2024年 4月 26日

此文件在_____收到，城市規劃委員會
只會在收到所有必要的資料及文件後才正式確認收到
申請的日期。

This document is received on 26 APR 2024.
The Town Planning Board will formally acknowledge the date of receipt of the application only upon receipt of all the required information and documents.

Form No. S16-I
表格第 S16-I 號

APPLICATION FOR PERMISSION UNDER SECTION 16 OF THE TOWN PLANNING ORDINANCE (CAP. 131)

根據《城市規劃條例》(第131章)第16條遞交的許可申請

Applicable to proposals not involving or not only involving:
適用於建議不涉及或不祇涉及:

(i) Construction of "New Territories Exempted House(s)";
興建「新界豁免管制屋宇」;

(ii) Temporary use/development of land and/or building not exceeding 3 years in rural areas or Regulated Areas; and
位於鄉郊地區或受規管地區土地上及/或建築物內進行為期不超過三年的臨時用途/發展;及

(iii) Renewal of permission for temporary use or development in rural areas or Regulated Areas
位於鄉郊地區或受規管地區的臨時用途或發展的許可續期

Applicant who would like to publish the notice of application in local newspapers to meet one of the Town Planning Board's requirements of taking reasonable steps to obtain consent of or give notification to the current land owner, please refer to the following link regarding publishing the notice in the designated newspapers:
https://www.tpb.gov.hk/en/plan_application/apply.html

申請人如欲在本地報章刊登申請通知，以採取城市規劃委員會就取得現行土地擁有人的同意或通知現行土地擁有人所指定的其中一項合理步驟，請瀏覽以下網址有關在指定的報章刊登通知：
https://www.tpb.gov.hk/tc/plan_application/apply.html

General Note and Annotation for the Form
填寫表格的一般指引及註解

\# "Current land owner" means any person whose name is registered in the Land Registry as that of an owner of the land to which the application relates, as at 6 weeks before the application is made
「現行土地擁有人」指在提出申請前六星期，其姓名或名稱已在土地註冊處註冊為該申請所關乎的土地的擁有人的人

& Please attach documentary proof 請夾附證明文件

^ Please insert number where appropriate 請在適當地方註明編號

Please fill "NA" for inapplicable item 請在不適用的項目填寫「不適用」

Please use separate sheets if the space provided is insufficient 如所提供的空間不足，請另頁說明

Please insert a「✔」at the appropriate box 請在適當的方格內上加上「✔」號

2400959

For Official Use Only 請勿填寫此欄	Application No. 申請編號	A/I-TCT 14
	Date Received 收到日期	26 APR 2024

1. The completed form and supporting documents (if any) should be sent to the Secretary, Town Planning Board (the Board), 15/F, North Point Government Offices, 333 Java Road, North Point, Hong Kong.
申請人須把填妥的申請表格及其他支持申請的文件 (倘有)，送交香港北角渣華道 333 號北角政府合署 15 樓城市規劃委員會(下稱「委員會」)秘書收。

2. Please read the "Guidance Notes" carefully before you fill in this form. The document can be downloaded from the Board's website at http://www.tpb.gov.hk/. It can also be obtained from the Secretariat of the Board at 15/F, North Point Government Offices, 333 Java Road, North Point, Hong Kong (Tel: 2231 4810 or 2231 4835), and the Planning Enquiry Counters of the Planning Department (Hotline: 2231 5000) (17/F, North Point Government Offices, 333 Java Road, North Point, Hong Kong and 14/F, Sha Tin Government Offices, 1 Sheung Wo Che Road, Sha Tin, New Territories).
請先細閱《申請須知》的資料單張，然後填寫此表格。該份文件可從委員會的網頁下載 (網址：http://www.tpb.gov.hk/)，亦可向委員會秘書處 (香港北角渣華道 333 號北角政府合署 15 樓 – 電話：2231 4810 或 2231 4835)及規劃署的規劃資料查詢處(熱線：2231 5000) (香港北角渣華道 333 號北角政府合署 17 樓及新界沙田上禾輋路 1 號沙田政府合署 14 樓)索取。

3. This form can be downloaded from the Board's website, and obtained from the Secretariat of the Board and the Planning Enquiry Counters of the Planning Department. The form should be typed or completed in block letters. The processing of the application may be refused if the required information or the required copies are incomplete.
此表格可從委員會的網頁下載，亦可向委員會秘書處及規劃署的規劃資料查詢處索取。申請人須以打印方式或以正楷填寫表格。如果申請人所提交的資料或文件副本不齊全，委員會可拒絕處理有關申請。

1. Name of Applicant 申請人姓名/名稱

(☐ Mr. 先生 / ☐ Mrs. 夫人 / ☐ Miss 小姐 / ☐ Ms. 女士 / ☐ Company 公司 / ☑ Organisation 機構)

Hong Kong Housing Authority

2. Name of Authorised Agent (if applicable) 獲授權代理人姓名/名稱（如適用）

(☐ Mr. 先生 / ☐ Mrs. 夫人 / ☐ Miss 小姐 / ☐ Ms. 女士 / ☐ Company 公司 / ☐ Organisation 機構)

3. Application Site 申請地點

(a) Full address / location / demarcation district and lot number (if applicable) 詳細地址／地點／丈量約份及地段號碼（如適用）	Government Land at Tung Chung Area 133A, Area 133B and Area 133C, Lantau Island, Hong Kong
(b) Site area and/or gross floor area involved 涉及的地盤面積及／或總樓面面積	☑Site area 地盤面積 Area 133A: 43,000 Area 133B: 18,100 Area 133C: 18,500 (Subject to detailed survey and layout finalization) sq.m 平方米 ☑About 約 ☑Gross floor area 總樓面面積 Area 133A: 293,300 Area 133B: 123,080 Area 133C: 123,950 sq.m 平方米 ☑About 約
(c) Area of Government land included (if any) 所包括的政府土地面積（倘有）	Area 133A: 43,000 Area 133B: 18,100 Area 133C: 18,500 sq.m 平方米 ☑About 約

(d)	Name and number of the related statutory plan(s) 有關法定圖則的名稱及編號	Approved Tung Chung Extension Area Outline Zoning Plan No. S/I-TCE/2
(e)	Land use zone(s) involved 涉及的土地用途地帶	Area 133A: "Residential (Group A) 2" with a small portion in area zoned as "Open Space" Area 133B: "Residential (Group A) 3" Area 133C: "Residential (Group A) 3"
(f)	Current use(s) 現時用途	Under Site Formation (If there are any Government, institution or community facilities, please illustrate on plan and specify the use and gross floor area) (如有任何政府、機構或社區設施，請在圖則上顯示，並註明用途及總樓面面積)

4. "Current Land Owner" of Application Site 申請地點的「現行土地擁有人」

The applicant 申請人 –

☐ is the sole "current land owner"#& (please proceed to Part 6 and attach documentary proof of ownership).
是唯一的「現行土地擁有人」#& (請繼續填寫第 6 部分，並夾附業權證明文件)。

☐ is one of the "current land owners"#& (please attach documentary proof of ownership).
是其中一名「現行土地擁有人」#& (請夾附業權證明文件)。

☐ is not a "current land owner"#.
並不是「現行土地擁有人」#。

☑ The application site is entirely on Government land (please proceed to Part 6).
申請地點完全位於政府土地上（請繼續填寫第 6 部分）。

5. Statement on Owner's Consent/Notification 就土地擁有人的同意/通知土地擁有人的陳述

(a) According to the record(s) of the Land Registry as at ..... (DD/MM/YYYY), this application involves a total of ..... "current land owner(s)"#.
根據土地註冊處截至 ..... 年 ..... 月 ..... 日的記錄，這宗申請共牽涉 ..... 名「現行土地擁有人」#。

(b) The applicant 申請人 –

☐ has obtained consent(s) of ..... "current land owner(s)"#.
已取得 ..... 名「現行土地擁有人」#的同意。

Details of consent of "current land owner(s)"# obtained 取得「現行土地擁有人」#同意的詳情		
No. of 'Current Land Owner(s)' 「現行土地擁有人」數目	Lot number/address of premises as shown in the record of the Land Registry where consent(s) has/have been obtained 根據土地註冊處記錄已獲得同意的地段號碼／處所地址	Date of consent obtained (DD/MM/YYYY) 取得同意的日期 (日/月/年)

(Please use separate sheets if the space of any box above is insufficient. 如上列任何方格的空間不足，請另頁說明)

☐ has notified ..... "current land owner(s)"#
已通知 ..... 名「現行土地擁有人」#。

Details of the "current land owner(s)"# notified 已獲通知「現行土地擁有人」#的詳細資料		
No. of 'Current Land Owner(s)' 「現行土地擁有人」數目	Lot number/address of premises as shown in the record of the Land Registry where notification(s) has/have been given 根據土地註冊處記錄已發出通知的地段號碼／處所地址	Date of notification given (DD/MM/YYYY) 通知日期(日/月/年)

(Please use separate sheets if the space of any box above is insufficient. 如上列任何方格的空間不足，請另頁說明)

☐ has taken reasonable steps to obtain consent of or give notification to owner(s):
已採取合理步驟以取得土地擁有人的同意或向該人發給通知。詳情如下：

Reasonable Steps to Obtain Consent of Owner(s) 取得土地擁有人的同意所採取的合理步驟

☐ sent request for consent to the "current land owner(s)" on _____ (DD/MM/YYYY)#&
於_____(日/月/年)向每一名「現行土地擁有人」#郵遞要求同意書&

Reasonable Steps to Give Notification to Owner(s) 向土地擁有人發出通知所採取的合理步驟

☐ published notices in local newspapers on _____ (DD/MM/YYYY)&
於_____(日/月/年)在指定報章就申請刊登一次通知&

☐ posted notice in a prominent position on or near application site/premises on _____ (DD/MM/YYYY)&
於_____(日/月/年)在申請地點／申請處所或附近的顯明位置貼出關於該申請的通知&

☐ sent notice to relevant owners' corporation(s)/owners' committee(s)/mutual aid committee(s)/management office(s) or rural committee on _____ (DD/MM/YYYY)&
於_____(日/月/年)把通知寄往相關的業主立案法團/業主委員會/互助委員會或管理處，或有關的鄉事委員會&

Others 其他

☐ others (please specify)
其他（請指明）

_____

_____

_____

_____

Note: May insert more than one「✔」.
Information should be provided on the basis of each and every lot (if applicable) and premises (if any) in respect of the application.
註: 可在多於一個方格內加上「✔」號
申請人須就申請涉及的每一地段（倘適用）及處所（倘有）分別提供資料

6. Type(s) of Application 申請類別

☐ Type (i) 第(i)類 Change of use within existing building or part thereof 更改現有建築物或其部分內的用途

☐ Type (ii) 第(ii)類 Diversion of stream / excavation of land / filling of land / filling of pond as required under Notes of Statutory Plan(s) 根據法定圖則《註釋》內所要求的河道改道／挖土／填土／填塘工程

☐ Type (iii) 第(iii)類 Public utility installation / Utility installation for private project 公用事業設施裝置/私人發展計劃的公用設施裝置

☑ Type (iv) 第(iv)類 Minor relaxation of stated development restriction(s) as provided under Notes of Statutory Plan(s) 略為放寬於法定圖則《註釋》內列明的發展限制

☑ Type (v) 第(v)類 Use / development other than (i) to (iii) above 上述的(i)至(iii)項以外的用途／發展

Note 1: May insert more than one「✓」.
註 1： 可在多於一個方格內加上「✓」號
Note 2: For Development involving columbarium use, please complete the table in the Appendix.
註 2： 如發展涉及靈灰安置所用途，請填妥於附件的表格。

(i) For Type (i) application 供第(i)類申請

(a) Total floor area involved 涉及的總樓面面積	sq.m 平方米		
(b) Proposed use(s)/development 擬議用途/發展	(If there are any Government, institution or community facilities, please illustrate on plan and specify the use and gross floor area) (如有任何政府、機構或社區設施，請在圖則上顯示，並註明用途及總樓面面積)		
(c) Number of storeys involved 涉及層數		Number of units involved 涉及單位數目	
(d) Proposed floor area 擬議樓面面積	Domestic part 住用部分 ..... sq.m 平方米 ☐About 約		
	Non-domestic part 非住用部分..... sq.m 平方米 ☐About 約		
	Total 總計 ..... sq.m 平方米 ☐About 約		

(e) Proposed uses of different floors (if applicable) 不同樓層的擬議用途(如適用)
(Please use separate sheets if the space provided is insufficient)
(如所提供的空間不足，請另頁說明)

Floor(s) 樓層	Current use(s) 現時用途	Proposed use(s) 擬議用途

(ii) For Type (ii) application 供第(ii)類申請	
(a) Operation involved 涉及工程	☐ Diversion of stream 河道改道 ☐ Filling of pond 填塘 Area of filling 填塘面積 ..... sq.m 平方米 ☐About 約 Depth of filling 填塘深度 ..... m 米 ☐About 約 ☐ Filling of land 填土 Area of filling 填土面積 ..... sq.m 平方米 ☐About 約 Depth of filling 填土厚度 ..... m 米 ☐About 約 ☐ Excavation of land 挖土 Area of excavation 挖土面積 ..... sq.m 平方米 ☐About 約 Depth of excavation 挖土深度 ..... m 米 ☐About 約 (Please indicate on site plan the boundary of concerned land/pond(s), and particulars of stream diversion, the extent of filling of land/pond(s) and/or excavation of land) (請用圖則顯示有關土地／池塘界線，以及河道改道、填塘、填土及／或挖土的細節及/或範圍))
(b) Intended use/development 有意進行的用途／發展	

(iii) For Type (iii) application 供第(iii)類申請	
(a) Nature and scale 性質及規模	☐ Public utility installation 公用事業設施裝置 ☐ Utility installation for private project 私人發展計劃的公用設施裝置 Please specify the type and number of utility to be provided as well as the dimensions of each building/structure, where appropriate 請註明有關裝置的性質及數量，包括每座建築物/構築物(倘有)的長度、高度和闊度

Name/type of installation 裝置名稱／種類	Number of provision 數量	Dimension of each installation /building/structure (m) (LxWxH) 每個裝置／建築物／構築物的尺寸 (米) (長 x 闊 x 高)

(Please illustrate on plan the layout of the installation 請用圖則顯示裝置的布局)

(iv) For Type (iv) application 供第(iv)類申請

(a) Please specify the proposed minor relaxation of stated development restriction(s) and **also fill in the proposed use/development and development particulars in part (v) below** –
請列明擬議略為放寬的發展限制**並填妥於第(v)部分的擬議用途/發展及發展細節** –

☑	Plot ratio restriction 地積比率限制	From 由 Area 133A: 6.5 Area 133B: 6.4 Area 133C: 6.4 ..... to 至 Area 133A: 7.0 Area 133B: 6.8 Area 133C: 6.7 .....
☐	Gross floor area restriction 總樓面面積限制	From 由 .....sq. m 平方米 to 至 .....sq. m 平方米
☐	Site coverage restriction 上蓋面積限制	From 由 .....% to 至 ..... %
☑	Building height restriction 建築物高度限制	From 由 ..... Area 133A: 115 Area 133B: 110 Area 133C: 110 m 米 to 至 ..... m 米 From 由 ..... Area 133A: 135 Area 133B: 130 Area 133C: 125 mPD 米 (主水平基準上) to 至 .....mPD 米 (主水平基準上) From 由 ..... storeys 層 to 至 ..... storeys 層
☐	Non-building area restriction 非建築用地限制	From 由 .....m to 至 ..... m
☐	Others (please specify) 其他（請註明）	.....

(v) For Type (v) application 供第(v)類申請

(a) Proposed use(s)/development 擬議用途/發展	Proposed Minor Relaxation of Restrictions of Plot Ratio and Building Height for Permitted Public Housing Development (Please illustrate the details of the proposal on a layout plan 請用平面圖說明建議詳情)

(b) Development Schedule 發展細節表

Proposed gross floor area (GFA) 擬議總樓面面積	Area 133A: 293,300 Area 133B: 123,080 Area 133C: 123,950 sq.m 平方米 ☑About 約
Proposed plot ratio 擬議地積比率	Area 133A: 7.0; Area 133B: 6.8; Area 133C: 6.7 ☑About 約
Proposed site coverage 擬議上蓋面積	Area 133A: Under 15m: Not more than 100%, Non-domestic above 15m: Not more than 65%, Domestic above 15m: Not more than 40%; Area 133B: Under 15m: Not more than 100%, Non-domestic above 15m: Not more than 65%, Domestic above 15m: Not more than 40%; Area 133C: Under 15m: Not more than 100%, Non-domestic above 15m: Not more than 65%, Domestic above 15m : Not more than 40%
Proposed no. of blocks 擬議座數	Area 133A: 5; Area 133B: 4 & Area 133C: 4
Proposed no. of storeys of each block 每座建築物的擬議層數	Area 133A: 41; Area 133B: 37-38 & Area 133C: 35-37 storeys 層 ☐ include 包括 ..... storeys of basements 層地庫 ☐ exclude 不包括 ..... storeys of basements 層地庫
Proposed building height of each block 每座建築物的擬議高度	Area 133A: Not more than 135 Area 133B: Not more than 130 Area 133C: Not more than 125 mPD 米(主水平基準上) ☐About 約 ..... m 米 ☐About 約

☑ Domestic part 住用部分

GFA 總樓面面積 Area 133A: 272,350 Area 133B: 117,650 Area 133C: 120,250 sq. m 平方米 ☑About 約

number of Units 單位數目 Area 133A: 6,817; Area 133B: 2,448 & Area 133C: 2,571 (about)

average unit size 單位平均面積 Area 133A: 40; Area 133B: 48 & Area 133C: 47 sq. m 平方米 ☑About 約

estimated number of residents 估計住客數目 Area 133A: 16,469; Area 133B: 7,620 & Area 133C: 6,942 (about)

☑ Non-domestic part 非住用部分

GFA 總樓面面積

☐ eating place 食肆 ..... sq. m 平方米 ☐About 約

☐ hotel 酒店 ..... sq. m 平方米 ☐About 約

(please specify the number of rooms 請註明房間數目) .....

☐ office 辦公室 ..... sq. m 平方米 ☐About 約

☐ shop and services 商店及服務行業 ..... sq. m 平方米 ☐About 約

☑ Government, institution or community facilities 政府、機構或社區設施 (please specify the use(s) and concerned land area(s)/GFA(s) 請註明用途及有關的地面面積／總樓面面積)

Area 133A: Public market
Area 133B & C: Social welfare facilities

☑ other(s) 其他 (please specify the use(s) and concerned land area(s)/GFA(s) 請註明用途及有關的地面面積／總樓面面積)

Area 133A: Commercial Uses (Eating Places, Shops & Services), Kindergarten, Estate Management Offices (EMOs) and ancillary facilities (Total GFA of not more than 20,950 sq.m)
Area 133B: Public Transport Interchange(PTI), Kindergarten, Estate Management Office (EMO) and ancillary facilities (Total GFA of not more than 5,430 sq.m)
Area 133C: Kindergarten, Management Office (MO) and ancillary facilities (Total GFA of not more than 3,700 sq.m)

☑ Open space 休憩用地 (please specify land area(s) 請註明地面面積)

☑ private open space 私人休憩用地 Area 133A: 16,469; Area 133B: 7,620 & Area 133C: 6,942 sq. m 平方米 ☑ Not less than 不少於

☐ public open space 公眾休憩用地 ..... sq. m 平方米 ☐ Not less than 不少於

(c) Use(s) of different floors (if applicable) 各樓層的用途 (如適用)

[Block number][座數]	[Floor(s)][層數]	[Proposed use(s)][擬議用途]
Area 133A Blocks 1-4	G-P3/F	Commercial Uses(Eating Places, Shops & Services), Kindergarten, EMOs, Carpark, Lobby, E&M Facilities
	1/F - 37/F	Residential Flats
	G/F	Lobby, E&M Facilities
Area 133A Block 5	1/F - 40/F	Residential Flats
	G-P5/F	PTI, Social Welfare Facilities, Carpark, Podium Landscape, Lobby, E&M Facilities
Area 133B Blocks 1&3	1/F - 32/F	Residential Flats
	G-P1/F	EMO, Kindergarten, Lobby, E&M Facilities
Area 133B Block 2	1/F - 36/F	Residential Flats
	G/F	Lobby, E&M Facilities
Area 133B Block 4	1/F - 36/F	Residential Flats
	G/F	Kindergarten, Lobby, E&M Facilities
Area 133C Block A	1/F - 36/F	Residential Flats
	G/F	MO, Lobby, E&M Facilities
Area 133C Block B	1/F - 35/F	Residential Flats
	G-P5/F	Social Welfare Facilities, Carpark, Lobby, E&M Facilities, Podium Landscape
Area 133C Blocks C&D	1/F - 29/F	Residential Flats

(d) Proposed use(s) of uncovered area (if any) 露天地方（倘有）的擬議用途

Area 133A, B & C : Landscape Area/Garden, Recreational Facilities, Circulation Area and Estate Road/ EVA

7. Anticipated Completion Time of the Development Proposal 擬議發展計劃的預計完成時間

Anticipated completion time (in month and year) of the development proposal (by phase (if any)) (e.g. June 2023)
擬議發展計劃預期完成的年份及月份 (分期 (倘有)) (例：2023 年 6 月)
(Separate anticipated completion times (in month and year) should be provided for the proposed public open space and Government, institution or community facilities (if any))
(申請人須就擬議的公眾休憩用地及政府、機構或社區設施 (倘有) 提供個別擬議完成的年份及月份)

Tentatively 2029/30

8. Vehicular Access Arrangement of the Development Proposal 擬議發展計劃的行車通道安排

Any vehicular access to the site/subject building? 是否有車路通往地盤／有關建築物？	Yes 是	☐ There is an existing access. (please indicate the street name, where appropriate) 有一條現有車路。(請註明車路名稱(如適用)) ..... ☑ There is a proposed access. (please illustrate on plan and specify the width) 有一條擬議車路。（請在圖則顯示，並註明車路的闊度） New Roads D2 & L6
	No 否	☐
Any provision of parking space for the proposed use(s)? 是否有為擬議用途提供停車位？	Yes 是	☑ (Please specify type(s) and number(s) and illustrate on plan) 請註明種類及數目並於圖則上顯示) (PC)[Residential] Area 133A: 385; Area 133B: 306; Area 133C: 321 (PC)[Visitor] Area 133A: 25; Area 133B: 20; Area 133C: 20 (PC)[Retail] Area 133A: 59 (PC)[Office] Area 133A: 2 Private Car Parking Spaces 私家車車位 (Motorcycle)Area 133A: 49; Area 133B: 22; Area 133C: 23 Motorcycle Parking Spaces 電單車車位 (LGV)Area 133A: 21; Area 133B: 9; Area 133C: 10 Light Goods Vehicle Parking Spaces 輕型貨車泊車位 Medium Goods Vehicle Parking Spaces 中型貨車泊車位 _____ Heavy Goods Vehicle Parking Spaces 重型貨車泊車位 _____ Others (Please Specify) 其他 (請列明) _____ Bicycle Parking Spaces (Bicycle) Area 133A: 454; Area 133B: 163; Area 133C: 171 Welfare Parking Spaces (Welfare)Area 133B: 3; Area 133C: 7
	No 否	☐
Any provision of loading/unloading space for the proposed use(s)? 是否有為擬議用途提供上落客貨車位？	Yes 是	☑ (Please specify type(s) and number(s) and illustrate on plan) 請註明種類及數目並於圖則上顯示) Taxi Spaces 的士車位 _____ Coach Spaces 旅遊巴車位 _____ Light Goods Vehicle Spaces 輕型貨車車位 _____ Medium Goods Vehicle Spaces 中型貨車車位 _____ Heavy Goods Vehicle Spaces 重型貨車車位 (HGV) [Residential] Area 133A: 10 (1 to be shared by other non-domestic facilities); Area 133B: 8 (1 to be shared by welfare facilities and 1 to be shared with other non-domestic facilities); Area 133C: 8; (HGV) [Retail] Area 133A: 11; (HGV) [Welfare facilities] Area 133C: 1 (to be shared by other non-domestic facilities) Others (Please Specify) 其他 (請列明) _____ _____
	No 否	☐

9. Impacts of Development Proposal 擬議發展計劃的影響

If necessary, please use separate sheets to indicate the proposed measures to minimise possible adverse impacts or give justifications/reasons for not providing such measures.
如需要的話，請另頁註明可盡量減少可能出現不良影響的措施，否則請提供理據/理由。

Does the development proposal involve alteration of existing building? 擬議發展計劃是否包括現有建築物的改動?	Yes 是	☐ Please provide details 請提供詳情 ....
	No 否	☑
Does the development proposal involve the operation on the right? 擬議發展是否涉及右列的工程? (Note: where Type (ii) application is the subject of application, please skip this section. 註：如申請涉及第(ii)類申請，請跳至下一條問題。)	Yes 是	☐ (Please indicate on site plan the boundary of concerned land/pond(s), and particulars of stream diversion, the extent of filling of land/pond(s) and/or excavation of land) (請用地盤平面圖顯示有關土地／池塘界線，以及河道改道、填塘、填土及／或挖土的細節及/或範圍) ☐ Diversion of stream 河道改道 ☐ Filling of pond 填塘 Area of filling 填塘面積 ..... sq.m 平方米 ☐About 約 Depth of filling 填塘深度 ..... m 米 ☐About 約 ☐ Filling of land 填土 Area of filling 填土面積 ..... sq.m 平方米 ☐About 約 Depth of filling 填土厚度 ..... m 米 ☐About 約 ☐ Excavation of land 挖土 Area of excavation 挖土面積..... sq.m 平方米 ☐About 約 Depth of excavation 挖土深度 .....m 米 ☐About 約
	No 否	☑

Would the development proposal cause any adverse impacts? 擬議發展計劃會否造成不良影響？			
	On environment 對環境	Yes 會 ☐	No 不會 ☑
	On traffic 對交通	Yes 會 ☐	No 不會 ☑
	On water supply 對供水	Yes 會 ☐	No 不會 ☑
	On drainage 對排水	Yes 會 ☐	No 不會 ☑
	On slopes 對斜坡	Yes 會 ☐	No 不會 ☑
	Affected by slopes 受斜坡影響	Yes 會 ☐	No 不會 ☑
	Landscape Impact 構成景觀影響	Yes 會 ☐	No 不會 ☑
	Tree Felling 砍伐樹木	Yes 會 ☐	No 不會 ☑
	Visual Impact 構成視覺影響	Yes 會 ☐	No 不會 ☑
	Others (Please Specify) 其他 (請列明)	Yes 會 ☐	No 不會 ☑
	_____		
	_____		

Please state measure(s) to minimise the impact(s). For tree felling, please state the number, diameter at breast height and species of the affected trees (if possible)
請註明盡量減少影響的措施。如涉及砍伐樹木，請說明受影響樹木的數目、及胸高度的樹幹直徑及品種(倘可)

N/A
.....
.....
.....
.....
.....

10. Justifications 理由

The applicant is invited to provide justifications in support of the application. Use separate sheets if necessary.
現請申請人提供申請理由及支持其申請的資料。如有需要，請另頁說明。

Please refer to the attached Supporting Planning Statement.

11. Declaration 聲明

I hereby declare that the particulars given in this application are correct and true to the best of my knowledge and belief.
本人謹此聲明，本人就這宗申請提交的資料，據本人所知及所信，均屬真實無誤。

I hereby grant a permission to the Board to copy all the materials submitted in this application and/or to upload such materials to the Board's website for browsing and downloading by the public free-of-charge at the Board's discretion. 本人現准許委員會酌情將本人就此申請所提交的所有資料複製及/或上載至委員會網站，供公眾免費瀏覽或下載。

Signature 簽署 ☑ Applicant 申請人 / ☐ Authorised Agent 獲授權代理人

MR. CHAN KING KONG, THERON
Name in Block Letters 姓名（請以正楷填寫）

CHIEF PLANNING OFFICER/1
Position (if applicable) 職位 （如適用）

Professional Qualification(s) 專業資格
☑ Member 會員 / ☐ Fellow of 資深會員
☑ HKIP 香港規劃師學會 / ☐ HKIA 香港建築師學會 /
☐ HKIS 香港測量師學會 / ☐ HKIE 香港工程師學會 /
☐ HKILA 香港園境師學會/ ☐ HKIUD 香港城市設計學會
☐ RPP 註冊專業規劃師
Others 其他 .....

on behalf of 代表 THE HONG KONG HOUSING AUTHORITY
☐ Company 公司 / ☑ Organisation Name and Chop (if applicable) 機構名稱及蓋章（如適用）

Date 日期 18/04/2024 (DD/MM/YYYY 日/月/年)

Remark 備註

The materials submitted in this application and the Board's decision on the application would be disclosed to the public. Such materials would also be uploaded to the Board's website for browsing and free downloading by the public where the Board considers appropriate.
委員會會向公眾披露申請人所遞交的申請資料和委員會對申請所作的決定。在委員會認為合適的情況下，有關申請資料亦會上載至委員會網頁供公眾免費瀏覽及下載。

Warning 警告

Any person who knowingly or wilfully makes any statement or furnish any information in connection with this application, which is false in any material particular, shall be liable to an offence under the Crimes Ordinance.
任何人在明知或故意的情況下，就這宗申請提出在任何要項上是虛假的陳述或資料，即屬違反《刑事罪行條例》。

Statement on Personal Data 個人資料的聲明

1. The personal data submitted to the Board in this application will be used by the Secretary of the Board and Government departments for the following purposes:
委員會就這宗申請所收到的個人資料會交給委員會秘書及政府部門，以根據《城市規劃條例》及相關的城市規劃委員會規劃指引的規定作以下用途：
   (a) the processing of this application which includes making available the name of the applicant for public inspection when making available this application for public inspection; and
處理這宗申請，包括公布這宗申請供公眾查閱，同時公布申請人的姓名供公眾查閱；以及
   (b) facilitating communication between the applicant and the Secretary of the Board/Government departments.
方便申請人與委員會秘書及政府部門之間進行聯絡。

2. The personal data provided by the applicant in this application may also be disclosed to other persons for the purposes mentioned in paragraph 1 above.
申請人就這宗申請提供的個人資料，或亦會向其他人士披露，以作上述第 1 段提及的用途。

3. An applicant has a right of access and correction with respect to his/her personal data as provided under the Personal Data (Privacy) Ordinance (Cap. 486). Request for personal data access and correction should be addressed to the Secretary of the Board at 15/F, North Point Government Offices, 333 Java Road, North Point, Hong Kong.
根據《個人資料(私隱)條例》(第 486 章)的規定，申請人有權查閱及更正其個人資料。如欲查閱及更正個人資料，應向委員會秘書提出有關要求，其地址為香港北角渣華道 333 號北角政府合署 15 樓。

For Developments involving Columbarium Use, please also complete the following:
如發展涉及靈灰安置所用途，請另外填妥以下資料:

Ash interment capacity 骨灰安放容量@

Maximum number of sets of ashes that may be interred in the niches
在龕位內最多可安放骨灰的數量 _____

Maximum number of sets of ashes that may be interred other than in niches
在非龕位的範圍內最多可安放骨灰的數量 _____

Total number of niches 龕位總數 _____

Total number of single niches
單人龕位總數 _____

Number of single niches (sold and occupied)
單人龕位數目 (已售並佔用) _____

Number of single niches (sold but unoccupied)
單人龕位數目 (已售但未佔用) _____

Number of single niches (residual for sale)
單人龕位數目 (待售) _____

Total number of double niches
雙人龕位總數 _____

Number of double niches (sold and fully occupied)
雙人龕位數目 (已售並全部佔用) _____

Number of double niches (sold and partially occupied)
雙人龕位數目 (已售並部分佔用) _____

Number of double niches (sold but unoccupied)
雙人龕位數目 (已售但未佔用) _____

Number of double niches (residual for sale)
雙人龕位數目 (待售) _____

Total no. of niches other than single or double niches (please specify type)
除單人及雙人龕位外的其他龕位總數 (請列明類別)

_____

Number. of niches (sold and fully occupied)
龕位數目 (已售並全部佔用) _____

Number of niches (sold and partially occupied)
龕位數目 (已售並部分佔用) _____

Number of niches (sold but unoccupied)
龕位數目 (已售但未佔用) _____

Number of niches (residual for sale)
龕位數目 (待售) _____

Proposed operating hours 擬議營運時間 _____

_____

@ Ash interment capacity in relation to a columbarium means –
就靈灰安置所而言，骨灰安放容量指：
- the maximum number of containers of ashes that may be interred in each niche in the columbarium;
每個龕位內可安放的骨灰容器的最高數目;
- the maximum number of sets of ashes that may be interred other than in niches in any area in the columbarium; and
在該靈灰安置所並非龕位的範圍內，總共最多可安放多少份骨灰；以及
- the total number of sets of ashes that may be interred in the columbarium.
在該骨灰安置所內，總共最多可安放多少份骨灰。

Gist of Application 申請摘要

(Please provide details in both English and Chinese as far as possible. This part will be circulated to relevant consultees, uploaded to the Town Planning Board's Website for browsing and free downloading by the public and available at the Planning Enquiry Counters of the Planning Department for general information.)
(請盡量以英文及中文填寫。此部分將會發送予相關諮詢人士、上載至城市規劃委員會網頁供公眾免費瀏覽及下載及於規劃署規劃資料查詢處供一般參閱。)

Application No. 申請編號	(For Official Use Only) (請勿填寫此欄)
Location/address 位置／地址	Government Land at Tung Chung Area 133A, Area 133B and Area 133C 位於東涌第133A、133B及133C區的政府土地
Site area 地盤面積	Area 133A 第133A區: 43,000 Area 133B 第133B區: 18,100 Area 133C 第133C區: 18,500 sq. m 平方米 ☑ About 約 (includes Government land of 包括政府土地 sq. m 平方米 ☑ About 約) Area 133A 第133A區: 43,000; Area 133B 第133B區: 18,100; Area 133C 第133C區: 18,500
Plan 圖則	Approved Tung Chung Extension Area Outline Zoning Plan No. S/I-TCE/2 東涌擴展區分區計劃大綱核准圖編號 S/I-TCE/2
Zoning 地帶	Area 133A: "Residential (Group A)2" with a small portion in area zoned as "Open Space" 第133A區:「住宅(甲類)2」及小部分顯示為「休憩用地」 Area 133B 第133B區: "Residential (Group A)3"「住宅(甲類)3」 Area 133C 第133C區: "Residential (Group A)3"「住宅(甲類)3」」
Applied use/ development 申請用途/發展	Proposed Minor Relaxation of Restrictions of Plot Ratio and Building Height for Permitted Public Housing Development 擬議略為放寬最高地積比率及建築物高度限制作准許的公營房屋

		sq.m 平方米	Plot Ratio 地積比率
(i) Gross floor area and/or plot ratio 總樓面面積及／或地積比率	Domestic 住用	Area 133A 第133A區: 272,350 Area 133B 第133B區: 117,650 Area 133C 第133C區: 120,250 ☐ About 約 ☑ Not more than 不多於	Area 133A, 133B & 133C 第133A、133B及133C區: 6.5 ☐About 約 ☑Not more than 不多於
	Non-domestic 非住用	Area 133A 第133A區: 20,950 Area 133B 第133B區: 5,430 Area 133C 第133C區: 3,700 ☐ About 約 ☑ Not more than 不多於	Area 133A 第133A區: 0.5 Area 133B 第133B區: 0.3 Area 133C 第133C區: 0.2 ☐About 約 ☑Not more than 不多於
(ii) No. of blocks 幢數	Domestic 住用	Area 133A 第133A區: 1 Area 133B 第133B區: 1	
	Non-domestic 非住用		
	Composite 綜合用途	Area 133A 第133A區: 4 Area 133B 第133B區: 3 Area 133C 第133C區: 4	

(iii)	Building height/No. of storeys 建築物高度／層數	Domestic 住用	m 米 ☐ (Not more than 不多於)
			Area 133A 第133A區: 135 Area 133B 第133B區: 130 mPD 米(主水平基準上) ☑ (Not more than 不多於)
			Area 133A 第133A區: 41 Area 133B 第133B區: 37 Storeys(s) 層 ☑ (Not more than 不多於) *(☐Include 包括/☐ Exclude 不包括* ☐ *Carport 停車間* ☐ *Basement 地庫* ☐ *Refuge Floor 防火層* ☐ *Podium 平台)*
		Non-domestic 非住用	m 米 ☐ (Not more than 不多於)
			mPD 米(主水平基準上) ☐ (Not more than 不多於)
			Storeys(s) 層 ☐ (Not more than 不多於) *(☐Include 包括/☐ Exclude 不包括* ☐ *Carport 停車間* ☐ *Basement 地庫* ☐ *Refuge Floor 防火層* ☐ *Podium 平台)*
		Composite 綜合用途	m 米 ☐ (Not more than 不多於)
			Area 133A 第133A區: 135 Area 133B 第133B區: 130 Area 133C 第133C區: 125 mPD 米(主水平基準上) ☑ (Not more than 不多於)
			Area 133A 第133A區: 41 Area 133B第133B區: 38 Area 133C 第133C區: 35-37 Storeys(s) 層 ☑ (Not more than 不多於) *(☑Include 包括/☐ Exclude 不包括* ☑ *Carport 停車間* ☐ *Basement 地庫* ☐ *Refuge Floor 防火層* ☑ *Podium 平台)*
(iv)	Site coverage 上蓋面積	Area 133A 第133A區: Under 15m 15米以下: Not more than 不多於 100%, Non-domestic above 15m 15米以上的非住用部分: Not more than 不多於 65%, Domestic above 15m 15米以上的住用部分: Not more than 不多於 40%; Area 133B 第133B區: Under 15m 15米以下: Not more than 不多於 100%, Non-domestic above 15m 15米以上的非住用部分: Not more than 不多於 65%, Domestic above 15m 15米以上的住用部分: Not more than 不多於 40%; Area 133C 第133C區: Under 15m 15米以下: Not more than 不多於 100%, Non-domestic above 15m 15米以上的非住用部分: Not more than 不多於 65%, Domestic above 15m 15米以上的住用部分: Not more than 不多於 40%	
(v)	No. of units 單位數目	Area 133A 第133A區: 6,817 Area 133B 第133B區: 2,448 Area 133C 第133C區: 2,571	
(vi)	Open space 休憩用地	Private 私人	Area 133A 第133A區: 16,469 Area 133B 第133B區: 7,620 sq.m 平方米 ☑ Not less than 不少於 Area 133C 第133C區: 6,942
		Public 公眾	sq.m 平方米 ☐ Not less than 不少於

(vii) No. of parking spaces and loading / unloading spaces 停車位及上落客貨車位數目	Total no. of vehicle parking spaces 停車位總數 Private Car Parking Spaces 私家車車位 Motorcycle Parking Spaces 電單車車位 Light Goods Vehicle Parking Spaces 輕型貨車泊車位 Medium Goods Vehicle Parking Spaces 中型貨車泊車位 Heavy Goods Vehicle Parking Spaces 重型貨車泊車位 Others (Please Specify) 其他 (請列明) Bicycle Parking Spaces Welfare Parking Spaces	(PC)[Residential住宅] Area 133A 第133A區: 385; Area 133B 第133B區: 306; Area 133C 第133C區: 321 (PC)[Visitor訪客] Area 133A 第133A區: 25; Area 133B 第133B區: 20; Area 133C 第133C區: 20 (PC)[Retail零售] Area 133A 第133A區: 59 (PC)[Office辦公室] Area 133A 第133A區: 2 (Motorcycle)Area 133A 第133A區: 49; Area 133B 第133B區: 22; Area 133C 第133C區: 23 (LGV)Area 133A第133A區: 21 Area 133B第133B區: 9 Area 133C第133C區: 10 (Bicycle)Area 133A第133A區: 454; Area 133B第133B區: 163; Area 133C第133C區: 171 (Welfare)Area 133B第133B區: 3; Area 133C第133C區: 7
	Total no. of vehicle loading/unloading bays/lay-bys 上落客貨車位／停車處總數 Taxi Spaces 的士車位 Coach Spaces 旅遊巴車位 Light Goods Vehicle Spaces 輕型貨車車位 Medium Goods Vehicle Spaces 中型貨車位 Heavy Goods Vehicle Spaces 重型貨車車位 Others (Please Specify) 其他 (請列明)	(HGV) [Residential 住宅] Area 133A 第133A區: 10 (1 to be shared by other non-domestic facilities 1個將與非住用設施共用) Area 133B 第133B區: 8 (1 to be shared by welfare facilities 1個將與社福設施共用 and 1 to be shared with other non-domestic facilities 1個將與非住用設施共用); Area 133C 第133C區: 8 (HGV) [Retail 零售] Area 133A 第133A區:11 (HGV) [Welfare facilities 社福設施] Area 133C 第133C區:1 (to be shared by other non-domestic facilities 將與非住用設施共用)

Submitted Plans, Drawings and Documents 提交的圖則、繪圖及文件

	Chinese 中文	English 英文
Plans and Drawings 圖則及繪圖		
Master layout plan(s)/Layout plan(s) 總綱發展藍圖／布局設計圖	☐	☑
Block plan(s) 樓宇位置圖	☐	☐
Floor plan(s) 樓宇平面圖	☐	☑
Sectional plan(s) 截視圖	☐	☑
Elevation(s) 立視圖	☐	☐
Photomontage(s) showing the proposed development 顯示擬議發展的合成照片	☐	☐
Master landscape plan(s)/Landscape plan(s) 園境設計總圖／園境設計圖	☐	☑
Others (please specify) 其他（請註明）	☐	☐
Reports 報告書		
Planning Statement/Justifications 規劃綱領/理據	☐	☑
Environmental assessment (noise, air and/or water pollutions) 環境評估（噪音、空氣及／或水的污染）	☐	☑
Traffic impact assessment (on vehicles) 就車輛的交通影響評估	☐	☑
Traffic impact assessment (on pedestrians) 就行人的交通影響評估	☐	☐
Visual impact assessment 視覺影響評估	☐	☑
Landscape impact assessment 景觀影響評估	☐	☐
Tree Survey 樹木調查	☐	☐
Geotechnical impact assessment 土力影響評估	☐	☐
Drainage impact assessment 排水影響評估	☐	☐
Sewerage impact assessment 排污影響評估	☐	☑
Risk Assessment 風險評估	☐	☐
Others (please specify) 其他（請註明）	☐	☑
Water Works Impact Assessment		
Air Ventilation Assessment		

Note: May insert more than one「✔」. 註：可在多於一個方格內加上「✔」號

Note: The information in the Gist of Application above is provided by the applicant for easy reference of the general public. Under no circumstances will the Town Planning Board accept any liabilities for the use of the information nor any inaccuracies or discrepancies of the information provided. In case of doubt, reference should always be made to the submission of the applicant.

註： 上述申請摘要的資料是由申請人提供以方便市民大眾參考。對於所載資料在使用上的問題及文義上的歧異，城市規劃委員會概不負責。若有任何疑問，應查閱申請人提交的文件。

S16 PLANNING APPLICATION
APPROVED TUNG CHUNG EXTENSION AREA OZP
NO. S/I-TCE/2

Proposed Minor Relaxation of Restrictions of Plot Ratio and Building Height for the Public Housing Developments at Tung Chung Areas 133A, 133B and 133C

SUPPORTING PLANNING STATEMENT

April 2024

香港房屋委員會
Hong Kong Housing Authority

Executive Summary

This Planning Application is submitted by the Hong Kong Housing Authority ("HKHA") to seek approval from the Town Planning Board ("TPB") under Section 16 of the Town Planning Ordinance for the minor relaxation of restrictions of maximum Plot Ratio ("PR") and maximum Building Height ("BH") for public housing developments at Tung Chung Areas 133A ("TC 133A"), 133B ("TC 133B") and 133C ("TC 133C").

Under the Approved Tung Chung Extension Area Outline Zoning Plan No. S/I-TCE/2 ("the OZP"), TC 133A is mainly zoned "Residential (Group A)2" ("R(A)2") with a small portion of adjacent area zoned "Open Space" ("O"), while TC 133B and TC 133C are zoned "Residential (Group A)3" ("R(A)3"). TC 133A is subject to a maximum overall PR of 6.5 with a maximum BH restriction of 115mPD, while TC 133B and TC 133C are subject to a maximum PR of overall 6.4 with a maximum BH restriction of 110mPD.

Due to shortage of land for public housing development, the Government has been adopting a multi-pronged approach in increasing public housing land supply, including optimization of development potential of public housing sites where technically permits. In line with Government's initiative announced in December 2018 on "Enhanced Development Intensity of Public Housing Sites" to increase the maximum domestic PR of the public housing sites in New Towns by up to 30% as appropriate where their technical feasibility permits, the HKHA is seeking for minor relaxation of maximum PR and BH restrictions for the public housing developments at TC 133A, TC 133B and TC 133C, with a view to optimizing the use of the public housing land. For TC 133A, it is proposed to increase maximum overall PR from 6.5 to 7.0 (around +7.7%), and maximum BH restriction from 115mPD to 135mPD (around +17.4%). For TC 133B, it is proposed to increase maximum overall PR from 6.4 to 6.8 (around +6.3%), and maximum BH restriction from 110mPD to 130mPD (around +18.2%). And for TC 133C, it is proposed to increase maximum overall PR from 6.4 to 6.7 (around +4.7%), and maximum BH restriction from 110mPD to 125mPD (+13.6%). With the proposed increase in development intensity, TC 133A, TC 133B & TC 133C could provide about 6,817 public housing flats (increasing 2,247 flats or +49.2%), 2,448 public housing flats (increasing 422 flats or +20.8%) and 2,571 public housing flats (increasing 601 flats or +30.5%) respectively.

The proposed minor relaxation of restrictions of PR and BH is fully justified with the following major reasons:

- The proposal is in-line with the policy initiative on "Enhanced Development Intensity of Public Housing Sites" announced by Executive Council in December 2018 for optimizing land utilization;
- The proposal is to meet the acute demand for public housing. Under the Long Term Housing Strategy Annual Progress Report 2023, the split ratio of public / private housing of 70:30 is maintained continuously, and supply target for public housing is 308,000 for ten years from Year 2024/25 to Year 2033/34;
- The proposed public housing developments are compatible with the surrounding development context;
- The proposal will not result in insurmountable impacts on air ventilation, visual, landscape, sewerage, fresh and salt water supply capacity, traffic and environmental aspects; and
- The proposal will achieve planning gain by providing additional of about 3,270 public housing flats (+38.2%).

In view of the above, the TPB is requested to give favorable consideration to this Planning Application.

行政摘要

(聲明：此中文譯本僅供參考，如中文譯本和英文原文有差異時，應以英文原文為準。)

是項規劃申請是由香港房屋委員會（下稱「房委會」）向城市規劃委員會（下稱「城規會」）提出，旨在根據《城市規劃條例》第16條，向城規會申請規劃許可，略為放寬於東涌第133A、133B及133C區公營房屋發展計劃的地積比率以及建築物高度限制。

於《東涌擴展區分區計劃大綱核准圖編號 S/I-TCE/2》（下稱「大綱核准圖」）上，東涌第133A區主要劃為「住宅（甲類）2」，及有小部分座落於旁邊劃為「休憩用地」的地方，而東涌第133B及C區則劃為「住宅（甲類）3」地帶。東涌第133A區受限於最高地積比率6.5倍及建築物高度限制的主水平基準以上115米；而東涌第133B及133C區則受限於最高地積比率6.4倍及建築物高度限制的主水平基準以上110米。

因應公營房屋用地短缺，政府一直採取多管齊下的措施以增加公營房屋土地供應，包括在技術可行的情況下優化個別公營房屋地盤的發展潛力。為配合2018年12月政府公布的「提升公營房屋用地的發展密度」政策，在技術可行的情況下可適度提高在新市鎮的最高住用地積比率最多三成，房委會建議申請略為放寬東涌第133A、B及C區公營房屋發展計劃的地積比率以及建築物高度限制，以更有效運用珍貴的土地資源。是項規劃申請建議東涌第133A區的最高地積比率由6.5倍增加至7.0倍(約+7.7%)，以及放寬建築物高度限制由主水平基準以上115米增加至135米(約+17.4%)；東涌第133B區的最高地積比率由6.4倍增加至6.8倍 (約+6.3%)，以及放寬建築物高度限制由主水平基準以上110米增加至130米(約+18.2%)；而東涌第133C區的最高地積比率由6.4倍增加至6.7倍 (約+4.7%)，以及放寬建築物高度限制由主水平基準以上110米增加至125米(約+13.6%)。因應擬議增加的發展密度，東涌第133A、133B及133C區能分別提供約6,817個公營房屋單位(增加2,247個單位或約+49.2%)；約2,448個公營房屋單位(增加422個單位或約+20.8%)；及約2,571個公營房屋單位(增加601個單位或約+30.5%)。

擬議略為放寬地積比率限制及建築物高度限制的主要理據如下：

- 提案符合行政會議於2018年12月公布的「提升公營房屋用地的發展密度」政策措施，以善用土地資源；
- 提案是為了滿足公營房屋的殷切需求。根據《長遠房屋策略》2023年周年進度報告，公私營房屋供應比例繼續維持為70：30，而2024/25至2033/34年度10年間的公營房屋供應目標為308,000個單位；
- 擬議公營房屋發展與周邊的發展密度兼容；
- 提案在空氣流通、視覺、景觀、污水、供水、交通、環境方面均不會對周邊地區帶來重大影響；及
- 提案能帶來規劃增益，提供額外約3,270個公營房屋單位(約+38.2%)。

基於以上各點，懇請城規會批准是項申請。

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1. INTRODUCTION

1.1 This application seeks the Town Planning Board ("TPB")'s permission under Section 16 ("s.16") of the Town Planning Ordinance for the proposed minor relaxation of restrictions of maximum Plot Ratio ("PR") and building height ("BH") for the planned public housing developments at Tung Chung Areas 133A ("TC 133A"), 133B ("TC 133B") and 133C ("TC 133C") ("The Application Sites"). For TC 133A, it is proposed to increase maximum overall PR from 6.5 to 7.0 (around +7.7%), and maximum BH restriction from 115mPD to 135mPD (around +17.4%). For TC 133B, it is proposed to increase maximum overall PR from 6.4 to 6.8 (around +6.3%), and maximum BH restriction from 110mPD to 130mPD (around +18.2%). And for TC 133C, it is proposed to increase maximum overall PR from 6.4 to 6.7 (around +4.7%), and maximum BH restriction from 110mPD to 125mPD (around +13.6%).

2 SITE CONTEXT

2.1 Planning Context

2.1.1 TC 133A, with a site area of about 4.3 hectare (ha), is mostly zoned "Residential (Group A)2" ("R(A)2") with a small portion in area zoned as "Open Space" ("O") on the Approved Tung Chung Extension Area Outline Zoning Plan No. S/I-TCE/2 ("the OZP"). TC 133A is subject to a maximum overall PR of 6.5 and a maximum BH of +115mPD. TC 133B and 133C have a site area of about 1.81 and 1.85 hectare (ha) respectively. According to the OZP, TC 133B and 133C are zoned "Residential (Group A)3" ("R(A)3"), and are subject to a maximum overall PR of 6.4 and a maximum BH of +110mPD (***Figure 1*** refers). The Application Sites are entirely on the Government land.

2.1.2 In pursuit of the policy of "Enhancement of the Development Intensity of Public Housing Sites" announced by the Executive Council ("ExCo") in December 2018 for addressing the shortage in public housing supply, the HKHA proposes to increase the flat production in the Application Sites through the minor relaxation of PR and BH. For TC 133A, it is proposed to increase maximum overall PR from 6.5 to 7.0, and maximum BH restriction from 115mPD to 135mPD. For TC 133B, it is

proposed to increase maximum overall PR from 6.4 to 6.8, and maximum BH restriction from 110mPD to 130mPD. For TC 133C, it is proposed to increase maximum overall PR from 6.4 to 6.7, and maximum BH restriction from 110mPD to 125mPD.

2.2 Surrounding Land Uses

2.2.1 The Application Sites have been formed by reclamation and will be surrounded by land use pattern of a mixture of high-density residential developments, Government, Institution or Community uses sites and open space.

2.2.2 TC 133A is bounded by new Road L6 to the east, new Road L7 to the south, TC 145B which planned for a district open space, as well as new Road D3 to the west, and new Road D2 to the north. To the east across Road L6 are TC 133 B & C public housing sites. To the south across Road L7, it is TC 129 planned for commercial development. To the west across the Road D3 are TC 117 planned for public housing development and TC 113 planned for integrated development for commercial and residential uses cum Public Transport Interchange (PTI). To the north of TC 133A across Road D2, it is TC 139 and 145C which planned for medium residential development and district open space respectively.

2.2.3 TC 133B is bounded by TC 135 planned for educational uses and new Road D2 to the east, TC 133C public housing site / new Road L7 to the south, new Road L6 to the west, and new Road D2 to the north. To the east across Road D2, it is TC 138 planned for sports ground. To the south across Road L7 is TC 130 planned for commercial development. To the west across Road L6, it is TC 133A public housing site. To the north across Road D2 are TC 139 & 141 planned for medium residential developments.

2.2.4 TC 133C is bounded by TC 134 & 135 which planned for government and educational uses respectively and new Road D2 to the east, new Road L7 to the south, new Road L6 to the west, and TC 133B public housing site and new Road D2 to the north. To the east across Road D2 are TC 137 & 138 planned for government uses and sports ground respectively. To the south across Road L7 is TC 130 planned for commercial development. To the west across Road L6 is TC

133A public housing site. To the north across Road D2, it is TC 145C planned for district open space.

2.3 Accessibility

2.3.1 The proposed vehicular access of the Application Sites would be via the new Road L6. Separate vehicular ingress/egress for PTI at TC 133B are located at Roads D2 and L6.

2.3.2 The main pedestrian access to TC133A is from Road D3. For TC 133B, the main pedestrian access would be via Road L6. For TC 133C, the main pedestrian access would be via Road L6.

2.3.3 As for public transport, the planned Tung Chung East station is around 450-600 m walking distance from TC 133A, TC 133B and TC 133C. There is also a planned PTI located at TC 133B, providing public transport services to serve the nearby population as well as the residents of the public housing developments.

3. DEVELOPMENT PROPOSAL

3.1 The Proposed Scheme

3.1.1 The proposed scheme at TC 133A adopts a maximum domestic PR of 6.5 plus non-domestic PR of 0.5 and a maximum BH not exceeding 135mPD, providing about 6,817 flats with a design population of about 16,469. The proposed scheme at TC 133B adopts a maximum domestic PR of 6.5, plus non-domestic PR of 0.3 and a maximum BH not exceeding 130mPD, providing about 2,448 flats with a design population of about 7,620. The proposed scheme at TC 133C adopts a maximum domestic PR of 6.5, plus non-domestic PR of 0.2 and a maximum BH not exceeding 125mPD, providing about 2,571 flats with a design population of about 6,942.

3.1.2 The differences in key parameters of TC 133A, TC 133B and TC 133C, as compared against the baseline schemes which is a OZP compliant scheme, are summarized in ***Tables 1, 2 and 3*** below.

Table 1 Comparison between the Baseline Scheme and Proposed Scheme for TC 133A

Development Parameters	**Baseline Scheme [A]**	**Proposed Scheme [B]**	**Difference [B] – [A]**
Site Area - **Gross Site Area** - **Net Site Area**[1]	 About 43,000m^2 About 41,900m^2	 About 43,000m^2 About 41,900m^2	
Maximum PR[2] - Overall: - Domestic: - Non-domestic:	 6.5 6.0 0.5	 7.0 6.5 0.5	+0.5 (+7.7%)
Gross Floor Area (GFA) [1, 2] - **Total** - **Domestic** - **Non-Domestic**	 About 272,350m^2 About 251,400m^2 About 20,950m^2	 About 293,300m^2 About 272,350m^2 About 20,950m^2	+20,950m^2 (+7.7%)
Maximum Building Height (Measured at Main Roof Level)	Not exceeding +115mPD	Not exceeding +135mPD	+20mPD (+17.4%)
Flat Production	About 4,570	About 6,817	+2,247 (+49.2%)
Design Population	About 13,984 [3]	About 16,469 [4]	+2,485 (+17.8%)

Note 1: The small portion of area zoned "O" is used as Emergency Vehicle Access / Dedicated Pedestrian Zone and is excluded from Net Site Area.

Note 2: Overall maximum PR and GFA excluding the PR/GFA of the public market to be provided by FEHD and all parking facilities to be provided by HKHA and FEHD.
Note 3: According to the Planning and Engineering Study for Tung Chung New Town Extension completed in 2016, average household size assumption of 3.06 was adopted for technical assessment purpose.
Note 4: Based on the individual household size of the proposed flat mix.

Table 2 Comparison between the Baseline Scheme and Proposed Scheme for TC 133B

Development Parameters	**Baseline Scheme [A]**	**Proposed Scheme [B]**	**Difference [B] – [A]**
Site Area - **Gross Site Area** - **Net Site Area**	 About 18,100m^2 About 18,100m^2	 About 18,100m^2 About 18,100m^2	
Maximum PR[5] - Overall: - Domestic: - Non-domestic:	 6.4 6 0.4	 6.8 6.5 0.3	Overall: +0.4 (+6.3%)
Gross Floor Area (GFA)[5, 6] - **Total** - **Domestic** - **Non-Domestic**	 About 115,840m^2 About 108,600m^2 About 7,240m^2	 About 123,080m^2 About 117,650m^2 About 5,430m^2	+ 7,240m^2 (+6.3%)
Maximum Building Height (Measured at Main Roof Level)	Not exceeding +110mPD	Not exceeding +130mPD	+20mPD (+18.2%)
Flat Production	About 2,026	About 2,448	+422 (+20.8%)
Design Population	About 6,200 [7]	About 7,620 [8]	+1,420 (+22.9%)

Note 5: Overall maximum PR and GFA excluding the PR/GFA of the PTI, welfare facilities and all parking facilities.
Note 6: Calculation based on the net site area of 18,100m^2.
Note 7: According to the Planning and Engineering Study for Tung Chung New Town Extension completed in 2016, average household size assumption of 3.06 was adopted for technical assessment purpose.
Note 8: Based on the individual household size of the proposed flat mix.

Table 3 Comparison between the Baseline Scheme and Proposed Scheme for TC 133C

Development Parameters	**Baseline Scheme [A]**	**Proposed Scheme [B]**	**Difference [B] – [A]**
Site Area - **Gross Site Area** - **Net Site Area**	 About 18,500m^2 About 18,500m^2	 About 18,500m^2 About 18,500m^2	
Maximum PR[9] - Overall: - Domestic: - Non-domestic:	 6.4 6 0.4	 6.7 6.5 0.2	Overall: +0.3 (+4.7%)

Gross Floor Area (GFA)[9, 10] - **Total** - **Domestic** - **Non-Domestic**	 About 118,400m^2 About 111,000m^2 About 7,400m^2	 About 123,950m^2 About 120,250m^2 About 3,700m^2	 + 5,550m^2 (+4.7%)
Maximum Building Height (Measured at Main Roof Level)	Not exceeding +110mPD	Not exceeding +125mPD	+15mPD (+13.6%)
Flat Production	About 1,970	About 2,571	+601 (+30.5%)
Design Population	About 6,028 [11]	About 6,942 [12]	+914 (+15.2%)

Note 9: Overall maximum PR and GFA excluding the PR/GFA of welfare facilities and all parking facilities.
Note 10: Calculation based on the net site area of 18,500m^2
Note 11: According to the Planning and Engineering Study for Tung Chung New Town Extension completed in 2016, average household size assumption of 3.06 was adopted for technical assessment purpose.
Note 12: Based on the latest average household size of 2.7.

3.1.3 The Proposed Scheme at TC 133A consists of five housing blocks which accommodate retail facilities, one 10-classroom kindergarten, estate management offices, podium gardens, carpark, and other associated ancillary facilities (***Appendix 1A*** refers). Portion of the site of about 0.6 ha is reserved for a standalone public market under the purview of Food and Environmental Hygiene Department (FEHD) at the southwestern corner of TC 133A. A footbridge is provided at podium level across a 20m-wide Non-Building Area ("NBA"), connecting the podium and the public market, to enhance the pedestrian connectivity at the podium level. Another footbridge would be provided at podium level to connect to TC 133B across Road L6. Not less than 16,469m^2 local open space in accordance with the HKPSG requirement of 1m^2 per person will be provided in TC 133A. Podium gardens and recreational facilities including two badminton courts, two table tennis tables, one basketball court and communal play areas will also be provided in TC 133A.

3.1.4 A small adjacent area (about 0.11 ha) zoned "O" is proposed to be included in TC 133A as an Emergency Vehicular Access (EVA) to allow greater flexibility for better planning and design, which would not be counted for PR calculation and local open space in the development. This concerned area will also serve as open space function and be accessible by the public.

3.1.5 The Proposed Scheme at TC 133B consists of four housing blocks which accommodate PTI of not less than 3,000 m^2 with planned completion year of 2029/30 tentatively, kindergarten, social welfare facilities, recreational facilities, parking facilities, estate management office and other associated ancillary facilities (***Appendix 1B*** refers). Not less than 7,620m^2 local open space will be provided in accordance with HKPSG requirement of 1 m^2 per person. Social welfare facilities for persons with disabilities will be provided in the public housing development at TC 133B[13]. A 6-classroom kindergarten, podium gardens and recreational facilities including one badminton court, one table tennis table, one basketball court and communal play areas will also be provided in TC 133B. The PTI is planned at this site to provide public transport services to the nearby population as well as the residents of the public housing developments[13].

3.1.6 The Proposed Scheme at TC 133C consists of four housing blocks which accommodate kindergarten, management office, social welfare facilities, recreational facilities, parking facilities, and other associated ancillary facilities (***Appendix 1C*** refers). Not less than 6,942m^2 local open space will be provided in accordance with HKPSG requirement of 1m^2 per person. Social welfare facilities for children and elderly will be provided at this Site. Podium gardens and recreational facilities including one badminton court, one table tennis table, one basketball court and communal play areas will also be provided in TC 133C.

3.1.7 The key development parameters of TC 133A, TC 133B and TC 133C are summarized in ***Table 4, Table 5 and Table 6 respectively***.

Note 13: PTI and welfare facilities is subject to confirmation on Government funding availability.

Table 4 Key Development Parameters of TC 133A

Development Parameters	Proposed Scheme for TC 133A
Site Area [14]	
- **Gross Site Area**	About 43,000 m^2 (including FEHD's public market site of approx. 6,000 m^2 and the "Open Space" zoned under the OZP of approx. 1,100 m^2)
- **Net Site Area**	About 41,900 m^2 (including FEHD's public market site of approx. 6,000 m^2; excluding the "Open Space" zoned under the OZP of approx. 1,100 m^2)
Maximum PR [15]	
- **Overall**	7.0
- **Domestic**	6.5
- **Non-domestic**	0.5
GFA [15, 16]	
- **Overall**	About 293,300 m^2
- **Domestic**	About 272,350 m^2
- **Non-domestic**	About 20,950 m^2
Building Height (Measured at Main Roof Level)	Not exceeding +135 mPD
No. of Domestic Blocks	5
Flat Production	About 6,817
Design Population [17]	About 16,469
Site Coverage	
- **(<15m)**	Not more than 100%
- **(≥15m)**	Not more than 40% (Domestic) Not more than 65% (Non-domestic)
Local Open Space	Not less than 16,469 m^2
Children's Play Area	Not less than 1,318 m^2
Green Coverage (% of Gross Site Area)	Target 30%
Parking Provision [18]	
Car Parking Spaces (Domestic)	385
Car Parking Spaces (Retail & Commercial (R&C))	59
Car Parking Spaces (Visitors)	25
Motorcycle Parking Spaces	49
Light Goods Vehicle Parking (Domestic)	21

Loading/Unloading (L/UL) Bay (Domestic)	10 (One L/UL share use with other non-domestic facilities)
Loading/Unloading (L/UL) Bay (R&C)	11
Bicycle Parking (Domestic)	454
Car Parking Spaces (HD's Office)	2

Note 14: Subject to detailed survey.
Note 15: Full PR/GFA exemption for parking facilities and excluding the GFA of public market developed by FEHD.
Note 16: Calculation based on the net site area of 41,900 m^2 for TC 133A.
Note 17: Based on individual household size of the proposed flat mix for TC 133A.
Note 18: Provision in accordance with HKPSG as advised by Transport Department.

Table 5 Key Development Parameters of TC 133B

Development Parameters	**Proposed Scheme for TC 133B**
Site Area [19] - **Gross** - **Net**	 About 18,100 m^2 About 18,100 m^2
Maximum PR [20] - **Overall** - **Domestic** - **Non-domestic**	 6.8 6.5 0.3
GFA [20, 21] - **Overall** - **Domestic** - **Non-domestic**	 About 123,080 m^2 About 117,650 m^2 About 5,430 m^2
Building Height (Measured at Main Roof Level)	Not exceeding +130 mPD
No. of Domestic Blocks	4
Flat Production	About 2,448
Design Population[22]	About 7,620
Site Coverage - **(<15m)** - **(≥15m)**	 Not more than 100% Not more than 40% (Domestic) Not more than 65% (Non- domestic)
Local Open Space	Not less than 7,620 m^2
Children's Play Area	Not less than 610 m^2
Green Coverage (% of Gross Site Area)	Not less than 20%

Parking Provision [23]	
Car Parking Spaces (Domestic)	306
Car Parking Spaces (Visitors)	20
Motorcycle Parking Spaces	22
Light Goods Vehicle Parking (Domestic)	9
Loading/Unloading (L/UL) Bay (Domestic)	8 (One L/UL share use with welfare facilities and one L/UL share use with other non-domestic facilities)
Bicycle Parking (Domestic)	163
Welfare Facilities Parking	3

Note 19: Subject to detailed survey.
Note 20: Full PR/GFA exemption for parking spaces, welfare facilities, and PTI.
Note 21: Calculation based on the net site area of 18,100 m^2 for TC 133B.
Note 22: Based on individual household size of the proposed flat mix for TC 133B.
Note 23: Provision in accordance with HKPSG as advised by Transport Department.

Table 6 Key Development Parameters of TC 133C

Development Parameters	**Proposed Scheme for TC 133C**
Site Area [24] - **Gross** - **Net**	 About 18,500 m^2 About 18,500 m^2
Maximum PR [25] - **Overall** - **Domestic** - **Non-domestic**	 6.7 6.5 0.2
GFA [25, 26] - **Overall** - **Domestic** - **Non-domestic**	 About 123,950 m^2 About 120,250 m^2 About 3,700 m^2
Building Height (Measured at Main Roof Level)	Not exceeding +125 mPD
No. of Domestic Blocks	4
Flat Production	About 2,571
Design Population[27]	About 6,942
Site Coverage - **(<15m)** - **(≥15m)**	 Not more than 100% Not more than 40% (Domestic) Not more than 65% (Non- domestic)
Local Open Space	Not less than 6,942 m^2

Children's Play Area	Not less than 556 m^2
Green Coverage (% of Gross Site Area)	Not less than 20%
Parking Provision [28]	
Car Parking Spaces (Domestic)	321
Car Parking Spaces (Visitors)	20
Motorcycle Parking Spaces	23
Light Goods Vehicle Parking (Domestic)	10
Loading/Unloading (L/UL) Bay (Domestic)	8
Bicycle Parking (Domestic)	171
Welfare Facilities Parking	7
Welfare Facilities Loading / Unloading (L/UL)Bay	1 (Share use with other non-domestic facilities)

Note 24: Subject to detailed survey.
Note 25: Full PR/GFA exemption for parking spaces, and welfare facilities.
Note 26: Calculation based on the net site area of 18,500 m^2 for TC 133C.
Note 27: Based on average household size of 2.7 for TC 133C.
Note 28: Provision in accordance with HKPSG as advised by Transport Department.

3.2 Implementation Programme

3.2.1 Piling works of TC 133A, TC 133B and TC 133C would be commenced tentatively in Year 2024/2025 for planned building completion in Year 2029/30 tentatively.

4. PLANNING JUSTIFICATIONS

4.1 In line with Government's Policy on Intensification of Public Housing Sites

4.1.1 The ExCo announced in December 2018 the policy initiative on "Enhanced Development Intensity of Public Housing Sites" by increasing the maximum domestic PR of public housing sites up to 30% where their technical feasibility permits. The policy allows the maximum domestic PR of public housing sites located in selected Zones, including Density Zone 1 of New Towns where Application Sites are located, to be increased by up to 30% (versus by up to 20% as announced in the 2014 Policy Address), where technical feasibility permits. To this end, the proposed increase in maximum domestic PR from 6 to 6.5 and the proposed increase in maximum building height from not exceeding +115mPD to not exceeding +135mPD for TC 133A, from not exceeding +110mPD to not exceeding +130mPD for TC 133B, and from not exceeding +110mPD to not exceeding +125mPD for TC 133C are in line with this policy. The subject minor relaxation of BH and PR restrictions are thus proposed.

4.2 Meet Acute Demand for Public Housing

4.2.1 Under the Long Term Housing Strategy Annual Progress Report 2023, the split ratio of public/ private housing of 70:30 is maintained continuously, and supply target for public housing is 308,000 for the ten year from Year 2024/25 to Year 2033/34. As at end-December 2023, there were about 129,400 general applications for public rental housing, and about 92,300 non-elderly one-person applications under the Quota and Points System. The proposal with minor relaxation of restrictions of PR and BH for TC 133A, TC 133B and TC 133C would increase the overall public housing production by providing about 3,270 additional flats (+38.2%) and increased about 4,819 persons (+18.4%) of planned population as a result of the intensified development, and is in line with the Government policy to better utilize land resources for increasing the public housing flat production in order to meet the imminent housing need.

4.3 Compatible with Surrounding Development Context

4.3.1 The proposed maximum overall PR of 7.0 and maximum BH of +135mPD for TC 133A; a maximum overall PR of 6.8 with a maximum BH of 130mPD for TC 133B;

and a maximum overall PR of 6.7 with a maximum BH of 125mPD for TC 133C are compatible with high-rise residential developments (such as planned public housing developments at TC 114 and TC 117 with a maximum overall PR of 6.9 and maximum domestic PR of 6.5; and private housing development at TC 115 and TC 116 with a maximum PR of 6.5; and the integrated development for commercial and residential uses cum PTI at TC 113 with a maximum overall PR of 8.8) in the vicinity. The proposed BH of TC 133A, TC 133B and TC 133C are also considered compatible with the stepped BH profile in the area, descending from the highest height band (including TC 113 with maximum BH restriction of 175-185mPD, TC 129 with maximum BH restriction of 160mPD and TC 130 with maximum BH restriction of 140mPD) in the south towards the waterfront area in the north. The Proposed Schemes of TC 133A, TC 133B and TC 133C are visually compatible with the surroundings.

4.4 Optimization of Site Development Potential

4.4.1 The disposition and layout of the building blocks of the Proposed Schemes have been specifically designed in response to the development constraints and site contexts (i) 0.6 ha of site area reserved for the standalone public market in TCA 133A; (ii) a PTI of not less than 3,000m^2 have to be provided at TCA 133B; (iii) 20m wide non-building areas are required in TCA 133A & C; and (iv) 50% of greening ratio should be provided at grade level and minimum building separations are required according to sustainable building design guidelines, which would reduce the developable site areas. Furthermore, various non-domestic facilities have to be provided within the developments, such as retail frontages in accordance with the Outline Development Plan (ODP) & the Urban Design Study at the western boundary of TC 133A, PTI to be provided at TC 133B as stated in the Explanatory Statement of OZP and ODP, social welfare facilities agreed with Social Welfare Department and other necessary community facilities / kindergarten / car parking spaces in accordance with the HKPSG requirement and requirement from relevant government departments, etc. Thus, multi-storey podiums would be required to accommodate these non-domestic facilities. Nevertheless, beside the increased public housing flats, public market, PTI, retail provision, and social welfare facilities, which are beneficial to the neighborhood would also be provided in the proposed public housing developments.

4.5 No Significant Change in Urban Design and Landscape Impact

4.5.1 The minor relaxation of restrictions of PR and BH of TC 133A, TC 133B and TC 133C would not compromise any original planning for high-density public housing development, urban design concepts / intentions and landscape aspects. A 20m-wide NBA running in east-west direction would be provided in TC 133A and TC 133C at ground level to serve as breezeways with consideration to the prevailing wind and provide a major view corridor to the sea.

4.5.2 To promote vibrant street life and provide local commercial uses serving the residents, commercial frontage would be provided at TC 133A along the western boundary fronting the open space at TC 145B.

4.5.3 The Application Sites are lately reclaimed sites with no landscape resources and existing trees. The Proposed Developments at TC 133A, 133B and 133C are unlikely to cause any further significant adverse landscape impact as the surrounding areas are also reclamation sites with similar design characters. As similar high-density public housing developments planned/currently under construction will be developed at TC 99, TC 100, TC 103, TC 109, TC 114, TC 117 and TC 119 in the vicinity at Tung Chung New Town Extension Area, TC 133A, TC 133B and TC 133C for same public housing uses which share similar development contexts are considered compatible with the surrounding local environment.

4.5.4 The landscape designs of TC 133A, TC 133B and TC 133C aim to maximize greening and recreational opportunity to cater for the enjoyment of the residents. The green coverage of TC 133A will be targeted at 30% of the gross site area, and TC 133B and TC 133C will be providing green coverage of a minimum 20% of the gross site area, with the integration of local open space. Please refer to Landscape Master Plans and Open Space Demarcation Plans of separate levels at **Appendice 2A- 2C** for details.

4.6 No Adverse Technical Implications

No Adverse Impact on the Air Ventilation

4.6.1 An Air Ventilation Assessment ("AVA")(Expert Evaluation (EE)) (***Appendix 3*** refers) has been prepared based on the Proposed Schemes of TC 133A, TC 133B and TC 133C. The mitigation measures, such as a 20m-wide NBA at ground level is incorporated at TC 133A and TC 133C, setback from the western boundary & northern boundary at podium level / building separation along the east-west axis between TC 133 A & B / use of truncated wings of the residential towers & empty bays, together would enhance the air ventilation and provide a satisfactory wind environment at pedestrian level.

4.6.2 It is concluded that with appropriate mitigation measures, the overall ventilation performance of the surrounding areas would not be significantly affected by the proposed increase of PR and BH under the Proposed Schemes. Thus, no adverse impact on air ventilation is anticipated.

No Adverse Visual Impact

4.6.3 A Visual Impact Assessment ("VIA") (***Appendix 4*** refers) has been conducted in accordance with the Town Planning Board Guidelines No. 41 – Submission of Visual Impact Assessment. A total of 5 Viewpoints ("VPs") are selected that can best facilitate the TPB to visualize the three-dimensional relationship of the proposed developments with the surrounding context. The 5 VPs cover the strategic locations around the proposed development developments.

4.6.4 Based on the analysis, the residual cumulative visual impact of the proposed development is considered negligible and conforms with the surrounding buildings and is seen as an extension of the townscape.

No Adverse Sewerage Impact

4.6.5 Sewerage Impact Assessments ("SIA") (***Appendix 5*** refers) has been prepared for the Proposed Schemes of TC 133A, TC 133B and TC 133C. The study findings conclude that the planned sewerage system has sufficient capacity to cater for the additional sewage discharge from the Proposed Developments.

4.6.6 The Civil Engineering and Development Department ("CEDD") will undertake the implementation of planned infrastructure according to the planned population threshold.

No Adverse Impact on the Fresh and Salt Water Supply System

4.6.7 Water Works Impact Assessment ("WWIA") (***Appendix 6*** refers) has been prepared for the Proposed Schemes of TC 133A, TC 133B and TC 133C. The results of the WWIA conclude that the planned fresh and salt water supply systems in the vicinity are adequate to serve the proposed public housing developments at Application Sites and no adverse impact is anticipated on the fresh and salt water supply system in the area.

No Adverse Traffic Impact

4.6.8 A Traffic Review Study (TRS) for the Proposed Schemes at TC 133A, TC 133B and TC 133C has been carried out. The result of TRS indicates that the proposal will not cause insurmountable traffic impact on the surrounding road network with the provision of improvement measures at local junctions included in infrastructure under Tung Chung New Town Extension project by CEDD. Car parking and loading/unloading facilities are provided to meet the HKPSG requirements, parking demand in the district, and to the satisfaction of the Transport Department ("TD"). Please refer to the TRS at ***Appendix 7*** for details.

No Adverse Environmental Impact

4.6.9 Environmental Assessment Studies ("EAS") was conducted to address the potential road traffic noise, fixed plant noise and air quality impact. The result of the EAS at ***Appendix 8*** has demonstrated that the Proposed Schemes of TC 133A, TC 133B and TC 133C will have no insurmountable impact with appropriate noise mitigation measures to be incorporated in the proposed public housing developments at the Application Sites, such as provision of acoustic windows, architectural fins and fixed windows.

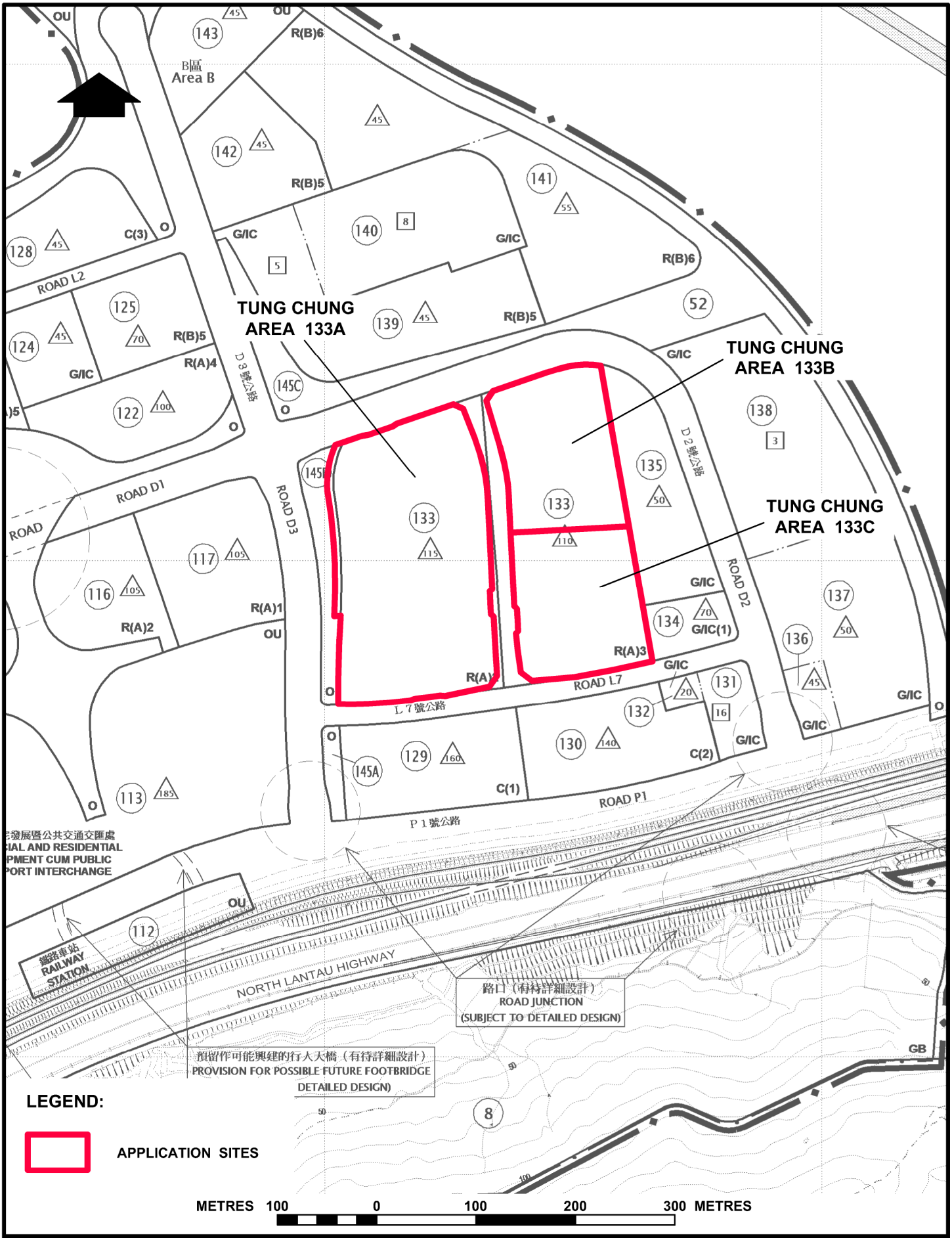
5 CONCLUSION

5.1 It has been demonstrated in this Supporting Planning Statement that the proposed minor relaxation of restrictions of maximum PR from 6.5 to 7.0, and maximum BH from 115mPD to 135mPD for TC 133A; the proposed maximum PR from 6.4 to 6.8 and maximum BH from 110mPD to 130mPD for TC 133B; and the proposed maximum PR from 6.4 to 6.7 and maximum BH from 110mPD to 125mPD for TC 133C will facilitate the provision of an addition of around 3,270 public housing flats. It is in line with the Government's policy directives to maximize the development potential of valuable land resources. Nevertheless, beside the increased public housing flats, public market, PTI, retail provision, and social welfare facilities, which are beneficial to the neighborhood would also be provided in the proposed public housing developments.

5.2 The Proposed Schemes at the Application Sites are also in line with the planning intention of the "R(A)2" zone for TC 133A and "R(A)3" for TC 133B and TC 133C, and are compatible with the surrounding developments. As demonstrated in the technical assessments, the Proposed Schemes will have no insurmountable impacts on urban design, air ventilation, visual, sewerage, fresh and salt water supply capacity, traffic and environmental aspects.

5.3 In view of the above, the TPB is requested to give favorable consideration on the proposed minor relaxation of restrictions of maximum PR and BH of the Application Sites.

Figure



TUNG CHUNG AREAS 133A, 133B & 133C LOCATION PLAN

HOUSING DEPARTMENT
PLANNING SECTIONS

Figure 1

DATE :
3. 4. 2024

BASE EXTRACTED FROM OZP No. S/I-TCE/2

Appendix 1A

Schematic Drawings for Tung Chung Area 133A

TUNG CHUNG AREA 139

ROAD D2

DISTRICT OPEN SPACE

BLK 1
DOMESTIC BLOCK WITH PODIUM
MAIN ROOF 134

LANDSCAPE DECK ON PODIUM

BLK 3
DOMESTIC BLOCK WITH PODIUM
MAIN ROOF 134

BLK 2
DOMESTIC BLOCK WITH PODIUM
MAIN ROOF 134

TUNG CHUNG AREA 133A

BLK 4
DOMESTIC BLOCK WITH PODIUM
MAIN ROOF 134

TUNG CHUNG AREA 133B

TUNG CHUNG AREA 135

TUNG CHUNG AREA 133C

TUNG CHUNG AREA 134

ROAD D3

ROAD L6

ROAD L7

NON BUILDING AREA

RUN IN / OUT

PUBLIC MARKET BY GOVERNMENT (FOR REFERENCE ONLY)

BLK 5
DOMESTIC BLOCK
MAIN ROOF 125

TUNG CHUNG AREA 131

TUNG CHUNG AREA 130

TUNG CHUNG AREA 129

LEGEND:

APPLICATION SITE
申請地點

AT GRADE OPEN SPACE / LANDSCAPE DECK
地面休憩空間/園景平台

NON BUILDING AREA
非建築用地

PROJECT
SECTION 16 PLANNING APPLICATION FOR TUNG CHUNG AREA 133

DRAWING TITLE
TCA 133A MASTER LAYOUT PLAN - BLOCK PLAN
(FOR REFERENCE ONLY & SUBJECT TO DESIGN REVIEW)

房 屋 署
HOUSING DEPARTMENT

編號 DRAWING NO. IS29/-/S16/A/MLP-01

比 例 SCALE 1:1500 (A3)

日 期 DATE

LEGEND

- EMERGENCY VEHICULAR ACCESS / DEDICATED PEDESTRIAN ZONE
- APPLICATION SITE 申請地點
- NON BUILDING AREA 非建築用地

N

ROAD D2

EVA / SERVICE ACCESS

TUNG CHUNG AREA 133B

DISTRICT OPEN SPACE

ABOUT 6m

BLOCK 1 +6

BLOCK 3 +6

CARPARK +6

SHOP / EATING PLACE

E&M

RS & MRC

LIFT LOBBY

RCP & JCP

EVA ONLY

LIFT LOBBY

ABOUT 10m COMMERCIAL FRONTAGE

ABOUT 5m SET BACK

BLOCK 2 +6

SHUTTLE LIFT

BLOCK 4

ROAD L6

TUNG CHUNG AREA 133C

RUN IN / OUT

NON BUILDING AREA

PUBLIC MARKET BY GOVERNMENT (FOR REFERENCE ONLY)

BASKETBALL COURT

BLOCK 5 +6

ROAD L7

PROJECT	DRAWING TITLE	房屋署 HOUSING DEPARTMENT		
SECTION 16 PLANNING APPLICATION FOR TUNG CHUNG AREA 133	TCA 133A MASTER LAYOUT PLAN – G/F PLAN (FOR REFERENCE ONLY & SUBJECT TO DESIGN REVIEW)	編號 DRAWING NO. IS29/-/S16/A/LO-01	比例 SCALE 1:800 (A3)	日期 DATE

LEGEND

APPLICATION SITE
申請地點

NON BUILDING AREA
非建築用地

N

ROAD D2

TUNG CHUNG AREA 133B

DISTRICT OPEN SPACE

BLOCK 1

E&M

E&M

LIFT LOBBY

CARPARK

+13

BLOCK 3

E&M

LIFT LOBBY

E&M

SHOP / EATING PLACE

+13

CANOPY

LIFT LOBBY

E&M

FOOTBRIDGE

SHOP / EATING PLACE

SHOP / EATING PLACE

SHOP / EATING PLACE

10000 COMMERCIAL FRONTAGE

BLOCK 2

+13

E&M

LIFT LOBBY

CANOPY

SHUTTLE LIFT

+13

BLOCK 4

SHOP / EATING PLACE

+13

LIFT LOBBY

E&M

E&M

ROAD L6

TUNG CHUNG AREA 133C

VOID

CANOPY

CANOPY

CANOPY

FOOTBRIDGE

ROOF OF COVERED WALKWAY

ROOF OF COVERED WALKWAY

CANOPY

RUN IN / OUT

NON BUILDING AREA

PUBLIC MARKET BY GOVERNMENT
(FOR REFERENCE ONLY)

BLOCK 5

VOID

E&M

ROAD L7

PROJECT	DRAWING TITLE	房屋署 HOUSING DEPARTMENT		
SECTION 16 PLANNING APPLICATION FOR TUNG CHUNG AREA 133	TCA 133A MASTER LAYOUT PLAN – P1/F PLAN (FOR REFERENCE ONLY & SUBJECT TO DESIGN REVIEW)	編號 DRAWING NO. IS29/-/S16/A/LO-02	比例 SCALE 1:800 (A3)	日期 DATE

LEGEND

APPLICATION SITE
申請地點

NON BUILDING AREA
非建築用地

N

ROAD D2

TUNG CHUNG AREA 133B

DISTRICT OPEN SPACE

BLOCK 1

BLOCK 2

BLOCK 3

BLOCK 4

BLOCK 5

CARPARK

+17

E&M

LIFT LOBBY

CANOPY

SHUTTLE LIFT

TUNG CHUNG AREA 133C

ROAD L6

RUN IN / OUT

NON BUILDING AREA

PUBLIC MARKET BY GOVERNMENT
(FOR REFERENCE ONLY)

ROAD L7

PROJECT

SECTION 16 PLANNING APPLICATION
FOR TUNG CHUNG AREA 133

DRAWING TITLE

TCA 133A MASTER LAYOUT PLAN – P2/F PLAN
(FOR REFERENCE ONLY & SUBJECT TO DESIGN REVIEW)

房 屋 署
HOUSING DEPARTMENT

編號 DRAWING NO.	比 例 SCALE	日 期 DATE
IS29/-/S16/A/LO-03	1:800 (A3)	

LEGEND

APPLICATION SITE
申請地點

NON BUILDING AREA
非建築用地

N

ROAD D2

TUNG CHUNG AREA 133B

DISTRICT OPEN SPACE

OFFICE (DTMO)

E&M

OFFICE (PMA)

OFFICE (EMO)

BLOCK 1
LIFT LOBBY
+21

PODIUM LANDSCAPE

BLOCK 3
LIFT LOBBY
+21

BADMINTON COURT

BADMINTON COURT

SHUTTLE LIFT

KINDERGARTEN

BLOCK 2
LIFT LOBBY
+21

+21

SHUTTLE LIFT

BLOCK 4
LIFT LOBBY
+21

TUNG CHUNG AREA 133C

ROAD L6

RUN IN / OUT

NON BUILDING AREA

PUBLIC MARKET BY GOVERNMENT
(FOR REFERENCE ONLY)

BLOCK 5

ROAD L7

PROJECT

SECTION 16 PLANNING APPLICATION
FOR TUNG CHUNG AREA 133

DRAWING TITLE

TCA 133A MASTER LAYOUT PLAN – P3/F PLAN
(FOR REFERENCE ONLY & SUBJECT TO DESIGN REVIEW)

房 屋 署
HOUSING DEPARTMENT

編號 DRAWING NO.
IS29/-/S16/A/LO-04

比 例 SCALE
1:800 (A3)

日 期 DATE

LEGEND

APPLICATION SITE
申請地點

NON BUILDING AREA
非建築用地

N

ROAD D2

+5.5

+5.5

TUNG CHUNG AREA 133B

DISTRICT OPEN SPACE

BLOCK 1

BLOCK 3

BLOCK 2

BLOCK 4

+5.5

ROAD L6

TUNG CHUNG AREA 133C

NON BUILDING AREA

RUN IN / OUT

+6.0

+6.0

BLOCK 5

PUBLIC MARKET BY GOVERNMENT
(FOR REFERENCE ONLY)

+5.6

ROAD L7

+5.5

PROJECT

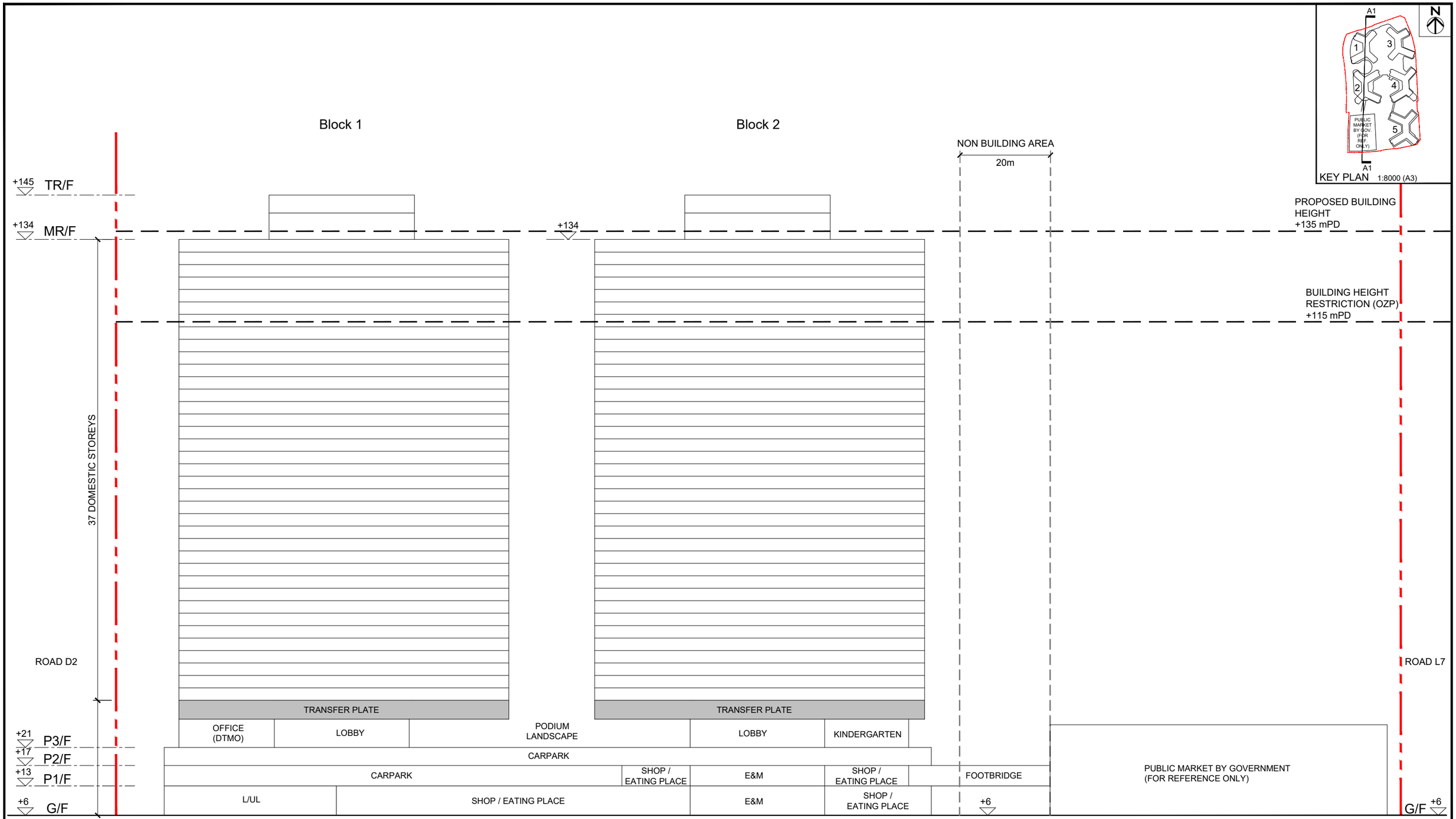
SECTION 16 PLANNING APPLICATION
FOR TUNG CHUNG AREA 133

DRAWING TITLE

TCA 133A MASTER LAYOUT PLAN – TYPICAL FLOOR PLAN
(FOR REFERENCE ONLY & SUBJECT TO DESIGN REVIEW)

房 屋 署
HOUSING DEPARTMENT

編號 DRAWING NO.	比 例 SCALE	日 期 DATE
IS29/-/S16/A/LO-05	1:800 (A3)	



LEGEND

- APPLICATION SITE 申請地點
- NON BUILDING AREA 非建築用地

PROJECT

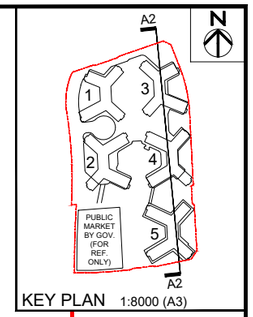
SECTION 16 PLANNING APPLICATION FOR TUNG CHUNG AREA 133

DRAWING TITLE

TCA 133A SECTION A1 - A1
(FOR REFERENCE ONLY & SUBJECT TO DESIGN REVIEW)

房 屋 署
HOUSING DEPARTMENT

編號 DRAWING NO.	比 例 SCALE	日 期 DATE
IS29/-/S16/A/LO-06	1:800 (A3)	



KEY PLAN 1:8000 (A3)

Block 5

NON BUILDING AREA
20m

Block 4

Block 3

PROPOSED BUILDING HEIGHT +135 mPD

BUILDING HEIGHT RESTRICTION (OZP) +115 mPD

TR/F +145

MR/F +134

+134

+125 MR/F

40 DOMESTIC STOREYS

37 DOMESTIC STOREYS

ROAD L7

ROAD D2

TRANSFER PLATE

LOBBY

PODIUM LANDSCAPE

LOBBY

TRANSFER PLATE

TRANSFER PLATE

CARPARK

SHOP / EATING PLACE

E&M

CARPARK

E&M

CARPARK

COVERED WALKWAY

E&M

LOBBY

E&M

E&M

L/UL

E&M

P3/F +21

P2/F +17

P1/F +13

+6 G/F

+6

G/F +6

LEGEND

APPLICATION SITE
申請地點

NON BUILDING AREA
非建築用地

PROJECT

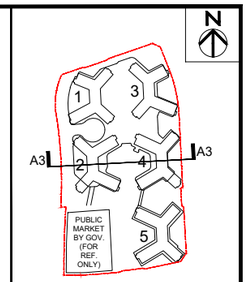
SECTION 16 PLANNING APPLICATION FOR
TUNG CHUNG AREA 133

DRAWING TITLE

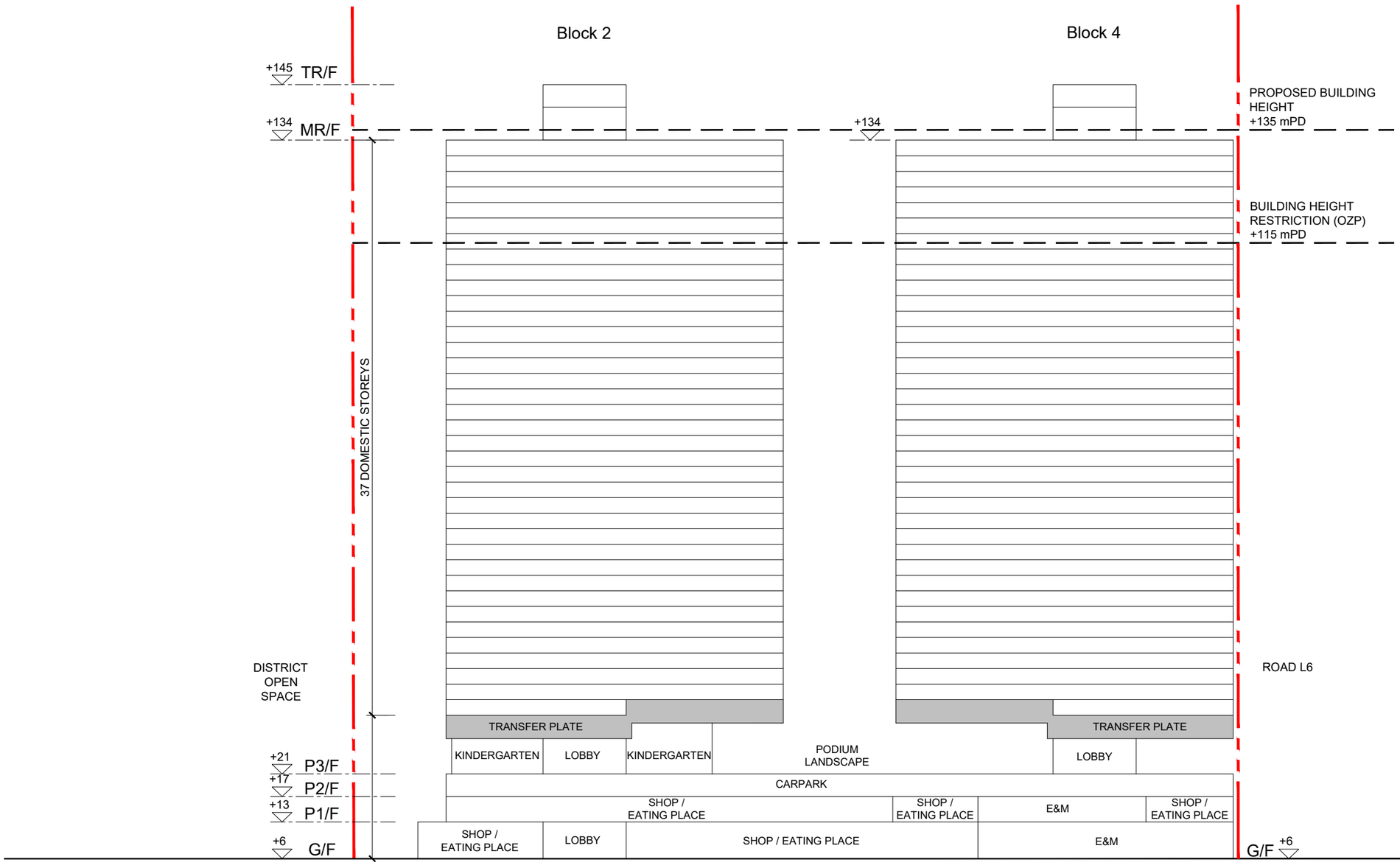
TCA 133A SECTION A2 - A2
(FOR REFERENCE ONLY & SUBJECT TO DESIGN REVIEW)

房 屋 署
HOUSING DEPARTMENT

編號 DRAWING NO.	比 例 SCALE	日 期 DATE
IS29/-/S16/A/LO-07	1:800 (A3)	



KEY PLAN 1:8000 (A3)



LEGEND

APPLICATION SITE
申請地點

NON BUILDING AREA
非建築用地

PROJECT

SECTION 16 PLANNING APPLICATION FOR
TUNG CHUNG AREA 133

DRAWING TITLE

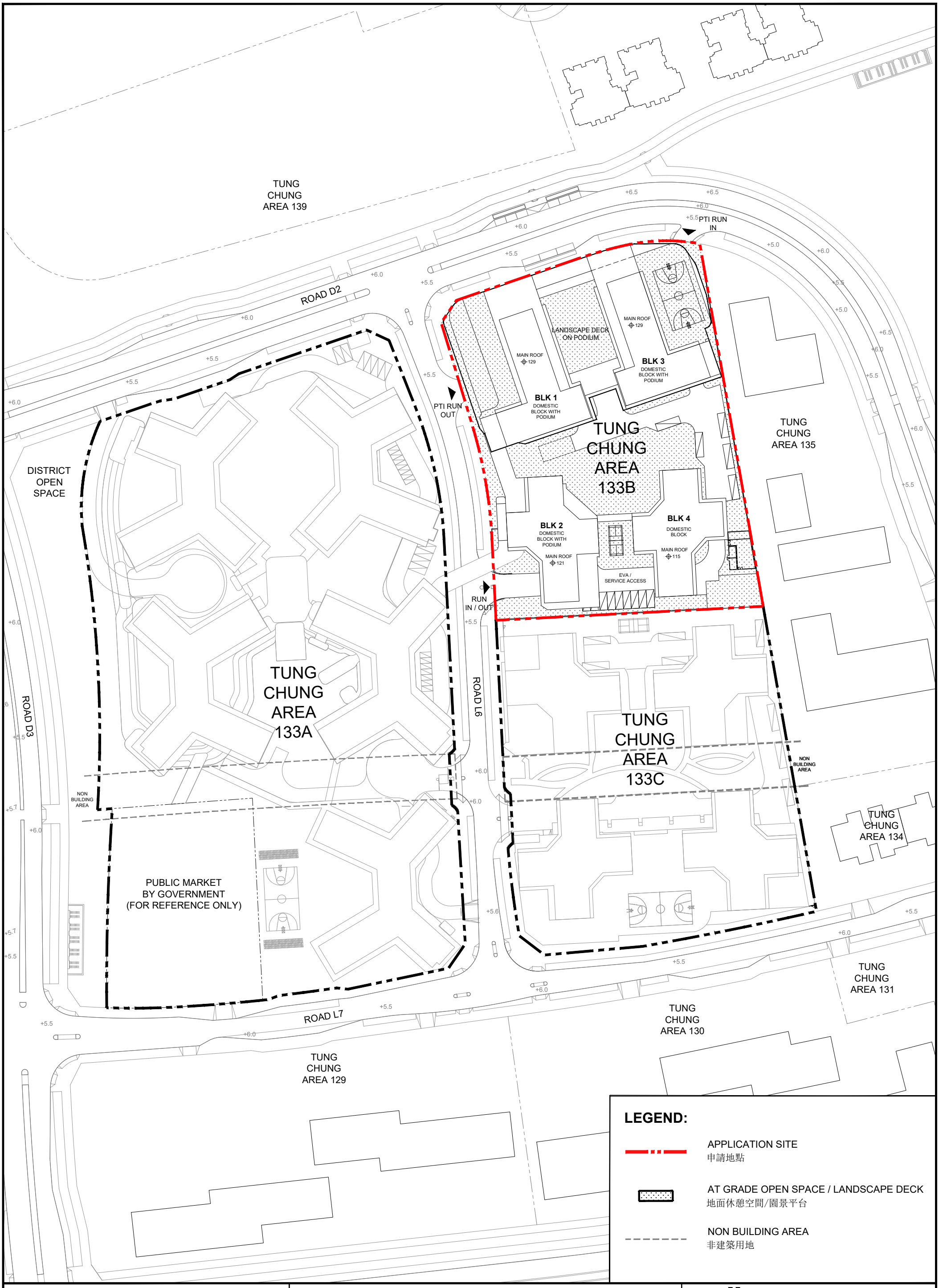
TCA 133A SECTION A3 - A3
(FOR REFERENCE ONLY & SUBJECT TO DESIGN REVIEW)

房 屋 署
HOUSING DEPARTMENT

編號 DRAWING NO.	比例 SCALE	日期 DATE
IS29/-/S16/A/LO-08	1:800 (A3)	

Appendix 1B

Schematic Drawings for Tung Chung Area 133B



LEGEND:

- APPLICATION SITE 申請地點
- AT GRADE OPEN SPACE / LANDSCAPE DECK 地面休憩空間/園景平台
- NON BUILDING AREA 非建築用地

PROJECT

SECTION 16 PLANNING APPLICATION FOR TUNG CHUNG AREA 133

DRAWING TITLE

TCA 133B MASTER LAYOUT PLAN - BLOCK PLAN (FOR REFERENCE ONLY & SUBJECT TO DESIGN REVIEW)

房 屋 署
HOUSING DEPARTMENT

編號 DRAWING NO. IS30/-/S16/A/MLP-01

比 例 SCALE 1:1500 (A3)

日 期 DATE

N

TUNG CHUNG
AREA 139

ROAD D2

PTI RUN IN

PTI

PUBLIC TOILET

E&M

OFFICES FOR OPERATOR

CARPARK RAMP

LIFT LOBBY

RS& MRC

BLOCK 3

+6

PTI RUN OUT

SHUTTLE LIFT

BLOCK 1

ROAD L6

TUNG CHUNG
AREA 135

TUNG CHUNG
AREA 133A

BLOCK 2

BLOCK 4

BADMINTON COURT

EVA / SERVICE ACCESS

RUN IN / OUT

RCP

TUNG CHUNG
AREA 133C

LEGEND

APPLICATION SITE
申請地點

PROJECT	DRAWING TITLE	房 屋 署 HOUSING DEPARTMENT		
SECTION 16 PLANNING APPLICATION FOR TUNG CHUNG AREA 133	TCA 133B MASTER LAYOUT PLAN – G/F PLAN (FOR REFERENCE ONLY & SUBJECT TO DESIGN REVIEW)	編號 DRAWING NO. IS30/-/S16/A/LO-01	比 例 SCALE 1:800 (A3)	日 期 DATE

N

TUNG CHUNG
AREA 139

PTI RUN IN

ROAD D2

UPPER PART
OF PTI

CARPARK RAMP

BLOCK 3
+12

SHUTTLE LIFT

E&M

BLOCK 1
+12

PTI RUN OUT

ROAD L6

SHUTTLE LIFT

TUNG CHUNG
AREA 135

TUNG CHUNG
AREA 133A

E&M

OFFICE
(EMO)

BLOCK 2
+14

E&M

BLOCK 4

FOOTBRIDGE TO
TCA 133A

KINDERGARTEN

+14

RUN IN / OUT

TUNG CHUNG
AREA 133C

LEGEND

APPLICATION SITE
申請地點

PROJECT

SECTION 16 PLANNING APPLICATION
FOR TUNG CHUNG AREA 133

DRAWING TITLE

TCA 133B MASTER LAYOUT PLAN – P1/F PLAN
(FOR REFERENCE ONLY & SUBJECT TO DESIGN REVIEW)

房 屋 署
HOUSING DEPARTMENT

編號 DRAWING NO.	比 例 SCALE	日 期 DATE
IS30/-/S16/A/LO-02	1:800 (A3)	

N

TUNG CHUNG
AREA 139

ROAD D2

PTI RUN IN

E&M

CARPARK

+18

PODIUM
LANDSCAPE

E&M

BLOCK 3
SOCIAL WELFARE
FACILITIES

+18

PTI RUN OUT

SHUTTLE LIFT

BLOCK 1

SHUTTLE
LIFT

ROAD L6

TUNG CHUNG
AREA 135

TUNG CHUNG
AREA 133A

+18

BLOCK 2

BLOCK 4

+18

+18

RUN IN / OUT

TUNG CHUNG
AREA 133C

LEGEND

APPLICATION SITE
申請地點

PROJECT	DRAWING TITLE	房 屋 署 HOUSING DEPARTMENT		
SECTION 16 PLANNING APPLICATION FOR TUNG CHUNG AREA 133	TCA 133B MASTER LAYOUT PLAN – P2/F PLAN (FOR REFERENCE ONLY & SUBJECT TO DESIGN REVIEW)	編號 DRAWING NO. IS30/-/S16/A/LO-03	比 例 SCALE 1:800 (A3)	日 期 DATE

N

TUNG CHUNG
AREA 139

PTI RUN IN

ROAD D2

E&M

CARPARK

+21

PODIUM
LANDSCAPE

E&M

BLOCK 3
SOCIAL WELFARE
FACILITIES

+21

PTI RUN OUT

SHUTTLE LIFT

BLOCK 1

SHUTTLE LIFT

ROAD L6

TUNG CHUNG
AREA 135

TUNG CHUNG
AREA 133A

BLOCK 2

BLOCK 4

RUN IN / OUT

TUNG CHUNG
AREA 133C

LEGEND

APPLICATION SITE
申請地點

PROJECT

SECTION 16 PLANNING APPLICATION
FOR TUNG CHUNG AREA 133

DRAWING TITLE

TCA 133B MASTER LAYOUT PLAN – P3/F PLAN
(FOR REFERENCE ONLY & SUBJECT TO DESIGN REVIEW)

房 屋 署
HOUSING DEPARTMENT

編號 DRAWING NO.	比 例 SCALE	日 期 DATE
IS30/-/S16/A/LO-04	1:800 (A3)	

N

TUNG CHUNG
AREA 139

PTI RUN IN

ROAD D2

E&M

CARPARK
+25

PODIUM
LANDSCAPE

E&M

BLOCK 3
SOCIAL WELFARE
FACILITIES
+25

PTI RUN OUT

SHUTTLE LIFT

BLOCK 1

SHUTTLE LIFT

ROAD L6

TUNG CHUNG
AREA 135

TUNG CHUNG
AREA 133A

BLOCK 2

BLOCK 4

RUN IN / OUT

TUNG CHUNG
AREA 133C

LEGEND

APPLICATION SITE
申請地點

PROJECT

SECTION 16 PLANNING APPLICATION
FOR TUNG CHUNG AREA 133

DRAWING TITLE

TCA 133B MASTER LAYOUT PLAN – P4/F PLAN
(FOR REFERENCE ONLY & SUBJECT TO DESIGN REVIEW)

房 屋 署
HOUSING DEPARTMENT

編號 DRAWING NO.	比 例 SCALE	日 期 DATE
IS30/-/S16/A/LO-05	1:800 (A3)	

N

TUNG CHUNG
AREA 139

PTI RUN IN

ROAD D2

PODIUM
LANDSCAPE

BASKETBALL
COURT

PODIUM
LANDSCAPE

E&M

BLOCK 3
SOCIAL WELFARE
FACILITIES
+29.5

SHUTTLE LIFT

BLOCK 1

SHUTTLE
LIFT

PTI RUN OUT

ROAD L6

TUNG CHUNG
AREA 135

TUNG CHUNG
AREA 133A

BLOCK 2

BLOCK 4

RUN IN / OUT

TUNG CHUNG
AREA 133C

LEGEND

APPLICATION SITE
申請地點

PROJECT

SECTION 16 PLANNING APPLICATION
FOR TUNG CHUNG AREA 133

DRAWING TITLE

TCA 133B MASTER LAYOUT PLAN – P5/F PLAN
(FOR REFERENCE ONLY & SUBJECT TO DESIGN REVIEW)

房 屋 署
HOUSING DEPARTMENT

編號 DRAWING NO.	比 例 SCALE	日 期 DATE
IS30/-/S16/A/LO-06	1:800 (A3)	

N

TUNG CHUNG
AREA 139

ROAD D2

PTI RUN IN

BLOCK 1

BLOCK 3

PTI RUN OUT

ROAD L6

TUNG CHUNG
AREA 135

TUNG CHUNG
AREA 133A

BLOCK 2

BLOCK 4

RUN IN / OUT

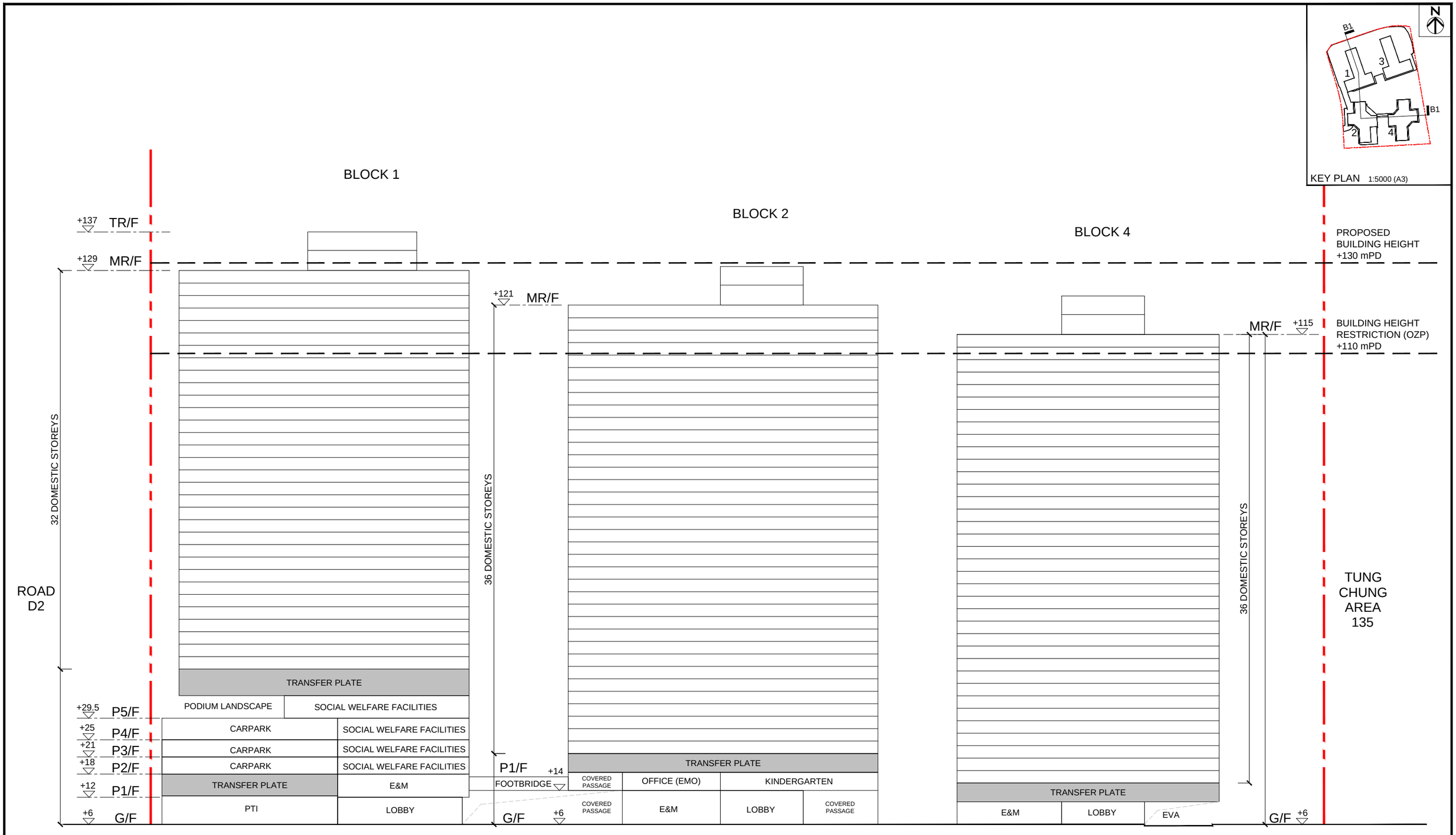
TUNG CHUNG
AREA 133C

LEGEND

APPLICATION SITE
申請地點

PROJECT	DRAWING TITLE	
SECTION 16 PLANNING APPLICATION FOR TUNG CHUNG AREA 133	TCA 133B MASTER LAYOUT PLAN – TYPICAL FLOOR PLAN (FOR REFERENCE ONLY & SUBJECT TO DESIGN REVIEW)	房 屋 署 HOUSING DEPARTMENT

編號 DRAWING NO.	比 例 SCALE	日 期 DATE
IS30/-/S16/A/LO-07	1:800 (A3)	



LEGEND

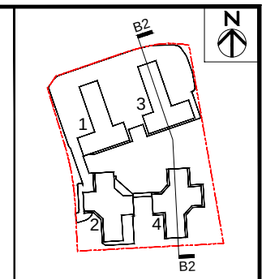
APPLICATION SITE
申請地點

PROJECT
PROPOSED PUBLIC HOUSING DEVELOPMENTS AT TUNG CHUNG AREA 133

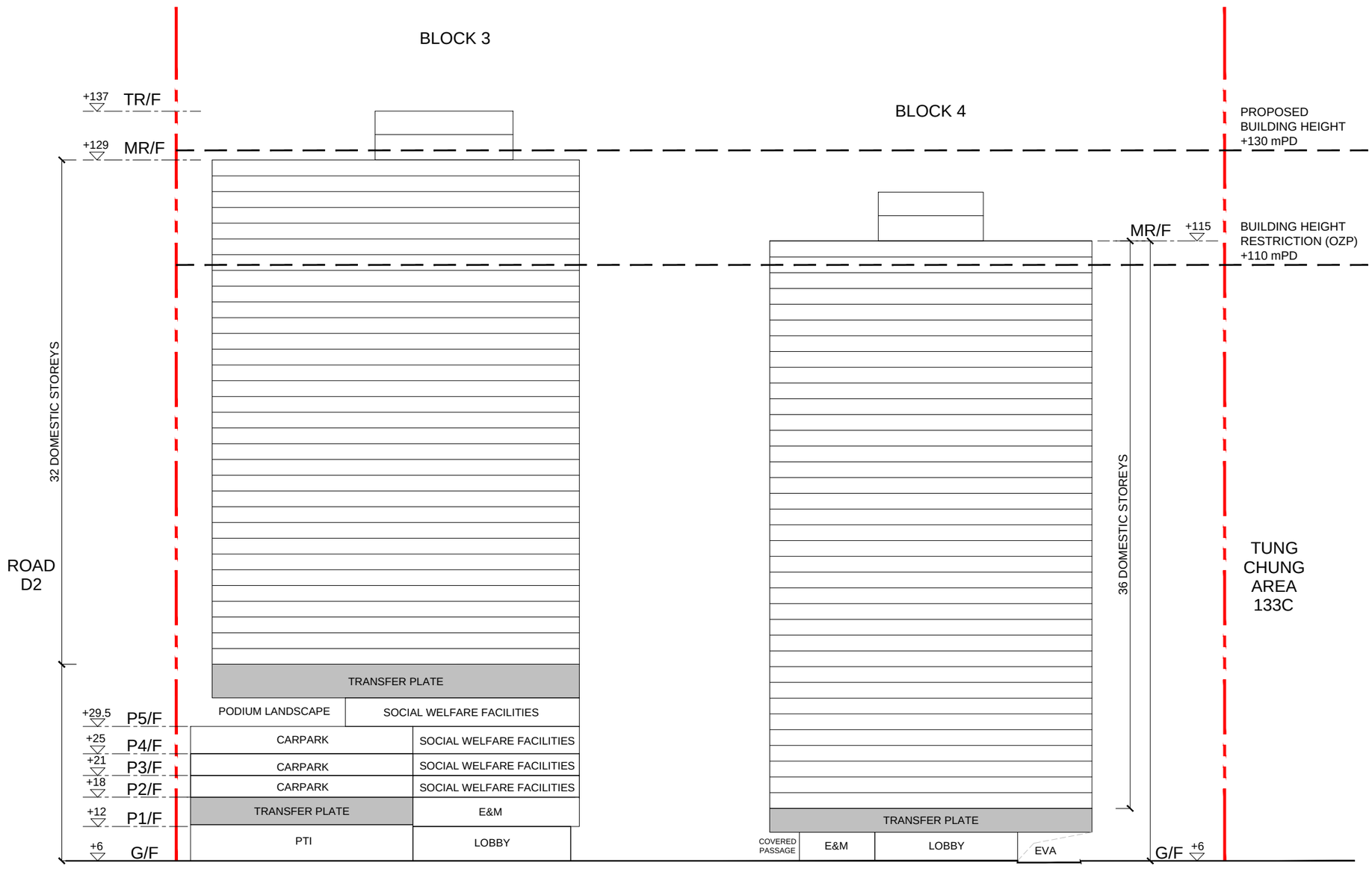
DRAWING TITLE
TCA 133B SECTION B1 - B1
(FOR REFERENCE ONLY & SUBJECT TO DESIGN REVIEW)

房 屋 署
HOUSING DEPARTMENT

編號 DRAWING NO.	比 例 SCALE	日 期 DATE
IS30/-/S16/A/LO-08	1:800 (A3)	



KEY PLAN 1:5000 (A3)



LEGEND

APPLICATION SITE
申請地點

PROJECT
PROPOSED PUBLIC HOUSING
DEVELOPMENTS AT TUNG CHUNG AREA 133

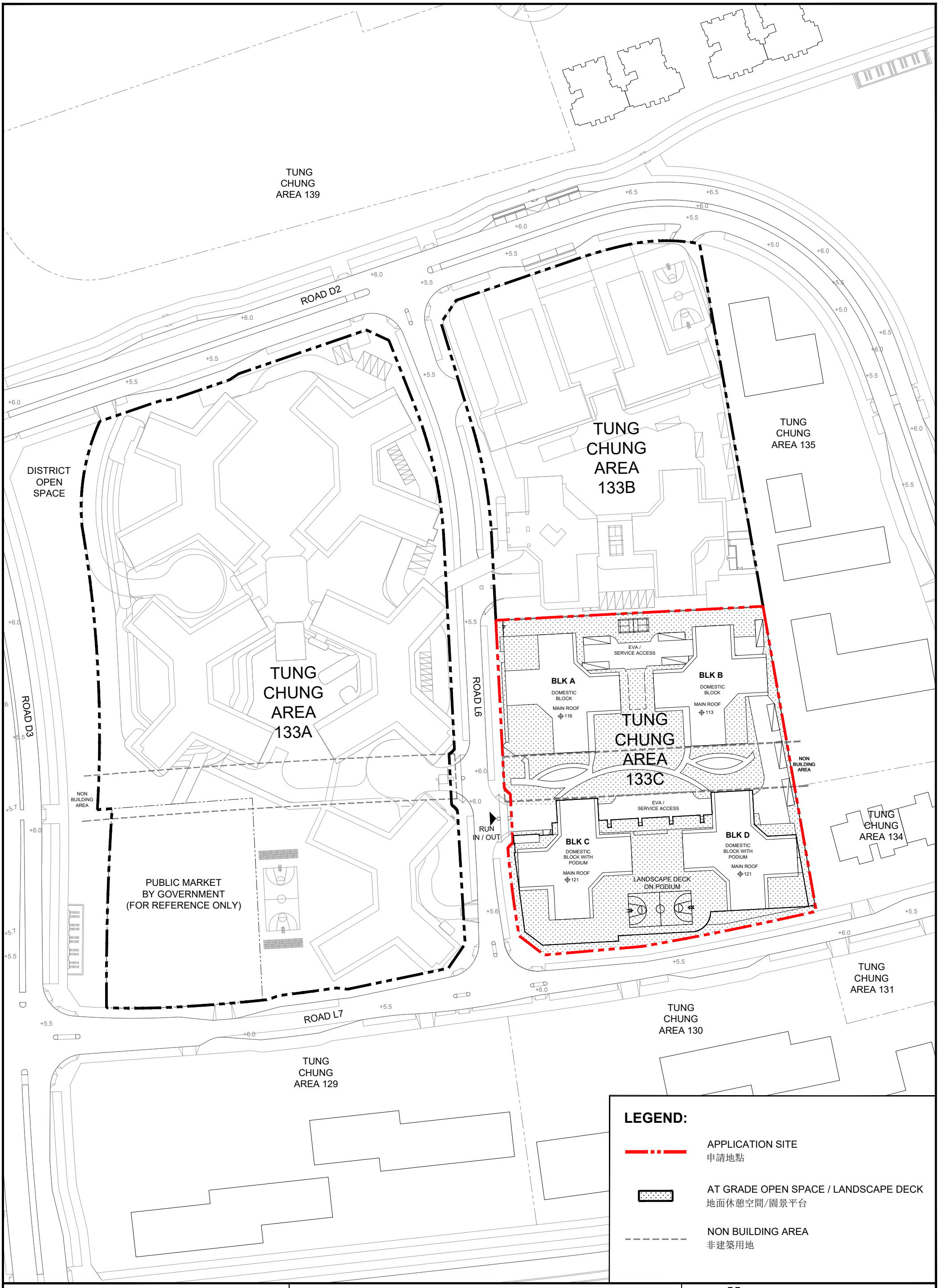
DRAWING TITLE
TCA 133B SECTION B2 - B2
(FOR REFERENCE ONLY & SUBJECT TO DESIGN REVIEW)

房 屋 署
HOUSING DEPARTMENT

編號 DRAWING NO.	比 例 SCALE	日 期 DATE
IS30/-/S16/A/LO-09	1:800 (A3)	

Appendix 1C

Schematic Drawings for Tung Chung Area 133C



LEGEND:

- APPLICATION SITE 申請地點
- AT GRADE OPEN SPACE / LANDSCAPE DECK 地面休憩空間/園景平台
- NON BUILDING AREA 非建築用地

PROJECT

SECTION 16 PLANNING APPLICATION FOR TUNG CHUNG AREA 133

DRAWING TITLE

TCA 133C MASTER LAYOUT PLAN – BLOCK PLAN (FOR REFERENCE ONLY & SUBJECT TO DESIGN REVIEW)

房 屋 署
HOUSING DEPARTMENT

編號 DRAWING NO.	比 例 SCALE	日 期 DATE
IS31/-/S16/A/MLP-01	1:1500 (A3)	

N

TUNG CHUNG AREA 135

TUNG CHUNG AREA 133B

TUNG CHUNG AREA 133A

TUNG CHUNG AREA 134

TUNG CHUNG AREA 131

TUNG CHUNG AREA 130

TUNG CHUNG AREA 129

ROAD L6

ROAD L7

+5.5

+6.0

+5.6

BADMINTON COURT

E&M

RS&MRC

+6

BLOCK A

KINDERGARTEN

OFFICE (EMO)

BLOCK B

LANDSCAPE

NON BUILDING AREA

EVA / SERVICE ACCESS

RUN IN / OUT

SHUTTLE LIFT

BLOCK C

BLOCK D

CARPARK

RCP

SOCIAL WELFARE FACILITIES

LEGEND

APPLICATION SITE
申請地點

NON BUILDING AREA
非建築用地

PROJECT	DRAWING TITLE	
SECTION 16 PLANNING APPLICATION FOR TUNG CHUNG AREA 133	TCA 133C MASTER LAYOUT PLAN – G/F PLAN (FOR REFERENCE ONLY & SUBJECT TO DESIGN REVIEW)	房 屋 署 HOUSING DEPARTMENT
		編號 DRAWING NO. IS31/-/S16/A/LO-01
		比 例 SCALE 1:800 (A3)
		日 期 DATE

N

TUNG CHUNG AREA 135

TUNG CHUNG AREA 133B

TUNG CHUNG AREA 133A

TUNG CHUNG AREA 134

TUNG CHUNG AREA 131

TUNG CHUNG AREA 130

TUNG CHUNG AREA 129

ROAD L6

ROAD L7

RUN IN / OUT

BLOCK A

BLOCK B

BLOCK C

BLOCK D

SOCIAL WELFARE FACILITIES

CARPARK

ROOF OF COVERED WALKWAY

NON BUILDING AREA

SHUTTLE LIFT

E&M

LANDSCAPE

+12

+13

+5.5

+5.6

+6.0

LEGEND

APPLICATION SITE
申請地點

NON BUILDING AREA
非建築用地

PROJECT	DRAWING TITLE			
SECTION 16 PLANNING APPLICATION FOR TUNG CHUNG AREA 133	TCA 133C MASTER LAYOUT PLAN – P1/F PLAN (FOR REFERENCE ONLY & SUBJECT TO DESIGN REVIEW)	房 屋 署 HOUSING DEPARTMENT		
		編號 DRAWING NO. IS31/-/S16/A/LO-02	比 例 SCALE 1:800 (A3)	日 期 DATE

N

TUNG CHUNG AREA 135

TUNG CHUNG AREA 133B

BLOCK A

BLOCK B

ROAD L6

+5.5

TUNG CHUNG AREA 133A

+6.0

+6.0

RUN IN / OUT

NON BUILDING AREA

SOCIAL WELFARE FACILITIES

+17

SHUTTLE LIFT

BLOCK C

CARPARK

+17

SHUTTLE LIFT

E&M

BLOCK D

TUNG CHUNG AREA 134

E&M

+5.6

LANDSCAPE

+17

E&M

E&M

+6.0

+5.5

ROAD L7

TUNG CHUNG AREA 131

+6.0

TUNG CHUNG AREA 130

TUNG CHUNG AREA 129

LEGEND

APPLICATION SITE
申請地點

NON BUILDING AREA
非建築用地

PROJECT	DRAWING TITLE	
SECTION 16 PLANNING APPLICATION FOR TUNG CHUNG AREA 133	TCA 133C MASTER LAYOUT PLAN – P2/F PLAN (FOR REFERENCE ONLY & SUBJECT TO DESIGN REVIEW)	房 屋 署 HOUSING DEPARTMENT
		編號 DRAWING NO. IS31/-/S16/A/LO-03
		比 例 SCALE 1:800 (A3)
		日 期 DATE

N

TUNG
CHUNG
AREA 135

TUNG
CHUNG
AREA 133B

BLOCK A

BLOCK B

ROAD L6

+5.5

TUNG
CHUNG
AREA 133A

+6.0

+6.0

RUN IN / OUT

NON
BUILDING
AREA

SOCIAL WELFARE
FACILITIES

+22

SHUTTLE
LIFT

BLOCK
C

SHUTTLE
LIFT

E&M

BLOCK
D

CARPARK

+22

E&M

TUNG
CHUNG
AREA 134

+5.6

E&M

E&M

+6.0

+5.5

ROAD L7

TUNG
CHUNG
AREA 131

+6.0

TUNG
CHUNG
AREA 130

TUNG
CHUNG
AREA 129

LEGEND

APPLICATION SITE
申請地點

NON BUILDING AREA
非建築用地

PROJECT	DRAWING TITLE			
SECTION 16 PLANNING APPLICATION FOR TUNG CHUNG AREA 133	TCA 133C MASTER LAYOUT PLAN – P3/F PLAN (FOR REFERENCE ONLY & SUBJECT TO DESIGN REVIEW)	房 屋 署 HOUSING DEPARTMENT		
		編號 DRAWING NO. IS31/-/S16/A/LO-04	比 例 SCALE 1:800 (A3)	日 期 DATE

N

TUNG CHUNG AREA 135

TUNG CHUNG AREA 133B

BLOCK A

BLOCK B

ROAD L6

+5.5

TUNG CHUNG AREA 133A

+6.0

+6.0

RUN IN / OUT

NON BUILDING AREA

TUNG CHUNG AREA 134

SHUTTLE LIFT

SOCIAL WELFARE FACILITIES

+27

PODIUM LANDSCAPE

+27

SHUTTLE LIFT

BLOCK C

BLOCK D

CARPARK

+27

E&M

+5.6

E&M

E&M

+6.0

+5.5

ROAD L7

TUNG CHUNG AREA 131

+6.0

TUNG CHUNG AREA 130

TUNG CHUNG AREA 129

LEGEND

APPLICATION SITE
申請地點

NON BUILDING AREA
非建築用地

PROJECT

SECTION 16 PLANNING APPLICATION FOR TUNG CHUNG AREA 133

DRAWING TITLE

TCA 133C MASTER LAYOUT PLAN – P4/F PLAN
(FOR REFERENCE ONLY & SUBJECT TO DESIGN REVIEW)

房 屋 署
HOUSING DEPARTMENT

編號 DRAWING NO.	比 例 SCALE	日 期 DATE
IS31/-/S16/A/LO-05	1:800 (A3)	

N

TUNG CHUNG AREA 135

TUNG CHUNG AREA 133B

BLOCK A

BLOCK B

ROAD L6

+5.5

TUNG CHUNG AREA 133A

+6.0

+6.0

RUN IN / OUT

NON BUILDING AREA

TUNG CHUNG AREA 134

PODIUM LANDSCAPE +27

SHUTTLE LIFT

BLOCK C +32

PODIUM LANDSCAPE +32

BLOCK D +32

BASKETBALL COURT

+5.6

+6.0

+5.5

ROAD L7

+6.0

TUNG CHUNG AREA 131

TUNG CHUNG AREA 130

TUNG CHUNG AREA 129

LEGEND

APPLICATION SITE
申請地點

NON BUILDING AREA
非建築用地

PROJECT

SECTION 16 PLANNING APPLICATION FOR TUNG CHUNG AREA 133

DRAWING TITLE

TCA 133C MASTER LAYOUT PLAN – P5/F PLAN
(FOR REFERENCE ONLY & SUBJECT TO DESIGN REVIEW)

房 屋 署
HOUSING DEPARTMENT

編號 DRAWING NO.	比 例 SCALE	日 期 DATE
IS31/-/S16/A/LO-06	1:800 (A3)	

N

TUNG
CHUNG
AREA 135

TUNG
CHUNG
AREA 133B

+5.5

BLOCK A

BLOCK B

ROAD L6

TUNG
CHUNG
AREA 133A

+6.0

+6.0

RUN IN / OUT

NON
BUILDING
AREA

TUNG
CHUNG
AREA 134

BLOCK C

BLOCK D

+5.6

+6.0

+5.5

ROAD L7

+6.0

TUNG
CHUNG
AREA 131

TUNG
CHUNG
AREA 130

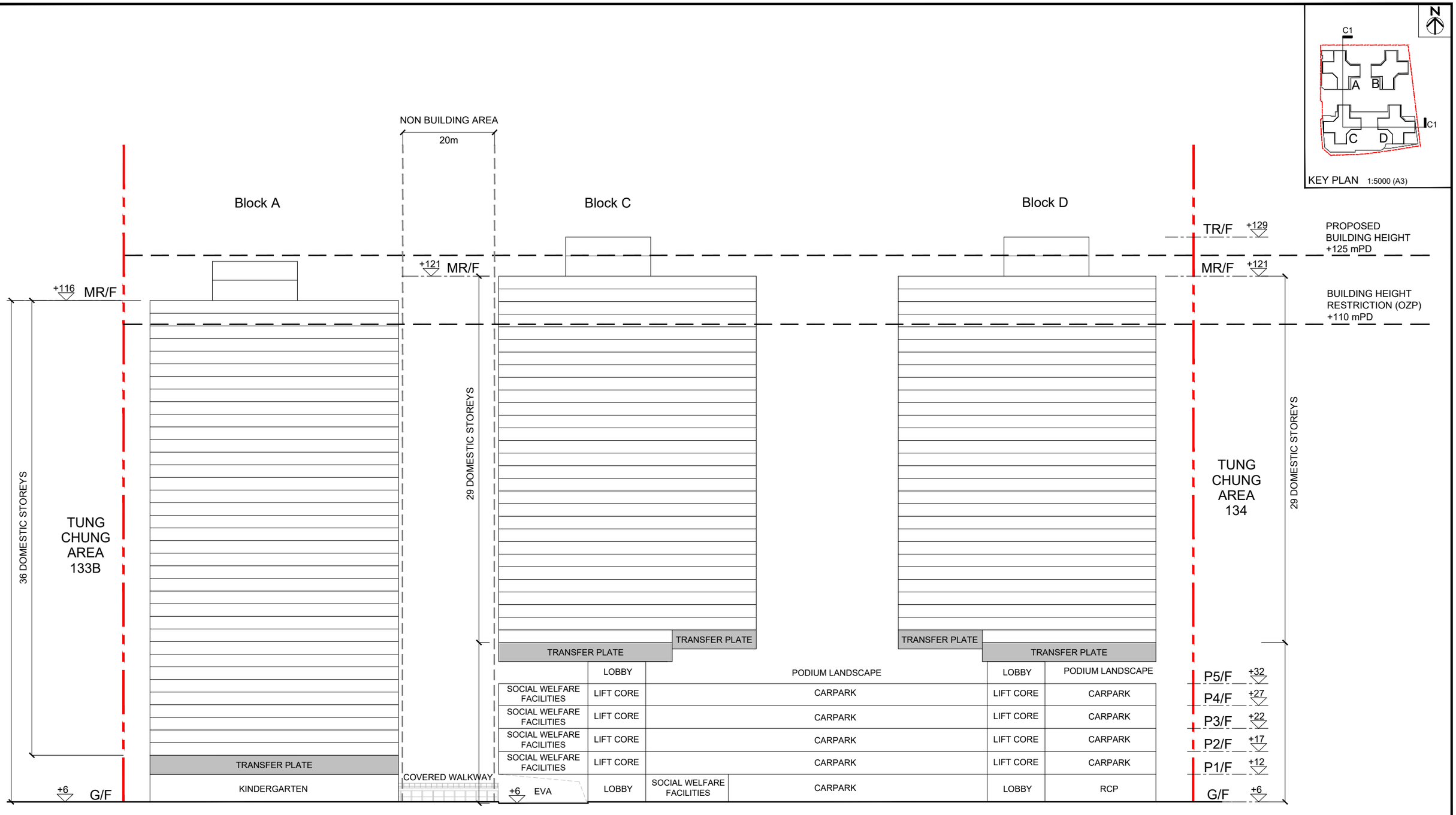
TUNG
CHUNG
AREA 129

LEGEND

APPLICATION SITE
申請地點

NON BUILDING AREA
非建築用地

PROJECT	DRAWING TITLE	房 屋 署 HOUSING DEPARTMENT		
SECTION 16 PLANNING APPLICATION FOR TUNG CHUNG AREA 133	TCA 133C MASTER LAYOUT PLAN – TYPICAL FLOOR PLAN (FOR REFERENCE ONLY & SUBJECT TO DESIGN REVIEW)	編號 DRAWING NO. IS31/-/S16/A/LO-07	比 例 SCALE 1:800 (A3)	日 期 DATE



LEGEND

- APPLICATION SITE 申請地點
- NON BUILDING AREA 非建築用地

PROJECT

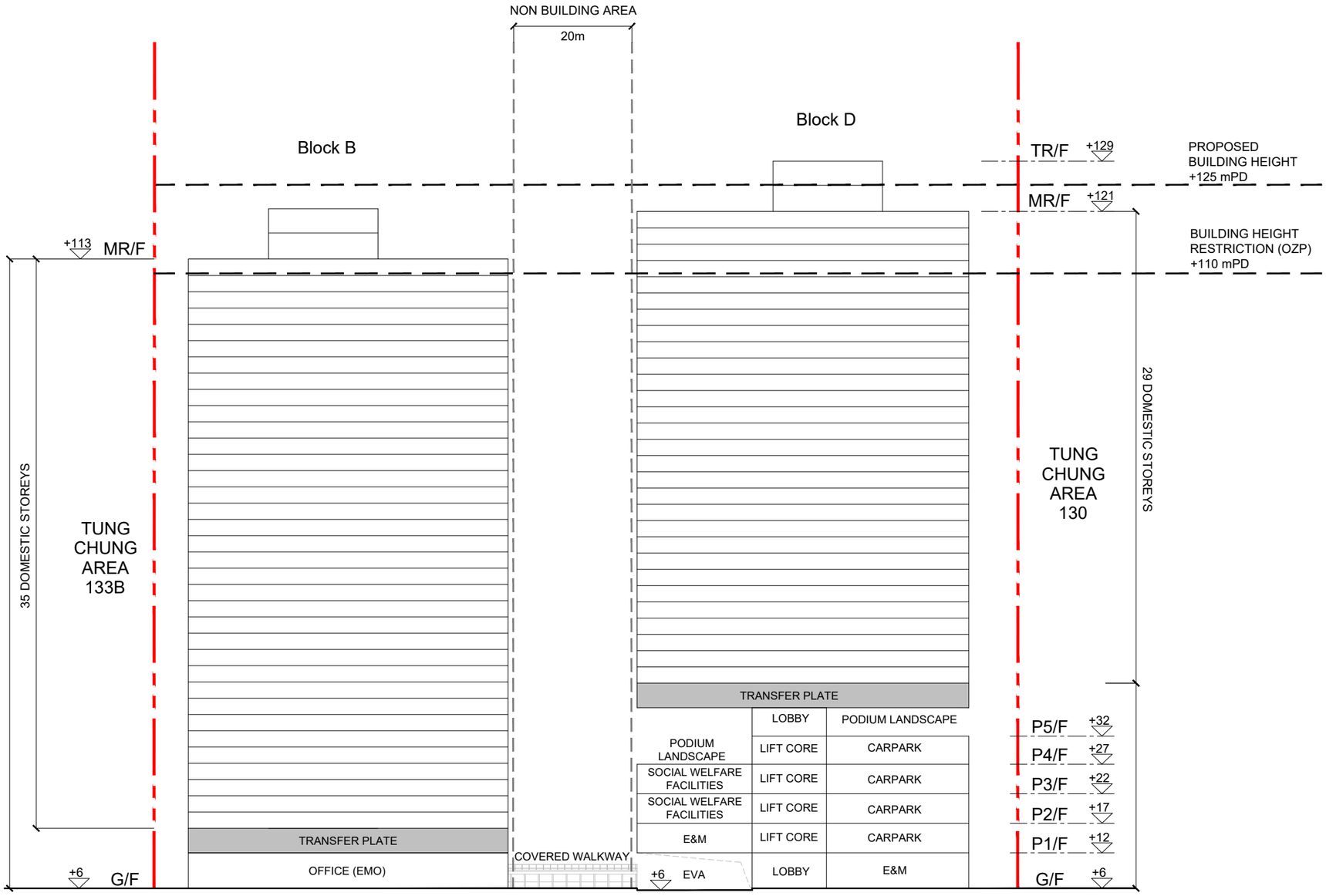
SECTION 16 PLANNING APPLICATION FOR TUNG CHUNG AREA 133

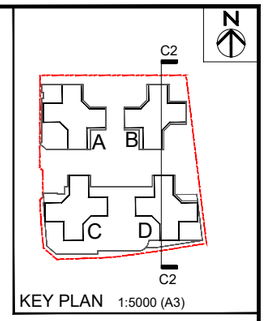
DRAWING TITLE

TCA 133C SECTION C1 - C1
(FOR REFERENCE ONLY & SUBJECT TO DESIGN REVIEW)

房 屋 署
HOUSING DEPARTMENT

編號 DRAWING NO.	比 例 SCALE	日 期 DATE
IS31/-/S16/A/LO-08	1:800 (A3)	





LEGEND

APPLICATION SITE
申請地點

NON BUILDING AREA
非建築用地

PROJECT

SECTION 16 PLANNING APPLICATION FOR
TUNG CHUNG AREA 133

DRAWING TITLE

TCA 133C SECTION C2 - C2
(FOR REFERENCE ONLY & SUBJECT TO DESIGN REVIEW)

房 屋 署
HOUSING DEPARTMENT

編號 DRAWING NO.	比例 SCALE	日期 DATE
IS31/-/S16/A/LO-09	1:800 (A3)	

Appendix 2A

Landscape Drawings for Tung Chung Area 133A

FOR REFERENCE ONLY AND SUBJECT TO DESIGN REVIEW

N

ROAD D2

+5.5

+6.0

TUNG CHUNG AREA 145B

TCA 145B

BLK 1

BLK 2

BLK 3

PODIUM LANDSCAPE +21.0

COVERED WALKWAY ABOVE

+21.0

GLASS CANOPY ABOVE

BLK 4

BLK 5

+21

+21.0

ROAD D3

+5.8

+6.0

+5.6

+5.5

+5.7

+6.0

PUBLIC MARKET BY FEHD

ROAD L7

+5.5

LEGEND:

- PROPOSED SITE BOUNDARY
- PUBLIC MARKET SITE BOUNDARY
- TREE PLANTING
- SHRUBS PLANTING
- LAWN
- COMMUNAL PLAY AREA
- GREEN ROOF
- SEATING LAWN
- BALL COURT
- JOGGING PATH
- BAMBOO PLANTING

PROJECT

SECTION 16 PLANNING APPLICATION FOR TUNG CHUNG AREA 133

DRAWING TITLE

TCA 133A

LANDSCAPE MASTER PLAN

房 屋 署
HOUSING DEPARTMENT

編號 DRAWING NO.	比例 SCALE	日期 DATE
IS29/-/S16/L/LMP-01	1:800 (A3)	

FOR REFERENCE ONLY AND SUBJECT TO DESIGN REVIEW

N

ROAD D2

EVA / SERVICE ACCESS

TUNG CHUNG AREA 133B

DISTRICT OPEN SPACE

BLOCK 1 +6

BLOCK 2 +6

BLOCK 3 +6

BLOCK 4 +6

BLOCK 5 +6

CARPARK +6

SHOP / EATING PLACE

SHOP / EATING PLACE

SHOP / EATING PLACE

SHOP / EATING PLACE

SHOP / EATING PLACE

SHOP / EATING PLACE

SHOP / EATING PLACE

SHOP / EATING PLACE

E&M

RS & MRC

LIFT LOBBY

SHUTTLE LIFT

RCP & JCP

EVA ONLY

EVA / SERVICE ACCESS

ROAD L6

TUNG CHUNG AREA 133C

RUN IN / OUT

NON BUILDING AREA

BASKETBALL COURT

PUBLIC MARKET BY GOVERNMENT
(1,800 SQ.M. GREENERY AREA PROVIDED IN FEHD'S PUBLIC MARKET SITE)

ROAD L7

LEGEND

APPLICATION SITE
申請地點

TOTAL GREENERY AREA
(NOT LESS THAN 12,930 SQ.M.)

PROJECT

SECTION 16 PLANNING APPLICATION FOR TUNG CHUNG AREA 133

DRAWING TITLE

TCA 133A GREENERY AREA - G/F PLAN

房 屋 署
HOUSING DEPARTMENT

編號 DRAWING NO. IS29/-/S16/L/LO-01

比 例 SCALE 1:800 (A3)

日 期 DATE

FOR REFERENCE ONLY AND SUBJECT TO DESIGN REVIEW

N

ROAD D2

TUNG CHUNG AREA 133B

DISTRICT OPEN SPACE

BLOCK 1

BLOCK 3

CARPARK

+12.5

SHOP / EATING PLACE

BLOCK 2

BLOCK 4

BLOCK 5

SHUTTLE LIFT

FOOTBRIDGE

CANOPY

ROOF OF COVERED WALKWAY

ROAD L6

TUNG CHUNG AREA 133C

RUN IN / OUT

NON BUILDING AREA

(1,800 sq.m.GREENERY AREA PROVIDED IN FEHD'S PUBLIC MARKET SITE)

PUBLIC MARKET BY GOVERNMENT

ROAD L7

E&M

LIFT LOBBY

RS & MRC

LEGEND

APPLICATION SITE
申請地點

TOTAL GREENERY AREA
(NOT LESS THAN 12,930 sq.m.)

PROJECT

SECTION 16 PLANNING APPLICATION FOR TUNG CHUNG AREA 133

DRAWING TITLE

TCA 133A GREENERY AREA - P1/F PLAN

房 屋 署
HOUSING DEPARTMENT

編號 DRAWING NO. IS29/-/S16/L/LO-02

比 例 SCALE 1:800 (A3)

日 期 DATE

FOR REFERENCE ONLY AND SUBJECT TO DESIGN REVIEW

N

ROAD D2

DISTRICT OPEN SPACE

TUNG CHUNG AREA 133B

OFFICE (DTMO)

OFFICE (PMA)

OFFICE (EMO)

E&M

BLOCK 1

+21.00

RS & MRC

PODIUM LANDSCAPE

BLOCK 3

BADMINTON COURT

BADMINTON COURT

KINDERGARTEN

SHUTTLE LIFT

BLOCK 2

BLOCK 4

TUNG CHUNG AREA 133C

ROAD L6

RUN IN / OUT

NON BUILDING AREA

(1,800 sq.m.GREENERY AREA PROVIDED IN FEHD'S PUBLIC MARKET SITE)

PUBLIC MARKET BY GOVERNMENT

BLOCK 5

ROAD L7

LEGEND

APPLICATION SITE
申請地點

TOTAL GREENERY AREA
(NOT LESS THAN 12,930 sq.m.)

PROJECT

SECTION 16 PLANNING APPLICATION FOR TUNG CHUNG AREA 133

DRAWING TITLE

TCA 133A GREENERY AREA - P3/F PLAN

房 屋 署
HOUSING DEPARTMENT

編號 DRAWING NO. IS29/-/S16/L/LO-03

比例 SCALE 1:800 (A3)

日期 DATE

FOR REFERENCE ONLY AND SUBJECT TO DESIGN REVIEW

ROAD D2

EVA / SERVICE ACCESS

TUNG CHUNG AREA 133B

DISTRICT OPEN SPACE

BLOCK 1 +6.00

BLOCK 3 +6.00

CARPARK +6.00

SHOP / EATING PLACE

RS & MRC

LIFT LOBBY

E&M

RCP & JCP

EVA ONLY

BLOCK 2 +6.00

BLOCK 4

SHUTTLE LIFT

ROAD L6

TUNG CHUNG AREA 133C

+5.70

RUN IN / OUT

NON BUILDING AREA

(1,800 sq.m. LOCAL OPEN SPACE PROVIDED IN FEHD'S PUBLIC MARKET SITE)

PUBLIC MARKET BY GOVERNMENT

BASKETBALL COURT

BLOCK 5 +6.00

ROAD L7

LEGEND

- PROPOSED SITE BOUNDARY OF TC133A
- PROPOSED SITE BOUNDARY OF TC133B & C
- **TOTAL OPEN SPACE AREA** (NOT LESS THAN 16,469 sq.m.)

PROJECT

SECTION 16 PLANNING APPLICATION FOR TUNG CHUNG AREA 133

DRAWING TITLE

TCA 133A OPEN SPACE - G/F PLAN

房 屋 署
HOUSING DEPARTMENT

編號 DRAWING NO.	比例 SCALE	日期 DATE
IS29/-/S16/L/LO-04	1:800 (A3)	

FOR REFERENCE ONLY AND SUBJECT TO DESIGN REVIEW

N

ROAD D2

TUNG CHUNG AREA 133B

TUNG CHUNG AREA 133C

DISTRICT OPEN SPACE

OFFICE (DTMO)

OFFICE (PMA)

OFFICE (EMO)

E&M

BLOCK 1

+21.00

BLOCK 3

RS & MRC

PODIUM LANDSCAPE

BADMINTON COURT

BADMINTON COURT

KINDERGARTEN

BLOCK 2

+21.00

SHUTTLE LIFT

+21.00

BLOCK 4

+21.00

ROAD L6

RUN IN / OUT

NON BUILDING AREA

BLOCK 5

(1,800 sq.m. LOCAL OPEN SPACE PROVIDED IN FEHD'S PUBLIC MARKET SITE)

PUBLIC MARKET BY GOVERNMENT

ROAD L7

LEGEND

PROPOSED SITE BOUNDARY OF TC133A

PROPOSED SITE BOUNDARY OF TC133B & C

TOTAL OPEN SPACE AREA
(NOT LESS THAN 16,469 sq.m.)

PROJECT

SECTION 16 PLANNING APPLICATION FOR TUNG CHUNG AREA 133

DRAWING TITLE

TCA 133A OPEN SPACE - P3/F PLAN

房 屋 署
HOUSING DEPARTMENT

編號 DRAWING NO. IS29/-/S16/L/LO-05

比例 SCALE 1:800 (A3)

日期 DATE

Appendix 2B

Landscape Drawings for Tung Chung Area 133B

FOR REFERENCE ONLY AND SUBJECT TO DESIGN REVIEW

N

+6.0
+5.5
+5.0

BLK 1
BLK 2
BLK 3
BLK 4

BASKETBALL COURT
20 45
TRANSFER PLATE
RAISED PLANTER AT +1.1
RAMP DN
RAMP DN
FLOW +.741
VOID
+6.385
+5.70
PLANT NURSERY
COMMUNITY FARM
OPEN SPACE FOR MAINTENANCE PURPOSES
4

TUNG CHUNG AREA 135

TCA 133A

BLK 4
BLK 4

ROAD R6

BADMINTON COURT

BLK A
BLK B
BLK C
BLK D

TCA 133C

LANDSCAPE

EVA / SERVICE ACCESS

LEGEND:

- PROPOSED SITE BOUNDARY
- TREE PLANTING
- SHRUBS PLANTING
- LAWN
- COMMUNAL PLAY AREA
- GREEN ROOF
- SEATING LAWN
- BALL COURT
- JOGGING PATH
- BAMBOO PLANTING

PROJECT

SECTION 16 PLANNING APPLICATION FOR TUNG CHUNG AREA 133

DRAWING TITLE

TCA 133B

LANDSCAPE MASTER PLAN

房 屋 署
HOUSING DEPARTMENT

編號 DRAWING NO.	比例 SCALE	日期 DATE
IS30/-/S16/L/LMP-01	1:800 (A3)	

FOR REFERENCE ONLY AND SUBJECT TO DESIGN REVIEW

N

TUNG CHUNG
AREA 139

ROAD D2

PTI RUN IN / OUT

PTI

OFFICES FOR OPERATOR

PUBLIC TOILET

E&M

CARPARK RAMP

BLOCK 3
+6.00

RS& MRC

SHUTTLE LIFT

BLOCK 1
+6.00

+5.70

TUNG CHUNG
AREA 135

PTI RUN IN / OUT

ROAD L6

TUNG CHUNG
AREA 133A

BLOCK 2
+6.00

BLOCK 4
+6.00

BADMINTON COURT

EVA / SERVICE ACCESS
+5.70

RCP

RUN IN / OUT

TUNG CHUNG
AREA 133C

LEGEND

APPLICATION SITE
申請地點

GREENERY AREA
(NOT LESS THAN 3,620 sq.m.)

PROJECT	DRAWING TITLE	房屋署 HOUSING DEPARTMENT		
SECTION 16 PLANNING APPLICATION FOR TUNG CHUNG AREA 133	TCA 133B GREENERY AREA G/F PLAN	編號 DRAWING NO. IS30/-/S16/A/LO-01	比例 SCALE 1:800 (A3)	日期 DATE

FOR REFERENCE ONLY AND SUBJECT TO DESIGN REVIEW

N

TUNG CHUNG
AREA 139

ROAD D2

PTI RUN IN / OUT

BASKETBALL COURT

PODIUM LANDSCAPE

PODIUM LANDSCAPE

PODIUM LANDSCAPE

SHUTTLE LIFT

BLOCK 1

SHUTTLE LIFT

BLOCK 3
SOCIAL WELFARE FACILITIES

E&M

+29.45

TUNG CHUNG
AREA 135

PTI RUN IN / OUT

ROAD L6

TUNG CHUNG
AREA 133A

BLOCK 2

BLOCK 4

RUN IN / OUT

TUNG CHUNG
AREA 133C

LEGEND

APPLICATION SITE
申請地點

GREENERY AREA
(NOT LESS THAN 3,620 sq.m.)

PROJECT	DRAWING TITLE	
SECTION 16 PLANNING APPLICATION FOR TUNG CHUNG AREA 133	TCA 133B GREENERY AREA P5/F PLAN	房 屋 署 HOUSING DEPARTMENT
		編號 DRAWING NO. IS30/-/S16/A/LO-06
		比例 SCALE 1:800 (A3)
		日期 DATE

FOR REFERENCE ONLY AND SUBJECT TO DESIGN REVIEW

N

TUNG CHUNG
AREA 139

ROAD D2

PTI RUN IN / OUT

PTI

OFFICES FOR OPERATOR

PUBLIC TOILET

E&M

CARPARK RAMP

BLOCK 3
+6.00

RS& MRC

SHUTTLE LIFT

BLOCK 1
+6.00

+5.70

TUNG CHUNG
AREA 135

PTI RUN IN / OUT

ROAD L6

TUNG CHUNG
AREA 133A

BLOCK 2
+6.00

BLOCK 4
+6.00

BADMINTON COURT

EVA / SERVICE ACCESS
+5.70

RUN IN / OUT

RCP

TUNG CHUNG
AREA 133C

LEGEND

- PROPOSED SITE BOUNDARY OF TC133B
- PROPOSED SITE BOUNDARY OF TC133A & C
- OPEN SPACE AREA
- COVERED OPEN SPACE AREA (OVERALL NOT LESS THAN 7,620 sq.m.)

PROJECT

SECTION 16 PLANNING APPLICATION
FOR TUNG CHUNG AREA 133

DRAWING TITLE

TCA 133B OPEN SPACE
G/F PLAN

房 屋 署
HOUSING DEPARTMENT

編號 DRAWING NO.	比例 SCALE	日期 DATE
IS30/-/S16/A/LO-01	1:800 (A3)	

FOR REFERENCE ONLY AND SUBJECT TO DESIGN REVIEW

N

TUNG CHUNG
AREA 139

PTI RUN IN / OUT

ROAD D2

PODIUM LANDSCAPE

PODIUM LANDSCAPE

BASKETBALL COURT

E&M

BLOCK 3

SOCIAL WELFARE FACILITIES

+29.45

SHUTTLE LIFT

BLOCK 1

SHUTTLE LIFT

PTI RUN IN / OUT

ROAD L6

TUNG CHUNG
AREA 135

TUNG CHUNG
AREA 133A

BLOCK 2

BLOCK 4

RUN IN / OUT

TUNG CHUNG
AREA 133C

LEGEND

- PROPOSED SITE BOUNDARY OF TC133A
- PROPOSED SITE BOUNDARY OF TC133B & C
- OPEN SPACE AREA
- COVERED OPEN SPACE AREA (OVERALL NOT LESS THAN 7,620 sq.m.)

PROJECT

SECTION 16 PLANNING APPLICATION
FOR TUNG CHUNG AREA 133

DRAWING TITLE

TCA 133B OPEN SPACE
P5/F PLAN

房 屋 署
HOUSING DEPARTMENT

編號 DRAWING NO.	比例 SCALE	日期 DATE
IS30/-/S16/A/LO-06	1:800 (A3)	

Appendix 2C

Landscape Drawings for Tung Chung Area 133C

FOR REFERENCE ONLY AND SUBJECT TO DESIGN REVIEW

N

TUNG CHUNG AREA 135

TCA 133B

TCA 133A

BLK 1

BLK 2

BLK 4

BLK A

BLK B

BLK C

BLK D

BADMINTON COURT

LANDSCAPE

EVA / SERVICE ACCESS

ROAD L6

PLANT NURSERY

COMMUNITY FARM

+5.5

+6.0

+5.6

+5.70

+12.00

LEGEND:

- PROPOSED SITE BOUNDARY
- TREE PLANTING
- SHRUBS PLANTING
- LAWN
- COMMUNAL PLAY AREA
- GREEN ROOF
- SEATING LAWN
- BALL COURT
- JOGGING PATH
- BAMBOO PLANTING

PROJECT

SECTION 16 PLANNING APPLICATION FOR TUNG CHUNG AREA 133

DRAWING TITLE

TCA 133C

LANDSCAPE MASTER PLAN

房 屋 署

HOUSING DEPARTMENT

編號 DRAWING NO. IS31/-/S16/L/LMP-01

比例 SCALE 1:800 (A3)

日期 DATE

FOR REFERENCE ONLY AND SUBJECT TO DESIGN REVIEW

N

TUNG CHUNG AREA 135

TUNG CHUNG AREA 133B

ROAD L6

+5.5

BADMINTON COURT

E&M

RS&MRC

+5.70

OFFICE (EMO)

+6.00

BLOCK A

BLOCK B

KINDERGARTEN

LANDSCAPE

NON BUILDING AREA

TUNG CHUNG AREA 133A

+6.0

RUN IN / OUT

EVA / SERVICE ACCESS

TUNG CHUNG AREA 134

SHUTTLE LIFT

BLOCK C

BLOCK D

CARPARK

RCP

SOCIAL WELFARE FACILITIES

+5.6

ROAD L7

TUNG CHUNG AREA 131

TUNG CHUNG AREA 130

TUNG

LEGEND:

SITE BOUNDARY

GREENERY AREA
(NOT LESS THAN 3,700 sq.m.)

PROJECT

SECTION 16 PLANNING APPLICATION
FOR TUNG CHUNG AREA 133

DRAWING TITLE

TCA 133C
GREENERY AREA - G/F

房 屋 署
HOUSING DEPARTMENT

編號 DRAWING NO.	比例 SCALE	日期 DATE
IS31/-/S16/A/LO-01/GR	1:800 (A3)	

FOR REFERENCE ONLY AND SUBJECT TO DESIGN REVIEW

N

TUNG CHUNG AREA 135

TUNG CHUNG AREA 133B

ROAD L6

+5.5

BLOCK A

BLOCK B

NON BUILDING AREA

TUNG CHUNG AREA 133A

+6.0

RUN IN / OUT

PODIUM LANDSCAPE

+24.50

SHUTTLE LIFT

SOCIAL WELFARE FACILITIES

BLOCK D

E&M

CARPARK

BLOCK C

TUNG CHUNG AREA 134

+5.6

ROAD L7

TUNG CHUNG AREA 131

TUNG CHUNG AREA 130

LEGEND:

SITE BOUNDARY

GREENERY AREA
(NOT LESS THAN 3,700 sq.m.)

PROJECT

SECTION 16 PLANNING APPLICATION
FOR TUNG CHUNG AREA 133

DRAWING TITLE

TCA 133C
GREENERY AREA - P4/F

房 屋 署
HOUSING DEPARTMENT

編號 DRAWING NO.	比例 SCALE	日期 DATE
IS31/-/S16/A/LO-05/GR	1:800 (A3)	

FOR REFERENCE ONLY AND SUBJECT TO DESIGN REVIEW

N

TUNG CHUNG AREA 135

TUNG CHUNG AREA 133B

ROAD L6

+5.5

BLOCK A

BLOCK B

ROAD L6

TUNG CHUNG AREA 133A

+6.0

NON BUILDING AREA

RUN IN / OUT

TUNG CHUNG AREA 134

PODIUM LANDSCAPE +24.50

PODIUM LANDSCAPE

SHUTTLE LIFT

E&M

BLOCK D

+29.50

E&M

E&M

BLOCK C

+29.50

E&M

BASKETBALL COURT

+5.6

+6.0

+5.5

ROAD L7

TUNG CHUNG AREA 131

+6.0

TUNG CHUNG AREA 130

TUNG

LEGEND:

SITE BOUNDARY

GREENERY AREA
(NOT LESS THAN 3,700 sq.m.)

PROJECT

SECTION 16 PLANNING APPLICATION
FOR TUNG CHUNG AREA 133

DRAWING TITLE

TCA 133C
GREENERY AREA - P5/F

房 屋 署
HOUSING DEPARTMENT

編號 DRAWING NO.	比例 SCALE	日期 DATE
IS31/-/S16/A/LO-06/GR	1:800 (A3)	

FOR REFERENCE ONLY AND SUBJECT TO DESIGN REVIEW

N

TUNG CHUNG AREA 135

TUNG CHUNG AREA 133B

ROAD L6

+5.5

BADMINTON COURT

E&M

+5.70

RS&MRC

OFFICE (EMO)

+6.00

BLOCK A

BLOCK B

KINDERGARTEN

LANDSCAPE

NON BUILDING AREA

TUNG CHUNG AREA 133A

+6.0

RUN IN / OUT

EVA / SERVICE ACCESS

TUNG CHUNG AREA 134

SHUTTLE LIFT

BLOCK C

BLOCK D

CARPARK

RCP

SOCIAL WELFARE FACILITIES

+5.6

ROAD L7

TUNG CHUNG AREA 131

TUNG CHUNG AREA 130

LEGEND:

SITE BOUNDARY

OPEN SPACE AREA
(NOT LESS THAN 6,942 sq.m.)

PROJECT

SECTION 16 PLANNING APPLICATION FOR TUNG CHUNG AREA 133

DRAWING TITLE

TCA 133C

OPEN SPACE - G/F

房 屋 署
HOUSING DEPARTMENT

編號 DRAWING NO. IS31/-/S16/A/LO-01/OS

比 例 SCALE 1:800 (A3)

日 期 DATE

FOR REFERENCE ONLY AND SUBJECT TO DESIGN REVIEW

N

TUNG CHUNG AREA 135

TUNG CHUNG AREA 133B

ROAD L6

+5.5

BLOCK A

BLOCK B

ROAD L6

TUNG CHUNG AREA 133A

+6.0

NON BUILDING AREA

RUN IN / OUT

SHUTTLE LIFT

SOCIAL WELFARE FACILITIES

+24.50

E&M

BLOCK D

E&M

SHUTTLE LIFT

E&M

BLOCK C

E&M

E&M

CARPARK

+24.50

E&M

TUNG CHUNG AREA 134

+5.6

E&M

E&M

+6.0

+5.5

ROAD L7

+6.0

TUNG CHUNG AREA 131

TUNG CHUNG AREA 130

TUNG

LEGEND:

SITE BOUNDARY

OPEN SPACE AREA
(NOT LESS THAN 6,942 sq.m.)

PROJECT

SECTION 16 PLANNING APPLICATION FOR TUNG CHUNG AREA 133

DRAWING TITLE

TCA 133C
OPEN SPACE - P4/F

房 屋 署
HOUSING DEPARTMENT

編號 DRAWING NO.	比 例 SCALE	日 期 DATE
IS31/-/S16/A/LO-05/OS	1:800 (A3)	

FOR REFERENCE ONLY AND SUBJECT TO DESIGN REVIEW

N

TUNG CHUNG AREA 135

TUNG CHUNG AREA 133B

ROAD L6

+5.5

BLOCK A

BLOCK B

TUNG CHUNG AREA 133A

+6.0

NON BUILDING AREA

RUN IN / OUT

PODIUM LANDSCAPE +24.50

SHUTTLE LIFT

E&M

BLOCK D

+29.50

PODIUM LANDSCAPE

BLOCK C

+29.50

BASKETBALL COURT

TUNG CHUNG AREA 134

+5.6

+6.0

+5.5

ROAD L7

TUNG CHUNG AREA 131

+6.0

TUNG CHUNG AREA 130

TUNG

LEGEND:

SITE BOUNDARY

OPEN SPACE AREA
(NOT LESS THAN 6,942 sq.m.)

PROJECT

SECTION 16 PLANNING APPLICATION
FOR TUNG CHUNG AREA 133

DRAWING TITLE

TCA 133C
OPEN SPACE - P5/F

房 屋 署
HOUSING DEPARTMENT

編號 DRAWING NO.	比例 SCALE	日期 DATE
IS31/-/S16/A/LO-06/OS	1:800 (A3)	

Appendix 3

Technical Assessments – Part 1

Air Ventilation Assessment (Expert Evaluation)
(for Tung Chung Areas 133A, 133B and 133C)

AIR VENTILATION ASSESSMENT – EXPERT EVALUATION

PUBLIC HOUSING DEVELOPMENT AT TUNG CHUNG AREA 133A, B, C

APRIL 15, 2024

AIR VENTILATION ASSESSMENT – EXPERT EVALUATION

PUBLIC HOUSING DEVELOPMENT AT TUNG CHUNG AREA 133A, B, C

DATE: 15 APRIL 2024
REV. 0

WSP (ASIA) LTD.
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QUALITY MANAGEMENT

ISSUE/REVISION	FIRST ISSUE	REVISION 1	REVISION 2	REVISION 3	REVISION 4
Remarks					
Date	Apr 15 2024				
Prepared by					
Signature					
Checked by					
Signature					
Authorised by					
Signature					

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1 INTRODUCTION

1.1 BACKGROUND

1.1.1 WSP (Asia) Ltd was commissioned by Hong Kong Housing Authority to undertake an Air Ventilation Assessment (AVA) Study – Expert Evaluation (EE) for the Public Housing Development at Tung Chung Area 133A, B, C (hereafter "the Project") to assess the air ventilation performance of the Project. The AVA study was conducted in accordance with the methodology stipulated in the Technical Guide for Air Ventilation Assessment for Developments in Hong Kong (hereafter "the Technical Guide") in Annex A of the Housing, Planning and Lands Bureau and Environment, Transport and Works Bureau Technical Circular No. 1/06.

1.2 OBJECTIVES

1.2.1 The objective of this study is to identify the characteristics of the site wind availability data of the Project and to review and evaluate the potential air ventilation and wind environment within the project site and the concerned surrounding areas.

1.2.2 Based on the methodology in the Technical Guide, the likely impacts of the proposed development on pedestrian level wind environment were analyzed and investigated. AVA-EE was employed as the assessment method for qualitative ventilation performance evaluation in the study. The main objects of this assessment, echoing to the Technical Guide include:

- To assess characteristics of the wind availability of the site;
- To identify good design features; and
- To assess qualitatively the potential air ventilation impacts of the proposed development on the surrounding areas.

1.3 STRUCTURE OF REPORT

1.3.1 The AVA report contains the following sections:

- Section 1 presents the introduction of the report including the background and objectives;
- Section 2 presents the site wind availability;
- Section 3 presents the project description and studied schemes (i.e. Baseline Scheme and Proposed Scheme);
- Section 4 presents the qualitative assessment; and
- Section 5 presents the conclusion of the study.

2 SITE WIND AVAILABILITY

2.1 RAMS WIND DATABASE

2.1.1 The Site Wind Availability Data is published by the Planning Department, which was simulated by the meso-scale numerical model Regional Atmospheric Modeling System (RAMS), as recommended in the Technical Guide. Annual and summer wind velocities at 200m above the terrain level ranges from 0 to 15m/s from 16 wind directions, predicted in the site area (X037, Y038) to the site. The wind roses under the annual and summer wind condition are shown in Figure 1 and Figure 2 respectively.

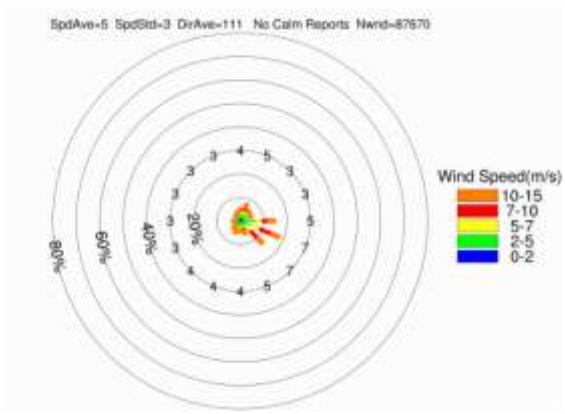


Figure 1: Annual Wind Rose at 200m – Grid (X037, Y038)

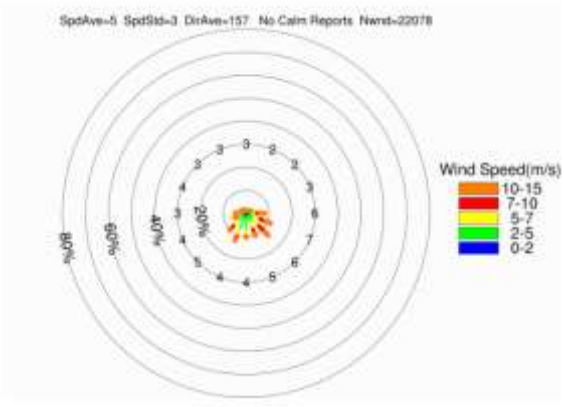


Figure 2: Summer Wind Rose at 200m – Grid (X037, Y038)

2.1.2 According to the RAMS wind data, the annual wind directions E, ESE and SE (marked as green in Table 1), which have corresponding frequencies of occurrences of 14.4%, 17.6% and 13.1% respectively, were identified as the annual prevailing winds for the study.

Table 1: Annual Wind Frequency at 200m Level

Wind Direction	Percentage of Occurrence (%)	Wind Direction	Percentage of Occurrence (%)	Wind Direction	Percentage of Occurrence (%)	Wind Direction	Percentage of Occurrence (%)
N	4.9	**E**	**14.4**	S	4.4	W	2.8
NNE	7.2	**ESE**	**17.6**	SSW	5.2	WNW	2.1
NE	5.3	**SE**	**13.1**	SW	3.9	NW	2.7
ENE	4.9	SSE	5.5	WSW	2.3	NNW	3.5

2.1.3 According to the RAMS wind data, the annual wind directions ESE, SE and SSW (marked as green in Table 2), which have corresponding frequencies of occurrences of 11.5%, 13.7% and 12.8% respectively, were identified as the summer prevailing winds for the study.

Table 2: Summer Wind Frequency at 200m Level

Wind Direction	Percentage of Occurrence (%)	Wind Direction	Percentage of Occurrence (%)	Wind Direction	Percentage of Occurrence (%)	Wind Direction	Percentage of Occurrence (%)
N	1.1	E	8.1	S	10.6	W	4.8
NNE	1.2	**ESE**	**11.5**	**SSW**	**12.8**	WNW	2.7
NE	1.4	**SE**	**13.7**	SW	10.2	NW	2.0
ENE	2.7	SSE	10.5	WSW	5.3	NNW	1.3

2.1.4 Considering the above sets of wind data, the annual prevailing winds adopted in the study area are E, ESE and SE. The summer prevailing winds adopted in the study are ESE, SE and SSW.

3 PROJECT DESCRIPTION

3.1 SITE ENVIRONMENT

3.1.1 The Project is located in the Tung Chung New Town Extension (TCNTE), a reclaimed land, which is proposed to cover the areas on the eastern and western flanks of the existing Tung Chung New Town (TCNT) including lands designated for a variety of developments such as residential, office, retail and hotel use. The area of the project site is approximately 79,600 m^2. The project is located on the eastern portion of the TCNTE abutting future Road D2, Road D3 and Road L7 with Road L6 separating site TCA 133A from TCA 133B and TCA 133C. TCA 133A is situated west of Road L6, whilst TCA 133B and TCA 133C is situated east of Road L6.

3.1.2 The site TCA 133A is zoned as "Residential Group(A)2" and site TCA 133B and site TCA 133C are zoned as "Residential Group(A)3" in the prevailing Approved Tung Chung Extension Area Zoning Plan No. S/I-TCE/2 (the "OZP").

3.1.3 The project site and surrounding studied area is on a flat land with a ground level of around 6 mPD.

3.1.4 The vicinity of the project site is under planning and development and there are no existing buildings in the studied area. Towards the east and southeast of the project site are planned G/IC sites including TCA 131, TCA 132 and TCA 134 to TCA 138 with maximum allowable building height ranging from 3-storeys to 16-storeys and 20 mPD to 70 mPD. Towards the south of the project site are planned commercial sites including TCA 129 and TCA 130 with maximum allowable building height of 160 mPD and 140 mPD respectively. Further south of the project site is the Por Kai Shan Mountain with peak of 482 mPD. Towards the southwest of the project site are planned sites categorised as "Other Specified Uses" including TCA 112, which is tentatively for a railway station and TCA 113 with maximum allowable building height of 185 mPD. Towards the west, northwest and north of the project site are planned residential sites including TCA 116, TCA 117, TCA 122, TCA 125, TCA 139 and TCA 141 with maximum allowable building height ranging from 45 mPD to 105 mPD and planned G/IC sites including TCA 124 and TCA 140 with maximum allowable building height of 45 mPD and 8-storeys respectively. Figure 3 shows the overview of the Project and its surrounding developments in the TCNTE Area – Preliminary Layout Plan. Table 3 summarizes the building height of the existing and planned surrounding developments.

3.1.5 As shown in Figure 4, the major open areas at the surrounding area of the project site are the planned sports ground at TCA 138 (maximum 3-storeys), the waterfront park and waterfront promenade under TCA 52 towards the east of the project site and a large garden under TCA 118 towards the west of the project site. Small government parks and gardens are sparsely distributed in the surrounding environment. The future Road D2, Road D3, Road L7 and Road L6 abutting the project site are served as the major air paths for the studied area. A 20m wide Non-Building Area (NBA) penetrating through site TCA 133C and site TCA 133A from east to west serves as another major air path for the studied area.

3.1.6 The planned G/IC sites and residential sites located to the immediate east side of project site can potentially block the annual prevailing winds spanning from east to southeast and less wind could reach the project site. Nonetheless, abundant easterly wind shall likely reach the project site as the density of buildings towards the east is low and the easterlies shall likely pass through the separation between the G/IC developments from the harbour. The Road L7 is aligned with the easterly wind forming a major air path to ventilate the perimeter of the project site. (Refer to the blue arrows in Figure 5).

3.1.7 The planned commercial sites located to the immediate south of project site shall likely block the summer prevailing winds from the southeast and south-southwest. The summer prevailing winds shall likely only reach the west side of the project site along Road D3 and TCA 145B open area and potentially through the building gap between TCA 129 and TCA 130 and provide some winds along the Road L6. As the incoming winds from southeast and south-southwest are from the Por Kai Shan Mountain, the planned commercial sites shall provide shielding to potential excessive winds from the mountain. (Refer to the orange arrows in Figure 5).



Figure 3: Overview of the Project Area and its Surroundings

(Source: TCNTE Area – Preliminary Layout Plan, Agreement No. CE 32/2011 (CE))



Figure 4: Overview of the Open Space and Surrounding Buildings

(Source: TCNTE Area – Preliminary Layout Plan, Agreement No. CE 32/2011 (CE))

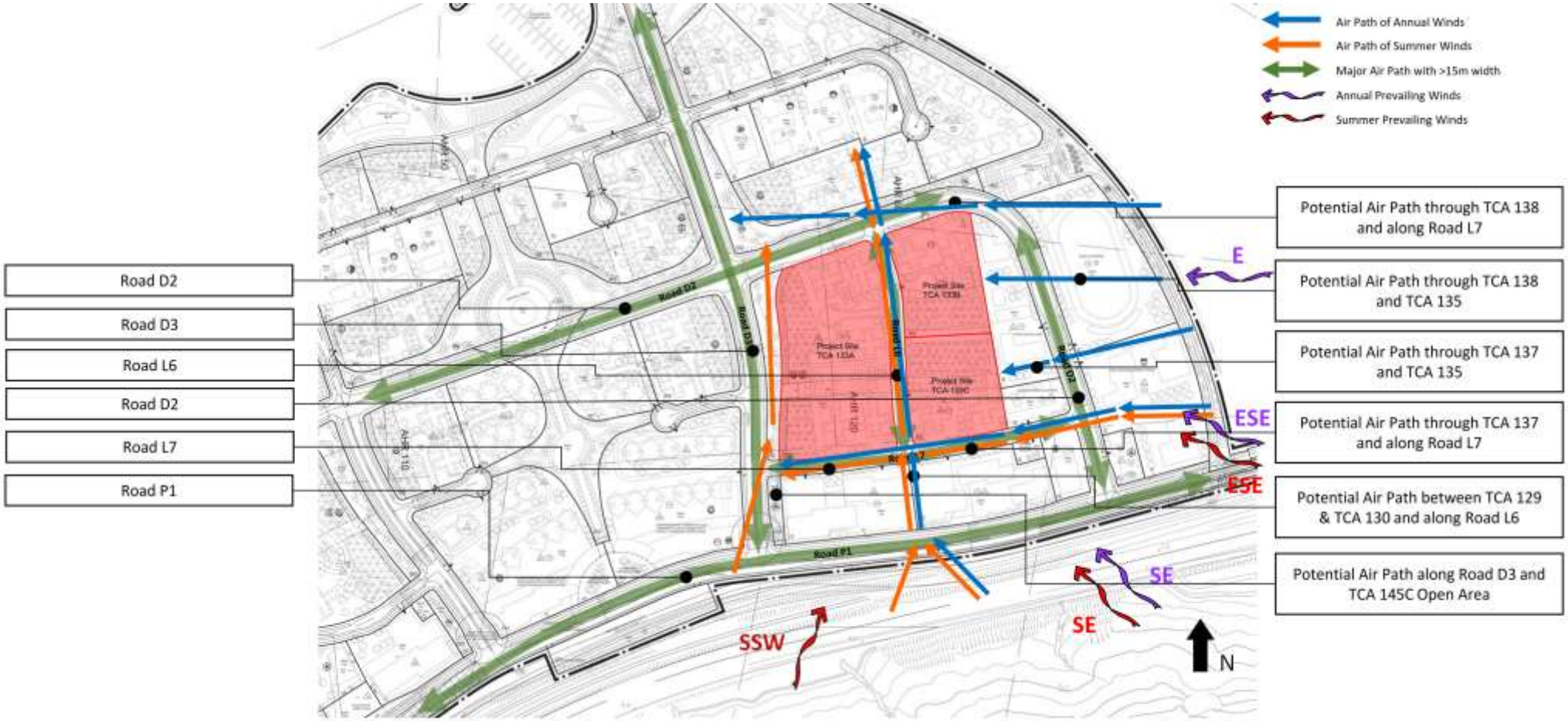


Figure 5: Overview of the Roads and Major Air Paths

(Source: TCNTE Area – Preliminary Layout Plan, Agreement No. CE 32/2011 (CE))

Table 3: Building Height of Planned Developments

Name of Surrounding Development	Maximum Allowable Height
TCA 112	-
TCA 113	185 mPD
TCA 116	105 mPD
TCA 117	105 mPD
TCA 122	100 mPD
TCA 124	45 mPD
TCA 125	70 mPD
TCA 129	160 mPD
TCA 130	140 mPD
TCA 131	16-storeys
TCA 132	20 mPD
TCA 134	70 mPD
TCA 135	50 mPD
TCA 136	45 mPD
TCA 137	50 mPD
TCA 138	3-storeys
TCA 139	45 mPD
TCA 140	8-storeys
TCA 141	55 mPD

3.2 Study Schemes

3.2.1 Two schemes were studied in the AVA - EE based on the layout plans found in the Planning and Engineering Study of Tung Chung New Town Extension (i.e. Baseline Scheme (B)) and layout plan provided by the project team (i.e. Proposed Scheme (P).

3.2.2 To promote the wind performance and minimize the ventilation impact on the surrounding environment of the project site, the good design features have been incorporated in the Proposed Scheme, including sufficient tower separation, aligned air path in the site and minimised site coverage of domestic portion.

3.2.3 To facilitate the approval and construction of the Proposed Scheme, the Project seeks relaxation for the design restrictions in Table 4 through comparison with the Baseline Scheme through this AVA study:

Table 4: Design Restrictions Seeking Relaxation under S16

	TCA 133A	TCA 133B	TCA 133C
Baseline Scheme			
Permitted Maximum Building Height (OZP No. S/I-TCE/2)	115 mPD	110 mPD	110 mPD
Permitted Plot Ratio	6.5 (Overall)	6.4 (Overall)	6.4 (Overall)
	6.0 (Domestic)	6.0 (Domestic)	6.0 (Domestic)
	0.5 (Non-domestic)	0.4 (Non-domestic)	0.4 (Non-domestic)
Proposed Scheme			
Proposed Maximum Building Height	135 mPD	130 mPD	125 mPD
Proposed Plot Ratio	7 (Overall)	6.8 (Overall)	6.7 (Overall)
	6.5 (Domestic)	6.5 (Domestic)	6.5 (Domestic)
	0.5 (Non-domestic)	0.3 (Non-domestic)	0.2 (Non-domestic)

Baseline Scheme

3.2.4 The Baseline Scheme (refer to Figure 6) consists of a total of 8 residential towers in site TCA 133A, 4 residential towers in site TCA 133B and 4 residential towers in site TCA 133C. The building height at the main roof level range from 105mPD to 115mPD in accordance with the maximum allowable building height. The residential towers are on top of a 2-storey high podium assuming up to 10m building height (i.e. 16mPD).

3.2.5 The Baseline Scheme includes the following design features (refer to Figure 6):

- A 20m Non-Building Area, which provides 20m width air path at ground level;
- Setback from the north, west and south boundary by ~5m to ~18m
- Building separation along the east-west axis of ~34m to ~35m between site TCA 133B and site TCA 133A

Proposed Scheme

3.2.6 The Proposed Scheme (refer to Figure 7) consists of a total of 5 residential towers in site TCA 133A, 4 residential towers in site TCA 133B and 4 residential towers in site TCA 133C. A site area of 6,000m^2 in the southwest of the site has been portioned out designated for a wet market and the height of the building within market site would not be taller than 35m (measured from street level) and subject to change. The building height at the main roof of the residential towers level range from 113mPD to 134mPD. The residential towers of TCA 133A, TCA 133B and TCA 133C are on top of a podium of up to 15m, 23.5m and 26m high respectively. Footbridges are provided along the 20m wide NBA and Road L6 to provide connection between site TCA 133A and the wet market and connection between site TCA 133A and site TCA 133B respectively.

3.2.7 The Proposed Scheme includes the following design features (refer to Figure 7):

- A 20m Non-Building Area with footbridge from site TCA 133A P1/F (6.5m above ground) to wet market, which provides 20m width air path at ground level;
- Setback from the west boundary by ~9m and north boundary by ~13m above 29.5mPD at podium level
- Building separation along the east-west axis of ~15m to ~17m between site TCA 133B and site TCA 133A
- Truncated wings of the residential towers and empty bays to create or widen air paths (refer to Figure 8)

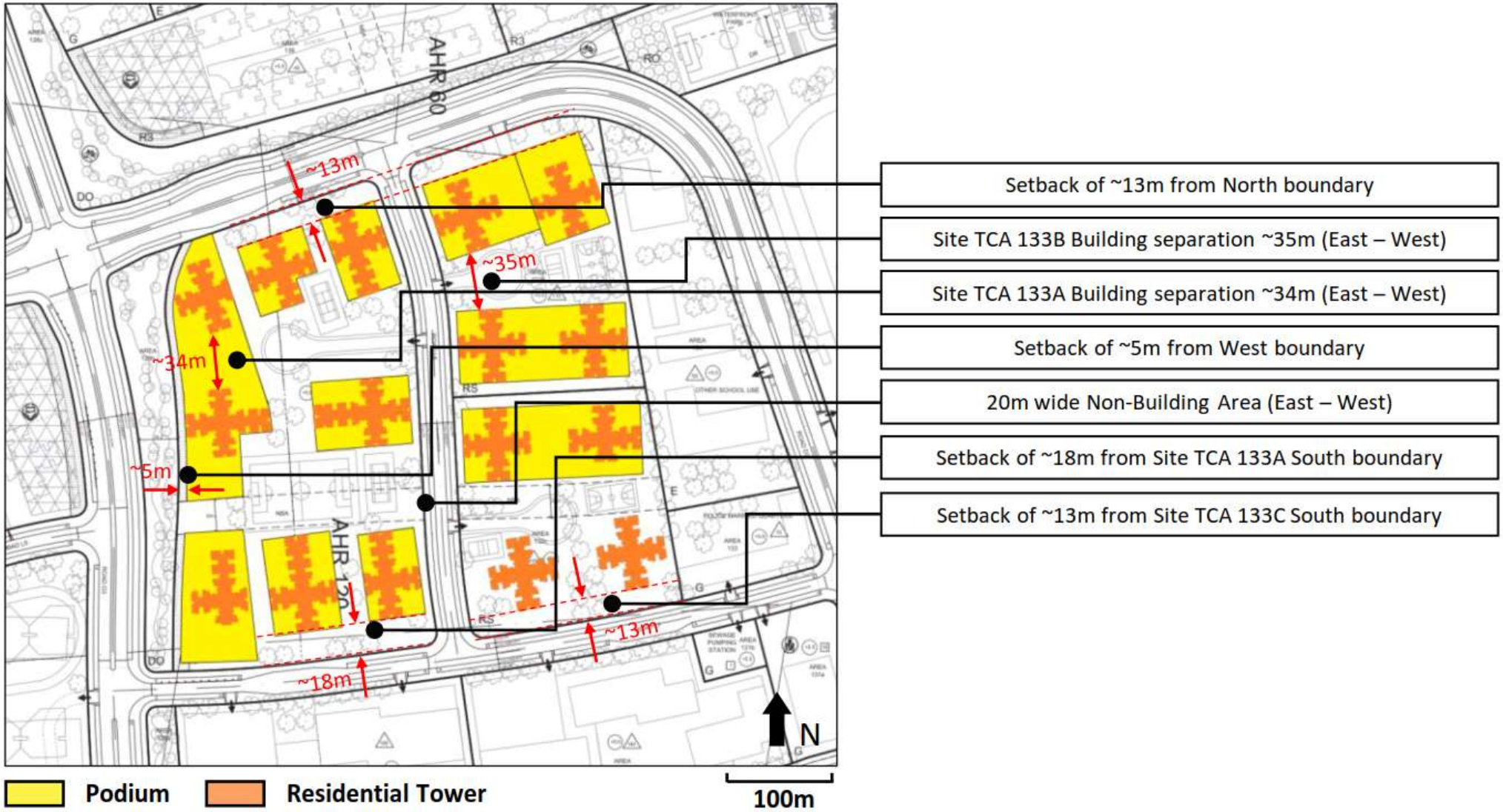


Figure 6: Baseline Scheme

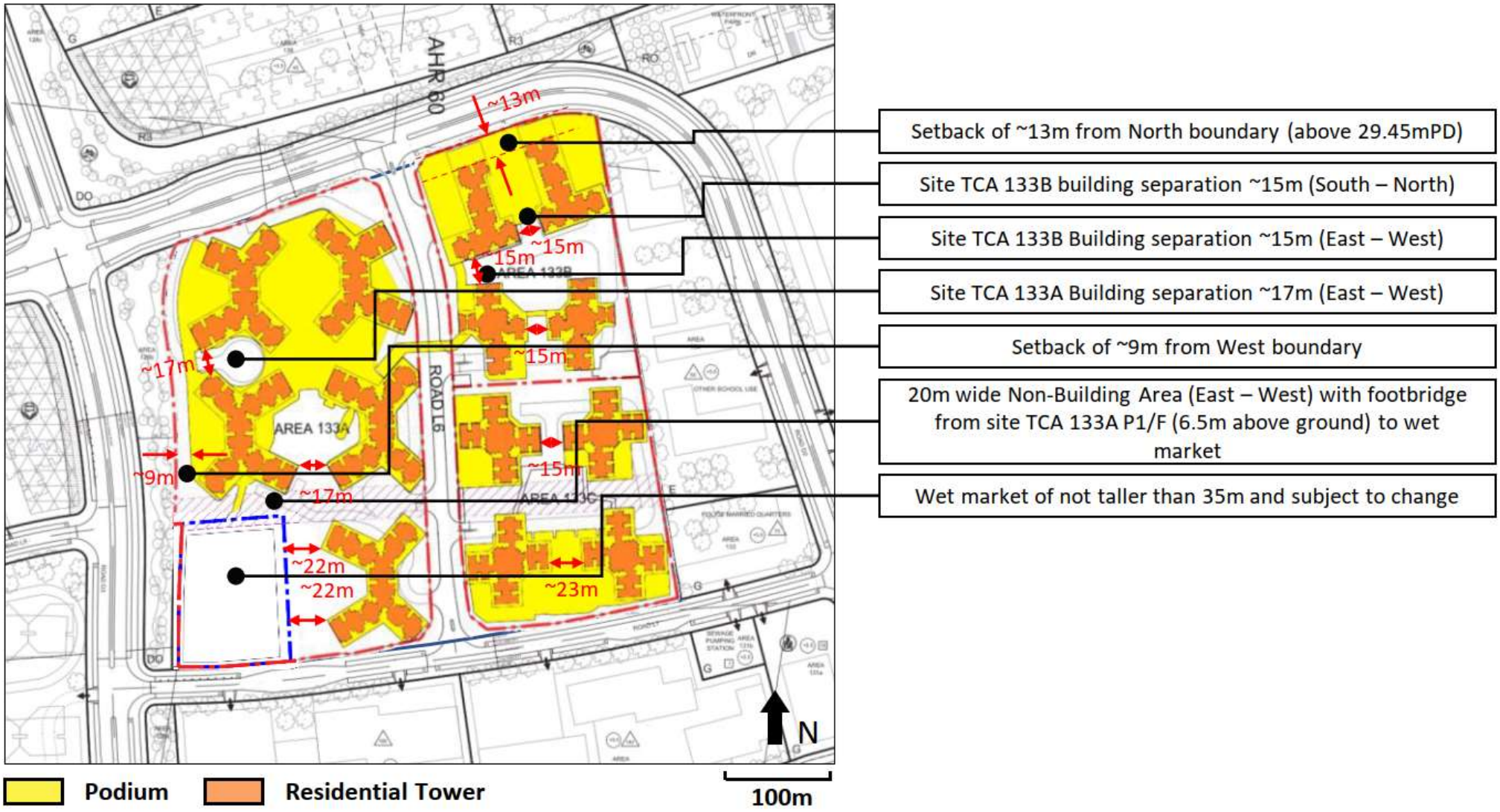


Figure 7: Proposed Scheme

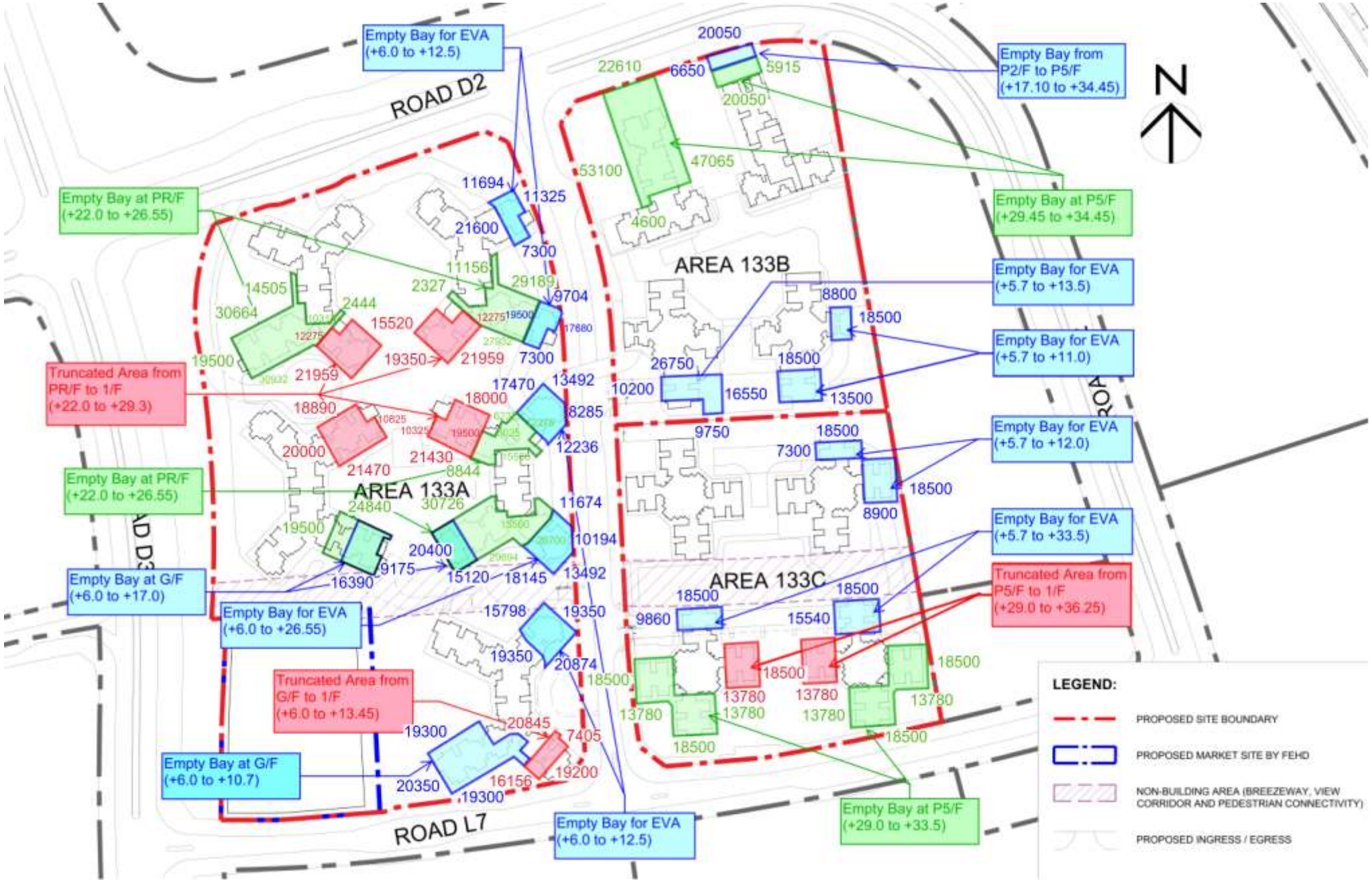


Figure 8: Illustration of Truncated Wing and Empty Bay Features in Proposed Scheme

4 QUALITATIVE ASSESSMENT

4.1 OVERVIEW

4.1.1 With consideration of the current topographical condition as well as the planned and committed developments nearby, the wind environment under both annual and summer conditions are qualitatively assessed below based on the wind data presented in Section 3.

4.1.2 Majority of prevailing winds are coming from the east to southeast for annual condition and from south-southwest, southeast and east-southeast for summer condition. However, the area immediately to the south of the site are planned with relatively tall high site coverage commercial towers which may affect the wind availability for the project site.

4.1.3 The details of the direction assessment are presented in the below sections.

E & ESE Wind

4.1.4 E and ESE winds are two of the annual prevailing winds and one of the summer prevailing winds. The two annual prevailing winds and one summer prevailing winds are expected to have the similar wind environment. Figure 9 and Figure 10 present the potential wind environment under E and ESE wind conditions for the Baseline Scheme and the Proposed Scheme respectively.

4.1.5 The sea wind from E and ESE directions would first reach the low-rise G/IC sites of TCA 137 and TCA 138 and traverse across Road D2 towards the G/IC sites of TCA 134 and TCA 135. Within the planned G/IC sites, there shall be pockets of open spaces for the E and ESE winds to travel through and reach the project site and abutting Road L7. The effects of wind blockage due to the buildings towards the east and southeast of the project site shall unlikely have a major effect on wind availability due to the relatively low building height of TCA 138 and building gaps throughout the sites allowing air paths to form.

4.1.6 The winds from E and ESE can well ventilate the southern site boundary of the project site via Road L7, along the east-west axis between the blocks of TCA 133C and TCA 133A via the 20m wide NBA within the project site and northern site boundary of TCA 133B via Road D2 (blue arrows in Figure 9 and Figure 10) to reach the open area of TCA 118 and future developments of TCA 116, TCA 117 and TCA 113.

4.1.7 In the Baseline Scheme, the Road L7 abutting the project site act as the major air path at the southern site boundary to provide ventilation for the future developments TCA 113 to the west of the project site. The Road D2 abutting the project site act as the major air path at the northern site boundary of TCA 133B of the site to provide ventilation for the TCA 145C open area to the northwest of the project site. The 20m wide NBA act as the major air path along the east-west axis between the blocks of TCA 133C and TCA 133A to provide ventilation for the TCA 118 and TCA 145B open areas to the west of the project site. A minor air path has been identified allowing the E and ESE winds to flow through site TCA 133B and reach the drop-off area of site TCA 133A. The 10m high podium will shield and weaken the incoming winds at the pedestrian level, reducing the wind availability towards the open area of TCA 145B immediately west of the project site. Winds at a higher altitude shall likely skim over the 10m high podium, through the building gap of around 34m to provide additional ventilation to the future developments TCA 116, TCA 117 and TCA 113 to the west of the project site.

4.1.8 In the Proposed Scheme, the maximum building height shall be increased by 20m from 110mPD to 130mPD for site TCA 133B, by 15m from 110mPD to 125mPD for site TCA 133C and by 20m from 115mPD to 135mPD for site TCA 133A compared to the Baseline Scheme. The increased building height would unlikely have an impact to the pedestrian winds (i.e. 6mPD street level +2m) in the immediate vicinity of the project site but would nonetheless increase the wake zone in the downwind areas of the E and ESE winds as a result of increased building height.

4.1.9 Similar to the Baseline Scheme, in the Proposed Scheme the Road L7 abutting the project site and 20m wide NBA act as the major air path at the perimeter of the site and within the site respectively for the E and ESE winds, to provide ventilation for the TCA 118 open area and future developments TCA 116, TCA 117 and TCA 113 to the west of the project site. A footbridge connecting the wet market to the TCA 133A residential blocks at P1/F (about 6m above ground) is proposed along the 20m wide NBA to enhance connectivity within the site. The platform and roofing of the footbridge shall be opaque with the remaining structure proposed to be permeable. The blockage of the E and ESE winds due to the opaque structure shall likely have minimal impact to the pedestrian winds as the features are above the pedestrian ground level and the thickness of the opaque structure shall unlikely have an effect on the wind along the direction of the wind flow. On the western site boundary of the TCA 133A the podium is around 5m higher under the Proposed Scheme compared to the Baseline Scheme. To mitigate the impact of the increased podium height towards the TCA 145B open area, the setback of the podium from the western site boundary has been increased from around 5m under the Baseline Scheme to around 9m under the Proposed Scheme.

4.1.10 Similar to the Baseline Scheme, a minor air path has been identified allowing the E and ESE winds to flow through site TCA 133B and reach the perimeter of site TCA 133A. In the Proposed Scheme, the open area of site TCA 133A along the minor air path has been elevated to be 15m above ground as part of the podium massing. To reduce the impact towards the wind availability from the E and ESE winds flowing into the podium roof level, the northeastern and northwestern residential blocks have been designed with a truncated southeastern and southwest wing respectively at P3/F, which creates an empty bay of about 6m high with about 15m in width perpendicular to the windward direction allowing the winds to flow into the P3/F open area. In addition, the wings of the residential towers facing towards the central open space have been truncated at P3/F and 1/F, which creates a 9m high empty bay to locally widen the building gap and enhance the E and ESE winds towards the future developments TCA 116, TCA 117 and TCA 113 to the west of the project site through the building separation of around 17m.

4.1.11 In the Proposed Scheme, the podium bulk of 29.5mPD in the site TCA 133B has been extended to the northern site boundary compared to the Baseline Scheme. Above 29.5mPD, 13m setback has been maintained, similar to the Baseline Scheme. It is expected that the extended podium bulk would have little effect to the incoming E and ESE winds as the winds would likely be redirected to the Road D2 with at least 30m street width.



Figure 9: E & ESE Wind Analysis for Baseline Scheme



Figure 10: E & ESE Wind Analysis for Proposed Scheme

SE Wind

4.1.12 SE wind is one of the annual prevailing winds and one of the summer prevailing winds. Figure 11 and Figure 12 present the potential wind environment under SE wind conditions for the Baseline Scheme and the Proposed Scheme respectively.

4.1.13 The mountain wind from SE directions would first reach the North Lantau Highway and then the high-rise commercial sites of TCA 129 and TCA 130 traverse across Road P1 and Road L7. Between the two commercial sites, there shall be a gap from building separation for the SE wind to travel through and reach the project site and along Road L6. The effects of wind blockage due to the planned commercial buildings towards the south of the project site shall likely have a major effect on wind availability due to the high-rise building masses.

4.1.14 In the Proposed Scheme, the maximum building height shall be increased by 20m from 110mPD to 130mPD for site TCA 133B, by 15m from 110mPD to 125mPD for site TCA 133C and by 20m from 115mPD to 135mPD for site TCA 133A compared to the Baseline Scheme. The increased building height would unlikely have an impact to the pedestrian winds (i.e. 6mPD street level +2m) in the immediate vicinity of the project site wind as a result of increased building height as majority of the incoming SE wind shall be blocked by the high-rise commercial sites of TCA 129 and TCA 130, whilst the air path along Road L6 is maintained similar to the Baseline Scheme. The wake zone in the downwind areas of the SE would increase due to the increase in maximum building height.

4.1.15 Similar to the Baseline Scheme, the Road L6 abutting the project site act as the major air path between the TCA 133A and TCA 133B sites and TCA 133A and TCA 133C sites, to provide ventilation for the future developments of TCA 139 to the north of the project site. A footbridge at P1/F (6.5m above ground) of site TCA 133A shall be extended across Road L6 to provide connection to P1/F of site TCA 133B. The platform and roofing of the footbridge shall be opaque with the remaining structure proposed to be permeable. Building separation of the residential towers above the podium level (i.e. above 15m from ground) of site TCA 133B and site TCA 133C have been identified, however, due to the blockage of wind from the commercial site of TCA 130, it is unlikely that there would be winds from SE traversing through the building separation to form an air path.

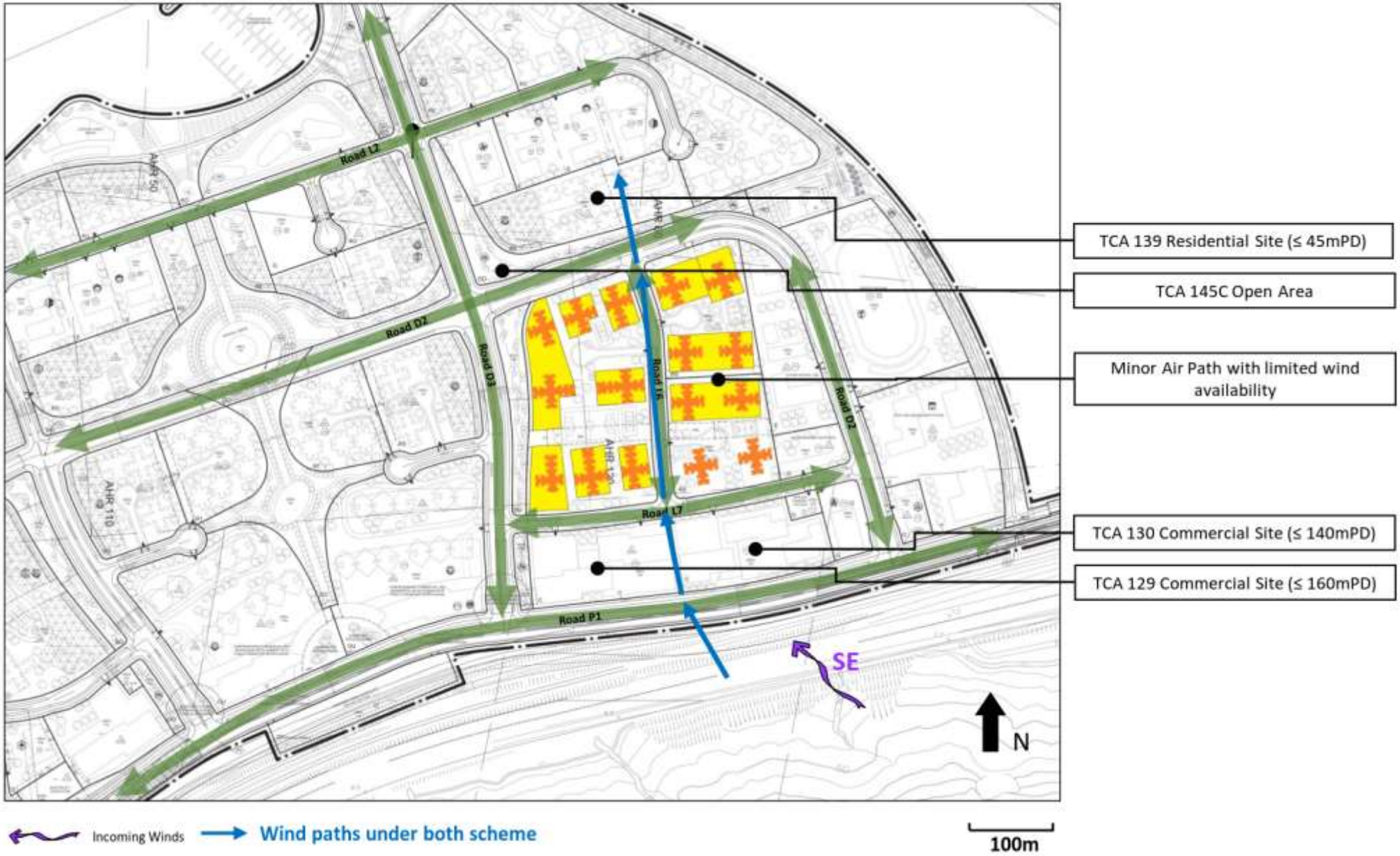


Figure 11: SE Wind Analysis for Baseline Scheme



Figure 12: SE Wind Analysis for Proposed Scheme

SSW Wind

4.1.16 SSW wind is one of the summer prevailing winds. Figure 13 and Figure 14 present the potential wind environment under SSW wind condition for the Baseline Scheme and the Proposed Scheme respectively.

4.1.17 The mountain wind from SSW direction would first reach the North Lantau Highway and then the high-rise commercial sites of TCA 129 and TCA 130 traverse across Road P1 and Road L7. Between the two commercial sites, there shall be a gap from building separation for the SSW wind to travel through and reach the project site and along Road L6. The SSW wind shall flow along the abutting roads of Road D3 and adjacent open area of TCA 145B. The effects of wind blockage due to the planned commercial buildings towards the south of the project site shall likely have a major effect on wind availability due to the high-rise building masses.

4.1.18 The winds from SSW can well ventilate the perimeter of the project site along the abutting road of Road D3 and adjacent open area of TCA 145B (blue arrows in Figure 11 and Figure 12) to reach the open area of TCA 145C and future developments of TCA 139. Ample wind traversing through the gap from the building separation of TCA 129 and TCA 130 shall flow along Road L6 provide some ventilation to the project site.

4.1.19 In the Baseline Scheme, the Road D3 and adjacent open area of TCA 145B and Road L6 abutting the project site act as the major air path at the perimeter of the site for the SSW wind, to provide ventilation for the open area of TCA 145C and future developments of TCA 139 to the north of the project site. Building separation of the residential towers above the podium level (i.e. above 10m from ground) of TCA 133B and TCA 133C have been identified, however, due to the blockage of wind from the commercial sites of TCA 129 and TCA 130, it is unlikely that there would be wind from SSW traversing through the building separation to form an air path.

4.1.20 In the Proposed Scheme, the maximum building height shall be increased by 20m from 110mPD to 130mPD for site TCA 133B, by 15m from 110mPD to 125mPD for site TCA 133C and by 20m from 115mPD to 135mPD for site TCA 133A compared to the Baseline Scheme. The increased building height would unlikely have an impact to the pedestrian winds (i.e. 6mPD street level +2m) in the immediate vicinity of the project site but would nonetheless increase the wake zone in the downwind areas of the SSW wind as a result of increased building height.

4.1.21 Similar to the Baseline Scheme, the Road D3 and adjacent open area of TCA 145B and Road L6 abutting the project site act as the major air path at the perimeter of the site for the SSW wind, to provide ventilation for the open area of TCA 145C and future developments of TCA 139 to the north of the project site. A footbridge at P1/F (about 6m above ground) of site TCA 133A shall be extended across Road L6 to provide connection to P1/F of site TCA 133B. The platform and roofing of the footbridge shall be opaque with the remaining structure proposed to be permeable. Building separation of the residential towers above the podium level of site TCA 133B and site TCA 133C have been identified, however, due to the blockage of wind from the commercial sites of TCA 129 and TCA 130, it is unlikely that there would be wind from SSW traversing through the building separation to form an air path.



Figure 13: SSW Wind Analysis for Baseline Scheme



Figure 14: SSW Wind Analysis for Proposed Scheme

5 CONCLUSION

5.1.1 The characteristics of the natural wind availability of the site were identified to investigate the wind performance of the project in the AVA-EE. Site wind availability data was used to assess the wind characteristics in terms of the magnitude and frequency of approaching wind from each wind direction. Based on the simulated RAMS wind data, it was identified the annual prevailing annual winds E, ESE and SE and summer prevailing winds ESE, SE and SSW respectively.

5.1.2 Two schemes were studied in the AVA - EE based on the layout plans provided by the project team: the Baseline Scheme (B) and the Proposed Scheme (P). The Proposed Scheme has included the following good design features to minimize the effect of the Project on the wind environment of the site and surroundings:

- A 20m Non-Building Area with footbridge from site TCA 133A P1/F (about 6m above ground) to wet market, which provides 20m width air path at ground level;
- Setback from the west boundary by ~9m and north boundary by ~13m above 29.5mPD at podium level
- Building separation along the east-west axis of ~15m to ~17m between site TCA 133B and site TCA 133A
- Truncated wings of the residential towers and empty bays to create or widen air paths

5.1.3 The Proposed Scheme with increased building height by 20m from 110mPD to 130mPD for site TCA 133B, by 15m from 110mPD to 125mPD for site TCA 133C and by 20m from 115mPD to 135mPD for site TCA 133A compared to the Baseline Scheme would unlikely have an impact to the pedestrian winds (i.e. 6mPD street level +2m) in the immediate vicinity of the project site but would nonetheless increase the wake zone in the downwind areas of the prevailing winds as a result of increased building height. The aforementioned good design features in the Proposed Scheme may help reduce the potential wake in the downwind areas and minimize the wind shielding effect. Therefore, it is unlikely that the Proposed Scheme would induce significant adverse impact on the pedestrian wind environment at the downwind areas.

APPENDIX A – LAYOUT AND SECTION DRAWING FOR PROPOSED SCHEME

TUNG CHUNG AREA 139

ROAD D2

DISTRICT OPEN SPACE

BLK 1
DOMESTIC BLOCK WITH PODIUM
MAIN ROOF 134

LANDSCAPE DECK ON PODIUM

BLK 3
DOMESTIC BLOCK WITH PODIUM
MAIN ROOF 134

BLK 2
DOMESTIC BLOCK WITH PODIUM
MAIN ROOF 134

TUNG CHUNG AREA 133A

BLK 4
DOMESTIC BLOCK WITH PODIUM
MAIN ROOF 134

TUNG CHUNG AREA 133B

TUNG CHUNG AREA 135

TUNG CHUNG AREA 133C

TUNG CHUNG AREA 134

ROAD D3

ROAD L6

ROAD L7

NON BUILDING AREA

RUN IN / OUT

PUBLIC MARKET BY GOVERNMENT (FOR REFERENCE ONLY)

BLK 5
DOMESTIC BLOCK
MAIN ROOF 125

TUNG CHUNG AREA 131

TUNG CHUNG AREA 130

TUNG CHUNG AREA 129

LEGEND:

APPLICATION SITE
申請地點

AT GRADE OPEN SPACE / LANDSCAPE DECK
地面休憩空間/園景平台

NON BUILDING AREA
非建築用地

PROJECT
SECTION 16 PLANNING APPLICATION FOR TUNG CHUNG AREA 133

DRAWING TITLE
TCA 133A MASTER LAYOUT PLAN - BLOCK PLAN
(FOR REFERENCE ONLY & SUBJECT TO DESIGN REVIEW)

房 屋 署
HOUSING DEPARTMENT

編號 DRAWING NO. IS29/-/S16/A/MLP-01

比 例 SCALE 1:1500 (A3)

日 期 DATE

LEGEND

- EMERGENCY VEHICULAR ACCESS / DEDICATED PEDESTRIAN ZONE
- APPLICATION SITE 申請地點
- NON BUILDING AREA 非建築用地

N

ROAD D2

EVA / SERVICE ACCESS

TUNG CHUNG AREA 133B

DISTRICT OPEN SPACE

ABOUT 6m

BLOCK 1 +6

BLOCK 3 +6

CARPARK +6

SHOP / EATING PLACE

E&M

RS & MRC

LIFT LOBBY

RCP & JCP

EVA ONLY

LIFT LOBBY

ABOUT 10m COMMERCIAL FRONTAGE

ABOUT 5m SET BACK

BLOCK 2 +6

SHUTTLE LIFT

BLOCK 4

ROAD L6

TUNG CHUNG AREA 133C

RUN IN / OUT

NON BUILDING AREA

PUBLIC MARKET BY GOVERNMENT (FOR REFERENCE ONLY)

BASKETBALL COURT

BLOCK 5 +6

ROAD L7

PROJECT	DRAWING TITLE	房屋署 HOUSING DEPARTMENT		
SECTION 16 PLANNING APPLICATION FOR TUNG CHUNG AREA 133	TCA 133A MASTER LAYOUT PLAN – G/F PLAN (FOR REFERENCE ONLY & SUBJECT TO DESIGN REVIEW)	編號 DRAWING NO. IS29/-/S16/A/LO-01	比例 SCALE 1:800 (A3)	日期 DATE

LEGEND

APPLICATION SITE
申請地點

NON BUILDING AREA
非建築用地

N

ROAD D2

TUNG CHUNG AREA 133B

DISTRICT OPEN SPACE

BLOCK 1

E&M

E&M

LIFT LOBBY

CARPARK

+13

BLOCK 3

E&M

LIFT LOBBY

E&M

SHOP / EATING PLACE

+13

CANOPY

LIFT LOBBY

E&M

FOOTBRIDGE

SHOP / EATING PLACE

SHOP / EATING PLACE

SHOP / EATING PLACE

10000 COMMERCIAL FRONTAGE

BLOCK 2

+13

E&M

LIFT LOBBY

CANOPY

SHUTTLE LIFT

+13

BLOCK 4

SHOP / EATING PLACE

+13

LIFT LOBBY

E&M

E&M

ROAD L6

TUNG CHUNG AREA 133C

VOID

CANOPY

CANOPY

CANOPY

FOOTBRIDGE

ROOF OF COVERED WALKWAY

ROOF OF COVERED WALKWAY

CANOPY

RUN IN / OUT

NON BUILDING AREA

PUBLIC MARKET BY GOVERNMENT
(FOR REFERENCE ONLY)

BLOCK 5

VOID

E&M

ROAD L7

PROJECT	DRAWING TITLE	房屋署 HOUSING DEPARTMENT		
SECTION 16 PLANNING APPLICATION FOR TUNG CHUNG AREA 133	TCA 133A MASTER LAYOUT PLAN – P1/F PLAN (FOR REFERENCE ONLY & SUBJECT TO DESIGN REVIEW)	編號 DRAWING NO. IS29/-/S16/A/LO-02	比例 SCALE 1:800 (A3)	日期 DATE

LEGEND

APPLICATION SITE
申請地點

NON BUILDING AREA
非建築用地

N

ROAD D2

TUNG CHUNG AREA 133B

DISTRICT OPEN SPACE

BLOCK 1

BLOCK 2

BLOCK 3

BLOCK 4

BLOCK 5

CARPARK

+17

E&M

LIFT LOBBY

CANOPY

SHUTTLE LIFT

TUNG CHUNG AREA 133C

ROAD L6

RUN IN / OUT

NON BUILDING AREA

PUBLIC MARKET BY GOVERNMENT
(FOR REFERENCE ONLY)

ROAD L7

PROJECT

SECTION 16 PLANNING APPLICATION
FOR TUNG CHUNG AREA 133

DRAWING TITLE

TCA 133A MASTER LAYOUT PLAN – P2/F PLAN
(FOR REFERENCE ONLY & SUBJECT TO DESIGN REVIEW)

房 屋 署
HOUSING DEPARTMENT

編號 DRAWING NO.	比 例 SCALE	日 期 DATE
IS29/-/S16/A/LO-03	1:800 (A3)	

LEGEND

APPLICATION SITE
申請地點

NON BUILDING AREA
非建築用地

N

ROAD D2

TUNG CHUNG AREA 133B

DISTRICT OPEN SPACE

OFFICE (DTMO)

E&M

OFFICE (PMA)

OFFICE (EMO)

BLOCK 1
LIFT LOBBY
+21

PODIUM LANDSCAPE

BLOCK 3
LIFT LOBBY
+21

BADMINTON COURT

BADMINTON COURT

SHUTTLE LIFT

KINDERGARTEN

BLOCK 2
LIFT LOBBY
+21

+21

SHUTTLE LIFT

BLOCK 4
LIFT LOBBY
+21

TUNG CHUNG AREA 133C

ROAD L6

RUN IN / OUT

NON BUILDING AREA

PUBLIC MARKET BY GOVERNMENT
(FOR REFERENCE ONLY)

BLOCK 5

ROAD L7

PROJECT

SECTION 16 PLANNING APPLICATION
FOR TUNG CHUNG AREA 133

DRAWING TITLE

TCA 133A MASTER LAYOUT PLAN – P3/F PLAN
(FOR REFERENCE ONLY & SUBJECT TO DESIGN REVIEW)

房 屋 署
HOUSING DEPARTMENT

編號 DRAWING NO.
IS29/-/S16/A/LO-04

比 例 SCALE
1:800 (A3)

日 期 DATE

LEGEND

APPLICATION SITE
申請地點

NON BUILDING AREA
非建築用地

N

ROAD D2

+5.5

+5.5

TUNG CHUNG AREA 133B

DISTRICT OPEN SPACE

BLOCK 1

BLOCK 3

BLOCK 2

BLOCK 4

+5.5

ROAD L6

TUNG CHUNG AREA 133C

NON BUILDING AREA

RUN IN / OUT

+6.0

+6.0

BLOCK 5

PUBLIC MARKET BY GOVERNMENT
(FOR REFERENCE ONLY)

+5.6

ROAD L7

+5.5

PROJECT

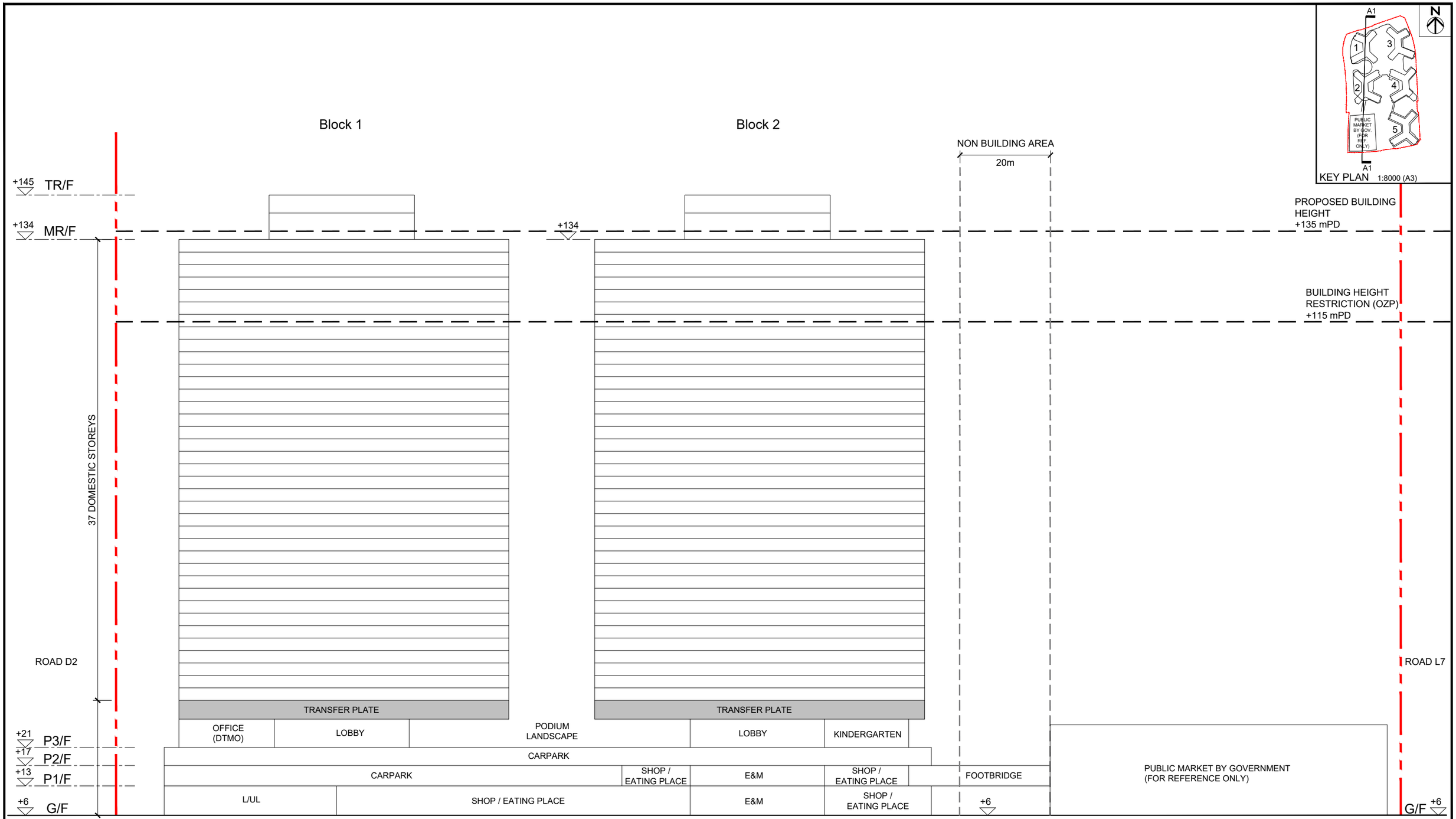
SECTION 16 PLANNING APPLICATION
FOR TUNG CHUNG AREA 133

DRAWING TITLE

TCA 133A MASTER LAYOUT PLAN – TYPICAL FLOOR PLAN
(FOR REFERENCE ONLY & SUBJECT TO DESIGN REVIEW)

房 屋 署
HOUSING DEPARTMENT

編號 DRAWING NO.	比 例 SCALE	日 期 DATE
IS29/-/S16/A/LO-05	1:800 (A3)	



LEGEND

- APPLICATION SITE 申請地點
- NON BUILDING AREA 非建築用地

PROJECT

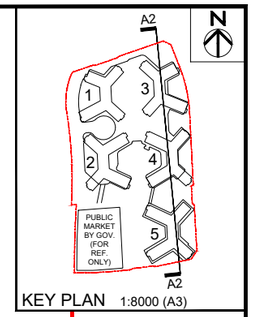
SECTION 16 PLANNING APPLICATION FOR TUNG CHUNG AREA 133

DRAWING TITLE

TCA 133A SECTION A1 - A1
(FOR REFERENCE ONLY & SUBJECT TO DESIGN REVIEW)

房 屋 署
HOUSING DEPARTMENT

編號 DRAWING NO.	比 例 SCALE	日 期 DATE
IS29/-/S16/A/LO-06	1:800 (A3)	



KEY PLAN 1:8000 (A3)

Block 5

NON BUILDING AREA
20m

Block 4

Block 3

PROPOSED BUILDING HEIGHT +135 mPD

BUILDING HEIGHT RESTRICTION (OZP) +115 mPD

TR/F +145

MR/F +134

+134

+125 MR/F

40 DOMESTIC STOREYS

37 DOMESTIC STOREYS

ROAD L7

ROAD D2

TRANSFER PLATE

LOBBY

PODIUM LANDSCAPE

LOBBY

TRANSFER PLATE

TRANSFER PLATE

CARPARK

SHOP / EATING PLACE

E&M

CARPARK

E&M

CARPARK

COVERED WALKWAY

E&M

LOBBY

E&M

E&M

L/UL

E&M

P3/F +21

P2/F +17

P1/F +13

+6 G/F

+6

G/F +6

LEGEND

APPLICATION SITE
申請地點

NON BUILDING AREA
非建築用地

PROJECT

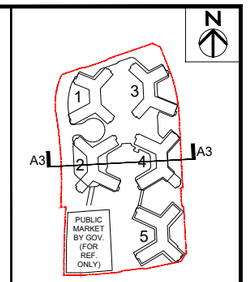
SECTION 16 PLANNING APPLICATION FOR
TUNG CHUNG AREA 133

DRAWING TITLE

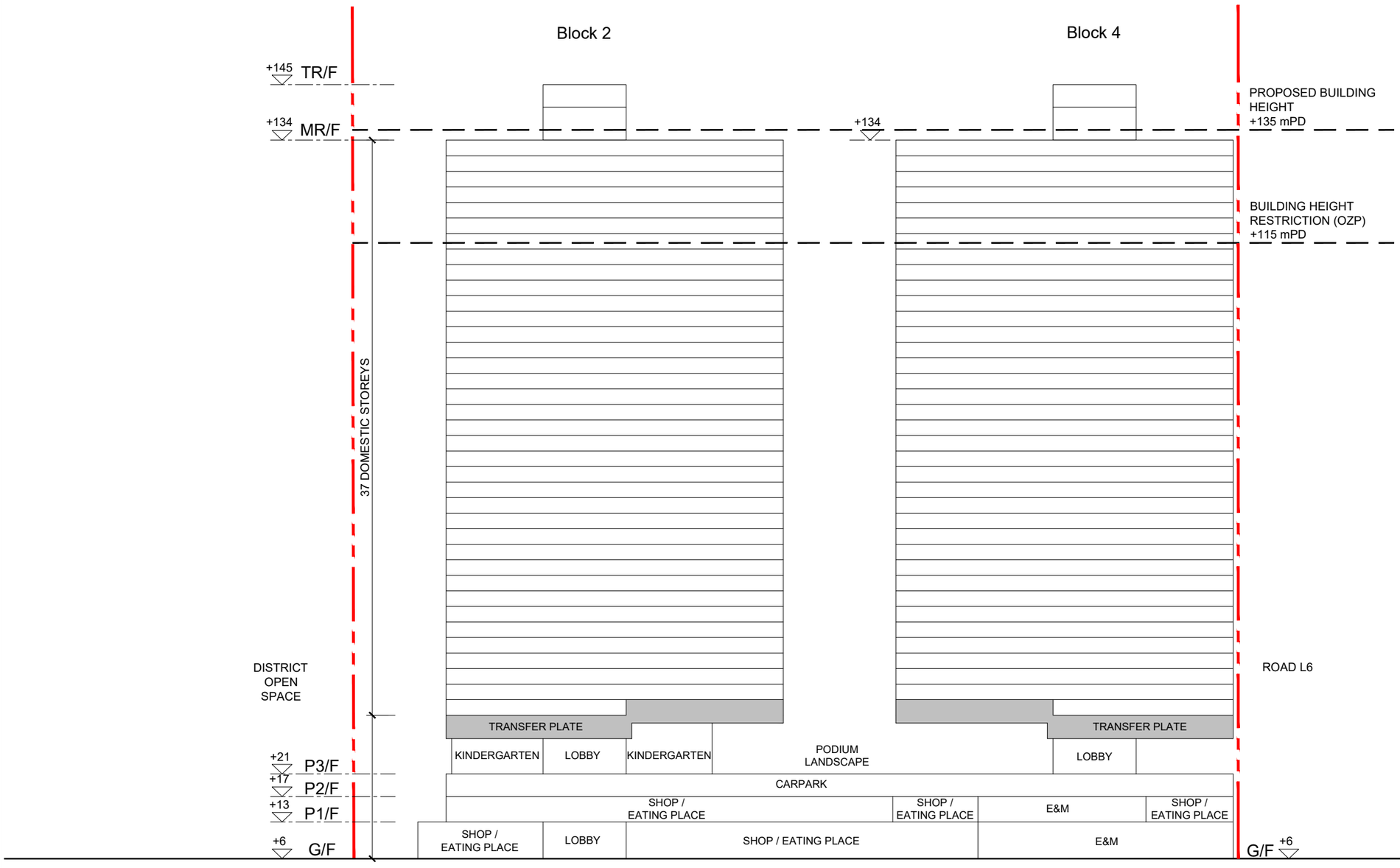
TCA 133A SECTION A2 - A2
(FOR REFERENCE ONLY & SUBJECT TO DESIGN REVIEW)

房 屋 署
HOUSING DEPARTMENT

編號 DRAWING NO.	比 例 SCALE	日 期 DATE
IS29/-/S16/A/LO-07	1:800 (A3)	



KEY PLAN 1:8000 (A3)



LEGEND

APPLICATION SITE
申請地點

NON BUILDING AREA
非建築用地

PROJECT

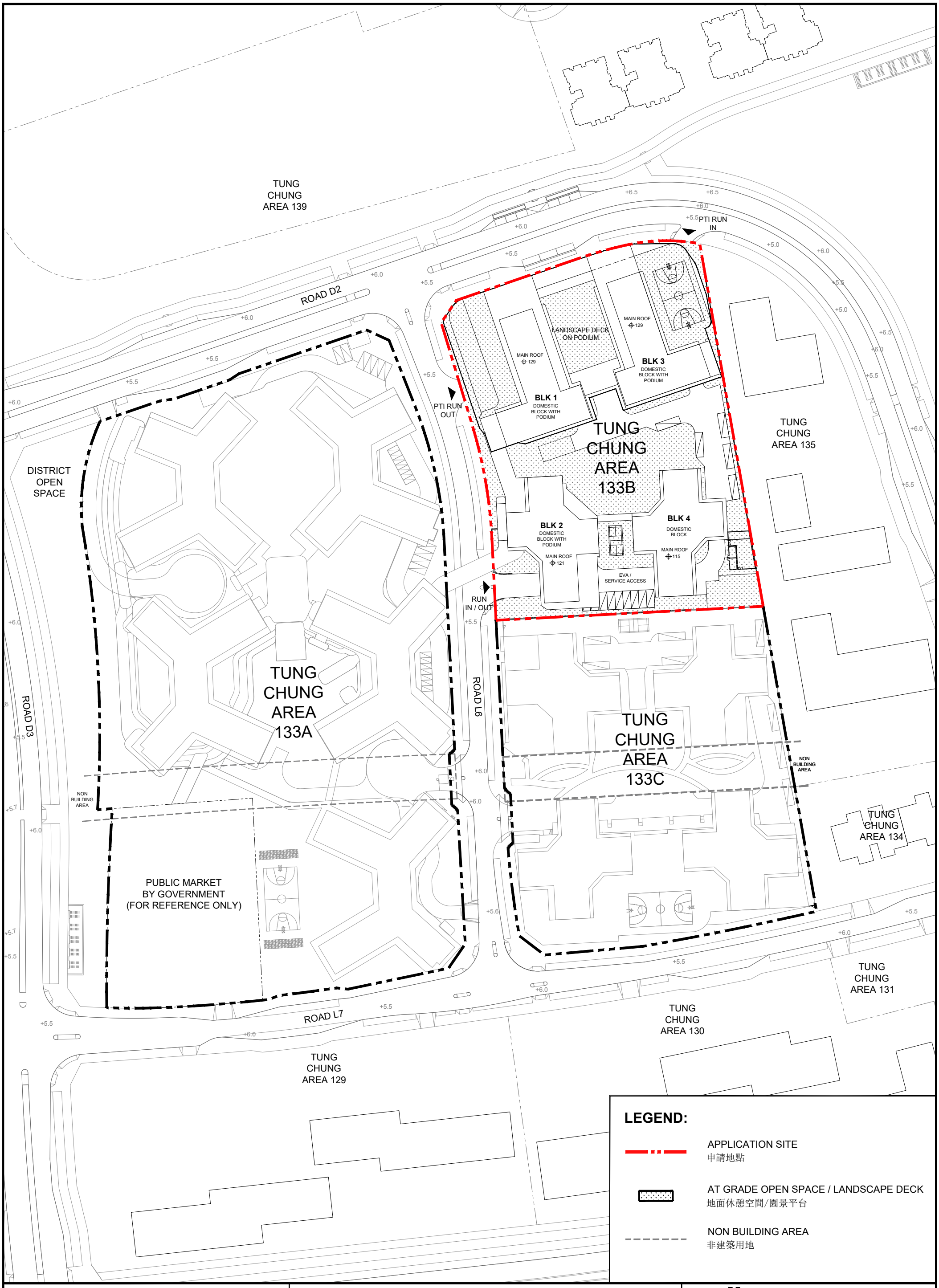
SECTION 16 PLANNING APPLICATION FOR
TUNG CHUNG AREA 133

DRAWING TITLE

TCA 133A SECTION A3 - A3
(FOR REFERENCE ONLY & SUBJECT TO DESIGN REVIEW)

房 屋 署
HOUSING DEPARTMENT

編號 DRAWING NO.	比例 SCALE	日期 DATE
IS29/-/S16/A/LO-08	1:800 (A3)	



LEGEND:

- APPLICATION SITE 申請地點
- AT GRADE OPEN SPACE / LANDSCAPE DECK 地面休憩空間/園景平台
- NON BUILDING AREA 非建築用地

PROJECT

SECTION 16 PLANNING APPLICATION FOR TUNG CHUNG AREA 133

DRAWING TITLE

TCA 133B MASTER LAYOUT PLAN - BLOCK PLAN (FOR REFERENCE ONLY & SUBJECT TO DESIGN REVIEW)

房 屋 署
HOUSING DEPARTMENT

編號 DRAWING NO. IS30/-/S16/A/MLP-01

比 例 SCALE 1:1500 (A3)

日 期 DATE

N

TUNG CHUNG
AREA 139

ROAD D2

PTI RUN IN

PTI

PUBLIC TOILET

E&M

OFFICES FOR OPERATOR

CARPARK RAMP

LIFT LOBBY

RS& MRC

BLOCK 3

+6

PTI RUN OUT

SHUTTLE LIFT

BLOCK 1

ROAD L6

TUNG CHUNG
AREA 135

TUNG CHUNG
AREA 133A

BLOCK 2

BLOCK 4

BADMINTON COURT

EVA / SERVICE ACCESS

RUN IN / OUT

RCP

TUNG CHUNG
AREA 133C

LEGEND

APPLICATION SITE
申請地點

PROJECT	DRAWING TITLE	房 屋 署 HOUSING DEPARTMENT		
SECTION 16 PLANNING APPLICATION FOR TUNG CHUNG AREA 133	TCA 133B MASTER LAYOUT PLAN – G/F PLAN (FOR REFERENCE ONLY & SUBJECT TO DESIGN REVIEW)	編號 DRAWING NO. IS30/-/S16/A/LO-01	比 例 SCALE 1:800 (A3)	日 期 DATE

N

TUNG CHUNG
AREA 139

PTI RUN IN

ROAD D2

UPPER PART
OF PTI

CARPARK RAMP

BLOCK 3
+12

SHUTTLE LIFT

E&M

BLOCK 1
+12

PTI RUN OUT

ROAD L6

SHUTTLE LIFT

TUNG CHUNG
AREA 135

TUNG CHUNG
AREA 133A

E&M

OFFICE
(EMO)

BLOCK 2
+14

E&M

BLOCK 4

FOOTBRIDGE TO
TCA 133A

KINDERGARTEN

+14

RUN IN / OUT

TUNG CHUNG
AREA 133C

LEGEND

APPLICATION SITE
申請地點

PROJECT

SECTION 16 PLANNING APPLICATION
FOR TUNG CHUNG AREA 133

DRAWING TITLE

TCA 133B MASTER LAYOUT PLAN – P1/F PLAN
(FOR REFERENCE ONLY & SUBJECT TO DESIGN REVIEW)

房 屋 署
HOUSING DEPARTMENT

編號 DRAWING NO.	比 例 SCALE	日 期 DATE
IS30/-/S16/A/LO-02	1:800 (A3)	

N

TUNG CHUNG
AREA 139

ROAD D2

PTI RUN IN

E&M

CARPARK

+18

PODIUM
LANDSCAPE

E&M

BLOCK 3
SOCIAL WELFARE
FACILITIES

+18

PTI RUN OUT

SHUTTLE LIFT

BLOCK 1

SHUTTLE
LIFT

ROAD L6

TUNG CHUNG
AREA 135

TUNG CHUNG
AREA 133A

+18

BLOCK 2

BLOCK 4

+18

+18

RUN IN / OUT

TUNG CHUNG
AREA 133C

LEGEND

APPLICATION SITE
申請地點

PROJECT	DRAWING TITLE	房 屋 署 HOUSING DEPARTMENT		
SECTION 16 PLANNING APPLICATION FOR TUNG CHUNG AREA 133	TCA 133B MASTER LAYOUT PLAN – P2/F PLAN (FOR REFERENCE ONLY & SUBJECT TO DESIGN REVIEW)	編號 DRAWING NO. IS30/-/S16/A/LO-03	比 例 SCALE 1:800 (A3)	日 期 DATE

N

TUNG CHUNG
AREA 139

PTI RUN IN

ROAD D2

E&M

CARPARK

+21

PODIUM
LANDSCAPE

E&M

BLOCK 3
SOCIAL WELFARE
FACILITIES

+21

PTI RUN OUT

SHUTTLE LIFT

BLOCK 1

SHUTTLE LIFT

ROAD L6

TUNG CHUNG
AREA 135

TUNG CHUNG
AREA 133A

BLOCK 2

BLOCK 4

RUN IN / OUT

TUNG CHUNG
AREA 133C

LEGEND

APPLICATION SITE
申請地點

PROJECT

SECTION 16 PLANNING APPLICATION
FOR TUNG CHUNG AREA 133

DRAWING TITLE

TCA 133B MASTER LAYOUT PLAN – P3/F PLAN
(FOR REFERENCE ONLY & SUBJECT TO DESIGN REVIEW)

房 屋 署
HOUSING DEPARTMENT

編號 DRAWING NO.	比 例 SCALE	日 期 DATE
IS30/-/S16/A/LO-04	1:800 (A3)	

N

TUNG CHUNG
AREA 139

PTI RUN IN

ROAD D2

E&M

CARPARK
+25

PODIUM
LANDSCAPE

E&M

BLOCK 3
SOCIAL WELFARE
FACILITIES
+25

PTI RUN OUT

SHUTTLE LIFT

BLOCK 1

SHUTTLE LIFT

ROAD L6

TUNG CHUNG
AREA 135

TUNG CHUNG
AREA 133A

BLOCK 2

BLOCK 4

RUN IN / OUT

TUNG CHUNG
AREA 133C

LEGEND

APPLICATION SITE
申請地點

PROJECT

SECTION 16 PLANNING APPLICATION
FOR TUNG CHUNG AREA 133

DRAWING TITLE

TCA 133B MASTER LAYOUT PLAN – P4/F PLAN
(FOR REFERENCE ONLY & SUBJECT TO DESIGN REVIEW)

房 屋 署
HOUSING DEPARTMENT

編號 DRAWING NO.	比 例 SCALE	日 期 DATE
IS30/-/S16/A/LO-05	1:800 (A3)	

N

TUNG CHUNG
AREA 139

PTI RUN IN

ROAD D2

PODIUM
LANDSCAPE

BASKETBALL
COURT

PODIUM
LANDSCAPE

E&M

BLOCK 3
SOCIAL WELFARE
FACILITIES
+29.5

SHUTTLE LIFT

BLOCK 1

SHUTTLE
LIFT

PTI RUN OUT

ROAD L6

TUNG CHUNG
AREA 135

TUNG CHUNG
AREA 133A

BLOCK 2

BLOCK 4

RUN IN / OUT

TUNG CHUNG
AREA 133C

LEGEND

APPLICATION SITE
申請地點

PROJECT

SECTION 16 PLANNING APPLICATION
FOR TUNG CHUNG AREA 133

DRAWING TITLE

TCA 133B MASTER LAYOUT PLAN – P5/F PLAN
(FOR REFERENCE ONLY & SUBJECT TO DESIGN REVIEW)

房 屋 署
HOUSING DEPARTMENT

編號 DRAWING NO.	比 例 SCALE	日 期 DATE
IS30/-/S16/A/LO-06	1:800 (A3)	

N

TUNG CHUNG
AREA 139

ROAD D2

PTI RUN IN

BLOCK 1

BLOCK 3

PTI RUN OUT

ROAD L6

TUNG CHUNG
AREA 135

TUNG CHUNG
AREA 133A

BLOCK 2

BLOCK 4

RUN IN / OUT

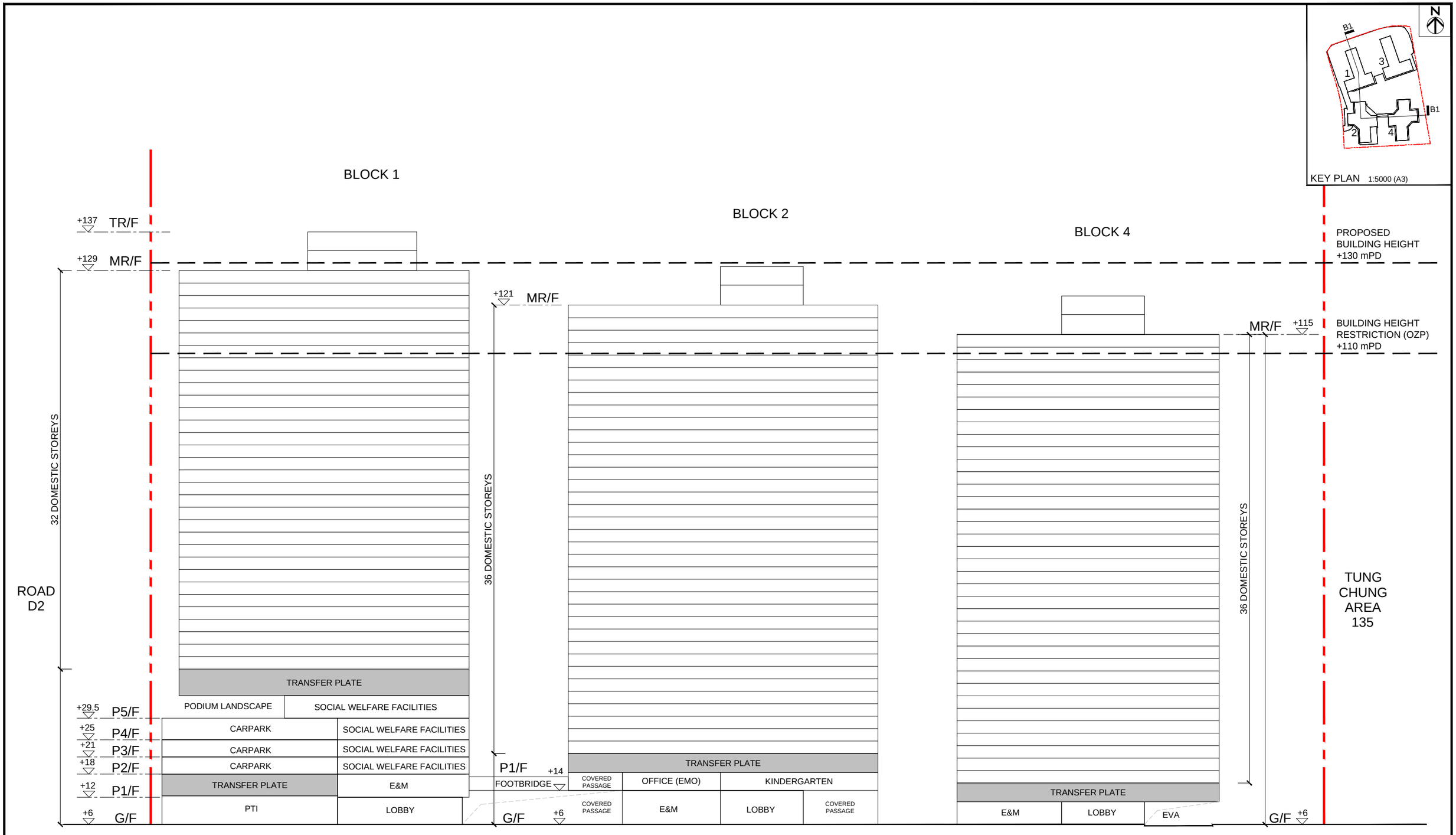
TUNG CHUNG
AREA 133C

LEGEND

APPLICATION SITE
申請地點

PROJECT	DRAWING TITLE	
SECTION 16 PLANNING APPLICATION FOR TUNG CHUNG AREA 133	TCA 133B MASTER LAYOUT PLAN – TYPICAL FLOOR PLAN (FOR REFERENCE ONLY & SUBJECT TO DESIGN REVIEW)	房 屋 署 HOUSING DEPARTMENT

編號 DRAWING NO.	比 例 SCALE	日 期 DATE
IS30/-/S16/A/LO-07	1:800 (A3)	



LEGEND

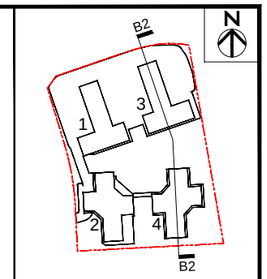
APPLICATION SITE
申請地點

PROJECT
PROPOSED PUBLIC HOUSING DEVELOPMENTS AT TUNG CHUNG AREA 133

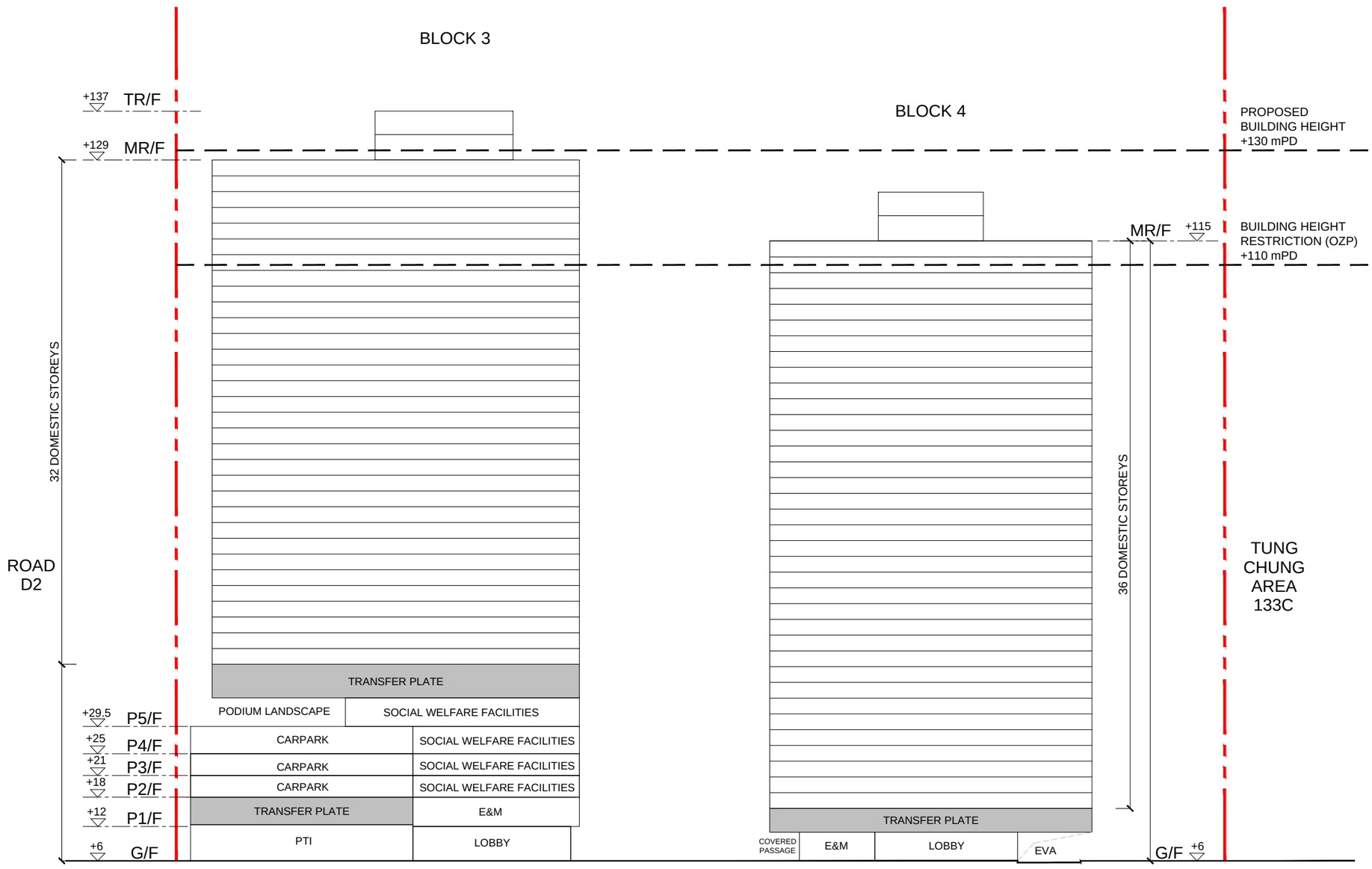
DRAWING TITLE
TCA 133B SECTION B1 - B1
(FOR REFERENCE ONLY & SUBJECT TO DESIGN REVIEW)

房 屋 署
HOUSING DEPARTMENT

編號 DRAWING NO.	比 例 SCALE	日 期 DATE
IS30/-/S16/A/LO-08	1:800 (A3)	



KEY PLAN 1:5000 (A3)



LEGEND

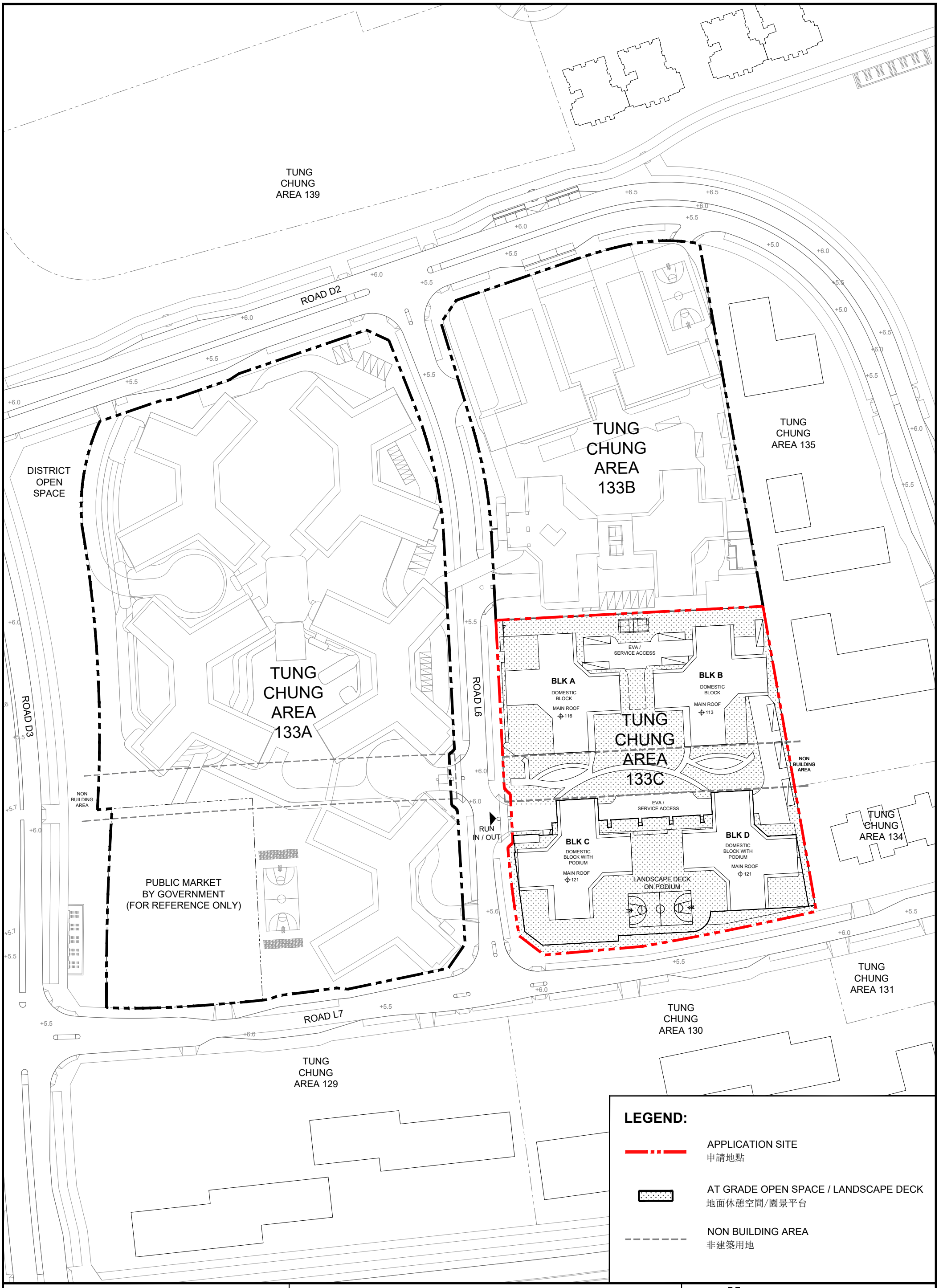
APPLICATION SITE
申請地點

PROJECT
PROPOSED PUBLIC HOUSING
DEVELOPMENTS AT TUNG CHUNG AREA 133

DRAWING TITLE
TCA 133B SECTION B2 - B2
(FOR REFERENCE ONLY & SUBJECT TO DESIGN REVIEW)

房 屋 署
HOUSING DEPARTMENT

編號 DRAWING NO.	比 例 SCALE	日 期 DATE
IS30/-/S16/A/LO-09	1:800 (A3)	



LEGEND:

- APPLICATION SITE 申請地點
- AT GRADE OPEN SPACE / LANDSCAPE DECK 地面休憩空間/園景平台
- NON BUILDING AREA 非建築用地

PROJECT

SECTION 16 PLANNING APPLICATION FOR TUNG CHUNG AREA 133

DRAWING TITLE

TCA 133C MASTER LAYOUT PLAN – BLOCK PLAN (FOR REFERENCE ONLY & SUBJECT TO DESIGN REVIEW)

房 屋 署
HOUSING DEPARTMENT

編號 DRAWING NO.	比 例 SCALE	日 期 DATE
IS31/-/S16/A/MLP-01	1:1500 (A3)	

N

TUNG CHUNG AREA 135

TUNG CHUNG AREA 133B

TUNG CHUNG AREA 133A

TUNG CHUNG AREA 134

TUNG CHUNG AREA 131

TUNG CHUNG AREA 130

TUNG CHUNG AREA 129

ROAD L6

ROAD L7

+5.5

+6.0

+5.6

BADMINTON COURT

E&M

RS&MRC

+6

BLOCK A

KINDERGARTEN

OFFICE (EMO)

BLOCK B

LANDSCAPE

NON BUILDING AREA

EVA / SERVICE ACCESS

RUN IN / OUT

SHUTTLE LIFT

BLOCK C

BLOCK D

CARPARK

RCP

SOCIAL WELFARE FACILITIES

LEGEND

APPLICATION SITE
申請地點

NON BUILDING AREA
非建築用地

PROJECT	DRAWING TITLE	
SECTION 16 PLANNING APPLICATION FOR TUNG CHUNG AREA 133	TCA 133C MASTER LAYOUT PLAN – G/F PLAN (FOR REFERENCE ONLY & SUBJECT TO DESIGN REVIEW)	房 屋 署 HOUSING DEPARTMENT
		編號 DRAWING NO. IS31/-/S16/A/LO-01
		比 例 SCALE 1:800 (A3)
		日 期 DATE

N

TUNG CHUNG AREA 135

TUNG CHUNG AREA 133B

TUNG CHUNG AREA 133A

TUNG CHUNG AREA 134

TUNG CHUNG AREA 131

TUNG CHUNG AREA 130

TUNG CHUNG AREA 129

ROAD L6

ROAD L7

RUN IN / OUT

BLOCK A

BLOCK B

BLOCK C

BLOCK D

SOCIAL WELFARE FACILITIES

CARPARK

ROOF OF COVERED WALKWAY

NON BUILDING AREA

SHUTTLE LIFT

E&M

LANDSCAPE

+12

+13

+5.5

+5.6

+6.0

LEGEND

APPLICATION SITE
申請地點

NON BUILDING AREA
非建築用地

PROJECT	DRAWING TITLE			
SECTION 16 PLANNING APPLICATION FOR TUNG CHUNG AREA 133	TCA 133C MASTER LAYOUT PLAN – P1/F PLAN (FOR REFERENCE ONLY & SUBJECT TO DESIGN REVIEW)	房 屋 署 HOUSING DEPARTMENT		
		編號 DRAWING NO. IS31/-/S16/A/LO-02	比 例 SCALE 1:800 (A3)	日 期 DATE

N

TUNG CHUNG AREA 135

TUNG CHUNG AREA 133B

BLOCK A

BLOCK B

ROAD L6

+5.5

TUNG CHUNG AREA 133A

+6.0

+6.0

RUN IN / OUT

NON BUILDING AREA

SOCIAL WELFARE FACILITIES

+17

SHUTTLE LIFT

BLOCK C

CARPARK

+17

SHUTTLE LIFT

E&M

BLOCK D

TUNG CHUNG AREA 134

E&M

+5.6

LANDSCAPE

+17

E&M

E&M

+6.0

+5.5

ROAD L7

TUNG CHUNG AREA 131

+6.0

TUNG CHUNG AREA 130

TUNG CHUNG AREA 129

LEGEND

APPLICATION SITE
申請地點

NON BUILDING AREA
非建築用地

PROJECT	DRAWING TITLE	
SECTION 16 PLANNING APPLICATION FOR TUNG CHUNG AREA 133	TCA 133C MASTER LAYOUT PLAN – P2/F PLAN (FOR REFERENCE ONLY & SUBJECT TO DESIGN REVIEW)	房 屋 署 HOUSING DEPARTMENT
		編號 DRAWING NO. IS31/-/S16/A/LO-03
		比 例 SCALE 1:800 (A3)
		日 期 DATE

N

TUNG
CHUNG
AREA 135

TUNG
CHUNG
AREA 133B

BLOCK A

BLOCK B

ROAD L6

+5.5

TUNG
CHUNG
AREA 133A

+6.0

+6.0

RUN IN / OUT

NON
BUILDING
AREA

SOCIAL WELFARE
FACILITIES

+22

SHUTTLE
LIFT

BLOCK
C

SHUTTLE
LIFT

E&M

BLOCK
D

CARPARK

+22

E&M

TUNG
CHUNG
AREA 134

+5.6

E&M

E&M

+6.0

+5.5

ROAD L7

TUNG
CHUNG
AREA 131

+6.0

TUNG
CHUNG
AREA 130

TUNG
CHUNG
AREA 129

LEGEND

APPLICATION SITE
申請地點

NON BUILDING AREA
非建築用地

PROJECT	DRAWING TITLE			
SECTION 16 PLANNING APPLICATION FOR TUNG CHUNG AREA 133	TCA 133C MASTER LAYOUT PLAN – P3/F PLAN (FOR REFERENCE ONLY & SUBJECT TO DESIGN REVIEW)	房 屋 署 HOUSING DEPARTMENT		
		編號 DRAWING NO. IS31/-/S16/A/LO-04	比 例 SCALE 1:800 (A3)	日 期 DATE

N

TUNG CHUNG AREA 135

TUNG CHUNG AREA 133B

BLOCK A

BLOCK B

ROAD L6

+5.5

TUNG CHUNG AREA 133A

+6.0

+6.0

RUN IN / OUT

NON BUILDING AREA

TUNG CHUNG AREA 134

SHUTTLE LIFT

SOCIAL WELFARE FACILITIES

+27

PODIUM LANDSCAPE

+27

SHUTTLE LIFT

BLOCK C

BLOCK D

CARPARK

+27

E&M

+5.6

E&M

E&M

+6.0

+5.5

ROAD L7

TUNG CHUNG AREA 131

+6.0

TUNG CHUNG AREA 130

TUNG CHUNG AREA 129

LEGEND

APPLICATION SITE
申請地點

NON BUILDING AREA
非建築用地

PROJECT

SECTION 16 PLANNING APPLICATION FOR TUNG CHUNG AREA 133

DRAWING TITLE

TCA 133C MASTER LAYOUT PLAN – P4/F PLAN
(FOR REFERENCE ONLY & SUBJECT TO DESIGN REVIEW)

房 屋 署
HOUSING DEPARTMENT

編號 DRAWING NO.	比 例 SCALE	日 期 DATE
IS31/-/S16/A/LO-05	1:800 (A3)	

N

TUNG CHUNG AREA 135

TUNG CHUNG AREA 133B

BLOCK A

BLOCK B

ROAD L6

+5.5

TUNG CHUNG AREA 133A

+6.0

+6.0

RUN IN / OUT

NON BUILDING AREA

TUNG CHUNG AREA 134

PODIUM LANDSCAPE +27

SHUTTLE LIFT

BLOCK C +32

PODIUM LANDSCAPE +32

BLOCK D +32

BASKETBALL COURT

+5.6

+6.0

+5.5

ROAD L7

+6.0

TUNG CHUNG AREA 131

TUNG CHUNG AREA 130

TUNG CHUNG AREA 129

LEGEND

APPLICATION SITE
申請地點

NON BUILDING AREA
非建築用地

PROJECT

SECTION 16 PLANNING APPLICATION FOR TUNG CHUNG AREA 133

DRAWING TITLE

TCA 133C MASTER LAYOUT PLAN – P5/F PLAN
(FOR REFERENCE ONLY & SUBJECT TO DESIGN REVIEW)

房 屋 署
HOUSING DEPARTMENT

編號 DRAWING NO.	比 例 SCALE	日 期 DATE
IS31/-/S16/A/LO-06	1:800 (A3)	

N

TUNG
CHUNG
AREA 135

TUNG
CHUNG
AREA 133B

+5.5

BLOCK A

BLOCK B

ROAD L6

TUNG
CHUNG
AREA 133A

+6.0

+6.0

RUN IN / OUT

NON
BUILDING
AREA

TUNG
CHUNG
AREA 134

BLOCK C

BLOCK D

+5.6

+6.0

+5.5

ROAD L7

+6.0

TUNG
CHUNG
AREA 131

TUNG
CHUNG
AREA 130

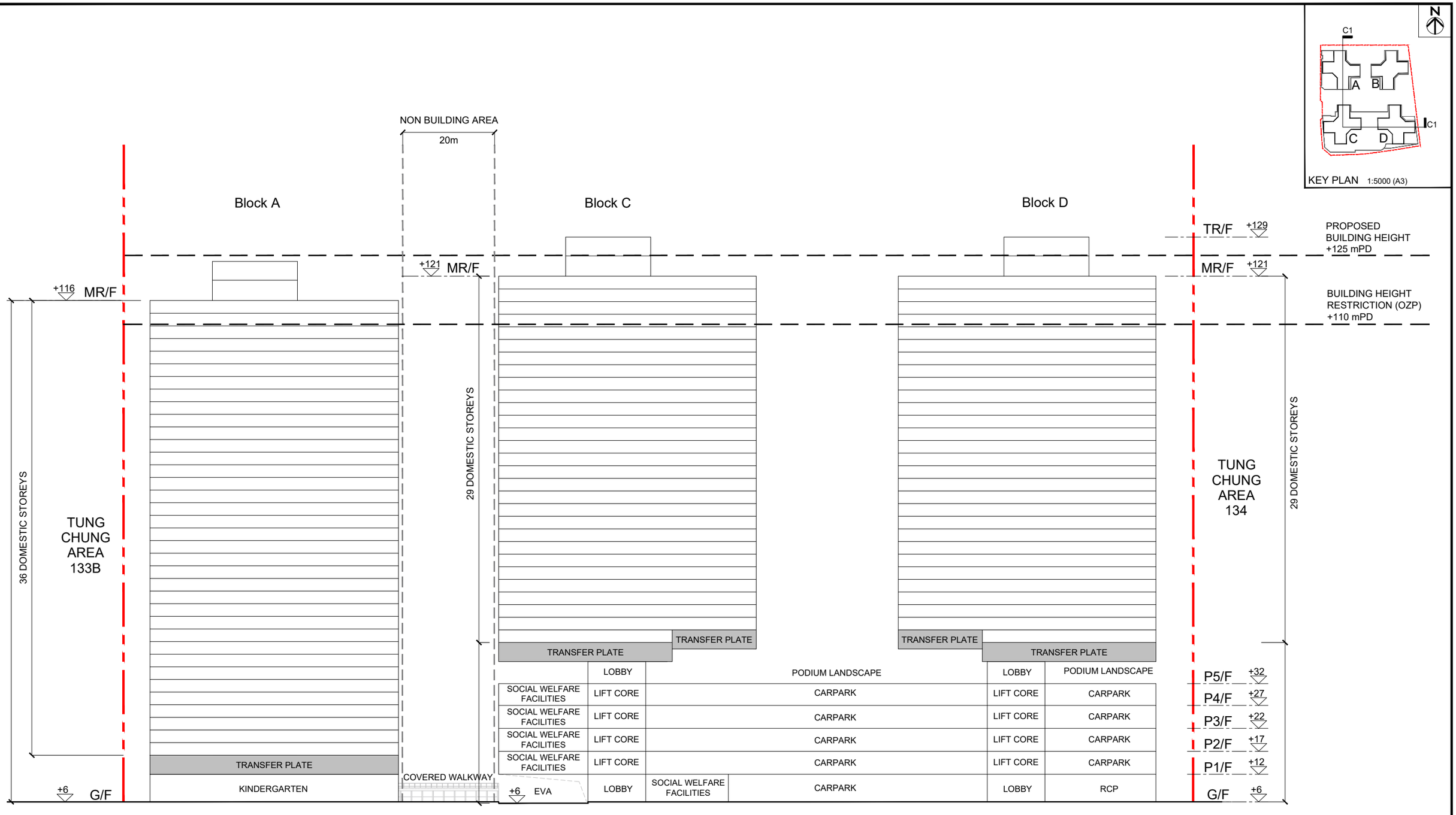
TUNG
CHUNG
AREA 129

LEGEND

APPLICATION SITE
申請地點

NON BUILDING AREA
非建築用地

PROJECT	DRAWING TITLE	房 屋 署 HOUSING DEPARTMENT		
SECTION 16 PLANNING APPLICATION FOR TUNG CHUNG AREA 133	TCA 133C MASTER LAYOUT PLAN – TYPICAL FLOOR PLAN (FOR REFERENCE ONLY & SUBJECT TO DESIGN REVIEW)	編號 DRAWING NO. IS31/-/S16/A/LO-07	比 例 SCALE 1:800 (A3)	日 期 DATE



LEGEND

- APPLICATION SITE 申請地點
- NON BUILDING AREA 非建築用地

PROJECT

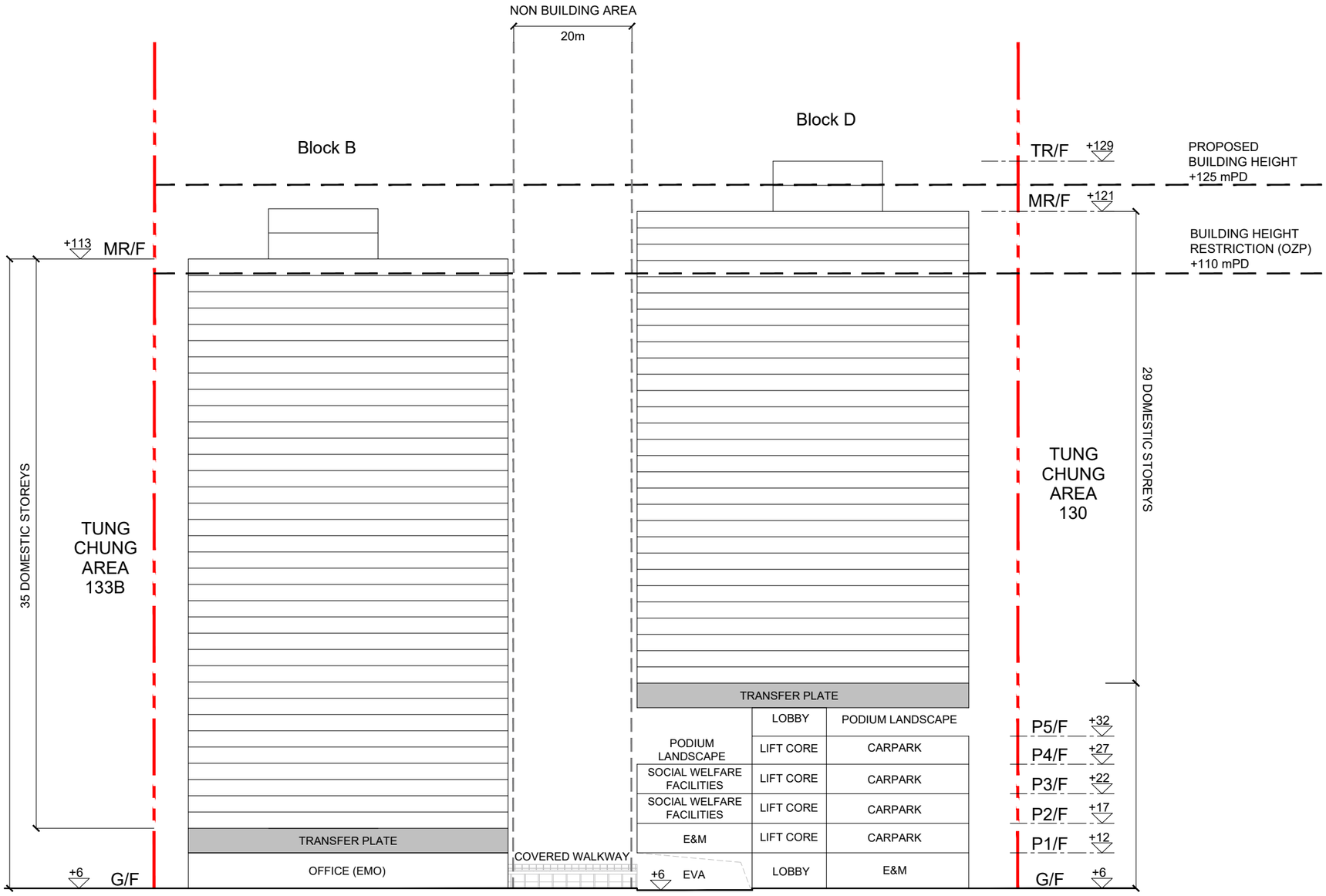
SECTION 16 PLANNING APPLICATION FOR TUNG CHUNG AREA 133

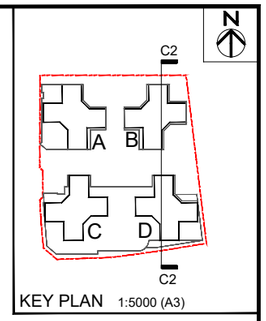
DRAWING TITLE

TCA 133C SECTION C1 - C1
(FOR REFERENCE ONLY & SUBJECT TO DESIGN REVIEW)

房 屋 署
HOUSING DEPARTMENT

編號 DRAWING NO.	比 例 SCALE	日 期 DATE
IS31/-/S16/A/LO-08	1:800 (A3)	





LEGEND

APPLICATION SITE
申請地點

NON BUILDING AREA
非建築用地

PROJECT

SECTION 16 PLANNING APPLICATION FOR
TUNG CHUNG AREA 133

DRAWING TITLE

TCA 133C SECTION C2 - C2
(FOR REFERENCE ONLY & SUBJECT TO DESIGN REVIEW)

房 屋 署
HOUSING DEPARTMENT

編號 DRAWING NO.	比例 SCALE	日期 DATE
IS31/-/S16/A/LO-09	1:800 (A3)	

Appendix 4

Technical Assessments – Part 2

Visual Impact Assessment
(for Tung Chung Areas 133A, 133B and 133C)

S16 PLANNING APPLICATION
APPROVED TUNG CHUNG EXTENSION AREA OUTLINE ZONING PLAN NO. S/I-TCE/2

Proposed Minor Relaxation of Restrictions of Plot Ratio and Building Height for the Public Housing Developments at Tung Chung Areas 133A, 133B and 133C

VISUAL IMPACT ASSESSMENT

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Section 16 Application for Minor Relaxation of Restrictions of Maximum Overall Plot Ratio and Building Height for the Public Housing Development at Tung Chung Areas 133A, 133B and 133C

Visual Impact Assessment

1 INTRODUCTION

1.1 This Visual Impact Assessment ("VIA") is prepared by the Hong Kong Housing Authority ("HKHA") in support of a Section 16 Planning Application for minor relaxation of restrictions of maximum overall Plot Ratios ("PRs") and maximum Building Heights ("BH") for the public housing developments at Tung Chung Areas (TC) 133A, 133B and 133C ("The Application Sites").

1.2 TC 133A has an area of approximately 4.30 hectares ("ha") and is zoned "Residential (Group A)2" ("R(A)2") with a small portion in area zoned as "Open Space" ("O") under the Approved Tung Chung Extension Area Outline Zoning Plan No. S/I-TCE/2 ("the OZP"). Pursuant to the OZP, development at TC 133A is subject to a maximum overall PR of 6.5 and a maximum BH restriction of 115mPD as stipulated on the OZP.

1.3 TC 133B and TC 133C have an area of approximately 1.81ha and 1.85ha respectively. TC 133B and 133C are zoned "Residential (Group A)3" ("R(A)3") under the OZP. Pursuant to the OZP, developments at TC 133B and 133C are subject to a maximum overall PR of 6.4 and a maximum BH restriction of 110mPD as stipulated on the OZP.

1.4 In response to the Government's Policy on the enhancement of the development intensity of public housing sites[1], the Town Planning Board ("TPB")'s approval is sought for the minor relaxation of restrictions of maximum PRs and maximum BHs restriction for TC 133A, 133B and 133C. For TC 133A, it is proposed to increase maximum overall PR of 6.5 to 7.0, and maximum BH restriction from 115mPD to

[1] In line with Government's initiative announced in December 2018 on "Enhanced Development Intensity of Public Housing Sites" to increase the maximum domestic PR of the public housing sites in New Towns by up to 30% as appropriate where their technical feasibility permits.

135mPD. For TC 133B, it is proposed to increase maximum overall PR from 6.4 to 6.8, and maximum BH restriction from 110mPD to 130mPD. And for TC 133C, it is proposed to increase maximum overall PR of 6.4 to 6.7, and maximum BH restriction from 115mPD to 125mPD.

1.5 This VIA evaluates, with reference to the "Town Planning Board Guidelines on Submission of Visual Impact Assessment for Planning Applications to the Town Planning Board" ("TPB PG-No. 41"), the existing visual quality, visual compatibility and degree of anticipated visual impacts of the Proposed Developments of the public viewer relevant to the Application Sites. The VIA comments on the visual acceptability of the proposed public housing developments and concludes with recommendation on mitigation measures if necessary.

2 OUTLINE OF THE VISUAL IMPACT ASSESSMENT

2.1 The outline of this VIA is set out below:

- Section 3 examines the existing visual context, characters and elements of the Application Sites and its surroundings;
- Section 4 outlines the development proposals under the Baseline Schemes and Proposed Schemes;
- Section 5 defines the Assessment Areas;
- Section 6 identifies the potential visual receptors and selected viewpoints;
- Section 7 assesses the potential visual impact; and
- Section 8 recommends any necessary mitigation measures.

3 VISUAL CONTEXT and VISUAL ELEMENTS

Site Location and Existing Site Condition

3.1 TC 133A, 133B and 133C, with gross site areas of approximately 4.30ha, 1.81ha and 1.85ha respectively, are situated at the eastern part of the Tung Chung New Town Extension Area. The Application Sites have been formed by reclamation. The proposed vehicular access of the Application Sites would be via a new Road L6.

The Surrounding Context

3.2 The land use pattern around the Application Sites is characterized by a mixture of high-density residential developments, medium-density residential development as well as Government, Institution or Community uses sites ("G/IC").

3.3 To the north of the Application Sites across planned Road D2 are the planned district open space at TC 145C, some planned medium-density residential development at TC 139 and TC 141B (with a BH restriction of 45 and 55mPD respectively), some G/IC sites planned for schools and a planned indoor recreation centre at TC 140A. To the immediate east are a G/IC site reserved for other educational purpose at TC 135 and a planned Police Married Quarter at TC 134. To the south are TC 129 and 130 which are planned for high-rise commercial development (with a BH restriction of 160 and 140mPD respectively), a sewage pumping station at TC 132 and a planned police station at Tung Chung Area 131. To the immediate west of the Application Sites is the planned N-S Linear Park at TC 145B. Further to the west across the planned Road D3 are TC 117 planned for public housing development (with a BH restriction of 105mPD), TC 116 planned for high-density private residential development (with a BH restriction of 105mPD) and TC 113B planned for high-rise commercial and residential development (with a BH restriction of 185mPD) (Please see ***Figure 1***).

3.4 As Tung Chung East Extension Area is currently undergoing different phases of reclamation, the extent of contrast between the Proposed Developments in the relation to the environment may differ depending on the progress of the reclamation.

4 THE DEVELOPMENT PROPOSAL

Statutory Provisions

4.1 TC 133A is zoned "R(A)2" with a small portion in area zoned as "O" on the Approved Tung Chung Extension Area OZP and subject to a maximum overall PR of 6.5, and a maximum BH of 115mPD as stipulated on the OZP.

4.2 TC 133B and 133C are zoned "R(A)3" on the OZP and subject to a maximum overall PR of 6.4, and a maximum BH of 110mPD as stipulated on the OZP.

Site Constraints and Special Requirements

4.3 It is ensured that the Proposed Scheme complies with the Sustainable Building Design ("SBD") Guidelines. The design of the Proposed Scheme meets the requirement on building separation set out in PNAP App-152 of the SBD Guidelines to avoid any potential wall effect.

The Baseline Scheme

4.4 Baseline Scheme for the Application Sites were prepared in compliance with the BH and PR stated on the Approved Tung Chung Extension Area OZP. They are used as a basis for comparison for this VIA as it reflects a basic quantum of development potential on the Sites according to the statutory zoning. The key development parameters of TC 133A, 133B and 133C as stipulated on the Approved OZP are presented in **Table 4.1**.

Table 4.1 Development Parameters as stipulated on the Approved OZP

Development Parameters	TC 133A	TC 133B	TC 133C
Plot ratio	6.5	6.4	6.4
Maximum Building Height	115mPD	110mPD	110mPD

The Proposed Scheme

4.5 The Proposed Scheme for TC 133A adopts a maximum overall PR of 7.0, comprising of domestic PR of 6.5 and non-domestic PR of 0.5. The proposed scheme shall provide a total of five (5) residential blocks with 6,817 flats that will cater for a total design population of 16,469, which are subject to detailed design.

4.6 The Proposed Scheme for TC 133B adopts a maximum overall PR of 6.8, comprising of domestic PR of 6.5 and non-domestic PR of 0.3. The proposed scheme shall provide a total of four (4) residential blocks with 2,448 flats that will cater for a total design population of 7,620, which are subject to detailed design.

4.7 As for the Proposed Scheme for TC 133C, it adopts a maximum overall PR of 6.7, comprising of domestic PR of 6.5 and non-domestic PR of 0.2. The proposed scheme shall provide a total of four (4) residential blocks with 2,571 flats that will cater for a total design population of 6,942, which are subject to detailed design.

4.8 The Master Layout Plans, Floor Plans and Schematic Sections of the Proposed Developments are presented at ***Figures 2a to 2g***. The key development parameters for TC 133A, 133B and 133C are detailed in **Table 4.2** below.

4.9 Having considered the planned BH profile in the Tung Chung New Town Extension Area, by which BHs are gradually reduced from the mountain backdrop in the south to the waterfront area in the north, the proposed BHs for Tung Chung 133A (i.e. 135mPD), Tung Chung 133B (i.e. 130mPD) and Tung Chung 133C (i.e. 125mPD) are lower than the max. BH of 160mPD at TC 129 and 140mPD at TC 130 to the south; while higher than the max. BH of 45mPD at TC 139 and 55mPD at TC 141 to the north. The gradually reduced BH profile could still be achieved in the vicinity with the proposed BHs relaxation.

4.10 Following design measures would be included to enhance the visual interest of the Proposed Development:

- Landscape treatment will be provided at-grade and podium level as far as possible to maximize the green coverage so as to minimize the visual impact of the Proposed Developments. For details of the landscape proposal, please refer to the Landscape Master Plan attached to the s.16 application;

- Building blocks would be carefully designed at detailed design stage with consideration on the building façade, colour, and treatment for both sites;
- A 20-m wide Non-Building Area ("NBA") running through TC 133A and 133C in east-west direction is provided as a visual and air ventilation corridor; and
- Domestic blocks are separated by about 10-15m in the Application Sites to improve the wind environment and provide visual permeability.

Table 4.2 Key Development Parameters of TC 133A, 133B and 133C

Development Parameters	Proposed Scheme for TC 133A	Proposed Scheme for TC 133B	Proposed Scheme for TC 133C
Site Area[1]			
- **Gross**	About 43,000 m^2 (including FEHD's public market site of approx. 6,000 m^2 and the "Open Space" zoned under the OZP of approx. 1,100 m^2)	About 18,100 m^2	About 18,500 m^2
- **Net**	About 41,900 m^2 (including FEHD's public market site of approx. 6,000 m^2; excluding the "Open Space" zoned under the OZP of approx. 1,100 m^2) [2]	About 18,100 m^2	About 18,500 m^2
PR			
- **Overall**	7.0	6.8	6.7
- **Domestic**	6.5	6.5	6.5
- **Non-domestic**	0.5	0.3	0.2
GFA[3, 4]			
- **Overall**	About 293,300 m^2	About 123,080 m^2	About 123,950 m^2
- **Domestic**	About 272,350 m^2	About 117,650 m^2	About 120,250 m^2
- **Non-domestic**	About 20,950 m^2	About 5,430 m^2	About 3,700 m^2
Building Height (Measured at Main Roof Level)	Not exceeding +135 mPD	Not exceeding +130 mPD	Not exceeding +125 mPD

Development Parameters	Proposed Scheme for TC 133A	Proposed Scheme for TC 133B	Proposed Scheme for TC 133C
No. of Storeys of Housing Block	Block 1 - 4: 41 (37 (Domestic)+4(Podium)) Block 5: 41 (40 (Domestic) + 1 (Lobby))	Block 1 & 3: 38 (32(Domestic) + 6 (Podium)) Block 2: 38 (36(Domestic) + 2 (Podium)) Block 4: 37 (36 (Domestic) + 1 (Lobby))	Block A: 37 (36 (Domestic) + 1 (Lobby)) Block B: 36 (35 (Domestic) + 1 (Lobby)) Block C & D: 35 (29 (Domestic) + 6 (Podium))
No. of Domestic Blocks	5	4	4
Flat Production	About 6,817	About 2,448	About 2,571
Design population[5]	About 16,469	About 7,620	About 6,942
Local Open Space	Not less than 16,469 m^2	Not less than 7,620 m^2	Not less than 6,942 m^2
Children's Play Area	Not less than 1,318 m^2	Not less than 610 m^2	Not less than 556 m^2
Green Coverage (% of Gross Site Area)	Target 30%	Not less than 20%	Not less than 20%
Parking Provision[6]			
Car Parking Spaces (Domestic)	385	306	321
Car Parking Spaces (Retail & Commercial (R&C))	59	-	-
Car Parking Spaces (Visitors)	25	20	20
Motorcycle Parking Spaces	49	22	23
Light Goods Vehicle Parking (Domestic)	21	9	10

Development Parameters	Proposed Scheme for TC 133A	Proposed Scheme for TC 133B	Proposed Scheme for TC 133C
Loading/Unloading (L/UL) Bay (Domestic)	10 [7]	8 [8]	8
Loading/Unloading (L/UL) Bay (R&C)	11	-	-
Bicycle Parking (Domestic)	454	163	171
Car Parking Spaces (HD's Office)	2	-	-
Welfare Facilities Parking	-	3	7
Welfare Facilities Loading / Unloading (L/UL)Bay	-	1 [9]	1 [10]

Note 1: Subject to detailed survey.
Note 2: The small portion of area zoned "O" is used as Emergency Vehicle Access/ Dedicated Pedestrian Zone and is excluded from Net Site Area.
Note 3: Calculation based on the net site area of 41,900 m^2 for TC 133A, 18,100 m^2 for TC 133B and 18,500 m^2 for TC 133C and subject to detailed design.
Note 4: Full PR/GFA exemption for parking facilities, welfare facilities (for TC 133B and TC 133 C), PTI (for TC 133B) and excluding the GFA of public market developed by FEHD (for TC 133A).
Note 5: Based on individual household size of the proposed flat mix for TC 133A and 133B, and average household size of 2.7 for TC 133C.
Note 6: Parking provision in accordance with HKPSG as advised by Transport Department. The parking provisions are subject to finalized flat mix.
Note 7: One L/UL share use with other non-domestic facilities.
Note 8: One L/UL share use with welfare facilities and one L/UL share use with other non-domestic facilities.
Note 9: L/UL bay share use with domestic.
Note 10: L/UL bay share use with other non-domestic facilities.

5 ASSESSMENT AREAS

5.1 This VIA follows the visual envelope of the Tung Chung New Town Extension Study to cover the strategic locations in northeast, northwest, west and southwest directions. A total of 5 viewpoints ("VPs") are selected that can best facilitate the Rural and New Town Planning Committee of the TPB to visualize the three-dimensional relationship of the Proposed Development with the surrounding context. The Proposed Development is pronouncedly visible from key sensitive viewers. The extent of which is delineated based on the size of the Proposed Development in both Baseline and Proposed Schemes, the site context, and the distance and location of the sensitive viewers.

5.2 Further to Para 4.5 of TPB PG No. 41, kinetic and static VPs have been identified that are representative of all sensitive viewers in direct sight of the proposed public housing developments. The selected VPs include public areas for outdoor facilities, recreation, rest, leisure, walking and prominent travel routes which are easily accessible by the public.

6 IDENTIFICATION and CLASSIFICATION OF VIEWING POINTS

6.1 In accordance with TPB PG-No. 41 para 4.5, the VIA focuses on key strategic views and local vantage points that are easily accessible and popular to the public. The effects of visual changes concerning the sensitive viewers within the assessment area are primarily appraised. These include users of the nearby open spaces and pedestrian passers-by in the surrounding neighborhoods. As demonstrated in **Figure 3**, five public VPs have been agreed with the Planning Department that can best represent the visual change of the public viewers of the Proposed Developments. The visual sensitivity of the public viewers from the VPs are qualitatively graded as high, medium or low. The viewers' activity and visual prominence of the Proposed Developments are also taken into account.

6.2 A brief evaluation of the identified five VPs is outlined as below:

- **Viewpoint 1 ("VP1"): View from Chek Lap Kok Road** – This is a **medium**-range transient VP located at about 2km to the northwest of the Application Sites. This VP situated on the Chek Lap Kok Road of the Hong Kong-Zhuhai-Macau Bridge Hong Kong Port, which also connects to the Tuen Mun–Chek Lap Kok Link. It is anticipated to have a significant volume of cross-boundary traffic. Given the transient nature of the public viewers and the long range of viewing distance, this VP is considered to have a **low to medium** sensitivity.

- **Viewpoint 2 ("VP2"): View from Scenic Hill Pavilion** – This **long**-range static VP is situated at the top of the Scenic Hill and located at around 2.9km to northwest of the Application Sites. This VP is frequently visited by hikers and other recreational users. The public viewers from this VP can overlook the Tung Chung East Extension Area as well as Shun Long Road in the background. With the long range of viewing distance and leisure nature of this VP, the public viewers from this VP would have **low to medium** sensitivity.

- **Viewpoint 3 ("VP3"): View from the planned Central Green at Tung Chung Area 118** – This is a **short**-range static VP situated at around 300m to the northwest of TC 133. The VP is located at the planned Central Green at Tung

Chung Area 118, which serves as the focal point and key activities node of the Tung Chung East Extension Area and expected to be frequently used by the general public. With the short range of viewing distance and high pedestrian flow, this VP is considered to have a **medium to high** sensitivity.

- **Viewpoint 4 ("VP4"): View from the planned Civic Waterfront Park at Tung Chung Area 52** – This is a **short**-range static VP situated at around 385m to the northeast of TC 133. Locating at the Planning Civic Waterfront Park at Area 52, this VP is positioned to be a hub for recreational activities and expected to be frequented by the general public. In view of the short viewing distance and the nature of the public viewers, this VP is considered to have **medium to high** visual sensitivity.

- **Viewpoint 5 ("VP5"): View from the planned N-S Linear Park at Area 145B** – This is a **short**-range static VP located about 180m to the west of TC 133. This VP is situated on **the planned N-S Linear Park at Area 145B** and aims to capture the NBA within the Applications Site. As the N-S Linear Park will be serving as a major commute route between the TCE station, waterfront and residential clusters and a community node for recreational activities, it is anticipated that this VP will be frequented by the general public. Given the proximity of this VP to the Application Sites and high foot traffic of this VP, the visual sensitivity of this VP is considered **medium to high**.

7 ASSESSMENT OF VISUAL IMPACTS

7.1 The primary objective of this VIA is to assess the visual impact of the proposed developments under s.16 application for the proposed housing developments at TC 133. For TC 133A, it is proposed to increase maximum overall PR of 6.5 to 7.0, and maximum BH restriction from 115mPD to 135mPD. For TC 133B, it is proposed to increase maximum overall PR from 6.4 to 6.8, and maximum BH restriction from 110mPD to 130mPD. And for TC 133C, it is proposed to increase maximum overall PR of 6.4 to 6.7, and maximum BH restriction from 110mPD to 125mPD. The assessment will hence focus on evaluating the potential visual impact of the Proposed Schemes in comparison to the Baseline Schemes at the Application Sites. In accordance with TPB PG-No. 41, the assessment includes the following aspects:

(i) **Visual Composition:** the total visual effects of all the visual elements due to their variation in locations, massing, height, forms, proportions in relation to the overall visual backdrop.

(ii) **Visual Obstruction:** the Proposed Developments may cause views to be blocked or affected in the foreground or background. The degree of visual obstruction and loss of views due to the Proposed Developments in all VPs will be assessed.

(iii) **Effect on Public Viewers:** the visual changes arise from the Proposed Developments at the VPs with direct sightlines will be demonstrated and assessed.

(iv) **Effect on Visual Resources:** the assessment will appraise if the Proposed Developments would improve or degrade the condition, quality and character of the assessment area.

7.2 An evaluation of the visual impact will also be included and classified as the following:

- **Enhanced:** the Proposed Developments will improve the visual effects in relation to the VPs.

- **Negligible:** the Proposed Developments will have insignificant visual effects in relation to the VPs.
- **Slightly Adverse:** the Proposed Developments will result in some negative visual effects to the VPs.
- **Moderately Adverse:** the Proposed Developments will result in negative visual effects to the VPs.
- **Significantly Adverse:** the Proposed Developments will result in serious and detrimental visual effect to the VPs.

7.3 Photomontages at ***Figures 4*** to ***8*** illustrate and compare between conditions of the Baseline Schemes and the Proposed Developments to be developed with minor relaxation of PR and BH restrictions (i.e. Proposed Schemes).

VP1: View from Chek Lap Kok Road (***Figure 4*** refers)

7.4 **Visual composition**: The existing view of VP1 is formed by the sea and road barriers in the foreground. The background consists of the development at the Tung Chung East Extension Area, the hillside greenery of Por Kai Shan and the open sky view. From This VP, the Proposed Developments at TC 133A, 133B and 133C along with the surrounding developments form a cluster of high-rise development. Although the BH of the Proposed Schemes are slightly higher than the Baseline Scheme, the Proposed Scheme has negligible visual impact in terms of visual composition from this VP.

7.5 **Visual obstruction:** Compared to the Baseline Scheme, the Proposed Schemes will obstruct slightly more of Por Kai Shan in the backdrop. Nonetheless, it forms part of a coherent building form in combination with the surrounding development. The degree of change in visual impact between the Baseline Schemes and the Proposed Schemes is considered acceptable as the majority of the sky view and mountain still remains unobstructed.

7.6 **Effect on public viewers:** As shown in *Figure 4*, both the Baseline Schemes and the Proposed Schemes would form a coherent building form and appeared to be visually compatible with the surrounding developments. Given the transient nature of the public viewers at this VP, the effect of the Proposed Schemes of TC 133A, 133B and 133C on the visual experience of the public viewers is considered negligible as the visual resources are insignificantly affected in the Proposed Schemes.

7.7 **Effect on visual resources:** Although the Proposed Schemes with increased BH would block a minor portion of the open sky view, there is insignificant difference in impact between the Baseline Schemes and the Proposed Schemes of TC 133A, 133B and 133C with high-rise developments in the surrounding. With majority of majority of the sky view and mountain being retained, the effected on visual resources is considered negligible.

7.8 To conclude, the Proposed Schemes of the Application Sites would have negligible impact compared to the Baseline Schemes of the Application Sites as they maintain compatible scale and BH that are consistent with the surrounding developments.

VP2: View from Scenic Hill Pavilion (***Figure 5*** refers)

7.9 **Visual composition**: The existing visual composition of this VP comprises greenery and the sea in the foreground, a cluster of private housing developments including Seaview Crescent, Coastal Skyline and Caribbean Square to the right, the Tung Chung East Extension Area in the center; and the open sky view and Tai Che Tung in the distant backdrop. As shown in Figure 5, the Baseline Scheme and Proposed Scheme of TC 133A, 133B and 133C are located behind the planned high-rise developments at the western part of the Tung Chung East Extension Area. The Proposed Developments at TC 133A, 133B and 133C would blend into the surrounding environment.

7.10 **Visual obstruction:** As the Proposed Schemes and Baseline Schemes of TC 133A, 133B and 133C are all located behind the planned development at the western part of the Tung Chung East Extension Area, no visual obstruction is caused by the Proposed Schemes.

7.11 **Effect on public viewers:** The public viewers of this long-range static VP are mostly hikers and other recreational users, whom are of transient nature. As the Baseline Schemes and Proposed Schemes of TC 133A, 133B and 133C are mainly behind the planned development towards the western part of the Tung Chung East Extension Area, no visual impact on public viewers would be resulted.

7.12 **Effect on visual resources:** The Baseline Scheme and Proposed Scheme of TC 133A, 133B and 133C will merge with the planned built environment of Tung Chung East Extension Area and will have minimal impact on key visual resources with the open sky view and sea view retained.

7.13 In conclusion, as the Proposed Developments at TC 133A, 133B and 133C are blocked by the other planned developments in the foreground, no visual impact is anticipated.

VP3: View from the Planned Central Green at Tung Chung Area 118 (***Figure 6*** refers)

7.14 **Visual composition**: This VP comprises of the planned district open space at TC 145B and 145C in the foreground. Behind the district open space are the Proposed Developments at TC 133A, 133B and 133C are to the right and a cluster of medium-density residential developments at TC 139 and 141 to the left. The Siu Ho Wan Depot Site development project and the open sky serve as the distant backdrop of this VP. As evident in *Figure 6*, the Proposed Developments with increased BH would extend slightly higher into the sky view. The proposed scheme of TC 133B, with an increased BH and a larger and tall podium, would also block slightly more of the view along the planned Road D1, resulting in slightly adverse impact in terms of visual openness.

7.15 **Visual obstruction:** Compared to the Baseline Schemes of TC 133A, 133B and 133C, the Proposed Schemes will obstruct slightly more of the sky view. However, the degree of visual obstruction is minor and the visual obstruction caused by the Proposed Schemes are acceptable when compared with the Baseline Scheme. The Proposed Scheme of TC 133B, with an increased BH and a larger and tall podium, would also obstruct part of the view at the pedestrian level as well as the sky view in the distant backdrop, resulting slightly adverse impact in terms of visual obstruction.

7.16 **Effect on public viewers:** The public viewers at this VP will be intended for recreational uses, and the visual impact caused by the increased PR and BH of the Proposed Schemes will cause negligible to slightly adverse visual impacts to the public viewers. Nevertheless, the district open space at TC 145B and 145C in the foreground will provide screening effect and visual relief for the public viewers that harmonizes the visual effect of the high-rise developments.

7.17 **Effect on visual resources:** The existing visual condition from this VP contains an open sky view in the distant backdrop. Compared to the Baseline Schemes, the Proposed Schemes of TC 133A, 133B and 133B with increased BH would block slightly more of the sky view. The Proposed Scheme of TC 133B would also slightly extended toward the planned Road D2 and block minor portion of the sky view in

the distant backdrop. Nevertheless, the effect on visual resources is minimal with majority of the key visual resources retained.

7.18 In consideration of the assessment above and the sensitivity of public viewers, the overall visual impact is considered **slightly adverse**.

VP4: View from the Planned Civic Waterfront Park at Tung Chung Area 52 (***Figure 7*** refers)

7.19 **Visual composition**: This VP comprises of the planned district open space at TC 145C to the and the Road D1 in the foreground. The Proposed Developments at TC 133A, 133B and 133C are to the left of this VP and a cluster of medium-density residential development is to the right of the VP. In the distant backdrop is the Central Green at Tung Chung Area 118 and some high-rise residential developments with a partial sky view. As evident in *Figure 7*, the Proposed Developments with increased BH would extend slightly higher into the sky view. The larger and tall podium under the Proposed Scheme of TC 133B would also add visual bulk to the locality and reduce the visual openness. Nonetheless, the change in visual composition is acceptable as the Proposed Schemes of TC 133A, 133B and 133C are compatible with the surrounding residential developments.

7.20 **Visual obstruction:** Compared to the Baseline Schemes of TC 133A, 133B and 133C, the Proposed Schemes will extend slightly higher due to the minor increase in BH and obstructing more of the sky view. The podium under the Proposed Scheme of TC 133B would obstruct more of the view at the pedestrian level along the planned Road D1. However, the degree of visual obstruction is minor and the visual obstruction caused by the Proposed Schemes are acceptable as the Proposed Schemes are still compatible with the surrounding and no prominent visual resources would be blocked by larger podium under the Proposed Scheme of TC 133B.

7.21 **Effect on public viewers:** The public viewers at this VP are mainly for recreational purposes, which are of medium to high visual sensitivity. Although the Proposed Developments of TC 133A, 133B and 133C will extend slightly higher with the

increased BH, it will blend with the surrounding built environment harmoniously. Nevertheless, the larger and tall podium design under the Proposed Scheme of TC 133 would reduce the visual openness at the pedestrian level. The public viewers at this VP would inevitably experience certain degree of visual impact caused by the larger and tall podium. The effects of visual change between the Proposed Schemes and the Baseline Schemes of the Application Sites are slightly adverse.

7.22 **Effect on visual resources:** As demonstrated in *Figure 7*, the view at this VP is mainly comprises of the development of the Tung Chung East Extension Area, with little or no prominent visual resources. While the Baseline and Proposed Schemes of TC 133A, 133B and 133C are compatible with the surrounding developments in terms of height, character and scale, no prominent visual resources would be blocked by the Proposed Schemes at the Application Sites. With majority of the visual resources being retained, no effect on visual resources is anticipated.

7.23 In consideration of the assessment above and the sensitivity of public viewers, the overall visual impact is considered **slightly adverse**.

VP5: View from the Planned N-S Linear Park at Area 145B (***Figure 8*** refers)

7.24 **Visual composition**: This VP captures the NBA within the Application Sites with the other developments in the Tung Chung East Extension Area with the open sky view as the distant backdrop. Compared with the Baseline Schemes, the setback of the podium at TC 133C under the Proposed Schemes would slightly enhance the visual openness at the street level. Covered walkways and footbridge spanning across the NBA are included in the Proposed Schemes, aiming to enhance the pedestrian connectivity. Given the close proximity of this VP to the Application Sites, the footbridge connecting the podium and the Public Market at TC 133A appears to be more profound and would block part of the sky view. The Proposed Schemes of the Application Sites would be slightly higher than Baseline Schemes in terms of BH, but would still be compatible with the surrounding development in terms of BH, massing and character.

7.25 **Visual obstruction:** Though the Proposed Schemes slightly cover a minor portion of the sky view, it forms part of a coherent building form in combination with other

developments in the Tung Chung East Extension Area. It appears to be visually compatible and conforms with the urban context. The covered walkways and footbridge spanning across the NBA would obstruct part of the sky view. As this VP is in proximity to the Application Sites, the degree of obstruction by the footbridge connecting the podium appears to be profound. Nevertheless, the visual obstruction is still considered acceptable as no prominent visual resources would be blocked by the covered walkways and footbridge.

7.26 **Effect on public viewers:** Public viewers at this VP are expected to be pedestrian as well as other public participating in recreational activities. While the increase in building height of the Proposed Developments will only result in very slight visual change, minor effect on public viewers is anticipated with the footbridge and covered walkways spanning across the NBA. Given the kinetic nature of the public viewers at this VP, the effects of visual change between the Proposed Schemes and the Baseline Schemes of the Application Sites are considered to be slightly adverse.

7.27 **Effect on visual resources:** As evident in *Figure 8*, the uppermost level of the Proposed Schemes would extend into the sky view, thus creating slightly adverse impact. The covered walkways and footbridge in the Proposed Schemes would also obstruct the visual openness of the NBA. Nonetheless, no special or prominent visual resources would be blocked by the covered walkways and footbridge as the background of this VP are mostly other developments in the Tung Chung East Extension Area and the partial sky view. The overall impact on visual resources of the Proposed Schemes is considered acceptable.

7.28 In conclusion, the visual impact from the Proposed Schemes of TC 133A, 133B and 133C is considered **slightly adverse** with the minor obstruction to the sky view and the NBA by the footbridge.

8 MITIGATION MEASURES

8.1 Mitigation measures are proposed in order to enhance the visual resources and minimize the visual impact of the Proposed Developments. Please refer to ***Figure 2a*** for details. Building blocks are to be carefully designed at the detailed design stage with consideration on the building façade, color and treatment for the Application Sites and the building blocks will be separated from each other as far as practicable. Adequate greening in accordance with prevailing guidelines will be provided at both at grade and podium level for each site.

8.2 For TC 133A, the podium is set back from the neighboring open space at TC 145B for better integration with the surrounding. Recreational facilities, including basketball courts, badminton court, communal play area and landscape gardens are provided on the ground floor and podium roof for enjoyment by the residents.

8.3 For TC 133B, Block 2 and Block 4 is set back from the neighboring TC 133C to enhance the visual permeability. A large piece of landscape area is created at center of the Site so as to enhance visual permeability and improve airflow by allowing natural air paths to circulate throughout the Site. Recreational facilities are provided at both ground level and the podium roof for enjoyment.

8.4 For TC 133C, Block A and Block B is set back from the neighboring TC 133B so as to enhance the visual permeability. Greening is also provided around Block A and Block B to soften the building edges.

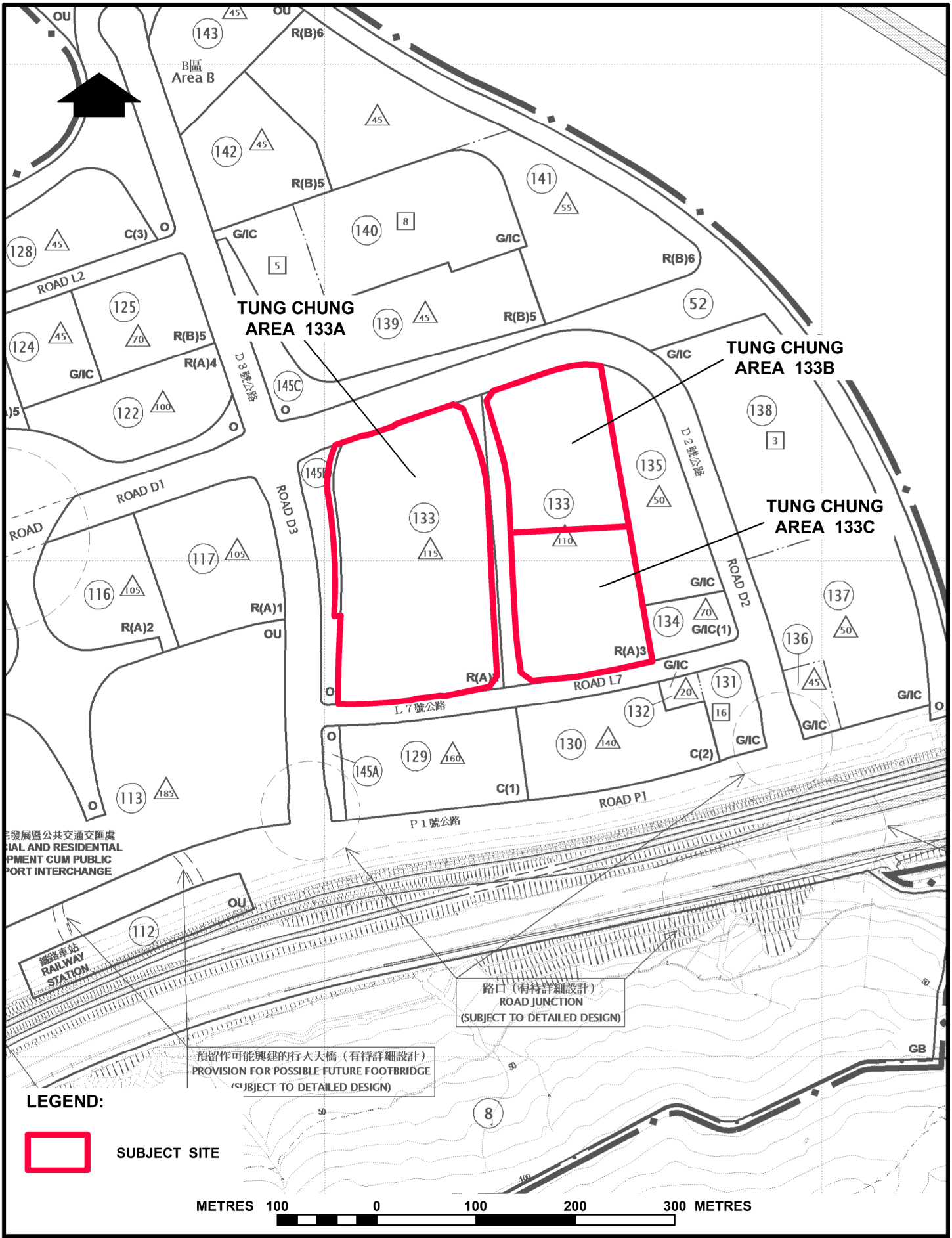
9 CONCLUSION

9.1 The VIA is prepared in support of a Section 16 Planning Application for minor relaxation of restrictions of maximum PR and maximum BH for public housing developments at TC 133A, 133B and 133C. The VIA compares the visual impact of the Baseline Schemes (representing OZP-Compliant Schemes) and Proposed Schemes of the Application Sites. A total of 5 VPs were identified and assessed against the Baseline Schemes for their visual impacts.

9.2 In summary, the Proposed Schemes were found to be **negligible** to **slightly adverse** in terms of visual impact (***Table 9.1*** refers) and compatible with the surroundings as a high-rise townscape. The effects of the minor relaxation of maximum domestic PR and maximum BH in the Proposed Schemes of the Application Sites would not result in material change in visual impacts compared with the Baseline Schemes.

Table 9.1 – Summary Table of Visual Impacts for TC 133A, 133B and 133C

	TC 133A, 133B and 133C	
Viewpoints Assessed	**Visual Sensitivity**	**Resultant Visual Impact**
VP1: View from Chek Lap Kok Road	Low to Medium	Negligible
VP2: View from Scenic Hill Pavilion	Low to Medium	Negligible
VP3: View from the planned Central Green at Tung Chung Area 118	Medium to High	Slightly Adverse
VP4: View from the planned Civic Waterfront Park at Tung Chung Area 52	Medium to High	Slightly Adverse
VP5: View from the N-S Linear Park at Area 145B	Medium to High	Slightly adverse



PROPOSED PUBLIC HOUSING DEVELOPMENT AT TUNG CHUNG AREAS 133A, 133B & 133C LOCATION PLAN

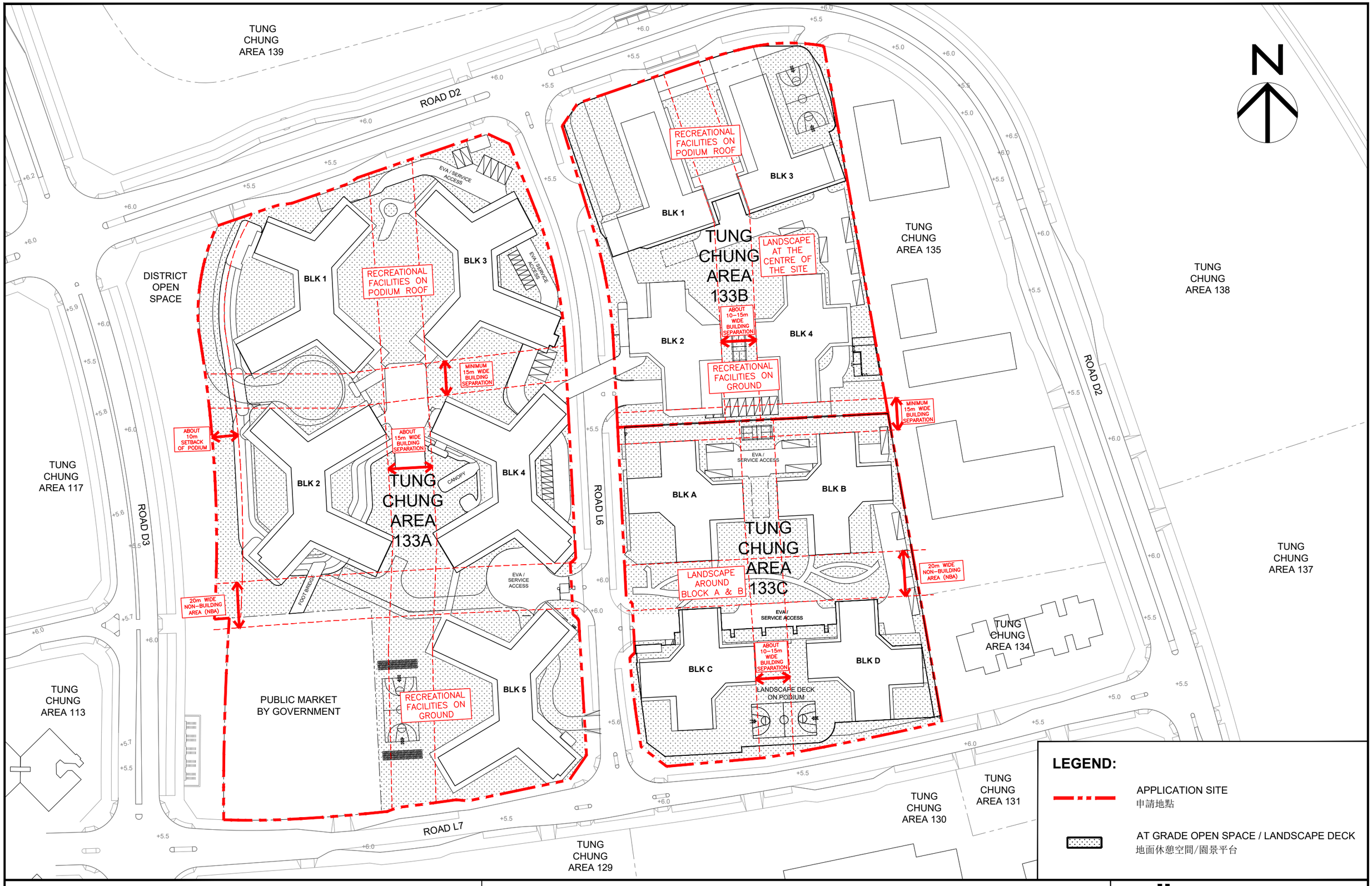
HOUSING DEPARTMENT
PLANNING SECTIONS

Figure 1

DATE :
8. 2. 2024

BASE EXTRACTED FROM OZP No. S/I-TCE/2

24_0112I_OZP



LEGEND:

APPLICATION SITE
申請地點

AT GRADE OPEN SPACE / LANDSCAPE DECK
地面休憩空間/園景平台

PROJECT

SECTION 16 PLANNING APPLICATION
FOR TUNG CHUNG AREA 133

DRAWING TITLE

Figure 2a TCA 133 MASTER LAYOUT PLAN – BLOCK PLAN
(FOR REFERENCE ONLY & SUBJECT TO DESIGN REVIEW)

房 屋 署
HOUSING DEPARTMENT

編號 DRAWING NO.	比 例 SCALE	日 期 DATE
IS29&30&31/-/S16/A/LO-01	1:1500 (A3)	

LEGEND

- EMERGENCY VEHICULAR ACCESS / DEDICATED PEDESTRIAN ZONE
- APPLICATION SITE 申請地點
- NON BUILDING AREA 非建築用地

N

ROAD D2

EVA / SERVICE ACCESS

E&M

TUNG CHUNG AREA 133B

DISTRICT OPEN SPACE

ABOUT 6m

BLOCK 1 +6

BLOCK 3 +6

CARPARK +6

SHOP / EATING PLACE

RS & MRC

LIFT LOBBY

RCP & JCP

EVA ONLY

ABOUT 10m COMMERCIAL FRONTAGE

ABOUT 5m SET BACK

BLOCK 2 +6

SHUTTLE LIFT

BLOCK 4

ROAD L6

TUNG CHUNG AREA 133C

RUN IN / OUT

NON BUILDING AREA

PUBLIC MARKET BY GOVERNMENT (FOR REFERENCE ONLY)

BASKETBALL COURT

BLOCK 5 +6

ROAD L7

PROJECT	DRAWING TITLE	
SECTION 16 PLANNING APPLICATION FOR TUNG CHUNG AREA 133	Figure 2b(1) TCA 133A MASTER LAYOUT PLAN – G/F PLAN (FOR REFERENCE ONLY & SUBJECT TO DESIGN REVIEW)	房 屋 署 HOUSING DEPARTMENT
		編號 DRAWING NO. IS29/-/S16/A/LO-01
		比 例 SCALE 1:800 (A3)
		日 期 DATE

LEGEND

APPLICATION SITE
申請地點

NON BUILDING AREA
非建築用地

N

ROAD D2

TUNG CHUNG AREA 133B

DISTRICT OPEN SPACE

BLOCK 1

E&M

E&M

LIFT LOBBY

CARPARK

+13

BLOCK 3

E&M

LIFT LOBBY

E&M

SHOP / EATING PLACE

+13

CANOPY

LIFT LOBBY

E&M

FOOTBRIDGE

SHOP / EATING PLACE

SHOP / EATING PLACE

SHOP / EATING PLACE

10000 COMMERCIAL FRONTAGE

+13

BLOCK 2

E&M

LIFT LOBBY

CANOPY

SHUTTLE LIFT

+13

BLOCK 4

SHOP / EATING PLACE

+13

LIFT LOBBY

E&M

E&M

ROAD L6

TUNG CHUNG AREA 133C

VOID

CANOPY

CANOPY

CANOPY

FOOTBRIDGE

ROOF OF COVERED WALKWAY

ROOF OF COVERED WALKWAY

CANOPY

RUN IN / OUT

NON BUILDING AREA

BLOCK 5

PUBLIC MARKET BY GOVERNMENT
(FOR REFERENCE ONLY)

VOID

E&M

ROAD L7

PROJECT	DRAWING TITLE	房屋署 HOUSING DEPARTMENT		
SECTION 16 PLANNING APPLICATION FOR TUNG CHUNG AREA 133	Figure 2b(2) TCA 133A MASTER LAYOUT PLAN – P1/F PLAN (FOR REFERENCE ONLY & SUBJECT TO DESIGN REVIEW)	編號 DRAWING NO. IS29/-/S16/A/LO-02	比例 SCALE 1:800 (A3)	日期 DATE

LEGEND

APPLICATION SITE
申請地點

NON BUILDING AREA
非建築用地

N

ROAD D2

TUNG CHUNG AREA 133B

DISTRICT OPEN SPACE

BLOCK 1

BLOCK 2

BLOCK 3

BLOCK 4

BLOCK 5

CARPARK

+17

E&M

LIFT LOBBY

CANOPY

SHUTTLE LIFT

TUNG CHUNG AREA 133C

ROAD L6

RUN IN / OUT

NON BUILDING AREA

PUBLIC MARKET BY GOVERNMENT
(FOR REFERENCE ONLY)

ROAD L7

PROJECT

SECTION 16 PLANNING APPLICATION
FOR TUNG CHUNG AREA 133

DRAWING TITLE

Figure 2b(3) TCA 133A MASTER LAYOUT PLAN – P2/F PLAN
(FOR REFERENCE ONLY & SUBJECT TO DESIGN REVIEW)

房 屋 署
HOUSING DEPARTMENT

編號 DRAWING NO.	比例 SCALE	日期 DATE
S29/-/S16/A/LO-03	1:800 (A3)	

LEGEND

APPLICATION SITE
申請地點

NON BUILDING AREA
非建築用地

N

ROAD D2

DISTRICT OPEN SPACE

TUNG CHUNG AREA 133B

OFFICE (PMA)

OFFICE (EMO)

E&M

OFFICE (DTMO)

BLOCK 1
LIFT LOBBY
+21

PODIUM LANDSCAPE

BLOCK 3
LIFT LOBBY
+21

BADMINTON COURT

BADMINTON COURT

SHUTTLE LIFT

+21

SHUTTLE LIFT

KINDERGARTEN

BLOCK 2
LIFT LOBBY
+21

BLOCK 4
LIFT LOBBY
+21

TUNG CHUNG AREA 133C

ROAD L6

RUN IN / OUT

NON BUILDING AREA

PUBLIC MARKET BY GOVERNMENT
(FOR REFERENCE ONLY)

BLOCK 5

ROAD L7

PROJECT

SECTION 16 PLANNING APPLICATION
FOR TUNG CHUNG AREA 133

DRAWING TITLE

Figure 2b(4) TCA 133A MASTER LAYOUT PLAN – P3/F PLAN
(FOR REFERENCE ONLY & SUBJECT TO DESIGN REVIEW)

房 屋 署
HOUSING DEPARTMENT

編號 DRAWING NO.	比例 SCALE	日期 DATE
S29/-/S16/A/LO-04	1:800 (A3)	

LEGEND

APPLICATION SITE
申請地點

NON BUILDING AREA
非建築用地

N

ROAD D2

+5.5

+5.5

TUNG CHUNG AREA 133B

DISTRICT OPEN SPACE

BLOCK 1

BLOCK 3

BLOCK 2

BLOCK 4

+5.5

ROAD L6

TUNG CHUNG AREA 133C

NON BUILDING AREA

RUN IN / OUT

+6.0

+6.0

BLOCK 5

PUBLIC MARKET BY GOVERNMENT
(FOR REFERENCE ONLY)

+5.6

ROAD L7

+5.5

PROJECT

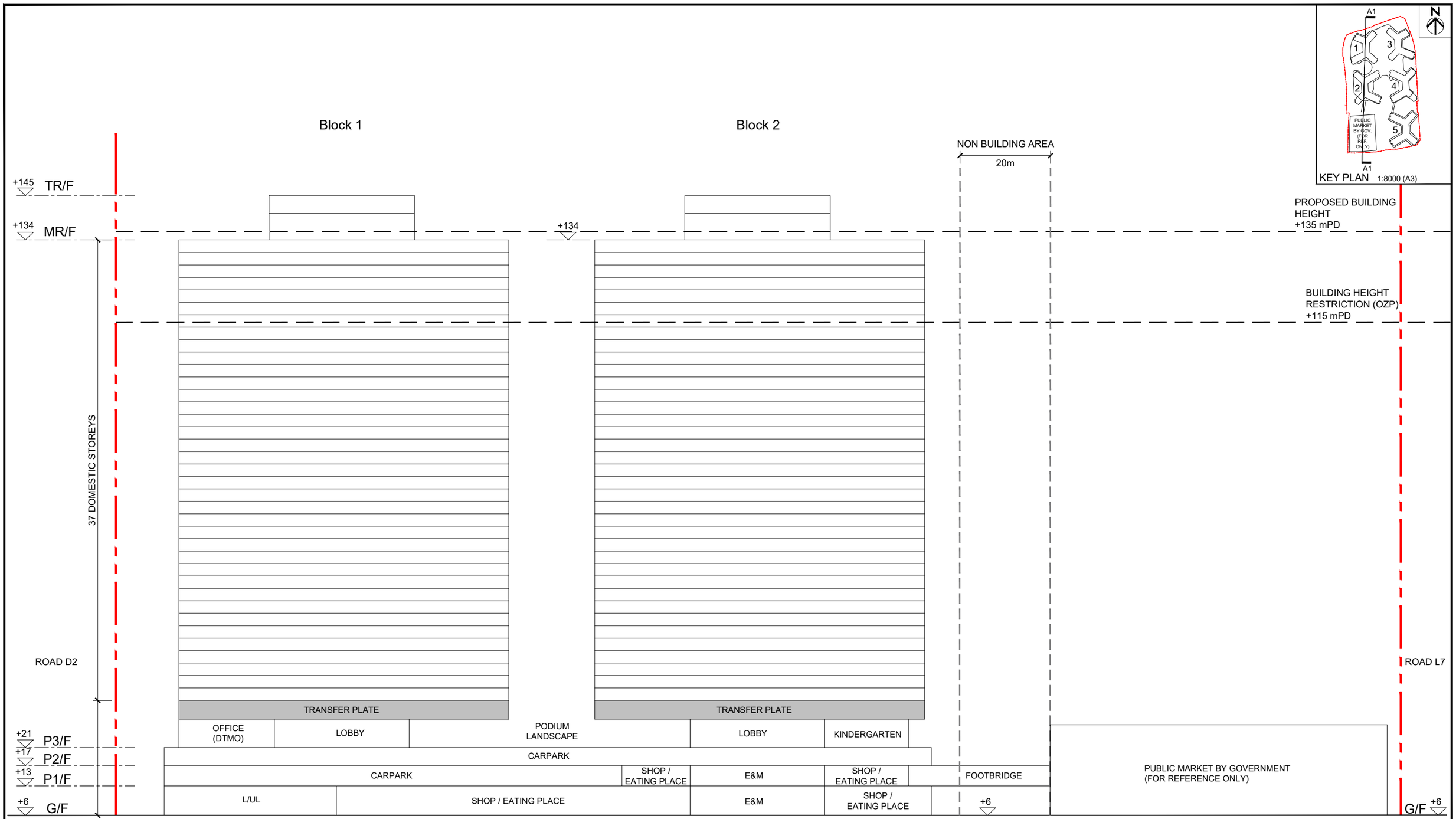
SECTION 16 PLANNING APPLICATION
FOR TUNG CHUNG AREA 133

DRAWING TITLE

Figure 2b(5)TCA 133A MASTER LAYOUT PLAN – TYPICAL FLOOR PLAN
(FOR REFERENCE ONLY & SUBJECT TO DESIGN REVIEW)

房 屋 署
HOUSING DEPARTMENT

DRAWING NO.圖號	比 例 SCALE	日 期 DATE
IS29/-/S16/A/LO-05	1:800 (A3)	



LEGEND

APPLICATION SITE
申請地點

NON BUILDING AREA
非建築用地

PROJECT

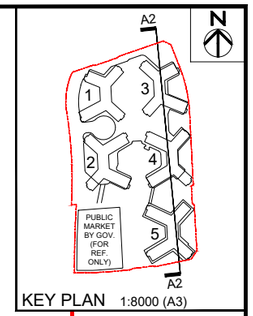
SECTION 16 PLANNING APPLICATION FOR TUNG CHUNG AREA 133

DRAWING TITLE

Figure 2c(1) TCA 133A SECTION A1 - A1
(FOR REFERENCE ONLY & SUBJECT TO DESIGN REVIEW)

房 屋 署
HOUSING DEPARTMENT

編號 DRAWING NO.	比 例 SCALE	日 期 DATE
IS29/-/S16/A/LO-06	1:800 (A3)	



KEY PLAN 1:8000 (A3)

Block 5

NON BUILDING AREA
20m

Block 4

Block 3

TR/F +145

PROPOSED BUILDING HEIGHT +135 mPD

+134

MR/F +134

+125

MR/F

BUILDING HEIGHT RESTRICTION (OZP) +115 mPD

40 DOMESTIC STOREYS

37 DOMESTIC STOREYS

ROAD L7

ROAD D2

TRANSFER PLATE

TRANSFER PLATE

TRANSFER PLATE

LOBBY

PODIUM LANDSCAPE

LOBBY

P3/F +21

CARPARK

P2/F +17

SHOP / EATING PLACE

E&M

CARPARK

E&M

CARPARK

P1/F +13

COVERED WALKWAY

+6

G/F

E&M

LOBBY

E&M

+6

E&M

L/UL

E&M

G/F +6

LEGEND

APPLICATION SITE
申請地點

NON BUILDING AREA
非建築用地

PROJECT

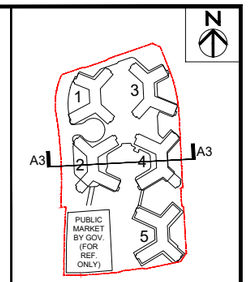
SECTION 16 PLANNING APPLICATION FOR
TUNG CHUNG AREA 133

DRAWING TITLE

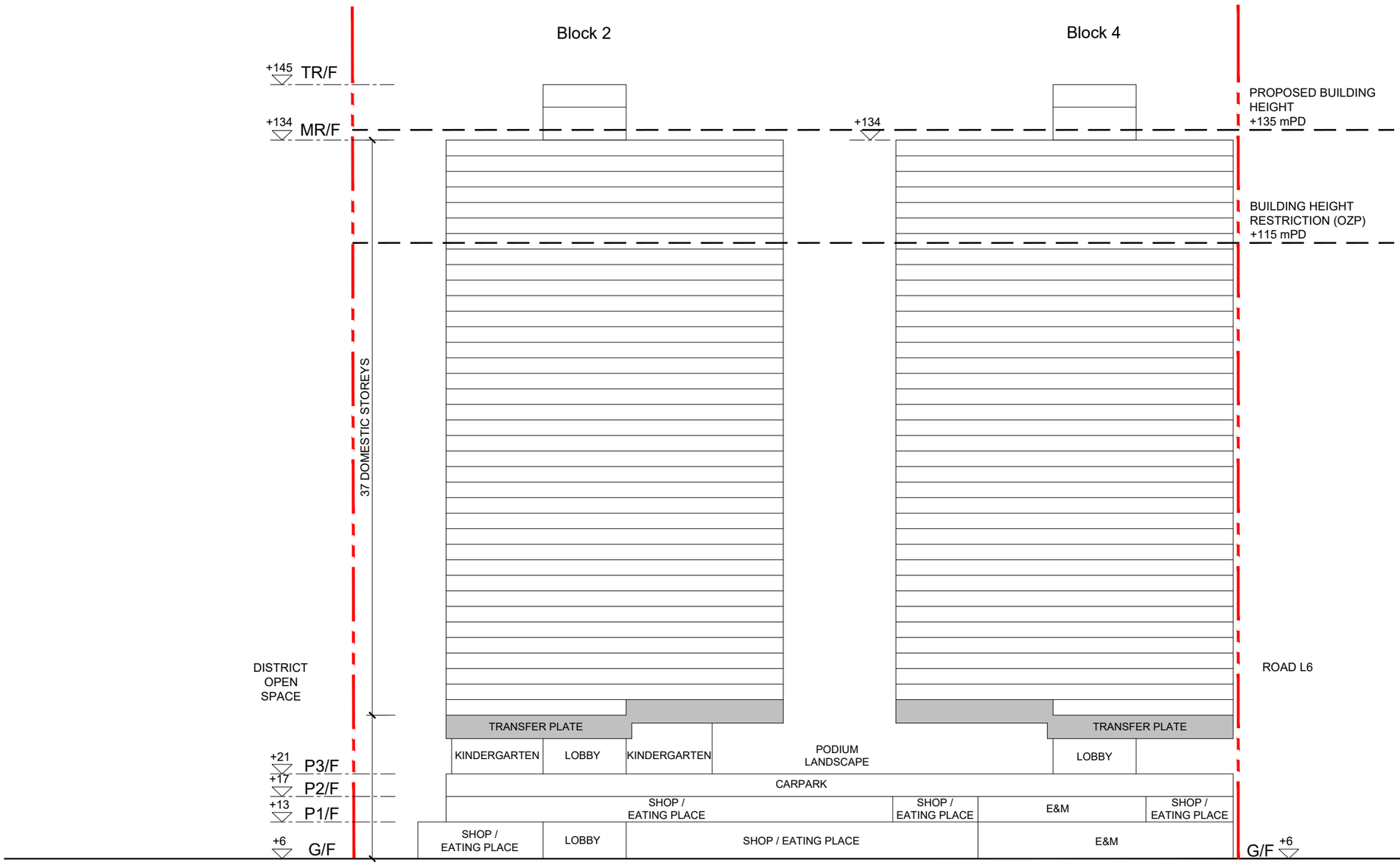
Figure 2c(2) TCA 133A SECTION A2 - A2
(FOR REFERENCE ONLY & SUBJECT TO DESIGN REVIEW)

房 屋 署
HOUSING DEPARTMENT

編號 DRAWING NO.	比例 SCALE	日期 DATE
IS29/-/S16/A/LO-07	1:800 (A3)	



KEY PLAN 1:8000 (A3)



LEGEND

APPLICATION SITE
申請地點

NON BUILDING AREA
非建築用地

PROJECT

SECTION 16 PLANNING APPLICATION FOR
TUNG CHUNG AREA 133

DRAWING TITLE

Figure 2c(3) TCA 133A SECTION A3 - A3
(FOR REFERENCE ONLY & SUBJECT TO DESIGN REVIEW)

房 屋 署
HOUSING DEPARTMENT

編號 DRAWING NO.	比例 SCALE	日期 DATE
IS29/-/S16/A/LO-08	1:800 (A3)	

N

TUNG CHUNG
AREA 139

PTI RUN IN

ROAD D2

PTI

PUBLIC TOILET

E&M

OFFICES FOR OPERATOR

CARPARK RAMP

LIFT LOBBY

RS& MRC

BLOCK 3

+6

SHUTTLE LIFT

BLOCK 1

PTI RUN OUT

ROAD L6

TUNG CHUNG
AREA 135

TUNG CHUNG
AREA 133A

BLOCK 2

BLOCK 4

BADMINTON COURT

EVA / SERVICE ACCESS

RUN IN / OUT

RCP

TUNG CHUNG
AREA 133C

LEGEND

APPLICATION SITE
申請地點

PROJECT	DRAWING TITLE	
SECTION 16 PLANNING APPLICATION FOR TUNG CHUNG AREA 133	Figure 2d(1) TCA 133B MASTER LAYOUT PLAN – G/F PLAN (FOR REFERENCE ONLY & SUBJECT TO DESIGN REVIEW)	房 屋 署 HOUSING DEPARTMENT
		編號 DRAWING NO. IS30/-/S16/A/LO-01 | 比 例 SCALE 1:800 (A3) | 日 期 DATE

N

TUNG CHUNG
AREA 139

PTI RUN IN

ROAD D2

UPPER PART
OF PTI

CARPARK RAMP

BLOCK 3
+12

SHUTTLE LIFT

E&M

BLOCK 1
+12

PTI RUN OUT

ROAD L6

SHUTTLE LIFT

TUNG CHUNG
AREA 135

TUNG CHUNG
AREA 133A

E&M

OFFICE
(EMO)

BLOCK 2
+14

E&M

BLOCK 4

FOOTBRIDGE TO
TCA 133A

KINDERGARTEN

+14

RUN IN / OUT

TUNG CHUNG
AREA 133C

LEGEND

APPLICATION SITE
申請地點

PROJECT

SECTION 16 PLANNING APPLICATION
FOR TUNG CHUNG AREA 133

DRAWING TITLE

Figure 2d(2) TCA 133B MASTER LAYOUT PLAN – P1/F PLAN
(FOR REFERENCE ONLY & SUBJECT TO DESIGN REVIEW)

房 屋 署
HOUSING DEPARTMENT

編號 DRAWING NO.	比 例 SCALE	日 期 DATE
IS30/-/S16/A/LO-02	1:800 (A3)	

N

TUNG CHUNG
AREA 139

PTI RUN IN

ROAD D2

E&M

CARPARK

+18

PODIUM
LANDSCAPE

E&M

BLOCK 3
SOCIAL WELFARE
FACILITIES

+18

PTI RUN OUT

SHUTTLE LIFT

BLOCK 1

SHUTTLE
LIFT

ROAD L6

TUNG CHUNG
AREA 135

TUNG CHUNG
AREA 133A

+18

BLOCK 2

BLOCK 4

+18

+18

RUN IN / OUT

TUNG CHUNG
AREA 133C

LEGEND

APPLICATION SITE
申請地點

PROJECT	DRAWING TITLE	
SECTION 16 PLANNING APPLICATION FOR TUNG CHUNG AREA 133	Figure 2d(3) TCA 133B MASTER LAYOUT PLAN – P2/F PLAN (FOR REFERENCE ONLY & SUBJECT TO DESIGN REVIEW)	房 屋 署 HOUSING DEPARTMENT
		編號 DRAWING NO. IS30/-/S16/A/LO-03
		比 例 SCALE 1:800 (A3)
		日 期 DATE

N

TUNG CHUNG
AREA 139

PTI RUN IN

ROAD D2

E&M

CARPARK

+21

PODIUM
LANDSCAPE

E&M

BLOCK 3
SOCIAL WELFARE
FACILITIES

+21

PTI RUN OUT

SHUTTLE LIFT

BLOCK 1

SHUTTLE LIFT

ROAD L6

TUNG CHUNG
AREA 135

TUNG CHUNG
AREA 133A

BLOCK 2

BLOCK 4

RUN IN / OUT

TUNG CHUNG
AREA 133C

LEGEND

APPLICATION SITE
申請地點

PROJECT

SECTION 16 PLANNING APPLICATION
FOR TUNG CHUNG AREA 133

DRAWING TITLE

Figure 2d(4) TCA 133B MASTER LAYOUT PLAN – P3/F PLAN
(FOR REFERENCE ONLY & SUBJECT TO DESIGN REVIEW)

房 屋 署
HOUSING DEPARTMENT

編號 DRAWING NO.	比 例 SCALE	日 期 DATE
IS30/-/S16/A/LO-04	1:800 (A3)	

N

TUNG CHUNG
AREA 139

ROAD D2

PTI RUN IN

E&M

CARPARK
+25

PODIUM
LANDSCAPE

E&M

BLOCK 3
SOCIAL WELFARE
FACILITIES
+25

PTI RUN OUT

SHUTTLE LIFT

BLOCK 1

SHUTTLE LIFT

ROAD L6

TUNG CHUNG
AREA 135

TUNG CHUNG
AREA 133A

BLOCK 2

BLOCK 4

RUN IN / OUT

TUNG CHUNG
AREA 133C

LEGEND

APPLICATION SITE
申請地點

PROJECT

SECTION 16 PLANNING APPLICATION
FOR TUNG CHUNG AREA 133

DRAWING TITLE

Figure 2d(5) TCA 133B MASTER LAYOUT PLAN – P4/F PLAN
(FOR REFERENCE ONLY & SUBJECT TO DESIGN REVIEW)

房 屋 署
HOUSING DEPARTMENT

編號 DRAWING NO.	比 例 SCALE	日 期 DATE
IS30/-/S16/A/LO-05	1:800 (A3)	

N

TUNG CHUNG
AREA 139

PTI RUN IN

ROAD D2

BASKETBALL COURT

PODIUM LANDSCAPE

PODIUM LANDSCAPE

E&M

BLOCK 3
SOCIAL WELFARE FACILITIES

+29.5

SHUTTLE LIFT

BLOCK 1

PTI RUN OUT

ROAD L6

SHUTTLE LIFT

TUNG CHUNG
AREA 135

TUNG CHUNG
AREA 133A

BLOCK 2

BLOCK 4

RUN IN / OUT

TUNG CHUNG
AREA 133C

LEGEND

APPLICATION SITE
申請地點

PROJECT	DRAWING TITLE	房 屋 署 HOUSING DEPARTMENT
SECTION 16 PLANNING APPLICATION FOR TUNG CHUNG AREA 133	Figure 2d(6) TCA 133B MASTER LAYOUT PLAN – P5/F PLAN (FOR REFERENCE ONLY & SUBJECT TO DESIGN REVIEW)	編號 DRAWING NO. IS30/-/S16/A/LO-06 | 比 例 SCALE 1:800 (A3) | 日 期 DATE

N

TUNG CHUNG
AREA 139

PTI RUN IN

ROAD D2

BLOCK 1

BLOCK 3

PTI RUN OUT

ROAD L6

TUNG CHUNG
AREA 135

TUNG CHUNG
AREA 133A

BLOCK 2

BLOCK 4

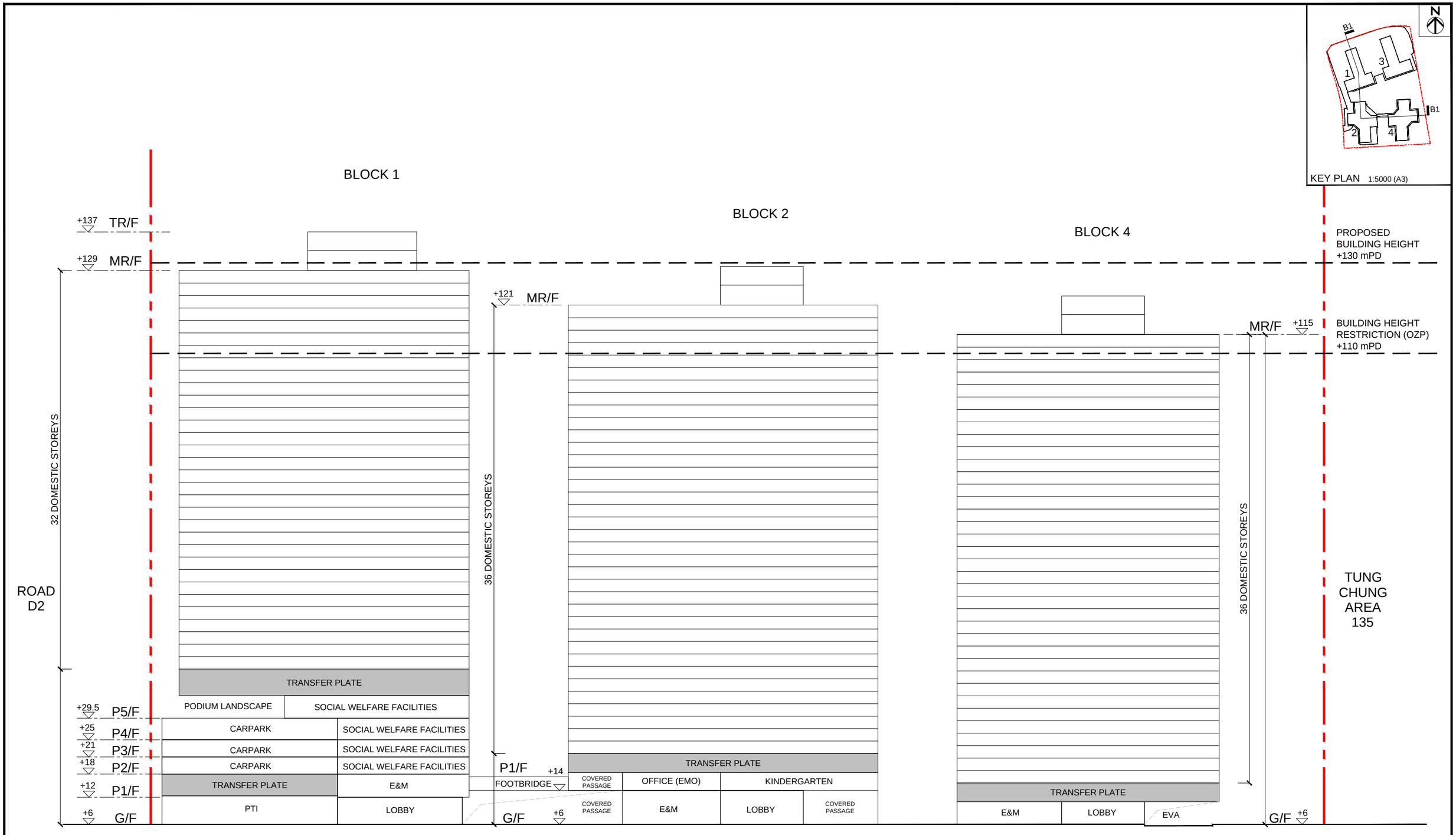
RUN IN / OUT

TUNG CHUNG
AREA 133C

LEGEND

APPLICATION SITE
申請地點

PROJECT	DRAWING TITLE	房 屋 署 HOUSING DEPARTMENT		
SECTION 16 PLANNING APPLICATION FOR TUNG CHUNG AREA 133	Figure 2d(7) TCA 133B MASTER LAYOUT PLAN – TYPICAL FLOOR PLAN (FOR REFERENCE ONLY & SUBJECT TO DESIGN REVIEW)	編號 DRAWING NO. IS30/-/S16/A/LO-07	比 例 SCALE 1:800 (A3)	日 期 DATE



LEGEND

APPLICATION SITE
申請地點

PROJECT

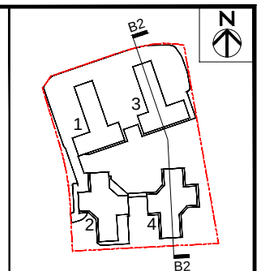
PROPOSED PUBLIC HOUSING DEVELOPMENTS AT TUNG CHUNG AREA 133

DRAWING TITLE

Figure 2e(1) TCA 133B SECTION B1 - B1
(FOR REFERENCE ONLY & SUBJECT TO DESIGN REVIEW)

房 屋 署
HOUSING DEPARTMENT

編號 DRAWING NO.	比 例 SCALE	日 期 DATE
IS30/-/S16/A/LO-08	1:800 (A3)	



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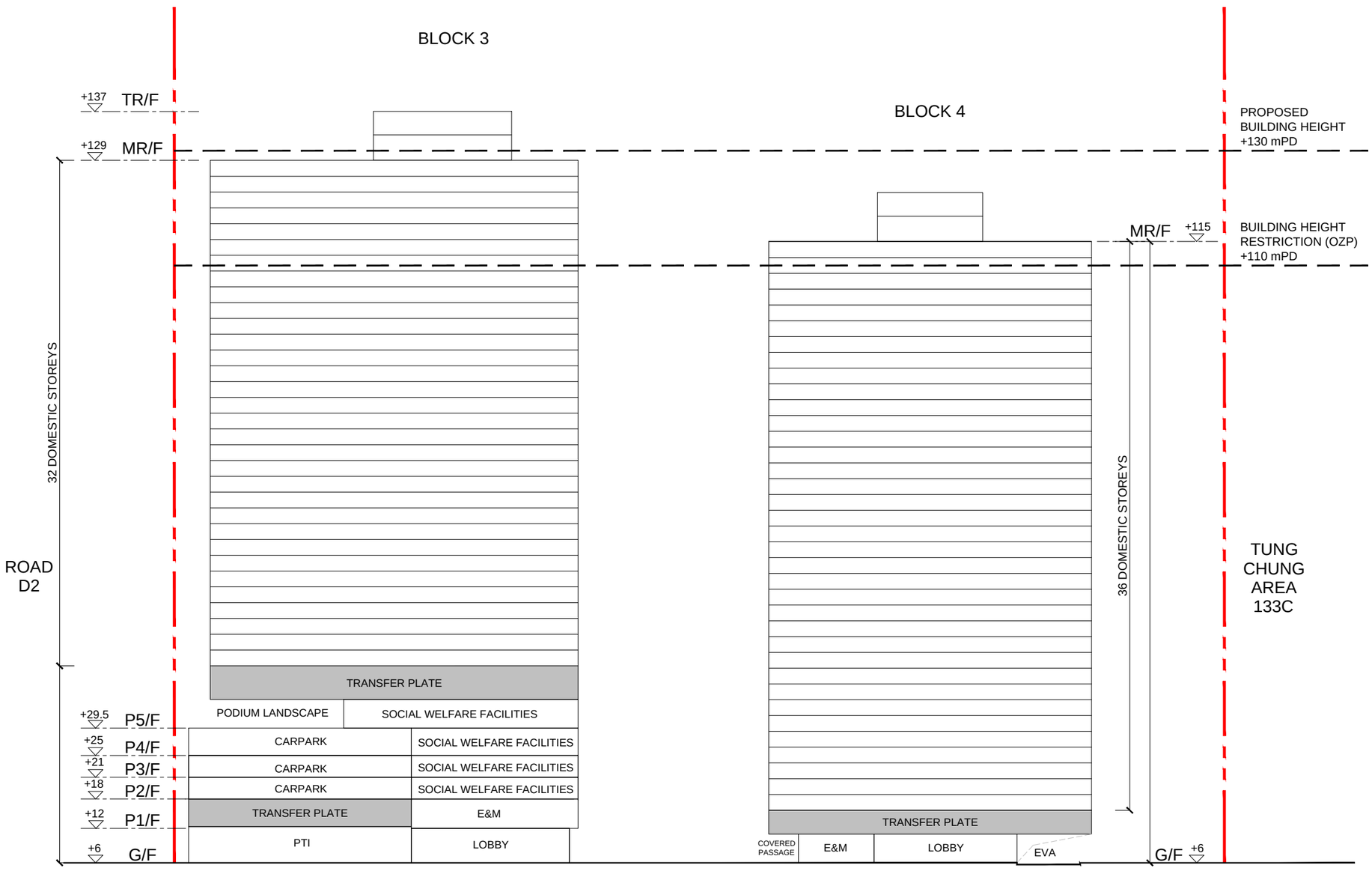


LEGEND

APPLICATION SITE
申請地點

PROJECT
PROPOSED PUBLIC HOUSING DEVELOPMENTS AT TUNG CHUNG AREA 133

DRAWING TITLE
Figure 2e(2) TCA 133B SECTION B2 - B2
(FOR REFERENCE ONLY & SUBJECT TO DESIGN REVIEW)

房 屋 署
HOUSING DEPARTMENT

編號 DRAWING NO.	比 例 SCALE	日 期 DATE
IS30/-/S16/A/LO-09	1:800 (A3)	

N

TUNG CHUNG AREA 135

TUNG CHUNG AREA 133B

TUNG CHUNG AREA 133A

TUNG CHUNG AREA 134

TUNG CHUNG AREA 131

TUNG CHUNG AREA 130

TUNG CHUNG AREA 129

ROAD L6

ROAD L7

+5.5

+5.6

+6.0

+6

BADMINTON COURT

E&M

RS&MRC

BLOCK A

KINDERGARTEN

OFFICE (EMO)

BLOCK B

LANDSCAPE

NON BUILDING AREA

EVA / SERVICE ACCESS

RUN IN / OUT

SHUTTLE LIFT

BLOCK C

BLOCK D

CARPARK

RCP

SOCIAL WELFARE FACILITIES

LEGEND

APPLICATION SITE
申請地點

NON BUILDING AREA
非建築用地

PROJECT	DRAWING TITLE	
SECTION 16 PLANNING APPLICATION FOR TUNG CHUNG AREA 133	Figure 2f(1) TCA 133C MASTER LAYOUT PLAN – G/F PLAN (FOR REFERENCE ONLY & SUBJECT TO DESIGN REVIEW)	房 屋 署 HOUSING DEPARTMENT
		編號 DRAWING NO. IS31/-/S16/A/LO-01
		比 例 SCALE 1:800 (A3)
		日 期 DATE

N

TUNG CHUNG AREA 135

TUNG CHUNG AREA 133B

TUNG CHUNG AREA 133A

TUNG CHUNG AREA 134

TUNG CHUNG AREA 131

TUNG CHUNG AREA 130

TUNG CHUNG AREA 129

ROAD L6

ROAD L7

RUN IN / OUT

BLOCK A

BLOCK B

BLOCK C

BLOCK D

SOCIAL WELFARE FACILITIES

CARPARK

ROOF OF COVERED WALKWAY

NON BUILDING AREA

SHUTTLE LIFT

E&M

LANDSCAPE

+5.5

+5.6

+6.0

+12

+13

LEGEND

APPLICATION SITE
申請地點

NON BUILDING AREA
非建築用地

PROJECT	DRAWING TITLE	
SECTION 16 PLANNING APPLICATION FOR TUNG CHUNG AREA 133	Figure 2f(2) TCA 133C MASTER LAYOUT PLAN – P1/F PLAN (FOR REFERENCE ONLY & SUBJECT TO DESIGN REVIEW)	房 屋 署 HOUSING DEPARTMENT
		編號 DRAWING NO. IS31/-/S16/A/LO-02
		比 例 SCALE 1:800 (A3)
		日 期 DATE

N

TUNG
CHUNG
AREA 135

TUNG
CHUNG
AREA 133B

BLOCK A

BLOCK B

ROAD L6

+5.5

TUNG
CHUNG
AREA 133A

+6.0

+6.0

RUN IN / OUT

NON
BUILDING
AREA

SOCIAL WELFARE
FACILITIES

+17

SHUTTLE
LIFT

BLOCK
C

CARPARK

+17

SHUTTLE
LIFT

E&M

BLOCK
D

TUNG
CHUNG
AREA 134

E&M

+5.6

E&M

E&M

LANDSCAPE

+17

+6.0

+5.5

ROAD L7

TUNG
CHUNG
AREA 131

+6.0

TUNG
CHUNG
AREA 130

TUNG
CHUNG
AREA 129

LEGEND

APPLICATION SITE
申請地點

NON BUILDING AREA
非建築用地

PROJECT	DRAWING TITLE	
SECTION 16 PLANNING APPLICATION FOR TUNG CHUNG AREA 133	Figure 2f(3) TCA 133C MASTER LAYOUT PLAN – P2/F PLAN (FOR REFERENCE ONLY & SUBJECT TO DESIGN REVIEW)	房 屋 署 HOUSING DEPARTMENT
		編號 DRAWING NO. IS31/-/S16/A/LO-03
		比 例 SCALE 1:800 (A3)
		日 期 DATE

N

TUNG
CHUNG
AREA 135

TUNG
CHUNG
AREA 133B

BLOCK A

BLOCK B

ROAD L6

+5.5

TUNG
CHUNG
AREA 133A

+6.0

+6.0

RUN IN / OUT

NON
BUILDING
AREA

SOCIAL WELFARE
FACILITIES

+22

SHUTTLE
LIFT

BLOCK
C

SHUTTLE
LIFT

E&M

BLOCK
D

CARPARK

+22

E&M

TUNG
CHUNG
AREA 134

+5.6

E&M

E&M

+6.0

+5.5

ROAD L7

TUNG
CHUNG
AREA 131

+6.0

TUNG
CHUNG
AREA 130

TUNG
CHUNG
AREA 129

LEGEND

APPLICATION SITE
申請地點

NON BUILDING AREA
非建築用地

PROJECT	DRAWING TITLE	房 屋 署 HOUSING DEPARTMENT		
SECTION 16 PLANNING APPLICATION FOR TUNG CHUNG AREA 133	Figure 2f(4) TCA 133C MASTER LAYOUT PLAN – P3/F PLAN (FOR REFERENCE ONLY & SUBJECT TO DESIGN REVIEW)	編號 DRAWING NO. IS31/-/S16/A/LO-04	比 例 SCALE 1:800 (A3)	日 期 DATE

N

TUNG CHUNG AREA 135

TUNG CHUNG AREA 133B

TUNG CHUNG AREA 133A

TUNG CHUNG AREA 134

TUNG CHUNG AREA 131

TUNG CHUNG AREA 130

TUNG CHUNG AREA 129

BLOCK A

BLOCK B

BLOCK C

BLOCK D

SOCIAL WELFARE FACILITIES

PODIUM LANDSCAPE +27

CARPARK +27

SHUTTLE LIFT

SHUTTLE LIFT

+27

E&M

E&M

E&M

NON BUILDING AREA

RUN IN / OUT

ROAD L6

ROAD L7

+5.5

+5.6

+6.0

+6.0

+6.0

+6.0

LEGEND

APPLICATION SITE
申請地點

NON BUILDING AREA
非建築用地

PROJECT

SECTION 16 PLANNING APPLICATION FOR TUNG CHUNG AREA 133

DRAWING TITLE

Figure 2f(5) TCA 133C MASTER LAYOUT PLAN – P4/F PLAN (FOR REFERENCE ONLY & SUBJECT TO DESIGN REVIEW)

房 屋 署
HOUSING DEPARTMENT

編號 DRAWING NO.	比 例 SCALE	日 期 DATE
IS31/-/S16/A/LO-05	1:800 (A3)	

N

TUNG CHUNG AREA 135

TUNG CHUNG AREA 133B

BLOCK A

BLOCK B

ROAD L6

+5.5

TUNG CHUNG AREA 133A

+6.0

+6.0

RUN IN / OUT

NON BUILDING AREA

PODIUM LANDSCAPE +27

SHUTTLE LIFT

BLOCK C +32

PODIUM LANDSCAPE +32

BLOCK D +32

BASKETBALL COURT

TUNG CHUNG AREA 134

+5.6

+6.0

+5.5

ROAD L7

+6.0

TUNG CHUNG AREA 131

TUNG CHUNG AREA 130

TUNG CHUNG AREA 129

LEGEND

APPLICATION SITE
申請地點

NON BUILDING AREA
非建築用地

PROJECT

SECTION 16 PLANNING APPLICATION FOR TUNG CHUNG AREA 133

DRAWING TITLE

Figure 2f(6) TCA 133C MASTER LAYOUT PLAN – P5/F PLAN (FOR REFERENCE ONLY & SUBJECT TO DESIGN REVIEW)

房 屋 署
HOUSING DEPARTMENT

編號 DRAWING NO.	比 例 SCALE	日 期 DATE
IS31/-/S16/A/LO-06	1:800 (A3)	

N

TUNG CHUNG AREA 135

TUNG CHUNG AREA 133B

BLOCK A

BLOCK B

ROAD L6

+5.5

TUNG CHUNG AREA 133A

+6.0

+6.0

RUN IN / OUT

NON BUILDING AREA

BLOCK C

BLOCK D

TUNG CHUNG AREA 134

+5.6

+6.0

+5.5

ROAD L7

+6.0

TUNG CHUNG AREA 131

TUNG CHUNG AREA 130

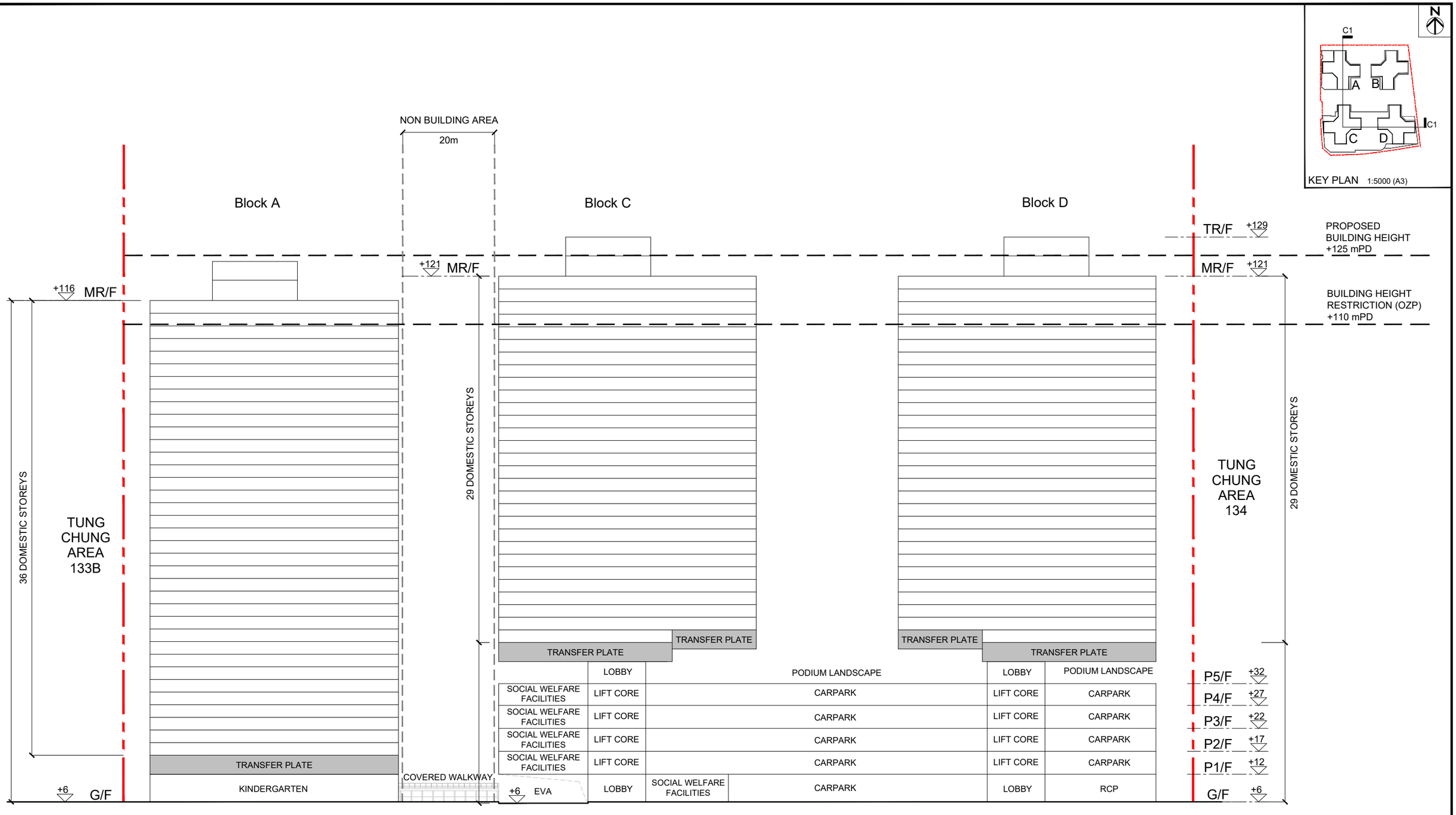
TUNG CHUNG AREA 129

LEGEND

APPLICATION SITE
申請地點

NON BUILDING AREA
非建築用地

PROJECT	DRAWING TITLE	房 屋 署 HOUSING DEPARTMENT		
SECTION 16 PLANNING APPLICATION FOR TUNG CHUNG AREA 133	Figure 2f(7) TCA 133C MASTER LAYOUT PLAN – TYPICAL FLOOR PLAN (FOR REFERENCE ONLY & SUBJECT TO DESIGN REVIEW)	編號 DRAWING NO. IS31/-/S16/A/LO-07	比 例 SCALE 1:800 (A3)	日 期 DATE



LEGEND

- APPLICATION SITE 申請地點
- NON BUILDING AREA 非建築用地

PROJECT

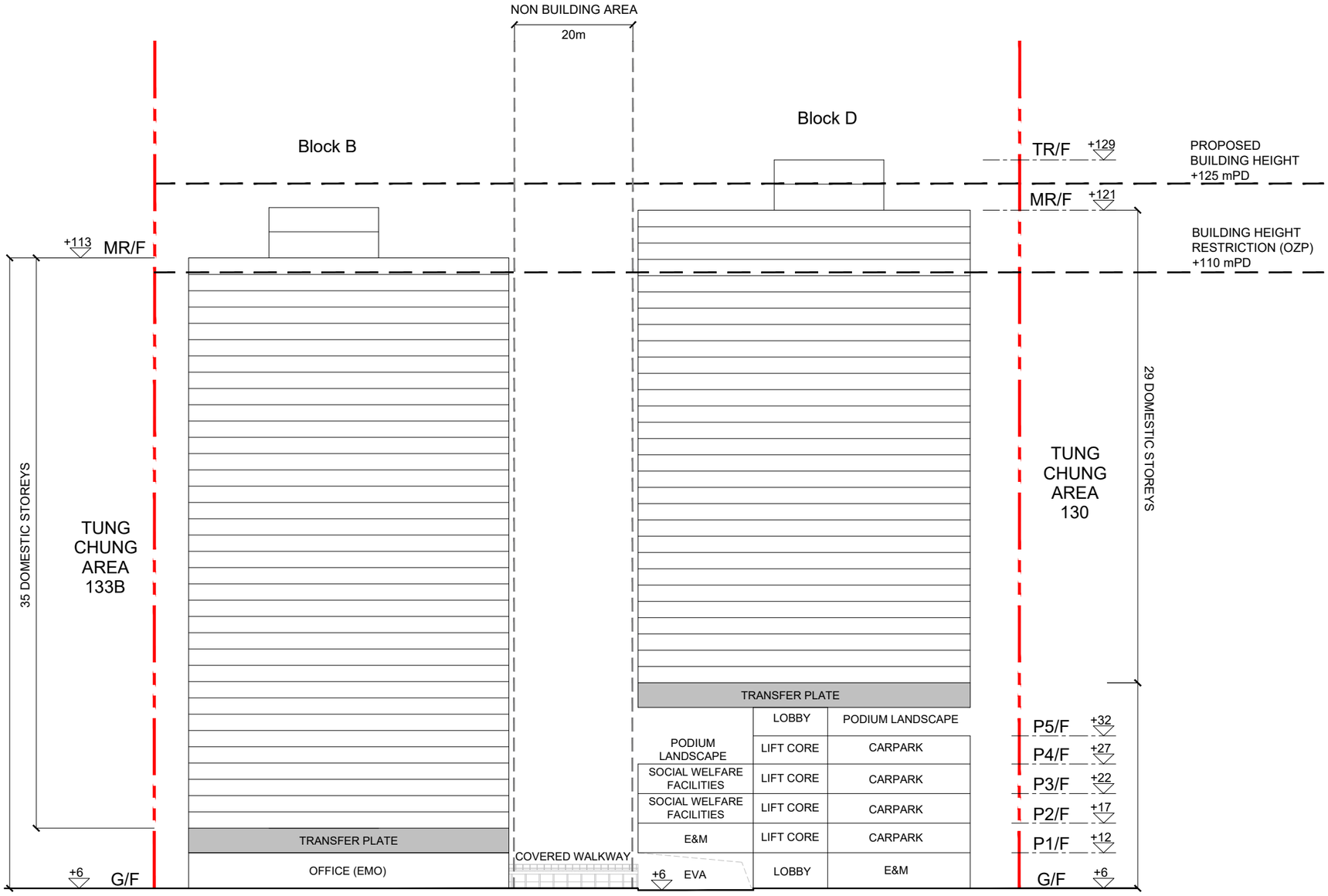
SECTION 16 PLANNING APPLICATION FOR TUNG CHUNG AREA 133

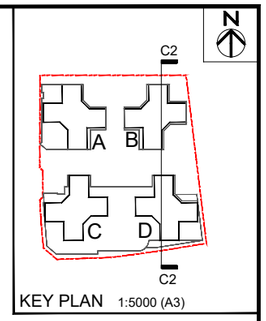
DRAWING TITLE

Figure 2g(1) TCA 133C SECTION C1 - C1
(FOR REFERENCE ONLY & SUBJECT TO DESIGN REVIEW)

房 屋 署
HOUSING DEPARTMENT

編號 DRAWING NO.	比 例 SCALE	日 期 DATE
IS31/-/S16/A/LO-08	1:800 (A3)	





LEGEND

APPLICATION SITE
申請地點

NON BUILDING AREA
非建築用地

PROJECT

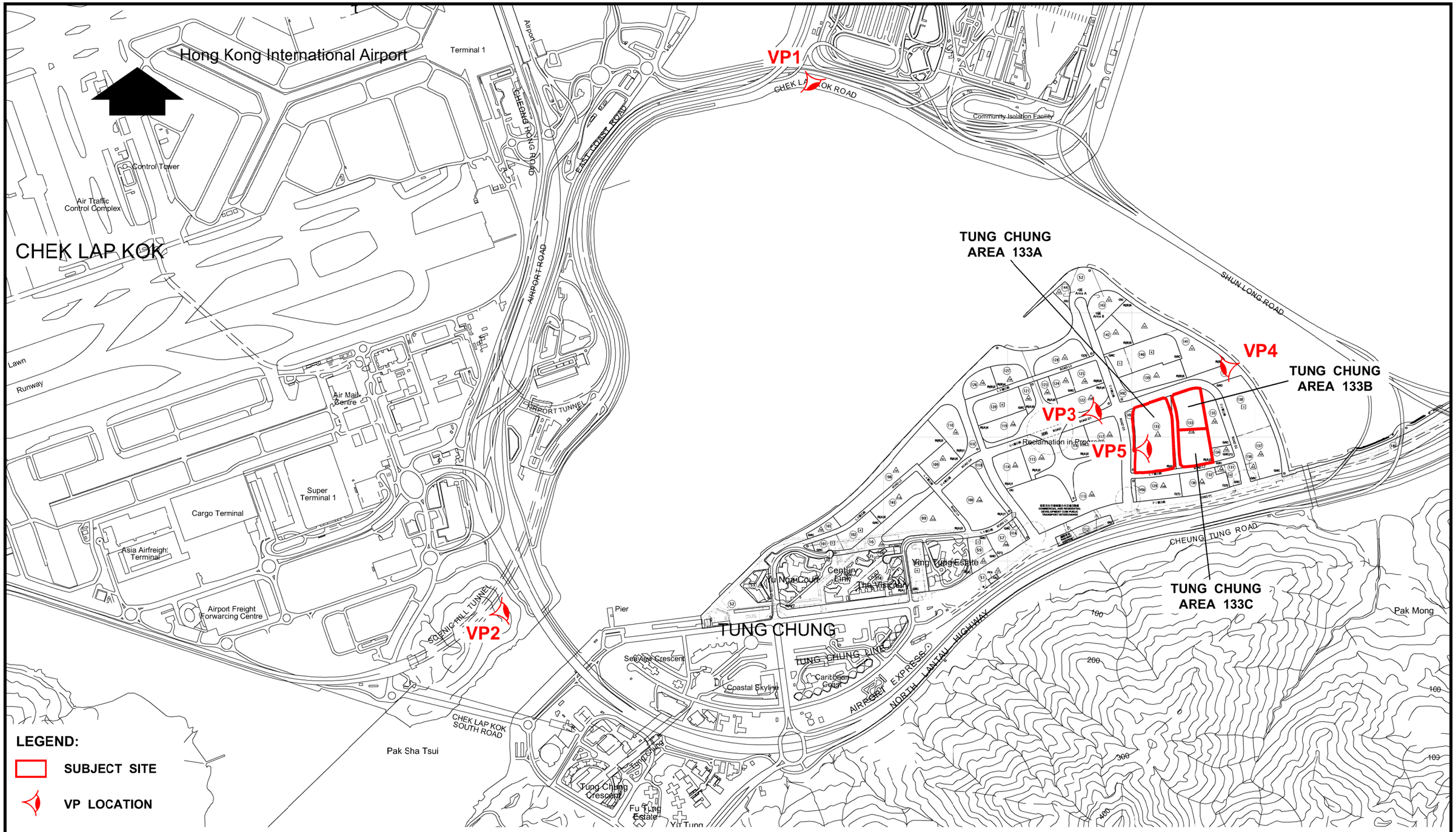
SECTION 16 PLANNING APPLICATION FOR TUNG CHUNG AREA 133

DRAWING TITLE

Figure 2g(2) TCA 133C SECTION C2 - C2
(FOR REFERENCE ONLY & SUBJECT TO DESIGN REVIEW)

房 屋 署
HOUSING DEPARTMENT

編號 DRAWING NO.	比例 SCALE	日期 DATE
IS31/-/S16/A/LO-09	1:800 (A3)	



PROPOSED PUBLIC HOUSING DEVELOPMENT AT TUNG CHUNG AREAS 133A, 133B & 133C VIEWPOINTS LOCATION

HOUSING DEPARTMENT
PLANNING SECTIONS

Figure 3

DATE : 8. 2. 2024

BASE EXTRACTED FROM OZP No. S/I-TCE/2 AND SHT. No. 9

24_0112I_VP

Baseline Scheme

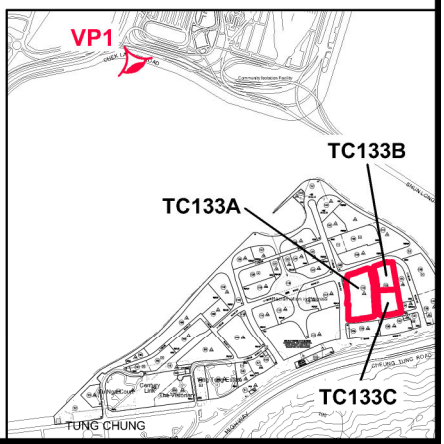


Proposed Scheme



LEGEND:

- TC133A
- TC133B
- TC133C



PHOTOMONTAGE AT VIEWPOINT 1 (VIEW FROM CHEK LAP KOK ROAD)

HOUSING DEPARTMENT
PLANNING SECTIONS

Figure 4

DATE : 8. 2. 2024

24_0112I_VP1

Baseline Scheme



Proposed Scheme

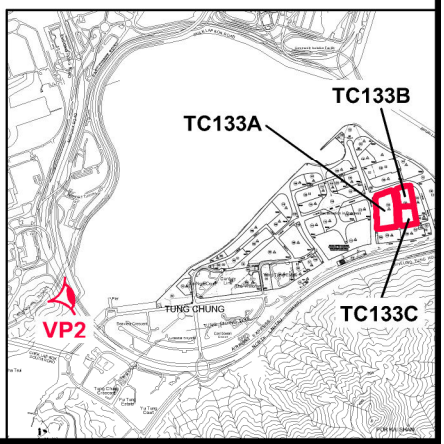


LEGEND:

TC133A

TC133B

TC133C



PHOTOMONTAGE AT VIEWPOINT 2 (VIEW FROM SCENIC HILL PAVILION)

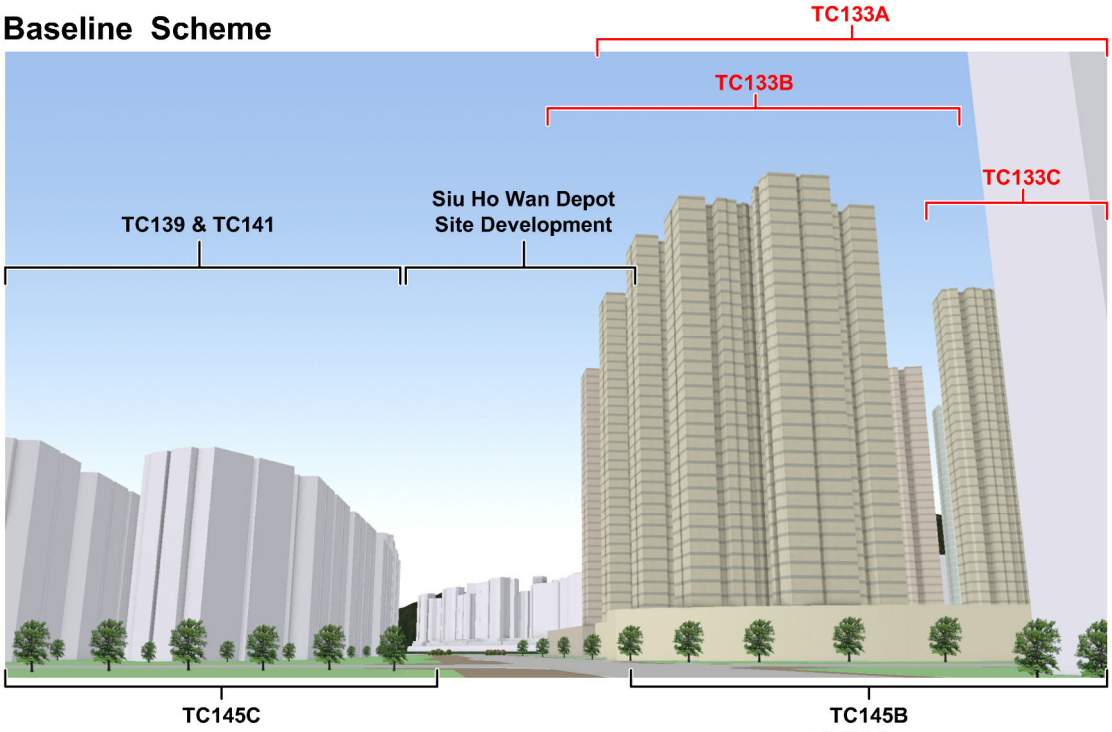
HOUSING DEPARTMENT
PLANNING SECTIONS

Figure 5

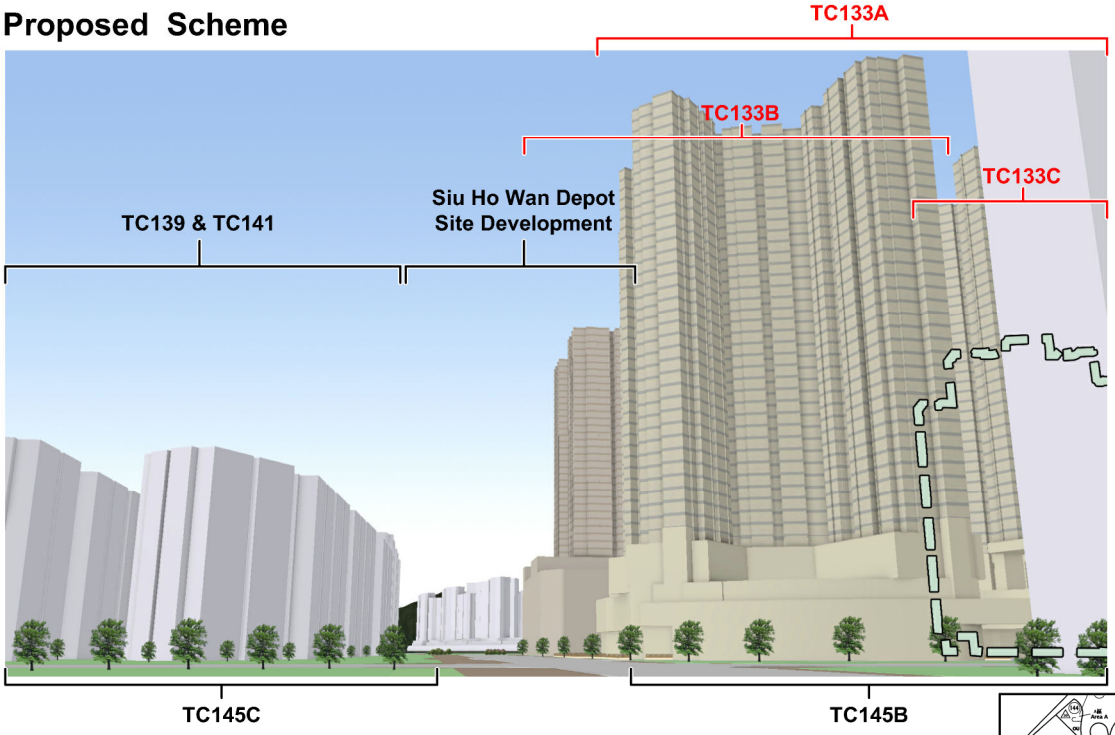
DATE : 8. 2. 2024

24_0112I_VP2

Baseline Scheme

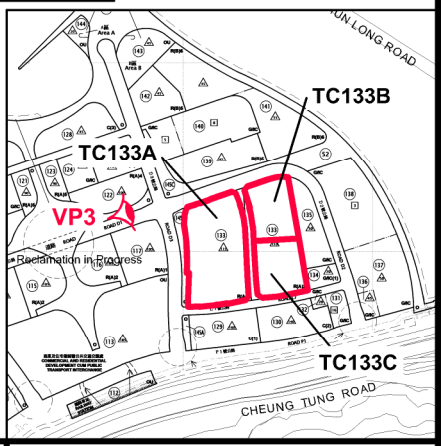


Proposed Scheme



LEGEND:

- TC133A
- TC133B
- TC133C



PHOTOMONTAGE AT VIEWPOINT 3 (VIEW FROM THE PLANNED CENTRAL GREEN AT TUNG CHUNG AREA 118)

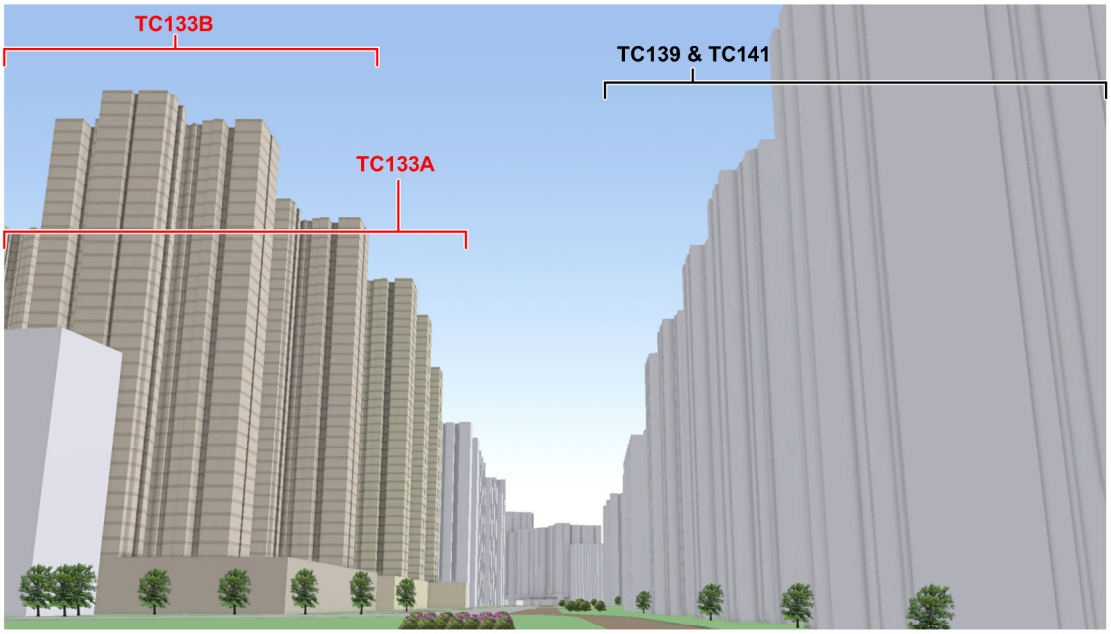
HOUSING DEPARTMENT
PLANNING SECTIONS

Figure 6

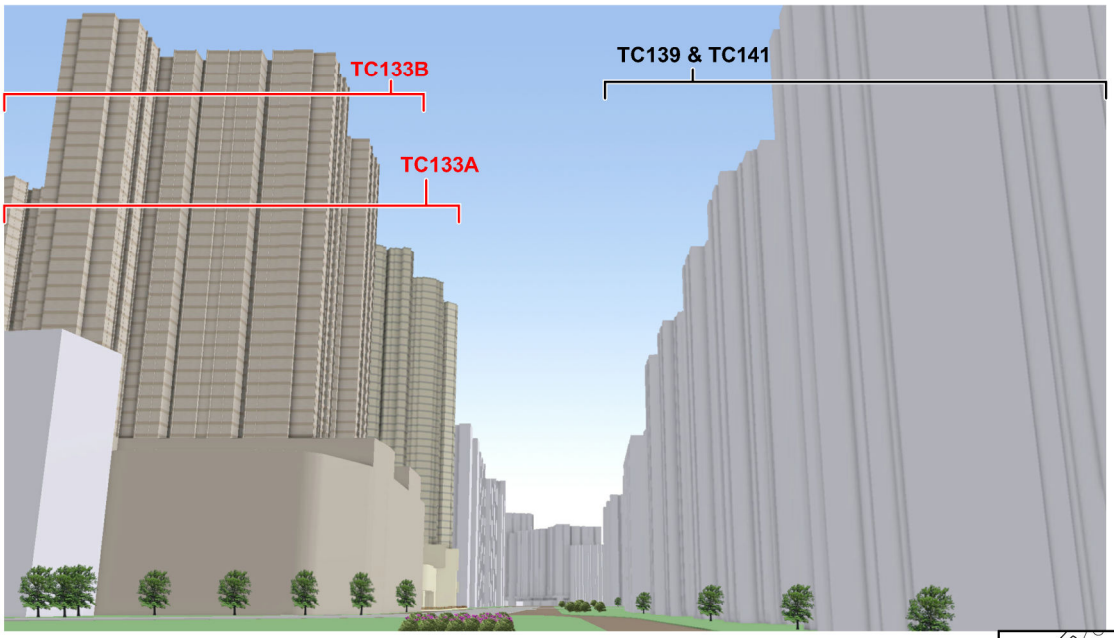
DATE :
8. 2. 2024

24_0112I_VP3

Baseline Scheme



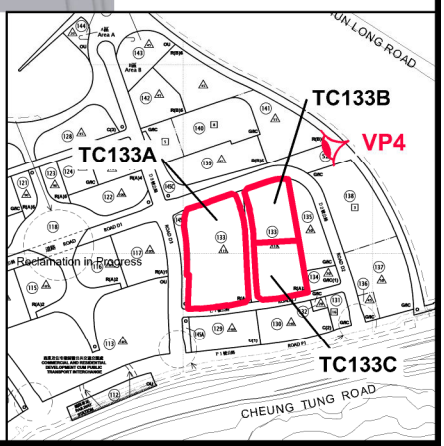
Proposed Scheme



LEGEND:

TC133A

TC133B



PHOTOMONTAGE AT VIEWPOINT 4 (VIEW FROM THE PLANNED CIVIC WATERFRONT PARK AT TUNG CHUNG AREA 52)

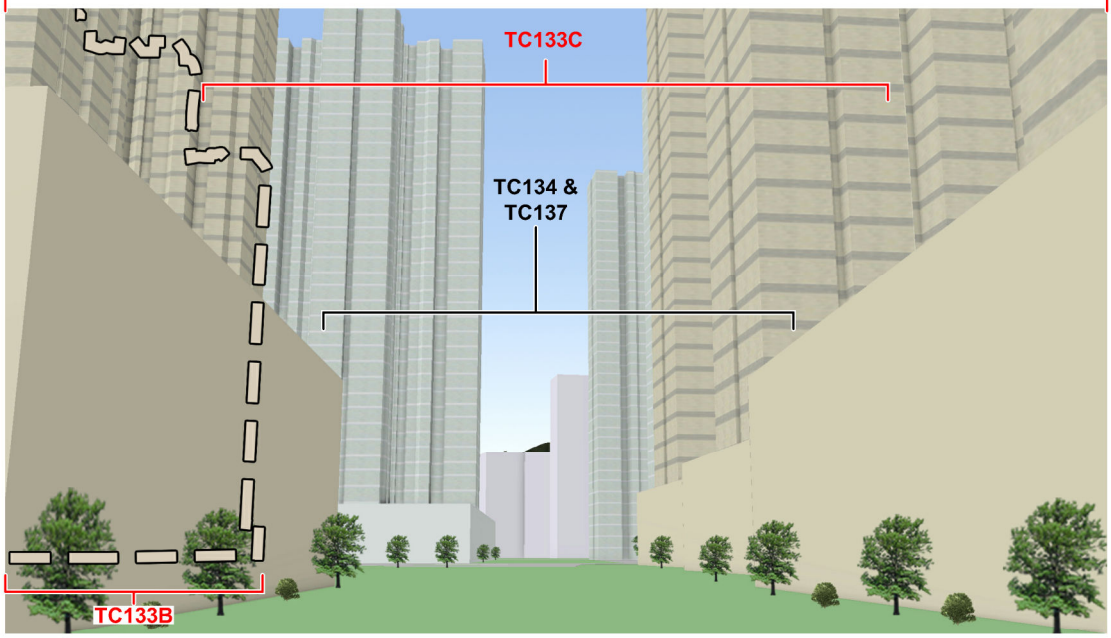
HOUSING DEPARTMENT
PLANNING SECTIONS

Figure 7

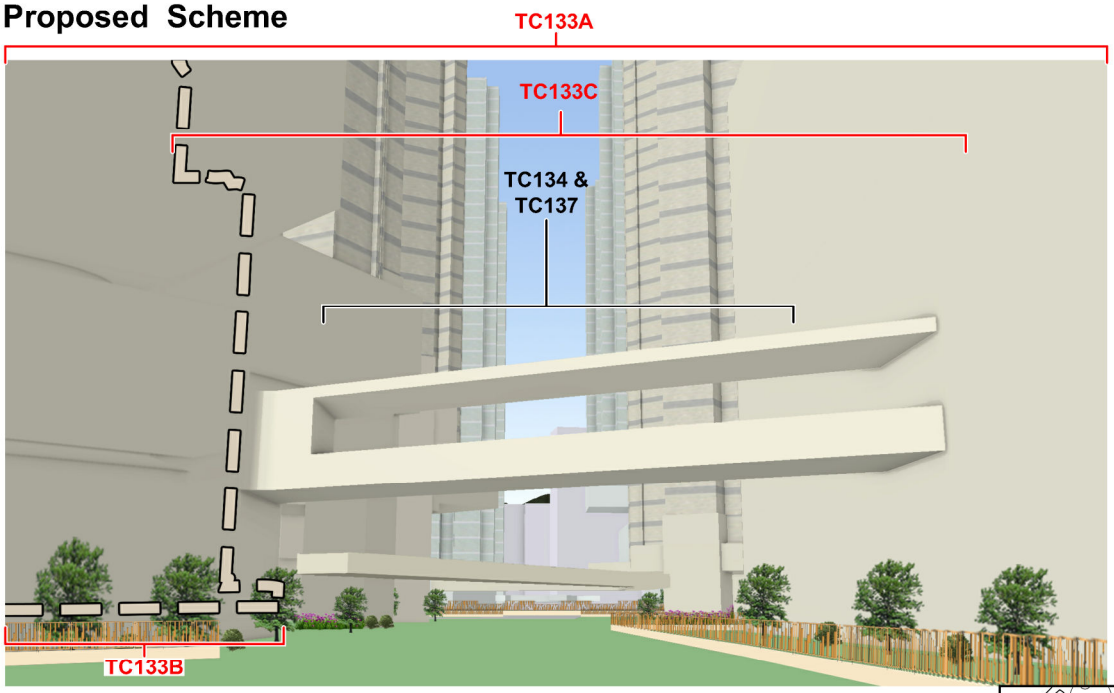
DATE :
8. 2. 2024

24_0112I_VP4

Baseline Scheme



Proposed Scheme

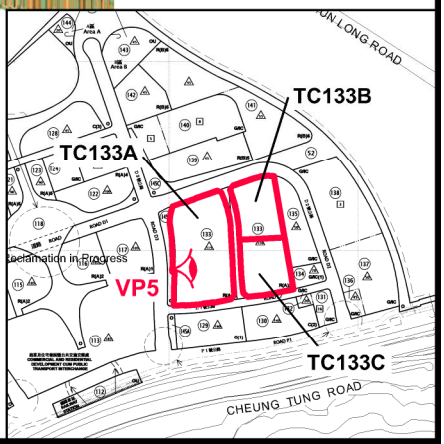


LEGEND:

TC133A

TC133B

TC133C



PHOTOMONTAGE AT VIEWPOINT 5 (VIEW FROM THE PLANNED N-S LINEAR PARK AT AREA 145B)

HOUSING DEPARTMENT
PLANNING SECTIONS

Figure 8

DATE :
8. 2. 2024

24_0112I_VP5

Appendix 5

Technical Assessments – Part 3

Sewerage Impact Assessment
(for Tung Chung Areas 133A, 133B and 133C)

Hong Kong Housing Authority

Agreement No. CB20210451
HKHA Term Engineering Consultancy Services 2021-2023
For Kowloon Central & West and Islands Region

Proposed Public Housing Development at Tung Chung Area 133A, 133B & 133C

Sewerage Impact Assessment (Final)



Document No. T1024/C006
Issue 5

March 2024

MANNINGS
(Asia) Consultants Limited

Content

1.0 Introduction 1
2.0 Review of Sewerage Infrastructure 1
3.0 Conclusion 9

Appendix A – Site Layout Plan and Proposed Manhole Layout Plan

Appendix B – Extract from CEDD report "Sewerage Design Report (Final)" (Ref. C20-04)

Appendix C – EPD Guidelines for Estimating Sewage Flows for Sewage Infrastructure Planning

Appendix D – Sewage Flow Estimation

1.0 Introduction

1.1 Background

1.1.1 Civil Engineering and Development Department (CEDD) is carrying out reclamation and infrastructure works for the development of Tung Chung New Town Extension (TCNTE) - East. In response to the policy on site optimisation and intensification, CEDD has carried out studies to assess the potential increase of housing provision in TCNTE - East. Tung Chung Areas 133A, 133B & 133C (hereinafter refer as "the Subject Sites") at TCNTE - East are the three being explored (See **Appendix A**). Tentatively, the proposed public housing developments at the Subject Sites are targeted to complete in year 2029/2030.

1.1.2 The proposed scheme at Tung Chung Area 133A adopts a maximum domestic Plot Ratio (PR) of 6.5 plus non-domestic PR of 0.5 and maximum overall GFA not exceeding 293,300 m^2, providing about 6,817 flats with a design population of about 16,469. The proposed scheme at Tung Chung Area 133B adopts a maximum domestic PR of 6.5, plus non-domestic PR of 0.3 and a maximum overall GFA not exceeding 123,080 m^2, providing about 2,448 flats with a design population of about 7,620. The proposed scheme at Tung Chung Area 133C adopts a maximum domestic PR of 6.5, plus non-domestic PR of 0.2 and a maximum overall GFA not exceeding 123,950 m^2, providing about 2,571 flats with a design population of about 6,942.

1.1.3 Mannings (Asia) Consultants Ltd has been commissioned by the Hong Kong Housing Authority (HKHA) under the Agreement No. CB20210451 HKHA Term Engineering Consultancy Services 2021-2023 to undertake the Sewerage Impact Assessment (SIA) (hereinafter refer as "the Subject Study") to support the s.16 planning application for the proposed public housing development at the Subject Sites.

1.2 Study Objective

1.2.1 The objective of the study is:

- To evaluate and assess the sewerage impact on the proposed and existing public sewerage system based on the latest development parameter of Area 133A, 133B & 133C

1.2.2 The major tasks to achieve these objectives include:

- To evaluate the Average Dry Weather Flow (ADWF) generated from the design parameter changes of Area 133A, 133B & 133C; and
- Assess the impacts of design parameter changes in Area 133A, 133B & 133C to the proposed and existing sewerage system.

Review of Sewerage Infrastructure

2.1 Population

2.1.1 A site layout plan of the subject site is shown in **Appendix A**. A summary of the development parameters of the Subject Sites in the assessment are presented in the table below.

	Tung Chung Area 133A	Tung Chung Area 133B	Tung Chung Area 133C
Target Population Intake	2029/30		
Flat type	PRH*	PRH* / GSH*	SSF*
No. of Flats	6,817	2,448	2,571
Population** (Without design buffer)	16,469	7,620	6,942
Population (With design buffer# adopted in the technical assessments for studying purpose)	18,406	8,382	7,984
Non-domestic Facilities			
Retail	8,800 m^2 GFA	Nil	Nil
Kindergarten	1,610 m^2 GFA	830 m^2 GFA	850 m^2 GFA
Public Market (by FEHD)	13,000 m^2 GFA	Nil	Nil
District Tenancy Management Office (DTMO)	810 m^2 GFA	Nil	Nil
Estate Management Office (EMO)	500 m^2 GFA	230 m^2 GFA	Nil
Management Office (MO)	Nil	Nil	250 m^2 GFA
Welfare Facilities			
Welfare	Nil	5,880 m^2 GFA	5,500 m^2 GFA

* PRH means Public Rental Housing; GSH means Green Form Subsidised Home Ownership Scheme; and SSF means Subsidised Sale Flats.
** Population is based on the actual flat mix of the proposal.
# For PRH/GSH in Tung Chung Area 133A and 133B, 10% design buff is adopted while for SSF in Tung Chung Area 133C, 15% allowance is adopted for design purpose.

2.2 Sewage Estimation based on Design Parameters adopted in CEDD Report

2.2.1 As referred to the CEDD report "Sewerage Design Report (Final)" (Ref. C20-04) with permission of use by CEDD, the total ADWF generated from the Subject Sites based on the development parameters adopted in CEDD report are estimated to be 4,625 m^3/day for Area 133A, 1,712 m^3/day for Area 133B and 1,933 m^3/day for Area 133C, with a total of 8,270 m^3/day. Extract from CEDD report are shown in **Appendix B**. The estimation of ADWF are summarized in the table below.

Development	Name	Population / Employee	Unit Flow Factor (m^3/d/person)	ADWF (m^3/day)	Total (m^3/day)	Remarks and Assumption
Area 133A	Special Residential	20,860	0.19	3,963	4,625	Information from CEDD report "Sewerage Design Report (Final)" (Ref. C20-04) with permission of use by CEDD.
	Commercial	1,017	0.28	285		
	Kindergarten (Student)	180	0.04	7		
	Kindergarten (Teacher)	20	0.28	6		
	Commercial and Social Centres	235	0.28	66		
	Welfare Facilities	490	0.28	137		
	Possible F&B trade	101.7	1.58	161		
Area 133B	Special Residential	7,868	0.19	1,495	1,712	
	Commercial	362	0.28	101		
	Welfare Facilities	209	0.28	59		
	Possible F&B trade	36.2	1.58	57		
Area 133C	Special Residential	8,999	0.19	1,710	1,933	
	Commercial	372	0.28	104		
	Welfare Facilities	214	0.28	60		
	Possible F&B trade	37.2	1.58	59		

2.3 Sewage Estimation based on Development Parameters adopted in HD latest Design Scheme

2.3.1 By referring to the CEDD report and EPD's Guidelines for Estimating Sewage Flows for Sewage Infrastructure Planning, different unit flow factors have been stipulated for the following 2 different types of development:

- Domestic Flows (EPD's Guidelines Section 7, Table T-1); and
- Commercial and Institutional Flows (EPD's Guidelines Section 7, Table T-2);

Relevant tables of EPD's Guidelines are extracted in **Appendix C** for easy reference.

2.3.2 The total ADWF generated from Area 133A, 133B & 133C based on Latest HD adopted Development Parameters are estimated to be 4,422 m^3/day, 1,706 m^3/day and 1,612 m^3/day respectively with a total ADWF of 7,805 m^3/day. The estimation of ADWF are summarized in the table below. Detail calculations are shown in **Appendix D**.

Development	Name	Population / Employee	Unit Flow Factor (m^3/d/person)	ADWF (m^3/day)	Total (m^3/day)	Remarks and Assumption
Area 133A	Residential Population	18,406	0.19	3,497	4,422	Information from HD
	Commercial	220	0.28	62		
	Public Market	693	0.28	194		
	Public Market (F&B trade)	173	1.58	273		
	Kindergarten (Student)	452	0.04	19		
	Kindergarten (Teacher)	51	0.28	15		
	Management Offices	50	0.28	14		
	Retail (Possible F&B trade)	220	1.58	348		
Area 133B*	Residential Population	8,382	0.19	1,593	1,706	
	Kindergarten (Student)	233	0.04	10		
	Kindergarten (Teacher)	26	0.28	8		
	Management Offices	25	0.28	7		
	Welfare Facilities (Employee)	194	0.28	54		
	Welfare Facilities (Resident)	180	0.19	34		

Area 133C*	Residential Population	7,984	0.19	1,517	1,612	Information from HD
	Kindergarten (Student)	239	0.04	10		
	Kindergarten (Teacher)	26	0.28	8		
	Management Offices	25	0.28	7		
	Welfare Facilities (Employee)	182	0.28	51		
	Welfare Facilities (Resident)	100	0.19	19		

*Since no retail facility would be provided in the current design scheme of Area 133B and 133C, no potential F&B trade would be anticipated in Area 133B and 133C.

2.4 Comparison of Sewage Estimated based on Development Parameters adopted in CEDD report and adopted in HD latest Design Scheme

2.4.1 A summary indicating the comparison of ADWF between the original scheme (i.e. CEDD report) and newly-estimated scheme (i.e. based on HD latest development parameter)

	Area 133A (m^3/d)	Area 133B (m^3/d)	Area 133C (m^3/d)
Original	4,625	1,712	1,933
Newly-estimated	4,422	1,706	1,612
Difference	-203	-6	-321
Overall percentage change (%)(1)	**-4.39%**	**-0.35%**	**-16.61%**

Note:
(1) Positive sign denotes increase in ADWF, whereas negative sign denotes reduction in ADWF.

2.4.2 As referred to CEDD report “Sewerage Design Report (Final)” (Ref. C20-04) with permission of use by CEDD, a sewerage network comprising gravity sewer is proposed to convey the collected sewage to the Tung Chung East Pumping Station. The estimation of the catchment of Tung Chung East Pumping Station excluding the Subject Sites is summarized in the following table:

	ADWF (m^3/day)
Design Catchment to Tung Chung East Pumping Station	35,298
Less	
Area 133A (Refer to CEDD report with ref. PI20-04)	4,625
Area 133B (Refer to CEDD report with ref. PI20-04)	1,712
Area 133C (Refer to CEDD report with ref. PI20-04)	1,933
Sub Total	8,270
Design Catchment to Tung Chung East Pumping Station excluding the Subject Sites	27,028

2.4.3 The ADWF generated from other areas to the Tung Chung East Pumping Station excluding the Subject Sites will be 27,028 m^3/day. Taken into account the ADWF estimated for the Subject Sites based on the development parameters adopted in HD latest design scheme, which is 7,740 m^3/day, the updated estimation of the Catchment of the Tung Chung East Sewerage Pumping Station is summarized in the table below:

	ADWF (m^3/day)	Peak Flow (m^3/day)
Area 133A (Adopting Latest HD Development Parameters)	4,422	
Area 133B (Adopting Latest HD Development Parameters)	1,706	
Area 133C (Adopting Latest HD Development Parameters)	1,612	
Other Areas in Tung Chung Eastern Sewage Catchment	27,028	
Total (Based on Development Parameters adopted in HD Latest Design Scheme)	34,768	66,060(1)
Total (Based on Development Parameters adopted in CEDD Report)	35,298	67,066(1)
Capacity of Tung Chung East Sewage Pumping Station	37,000 (Design)	70,300(1) (Maximum)

Note:
(1) Peaking Factor 1.90 is adopted according to CEED Report (Ref. C20-04)

2.5 Sewerage Impact Assessment

2.5.1 Comparing with CEDD report "Sewerage Design Report (Final)" (Ref. C20-04), the original designed flow of sewage generated from the Area 133A is 4,625 m^3/day while with design parameter changes in Area 133A, the latest designed flow of sewage generated from the Area 133A will be 4,422 m^3/day which is 203 m^3/day less than the original value. It is concluded that no adverse sewerage impact will be arising from the design parameter changes in Area 133A and no further assessment will be required. The proposed manholes to be connected for discharge of sewage are attached in **Appendix A**.

2.5.2 The comparison of ADWF between the original scheme (i.e. CEDD report) and newly-estimated scheme (i.e. based on HD latest development parameter) for Area 133A is summarized in the table below:

	Area133A (m^3/d)
Original	4,625
Newly-estimated	4,422
Difference (Smaller/larger than the original value)	203 (Smaller)
Overall percentage change (%)(1)	**-4.39%**

Note:
(1) Positive sign denotes increase, whereas negative sign denotes reduction.

2.5.3 Comparing with CEDD report "Sewerage Design Report (Final)" (Ref. C20-04), the original designed flow of sewage generated from the Area 133B is 1,712 m^3/day while with design parameter changes in Area 133B, the latest designed flow of sewage generated from the Area 133B will be 1,706 m^3/day which is 6 m^3/day less than the original value. It is concluded that no adverse sewerage impact will be arising from the design parameter changes in Area 133B and no further assessment will be required.

2.5.4 The comparison of ADWF between the original scheme (i.e. CEDD report) and newly-estimated scheme (i.e. based on HD latest development parameter) for Area 133B is summarized in the table below:

	Area133B (m^3/d)
Original	1,712
Newly-estimated	1,706
Difference (Smaller/larger than the original value)	6 (Smaller)
Overall percentage change (%)(1)	**-0.35%**

Note:
(1) Positive sign denotes increase, whereas negative sign denotes reduction.

2.5.5 Comparing with CEDD report "Sewerage Design Report (Final)" (Ref. C20-04), the original designed flow of sewage generated from the Area 133C is 1,933 m^3/day while with design parameter changes in Area 133C, the latest designed flow of sewage generated from the Area 133C will be 1,612 m^3/day which is 321 m^3/day less than the original value. It is concluded that no adverse sewerage impact will be arising from the design parameter changes in Area 133C and no further assessment will be required.

2.5.6 The comparison of ADWF between the original scheme (i.e. CEDD report) and newly-estimated scheme (i.e. based on HD latest development parameter) for Area 133C is summarized in the table below:

	Area133C (m^3/d)
Original	1,933
Newly-estimated	1,612
Difference (Smaller/larger than the original value)	321 (Smaller)
Overall percentage change (%)(1)	**-16.61%**

Note:
(1) Positive sign denotes increase, whereas negative sign denotes reduction.

2.5.7 Comparing with CEDD report "Sewerage Design Report (Final)" (Ref. C20-04), the original designed flow of sewage generated from the Subject Sites is 8,270 m^3/day, while with design parameter changes in Area 133A, 133B and Area 133C, the latest designed flow of sewage generated from the Subject Sites will be 7,740 m^3/day which is 530 m^3/day less than the original value. Also, the original design catchment to Tung Chung East Pumping Station is 35,298 m^3/day, while with design parameter changes in Area 133A, 133B and

Area 133C, the latest design catchment to Tung Chung East Pumping Station will be 34,768 m^3/day which is 530 m^3/day less than the original value. It is concluded that no adverse sewerage impact will be arising from the population decrease in Area 133A, 133B and 133C.

3.0 Conclusion

3.1 The sewerage impact assessment was based on the scenarios that the development intensity for the Subject Sites were decreased. The population of 16,469 in Area 133A, 7,620 in Area 133B and 6,942 in Area 133C with design buffer, are adopted in this assessment.

3.2 Based the latest design of the proposed sewerage system in CEDD report “Sewerage Design Report (Final)” (Ref. C20-04), the sewerage generated from the Subject Sites is proposed to be discharged to Tung Chung East Eastern Sewage Pumping Station via the proposed gravity sewer. The capacity of the proposed gravity sewers and Tung Chung East Eastern Sewage Pumping Station were assessed to be adequate to cater for the decreased population intensity of the Subject Sites.

3.3 It is concluded that the sewerage generated from the decrease development intensity of the Subject Sites could be accommodated in Design Catchment of the Tung Chung East Eastern Sewage Pumping Station by the proposed design of gravity sewers and pumping station in CEDD report “Sewerage Design Report (Final)” (Ref. C20-04).

APPENDIX A

Site Layout Plan and Proposed Manhole Layout Plan

ISO A1 594mm x 841mm
Approved:
Checked:
Designer:
Project Management Initials:

CUT LINE 46-46
SEE DRAWING NO. 60507694/C20/433

814000 E
814100 E
814200 E

818100 N
818000 N

CUT LINE 26-26
SEE DRAWING NO. 60507694/C20/414

CUT LINE 28-28
SEE DRAWING NO. 60507694/C20/418

CUT LINE 29-29
SEE DRAWING NO. 60507694/C20/417

OD450
OD400
OD500
OD630

SE-C1D
SE-C1C
SE-C1B
SE-C1E
SE-C1F
SE-C1G
SE-C1
SE-C2
SE-C3A
SE-C3
SE-C4

PLUG C1.1A
PLUG C2.2
PLUG C2.2A
PLUG C1.1
PLUG G2.1

FTM1
250OD PE PIPE
GRADIENT: 1 IN 100
I.L. +2.3mPD
COORDINATE: E 814171.510
N 818141.020

FTM2
250OD PE PIPE
GRADIENT: 1 IN 100
I.L. +2.3mPD
COORDINATE: E 814173.978
N 818123.902

FTM3
250OD PE PIPE
GRADIENT: 1 IN 100
I.L. +2.3mPD
COORDINATE: E 814174.775
N 818121.399

FTM4
400OD PE PIPE
GRADIENT: 1 IN 100
IL: +1.8mPD
COORDINATE: E 814181.155
N 818098.059

FTM1
400OD PE PIPE
GRADIENT: 1 IN 100
IL: +2.10mPD
COORDINATE: E 814156.822
N 818093.311

FTM2
400OD PE PIPE
GRADIENT: 1 IN 100
IL: +2.10mPD
COORDINATE: E 814166.357
N 817998.627

FTM1
400OD PE PIPE
GRADIENT: 1 IN 100
IL: +2.29mPD
COORDINATE: E 814190.551
N 817961.730

RS

N

NOTES:
1. FOR NOTES AND LEGEND REFER TO DRAWING NO. 60507694/C20/401.
2. THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING NOS. 60507694/C20/402 TO 435.

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PROJECT
項目
TUNG CHUNG NEW TOWN EXTENSION (EAST) - DESIGN AND CONSTRUCTION

CLIENT
業主
土木工程拓展署
Civil Engineering and Development Department

CONSULTANT
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SUB-CONSULTANTS
分判工程顧問公司

ISSUE/REVISION
修訂

I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 核核

STATUS
階段

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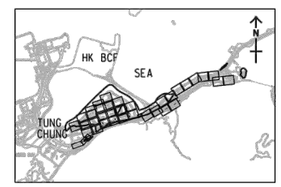
DIMENSION UNIT 尺寸單位: METRES

KEY PLAN 索引圖 A1 1 : 100000



PROJECT NO. 項目編號: 60507694
CONTRACT NO. 合約編號: CE 69/2015 (CE)

SHEET TITLE
圖紙名稱
SEWERAGE LAYOUT PLAN

SHEET 15 OF 34

SHEET NUMBER
圖紙編號
60507694/C20/416

29-September-2021
Plot File by: vicky.xia1
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ISO A1 594mm x 841mm

Approved:

Checked:

Designer:

Project Management Initials:

CUT LINE 29-29
SEE DRAWING NO. 60507694/C20/416

814100 E

814200 E

SE-C4

SE-C5A

OD500

FTM3
400OD PE PIPE
GRADIENT: 1 IN 50
IL: +1.32mPD
COORDINATE: E 814105.203
N 817863.538

OD630

OD400

PLUG G2.1A

FTM2
250OD PE PIPE
GRADIENT: 1 IN 100
IL: + 2.10mPD
COORDINATE: E 814194.582
N 817907.338

SE-C5

OD710

PLUG E1.6

SE-E23A

OD355

PLUG E1.1

OD400

SE-E23B

SE-E24

OD1400

RS

SE-E25

SE-E26

PLUG COM.2

OD355

SE-E27

BASKET SCREEN
TO BE PROVIDED
DOWNSTREAM
OF SE-E28

SE-H5

SE-J1

SE-H4A

PLUG CO.2

CHC 11.452

CHC 0.000

OD500

OD280

OD800

PLUG COM.3

DRAINAGE MONITORING CONTROL KIOSKS
AND LEVEL SENSORS (INDICATIVE ONLY)

SE-E28

SE-J1A

817800 N

CONNECTED TO EAST
SEWAGE PUMPING
STATION'S OUTLET SEE
DRAWING NO. 60507694/C20/462

CONNECTED TO EAST
SEWAGE PUMPING STATION
SEE DRAWING NO.
60507694/C20/462

CONNECTED TO EAST
SEWAGE PUMPING STATION
INLET CHAMBER SEE
DRAWING NO. 60507694/C20/462

CUT LINE 27-27
SEE DRAWING NO. 60507694/C20/415

CUT LINE 30-30
SEE DRAWING NO. 60507694/C20/419

817700 N

碎石 Rubble

Road

HWM

Tunnel Portal

港鐵 (機場快線)

MTR (Airport Express)

NOTES:

1. FOR NOTES AND LEGEND REFER TO DRAWING NO. 60507694/C20/401.
2. THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING NOS. 60507694/C20/402 TO 435.

AECOM

PROJECT
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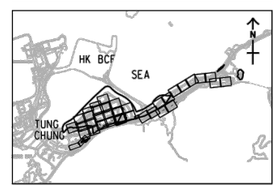
STATUS
階段

SCALE 比例: A1 1 : 500

DIMENSION UNIT 尺寸單位: METRES

KEY PLAN 索引圖 A1 1 : 100000



PROJECT NO. 項目編號: 60507694

CONTRACT NO. 合約編號: CE 69/2015 (CE)

SHEET TITLE 圖紙名稱

SEWERAGE LAYOUT PLAN

SHEET 16 OF 34

SHEET NUMBER 圖紙編號

60507694/C20/417

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Plot File by: vicky.xia1
29-September-2021
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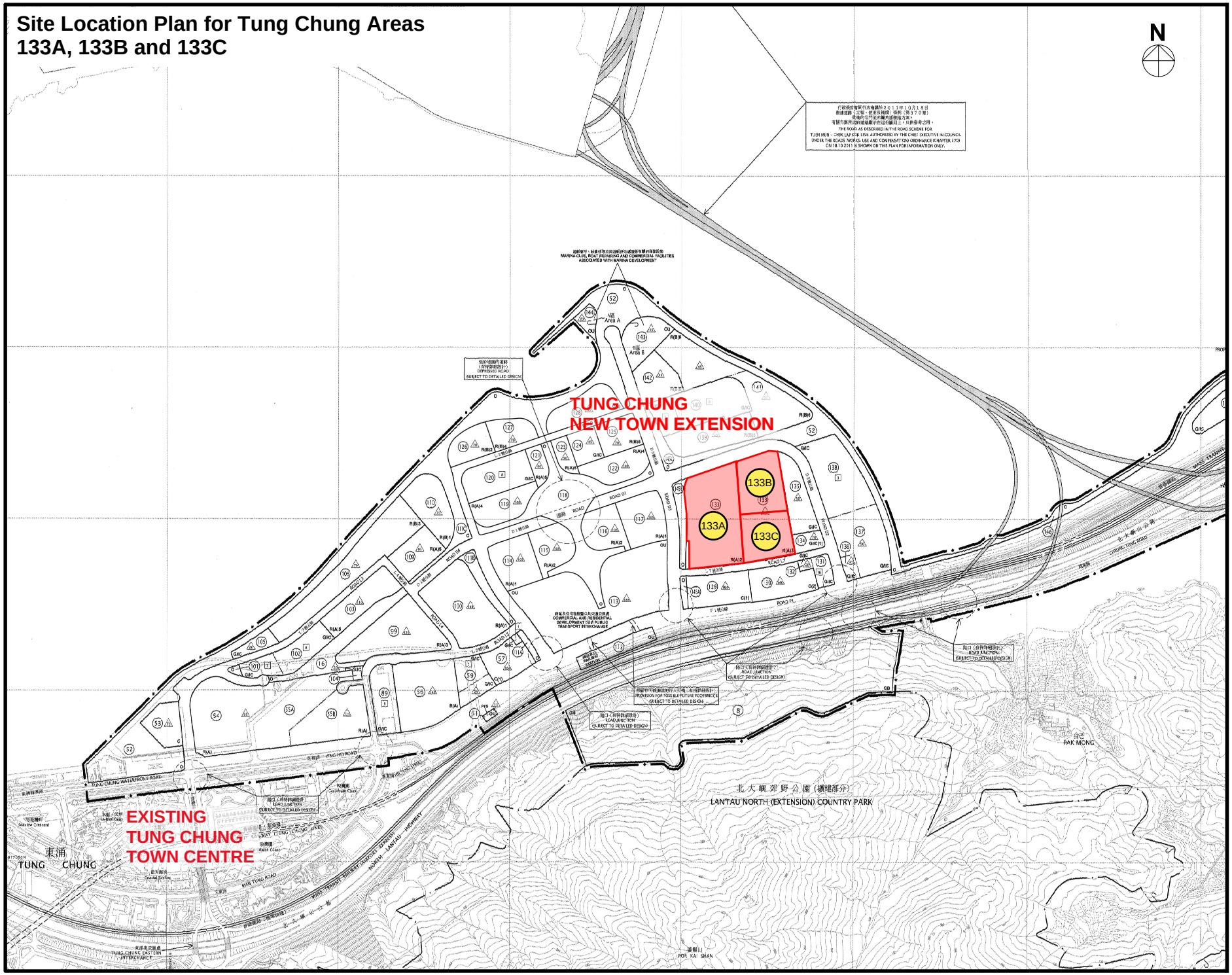
Site Location Plan for Tung Chung Areas 133A, 133B and 133C



APPENDIX B

Extract from CEDD report "Sewerage Design Report (Final)" (Ref. C20-04)

2. Findings in the Review Phase

2.1 Findings in the Review Phase

2.1.1 The review on the previous Sewerage Impact Assessment (SIA) report is carried out in accordance with the guidelines set out in EPD Report No. EPD/TP1/05: Guidelines for Estimating Sewage Flows (GESF) for Sewerage Infrastructure Planning Version 1.0 and DSD's Sewerage Manual (Part 1 and Part 2).

2.1.2 During the review stage, a review paper on the Ultimate Sewage Disposal Scheme (Working Paper No. Z17-01) has been draft on 21 September 2017 and it was finally accepted by both EPD and DSD in January 2018 (Working Paper No. Z17-02). The detail design of sewerage system under the Project shall base on the agreed alternative sewerage discharge scheme as below:

Update of Sewage Flow

2.1.3 The planned population of Tung Chung East based on the RODP in P&E Study (Agreement No. 32/2011(CE)) was 177,567 in the SIA. This detailed design report is conducted based on the increased population Case 2 Scenario 2B (C2S2B). The comparisons were summarized as below:

Table 2-1 Review of Planned Population for Tung Chung East Development

Type	Population P&E Study	Population Increase Scenario C2S2B.
Residential Population	118,900	145,727
Employee (Commercial and GIC)	45,277	58,981
School (Student)	13,390	12,640
Total	**177,567**	**217,348**

2.1.3.1 According to the latest development proposal provided by CEDD in CEDD in February 2021, there is a proposal of enhancement of population in TCE development under CASE 2 Scenario 2B. The increased sewage build-ups of the Western and Eastern sewerage catchment are summarized in **Table 2-2**, **Table 2-3**, **Table 2-4** and **Table 2-5**. The total ADWF generated from the western sewerage catchment is 14,740m3/day whereas the ADWF generated in eastern catchment is 35269m3/day. The Sewage Flow Projection are appended in **Appendix A.**

Table 2-2 Revised Sewage Build-up of the WSPS for Population Increase of Tung Chung Phase 1 and 2 Areas under CASE 2 Scenario 2B

Area No. (Catchment)	Category	Population/Employee (Head)	Unit Flow Factor (m^3/h/day)	ADWF (m^3/day)
106A (D1-1)	Residential Population (R3)	1,303	0.37	482
106B (D1-2)	Residential Population (R3)	988	0.37	366
106C (D2-1)	Residential Population (R3)	1,372	0.37	508
110 (D2-2)	Residential Population (R3)	1,707	0.37	632
	Commercial (Retail)	330	0.28	92
109	Residential Population (RS)	4,113	0.19	781

Area No. (Catchment)	Category	Population/Employee (Head)	Unit Flow Factor (m^3/h/day)	ADWF (m^3/day)
(D2-3)	Commercial (Retail)	180	0.28	50
103 (D2-4)	Residential Population (RS)	6,322	0.19	1,201
	Commercial (Retail)	287	0.28	80
	Kindergarten (Student)	180	0.04	7
	Kindergarten (Employee)	20	0.28	6
	Community & Social Centres	33	0.28	9
99 (B1-1)	Residential Population (RS)	14,880	0.19	2,827
	Commercial (Retail)	288	0.28	81
	Kindergarten (Student)	180	0.04	7
	Kindergarten (Employee)	20	0.28	6
100 (B1-2)	Residential Population (RS)	16,120	0.19	3,063
	Commercial (Retail)	676	0.28	189
	Kindergarten (Student)	180	0.04	7
	Kindergarten (Employee)	20	0.28	6
	Community & Social Centres	128	0.28	36
57 (com - 1)	Commercial (Office)	4,122(1)	0.08	330
	Commercial (Retail)	1,767(1)	0.28	495
105 (D0-2)	Salt-water Pumping Station	10	0.33	3
59 (B0-3)	Electricity Substation	10	0.33	3
	Clinic	278	0.28	78
102 (D0-3, D0-4)	Sports Centre	300	0.28	84
	Primary School (Student)	1,530	0.04	61
	Primary School (employee)	109	0.28	31
	Sewage Flow for Assumed F&B Trade(2)	354	1.58	557
56				2,662
Total				**14,740**

Notes:

(1) Revised population due to increasing the retail proportion of Area 57 to 30%.
(2) Sewage flow for assumed F&B Trade refers to **Table 2.3**.

Table 2-3 Revised Sewage F&B Trade Build-up of the WSPS for Population Increase of Tung Chung Phase 1 and 2 Areas under CASE 2 Scenario 2B

Area No. (Catchment)	Population of possible F&B trade(1) (head)	Unit flow factor (2) (m^3/head/day)	ADWF (m^3/day)
110 (D2-2)	33	1.58	52.1
109 (D2-3)	18	1.58	28.4
103 (D2-4)	28.7	1.58	45.3
99 (B1-1)	28.8	1.58	45.5
100 (B1-2)	67.6	1.58	106.8
57 (com-1-Retail)	176.7	1.58	279.2
Total	**354**		**557.3**

Notes:

(1) Population of possible F&B trade in TCE is assumed to be 10% of retail employee.

Table 2-4 Revised Sewage Build-up of the ESPS for Population Increase of Tung Chung Phase 3 and 4 Areas under CASE 2 Scenario 2B

Area No. (Catchment)	Category	Population/Employee (Head)	Unit Flow Factor (m^3/h/day)	ADWF (m^3/day)
113 (A1-1)	Comprehensive Development Area	9,339	0.28	2,615
	Metro Core Area (Office)	2,350	0.08	188
	Metro Core Area (Retail)	2,526	0.28	707
	Kindergarten (Student)	180	0.04	7
	Kindergarten (Teacher)	20	0.28	6
113 (A1-2)	Comprehensive Development Area	8,966	0.28	2,510
	Metro Core Area (Office)	3,150	0.08	252
	Metro Core Area (Retail)	1,531	0.28	429
	Kindergarten (Student)	180	0.04	7
	Kindergarten (Teacher)	20	0.28	6
114 (A2-1)	Special Residential (RS)	7,886	0.19	1,498
	Commercial	285	0.28	80
	Kindergarten (Student)	180	0.04	7
	Kindergarten (Teacher)	20	0.28	6
	Welfare Facilities	183(1)	0.28	51
115 (A2-2)	Residential Population (R1)	3,525	0.19	670
116 (A2-3)	Residential Population (R1)	3,525	0.19	670
117 (A2-4)	Special Residential (RS)	8,293	0.19	1,576
	Commercial	301	0.28	84
	Kindergarten (Student)	180	0.04	7
	Kindergarten (Teacher)	20	0.28	6
	Welfare Facilities	192(1)	0.28	54
133 (C1-1)	Special Residential (RS)	20,860	0.19	3,963
	Commercial	1,017	0.28	285
	Kindergarten (Student)	180	0.04	7
	Kindergarten (Teacher)	20	0.28	6
	Community & Social Centres	235	0.28	66
	Welfare Facilities	490(1)	0.28	137
133 (C2-1)	Special Residential (RS)	8,999	0.19	1,710
	Commercial	372	0.28	104
	Welfare Facilities	214(1)	0.28	60
133 (C2-2)	Special Residential (RS)	7,868	0.19	1,495
	Commercial	362	0.28	101
	Welfare Facilities	209(1)	0.28	59
119 (E1-1)	Special Residential (RS)	5,145	0.19	978
	Commercial	287	0.28	80
	Community & Social Centres	120	0.28	34
	Welfare Facilities	142(1)	0.28	40
121 (E1-2)	Residential Population (R2)	1,015	0.27	274
	Commercial	92	0.28	26
123 (E1-3)	Residential Population (R2)	1,015	0.27	274
	Commercial	92	0.28	26
125 (E1-4)	Residential Population (R3)	691	0.37	256
	Commercial	140	0.28	39
122 (E1-5)	Special Residential (RS)	5,097	0.19	968

Area No. (Catchment)	Category	Population/Employee (Head)	Unit Flow Factor (m^3/h/day)	ADWF (m^3/day)
	Commercial	253	0.28	71
	Kindergarten (Student)	180	0.04	7
	Kindergarten (Teacher)	20	0.28	6
	Community & Social Centres	70	0.28	20
	Welfare Facilities	140(1)	0.28	39
126 (E3-1)	Residential Population (R3)	1,045	0.37	387
	Commercial	152	0.28	43
127 (E3-2)	Residential Population (R3)	803	0.37	297
	Commercial	181	0.28	51
139 (F1-1)	Residential Population (R3)	1,326	0.37	491
	Commercial	237	0.28	66
	Kindergarten (Student)	180	0.04	7
	Kindergarten (Teacher)	20	0.28	6
141 (F1-2)	Residential Population (R3)	1,328	0.37	491
142 (F2-1)	Residential Population (R3)	877	0.37	324
	Commercial	146	0.28	41
	Kindergarten (Student)	180	0.04	7
	Kindergarten (Teacher)	20	0.28	6
141 (F2-2)	Residential Population (R3)	1,319	0.37	488
129 (Com-2)	Com-2 (Office)	7,250	0.08	580
	Com-2 (Retail)	736	0.28	206
130 (Com-3)	Com-3 (Office)	6,900	0.08	552
	Com-3 (Retail)	739	0.28	207
128 (Com-4)	Com-4 (Hotel)	2,429	1.58	3,838
143 (Com-5)	Com-5 (Yacht Club+Commercial)	2,096	0.28	587
140 (F0-1)	Sports Centre	317	0.28	89
131 (G0-2)	Police Station	233	0.28	65
135 (C0-1)	Other School Use (Student)	1,200	0.04	48
	Other School Use (Teacher)	104	0.28	29
134 (C0-2)	Police Married Quarters	1,152	0.27	311
137 (C0-3)	Post Secondary Institution (Student)	4,000	0.04	160
	Post Secondary Institution (Employee)	345	0.28	97
138 (G0-1)	Sports Ground	15	0.28	4
	Sports Ground	2,500 (6)	0.025 (6)	63
136 (G0-3)	Fire Station	148	0.28	41
124 (E0-4)	Undesignated GIC	348	0.28	97
120 (E0-1)	Secondary School (Student)	1,200	0.04	48
	Secondary School (Teacher)	98	0.28	27
120 (E0-2)	Primary School (Student)	765	0.04	31
	Primary School (Teacher)	54	0.28	15

Area No. (Catchment)	Category	Population/Employee (Head)	Unit Flow Factor (m^3/h/day)	ADWF (m^3/day)
120 (E0-3)	Primary School (Student)	765	0.04	31
	Primary School (Teacher)	54	0.28	15
140 (F0-4)	Secondary School (Student)	1,200	0.04	48
	Secondary School (Teacher)	98	0.28	27
140 (F0-2)	Primary School (Student)	765	0.04	31
	Primary School (Teacher)	54	0.28	15
140 (F0-3)	Primary School (Student)	765	0.04	31
	Primary School (Teacher)	54	0.28	15
MTR TCE Station				1,023(2)
147	Cycle Park	50(3)	0.28	14
Tai Ho Villages (i.e. Tai Ho San Tsuen, Ngau Kwu Long Tsuen, Pak Mong Tsuen)	Residential Population	696	0.27	188(4)
Sewage F&B Trade		945	1.58	1,493(5)
Total				**35,298**

Notes:

(1) Revised population under Case 2 Scenario 2B comparing with Case 2 Scenario 2A. Assumptions: 30m^2 per bed and 3 employees per bed

(2) According to information provided by MTR, peak flow of TCE MTR station is 1,944m^3/day, which is estimated based on no. of fitment. Peaking factor (excluding stormwater) for East SPS is assumed for calculation of the ADWF of TCE MTR station, i.e. 1.9. So, the ADWF of MTR TCE station can be estimate by following formula:

ADWF of TCE station = Peak flow / Peaking Factor= 1944 / 1.9=1,023 m^3/day

(3) LCSD proposed 50 seats for the spectator standing of the Cycle Park in Area 147, including shower facilities and toilet.

(4) The estimated ADWF is based on number of village houses (approximately 116 houses) and subject to further review. Details refer to Appendix K.

(5) For Sewage F&B Trade, **Table 2.5** refers.

(6) Estimated by HAB in 2015, based on the employment figures of Tseung Kwan O Sports Ground. According to 2015 employment figures of Tseung Kwan O Sports Ground with 5,000 spectators, the permanent employees are 30. The UFF is estimated by making reference to the deviation under Section 7.4 of the EIA report of Kai Tak Multi-purpose Sports Complex.

Table 2.5 Revised Sewage F&B Trade Build-up of the ESPS for Population Increase of Tung Chung Phase 3 and 4 Areas under CASE 2 Scenario 2B

Area No. (Catchment)	Category	Population/Employee (Head)	Population of possible F&B trade(1)	Unit flow factor (2) (m^3/h/d)	ADWF (m^3/day)
114 (A2-1)	Commercial	285	28.5	1.58	45.0
117 (A2-4)	Commercial	301	30.1	1.58	47.6
133 (C1-1)	Commercial	1,017	101.7	1.58	160.7
133 (C2-1)	Commercial	372	37.2	1.58	58.8
133 (C2-2)	Commercial	362	36.2	1.58	57.2
119 (E1-1)	Commercial	287	28.7	1.58	45.3
121 (E1-2)	Commercial	92	9.2	1.58	14.5
123 (E1-3)	Commercial	92	9.2	1.58	14.5
125 (E1-4)	Commercial	140	14.0	1.58	22.1
122 (E1-5)	Commercial	253	25.3	1.58	40.0
126 (E3-1)	Commercial	152	15.2	1.58	24.2
127 (E3-2)	Commercial	181	18.1	1.58	28.6
139 (F1-1)	Commercial	237	23.7	1.58	37.4
142 (F2-1)	Commercial	146	14.6	1.58	23.1
113 (A1-1)	Metro Core Area (Retail)	2,526	252.6	1.58	399.1
133 (A1-2)	Metro Core Area (Retail)	1,531	153.1	1.58	241.9
129 (com-2)	COM-2 (Retail)	736	73.6	1.58	116.3
130 (com-3)	COM-3 (Retail)	739	73.9	1.58	116.8
Total		**9,449**	**944.9**		**1,493**

Notes:

(1) Population of possible F&B trade in TCE is assumed to be 10% of retail employee.

2.1.4 The review of sewage flow projection was conducted in the review phase of TCE D&C project. The population of TCE was updated based on the population planning information as advised in Section 2.1.2. **Table 4** below summarized the update ADWF for different phases in this project. The calculation details can refer to **Appendix A**.

Table 4 Average Dry Weather Flow (ADWF) Review

Flow for Area Served	Update ADWF under this Study (m^3/day)
Phase 1 and Phase 2 of TCE & Tung Chung Area 56	14,740
Phase 3 and Phase 4 of TCE	35,298
All new developments of TCE & Tung Chung Area 56	50,038

APPENDIX C

EPD Guidelines for Estimating Sewage Flows for Sewage Infrastructure Planning

Table T-1 Unit Flow Factor for Domestic Flows

Location	Unit	Datum (2002) (m^3/d)	Increase per Annum (m3/d)	Planning for Future (m^3/day)
Domestic (housing type specific)				
Public rental	Person	0.19	-	0.19
Private R1	Person	0.19	-	0.19
R2	Person	0.27	-	0.27
R3	Person	0.34	0.003	0.37
R4	Person	0.34	0.003	0.37
Traditional Village	Person	0.15	-	0.15
Modern Village	Person	0.27	-	0.27
Institutional and special class	Person	0.19	-	0.19
Temporary and non-domestic	Person	0.15	-	0.15
Mobile residents	Person	0.19	-	0.19
Domestic (catchment specific)				
General- Permanent housing (for catchment wide planning)				
- Sandy Bay	Person	0.32	0.003	0.35
- Stanley, Discovery Bay	Person	0.29	-	0.29
- Shek O	Person	0.28	0.007	0.35
- Outlying Islands, Sai Kung	Person	0.26	0.001	0.27
- Yuen Long, Mui Wo	Person	0.23	0.002	0.25
- Aberdeen, Wan Chai, North Lantau	Person	0.23	-	0.23
- Sha Tin, Tai Po	Person	0.21	-	0.22
- San Wai	Person	0.20	0.003	0.23
-Wah Fu, Shek Wu Hui	Person	0.20	0.001	0.21
- Northwest Kowloon, Tuen Mun, Central, North Point	Person	0.20	-	0.20
- Ap Lei Chau, Chai Wan, Shau Kei Wan, Central Kowloon, East Kowloon, Kwai Chung, Tsing Yi, Tseung Kwan O	Person	0.19	-	0.19
General – Other housing (catchment wide planning				
- All catchments	person	0.175	-	0.175

Notes of Table 1:

(1) For planning a new sewerage system, the planning unit flow factors should be used. Adequate allowance should be provided in the proposed sewerage system to ensure that the sewerage system will be adequate for the worst possible future development scenarios.

(2) Permanent housing comprises public rental housing, subsidized sales flats and private permanent housing (R1, R2, R3 and R4). Other housing consists of non-domestic, institutional & special classes, and temporary housing.

Table T-2 : Unit Flow Factors of Commercial Flows and Student Flows

Location	Unit	Planning For Future (m3/d)
Commercial employee	Employee	0.08
Commercial employee		
(a) Specific trades:	Employee	
J2 Electricity Gas & Water	Employee	0.250
J3 Transport, Storage & Communication	Employee	0.100
J4 Wholesale & Retail	Employee	0.200
J5 Import & Export	Employee	-
J6 Finance, Insurance, Real Estate & Business Services	Employee	-
J7 Agriculture & Fishing	Employee	-
J8 Mining & Quarrying	Employee	-
J9 Construction	Employee	0.150
J10 Restaurants & Hotels	Employee	1.500
J11 Community, Social & Personal Services	Employee	0.200
J12 Public Administration	Employee	-
(b) General –territorial average	Employee	0.200
School student	Person	0.040

Notes of Table T-2:

(1) For planning of a new sewerage system, the planning unit flow factors should be used and the worst possible combination of commercial flows for the future development scenarios should be considered to ensure that the sewerage system under planning will be sustainable.

(2) For job types J10 and J11, the “per-employee” unit flow factor takes into account the flows of customers and/or tenants.

(3) The total unit flow generated from an employee in a particular trade is the sum of the unit flow factor of employee and the unit flow factor of commercial activities of a particular trade under consideration.

Table T-3 : Unit Flow Factors for Industrial Flows

	Unit	Datum (2002) (m^3/day)	Increase per Annum (m^3/day)	Planning for Future (m^3/day)
Industrial employee	employee	0.080		0.080
Industrial activities J1 Manufacturing		See Note 1		See Note 1
- Territorial average	employee	0.560	-	0.560
- Hong Kong Island (except Aberdeen & Ap Lei Chau), San Po Kong(3)	employee	0.250	-	0.250
- North West Kowloon	employee	0.350	-	0.450
- East Kowloon (everall), Sha Tin, Lantau Island (except Mui Wo)	employee	0.450	-	0.450
- Cental Kowloon, North District, Aberdeen, Ap Lei Chau	employee	0.550	-	0.550
- Tsuen Wan, Kwai Chung	employee	0.650	-	0.650
- Tai Po	employee	0.750	-	0.750
- Tuen Mun, Tseung Kwan O, Yau Tong(3), Cheung Chau, Mui Wo	employee	1.000	-	1.000
- Tsing Yi	employee	1.500	-	1.500
- Sai Kung, Yuen Long	employee	2.000	-	2.000

Notes of Table T-3:

(1) Quantities of industrial discharges depend on the natures of individual industries. Local industrial discharges may vary significantly from one industrial premises to another and are best determined by updated flow survey data and water consumption records. The catchment-dependent unit flow factors for industrial flows in this table provide a means to estimate industrial flows for a catchment-wide sewerage facility, such as sewage treatment works and major sewage pumping stations. They may form a basis for refinement and adjustments when suitable latest survey results and water consumption data are available. They would be subject to periodic updates of EPD. As the actual per-employee unit flow factor of any local industrial area may vary significantly from these unit flow factors, caution must be taken in applying these factors direct to any local individual industrial premises.

(2) The total unit flow generated from an employee in a particular trade is the sum of the flows due to the employee and the unit flow factor for a particular trade under consideration.

(3) Yau Tong and San Po Kong are sub-catchments of the East Kowloon catchment. Figures are provided for reference for planning local sewage infrastructure.

Table T-4 : Catchment Inflow Factors, P_{CIF}

Catchment	Catchment Inflow Factor
Central, North Point, Sandy Bay, Wan Chai, Wah Fu, Stanley, Cental Kowloon, Yuen Long, San Wai, North District, Tai Po, North Lantau, Mui Wo	1.00
Chai Wan, Tuen Mun, Kwai Chung, Tsing Yi, East Kowloon	1.10
Sha Tin	1.15
Tseung Kwan O	1.20
Shau Kei Wan	1.25
Aberdeen, Ap Lei Chau, Sai Kung, North West Kowloon	1.30
Cheung Chau, Shek O	1.50

Notes of Table T-4:

(1) Catchment inflow factors will be updated regularly by EPD.

(2) For calculating the total peak flow from a new development area within a catchment of high inflow factors, the catchment inflow factor may not be applicable to the new development. However, it will be applicable in assessing the downstream existing sewerage facilities.

Table T-5 : Peaking Factors, P

Population Range	Peaking Factor (including stormwater allowance) for facility with existing upstream sewerage	Peaking Factor (excluding stormwater allowance) for facility with new upstream sewerage
(a) For sewers		
<1,000	8	6
1,000 – 5,000	6	5
5,000 – 10,000	5	4
10,000 – 50,000	4	3
>50,000	$\text{Max}\left(\frac{7.3}{N^{0.15}}, 2.4\right)$	$\text{Max}\left(\frac{6}{N^{0.175}}, 1.6\right)$
(b) Sewage Treatment Works, Preliminary Treatment Works and Pumping Stations		
<10,000	4	3
10,000 – 25,000	3.5	2.5
25,000 – 50,000	3	2
>50,000	$\text{Max}\left(\frac{3.9}{N^{0.065}}, 2.4\right)$	$\text{Max}\left(\frac{2.6}{N^{0.065}}, 1.6\right)$

Notes of Table T-5:

(1) N is the contributing population in thousands.

APPENDIX D

Sewage Flow Estimation

Sewage Estimation based on Development Parameters adopted in HD latest Design Scheme

(1) Public Housing Development in TC Area 133A

(a) Domestic Flow

Residential Population	=	18,406	ppl	(With design buffer adopted)
Unit Flow factor for Residential Population	=	0.19		
Sewerage flow for Residential Population	=	3497	m^3 / day	

(b) Commerical Flow

GFA for commercial activity	=	4400	m^2	
Worker density	=	1 job / 20 sqm		(Ref. in CEDD Report)
No. of employee	=	220	employee	
Unit Flow factor for Commercial Flow	=	0.28		(Ref. in CEDD Report & EPD Guideline)
ADWF for Commercial Flow	=	62	m^3 / day	

(c) Public Market Flow (Non F&B Trade)

GFA for Public Market	=	13000	m^2	
GFA for Public Market (Non F&B Trade)	=	10400		(Assumed 80% of Public Market GFA are non F&B trade)
Worker density	=	1 job / 15 sqm		
No. of employee	=	693	employee	
Unit Flow factor for Commercial Flow	=	0.28		(Ref. in CEDD Report & EPD Guideline)
ADWF for Commercial Flow	=	194	m^3 / day	

(d) Public Market Flow (F&B Trade)

GFA for Public Market (F&B Trade)	=	2600		(Assumed 20% of Public Market GFA are non F&B trade)
Worker density	=	1 job / 15 sqm		
No. of employee	=	173	employee	
Unit Flow factor for Commercial Flow	=	1.58		
ADWF for Commercial Flow	=	273	m^3 / day	

(e) Kindergarten Flow

GFA for Kindergarten	=	1610	m^2	
Student density	=	180 student / 642m^2 GFA		(Ref. in CEDD Report & Section 2 of Chapter 3 of HKPSG)
No. of student	=	452	student	
Unit Flow factor for School Student	=	0.04		(Ref. in CEDD Report & EPD Guideline)
ADWF for Kindergarten (Student)	=	18.08	m^3 / day	
Teacher density	=	1 teacher / 9 student		(Ref. in CEDD Report & Section 12.14 in "Hong Kong Annual Digest of Statistics (2016 Edition)
No. of teacher	=	51	teacher	
Unit Flow factor for Teacher	=	0.28		(Ref. in CEDD Report)
ADWF for Kindergarten (Teacher)	=	14.28	m^3 / day	

(f) Management Office Flow

GFA for office	=	1310	m^2	(810 + 500)
No. of employee	=	50	employee	(Anticipated number from HKHA)
Unit Flow factor for Management Office Flow	=	0.28		(Ref. in CEDD Report & EPD Guideline)
ADWF for Management Office Flow	=	14	m^3 / day	

(g) Possible F&B trade Flow

GFA for Possible F&B trade	=	4400	m^2	(Anticipated 40% of retail GFA from HKHA)
Worker density	=	1 job / 20 sqm		
No. of employee	=	220	employee	
Unit Flow factor for Possible F&B trade Flow	=	1.58		
ADWF for Possible F&B trade Flow	=	348	m^3 / day	

(2) Public Housing Development in TC Area 133B

(a) Domestic Flow

Residential Population	=	8382	ppl	(With 10% design buffer adopted)
Unit Flow factor for Residential Population	=	0.19		
Sewerage flow for Residential Population	=	1593	m^3 / day	

(b) Kindergarten Flow

GFA for Kindergarten	=	830	m^2	
Student density	=	180 student / 642m^2 GFA		(Ref. in CEDD Report & Section 2 of Chapter 3 of HKPSG)
No. of student	=	233	student	
Unit Flow factor for School Student	=	0.04		(Ref. in CEDD Report & EPD Guideline)
ADWF for Kindergarten (Student)	=	9.32	m^3 / day	
Teacher density	=	1 teacher / 9 student		(Ref. in CEDD Report & Section 12.14 in "Hong Kong Annual Digest of Statistics (2016 Edition)
No. of teacher	=	26	teacher	
Unit Flow factor for Teacher	=	0.28		(Ref. in CEDD Report)
ADWF for Kindergarten (Teachert)	=	7.28	m^3 / day	

(c) Management Office Flow

GFA for office	=	230	m^2	
No. of employee	=	25	employee	(Anticipated number from HKHA)
Unit Flow factor for Management Office Flow	=	0.28		(Ref. in CEDD Report & EPD Guideline)
ADWF for Management Office Flow	=	7	m^3 / day	

(d) Welfare Flow

GFA for welfare facilities	=	5880	m^2	
Population density	=	3.3 employees per 100m^2 GFA		(Ref. to PlanD's "Commercial and Industrial Floor Space Utilization Survey")
No. of employee	=	194	employee	
Unit Flow factor for Welfare Flow	=	0.28		(Ref. in CEDD Report & EPD Guideline)
ADWF for Commercial Flow	=	54	m^3 / day	

The proposed facilities are requested by Social Welfare Department(SWD) and subject to SWD's confirmation on funding availability and detailed design. The planned Welfare facilities in TCA 133B to be developed includes:
- 1 no. of **50-p Care and Attention Home for Severely Disabled Persons (RESIDENTIAL)**
- 1 no. of **50-p Hostel for Moderately Mentally Handicapped Persons (RESIDENTIAL)**
- 1 no. of **30-p Supported Hostel for Mentally/Physically Handicapped Persons (RESIDENTIAL)**
- 1 no. of 80-p Integrated Vocational Rehabilitation Services Centre
- 1 no. of 50-p Day Activity Centre
- 1 no. of **50-p Hostel for Severely Mentally Handicapped Persons (RESIDENTIAL)**

Welfare Flow due to residential nature

Residential Population	=	180	ppl	(50+50+30+50)
Unit Flow factor for Residential Population	=	0.19		
Sewerage flow for Residential Population	=	34	m^3 / day	

(3) Public Housing Development in TC Area 133C

(a) Domestic Flow

Residential Population	=	7984	ppl	(With 15% design buffer adopted)
Unit Flow factor for Residential Population	=	0.19		
Sewerage flow for Residential Population	=	1517	m^3 / day	

(b) Kindergarten Flow

GFA for Kindergarten	=	850	m^2	
Student density	=	180 student / 642m^2 GFA		(Ref. in CEDD Report & Section 2 of Chapter 3 of HKPSG)
No. of student	=	239	student	
Unit Flow factor for School Student	=	0.04		(Ref. in CEDD Report & EPD Guideline)
ADWF for Kindergarten (Student)	=	9.56	m^3 / day	
Teacher density	=	1 teacher / 9 student		(Ref. in CEDD Report & Section 12.14 in "Hong Kong Annual Digest of Statistics (2016 Edition)
No. of teacher	=	27	teacher	
Unit Flow factor for Teacher	=	0.28		(Ref. in CEDD Report)
ADWF for Kindergarten (Teachert)	=	7.56	m^3 / day	

(c) Management Office Flow

GFA for office	=	250	m^2	
No. of employee	=	25	employee	(Anticipated number from HKHA)
Unit Flow factor for Management Office Flow	=	0.28		(Ref. in CEDD Report & EPD Guideline)
ADWF for Management Office Flow	=	7	m^3 / day	

(d) Welfare Flow

GFA for welfare facilities	=	5500	m^2	
Population density	=	3.3 employees per 100m^2 GFA		(Ref. to PlanD's "Commercial and Industrial Floor Space Utilization Survey")
No. of employee	=	182	employee	
Unit Flow factor for Welfare Flow	=	0.28		(Ref. in CEDD Report & EPD Guideline)
ADWF for Commercial Flow	=	51	m^3 / day	

The proposed facilities are requested by Social Welfare Department(SWD) and subject to SWD's confirmation on funding availability and detailed design. The planned Welfare facilities in TCA 133C to be developed includes:
- 1 no. of 100-p Child Care Centre
- 1 no. of **100-p Residential Care Home for the Elderly (RCHE) (RESIDENTIAL)** cum 30-p Day Care Unit for the Elderly
- 1no. of One team of Home Care Services (HCS) for Frail Elderly Persons (3-team size non-kitchen based)
- 1 no. of 80-p Day Care Centre for the Elderly (DE)

Welfare Flow due to residential nature

Residential Population	=	100	ppl	
Unit Flow factor for Residential Population	=	0.19		
Sewerage flow for Residential Population	=	19	m^3 / day	

Appendix 6

Technical Assessments – Part 4

Water Works Impact Assessment
(for Tung Chung Areas 133A, 133B and 133C)

Hong Kong Housing Authority

Agreement No. CB20210451
HKHA Term Engineering Consultancy Services 2021-2023
For Kowloon Central & West and Islands Region

Proposed Public Housing Development at Tung Chung Areas 133A, 133B & 133C

Water Works Impact Assessment (Final)



Document No. T1024/C005
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MANNINGS
(Asia) Consultants Limited

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Appendix E – **Estimation of Water Demand of the Subject Sites**

Executive Summary

To meet the public housing target, the Hong Kong Housing Authority (HKHA) was invited "to study the potential increase of housing provision in Tung Chung East". Tung Chung Area 133A, 133B & 133C (hereinafter refer as "the Subject Sites") at Tung Chung East is the three being explored.

The potential populations of the subject sites are about 16,469 (Area 133A), 7,620 (Area 133B) and 6,942 (Area 133C) respectively. Tentatively, the subject sites are targeted to complete the potential development in 2029/2030.

The water demands of both the existing and potential development were estimated with reference to the Departmental Instruction (DI) No. 1309 published by Water Supplies Department (WSD) and AECOM report "Fresh and Salt Water Supply Review for Population Increase and Development Intensity – CASE 2 Scenario 2B (Final)" (Ref. PI21-02) with permission of use by HKHA.

The results showed that the fresh water demand (-3.85%) and flush water demand (-0.82% of the Subject Sites is well within the original design. The newly estimated Mean Daily Demand (MDD) for Fresh Water Services (i.e. 62,016 m^3) and Salt Water Services (i.e. 45,117 m^3) will not exceed the current proposed capacity of Siu Ho Wan Fresh Water Service Reservoir (i.e. 64,600 m^3) and Tung Chung Salt Water Service Reservoir (i.e. 11,500 m^3) which can be catered a factor of additional 25% of MDD as safety margin in the design assumption. Thus no insurmountable technical problem shall be induced form the capacity of the planned water services facilities.

1.0 Introduction

1.1.1 Civil Engineering and Development Department (CEDD) is carrying out reclamation and infrastructure works for the development of Tung Chung New Town Extension (TCNTE) - East. In response to the policy on site optimisation and intensification, CEDD has carried out studies to assess the potential increase of housing provision in Tung Chung East. Tung Chung Areas 133A, 133B & 133C (hereinafter refer as "the Subject Sites") at Tung Chung East are the three being explored (See Appendix A). Tentatively, the proposed public housing developments at the Subject Sites are targeted to complete in 2029/2030.

1.1.2 Mannings (Asia) Consultants Ltd has been commissioned by the Hong Kong Housing Authority (HKHA) under the Agreement No. CB20210451 HKHA Term Engineering Consultancy Services 2021-2023 to undertake the Water Works Impact Assessment (WWIA) (hereinafter refer as "the Subject Study") to support the s.16 planning application for the proposed public housing development at the Subject Sites.

2.0 Background

2.1.1 The proposed scheme at Tung Chung Area 133A adopts a maximum domestic Plot Ratio (PR) of 6.5 plus non-domestic PR of 0.5 and maximum overall GFA not exceeding 293,300 m^2, providing about 6,817 flats with a design population of about 16,469. The proposed scheme at Tung Chung Area 133B adopts a maximum domestic PR of 6.5, plus non-domestic PR of 0.3 and a maximum overall GFA not exceeding 123,080 m^2, providing about 2,448 flats with a design population of about 7,620. The proposed scheme at Tung Chung Area 133C adopts a maximum domestic PR of 6.5, plus non-domestic PR of 0.2 and a maximum overall GFA not exceeding 123,950 m^2, providing about 2,571 flats with a design population of about 6,942.

3.0 Study Objective

3.1.1 The objective of the study is:

- To assess the fresh and flushing water demands of the Subject Sites

3.1.2 The major tasks to achieve these objectives include:

- Acquire background information and predict water demands in the Subject Sites;
- Assess the impacts of the potential development's water demands on the original design

4.0 Data Collection

4.1.1 Data used for this assessment were based on the HKHA information, Water Supplied Department (WSD) Departmental Instruction No. 1309 and the AECOM report "Fresh and Salt Water Supply Review for Population Increase and

Development Intensity – CASE 2 Scenario 2B (Final)" (Ref. PI21-02) with permission of use by CEDD.

5.0 Tung Chung Area 133A, 133B & 133C

5.1.1 The Subject Sites, with a site layout plan shown in **Appendix A**, will include domestic blocks, non-domestic facilities including retail and social welfare block. A summary of the development parameters of the Subject Sites in the assessment were presented in Table 5.1.

Table 5.1 – Development Parameters of the Subject Sites

	Tung Chung Area 133A	Tung Chung Area 133B	Tung Chung Area 133C
Target Population Intake	2029/30		
Flat type	PRH*	PRH* / GSH*	SSF*
No. of Flats	6,817	2,448	2,571
Population	16,469	7,620	6,942
Population (With design buffer adopted in the technical assessments for studying purpose)	18,406	8,382	7,984
Non-domestic Facilities			
Retail	8,800 m^2 GFA	Nil	Nil
Kindergarten	1,610 m^2 GFA	830 m^2 GFA	850 m^2 GFA
Public Market (by FEHD)	13,000 m^2 GFA	Nil	Nil
District Tenancy Management Office (DTMO)	810 m^2 GFA	Nil	Nil
Estate Management Office (EMO)	500 m^2 GFA	230 m^2 GFA	Nil
Management Office (MO)	Nil	Nil	250 m^2 GFA
Welfare Facilities			
Welfare	Nil	5,880 m^2 GFA	5,500 m^2 GFA

* PRH means Public Rental Housing; GSH means Green Form Subsidised Home Ownership Scheme; and SSF means Subsidised Sale Flats.

6.0 Existing and Proposed Fresh and Salt Water Supply System

6.1 Existing Fresh Water Supply Condition

6.1.1 No fresh water was supplied to the Subject Sites. A record plan of existing fresh water mains is appended in Appendix B.

6.2 Existing Flushing Water Supply Condition

6.2.1 The flushing water system of the Subject Sites was supplied by salt water.

6.2.2 No salt water was supplied to the Subject Sites. A record plan of existing flushing water mains is appended in **Appendix C**.

6.3 Proposed Fresh Water Supply

6.3.1 It is anticipated that the location of the fresh water connection point for the Subject Sites would be placed outside the boundary of the Subject Sites. The proposed fresh water connection point shall be aligned with the connection points at detail design stage.

6.4 Proposed Flushing Water Supply

6.4.1 It is anticipated that the location of the flushing water connection point for the Subject Sites would be placed outside the boundary of the Subject Sites. The proposed salt water connection point shall be aligned with the connection points at detail design stage.

7.0 Assessment Methodology

7.1 Assumptions

7.1.1 The unit demands of the residential population and the services trade are based on the Water Supplies Department (WSD) Departmental Instruction (DI) No. 1309.

7.1.2 The assumptions on flat occupancy were based on Table 9 in Chapter 2 of Hong Kong Planning Standard and Guidelines (HKPSG) published by Planning Department.

7.1.3 The actual demand is subject to the planning on the Assignment. The scheme adopted in the scheme is preliminary and the layout will be updated subject to the scheme evaluation and liaison with relevant departments.

7.2 Unit Demand

7.2.1 In accordance with WSD's DI No. 1309 and other reference, the following unit demand factors are adopted in this assessment and summarized in Table 7.1:

Table 7.1 – Unit Demand Rates for the Potential development

Population or Employment Type	Unit Portable Water Demand (l/h/d)	Unit Flushing Water Demand (l/h/d)
Residential	140	70
Service Trades	40	--
Non-residential	40	20(1)
Welfare Facilities	230	70

Note:
(1) The unit flushing water demand is referred to that of Categories – General Government/Institution/Community (GIC) and Office in Annex B2 of AECOM report "Fresh and Salt Water Supply Review for Population Increase and Development Intensity – CASE 2 Scenario 2B (Final)" (Ref. PI21-02)

7.3 Required Water Demands for Fresh and Salt Water

7.3.1 This assessment will be evaluated based on the estimated fresh and salt water demands of the Subject Sites. The estimated values are then added to the required fresh and salt water demands without the Subject Sites. According to Annex B2 of AECOM report "Fresh and Salt Water Supply Review for Population Increase and Development Intensity – CASE 2 Scenario 2B (Final)" (Ref. PI21-02) (See Appendix D1), the fresh and salt water demands of Tung Chung East and West Developments (including that of the Subject Sites) are 64,498 m3 and 45,491 m3 respectively. Table 7.2 provides demand estimates of the development without the Subject Sites.

7.3.2 The demand estimates from Table 7.2 will be used to summate the estimated fresh and salt water demand based on development parameters summarized in Table 5.1 to assess the adequacies of the fresh and salt water service reservoirs.

Table 7.2 – Demand Estimates of Tung Chung East and West Developments without the Subject Sites

	Population (Head) (From AECOM report)	GFA (m^2) (From AECOM report)	Fresh Water Unit Demand (l/h/d)	Fresh Water Demand (m^3/day)	Salt Water Unit Demand (l/h/d)	Salt Water Demand (m^3/day)
Original				**64,498**		**45,491**
Deduction						
Residential						
Area 133A	20,860	--	140	2,921	70	1,460
Area 133B	7,868	--	140	1,102	70	551
Area 133C	8,999	--	140	1,260	70	630
Sub-total	**37,727**			**5,283**		**2,642**
Service Trades(1)	37,727	--	40	1,510	--	--
Non-residential(2)		17,652	40	48	20	24
Welfare Facilities(2)		50,040	230	768	70	234
Total (Nearest integral)				**56,889**		**42,591**

Note:

(1) According to Table 2 of WSD Departmental Instruction No. 1309, an allowance should be added for service trades use. A 40l/h/d is used for service trades for the Subject Sites located in Tung Chung, Islands.

(2) For non-domestic and welfare facilities, assume 15 m^2 per employee/user.

8.0 Assessment

8.1 Supply Zone

8.1.1 The Subject Sites are fallen within the Supply Zone of Tung Chung Fresh Water Service Reservoir and Tung Chung Salt Water Service Reservoir (See **Appendices B** and **C**). According to the report from AECOM (Ref. PI21-02), the existing Tung Chung Fresh Water Reservoir is not able to cater for the fresh water demands in Tung Chung East West Developments. A newly-proposed fresh water service reservoir at Siu Ho Wan shall be constructed to serve the demand. For the flushing water supply, the existing Tung Chung Salt Water Service Reservoir shall be used to serve as the flushing water supply for these two new developments.

8.2 Proposed Water Demand

8.2.1 With reference to DI No. 1309, the estimate of fresh and flushing water demand for the proposed redevelopment is summarized in Table 8.1. The detailed breakdown is attached in **Appendix E**.

Table 8.1 – Summary for Fresh and Flushing Water Daily Demands for the Subject Sites

	Fresh Water Demand (m^3/d)			Flushing Water Demand (m^3/d)		
	Area 133A	Area 133B	Area 133C	Area 133A	Area 133B	Area 133C
Residential	2,577	1,174	1,118	1,289	587	559
Non-domestic uses	66	3	3	33	2	2
Welfare Facilities	Nil	91	85	Nil	28	26
Total	**2,643**	**1,268**	**1,206**	**1,322**	**617**	**587**

8.2.2 By summating the required water demands of the Tung Chung East Development within the Subject Sites, the total required water demands are summarized in Table 8.2.

Table 8.2 – Summary for Total Fresh and Flushing Water Daily Demands

	Fresh Water Demand (m^3/d)	Flushing Water Demand (m^3/d)
Existing demand (Without the Subject Sites)	**56,899**	**42,591**
Newly-estimated demand to be added		
Estimated Water demand (Area 133A)	2,643	1,322
Estimated Water demand (Area 133B)	1,268	617
Estimated Water demand (Area 133C)	1,206	587
Sub-total	**5,117**	**2,526**
Total	**62,016**	**45,117**

8.3 Checking of Distribution Mains and Service Reservoir

8.3.1 Given that no distribution mains are constructed around the Subject Sites yet, no checking on the distribution mains would be required.

8.3.2 A summary indicating the comparison between the total water demands of the original and the newly-estimated values is shown in Table 8.3 for easy reference.

Table 8.3 – Summary for Total Fresh and Flushing Water Daily Demands between original and newly-estimated values

	Fresh Water Demand (m^3/d)	Flushing Water Demand (m^3/d)
Original	64,498	45,491
Newly-estimated	62,016	45,117
Difference (Smaller/larger than the original value)	2,482 (Smaller)	374 (Smaller)
Overall demand	62,016	45,117
Overall percentage change (%)(1)	**-3.85%**	**-0.82%**

Note:
(1) Positive sign denotes increase, whereas negative sign denotes reduction.

8.3.3 For the service reservoir, a new Siu Ho Wan Fresh Water Service Reservoir is proposed to serve as fresh water supply of Tung Chung West and Tung Chung East Areas. Also, an existing Tung Chung Salt Water Service Reservoir is used to serve as flushing water supply of the above two areas. The newly estimated MDD for both Fresh Water and Salt Water services will not exceed the current proposed capacity of Siu Ho Wan Fresh Water Service Reservoir (i.e. 64,600 m3) and Tung Chung Salt Water Service Reservoir (i.e. 11,500 m3) and thus no insurmountable technical problem shall be induced from water supply perspective and the capacity of the planned salt water pumping station.

8.4 Assessment Result

8.4.1 The proposed fresh water demands for the Subject Sites are 2,643 m^3/d (Area 133A), 1,268 m^3/d (Area 133B) and 1,206 m^3/d (Area 133C) respectively.

8.4.2 The proposed flushing water demands for the Subject Sites are 1,322 m^3/d (Area 133A), 617 m^3/d (Area 133B) and 587 m^3/d (Area 133C) respectively.

8.5 Impact on Original Design

8.5.1 According to the results in Table 8.3, the overall demand of fresh water and salt water is changed by -3.85% and -0.82% respectively. For salt water supply, there is a factor of additional 25% of MDD as safety margin in the design assumption from Annex C2 of AECOM report “Fresh and Salt Water Supply Review for Population Increase and Development Intensity – CASE 2 Scenario 2B (Final) (Ref. PI21-02)” (See Appendix D2). The newly estimated MDD for both Fresh Water and Salt Water services will not exceed the current proposed capacity of

Siu Ho Wan Fresh Water Service Reservoir (64,600 m3) and Tung Chung Salt Water Service Reservoir (i.e. 11,500 m3) and thus no insurmountable technical problem shall be induced from the capacity of the planned water services facilities.

9.0 Summary & Conclusion

9.1.1 The main objective of this WWIA study is to evaluate the impact of the estimated fresh water and flush water demands of Tung Chung Area 133A, 133B and 133C to the newly-proposed Siu Ho Wan Fresh Water Service Reservoir and existing Tung Chung Salt Water Service Reservoir.

9.1.2 The proposed fresh water demands for the Subject Sites are 2,643 m3/d (Area 133A), 1,268 m3/d (Area 133B) and 1,206 m3/d (Area 133C) respectively. According to the capacity of the proposed Siu Ho Wan Fresh Water Service Reservoir (64,600 m3), the newly-estimated total water demand including that of the Subject Site (i.e. 62,016 m3) is decreased by 3.85% of than that of the original value (i.e. 64,498 m3). The total fresh water demand including that of the Subject Site is well within the original design and thus no insurmountable technical problem shall be induced from the capacity of the planned fresh water services facilities.

9.1.3 The proposed flushing water demands for the Subject Sites are 1,322 m3/d (Area 133A), 617 m3/d (Area 133B) and 587 m3/d (Area 133C) respectively. According to the proposed capacity of (46,000 m3), the newly-estimated total water demand including that of the Subject Site (i.e. 45,117 m3) is decreased by 0.82% of than that of the original value. The newly estimated MDD for Salt Water services is well within the current proposed capacity of and Tung Chung Salt Water Service Reservoir (i.e. 11,500 m3), with a factor of additional 25% of MDD as safety margin in the design assumption, and thus no insurmountable technical problem shall be induced from the capacity of the planned salt water pumping station.

9.1.4 It is proposed to serve the Subject Sites by using the connection points which are subject to the final design at detail design stage. No new fresh and salt distribution mains were proposed.

9.1.5 To monitor the water usage and carry out leakage detection, Automatic Meter Reading (AMR) system could be included in the detailed design of the buildings blocks. The standard and requirements shall comply with WSD's standards.

10.0 References

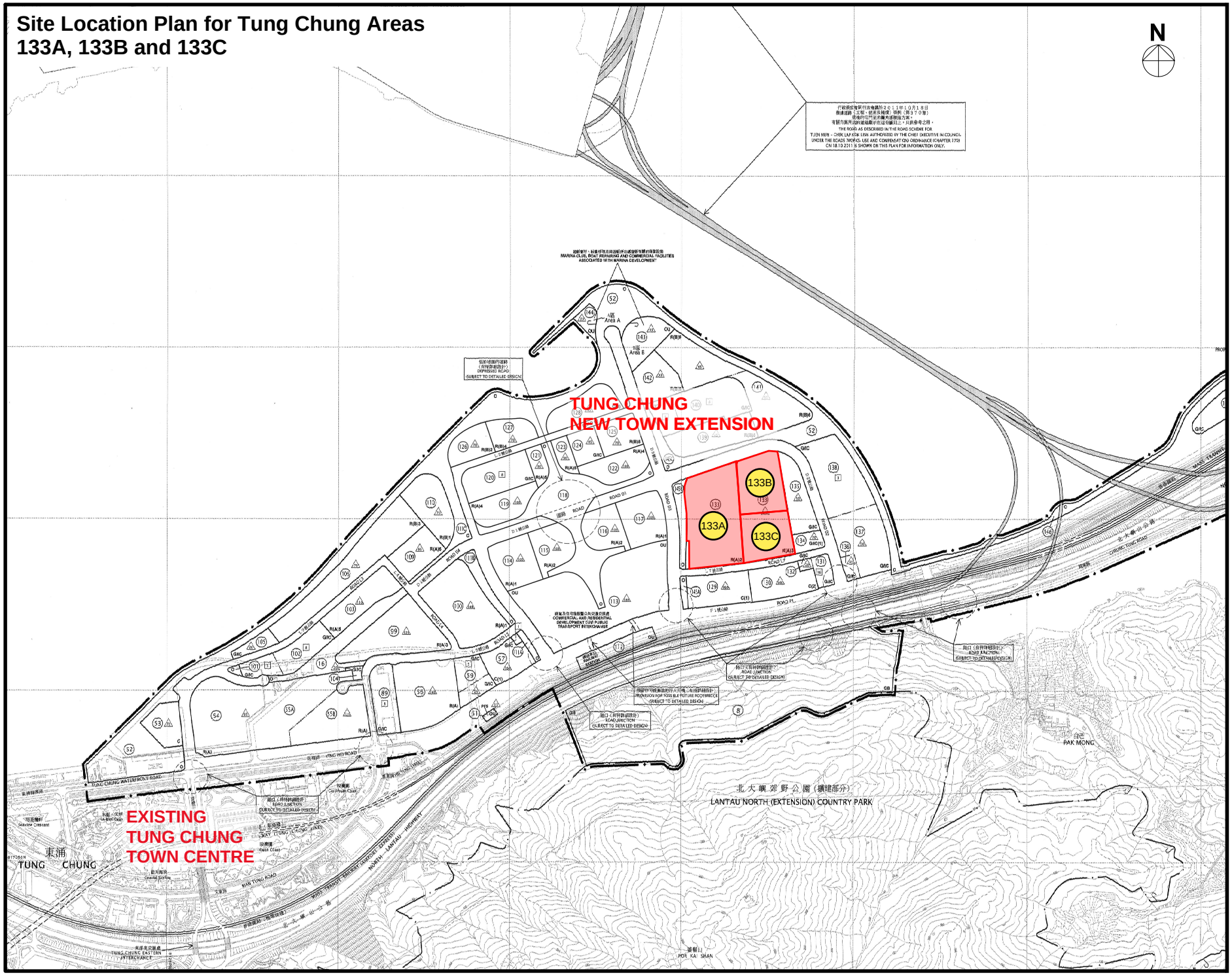
(1) Departmental Instruction No. 1309, Water Supplied Department, HKSAR

(2) Fresh and Salt Water Supply Review for Population Increase and Development Intensity – CASE 2 Scenario 2B (Final) (Ref. PI21-02), AECOM Asia Company Limited, HKSAR

APPENDIX A

SITE LAYOUT PLAN

Site Location Plan for Tung Chung Areas 133A, 133B and 133C



APPENDIX B

Water Mains Record (Fresh Water)

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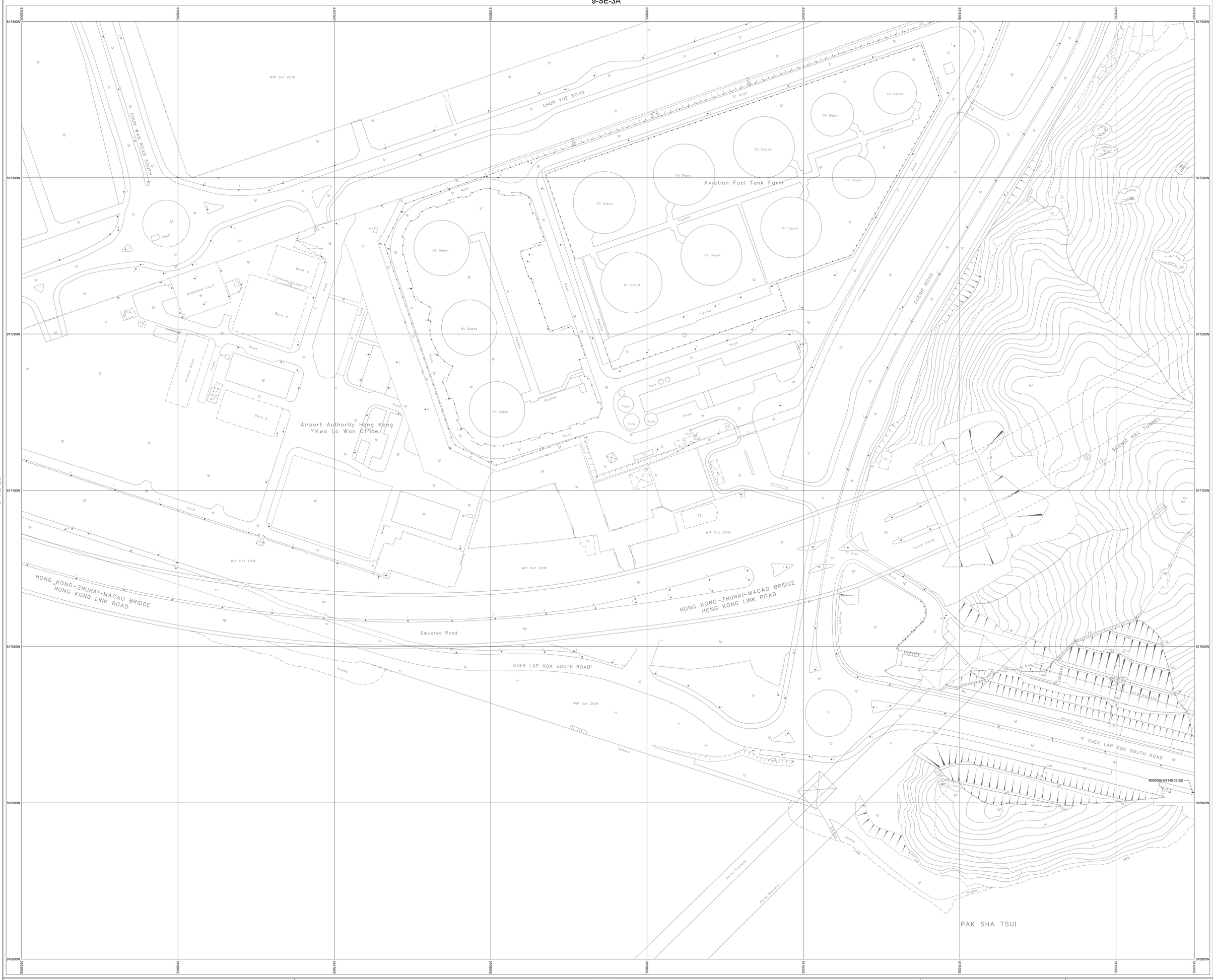
9-SE-2D

9-SE-3D

9-SE-8A



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SCALE 1:1 000

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CHUN YUE ROAD, CHEK LAP KOK

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INSET 'A'	INSET 'B'	INSET 'C'	INSET 'D'	INSET 'E'	INSET 'F'

9-SE-3B



9-SE-8B

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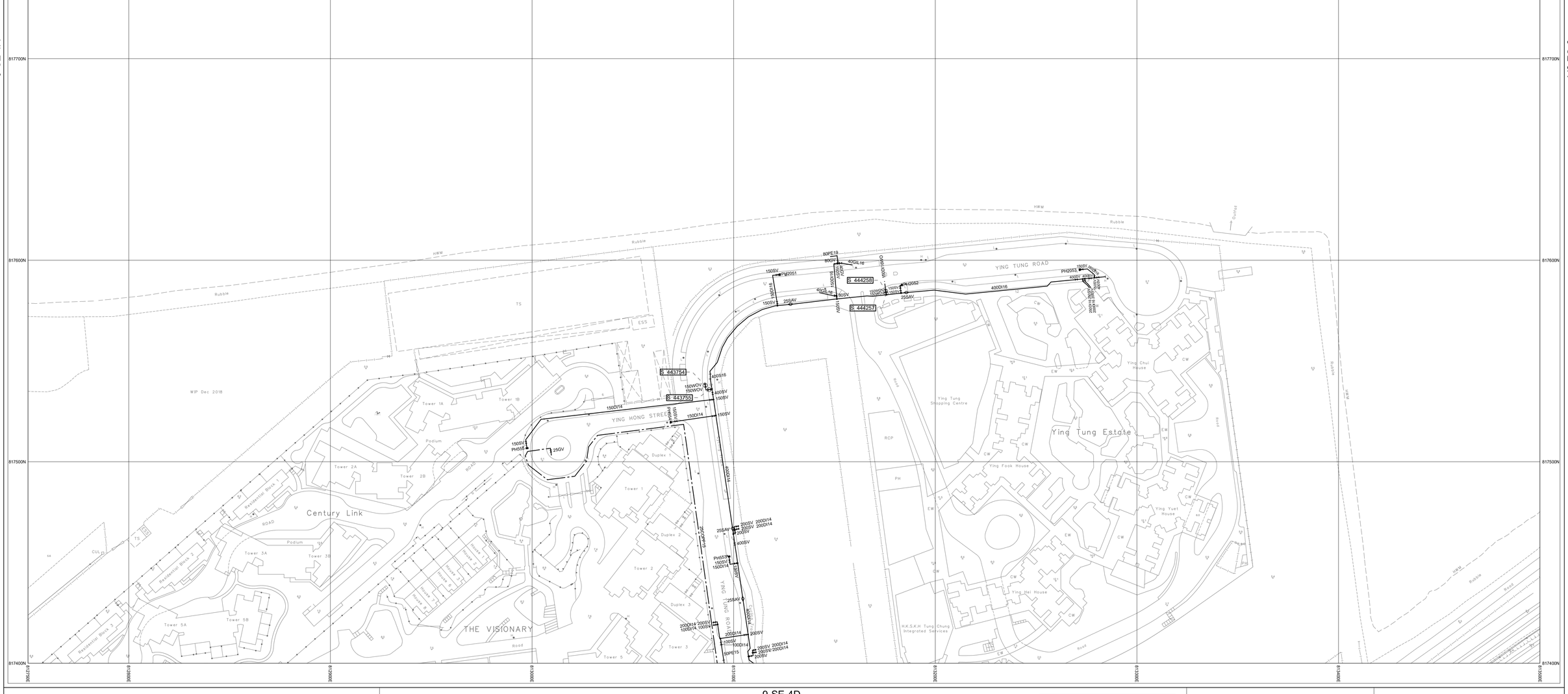
9-SE-4A

9-SE-5A

9-SE-4D



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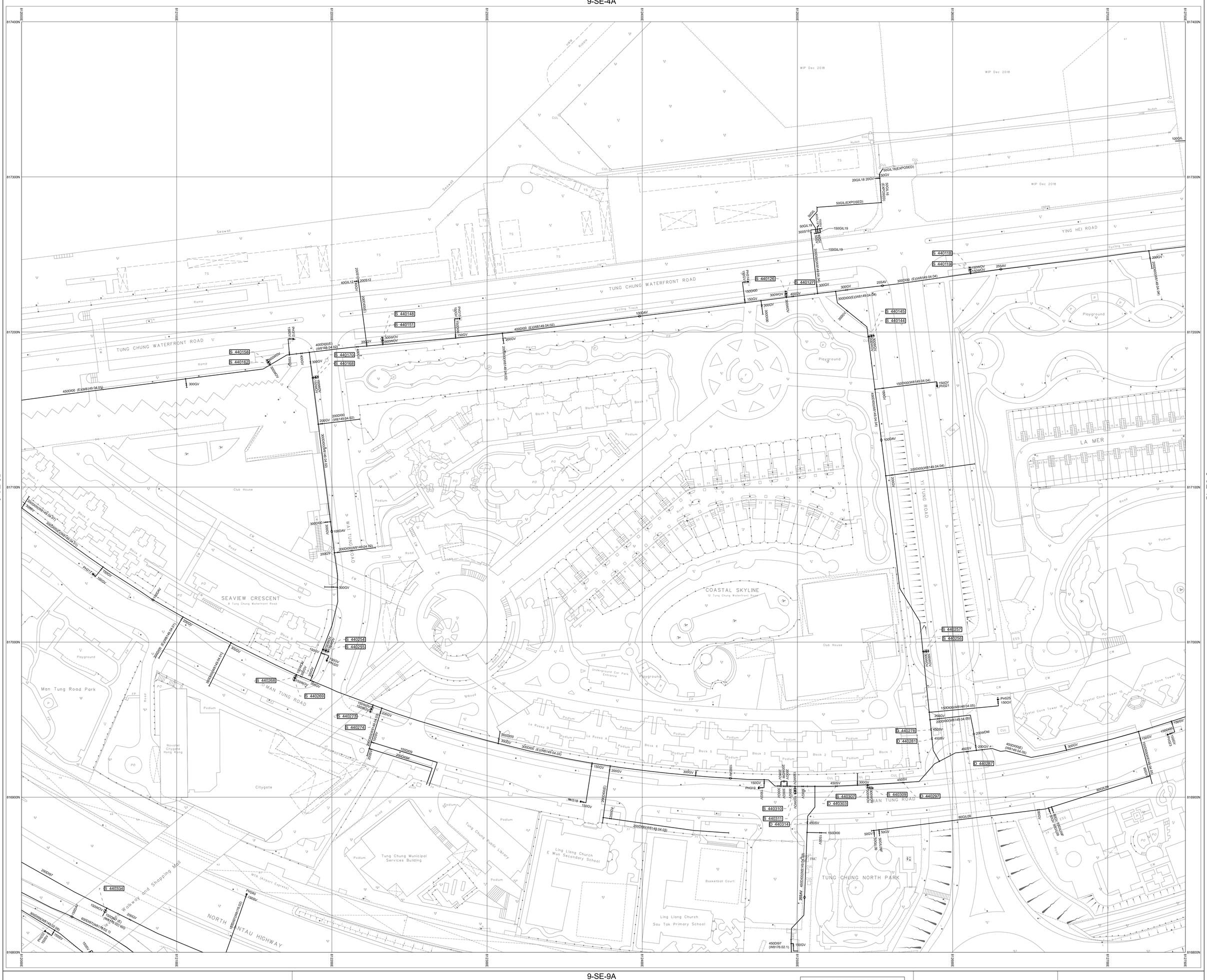

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9-SE-9B

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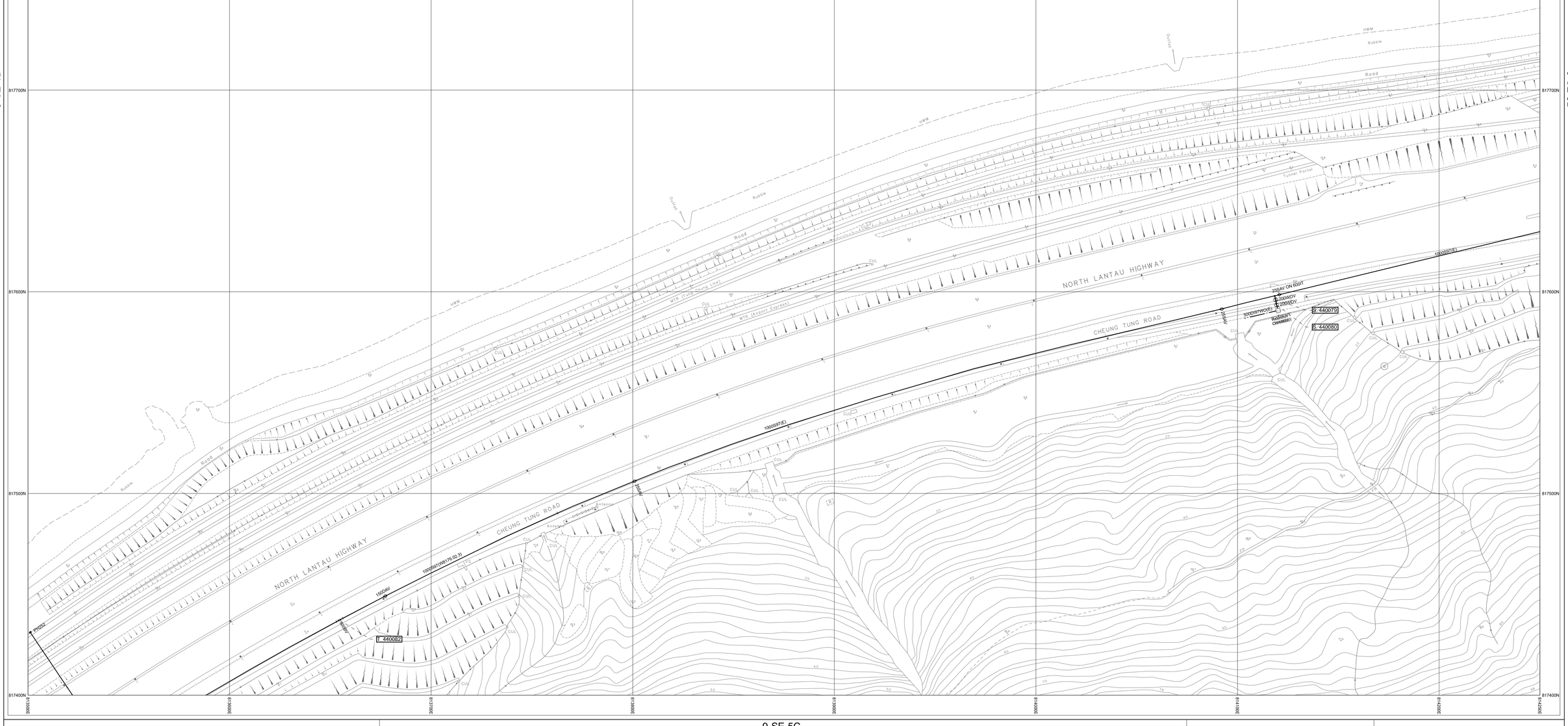
9-SE-4B

9-SE-5B



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9-SE-5A

10-SW-1A

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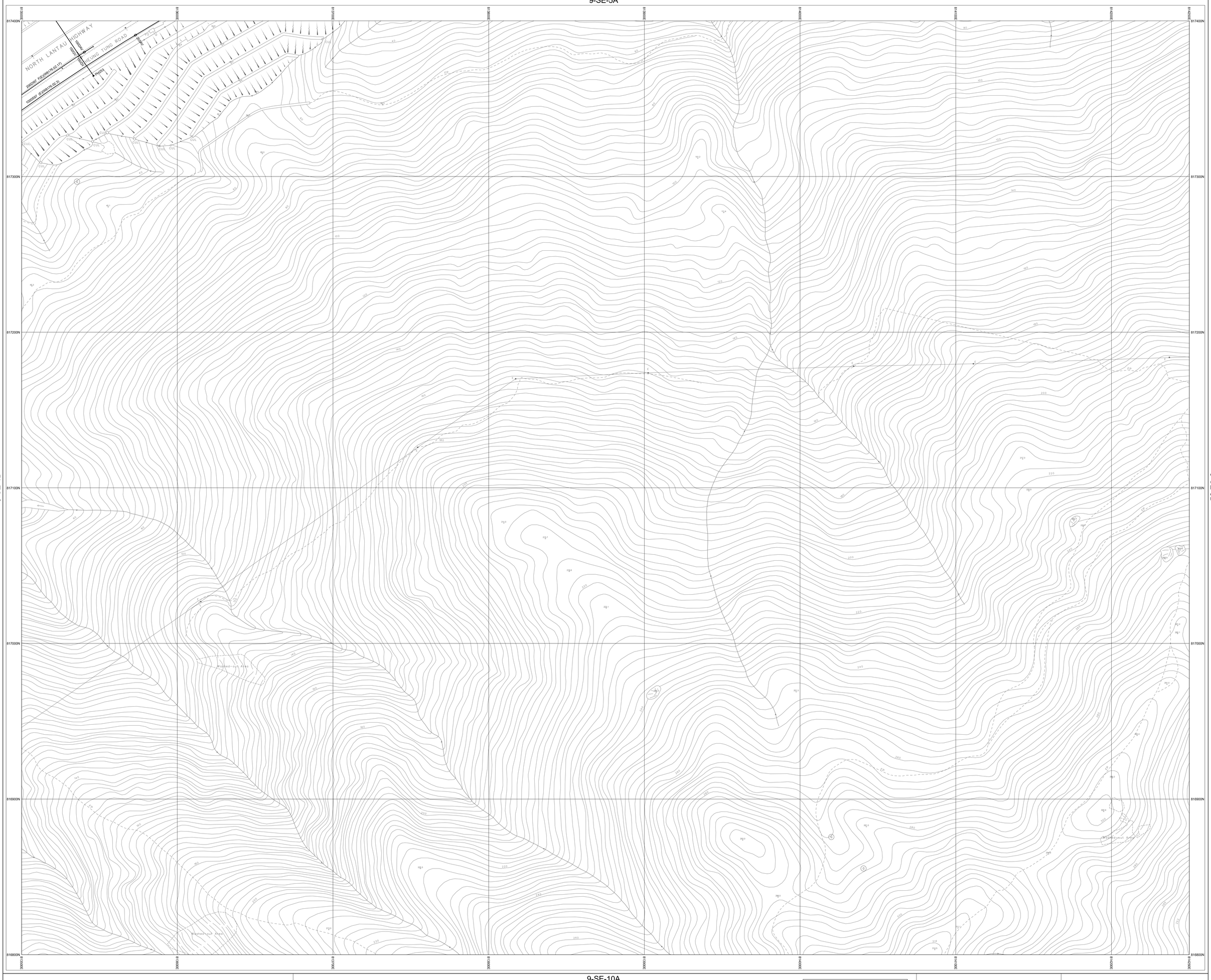

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9-SE-8D

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9-SE-8A

9-SE-7D

9-SE-8D

9-SE-13A

TUNG CHUNG BAY

SHA TSUI TAU

Cultivation

Jetty

Football Field

Sitting-out Area

Playground

Outfall

Ramp

S_440628

S_440629

S_440665

S_440655

S_440654

S_440700

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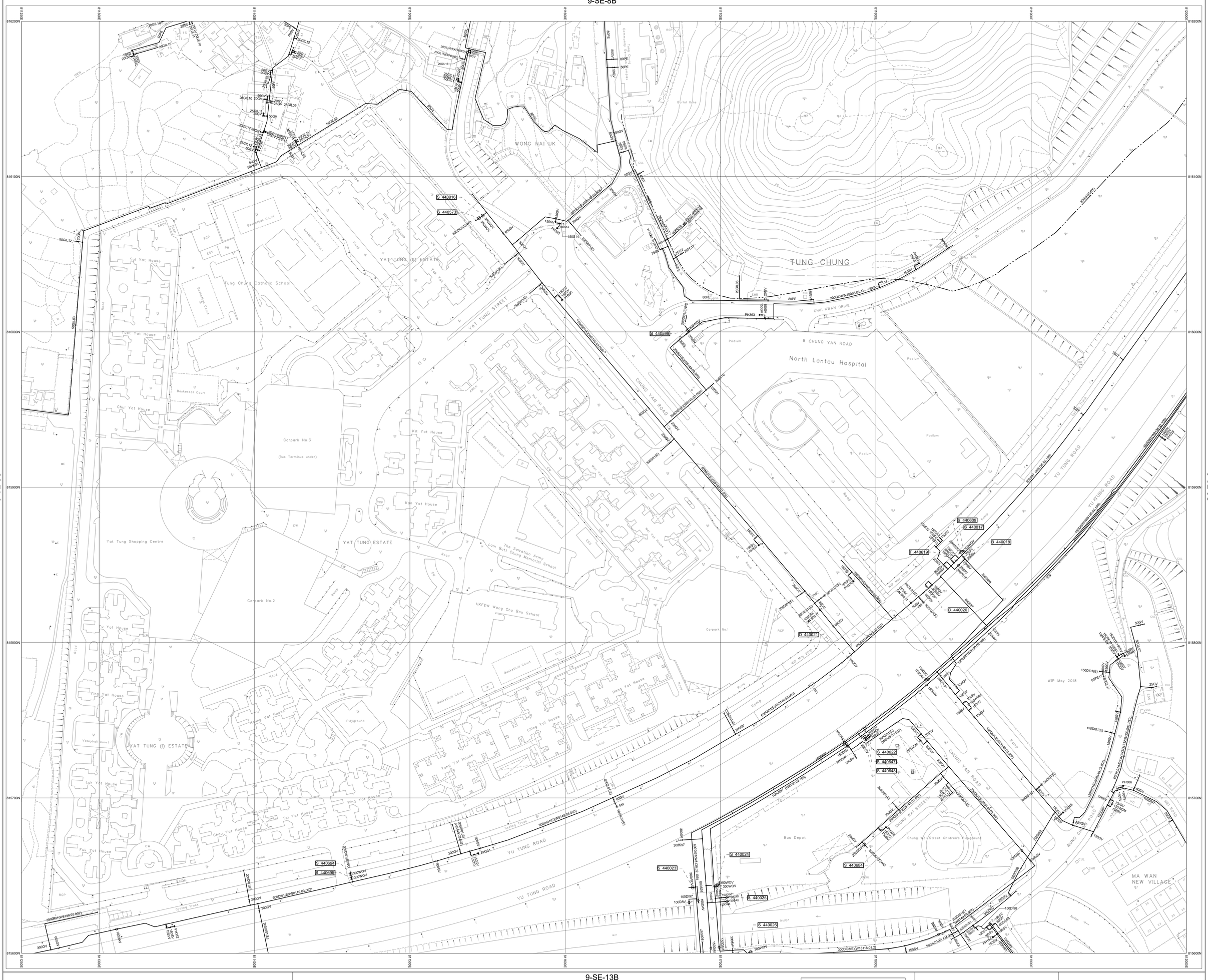

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METRES 20 10 0 20 40 60 80 100 METRES

FRESH WATER MAINS RECORD PLAN

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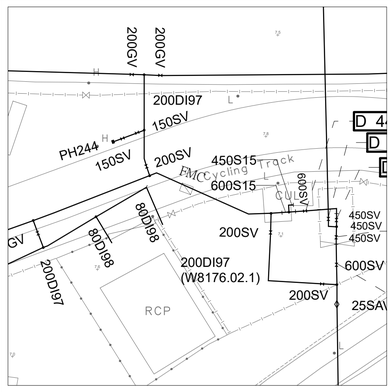	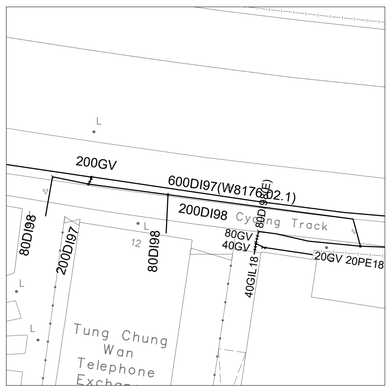				

Scale 1:500 Scale 1:500

9-SE-4C



9-SE-9C

NOTES:

1. FOR MAINS RECORDS SIGN CONVENTIONS AND DESIGNATIONS SEE SKETCH NO.3988.
2. DIMENSIONS OF MAINS ARE IN MILLIMETRES UNLESS OTHERWISE SPECIFIED.
3. ALL LEVELS ARE IN METRES ABOVE PRINCIPAL DATUM.

Basemap Date Updated On: 30/04/2019

SCALE 1:1 000

METRES 20 10 0 20 40 60 80 100 METRES

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FRESH WATER MAINS RECORD PLAN

TAI PO, LANTAU ISLAND

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W67880/ 9-SE-9A

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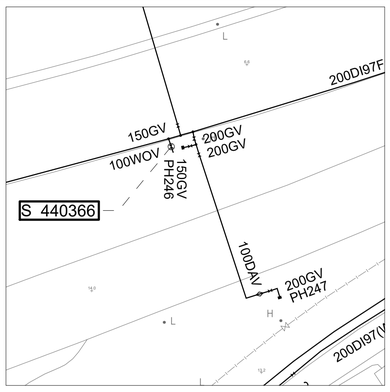
INSET 'A'	INSET 'B'	INSET 'C'	INSET 'D'	INSET 'E'	INSET 'F'
					

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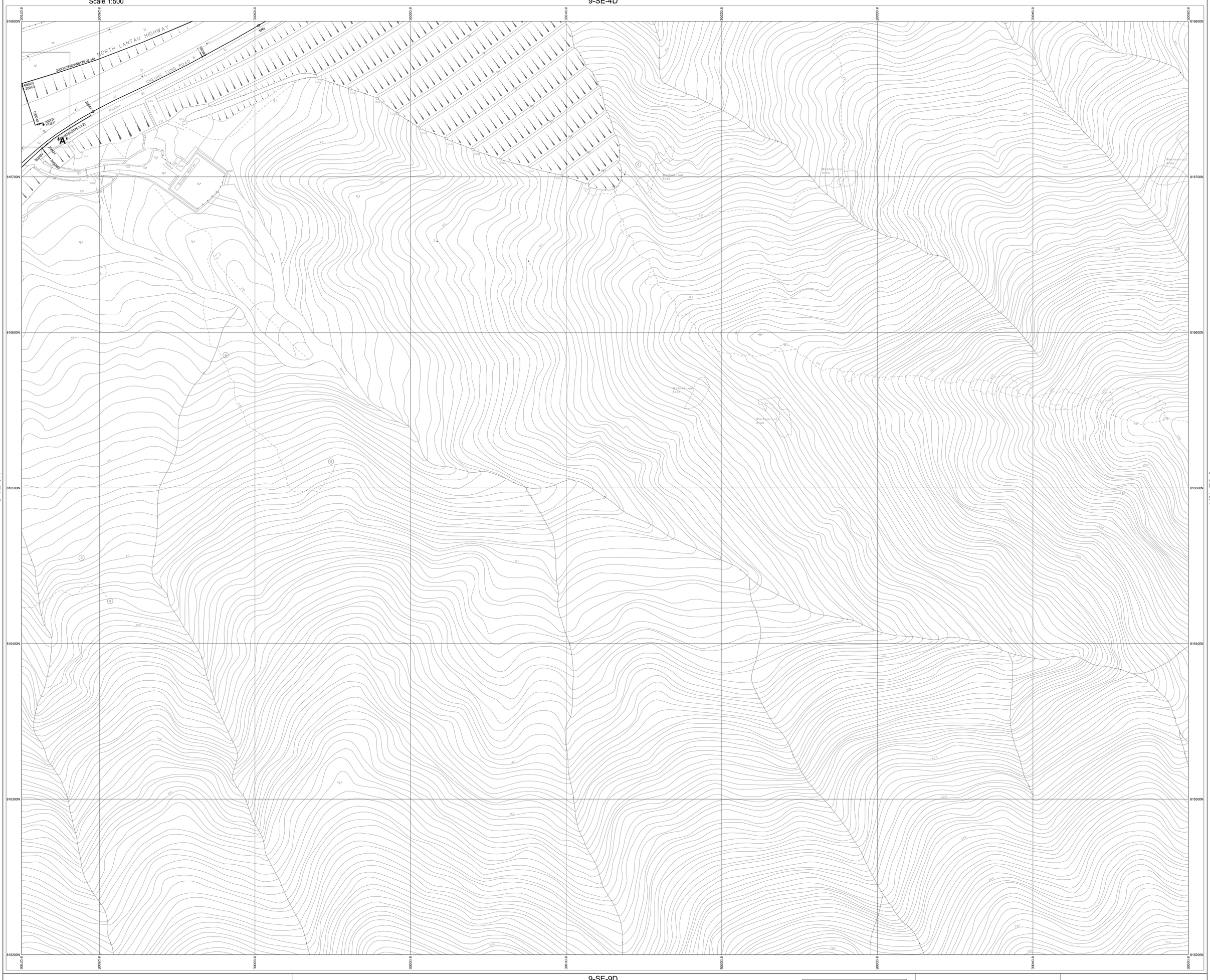
9-SE-4D



9-SE-9D

NOTES:

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Basemap Date Updated On: 30/04/2019

SCALE 1:1 000

METRES 20 10 0 20 40 60 80 100 METRES

FRESH WATER MAINS RECORD PLAN

TUNG CHUNG, LANTAU ISLAND

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INSET 'A'	INSET 'B'	INSET 'C'	INSET 'D'	INSET 'E'	INSET 'F'

9-SE-9A

9-SE-8D

9-SE-9D

9-SE-14A

NOTES:

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Basemap Date Updated On: 30/04/2019

SCALE 1:1 000

METRES 20 10 0 20 40 60 80 100 METRES

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FRESH WATER MAINS RECORD PLAN

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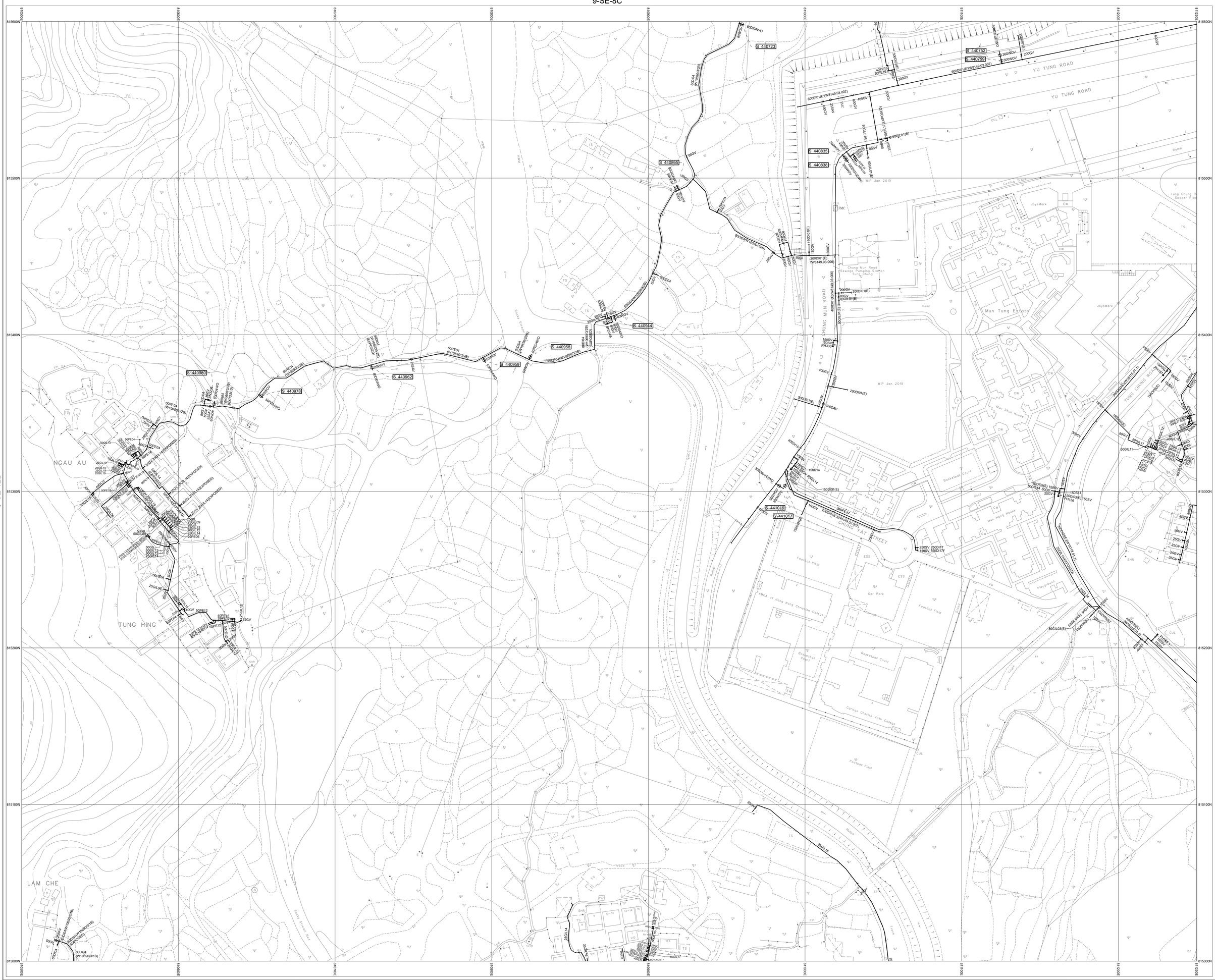
9-SE-8C



9-SE-13C

NOTES:

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Basemap Date Updated On: 30/04/2019

SCALE 1:1 000

METRES 20 10 0 20 40 60 80 100 METRES

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FRESH WATER MAINS RECORD PLAN

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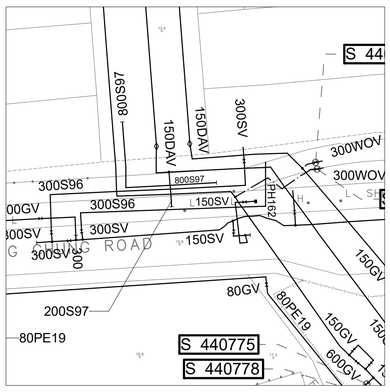					

Scale 1:500

9-SE-8D

9-SE-13A

9-SE-14A

9-SE-13D

NOTES:

1. FOR MAINS RECORDS SIGN CONVENTIONS AND DESIGNATIONS SEE SKETCH NO.3988.
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Basemap Date Updated On: 30/04/2019

SCALE 1:1 000

METRES 20 10 0 20 40 60 80 100 METRES

FRESH WATER MAINS RECORD PLAN

SHEUNG LING PEI, TUNG CHUNG

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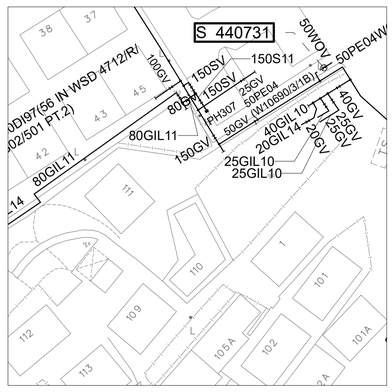					

Scale 1:500

9-SE-9C

9-SE-13B

9-SE-14B

9-SE-14C

NOTES:

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Basemap Date Updated On: 30/04/2019

SCALE 1:1 000

METRES 20 10 0 20 40 60 80 100 METRES

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FRESH WATER MAINS RECORD PLAN

WONG LUNG HANG, TUNG CHUNG

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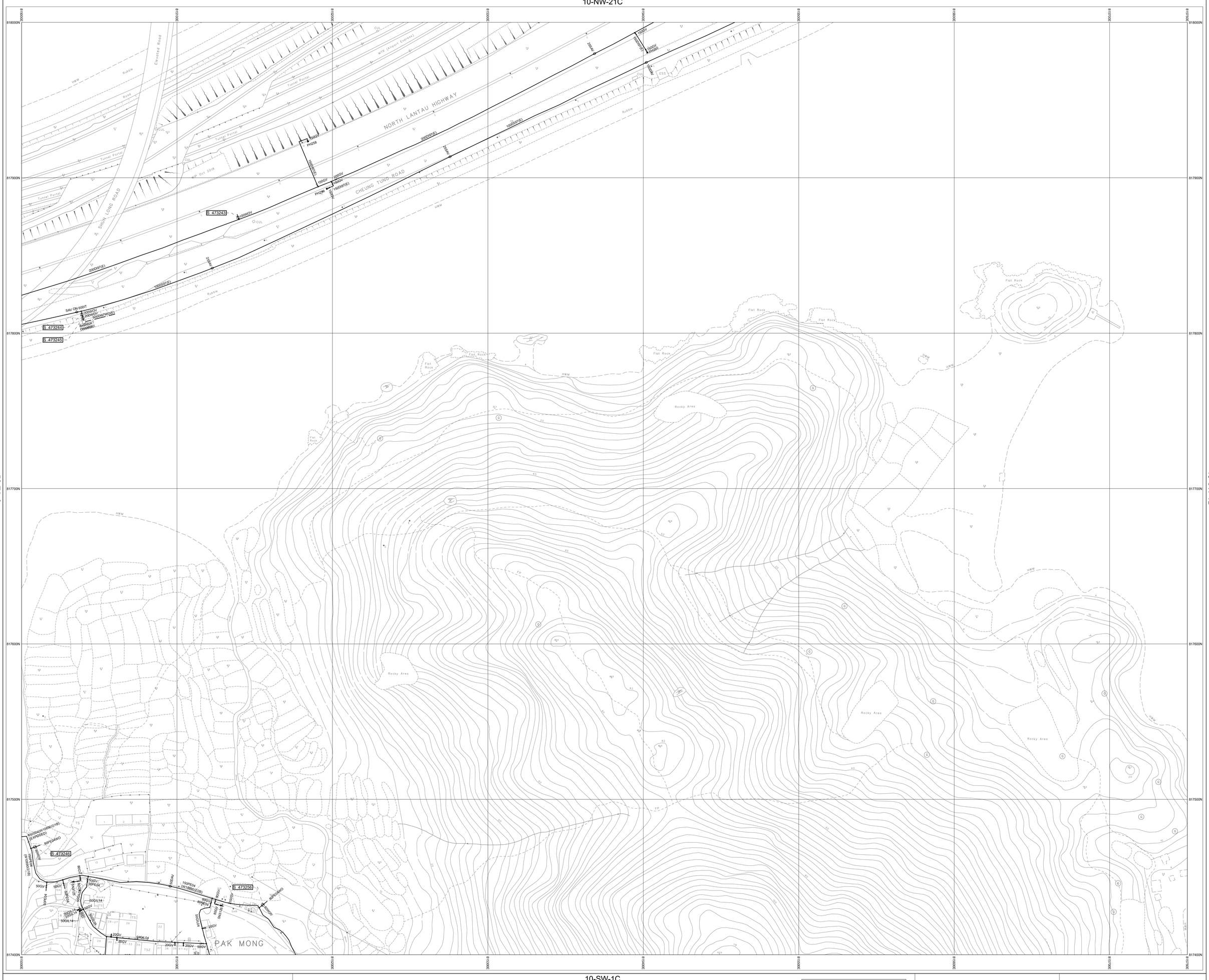
INSET 'A'	INSET 'B'	INSET 'C'	INSET 'D'	INSET 'E'	INSET 'F'

10-NW-21C



10-SW-1C

NOTES:

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Basemap Date Updated On: 30/04/2019

SCALE 1:1 000

METRES 20 10 0 20 40 60 80 100 METRES

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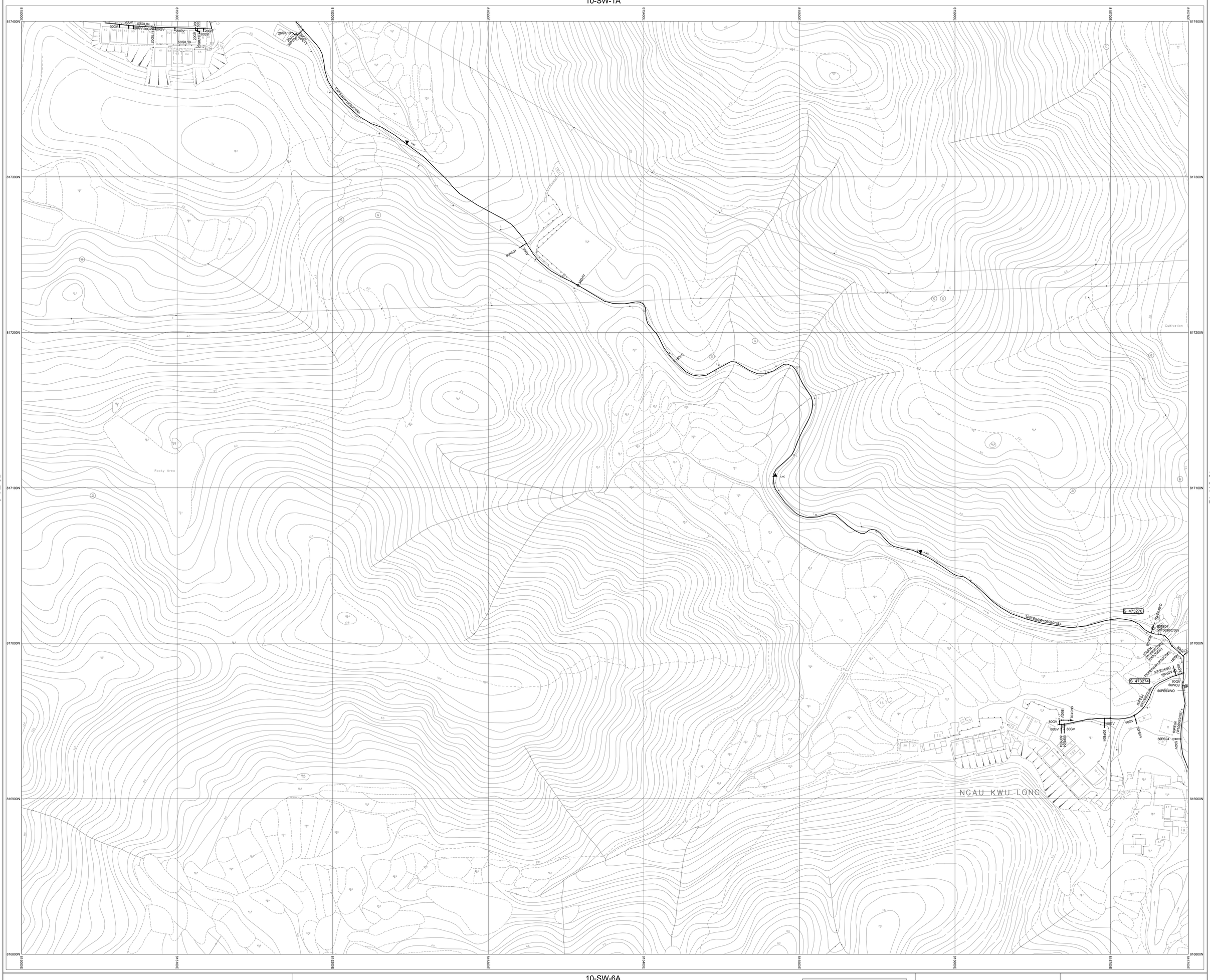
INSET 'A'	INSET 'B'	INSET 'C'	INSET 'D'	INSET 'E'	INSET 'F'

10-SW-1A

9-SE-5D

10-SW-1D


817400N
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817200N
817100N
817000N
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816800N
815000E
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815300E
815400E
815500E
815600E
815700E
815800E
815900E
816000E
Rocky Area
Cultivation
Graves
NGAU KWU LONG
LNC
S 473270
S 473274
200GV
50GIL/04
20GIL/13
50GIL/10
20GIL/14
20GIL/15
20GIL/16
20GIL/17
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50PE04/W106903/3B(38)
50PE04/W106903/3B(39)
50PE04/W106903/3B(40)

APPENDIX C

Water Mains Record (Salt Water)

INSET 'A'	INSET 'B'	INSET 'C'	INSET 'D'	INSET 'E'	INSET 'F'

9-SE-3B

9-SE-3C

9-SE-4C

9-SE-8B

NOTES:

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3. ALL LEVELS ARE IN METRES ABOVE PRINCIPAL DATUM.

Basemap Date Updated On: 30/04/2019

SCALE 1:1 000

METRES 20 10 0 20 40 60 80 100 METRES

SALT WATER MAINS RECORD PLAN

TUNG CHUNG NEW TOWN, LANTAU ISLAND

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INSET 'A'	INSET 'B'	INSET 'C'	INSET 'D'	INSET 'E'	INSET 'F'

9-NE-24D

9-SE-4A

9-SE-5A



9-SE-4D

NOTES:

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Basemap Date Updated On: 30/04/2019

SCALE 1:1 000

METRES 20 10 0 20 40 60 80 100 METRES

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SALT WATER MAINS RECORD PLAN

TUNG CHUNG, LANTAU ISLAND

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INSET 'A'	INSET 'B'	INSET 'C'	INSET 'D'	INSET 'E'	INSET 'F'

9-SE-4A

9-SE-3D

9-SE-4D


817400N
817300N
817200N
817100N
817000N
816900N
816800N
812000E
812500E
813000E
813500E
814000E
814500E
815000E
815500E
816000E
816500E
817000E
TUNG CHUNG WATERFRONT ROAD
YING HEI ROAD
YI TUNG ROAD
MAN TUNG ROAD
SEAVIEW CRESCENT
COASTAL SKYLINE
NORTH LANTAU HIGHWAY
Elevated Walkway and Shopping Mall
Man Tung Road Park
Tung Chung Municipal Services Building
Tung Chung Public Library
Ling Liang Church E Wun Secondary School
Ling Liang Church Sau Tak Primary School
TUNG CHUNG NORTH PARK
LA MER
Playground
Club House
Basketball Court
Underground Car Park Entrance
Citygate
Novotel Citygate Hong Kong
Seawall
Cycling Track
Ramp
Podium
Road
WIP Dec 2018
X 460012
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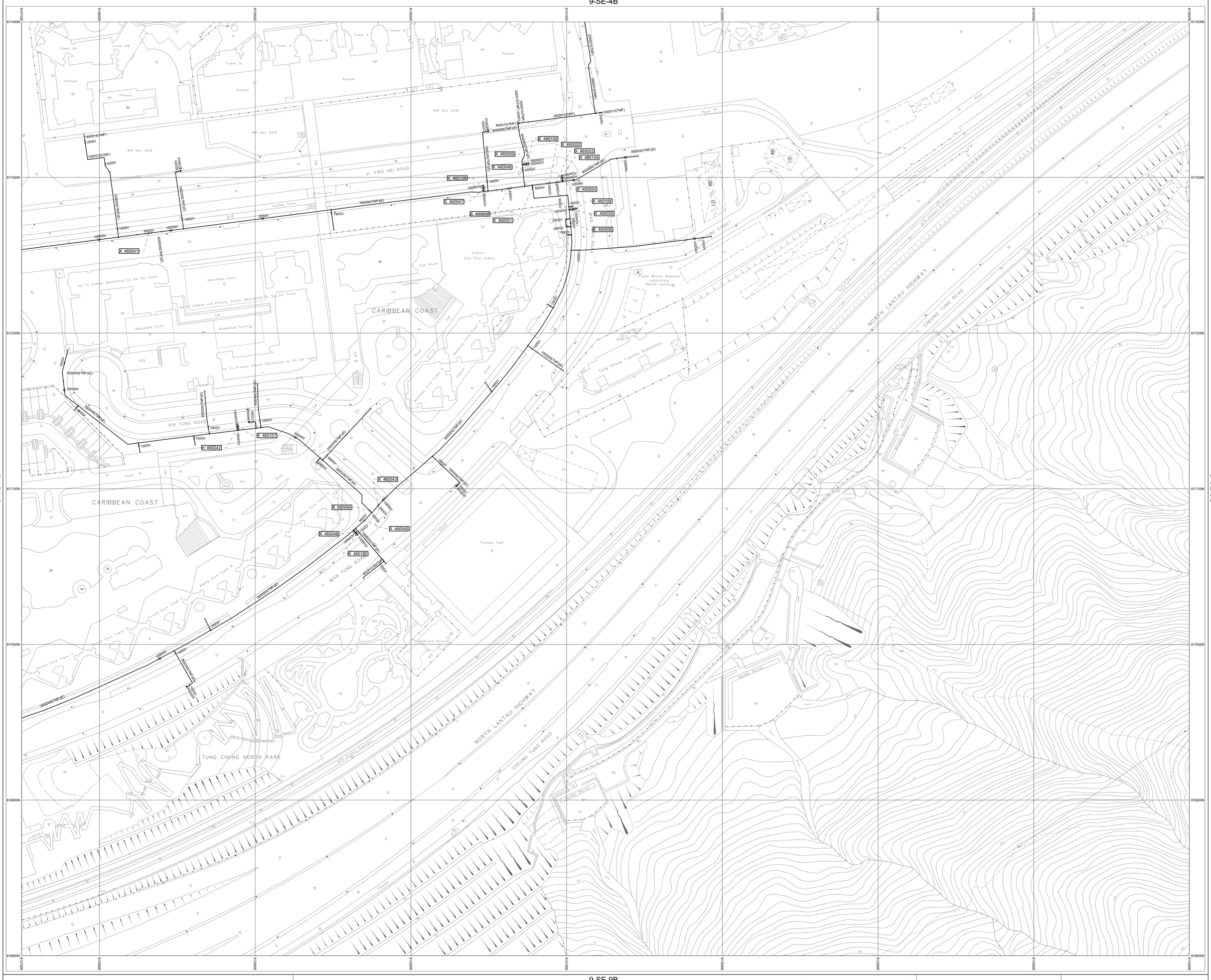
INSET 'A'	INSET 'B'	INSET 'C'	INSET 'D'	INSET 'E'	INSET 'F'

9-SE-4B



NOTES:

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Basemap Date Updated On: 30/04/2019

SCALE 1:1 000

METRES 20 10 0 20 40 60 80 100 METRES

SALT WATER MAINS RECORD PLAN

TUNG CHUNG, LANTAU ISLAND

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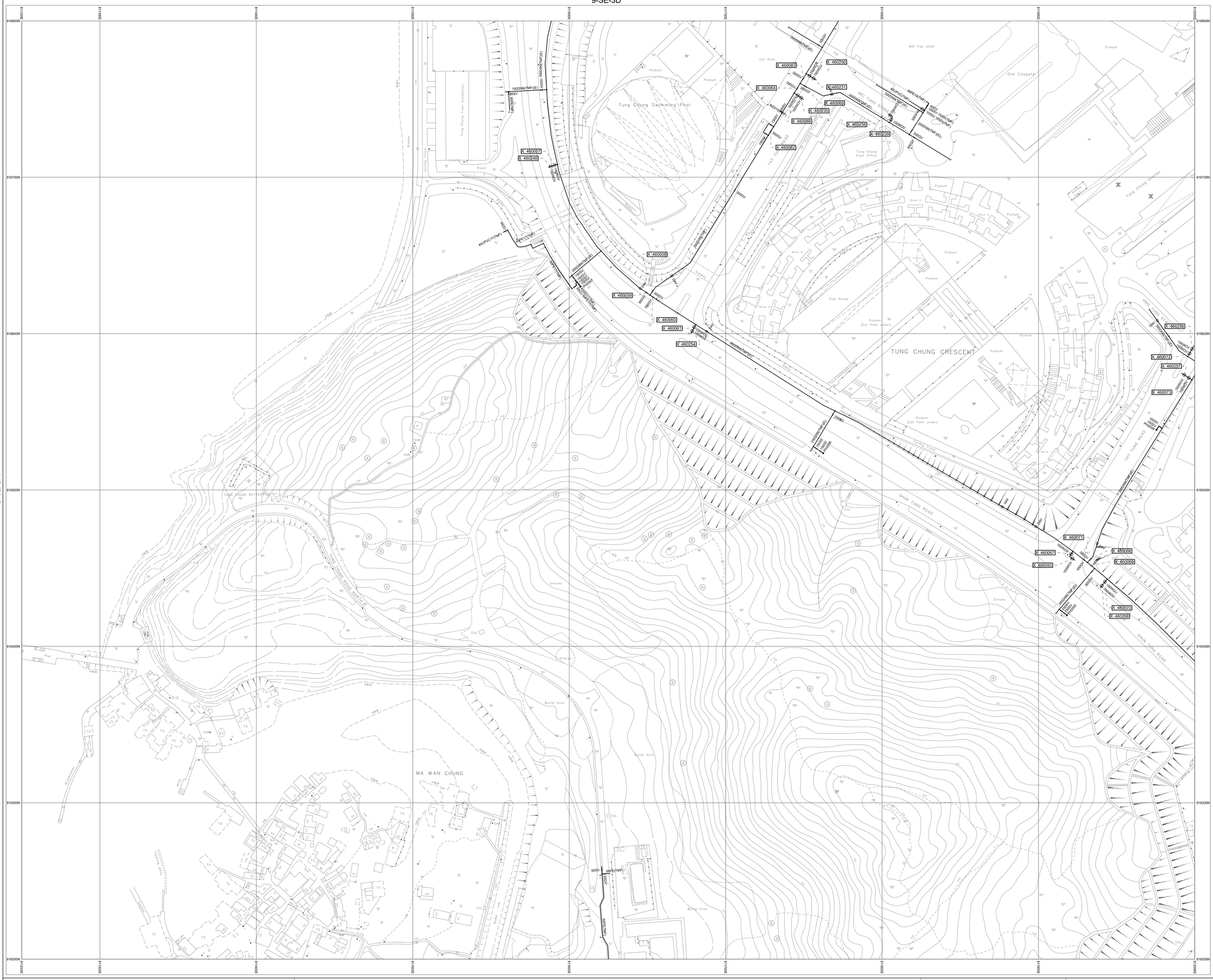
INSET 'A'	INSET 'B'	INSET 'C'	INSET 'D'	INSET 'E'	INSET 'F'

9-SE-3D



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Basemap Date Updated On: 30/04/2019

SCALE 1:1 000

METRES 20 10 0 20 40 60 80 100 METRES

SALT WATER MAINS RECORD PLAN

MA WAN CHUNG, TUNG CHUNG

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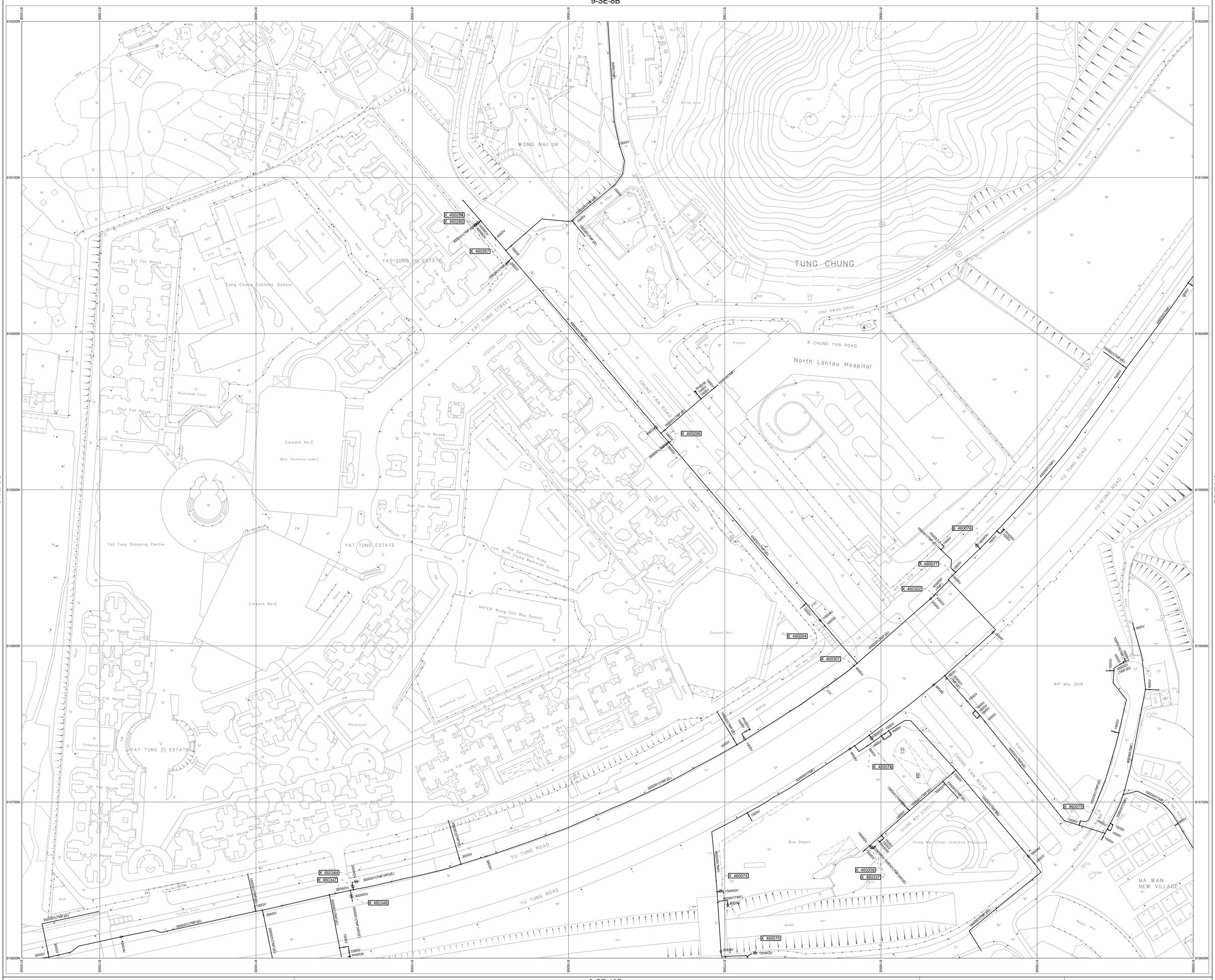
INSET 'A'	INSET 'B'	INSET 'C'	INSET 'D'	INSET 'E'	INSET 'F'

9-SE-8B



9-SE-13B

NOTES:

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SCALE 1:1 000

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INSET 'A'	INSET 'B'	INSET 'C'	INSET 'D'	INSET 'E'	INSET 'F'

9-SE-4C

9-SE-8B

9-SE-9B

9-SE-9C

NOTES:

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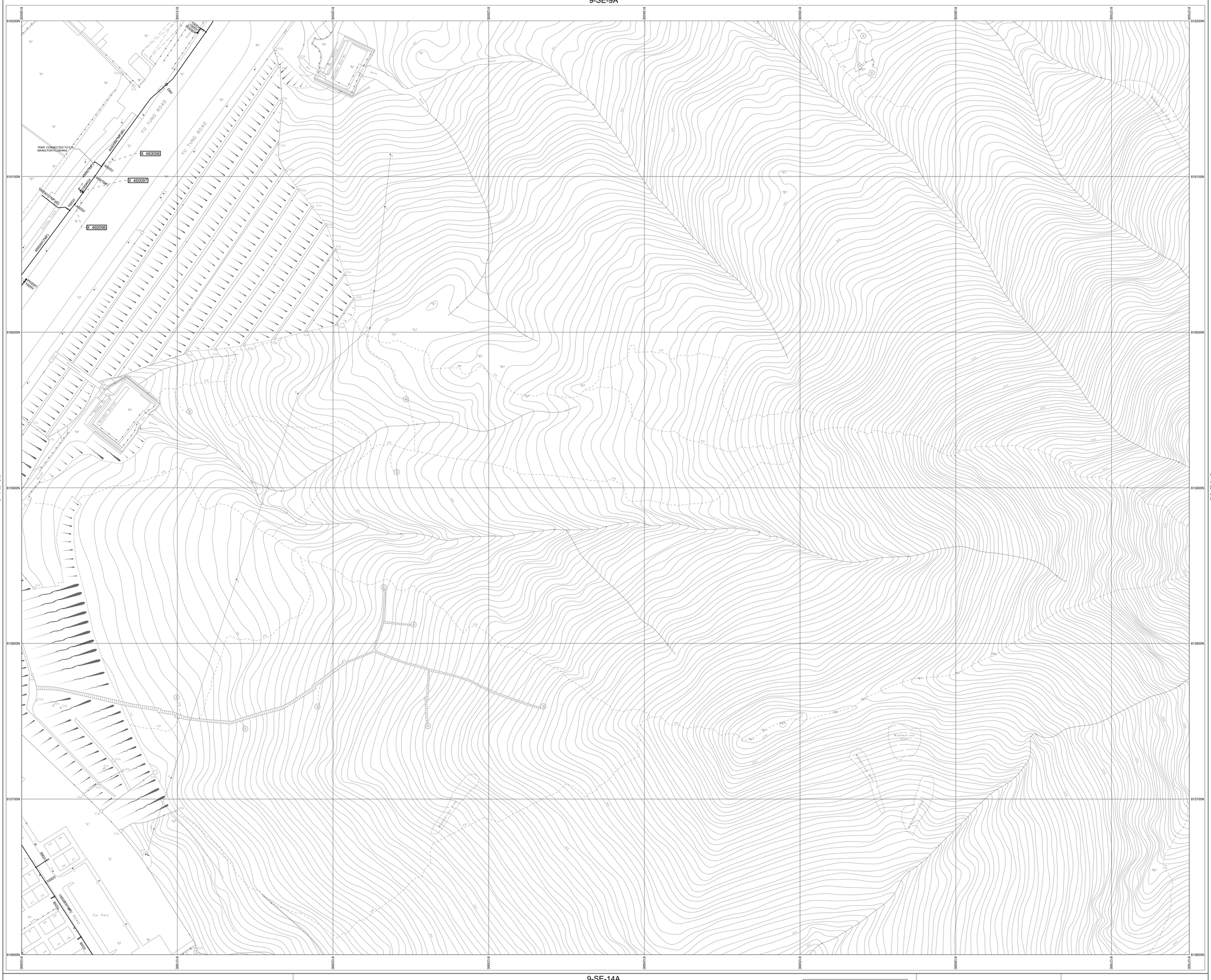
INSET 'A'	INSET 'B'	INSET 'C'	INSET 'D'	INSET 'E'	INSET 'F'

9-SE-9A

9-SE-8D

9-SE-9D



9-SE-14A

NOTES:

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INSET 'A'	INSET 'B'	INSET 'C'	INSET 'D'	INSET 'E'	INSET 'F'

9-SE-8C

9-SE-12B

9-SE-13B

9-SE-13C

NGAU AU

TUNG HING

LAM CHE

TUNG ROAD

YU TUNG ROAD

CHUNG MUN ROAD

TUNG CHUNG ROAD

Mun Tung Estate

Chung Mun Road Sewage Pumping Station

Tung Chung Soccer Pitch

Basketball Court

Carlos Chorlas Vath College

YMCA of Hong Kong Christian College

Footbal Field

Car Park

Sitting-out Area

Rocky Stream Bay

WIP Jan 2019

X 460362

X 460364

X 460376

X 460377

X 460386

X 460387

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Basemap Date Updated On: 30/04/2019

SCALE 1:1 000

METRES 20 10 0 20 40 60 80 100 METRES

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SALT WATER MAINS RECORD PLAN

NGAU AU, LANTAU ISLAND

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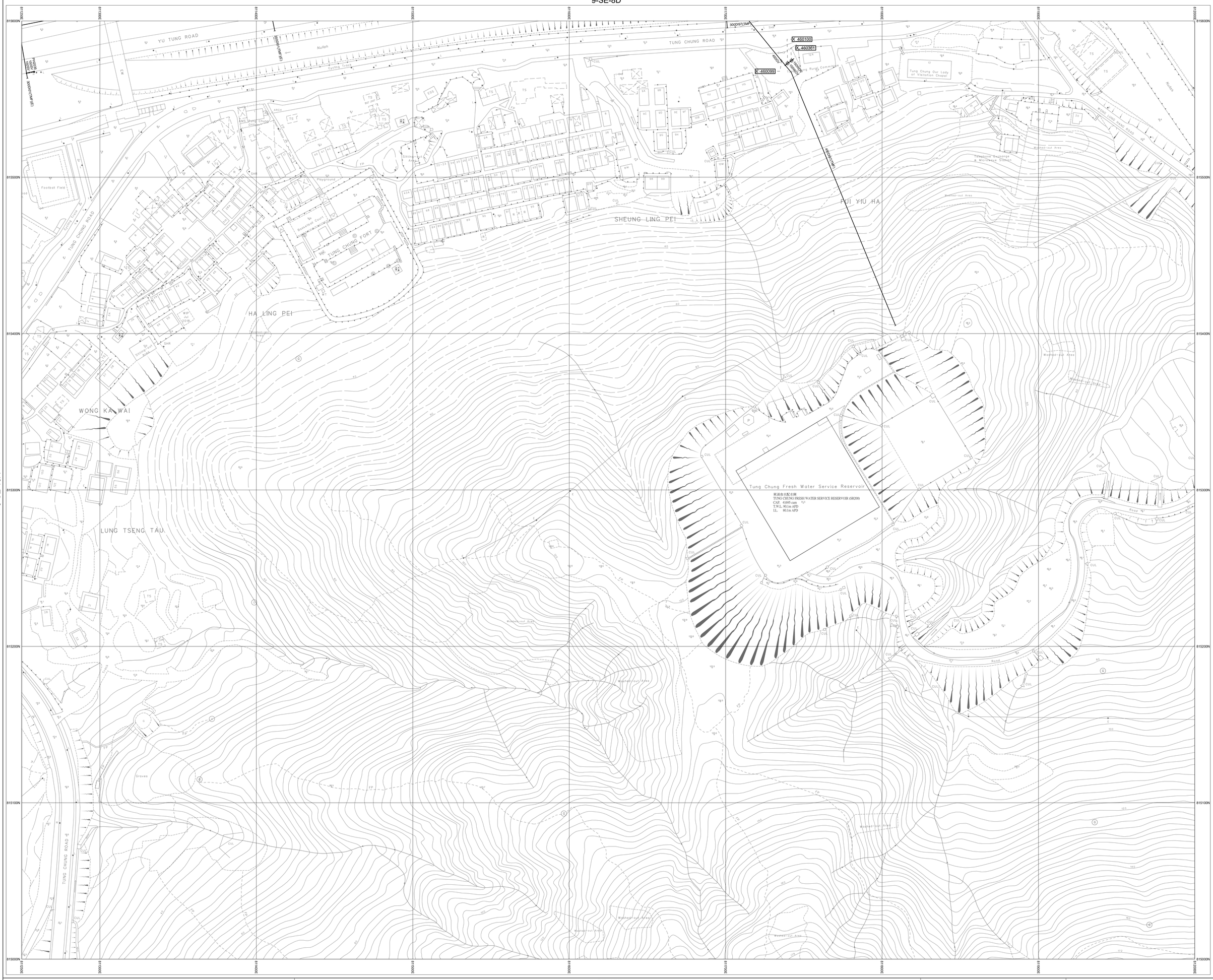

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SALT WATER MAINS RECORD PLAN

SHEUNG LING PEI, TUNG CHUNG

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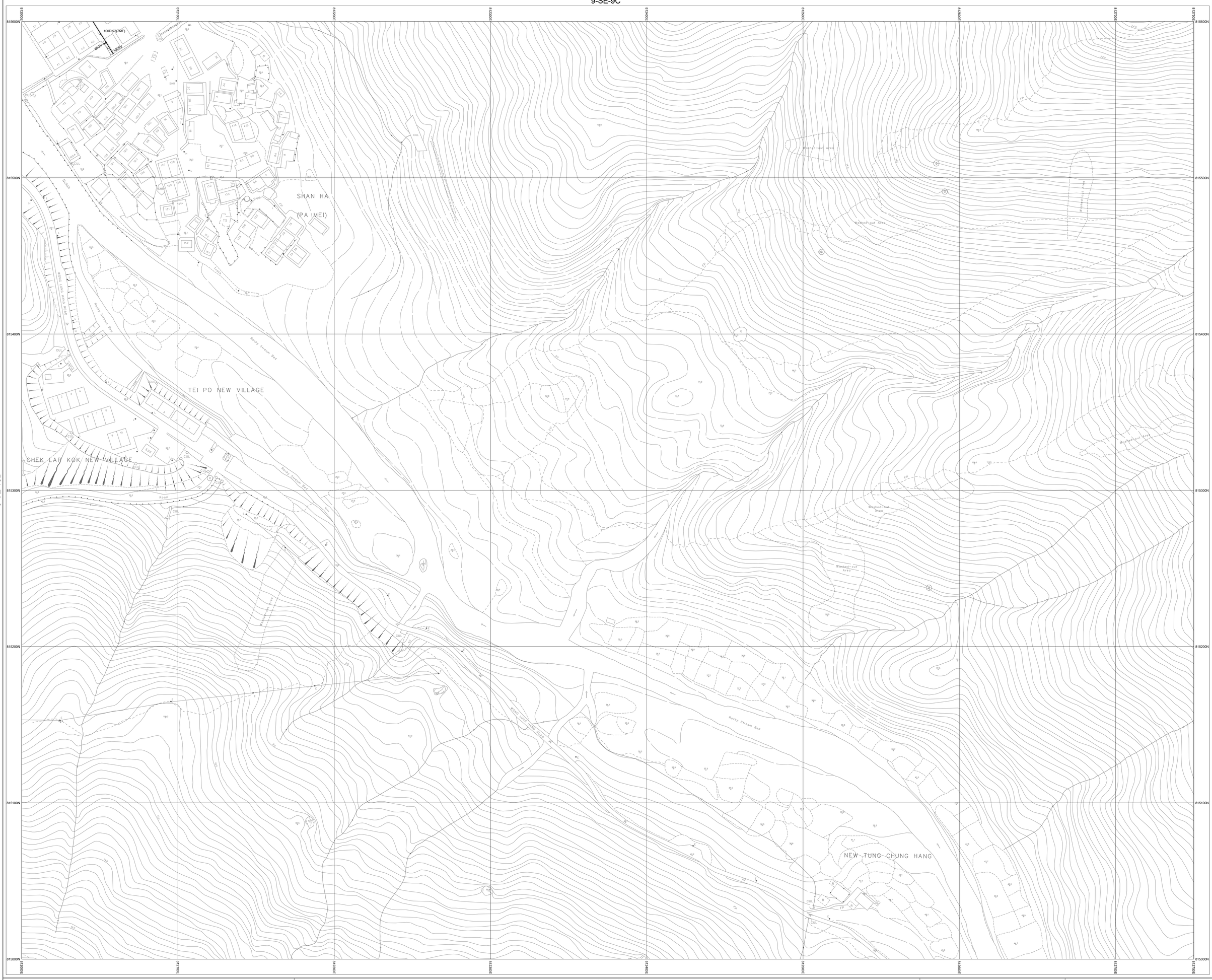

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SALT WATER MAINS RECORD PLAN

WONG LUNG HANG, TUNG CHUNG

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APPENDIX D1

Annex B2 of AECOM Report "Fresh and Salt Water Supply Review for Population Increase and Development Intensity – CASE 2 Scenario 2B"

Summary of Water Demand Estimate for Year 2031

Intensification Case 2 Scenario 2

183,799 Total Planned Population (TCE + TCW), excluding existing villages (population 5,298)

Estimated Water Demand of Tung Chung East Development - Based on CEDD's email regarding population increase Case 2 on 12 November 2019

Location	Population (Head)	Fresh Water Unit Demand	FW Demand (m3/d)	Salt Water Unit Demand	SW Demand (m3/d)	Remarks
Comprehensive Development (CDA)	18,305	0.230	4,210	0.070	1,281	FW/SW Unit Demand based on **R1 (All areas)**, WSD DI 1309, Table 1
Residential (R1)	7,050	0.230	1,622	0.070	494	FW/SW Unit Demand refer to WSD DI 1309, Table 1
Residential (R2)	2,030	0.300	609	0.070	142	FW/SW Unit Demand refer to WSD DI 1309, Table 1
Residential (R3)	12,759	0.390	4,976	0.070	893	FW/SW Unit Demand refer to WSD DI 1309, Table 1
Service Trades for Above Residential Types	*40,144*	*0.040*	1,606	-	-	Unit Demand refer to WSD DI 1309, Clause 3 and Table 2
Residential (RS)	**105,583**	0.140	14,782	0.070	7,391	FW/SW Unit Demand based on **Government Housing Estate (All areas)**, WSD DI 1309, Table 1
Service Trades for RS Types	*105,583*	*0.040*	4,223	-	-	Unit Demand refer to WSD DI 1309, Clause 3 and Table 2
Sub-total (Residential)	***145,727***		***32,027***		***10,201***	Sum of all residential types (sum of demand = domestic demand + service trades)
Location	**Unit for Demand Factor**	**Fresh Water Unit Demand**	**FW Demand (m3/d)**	**Salt Water Unit Demand**	**SW Demand (m3/d)**	**Remarks**
School (SCH)	12,704 heads	-	-	0.025	318	FW demand included in Service Trades, SW Unit Demand refers to WSIA report under CE 32/2011(CE)
Clinic (HSP)	801 HSP beds	-	-	0.295	**236**	FW demand included in Service Trades, SW Unit Demand refers to WSIA report under CE 32/2011(CE)
General Government/Institution/Community (GIC)	97,837 m2	-	-	0.020	1,957	FW demand included in Service Trades, SW Unit Demand refers to WSIA report under CE 32/2011(CE)
Office (O)	500,000 m2	0.040	20,000	0.020	10,000	FW and SW unit demands were based on Table 1 of WSD's Planning Report No. 6/2001 (also SW Unit Demand refers to WSIA report under CE 32/2011(CE))
Hotel (HTL)	1,000 HTL rooms	1.200	1,200	0.140	140	GFA is 48,573 sqm. The room number is assumed to be 1000 (Section 7.1.4 of RODP refers). FW/SW Unit Demand refer to WSIA report under CE 32/2011(CE), with unit of m3/room/day.
Retail (RT)	10,968 heads	-	-	0.050	548	FW demand included in Service Trades, SW Unit Demand refers to WSIA report under CE 32/2011(CE)
Commercial (C)	41,919 m2	-	-	0.020	838	FW demand included in Service Trades, SW Unit Demand refers to WSIA report under CE 32/2011(CE)
Sub-total (Non-residential)			***21,200***		***14,038***	
Total MDD			**53,227**		**24,238**	

Estimated Water Demand of Tung Chung West Development - Based on TCW latest information via CEDD's email dated 6 January 2020

Location	Population (Head)	Fresh Water Unit Demand	FW Demand (m3/d)	Salt Water Unit Demand	SW Demand (m3/d)	Remarks
Residential (R3)	3,738	0.390	1,458	0.070	262	FW/SW Unit Demand refer to WSD DI 1309, Table 1
Residential (R4)	2,880	0.390	1,123	0.070	202	FW/SW Unit Demand refer to WSD DI 1309, Table 1
Service Trades for Above Residential Types	*6,618*	*0.040*	265	-	-	Unit Demand refer to WSD DI 1309, Clause 3 and Table 2
Residential (RS)	31,454	0.140	4,404	0.070	2,202	FW/SW Unit Demand based on **Government Housing Estate (All areas)**, WSD DI 1309, Table 1
Service Trades for RS Types	*31,454*	*0.040*	1,258	-	-	Unit Demand refer to WSD DI 1309, Clause 3 and Table 2
Sub-total (Residential)	***38,072***		***8,507***		***2,665***	Sum of all residential types (excluding existing villages) (sum of demand = domestic demand + service trades)
Village (Traditional Type)	5,298	0.185	980	-	-	FW to supply flushing, FW Unit Demand (fresh + flushing) refer to WSD DI 1309, Table 1
Location	**Unit for Demand Factor**	**Fresh Water Unit Demand**	**FW Demand (m3/d)**	**Salt Water Unit Demand**	**SW Demand (m3/d)**	**Remarks**
School (SCH)	445 heads	-	-	0.025	11	FW demand included in Service Trades, SW Unit Demand refers to WSIA report under CE 32/2011(CE)
General Government/Institution/Community (GIC)	28,534 m2	-	-	0.020	571	FW demand included in Service Trades, SW Unit Demand refers to WSIA report under CE 32/2011(CE)
Landscape (Irrigation for Amenity Area)	10,139 m2	0.010	101	-	112	FW Unit Demand per planting area refers to WSIA report under CE 32/2011(CE). SW demand refers to estimate of TCW Project.
Retail (RT)	919 heads	-	-	0.050	46	FW demand included in Service Trades, SW Unit Demand refers to WSIA report under CE 32/2011(CE)
Commercial (C)	32,343 m2	-	-	0.020	647	FW demand included in Service Trades, SW Unit Demand refers to WSIA report under CE 32/2011(CE)
Sub-total (Non-residential)			***101***		***1,387***	
Total MDD			**9,589**		**4,052**	

Summary of Water Demand Estimate based on Population Intake

Case 2 Scenario 2

Estimated Water Demand of Tung Chung East Development

Phase	Population Intake	Area	FW Demand (m3/d)	SW Demand (m3/d)
1	**2024 Q1**	51, 57, 59, 99, 100, 104	8,843	4,703
2a	**2026 Q1**	102 (Part), 103, 109	1,540	801
2b	**2028 Q4**	102(Part), 105, 106, 110	2,497	613
3	**2028 Q3**	113	8,768	3,694
	2029 Q2	114, 117	2,300	1,172
	2029 Q3	115, 116	1,622	494
4a	**2029 Q4**	129, 130, 131, 132, 133, 134, 135, 136, 137, 138	19,154	9,826
4b	**2029 Q4**	119, 120, 122, 124	1,945	1,037
	2030 Q2	121, 123, 125, 126, 127, 128	2,822	493
4c	**2030 Q4**	139, 140, 141, 142, 143, 144	3,737	1,407
Total			**53,227**	**24,238**

Estimated Water Demand of Tung Chung West Development

Phase	Population Intake	Area	FW Demand (m3/d)	SW Demand (m3/d)
	Current	41,72,73,74,75,76,77	980	-
5,6	**2025**	33,48,60,61A,66A,67,68A&68B,71A,71B,38A,38B,38C,29A,36A,36F, River Park	2,947	1,343
7	**2027**	23, 42,44	4,719	2,083
7	**2028**	24A,46	942	625
Total			**9,589**	**4,052**

APPENDIX D2

Annex C2 of AECOM Report "Fresh and Salt Water Supply Review for Population Increase and Development Intensity – CASE 2 Scenario 2B"

Capacity assessment of proposed FWSR & SWSR

Intensification Case 2 Scenario 2B

Capacity of the proposed Siu Ho Wan Fresh Water Service Reservoir (SHW FWSR)

	Estimated shown in Annex C2		**Total**
1. Estimated Fresh Water Mean Daily Demands (m3/d)	TCE	TCW	(TCE + TCW)
Housing MDD from Private Housing only	13,280	2,846	16,126
10% Contingency for Housing MDD, from Private Housing only			**1,613**
Total MDD	53,296	9,589	**62,885**

Design MDD for sizing FWSR = Total MDD + Contingency for Housing MDD = **64,498** m3/d

				Reference
2. Sizing factors for SHW FWSR:	(a) interconnected supply zone	75%	x Design MDD	WSD DI1309
	(b) primary storage for Lantau	20%	x Design MDD	WSD PR 6/2001
	(c) to supply critical consumers	5%	x Design MDD	WSD DI1309
	Total	100%	x Design MDD	

3. Required capacity of SHW FWSR = 64,500 m3 , ≈ 103% x MDD

Details of the proposed SHW FWSR: (Design TWL increased by 0.6m based on Existing Design)

A. Invert Level (IL) =	70.00	mPD	
B. Top Water Level (TWL) =	80.90	mPD	increased 0.6m
C. Water Depth inside FWSR =	10.90	m	increased 0.6m
D. Available footprint on site =	6,030	m2	
E. Approximate footprint of internal walls and columns	100	m2	
F. Approximate net volume of the proposed FWSR =	64,637	m3	

Capacity of the proposed FWSR = ***64,600 m3*** ***ok***

Capacity of the proposed Tung Chung Salt Water Service Reservoir (TC SWSR)

Assumptions:-

	Estimated shown in Annex C2		*(Input from CE 32/2011(CE) WSIA)*		
1. Estimated Salt Water Demands (m3/d)	TCE	TCW	Existing TCNT	SHW Topside	**Sum**
Total MDD	24,735	4,052	13,105	3,600	**45,491**

(Assume TC SWSR to serve all supply zones including FSP and VSP system to enhance reliability)

				Reference
2. Sizing factors for TC SWSR:	(e) balancing tank	0.25	x MDD	WSD DI1309

3. Required capacity of TC SWSR = 11,400 m3

Details of the proposed TC SWSR: (Existing Design)

1. Invert Level (IL) =	65.00	mPD
2. Top Water Level (TWL) =	75.00	mPD
3. Water Depth inside SWSR =	10.00	m
4. Available footprint on site =	1,500	m2
5. Approximate footprint of internal walls and columns	350	m2
6. Approximate net volume of the proposed SWSR =	11,500	m3

Capacity of the proposed SWSR = ***11,500 m3*** **ok**

APPENDIX E

Estimation of Water Demand of the Subject Sites

0. General

Reference

1. Departmental Instruction No. 1309, WSD
2. Hong Kong Planning Standards and Guidelines, PlanD
3. AECOM Report "Fresh and Salt Water Supply Review for Population Increase and Development Intensity – CASE 2 Scenario 2B (Final)"
4. Housing in Figures 2020 - Transport and Housing Bureau

1. Data Input

Summary of Development Parameters

Area	133A	133B	133C	
	Qty.	Qty.	Qty.	Unit
1. Residential	6,817	2,448	2,571	Flats
2. Non-domestic uses				
-Retail	8,800	--	--	GFA (m^2)
-Public Market (by FEHD)	13,000	--	--	GFA (m^2)
-District Tenancy Management Office (DTMO)	810	--	--	GFA (m^2)
-Estate Management Office (EMO)	500	230	--	GFA (m^2)
-Management Office (MO)	--	--	250	GFA (m^2)
-Kindergarten	1,610	830	850	GFA (m^2)
3. Welfare				
- Total	--	5,880	5,500	GFA (m^2)

2. Water Demand

2.1 Tung Chung Area 133A

Water Demand

1. Residential	=	6,817	Flats	
Estimated Resident Population	=	16,469	persons	(Provided By HKHA)
With design buffer	=	18,406	persons	
Fresh water unit daily demand	=	0.14	$m^3/h/d$	(Table 1, DI 1309)
Fresh water mean daily demand	=	**2576.84**	m^3/d	
Flushing water unit daily demand	=	0.07	$m^3/h/d$	(Table 1, DI 1309)
Flushing water mean daily demand	=	**1288.42**	m^3/d	
2. Non domestic uses				
Estimated GFA	=	24,720		
Area in m2 per employee/user	=	15	m^2	(Assumed)
Estimated Population	=	1648		
Fresh water unit daily demand	=	0.04	$m^3/h/d$	(Table 1, DI 1309)
Fresh water mean daily demand	=	**65.92**	m^3/d	
Flushing water unit daily demand	=	0.02	$m^3/h/d$	(Table 1, DI 1309)
Flushing water mean daily demand	=	**32.96**	m^3/d	
3. Welfare				
Estimated GFA	=	--		
Area in m2 per employee/user	=	15	m^2	(Assumed)
Estimated Population	=	0		

2.2 Tung Chung Area 133B

Water Demand

1. Residential	=	2,448	Flats	
Estimated Resident Population	=	7,620		(Provided By HKHA)
With design buffer	=	8382		
Fresh water unit daily demand	=	0.14	$m^3/h/d$	(Table 1, DI 1309)
Fresh water mean daily demand	=	**1173.48**	m^3/d	
Flushing water unit daily demand	=	0.07	$m^3/h/d$	(Table 1, DI 1309)
Flushing water mean daily demand	=	**586.74**	m^3/d	
2. Non domestic uses				
Estimated GFA	=	1,060		
Area in m2 per employee/user	=	15	m^2	(Assumed)
Estimated Population	=	71		
Fresh water unit daily demand	=	0.04	$m^3/h/d$	(Table 1, DI 1309)
Fresh water mean daily demand	=	**2.84**	m^3/d	
Flushing water unit daily demand	=	0.02	$m^3/h/d$	(Table 1, DI 1309)
Flushing water mean daily demand	=	**1.42**	m^3/d	
3. Welfare				
Estimated GFA	=	5,880		
Area in m2 per employee/user	=	15	m^2	(Assumed)
Estimated Population	=	392		
Fresh water unit daily demand	=	0.23	$m^3/h/d$	(Table 1, DI 1309)
Fresh water mean daily demand	=	**90.16**	m^3/d	
Flushing water unit daily demand	=	0.07	$m^3/h/d$	(Table 1, DI 1309)
Flushing water mean daily demand	=	**27.44**	m^3/d	

2.3 Tung Chung Area 133C

Water Demand

1. Residential	=	2,571	Flats		
Estimated Resident Population	=	2,571	x	2.7	(Housing in Figures 2020, THB)
	=	6,942	persons		
With design buffer	=	7,984	persons		
Fresh water unit daily demand	=	0.14	$m^3/h/d$		(Table 1, DI 1309)
Fresh water mean daily demand	=	**1117.76**	m^3/d		
Flushing water unit daily demand	=	0.07	$m^3/h/d$		(Table 1, DI 1309)
Flushing water mean daily demand	=	**558.88**	m^3/d		
2. Non domestic uses					
Estimated GFA	=	1,100			
Area in m2 per employee/user	=	15	m^2		(Assumed)
Estimated Population	=	73			
Fresh water unit daily demand	=	0.04	$m^3/h/d$		(Table 1, DI 1309)
Fresh water mean daily demand	=	**2.92**	m^3/d		
Flushing water unit daily demand	=	0.02	$m^3/h/d$		(Table 1, DI 1309)
Flushing water mean daily demand	=	**1.46**	m^3/d		
3. Welfare					
Estimated GFA	=	5,500			
Area in m2 per employee/user	=	15	m^2		(Assumed)
Estimated Population	=	367			
Fresh water unit daily demand	=	0.23	$m^3/h/d$		(Table 1, DI 1309)
Fresh water mean daily demand	=	**84.41**	m^3/d		
Flushing water unit daily demand	=	0.07	$m^3/h/d$		(Table 1, DI 1309)
Flushing water mean daily demand	=	**25.69**	m^3/d		

Summary of Fresh Water & Flushing Water Mean Daily Demand (MDD)

Type of Development	Area 133A		Area 133B		Area 133C	
	Fresh Water MDD (m^3/d)	Flushing Water MDD (m^3/d)	Fresh Water MDD (m^3/d)	Flushing Water MDD (m^3/d)	Fresh Water MDD (m^3/d)	Flushing Water MDD (m^3/d)
1. Data Input	2642.76	1321.38	1266.48	615.60	1205.09	586.03

Appendix 7

Technical Assessments – Part 5

Traffic Review Study
(for Tung Chung Areas 133A, 133B and 133C)

ARUP

Hong Kong Housing Authority

Public Housing Development at Tung Chung Areas 133A, 133B And 133C – Traffic Study

Traffic Review Study Report

Final | April 2024

This report takes into account the particular instructions and requirements of our client. It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

Job number 289233-05

Ove Arup & Partners Hong Kong Ltd

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1. Introduction

1.1 Background

1.1.1 Civil Engineering and Development Department (CEDD) conducted a Technical Note on Preliminary Findings of Traffic Impact Assessment for Population Increase and Development Intensity – Case 2 Scenario 2B (Final Rev.1) for the proposed housing development and associated facilities under "Agreement No. CE 69/2015 (CE) Tung Chung New Town Extension (East) – Design and Construction" (hereafter named "CEDD's Study"). CASE 2 Scenario 2B is the developed scenario that allow additional GFA for welfare purposes in accordance with Policy Address 2020.

1.1.2 Further to the Technical Note on Preliminary Findings of Traffic Impact Assessment for Population Increase and Development Intensity – Case 2 Scenario 2B (Final Rev.1) in May 2022, Hong Kong Housing Authority (HKHA) intends to carry out Traffic Review Study based on the assessment in the aforesaid CEDD's report to support the latest design update of the proposed public housing developments at Tung Chung Areas 133A, 133B and 133C ("the Sites"). The proposed public housing development will comprise of about 6,817, 2,448 and 2,571 public housing flats at Areas 133A, 133B and 133C respectively, and are envisaged to be completed by Year 2029/30.

1.1.3 The proposed scheme at Tung Chung Area 133A adopts a maximum domestic Plot Ratio (PR) of 6.5 plus non-domestic PR of 0.5 and maximum overall GFA not exceeding 293,300 sqm, providing about 6,817 flats with a design population of about 16,469. The proposed scheme at Tung Chung Area 133B adopts a maximum domestic PR of 6.5, plus non-domestic PR of 0.3 and a maximum overall GFA not exceeding 123,080 sqm, providing about 2,448 flats with a design population of about 7,620. The proposed scheme at Tung Chung Area 133C adopts a maximum domestic PR of 6.5, plus non-domestic PR of 0.2 and a maximum overall GFA not exceeding 123,950 sqm, providing about 2,571 flats with a design population of about 6,942.

1.1.4 Arup was appointed as traffic consultant to conduct Traffic Review Study to assess on the traffic impact induced by the change of development parameters of the Sites. The location of the Sites is shown in **Figure 1.1**.

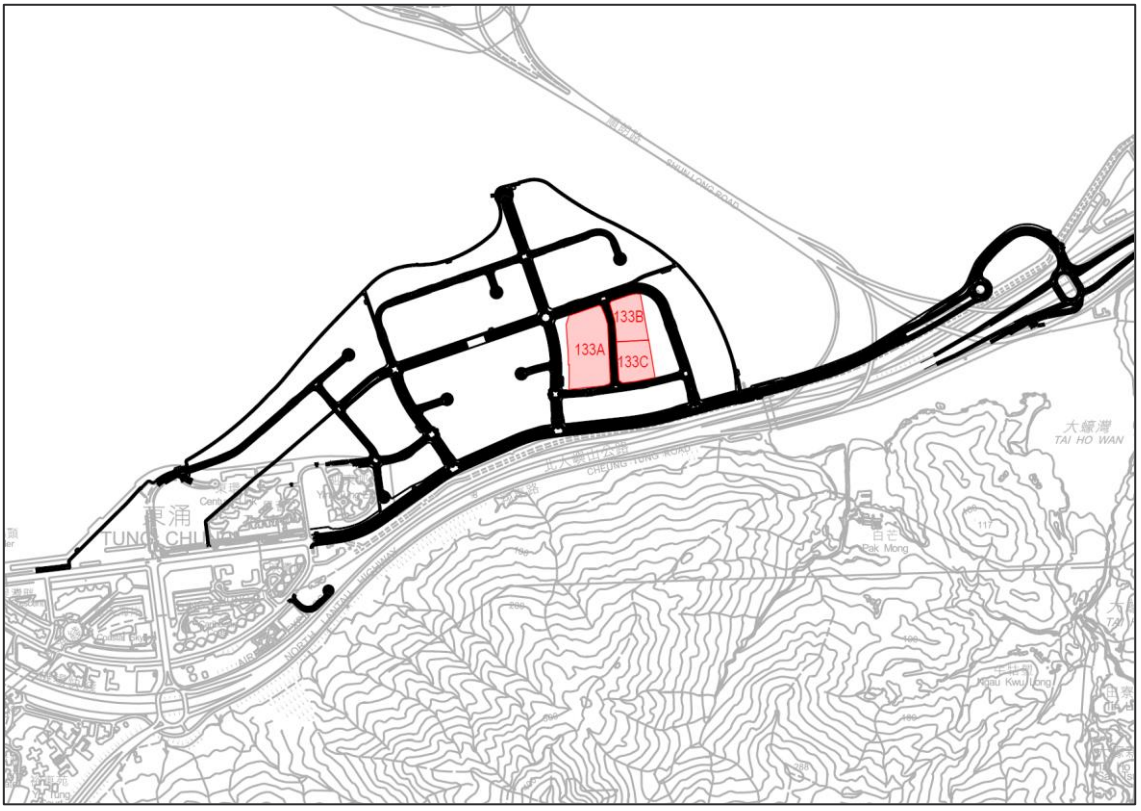

Figure 1.1 Location of the Site

1.2 This Report

1.2.1 The scopes of this Traffic Review Study Report are as follows:

a) Review the trip rates and the traffic generation and attraction of the Sites as adopted in the CEDD's Study;

b) Estimate the traffic generation and attraction of the Sites, based on the aforesaid trip rates and the latest development parameters of the Sites provided by HKHA;

c) Carry out comparison of the two set of traffic generation and attraction as described above; and

d) Summarize the provision of parking and loading/ unloading facilities of the Sites.

2. Comparison of Traffic Generation of the Sites

2.1 Trip Rates and Traffic Generation and Attraction of the Sites as Adopted in the CEDD's Study

2.1.1 Based on the information in Technical Note on Preliminary Findings of Traffic Impact Assessment for Population Increase and Development Intensity – Case 2 Scenario 2B (Final Rev.1) of the CEDD's Study, the adopted trip rates and the traffic generation and attraction of the Sites are shown in **Table 2.1** and **Table 2.2** respectively.

Table 2.1 Adopted Trip Rate of the Sites in CEDD's Study

Development Type		AM Peak		PM Peak	
		Generation	Attraction	Generation	Attraction
Public Housing	Public Rental Housing (pcu/flat/hr)	0.0325	0.0213	0.0196	0.0263
	Home Ownership Scheme Housing (pcu/flat/hr)	0.0483	0.0279	0.0244	0.0351
Non-domestic	Retail (pcu/hr/100 sqmGFA)	0.1285	0.1525	0.2360	0.2622
	Office (pcu/hr/100 sqmGFA)	0.1045	0.1646	0.1217	0.0840
	Welfare (pcu/hr/100 sqmGFA)	0.0300	0.0070	0.0410	0.0510
	Kindergarten (pcu/hr/school) *	14	14	14	14

Source: Table 2.3 of Technical Note on Preliminary Findings of Traffic Impact Assessment for Population Increase and Development Intensity – Case 2 Scenario 2B (Final Rev.1) of the CEDD's Study.

Note: *PM peak hour trip rate for kindergarten is assumed same as those of AM peak hour for conservative assessment purpose.

Table 2.2 Adopted Traffic Generation and Attraction of the Sites in CEDD's Study (PCUs / hr)

Development	AM		PM	
	Generation	Attraction	Generation	Attraction
Area 133A, 133B and 133C	530	392	370	463
Total (2-way)	922		833	

Source: Tables 2.4 and 3.13 of Technical Note on Preliminary Findings of Traffic Impact Assessment for Population Increase and Development Intensity – Case 2 Scenario 2B (Final Rev.1) of the CEDD's Study

2.2 Traffic Generation and Attraction of the Sites Based on the Latest Development Parameters

2.2.1 According to the latest development parameters provided by HKHA, the parameters of the proposed public housing development in the Sites has been updated. **Table 2.3** below summaries the latest development parameters of the Sites.

Table 2.3 Latest Development Parameters of the Sites

Development	Parameters		
	Area 133A	Area 133B	Area 133C
Proposed population intake year	2029/2030	2029/2030	2029/2030
Public Housing	6,817 flats (PRH)	2,693 flats* (PRH or GSH)	2,571 (SSF)
Retail	8,800 sqmGFA	-	-
Welfare Facilities	-	5,880 sqmGFA	5,500 sqmGFA
Kindergarten	1 no.	1 no.	1 no.
Estate Management Office (EMO) / Management Office (MO)	500 sqmGFA	230 sqmGFA	250 sqmGFA
District Tenancy Management Office (DTMO)	810 sqmGFA	-	-
Public Market (by FEHD)	13,000 sqmGFA	-	-

Note:

PRH means Public Rental Housing; GSH means Green Form Subsidised Home Ownership Scheme; and SSF means Subsidised Sale Flats.

* With additional 10% allowance for the proposed number of flats for technical assessment purpose, i.e. 2,448 x 1.1 = 2,693.

2.2.2 **Table 2.4** below compares the development schedule (i.e. those adopted in the CEDD's Study as abovementioned in para 2.1.1, and the latest development parameters) of the proposed public housing developments in the Sites.

Table 2.4 Comparison of Development Schedule of the Sites

Development	Parameters (adopted in the in the CEDD's Study) (A)	Parameters (latest development plan adopted in this Traffic Review) (B)	Difference (B) - (A)
Public Housing (Total no. of flats)	12,329	12,081	-248
Retail and Public Market (Total no. of sqmGFA)	35,010	21,800	-13,210
Welfare Facilities (Total no. of sqmGFA)	27,340	11,380	-15,960
Kindergarten (Total no. of kindergarten)	1	3	+2
EMO / MO / DTMO (Total no. of sqmGFA)	Nil	1,790	+1790

Note:

The above figures present the total amount of provision of TC Areas 133A, 133B and 133C by development parameter.

2.2.3 Based on the trip rates in **Table 2.1** and the latest development parameters of this Sites in **Table 2.3**, a summary of the trips related to the Sites, comparing those adopted in the CEDD's Study (above **Table 2.2** refers) is shown in **Table 2.5** below.

Table 2.5 Comparison of Estimated Traffic Generation and Attraction for the Sites (PCUs / hr)

Development	AM Peak		PM Peak	
	Generation	Attraction	Generation	Attraction
Estimated Traffic Generation and Attraction Based on the Latest development parameters (above Table 2.3 refers) adopted in this Traffic Review Study				
Public Housing *	476	292	262	364
Retail and Public Market	28	33	51	57
Welfare	3	1	5	6
Kindergarten	42	42	42	42
EMO/ MO/ DTMO	2	3	2	2
Total (Areas 133A + 133B + 133C) (2-way), (A)	***922***		***833***	
Traffic Generation and Attraction adopted in CEDD's Study (above Table 2.2 refers)				
Total (Areas 133A + 133B + 133C)	530	392	370	463
Total (Areas 133A + 133B + 133C) (2-way), (B)	***922***		***833***	
Difference, (A) - (B)	**0**		**0**	

Note:

* The traffic of public housing at Area 133B are estimated based on 2,693 flats (i.e. 2,448 x 1.1) of GSH, which have higher trip rates than those of the PRH.

2.2.4 It is revealed that the latest development parameters will induce nil change of traffic during AM and PM peak hours respectively.

3. Car Parking and Loading / Unloading Provision

3.1.1 The provision of parking and loading/ unloading (L/UL) facilities of the Sites will be made reference to the Hong Kong Planning Standard and Guideline (HKPSG) published by Planning Department (PlanD) as well as requests from relevant government departments as shown in **Tables 3.1, 3.2 and 3.3** for the proposed public housing developments at Tung Chung Areas 133A, 133B and 133C respectively.

Table 3.1 Parking and Loading / Unloading Facilities Provision of the Proposed Developments at Tung Chung Area 133A

Parking and Loading/Unloading Facilities	Component	Requirement	Proposed Provision (nos.) (1)
Car Parking Space	Domestic	1 per 14 flats	385 no.
	Visitors	5 per residential block	25 no.
	Retail and Commercial (2)	1 per 150sqm GFA	59 no.
	DTMO	-	2 no.
Motorcycle Parking Space	Domestic	1 per 110 flats	49 no.
Light Goods Vehicle	Domestic	1 per 260 flats	21 no.
L/UL Bay	Domestic (3)	2 per residential blocks	10 no.
	Retail and Commercial (2)	1 per 800sqm GFA	11 no.
Bicycle Parking	Domestic	1 per 15 flats	454 no.

Remarks

(1) The parking and loading / unloading facilities provisions are subject to finalized flat mix.

(2) Total IFA for retail and commercial is about 800 sqm (subject to detailed design).

(3) 2 no. of loading / unloading bays would be shared used with other non-domestic facilities.

Table 3.2 Parking and Loading / Unloading Facilities Provision of the Proposed Developments at Tung Chung Area 133B

Parking and Loading/Unloading Facilities	Component	Requirement	Proposed Provision (nos.) [1]
Car Parking Space	Domestic	1 per 8 flats	306 no.
	Visitors	5 per residential block	20 no.
Motorcycle Parking Space	Domestic	1 per 110 flats	22 no.
Light Goods Vehicle	Domestic	1 per 260 flats	9 no.
L/UL Bay [2]	Domestic	2 per residential blocks	8 no.
Bicycle Parking	Domestic	1 per 15 flats	163 no.
Private Light Bus Parking Space [3]	Welfare Facilities	As per requested by Social Welfare Department	2 no.
5.5 ton good vehicle [4]	Welfare Facilities	As per requested by Social Welfare Department	1 no.

Remarks

(1) The parking and loading / unloading facilities provisions are subject to finalized flat mix.

(2) 1 no. of loading / unloading bay would be shared used with social welfare facilities & 1 no. of loading / unloading bay would be shared used with other non-domestic facilities.

(3) 2 no. of designated parking space for 2 private light bus with tail-lift measuring 8m x 3m with minimum headroom of 3.3m is required.

(4) 1 no. of designated parking space for 1 5.5 ton goods vehicle with loading / unloading area with tail-lift measuring 7m x 3.5m with minimum headroom of 3.6m is required.

Table 3.2 Parking and Loading / Unloading Facilities Provision of the Proposed Developments at Tung Chung Area 133C

Parking and Loading/Unloading Facilities	Component	Requirement	Proposed Provision (nos.) [1]
Car Parking Space	Domestic	1 per 8 flats	321 no.
	Visitors	5 per residential block	20 no.
Motorcycle Parking Space	Domestic	1 per 110 flats	23 no.
Light Goods Vehicle	Domestic	1 per 260 flats	10 no.
L/UL Bay	Domestic	2 per residential blocks	8 no.
	Welfare [2]	As per requested by Social Welfare Department	1 no.
Bicycle Parking	Domestic	1 per 15 flats	171 no.
Private Light Bus Parking Space [3]	Welfare Facilities	As per requested by Social Welfare Department	7 no.

Remarks

(1) The parking and loading / unloading facilities provisions are subject to finalized flat mix.

(2) 1 no. of loading / unloading bay would be shared used with other non-domestic facilities.

(3) 7 no. of designated parking space for 7 private light bus with tail-lift measuring 8m x 3m with minimum headroom of 3.3m is required.

4. Conclusion

4.1.1 In view of the nil change of traffic induced by the Sites as shown in above para 2.2.4 and **Table 2.5**, it is anticipated that the latest development parameters of the Sites would not deteriorate the future traffic condition as assessed in the CEDD's Study and no additional mitigation measures would be required.

Appendix 8A

Technical Assessments – Part 6

Environmental Assessment Study
(for Tung Chung Area 133A)

Hong Kong Housing Authority

Public Housing Development at Tung Chung Area 133A

Environmental Assessment Study Final Report

287645-10

Final Report | April 2024

This report takes into account the particular instructions and requirements of our client.

It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

Job number 287645-10

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ARUP

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NEF Noise Contours extracted from 3RS EIA

Executive Summary

Ove Arup & Partners Hong Kong Ltd (Arup) was commissioned by Hong Kong Housing Authority (HKHA) to conduct an Environmental Assessment Study (EAS) on the proposed public housing development (Scheme received on 13 February 2023 with 6,817 no. of flats) at Tung Chung Area 133A with respect to the Hong Kong Planning Standards and Guidelines (HKPSG).

The subject site is located on the reclaimed land in Tung Chung East (TCE). It is bounded by Road D3 to the west, Road D2 to the north, Road L6 to the east and Road L7 to the south. Road traffic noise assessment has predicted that a total of 85 flats will be exposed to noise level in excess of the 70dB(A) criterion under the base scenario. The maximum noise level is 74dB(A) and the compliance rate is 98.8%. Various forms of noise mitigation measures have been investigated. Architectural fin, acoustic window and fixed glazing are recommended to mitigate the affected residential units. With these mitigation measures in place, a 100% noise compliance rate could be achieved. Adverse road traffic noise impacts on the proposed residential development are not anticipated.

The Tung Chung Line (TCL) and Airport Express Line (AEL) are located about 170m to the south of the subject site. A section of existing TCL will be diverted for the planned Tung Chung Line Extension (TCLE) with the provision of a new TCE Station. The planned TCLE and TCE station are located at approximately 160m to the south and 250m to the southwest of the subject housing site respectively. Based on the latest implementation programme of TCE, there are other planned high-rise developments in vicinity of the subject site to be in place (e.g. 113, 129, 130, 131, 132, 133C, 136 and 137) to provide noise screening from the rail tracks. The rail noise impact assessment in the approved TCLE EIA indicates that the proposed residential development could comply with the respective noise criteria for base scenario. Potential rail noise impact is therefore not anticipated.

The major fixed noise sources include the planned TCE station, salt water pumping station/ sewage pumping station, fire station and sports ground in Tung Chung Area 132, 136 and 138 respectively. They are all located at a far distance away and some are screened by the other planned development in vicinity of the subject site (e.g. Area 133B, 133C, 134 and 135). The approved TCLE EIA and TCNTE EIA also indicate that the predicted fixed noise levels on the proposed residential development at Tung Chung Area 133A would comply with the respective noise criteria. A public wet market is planned to the southwest corner of Tung Chung Area 133A. As confirmed by Architectural Services Department (ArchSD), the design of the public market will consider the public housing developments to ensure the environmental impact will comply with statutory requirements. Potential fixed noise sources impact is therefore not anticipated.

With reference to the approved EIA (AEIAR-185/2014) for Expansion of Hong Kong International Airport (HKIA) into a Three-Runway System (3RS), the subject site is located outside the NEF25 contour for all future scenarios for 3RS operation of HKIA. Hence, aircraft noise impact is not anticipated.

Two Public Transport Interchanges (PTIs) are planned within Tung Chung Area 113 and Area 133B respectively. Both will be designed with due consideration to the HKPSG and under deck

with no line-of-sight to the nearby noise sensitive receivers. Potential noise nuisance is therefore not anticipated.

The layout plans of the proposed kindergarten and management office are being studied and yet to be available at this stage. Hence, noise assessments will be supplemented in the next stage.

The current scheme has allowed sufficient setback distances from the surrounding roads to meet the minimum requirement for the residential blocks as stipulated in HKPSG. Any planned air sensitive rooms at the proposed kindergarten and social welfare facilities shall also be provided with the setback distance requirements as stipulated in HKPSG. There is no chimney found within the 500m assessment area. The planned PTIs at Area 113 and 133B will be designed under deck by others and HKHA respectively, with due consideration to the HKPSG and Practice Note for Professional Persons (ProPECC PN) 1/22 "Control of Air Pollution in Semi-Confined Public Transport Interchanges". Hence, no adverse air quality impact on the proposed development is anticipated.

As confirmed by Architectural Services Department (ArchSD), the design of the planned public market located at southwest of the subject site will consider the proposed public housing developments to ensure the environmental impact will comply with statutory requirements.

It is concluded that there are no adverse environmental impacts on the subject site at Tung Chung Area 133A for housing development.

1 Introduction

1.1.1.1 Ove Arup & Partners Hong Kong Ltd (Arup) was commissioned by Hong Kong Housing Authority (HKHA) to conduct an Environmental Assessment Study (EAS) on the proposed public housing development at Tung Chung Area 133A.

1.1.1.2 The reclamation at Tung Chung East to form a total of 130 ha of land for development of Tung Chung New Town Extension (TCNTE) (East) was currently being undertaken and the associated site formation and infrastructure works will be carried out by Civil Engineering and Development Department (CEDD).

1.1.1.3 The subject site is located on Area 133A of the reclaimed land in TCNTE (East). The land of Area 133A has already been reclaimed and formed. It will be bounded by Road D3 to the west, Road D2 to the north, Road L6 to the east and Road L7 to the south. The gross site area is about 4.2 ha. In accordance with the "Approved Tung Chung Extension Area Outline Zoning Plan (OZP) No. S/I-TCE/2", the current land use zoning of the subject site is "Residential (Group A)2" ("R(A)2").

1.1.1.4 This EAS is conducted on the Scheme received on 13 February 2023 provided by HKHA to evaluate the potential environmental impacts on the proposed development with respect to guidance for environmental considerations provided in Chapter 9 – Environment of the Hong Kong Planning Standards & Guidelines (HKPSG). Road traffic noise impact assessment has been conducted in this EAS. In addition, potential rail noise impact, fixed noise impact, aircraft noise impact, noise nuisance arising from the planned public transport interchange (PTI) and air quality impact have also been qualitatively reviewed in this EAS.

1.1.1.5 The EAS was conducted on the following scheme:

Scheme	EAS version	Submission date
Scheme dated 13 February 2023	Draft EAS Report	21 April 2023
Scheme dated 13 February 2023	Draft Final EAS Report	5 July 2023
Scheme dated 13 February 2023	Draft Final EAS Report	11 March 2024

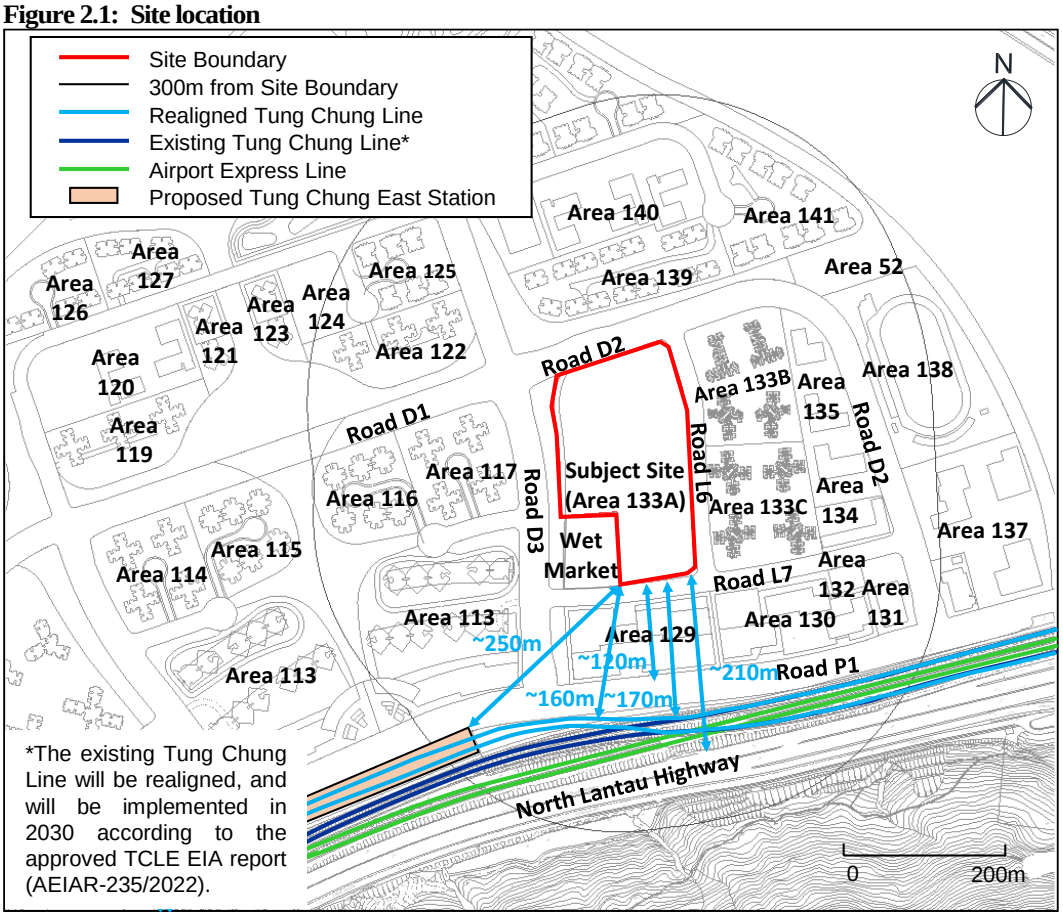
1.1.1.6 This EAS has been updated for the Scheme dated 13 February 2023 with incorporation of EPD's comments provided on 18 March 2024.

2 Site Location and Building Layout

2.1 Site Location and Description

2.1.1.1 The subject site is located on Area 133A of the reclaimed land in TCNTE (East). It will be bounded by Road D3 to the west, Road D2 to the north, Road L6 to the east and Road L7 to the south (**Figure 2.1**). Road P1 and North Lantau Highway will be at some 120m and 210m to the south respectively. Another two public housing sites at Area 133B and Area 133C are planned to its east. The site will also be surrounded by other developments in its immediate vicinity, including Areas 129 to 132 to the south, Areas 113 and 117 to the west, and Areas 139 to 141 to the north. The area to the southwest of the subject site is reserved for a public wet market to be developed and managed under Food and Environmental Hygiene Department (FEHD).

Figure 2.1: Site location

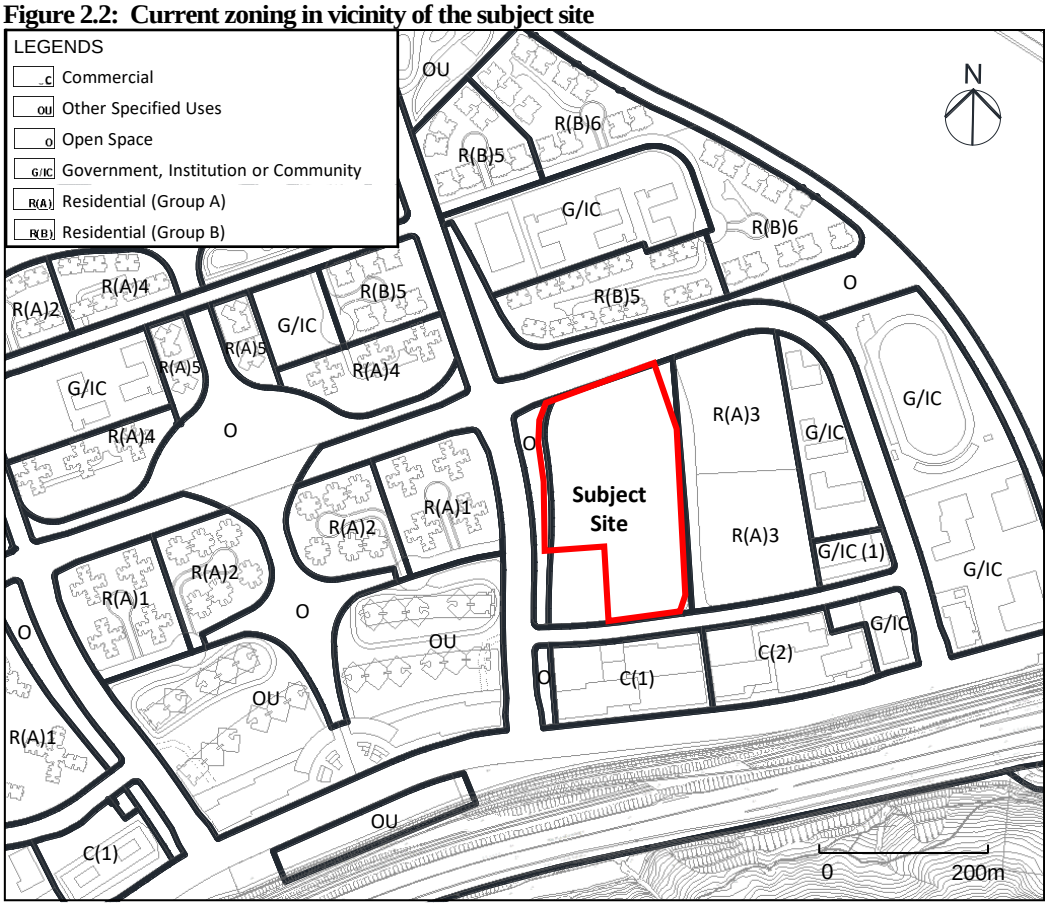


2.1.1.2 The existing Tung Chung Line (TCL) and Airport Express Line (AEL) are located about 170m to the south of the subject site. A section of existing TCL will be slightly diverted for the planned Tung Chung Line Extension (TCLE) with the provision of a new Tung Chung East (TCE) Station on the reclaimed land. The planned TCLE and TCE station are located at approximately 160m to the south and 250m to the southwest of the subject housing site respectively (**Figure 2.1**).

2.1.1.3 In accordance with the Tung Chung Extension Area Outline Zoning Plan (OZP) No. S/I-TCE/2, the existing land use zoning of the subject site is "Residential (Group A)2"

("R(A)2"). The areas in vicinity of the subject site are mainly zoned as "R(A)", "Residential (Group B)" ("R(B)"), Open Space" ("O"), "Government, Institution or Community" ("G/IC"), "Commercial" ("C") and "Other Specified Uses" ("OU") (**Figure 2.2**).

Figure 2.2: Current zoning in vicinity of the subject site



2.2 Building Design

2.2.1.1 The latest site layout plan (Scheme received on 13 February 2023) is illustrated in **Figure 2.3**. The proposed development consists of five domestic blocks with a total of 6,817 residential flats. **Figures 2.4 to 2.8** illustrate the typical floor plans of the residential blocks.

2.2.1.2 Kindergarten and management office are planned on P3/F of the proposed development. Their locations and layout plans are still being investigated. Hence, assessments on the kindergarten and management office will be supplemented when the layout is confirmed in the next stage.

2.2.1.3 The anticipated occupation year of population of the proposed development is Year 2030. The key development parameters for the residential blocks under current scheme are given in **Table 2.1**. The detailed layout plan and schematic section plan are provided in **Appendix 2.1**.

Table 2.1: Key development parameters of residential blocks

Parameters	Block 1	Block 2	Block 3	Block 4	Block 5
No. of Domestic Storeys	37				40
Floor to Floor Height (m) [1]	2.75				
First Level (mPD)	31.4				14.95
First NSR Level (mPD) [2]	32.6				16.15
Main Roof Level (mPD) [2]	133.15				124.95
Number of Flats per Storey	28 (1/F) 34 (2/F-37/F)	31 (1/F) 38 (2/F-37/F)	28 (1/F) 34 (2/F-37/F)	31 (1/F) 38 (2/F-37/F)	33 (1/F) 38 (2/F-40/F)
Number of Flats per Block	1,252	1,399	1,252	1,399	1,515
Total Number of Flats	6,817				
Proposed Occupation Year of Population	2030				

Notes:
[1] For modeling purpose, a floor-to-floor height of 2.7m is assumed for domestic block.
[2] For modeling purpose, the first NSR level and main roof level are round down to one decimal place.

Figure 2.3: Site layout plan – Typical Floor (Scheme received on 13 February 2023)

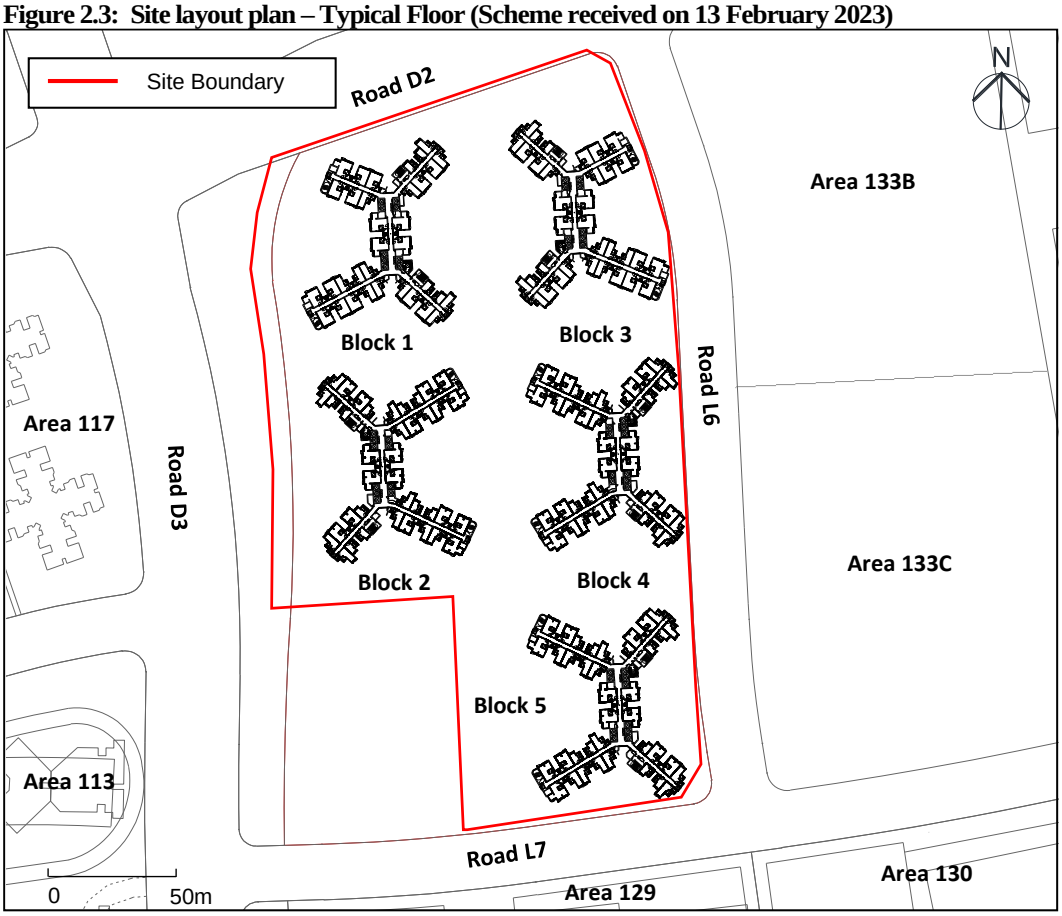


Figure 2.4: Typical floor plan of Residential Block 1 (Scheme received on 13 February 2023)

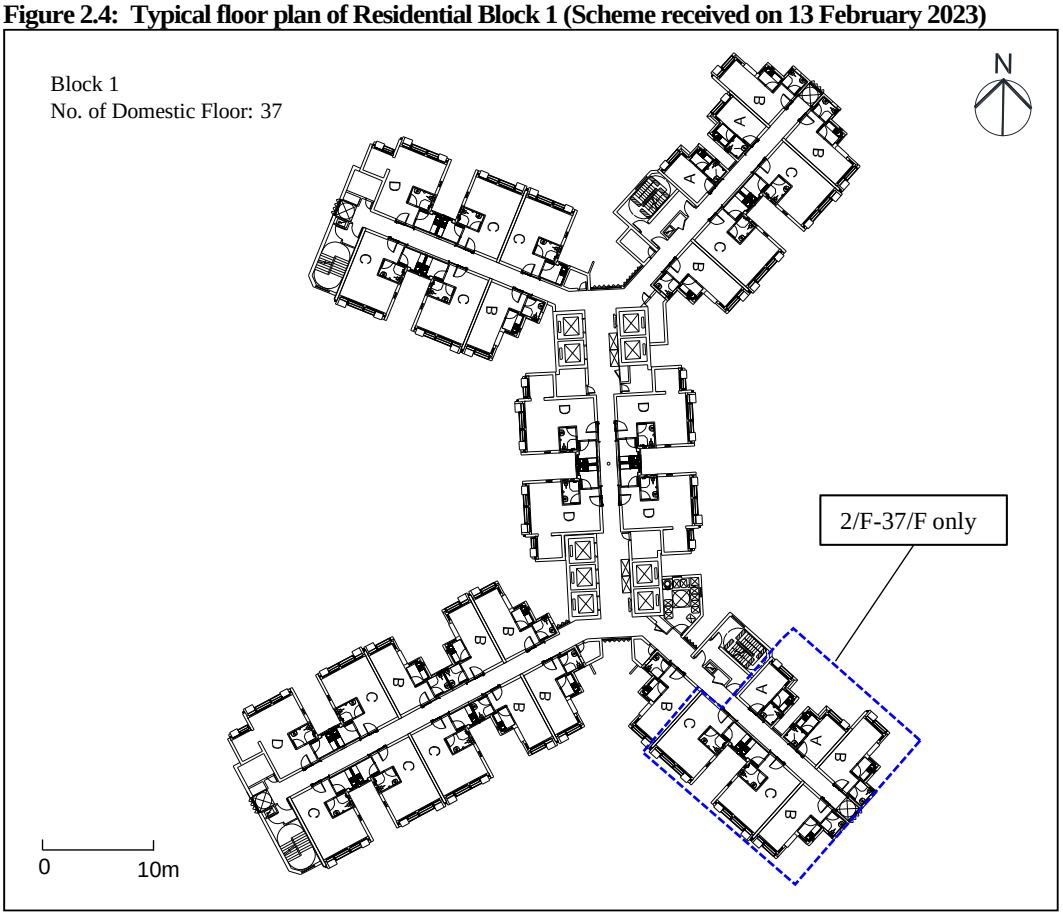


Figure 2.5: Typical floor plan of Residential Block 2 (Scheme received on 13 February 2023)

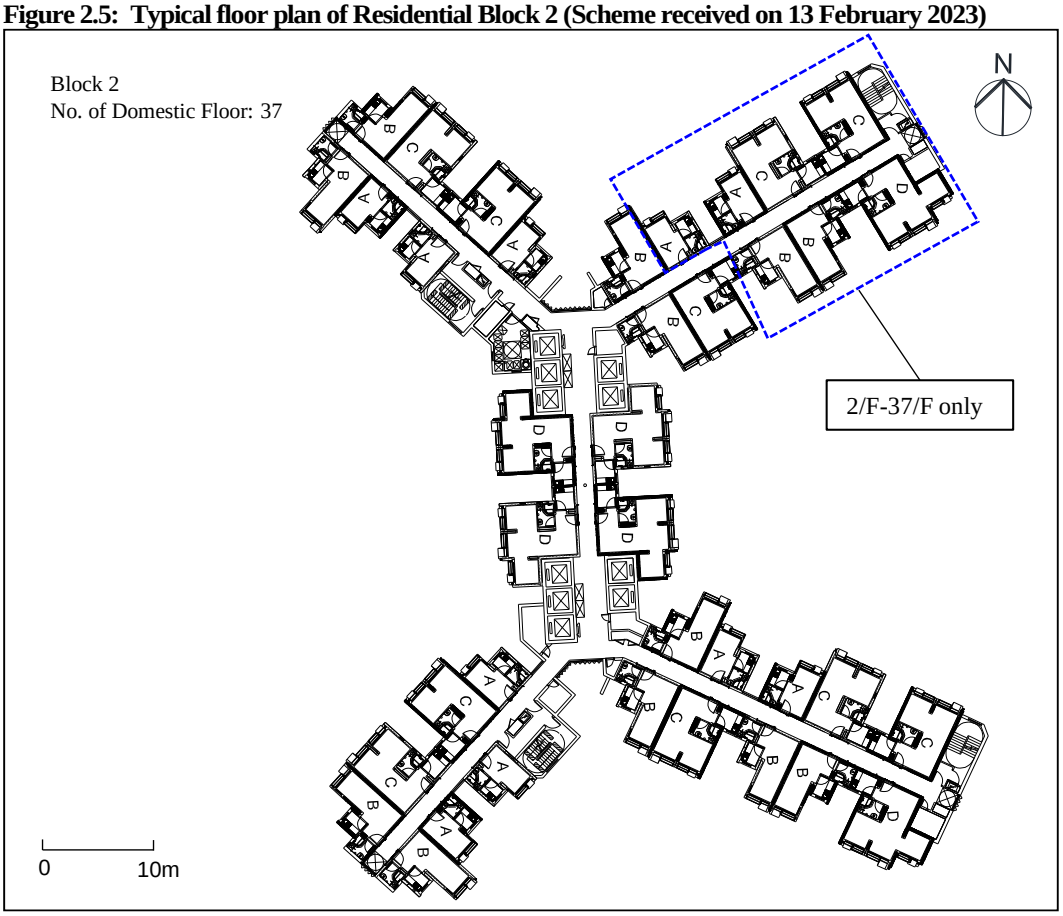


Figure 2.6: Typical floor plan of Residential Block 3 (Scheme received on 13 February 2023)

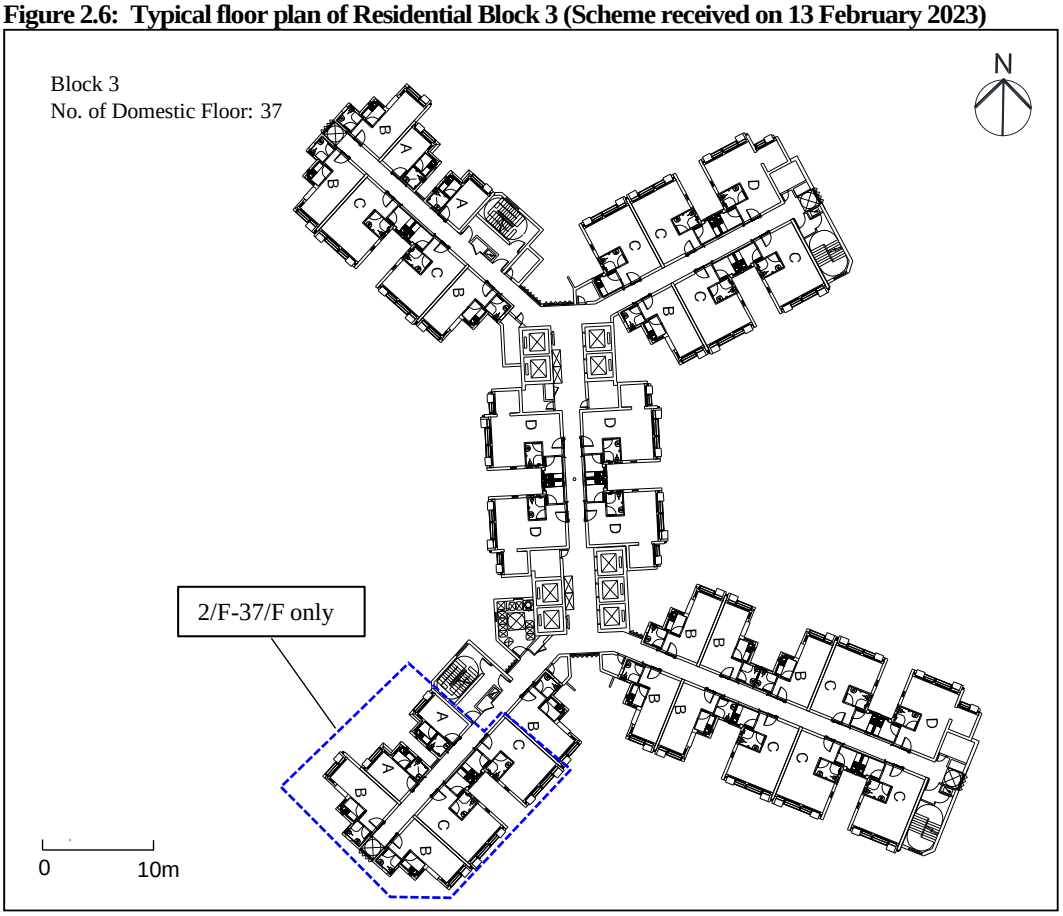
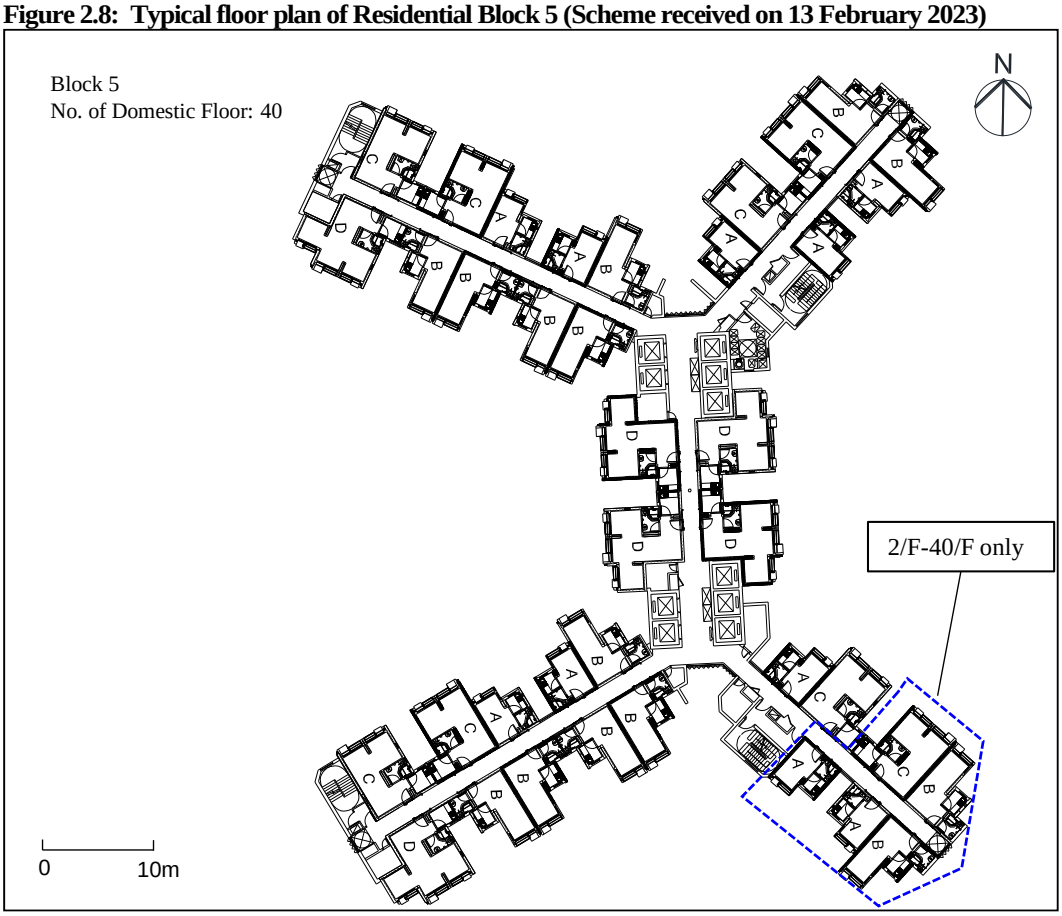


Figure 2.7: Typical floor plan of Residential Block 4 (Scheme received on 13 February 2023)



Figure 2.8: Typical floor plan of Residential Block 5 (Scheme received on 13 February 2023)



3 Site Inspection

3.1.1.1 The subject site is located on the reclaimed land of Area 133A in TCE. The land has already been formed. The reclamation at the remaining areas of TCNTE (East) was still being undertaken and the associated site formation and infrastructure works will be carried out by Civil Engineering and Development Department (CEDD).

3.1.1.2 The subject site will be bounded by Road D3 to the west, Road D2 to the north, Road L6 to the east and Road L7 to the south. Another two public housing sites at 133B and Area 133C are planned to its east. The site will also be surrounded by other developments in its immediate vicinity, including Areas 129 to 132 to the south, Areas 113 and 117 to the west, and Areas 139 to 141 to the north.

3.1.1.3 Based on site observation, the subject site is currently occupied by CEDD as works area for storage of construction plants or construction materials. Photographs taken at site are given in **Photo 1** and **Photo 2** below.

Photo 1: Subject Site (occupied by CEDD as works area)	**Photo 2: Subject Site (occupied by CEDD as works area)**
	

4 Road Traffic Noise Impact Assessment

4.1 Concerned Road Sections and Noise Sensitive Receivers

4.1.1.1 With reference to the HKPSG, Noise Sensitive Receivers (NSRs) shall include residential uses (all domestic premises including temporary housing accommodation), institutional uses (educational institutions including kindergarten, child care centres and all others where unaided voice communication is required), hotels, hostels, offices, places of public worship, courts of law, hospitals, clinics, convalescences, residential care homes for the elderly, amphitheatres, auditoria, libraries, performing arts centres and country parks. Based on the current development plan, the proposed domestic blocks, kindergarten and management office are planned within the site and all of them are regarded as NSRs.

4.2 Noise Criteria

4.2.1.1 In accordance with the HKPSG, the maximum permissible hourly road traffic noise level at 1m from the external facades of the representative NSRs for the proposed development is summarized in **Table 4.1**. The criterion applies to premises relying on opened windows as primary means for ventilation. As mentioned in **Section 2.2**, the layouts of the kindergarten and management office at P3/F are still being investigated. Hence, assessment will be supplemented in the next stage.

Table 4.1: Summary of noise criterion for road traffic noise

Proposed Developments / Facilities	Noise Sensitive Room with Openable Windows as Primary Means for Ventilation [1]	Uses	Noise Standards for Road Traffic Noise, $L_{10(1\ hour)}$ dB(A)
Residential Block 1 to Block 5	Residential Units	Domestic	70

Notes:
[1] All sensitive rooms which rely on opened windows as primary means for ventilation are identified.

4.3 Noise Assessment Points

4.3.1.1 Assessment points for the residential blocks have been assigned to all openable windows of the NSRs for ventilation. The locations of the selected assessment points are given in **Figure 4.1 to 4.5**.

Figure 4.1: Selected assessment points for Block 1 (road traffic noise assessment)



Figure 4.2: Selected assessment points for Block 2 (road traffic noise assessment)

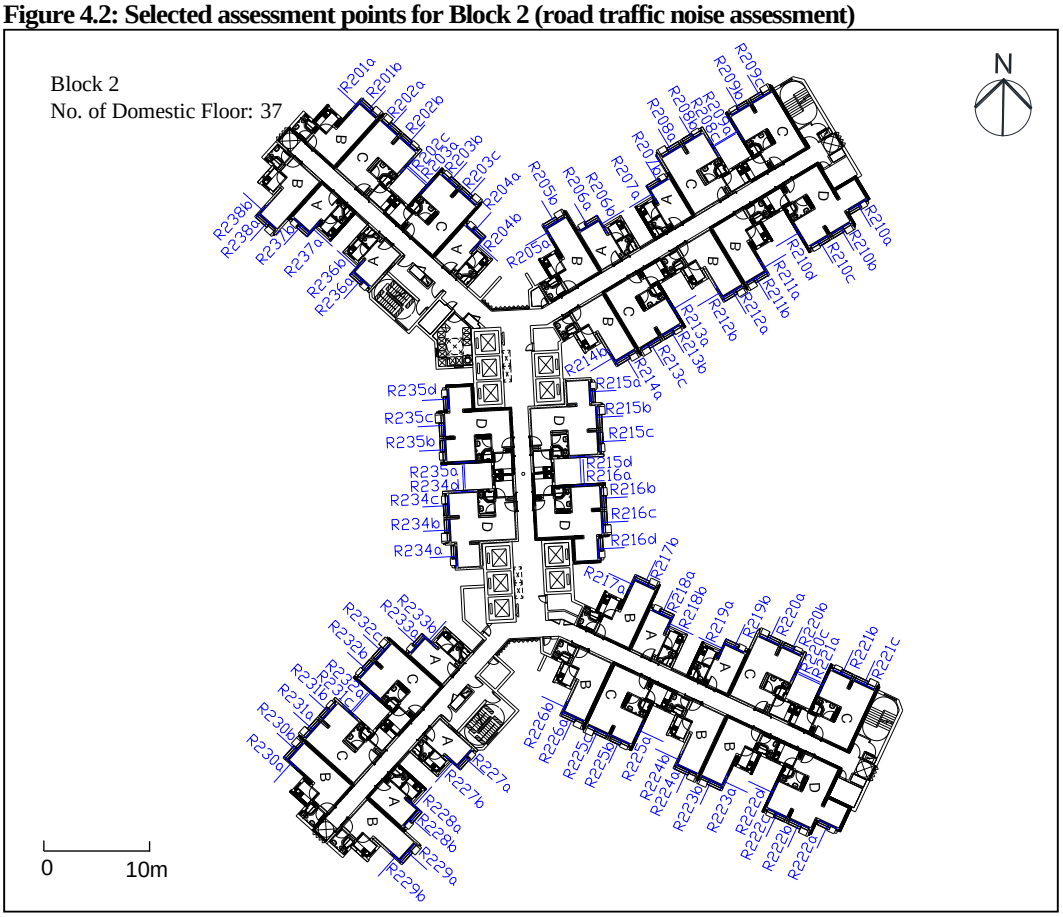


Figure 4.3: Selected assessment points for Block 3 (road traffic noise assessment)

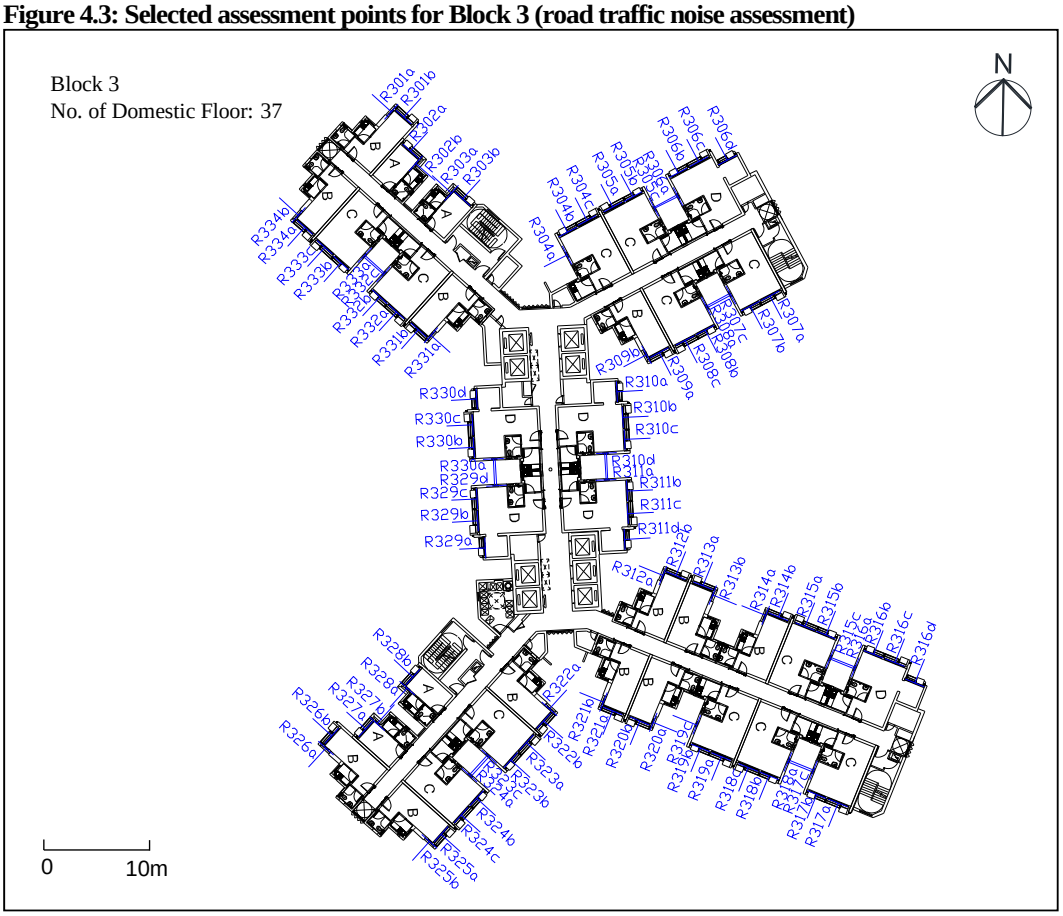


Figure 4.4: Selected assessment points for Block 4 (road traffic noise assessment)



Figure 4.5: Selected assessment points for Block 5 (road traffic noise assessment)



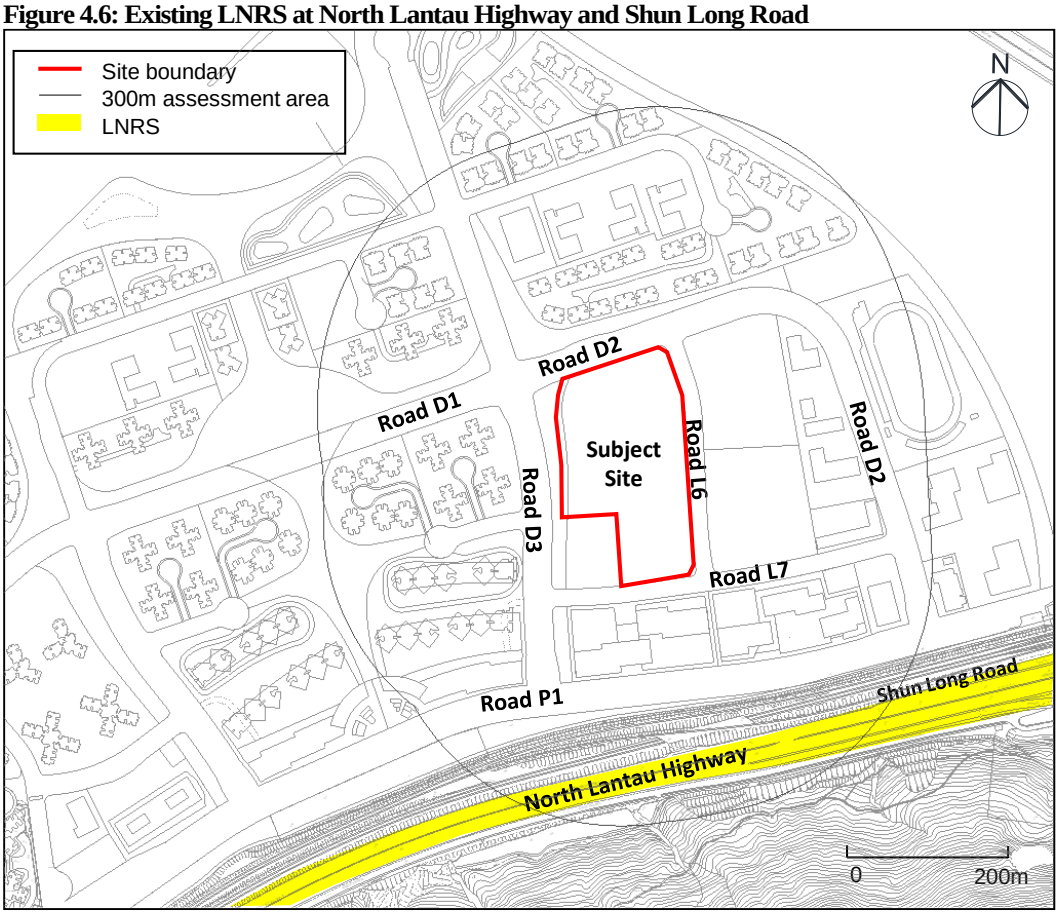
4.4 Assessment Methodology

4.4.1.1 The prediction is based on the calculation method in accordance with the UK Department of the Transport "Calculation of Road Traffic Noise" (CRTN) and the traffic noise levels at the facades of the selected assessment points have been predicted.

Existing Noise Mitigation Measures

4.4.1.2 Low noise road surfacing (LNRS) is currently in place on North Lantau Highway and Shun Long Road. Letter of reply from Highways Department (HyD) is attached in **Appendix 4.1**. The extent of LNRS is illustrated in **Figure 4.6**.

Figure 4.6: Existing LNRS at North Lantau Highway and Shun Long Road



Proposed Noise Mitigation Measures

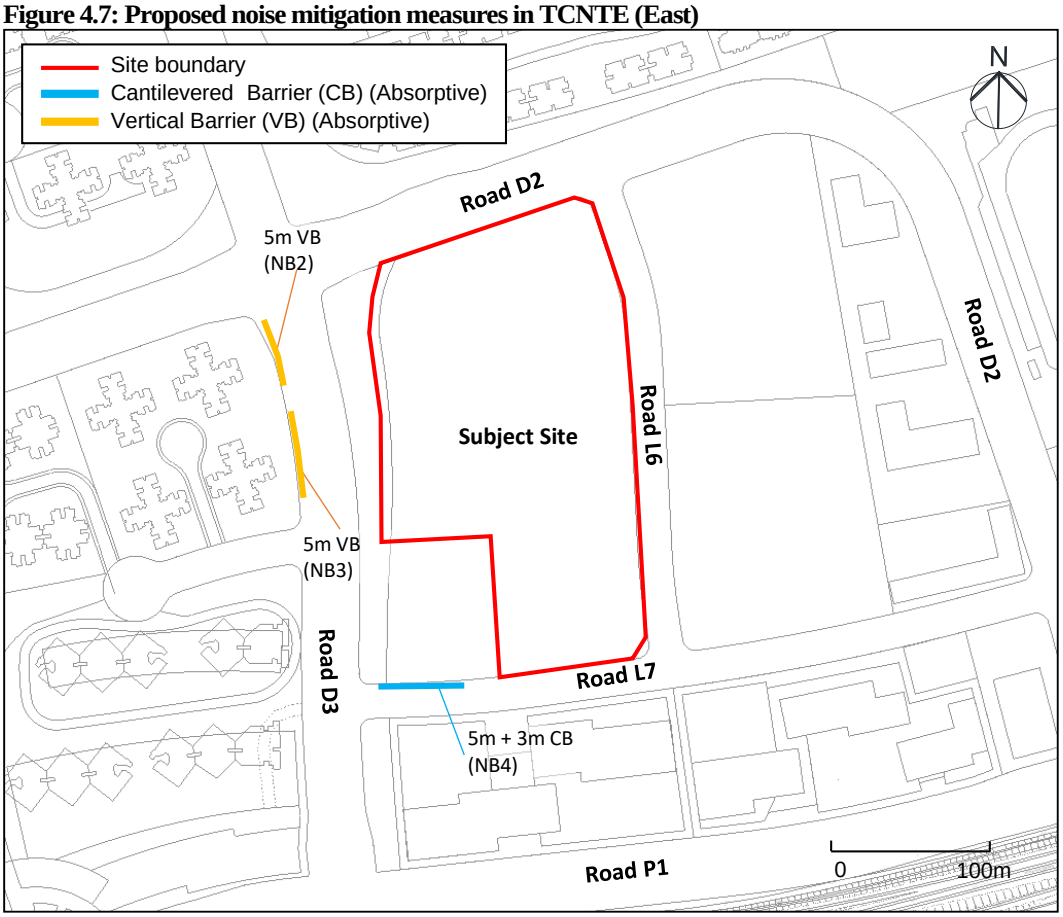
4.4.1.3 The approved TCNTE EIA (AEIAR-196/2016) has proposed at-source noise mitigation measures on some planned roads in TCNTE (East) to relieve the noise impacts caused by its associated new road infrastructure works. The proposed noise mitigation measures were reviewed in Civil Engineering and Development Department (CEDD)'s Environmental Review studies for Enhancement of the Development Intensity in TCNTE (East). The proposed noise barriers on Road L7 and Road D3 which are within 300m of the subject housing site are described below (**Figure 4.7**).

- One section of cantilevered noise barrier (5m high with 3m cantilever arm) of about 60m in length along a section of Road L7; and
- Two 5m high vertical noise barrier of about 120m in total length along a section of Road D3.

4.4.1.4 The tender drawings of the noise barriers provided by CEDD are shown in **Appendix 4.2**.

4.4.1.5 The noise barriers in TCNTE as described above have been incorporated into the base case of the traffic noise model of the present EAS. It shall however be noted that the proposed noise mitigation measures are still being reviewed by CEDD. Should there be any change in the proposed noise mitigation measures under CEDD's study, the road traffic noise assessment will be updated in the subsequent stage of the EAS.

Figure 4.7: Proposed noise mitigation measures in TCNTE (East)



4.5 Traffic Flow Data for Assessment

4.5.1.1 Based on the information provided by HKHA, the tentative occupation year of the proposed development is Year 2030. According to CEDD's Environmental Review studies for Enhancement of the Development Intensity in TCNTE (East), the maximum traffic projection for road traffic noise assessment is Year 2045 (which is 15 years upon the ultimate commissioning year of the TCNTE (East)). The same set of projected traffic flow data for Year 2045 has been adopted for the assessment in current EAS.

4.5.1.2 Reply from Transport Department (TD) on the traffic forecast for CEDD's Environmental Review studies for Enhancement of the Development Intensity in TCNTE (East) is given in **Appendix 4.3**.

4.5.1.3 The traffic flow data for the major roads surrounding the subject site is presented in **Figure 4.8** and **Table 4.2** below. The traffic flow data for all roads is given in **Appendix 4.4**.

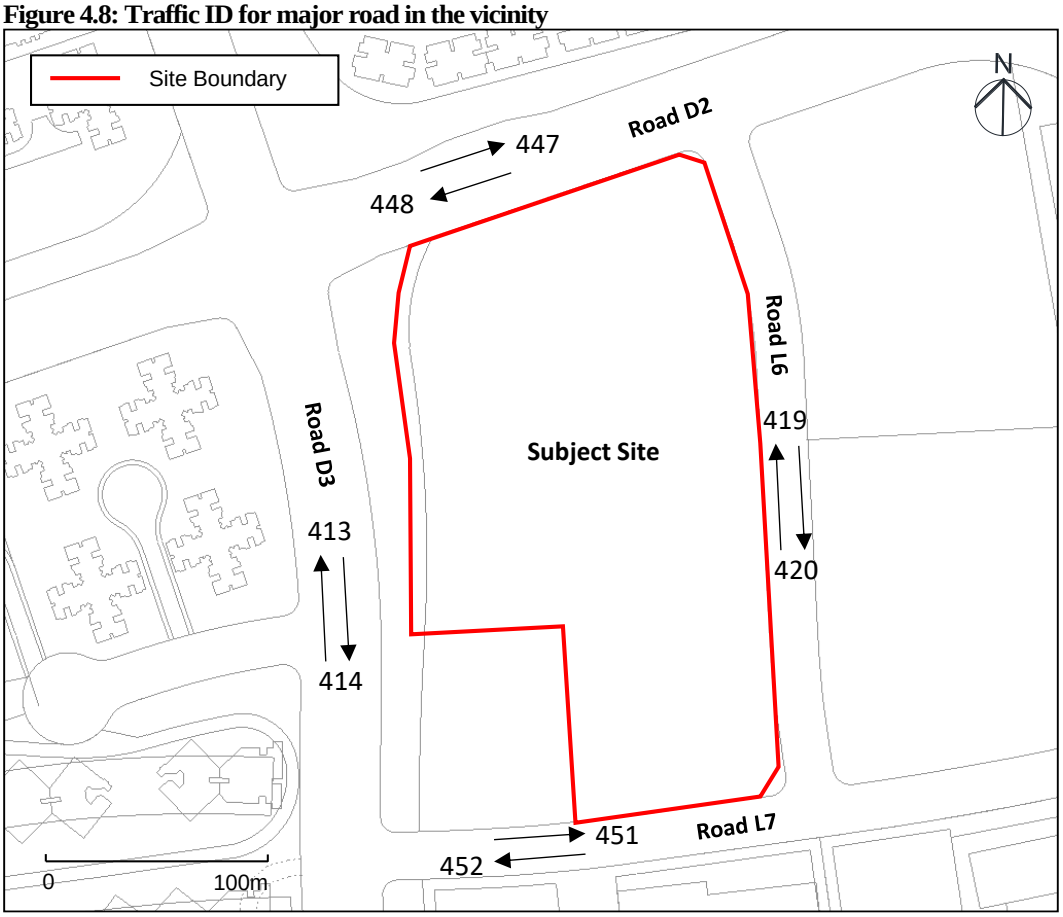
Table 4.2: Predicted peak hourly traffic flow data

Road ID [1]	Street [2]	Speed Limit (km/hr)	Year 2045	
			Traffic Flow (veh/hr)	% of Heavy Vehicles
413	Road D3 NB	50	371	19.6%
414	Road D3 SB	50	212	28.0%

Road ID [1]	Street [2]	Speed Limit (km/hr)	Year 2045	
			Traffic Flow (veh/hr)	% of Heavy Vehicles
419	Road L6 NB	50	220	26.0%
420	Road L6 SB	50	260	33.8%
447	Road D2 EB	50	730	21.0%
448	Road D2 WB	50	45	95.7%
451	Road L7 EB	50	422	27.1%
452	Road L7 WB	50	58	38.5%

Notes:
[1] Only the major roads are shown in the table above. Hence, the flow ID is not in sequential order
[2] NB = North bound, SB = South bound, EB = East bound, WB = West bound

Figure 4.8: Traffic ID for major road in the vicinity



4.6 Assessment Results for Residential Blocks

4.6.1.1 Optimised building layout, design and orientation have already been incorporated into the current scheme for the basecase scenario, as described below:

Building Block Design, Layout and Orientation

4.6.1.2 During the process of designing the development layout, due consideration has been given to avoid the road traffic noise impacts as much as practicable. Different block designs have

been investigated. Y-shape building block design has been adopted which could provide self-screening effect and reduce view angle to the nearby roads.

4.6.1.3 The current scheme is found to be the optimal option from perspectives of development efficiency, flat production, noise performance, scenery and angle of view, etc.

Podium

4.6.1.4 Blocks 1 to 4 are situated on top of a podium of approximate 15m high for the current scheme which can increase the separation distance between the residential units and the nearby roads to achieve larger noise reduction. Detailed layout and section drawings could be referred to **Appendix 2.1**.

Building setback

4.6.1.5 The current building blocks have been deposited with optimised setback distance from the nearby roads to reduce the noise impacts as far as practicable.

4.6.1.6 With the above proper designs, it is estimated that a total of 85 residential flats will be exposed to noise level in excess of the 70dB(A) criterion and the overall noise compliance rate is 98.8%. Results of the road traffic noise assessments for the proposed residential development are summarised in **Table 4.3**. Details are presented in **Appendix 4.5**. Without these building designs, it is expected that the noise compliance rate would be lower.

Table 4.3 Road traffic noise assessment results – Residential Blocks (Basecase Scenarios)

Scenario	Total No. of Flats	No. of Flats Exceeding the Noise Criteria	Max Noise Levels, dB(A)	Compliance Rate
Basecase Scenario	6,817	85	74	98.8%

4.6.1.7 Results indicate that the predicted exceedances are located on the northern facades of Block 1, northern and south-eastern facades of Block 3, eastern facades of Block 4, and eastern and southern facades of Block 5, which are primarily affected by Road D2, Road L6 and Road L7. The locations of the predicted exceedances are given in **Table 4.4** below and shown in **Figures 4.9 to 4.12** below.

Table 4.4 Location of the predicted exceedances – Residential Blocks (Basecase Scenarios)

Block	Exceeded NSR	Exceeded Floor	Number of Exceedance
1	R101a	1/F – 4/F	4
	R101b	1/F – 2/F	
	R106a	1/F – 2/F	2
	R106b	1/F – 2/F	
3	R301a	1/F	1
	R306d	1/F	1
	R316d	1/F – 2/F	2
4	R410a	1/F-4/F	4
	R410b	1/F-3/F	
	R417c	1/F	1

Block	Exceeded NSR	Exceeded Floor	Number of Exceedance
	R418a	1/F-4/F	4
	R418b	1/F-4/F	
5	R510a	1/F – 8/F	8
	R510b	1/F – 8/F	
	R516a	1/F – 2/F	4
	R516b	1/F – 4/F	
	R517b	2/F – 7/F	7
	R517c	2/F – 8/F	
	R518a	2/F – 11/F	11
	R518b	2/F – 12/F	
	R519a	2/F – 13/F	12
	R519b	2/F – 10/F	
	R523a	1/F	1
	R524b	1/F – 5/F	5
	R525a	1/F – 6/F	6
	R525b	1/F – 2/F	
	R526b	1/F – 9/F	12
	R526c	1/F – 11/F	
	R526d	1/F – 12/F	
Total number of Exceedance		-	85

Figure 4.9: Location of predicted exceedances in Block 1

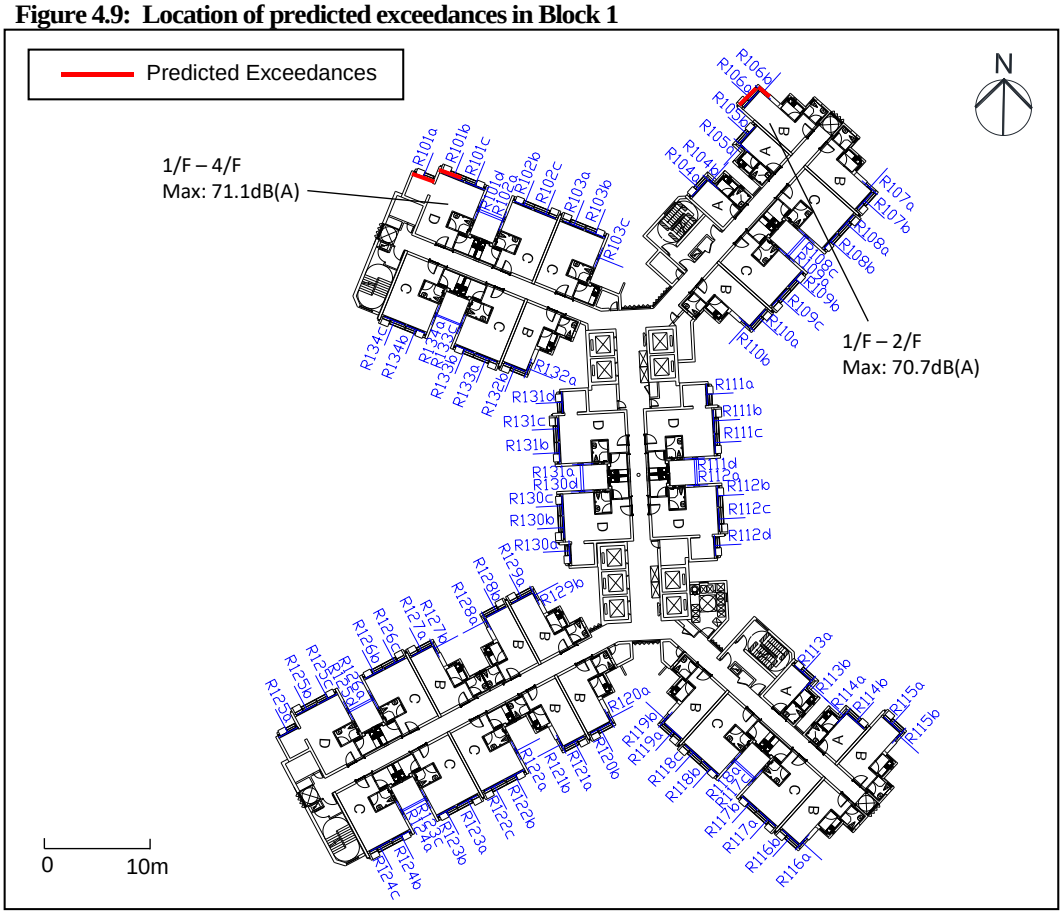


Figure 4.10: Location of predicted exceedances in Block 3

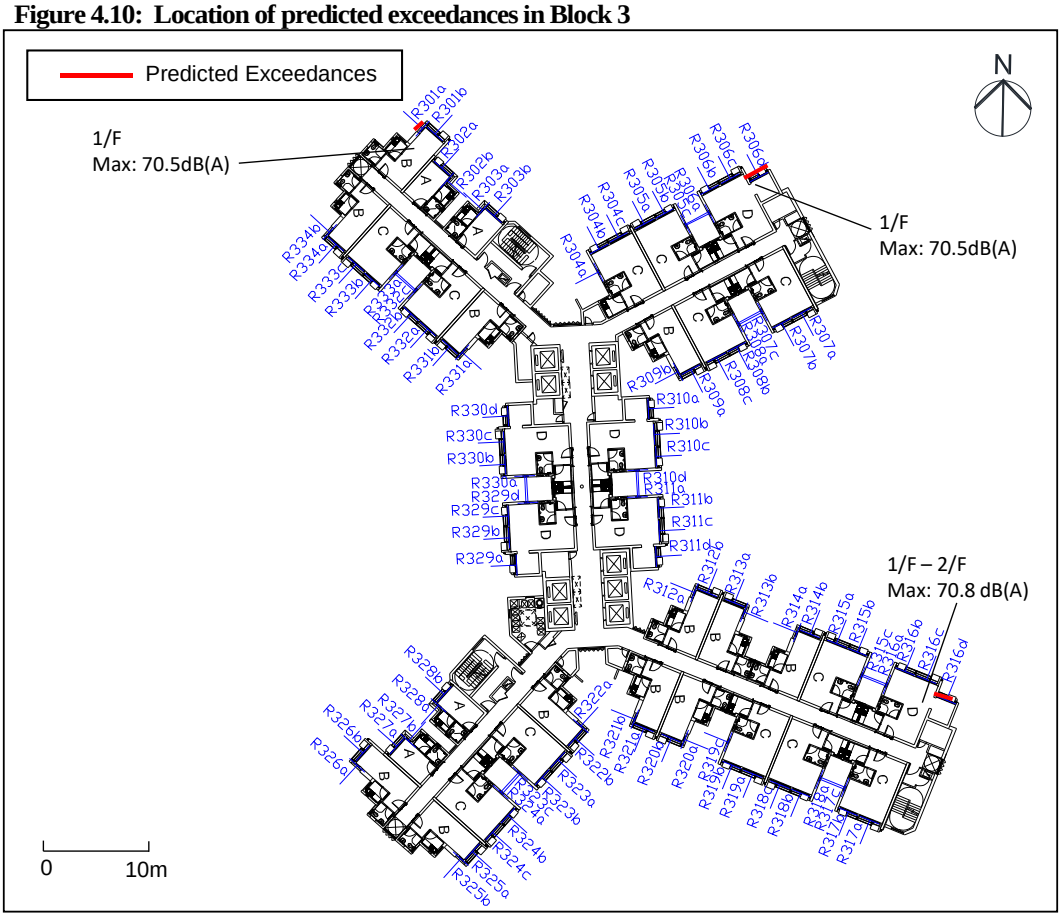


Figure 4.11: Location of predicted exceedances in Block 4

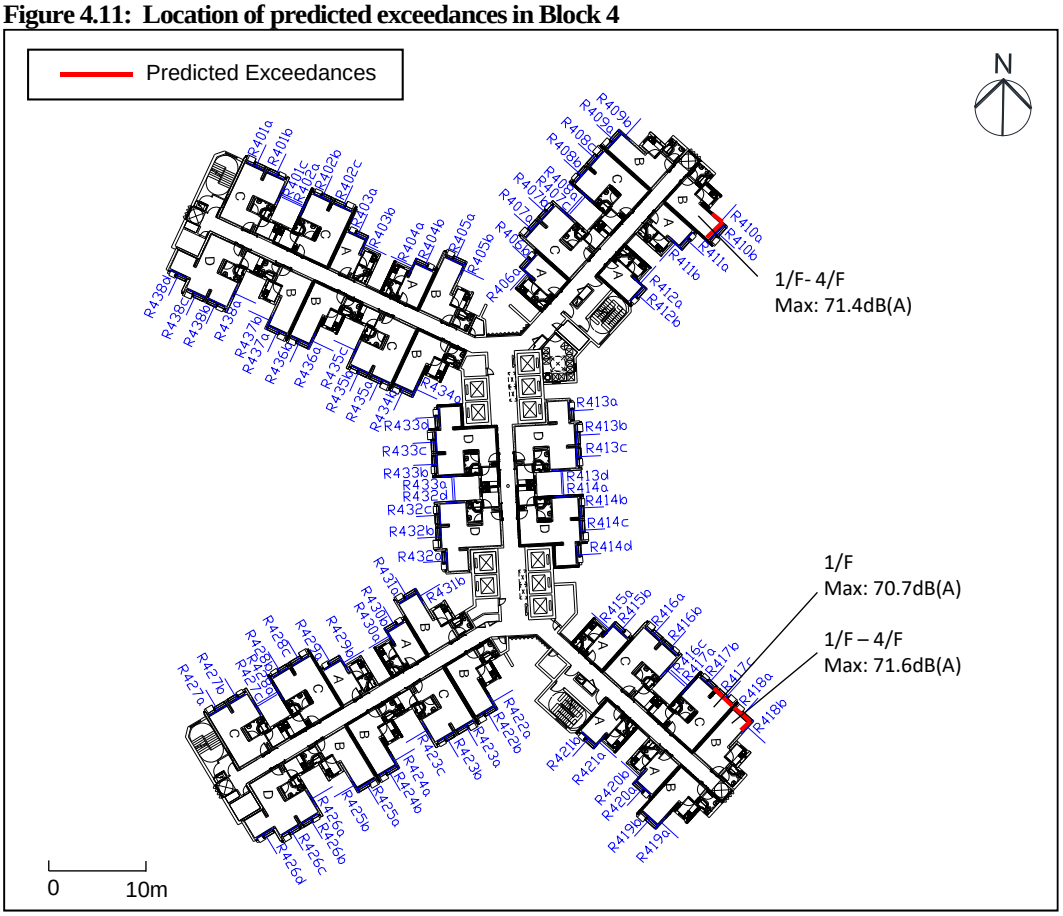
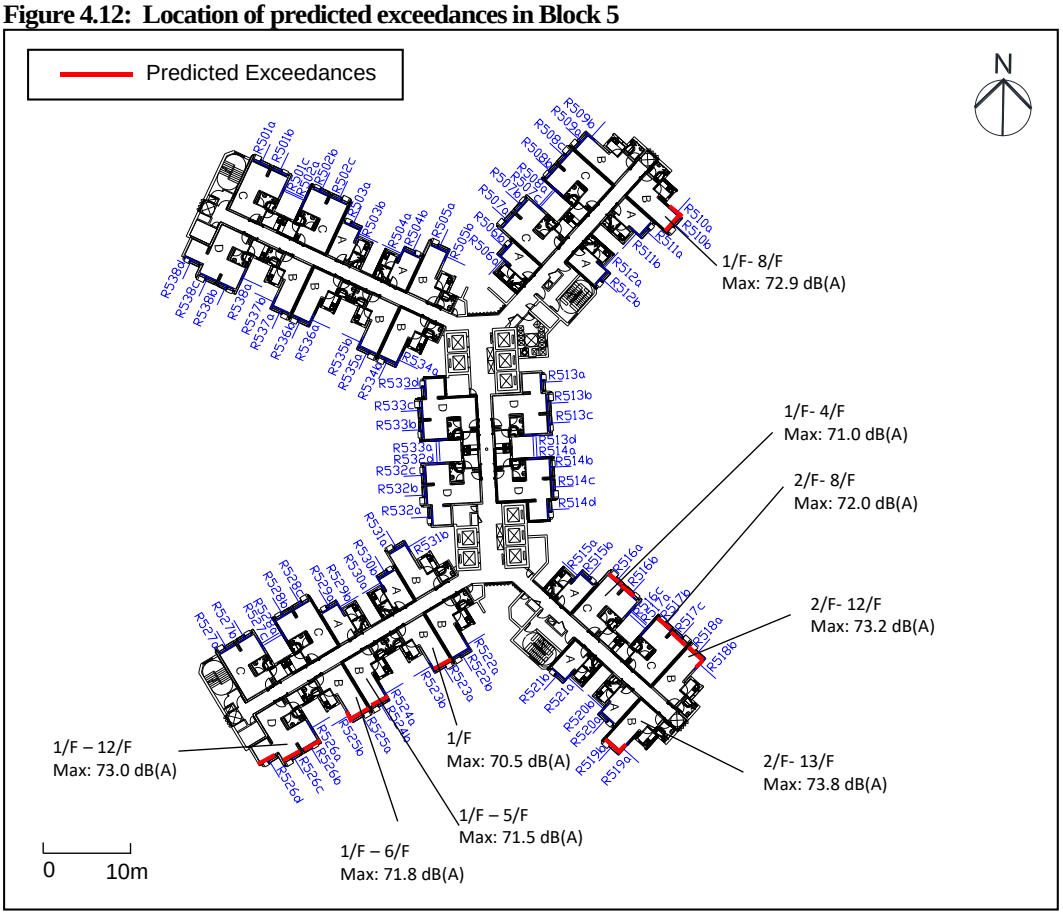


Figure 4.12: Location of predicted exceedances in Block 5



4.7 Noise Mitigation Measures for Residential Blocks

4.7.1.1 Proper building layout and design have been adopted in the current scheme as described in the section above. In addition, other practicable noise mitigation measures have also been investigated exhaustively and the findings are discussed as follows:

Boundary /Barrier Wall

4.7.1.2 Block 1 to 4 have been already situated on a podium of 15m. Installation of a boundary wall is considered not effective; while barrier wall along the podium edge is not feasible as it would block the view of the first domestic floor. Hence, other forms of mitigation measures such as architectural fin, fixed glazing and acoustic windows have been adopted (see below sections).

Noise Shielding Building

4.7.1.3 Podium with carpark underneath has been planned at Block 1 to 4 which can provide noise shielding from Road D3, Road D2 and Road L6.

Architectural Fin

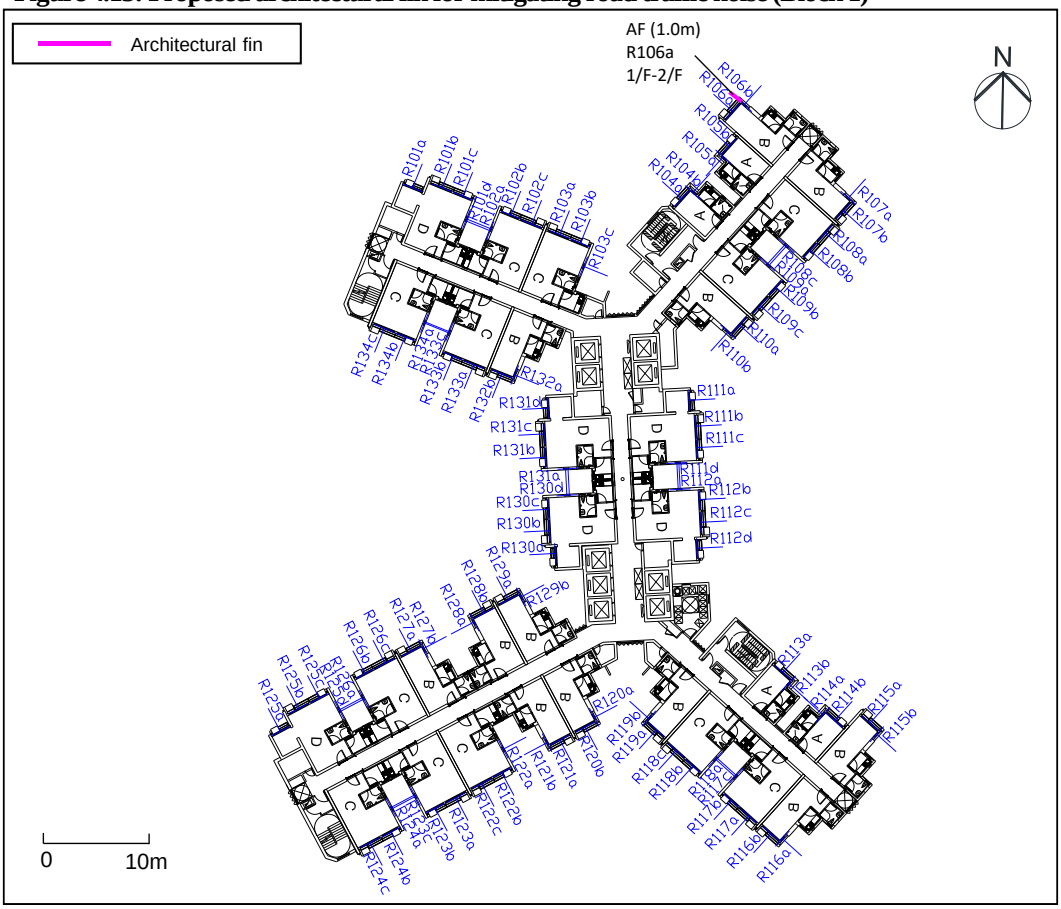
4.7.1.4 Since the Modular Integrated Construction (MiC) method will be adopted for Blocks 2, 4 and 5, fin is not a preferred noise mitigation option. Fins is also not considered at the small bedrooms of R101a, R306d and R316d due to the potential noise reflection effect between the proposed fins and the side wall of the living room.

4.7.1.5 Feasibility of the architectural fin at R106a has been investigated and it is found that a 1m long fin is effective to mitigate the impact to within the noise criterion. Since the fin at R106a is only 1m long, potential noise reflection effect is considered negligible. It is recommended that the architectural fin shall be integrated into the building design to form an architectural feature for better visual appearance. It is also confirmed by the Project Team that the proposed architectural fin is practical from structural engineering point of view. Location of the proposed architectural fin is given in **Table 4.5** and indicated in **Figure 4.13** below. Detailed results with the provision of fin are presented in **Appendix 4.6**.

Table 4.5 Location of proposed architectural fin for mitigating road traffic noise

Architectural Fin Location	Extent of Architectural Fin	Target Protection for NSR	Implemented Floor
R106a	1m	R106a	1/F – 2/F

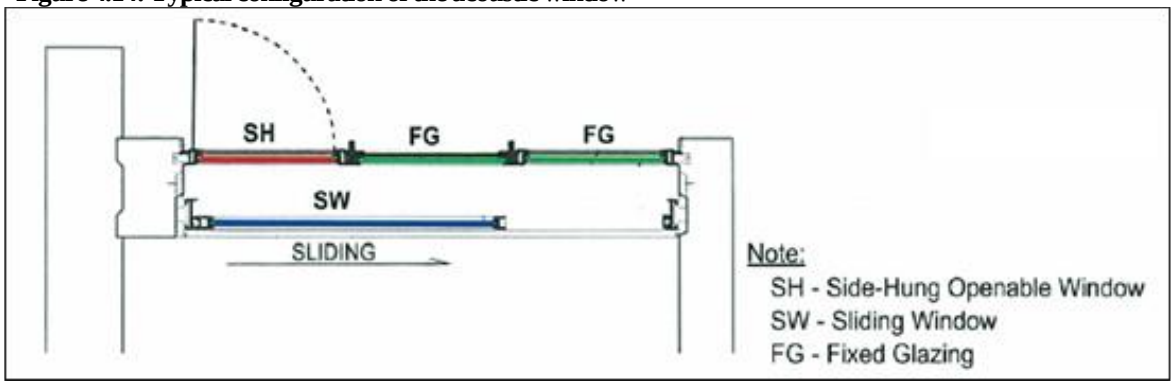
Figure 4.13: Proposed architectural fin for mitigating road traffic noise (Block 1)



Acoustic Window Design

4.7.1.6 The acoustic window is designed with two layers of window including push open window at outer layer and sliding window at inner layer as illustrated in **Figure 4.14**. The opening and gap between the two layers of window allow air ventilation while direct noise transmission into the room is obstructed by the inner sliding window and hence noise reduction could be achieved. In order to achieve the intended noise reduction, the sliding window should be behind the opened side-hung window while the fixed glazing should be kept close as shown in **Figure 4.14**. The above information about the acoustic window will be stated in the Decoration Handbook to let the future occupants be well aware of its intended purpose.

Figure 4.14: Typical configuration of the acoustic window



4.7.1.7 For the main windows of the affected flats which are facing directly to Road D2, Road L6 and Road L7, acoustic windows are recommended. The locations of the proposed acoustic window are summarized in **Table 4.6** and indicated in **Figures 4.15** to **4.18**.

4.7.1.8 The configurations of the proposed acoustic window to be adopted in this scheme are shown in **Appendix 4.7**. The flat unit and the window configurations in the current scheme are generally based on the latest Modular Flat Design (MFD) for Block 1 and 3, and latest Modular Flat Design - Modular Integrated Construction (MFD-MiC) for Block 4 and 5, except with minor modification on the height and width of the windows.

4.7.1.9 As advised by HKHA, the noise attenuation of acoustic window for Modular Flat Type B-5 should be applied to Flat Type B, Modular Flat Type C-7 should be applied to Flat Type C and Flat Type D (LR & BR1) in the assessment (see **Appendix 4.8** for details) for Block 1 and 3. The height of the windows has been slightly adjusted from 1383mm to 1395mm for Flat Type B, Type C and Type D Living Room. Nonetheless, such minor changes in the window opening area would not significantly affect the noise attenuation

4.7.1.10 For Block 4 and 5, as advised by HKHA, the noise attenuation of acoustic window for Modular Flat Type B-M2 should be applied to Flat Type B, Modular Flat Type C-M2 should be applied to Flat Type C, and Modular Flat Type D-M2 should be applied to Flat Type D (See **Appendix 4.9** for details) in the assessment. The height of the windows has been slightly adjusted from 1352mm to 1310mm for Flat Type B, Type C and Type D Living Room. Nonetheless, such minor changes in the window opening area would not significantly affect the noise attenuation.

4.7.1.11 Based on the current design, 6mm window pane will be provided to the proposed acoustic window. The openable side-hung windows and fixed glazing of the acoustic windows are in the favourable setting for noise reduction as shown in **Figures 4.15** to **4.18**. The design of the proposed acoustic window can meet the relevant ventilation requirement under the Building (Planning) Regulations. According to the Practice Note on Lighting and Ventilation Requirements – Performance-based Approach (APP-130) issued by Buildings Department, for optimum performance with the inner sliding glass panel in a closed position, the air gap should have a length of not less than 100mm and a width between 100mm and 175mm. The length and width of the air gap of the proposed acoustic window also meet these conditions.

Table 4.6 Locations of proposed acoustic windows for mitigating road traffic noise

Acoustic Window at NSR	Floor Requiring Acoustic Window	Type of Flat	Ref. Modular Flat Type	Acoustic Window Configurations			With / Without Absorption (W / WO)	Noise Attenuation, dB(A)
				Gap Width, mm	Inner/Outer Window Width, mm	Overlapping Length, mm		
R101a	1/F – 4/F	D	D-7 (BR2)	115	550/550	500	WO	2.7
R101b	1/F – 2/F	D	D-7 (LR)	115	1040/1060	140	WO	5.4
R101c	1/F – 2/F	D	D-7 (BR1)	115	575/550	525	WO	5.4

Acoustic Window at NSR	Floor Requiring Acoustic Window	Type of Flat	Ref. Modular Flat Type	Acoustic Window Configurations			With / Without Absorption (W / WO)	Noise Attenuation, dB(A)
				Gap Width, mm	Inner/Outer Window Width, mm	Overlapping Length, mm		
R306d	1/F	D	D-7 (BR2)	115	550/550	500	WO	2.7
R316d	1/F – 2/F	D	D-7 (BR2)	115	550/550	500	WO	2.7
R410b	1/F – 3/F	B	B-M2	115	895/945	200	WO	5.8
R417b	1/F	C	C-M2 (BR1)	115	660/633	607	WO	5.6
R417c	1/F	C	C-M2 (LR)	115	915/985	100	WO	5.6
R418a	1/F – 4/F	B	B-M2	115	895/945	200	WO	5.8
R510b	1/F – 8/F	B	B-M2	115	895/945	200	WO	5.8
R516a	1/F – 4/F	C	C-M2 (LR)	115	915/985	100	WO	5.6
R516b	1/F – 4/F	C	C-M2 (BR1)	115	660/633	607	WO	5.6
R517b	2/F – 8/F	C	C-M2 (BR1)	115	660/633	607	WO	5.6
R517c	2/F – 8/F	C	C-M2 (LR)	115	915/985	100	WO	5.6
R518a	2/F – 11/F	B	B-M2	115	895/945	200	WO	5.8
R519b	2/F – 10/F	B	B-M2	115	895/945	200	WO	5.8
R523a	1/F	B	B-M2	115	895/945	200	WO	5.8
R524b	1/F – 5/F	B	B-M2	115	895/945	200	WO	5.8
R525a	1/F – 6/F	B	B-M2	115	895/945	200	WO	5.8
R526b	1/F – 11/F	D	D-M2 (BR1)	115	660/633	607	WO	5.6
R526c	1/F – 11/F	D	D-M2 (LR)	115	915/985	100	WO	5.6
R526d	1/F – 12/F	D	D-M2 (BR2)	115	545/545	680	WO	3.0

Conversion of Openable Window to Fixed Glazing at Side Window

4.7.1.12 With acoustic windows at the main window of the affected flats (Type B, Type C and BR1 of Type D) mentioned above, it is proposed to convert the openable side window to fixed

glazing. Where exceedances are predicted at the side windows, fixed glazing is also recommended. The proposed fixed glazing should be normally closed for noise reduction and need not to be opened for meeting the ventilation requirement. The maximum predicted noise level at the side windows is 74dB(A). At least 6mm window pane will be provided to the proposed fixed glazing from noise perspective and these fixed glazing could only be opened by Allen key for cleansing and maintenance purposes. The purpose of fixed glazing will be stated in the Decoration Handbook to let the future occupants be well aware of its intended purpose. The locations of the proposed fixed glazing windows are summarized in **Table 4.7** and indicated in **Figures 4.15** to **4.18**.

Table 4.7 Location of proposed fixed glazing for mitigating road traffic noise

Fixed glazing at NSR	Floor Requiring Fixed glazing
R101d	1/F – 2/F
R301a	1/F
R410a	1/F – 4/F
R417a	1/F
R418b	1/F – 4/F
R510a	1/F – 8/F
R516c	1/F – 4/F
R517a	2/F – 8/F
R518b	2/F – 12/F
R519a	2/F – 13/F
R523b	1/F
R524a	1/F – 5/F
R525b	1/F – 6/F
R526a	1/F – 11/F

4.7.1.13 With the provision of the recommended architectural fin, acoustic window and fixed glazing, all residential flats will be protected and a compliance rate of 100% could be achieved. Detailed results are attached in **Appendix 4.10.**

Figure 4.15: Proposed mitigation measures for Block 1

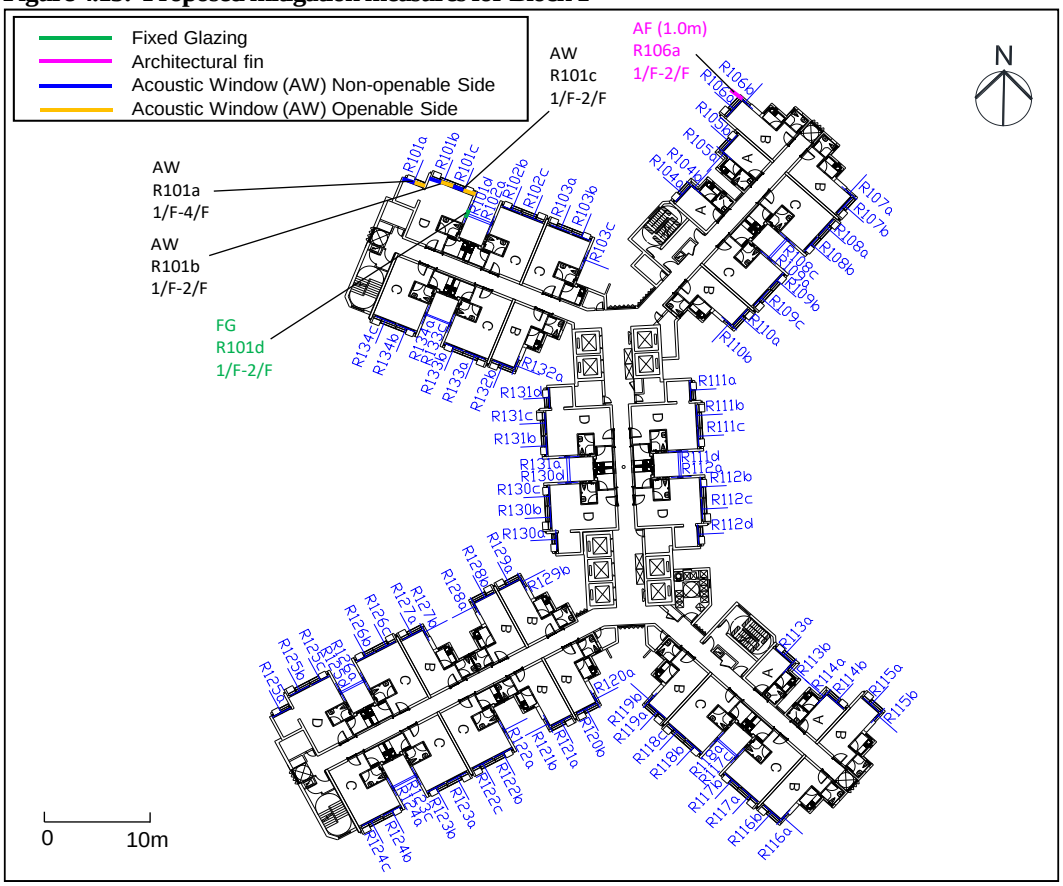


Figure 4.16: Proposed mitigation measures for Block 3

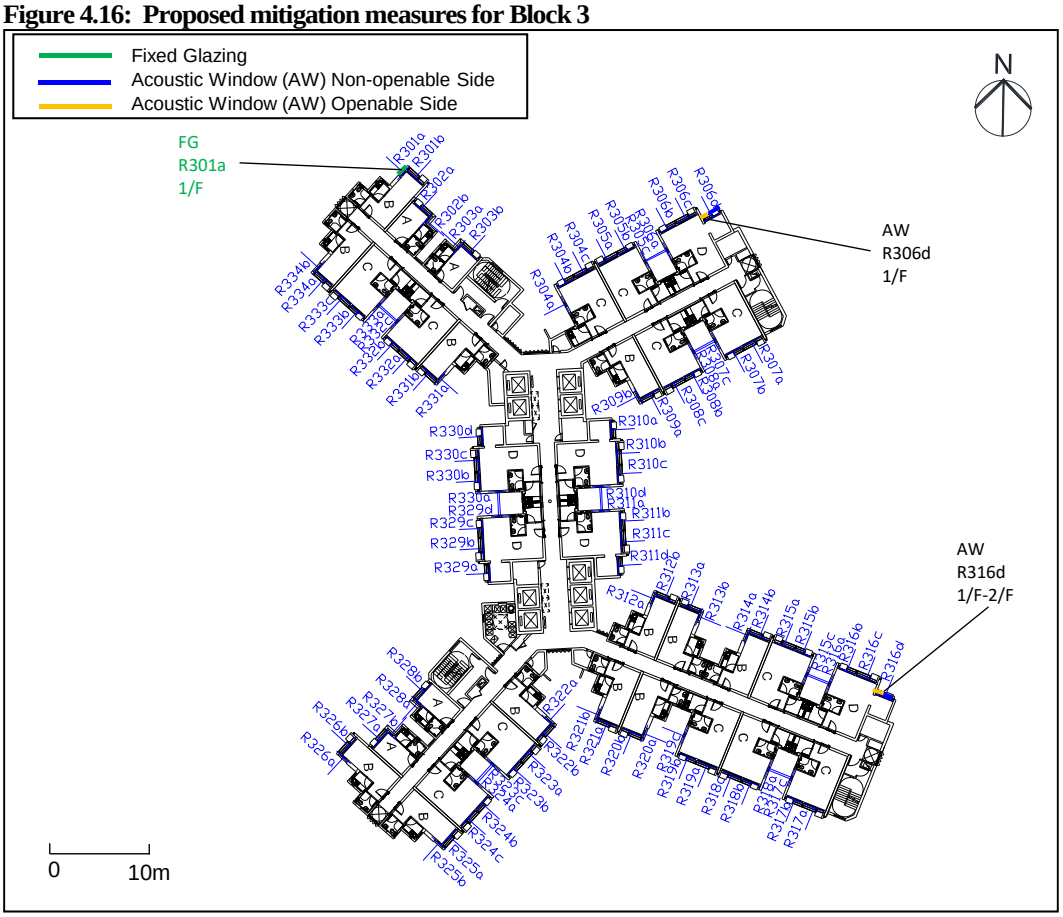


Figure 4.17: Proposed mitigation measures for Block 4

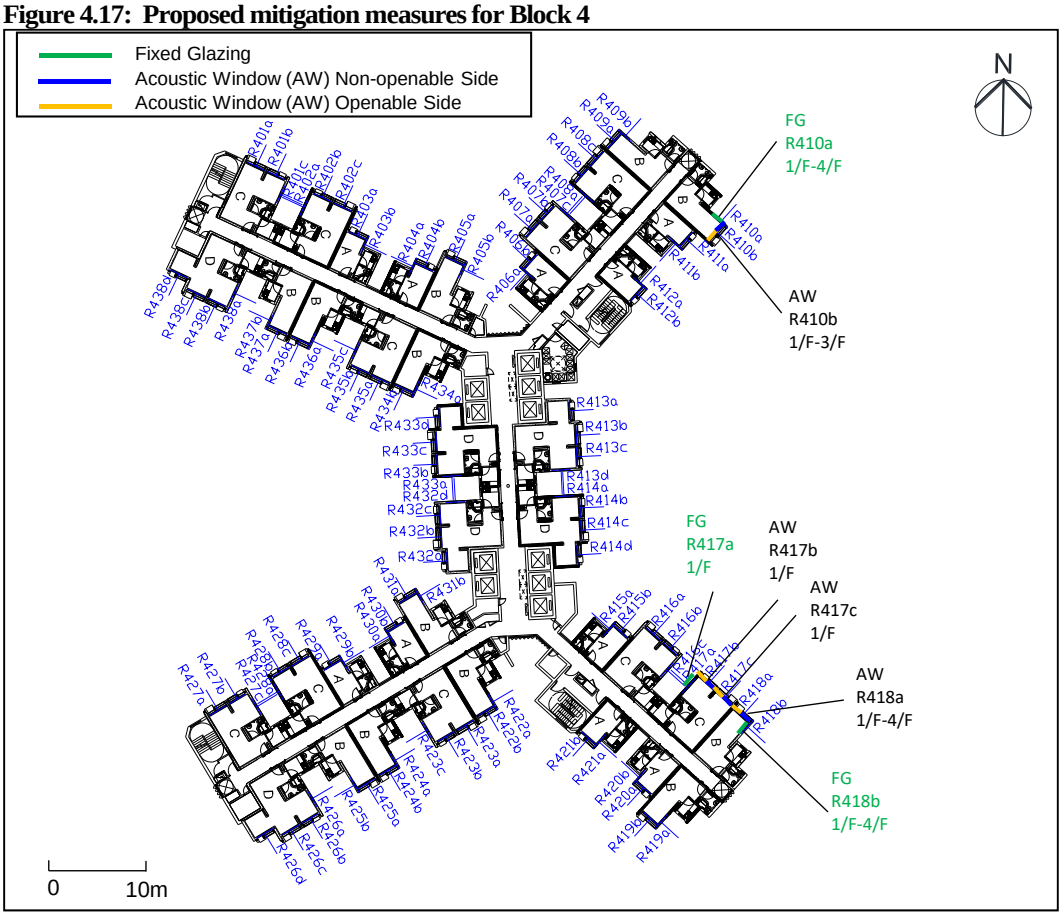
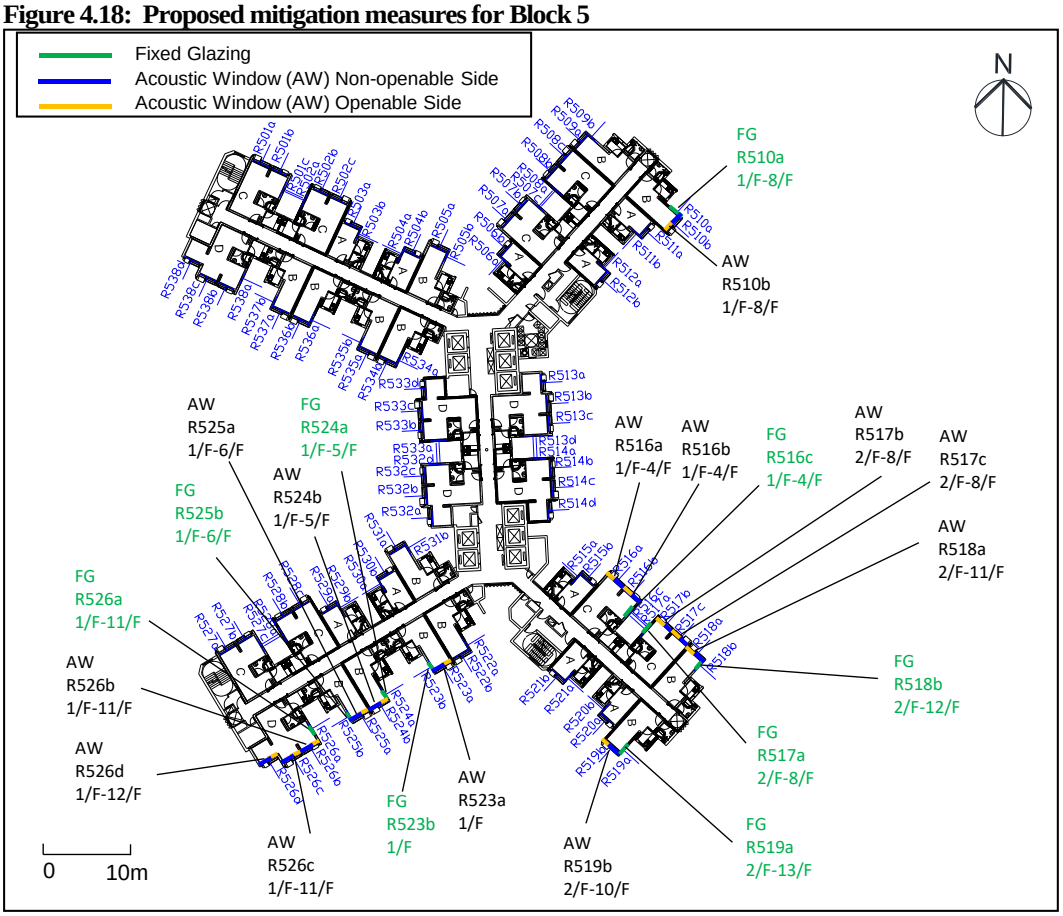


Figure 4.18: Proposed mitigation measures for Block 5



5 Review of Rail Noise Impact Assessment

5.1 Rail Noise Criteria

5.1.1.1 Noise planning standards for rail noise have been specified in Table 4.1 of the HKPSG Chapter 9, i.e. $L_{eq(24hr)}$ of 65 dB(A) and $L_{max(2300\text{-}0700hours)}$ of 85 dB(A). Besides, Acceptable Noise Levels (ANL) are also stipulated in the Technical Memorandum for Assessment of Noise from Places other than Domestic Premises, Public Places or Construction Sites Sites (IND-TM). issued under the Noise Control Ordinance as shown in **Table 5.1**. Rail noise impact is reviewed according to the recommendation of the HKPSG, which includes compliance with the relevant requirement of the NCO.

Table 5.1: Noise criteria for rail noise

Area Sensitivity Rating	Time Period [1]	Acceptable Noise Levels, $Leq_{(30\ mins)}$ dB(A) under IND-TM	Maximum A-weighted SPL, $L_{max\ (2300\text{-}0700hrs)}$ dB(A) under HKPSG	24 hours Equivalent SPL, $Leq_{(24\ hr)}$ dB(A) under HKPSG
A	Daytime & Evening	60	85	65
	Night-time	50		
B	Daytime & Evening	65		
	Night-time	55		
C	Daytime & Evening	70		
	Night-time	60		

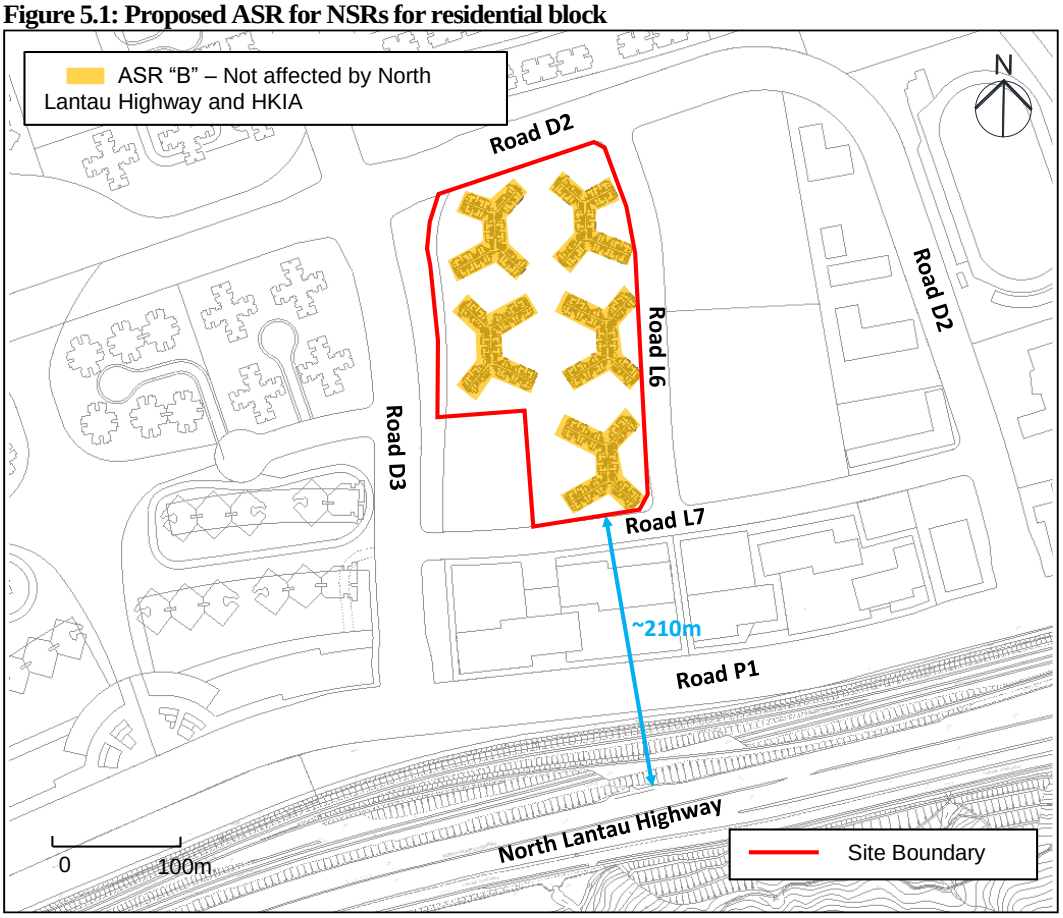
Note:
[1] Daytime: 0700 to 1900 hours, Evening: 1900 to 2300 hours, Night-time: 2300 to 0700 hours

5.1.1.2 The site is planned for high-rise residential development. It is surrounded by planned residential developments in TCNTE (East). The types of area (i) rural area; (ii) low density residential area consisting of low-rise or isolated high-rise developments; and (iii) urban area according to IND-TM cannot reflect the future environs of the subject site and are all not applicable. Thus, the whole site shall fall into type (iv) “Area other than those above" according to IND-TM.

5.1.1.3 Review of the Annual Traffic Census (ATC) for Year 2021 indicates that North Lantau Highway had an AADT of 38,690, which is considered as an Influencing Factor (IF) under the IND-TM. Hong Kong International Airport (HKIA) is located on the west of the subject site and it is also considered as an IF. North Lantau Highway is located at about 210m to the south of the subject site with high-rise developments in between to provide screening, while HKIA is located outside 300m to the north of the subject site. The subject housing site is therefore considered to be not affected by the IFs, and hence an ASR of B is assigned. The Acceptable Noise Level (ANL) for ASR of “B” should be 65dB(A) and 55dB(A) for daytime and night-time respectively. The proposed ASR for the NSRs is indicated in **Figure 5.1** below. The ASR assigned in this EAS report is for

assessment purpose only and shall not prejudice the Authority's decision on enforcement based on contemporary conditions.

Figure 5.1: Proposed ASR for NSRs for residential block



5.2 Review of Potential Rail Noise Impact

5.2.1.1 The existing Tung Chung Line (TCL) and Airport Express Line (AEL) are located about 170m to the south of the subject site. A section of existing TCL will be diverted for the planned Tung Chung Line Extension (TCLE) with the provision of a new TCE Station.

5.2.1.2 The TCLE is a Designated Project under Environmental Impact Assessment Ordinance (EIAO). An Environmental Impact Assessment (EIA) was conducted and approved under EIAO on 12 July 2022 (AEIAR-235/2022).

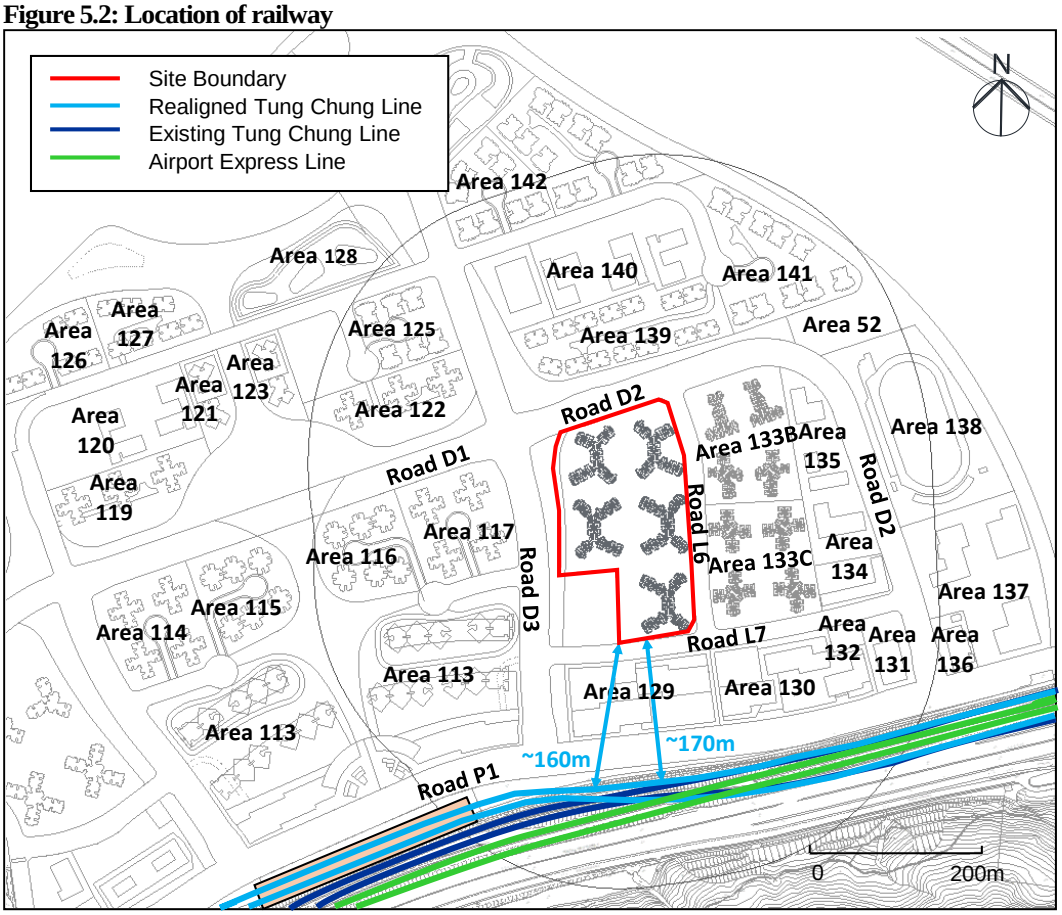
5.2.1.3 The planned TCLE are located at about 160m to the south of the subject site as shown in **Figure 5.2**. The committed high-rise residential development at Tung Chung Area 113, commercial development at Area 129 and 130, and G/IC developments at Area 131, 132, 136 and 137 are located between the railway and Tung Chung Area 133A. Based on the information provided by HKHA, the tentative occupation year of the proposed high-rise residential development at Tung Chung Area 113 along the TCLE is Year 2029 and the building blocks will provide partial noise screening to the railway to the proposed housing development at Tung Chung Area 133A.

5.2.1.4 Besides, according to the approved TCLE EIA (AEIAR-235/2022), the tentative occupation year of the proposed high-rise commercial development at Tung Chung Area

129 and 130, and G/IC developments at Area 131, 132, 136 and 137 (i.e. Phase 4 in TCNTE (East)) are also Year 2030. At that time when Tung Chung Area 133A is occupied, the building blocks in Area 129, 130, 131, 132, 136 and 137 shall have been likely in place and could also provide noise screening to the proposed housing development at Tung Chung Area 133A.

5.2.1.5 In consideration of the screening provided by the high-rise residential development at Tung Chung Area 113, high-rise commercial development at Tung Chung Area 129 and 130, and G/IC developments at Area 131, 132, 136 and 137, as well as the large separation distance between the subject site and the railway, adverse rail noise impact arising from the railway is not anticipated.

Figure 5.2: Location of railway

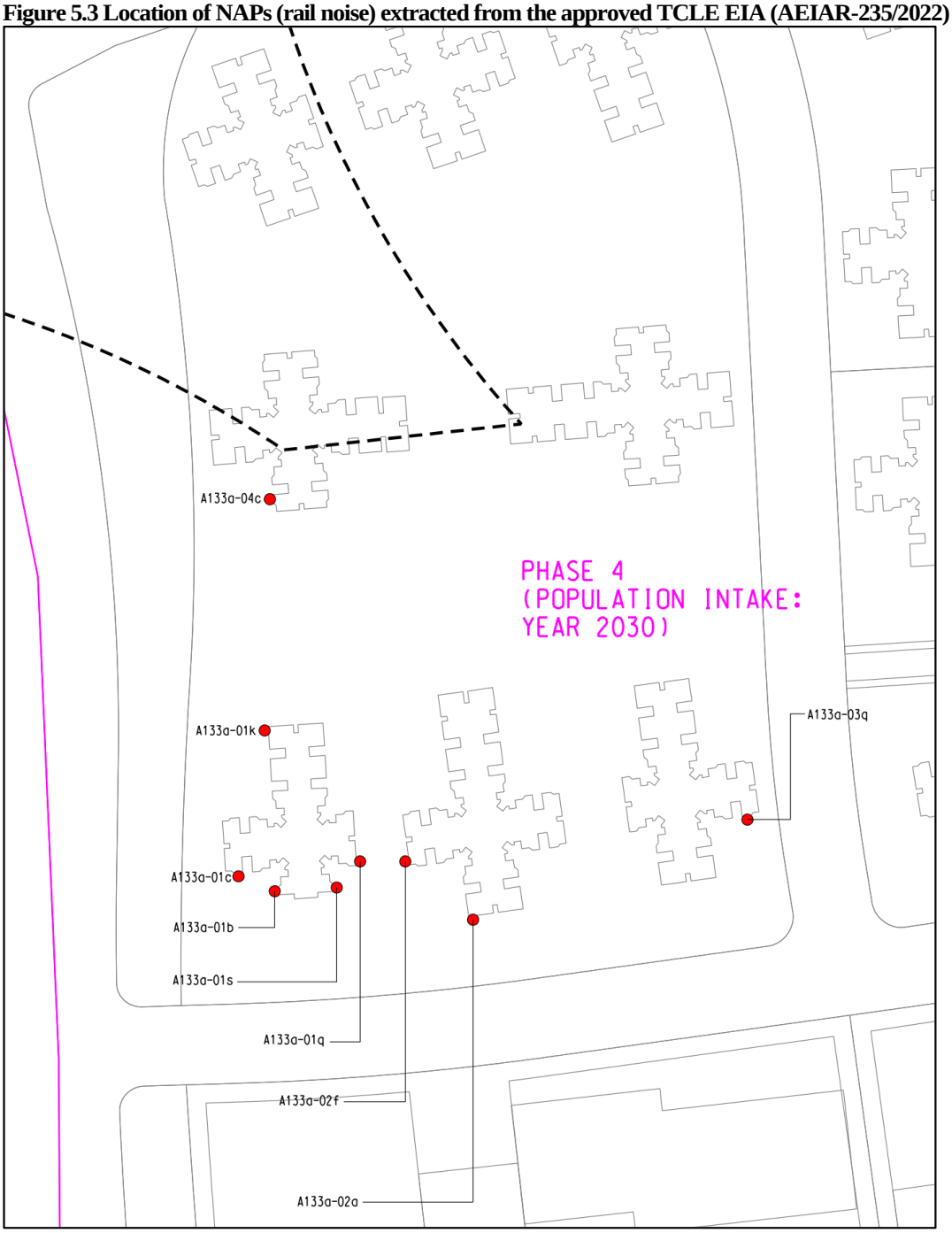


5.2.1.6 In addition, with reference to the approved TCLE EIA (AEIAR-235/2022), rail noise impact assessment was conducted at the proposed residential development at Tung Chung Area 133A. The approved TCLE EIA has assessed the potential rail noise impacts on the nearest building façades (i.e. NAP A133a-01b, A133a-01c, A133a-01k, A133a-01q, A133a-01s, A133a-02a, A133a-02f, A133a-03q and A133a-04c) which cover the southwestern, western, southern and south-eastern facades of tentative buildings block at Area 133A (**Figure 5.3**). The predicted noise levels on the above NAPs are $L_{eq(30mins)}$ <56 dB(A) for daytime and night-time which comply with the respective noise criteria for ASR of B in the approved TCLE EIA, and the predicted L_{max} is below 74 dB(A) which could also comply with the noise standard of HKPSG.

5.2.1.7 The proposed residential blocks for the current scheme at Tung Chung Area 133A have similar separation distance and similar view angle from the railway and the southwestern corner is currently excluded from subject housing site and reserved for a public wet market. Given the low predicted noise levels in the approved TCLE EIA, similar setback distance and similar view angle to the railway and screening by the nearby developments including Tung Chung Area 113, 129, 130, 131, 132, 136 and 137, potential rail noise impact is therefore not anticipated on the current scheme.

5.2.1.8 The rail noise impact assessments in the approved TCLE EIA have taken into account the noise screening effect of the nearby planned developments to the proposed housing development in Area 133A. HKHA has committed to closely liaise with CEDD regarding the implementation programmes of the developments in Area 113, 129, 130, 131, 132, 136 and 137.

Figure 5.3 Location of NAPs (rail noise) extracted from the approved TCLE EIA (AEIAR-235/2022)



6 Review of Fixed Noise Impact

6.1 Identification of Fixed Noise Sources

6.1.1.1 Four planned fixed noise sources within 300m assessment area of the subject site are identified according to the approved TCLE EIA report (AEIAR-235/2022) and TCNTE EIA (AEIAR-196/2016). They include the planned TCE station louvres, salt water pumping station/ sewage pumping station in Area 132, fire station in Area 136 and sports ground in Area 138 (**Figure 6.1**). The basic information of the identified planned fixed noise sources is summarised in **Table 6.1**.

Table 6.1: Basic information of identified fixed noise sources (identified in TCLE EIA and TCNTE EIA)

Operators/Locations	Identified Potential Noise Sources
TCE Station Louvres (PNS01c)	• Operation: Ventilation louvres at TCE station to be operated during daytime, evening time and night-time periods.
Salt Water Pumping Station/ Sewage Pumping Station (CNS01) in Area 132	• Operation: Pumps and exhaust of mechanical ventilation system to be operated during daytime, evening time and night-time periods.
Fire Station in Area 136 (CNS02)	• Operation: Station operations include loudspeakers, siren, fire engine sirens, condenser and transformer, etc.
Sports Ground in Area 138 (CNS06)	• Operation: Operation of the facility and public address (PA) system

Ventilation Louvres at TCE Station (PNS01c)

6.1.1.2 The TCE Station is located at about 250m to the southwest of the subject site. Noise sources include ventilation louvres which will be operated during daytime, evening time and night-time periods. With reference to the approved TCLE EIA report (AEIAR-235/2022), the equipment would be properly selected and acoustics attenuators would be installed, such as enclosure and silencer to achieve the maximum allowable Sound Power Levels (SWLs) in the approved TCLE EIA.

Salt Water Pumping Station/ Sewage Pumping Station (CNS01) in Area 132

6.1.1.3 The salt water pumping station/ sewage pumping station is located at about 170m to the southeast of the subject site to cater for the demand increase in water supply and sewage load for the future population. Noise sources include the pumps and exhaust of mechanical ventilation system to be operated during daytime, evening time and night-time periods. With reference to the approved TCNTE EIA (AEIAR-196/2016), it was recommended that the future Contractor of the salt water pumping station/ sewage pumping station would review the latest available information during their detailed design stage and the maximum allowable SWL set out in the approved TCNTE EIA. It was also recommended that the future Contractor of the salt water pumping station/ sewage pumping station would implement mitigation measures, such as installing acoustic silencers for the exhaust of mechanical ventilation system, etc as appropriate to ensure the

overall maximum SWLs of the noise sources would comply with the maximum allowable SWL as set out in the approved TCNTE EIA.

Fire Station (CNS02) in Area 136

6.1.1.4 The fire station is located at about 290m to the southeast of the subject site. Noise sources include loudspeakers, siren, fire engine sirens, condenser and transfer, etc. from the station operations. The fire station is located far away from the subject site, and largely outside 300m from some of the residential buildings.

Sports Ground (CNS06) in Area 138

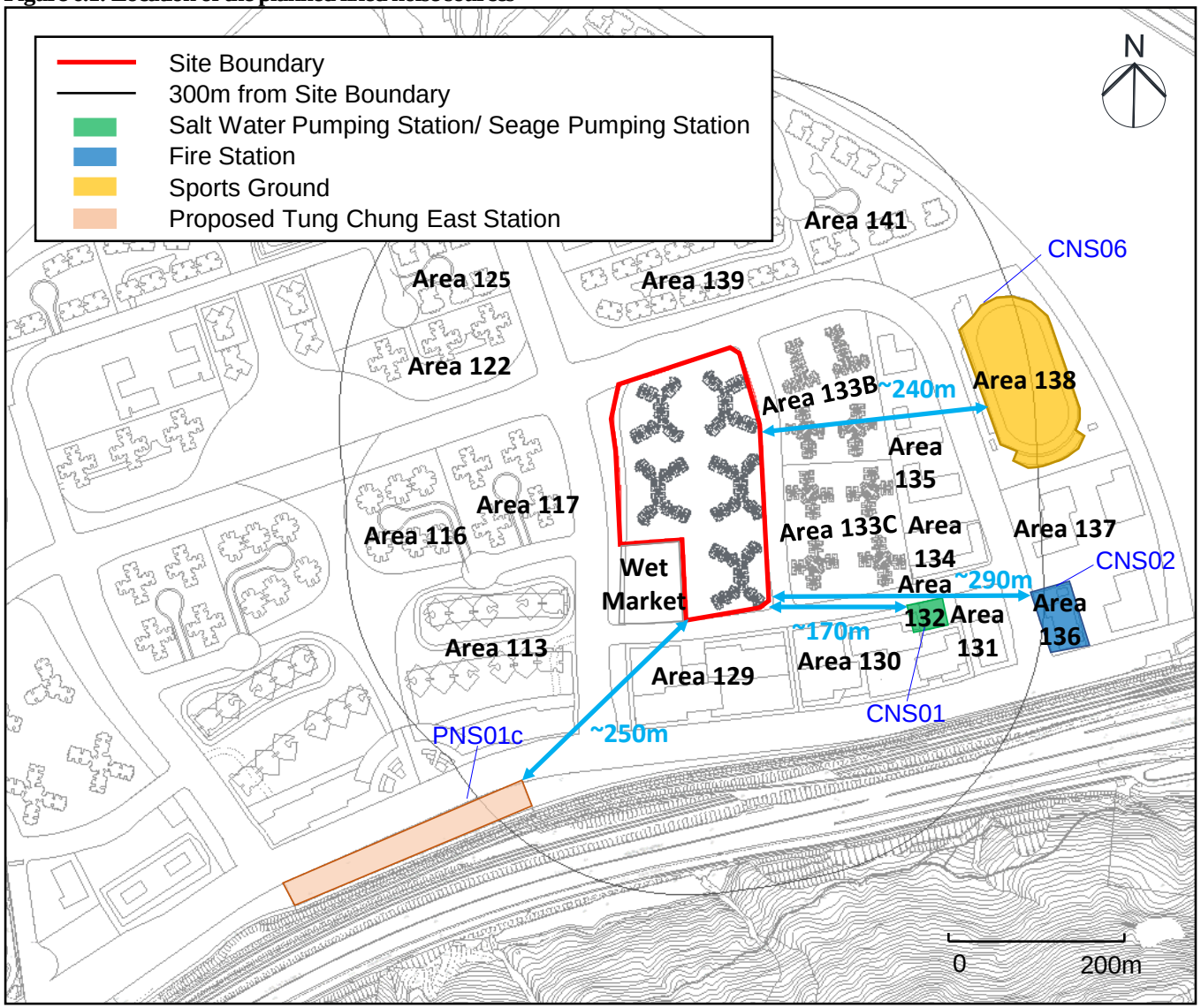
6.1.1.5 The sports ground is located at about 240m to the east of the subject site. Noise sources include the operation of the facility and PA system. The committed high-rise residential development at Tung Chung Area 133B and 133C, committed G/IC development at Tung Chung Area 134 and 135 will be located between the sports ground and Tung Chung Area 133A. Based on the information provided by HKHA, the tentative occupation year of the proposed high-rise residential development at Tung Chung Area 133B and 133C is the same as that of Area 133A (i.e. Year 2030). The building blocks in Area 133B and 133C will provide noise screening to the sports ground to the proposed housing development at Tung Chung Area 133A.

6.1.1.6 With reference to the approved TCNTE EIA (AEIAR-196/2016), it was recommended to incorporate measures for the PA system and/ or the sound amplification system, if used during the outdoor noise activities. The recommended measures include the adoption of a cluster of small power loudspeakers instead of a few large power loudspeakers, adoption of directional loudspeakers with orientation to point away from the nearby NSRs; and the inclusion of a "Limiter" device in the system to set the upper bound of the output sound level. Besides, as concluded in the TCNTE EIA, the sports ground is a Designated Project under Item O.7 of Schedule 2 of Technical Memorandum on the Environmental Impact Assessment Process, a separate EIA study would be required to be conducted by the future operator to fulfil all the statutory requirements and procedures under the EIAO. Any potential environmental noise impacts caused by the planned sports ground shall be addressed in the respective future EIA and mitigated by appropriate at source mitigation measures where necessary to ensure no noise exceedance at all nearby sensitive receivers including the proposed housing site in Area 133A.

Planned Public Wet Market

6.1.1.7 The area to the southwest of the subject site is reserved for a public wet market to be developed and managed under Food and Environmental Hygiene Department (FEHD). **Figure 6.1** shows the location of the planned public wet market. Subject to the design of the public market, there might be potential fixed noise sources such as chillers/cooling towers, exhaust fans etc. As confirmed by Architectural Services Department (ArchSD), the design of the public market will consider the public housing developments to ensure the environmental impact will comply with statutory requirements (**Appendix 6.1**).

Figure 6.1: Location of the planned fixed noise sources



6.2 Fixed Noise Criteria

6.2.1.1 According to Section 4.2.13 in Chapter 9 of the HKPSG, noise assessments for fixed noise sources would normally be conducted in accordance with the Technical Memorandum for the Assessment of Noise from Places Other Than Domestic Premises, Public Places or Construction Sites (IND-TM) under the Noise Control Ordinance. The IND-TM lays down statutory Acceptable Noise Level (ANL). The HKPSG also states that in order to plan for a better environment, all planned fixed noise sources should be so located and designed that when assessed in accordance with the TM, the level of the intruding noise at the façade of the nearest sensitive use should be at least 5 dB(A) below the appropriate ANL of the IND-TM or, in the case of the prevailing background noise level being 5 dB(A) lower than the ANL, should not be higher than the prevailing background noise level.

6.2.1.2 The proposed ASRs and respective ANLs for the development are described in **Section 5.1** above. An ASR of "B" shall be applied to all facades. The ANL for ASR of "B" should be 65 dB(A) and 55 dB(A) for daytime and night-time respectively. The ASR assigned in this EAS report is for assessment purpose only and it shall not prejudice the Authority's decision on enforcement based on contemporary conditions.

6.3 Review of Potential Fixed Noise Impacts

6.3.1.1 With reference to the approved TCLE EIA (AEIAR-235/2022), fixed noise sources impact assessment was conducted at the proposed residential development at Tung Chung Area 133A considering the TCE station louvres and salt water pumping station/ sewage pumping station. The proposed residential blocks for the current scheme at Tung Chung Area 133A have larger separation distance from these fixed noise sources, as compared to the tentative block layout assumed in the approved TCLE EIA. The approved TCLE EIA has assessed the potential fixed noise sources impact on the nearest building facade (i.e. NAP A133a-01e) which is the nearest southwestern facade of tentative buildings blocks at Area 133A in the approved TCLE EIA (**Figure 6.2**). The maximum predicted cumulative noise levels on this NAP A133a-01e is 54 dB(A) and 49 dB(A) for daytime/ evening and night-time respectively, which comply with the respective noise criterion for ASR of B in the approved TCLE EIA. Given the use of proper equipment and installation of acoustic attenuator, larger separation distance in current scheme, and with reference to the predicted noise levels in the approved TCLE EIA, potential fixed noise impact on the proposed housing development is therefore not anticipated.

6.3.1.2 In addition, with reference to the approved TCNTE EIA (AEIAR-196/2016), fixed noise sources impact assessment was conducted at the nearby proposed residential development at Tung Chung Area 133C considering the salt water pumping station/ sewage pumping station and fire station. The approved TCNTE EIA has assessed the potential fixed noise sources impact on the building facade (i.e. NAP C2-1-06) which is the nearest south-eastern facade of tentative buildings blocks at Area 133C in the approved TCNTE EIA (**Figure 6.3**). The maximum predicted cumulative noise levels on this NAP C2-1-06 is 54 dB(A), which comply with the night-time noise criterion for ASR of B. In the assessment, night-time criterion was assessed as the worst case scenario, and screening

effect was not considered for conservative assessment. The proposed residential blocks for the current scheme at Tung Chung Area 133A have much larger separation distance from these fixed noise sources, as compared to this NAP at Area 133C in the approved TCNTE EIA. Given the use of proper design of the planned salt water pumping station/ sewage pumping station and fire station, much larger separation distance, and with reference to the predicted noise levels in the approved TCNTE EIA, potential fixed noise impact on the current scheme is therefore not anticipated.

6.3.1.3 According to the approved TCNTE EIA (AEIAR-196/2016), noise assessment was conducted at the nearby proposed residential development at Tung Chung Area 133B considering the noise from operation and PA system noise from the sports ground. The approved TCNTE EIA has assessed the potential noise impact on the building façade (i.e. NAP C2-2-03) which is the nearest eastern facade of tentative buildings blocks at Area 133B in the approved TCNTE EIA (**Figure 6.3**). The predicted noise levels on this NAP C2-2-03 is 53 dB(A) for daytime, which comply with the respective noise criterion for ASR of B. In the assessment, only day time criterion was assessed as worst case scenario. As recommended, any night-time noise impact from the operation of sports ground shall be conducted in detailed design stage of the sports ground. The proposed residential blocks for the current scheme at Tung Chung Area 133A have much larger separation distance from the sports grounds, as compared to this NAP at Area 133B in the approved TCNTE EIA and will be largely screened by both Area 133B and Area 133C. Given the much larger separation distance, the screening by the nearby developments, and with reference to the predicted noise levels in the approved TCNTE EIA, potential fixed noise impact on the proposed housing development at Area 133A is therefore not anticipated. As discussed in **Section 6.1**, the sports ground is a Designated Project and a separate EIA study would be required to be conducted by the future operator to fulfil all the statutory requirements and procedures under the EIAO. Any potential environmental noise impacts caused by the planned sports ground shall be addressed in the respective future EIA and mitigated by appropriate at source mitigation measures where necessary to ensure no noise exceedance at all nearby sensitive receivers including the proposed housing site in Area 133A. As such, potential noise impact from the sports ground is not anticipated.

Figure 6.2 Location of NAPs (fixed noise) extracted from the approved TCLE EIA (AEIAR-235/2022)

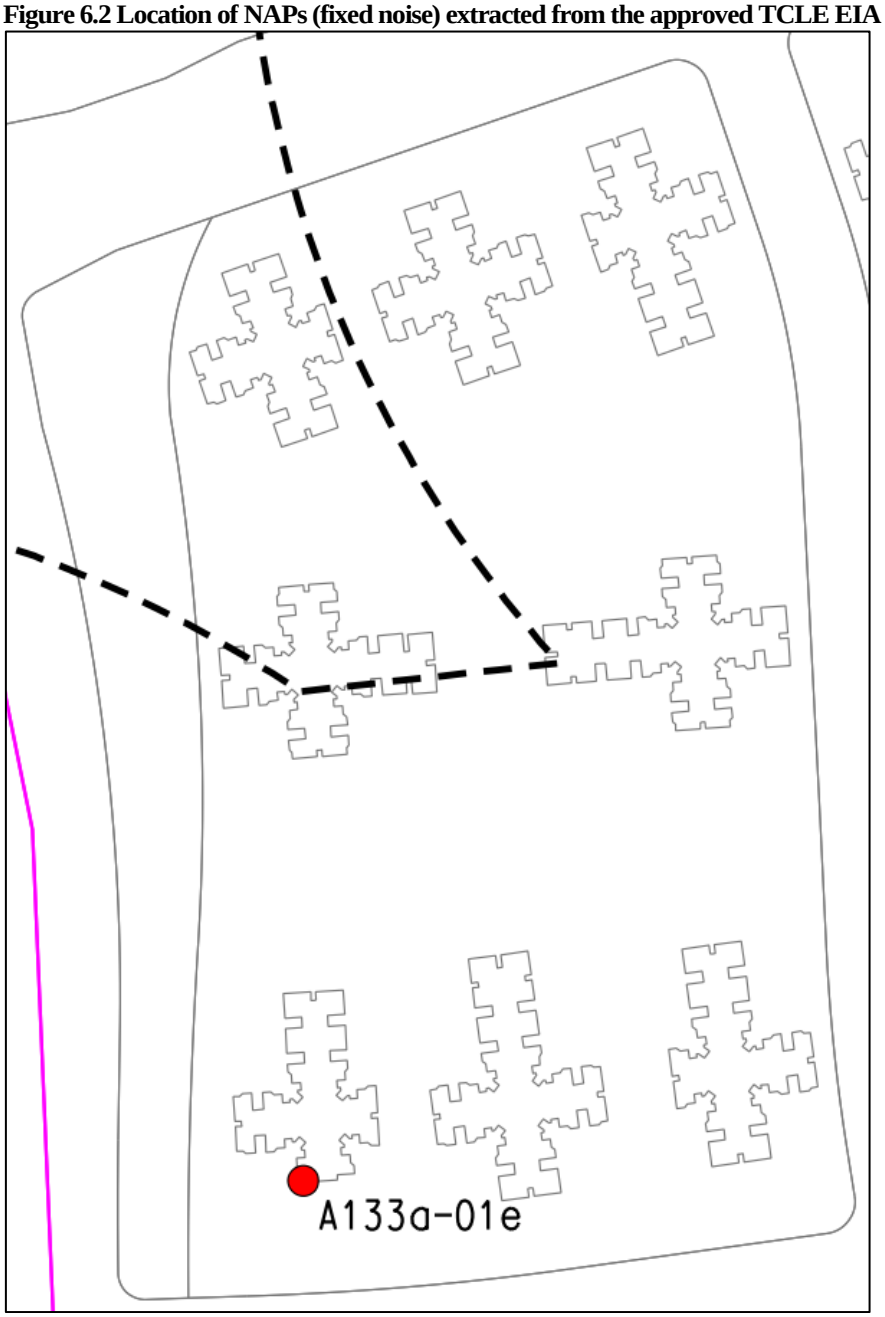
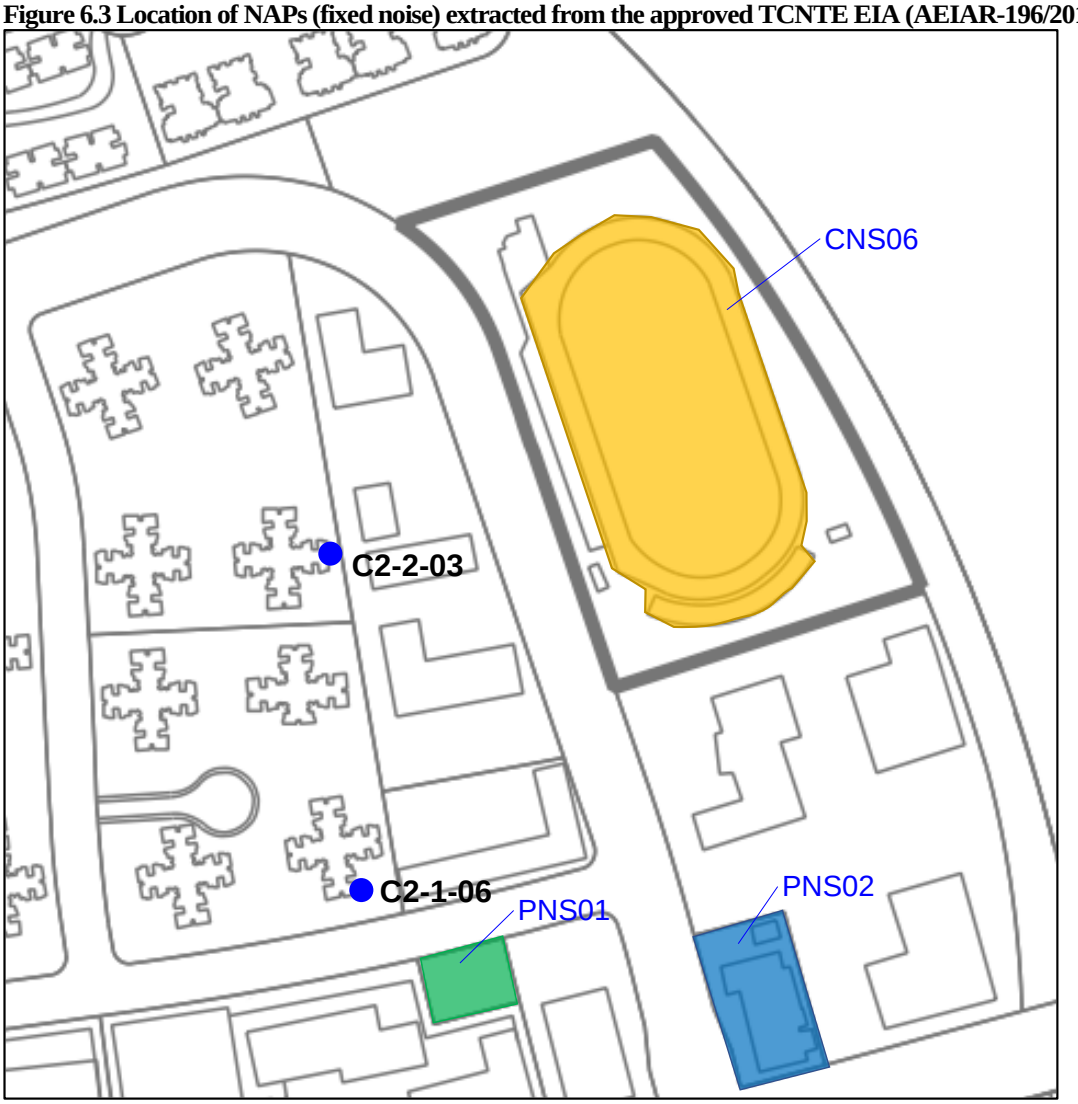


Figure 6.3 Location of NAPs (fixed noise) extracted from the approved TCNTE EIA (AEIAR-196/2016)



7 Review of Potential Aircraft Noise Impact

7.1 Aircraft Noise Criteria

7.1.1.1 In accordance with the HKPSG, exposure to aircraft noise is described by Noise Exposure Forecast (NEF) contours. NEF contours should be used together with the standards to define areas where certain noise sensitive uses should not be located within specified NEF contours. The NEF standards applicable to the Hong Kong International Airport (HKIA) at Chek Lap Kok as stipulated in HKPSG should not be exceeded. The aircraft noise standard is given in **Table 7.1**.

Table 7.1: Noise standards for aircraft noise

Parameters	Noise Standard [1]
	Aircraft Noise (Noise Exposure Forecast: NEF)
All domestic premises including temporary housing accommodation	25
Offices	30
Educational institutions including kindergartens, child care centres and all others where unaided voice communication is required	25
Hospitals, clinics, convalescences and homes for the aged, diagnostic rooms, wards	25

Notes:
[1] The above standards apply to uses which rely on opened windows for ventilation.

7.2 NEF Contours for the Three-Runway System (3RS)

7.2.1.1 In order to cope with the future air traffic demand, the HKIA is developing into a Three-runway System (3RS). The aircraft noise impacts for the 3RS have been addressed in the approved Expansion of Hong Kong International Airport into a Three-Runway System (3RS) EIA (AEIAR-185/2014). Three scenarios were assessed in the said EIA, including: (i) the interim phase operation mode representing the phase during which the existing North Runway is closed and the proposed 3rd runway is operating with the existing South Runway (Year 2021); (ii) the worst operation mode with maximum noise emission (Year 2030); and (iii) full operation of the 3RS at design capacity (Year 2032). The NEF noise contours predicted in 3RS EIA are shown in **Appendix 7.1**.

7.2.1.2 Operation familisation for flights on the third runway, designated as the new North Runway of HKIA, started in July 2022. The Centre Runway has been temporarily closed for reconfiguration as part of the 3RS development; while HKIA will continue to operate as a two-runway system with the new North Runway and the South Runway. The 3RS project is targeted to complete in 2024.

7.2.1.3 The tentative occupation year of the development is 2030. At that time, the 3RS shall have been completed and commissioned. As shown in **Figures 7.1 to 7.2**, the site is located more than 500m outside the NEF25 contour for the worst 3RS operation mode in Year

2030 and full 3RS operation mode in Year 2032. The HKPSG standard will therefore be complied.

Figure 7.1: Location of the proposed development and NEF25 contour in 2030

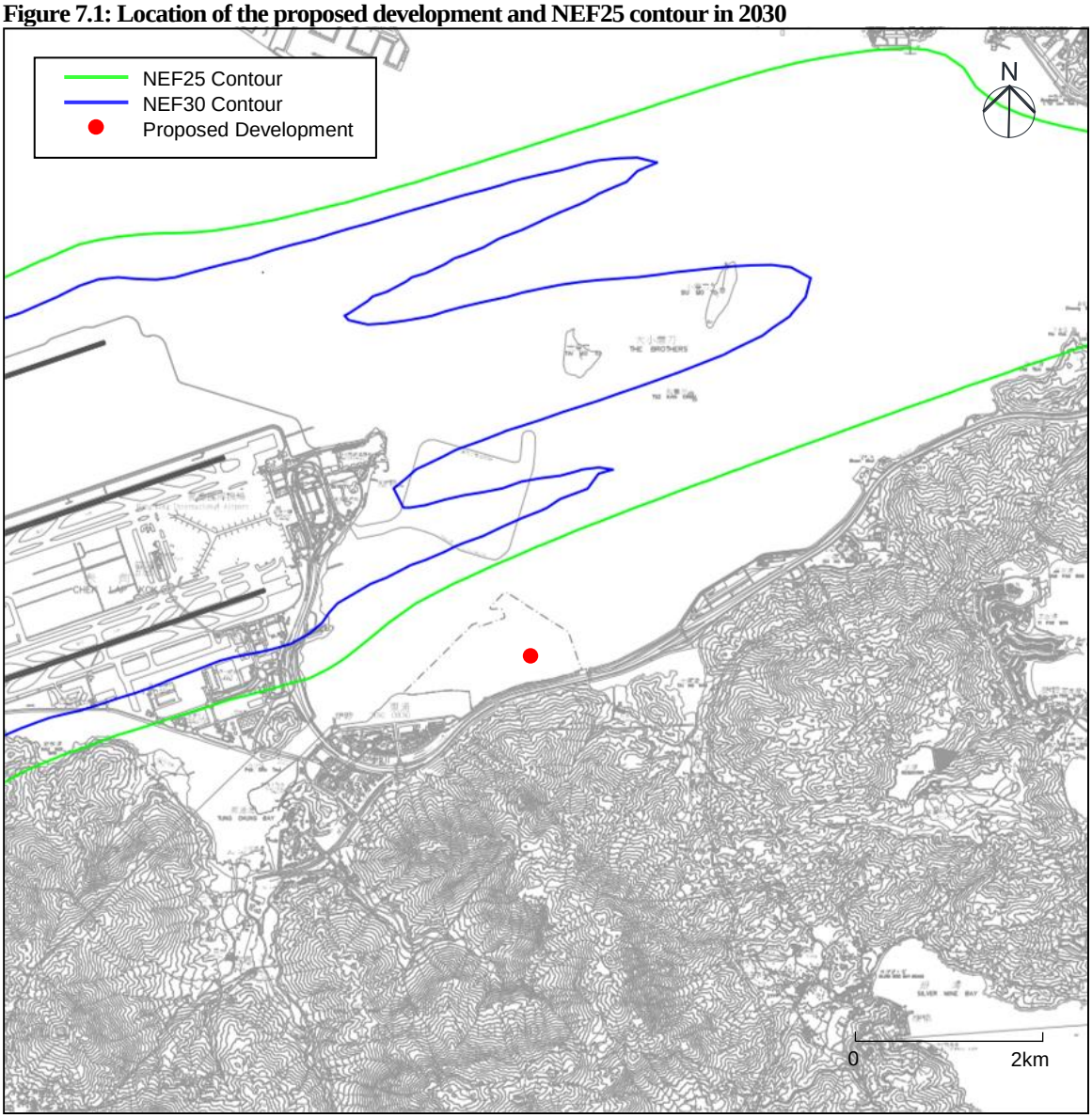
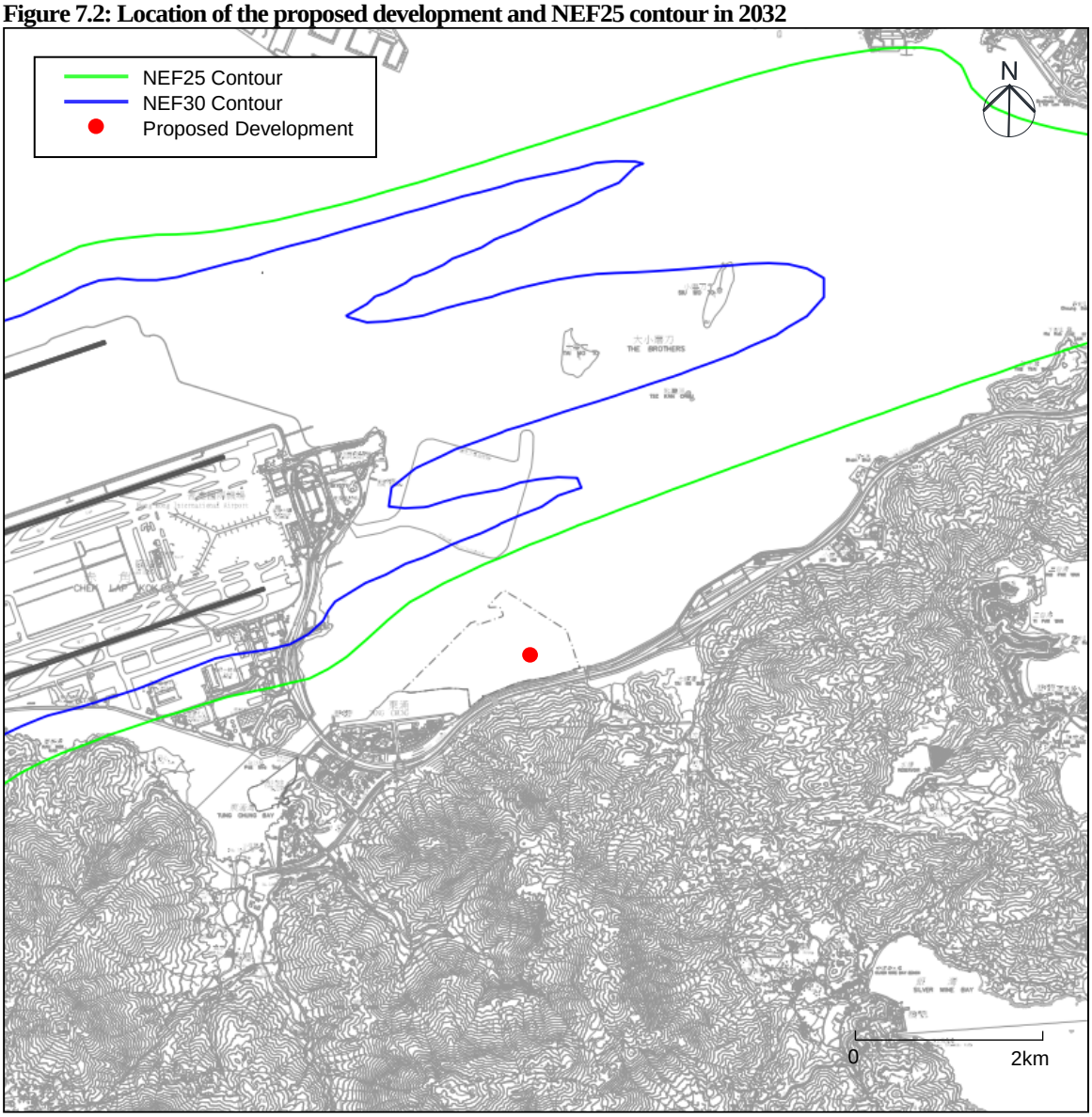


Figure 7.2: Location of the proposed development and NEF25 contour in 2032



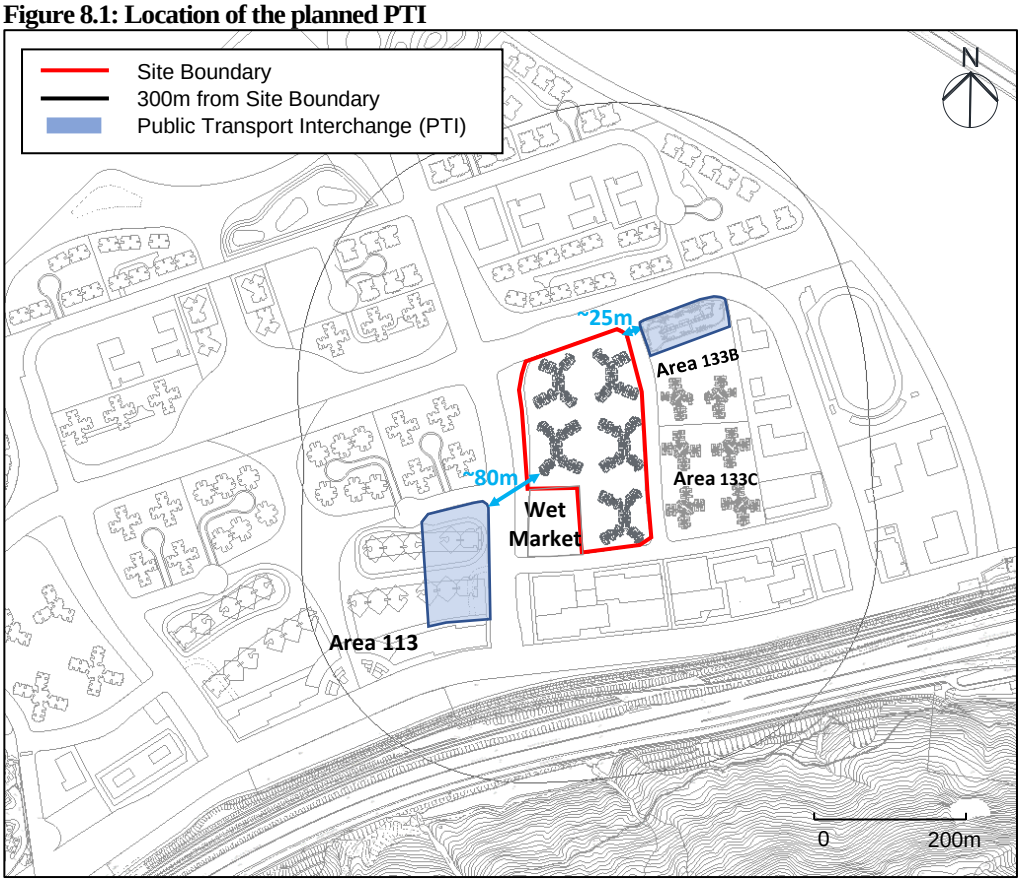
7.2.1.4 Given that the proposed development site is located outside the predicted NEF25 contours in both worst and full 3RS operation scenarios, no adverse aircraft noise impact arising from the future operation of the 3RS is anticipated.

8 Review of Noise Nuisance Arising from Public Transport Interchange

8.1 Planned Public Transport Interchange in TCNTE (East)

8.1.1.1 Two Public Transport Interchange (PTI) are planned within Tung Chung Area 113 and Area 133B located at about 80m to the west and 25m to the east of the nearest building blocks at subject site, respectively. The location of the PTI is shown in **Figure 8.1**.

Figure 8.1: Location of the planned PTI



Planned PTI at Area 113

8.1.1.2 Key noise generating sources inside PTI include ventilation fans, idling engine and manoeuvring vehicles, etc. With reference to the approved TCLE EIA (AEIAR-235/2022), the PTI would be decked under proposed building structures and designed with no direct line-of-sight at the noise sensitive use in the vicinity of the PTI and therefore the noise emissions will be adequately controlled.

8.1.1.3 Proposed residential building blocks at Tung Chung Area 133A is located far away from the PTI at Area 113 (at least 80m). Besides, the planned public wet market will also provide screening effect to the planned PTI to the residential blocks at Area 133A. In consideration of the decking design of the PTI, large separation between the planned PTI and screening by other development, potential noise nuisance arising from the planned PTI at Area 113 on the subject housing site is therefore not anticipated.

Planned PTI at Area 133B

8.1.1.4 As advised by HKHA, the planned PTI at Area 133B will be designed with due consideration to the HKPSG. The planned PTI will be covered under a podium decking with full height double bank louvre, solid boundary wall and hanger louver/fins at vehicular and pedestrian accesses, to avoid line of sights to the planned noise sensitive uses in the proximity as far as practicable.

8.1.1.5 Besides, absorptive lining will be provided on interior walls of the PTI as far as practicable to minimise the reverberance and acoustic silencer will be installed at exhaust fan system. The design of PTI will meet the requirements of the Technical Schedule of Public Transport Interchange to be conducted in detailed design stage. Design details of the planned PTI could be referred to the EAS report of Tung Chung Area 133B.

8.1.1.6 In consideration of the proper design of the PTI, potential noise nuisance arising from the planned PTI at Area 133B on the subject housing site is therefore not anticipated.

9 Review of Air Quality Impact

9.1 Vehicular Emissions

9.1.1.1 Hong Kong Planning Standards and Guidelines (HKPSG) provides environmental guidance for residential developments on air quality. The guidelines recommend the minimum buffer distance required for active and passive recreational uses.

9.1.1.2 The buffer distances between the sensitive uses of the current development scheme and the surrounding major roads are summarised in **Table 9.1**, and illustrated in **Figure 9.1 to 9.2** below.

Table 9.1: Separation distances between the proposed development and nearby major roads

Name of Road	Type of Road [1]	HKPSG Recommended Buffer Distance for Active and Passive Recreational Use	Shortest Horizontal Distance from the Air Sensitive Uses to Road Kerb
			Residential Blocks/Recreational Areas
Road D3	DD	>10m	~45m
Road D2	DD	>10m	~12m
Road L6	LD	>5m	~8m
Road L7	LD	>5m	~8m

Note:
[1] DD – District Distributor, LD – Local Distributor. The road classifications are given in the Roadworks and Noise Mitigation Measures Design Report under TCNTE (East) – Design and Construction and the respective Technical Note on Traffic Forecast for Environmental Impact Assessment for Planning Review for Population Increase and Development Intensity in TCNTE (East) has referenced the road classification. Reply from TD on the Technical Note is given in **Appendix 4.3**.

9.1.1.3 It can be found that the proposed residential blocks for the current scheme can satisfy the setback distance requirements as stipulated in HKPSG (see **Figure 9.1**). There are also no other sensitive active and passive recreational uses located within the minimum buffer zone (see **Figure 9.2**). Adverse vehicular emission impacts on the proposed residential development are therefore not anticipated.

9.1.1.4 The detailed internal layout plans for kindergarten and management office at P3/F are yet to be available at this stage. Any planned air sensitive rooms at these non-domestic facilities shall be provided with sufficient setback distances as stipulated in HKPSG.

Figure 9.1: Separation distances between the air sensitive uses and nearby major roads (residential blocks)

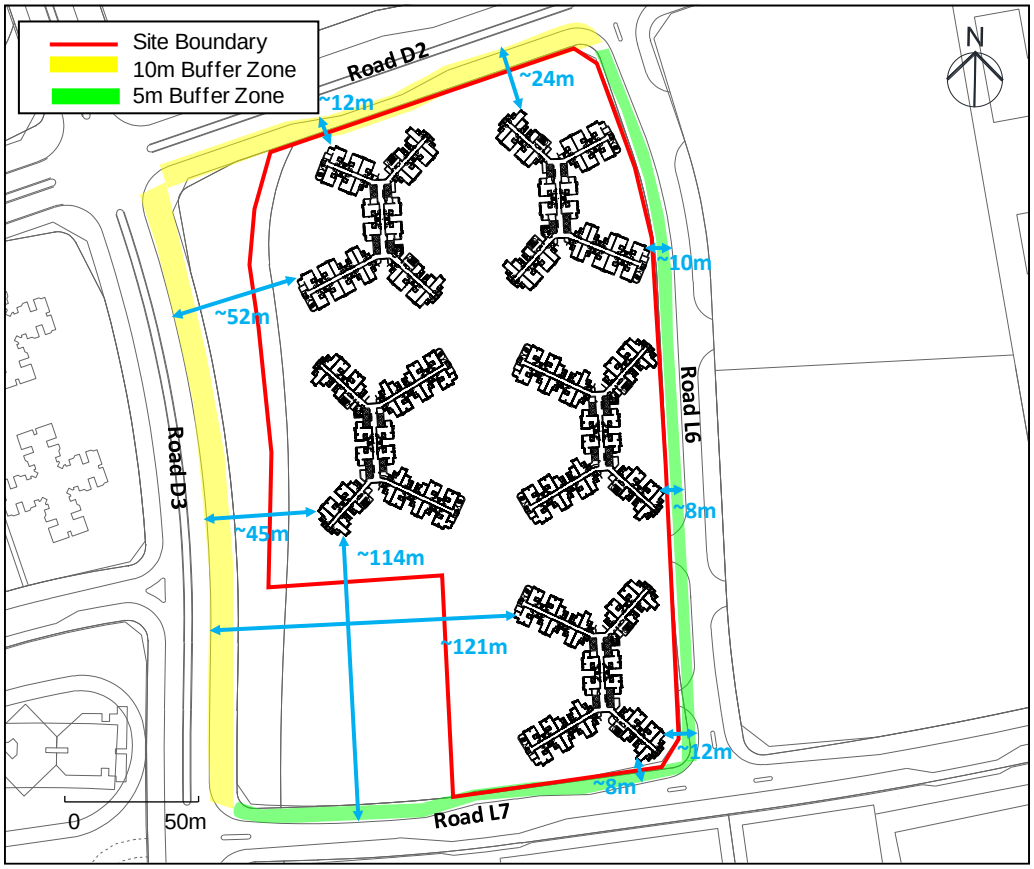
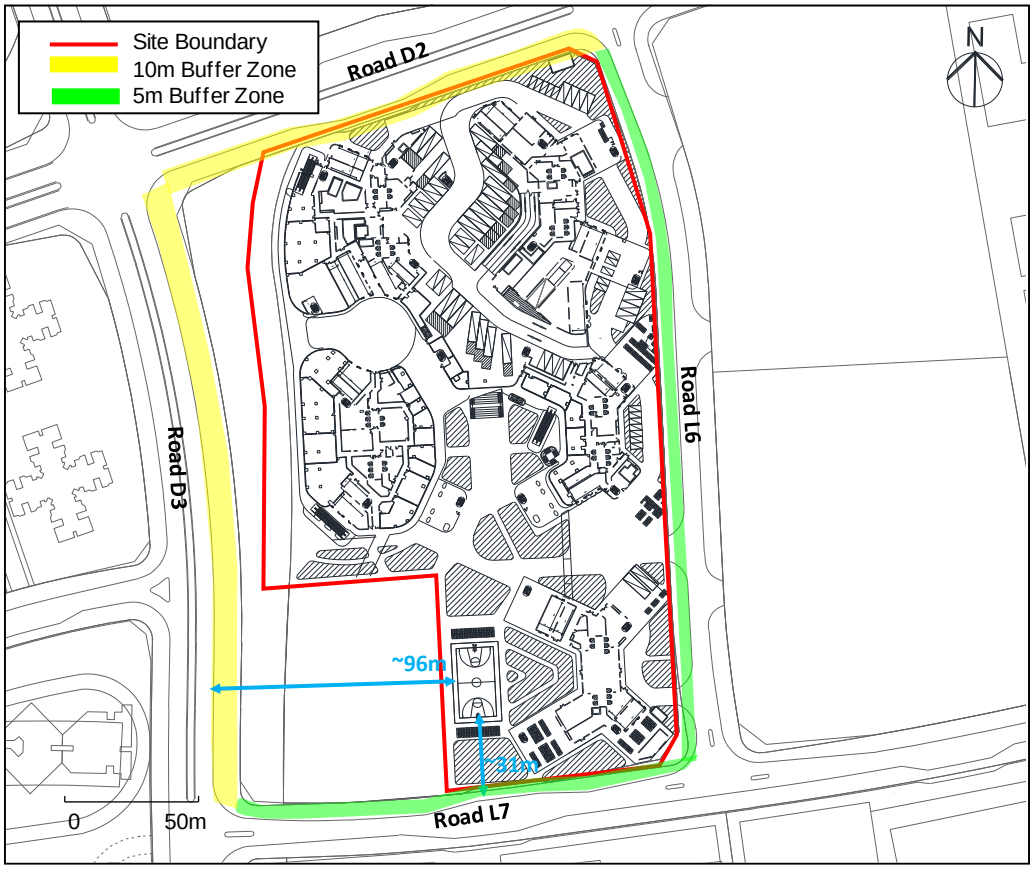


Figure 9.2: Separation distances between the air sensitive uses and nearby major roads (podium level)



9.2 Chimney Emissions

9.2.1.1 Based on site visit conducted in June 2023, there is no existing chimney within 500m of the subject site. According to the Air Quality Impact Assessments Review for Population Increase and Development Intensity - CASE 2: Scenario 2A (Final) under TCNTE (East) – Design and Construction conducted in May 2021, no chimney is also planned within 500m of the subject site. Hence, no adverse air quality due to chimney emission is anticipated.

9.3 Potential Odour Impact from Planned Public Wet Market

9.3.1.1 The area to the southwest corner of Tung Chung Area 133A is reserved for a public wet market to be developed and managed under FEHD (see **Figure 6.1**).

9.3.1.2 Future study for the public wet market should ensure proper design and measures to ensure that there is no odour nuisance/ impact on all nearby sensitive receivers including the subject housing development. As confirmed by ArchSD, the design of the public wet market will consider statutory requirements to ensure no odour impacts on the proposed development (**Appendix 6.1**).

9.4 Planned Public Transport Interchange

Planned PTI at Area 113

9.4.1.1 A PTI is planned at Area 113 as shown in **Figure 8.1**. With reference to the approved TCNTE EIA (AEIAR-196/2016) and TCLE EIA (AEIAR-235/2022), the PTI would be decked under proposed building structures. The proposed PTI at Area 113 is planned by other parties, any design, maintenance, and operating requirements stipulated in ProPECC PN 1/22 relevant to any air quality impacts to its neighbouring developments including the planned public housing at Area 133A shall be considered and addressed by other parties. The proposed residential building blocks at Tung Chung Area 133A is located far away from the PTI at Area 113 (at least 80m). Besides, the planned public wet market will also provide screening to the planned PTI to the residential blocks at Area 133A. In consideration of the decking design of the PTI and separation distance, potential air pollutant nuisance arising from the planned PTI at Area 113 on the subject housing site is therefore not anticipated.

Planned PTI at Area 133B

9.4.1.2 The planned PTI at Area 133B will be designed with due consideration to the HKPSG as far as practicable. Open-form design has been avoided. The planned PTI will be covered under a podium decking to cover the whole extent of the bus drop off, pick up, stacking and routing area. Design details of the planned PTI at Area 133B shall be referred to the EAS report of Tung Chung Area 133B.

9.4.1.3 Besides, the Practice Note for Professional Persons (ProPECC PN) 1/22 “Control of Air Pollution in Semi-Confined Public Transport Interchanges” will be followed as appropriate for designing and operating the PTI to meet the air quality guidelines inside the PTI.

9.4.1.4 Besides, the air quality impact considering the planned PTIs at Area 113 and Area 133B has been addressed in the Final Air Quality Impact Assessments Review for Population Increase and Development Intensity – CASE 2: Scenario 2A (Final) (Ref. PI17-02) issued in May 2021 under Tung Chung New Town Extension (East) – Design and Construction Study. The cumulative air quality assessment (with PTIs addressed) concluded that all air sensitive receivers at Area 133A comply with the relevant AQOs. No adverse air quality impacts are anticipated.

10 Conclusion

10.1.1.1 An EAS has been conducted for the proposed housing development at Tung Chung Area 133A.

10.1.1.2 The subject site is located on Area 133A of the reclaimed land in TCNTE (East). With implementation of the recommended architectural fin, acoustic window and conversion of opened window to fixed glazing for the residential block, a road traffic noise compliance rate of 100% could be achieved.

10.1.1.3 The TCL and AEL are located about 170m, while the future TCLE will be running at about 160m to the south of the subject site. They are screened by other planned residential high-rise developments. The rail noise impact assessment in the approved TCLE EIA indicates that the proposed residential development could comply with the respective noise criteria. Potential rail noise impact is therefore not anticipated.

10.1.1.4 The major fixed noise sources in vicinity of the subject site are the planned TCE station, salt water pumping station/ sewage pumping station in Area 132, fire station in Area 136 and sports ground in Area 138. They are all located at a far distance away and some are screened by the other planned developments in vicinity of the subject site. The approved TCLE EIA and TCNTE EIA also indicate that the predicted fixed noise levels on the proposed residential development at Tung Chung Area 133A would comply with the respective noise criteria. A public wet market is planned to the southwest corner of Tung Chung Area 133A. As confirmed by Architectural Services Department (ArchSD), the design of the public market will consider the public housing developments to ensure the environmental impact will comply with statutory requirements. Potential fixed noise sources impact is therefore not anticipated.

10.1.1.5 With reference to the approved EIA (AEIAR-185/2014) for 3RS, the subject site is located outside the NEF25 contour for all future scenarios for 3RS operation of HKIA. Hence, aircraft noise impact is not anticipated.

10.1.1.6 Two PTIs are planned at Tung Chung Area 113 and 133B. Both will be designed with due consideration to the HKPSG and under deck with no line-of-sight to the nearby noise sensitive receivers. Potential noise nuisance is therefore not anticipated.

10.1.1.7 Kindergarten and management office are planned at P3/F. However, their layouts are still being investigated. Hence, noise assessments on these non-domestic facilities will be supplemented when the layout is confirmed in the next stage.

10.1.1.8 The current scheme has allowed adequate setback distance for all air sensitive uses from the major roads to meet the minimum requirement as stipulated in HKPSG. There is also no chimney found within 500m of the study area. Both the planned PTIs at Area 113 and Area 133B will be under deck and designed by others and HKHA respectively, with due consideration to the HKPSG and Practice Note for Professional Persons (ProPECC PN) 1/22 “Control of Air Pollution in Semi-Confined Public Transport Interchanges”. Hence no adverse air quality impact is anticipated.

10.1.1.9 As confirmed by Architectural Services Department (ArchSD), the design of the planned public market located at southwest of the subject site will consider the proposed public housing developments to ensure the environmental impact will comply with statutory requirements.

10.1.1.10 It is concluded that there are no adverse environmental impacts on the proposed housing development at Tung Chung Area 133A.

Appendix 2.1

Layout and
Schematic Sections



LEGEND

- TYPE A
- TYPE B
- TYPE C
- TYPE D

SCALE BAR 1:500 (A1 size)

0 5 10 20 30

SITE PLAN
TYPICAL FLOOR PLAN

TUNG CHUNG EAST AREA 133A - SCHEME 20B
Site Plan - Typical Floor Plan
Dwg No. :

SITE PLAN
FIRST FLOOR PLAN

TUNG CHUNG EAST AREA 133A - SCHEME 20B
Site Plan - First Floor Plan
Dwg No. :

LEGEND

- TYPE A
- TYPE B
- TYPE C
- TYPE D

SCALE BAR 1:500 (A1 size)
0 5 10 20 30

BLK 1
BLK 2
BLK 3
BLK 4
BLK 5

WING A
WING B
WING C
WING D

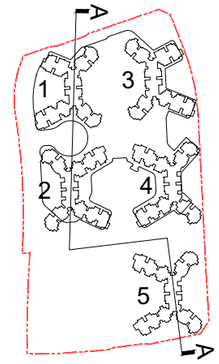
GLASS CANOPY
ROOF OF COVERED WALKWAY
ROOF OF FOOTBRIDGE
FLAT ROOF OF FOOTBRIDGE
FLAT ROOF OF DTMO
FLAT ROOF OF MASTER WATER METER ROOM
FLAT ROOF OF GAS ROOM

PUBLIC MARKET BY FEHD

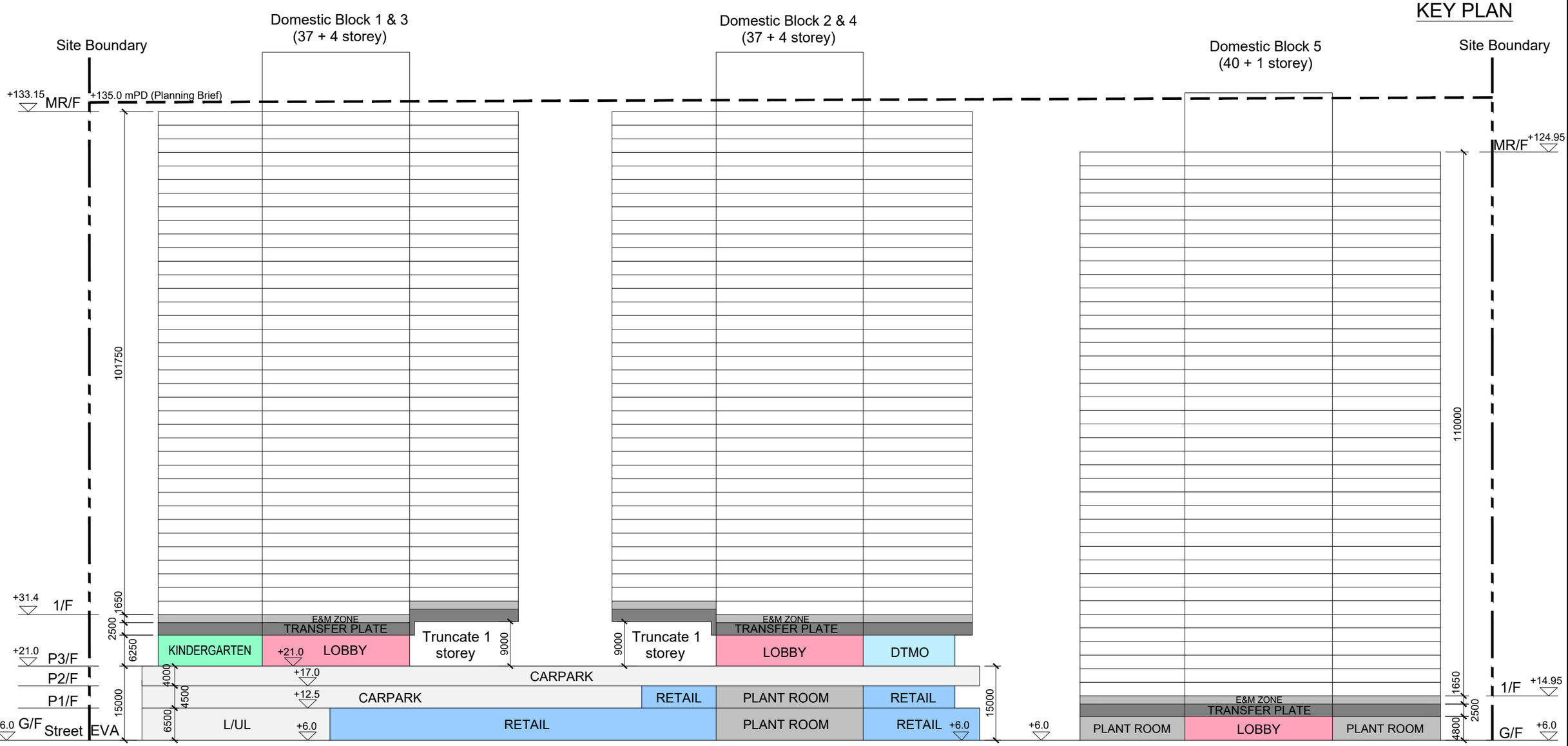
ROAD D2
ROAD D3
ROAD L6
ROAD L7

TCA 145B
TCA 133B
TCA 133C

+5.5
+6.0
+5.9
+5.6
+5.8
+5.7



KEY PLAN



PROJECT

PROPOSED PUBLIC HOUSING DEVELOPMENTS
AT TUNG CHUNG AREA 133

DRAWING TITLE

TC133A
SECTION A-A

房 屋 署
HOUSING DEPARTMENT

編號 DRAWING NO.	比例 SCALE	日期 DATE	
IS30/P2/BLK/A/LO-02	1:800 (A3)	21/03/2023	26

Appendix 4.1

Letter of Reply
from HyD

From:
To:
Cc:
Subject: Fw: Tung Chung Area 133A, 133B, 133C - Road Surface details at Shun Long Road
Date: Friday, March 17, 2023 4:24:29 PM
Attachments: ATT00001.gif
ATT00002.gif
J3518-P-OAP-02-09201-2.pdf
J3518-P-OAP-02-04401-2.pdf
J3518-P-OAP-16-00301-2_A1.pdf
J3518-P-OAP-16-00113-1_A1.pdf
J3518-P-OAP-16-00112-1_A1.pdf

Dear

I forward the reply from HyD regarding the caption for your use. Thanks.

Regards,

From:
To:
Cc:
Date: 17/03/2023 16:15
Subject: Re: Fw: Tung Chung Area 133A, 133B, 133C - Road Surface details at North Lantau Highway

---

Dear

Both viaduct and at-grade section of Shun Long Road at the concerned area shows that the surface pavement is 30mm PMFC. For further details, you may approach Sandra Leung as Leo Ip has just re-deployed to other team. Thanks.

Regards,

www.hyd.gov.hk

**** This e-mail message (together with any attachments) is for the designated recipient only. It may contain information that is privileged. If you are not the intended recipient, you are hereby notified that any use, retention, disclosure, copying, printing, forwarding or dissemination of the message is strictly prohibited. If you have received the message in error, please erase all copies of the message (including attachments) from your system and notify the sender immediately. ****
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From:
To:
Cc:
Date: 17/03/2023 09:24
Subject: Re: Tung Chung Area 133A, 133B, 133C - Road Surface details at North Lantau Highway

---

Dear

I refer to your email below regarding the captioned.

Please note that polymer modified friction course has been used at the concerned extent of North Lantau Highway near the developments.

Please feel free to contact me if you have any query.

Thanks.

Best Regards,

From:
To:
Cc:
Date: 15/03/2023 11:14
Subject: Tung Chung Area 133A, 133B, 133C - Road Surface details at North Lantau Highway

---

Dear

I tried to call but in vain.
An environmental assessment study for the Proposed Public Housing Developments at Tung Chung Area 133A, 133B and 133C is under our consultant's (ie. Ove Arup) preparation. In the study, the road surface details of existing road networks nearby the developments (see attachment 1) would be crucial for our road traffic noise impact assessment.

It would be grateful if you could provide us the details of the road surface, especially the extent and details of friction course materials or Low Noise Road Surfacing materials, used on the North Lantau Highway nearby the developments for our assessment.

Your reply by 24 March 2023 would be much appreciated. Should you have any enquiries, please do not hesitate to contact me or the consultant at Thanks.

Regards,

.
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Housing Authority/Housing Department Website -- https://www.housingauthority.gov.hk
Facebook -- https://www.facebook.com/HKHousingAuthority
Instagram -- https://www.instagram.com/hkhousingauthority
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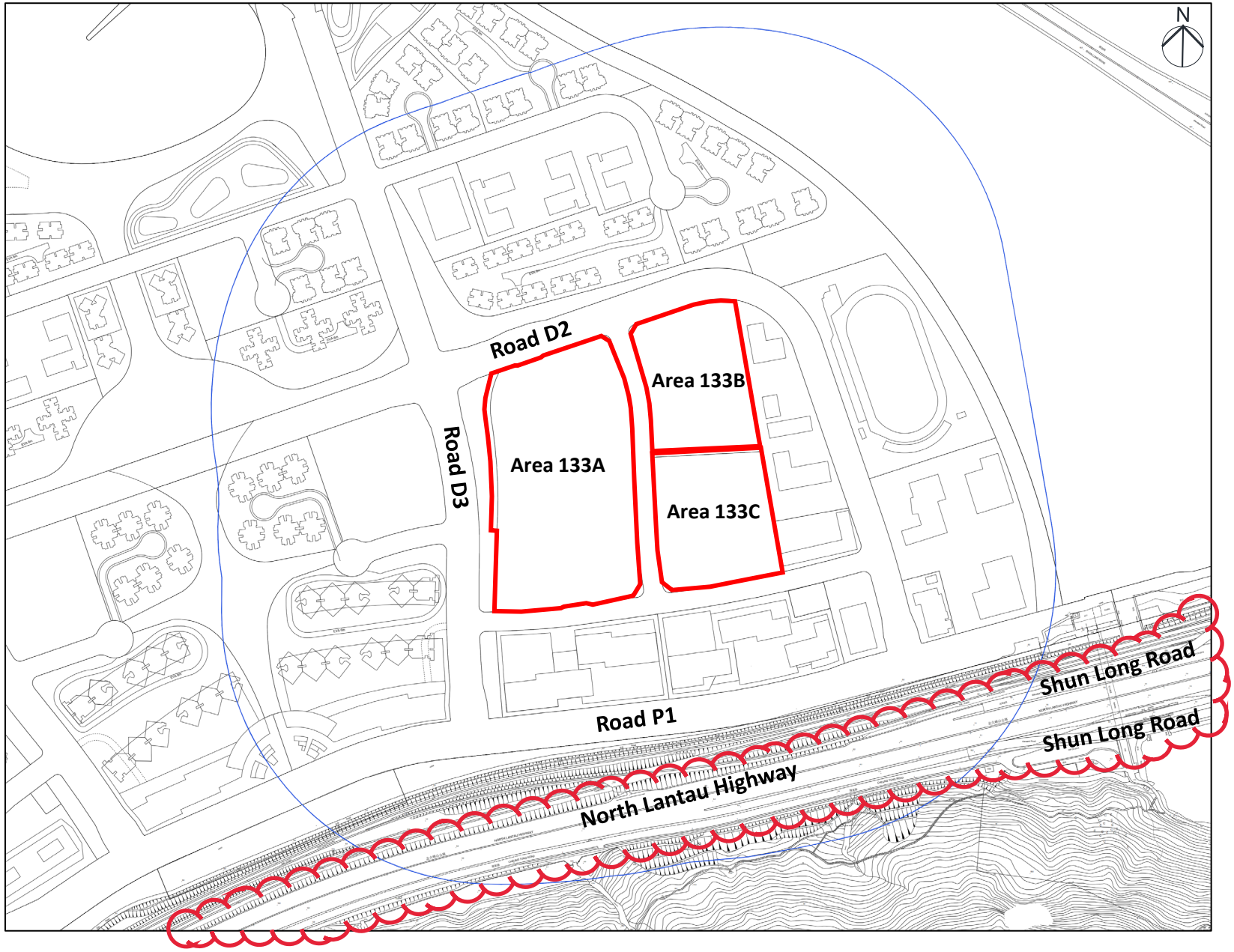
Attachment 1

Legend

- Site Boundary
- 300m Assessment Area
- Friction course materials along these sections of North Lantau Highway near Tung Chung (East) New Town Extension



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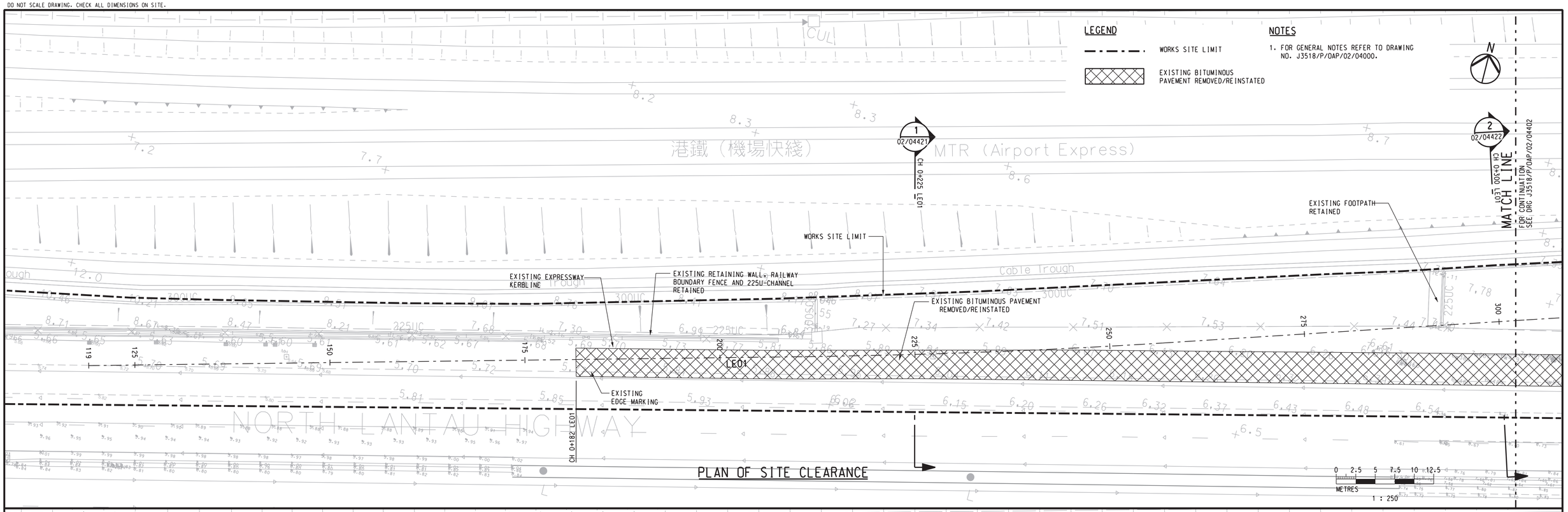
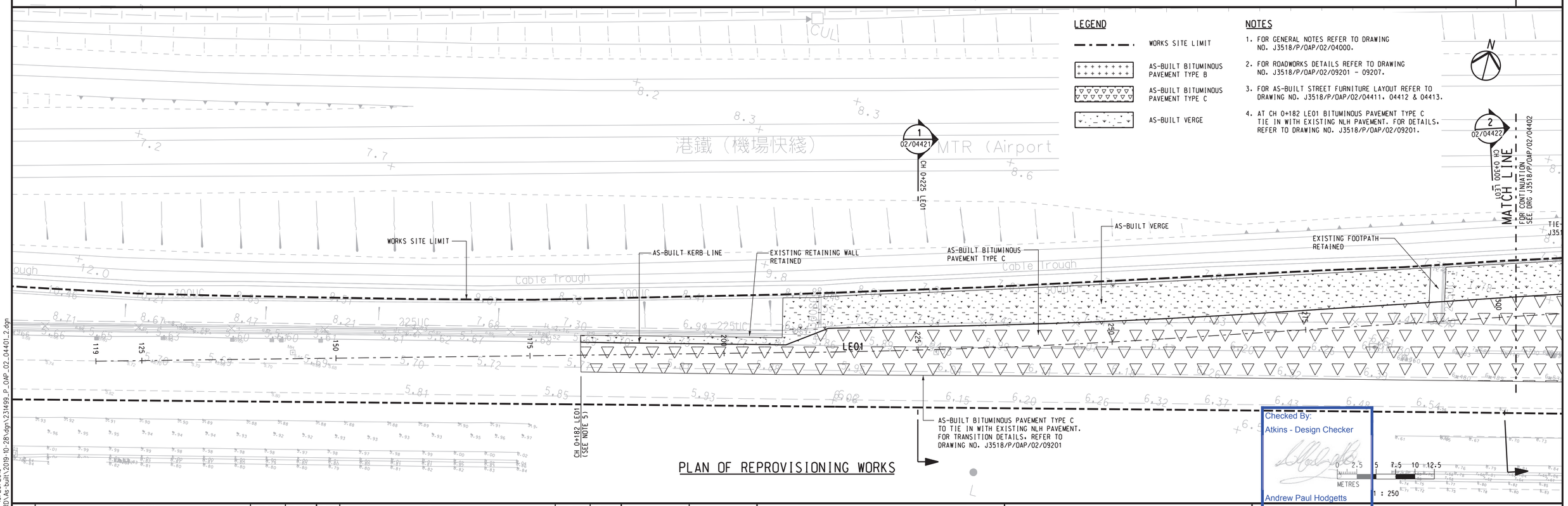




Checked By:
Atkins - Design Checker
Andrew Paul Hodgetts
Chinese Auth. Rep.

Rev	Description	By	Date
1	AS-CONSTRUCTED	SK	03/19
2	REVISED AS PER SOR COMMENT	SK	10/19

Rev	Description	By	Date

Drawn: A.LIE	Date: 01/14
Checked: TL	Approved: DOP
Scale: 1:250 @ A1 / 1:500 @ A3	

Client: 路政署 HIGHWAYS DEPARTMENT 港珠澳大橋香港工程管理處 Hong Kong - Zhuhai - Macao Bridge Hong Kong Project Management Office

Project Title: Contract No. HY/2012/07 Tuen Mun - Chek Lap Kok Link Southern Connection Viaduct Section

Supervising Officer: AECOM

Contractor: Gammon

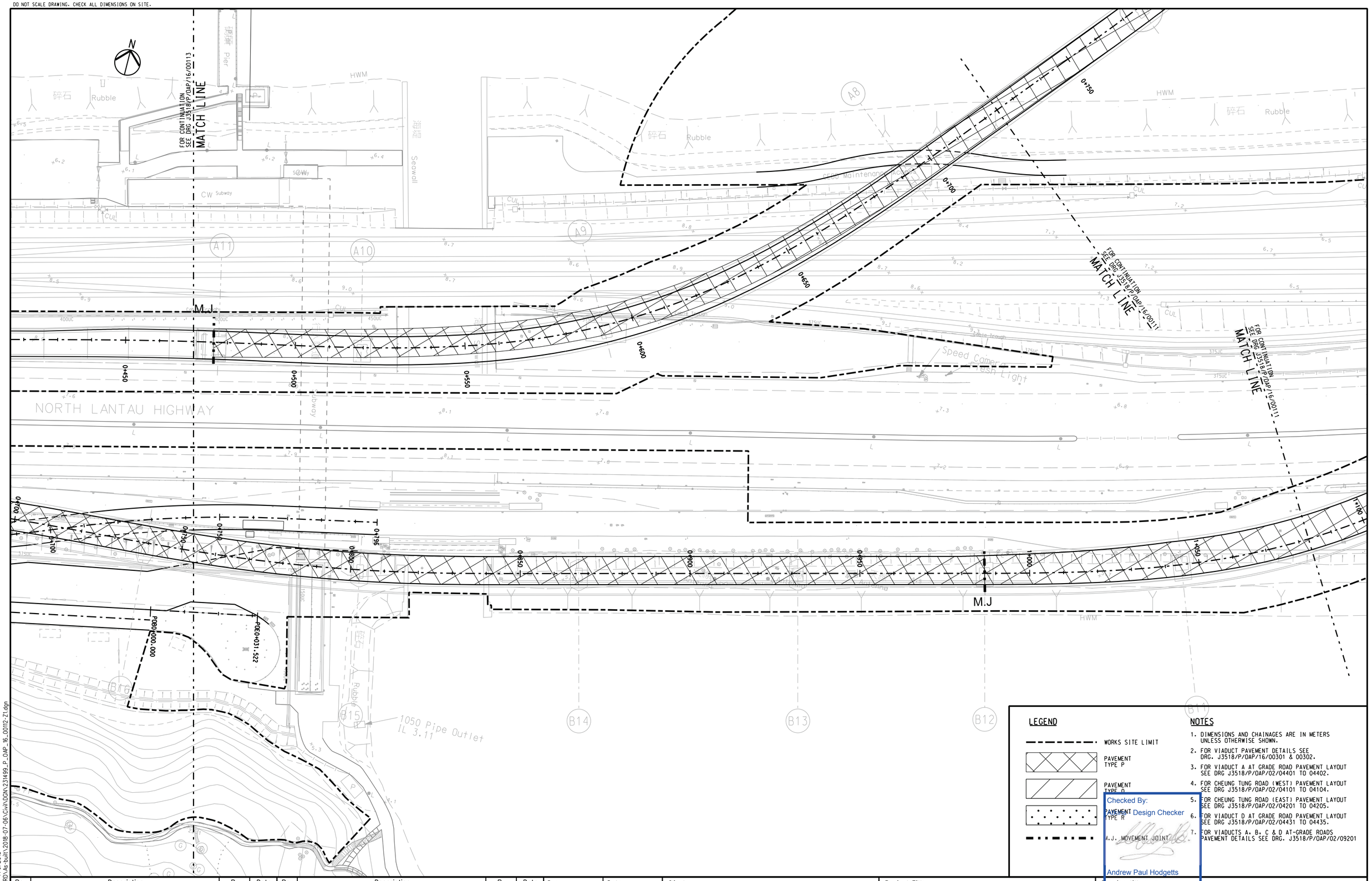
Originator: ARUP

Drawing title: VIADUCT A AT-GRADE ROAD PAVEMENT LAYOUT (SHEET 1 OF 2)

Drawing no. J3518/P/OAP/02/04401 Rev. 2

Printed by : johnny.cheng 10/29/2019
Filename : J:\23149\RECORD\As-built\2019-10-28\dgn\231499_P_OAP_02_04401_2.dgn

DO NOT SCALE DRAWING. CHECK ALL DIMENSIONS ON SITE.



LEGEND

- WORKS SITE LIMIT
- PAVEMENT TYPE P
- PAVEMENT TYPE Q
- PAVEMENT TYPE R
- M.J. MOVEMENT JOINT

NOTES

1. DIMENSIONS AND CHAINAGES ARE IN METERS UNLESS OTHERWISE SHOWN.
2. FOR VIADUCT PAVEMENT DETAILS SEE DRG. J3518/P/OAP/16/00301 & 00302.
3. FOR VIADUCT A AT GRADE ROAD PAVEMENT LAYOUT SEE DRG J3518/P/OAP/02/04401 TO 04402.
4. FOR CHELUNG TUNG ROAD (WEST) PAVEMENT LAYOUT SEE DRG J3518/P/OAP/02/04101 TO 04104.
5. FOR CHELUNG TUNG ROAD (EAST) PAVEMENT LAYOUT SEE DRG J3518/P/OAP/02/04201 TO 04205.
6. FOR VIADUCT D AT GRADE ROAD PAVEMENT LAYOUT SEE DRG J3518/P/OAP/02/04431 TO 04435.
7. FOR VIADUCTS A, B, C & D AT-GRADE ROADS PAVEMENT DETAILS SEE DRG. J3518/P/OAP/02/09201

Checked By: Design Checker
Andrew Paul Hodgetts
Resident Engr's Rep.

Rev	Description	By	Date	Rev	Description	By	Date
1	AS-CONSTRUCTED	SK	07/18				

Drawn: LTF	Date: 06/14
Checked: KYL	Approved: DOP
Scale: 1:500 @ A1 / 1:1000 @ A3	

Client: 路政署 HIGHWAYS DEPARTMENT 港珠澳大橋香港工程管理處 Hong Kong - Zhuhai - Macao Bridge Hong Kong Project Management Office

Project Title: Contract No. HY/2012/07 Tuen Mun - Chek Lap Kok Link Southern Connection Viaduct Section

Supervising Officer: AECOM

Contractor: Gammon

Originator: ARUP

Drawing title: VIADUCT PAVEMENT LAYOUT PLAN SHEET 12 OF 13

Drawing no. J3518/P/OAP/16/00112 Rev. 1

Printed by : reman.yick 7/6/2018
Filename : J:\23149\RECORD\As-built\2018-07-06\Civil\DGN\23149_P_OAP_16_00112_Z1.dgn

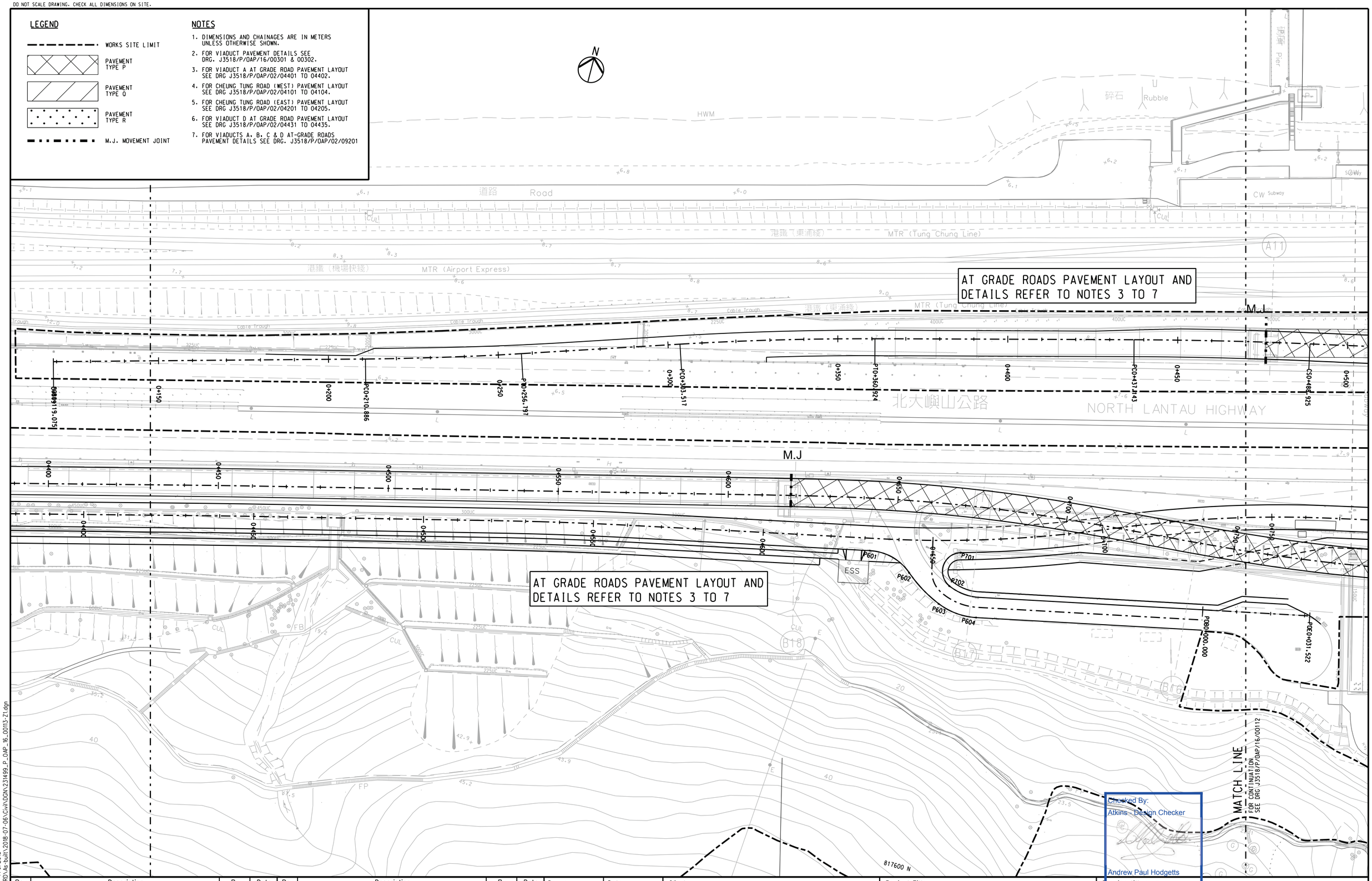
DO NOT SCALE DRAWING. CHECK ALL DIMENSIONS ON SITE.

LEGEND

- WORKS SITE LIMIT
- PAVEMENT TYPE P
- PAVEMENT TYPE Q
- PAVEMENT TYPE R
- M.J. MOVEMENT JOINT

NOTES

1. DIMENSIONS AND CHAINAGES ARE IN METERS UNLESS OTHERWISE SHOWN.
2. FOR VIADUCT PAVEMENT DETAILS SEE DRG. J3518/P/OAP/16/00301 & 00302.
3. FOR VIADUCT A AT GRADE ROAD PAVEMENT LAYOUT SEE DRG J3518/P/OAP/02/04401 TO 04402.
4. FOR CHEUNG TUNG ROAD (WEST) PAVEMENT LAYOUT SEE DRG J3518/P/OAP/02/04101 TO 04104.
5. FOR CHEUNG TUNG ROAD (EAST) PAVEMENT LAYOUT SEE DRG J3518/P/OAP/02/04201 TO 04205.
6. FOR VIADUCT D AT GRADE ROAD PAVEMENT LAYOUT SEE DRG J3518/P/OAP/02/04431 TO 04435.
7. FOR VIADUCTS A, B, C & D AT-GRADE ROADS PAVEMENT DETAILS SEE DRG. J3518/P/OAP/02/09201



Checked By:
Atkins - Design Checker
Andrew Paul Hodgetts
Checker Auth. Rep.

Rev	Description	By	Date	Rev	Description	By	Date
1	AS-CONSTRUCTED	SK	07/18				

Drawn	Date
LTF	06/14
Checked	Approved
KYL	DOP
Scale	
1:500 @ A1 / 1:1000 @ A3	

Client: 路政署 HIGHWAYS DEPARTMENT 港珠澳大橋香港工程管理處 Hong Kong - Zhuhai - Macao Bridge Hong Kong Project Management Office

Project Title: Contract No. HY/2012/07 Tuen Mun - Chek Lap Kok Link Southern Connection Viaduct Section

Supervising Officer: AECOM

Contractor: Gammon

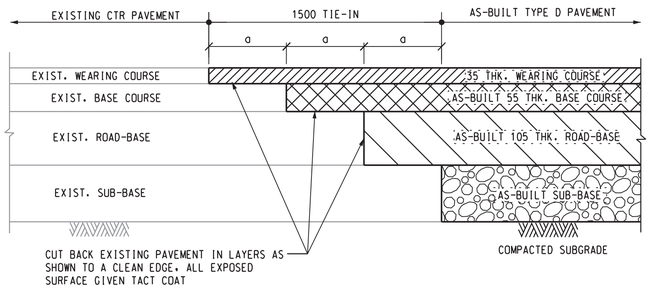
Originator: ARUP

Drawing title: VIADUCT PAVEMENT LAYOUT PLAN SHEET 13 OF 13

Drawing no. J3518/P/OAP/16/00113 Rev. 1

Printed by : reman.yick 7/6/2018
Filename : J:\231499\RECORD\As-built\2018-07-06\Civil\DGN\231499_P_OAP_16_00113-Z1.dgn

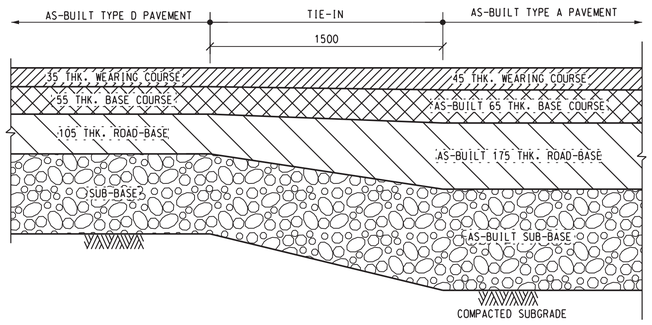
DO NOT SCALE DRAWING. CHECK ALL DIMENSIONS ON SITE.



NOTE:
IF AS-BUILT SUB-BASE THCIKNESS DOES NOT MATCH WITH EXISTING,
1500 TIE-IN WILL BE REQUIRED FOR THICKNESS TRANSITION.

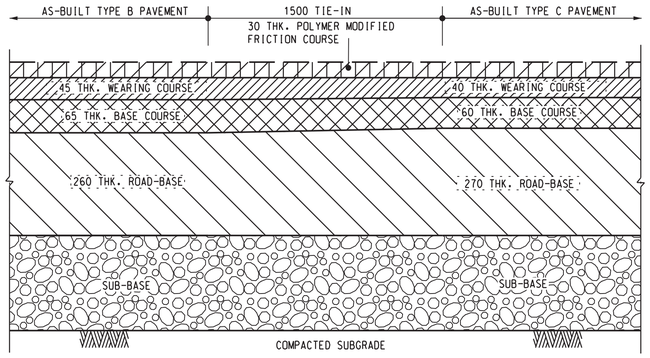
TIE-IN OF NEW FLEXIBLE PAVEMENT (TYPE D) WITH EXISTING FLEXIBLE PAVEMENT ON CHEUNG TUNG ROAD

a=150 FOR LONGITUDINAL JOINT
a=500 FOR TRANSVERSE JOINT
N.T.S.



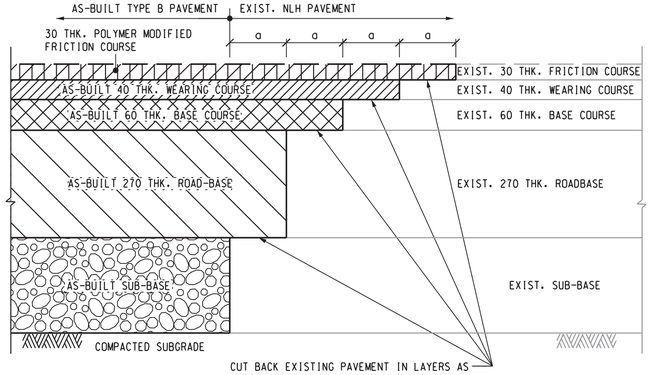
TIE-IN OF NEW FLEXIBLE PAVEMENT BETWEEN TYPE A AND TYPE D

N.T.S.



TIE-IN OF NEW FLEXIBLE PAVEMENT BETWEEN TYPE B AND TYPE C

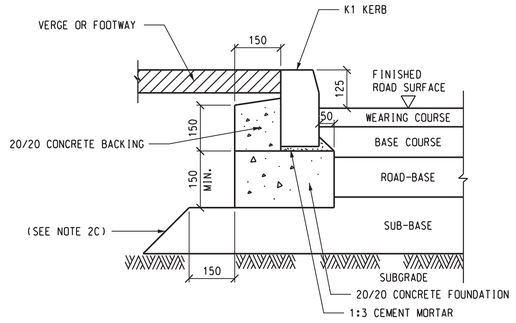
N.T.S.



NOTE:
IF AS-BUILT SUB-BASE THCIKNESS DOES NOT MATCH WITH EXISTING,
1500 TIE-IN WILL BE REQUIRED FOR THICKNESS TRANSITION.

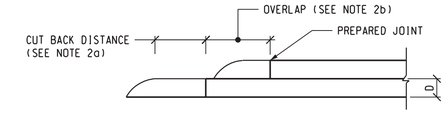
TIE-IN OF NEW FLEXIBLE PAVEMENT (TYPE C) WITH EXISTING FLEXIBLE PAVEMENT AT NLH

a=150 FOR LONGITUDINAL JOINT
a=500 FOR TRANSVERSE JOINT
N.T.S.



TYPICAL BITUMINOUS PAVEMENT CROSS-SECTION

N.T.S.



JOINTS IN BITUMINOUS MATERIALS LAYERS

N.T.S.

NOTES

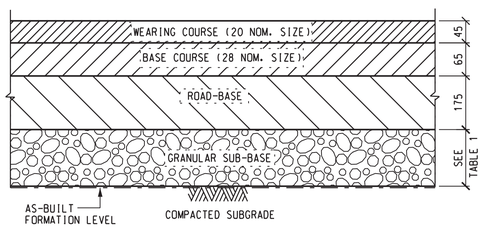
1. ALL DIMENSIONS ARE IN MILLIMETERS.
2. NOTES FOR BITUMINOUS PAVEMENT:
   (a) MINIMUM CUT BACK DISTANCE = 2 x D OR 100 WHICHEVER IS GREATER.
   (b) MINIMUM OVERLAP BETWEEN ADJOINING LAYERS:
   150 FOR JOINTS LONGITUDINAL TO CARRIAGEWAY.
   500 FOR JOINTS TRANSVERSE TO CARRIAGEWAY.
   (c) WHERE THE CROSSFALL OF ROAD SURFACE IS TOWARDS THE KERB THE SUB-BASE SHOULD BE CARRIED THROUGH TO THE EDGE OF THE EMBANKMENT OR TO THE FILTER DRAIN.
   (d) REFER TO THE GENERAL SPECIFICATION FOR THE NOMINAL SIZES OF MATERIALS.
   (e) KERB UNITS ARE LAID ON 1 : 3 CEMENT MORTAR NOT LESS THAN 10 mm THICK AND NOT MORE THAN 40 mm THICK.
3. NOTES FOR FOOTWAY PAVEMENT:
   (a) THE FINISHES TO THE CONCRETE SURFACE IS CLASS U4.
   (b) CONCRETE FOOTWAY AND PAVED AREAS AREA LAID IN BAYS NOT EXCEEDING 20 SQ.m WITH A MAXIMUM JOINT SPACING OF 5m.
   (c) EXPANSION JOINTS IS PROVIDED AT MAX. SPACING OF 100m.
4. THE POLYMER MODIFIED FRICTION COURSE IS 10mm NOMINAL SIZE AND SHALL COMPLY WITH APPENDIX A OF HyD GUIDANCE NOTES RD/GN/032.
5. FOR NOTES ON ROAD PAVEMENT CONSTRUCTION, REFER TO GENERAL NOTE 12 ON DRAWING NO. J3518/P/OAP/02/04000.

TABLE 1. DESIGN THICKNESS OF CAPPING LAYER/SUB-BASE

SUBGRADE MODULUS OF ELASTICITY (MPa)	SUBGRADE CBR VALUE (%)	PLASTICITY INDEX (PI) (%)	MINIMUM THICKNESS (mm)	
			CAPPING LAYER	GRANULAR SUB-BASE
< 20	-	> 50	600	150
20 - < 50	-	> 20 - 50	350	150
50 - < 150	5 - < 15	≤ 20	-	225
≥ 150	≥ 15	-	-	150

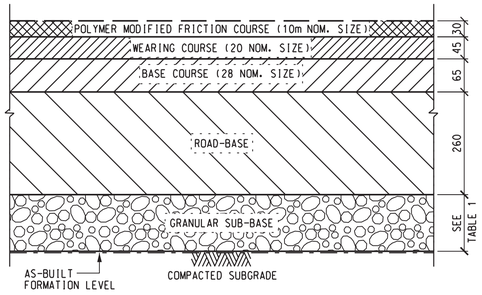
NOTE 1. FOR WEAK SUBGRADES (<50 MPa), AN OVERLAYING CAPPING LAYER OF MIN. CBR VALUE OF 15% IS REQUIRED.

2. FOR ABNORMALLY WEAK SUBGRADE (<20 MPa), GEOTEXTILES SHOULD BE USED TO SEPARATE THE SOIL AND THE CAPPING LAYER IN ORDER TO REDUCE DEFORMATIONS UNDER CONSTRUCTION TRAFFIC.



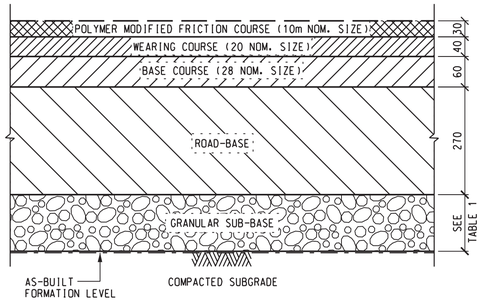
PAVEMENT DETAIL TYPE A (FOR REPROVISIONED CHEUNG TUNG ROAD)

N.T.S.



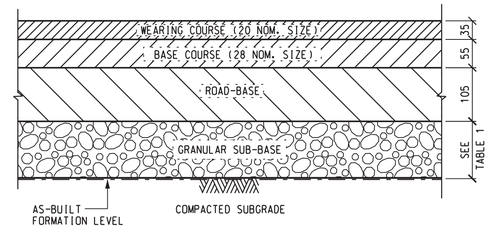
PAVEMENT DETAIL TYPE B (FOR VIADUCT APPROACH RAMP AND ROAD)

N.T.S.



PAVEMENT DETAIL TYPE C (FOR NLH EXPRESSWAY)

N.T.S.



PAVEMENT DETAIL TYPE D (FOR REPROVISIONED CHEUNG TUNG ROAD - SIMILAR PAVEMENT CONFIGURATION AS EXISTING)

N.T.S.

Checked By:
Andrew Paul Hodgetts
Chartered Engineer
Andrew Paul Hodgetts
Chartered Engineer
Authorised Person (Checker)

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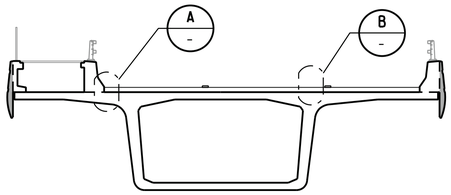
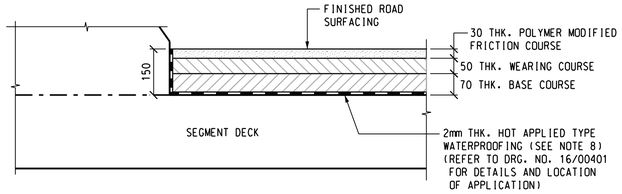
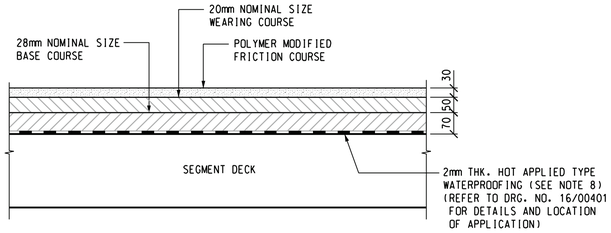


PAVEMENT TYPE P
TYPICAL DECK SECTION
N.T.S.



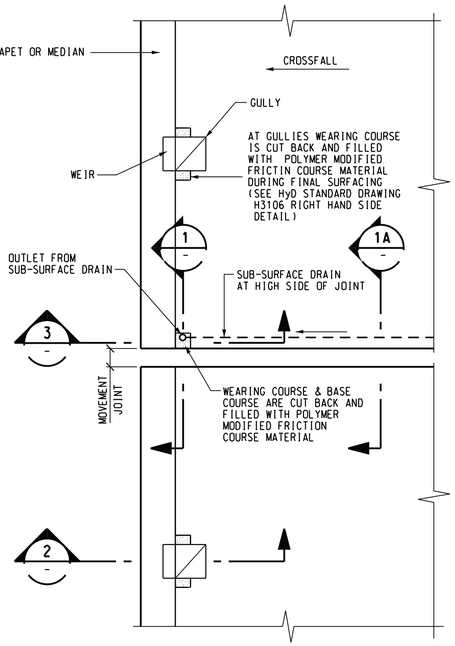
DETAIL A
SCALE N.T.S.



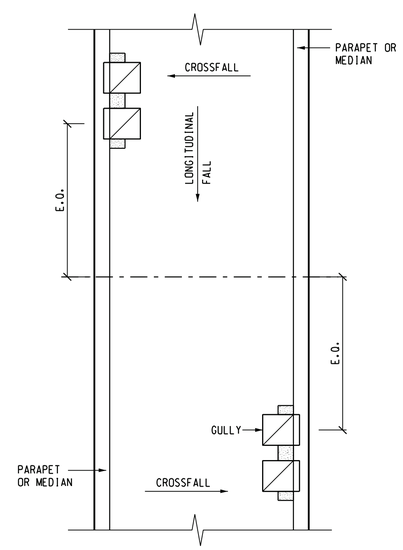
DETAIL B
SCALE N.T.S.

NOTES

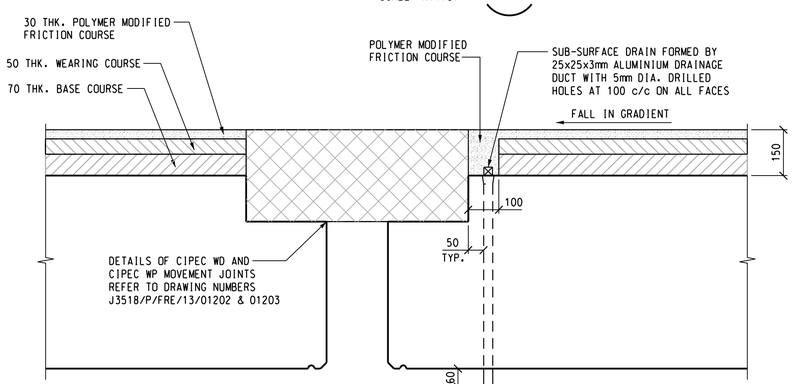
1. ALL DIMENSION ARE IN MILLIMETER UNLESS OTHERWISE STATED.
2. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH ALL ROADWORK DRAWINGS AND HyD STANDARD DRAWINGS.
3. ALL STANDARD DRAWINGS REFERRED TO IN THE DRAWINGS SHALL BE THE LATEST VERSION.
4. REFER TO GENERAL SPECIFICATION AND EMPLOYER'S REQUIREMENTS FOR THE NOMINAL SIZES OF MATERIALS.
5. FOR DETAILS OF TRANSITION BETWEEN VIADUCT F AND AT-GRADE ROADS SEE DRG. J3518/P/OAP/16/00302.
6. MINIMUM OVERLAP BETWEEN ADJOINING LAYERS:
   150 FOR JOINTS LONGITUDINAL TO CARRIAGEWAY
   500 FOR JOINTS TRANSVERSE TO CARRIAGEWAY
7. FOR VIADUCTS A, B, C & D AT-GRADE ROADS PAVEMENT DETAILS SEE DRG. J3518/P/OAP/02/09201.
8. HOT APPLIED FLINTKOTE BRIDGE COAT WITH FLINTKOTE PF-4 PRIMER IS USED FOR WATERPROOFING.



TYPICAL PLAN ARRANGEMENT
N.T.S.



TYPICAL LAYOUT OF EXTENT OF
POLYMER MODIFIED FRICTION COURSE MATERIAL
AT CHANGE OF CROSS FALL
N.T.S.



SECTION 1
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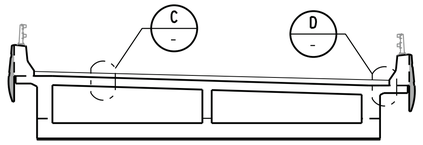
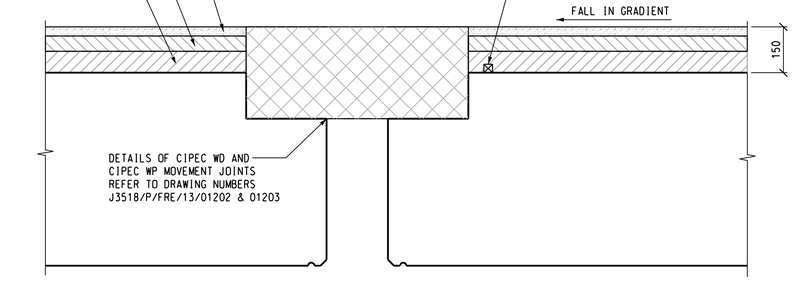


PAVEMENT TYPE S
TYPICAL RAMP SECTION
N.T.S.



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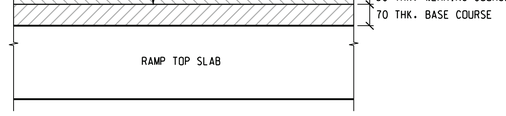
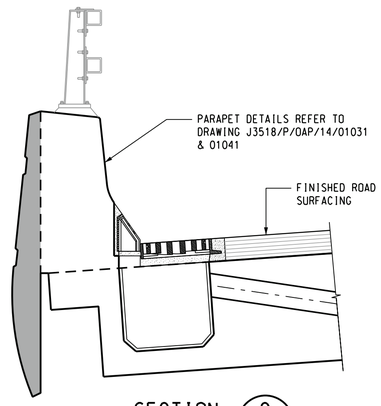


DETAIL C
SCALE N.T.S.



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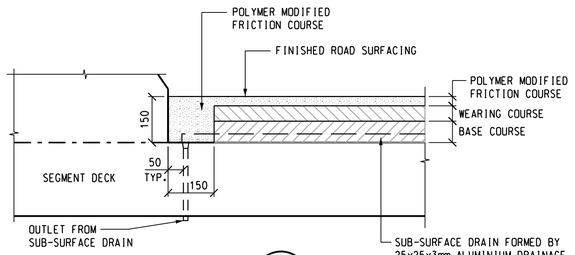

SECTION 3
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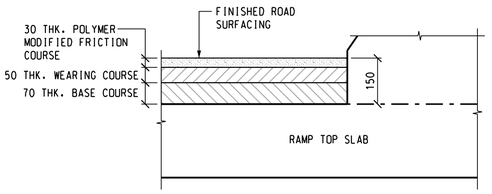

DETAIL D
SCALE N.T.S.

Checked By:
Atkins - Design Checker
Andrew Paul Hodgetts
Works Auth. Rep.

Rev	Description	By	Date	Rev	Description	By	Date
1	AS-CONSTRUCTED	SK	07/18				
2	SECOND ISSUE	SK	03/19				

Drawn: JC	Date: 05/14
Checked: KYL	Approved: DOP
Scale: 1:50 @ A1 / 1:100 @ A3	

Client: 路政署 HIGHWAYS DEPARTMENT 港珠澳大橋香港工程管理處 Hong Kong - Zhuhai - Macao Bridge Hong Kong Project Management Office

Project Title: Contract No. HY/2012/07 Tuen Mun - Chek Lap Kok Link Southern Connection Viaduct Section

Supervising Officer: AECOM

Contractor: Gammon

Originator: ARUP

Drawing title: VIADUCT PAVEMENT DETAILS SHEET 1 OF 3

Drawing no. J3518/P/OAP/16/00301 Rev. 2

Printed by : remon.yick 3/22/2019
Filename : J:\23149\RECORD\As-built\2019-03-22\DGN\231499_P_OAP_16_00301_2.dgn

Appendix 4.2

Location of Noise Mitigation Measures

Project Management Initials: Designer: CYCK Checked: CCHY Approved: SWKM ISO A1 594mm x 841mm

GENERAL:

1.1 THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE SPECIFICATIONS AND THE PARTICULAR REQUIREMENTS WHICH ARE SHOWN ON INDIVIDUAL DRAWINGS.

1.2 UNLESS OTHERWISE SPECIFIED, THESE GENERAL NOTES ARE APPLICABLE TO ALL THE STRUCTURES.

1.3 ALL REFERENCES OF STANDARD DRAWING SHALL REFER TO THE LATEST VERSION OF THAT STANDARD DRAWING.

1.4 NO DIMENSIONS ARE TO BE OBTAINED FROM SCALING DRAWINGS.

1.5 ALL STRUCTURAL DRAWINGS MUST BE READ IN CONJUNCTION WITH ALL RELEVANT CIVIL, GEOTECHNICAL, ARCHITECTURAL AND MECHANICAL AND ELECTRICAL WORK DRAWINGS, AND THE OTHER CONTRACT DOCUMENTS.

1.6 ALL SETTING OUT DIMENSIONS SHALL BE VERIFIED AGAINST THE LATEST RELEVANT ARCHITECTURAL DRAWINGS BEFORE WORK COMMENCES. THE SUPERVISOR SHALL BE INFORMED IMMEDIATELY OF ANY DISCREPANCIES DISCOVERED.

1.7 ALL DESIGN AND CONSTRUCTION SHALL COMPLY WITH BS EN 1991 EUROCODE 1 : ACTIONS ON STRUCTURES, BS EN 1992 EUROCODE 2 : DESIGN OF CONCRETE STRUCTURES, BS EN 1993 EUROCODE 3 : DESIGE OF STEEL STRUCTURES AS MODIFIED BY THE STRUCTURES DESIGN MANUAL FOR HIGHWAYS AND RAILWAYS (2013 EDITION).

1.8 ABBREVIATIONS:

ABBREVIATIONS USED ARE AS DEFINED IN "STANDARD METHOD OF DETAILING STRUCTURAL CONCRETE" PUBLISHED BY THE INSTITUTION OF STRUCTURAL ENGINEERS UNLESS NOTED OTHERWISE.

STANDARD ABBREVIATIONS:

DIA.	DIAMETER
MAX.	MAXIMUM
MIN.	MINIMUM
M/S	MARGINAL STRIP
NOM.	NOMINAL
TYP.	TYPICAL
C.J.	CONSTRUCTION JOINT
M.J.	MOVEMENT JOINT
F.G.L.	FINISH GROUND LEVEL
F.S.L.	FINISH STRUCTURE LEVEL
F.R.L.	FINISH ROAD LEVEL
F.F.L.	FINISH FLOOR LEVEL
E.G.L.	EXISTING GROUND LEVEL
N.T.S.	NOT TO SCALE
S.O.L.	SETTING OUT LINE
C/W	CARRIAGEWAY
G.M.S.	GALVANIZED MILD STEEL
S.S.	STAINLESS STEEL
H/S	HARD SHOULDER
P.J.	PARAPET JOINT
S.O.P.	SETTING OUT POINT

1.9 ALL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE HONG KONG GOVERNMENT GENERAL SPECIFICATION FOR CIVIL ENGINEERING WORKS 2006 EDITION.

1.10 ALLOWANCE IS TO BE MADE BY THE CONTRACTOR FOR PRECAMBER IN THE FORMWORK SUCH THAT THE ALIGNMENT OF THE COMPLETED STRUCTURE CONFORMS TO THE ALIGNMENT SHOWN ON THE DRAWING.

1.11 PARAPETS ARE CAST VERTICALLY.

DIMENSIONS AND LEVELS:

2.1 COORDINATES ARE BASED ON HONG KONG METRIC GRID (1980) UNLESS OTHERWISE NOTED.

2.2 LEVELS ARE IN METRES RELATIVE TO HONG KONG PRINCIPAL DATUM (mPD) UNLESS OTHERWISE NOTED.

2.3 DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.

2.4 SETTING OUT DIMENSIONS, LEVELS, COORDINATES ARE TO BE CALCULATED BY THE CONTRACTOR. NO INFORMATION SHOULD BE SCALED PHYSICALLY OR ELECTRONICALLY FROM THE DRAWINGS OR FILES.

2.5 INFERRED ROCKHEAD LEVEL AND UTILITIES SHOWN ON DRAWING IS INDICATIVE AND FOR INFORMATION ONLY.

CONCRETE:

3.1 CONCRETE GRADES AND NOMINAL COVERS SHALL BE AS FOLLOWS UNLESS OTHERWISE NOTED:

UNDERSIDE OF FOOTINGS AND PILE CAPS IN DIRECT CONTACT WITH GROUND	C32/40	75
FOOTINGS AND PILE CAPS OTHER THAN ABOVE STATED	C32/40	50
LAND PILE	C32/40	75
PARAPET	C32/40	50
BLINDING	C16/20	-
ELSEWHERE	C16/20	35

C32/40
Fck (MPa) CHARACTERISTIC CYLINDER STRENGTH — Fck.cube (MPa) CHARACTERISTIC CUBE STRENGTH

NOMINAL COVER MEASURED FROM THE FACE OF THE CONCRETE TO THE OUTERMOST REINFORCEMENT, INCLUDING LINKS.
MINIMUM COVER TO BE NOMINAL COVER MINUS 5mm
THE MINIMUM COVER SHALL NOT BE LESS THAN THE ADJACENT REINFORCEMENT DIAMETER.
FULL COVER IS TO BE MAINTAINED AT GROOVES AND OTHER ARCHITECTURAL FEATURES TO THE CONCRETE SURFACE.

3.2 CONCRETE GRADES SPECIFY THE REQUIRED MINIMUM 28 DAYS CHARACTERISTIC CYLINDER OR CUBE STRENGTH IN MPa WITH THE MAXIMUM SIZE OF AGGREGATE NOT EXCEEDING 20mm. THE REACTIVE ALKALI OF CONCRETE EXPRESSED AS THE EQUIVALENT SODIUM OXIDE PER CUBIC METRE OF CONCRETE SHALL NOT EXCEED 3KG.

3.3 CONSTITUENT MATERIALS, MIX DESIGN AND TESTING REQUIREMENTS ARE DEFINED IN THE HONG KONG GOVERNMENT GENERAL SPECIFICATION FOR CIVIL ENGINEERING WORKS 2006 EDITION.

3.4 DEFINITION OF VARIOUS CLASSES OF SURFACE FINISH IS IN ACCORDANCE WITH THE HONG KONG GOVERNMENT GENERAL SPECIFICATION FOR CIVIL ENGINEERING WORKS 2006 EDITION.

CONCRETE FINISHES, UNLESS SHOWN OTHERWISE, SHALL BE FORMED FINISHES:

SURFACES IN CONTACT WITH SOIL	F1
UNEXPOSED SURFACES	F2
EXPOSED SURFACES	F5

UNFORMED FINISHES:

UNEXPOSED SURFACES	U2
EXPOSED SURFACES	U5
TREATED FINISH	T4

3.5 ALL CONSTRUCTION JOINTS SHALL BE LOCATED AS SHOWN ON THE DRAWINGS OR AS ACCEPTED BY THE PROJECT MANAGER.

3.6 BLINDING CONCRETE SHALL BE 75mm THICK UNLESS SHOWN OTHERWISE.

3.7 ALL EXTERNAL CORNERS SHALL BE 20mm x 20mm CHAMFERS UNLESS SHOWN OTHERWISE.

3.8 KICKERS SHALL BE 100mm HIGH UNLESS SHOWN OTHERWISE.

3.9 ALL LEVELS SHALL BE STRUCTURAL LEVEL UNLESS SHOWN OTHERWISE.

REINFORCEMENT:

4.1 STEEL REINFORCEMENT SHALL COMPLY WITH CONSTRUCTION STANDARD CS2 : 2012 OF HONG KONG.

SYMBOL	TYPE OF BAR
R	MILD STEEL BAR OF GRADE 250
T	HIGH YIELD DEFORMED BAR OF GRADE 500B

4.2 STEEL REINFORCEMENT SHALL COMPLY WITH THE REQUIREMENTS OF CONSTRUCTION STANDARD CS2 : 2012 AND SHALL BE BENT IN ACCORDANCE WITH BS EN 1992 AND BS 8666.

4.3 REINFORCEMENT NOTATION IS AS FOLLOWS:

50/T25001/150 (EF)
NO. OF BARS
TYPE OF BAR (SEE 4.1)
BAR DIAMETER
BAR LOCATION (SEE 4.6)
BAR SPACING
BAR MARK

4.4 REINFORCEMENT IS SHOWN DIAGRAMMATICALLY ON THE DRAWINGS AND DOES NOT INTEND TO SHOW THE PRECISE LOCATION OF BARS. UNLESS OTHERWISE INDICATED ON THE DRAWINGS, BAR SPACING IS MEASURED PERPENDICULAR TO THE BAR.

4.5 TOP OR NEAR SIDE BARS SHOWN AS ————————
ALL OTHER BARS SHOWN AS — — — — — — —.

4.6 ABBREVIATIONS:

T	TOP
B	BOTTOM
NF	NEAR FACE
FF	FAR FACE
EF	EACH FACE
BW	BOTH WAYS
AP	ALTERNATELY PLACED (BARS OF ONE MARK ALTERNATING WITH BARS OF ANOTHER MARK)
AR	ALTERNATELY REVERSED (ALTERNATE BARS TURNED END FOR END AND POSSIBLY MOVED ALONG THEIR LENGTH, AS INDICATED BY TYPICAL BAR)
AS	ALTERNATELY STAGGERED (BARS OF ONE MARK WITH ALTERNATE BARS MOVED ALONG THEIR LENGTH SO THAT TWO SETS OF PLAN POSITIONS ARE OCCUPIED, AS INDICATED BY TYPICAL BAR)
V	VARIES (BARS OF VARYING DIMENSIONS)
RL	RANDOM LENGTH (BARS OF SECONDARY REINFORCEMENT IN WHICH THE POSITION OF LAPS ARE NOT DEFINED)
A.L.	ANCHORAGE LENGTH
T.A.L.	TENSILE ANCHORAGE LENGTH
T.L.L.	TENSILE LAP LENGTH
LV	LENGTH VARIES
U-BAR	U-SHAPED BAR
L-BAR	L-SHAPED BAR

4.7 BARS SHALL BE LAPPED AT THE LOCATIONS SHOWN ON THE DRAWINGS. THE CONTRACTOR SHALL OBTAIN ACCEPTANCE FROM THE PROJECT MANAGER IF BARS ARE TO BE LAPPED ELSEWHERE.

4.8 DESIGN ANCHORAGE LENGTHS AND LAP LENGTHS FOR VARIOUS BAR SIZES ARE AS FOLLOWS UNLESS SHOWN OTHERWISE ON THE DRAWINGS:

BASIC REQUIRED ANCHORAGE LENGTHS, lb.rqd

BAR DIAMETER \ CONCRETE GRADE	C25/30	C28/35	C32/40	C35/45	C40/50
10	740	700	650	580	550
12	890	830	780	700	660
16	1190	1110	1040	930	880
20	1480	1390	1300	1160	1090
25	1850	1730	1620	1440	1370
32	2370	2210	2080	1850	1750
40	3220	3010	2820	2510	2370
50	4510	4210	3820	3510	3330

- A FACTOR OF 0.7 CAN BE APPLIED TO THE BASIC REQUIRED ANCHORAGE LENGTHS(lb.rqd) IN THE ABOVE TABLE FOR GOOD BOND CONDITIONS AS DEFINED IN CLAUSE 8.4.2(2) AND FIGURE 8.2 OF BS EN 1992-1-1:2004.
- DESIGN ANCHORAGE LENGTHS SHALL BE DETERMINED USING BASIC REQUIRED ANCHORAGE LENGTHS ABOVE AND EQUATION (8.4) IN ACCORDANCE WITH CLAUSE 8.4.4 OF BS EN 1992-1-1:2004.
- DESIGN LAP LENGTHS SHALL BE DETERMINED USING BASIC REQUIRED ANCHORAGE LENGTHS ABOVE AND EQUATION (8.10) IN ACCORDANCE WITH CLAUSE 8.7.3 OF BS EN 1992-1-1:2004.

4.9 SCHEDULING, DIMENSIONING, BENDING AND CUTTING OF REINFORCEMENT SHALL BE IN ACCORDANCE WITH BS EN 1992 AND BS 8666.

4.10 IN A BUNDLE, ANCHORAGE LENGTHS, LAP LENGTHS AND OTHER REQUIREMENTS SHALL BE DETERMINED IN ACCORDANCES WITH CLAUSES 8.9.2 AND 8.9.3 OF BS EN 1992-1-1:2004 RESPECTIVELY.
BASIC REQUIRED ANCHORAGE LENGTHS, lb.rqd, BASED ON THE BUNDLES' EQUIVALENT DIAMETERS ARE AS SHOWN IN THE FOLLOWING TABLES AND SHALL BE USED TO DETERMINE THE BUNDLES' ANCHORAGE AND LAP LENGTHS AS REQUIRED BY BS EN 1992-1-1:2004.

2-BAR BUNDLES - BASIC REQUIRED ANCHORAGE LENGTHS, lb.rqd

BAR DIAMETER \ CONCRETE GRADE	C25/30	C28/35	C32/40	C35/45	C40/50
10	1050	980	920	820	780
12	1260	1180	1100	980	930
16	1680	1570	1470	1310	1240
20	2100	1960	1830	1630	1550
25	2710	2530	2370	2110	2000
32	3860	3610	3380	3010	2850

3-BAR BUNDLES - BASIC REQUIRED ANCHORAGE LENGTHS, lb.rqd

BAR DIAMETER \ CONCRETE GRADE	C25/30	C28/35	C32/40	C35/45	C40/50
10	1290	1200	1130	1000	950
12	1540	1440	1350	1200	1140
16	2050	1920	1800	1600	1510
20	2470	2310	2170	1930	1820
25	3320	3100	2900	2580	2450
32	4690	4380	4110	3650	3460

- A FACTOR OF 0.7 CAN BE APPLIED TO THE BASIC REQUIRED ANCHORAGE LENGTHS(lb.rqd) IN THE ABOVE TABLES FOR GOOD BOND CONDITIONS AS DEFINED IN CLAUSE 8.4.2(2) AND FIGURE 8.2 OF BS EN 1992-1-1:2004.

4.11 BARS INDICATED AS RANDOM LENGTH (RL) SHALL BE LAPPED AS NECESSARY SUBJECT TO THE FOLLOWING CONDITIONS:
(A) LAPS IN ADJACENT BARS SHALL BE STAGGERED.
(B) MINIMUM LAP LENGTH SHALL BE IN ACCORDANCE WITH NOTE 4.8.
(C) NOT MORE THAN ONE BAR PER LINE SHALL BE SHORTER THAN
6 METRES FOR 16mm DIA. OR SMALLER OR
9 METRES FOR 20mm DIA. OR LARGER .

4.12 WELDING OF REINFORCEMENT SHALL NOT BE PERMITTED WITHOUT ACCEPTANCE OF THE PROJECT MANAGER.

4.13 STEEL SPACERS OF SIMILAR DIAMETER TO BARS BUT NOT LESS THAN 25mm DIAMETER SHALL BE PROVIDED BETWEEN ADJACENT LAYERS OF PARALLEL REINFORCEMENT AND SPACED AT NOT MORE THAN 60xSMALLER BAR DIAMETER OR 1.5m WHICHEVER IS SMALLER.

4.14 THE CONTRACTOR SHALL PROVIDE ADEQUATE CHAIRS, SPACING LINKS TO SUPPORT THE TOP LAYER OF REINFORCEMENT IN THE SLABS AND BARS SHALL BE PROVIDED TO KEEP VERTICAL WALL REINFROCEMENT IN ITS CORRECT ALIGNMENT.

4.15 ALL LAPS SHOWN ON THE DRAWINGS ARE INDICATIVE ONLY. THE CONTRACTOR SHALL PREPARE THE BENDING SCHEDULE TO THE PROJECT MANAGER'S ACCEPTANCE.

WATERPROOFING OF CONCRETE SURFACES BELOW GROUND

5.1 TWO COATS OF BITUMINOUS PAINT SHALL BE APPLIED TO SURFACES OF ABUTMENTS, RETAINING WALLS, PILE CAPS AND FOOTINGS WHICH WILL FINALLY BE IN CONTACT WITH SOIL.

5.2 BITUMINOUS PAINT AND ITS APPLICATION SHALL COMPLY WITH THE SPECIFICATION SECTION 20, PART 1 : WATERPROOFING.

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AECOM

PROJECT 項目

TUNG CHUNG NEW TOWN EXTENSION (EAST) - DESIGN AND CONSTRUCTION

CONTRACT TITLE

TUNG CHUNG NEW TOWN EXTENSION - MAJOR INFRASTRUCTURE WORKS IN TUNG CHUNG EAST

CLIENT 業主

CEDD 土木工程拓展署 Civil Engineering and Development Department

CONSULTANT 工程顧問公司

AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS 分判工程顧問公司

ISSUE/REVISION 修訂

I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 複核
-	DEC. 20	TENDER DRAWING	CCHY

STATUS 階段

SCALE 比例: N.T.S.
DIMENSION UNIT 尺寸單位: MILLIMETRES

KEY PLAN 索引圖

PROJECT NO. 項目編號: 60507694
CONTRACT NO. 合約編號: NL/2020/03

SHEET TITLE 圖紙名稱

NOISE BARRIER GENERAL NOTES FOR STRUCTURE

SHEET NUMBER 圖紙編號

60507694/C3/6001

Plot File by: Jie.Yang@aecom.com 29-December-2020
PATH: pw:\\aecom-as-pw.bentley.com:AECOM_DS02_ASDocuments\60507694 TCNTE - D&C\CAD PRODUCTION\DRAWING\CONTRACTC3\6000\C3_6001.dgn

Project Management Initials: Designer: CYCK Checked: CCHY Approved: SWKM ISO A1 594mm x 841mm

GENERAL:

1. ALL DIMENSIONS AND LEVELS INCLUDING AS CONSTRUCTED HOLDING DOWN BOLT POSITIONS AFFECTING NEW STEELWORK SHOULD BE CHECKED ON SITE BY THE CONTRACTOR AND INCORPORATED INTO WORKSHOP DRAWINGS.

2. STRUCTURAL STEEL SECTION TO COMPLY WITH THE STANDARDS AS STIPULATED IN THE SPECIFICATIONS SHOULD NOT BE REPLACED WITH OTHER SECTIONS COMPLYING WITH OTHER STANDARDS UNLESS ACCEPTED BY THE PROJECT MANAGER. ALL SECTIONS SHALL BE HOT ROLLED.

3. UNLESS OTHERWISE SPECIFIED, ALL STRUCTURAL STEEL MEMBERS AND ALL STRUCTURAL HOLLOW SECTION SHALL COMPLY WITH BS EN 10025:1993 AND BS EN 10210 PART 1 AND PART 2 RESPECTIVELY.

MEMBERS	GRADE
HOLLOW SECTIONS	:GRADE S355JOH OR EQUIVALENT
SECTIONS OTHER THAN HOLLOW SECTIONS	:GRADE S355JO OR EQUIVALENT
PLATES FOR STRUCTURAL ELEMENTS	:GRADE S355JO OR EQUIVALENT
PLATES FOR NONSTRUCTURAL ELEMENT	:GRADE S355JO OR EQUIVALENT
CONNECTION BOLTS AND HOLDING DOWN BOLTS	:STAINLESS STEEL GRADE A4-80(BS EN ISO 3506-1 & 2)

4. IN ACCORDANCE WITH BS EN 10025:1993.THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE NOTCH TOUGHNESS AND THE CHARPY IMPACT REQUIREMENTS OF THE STEEL. (I.E. SELECTION OF STEEL SUBGRADE). THE STEEL SHOULD SATISFY THE REQUIREMENTS OF BS EN 1993-1-10 : 2005 BASED ON A MINIMUM TEMPERATURE OF 10° C.

   THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT THE STEEL HAS ADEQUATE THROUGH THICKNESS PROPERTIES TO SATISFY THE THROUGH THICKNESS PROPERTIES AND WELDING SEQUENCE THAT THE MATERIAL, AT OR ADJACENT TO WELDED LOCATIONS , IS FREE OF LAMINATIONS, CENTERLINE SEGEGATION, OR OTHER CRACK LINE INDICATIONS ON COMPLETION OF WELDING. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE QUALITY CLASS OF STEEL WITH ENHANCED THROUGH THICKNESS PROPERTIES (EN 10164) WHICH IS REQUIRED COMPATIBLE WITH HIS CHOSEN METHOD OF WORKING.

   NOT LESS THAN THREE WEEKS PRIOR TO ORDERING THE STEEL, THE CONTRACTOR SHOULD SUBMIT A REPORT FOR REVIEW WHICH DOCUMENTS THE SUBGRADE SELECTION AND THE STRATEGY (MATERIAL SELECTION, WELDING PROCEDURE AND INSPECTION) WHICH WOULD BE IMPLEMENTED FOR CONTROLLING THE THROUGH THICKNESS STRESS DURING WELDING AND ENSURING THAT THE ABOVE CRITERIA ARE SATISFIED.

5. DIMENSIONS AND TOLERANCES ARE IN ACCORDANCE WITH BS EN 10056 PART 1 AND PART 2.

6. THE CONTRACTOR SHOULD BE RESPONSIBLE FOR THE PROVISION OF ALL PACKING TO ACHIEVE ADEQUATE TOLERANCE AT THE CONNECTIONS.

7. END OF ALL HOLLOW SECTIONS SHALL BE SEALED WITH 10mm THK. PLATE UNLESS OTHERWISE SPECIFIED.

8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN, FABRICATION, ERECTION AND REMOVAL OF ALL TEMPORARY WORKS AND TEMPORARY BRACING NECESSARY TO MAINTAIN STRUCTURAL STABILITY OF THE STEELWORK DURING CONSTRUCTION.

9. BEFORE FABRICATION OF THE STEELWORK, THE CONTRACTOR SHALL SUBMIT A FULL-SET OF WORKSHOP DRAWINGS, TOGETHER WITH DETAILS OF HIS PROPOSED METHOD OF HANDLING, TRANSPORTATION AND ERECTION OF THE COMPLETED STEEL FRAME TO THE PROJECT MANAGER FOR HIS ACCEPTANCE. ANY MODIFICATION ON STEELWORK TO ACCOMMODATE THE PROPOSED CONSTRUCTION SHALL BE DESIGNED BY THE CONTRACTOR, AND CLEARLY INDICATED IN THE WORKSHOP DRAWINGS FOR THE ACCEPTANCE OF THE PROJECT MANAGER.

10. AFTER FABRICATION ALL STRUCTURAL STEEL IS TO BE HOT-DIP GALVANIZED IN ACCORDANCE WITH BS EN ISO1461:1999 TO AND A MINIMUM OF 85um. SURFACES SHALL BE PROPERLY PREPARED, ALL RUST, OIL, PAINT, AND OTHER SURFACE CONTAMINANTS; MILL SCALE AND WELDING SLAG SHALL BE REMOVED BY GRIT BLASTING CUT FACES AND OUTSIDE ARISES SHALL BE GROUND SMOOTH. THE SIZES AND POSITIONS OF ANY VENT HOLES REQUITED BY THE GALVANIZER, TOGETHER WITH HIS PROPOSED METHOD OF RE-SEALING, SHALL BE NOTIFIED TO THE PROJECT MANAGER.

BOLTING:

1. STAINLESS STEEL SHALL COMPLY WITH THE STANDARDS AS STIPULATED IN THE GENERAL SPECIFICATION FOR CIVIL ENGINEERING WORKS.

2. ALL STAINLESS STEEL BOLTS AND RETAINING SCREWS SHALL BE GRADE A4-80. STAINLESS STEEL TO BS EN ISO 3506-1 & 2 WITH COMPATIBLE STAINLESS STEEL WASHERS. A NYLON OR OTHER ACCEPTED PLASTICS WASHER IS TO BE PROVIDED BETWEEN THE SURFACES OF ANY DIFFERENT METAL SUCH AS ALUMINIUM ALLOY, STAINLESS STEEL AND GALVANIZED STEEL.

3. UNLESS OTHERWISE SPECIFIED IN THE DRAWINGS, ALL FASTENERS SHALL BE STAINLESS STEEL BOLTS OR HSFG BOLTS AS ACCEPTED BY THE PROJECT MANAGER.HSFG BOLTS SHALL BE PROTECTED WITH ELECTROPLATED ZINC PLATE FOR THE BOLTS AND CADMIUM PLATE FOR THE NUTS TO BS 3382.

4. THE DIAMETER OF A BOLT HOLE SHALL BE 2mm LARGER THAN THE NOMINAL DIAMETER OF THE BOLT, UNLESS SHOWN OTHERWISE.

5. AT SLOTTED HOLE CONNECTIONS EITHER SELF LOCKING NUTS SHOULD BE USED OR THE BOLTS NUTS SHOULD BE COATED WITH EPOXY RESIN ADHESIVE IMMEDIATELY PRIOR TO TIGHTENING.

6. FOR GRADE OF BOLTS, NUTS AND WASHERS REFER TO THE STEELWORK SPECIFICATION.

7. ALL FASTENERS WHICH ARE USED WITH UNGALVANISED, PAINTED STEELWORK ARE TO BE SHERADIZED TO BS 4921, TABLE 1, CLASS 1. UNLESS NOTED OTHERWISE AND SHALL RECEIVE A COMPATIBLE PRIMER AND FINISHING COAT(S) ONLY AS SPECIFIED FOR THE STEELWORK TO WHICH IT CONNECTS. ALL FASTENERS, (EXCEPT HSFG BOLTS) WELDS & SHIMS WHICH ARE USED WITH GALVANISED STEELWORK SHALL BE HOT DIP GALVANISED TO BS EN 1461:2009 UNLESS NOTED OTHERWISE. WHERE GALVANISED STEEL IS BOLTED TO PAINTED STEEL, USING BLACK BOLTS, THESE BOLTS ARE TO BE GALVANISED.

8. THE THREAD OF ALL RETAINING (BOLTS WITHOUT NUTS) SHOULD BE COATED WITH AN EPOXY RESIN ADHESIVE IMMEDIATELY PRIOR TO TIGHTENING. MANUFACTURERS DETAILS OF THE ADHESIVE SHOULD BE AGREED WITH THE PROJECT MANAGER.

9. HIGH STRENGTH FRICTION GRIP BOLTS, WHERE SPECIFIED, SHALL BE GENERAL GRADE TO BS 4395 WITH STANDARD HARDENED WASHERS OVER THE HOLES IN THE OUTER PILES.

WELDING:

1. WELDING AND WELDING CONSUMABLES SHALL COMPLY WITH THE REQUIREMENTS OF BS EN 1011, BS EN 1993-3-1-8 AND BS EN ISO 2560.

2. ALL WELDING SHALL BE CARRIED OUT BY CERTIFIED WELDERS AS DESCRIBED IN THE SPECIFICATION.

3. THE SYMBOLS FOR WELDING ARE IN ACCORDANCE WITH BS EN ISO 2553 : 1993.

4. CONNECTIONS SHALL BE FULL STRENGTH BUTT WELDS UNLESS OTHERWISE NOTED.

5. MINIMUM FILLET WELD SHALL BE 6mm LEG LENGTH UNLESS OTHERWISE SPECIFIED. ELECTRODE FOR FILLET WELDS SHALL BE GRADE E-46 TO BS EN 2560 WITH MINIMUM YIELD STRENGTH OF 460 N/mm² UNLESS OTHERWISE SPECIFIED.

6. SITE WELDS SHALL BE KEPT TO A MINIMUM AND SHALL ONLY BE PERMITTED WITH THE PRIOR WRITTEN ACCEPTANCE OF THE PROJECT MANAGER.

7. BUTT WELDS ARE TO BE COMPLETED PENETRATION WELDS PRODUCED BY METHODS ACCEPTED BY THE PROJECT MANAGER AFTER DEMONSTRATION AT PROCEDURE TRIALS.

8. WELDING CONSUMABLES SHOULD PRODUCE DEPOSITED WELD METAL HAVING MECHANICAL PROPERTIES NOT INFERIOR THE MINIMA OF THE PARENT METAL.

9. NON-DESTRUCTIVE TESTING OF WELDS SHALL BE APPLIED IN THE FORM OF:
   - VISUAL INSPECTION TO BS EN 970 FOR ALL WELDS.
   - SURFACE FLAW DETECTION TO BS 6072, BS EN 571.
   - ULTRASONIC EXAMINATION TO BS 3923 OR RADIOGRAPHIC EXAMINATION TO BS EN 1435.
   - THE LOCATION AND EXTENT OF TESTING SHALL BE IN ACCORDANCE WITH THE GENERAL SPECIFICATION AND PARTICULAR SPECIFICATION OF THE CONTRACT.

10. ALL IMPROPER MATERIALS INCLUDING LAG, DIRT, IRREGULARITIES AND OIL ETC. SHALL BE REMOVED FROM JOINTS PRIOR TO WELDING

11. ALL FILLET WELDS ARE TO BE ALL ROUND UNLESS OTHERWISE STATED.

CORROSION PROTECTION:

1. STEELWORK SHALL BE CORROSION PROTECTED AS DESCRIBED IN BS EN 1090-2 ANNEX F, STRUCTURAL DESIGEN MANUAL FOR HIGHWAYS AND RAILWAYS AND THE SPECIFCATION.

2. CORROSION PROTECTION SHALL BE APPLIED TO THE INSIDE SURFACES OF ALL HOLES.

3. ALL STEEL COMPONENTS SHALL BE HOT-DIP GALVANIZED TO BS EN ISO 1461:1999 AFTER FABRICATION BY SPECIALIST CONTRACTOR IN THE "CLASS V: HOT DIP GALVANIZING" OF THE "SPECIALIZED OPERATIONS FOR HIGHWAY STRUCTURE" CATEGORY OF THE LIST OF APPROVED SUPPLIERS OF MATERIALS AND SPECIALIST CONTRACTORS OF PUBLIC WORKS.

4. POSITION OF GALVANIZING VENT HOLES SHALL BE AGREED WITH THE GALVANIZER, SUBJECT TO THE ACCEPTANCE OF THE PROJECT MANAGER.

5. WHERE MEMBERS ARE TOO LARGE FOR AVAILABLE GALVANIZING BATHS, SUB-ASSEMBLIES SHALL BE PREPARED AS ABOVE AND SUBSEQUENT WELDED JOINTS SHALL BE ZINC SPRAYED IN ACCORDANCE WITH BS 2569 TO A MINIMUM THICKNESS OF 0.2 mm. TWO COSTS OF GOOD QUALITY ZINC-RICH PAINT COMPLYING WITH BS 4652 SHALL THEN BE APPLIED ACROSS THE ENTIRE ZINC SPRAYED AREAS INCLUDING AT LEAST 25 mm OF THE PARENT GALVANIZED COATING, OR, AT THE DISCRETION OF THE SUPERVISOR, BY THE USE OF LOW MELTING POINT ZINC ALLOY REPAIR RODS MADE SPECIFICALLY FOR THIS PURPOSE RESULTING IN A MINIMUM COATING THICKNESS OF 0.2 mm. ANY DAMAGE OF GALVANIZED COATINGS SHALL BE MADE GOOD IN A SIMILAR WAY TO THE TREATMENT OF WELDED JOINTS.

6. DETAILS OF PAINT USED SHOULD BE ACCEPTED BY THE PROJECT MANAGER PRIOR TO APPLICATION TO THE STEELWORK.

7. STEEL WHICH IS CAST-IN SHOULD REMAIN UNPAINTED. THE STEEL SHOULD BE BLAST CLEANED (EITHER PRIOR TO OR AFTER FABRICATION) TO THE STANDARDS AS STIPULATED IN THE SPECIFICATIONS.

8. IMMEDIATELY PRIOR TO ERECTION ALL STEELWORK SHOULD BE SPRAY WASHED WITH WATER AND DETERGENT, THEN SPRAY RINSED WITH CLEAN WATER.

9. PAINTING SYSTEM TO BE AS FOLLOWS AND CONFORM TO PARTICULAR SPECIFICATION CLAUSE 18 & STRUCTURES DESIGN MANUAL FOR HIGHWAYS AND RAILWAYS (2013 EDITION) cl. 16.4.
   (i) STRUCTURAL STEELWORK TO BE SYSTEM II.
   (ii) STEEL PARAPET TO BE SYSTEM I.

10. THE STEEL SURFACE TO BE PAINTED SHALL BE THOROUGHLY CLEANED AND PREPARED, FREE FROM GREASE, DIRT, SCALE AND RUST. THE CONTRACTOR SHALL SUBMIT THE PROPOSED METHOD STATEMENT FOR STEEL SURFACE PREPARATION WORKS TO THE PROJECT MANAGER FOR ACCEPTANCE PRIOR TO THE COMMENCEMENT OF PAINTING WORKS.

SHEAR CONNECTORS:

1. ALL SHEAR STUD CONNECTORS SHALL BE 105mm LONG TO BS EN ISO 13918 AND WELDED TO THE STEEL SECTION WITH AUTOMATIC STUD WELD UNLESS OTHERWISE STATED.

2. SHEAR STUD CONNECTORS SHALL HAVE A MIN. YIELD STRENGTH OF 385 N/mm2 WITH A MIN. ELONGATION OF 15% AND ULTIMATE TENSILE STRENGTH OF 495 N/mm2. TESTS ON SHEAR STUD CONNECTORS SHALL BE CARRIED OUT IN ACCORDANCE WITH BS EN ISO 13918 AND BS EN 10002-1.

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PROJECT
項目

TUNG CHUNG NEW TOWN EXTENSION (EAST) - DESIGN AND CONSTRUCTION

CONTRACT TITLE

TUNG CHUNG NEW TOWN EXTENSION - MAJOR INFRASTRUCTURE WORKS IN TUNG CHUNG EAST

CLIENT
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CEDD 土木工程拓展署 Civil Engineering and Development Department

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ISSUE/REVISION
修訂

I/R 修訂	DATE 日期	DESCRIPTION 內容/摘要	CHK. 複核
-	DEC. 20	TENDER DRAWING	CCHY

STATUS
現況

SCALE 比例: A1 N.T.S.

DIMENSION UNIT 尺寸單位: MILLIMETRES

KEY PLAN
索引圖

PROJECT NO. 項目編號: 60507694

CONTRACT NO. 合約編號: NL/2020/03

SHEET TITLE
圖紙名稱

NOISE BARRIER
GENERAL NOTES
FOR STEEL WORKS

SHEET NUMBER
圖紙編號

60507694/C3/6002

ISO A1 594mm x 841mm
Approved: SWKM
Checked: CCHY
Designer: CYCK
Project Management Initials:
CL
DTPL

GENERAL:

1. ALL DESIGN AND CONSTRUCTION SHOULD COMPLY WITH STRUCTURES DESIGN MANUAL FOR HIGHWAYS AND RAILWAYS IN CONJUNCTION WITH BS8004.
2. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE STATED.
3. ALL LEVELS ARE IN METRES ABOVE HONG KONG PRINCIPAL DATUM.
4. ALL SETTING OUT DIMENSIONS MUST BE VERIFIED AGAINST THE LATEST RELEVANT GENERAL ARRANGEMENT DRAWINGS BEFORE WORK COMMENCES. THE SUPERVISOR MUST BE INFORMED IMMEDIATELY OF ANY DISCREPANCIES DISCOVERED.
5. THE FOUNDING LEVELS OF PILES ARE APPROXIMATE AS DETERMINED FROM BOREHOLE INFORMATION. THE ACTUAL FOUNDING LEVEL FOR EACH PILE SHOULD BE DETERMINED BY THE MAIN CONTRACTOR TO THE ACCEPTANCE FROM THE PROJECT MANAGER AFTER EXCAVATION OF EACH PILE.
6. WHERE ANY DOUBT EXISTS AS TO THE CAPACITY OF ANY PILE TO SUSTAIN ADEQUATELY AND WITHOUT UNDUE SETTLEMENT, THE LOAD FOR WHICH IT HAS BEEN DESIGNED. THE PILE SHOULD BE TESTED IN ACCORDANCE WITH STRUCTURES DESIGN MANUAL FOR HIGHWAYS AND RAILWAYS AND THE SPECIFICATIONS.
7. THE CONTRACTOR SHOULD EXERCISE DUE CARE DURING THE WORK ON SITE TO AVOID DAMAGE TO ADJACENT STRUCTURES.
8. THE CONTRACTOR SHOULD BE RESPONSIBLE FOR ANY NECESSARY ACTIONS TO DIVERT OR PROTECT ALL SERVICES AND UTILITIES AFFECTED BY THE WORK.
9. THE CONTRACTOR SHOULD MAINTAIN ALL EXISTING SURFACE CHANNELS AND SANDTRAPS DURING THE WORKS AND ALL SURFACE WATER MUST PASS THROUGH THE SANDTRAPS BEFORE DISCHARGING TO THE PUBLIC SURFACE DRAINAGE SYSTEM.
10. ALL SETTING OUT TO THE EXISTING STRUCTURE AND UTILITIES SHOULD BE VERIFIED ON SITE PRIOR TO CONSTRUCTION. INFORM THE PROJECT MANAGER IMMEDIATELY OF ANY DISCREPANCIES DISCOVERED.
11. REINFORCING STARTER BARS PROTRUDING ABOVE PILE CUT-OFF LEVEL SHOULD BE PROTECTED BY ACCEPTED METHOD.
12. THE CONTRACTOR SHOULD BE RESPONSIBLE FOR REMOVAL OF SURPLUS LENGTH BY CUTTING OF CONCRETE TO THE CUT-OFF LEVEL SPECIFIED ON DRAWING.CARE SHOULD BE TAKEN TO AVOID SHATTERING OR OTHERWISE DAMAGING THE REST OF THE UNIT. ANY CRACKS OR DEFECTIVE CONCRETE SHOULD BE CUT AWAY AND MADE GOOD BY ACCEPTED GROUT OF EQUAL OR HIGHER STRENGTH PROPERLY BONDED TO THE OLD CONCRETE.
13. WHEREVER NECESSARY THE CONTRACTOR SHOULD BE RESPONSIBLE FOR THE APPLICATION OF CONSTRUCTION NOISE PERMIT REQUIRED UNDER THE NOISE CONTROL ORDINANCE.
14. BLASTING IS NOT PERMITTED.
15. ALLOWANCE SHALL BE MADE FOR ALL ANCILLARY TREATMENTS AND ALL WORKS NECESSARY TO ENSURE THE STABILITY OF ROADWAY, ADJACENT STRUCTURES AND UNDERGROUND CONSTRUCTION AND SERVICES.
16. PRIOR TO THE COMMENCEMENT OF FOUNDATION WORK, THE FOLLOWING DOCUMENTS SHALL BE SUBMITTED TO THE PROJECT MANAGER FOR COMMENTS AND ACCEPTANCE: THE DESIGN AND METHOD OF EXECUTION OF ANY ASSOCIATED TEMPORARY WORKS
17. UPON COMPLETION OF FOUNDATION WORK, AS-BUILT RECORDS OF ALL FOUNDATIONS CONSTRUCTED SHALL BE SUBMITTED TO THE PROJECT MANAGER FOR ACCEPTANCE. THE CONTENT AND FORMAT OF THE RECORDS SHALL BE IN ACCORDANCE WITH THE GENERAL SPECIFICATION OR AS ACCEPTED BY THE PROJECT MANAGER.

NOTES ON MONITORING:

1. THE EXACT LOCATION OF THE PROPOSED PIEZOMETERS OR BORE HOLES etc. SHOULD BE PEGGED OUT ON SITE BY THE CONTRACTOR AND ACCEPTED BY THE PROJECT MANAGER PRIOR TO THE COMMENCEMENT OF BORED HOLE SINKING.
2. SHOULD THERE BE ANY RELOCATION OR ADDITION OF BORED HOLES, THE ACCEPTANCE FROM THE PROJECT MANAGER MUSH BE OBTAINED.
3. MONITORING POINTS SHOULD BE INSTALLED AND INITIAL READING TAKEN BEFORE WORKS COMMENCE. FOR DETAILS OF MONITORING SEE INSTRUMENTATION DRAWINGS.
4. IF ANY OF THE SETTLEMENT OR VIBRATION CRITERIA IS EXCEEDED, WORK SHOULD CEASE AND THE SUPERVISOR SHOULD BE NOTIFIED. REMEDIAL WORKS PROPOSAL SHOULD BE SUBMITTED FOR ACCEPTANCE.
5. VIBRATION EFFECT ONTO THE ADJACENT STRUCTURES DUE TO THE OPERATION FOR INSTALLATION/REMOVAL OF TEMPORARY CASING AND TO REMOVE OBSTRUCTION OR TO FORM ROCK SOCKET SHOULD BE MONITORED BY THE CONTRACTOR. IN THE EVENT THE ALLOWABLE VIBRATION LIMIT IS EXCEEDED, THE WORK SHOULD BE STOPPED IMMEDIATELY AND AN ALTERNATE PROPOSAL SHOULD BE SUBMITTED TO THE PROJECT MANAGER FOR ACCEPTANCE PRIOR TO RESUMPTION OF THE WORK.

NOTES ON PAD FOOTING

1. THE MIN. ALLOWABLE BEARING CAPACITY OF THE FOUNDING MATERIAL IS 265kPa. THE CONTRACTOR SHALL REMOVE 500mm THICK LOOSE MATERIAL BELOW THE FORMATION LEVEL TO REACH A LEVEL WITH MIN. ALLOWABLE BEARING CAPACITY OF 265kPa. THE CONTRACTOR SHALL THEN BACKFILL WITH 20/20D CONCRETE TO THE REQUIRED FORMATION LEVEL.

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PROJECT
項目

TUNG CHUNG NEW TOWN EXTENSION (EAST) - DESIGN AND CONSTRUCTION

CONTRACT TITLE

TUNG CHUNG NEW TOWN EXTENSION - MAJOR INFRASTRUCTURE WORKS IN TUNG CHUNG EAST

CLIENT
業主

CEDD 土木工程拓展署 Civil Engineering and Development Department

CONSULTANT
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I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 複核
-	DEC. 20	TENDER DRAWING	CCHY

STATUS
階段

SCALE 比例 — A1 N.T.S.

DIMENSION UNIT 尺寸單位 — MILLIMETRES

KEY PLAN
索引圖

PROJECT NO. 項目編號 — 60507694

CONTRACT NO. 合約編號 — NL/2020/03

SHEET TITLE
圖紙名稱

NOISE BARRIER
GENERAL NOTES
FOR FOUNDATIONS

SHEET NUMBER
圖紙編號

60507694/C3/6003

Project Management Initials: Designer: CYCK Checked: CCHY Approved: SWKM ISO A1 594mm x 841mm

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE SPECIFIED.
2. ALL LEVELS ARE IN METRES ABOVE PRINCIPAL DATUM.
3. ASTERISKED DIMENSIONS ARE TO BE ADJUSTED ON SITE TO SUIT ACTUAL SITE CONDITIONS AS DETERMINED BY THE SUPERVISOR.
4. THE HEIGHT OF EACH SOUND ABSORPTIVE PANEL SHALL BE 500mm.
5. THE CONTRACTOR SHALL PROPOSE AND DESIGN THE DETAILS AND MATERIALS FOR SEALING THE GAP BETWEEN NOISE BARRIER PANELS AND CONCRETE FOOTING FOR THE SUPERVISOR'S APPROVAL. COLOURS OF SEALING MATERIALS SHALL BE COMPATIBLE WITH THE COLOURS OF THE ADJACENT NOISE BARRIER PANELS.
6. THE LOCATION OF NOISE BARRIER FOOTING MOVEMENT JOINT SHALL BE DETERMINED BY THE CONTRACTOR BUT SPACING SHALL NOT EXCEED 12000 c/c UNLESS OTHERWISE SPECIFIED.
7. ABSORPTIVE PANELS, TRANSPARENT PANELS AND THE FIXING DETAILS OF THE PANELS SHALL BE DESIGNED BY THE CONTRACTOR IN ACCORDANCE WITH PARTICULAR SPECIFICATION.
8. MOVEMENT JOINT FOR PANEL SHALL BE DESIGNED BY THE CONTRACTOR AND APPROVED BY THE SUPERVISOR.
9. THE CONTRACTOR SHALL PROPOSE THE FIXING DETAILS OF NOISE BARRIER PANELS TO ACCOMMODATE LEVEL CHANGE AND CURVATURE CHANGE ALONG THE VERTICAL AND HORIZONTAL PROFILES OF THE ROAD FOR THE SUPERVISOR'S APPROVAL.
10. THE CONTRACTOR SHALL PROPOSE THE FIXING DETAILS OF NOISE BARRIER PANELS TO ACCOMMODATE THE LEVEL DROP ON SLOPE GROUND FOR THE SUPERVISOR'S APPROVAL.
11. THE CONTRACTOR SHALL DESIGN ANY MOUNTING FRAME NECESSARY FOR THE NOISE BARRIER PANELS AND SUBMIT ICE CERTIFIED DESIGN CALCULATIONS AND SHOP DRAWINGS FOR THE SUPERVISOR'S APPROVAL. THE COST OF THE MOUNTING FRAME AND ITS ASSOCIATED CONNECTION ELEMENTS IS DEEMED TO BE INCLUDED IN THE PRICE FOR NOISE BARRIER PANELS.
12. NO VERTICAL MEMBERS OF THE MOUNTING FRAMES ARE PERMITTED BETWEEN BARRIER POSTS FOR ALL NOISE BARRIERS.
13. HORIZONTAL MEMBERS OF THE MOUNTING FRAME SHALL BE LIMITED TO THE MINIMUM REQUIRED AND THE SPACING BETWEEN THESE MEMBERS SHALL BE AGREED WITH THE SUPERVISOR.
14. THE CONTRACTOR SHALL PROPOSE THE FIXING DETAILS AT THE INTERFACE OF THE TRANSPARENT AND ABSORPTIVE NOISE BARRIER PANELS FOR THE SUPERVISOR'S APPROVAL.
15. THE DESIGN OF THE NOISE BARRIER PANEL MOUNTING FRAMES AND THE FIXING DETAILS SHALL BE CARRIED OUT IN ACCORDANCE WITH THE STRUCTURES DESIGN MANUAL FOR HIGHWAYS AND RAILWAYS PUBLISHED BY HIGHWAYS DEPARTMENT (2013).
16. IN CASE THE NOISE BARRIER ELEMENT(S) IS / ARE COMBUSTIBLE, A SECTION OF MINIMUM 4.0m IN LENGTH FIRE BREAK MADE OF NON-COMBUSTIBLE MATERIAL SHALL BE REQUIRED FOR EVERY 100M IN LENGTH NOISE BARRIER.
17. THE NOISE BARRIER PANEL SHALL NOT REFLECT LIGHT IN SUCH A WAY AS TO PREJUDICE ROAD SAFETY AND CAUSE NUISANCE TO THE NEARBY RESIDENTS.
18. THE SLANTED PANELS SHALL HAVE NON-GLARING MATT SURFACE AT TOP REQUIRING BUT NOT LIMITED TO THE FOLLOWINGS FEATURES AND SUBJECT TO THE SATISFACTION BY THE SUPERVISOR:

A: THE MATT SURFACE SHALL NOT BE PRODUCED BY DESTRUCTIVE METHOD SUCH AS MECHANICAL BLAST, CHEMICAL ETCHING ETC. IN ORDER NOT TO CHANGE THE PROPERTIES OF MATERIAL;

B: THE APPEARANCE OF NON-GLARING SURFACE SHALL NOT BE BLEMISHED EITHER WITH FINGERPRINTS OR AFTER PROCESSING THE MATT SURFACE;

C: LIGHT TRANSMISSION OF NON-GLARING PANELS SHALL BE 68±5%;

D: THE SPECULAR GLOSS VALUE OF THE NON-GLARING PANELS SHALL BE TESTED ACCORDING TO BS2782: PART 5 METHOD 520A.

ANGLE OF INCIDENCE	SPECULAR GLOSS VALUE
20°	10 (MAX.)
60°	30 (MAX.)
85°	20 (MAX.)

19. THE STEELWORK SHALL BE PAINTED IN ACCORDANCE WITH THE PS REQUIREMENTS AND MATCH WITH EXISTING.
20. THE CONTRACTOR SHALL DESIGN THE NOISE BARRIER PANEL MOUNTING FRAME/ SUB-FRAME, SUCH THAT ALL NOISE BARRIER PANEL COULD BE REPLACED INDIVIDUALLY IN FUTURE, WITHOUT DISMANTLING OTHER PANELS NOT GOING TO BE REPLACED.
21. ERECTION TOLERANCE OF STEELWORK TO BE AS FOLLOWS.
    LINEAR DIMENSION UP TO 10m ±10mm
    LINEAR DIMENSION 10 TO 20m ±20mm
    FINISHING COAT COLOUR TO BE DETERMINED BY THE SUPERVISOR.
22. FASTENERS FOR NOISE BARRIER AND SEMI ENCLOSURE SHALL BE GRADE A4-80 STAINLESS STEEL TO BS EN ISO 3506-1 & 2 WITH COMPATIBLE STAINLESS STEEL WASHERS A NYLON OR OTHER APPROVED PLASTICS WASHER IS TO BE PROVIDED BETWEEN THE SURFACES OF ANY DIFFERENT METAL SUCH AS ALUMINIUM ALLOY, STAINLESS STEEL AND GALVANIZED STEEL.
23. FASTENERS FOR ALUMINIUM COMPONENTS AND HOLDING DOWN BOLTS ARRANGEMENTS SHALL BE GRADE A4-80 STAINLESS STEEL TO BS EN ISO 3506-1 & 2 RESPECTIVELY WITH COMPATIBLE STAINLESS STEEL WASHERS A NYLON OR OTHER APPROVED PLASTICS WASHER IS TO BE PROVIDED BETWEEN THE SURFACES OF ANY DIFFERENT METAL SUCH AS ALUMINIUM ALLOY, STAINLESS STEEL AND GALVANIZED STEEL.

NOTES FOR NOISE BARRIER PANELS:

1. THE FIXING AND CLAMPING SYSTEMS OF THE NOISE BARRIER PANELS TO THE STEEL VERTICAL POSTS SHOWN ON THE DRAWINGS ARE INDICATIVE ONLY. THE CONTRACTOR SHALL DESIGN SUCH SYSTEMS TO THE SATISFACTION OF THE SUPERVISOR.
2. THE PROPOSED NOISE BARRIER PANELS AND THE ASSOCIATED FIXING AND CLAMPING SYSTEM SHALL BE CAPABLE OF SUSTAINING THE FOLLOWING DESIGNED LOAD AND MOVEMENT :
   NOMINAL WIND PRESSURE = 3.3kN/m
   HORIZONTAL MOVEMENT OF THE PANELS OVER M.J. = 5mm
3. THE NOISE BARRIER WORKS SHALL INCORPORATE HOLDING DEVICES TO PREVENT PANELS FORM FALLING OFF IN THE EVENT OF ACCIDENTAL IMPACT BY VEHICLE. THE HOLDING DEVICES SHALL COMPLY WITH THE FOLLOWING REQUIREMENTS:

(1): THE DEVICES SHALL HOLD THE FOUR CORNERS OF EACH PANEL MEMBER BY WIRE ROPES. THE DESIGN HOLDING FORCE FOR EACH PANEL SHALL BE 10kN.

(2): THE DEVICES SHALL ALLOW A RELATIVE MOVEMENT OF 0.3m BETWEEN THE PANELS AND THE STRUCTURAL FRAMES.

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PROJECT 項目

TUNG CHUNG NEW TOWN EXTENSION (EAST) - DESIGN AND CONSTRUCTION

CONTRACT TITLE

TUNG CHUNG NEW TOWN EXTENSION - MAJOR INFRASTRUCTURE WORKS IN TUNG CHUNG EAST

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-	DEC. 20	TENDER DRAWING	CCHY

STATUS 狀況

SCALE 比例 A1 N.T.S.

DIMENSION UNIT 尺寸單位 MILLIMETRES

KEY PLAN 索引圖

PROJECT NO. 項目編號 60507694

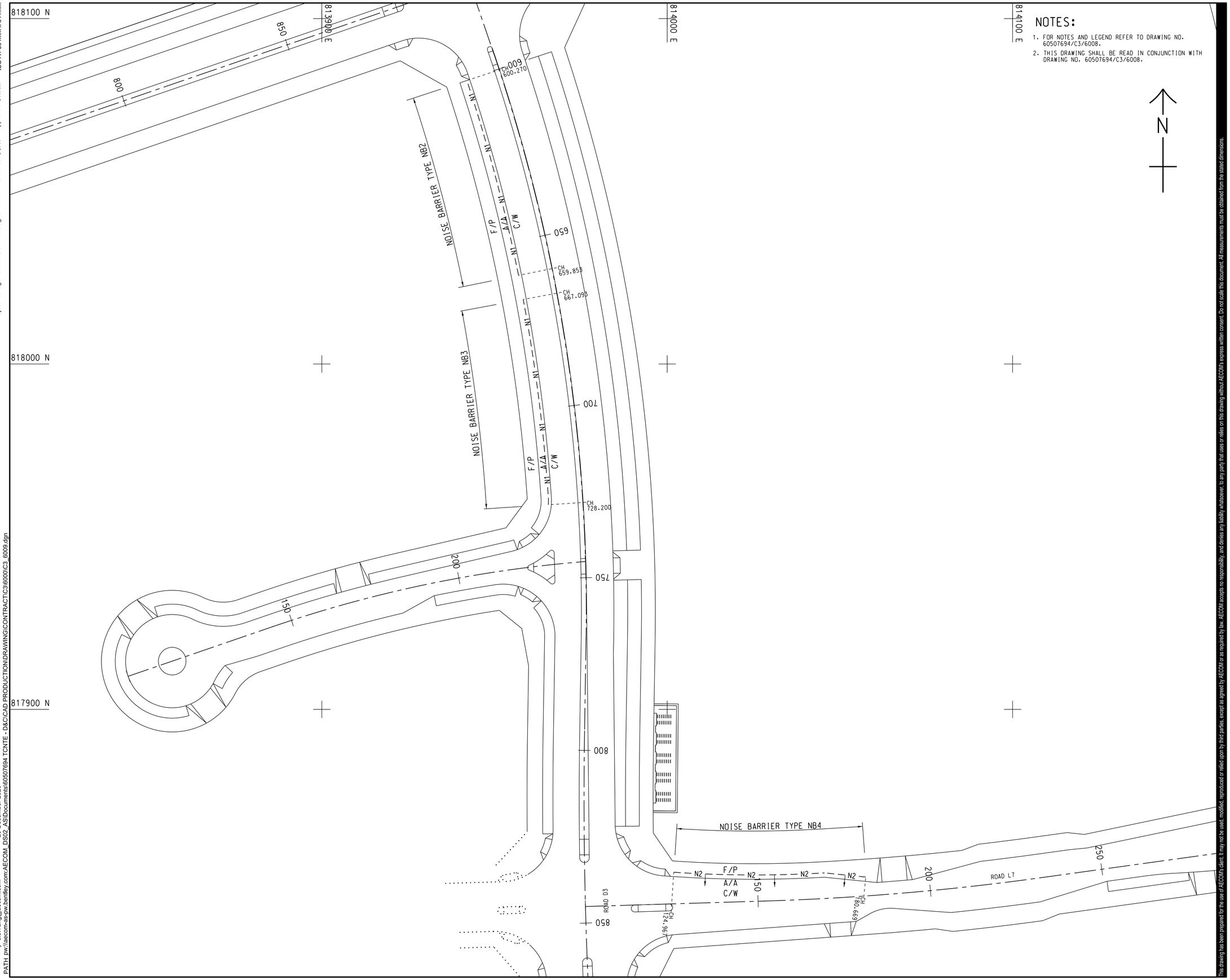
CONTRACT NO. 合約編號 NL/2020/03

SHEET TITLE 圖紙名稱

NOISE BARRIER
GENERAL NOTES
FOR NOISE PANEL

SHEET NUMBER 圖紙編號

60507694/C3/6004



NOTES:

1. FOR NOTES AND LEGEND REFER TO DRAWING NO. 60507694/C3/6008.
2. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH DRAWING NO. 60507694/C3/6008.

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PROJECT
項目

TUNG CHUNG NEW TOWN EXTENSION (EAST) - DESIGN AND CONSTRUCTION

CONTRACT TITLE

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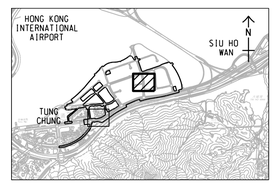
STATUS
階段

SCALE 比例: A1 1 : 500

DIMENSION UNIT 尺寸單位: METRES

KEY PLAN 索引圖 A1 1 : 50000



PROJECT NO. 項目編號: 60507694

CONTRACT NO. 合約編號: NL/2020/03

SHEET TITLE
圖紙名稱

NOISE BARRIER LAYOUT PLAN

SHEET 2 OF 2

SHEET NUMBER
圖紙編號

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Project Management Initials: Designer: CYCK Checked: CCHY Approved: SWKM ISO A1 594mm x 841mm

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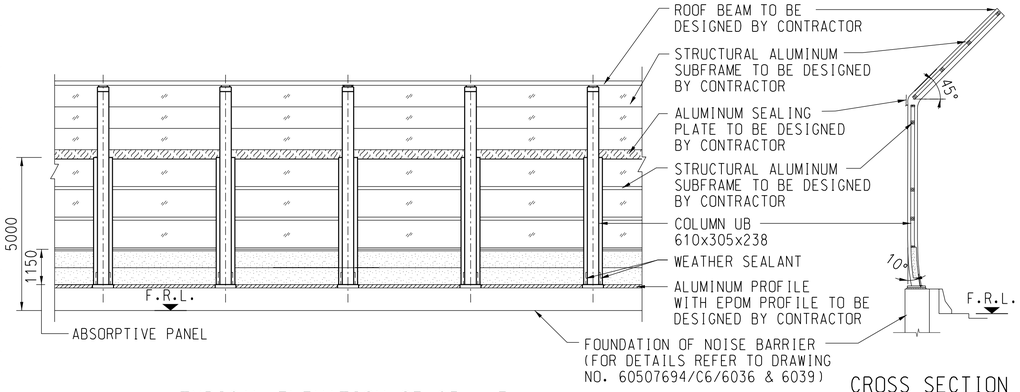
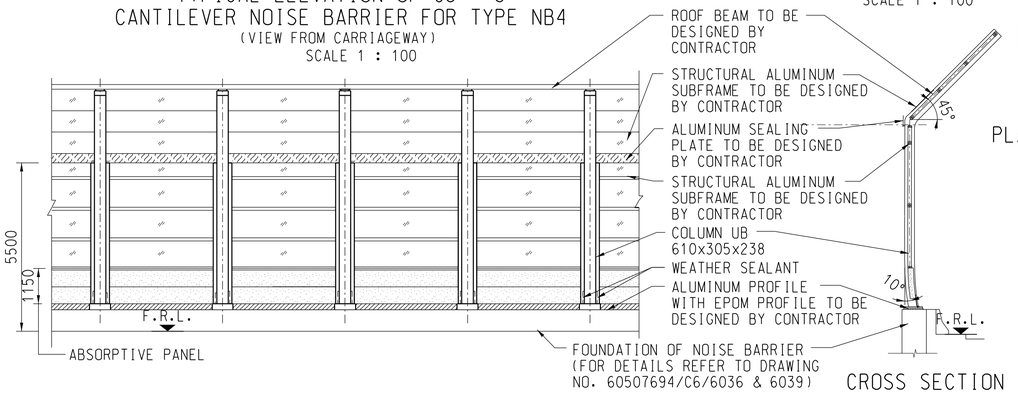


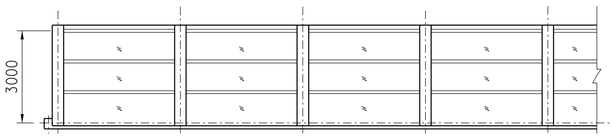
TYPICAL ELEVATION OF C5 + 3
CANTILEVER NOISE BARRIER FOR TYPE NB4
(VIEW FROM CARRIAGEWAY)
SCALE 1 : 100

CROSS SECTION
SCALE 1 : 100

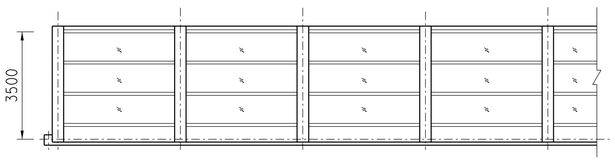


TYPICAL ELEVATION OF C5.5 + 3.5
CANTILEVER NOISE BARRIER FOR TYPE NB1
(VIEW FROM CARRIAGEWAY)
SCALE 1 : 100

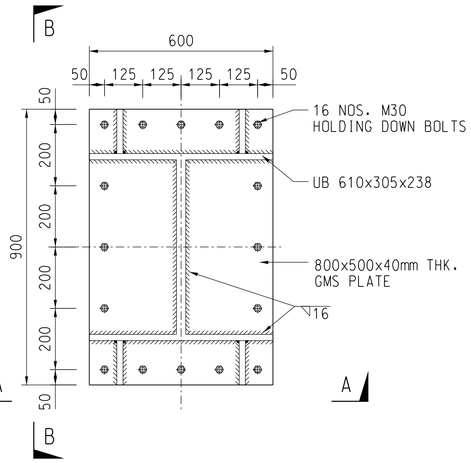
CROSS SECTION
SCALE 1 : 100



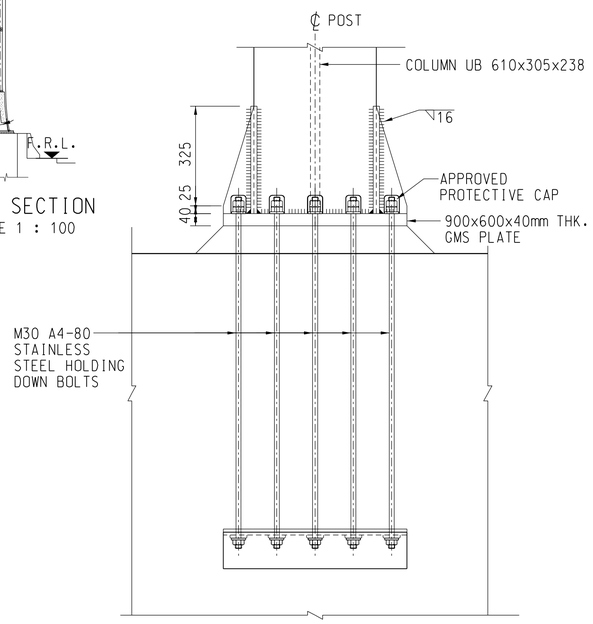
TYPICAL PLAN OF C5 + 3 CANTILEVER NOISE BARRIER FOR TYPE NB4
SCALE 1 : 100



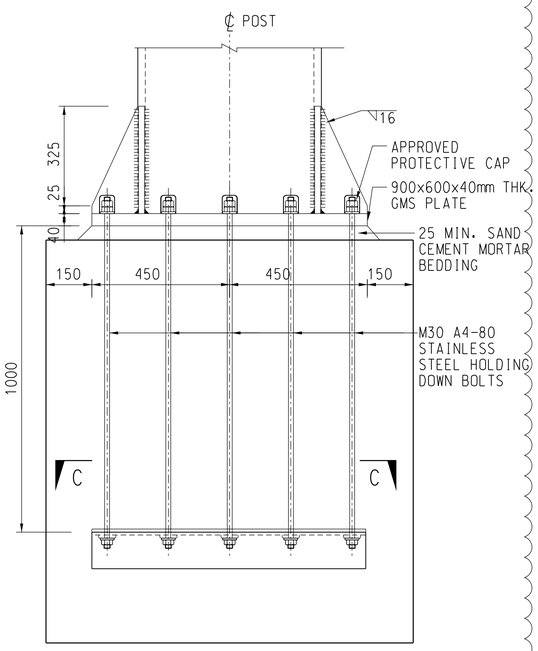
TYPICAL PLAN OF C5.5 + 3.5 CANTILEVER NOISE BARRIER FOR TYPE NB1
SCALE 1 : 100



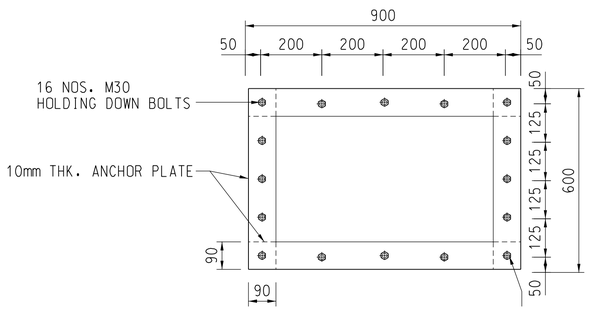
PLAN OF ANCHORAGE FOR NOISE BARRIER POST
SCALE 1 : 10



SECTION A - A
SCALE 1 : 10



SECTION B - B
SCALE 1 : 10



SECTION C - C
SCALE 1 : 10

NOTES

1. FOR GENERAL NOTES REFER TO DRAWING NO. 60507694/C3/6021.
2. THE CONTRACTOR SHALL MAY PROPOSE ALTERNATIVE HORIZONTAL SUBFRAMES AND CONNECTION DETAILS OF THE HORIZONTAL SUBFRAME TO VERTIACL POST CONNECTION AND SUBMIT RELEVANT ICE CERTIFIED CALCULATION AND SHOP DRAWINGS FOR THE PROJECT MANAGER"S APPROVAL.
3. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF THE HORIZONTAL SUBFRAMES AND THE CONNECTION DETAILS OF THE HORIZONTAL SUBFRAME TO VERTICAL POST CONNECTION TAKING ACCOUNT OF THE HORIZONTAL AND VERTICAL PROFILES OF THE ROAD.
4. ALL THE FIXING DETAILS OF NOISE BARRIER PANELS ARE INDICATIVE ONLY THE CONNTRACTOR SHALL DESIGN THE MOUNTING FRAME NECESSARY FOR THE NOISE VARRIER PANELS AND SUBMIT RELEVANT ICE CERTIFIED CALCULETIONS AND SHOP DRAWINGS FOR THE PROJECT MANGER'S APPROVAL.
5. THE SIZE AND SPACING OF THE VERTICAL MOUNTING FRAME SHALL BE LIMITED TO THE MINIMUM REQUIRED AND TO BE AGREED WITH THE PROJECT MANAGER.
6. FOR NOISE BARRIER TRANSPARENT AND ABSORPTIVE PANEL DETAILS REFER DRAWING NO. 60507694/C3/6021

AECOM

PROJECT
項目

TUNG CHUNG NEW TOWN EXTENSION (EAST) - DESIGN AND CONSTRUCTION

CONTRACT TITLE

TUNG CHUNG NEW TOWN EXTENSION - MAJOR INFRASTRUCTURE WORKS IN TUNG CHUNG EAST

CLIENT
業主

CEDD 土木工程拓展署 Civil Engineering and Development Department

CONSULTANT
工程顧問公司

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www.aecom.com

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ISSUE/REVISION
修訂

I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 複核
A	FEB. 21	TENDER ADDEDUM NO. 2	CCHY
-	DEC. 20	TENDER DRAWING	CCHY

STATUS
階段

SCALE 比例: A1 AS SHOWN
DIMENSION UNIT 尺寸單位: MILLIMETRES

KEY PLAN
索引圖

PROJECT NO. 項目編號: 60507694
CONTRACT NO. 合約編號: NL/2020/03

SHEET TITLE
圖紙名稱

CANTILEVER NOISE BARRIER TYPICAL DETAILS

SHEET NUMBER
圖紙編號

60507694/C3/6022A

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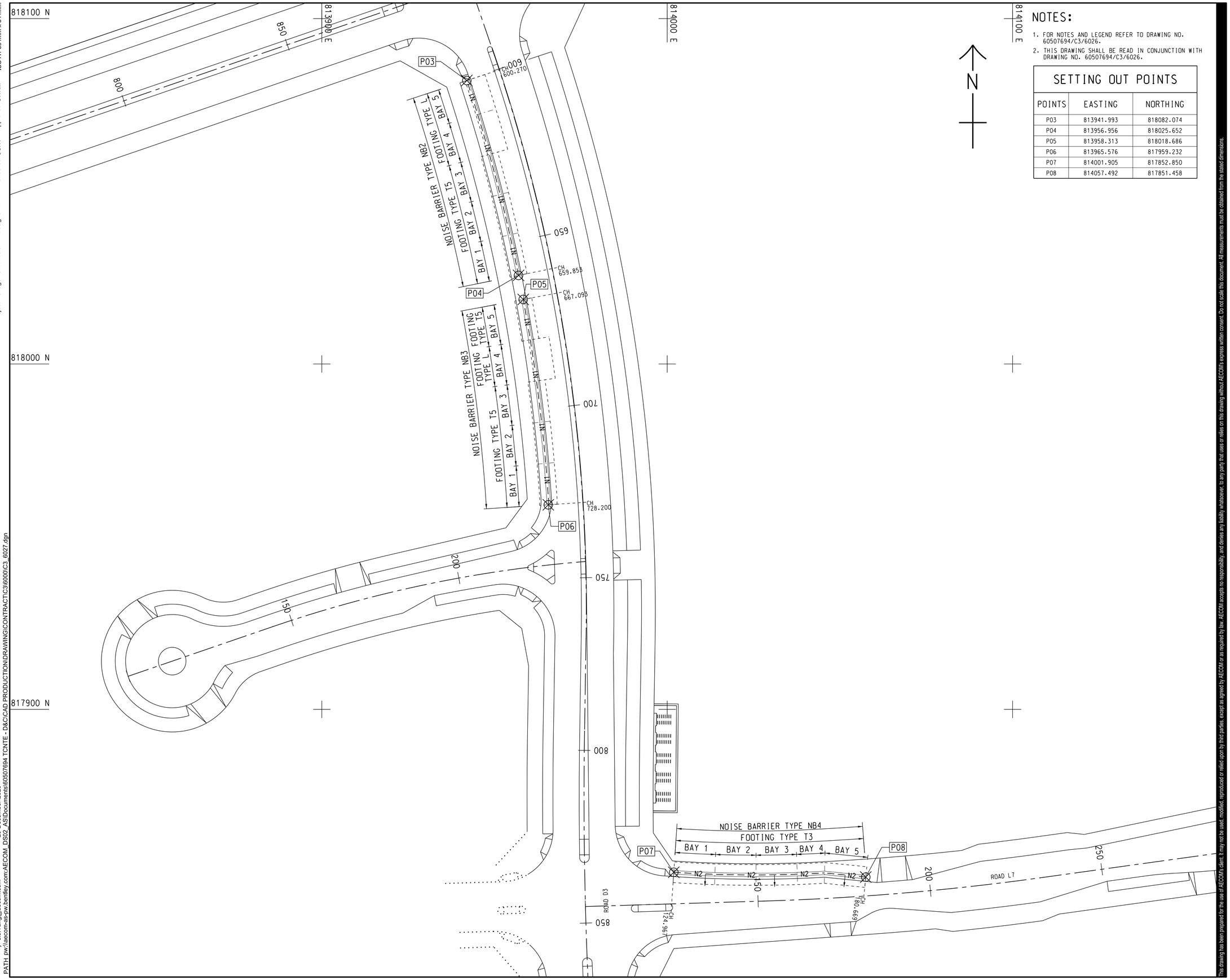
Project Management Initials: Designer: CYCK Checked: CCHY Approved: SWKM ISO A1 594mm x 841mm
Plot File by: hao.he
PATH: pw://aecom-ase-pw.bentley.com:AECOM_DS02_ASDocuments\60507694 TCNTE - D&C\CAD PRODUCTION\DRAWING\CONTRACTC3\6000\C3_6022.dgn
22 二月 2021



NOTES:

1. FOR NOTES AND LEGEND REFER TO DRAWING NO. 60507694/C3/6026.
2. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH DRAWING NO. 60507694/C3/6026.

N

SETTING OUT POINTS

POINTS	EASTING	NORTHING
P03	813941.993	818082.074
P04	813956.956	818025.652
P05	813958.313	818018.686
P06	813965.576	817959.232
P07	814001.905	817852.850
P08	814057.492	817851.458

Project Management Initials:
Designer: CYCK
Checked: CCHY
Approved: SWKM
ISO A1 594mm x 841mm

Plot File by: Jie.Yang@aecom.com
PATH: pw:\\aecom-as-pw.bentley.com:AECOM_DS02_ASIDocuments\60507694 TCNTE - D&C\CAD PRODUCTION\DRAWING\CONTRACT\C3\6000\IC3_6027.dgn
29-December-2020

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AECOM

PROJECT
項目

TUNG CHUNG NEW TOWN EXTENSION (EAST) - DESIGN AND CONSTRUCTION

CONTRACT TITLE

TUNG CHUNG NEW TOWN EXTENSION - MAJOR INFRASTRUCTURE WORKS IN TUNG CHUNG EAST

CLIENT
業主

土木工程拓展署
CEDD Civil Engineering and Development Department

CONSULTANT
工程顧問公司

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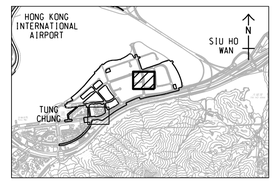
I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 複核
-	DEC. 20	TENDER DRAWING	CCHY

STATUS
階段

SCALE 比例
A1 1 : 500

DIMENSION UNIT 尺寸單位
METRES

KEY PLAN 索引圖 A1 1 : 50000



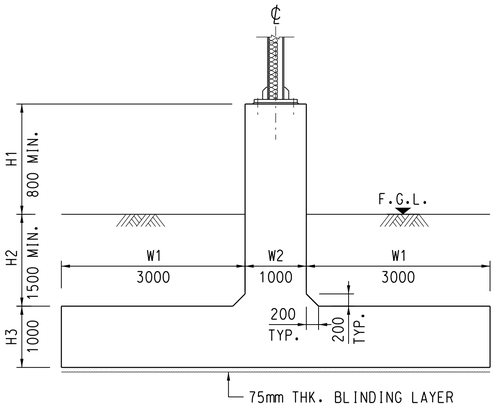
PROJECT NO. 項目編號
60507694

CONTRACT NO. 合約編號
NL/2020/03

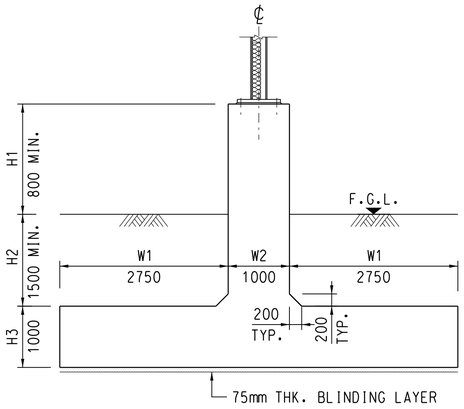
SHEET TITLE 圖紙名稱
NOISE BARRIER FOUNDATION LAYOUT PLAN

SHEET 2 OF 2

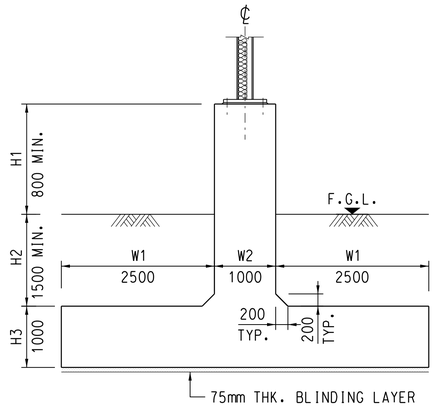
SHEET NUMBER 圖紙編號
60507694/C3/6027



NOISE BARRIER FOOTING TYPE T1
SCALE 1 : 50



NOISE BARRIER FOOTING TYPE T2
SCALE 1 : 50

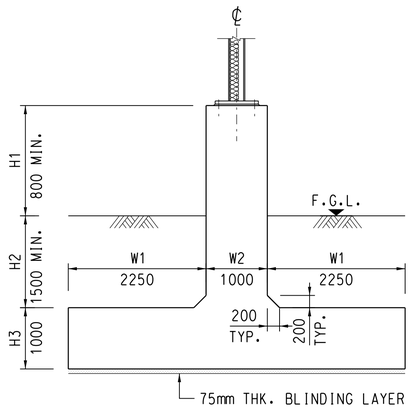


NOISE BARRIER FOOTING TYPE T3
SCALE 1 : 50

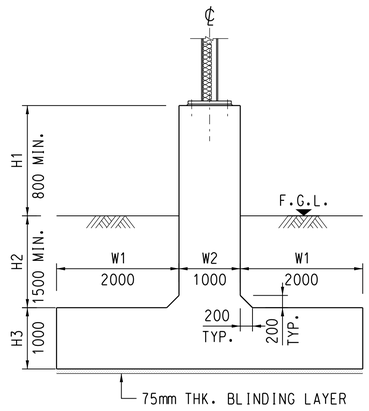
NOTES:

1. GENERAL NOTES FOR FOUNDATIONS REFER TO DRAWING NO. 60507694/C3/6003.
2. FOUNDATION TYPE REFER TO DRAWINGS NOS. 60507694/C3/6008 AND 6009.
3. REINFORCEMENT DETAILS OF FOOTING REFER TO DRAWING NO. 60507694/C3/6039.

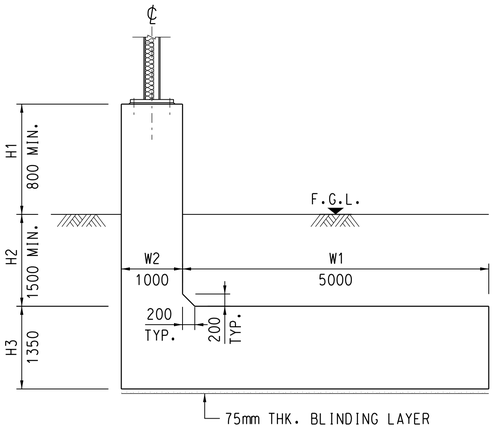
NOISE BARRIER	FOOTING TYPE	FOOTING DIMENSION (mm)				
		H1	H2	H3	W1	W2
NB1	T1	MIN.800	MIN.1500	1200	3000	1000
	T2	MIN.800	MIN.1500	1000	2750	1000
	T3	MIN.800	MIN.1500	1000	2500	1000
	T4	MIN.800	MIN.1500	1000	2250	1000
NB2	T5	MIN.800	MIN.1500	1000	2000	1000
	L	MIN.800	MIN.1500	1350	5000	1000
NB3	T5	MIN.800	MIN.1500	1000	2000	1000
	L	MIN.800	MIN.1500	1350	5000	1000
NB4	T3	MIN.800	MIN.1500	1000	2500	1000



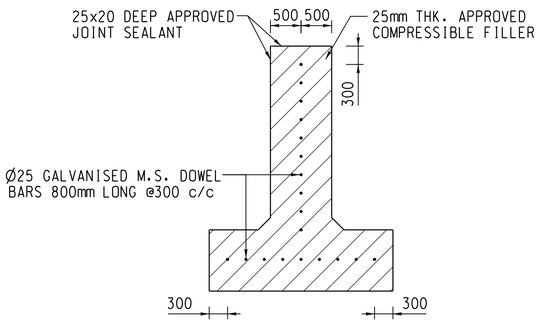
NOISE BARRIER FOOTING TYPE T4
SCALE 1 : 50



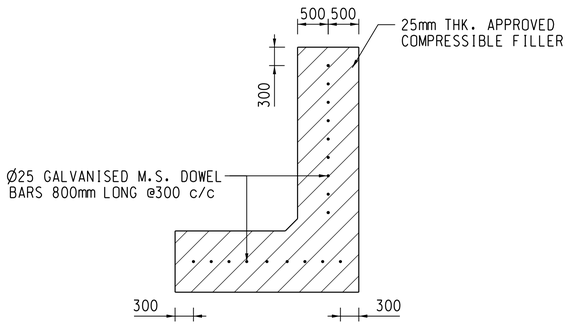
NOISE BARRIER FOOTING TYPE T5
SCALE 1 : 50



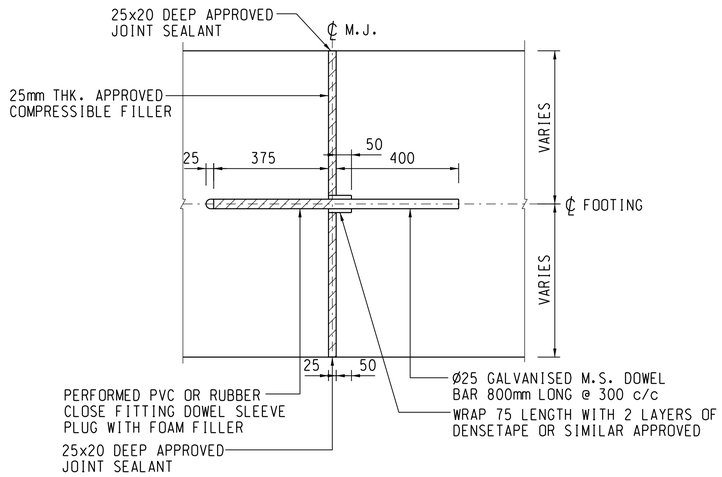
NOISE BARRIER FOOTING TYPE L
SCALE 1 : 50



SECTION THROUGH MOVEMENT JOINT OF
NOISE BARRIER / ENCLOSURE TYPE T FOOTING
SCALE 1 : 50



SECTION THROUGH MOVEMENT JOINT OF
NOISE BARRIER / ENCLOSURE TYPE L FOOTING
SCALE 1 : 50



MOVEMENT JOINT FOR NOISE BARRIER/ENCLOSURE FOUNDATION
SCALE 1 : 10

AECOM

PROJECT
項目

TUNG CHUNG NEW TOWN EXTENSION (EAST) - DESIGN AND CONSTRUCTION

CONTRACT TITLE

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I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 複核
-	DEC. 20	TENDER DRAWING	CCHY

STATUS
階段

SCALE 比例: A1 AS SHOWN

DIMENSION UNIT 尺寸單位: MILLIMETRES

KEY PLAN
索引圖

PROJECT NO. 項目編號: 60507694

CONTRACT NO. 合約編號: NL/2020/03

SHEET TITLE
圖紙名稱

NOISE BARRIER FOUNDATION DETAILS

SHEET NUMBER
圖紙編號

60507694/C3/6036

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Project Management Initials: Designer: CYCK Checked: CCHY Approved: SWKM ISO A1 594mm x 841mm

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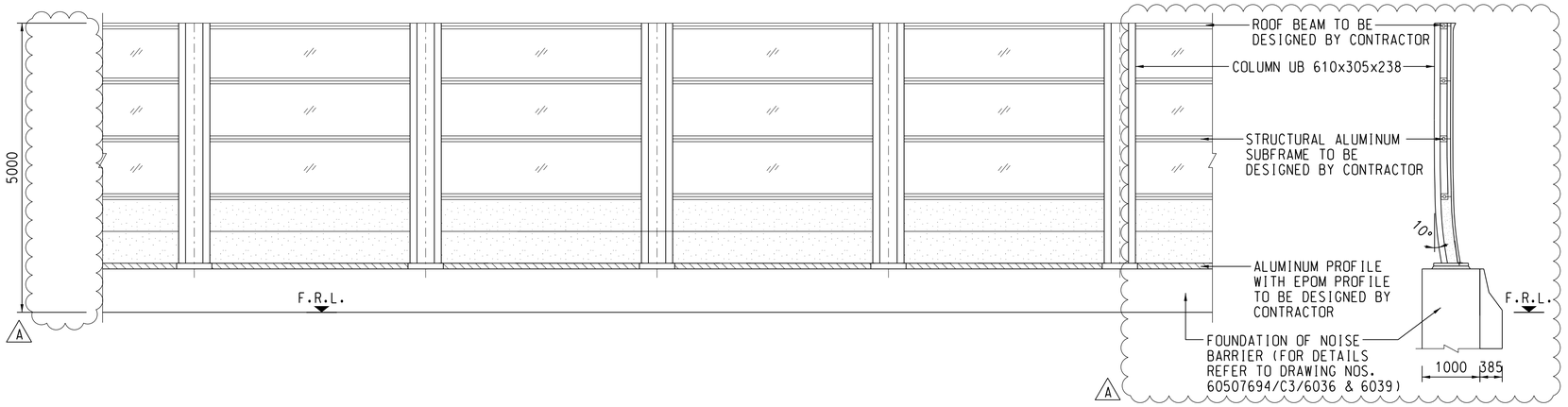
29-December-2020



TYPICAL ELEVATION OF V5 VERTICAL NOISE BARRIER FOR TYPE NB2 AND NB3
(VIEW FROM CARRIAGEWAY)
SCALE 1 : 50

TIPICAL CROSS SECTION FOR TYPE NB2 AND NB3
SCALE 1 : 50

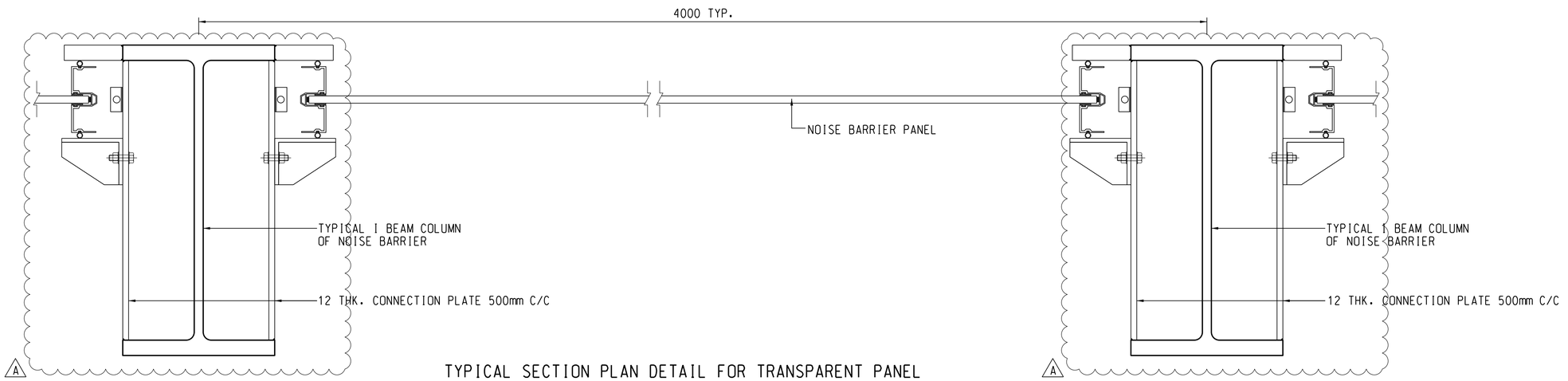
NOTES:

1. STRUCTURAL ARRANGEMENT OF NOISE BARRIER SUCH AS POST LOCATION AS INDICATED ON THE DRAWINGS IS FOR REFERENCE ONLY.
2. THE CONTRACTOR SHALL MAY PROPOSE ALTERNATIVE HORIZONTAL SUBFRAMES AND CONNECTION DETAILS OF THE HORIZONTAL SUBFRAME TO VERTIACL POST CONNECTION AND SUBMIT RELEVANT ICE CERTIFIED CALCULATION AND SHOP DRAWINGS FOR THE PROJECT MANAGER'S APPROVAL.
3. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF THE HORIZONTAL SUBFRAMES AND THE CONNECTION DETAILS OF THE HORIZONTAL SUBFRAME TO VERTICAL POST CONNECTION TAKING ACCOUNT OF THE HORIZONTAL AND VERTICAL PROFILES OF THE ROAD.
4. ALL THE FIXING DETAILS OF NOISE BARRIER PANELS ARE INDICATIVE ONLY THE CONNTRACTOR SHALL DESIGN THE MOUNTING FRAME NECESSARY FOR THE NOISE VARRIER PANELS AND SUBMIT RELEVANT ICE CERTIFIED CALCULETIONS AND SHOP DRAWINGS FOR THE PROJECT MANAGER'S APPROVAL.
5. THE SIZE AND SPACING OF THE VERTICAL MOUNTING FRAME SHALL BE LIMITED TO THE MINIMUM REQUIRED AND TO BE AGREED WITH THE PROJECT MANAGER.
6. FOR ANCHOR DETAILS REFER DRAWING NO. 60507694/C3/6022.

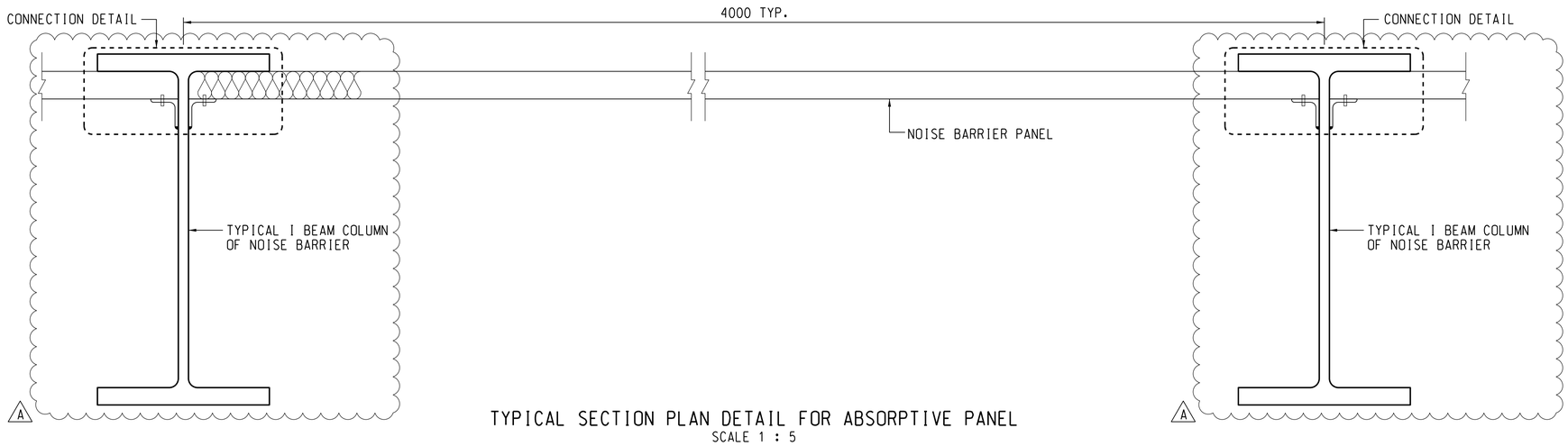
LEGEND:

TRANSPARENT WITH ANTI - BIRD COLISION LINEAR PATTERN PANEL (CLEAR)

ABSORPTIVE PANEL



TYPICAL SECTION PLAN DETAIL FOR TRANSPARENT PANEL
SCALE 1 : 5



TYPICAL SECTION PLAN DETAIL FOR ABSORPTIVE PANEL
SCALE 1 : 5

AECOM

PROJECT
項目

TUNG CHUNG NEW TOWN EXTENSION (EAST) - DESIGN AND CONSTRUCTION

CONTRACT TITLE

TUNG CHUNG NEW TOWN EXTENSION - MAJOR INFRASTRUCTURE WORKS IN TUNG CHUNG EAST

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業主

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A	FEB. 21	TENDER ADDEDUM NO. 2	CCHY
-	DEC. 20	TENDER DRAWING	CCHY

STATUS
階段

SCALE 比例
A1 AS SHOWN

DIMENSION UNIT 尺寸單位
MILLIMETRES

KEY PLAN
索引圖

PROJECT NO. 項目編號
60507694

CONTRACT NO. 合約編號
NL/2020/03

SHEET TITLE
圖紙名稱
VERTICAL NOISE BARRIER TYPICAL DETAILS

SHEET NUMBER
圖紙編號
60507694/C3/6021A

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Project Management Initials: Designer: CYCK Checked: CCHY Approved: SWKM ISO A1 594mm x 841mm

Plot File by: Shuyan.Wang@aecom.com 24-February-2021
PATH: pw:\\aecom-as-pw.bentley.com:AECOM_DS02_AS\Documents\60507694 TCNTE - D&C\CAD PRODUCTION\DRAWING\CONTRACT\C3\60000\C3_6021.dgn

Appendix 4.3

TD Endorsement on Traffic Forecast

By Fax
3922 9797

運輸署
Transport Department

本署檔案 Our Ref. : (NGW0W) in TD NR182/90-19
來函檔號 Your Ref. : CCHY:CYCK:mlpm:60507694/11.11-2021008757L
電 話 Tel. :
圖文傳真 Fax :
電 郵 Email :

23 June 2021

AECOM
12/F, Grand Central Plaza, Tower 2,
138 Shatin Rural Committee Road,
Shatin, Hong Kong

Dear Sir,

Agreement No. CE 69/2015 (CE)
Tung Chung New Town Extension (East) – Design and Construction

Additional Services
Review for Population Increase and Development Intensity

Planning Review for Population Increase and Development Intensity – Technical Note on Traffic Forecast for Environmental Impact Assessment (Ref. PI00-01)

I refer to your captioned letter dated 11 June 2021. Please find our comments as follows:

1. Please note that the Environmental Assessment is not under our purview. We are not in a position to provide comments on the traffic figures tailor-made for the environmental assessment study.

2. Notwithstanding the above, we have no comment on the methodology of the traffic forecast, provided that you have made reference to the TIA reports under TCNTE(TCE) projects and the traffic data of the technical note shall tally with those for the TIA reports. In case there is any discrepancy in the traffic data between the TIA reports and the EIA report, please highlight it for our consideration.

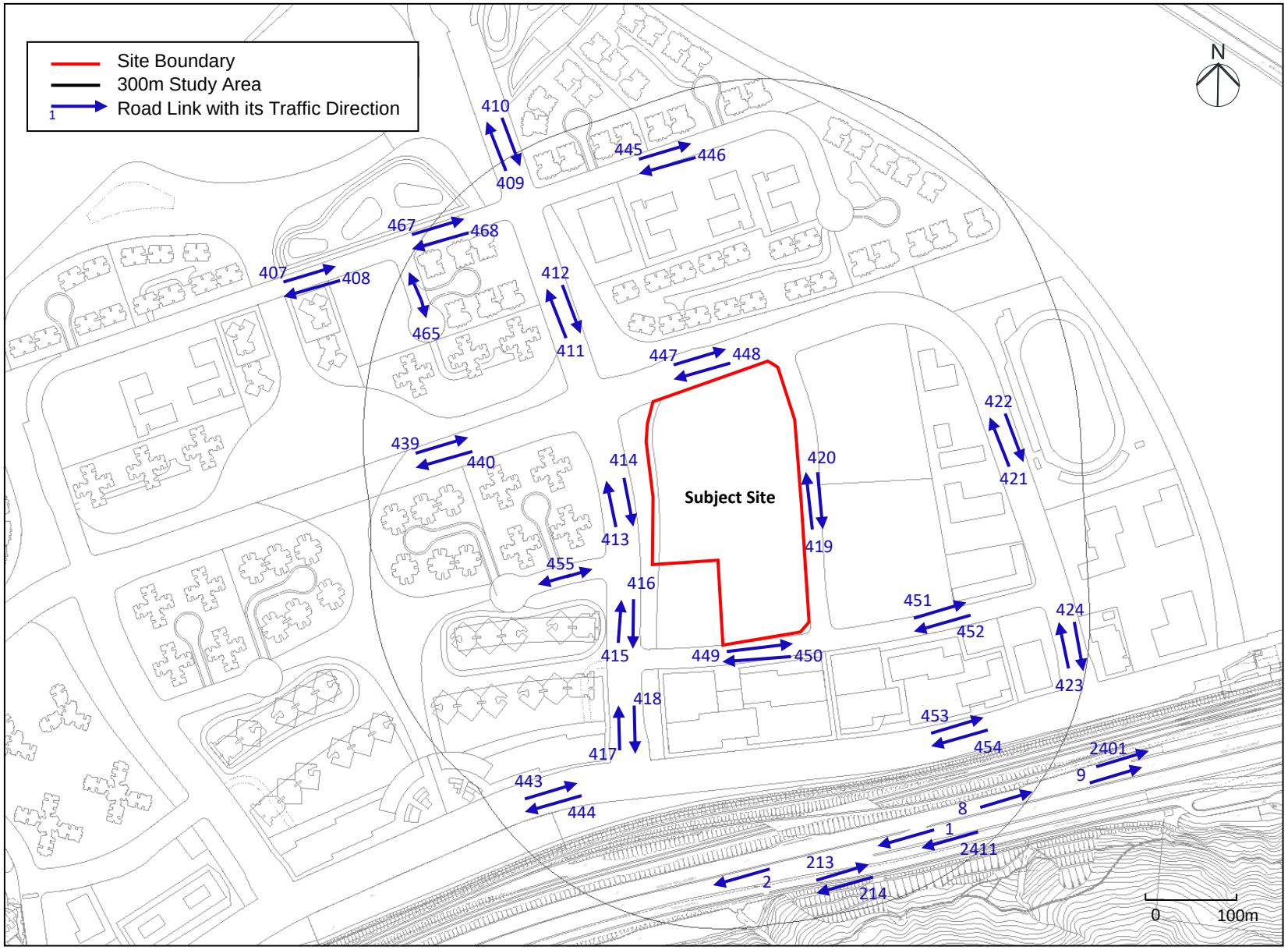
新界分區辦事處
NT Regional Office
九龍聯運街三十號旺角政府合署七樓
7th Floor, Mong Kok Government Offices, 30 Luen Wan Street, Kowloon.
圖文傳真 Fax No.: 2381 3799 (新界區) (NTRO)
網址 Web Site: http://www.td.gov.hk

我們的信念 - 我們會 • 發揮潛能 • 各盡所長 • 公平開放 • 細意關懷 • 承擔責任 • 積極進取 • 力求至善
Our Values - We will • bring out the best in people • be fair, open and caring • take responsibility • be proactive • strive for excellence

Yours faithfully,

Appendix 4.4

Traffic Forecast


Site Boundary
300m Study Area
Road Link with its Traffic Direction
1
N
Subject Site
410
409
445
446
467
468
407
408
465
412
411
447
448
422
421
439
440
414
413
420
419
455
416
415
451
452
424
423
449
450
418
417
453
454
2401
9
443
444
8
1
2411
213
2
214
0
100m

Year 2045 Traffic Flow (AM Peak)

Link ID	Road Name	Speed Limit	Peak Flow (Veh/hr)	Heavy Vehicle (HV) Composition %
1	North Lantau Highway	110	4,261	30.5%
2	North Lantau Highway	110	5,169	28.7%
8	North Lantau Highway	110	2,896	26.9%
9	North Lantau Highway	110	2,195	27.3%
213	Cheung Tung Road	50	300	17.0%
214	Cheung Tung Road	50	221	29.0%
407	Road D5	50	419	31.7%
408	Road D5	50	252	35.1%
409	Road D3	50	104	20.2%
410	Road D3	50	145	20.0%
411	Road D3	50	215	30.7%
412	Road D3	50	510	26.5%
413	Road D3	50	371	19.6%
414	Road D3	50	212	28.0%
415	Road D3	50	314	19.6%
416	Road D3	50	212	28.0%
417	Road D3	50	1,021	20.9%
418	Road D3	50	564	25.4%
419	Road L6	50	220	26.0%
420	Road L6	50	260	33.8%
421	Road D2	50	29	89.0%
422	Road D2	50	812	16.3%
423	Road D2	50	118	22.5%
424	Road D2	50	1,212	17.7%
439	Road D1	50	311	17.9%
440	Road D1	50	81	34.0%
443	Road P1	50	1,074	22.4%
444	Road P1	50	987	20.9%
445	Road L2	50	130	20.2%
446	Road L2	50	136	20.0%
447	Road D2	50	730	21.0%
448	Road D2	50	45	95.7%
449	Road L7	50	459	26.2%
450	Road L7	50	134	43.6%
451	Road L7	50	422	27.1%
452	Road L7	50	58	38.5%
453	Road P1	50	1,173	20.2%
454	Road P1	50	1,543	17.7%
455	Road L9	50	226	20.1%
501	Road P1	50	2,267	18.8%
502	Road P1	50	1,543	17.7%
2401	Shun Long Road	80	701	25.8%
2411	Shun Long Road	80	908	20.2%
465	Road L10	50	213	20.1%
467	Road L2	50	379	29.3%
468	Road L2	50	131	38.8%

Note:

[1] Some traffic flow are not used as they are outside 300m study area of Tung Chung Area 133A, which will be used for Tung Chung Area 133B or 133C.

Appendix 4.5

Predicted Traffic Noise Levels for Residential Blocks (Basecase)

Floor	R101a	R101b	R101c	R101d	R102a	R102b	R102c	R103a	R103b	R103c	R104a	R104b	R105a	R105b	R106a	R106b	R107a	R107b	R108a	R108b	R108c	R109a	R109b	R109c	R110a	R110b	R111a	R111b	R111c	R111d	R112a	R112b
40																																
39																																
38																																
37	66.7	66.3	65.8	60.3	60.4	65.3	65.2	65.0	64.8	59.0	65.1	64.7	64.4	64.2	66.6	66.7	62.7	60.6	58.4	57.9	<40	<40	56.0	56.2	55.2	43.9	54.5	55.0	55.1	<40	<40	55.1
36	66.7	66.4	65.8	60.4	60.5	65.4	65.3	65.1	64.9	59.0	65.1	64.7	64.5	64.2	66.7	66.8	62.7	60.7	58.5	58.0	<40	<40	56.1	56.2	55.2	43.7	54.6	55.1	55.2	<40	<40	55.2
35	66.8	66.4	65.9	60.5	60.5	65.5	65.4	65.1	65.0	59.1	65.2	64.8	64.5	64.3	66.7	66.8	62.8	60.8	58.5	58.0	<40	<40	56.2	56.3	55.3	42.9	54.6	55.1	55.2	<40	<40	55.3
34	66.9	66.5	66.0	60.5	60.6	65.6	65.4	65.2	65.0	59.2	65.3	64.9	64.6	64.4	66.8	66.9	62.9	60.8	58.6	58.1	<40	<40	56.3	56.4	55.4	43.6	54.7	55.2	55.2	<40	<40	55.4
33	66.9	66.6	66.1	60.6	60.7	65.7	65.5	65.3	65.1	59.3	65.4	65.0	64.7	64.5	66.9	67.0	63.0	60.9	58.7	58.1	<40	<40	56.4	56.3	55.4	<40	54.8	55.3	55.3	<40	<40	55.4
32	67.0	66.7	66.2	60.7	60.8	65.8	65.6	65.4	65.2	59.4	65.4	65.0	64.8	64.5	67.0	67.1	63.0	60.9	58.7	57.9	<40	<40	56.4	56.1	55.5	<40	54.9	55.3	55.3	<40	<40	55.5
31	67.1	66.7	66.2	60.8	60.9	65.8	65.7	65.4	65.2	59.5	65.5	65.1	64.9	64.6	67.1	67.1	63.1	61.0	58.8	58.0	<40	<40	56.5	56.1	55.5	<40	55.0	55.3	55.4	<40	<40	55.6
30	67.2	66.8	66.3	60.9	61.0	65.9	65.8	65.5	65.3	59.6	65.6	65.2	65.0	64.7	67.1	67.2	63.2	61.0	58.9	58.1	<40	<40	56.6	56.2	55.6	<40	55.0	55.4	55.5	<40	<40	55.7
29	67.3	66.9	66.4	61.0	61.1	66.0	65.9	65.6	65.4	59.6	65.7	65.3	65.0	64.8	67.2	67.3	63.3	61.1	59.0	58.2	<40	<40	56.7	56.3	55.7	<40	55.1	55.5	55.6	<40	<40	55.8
28	67.4	67.0	66.5	61.1	61.2	66.1	66.0	65.7	65.5	59.7	65.7	65.3	65.1	64.9	67.3	67.4	63.4	61.2	59.1	58.3	<40	<40	56.8	56.4	55.8	<40	55.2	55.6	55.6	<40	<40	55.8
27	67.5	67.1	66.6	61.2	61.3	66.2	66.0	65.8	65.6	59.8	65.8	65.4	65.2	64.9	67.4	67.5	63.5	61.3	59.2	58.3	<40	<40	56.9	56.5	55.9	<40	55.3	55.7	55.7	<40	<40	55.9
26	67.6	67.2	66.7	61.3	61.3	66.3	66.1	65.9	65.7	59.9	66.0	65.5	65.3	65.0	67.5	67.6	63.6	61.4	59.2	58.4	<40	<40	57.0	56.5	56.0	<40	55.3	55.8	55.8	<40	<40	56.0
25	67.7	67.3	66.8	61.4	61.5	66.4	66.2	66.0	65.8	60.0	66.0	65.6	65.3	65.1	67.6	67.7	63.7	61.5	59.3	58.5	<40	<40	57.0	56.6	56.1	<40	55.4	55.8	55.9	<40	<40	56.1
24	67.8	67.4	66.9	61.5	61.5	66.5	66.3	66.1	65.9	60.1	66.1	65.7	65.4	65.2	67.7	67.8	63.8	61.6	59.4	58.6	<40	<40	57.1	56.7	56.2	<40	55.5	55.9	56.0	<40	<40	56.2
23	67.9	67.5	67.0	61.6	61.6	66.6	66.4	66.2	66.0	60.2	66.2	65.8	65.5	65.3	67.8	67.9	63.8	61.7	59.5	58.7	<40	<40	57.3	56.8	56.3	<40	55.6	56.0	56.1	<40	<40	56.3
22	68.0	67.6	67.1	61.8	61.8	66.7	66.5	66.3	66.1	60.3	66.3	65.9	65.6	65.4	67.9	68.0	63.9	61.8	59.6	58.8	<40	<40	57.3	56.9	56.3	<40	55.7	56.1	56.2	<40	<40	56.3
21	68.1	67.7	67.2	61.9	61.9	66.8	66.6	66.4	66.2	60.4	66.4	66.0	65.6	65.5	67.9	68.0	64.0	61.9	59.7	58.9	<40	<40	57.5	57.0	56.4	<40	55.8	56.2	56.3	<40	<40	56.4
20	68.2	67.8	67.3	62.0	62.0	66.9	66.7	66.5	66.3	60.5	66.5	66.0	65.8	65.6	68.1	68.2	64.1	62.0	59.8	59.0	<40	<40	57.6	57.1	56.5	<40	55.9	56.3	56.4	<40	<40	56.5
19	68.3	67.9	67.4	62.1	62.1	67.0	66.8	66.6	66.4	60.7	66.6	66.2	65.9	65.6	68.2	68.3	64.3	62.1	60.0	59.1	<40	<40	57.6	57.2	56.6	<40	56.0	56.4	56.5	<40	<40	56.6
18	68.4	68.1	67.5	62.2	62.3	67.1	66.9	66.7	66.5	60.8	66.7	66.3	65.9	65.8	68.3	68.3	64.4	62.2	60.1	59.2	<40	<40	57.7	57.3	56.7	<40	56.1	56.5	56.5	<40	<40	56.7
17	68.5	68.2	67.7	62.3	62.4	67.2	67.1	66.8	66.6	60.9	66.8	66.3	66.0	65.8	68.4	68.5	64.5	62.3	60.2	59.4	<40	<40	57.8	57.4	56.8	<40	56.2	56.6	56.6	<40	<40	56.8
16	68.7	68.3	67.8	62.5	62.5	67.4	67.2	67.0	66.7	61.0	66.9	66.5	66.1	65.9	68.5	68.5	64.6	62.4	60.3	59.4	<40	<40	57.9	57.5	56.9	<40	56.3	56.7	56.7	<40	<40	56.9
15	68.8	68.4	67.9	62.6	62.7	67.5	67.4	67.1	66.9	61.2	67.0	66.6	66.2	66.0	68.6	68.7	64.7	62.6	60.4	59.6	<40	<40	58.0	57.6	57.0	<40	56.4	56.8	56.8	<40	<40	57.0
14	68.9	68.6	68.0	62.8	62.8	67.6	67.5	67.2	67.0	61.3	67.1	66.6	66.4	66.1	68.7	68.8	64.8	62.7	60.5	59.7	<40	<40	58.1	57.7	57.1	<40	56.5	56.9	56.9	<40	<40	57.0
13	69.1	68.7	68.2	63.0	63.0	67.8	67.6	67.3	67.1	61.4	67.3	66.8	66.4	66.2	68.8	68.9	64.9	62.8	60.6	59.8	<40	<40	58.3	57.8	57.2	<40	56.6	57.0	57.0	<40	<40	57.1
12	69.2	68.8	68.3	63.1	63.1	67.9	67.7	67.4	67.2	61.5	67.4	66.9	66.6	66.3	68.9	69.0	65.0	62.9	60.7	59.9	<40	<40	58.4	57.9	57.3	<40	56.7	57.1	57.1	<40	<40	57.2
11	69.4	69.0	68.4	63.3	63.3	68.0	67.8	67.6	67.3	61.7	67.5	67.0	66.7	66.5	69.1	69.2	65.2	63.1	60.8	60.0	<40	<40	58.5	58.0	57.4	<40	56.8	57.2	57.2	<40	<40	57.2
10	69.5	69.1	68.6	63.4	63.4	68.2	68.0	67.7	67.5	61.8	67.6	67.1	66.8	66.6	69.3	69.3	65.3	63.2	61.0	60.1	<40	<40	58.6	58.2	57.5	<40	56.9	57.3	57.3	<40	<40	57.3
9	69.6	69.3	68.8	63.6	63.6	68.3	68.2	67.9	67.6	62.0	67.8	67.3	66.9	66.7	69.4	69.5	65.4	63.3	61.1	60.2	<40	<40	58.7	58.3	57.6	<40	56.9	57.4	57.3	<40	<40	57.3
8	69.8	69.4	68.9	63.8	63.8	68.5	68.3	68.0	67.8	62.1	67.9	67.4	67.1	66.9	69.5	69.6	65.6	63.4	61.2	60.3	<40	<40	58.8	58.4	57.7	<40	57.0	57.4	57.4	<40	<40	57.2
7	70.0	69.6	69.1	63.9	63.9	68.6	68.5	68.2	67.9	62.3	68.1	67.6	67.2	67.0	69.7	69.8	65.7	63.6	61.3	60.5	<40	<40	58.9	58.5	57.8	<40	57.0	57.4	57.3	<40	<40	57.0
6	70.1	69.8	69.3	64.1	64.1	68.8	68.6	68.3	68.1	62.4	68.2	67.7	67.4	67.2	69.9	70.0	65.8	63.7	61.4	60.6	<40	<40	59.0	58.5	57.9	<40	57.0	57.2	57.1	<40	<40	56.5
5	70.3	70.0	69.4	64.3	64.3	69.0	68.8	68.4	68.2	62.6	68.4	67.9	67.5	67.3	70.0	70.1	66.0	63.8	61.5	60.6	<40	<40	59.0	58.5	57.8	<40	56.7	57.0	56.8	<40	<40	55.9
4	**70.5**	70.1	69.6	64.4	64.5	69.2	69.0	68.6	68.4	62.7	68.5	68.0	67.7	67.5	70.2	70.3	66.1	63.9	61.6	60.6	<40	<40	59.0	58.4	57.7	<40	56.4	56.5	56.1	<40	<40	54.3
3	**70.7**	70.3	69.8	64.6	64.7	69.3	69.1	68.7	68.5	62.9	68.6	68.1	67.8	67.6	70.4	70.4	66.1	63.9	61.5	60.5	<40	<40	58.7	58.1	57.3	<40	55.7	55.2	54.4	<40	<40	52.5
2	**70.9**	**70.5**	70.0	64.9	64.9	69.5	69.3	68.9	68.6	63.0	68.7	68.2	67.9	67.8	**70.5**	**70.6**	66.2	63.7	61.1	60.1	<40	<40	58.2	57.5	56.6	<40	54.2	53.4	52.5	<40	<40	50.4
1	**71.1**	**70.7**	70.2	65.1	65.0	69.6	69.4	69.0	68.7	63.1	68.9	68.4	68.1	67.9	**70.7**	**70.7**	65.9	63.2	60.4	59.3	<40	<40	57.0	56.1	55.2	<40	52.2	51.1	50.5	<40	<40	48.8
Max	**71.1**	**70.7**	70.2	65.1	65.0	69.6	69.4	69.0	68.7	63.1	68.9	68.4	68.1	67.9	**70.7**	**70.7**	66.2	63.9	61.6	60.6	<40	<40	59.0	58.5	57.9	43.9	57.0	57.4	57.4	<40	<40	57.3
Min	66.7	66.3	65.8	60.3	60.4	65.3	65.2	65.0	64.8	59.0	65.1	64.7	64.4	64.2	66.6	66.7	62.7	60.6	58.4	57.9	<40	<40	56.0	56.1	55.2	<40	52.2	51.1	50.5	<40	<40	48.8

# Total Flats	6817
Exceedance	85
Compliance Rate	98.8%

Noise sensitive receivers with exceedance (≥70.5 dB(A))

Floor	R112c	R112d	R113a	R113b	R114a	R114b	R115a	R115b	R116a	R116b	R117a	R117b	R117c	R118a	R118b	R118c	R119a	R119b	R120a	R120b	R121a	R121b	R122a	R122b	R122c	R123a	R123b	R123c	R124a	R124b	R124c	R125a
40																																
39																																
38																																
37	55.4	55.2	56.2	56.2	55.5	55.7	57.0	57.4	57.5	55.8	55.9	56.0	54.8	52.1	55.9	56.0	55.8	55.6	<40	56.3	56.6	53.1	<40	57.4	57.8	58.2	58.6	<40	<40	59.8	60.7	65.3
36	55.4	55.2	56.3	56.3	55.5	55.7	57.1	57.4	57.3	55.7	55.8	55.9	54.8	52.1	56.0	56.0	55.9	55.7	<40	56.3	56.7	53.1	<40	57.5	57.8	58.3	58.7	<40	<40	59.9	60.8	65.4
35	55.4	55.2	56.3	56.3	55.6	55.8	57.2	57.5	57.4	55.7	55.9	56.0	54.9	52.2	56.0	56.1	56.0	55.7	<40	56.4	56.8	53.2	<40	57.6	57.9	58.3	58.8	<40	<40	60.0	60.9	65.4
34	55.4	55.3	56.4	56.4	55.7	55.8	57.2	57.5	57.4	55.8	55.9	56.0	54.9	52.2	56.1	56.1	56.0	55.8	<40	56.5	56.8	53.2	<40	57.6	58.0	58.4	58.8	<40	<40	60.0	61.0	65.5
33	55.5	55.4	56.4	56.4	55.7	55.9	57.3	57.5	57.5	55.8	56.0	56.1	55.0	52.3	56.2	56.2	56.0	55.8	<40	56.5	56.9	53.3	<40	57.7	58.0	58.5	58.9	<40	<40	60.1	61.0	65.6
32	55.6	55.4	56.5	56.4	55.7	55.9	57.3	57.6	57.6	55.9	56.0	56.2	55.1	52.4	56.2	56.3	56.1	55.9	<40	56.6	56.9	53.4	<40	57.8	58.1	58.5	59.0	<40	<40	60.2	61.1	65.7
31	55.6	55.5	56.6	56.5	55.8	55.9	57.4	57.7	57.6	56.0	56.1	56.2	55.1	52.4	56.3	56.3	56.2	56.0	<40	56.7	57.0	53.4	<40	57.8	58.2	58.6	59.1	<40	<40	60.2	61.2	65.7
30	55.6	55.6	56.6	56.6	55.8	56.0	57.5	57.7	57.7	56.0	56.1	56.3	55.2	52.5	56.3	56.4	56.2	56.0	<40	56.7	57.1	53.5	<40	57.9	58.2	58.7	59.1	<40	<40	60.3	61.2	65.8
29	55.7	55.7	56.7	56.7	55.9	56.1	57.5	57.8	57.7	56.1	56.2	56.3	55.2	52.5	56.4	56.4	56.3	56.1	<40	56.8	57.1	53.6	<40	58.0	58.3	58.8	59.2	<40	<40	60.4	61.3	65.9
28	55.8	55.7	56.8	56.7	56.0	56.1	57.6	57.9	57.8	56.1	56.3	56.4	55.3	52.6	56.4	56.5	56.4	56.2	<40	56.9	57.2	53.7	<40	58.0	58.4	58.8	59.3	<40	<40	60.5	61.4	66.0
27	55.9	55.8	56.8	56.8	56.0	56.2	57.7	57.9	57.8	56.2	56.3	56.4	55.4	52.6	56.5	56.5	56.4	56.2	<40	56.9	57.3	53.7	<40	58.1	58.4	58.9	59.3	<40	<40	60.5	61.5	66.0
26	56.0	55.9	56.9	56.8	56.1	56.3	57.7	58.0	57.9	56.3	56.4	56.5	55.4	52.7	56.5	56.6	56.5	56.3	<40	57.0	57.3	53.8	<40	58.2	58.5	59.0	59.4	<40	<40	60.6	61.6	66.1
25	56.1	56.0	57.0	56.9	56.2	56.3	57.8	58.0	57.9	56.3	56.4	56.5	55.5	52.7	56.6	56.7	56.6	56.4	<40	57.0	57.4	53.8	<40	58.2	58.6	59.1	59.5	<40	<40	60.7	61.6	66.2
24	56.2	56.1	57.0	57.0	56.2	56.4	57.9	58.1	57.9	56.4	56.5	56.6	55.5	52.8	56.7	56.7	56.6	56.4	<40	57.1	57.4	53.9	<40	58.3	58.7	59.1	59.6	<40	<40	60.8	61.7	66.3
23	56.3	56.1	57.1	57.1	56.3	56.5	57.9	58.2	58.0	56.4	56.5	56.6	55.6	52.8	56.7	56.8	56.7	56.4	<40	57.1	57.5	54.0	<40	58.4	58.7	59.2	59.6	<40	<40	60.9	61.8	66.4
22	56.4	56.2	57.2	57.1	56.4	56.5	58.0	58.2	58.1	56.5	56.6	56.7	55.6	52.9	56.8	56.8	56.8	56.5	<40	57.2	57.6	54.0	<40	58.4	58.8	59.3	59.7	<40	<40	60.9	61.9	66.5
21	56.4	56.3	57.3	57.2	56.4	56.6	58.0	58.3	58.1	56.5	56.6	56.8	55.7	52.9	56.8	56.9	56.8	56.5	<40	57.3	57.6	54.1	<40	58.5	58.9	59.3	59.8	<40	<40	61.0	62.0	66.5
20	56.5	56.4	57.3	57.2	56.5	56.6	58.0	58.3	58.2	56.6	56.7	56.8	55.8	53.0	56.9	56.9	56.9	56.6	<40	57.3	57.7	54.1	<40	58.6	58.9	59.4	59.9	<40	<40	61.1	62.0	66.6
19	56.6	56.5	57.4	57.2	56.5	56.6	58.1	58.3	58.2	56.7	56.7	56.9	55.8	53.1	57.0	57.0	56.9	56.7	<40	57.4	57.8	54.2	<40	58.6	59.0	59.5	59.9	<40	<40	61.2	62.1	66.7
18	56.7	56.6	57.5	57.3	56.5	56.7	58.1	58.4	58.3	56.7	56.8	56.9	55.9	53.1	57.0	57.0	56.9	56.7	<40	57.4	57.8	54.3	<40	58.7	59.1	59.6	60.0	<40	<40	61.3	62.2	66.8
17	56.8	56.6	57.4	57.4	56.6	56.7	58.1	58.3	58.3	56.8	56.8	57.0	55.9	53.2	57.1	57.1	57.0	56.8	<40	57.5	57.9	54.3	<40	58.8	59.2	59.7	60.1	<40	<40	61.3	62.3	66.9
16	56.8	56.7	57.5	57.3	56.6	56.6	58.1	58.3	58.4	56.8	56.9	57.0	56.0	53.3	57.1	57.2	57.0	56.8	<40	57.6	57.9	54.4	<40	58.8	59.2	59.7	60.2	<40	<40	61.4	62.3	67.0
15	56.9	56.8	57.5	57.4	56.4	56.6	58.0	58.2	58.4	56.9	56.9	57.1	56.0	53.3	57.2	57.2	57.1	56.9	<40	57.6	58.0	54.5	<40	58.9	59.3	59.8	60.2	<40	<40	61.5	62.4	67.0
14	57.0	56.9	57.5	57.2	56.4	56.4	58.0	58.2	58.4	56.9	57.0	57.1	56.1	53.4	57.2	57.3	57.2	56.9	<40	57.7	58.1	54.5	<40	59.0	59.4	59.8	60.3	<40	<40	61.6	62.5	67.1
13	57.1	56.9	57.4	57.1	56.2	56.3	57.8	58.1	58.5	57.0	57.0	57.2	56.1	53.4	57.3	57.3	57.2	57.0	<40	57.8	58.1	54.6	<40	59.0	59.4	59.9	60.4	<40	<40	61.6	62.6	67.2
12	57.1	57.0	57.3	57.0	56.0	56.0	57.7	57.9	58.5	57.0	57.1	57.2	56.2	53.5	57.3	57.4	57.3	57.0	<40	57.8	58.2	54.6	<40	59.1	59.5	60.0	60.5	<40	<40	61.7	62.6	67.3
11	57.1	57.0	57.2	56.8	55.8	55.7	57.5	57.7	58.5	57.0	57.1	57.3	56.2	53.5	57.4	57.4	57.3	57.1	<40	57.9	58.2	54.7	<40	59.2	59.6	60.1	60.5	<40	<40	61.8	62.7	67.4
10	57.2	56.9	56.9	56.5	55.2	55.2	57.0	57.2	58.5	57.1	57.2	57.3	56.3	53.6	57.4	57.4	57.4	57.2	<40	57.9	58.3	54.8	<40	59.2	59.6	60.2	60.6	<40	<40	61.8	62.8	67.5
9	57.1	56.8	56.5	55.8	54.4	54.1	56.3	56.4	58.4	57.1	57.2	57.3	56.3	53.6	57.5	57.5	57.4	57.2	<40	58.0	58.3	54.8	<40	59.3	59.7	60.2	60.7	<40	<40	61.9	62.8	67.6
8	57.0	56.6	55.7	54.6	52.7	52.5	55.4	55.8	58.3	57.2	57.2	57.4	56.3	53.7	57.5	57.5	57.5	57.2	<40	58.0	58.4	54.9	<40	59.4	59.8	60.3	60.7	<40	<40	62.0	62.9	67.7
7	56.7	56.2	54.5	53.3	51.2	50.9	54.6	55.1	58.0	57.2	57.3	57.4	56.4	53.7	57.6	57.6	57.5	57.3	<40	58.1	58.5	54.9	<40	59.4	59.8	60.4	60.8	<40	<40	62.1	63.0	67.7
6	56.2	55.6	53.3	51.3	49.4	49.2	53.7	54.4	57.8	57.2	57.3	57.5	56.4	53.7	57.6	57.6	57.6	57.3	<40	58.1	58.5	55.0	<40	59.5	59.9	60.4	60.8	<40	<40	62.1	63.1	67.8
5	55.2	54.2	52.3	49.5	48.0	47.8	52.9	53.4	57.6	57.3	57.3	57.5	56.5	53.8	57.6	57.7	57.6	57.4	<40	58.2	58.5	55.0	<40	59.6	60.0	60.5	60.9	<40	<40	62.2	63.2	67.9
4	53.5	52.5	51.6	48.1	46.7	46.6	52.2	52.8	57.4	57.2	57.4	57.5	56.5	53.7	57.7	57.7	57.6	57.4	<40	58.2	58.6	55.1	<40	59.6	60.0	60.6	61.0	<40	<40	62.3	63.2	67.9
3	51.5	50.5	51.1	46.8	45.7	45.5	51.8	52.3	57.3	57.1	57.3	57.5	56.4	53.6	57.7	57.7	57.6	57.4	<40	58.2	58.6	55.1	<40	59.7	60.1	60.6	61.1	<40	<40	62.3	63.3	67.9
2	49.7	48.9	50.8	45.7	44.6	44.5	51.5	52.0	57.1	57.0	57.1	57.3	56.2	53.2	57.6	57.6	57.6	57.3	<40	58.2	58.7	55.1	<40	59.7	60.1	60.6	61.1	<40	<40	62.4	63.4	67.9
1	48.3	47.8															57.3	57.1	<40	58.2	58.6	55.0	<40	59.7	60.2	60.7	61.2	<40	<40	62.5	63.4	68.0
Max	57.2	57.0	57.5	57.4	56.6	56.7	58.1	58.4	58.5	57.3	57.4	57.5	56.5	53.8	57.7	57.7	57.6	57.4	<40	58.2	58.7	55.1	<40	59.7	60.2	60.7	61.2	<40	<40	62.5	63.4	68.0
Min	48.3	47.8	50.8	45.7	44.6	44.5	51.5	52.0	57.1	55.7	55.8	55.9	54.8	52.1	55.9	56.0	55.8	55.6	<40	56.3	56.6	53.1	<40	57.4	57.8	58.2	58.6	<40	<40	59.8	60.7	65.3

Noise sensitive receivers with exceedance ($\geq$70.5 dB(A))

Floor	R125b	R125c	R125d	R126a	R126b	R126c	R127a	R127b	R128a	R128b	R129a	R129b	R130a	R130b	R130c	R130d	R131a	R131b	R131c	R131d	R132a	R132b	R133a	R133b	R133c	R134a	R134b	R134c	R201a	R201b	R202a	R202b
40																																
39																																
38																																
37	65.0	64.6	61.0	61.7	64.3	64.3	64.1	63.1	63.5	63.6	63.4	62.2	62.9	63.0	62.8	60.4	59.5	62.5	62.3	61.8	58.4	62.0	62.3	62.5	56.6	55.0	63.2	63.7	62.3	61.2	59.1	58.2
36	65.0	64.7	61.1	61.8	64.4	64.3	64.2	63.1	63.6	63.7	63.5	62.3	63.0	63.0	62.9	60.5	59.6	62.6	62.4	61.9	58.5	62.0	62.4	62.6	56.7	55.1	63.3	63.8	62.4	61.2	59.2	58.2
35	65.1	64.8	61.2	61.9	64.5	64.4	64.2	63.2	63.6	63.7	63.6	62.4	63.1	63.1	63.0	60.5	59.6	62.7	62.4	61.9	58.5	62.1	62.4	62.7	56.7	55.1	63.4	63.8	62.4	61.3	59.2	58.3
34	65.2	64.9	61.2	61.9	64.6	64.5	64.3	63.3	63.7	63.8	63.6	62.4	63.1	63.2	63.0	60.6	59.7	62.7	62.5	62.0	58.6	62.2	62.5	62.8	56.7	55.2	63.5	63.9	62.5	61.3	59.3	58.3
33	65.2	64.9	61.3	62.0	64.6	64.5	64.4	63.3	63.8	63.9	63.7	62.5	63.2	63.2	63.1	60.7	59.7	62.8	62.6	62.1	58.6	62.2	62.6	62.8	56.8	55.2	63.5	64.0	62.6	61.4	59.4	58.4
32	65.3	65.0	61.4	62.1	64.7	64.6	64.4	63.4	63.8	63.9	63.8	62.6	63.3	63.3	63.2	60.7	59.8	62.9	62.7	62.1	58.7	62.3	62.7	62.9	56.9	55.3	63.6	64.1	62.7	61.4	59.5	58.5
31	65.4	65.1	61.4	62.2	64.8	64.7	64.5	63.5	63.9	64.0	63.8	62.6	63.3	63.4	63.3	60.8	59.9	62.9	62.7	62.2	58.8	62.4	62.7	63.0	56.9	55.3	63.7	64.1	62.7	61.5	59.5	58.5
30	65.5	65.1	61.5	62.2	64.8	64.8	64.6	63.5	64.0	64.1	63.9	62.7	63.4	63.4	63.3	60.9	60.0	63.0	62.8	62.3	58.8	62.4	62.8	63.0	57.0	55.4	63.8	64.2	62.8	61.6	59.6	58.6
29	65.5	65.2	61.6	62.3	64.9	64.8	64.7	63.6	64.1	64.1	64.0	62.8	63.5	63.5	63.4	61.0	60.0	63.1	62.9	62.3	58.9	62.5	62.9	63.1	57.1	55.5	63.8	64.3	62.8	61.6	59.7	58.6
28	65.6	65.3	61.7	62.4	65.0	64.9	64.7	63.7	64.1	64.2	64.1	62.9	63.5	63.6	63.5	61.0	60.1	63.2	62.9	62.4	58.9	62.6	63.0	63.2	57.1	55.5	63.9	64.4	62.9	61.7	59.7	58.7
27	65.7	65.4	61.7	62.5	65.1	65.0	64.8	63.7	64.2	64.3	64.1	63.0	63.6	63.7	63.5	61.1	60.2	63.2	63.0	62.5	59.0	62.7	63.0	63.3	57.2	55.6	64.0	64.5	63.0	61.8	59.8	58.8
26	65.8	65.4	61.8	62.5	65.1	65.0	64.9	63.8	64.3	64.4	64.2	63.0	63.7	63.7	63.6	61.2	60.2	63.3	63.1	62.6	59.1	62.7	63.1	63.4	57.3	55.7	64.1	64.6	63.1	61.9	59.8	58.8
25	65.9	65.5	61.8	62.6	65.2	65.1	65.0	63.9	64.4	64.4	64.3	63.1	63.8	63.8	63.7	61.3	60.3	63.4	63.2	62.6	59.1	62.8	63.2	63.4	57.4	55.8	64.1	64.6	63.1	61.9	59.9	58.9
24	65.9	65.6	61.9	62.7	65.3	65.2	65.0	64.0	64.4	64.5	64.4	63.2	63.9	63.9	63.8	61.3	60.4	63.5	63.2	62.7	59.2	62.9	63.3	63.5	57.4	55.8	64.2	64.7	63.2	62.0	60.0	59.0
23	66.0	65.7	62.0	62.8	65.4	65.3	65.1	64.1	64.5	64.6	64.4	63.3	63.9	64.0	63.8	61.4	60.4	63.5	63.3	62.8	59.2	63.0	63.4	63.6	57.5	55.9	64.3	64.8	63.3	62.0	60.1	59.1
22	66.1	65.8	62.1	62.8	65.5	65.4	65.2	64.1	64.6	64.7	64.5	63.3	64.0	64.0	63.9	61.5	60.5	63.6	63.4	62.9	59.3	63.1	63.4	63.7	57.6	55.9	64.4	64.9	63.4	62.1	60.1	59.1
21	66.2	65.9	62.1	62.9	65.6	65.4	65.2	64.2	64.6	64.8	64.6	63.4	64.1	64.1	64.0	61.5	60.6	63.7	63.5	63.0	59.4	63.1	63.5	63.7	57.6	56.0	64.5	65.0	63.4	62.2	60.2	59.2
20	66.3	66.0	62.2	63.0	65.6	65.5	65.3	64.3	64.7	64.8	64.7	63.5	64.1	64.2	64.1	61.6	60.7	63.8	63.5	63.0	59.5	63.2	63.6	63.8	57.7	56.1	64.6	65.1	63.5	62.3	60.3	59.3
19	66.3	66.0	62.3	63.1	65.7	65.6	65.4	64.4	64.8	64.9	64.7	63.6	64.2	64.3	64.1	61.7	60.7	63.9	63.6	63.1	59.5	63.3	63.6	63.9	57.8	56.2	64.6	65.2	63.6	62.3	60.3	59.3
18	66.4	66.1	62.4	63.2	65.8	65.7	65.5	64.5	64.9	65.0	64.8	63.6	64.3	64.3	64.2	61.8	60.8	63.9	63.7	63.2	59.6	63.4	63.7	64.0	57.8	56.2	64.8	65.2	63.6	62.4	60.4	59.4
17	66.5	66.2	62.5	63.2	65.9	65.8	65.6	64.5	65.0	65.1	64.9	63.7	64.4	64.4	64.3	61.8	60.9	64.0	63.8	63.2	59.6	63.4	63.8	64.1	57.9	56.3	64.9	65.3	63.7	62.5	60.5	59.4
16	66.6	66.3	62.5	63.3	66.0	65.8	65.6	64.6	65.0	65.1	65.0	63.8	64.4	64.5	64.4	61.9	60.9	64.1	63.8	63.3	59.7	63.5	63.9	64.1	58.0	56.4	64.9	65.4	63.8	62.5	60.5	59.5
15	66.7	66.4	62.6	63.4	66.0	65.9	65.7	64.7	65.1	65.2	65.0	63.9	64.5	64.5	64.5	62.0	61.0	64.2	63.9	63.4	59.8	63.6	64.0	64.2	58.1	56.4	65.0	65.5	63.9	62.6	60.6	59.6
14	66.8	66.5	62.7	63.5	66.1	66.0	65.8	64.8	65.2	65.3	65.1	63.9	64.6	64.6	64.5	62.1	61.1	64.2	64.0	63.5	59.8	63.7	64.1	64.3	58.1	56.5	65.1	65.6	63.9	62.6	60.6	59.6
13	66.9	66.5	62.8	63.6	66.2	66.1	65.9	64.9	65.3	65.4	65.2	64.0	64.6	64.7	64.6	62.1	61.1	64.3	64.1	63.6	59.9	63.8	64.2	64.4	58.2	56.6	65.2	65.7	64.0	62.7	60.6	59.6
12	67.0	66.6	62.8	63.6	66.3	66.2	66.0	64.9	65.4	65.4	65.2	64.1	64.7	64.8	64.7	62.2	61.2	64.4	64.2	63.6	60.0	63.8	64.2	64.5	58.2	56.7	65.3	65.8	64.0	62.7	60.6	59.6
11	67.1	66.7	62.9	63.7	66.4	66.3	66.1	65.0	65.4	65.5	65.3	64.2	64.8	64.9	64.7	62.3	61.3	64.5	64.3	63.7	60.0	63.9	64.3	64.6	58.3	56.7	65.4	65.9	64.1	62.7	60.6	59.6
10	67.1	66.8	63.0	63.8	66.4	66.3	66.1	65.1	65.5	65.6	65.4	64.2	64.9	64.9	64.8	62.4	61.3	64.5	64.3	63.8	60.1	64.0	64.4	64.6	58.4	56.8	65.5	66.0	64.1	62.8	60.7	59.7
9	67.2	66.9	63.1	63.9	66.5	66.4	66.2	65.2	65.6	65.7	65.5	64.3	64.9	65.0	64.9	62.4	61.4	64.6	64.4	63.8	60.1	64.0	64.5	64.7	58.4	56.8	65.6	66.1	64.2	62.8	60.7	59.7
8	67.3	66.9	63.1	63.9	66.6	66.5	66.3	65.2	65.6	65.7	65.5	64.3	65.0	65.1	64.9	62.5	61.4	64.7	64.5	63.9	60.2	64.1	64.6	64.9	58.5	56.9	65.6	66.2	64.2	62.9	60.7	59.7
7	67.4	67.0	63.2	64.0	66.7	66.6	66.4	65.3	65.7	65.8	65.6	64.4	65.0	65.1	65.0	62.6	61.5	64.8	64.5	64.0	60.2	64.2	64.6	64.9	58.5	56.9	65.7	66.3	64.3	62.9	60.8	59.8
6	67.4	67.1	63.2	64.1	66.7	66.6	66.4	65.3	65.7	65.8	65.6	64.5	65.1	65.2	65.1	62.6	61.6	64.8	64.6	64.1	60.3	64.3	64.7	65.0	58.6	57.0	65.8	66.4	64.4	63.0	60.8	59.8
5	67.5	67.1	63.2	64.1	66.8	66.6	66.4	65.4	65.7	65.9	65.7	64.5	65.1	65.2	65.1	62.7	61.6	64.9	64.7	64.1	60.3	64.4	64.8	65.1	58.6	57.0	65.9	66.5	64.4	63.1	60.9	59.9
4	67.5	67.1	63.2	64.2	66.8	66.6	66.4	65.3	65.8	65.9	65.7	64.5	65.2	65.3	65.2	62.7	61.7	65.0	64.7	64.2	60.4	64.4	64.9	65.1	58.7	57.1	66.0	66.6	64.5	63.1	61.0	59.9
3	67.5	67.2	63.0	64.2	66.8	66.6	66.4	65.3	65.7	65.8	65.6	64.4	65.1	65.2	65.2	62.7	61.7	65.0	64.8	64.2	60.4	64.5	64.9	65.2	58.7	57.1	66.1	66.6	64.6	63.2	61.0	60.0
2	67.5	67.1	63.0	64.1	66.7	66.5	66.3	65.1	65.5	65.7	65.5	64.2	65.0	65.1	65.1	62.7	61.6	64.9	64.8	64.2	60.3	64.5	65.0	65.3	58.8	57.2	66.2	66.8	64.6	63.2	61.1	60.0
1	67.6	67.1	62.8	64.0	66.6	66.5	66.2	64.9	65.4	65.5	65.2	63.8	64.6	64.8	64.7	62.5	61.3	64.7	64.6	64.1	60.0	64.5	65.0	65.3	58.7	57.2	66.2	66.8	64.7	63.3	61.1	60.1
Max	67.6	67.2	63.2	64.2	66.8	66.6	66.4	65.4	65.8	65.9	65.7	64.5	65.2	65.3	65.2	62.7	61.7	65.0	64.8	64.2	60.4	64.5	65.0	65.3	58.8	57.2	66.2	66.8	64.7	63.3	61.1	60.1
Min	65.0	64.6	61.0	61.7	64.3	64.3	64.1	63.1	63.5	63.6	63.4	62.2	62.9	63.0	62.8	60.4	59.5	62.5	62.3	61.8	58.4	62.0	62.3	62.5	56.6	55.0	63.2	63.7	62.3	61.2	59.1	58.2

Noise sensitive receivers with exceedance ($\geq$70.5 dB(A))

Floor	R202c	R203a	R203b	R203c	R204a	R204b	R205a	R205b	R206a	R206b	R207a	R207b	R208a	R208b	R208c	R209a	R209b	R209c	R210a	R210b	R210c	R210d	R211a	R211b	R212a	R212b	R213a	R213b	R213c	R214a	R214b	R215a
40																																
39																																
38																																
37	45.4	<40	56.1	55.5	<40	<40	54.3	54.8	54.5	54.2	54.9	55.3	55.6	55.5	<40	45.5	55.4	55.8	49.5	48.1	46.0	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40
36	45.4	<40	56.1	55.5	<40	<40	54.4	54.8	54.5	54.3	55.0	55.3	55.7	55.6	<40	45.6	55.4	55.9	49.0	47.8	45.7	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40
35	45.4	<40	56.2	55.6	<40	<40	54.4	54.9	54.6	54.4	55.0	55.4	55.7	55.6	<40	45.6	55.5	55.9	49.1	47.6	45.7	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40
34	45.4	<40	56.3	55.6	<40	<40	54.5	55.0	54.7	54.4	55.1	55.5	55.8	55.7	<40	45.6	55.5	56.0	48.8	46.7	44.2	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40
33	45.3	<40	56.3	55.7	<40	<40	54.6	55.1	54.7	54.5	55.2	55.5	55.8	55.7	<40	45.7	55.6	56.0	48.3	46.7	44.2	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40
32	45.4	<40	56.4	55.7	<40	<40	54.6	55.1	54.8	54.6	55.2	55.6	55.9	55.7	<40	45.7	55.6	56.1	48.4	46.7	44.2	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40
31	45.4	<40	56.4	55.8	<40	<40	54.7	55.2	54.9	54.6	55.3	55.7	55.9	55.8	<40	45.8	55.7	56.1	48.2	46.5	43.9	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40
30	45.4	<40	56.5	55.9	<40	<40	54.7	55.2	54.9	54.7	55.3	55.7	56.0	55.8	<40	45.9	55.7	56.2	48.2	46.6	43.9	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40
29	45.4	<40	56.6	56.0	<40	<40	54.8	55.3	55.0	54.7	55.4	55.8	56.1	55.9	<40	45.9	55.8	56.2	48.3	46.6	43.9	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40
28	45.5	<40	56.7	56.0	<40	<40	54.9	55.4	55.1	54.8	55.4	55.8	56.1	56.0	<40	46.0	55.8	56.3	48.3	46.6	43.9	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40
27	45.4	<40	56.7	56.1	<40	<40	55.0	55.4	55.1	54.8	55.5	55.9	56.2	56.0	<40	46.0	55.9	56.3	48.2	46.7	44.0	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40
26	45.4	<40	56.8	56.2	<40	<40	55.0	55.5	55.2	54.9	55.5	56.0	56.2	56.1	<40	46.1	55.9	56.3	48.2	46.7	44.0	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40
25	45.5	<40	56.8	56.2	<40	<40	55.1	55.6	55.2	55.0	55.6	56.0	56.3	56.2	<40	46.2	56.0	56.4	48.3	46.7	44.0	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40
24	45.5	<40	56.9	56.3	<40	<40	55.2	55.7	55.3	55.0	55.6	56.1	56.3	56.2	<40	46.2	56.0	56.4	48.3	46.7	44.1	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40
23	45.6	<40	57.0	56.4	<40	<40	55.2	55.7	55.4	55.1	55.7	56.1	56.4	56.2	<40	46.3	56.1	56.4	48.2	46.8	44.1	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40
22	45.6	<40	57.1	56.5	<40	<40	55.3	55.8	55.4	55.2	55.8	56.1	56.5	56.3	<40	46.3	56.1	56.4	48.2	46.8	44.1	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40
21	45.6	<40	57.1	56.6	<40	<40	55.4	55.9	55.5	55.2	55.8	56.2	56.5	56.4	<40	46.4	56.2	56.4	48.3	46.8	44.1	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40
20	45.7	<40	57.2	56.6	<40	<40	55.4	55.9	55.6	55.3	55.8	56.3	56.5	56.4	<40	46.4	56.2	56.5	48.3	46.8	44.2	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40
19	45.6	<40	57.3	56.7	<40	<40	55.5	56.0	55.6	55.4	55.9	56.3	56.6	56.5	<40	46.5	56.2	56.5	48.2	46.9	44.2	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40
18	45.6	<40	57.4	56.7	<40	<40	55.6	56.0	55.7	55.4	56.0	56.3	56.7	56.5	<40	46.5	56.3	56.5	48.2	46.9	44.2	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40
17	45.6	<40	57.4	56.8	<40	<40	55.7	56.1	55.7	55.5	56.0	56.4	56.7	56.6	<40	46.6	56.3	56.4	48.3	46.9	44.2	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40
16	45.5	<40	57.4	56.9	<40	<40	55.7	56.2	55.8	55.5	56.0	56.4	56.8	56.6	<40	46.6	56.3	56.4	48.3	46.9	44.3	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40
15	45.4	<40	57.5	57.0	<40	<40	55.8	56.3	55.9	55.6	56.1	56.5	56.8	56.6	<40	46.7	56.3	56.4	48.3	47.0	44.3	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40
14	45.0	<40	57.6	57.1	<40	<40	55.8	56.3	55.9	55.6	56.1	56.5	56.8	56.7	<40	46.7	56.3	56.3	48.3	47.0	44.3	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40
13	44.4	<40	57.7	57.1	<40	<40	55.9	56.4	56.0	55.7	56.2	56.5	56.9	56.7	<40	46.8	56.3	56.3	48.4	47.0	44.4	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40
12	43.5	<40	57.7	57.2	<40	<40	56.0	56.4	56.1	55.8	56.2	56.6	56.9	56.7	<40	46.8	56.3	56.2	48.4	47.0	44.4	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40
11	42.1	<40	57.8	57.3	<40	<40	56.1	56.5	56.1	55.8	56.2	56.6	56.9	56.8	<40	46.8	56.3	56.2	48.4	47.0	44.5	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40
10	41.3	<40	57.8	57.3	<40	<40	56.1	56.6	56.2	55.9	56.2	56.6	56.9	56.8	<40	46.9	56.4	56.2	48.4	47.1	44.5	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40
9	<40	<40	57.9	57.3	<40	<40	56.2	56.6	56.2	56.0	56.3	56.7	57.0	56.8	<40	46.9	56.4	56.2	48.4	47.1	44.5	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40
8	<40	<40	58.0	57.4	<40	<40	56.2	56.7	56.3	56.0	56.3	56.7	57.0	56.9	<40	46.9	56.4	56.2	48.5	47.1	44.5	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40
7	<40	<40	58.0	57.5	<40	<40	56.3	56.7	56.4	56.1	56.3	56.8	57.1	56.9	<40	47.0	56.4	56.2	48.5	47.1	44.5	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40
6	<40	<40	58.1	57.6	<40	<40	56.4	56.8	56.4	56.1	56.4	56.8	57.0	56.9	<40	47.0	56.5	56.2	48.5	47.1	44.6	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40
5	<40	<40	58.1	57.7	<40	<40	56.4	56.9	56.4	56.1	56.4	56.8	57.1	56.9	<40	47.1	56.5	56.2	48.5	47.1	44.6	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40
4	<40	<40	58.2	57.7	<40	<40	56.5	56.9	56.5	56.2	56.4	56.8	57.1	56.9	<40	47.1	56.4	56.2	48.5	47.2	44.6	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40
3	<40	<40	58.3	57.7	<40	<40	56.5	57.0	56.6	56.2	56.4	56.8	57.1	57.0	<40	47.0	56.5	56.1	48.5	47.2	44.6	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40
2	<40	<40	58.3	57.8	<40	<40	56.5	57.0	56.6	56.2	56.5	56.8	57.1	56.9	<40	46.8	56.3	56.0	48.5	47.2	44.6	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40
1	<40	<40	58.3	57.8	<40	<40	56.5	56.9																			<40	<40	<40	<40	<40	<40	<40
Max	45.7	<40	58.3	57.8	<40	<40	56.5	57.0	56.6	56.2	56.5	56.8	57.1	57.0	<40	47.1	56.5	56.5	49.5	48.1	46.0	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40
Min	<40	<40	56.1	55.5	<40	<40	54.3	54.8	54.5	54.2	54.9	55.3	55.6	55.5	<40	45.5	55.4	55.8	48.2	46.5	43.9	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40

Noise sensitive receivers with exceedance ($\geq$70.5 dB(A))

Floor	R215b	R215c	R215d	R216a	R216b	R216c	R216d	R217a	R217b	R218a	R218b	R219a	R219b	R220a	R220b	R220c	R221a	R221b	R221c	R222a	R222b	R222c	R222d	R223a	R223b	R224a	R224b	R225a	R225b	R225c	R226a	R226b
40																																
39																																
38																																
37	<40	<40	<40	<40	<40	<40	42.2	<40	43.3	<40	<40	<40	<40	45.2	45.2	40.5	42.3	48.9	49.9	64.4	64.4	64.1	62.5	63.2	63.2	63.1	62.9	62.2	62.7	62.6	62.4	62.1
36	<40	<40	<40	<40	<40	<40	42.2	<40	43.3	<40	<40	<40	<40	45.2	45.1	40.5	42.3	48.9	49.9	64.5	64.4	64.1	62.6	63.2	63.2	63.1	62.9	62.2	62.7	62.6	62.4	62.1
35	<40	<40	<40	<40	<40	<40	42.3	<40	43.3	<40	<40	<40	<40	45.3	45.2	40.4	42.2	48.9	49.9	64.5	64.4	64.1	62.6	63.3	63.3	63.2	62.9	62.2	62.8	62.6	62.5	62.1
34	<40	<40	<40	<40	<40	<40	42.3	<40	43.4	<40	<40	<40	<40	45.3	45.2	40.3	42.1	48.8	49.9	64.5	64.5	64.2	62.6	63.3	63.3	63.2	63.0	62.3	62.8	62.7	62.5	62.2
33	<40	<40	<40	<40	<40	<40	42.3	<40	43.4	<40	<40	<40	<40	44.9	45.2	40.3	42.1	48.8	49.8	64.6	64.5	64.2	62.7	63.3	63.4	63.2	63.0	62.3	62.8	62.7	62.5	62.2
32	<40	<40	<40	<40	<40	<40	42.3	<40	43.5	<40	<40	<40	<40	44.9	45.0	40.2	41.9	48.8	49.8	64.6	64.5	64.2	62.7	63.4	63.4	63.3	63.1	62.3	62.9	62.7	62.6	62.3
31	<40	<40	<40	<40	<40	<40	42.4	<40	43.5	<40	<40	<40	<40	44.7	45.0	40.1	41.8	48.7	49.7	64.7	64.5	64.3	62.8	63.4	63.4	63.3	63.1	62.4	62.9	62.8	62.6	62.3
30	<40	<40	<40	<40	<40	<40	42.4	<40	43.6	<40	<40	<40	<40	44.7	45.1	40.0	41.7	48.7	49.6	64.7	64.6	64.3	62.8	63.5	63.5	63.3	63.1	62.4	63.0	62.8	62.7	62.3
29	<40	<40	<40	<40	<40	<40	42.5	<40	43.6	<40	<40	<40	<40	44.8	45.1	<40	41.5	48.5	49.5	64.7	64.6	64.4	62.8	63.5	63.5	63.4	63.2	62.5	63.0	62.9	62.7	62.4
28	<40	<40	<40	<40	<40	<40	42.5	<40	43.7	<40	<40	<40	<40	44.8	45.2	<40	41.1	48.4	49.3	64.8	64.7	64.4	62.9	63.5	63.6	63.4	63.2	62.5	63.0	62.9	62.8	62.4
27	<40	<40	<40	<40	<40	<40	42.6	<40	43.7	<40	<40	<40	<40	44.9	45.2	<40	40.6	48.2	49.1	64.8	64.7	64.4	62.9	63.6	63.6	63.5	63.3	62.5	63.1	63.0	62.8	62.5
26	<40	<40	<40	<40	<40	<40	42.6	<40	43.8	<40	<40	<40	<40	45.0	45.3	<40	40.1	48.0	48.8	64.8	64.7	64.5	63.0	63.6	63.6	63.5	63.3	62.6	63.1	63.0	62.8	62.5
25	<40	<40	<40	<40	<40	<40	42.7	<40	43.8	<40	<40	<40	<40	45.0	45.4	<40	<40	47.8	48.5	64.9	64.8	64.5	63.0	63.7	63.7	63.6	63.4	62.6	63.2	63.1	62.9	62.5
24	<40	<40	<40	<40	<40	<40	42.7	<40	43.9	<40	<40	<40	<40	45.1	45.4	<40	<40	47.4	48.2	64.9	64.8	64.5	63.0	63.7	63.7	63.6	63.4	62.7	63.2	63.1	62.9	62.6
23	<40	<40	<40	<40	<40	<40	42.8	<40	43.9	<40	<40	<40	<40	45.1	45.5	<40	<40	47.4	48.1	64.9	64.8	64.6	63.1	63.7	63.8	63.6	63.4	62.7	63.3	63.1	63.0	62.6
22	<40	<40	<40	<40	<40	<40	42.8	<40	44.0	<40	<40	<40	<40	45.2	45.5	<40	<40	47.3	47.8	65.0	64.9	64.6	63.1	63.8	63.8	63.7	63.5	62.7	63.3	63.2	63.0	62.7
21	<40	<40	<40	<40	<40	<40	42.9	<40	44.0	<40	<40	<40	<40	45.2	45.6	<40	<40	47.1	47.7	65.0	64.9	64.6	63.1	63.8	63.9	63.7	63.5	62.8	63.4	63.2	63.1	62.7
20	<40	<40	<40	<40	<40	<40	42.9	<40	44.1	<40	<40	<40	<40	45.3	45.6	<40	<40	47.0	47.5	65.1	64.9	64.7	63.2	63.9	63.9	63.8	63.6	62.8	63.4	63.3	63.1	62.8
19	<40	<40	<40	<40	<40	<40	42.9	<40	44.1	<40	<40	<40	<40	45.3	45.7	<40	<40	46.9	47.4	65.1	65.0	64.7	63.2	63.9	63.9	63.8	63.6	62.9	63.5	63.3	63.1	62.8
18	<40	<40	<40	<40	<40	<40	43.0	<40	44.2	<40	<40	<40	<40	45.4	45.7	<40	<40	46.8	47.4	65.1	65.0	64.8	63.3	64.0	64.0	63.9	63.7	62.9	63.5	63.4	63.2	62.8
17	<40	<40	<40	<40	<40	<40	43.0	<40	44.2	<40	<40	<40	<40	45.5	45.7	<40	<40	46.9	47.3	65.2	65.1	64.8	63.3	64.0	64.0	63.9	63.7	62.9	63.5	63.4	63.2	62.9
16	<40	<40	<40	<40	<40	<40	43.1	<40	44.3	<40	<40	<40	<40	45.5	45.8	<40	<40	46.8	47.3	65.2	65.1	64.8	63.3	64.0	64.1	63.9	63.7	63.0	63.6	63.5	63.3	62.9
15	<40	<40	<40	<40	<40	<40	43.1	<40	44.3	<40	<40	<40	<40	45.6	45.8	<40	<40	46.8	47.2	65.2	65.1	64.9	63.4	64.1	64.1	64.0	63.8	63.0	63.6	63.5	63.3	63.0
14	<40	<40	<40	<40	<40	<40	43.2	<40	44.4	<40	<40	<40	<40	45.6	45.9	<40	<40	46.8	47.3	65.3	65.2	64.9	63.4	64.1	64.1	64.0	63.8	63.0	63.7	63.5	63.4	63.0
13	<40	<40	<40	<40	<40	<40	43.2	<40	44.4	<40	<40	<40	<40	45.7	45.9	<40	<40	46.8	47.2	65.3	65.2	64.9	63.4	64.2	64.2	64.1	63.9	63.1	63.7	63.6	63.4	63.0
12	<40	<40	<40	<40	<40	<40	43.2	<40	44.4	<40	<40	<40	<40	45.7	46.0	<40	<40	46.8	47.3	65.3	65.2	65.0	63.5	64.2	64.2	64.1	63.9	63.1	63.7	63.6	63.4	63.1
11	<40	<40	<40	<40	<40	<40	43.3	<40	44.5	<40	<40	<40	<40	45.8	46.0	<40	<40	46.9	47.3	65.4	65.3	65.0	63.5	64.2	64.3	64.1	63.9	63.2	63.8	63.7	63.5	63.1
10	<40	<40	<40	<40	<40	<40	43.3	<40	44.5	<40	<40	<40	<40	45.8	46.1	<40	<40	46.8	47.3	65.4	65.3	65.0	63.5	64.3	64.3	64.2	64.0	63.2	63.8	63.7	63.5	63.2
9	<40	<40	<40	<40	<40	<40	43.3	<40	44.5	<40	<40	<40	<40	45.8	46.1	<40	<40	46.9	47.4	65.4	65.3	65.0	63.6	64.3	64.3	64.2	64.0	63.2	63.9	63.8	63.6	63.2
8	<40	<40	<40	<40	<40	<40	43.4	<40	44.5	<40	<40	<40	<40	45.9	46.2	<40	<40	46.9	47.4	65.4	65.4	65.1	63.6	64.3	64.4	64.2	64.0	63.2	63.9	63.8	63.6	63.2
7	<40	<40	<40	<40	<40	<40	43.4	<40	44.5	<40	<40	<40	<40	45.9	46.2	<40	<40	47.0	47.3	65.5	65.4	65.1	63.6	64.4	64.4	64.3	64.1	63.3	63.9	63.8	63.6	63.3
6	<40	<40	<40	<40	<40	<40	43.4	<40	44.6	<40	<40	<40	<40	45.9	46.2	<40	<40	47.0	47.4	65.5	65.4	65.1	63.7	64.4	64.4	64.3	64.1	63.3	64.0	63.9	63.7	63.3
5	<40	<40	<40	<40	<40	<40	43.4	<40	44.6	<40	<40	<40	<40	45.9	46.3	<40	<40	47.0	47.4	65.5	65.4	65.1	63.7	64.4	64.5	64.3	64.1	63.3	64.0	63.9	63.7	63.3
4	<40	<40	<40	<40	<40	<40	43.1	<40	44.5	<40	<40	<40	<40	45.9	46.3	<40	<40	47.0	47.5	65.5	65.4	65.1	63.7	64.4	64.5	64.3	64.2	63.3	64.0	63.9	63.7	63.4
3	<40	<40	<40	<40	<40	<40	42.7	<40	44.1	<40	<40	<40	<40	46.0	46.2	<40	<40	47.0	47.5	65.5	65.4	65.2	63.7	64.4	64.5	64.4	64.2	63.4	64.1	63.9	63.8	63.4
2	<40	<40	<40	<40	<40	<40	41.9	<40	43.6	<40	<40	<40	<40	45.7	46.1	<40	<40	47.0	47.5	65.5	65.4	65.2	63.7	64.4	64.5	64.4	64.2	63.4	64.1	63.9	63.8	63.4
1	<40	<40	<40	<40	<40	<40	41.4	<40	43.2	<40	<40	<40	<40	45.0	45.5	<40	<40	46.6	47.2	65.5	65.4	65.1	63.7	64.4	64.5	64.3	64.1	63.3	64.0	63.9	63.7	63.4
Max	<40	<40	<40	<40	<40	<40	43.4	<40	44.6	<40	<40	<40	<40	46.0	46.3	40.5	42.3	48.9	49.9	65.5	65.4	65.2	63.7	64.4	64.5	64.4	64.2	63.4	64.1	63.9	63.8	63.4
Min	<40	<40	<40	<40	<40	<40	41.4	<40	43.2	<40	<40	<40	<40	44.7	45.0	<40	<40	46.6	47.2	64.4	64.4	64.1	62.5	63.2	63.2	63.1	62.9	62.2	62.7	62.6	62.4	62.1

Noise sensitive receivers with exceedance ($\geq$70.5 dB(A))

Floor	R227a	R227b	R228a	R228b	R229a	R229b	R230a	R230b	R231a	R231b	R231c	R232a	R232b	R232c	R233a	R233b	R234a	R234b	R234c	R234d	R235a	R235b	R235c	R235d	R236a	R236b	R237a	R237b	R238a	R238b	R301a	R301b
40																																
39																																
38																																
37	62.1	59.9	56.7	56.9	63.8	64.3	65.4	65.1	63.6	63.5	60.2	60.5	63.3	63.2	60.9	61.2	62.8	62.9	62.9	59.9	59.8	62.7	62.7	62.6	63.4	62.9	62.3	61.8	65.0	65.1	66.9	66.4
36	62.1	59.9	56.7	57.0	63.9	64.4	65.5	65.1	63.7	63.6	60.3	60.5	63.3	63.2	61.0	61.3	62.8	63.0	63.0	60.0	59.9	62.8	62.7	62.7	63.5	63.0	62.4	61.9	65.1	65.2	67.0	66.5
35	62.1	60.0	56.8	57.0	63.9	64.4	65.5	65.2	63.8	63.6	60.3	60.6	63.4	63.3	61.0	61.3	62.9	63.0	63.0	60.1	59.9	62.9	62.8	62.7	63.6	63.0	62.5	61.9	65.1	65.3	67.1	66.6
34	62.2	60.0	56.8	57.1	63.9	64.4	65.6	65.3	63.8	63.7	60.4	60.7	63.5	63.4	61.1	61.4	63.0	63.1	63.1	60.1	60.0	62.9	62.9	62.8	63.6	63.1	62.5	62.0	65.2	65.3	67.1	66.6
33	62.2	60.0	56.9	57.1	64.0	64.5	65.7	65.3	63.9	63.8	60.5	60.8	63.5	63.5	61.2	61.5	63.1	63.2	63.2	60.2	60.1	63.0	62.9	62.9	63.7	63.2	62.6	62.1	65.3	65.4	67.2	66.7
32	62.3	60.1	56.9	57.2	64.0	64.6	65.7	65.4	64.0	63.8	60.5	60.8	63.6	63.5	61.2	61.6	63.1	63.3	63.2	60.3	60.2	63.1	63.0	62.9	63.8	63.3	62.7	62.2	65.4	65.5	67.3	66.7
31	62.3	60.1	57.0	57.2	64.1	64.6	65.8	65.5	64.1	63.9	60.6	60.9	63.7	63.6	61.3	61.6	63.2	63.3	63.3	60.4	60.3	63.2	63.1	63.0	63.8	63.3	62.7	62.2	65.4	65.6	67.3	66.8
30	62.3	60.1	57.0	57.3	64.1	64.7	65.9	65.6	64.2	64.0	60.7	61.0	63.8	63.7	61.4	61.7	63.3	63.4	63.4	60.4	60.3	63.2	63.2	63.1	63.9	63.4	62.8	62.3	65.5	65.6	67.4	66.9
29	62.4	60.1	57.0	57.3	64.2	64.7	65.9	65.6	64.2	64.1	60.7	61.1	63.9	63.8	61.5	61.8	63.4	63.5	63.5	60.5	60.4	63.3	63.3	63.2	64.0	63.5	62.9	62.4	65.6	65.7	67.5	67.0
28	62.4	60.2	57.1	57.4	64.2	64.8	66.0	65.7	64.3	64.2	60.8	61.1	63.9	63.8	61.5	61.8	63.4	63.6	63.5	60.6	60.5	63.4	63.3	63.2	64.1	63.6	63.0	62.5	65.7	65.8	67.6	67.1
27	62.5	60.2	57.1	57.4	64.3	64.8	66.1	65.8	64.4	64.2	60.9	61.2	64.0	63.9	61.6	61.9	63.5	63.6	63.6	60.7	60.6	63.4	63.4	63.3	64.1	63.6	63.0	62.5	65.7	65.9	67.6	67.1
26	62.5	60.2	57.2	57.5	64.3	64.9	66.2	65.9	64.5	64.3	60.9	61.3	64.1	64.0	61.7	62.0	63.6	63.7	63.7	60.7	60.6	63.5	63.5	63.4	64.2	63.7	63.1	62.6	65.8	65.9	67.8	67.2
25	62.5	60.3	57.2	57.5	64.4	65.0	66.2	65.9	64.6	64.4	61.0	61.4	64.2	64.1	61.8	62.1	63.7	63.8	63.8	60.8	60.7	63.6	63.6	63.5	64.3	63.8	63.2	62.7	65.9	66.0	67.8	67.3
24	62.6	60.3	57.2	57.5	64.4	65.0	66.3	66.0	64.7	64.5	61.1	61.5	64.3	64.2	61.8	62.1	63.7	63.9	63.9	60.8	60.8	63.7	63.6	63.5	64.4	63.8	63.3	62.8	66.0	66.1	67.9	67.4
23	62.6	60.4	57.2	57.6	64.5	65.1	66.4	66.1	64.8	64.6	61.2	61.6	64.3	64.2	61.9	62.2	63.8	64.0	63.9	60.9	60.9	63.8	63.7	63.6	64.4	63.9	63.3	62.9	66.1	66.2	68.0	67.5
22	62.7	60.4	57.3	57.6	64.6	65.1	66.5	66.2	64.9	64.7	61.3	61.7	64.4	64.3	62.0	62.3	63.9	64.0	64.0	61.0	60.9	63.9	63.8	63.7	64.5	64.0	63.4	62.9	66.2	66.3	68.0	67.5
21	62.7	60.4	57.3	57.7	64.6	65.2	66.5	66.3	64.9	64.8	61.4	61.8	64.5	64.4	62.1	62.4	64.0	64.1	64.1	61.1	61.0	63.9	63.9	63.8	64.6	64.1	63.5	63.0	66.2	66.4	68.1	67.6
20	62.8	60.5	57.4	57.7	64.7	65.3	66.6	66.4	65.0	64.9	61.4	61.8	64.6	64.5	62.2	62.5	64.1	64.2	64.2	61.2	61.1	64.0	64.0	63.8	64.7	64.2	63.6	63.1	66.3	66.4	68.2	67.7
19	62.8	60.5	57.4	57.7	64.7	65.3	66.7	66.5	65.1	65.0	61.5	61.9	64.7	64.6	62.2	62.5	64.1	64.3	64.3	61.2	61.2	64.1	64.0	63.9	64.8	64.2	63.7	63.2	66.4	66.5	68.3	67.8
18	62.8	60.5	57.4	57.8	64.8	65.4	66.8	66.5	65.2	65.1	61.6	62.0	64.8	64.7	62.3	62.6	64.2	64.3	64.3	61.3	61.2	64.2	64.1	64.0	64.8	64.3	63.7	63.3	66.5	66.6	68.4	67.9
17	62.9	60.6	57.5	57.8	64.8	65.4	66.9	66.6	65.3	65.1	61.7	62.1	64.9	64.8	62.4	62.7	64.3	64.4	64.4	61.4	61.3	64.3	64.2	64.1	64.9	64.4	63.8	63.4	66.6	66.7	68.5	68.0
16	62.9	60.6	57.5	57.9	64.9	65.5	67.0	66.7	65.4	65.2	61.7	62.2	65.0	64.9	62.5	62.8	64.4	64.5	64.5	61.5	61.4	64.4	64.3	64.2	65.0	64.5	63.9	63.5	66.7	66.8	68.6	68.1
15	63.0	60.6	57.6	57.9	65.0	65.6	67.0	66.8	65.5	65.3	61.8	62.3	65.0	64.9	62.5	62.8	64.5	64.6	64.6	61.5	61.5	64.4	64.4	64.2	65.1	64.6	64.0	63.6	66.8	66.9	68.8	68.2
14	63.0	60.6	57.6	57.9	65.0	65.6	67.1	66.9	65.6	65.4	61.9	62.4	65.1	65.0	62.6	62.9	64.5	64.7	64.7	61.6	61.6	64.5	64.5	64.3	65.1	64.7	64.1	63.6	66.9	67.0	68.9	68.4
13	63.0	60.7	57.6	58.0	65.1	65.7	67.2	67.0	65.7	65.5	62.0	62.5	65.2	65.1	62.7	63.0	64.6	64.8	64.8	61.7	61.7	64.6	64.5	64.4	65.2	64.7	64.2	63.7	67.0	67.1	69.0	68.5
12	63.1	60.7	57.7	58.0	65.1	65.8	67.3	67.1	65.8	65.6	62.1	62.6	65.3	65.2	62.8	63.1	64.7	64.9	64.9	61.8	61.8	64.7	64.6	64.5	65.3	64.8	64.2	63.8	67.0	67.2	69.1	68.6
11	63.1	60.8	57.7	58.0	65.2	65.8	67.4	67.2	65.9	65.7	62.2	62.7	65.4	65.3	62.9	63.2	64.8	64.9	64.9	61.8	61.8	64.7	64.7	64.5	65.4	64.9	64.3	63.9	67.1	67.2	69.2	68.7
10	63.2	60.8	57.7	58.1	65.3	65.9	67.5	67.3	66.0	65.8	62.3	62.8	65.5	65.4	63.0	63.2	64.9	65.0	65.0	61.9	61.9	64.8	64.8	64.6	65.5	65.0	64.4	64.0	67.2	67.3	69.4	68.8
9	63.2	60.8	57.8	58.1	65.3	66.0	67.6	67.4	66.1	65.9	62.4	62.9	65.6	65.5	63.0	63.3	65.0	65.1	65.1	62.0	62.0	64.9	64.8	64.7	65.5	65.1	64.5	64.1	67.3	67.4	69.4	69.0
8	63.2	60.8	57.8	58.1	65.4	66.0	67.7	67.5	66.2	66.0	62.4	63.0	65.7	65.6	63.1	63.4	65.0	65.2	65.2	62.1	62.1	65.0	64.9	64.8	65.6	65.1	64.6	64.2	67.4	67.5	69.6	69.1
7	63.3	60.9	57.8	58.2	65.4	66.1	67.8	67.6	66.3	66.1	62.6	63.0	65.8	65.7	63.2	63.5	65.1	65.3	65.3	62.1	62.2	65.1	65.0	64.8	65.7	65.2	64.6	64.3	67.5	67.6	69.7	69.2
6	63.3	60.9	57.8	58.2	65.5	66.1	67.9	67.7	66.4	66.2	62.6	63.1	65.9	65.8	63.3	63.6	65.2	65.3	65.3	62.2	62.2	65.1	65.1	64.9	65.8	65.3	64.7	64.3	67.6	67.7	69.8	69.3
5	63.3	60.9	57.9	58.2	65.5	66.2	68.0	67.8	66.5	66.3	62.7	63.2	66.0	65.9	63.4	63.7	65.3	65.4	65.4	62.2	62.3	65.2	65.1	65.0	65.8	65.4	64.8	64.4	67.7	67.8	69.9	69.5
4	63.4	60.9	57.9	58.3	65.6	66.3	68.1	67.9	66.6	66.4	62.8	63.3	66.1	66.0	63.5	63.7	65.4	65.5	65.5	62.3	62.4	65.3	65.2	65.1	65.9	65.4	64.9	64.5	67.7	67.8	70.1	69.6
3	63.4	61.0	57.9	58.3	65.6	66.3	68.1	67.9	66.7	66.5	62.9	63.4	66.2	66.0	63.6	63.8	65.4	65.6	65.5	62.4	62.5	65.4	65.3	65.1	66.0	65.5	64.9	64.6	67.8	67.9	70.3	69.7
2	63.4	61.0	57.9	58.3	65.7	66.4	68.2	68.0	66.8	66.6	63.0	63.5	66.2	66.1	63.6	63.9	65.5	65.6	65.6	62.4	62.5	65.4	65.3	65.1	66.0	65.5	65.0	64.6	67.9	68.0	70.4	69.9
1	63.4	60.9	57.9	58.3	65.7	66.4	68.3	68.1	66.9	66.7	63.0	63.6	66.3	66.2	63.7	63.9	65.5	65.7	65.7	62.5	62.5	65.5	65.4	65.2	66.1	65.6	65.1	64.7	68.0	68.1	**70.5**	70.0
Max	63.4	61.0	57.9	58.3	65.7	66.4	68.3	68.1	66.9	66.7	63.0	63.6	66.3	66.2	63.7	63.9	65.5	65.7	65.7	62.5	62.5	65.5	65.4	65.2	66.1	65.6	65.1	64.7	68.0	68.1	**70.5**	70.0
Min	62.1	59.9	56.7	56.9	63.8	64.3	65.4	65.1	63.6	63.5	60.2	60.5	63.3	63.2	60.9	61.2	62.8	62.9	62.9	59.9	59.8	62.7	62.7	62.6	63.4	62.9	62.3	61.8	65.0	65.1	66.9	66.4

Noise sensitive receivers with exceedance ($\geq$70.5 dB(A))

Floor	R302a	R302b	R303a	R303b	R304a	R304b	R304c	R305a	R305b	R305c	R306a	R306b	R306c	R306d	R307a	R307b	R307c	R308a	R308b	R308c	R309a	R309b	R310a	R310b	R310c	R310d	R311a	R311b	R311c	R311d	R312a	R312b
40																																
39																																
38																																
37	63.3	63.5	63.9	64.4	58.9	64.7	65.0	65.3	65.5	60.1	60.6	65.9	66.3	66.6	63.5	63.0	56.3	58.0	62.4	62.2	61.9	59.4	61.7	62.0	62.2	60.3	60.2	62.5	62.5	62.5	61.1	63.0
36	63.3	63.5	64.0	64.5	58.9	64.8	65.1	65.4	65.6	60.2	60.7	66.0	66.4	66.7	63.6	63.1	56.4	58.1	62.5	62.3	62.0	59.5	61.8	62.1	62.3	60.4	60.3	62.6	62.6	62.6	61.1	63.1
35	63.4	63.6	64.1	64.5	59.0	64.9	65.2	65.4	65.7	60.2	60.7	66.1	66.5	66.8	63.7	63.2	56.5	58.2	62.6	62.4	62.1	59.6	61.9	62.2	62.4	60.5	60.4	62.7	62.7	62.6	61.2	63.2
34	63.5	63.7	64.1	64.6	59.1	64.9	65.3	65.5	65.7	60.3	60.7	66.2	66.5	66.8	63.8	63.3	56.5	58.3	62.7	62.4	62.2	59.7	62.0	62.3	62.5	60.5	60.4	62.7	62.8	62.7	61.3	63.3
33	63.6	63.8	64.2	64.7	59.2	65.0	65.3	65.6	65.8	60.4	60.8	66.2	66.6	66.9	63.9	63.4	56.6	58.4	62.8	62.5	62.3	59.7	62.1	62.4	62.6	60.6	60.5	62.8	62.9	62.8	61.3	63.3
32	63.7	63.9	64.3	64.8	59.3	65.1	65.4	65.6	65.8	60.5	60.9	66.3	66.7	67.0	64.0	63.5	56.2	58.1	62.9	62.6	62.4	59.8	62.2	62.5	62.7	60.7	60.6	62.9	62.9	62.8	61.4	63.4
31	63.8	63.9	64.4	64.9	59.3	65.1	65.4	65.7	65.9	60.5	60.9	66.3	66.7	67.0	64.1	63.6	56.3	58.2	63.0	62.7	62.5	59.9	62.3	62.6	62.8	60.8	60.7	63.0	63.0	62.9	61.5	63.5
30	63.8	64.0	64.4	65.0	59.3	65.2	65.5	65.8	66.0	60.6	61.0	66.4	66.8	67.1	64.2	63.7	56.4	58.3	63.1	62.8	62.6	60.0	62.4	62.7	62.9	60.9	60.8	63.1	63.1	63.0	61.6	63.6
29	63.9	64.1	64.5	65.0	59.4	65.3	65.6	65.8	66.1	60.7	61.0	66.5	66.9	67.2	64.3	63.8	56.5	58.4	63.2	63.0	62.7	60.1	62.5	62.8	63.0	60.9	60.9	63.2	63.2	63.1	61.6	63.6
28	64.0	64.2	64.6	65.1	59.5	65.3	65.6	65.9	66.1	60.7	61.0	66.5	66.9	67.3	64.4	63.9	56.6	58.5	63.3	63.1	62.8	60.2	62.6	62.9	63.1	61.0	61.0	63.3	63.3	63.2	61.7	63.7
27	64.1	64.3	64.7	65.2	59.6	65.4	65.7	65.9	66.2	60.8	61.0	66.6	67.0	67.4	64.5	64.0	56.7	58.7	63.4	63.2	62.9	60.3	62.7	63.0	63.2	61.1	61.0	63.4	63.4	63.3	61.7	63.8
26	64.2	64.4	64.8	65.3	59.6	65.5	65.8	66.0	66.2	60.9	61.1	66.7	67.1	67.4	64.6	64.2	56.8	58.8	63.5	63.3	63.0	60.4	62.8	63.1	63.3	61.2	61.1	63.5	63.5	63.4	61.8	63.8
25	64.3	64.5	64.9	65.4	59.7	65.5	65.8	66.1	66.3	60.9	61.1	66.8	67.2	67.5	64.8	64.3	56.9	58.9	63.6	63.4	63.1	60.5	62.9	63.2	63.4	61.3	61.2	63.6	63.6	63.5	61.9	63.9
24	64.4	64.6	65.0	65.5	59.8	65.6	65.9	66.2	66.4	61.0	61.2	66.8	67.2	67.6	64.9	64.4	57.1	59.0	63.7	63.5	63.2	60.6	63.0	63.3	63.5	61.5	61.3	63.7	63.7	63.6	62.0	64.0
23	64.5	64.6	65.1	65.6	59.9	65.7	66.0	66.2	66.4	61.1	61.2	66.9	67.3	67.7	65.0	64.5	57.2	59.1	63.9	63.6	63.3	60.8	63.1	63.4	63.6	61.6	61.5	63.8	63.8	63.7	62.1	64.1
22	64.6	64.8	65.2	65.7	60.0	65.8	66.1	66.3	66.5	61.2	61.3	67.0	67.4	67.8	65.1	64.7	57.3	59.2	64.0	63.8	63.4	60.9	63.2	63.5	63.7	61.7	61.6	63.9	63.9	63.8	62.1	64.2
21	64.7	64.9	65.3	65.8	60.1	65.9	66.1	66.4	66.6	61.3	61.4	67.1	67.5	67.9	65.3	64.8	57.5	59.4	64.1	63.9	63.6	61.0	63.4	63.7	63.9	61.8	61.7	64.0	64.0	63.9	62.2	64.3
20	64.8	65.0	65.4	65.9	60.1	66.0	66.2	66.5	66.7	61.4	61.5	67.2	67.6	68.0	65.4	64.9	57.6	59.5	64.3	64.0	63.7	61.1	63.5	63.8	64.0	61.9	61.8	64.1	64.1	64.0	62.4	64.4
19	64.9	65.1	65.5	66.0	60.2	66.0	66.3	66.6	66.8	61.5	61.6	67.3	67.7	68.1	65.5	65.1	57.7	59.6	64.4	64.2	63.8	61.2	63.6	63.9	64.1	62.0	61.9	64.2	64.2	64.1	62.5	64.5
18	65.0	65.2	65.6	66.1	60.3	66.1	66.5	66.7	66.9	61.6	61.6	67.4	67.8	68.2	65.7	65.2	57.9	59.8	64.5	64.3	63.9	61.4	63.7	64.0	64.2	62.2	62.1	64.3	64.3	64.2	62.6	64.7
17	65.1	65.3	65.7	66.2	60.4	66.2	66.5	66.8	67.0	61.7	61.7	67.5	68.0	68.3	65.8	65.4	58.0	59.9	64.7	64.4	64.1	61.5	63.9	64.2	64.3	62.3	62.2	64.5	64.4	64.3	62.7	64.8
16	65.2	65.4	65.8	66.3	60.5	66.3	66.6	66.9	67.1	61.7	61.8	67.6	68.0	68.4	66.0	65.5	58.2	60.1	64.8	64.6	64.2	61.7	64.0	64.3	64.4	62.4	62.3	64.6	64.6	64.5	62.8	65.0
15	65.3	65.5	65.9	66.4	60.6	66.4	66.7	67.0	67.2	61.8	61.9	67.7	68.2	68.5	66.1	65.7	58.3	60.2	65.0	64.7	64.4	61.8	64.1	64.4	64.5	62.5	62.4	64.7	64.7	64.6	63.0	65.0
14	65.4	65.6	66.0	66.5	60.7	66.5	66.8	67.0	67.3	62.0	62.0	67.8	68.3	68.6	66.3	65.9	58.5	60.4	65.1	64.9	64.5	61.9	64.3	64.6	64.7	62.7	62.6	64.9	64.8	64.7	63.1	65.2
13	65.5	65.7	66.1	66.6	60.8	66.6	66.9	67.1	67.4	62.1	62.1	67.9	68.4	68.7	66.5	66.0	58.6	60.5	65.2	65.0	64.7	62.0	64.4	64.6	64.8	62.7	62.7	65.0	65.0	64.8	63.2	65.3
12	65.6	65.8	66.2	66.7	60.9	66.7	67.0	67.2	67.4	62.2	62.2	68.0	68.5	68.8	66.7	66.2	58.8	60.7	65.4	65.2	64.8	62.2	64.5	64.8	65.0	62.9	62.8	65.1	65.0	64.9	63.4	65.5
11	65.7	65.9	66.3	66.7	61.1	66.7	67.0	67.3	67.5	62.3	62.3	68.1	68.6	68.9	66.9	66.4	58.9	60.8	65.6	65.4	65.0	62.3	64.6	64.9	65.1	63.0	63.0	65.2	65.2	65.0	63.5	65.6
10	65.8	65.9	66.3	66.8	61.2	66.8	67.1	67.4	67.6	62.4	62.4	68.2	68.7	69.1	67.1	66.6	59.1	61.0	65.7	65.5	65.1	62.5	64.8	65.1	65.3	63.1	63.1	65.3	65.3	65.2	63.6	65.7
9	65.9	66.0	66.4	67.0	61.3	66.9	67.2	67.5	67.7	62.5	62.5	68.3	68.8	69.2	67.3	66.8	59.2	61.2	65.9	65.7	65.3	62.6	64.9	65.2	65.4	63.3	63.2	65.5	65.5	65.3	63.7	65.9
8	66.0	66.1	66.5	67.0	61.4	67.1	67.3	67.6	67.9	62.6	62.6	68.4	68.9	69.4	67.5	67.0	59.4	61.4	66.1	65.8	65.5	62.8	65.1	65.3	65.5	63.4	63.3	65.6	65.6	65.4	63.9	66.1
7	66.0	66.2	66.6	67.1	61.4	67.2	67.5	67.8	68.0	62.7	62.8	68.5	69.1	69.5	67.7	67.2	59.5	61.5	66.3	66.0	65.6	62.9	65.2	65.5	65.6	63.6	63.5	65.7	65.7	65.5	64.0	66.1
6	66.1	66.3	66.7	67.2	61.5	67.3	67.6	67.9	68.1	62.8	62.9	68.7	69.2	69.7	67.9	67.4	59.6	61.7	66.5	66.2	65.7	63.0	65.2	65.5	65.7	63.7	63.6	65.8	65.8	65.6	64.1	66.3
5	66.3	66.4	66.8	67.3	61.6	67.4	67.7	68.0	68.3	62.9	63.0	68.8	69.4	69.9	68.2	67.7	59.8	61.9	66.7	66.4	65.9	63.2	65.3	65.6	65.8	63.9	63.8	65.9	65.9	65.8	64.2	66.4
4	66.4	66.5	66.9	67.4	61.6	67.4	67.8	68.1	68.4	63.0	63.1	69.0	69.5	70.0	68.4	67.8	60.0	62.0	66.8	66.5	65.9	63.4	65.5	65.7	65.9	64.0	63.9	66.1	66.0	65.9	64.4	66.5
3	66.5	66.6	67.0	67.5	61.7	67.4	67.8	68.2	68.5	63.1	63.2	69.1	69.7	70.2	68.7	68.1	60.1	62.2	67.0	66.6	66.0	63.5	65.5	65.8	66.0	64.1	64.1	66.2	66.2	66.0	64.5	66.7
2	66.6	66.7	67.2	67.6	61.7	67.5	67.8	68.1	68.5	63.2	63.3	69.2	69.8	70.3	68.9	68.3	60.3	62.4	67.1	66.6	66.1	63.6	65.6	66.0	66.2	64.2	64.2	66.3	66.3	66.2	64.6	66.9
1	66.7	66.8	67.3	67.7	61.7	67.5	67.8	68.1	68.5	63.3	63.4	69.3	69.9	**70.5**	69.2	68.5	60.5	62.6	67.1	66.6	66.2	63.8	65.8	66.1	66.3	64.4	64.3	66.5	66.4	66.3	64.8	67.0
Max	66.7	66.8	67.3	67.7	61.7	67.5	67.8	68.2	68.5	63.3	63.4	69.3	69.9	**70.5**	69.2	68.5	60.5	62.6	67.1	66.6	66.2	63.8	65.8	66.1	66.3	64.4	64.3	66.5	66.4	66.3	64.8	67.0
Min	63.3	63.5	63.9	64.4	58.9	64.7	65.0	65.3	65.5	60.1	60.6	65.9	66.3	66.6	63.5	63.0	56.2	58.0	62.4	62.2	61.9	59.4	61.7	62.0	62.2	60.3	60.2	62.5	62.5	62.5	61.1	63.0

Noise sensitive receivers with exceedance ($\geq$70.5 dB(A))

Floor	R313a	R313b	R314a	R314b	R315a	R315b	R315c	R316a	R316b	R316c	R316d	R317a	R317b	R317c	R318a	R318b	R318c	R319a	R319b	R319c	R320a	R320b	R321a	R321b	R322a	R322b	R323a	R323b	R323c	R324a	R324b	R324c
40																																
39																																
38																																
37	63.3	63.2	62.4	64.0	64.2	64.3	61.0	61.0	64.5	64.9	65.1	60.6	60.0	<40	<40	59.1	58.6	57.9	57.7	<40	54.6	57.4	57.0	48.1	56.4	56.7	56.7	56.7	53.8	55.4	56.5	56.4
36	63.4	63.2	62.5	64.1	64.2	64.4	61.1	61.1	64.6	64.9	65.2	60.6	60.1	<40	<40	59.2	58.7	58.0	57.8	<40	54.7	57.5	57.1	48.1	56.5	56.7	56.8	56.7	53.8	55.5	56.6	56.5
35	63.5	63.3	62.6	64.1	64.3	64.4	61.1	61.1	64.7	64.9	65.2	60.7	60.2	<40	<40	59.2	58.8	58.1	57.9	<40	54.8	57.5	57.2	48.2	56.4	56.8	56.9	56.8	53.6	55.5	56.5	56.4
34	63.5	63.4	62.6	64.2	64.4	64.5	61.2	61.2	64.7	65.0	65.3	60.8	60.3	<40	<40	59.3	58.9	58.2	57.8	<40	53.8	57.0	56.7	<40	56.1	56.5	56.6	56.6	53.5	55.6	56.5	56.5
33	63.6	63.4	62.7	64.3	64.5	64.6	61.2	61.2	64.8	65.1	65.4	60.7	60.2	<40	<40	59.1	58.7	58.3	57.9	<40	53.4	57.1	56.8	<40	56.2	56.6	56.7	56.7	53.6	55.7	56.6	56.6
32	63.7	63.5	62.7	64.3	64.5	64.7	61.3	61.2	64.9	65.2	65.5	60.8	60.3	<40	<40	59.2	58.8	58.4	58.0	<40	53.5	57.2	56.9	<40	56.3	56.7	56.8	56.7	53.7	55.8	56.7	56.7
31	63.8	63.6	62.8	64.4	64.6	64.7	61.4	61.3	65.0	65.3	65.6	60.9	60.4	<40	<40	59.3	58.9	58.5	58.1	<40	53.6	57.3	57.0	<40	56.4	56.8	56.9	56.8	53.8	55.9	56.8	56.7
30	63.8	63.6	62.8	64.5	64.7	64.8	61.4	61.4	65.1	65.4	65.7	61.0	60.5	<40	<40	59.4	59.0	58.6	58.2	<40	53.7	57.4	57.1	<40	56.5	56.9	56.9	56.9	53.8	56.0	56.9	56.8
29	63.9	63.7	62.9	64.6	64.8	64.9	61.5	61.4	65.2	65.5	65.7	61.1	60.6	<40	<40	59.6	59.1	58.7	58.3	<40	53.8	57.5	57.2	<40	56.6	57.0	57.0	57.0	53.9	56.0	56.9	56.9
28	64.0	63.8	63.0	64.6	64.8	65.0	61.6	61.5	65.3	65.6	65.8	61.2	60.7	<40	<40	59.6	59.2	58.8	58.4	<40	53.9	57.6	57.3	<40	56.7	57.0	57.1	57.1	54.0	56.1	57.0	57.0
27	64.0	63.8	63.1	64.7	64.9	65.1	61.7	61.6	65.4	65.7	65.9	61.3	60.7	<40	<40	59.8	59.3	58.9	58.5	<40	54.0	57.7	57.4	<40	56.8	57.1	57.2	57.2	54.1	56.2	57.1	57.1
26	64.1	64.0	63.2	64.8	65.1	65.2	61.8	61.7	65.5	65.8	66.0	61.4	60.8	<40	<40	59.9	59.5	59.0	58.6	<40	54.1	57.8	57.5	<40	56.9	57.2	57.3	57.3	54.2	56.3	57.2	57.2
25	64.2	64.1	63.3	64.9	65.2	65.3	61.9	61.8	65.6	65.9	66.2	61.6	61.0	<40	<40	60.0	59.6	59.1	58.7	<40	54.2	57.9	57.6	<40	57.0	57.3	57.4	57.4	54.3	56.4	57.3	57.3
24	64.3	64.2	63.3	65.0	65.3	65.4	62.0	61.9	65.7	66.0	66.3	61.7	61.1	<40	<40	60.1	59.7	59.2	58.8	<40	54.3	58.0	57.7	<40	57.1	57.4	57.5	57.5	54.4	56.5	57.4	57.4
23	64.4	64.3	63.5	65.2	65.4	65.5	62.1	62.0	65.8	66.1	66.4	61.8	61.2	<40	<40	60.2	59.8	59.4	58.9	<40	54.5	58.1	57.8	<40	57.2	57.5	57.6	57.6	54.5	56.6	57.5	57.5
22	64.5	64.4	63.6	65.3	65.5	65.7	62.3	62.2	65.9	66.2	66.6	61.9	61.3	<40	<40	60.4	59.9	59.5	59.0	<40	54.6	58.2	57.9	<40	57.3	57.6	57.7	57.7	54.6	56.7	57.6	57.6
21	64.6	64.5	63.7	65.4	65.6	65.8	62.3	62.2	66.1	66.4	66.7	62.0	61.5	<40	<40	60.5	60.0	59.6	59.2	<40	54.7	58.4	58.0	<40	57.4	57.8	57.8	57.8	54.7	56.8	57.7	57.7
20	64.8	64.6	63.8	65.5	65.7	65.9	62.5	62.4	66.2	66.5	66.8	62.1	61.6	<40	<40	60.6	60.2	59.7	59.3	<40	54.8	58.5	58.1	<40	57.5	57.9	57.9	57.9	54.8	56.9	57.8	57.7
19	64.9	64.7	63.9	65.6	65.9	66.0	62.6	62.5	66.4	66.7	66.9	62.3	61.7	<40	<40	60.7	60.3	59.9	59.4	<40	54.9	58.6	58.2	<40	57.6	58.0	58.0	58.0	54.9	57.0	57.9	57.8
18	65.0	64.9	64.0	65.8	66.0	66.1	62.7	62.6	66.5	66.8	67.1	62.4	61.9	<40	<40	60.9	60.4	60.0	59.5	<40	55.1	58.7	58.3	<40	57.7	58.1	58.1	58.1	55.0	57.1	58.0	57.9
17	65.1	65.0	64.2	65.9	66.1	66.3	62.9	62.7	66.6	67.0	67.2	62.6	62.0	<40	<40	60.9	60.6	60.1	59.7	<40	55.2	58.8	58.5	<40	57.8	58.2	58.2	58.2	55.1	57.2	58.1	58.0
16	65.3	65.1	64.3	66.0	66.3	66.4	63.0	62.9	66.8	67.1	67.4	62.7	62.2	<40	<40	61.1	60.7	60.3	59.8	<40	55.3	59.0	58.6	<40	57.9	58.3	58.4	58.3	55.2	57.3	58.2	58.1
15	65.4	65.3	64.5	66.2	66.4	66.6	63.2	63.0	66.9	67.3	67.5	62.9	62.3	<40	<40	61.2	60.9	60.4	59.9	<40	55.4	59.1	58.7	<40	58.1	58.4	58.5	58.4	55.3	57.4	58.3	58.2
14	65.6	65.4	64.6	66.3	66.6	66.8	63.3	63.1	67.1	67.5	67.7	63.1	62.5	<40	<40	61.4	61.0	60.5	60.1	<40	55.6	59.2	58.8	<40	58.2	58.5	58.6	58.5	55.4	57.5	58.4	58.3
13	65.7	65.5	64.7	66.5	66.7	66.9	63.5	63.3	67.2	67.6	67.9	63.2	62.7	<40	<40	61.5	61.2	60.7	60.2	<40	55.7	59.4	59.0	<40	58.3	58.6	58.7	58.6	55.5	57.6	58.5	58.4
12	65.8	65.7	64.9	66.6	66.9	67.1	63.6	63.5	67.4	67.8	68.1	63.4	62.7	<40	<40	61.7	61.3	60.8	60.4	<40	55.9	59.5	59.1	<40	58.4	58.8	58.8	58.7	55.6	57.7	58.6	58.5
11	66.0	65.8	65.0	66.8	67.1	67.3	63.7	63.6	67.6	68.0	68.2	63.6	62.9	<40	<40	61.9	61.4	61.0	60.5	<40	56.0	59.6	59.2	<40	58.5	58.9	58.8	58.8	55.7	57.8	58.6	58.6
10	66.1	66.0	65.2	67.0	67.3	67.4	63.9	63.7	67.8	68.2	68.4	63.8	63.1	<40	<40	62.0	61.6	61.2	60.7	<40	56.2	59.8	59.4	<40	58.6	58.9	58.9	59.0	55.8	57.9	58.7	58.7
9	66.3	66.1	65.4	67.2	67.4	67.6	64.1	63.9	67.9	68.4	68.6	64.0	63.3	<40	<40	62.2	61.7	61.2	60.8	<40	56.3	59.9	59.5	<40	58.7	59.0	59.0	59.0	55.9	58.0	58.8	58.8
8	66.4	66.3	65.5	67.3	67.6	67.8	64.3	64.1	68.2	68.5	68.9	64.1	63.4	<40	<40	62.4	61.9	61.4	61.0	<40	56.4	60.0	59.6	<40	58.9	59.1	59.2	59.1	56.0	58.1	58.8	58.9
7	66.6	66.5	65.6	67.5	67.8	68.0	64.5	64.3	68.4	68.8	69.1	64.3	63.6	<40	<40	62.5	62.1	61.6	61.2	<40	56.6	60.2	59.7	<40	58.9	59.2	59.2	59.1	56.1	58.2	58.9	58.8
6	66.7	66.6	65.8	67.7	68.0	68.2	64.7	64.5	68.6	69.0	69.4	64.5	63.8	<40	<40	62.7	62.3	61.7	61.3	<40	56.7	60.3	59.8	<40	58.9	59.2	59.3	59.1	56.2	58.3	59.0	58.9
5	66.8	66.8	66.0	67.9	68.2	68.4	64.9	64.7	68.9	69.3	69.6	64.7	64.0	<40	<40	62.9	62.4	61.9	61.5	<40	56.9	60.4	59.9	<40	59.0	59.3	59.3	59.2	56.3	58.4	59.1	59.0
4	67.0	66.9	66.2	68.0	68.4	68.6	65.2	64.9	69.1	69.6	69.9	65.0	64.3	<40	<40	63.1	62.6	62.1	61.7	<40	57.1	60.4	59.9	<40	59.0	59.3	59.4	59.3	56.4	58.5	59.2	59.1
3	67.1	67.0	66.3	68.2	68.6	68.9	65.4	65.1	69.4	69.8	70.1	65.2	64.5	<40	<40	63.3	62.8	62.3	61.7	<40	57.2	60.5	60.0	<40	59.2	59.4	59.5	59.4	56.5	58.6	59.3	59.2
2	67.3	67.2	66.5	68.4	68.8	69.1	65.7	65.3	69.6	70.2	**70.5**	65.4	64.6	<40	<40	63.4	62.9	62.3	61.7	<40	57.4	60.5	60.1	<40	59.3	59.5	59.5	59.5	56.6	58.7	59.4	59.3
1	67.4	67.4	66.7	68.6	69.0	69.2	65.9	65.6	69.9	70.4	**70.8**	65.6	64.8	<40	<40	63.6	63.0	62.3	61.7	<40	57.5	60.6	60.2	<40	59.3	59.6							
Max	67.4	67.4	66.7	68.6	69.0	69.2	65.9	65.6	69.9	70.4	**70.8**	65.6	64.8	<40	<40	63.6	63.0	62.3	61.7	<40	57.5	60.6	60.2	48.2	59.3	59.6	59.5	59.5	56.6	58.7	59.4	59.3
Min	63.3	63.2	62.4	64.0	64.2	64.3	61.0	61.0	64.5	64.9	65.1	60.6	60.0	<40	<40	59.1	58.6	57.9	57.7	<40	53.4	57.0	56.7	<40	56.1	56.5	56.6	56.6	53.5	55.4	56.5	56.4

Noise sensitive receivers with exceedance (≥70.5 dB(A))

Floor	R325a	R325b	R326a	R326b	R327a	R327b	R328a	R328b	R329a	R329b	R329c	R329d	R330a	R330b	R330c	R330d	R331a	R331b	R332a	R332b	R332c	R333a	R333b	R333c	R334a	R334b	R401a	R401b	R401c	R402a	R402b	R402c
40																																
39																																
38																																
37	56.8	57.4	57.2	56.6	56.3	56.2	56.2	56.4	57.2	57.6	58.1	<40	<40	58.4	58.5	58.4	<40	59.0	59.5	59.9	<40	<40	60.8	61.4	62.7	64.2	57.0	57.0	53.0	<40	57.0	57.1
36	56.9	57.5	57.2	56.6	56.3	56.3	56.3	56.4	57.3	57.7	58.1	<40	<40	58.4	58.5	58.5	<40	59.1	59.5	60.0	<40	<40	60.9	61.5	62.8	64.2	57.0	56.9	53.0	<40	57.1	57.2
35	56.9	57.5	57.3	56.7	56.4	56.3	56.3	56.5	57.3	57.7	58.2	<40	<40	58.5	58.6	58.5	<40	59.1	59.6	60.0	<40	<40	60.9	61.5	62.9	64.3	57.1	57.0	53.1	<40	57.2	57.3
34	57.0	57.5	57.3	56.8	56.5	56.4	56.4	56.5	57.4	57.8	58.3	<40	<40	58.6	58.6	58.5	<40	59.2	59.7	60.1	<40	<40	61.0	61.6	62.9	64.4	57.1	57.1	53.2	<40	57.3	57.4
33	57.0	57.6	57.4	56.8	56.5	56.4	56.5	56.6	57.5	57.8	58.3	<40	<40	58.6	58.7	58.6	<40	59.2	59.7	60.1	<40	<40	61.1	61.7	63.0	64.5	57.1	57.2	53.3	<40	57.3	57.5
32	57.1	57.7	57.5	56.9	56.6	56.5	56.5	56.7	57.5	57.9	58.3	<40	<40	58.6	58.7	58.6	<40	59.3	59.8	60.2	<40	<40	61.1	61.8	63.1	64.5	57.2	57.3	53.4	<40	57.4	57.6
31	57.2	57.8	57.5	57.0	56.7	56.6	56.6	56.7	57.5	57.9	58.4	<40	<40	58.7	58.7	58.7	<40	59.3	59.8	60.3	<40	<40	61.2	61.8	63.1	64.6	57.3	57.3	53.4	<40	57.5	57.6
30	57.3	57.8	57.5	57.0	56.7	56.6	56.6	56.8	57.6	57.9	58.4	<40	<40	58.7	58.8	58.7	<40	59.4	59.9	60.3	<40	<40	61.2	61.9	63.2	64.6	57.4	57.4	53.5	<40	57.6	57.7
29	57.4	57.9	57.6	57.0	56.8	56.7	56.7	56.9	57.6	58.0	58.4	<40	<40	58.7	58.8	58.7	<40	59.4	59.9	60.3	<40	<40	61.3	61.9	63.3	64.7	57.5	57.5	53.6	<40	57.7	57.8
28	57.5	58.0	57.6	57.1	56.8	56.7	56.8	56.9	57.6	58.0	58.4	<40	<40	58.7	58.8	58.7	<40	59.4	59.9	60.3	<40	<40	61.3	62.0	63.3	64.8	57.6	57.6	53.7	<40	57.8	57.9
27	57.5	58.0	57.7	57.1	56.8	56.8	56.8	57.0	57.6	57.9	58.4	<40	<40	58.7	58.7	58.7	<40	59.4	60.0	60.4	<40	<40	61.4	62.0	63.4	64.9	57.6	57.7	53.8	<40	57.9	58.0
26	57.6	58.1	57.7	57.2	56.9	56.9	56.9	57.1	57.7	57.9	58.4	<40	<40	58.7	58.7	58.7	<40	59.4	60.0	60.4	<40	<40	61.4	62.0	63.4	64.9	57.7	57.8	53.9	<40	58.0	58.1
25	57.6	58.2	57.8	57.2	56.9	56.9	57.0	57.1	57.6	58.0	58.3	<40	<40	58.7	58.8	58.7	<40	59.4	60.0	60.4	<40	<40	61.4	62.0	63.5	64.9	57.8	57.9	54.0	<40	58.1	58.2
24	57.7	58.3	57.9	57.3	57.0	57.0	57.0	57.2	57.6	58.0	58.3	<40	<40	58.6	58.8	58.6	<40	59.4	60.0	60.4	<40	<40	61.4	62.1	63.5	65.0	57.9	58.0	54.1	<40	58.2	58.3
23	57.8	58.4	57.9	57.4	57.1	57.1	57.1	57.2	57.7	57.9	58.3	<40	<40	58.6	58.8	58.6	<40	59.4	60.0	60.4	<40	<40	61.5	62.1	63.5	65.1	58.0	58.0	54.2	<40	58.3	58.4
22	57.9	58.4	57.9	57.4	57.1	57.1	57.2	57.3	57.6	58.0	58.4	<40	<40	58.7	58.7	58.6	<40	59.4	60.0	60.4	<40	<40	61.5	62.1	63.6	65.2	58.1	58.1	54.3	<40	58.4	58.5
21	58.0	58.5	57.9	57.5	57.2	57.1	57.2	57.4	57.6	58.0	58.3	<40	<40	58.6	58.7	58.7	<40	59.4	59.9	60.4	<40	<40	61.5	62.2	63.6	65.2	58.2	58.2	54.4	<40	58.5	58.6
20	58.1	58.6	58.0	57.5	57.2	57.1	57.2	57.4	57.6	58.0	58.3	<40	<40	58.6	58.7	58.7	<40	59.5	60.0	60.5	<40	<40	61.5	62.2	63.7	65.3	58.2	58.3	54.5	<40	58.6	58.7
19	58.2	58.6	58.0	57.5	57.2	57.2	57.2	57.4	57.7	58.0	58.3	<40	<40	58.6	58.8	58.7	<40	59.5	60.0	60.5	<40	<40	61.6	62.3	63.8	65.4	58.3	58.4	54.6	<40	58.7	58.8
18	58.2	58.7	58.0	57.5	57.3	57.2	57.2	57.5	57.7	58.0	58.3	<40	<40	58.6	58.8	58.7	<40	59.5	60.0	60.6	<40	<40	61.6	62.3	63.8	65.5	58.4	58.5	54.7	<40	58.8	58.9
17	58.3	58.8	57.9	57.5	57.2	57.1	57.3	57.4	57.7	58.1	58.3	<40	<40	58.7	58.8	58.7	<40	59.6	60.1	60.6	<40	<40	61.7	62.4	63.9	65.5	58.5	58.6	54.8	<40	58.9	59.0
16	58.4	58.8	57.8	57.5	57.2	57.0	57.2	57.5	57.8	58.2	58.3	<40	<40	58.7	58.9	58.8	<40	59.6	60.2	60.7	<40	<40	61.7	62.5	64.0	65.7	58.6	58.7	54.8	<40	59.0	59.1
15	58.5	58.9	57.8	57.4	57.0	56.9	57.1	57.5	57.8	58.2	58.4	<40	<40	58.8	58.9	58.8	<40	59.7	60.2	60.7	<40	<40	61.8	62.5	64.1	65.8	58.5	58.8	54.9	<40	59.1	59.3
14	58.6	59.0	57.6	57.2	56.9	56.8	56.9	57.3	57.8	58.2	58.4	<40	<40	58.8	58.9	58.9	<40	59.7	60.3	60.8	<40	<40	61.9	62.6	64.2	65.9	58.6	58.8	55.0	<40	59.2	59.4
13	58.7	59.1	57.4	57.1	56.8	56.7	56.7	57.1	57.8	58.2	58.4	<40	<40	58.8	59.0	59.0	<40	59.8	60.4	60.9	<40	<40	62.0	62.7	64.3	65.9	58.7	58.9	55.1	<40	59.3	59.5
12	58.8	59.1	57.2	56.7	56.4	56.3	56.6	56.8	57.6	58.0	58.4	<40	<40	58.9	59.1	59.0	<40	59.9	60.4	61.0	<40	<40	62.1	62.8	64.4	66.1	58.7	59.0	55.2	<40	59.4	59.6
11	58.8	59.2	56.7	56.4	56.0	55.8	56.1	56.6	57.5	57.9	58.4	<40	<40	58.9	59.1	59.0	<40	60.0	60.5	61.0	<40	<40	62.2	62.9	64.5	66.2	58.8	59.0	55.3	<40	59.5	59.7
10	58.9	59.2	55.9	55.5	55.0	54.9	55.3	55.9	57.3	57.8	58.3	<40	<40	58.9	59.0	59.0	<40	60.0	60.6	61.1	<40	<40	62.3	63.0	64.6	66.3	58.6	59.0	55.3	<40	59.5	59.8
9	58.9	59.2	54.9	54.2	53.6	53.4	53.9	54.9	56.8	57.6	58.0	<40	<40	58.7	58.9	59.0	<40	60.1	60.7	61.2	<40	<40	62.4	63.1	64.7	66.4	58.5	59.0	55.4	<40	59.5	59.8
8	59.0	59.3	54.1	52.8	51.9	51.8	52.4	53.1	56.2	57.1	57.7	<40	<40	58.5	58.7	58.9	<40	60.1	60.7	61.3	<40	<40	62.4	63.2	64.8	66.6	58.4	58.9	55.5	<40	59.6	59.9
7	59.0	59.3	53.2	51.3	50.3	50.2	50.6	51.8	55.0	56.2	57.0	<40	<40	58.2	58.6	58.7	<40	60.1	60.8	61.3	<40	<40	62.5	63.3	65.0	66.7	58.4	58.7	55.6	<40	59.5	59.9
6	59.0	59.3	52.6	49.9	48.8	48.7	49.2	49.8	53.0	54.5	55.6	<40	<40	57.5	58.0	58.4	<40	60.0	60.8	61.3	<40	<40	62.6	63.4	65.1	66.8	58.4	58.7	55.6	<40	59.3	59.7
5	59.0	59.4	52.2	49.0	47.6	47.5	47.8	48.4	51.2	53.1	53.9	<40	<40	56.2	57.1	57.7	<40	59.7	60.6	61.2	<40	<40	62.7	63.5	65.1	67.0	58.4	58.7	55.7	<40	59.2	59.5
4	59.1	59.5	51.9	48.1	46.4	46.3	46.5	47.1	49.5	51.1	52.3	<40	<40	54.7	55.5	56.5	<40	59.4	60.3	61.0	<40	<40	62.7	63.5	65.2	67.0	58.5	58.8	55.8	<40	59.2	59.5
3	59.2	59.5	51.7	47.4	45.3	45.2	45.5	46.0	48.2	49.9	51.1	<40	<40	53.2	54.1	55.1	<40	58.4	59.6	60.5	<40	<40	62.4	63.3	65.1	67.1	58.5	58.8	55.8	<40	59.2	59.5
2	59.2	59.3	51.5	46.8	44.5	44.3	44.5	44.9	47.1	48.9	50.3	<40	<40	52.2	53.0	53.8	<40	56.6	57.9	59.2	<40	<40	61.8	62.9	64.9	67.0	58.4	58.8	55.9	<40	59.3	59.5
1									46.2	48.1	49.6	<40	<40	51.6	52.4	53.1	<40	55.2	56.2	57.4	<40	<40	60.1	61.7	64.1	66.5						
Max	59.2	59.5	58.0	57.5	57.3	57.2	57.3	57.5	57.8	58.2	58.4	<40	<40	58.9	59.1	59.0	<40	60.1	60.8	61.3	<40	<40	62.7	63.5	65.2	67.1	58.8	59.0	55.9	<40	59.6	59.9
Min	56.8	57.4	51.5	46.8	44.5	44.3	44.5	44.9	46.2	48.1	49.6	<40	<40	51.6	52.4	53.1	<40	55.2	56.2	57.4	<40	<40	60.1	61.4	62.7	64.2	57.0	56.9	53.0	<40	57.0	57.1

Noise sensitive receivers with exceedance (≥70.5 dB(A))

Floor	R403a	R403b	R404a	R404b	R405a	R405b	R406a	R406b	R407a	R407b	R407c	R408a	R408b	R408c	R409a	R409b	R410a	R410b	R411a	R411b	R412a	R412b	R413a	R413b	R413c	R413d	R414a	R414b	R414c	R414d	R415a	R415b
40																																
39																																
38																																
37	57.0	56.6	56.3	56.4	56.5	55.7	<40	<40	56.7	57.1	<40	<40	58.8	59.7	61.3	62.3	65.5	65.2	62.2	62.4	63.0	63.3	63.1	63.1	63.4	60.7	60.5	63.3	63.3	63.2	61.3	61.1
36	57.0	56.6	56.4	56.5	56.5	55.7	<40	<40	56.8	57.2	<40	<40	58.8	59.7	61.4	62.4	65.6	65.3	62.3	62.5	63.1	63.4	63.2	63.2	63.4	60.7	60.5	63.4	63.4	63.3	61.4	61.2
35	57.0	56.7	56.5	56.6	56.6	55.8	<40	<40	56.9	57.3	<40	<40	58.7	59.6	61.4	62.5	65.6	65.4	62.4	62.5	63.2	63.5	63.3	63.3	63.5	60.8	60.6	63.5	63.5	63.4	61.4	61.3
34	57.1	56.8	56.6	56.7	56.7	55.9	<40	<40	56.9	57.4	<40	<40	58.8	59.7	61.5	62.6	65.7	65.4	62.5	62.6	63.2	63.6	63.4	63.4	63.6	60.9	60.7	63.6	63.6	63.5	61.5	61.4
33	57.2	56.9	56.6	56.8	56.7	55.9	<40	<40	57.0	57.5	<40	<40	58.9	59.8	61.6	62.6	65.8	65.5	62.6	62.7	63.3	63.7	63.4	63.5	63.7	61.0	60.8	63.7	63.7	63.6	61.6	61.5
32	57.3	57.0	56.7	56.9	56.8	56.0	<40	<40	57.1	57.5	<40	<40	59.0	59.9	61.7	62.7	65.9	65.7	62.7	62.8	63.4	63.8	63.5	63.6	63.8	61.1	60.9	63.8	63.8	63.6	61.7	61.6
31	57.4	57.1	56.8	57.0	56.9	56.1	<40	<40	57.2	57.6	<40	<40	59.1	60.0	61.8	62.8	66.0	65.7	62.7	62.9	63.5	63.9	63.6	63.7	63.9	61.2	61.0	63.9	63.9	63.8	61.8	61.7
30	57.5	57.2	56.9	57.1	57.0	56.2	<40	<40	57.3	57.7	<40	<40	59.2	60.1	61.9	62.9	66.1	65.8	62.9	63.0	63.6	64.0	63.8	63.8	64.0	61.3	61.1	64.0	64.0	63.9	61.9	61.8
29	57.5	57.3	57.0	57.2	57.1	56.3	<40	<40	57.4	57.8	<40	<40	59.3	60.2	62.0	63.0	66.2	65.9	63.0	63.1	63.7	64.1	63.9	63.9	64.1	61.4	61.2	64.1	64.1	64.0	62.1	61.9
28	57.6	57.4	57.1	57.3	57.2	56.4	<40	<40	57.5	57.9	<40	<40	59.4	60.3	62.1	63.1	66.3	66.0	63.1	63.3	63.8	64.2	64.0	64.0	64.2	61.5	61.3	64.2	64.2	64.1	62.2	62.0
27	57.7	57.5	57.2	57.4	57.3	56.5	<40	<40	57.6	58.0	<40	<40	59.5	60.4	62.2	63.2	66.4	66.1	63.2	63.4	64.0	64.4	64.1	64.1	64.3	61.7	61.5	64.3	64.3	64.2	62.3	62.1
26	57.8	57.6	57.3	57.5	57.4	56.6	<40	<40	57.7	58.1	<40	<40	59.6	60.5	62.3	63.4	66.5	66.2	63.3	63.5	64.1	64.5	64.2	64.2	64.4	61.8	61.6	64.4	64.4	64.3	62.4	62.2
25	57.9	57.7	57.4	57.6	57.5	56.7	<40	<40	57.8	58.3	<40	<40	59.7	60.6	62.5	63.5	66.7	66.4	63.4	63.6	64.2	64.6	64.3	64.3	64.5	61.9	61.7	64.5	64.5	64.4	62.5	62.3
24	58.0	57.8	57.5	57.7	57.6	56.8	<40	<40	57.9	58.4	<40	<40	59.8	60.8	62.6	63.6	66.8	66.5	63.6	63.7	64.3	64.7	64.4	64.4	64.6	62.0	61.8	64.6	64.6	64.5	62.6	62.5
23	58.1	57.9	57.6	57.8	57.7	57.0	<40	<40	58.1	58.5	<40	<40	60.0	60.9	62.7	63.7	66.9	66.6	63.7	63.9	64.4	64.8	64.5	64.6	64.8	62.1	61.9	64.8	64.8	64.6	62.7	62.6
22	58.2	58.0	57.7	57.9	57.9	57.1	<40	<40	58.2	58.6	<40	<40	60.1	61.0	62.8	63.9	67.1	66.8	63.8	64.0	64.6	64.9	64.7	64.7	64.9	62.2	62.0	64.9	64.9	64.8	62.9	62.7
21	58.3	58.1	57.8	58.0	58.0	57.2	<40	<40	58.3	58.7	<40	<40	60.2	61.1	62.9	64.0	67.2	66.9	64.0	64.1	64.7	65.0	64.8	64.8	65.0	62.4	62.2	65.0	65.0	64.9	63.0	62.8
20	58.4	58.2	57.9	58.1	58.1	57.3	<40	<40	58.4	58.9	<40	<40	60.2	61.3	63.0	64.1	67.3	67.0	64.1	64.2	64.9	65.1	64.9	64.9	65.1	62.5	62.3	65.1	65.1	65.0	63.1	63.0
19	58.6	58.3	58.1	58.2	58.2	57.4	<40	<40	58.6	59.0	<40	<40	60.4	61.3	63.2	64.3	67.4	67.2	64.3	64.3	65.0	65.3	65.1	65.1	65.3	62.6	62.4	65.3	65.3	65.2	63.3	63.1
18	58.7	58.4	58.2	58.3	58.3	57.6	<40	<40	58.7	59.1	<40	<40	60.5	61.4	63.3	64.4	67.6	67.3	64.4	64.5	65.1	65.4	65.2	65.2	65.4	62.8	62.6	65.4	65.4	65.3	63.4	63.3
17	58.8	58.5	58.3	58.5	58.5	57.7	<40	<40	58.8	59.3	<40	<40	60.7	61.6	63.4	64.5	67.7	67.5	64.5	64.6	65.3	65.6	65.3	65.4	65.6	62.9	62.7	65.6	65.6	65.4	63.5	63.4
16	58.9	58.6	58.4	58.6	58.6	57.8	<40	<40	59.0	59.4	<40	<40	60.8	61.7	63.6	64.6	67.9	67.7	64.6	64.8	65.5	65.7	65.5	65.5	65.7	63.0	62.8	65.7	65.7	65.6	63.7	63.5
15	59.0	58.7	58.5	58.7	58.7	57.9	<40	<40	59.1	59.6	<40	<40	61.0	61.9	63.7	64.8	68.1	67.8	64.8	65.0	65.6	65.9	65.6	65.7	65.9	63.2	63.0	65.9	65.9	65.7	63.8	63.7
14	59.1	58.9	58.7	58.8	58.8	58.1	<40	<40	59.3	59.7	<40	<40	61.1	62.1	63.9	65.0	68.2	68.0	65.0	65.1	65.8	66.1	65.8	65.8	66.0	63.3	63.1	66.0	66.0	65.9	64.0	63.9
13	59.2	59.0	58.8	59.0	59.0	58.2	<40	<40	59.4	59.9	<40	<40	61.3	62.2	64.1	65.1	68.4	68.1	65.2	65.3	65.9	66.2	66.0	66.0	66.2	63.5	63.3	66.2	66.2	66.1	64.2	64.0
12	59.3	59.1	58.9	59.1	59.1	58.4	<40	<40	59.5	60.0	<40	<40	61.4	62.4	64.2	65.3	68.6	68.3	65.4	65.5	66.1	66.4	66.1	66.1	66.3	63.7	63.5	66.3	66.3	66.2	64.3	64.2
11	59.5	59.2	59.0	59.2	59.3	58.5	<40	<40	59.7	60.1	<40	<40	61.6	62.6	64.4	65.5	68.8	68.5	65.5	65.7	66.2	66.6	66.3	66.3	66.5	63.8	63.6	66.5	66.5	66.4	64.5	64.4
10	59.5	59.3	59.2	59.4	59.4	58.6	<40	<40	59.8	60.3	<40	<40	61.8	62.7	64.5	65.7	69.0	68.7	65.8	65.9	66.4	66.8	66.5	66.5	66.7	64.0	63.8	66.7	66.7	66.6	64.7	64.6
9	59.6	59.4	59.3	59.5	59.5	58.7	<40	<40	60.0	60.4	<40	<40	61.9	62.9	64.7	65.9	69.2	68.9	66.0	66.1	66.6	67.0	66.6	66.7	66.9	64.2	64.0	66.9	66.9	66.7	64.9	64.8
8	59.6	59.6	59.4	59.5	59.7	58.8	<40	<40	60.1	60.6	<40	<40	62.1	63.0	64.9	66.1	69.4	69.2	66.2	66.3	66.8	67.2	66.8	66.9	67.1	64.3	64.1	67.1	67.0	66.9	65.0	65.0
7	59.6	59.6	59.4	59.6	59.8	59.0	<40	<40	60.3	60.8	<40	<40	62.2	63.2	65.1	66.2	69.6	69.4	66.4	66.5	67.1	67.4	67.0	67.0	67.2	64.5	64.3	67.2	67.2	67.1	65.2	65.2
6	59.5	59.5	59.5	59.7	60.0	59.1	<40	<40	60.5	60.9	<40	<40	62.4	63.4	65.3	66.4	69.9	69.7	66.7	66.7	67.3	67.7	67.2	67.2	67.4	64.7	64.5	67.4	67.4	67.3	65.4	65.3
5	59.4	59.3	59.5	59.8	60.0	59.2	<40	<40	60.6	61.1	<40	<40	62.6	63.6	65.5	66.7	70.2	70.0	66.9	66.9	67.5	67.9	67.3	67.4	67.6	64.9	64.7	67.6	67.5	67.5	65.6	65.5
4	59.2	59.1	59.2	59.8	60.1	59.3	<40	<40	60.8	61.3	<40	<40	62.8	63.8	65.7	66.9	**70.5**	70.2	67.2	67.2	67.8	68.1	67.5	67.6	67.8	65.1	64.9	67.8	67.7	67.7	65.8	65.8
3	59.2	59.0	59.0	59.4	59.9	59.3	<40	<40	61.0	61.5	<40	<40	63.0	64.0	65.9	67.1	**70.8**	**70.6**	67.4	67.5	68.0	68.4	67.7	67.9	68.1	65.3	65.1	68.1	68.0	67.9	66.0	66.0
2	59.2	59.0	58.9	59.1	59.5	58.9	<40	<40	61.0	61.7	<40	<40	63.2	64.2	66.1	67.3	**71.1**	**70.9**	67.7	67.8	68.3	68.6	67.9	68.1	68.3	65.5	65.3	68.3	68.2	68.1	66.2	66.2
1					59.2	58.5	<40	<40	60.9	61.7	<40	<40	63.3	64.3	66.3	67.6	**71.4**	**71.2**	68.0	68.1	68.6	68.9	68.1	68.3	68.5	65.7	65.5	68.5	68.4	68.3	66.4	66.5
Max	59.6	59.6	59.5	59.8	60.1	59.3	<40	<40	61.0	61.7	<40	<40	63.3	64.3	66.3	67.6	**71.4**	**71.2**	68.0	68.1	68.6	68.9	68.1	68.3	68.5	65.7	65.5	68.5	68.4	68.3	66.4	66.5
Min	57.0	56.6	56.3	56.4	56.5	55.7	<40	<40	56.7	57.1	<40	<40	58.7	59.6	61.3	62.3	65.5	65.2	62.2	62.4	63.0	63.3	63.1	63.1	63.4	60.7	60.5	63.3	63.3	63.2	61.3	61.1

Noise sensitive receivers with exceedance (≥70.5 dB(A))

Floor	R416a	R416b	R416c	R417a	R417b	R417c	R418a	R418b	R419a	R419b	R420a	R420b	R421a	R421b	R422a	R422b	R423a	R423b	R423c	R424a	R424b	R425a	R425b	R426a	R426b	R426c	R426d	R427a	R427b	R427c	R428a	R428b	R428c	R429a
40																																		
39																																		
38																																		
37	63.8	63.9	60.6	60.6	64.3	64.6	65.5	65.8	63.1	62.2	54.0	53.9	57.3	59.2	56.5	62.3	62.8	63.1	56.6	57.2	63.8	63.9	63.1	56.7	64.2	64.4	64.6	53.7	52.0	45.7	45.0	48.3	46.1	<40
36	63.9	64.0	60.7	60.7	64.3	64.7	65.6	65.8	63.1	62.3	53.8	53.7	57.2	59.2	56.6	62.4	62.9	63.2	56.7	57.3	63.8	64.0	63.1	56.7	64.2	64.5	64.6	53.7	51.9	45.7	45.0	48.3	46.1	<40
35	64.0	64.1	60.8	60.8	64.4	64.8	65.7	65.9	63.2	62.3	53.7	53.5	57.3	59.2	56.6	62.4	62.9	63.2	56.7	57.3	63.8	64.0	63.1	56.8	64.3	64.5	64.6	53.7	51.9	45.6	44.8	48.3	46.1	<40
34	64.1	64.2	60.9	60.9	64.5	64.9	65.8	66.0	63.2	62.4	53.6	53.5	57.3	59.2	56.7	62.4	62.9	63.2	56.8	57.4	63.8	64.0	63.1	56.9	64.3	64.5	64.6	53.7	52.0	45.5	44.8	48.3	46.2	<40
33	64.2	64.3	61.0	61.0	64.6	65.0	65.9	66.1	63.3	62.2	53.6	53.5	57.3	59.3	56.8	62.5	63.0	63.3	56.8	57.5	63.9	64.1	63.2	57.0	64.3	64.5	64.7	53.7	51.9	45.4	44.7	48.3	46.2	<40
32	64.3	64.4	61.1	61.1	64.7	65.1	66.0	66.2	63.4	62.3	53.6	53.5	57.3	59.3	56.9	62.5	63.0	63.3	56.9	57.6	63.9	64.1	63.2	57.1	64.4	64.6	64.7	53.7	51.9	45.3	44.6	48.3	46.3	<40
31	64.4	64.5	61.2	61.2	64.9	65.2	66.1	66.3	63.4	62.4	53.6	53.5	57.4	59.4	56.9	62.5	63.1	63.4	56.9	57.7	64.0	64.1	63.3	57.2	64.4	64.6	64.7	53.6	51.9	45.1	44.4	48.3	46.3	<40
30	64.5	64.6	61.3	61.3	65.0	65.3	66.2	66.4	63.5	62.5	53.7	53.5	57.4	59.4	57.0	62.6	63.1	63.4	57.0	57.7	64.0	64.2	63.3	57.2	64.4	64.6	64.8	53.6	51.8	44.9	44.2	48.3	46.3	<40
29	64.6	64.7	61.4	61.4	65.1	65.4	66.2	66.5	63.6	62.6	53.7	53.5	57.5	59.5	57.1	62.6	63.1	63.4	57.0	57.8	64.0	64.2	63.3	57.3	64.4	64.7	64.8	53.5	51.7	44.6	43.9	48.3	46.4	<40
28	64.7	64.9	61.6	61.6	65.2	65.5	66.3	66.6	63.7	62.7	53.7	53.5	57.5	59.6	57.2	62.7	63.2	63.5	57.1	57.9	64.1	64.2	63.4	57.4	64.5	64.7	64.8	53.4	51.6	44.2	43.5	48.2	46.4	<40
27	64.9	65.0	61.7	61.7	65.3	65.6	66.4	66.7	63.8	62.8	53.7	53.6	57.6	59.6	57.4	62.7	63.2	63.5	57.2	58.0	64.1	64.3	63.4	57.5	64.5	64.8	64.9	53.3	51.5	43.7	43.1	48.2	46.5	<40
26	65.0	65.1	61.8	61.8	65.4	65.7	66.6	66.8	63.9	62.9	53.8	53.6	57.6	59.7	57.5	62.8	63.3	63.6	57.2	58.1	64.1	64.3	63.4	57.6	64.6	64.8	64.9	53.2	51.3	43.0	42.3	48.1	46.5	<40
25	65.1	65.2	61.9	61.9	65.5	65.9	66.7	67.0	64.0	63.0	53.8	53.6	57.7	59.8	57.5	62.8	63.3	63.6	57.3	58.2	64.2	64.4	63.5	57.7	64.6	64.8	64.9	53.1	51.2	42.1	41.5	48.0	46.5	<40
24	65.2	65.3	62.0	62.0	65.7	66.0	66.8	67.0	64.1	63.1	53.8	53.6	57.8	59.8	57.7	62.9	63.4	63.6	57.3	58.3	64.2	64.4	63.5	57.8	64.7	64.9	65.0	53.1	51.1	41.5	40.9	47.9	46.6	<40
23	65.3	65.5	62.2	62.2	65.8	66.1	66.9	67.1	64.2	63.2	53.8	53.7	57.8	59.9	57.8	62.9	63.4	63.7	57.4	58.4	64.3	64.4	63.6	57.9	64.7	64.9	65.0	53.0	51.0	41.3	40.8	47.9	46.6	<40
22	65.5	65.6	62.3	62.3	65.9	66.3	67.1	67.3	64.4	63.2	53.9	53.7	57.9	60.0	57.9	63.0	63.5	63.7	57.4	58.5	64.3	64.5	63.6	58.0	64.7	64.9	65.0	52.9	50.9	40.2	<40	47.9	46.7	<40
21	65.6	65.7	62.4	62.4	66.1	66.4	67.2	67.4	64.5	63.4	53.9	53.7	58.0	60.1	57.9	63.0	63.5	63.8	57.5	58.6	64.3	64.5	63.6	58.1	64.8	65.0	65.1	52.9	50.8	<40	<40	47.8	46.7	<40
20	65.8	65.9	62.6	62.6	66.2	66.5	67.4	67.6	64.6	63.5	53.9	53.7	58.0	60.2	58.0	63.1	63.6	63.8	57.6	58.7	64.4	64.6	63.7	58.2	64.8	65.0	65.1	52.9	50.8	<40	<40	47.8	46.7	<40
19	65.9	66.0	62.7	62.7	66.4	66.7	67.5	67.7	64.7	63.6	53.9	53.8	58.1	60.2	58.2	63.1	63.6	63.9	57.7	58.8	64.4	64.6	63.7	58.3	64.8	65.1	65.1	52.8	50.7	<40	<40	47.8	46.8	<40
18	66.0	66.2	62.9	62.9	66.5	66.8	67.7	67.9	64.8	63.7	54.0	53.8	58.2	60.3	58.3	63.2	63.7	63.9	57.8	58.9	64.5	64.6	63.7	58.4	64.9	65.1	65.2	52.8	50.7	<40	<40	47.8	46.8	<40
17	66.2	66.3	63.0	63.0	66.7	67.0	67.8	68.0	65.0	63.8	54.0	53.8	58.2	60.4	58.4	63.2	63.7	64.0	57.8	59.0	64.5	64.7	63.8	58.5	64.9	65.1	65.2	52.9	50.7	<40	<40	47.8	46.8	<40
16	66.3	66.5	63.2	63.2	66.8	67.2	68.0	68.2	65.1	64.0	54.0	53.8	58.3	60.5	58.6	63.3	63.8	64.0	57.9	59.2	64.6	64.7	63.9	58.6	64.9	65.2	65.3	52.8	50.7	<40	<40	47.8	46.9	<40
15	66.5	66.6	63.3	63.4	67.0	67.3	68.2	68.3	65.2	64.2	54.0	53.9	58.4	60.6	58.7	63.4	63.8	64.1	58.0	59.3	64.6	64.8	63.9	58.7	65.0	65.2	65.3	52.8	50.7	<40	<40	47.9	46.9	<40
14	66.7	66.8	63.5	63.5	67.2	67.5	68.3	68.5	65.4	64.3	54.1	53.9	58.4	60.7	58.8	63.4	63.9	64.1	58.0	59.4	64.6	64.8	64.0	58.8	65.0	65.2	65.3	52.9	50.7	<40	<40	47.8	46.9	<40
13	66.9	67.0	63.7	63.7	67.4	67.7	68.5	68.6	65.6	64.4	54.1	53.9	58.5	60.7	59.0	63.5	64.0	64.2	58.1	59.5	64.7	64.9	64.0	58.9	65.0	65.3	65.4	52.9	50.7	<40	<40	47.8	47.0	<40
12	67.0	67.2	63.9	63.9	67.6	67.9	68.7	68.8	65.7	64.6	54.1	53.9	58.6	60.8	59.1	63.5	64.0	64.2	58.2	59.7	64.7	64.9	64.0	59.0	65.1	65.3	65.4	52.9	50.8	<40	<40	47.9	47.0	<40
11	67.2	67.4	64.1	64.1	67.8	68.1	68.8	69.0	65.8	64.7	54.1	53.9	58.7	61.0	59.3	63.6	64.1	64.3	58.3	59.8	64.8	64.9	64.1	59.1	65.1	65.3	65.4	53.0	50.7	<40	<40	47.9	47.0	<40
10	67.4	67.6	64.3	64.3	68.0	68.3	69.0	69.2	66.0	64.9	54.2	54.0	58.8	61.0	59.4	63.7	64.1	64.4	58.4	59.9	64.8	65.0	64.1	59.2	65.1	65.4	65.4	53.0	50.7	<40	<40	47.9	47.1	<40
9	67.6	67.8	64.5	64.5	68.2	68.5	69.3	69.5	66.2	65.0	54.2	54.0	58.9	61.1	59.5	63.7	64.2	64.4	58.5	60.0	64.9	65.0	64.2	59.3	65.2	65.4	65.5	52.9	50.8	<40	<40	47.9	47.1	<40
8	67.8	68.0	64.7	64.7	68.4	68.8	69.5	69.7	66.4	65.2	54.2	54.0	59.0	61.2	59.7	63.8	64.2	64.4	58.6	60.2	64.9	65.0	64.2	59.4	65.2	65.4	65.5	53.0	50.8	<40	<40	48.0	47.1	<40
7	68.0	68.2	64.9	64.9	68.6	69.0	69.7	69.9	66.5	65.4	54.2	54.0	59.1	61.4	59.8	63.8	64.3	64.5	58.6	60.3	64.9	65.1	64.3	59.5	65.2	65.4	65.5	53.0	50.8	<40	<40	48.0	47.1	<40
6	68.3	68.4	65.1	65.1	68.9	69.3	70.0	70.1	66.8	65.6	54.3	54.0	59.2	61.5	59.9	63.9	64.3	64.5	58.7	60.4	65.0	65.1	64.3	59.6	65.3	65.5	65.5	53.0	50.8	<40	<40	48.0	47.1	<40
5	68.5	68.7	65.4	65.3	69.1	69.5	70.3	70.4	67.0	65.8	54.3	54.0	59.3	61.6	60.1	63.9	64.4	64.6	58.8	60.5	65.0	65.2	64.3	59.7	65.3	65.5	65.5	53.0	50.8	<40	<40	48.0	47.2	<40
4	68.7	68.9	65.6	65.6	69.4	69.8	**70.6**	**70.7**	67.2	66.0	54.3	54.1	59.4	61.7	60.2	64.0	64.4	64.6	58.9	60.6	65.0	65.2	64.4	59.8	65.3	65.5	65.6	53.1	50.9	<40	<40	48.0	47.2	<40
3	69.0	69.2	65.9	65.8	69.6	70.1	**70.9**	**71.0**	67.4	66.2	54.3	54.1	59.5	61.8	60.4	64.0	64.4	64.7	59.0	60.7	65.0	65.2	64.4	59.9	65.3	65.5	65.6	53.1	50.9	<40	<40	48.1	47.2	<40
2	69.3	69.5	66.2	66.1	69.9	70.3	**71.2**	**71.4**	67.7	66.4	54.4	54.1	59.6	62.0	60.5	64.1	64.5	64.7	59.1	60.8	65.1	65.2	64.4	59.9	65.3	65.5	65.6	53.1	50.9	<40	<40	48.1	47.2	<40
1	69.5	69.8	66.4	66.4	70.2	**70.7**	**71.5**	**71.6**	67.9	66.6	54.4	54.1	59.8	62.1	60.7	64.1	64.5	64.7	59.1	61.0	65.0	65.2	64.4	60.0	65.3	65.5	65.6	53.1	50.9	<40	<40	48.0	47.2	<40
Max	69.5	69.8	66.4	66.4	70.2	**70.7**	**71.5**	**71.6**	67.9	66.6	54.4	54.1	59.8	62.1	60.7	64.1	64.5	64.7	59.1	61.0	65.1	65.2	64.4	60.0	65.3	65.5	65.6	53.7	52.0	45.7	45.0	48.3	47.2	<40
Min	63.8	63.9	60.6	60.6	64.3	64.6	65.5	65.8	63.1	62.2	53.6	53.5	57.2	59.2	56.5	62.3	62.8	63.1	56.6	57.2	63.8	63.9	63.1	56.7	64.2	64.4	64.6	52.8	50.7	<40	<40	47.8	46.1	<40

Noise sensitive receivers with exceedance (≥70.5 dB(A))

Floor	R429b	R430a	R430b	R431a	R431b	R432a	R432b	R432c	R432d	R433a	R433b	R433c	R433d	R434a	R434b	R435a	R435b	R435c	R436a	R436b	R437a	R437b	R438a	R438b	R438c	R438d	R501a	R501b	R501c	R502a	R502b	R502c	R503a	R503b	R504a
40																											56.8	56.8	52.2	<40	56.5	56.5	56.3	56.4	56.0
39																											56.8	56.8	52.3	<40	56.6	56.6	56.3	56.4	55.9
38																											56.9	56.8	52.4	<40	56.7	56.7	56.4	56.4	56.0
37	<40	<40	<40	43.2	<40	42.7	46.7	47.8	<40	46.7	50.1	53.1	55.6	56.9	57.7	58.6	59.1	58.5	58.2	57.9	57.4	56.3	55.6	55.3	54.6	53.5	56.9	56.9	52.5	<40	56.8	56.8	56.5	56.5	56.1
36	<40	<40	<40	43.2	<40	42.7	46.7	47.8	<40	46.7	50.2	53.2	55.7	57.0	57.8	58.6	59.1	58.5	58.2	58.0	57.4	56.3	55.7	55.4	54.6	53.6	57.0	57.0	52.6	<40	56.8	56.9	56.6	56.6	56.2
35	<40	<40	<40	43.2	<40	42.8	46.8	47.9	<40	46.7	50.2	53.2	55.7	57.0	57.8	58.6	59.1	58.5	58.2	58.0	57.4	56.3	55.7	55.4	54.6	53.6	57.1	57.0	52.7	<40	56.9	57.0	56.7	56.7	56.3
34	<40	<40	<40	43.3	<40	42.8	46.8	47.9	<40	46.8	50.3	53.3	55.7	57.0	57.8	58.6	59.1	58.5	58.2	58.0	57.4	56.4	55.7	55.4	54.7	53.6	57.2	57.1	52.7	<40	57.0	57.1	56.8	56.8	56.4
33	<40	<40	<40	43.3	<40	42.8	46.8	48.0	<40	46.8	50.3	53.3	55.8	57.0	57.8	58.6	59.2	58.6	58.3	58.0	57.4	56.4	55.7	55.4	54.7	53.6	57.3	57.1	52.8	<40	57.1	57.1	56.9	56.9	56.5
32	<40	<40	<40	43.3	<40	42.9	46.9	48.0	<40	46.8	50.3	53.3	55.8	57.1	57.9	58.7	59.2	58.6	58.3	58.0	57.5	56.4	55.8	55.5	54.7	53.6	57.3	57.2	52.9	<40	57.2	57.2	57.0	57.0	56.6
31	<40	<40	<40	43.4	<40	42.9	46.9	48.0	<40	46.9	50.4	53.4	55.8	57.1	57.9	58.7	59.2	58.6	58.3	58.1	57.5	56.4	55.8	55.5	54.8	53.7	57.4	57.3	53.0	<40	57.3	57.3	57.1	57.1	56.7
30	<40	<40	<40	43.4	<40	42.9	47.0	48.1	<40	46.9	50.4	53.4	55.8	57.1	57.9	58.7	59.2	58.7	58.3	58.1	57.5	56.5	55.8	55.5	54.8	53.7	57.5	57.4	53.1	<40	57.4	57.4	57.2	57.2	56.8
29	<40	<40	<40	43.4	<40	43.0	47.0	48.1	<40	46.9	50.4	53.4	55.8	57.1	57.9	58.7	59.3	58.7	58.3	58.1	57.5	56.5	55.8	55.5	54.8	53.7	57.6	57.5	53.2	<40	57.5	57.5	57.2	57.3	56.9
28	<40	<40	<40	43.5	<40	43.0	47.0	48.1	<40	47.0	50.5	53.5	55.9	57.2	57.9	58.8	59.3	58.7	58.4	58.1	57.6	56.5	55.9	55.6	54.8	53.8	57.7	57.6	53.3	<40	57.6	57.6	57.3	57.4	57.0
27	<40	<40	<40	43.5	<40	43.1	47.1	48.2	<40	47.0	50.5	53.5	55.9	57.2	58.0	58.8	59.3	58.7	58.4	58.1	57.6	56.5	55.9	55.6	54.8	53.8	57.8	57.6	53.4	<40	57.7	57.7	57.4	57.5	57.1
26	<40	<40	<40	43.5	<40	43.1	47.1	48.2	<40	47.0	50.5	53.5	55.9	57.2	58.0	58.8	59.3	58.7	58.4	58.2	57.6	56.6	55.9	55.6	54.9	53.8	57.9	57.7	53.5	<40	57.8	57.8	57.5	57.6	57.2
25	<40	<40	<40	43.6	<40	43.1	47.1	48.2	<40	47.1	50.6	53.6	55.9	57.2	58.0	58.8	59.3	58.8	58.4	58.2	57.6	56.6	55.9	55.6	54.9	53.8	57.9	57.8	53.6	<40	57.9	57.9	57.7	57.7	57.3
24	<40	<40	<40	43.6	<40	43.2	47.2	48.3	<40	47.1	50.6	53.6	56.0	57.3	58.0	58.8	59.4	58.8	58.5	58.2	57.7	56.6	55.9	55.7	54.9	53.8	58.0	57.9	53.6	<40	58.0	58.0	57.8	57.8	57.4
23	<40	<40	<40	43.6	<40	43.2	47.2	48.3	<40	47.1	50.6	53.6	56.0	57.3	58.1	58.9	59.4	58.8	58.5	58.2	57.7	56.6	56.0	55.7	55.0	53.9	58.0	58.0	53.7	<40	58.1	58.1	57.9	57.9	57.5
22	<40	<40	<40	43.7	<40	43.2	47.2	48.3	<40	47.1	50.6	53.6	56.0	57.3	58.1	58.9	59.4	58.8	58.5	58.2	57.7	56.7	56.0	55.7	55.0	53.9	58.1	58.1	53.8	<40	58.2	58.2	58.0	58.0	57.6
21	<40	<40	<40	43.7	<40	43.3	47.3	48.4	<40	47.2	50.7	53.7	56.0	57.3	58.1	58.9	59.4	58.8	58.5	58.3	57.7	56.7	56.0	55.7	55.0	53.9	58.2	58.2	53.9	<40	58.3	58.3	58.1	58.1	57.7
20	<40	<40	<40	43.7	<40	43.3	47.3	48.4	<40	47.2	50.7	53.7	56.0	57.3	58.1	58.9	59.4	58.9	58.5	58.3	57.7	56.7	56.1	55.8	55.0	53.9	58.3	58.3	54.0	<40	58.4	58.4	58.2	58.2	57.8
19	<40	<40	<40	43.7	<40	43.3	47.3	48.4	<40	47.2	50.7	53.7	56.1	57.3	58.1	59.0	59.5	58.9	58.5	58.3	57.7	56.7	56.1	55.8	55.1	54.0	58.4	58.4	54.1	<40	58.5	58.5	58.3	58.3	57.9
18	<40	<40	<40	43.8	<40	43.3	47.4	48.5	<40	47.3	50.8	53.8	56.1	57.4	58.1	59.0	59.5	58.9	58.6	58.3	57.8	56.8	56.1	55.8	55.1	54.0	58.5	58.5	54.2	<40	58.6	58.6	58.4	58.4	58.1
17	<40	<40	<40	43.8	<40	43.4	47.4	48.5	<40	47.3	50.8	53.8	56.1	57.4	58.2	59.0	59.5	58.9	58.6	58.3	57.8	56.8	56.1	55.8	55.1	54.0	58.6	58.6	54.3	<40	58.7	58.7	58.5	58.6	58.2
16	<40	<40	<40	43.8	<40	43.4	47.4	48.5	<40	47.3	50.8	53.8	56.1	57.4	58.2	59.0	59.5	58.9	58.6	58.4	57.8	56.8	56.1	55.8	55.1	54.0	58.7	58.7	54.4	<40	58.8	58.8	58.6	58.7	58.3
15	<40	<40	<40	43.9	<40	43.4	47.4	48.6	<40	47.3	50.8	53.8	56.1	57.4	58.2	59.0	59.5	59.0	58.6	58.4	57.8	56.8	56.2	55.9	55.1	54.1	58.8	58.7	54.5	<40	58.9	58.9	58.7	58.8	58.4
14	<40	<40	<40	43.9	<40	43.5	47.5	48.6	<40	47.4	50.9	53.9	56.2	57.4	58.2	59.0	59.5	59.0	58.6	58.4	57.8	56.8	56.2	55.9	55.1	54.1	58.8	58.8	54.6	<40	59.0	59.0	58.8	58.9	58.5
13	<40	<40	<40	43.9	<40	43.5	47.5	48.6	<40	47.4	50.9	53.9	56.2	57.4	58.2	59.0	59.6	59.0	58.6	58.4	57.9	56.9	56.2	55.9	55.2	54.1	58.9	58.9	54.7	<40	59.1	59.2	58.9	59.0	58.6
12	<40	<40	<40	43.9	<40	43.5	47.5	48.6	<40	47.4	50.9	53.9	56.2	57.4	58.2	59.0	59.6	59.0	58.6	58.4	57.9	56.9	56.2	55.9	55.2	54.1	59.0	58.9	54.8	<40	59.1	59.3	59.0	59.1	58.8
11	<40	<40	<40	44.0	<40	43.5	47.6	48.7	<40	47.4	51.0	53.9	56.2	57.4	58.2	59.0	59.6	59.0	58.6	58.4	57.9	56.9	56.2	55.9	55.2	54.1	59.1	59.0	54.8	<40	59.2	59.3	59.1	59.2	58.9
10	<40	<40	<40	44.0	<40	43.6	47.6	48.7	<40	47.4	51.0	53.9	56.2	57.4	58.2	59.0	59.6	59.0	58.6	58.4	57.9	56.9	56.2	55.9	55.2	54.1	59.2	59.1	54.9	<40	59.3	59.4	59.2	59.3	59.0
9	<40	<40	<40	44.0	<40	43.6	47.6	48.7	<40	47.5	51.0	54.0	56.2	57.4	58.2	59.0	59.5	59.0	58.6	58.4	57.9	56.9	56.2	56.0	55.2	54.1	59.2	59.2	55.0	<40	59.4	59.5	59.2	59.4	59.1
8	<40	<40	<40	44.0	<40	43.6	47.6	48.7	<40	47.5	51.0	54.0	56.2	57.4	58.2	59.0	59.5	59.0	58.6	58.4	57.9	56.9	56.2	56.0	55.2	54.2	59.3	59.2	55.1	<40	59.5	59.6	59.3	59.5	59.2
7	<40	<40	<40	44.0	<40	43.6	47.6	48.7	<40	47.5	51.0	54.0	56.1	57.3	58.2	59.0	59.5	58.9	58.6	58.3	57.9	56.9	56.3	56.0	55.3	54.2	59.4	59.3	55.1	<40	59.6	59.7	59.4	59.6	59.3
6	<40	<40	<40	44.1	<40	43.6	47.7	48.8	<40	47.5	51.1	54.0	56.1	57.3	58.1	59.0	59.5	58.9	58.6	58.3	57.8	56.9	56.3	56.0	55.3	54.2	59.4	59.4	55.2	<40	59.7	59.8	59.5	59.7	59.4
5	<40	<40	<40	44.1	<40	43.7	47.7	48.8	<40	47.5	51.1	54.0	56.1	57.3	58.1	58.9	59.4	58.9	58.5	58.3	57.8	56.9	56.3	56.0	55.3	54.2	59.5	59.4	55.3	<40	59.7	59.9	59.6	59.7	59.5
4	<40	<40	<40	44.1	<40	43.7	47.7	48.8	<40	47.6	51.1	54.1	56.1	57.2	58.0	58.9	59.4	58.8	58.4	58.2	57.7	56.8	56.2	56.0	55.3	54.2	59.5	59.5	55.3	<40	59.8	59.9	59.6	59.8	59.5
3	<40	<40	<40	44.1	<40	43.6	47.7	48.8	<40	47.6	51.1	54.1	56.1	57.1	57.9	58.7	59.3	58.7	58.3	58.1	57.6	56.7	56.2	55.9	55.3	54.2	59.6	59.5	55.4	<40	59.8	60.0	59.7	59.9	59.6
2	<40	<40	<40	44.0	<40	43.6	47.6	48.7	<40	47.6	51.1	54.1	56.1	57.1	57.8	58.6	59.2	58.5	58.1	57.9	57.4	56.6	56.0	55.9	55.2	54.2	59.6	59.6	55.4	<40	59.9	60.0	59.7	59.9	59.7
1	<40	<40	<40	43.9	<40	43.3	47.6	48.7	<40	47.5	51.1	54.1	56.1	57.0	57.7	58.5	59.0	58.3									59.6	59.6	55.4	<40	59.9	60.1	59.8	60.0	59.7
Max	<40	<40	<40	44.1	<40	43.7	47.7	48.8	<40	47.6	51.1	54.1	56.2	57.4	58.2	59.0	59.6	59.0	58.6	58.4	57.9	56.9	56.3	56.0	55.3	54.2	59.6	59.6	55.4	<40	59.9	60.1	59.8	60.0	59.7
Min	<40	<40	<40	43.2	<40	42.7	46.7	47.8	<40	46.7	50.1	53.1	55.6	56.9	57.7	58.5	59.0	58.3	58.1	57.9	57.4	56.3	55.6	55.3	54.6	53.5	56.8	56.8	52.2	<40	56.5	56.5	56.3	56.4	55.9

Noise sensitive receivers with exceedance (≥70.5 dB(A))

Floor	R504b	R505a	R505b	R506a	R506b	R507a	R507b	R507c	R508a	R508b	R508c	R509a	R509b	R510a	R510b	R511a	R511b	R512a	R512b	R513a	R513b	R513c	R513d	R514a	R514b	R514c	R514d	R515a	R515b	R516a	R516b	R516c	R517a	R517b	R517c
40	55.7	55.9	54.3	<40	<40	55.1	55.8	<40	46.7	57.3	58.6	60.6	61.9	65.8	65.8	63.4	63.4	63.9	64.2	64.1	64.3	64.4	62.5	61.8	64.9	64.9	64.7	61.5	61.0	65.4	65.5	60.8	60.8	65.7	65.9
39	55.8	55.6	54.1	<40	<40	55.0	55.8	<40	46.7	57.3	58.7	60.7	62.0	65.9	65.9	63.4	63.5	64.0	64.3	64.2	64.4	64.5	62.5	61.9	65.0	65.0	64.8	61.6	61.1	65.5	65.5	60.9	60.9	65.8	66.0
38	55.9	55.7	54.2	<40	<40	54.9	55.6	<40	46.7	57.4	58.7	60.7	62.0	66.0	66.0	63.5	63.5	64.0	64.3	64.3	64.5	64.6	62.6	61.9	65.1	65.0	64.9	61.7	61.2	65.5	65.6	61.0	61.0	65.9	66.1
37	56.0	55.8	54.3	<40	<40	55.0	55.7	<40	46.7	57.5	58.8	60.8	62.1	66.1	66.1	63.5	63.6	64.1	64.4	64.4	64.6	64.7	62.7	62.0	65.1	65.1	64.9	61.8	61.3	65.6	65.7	61.1	61.1	66.0	66.2
36	56.1	55.9	54.4	<40	<40	55.1	55.8	<40	46.8	57.6	59.0	60.9	62.2	66.2	66.1	63.6	63.7	64.2	64.5	64.5	64.7	64.8	62.7	62.0	65.2	65.2	65.0	61.9	61.4	65.7	65.8	61.2	61.2	66.1	66.3
35	56.2	56.0	54.5	<40	<40	55.2	55.9	<40	46.8	57.7	59.1	61.0	62.3	66.2	66.2	63.7	63.7	64.2	64.5	64.6	64.7	64.9	62.7	62.0	65.2	65.2	65.1	62.0	61.5	65.8	65.9	61.3	61.3	66.2	66.3
34	56.3	56.1	54.6	<40	<40	55.3	56.0	<40	46.8	57.8	59.2	61.1	62.3	66.3	66.3	63.8	63.8	64.3	64.6	64.6	64.8	65.0	62.7	62.0	65.3	65.2	65.1	62.1	61.6	65.9	65.9	61.4	61.4	66.3	66.4
33	56.4	56.2	54.7	<40	<40	55.4	56.1	<40	46.9	58.0	59.3	61.2	62.4	66.4	66.4	63.9	64.0	64.4	64.7	64.7	64.9	65.0	62.7	61.9	65.3	65.3	65.1	62.2	61.7	65.9	66.0	61.5	61.6	66.3	66.6
32	56.5	56.3	54.8	<40	<40	55.5	56.2	<40	46.9	58.1	59.4	61.3	62.5	66.5	66.5	63.9	64.0	64.4	64.8	64.8	65.0	65.1	62.8	61.9	65.3	65.3	65.2	62.3	61.9	66.0	66.1	61.6	61.7	66.5	66.7
31	56.6	56.4	54.9	<40	<40	55.6	56.3	<40	46.9	58.1	59.5	61.4	62.7	66.7	66.6	64.0	64.1	64.6	64.9	64.9	65.1	65.2	62.8	62.0	65.4	65.4	65.3	62.4	62.0	66.1	66.2	61.7	61.8	66.6	66.7
30	56.7	56.5	55.0	<40	<40	55.7	56.4	<40	46.9	58.2	59.6	61.5	62.8	66.7	66.7	64.1	64.2	64.7	65.0	65.0	65.2	65.4	62.9	62.0	65.5	65.5	65.3	62.6	62.1	66.2	66.3	61.9	61.9	66.7	66.9
29	56.8	56.6	55.1	<40	<40	55.8	56.5	<40	47.0	58.3	59.7	61.7	62.9	66.8	66.8	64.2	64.3	64.8	65.1	65.1	65.3	65.5	62.9	62.0	65.6	65.6	65.5	62.7	62.2	66.3	66.4	62.0	62.0	66.8	67.0
28	56.9	56.7	55.2	<40	<40	55.9	56.7	<40	47.0	58.4	59.8	61.8	63.0	67.0	66.9	64.3	64.5	64.8	65.2	65.2	65.4	65.5	63.0	62.1	65.7	65.7	65.5	62.8	62.3	66.4	66.5	62.1	62.2	66.9	67.1
27	57.0	56.8	55.3	<40	<40	56.1	56.7	<40	47.0	58.6	59.9	61.9	63.2	67.1	67.1	64.4	64.5	65.0	65.3	65.3	65.5	65.6	63.1	62.3	65.8	65.7	65.6	62.9	62.5	66.5	66.6	62.2	62.3	67.0	67.2
26	57.1	56.9	55.4	<40	<40	56.2	56.8	<40	47.0	58.7	60.0	62.0	63.3	67.2	67.2	64.6	64.7	65.1	65.4	65.4	65.6	65.7	63.2	62.3	65.8	65.8	65.7	63.0	62.6	66.6	66.8	62.4	62.4	67.1	67.4
25	57.2	57.0	55.6	<40	<40	56.3	56.9	<40	47.1	58.8	60.2	62.1	63.4	67.3	67.3	64.6	64.8	65.2	65.5	65.5	65.7	65.8	63.2	62.4	66.0	66.0	65.8	63.2	62.7	66.8	66.9	62.5	62.6	67.3	67.5
24	57.3	57.1	55.7	<40	<40	56.4	57.1	<40	47.1	59.0	60.3	62.2	63.6	67.4	67.4	64.8	64.9	65.4	65.7	65.6	65.8	65.9	63.3	62.5	66.0	66.1	66.0	63.3	62.9	66.9	67.1	62.6	62.7	67.4	67.6
23	57.5	57.3	55.8	<40	<40	56.6	57.2	<40	47.1	59.0	60.4	62.4	63.6	67.6	67.6	64.9	65.0	65.4	65.8	65.7	65.9	66.0	63.4	62.6	66.1	66.1	66.1	63.4	63.0	67.0	67.2	62.8	62.9	67.6	67.8
22	57.6	57.4	55.9	<40	<40	56.7	57.3	<40	47.1	59.1	60.6	62.5	63.8	67.8	67.7	65.1	65.1	65.6	65.9	65.9	66.1	66.2	63.5	62.7	66.3	66.3	66.1	63.6	63.1	67.2	67.3	62.9	63.0	67.7	67.9
21	57.7	57.5	56.0	<40	<40	56.8	57.5	<40	47.2	59.3	60.7	62.7	63.9	67.9	67.9	65.2	65.3	65.7	66.0	66.0	66.2	66.3	63.6	62.8	66.4	66.4	66.3	63.7	63.3	67.3	67.5	63.1	63.2	67.9	68.1
20	57.8	57.6	56.2	<40	<40	57.0	57.6	<40	47.2	59.4	60.8	62.8	64.1	68.1	68.1	65.3	65.5	65.9	66.2	66.1	66.3	66.4	63.8	63.0	66.5	66.5	66.4	63.9	63.4	67.4	67.6	63.2	63.4	68.0	68.2
19	57.9	57.8	56.3	<40	<40	57.1	57.8	<40	47.2	59.6	60.9	63.0	64.3	68.3	68.2	65.5	65.6	66.1	66.4	66.2	66.4	66.5	63.9	63.1	66.6	66.6	66.5	64.0	63.6	67.6	67.7	63.4	63.5	68.2	68.4
18	58.0	57.9	56.4	<40	<40	57.2	57.9	<40	47.2	59.7	61.1	63.1	64.4	68.4	68.4	65.7	65.7	66.2	66.5	66.4	66.6	66.7	64.0	63.3	66.8	66.8	66.6	64.2	63.7	67.7	67.9	63.6	63.7	68.3	68.5
17	58.2	58.0	56.6	<40	<40	57.4	58.1	<40	47.2	59.9	61.3	63.3	64.6	68.6	68.6	65.8	65.9	66.3	66.6	66.5	66.7	66.8	64.1	63.4	66.9	66.9	66.8	64.3	63.9	67.8	68.0	63.7	63.9	68.5	68.7
16	58.3	58.1	56.7	<40	<40	57.5	58.2	<40	47.3	60.0	61.4	63.5	64.8	68.8	68.8	66.0	66.1	66.5	66.8	66.7	66.9	67.0	64.3	63.6	67.1	67.1	66.9	64.5	64.1	68.0	68.1	63.9	64.0	68.7	68.9
15	58.4	58.3	56.8	<40	<40	57.7	58.4	<40	47.3	60.1	61.6	63.6	65.0	69.0	69.0	66.2	66.2	66.7	67.0	66.8	67.1	67.2	64.4	63.7	67.2	67.2	67.1	64.6	64.2	68.2	68.3	64.1	64.2	68.8	69.1
14	58.5	58.4	57.0	<40	<40	57.8	58.5	<40	47.3	60.3	61.8	63.8	65.1	69.2	69.2	66.3	66.4	66.9	67.2	67.0	67.2	67.3	64.6	63.9	67.4	67.4	67.3	64.8	64.4	68.3	68.5	64.3	64.4	69.0	69.2
13	58.7	58.5	57.1	<40	<40	58.0	58.6	<40	47.3	60.5	61.9	64.0	65.3	69.4	69.3	66.5	66.6	67.0	67.4	67.1	67.3	67.5	64.7	64.0	67.6	67.5	67.4	65.0	64.6	68.5	68.7	64.5	64.6	69.2	69.4
12	58.8	58.7	57.2	<40	<40	58.2	58.8	<40	47.3	60.7	62.1	64.1	65.5	69.6	69.6	66.7	66.7	67.2	67.5	67.3	67.5	67.6	64.9	64.2	67.7	67.7	67.6	65.1	64.8	68.6	68.8	64.7	64.8	69.4	69.7
11	58.9	58.8	57.4	<40	<40	58.3	58.9	<40	47.3	60.8	62.2	64.3	65.7	69.8	69.8	66.9	67.0	67.4	67.7	67.4	67.6	67.7	65.1	64.4	67.9	67.8	67.8	65.3	65.0	68.8	69.0	64.9	65.0	69.6	69.8
10	59.0	58.9	57.5	<40	<40	58.5	59.1	<40	47.3	61.0	62.4	64.5	65.9	70.1	70.1	67.1	67.2	67.6	67.9	67.6	67.8	67.9	65.2	64.5	68.0	68.0	67.9	65.5	65.2	69.0	69.2	65.1	65.2	69.7	70.0
9	59.1	59.1	57.6	<40	<40	58.6	59.2	<40	47.4	61.2	62.6	64.7	66.1	70.3	70.3	67.4	67.4	67.8	68.0	67.8	68.0	68.1	65.4	64.7	68.2	68.2	68.0	65.7	65.4	69.2	69.4	65.3	65.4	70.0	70.3
8	59.2	59.2	57.8	<40	<40	58.8	59.4	<40	47.4	61.3	62.8	64.9	66.3	**70.6**	**70.6**	67.6	67.6	68.0	68.3	67.9	68.1	68.3	65.5	64.8	68.3	68.3	68.2	65.8	65.6	69.5	69.7	65.5	65.7	70.2	**70.5**
7	59.4	59.3	57.9	<40	<40	58.9	59.6	<40	47.4	61.5	63.0	65.1	66.6	**70.9**	**70.9**	67.8	67.8	68.2	68.5	68.1	68.3	68.4	65.6	65.0	68.5	68.5	68.4	66.0	65.8	69.7	69.9	65.8	65.9	**70.5**	**70.8**
6	59.5	59.4	58.0	<40	<40	59.1	59.7	<40	47.4	61.6	63.2	65.4	66.8	**71.2**	**71.2**	68.1	68.0	68.4	68.7	68.2	68.4	68.6	65.8	65.2	68.7	68.7	68.5	66.2	66.0	69.9	70.1	66.0	66.2	**70.7**	**71.0**
5	59.5	59.5	58.1	<40	<40	59.2	59.9	<40	47.4	61.8	63.4	65.5	67.0	**71.5**	**71.5**	68.3	68.3	68.6	68.9	68.3	68.6	68.7	65.9	65.3	68.8	68.8	68.6	66.3	66.1	70.1	70.3	66.2	66.4	**70.9**	**71.3**
4	59.6	59.6	58.2	<40	<40	59.3	60.0	<40	47.4	62.0	63.5	65.7	67.2	**71.9**	**71.8**	68.5	68.5	68.8	69.1	68.5	68.7	68.8	66.0	65.4	69.0	69.0	68.8	66.5	66.3	70.2	**70.5**	66.5	66.6	**71.2**	**71.5**
3	59.7	59.7	58.3	<40	<40	59.5	60.1	<40	47.4	62.1	63.7	65.8	67.3	**72.2**	**72.1**	68.8	68.7	69.0	69.3	68.6	68.9	69.0	66.2	65.6	69.1	69.1	68.9	66.6	66.5	70.4	**70.7**	66.7	66.8	**71.4**	**71.8**
2	59.8	59.8	58.4	<40	<40	59.6	60.2	<40	47.4	62.2	63.8	66.0	67.5	**72.5**	**72.5**	69.1	68.9	69.2	69.5	68.8	69.0	69.1	66.3	65.7	69.2	69.2	69.0	66.8	66.6	**70.6**	**70.9**	66.8	67.0	**71.6**	**72.0**
1	59.8	59.8	58.4	<40	<40	59.6	60.3	<40	47.4	62.4	63.9	66.1	67.7	**72.9**	**72.8**	69.3	69.2	69.3	69.6	68.8	69.1	69.2	66.4	65.8	69.3	69.3	69.1	66.9	66.7	**70.7**	**71.0**	67.0			
Max	59.8	59.8	58.4	<40	<40	59.6	60.3	<40	47.4	62.4	63.9	66.1	67.7	**72.9**	**72.8**	69.3	69.2	69.3	69.6	68.8	69.1	69.2	66.4	65.8	69.3	69.3	69.1	66.9	66.7	**70.7**	**71.0**	67.0	67.0	**71.6**	**72.0**
Min	55.7	55.6	54.1	<40	<40	54.9	55.6	<40	46.7	57.3	58.6	60.6	61.9	65.8	65.8	63.4	63.4	63.9	64.2	64.1	64.3	64.4	62.5	61.8	64.9	64.9	64.7	61.5	61.0	65.4	65.5	60.8	60.8	65.7	65.9

Noise sensitive receivers with exceedance (≥ 70.5 dB(A))

Floor	R518a	R518b	R519a	R519b	R520a	R520b	R521a	R521b	R522a	R522b	R523a	R523b	R524a	R524b	R525a	R525b	R526a	R526b	R526c	R526d	R527a	R527b	R527c	R528a	R528b	R528c	R529a	R529b	R530a	R530b	R531a	R531b	R532a	R532b	R532c
40	66.4	66.6	67.0	66.4	63.8	63.9	64.3	64.7	61.8	64.8	65.1	64.7	63.1	65.6	65.8	64.0	62.0	66.4	67.0	67.2	63.8	62.5	49.8	54.3	61.5	61.3	53.9	55.4	57.3	58.6	60.5	56.0	60.4	61.0	61.8
39	66.5	66.7	67.1	66.5	63.8	64.0	64.4	64.7	61.9	64.9	65.1	64.8	63.2	65.7	65.9	64.1	62.1	66.5	67.1	67.3	63.8	62.6	49.8	54.3	61.5	61.3	53.9	55.5	57.3	58.7	60.5	56.1	60.4	61.0	61.8
38	66.6	66.8	67.1	66.6	63.9	64.1	64.4	64.8	62.0	65.0	65.2	64.8	63.3	65.8	66.0	64.2	62.2	66.6	67.2	67.4	63.9	62.6	49.9	54.3	61.6	61.4	54.0	55.5	57.4	58.7	60.5	56.1	60.5	61.0	61.8
37	66.6	66.9	67.2	66.6	64.0	64.1	64.5	64.9	62.1	65.1	65.3	64.9	63.4	65.9	66.1	64.3	62.3	66.7	67.3	67.5	63.9	62.7	49.9	54.4	61.6	61.4	54.0	55.5	57.4	58.8	60.6	56.2	60.5	61.1	61.9
36	66.7	67.0	67.3	66.7	64.1	64.2	64.6	65.0	62.2	65.2	65.4	65.0	63.5	66.0	66.2	64.4	62.4	66.8	67.4	67.6	64.0	62.8	50.0	54.4	61.6	61.5	54.0	55.6	57.4	58.8	60.6	56.2	60.5	61.1	61.9
35	66.8	67.1	67.4	66.8	64.2	64.3	64.7	65.1	62.3	65.2	65.5	65.1	63.6	66.1	66.3	64.5	62.5	66.8	67.5	67.7	64.0	62.8	50.0	54.5	61.7	61.5	54.1	55.6	57.5	58.8	60.6	56.3	60.6	61.1	61.9
34	67.0	67.2	67.5	66.9	64.3	64.4	64.8	65.2	62.4	65.3	65.6	65.2	63.7	66.2	66.4	64.6	62.6	67.0	67.6	67.8	64.1	62.8	50.1	54.5	61.7	61.5	54.1	55.7	57.5	58.9	60.7	56.3	60.6	61.1	62.0
33	67.1	67.3	67.6	67.0	64.4	64.5	64.8	65.2	62.6	65.4	65.7	65.3	63.8	66.3	66.4	64.7	62.7	67.1	67.7	67.8	64.1	62.9	50.1	54.6	61.8	61.6	54.1	55.7	57.6	58.9	60.7	56.3	60.6	61.2	62.0
32	67.2	67.4	67.7	67.1	64.4	64.6	65.0	65.4	62.7	65.5	65.7	65.4	63.9	66.4	66.6	64.9	62.9	67.2	67.7	67.9	64.2	62.9	50.2	54.6	61.8	61.6	54.2	55.7	57.6	59.0	60.7	56.4	60.6	61.2	62.0
31	67.3	67.5	67.8	67.3	64.5	64.7	65.1	65.5	62.8	65.6	65.8	65.5	64.0	66.5	66.7	65.0	63.0	67.2	67.8	68.0	64.3	63.0	50.2	54.6	61.9	61.6	54.2	55.8	57.6	59.0	60.8	56.4	60.7	61.2	62.0
30	67.4	67.6	67.9	67.4	64.7	64.8	65.2	65.6	62.9	65.7	66.0	65.5	64.2	66.6	66.8	65.1	63.1	67.3	68.0	68.1	64.3	63.0	50.3	54.6	61.9	61.7	54.2	55.8	57.7	59.0	60.8	56.4	60.6	61.2	62.0
29	67.5	67.8	68.0	67.4	64.8	64.9	65.3	65.6	62.9	65.8	66.1	65.7	64.3	66.7	66.9	65.2	63.2	67.5	68.1	68.2	64.4	63.1	50.3	54.7	61.9	61.7	54.3	55.8	57.7	59.1	60.8	56.5	60.7	61.2	62.1
28	67.6	67.9	68.2	67.6	64.8	65.0	65.4	65.8	63.1	65.9	66.2	65.8	64.4	66.8	67.0	65.4	63.4	67.6	68.1	68.3	64.4	63.1	50.4	54.7	62.0	61.7	54.3	55.9	57.7	59.1	60.8	56.5	60.7	61.2	62.0
27	67.7	68.0	68.3	67.7	65.0	65.1	65.5	65.9	63.2	66.0	66.3	65.9	64.6	66.9	67.1	65.5	63.5	67.6	68.3	68.4	64.5	63.2	50.4	54.8	62.0	61.8	54.3	55.9	57.8	59.1	60.8	56.6	60.6	61.2	62.1
26	67.9	68.2	68.4	67.8	65.1	65.2	65.6	66.0	63.3	66.1	66.4	66.0	64.7	67.0	67.2	65.6	63.6	67.8	68.4	68.5	64.5	63.2	50.4	54.8	62.0	61.8	54.4	55.9	57.8	59.1	60.8	56.6	60.6	61.2	62.1
25	68.0	68.3	68.5	68.0	65.1	65.3	65.7	66.1	63.4	66.3	66.5	66.2	64.8	67.2	67.4	65.8	63.8	67.9	68.5	68.6	64.5	63.2	50.5	54.8	62.0	61.8	54.4	56.0	57.9	59.2	60.8	56.6	60.6	61.2	62.1
24	68.2	68.4	68.7	68.1	65.3	65.4	65.8	66.2	63.6	66.3	66.6	66.3	65.0	67.3	67.5	65.9	63.9	68.0	68.6	68.8	64.6	63.3	50.5	54.8	62.0	61.8	54.4	56.0	57.9	59.2	60.8	56.7	60.6	61.2	62.1
23	68.3	68.6	68.8	68.2	65.4	65.5	65.9	66.4	63.7	66.5	66.8	66.4	65.1	67.4	67.6	66.1	64.1	68.1	68.7	68.8	64.6	63.3	50.6	54.9	62.0	61.8	54.5	56.0	57.9	59.2	60.7	56.7	60.6	61.2	62.1
22	68.5	68.7	69.0	68.4	65.5	65.6	66.0	66.5	63.9	66.6	66.9	66.5	65.3	67.5	67.7	66.2	64.2	68.3	68.8	69.0	64.6	63.3	50.6	54.9	62.0	61.7	54.4	56.1	58.0	59.2	60.7	56.7	60.6	61.2	62.1
21	68.6	68.9	69.1	68.5	65.6	65.7	66.2	66.6	64.0	66.8	67.0	66.7	65.4	67.7	67.9	66.4	64.4	68.4	69.0	69.1	64.6	63.3	50.7	54.9	62.0	61.7	54.5	56.1	58.0	59.3	60.7	56.8	60.5	61.2	62.1
20	68.8	69.1	69.2	68.7	65.8	65.9	66.3	66.7	64.2	66.9	67.2	66.8	65.6	67.8	68.0	66.5	64.5	68.6	69.1	69.2	64.7	63.3	50.7	54.9	61.9	61.7	54.5	56.2	58.0	59.3	60.7	56.8	60.5	61.2	62.1
19	68.9	69.2	69.4	68.8	65.9	66.0	66.4	66.9	64.3	67.0	67.3	67.0	65.7	68.0	68.1	66.7	64.7	68.7	69.2	69.4	64.7	63.3	50.7	55.0	61.9	61.6	54.6	56.2	58.1	59.2	60.6	56.8	60.5	61.1	62.1
18	69.1	69.4	69.6	69.0	66.0	66.2	66.6	67.0	64.5	67.2	67.5	67.1	65.9	68.1	68.3	66.9	64.9	68.9	69.4	69.5	64.7	63.3	50.8	55.0	61.8	61.6	54.6	56.2	58.1	59.3	60.6	56.8	60.5	61.2	62.1
17	69.3	69.6	69.7	69.2	66.2	66.3	66.7	67.2	64.7	67.3	67.6	67.2	66.1	68.3	68.5	67.1	65.1	69.0	69.6	69.7	64.7	63.2	50.8	55.0	61.8	61.6	54.6	56.3	58.1	59.3	60.6	56.9	60.5	61.2	62.2
16	69.5	69.8	69.9	69.3	66.3	66.4	66.9	67.3	64.8	67.5	67.7	67.4	66.3	68.4	68.6	67.3	65.3	69.2	69.7	69.8	64.7	63.2	50.9	55.1	61.8	61.5	54.6	56.3	58.1	59.3	60.6	56.9	60.5	61.2	62.2
15	69.7	70.0	70.1	69.5	66.5	66.6	67.1	67.5	65.0	67.6	67.9	67.6	66.5	68.6	68.8	67.5	65.5	69.4	69.9	70.0	64.7	63.2	50.9	55.1	61.7	61.5	54.7	56.3	58.2	59.2	60.6	56.9	60.4	61.1	62.2
14	69.9	70.2	70.3	69.8	66.7	66.7	67.2	67.6	65.2	67.8	68.1	67.8	66.7	68.7	69.0	67.7	65.7	69.6	70.0	70.1	64.7	63.2	50.9	55.1	61.7	61.5	54.7	56.3	58.2	59.2	60.6	57.0	60.4	61.1	62.2
13	70.0	70.4	**70.5**	69.9	66.8	66.9	67.4	67.8	65.4	68.0	68.2	67.9	66.9	69.0	69.2	67.9	65.9	69.7	70.2	70.3	64.7	63.2	50.9	55.1	61.7	61.5	54.7	56.4	58.2	59.3	60.5	57.0	60.4	61.1	62.2
12	70.2	**70.6**	**70.8**	70.2	67.0	67.0	67.6	68.0	65.6	68.1	68.4	68.1	67.1	69.2	69.3	68.1	66.1	69.9	70.4	**70.5**	64.7	63.2	51.0	55.2	61.7	61.4	54.7	56.4	58.2	59.2	60.5	57.0	60.4	61.2	62.2
11	**70.5**	**70.8**	**70.9**	70.4	67.2	67.2	67.7	68.2	65.7	68.3	68.6	68.3	67.3	69.4	69.5	68.3	66.3	70.2	**70.5**	**70.7**	64.7	63.1	51.0	55.2	61.6	61.4	54.7	56.4	58.3	59.2	60.5	57.1	60.4	61.1	62.2
10	**70.7**	**71.0**	**71.2**	**70.6**	67.3	67.4	68.0	68.4	65.9	68.5	68.8	68.5	67.5	69.5	69.8	68.6	66.5	70.4	**70.8**	**70.9**	64.7	63.2	51.0	55.2	61.6	61.4	54.7	56.4	58.3	59.2	60.5	57.1	60.3	61.1	62.2
9	**70.9**	**71.3**	**71.4**	**70.9**	67.5	67.6	68.1	68.6	66.1	68.7	69.0	68.7	67.7	69.8	70.0	68.8	66.7	**70.6**	**71.0**	**71.1**	64.7	63.2	51.1	55.2	61.6	61.3	54.8	56.4	58.3	59.2	60.4	57.1	60.3	61.1	62.2
8	**71.2**	**71.6**	**71.8**	**71.2**	67.8	67.8	68.3	68.8	66.3	68.9	69.2	68.9	67.9	70.0	70.2	69.0	67.0	**70.8**	**71.2**	**71.3**	64.7	63.1	51.1	55.3	61.5	61.3	54.8	56.5	58.4	59.1	60.3	57.1	60.2	61.0	62.1
7	**71.4**	**71.8**	**72.0**	**71.5**	68.0	68.0	68.6	69.0	66.5	69.0	69.4	69.0	68.2	70.2	70.4	69.3	67.2	**71.1**	**71.4**	**71.5**	64.7	63.1	51.1	55.3	61.5	61.2	54.8	56.5	58.4	59.1	60.2	57.1	60.1	60.9	62.1
6	**71.7**	**72.0**	**72.4**	**71.8**	68.2	68.3	68.7	69.3	66.7	69.2	69.6	69.3	68.4	70.4	**70.7**	69.6	67.5	**71.4**	**71.7**	**71.7**	64.7	63.0	51.1	55.3	61.3	61.1	54.8	56.5	58.4	59.2	60.1	57.2	59.9	60.8	62.0
5	**72.0**	**72.3**	**72.7**	**72.1**	68.5	68.5	69.0	69.4	66.9	69.4	69.8	69.5	68.6	**70.7**	**70.9**	69.8	67.7	**71.6**	**71.9**	**72.0**	64.7	62.9	51.1	55.3	61.2	60.9	54.8	56.5	58.4	59.1	59.9	57.2	59.8	60.7	61.9
4	**72.2**	**72.6**	**73.0**	**72.5**	68.8	68.7	69.2	69.7	67.1	69.6	70.0	69.7	68.9	**70.9**	**71.1**	70.1	68.0	**71.9**	**72.2**	**72.2**	64.6	62.8	51.1	55.3	61.0	60.7	54.8	56.5	58.4	59.1	59.7	57.2	59.6	60.5	61.8
3	**72.5**	**72.9**	**73.4**	**72.9**	69.0	68.9	69.4	69.9	67.3	69.8	70.2	69.8	69.1	**71.1**	**71.4**	70.3	68.2	**72.2**	**72.5**	**72.5**	64.5	62.7	51.2	55.3	60.7	60.5	54.8	56.6	58.4	59.1	59.5	57.2	59.4	60.3	61.6
2	**72.8**	**73.2**	**73.8**	**73.3**	69.3	69.2	69.6	70.1	67.4	69.9	70.3	70.0	69.3	**71.3**	**71.6**	**70.6**	68.5	**72.4**	**72.7**	**72.8**	64.4	62.5	51.2	55.3	60.4	60.2	54.9	56.6	58.4	59.1	59.4	57.2	59.2	60.2	61.6
1									67.6	70.1	**70.5**	70.2	69.4	**71.5**	**71.8**	**70.8**	68.7	**72.7**	**73.0**	**73.0**	64.3	62.3	51.2	55.4	60.2	60.0	54.9	56.6	58.4	59.1	59.3	57.2	59.1	60.1	61.5
Max	**72.8**	**73.2**	**73.8**	**73.3**	69.3	69.2	69.6	70.1	67.6	70.1	**70.5**	70.2	69.4	**71.5**	**71.8**	**70.8**	68.7	**72.7**	**73.0**	**73.0**	64.7	63.3	51.2	55.4	62.0	61.8	54.9	56.6	58.4	59.3	60.8	57.2	60.7	61.2	62.2
Min	66.4	66.6	67.0	66.4	63.8	63.9	64.3	64.7	61.8	64.8	65.1	64.7	63.1	65.6	65.8	64.0	62.0	66.4	67.0	67.2	63.8	62.3	49.8	54.3	60.2	60.0	53.9	55.4	57.3	58.6	59.3	56.0	59.1	60.1	61.5

Noise sensitive receivers with exceedance (≥ 70.5 dB(A))

Floor	R532d	R533a	R533b	R533c	R533d	R534a	R534b	R535a	R535b	R536a	R536b	R537a	R537b	R538a	R538b	R538c	R538d
40	58.5	61.2	63.6	64.4	64.8	64.5	65.2	65.4	65.4	65.4	66.0	66.2	66.0	65.1	66.6	66.7	66.7
39	58.6	61.2	63.6	64.4	64.8	64.5	65.2	65.4	65.4	65.4	66.1	66.2	66.1	65.1	66.6	66.7	66.8
38	58.6	61.2	63.6	64.5	64.9	64.5	65.3	65.4	65.5	65.4	66.1	66.2	66.1	65.1	66.6	66.7	66.8
37	58.6	61.3	63.7	64.5	64.9	64.5	65.3	65.5	65.5	65.4	66.1	66.2	66.1	65.1	66.6	66.8	66.8
36	58.7	61.3	63.7	64.5	64.9	64.6	65.3	65.5	65.5	65.4	66.1	66.3	66.1	65.1	66.6	66.8	66.8
35	58.7	61.3	63.7	64.5	64.9	64.6	65.3	65.5	65.5	65.5	66.1	66.3	66.2	65.1	66.7	66.8	66.9
34	58.7	61.3	63.7	64.6	64.9	64.6	65.4	65.5	65.6	65.5	66.2	66.3	66.2	65.2	66.7	66.8	66.9
33	58.8	61.4	63.8	64.6	65.0	64.6	65.4	65.6	65.6	65.5	66.2	66.3	66.2	65.2	66.7	66.8	66.9
32	58.8	61.4	63.8	64.6	65.0	64.6	65.4	65.6	65.6	65.5	66.2	66.4	66.2	65.2	66.8	66.9	66.9
31	58.8	61.4	63.8	64.6	65.0	64.6	65.4	65.6	65.6	65.6	66.2	66.4	66.2	65.3	66.8	66.9	67.0
30	58.8	61.4	63.8	64.6	65.0	64.7	65.4	65.6	65.7	65.6	66.3	66.4	66.3	65.3	66.8	66.9	67.0
29	58.9	61.4	63.8	64.7	65.1	64.7	65.5	65.6	65.7	65.6	66.3	66.4	66.3	65.3	66.8	67.0	67.0
28	58.9	61.4	63.9	64.7	65.1	64.7	65.5	65.7	65.7	65.6	66.3	66.5	66.3	65.3	66.9	67.0	67.1
27	58.9	61.4	63.9	64.7	65.1	64.7	65.5	65.7	65.7	65.7	66.4	66.5	66.4	65.3	66.9	67.0	67.1
26	58.9	61.4	63.9	64.7	65.1	64.7	65.5	65.7	65.7	65.7	66.4	66.5	66.4	65.4	66.9	67.0	67.1
25	58.9	61.4	63.9	64.7	65.1	64.8	65.5	65.7	65.8	65.7	66.4	66.6	66.4	65.4	67.0	67.1	67.1
24	58.9	61.4	63.9	64.8	65.2	64.8	65.6	65.8	65.8	65.7	66.4	66.6	66.4	65.4	67.0	67.1	67.2
23	58.9	61.4	63.9	64.8	65.2	64.8	65.6	65.8	65.8	65.7	66.5	66.6	66.5	65.5	67.0	67.1	67.2
22	58.9	61.4	64.0	64.8	65.2	64.8	65.6	65.8	65.9	65.8	66.5	66.6	66.5	65.5	67.0	67.2	67.2
21	58.9	61.4	64.0	64.8	65.2	64.9	65.7	65.8	65.9	65.8	66.5	66.7	66.5	65.5	67.1	67.2	67.2
20	59.0	61.5	64.0	64.8	65.2	64.9	65.7	65.9	65.9	65.8	66.5	66.7	66.5	65.5	67.1	67.2	67.3
19	59.0	61.5	64.0	64.9	65.3	64.9	65.7	65.9	65.9	65.9	66.6	66.7	66.6	65.5	67.1	67.2	67.3
18	59.0	61.5	64.1	64.9	65.3	64.9	65.7	65.9	65.9	65.9	66.6	66.8	66.6	65.6	67.1	67.3	67.3
17	59.0	61.5	64.1	64.9	65.3	64.9	65.7	65.9	66.0	65.9	66.6	66.8	66.6	65.6	67.2	67.3	67.4
16	59.0	61.5	64.1	64.9	65.3	65.0	65.8	66.0	66.0	65.9	66.6	66.8	66.7	65.6	67.2	67.3	67.4
15	59.0	61.5	64.1	65.0	65.3	65.0	65.8	66.0	66.0	65.9	66.7	66.8	66.7	65.6	67.2	67.3	67.4
14	59.0	61.5	64.1	65.0	65.4	65.0	65.8	66.0	66.0	66.0	66.7	66.9	66.7	65.7	67.2	67.4	67.4
13	59.0	61.5	64.1	65.0	65.4	65.0	65.8	66.0	66.1	66.0	66.7	66.9	66.7	65.7	67.3	67.4	67.5
12	59.0	61.5	64.2	65.0	65.4	65.0	65.9	66.0	66.1	66.0	66.7	66.9	66.7	65.7	67.3	67.4	67.5
11	58.9	61.5	64.2	65.0	65.4	65.0	65.9	66.0	66.1	66.0	66.7	66.9	66.7	65.7	67.3	67.4	67.5
10	58.9	61.5	64.2	65.0	65.4	65.0	65.9	66.1	66.1	66.0	66.8	66.9	66.8	65.8	67.3	67.4	67.5
9	58.9	61.5	64.2	65.0	65.4	65.0	65.9	66.0	66.1	66.0	66.8	66.9	66.8	65.8	67.3	67.4	67.5
8	58.8	61.4	64.1	65.0	65.4	65.0	65.8	66.0	66.1	66.0	66.7	66.9	66.8	65.8	67.3	67.5	67.5
7	58.8	61.4	64.1	65.0	65.4	65.0	65.8	66.0	66.1	66.0	66.7	66.9	66.7	65.8	67.3	67.4	67.5
6	58.8	61.3	64.1	64.9	65.3	64.9	65.8	66.0	66.0	65.9	66.7	66.9	66.7	65.8	67.3	67.4	67.5
5	58.8	61.1	64.0	64.9	65.3	64.9	65.8	66.0	66.0	65.9	66.7	66.8	66.7	65.8	67.3	67.4	67.4
4	58.8	61.0	64.0	64.8	65.3	64.8	65.7	65.9	66.0	65.8	66.6	66.8	66.6	65.7	67.2	67.3	67.4
3	58.8	60.8	63.9	64.8	65.2	64.7	65.6	65.8	65.9	65.7	66.5	66.7	66.5	65.5	67.1	67.2	67.2
2	58.8	60.7	63.8	64.7	65.1	64.6	65.5	65.7	65.8	65.5	66.4	66.5	66.3	65.2	66.8	66.9	66.9
1	58.8	60.6	63.7	64.6	65.0	64.5	65.4	65.6	65.6	65.2	66.1	66.1	65.8	64.7	66.3	66.3	66.3
Max	59.0	61.5	64.2	65.0	65.4	65.0	65.9	66.1	66.1	66.0	66.8	66.9	66.8	65.8	67.3	67.5	67.5
Min	58.5	60.6	63.6	64.4	64.8	64.5	65.2	65.4	65.4	65.2	66.0	66.1	65.8	64.7	66.3	66.3	66.3

Noise sensitive receivers with exceedance (≥ 70.5 dB(A))

Floor	R101 max	R102max	R103 max	R104 max	R105 max	R106 max	R107 max	R108 max	R109 max	R110 max	R111 max	R112 max	R113 max	R114 max	R115 max	R116 max	R117 max	R118 max	R119 max	R120 max	R121 max	R122 max	R123 max	R124 max	R125 max	R126 max	R127 max	R128 max	R129 max	R130 max	R131 max	R132 max	R133 max	R134 max
40																																		
39																																		
38																																		
37	66.7	65.3	65.0	65.1	64.4	66.7	62.7	58.4	56.2	55.2	55.1	55.4	56.2	55.7	57.4	57.5	56.0	56.0	55.8	56.3	56.6	57.8	58.6	60.7	65.3	64.3	64.1	63.6	63.4	63.0	62.5	62.0	62.5	63.7
36	66.7	65.4	65.1	65.1	64.5	66.8	62.7	58.5	56.2	55.2	55.2	55.4	56.3	55.7	57.4	57.3	55.9	56.0	55.9	56.3	56.7	57.8	58.7	60.8	65.4	64.4	64.2	63.7	63.5	63.0	62.6	62.0	62.6	63.8
35	66.8	65.5	65.1	65.2	64.5	66.8	62.8	58.5	56.3	55.3	55.2	55.4	56.3	55.8	57.5	57.4	56.0	56.1	56.0	56.4	56.8	57.9	58.8	60.9	65.4	64.5	64.2	63.7	63.6	63.1	62.7	62.1	62.7	63.8
34	66.9	65.6	65.2	65.3	64.6	66.9	62.9	58.6	56.4	55.4	55.2	55.4	56.4	55.8	57.5	57.4	56.0	56.1	56.0	56.5	56.8	58.0	58.8	61.0	65.5	64.6	64.3	63.8	63.6	63.2	62.7	62.2	62.8	63.9
33	66.9	65.7	65.3	65.4	64.7	67.0	63.0	58.7	56.4	55.4	55.3	55.5	56.4	55.9	57.5	57.5	56.1	56.2	56.0	56.5	56.9	58.0	58.9	61.0	65.6	64.6	64.4	63.9	63.7	63.2	62.8	62.2	62.8	64.0
32	67.0	65.8	65.4	65.4	64.8	67.1	63.0	58.7	56.4	55.5	55.3	55.6	56.5	55.9	57.6	57.6	56.2	56.3	56.1	56.6	56.9	58.1	59.0	61.1	65.7	64.7	64.4	63.9	63.8	63.3	62.9	62.3	62.9	64.1
31	67.1	65.8	65.4	65.5	64.9	67.1	63.1	58.8	56.5	55.5	55.4	55.6	56.6	55.9	57.7	57.6	56.2	56.3	56.2	56.7	57.0	58.2	59.1	61.2	65.7	64.8	64.5	64.0	63.8	63.4	62.9	62.4	63.0	64.1
30	67.2	65.9	65.5	65.6	65.0	67.2	63.2	58.9	56.6	55.6	55.5	55.7	56.6	56.0	57.7	57.7	56.3	56.4	56.2	56.7	57.1	58.2	59.1	61.2	65.8	64.8	64.6	64.1	63.9	63.4	63.0	62.4	63.0	64.2
29	67.3	66.0	65.6	65.7	65.0	67.3	63.3	59.0	56.7	55.7	55.6	55.8	56.7	56.1	57.8	57.7	56.3	56.4	56.3	56.8	57.1	58.3	59.2	61.3	65.9	64.9	64.7	64.1	64.0	63.5	63.1	62.5	63.1	64.3
28	67.4	66.1	65.7	65.7	65.1	67.4	63.4	59.1	56.8	55.8	55.6	55.8	56.8	56.1	57.9	57.8	56.4	56.5	56.4	56.9	57.2	58.4	59.3	61.4	66.0	65.0	64.7	64.2	64.1	63.6	63.2	62.6	63.2	64.4
27	67.5	66.2	65.8	65.8	65.2	67.5	63.5	59.2	56.9	55.9	55.7	55.9	56.8	56.2	57.9	57.8	56.4	56.5	56.4	56.9	57.3	58.4	59.3	61.5	66.0	65.1	64.8	64.3	64.1	63.7	63.2	62.7	63.3	64.5
26	67.6	66.3	65.9	66.0	65.3	67.6	63.6	59.2	57.0	56.0	55.8	56.0	56.9	56.3	58.0	57.9	56.5	56.6	56.5	57.0	57.3	58.5	59.4	61.6	66.1	65.1	64.9	64.4	64.2	63.7	63.3	62.7	63.4	64.6
25	67.7	66.4	66.0	66.0	65.3	67.7	63.7	59.3	57.0	56.1	55.9	56.1	57.0	56.3	58.0	57.9	56.5	56.7	56.6	57.0	57.4	58.6	59.5	61.6	66.2	65.2	65.0	64.4	64.3	63.8	63.4	62.8	63.4	64.6
24	67.8	66.5	66.1	66.1	65.4	67.8	63.8	59.4	57.1	56.2	56.0	56.2	57.0	56.4	58.1	57.9	56.6	56.7	56.6	57.1	57.4	58.7	59.6	61.7	66.3	65.3	65.0	64.5	64.4	63.9	63.5	62.9	63.5	64.7
23	67.9	66.6	66.2	66.2	65.5	67.9	63.8	59.5	57.3	56.3	56.1	56.3	57.1	56.5	58.2	58.0	56.6	56.8	56.7	57.1	57.5	58.7	59.6	61.8	66.4	65.4	65.1	64.6	64.4	64.0	63.5	63.0	63.6	64.8
22	68.0	66.7	66.3	66.3	65.6	68.0	63.9	59.6	57.3	56.3	56.2	56.4	57.2	56.5	58.2	58.1	56.7	56.8	56.8	57.2	57.6	58.8	59.7	61.9	66.5	65.5	65.2	64.7	64.5	64.0	63.6	63.1	63.7	64.9
21	68.1	66.8	66.4	66.4	65.6	68.0	64.0	59.7	57.5	56.4	56.3	56.4	57.3	56.6	58.3	58.1	56.8	56.9	56.8	57.3	57.6	58.9	59.8	62.0	66.5	65.6	65.2	64.8	64.6	64.1	63.7	63.1	63.7	65.0
20	68.2	66.9	66.5	66.5	65.8	68.2	64.1	59.8	57.6	56.5	56.4	56.5	57.3	56.6	58.3	58.2	56.8	56.9	56.9	57.3	57.7	58.9	59.9	62.0	66.6	65.6	65.3	64.8	64.7	64.2	63.8	63.2	63.8	65.1
19	68.3	67.0	66.6	66.6	65.9	68.3	64.3	60.0	57.6	56.6	56.5	56.6	57.4	56.6	58.3	58.2	56.9	57.0	56.9	57.4	57.8	59.0	59.9	62.1	66.7	65.7	65.4	64.9	64.7	64.3	63.9	63.3	63.9	65.2
18	68.4	67.1	66.7	66.7	65.9	68.3	64.4	60.1	57.7	56.7	56.5	56.7	57.5	56.7	58.4	58.3	56.9	57.0	56.9	57.4	57.8	59.1	60.0	62.2	66.8	65.8	65.5	65.0	64.8	64.3	63.9	63.4	64.0	65.2
17	68.5	67.2	66.8	66.8	66.0	68.5	64.5	60.2	57.8	56.8	56.6	56.8	57.4	56.7	58.3	58.3	57.0	57.1	57.0	57.5	57.9	59.2	60.1	62.3	66.9	65.9	65.6	65.1	64.9	64.4	64.0	63.4	64.1	65.3
16	68.7	67.4	67.0	66.9	66.1	68.5	64.6	60.3	57.9	56.9	56.7	56.9	57.5	56.6	58.3	58.4	57.0	57.2	57.0	57.6	57.9	59.2	60.2	62.3	67.0	66.0	65.6	65.1	65.0	64.5	64.1	63.5	64.1	65.4
15	68.8	67.5	67.1	67.0	66.2	68.7	64.7	60.4	58.0	57.0	56.8	57.0	57.5	56.6	58.2	58.4	57.1	57.2	57.1	57.6	58.0	59.3	60.2	62.4	67.0	66.0	65.7	65.2	65.0	64.5	64.2	63.6	64.2	65.5
14	68.9	67.6	67.2	67.1	66.4	68.8	64.8	60.5	58.1	57.1	56.9	57.0	57.5	56.4	58.2	58.4	57.1	57.3	57.2	57.7	58.1	59.4	60.3	62.5	67.1	66.1	65.8	65.3	65.1	64.6	64.2	63.7	64.3	65.6
13	69.1	67.8	67.3	67.3	66.4	68.9	64.9	60.6	58.3	57.2	57.0	57.1	57.4	56.3	58.1	58.5	57.2	57.3	57.2	57.8	58.1	59.4	60.4	62.6	67.2	66.2	65.9	65.4	65.2	64.7	64.3	63.8	64.4	65.7
12	69.2	67.9	67.4	67.4	66.6	69.0	65.0	60.7	58.4	57.3	57.1	57.2	57.3	56.0	57.9	58.5	57.2	57.4	57.3	57.8	58.2	59.5	60.5	62.6	67.3	66.3	66.0	65.4	65.2	64.8	64.4	63.8	64.5	65.8
11	69.4	68.0	67.6	67.5	66.7	69.2	65.2	60.8	58.5	57.4	57.2	57.2	57.2	55.8	57.7	58.5	57.3	57.4	57.3	57.9	58.2	59.6	60.5	62.7	67.4	66.4	66.1	65.5	65.3	64.9	64.5	63.9	64.6	65.9
10	69.5	68.2	67.7	67.6	66.8	69.3	65.3	61.0	58.6	57.5	57.3	57.3	56.9	55.2	57.2	58.5	57.3	57.4	57.4	57.9	58.3	59.6	60.6	62.8	67.5	66.4	66.1	65.6	65.4	64.9	64.5	64.0	64.6	66.0
9	69.6	68.3	67.9	67.8	66.9	69.5	65.4	61.1	58.7	57.6	57.4	57.3	56.5	54.4	56.4	58.4	57.3	57.5	57.4	58.0	58.3	59.7	60.7	62.8	67.6	66.5	66.2	65.7	65.5	65.0	64.6	64.0	64.7	66.1
8	69.8	68.5	68.0	67.9	67.1	69.6	65.6	61.2	58.8	57.7	57.4	57.2	55.7	52.7	55.8	58.3	57.4	57.5	57.5	58.0	58.4	59.8	60.7	62.9	67.7	66.6	66.3	65.7	65.5	65.1	64.7	64.1	64.9	66.2
7	70.0	68.6	68.2	68.1	67.2	69.8	65.7	61.3	58.9	57.8	57.4	57.0	54.5	51.2	55.1	58.0	57.4	57.6	57.5	58.1	58.5	59.8	60.8	63.0	67.7	66.7	66.4	65.8	65.6	65.1	64.8	64.2	64.9	66.3
6	70.1	68.8	68.3	68.2	67.4	70.0	65.8	61.4	59.0	57.9	57.2	56.5	53.3	49.4	54.4	57.8	57.5	57.6	57.6	58.1	58.5	59.9	60.8	63.1	67.8	66.7	66.4	65.8	65.6	65.2	64.8	64.3	65.0	66.4
5	70.3	69.0	68.4	68.4	67.5	70.1	66.0	61.5	59.0	57.8	57.0	55.9	52.3	48.0	53.4	57.6	57.5	57.7	57.6	58.2	58.5	60.0	60.9	63.2	67.9	66.8	66.4	65.9	65.7	65.2	64.9	64.4	65.1	66.5
4	**70.5**	69.2	68.6	68.5	67.7	70.3	66.1	61.6	59.0	57.7	56.5	54.3	51.6	46.7	52.8	57.4	57.5	57.7	57.6	58.2	58.6	60.0	61.0	63.2	67.9	66.8	66.4	65.9	65.7	65.3	65.0	64.4	65.1	66.6
3	**70.7**	69.3	68.7	68.6	67.8	70.4	66.1	61.5	58.7	57.3	55.7	52.5	51.1	45.7	52.3	57.3	57.5	57.7	57.6	58.2	58.6	60.1	61.1	63.3	67.9	66.8	66.4	65.8	65.6	65.2	65.0	64.5	65.2	66.6
2	**70.9**	69.5	68.9	68.7	67.9	**70.6**	66.2	61.1	58.2	56.6	54.2	50.4	50.8	44.6	52.0	57.1	57.3	57.6	57.6	58.2	58.7	60.1	61.1	63.4	67.9	66.7	66.3	65.7	65.5	65.1	64.9	64.5	65.3	66.8
1	**71.1**	69.6	69.0	68.9	68.1	**70.7**	65.9	60.4	57.0	55.2	52.2	48.8							57.3	58.2	58.6	60.2	61.2	63.4	68.0	66.6	66.2	65.5	65.2	64.8	64.7	64.5	65.3	66.8
Max	**71.1**	69.6	69.0	68.9	68.1	**70.7**	66.2	61.6	59.0	57.9	57.4	57.3	57.5	56.7	58.4	58.5	57.5	57.7	57.6	58.2	58.7	60.2	61.2	63.4	68.0	66.8	66.4	65.9	65.7	65.3	65.0	64.5	65.3	66.8
Min	66.7	65.3	65.0	65.1	64.4	66.7	62.7	58.4	56.2	55.2	52.2	48.8	50.8	44.6	52.0	57.1	55.9	56.0	55.8	56.3	56.6	57.8	58.6	60.7	65.3	64.3	64.1	63.6	63.4	63.0	62.5	62.0	62.5	63.7

Total	6817
Exceedance	85
Compliance Rate	98.8%

Noise sensitive receivers with exceedance (≥70.5 dB(A))

Floor	R201 max	R202 max	R203 max	R204 max	R205 max	R206 max	R207 max	R208 max	R209 max	R210 max	R211 max	R212 max	R213 max	R214 max	R215 max	R216 max	R217 max	R218 max	R219 max	R220 max	R221 max	R222 max	R223 max	R224 max	R225 max	R226 max	R227 max	R228 max	R229 max	R230 max	R231 max	R232 max	R233 max	R234 max
40																																		
39																																		
38																																		
37	62.3	59.1	56.1	<40	54.8	54.5	55.3	55.6	55.8	49.5	<40	<40	<40	<40	<40	42.2	43.3	<40	<40	45.2	49.9	64.4	63.2	63.1	62.7	62.4	62.1	56.9	64.3	65.4	63.6	63.3	61.2	62.9
36	62.4	59.2	56.1	<40	54.8	54.5	55.3	55.7	55.9	49.0	<40	<40	<40	<40	<40	42.2	43.3	<40	<40	45.2	49.9	64.5	63.2	63.1	62.7	62.4	62.1	57.0	64.4	65.5	63.7	63.3	61.3	63.0
35	62.4	59.2	56.2	<40	54.9	54.6	55.4	55.7	55.9	49.1	<40	<40	<40	<40	<40	42.3	43.3	<40	<40	45.3	49.9	64.5	63.3	63.2	62.8	62.5	62.1	57.0	64.4	65.5	63.8	63.4	61.3	63.0
34	62.5	59.3	56.3	<40	55.0	54.7	55.5	55.8	56.0	48.8	<40	<40	<40	<40	<40	42.3	43.4	<40	<40	45.3	49.9	64.5	63.3	63.2	62.8	62.5	62.2	57.1	64.4	65.6	63.8	63.5	61.4	63.1
33	62.6	59.4	56.3	<40	55.1	54.7	55.5	55.8	56.0	48.3	<40	<40	<40	<40	<40	42.3	43.4	<40	<40	45.2	49.8	64.6	63.4	63.2	62.8	62.5	62.2	57.1	64.5	65.7	63.9	63.5	61.5	63.2
32	62.7	59.5	56.4	<40	55.1	54.8	55.6	55.9	56.1	48.4	<40	<40	<40	<40	<40	42.3	43.5	<40	<40	45.0	49.8	64.6	63.4	63.3	62.9	62.6	62.3	57.2	64.6	65.7	64.0	63.6	61.6	63.3
31	62.7	59.5	56.4	<40	55.2	54.9	55.7	55.9	56.1	48.2	<40	<40	<40	<40	<40	42.4	43.5	<40	<40	45.0	49.7	64.7	63.4	63.3	62.9	62.6	62.3	57.2	64.6	65.8	64.1	63.7	61.6	63.3
30	62.8	59.6	56.5	<40	55.2	54.9	55.7	56.0	56.2	48.2	<40	<40	<40	<40	<40	42.4	43.6	<40	<40	45.1	49.6	64.7	63.5	63.3	63.0	62.7	62.3	57.3	64.7	65.9	64.2	63.8	61.7	63.4
29	62.8	59.7	56.6	<40	55.3	55.0	55.8	56.1	56.2	48.3	<40	<40	<40	<40	<40	42.5	43.6	<40	<40	45.1	49.5	64.7	63.5	63.4	63.0	62.7	62.4	57.3	64.7	65.9	64.2	63.9	61.8	63.5
28	62.9	59.7	56.7	<40	55.4	55.1	55.8	56.1	56.3	48.3	<40	<40	<40	<40	<40	42.5	43.7	<40	<40	45.2	49.3	64.8	63.6	63.4	63.0	62.8	62.4	57.4	64.8	66.0	64.3	63.9	61.8	63.6
27	63.0	59.8	56.7	<40	55.4	55.1	55.9	56.2	56.3	48.2	<40	<40	<40	<40	<40	42.6	43.7	<40	<40	45.2	49.1	64.8	63.6	63.5	63.1	62.8	62.5	57.4	64.8	66.1	64.4	64.0	61.9	63.6
26	63.1	59.8	56.8	<40	55.5	55.2	56.0	56.2	56.3	48.2	<40	<40	<40	<40	<40	42.6	43.8	<40	<40	45.3	48.8	64.8	63.6	63.5	63.1	62.8	62.5	57.5	64.9	66.2	64.5	64.1	62.0	63.7
25	63.1	59.9	56.8	<40	55.6	55.2	56.0	56.3	56.4	48.3	<40	<40	<40	<40	<40	42.7	43.8	<40	<40	45.4	48.5	64.9	63.7	63.6	63.2	62.9	62.5	57.5	65.0	66.2	64.6	64.2	62.1	63.8
24	63.2	60.0	56.9	<40	55.7	55.3	56.1	56.3	56.4	48.3	<40	<40	<40	<40	<40	42.7	43.9	<40	<40	45.4	48.2	64.9	63.7	63.6	63.2	62.9	62.6	57.5	65.0	66.3	64.7	64.3	62.1	63.9
23	63.3	60.1	57.0	<40	55.7	55.4	56.1	56.4	56.4	48.2	<40	<40	<40	<40	<40	42.8	43.9	<40	<40	45.5	48.1	64.9	63.8	63.6	63.3	63.0	62.6	57.6	65.1	66.4	64.8	64.3	62.2	64.0
22	63.4	60.1	57.1	<40	55.8	55.4	56.1	56.5	56.4	48.2	<40	<40	<40	<40	<40	42.8	44.0	<40	<40	45.5	47.8	65.0	63.8	63.7	63.3	63.0	62.7	57.6	65.1	66.5	64.9	64.4	62.3	64.0
21	63.4	60.2	57.1	<40	55.9	55.5	56.2	56.5	56.4	48.3	<40	<40	<40	<40	<40	42.9	44.0	<40	<40	45.6	47.7	65.0	63.9	63.7	63.4	63.1	62.7	57.7	65.2	66.5	64.9	64.5	62.4	64.1
20	63.5	60.3	57.2	<40	55.9	55.6	56.3	56.5	56.5	48.3	<40	<40	<40	<40	<40	42.9	44.1	<40	<40	45.6	47.5	65.1	63.9	63.8	63.4	63.1	62.8	57.7	65.3	66.6	65.0	64.6	62.5	64.2
19	63.6	60.3	57.3	<40	56.0	55.6	56.3	56.6	56.5	48.2	<40	<40	<40	<40	<40	42.9	44.1	<40	<40	45.7	47.4	65.1	63.9	63.8	63.5	63.1	62.8	57.7	65.3	66.7	65.1	64.7	62.5	64.3
18	63.6	60.4	57.4	<40	56.0	55.7	56.3	56.7	56.5	48.2	<40	<40	<40	<40	<40	43.0	44.2	<40	<40	45.7	47.4	65.1	64.0	63.9	63.5	63.2	62.8	57.8	65.4	66.8	65.2	64.8	62.6	64.3
17	63.7	60.5	57.4	<40	56.1	55.7	56.4	56.7	56.4	48.3	<40	<40	<40	<40	<40	43.0	44.2	<40	<40	45.7	47.3	65.2	64.0	63.9	63.5	63.2	62.9	57.8	65.4	66.9	65.3	64.9	62.7	64.4
16	63.8	60.5	57.4	<40	56.2	55.8	56.4	56.8	56.4	48.3	<40	<40	<40	<40	<40	43.1	44.3	<40	<40	45.8	47.3	65.2	64.1	63.9	63.6	63.3	62.9	57.9	65.5	67.0	65.4	65.0	62.8	64.5
15	63.9	60.6	57.5	<40	56.3	55.9	56.5	56.8	56.4	48.3	<40	<40	<40	<40	<40	43.1	44.3	<40	<40	45.8	47.2	65.2	64.1	64.0	63.6	63.3	63.0	57.9	65.6	67.0	65.5	65.0	62.8	64.6
14	63.9	60.6	57.6	<40	56.3	55.9	56.5	56.8	56.3	48.3	<40	<40	<40	<40	<40	43.2	44.4	<40	<40	45.9	47.3	65.3	64.1	64.0	63.7	63.4	63.0	57.9	65.6	67.1	65.6	65.1	62.9	64.7
13	64.0	60.6	57.7	<40	56.4	56.0	56.5	56.9	56.3	48.4	<40	<40	<40	<40	<40	43.2	44.4	<40	<40	45.9	47.2	65.3	64.2	64.1	63.7	63.4	63.0	58.0	65.7	67.2	65.7	65.2	63.0	64.8
12	64.0	60.6	57.7	<40	56.4	56.1	56.6	56.9	56.3	48.4	<40	<40	<40	<40	<40	43.2	44.4	<40	<40	46.0	47.3	65.3	64.2	64.1	63.7	63.4	63.1	58.0	65.8	67.3	65.8	65.3	63.1	64.9
11	64.1	60.6	57.8	<40	56.5	56.1	56.6	56.9	56.3	48.4	<40	<40	<40	<40	<40	43.3	44.5	<40	<40	46.0	47.3	65.4	64.3	64.1	63.8	63.5	63.1	58.0	65.8	67.4	65.9	65.4	63.2	64.9
10	64.1	60.7	57.8	<40	56.6	56.2	56.6	56.9	56.4	48.4	<40	<40	<40	<40	<40	43.3	44.5	<40	<40	46.1	47.3	65.4	64.3	64.2	63.8	63.5	63.2	58.1	65.9	67.5	66.0	65.5	63.2	65.0
9	64.2	60.7	57.9	<40	56.6	56.2	56.7	57.0	56.4	48.4	<40	<40	<40	<40	<40	43.3	44.5	<40	<40	46.1	47.4	65.4	64.3	64.2	63.9	63.6	63.2	58.1	66.0	67.6	66.1	65.6	63.3	65.1
8	64.2	60.7	58.0	<40	56.7	56.3	56.7	57.0	56.4	48.5	<40	<40	<40	<40	<40	43.4	44.5	<40	<40	46.2	47.4	65.4	64.4	64.2	63.9	63.6	63.2	58.1	66.0	67.7	66.2	65.7	63.4	65.2
7	64.3	60.8	58.0	<40	56.7	56.4	56.8	57.1	56.4	48.5	<40	<40	<40	<40	<40	43.4	44.5	<40	<40	46.2	47.3	65.5	64.4	64.3	63.9	63.6	63.3	58.2	66.1	67.8	66.3	65.8	63.5	65.3
6	64.4	60.8	58.1	<40	56.8	56.4	56.8	57.0	56.5	48.5	<40	<40	<40	<40	<40	43.4	44.6	<40	<40	46.2	47.4	65.5	64.4	64.3	64.0	63.7	63.3	58.2	66.1	67.9	66.4	65.9	63.6	65.3
5	64.4	60.9	58.1	<40	56.9	56.4	56.8	57.1	56.5	48.5	<40	<40	<40	<40	<40	43.4	44.6	<40	<40	46.3	47.4	65.5	64.5	64.3	64.0	63.7	63.3	58.2	66.2	68.0	66.5	66.0	63.7	65.4
4	64.5	61.0	58.2	<40	56.9	56.5	56.8	57.1	56.4	48.5	<40	<40	<40	<40	<40	43.1	44.5	<40	<40	46.3	47.5	65.5	64.5	64.3	64.0	63.7	63.4	58.3	66.3	68.1	66.6	66.1	63.7	65.5
3	64.6	61.0	58.3	<40	57.0	56.6	56.8	57.1	56.5	48.5	<40	<40	<40	<40	<40	42.7	44.1	<40	<40	46.2	47.5	65.5	64.5	64.4	64.1	63.8	63.4	58.3	66.3	68.1	66.7	66.2	63.8	65.6
2	64.6	61.1	58.3	<40	57.0	56.6	56.8	57.1	56.3	48.5	<40	<40	<40	<40	<40	41.9	43.6	<40	<40	46.1	47.5	65.5	64.5	64.4	64.1	63.8	63.4	58.3	66.4	68.2	66.8	66.2	63.9	65.6
1	64.7	61.1	58.3	<40	56.9								<40	<40	<40	41.4	43.2	<40	<40	45.5	47.2	65.5	64.5	64.3	64.0	63.7	63.4	58.3	66.4	68.3	66.9	66.3	63.9	65.7
Max	64.7	61.1	58.3	<40	57.0	56.6	56.8	57.1	56.5	49.5	<40	<40	<40	<40	<40	43.4	44.6	<40	<40	46.3	49.9	65.5	64.5	64.4	64.1	63.8	63.4	58.3	66.4	68.3	66.9	66.3	63.9	65.7
Min	62.3	59.1	56.1	<40	54.8	54.5	55.3	55.6	55.8	48.2	<40	<40	<40	<40	<40	41.4	43.2	<40	<40	45.0	47.2	64.4	63.2	63.1	62.7	62.4	62.1	56.9	64.3	65.4	63.6	63.3	61.2	62.9

Noise sensitive receivers with exceedance (≥ 70.5 dB(A))

Floor	R235 max	R236 max	R237 max	R238 max	R301 max	R302 max	R303 max	R304 max	R305 max	R306 max	R307 max	R308 max	R309 max	R310 max	R311 max	R312 max	R313 max	R314 max	R315 max	R316max	R317 max	R318 max	R319 max	R320 max	R321 max	R322 max	R323 max	R324 max	R325 max	R326 max	R327 max	R328 max	R329 max	R330 max
40																																		
39																																		
38																																		
37	62.7	63.4	62.3	65.1	66.9	63.5	64.4	65.0	65.5	66.6	63.5	62.4	61.9	62.2	62.5	63.0	63.3	64.0	64.3	65.1	60.6	59.1	57.9	57.4	57.0	56.7	56.7	56.5	57.4	57.2	56.3	56.4	58.1	58.5
36	62.8	63.5	62.4	65.2	67.0	63.5	64.5	65.1	65.6	66.7	63.6	62.5	62.0	62.3	62.6	63.1	63.4	64.1	64.4	65.2	60.6	59.2	58.0	57.5	57.1	56.7	56.8	56.6	57.5	57.2	56.3	56.4	58.1	58.5
35	62.9	63.6	62.5	65.3	67.1	63.6	64.5	65.2	65.7	66.8	63.7	62.6	62.1	62.4	62.7	63.2	63.5	64.1	64.4	65.2	60.7	59.2	58.1	57.5	57.2	56.8	56.9	56.5	57.5	57.3	56.4	56.5	58.2	58.6
34	62.9	63.6	62.5	65.3	67.1	63.7	64.6	65.3	65.7	66.8	63.8	62.7	62.2	62.5	62.8	63.3	63.5	64.2	64.5	65.3	60.8	59.3	58.2	57.0	56.7	56.5	56.6	56.5	57.5	57.3	56.5	56.5	58.3	58.6
33	63.0	63.7	62.6	65.4	67.2	63.8	64.7	65.3	65.8	66.9	63.9	62.8	62.3	62.6	62.9	63.3	63.6	64.3	64.6	65.4	60.7	59.1	58.3	57.1	56.8	56.6	56.7	56.6	57.6	57.4	56.5	56.6	58.3	58.7
32	63.1	63.8	62.7	65.5	67.3	63.9	64.8	65.4	65.8	67.0	64.0	62.9	62.4	62.7	62.9	63.4	63.7	64.3	64.7	65.5	60.8	59.2	58.4	57.2	56.9	56.7	56.8	56.7	57.7	57.5	56.6	56.7	58.3	58.7
31	63.2	63.8	62.7	65.6	67.3	63.9	64.9	65.4	65.9	67.0	64.1	63.0	62.5	62.8	63.0	63.5	63.8	64.4	64.7	65.6	60.9	59.3	58.5	57.3	57.0	56.8	56.9	56.8	57.8	57.5	56.7	56.7	58.4	58.7
30	63.2	63.9	62.8	65.6	67.4	64.0	65.0	65.5	66.0	67.1	64.2	63.1	62.6	62.9	63.1	63.6	63.8	64.5	64.8	65.7	61.0	59.4	58.6	57.4	57.1	56.9	56.9	56.9	57.8	57.5	56.7	56.8	58.4	58.8
29	63.3	64.0	62.9	65.7	67.5	64.1	65.0	65.6	66.1	67.2	64.3	63.2	62.7	63.0	63.2	63.6	63.9	64.6	64.9	65.7	61.1	59.6	58.7	57.5	57.2	57.0	57.0	56.9	57.9	57.6	56.8	56.9	58.4	58.8
28	63.4	64.1	63.0	65.8	67.6	64.2	65.1	65.6	66.1	67.3	64.4	63.3	62.8	63.1	63.3	63.7	64.0	64.6	65.0	65.8	61.2	59.6	58.8	57.6	57.3	57.0	57.1	57.0	58.0	57.6	56.8	56.9	58.4	58.8
27	63.4	64.1	63.0	65.9	67.6	64.3	65.2	65.7	66.2	67.4	64.5	63.4	62.9	63.2	63.4	63.8	64.0	64.7	65.1	65.9	61.3	59.8	58.9	57.7	57.4	57.1	57.2	57.1	58.0	57.7	56.8	57.0	58.4	58.7
26	63.5	64.2	63.1	65.9	67.8	64.4	65.3	65.8	66.2	67.4	64.6	63.5	63.0	63.3	63.5	63.8	64.1	64.8	65.2	66.0	61.4	59.9	59.0	57.8	57.5	57.2	57.3	57.2	58.1	57.7	56.9	57.1	58.4	58.7
25	63.6	64.3	63.2	66.0	67.8	64.5	65.4	65.8	66.3	67.5	64.8	63.6	63.1	63.4	63.6	63.9	64.2	64.9	65.3	66.2	61.6	60.0	59.1	57.9	57.6	57.3	57.4	57.3	58.2	57.8	56.9	57.1	58.3	58.8
24	63.7	64.4	63.3	66.1	67.9	64.6	65.5	65.9	66.4	67.6	64.9	63.7	63.2	63.5	63.7	64.0	64.3	65.0	65.4	66.3	61.7	60.1	59.2	58.0	57.7	57.4	57.5	57.4	58.3	57.9	57.0	57.2	58.3	58.8
23	63.8	64.4	63.3	66.2	68.0	64.6	65.6	66.0	66.4	67.7	65.0	63.9	63.3	63.6	63.8	64.1	64.4	65.2	65.5	66.4	61.8	60.2	59.4	58.1	57.8	57.5	57.6	57.5	58.4	57.9	57.1	57.2	58.3	58.8
22	63.9	64.5	63.4	66.3	68.0	64.8	65.7	66.1	66.5	67.8	65.1	64.0	63.4	63.7	63.9	64.2	64.5	65.3	65.7	66.6	61.9	60.4	59.5	58.2	57.9	57.6	57.7	57.6	58.4	57.9	57.1	57.3	58.4	58.7
21	63.9	64.6	63.5	66.4	68.1	64.9	65.8	66.1	66.6	67.9	65.3	64.1	63.6	63.9	64.0	64.3	64.6	65.4	65.8	66.7	62.0	60.5	59.6	58.4	58.0	57.8	57.8	57.7	58.5	57.9	57.2	57.4	58.3	58.7
20	64.0	64.7	63.6	66.4	68.2	65.0	65.9	66.2	66.7	68.0	65.4	64.3	63.7	64.0	64.1	64.4	64.8	65.5	65.9	66.8	62.1	60.6	59.7	58.5	58.1	57.9	57.9	57.8	58.6	58.0	57.2	57.4	58.3	58.7
19	64.1	64.8	63.7	66.5	68.3	65.1	66.0	66.3	66.8	68.1	65.5	64.4	63.8	64.1	64.2	64.5	64.9	65.6	66.0	66.9	62.3	60.7	59.9	58.6	58.2	58.0	58.0	57.9	58.6	58.0	57.2	57.4	58.3	58.8
18	64.2	64.8	63.7	66.6	68.4	65.2	66.1	66.5	66.9	68.2	65.7	64.5	63.9	64.2	64.3	64.7	65.0	65.8	66.1	67.1	62.4	60.9	60.0	58.7	58.3	58.1	58.1	58.0	58.7	58.0	57.3	57.5	58.3	58.8
17	64.3	64.9	63.8	66.7	68.5	65.3	66.2	66.5	67.0	68.3	65.8	64.7	64.1	64.3	64.5	64.8	65.1	65.9	66.3	67.2	62.6	60.9	60.1	58.8	58.5	58.2	58.2	58.1	58.8	57.9	57.2	57.4	58.3	58.8
16	64.4	65.0	63.9	66.8	68.6	65.4	66.3	66.6	67.1	68.4	66.0	64.8	64.2	64.4	64.6	65.0	65.3	66.0	66.4	67.4	62.7	61.1	60.3	59.0	58.6	58.3	58.4	58.2	58.8	57.8	57.2	57.5	58.3	58.9
15	64.4	65.1	64.0	66.9	68.8	65.5	66.4	66.7	67.2	68.5	66.1	65.0	64.4	64.5	64.7	65.0	65.4	66.2	66.6	67.5	62.9	61.2	60.4	59.1	58.7	58.4	58.5	58.3	58.9	57.8	57.0	57.5	58.4	58.9
14	64.5	65.1	64.1	67.0	68.9	65.6	66.5	66.8	67.3	68.6	66.3	65.1	64.5	64.7	64.9	65.2	65.6	66.3	66.8	67.7	63.1	61.4	60.5	59.2	58.8	58.5	58.6	58.4	59.0	57.6	56.9	57.3	58.4	58.9
13	64.6	65.2	64.2	67.1	69.0	65.7	66.6	66.9	67.4	68.7	66.5	65.2	64.7	64.8	65.0	65.3	65.7	66.5	66.9	67.9	63.2	61.5	60.7	59.4	59.0	58.6	58.7	58.5	59.1	57.4	56.8	57.1	58.4	59.0
12	64.7	65.3	64.2	67.2	69.1	65.8	66.7	67.0	67.4	68.8	66.7	65.4	64.8	65.0	65.1	65.5	65.8	66.6	67.1	68.1	63.4	61.7	60.8	59.5	59.1	58.8	58.8	58.6	59.1	57.2	56.4	56.8	58.4	59.1
11	64.7	65.4	64.3	67.2	69.2	65.9	66.7	67.0	67.5	68.9	66.9	65.6	65.0	65.1	65.2	65.6	66.0	66.8	67.3	68.2	63.6	61.9	61.0	59.6	59.2	58.9	58.8	58.6	59.2	56.7	56.0	56.6	58.4	59.1
10	64.8	65.5	64.4	67.3	69.4	65.9	66.8	67.1	67.6	69.1	67.1	65.7	65.1	65.3	65.3	65.7	66.1	67.0	67.4	68.4	63.8	62.0	61.2	59.8	59.4	58.9	59.0	58.7	59.2	55.9	55.0	55.9	58.3	59.0
9	64.9	65.5	64.5	67.4	69.4	66.0	67.0	67.2	67.7	69.2	67.3	65.9	65.3	65.4	65.5	65.9	66.3	67.2	67.6	68.6	64.0	62.2	61.2	59.9	59.5	59.0	59.0	58.8	59.2	54.9	53.6	54.9	58.0	59.0
8	65.0	65.6	64.6	67.5	69.6	66.1	67.0	67.3	67.9	69.4	67.5	66.1	65.5	65.5	65.6	66.1	66.4	67.3	67.8	68.9	64.1	62.4	61.4	60.0	59.6	59.1	59.2	58.9	59.3	54.1	51.9	53.1	57.7	58.9
7	65.1	65.7	64.6	67.6	69.7	66.2	67.1	67.5	68.0	69.5	67.7	66.3	65.6	65.6	65.7	66.1	66.6	67.5	68.0	69.1	64.3	62.5	61.6	60.2	59.7	59.2	59.2	58.9	59.3	53.2	50.3	51.8	57.0	58.7
6	65.1	65.8	64.7	67.7	69.8	66.3	67.2	67.6	68.1	69.7	67.9	66.5	65.7	65.7	65.8	66.3	66.7	67.7	68.2	69.4	64.5	62.7	61.7	60.3	59.8	59.2	59.3	59.0	59.3	52.6	48.8	49.8	55.6	58.4
5	65.2	65.8	64.8	67.8	69.9	66.4	67.3	67.7	68.3	69.9	68.2	66.7	65.9	65.8	65.9	66.4	66.8	67.9	68.4	69.6	64.7	62.9	61.9	60.4	59.9	59.3	59.3	59.1	59.4	52.2	47.6	48.4	53.9	57.7
4	65.3	65.9	64.9	67.8	70.1	66.5	67.4	67.8	68.4	70.0	68.4	66.8	65.9	65.9	66.1	66.5	67.0	68.0	68.6	69.9	65.0	63.1	62.1	60.4	59.9	59.3	59.4	59.2	59.5	51.9	46.4	47.1	52.3	56.5
3	65.4	66.0	64.9	67.9	70.3	66.6	67.5	67.8	68.5	70.2	68.7	67.0	66.0	66.0	66.2	66.7	67.1	68.2	68.9	70.1	65.2	63.3	62.3	60.5	60.0	59.4	59.5	59.3	59.5	51.7	45.3	46.0	51.1	55.1
2	65.4	66.0	65.0	68.0	70.4	66.7	67.6	67.8	68.5	70.3	68.9	67.1	66.1	66.2	66.3	66.9	67.3	68.4	69.1	**70.5**	65.4	63.4	62.3	60.5	60.1	59.5	59.5	59.4	59.3	51.5	44.5	44.9	50.3	53.8
1	65.5	66.1	65.1	68.1	**70.5**	66.8	67.7	67.8	68.5	**70.5**	69.2	67.1	66.2	66.3	66.5	67.0	67.4	68.6	69.2	**70.8**	65.6	63.6	62.3	60.6	60.2	59.6							49.6	53.1
Max	65.5	66.1	65.1	68.1	**70.5**	66.8	67.7	67.8	68.5	**70.5**	69.2	67.1	66.2	66.3	66.5	67.0	67.4	68.6	69.2	**70.8**	65.6	63.6	62.3	60.6	60.2	59.6	59.5	59.4	59.5	58.0	57.3	57.5	58.4	59.1
Min	62.7	63.4	62.3	65.1	66.9	63.5	64.4	65.0	65.5	66.6	63.5	62.4	61.9	62.2	62.5	63.0	63.3	64.0	64.3	65.1	60.6	59.1	57.9	57.0	56.7	56.5	56.6	56.5	57.4	51.5	44.5	44.9	49.6	53.1

Noise sensitive receivers with exceedance (≥70.5 dB(A))

Floor	R331 max	R332 max	R333 max	R334 max	R401 max	R402 max	R403 max	R404 max	R405 max	R406 max	R407 max	R408 max	R409 max	R410 max	R411 max	R412 max	R413 max	R414 max	R415 max	R416 max	R417 max	R418 max	R419 max	R420 max	R421 max	R422 max	R423 max	R424 max	R425 max	R426 max	R427 max	R428 max	R429 max	R430 max
40																																		
39																																		
38																																		
37	59.0	59.9	61.4	64.2	57.0	57.1	57.0	56.4	56.5	<40	57.1	59.7	62.3	65.5	62.4	63.3	63.4	63.3	61.3	63.9	64.6	65.8	63.1	54.0	59.2	62.3	63.1	63.8	63.9	64.6	53.7	48.3	<40	<40
36	59.1	60.0	61.5	64.2	57.0	57.2	57.0	56.5	56.5	<40	57.2	59.7	62.4	65.6	62.5	63.4	63.4	63.4	61.4	64.0	64.7	65.8	63.1	53.8	59.2	62.4	63.2	63.8	64.0	64.6	53.7	48.3	<40	<40
35	59.1	60.0	61.5	64.3	57.1	57.3	57.0	56.6	56.6	<40	57.3	59.6	62.5	65.6	62.5	63.5	63.5	63.5	61.4	64.1	64.8	65.9	63.2	53.7	59.2	62.4	63.2	63.8	64.0	64.6	53.7	48.3	<40	<40
34	59.2	60.1	61.6	64.4	57.1	57.4	57.1	56.7	56.7	<40	57.4	59.7	62.6	65.7	62.6	63.6	63.6	63.6	61.5	64.2	64.9	66.0	63.2	53.6	59.2	62.4	63.2	63.8	64.0	64.6	53.7	48.3	<40	<40
33	59.2	60.1	61.7	64.5	57.2	57.5	57.2	56.8	56.7	<40	57.5	59.8	62.6	65.8	62.7	63.7	63.7	63.7	61.6	64.3	65.0	66.1	63.3	53.6	59.3	62.5	63.3	63.9	64.1	64.7	53.7	48.3	<40	<40
32	59.3	60.2	61.8	64.5	57.3	57.6	57.3	56.9	56.8	<40	57.5	59.9	62.7	65.9	62.8	63.8	63.8	63.8	61.7	64.4	65.1	66.2	63.4	53.6	59.3	62.5	63.3	63.9	64.1	64.7	53.7	48.3	<40	<40
31	59.3	60.3	61.8	64.6	57.3	57.6	57.4	57.0	56.9	<40	57.6	60.0	62.8	66.0	62.9	63.9	63.9	63.9	61.8	64.5	65.2	66.3	63.4	53.6	59.4	62.5	63.4	64.0	64.1	64.7	53.6	48.3	<40	<40
30	59.4	60.3	61.9	64.6	57.4	57.7	57.5	57.1	57.0	<40	57.7	60.1	62.9	66.1	63.0	64.0	64.0	64.0	61.9	64.6	65.3	66.4	63.5	53.7	59.4	62.6	63.4	64.0	64.2	64.8	53.6	48.3	<40	<40
29	59.4	60.3	61.9	64.7	57.5	57.8	57.5	57.2	57.1	<40	57.8	60.2	63.0	66.2	63.1	64.1	64.1	64.1	62.1	64.7	65.4	66.5	63.6	53.7	59.5	62.6	63.4	64.0	64.2	64.8	53.5	48.3	<40	<40
28	59.4	60.3	62.0	64.8	57.6	57.9	57.6	57.3	57.2	<40	57.9	60.3	63.1	66.3	63.3	64.2	64.2	64.2	62.2	64.9	65.5	66.6	63.7	53.7	59.6	62.7	63.5	64.1	64.2	64.8	53.4	48.2	<40	<40
27	59.4	60.4	62.0	64.9	57.7	58.0	57.7	57.4	57.3	<40	58.0	60.4	63.2	66.4	63.4	64.4	64.3	64.3	62.3	65.0	65.6	66.7	63.8	53.7	59.6	62.7	63.5	64.1	64.3	64.9	53.3	48.2	<40	<40
26	59.4	60.4	62.0	64.9	57.8	58.1	57.8	57.5	57.4	<40	58.1	60.5	63.4	66.5	63.5	64.5	64.4	64.4	62.4	65.1	65.7	66.8	63.9	53.8	59.7	62.8	63.6	64.1	64.3	64.9	53.2	48.1	<40	<40
25	59.4	60.4	62.0	64.9	57.9	58.2	57.9	57.6	57.5	<40	58.3	60.6	63.5	66.7	63.6	64.6	64.5	64.5	62.5	65.2	65.9	67.0	64.0	53.8	59.8	62.8	63.6	64.2	64.4	64.9	53.1	48.0	<40	<40
24	59.4	60.4	62.1	65.0	58.0	58.3	58.0	57.7	57.6	<40	58.4	60.8	63.6	66.8	63.7	64.7	64.6	64.6	62.6	65.3	66.0	67.0	64.1	53.8	59.8	62.9	63.6	64.2	64.4	65.0	53.1	47.9	<40	<40
23	59.4	60.4	62.1	65.1	58.0	58.4	58.1	57.8	57.7	<40	58.5	60.9	63.7	66.9	63.9	64.8	64.8	64.8	62.7	65.5	66.1	67.1	64.2	53.8	59.9	62.9	63.7	64.3	64.4	65.0	53.0	47.9	<40	<40
22	59.4	60.4	62.1	65.2	58.1	58.5	58.2	57.9	57.9	<40	58.6	61.0	63.9	67.1	64.0	64.9	64.9	64.9	62.9	65.6	66.3	67.3	64.4	53.9	60.0	63.0	63.7	64.3	64.5	65.0	52.9	47.9	<40	<40
21	59.4	60.4	62.2	65.2	58.2	58.6	58.3	58.0	58.0	<40	58.7	61.1	64.0	67.2	64.1	65.0	65.0	65.0	63.0	65.7	66.4	67.4	64.5	53.9	60.1	63.0	63.8	64.3	64.5	65.1	52.9	47.8	<40	<40
20	59.5	60.5	62.2	65.3	58.3	58.7	58.4	58.1	58.1	<40	58.9	61.3	64.1	67.3	64.2	65.1	65.1	65.1	63.1	65.9	66.5	67.6	64.6	53.9	60.2	63.1	63.8	64.4	64.6	65.1	52.9	47.8	<40	<40
19	59.5	60.5	62.3	65.4	58.4	58.8	58.6	58.2	58.2	<40	59.0	61.3	64.3	67.4	64.3	65.3	65.3	65.3	63.3	66.0	66.7	67.7	64.7	53.9	60.2	63.1	63.9	64.4	64.6	65.1	52.8	47.8	<40	<40
18	59.5	60.6	62.3	65.5	58.5	58.9	58.7	58.3	58.3	<40	59.1	61.4	64.4	67.6	64.5	65.4	65.4	65.4	63.4	66.2	66.8	67.9	64.8	54.0	60.3	63.2	63.9	64.5	64.6	65.2	52.8	47.8	<40	<40
17	59.6	60.6	62.4	65.5	58.6	59.0	58.8	58.5	58.5	<40	59.3	61.6	64.5	67.7	64.6	65.6	65.6	65.6	63.5	66.3	67.0	68.0	65.0	54.0	60.4	63.2	64.0	64.5	64.7	65.2	52.9	47.8	<40	<40
16	59.6	60.7	62.5	65.7	58.7	59.1	58.9	58.6	58.6	<40	59.4	61.7	64.6	67.9	64.8	65.7	65.7	65.7	63.7	66.5	67.2	68.2	65.1	54.0	60.5	63.3	64.0	64.6	64.7	65.3	52.8	47.8	<40	<40
15	59.7	60.7	62.5	65.8	58.8	59.3	59.0	58.7	58.7	<40	59.6	61.9	64.8	68.1	65.0	65.9	65.9	65.9	63.8	66.6	67.3	68.3	65.2	54.0	60.6	63.4	64.1	64.6	64.8	65.3	52.8	47.9	<40	<40
14	59.7	60.8	62.6	65.9	58.8	59.4	59.1	58.8	58.8	<40	59.7	62.1	65.0	68.2	65.1	66.1	66.0	66.0	64.0	66.8	67.5	68.5	65.4	54.1	60.7	63.4	64.1	64.6	64.8	65.3	52.9	47.8	<40	<40
13	59.8	60.9	62.7	65.9	58.9	59.5	59.2	59.0	59.0	<40	59.9	62.2	65.1	68.4	65.3	66.2	66.2	66.2	64.2	67.0	67.7	68.6	65.6	54.1	60.7	63.5	64.2	64.7	64.9	65.4	52.9	47.8	<40	<40
12	59.9	61.0	62.8	66.1	59.0	59.6	59.3	59.1	59.1	<40	60.0	62.4	65.3	68.6	65.5	66.4	66.3	66.3	64.3	67.2	67.9	68.8	65.7	54.1	60.8	63.5	64.2	64.7	64.9	65.4	52.9	47.9	<40	<40
11	60.0	61.0	62.9	66.2	59.0	59.7	59.5	59.2	59.3	<40	60.1	62.6	65.5	68.8	65.7	66.6	66.5	66.5	64.5	67.4	68.1	69.0	65.8	54.1	61.0	63.6	64.3	64.8	64.9	65.4	53.0	47.9	<40	<40
10	60.0	61.1	63.0	66.3	59.0	59.8	59.5	59.4	59.4	<40	60.3	62.7	65.7	69.0	65.9	66.8	66.7	66.7	64.7	67.6	68.3	69.2	66.0	54.2	61.0	63.7	64.4	64.8	65.0	65.4	53.0	47.9	<40	<40
9	60.1	61.2	63.1	66.4	59.0	59.8	59.6	59.5	59.5	<40	60.4	62.9	65.9	69.2	66.1	67.0	66.9	66.9	64.9	67.8	68.5	69.5	66.2	54.2	61.1	63.7	64.4	64.9	65.0	65.5	52.9	47.9	<40	<40
8	60.1	61.3	63.2	66.6	58.9	59.9	59.6	59.5	59.7	<40	60.6	63.0	66.1	69.4	66.3	67.2	67.1	67.1	65.0	68.0	68.8	69.7	66.4	54.2	61.2	63.8	64.4	64.9	65.0	65.5	53.0	48.0	<40	<40
7	60.1	61.3	63.3	66.7	58.7	59.9	59.6	59.6	59.8	<40	60.8	63.2	66.2	69.6	66.5	67.4	67.2	67.2	65.2	68.2	69.0	69.9	66.5	54.2	61.4	63.8	64.5	64.9	65.1	65.5	53.0	48.0	<40	<40
6	60.0	61.3	63.4	66.8	58.7	59.7	59.5	59.7	60.0	<40	60.9	63.4	66.4	69.9	66.7	67.7	67.4	67.4	65.4	68.4	69.3	70.1	66.8	54.3	61.5	63.9	64.5	65.0	65.1	65.5	53.0	48.0	<40	<40
5	59.7	61.2	63.5	67.0	58.7	59.5	59.4	59.8	60.0	<40	61.1	63.6	66.7	70.2	66.9	67.9	67.6	67.6	65.6	68.7	69.5	70.4	67.0	54.3	61.6	63.9	64.6	65.0	65.2	65.5	53.0	48.0	<40	<40
4	59.4	61.0	63.5	67.0	58.8	59.5	59.2	59.8	60.1	<40	61.3	63.8	66.9	**70.5**	67.2	68.1	67.8	67.8	65.8	68.9	69.8	**70.7**	67.2	54.3	61.7	64.0	64.6	65.0	65.2	65.6	53.1	48.0	<40	<40
3	58.4	60.5	63.3	67.1	58.8	59.5	59.2	59.4	59.9	<40	61.5	64.0	67.1	**70.8**	67.5	68.4	68.1	68.1	66.0	69.2	70.1	**71.0**	67.4	54.3	61.8	64.0	64.7	65.0	65.2	65.6	53.1	48.1	<40	<40
2	56.6	59.2	62.9	67.0	58.8	59.5	59.2	59.1	59.5	<40	61.7	64.2	67.3	**71.1**	67.8	68.6	68.3	68.3	66.2	69.5	70.3	**71.4**	67.7	54.4	62.0	64.1	64.7	65.1	65.2	65.6	53.1	48.1	<40	<40
1	55.2	57.4	61.7	66.5					59.2	<40	61.7	64.3	67.6	**71.4**	68.1	68.9	68.5	68.5	66.5	69.8	**70.7**	**71.6**	67.9	54.4	62.1	64.1	64.7	65.0	65.2	65.6	53.1	48.0	<40	<40
Max	60.1	61.3	63.5	67.1	59.0	59.9	59.6	59.8	60.1	<40	61.7	64.3	67.6	**71.4**	68.1	68.9	68.5	68.5	66.5	69.8	**70.7**	**71.6**	67.9	54.4	62.1	64.1	64.7	65.1	65.2	65.6	53.7	48.3	<40	<40
Min	55.2	57.4	61.4	64.2	57.0	57.1	57.0	56.4	56.5	<40	57.1	59.6	62.3	65.5	62.4	63.3	63.4	63.3	61.3	63.9	64.6	65.8	63.1	53.6	59.2	62.3	63.1	63.8	63.9	64.6	52.8	47.8	<40	<40

Noise sensitive receivers with exceedance (≥70.5 dB(A))

Floor	R431 max	R432 max	R433 max	R434 max	R435 max	R436 max	R437 max	R438 max	R501 max	R502 max	R503 max	R504 max	R505 max	R506 max	R507 max	R508 max	R509 max	R510 max	R511 max	R512 max	R513 max	R514 max	R515 max	R516 max	R517 max	R518 max	R519 max	R520 max	R521 max	R522 max	R523 max	R524 max
40									56.8	56.5	56.4	56.0	55.9	<40	55.8	58.6	61.9	65.8	63.4	64.2	64.4	64.9	61.5	65.5	65.9	66.6	67.0	63.9	64.7	64.8	65.1	65.6
39									56.8	56.6	56.4	55.9	55.6	<40	55.8	58.7	62.0	65.9	63.5	64.3	64.5	65.0	61.6	65.5	66.0	66.7	67.1	64.0	64.7	64.9	65.1	65.7
38									56.9	56.7	56.4	56.0	55.7	<40	55.6	58.7	62.0	66.0	63.5	64.3	64.6	65.1	61.7	65.6	66.1	66.8	67.1	64.1	64.8	65.0	65.2	65.8
37	43.2	47.8	55.6	57.7	59.1	58.2	57.4	55.6	56.9	56.8	56.5	56.1	55.8	<40	55.7	58.8	62.1	66.1	63.6	64.4	64.7	65.1	61.8	65.7	66.2	66.9	67.2	64.1	64.9	65.1	65.3	65.9
36	43.2	47.8	55.7	57.8	59.1	58.2	57.4	55.7	57.0	56.9	56.6	56.2	55.9	<40	55.8	59.0	62.2	66.2	63.7	64.5	64.8	65.2	61.9	65.8	66.3	67.0	67.3	64.2	65.0	65.2	65.4	66.0
35	43.2	47.9	55.7	57.8	59.1	58.2	57.4	55.7	57.1	57.0	56.7	56.3	56.0	<40	55.9	59.1	62.3	66.2	63.7	64.5	64.9	65.2	62.0	65.9	66.3	67.1	67.4	64.3	65.1	65.2	65.5	66.1
34	43.3	47.9	55.7	57.8	59.1	58.2	57.4	55.7	57.2	57.1	56.8	56.4	56.1	<40	56.0	59.2	62.3	66.3	63.8	64.6	65.0	65.3	62.1	65.9	66.4	67.2	67.5	64.4	65.2	65.3	65.6	66.2
33	43.3	48.0	55.8	57.8	59.2	58.3	57.4	55.7	57.3	57.1	56.9	56.5	56.2	<40	56.1	59.3	62.4	66.4	64.0	64.7	65.0	65.3	62.2	66.0	66.6	67.3	67.6	64.5	65.2	65.4	65.7	66.3
32	43.3	48.0	55.8	57.9	59.2	58.3	57.5	55.8	57.3	57.2	57.0	56.6	56.3	<40	56.2	59.4	62.5	66.5	64.0	64.8	65.1	65.3	62.3	66.1	66.7	67.4	67.7	64.6	65.4	65.5	65.7	66.4
31	43.4	48.0	55.8	57.9	59.2	58.3	57.5	55.8	57.4	57.3	57.1	56.7	56.4	<40	56.3	59.5	62.7	66.7	64.1	64.9	65.2	65.4	62.4	66.2	66.7	67.5	67.8	64.7	65.5	65.6	65.8	66.5
30	43.4	48.1	55.8	57.9	59.2	58.3	57.5	55.8	57.5	57.4	57.2	56.8	56.5	<40	56.4	59.6	62.8	66.7	64.2	65.0	65.4	65.5	62.6	66.3	66.9	67.6	67.9	64.8	65.6	65.7	66.0	66.6
29	43.4	48.1	55.8	57.9	59.3	58.3	57.5	55.8	57.6	57.5	57.3	56.9	56.6	<40	56.5	59.7	62.9	66.8	64.3	65.1	65.5	65.6	62.7	66.4	67.0	67.8	68.0	64.9	65.6	65.8	66.1	66.7
28	43.5	48.1	55.9	57.9	59.3	58.4	57.6	55.9	57.7	57.6	57.4	57.0	56.7	<40	56.7	59.8	63.0	67.0	64.5	65.2	65.5	65.7	62.8	66.5	67.1	67.9	68.2	65.0	65.8	65.9	66.2	66.8
27	43.5	48.2	55.9	58.0	59.3	58.4	57.6	55.9	57.8	57.7	57.5	57.1	56.8	<40	56.7	59.9	63.2	67.1	64.5	65.3	65.6	65.8	62.9	66.6	67.2	68.0	68.3	65.1	65.9	66.0	66.3	66.9
26	43.5	48.2	55.9	58.0	59.3	58.4	57.6	55.9	57.9	57.8	57.6	57.2	56.9	<40	56.8	60.0	63.3	67.2	64.7	65.4	65.7	65.8	63.0	66.8	67.4	68.2	68.4	65.2	66.0	66.1	66.4	67.0
25	43.6	48.2	55.9	58.0	59.3	58.4	57.6	55.9	57.9	57.9	57.7	57.3	57.0	<40	56.9	60.2	63.4	67.3	64.8	65.5	65.8	66.0	63.2	66.9	67.5	68.3	68.5	65.3	66.1	66.3	66.5	67.2
24	43.6	48.3	56.0	58.0	59.4	58.5	57.7	55.9	58.0	58.0	57.8	57.4	57.1	<40	57.1	60.3	63.6	67.4	64.9	65.7	65.9	66.1	63.3	67.1	67.6	68.4	68.7	65.4	66.2	66.3	66.6	67.3
23	43.6	48.3	56.0	58.1	59.4	58.5	57.7	56.0	58.0	58.1	57.9	57.5	57.3	<40	57.2	60.4	63.6	67.6	65.0	65.8	66.0	66.1	63.4	67.2	67.8	68.6	68.8	65.5	66.4	66.5	66.8	67.4
22	43.7	48.3	56.0	58.1	59.4	58.5	57.7	56.0	58.1	58.2	58.0	57.6	57.4	<40	57.3	60.6	63.8	67.8	65.1	65.9	66.2	66.3	63.6	67.3	67.9	68.7	69.0	65.6	66.5	66.6	66.9	67.5
21	43.7	48.4	56.0	58.1	59.4	58.5	57.7	56.0	58.2	58.3	58.1	57.7	57.5	<40	57.5	60.7	63.9	67.9	65.3	66.0	66.3	66.4	63.7	67.5	68.1	68.9	69.1	65.7	66.6	66.8	67.0	67.7
20	43.7	48.4	56.0	58.1	59.4	58.5	57.7	56.1	58.3	58.4	58.2	57.8	57.6	<40	57.6	60.8	64.1	68.1	65.5	66.2	66.4	66.5	63.9	67.6	68.2	69.1	69.2	65.9	66.7	66.9	67.2	67.8
19	43.7	48.4	56.1	58.1	59.5	58.5	57.7	56.1	58.4	58.5	58.3	57.9	57.8	<40	57.8	60.9	64.3	68.3	65.6	66.4	66.5	66.6	64.0	67.7	68.4	69.2	69.4	66.0	66.9	67.0	67.3	68.0
18	43.8	48.5	56.1	58.1	59.5	58.6	57.8	56.1	58.5	58.6	58.4	58.1	57.9	<40	57.9	61.1	64.4	68.4	65.7	66.5	66.7	66.8	64.2	67.9	68.5	69.4	69.6	66.2	67.0	67.2	67.5	68.1
17	43.8	48.5	56.1	58.2	59.5	58.6	57.8	56.1	58.6	58.7	58.6	58.2	58.0	<40	58.1	61.3	64.6	68.6	65.9	66.6	66.8	66.9	64.3	68.0	68.7	69.6	69.7	66.3	67.2	67.3	67.6	68.3
16	43.8	48.5	56.1	58.2	59.5	58.6	57.8	56.1	58.7	58.8	58.7	58.3	58.1	<40	58.2	61.4	64.8	68.8	66.1	66.8	67.0	67.1	64.5	68.1	68.9	69.8	69.9	66.4	67.3	67.5	67.7	68.4
15	43.9	48.6	56.1	58.2	59.5	58.6	57.8	56.2	58.8	58.9	58.8	58.4	58.3	<40	58.4	61.6	65.0	69.0	66.2	67.0	67.2	67.2	64.6	68.3	69.1	70.0	70.1	66.6	67.5	67.6	67.9	68.6
14	43.9	48.6	56.2	58.2	59.5	58.6	57.8	56.2	58.8	59.0	58.9	58.5	58.4	<40	58.5	61.8	65.1	69.2	66.4	67.2	67.3	67.4	64.8	68.5	69.2	70.2	70.3	66.7	67.6	67.8	68.1	68.7
13	43.9	48.6	56.2	58.2	59.6	58.6	57.9	56.2	58.9	59.2	59.0	58.7	58.5	<40	58.6	61.9	65.3	69.4	66.6	67.4	67.5	67.6	65.0	68.7	69.4	70.4	**70.5**	66.9	67.8	68.0	68.2	69.0
12	43.9	48.6	56.2	58.2	59.6	58.6	57.9	56.2	59.0	59.3	59.1	58.8	58.7	<40	58.8	62.1	65.5	69.6	66.7	67.5	67.6	67.7	65.1	68.8	69.7	**70.6**	**70.8**	67.0	68.0	68.1	68.4	69.2
11	44.0	48.7	56.2	58.2	59.6	58.6	57.9	56.2	59.1	59.3	59.2	58.9	58.8	<40	58.9	62.2	65.7	69.8	67.0	67.7	67.7	67.9	65.3	69.0	69.8	**70.8**	**70.9**	67.2	68.2	68.3	68.6	69.4
10	44.0	48.7	56.2	58.2	59.6	58.6	57.9	56.2	59.2	59.4	59.3	59.0	58.9	<40	59.1	62.4	65.9	70.1	67.2	67.9	67.9	68.0	65.5	69.2	70.0	**71.0**	**71.2**	67.4	68.4	68.5	68.8	69.5
9	44.0	48.7	56.2	58.2	59.5	58.6	57.9	56.2	59.2	59.5	59.4	59.1	59.1	<40	59.2	62.6	66.1	70.3	67.4	68.0	68.1	68.2	65.7	69.4	70.3	**71.3**	**71.4**	67.6	68.6	68.7	69.0	69.8
8	44.0	48.7	56.2	58.2	59.5	58.6	57.9	56.2	59.3	59.6	59.5	59.2	59.2	<40	59.4	62.8	66.3	**70.6**	67.6	68.3	68.3	68.3	65.8	69.7	**70.5**	**71.6**	**71.8**	67.8	68.8	68.9	69.2	70.0
7	44.0	48.7	56.1	58.2	59.5	58.6	57.9	56.3	59.4	59.7	59.6	59.4	59.3	<40	59.6	63.0	66.6	**70.9**	67.8	68.5	68.4	68.5	66.0	69.9	**70.8**	**71.8**	**72.0**	68.0	69.0	69.0	69.4	70.2
6	44.1	48.8	56.1	58.1	59.5	58.6	57.8	56.3	59.4	59.8	59.7	59.5	59.4	<40	59.7	63.2	66.8	**71.2**	68.1	68.7	68.6	68.7	66.2	70.1	**71.0**	**72.0**	**72.4**	68.3	69.3	69.2	69.6	70.4
5	44.1	48.8	56.1	58.1	59.4	58.5	57.8	56.3	59.5	59.9	59.7	59.5	59.5	<40	59.9	63.4	67.0	**71.5**	68.3	68.9	68.7	68.8	66.3	70.3	**71.3**	**72.3**	**72.7**	68.5	69.4	69.4	69.8	**70.7**
4	44.1	48.8	56.1	58.0	59.4	58.4	57.7	56.2	59.5	59.9	59.8	59.6	59.6	<40	60.0	63.5	67.2	**71.9**	68.5	69.1	68.8	69.0	66.5	**70.5**	**71.5**	**72.6**	**73.0**	68.8	69.7	69.6	70.0	**70.9**
3	44.1	48.8	56.1	57.9	59.3	58.3	57.6	56.2	59.6	60.0	59.9	59.7	59.7	<40	60.1	63.7	67.3	**72.2**	68.8	69.3	69.0	69.1	66.6	**70.7**	**71.8**	**72.9**	**73.4**	69.0	69.9	69.8	70.2	**71.1**
2	44.0	48.7	56.1	57.8	59.2	58.1	57.4	56.0	59.6	60.0	59.9	59.8	59.8	<40	60.2	63.8	67.5	**72.5**	69.1	69.5	69.1	69.2	66.8	**70.9**	**72.0**	**73.2**	**73.8**	69.3	70.1	69.9	70.3	**71.3**
1	43.9	48.7	56.1	57.7	59.0				59.6	60.1	60.0	59.8	59.8	<40	60.3	63.9	67.7	**72.9**	69.3	69.6	69.2	69.3	66.9	**71.0**						70.1	**70.5**	**71.5**
Max	44.1	48.8	56.2	58.2	59.6	58.6	57.9	56.3	59.6	60.1	60.0	59.8	59.8	<40	60.3	63.9	67.7	**72.9**	69.3	69.6	69.2	69.3	66.9	**71.0**	**72.0**	**73.2**	**73.8**	69.3	70.1	70.1	**70.5**	**71.5**
Min	43.2	47.8	55.6	57.7	59.0	58.1	57.4	55.6	56.8	56.5	56.4	55.9	55.6	<40	55.6	58.6	61.9	65.8	63.4	64.2	64.4	64.9	61.5	65.5	65.9	66.6	67.0	63.9	64.7	64.8	65.1	65.6

Noise sensitive receivers with exceedance (≥70.5 dB(A))

Floor	R525 max	R526 max	R527 max	R528 max	R529 max	R530 max	R531 max	R532 max	R533 max	R534 max	R535 max	R536 max	R537 max	R538m ax
40	65.8	67.2	63.8	61.5	55.4	58.6	60.5	61.8	64.8	65.2	65.4	66.0	66.2	66.7
39	65.9	67.3	63.8	61.5	55.5	58.7	60.5	61.8	64.8	65.2	65.4	66.1	66.2	66.8
38	66.0	67.4	63.9	61.6	55.5	58.7	60.5	61.8	64.9	65.3	65.5	66.1	66.2	66.8
37	66.1	67.5	63.9	61.6	55.5	58.8	60.6	61.9	64.9	65.3	65.5	66.1	66.2	66.8
36	66.2	67.6	64.0	61.6	55.6	58.8	60.6	61.9	64.9	65.3	65.5	66.1	66.3	66.8
35	66.3	67.7	64.0	61.7	55.6	58.8	60.6	61.9	64.9	65.3	65.5	66.1	66.3	66.9
34	66.4	67.8	64.1	61.7	55.7	58.9	60.7	62.0	64.9	65.4	65.6	66.2	66.3	66.9
33	66.4	67.8	64.1	61.8	55.7	58.9	60.7	62.0	65.0	65.4	65.6	66.2	66.3	66.9
32	66.6	67.9	64.2	61.8	55.7	59.0	60.7	62.0	65.0	65.4	65.6	66.2	66.4	66.9
31	66.7	68.0	64.3	61.9	55.8	59.0	60.8	62.0	65.0	65.4	65.6	66.2	66.4	67.0
30	66.8	68.1	64.3	61.9	55.8	59.0	60.8	62.0	65.0	65.4	65.7	66.3	66.4	67.0
29	66.9	68.2	64.4	61.9	55.8	59.1	60.8	62.1	65.1	65.5	65.7	66.3	66.4	67.0
28	67.0	68.3	64.4	62.0	55.9	59.1	60.8	62.0	65.1	65.5	65.7	66.3	66.5	67.1
27	67.1	68.4	64.5	62.0	55.9	59.1	60.8	62.1	65.1	65.5	65.7	66.4	66.5	67.1
26	67.2	68.5	64.5	62.0	55.9	59.1	60.8	62.1	65.1	65.5	65.7	66.4	66.5	67.1
25	67.4	68.6	64.5	62.0	56.0	59.2	60.8	62.1	65.1	65.5	65.8	66.4	66.6	67.1
24	67.5	68.8	64.6	62.0	56.0	59.2	60.8	62.1	65.2	65.6	65.8	66.4	66.6	67.2
23	67.6	68.8	64.6	62.0	56.0	59.2	60.7	62.1	65.2	65.6	65.8	66.5	66.6	67.2
22	67.7	69.0	64.6	62.0	56.1	59.2	60.7	62.1	65.2	65.6	65.9	66.5	66.6	67.2
21	67.9	69.1	64.6	62.0	56.1	59.3	60.7	62.1	65.2	65.7	65.9	66.5	66.7	67.2
20	68.0	69.2	64.7	61.9	56.2	59.3	60.7	62.1	65.2	65.7	65.9	66.5	66.7	67.3
19	68.1	69.4	64.7	61.9	56.2	59.2	60.6	62.1	65.3	65.7	65.9	66.6	66.7	67.3
18	68.3	69.5	64.7	61.8	56.2	59.3	60.6	62.1	65.3	65.7	65.9	66.6	66.8	67.3
17	68.5	69.7	64.7	61.8	56.3	59.3	60.6	62.2	65.3	65.7	66.0	66.6	66.8	67.4
16	68.6	69.8	64.7	61.8	56.3	59.3	60.6	62.2	65.3	65.8	66.0	66.6	66.8	67.4
15	68.8	70.0	64.7	61.7	56.3	59.2	60.6	62.2	65.3	65.8	66.0	66.7	66.8	67.4
14	69.0	70.1	64.7	61.7	56.3	59.2	60.6	62.2	65.4	65.8	66.0	66.7	66.9	67.4
13	69.2	70.3	64.7	61.7	56.4	59.3	60.5	62.2	65.4	65.8	66.1	66.7	66.9	67.5
12	69.3	**70.5**	64.7	61.7	56.4	59.2	60.5	62.2	65.4	65.9	66.1	66.7	66.9	67.5
11	69.5	**70.7**	64.7	61.6	56.4	59.2	60.5	62.2	65.4	65.9	66.1	66.7	66.9	67.5
10	69.8	**70.9**	64.7	61.6	56.4	59.2	60.5	62.2	65.4	65.9	66.1	66.8	66.9	67.5
9	70.0	**71.1**	64.7	61.6	56.4	59.2	60.4	62.2	65.4	65.9	66.1	66.8	66.9	67.5
8	70.2	**71.3**	64.7	61.5	56.5	59.1	60.3	62.1	65.4	65.8	66.1	66.7	66.9	67.5
7	70.4	**71.5**	64.7	61.5	56.5	59.1	60.2	62.1	65.4	65.8	66.1	66.7	66.9	67.5
6	**70.7**	**71.7**	64.7	61.3	56.5	59.2	60.1	62.0	65.3	65.8	66.0	66.7	66.9	67.5
5	**70.9**	**72.0**	64.7	61.2	56.5	59.1	59.9	61.9	65.3	65.8	66.0	66.7	66.8	67.4
4	**71.1**	**72.2**	64.6	61.0	56.5	59.1	59.7	61.8	65.3	65.7	66.0	66.6	66.8	67.4
3	**71.4**	**72.5**	64.5	60.7	56.6	59.1	59.5	61.6	65.2	65.6	65.9	66.5	66.7	67.2
2	**71.6**	**72.8**	64.4	60.4	56.6	59.1	59.4	61.6	65.1	65.5	65.8	66.4	66.5	66.9
1	**71.8**	**73.0**	64.3	60.2	56.6	59.1	59.3	61.5	65.0	65.4	65.6	66.1	66.1	66.3
Max	**71.8**	**73.0**	64.7	62.0	56.6	59.3	60.8	62.2	65.4	65.9	66.1	66.8	66.9	67.5
Min	65.8	67.2	63.8	60.2	55.4	58.6	59.3	61.5	64.8	65.2	65.4	66.0	66.1	66.3

Noise sensitive receivers with exceedance (≥ 70.5 dB(A))

Appendix 4.6

Predicted Traffic Noise Levels for Residential Blocks (Mitigated Scenario - Architectural Fin Only)

Floor	R101a	R101b	R101c	R101d	R102a	R102b	R102c	R103a	R103b	R103c	R104a	R104b	R105a	R105b	R106a	R106b	R107a	R107b	R108a	R108b	R108c	R109a	R109b	R109c	R110a	R110b	R111a	R111b	R111c	R111d	R112a	R112b
40																																
39																																
38																																
37	66.7	66.3	65.8	60.3	60.4	65.3	65.2	65.0	64.8	59.0	65.1	64.7	64.4	64.2	66.6	66.7	62.7	60.6	58.4	57.9	<40	<40	56.0	56.2	55.2	43.9	54.5	55.0	55.1	<40	<40	55.1
36	66.7	66.4	65.8	60.4	60.5	65.4	65.3	65.1	64.9	59.0	65.1	64.7	64.5	64.2	66.7	66.8	62.7	60.7	58.5	58.0	<40	<40	56.1	56.2	55.2	43.7	54.6	55.1	55.2	<40	<40	55.2
35	66.8	66.4	65.9	60.5	60.5	65.5	65.4	65.1	65.0	59.1	65.2	64.8	64.5	64.3	66.7	66.8	62.8	60.8	58.5	58.0	<40	<40	56.2	56.3	55.3	42.9	54.6	55.1	55.2	<40	<40	55.3
34	66.9	66.5	66.0	60.5	60.6	65.6	65.4	65.2	65.0	59.2	65.3	64.9	64.6	64.4	66.8	66.9	62.9	60.8	58.6	58.1	<40	<40	56.3	56.4	55.4	43.6	54.7	55.2	55.2	<40	<40	55.4
33	66.9	66.6	66.1	60.6	60.7	65.7	65.5	65.3	65.1	59.3	65.4	65.0	64.7	64.5	66.9	67.0	63.0	60.9	58.7	58.1	<40	<40	56.4	56.3	55.4	<40	54.8	55.3	55.3	<40	<40	55.4
32	67.0	66.7	66.2	60.7	60.8	65.8	65.6	65.4	65.2	59.4	65.4	65.0	64.8	64.5	67.0	67.1	63.0	60.9	58.7	57.9	<40	<40	56.4	56.1	55.5	<40	54.9	55.3	55.3	<40	<40	55.5
31	67.1	66.7	66.2	60.8	60.9	65.8	65.7	65.4	65.2	59.5	65.5	65.1	64.9	64.6	67.1	67.1	63.1	61.0	58.8	58.0	<40	<40	56.5	56.1	55.5	<40	55.0	55.3	55.4	<40	<40	55.6
30	67.2	66.8	66.3	60.9	61.0	65.9	65.8	65.5	65.3	59.6	65.6	65.2	65.0	64.7	67.1	67.2	63.2	61.0	58.9	58.1	<40	<40	56.6	56.2	55.6	<40	55.0	55.4	55.5	<40	<40	55.7
29	67.3	66.9	66.4	61.0	61.1	66.0	65.9	65.6	65.4	59.6	65.7	65.3	65.0	64.8	67.2	67.3	63.3	61.1	59.0	58.2	<40	<40	56.7	56.3	55.7	<40	55.1	55.5	55.6	<40	<40	55.8
28	67.4	67.0	66.5	61.1	61.2	66.1	66.0	65.7	65.5	59.7	65.7	65.3	65.1	64.9	67.3	67.4	63.4	61.2	59.1	58.3	<40	<40	56.8	56.4	55.8	<40	55.2	55.6	55.6	<40	<40	55.8
27	67.5	67.1	66.6	61.2	61.3	66.2	66.0	65.8	65.6	59.8	65.8	65.4	65.2	64.9	67.4	67.5	63.5	61.3	59.2	58.3	<40	<40	56.9	56.5	55.9	<40	55.3	55.7	55.7	<40	<40	55.9
26	67.6	67.2	66.7	61.3	61.3	66.3	66.1	65.9	65.7	59.9	66.0	65.5	65.3	65.0	67.5	67.6	63.6	61.4	59.2	58.4	<40	<40	57.0	56.5	56.0	<40	55.3	55.8	55.8	<40	<40	56.0
25	67.7	67.3	66.8	61.4	61.5	66.4	66.2	66.0	65.8	60.0	66.0	65.6	65.3	65.1	67.6	67.7	63.7	61.5	59.3	58.5	<40	<40	57.0	56.6	56.1	<40	55.4	55.8	55.9	<40	<40	56.1
24	67.8	67.4	66.9	61.5	61.5	66.5	66.3	66.1	65.9	60.1	66.1	65.7	65.4	65.2	67.7	67.8	63.8	61.6	59.4	58.6	<40	<40	57.1	56.7	56.2	<40	55.5	55.9	56.0	<40	<40	56.2
23	67.9	67.5	67.0	61.6	61.6	66.6	66.4	66.2	66.0	60.2	66.2	65.8	65.5	65.3	67.8	67.9	63.8	61.7	59.5	58.7	<40	<40	57.3	56.8	56.3	<40	55.6	56.0	56.1	<40	<40	56.3
22	68.0	67.6	67.1	61.8	61.8	66.7	66.5	66.3	66.1	60.3	66.3	65.9	65.6	65.4	67.9	68.0	63.9	61.8	59.6	58.8	<40	<40	57.3	56.9	56.3	<40	55.7	56.1	56.2	<40	<40	56.3
21	68.1	67.7	67.2	61.9	61.9	66.8	66.6	66.4	66.2	60.4	66.4	66.0	65.6	65.5	67.9	68.0	64.0	61.9	59.7	58.9	<40	<40	57.5	57.0	56.4	<40	55.8	56.2	56.3	<40	<40	56.4
20	68.2	67.8	67.3	62.0	62.0	66.9	66.7	66.5	66.3	60.5	66.5	66.0	65.8	65.6	68.1	68.2	64.1	62.0	59.8	59.0	<40	<40	57.6	57.1	56.5	<40	55.9	56.3	56.4	<40	<40	56.5
19	68.3	67.9	67.4	62.1	62.1	67.0	66.8	66.6	66.4	60.7	66.6	66.2	65.9	65.6	68.2	68.3	64.3	62.1	60.0	59.1	<40	<40	57.6	57.2	56.6	<40	56.0	56.4	56.5	<40	<40	56.6
18	68.4	68.1	67.5	62.2	62.3	67.1	66.9	66.7	66.5	60.8	66.7	66.3	65.9	65.8	68.3	68.3	64.4	62.2	60.1	59.2	<40	<40	57.7	57.3	56.7	<40	56.1	56.5	56.5	<40	<40	56.7
17	68.5	68.2	67.7	62.3	62.4	67.2	67.1	66.8	66.6	60.9	66.8	66.3	66.0	65.8	68.4	68.5	64.5	62.3	60.2	59.4	<40	<40	57.8	57.4	56.8	<40	56.2	56.6	56.6	<40	<40	56.8
16	68.7	68.3	67.8	62.5	62.5	67.4	67.2	67.0	66.7	61.0	66.9	66.5	66.1	65.9	68.5	68.5	64.6	62.4	60.3	59.4	<40	<40	57.9	57.5	56.9	<40	56.3	56.7	56.7	<40	<40	56.9
15	68.8	68.4	67.9	62.6	62.7	67.5	67.4	67.1	66.9	61.2	67.0	66.6	66.2	66.0	68.6	68.7	64.7	62.6	60.4	59.6	<40	<40	58.0	57.6	57.0	<40	56.4	56.8	56.8	<40	<40	57.0
14	68.9	68.6	68.0	62.8	62.8	67.6	67.5	67.2	67.0	61.3	67.1	66.6	66.4	66.1	68.7	68.8	64.8	62.7	60.5	59.7	<40	<40	58.1	57.7	57.1	<40	56.5	56.9	56.9	<40	<40	57.0
13	69.1	68.7	68.2	63.0	63.0	67.8	67.6	67.3	67.1	61.4	67.3	66.8	66.4	66.2	68.8	68.9	64.9	62.8	60.6	59.8	<40	<40	58.3	57.8	57.2	<40	56.6	57.0	57.0	<40	<40	57.1
12	69.2	68.8	68.3	63.1	63.1	67.9	67.7	67.4	67.2	61.5	67.4	66.9	66.6	66.3	68.9	69.0	65.0	62.9	60.7	59.9	<40	<40	58.4	57.9	57.3	<40	56.7	57.1	57.1	<40	<40	57.2
11	69.4	69.0	68.4	63.3	63.3	68.0	67.8	67.6	67.3	61.7	67.5	67.0	66.7	66.5	69.1	69.2	65.2	63.1	60.8	60.0	<40	<40	58.5	58.0	57.4	<40	56.8	57.2	57.2	<40	<40	57.2
10	69.5	69.1	68.6	63.4	63.4	68.2	68.0	67.7	67.5	61.8	67.6	67.1	66.8	66.6	69.3	69.3	65.3	63.2	61.0	60.1	<40	<40	58.6	58.2	57.5	<40	56.9	57.3	57.3	<40	<40	57.3
9	69.6	69.3	68.8	63.6	63.6	68.3	68.2	67.9	67.6	62.0	67.8	67.3	66.9	66.7	69.4	69.5	65.4	63.3	61.1	60.2	<40	<40	58.7	58.3	57.6	<40	56.9	57.4	57.3	<40	<40	57.3
8	69.8	69.4	68.9	63.8	63.8	68.5	68.3	68.0	67.8	62.1	67.9	67.4	67.1	66.9	69.5	69.6	65.6	63.4	61.2	60.3	<40	<40	58.8	58.4	57.7	<40	57.0	57.4	57.4	<40	<40	57.2
7	70.0	69.6	69.1	63.9	63.9	68.6	68.5	68.2	67.9	62.2	68.1	67.6	67.2	67.0	69.7	69.8	65.7	63.6	61.3	60.5	<40	<40	58.9	58.5	57.8	<40	57.0	57.4	57.3	<40	<40	57.0
6	70.1	69.8	69.3	64.1	64.1	68.8	68.6	68.3	68.0	62.3	68.2	67.7	67.4	67.2	69.9	70.0	65.8	63.7	61.4	60.6	<40	<40	59.0	58.5	57.9	<40	57.0	57.2	57.1	<40	<40	56.5
5	70.3	70.0	69.4	64.3	64.3	69.0	68.8	68.4	68.1	62.4	68.4	67.9	67.5	67.3	70.0	70.1	66.0	63.8	61.5	60.6	<40	<40	59.0	58.5	57.8	<40	56.7	57.0	56.8	<40	<40	55.9
4	**70.5**	70.1	69.6	64.4	64.5	69.1	68.9	68.6	68.3	62.5	68.5	68.0	67.7	67.5	70.2	70.3	66.1	63.9	61.6	60.6	<40	<40	59.0	58.4	57.7	<40	56.4	56.5	56.1	<40	<40	54.3
3	**70.7**	70.3	69.8	64.6	64.7	69.2	69.0	68.7	68.4	62.7	68.6	68.1	67.8	67.6	70.2	70.3	66.1	63.9	61.5	60.5	<40	<40	58.7	58.1	57.3	<40	55.7	55.2	54.4	<40	<40	52.5
2	**70.9**	**70.5**	70.0	64.9	64.9	69.4	69.2	68.8	68.5	62.9	68.7	68.2	67.9	67.8	69.7	69.8	66.2	63.7	61.1	60.1	<40	<40	58.2	57.5	56.6	<40	54.2	53.4	52.5	<40	<40	50.4
1	**71.1**	**70.7**	70.2	65.1	65.0	69.6	69.4	69.0	68.6	63.0	68.9	68.4	68.1	67.9	69.9	70.0	65.9	63.2	60.4	59.3	<40	<40	57.0	56.1	55.2	<40	52.2	51.1	50.5	<40	<40	48.8
Max	**71.1**	**70.7**	70.2	65.1	65.0	69.6	69.4	69.0	68.6	63.0	68.9	68.4	68.1	67.9	70.2	70.3	66.2	63.9	61.6	60.6	<40	<40	59.0	58.5	57.9	43.9	57.0	57.4	57.4	<40	<40	57.3
Min	66.7	66.3	65.8	60.3	60.4	65.3	65.2	65.0	64.8	59.0	65.1	64.7	64.4	64.2	66.6	66.7	62.7	60.6	58.4	57.9	<40	<40	56.0	56.1	55.2	<40	52.2	51.1	50.5	<40	<40	48.8

# Total Flats	6817
Exceedance	83
Compliance Rate	98.8%

Noise sensitive receivers with exceedance (≥70.5 dB(A))

Floor	R112c	R112d	R113a	R113b	R114a	R114b	R115a	R115b	R116a	R116b	R117a	R117b	R117c	R118a	R118b	R118c	R119a	R119b	R120a	R120b	R121a	R121b	R122a	R122b	R122c	R123a	R123b	R123c	R124a	R124b	R124c	R125a
40																																
39																																
38																																
37	55.4	55.2	56.2	56.2	55.5	55.7	57.0	57.4	57.5	55.8	55.9	56.0	54.8	52.1	55.9	56.0	55.8	55.6	<40	56.3	56.6	53.1	<40	57.4	57.8	58.2	58.6	<40	<40	59.8	60.7	65.3
36	55.4	55.2	56.3	56.3	55.5	55.7	57.1	57.4	57.3	55.7	55.8	55.9	54.8	52.1	56.0	56.0	55.9	55.7	<40	56.3	56.7	53.1	<40	57.5	57.8	58.3	58.7	<40	<40	59.9	60.8	65.4
35	55.4	55.2	56.3	56.3	55.6	55.8	57.2	57.5	57.4	55.7	55.9	56.0	54.9	52.2	56.0	56.1	56.0	55.7	<40	56.4	56.8	53.2	<40	57.6	57.9	58.3	58.8	<40	<40	60.0	60.9	65.4
34	55.4	55.3	56.4	56.4	55.7	55.8	57.2	57.5	57.4	55.8	55.9	56.0	54.9	52.2	56.1	56.1	56.0	55.8	<40	56.5	56.8	53.2	<40	57.6	58.0	58.4	58.8	<40	<40	60.0	61.0	65.5
33	55.5	55.4	56.4	56.4	55.7	55.9	57.3	57.5	57.5	55.8	56.0	56.1	55.0	52.3	56.2	56.2	56.0	55.8	<40	56.5	56.9	53.3	<40	57.7	58.0	58.5	58.9	<40	<40	60.1	61.0	65.6
32	55.6	55.4	56.5	56.4	55.7	55.9	57.3	57.6	57.6	55.9	56.0	56.2	55.1	52.4	56.2	56.3	56.1	55.9	<40	56.6	56.9	53.4	<40	57.8	58.1	58.5	59.0	<40	<40	60.2	61.1	65.7
31	55.6	55.5	56.6	56.5	55.8	55.9	57.4	57.7	57.6	56.0	56.1	56.2	55.1	52.4	56.3	56.3	56.2	56.0	<40	56.7	57.0	53.4	<40	57.8	58.2	58.6	59.1	<40	<40	60.2	61.2	65.7
30	55.6	55.6	56.6	56.6	55.8	56.0	57.5	57.7	57.7	56.0	56.1	56.3	55.2	52.5	56.3	56.4	56.2	56.0	<40	56.7	57.1	53.5	<40	57.9	58.2	58.7	59.1	<40	<40	60.3	61.2	65.8
29	55.7	55.7	56.7	56.7	55.9	56.1	57.5	57.8	57.7	56.1	56.2	56.3	55.2	52.5	56.4	56.4	56.3	56.1	<40	56.8	57.1	53.6	<40	58.0	58.3	58.8	59.2	<40	<40	60.4	61.3	65.9
28	55.8	55.7	56.8	56.7	56.0	56.1	57.6	57.9	57.8	56.1	56.3	56.4	55.3	52.6	56.4	56.5	56.4	56.2	<40	56.9	57.2	53.7	<40	58.0	58.4	58.8	59.3	<40	<40	60.5	61.4	66.0
27	55.9	55.8	56.8	56.8	56.0	56.2	57.7	57.9	57.8	56.2	56.3	56.4	55.4	52.6	56.5	56.5	56.4	56.2	<40	56.9	57.3	53.7	<40	58.1	58.4	58.9	59.3	<40	<40	60.5	61.5	66.0
26	56.0	55.9	56.9	56.8	56.1	56.3	57.7	58.0	57.9	56.3	56.4	56.5	55.4	52.7	56.5	56.6	56.5	56.3	<40	57.0	57.3	53.8	<40	58.2	58.5	59.0	59.4	<40	<40	60.6	61.6	66.1
25	56.1	56.0	57.0	56.9	56.2	56.3	57.8	58.0	57.9	56.3	56.4	56.5	55.5	52.7	56.6	56.7	56.6	56.4	<40	57.0	57.4	53.8	<40	58.2	58.6	59.1	59.5	<40	<40	60.7	61.6	66.2
24	56.2	56.1	57.0	57.0	56.2	56.4	57.9	58.1	57.9	56.4	56.5	56.6	55.5	52.8	56.7	56.7	56.6	56.4	<40	57.1	57.4	53.9	<40	58.3	58.7	59.1	59.6	<40	<40	60.8	61.7	66.3
23	56.3	56.1	57.1	57.1	56.3	56.5	57.9	58.2	58.0	56.4	56.5	56.6	55.6	52.8	56.7	56.8	56.7	56.4	<40	57.1	57.5	54.0	<40	58.4	58.7	59.2	59.6	<40	<40	60.9	61.8	66.4
22	56.4	56.2	57.2	57.1	56.4	56.5	58.0	58.2	58.1	56.5	56.6	56.7	55.6	52.9	56.8	56.8	56.8	56.5	<40	57.2	57.6	54.0	<40	58.4	58.8	59.3	59.7	<40	<40	60.9	61.9	66.5
21	56.4	56.3	57.3	57.2	56.4	56.6	58.0	58.3	58.1	56.5	56.6	56.8	55.7	52.9	56.8	56.9	56.8	56.5	<40	57.3	57.6	54.1	<40	58.5	58.9	59.3	59.8	<40	<40	61.0	62.0	66.5
20	56.5	56.4	57.3	57.2	56.5	56.6	58.0	58.3	58.2	56.6	56.7	56.8	55.8	53.0	56.9	56.9	56.9	56.6	<40	57.3	57.7	54.1	<40	58.6	58.9	59.4	59.9	<40	<40	61.1	62.0	66.6
19	56.6	56.5	57.4	57.2	56.5	56.6	58.1	58.3	58.2	56.7	56.7	56.9	55.8	53.1	57.0	57.0	56.9	56.7	<40	57.4	57.8	54.2	<40	58.6	59.0	59.5	59.9	<40	<40	61.2	62.1	66.7
18	56.7	56.6	57.5	57.3	56.5	56.7	58.1	58.4	58.3	56.7	56.8	56.9	55.9	53.1	57.0	57.0	56.9	56.7	<40	57.4	57.8	54.3	<40	58.7	59.1	59.6	60.0	<40	<40	61.3	62.2	66.8
17	56.8	56.6	57.4	57.4	56.6	56.7	58.1	58.3	58.3	56.8	56.8	57.0	55.9	53.2	57.1	57.1	57.0	56.8	<40	57.5	57.9	54.3	<40	58.8	59.2	59.7	60.1	<40	<40	61.3	62.3	66.9
16	56.8	56.7	57.5	57.3	56.6	56.6	58.1	58.3	58.4	56.8	56.9	57.0	56.0	53.3	57.1	57.2	57.0	56.8	<40	57.6	57.9	54.4	<40	58.8	59.2	59.7	60.2	<40	<40	61.4	62.3	67.0
15	56.9	56.8	57.5	57.4	56.4	56.6	58.0	58.2	58.4	56.9	56.9	57.1	56.0	53.3	57.2	57.2	57.1	56.9	<40	57.6	58.0	54.5	<40	58.9	59.3	59.8	60.2	<40	<40	61.5	62.4	67.0
14	57.0	56.9	57.5	57.2	56.4	56.4	58.0	58.2	58.4	56.9	57.0	57.1	56.1	53.4	57.2	57.3	57.2	56.9	<40	57.7	58.1	54.5	<40	59.0	59.4	59.8	60.3	<40	<40	61.6	62.5	67.1
13	57.1	56.9	57.4	57.1	56.2	56.3	57.8	58.1	58.5	57.0	57.0	57.2	56.1	53.4	57.3	57.3	57.2	57.0	<40	57.8	58.1	54.6	<40	59.0	59.4	59.9	60.4	<40	<40	61.6	62.6	67.2
12	57.1	57.0	57.3	57.0	56.0	56.0	57.7	57.9	58.5	57.0	57.1	57.2	56.2	53.5	57.3	57.4	57.3	57.0	<40	57.8	58.2	54.6	<40	59.1	59.5	60.0	60.5	<40	<40	61.7	62.6	67.3
11	57.1	57.0	57.2	56.8	55.8	55.7	57.5	57.7	58.5	57.0	57.1	57.3	56.2	53.5	57.4	57.4	57.3	57.1	<40	57.9	58.2	54.7	<40	59.2	59.6	60.1	60.5	<40	<40	61.8	62.7	67.4
10	57.2	56.9	56.9	56.5	55.2	55.2	57.0	57.2	58.5	57.1	57.2	57.3	56.3	53.6	57.4	57.4	57.4	57.2	<40	57.9	58.3	54.8	<40	59.2	59.6	60.2	60.6	<40	<40	61.8	62.8	67.5
9	57.1	56.8	56.5	55.8	54.4	54.1	56.3	56.4	58.4	57.1	57.2	57.3	56.3	53.6	57.5	57.5	57.4	57.2	<40	58.0	58.3	54.8	<40	59.3	59.7	60.2	60.7	<40	<40	61.9	62.8	67.6
8	57.0	56.6	55.7	54.6	52.7	52.5	55.4	55.8	58.3	57.2	57.2	57.4	56.3	53.7	57.5	57.5	57.5	57.2	<40	58.0	58.4	54.9	<40	59.4	59.8	60.3	60.7	<40	<40	62.0	62.9	67.7
7	56.7	56.2	54.5	53.3	51.2	50.9	54.6	55.1	58.0	57.2	57.3	57.4	56.4	53.7	57.6	57.6	57.5	57.3	<40	58.1	58.5	54.9	<40	59.4	59.8	60.4	60.8	<40	<40	62.1	63.0	67.7
6	56.2	55.6	53.3	51.3	49.4	49.2	53.7	54.4	57.8	57.2	57.3	57.5	56.4	53.7	57.6	57.6	57.6	57.3	<40	58.1	58.5	55.0	<40	59.5	59.9	60.4	60.8	<40	<40	62.1	63.1	67.8
5	55.2	54.2	52.3	49.5	48.0	47.8	52.9	53.4	57.6	57.3	57.3	57.5	56.5	53.8	57.6	57.7	57.6	57.4	<40	58.2	58.5	55.0	<40	59.6	60.0	60.5	60.9	<40	<40	62.2	63.2	67.9
4	53.5	52.5	51.6	48.1	46.7	46.6	52.2	52.8	57.4	57.2	57.4	57.5	56.5	53.7	57.7	57.7	57.6	57.4	<40	58.2	58.6	55.1	<40	59.6	60.0	60.6	61.0	<40	<40	62.3	63.2	67.9
3	51.5	50.5	51.1	46.8	45.7	45.5	51.8	52.3	57.3	57.1	57.3	57.5	56.4	53.6	57.7	57.7	57.6	57.4	<40	58.2	58.6	55.1	<40	59.7	60.1	60.6	61.1	<40	<40	62.3	63.3	67.9
2	49.7	48.9	50.8	45.7	44.6	44.5	51.5	52.0	57.1	57.0	57.1	57.3	56.2	53.2	57.6	57.6	57.6	57.3	<40	58.2	58.7	55.1	<40	59.7	60.1	60.6	61.1	<40	<40	62.4	63.4	67.9
1	48.3	47.8															57.3	57.1	<40	58.2	58.6	55.0	<40	59.7	60.2	60.7	61.2	<40	<40	62.5	63.4	68.0
Max	57.2	57.0	57.5	57.4	56.6	56.7	58.1	58.4	58.5	57.3	57.4	57.5	56.5	53.8	57.7	57.7	57.6	57.4	<40	58.2	58.7	55.1	<40	59.7	60.2	60.7	61.2	<40	<40	62.5	63.4	68.0
Min	48.3	47.8	50.8	45.7	44.6	44.5	51.5	52.0	57.1	55.7	55.8	55.9	54.8	52.1	55.9	56.0	55.8	55.6	<40	56.3	56.6	53.1	<40	57.4	57.8	58.2	58.6	<40	<40	59.8	60.7	65.3

Noise sensitive receivers with exceedance (≥70.5 dB(A))

Floor	R125b	R125c	R125d	R126a	R126b	R126c	R127a	R127b	R128a	R128b	R129a	R129b	R130a	R130b	R130c	R130d	R131a	R131b	R131c	R131d	R132a	R132b	R133a	R133b	R133c	R134a	R134b	R134c	R201a	R201b	R202a	R202b
40																																
39																																
38																																
37	65.0	64.6	61.0	61.7	64.3	64.3	64.1	63.1	63.5	63.6	63.4	62.2	62.9	63.0	62.8	60.4	59.5	62.5	62.3	61.8	58.4	62.0	62.3	62.5	56.6	55.0	63.2	63.7	62.3	61.2	59.1	58.2
36	65.0	64.7	61.1	61.8	64.4	64.3	64.2	63.1	63.6	63.7	63.5	62.3	63.0	63.0	62.9	60.5	59.6	62.6	62.4	61.9	58.5	62.0	62.4	62.6	56.7	55.1	63.3	63.8	62.4	61.2	59.2	58.2
35	65.1	64.8	61.2	61.9	64.5	64.4	64.2	63.2	63.6	63.7	63.6	62.4	63.1	63.1	63.0	60.5	59.6	62.7	62.4	61.9	58.5	62.1	62.4	62.7	56.7	55.1	63.4	63.8	62.4	61.3	59.2	58.3
34	65.2	64.9	61.2	61.9	64.6	64.5	64.3	63.3	63.7	63.8	63.6	62.4	63.1	63.2	63.0	60.6	59.7	62.7	62.5	62.0	58.6	62.2	62.5	62.8	56.7	55.2	63.5	63.9	62.5	61.3	59.3	58.3
33	65.2	64.9	61.3	62.0	64.6	64.5	64.4	63.3	63.8	63.9	63.7	62.5	63.2	63.2	63.1	60.7	59.7	62.8	62.6	62.1	58.6	62.2	62.6	62.8	56.8	55.2	63.5	64.0	62.6	61.4	59.4	58.4
32	65.3	65.0	61.4	62.1	64.7	64.6	64.4	63.4	63.8	63.9	63.8	62.6	63.3	63.3	63.2	60.7	59.8	62.9	62.7	62.1	58.7	62.3	62.7	62.9	56.9	55.3	63.6	64.1	62.7	61.4	59.5	58.5
31	65.4	65.1	61.4	62.2	64.8	64.7	64.5	63.5	63.9	64.0	63.8	62.6	63.3	63.4	63.3	60.8	59.9	62.9	62.7	62.2	58.8	62.4	62.7	63.0	56.9	55.3	63.7	64.1	62.7	61.5	59.5	58.5
30	65.5	65.1	61.5	62.2	64.8	64.8	64.6	63.5	64.0	64.1	63.9	62.7	63.4	63.4	63.3	60.9	60.0	63.0	62.8	62.3	58.8	62.4	62.8	63.0	57.0	55.4	63.8	64.2	62.8	61.6	59.6	58.6
29	65.5	65.2	61.6	62.3	64.9	64.8	64.7	63.6	64.1	64.1	64.0	62.8	63.5	63.5	63.4	61.0	60.0	63.1	62.9	62.3	58.9	62.5	62.9	63.1	57.1	55.5	63.8	64.3	62.8	61.6	59.7	58.6
28	65.6	65.3	61.7	62.4	65.0	64.9	64.7	63.7	64.1	64.2	64.1	62.9	63.5	63.6	63.5	61.0	60.1	63.2	62.9	62.4	58.9	62.6	63.0	63.2	57.1	55.5	63.9	64.4	62.9	61.7	59.7	58.7
27	65.7	65.4	61.7	62.5	65.1	65.0	64.8	63.7	64.2	64.3	64.1	63.0	63.6	63.7	63.5	61.1	60.2	63.2	63.0	62.5	59.0	62.7	63.0	63.3	57.2	55.6	64.0	64.5	63.0	61.8	59.8	58.8
26	65.8	65.4	61.8	62.5	65.1	65.0	64.9	63.8	64.3	64.4	64.2	63.0	63.7	63.7	63.6	61.2	60.2	63.3	63.1	62.6	59.1	62.7	63.1	63.4	57.3	55.7	64.1	64.6	63.1	61.9	59.8	58.8
25	65.9	65.5	61.8	62.6	65.2	65.1	65.0	63.9	64.4	64.4	64.3	63.1	63.8	63.8	63.7	61.3	60.3	63.4	63.2	62.6	59.1	62.8	63.2	63.4	57.4	55.8	64.1	64.6	63.1	61.9	59.9	58.9
24	65.9	65.6	61.9	62.7	65.3	65.2	65.0	64.0	64.4	64.5	64.4	63.2	63.9	63.9	63.8	61.3	60.4	63.5	63.2	62.7	59.2	62.9	63.3	63.5	57.4	55.8	64.2	64.7	63.2	62.0	60.0	59.0
23	66.0	65.7	62.0	62.8	65.4	65.3	65.1	64.1	64.5	64.6	64.4	63.3	63.9	64.0	63.8	61.4	60.4	63.5	63.3	62.8	59.2	63.0	63.4	63.6	57.5	55.9	64.3	64.8	63.3	62.0	60.1	59.1
22	66.1	65.8	62.1	62.8	65.5	65.4	65.2	64.1	64.6	64.7	64.5	63.3	64.0	64.0	63.9	61.5	60.5	63.6	63.4	62.9	59.3	63.1	63.4	63.7	57.6	55.9	64.4	64.9	63.4	62.1	60.1	59.1
21	66.2	65.9	62.1	62.9	65.6	65.4	65.2	64.2	64.6	64.8	64.6	63.4	64.1	64.1	64.0	61.5	60.6	63.7	63.5	63.0	59.4	63.1	63.5	63.7	57.6	56.0	64.5	65.0	63.4	62.2	60.2	59.2
20	66.3	66.0	62.2	63.0	65.6	65.5	65.3	64.3	64.7	64.8	64.7	63.5	64.1	64.2	64.1	61.6	60.7	63.8	63.5	63.0	59.5	63.2	63.6	63.8	57.7	56.1	64.6	65.1	63.5	62.3	60.3	59.3
19	66.3	66.0	62.3	63.1	65.7	65.6	65.4	64.4	64.8	64.9	64.7	63.6	64.2	64.3	64.1	61.7	60.7	63.9	63.6	63.1	59.5	63.3	63.6	63.9	57.8	56.2	64.6	65.2	63.6	62.3	60.3	59.3
18	66.4	66.1	62.4	63.2	65.8	65.7	65.5	64.5	64.9	65.0	64.8	63.6	64.3	64.3	64.2	61.8	60.8	63.9	63.7	63.2	59.6	63.4	63.7	64.0	57.8	56.2	64.8	65.2	63.6	62.4	60.4	59.4
17	66.5	66.2	62.5	63.2	65.9	65.8	65.6	64.5	65.0	65.1	64.9	63.7	64.4	64.4	64.3	61.8	60.9	64.0	63.8	63.2	59.6	63.4	63.8	64.1	57.9	56.3	64.9	65.3	63.7	62.5	60.5	59.4
16	66.6	66.3	62.5	63.3	66.0	65.8	65.6	64.6	65.0	65.1	65.0	63.8	64.4	64.5	64.4	61.9	60.9	64.1	63.8	63.3	59.7	63.5	63.9	64.1	58.0	56.4	64.9	65.4	63.8	62.5	60.5	59.5
15	66.7	66.4	62.6	63.4	66.0	65.9	65.7	64.7	65.1	65.2	65.0	63.9	64.5	64.5	64.5	62.0	61.0	64.2	63.9	63.4	59.8	63.6	64.0	64.2	58.1	56.4	65.0	65.5	63.9	62.6	60.6	59.6
14	66.8	66.5	62.7	63.5	66.1	66.0	65.8	64.8	65.2	65.3	65.1	63.9	64.6	64.6	64.5	62.1	61.1	64.2	64.0	63.5	59.8	63.7	64.1	64.3	58.1	56.5	65.1	65.6	63.9	62.6	60.6	59.6
13	66.9	66.5	62.8	63.6	66.2	66.1	65.9	64.9	65.3	65.4	65.2	64.0	64.6	64.7	64.6	62.1	61.1	64.3	64.1	63.6	59.9	63.8	64.2	64.4	58.2	56.6	65.2	65.7	64.0	62.7	60.6	59.6
12	67.0	66.6	62.8	63.6	66.3	66.2	66.0	64.9	65.4	65.4	65.2	64.1	64.7	64.8	64.7	62.2	61.2	64.4	64.2	63.6	60.0	63.8	64.2	64.5	58.2	56.7	65.3	65.8	64.0	62.7	60.6	59.6
11	67.1	66.7	62.9	63.7	66.4	66.3	66.1	65.0	65.4	65.5	65.3	64.2	64.8	64.9	64.7	62.3	61.3	64.5	64.3	63.7	60.0	63.9	64.3	64.6	58.3	56.7	65.4	65.9	64.1	62.7	60.6	59.6
10	67.1	66.8	63.0	63.8	66.4	66.3	66.1	65.1	65.5	65.6	65.4	64.2	64.9	64.9	64.8	62.4	61.3	64.5	64.3	63.8	60.1	64.0	64.4	64.6	58.4	56.8	65.5	66.0	64.1	62.8	60.7	59.7
9	67.2	66.9	63.1	63.9	66.5	66.4	66.2	65.2	65.6	65.7	65.5	64.3	64.9	65.0	64.9	62.4	61.4	64.6	64.4	63.8	60.1	64.0	64.5	64.7	58.4	56.8	65.6	66.1	64.2	62.8	60.7	59.7
8	67.3	66.9	63.1	63.9	66.6	66.5	66.3	65.2	65.6	65.7	65.5	64.3	65.0	65.1	64.9	62.5	61.4	64.7	64.5	63.9	60.2	64.1	64.6	64.9	58.5	56.9	65.6	66.2	64.2	62.9	60.7	59.7
7	67.4	67.0	63.2	64.0	66.7	66.6	66.4	65.3	65.7	65.8	65.6	64.4	65.0	65.1	65.0	62.6	61.5	64.8	64.5	64.0	60.2	64.2	64.6	64.9	58.5	56.9	65.7	66.3	64.3	62.9	60.8	59.8
6	67.4	67.1	63.2	64.1	66.7	66.6	66.4	65.3	65.7	65.8	65.6	64.5	65.1	65.2	65.1	62.6	61.6	64.8	64.6	64.1	60.3	64.3	64.7	65.0	58.6	57.0	65.8	66.4	64.4	63.0	60.8	59.8
5	67.5	67.1	63.2	64.1	66.8	66.6	66.4	65.4	65.7	65.9	65.7	64.5	65.1	65.2	65.1	62.7	61.6	64.9	64.7	64.1	60.3	64.4	64.8	65.1	58.6	57.0	65.9	66.5	64.4	63.1	60.9	59.9
4	67.5	67.1	63.2	64.2	66.8	66.6	66.4	65.3	65.8	65.9	65.7	64.5	65.2	65.3	65.2	62.7	61.7	65.0	64.7	64.2	60.4	64.4	64.9	65.1	58.7	57.1	66.0	66.6	64.5	63.1	61.0	59.9
3	67.5	67.2	63.0	64.2	66.8	66.6	66.4	65.3	65.7	65.8	65.6	64.4	65.1	65.2	65.2	62.7	61.7	65.0	64.8	64.2	60.4	64.5	64.9	65.2	58.7	57.1	66.1	66.6	64.6	63.2	61.0	60.0
2	67.5	67.1	63.0	64.1	66.7	66.5	66.3	65.1	65.5	65.7	65.5	64.2	65.0	65.1	65.1	62.7	61.6	64.9	64.8	64.2	60.3	64.5	65.0	65.3	58.8	57.2	66.2	66.8	64.6	63.2	61.1	60.0
1	67.6	67.1	62.8	64.0	66.6	66.5	66.2	64.9	65.4	65.5	65.2	63.8	64.6	64.8	64.7	62.5	61.3	64.7	64.6	64.1	60.0	64.5	65.0	65.3	58.7	57.2	66.2	66.8	64.7	63.3	61.1	60.1
Max	67.6	67.2	63.2	64.2	66.8	66.6	66.4	65.4	65.8	65.9	65.7	64.5	65.2	65.3	65.2	62.7	61.7	65.0	64.8	64.2	60.4	64.5	65.0	65.3	58.8	57.2	66.2	66.8	64.7	63.3	61.1	60.1
Min	65.0	64.6	61.0	61.7	64.3	64.3	64.1	63.1	63.5	63.6	63.4	62.2	62.9	63.0	62.8	60.4	59.5	62.5	62.3	61.8	58.4	62.0	62.3	62.5	56.6	55.0	63.2	63.7	62.3	61.2	59.1	58.2

Noise sensitive receivers with exceedance (≥70.5 dB(A))

Floor	R202c	R203a	R203b	R203c	R204a	R204b	R205a	R205b	R206a	R206b	R207a	R207b	R208a	R208b	R208c	R209a	R209b	R209c	R210a	R210b	R210c	R210d	R211a	R211b	R212a	R212b	R213a	R213b	R213c	R214a	R214b	R215a
40																																
39																																
38																																
37	45.4	<40	56.1	55.5	<40	<40	54.3	54.8	54.5	54.2	54.9	55.3	55.6	55.5	<40	45.5	55.4	55.8	49.5	48.1	46.0	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40
36	45.4	<40	56.1	55.5	<40	<40	54.4	54.8	54.5	54.3	55.0	55.3	55.7	55.6	<40	45.6	55.4	55.9	49.0	47.8	45.7	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40
35	45.4	<40	56.2	55.6	<40	<40	54.4	54.9	54.6	54.4	55.0	55.4	55.7	55.6	<40	45.6	55.5	55.9	49.1	47.6	45.7	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40
34	45.4	<40	56.3	55.6	<40	<40	54.5	55.0	54.7	54.4	55.1	55.5	55.8	55.7	<40	45.6	55.5	56.0	48.8	46.7	44.2	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40
33	45.3	<40	56.3	55.7	<40	<40	54.6	55.1	54.7	54.5	55.2	55.5	55.8	55.7	<40	45.7	55.6	56.0	48.3	46.7	44.2	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40
32	45.4	<40	56.4	55.7	<40	<40	54.6	55.1	54.8	54.6	55.2	55.6	55.9	55.7	<40	45.7	55.6	56.1	48.4	46.7	44.2	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40
31	45.4	<40	56.4	55.8	<40	<40	54.7	55.2	54.9	54.6	55.3	55.7	55.9	55.8	<40	45.8	55.7	56.1	48.2	46.5	43.9	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40
30	45.4	<40	56.5	55.9	<40	<40	54.7	55.2	54.9	54.7	55.3	55.7	56.0	55.8	<40	45.9	55.7	56.2	48.2	46.6	43.9	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40
29	45.4	<40	56.6	56.0	<40	<40	54.8	55.3	55.0	54.7	55.4	55.8	56.1	55.9	<40	45.9	55.8	56.2	48.3	46.6	43.9	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40
28	45.5	<40	56.7	56.0	<40	<40	54.9	55.4	55.1	54.8	55.4	55.8	56.1	56.0	<40	46.0	55.8	56.3	48.3	46.6	43.9	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40
27	45.4	<40	56.7	56.1	<40	<40	55.0	55.4	55.1	54.8	55.5	55.9	56.2	56.0	<40	46.0	55.9	56.3	48.2	46.7	44.0	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40
26	45.4	<40	56.8	56.2	<40	<40	55.0	55.5	55.2	54.9	55.5	56.0	56.2	56.1	<40	46.1	55.9	56.3	48.2	46.7	44.0	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40
25	45.5	<40	56.8	56.2	<40	<40	55.1	55.6	55.2	55.0	55.6	56.0	56.3	56.2	<40	46.2	56.0	56.4	48.3	46.7	44.0	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40
24	45.5	<40	56.9	56.3	<40	<40	55.2	55.7	55.3	55.0	55.6	56.1	56.3	56.2	<40	46.2	56.0	56.4	48.3	46.7	44.1	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40
23	45.6	<40	57.0	56.4	<40	<40	55.2	55.7	55.4	55.1	55.7	56.1	56.4	56.2	<40	46.3	56.1	56.4	48.2	46.8	44.1	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40
22	45.6	<40	57.1	56.5	<40	<40	55.3	55.8	55.4	55.2	55.8	56.1	56.5	56.3	<40	46.3	56.1	56.4	48.2	46.8	44.1	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40
21	45.6	<40	57.1	56.6	<40	<40	55.4	55.9	55.5	55.2	55.8	56.2	56.5	56.4	<40	46.4	56.2	56.4	48.3	46.8	44.1	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40
20	45.7	<40	57.2	56.6	<40	<40	55.4	55.9	55.6	55.3	55.8	56.3	56.5	56.4	<40	46.4	56.2	56.5	48.3	46.8	44.2	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40
19	45.6	<40	57.3	56.7	<40	<40	55.5	56.0	55.6	55.4	55.9	56.3	56.6	56.5	<40	46.5	56.2	56.5	48.2	46.9	44.2	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40
18	45.6	<40	57.4	56.7	<40	<40	55.6	56.0	55.7	55.4	56.0	56.3	56.7	56.5	<40	46.5	56.3	56.5	48.2	46.9	44.2	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40
17	45.6	<40	57.4	56.8	<40	<40	55.7	56.1	55.7	55.5	56.0	56.4	56.7	56.6	<40	46.6	56.3	56.4	48.3	46.9	44.2	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40
16	45.5	<40	57.4	56.9	<40	<40	55.7	56.2	55.8	55.5	56.0	56.4	56.8	56.6	<40	46.6	56.3	56.4	48.3	46.9	44.3	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40
15	45.4	<40	57.5	57.0	<40	<40	55.8	56.3	55.9	55.6	56.1	56.5	56.8	56.6	<40	46.7	56.3	56.4	48.3	47.0	44.3	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40
14	45.0	<40	57.6	57.1	<40	<40	55.8	56.3	55.9	55.6	56.1	56.5	56.8	56.7	<40	46.7	56.3	56.3	48.3	47.0	44.3	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40
13	44.4	<40	57.7	57.1	<40	<40	55.9	56.4	56.0	55.7	56.2	56.5	56.9	56.7	<40	46.8	56.3	56.3	48.4	47.0	44.4	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40
12	43.5	<40	57.7	57.2	<40	<40	56.0	56.4	56.1	55.8	56.2	56.6	56.9	56.7	<40	46.8	56.3	56.2	48.4	47.0	44.4	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40
11	42.1	<40	57.8	57.3	<40	<40	56.1	56.5	56.1	55.8	56.2	56.6	56.9	56.8	<40	46.8	56.3	56.2	48.4	47.0	44.5	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40
10	41.3	<40	57.8	57.3	<40	<40	56.1	56.6	56.2	55.9	56.2	56.6	56.9	56.8	<40	46.9	56.4	56.2	48.4	47.1	44.5	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40
9	<40	<40	57.9	57.3	<40	<40	56.2	56.6	56.2	56.0	56.3	56.7	57.0	56.8	<40	46.9	56.4	56.2	48.4	47.1	44.5	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40
8	<40	<40	58.0	57.4	<40	<40	56.2	56.7	56.3	56.0	56.3	56.7	57.0	56.9	<40	46.9	56.4	56.2	48.5	47.1	44.5	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40
7	<40	<40	58.0	57.5	<40	<40	56.3	56.7	56.4	56.1	56.3	56.8	57.1	56.9	<40	47.0	56.4	56.2	48.5	47.1	44.5	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40
6	<40	<40	58.1	57.6	<40	<40	56.4	56.8	56.4	56.1	56.4	56.8	57.0	56.9	<40	47.0	56.5	56.2	48.5	47.1	44.6	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40
5	<40	<40	58.1	57.7	<40	<40	56.4	56.9	56.4	56.1	56.4	56.8	57.1	56.9	<40	47.1	56.5	56.2	48.5	47.1	44.6	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40
4	<40	<40	58.2	57.7	<40	<40	56.5	56.9	56.5	56.2	56.4	56.8	57.1	56.9	<40	47.1	56.4	56.2	48.5	47.2	44.6	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40
3	<40	<40	58.3	57.7	<40	<40	56.5	57.0	56.6	56.2	56.4	56.8	57.1	57.0	<40	47.0	56.5	56.1	48.5	47.2	44.6	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40
2	<40	<40	58.3	57.8	<40	<40	56.5	57.0	56.6	56.2	56.5	56.8	57.1	56.9	<40	46.8	56.3	56.0	48.5	47.2	44.6	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40
1	<40	<40	58.3	57.8	<40	<40	56.5	56.9																			<40	<40	<40	<40	<40	<40	<40
Max	45.7	<40	58.3	57.8	<40	<40	56.5	57.0	56.6	56.2	56.5	56.8	57.1	57.0	<40	47.1	56.5	56.5	49.5	48.1	46.0	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40
Min	<40	<40	56.1	55.5	<40	<40	54.3	54.8	54.5	54.2	54.9	55.3	55.6	55.5	<40	45.5	55.4	55.8	48.2	46.5	43.9	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40

Noise sensitive receivers with exceedance (≥70.5 dB(A))

Floor	R215b	R215c	R215d	R216a	R216b	R216c	R216d	R217a	R217b	R218a	R218b	R219a	R219b	R220a	R220b	R220c	R221a	R221b	R221c	R222a	R222b	R222c	R222d	R223a	R223b	R224a	R224b	R225a	R225b	R225c	R226a	R226b
40																																
39																																
38																																
37	<40	<40	<40	<40	<40	<40	42.2	<40	43.3	<40	<40	<40	<40	45.2	45.2	40.5	42.3	48.9	49.9	64.4	64.4	64.1	62.5	63.2	63.2	63.1	62.9	62.2	62.7	62.6	62.4	62.1
36	<40	<40	<40	<40	<40	<40	42.2	<40	43.3	<40	<40	<40	<40	45.2	45.1	40.5	42.3	48.9	49.9	64.5	64.4	64.1	62.6	63.2	63.2	63.1	62.9	62.2	62.7	62.6	62.4	62.1
35	<40	<40	<40	<40	<40	<40	42.3	<40	43.3	<40	<40	<40	<40	45.3	45.2	40.4	42.2	48.9	49.9	64.5	64.4	64.1	62.6	63.3	63.3	63.2	62.9	62.2	62.8	62.6	62.5	62.1
34	<40	<40	<40	<40	<40	<40	42.3	<40	43.4	<40	<40	<40	<40	45.3	45.2	40.3	42.1	48.8	49.9	64.5	64.5	64.2	62.6	63.3	63.3	63.2	63.0	62.3	62.8	62.7	62.5	62.2
33	<40	<40	<40	<40	<40	<40	42.3	<40	43.4	<40	<40	<40	<40	44.9	45.2	40.3	42.1	48.8	49.8	64.6	64.5	64.2	62.7	63.3	63.4	63.2	63.0	62.3	62.8	62.7	62.5	62.2
32	<40	<40	<40	<40	<40	<40	42.3	<40	43.5	<40	<40	<40	<40	44.9	45.0	40.2	41.9	48.8	49.8	64.6	64.5	64.2	62.7	63.4	63.4	63.3	63.1	62.3	62.9	62.7	62.6	62.3
31	<40	<40	<40	<40	<40	<40	42.4	<40	43.5	<40	<40	<40	<40	44.7	45.0	40.1	41.8	48.7	49.7	64.7	64.5	64.3	62.8	63.4	63.4	63.3	63.1	62.4	62.9	62.8	62.6	62.3
30	<40	<40	<40	<40	<40	<40	42.4	<40	43.6	<40	<40	<40	<40	44.7	45.1	40.0	41.7	48.7	49.6	64.7	64.6	64.3	62.8	63.5	63.5	63.3	63.1	62.4	63.0	62.8	62.7	62.3
29	<40	<40	<40	<40	<40	<40	42.5	<40	43.6	<40	<40	<40	<40	44.8	45.1	<40	41.5	48.5	49.5	64.7	64.6	64.4	62.8	63.5	63.5	63.4	63.2	62.5	63.0	62.9	62.7	62.4
28	<40	<40	<40	<40	<40	<40	42.5	<40	43.7	<40	<40	<40	<40	44.8	45.2	<40	41.1	48.4	49.3	64.8	64.7	64.4	62.9	63.5	63.6	63.4	63.2	62.5	63.0	62.9	62.8	62.4
27	<40	<40	<40	<40	<40	<40	42.6	<40	43.7	<40	<40	<40	<40	44.9	45.2	<40	40.6	48.2	49.1	64.8	64.7	64.4	62.9	63.6	63.6	63.5	63.3	62.5	63.1	63.0	62.8	62.5
26	<40	<40	<40	<40	<40	<40	42.6	<40	43.8	<40	<40	<40	<40	45.0	45.3	<40	40.1	48.0	48.8	64.8	64.7	64.5	63.0	63.6	63.6	63.5	63.3	62.6	63.1	63.0	62.8	62.5
25	<40	<40	<40	<40	<40	<40	42.7	<40	43.8	<40	<40	<40	<40	45.0	45.4	<40	<40	47.8	48.5	64.9	64.8	64.5	63.0	63.7	63.7	63.6	63.4	62.6	63.2	63.1	62.9	62.5
24	<40	<40	<40	<40	<40	<40	42.7	<40	43.9	<40	<40	<40	<40	45.1	45.4	<40	<40	47.4	48.2	64.9	64.8	64.5	63.0	63.7	63.7	63.6	63.4	62.7	63.2	63.1	62.9	62.6
23	<40	<40	<40	<40	<40	<40	42.8	<40	43.9	<40	<40	<40	<40	45.1	45.5	<40	<40	47.4	48.1	64.9	64.8	64.6	63.1	63.7	63.8	63.6	63.4	62.7	63.3	63.1	63.0	62.6
22	<40	<40	<40	<40	<40	<40	42.8	<40	44.0	<40	<40	<40	<40	45.2	45.5	<40	<40	47.3	47.8	65.0	64.9	64.6	63.1	63.8	63.8	63.7	63.5	62.7	63.3	63.2	63.0	62.7
21	<40	<40	<40	<40	<40	<40	42.9	<40	44.0	<40	<40	<40	<40	45.2	45.6	<40	<40	47.1	47.7	65.0	64.9	64.6	63.1	63.8	63.9	63.7	63.5	62.8	63.4	63.2	63.1	62.7
20	<40	<40	<40	<40	<40	<40	42.9	<40	44.1	<40	<40	<40	<40	45.3	45.6	<40	<40	47.0	47.5	65.1	64.9	64.7	63.2	63.9	63.9	63.8	63.6	62.8	63.4	63.3	63.1	62.8
19	<40	<40	<40	<40	<40	<40	42.9	<40	44.1	<40	<40	<40	<40	45.3	45.7	<40	<40	46.9	47.4	65.1	65.0	64.7	63.2	63.9	63.9	63.8	63.6	62.9	63.5	63.3	63.1	62.8
18	<40	<40	<40	<40	<40	<40	43.0	<40	44.2	<40	<40	<40	<40	45.4	45.7	<40	<40	46.8	47.4	65.1	65.0	64.8	63.3	64.0	64.0	63.9	63.7	62.9	63.5	63.4	63.2	62.8
17	<40	<40	<40	<40	<40	<40	43.0	<40	44.2	<40	<40	<40	<40	45.5	45.7	<40	<40	46.9	47.3	65.2	65.1	64.8	63.3	64.0	64.0	63.9	63.7	62.9	63.5	63.4	63.2	62.9
16	<40	<40	<40	<40	<40	<40	43.1	<40	44.3	<40	<40	<40	<40	45.5	45.8	<40	<40	46.8	47.3	65.2	65.1	64.8	63.3	64.0	64.1	63.9	63.7	63.0	63.6	63.5	63.3	62.9
15	<40	<40	<40	<40	<40	<40	43.1	<40	44.3	<40	<40	<40	<40	45.6	45.8	<40	<40	46.8	47.2	65.2	65.1	64.9	63.4	64.1	64.1	64.0	63.8	63.0	63.6	63.5	63.3	63.0
14	<40	<40	<40	<40	<40	<40	43.2	<40	44.4	<40	<40	<40	<40	45.6	45.9	<40	<40	46.8	47.3	65.3	65.2	64.9	63.4	64.1	64.1	64.0	63.8	63.0	63.7	63.5	63.4	63.0
13	<40	<40	<40	<40	<40	<40	43.2	<40	44.4	<40	<40	<40	<40	45.7	45.9	<40	<40	46.8	47.2	65.3	65.2	64.9	63.4	64.2	64.2	64.1	63.9	63.1	63.7	63.6	63.4	63.0
12	<40	<40	<40	<40	<40	<40	43.2	<40	44.4	<40	<40	<40	<40	45.7	46.0	<40	<40	46.8	47.3	65.3	65.2	65.0	63.5	64.2	64.2	64.1	63.9	63.1	63.7	63.6	63.4	63.1
11	<40	<40	<40	<40	<40	<40	43.3	<40	44.5	<40	<40	<40	<40	45.8	46.0	<40	<40	46.9	47.3	65.4	65.3	65.0	63.5	64.2	64.3	64.1	63.9	63.2	63.8	63.7	63.5	63.1
10	<40	<40	<40	<40	<40	<40	43.3	<40	44.5	<40	<40	<40	<40	45.8	46.1	<40	<40	46.8	47.3	65.4	65.3	65.0	63.5	64.3	64.3	64.2	64.0	63.2	63.8	63.7	63.5	63.2
9	<40	<40	<40	<40	<40	<40	43.3	<40	44.5	<40	<40	<40	<40	45.8	46.1	<40	<40	46.9	47.4	65.4	65.3	65.0	63.6	64.3	64.3	64.2	64.0	63.2	63.9	63.8	63.6	63.2
8	<40	<40	<40	<40	<40	<40	43.4	<40	44.5	<40	<40	<40	<40	45.9	46.2	<40	<40	46.9	47.4	65.4	65.4	65.1	63.6	64.3	64.4	64.2	64.0	63.2	63.9	63.8	63.6	63.2
7	<40	<40	<40	<40	<40	<40	43.4	<40	44.5	<40	<40	<40	<40	45.9	46.2	<40	<40	47.0	47.3	65.5	65.4	65.1	63.6	64.4	64.4	64.3	64.1	63.3	63.9	63.8	63.6	63.3
6	<40	<40	<40	<40	<40	<40	43.4	<40	44.6	<40	<40	<40	<40	45.9	46.2	<40	<40	47.0	47.4	65.5	65.4	65.1	63.7	64.4	64.4	64.3	64.1	63.3	64.0	63.9	63.7	63.3
5	<40	<40	<40	<40	<40	<40	43.4	<40	44.6	<40	<40	<40	<40	45.9	46.3	<40	<40	47.0	47.4	65.5	65.4	65.1	63.7	64.4	64.5	64.3	64.1	63.3	64.0	63.9	63.7	63.3
4	<40	<40	<40	<40	<40	<40	43.1	<40	44.5	<40	<40	<40	<40	45.9	46.3	<40	<40	47.0	47.5	65.5	65.4	65.1	63.7	64.4	64.5	64.3	64.2	63.3	64.0	63.9	63.7	63.4
3	<40	<40	<40	<40	<40	<40	42.7	<40	44.1	<40	<40	<40	<40	46.0	46.2	<40	<40	47.0	47.5	65.5	65.4	65.2	63.7	64.4	64.5	64.4	64.2	63.4	64.1	63.9	63.8	63.4
2	<40	<40	<40	<40	<40	<40	41.9	<40	43.6	<40	<40	<40	<40	45.7	46.1	<40	<40	47.0	47.5	65.5	65.4	65.2	63.7	64.4	64.5	64.4	64.2	63.4	64.1	63.9	63.8	63.4
1	<40	<40	<40	<40	<40	<40	41.4	<40	43.2	<40	<40	<40	<40	45.0	45.5	<40	<40	46.6	47.2	65.5	65.4	65.1	63.7	64.4	64.5	64.3	64.1	63.3	64.0	63.9	63.7	63.4
Max	<40	<40	<40	<40	<40	<40	43.4	<40	44.6	<40	<40	<40	<40	46.0	46.3	40.5	42.3	48.9	49.9	65.5	65.4	65.2	63.7	64.4	64.5	64.4	64.2	63.4	64.1	63.9	63.8	63.4
Min	<40	<40	<40	<40	<40	<40	41.4	<40	43.2	<40	<40	<40	<40	44.7	45.0	<40	<40	46.6	47.2	64.4	64.4	64.1	62.5	63.2	63.2	63.1	62.9	62.2	62.7	62.6	62.4	62.1

Noise sensitive receivers with exceedance (≥70.5 dB(A))

Floor	R227a	R227b	R228a	R228b	R229a	R229b	R230a	R230b	R231a	R231b	R231c	R232a	R232b	R232c	R233a	R233b	R234a	R234b	R234c	R234d	R235a	R235b	R235c	R235d	R236a	R236b	R237a	R237b	R238a	R238b	R301a	R301b
40																																
39																																
38																																
37	62.1	59.9	56.7	56.9	63.8	64.3	65.4	65.1	63.6	63.5	60.2	60.5	63.3	63.2	60.9	61.2	62.8	62.9	62.9	59.9	59.8	62.7	62.7	62.6	63.4	62.9	62.3	61.8	65.0	65.1	66.9	66.4
36	62.1	59.9	56.7	57.0	63.9	64.4	65.5	65.1	63.7	63.6	60.3	60.5	63.3	63.2	61.0	61.3	62.8	63.0	63.0	60.0	59.9	62.8	62.7	62.7	63.5	63.0	62.4	61.9	65.1	65.2	67.0	66.5
35	62.1	60.0	56.8	57.0	63.9	64.4	65.5	65.2	63.8	63.6	60.3	60.6	63.4	63.3	61.0	61.3	62.9	63.0	63.0	60.1	59.9	62.9	62.8	62.7	63.6	63.0	62.5	61.9	65.1	65.3	67.1	66.6
34	62.2	60.0	56.8	57.1	63.9	64.4	65.6	65.3	63.8	63.7	60.4	60.7	63.5	63.4	61.1	61.4	63.0	63.1	63.1	60.1	60.0	62.9	62.9	62.8	63.6	63.1	62.5	62.0	65.2	65.3	67.1	66.6
33	62.2	60.0	56.9	57.1	64.0	64.5	65.7	65.3	63.9	63.8	60.5	60.8	63.5	63.5	61.2	61.5	63.1	63.2	63.2	60.2	60.1	63.0	62.9	62.9	63.7	63.2	62.6	62.1	65.3	65.4	67.2	66.7
32	62.3	60.1	56.9	57.2	64.0	64.6	65.7	65.4	64.0	63.8	60.5	60.8	63.6	63.5	61.2	61.6	63.1	63.3	63.2	60.3	60.2	63.1	63.0	62.9	63.8	63.3	62.7	62.2	65.4	65.5	67.3	66.7
31	62.3	60.1	57.0	57.2	64.1	64.6	65.8	65.5	64.1	63.9	60.6	60.9	63.7	63.6	61.3	61.6	63.2	63.3	63.3	60.4	60.3	63.2	63.1	63.0	63.8	63.3	62.7	62.2	65.4	65.6	67.3	66.8
30	62.3	60.1	57.0	57.3	64.1	64.7	65.9	65.6	64.2	64.0	60.7	61.0	63.8	63.7	61.4	61.7	63.3	63.4	63.4	60.4	60.3	63.2	63.2	63.1	63.9	63.4	62.8	62.3	65.5	65.6	67.4	66.9
29	62.4	60.1	57.0	57.3	64.2	64.7	65.9	65.6	64.2	64.1	60.7	61.1	63.9	63.8	61.5	61.8	63.4	63.5	63.5	60.5	60.4	63.3	63.3	63.2	64.0	63.5	62.9	62.4	65.6	65.7	67.5	67.0
28	62.4	60.2	57.1	57.4	64.2	64.8	66.0	65.7	64.3	64.2	60.8	61.1	63.9	63.8	61.5	61.8	63.4	63.6	63.5	60.6	60.5	63.4	63.3	63.2	64.1	63.6	63.0	62.5	65.7	65.8	67.6	67.1
27	62.5	60.2	57.1	57.4	64.3	64.8	66.1	65.8	64.4	64.2	60.9	61.2	64.0	63.9	61.6	61.9	63.5	63.6	63.6	60.7	60.6	63.4	63.4	63.3	64.1	63.6	63.0	62.5	65.7	65.9	67.6	67.1
26	62.5	60.2	57.2	57.5	64.3	64.9	66.2	65.9	64.5	64.3	60.9	61.3	64.1	64.0	61.7	62.0	63.6	63.7	63.7	60.7	60.6	63.5	63.5	63.4	64.2	63.7	63.1	62.6	65.8	65.9	67.8	67.2
25	62.5	60.3	57.2	57.5	64.4	65.0	66.2	65.9	64.6	64.4	61.0	61.4	64.2	64.1	61.8	62.1	63.7	63.8	63.8	60.8	60.7	63.6	63.6	63.5	64.3	63.8	63.2	62.7	65.9	66.0	67.8	67.3
24	62.6	60.3	57.2	57.5	64.4	65.0	66.3	66.0	64.7	64.5	61.1	61.5	64.3	64.2	61.8	62.1	63.7	63.9	63.9	60.8	60.8	63.7	63.6	63.5	64.4	63.8	63.3	62.8	66.0	66.1	67.9	67.4
23	62.6	60.4	57.2	57.6	64.5	65.1	66.4	66.1	64.8	64.6	61.2	61.6	64.3	64.2	61.9	62.2	63.8	64.0	63.9	60.9	60.9	63.8	63.7	63.6	64.4	63.9	63.3	62.9	66.1	66.2	68.0	67.5
22	62.7	60.4	57.3	57.6	64.6	65.1	66.5	66.2	64.9	64.7	61.3	61.7	64.4	64.3	62.0	62.3	63.9	64.0	64.0	61.0	60.9	63.9	63.8	63.7	64.5	64.0	63.4	62.9	66.2	66.3	68.0	67.5
21	62.7	60.4	57.3	57.7	64.6	65.2	66.5	66.3	64.9	64.8	61.4	61.8	64.5	64.4	62.1	62.4	64.0	64.1	64.1	61.1	61.0	63.9	63.9	63.8	64.6	64.1	63.5	63.0	66.2	66.4	68.1	67.6
20	62.8	60.5	57.4	57.7	64.7	65.3	66.6	66.4	65.0	64.9	61.4	61.8	64.6	64.5	62.2	62.5	64.1	64.2	64.2	61.2	61.1	64.0	64.0	63.8	64.7	64.2	63.6	63.1	66.3	66.4	68.2	67.7
19	62.8	60.5	57.4	57.7	64.7	65.3	66.7	66.5	65.1	65.0	61.5	61.9	64.7	64.6	62.2	62.5	64.1	64.3	64.3	61.2	61.2	64.1	64.0	63.9	64.8	64.2	63.7	63.2	66.4	66.5	68.3	67.8
18	62.8	60.5	57.4	57.8	64.8	65.4	66.8	66.5	65.2	65.1	61.6	62.0	64.8	64.7	62.3	62.6	64.2	64.3	64.3	61.3	61.2	64.2	64.1	64.0	64.8	64.3	63.7	63.3	66.5	66.6	68.4	67.9
17	62.9	60.6	57.5	57.8	64.8	65.4	66.9	66.6	65.3	65.1	61.7	62.1	64.9	64.8	62.4	62.7	64.3	64.4	64.4	61.4	61.3	64.3	64.2	64.1	64.9	64.4	63.8	63.4	66.6	66.7	68.5	68.0
16	62.9	60.6	57.5	57.9	64.9	65.5	67.0	66.7	65.4	65.2	61.7	62.2	65.0	64.9	62.5	62.8	64.4	64.5	64.5	61.5	61.4	64.4	64.3	64.2	65.0	64.5	63.9	63.5	66.7	66.8	68.6	68.1
15	63.0	60.6	57.6	57.9	65.0	65.6	67.0	66.8	65.5	65.3	61.8	62.3	65.0	64.9	62.5	62.8	64.5	64.6	64.6	61.5	61.5	64.4	64.4	64.2	65.1	64.6	64.0	63.6	66.8	66.9	68.8	68.2
14	63.0	60.6	57.6	57.9	65.0	65.6	67.1	66.9	65.6	65.4	61.9	62.4	65.1	65.0	62.6	62.9	64.5	64.7	64.7	61.6	61.6	64.5	64.5	64.3	65.1	64.7	64.1	63.6	66.9	67.0	68.9	68.4
13	63.0	60.7	57.6	58.0	65.1	65.7	67.2	67.0	65.7	65.5	62.0	62.5	65.2	65.1	62.7	63.0	64.6	64.8	64.8	61.7	61.7	64.6	64.5	64.4	65.2	64.7	64.2	63.7	67.0	67.1	69.0	68.5
12	63.1	60.7	57.7	58.0	65.1	65.8	67.3	67.1	65.8	65.6	62.1	62.6	65.3	65.2	62.8	63.1	64.7	64.9	64.9	61.8	61.8	64.7	64.6	64.5	65.3	64.8	64.2	63.8	67.0	67.2	69.1	68.6
11	63.1	60.8	57.7	58.0	65.2	65.8	67.4	67.2	65.9	65.7	62.2	62.7	65.4	65.3	62.9	63.2	64.8	64.9	64.9	61.8	61.8	64.7	64.7	64.5	65.4	64.9	64.3	63.9	67.1	67.2	69.2	68.7
10	63.2	60.8	57.7	58.1	65.3	65.9	67.5	67.3	66.0	65.8	62.3	62.8	65.5	65.4	63.0	63.2	64.9	65.0	65.0	61.9	61.9	64.8	64.8	64.6	65.5	65.0	64.4	64.0	67.2	67.3	69.4	68.8
9	63.2	60.8	57.8	58.1	65.3	66.0	67.6	67.4	66.1	65.9	62.4	62.9	65.6	65.5	63.0	63.3	65.0	65.1	65.1	62.0	62.0	64.9	64.8	64.7	65.5	65.1	64.5	64.1	67.3	67.4	69.4	69.0
8	63.2	60.8	57.8	58.1	65.4	66.0	67.7	67.5	66.2	66.0	62.4	63.0	65.7	65.6	63.1	63.4	65.0	65.2	65.2	62.1	62.1	65.0	64.9	64.8	65.6	65.1	64.6	64.2	67.4	67.5	69.6	69.1
7	63.3	60.9	57.8	58.2	65.4	66.1	67.8	67.6	66.3	66.1	62.6	63.0	65.8	65.7	63.2	63.5	65.1	65.3	65.3	62.1	62.2	65.1	65.0	64.8	65.7	65.2	64.6	64.3	67.5	67.6	69.7	69.2
6	63.3	60.9	57.8	58.2	65.5	66.1	67.9	67.7	66.4	66.2	62.6	63.1	65.9	65.8	63.3	63.6	65.2	65.3	65.3	62.2	62.2	65.1	65.1	64.9	65.8	65.3	64.7	64.3	67.6	67.7	69.8	69.3
5	63.3	60.9	57.9	58.2	65.5	66.2	68.0	67.8	66.5	66.3	62.7	63.2	66.0	65.9	63.4	63.7	65.3	65.4	65.4	62.2	62.3	65.2	65.1	65.0	65.8	65.4	64.8	64.4	67.7	67.8	69.9	69.5
4	63.4	60.9	57.9	58.3	65.6	66.3	68.1	67.9	66.6	66.4	62.8	63.3	66.1	66.0	63.5	63.7	65.4	65.5	65.5	62.3	62.4	65.3	65.2	65.1	65.9	65.4	64.9	64.5	67.7	67.8	70.1	69.6
3	63.4	61.0	57.9	58.3	65.6	66.3	68.1	67.9	66.7	66.5	62.9	63.4	66.2	66.0	63.6	63.8	65.4	65.6	65.5	62.4	62.5	65.4	65.3	65.1	66.0	65.5	64.9	64.6	67.8	67.9	70.3	69.7
2	63.4	61.0	57.9	58.3	65.7	66.4	68.2	68.0	66.8	66.6	63.0	63.5	66.2	66.1	63.6	63.9	65.5	65.6	65.6	62.4	62.5	65.4	65.3	65.1	66.0	65.5	65.0	64.6	67.9	68.0	70.4	69.9
1	63.4	60.9	57.9	58.3	65.7	66.4	68.3	68.1	66.9	66.7	63.0	63.6	66.3	66.2	63.7	63.9	65.5	65.7	65.7	62.5	62.5	65.5	65.4	65.2	66.1	65.6	65.1	64.7	68.0	68.1	**70.5**	70.0
Max	63.4	61.0	57.9	58.3	65.7	66.4	68.3	68.1	66.9	66.7	63.0	63.6	66.3	66.2	63.7	63.9	65.5	65.7	65.7	62.5	62.5	65.5	65.4	65.2	66.1	65.6	65.1	64.7	68.0	68.1	**70.5**	70.0
Min	62.1	59.9	56.7	56.9	63.8	64.3	65.4	65.1	63.6	63.5	60.2	60.5	63.3	63.2	60.9	61.2	62.8	62.9	62.9	59.9	59.8	62.7	62.7	62.6	63.4	62.9	62.3	61.8	65.0	65.1	66.9	66.4

Noise sensitive receivers with exceedance (≥70.5 dB(A))

Floor	R302a	R302b	R303a	R303b	R304a	R304b	R304c	R305a	R305b	R305c	R306a	R306b	R306c	R306d	R307a	R307b	R307c	R308a	R308b	R308c	R309a	R309b	R310a	R310b	R310c	R310d	R311a	R311b	R311c	R311d	R312a	R312b
40																																
39																																
38																																
37	63.3	63.5	63.9	64.4	58.9	64.7	65.0	65.3	65.5	60.1	60.6	65.9	66.3	66.6	63.5	63.0	56.3	58.0	62.4	62.2	61.9	59.4	61.7	62.0	62.2	60.3	60.2	62.5	62.5	62.5	61.1	63.0
36	63.3	63.5	64.0	64.5	58.9	64.8	65.1	65.4	65.6	60.2	60.7	66.0	66.4	66.7	63.6	63.1	56.4	58.1	62.5	62.3	62.0	59.5	61.8	62.1	62.3	60.4	60.3	62.6	62.6	62.6	61.1	63.1
35	63.4	63.6	64.1	64.5	59.0	64.9	65.2	65.4	65.7	60.2	60.7	66.1	66.5	66.8	63.7	63.2	56.5	58.2	62.6	62.4	62.1	59.6	61.9	62.2	62.4	60.5	60.4	62.7	62.7	62.6	61.2	63.2
34	63.5	63.7	64.1	64.6	59.1	64.9	65.3	65.5	65.7	60.3	60.7	66.2	66.5	66.8	63.8	63.3	56.5	58.3	62.7	62.4	62.2	59.7	62.0	62.3	62.5	60.5	60.4	62.7	62.8	62.7	61.3	63.3
33	63.6	63.8	64.2	64.7	59.2	65.0	65.3	65.6	65.8	60.4	60.8	66.2	66.6	66.9	63.9	63.4	56.6	58.4	62.8	62.5	62.3	59.7	62.1	62.4	62.6	60.6	60.5	62.8	62.9	62.8	61.3	63.3
32	63.7	63.9	64.3	64.8	59.3	65.1	65.4	65.6	65.8	60.5	60.9	66.3	66.7	67.0	64.0	63.5	56.2	58.1	62.9	62.6	62.4	59.8	62.2	62.5	62.7	60.7	60.6	62.9	62.9	62.8	61.4	63.4
31	63.8	63.9	64.4	64.9	59.3	65.1	65.4	65.7	65.9	60.5	60.9	66.3	66.7	67.0	64.1	63.6	56.3	58.2	63.0	62.7	62.5	59.9	62.3	62.6	62.8	60.8	60.7	63.0	63.0	62.9	61.5	63.5
30	63.8	64.0	64.4	65.0	59.3	65.2	65.5	65.8	66.0	60.6	61.0	66.4	66.8	67.1	64.2	63.7	56.4	58.3	63.1	62.8	62.6	60.0	62.4	62.7	62.9	60.9	60.8	63.1	63.1	63.0	61.6	63.6
29	63.9	64.1	64.5	65.0	59.4	65.3	65.6	65.8	66.1	60.7	61.0	66.5	66.9	67.2	64.3	63.8	56.5	58.4	63.2	63.0	62.7	60.1	62.5	62.8	63.0	60.9	60.9	63.2	63.2	63.1	61.6	63.6
28	64.0	64.2	64.6	65.1	59.5	65.3	65.6	65.9	66.1	60.7	61.0	66.5	66.9	67.3	64.4	63.9	56.6	58.5	63.3	63.1	62.8	60.2	62.6	62.9	63.1	61.0	61.0	63.3	63.3	63.2	61.7	63.7
27	64.1	64.3	64.7	65.2	59.6	65.4	65.7	65.9	66.2	60.8	61.0	66.6	67.0	67.4	64.5	64.0	56.7	58.7	63.4	63.2	62.9	60.3	62.7	63.0	63.2	61.1	61.0	63.4	63.4	63.3	61.7	63.8
26	64.2	64.4	64.8	65.3	59.6	65.5	65.8	66.0	66.2	60.9	61.1	66.7	67.1	67.4	64.6	64.2	56.8	58.8	63.5	63.3	63.0	60.4	62.8	63.1	63.3	61.2	61.1	63.5	63.5	63.4	61.8	63.8
25	64.3	64.5	64.9	65.4	59.7	65.5	65.8	66.1	66.3	60.9	61.1	66.8	67.2	67.5	64.8	64.3	56.9	58.9	63.6	63.4	63.1	60.5	62.9	63.2	63.4	61.3	61.2	63.6	63.6	63.5	61.9	63.9
24	64.4	64.6	65.0	65.5	59.8	65.6	65.9	66.2	66.4	61.0	61.2	66.8	67.2	67.6	64.9	64.4	57.1	59.0	63.7	63.5	63.2	60.6	63.0	63.3	63.5	61.5	61.3	63.7	63.7	63.6	62.0	64.0
23	64.5	64.6	65.1	65.6	59.9	65.7	66.0	66.2	66.4	61.1	61.2	66.9	67.3	67.7	65.0	64.5	57.2	59.1	63.9	63.6	63.3	60.8	63.1	63.4	63.6	61.6	61.5	63.8	63.8	63.7	62.1	64.1
22	64.6	64.8	65.2	65.7	60.0	65.8	66.1	66.3	66.5	61.2	61.3	67.0	67.4	67.8	65.1	64.7	57.3	59.2	64.0	63.8	63.4	60.9	63.2	63.5	63.7	61.7	61.6	63.9	63.9	63.8	62.1	64.2
21	64.7	64.9	65.3	65.8	60.1	65.9	66.1	66.4	66.6	61.3	61.4	67.1	67.5	67.9	65.3	64.8	57.5	59.4	64.1	63.9	63.6	61.0	63.4	63.7	63.9	61.8	61.7	64.0	64.0	63.9	62.2	64.3
20	64.8	65.0	65.4	65.9	60.1	66.0	66.2	66.5	66.7	61.4	61.5	67.2	67.6	68.0	65.4	64.9	57.6	59.5	64.3	64.0	63.7	61.1	63.5	63.8	64.0	61.9	61.8	64.1	64.1	64.0	62.4	64.4
19	64.9	65.1	65.5	66.0	60.2	66.0	66.3	66.6	66.8	61.5	61.6	67.3	67.7	68.1	65.5	65.1	57.7	59.6	64.4	64.2	63.8	61.2	63.6	63.9	64.1	62.0	61.9	64.2	64.2	64.1	62.5	64.5
18	65.0	65.2	65.6	66.1	60.3	66.1	66.5	66.7	66.9	61.6	61.6	67.4	67.8	68.2	65.7	65.2	57.9	59.8	64.5	64.3	63.9	61.4	63.7	64.0	64.2	62.2	62.1	64.3	64.3	64.2	62.6	64.7
17	65.1	65.3	65.7	66.2	60.4	66.2	66.5	66.8	67.0	61.7	61.7	67.5	68.0	68.3	65.8	65.4	58.0	59.9	64.7	64.4	64.1	61.5	63.9	64.2	64.3	62.3	62.2	64.5	64.4	64.3	62.7	64.8
16	65.2	65.4	65.8	66.3	60.5	66.3	66.6	66.9	67.1	61.7	61.8	67.6	68.0	68.4	66.0	65.5	58.2	60.1	64.8	64.6	64.2	61.7	64.0	64.3	64.4	62.4	62.3	64.6	64.6	64.5	62.8	65.0
15	65.3	65.5	65.9	66.4	60.6	66.4	66.7	67.0	67.2	61.8	61.9	67.7	68.2	68.5	66.1	65.7	58.3	60.2	65.0	64.7	64.4	61.8	64.1	64.4	64.5	62.5	62.4	64.7	64.7	64.6	63.0	65.0
14	65.4	65.6	66.0	66.5	60.7	66.5	66.8	67.0	67.3	62.0	62.0	67.8	68.3	68.6	66.3	65.9	58.5	60.4	65.1	64.9	64.5	61.9	64.3	64.6	64.7	62.7	62.6	64.9	64.8	64.7	63.1	65.2
13	65.5	65.7	66.1	66.6	60.8	66.6	66.9	67.1	67.4	62.1	62.1	67.9	68.4	68.7	66.5	66.0	58.6	60.5	65.2	65.0	64.7	62.0	64.4	64.6	64.8	62.7	62.7	65.0	65.0	64.8	63.2	65.3
12	65.6	65.8	66.2	66.7	60.9	66.7	67.0	67.2	67.4	62.2	62.2	68.0	68.5	68.8	66.7	66.2	58.8	60.7	65.4	65.2	64.8	62.2	64.5	64.8	65.0	62.9	62.8	65.1	65.0	64.9	63.4	65.5
11	65.7	65.9	66.3	66.7	61.1	66.7	67.0	67.3	67.5	62.3	62.3	68.1	68.6	68.9	66.9	66.4	58.9	60.8	65.6	65.4	65.0	62.3	64.6	64.9	65.1	63.0	63.0	65.2	65.2	65.0	63.5	65.6
10	65.8	65.9	66.3	66.8	61.2	66.8	67.1	67.4	67.6	62.4	62.4	68.2	68.7	69.1	67.1	66.6	59.1	61.0	65.7	65.5	65.1	62.5	64.8	65.1	65.3	63.1	63.1	65.3	65.3	65.2	63.6	65.7
9	65.9	66.0	66.4	67.0	61.3	66.9	67.2	67.5	67.7	62.5	62.5	68.3	68.8	69.2	67.3	66.8	59.2	61.2	65.9	65.7	65.3	62.6	64.9	65.2	65.4	63.3	63.2	65.5	65.5	65.3	63.7	65.9
8	66.0	66.1	66.5	67.0	61.4	67.1	67.3	67.6	67.9	62.6	62.6	68.4	68.9	69.4	67.5	67.0	59.4	61.4	66.1	65.8	65.5	62.8	65.1	65.3	65.5	63.4	63.3	65.6	65.6	65.4	63.9	66.1
7	66.0	66.2	66.6	67.1	61.4	67.2	67.5	67.8	68.0	62.7	62.8	68.5	69.1	69.5	67.7	67.2	59.5	61.5	66.3	66.0	65.6	62.9	65.2	65.5	65.6	63.6	63.5	65.7	65.7	65.5	64.0	66.1
6	66.1	66.3	66.7	67.2	61.5	67.3	67.6	67.9	68.1	62.8	62.9	68.7	69.2	69.7	67.9	67.4	59.6	61.7	66.5	66.2	65.7	63.0	65.2	65.5	65.7	63.7	63.6	65.8	65.8	65.6	64.1	66.3
5	66.3	66.4	66.8	67.3	61.6	67.4	67.7	68.0	68.3	62.9	63.0	68.8	69.4	69.9	68.2	67.7	59.8	61.9	66.7	66.4	65.9	63.2	65.3	65.6	65.8	63.9	63.8	65.9	65.9	65.8	64.2	66.4
4	66.4	66.5	66.9	67.4	61.6	67.4	67.8	68.1	68.4	63.0	63.1	69.0	69.5	70.0	68.4	67.8	60.0	62.0	66.8	66.5	65.9	63.4	65.5	65.7	65.9	64.0	63.9	66.1	66.0	65.9	64.4	66.5
3	66.5	66.6	67.0	67.5	61.7	67.4	67.8	68.2	68.5	63.1	63.2	69.1	69.7	70.2	68.7	68.1	60.1	62.2	67.0	66.6	66.0	63.5	65.5	65.8	66.0	64.1	64.1	66.2	66.2	66.0	64.5	66.7
2	66.6	66.7	67.2	67.6	61.7	67.5	67.8	68.1	68.5	63.2	63.3	69.2	69.8	70.3	68.9	68.3	60.3	62.4	67.1	66.6	66.1	63.6	65.6	66.0	66.2	64.2	64.2	66.3	66.3	66.2	64.6	66.9
1	66.7	66.8	67.3	67.7	61.7	67.5	67.8	68.1	68.5	63.3	63.4	69.3	69.9	**70.5**	69.2	68.5	60.5	62.6	67.1	66.6	66.2	63.8	65.8	66.1	66.3	64.4	64.3	66.5	66.4	66.3	64.8	67.0
Max	66.7	66.8	67.3	67.7	61.7	67.5	67.8	68.2	68.5	63.3	63.4	69.3	69.9	**70.5**	69.2	68.5	60.5	62.6	67.1	66.6	66.2	63.8	65.8	66.1	66.3	64.4	64.3	66.5	66.4	66.3	64.8	67.0
Min	63.3	63.5	63.9	64.4	58.9	64.7	65.0	65.3	65.5	60.1	60.6	65.9	66.3	66.6	63.5	63.0	56.2	58.0	62.4	62.2	61.9	59.4	61.7	62.0	62.2	60.3	60.2	62.5	62.5	62.5	61.1	63.0

Noise sensitive receivers with exceedance (≥70.5 dB(A))

Floor	R313a	R313b	R314a	R314b	R315a	R315b	R315c	R316a	R316b	R316c	R316d	R317a	R317b	R317c	R318a	R318b	R318c	R319a	R319b	R319c	R320a	R320b	R321a	R321b	R322a	R322b	R323a	R323b	R323c	R324a	R324b	R324c
40																																
39																																
38																																
37	63.3	63.2	62.4	64.0	64.2	64.3	61.0	61.0	64.5	64.9	65.1	60.6	60.0	<40	<40	59.1	58.6	57.9	57.7	<40	54.6	57.4	57.0	48.1	56.4	56.7	56.7	56.7	53.8	55.4	56.5	56.4
36	63.4	63.2	62.5	64.1	64.2	64.4	61.1	61.1	64.6	64.9	65.2	60.6	60.1	<40	<40	59.2	58.7	58.0	57.8	<40	54.7	57.5	57.1	48.1	56.5	56.7	56.8	56.7	53.8	55.5	56.6	56.5
35	63.5	63.3	62.6	64.1	64.3	64.4	61.1	61.1	64.7	64.9	65.2	60.7	60.2	<40	<40	59.2	58.8	58.1	57.9	<40	54.8	57.5	57.2	48.2	56.4	56.8	56.9	56.8	53.6	55.5	56.5	56.4
34	63.5	63.4	62.6	64.2	64.4	64.5	61.2	61.2	64.7	65.0	65.3	60.8	60.3	<40	<40	59.3	58.9	58.2	57.8	<40	53.8	57.0	56.7	<40	56.1	56.5	56.6	56.6	53.5	55.6	56.5	56.5
33	63.6	63.4	62.7	64.3	64.5	64.6	61.2	61.2	64.8	65.1	65.4	60.7	60.2	<40	<40	59.1	58.7	58.3	57.9	<40	53.4	57.1	56.8	<40	56.2	56.6	56.7	56.7	53.6	55.7	56.6	56.6
32	63.7	63.5	62.7	64.3	64.5	64.7	61.3	61.2	64.9	65.2	65.5	60.8	60.3	<40	<40	59.2	58.8	58.4	58.0	<40	53.5	57.2	56.9	<40	56.3	56.7	56.8	56.7	53.7	55.8	56.7	56.7
31	63.8	63.6	62.8	64.4	64.6	64.7	61.4	61.3	65.0	65.3	65.6	60.9	60.4	<40	<40	59.3	58.9	58.5	58.1	<40	53.6	57.3	57.0	<40	56.4	56.8	56.9	56.8	53.8	55.9	56.8	56.7
30	63.8	63.6	62.8	64.5	64.7	64.8	61.4	61.4	65.1	65.4	65.7	61.0	60.5	<40	<40	59.4	59.0	58.6	58.2	<40	53.7	57.4	57.1	<40	56.5	56.9	56.9	56.9	53.8	56.0	56.9	56.8
29	63.9	63.7	62.9	64.6	64.8	64.9	61.5	61.4	65.2	65.5	65.7	61.1	60.6	<40	<40	59.6	59.1	58.7	58.3	<40	53.8	57.5	57.2	<40	56.6	57.0	57.0	57.0	53.9	56.0	56.9	56.9
28	64.0	63.8	63.0	64.6	64.8	65.0	61.6	61.5	65.3	65.6	65.8	61.2	60.7	<40	<40	59.6	59.2	58.8	58.4	<40	53.9	57.6	57.3	<40	56.7	57.0	57.1	57.1	54.0	56.1	57.0	57.0
27	64.0	63.8	63.1	64.7	64.9	65.1	61.7	61.6	65.4	65.7	65.9	61.3	60.7	<40	<40	59.8	59.3	58.9	58.5	<40	54.0	57.7	57.4	<40	56.8	57.1	57.2	57.2	54.1	56.2	57.1	57.1
26	64.1	64.0	63.2	64.8	65.1	65.2	61.8	61.7	65.5	65.8	66.0	61.4	60.8	<40	<40	59.9	59.5	59.0	58.6	<40	54.1	57.8	57.5	<40	56.9	57.2	57.3	57.3	54.2	56.3	57.2	57.2
25	64.2	64.1	63.3	64.9	65.2	65.3	61.9	61.8	65.6	65.9	66.2	61.6	61.0	<40	<40	60.0	59.6	59.1	58.7	<40	54.2	57.9	57.6	<40	57.0	57.3	57.4	57.4	54.3	56.4	57.3	57.3
24	64.3	64.2	63.3	65.0	65.3	65.4	62.0	61.9	65.7	66.0	66.3	61.7	61.1	<40	<40	60.1	59.7	59.2	58.8	<40	54.3	58.0	57.7	<40	57.1	57.4	57.5	57.5	54.4	56.5	57.4	57.4
23	64.4	64.3	63.5	65.2	65.4	65.5	62.1	62.0	65.8	66.1	66.4	61.8	61.2	<40	<40	60.2	59.8	59.4	58.9	<40	54.5	58.1	57.8	<40	57.2	57.5	57.6	57.6	54.5	56.6	57.5	57.5
22	64.5	64.4	63.6	65.3	65.5	65.7	62.3	62.2	65.9	66.2	66.6	61.9	61.3	<40	<40	60.4	59.9	59.5	59.0	<40	54.6	58.2	57.9	<40	57.3	57.6	57.7	57.7	54.6	56.7	57.6	57.6
21	64.6	64.5	63.7	65.4	65.6	65.8	62.3	62.2	66.1	66.4	66.7	62.0	61.5	<40	<40	60.5	60.0	59.6	59.2	<40	54.7	58.4	58.0	<40	57.4	57.8	57.8	57.8	54.7	56.8	57.7	57.7
20	64.8	64.6	63.8	65.5	65.7	65.9	62.5	62.4	66.2	66.5	66.8	62.1	61.6	<40	<40	60.6	60.2	59.7	59.3	<40	54.8	58.5	58.1	<40	57.5	57.9	57.9	57.9	54.8	56.9	57.8	57.7
19	64.9	64.7	63.9	65.6	65.9	66.0	62.6	62.5	66.4	66.7	66.9	62.3	61.7	<40	<40	60.7	60.3	59.9	59.4	<40	54.9	58.6	58.2	<40	57.6	58.0	58.0	58.0	54.9	57.0	57.9	57.8
18	65.0	64.9	64.0	65.8	66.0	66.1	62.7	62.6	66.5	66.8	67.1	62.4	61.9	<40	<40	60.9	60.4	60.0	59.5	<40	55.1	58.7	58.3	<40	57.7	58.1	58.1	58.1	55.0	57.1	58.0	57.9
17	65.1	65.0	64.2	65.9	66.1	66.3	62.9	62.7	66.6	67.0	67.2	62.6	62.0	<40	<40	60.9	60.6	60.1	59.7	<40	55.2	58.8	58.5	<40	57.8	58.2	58.2	58.2	55.1	57.2	58.1	58.0
16	65.3	65.1	64.3	66.0	66.3	66.4	63.0	62.9	66.8	67.1	67.4	62.7	62.2	<40	<40	61.1	60.7	60.3	59.8	<40	55.3	59.0	58.6	<40	57.9	58.3	58.4	58.3	55.2	57.3	58.2	58.1
15	65.4	65.3	64.5	66.2	66.4	66.6	63.2	63.0	66.9	67.3	67.5	62.9	62.3	<40	<40	61.2	60.9	60.4	59.9	<40	55.4	59.1	58.7	<40	58.1	58.4	58.5	58.4	55.3	57.4	58.3	58.2
14	65.6	65.4	64.6	66.3	66.6	66.8	63.3	63.1	67.1	67.5	67.7	63.1	62.5	<40	<40	61.4	61.0	60.5	60.1	<40	55.6	59.2	58.8	<40	58.2	58.5	58.6	58.5	55.4	57.5	58.4	58.3
13	65.7	65.5	64.7	66.5	66.7	66.9	63.5	63.3	67.2	67.6	67.9	63.2	62.7	<40	<40	61.5	61.2	60.7	60.2	<40	55.7	59.4	59.0	<40	58.3	58.6	58.7	58.6	55.5	57.6	58.5	58.4
12	65.8	65.7	64.9	66.6	66.9	67.1	63.6	63.5	67.4	67.8	68.1	63.4	62.7	<40	<40	61.7	61.3	60.8	60.4	<40	55.9	59.5	59.1	<40	58.4	58.8	58.8	58.7	55.6	57.7	58.6	58.5
11	66.0	65.8	65.0	66.8	67.1	67.3	63.7	63.6	67.6	68.0	68.2	63.6	62.9	<40	<40	61.9	61.4	61.0	60.5	<40	56.0	59.6	59.2	<40	58.5	58.9	58.8	58.8	55.7	57.8	58.6	58.6
10	66.1	66.0	65.2	67.0	67.3	67.4	63.9	63.7	67.8	68.2	68.4	63.8	63.1	<40	<40	62.0	61.6	61.2	60.7	<40	56.2	59.8	59.4	<40	58.6	58.9	58.9	59.0	55.8	57.9	58.7	58.7
9	66.3	66.1	65.4	67.2	67.4	67.6	64.1	63.9	67.9	68.4	68.6	64.0	63.3	<40	<40	62.2	61.7	61.2	60.8	<40	56.3	59.9	59.5	<40	58.7	59.0	59.0	59.0	55.9	58.0	58.8	58.8
8	66.4	66.3	65.5	67.3	67.6	67.8	64.3	64.1	68.2	68.5	68.9	64.1	63.4	<40	<40	62.4	61.9	61.4	61.0	<40	56.4	60.0	59.6	<40	58.9	59.1	59.2	59.1	56.0	58.1	58.8	58.9
7	66.6	66.5	65.6	67.5	67.8	68.0	64.5	64.3	68.4	68.8	69.1	64.3	63.6	<40	<40	62.5	62.1	61.6	61.2	<40	56.6	60.2	59.7	<40	58.9	59.2	59.2	59.1	56.1	58.2	58.9	58.8
6	66.7	66.6	65.8	67.7	68.0	68.2	64.7	64.5	68.6	69.0	69.4	64.5	63.8	<40	<40	62.7	62.3	61.7	61.3	<40	56.7	60.3	59.8	<40	58.9	59.2	59.3	59.1	56.2	58.3	59.0	58.9
5	66.8	66.8	66.0	67.9	68.2	68.4	64.9	64.7	68.9	69.3	69.6	64.7	64.0	<40	<40	62.9	62.4	61.9	61.5	<40	56.9	60.4	59.9	<40	59.0	59.3	59.3	59.2	56.3	58.4	59.1	59.0
4	67.0	66.9	66.2	68.0	68.4	68.6	65.2	64.9	69.1	69.6	69.9	65.0	64.3	<40	<40	63.1	62.6	62.1	61.7	<40	57.1	60.4	59.9	<40	59.0	59.3	59.4	59.3	56.4	58.5	59.2	59.1
3	67.1	67.0	66.3	68.2	68.6	68.9	65.4	65.1	69.4	69.8	70.1	65.2	64.5	<40	<40	63.3	62.8	62.3	61.7	<40	57.2	60.5	60.0	<40	59.2	59.4	59.5	59.4	56.5	58.6	59.3	59.2
2	67.3	67.2	66.5	68.4	68.8	69.1	65.7	65.3	69.6	70.2	**70.5**	65.4	64.6	<40	<40	63.4	62.9	62.3	61.7	<40	57.4	60.5	60.1	<40	59.3	59.5	59.5	59.5	56.6	58.7	59.4	59.3
1	67.4	67.4	66.7	68.6	69.0	69.2	65.9	65.6	69.9	70.4	**70.8**	65.6	64.8	<40	<40	63.6	63.0	62.3	61.7	<40	57.5	60.6	60.2	<40	59.3	59.6							
Max	67.4	67.4	66.7	68.6	69.0	69.2	65.9	65.6	69.9	70.4	**70.8**	65.6	64.8	<40	<40	63.6	63.0	62.3	61.7	<40	57.5	60.6	60.2	48.2	59.3	59.6	59.5	59.5	56.6	58.7	59.4	59.3
Min	63.3	63.2	62.4	64.0	64.2	64.3	61.0	61.0	64.5	64.9	65.1	60.6	60.0	<40	<40	59.1	58.6	57.9	57.7	<40	53.4	57.0	56.7	<40	56.1	56.5	56.6	56.6	53.5	55.4	56.5	56.4

Noise sensitive receivers with exceedance (≥70.5 dB(A))

Floor	R325a	R325b	R326a	R326b	R327a	R327b	R328a	R328b	R329a	R329b	R329c	R329d	R330a	R330b	R330c	R330d	R331a	R331b	R332a	R332b	R332c	R333a	R333b	R333c	R334a	R334b	R401a	R401b	R401c	R402a	R402b	R402c
40																																
39																																
38																																
37	56.8	57.4	57.2	56.6	56.3	56.2	56.2	56.4	57.2	57.6	58.1	<40	<40	58.4	58.5	58.4	<40	59.0	59.5	59.9	<40	<40	60.8	61.4	62.7	64.2	57.0	57.0	53.0	<40	57.0	57.1
36	56.9	57.5	57.2	56.6	56.3	56.3	56.3	56.4	57.3	57.7	58.1	<40	<40	58.4	58.5	58.5	<40	59.1	59.5	60.0	<40	<40	60.9	61.5	62.8	64.2	57.0	56.9	53.0	<40	57.1	57.2
35	56.9	57.5	57.3	56.7	56.4	56.3	56.3	56.5	57.3	57.7	58.2	<40	<40	58.5	58.6	58.5	<40	59.1	59.6	60.0	<40	<40	60.9	61.5	62.9	64.3	57.1	57.0	53.1	<40	57.2	57.3
34	57.0	57.5	57.3	56.8	56.5	56.4	56.4	56.5	57.4	57.8	58.3	<40	<40	58.6	58.6	58.5	<40	59.2	59.7	60.1	<40	<40	61.0	61.6	62.9	64.4	57.1	57.1	53.2	<40	57.3	57.4
33	57.0	57.6	57.4	56.8	56.5	56.4	56.5	56.6	57.5	57.8	58.3	<40	<40	58.6	58.7	58.6	<40	59.2	59.7	60.1	<40	<40	61.1	61.7	63.0	64.5	57.1	57.2	53.3	<40	57.3	57.5
32	57.1	57.7	57.5	56.9	56.6	56.5	56.5	56.7	57.5	57.9	58.3	<40	<40	58.6	58.7	58.6	<40	59.3	59.8	60.2	<40	<40	61.1	61.8	63.1	64.5	57.2	57.3	53.4	<40	57.4	57.6
31	57.2	57.8	57.5	57.0	56.7	56.6	56.6	56.7	57.5	57.9	58.4	<40	<40	58.7	58.7	58.7	<40	59.3	59.8	60.3	<40	<40	61.2	61.8	63.1	64.6	57.3	57.3	53.4	<40	57.5	57.6
30	57.3	57.8	57.5	57.0	56.7	56.6	56.6	56.8	57.6	57.9	58.4	<40	<40	58.7	58.8	58.7	<40	59.4	59.9	60.3	<40	<40	61.2	61.9	63.2	64.6	57.4	57.4	53.5	<40	57.6	57.7
29	57.4	57.9	57.6	57.0	56.8	56.7	56.7	56.9	57.6	58.0	58.4	<40	<40	58.7	58.8	58.7	<40	59.4	59.9	60.3	<40	<40	61.3	61.9	63.3	64.7	57.5	57.5	53.6	<40	57.7	57.8
28	57.5	58.0	57.6	57.1	56.8	56.7	56.8	56.9	57.6	58.0	58.4	<40	<40	58.7	58.8	58.7	<40	59.4	59.9	60.3	<40	<40	61.3	62.0	63.3	64.8	57.6	57.6	53.7	<40	57.8	57.9
27	57.5	58.0	57.7	57.1	56.8	56.8	56.8	57.0	57.6	57.9	58.4	<40	<40	58.7	58.7	58.7	<40	59.4	60.0	60.4	<40	<40	61.4	62.0	63.4	64.9	57.6	57.7	53.8	<40	57.9	58.0
26	57.6	58.1	57.7	57.2	56.9	56.9	56.9	57.1	57.7	57.9	58.4	<40	<40	58.7	58.7	58.7	<40	59.4	60.0	60.4	<40	<40	61.4	62.0	63.4	64.9	57.7	57.8	53.9	<40	58.0	58.1
25	57.6	58.2	57.8	57.2	56.9	56.9	57.0	57.1	57.6	58.0	58.3	<40	<40	58.7	58.8	58.7	<40	59.4	60.0	60.4	<40	<40	61.4	62.0	63.5	64.9	57.8	57.9	54.0	<40	58.1	58.2
24	57.7	58.3	57.9	57.3	57.0	57.0	57.0	57.2	57.6	58.0	58.3	<40	<40	58.6	58.8	58.6	<40	59.4	60.0	60.4	<40	<40	61.4	62.1	63.5	65.0	57.9	58.0	54.1	<40	58.2	58.3
23	57.8	58.4	57.9	57.4	57.1	57.1	57.1	57.2	57.7	57.9	58.3	<40	<40	58.6	58.8	58.6	<40	59.4	60.0	60.4	<40	<40	61.5	62.1	63.5	65.1	58.0	58.0	54.2	<40	58.3	58.4
22	57.9	58.4	57.9	57.4	57.1	57.1	57.2	57.3	57.6	58.0	58.4	<40	<40	58.7	58.7	58.6	<40	59.4	60.0	60.4	<40	<40	61.5	62.1	63.6	65.2	58.1	58.1	54.3	<40	58.4	58.5
21	58.0	58.5	57.9	57.5	57.2	57.1	57.2	57.4	57.6	58.0	58.3	<40	<40	58.6	58.7	58.7	<40	59.4	59.9	60.4	<40	<40	61.5	62.2	63.6	65.2	58.2	58.2	54.4	<40	58.5	58.6
20	58.1	58.6	58.0	57.5	57.2	57.1	57.2	57.4	57.6	58.0	58.3	<40	<40	58.6	58.7	58.7	<40	59.5	60.0	60.5	<40	<40	61.5	62.2	63.7	65.3	58.2	58.3	54.5	<40	58.6	58.7
19	58.2	58.6	58.0	57.5	57.2	57.2	57.2	57.4	57.7	58.0	58.3	<40	<40	58.6	58.8	58.7	<40	59.5	60.0	60.5	<40	<40	61.6	62.3	63.8	65.4	58.3	58.4	54.6	<40	58.7	58.8
18	58.2	58.7	58.0	57.5	57.3	57.2	57.2	57.5	57.7	58.0	58.3	<40	<40	58.6	58.8	58.7	<40	59.5	60.0	60.6	<40	<40	61.6	62.3	63.8	65.5	58.4	58.5	54.7	<40	58.8	58.9
17	58.3	58.8	57.9	57.5	57.2	57.1	57.3	57.4	57.7	58.1	58.3	<40	<40	58.7	58.8	58.7	<40	59.6	60.1	60.6	<40	<40	61.7	62.4	63.9	65.5	58.5	58.6	54.8	<40	58.9	59.0
16	58.4	58.8	57.8	57.5	57.2	57.0	57.2	57.5	57.8	58.2	58.3	<40	<40	58.7	58.9	58.8	<40	59.6	60.2	60.7	<40	<40	61.7	62.5	64.0	65.7	58.6	58.7	54.8	<40	59.0	59.1
15	58.5	58.9	57.8	57.4	57.0	56.9	57.1	57.5	57.8	58.2	58.4	<40	<40	58.8	58.9	58.8	<40	59.7	60.2	60.7	<40	<40	61.8	62.5	64.1	65.8	58.5	58.8	54.9	<40	59.1	59.3
14	58.6	59.0	57.6	57.2	56.9	56.8	56.9	57.3	57.8	58.2	58.4	<40	<40	58.8	58.9	58.9	<40	59.7	60.3	60.8	<40	<40	61.9	62.6	64.2	65.9	58.6	58.8	55.0	<40	59.2	59.4
13	58.7	59.1	57.4	57.1	56.8	56.7	56.7	57.1	57.8	58.2	58.4	<40	<40	58.8	59.0	59.0	<40	59.8	60.4	60.9	<40	<40	62.0	62.7	64.3	65.9	58.7	58.9	55.1	<40	59.3	59.5
12	58.8	59.1	57.2	56.7	56.4	56.3	56.6	56.8	57.6	58.0	58.4	<40	<40	58.9	59.1	59.0	<40	59.9	60.4	61.0	<40	<40	62.1	62.8	64.4	66.1	58.7	59.0	55.2	<40	59.4	59.6
11	58.8	59.2	56.7	56.4	56.0	55.8	56.1	56.6	57.5	57.9	58.4	<40	<40	58.9	59.1	59.0	<40	60.0	60.5	61.0	<40	<40	62.2	62.9	64.5	66.2	58.8	59.0	55.3	<40	59.5	59.7
10	58.9	59.2	55.9	55.5	55.0	54.9	55.3	55.9	57.3	57.8	58.3	<40	<40	58.9	59.0	59.0	<40	60.0	60.6	61.1	<40	<40	62.3	63.0	64.6	66.3	58.6	59.0	55.3	<40	59.5	59.8
9	58.9	59.2	54.9	54.2	53.6	53.4	53.9	54.9	56.8	57.6	58.0	<40	<40	58.7	58.9	59.0	<40	60.1	60.7	61.2	<40	<40	62.4	63.1	64.7	66.4	58.5	59.0	55.4	<40	59.5	59.8
8	59.0	59.3	54.1	52.8	51.9	51.8	52.4	53.1	56.2	57.1	57.7	<40	<40	58.5	58.7	58.9	<40	60.1	60.7	61.3	<40	<40	62.4	63.2	64.8	66.5	58.4	58.9	55.5	<40	59.6	59.9
7	59.0	59.3	53.2	51.3	50.3	50.2	50.6	51.8	55.0	56.2	57.0	<40	<40	58.2	58.6	58.7	<40	60.1	60.8	61.3	<40	<40	62.5	63.3	64.9	66.6	58.4	58.7	55.6	<40	59.5	59.9
6	59.0	59.3	52.6	49.9	48.8	48.7	49.2	49.8	53.0	54.5	55.6	<40	<40	57.5	58.0	58.4	<40	60.0	60.8	61.3	<40	<40	62.6	63.4	65.0	66.7	58.4	58.7	55.6	<40	59.3	59.7
5	59.0	59.4	52.2	49.0	47.6	47.5	47.8	48.4	51.2	53.1	53.9	<40	<40	56.2	57.1	57.7	<40	59.7	60.6	61.2	<40	<40	62.7	63.5	65.1	66.9	58.4	58.7	55.7	<40	59.2	59.5
4	59.1	59.5	51.9	48.1	46.4	46.3	46.5	47.1	49.5	51.1	52.3	<40	<40	54.7	55.5	56.5	<40	59.4	60.3	61.0	<40	<40	62.7	63.5	65.1	67.0	58.5	58.8	55.8	<40	59.2	59.5
3	59.2	59.5	51.7	47.4	45.3	45.2	45.5	46.0	48.2	49.9	51.1	<40	<40	53.2	54.1	55.1	<40	58.4	59.6	60.5	<40	<40	62.4	63.3	65.1	67.0	58.5	58.8	55.8	<40	59.2	59.5
2	59.2	59.3	51.5	46.8	44.5	44.3	44.5	44.9	47.1	48.9	50.3	<40	<40	52.2	53.0	53.8	<40	56.6	57.9	59.2	<40	<40	61.8	62.8	64.8	66.9	58.4	58.8	55.9	<40	59.3	59.5
1									46.2	48.1	49.6	<40	<40	51.6	52.4	53.1	<40	55.2	56.2	57.4	<40	<40	60.1	61.6	64.1	66.5						
Max	59.2	59.5	58.0	57.5	57.3	57.2	57.3	57.5	57.8	58.2	58.4	<40	<40	58.9	59.1	59.0	<40	60.1	60.8	61.3	<40	<40	62.7	63.5	65.1	67.0	58.8	59.0	55.9	<40	59.6	59.9
Min	56.8	57.4	51.5	46.8	44.5	44.3	44.5	44.9	46.2	48.1	49.6	<40	<40	51.6	52.4	53.1	<40	55.2	56.2	57.4	<40	<40	60.1	61.4	62.7	64.2	57.0	56.9	53.0	<40	57.0	57.1

Noise sensitive receivers with exceedance (≥70.5 dB(A))

Floor	R403a	R403b	R404a	R404b	R405a	R405b	R406a	R406b	R407a	R407b	R407c	R408a	R408b	R408c	R409a	R409b	R410a	R410b	R411a	R411b	R412a	R412b	R413a	R413b	R413c	R413d	R414a	R414b	R414c	R414d	R415a	R415b
40																																
39																																
38																																
37	57.0	56.6	56.3	56.4	56.5	55.7	<40	<40	56.7	57.1	<40	<40	58.8	59.7	61.3	62.3	65.5	65.2	62.2	62.4	63.0	63.3	63.1	63.1	63.4	60.7	60.5	63.3	63.3	63.2	61.3	61.1
36	57.0	56.6	56.4	56.5	56.5	55.7	<40	<40	56.8	57.2	<40	<40	58.8	59.7	61.4	62.4	65.6	65.3	62.3	62.5	63.1	63.4	63.2	63.2	63.4	60.7	60.5	63.4	63.4	63.3	61.4	61.2
35	57.0	56.7	56.5	56.6	56.6	55.8	<40	<40	56.9	57.3	<40	<40	58.7	59.6	61.4	62.5	65.6	65.4	62.4	62.5	63.2	63.5	63.3	63.3	63.5	60.8	60.6	63.5	63.5	63.4	61.4	61.3
34	57.1	56.8	56.6	56.7	56.7	55.9	<40	<40	56.9	57.4	<40	<40	58.8	59.7	61.5	62.6	65.7	65.4	62.5	62.6	63.2	63.6	63.4	63.4	63.6	60.9	60.7	63.6	63.6	63.5	61.5	61.4
33	57.2	56.9	56.6	56.8	56.7	55.9	<40	<40	57.0	57.5	<40	<40	58.9	59.8	61.6	62.6	65.8	65.5	62.6	62.7	63.3	63.7	63.4	63.5	63.7	61.0	60.8	63.7	63.7	63.6	61.6	61.5
32	57.3	57.0	56.7	56.9	56.8	56.0	<40	<40	57.1	57.5	<40	<40	59.0	59.9	61.7	62.7	65.9	65.7	62.7	62.8	63.4	63.8	63.5	63.6	63.8	61.1	60.9	63.8	63.8	63.6	61.7	61.6
31	57.4	57.1	56.8	57.0	56.9	56.1	<40	<40	57.2	57.6	<40	<40	59.1	60.0	61.8	62.8	66.0	65.7	62.7	62.9	63.5	63.9	63.6	63.7	63.9	61.2	61.0	63.9	63.9	63.8	61.8	61.7
30	57.5	57.2	56.9	57.1	57.0	56.2	<40	<40	57.3	57.7	<40	<40	59.2	60.1	61.9	62.9	66.1	65.8	62.9	63.0	63.6	64.0	63.8	63.8	64.0	61.3	61.1	64.0	64.0	63.9	61.9	61.8
29	57.5	57.3	57.0	57.2	57.1	56.3	<40	<40	57.4	57.8	<40	<40	59.3	60.2	62.0	63.0	66.2	65.9	63.0	63.1	63.7	64.1	63.9	63.9	64.1	61.4	61.2	64.1	64.1	64.0	62.1	61.9
28	57.6	57.4	57.1	57.3	57.2	56.4	<40	<40	57.5	57.9	<40	<40	59.4	60.3	62.1	63.1	66.3	66.0	63.1	63.3	63.8	64.2	64.0	64.0	64.2	61.5	61.3	64.2	64.2	64.1	62.2	62.0
27	57.7	57.5	57.2	57.4	57.3	56.5	<40	<40	57.6	58.0	<40	<40	59.5	60.4	62.2	63.2	66.4	66.1	63.2	63.4	64.0	64.4	64.1	64.1	64.3	61.7	61.5	64.3	64.3	64.2	62.3	62.1
26	57.8	57.6	57.3	57.5	57.4	56.6	<40	<40	57.7	58.1	<40	<40	59.6	60.5	62.3	63.4	66.5	66.2	63.3	63.5	64.1	64.5	64.2	64.2	64.4	61.8	61.6	64.4	64.4	64.3	62.4	62.2
25	57.9	57.7	57.4	57.6	57.5	56.7	<40	<40	57.8	58.3	<40	<40	59.7	60.6	62.5	63.5	66.7	66.4	63.4	63.6	64.2	64.6	64.3	64.3	64.5	61.9	61.7	64.5	64.5	64.4	62.5	62.3
24	58.0	57.8	57.5	57.7	57.6	56.8	<40	<40	57.9	58.4	<40	<40	59.8	60.8	62.6	63.6	66.8	66.5	63.6	63.7	64.3	64.7	64.4	64.4	64.6	62.0	61.8	64.6	64.6	64.5	62.6	62.5
23	58.1	57.9	57.6	57.8	57.7	57.0	<40	<40	58.1	58.5	<40	<40	60.0	60.9	62.7	63.7	66.9	66.6	63.7	63.9	64.4	64.8	64.5	64.6	64.8	62.1	61.9	64.8	64.8	64.6	62.7	62.6
22	58.2	58.0	57.7	57.9	57.9	57.1	<40	<40	58.2	58.6	<40	<40	60.1	61.0	62.8	63.9	67.1	66.8	63.8	64.0	64.6	64.9	64.7	64.7	64.9	62.2	62.0	64.9	64.9	64.8	62.9	62.7
21	58.3	58.1	57.8	58.0	58.0	57.2	<40	<40	58.3	58.7	<40	<40	60.2	61.1	62.9	64.0	67.2	66.9	64.0	64.1	64.7	65.0	64.8	64.8	65.0	62.4	62.2	65.0	65.0	64.9	63.0	62.8
20	58.4	58.2	57.9	58.1	58.1	57.3	<40	<40	58.4	58.9	<40	<40	60.2	61.3	63.0	64.1	67.3	67.0	64.1	64.2	64.9	65.1	64.9	64.9	65.1	62.5	62.3	65.1	65.1	65.0	63.1	63.0
19	58.6	58.3	58.1	58.2	58.2	57.4	<40	<40	58.6	59.0	<40	<40	60.4	61.3	63.2	64.3	67.4	67.2	64.3	64.3	65.0	65.3	65.1	65.1	65.3	62.6	62.4	65.3	65.3	65.2	63.3	63.1
18	58.7	58.4	58.2	58.3	58.3	57.6	<40	<40	58.7	59.1	<40	<40	60.5	61.4	63.3	64.4	67.6	67.3	64.4	64.5	65.1	65.4	65.2	65.2	65.4	62.8	62.6	65.4	65.4	65.3	63.4	63.3
17	58.8	58.5	58.3	58.5	58.5	57.7	<40	<40	58.8	59.3	<40	<40	60.7	61.6	63.4	64.5	67.7	67.5	64.5	64.6	65.3	65.6	65.3	65.4	65.6	62.9	62.7	65.6	65.6	65.4	63.5	63.4
16	58.9	58.6	58.4	58.6	58.6	57.8	<40	<40	59.0	59.4	<40	<40	60.8	61.7	63.6	64.6	67.9	67.7	64.6	64.8	65.5	65.7	65.5	65.5	65.7	63.0	62.8	65.7	65.7	65.6	63.7	63.5
15	59.0	58.7	58.5	58.7	58.7	57.9	<40	<40	59.1	59.6	<40	<40	61.0	61.9	63.7	64.8	68.1	67.8	64.8	65.0	65.6	65.9	65.6	65.7	65.9	63.2	63.0	65.9	65.9	65.7	63.8	63.7
14	59.1	58.9	58.7	58.8	58.8	58.1	<40	<40	59.3	59.7	<40	<40	61.1	62.1	63.9	65.0	68.2	68.0	65.0	65.1	65.8	66.1	65.8	65.8	66.0	63.3	63.1	66.0	66.0	65.9	64.0	63.9
13	59.2	59.0	58.8	59.0	59.0	58.2	<40	<40	59.4	59.9	<40	<40	61.3	62.2	64.1	65.1	68.4	68.1	65.2	65.3	65.9	66.2	66.0	66.0	66.2	63.5	63.3	66.2	66.2	66.1	64.2	64.0
12	59.3	59.1	58.9	59.1	59.1	58.4	<40	<40	59.5	60.0	<40	<40	61.4	62.4	64.2	65.3	68.6	68.3	65.4	65.5	66.1	66.4	66.1	66.1	66.3	63.7	63.5	66.3	66.3	66.2	64.3	64.2
11	59.5	59.2	59.0	59.2	59.3	58.5	<40	<40	59.7	60.1	<40	<40	61.6	62.6	64.4	65.5	68.8	68.5	65.5	65.7	66.2	66.6	66.3	66.3	66.5	63.8	63.6	66.5	66.5	66.4	64.5	64.4
10	59.5	59.3	59.2	59.4	59.4	58.6	<40	<40	59.8	60.3	<40	<40	61.8	62.7	64.5	65.7	69.0	68.7	65.8	65.9	66.4	66.8	66.5	66.5	66.7	64.0	63.8	66.7	66.7	66.6	64.7	64.6
9	59.6	59.4	59.3	59.5	59.5	58.7	<40	<40	60.0	60.4	<40	<40	61.9	62.9	64.7	65.9	69.2	68.9	66.0	66.1	66.6	67.0	66.6	66.7	66.9	64.2	64.0	66.9	66.9	66.7	64.9	64.8
8	59.6	59.6	59.4	59.5	59.7	58.8	<40	<40	60.1	60.6	<40	<40	62.1	63.0	64.9	66.1	69.4	69.2	66.2	66.3	66.8	67.2	66.8	66.9	67.1	64.3	64.1	67.1	67.0	66.9	65.0	65.0
7	59.6	59.6	59.4	59.6	59.8	59.0	<40	<40	60.3	60.8	<40	<40	62.2	63.2	65.1	66.2	69.6	69.4	66.4	66.5	67.1	67.4	67.0	67.0	67.2	64.5	64.3	67.2	67.2	67.1	65.2	65.2
6	59.5	59.5	59.5	59.7	60.0	59.1	<40	<40	60.5	60.9	<40	<40	62.4	63.4	65.3	66.4	69.9	69.7	66.7	66.7	67.3	67.7	67.2	67.2	67.4	64.7	64.5	67.4	67.4	67.3	65.4	65.3
5	59.4	59.3	59.5	59.8	60.0	59.2	<40	<40	60.6	61.1	<40	<40	62.6	63.6	65.5	66.7	70.2	70.0	66.9	66.9	67.5	67.9	67.3	67.4	67.6	64.9	64.7	67.6	67.5	67.5	65.6	65.5
4	59.2	59.1	59.2	59.8	60.1	59.3	<40	<40	60.8	61.3	<40	<40	62.8	63.8	65.7	66.9	**70.5**	70.2	67.2	67.2	67.8	68.1	67.5	67.6	67.8	65.1	64.9	67.8	67.7	67.7	65.8	65.8
3	59.2	59.0	59.0	59.4	59.9	59.3	<40	<40	61.0	61.5	<40	<40	63.0	64.0	65.9	67.1	**70.8**	**70.6**	67.4	67.5	68.0	68.4	67.7	67.9	68.1	65.3	65.1	68.1	68.0	67.9	66.0	66.0
2	59.2	59.0	58.9	59.1	59.5	58.9	<40	<40	61.0	61.7	<40	<40	63.2	64.2	66.1	67.3	**71.1**	**70.9**	67.7	67.8	68.3	68.6	67.9	68.1	68.3	65.5	65.3	68.3	68.2	68.1	66.2	66.2
1					59.2	58.5	<40	<40	60.9	61.7	<40	<40	63.3	64.3	66.3	67.6	**71.4**	**71.2**	68.0	68.1	68.6	68.9	68.1	68.3	68.5	65.7	65.5	68.5	68.4	68.3	66.4	66.5
Max	59.6	59.6	59.5	59.8	60.1	59.3	<40	<40	61.0	61.7	<40	<40	63.3	64.3	66.3	67.6	**71.4**	**71.2**	68.0	68.1	68.6	68.9	68.1	68.3	68.5	65.7	65.5	68.5	68.4	68.3	66.4	66.5
Min	57.0	56.6	56.3	56.4	56.5	55.7	<40	<40	56.7	57.1	<40	<40	58.7	59.6	61.3	62.3	65.5	65.2	62.2	62.4	63.0	63.3	63.1	63.1	63.4	60.7	60.5	63.3	63.3	63.2	61.3	61.1

Noise sensitive receivers with exceedance (≥70.5 dB(A))

Floor	R416a	R416b	R416c	R417a	R417b	R417c	R418a	R418b	R419a	R419b	R420a	R420b	R421a	R421b	R422a	R422b	R423a	R423b	R423c	R424a	R424b	R425a	R425b	R426a	R426b	R426c	R426d	R427a	R427b	R427c	R428a	R428b	R428c	R429a
40																																		
39																																		
38																																		
37	63.8	63.9	60.6	60.6	64.3	64.6	65.5	65.8	63.1	62.2	54.0	53.9	57.3	59.2	56.5	62.3	62.8	63.1	56.6	57.2	63.8	63.9	63.1	56.7	64.2	64.4	64.6	53.7	52.0	45.7	45.0	48.3	46.1	<40
36	63.9	64.0	60.7	60.7	64.3	64.7	65.6	65.8	63.1	62.3	53.8	53.7	57.2	59.2	56.6	62.4	62.9	63.2	56.7	57.3	63.8	64.0	63.1	56.7	64.2	64.5	64.6	53.7	51.9	45.7	45.0	48.3	46.1	<40
35	64.0	64.1	60.8	60.8	64.4	64.8	65.7	65.9	63.2	62.3	53.7	53.5	57.3	59.2	56.6	62.4	62.9	63.2	56.7	57.3	63.8	64.0	63.1	56.8	64.3	64.5	64.6	53.7	51.9	45.6	44.8	48.3	46.1	<40
34	64.1	64.2	60.9	60.9	64.5	64.9	65.8	66.0	63.2	62.4	53.6	53.5	57.3	59.2	56.7	62.4	62.9	63.2	56.8	57.4	63.8	64.0	63.1	56.9	64.3	64.5	64.6	53.7	52.0	45.5	44.8	48.3	46.2	<40
33	64.2	64.3	61.0	61.0	64.6	65.0	65.9	66.1	63.3	62.2	53.6	53.5	57.3	59.3	56.8	62.5	63.0	63.3	56.8	57.5	63.9	64.1	63.2	57.0	64.3	64.5	64.7	53.7	51.9	45.4	44.7	48.3	46.2	<40
32	64.3	64.4	61.1	61.1	64.7	65.1	66.0	66.2	63.4	62.3	53.6	53.5	57.3	59.3	56.9	62.5	63.0	63.3	56.9	57.6	63.9	64.1	63.2	57.1	64.4	64.6	64.7	53.7	51.9	45.3	44.6	48.3	46.3	<40
31	64.4	64.5	61.2	61.2	64.9	65.2	66.1	66.3	63.4	62.4	53.6	53.5	57.4	59.4	56.9	62.5	63.1	63.4	56.9	57.7	64.0	64.1	63.3	57.2	64.4	64.6	64.7	53.6	51.9	45.1	44.4	48.3	46.3	<40
30	64.5	64.6	61.3	61.3	65.0	65.3	66.2	66.4	63.5	62.5	53.7	53.5	57.4	59.4	57.0	62.6	63.1	63.4	57.0	57.7	64.0	64.2	63.3	57.2	64.4	64.6	64.8	53.6	51.8	44.9	44.2	48.3	46.3	<40
29	64.6	64.7	61.4	61.4	65.1	65.4	66.2	66.5	63.6	62.6	53.7	53.5	57.5	59.5	57.1	62.6	63.1	63.4	57.0	57.8	64.0	64.2	63.3	57.3	64.4	64.7	64.8	53.5	51.7	44.6	43.9	48.3	46.4	<40
28	64.7	64.9	61.6	61.6	65.2	65.5	66.3	66.6	63.7	62.7	53.7	53.5	57.5	59.6	57.2	62.7	63.2	63.5	57.1	57.9	64.1	64.2	63.4	57.4	64.5	64.7	64.8	53.4	51.6	44.2	43.5	48.2	46.4	<40
27	64.9	65.0	61.7	61.7	65.3	65.6	66.4	66.7	63.8	62.8	53.7	53.6	57.6	59.6	57.4	62.7	63.2	63.5	57.2	58.0	64.1	64.3	63.4	57.5	64.5	64.8	64.9	53.3	51.5	43.7	43.1	48.2	46.5	<40
26	65.0	65.1	61.8	61.8	65.4	65.7	66.6	66.8	63.9	62.9	53.8	53.6	57.6	59.7	57.5	62.8	63.3	63.6	57.2	58.1	64.1	64.3	63.4	57.6	64.6	64.8	64.9	53.2	51.3	43.0	42.3	48.1	46.5	<40
25	65.1	65.2	61.9	61.9	65.5	65.9	66.7	67.0	64.0	63.0	53.8	53.6	57.7	59.8	57.5	62.8	63.3	63.6	57.3	58.2	64.2	64.4	63.5	57.7	64.6	64.8	64.9	53.1	51.2	42.1	41.5	48.0	46.5	<40
24	65.2	65.3	62.0	62.0	65.7	66.0	66.8	67.0	64.1	63.1	53.8	53.6	57.8	59.8	57.7	62.9	63.4	63.6	57.3	58.3	64.2	64.4	63.5	57.8	64.7	64.9	65.0	53.1	51.1	41.5	40.9	47.9	46.6	<40
23	65.3	65.5	62.2	62.2	65.8	66.1	66.9	67.1	64.2	63.2	53.8	53.7	57.8	59.9	57.8	62.9	63.4	63.7	57.4	58.4	64.3	64.4	63.6	57.9	64.7	64.9	65.0	53.0	51.0	41.3	40.8	47.9	46.6	<40
22	65.5	65.6	62.3	62.3	65.9	66.3	67.1	67.3	64.4	63.2	53.9	53.7	57.9	60.0	57.9	63.0	63.5	63.7	57.4	58.5	64.3	64.5	63.6	58.0	64.7	64.9	65.0	52.9	50.9	40.2	<40	47.9	46.7	<40
21	65.6	65.7	62.4	62.4	66.1	66.4	67.2	67.4	64.5	63.4	53.9	53.7	58.0	60.1	57.9	63.0	63.5	63.8	57.5	58.6	64.3	64.5	63.6	58.1	64.8	65.0	65.1	52.9	50.8	<40	<40	47.8	46.7	<40
20	65.8	65.9	62.6	62.6	66.2	66.5	67.4	67.6	64.6	63.5	53.9	53.7	58.0	60.2	58.0	63.1	63.6	63.8	57.6	58.7	64.4	64.6	63.7	58.2	64.8	65.0	65.1	52.9	50.8	<40	<40	47.8	46.7	<40
19	65.9	66.0	62.7	62.7	66.4	66.7	67.5	67.7	64.7	63.6	53.9	53.8	58.1	60.2	58.2	63.1	63.6	63.9	57.7	58.8	64.4	64.6	63.7	58.3	64.8	65.1	65.1	52.8	50.7	<40	<40	47.8	46.8	<40
18	66.0	66.2	62.9	62.9	66.5	66.8	67.7	67.9	64.8	63.7	54.0	53.8	58.2	60.3	58.3	63.2	63.7	63.9	57.8	58.9	64.5	64.6	63.7	58.4	64.9	65.1	65.2	52.8	50.7	<40	<40	47.8	46.8	<40
17	66.2	66.3	63.0	63.0	66.7	67.0	67.8	68.0	65.0	63.8	54.0	53.8	58.2	60.4	58.4	63.2	63.7	64.0	57.8	59.0	64.5	64.7	63.8	58.5	64.9	65.1	65.2	52.9	50.7	<40	<40	47.8	46.8	<40
16	66.3	66.5	63.2	63.2	66.8	67.2	68.0	68.2	65.1	64.0	54.0	53.8	58.3	60.5	58.6	63.3	63.8	64.0	57.9	59.2	64.6	64.7	63.9	58.6	64.9	65.2	65.3	52.8	50.7	<40	<40	47.8	46.9	<40
15	66.5	66.6	63.3	63.4	67.0	67.3	68.2	68.3	65.2	64.2	54.0	53.9	58.4	60.6	58.7	63.4	63.8	64.1	58.0	59.3	64.6	64.8	63.9	58.7	65.0	65.2	65.3	52.8	50.7	<40	<40	47.9	46.9	<40
14	66.7	66.8	63.5	63.5	67.2	67.5	68.3	68.5	65.4	64.3	54.1	53.9	58.4	60.7	58.8	63.4	63.9	64.1	58.0	59.4	64.6	64.8	64.0	58.8	65.0	65.2	65.3	52.9	50.7	<40	<40	47.8	46.9	<40
13	66.9	67.0	63.7	63.7	67.4	67.7	68.5	68.6	65.6	64.4	54.1	53.9	58.5	60.7	59.0	63.5	64.0	64.2	58.1	59.5	64.7	64.9	64.0	58.9	65.0	65.3	65.4	52.9	50.7	<40	<40	47.8	47.0	<40
12	67.0	67.2	63.9	63.9	67.6	67.9	68.7	68.8	65.7	64.6	54.1	53.9	58.6	60.8	59.1	63.5	64.0	64.2	58.2	59.7	64.7	64.9	64.0	59.0	65.1	65.3	65.4	52.9	50.8	<40	<40	47.9	47.0	<40
11	67.2	67.4	64.1	64.1	67.8	68.1	68.8	69.0	65.8	64.7	54.1	53.9	58.7	61.0	59.3	63.6	64.1	64.3	58.3	59.8	64.8	64.9	64.1	59.1	65.1	65.3	65.4	53.0	50.7	<40	<40	47.9	47.0	<40
10	67.4	67.6	64.3	64.3	68.0	68.3	69.0	69.2	66.0	64.9	54.2	54.0	58.8	61.0	59.4	63.7	64.1	64.4	58.4	59.9	64.8	65.0	64.1	59.2	65.1	65.4	65.4	53.0	50.7	<40	<40	47.9	47.1	<40
9	67.6	67.8	64.5	64.5	68.2	68.5	69.3	69.5	66.2	65.0	54.2	54.0	58.9	61.1	59.5	63.7	64.2	64.4	58.5	60.0	64.9	65.0	64.2	59.3	65.2	65.4	65.5	52.9	50.8	<40	<40	47.9	47.1	<40
8	67.8	68.0	64.7	64.7	68.4	68.8	69.5	69.7	66.4	65.2	54.2	54.0	59.0	61.2	59.7	63.8	64.2	64.4	58.6	60.2	64.9	65.0	64.2	59.4	65.2	65.4	65.5	53.0	50.8	<40	<40	48.0	47.1	<40
7	68.0	68.2	64.9	64.9	68.6	69.0	69.7	69.9	66.5	65.4	54.2	54.0	59.1	61.4	59.8	63.8	64.3	64.5	58.6	60.3	64.9	65.1	64.3	59.5	65.2	65.4	65.5	53.0	50.8	<40	<40	48.0	47.1	<40
6	68.3	68.4	65.1	65.1	68.9	69.3	70.0	70.1	66.8	65.6	54.3	54.0	59.2	61.5	59.9	63.9	64.3	64.5	58.7	60.4	65.0	65.1	64.3	59.6	65.3	65.5	65.5	53.0	50.8	<40	<40	48.0	47.1	<40
5	68.5	68.7	65.4	65.3	69.1	69.5	70.3	70.4	67.0	65.8	54.3	54.0	59.3	61.6	60.1	63.9	64.4	64.6	58.8	60.5	65.0	65.2	64.3	59.7	65.3	65.5	65.5	53.0	50.8	<40	<40	48.0	47.2	<40
4	68.7	68.9	65.6	65.6	69.4	69.8	**70.6**	**70.7**	67.2	66.0	54.3	54.1	59.4	61.7	60.2	64.0	64.4	64.6	58.9	60.6	65.0	65.2	64.4	59.8	65.3	65.5	65.6	53.1	50.9	<40	<40	48.0	47.2	<40
3	69.0	69.2	65.9	65.8	69.6	70.1	**70.9**	**71.0**	67.4	66.2	54.3	54.1	59.5	61.8	60.4	64.0	64.4	64.7	59.0	60.7	65.0	65.2	64.4	59.9	65.3	65.5	65.6	53.1	50.9	<40	<40	48.1	47.2	<40
2	69.3	69.5	66.2	66.1	69.9	70.3	**71.2**	**71.4**	67.7	66.4	54.4	54.1	59.6	62.0	60.5	64.1	64.5	64.7	59.1	60.8	65.1	65.2	64.4	59.9	65.3	65.5	65.6	53.1	50.9	<40	<40	48.1	47.2	<40
1	69.5	69.8	66.4	66.4	70.2	**70.7**	**71.5**	**71.6**	67.9	66.6	54.4	54.1	59.8	62.1	60.7	64.1	64.5	64.7	59.1	61.0	65.0	65.2	64.4	60.0	65.3	65.5	65.6	53.1	50.9	<40	<40	48.0	47.2	<40
Max	69.5	69.8	66.4	66.4	70.2	**70.7**	**71.5**	**71.6**	67.9	66.6	54.4	54.1	59.8	62.1	60.7	64.1	64.5	64.7	59.1	61.0	65.1	65.2	64.4	60.0	65.3	65.5	65.6	53.7	52.0	45.7	45.0	48.3	47.2	<40
Min	63.8	63.9	60.6	60.6	64.3	64.6	65.5	65.8	63.1	62.2	53.6	53.5	57.2	59.2	56.5	62.3	62.8	63.1	56.6	57.2	63.8	63.9	63.1	56.7	64.2	64.4	64.6	52.8	50.7	<40	<40	47.8	46.1	<40

Noise sensitive receivers with exceedance (≥70.5 dB(A))

Floor	R429b	R430a	R430b	R431a	R431b	R432a	R432b	R432c	R432d	R433a	R433b	R433c	R433d	R434a	R434b	R435a	R435b	R435c	R436a	R436b	R437a	R437b	R438a	R438b	R438c	R438d	R501a	R501b	R501c	R502a	R502b	R502c	R503a	R503b	R504a
40																											56.8	56.8	52.2	<40	56.5	56.5	56.3	56.4	56.0
39																											56.8	56.8	52.3	<40	56.6	56.6	56.3	56.4	55.9
38																											56.9	56.8	52.4	<40	56.7	56.7	56.4	56.4	56.0
37	<40	<40	<40	43.2	<40	42.7	46.7	47.8	<40	46.7	50.1	53.1	55.6	56.9	57.7	58.6	59.1	58.5	58.2	57.9	57.4	56.3	55.6	55.3	54.6	53.5	56.9	56.9	52.5	<40	56.8	56.8	56.5	56.5	56.1
36	<40	<40	<40	43.2	<40	42.7	46.7	47.8	<40	46.7	50.2	53.2	55.7	57.0	57.8	58.6	59.1	58.5	58.2	58.0	57.4	56.3	55.7	55.4	54.6	53.6	57.0	57.0	52.6	<40	56.8	56.9	56.6	56.6	56.2
35	<40	<40	<40	43.2	<40	42.8	46.8	47.9	<40	46.7	50.2	53.2	55.7	57.0	57.8	58.6	59.1	58.5	58.2	58.0	57.4	56.3	55.7	55.4	54.6	53.6	57.1	57.0	52.7	<40	56.9	57.0	56.7	56.7	56.3
34	<40	<40	<40	43.3	<40	42.8	46.8	47.9	<40	46.8	50.3	53.3	55.7	57.0	57.8	58.6	59.1	58.5	58.2	58.0	57.4	56.4	55.7	55.4	54.7	53.6	57.2	57.1	52.7	<40	57.0	57.1	56.8	56.8	56.4
33	<40	<40	<40	43.3	<40	42.8	46.8	48.0	<40	46.8	50.3	53.3	55.8	57.0	57.8	58.6	59.2	58.6	58.3	58.0	57.4	56.4	55.7	55.4	54.7	53.6	57.3	57.1	52.8	<40	57.1	57.1	56.9	56.9	56.5
32	<40	<40	<40	43.3	<40	42.9	46.9	48.0	<40	46.8	50.3	53.3	55.8	57.1	57.9	58.7	59.2	58.6	58.3	58.0	57.5	56.4	55.8	55.5	54.7	53.6	57.3	57.2	52.9	<40	57.2	57.2	57.0	57.0	56.6
31	<40	<40	<40	43.4	<40	42.9	46.9	48.0	<40	46.9	50.4	53.4	55.8	57.1	57.9	58.7	59.2	58.6	58.3	58.1	57.5	56.4	55.8	55.5	54.8	53.7	57.4	57.3	53.0	<40	57.3	57.3	57.1	57.1	56.7
30	<40	<40	<40	43.4	<40	42.9	47.0	48.1	<40	46.9	50.4	53.4	55.8	57.1	57.9	58.7	59.2	58.7	58.3	58.1	57.5	56.5	55.8	55.5	54.8	53.7	57.5	57.4	53.1	<40	57.4	57.4	57.2	57.2	56.8
29	<40	<40	<40	43.4	<40	43.0	47.0	48.1	<40	46.9	50.4	53.4	55.8	57.1	57.9	58.7	59.3	58.7	58.3	58.1	57.5	56.5	55.8	55.5	54.8	53.7	57.6	57.5	53.2	<40	57.5	57.5	57.2	57.3	56.9
28	<40	<40	<40	43.5	<40	43.0	47.0	48.1	<40	47.0	50.5	53.5	55.9	57.2	57.9	58.8	59.3	58.7	58.4	58.1	57.6	56.5	55.9	55.6	54.8	53.8	57.7	57.6	53.3	<40	57.6	57.6	57.3	57.4	57.0
27	<40	<40	<40	43.5	<40	43.1	47.1	48.2	<40	47.0	50.5	53.5	55.9	57.2	58.0	58.8	59.3	58.7	58.4	58.1	57.6	56.5	55.9	55.6	54.8	53.8	57.8	57.6	53.4	<40	57.7	57.7	57.4	57.5	57.1
26	<40	<40	<40	43.5	<40	43.1	47.1	48.2	<40	47.0	50.5	53.5	55.9	57.2	58.0	58.8	59.3	58.7	58.4	58.2	57.6	56.6	55.9	55.6	54.9	53.8	57.9	57.7	53.5	<40	57.8	57.8	57.5	57.6	57.2
25	<40	<40	<40	43.6	<40	43.1	47.1	48.2	<40	47.1	50.6	53.6	55.9	57.2	58.0	58.8	59.3	58.8	58.4	58.2	57.6	56.6	55.9	55.6	54.9	53.8	57.9	57.8	53.6	<40	57.9	57.9	57.7	57.7	57.3
24	<40	<40	<40	43.6	<40	43.2	47.2	48.3	<40	47.1	50.6	53.6	56.0	57.3	58.0	58.8	59.4	58.8	58.5	58.2	57.7	56.6	55.9	55.7	54.9	53.8	58.0	57.9	53.6	<40	58.0	58.0	57.8	57.8	57.4
23	<40	<40	<40	43.6	<40	43.2	47.2	48.3	<40	47.1	50.6	53.6	56.0	57.3	58.1	58.9	59.4	58.8	58.5	58.2	57.7	56.6	56.0	55.7	55.0	53.9	58.0	58.0	53.7	<40	58.1	58.1	57.9	57.9	57.5
22	<40	<40	<40	43.7	<40	43.2	47.2	48.3	<40	47.1	50.6	53.6	56.0	57.3	58.1	58.9	59.4	58.8	58.5	58.2	57.7	56.7	56.0	55.7	55.0	53.9	58.1	58.1	53.8	<40	58.2	58.2	58.0	58.0	57.6
21	<40	<40	<40	43.7	<40	43.3	47.3	48.4	<40	47.2	50.7	53.7	56.0	57.3	58.1	58.9	59.4	58.8	58.5	58.3	57.7	56.7	56.0	55.7	55.0	53.9	58.2	58.2	53.9	<40	58.3	58.3	58.1	58.1	57.7
20	<40	<40	<40	43.7	<40	43.3	47.3	48.4	<40	47.2	50.7	53.7	56.0	57.3	58.1	58.9	59.4	58.9	58.5	58.3	57.7	56.7	56.1	55.8	55.0	53.9	58.3	58.3	54.0	<40	58.4	58.4	58.2	58.2	57.8
19	<40	<40	<40	43.7	<40	43.3	47.3	48.4	<40	47.2	50.7	53.7	56.1	57.3	58.1	59.0	59.5	58.9	58.5	58.3	57.7	56.7	56.1	55.8	55.1	54.0	58.4	58.4	54.1	<40	58.5	58.5	58.3	58.3	57.9
18	<40	<40	<40	43.8	<40	43.3	47.4	48.5	<40	47.3	50.8	53.8	56.1	57.4	58.1	59.0	59.5	58.9	58.6	58.3	57.8	56.8	56.1	55.8	55.1	54.0	58.5	58.5	54.2	<40	58.6	58.6	58.4	58.4	58.1
17	<40	<40	<40	43.8	<40	43.4	47.4	48.5	<40	47.3	50.8	53.8	56.1	57.4	58.2	59.0	59.5	58.9	58.6	58.3	57.8	56.8	56.1	55.8	55.1	54.0	58.6	58.6	54.3	<40	58.7	58.7	58.5	58.6	58.2
16	<40	<40	<40	43.8	<40	43.4	47.4	48.5	<40	47.3	50.8	53.8	56.1	57.4	58.2	59.0	59.5	58.9	58.6	58.4	57.8	56.8	56.1	55.8	55.1	54.0	58.7	58.7	54.4	<40	58.8	58.8	58.6	58.7	58.3
15	<40	<40	<40	43.9	<40	43.4	47.4	48.6	<40	47.3	50.8	53.8	56.1	57.4	58.2	59.0	59.5	59.0	58.6	58.4	57.8	56.8	56.2	55.9	55.1	54.1	58.8	58.7	54.5	<40	58.9	58.9	58.7	58.8	58.4
14	<40	<40	<40	43.9	<40	43.5	47.5	48.6	<40	47.4	50.9	53.9	56.2	57.4	58.2	59.0	59.5	59.0	58.6	58.4	57.8	56.8	56.2	55.9	55.1	54.1	58.8	58.8	54.6	<40	59.0	59.0	58.8	58.9	58.5
13	<40	<40	<40	43.9	<40	43.5	47.5	48.6	<40	47.4	50.9	53.9	56.2	57.4	58.2	59.0	59.6	59.0	58.6	58.4	57.9	56.9	56.2	55.9	55.2	54.1	58.9	58.9	54.7	<40	59.1	59.2	58.9	59.0	58.6
12	<40	<40	<40	43.9	<40	43.5	47.5	48.6	<40	47.4	50.9	53.9	56.2	57.4	58.2	59.0	59.6	59.0	58.6	58.4	57.9	56.9	56.2	55.9	55.2	54.1	59.0	58.9	54.8	<40	59.1	59.3	59.0	59.1	58.8
11	<40	<40	<40	44.0	<40	43.5	47.6	48.7	<40	47.4	51.0	53.9	56.2	57.4	58.2	59.0	59.6	59.0	58.6	58.4	57.9	56.9	56.2	55.9	55.2	54.1	59.1	59.0	54.8	<40	59.2	59.3	59.1	59.2	58.9
10	<40	<40	<40	44.0	<40	43.6	47.6	48.7	<40	47.4	51.0	53.9	56.2	57.4	58.2	59.0	59.6	59.0	58.6	58.4	57.9	56.9	56.2	55.9	55.2	54.1	59.2	59.1	54.9	<40	59.3	59.4	59.2	59.3	59.0
9	<40	<40	<40	44.0	<40	43.6	47.6	48.7	<40	47.5	51.0	54.0	56.2	57.4	58.2	59.0	59.5	59.0	58.6	58.4	57.9	56.9	56.2	56.0	55.2	54.1	59.2	59.2	55.0	<40	59.4	59.5	59.2	59.4	59.1
8	<40	<40	<40	44.0	<40	43.6	47.6	48.7	<40	47.5	51.0	54.0	56.2	57.4	58.2	59.0	59.5	59.0	58.6	58.4	57.9	56.9	56.2	56.0	55.2	54.2	59.3	59.2	55.1	<40	59.5	59.6	59.3	59.5	59.2
7	<40	<40	<40	44.0	<40	43.6	47.6	48.7	<40	47.5	51.0	54.0	56.1	57.3	58.2	59.0	59.5	58.9	58.6	58.3	57.9	56.9	56.3	56.0	55.3	54.2	59.4	59.3	55.1	<40	59.6	59.7	59.4	59.6	59.3
6	<40	<40	<40	44.1	<40	43.6	47.7	48.8	<40	47.5	51.1	54.0	56.1	57.3	58.1	59.0	59.5	58.9	58.6	58.3	57.8	56.9	56.3	56.0	55.3	54.2	59.4	59.4	55.2	<40	59.7	59.8	59.5	59.7	59.4
5	<40	<40	<40	44.1	<40	43.7	47.7	48.8	<40	47.5	51.1	54.0	56.1	57.3	58.1	58.9	59.4	58.9	58.5	58.3	57.8	56.9	56.3	56.0	55.3	54.2	59.5	59.4	55.3	<40	59.7	59.9	59.6	59.7	59.5
4	<40	<40	<40	44.1	<40	43.7	47.7	48.8	<40	47.6	51.1	54.1	56.1	57.2	58.0	58.9	59.4	58.8	58.4	58.2	57.7	56.8	56.2	56.0	55.3	54.2	59.5	59.5	55.3	<40	59.8	59.9	59.6	59.8	59.5
3	<40	<40	<40	44.1	<40	43.6	47.7	48.8	<40	47.6	51.1	54.1	56.1	57.1	57.9	58.7	59.3	58.7	58.3	58.1	57.6	56.7	56.2	55.9	55.3	54.2	59.6	59.5	55.4	<40	59.8	60.0	59.7	59.9	59.6
2	<40	<40	<40	44.0	<40	43.6	47.6	48.7	<40	47.6	51.1	54.1	56.1	57.1	57.8	58.6	59.2	58.5	58.1	57.9	57.4	56.6	56.0	55.9	55.2	54.2	59.6	59.6	55.4	<40	59.9	60.0	59.7	59.9	59.7
1	<40	<40	<40	43.9	<40	43.3	47.6	48.7	<40	47.5	51.1	54.1	56.1	57.0	57.7	58.5	59.0	58.3									59.6	59.6	55.4	<40	59.9	60.1	59.8	60.0	59.7
Max	<40	<40	<40	44.1	<40	43.7	47.7	48.8	<40	47.6	51.1	54.1	56.2	57.4	58.2	59.0	59.6	59.0	58.6	58.4	57.9	56.9	56.3	56.0	55.3	54.2	59.6	59.6	55.4	<40	59.9	60.1	59.8	60.0	59.7
Min	<40	<40	<40	43.2	<40	42.7	46.7	47.8	<40	46.7	50.1	53.1	55.6	56.9	57.7	58.5	59.0	58.3	58.1	57.9	57.4	56.3	55.6	55.3	54.6	53.5	56.8	56.8	52.2	<40	56.5	56.5	56.3	56.4	55.9

Noise sensitive receivers with exceedance (≥70.5 dB(A))

Floor	R504b	R505a	R505b	R506a	R506b	R507a	R507b	R507c	R508a	R508b	R508c	R509a	R509b	R510a	R510b	R511a	R511b	R512a	R512b	R513a	R513b	R513c	R513d	R514a	R514b	R514c	R514d	R515a	R515b	R516a	R516b	R516c	R517a	R517b	R517c
40	55.7	55.9	54.3	<40	<40	55.1	55.8	<40	46.7	57.3	58.6	60.6	61.9	65.8	65.8	63.4	63.4	63.9	64.2	64.1	64.3	64.4	62.5	61.8	64.9	64.9	64.7	61.5	61.0	65.4	65.5	60.8	60.8	65.7	65.9
39	55.8	55.6	54.1	<40	<40	55.0	55.8	<40	46.7	57.3	58.7	60.7	62.0	65.9	65.9	63.4	63.5	64.0	64.3	64.2	64.4	64.5	62.5	61.9	65.0	65.0	64.8	61.6	61.1	65.5	65.5	60.9	60.9	65.8	66.0
38	55.9	55.7	54.2	<40	<40	54.9	55.6	<40	46.7	57.4	58.7	60.7	62.0	66.0	66.0	63.5	63.5	64.0	64.3	64.3	64.5	64.6	62.6	61.9	65.1	65.0	64.9	61.7	61.2	65.5	65.6	61.0	61.0	65.9	66.1
37	56.0	55.8	54.3	<40	<40	55.0	55.7	<40	46.7	57.5	58.8	60.8	62.1	66.1	66.1	63.5	63.6	64.1	64.4	64.4	64.6	64.7	62.7	62.0	65.1	65.1	64.9	61.8	61.3	65.6	65.7	61.1	61.1	66.0	66.2
36	56.1	55.9	54.4	<40	<40	55.1	55.8	<40	46.8	57.6	59.0	60.9	62.2	66.2	66.1	63.6	63.7	64.2	64.5	64.5	64.7	64.8	62.7	62.0	65.2	65.2	65.0	61.9	61.4	65.7	65.8	61.2	61.2	66.1	66.3
35	56.2	56.0	54.5	<40	<40	55.2	55.9	<40	46.8	57.7	59.1	61.0	62.3	66.2	66.2	63.7	63.7	64.2	64.5	64.6	64.7	64.9	62.7	62.0	65.2	65.2	65.1	62.0	61.5	65.8	65.9	61.3	61.3	66.2	66.3
34	56.3	56.1	54.6	<40	<40	55.3	56.0	<40	46.8	57.8	59.2	61.1	62.3	66.3	66.3	63.8	63.8	64.3	64.6	64.6	64.8	65.0	62.7	62.0	65.3	65.2	65.1	62.1	61.6	65.9	65.9	61.4	61.4	66.3	66.4
33	56.4	56.2	54.7	<40	<40	55.4	56.1	<40	46.9	58.0	59.3	61.2	62.4	66.4	66.4	63.9	64.0	64.4	64.7	64.7	64.9	65.0	62.7	61.9	65.3	65.3	65.1	62.2	61.7	65.9	66.0	61.5	61.6	66.3	66.6
32	56.5	56.3	54.8	<40	<40	55.5	56.2	<40	46.9	58.1	59.4	61.3	62.5	66.5	66.5	63.9	64.0	64.4	64.8	64.8	65.0	65.1	62.8	61.9	65.3	65.3	65.2	62.3	61.9	66.0	66.1	61.6	61.7	66.5	66.7
31	56.6	56.4	54.9	<40	<40	55.6	56.3	<40	46.9	58.1	59.5	61.4	62.7	66.7	66.6	64.0	64.1	64.6	64.9	64.9	65.1	65.2	62.8	62.0	65.4	65.4	65.3	62.4	62.0	66.1	66.2	61.7	61.8	66.6	66.7
30	56.7	56.5	55.0	<40	<40	55.7	56.4	<40	46.9	58.2	59.6	61.5	62.8	66.7	66.7	64.1	64.2	64.7	65.0	65.0	65.2	65.4	62.9	62.0	65.5	65.5	65.3	62.6	62.1	66.2	66.3	61.9	61.9	66.7	66.9
29	56.8	56.6	55.1	<40	<40	55.8	56.5	<40	47.0	58.3	59.7	61.7	62.9	66.8	66.8	64.2	64.3	64.8	65.1	65.1	65.3	65.5	62.9	62.0	65.6	65.6	65.5	62.7	62.2	66.3	66.4	62.0	62.0	66.8	67.0
28	56.9	56.7	55.2	<40	<40	55.9	56.7	<40	47.0	58.4	59.8	61.8	63.0	67.0	66.9	64.3	64.5	64.8	65.2	65.2	65.4	65.5	63.0	62.1	65.7	65.7	65.5	62.8	62.3	66.4	66.5	62.1	62.2	66.9	67.1
27	57.0	56.8	55.3	<40	<40	56.1	56.7	<40	47.0	58.6	59.9	61.9	63.2	67.1	67.1	64.4	64.5	65.0	65.3	65.3	65.5	65.6	63.1	62.3	65.8	65.7	65.6	62.9	62.5	66.5	66.6	62.2	62.3	67.0	67.2
26	57.1	56.9	55.4	<40	<40	56.2	56.8	<40	47.0	58.7	60.0	62.0	63.3	67.2	67.2	64.6	64.7	65.1	65.4	65.4	65.6	65.7	63.2	62.3	65.8	65.8	65.7	63.0	62.6	66.6	66.8	62.4	62.4	67.1	67.4
25	57.2	57.0	55.6	<40	<40	56.3	56.9	<40	47.1	58.8	60.2	62.1	63.4	67.3	67.3	64.6	64.8	65.2	65.5	65.5	65.7	65.8	63.2	62.4	66.0	66.0	65.8	63.2	62.7	66.8	66.9	62.5	62.6	67.3	67.5
24	57.3	57.1	55.7	<40	<40	56.4	57.1	<40	47.1	59.0	60.3	62.2	63.6	67.4	67.4	64.8	64.9	65.4	65.7	65.6	65.8	65.9	63.3	62.5	66.0	66.1	66.0	63.3	62.9	66.9	67.1	62.6	62.7	67.4	67.6
23	57.5	57.3	55.8	<40	<40	56.6	57.2	<40	47.1	59.0	60.4	62.4	63.6	67.6	67.6	64.9	65.0	65.4	65.8	65.7	65.9	66.0	63.4	62.6	66.1	66.1	66.1	63.4	63.0	67.0	67.2	62.8	62.9	67.6	67.8
22	57.6	57.4	55.9	<40	<40	56.7	57.3	<40	47.1	59.1	60.6	62.5	63.8	67.8	67.7	65.1	65.1	65.6	65.9	65.9	66.1	66.2	63.5	62.7	66.3	66.3	66.1	63.6	63.1	67.2	67.3	62.9	63.0	67.7	67.9
21	57.7	57.5	56.0	<40	<40	56.8	57.5	<40	47.2	59.3	60.7	62.7	63.9	67.9	67.9	65.2	65.3	65.7	66.0	66.0	66.2	66.3	63.6	62.8	66.4	66.4	66.3	63.7	63.3	67.3	67.5	63.1	63.2	67.9	68.1
20	57.8	57.6	56.2	<40	<40	57.0	57.6	<40	47.2	59.4	60.8	62.8	64.1	68.1	68.1	65.3	65.5	65.9	66.2	66.1	66.3	66.4	63.8	63.0	66.5	66.5	66.4	63.9	63.4	67.4	67.6	63.2	63.4	68.0	68.2
19	57.9	57.8	56.3	<40	<40	57.1	57.8	<40	47.2	59.6	60.9	63.0	64.3	68.3	68.2	65.5	65.6	66.1	66.4	66.2	66.4	66.5	63.9	63.1	66.6	66.6	66.5	64.0	63.6	67.6	67.7	63.4	63.5	68.2	68.4
18	58.0	57.9	56.4	<40	<40	57.2	57.9	<40	47.2	59.7	61.1	63.1	64.4	68.4	68.4	65.7	65.7	66.2	66.5	66.4	66.6	66.7	64.0	63.3	66.8	66.8	66.6	64.2	63.7	67.7	67.9	63.6	63.7	68.3	68.5
17	58.2	58.0	56.6	<40	<40	57.4	58.1	<40	47.2	59.9	61.3	63.3	64.6	68.6	68.6	65.8	65.9	66.3	66.6	66.5	66.7	66.8	64.1	63.4	66.9	66.9	66.8	64.3	63.9	67.8	68.0	63.7	63.9	68.5	68.7
16	58.3	58.1	56.7	<40	<40	57.5	58.2	<40	47.3	60.0	61.4	63.5	64.8	68.8	68.8	66.0	66.1	66.5	66.8	66.7	66.9	67.0	64.3	63.6	67.1	67.1	66.9	64.5	64.1	68.0	68.1	63.9	64.0	68.7	68.9
15	58.4	58.3	56.8	<40	<40	57.7	58.4	<40	47.3	60.1	61.6	63.6	65.0	69.0	69.0	66.2	66.2	66.7	67.0	66.8	67.1	67.2	64.4	63.7	67.2	67.2	67.1	64.6	64.2	68.2	68.3	64.1	64.2	68.8	69.1
14	58.5	58.4	57.0	<40	<40	57.8	58.5	<40	47.3	60.3	61.8	63.8	65.1	69.2	69.2	66.3	66.4	66.9	67.2	67.0	67.2	67.3	64.6	63.9	67.4	67.4	67.3	64.8	64.4	68.3	68.5	64.3	64.4	69.0	69.2
13	58.7	58.5	57.1	<40	<40	58.0	58.6	<40	47.3	60.5	61.9	64.0	65.3	69.4	69.3	66.5	66.6	67.0	67.4	67.1	67.3	67.5	64.7	64.0	67.6	67.5	67.4	65.0	64.6	68.5	68.7	64.5	64.6	69.2	69.4
12	58.8	58.7	57.2	<40	<40	58.2	58.8	<40	47.3	60.7	62.1	64.1	65.5	69.6	69.6	66.7	66.7	67.2	67.5	67.3	67.5	67.6	64.9	64.2	67.7	67.7	67.6	65.1	64.8	68.6	68.8	64.7	64.8	69.4	69.7
11	58.9	58.8	57.4	<40	<40	58.3	58.9	<40	47.3	60.8	62.2	64.3	65.7	69.8	69.8	66.9	67.0	67.4	67.7	67.4	67.6	67.7	65.1	64.4	67.9	67.8	67.8	65.3	65.0	68.8	69.0	64.9	65.0	69.6	69.8
10	59.0	58.9	57.5	<40	<40	58.5	59.1	<40	47.3	61.0	62.4	64.5	65.9	70.1	70.1	67.1	67.2	67.6	67.9	67.6	67.8	67.9	65.2	64.5	68.0	68.0	67.9	65.5	65.2	69.0	69.2	65.1	65.2	69.7	70.0
9	59.1	59.1	57.6	<40	<40	58.6	59.2	<40	47.4	61.2	62.6	64.7	66.1	70.3	70.3	67.4	67.4	67.8	68.0	67.8	68.0	68.1	65.4	64.7	68.2	68.2	68.0	65.7	65.4	69.2	69.4	65.3	65.4	70.0	70.3
8	59.2	59.2	57.8	<40	<40	58.8	59.4	<40	47.4	61.3	62.8	64.9	66.3	**70.6**	**70.6**	67.6	67.6	68.0	68.3	67.9	68.1	68.3	65.5	64.8	68.3	68.3	68.2	65.8	65.6	69.5	69.7	65.5	65.7	70.2	**70.5**
7	59.4	59.3	57.9	<40	<40	58.9	59.6	<40	47.4	61.5	63.0	65.1	66.6	**70.9**	**70.9**	67.8	67.8	68.2	68.5	68.1	68.3	68.4	65.6	65.0	68.5	68.5	68.4	66.0	65.8	69.7	69.9	65.8	65.9	**70.5**	**70.8**
6	59.5	59.4	58.0	<40	<40	59.1	59.7	<40	47.4	61.6	63.2	65.4	66.8	**71.2**	**71.2**	68.1	68.0	68.4	68.7	68.2	68.4	68.6	65.8	65.2	68.7	68.7	68.5	66.2	66.0	69.9	70.1	66.0	66.2	**70.7**	**71.0**
5	59.5	59.5	58.1	<40	<40	59.2	59.9	<40	47.4	61.8	63.4	65.5	67.0	**71.5**	**71.5**	68.3	68.3	68.6	68.9	68.3	68.6	68.7	65.9	65.3	68.8	68.8	68.6	66.3	66.1	70.1	70.3	66.2	66.4	**70.9**	**71.3**
4	59.6	59.6	58.2	<40	<40	59.3	60.0	<40	47.4	62.0	63.5	65.7	67.2	**71.9**	**71.8**	68.5	68.5	68.8	69.1	68.5	68.7	68.8	66.0	65.4	69.0	69.0	68.8	66.5	66.3	70.2	**70.5**	66.5	66.6	**71.2**	**71.5**
3	59.7	59.7	58.3	<40	<40	59.5	60.1	<40	47.4	62.1	63.7	65.8	67.3	**72.2**	**72.1**	68.8	68.7	69.0	69.3	68.6	68.9	69.0	66.2	65.6	69.1	69.1	68.9	66.6	66.5	70.4	**70.7**	66.7	66.8	**71.4**	**71.8**
2	59.8	59.8	58.4	<40	<40	59.6	60.2	<40	47.4	62.2	63.8	66.0	67.5	**72.5**	**72.5**	69.1	68.9	69.2	69.5	68.8	69.0	69.1	66.3	65.7	69.2	69.2	69.0	66.8	66.6	**70.6**	**70.9**	66.8	67.0	**71.6**	**72.0**
1	59.8	59.8	58.4	<40	<40	59.6	60.3	<40	47.4	62.4	63.9	66.1	67.7	**72.9**	**72.8**	69.3	69.2	69.3	69.6	68.8	69.1	69.2	66.4	65.8	69.3	69.3	69.1	66.9	66.7	**70.7**	**71.0**	67.0			
Max	59.8	59.8	58.4	<40	<40	59.6	60.3	<40	47.4	62.4	63.9	66.1	67.7	**72.9**	**72.8**	69.3	69.2	69.3	69.6	68.8	69.1	69.2	66.4	65.8	69.3	69.3	69.1	66.9	66.7	**70.7**	**71.0**	67.0	67.0	**71.6**	**72.0**
Min	55.7	55.6	54.1	<40	<40	54.9	55.6	<40	46.7	57.3	58.6	60.6	61.9	65.8	65.8	63.4	63.4	63.9	64.2	64.1	64.3	64.4	62.5	61.8	64.9	64.9	64.7	61.5	61.0	65.4	65.5	60.8	60.8	65.7	65.9

Noise sensitive receivers with exceedance (≥ 70.5 dB(A))

Floor	R518a	R518b	R519a	R519b	R520a	R520b	R521a	R521b	R522a	R522b	R523a	R523b	R524a	R524b	R525a	R525b	R526a	R526b	R526c	R526d	R527a	R527b	R527c	R528a	R528b	R528c	R529a	R529b	R530a	R530b	R531a	R531b	R532a	R532b	R532c
40	66.4	66.6	67.0	66.4	63.8	63.9	64.3	64.7	61.8	64.8	65.1	64.7	63.1	65.6	65.8	64.0	62.0	66.4	67.0	67.2	63.8	62.5	49.8	54.3	61.5	61.3	53.9	55.4	57.3	58.6	60.5	56.0	60.4	61.0	61.8
39	66.5	66.7	67.1	66.5	63.8	64.0	64.4	64.7	61.9	64.9	65.1	64.8	63.2	65.7	65.9	64.1	62.1	66.5	67.1	67.3	63.8	62.6	49.8	54.3	61.5	61.3	53.9	55.5	57.3	58.7	60.5	56.1	60.4	61.0	61.8
38	66.6	66.8	67.1	66.6	63.9	64.1	64.4	64.8	62.0	65.0	65.2	64.8	63.3	65.8	66.0	64.2	62.2	66.6	67.2	67.4	63.9	62.6	49.9	54.3	61.6	61.4	54.0	55.5	57.4	58.7	60.5	56.1	60.5	61.0	61.8
37	66.6	66.9	67.2	66.6	64.0	64.1	64.5	64.9	62.1	65.1	65.3	64.9	63.4	65.9	66.1	64.3	62.3	66.7	67.3	67.5	63.9	62.7	49.9	54.4	61.6	61.4	54.0	55.5	57.4	58.8	60.6	56.2	60.5	61.1	61.9
36	66.7	67.0	67.3	66.7	64.1	64.2	64.6	65.0	62.2	65.2	65.4	65.0	63.5	66.0	66.2	64.4	62.4	66.8	67.4	67.6	64.0	62.8	50.0	54.4	61.6	61.5	54.0	55.6	57.4	58.8	60.6	56.2	60.5	61.1	61.9
35	66.8	67.1	67.4	66.8	64.2	64.3	64.7	65.1	62.3	65.2	65.5	65.1	63.6	66.1	66.3	64.5	62.5	66.8	67.5	67.7	64.0	62.8	50.0	54.5	61.7	61.5	54.1	55.6	57.5	58.8	60.6	56.3	60.6	61.1	61.9
34	67.0	67.2	67.5	66.9	64.3	64.4	64.8	65.2	62.4	65.3	65.6	65.2	63.7	66.2	66.4	64.6	62.6	67.0	67.6	67.8	64.1	62.8	50.1	54.5	61.7	61.5	54.1	55.7	57.5	58.9	60.7	56.3	60.6	61.1	62.0
33	67.1	67.3	67.6	67.0	64.4	64.5	64.8	65.2	62.6	65.4	65.7	65.3	63.8	66.3	66.4	64.7	62.7	67.1	67.7	67.8	64.1	62.9	50.1	54.6	61.8	61.6	54.1	55.7	57.6	58.9	60.7	56.3	60.6	61.2	62.0
32	67.2	67.4	67.7	67.1	64.4	64.6	65.0	65.4	62.7	65.5	65.7	65.4	63.9	66.4	66.6	64.9	62.9	67.2	67.7	67.9	64.2	62.9	50.2	54.6	61.8	61.6	54.2	55.7	57.6	59.0	60.7	56.4	60.6	61.2	62.0
31	67.3	67.5	67.8	67.3	64.5	64.7	65.1	65.5	62.8	65.6	65.8	65.5	64.0	66.5	66.7	65.0	63.0	67.2	67.8	68.0	64.3	63.0	50.2	54.6	61.9	61.6	54.2	55.8	57.6	59.0	60.8	56.4	60.7	61.2	62.0
30	67.4	67.6	67.9	67.4	64.7	64.8	65.2	65.6	62.9	65.7	66.0	65.5	64.2	66.6	66.8	65.1	63.1	67.3	68.0	68.1	64.3	63.0	50.3	54.6	61.9	61.7	54.2	55.8	57.7	59.0	60.8	56.4	60.6	61.2	62.0
29	67.5	67.8	68.0	67.4	64.8	64.9	65.3	65.6	62.9	65.8	66.1	65.7	64.3	66.7	66.9	65.2	63.2	67.5	68.1	68.2	64.4	63.1	50.3	54.7	61.9	61.7	54.3	55.8	57.7	59.1	60.8	56.5	60.7	61.2	62.1
28	67.6	67.9	68.2	67.6	64.8	65.0	65.4	65.8	63.1	65.9	66.2	65.8	64.4	66.8	67.0	65.4	63.4	67.6	68.1	68.3	64.4	63.1	50.4	54.7	62.0	61.7	54.3	55.9	57.7	59.1	60.8	56.5	60.7	61.2	62.0
27	67.7	68.0	68.3	67.7	65.0	65.1	65.5	65.9	63.2	66.0	66.3	65.9	64.6	66.9	67.1	65.5	63.5	67.6	68.3	68.4	64.5	63.2	50.4	54.8	62.0	61.8	54.3	55.9	57.8	59.1	60.8	56.6	60.6	61.2	62.1
26	67.9	68.2	68.4	67.8	65.1	65.2	65.6	66.0	63.3	66.1	66.4	66.0	64.7	67.0	67.2	65.6	63.6	67.8	68.4	68.5	64.5	63.2	50.4	54.8	62.0	61.8	54.4	55.9	57.8	59.1	60.8	56.6	60.6	61.2	62.1
25	68.0	68.3	68.5	68.0	65.1	65.3	65.7	66.1	63.4	66.3	66.5	66.2	64.8	67.2	67.4	65.8	63.8	67.9	68.5	68.6	64.5	63.2	50.5	54.8	62.0	61.8	54.4	56.0	57.9	59.2	60.8	56.6	60.6	61.2	62.1
24	68.2	68.4	68.7	68.1	65.3	65.4	65.8	66.2	63.6	66.3	66.6	66.3	65.0	67.3	67.5	65.9	63.9	68.0	68.6	68.8	64.6	63.3	50.5	54.8	62.0	61.8	54.4	56.0	57.9	59.2	60.8	56.7	60.6	61.2	62.1
23	68.3	68.6	68.8	68.2	65.4	65.5	65.9	66.4	63.7	66.5	66.8	66.4	65.1	67.4	67.6	66.1	64.1	68.1	68.7	68.8	64.6	63.3	50.6	54.9	62.0	61.8	54.5	56.0	57.9	59.2	60.7	56.7	60.6	61.2	62.1
22	68.5	68.7	69.0	68.4	65.5	65.6	66.0	66.5	63.9	66.6	66.9	66.5	65.3	67.5	67.7	66.2	64.2	68.3	68.8	69.0	64.6	63.3	50.6	54.9	62.0	61.7	54.4	56.1	58.0	59.2	60.7	56.7	60.6	61.2	62.1
21	68.6	68.9	69.1	68.5	65.6	65.7	66.2	66.6	64.0	66.8	67.0	66.7	65.4	67.7	67.9	66.4	64.4	68.4	69.0	69.1	64.6	63.3	50.7	54.9	62.0	61.7	54.5	56.1	58.0	59.3	60.7	56.8	60.5	61.2	62.1
20	68.8	69.1	69.2	68.7	65.8	65.9	66.3	66.7	64.2	66.9	67.2	66.8	65.6	67.8	68.0	66.5	64.5	68.6	69.1	69.2	64.7	63.3	50.7	54.9	61.9	61.7	54.5	56.2	58.0	59.3	60.7	56.8	60.5	61.2	62.1
19	68.9	69.2	69.4	68.8	65.9	66.0	66.4	66.9	64.3	67.0	67.3	67.0	65.7	68.0	68.1	66.7	64.7	68.7	69.2	69.4	64.7	63.3	50.7	55.0	61.9	61.6	54.6	56.2	58.1	59.2	60.6	56.8	60.5	61.1	62.1
18	69.1	69.4	69.6	69.0	66.0	66.2	66.6	67.0	64.5	67.2	67.5	67.1	65.9	68.1	68.3	66.9	64.9	68.9	69.4	69.5	64.7	63.3	50.8	55.0	61.8	61.6	54.6	56.2	58.1	59.3	60.6	56.8	60.5	61.2	62.1
17	69.3	69.6	69.7	69.2	66.2	66.3	66.7	67.2	64.7	67.3	67.6	67.2	66.1	68.3	68.5	67.1	65.1	69.0	69.6	69.7	64.7	63.2	50.8	55.0	61.8	61.6	54.6	56.3	58.1	59.3	60.6	56.9	60.5	61.2	62.2
16	69.5	69.8	69.9	69.3	66.3	66.4	66.9	67.3	64.8	67.5	67.7	67.4	66.3	68.4	68.6	67.3	65.3	69.2	69.7	69.8	64.7	63.2	50.9	55.1	61.8	61.5	54.6	56.3	58.1	59.3	60.6	56.9	60.5	61.2	62.2
15	69.7	70.0	70.1	69.5	66.5	66.6	67.1	67.5	65.0	67.6	67.9	67.6	66.5	68.6	68.8	67.5	65.5	69.4	69.9	70.0	64.7	63.2	50.9	55.1	61.7	61.5	54.7	56.3	58.2	59.2	60.6	56.9	60.4	61.1	62.2
14	69.9	70.2	70.3	69.8	66.7	66.7	67.2	67.6	65.2	67.8	68.1	67.8	66.7	68.7	69.0	67.7	65.7	69.6	70.0	70.1	64.7	63.2	50.9	55.1	61.7	61.5	54.7	56.3	58.2	59.2	60.6	57.0	60.4	61.1	62.2
13	70.0	70.4	**70.5**	69.9	66.8	66.9	67.4	67.8	65.4	68.0	68.2	67.9	66.9	69.0	69.2	67.9	65.9	69.7	70.2	70.3	64.7	63.2	50.9	55.1	61.7	61.5	54.7	56.4	58.2	59.3	60.5	57.0	60.4	61.1	62.2
12	70.2	**70.6**	**70.8**	70.2	67.0	67.0	67.6	68.0	65.6	68.1	68.4	68.1	67.1	69.2	69.3	68.1	66.1	69.9	70.4	**70.5**	64.7	63.2	51.0	55.2	61.7	61.4	54.7	56.4	58.2	59.2	60.5	57.0	60.4	61.2	62.2
11	**70.5**	**70.8**	**70.9**	70.4	67.2	67.2	67.7	68.2	65.7	68.3	68.6	68.3	67.3	69.4	69.5	68.3	66.3	70.2	**70.5**	**70.7**	64.7	63.1	51.0	55.2	61.6	61.4	54.7	56.4	58.3	59.2	60.5	57.1	60.4	61.1	62.2
10	**70.7**	**71.0**	**71.2**	**70.6**	67.3	67.4	68.0	68.4	65.9	68.5	68.8	68.5	67.5	69.5	69.8	68.6	66.5	70.4	**70.8**	**70.9**	64.7	63.2	51.0	55.2	61.6	61.4	54.7	56.4	58.3	59.2	60.5	57.1	60.3	61.1	62.2
9	**70.9**	**71.3**	**71.4**	**70.9**	67.5	67.6	68.1	68.6	66.1	68.7	69.0	68.7	67.7	69.8	70.0	68.8	66.7	**70.6**	**71.0**	**71.1**	64.7	63.2	51.1	55.2	61.6	61.3	54.8	56.4	58.3	59.2	60.4	57.1	60.3	61.1	62.2
8	**71.2**	**71.6**	**71.8**	**71.2**	67.8	67.8	68.3	68.8	66.3	68.9	69.2	68.9	67.9	70.0	70.2	69.0	67.0	**70.8**	**71.2**	**71.3**	64.7	63.1	51.1	55.3	61.5	61.3	54.8	56.5	58.4	59.1	60.3	57.1	60.2	61.0	62.1
7	**71.4**	**71.8**	**72.0**	**71.5**	68.0	68.0	68.6	69.0	66.5	69.0	69.4	69.0	68.2	70.2	70.4	69.3	67.2	**71.1**	**71.4**	**71.5**	64.7	63.1	51.1	55.3	61.5	61.2	54.8	56.5	58.4	59.1	60.2	57.1	60.1	60.9	62.1
6	**71.7**	**72.0**	**72.4**	**71.8**	68.2	68.3	68.7	69.3	66.7	69.2	69.6	69.3	68.4	70.4	**70.7**	69.6	67.5	**71.4**	**71.7**	**71.7**	64.7	63.0	51.1	55.3	61.3	61.1	54.8	56.5	58.4	59.2	60.1	57.2	59.9	60.8	62.0
5	**72.0**	**72.3**	**72.7**	**72.1**	68.5	68.5	69.0	69.4	66.9	69.4	69.8	69.5	68.6	**70.7**	**70.9**	69.8	67.7	**71.6**	**71.9**	**72.0**	64.7	62.9	51.1	55.3	61.2	60.9	54.8	56.5	58.4	59.1	59.9	57.2	59.8	60.7	61.9
4	**72.2**	**72.6**	**73.0**	**72.5**	68.8	68.7	69.2	69.7	67.1	69.6	70.0	69.7	68.9	**70.9**	**71.1**	70.1	68.0	**71.9**	**72.2**	**72.2**	64.6	62.8	51.1	55.3	61.0	60.7	54.8	56.5	58.4	59.1	59.7	57.2	59.6	60.5	61.8
3	**72.5**	**72.9**	**73.4**	**72.9**	69.0	68.9	69.4	69.9	67.3	69.8	70.2	69.8	69.1	**71.1**	**71.4**	70.3	68.2	**72.2**	**72.5**	**72.5**	64.5	62.7	51.2	55.3	60.7	60.5	54.8	56.6	58.4	59.1	59.5	57.2	59.4	60.3	61.6
2	**72.8**	**73.2**	**73.8**	**73.3**	69.3	69.2	69.6	70.1	67.4	69.9	70.3	70.0	69.3	**71.3**	**71.6**	**70.6**	68.5	**72.4**	**72.7**	**72.8**	64.4	62.5	51.2	55.3	60.4	60.2	54.9	56.6	58.4	59.1	59.4	57.2	59.2	60.2	61.6
1									67.6	70.1	**70.5**	70.2	69.4	**71.5**	**71.8**	**70.8**	68.7	**72.7**	**73.0**	**73.0**	64.3	62.3	51.2	55.4	60.2	60.0	54.9	56.6	58.4	59.1	59.3	57.2	59.1	60.1	61.5
Max	**72.8**	**73.2**	**73.8**	**73.3**	69.3	69.2	69.6	70.1	67.6	70.1	**70.5**	70.2	69.4	**71.5**	**71.8**	**70.8**	68.7	**72.7**	**73.0**	**73.0**	64.7	63.3	51.2	55.4	62.0	61.8	54.9	56.6	58.4	59.3	60.8	57.2	60.7	61.2	62.2
Min	66.4	66.6	67.0	66.4	63.8	63.9	64.3	64.7	61.8	64.8	65.1	64.7	63.1	65.6	65.8	64.0	62.0	66.4	67.0	67.2	63.8	62.3	49.8	54.3	60.2	60.0	53.9	55.4	57.3	58.6	59.3	56.0	59.1	60.1	61.5

Noise sensitive receivers with exceedance (≥ 70.5 dB(A))

Floor	R532d	R533a	R533b	R533c	R533d	R534a	R534b	R535a	R535b	R536a	R536b	R537a	R537b	R538a	R538b	R538c	R538d
40	58.5	61.2	63.6	64.4	64.8	64.5	65.2	65.4	65.4	65.4	66.0	66.2	66.0	65.1	66.6	66.7	66.7
39	58.6	61.2	63.6	64.4	64.8	64.5	65.2	65.4	65.4	65.4	66.1	66.2	66.1	65.1	66.6	66.7	66.8
38	58.6	61.2	63.6	64.5	64.9	64.5	65.3	65.4	65.5	65.4	66.1	66.2	66.1	65.1	66.6	66.7	66.8
37	58.6	61.3	63.7	64.5	64.9	64.5	65.3	65.5	65.5	65.4	66.1	66.2	66.1	65.1	66.6	66.8	66.8
36	58.7	61.3	63.7	64.5	64.9	64.6	65.3	65.5	65.5	65.4	66.1	66.3	66.1	65.1	66.6	66.8	66.8
35	58.7	61.3	63.7	64.5	64.9	64.6	65.3	65.5	65.5	65.5	66.1	66.3	66.2	65.1	66.7	66.8	66.9
34	58.7	61.3	63.7	64.6	64.9	64.6	65.4	65.5	65.6	65.5	66.2	66.3	66.2	65.2	66.7	66.8	66.9
33	58.8	61.4	63.8	64.6	65.0	64.6	65.4	65.6	65.6	65.5	66.2	66.3	66.2	65.2	66.7	66.8	66.9
32	58.8	61.4	63.8	64.6	65.0	64.6	65.4	65.6	65.6	65.5	66.2	66.4	66.2	65.2	66.8	66.9	66.9
31	58.8	61.4	63.8	64.6	65.0	64.6	65.4	65.6	65.6	65.6	66.2	66.4	66.2	65.3	66.8	66.9	67.0
30	58.8	61.4	63.8	64.6	65.0	64.7	65.4	65.6	65.7	65.6	66.3	66.4	66.3	65.3	66.8	66.9	67.0
29	58.9	61.4	63.8	64.7	65.1	64.7	65.5	65.6	65.7	65.6	66.3	66.4	66.3	65.3	66.8	67.0	67.0
28	58.9	61.4	63.9	64.7	65.1	64.7	65.5	65.7	65.7	65.6	66.3	66.5	66.3	65.3	66.9	67.0	67.1
27	58.9	61.4	63.9	64.7	65.1	64.7	65.5	65.7	65.7	65.7	66.4	66.5	66.4	65.3	66.9	67.0	67.1
26	58.9	61.4	63.9	64.7	65.1	64.7	65.5	65.7	65.7	65.7	66.4	66.5	66.4	65.4	66.9	67.0	67.1
25	58.9	61.4	63.9	64.7	65.1	64.8	65.5	65.7	65.8	65.7	66.4	66.6	66.4	65.4	67.0	67.1	67.1
24	58.9	61.4	63.9	64.8	65.2	64.8	65.6	65.8	65.8	65.7	66.4	66.6	66.4	65.4	67.0	67.1	67.2
23	58.9	61.4	63.9	64.8	65.2	64.8	65.6	65.8	65.8	65.7	66.5	66.6	66.5	65.5	67.0	67.1	67.2
22	58.9	61.4	64.0	64.8	65.2	64.8	65.6	65.8	65.9	65.8	66.5	66.6	66.5	65.5	67.0	67.2	67.2
21	58.9	61.4	64.0	64.8	65.2	64.9	65.7	65.8	65.9	65.8	66.5	66.7	66.5	65.5	67.1	67.2	67.2
20	59.0	61.5	64.0	64.8	65.2	64.9	65.7	65.9	65.9	65.8	66.5	66.7	66.5	65.5	67.1	67.2	67.3
19	59.0	61.5	64.0	64.9	65.3	64.9	65.7	65.9	65.9	65.9	66.6	66.7	66.6	65.5	67.1	67.2	67.3
18	59.0	61.5	64.1	64.9	65.3	64.9	65.7	65.9	65.9	65.9	66.6	66.8	66.6	65.6	67.1	67.3	67.3
17	59.0	61.5	64.1	64.9	65.3	64.9	65.7	65.9	66.0	65.9	66.6	66.8	66.6	65.6	67.2	67.3	67.4
16	59.0	61.5	64.1	64.9	65.3	65.0	65.8	66.0	66.0	65.9	66.6	66.8	66.7	65.6	67.2	67.3	67.4
15	59.0	61.5	64.1	65.0	65.3	65.0	65.8	66.0	66.0	65.9	66.7	66.8	66.7	65.6	67.2	67.3	67.4
14	59.0	61.5	64.1	65.0	65.4	65.0	65.8	66.0	66.0	66.0	66.7	66.9	66.7	65.7	67.2	67.4	67.4
13	59.0	61.5	64.1	65.0	65.4	65.0	65.8	66.0	66.1	66.0	66.7	66.9	66.7	65.7	67.3	67.4	67.5
12	59.0	61.5	64.2	65.0	65.4	65.0	65.9	66.0	66.1	66.0	66.7	66.9	66.7	65.7	67.3	67.4	67.5
11	58.9	61.5	64.2	65.0	65.4	65.0	65.9	66.0	66.1	66.0	66.7	66.9	66.7	65.7	67.3	67.4	67.5
10	58.9	61.5	64.2	65.0	65.4	65.0	65.9	66.1	66.1	66.0	66.8	66.9	66.8	65.8	67.3	67.4	67.5
9	58.9	61.5	64.2	65.0	65.4	65.0	65.9	66.0	66.1	66.0	66.8	66.9	66.8	65.8	67.3	67.4	67.5
8	58.8	61.4	64.1	65.0	65.4	65.0	65.8	66.0	66.1	66.0	66.7	66.9	66.8	65.8	67.3	67.5	67.5
7	58.8	61.4	64.1	65.0	65.4	65.0	65.8	66.0	66.1	66.0	66.7	66.9	66.7	65.8	67.3	67.4	67.5
6	58.8	61.3	64.1	64.9	65.3	64.9	65.8	66.0	66.0	65.9	66.7	66.9	66.7	65.8	67.3	67.4	67.5
5	58.8	61.1	64.0	64.9	65.3	64.9	65.8	66.0	66.0	65.9	66.7	66.8	66.7	65.8	67.3	67.4	67.4
4	58.8	61.0	64.0	64.8	65.3	64.8	65.7	65.9	66.0	65.8	66.6	66.8	66.6	65.7	67.2	67.3	67.4
3	58.8	60.8	63.9	64.8	65.2	64.7	65.6	65.8	65.9	65.7	66.5	66.7	66.5	65.5	67.1	67.2	67.2
2	58.8	60.7	63.8	64.7	65.1	64.6	65.5	65.7	65.8	65.5	66.4	66.5	66.3	65.2	66.8	66.9	66.9
1	58.8	60.6	63.7	64.6	65.0	64.5	65.4	65.6	65.6	65.2	66.1	66.1	65.8	64.7	66.3	66.3	66.3
Max	59.0	61.5	64.2	65.0	65.4	65.0	65.9	66.1	66.1	66.0	66.8	66.9	66.8	65.8	67.3	67.5	67.5
Min	58.5	60.6	63.6	64.4	64.8	64.5	65.2	65.4	65.4	65.2	66.0	66.1	65.8	64.7	66.3	66.3	66.3

Noise sensitive receivers with exceedance (≥ 70.5 dB(A))

Floor	R101 max	R102max	R103 max	R104 max	R105 max	R106 max	R107 max	R108 max	R109 max	R110 max	R111 max	R112 max	R113 max	R114 max	R115 max	R116 max	R117 max	R118 max	R119 max	R120 max	R121 max	R122 max	R123 max	R124 max	R125 max	R126 max	R127 max	R128 max	R129 max	R130 max	R131 max	R132 max	R133 max	R134 max
40																																		
39																																		
38																																		
37	66.7	65.3	65.0	65.1	64.4	66.7	62.7	58.4	56.2	55.2	55.1	55.4	56.2	55.7	57.4	57.5	56.0	56.0	55.8	56.3	56.6	57.8	58.6	60.7	65.3	64.3	64.1	63.6	63.4	63.0	62.5	62.0	62.5	63.7
36	66.7	65.4	65.1	65.1	64.5	66.8	62.7	58.5	56.2	55.2	55.2	55.4	56.3	55.7	57.4	57.3	55.9	56.0	55.9	56.3	56.7	57.8	58.7	60.8	65.4	64.4	64.2	63.7	63.5	63.0	62.6	62.0	62.6	63.8
35	66.8	65.5	65.1	65.2	64.5	66.8	62.8	58.5	56.3	55.3	55.2	55.4	56.3	55.8	57.5	57.4	56.0	56.1	56.0	56.4	56.8	57.9	58.8	60.9	65.4	64.5	64.2	63.7	63.6	63.1	62.7	62.1	62.7	63.8
34	66.9	65.6	65.2	65.3	64.6	66.9	62.9	58.6	56.4	55.4	55.2	55.4	56.4	55.8	57.5	57.4	56.0	56.1	56.0	56.5	56.8	58.0	58.8	61.0	65.5	64.6	64.3	63.8	63.6	63.2	62.7	62.2	62.8	63.9
33	66.9	65.7	65.3	65.4	64.7	67.0	63.0	58.7	56.4	55.4	55.3	55.5	56.4	55.9	57.5	57.5	56.1	56.2	56.0	56.5	56.9	58.0	58.9	61.0	65.6	64.6	64.4	63.9	63.7	63.2	62.8	62.2	62.8	64.0
32	67.0	65.8	65.4	65.4	64.8	67.1	63.0	58.7	56.4	55.5	55.3	55.6	56.5	55.9	57.6	57.6	56.2	56.3	56.1	56.6	56.9	58.1	59.0	61.1	65.7	64.7	64.4	63.9	63.8	63.3	62.9	62.3	62.9	64.1
31	67.1	65.8	65.4	65.5	64.9	67.1	63.1	58.8	56.5	55.5	55.4	55.6	56.6	55.9	57.7	57.6	56.2	56.3	56.2	56.7	57.0	58.2	59.1	61.2	65.7	64.8	64.5	64.0	63.8	63.4	62.9	62.4	63.0	64.1
30	67.2	65.9	65.5	65.6	65.0	67.2	63.2	58.9	56.6	55.6	55.5	55.7	56.6	56.0	57.7	57.7	56.3	56.4	56.2	56.7	57.1	58.2	59.1	61.2	65.8	64.8	64.6	64.1	63.9	63.4	63.0	62.4	63.0	64.2
29	67.3	66.0	65.6	65.7	65.0	67.3	63.3	59.0	56.7	55.7	55.6	55.8	56.7	56.1	57.8	57.7	56.3	56.4	56.3	56.8	57.1	58.3	59.2	61.3	65.9	64.9	64.7	64.1	64.0	63.5	63.1	62.5	63.1	64.3
28	67.4	66.1	65.7	65.7	65.1	67.4	63.4	59.1	56.8	55.8	55.6	55.8	56.8	56.1	57.9	57.8	56.4	56.5	56.4	56.9	57.2	58.4	59.3	61.4	66.0	65.0	64.7	64.2	64.1	63.6	63.2	62.6	63.2	64.4
27	67.5	66.2	65.8	65.8	65.2	67.5	63.5	59.2	56.9	55.9	55.7	55.9	56.8	56.2	57.9	57.8	56.4	56.5	56.4	56.9	57.3	58.4	59.3	61.5	66.0	65.1	64.8	64.3	64.1	63.7	63.2	62.7	63.3	64.5
26	67.6	66.3	65.9	66.0	65.3	67.6	63.6	59.2	57.0	56.0	55.8	56.0	56.9	56.3	58.0	57.9	56.5	56.6	56.5	57.0	57.3	58.5	59.4	61.6	66.1	65.1	64.9	64.4	64.2	63.7	63.3	62.7	63.4	64.6
25	67.7	66.4	66.0	66.0	65.3	67.7	63.7	59.3	57.0	56.1	55.9	56.1	57.0	56.3	58.0	57.9	56.5	56.7	56.6	57.0	57.4	58.6	59.5	61.6	66.2	65.2	65.0	64.4	64.3	63.8	63.4	62.8	63.4	64.6
24	67.8	66.5	66.1	66.1	65.4	67.8	63.8	59.4	57.1	56.2	56.0	56.2	57.0	56.4	58.1	57.9	56.6	56.7	56.6	57.1	57.4	58.7	59.6	61.7	66.3	65.3	65.0	64.5	64.4	63.9	63.5	62.9	63.5	64.7
23	67.9	66.6	66.2	66.2	65.5	67.9	63.8	59.5	57.3	56.3	56.1	56.3	57.1	56.5	58.2	58.0	56.6	56.8	56.7	57.1	57.5	58.7	59.6	61.8	66.4	65.4	65.1	64.6	64.4	64.0	63.5	63.0	63.6	64.8
22	68.0	66.7	66.3	66.3	65.6	68.0	63.9	59.6	57.3	56.3	56.2	56.4	57.2	56.5	58.2	58.1	56.7	56.8	56.8	57.2	57.6	58.8	59.7	61.9	66.5	65.5	65.2	64.7	64.5	64.0	63.6	63.1	63.7	64.9
21	68.1	66.8	66.4	66.4	65.6	68.0	64.0	59.7	57.5	56.4	56.3	56.4	57.3	56.6	58.3	58.1	56.8	56.9	56.8	57.3	57.6	58.9	59.8	62.0	66.5	65.6	65.2	64.8	64.6	64.1	63.7	63.1	63.7	65.0
20	68.2	66.9	66.5	66.5	65.8	68.2	64.1	59.8	57.6	56.5	56.4	56.5	57.3	56.6	58.3	58.2	56.8	56.9	56.9	57.3	57.7	58.9	59.9	62.0	66.6	65.6	65.3	64.8	64.7	64.2	63.8	63.2	63.8	65.1
19	68.3	67.0	66.6	66.6	65.9	68.3	64.3	60.0	57.6	56.6	56.5	56.6	57.4	56.6	58.3	58.2	56.9	57.0	56.9	57.4	57.8	59.0	59.9	62.1	66.7	65.7	65.4	64.9	64.7	64.3	63.9	63.3	63.9	65.2
18	68.4	67.1	66.7	66.7	65.9	68.3	64.4	60.1	57.7	56.7	56.5	56.7	57.5	56.7	58.4	58.3	56.9	57.0	56.9	57.4	57.8	59.1	60.0	62.2	66.8	65.8	65.5	65.0	64.8	64.3	63.9	63.4	64.0	65.2
17	68.5	67.2	66.8	66.8	66.0	68.5	64.5	60.2	57.8	56.8	56.6	56.8	57.4	56.7	58.3	58.3	57.0	57.1	57.0	57.5	57.9	59.2	60.1	62.3	66.9	65.9	65.6	65.1	64.9	64.4	64.0	63.4	64.1	65.3
16	68.7	67.4	67.0	66.9	66.1	68.5	64.6	60.3	57.9	56.9	56.7	56.9	57.5	56.6	58.3	58.4	57.0	57.2	57.0	57.6	57.9	59.2	60.2	62.3	67.0	66.0	65.6	65.1	65.0	64.5	64.1	63.5	64.1	65.4
15	68.8	67.5	67.1	67.0	66.2	68.7	64.7	60.4	58.0	57.0	56.8	57.0	57.5	56.6	58.2	58.4	57.1	57.2	57.1	57.6	58.0	59.3	60.2	62.4	67.0	66.0	65.7	65.2	65.0	64.5	64.2	63.6	64.2	65.5
14	68.9	67.6	67.2	67.1	66.4	68.8	64.8	60.5	58.1	57.1	56.9	57.0	57.5	56.4	58.2	58.4	57.1	57.3	57.2	57.7	58.1	59.4	60.3	62.5	67.1	66.1	65.8	65.3	65.1	64.6	64.2	63.7	64.3	65.6
13	69.1	67.8	67.3	67.3	66.4	68.9	64.9	60.6	58.3	57.2	57.0	57.1	57.4	56.3	58.1	58.5	57.2	57.3	57.2	57.8	58.1	59.4	60.4	62.6	67.2	66.2	65.9	65.4	65.2	64.7	64.3	63.8	64.4	65.7
12	69.2	67.9	67.4	67.4	66.6	69.0	65.0	60.7	58.4	57.3	57.1	57.2	57.3	56.0	57.9	58.5	57.2	57.4	57.3	57.8	58.2	59.5	60.5	62.6	67.3	66.3	66.0	65.4	65.2	64.8	64.4	63.8	64.5	65.8
11	69.4	68.0	67.6	67.5	66.7	69.2	65.2	60.8	58.5	57.4	57.2	57.2	57.2	55.8	57.7	58.5	57.3	57.4	57.3	57.9	58.2	59.6	60.5	62.7	67.4	66.4	66.1	65.5	65.3	64.9	64.5	63.9	64.6	65.9
10	69.5	68.2	67.7	67.6	66.8	69.3	65.3	61.0	58.6	57.5	57.3	57.3	56.9	55.2	57.2	58.5	57.3	57.4	57.4	57.9	58.3	59.6	60.6	62.8	67.5	66.4	66.1	65.6	65.4	64.9	64.5	64.0	64.6	66.0
9	69.6	68.3	67.9	67.8	66.9	69.5	65.4	61.1	58.7	57.6	57.4	57.3	56.5	54.4	56.4	58.4	57.3	57.5	57.4	58.0	58.3	59.7	60.7	62.8	67.6	66.5	66.2	65.7	65.5	65.0	64.6	64.0	64.7	66.1
8	69.8	68.5	68.0	67.9	67.1	69.6	65.6	61.2	58.8	57.7	57.4	57.2	55.7	52.7	55.8	58.3	57.4	57.5	57.5	58.0	58.4	59.8	60.7	62.9	67.7	66.6	66.3	65.7	65.5	65.1	64.7	64.1	64.9	66.2
7	70.0	68.6	68.2	68.1	67.2	69.8	65.7	61.3	58.9	57.8	57.4	57.0	54.5	51.2	55.1	58.0	57.4	57.6	57.5	58.1	58.5	59.8	60.8	63.0	67.7	66.7	66.4	65.8	65.6	65.1	64.8	64.2	64.9	66.3
6	70.1	68.8	68.3	68.2	67.4	70.0	65.8	61.4	59.0	57.9	57.2	56.5	53.3	49.4	54.4	57.8	57.5	57.6	57.6	58.1	58.5	59.9	60.8	63.1	67.8	66.7	66.4	65.8	65.6	65.2	64.8	64.3	65.0	66.4
5	70.3	69.0	68.4	68.4	67.5	70.1	66.0	61.5	59.0	57.8	57.0	55.9	52.3	48.0	53.4	57.6	57.5	57.7	57.6	58.2	58.5	60.0	60.9	63.2	67.9	66.8	66.4	65.9	65.7	65.2	64.9	64.4	65.1	66.5
4	**70.5**	69.1	68.6	68.5	67.7	70.3	66.1	61.6	59.0	57.7	56.5	54.3	51.6	46.7	52.8	57.4	57.5	57.7	57.6	58.2	58.6	60.0	61.0	63.2	67.9	66.8	66.4	65.9	65.7	65.3	65.0	64.4	65.1	66.6
3	**70.7**	69.2	68.7	68.6	67.8	70.3	66.1	61.5	58.7	57.3	55.7	52.5	51.1	45.7	52.3	57.3	57.5	57.7	57.6	58.2	58.6	60.1	61.1	63.3	67.9	66.8	66.4	65.8	65.6	65.2	65.0	64.5	65.2	66.6
2	**70.9**	69.4	68.8	68.7	67.9	69.8	66.2	61.1	58.2	56.6	54.2	50.4	50.8	44.6	52.0	57.1	57.3	57.6	57.6	58.2	58.7	60.1	61.1	63.4	67.9	66.7	66.3	65.7	65.5	65.1	64.9	64.5	65.3	66.8
1	**71.1**	69.6	69.0	68.9	68.1	70.0	65.9	60.4	57.0	55.2	52.2	48.8							57.3	58.2	58.6	60.2	61.2	63.4	68.0	66.6	66.2	65.5	65.2	64.8	64.7	64.5	65.3	66.8
Max	**71.1**	69.6	69.0	68.9	68.1	70.3	66.2	61.6	59.0	57.9	57.4	57.3	57.5	56.7	58.4	58.5	57.5	57.7	57.6	58.2	58.7	60.2	61.2	63.4	68.0	66.8	66.4	65.9	65.7	65.3	65.0	64.5	65.3	66.8
Min	66.7	65.3	65.0	65.1	64.4	66.7	62.7	58.4	56.2	55.2	52.2	48.8	50.8	44.6	52.0	57.1	55.9	56.0	55.8	56.3	56.6	57.8	58.6	60.7	65.3	64.3	64.1	63.6	63.4	63.0	62.5	62.0	62.5	63.7

Total	6817
Exceedance	83
Compliance Rate	98.8%

Noise sensitive receivers with exceedance (≥70.5 dB(A))

Floor	R201 max	R202 max	R203 max	R204 max	R205 max	R206 max	R207 max	R208 max	R209 max	R210 max	R211 max	R212 max	R213 max	R214 max	R215 max	R216 max	R217 max	R218 max	R219 max	R220 max	R221 max	R222 max	R223 max	R224 max	R225 max	R226 max	R227 max	R228 max	R229 max	R230 max	R231 max	R232 max	R233 max	R234 max
40																																		
39																																		
38																																		
37	62.3	59.1	56.1	<40	54.8	54.5	55.3	55.6	55.8	49.5	<40	<40	<40	<40	<40	42.2	43.3	<40	<40	45.2	49.9	64.4	63.2	63.1	62.7	62.4	62.1	56.9	64.3	65.4	63.6	63.3	61.2	62.9
36	62.4	59.2	56.1	<40	54.8	54.5	55.3	55.7	55.9	49.0	<40	<40	<40	<40	<40	42.2	43.3	<40	<40	45.2	49.9	64.5	63.2	63.1	62.7	62.4	62.1	57.0	64.4	65.5	63.7	63.3	61.3	63.0
35	62.4	59.2	56.2	<40	54.9	54.6	55.4	55.7	55.9	49.1	<40	<40	<40	<40	<40	42.3	43.3	<40	<40	45.3	49.9	64.5	63.3	63.2	62.8	62.5	62.1	57.0	64.4	65.5	63.8	63.4	61.3	63.0
34	62.5	59.3	56.3	<40	55.0	54.7	55.5	55.8	56.0	48.8	<40	<40	<40	<40	<40	42.3	43.4	<40	<40	45.3	49.9	64.5	63.3	63.2	62.8	62.5	62.2	57.1	64.4	65.6	63.8	63.5	61.4	63.1
33	62.6	59.4	56.3	<40	55.1	54.7	55.5	55.8	56.0	48.3	<40	<40	<40	<40	<40	42.3	43.4	<40	<40	45.2	49.8	64.6	63.4	63.2	62.8	62.5	62.2	57.1	64.5	65.7	63.9	63.5	61.5	63.2
32	62.7	59.5	56.4	<40	55.1	54.8	55.6	55.9	56.1	48.4	<40	<40	<40	<40	<40	42.3	43.5	<40	<40	45.0	49.8	64.6	63.4	63.3	62.9	62.6	62.3	57.2	64.6	65.7	64.0	63.6	61.6	63.3
31	62.7	59.5	56.4	<40	55.2	54.9	55.7	55.9	56.1	48.2	<40	<40	<40	<40	<40	42.4	43.5	<40	<40	45.0	49.7	64.7	63.4	63.3	62.9	62.6	62.3	57.2	64.6	65.8	64.1	63.7	61.6	63.3
30	62.8	59.6	56.5	<40	55.2	54.9	55.7	56.0	56.2	48.2	<40	<40	<40	<40	<40	42.4	43.6	<40	<40	45.1	49.6	64.7	63.5	63.3	63.0	62.7	62.3	57.3	64.7	65.9	64.2	63.8	61.7	63.4
29	62.8	59.7	56.6	<40	55.3	55.0	55.8	56.1	56.2	48.3	<40	<40	<40	<40	<40	42.5	43.6	<40	<40	45.1	49.5	64.7	63.5	63.4	63.0	62.7	62.4	57.3	64.7	65.9	64.2	63.9	61.8	63.5
28	62.9	59.7	56.7	<40	55.4	55.1	55.8	56.1	56.3	48.3	<40	<40	<40	<40	<40	42.5	43.7	<40	<40	45.2	49.3	64.8	63.6	63.4	63.0	62.8	62.4	57.4	64.8	66.0	64.3	63.9	61.8	63.6
27	63.0	59.8	56.7	<40	55.4	55.1	55.9	56.2	56.3	48.2	<40	<40	<40	<40	<40	42.6	43.7	<40	<40	45.2	49.1	64.8	63.6	63.5	63.1	62.8	62.5	57.4	64.8	66.1	64.4	64.0	61.9	63.6
26	63.1	59.8	56.8	<40	55.5	55.2	56.0	56.2	56.3	48.2	<40	<40	<40	<40	<40	42.6	43.8	<40	<40	45.3	48.8	64.8	63.6	63.5	63.1	62.8	62.5	57.5	64.9	66.2	64.5	64.1	62.0	63.7
25	63.1	59.9	56.8	<40	55.6	55.2	56.0	56.3	56.4	48.3	<40	<40	<40	<40	<40	42.7	43.8	<40	<40	45.4	48.5	64.9	63.7	63.6	63.2	62.9	62.5	57.5	65.0	66.2	64.6	64.2	62.1	63.8
24	63.2	60.0	56.9	<40	55.7	55.3	56.1	56.3	56.4	48.3	<40	<40	<40	<40	<40	42.7	43.9	<40	<40	45.4	48.2	64.9	63.7	63.6	63.2	62.9	62.6	57.5	65.0	66.3	64.7	64.3	62.1	63.9
23	63.3	60.1	57.0	<40	55.7	55.4	56.1	56.4	56.4	48.2	<40	<40	<40	<40	<40	42.8	43.9	<40	<40	45.5	48.1	64.9	63.8	63.6	63.3	63.0	62.6	57.6	65.1	66.4	64.8	64.3	62.2	64.0
22	63.4	60.1	57.1	<40	55.8	55.4	56.1	56.5	56.4	48.2	<40	<40	<40	<40	<40	42.8	44.0	<40	<40	45.5	47.8	65.0	63.8	63.7	63.3	63.0	62.7	57.6	65.1	66.5	64.9	64.4	62.3	64.0
21	63.4	60.2	57.1	<40	55.9	55.5	56.2	56.5	56.4	48.3	<40	<40	<40	<40	<40	42.9	44.0	<40	<40	45.6	47.7	65.0	63.9	63.7	63.4	63.1	62.7	57.7	65.2	66.5	64.9	64.5	62.4	64.1
20	63.5	60.3	57.2	<40	55.9	55.6	56.3	56.5	56.5	48.3	<40	<40	<40	<40	<40	42.9	44.1	<40	<40	45.6	47.5	65.1	63.9	63.8	63.4	63.1	62.8	57.7	65.3	66.6	65.0	64.6	62.5	64.2
19	63.6	60.3	57.3	<40	56.0	55.6	56.3	56.6	56.5	48.2	<40	<40	<40	<40	<40	42.9	44.1	<40	<40	45.7	47.4	65.1	63.9	63.8	63.5	63.1	62.8	57.7	65.3	66.7	65.1	64.7	62.5	64.3
18	63.6	60.4	57.4	<40	56.0	55.7	56.3	56.7	56.5	48.2	<40	<40	<40	<40	<40	43.0	44.2	<40	<40	45.7	47.4	65.1	64.0	63.9	63.5	63.2	62.8	57.8	65.4	66.8	65.2	64.8	62.6	64.3
17	63.7	60.5	57.4	<40	56.1	55.7	56.4	56.7	56.4	48.3	<40	<40	<40	<40	<40	43.0	44.2	<40	<40	45.7	47.3	65.2	64.0	63.9	63.5	63.2	62.9	57.8	65.4	66.9	65.3	64.9	62.7	64.4
16	63.8	60.5	57.4	<40	56.2	55.8	56.4	56.8	56.4	48.3	<40	<40	<40	<40	<40	43.1	44.3	<40	<40	45.8	47.3	65.2	64.1	63.9	63.6	63.3	62.9	57.9	65.5	67.0	65.4	65.0	62.8	64.5
15	63.9	60.6	57.5	<40	56.3	55.9	56.5	56.8	56.4	48.3	<40	<40	<40	<40	<40	43.1	44.3	<40	<40	45.8	47.2	65.2	64.1	64.0	63.6	63.3	63.0	57.9	65.6	67.0	65.5	65.0	62.8	64.6
14	63.9	60.6	57.6	<40	56.3	55.9	56.5	56.8	56.3	48.3	<40	<40	<40	<40	<40	43.2	44.4	<40	<40	45.9	47.3	65.3	64.1	64.0	63.7	63.4	63.0	57.9	65.6	67.1	65.6	65.1	62.9	64.7
13	64.0	60.6	57.7	<40	56.4	56.0	56.5	56.9	56.3	48.4	<40	<40	<40	<40	<40	43.2	44.4	<40	<40	45.9	47.2	65.3	64.2	64.1	63.7	63.4	63.0	58.0	65.7	67.2	65.7	65.2	63.0	64.8
12	64.0	60.6	57.7	<40	56.4	56.1	56.6	56.9	56.3	48.4	<40	<40	<40	<40	<40	43.2	44.4	<40	<40	46.0	47.3	65.3	64.2	64.1	63.7	63.4	63.1	58.0	65.8	67.3	65.8	65.3	63.1	64.9
11	64.1	60.6	57.8	<40	56.5	56.1	56.6	56.9	56.3	48.4	<40	<40	<40	<40	<40	43.3	44.5	<40	<40	46.0	47.3	65.4	64.3	64.1	63.8	63.5	63.1	58.0	65.8	67.4	65.9	65.4	63.2	64.9
10	64.1	60.7	57.8	<40	56.6	56.2	56.6	56.9	56.4	48.4	<40	<40	<40	<40	<40	43.3	44.5	<40	<40	46.1	47.3	65.4	64.3	64.2	63.8	63.5	63.2	58.1	65.9	67.5	66.0	65.5	63.2	65.0
9	64.2	60.7	57.9	<40	56.6	56.2	56.7	57.0	56.4	48.4	<40	<40	<40	<40	<40	43.3	44.5	<40	<40	46.1	47.4	65.4	64.3	64.2	63.9	63.6	63.2	58.1	66.0	67.6	66.1	65.6	63.3	65.1
8	64.2	60.7	58.0	<40	56.7	56.3	56.7	57.0	56.4	48.5	<40	<40	<40	<40	<40	43.4	44.5	<40	<40	46.2	47.4	65.4	64.4	64.2	63.9	63.6	63.2	58.1	66.0	67.7	66.2	65.7	63.4	65.2
7	64.3	60.8	58.0	<40	56.7	56.4	56.8	57.1	56.4	48.5	<40	<40	<40	<40	<40	43.4	44.5	<40	<40	46.2	47.3	65.5	64.4	64.3	63.9	63.6	63.3	58.2	66.1	67.8	66.3	65.8	63.5	65.3
6	64.4	60.8	58.1	<40	56.8	56.4	56.8	57.0	56.5	48.5	<40	<40	<40	<40	<40	43.4	44.6	<40	<40	46.2	47.4	65.5	64.4	64.3	64.0	63.7	63.3	58.2	66.1	67.9	66.4	65.9	63.6	65.3
5	64.4	60.9	58.1	<40	56.9	56.4	56.8	57.1	56.5	48.5	<40	<40	<40	<40	<40	43.4	44.6	<40	<40	46.3	47.4	65.5	64.5	64.3	64.0	63.7	63.3	58.2	66.2	68.0	66.5	66.0	63.7	65.4
4	64.5	61.0	58.2	<40	56.9	56.5	56.8	57.1	56.4	48.5	<40	<40	<40	<40	<40	43.1	44.5	<40	<40	46.3	47.5	65.5	64.5	64.3	64.0	63.7	63.4	58.3	66.3	68.1	66.6	66.1	63.7	65.5
3	64.6	61.0	58.3	<40	57.0	56.6	56.8	57.1	56.5	48.5	<40	<40	<40	<40	<40	42.7	44.1	<40	<40	46.2	47.5	65.5	64.5	64.4	64.1	63.8	63.4	58.3	66.3	68.1	66.7	66.2	63.8	65.6
2	64.6	61.1	58.3	<40	57.0	56.6	56.8	57.1	56.3	48.5	<40	<40	<40	<40	<40	41.9	43.6	<40	<40	46.1	47.5	65.5	64.5	64.4	64.1	63.8	63.4	58.3	66.4	68.2	66.8	66.2	63.9	65.6
1	64.7	61.1	58.3	<40	56.9								<40	<40	<40	41.4	43.2	<40	<40	45.5	47.2	65.5	64.5	64.3	64.0	63.7	63.4	58.3	66.4	68.3	66.9	66.3	63.9	65.7
Max	64.7	61.1	58.3	<40	57.0	56.6	56.8	57.1	56.5	49.5	<40	<40	<40	<40	<40	43.4	44.6	<40	<40	46.3	49.9	65.5	64.5	64.4	64.1	63.8	63.4	58.3	66.4	68.3	66.9	66.3	63.9	65.7
Min	62.3	59.1	56.1	<40	54.8	54.5	55.3	55.6	55.8	48.2	<40	<40	<40	<40	<40	41.4	43.2	<40	<40	45.0	47.2	64.4	63.2	63.1	62.7	62.4	62.1	56.9	64.3	65.4	63.6	63.3	61.2	62.9

Noise sensitive receivers with exceedance (≥70.5 dB(A))

Floor	R235 max	R236 max	R237 max	R238 max	R301 max	R302 max	R303 max	R304 max	R305 max	R306 max	R307 max	R308 max	R309 max	R310 max	R311 max	R312 max	R313 max	R314 max	R315 max	R316max	R317 max	R318 max	R319 max	R320 max	R321 max	R322 max	R323 max	R324 max	R325 max	R326 max	R327 max	R328 max	R329 max	R330 max
40																																		
39																																		
38																																		
37	62.7	63.4	62.3	65.1	66.9	63.5	64.4	65.0	65.5	66.6	63.5	62.4	61.9	62.2	62.5	63.0	63.3	64.0	64.3	65.1	60.6	59.1	57.9	57.4	57.0	56.7	56.7	56.5	57.4	57.2	56.3	56.4	58.1	58.5
36	62.8	63.5	62.4	65.2	67.0	63.5	64.5	65.1	65.6	66.7	63.6	62.5	62.0	62.3	62.6	63.1	63.4	64.1	64.4	65.2	60.6	59.2	58.0	57.5	57.1	56.7	56.8	56.6	57.5	57.2	56.3	56.4	58.1	58.5
35	62.9	63.6	62.5	65.3	67.1	63.6	64.5	65.2	65.7	66.8	63.7	62.6	62.1	62.4	62.7	63.2	63.5	64.1	64.4	65.2	60.7	59.2	58.1	57.5	57.2	56.8	56.9	56.5	57.5	57.3	56.4	56.5	58.2	58.6
34	62.9	63.6	62.5	65.3	67.1	63.7	64.6	65.3	65.7	66.8	63.8	62.7	62.2	62.5	62.8	63.3	63.5	64.2	64.5	65.3	60.8	59.3	58.2	57.0	56.7	56.5	56.6	56.5	57.5	57.3	56.5	56.5	58.3	58.6
33	63.0	63.7	62.6	65.4	67.2	63.8	64.7	65.3	65.8	66.9	63.9	62.8	62.3	62.6	62.9	63.3	63.6	64.3	64.6	65.4	60.7	59.1	58.3	57.1	56.8	56.6	56.7	56.6	57.6	57.4	56.5	56.6	58.3	58.7
32	63.1	63.8	62.7	65.5	67.3	63.9	64.8	65.4	65.8	67.0	64.0	62.9	62.4	62.7	62.9	63.4	63.7	64.3	64.7	65.5	60.8	59.2	58.4	57.2	56.9	56.7	56.8	56.7	57.7	57.5	56.6	56.7	58.3	58.7
31	63.2	63.8	62.7	65.6	67.3	63.9	64.9	65.4	65.9	67.0	64.1	63.0	62.5	62.8	63.0	63.5	63.8	64.4	64.7	65.6	60.9	59.3	58.5	57.3	57.0	56.8	56.9	56.8	57.8	57.5	56.7	56.7	58.4	58.7
30	63.2	63.9	62.8	65.6	67.4	64.0	65.0	65.5	66.0	67.1	64.2	63.1	62.6	62.9	63.1	63.6	63.8	64.5	64.8	65.7	61.0	59.4	58.6	57.4	57.1	56.9	56.9	56.9	57.8	57.5	56.7	56.8	58.4	58.8
29	63.3	64.0	62.9	65.7	67.5	64.1	65.0	65.6	66.1	67.2	64.3	63.2	62.7	63.0	63.2	63.6	63.9	64.6	64.9	65.7	61.1	59.6	58.7	57.5	57.2	57.0	57.0	56.9	57.9	57.6	56.8	56.9	58.4	58.8
28	63.4	64.1	63.0	65.8	67.6	64.2	65.1	65.6	66.1	67.3	64.4	63.3	62.8	63.1	63.3	63.7	64.0	64.6	65.0	65.8	61.2	59.6	58.8	57.6	57.3	57.0	57.1	57.0	58.0	57.6	56.8	56.9	58.4	58.8
27	63.4	64.1	63.0	65.9	67.6	64.3	65.2	65.7	66.2	67.4	64.5	63.4	62.9	63.2	63.4	63.8	64.0	64.7	65.1	65.9	61.3	59.8	58.9	57.7	57.4	57.1	57.2	57.1	58.0	57.7	56.8	57.0	58.4	58.7
26	63.5	64.2	63.1	65.9	67.8	64.4	65.3	65.8	66.2	67.4	64.6	63.5	63.0	63.3	63.5	63.8	64.1	64.8	65.2	66.0	61.4	59.9	59.0	57.8	57.5	57.2	57.3	57.2	58.1	57.7	56.9	57.1	58.4	58.7
25	63.6	64.3	63.2	66.0	67.8	64.5	65.4	65.8	66.3	67.5	64.8	63.6	63.1	63.4	63.6	63.9	64.2	64.9	65.3	66.2	61.6	60.0	59.1	57.9	57.6	57.3	57.4	57.3	58.2	57.8	56.9	57.1	58.3	58.8
24	63.7	64.4	63.3	66.1	67.9	64.6	65.5	65.9	66.4	67.6	64.9	63.7	63.2	63.5	63.7	64.0	64.3	65.0	65.4	66.3	61.7	60.1	59.2	58.0	57.7	57.4	57.5	57.4	58.3	57.9	57.0	57.2	58.3	58.8
23	63.8	64.4	63.3	66.2	68.0	64.6	65.6	66.0	66.4	67.7	65.0	63.9	63.3	63.6	63.8	64.1	64.4	65.2	65.5	66.4	61.8	60.2	59.4	58.1	57.8	57.5	57.6	57.5	58.4	57.9	57.1	57.2	58.3	58.8
22	63.9	64.5	63.4	66.3	68.0	64.8	65.7	66.1	66.5	67.8	65.1	64.0	63.4	63.7	63.9	64.2	64.5	65.3	65.7	66.6	61.9	60.4	59.5	58.2	57.9	57.6	57.7	57.6	58.4	57.9	57.1	57.3	58.4	58.7
21	63.9	64.6	63.5	66.4	68.1	64.9	65.8	66.1	66.6	67.9	65.3	64.1	63.6	63.9	64.0	64.3	64.6	65.4	65.8	66.7	62.0	60.5	59.6	58.4	58.0	57.8	57.8	57.7	58.5	57.9	57.2	57.4	58.3	58.7
20	64.0	64.7	63.6	66.4	68.2	65.0	65.9	66.2	66.7	68.0	65.4	64.3	63.7	64.0	64.1	64.4	64.8	65.5	65.9	66.8	62.1	60.6	59.7	58.5	58.1	57.9	57.9	57.8	58.6	58.0	57.2	57.4	58.3	58.7
19	64.1	64.8	63.7	66.5	68.3	65.1	66.0	66.3	66.8	68.1	65.5	64.4	63.8	64.1	64.2	64.5	64.9	65.6	66.0	66.9	62.3	60.7	59.9	58.6	58.2	58.0	58.0	57.9	58.6	58.0	57.2	57.4	58.3	58.8
18	64.2	64.8	63.7	66.6	68.4	65.2	66.1	66.5	66.9	68.2	65.7	64.5	63.9	64.2	64.3	64.7	65.0	65.8	66.1	67.1	62.4	60.9	60.0	58.7	58.3	58.1	58.1	58.0	58.7	58.0	57.3	57.5	58.3	58.8
17	64.3	64.9	63.8	66.7	68.5	65.3	66.2	66.5	67.0	68.3	65.8	64.7	64.1	64.3	64.5	64.8	65.1	65.9	66.3	67.2	62.6	60.9	60.1	58.8	58.5	58.2	58.2	58.1	58.8	57.9	57.2	57.4	58.3	58.8
16	64.4	65.0	63.9	66.8	68.6	65.4	66.3	66.6	67.1	68.4	66.0	64.8	64.2	64.4	64.6	65.0	65.3	66.0	66.4	67.4	62.7	61.1	60.3	59.0	58.6	58.3	58.4	58.2	58.8	57.8	57.2	57.5	58.3	58.9
15	64.4	65.1	64.0	66.9	68.8	65.5	66.4	66.7	67.2	68.5	66.1	65.0	64.4	64.5	64.7	65.0	65.4	66.2	66.6	67.5	62.9	61.2	60.4	59.1	58.7	58.4	58.5	58.3	58.9	57.8	57.0	57.5	58.4	58.9
14	64.5	65.1	64.1	67.0	68.9	65.6	66.5	66.8	67.3	68.6	66.3	65.1	64.5	64.7	64.9	65.2	65.6	66.3	66.8	67.7	63.1	61.4	60.5	59.2	58.8	58.5	58.6	58.4	59.0	57.6	56.9	57.3	58.4	58.9
13	64.6	65.2	64.2	67.1	69.0	65.7	66.6	66.9	67.4	68.7	66.5	65.2	64.7	64.8	65.0	65.3	65.7	66.5	66.9	67.9	63.2	61.5	60.7	59.4	59.0	58.6	58.7	58.5	59.1	57.4	56.8	57.1	58.4	59.0
12	64.7	65.3	64.2	67.2	69.1	65.8	66.7	67.0	67.4	68.8	66.7	65.4	64.8	65.0	65.1	65.5	65.8	66.6	67.1	68.1	63.4	61.7	60.8	59.5	59.1	58.8	58.8	58.6	59.1	57.2	56.4	56.8	58.4	59.1
11	64.7	65.4	64.3	67.2	69.2	65.9	66.7	67.0	67.5	68.9	66.9	65.6	65.0	65.1	65.2	65.6	66.0	66.8	67.3	68.2	63.6	61.9	61.0	59.6	59.2	58.9	58.8	58.6	59.2	56.7	56.0	56.6	58.4	59.1
10	64.8	65.5	64.4	67.3	69.4	65.9	66.8	67.1	67.6	69.1	67.1	65.7	65.1	65.3	65.3	65.7	66.1	67.0	67.4	68.4	63.8	62.0	61.2	59.8	59.4	58.9	59.0	58.7	59.2	55.9	55.0	55.9	58.3	59.0
9	64.9	65.5	64.5	67.4	69.4	66.0	67.0	67.2	67.7	69.2	67.3	65.9	65.3	65.4	65.5	65.9	66.3	67.2	67.6	68.6	64.0	62.2	61.2	59.9	59.5	59.0	59.0	58.8	59.2	54.9	53.6	54.9	58.0	59.0
8	65.0	65.6	64.6	67.5	69.6	66.1	67.0	67.3	67.9	69.4	67.5	66.1	65.5	65.5	65.6	66.1	66.4	67.3	67.8	68.9	64.1	62.4	61.4	60.0	59.6	59.1	59.2	58.9	59.3	54.1	51.9	53.1	57.7	58.9
7	65.1	65.7	64.6	67.6	69.7	66.2	67.1	67.5	68.0	69.5	67.7	66.3	65.6	65.6	65.7	66.1	66.6	67.5	68.0	69.1	64.3	62.5	61.6	60.2	59.7	59.2	59.2	58.9	59.3	53.2	50.3	51.8	57.0	58.7
6	65.1	65.8	64.7	67.7	69.8	66.3	67.2	67.6	68.1	69.7	67.9	66.5	65.7	65.7	65.8	66.3	66.7	67.7	68.2	69.4	64.5	62.7	61.7	60.3	59.8	59.2	59.3	59.0	59.3	52.6	48.8	49.8	55.6	58.4
5	65.2	65.8	64.8	67.8	69.9	66.4	67.3	67.7	68.3	69.9	68.2	66.7	65.9	65.8	65.9	66.4	66.8	67.9	68.4	69.6	64.7	62.9	61.9	60.4	59.9	59.3	59.3	59.1	59.4	52.2	47.6	48.4	53.9	57.7
4	65.3	65.9	64.9	67.8	70.1	66.5	67.4	67.8	68.4	70.0	68.4	66.8	65.9	65.9	66.1	66.5	67.0	68.0	68.6	69.9	65.0	63.1	62.1	60.4	59.9	59.3	59.4	59.2	59.5	51.9	46.4	47.1	52.3	56.5
3	65.4	66.0	64.9	67.9	70.3	66.6	67.5	67.8	68.5	70.2	68.7	67.0	66.0	66.0	66.2	66.7	67.1	68.2	68.9	70.1	65.2	63.3	62.3	60.5	60.0	59.4	59.5	59.3	59.5	51.7	45.3	46.0	51.1	55.1
2	65.4	66.0	65.0	68.0	70.4	66.7	67.6	67.8	68.5	70.3	68.9	67.1	66.1	66.2	66.3	66.9	67.3	68.4	69.1	**70.5**	65.4	63.4	62.3	60.5	60.1	59.5	59.5	59.4	59.3	51.5	44.5	44.9	50.3	53.8
1	65.5	66.1	65.1	68.1	**70.5**	66.8	67.7	67.8	68.5	**70.5**	69.2	67.1	66.2	66.3	66.5	67.0	67.4	68.6	69.2	**70.8**	65.6	63.6	62.3	60.6	60.2	59.6							49.6	53.1
Max	65.5	66.1	65.1	68.1	**70.5**	66.8	67.7	67.8	68.5	**70.5**	69.2	67.1	66.2	66.3	66.5	67.0	67.4	68.6	69.2	**70.8**	65.6	63.6	62.3	60.6	60.2	59.6	59.5	59.4	59.5	58.0	57.3	57.5	58.4	59.1
Min	62.7	63.4	62.3	65.1	66.9	63.5	64.4	65.0	65.5	66.6	63.5	62.4	61.9	62.2	62.5	63.0	63.3	64.0	64.3	65.1	60.6	59.1	57.9	57.0	56.7	56.5	56.6	56.5	57.4	51.5	44.5	44.9	49.6	53.1

Noise sensitive receivers with exceedance (≥70.5 dB(A))

Floor	R331 max	R332 max	R333 max	R334 max	R401 max	R402 max	R403 max	R404 max	R405 max	R406 max	R407 max	R408 max	R409 max	R410 max	R411 max	R412 max	R413 max	R414 max	R415 max	R416 max	R417 max	R418 max	R419 max	R420 max	R421 max	R422 max	R423 max	R424 max	R425 max	R426 max	R427 max	R428 max	R429 max	R430 max
40																																		
39																																		
38																																		
37	59.0	59.9	61.4	64.2	57.0	57.1	57.0	56.4	56.5	<40	57.1	59.7	62.3	65.5	62.4	63.3	63.4	63.3	61.3	63.9	64.6	65.8	63.1	54.0	59.2	62.3	63.1	63.8	63.9	64.6	53.7	48.3	<40	<40
36	59.1	60.0	61.5	64.2	57.0	57.2	57.0	56.5	56.5	<40	57.2	59.7	62.4	65.6	62.5	63.4	63.4	63.4	61.4	64.0	64.7	65.8	63.1	53.8	59.2	62.4	63.2	63.8	64.0	64.6	53.7	48.3	<40	<40
35	59.1	60.0	61.5	64.3	57.1	57.3	57.0	56.6	56.6	<40	57.3	59.6	62.5	65.6	62.5	63.5	63.5	63.5	61.4	64.1	64.8	65.9	63.2	53.7	59.2	62.4	63.2	63.8	64.0	64.6	53.7	48.3	<40	<40
34	59.2	60.1	61.6	64.4	57.1	57.4	57.1	56.7	56.7	<40	57.4	59.7	62.6	65.7	62.6	63.6	63.6	63.6	61.5	64.2	64.9	66.0	63.2	53.6	59.2	62.4	63.2	63.8	64.0	64.6	53.7	48.3	<40	<40
33	59.2	60.1	61.7	64.5	57.2	57.5	57.2	56.8	56.7	<40	57.5	59.8	62.6	65.8	62.7	63.7	63.7	63.7	61.6	64.3	65.0	66.1	63.3	53.6	59.3	62.5	63.3	63.9	64.1	64.7	53.7	48.3	<40	<40
32	59.3	60.2	61.8	64.5	57.3	57.6	57.3	56.9	56.8	<40	57.5	59.9	62.7	65.9	62.8	63.8	63.8	63.8	61.7	64.4	65.1	66.2	63.4	53.6	59.3	62.5	63.3	63.9	64.1	64.7	53.7	48.3	<40	<40
31	59.3	60.3	61.8	64.6	57.3	57.6	57.4	57.0	56.9	<40	57.6	60.0	62.8	66.0	62.9	63.9	63.9	63.9	61.8	64.5	65.2	66.3	63.4	53.6	59.4	62.5	63.4	64.0	64.1	64.7	53.6	48.3	<40	<40
30	59.4	60.3	61.9	64.6	57.4	57.7	57.5	57.1	57.0	<40	57.7	60.1	62.9	66.1	63.0	64.0	64.0	64.0	61.9	64.6	65.3	66.4	63.5	53.7	59.4	62.6	63.4	64.0	64.2	64.8	53.6	48.3	<40	<40
29	59.4	60.3	61.9	64.7	57.5	57.8	57.5	57.2	57.1	<40	57.8	60.2	63.0	66.2	63.1	64.1	64.1	64.1	62.1	64.7	65.4	66.5	63.6	53.7	59.5	62.6	63.4	64.0	64.2	64.8	53.5	48.3	<40	<40
28	59.4	60.3	62.0	64.8	57.6	57.9	57.6	57.3	57.2	<40	57.9	60.3	63.1	66.3	63.3	64.2	64.2	64.2	62.2	64.9	65.5	66.6	63.7	53.7	59.6	62.7	63.5	64.1	64.2	64.8	53.4	48.2	<40	<40
27	59.4	60.4	62.0	64.9	57.7	58.0	57.7	57.4	57.3	<40	58.0	60.4	63.2	66.4	63.4	64.4	64.3	64.3	62.3	65.0	65.6	66.7	63.8	53.7	59.6	62.7	63.5	64.1	64.3	64.9	53.3	48.2	<40	<40
26	59.4	60.4	62.0	64.9	57.8	58.1	57.8	57.5	57.4	<40	58.1	60.5	63.4	66.5	63.5	64.5	64.4	64.4	62.4	65.1	65.7	66.8	63.9	53.8	59.7	62.8	63.6	64.1	64.3	64.9	53.2	48.1	<40	<40
25	59.4	60.4	62.0	64.9	57.9	58.2	57.9	57.6	57.5	<40	58.3	60.6	63.5	66.7	63.6	64.6	64.5	64.5	62.5	65.2	65.9	67.0	64.0	53.8	59.8	62.8	63.6	64.2	64.4	64.9	53.1	48.0	<40	<40
24	59.4	60.4	62.1	65.0	58.0	58.3	58.0	57.7	57.6	<40	58.4	60.8	63.6	66.8	63.7	64.7	64.6	64.6	62.6	65.3	66.0	67.0	64.1	53.8	59.8	62.9	63.6	64.2	64.4	65.0	53.1	47.9	<40	<40
23	59.4	60.4	62.1	65.1	58.0	58.4	58.1	57.8	57.7	<40	58.5	60.9	63.7	66.9	63.9	64.8	64.8	64.8	62.7	65.5	66.1	67.1	64.2	53.8	59.9	62.9	63.7	64.3	64.4	65.0	53.0	47.9	<40	<40
22	59.4	60.4	62.1	65.2	58.1	58.5	58.2	57.9	57.9	<40	58.6	61.0	63.9	67.1	64.0	64.9	64.9	64.9	62.9	65.6	66.3	67.3	64.4	53.9	60.0	63.0	63.7	64.3	64.5	65.0	52.9	47.9	<40	<40
21	59.4	60.4	62.2	65.2	58.2	58.6	58.3	58.0	58.0	<40	58.7	61.1	64.0	67.2	64.1	65.0	65.0	65.0	63.0	65.7	66.4	67.4	64.5	53.9	60.1	63.0	63.8	64.3	64.5	65.1	52.9	47.8	<40	<40
20	59.5	60.5	62.2	65.3	58.3	58.7	58.4	58.1	58.1	<40	58.9	61.3	64.1	67.3	64.2	65.1	65.1	65.1	63.1	65.9	66.5	67.6	64.6	53.9	60.2	63.1	63.8	64.4	64.6	65.1	52.9	47.8	<40	<40
19	59.5	60.5	62.3	65.4	58.4	58.8	58.6	58.2	58.2	<40	59.0	61.3	64.3	67.4	64.3	65.3	65.3	65.3	63.3	66.0	66.7	67.7	64.7	53.9	60.2	63.1	63.9	64.4	64.6	65.1	52.8	47.8	<40	<40
18	59.5	60.6	62.3	65.5	58.5	58.9	58.7	58.3	58.3	<40	59.1	61.4	64.4	67.6	64.5	65.4	65.4	65.4	63.4	66.2	66.8	67.9	64.8	54.0	60.3	63.2	63.9	64.5	64.6	65.2	52.8	47.8	<40	<40
17	59.6	60.6	62.4	65.5	58.6	59.0	58.8	58.5	58.5	<40	59.3	61.6	64.5	67.7	64.6	65.6	65.6	65.6	63.5	66.3	67.0	68.0	65.0	54.0	60.4	63.2	64.0	64.5	64.7	65.2	52.9	47.8	<40	<40
16	59.6	60.7	62.5	65.7	58.7	59.1	58.9	58.6	58.6	<40	59.4	61.7	64.6	67.9	64.8	65.7	65.7	65.7	63.7	66.5	67.2	68.2	65.1	54.0	60.5	63.3	64.0	64.6	64.7	65.3	52.8	47.8	<40	<40
15	59.7	60.7	62.5	65.8	58.8	59.3	59.0	58.7	58.7	<40	59.6	61.9	64.8	68.1	65.0	65.9	65.9	65.9	63.8	66.6	67.3	68.3	65.2	54.0	60.6	63.4	64.1	64.6	64.8	65.3	52.8	47.9	<40	<40
14	59.7	60.8	62.6	65.9	58.8	59.4	59.1	58.8	58.8	<40	59.7	62.1	65.0	68.2	65.1	66.1	66.0	66.0	64.0	66.8	67.5	68.5	65.4	54.1	60.7	63.4	64.1	64.6	64.8	65.3	52.9	47.8	<40	<40
13	59.8	60.9	62.7	65.9	58.9	59.5	59.2	59.0	59.0	<40	59.9	62.2	65.1	68.4	65.3	66.2	66.2	66.2	64.2	67.0	67.7	68.6	65.6	54.1	60.7	63.5	64.2	64.7	64.9	65.4	52.9	47.8	<40	<40
12	59.9	61.0	62.8	66.1	59.0	59.6	59.3	59.1	59.1	<40	60.0	62.4	65.3	68.6	65.5	66.4	66.3	66.3	64.3	67.2	67.9	68.8	65.7	54.1	60.8	63.5	64.2	64.7	64.9	65.4	52.9	47.9	<40	<40
11	60.0	61.0	62.9	66.2	59.0	59.7	59.5	59.2	59.3	<40	60.1	62.6	65.5	68.8	65.7	66.6	66.5	66.5	64.5	67.4	68.1	69.0	65.8	54.1	61.0	63.6	64.3	64.8	64.9	65.4	53.0	47.9	<40	<40
10	60.0	61.1	63.0	66.3	59.0	59.8	59.5	59.4	59.4	<40	60.3	62.7	65.7	69.0	65.9	66.8	66.7	66.7	64.7	67.6	68.3	69.2	66.0	54.2	61.0	63.7	64.4	64.8	65.0	65.4	53.0	47.9	<40	<40
9	60.1	61.2	63.1	66.4	59.0	59.8	59.6	59.5	59.5	<40	60.4	62.9	65.9	69.2	66.1	67.0	66.9	66.9	64.9	67.8	68.5	69.5	66.2	54.2	61.1	63.7	64.4	64.9	65.0	65.5	52.9	47.9	<40	<40
8	60.1	61.3	63.2	66.5	58.9	59.9	59.6	59.5	59.7	<40	60.6	63.0	66.1	69.4	66.3	67.2	67.1	67.1	65.0	68.0	68.8	69.7	66.4	54.2	61.2	63.8	64.4	64.9	65.0	65.5	53.0	48.0	<40	<40
7	60.1	61.3	63.3	66.6	58.7	59.9	59.6	59.6	59.8	<40	60.8	63.2	66.2	69.6	66.5	67.4	67.2	67.2	65.2	68.2	69.0	69.9	66.5	54.2	61.4	63.8	64.5	64.9	65.1	65.5	53.0	48.0	<40	<40
6	60.0	61.3	63.4	66.7	58.7	59.7	59.5	59.7	60.0	<40	60.9	63.4	66.4	69.9	66.7	67.7	67.4	67.4	65.4	68.4	69.3	70.1	66.8	54.3	61.5	63.9	64.5	65.0	65.1	65.5	53.0	48.0	<40	<40
5	59.7	61.2	63.5	66.9	58.7	59.5	59.4	59.8	60.0	<40	61.1	63.6	66.7	70.2	66.9	67.9	67.6	67.6	65.6	68.7	69.5	70.4	67.0	54.3	61.6	63.9	64.6	65.0	65.2	65.5	53.0	48.0	<40	<40
4	59.4	61.0	63.5	67.0	58.8	59.5	59.2	59.8	60.1	<40	61.3	63.8	66.9	**70.5**	67.2	68.1	67.8	67.8	65.8	68.9	69.8	**70.7**	67.2	54.3	61.7	64.0	64.6	65.0	65.2	65.6	53.1	48.0	<40	<40
3	58.4	60.5	63.3	67.0	58.8	59.5	59.2	59.4	59.9	<40	61.5	64.0	67.1	**70.8**	67.5	68.4	68.1	68.1	66.0	69.2	70.1	**71.0**	67.4	54.3	61.8	64.0	64.7	65.0	65.2	65.6	53.1	48.1	<40	<40
2	56.6	59.2	62.8	66.9	58.8	59.5	59.2	59.1	59.5	<40	61.7	64.2	67.3	**71.1**	67.8	68.6	68.3	68.3	66.2	69.5	70.3	**71.4**	67.7	54.4	62.0	64.1	64.7	65.1	65.2	65.6	53.1	48.1	<40	<40
1	55.2	57.4	61.6	66.5					59.2	<40	61.7	64.3	67.6	**71.4**	68.1	68.9	68.5	68.5	66.5	69.8	**70.7**	**71.6**	67.9	54.4	62.1	64.1	64.7	65.0	65.2	65.6	53.1	48.0	<40	<40
Max	60.1	61.3	63.5	67.0	59.0	59.9	59.6	59.8	60.1	<40	61.7	64.3	67.6	**71.4**	68.1	68.9	68.5	68.5	66.5	69.8	**70.7**	**71.6**	67.9	54.4	62.1	64.1	64.7	65.1	65.2	65.6	53.7	48.3	<40	<40
Min	55.2	57.4	61.4	64.2	57.0	57.1	57.0	56.4	56.5	<40	57.1	59.6	62.3	65.5	62.4	63.3	63.4	63.3	61.3	63.9	64.6	65.8	63.1	53.6	59.2	62.3	63.1	63.8	63.9	64.6	52.8	47.8	<40	<40

Noise sensitive receivers with exceedance (≥70.5 dB(A))

Floor	R431 max	R432 max	R433 max	R434 max	R435 max	R436 max	R437 max	R438 max	R501 max	R502 max	R503 max	R504 max	R505 max	R506 max	R507 max	R508 max	R509 max	R510 max	R511 max	R512 max	R513 max	R514 max	R515 max	R516 max	R517 max	R518 max	R519 max	R520 max	R521 max	R522 max	R523 max	R524 max
40									56.8	56.5	56.4	56.0	55.9	<40	55.8	58.6	61.9	65.8	63.4	64.2	64.4	64.9	61.5	65.5	65.9	66.6	67.0	63.9	64.7	64.8	65.1	65.6
39									56.8	56.6	56.4	55.9	55.6	<40	55.8	58.7	62.0	65.9	63.5	64.3	64.5	65.0	61.6	65.5	66.0	66.7	67.1	64.0	64.7	64.9	65.1	65.7
38									56.9	56.7	56.4	56.0	55.7	<40	55.6	58.7	62.0	66.0	63.5	64.3	64.6	65.1	61.7	65.6	66.1	66.8	67.1	64.1	64.8	65.0	65.2	65.8
37	43.2	47.8	55.6	57.7	59.1	58.2	57.4	55.6	56.9	56.8	56.5	56.1	55.8	<40	55.7	58.8	62.1	66.1	63.6	64.4	64.7	65.1	61.8	65.7	66.2	66.9	67.2	64.1	64.9	65.1	65.3	65.9
36	43.2	47.8	55.7	57.8	59.1	58.2	57.4	55.7	57.0	56.9	56.6	56.2	55.9	<40	55.8	59.0	62.2	66.2	63.7	64.5	64.8	65.2	61.9	65.8	66.3	67.0	67.3	64.2	65.0	65.2	65.4	66.0
35	43.2	47.9	55.7	57.8	59.1	58.2	57.4	55.7	57.1	57.0	56.7	56.3	56.0	<40	55.9	59.1	62.3	66.2	63.7	64.5	64.9	65.2	62.0	65.9	66.3	67.1	67.4	64.3	65.1	65.2	65.5	66.1
34	43.3	47.9	55.7	57.8	59.1	58.2	57.4	55.7	57.2	57.1	56.8	56.4	56.1	<40	56.0	59.2	62.3	66.3	63.8	64.6	65.0	65.3	62.1	65.9	66.4	67.2	67.5	64.4	65.2	65.3	65.6	66.2
33	43.3	48.0	55.8	57.8	59.2	58.3	57.4	55.7	57.3	57.1	56.9	56.5	56.2	<40	56.1	59.3	62.4	66.4	64.0	64.7	65.0	65.3	62.2	66.0	66.6	67.3	67.6	64.5	65.2	65.4	65.7	66.3
32	43.3	48.0	55.8	57.9	59.2	58.3	57.5	55.8	57.3	57.2	57.0	56.6	56.3	<40	56.2	59.4	62.5	66.5	64.0	64.8	65.1	65.3	62.3	66.1	66.7	67.4	67.7	64.6	65.4	65.5	65.7	66.4
31	43.4	48.0	55.8	57.9	59.2	58.3	57.5	55.8	57.4	57.3	57.1	56.7	56.4	<40	56.3	59.5	62.7	66.7	64.1	64.9	65.2	65.4	62.4	66.2	66.7	67.5	67.8	64.7	65.5	65.6	65.8	66.5
30	43.4	48.1	55.8	57.9	59.2	58.3	57.5	55.8	57.5	57.4	57.2	56.8	56.5	<40	56.4	59.6	62.8	66.7	64.2	65.0	65.4	65.5	62.6	66.3	66.9	67.6	67.9	64.8	65.6	65.7	66.0	66.6
29	43.4	48.1	55.8	57.9	59.3	58.3	57.5	55.8	57.6	57.5	57.3	56.9	56.6	<40	56.5	59.7	62.9	66.8	64.3	65.1	65.5	65.6	62.7	66.4	67.0	67.8	68.0	64.9	65.6	65.8	66.1	66.7
28	43.5	48.1	55.9	57.9	59.3	58.4	57.6	55.9	57.7	57.6	57.4	57.0	56.7	<40	56.7	59.8	63.0	67.0	64.5	65.2	65.5	65.7	62.8	66.5	67.1	67.9	68.2	65.0	65.8	65.9	66.2	66.8
27	43.5	48.2	55.9	58.0	59.3	58.4	57.6	55.9	57.8	57.7	57.5	57.1	56.8	<40	56.7	59.9	63.2	67.1	64.5	65.3	65.6	65.8	62.9	66.6	67.2	68.0	68.3	65.1	65.9	66.0	66.3	66.9
26	43.5	48.2	55.9	58.0	59.3	58.4	57.6	55.9	57.9	57.8	57.6	57.2	56.9	<40	56.8	60.0	63.3	67.2	64.7	65.4	65.7	65.8	63.0	66.8	67.4	68.2	68.4	65.2	66.0	66.1	66.4	67.0
25	43.6	48.2	55.9	58.0	59.3	58.4	57.6	55.9	57.9	57.9	57.7	57.3	57.0	<40	56.9	60.2	63.4	67.3	64.8	65.5	65.8	66.0	63.2	66.9	67.5	68.3	68.5	65.3	66.1	66.3	66.5	67.2
24	43.6	48.3	56.0	58.0	59.4	58.5	57.7	55.9	58.0	58.0	57.8	57.4	57.1	<40	57.1	60.3	63.6	67.4	64.9	65.7	65.9	66.1	63.3	67.1	67.6	68.4	68.7	65.4	66.2	66.3	66.6	67.3
23	43.6	48.3	56.0	58.1	59.4	58.5	57.7	56.0	58.0	58.1	57.9	57.5	57.3	<40	57.2	60.4	63.6	67.6	65.0	65.8	66.0	66.1	63.4	67.2	67.8	68.6	68.8	65.5	66.4	66.5	66.8	67.4
22	43.7	48.3	56.0	58.1	59.4	58.5	57.7	56.0	58.1	58.2	58.0	57.6	57.4	<40	57.3	60.6	63.8	67.8	65.1	65.9	66.2	66.3	63.6	67.3	67.9	68.7	69.0	65.6	66.5	66.6	66.9	67.5
21	43.7	48.4	56.0	58.1	59.4	58.5	57.7	56.0	58.2	58.3	58.1	57.7	57.5	<40	57.5	60.7	63.9	67.9	65.3	66.0	66.3	66.4	63.7	67.5	68.1	68.9	69.1	65.7	66.6	66.8	67.0	67.7
20	43.7	48.4	56.0	58.1	59.4	58.5	57.7	56.1	58.3	58.4	58.2	57.8	57.6	<40	57.6	60.8	64.1	68.1	65.5	66.2	66.4	66.5	63.9	67.6	68.2	69.1	69.2	65.9	66.7	66.9	67.2	67.8
19	43.7	48.4	56.1	58.1	59.5	58.5	57.7	56.1	58.4	58.5	58.3	57.9	57.8	<40	57.8	60.9	64.3	68.3	65.6	66.4	66.5	66.6	64.0	67.7	68.4	69.2	69.4	66.0	66.9	67.0	67.3	68.0
18	43.8	48.5	56.1	58.1	59.5	58.6	57.8	56.1	58.5	58.6	58.4	58.1	57.9	<40	57.9	61.1	64.4	68.4	65.7	66.5	66.7	66.8	64.2	67.9	68.5	69.4	69.6	66.2	67.0	67.2	67.5	68.1
17	43.8	48.5	56.1	58.2	59.5	58.6	57.8	56.1	58.6	58.7	58.6	58.2	58.0	<40	58.1	61.3	64.6	68.6	65.9	66.6	66.8	66.9	64.3	68.0	68.7	69.6	69.7	66.3	67.2	67.3	67.6	68.3
16	43.8	48.5	56.1	58.2	59.5	58.6	57.8	56.1	58.7	58.8	58.7	58.3	58.1	<40	58.2	61.4	64.8	68.8	66.1	66.8	67.0	67.1	64.5	68.1	68.9	69.8	69.9	66.4	67.3	67.5	67.7	68.4
15	43.9	48.6	56.1	58.2	59.5	58.6	57.8	56.2	58.8	58.9	58.8	58.4	58.3	<40	58.4	61.6	65.0	69.0	66.2	67.0	67.2	67.2	64.6	68.3	69.1	70.0	70.1	66.6	67.5	67.6	67.9	68.6
14	43.9	48.6	56.2	58.2	59.5	58.6	57.8	56.2	58.8	59.0	58.9	58.5	58.4	<40	58.5	61.8	65.1	69.2	66.4	67.2	67.3	67.4	64.8	68.5	69.2	70.2	70.3	66.7	67.6	67.8	68.1	68.7
13	43.9	48.6	56.2	58.2	59.6	58.6	57.9	56.2	58.9	59.2	59.0	58.7	58.5	<40	58.6	61.9	65.3	69.4	66.6	67.4	67.5	67.6	65.0	68.7	69.4	70.4	**70.5**	66.9	67.8	68.0	68.2	69.0
12	43.9	48.6	56.2	58.2	59.6	58.6	57.9	56.2	59.0	59.3	59.1	58.8	58.7	<40	58.8	62.1	65.5	69.6	66.7	67.5	67.6	67.7	65.1	68.8	69.7	**70.6**	**70.8**	67.0	68.0	68.1	68.4	69.2
11	44.0	48.7	56.2	58.2	59.6	58.6	57.9	56.2	59.1	59.3	59.2	58.9	58.8	<40	58.9	62.2	65.7	69.8	67.0	67.7	67.7	67.9	65.3	69.0	69.8	**70.8**	**70.9**	67.2	68.2	68.3	68.6	69.4
10	44.0	48.7	56.2	58.2	59.6	58.6	57.9	56.2	59.2	59.4	59.3	59.0	58.9	<40	59.1	62.4	65.9	70.1	67.2	67.9	67.9	68.0	65.5	69.2	70.0	**71.0**	**71.2**	67.4	68.4	68.5	68.8	69.5
9	44.0	48.7	56.2	58.2	59.5	58.6	57.9	56.2	59.2	59.5	59.4	59.1	59.1	<40	59.2	62.6	66.1	70.3	67.4	68.0	68.1	68.2	65.7	69.4	70.3	**71.3**	**71.4**	67.6	68.6	68.7	69.0	69.8
8	44.0	48.7	56.2	58.2	59.5	58.6	57.9	56.2	59.3	59.6	59.5	59.2	59.2	<40	59.4	62.8	66.3	**70.6**	67.6	68.3	68.3	68.3	65.8	69.7	**70.5**	**71.6**	**71.8**	67.8	68.8	68.9	69.2	70.0
7	44.0	48.7	56.1	58.2	59.5	58.6	57.9	56.3	59.4	59.7	59.6	59.4	59.3	<40	59.6	63.0	66.6	**70.9**	67.8	68.5	68.4	68.5	66.0	69.9	**70.8**	**71.8**	**72.0**	68.0	69.0	69.0	69.4	70.2
6	44.1	48.8	56.1	58.1	59.5	58.6	57.8	56.3	59.4	59.8	59.7	59.5	59.4	<40	59.7	63.2	66.8	**71.2**	68.1	68.7	68.6	68.7	66.2	70.1	**71.0**	**72.0**	**72.4**	68.3	69.3	69.2	69.6	70.4
5	44.1	48.8	56.1	58.1	59.4	58.5	57.8	56.3	59.5	59.9	59.7	59.5	59.5	<40	59.9	63.4	67.0	**71.5**	68.3	68.9	68.7	68.8	66.3	70.3	**71.3**	**72.3**	**72.7**	68.5	69.4	69.4	69.8	**70.7**
4	44.1	48.8	56.1	58.0	59.4	58.4	57.7	56.2	59.5	59.9	59.8	59.6	59.6	<40	60.0	63.5	67.2	**71.9**	68.5	69.1	68.8	69.0	66.5	**70.5**	**71.5**	**72.6**	**73.0**	68.8	69.7	69.6	70.0	**70.9**
3	44.1	48.8	56.1	57.9	59.3	58.3	57.6	56.2	59.6	60.0	59.9	59.7	59.7	<40	60.1	63.7	67.3	**72.2**	68.8	69.3	69.0	69.1	66.6	**70.7**	**71.8**	**72.9**	**73.4**	69.0	69.9	69.8	70.2	**71.1**
2	44.0	48.7	56.1	57.8	59.2	58.1	57.4	56.0	59.6	60.0	59.9	59.8	59.8	<40	60.2	63.8	67.5	**72.5**	69.1	69.5	69.1	69.2	66.8	**70.9**	**72.0**	**73.2**	**73.8**	69.3	70.1	69.9	70.3	**71.3**
1	43.9	48.7	56.1	57.7	59.0				59.6	60.1	60.0	59.8	59.8	<40	60.3	63.9	67.7	**72.9**	69.3	69.6	69.2	69.3	66.9	**71.0**						70.1	**70.5**	**71.5**
Max	44.1	48.8	56.2	58.2	59.6	58.6	57.9	56.3	59.6	60.1	60.0	59.8	59.8	<40	60.3	63.9	67.7	**72.9**	69.3	69.6	69.2	69.3	66.9	**71.0**	**72.0**	**73.2**	**73.8**	69.3	70.1	70.1	**70.5**	**71.5**
Min	43.2	47.8	55.6	57.7	59.0	58.1	57.4	55.6	56.8	56.5	56.4	55.9	55.6	<40	55.6	58.6	61.9	65.8	63.4	64.2	64.4	64.9	61.5	65.5	65.9	66.6	67.0	63.9	64.7	64.8	65.1	65.6

Noise sensitive receivers with exceedance (≥70.5 dB(A))

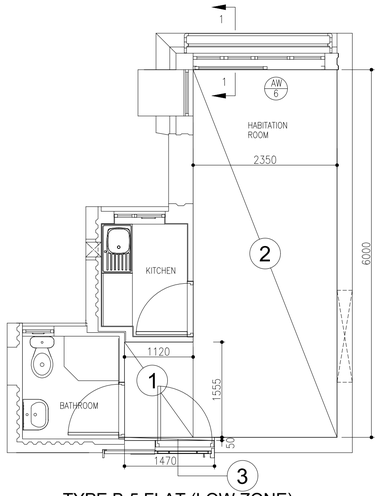
Floor	R525 max	R526 max	R527 max	R528 max	R529 max	R530 max	R531 max	R532 max	R533 max	R534 max	R535 max	R536 max	R537 max	R538m ax
40	65.8	67.2	63.8	61.5	55.4	58.6	60.5	61.8	64.8	65.2	65.4	66.0	66.2	66.7
39	65.9	67.3	63.8	61.5	55.5	58.7	60.5	61.8	64.8	65.2	65.4	66.1	66.2	66.8
38	66.0	67.4	63.9	61.6	55.5	58.7	60.5	61.8	64.9	65.3	65.5	66.1	66.2	66.8
37	66.1	67.5	63.9	61.6	55.5	58.8	60.6	61.9	64.9	65.3	65.5	66.1	66.2	66.8
36	66.2	67.6	64.0	61.6	55.6	58.8	60.6	61.9	64.9	65.3	65.5	66.1	66.3	66.8
35	66.3	67.7	64.0	61.7	55.6	58.8	60.6	61.9	64.9	65.3	65.5	66.1	66.3	66.9
34	66.4	67.8	64.1	61.7	55.7	58.9	60.7	62.0	64.9	65.4	65.6	66.2	66.3	66.9
33	66.4	67.8	64.1	61.8	55.7	58.9	60.7	62.0	65.0	65.4	65.6	66.2	66.3	66.9
32	66.6	67.9	64.2	61.8	55.7	59.0	60.7	62.0	65.0	65.4	65.6	66.2	66.4	66.9
31	66.7	68.0	64.3	61.9	55.8	59.0	60.8	62.0	65.0	65.4	65.6	66.2	66.4	67.0
30	66.8	68.1	64.3	61.9	55.8	59.0	60.8	62.0	65.0	65.4	65.7	66.3	66.4	67.0
29	66.9	68.2	64.4	61.9	55.8	59.1	60.8	62.1	65.1	65.5	65.7	66.3	66.4	67.0
28	67.0	68.3	64.4	62.0	55.9	59.1	60.8	62.0	65.1	65.5	65.7	66.3	66.5	67.1
27	67.1	68.4	64.5	62.0	55.9	59.1	60.8	62.1	65.1	65.5	65.7	66.4	66.5	67.1
26	67.2	68.5	64.5	62.0	55.9	59.1	60.8	62.1	65.1	65.5	65.7	66.4	66.5	67.1
25	67.4	68.6	64.5	62.0	56.0	59.2	60.8	62.1	65.1	65.5	65.8	66.4	66.6	67.1
24	67.5	68.8	64.6	62.0	56.0	59.2	60.8	62.1	65.2	65.6	65.8	66.4	66.6	67.2
23	67.6	68.8	64.6	62.0	56.0	59.2	60.7	62.1	65.2	65.6	65.8	66.5	66.6	67.2
22	67.7	69.0	64.6	62.0	56.1	59.2	60.7	62.1	65.2	65.6	65.9	66.5	66.6	67.2
21	67.9	69.1	64.6	62.0	56.1	59.3	60.7	62.1	65.2	65.7	65.9	66.5	66.7	67.2
20	68.0	69.2	64.7	61.9	56.2	59.3	60.7	62.1	65.2	65.7	65.9	66.5	66.7	67.3
19	68.1	69.4	64.7	61.9	56.2	59.2	60.6	62.1	65.3	65.7	65.9	66.6	66.7	67.3
18	68.3	69.5	64.7	61.8	56.2	59.3	60.6	62.1	65.3	65.7	65.9	66.6	66.8	67.3
17	68.5	69.7	64.7	61.8	56.3	59.3	60.6	62.2	65.3	65.7	66.0	66.6	66.8	67.4
16	68.6	69.8	64.7	61.8	56.3	59.3	60.6	62.2	65.3	65.8	66.0	66.6	66.8	67.4
15	68.8	70.0	64.7	61.7	56.3	59.2	60.6	62.2	65.3	65.8	66.0	66.7	66.8	67.4
14	69.0	70.1	64.7	61.7	56.3	59.2	60.6	62.2	65.4	65.8	66.0	66.7	66.9	67.4
13	69.2	70.3	64.7	61.7	56.4	59.3	60.5	62.2	65.4	65.8	66.1	66.7	66.9	67.5
12	69.3	**70.5**	64.7	61.7	56.4	59.2	60.5	62.2	65.4	65.9	66.1	66.7	66.9	67.5
11	69.5	**70.7**	64.7	61.6	56.4	59.2	60.5	62.2	65.4	65.9	66.1	66.7	66.9	67.5
10	69.8	**70.9**	64.7	61.6	56.4	59.2	60.5	62.2	65.4	65.9	66.1	66.8	66.9	67.5
9	70.0	**71.1**	64.7	61.6	56.4	59.2	60.4	62.2	65.4	65.9	66.1	66.8	66.9	67.5
8	70.2	**71.3**	64.7	61.5	56.5	59.1	60.3	62.1	65.4	65.8	66.1	66.7	66.9	67.5
7	70.4	**71.5**	64.7	61.5	56.5	59.1	60.2	62.1	65.4	65.8	66.1	66.7	66.9	67.5
6	**70.7**	**71.7**	64.7	61.3	56.5	59.2	60.1	62.0	65.3	65.8	66.0	66.7	66.9	67.5
5	**70.9**	**72.0**	64.7	61.2	56.5	59.1	59.9	61.9	65.3	65.8	66.0	66.7	66.8	67.4
4	**71.1**	**72.2**	64.6	61.0	56.5	59.1	59.7	61.8	65.3	65.7	66.0	66.6	66.8	67.4
3	**71.4**	**72.5**	64.5	60.7	56.6	59.1	59.5	61.6	65.2	65.6	65.9	66.5	66.7	67.2
2	**71.6**	**72.8**	64.4	60.4	56.6	59.1	59.4	61.6	65.1	65.5	65.8	66.4	66.5	66.9
1	**71.8**	**73.0**	64.3	60.2	56.6	59.1	59.3	61.5	65.0	65.4	65.6	66.1	66.1	66.3
Max	**71.8**	**73.0**	64.7	62.0	56.6	59.3	60.8	62.2	65.4	65.9	66.1	66.8	66.9	67.5
Min	65.8	67.2	63.8	60.2	55.4	58.6	59.3	61.5	64.8	65.2	65.4	66.0	66.1	66.3

Noise sensitive receivers with exceedance (≥70.5 dB(A))

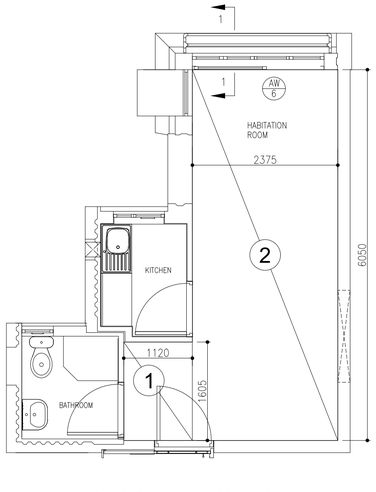
Appendix 4.7

Acoustic Window Configuration

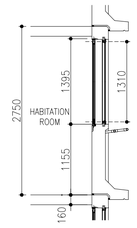
CALCULATION OF GLAZING AREA



TYPE B-5 FLAT (LOW ZONE)
(WITH VPB + VPK)



TYPE B-5 FLAT (HIGH ZONE)
(WITH VPB + VPK)



SECTION 1-1

WINDOW / OPENING (AW-6)

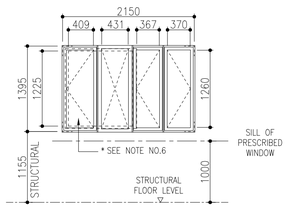
TABLE A (LOW ZONE)

LOCATION	PORTION	AREA (m²)	AREA REQUIRED (m²)			AREA PROVIDED (m²)
HABITATION ROOM	1, 2 & 3 (AW-6)	(1.120x1.555)+ (2.350x6.000) +(1.470x0.050) =15.915	GLAZING	1/10	1.592	1.958
			OPENABLE	1/16	0.995	1.064

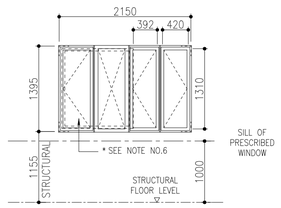
TABLE B (HIGH ZONE)

LOCATION	PORTION	AREA (m²)	AREA REQUIRED (m²)			AREA PROVIDED (m²)
HABITATION ROOM	1 & 2 (AW-6)	(1.120x1.605)+ (2.375x6.050) =16.166	GLAZING	1/10	1.617	1.958
			OPENABLE	1/16	1.010	1.064

CALCULATION OF GLAZING AREA

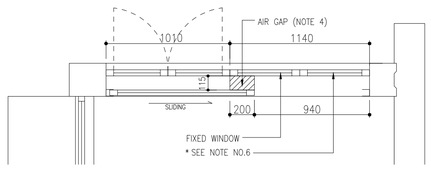


CALCULATION OF OPENABLE AREA



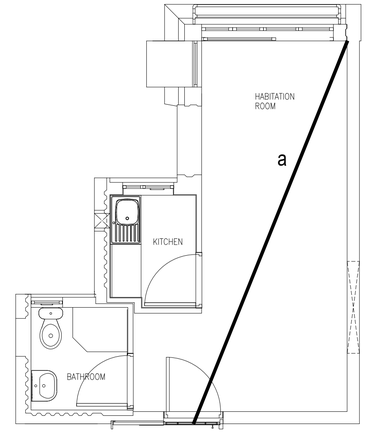
HABITATION ROOM

MARK :	AW-6
GLAZING AREA :	0.409x1.225+0.431x1.225+0.367x1.260+0.370x1.260 = 1.958m²
OPENABLE AREA :	0.392x1.310+0.420x1.310 = 1.064m²



PLAN OF ACOUSTIC WINDOW(AW-6)
SCALE 1:25

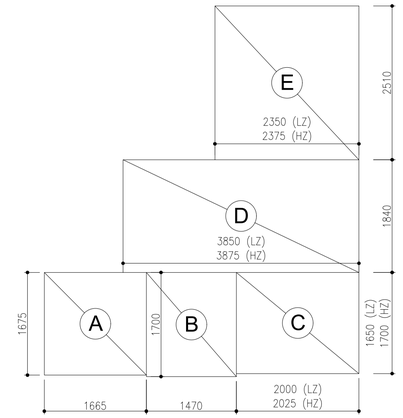
CALCULATION OF DEADEND TRAVEL DISTANCE



DEADEND TRAVEL DISTANCE (UNDER FS CODE 2011)
FOR TYPE B-5 FLAT (HIGH ZONE)
AT A RANGE OF

a = 6.737m ≤ 24m (UNDER FS CODE 2011 CLAUSE B11.2 (a)(i))

CALCULATION OF IFA



TYPE B-5 FLAT		LOW ZONE		HIGH ZONE	
	PORTION	CALCULATION (m)	AREA (m²)	CALCULATION (m)	AREA (m²)
IFA	A	1.665 X 1.675	2.789	1.665 X 1.675	2.789
	B	1.470 X 1.700	2.499	1.470 X 1.700	2.499
	C	2.000 X 1.650	3.300	2.025 X 1.700	3.443
	D	3.850 X 1.840	7.084	3.875 X 1.840	7.130
	E	2.350 X 2.510	5.899	2.375 X 2.510	5.961
		21.571m²		21.822m²	

GENERAL NOTES

1. THIS DRAWING SHOWS THE TRAVEL DISTANCE AND DEADEND TO STAIRCASE FOR TYPE B-5 FLAT(S). ANY OTHER INFORMATION OF FLOOR LAYOUT PLAN SHOULD REFER TO OTHER RELEVANT ICU APPROVED GENERAL BUILDING PLAN (GBP) FOR THIS PROJECT.
2. THIS DRAWING SHOWS THE GLAZING AREA CALCULATION FOR HABITATION ROOMS AT TYPE B-5 FLAT(S). ANY OTHER INFORMATION REGARDING GLAZING AREA CALCULATION FOR KITCHEN AND BATHROOM SHALL REFER TO OTHER RELEVANT APPROVED GBP FOR THIS PROJECT.
3. TYPE B-5 FLAT(S) ARE FLAT NO. (*project basis information*) AT BLOCK (*project basis information*).
4. ACCORDING TO PNAP APP-130, PARA. 6 OF APPENDIX A, THE WIDTH OF AIR GAP IS BETWEEN 100mm TO 175mm, THE LENGTH OF AIR GAP IS NOT LESS THAN 100mm.
5. ALL ELEVATIONS OF WINDOWS ARE VIEWED FROM OUTSIDE.
6. THE FIXED GLAZING IS EQUIPPED WITH SIDE-HUNG OPENABLE WINDOW FOR OPERATION AND MAINTENANCE PURPOSE AND SPECIAL WINDOW OPENING DEVICE (e.g. ALLEN KEY LOCK) WOULD BE PROVIDED. THIS FIXED GLAZING SHALL BE KEPT CLOSE TO ATTAIN THE NOISE PERFORMANCE AS SPECIFIED UNDER ENVIRONMENTAL ASSESSMENT STUDY.
7. THE AIR-CONDITIONERS PLATFORMS SHOULD NOT PROJECT MORE THAN 750mm IN ACCORDANCE WITH PNAP APP-19.

NOTES

LEGEND:

LZ - LOW ZONE (XX/F TO XX/F)
HZ - HIGH ZONE (XX/F TO XX/F)

IFA - INTERNAL FLOOR AREA

FS CODE - CODE OF PRACTICE FOR FIRE SAFETY IN BUILDINGS

ORIGINAL SIGNED

REVISIONS

NO	DESCRIPTION AND DATE	INITIAL AND DESIGNATION DWN	CKD	AUTH

	NAME AND DESIGNATION	INITIAL	DATE
AUTHORISED		ORIGINAL SIGNED	12/2018
CHECKED		ORIGINAL SIGNED	12/2018
		ORIGINAL SIGNED	12/2018
		ORIGINAL SIGNED	12/2018
DRAWN		ORIGINAL SIGNED	12/2018

PROJECT
MODULAR FLAT DESIGN WITH ACOUSTIC WINDOW (VOLUMETRIC PRECAST BATHROOM AND VOLUMETRIC PRECAST KITCHEN OPTION)

DRAWING TITLE
TYPE B-5 FLAT
- CALCULATION OF GLAZING AREA AND DEADEND TRAVEL DISTANCE

SCALE 1:50

DRAWING NO.
MF/AW/VBK/MW/A/ICU801

SOURCE

ICU NO.

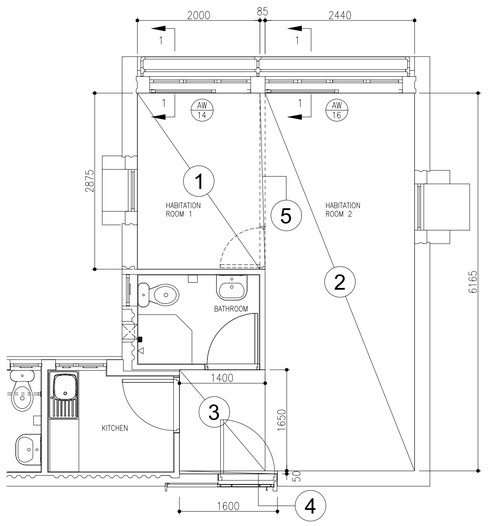
AutoCAD 2000 A1 594 x 841

HOUSING DEPARTMENT

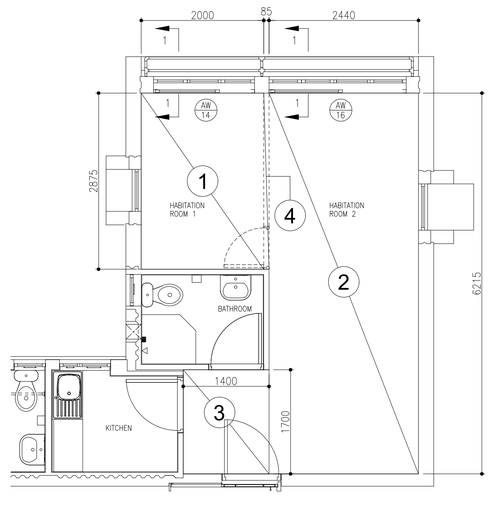
REF :
DATE :

☐ C.E.'s COPY
☐ 's COPY
☐ CON's COPY
☐ R.E.'s COPY
☐ BSE's COPY
☐ BSI's COPY
☐ S.E.'s COPY
☐ Q.S.'s COPY
☐ CONTRACTOR's COPY
☐ OFFICE's COPY

CALCULATION OF GLAZING AREA



TYPE C-7(b) FLAT (LOW ZONE)
(WITH VPB + VPK)



TYPE C-7(b) FLAT (HIGH ZONE)
(WITH VPB + VPK)

GENERAL NOTES

1. THIS DRAWING SHOWS THE TRAVEL DISTANCE AND DEADEND TO STAIRCASE FOR TYPE C-7(b) FLAT(S). ANY OTHER INFORMATION OF FLOOR LAYOUT PLAN SHOULD REFER TO OTHER RELEVANT ICU APPROVED GENERAL BUILDING PLAN (GBP) FOR THIS PROJECT.
2. THIS DRAWING SHOWS THE GLAZING AREA CALCULATION FOR HABITATION ROOMS AT TYPE C-7(b) FLAT(S). ANY OTHER INFORMATION REGARDING GLAZING AREA CALCULATION FOR KITCHEN AND BATHROOM SHALL REFER TO OTHER RELEVANT APPROVED GBP FOR THIS PROJECT.
3. TYPE C-7(b) FLAT(S) ARE FLAT NO. (*project basis information*) AT BLOCK (*project basis information*).
4. ACCORDING TO PNAP APP-130, PARA. 6 OF APPENDIX A, THE WIDTH OF AIR GAP IS BETWEEN 100mm TO 175mm, THE LENGTH OF AIR GAP IS NOT LESS THAN 100mm.
5. THE INTENDED CONSTRUCTION OF NOTIONAL PARTITION(S) CONSISTS OF MAXIMUM 85mm THICK SOLID CONCRETE BLOCK WALL(S) / LIGHTWEIGHT PARTITION(S) (DENSITY NOT MORE THAN 2060 kg/m^3) WITH 15mm THICK CEMENT SAND PLASTER (DENSITY NOT MORE THAN 2300 kg/m^3) ON BOTH FACES (WITH AGGREGATED AVERAGE DENSITY NOT MORE THAN 2125 kg/m^3).
6. ALL ELEVATIONS OF WINDOWS ARE VIEWED FROM OUTSIDE.
7. THE FIXED GLAZING IS EQUIPPED WITH SIDE-HUNG OPENABLE WINDOW FOR OPERATION AND MAINTENANCE PURPOSE AND SPECIAL WINDOW OPENING DEVICE (e.g. ALLEN KEY LOCK) WOULD BE PROVIDED. THIS FIXED GLAZING SHALL BE KEPT CLOSE TO ATTAIN THE NOISE PERFORMANCE AS SPECIFIED UNDER ENVIRONMENTAL ASSESSMENT STUDY.
8. THE AIR-CONDITIONERS PLATFORMS SHOULD NOT PROJECT MORE THAN 750mm IN ACCORDANCE WITH PNAP APP-19.

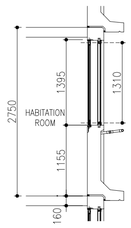
WINDOW / OPENING (AW-14 & AW-16)

TABLE A (LOW ZONE)

LOCATION	PORTION	AREA (m²)	AREA REQUIRED (m²)			AREA PROVIDED (m²)
HABITATION ROOM 1 (WITH NOTIONAL PARTITION)	1 (AW-14)	(2.000x2.875) = 5.750	GLAZING	1/10	0.575	1.478
			OPENABLE	1/16	0.359	0.609
HABITATION ROOM 2 (WITH NOTIONAL PARTITION)	2, 3 & 4 (AW-16)	(2.440x6.165+ 1.400x1.650+ 1.600x0.050) = 17.433	GLAZING	1/10	1.743	2.073
			OPENABLE	1/16	1.090	1.166
HABITATION ROOM 1 & 2 (WITHOUT NOTIONAL PARTITION)	1–5 (AW-14 & AW-16)	(2.000x2.875)+ (2.440x6.165)+ (1.400x1.650)+ (1.600x0.050)+ (0.085x2.875) =23.427	GLAZING	1/10	2.343	(1.478+2.073) =3.551
			OPENABLE	1/16	1.464	(0.609+1.166) =1.775

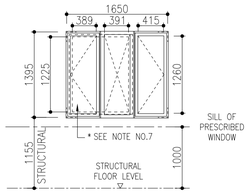
TABLE B (HIGH ZONE)

LOCATION	PORTION	AREA (m²)	AREA REQUIRED (m²)			AREA PROVIDED (m²)
HABITATION ROOM 1 (WITH NOTIONAL PARTITION)	1 (AW-14)	(2.000x2.875) =5.750	GLAZING	1/10	0.575	1.478
			OPENABLE	1/16	0.359	0.609
HABITATION ROOM 2 (WITH NOTIONAL PARTITION)	2 & 3 (AW-16)	(2.440x6.215)+ (1.400x1.700) =17.545	GLAZING	1/10	1.755	2.073
			OPENABLE	1/16	1.097	1.166
HABITATION ROOM 1 & 2 (WITHOUT NOTIONAL PARTITION)	1–4 (AW-14 & AW-16)	(2.000x2.875)+ (2.440x6.215)+ (1.400x1.700)+ (0.085x2.875) =23.539	GLAZING	1/10	2.354	(1.478+2.073) =3.551
			OPENABLE	1/16	1.471	(0.609+1.166) =1.775

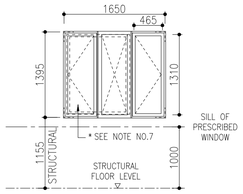


SECTION 1-1

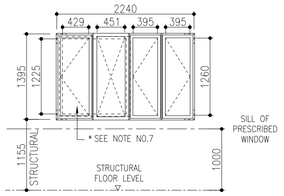
CALCULATION OF GLAZING AREA



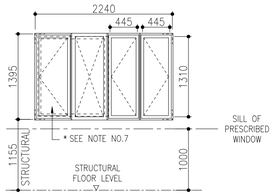
CALCULATION OF OPENABLE AREA



CALCULATION OF GLAZING AREA



CALCULATION OF OPENABLE AREA

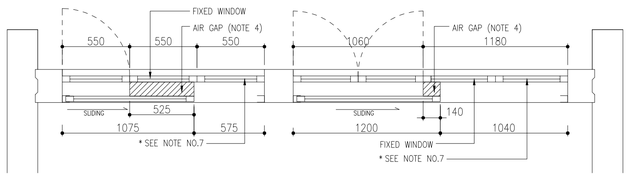


HABITATION ROOM 1

MARK :	AW-14
GLAZING AREA	: 0.415x1.260+0.391x1.225+0.389x1.225 = 1.478m^2
OPENABLE AREA (RESULTANT OPENING)	: 0.465x1.310 = 0.609m^2

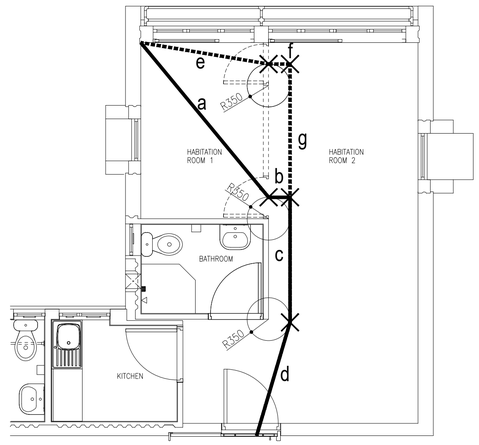
HABITATION ROOM 2

MARK :	AW-16
GLAZING AREA	: 0.429x1.225+0.451x1.225+(0.395x1.260)x2 = 2.073m^2
OPENABLE AREA (RESULTANT OPENING)	: (0.445x1.310)x2 = 1.166m^2



PLAN OF ACOUSTIC WINDOW(AW-14 & AW-16)
SCALE 1:25

CALCULATION OF DEADEND TRAVEL DISTANCE

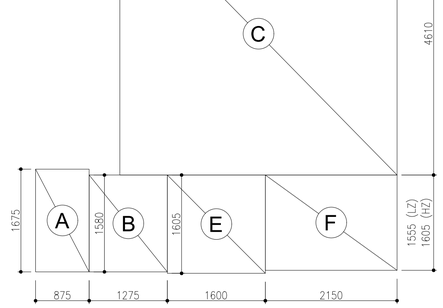


DEADEND TRAVEL DISTANCE (UNDER FS CODE 2011)
FOR TYPE C-7(b) FLAT (HIGH ZONE)
AT A RANGE OF

a + b + c + d =
3.275 + 0.350 + 2.041 + 1.928 = 7.594m
OR
e + f + g + c + d
= 2.114 + 0.350 + 2.175 + 2.041 + 1.928
= 8.608m

} ≤ 24m (UNDER FS CODE 2011 CLAUSE B11.2 (a)(i))

CALCULATION OF IFA



TYPE C-7(b) FLAT		LOW ZONE		HIGH ZONE	
	PORTION	CALCULATION (m)	AREA (m^2)	CALCULATION (m)	AREA (m^2)
IFA	A	0.875 X 1.675	1.466	0.875 X 1.675	1.466
	B	1.275 X 1.580	2.015	1.275 X 1.580	2.015
	C	4.525 X 4.610	20.860	4.525 X 4.610	20.860
	D	1.600 X 1.605	2.568	1.600 X 1.605	2.568
	E	2.150 X 1.555	3.343	2.150 X 1.605	3.451
		30.252m^2		30.360m^2	

CALCULATION OF NOTIONAL PARTITION

	IFA (m²) (A)	THE MAXIMUM AGGREGATE LENGTH OF THE ADDITIONAL BLOCK WALL (m) (A)/10 = (B)	TOTAL ADDITIONAL WALL LENGTH (EXCLUDED 1x700mm WIDTH DOOR) (m)
LOW ZONE	30.252	3.025	(2.875 – 0.700) = 2.175 < (B)
HIGH ZONE	30.360	3.036	(2.875 – 0.700) = 2.175 < (B)

* REFER TO NOTES NO.5

NOTES

LEGEND:

LZ - LOW ZONE (XX/F TO XX/F)
HZ - HIGH ZONE (XX/F TO XX/F)

IFA - INTERNAL FLOOR AREA

FS CODE - CODE OF PRACTICE FOR FIRE SAFETY IN BUILDINGS

ORIGINAL SIGNED

REVISIONS		INITIAL AND DESIGNATION		
NO	DESCRIPTION AND DATE	DWN	CKD	AUTH

	NAME AND DESIGNATION	INITIAL	DATE
AUTHORISED		ORIGINAL SIGNED	12/2018
CHECKED		ORIGINAL SIGNED	12/2018
		ORIGINAL SIGNED	12/2018
		ORIGINAL SIGNED	12/2018
DRAWN		ORIGINAL SIGNED	12/2018

PROJECT
MODULAR FLAT DESIGN WITH ACOUSTIC WINDOW (VOLUMETRIC PRECAST BATHROOM AND VOLUMETRIC PRECAST KITCHEN OPTION)

DRAWING TITLE
TYPE C-7(b) FLAT
CALCULATION OF NOTIONAL PARTITION, GLAZING AREA AND DEADEND TRAVEL DISTANCE

SCALE 1:50

DRAWING NO.
MF/AW/VBK/MW/A/ICU809

SOURCE

ICU NO.

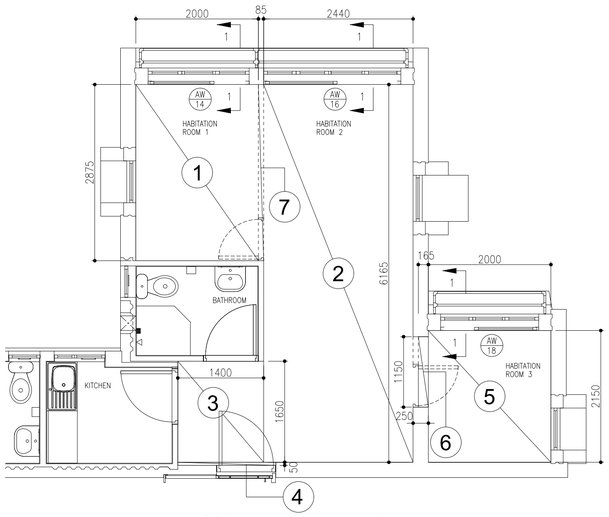
AutoCAD 2000 A1 594 x 841

HOUSING DEPARTMENT

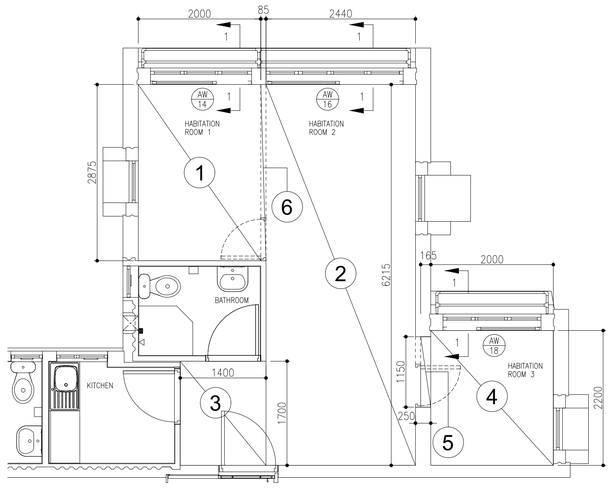
REF : DATE :

☐ C.E.'s COPY ☐ 's COPY
☐ COW's COPY ☐ R.E.'s COPY
☐ BSE's COPY ☐ BSI's COPY
☐ S.E's COPY ☐ QS's COPY
☐ CONTRACTOR's COPY ☐ OFFICE's COPY

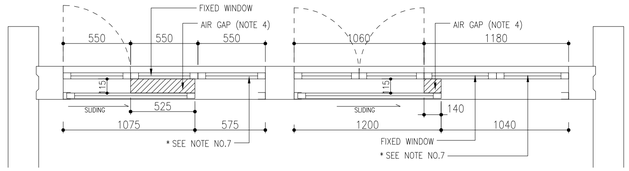
CALCULATION OF GLAZING AREA



TYPE D-7(b) FLAT (LOW ZONE)
(WITH VPB + VPK)



TYPE D-7(b) FLAT (HIGH ZONE)
(WITH VPB + VPK)



PLAN OF ACOUSTIC WINDOW (AW-14 & AW-16)
SCALE 1:25

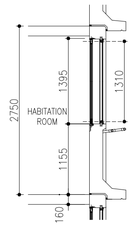
WINDOW / OPENING (AW-14, AW-16 & AW-18)

TABLE A (LOW ZONE)

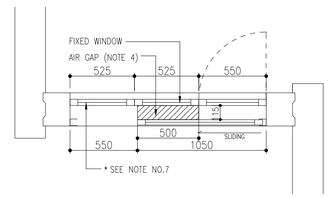
LOCATION	PORTION	AREA (m²)	AREA REQUIRED		(m²)	AREA PROVIDED (m²)
HABITATION ROOM 1 (WITH NOTIONAL PARTITION)	1 (AW-14)	(2.000x2.875) = 5.750	GLAZING	1/10	0.575	1.478
			OPENABLE	1/16	0.359	0.609
HABITATION ROOM 2 (WITH NOTIONAL PARTITION)	2, 3 & 4 (AW-16)	(2.440x6.165+ 1.400x1.650+ 1.600x0.050) = 17.433	GLAZING	1/10	1.743	2.073
			OPENABLE	1/16	1.090	1.166
HABITATION ROOM 3	5 & 6 (AW-18)	(2.000x2.150+ 0.165x1.150) = 4.490	GLAZING	1/10	0.449	1.442
			OPENABLE	1/16	0.281	0.609
HABITATION ROOM 1 & 2 (WITHOUT NOTIONAL PARTITION)	1–4 & 7 (AW-14 & AW-16)	(2.000x2.875)+ (2.440x6.165)+ (1.400x1.650)+ (1.600x0.050)+ (0.085x2.875) =23.427	GLAZING	1/10	2.343	(1.478+2.073) =3.551
			OPENABLE	1/16	1.464	(0.609+1.166) =1.775

TABLE B (HIGH ZONE)

LOCATION	PORTION	AREA (m²)	AREA REQUIRED		(m²)	AREA PROVIDED (m²)
HABITATION ROOM 1 (WITH NOTIONAL PARTITION)	1 (AW-14)	(2.000x2.875) = 5.75	GLAZING	1/10	0.575	1.478
			OPENABLE	1/16	0.359	0.609
HABITATION ROOM 2 (WITH NOTIONAL PARTITION)	2 & 3 (AW-16)	(2.440x6.215+ 1.400x1.700) = 17.545	GLAZING	1/10	1.755	2.073
			OPENABLE	1/16	1.097	1.166
HABITATION ROOM 3	4 & 5 (AW-18)	(2.000x2.200+ 0.165x1.150) = 4.590	GLAZING	1/10	0.459	1.442
			OPENABLE	1/16	0.287	0.609
HABITATION ROOM 1 & 2 (WITHOUT NOTIONAL PARTITION)	1–3 & 6 (AW-14 & AW-16)	(2.000x2.875)+ (2.440x6.215)+ (1.400x1.700)+ (0.085x2.875) =23.539	GLAZING	1/10	2.354	(1.478+2.073) =3.551
			OPENABLE	1/16	1.471	(0.609+1.166) =1.775

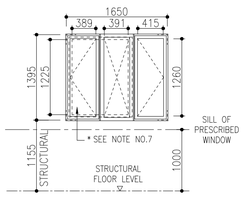


SECTION 1-1

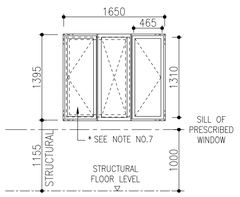


PLAN OF ACOUSTIC WINDOW (AW-18)
SCALE 1:25

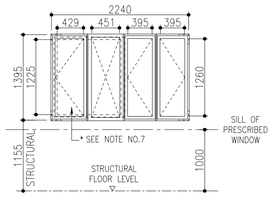
CALCULATION OF GLAZING AREA



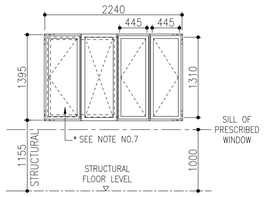
CALCULATION OF OPENABLE AREA



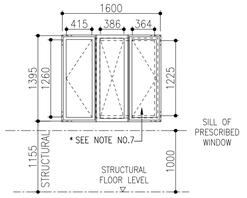
CALCULATION OF GLAZING AREA



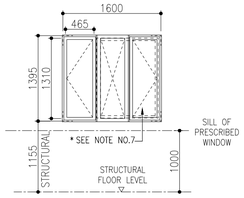
CALCULATION OF OPENABLE AREA



CALCULATION OF GLAZING AREA



CALCULATION OF OPENABLE AREA



HABITATION ROOM 1

MARK :	AW-14
GLAZING AREA :	0.415x1.260+0.391x1.225+0.389x1.225 = 1.478m²
OPENABLE AREA : (RESULTANT OPENING)	0.465x1.310 = 0.609m²

HABITATION ROOM 2

MARK :	AW-16
GLAZING AREA :	0.429x1.225+0.451x1.225+(0.395x1.260)x2 = 2.073m²
OPENABLE AREA : (RESULTANT OPENING)	(0.445x1.310)x2 = 1.166m²

HABITATION ROOM 3

MARK :	AW-18
GLAZING AREA :	0.415x1.260+0.386x1.225+0.364x1.225 = 1.442m²
OPENABLE AREA : (RESULTANT OPENING)	0.465x1.310 = 0.609m²

NOTES

LEGEND:

LZ - LOW ZONE (XX/F TO XX/F)
HZ - HIGH ZONE (XX/F TO XX/F)

IFA - INTERNAL FLOOR AREA

FS CODE - CODE OF PRACTICE FOR FIRE SAFETY IN BUILDINGS

THIS DRAWING IS TO BE READ IN CONJUNCTION WITH DRAWING NO. MF/AW/VBK/MW/A/ICU813.

ORIGINAL SIGNED

REVISIONS

NO	DESCRIPTION AND DATE	INITIAL AND DESIGNATION DWN	CKD	AUTH

	NAME AND DESIGNATION	INITIAL	DATE
AUTHORISED		ORIGINAL SIGNED	12/2018
CHECKED		ORIGINAL SIGNED	12/2018
		ORIGINAL SIGNED	12/2018
		ORIGINAL SIGNED	12/2018
DRAWN		ORIGINAL SIGNED	12/2018

PROJECT
MODULAR FLAT DESIGN WITH ACOUSTIC WINDOW (VOLUMETRIC PRECAST BATHROOM AND VOLUMETRIC PRECAST KITCHEN OPTION)

DRAWING TITLE
TYPE D-7(b) FLAT
CALCULATION OF NOTIONAL PARTITION, GLAZING AREA AND DEADEND TRAVEL DISTANCE

SCALE 1:50

DRAWING NO.
MF/AW/VBK/MW/A/ICU812

SOURCE

ICU NO.

AutoCAD 2000 A1 594 x 841

HOUSING DEPARTMENT

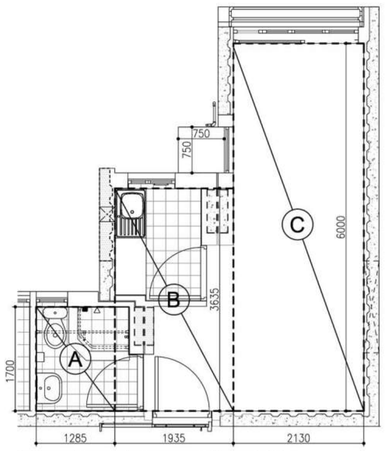
REF : DATE :

☐ C.E.'s COPY ☐ ——'s COPY
☐ CON's COPY ☐ R.E.'s COPY
☐ RSE's COPY ☐ RSI's COPY
☐ S.E.'s COPY ☐ Q.S's COPY
☐ CONTRACTOR's COPY ☐ OFFICE's COPY

ICU Ref. : HD(ICU) ____STD-EPS____

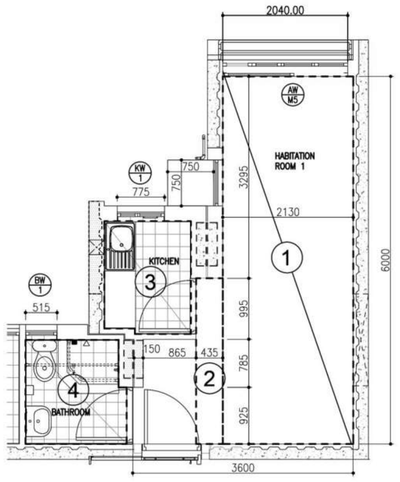
CALCULATION OF IFA

(FOR ICU REFERENCE)



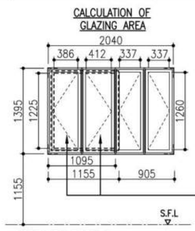
	PORTION	CALCULATION (m^2)	AREA (m^2)
IFA	A	1.285 X 1.700	2.185
	B	1.935 X 3.635	7.034
	C	2.130 X 6.000	12.780
		21.999m^2	

CALCULATION OF GLAZING AREA

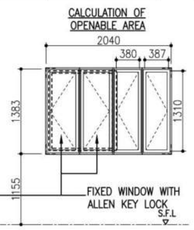


LOCATION	PORTION	HABITATION FLOOR AREA (m^2)	AREA REQUIRED (m^2)			AREA PROVIDED (m^2)
HABITATION ROOM 1	1 & 2 (AW–M5)	13.957	GLAZING	1/10	1.396	1.827
			OPENABLE	1/16	0.872	1.005
KITCHEN	3 (KW1)	2.559	GLAZING	1/10	0.256	0.679
			OPENABLE	1/16	0.160	0.416
BATHROOM	4 (BW1)	2.706	GLAZING	1/10	0.271	0.410
			OPENABLE	1/10	0.271	0.413

CALCULATION OF GLAZING AREA



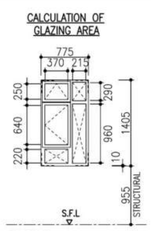
CALCULATION OF OPENABLE AREA



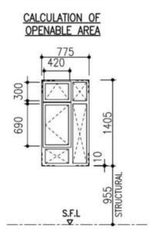
HABITATION ROOM 1

WINDOW MARK :	AW–M5
GLAZING AREA :	0.386x1.225+0.412x1.225+0.337x1.260 +0.337x1.260 = 1.827m^2
OPENABLE AREA :	0.380x1.310+0.387x1.310 = 1.005m^2

CALCULATION OF GLAZING AREA



CALCULATION OF OPENABLE AREA

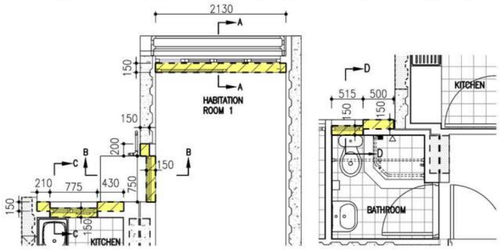


KITCHEN

MARK :	KW–1
GLAZING AREA :	(0.370x0.250)+(0.370x0.640)+ (0.370x0.220)+(0.215x0.290)+(0.215x0.960) = 0.679m^2
OPENABLE AREA :	(0.420x0.300)+(0.420x0.690) = 0.416m^2

CALCULATION OF NON-STRUCTURAL PREFABRICATED EXTERNAL WALL AREA

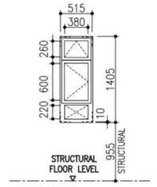
(SUBJECT TO COMPLIANCE WITH THE PRE-REQUISITES AND THE OVERALL CAP ON GFA CONCESSIONS STIPULATED IN PNAP APP-151)



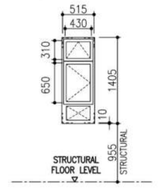
NON–STRUCTURAL PREFABRICATED EXTERNAL WALL AREA TO BE EXEMPTED FROM GFA AND SC CALCULATION	LOCATION	AREA (m^2)
	HABITATION ROOM 1	0.320+0.142=0.462
	KITCHEN	0.212
	BATHROOM	0.152
	TOTAL:	0.826m^2

* SECTION REFER TO MF/MIC/AW/MW/A/ICU906

CALCULATION OF GLAZING AREA



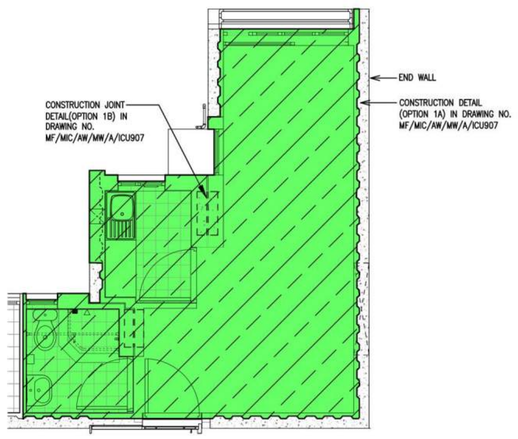
CALCULATION OF OPENABLE AREA



BATHROOM

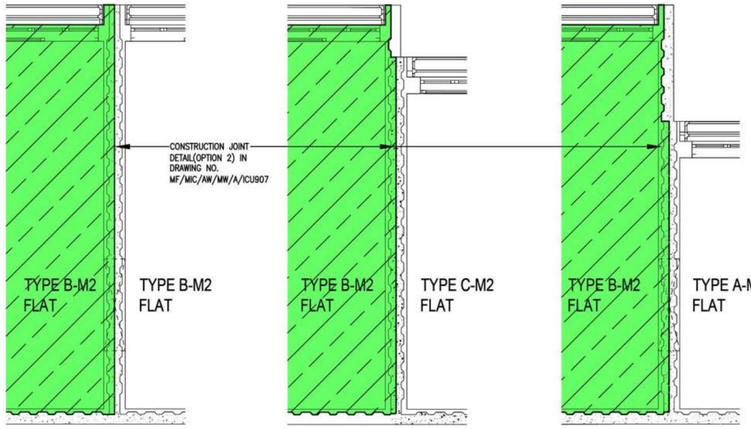
MARK :	BW–1
GLAZING AREA :	(0.380x0.260)+(0.380x0.600)+ (0.380x0.220) = 0.410m^2
OPENABLE AREA :	(0.430x0.310)+(0.430x0.650) = 0.413m^2

CALCULATION OF MiC FLOOR AREA



WALL CONNECTING TO	MiC FLOOR AREA (m^2)	10% OF THE MiC FLOOR AREA TO BE DISREGARDED FROM GFA (m^2)
END WALL	24.841	24.841 X 10% = 2.484
TYPE A–M2 FLAT	25.348	25.348 X 10% = 2.534
TYPE B–M2 FLAT	25.550	25.550 X 10% = 2.555
TYPE C–M2 FLAT	25.465	25.465 X 10% = 2.546

* REFER TO NOTES NO.4–6

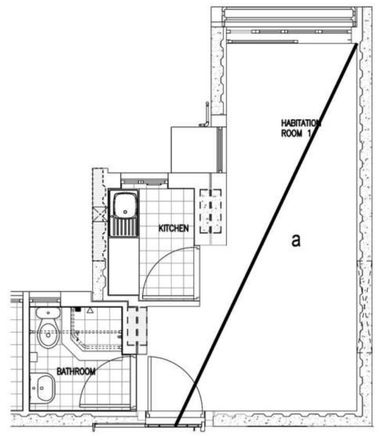


PART PLAN OF WALL CONNECTING TO ADJOINING TYPE B-M2 MIC MODULE

PART PLAN OF WALL CONNECTING TO ADJOINING TYPE C-M2 MIC MODULE

PART PLAN OF WALL CONNECTING TO ADJOINING TYPE A-M2 MIC MODULE

CALCULATION OF DEADEND TRAVEL DISTANCE



DEADEND TRAVEL DISTANCE (UNDER FS CODE 2011) FOR TYPE B-M2 FLAT AT A RANGE OF

a = 6.917 ≤ 24m (UNDER FS CODE 2011 CLAUSE B11.2 (a)(i))

PLAN OF ACOUSTIC WINDOW (AW–M5)

SCALE 1:25

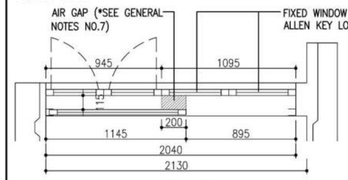
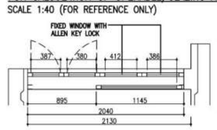


DIAGRAM OF ACOUSTIC WINDOW (AW–M5) FOR CALCULATION OF OPENABLE/GLAZING AREA

SCALE 1:40 (FOR REFERENCE ONLY)



LEGEND:

IFA - INTERNAL FLOOR AREA

FS CODE - CODE OF PRACTICE FOR FIRE SAFETY IN BUILDINGS

CONSTRUCTION JOINT/ IN-SITU CONCRETE WALL (FULL HEIGHT)

CONSTRUCTION JOINT/ IN-SITU CONCRETE WALL (BOTTOM PORTION ONLY)

MiC FLOOR AREA

NON-STRUCTURAL PREFABRICATED EXTERNAL WALL (NON-LOADING BEARING WALL COMPLIED WITH JPN-2)

GENERAL NOTES

1. THIS DRAWING SHOWS THE TRAVEL DISTANCE AND DEADEND TO STAIRCASE FOR TYPE B-M2 FLAT(S) WITH NOTIONAL PARTITION ONLY. ANY OTHER INFORMATION OF FLOOR LAYOUT PLAN SHOULD REFER TO OTHER RELEVANT ICU APPROVED GENERAL BUILDING PLAN (GBP) FOR THE PROJECT.
2. TYPE B-M2 FLAT(S) ARE FLAT NO. (*project basis information*) AT BLOCK (*project basis information*).
3. ALL ELEVATIONS OF WINDOWS ARE VIEWED FROM OUTSIDE.
4. THE GRANTING OF GFA CONCESSION REGARDING GREEN & INNOVATIVE FEATURES UNDER JPNs (i.e. MODULAR INTEGRATED CONSTRUCTION) IS SUBJECT TO COMPLIANCE WITH THE CRITERIA STIPULATED IN JPN 8 .
5. ESSENTIAL INFORMATION OF THE MIC SYSTEM AS LISTED IN PNAP ADV-36 SHALL BE SUBMITTED SEPARATELY AND THE ACCEPTANCE OF SUCH BY THE ICU SHALL BE OBTAINED BEFORE THE COMMENCEMENT OF THE MODULAR UNIT PRODUCTION WORK IN THE PREFABRICATION FACTORY.
6. A QUALITY ASSURANCE SCHEME AND AN MIC SUPERVISION PLAN SHALL BE PREPARED IN ACCORDANCE WITH PNAP ADV-36 AND SUBMITTED AT LEAST 14 DAYS BEFORE THE COMMENCEMENT OF THE MODULAR UNIT PRODUCTION WORK IN THE PREFABRICATION FACTORY.
7. ACCORDING TO PNAP APP-130, PARA. 6 OF APPENDIX A, THE WIDTH OF AIR GAP IS BETWEEN 100mm TO 175mm, THE LENGTH OF AIR GAP IS NOT LESS THAN 100mm.

ICU Pre-accepted Typical Architectural Details

Pre-accepted Memo Date: 04/11/2022

Pre-accepted Drawing No.: MF/MIC/AW/MW/A/ICU902

ICU Ref.: MFD/2022/3

The works shown on this plan are ICU pre-accepted typical architectural details in respect of which the identical details * (except the content as bounded by–·–·–·–·–) are reproduced herewith for approval on project basis.

* *Delete where appropriate*

Signature of Applicant (HD / PSP) :

ICU Approval Signature :

Signature for Record Plan :

REVISIONS

NO	DESCRIPTION AND DATE	INITIAL AND DESIGNATION DWN	CKD	AUTH

	NAME AND DESIGNATION	INITIAL	DATE
AUTHORISED			
CHECKED			
DRAWN			

DATE OF ISSUE :

PROJECT

MODULAR FLAT DESIGN (MODULAR INTEGRATED CONSTRUCTION)

DRAWING TITLE

TYPE B-M2 FLAT - CALCULATION OF MiC AREA, GLAZING AREA AND DEADEND TRAVEL DISTANCE

SCALE 1:50

DRAWING NO.

MF/MIC/AW/MW/A/ICU902

SOURCE

ICU NO.

AutoCAD 2000 A1 594 x 841

HOUSING DEPARTMENT

C.E. ☐ OTHERS ☐

B.S.E. ☐ G.E. ☐

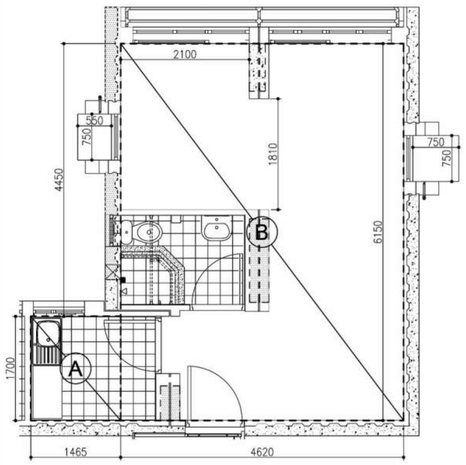
TOWCON ☐ FILE / OFFICE ☐

R.E. ☐ Q.S. ☐

COPY FOR ☐ Contractor ☐ Architect

CALCULATION OF IFA

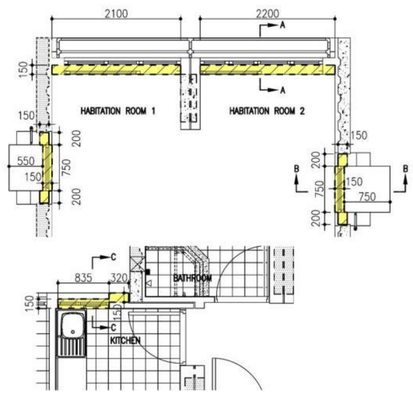
(FOR ICU REFERENCE)



	PORTION	CALCULATION (m^2)	AREA (m^2)
IFA	A	1.465 X 1.700	2.491
	B	4.620 X 6.150	28.413
		30.904m^2	

CALCULATION OF NON-STRUCTURAL PREFABRICATED EXTERNAL WALL AREA

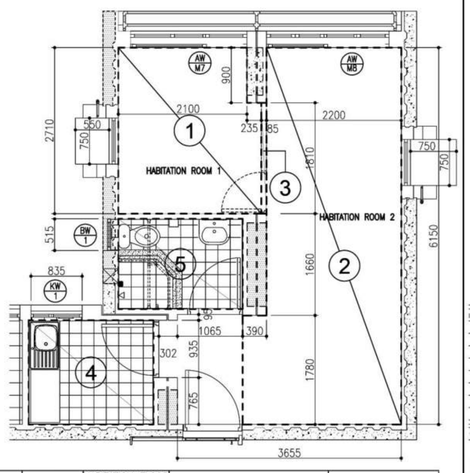
(SUBJECT TO COMPLIANCE WITH THE PRE-REQUISITES AND THE OVERALL CAP ON GFA CONCESSIONS STIPULATED IN PNAP APP-151)



NON-STRUCTURAL PREFABRICATED EXTERNAL WALL AREA TO BE EXEMPTED FROM GFA AND SC CALCULATION	LOCATION	AREA (m^2)
	HABITATION ROOM 1	0.315+0.172=0.487
	HABITATION ROOM 2	0.330+0.172=0.502
	KITCHEN	0.173
	TOTAL:	1.162m^2

* SECTION REFER TO MF/MIC/AW/MW/A/ICU906

CALCULATION OF GLAZING AREA



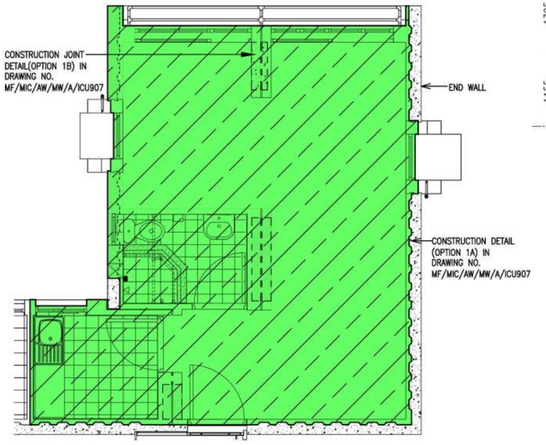
LOCATION	PORTION	HABITATION FLOOR AREA (m^2)	AREA REQUIRED (m^2)			AREA PROVIDED (m^2)
HABITATION ROOM 1	1 (AW–M7)	6.117	GLAZING	1/10	0.612	1.812
			OPENABLE	1/16	0.382	0.718
HABITATION ROOM 2	2 (AW–M8)	14.225	GLAZING	1/10	1.423	1.777
			OPENABLE	1/16	0.889	1.031
HABITATION ROOM 1&2	1, 2 & 3 (AW–M7 & AW–M8)	(6.117+14.225 +0.154) =20.496	GLAZING	1/10	2.050	(1.812+1.777) =3.589
			OPENABLE	1/16	1.281	(0.718+1.031) =1.749
KITCHEN	4 (KW1)	3.468	GLAZING	1/10	0.347	0.686
			OPENABLE	1/16	0.217	0.413
BATHROOM	5 (BW1)	2.984	GLAZING	1/10	0.298	0.410
			OPENABLE	1/16	0.298	0.413

CALCULATION OF NOTIONAL PARTITION

IFA (m^2) (A)	THE MAXIMUM AGGREGATE LENGTH OF THE ADDITIONAL BLOCK WALL (m) (A)/10 = (B)	TOTAL ADDITIONAL WALL LENGTH (EXCLUDED 1x700mm WIDTH DOOR) (m)
30.904	3.090	(1.810 – 0.700) = 1.110 < (B)

* REFER TO NOTES NO.5 & 6

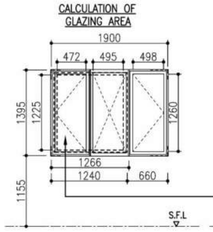
CALCULATION OF MiC FLOOR AREA



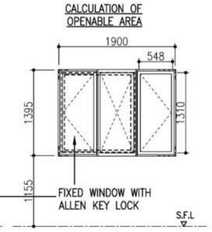
WALL CONNECTING TO	MiC FLOOR AREA (m^2)	10% OF THE MiC FLOOR AREA TO BE DISREGARDED FROM GFA (m^2)
END WALL	34.564	34.564 X 10% = 3.456

* REFER TO NOTES NO.7–9

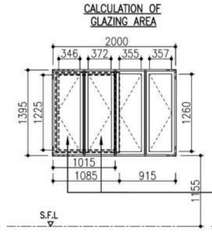
CALCULATION OF GLAZING AREA



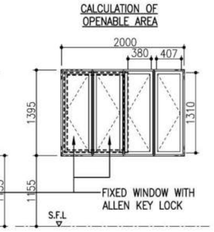
CALCULATION OF OPENABLE AREA



CALCULATION OF GLAZING AREA



CALCULATION OF OPENABLE AREA



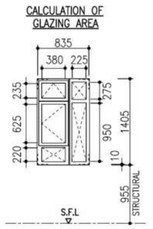
HABITATION ROOM 1

WINDOW MARK :	AW–M7
GLAZING AREA :	0.472x1.225+0.495x1.225+0.498x1.260 = 1.812m^2
OPENABLE AREA :	0.548x1.310 = 0.718m^2

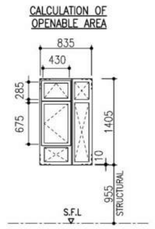
HABITATION ROOM 2

WINDOW MARK :	AW–M8
GLAZING AREA :	0.346x1.225+0.372x1.225+0.355x1.260 +0.357x1.260 = 1.777m^2
OPENABLE AREA :	0.380x1.310+0.407x1.310 = 1.031m^2

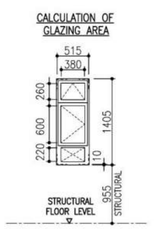
CALCULATION OF GLAZING AREA



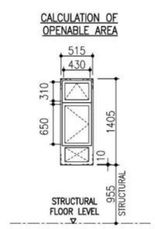
CALCULATION OF OPENABLE AREA



CALCULATION OF GLAZING AREA



CALCULATION OF OPENABLE AREA



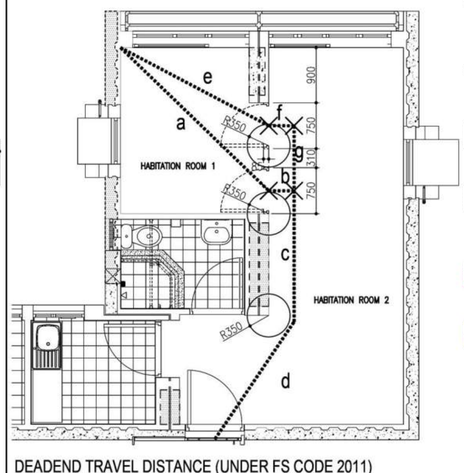
KITCHEN

MARK :	KW–1
GLAZING AREA :	(0.380x0.235)+(0.380x0.625)+ (0.380x0.220)+(0.225x0.275)+(0.225x0.950) = 0.686m^2
OPENABLE AREA :	(0.430x0.285)+(0.430x0.675) = 0.413m^2

BATHROOM

MARK :	BW–1
GLAZING AREA :	(0.380x0.260)+(0.380x0.600)+ (0.380x0.220) = 0.410m^2
OPENABLE AREA :	(0.430x0.310)+(0.430x0.650) = 0.413m^2

CALCULATION OF DEADEND TRAVEL DISTANCE



DEADEND TRAVEL DISTANCE (UNDER FS CODE 2011) FOR TYPE D-M2 FLAT AT A RANGE OF

a + b + c + d =
3.363 + 0.413 + 2.140 + 2.311 = 8.227m
OR
e + f + g + c + d =
2.735+ 0.413 + 1.060 + 2.140 + 2.311 = 8.659m

} ≤ 24m (UNDER FS CODE 2011 CLAUSE B11.2 (a)(i))

PLAN OF ACOUSTIC WINDOW (AW–M7) & (AW–M8)

SCALE 1:25

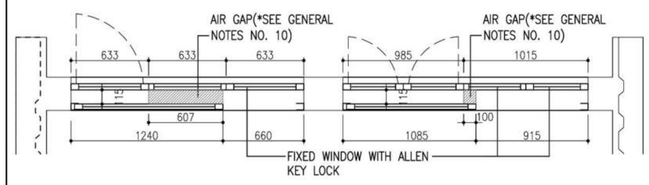
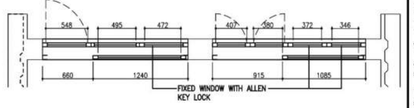


DIAGRAM OF ACOUSTIC WINDOW (AW–M7) & (AW–M8) FOR CALCULATION OF OPENABLE/GLAZING AREA

SCALE 1:40 (FOR REFERENCE ONLY)



ICU Pre-accepted Typical Architectural Details

Pre-accepted Memo Date: 04/11/2022
Pre-accepted Drawing No.: MF/MIC/AW/MW/A/ICU903
ICU Ref.: MFD/2022/3

The works shown on this plan are ICU pre-accepted typical architectural details in respect of which the identical details * (except the content as bounded by –·–·–·–) are reproduced herewith for approval on project basis.
* *Delete where appropriate*

GENERAL NOTES

1. THIS DRAWING SHOWS THE TRAVEL DISTANCE AND DEADEND TO STAIRCASE FOR TYPE C-M2 FLAT(S) WITH NOTIONAL PARTITION ONLY. ANY OTHER INFORMATION OF FLOOR LAYOUT PLAN SHOULD REFER TO OTHER RELEVANT ICU APPROVED GENERAL BUILDING PLAN (GBP) FOR THE PROJECT.
2. TYPE C-M2 FLAT(S) ARE FLAT NO. (*project basis information*) AT BLOCK (*project basis information*).
3. ALL ELEVATIONS OF WINDOWS ARE VIEWED FROM OUTSIDE.
4. THE STRUCTURAL DESIGN HAS ALREADY CATERED FOR ERECTION OF NON-LOAD BEARING BLOCK WALL(S) SAME AS THE NOTIONAL PARTITION(S) SHOWN IN THIS SUBMISSION.
5. ANY ALTERNATIVE NON-LOAD BEARING BLOCK WALL(S) TO BE ERECTED AFTER OCCUPATION PERMIT, OTHER THAN THOSE SAME AS THE NOTIONAL PARTITION(S) SHOWN IN THIS SUBMISSION, MAY BE SUBJECT TO ICU'S BUILDING CONTROL WITH SUBMISSIONS TO ICU AS ALTERATION & ADDITION WORKS FOR APPROVAL AND CONSENT OR AS MINOR WORKS FOR PROCESSING TO BE MADE AS REQUIRED UNDER THE BUILDINGS ORDINANCE AND RELEVANT BUILDING REGULATIONS THEREUNDER.
6. THE INTENDED CONSTRUCTION OF NOTIONAL PARTITION(S) FOR THIS SUBMISSION CONSISTS OF 85mm THICK SOLID CONCRETE BLOCK WALL(S) / LIGHTWEIGHT PARTITION(S) (DENSITY NOT MORE THAN 2060 kg/m^3) WITH 15mm THICK CEMENT SAND PLASTER (DENSITY NOT MORE THAN 2300 kg/m^3) ON BOTH FACES (WITH AGGREGATED AVERAGE DENSITY NOT MORE THAN 2125 kg/m^3).
7. THE GRANTING OF GFA CONCESSION REGARDING GREEN & INNOVATIVE FEATURES UNDER JPNs (i.e. MODULAR INTEGRATED CONSTRUCTION) IS SUBJECT TO COMPLIANCE WITH THE CRITERIA STIPULATED IN JPN 8 .
8. ESSENTIAL INFORMATION OF THE MIC SYSTEM AS LISTED IN PNAP ADV-36 SHALL BE SUBMITTED SEPARATELY AND THE ACCEPTANCE OF SUCH BY THE ICU SHALL BE OBTAINED BEFORE THE COMMENCEMENT OF THE MODULAR UNIT PRODUCTION WORK IN THE PREFABRICATION FACTORY.
9. A QUALITY ASSURANCE SCHEME AND AN MIC SUPERVISION PLAN SHALL BE PREPARED IN ACCORDANCE WITH PNAP ADV-36 AND SUBMITTED AT LEAST 14 DAYS BEFORE THE COMMENCEMENT OF THE MODULAR UNIT PRODUCTION WORK IN THE PREFABRICATION FACTORY.
10. ACCORDING TO PNAP APP-130, PARA. 6 OF APPENDIX A, THE WIDTH OF AIR GAP IS BETWEEN 100mm TO 175mm, THE LENGTH OF AIR GAP IS NOT LESS THAN 100mm.

LEGEND:

IFA - INTERNAL FLOOR AREA

FS CODE - CODE OF PRACTICE FOR FIRE SAFETY IN BUILDINGS

NOTIONAL PARTITIONS WITH NOTIONAL DOOR OPENINGS

CONSTRUCTION JOINT/ IN-SITU CONCRETE WALL (FULL HEIGHT)

CONSTRUCTION JOINT/ IN-SITU CONCRETE WALL (BOTTOM PORTION ONLY)

MiC FLOOR AREA

NON-STRUCTURAL PREFABRICATED EXTERNAL WALL (NON-LOADING BEARING WALL COMPLIED WITH JPN-2)

ICU Ref. : HD(ICU) STD-EPS

Signature of Applicant (HD / PSP) :

ICU Approval Signature :

Signature for Record Plan :

REVISIONS

NO	DESCRIPTION AND DATE	INITIAL AND DESIGNATION DWN	CKD	AUTH

	NAME AND DESIGNATION	INITIAL	DATE
AUTHORISED			
CHECKED			
DRAWN			

DATE OF ISSUE :

PROJECT
MODULAR FLAT DESIGN
(MODULAR INTEGRATED CONSTRUCTION)

DRAWING TITLE
TYPE C-M2 FLAT - CALCULATION OF MiC AREA, NOTIONAL PARTITION, GLAZING AREA AND DEADEND TRAVEL DISTANCE

SCALE 1:50

DRAWING NO.
MF/MIC/AW/MW/A/ICU903

SOURCE

ICU NO.

AutoCAD 2000 A1 594 x 841

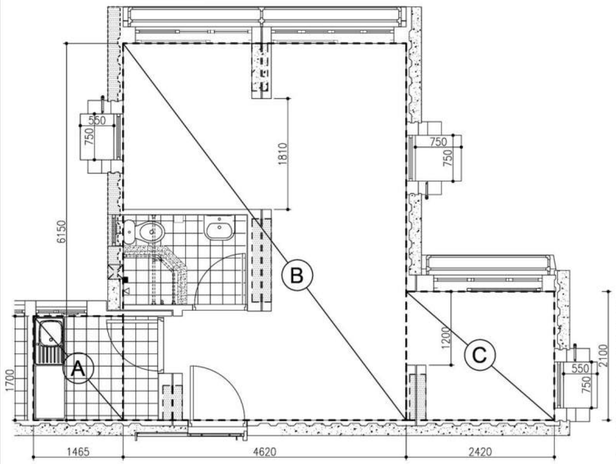
HOUSING DEPARTMENT

COPY FOR ☐ Contractor ☐ Architect ☐ R.E. ☐ G.S. ☐ ICW/CON FILE/OFFICE ☐ B.S.E. ☐ G.E. ☐ C.E. ☐ OTHERS:

ICU Ref. : HD(ICU) STD-EPS

CALCULATION OF IFA

(FOR ICU REFERENCE)



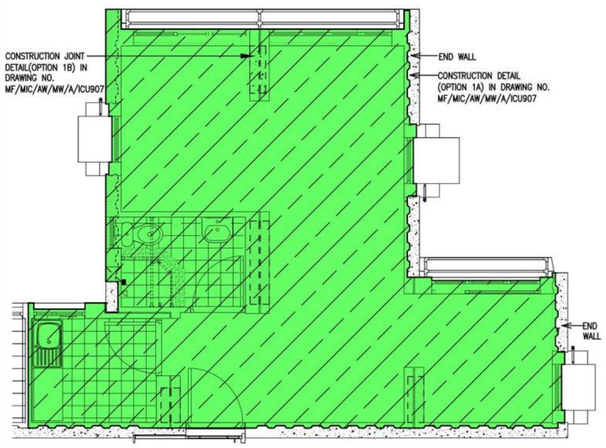
	PORTION	CALCULATION (m^2)	AREA (m^2)
IFA	A	1.465 X 1.700	2.491
	B	4.620 X 6.150	28.413
	C	2.420 X 2.100	5.082
		35.986m^2	

CALCULATION OF NOTIONAL PARTITION

IFA (m^2) (A)	THE MAXIMUM AGGREGATE LENGTH OF THE ADDITIONAL BLOCK WALL (m) (A)/10 = (B)	TOTAL ADDITIONAL WALL LENGTH (EXCLUDED 2x700mm WIDTH DOOR) (m)
35.981	3.598	(1.810 + 1.200 − 1.400) = 1.610 < (B)

* REFER TO NOTES NO.5 & 6

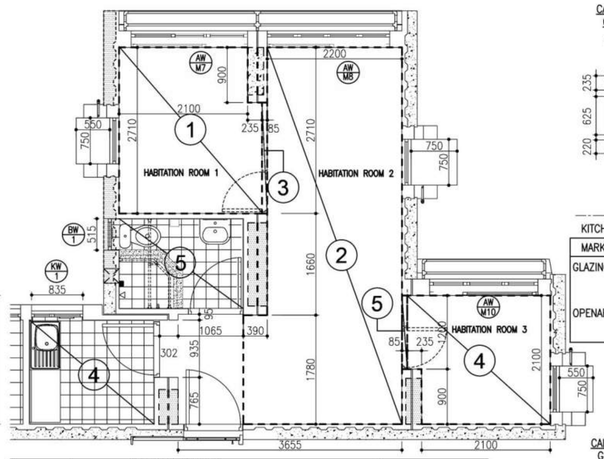
CALCULATION OF MiC FLOOR AREA



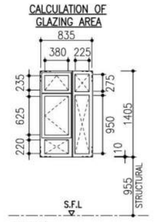
WALL CONNECTING TO	MiC FLOOR AREA (m^2)	10% OF THE MiC FLOOR AREA TO BE DISREGARDED FROM GFA (m^2)
END WALL	40.497	40.497 X 10% = 4.049

* REFER TO NOTES NO.7−9

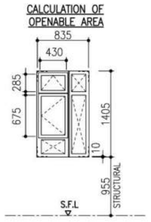
CALCULATION OF GLAZING AREA



CALCULATION OF GLAZING AREA



CALCULATION OF OPENABLE AREA

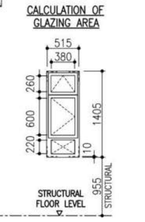


KITCHEN

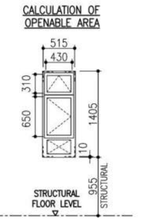
MARK :	KW−1
GLAZING AREA :	(0.380x0.235)+(0.380x0.625)+(0.380x0.220)+(0.225x0.275)+(0.225x0.950) = 0.686m^2
OPENABLE AREA :	(0.430x0.285)+(0.430x0.675) = 0.413m^2

LOCATION	PORTION	HABITATION FLOOR AREA (m^2)	AREA REQUIRED (m^2)			AREA PROVIDED (m^2)
HABITATION ROOM 1	1 (AW−M7)	6.117	GLAZING	1/10	0.612	1.812
			OPENABLE	1/16	0.382	0.718
HABITATION ROOM 2	2 (AW−M8)	14.225	GLAZING	1/10	1.423	1.777
			OPENABLE	1/16	0.889	1.031
HABITATION ROOM 3	4 (AW−M10)	4.692	GLAZING	1/10	0.469	1.675
			OPENABLE	1/16	0.293	0.603
HABITATION ROOM 1, 2 & 3	1−5 (AW−M7, AW−M8 & AW−M10)	(6.117+14.225 +0.154+4.692 +0.102) =25.290	GLAZING	1/10	2.529	(1.812+1.777+1.675) =5.264
			OPENABLE	1/16	1.581	(0.718+1.031+0.603) =2.352
KITCHEN	4 (KW1)	3.468	GLAZING	1/10	0.347	0.737
			OPENABLE	1/16	0.217	0.437
BATHROOM	5 (BW1)	2.984	GLAZING	1/10	0.298	0.370
			OPENABLE	1/16	0.298	0.320

CALCULATION OF GLAZING AREA



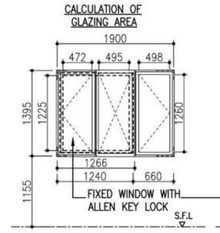
CALCULATION OF OPENABLE AREA



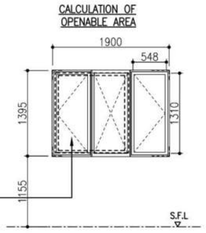
BATHROOM

MARK :	BW−1
GLAZING AREA :	(0.380x0.260)+(0.380x0.600)+(0.380x0.220) = 0.410m^2
OPENABLE AREA :	(0.430x0.310)+(0.430x0.650) = 0.413m^2

CALCULATION OF GLAZING AREA



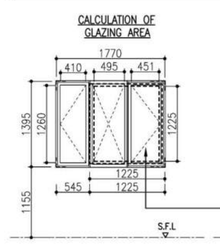
CALCULATION OF OPENABLE AREA



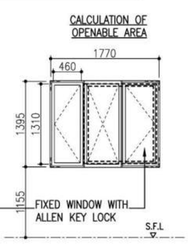
HABITATION ROOM 1

WINDOW MARK :	AW−M7
GLAZING AREA :	0.472x1.225+0.495x1.225+0.498x1.260 = 1.812m^2
OPENABLE AREA :	0.548x1.310 = 0.718m^2

CALCULATION OF GLAZING AREA



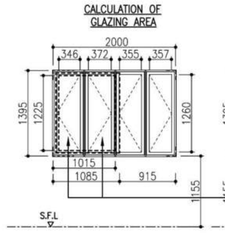
CALCULATION OF OPENABLE AREA



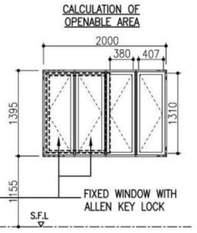
HABITATION ROOM 3

WINDOW MARK :	AW−M10
GLAZING AREA :	0.410x1.260+0.495x1.225+0.451x1.225 = 1.675m^2
OPENABLE AREA :	0.460x1.310 = 0.603m^2

CALCULATION OF GLAZING AREA



CALCULATION OF OPENABLE AREA



HABITATION ROOM 2

WINDOW MARK :	AW−M8
GLAZING AREA :	0.346x1.225+0.372x1.225+0.355x1.260 +0.357x1.260 = 1.777m^2
OPENABLE AREA :	0.380x1.310+0.407x1.310 = 1.031m^2

DIAGRAM OF ACOUSTIC WINDOW (AW−M7) & (AW−M8) FOR CALCULATION OF OPENABLE/GLAZING AREA

SCALE 1:40 (FOR REFERENCE ONLY)

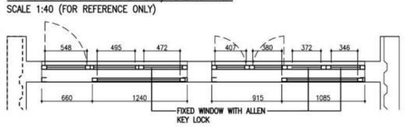
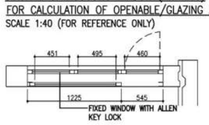
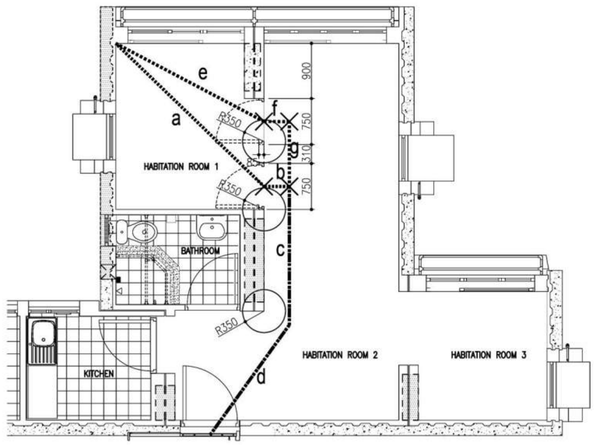


DIAGRAM OF ACOUSTIC WINDOW (AW−M10) FOR CALCULATION OF OPENABLE/GLAZING AREA

SCALE 1:40 (FOR REFERENCE ONLY)



CALCULATION OF DEADEND TRAVEL DISTANCE



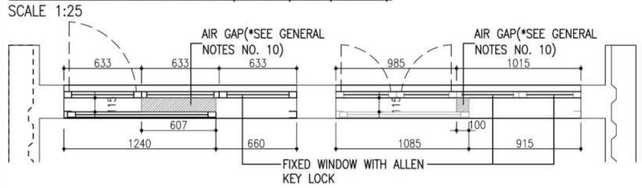
DEADEND TRAVEL DISTANCE (UNDER FS CODE 2011)
FOR TYPE D-M2 FLAT AT A RANGE OF

a + b + c + d =
3.363 + 0.413 + 2.259 + 2.213 = 8.248m
OR
e + f + g + c + d =
2.735+ 0.413 + 1.060 + 2.259 + 2.213 = 8.68m

} ≤ 24m (UNDER FS CODE 2011 CLAUSE B11.2 (a)(i))

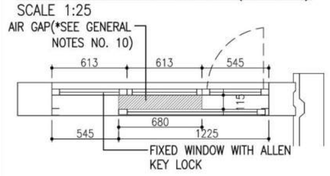
PLAN OF ACOUSTIC WINDOW (AW−M7) & (AW−M8)

SCALE 1:25



PLAN OF ACOUSTIC WINDOW (AW−M10)

SCALE 1:25



LEGEND:

IFA - INTERNAL FLOOR AREA

FS CODE - CODE OF PRACTICE FOR FIRE SAFETY IN BUILDINGS

NOTIONAL PARTITIONS WITH NOTIONAL DOOR OPENINGS

CONSTRUCTION JOINT/ IN-SITU CONCRETE WALL (FULL HEIGHT)

CONSTRUCTION JOINT/ IN-SITU CONCRETE WALL (BOTTOM PORTION ONLY)

MiC FLOOR AREA

GENERAL NOTES

1. THIS DRAWING SHOWS THE TRAVEL DISTANCE AND DEADEND TO STAIRCASE FOR TYPE D-M2 FLAT(S) WITH NOTIONAL PARTITION ONLY. ANY OTHER INFORMATION OF FLOOR LAYOUT PLAN SHOULD REFER TO OTHER RELEVANT ICU APPROVED GENERAL BUILDING PLAN (GBP) FOR THE PROJECT.
2. TYPE D-M2 FLAT(S) ARE FLAT NO. (*project basis information*) AT BLOCK (*project basis information*).
3. ALL ELEVATIONS OF WINDOWS ARE VIEWED FROM OUTSIDE.
4. THE STRUCTURAL DESIGN HAS ALREADY CATERED FOR ERECTION OF NON-LOAD BEARING BLOCK WALL(S) SAME AS THE NOTIONAL PARTITION(S) SHOWN IN THIS SUBMISSION.
5. ANY ALTERNATIVE NON-LOAD BEARING BLOCK WALL(S) TO BE ERECTED AFTER OCCUPATION PERMIT, OTHER THAN THOSE SAME AS THE NOTIONAL PARTITION(S) SHOWN IN THIS SUBMISSION, MAY BE SUBJECT TO ICU'S BUILDING CONTROL WITH SUBMISSIONS TO ICU AS ALTERATION & ADDITION WORKS FOR APPROVAL AND CONSENT OR AS MINOR WORKS FOR PROCESSING TO BE MADE AS REQUIRED UNDER THE BUILDINGS ORDINANCE AND RELEVANT BUILDING REGULATIONS THEREUNDER.
6. THE INTENDED CONSTRUCTION OF NOTIONAL PARTITION(S) FOR THIS SUBMISSION CONSISTS OF 85mm THICK SOLID CONCRETE BLOCK WALL(S) / LIGHTWEIGHT PARTITION(S) (DENSITY NOT MORE THAN 2060 kg/m^3) WITH 15mm THICK CEMENT SAND PLASTER (DENSITY NOT MORE THAN 2300 kg/m^3) ON BOTH FACES (WITH AGGREGATED AVERAGE DENSITY NOT MORE THAN 2125 kg/m^3).
7. THE GRANTING OF GFA CONCESSION REGARDING GREEN & INNOVATIVE FEATURES UNDER JPNs (i.e. MODULAR INTEGRATED CONSTRUCTION) IS SUBJECT TO COMPLIANCE WITH THE CRITERIA STIPULATED IN JPN 8 .
8. ESSENTIAL INFORMATION OF THE MIC SYSTEM AS LISTED IN PNAP ADV-36 SHALL BE SUBMITTED SEPARATELY AND THE ACCEPTANCE OF SUCH BY THE ICU SHALL BE OBTAINED BEFORE THE COMMENCEMENT OF THE MODULAR UNIT PRODUCTION WORK IN THE PREFABRICATION FACTORY.
9. A QUALITY ASSURANCE SCHEME AND AN MIC SUPERVISION PLAN SHALL BE PREPARED IN ACCORDANCE WITH PNAP ADV-36 AND SUBMITTED AT LEAST 14 DAYS BEFORE THE COMMENCEMENT OF THE MODULAR UNIT PRODUCTION WORK IN THE PREFABRICATION FACTORY.
10. ACCORDING TO PNAP APP-130, PARA. 6 OF APPENDIX A, THE WIDTH OF AIR GAP IS BETWEEN 100mm TO 175mm, THE LENGTH OF AIR GAP IS NOT LESS THAN 100mm.
11. PART PLAN OF CALCULATION OF NON-STRUCTURAL PREFABRICATED EXTERNAL WALL AREA REFER TO MF/MIC/AW/MW/A/ICU906.

Signature of Applicant (HD / PSP) :

ICU Pre-accepted Typical Architectural Details

Pre-accepted Memo Date: 04/11/2022
Pre-accepted Drawing No.: MF/MIC/AW/MW/A/ICU905
ICU Ref.: MFD/2022/3

The works shown on this plan are ICU pre-accepted typical architectural details in respect of which the identical details * (except the content as bounded by −·−·−·−) are reproduced herewith for approval on project basis.
* *Delete where appropriate*

ICU Approval Signature :

Signature for Record Plan :

REVISIONS

NO	DESCRIPTION AND DATE	INITIAL AND DESIGNATION DWN	CKD	AUTH

	NAME AND DESIGNATION	INITIAL	DATE
AUTHORISED			
CHECKED			
DRAWN			

DATE OF ISSUE :

PROJECT
MODULAR FLAT DESIGN
(MODULAR INTEGRATED CONSTRUCTION)

DRAWING TITLE
TYPE D-M2 FLAT - CALCULATION OF MiC AREA, NOTIONAL PARTITION, GLAZING AREA AND DEADEND TRAVEL DISTANCE

SCALE 1:50

DRAWING NO.
MF/MIC/AW/MW/A/ICU905

SOURCE

ICU NO.

AutoCAD 2000 A1 594 x 841

HOUSING DEPARTMENT

C.E. ☐ OTHERS ☐
B.S.E. ☐ S.E. ☐
TOWNOWN FILE / OFFICE ☐
R.E. ☐ Q.S. ☐
Contractor ☐ Architect ☐

COPY FOR

Appendix 4.8

Summary of Noise Attenuation Performance for MFD with Acoustic Window

Summary of Noise Attenuation Performance for MFD with Acoustic Window

	Acoustic Window Configurations				Noise Attenuation dB(A)	
Flat Type	**Inner Window Opening (mm)**	**Outer Window Opening (mm)**	**Window Overlapping Length (mm)**	**Gap Width between Window Panel (mm)**	**With Sound Absorptive Lining**	**Without Sound Absorptive Lining**
Type A-3 (1/2P)	1383mm (H) x 840mm (W)	1383mm (H) x 870mm (W)	340mm	175mm	**7.0**	**5.8**
Type B-5 (2/3P)	1383mm (H) x 940mm (W)	1383mm (H) x 1010mm (W)	200mm	175mm	**6.6**	**5.5**
Type C-6 (1B) **& Type D-6** (2B)						
Living Room	1383mm (H) x 980mm (W)	1383mm (H) x 1040mm (W)	100mm	175mm	**7.0**	**5.5**
Bedroom 1	1383mm (H) x 675mm (W)	1383mm (H) x 600mm (W)	525mm	175mm		
Type C-7 (1B) **& Type D-7** (2B)						
Living Room	1383mm (H) x 1040mm (W)	1383mm (H) x 1060mm (W)	140mm	175mm	**6.9**	**5.4**
Bedroom 1	1383mm (H) x 575mm (W)	1383mm (H) x 550mm (W)	525mm	175mm		
Type C-8 (1B)						
Living Room	1383mm (H) x 1060mm (W)	1383mm (H) x 1050mm (W)	330mm	175mm	**7.1**	**5.6**
Bedroom 1	1383mm (H) x 675mm (W)	1383mm (H) x 600mm (W)	525mm	175mm		
Type D-6 (2B) **& Type D-7** (2B)						
Bedroom 2	1383mm (H) x 550mm (W)	1383mm (H) x 550mm (W)	500mm	175mm	**3.9**	**2.7**

For the acoustic window configuration deviated from the above, further discussion with Environmental Protection Department (EPD) is required on project basis.

Appendix 4.9

Summary of Noise Attenuation Performance for MFD-MiC with Acoustic Window

Table 8 – Summary of Noise Attenuation Performance for MFD-MiC with Acoustic Window

		Acoustic Window Configurations				Noise Attenuation dB(A)	
Flat Type	**Floor Size (m^2)**	**Inner Window Opening**	**Outer Window Opening**	**Window Overlapping Length**	**Gap Width between Window Panel**	**With Sound Absorptive Lining**	**Without Sound Absorptive Lining**
Type A-M2	9.357	1352mm (H) x 820mm (W)	1352mm (H) x 700mm (W)	340mm	175 mm	7.1	5.9
Type B-M2	15.592	1352mm (H) x 895mm (W)	1352mm (H) x 945mm (W)	200mm	175 mm	6.9	5.8
Type C-M2							
Living Room	16.414	1352mm (H) x 915mm (W)	1352mm (H) x 985mm (W)	100mm	175 mm	7.1	5.6
Bedroom 1	6.117	1352mm (H) x 660mm (W)	1352mm (H) x 633mm (W)	607mm	175 mm		
Type C-M3							
Living Room	16.736	1352mm (H) x 985mm (W)	1352mm (H) x 1125mm (W)	330mm	175 mm	7.1	5.6
Bedroom 1	6.094	1352mm (H) x 660mm (W)	1352mm (H) x 633mm (W)	607mm	175 mm		
Type D-M2							
Living Room	16.414	1352mm (H) x 915mm (W)	1352mm (H) x 985mm (W)	100mm	175 mm	7.1	5.6
Bedroom 1	6.117	1352mm (H) x 660mm (W)	1352mm (H) x 633mm (W)	607mm	175 mm		
Bedroom 2	4.692	1352mm (H) x 545mm (W)	1352mm (H) x 545mm (W)	680mm	175 mm	4.2	3.0

Appendix 4.10

Predicted Traffic Noise Levels for Residential Blocks (Mitigated Scenario - Architectural Fin & Acoustic Window & Fixed Glazing)

Floor	R101a	R101b	R101c	R101d	R102a	R102b	R102c	R103a	R103b	R103c	R104a	R104b	R105a	R105b	R106a	R106b	R107a	R107b	R108a	R108b	R108c	R109a	R109b	R109c	R110a
40																									
39																									
38																									
37	66.7	66.3	65.8	60.3	60.4	65.3	65.2	65.0	64.8	59.0	65.1	64.7	64.4	64.2	66.6	66.7	62.7	60.6	58.4	57.9	<40	<40	56.0	56.2	55.2
36	66.7	66.4	65.8	60.4	60.5	65.4	65.3	65.1	64.9	59.0	65.1	64.7	64.5	64.2	66.7	66.8	62.7	60.7	58.5	58.0	<40	<40	56.1	56.2	55.2
35	66.8	66.4	65.9	60.5	60.5	65.5	65.4	65.1	65.0	59.1	65.2	64.8	64.5	64.3	66.7	66.8	62.8	60.8	58.5	58.0	<40	<40	56.2	56.3	55.3
34	66.9	66.5	66.0	60.5	60.6	65.6	65.4	65.2	65.0	59.2	65.3	64.9	64.6	64.4	66.8	66.9	62.9	60.8	58.6	58.1	<40	<40	56.3	56.4	55.4
33	66.9	66.6	66.1	60.6	60.7	65.7	65.5	65.3	65.1	59.3	65.4	65.0	64.7	64.5	66.9	67.0	63.0	60.9	58.7	58.1	<40	<40	56.4	56.3	55.4
32	67.0	66.7	66.2	60.7	60.8	65.8	65.6	65.4	65.2	59.4	65.4	65.0	64.8	64.5	67.0	67.1	63.0	60.9	58.7	57.9	<40	<40	56.4	56.1	55.5
31	67.1	66.7	66.2	60.8	60.9	65.8	65.7	65.4	65.2	59.5	65.5	65.1	64.9	64.6	67.1	67.1	63.1	61.0	58.8	58.0	<40	<40	56.5	56.1	55.5
30	67.2	66.8	66.3	60.9	61.0	65.9	65.8	65.5	65.3	59.6	65.6	65.2	65.0	64.7	67.1	67.2	63.2	61.0	58.9	58.1	<40	<40	56.6	56.2	55.6
29	67.3	66.9	66.4	61.0	61.1	66.0	65.9	65.6	65.4	59.6	65.7	65.3	65.0	64.8	67.2	67.3	63.3	61.1	59.0	58.2	<40	<40	56.7	56.3	55.7
28	67.4	67.0	66.5	61.1	61.2	66.1	66.0	65.7	65.5	59.7	65.7	65.3	65.1	64.9	67.3	67.4	63.4	61.2	59.1	58.3	<40	<40	56.8	56.4	55.8
27	67.5	67.1	66.6	61.2	61.3	66.2	66.0	65.8	65.6	59.8	65.8	65.4	65.2	64.9	67.4	67.5	63.5	61.3	59.2	58.3	<40	<40	56.9	56.5	55.9
26	67.6	67.2	66.7	61.3	61.3	66.3	66.1	65.9	65.7	59.9	66.0	65.5	65.3	65.0	67.5	67.6	63.6	61.4	59.2	58.4	<40	<40	57.0	56.5	56.0
25	67.7	67.3	66.8	61.4	61.5	66.4	66.2	66.0	65.8	60.0	66.0	65.6	65.3	65.1	67.6	67.7	63.7	61.5	59.3	58.5	<40	<40	57.0	56.6	56.1
24	67.8	67.4	66.9	61.5	61.5	66.5	66.3	66.1	65.9	60.1	66.1	65.7	65.4	65.2	67.7	67.8	63.8	61.6	59.4	58.6	<40	<40	57.1	56.7	56.2
23	67.9	67.5	67.0	61.6	61.6	66.6	66.4	66.2	66.0	60.2	66.2	65.8	65.5	65.3	67.8	67.9	63.8	61.7	59.5	58.7	<40	<40	57.3	56.8	56.3
22	68.0	67.6	67.1	61.8	61.8	66.7	66.5	66.3	66.1	60.3	66.3	65.9	65.6	65.4	67.9	68.0	63.9	61.8	59.6	58.8	<40	<40	57.3	56.9	56.3
21	68.1	67.7	67.2	61.9	61.9	66.8	66.6	66.4	66.2	60.4	66.4	66.0	65.6	65.5	67.9	68.0	64.0	61.9	59.7	58.9	<40	<40	57.5	57.0	56.4
20	68.2	67.8	67.3	62.0	62.0	66.9	66.7	66.5	66.3	60.5	66.5	66.0	65.8	65.6	68.1	68.2	64.1	62.0	59.8	59.0	<40	<40	57.6	57.1	56.5
19	68.3	67.9	67.4	62.1	62.1	67.0	66.8	66.6	66.4	60.7	66.6	66.2	65.9	65.6	68.2	68.3	64.3	62.1	60.0	59.1	<40	<40	57.6	57.2	56.6
18	68.4	68.1	67.5	62.2	62.3	67.1	66.9	66.7	66.5	60.8	66.7	66.3	65.9	65.8	68.3	68.3	64.4	62.2	60.1	59.2	<40	<40	57.7	57.3	56.7
17	68.5	68.2	67.7	62.3	62.4	67.2	67.1	66.8	66.6	60.9	66.8	66.3	66.0	65.8	68.4	68.5	64.5	62.3	60.2	59.4	<40	<40	57.8	57.4	56.8
16	68.7	68.3	67.8	62.5	62.5	67.4	67.2	67.0	66.7	61.0	66.9	66.5	66.1	65.9	68.5	68.5	64.6	62.4	60.3	59.4	<40	<40	57.9	57.5	56.9
15	68.8	68.4	67.9	62.6	62.7	67.5	67.4	67.1	66.9	61.2	67.0	66.6	66.2	66.0	68.6	68.7	64.7	62.6	60.4	59.6	<40	<40	58.0	57.6	57.0
14	68.9	68.6	68.0	62.8	62.8	67.6	67.5	67.2	67.0	61.3	67.1	66.6	66.4	66.1	68.7	68.8	64.8	62.7	60.5	59.7	<40	<40	58.1	57.7	57.1
13	69.1	68.7	68.2	63.0	63.0	67.8	67.6	67.3	67.1	61.4	67.3	66.8	66.4	66.2	68.8	68.9	64.9	62.8	60.6	59.8	<40	<40	58.3	57.8	57.2
12	69.2	68.8	68.3	63.1	63.1	67.9	67.7	67.4	67.2	61.5	67.4	66.9	66.6	66.3	68.9	69.0	65.0	62.9	60.7	59.9	<40	<40	58.4	57.9	57.3
11	69.4	69.0	68.4	63.3	63.3	68.0	67.8	67.6	67.3	61.7	67.5	67.0	66.7	66.5	69.1	69.2	65.2	63.1	60.8	60.0	<40	<40	58.5	58.0	57.4
10	69.5	69.1	68.6	63.4	63.4	68.2	68.0	67.7	67.5	61.8	67.6	67.1	66.8	66.6	69.3	69.3	65.3	63.2	61.0	60.1	<40	<40	58.6	58.2	57.5
9	69.6	69.3	68.8	63.6	63.6	68.3	68.2	67.9	67.6	62.0	67.8	67.3	66.9	66.7	69.4	69.5	65.4	63.3	61.1	60.2	<40	<40	58.7	58.3	57.6
8	69.8	69.4	68.9	63.8	63.8	68.5	68.3	68.0	67.8	62.1	67.9	67.4	67.1	66.9	69.5	69.6	65.6	63.4	61.2	60.3	<40	<40	58.8	58.4	57.7
7	70.0	69.6	69.1	63.9	63.9	68.6	68.5	68.2	67.9	62.3	68.1	67.6	67.2	67.0	69.7	69.8	65.7	63.6	61.3	60.5	<40	<40	58.9	58.5	57.8
6	70.1	69.8	69.3	64.1	64.1	68.8	68.6	68.3	68.0	62.3	68.2	67.7	67.4	67.2	69.9	70.0	65.8	63.7	61.4	60.6	<40	<40	59.0	58.5	57.9
5	70.3	70.0	69.4	64.3	64.3	69.0	68.8	68.4	68.1	62.4	68.4	67.9	67.5	67.3	70.0	70.1	66.0	63.8	61.5	60.6	<40	<40	59.0	58.5	57.8
4	67.8	70.1	69.6	64.4	64.5	69.1	68.9	68.6	68.3	62.5	68.5	68.0	67.7	67.5	70.2	70.3	66.1	63.9	61.6	60.6	<40	<40	59.0	58.4	57.7
3	68.0	70.3	69.8	64.6	64.7	69.2	69.0	68.7	68.4	62.7	68.6	68.1	67.8	67.6	70.2	70.3	66.1	63.9	61.5	60.5	<40	<40	58.7	58.1	57.3
2	68.2	65.1	64.6	-	64.9	69.4	69.2	68.8	68.5	62.9	68.7	68.2	67.9	67.8	69.7	69.8	66.2	63.7	61.1	60.1	<40	<40	58.2	57.5	56.6
1	68.4	65.3	64.8	-	65.0	69.6	69.4	69.0	68.6	63.0	68.9	68.4	68.1	67.9	69.9	70.0	65.9	63.2	60.4	59.3	30.4	31.1	57.0	56.1	55.2
Max	70.3	70.3	69.8	64.6	65.0	69.6	69.4	69.0	68.6	63.0	68.9	68.4	68.1	67.9	70.2	70.3	66.2	63.9	61.6	60.6	<40	<40	59.0	58.5	57.9
Min	66.7	65.1	64.6	60.3	60.4	65.3	65.2	65.0	64.8	59.0	65.1	64.7	64.4	64.2	66.6	66.7	62.7	60.6	58.4	57.9	<40	<40	56.0	56.1	55.2

Total	2504.0
Exceedance	0.0
Compliance Rate	100%

Noise sensitive receivers with exceedance (≥70.5 dB(A))
- Noise sensitive receivers applied with fixed glazing

Noise sensitive receivers applied with acoustic window (non-absorptive)

Noise sensitive receivers applied with acoustic window (absorptive)

(These predicted noise levels are the equivalent noise levels at 1m from the external facade after accounting the reduction in noise levels inside the flat offered by the proposed acoustic window)

Floor	R110b	R111a	R111b	R111c	R111d	R112a	R112b	R112c	R112d	R113a	R113b	R114a	R114b	R115a	R115b	R116a	R116b	R117a	R117b	R117c	R118a	R118b	R118c	R119a	R119b
40																									
39																									
38																									
37	43.9	54.5	55.0	55.1	<40	<40	55.1	55.4	55.2	56.2	56.2	55.5	55.7	57.0	57.4	57.5	55.8	55.9	56.0	54.8	52.1	55.9	56.0	55.8	55.6
36	43.7	54.6	55.1	55.2	<40	<40	55.2	55.4	55.2	56.3	56.3	55.5	55.7	57.1	57.4	57.3	55.7	55.8	55.9	54.8	52.1	56.0	56.0	55.9	55.7
35	42.9	54.6	55.1	55.2	<40	<40	55.3	55.4	55.2	56.3	56.3	55.6	55.8	57.2	57.5	57.4	55.7	55.9	56.0	54.9	52.2	56.0	56.1	56.0	55.7
34	43.6	54.7	55.2	55.2	<40	<40	55.4	55.4	55.3	56.4	56.4	55.7	55.8	57.2	57.5	57.4	55.8	55.9	56.0	54.9	52.2	56.1	56.1	56.0	55.8
33	<40	54.8	55.3	55.3	<40	<40	55.4	55.5	55.4	56.4	56.4	55.7	55.9	57.3	57.5	57.5	55.8	56.0	56.1	55.0	52.3	56.2	56.2	56.0	55.8
32	<40	54.9	55.3	55.3	<40	<40	55.5	55.6	55.4	56.5	56.4	55.7	55.9	57.3	57.6	57.6	55.9	56.0	56.2	55.1	52.4	56.2	56.3	56.1	55.9
31	<40	55.0	55.3	55.4	<40	<40	55.6	55.6	55.5	56.6	56.5	55.8	55.9	57.4	57.7	57.6	56.0	56.1	56.2	55.1	52.4	56.3	56.3	56.2	56.0
30	<40	55.0	55.4	55.5	<40	<40	55.7	55.6	55.6	56.6	56.6	55.8	56.0	57.5	57.7	57.7	56.0	56.1	56.3	55.2	52.5	56.3	56.4	56.2	56.0
29	<40	55.1	55.5	55.6	<40	<40	55.8	55.7	55.7	56.7	56.7	55.9	56.1	57.5	57.8	57.7	56.1	56.2	56.3	55.2	52.5	56.4	56.4	56.3	56.1
28	<40	55.2	55.6	55.6	<40	<40	55.8	55.8	55.7	56.8	56.7	56.0	56.1	57.6	57.9	57.8	56.1	56.3	56.4	55.3	52.6	56.4	56.5	56.4	56.2
27	<40	55.3	55.7	55.7	<40	<40	55.9	55.9	55.8	56.8	56.8	56.0	56.2	57.7	57.9	57.8	56.2	56.3	56.4	55.4	52.6	56.5	56.5	56.4	56.2
26	<40	55.3	55.8	55.8	<40	<40	56.0	56.0	55.9	56.9	56.8	56.1	56.3	57.7	58.0	57.9	56.3	56.4	56.5	55.4	52.7	56.5	56.6	56.5	56.3
25	<40	55.4	55.8	55.9	<40	<40	56.1	56.1	56.0	57.0	56.9	56.2	56.3	57.8	58.0	57.9	56.3	56.4	56.5	55.5	52.7	56.6	56.7	56.6	56.4
24	<40	55.5	55.9	56.0	<40	<40	56.2	56.2	56.1	57.0	57.0	56.2	56.4	57.9	58.1	57.9	56.4	56.5	56.6	55.5	52.8	56.7	56.7	56.6	56.4
23	<40	55.6	56.0	56.1	<40	<40	56.3	56.3	56.1	57.1	57.1	56.3	56.5	57.9	58.2	58.0	56.4	56.5	56.6	55.6	52.8	56.7	56.8	56.7	56.4
22	<40	55.7	56.1	56.2	<40	<40	56.3	56.4	56.2	57.2	57.1	56.4	56.5	58.0	58.2	58.1	56.5	56.6	56.7	55.6	52.9	56.8	56.8	56.8	56.5
21	<40	55.8	56.2	56.3	<40	<40	56.4	56.4	56.3	57.3	57.2	56.4	56.6	58.0	58.3	58.1	56.5	56.6	56.8	55.7	52.9	56.8	56.9	56.8	56.5
20	<40	55.9	56.3	56.4	<40	<40	56.5	56.5	56.4	57.3	57.2	56.5	56.6	58.0	58.3	58.2	56.6	56.7	56.8	55.8	53.0	56.9	56.9	56.9	56.6
19	<40	56.0	56.4	56.5	<40	<40	56.6	56.6	56.5	57.4	57.2	56.5	56.6	58.1	58.3	58.2	56.7	56.7	56.9	55.8	53.1	57.0	57.0	56.9	56.7
18	<40	56.1	56.5	56.5	<40	<40	56.7	56.7	56.6	57.5	57.3	56.5	56.7	58.1	58.4	58.3	56.7	56.8	56.9	55.9	53.1	57.0	57.0	56.9	56.7
17	<40	56.2	56.6	56.6	<40	<40	56.8	56.8	56.6	57.4	57.4	56.6	56.7	58.1	58.3	58.3	56.8	56.8	57.0	55.9	53.2	57.1	57.1	57.0	56.8
16	<40	56.3	56.7	56.7	<40	<40	56.9	56.8	56.7	57.5	57.3	56.6	56.6	58.1	58.3	58.4	56.8	56.9	57.0	56.0	53.3	57.1	57.2	57.0	56.8
15	<40	56.4	56.8	56.8	<40	<40	57.0	56.9	56.8	57.5	57.4	56.4	56.6	58.0	58.2	58.4	56.9	56.9	57.1	56.0	53.3	57.2	57.2	57.1	56.9
14	<40	56.5	56.9	56.9	<40	<40	57.0	57.0	56.9	57.5	57.2	56.4	56.4	58.0	58.2	58.4	56.9	57.0	57.1	56.1	53.4	57.2	57.3	57.2	56.9
13	<40	56.6	57.0	57.0	<40	<40	57.1	57.1	56.9	57.4	57.1	56.2	56.3	57.8	58.1	58.5	57.0	57.0	57.2	56.1	53.4	57.3	57.3	57.2	57.0
12	<40	56.7	57.1	57.1	<40	<40	57.2	57.1	57.0	57.3	57.0	56.0	56.0	57.7	57.9	58.5	57.0	57.1	57.2	56.2	53.5	57.3	57.4	57.3	57.0
11	<40	56.8	57.2	57.2	<40	<40	57.2	57.1	57.0	57.2	56.8	55.8	55.7	57.5	57.7	58.5	57.0	57.1	57.3	56.2	53.5	57.4	57.4	57.3	57.1
10	<40	56.9	57.3	57.3	<40	<40	57.3	57.2	56.9	56.9	56.5	55.2	55.2	57.0	57.2	58.5	57.1	57.2	57.3	56.3	53.6	57.4	57.4	57.4	57.2
9	<40	56.9	57.4	57.3	<40	<40	57.3	57.1	56.8	56.5	55.8	54.4	54.1	56.3	56.4	58.4	57.1	57.2	57.3	56.3	53.6	57.5	57.5	57.4	57.2
8	<40	57.0	57.4	57.4	<40	<40	57.2	57.0	56.6	55.7	54.6	52.7	52.5	55.4	55.8	58.3	57.2	57.2	57.4	56.3	53.7	57.5	57.5	57.5	57.2
7	<40	57.0	57.4	57.3	<40	<40	57.0	56.7	56.2	54.5	53.3	51.2	50.9	54.6	55.1	58.0	57.2	57.3	57.4	56.4	53.7	57.6	57.6	57.5	57.3
6	<40	57.0	57.2	57.1	<40	<40	56.5	56.2	55.6	53.3	51.3	49.4	49.2	53.7	54.4	57.8	57.2	57.3	57.5	56.4	53.7	57.6	57.6	57.6	57.3
5	<40	56.7	57.0	56.8	<40	<40	55.9	55.2	54.2	52.3	49.5	48.0	47.8	52.9	53.4	57.6	57.3	57.3	57.5	56.5	53.8	57.6	57.7	57.6	57.4
4	<40	56.4	56.5	56.1	<40	<40	54.3	53.5	52.5	51.6	48.1	46.7	46.6	52.2	52.8	57.4	57.2	57.4	57.5	56.5	53.7	57.7	57.7	57.6	57.4
3	<40	55.7	55.2	54.4	<40	<40	52.5	51.5	50.5	51.1	46.8	45.7	45.5	51.8	52.3	57.3	57.1	57.3	57.5	56.4	53.6	57.7	57.7	57.6	57.4
2	<40	54.2	53.4	52.5	<40	<40	50.4	49.7	48.9	50.8	45.7	44.6	44.5	51.5	52.0	57.1	57.0	57.1	57.3	56.2	53.2	57.6	57.6	57.6	57.3
1	33.3	52.2	51.1	50.5	30.4	31.1	48.8	48.3	47.8															57.3	57.1
Max	43.9	57.0	57.4	57.4	<40	<40	57.3	57.2	57.0	57.5	57.4	56.6	56.7	58.1	58.4	58.5	57.3	57.4	57.5	56.5	53.8	57.7	57.7	57.6	57.4
Min	<40	52.2	51.1	50.5	<40	<40	48.8	48.3	47.8	50.8	45.7	44.6	44.5	51.5	52.0	57.1	55.7	55.8	55.9	54.8	52.1	55.9	56.0	55.8	55.6

Noise sensitive receivers with exceedance (≥70.5 dB(A))

\- Noise sensitive receivers applied with fixed glazing

Noise sensitive receivers applied with acoustic window (non-absorptive)

Noise sensitive receivers applied with acoustic window (absorptive)

(These predicted noise levels are the equivalent noise levels at 1m from the external facade after accounting the reduction in noise levels inside the flat offered by the proposed acoustic window)

Floor	R120a	R120b	R121a	R121b	R122a	R122b	R122c	R123a	R123b	R123c	R124a	R124b	R124c	R125a	R125b	R125c	R125d	R126a	R126b	R126c	R127a	R127b	R128a	R128b	R129a
40																									
39																									
38																									
37	<40	56.3	56.6	53.1	<40	57.4	57.8	58.2	58.6	<40	<40	59.8	60.7	65.3	65.0	64.6	61.0	61.7	64.3	64.3	64.1	63.1	63.5	63.6	63.4
36	<40	56.3	56.7	53.1	<40	57.5	57.8	58.3	58.7	<40	<40	59.9	60.8	65.4	65.0	64.7	61.1	61.8	64.4	64.3	64.2	63.1	63.6	63.7	63.5
35	<40	56.4	56.8	53.2	<40	57.6	57.9	58.3	58.8	<40	<40	60.0	60.9	65.4	65.1	64.8	61.2	61.9	64.5	64.4	64.2	63.2	63.6	63.7	63.6
34	<40	56.5	56.8	53.2	<40	57.6	58.0	58.4	58.8	<40	<40	60.0	61.0	65.5	65.2	64.9	61.2	61.9	64.6	64.5	64.3	63.3	63.7	63.8	63.6
33	<40	56.5	56.9	53.3	<40	57.7	58.0	58.5	58.9	<40	<40	60.1	61.0	65.6	65.2	64.9	61.3	62.0	64.6	64.5	64.4	63.3	63.8	63.9	63.7
32	<40	56.6	56.9	53.4	<40	57.8	58.1	58.5	59.0	<40	<40	60.2	61.1	65.7	65.3	65.0	61.4	62.1	64.7	64.6	64.4	63.4	63.8	63.9	63.8
31	<40	56.7	57.0	53.4	<40	57.8	58.2	58.6	59.1	<40	<40	60.2	61.2	65.7	65.4	65.1	61.4	62.2	64.8	64.7	64.5	63.5	63.9	64.0	63.8
30	<40	56.7	57.1	53.5	<40	57.9	58.2	58.7	59.1	<40	<40	60.3	61.2	65.8	65.5	65.1	61.5	62.2	64.8	64.8	64.6	63.5	64.0	64.1	63.9
29	<40	56.8	57.1	53.6	<40	58.0	58.3	58.8	59.2	<40	<40	60.4	61.3	65.9	65.5	65.2	61.6	62.3	64.9	64.8	64.7	63.6	64.1	64.1	64.0
28	<40	56.9	57.2	53.7	<40	58.0	58.4	58.8	59.3	<40	<40	60.5	61.4	66.0	65.6	65.3	61.7	62.4	65.0	64.9	64.7	63.7	64.1	64.2	64.1
27	<40	56.9	57.3	53.7	<40	58.1	58.4	58.9	59.3	<40	<40	60.5	61.5	66.0	65.7	65.4	61.7	62.5	65.1	65.0	64.8	63.7	64.2	64.3	64.1
26	<40	57.0	57.3	53.8	<40	58.2	58.5	59.0	59.4	<40	<40	60.6	61.6	66.1	65.8	65.4	61.8	62.5	65.1	65.0	64.9	63.8	64.3	64.4	64.2
25	<40	57.0	57.4	53.8	<40	58.2	58.6	59.1	59.5	<40	<40	60.7	61.6	66.2	65.9	65.5	61.8	62.6	65.2	65.1	65.0	63.9	64.4	64.4	64.3
24	<40	57.1	57.4	53.9	<40	58.3	58.7	59.1	59.6	<40	<40	60.8	61.7	66.3	65.9	65.6	61.9	62.7	65.3	65.2	65.0	64.0	64.4	64.5	64.4
23	<40	57.1	57.5	54.0	<40	58.4	58.7	59.2	59.6	<40	<40	60.9	61.8	66.4	66.0	65.7	62.0	62.8	65.4	65.3	65.1	64.1	64.5	64.6	64.4
22	<40	57.2	57.6	54.0	<40	58.4	58.8	59.3	59.7	<40	<40	60.9	61.9	66.5	66.1	65.8	62.1	62.8	65.5	65.4	65.2	64.1	64.6	64.7	64.5
21	<40	57.3	57.6	54.1	<40	58.5	58.9	59.3	59.8	<40	<40	61.0	62.0	66.5	66.2	65.9	62.1	62.9	65.6	65.4	65.2	64.2	64.6	64.8	64.6
20	<40	57.3	57.7	54.1	<40	58.6	58.9	59.4	59.9	<40	<40	61.1	62.0	66.6	66.3	66.0	62.2	63.0	65.6	65.5	65.3	64.3	64.7	64.8	64.7
19	<40	57.4	57.8	54.2	<40	58.6	59.0	59.5	59.9	<40	<40	61.2	62.1	66.7	66.3	66.0	62.3	63.1	65.7	65.6	65.4	64.4	64.8	64.9	64.7
18	<40	57.4	57.8	54.3	<40	58.7	59.1	59.6	60.0	<40	<40	61.3	62.2	66.8	66.4	66.1	62.4	63.2	65.8	65.7	65.5	64.5	64.9	65.0	64.8
17	<40	57.5	57.9	54.3	<40	58.8	59.2	59.7	60.1	<40	<40	61.3	62.3	66.9	66.5	66.2	62.5	63.2	65.9	65.8	65.6	64.5	65.0	65.1	64.9
16	<40	57.6	57.9	54.4	<40	58.8	59.2	59.7	60.2	<40	<40	61.4	62.3	67.0	66.6	66.3	62.5	63.3	66.0	65.8	65.6	64.6	65.0	65.1	65.0
15	<40	57.6	58.0	54.5	<40	58.9	59.3	59.8	60.2	<40	<40	61.5	62.4	67.0	66.7	66.4	62.6	63.4	66.0	65.9	65.7	64.7	65.1	65.2	65.0
14	<40	57.7	58.1	54.5	<40	59.0	59.4	59.8	60.3	<40	<40	61.6	62.5	67.1	66.8	66.5	62.7	63.5	66.1	66.0	65.8	64.8	65.2	65.3	65.1
13	<40	57.8	58.1	54.6	<40	59.0	59.4	59.9	60.4	<40	<40	61.6	62.6	67.2	66.9	66.5	62.8	63.6	66.2	66.1	65.9	64.9	65.3	65.4	65.2
12	<40	57.8	58.2	54.6	<40	59.1	59.5	60.0	60.5	<40	<40	61.7	62.6	67.3	67.0	66.6	62.8	63.6	66.3	66.2	66.0	64.9	65.4	65.4	65.2
11	<40	57.9	58.2	54.7	<40	59.2	59.6	60.1	60.5	<40	<40	61.8	62.7	67.4	67.1	66.7	62.9	63.7	66.4	66.3	66.1	65.0	65.4	65.5	65.3
10	<40	57.9	58.3	54.8	<40	59.2	59.6	60.2	60.6	<40	<40	61.8	62.8	67.5	67.1	66.8	63.0	63.8	66.4	66.3	66.1	65.1	65.5	65.6	65.4
9	<40	58.0	58.3	54.8	<40	59.3	59.7	60.2	60.7	<40	<40	61.9	62.8	67.6	67.2	66.9	63.1	63.9	66.5	66.4	66.2	65.2	65.6	65.7	65.5
8	<40	58.0	58.4	54.9	<40	59.4	59.8	60.3	60.7	<40	<40	62.0	62.9	67.7	67.3	66.9	63.1	63.9	66.6	66.5	66.3	65.2	65.6	65.7	65.5
7	<40	58.1	58.5	54.9	<40	59.4	59.8	60.4	60.8	<40	<40	62.1	63.0	67.7	67.4	67.0	63.2	64.0	66.7	66.6	66.4	65.3	65.7	65.8	65.6
6	<40	58.1	58.5	55.0	<40	59.5	59.9	60.4	60.8	<40	<40	62.1	63.1	67.8	67.4	67.1	63.2	64.1	66.7	66.6	66.4	65.3	65.7	65.8	65.6
5	<40	58.2	58.5	55.0	<40	59.6	60.0	60.5	60.9	<40	<40	62.2	63.2	67.9	67.5	67.1	63.2	64.1	66.8	66.6	66.4	65.4	65.7	65.9	65.7
4	<40	58.2	58.6	55.1	<40	59.6	60.0	60.6	61.0	<40	<40	62.3	63.2	67.9	67.5	67.1	63.2	64.2	66.8	66.6	66.4	65.3	65.8	65.9	65.7
3	<40	58.2	58.6	55.1	<40	59.7	60.1	60.6	61.1	<40	<40	62.3	63.3	67.9	67.5	67.2	63.0	64.2	66.8	66.6	66.4	65.3	65.7	65.8	65.6
2	<40	58.2	58.7	55.1	<40	59.7	60.1	60.6	61.1	<40	<40	62.4	63.4	67.9	67.5	67.1	63.0	64.1	66.7	66.5	66.3	65.1	65.5	65.7	65.5
1	32.3	58.2	58.6	55.0	29.7	59.7	60.2	60.7	61.2	27.4	28.0	62.5	63.4	68.0	67.6	67.1	62.8	64.0	66.6	66.5	66.2	64.9	65.4	65.5	65.2
Max	<40	58.2	58.7	55.1	<40	59.7	60.2	60.7	61.2	<40	<40	62.5	63.4	68.0	67.6	67.2	63.2	64.2	66.8	66.6	66.4	65.4	65.8	65.9	65.7
Min	<40	56.3	56.6	53.1	<40	57.4	57.8	58.2	58.6	<40	<40	59.8	60.7	65.3	65.0	64.6	61.0	61.7	64.3	64.3	64.1	63.1	63.5	63.6	63.4

Noise sensitive receivers with exceedance (≥70.5 dB(A))

\- Noise sensitive receivers applied with fixed glazing

Noise sensitive receivers applied with acoustic window (non-absorptive)

Noise sensitive receivers applied with acoustic window (absorptive)

(These predicted noise levels are the equivalent noise levels at 1m from the external facade after accounting the reduction in noise levels inside the flat offered by the proposed acoustic window)

Floor	R129b	R130a	R130b	R130c	R130d	R131a	R131b	R131c	R131d	R132a	R132b	R133a	R133b	R133c	R134a	R134b	R134c	R301a	R301b	R302a	R302b	R303a	R303b	R304a	R304b
40																									
39																									
38																									
37	62.2	62.9	63.0	62.8	60.4	59.5	62.5	62.3	61.8	58.4	62.0	62.3	62.5	56.6	55.0	63.2	63.7	66.9	66.4	63.3	63.5	63.9	64.4	58.9	64.7
36	62.3	63.0	63.0	62.9	60.5	59.6	62.6	62.4	61.9	58.5	62.0	62.4	62.6	56.7	55.1	63.3	63.8	67.0	66.5	63.3	63.5	64.0	64.5	58.9	64.8
35	62.4	63.1	63.1	63.0	60.5	59.6	62.7	62.4	61.9	58.5	62.1	62.4	62.7	56.7	55.1	63.4	63.8	67.1	66.6	63.4	63.6	64.1	64.5	59.0	64.9
34	62.4	63.1	63.2	63.0	60.6	59.7	62.7	62.5	62.0	58.6	62.2	62.5	62.8	56.7	55.2	63.5	63.9	67.1	66.6	63.5	63.7	64.1	64.6	59.1	64.9
33	62.5	63.2	63.2	63.1	60.7	59.7	62.8	62.6	62.1	58.6	62.2	62.6	62.8	56.8	55.2	63.5	64.0	67.2	66.7	63.6	63.8	64.2	64.7	59.2	65.0
32	62.6	63.3	63.3	63.2	60.7	59.8	62.9	62.7	62.1	58.7	62.3	62.7	62.9	56.9	55.3	63.6	64.1	67.3	66.7	63.7	63.9	64.3	64.8	59.3	65.1
31	62.6	63.3	63.4	63.3	60.8	59.9	62.9	62.7	62.2	58.8	62.4	62.7	63.0	56.9	55.3	63.7	64.1	67.3	66.8	63.8	63.9	64.4	64.9	59.3	65.1
30	62.7	63.4	63.4	63.3	60.9	60.0	63.0	62.8	62.3	58.8	62.4	62.8	63.0	57.0	55.4	63.8	64.2	67.4	66.9	63.8	64.0	64.4	65.0	59.3	65.2
29	62.8	63.5	63.5	63.4	61.0	60.0	63.1	62.9	62.3	58.9	62.5	62.9	63.1	57.1	55.5	63.8	64.3	67.5	67.0	63.9	64.1	64.5	65.0	59.4	65.3
28	62.9	63.5	63.6	63.5	61.0	60.1	63.2	62.9	62.4	58.9	62.6	63.0	63.2	57.1	55.5	63.9	64.4	67.6	67.1	64.0	64.2	64.6	65.1	59.5	65.3
27	63.0	63.6	63.7	63.5	61.1	60.2	63.2	63.0	62.5	59.0	62.7	63.0	63.3	57.2	55.6	64.0	64.5	67.6	67.1	64.1	64.3	64.7	65.2	59.6	65.4
26	63.0	63.7	63.7	63.6	61.2	60.2	63.3	63.1	62.6	59.1	62.7	63.1	63.4	57.3	55.7	64.1	64.6	67.8	67.2	64.2	64.4	64.8	65.3	59.6	65.5
25	63.1	63.8	63.8	63.7	61.3	60.3	63.4	63.2	62.6	59.1	62.8	63.2	63.4	57.4	55.8	64.1	64.6	67.8	67.3	64.3	64.5	64.9	65.4	59.7	65.5
24	63.2	63.9	63.9	63.8	61.3	60.4	63.5	63.2	62.7	59.2	62.9	63.3	63.5	57.4	55.8	64.2	64.7	67.9	67.4	64.4	64.6	65.0	65.5	59.8	65.6
23	63.3	63.9	64.0	63.8	61.4	60.4	63.5	63.3	62.8	59.2	63.0	63.4	63.6	57.5	55.9	64.3	64.8	68.0	67.5	64.5	64.6	65.1	65.6	59.9	65.7
22	63.3	64.0	64.0	63.9	61.5	60.5	63.6	63.4	62.9	59.3	63.1	63.4	63.7	57.6	55.9	64.4	64.9	68.0	67.5	64.6	64.8	65.2	65.7	60.0	65.8
21	63.4	64.1	64.1	64.0	61.5	60.6	63.7	63.5	63.0	59.4	63.1	63.5	63.7	57.6	56.0	64.5	65.0	68.1	67.6	64.7	64.9	65.3	65.8	60.1	65.9
20	63.5	64.1	64.2	64.1	61.6	60.7	63.8	63.5	63.0	59.5	63.2	63.6	63.8	57.7	56.1	64.6	65.1	68.2	67.7	64.8	65.0	65.4	65.9	60.1	66.0
19	63.6	64.2	64.3	64.1	61.7	60.7	63.9	63.6	63.1	59.5	63.3	63.6	63.9	57.8	56.2	64.6	65.2	68.3	67.8	64.9	65.1	65.5	66.0	60.2	66.0
18	63.6	64.3	64.3	64.2	61.8	60.8	63.9	63.7	63.2	59.6	63.4	63.7	64.0	57.8	56.2	64.8	65.2	68.4	67.9	65.0	65.2	65.6	66.1	60.3	66.1
17	63.7	64.4	64.4	64.3	61.8	60.9	64.0	63.8	63.2	59.6	63.4	63.8	64.1	57.9	56.3	64.9	65.3	68.5	68.0	65.1	65.3	65.7	66.2	60.4	66.2
16	63.8	64.4	64.5	64.4	61.9	60.9	64.1	63.8	63.3	59.7	63.5	63.9	64.1	58.0	56.4	64.9	65.4	68.6	68.1	65.2	65.4	65.8	66.3	60.5	66.3
15	63.9	64.5	64.5	64.5	62.0	61.0	64.2	63.9	63.4	59.8	63.6	64.0	64.2	58.1	56.4	65.0	65.5	68.8	68.2	65.3	65.5	65.9	66.4	60.6	66.4
14	63.9	64.6	64.6	64.5	62.1	61.1	64.2	64.0	63.5	59.8	63.7	64.1	64.3	58.1	56.5	65.1	65.6	68.9	68.4	65.4	65.6	66.0	66.5	60.7	66.5
13	64.0	64.6	64.7	64.6	62.1	61.1	64.3	64.1	63.6	59.9	63.8	64.2	64.4	58.2	56.6	65.2	65.7	69.0	68.5	65.5	65.7	66.1	66.6	60.8	66.6
12	64.1	64.7	64.8	64.7	62.2	61.2	64.4	64.2	63.6	60.0	63.8	64.2	64.5	58.2	56.7	65.3	65.8	69.1	68.6	65.6	65.8	66.2	66.7	60.9	66.7
11	64.2	64.8	64.9	64.7	62.3	61.3	64.5	64.3	63.7	60.0	63.9	64.3	64.6	58.3	56.7	65.4	65.9	69.2	68.7	65.7	65.9	66.3	66.7	61.1	66.7
10	64.2	64.9	64.9	64.8	62.4	61.3	64.5	64.3	63.8	60.1	64.0	64.4	64.6	58.4	56.8	65.5	66.0	69.4	68.8	65.8	65.9	66.3	66.8	61.2	66.8
9	64.3	64.9	65.0	64.9	62.4	61.4	64.6	64.4	63.8	60.1	64.0	64.5	64.7	58.4	56.8	65.6	66.1	69.4	69.0	65.9	66.0	66.4	67.0	61.3	66.9
8	64.3	65.0	65.1	64.9	62.5	61.4	64.7	64.5	63.9	60.2	64.1	64.6	64.9	58.5	56.9	65.6	66.2	69.6	69.1	66.0	66.1	66.5	67.0	61.4	67.1
7	64.4	65.0	65.1	65.0	62.6	61.5	64.8	64.5	64.0	60.2	64.2	64.6	64.9	58.5	56.9	65.7	66.3	69.7	69.2	66.0	66.2	66.6	67.1	61.4	67.2
6	64.5	65.1	65.2	65.1	62.6	61.6	64.8	64.6	64.1	60.3	64.3	64.7	65.0	58.6	57.0	65.8	66.4	69.8	69.3	66.1	66.3	66.7	67.2	61.5	67.3
5	64.5	65.1	65.2	65.1	62.7	61.6	64.9	64.7	64.1	60.3	64.4	64.8	65.1	58.6	57.0	65.9	66.5	69.9	69.5	66.3	66.4	66.8	67.3	61.6	67.4
4	64.5	65.2	65.3	65.2	62.7	61.7	65.0	64.7	64.2	60.4	64.4	64.9	65.1	58.7	57.1	66.0	66.6	70.1	69.6	66.4	66.5	66.9	67.4	61.6	67.4
3	64.4	65.1	65.2	65.2	62.7	61.7	65.0	64.8	64.2	60.4	64.5	64.9	65.2	58.7	57.1	66.1	66.6	70.3	69.7	66.5	66.6	67.0	67.5	61.7	67.4
2	64.2	65.0	65.1	65.1	62.7	61.6	64.9	64.8	64.2	60.3	64.5	65.0	65.3	58.8	57.2	66.2	66.8	70.4	69.9	66.6	66.7	67.2	67.6	61.7	67.5
1	63.8	64.6	64.8	64.7	62.5	61.3	64.7	64.6	64.1	60.0	64.5	65.0	65.3	58.7	57.2	66.2	66.8	-	70.0	66.7	66.8	67.3	67.7	61.7	67.5
Max	64.5	65.2	65.3	65.2	62.7	61.7	65.0	64.8	64.2	60.4	64.5	65.0	65.3	58.8	57.2	66.2	66.8	70.4	70.0	66.7	66.8	67.3	67.7	61.7	67.5
Min	62.2	62.9	63.0	62.8	60.4	59.5	62.5	62.3	61.8	58.4	62.0	62.3	62.5	56.6	55.0	63.2	63.7	66.9	66.4	63.3	63.5	63.9	64.4	58.9	64.7

Noise sensitive receivers with exceedance (≥70.5 dB(A))

\- Noise sensitive receivers applied with fixed glazing

Noise sensitive receivers applied with acoustic window (non-absorptive)

Noise sensitive receivers applied with acoustic window (absorptive)

(These predicted noise levels are the equivalent noise levels at 1m from the external facade after accounting the reduction in noise levels inside the flat offered by the proposed acoustic window)

Floor	R304c	R305a	R305b	R305c	R306a	R306b	R306c	R306d	R307a	R307b	R307c	R308a	R308b	R308c	R309a	R309b	R310a	R310b	R310c	R310d	R311a	R311b	R311c	R311d	R312a
40																									
39																									
38																									
37	65.0	65.3	65.5	60.1	60.6	65.9	66.3	66.6	63.5	63.0	56.3	58.0	62.4	62.2	61.9	59.4	61.7	62.0	62.2	60.3	60.2	62.5	62.5	62.5	61.1
36	65.1	65.4	65.6	60.2	60.7	66.0	66.4	66.7	63.6	63.1	56.4	58.1	62.5	62.3	62.0	59.5	61.8	62.1	62.3	60.4	60.3	62.6	62.6	62.6	61.1
35	65.2	65.4	65.7	60.2	60.7	66.1	66.5	66.8	63.7	63.2	56.5	58.2	62.6	62.4	62.1	59.6	61.9	62.2	62.4	60.5	60.4	62.7	62.7	62.6	61.2
34	65.3	65.5	65.7	60.3	60.7	66.2	66.5	66.8	63.8	63.3	56.5	58.3	62.7	62.4	62.2	59.7	62.0	62.3	62.5	60.5	60.4	62.7	62.8	62.7	61.3
33	65.3	65.6	65.8	60.4	60.8	66.2	66.6	66.9	63.9	63.4	56.6	58.4	62.8	62.5	62.3	59.7	62.1	62.4	62.6	60.6	60.5	62.8	62.9	62.8	61.3
32	65.4	65.6	65.8	60.5	60.9	66.3	66.7	67.0	64.0	63.5	56.2	58.1	62.9	62.6	62.4	59.8	62.2	62.5	62.7	60.7	60.6	62.9	62.9	62.8	61.4
31	65.4	65.7	65.9	60.5	60.9	66.3	66.7	67.0	64.1	63.6	56.3	58.2	63.0	62.7	62.5	59.9	62.3	62.6	62.8	60.8	60.7	63.0	63.0	62.9	61.5
30	65.5	65.8	66.0	60.6	61.0	66.4	66.8	67.1	64.2	63.7	56.4	58.3	63.1	62.8	62.6	60.0	62.4	62.7	62.9	60.9	60.8	63.1	63.1	63.0	61.6
29	65.6	65.8	66.1	60.7	61.0	66.5	66.9	67.2	64.3	63.8	56.5	58.4	63.2	63.0	62.7	60.1	62.5	62.8	63.0	60.9	60.9	63.2	63.2	63.1	61.6
28	65.6	65.9	66.1	60.7	61.0	66.5	66.9	67.3	64.4	63.9	56.6	58.5	63.3	63.1	62.8	60.2	62.6	62.9	63.1	61.0	61.0	63.3	63.3	63.2	61.7
27	65.7	65.9	66.2	60.8	61.0	66.6	67.0	67.4	64.5	64.0	56.7	58.7	63.4	63.2	62.9	60.3	62.7	63.0	63.2	61.1	61.0	63.4	63.4	63.3	61.7
26	65.8	66.0	66.2	60.9	61.1	66.7	67.1	67.4	64.6	64.2	56.8	58.8	63.5	63.3	63.0	60.4	62.8	63.1	63.3	61.2	61.1	63.5	63.5	63.4	61.8
25	65.8	66.1	66.3	60.9	61.1	66.8	67.2	67.5	64.8	64.3	56.9	58.9	63.6	63.4	63.1	60.5	62.9	63.2	63.4	61.3	61.2	63.6	63.6	63.5	61.9
24	65.9	66.2	66.4	61.0	61.2	66.8	67.2	67.6	64.9	64.4	57.1	59.0	63.7	63.5	63.2	60.6	63.0	63.3	63.5	61.5	61.3	63.7	63.7	63.6	62.0
23	66.0	66.2	66.4	61.1	61.2	66.9	67.3	67.7	65.0	64.5	57.2	59.1	63.9	63.6	63.3	60.8	63.1	63.4	63.6	61.6	61.5	63.8	63.8	63.7	62.1
22	66.1	66.3	66.5	61.2	61.3	67.0	67.4	67.8	65.1	64.7	57.3	59.2	64.0	63.8	63.4	60.9	63.2	63.5	63.7	61.7	61.6	63.9	63.9	63.8	62.1
21	66.1	66.4	66.6	61.3	61.4	67.1	67.5	67.9	65.3	64.8	57.5	59.4	64.1	63.9	63.6	61.0	63.4	63.7	63.9	61.8	61.7	64.0	64.0	63.9	62.2
20	66.2	66.5	66.7	61.4	61.5	67.2	67.6	68.0	65.4	64.9	57.6	59.5	64.3	64.0	63.7	61.1	63.5	63.8	64.0	61.9	61.8	64.1	64.1	64.0	62.4
19	66.3	66.6	66.8	61.5	61.6	67.3	67.7	68.1	65.5	65.1	57.7	59.6	64.4	64.2	63.8	61.2	63.6	63.9	64.1	62.0	61.9	64.2	64.2	64.1	62.5
18	66.5	66.7	66.9	61.6	61.6	67.4	67.8	68.2	65.7	65.2	57.9	59.8	64.5	64.3	63.9	61.4	63.7	64.0	64.2	62.2	62.1	64.3	64.3	64.2	62.6
17	66.5	66.8	67.0	61.7	61.7	67.5	68.0	68.3	65.8	65.4	58.0	59.9	64.7	64.4	64.1	61.5	63.9	64.2	64.3	62.3	62.2	64.5	64.4	64.3	62.7
16	66.6	66.9	67.1	61.7	61.8	67.6	68.0	68.4	66.0	65.5	58.2	60.1	64.8	64.6	64.2	61.7	64.0	64.3	64.4	62.4	62.3	64.6	64.6	64.5	62.8
15	66.7	67.0	67.2	61.8	61.9	67.7	68.2	68.5	66.1	65.7	58.3	60.2	65.0	64.7	64.4	61.8	64.1	64.4	64.5	62.5	62.4	64.7	64.7	64.6	63.0
14	66.8	67.0	67.3	62.0	62.0	67.8	68.3	68.6	66.3	65.9	58.5	60.4	65.1	64.9	64.5	61.9	64.3	64.6	64.7	62.7	62.6	64.9	64.8	64.7	63.1
13	66.9	67.1	67.4	62.1	62.1	67.9	68.4	68.7	66.5	66.0	58.6	60.5	65.2	65.0	64.7	62.0	64.4	64.6	64.8	62.7	62.7	65.0	65.0	64.8	63.2
12	67.0	67.2	67.4	62.2	62.2	68.0	68.5	68.8	66.7	66.2	58.8	60.7	65.4	65.2	64.8	62.2	64.5	64.8	65.0	62.9	62.8	65.1	65.0	64.9	63.4
11	67.0	67.3	67.5	62.3	62.3	68.1	68.6	68.9	66.9	66.4	58.9	60.8	65.6	65.4	65.0	62.3	64.6	64.9	65.1	63.0	63.0	65.2	65.2	65.0	63.5
10	67.1	67.4	67.6	62.4	62.4	68.2	68.7	69.1	67.1	66.6	59.1	61.0	65.7	65.5	65.1	62.5	64.8	65.1	65.3	63.1	63.1	65.3	65.3	65.2	63.6
9	67.2	67.5	67.7	62.5	62.5	68.3	68.8	69.2	67.3	66.8	59.2	61.2	65.9	65.7	65.3	62.6	64.9	65.2	65.4	63.3	63.2	65.5	65.5	65.3	63.7
8	67.3	67.6	67.9	62.6	62.6	68.4	68.9	69.4	67.5	67.0	59.4	61.4	66.1	65.8	65.5	62.8	65.1	65.3	65.5	63.4	63.3	65.6	65.6	65.4	63.9
7	67.5	67.8	68.0	62.7	62.8	68.5	69.1	69.5	67.7	67.2	59.5	61.5	66.3	66.0	65.6	62.9	65.2	65.5	65.6	63.6	63.5	65.7	65.7	65.5	64.0
6	67.6	67.9	68.1	62.8	62.9	68.7	69.2	69.7	67.9	67.4	59.6	61.7	66.5	66.2	65.7	63.0	65.2	65.5	65.7	63.7	63.6	65.8	65.8	65.6	64.1
5	67.7	68.0	68.3	62.9	63.0	68.8	69.4	69.9	68.2	67.7	59.8	61.9	66.7	66.4	65.9	63.2	65.3	65.6	65.8	63.9	63.8	65.9	65.9	65.8	64.2
4	67.8	68.1	68.4	63.0	63.1	69.0	69.5	70.0	68.4	67.8	60.0	62.0	66.8	66.5	65.9	63.4	65.5	65.7	65.9	64.0	63.9	66.1	66.0	65.9	64.4
3	67.8	68.2	68.5	63.1	63.2	69.1	69.7	70.2	68.7	68.1	60.1	62.2	67.0	66.6	66.0	63.5	65.5	65.8	66.0	64.1	64.1	66.2	66.2	66.0	64.5
2	67.8	68.1	68.5	63.2	63.3	69.2	69.8	70.3	68.9	68.3	60.3	62.4	67.1	66.6	66.1	63.6	65.6	66.0	66.2	64.2	64.2	66.3	66.3	66.2	64.6
1	67.8	68.1	68.5	63.3	63.4	69.3	69.9	67.8	69.2	68.5	60.5	62.6	67.1	66.6	66.2	63.8	65.8	66.1	66.3	64.4	64.3	66.5	66.4	66.3	64.8
Max	67.8	68.2	68.5	63.3	63.4	69.3	69.9	70.3	69.2	68.5	60.5	62.6	67.1	66.6	66.2	63.8	65.8	66.1	66.3	64.4	64.3	66.5	66.4	66.3	64.8
Min	65.0	65.3	65.5	60.1	60.6	65.9	66.3	66.6	63.5	63.0	56.2	58.0	62.4	62.2	61.9	59.4	61.7	62.0	62.2	60.3	60.2	62.5	62.5	62.5	61.1

Noise sensitive receivers with exceedance (≥70.5 dB(A))
Noise sensitive receivers applied with fixed glazing
Noise sensitive receivers applied with acoustic window (non-absorptive)
Noise sensitive receivers applied with acoustic window (absorptive)

(These predicted noise levels are the equivalent noise levels at 1m from the external facade after accounting the reduction in noise levels inside the flat offered by the proposed acoustic window)

Floor	R312b	R313a	R313b	R314a	R314b	R315a	R315b	R315c	R316a	R316b	R316c	R316d	R317a	R317b	R317c	R318a	R318b	R318c	R319a	R319b	R319c	R320a	R320b	R321a	R321b
40																									
39																									
38																									
37	63.0	63.3	63.2	62.4	64.0	64.2	64.3	61.0	61.0	64.5	64.9	65.1	60.6	60.0	<40	<40	59.1	58.6	57.9	57.7	<40	54.6	57.4	57.0	48.1
36	63.1	63.4	63.2	62.5	64.1	64.2	64.4	61.1	61.1	64.6	64.9	65.2	60.6	60.1	<40	<40	59.2	58.7	58.0	57.8	<40	54.7	57.5	57.1	48.1
35	63.2	63.5	63.3	62.6	64.1	64.3	64.4	61.1	61.1	64.7	64.9	65.2	60.7	60.2	<40	<40	59.2	58.8	58.1	57.9	<40	54.8	57.5	57.2	48.2
34	63.3	63.5	63.4	62.6	64.2	64.4	64.5	61.2	61.2	64.7	65.0	65.3	60.8	60.3	<40	<40	59.3	58.9	58.2	57.8	<40	53.8	57.0	56.7	<40
33	63.3	63.6	63.4	62.7	64.3	64.5	64.6	61.2	61.2	64.8	65.1	65.4	60.7	60.2	<40	<40	59.1	58.7	58.3	57.9	<40	53.4	57.1	56.8	<40
32	63.4	63.7	63.5	62.7	64.3	64.5	64.7	61.3	61.2	64.9	65.2	65.5	60.8	60.3	<40	<40	59.2	58.8	58.4	58.0	<40	53.5	57.2	56.9	<40
31	63.5	63.8	63.6	62.8	64.4	64.6	64.7	61.4	61.3	65.0	65.3	65.6	60.9	60.4	<40	<40	59.3	58.9	58.5	58.1	<40	53.6	57.3	57.0	<40
30	63.6	63.8	63.6	62.8	64.5	64.7	64.8	61.4	61.4	65.1	65.4	65.7	61.0	60.5	<40	<40	59.4	59.0	58.6	58.2	<40	53.7	57.4	57.1	<40
29	63.6	63.9	63.7	62.9	64.6	64.8	64.9	61.5	61.4	65.2	65.5	65.7	61.1	60.6	<40	<40	59.6	59.1	58.7	58.3	<40	53.8	57.5	57.2	<40
28	63.7	64.0	63.8	63.0	64.6	64.8	65.0	61.6	61.5	65.3	65.6	65.8	61.2	60.7	<40	<40	59.6	59.2	58.8	58.4	<40	53.9	57.6	57.3	<40
27	63.8	64.0	63.8	63.1	64.7	64.9	65.1	61.7	61.6	65.4	65.7	65.9	61.3	60.7	<40	<40	59.8	59.3	58.9	58.5	<40	54.0	57.7	57.4	<40
26	63.8	64.1	64.0	63.2	64.8	65.1	65.2	61.8	61.7	65.5	65.8	66.0	61.4	60.8	<40	<40	59.9	59.5	59.0	58.6	<40	54.1	57.8	57.5	<40
25	63.9	64.2	64.1	63.3	64.9	65.2	65.3	61.9	61.8	65.6	65.9	66.2	61.6	61.0	<40	<40	60.0	59.6	59.1	58.7	<40	54.2	57.9	57.6	<40
24	64.0	64.3	64.2	63.3	65.0	65.3	65.4	62.0	61.9	65.7	66.0	66.3	61.7	61.1	<40	<40	60.1	59.7	59.2	58.8	<40	54.3	58.0	57.7	<40
23	64.1	64.4	64.3	63.5	65.2	65.4	65.5	62.1	62.0	65.8	66.1	66.4	61.8	61.2	<40	<40	60.2	59.8	59.4	58.9	<40	54.5	58.1	57.8	<40
22	64.2	64.5	64.4	63.6	65.3	65.5	65.7	62.3	62.2	65.9	66.2	66.6	61.9	61.3	<40	<40	60.4	59.9	59.5	59.0	<40	54.6	58.2	57.9	<40
21	64.3	64.6	64.5	63.7	65.4	65.6	65.8	62.3	62.2	66.1	66.4	66.7	62.0	61.5	<40	<40	60.5	60.0	59.6	59.2	<40	54.7	58.4	58.0	<40
20	64.4	64.8	64.6	63.8	65.5	65.7	65.9	62.5	62.4	66.2	66.5	66.8	62.1	61.6	<40	<40	60.6	60.2	59.7	59.3	<40	54.8	58.5	58.1	<40
19	64.5	64.9	64.7	63.9	65.6	65.9	66.0	62.6	62.5	66.4	66.7	66.9	62.3	61.7	<40	<40	60.7	60.3	59.9	59.4	<40	54.9	58.6	58.2	<40
18	64.7	65.0	64.9	64.0	65.8	66.0	66.1	62.7	62.6	66.5	66.8	67.1	62.4	61.9	<40	<40	60.9	60.4	60.0	59.5	<40	55.1	58.7	58.3	<40
17	64.8	65.1	65.0	64.2	65.9	66.1	66.3	62.9	62.7	66.6	67.0	67.2	62.6	62.0	<40	<40	60.9	60.6	60.1	59.7	<40	55.2	58.8	58.5	<40
16	65.0	65.3	65.1	64.3	66.0	66.3	66.4	63.0	62.9	66.8	67.1	67.4	62.7	62.2	<40	<40	61.1	60.7	60.3	59.8	<40	55.3	59.0	58.6	<40
15	65.0	65.4	65.3	64.5	66.2	66.4	66.6	63.2	63.0	66.9	67.3	67.5	62.9	62.3	<40	<40	61.2	60.9	60.4	59.9	<40	55.4	59.1	58.7	<40
14	65.2	65.6	65.4	64.6	66.3	66.6	66.8	63.3	63.1	67.1	67.5	67.7	63.1	62.5	<40	<40	61.4	61.0	60.5	60.1	<40	55.6	59.2	58.8	<40
13	65.3	65.7	65.5	64.7	66.5	66.7	66.9	63.5	63.3	67.2	67.6	67.9	63.2	62.7	<40	<40	61.5	61.2	60.7	60.2	<40	55.7	59.4	59.0	<40
12	65.5	65.8	65.7	64.9	66.6	66.9	67.1	63.6	63.5	67.4	67.8	68.1	63.4	62.7	<40	<40	61.7	61.3	60.8	60.4	<40	55.9	59.5	59.1	<40
11	65.6	66.0	65.8	65.0	66.8	67.1	67.3	63.7	63.6	67.6	68.0	68.2	63.6	62.9	<40	<40	61.9	61.4	61.0	60.5	<40	56.0	59.6	59.2	<40
10	65.7	66.1	66.0	65.2	67.0	67.3	67.4	63.9	63.7	67.8	68.2	68.4	63.8	63.1	<40	<40	62.0	61.6	61.2	60.7	<40	56.2	59.8	59.4	<40
9	65.9	66.3	66.1	65.4	67.2	67.4	67.6	64.1	63.9	67.9	68.4	68.6	64.0	63.3	<40	<40	62.2	61.7	61.2	60.8	<40	56.3	59.9	59.5	<40
8	66.1	66.4	66.3	65.5	67.3	67.6	67.8	64.3	64.1	68.2	68.5	68.9	64.1	63.4	<40	<40	62.4	61.9	61.4	61.0	<40	56.4	60.0	59.6	<40
7	66.1	66.6	66.5	65.6	67.5	67.8	68.0	64.5	64.3	68.4	68.8	69.1	64.3	63.6	<40	<40	62.5	62.1	61.6	61.2	<40	56.6	60.2	59.7	<40
6	66.3	66.7	66.6	65.8	67.7	68.0	68.2	64.7	64.5	68.6	69.0	69.4	64.5	63.8	<40	<40	62.7	62.3	61.7	61.3	<40	56.7	60.3	59.8	<40
5	66.4	66.8	66.8	66.0	67.9	68.2	68.4	64.9	64.7	68.9	69.3	69.6	64.7	64.0	<40	<40	62.9	62.4	61.9	61.5	<40	56.9	60.4	59.9	<40
4	66.5	67.0	66.9	66.2	68.0	68.4	68.6	65.2	64.9	69.1	69.6	69.9	65.0	64.3	<40	<40	63.1	62.6	62.1	61.7	<40	57.1	60.4	59.9	<40
3	66.7	67.1	67.0	66.3	68.2	68.6	68.9	65.4	65.1	69.4	69.8	70.1	65.2	64.5	<40	<40	63.3	62.8	62.3	61.7	<40	57.2	60.5	60.0	<40
2	66.9	67.3	67.2	66.5	68.4	68.8	69.1	65.7	65.3	69.6	70.2	67.8	65.4	64.6	<40	<40	63.4	62.9	62.3	61.7	<40	57.4	60.5	60.1	<40
1	67.0	67.4	67.4	66.7	68.6	69.0	69.2	65.9	65.6	69.9	70.4	68.1	65.6	64.8	29.8	29.4	63.6	63.0	62.3	61.7	31.2	57.5	60.6	60.2	33.8
Max	67.0	67.4	67.4	66.7	68.6	69.0	69.2	65.9	65.6	69.9	70.4	70.1	65.6	64.8	<40	<40	63.6	63.0	62.3	61.7	<40	57.5	60.6	60.2	48.2
Min	63.0	63.3	63.2	62.4	64.0	64.2	64.3	61.0	61.0	64.5	64.9	65.1	60.6	60.0	<40	<40	59.1	58.6	57.9	57.7	<40	53.4	57.0	56.7	<40

Noise sensitive receivers with exceedance (≥70.5 dB(A))

\- Noise sensitive receivers applied with fixed glazing

Noise sensitive receivers applied with acoustic window (non-absorptive)

Noise sensitive receivers applied with acoustic window (absorptive)

(These predicted noise levels are the equivalent noise levels at 1m from the external facade after accounting the reduction in noise levels inside the flat offered by the proposed acoustic window)

Floor	R322a	R322b	R323a	R323b	R323c	R324a	R324b	R324c	R325a	R325b	R326a	R326b	R327a	R327b	R328a	R328b	R329a	R329b	R329c	R329d	R330a	R330b	R330c	R330d	R331a
40																									
39																									
38																									
37	56.4	56.7	56.7	56.7	53.8	55.4	56.5	56.4	56.8	57.4	57.2	56.6	56.3	56.2	56.2	56.4	57.2	57.6	58.1	<40	<40	58.4	58.5	58.4	<40
36	56.5	56.7	56.8	56.7	53.8	55.5	56.6	56.5	56.9	57.5	57.2	56.6	56.3	56.3	56.3	56.4	57.3	57.7	58.1	<40	<40	58.4	58.5	58.5	<40
35	56.4	56.8	56.9	56.8	53.6	55.5	56.5	56.4	56.9	57.5	57.3	56.7	56.4	56.3	56.3	56.5	57.3	57.7	58.2	<40	<40	58.5	58.6	58.5	<40
34	56.1	56.5	56.6	56.6	53.5	55.6	56.5	56.5	57.0	57.5	57.3	56.8	56.5	56.4	56.4	56.5	57.4	57.8	58.3	<40	<40	58.6	58.6	58.5	<40
33	56.2	56.6	56.7	56.7	53.6	55.7	56.6	56.6	57.0	57.6	57.4	56.8	56.5	56.4	56.5	56.6	57.5	57.8	58.3	<40	<40	58.6	58.7	58.6	<40
32	56.3	56.7	56.8	56.7	53.7	55.8	56.7	56.7	57.1	57.7	57.5	56.9	56.6	56.5	56.5	56.7	57.5	57.9	58.3	<40	<40	58.6	58.7	58.6	<40
31	56.4	56.8	56.9	56.8	53.8	55.9	56.8	56.7	57.2	57.8	57.5	57.0	56.7	56.6	56.6	56.7	57.5	57.9	58.4	<40	<40	58.7	58.7	58.7	<40
30	56.5	56.9	56.9	56.9	53.8	56.0	56.9	56.8	57.3	57.8	57.5	57.0	56.7	56.6	56.6	56.8	57.6	57.9	58.4	<40	<40	58.7	58.8	58.7	<40
29	56.6	57.0	57.0	57.0	53.9	56.0	56.9	56.9	57.4	57.9	57.6	57.0	56.8	56.7	56.7	56.9	57.6	58.0	58.4	<40	<40	58.7	58.8	58.7	<40
28	56.7	57.0	57.1	57.1	54.0	56.1	57.0	57.0	57.5	58.0	57.6	57.1	56.8	56.7	56.8	56.9	57.6	58.0	58.4	<40	<40	58.7	58.8	58.7	<40
27	56.8	57.1	57.2	57.2	54.1	56.2	57.1	57.1	57.5	58.0	57.7	57.1	56.8	56.8	56.8	57.0	57.6	57.9	58.4	<40	<40	58.7	58.7	58.7	<40
26	56.9	57.2	57.3	57.3	54.2	56.3	57.2	57.2	57.6	58.1	57.7	57.2	56.9	56.9	56.9	57.1	57.7	57.9	58.4	<40	<40	58.7	58.7	58.7	<40
25	57.0	57.3	57.4	57.4	54.3	56.4	57.3	57.3	57.6	58.2	57.8	57.2	56.9	56.9	57.0	57.1	57.6	58.0	58.3	<40	<40	58.7	58.8	58.7	<40
24	57.1	57.4	57.5	57.5	54.4	56.5	57.4	57.4	57.7	58.3	57.9	57.3	57.0	57.0	57.0	57.2	57.6	58.0	58.3	<40	<40	58.6	58.8	58.6	<40
23	57.2	57.5	57.6	57.6	54.5	56.6	57.5	57.5	57.8	58.4	57.9	57.4	57.1	57.1	57.1	57.2	57.7	57.9	58.3	<40	<40	58.6	58.8	58.6	<40
22	57.3	57.6	57.7	57.7	54.6	56.7	57.6	57.6	57.9	58.4	57.9	57.4	57.1	57.1	57.2	57.3	57.6	58.0	58.4	<40	<40	58.7	58.7	58.6	<40
21	57.4	57.8	57.8	57.8	54.7	56.8	57.7	57.7	58.0	58.5	57.9	57.5	57.2	57.1	57.2	57.4	57.6	58.0	58.3	<40	<40	58.6	58.7	58.7	<40
20	57.5	57.9	57.9	57.9	54.8	56.9	57.8	57.7	58.1	58.6	58.0	57.5	57.2	57.1	57.2	57.4	57.6	58.0	58.3	<40	<40	58.6	58.7	58.7	<40
19	57.6	58.0	58.0	58.0	54.9	57.0	57.9	57.8	58.2	58.6	58.0	57.5	57.2	57.2	57.2	57.4	57.7	58.0	58.3	<40	<40	58.6	58.8	58.7	<40
18	57.7	58.1	58.1	58.1	55.0	57.1	58.0	57.9	58.2	58.7	58.0	57.5	57.3	57.2	57.2	57.5	57.7	58.0	58.3	<40	<40	58.6	58.8	58.7	<40
17	57.8	58.2	58.2	58.2	55.1	57.2	58.1	58.0	58.3	58.8	57.9	57.5	57.2	57.1	57.3	57.4	57.7	58.1	58.3	<40	<40	58.7	58.8	58.7	<40
16	57.9	58.3	58.4	58.3	55.2	57.3	58.2	58.1	58.4	58.8	57.8	57.5	57.2	57.0	57.2	57.5	57.8	58.2	58.3	<40	<40	58.7	58.9	58.8	<40
15	58.1	58.4	58.5	58.4	55.3	57.4	58.3	58.2	58.5	58.9	57.8	57.4	57.0	56.9	57.1	57.5	57.8	58.2	58.4	<40	<40	58.8	58.9	58.8	<40
14	58.2	58.5	58.6	58.5	55.4	57.5	58.4	58.3	58.6	59.0	57.6	57.2	56.9	56.8	56.9	57.3	57.8	58.2	58.4	<40	<40	58.8	58.9	58.9	<40
13	58.3	58.6	58.7	58.6	55.5	57.6	58.5	58.4	58.7	59.1	57.4	57.1	56.8	56.7	56.7	57.1	57.8	58.2	58.4	<40	<40	58.8	59.0	59.0	<40
12	58.4	58.8	58.8	58.7	55.6	57.7	58.6	58.5	58.8	59.1	57.2	56.7	56.4	56.3	56.6	56.8	57.6	58.0	58.4	<40	<40	58.9	59.1	59.0	<40
11	58.5	58.9	58.8	58.8	55.7	57.8	58.6	58.6	58.8	59.2	56.7	56.4	56.0	55.8	56.1	56.6	57.5	57.9	58.4	<40	<40	58.9	59.1	59.0	<40
10	58.6	58.9	58.9	59.0	55.8	57.9	58.7	58.7	58.9	59.2	55.9	55.5	55.0	54.9	55.3	55.9	57.3	57.8	58.3	<40	<40	58.9	59.0	59.0	<40
9	58.7	59.0	59.0	59.0	55.9	58.0	58.8	58.8	58.9	59.2	54.9	54.2	53.6	53.4	53.9	54.9	56.8	57.6	58.0	<40	<40	58.7	58.9	59.0	<40
8	58.9	59.1	59.2	59.1	56.0	58.1	58.8	58.9	59.0	59.3	54.1	52.8	51.9	51.8	52.4	53.1	56.2	57.1	57.7	<40	<40	58.5	58.7	58.9	<40
7	58.9	59.2	59.2	59.1	56.1	58.2	58.9	58.8	59.0	59.3	53.2	51.3	50.3	50.2	50.6	51.8	55.0	56.2	57.0	<40	<40	58.2	58.6	58.7	<40
6	58.9	59.2	59.3	59.1	56.2	58.3	59.0	58.9	59.0	59.3	52.6	49.9	48.8	48.7	49.2	49.8	53.0	54.5	55.6	<40	<40	57.5	58.0	58.4	<40
5	59.0	59.3	59.3	59.2	56.3	58.4	59.1	59.0	59.0	59.4	52.2	49.0	47.6	47.5	47.8	48.4	51.2	53.1	53.9	<40	<40	56.2	57.1	57.7	<40
4	59.0	59.3	59.4	59.3	56.4	58.5	59.2	59.1	59.1	59.5	51.9	48.1	46.4	46.3	46.5	47.1	49.5	51.1	52.3	<40	<40	54.7	55.5	56.5	<40
3	59.2	59.4	59.5	59.4	56.5	58.6	59.3	59.2	59.2	59.5	51.7	47.4	45.3	45.2	45.5	46.0	48.2	49.9	51.1	<40	<40	53.2	54.1	55.1	<40
2	59.3	59.5	59.5	59.5	56.6	58.7	59.4	59.3	59.2	59.3	51.5	46.8	44.5	44.3	44.5	44.9	47.1	48.9	50.3	<40	<40	52.2	53.0	53.8	<40
1	59.3	59.6															46.2	48.1	49.6	32.4	31.1	51.6	52.4	53.1	33.4
Max	59.3	59.6	59.5	59.5	56.6	58.7	59.4	59.3	59.2	59.5	58.0	57.5	57.3	57.2	57.3	57.5	57.8	58.2	58.4	<40	<40	58.9	59.1	59.0	<40
Min	56.1	56.5	56.6	56.6	53.5	55.4	56.5	56.4	56.8	57.4	51.5	46.8	44.5	44.3	44.5	44.9	46.2	48.1	49.6	<40	<40	51.6	52.4	53.1	<40

Noise sensitive receivers with exceedance (≥70.5 dB(A))

\- Noise sensitive receivers applied with fixed glazing

Noise sensitive receivers applied with acoustic window (non-absorptive)

Noise sensitive receivers applied with acoustic window (absorptive)

(These predicted noise levels are the equivalent noise levels at 1m from the external facade after accounting the reduction in noise levels inside the flat offered by the proposed acoustic window)

Floor	R331b	R332a	R332b	R332c	R333a	R333b	R333c	R334a	R334b
40									
39									
38									
37	59.0	59.5	59.9	<40	<40	60.8	61.4	62.7	64.2
36	59.1	59.5	60.0	<40	<40	60.9	61.5	62.8	64.2
35	59.1	59.6	60.0	<40	<40	60.9	61.5	62.9	64.3
34	59.2	59.7	60.1	<40	<40	61.0	61.6	62.9	64.4
33	59.2	59.7	60.1	<40	<40	61.1	61.7	63.0	64.5
32	59.3	59.8	60.2	<40	<40	61.1	61.8	63.1	64.5
31	59.3	59.8	60.3	<40	<40	61.2	61.8	63.1	64.6
30	59.4	59.9	60.3	<40	<40	61.2	61.9	63.2	64.6
29	59.4	59.9	60.3	<40	<40	61.3	61.9	63.3	64.7
28	59.4	59.9	60.3	<40	<40	61.3	62.0	63.3	64.8
27	59.4	60.0	60.4	<40	<40	61.4	62.0	63.4	64.9
26	59.4	60.0	60.4	<40	<40	61.4	62.0	63.4	64.9
25	59.4	60.0	60.4	<40	<40	61.4	62.0	63.5	64.9
24	59.4	60.0	60.4	<40	<40	61.4	62.1	63.5	65.0
23	59.4	60.0	60.4	<40	<40	61.5	62.1	63.5	65.1
22	59.4	60.0	60.4	<40	<40	61.5	62.1	63.6	65.2
21	59.4	59.9	60.4	<40	<40	61.5	62.2	63.6	65.2
20	59.5	60.0	60.5	<40	<40	61.5	62.2	63.7	65.3
19	59.5	60.0	60.5	<40	<40	61.6	62.3	63.8	65.4
18	59.5	60.0	60.6	<40	<40	61.6	62.3	63.8	65.5
17	59.6	60.1	60.6	<40	<40	61.7	62.4	63.9	65.5
16	59.6	60.2	60.7	<40	<40	61.7	62.5	64.0	65.7
15	59.7	60.2	60.7	<40	<40	61.8	62.5	64.1	65.8
14	59.7	60.3	60.8	<40	<40	61.9	62.6	64.2	65.9
13	59.8	60.4	60.9	<40	<40	62.0	62.7	64.3	65.9
12	59.9	60.4	61.0	<40	<40	62.1	62.8	64.4	66.1
11	60.0	60.5	61.0	<40	<40	62.2	62.9	64.5	66.2
10	60.0	60.6	61.1	<40	<40	62.3	63.0	64.6	66.3
9	60.1	60.7	61.2	<40	<40	62.4	63.1	64.7	66.4
8	60.1	60.7	61.3	<40	<40	62.4	63.2	64.8	66.5
7	60.1	60.8	61.3	<40	<40	62.5	63.3	64.9	66.6
6	60.0	60.8	61.3	<40	<40	62.6	63.4	65.0	66.7
5	59.7	60.6	61.2	<40	<40	62.7	63.5	65.1	66.9
4	59.4	60.3	61.0	<40	<40	62.7	63.5	65.1	67.0
3	58.4	59.6	60.5	<40	<40	62.4	63.3	65.1	67.0
2	56.6	57.9	59.2	<40	<40	61.8	62.8	64.8	66.9
1	55.2	56.2	57.4	29.4	29.8	60.1	61.6	64.1	66.5
Max	60.1	60.8	61.3	<40	<40	62.7	63.5	65.1	67.0
Min	55.2	56.2	57.4	<40	<40	60.1	61.4	62.7	64.2

Noise sensitive receivers with exceedance (≥70.5 dB(A))

\- Noise sensitive receivers applied with fixed glazing

Noise sensitive receivers applied with acoustic window (non-absorptive)

Noise sensitive receivers applied with acoustic window (absorptive)

(These predicted noise levels are the equivalent noise levels at 1m from the external facade after accounting the reduction in noise levels inside the flat offered by the proposed acoustic window)

Floor	R101 max	R102 max	R103 max	R104 max	R105 max	R106 max	R107 max	R108 max	R109 max	R110 max	R111 max	R112 max	R113 max	R114 max	R115 max	R116 max	R117 max	R118 max	R119 max	R120 max	R121 max	R122 max	R123 max	R124 max	R125 max	R126 max	R127 max	R128 max	R129 max	R130 max	R131 max	R132 max	R133 max	R134 max
40																																		
39																																		
38																																		
37	66.7	65.3	65.0	65.1	64.4	66.7	62.7	58.4	56.2	55.2	55.1	55.4	56.2	55.7	57.4	57.5	56.0	56.0	55.8	56.3	56.6	57.8	58.6	60.7	65.3	64.3	64.1	63.6	63.4	63.0	62.5	62.0	62.5	63.7
36	66.7	65.4	65.1	65.1	64.5	66.8	62.7	58.5	56.2	55.2	55.2	55.4	56.3	55.7	57.4	57.3	55.9	56.0	55.9	56.3	56.7	57.8	58.7	60.8	65.4	64.4	64.2	63.7	63.5	63.0	62.6	62.0	62.6	63.8
35	66.8	65.5	65.1	65.2	64.5	66.8	62.8	58.5	56.3	55.3	55.2	55.4	56.3	55.8	57.5	57.4	56.0	56.1	56.0	56.4	56.8	57.9	58.8	60.9	65.4	64.5	64.2	63.7	63.6	63.1	62.7	62.1	62.7	63.8
34	66.9	65.6	65.2	65.3	64.6	66.9	62.9	58.6	56.4	55.4	55.2	55.4	56.4	55.8	57.5	57.4	56.0	56.1	56.0	56.5	56.8	58.0	58.8	61.0	65.5	64.6	64.3	63.8	63.6	63.2	62.7	62.2	62.8	63.9
33	66.9	65.7	65.3	65.4	64.7	67.0	63.0	58.7	56.4	55.4	55.3	55.5	56.4	55.9	57.5	57.5	56.1	56.2	56.0	56.5	56.9	58.0	58.9	61.0	65.6	64.6	64.4	63.9	63.7	63.2	62.8	62.2	62.8	64.0
32	67.0	65.8	65.4	65.4	64.8	67.1	63.0	58.7	56.4	55.5	55.3	55.6	56.5	55.9	57.6	57.6	56.2	56.3	56.1	56.6	56.9	58.1	59.0	61.1	65.7	64.7	64.4	63.9	63.8	63.3	62.9	62.3	62.9	64.1
31	67.1	65.8	65.4	65.5	64.9	67.1	63.1	58.8	56.5	55.5	55.4	55.6	56.6	55.9	57.7	57.6	56.2	56.3	56.2	56.7	57.0	58.2	59.1	61.2	65.7	64.8	64.5	64.0	63.8	63.4	62.9	62.4	63.0	64.1
30	67.2	65.9	65.5	65.6	65.0	67.2	63.2	58.9	56.6	55.6	55.5	55.7	56.6	56.0	57.7	57.7	56.3	56.4	56.2	56.7	57.1	58.2	59.1	61.2	65.8	64.8	64.6	64.1	63.9	63.4	63.0	62.4	63.0	64.2
29	67.3	66.0	65.6	65.7	65.0	67.3	63.3	59.0	56.7	55.7	55.6	55.8	56.7	56.1	57.8	57.7	56.3	56.4	56.3	56.8	57.1	58.3	59.2	61.3	65.9	64.9	64.7	64.1	64.0	63.5	63.1	62.5	63.1	64.3
28	67.4	66.1	65.7	65.7	65.1	67.4	63.4	59.1	56.8	55.8	55.6	55.8	56.8	56.1	57.9	57.8	56.4	56.5	56.4	56.9	57.2	58.4	59.3	61.4	66.0	65.0	64.7	64.2	64.1	63.6	63.2	62.6	63.2	64.4
27	67.5	66.2	65.8	65.8	65.2	67.5	63.5	59.2	56.9	55.9	55.7	55.9	56.8	56.2	57.9	57.8	56.4	56.5	56.4	56.9	57.3	58.4	59.3	61.5	66.0	65.1	64.8	64.3	64.1	63.7	63.2	62.7	63.3	64.5
26	67.6	66.3	65.9	66.0	65.3	67.6	63.6	59.2	57.0	56.0	55.8	56.0	56.9	56.3	58.0	57.9	56.5	56.6	56.5	57.0	57.3	58.5	59.4	61.6	66.1	65.1	64.9	64.4	64.2	63.7	63.3	62.7	63.4	64.6
25	67.7	66.4	66.0	66.0	65.3	67.7	63.7	59.3	57.0	56.1	55.9	56.1	57.0	56.3	58.0	57.9	56.5	56.7	56.6	57.0	57.4	58.6	59.5	61.6	66.2	65.2	65.0	64.4	64.3	63.8	63.4	62.8	63.4	64.6
24	67.8	66.5	66.1	66.1	65.4	67.8	63.8	59.4	57.1	56.2	56.0	56.2	57.0	56.4	58.1	57.9	56.6	56.7	56.6	57.1	57.4	58.7	59.6	61.7	66.3	65.3	65.0	64.5	64.4	63.9	63.5	62.9	63.5	64.7
23	67.9	66.6	66.2	66.2	65.5	67.9	63.8	59.5	57.3	56.3	56.1	56.3	57.1	56.5	58.2	58.0	56.6	56.8	56.7	57.1	57.5	58.7	59.6	61.8	66.4	65.4	65.1	64.6	64.4	64.0	63.5	63.0	63.6	64.8
22	68.0	66.7	66.3	66.3	65.6	68.0	63.9	59.6	57.3	56.3	56.2	56.4	57.2	56.5	58.2	58.1	56.7	56.8	56.8	57.2	57.6	58.8	59.7	61.9	66.5	65.5	65.2	64.7	64.5	64.0	63.6	63.1	63.7	64.9
21	68.1	66.8	66.4	66.4	65.6	68.0	64.0	59.7	57.5	56.4	56.3	56.4	57.3	56.6	58.3	58.1	56.8	56.9	56.8	57.3	57.6	58.9	59.8	62.0	66.5	65.6	65.2	64.8	64.6	64.1	63.7	63.1	63.7	65.0
20	68.2	66.9	66.5	66.5	65.8	68.2	64.1	59.8	57.6	56.5	56.4	56.5	57.3	56.6	58.3	58.2	56.8	56.9	56.9	57.3	57.7	58.9	59.9	62.0	66.6	65.6	65.3	64.8	64.7	64.2	63.8	63.2	63.8	65.1
19	68.3	67.0	66.6	66.6	65.9	68.3	64.3	60.0	57.6	56.6	56.5	56.6	57.4	56.6	58.3	58.2	56.9	57.0	56.9	57.4	57.8	59.0	59.9	62.1	66.7	65.7	65.4	64.9	64.7	64.3	63.9	63.3	63.9	65.2
18	68.4	67.1	66.7	66.7	65.9	68.3	64.4	60.1	57.7	56.7	56.5	56.7	57.5	56.7	58.4	58.3	56.9	57.0	56.9	57.4	57.8	59.1	60.0	62.2	66.8	65.8	65.5	65.0	64.8	64.3	63.9	63.4	64.0	65.2
17	68.5	67.2	66.8	66.8	66.0	68.5	64.5	60.2	57.8	56.8	56.6	56.8	57.4	56.7	58.3	58.3	57.0	57.1	57.0	57.5	57.9	59.2	60.1	62.3	66.9	65.9	65.6	65.1	64.9	64.4	64.0	63.4	64.1	65.3
16	68.7	67.4	67.0	66.9	66.1	68.5	64.6	60.3	57.9	56.9	56.7	56.9	57.5	56.6	58.3	58.4	57.0	57.2	57.0	57.6	57.9	59.2	60.2	62.3	67.0	66.0	65.6	65.1	65.0	64.5	64.1	63.5	64.1	65.4
15	68.8	67.5	67.1	67.0	66.2	68.7	64.7	60.4	58.0	57.0	56.8	57.0	57.5	56.6	58.2	58.4	57.1	57.2	57.1	57.6	58.0	59.3	60.2	62.4	67.0	66.0	65.7	65.2	65.0	64.5	64.2	63.6	64.2	65.5
14	68.9	67.6	67.2	67.1	66.4	68.8	64.8	60.5	58.1	57.1	56.9	57.0	57.5	56.4	58.2	58.4	57.1	57.3	57.2	57.7	58.1	59.4	60.3	62.5	67.1	66.1	65.8	65.3	65.1	64.6	64.2	63.7	64.3	65.6
13	69.1	67.8	67.3	67.3	66.4	68.9	64.9	60.6	58.3	57.2	57.0	57.1	57.4	56.3	58.1	58.5	57.2	57.3	57.2	57.8	58.1	59.4	60.4	62.6	67.2	66.2	65.9	65.4	65.2	64.7	64.3	63.8	64.4	65.7
12	69.2	67.9	67.4	67.4	66.6	69.0	65.0	60.7	58.4	57.3	57.1	57.2	57.3	56.0	57.9	58.5	57.2	57.4	57.3	57.8	58.2	59.5	60.5	62.6	67.3	66.3	66.0	65.4	65.2	64.8	64.4	63.8	64.5	65.8
11	69.4	68.0	67.6	67.5	66.7	69.2	65.2	60.8	58.5	57.4	57.2	57.2	57.2	55.8	57.7	58.5	57.3	57.4	57.3	57.9	58.2	59.6	60.5	62.7	67.4	66.4	66.1	65.5	65.3	64.9	64.5	63.9	64.6	65.9
10	69.5	68.2	67.7	67.6	66.8	69.3	65.3	61.0	58.6	57.5	57.3	57.3	56.9	55.2	57.2	58.5	57.3	57.4	57.4	57.9	58.3	59.6	60.6	62.8	67.5	66.4	66.1	65.6	65.4	64.9	64.5	64.0	64.6	66.0
9	69.6	68.3	67.9	67.8	66.9	69.5	65.4	61.1	58.7	57.6	57.4	57.3	56.5	54.4	56.4	58.4	57.3	57.5	57.4	58.0	58.3	59.7	60.7	62.8	67.6	66.5	66.2	65.7	65.5	65.0	64.6	64.0	64.7	66.1
8	69.8	68.5	68.0	67.9	67.1	69.6	65.6	61.2	58.8	57.7	57.4	57.2	55.7	52.7	55.8	58.3	57.4	57.5	57.5	58.0	58.4	59.8	60.7	62.9	67.7	66.6	66.3	65.7	65.5	65.1	64.7	64.1	64.9	66.2
7	70.0	68.6	68.2	68.1	67.2	69.8	65.7	61.3	58.9	57.8	57.4	57.0	54.5	51.2	55.1	58.0	57.4	57.6	57.5	58.1	58.5	59.8	60.8	63.0	67.7	66.7	66.4	65.8	65.6	65.1	64.8	64.2	64.9	66.3
6	70.1	68.8	68.3	68.2	67.4	70.0	65.8	61.4	59.0	57.9	57.2	56.5	53.3	49.4	54.4	57.8	57.5	57.6	57.6	58.1	58.5	59.9	60.8	63.1	67.8	66.7	66.4	65.8	65.6	65.2	64.8	64.3	65.0	66.4
5	70.3	69.0	68.4	68.4	67.5	70.1	66.0	61.5	59.0	57.8	57.0	55.9	52.3	48.0	53.4	57.6	57.5	57.7	57.6	58.2	58.5	60.0	60.9	63.2	67.9	66.8	66.4	65.9	65.7	65.2	64.9	64.4	65.1	66.5
4	70.1	69.1	68.6	68.5	67.7	70.3	66.1	61.6	59.0	57.7	56.5	54.3	51.6	46.7	52.8	57.4	57.5	57.7	57.6	58.2	58.6	60.0	61.0	63.2	67.9	66.8	66.4	65.9	65.7	65.3	65.0	64.4	65.1	66.6
3	70.3	69.2	68.7	68.6	67.8	70.3	66.1	61.5	58.7	57.3	55.7	52.5	51.1	45.7	52.3	57.3	57.5	57.7	57.6	58.2	58.6	60.1	61.1	63.3	67.9	66.8	66.4	65.8	65.6	65.2	65.0	64.5	65.2	66.6
2	68.2	69.4	68.8	68.7	67.9	69.8	66.2	61.1	58.2	56.6	54.2	50.4	50.8	44.6	52.0	57.1	57.3	57.6	57.6	58.2	58.7	60.1	61.1	63.4	67.9	66.7	66.3	65.7	65.5	65.1	64.9	64.5	65.3	66.8
1	68.4	69.6	69.0	68.9	68.1	70.0	65.9	60.4	57.0	55.2	52.2	48.8							57.3	58.2	58.6	60.2	61.2	63.4	68.0	66.6	66.2	65.5	65.2	64.8	64.7	64.5	65.3	66.8
Max	70.3	69.6	69.0	68.9	68.1	70.3	66.2	61.6	59.0	57.9	57.4	57.3	57.5	56.7	58.4	58.5	57.5	57.7	57.6	58.2	58.7	60.2	61.2	63.4	68.0	66.8	66.4	65.9	65.7	65.3	65.0	64.5	65.3	66.8
Min	66.7	65.3	65.0	65.1	64.4	66.7	62.7	58.4	56.2	55.2	52.2	48.8	50.8	44.6	52.0	57.1	55.9	56.0	55.8	56.3	56.6	57.8	58.6	60.7	65.3	64.3	64.1	63.6	63.4	63.0	62.5	62.0	62.5	63.7
Exceedance	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Total	2504	
Exceedance	0.0	
Compliance Rate	100%	Noise sensitive receivers with exceedance (≥70.5 dB(A))

Floor	R301 max	R302 max	R303 max	R304 max	R305 max	R306 max	R307 max	R308 max	R309 max	R310 max	R311 max	R312 max	R313 max	R314 max	R315 max	R316 max	R317 max	R318 max	R319 max	R320 max	R321 max	R322 max	R323 max	R324 max	R325 max	R326 max	R327 max	R328 max	R329 max	R330 max	R331 max	R332 max	R333 max	R334 max
40																																		
39																																		
38																																		
37	66.9	63.5	64.4	65.0	65.5	66.6	63.5	62.4	61.9	62.2	62.5	63.0	63.3	64.0	64.3	65.1	60.6	59.1	57.9	57.4	57.0	56.7	56.7	56.5	57.4	57.2	56.3	56.4	58.1	58.5	59.0	59.9	61.4	64.2
36	67.0	63.5	64.5	65.1	65.6	66.7	63.6	62.5	62.0	62.3	62.6	63.1	63.4	64.1	64.4	65.2	60.6	59.2	58.0	57.5	57.1	56.7	56.8	56.6	57.5	57.2	56.3	56.4	58.1	58.5	59.1	60.0	61.5	64.2
35	67.1	63.6	64.5	65.2	65.7	66.8	63.7	62.6	62.1	62.4	62.7	63.2	63.5	64.1	64.4	65.2	60.7	59.2	58.1	57.5	57.2	56.8	56.9	56.5	57.5	57.3	56.4	56.5	58.2	58.6	59.1	60.0	61.5	64.3
34	67.1	63.7	64.6	65.3	65.7	66.8	63.8	62.7	62.2	62.5	62.8	63.3	63.5	64.2	64.5	65.3	60.8	59.3	58.2	57.0	56.7	56.5	56.6	56.5	57.5	57.3	56.5	56.5	58.3	58.6	59.2	60.1	61.6	64.4
33	67.2	63.8	64.7	65.3	65.8	66.9	63.9	62.8	62.3	62.6	62.9	63.3	63.6	64.3	64.6	65.4	60.7	59.1	58.3	57.1	56.8	56.6	56.7	56.6	57.6	57.4	56.5	56.6	58.3	58.7	59.2	60.1	61.7	64.5
32	67.3	63.9	64.8	65.4	65.8	67.0	64.0	62.9	62.4	62.7	62.9	63.4	63.7	64.3	64.7	65.5	60.8	59.2	58.4	57.2	56.9	56.7	56.8	56.7	57.7	57.5	56.6	56.7	58.3	58.7	59.3	60.2	61.8	64.5
31	67.3	63.9	64.9	65.4	65.9	67.0	64.1	63.0	62.5	62.8	63.0	63.5	63.8	64.4	64.7	65.6	60.9	59.3	58.5	57.3	57.0	56.8	56.9	56.8	57.8	57.5	56.7	56.7	58.4	58.7	59.3	60.3	61.8	64.6
30	67.4	64.0	65.0	65.5	66.0	67.1	64.2	63.1	62.6	62.9	63.1	63.6	63.8	64.5	64.8	65.7	61.0	59.4	58.6	57.4	57.1	56.9	56.9	56.9	57.8	57.5	56.7	56.8	58.4	58.8	59.4	60.3	61.9	64.6
29	67.5	64.1	65.0	65.6	66.1	67.2	64.3	63.2	62.7	63.0	63.2	63.6	63.9	64.6	64.9	65.7	61.1	59.6	58.7	57.5	57.2	57.0	57.0	56.9	57.9	57.6	56.8	56.9	58.4	58.8	59.4	60.3	61.9	64.7
28	67.6	64.2	65.1	65.6	66.1	67.3	64.4	63.3	62.8	63.1	63.3	63.7	64.0	64.6	65.0	65.8	61.2	59.6	58.8	57.6	57.3	57.0	57.1	57.0	58.0	57.6	56.8	56.9	58.4	58.8	59.4	60.3	62.0	64.8
27	67.6	64.3	65.2	65.7	66.2	67.4	64.5	63.4	62.9	63.2	63.4	63.8	64.0	64.7	65.1	65.9	61.3	59.8	58.9	57.7	57.4	57.1	57.2	57.1	58.0	57.7	56.8	57.0	58.4	58.7	59.4	60.4	62.0	64.9
26	67.8	64.4	65.3	65.8	66.2	67.4	64.6	63.5	63.0	63.3	63.5	63.8	64.1	64.8	65.2	66.0	61.4	59.9	59.0	57.8	57.5	57.2	57.3	57.2	58.1	57.7	56.9	57.1	58.4	58.7	59.4	60.4	62.0	64.9
25	67.8	64.5	65.4	65.8	66.3	67.5	64.8	63.6	63.1	63.4	63.6	63.9	64.2	64.9	65.3	66.2	61.6	60.0	59.1	57.9	57.6	57.3	57.4	57.3	58.2	57.8	56.9	57.1	58.3	58.8	59.4	60.4	62.0	64.9
24	67.9	64.6	65.5	65.9	66.4	67.6	64.9	63.7	63.2	63.5	63.7	64.0	64.3	65.0	65.4	66.3	61.7	60.1	59.2	58.0	57.7	57.4	57.5	57.4	58.3	57.9	57.0	57.2	58.3	58.8	59.4	60.4	62.1	65.0
23	68.0	64.6	65.6	66.0	66.4	67.7	65.0	63.9	63.3	63.6	63.8	64.1	64.4	65.2	65.5	66.4	61.8	60.2	59.4	58.1	57.8	57.5	57.6	57.5	58.4	57.9	57.1	57.2	58.3	58.8	59.4	60.4	62.1	65.1
22	68.0	64.8	65.7	66.1	66.5	67.8	65.1	64.0	63.4	63.7	63.9	64.2	64.5	65.3	65.7	66.6	61.9	60.4	59.5	58.2	57.9	57.6	57.7	57.6	58.4	57.9	57.1	57.3	58.4	58.7	59.4	60.4	62.1	65.2
21	68.1	64.9	65.8	66.1	66.6	67.9	65.3	64.1	63.6	63.9	64.0	64.3	64.6	65.4	65.8	66.7	62.0	60.5	59.6	58.4	58.0	57.8	57.8	57.7	58.5	57.9	57.2	57.4	58.3	58.7	59.4	60.4	62.2	65.2
20	68.2	65.0	65.9	66.2	66.7	68.0	65.4	64.3	63.7	64.0	64.1	64.4	64.8	65.5	65.9	66.8	62.1	60.6	59.7	58.5	58.1	57.9	57.9	57.8	58.6	58.0	57.2	57.4	58.3	58.7	59.5	60.5	62.2	65.3
19	68.3	65.1	66.0	66.3	66.8	68.1	65.5	64.4	63.8	64.1	64.2	64.5	64.9	65.6	66.0	66.9	62.3	60.7	59.9	58.6	58.2	58.0	58.0	57.9	58.6	58.0	57.2	57.4	58.3	58.8	59.5	60.5	62.3	65.4
18	68.4	65.2	66.1	66.5	66.9	68.2	65.7	64.5	63.9	64.2	64.3	64.7	65.0	65.8	66.1	67.1	62.4	60.9	60.0	58.7	58.3	58.1	58.1	58.0	58.7	58.0	57.3	57.5	58.3	58.8	59.5	60.6	62.3	65.5
17	68.5	65.3	66.2	66.5	67.0	68.3	65.8	64.7	64.1	64.3	64.5	64.8	65.1	65.9	66.3	67.2	62.6	60.9	60.1	58.8	58.5	58.2	58.2	58.1	58.8	57.9	57.2	57.4	58.3	58.8	59.6	60.6	62.4	65.5
16	68.6	65.4	66.3	66.6	67.1	68.4	66.0	64.8	64.2	64.4	64.6	65.0	65.3	66.0	66.4	67.4	62.7	61.1	60.3	59.0	58.6	58.3	58.4	58.2	58.8	57.8	57.2	57.5	58.3	58.9	59.6	60.7	62.5	65.7
15	68.8	65.5	66.4	66.7	67.2	68.5	66.1	65.0	64.4	64.5	64.7	65.0	65.4	66.2	66.6	67.5	62.9	61.2	60.4	59.1	58.7	58.4	58.5	58.3	58.9	57.8	57.0	57.5	58.4	58.9	59.7	60.7	62.5	65.8
14	68.9	65.6	66.5	66.8	67.3	68.6	66.3	65.1	64.5	64.7	64.9	65.2	65.6	66.3	66.8	67.7	63.1	61.4	60.5	59.2	58.8	58.5	58.6	58.4	59.0	57.6	56.9	57.3	58.4	58.9	59.7	60.8	62.6	65.9
13	69.0	65.7	66.6	66.9	67.4	68.7	66.5	65.2	64.7	64.8	65.0	65.3	65.7	66.5	66.9	67.9	63.2	61.5	60.7	59.4	59.0	58.6	58.7	58.5	59.1	57.4	56.8	57.1	58.4	59.0	59.8	60.9	62.7	65.9
12	69.1	65.8	66.7	67.0	67.4	68.8	66.7	65.4	64.8	65.0	65.1	65.5	65.8	66.6	67.1	68.1	63.4	61.7	60.8	59.5	59.1	58.8	58.8	58.6	59.1	57.2	56.4	56.8	58.4	59.1	59.9	61.0	62.8	66.1
11	69.2	65.9	66.7	67.0	67.5	68.9	66.9	65.6	65.0	65.1	65.2	65.6	66.0	66.8	67.3	68.2	63.6	61.9	61.0	59.6	59.2	58.9	58.8	58.6	59.2	56.7	56.0	56.6	58.4	59.1	60.0	61.0	62.9	66.2
10	69.4	65.9	66.8	67.1	67.6	69.1	67.1	65.7	65.1	65.3	65.3	65.7	66.1	67.0	67.4	68.4	63.8	62.0	61.2	59.8	59.4	58.9	59.0	58.7	59.2	55.9	55.0	55.9	58.3	59.0	60.0	61.1	63.0	66.3
9	69.4	66.0	67.0	67.2	67.7	69.2	67.3	65.9	65.3	65.4	65.5	65.9	66.3	67.2	67.6	68.6	64.0	62.2	61.2	59.9	59.5	59.0	59.0	58.8	59.2	54.9	53.6	54.9	58.0	59.0	60.1	61.2	63.1	66.4
8	69.6	66.1	67.0	67.3	67.9	69.4	67.5	66.1	65.5	65.5	65.6	66.1	66.4	67.3	67.8	68.9	64.1	62.4	61.4	60.0	59.6	59.1	59.2	58.9	59.3	54.1	51.9	53.1	57.7	58.9	60.1	61.3	63.2	66.5
7	69.7	66.2	67.1	67.5	68.0	69.5	67.7	66.3	65.6	65.6	65.7	66.1	66.6	67.5	68.0	69.1	64.3	62.5	61.6	60.2	59.7	59.2	59.2	58.9	59.3	53.2	50.3	51.8	57.0	58.7	60.1	61.3	63.3	66.6
6	69.8	66.3	67.2	67.6	68.1	69.7	67.9	66.5	65.7	65.7	65.8	66.3	66.7	67.7	68.2	69.4	64.5	62.7	61.7	60.3	59.8	59.2	59.3	59.0	59.3	52.6	48.8	49.8	55.6	58.4	60.0	61.3	63.4	66.7
5	69.9	66.4	67.3	67.7	68.3	69.9	68.2	66.7	65.9	65.8	65.9	66.4	66.8	67.9	68.4	69.6	64.7	62.9	61.9	60.4	59.9	59.3	59.3	59.1	59.4	52.2	47.6	48.4	53.9	57.7	59.7	61.2	63.5	66.9
4	70.1	66.5	67.4	67.8	68.4	70.0	68.4	66.8	65.9	65.9	66.1	66.5	67.0	68.0	68.6	69.9	65.0	63.1	62.1	60.4	59.9	59.3	59.4	59.2	59.5	51.9	46.4	47.1	52.3	56.5	59.4	61.0	63.5	67.0
3	70.3	66.6	67.5	67.8	68.5	70.2	68.7	67.0	66.0	66.0	66.2	66.7	67.1	68.2	68.9	70.1	65.2	63.3	62.3	60.5	60.0	59.4	59.5	59.3	59.5	51.7	45.3	46.0	51.1	55.1	58.4	60.5	63.3	67.0
2	70.4	66.7	67.6	67.8	68.5	70.3	68.9	67.1	66.1	66.2	66.3	66.9	67.3	68.4	69.1	70.2	65.4	63.4	62.3	60.5	60.1	59.5	59.5	59.4	59.3	51.5	44.5	44.9	50.3	53.8	56.6	59.2	62.8	66.9
1	70.0	66.8	67.7	67.8	68.5	69.9	69.2	67.1	66.2	66.3	66.5	67.0	67.4	68.6	69.2	70.4	65.6	63.6	62.3	60.6	60.2	59.6							49.6	53.1	55.2	57.4	61.6	66.5
Max	70.4	66.8	67.7	67.8	68.5	70.3	69.2	67.1	66.2	66.3	66.5	67.0	67.4	68.6	69.2	70.4	65.6	63.6	62.3	60.6	60.2	59.6	59.5	59.4	59.5	58.0	57.3	57.5	58.4	59.1	60.1	61.3	63.5	67.0
Min	66.9	63.5	64.4	65.0	65.5	66.6	63.5	62.4	61.9	62.2	62.5	63.0	63.3	64.0	64.3	65.1	60.6	59.1	57.9	57.0	56.7	56.5	56.6	56.5	57.4	51.5	44.5	44.9	49.6	53.1	55.2	57.4	61.4	64.2
Exceedance	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Noise sensitive receivers with exceedance (≥70.5 dB(A))

Floor	R201a	R201b	R202a	R202b	R202c	R203a	R203b	R203c	R204a	R204b	R205a	R205b	R206a	R206b	R207a	R207b	R208a	R208b	R208c	R209a	R209b	R209c	R210a	R210b
40																								
39																								
38																								
37	62.3	61.2	59.1	58.2	45.4	<40	56.1	55.5	<40	<40	54.3	54.8	54.5	54.2	54.9	55.3	55.6	55.5	<40	45.5	55.4	55.8	49.5	48.1
36	62.4	61.2	59.2	58.2	45.4	<40	56.1	55.5	<40	<40	54.4	54.8	54.5	54.3	55.0	55.3	55.7	55.6	<40	45.6	55.4	55.9	49.0	47.8
35	62.4	61.3	59.2	58.3	45.4	<40	56.2	55.6	<40	<40	54.4	54.9	54.6	54.4	55.0	55.4	55.7	55.6	<40	45.6	55.5	55.9	49.1	47.6
34	62.5	61.3	59.3	58.3	45.4	<40	56.3	55.6	<40	<40	54.5	55.0	54.7	54.4	55.1	55.5	55.8	55.7	<40	45.6	55.5	56.0	48.8	46.7
33	62.6	61.4	59.4	58.4	45.3	<40	56.3	55.7	<40	<40	54.6	55.1	54.7	54.5	55.2	55.5	55.8	55.7	<40	45.7	55.6	56.0	48.3	46.7
32	62.7	61.4	59.5	58.5	45.4	<40	56.4	55.7	<40	<40	54.6	55.1	54.8	54.6	55.2	55.6	55.9	55.7	<40	45.7	55.6	56.1	48.4	46.7
31	62.7	61.5	59.5	58.5	45.4	<40	56.4	55.8	<40	<40	54.7	55.2	54.9	54.6	55.3	55.7	55.9	55.8	<40	45.8	55.7	56.1	48.2	46.5
30	62.8	61.6	59.6	58.6	45.4	<40	56.5	55.9	<40	<40	54.7	55.2	54.9	54.7	55.3	55.7	56.0	55.8	<40	45.9	55.7	56.2	48.2	46.6
29	62.8	61.6	59.7	58.6	45.4	<40	56.6	56.0	<40	<40	54.8	55.3	55.0	54.7	55.4	55.8	56.1	55.9	<40	45.9	55.8	56.2	48.3	46.6
28	62.9	61.7	59.7	58.7	45.5	<40	56.7	56.0	<40	<40	54.9	55.4	55.1	54.8	55.4	55.8	56.1	56.0	<40	46.0	55.8	56.3	48.3	46.6
27	63.0	61.8	59.8	58.8	45.4	<40	56.7	56.1	<40	<40	55.0	55.4	55.1	54.8	55.5	55.9	56.2	56.0	<40	46.0	55.9	56.3	48.2	46.7
26	63.1	61.9	59.8	58.8	45.4	<40	56.8	56.2	<40	<40	55.0	55.5	55.2	54.9	55.5	56.0	56.2	56.1	<40	46.1	55.9	56.3	48.2	46.7
25	63.1	61.9	59.9	58.9	45.5	<40	56.8	56.2	<40	<40	55.1	55.6	55.2	55.0	55.6	56.0	56.3	56.2	<40	46.2	56.0	56.4	48.3	46.7
24	63.2	62.0	60.0	59.0	45.5	<40	56.9	56.3	<40	<40	55.2	55.7	55.3	55.0	55.6	56.1	56.3	56.2	<40	46.2	56.0	56.4	48.3	46.7
23	63.3	62.0	60.1	59.1	45.6	<40	57.0	56.4	<40	<40	55.2	55.7	55.4	55.1	55.7	56.1	56.4	56.2	<40	46.3	56.1	56.4	48.2	46.8
22	63.4	62.1	60.1	59.1	45.6	<40	57.1	56.5	<40	<40	55.3	55.8	55.4	55.2	55.8	56.1	56.5	56.3	<40	46.3	56.1	56.4	48.2	46.8
21	63.4	62.2	60.2	59.2	45.6	<40	57.1	56.6	<40	<40	55.4	55.9	55.5	55.2	55.8	56.2	56.5	56.4	<40	46.4	56.2	56.4	48.3	46.8
20	63.5	62.3	60.3	59.3	45.7	<40	57.2	56.6	<40	<40	55.4	55.9	55.6	55.3	55.8	56.3	56.5	56.4	<40	46.4	56.2	56.5	48.3	46.8
19	63.6	62.3	60.3	59.3	45.6	<40	57.3	56.7	<40	<40	55.5	56.0	55.6	55.4	55.9	56.3	56.6	56.5	<40	46.5	56.2	56.5	48.2	46.9
18	63.6	62.4	60.4	59.4	45.6	<40	57.4	56.7	<40	<40	55.6	56.0	55.7	55.4	56.0	56.3	56.7	56.5	<40	46.5	56.3	56.5	48.2	46.9
17	63.7	62.5	60.5	59.4	45.6	<40	57.4	56.8	<40	<40	55.7	56.1	55.7	55.5	56.0	56.4	56.7	56.6	<40	46.6	56.3	56.4	48.3	46.9
16	63.8	62.5	60.5	59.5	45.5	<40	57.4	56.9	<40	<40	55.7	56.2	55.8	55.5	56.0	56.4	56.8	56.6	<40	46.6	56.3	56.4	48.3	46.9
15	63.9	62.6	60.6	59.6	45.4	<40	57.5	57.0	<40	<40	55.8	56.3	55.9	55.6	56.1	56.5	56.8	56.6	<40	46.7	56.3	56.4	48.3	47.0
14	63.9	62.6	60.6	59.6	45.0	<40	57.6	57.1	<40	<40	55.8	56.3	55.9	55.6	56.1	56.5	56.8	56.7	<40	46.7	56.3	56.3	48.3	47.0
13	64.0	62.7	60.6	59.6	44.4	<40	57.7	57.1	<40	<40	55.9	56.4	56.0	55.7	56.2	56.5	56.9	56.7	<40	46.8	56.3	56.3	48.4	47.0
12	64.0	62.7	60.6	59.6	43.5	<40	57.7	57.2	<40	<40	56.0	56.4	56.1	55.8	56.2	56.6	56.9	56.7	<40	46.8	56.3	56.2	48.4	47.0
11	64.1	62.7	60.6	59.6	42.1	<40	57.8	57.3	<40	<40	56.1	56.5	56.1	55.8	56.2	56.6	56.9	56.8	<40	46.8	56.3	56.2	48.4	47.0
10	64.1	62.8	60.7	59.7	41.3	<40	57.8	57.3	<40	<40	56.1	56.6	56.2	55.9	56.2	56.6	56.9	56.8	<40	46.9	56.4	56.2	48.4	47.1
9	64.2	62.8	60.7	59.7	<40	<40	57.9	57.3	<40	<40	56.2	56.6	56.2	56.0	56.3	56.7	57.0	56.8	<40	46.9	56.4	56.2	48.4	47.1
8	64.2	62.9	60.7	59.7	<40	<40	58.0	57.4	<40	<40	56.2	56.7	56.3	56.0	56.3	56.7	57.0	56.9	<40	46.9	56.4	56.2	48.5	47.1
7	64.3	62.9	60.8	59.8	<40	<40	58.0	57.5	<40	<40	56.3	56.7	56.4	56.1	56.3	56.8	57.1	56.9	<40	47.0	56.4	56.2	48.5	47.1
6	64.4	63.0	60.8	59.8	<40	<40	58.1	57.6	<40	<40	56.4	56.8	56.4	56.1	56.4	56.8	57.0	56.9	<40	47.0	56.5	56.2	48.5	47.1
5	64.4	63.1	60.9	59.9	<40	<40	58.1	57.7	<40	<40	56.4	56.9	56.4	56.1	56.4	56.8	57.1	56.9	<40	47.1	56.5	56.2	48.5	47.1
4	64.5	63.1	61.0	59.9	<40	<40	58.2	57.7	<40	<40	56.5	56.9	56.5	56.2	56.4	56.8	57.1	56.9	<40	47.1	56.4	56.2	48.5	47.2
3	64.6	63.2	61.0	60.0	<40	<40	58.3	57.7	<40	<40	56.5	57.0	56.6	56.2	56.4	56.8	57.1	57.0	<40	47.0	56.5	56.1	48.5	47.2
2	64.6	63.2	61.1	60.0	<40	<40	58.3	57.8	<40	<40	56.5	57.0	56.6	56.2	56.5	56.8	57.1	56.9	<40	46.8	56.3	56.0	48.5	47.2
1	64.7	63.3	61.1	60.1	<40	<40	58.3	57.8	<40	<40	56.5	56.9												
Max	64.7	63.3	61.1	60.1	45.7	<40	58.3	57.8	<40	<40	56.5	57.0	56.6	56.2	56.5	56.8	57.1	57.0	<40	47.1	56.5	56.5	49.5	48.1
Min	62.3	61.2	59.1	58.2	<40	<40	56.1	55.5	<40	<40	54.3	54.8	54.5	54.2	54.9	55.3	55.6	55.5	<40	45.5	55.4	55.8	48.2	46.5

Total	4313.0
Exceedance	0.0
Compliance Rate	100%

Noise sensitive receivers with exceedance (≥70.5 dB(A))
- Noise sensitive receivers applied with fixed glazing
Noise sensitive receivers applied with acoustic window (non-absorptive)
Noise sensitive receivers applied with acoustic window (absorptive)

(These predicted noise levels are the equivalent noise levels at 1m from the external facade after accounting the reduction in noise levels inside the flat offered by the proposed acoustic window)

Floor	R210c	R210d	R211a	R211b	R212a	R212b	R213a	R213b	R213c	R214a	R214b	R215a	R215b	R215c	R215d	R216a	R216b	R216c	R216d	R217a	R217b	R218a	R218b	R219a
40																								
39																								
38																								
37	46.0	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	42.2	<40	43.3	<40	<40	<40
36	45.7	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	42.2	<40	43.3	<40	<40	<40
35	45.7	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	42.3	<40	43.3	<40	<40	<40
34	44.2	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	42.3	<40	43.4	<40	<40	<40
33	44.2	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	42.3	<40	43.4	<40	<40	<40
32	44.2	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	42.3	<40	43.5	<40	<40	<40
31	43.9	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	42.4	<40	43.5	<40	<40	<40
30	43.9	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	42.4	<40	43.6	<40	<40	<40
29	43.9	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	42.5	<40	43.6	<40	<40	<40
28	43.9	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	42.5	<40	43.7	<40	<40	<40
27	44.0	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	42.6	<40	43.7	<40	<40	<40
26	44.0	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	42.6	<40	43.8	<40	<40	<40
25	44.0	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	42.7	<40	43.8	<40	<40	<40
24	44.1	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	42.7	<40	43.9	<40	<40	<40
23	44.1	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	42.8	<40	43.9	<40	<40	<40
22	44.1	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	42.8	<40	44.0	<40	<40	<40
21	44.1	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	42.9	<40	44.0	<40	<40	<40
20	44.2	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	42.9	<40	44.1	<40	<40	<40
19	44.2	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	42.9	<40	44.1	<40	<40	<40
18	44.2	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	43.0	<40	44.2	<40	<40	<40
17	44.2	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	43.0	<40	44.2	<40	<40	<40
16	44.3	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	43.1	<40	44.3	<40	<40	<40
15	44.3	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	43.1	<40	44.3	<40	<40	<40
14	44.3	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	43.2	<40	44.4	<40	<40	<40
13	44.4	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	43.2	<40	44.4	<40	<40	<40
12	44.4	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	43.2	<40	44.4	<40	<40	<40
11	44.5	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	43.3	<40	44.5	<40	<40	<40
10	44.5	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	43.3	<40	44.5	<40	<40	<40
9	44.5	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	43.3	<40	44.5	<40	<40	<40
8	44.5	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	43.4	<40	44.5	<40	<40	<40
7	44.5	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	43.4	<40	44.5	<40	<40	<40
6	44.6	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	43.4	<40	44.6	<40	<40	<40
5	44.6	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	43.4	<40	44.6	<40	<40	<40
4	44.6	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	43.1	<40	44.5	<40	<40	<40
3	44.6	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	42.7	<40	44.1	<40	<40	<40
2	44.6	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	41.9	<40	43.6	<40	<40	<40
1							<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	41.4	<40	43.2	<40	<40	<40
Max	46.0	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	43.4	<40	44.6	<40	<40	<40
Min	43.9	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	41.4	<40	43.2	<40	<40	<40

Noise sensitive receivers with exceedance (≥70.5 dB(A))

\- Noise sensitive receivers applied with fixed glazing

Noise sensitive receivers applied with acoustic window (non-absorptive)

Noise sensitive receivers applied with acoustic window (absorptive)

(These predicted noise levels are the equivalent noise levels at 1m from the external facade after accounting the reduction in noise levels inside the flat offered by the proposed acoustic window)

Floor	R219b	R220a	R220b	R220c	R221a	R221b	R221c	R222a	R222b	R222c	R222d	R223a	R223b	R224a	R224b	R225a	R225b	R225c	R226a	R226b	R227a	R227b	R228a	R228b
40																								
39																								
38																								
37	<40	45.2	45.2	40.5	42.3	48.9	49.9	64.4	64.4	64.1	62.5	63.2	63.2	63.1	62.9	62.2	62.7	62.6	62.4	62.1	62.1	59.9	56.7	56.9
36	<40	45.2	45.1	40.5	42.3	48.9	49.9	64.5	64.4	64.1	62.6	63.2	63.2	63.1	62.9	62.2	62.7	62.6	62.4	62.1	62.1	59.9	56.7	57.0
35	<40	45.3	45.2	40.4	42.2	48.9	49.9	64.5	64.4	64.1	62.6	63.3	63.3	63.2	62.9	62.2	62.8	62.6	62.5	62.1	62.1	60.0	56.8	57.0
34	<40	45.3	45.2	40.3	42.1	48.8	49.9	64.5	64.5	64.2	62.6	63.3	63.3	63.2	63.0	62.3	62.8	62.7	62.5	62.2	62.2	60.0	56.8	57.1
33	<40	44.9	45.2	40.3	42.1	48.8	49.8	64.6	64.5	64.2	62.7	63.3	63.4	63.2	63.0	62.3	62.8	62.7	62.5	62.2	62.2	60.0	56.9	57.1
32	<40	44.9	45.0	40.2	41.9	48.8	49.8	64.6	64.5	64.2	62.7	63.4	63.4	63.3	63.1	62.3	62.9	62.7	62.6	62.3	62.3	60.1	56.9	57.2
31	<40	44.7	45.0	40.1	41.8	48.7	49.7	64.7	64.5	64.3	62.8	63.4	63.4	63.3	63.1	62.4	62.9	62.8	62.6	62.3	62.3	60.1	57.0	57.2
30	<40	44.7	45.1	40.0	41.7	48.7	49.6	64.7	64.6	64.3	62.8	63.5	63.5	63.3	63.1	62.4	63.0	62.8	62.7	62.3	62.3	60.1	57.0	57.3
29	<40	44.8	45.1	<40	41.5	48.5	49.5	64.7	64.6	64.4	62.8	63.5	63.5	63.4	63.2	62.5	63.0	62.9	62.7	62.4	62.4	60.1	57.0	57.3
28	<40	44.8	45.2	<40	41.1	48.4	49.3	64.8	64.7	64.4	62.9	63.5	63.6	63.4	63.2	62.5	63.0	62.9	62.8	62.4	62.4	60.2	57.1	57.4
27	<40	44.9	45.2	<40	40.6	48.2	49.1	64.8	64.7	64.4	62.9	63.6	63.6	63.5	63.3	62.5	63.1	63.0	62.8	62.5	62.5	60.2	57.1	57.4
26	<40	45.0	45.3	<40	40.1	48.0	48.8	64.8	64.7	64.5	63.0	63.6	63.6	63.5	63.3	62.6	63.1	63.0	62.8	62.5	62.5	60.2	57.2	57.5
25	<40	45.0	45.4	<40	<40	47.8	48.5	64.9	64.8	64.5	63.0	63.7	63.7	63.6	63.4	62.6	63.2	63.1	62.9	62.5	62.5	60.3	57.2	57.5
24	<40	45.1	45.4	<40	<40	47.4	48.2	64.9	64.8	64.5	63.0	63.7	63.7	63.6	63.4	62.7	63.2	63.1	62.9	62.6	62.6	60.3	57.2	57.5
23	<40	45.1	45.5	<40	<40	47.4	48.1	64.9	64.8	64.6	63.1	63.7	63.8	63.6	63.4	62.7	63.3	63.1	63.0	62.6	62.6	60.4	57.2	57.6
22	<40	45.2	45.5	<40	<40	47.3	47.8	65.0	64.9	64.6	63.1	63.8	63.8	63.7	63.5	62.7	63.3	63.2	63.0	62.7	62.7	60.4	57.3	57.6
21	<40	45.2	45.6	<40	<40	47.1	47.7	65.0	64.9	64.6	63.1	63.8	63.9	63.7	63.5	62.8	63.4	63.2	63.1	62.7	62.7	60.4	57.3	57.7
20	<40	45.3	45.6	<40	<40	47.0	47.5	65.1	64.9	64.7	63.2	63.9	63.9	63.8	63.6	62.8	63.4	63.3	63.1	62.8	62.8	60.5	57.4	57.7
19	<40	45.3	45.7	<40	<40	46.9	47.4	65.1	65.0	64.7	63.2	63.9	63.9	63.8	63.6	62.9	63.5	63.3	63.1	62.8	62.8	60.5	57.4	57.7
18	<40	45.4	45.7	<40	<40	46.8	47.4	65.1	65.0	64.8	63.3	64.0	64.0	63.9	63.7	62.9	63.5	63.4	63.2	62.8	62.8	60.5	57.4	57.8
17	<40	45.5	45.7	<40	<40	46.9	47.3	65.2	65.1	64.8	63.3	64.0	64.0	63.9	63.7	62.9	63.5	63.4	63.2	62.9	62.9	60.6	57.5	57.8
16	<40	45.5	45.8	<40	<40	46.8	47.3	65.2	65.1	64.8	63.3	64.0	64.1	63.9	63.7	63.0	63.6	63.5	63.3	62.9	62.9	60.6	57.5	57.9
15	<40	45.6	45.8	<40	<40	46.8	47.2	65.2	65.1	64.9	63.4	64.1	64.1	64.0	63.8	63.0	63.6	63.5	63.3	63.0	63.0	60.6	57.6	57.9
14	<40	45.6	45.9	<40	<40	46.8	47.3	65.3	65.2	64.9	63.4	64.1	64.1	64.0	63.8	63.0	63.7	63.5	63.4	63.0	63.0	60.6	57.6	57.9
13	<40	45.7	45.9	<40	<40	46.8	47.2	65.3	65.2	64.9	63.4	64.2	64.2	64.1	63.9	63.1	63.7	63.6	63.4	63.0	63.0	60.7	57.6	58.0
12	<40	45.7	46.0	<40	<40	46.8	47.3	65.3	65.2	65.0	63.5	64.2	64.2	64.1	63.9	63.1	63.7	63.6	63.4	63.1	63.1	60.7	57.7	58.0
11	<40	45.8	46.0	<40	<40	46.9	47.3	65.4	65.3	65.0	63.5	64.2	64.3	64.1	63.9	63.2	63.8	63.7	63.5	63.1	63.1	60.8	57.7	58.0
10	<40	45.8	46.1	<40	<40	46.8	47.3	65.4	65.3	65.0	63.5	64.3	64.3	64.2	64.0	63.2	63.8	63.7	63.5	63.2	63.2	60.8	57.7	58.1
9	<40	45.8	46.1	<40	<40	46.9	47.4	65.4	65.3	65.0	63.6	64.3	64.3	64.2	64.0	63.2	63.9	63.8	63.6	63.2	63.2	60.8	57.8	58.1
8	<40	45.9	46.2	<40	<40	46.9	47.4	65.4	65.4	65.1	63.6	64.3	64.4	64.2	64.0	63.2	63.9	63.8	63.6	63.2	63.2	60.8	57.8	58.1
7	<40	45.9	46.2	<40	<40	47.0	47.3	65.5	65.4	65.1	63.6	64.4	64.4	64.3	64.1	63.3	63.9	63.8	63.6	63.3	63.3	60.9	57.8	58.2
6	<40	45.9	46.2	<40	<40	47.0	47.4	65.5	65.4	65.1	63.7	64.4	64.4	64.3	64.1	63.3	64.0	63.9	63.7	63.3	63.3	60.9	57.8	58.2
5	<40	45.9	46.3	<40	<40	47.0	47.4	65.5	65.4	65.1	63.7	64.4	64.5	64.3	64.1	63.3	64.0	63.9	63.7	63.3	63.3	60.9	57.9	58.2
4	<40	45.9	46.3	<40	<40	47.0	47.5	65.5	65.4	65.1	63.7	64.4	64.5	64.3	64.2	63.3	64.0	63.9	63.7	63.4	63.4	60.9	57.9	58.3
3	<40	46.0	46.2	<40	<40	47.0	47.5	65.5	65.4	65.2	63.7	64.4	64.5	64.4	64.2	63.4	64.1	63.9	63.8	63.4	63.4	61.0	57.9	58.3
2	<40	45.7	46.1	<40	<40	47.0	47.5	65.5	65.4	65.2	63.7	64.4	64.5	64.4	64.2	63.4	64.1	63.9	63.8	63.4	63.4	61.0	57.9	58.3
1	<40	45.0	45.5	<40	<40	46.6	47.2	65.5	65.4	65.1	63.7	64.4	64.5	64.3	64.1	63.3	64.0	63.9	63.7	63.4	63.4	60.9	57.9	58.3
Max	<40	46.0	46.3	40.5	42.3	48.9	49.9	65.5	65.4	65.2	63.7	64.4	64.5	64.4	64.2	63.4	64.1	63.9	63.8	63.4	63.4	61.0	57.9	58.3
Min	<40	44.7	45.0	<40	<40	46.6	47.2	64.4	64.4	64.1	62.5	63.2	63.2	63.1	62.9	62.2	62.7	62.6	62.4	62.1	62.1	59.9	56.7	56.9

Noise sensitive receivers with exceedance (≥70.5 dB(A))
Noise sensitive receivers applied with fixed glazing
Noise sensitive receivers applied with acoustic window (non-absorptive)
Noise sensitive receivers applied with acoustic window (absorptive)

(These predicted noise levels are the equivalent noise levels at 1m from the external facade after accounting the reduction in noise levels inside the flat offered by the proposed acoustic window)

Floor	R229a	R229b	R230a	R230b	R231a	R231b	R231c	R232a	R232b	R232c	R233a	R233b	R234a	R234b	R234c	R234d	R235a	R235b	R235c	R235d	R236a	R236b	R237a	R237b
40																								
39																								
38																								
37	63.8	64.3	65.4	65.1	63.6	63.5	60.2	60.5	63.3	63.2	60.9	61.2	62.8	62.9	62.9	59.9	59.8	62.7	62.7	62.6	63.4	62.9	62.3	61.8
36	63.9	64.4	65.5	65.1	63.7	63.6	60.3	60.5	63.3	63.2	61.0	61.3	62.8	63.0	63.0	60.0	59.9	62.8	62.7	62.7	63.5	63.0	62.4	61.9
35	63.9	64.4	65.5	65.2	63.8	63.6	60.3	60.6	63.4	63.3	61.0	61.3	62.9	63.0	63.0	60.1	59.9	62.9	62.8	62.7	63.6	63.0	62.5	61.9
34	63.9	64.4	65.6	65.3	63.8	63.7	60.4	60.7	63.5	63.4	61.1	61.4	63.0	63.1	63.1	60.1	60.0	62.9	62.9	62.8	63.6	63.1	62.5	62.0
33	64.0	64.5	65.7	65.3	63.9	63.8	60.5	60.8	63.5	63.5	61.2	61.5	63.1	63.2	63.2	60.2	60.1	63.0	62.9	62.9	63.7	63.2	62.6	62.1
32	64.0	64.6	65.7	65.4	64.0	63.8	60.5	60.8	63.6	63.5	61.2	61.6	63.1	63.3	63.2	60.3	60.2	63.1	63.0	62.9	63.8	63.3	62.7	62.2
31	64.1	64.6	65.8	65.5	64.1	63.9	60.6	60.9	63.7	63.6	61.3	61.6	63.2	63.3	63.3	60.4	60.3	63.2	63.1	63.0	63.8	63.3	62.7	62.2
30	64.1	64.7	65.9	65.6	64.2	64.0	60.7	61.0	63.8	63.7	61.4	61.7	63.3	63.4	63.4	60.4	60.3	63.2	63.2	63.1	63.9	63.4	62.8	62.3
29	64.2	64.7	65.9	65.6	64.2	64.1	60.7	61.1	63.9	63.8	61.5	61.8	63.4	63.5	63.5	60.5	60.4	63.3	63.3	63.2	64.0	63.5	62.9	62.4
28	64.2	64.8	66.0	65.7	64.3	64.2	60.8	61.1	63.9	63.8	61.5	61.8	63.4	63.6	63.5	60.6	60.5	63.4	63.3	63.2	64.1	63.6	63.0	62.5
27	64.3	64.8	66.1	65.8	64.4	64.2	60.9	61.2	64.0	63.9	61.6	61.9	63.5	63.6	63.6	60.7	60.6	63.4	63.4	63.3	64.1	63.6	63.0	62.5
26	64.3	64.9	66.2	65.9	64.5	64.3	60.9	61.3	64.1	64.0	61.7	62.0	63.6	63.7	63.7	60.7	60.6	63.5	63.5	63.4	64.2	63.7	63.1	62.6
25	64.4	65.0	66.2	65.9	64.6	64.4	61.0	61.4	64.2	64.1	61.8	62.1	63.7	63.8	63.8	60.8	60.7	63.6	63.6	63.5	64.3	63.8	63.2	62.7
24	64.4	65.0	66.3	66.0	64.7	64.5	61.1	61.5	64.3	64.2	61.8	62.1	63.7	63.9	63.9	60.8	60.8	63.7	63.6	63.5	64.4	63.8	63.3	62.8
23	64.5	65.1	66.4	66.1	64.8	64.6	61.2	61.6	64.3	64.2	61.9	62.2	63.8	64.0	63.9	60.9	60.9	63.8	63.7	63.6	64.4	63.9	63.3	62.9
22	64.6	65.1	66.5	66.2	64.9	64.7	61.3	61.7	64.4	64.3	62.0	62.3	63.9	64.0	64.0	61.0	60.9	63.9	63.8	63.7	64.5	64.0	63.4	62.9
21	64.6	65.2	66.5	66.3	64.9	64.8	61.4	61.8	64.5	64.4	62.1	62.4	64.0	64.1	64.1	61.1	61.0	63.9	63.9	63.8	64.6	64.1	63.5	63.0
20	64.7	65.3	66.6	66.4	65.0	64.9	61.4	61.8	64.6	64.5	62.2	62.5	64.1	64.2	64.2	61.2	61.1	64.0	64.0	63.8	64.7	64.2	63.6	63.1
19	64.7	65.3	66.7	66.5	65.1	65.0	61.5	61.9	64.7	64.6	62.2	62.5	64.1	64.3	64.3	61.2	61.2	64.1	64.0	63.9	64.8	64.2	63.7	63.2
18	64.8	65.4	66.8	66.5	65.2	65.1	61.6	62.0	64.8	64.7	62.3	62.6	64.2	64.3	64.3	61.3	61.2	64.2	64.1	64.0	64.8	64.3	63.7	63.3
17	64.8	65.4	66.9	66.6	65.3	65.1	61.7	62.1	64.9	64.8	62.4	62.7	64.3	64.4	64.4	61.4	61.3	64.3	64.2	64.1	64.9	64.4	63.8	63.4
16	64.9	65.5	67.0	66.7	65.4	65.2	61.7	62.2	65.0	64.9	62.5	62.8	64.4	64.5	64.5	61.5	61.4	64.4	64.3	64.2	65.0	64.5	63.9	63.5
15	65.0	65.6	67.0	66.8	65.5	65.3	61.8	62.3	65.0	64.9	62.5	62.8	64.5	64.6	64.6	61.5	61.5	64.4	64.4	64.2	65.1	64.6	64.0	63.6
14	65.0	65.6	67.1	66.9	65.6	65.4	61.9	62.4	65.1	65.0	62.6	62.9	64.5	64.7	64.7	61.6	61.6	64.5	64.5	64.3	65.1	64.7	64.1	63.6
13	65.1	65.7	67.2	67.0	65.7	65.5	62.0	62.5	65.2	65.1	62.7	63.0	64.6	64.8	64.8	61.7	61.7	64.6	64.5	64.4	65.2	64.7	64.2	63.7
12	65.1	65.8	67.3	67.1	65.8	65.6	62.1	62.6	65.3	65.2	62.8	63.1	64.7	64.9	64.9	61.8	61.8	64.7	64.6	64.5	65.3	64.8	64.2	63.8
11	65.2	65.8	67.4	67.2	65.9	65.7	62.2	62.7	65.4	65.3	62.9	63.2	64.8	64.9	64.9	61.8	61.8	64.7	64.7	64.5	65.4	64.9	64.3	63.9
10	65.3	65.9	67.5	67.3	66.0	65.8	62.3	62.8	65.5	65.4	63.0	63.2	64.9	65.0	65.0	61.9	61.9	64.8	64.8	64.6	65.5	65.0	64.4	64.0
9	65.3	66.0	67.6	67.4	66.1	65.9	62.4	62.9	65.6	65.5	63.0	63.3	65.0	65.1	65.1	62.0	62.0	64.9	64.8	64.7	65.5	65.1	64.5	64.1
8	65.4	66.0	67.7	67.5	66.2	66.0	62.4	63.0	65.7	65.6	63.1	63.4	65.0	65.2	65.2	62.1	62.1	65.0	64.9	64.8	65.6	65.1	64.6	64.2
7	65.4	66.1	67.8	67.6	66.3	66.1	62.6	63.0	65.8	65.7	63.2	63.5	65.1	65.3	65.3	62.1	62.2	65.1	65.0	64.8	65.7	65.2	64.6	64.3
6	65.5	66.1	67.9	67.7	66.4	66.2	62.6	63.1	65.9	65.8	63.3	63.6	65.2	65.3	65.3	62.2	62.2	65.1	65.1	64.9	65.8	65.3	64.7	64.3
5	65.5	66.2	68.0	67.8	66.5	66.3	62.7	63.2	66.0	65.9	63.4	63.7	65.3	65.4	65.4	62.2	62.3	65.2	65.1	65.0	65.8	65.4	64.8	64.4
4	65.6	66.3	68.1	67.9	66.6	66.4	62.8	63.3	66.1	66.0	63.5	63.7	65.4	65.5	65.5	62.3	62.4	65.3	65.2	65.1	65.9	65.4	64.9	64.5
3	65.6	66.3	68.1	67.9	66.7	66.5	62.9	63.4	66.2	66.0	63.6	63.8	65.4	65.6	65.5	62.4	62.5	65.4	65.3	65.1	66.0	65.5	64.9	64.6
2	65.7	66.4	68.2	68.0	66.8	66.6	63.0	63.5	66.2	66.1	63.6	63.9	65.5	65.6	65.6	62.4	62.5	65.4	65.3	65.1	66.0	65.5	65.0	64.6
1	65.7	66.4	68.3	68.1	66.9	66.7	63.0	63.6	66.3	66.2	63.7	63.9	65.5	65.7	65.7	62.5	62.5	65.5	65.4	65.2	66.1	65.6	65.1	64.7
Max	65.7	66.4	68.3	68.1	66.9	66.7	63.0	63.6	66.3	66.2	63.7	63.9	65.5	65.7	65.7	62.5	62.5	65.5	65.4	65.2	66.1	65.6	65.1	64.7
Min	63.8	64.3	65.4	65.1	63.6	63.5	60.2	60.5	63.3	63.2	60.9	61.2	62.8	62.9	62.9	59.9	59.8	62.7	62.7	62.6	63.4	62.9	62.3	61.8

Noise sensitive receivers with exceedance (≥70.5 dB(A))
Noise sensitive receivers applied with fixed glazing
Noise sensitive receivers applied with acoustic window (non-absorptive)
Noise sensitive receivers applied with acoustic window (absorptive)

(These predicted noise levels are the equivalent noise levels at 1m from the external facade after accounting the reduction in noise levels inside the flat offered by the proposed acoustic window)

Floor	R238a	R238b	R401a	R401b	R401c	R402a	R402b	R402c	R403a	R403b	R404a	R404b	R405a	R405b	R406a	R406b	R407a	R407b	R407c	R408a	R408b	R408c	R409a	R409b
40																								
39																								
38																								
37	65.0	65.1	57.0	57.0	53.0	<40	57.0	57.1	57.0	56.6	56.3	56.4	56.5	55.7	<40	<40	56.7	57.1	<40	<40	58.8	59.7	61.3	62.3
36	65.1	65.2	57.0	56.9	53.0	<40	57.1	57.2	57.0	56.6	56.4	56.5	56.5	55.7	<40	<40	56.8	57.2	<40	<40	58.8	59.7	61.4	62.4
35	65.1	65.3	57.1	57.0	53.1	<40	57.2	57.3	57.0	56.7	56.5	56.6	56.6	55.8	<40	<40	56.9	57.3	<40	<40	58.7	59.6	61.4	62.5
34	65.2	65.3	57.1	57.1	53.2	<40	57.3	57.4	57.1	56.8	56.6	56.7	56.7	55.9	<40	<40	56.9	57.4	<40	<40	58.8	59.7	61.5	62.6
33	65.3	65.4	57.1	57.2	53.3	<40	57.3	57.5	57.2	56.9	56.6	56.8	56.7	55.9	<40	<40	57.0	57.5	<40	<40	58.9	59.8	61.6	62.6
32	65.4	65.5	57.2	57.3	53.4	<40	57.4	57.6	57.3	57.0	56.7	56.9	56.8	56.0	<40	<40	57.1	57.5	<40	<40	59.0	59.9	61.7	62.7
31	65.4	65.6	57.3	57.3	53.4	<40	57.5	57.6	57.4	57.1	56.8	57.0	56.9	56.1	<40	<40	57.2	57.6	<40	<40	59.1	60.0	61.8	62.8
30	65.5	65.6	57.4	57.4	53.5	<40	57.6	57.7	57.5	57.2	56.9	57.1	57.0	56.2	<40	<40	57.3	57.7	<40	<40	59.2	60.1	61.9	62.9
29	65.6	65.7	57.5	57.5	53.6	<40	57.7	57.8	57.5	57.3	57.0	57.2	57.1	56.3	<40	<40	57.4	57.8	<40	<40	59.3	60.2	62.0	63.0
28	65.7	65.8	57.6	57.6	53.7	<40	57.8	57.9	57.6	57.4	57.1	57.3	57.2	56.4	<40	<40	57.5	57.9	<40	<40	59.4	60.3	62.1	63.1
27	65.7	65.9	57.6	57.7	53.8	<40	57.9	58.0	57.7	57.5	57.2	57.4	57.3	56.5	<40	<40	57.6	58.0	<40	<40	59.5	60.4	62.2	63.2
26	65.8	65.9	57.7	57.8	53.9	<40	58.0	58.1	57.8	57.6	57.3	57.5	57.4	56.6	<40	<40	57.7	58.1	<40	<40	59.6	60.5	62.3	63.4
25	65.9	66.0	57.8	57.9	54.0	<40	58.1	58.2	57.9	57.7	57.4	57.6	57.5	56.7	<40	<40	57.8	58.3	<40	<40	59.7	60.6	62.5	63.5
24	66.0	66.1	57.9	58.0	54.1	<40	58.2	58.3	58.0	57.8	57.5	57.7	57.6	56.8	<40	<40	57.9	58.4	<40	<40	59.8	60.8	62.6	63.6
23	66.1	66.2	58.0	58.0	54.2	<40	58.3	58.4	58.1	57.9	57.6	57.8	57.7	57.0	<40	<40	58.1	58.5	<40	<40	60.0	60.9	62.7	63.7
22	66.2	66.3	58.1	58.1	54.3	<40	58.4	58.5	58.2	58.0	57.7	57.9	57.9	57.1	<40	<40	58.2	58.6	<40	<40	60.1	61.0	62.8	63.9
21	66.2	66.4	58.2	58.2	54.4	<40	58.5	58.6	58.3	58.1	57.8	58.0	58.0	57.2	<40	<40	58.3	58.7	<40	<40	60.2	61.1	62.9	64.0
20	66.3	66.4	58.2	58.3	54.5	<40	58.6	58.7	58.4	58.2	57.9	58.1	58.1	57.3	<40	<40	58.4	58.9	<40	<40	60.2	61.3	63.0	64.1
19	66.4	66.5	58.3	58.4	54.6	<40	58.7	58.8	58.6	58.3	58.1	58.2	58.2	57.4	<40	<40	58.6	59.0	<40	<40	60.4	61.3	63.2	64.3
18	66.5	66.6	58.4	58.5	54.7	<40	58.8	58.9	58.7	58.4	58.2	58.3	58.3	57.6	<40	<40	58.7	59.1	<40	<40	60.5	61.4	63.3	64.4
17	66.6	66.7	58.5	58.6	54.8	<40	58.9	59.0	58.8	58.5	58.3	58.5	58.5	57.7	<40	<40	58.8	59.3	<40	<40	60.7	61.6	63.4	64.5
16	66.7	66.8	58.6	58.7	54.8	<40	59.0	59.1	58.9	58.6	58.4	58.6	58.6	57.8	<40	<40	59.0	59.4	<40	<40	60.8	61.7	63.6	64.6
15	66.8	66.9	58.5	58.8	54.9	<40	59.1	59.3	59.0	58.7	58.5	58.7	58.7	57.9	<40	<40	59.1	59.6	<40	<40	61.0	61.9	63.7	64.8
14	66.9	67.0	58.6	58.8	55.0	<40	59.2	59.4	59.1	58.9	58.7	58.8	58.8	58.1	<40	<40	59.3	59.7	<40	<40	61.1	62.1	63.9	65.0
13	67.0	67.1	58.7	58.9	55.1	<40	59.3	59.5	59.2	59.0	58.8	59.0	59.0	58.2	<40	<40	59.4	59.9	<40	<40	61.3	62.2	64.1	65.1
12	67.0	67.2	58.7	59.0	55.2	<40	59.4	59.6	59.3	59.1	58.9	59.1	59.1	58.4	<40	<40	59.5	60.0	<40	<40	61.4	62.4	64.2	65.3
11	67.1	67.2	58.8	59.0	55.3	<40	59.5	59.7	59.5	59.2	59.0	59.2	59.3	58.5	<40	<40	59.7	60.1	<40	<40	61.6	62.6	64.4	65.5
10	67.2	67.3	58.6	59.0	55.3	<40	59.5	59.8	59.5	59.3	59.2	59.4	59.4	58.6	<40	<40	59.8	60.3	<40	<40	61.8	62.7	64.5	65.7
9	67.3	67.4	58.5	59.0	55.4	<40	59.5	59.8	59.6	59.4	59.3	59.5	59.5	58.7	<40	<40	60.0	60.4	<40	<40	61.9	62.9	64.7	65.9
8	67.4	67.5	58.4	58.9	55.5	<40	59.6	59.9	59.6	59.6	59.4	59.5	59.7	58.8	<40	<40	60.1	60.6	<40	<40	62.1	63.0	64.9	66.1
7	67.5	67.6	58.4	58.7	55.6	<40	59.5	59.9	59.6	59.6	59.4	59.6	59.8	59.0	<40	<40	60.3	60.8	<40	<40	62.2	63.2	65.1	66.2
6	67.6	67.7	58.4	58.7	55.6	<40	59.3	59.7	59.5	59.5	59.5	59.7	60.0	59.1	<40	<40	60.5	60.9	<40	<40	62.4	63.4	65.3	66.4
5	67.7	67.8	58.4	58.7	55.7	<40	59.2	59.5	59.4	59.3	59.5	59.8	60.0	59.2	<40	<40	60.6	61.1	<40	<40	62.6	63.6	65.5	66.7
4	67.7	67.8	58.5	58.8	55.8	<40	59.2	59.5	59.2	59.1	59.2	59.8	60.1	59.3	<40	<40	60.8	61.3	<40	<40	62.8	63.8	65.7	66.9
3	67.8	67.9	58.5	58.8	55.8	<40	59.2	59.5	59.2	59.0	59.0	59.4	59.9	59.3	<40	<40	61.0	61.5	<40	<40	63.0	64.0	65.9	67.1
2	67.9	68.0	58.4	58.8	55.9	<40	59.3	59.5	59.2	59.0	58.9	59.1	59.5	58.9	<40	<40	61.0	61.7	<40	<40	63.2	64.2	66.1	67.3
1	68.0	68.1											59.2	58.5	<40	<40	60.9	61.7	<40	<40	63.3	64.3	66.3	67.6
Max	68.0	68.1	58.8	59.0	55.9	<40	59.6	59.9	59.6	59.6	59.5	59.8	60.1	59.3	<40	<40	61.0	61.7	<40	<40	63.3	64.3	66.3	67.6
Min	65.0	65.1	57.0	56.9	53.0	<40	57.0	57.1	57.0	56.6	56.3	56.4	56.5	55.7	<40	<40	56.7	57.1	<40	<40	58.7	59.6	61.3	62.3

Noise sensitive receivers with exceedance (≥70.5 dB(A))
Noise sensitive receivers applied with fixed glazing
Noise sensitive receivers applied with acoustic window (non-absorptive)
Noise sensitive receivers applied with acoustic window (absorptive)

(These predicted noise levels are the equivalent noise levels at 1m from the external facade after accounting the reduction in noise levels inside the flat offered by the proposed acoustic window)

Floor	R410a	R410b	R411a	R411b	R412a	R412b	R413a	R413b	R413c	R413d	R414a	R414b	R414c	R414d	R415a	R415b	R416a	R416b	R416c	R417a	R417b	R417c	R418a	R418b
40																								
39																								
38																								
37	65.5	65.2	62.2	62.4	63.0	63.3	63.1	63.1	63.4	60.7	60.5	63.3	63.3	63.2	61.3	61.1	63.8	63.9	60.6	60.6	64.3	64.6	65.5	65.8
36	65.6	65.3	62.3	62.5	63.1	63.4	63.2	63.2	63.4	60.7	60.5	63.4	63.4	63.3	61.4	61.2	63.9	64.0	60.7	60.7	64.3	64.7	65.6	65.8
35	65.6	65.4	62.4	62.5	63.2	63.5	63.3	63.3	63.5	60.8	60.6	63.5	63.5	63.4	61.4	61.3	64.0	64.1	60.8	60.8	64.4	64.8	65.7	65.9
34	65.7	65.4	62.5	62.6	63.2	63.6	63.4	63.4	63.6	60.9	60.7	63.6	63.6	63.5	61.5	61.4	64.1	64.2	60.9	60.9	64.5	64.9	65.8	66.0
33	65.8	65.5	62.6	62.7	63.3	63.7	63.4	63.5	63.7	61.0	60.8	63.7	63.7	63.6	61.6	61.5	64.2	64.3	61.0	61.0	64.6	65.0	65.9	66.1
32	65.9	65.7	62.7	62.8	63.4	63.8	63.5	63.6	63.8	61.1	60.9	63.8	63.8	63.6	61.7	61.6	64.3	64.4	61.1	61.1	64.7	65.1	66.0	66.2
31	66.0	65.7	62.7	62.9	63.5	63.9	63.6	63.7	63.9	61.2	61.0	63.9	63.9	63.8	61.8	61.7	64.4	64.5	61.2	61.2	64.9	65.2	66.1	66.3
30	66.1	65.8	62.9	63.0	63.6	64.0	63.8	63.8	64.0	61.3	61.1	64.0	64.0	63.9	61.9	61.8	64.5	64.6	61.3	61.3	65.0	65.3	66.2	66.4
29	66.2	65.9	63.0	63.1	63.7	64.1	63.9	63.9	64.1	61.4	61.2	64.1	64.1	64.0	62.1	61.9	64.6	64.7	61.4	61.4	65.1	65.4	66.2	66.5
28	66.3	66.0	63.1	63.3	63.8	64.2	64.0	64.0	64.2	61.5	61.3	64.2	64.2	64.1	62.2	62.0	64.7	64.9	61.6	61.6	65.2	65.5	66.3	66.6
27	66.4	66.1	63.2	63.4	64.0	64.4	64.1	64.1	64.3	61.7	61.5	64.3	64.3	64.2	62.3	62.1	64.9	65.0	61.7	61.7	65.3	65.6	66.4	66.7
26	66.5	66.2	63.3	63.5	64.1	64.5	64.2	64.2	64.4	61.8	61.6	64.4	64.4	64.3	62.4	62.2	65.0	65.1	61.8	61.8	65.4	65.7	66.6	66.8
25	66.7	66.4	63.4	63.6	64.2	64.6	64.3	64.3	64.5	61.9	61.7	64.5	64.5	64.4	62.5	62.3	65.1	65.2	61.9	61.9	65.5	65.9	66.7	67.0
24	66.8	66.5	63.6	63.7	64.3	64.7	64.4	64.4	64.6	62.0	61.8	64.6	64.6	64.5	62.6	62.5	65.2	65.3	62.0	62.0	65.7	66.0	66.8	67.0
23	66.9	66.6	63.7	63.9	64.4	64.8	64.5	64.6	64.8	62.1	61.9	64.8	64.8	64.6	62.7	62.6	65.3	65.5	62.2	62.2	65.8	66.1	66.9	67.1
22	67.1	66.8	63.8	64.0	64.6	64.9	64.7	64.7	64.9	62.2	62.0	64.9	64.9	64.8	62.9	62.7	65.5	65.6	62.3	62.3	65.9	66.3	67.1	67.3
21	67.2	66.9	64.0	64.1	64.7	65.0	64.8	64.8	65.0	62.4	62.2	65.0	65.0	64.9	63.0	62.8	65.6	65.7	62.4	62.4	66.1	66.4	67.2	67.4
20	67.3	67.0	64.1	64.2	64.9	65.1	64.9	64.9	65.1	62.5	62.3	65.1	65.1	65.0	63.1	63.0	65.8	65.9	62.6	62.6	66.2	66.5	67.4	67.6
19	67.4	67.2	64.3	64.3	65.0	65.3	65.1	65.1	65.3	62.6	62.4	65.3	65.3	65.2	63.3	63.1	65.9	66.0	62.7	62.7	66.4	66.7	67.5	67.7
18	67.6	67.3	64.4	64.5	65.1	65.4	65.2	65.2	65.4	62.8	62.6	65.4	65.4	65.3	63.4	63.3	66.0	66.2	62.9	62.9	66.5	66.8	67.7	67.9
17	67.7	67.5	64.5	64.6	65.3	65.6	65.3	65.4	65.6	62.9	62.7	65.6	65.6	65.4	63.5	63.4	66.2	66.3	63.0	63.0	66.7	67.0	67.8	68.0
16	67.9	67.7	64.6	64.8	65.5	65.7	65.5	65.5	65.7	63.0	62.8	65.7	65.7	65.6	63.7	63.5	66.3	66.5	63.2	63.2	66.8	67.2	68.0	68.2
15	68.1	67.8	64.8	65.0	65.6	65.9	65.6	65.7	65.9	63.2	63.0	65.9	65.9	65.7	63.8	63.7	66.5	66.6	63.3	63.4	67.0	67.3	68.2	68.3
14	68.2	68.0	65.0	65.1	65.8	66.1	65.8	65.8	66.0	63.3	63.1	66.0	66.0	65.9	64.0	63.9	66.7	66.8	63.5	63.5	67.2	67.5	68.3	68.5
13	68.4	68.1	65.2	65.3	65.9	66.2	66.0	66.0	66.2	63.5	63.3	66.2	66.2	66.1	64.2	64.0	66.9	67.0	63.7	63.7	67.4	67.7	68.5	68.6
12	68.6	68.3	65.4	65.5	66.1	66.4	66.1	66.1	66.3	63.7	63.5	66.3	66.3	66.2	64.3	64.2	67.0	67.2	63.9	63.9	67.6	67.9	68.7	68.8
11	68.8	68.5	65.5	65.7	66.2	66.6	66.3	66.3	66.5	63.8	63.6	66.5	66.5	66.4	64.5	64.4	67.2	67.4	64.1	64.1	67.8	68.1	68.8	69.0
10	69.0	68.7	65.8	65.9	66.4	66.8	66.5	66.5	66.7	64.0	63.8	66.7	66.7	66.6	64.7	64.6	67.4	67.6	64.3	64.3	68.0	68.3	69.0	69.2
9	69.2	68.9	66.0	66.1	66.6	67.0	66.6	66.7	66.9	64.2	64.0	66.9	66.9	66.7	64.9	64.8	67.6	67.8	64.5	64.5	68.2	68.5	69.3	69.5
8	69.4	69.2	66.2	66.3	66.8	67.2	66.8	66.9	67.1	64.3	64.1	67.1	67.0	66.9	65.0	65.0	67.8	68.0	64.7	64.7	68.4	68.8	69.5	69.7
7	69.6	69.4	66.4	66.5	67.1	67.4	67.0	67.0	67.2	64.5	64.3	67.2	67.2	67.1	65.2	65.2	68.0	68.2	64.9	64.9	68.6	69.0	69.7	69.9
6	69.9	69.7	66.7	66.7	67.3	67.7	67.2	67.2	67.4	64.7	64.5	67.4	67.4	67.3	65.4	65.3	68.3	68.4	65.1	65.1	68.9	69.3	70.0	70.1
5	70.2	70.0	66.9	66.9	67.5	67.9	67.3	67.4	67.6	64.9	64.7	67.6	67.5	67.5	65.6	65.5	68.5	68.7	65.4	65.3	69.1	69.5	70.3	70.4
4	-	70.2	67.2	67.2	67.8	68.1	67.5	67.6	67.8	65.1	64.9	67.8	67.7	67.7	65.8	65.8	68.7	68.9	65.6	65.6	69.4	69.8	64.8	-
3	-	64.8	67.4	67.5	68.0	68.4	67.7	67.9	68.1	65.3	65.1	68.1	68.0	67.9	66.0	66.0	69.0	69.2	65.9	65.8	69.6	70.1	65.1	-
2	-	65.1	67.7	67.8	68.3	68.6	67.9	68.1	68.3	65.5	65.3	68.3	68.2	68.1	66.2	66.2	69.3	69.5	66.2	66.1	69.9	70.3	65.4	-
1	-	65.4	68.0	68.1	68.6	68.9	68.1	68.3	68.5	65.7	65.5	68.5	68.4	68.3	66.4	66.5	69.5	69.8	66.4	-	64.6	65.1	65.7	-
Max	70.2	70.2	68.0	68.1	68.6	68.9	68.1	68.3	68.5	65.7	65.5	68.5	68.4	68.3	66.4	66.5	69.5	69.8	66.4	66.1	69.9	70.3	70.3	70.4
Min	65.5	64.8	62.2	62.4	63.0	63.3	63.1	63.1	63.4	60.7	60.5	63.3	63.3	63.2	61.3	61.1	63.8	63.9	60.6	60.6	64.3	64.6	64.8	65.8

Noise sensitive receivers with exceedance (≥70.5 dB(A))
\- Noise sensitive receivers applied with fixed glazing
Noise sensitive receivers applied with acoustic window (non-absorptive)
Noise sensitive receivers applied with acoustic window (absorptive)

(These predicted noise levels are the equivalent noise levels at 1m from the external facade after accounting the reduction in noise levels inside the flat offered by the proposed acoustic window)

Floor	R419a	R419b	R420a	R420b	R421a	R421b	R422a	R422b	R423a	R423b	R423c	R424a	R424b	R425a	R425b	R426a	R426b	R426c	R426d	R427a	R427b	R427c	R428a	R428b
40																								
39																								
38																								
37	63.1	62.2	54.0	53.9	57.3	59.2	56.5	62.3	62.8	63.1	56.6	57.2	63.8	63.9	63.1	56.7	64.2	64.4	64.6	53.7	52.0	45.7	45.0	48.3
36	63.1	62.3	53.8	53.7	57.2	59.2	56.6	62.4	62.9	63.2	56.7	57.3	63.8	64.0	63.1	56.7	64.2	64.5	64.6	53.7	51.9	45.7	45.0	48.3
35	63.2	62.3	53.7	53.5	57.3	59.2	56.6	62.4	62.9	63.2	56.7	57.3	63.8	64.0	63.1	56.8	64.3	64.5	64.6	53.7	51.9	45.6	44.8	48.3
34	63.2	62.4	53.6	53.5	57.3	59.2	56.7	62.4	62.9	63.2	56.8	57.4	63.8	64.0	63.1	56.9	64.3	64.5	64.6	53.7	52.0	45.5	44.8	48.3
33	63.3	62.2	53.6	53.5	57.3	59.3	56.8	62.5	63.0	63.3	56.8	57.5	63.9	64.1	63.2	57.0	64.3	64.5	64.7	53.7	51.9	45.4	44.7	48.3
32	63.4	62.3	53.6	53.5	57.3	59.3	56.9	62.5	63.0	63.3	56.9	57.6	63.9	64.1	63.2	57.1	64.4	64.6	64.7	53.7	51.9	45.3	44.6	48.3
31	63.4	62.4	53.6	53.5	57.4	59.4	56.9	62.5	63.1	63.4	56.9	57.7	64.0	64.1	63.3	57.2	64.4	64.6	64.7	53.6	51.9	45.1	44.4	48.3
30	63.5	62.5	53.7	53.5	57.4	59.4	57.0	62.6	63.1	63.4	57.0	57.7	64.0	64.2	63.3	57.2	64.4	64.6	64.8	53.6	51.8	44.9	44.2	48.3
29	63.6	62.6	53.7	53.5	57.5	59.5	57.1	62.6	63.1	63.4	57.0	57.8	64.0	64.2	63.3	57.3	64.4	64.7	64.8	53.5	51.7	44.6	43.9	48.3
28	63.7	62.7	53.7	53.5	57.5	59.6	57.2	62.7	63.2	63.5	57.1	57.9	64.1	64.2	63.4	57.4	64.5	64.7	64.8	53.4	51.6	44.2	43.5	48.2
27	63.8	62.8	53.7	53.6	57.6	59.6	57.4	62.7	63.2	63.5	57.2	58.0	64.1	64.3	63.4	57.5	64.5	64.8	64.9	53.3	51.5	43.7	43.1	48.2
26	63.9	62.9	53.8	53.6	57.6	59.7	57.5	62.8	63.3	63.6	57.2	58.1	64.1	64.3	63.4	57.6	64.6	64.8	64.9	53.2	51.3	43.0	42.3	48.1
25	64.0	63.0	53.8	53.6	57.7	59.8	57.5	62.8	63.3	63.6	57.3	58.2	64.2	64.4	63.5	57.7	64.6	64.8	64.9	53.1	51.2	42.1	41.5	48.0
24	64.1	63.1	53.8	53.6	57.8	59.8	57.7	62.9	63.4	63.6	57.3	58.3	64.2	64.4	63.5	57.8	64.7	64.9	65.0	53.1	51.1	41.5	40.9	47.9
23	64.2	63.2	53.8	53.7	57.8	59.9	57.8	62.9	63.4	63.7	57.4	58.4	64.3	64.4	63.6	57.9	64.7	64.9	65.0	53.0	51.0	41.3	40.8	47.9
22	64.4	63.2	53.9	53.7	57.9	60.0	57.9	63.0	63.5	63.7	57.4	58.5	64.3	64.5	63.6	58.0	64.7	64.9	65.0	52.9	50.9	40.2	<40	47.9
21	64.5	63.4	53.9	53.7	58.0	60.1	57.9	63.0	63.5	63.8	57.5	58.6	64.3	64.5	63.6	58.1	64.8	65.0	65.1	52.9	50.8	<40	<40	47.8
20	64.6	63.5	53.9	53.7	58.0	60.2	58.0	63.1	63.6	63.8	57.6	58.7	64.4	64.6	63.7	58.2	64.8	65.0	65.1	52.9	50.8	<40	<40	47.8
19	64.7	63.6	53.9	53.8	58.1	60.2	58.2	63.1	63.6	63.9	57.7	58.8	64.4	64.6	63.7	58.3	64.8	65.1	65.1	52.8	50.7	<40	<40	47.8
18	64.8	63.7	54.0	53.8	58.2	60.3	58.3	63.2	63.7	63.9	57.8	58.9	64.5	64.6	63.7	58.4	64.9	65.1	65.2	52.8	50.7	<40	<40	47.8
17	65.0	63.8	54.0	53.8	58.2	60.4	58.4	63.2	63.7	64.0	57.8	59.0	64.5	64.7	63.8	58.5	64.9	65.1	65.2	52.9	50.7	<40	<40	47.8
16	65.1	64.0	54.0	53.8	58.3	60.5	58.6	63.3	63.8	64.0	57.9	59.2	64.6	64.7	63.9	58.6	64.9	65.2	65.3	52.8	50.7	<40	<40	47.8
15	65.2	64.2	54.0	53.9	58.4	60.6	58.7	63.4	63.8	64.1	58.0	59.3	64.6	64.8	63.9	58.7	65.0	65.2	65.3	52.8	50.7	<40	<40	47.9
14	65.4	64.3	54.1	53.9	58.4	60.7	58.8	63.4	63.9	64.1	58.0	59.4	64.6	64.8	64.0	58.8	65.0	65.2	65.3	52.9	50.7	<40	<40	47.8
13	65.6	64.4	54.1	53.9	58.5	60.7	59.0	63.5	64.0	64.2	58.1	59.5	64.7	64.9	64.0	58.9	65.0	65.3	65.4	52.9	50.7	<40	<40	47.8
12	65.7	64.6	54.1	53.9	58.6	60.8	59.1	63.5	64.0	64.2	58.2	59.7	64.7	64.9	64.0	59.0	65.1	65.3	65.4	52.9	50.8	<40	<40	47.9
11	65.8	64.7	54.1	53.9	58.7	61.0	59.3	63.6	64.1	64.3	58.3	59.8	64.8	64.9	64.1	59.1	65.1	65.3	65.4	53.0	50.7	<40	<40	47.9
10	66.0	64.9	54.2	54.0	58.8	61.0	59.4	63.7	64.1	64.4	58.4	59.9	64.8	65.0	64.1	59.2	65.1	65.4	65.4	53.0	50.7	<40	<40	47.9
9	66.2	65.0	54.2	54.0	58.9	61.1	59.5	63.7	64.2	64.4	58.5	60.0	64.9	65.0	64.2	59.3	65.2	65.4	65.5	52.9	50.8	<40	<40	47.9
8	66.4	65.2	54.2	54.0	59.0	61.2	59.7	63.8	64.2	64.4	58.6	60.2	64.9	65.0	64.2	59.4	65.2	65.4	65.5	53.0	50.8	<40	<40	48.0
7	66.5	65.4	54.2	54.0	59.1	61.4	59.8	63.8	64.3	64.5	58.6	60.3	64.9	65.1	64.3	59.5	65.2	65.4	65.5	53.0	50.8	<40	<40	48.0
6	66.8	65.6	54.3	54.0	59.2	61.5	59.9	63.9	64.3	64.5	58.7	60.4	65.0	65.1	64.3	59.6	65.3	65.5	65.5	53.0	50.8	<40	<40	48.0
5	67.0	65.8	54.3	54.0	59.3	61.6	60.1	63.9	64.4	64.6	58.8	60.5	65.0	65.2	64.3	59.7	65.3	65.5	65.5	53.0	50.8	<40	<40	48.0
4	67.2	66.0	54.3	54.1	59.4	61.7	60.2	64.0	64.4	64.6	58.9	60.6	65.0	65.2	64.4	59.8	65.3	65.5	65.6	53.1	50.9	<40	<40	48.0
3	67.4	66.2	54.3	54.1	59.5	61.8	60.4	64.0	64.4	64.7	59.0	60.7	65.0	65.2	64.4	59.9	65.3	65.5	65.6	53.1	50.9	<40	<40	48.1
2	67.7	66.4	54.4	54.1	59.6	62.0	60.5	64.1	64.5	64.7	59.1	60.8	65.1	65.2	64.4	59.9	65.3	65.5	65.6	53.1	50.9	<40	<40	48.1
1	67.9	66.6	54.4	54.1	59.8	62.1	60.7	64.1	64.5	64.7	59.1	61.0	65.0	65.2	64.4	60.0	65.3	65.5	65.6	53.1	50.9	<40	<40	48.0
Max	67.9	66.6	54.4	54.1	59.8	62.1	60.7	64.1	64.5	64.7	59.1	61.0	65.1	65.2	64.4	60.0	65.3	65.5	65.6	53.7	52.0	45.7	45.0	48.3
Min	63.1	62.2	53.6	53.5	57.2	59.2	56.5	62.3	62.8	63.1	56.6	57.2	63.8	63.9	63.1	56.7	64.2	64.4	64.6	52.8	50.7	<40	<40	47.8

Noise sensitive receivers with exceedance (≥70.5 dB(A))

\- Noise sensitive receivers applied with fixed glazing

Noise sensitive receivers applied with acoustic window (non-absorptive)

Noise sensitive receivers applied with acoustic window (absorptive)

(These predicted noise levels are the equivalent noise levels at 1m from the external facade after accounting the reduction in noise levels inside the flat offered by the proposed acoustic window)

Floor	R428c	R429a	R429b	R430a	R430b	R431a	R431b	R432a	R432b	R432c	R432d	R433a	R433b	R433c	R433d	R434a	R434b	R435a	R435b	R435c	R436a	R436b	R437a	R437b
40																								
39																								
38																								
37	46.1	<40	<40	<40	<40	43.2	<40	42.7	46.7	47.8	<40	46.7	50.1	53.1	55.6	56.9	57.7	58.6	59.1	58.5	58.2	57.9	57.4	56.3
36	46.1	<40	<40	<40	<40	43.2	<40	42.7	46.7	47.8	<40	46.7	50.2	53.2	55.7	57.0	57.8	58.6	59.1	58.5	58.2	58.0	57.4	56.3
35	46.1	<40	<40	<40	<40	43.2	<40	42.8	46.8	47.9	<40	46.7	50.2	53.2	55.7	57.0	57.8	58.6	59.1	58.5	58.2	58.0	57.4	56.3
34	46.2	<40	<40	<40	<40	43.3	<40	42.8	46.8	47.9	<40	46.8	50.3	53.3	55.7	57.0	57.8	58.6	59.1	58.5	58.2	58.0	57.4	56.4
33	46.2	<40	<40	<40	<40	43.3	<40	42.8	46.8	48.0	<40	46.8	50.3	53.3	55.8	57.0	57.8	58.6	59.2	58.6	58.3	58.0	57.4	56.4
32	46.3	<40	<40	<40	<40	43.3	<40	42.9	46.9	48.0	<40	46.8	50.3	53.3	55.8	57.1	57.9	58.7	59.2	58.6	58.3	58.0	57.5	56.4
31	46.3	<40	<40	<40	<40	43.4	<40	42.9	46.9	48.0	<40	46.9	50.4	53.4	55.8	57.1	57.9	58.7	59.2	58.6	58.3	58.1	57.5	56.4
30	46.3	<40	<40	<40	<40	43.4	<40	42.9	47.0	48.1	<40	46.9	50.4	53.4	55.8	57.1	57.9	58.7	59.2	58.7	58.3	58.1	57.5	56.5
29	46.4	<40	<40	<40	<40	43.4	<40	43.0	47.0	48.1	<40	46.9	50.4	53.4	55.8	57.1	57.9	58.7	59.3	58.7	58.3	58.1	57.5	56.5
28	46.4	<40	<40	<40	<40	43.5	<40	43.0	47.0	48.1	<40	47.0	50.5	53.5	55.9	57.2	57.9	58.8	59.3	58.7	58.4	58.1	57.6	56.5
27	46.5	<40	<40	<40	<40	43.5	<40	43.1	47.1	48.2	<40	47.0	50.5	53.5	55.9	57.2	58.0	58.8	59.3	58.7	58.4	58.1	57.6	56.5
26	46.5	<40	<40	<40	<40	43.5	<40	43.1	47.1	48.2	<40	47.0	50.5	53.5	55.9	57.2	58.0	58.8	59.3	58.7	58.4	58.2	57.6	56.6
25	46.5	<40	<40	<40	<40	43.6	<40	43.1	47.1	48.2	<40	47.1	50.6	53.6	55.9	57.2	58.0	58.8	59.3	58.8	58.4	58.2	57.6	56.6
24	46.6	<40	<40	<40	<40	43.6	<40	43.2	47.2	48.3	<40	47.1	50.6	53.6	56.0	57.3	58.0	58.8	59.4	58.8	58.5	58.2	57.7	56.6
23	46.6	<40	<40	<40	<40	43.6	<40	43.2	47.2	48.3	<40	47.1	50.6	53.6	56.0	57.3	58.1	58.9	59.4	58.8	58.5	58.2	57.7	56.6
22	46.7	<40	<40	<40	<40	43.7	<40	43.2	47.2	48.3	<40	47.1	50.6	53.6	56.0	57.3	58.1	58.9	59.4	58.8	58.5	58.2	57.7	56.7
21	46.7	<40	<40	<40	<40	43.7	<40	43.3	47.3	48.4	<40	47.2	50.7	53.7	56.0	57.3	58.1	58.9	59.4	58.8	58.5	58.3	57.7	56.7
20	46.7	<40	<40	<40	<40	43.7	<40	43.3	47.3	48.4	<40	47.2	50.7	53.7	56.0	57.3	58.1	58.9	59.4	58.9	58.5	58.3	57.7	56.7
19	46.8	<40	<40	<40	<40	43.7	<40	43.3	47.3	48.4	<40	47.2	50.7	53.7	56.1	57.3	58.1	59.0	59.5	58.9	58.5	58.3	57.7	56.7
18	46.8	<40	<40	<40	<40	43.8	<40	43.3	47.4	48.5	<40	47.3	50.8	53.8	56.1	57.4	58.1	59.0	59.5	58.9	58.6	58.3	57.8	56.8
17	46.8	<40	<40	<40	<40	43.8	<40	43.4	47.4	48.5	<40	47.3	50.8	53.8	56.1	57.4	58.2	59.0	59.5	58.9	58.6	58.3	57.8	56.8
16	46.9	<40	<40	<40	<40	43.8	<40	43.4	47.4	48.5	<40	47.3	50.8	53.8	56.1	57.4	58.2	59.0	59.5	58.9	58.6	58.4	57.8	56.8
15	46.9	<40	<40	<40	<40	43.9	<40	43.4	47.4	48.6	<40	47.3	50.8	53.8	56.1	57.4	58.2	59.0	59.5	59.0	58.6	58.4	57.8	56.8
14	46.9	<40	<40	<40	<40	43.9	<40	43.5	47.5	48.6	<40	47.4	50.9	53.9	56.2	57.4	58.2	59.0	59.5	59.0	58.6	58.4	57.8	56.8
13	47.0	<40	<40	<40	<40	43.9	<40	43.5	47.5	48.6	<40	47.4	50.9	53.9	56.2	57.4	58.2	59.0	59.6	59.0	58.6	58.4	57.9	56.9
12	47.0	<40	<40	<40	<40	43.9	<40	43.5	47.5	48.6	<40	47.4	50.9	53.9	56.2	57.4	58.2	59.0	59.6	59.0	58.6	58.4	57.9	56.9
11	47.0	<40	<40	<40	<40	44.0	<40	43.5	47.6	48.7	<40	47.4	51.0	53.9	56.2	57.4	58.2	59.0	59.6	59.0	58.6	58.4	57.9	56.9
10	47.1	<40	<40	<40	<40	44.0	<40	43.6	47.6	48.7	<40	47.4	51.0	53.9	56.2	57.4	58.2	59.0	59.6	59.0	58.6	58.4	57.9	56.9
9	47.1	<40	<40	<40	<40	44.0	<40	43.6	47.6	48.7	<40	47.5	51.0	54.0	56.2	57.4	58.2	59.0	59.5	59.0	58.6	58.4	57.9	56.9
8	47.1	<40	<40	<40	<40	44.0	<40	43.6	47.6	48.7	<40	47.5	51.0	54.0	56.2	57.4	58.2	59.0	59.5	59.0	58.6	58.4	57.9	56.9
7	47.1	<40	<40	<40	<40	44.0	<40	43.6	47.6	48.7	<40	47.5	51.0	54.0	56.1	57.3	58.2	59.0	59.5	58.9	58.6	58.3	57.9	56.9
6	47.1	<40	<40	<40	<40	44.1	<40	43.6	47.7	48.8	<40	47.5	51.1	54.0	56.1	57.3	58.1	59.0	59.5	58.9	58.6	58.3	57.8	56.9
5	47.2	<40	<40	<40	<40	44.1	<40	43.7	47.7	48.8	<40	47.5	51.1	54.0	56.1	57.3	58.1	58.9	59.4	58.9	58.5	58.3	57.8	56.9
4	47.2	<40	<40	<40	<40	44.1	<40	43.7	47.7	48.8	<40	47.6	51.1	54.1	56.1	57.2	58.0	58.9	59.4	58.8	58.4	58.2	57.7	56.8
3	47.2	<40	<40	<40	<40	44.1	<40	43.6	47.7	48.8	<40	47.6	51.1	54.1	56.1	57.1	57.9	58.7	59.3	58.7	58.3	58.1	57.6	56.7
2	47.2	<40	<40	<40	<40	44.0	<40	43.6	47.6	48.7	<40	47.6	51.1	54.1	56.1	57.1	57.8	58.6	59.2	58.5	58.1	57.9	57.4	56.6
1	47.2	<40	<40	<40	<40	43.9	<40	43.3	47.6	48.7	<40	47.5	51.1	54.1	56.1	57.0	57.7	58.5	59.0	58.3				
Max	47.2	<40	<40	<40	<40	44.1	<40	43.7	47.7	48.8	<40	47.6	51.1	54.1	56.2	57.4	58.2	59.0	59.6	59.0	58.6	58.4	57.9	56.9
Min	46.1	<40	<40	<40	<40	43.2	<40	42.7	46.7	47.8	<40	46.7	50.1	53.1	55.6	56.9	57.7	58.5	59.0	58.3	58.1	57.9	57.4	56.3

Noise sensitive receivers with exceedance (≥70.5 dB(A))
Noise sensitive receivers applied with fixed glazing
Noise sensitive receivers applied with acoustic window (non-absorptive)
Noise sensitive receivers applied with acoustic window (absorptive)

(These predicted noise levels are the equivalent noise levels at 1m from the external facade after accounting the reduction in noise levels inside the flat offered by the proposed acoustic window)

Floor	R438a	R438b	R438c	R438d	R501a	R501b	R501c	R502a	R502b	R502c	R503a	R503b	R504a	R504b	R505a	R505b	R506a	R506b	R507a	R507b	R507c	R508a	R508b	R508c
40					56.8	56.8	52.2	<40	56.5	56.5	56.3	56.4	56.0	55.7	55.9	54.3	<40	<40	55.1	55.8	<40	46.7	57.3	58.6
39					56.8	56.8	52.3	<40	56.6	56.6	56.3	56.4	55.9	55.8	55.6	54.1	<40	<40	55.0	55.8	<40	46.7	57.3	58.7
38					56.9	56.8	52.4	<40	56.7	56.7	56.4	56.4	56.0	55.9	55.7	54.2	<40	<40	54.9	55.6	<40	46.7	57.4	58.7
37	55.6	55.3	54.6	53.5	56.9	56.9	52.5	<40	56.8	56.8	56.5	56.5	56.1	56.0	55.8	54.3	<40	<40	55.0	55.7	<40	46.7	57.5	58.8
36	55.7	55.4	54.6	53.6	57.0	57.0	52.6	<40	56.8	56.9	56.6	56.6	56.2	56.1	55.9	54.4	<40	<40	55.1	55.8	<40	46.8	57.6	59.0
35	55.7	55.4	54.6	53.6	57.1	57.0	52.7	<40	56.9	57.0	56.7	56.7	56.3	56.2	56.0	54.5	<40	<40	55.2	55.9	<40	46.8	57.7	59.1
34	55.7	55.4	54.7	53.6	57.2	57.1	52.7	<40	57.0	57.1	56.8	56.8	56.4	56.3	56.1	54.6	<40	<40	55.3	56.0	<40	46.8	57.8	59.2
33	55.7	55.4	54.7	53.6	57.3	57.1	52.8	<40	57.1	57.1	56.9	56.9	56.5	56.4	56.2	54.7	<40	<40	55.4	56.1	<40	46.9	58.0	59.3
32	55.8	55.5	54.7	53.6	57.3	57.2	52.9	<40	57.2	57.2	57.0	57.0	56.6	56.5	56.3	54.8	<40	<40	55.5	56.2	<40	46.9	58.1	59.4
31	55.8	55.5	54.8	53.7	57.4	57.3	53.0	<40	57.3	57.3	57.1	57.1	56.7	56.6	56.4	54.9	<40	<40	55.6	56.3	<40	46.9	58.1	59.5
30	55.8	55.5	54.8	53.7	57.5	57.4	53.1	<40	57.4	57.4	57.2	57.2	56.8	56.7	56.5	55.0	<40	<40	55.7	56.4	<40	46.9	58.2	59.6
29	55.8	55.5	54.8	53.7	57.6	57.5	53.2	<40	57.5	57.5	57.2	57.3	56.9	56.8	56.6	55.1	<40	<40	55.8	56.5	<40	47.0	58.3	59.7
28	55.9	55.6	54.8	53.8	57.7	57.6	53.3	<40	57.6	57.6	57.3	57.4	57.0	56.9	56.7	55.2	<40	<40	55.9	56.7	<40	47.0	58.4	59.8
27	55.9	55.6	54.8	53.8	57.8	57.6	53.4	<40	57.7	57.7	57.4	57.5	57.1	57.0	56.8	55.3	<40	<40	56.1	56.7	<40	47.0	58.6	59.9
26	55.9	55.6	54.9	53.8	57.9	57.7	53.5	<40	57.8	57.8	57.5	57.6	57.2	57.1	56.9	55.4	<40	<40	56.2	56.8	<40	47.0	58.7	60.0
25	55.9	55.6	54.9	53.8	57.9	57.8	53.6	<40	57.9	57.9	57.7	57.7	57.3	57.2	57.0	55.6	<40	<40	56.3	56.9	<40	47.1	58.8	60.2
24	55.9	55.7	54.9	53.8	58.0	57.9	53.6	<40	58.0	58.0	57.8	57.8	57.4	57.3	57.1	55.7	<40	<40	56.4	57.1	<40	47.1	59.0	60.3
23	56.0	55.7	55.0	53.9	58.0	58.0	53.7	<40	58.1	58.1	57.9	57.9	57.5	57.5	57.3	55.8	<40	<40	56.6	57.2	<40	47.1	59.0	60.4
22	56.0	55.7	55.0	53.9	58.1	58.1	53.8	<40	58.2	58.2	58.0	58.0	57.6	57.6	57.4	55.9	<40	<40	56.7	57.3	<40	47.1	59.1	60.6
21	56.0	55.7	55.0	53.9	58.2	58.2	53.9	<40	58.3	58.3	58.1	58.1	57.7	57.7	57.5	56.0	<40	<40	56.8	57.5	<40	47.2	59.3	60.7
20	56.1	55.8	55.0	53.9	58.3	58.3	54.0	<40	58.4	58.4	58.2	58.2	57.8	57.8	57.6	56.2	<40	<40	57.0	57.6	<40	47.2	59.4	60.8
19	56.1	55.8	55.1	54.0	58.4	58.4	54.1	<40	58.5	58.5	58.3	58.3	57.9	57.9	57.8	56.3	<40	<40	57.1	57.8	<40	47.2	59.6	60.9
18	56.1	55.8	55.1	54.0	58.5	58.5	54.2	<40	58.6	58.6	58.4	58.4	58.1	58.0	57.9	56.4	<40	<40	57.2	57.9	<40	47.2	59.7	61.1
17	56.1	55.8	55.1	54.0	58.6	58.6	54.3	<40	58.7	58.7	58.5	58.6	58.2	58.2	58.0	56.6	<40	<40	57.4	58.1	<40	47.2	59.9	61.3
16	56.1	55.8	55.1	54.0	58.7	58.7	54.4	<40	58.8	58.8	58.6	58.7	58.3	58.3	58.1	56.7	<40	<40	57.5	58.2	<40	47.3	60.0	61.4
15	56.2	55.9	55.1	54.1	58.8	58.7	54.5	<40	58.9	58.9	58.7	58.8	58.4	58.4	58.3	56.8	<40	<40	57.7	58.4	<40	47.3	60.1	61.6
14	56.2	55.9	55.1	54.1	58.8	58.8	54.6	<40	59.0	59.0	58.8	58.9	58.5	58.5	58.4	57.0	<40	<40	57.8	58.5	<40	47.3	60.3	61.8
13	56.2	55.9	55.2	54.1	58.9	58.9	54.7	<40	59.1	59.2	58.9	59.0	58.6	58.7	58.5	57.1	<40	<40	58.0	58.6	<40	47.3	60.5	61.9
12	56.2	55.9	55.2	54.1	59.0	58.9	54.8	<40	59.1	59.3	59.0	59.1	58.8	58.8	58.7	57.2	<40	<40	58.2	58.8	<40	47.3	60.7	62.1
11	56.2	55.9	55.2	54.1	59.1	59.0	54.8	<40	59.2	59.3	59.1	59.2	58.9	58.9	58.8	57.4	<40	<40	58.3	58.9	<40	47.3	60.8	62.2
10	56.2	55.9	55.2	54.1	59.2	59.1	54.9	<40	59.3	59.4	59.2	59.3	59.0	59.0	58.9	57.5	<40	<40	58.5	59.1	<40	47.3	61.0	62.4
9	56.2	56.0	55.2	54.1	59.2	59.2	55.0	<40	59.4	59.5	59.2	59.4	59.1	59.1	59.1	57.6	<40	<40	58.6	59.2	<40	47.4	61.2	62.6
8	56.2	56.0	55.2	54.2	59.3	59.2	55.1	<40	59.5	59.6	59.3	59.5	59.2	59.2	59.2	57.8	<40	<40	58.8	59.4	<40	47.4	61.3	62.8
7	56.3	56.0	55.3	54.2	59.4	59.3	55.1	<40	59.6	59.7	59.4	59.6	59.3	59.4	59.3	57.9	<40	<40	58.9	59.6	<40	47.4	61.5	63.0
6	56.3	56.0	55.3	54.2	59.4	59.4	55.2	<40	59.7	59.8	59.5	59.7	59.4	59.5	59.4	58.0	<40	<40	59.1	59.7	<40	47.4	61.6	63.2
5	56.3	56.0	55.3	54.2	59.5	59.4	55.3	<40	59.7	59.9	59.6	59.7	59.5	59.5	59.5	58.1	<40	<40	59.2	59.9	<40	47.4	61.8	63.4
4	56.2	56.0	55.3	54.2	59.5	59.5	55.3	<40	59.8	59.9	59.6	59.8	59.5	59.6	59.6	58.2	<40	<40	59.3	60.0	<40	47.4	62.0	63.5
3	56.2	55.9	55.3	54.2	59.6	59.5	55.4	<40	59.8	60.0	59.7	59.9	59.6	59.7	59.7	58.3	<40	<40	59.5	60.1	<40	47.4	62.1	63.7
2	56.0	55.9	55.2	54.2	59.6	59.6	55.4	<40	59.9	60.0	59.7	59.9	59.7	59.8	59.8	58.4	<40	<40	59.6	60.2	<40	47.4	62.2	63.8
1					59.6	59.6	55.4	<40	59.9	60.1	59.8	60.0	59.7	59.8	59.8	58.4	<40	<40	59.6	60.3	<40	47.4	62.4	63.9
Max	56.3	56.0	55.3	54.2	59.6	59.6	55.4	<40	59.9	60.1	59.8	60.0	59.7	59.8	59.8	58.4	<40	<40	59.6	60.3	<40	47.4	62.4	63.9
Min	55.6	55.3	54.6	53.5	56.8	56.8	52.2	<40	56.5	56.5	56.3	56.4	55.9	55.7	55.6	54.1	<40	<40	54.9	55.6	<40	46.7	57.3	58.6

Noise sensitive receivers with exceedance (≥70.5 dB(A))
Noise sensitive receivers applied with fixed glazing
Noise sensitive receivers applied with acoustic window (non-absorptive)
Noise sensitive receivers applied with acoustic window (absorptive)

(These predicted noise levels are the equivalent noise levels at 1m from the external facade after accounting the reduction in noise levels inside the flat offered by the proposed acoustic window)

Floor	R509a	R509b	R510a	R510b	R511a	R511b	R512a	R512b	R513a	R513b	R513c	R513d	R514a	R514b	R514c	R514d	R515a	R515b	R516a	R516b	R516c	R517a	R517b	R517c
40	60.6	61.9	65.8	65.8	63.4	63.4	63.9	64.2	64.1	64.3	64.4	62.5	61.8	64.9	64.9	64.7	61.5	61.0	65.4	65.5	60.8	60.8	65.7	65.9
39	60.7	62.0	65.9	65.9	63.4	63.5	64.0	64.3	64.2	64.4	64.5	62.5	61.9	65.0	65.0	64.8	61.6	61.1	65.5	65.5	60.9	60.9	65.8	66.0
38	60.7	62.0	66.0	66.0	63.5	63.5	64.0	64.3	64.3	64.5	64.6	62.6	61.9	65.1	65.0	64.9	61.7	61.2	65.5	65.6	61.0	61.0	65.9	66.1
37	60.8	62.1	66.1	66.1	63.5	63.6	64.1	64.4	64.4	64.6	64.7	62.7	62.0	65.1	65.1	64.9	61.8	61.3	65.6	65.7	61.1	61.1	66.0	66.2
36	60.9	62.2	66.2	66.1	63.6	63.7	64.2	64.5	64.5	64.7	64.8	62.7	62.0	65.2	65.2	65.0	61.9	61.4	65.7	65.8	61.2	61.2	66.1	66.3
35	61.0	62.3	66.2	66.2	63.7	63.7	64.2	64.5	64.6	64.7	64.9	62.7	62.0	65.2	65.2	65.1	62.0	61.5	65.8	65.9	61.3	61.3	66.2	66.3
34	61.1	62.3	66.3	66.3	63.8	63.8	64.3	64.6	64.6	64.8	65.0	62.7	62.0	65.3	65.2	65.1	62.1	61.6	65.9	65.9	61.4	61.4	66.3	66.4
33	61.2	62.4	66.4	66.4	63.9	64.0	64.4	64.7	64.7	64.9	65.0	62.7	61.9	65.3	65.3	65.1	62.2	61.7	65.9	66.0	61.5	61.6	66.3	66.6
32	61.3	62.5	66.5	66.5	63.9	64.0	64.4	64.8	64.8	65.0	65.1	62.8	61.9	65.3	65.3	65.2	62.3	61.9	66.0	66.1	61.6	61.7	66.5	66.7
31	61.4	62.7	66.7	66.6	64.0	64.1	64.6	64.9	64.9	65.1	65.2	62.8	62.0	65.4	65.4	65.3	62.4	62.0	66.1	66.2	61.7	61.8	66.6	66.7
30	61.5	62.8	66.7	66.7	64.1	64.2	64.7	65.0	65.0	65.2	65.4	62.9	62.0	65.5	65.5	65.3	62.6	62.1	66.2	66.3	61.9	61.9	66.7	66.9
29	61.7	62.9	66.8	66.8	64.2	64.3	64.8	65.1	65.1	65.3	65.5	62.9	62.0	65.6	65.6	65.5	62.7	62.2	66.3	66.4	62.0	62.0	66.8	67.0
28	61.8	63.0	67.0	66.9	64.3	64.5	64.8	65.2	65.2	65.4	65.5	63.0	62.1	65.7	65.7	65.5	62.8	62.3	66.4	66.5	62.1	62.2	66.9	67.1
27	61.9	63.2	67.1	67.1	64.4	64.5	65.0	65.3	65.3	65.5	65.6	63.1	62.3	65.8	65.7	65.6	62.9	62.5	66.5	66.6	62.2	62.3	67.0	67.2
26	62.0	63.3	67.2	67.2	64.6	64.7	65.1	65.4	65.4	65.6	65.7	63.2	62.3	65.8	65.8	65.7	63.0	62.6	66.6	66.8	62.4	62.4	67.1	67.4
25	62.1	63.4	67.3	67.3	64.6	64.8	65.2	65.5	65.5	65.7	65.8	63.2	62.4	66.0	66.0	65.8	63.2	62.7	66.8	66.9	62.5	62.6	67.3	67.5
24	62.2	63.6	67.4	67.4	64.8	64.9	65.4	65.7	65.6	65.8	65.9	63.3	62.5	66.0	66.1	66.0	63.3	62.9	66.9	67.1	62.6	62.7	67.4	67.6
23	62.4	63.6	67.6	67.6	64.9	65.0	65.4	65.8	65.7	65.9	66.0	63.4	62.6	66.1	66.1	66.1	63.4	63.0	67.0	67.2	62.8	62.9	67.6	67.8
22	62.5	63.8	67.8	67.7	65.1	65.1	65.6	65.9	65.9	66.1	66.2	63.5	62.7	66.3	66.3	66.1	63.6	63.1	67.2	67.3	62.9	63.0	67.7	67.9
21	62.7	63.9	67.9	67.9	65.2	65.3	65.7	66.0	66.0	66.2	66.3	63.6	62.8	66.4	66.4	66.3	63.7	63.3	67.3	67.5	63.1	63.2	67.9	68.1
20	62.8	64.1	68.1	68.1	65.3	65.5	65.9	66.2	66.1	66.3	66.4	63.8	63.0	66.5	66.5	66.4	63.9	63.4	67.4	67.6	63.2	63.4	68.0	68.2
19	63.0	64.3	68.3	68.2	65.5	65.6	66.1	66.4	66.2	66.4	66.5	63.9	63.1	66.6	66.6	66.5	64.0	63.6	67.6	67.7	63.4	63.5	68.2	68.4
18	63.1	64.4	68.4	68.4	65.7	65.7	66.2	66.5	66.4	66.6	66.7	64.0	63.3	66.8	66.8	66.6	64.2	63.7	67.7	67.9	63.6	63.7	68.3	68.5
17	63.3	64.6	68.6	68.6	65.8	65.9	66.3	66.6	66.5	66.7	66.8	64.1	63.4	66.9	66.9	66.8	64.3	63.9	67.8	68.0	63.7	63.9	68.5	68.7
16	63.5	64.8	68.8	68.8	66.0	66.1	66.5	66.8	66.7	66.9	67.0	64.3	63.6	67.1	67.1	66.9	64.5	64.1	68.0	68.1	63.9	64.0	68.7	68.9
15	63.6	65.0	69.0	69.0	66.2	66.2	66.7	67.0	66.8	67.1	67.2	64.4	63.7	67.2	67.2	67.1	64.6	64.2	68.2	68.3	64.1	64.2	68.8	69.1
14	63.8	65.1	69.2	69.2	66.3	66.4	66.9	67.2	67.0	67.2	67.3	64.6	63.9	67.4	67.4	67.3	64.8	64.4	68.3	68.5	64.3	64.4	69.0	69.2
13	64.0	65.3	69.4	69.3	66.5	66.6	67.0	67.4	67.1	67.3	67.5	64.7	64.0	67.6	67.5	67.4	65.0	64.6	68.5	68.7	64.5	64.6	69.2	69.4
12	64.1	65.5	69.6	69.6	66.7	66.7	67.2	67.5	67.3	67.5	67.6	64.9	64.2	67.7	67.7	67.6	65.1	64.8	68.6	68.8	64.7	64.8	69.4	69.7
11	64.3	65.7	69.8	69.8	66.9	67.0	67.4	67.7	67.4	67.6	67.7	65.1	64.4	67.9	67.8	67.8	65.3	65.0	68.8	69.0	64.9	65.0	69.6	69.8
10	64.5	65.9	70.1	70.1	67.1	67.2	67.6	67.9	67.6	67.8	67.9	65.2	64.5	68.0	68.0	67.9	65.5	65.2	69.0	69.2	65.1	65.2	69.7	70.0
9	64.7	66.1	70.3	70.3	67.4	67.4	67.8	68.0	67.8	68.0	68.1	65.4	64.7	68.2	68.2	68.0	65.7	65.4	69.2	69.4	65.3	65.4	70.0	70.3
8	64.9	66.3	-	64.8	67.6	67.6	68.0	68.3	67.9	68.1	68.3	65.5	64.8	68.3	68.3	68.2	65.8	65.6	69.5	69.7	65.5	-	64.6	64.9
7	65.1	66.6	-	65.1	67.8	67.8	68.2	68.5	68.1	68.3	68.4	65.6	65.0	68.5	68.5	68.4	66.0	65.8	69.7	69.9	65.8	-	64.9	65.2
6	65.4	66.8	-	65.4	68.1	68.0	68.4	68.7	68.2	68.4	68.6	65.8	65.2	68.7	68.7	68.5	66.2	66.0	69.9	70.1	66.0	-	65.1	65.4
5	65.5	67.0	-	65.7	68.3	68.3	68.6	68.9	68.3	68.6	68.7	65.9	65.3	68.8	68.8	68.6	66.3	66.1	70.1	70.3	66.2	-	65.3	65.7
4	65.7	67.2	-	66.0	68.5	68.5	68.8	69.1	68.5	68.7	68.8	66.0	65.4	69.0	69.0	68.8	66.5	66.3	64.6	64.9	-	-	65.6	65.9
3	65.8	67.3	-	66.3	68.8	68.7	69.0	69.3	68.6	68.9	69.0	66.2	65.6	69.1	69.1	68.9	66.6	66.5	64.8	65.1	-	-	65.8	66.2
2	66.0	67.5	-	66.7	69.1	68.9	69.2	69.5	68.8	69.0	69.1	66.3	65.7	69.2	69.2	69.0	66.8	66.6	65.0	65.3	-	-	66.0	66.4
1	66.1	67.7	-	67.0	69.3	69.2	69.3	69.6	68.8	69.1	69.2	66.4	65.8	69.3	69.3	69.1	66.9	66.7	65.1	65.4	-			
Max	66.1	67.7	70.3	70.3	69.3	69.2	69.3	69.6	68.8	69.1	69.2	66.4	65.8	69.3	69.3	69.1	66.9	66.7	70.1	70.3	66.2	65.4	70.0	70.3
Min	60.6	61.9	65.8	64.8	63.4	63.4	63.9	64.2	64.1	64.3	64.4	62.5	61.8	64.9	64.9	64.7	61.5	61.0	64.6	64.9	60.8	60.8	64.6	64.9

Noise sensitive receivers with exceedance (≥70.5 dB(A))
\- Noise sensitive receivers applied with fixed glazing
Noise sensitive receivers applied with acoustic window (non-absorptive)
Noise sensitive receivers applied with acoustic window (absorptive)
(These predicted noise levels are the equivalent noise levels at 1m from the external facade after accounting the reduction in noise levels inside the flat offered by the proposed acoustic window)

Floor	R518a	R518b	R519a	R519b	R520a	R520b	R521a	R521b	R522a	R522b	R523a	R523b	R524a	R524b	R525a	R525b	R526a	R526b	R526c	R526d	R527a	R527b	R527c	R528a
40	66.4	66.6	67.0	66.4	63.8	63.9	64.3	64.7	61.8	64.8	65.1	64.7	63.1	65.6	65.8	64.0	62.0	66.4	67.0	67.2	63.8	62.5	49.8	54.3
39	66.5	66.7	67.1	66.5	63.8	64.0	64.4	64.7	61.9	64.9	65.1	64.8	63.2	65.7	65.9	64.1	62.1	66.5	67.1	67.3	63.8	62.6	49.8	54.3
38	66.6	66.8	67.1	66.6	63.9	64.1	64.4	64.8	62.0	65.0	65.2	64.8	63.3	65.8	66.0	64.2	62.2	66.6	67.2	67.4	63.9	62.6	49.9	54.3
37	66.6	66.9	67.2	66.6	64.0	64.1	64.5	64.9	62.1	65.1	65.3	64.9	63.4	65.9	66.1	64.3	62.3	66.7	67.3	67.5	63.9	62.7	49.9	54.4
36	66.7	67.0	67.3	66.7	64.1	64.2	64.6	65.0	62.2	65.2	65.4	65.0	63.5	66.0	66.2	64.4	62.4	66.8	67.4	67.6	64.0	62.8	50.0	54.4
35	66.8	67.1	67.4	66.8	64.2	64.3	64.7	65.1	62.3	65.2	65.5	65.1	63.6	66.1	66.3	64.5	62.5	66.8	67.5	67.7	64.0	62.8	50.0	54.5
34	67.0	67.2	67.5	66.9	64.3	64.4	64.8	65.2	62.4	65.3	65.6	65.2	63.7	66.2	66.4	64.6	62.6	67.0	67.6	67.8	64.1	62.8	50.1	54.5
33	67.1	67.3	67.6	67.0	64.4	64.5	64.8	65.2	62.6	65.4	65.7	65.3	63.8	66.3	66.4	64.7	62.7	67.1	67.7	67.8	64.1	62.9	50.1	54.6
32	67.2	67.4	67.7	67.1	64.4	64.6	65.0	65.4	62.7	65.5	65.7	65.4	63.9	66.4	66.6	64.9	62.9	67.2	67.7	67.9	64.2	62.9	50.2	54.6
31	67.3	67.5	67.8	67.3	64.5	64.7	65.1	65.5	62.8	65.6	65.8	65.5	64.0	66.5	66.7	65.0	63.0	67.2	67.8	68.0	64.3	63.0	50.2	54.6
30	67.4	67.6	67.9	67.4	64.7	64.8	65.2	65.6	62.9	65.7	66.0	65.5	64.2	66.6	66.8	65.1	63.1	67.3	68.0	68.1	64.3	63.0	50.3	54.6
29	67.5	67.8	68.0	67.4	64.8	64.9	65.3	65.6	62.9	65.8	66.1	65.7	64.3	66.7	66.9	65.2	63.2	67.5	68.1	68.2	64.4	63.1	50.3	54.7
28	67.6	67.9	68.2	67.6	64.8	65.0	65.4	65.8	63.1	65.9	66.2	65.8	64.4	66.8	67.0	65.4	63.4	67.6	68.1	68.3	64.4	63.1	50.4	54.7
27	67.7	68.0	68.3	67.7	65.0	65.1	65.5	65.9	63.2	66.0	66.3	65.9	64.6	66.9	67.1	65.5	63.5	67.6	68.3	68.4	64.5	63.2	50.4	54.8
26	67.9	68.2	68.4	67.8	65.1	65.2	65.6	66.0	63.3	66.1	66.4	66.0	64.7	67.0	67.2	65.6	63.6	67.8	68.4	68.5	64.5	63.2	50.4	54.8
25	68.0	68.3	68.5	68.0	65.1	65.3	65.7	66.1	63.4	66.3	66.5	66.2	64.8	67.2	67.4	65.8	63.8	67.9	68.5	68.6	64.5	63.2	50.5	54.8
24	68.2	68.4	68.7	68.1	65.3	65.4	65.8	66.2	63.6	66.3	66.6	66.3	65.0	67.3	67.5	65.9	63.9	68.0	68.6	68.8	64.6	63.3	50.5	54.8
23	68.3	68.6	68.8	68.2	65.4	65.5	65.9	66.4	63.7	66.5	66.8	66.4	65.1	67.4	67.6	66.1	64.1	68.1	68.7	68.8	64.6	63.3	50.6	54.9
22	68.5	68.7	69.0	68.4	65.5	65.6	66.0	66.5	63.9	66.6	66.9	66.5	65.3	67.5	67.7	66.2	64.2	68.3	68.8	69.0	64.6	63.3	50.6	54.9
21	68.6	68.9	69.1	68.5	65.6	65.7	66.2	66.6	64.0	66.8	67.0	66.7	65.4	67.7	67.9	66.4	64.4	68.4	69.0	69.1	64.6	63.3	50.7	54.9
20	68.8	69.1	69.2	68.7	65.8	65.9	66.3	66.7	64.2	66.9	67.2	66.8	65.6	67.8	68.0	66.5	64.5	68.6	69.1	69.2	64.7	63.3	50.7	54.9
19	68.9	69.2	69.4	68.8	65.9	66.0	66.4	66.9	64.3	67.0	67.3	67.0	65.7	68.0	68.1	66.7	64.7	68.7	69.2	69.4	64.7	63.3	50.7	55.0
18	69.1	69.4	69.6	69.0	66.0	66.2	66.6	67.0	64.5	67.2	67.5	67.1	65.9	68.1	68.3	66.9	64.9	68.9	69.4	69.5	64.7	63.3	50.8	55.0
17	69.3	69.6	69.7	69.2	66.2	66.3	66.7	67.2	64.7	67.3	67.6	67.2	66.1	68.3	68.5	67.1	65.1	69.0	69.6	69.7	64.7	63.2	50.8	55.0
16	69.5	69.8	69.9	69.3	66.3	66.4	66.9	67.3	64.8	67.5	67.7	67.4	66.3	68.4	68.6	67.3	65.3	69.2	69.7	69.8	64.7	63.2	50.9	55.1
15	69.7	70.0	70.1	69.5	66.5	66.6	67.1	67.5	65.0	67.6	67.9	67.6	66.5	68.6	68.8	67.5	65.5	69.4	69.9	70.0	64.7	63.2	50.9	55.1
14	69.9	70.2	70.3	69.8	66.7	66.7	67.2	67.6	65.2	67.8	68.1	67.8	66.7	68.7	69.0	67.7	65.7	69.6	70.0	70.1	64.7	63.2	50.9	55.1
13	70.0	70.4	-	69.9	66.8	66.9	67.4	67.8	65.4	68.0	68.2	67.9	66.9	69.0	69.2	67.9	65.9	69.7	70.2	70.3	64.7	63.2	50.9	55.1
12	70.2	-	-	70.2	67.0	67.0	67.6	68.0	65.6	68.1	68.4	68.1	67.1	69.2	69.3	68.1	66.1	69.9	70.4	67.5	64.7	63.2	51.0	55.2
11	64.7	-	-	70.4	67.2	67.2	67.7	68.2	65.7	68.3	68.6	68.3	67.3	69.4	69.5	68.3	-	64.6	64.9	67.7	64.7	63.1	51.0	55.2
10	64.9	-	-	64.8	67.3	67.4	68.0	68.4	65.9	68.5	68.8	68.5	67.5	69.5	69.8	68.6	-	64.8	65.2	67.9	64.7	63.2	51.0	55.2
9	65.1	-	-	65.1	67.5	67.6	68.1	68.6	66.1	68.7	69.0	68.7	67.7	69.8	70.0	68.8	-	65.0	65.4	68.1	64.7	63.2	51.1	55.2
8	65.4	-	-	65.4	67.8	67.8	68.3	68.8	66.3	68.9	69.2	68.9	67.9	70.0	70.2	69.0	-	65.2	65.6	68.3	64.7	63.1	51.1	55.3
7	65.6	-	-	65.7	68.0	68.0	68.6	69.0	66.5	69.0	69.4	69.0	68.2	70.2	70.4	69.3	-	65.5	65.8	68.5	64.7	63.1	51.1	55.3
6	65.9	-	-	66.0	68.2	68.3	68.7	69.3	66.7	69.2	69.6	69.3	68.4	70.4	64.9	-	-	65.8	66.1	68.7	64.7	63.0	51.1	55.3
5	66.2	-	-	66.3	68.5	68.5	69.0	69.4	66.9	69.4	69.8	69.5	-	64.9	65.1	-	-	66.0	66.3	69.0	64.7	62.9	51.1	55.3
4	66.4	-	-	66.7	68.8	68.7	69.2	69.7	67.1	69.6	70.0	69.7	-	65.1	65.3	-	-	66.3	66.6	69.2	64.6	62.8	51.1	55.3
3	66.7	-	-	67.1	69.0	68.9	69.4	69.9	67.3	69.8	70.2	69.8	-	65.3	65.6	-	-	66.6	66.9	69.5	64.5	62.7	51.2	55.3
2	67.0	-	-	67.5	69.3	69.2	69.6	70.1	67.4	69.9	70.3	70.0	-	65.5	65.8	-	-	66.8	67.1	69.8	64.4	62.5	51.2	55.3
1									67.6	70.1	64.7	-	-	65.7	66.0	-	-	67.1	67.4	70.0	64.3	62.3	51.2	55.4
Max	70.2	70.4	70.3	70.4	69.3	69.2	69.6	70.1	67.6	70.1	70.3	70.0	68.4	70.4	70.4	69.3	66.1	69.9	70.4	70.3	64.7	63.3	51.2	55.4
Min	64.7	66.6	67.0	64.8	63.8	63.9	64.3	64.7	61.8	64.8	64.7	64.7	63.1	64.9	64.9	64.0	62.0	64.6	64.9	67.2	63.8	62.3	49.8	54.3

Noise sensitive receivers with exceedance (≥70.5 dB(A))

\- Noise sensitive receivers applied with fixed glazing

Noise sensitive receivers applied with acoustic window (non-absorptive)

Noise sensitive receivers applied with acoustic window (absorptive)

(These predicted noise levels are the equivalent noise levels at 1m from the external facade after accounting the reduction in noise levels inside the flat offered by the proposed acoustic window)

Floor	R528b	R528c	R529a	R529b	R530a	R530b	R531a	R531b	R532a	R532b	R532c	R532d	R533a	R533b	R533c	R533d	R534a	R534b	R535a	R535b	R536a	R536b	R537a	R537b
40	61.5	61.3	53.9	55.4	57.3	58.6	60.5	56.0	60.4	61.0	61.8	58.5	61.2	63.6	64.4	64.8	64.5	65.2	65.4	65.4	65.4	66.0	66.2	66.0
39	61.5	61.3	53.9	55.5	57.3	58.7	60.5	56.1	60.4	61.0	61.8	58.6	61.2	63.6	64.4	64.8	64.5	65.2	65.4	65.4	65.4	66.1	66.2	66.1
38	61.6	61.4	54.0	55.5	57.4	58.7	60.5	56.1	60.5	61.0	61.8	58.6	61.2	63.6	64.5	64.9	64.5	65.3	65.4	65.5	65.4	66.1	66.2	66.1
37	61.6	61.4	54.0	55.5	57.4	58.8	60.6	56.2	60.5	61.1	61.9	58.6	61.3	63.7	64.5	64.9	64.5	65.3	65.5	65.5	65.4	66.1	66.2	66.1
36	61.6	61.5	54.0	55.6	57.4	58.8	60.6	56.2	60.5	61.1	61.9	58.7	61.3	63.7	64.5	64.9	64.6	65.3	65.5	65.5	65.4	66.1	66.3	66.1
35	61.7	61.5	54.1	55.6	57.5	58.8	60.6	56.3	60.6	61.1	61.9	58.7	61.3	63.7	64.5	64.9	64.6	65.3	65.5	65.5	65.5	66.1	66.3	66.2
34	61.7	61.5	54.1	55.7	57.5	58.9	60.7	56.3	60.6	61.1	62.0	58.7	61.3	63.7	64.6	64.9	64.6	65.4	65.5	65.6	65.5	66.2	66.3	66.2
33	61.8	61.6	54.1	55.7	57.6	58.9	60.7	56.3	60.6	61.2	62.0	58.8	61.4	63.8	64.6	65.0	64.6	65.4	65.6	65.6	65.5	66.2	66.3	66.2
32	61.8	61.6	54.2	55.7	57.6	59.0	60.7	56.4	60.6	61.2	62.0	58.8	61.4	63.8	64.6	65.0	64.6	65.4	65.6	65.6	65.5	66.2	66.4	66.2
31	61.9	61.6	54.2	55.8	57.6	59.0	60.8	56.4	60.7	61.2	62.0	58.8	61.4	63.8	64.6	65.0	64.6	65.4	65.6	65.6	65.6	66.2	66.4	66.2
30	61.9	61.7	54.2	55.8	57.7	59.0	60.8	56.4	60.6	61.2	62.0	58.8	61.4	63.8	64.6	65.0	64.7	65.4	65.6	65.7	65.6	66.3	66.4	66.3
29	61.9	61.7	54.3	55.8	57.7	59.1	60.8	56.5	60.7	61.2	62.1	58.9	61.4	63.8	64.7	65.1	64.7	65.5	65.6	65.7	65.6	66.3	66.4	66.3
28	62.0	61.7	54.3	55.9	57.7	59.1	60.8	56.5	60.7	61.2	62.0	58.9	61.4	63.9	64.7	65.1	64.7	65.5	65.7	65.7	65.6	66.3	66.5	66.3
27	62.0	61.8	54.3	55.9	57.8	59.1	60.8	56.6	60.6	61.2	62.1	58.9	61.4	63.9	64.7	65.1	64.7	65.5	65.7	65.7	65.7	66.4	66.5	66.4
26	62.0	61.8	54.4	55.9	57.8	59.1	60.8	56.6	60.6	61.2	62.1	58.9	61.4	63.9	64.7	65.1	64.7	65.5	65.7	65.7	65.7	66.4	66.5	66.4
25	62.0	61.8	54.4	56.0	57.9	59.2	60.8	56.6	60.6	61.2	62.1	58.9	61.4	63.9	64.7	65.1	64.8	65.5	65.7	65.8	65.7	66.4	66.6	66.4
24	62.0	61.8	54.4	56.0	57.9	59.2	60.8	56.7	60.6	61.2	62.1	58.9	61.4	63.9	64.8	65.2	64.8	65.6	65.8	65.8	65.7	66.4	66.6	66.4
23	62.0	61.8	54.5	56.0	57.9	59.2	60.7	56.7	60.6	61.2	62.1	58.9	61.4	63.9	64.8	65.2	64.8	65.6	65.8	65.8	65.7	66.5	66.6	66.5
22	62.0	61.7	54.4	56.1	58.0	59.2	60.7	56.7	60.6	61.2	62.1	58.9	61.4	64.0	64.8	65.2	64.8	65.6	65.8	65.9	65.8	66.5	66.6	66.5
21	62.0	61.7	54.5	56.1	58.0	59.3	60.7	56.8	60.5	61.2	62.1	58.9	61.4	64.0	64.8	65.2	64.9	65.7	65.8	65.9	65.8	66.5	66.7	66.5
20	61.9	61.7	54.5	56.2	58.0	59.3	60.7	56.8	60.5	61.2	62.1	59.0	61.5	64.0	64.8	65.2	64.9	65.7	65.9	65.9	65.8	66.5	66.7	66.5
19	61.9	61.6	54.6	56.2	58.1	59.2	60.6	56.8	60.5	61.1	62.1	59.0	61.5	64.0	64.9	65.3	64.9	65.7	65.9	65.9	65.9	66.6	66.7	66.6
18	61.8	61.6	54.6	56.2	58.1	59.3	60.6	56.8	60.5	61.2	62.1	59.0	61.5	64.1	64.9	65.3	64.9	65.7	65.9	65.9	65.9	66.6	66.8	66.6
17	61.8	61.6	54.6	56.3	58.1	59.3	60.6	56.9	60.5	61.2	62.2	59.0	61.5	64.1	64.9	65.3	64.9	65.7	65.9	66.0	65.9	66.6	66.8	66.6
16	61.8	61.5	54.6	56.3	58.1	59.3	60.6	56.9	60.5	61.2	62.2	59.0	61.5	64.1	64.9	65.3	65.0	65.8	66.0	66.0	65.9	66.6	66.8	66.7
15	61.7	61.5	54.7	56.3	58.2	59.2	60.6	56.9	60.4	61.1	62.2	59.0	61.5	64.1	65.0	65.3	65.0	65.8	66.0	66.0	65.9	66.7	66.8	66.7
14	61.7	61.5	54.7	56.3	58.2	59.2	60.6	57.0	60.4	61.1	62.2	59.0	61.5	64.1	65.0	65.4	65.0	65.8	66.0	66.0	66.0	66.7	66.9	66.7
13	61.7	61.5	54.7	56.4	58.2	59.3	60.5	57.0	60.4	61.1	62.2	59.0	61.5	64.1	65.0	65.4	65.0	65.8	66.0	66.1	66.0	66.7	66.9	66.7
12	61.7	61.4	54.7	56.4	58.2	59.2	60.5	57.0	60.4	61.2	62.2	59.0	61.5	64.2	65.0	65.4	65.0	65.9	66.0	66.1	66.0	66.7	66.9	66.7
11	61.6	61.4	54.7	56.4	58.3	59.2	60.5	57.1	60.4	61.1	62.2	58.9	61.5	64.2	65.0	65.4	65.0	65.9	66.0	66.1	66.0	66.7	66.9	66.7
10	61.6	61.4	54.7	56.4	58.3	59.2	60.5	57.1	60.3	61.1	62.2	58.9	61.5	64.2	65.0	65.4	65.0	65.9	66.1	66.1	66.0	66.8	66.9	66.8
9	61.6	61.3	54.8	56.4	58.3	59.2	60.4	57.1	60.3	61.1	62.2	58.9	61.5	64.2	65.0	65.4	65.0	65.9	66.0	66.1	66.0	66.8	66.9	66.8
8	61.5	61.3	54.8	56.5	58.4	59.1	60.3	57.1	60.2	61.0	62.1	58.8	61.4	64.1	65.0	65.4	65.0	65.8	66.0	66.1	66.0	66.7	66.9	66.8
7	61.5	61.2	54.8	56.5	58.4	59.1	60.2	57.1	60.1	60.9	62.1	58.8	61.4	64.1	65.0	65.4	65.0	65.8	66.0	66.1	66.0	66.7	66.9	66.7
6	61.3	61.1	54.8	56.5	58.4	59.2	60.1	57.2	59.9	60.8	62.0	58.8	61.3	64.1	64.9	65.3	64.9	65.8	66.0	66.0	65.9	66.7	66.9	66.7
5	61.2	60.9	54.8	56.5	58.4	59.1	59.9	57.2	59.8	60.7	61.9	58.8	61.1	64.0	64.9	65.3	64.9	65.8	66.0	66.0	65.9	66.7	66.8	66.7
4	61.0	60.7	54.8	56.5	58.4	59.1	59.7	57.2	59.6	60.5	61.8	58.8	61.0	64.0	64.8	65.3	64.8	65.7	65.9	66.0	65.8	66.6	66.8	66.6
3	60.7	60.5	54.8	56.6	58.4	59.1	59.5	57.2	59.4	60.3	61.6	58.8	60.8	63.9	64.8	65.2	64.7	65.6	65.8	65.9	65.7	66.5	66.7	66.5
2	60.4	60.2	54.9	56.6	58.4	59.1	59.4	57.2	59.2	60.2	61.6	58.8	60.7	63.8	64.7	65.1	64.6	65.5	65.7	65.8	65.5	66.4	66.5	66.3
1	60.2	60.0	54.9	56.6	58.4	59.1	59.3	57.2	59.1	60.1	61.5	58.8	60.6	63.7	64.6	65.0	64.5	65.4	65.6	65.6	65.2	66.1	66.1	65.8
Max	62.0	61.8	54.9	56.6	58.4	59.3	60.8	57.2	60.7	61.2	62.2	59.0	61.5	64.2	65.0	65.4	65.0	65.9	66.1	66.1	66.0	66.8	66.9	66.8
Min	60.2	60.0	53.9	55.4	57.3	58.6	59.3	56.0	59.1	60.1	61.5	58.5	60.6	63.6	64.4	64.8	64.5	65.2	65.4	65.4	65.2	66.0	66.1	65.8

Noise sensitive receivers with exceedance (≥70.5 dB(A))
Noise sensitive receivers applied with fixed glazing
Noise sensitive receivers applied with acoustic window (non-absorptive)
Noise sensitive receivers applied with acoustic window (absorptive)

(These predicted noise levels are the equivalent noise levels at 1m from the external facade after accounting the reduction in noise levels inside the flat offered by the proposed acoustic window)

Floor	R538a	R538b	R538c	R538d
40	65.1	66.6	66.7	66.7
39	65.1	66.6	66.7	66.8
38	65.1	66.6	66.7	66.8
37	65.1	66.6	66.8	66.8
36	65.1	66.6	66.8	66.8
35	65.1	66.7	66.8	66.9
34	65.2	66.7	66.8	66.9
33	65.2	66.7	66.8	66.9
32	65.2	66.8	66.9	66.9
31	65.3	66.8	66.9	67.0
30	65.3	66.8	66.9	67.0
29	65.3	66.8	67.0	67.0
28	65.3	66.9	67.0	67.1
27	65.3	66.9	67.0	67.1
26	65.4	66.9	67.0	67.1
25	65.4	67.0	67.1	67.1
24	65.4	67.0	67.1	67.2
23	65.5	67.0	67.1	67.2
22	65.5	67.0	67.2	67.2
21	65.5	67.1	67.2	67.2
20	65.5	67.1	67.2	67.3
19	65.5	67.1	67.2	67.3
18	65.6	67.1	67.3	67.3
17	65.6	67.2	67.3	67.4
16	65.6	67.2	67.3	67.4
15	65.6	67.2	67.3	67.4
14	65.7	67.2	67.4	67.4
13	65.7	67.3	67.4	67.5
12	65.7	67.3	67.4	67.5
11	65.7	67.3	67.4	67.5
10	65.8	67.3	67.4	67.5
9	65.8	67.3	67.4	67.5
8	65.8	67.3	67.5	67.5
7	65.8	67.3	67.4	67.5
6	65.8	67.3	67.4	67.5
5	65.8	67.3	67.4	67.4
4	65.7	67.2	67.3	67.4
3	65.5	67.1	67.2	67.2
2	65.2	66.8	66.9	66.9
1	64.7	66.3	66.3	66.3
Max	65.8	67.3	67.5	67.5
Min	64.7	66.3	66.3	66.3

Noise sensitive receivers with exceedance (≥70.5 dB(A))

\- Noise sensitive receivers applied with fixed glazing

Noise sensitive receivers applied with acoustic window (non-absorptive)

Noise sensitive receivers applied with acoustic window (absorptive)

(These predicted noise levels are the equivalent noise levels at 1m from the external facade after accounting the reduction in noise levels inside the flat offered by the proposed acoustic window)

Floor	R201 max	R202 max	R203 max	R204 max	R205 max	R206 max	R207 max	R208 max	R209 max	R210 max	R211 max	R212 max	R213 max	R214 max	R215 max	R216 max	R217 max	R218 max	R219 max	R220 max	R221 max	R222 max	R223 max	R224 max	R225 max	R226 max	R227 max	R228 max	R229 max	R230 max	R231 max	R232 max	R233 max	R234 max
40																																		
39																																		
38																																		
37	62.3	59.1	56.1	<40	54.8	54.5	55.3	55.6	55.8	49.5	<40	<40	<40	<40	<40	42.2	43.3	<40	<40	45.2	49.9	64.4	63.2	63.1	62.7	62.4	62.1	56.9	64.3	65.4	63.6	63.3	61.2	62.9
36	62.4	59.2	56.1	<40	54.8	54.5	55.3	55.7	55.9	49.0	<40	<40	<40	<40	<40	42.2	43.3	<40	<40	45.2	49.9	64.5	63.2	63.1	62.7	62.4	62.1	57.0	64.4	65.5	63.7	63.3	61.3	63.0
35	62.4	59.2	56.2	<40	54.9	54.6	55.4	55.7	55.9	49.1	<40	<40	<40	<40	<40	42.3	43.3	<40	<40	45.3	49.9	64.5	63.3	63.2	62.8	62.5	62.1	57.0	64.4	65.5	63.8	63.4	61.3	63.0
34	62.5	59.3	56.3	<40	55.0	54.7	55.5	55.8	56.0	48.8	<40	<40	<40	<40	<40	42.3	43.4	<40	<40	45.3	49.9	64.5	63.3	63.2	62.8	62.5	62.2	57.1	64.4	65.6	63.8	63.5	61.4	63.1
33	62.6	59.4	56.3	<40	55.1	54.7	55.5	55.8	56.0	48.3	<40	<40	<40	<40	<40	42.3	43.4	<40	<40	45.2	49.8	64.6	63.4	63.2	62.8	62.5	62.2	57.1	64.5	65.7	63.9	63.5	61.5	63.2
32	62.7	59.5	56.4	<40	55.1	54.8	55.6	55.9	56.1	48.4	<40	<40	<40	<40	<40	42.3	43.5	<40	<40	45.0	49.8	64.6	63.4	63.3	62.9	62.6	62.3	57.2	64.6	65.7	64.0	63.6	61.6	63.3
31	62.7	59.5	56.4	<40	55.2	54.9	55.7	55.9	56.1	48.2	<40	<40	<40	<40	<40	42.4	43.5	<40	<40	45.0	49.7	64.7	63.4	63.3	62.9	62.6	62.3	57.2	64.6	65.8	64.1	63.7	61.6	63.3
30	62.8	59.6	56.5	<40	55.2	54.9	55.7	56.0	56.2	48.2	<40	<40	<40	<40	<40	42.4	43.6	<40	<40	45.1	49.6	64.7	63.5	63.3	63.0	62.7	62.3	57.3	64.7	65.9	64.2	63.8	61.7	63.4
29	62.8	59.7	56.6	<40	55.3	55.0	55.8	56.1	56.2	48.3	<40	<40	<40	<40	<40	42.5	43.6	<40	<40	45.1	49.5	64.7	63.5	63.4	63.0	62.7	62.4	57.3	64.7	65.9	64.2	63.9	61.8	63.5
28	62.9	59.7	56.7	<40	55.4	55.1	55.8	56.1	56.3	48.3	<40	<40	<40	<40	<40	42.5	43.7	<40	<40	45.2	49.3	64.8	63.6	63.4	63.0	62.8	62.4	57.4	64.8	66.0	64.3	63.9	61.8	63.6
27	63.0	59.8	56.7	<40	55.4	55.1	55.9	56.2	56.3	48.2	<40	<40	<40	<40	<40	42.6	43.7	<40	<40	45.2	49.1	64.8	63.6	63.5	63.1	62.8	62.5	57.4	64.8	66.1	64.4	64.0	61.9	63.6
26	63.1	59.8	56.8	<40	55.5	55.2	56.0	56.2	56.3	48.2	<40	<40	<40	<40	<40	42.6	43.8	<40	<40	45.3	48.8	64.8	63.6	63.5	63.1	62.8	62.5	57.5	64.9	66.2	64.5	64.1	62.0	63.7
25	63.1	59.9	56.8	<40	55.6	55.2	56.0	56.3	56.4	48.3	<40	<40	<40	<40	<40	42.7	43.8	<40	<40	45.4	48.5	64.9	63.7	63.6	63.2	62.9	62.5	57.5	65.0	66.2	64.6	64.2	62.1	63.8
24	63.2	60.0	56.9	<40	55.7	55.3	56.1	56.3	56.4	48.3	<40	<40	<40	<40	<40	42.7	43.9	<40	<40	45.4	48.2	64.9	63.7	63.6	63.2	62.9	62.6	57.5	65.0	66.3	64.7	64.3	62.1	63.9
23	63.3	60.1	57.0	<40	55.7	55.4	56.1	56.4	56.4	48.2	<40	<40	<40	<40	<40	42.8	43.9	<40	<40	45.5	48.1	64.9	63.8	63.6	63.3	63.0	62.6	57.6	65.1	66.4	64.8	64.3	62.2	64.0
22	63.4	60.1	57.1	<40	55.8	55.4	56.1	56.5	56.4	48.2	<40	<40	<40	<40	<40	42.8	44.0	<40	<40	45.5	47.8	65.0	63.8	63.7	63.3	63.0	62.7	57.6	65.1	66.5	64.9	64.4	62.3	64.0
21	63.4	60.2	57.1	<40	55.9	55.5	56.2	56.5	56.4	48.3	<40	<40	<40	<40	<40	42.9	44.0	<40	<40	45.6	47.7	65.0	63.9	63.7	63.4	63.1	62.7	57.7	65.2	66.5	64.9	64.5	62.4	64.1
20	63.5	60.3	57.2	<40	55.9	55.6	56.3	56.5	56.5	48.3	<40	<40	<40	<40	<40	42.9	44.1	<40	<40	45.6	47.5	65.1	63.9	63.8	63.4	63.1	62.8	57.7	65.3	66.6	65.0	64.6	62.5	64.2
19	63.6	60.3	57.3	<40	56.0	55.6	56.3	56.6	56.5	48.2	<40	<40	<40	<40	<40	42.9	44.1	<40	<40	45.7	47.4	65.1	63.9	63.8	63.5	63.1	62.8	57.7	65.3	66.7	65.1	64.7	62.5	64.3
18	63.6	60.4	57.4	<40	56.0	55.7	56.3	56.7	56.5	48.2	<40	<40	<40	<40	<40	43.0	44.2	<40	<40	45.7	47.4	65.1	64.0	63.9	63.5	63.2	62.8	57.8	65.4	66.8	65.2	64.8	62.6	64.3
17	63.7	60.5	57.4	<40	56.1	55.7	56.4	56.7	56.4	48.3	<40	<40	<40	<40	<40	43.0	44.2	<40	<40	45.7	47.3	65.2	64.0	63.9	63.5	63.2	62.9	57.8	65.4	66.9	65.3	64.9	62.7	64.4
16	63.8	60.5	57.4	<40	56.2	55.8	56.4	56.8	56.4	48.3	<40	<40	<40	<40	<40	43.1	44.3	<40	<40	45.8	47.3	65.2	64.1	63.9	63.6	63.3	62.9	57.9	65.5	67.0	65.4	65.0	62.8	64.5
15	63.9	60.6	57.5	<40	56.3	55.9	56.5	56.8	56.4	48.3	<40	<40	<40	<40	<40	43.1	44.3	<40	<40	45.8	47.2	65.2	64.1	64.0	63.6	63.3	63.0	57.9	65.6	67.0	65.5	65.0	62.8	64.6
14	63.9	60.6	57.6	<40	56.3	55.9	56.5	56.8	56.3	48.3	<40	<40	<40	<40	<40	43.2	44.4	<40	<40	45.9	47.3	65.3	64.1	64.0	63.7	63.4	63.0	57.9	65.6	67.1	65.6	65.1	62.9	64.7
13	64.0	60.6	57.7	<40	56.4	56.0	56.5	56.9	56.3	48.4	<40	<40	<40	<40	<40	43.2	44.4	<40	<40	45.9	47.2	65.3	64.2	64.1	63.7	63.4	63.0	58.0	65.7	67.2	65.7	65.2	63.0	64.8
12	64.0	60.6	57.7	<40	56.4	56.1	56.6	56.9	56.3	48.4	<40	<40	<40	<40	<40	43.2	44.4	<40	<40	46.0	47.3	65.3	64.2	64.1	63.7	63.4	63.1	58.0	65.8	67.3	65.8	65.3	63.1	64.9
11	64.1	60.6	57.8	<40	56.5	56.1	56.6	56.9	56.3	48.4	<40	<40	<40	<40	<40	43.3	44.5	<40	<40	46.0	47.3	65.4	64.3	64.1	63.8	63.5	63.1	58.0	65.8	67.4	65.9	65.4	63.2	64.9
10	64.1	60.7	57.8	<40	56.6	56.2	56.6	56.9	56.4	48.4	<40	<40	<40	<40	<40	43.3	44.5	<40	<40	46.1	47.3	65.4	64.3	64.2	63.8	63.5	63.2	58.1	65.9	67.5	66.0	65.5	63.2	65.0
9	64.2	60.7	57.9	<40	56.6	56.2	56.7	57.0	56.4	48.4	<40	<40	<40	<40	<40	43.3	44.5	<40	<40	46.1	47.4	65.4	64.3	64.2	63.9	63.6	63.2	58.1	66.0	67.6	66.1	65.6	63.3	65.1
8	64.2	60.7	58.0	<40	56.7	56.3	56.7	57.0	56.4	48.5	<40	<40	<40	<40	<40	43.4	44.5	<40	<40	46.2	47.4	65.4	64.4	64.2	63.9	63.6	63.2	58.1	66.0	67.7	66.2	65.7	63.4	65.2
7	64.3	60.8	58.0	<40	56.7	56.4	56.8	57.1	56.4	48.5	<40	<40	<40	<40	<40	43.4	44.5	<40	<40	46.2	47.3	65.5	64.4	64.3	63.9	63.6	63.3	58.2	66.1	67.8	66.3	65.8	63.5	65.3
6	64.4	60.8	58.1	<40	56.8	56.4	56.8	57.0	56.5	48.5	<40	<40	<40	<40	<40	43.4	44.6	<40	<40	46.2	47.4	65.5	64.4	64.3	64.0	63.7	63.3	58.2	66.1	67.9	66.4	65.9	63.6	65.3
5	64.4	60.9	58.1	<40	56.9	56.4	56.8	57.1	56.5	48.5	<40	<40	<40	<40	<40	43.4	44.6	<40	<40	46.3	47.4	65.5	64.5	64.3	64.0	63.7	63.3	58.2	66.2	68.0	66.5	66.0	63.7	65.4
4	64.5	61.0	58.2	<40	56.9	56.5	56.8	57.1	56.4	48.5	<40	<40	<40	<40	<40	43.1	44.5	<40	<40	46.3	47.5	65.5	64.5	64.3	64.0	63.7	63.4	58.3	66.3	68.1	66.6	66.1	63.7	65.5
3	64.6	61.0	58.3	<40	57.0	56.6	56.8	57.1	56.5	48.5	<40	<40	<40	<40	<40	42.7	44.1	<40	<40	46.2	47.5	65.5	64.5	64.4	64.1	63.8	63.4	58.3	66.3	68.1	66.7	66.2	63.8	65.6
2	64.6	61.1	58.3	<40	57.0	56.6	56.8	57.1	56.3	48.5	<40	<40	<40	<40	<40	41.9	43.6	<40	<40	46.1	47.5	65.5	64.5	64.4	64.1	63.8	63.4	58.3	66.4	68.2	66.8	66.2	63.9	65.6
1	64.7	61.1	58.3	<40	56.9								<40	<40	<40	41.4	43.2	<40	<40	45.5	47.2	65.5	64.5	64.3	64.0	63.7	63.4	58.3	66.4	68.3	66.9	66.3	63.9	65.7
Max	64.7	61.1	58.3	<40	57.0	56.6	56.8	57.1	56.5	49.5	<40	<40	<40	<40	<40	43.4	44.6	<40	<40	46.3	49.9	65.5	64.5	64.4	64.1	63.8	63.4	58.3	66.4	68.3	66.9	66.3	63.9	65.7
Min	62.3	59.1	56.1	<40	54.8	54.5	55.3	55.6	55.8	48.2	<40	<40	<40	<40	<40	41.4	43.2	<40	<40	45.0	47.2	64.4	63.2	63.1	62.7	62.4	62.1	56.9	64.3	65.4	63.6	63.3	61.2	62.9
Exceedance	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Total	4313
Exceedance	0.0
Compliance Rate	100%

Noise sensitive receivers with exceedance (≥70.5 dB(A))

Floor	R235 max	R236 max	R237 max	R238 max	R401 max	R402 max	R403 max	R404 max	R405 max	R406 max	R407 max	R408 max	R409 max	R410 max	R411 max	R412 max	R413 max	R414 max	R415 max	R416 max	R417 max	R418 max	R419 max	R420 max	R421 max	R422 max	R423 max	R424 max	R425 max	R426 max	R427 max	R428 max	R429 max	R430 max
40																																		
39																																		
38																																		
37	62.7	63.4	62.3	65.1	57.0	57.1	57.0	56.4	56.5	<40	57.1	59.7	62.3	65.5	62.4	63.3	63.4	63.3	61.3	63.9	64.6	65.8	63.1	54.0	59.2	62.3	63.1	63.8	63.9	64.6	53.7	48.3	<40	<40
36	62.8	63.5	62.4	65.2	57.0	57.2	57.0	56.5	56.5	<40	57.2	59.7	62.4	65.6	62.5	63.4	63.4	63.4	61.4	64.0	64.7	65.8	63.1	53.8	59.2	62.4	63.2	63.8	64.0	64.6	53.7	48.3	<40	<40
35	62.9	63.6	62.5	65.3	57.1	57.3	57.0	56.6	56.6	<40	57.3	59.6	62.5	65.6	62.5	63.5	63.5	63.5	61.4	64.1	64.8	65.9	63.2	53.7	59.2	62.4	63.2	63.8	64.0	64.6	53.7	48.3	<40	<40
34	62.9	63.6	62.5	65.3	57.1	57.4	57.1	56.7	56.7	<40	57.4	59.7	62.6	65.7	62.6	63.6	63.6	63.6	61.5	64.2	64.9	66.0	63.2	53.6	59.2	62.4	63.2	63.8	64.0	64.6	53.7	48.3	<40	<40
33	63.0	63.7	62.6	65.4	57.2	57.5	57.2	56.8	56.7	<40	57.5	59.8	62.6	65.8	62.7	63.7	63.7	63.7	61.6	64.3	65.0	66.1	63.3	53.6	59.3	62.5	63.3	63.9	64.1	64.7	53.7	48.3	<40	<40
32	63.1	63.8	62.7	65.5	57.3	57.6	57.3	56.9	56.8	<40	57.5	59.9	62.7	65.9	62.8	63.8	63.8	63.8	61.7	64.4	65.1	66.2	63.4	53.6	59.3	62.5	63.3	63.9	64.1	64.7	53.7	48.3	<40	<40
31	63.2	63.8	62.7	65.6	57.3	57.6	57.4	57.0	56.9	<40	57.6	60.0	62.8	66.0	62.9	63.9	63.9	63.9	61.8	64.5	65.2	66.3	63.4	53.6	59.4	62.5	63.4	64.0	64.1	64.7	53.6	48.3	<40	<40
30	63.2	63.9	62.8	65.6	57.4	57.7	57.5	57.1	57.0	<40	57.7	60.1	62.9	66.1	63.0	64.0	64.0	64.0	61.9	64.6	65.3	66.4	63.5	53.7	59.4	62.6	63.4	64.0	64.2	64.8	53.6	48.3	<40	<40
29	63.3	64.0	62.9	65.7	57.5	57.8	57.5	57.2	57.1	<40	57.8	60.2	63.0	66.2	63.1	64.1	64.1	64.1	62.1	64.7	65.4	66.5	63.6	53.7	59.5	62.6	63.4	64.0	64.2	64.8	53.5	48.3	<40	<40
28	63.4	64.1	63.0	65.8	57.6	57.9	57.6	57.3	57.2	<40	57.9	60.3	63.1	66.3	63.3	64.2	64.2	64.2	62.2	64.9	65.5	66.6	63.7	53.7	59.6	62.7	63.5	64.1	64.2	64.8	53.4	48.2	<40	<40
27	63.4	64.1	63.0	65.9	57.7	58.0	57.7	57.4	57.3	<40	58.0	60.4	63.2	66.4	63.4	64.4	64.3	64.3	62.3	65.0	65.6	66.7	63.8	53.7	59.6	62.7	63.5	64.1	64.3	64.9	53.3	48.2	<40	<40
26	63.5	64.2	63.1	65.9	57.8	58.1	57.8	57.5	57.4	<40	58.1	60.5	63.4	66.5	63.5	64.5	64.4	64.4	62.4	65.1	65.7	66.8	63.9	53.8	59.7	62.8	63.6	64.1	64.3	64.9	53.2	48.1	<40	<40
25	63.6	64.3	63.2	66.0	57.9	58.2	57.9	57.6	57.5	<40	58.3	60.6	63.5	66.7	63.6	64.6	64.5	64.5	62.5	65.2	65.9	67.0	64.0	53.8	59.8	62.8	63.6	64.2	64.4	64.9	53.1	48.0	<40	<40
24	63.7	64.4	63.3	66.1	58.0	58.3	58.0	57.7	57.6	<40	58.4	60.8	63.6	66.8	63.7	64.7	64.6	64.6	62.6	65.3	66.0	67.0	64.1	53.8	59.8	62.9	63.6	64.2	64.4	65.0	53.1	47.9	<40	<40
23	63.8	64.4	63.3	66.2	58.0	58.4	58.1	57.8	57.7	<40	58.5	60.9	63.7	66.9	63.9	64.8	64.8	64.8	62.7	65.5	66.1	67.1	64.2	53.8	59.9	62.9	63.7	64.3	64.4	65.0	53.0	47.9	<40	<40
22	63.9	64.5	63.4	66.3	58.1	58.5	58.2	57.9	57.9	<40	58.6	61.0	63.9	67.1	64.0	64.9	64.9	64.9	62.9	65.6	66.3	67.3	64.4	53.9	60.0	63.0	63.7	64.3	64.5	65.0	52.9	47.9	<40	<40
21	63.9	64.6	63.5	66.4	58.2	58.6	58.3	58.0	58.0	<40	58.7	61.1	64.0	67.2	64.1	65.0	65.0	65.0	63.0	65.7	66.4	67.4	64.5	53.9	60.1	63.0	63.8	64.3	64.5	65.1	52.9	47.8	<40	<40
20	64.0	64.7	63.6	66.4	58.3	58.7	58.4	58.1	58.1	<40	58.9	61.3	64.1	67.3	64.2	65.1	65.1	65.1	63.1	65.9	66.5	67.6	64.6	53.9	60.2	63.1	63.8	64.4	64.6	65.1	52.9	47.8	<40	<40
19	64.1	64.8	63.7	66.5	58.4	58.8	58.6	58.2	58.2	<40	59.0	61.3	64.3	67.4	64.3	65.3	65.3	65.3	63.3	66.0	66.7	67.7	64.7	53.9	60.2	63.1	63.9	64.4	64.6	65.1	52.8	47.8	<40	<40
18	64.2	64.8	63.7	66.6	58.5	58.9	58.7	58.3	58.3	<40	59.1	61.4	64.4	67.6	64.5	65.4	65.4	65.4	63.4	66.2	66.8	67.9	64.8	54.0	60.3	63.2	63.9	64.5	64.6	65.2	52.8	47.8	<40	<40
17	64.3	64.9	63.8	66.7	58.6	59.0	58.8	58.5	58.5	<40	59.3	61.6	64.5	67.7	64.6	65.6	65.6	65.6	63.5	66.3	67.0	68.0	65.0	54.0	60.4	63.2	64.0	64.5	64.7	65.2	52.9	47.8	<40	<40
16	64.4	65.0	63.9	66.8	58.7	59.1	58.9	58.6	58.6	<40	59.4	61.7	64.6	67.9	64.8	65.7	65.7	65.7	63.7	66.5	67.2	68.2	65.1	54.0	60.5	63.3	64.0	64.6	64.7	65.3	52.8	47.8	<40	<40
15	64.4	65.1	64.0	66.9	58.8	59.3	59.0	58.7	58.7	<40	59.6	61.9	64.8	68.1	65.0	65.9	65.9	65.9	63.8	66.6	67.3	68.3	65.2	54.0	60.6	63.4	64.1	64.6	64.8	65.3	52.8	47.9	<40	<40
14	64.5	65.1	64.1	67.0	58.8	59.4	59.1	58.8	58.8	<40	59.7	62.1	65.0	68.2	65.1	66.1	66.0	66.0	64.0	66.8	67.5	68.5	65.4	54.1	60.7	63.4	64.1	64.6	64.8	65.3	52.9	47.8	<40	<40
13	64.6	65.2	64.2	67.1	58.9	59.5	59.2	59.0	59.0	<40	59.9	62.2	65.1	68.4	65.3	66.2	66.2	66.2	64.2	67.0	67.7	68.6	65.6	54.1	60.7	63.5	64.2	64.7	64.9	65.4	52.9	47.8	<40	<40
12	64.7	65.3	64.2	67.2	59.0	59.6	59.3	59.1	59.1	<40	60.0	62.4	65.3	68.6	65.5	66.4	66.3	66.3	64.3	67.2	67.9	68.8	65.7	54.1	60.8	63.5	64.2	64.7	64.9	65.4	52.9	47.9	<40	<40
11	64.7	65.4	64.3	67.2	59.0	59.7	59.5	59.2	59.3	<40	60.1	62.6	65.5	68.8	65.7	66.6	66.5	66.5	64.5	67.4	68.1	69.0	65.8	54.1	61.0	63.6	64.3	64.8	64.9	65.4	53.0	47.9	<40	<40
10	64.8	65.5	64.4	67.3	59.0	59.8	59.5	59.4	59.4	<40	60.3	62.7	65.7	69.0	65.9	66.8	66.7	66.7	64.7	67.6	68.3	69.2	66.0	54.2	61.0	63.7	64.4	64.8	65.0	65.4	53.0	47.9	<40	<40
9	64.9	65.5	64.5	67.4	59.0	59.8	59.6	59.5	59.5	<40	60.4	62.9	65.9	69.2	66.1	67.0	66.9	66.9	64.9	67.8	68.5	69.5	66.2	54.2	61.1	63.7	64.4	64.9	65.0	65.5	52.9	47.9	<40	<40
8	65.0	65.6	64.6	67.5	58.9	59.9	59.6	59.5	59.7	<40	60.6	63.0	66.1	69.4	66.3	67.2	67.1	67.1	65.0	68.0	68.8	69.7	66.4	54.2	61.2	63.8	64.4	64.9	65.0	65.5	53.0	48.0	<40	<40
7	65.1	65.7	64.6	67.6	58.7	59.9	59.6	59.6	59.8	<40	60.8	63.2	66.2	69.6	66.5	67.4	67.2	67.2	65.2	68.2	69.0	69.9	66.5	54.2	61.4	63.8	64.5	64.9	65.1	65.5	53.0	48.0	<40	<40
6	65.1	65.8	64.7	67.7	58.7	59.7	59.5	59.7	60.0	<40	60.9	63.4	66.4	69.9	66.7	67.7	67.4	67.4	65.4	68.4	69.3	70.1	66.8	54.3	61.5	63.9	64.5	65.0	65.1	65.5	53.0	48.0	<40	<40
5	65.2	65.8	64.8	67.8	58.7	59.5	59.4	59.8	60.0	<40	61.1	63.6	66.7	70.2	66.9	67.9	67.6	67.6	65.6	68.7	69.5	70.4	67.0	54.3	61.6	63.9	64.6	65.0	65.2	65.5	53.0	48.0	<40	<40
4	65.3	65.9	64.9	67.8	58.8	59.5	59.2	59.8	60.1	<40	61.3	63.8	66.9	70.2	67.2	68.1	67.8	67.8	65.8	68.9	69.8	64.8	67.2	54.3	61.7	64.0	64.6	65.0	65.2	65.6	53.1	48.0	<40	<40
3	65.4	66.0	64.9	67.9	58.8	59.5	59.2	59.4	59.9	<40	61.5	64.0	67.1	64.8	67.5	68.4	68.1	68.1	66.0	69.2	70.1	65.1	67.4	54.3	61.8	64.0	64.7	65.0	65.2	65.6	53.1	48.1	<40	<40
2	65.4	66.0	65.0	68.0	58.8	59.5	59.2	59.1	59.5	<40	61.7	64.2	67.3	65.1	67.8	68.6	68.3	68.3	66.2	69.5	70.3	65.4	67.7	54.4	62.0	64.1	64.7	65.1	65.2	65.6	53.1	48.1	<40	<40
1	65.5	66.1	65.1	68.1					59.2	<40	61.7	64.3	67.6	65.4	68.1	68.9	68.5	68.5	66.5	69.8	65.1	65.7	67.9	54.4	62.1	64.1	64.7	65.0	65.2	65.6	53.1	48.0	<40	<40
Max	65.5	66.1	65.1	68.1	59.0	59.9	59.6	59.8	60.1	<40	61.7	64.3	67.6	70.2	68.1	68.9	68.5	68.5	66.5	69.8	70.3	70.4	67.9	54.4	62.1	64.1	64.7	65.1	65.2	65.6	53.7	48.3	<40	<40
Min	62.7	63.4	62.3	65.1	57.0	57.1	57.0	56.4	56.5	<40	57.1	59.6	62.3	64.8	62.4	63.3	63.4	63.3	61.3	63.9	64.6	64.8	63.1	53.6	59.2	62.3	63.1	63.8	63.9	64.6	52.8	47.8	<40	<40
Exceedance	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Noise sensitive receivers with exceedance (≥70.5 dB(A))

Floor	R431 max	R432 max	R433 max	R434 max	R435 max	R436 max	R437 max	R438 max	R501 max	R502 max	R503 max	R504 max	R505 max	R506 max	R507 max	R508 max	R509 max	R510 max	R511 max	R512 max	R513 max	R514 max	R515 max	R516 max	R517 max	R518 max	R519 max	R520 max	R521 max	R522 max	R523 max	R524 max	R525 max	R526 max
40									56.8	56.5	56.4	56.0	55.9	<40	55.8	58.6	61.9	65.8	63.4	64.2	64.4	64.9	61.5	65.5	65.9	66.6	67.0	63.9	64.7	64.8	65.1	65.6	65.8	67.2
39									56.8	56.6	56.4	55.9	55.6	<40	55.8	58.7	62.0	65.9	63.5	64.3	64.5	65.0	61.6	65.5	66.0	66.7	67.1	64.0	64.7	64.9	65.1	65.7	65.9	67.3
38									56.9	56.7	56.4	56.0	55.7	<40	55.6	58.7	62.0	66.0	63.5	64.3	64.6	65.1	61.7	65.6	66.1	66.8	67.1	64.1	64.8	65.0	65.2	65.8	66.0	67.4
37	43.2	47.8	55.6	57.7	59.1	58.2	57.4	55.6	56.9	56.8	56.5	56.1	55.8	<40	55.7	58.8	62.1	66.1	63.6	64.4	64.7	65.1	61.8	65.7	66.2	66.9	67.2	64.1	64.9	65.1	65.3	65.9	66.1	67.5
36	43.2	47.8	55.7	57.8	59.1	58.2	57.4	55.7	57.0	56.9	56.6	56.2	55.9	<40	55.8	59.0	62.2	66.2	63.7	64.5	64.8	65.2	61.9	65.8	66.3	67.0	67.3	64.2	65.0	65.2	65.4	66.0	66.2	67.6
35	43.2	47.9	55.7	57.8	59.1	58.2	57.4	55.7	57.1	57.0	56.7	56.3	56.0	<40	55.9	59.1	62.3	66.2	63.7	64.5	64.9	65.2	62.0	65.9	66.3	67.1	67.4	64.3	65.1	65.2	65.5	66.1	66.3	67.7
34	43.3	47.9	55.7	57.8	59.1	58.2	57.4	55.7	57.2	57.1	56.8	56.4	56.1	<40	56.0	59.2	62.3	66.3	63.8	64.6	65.0	65.3	62.1	65.9	66.4	67.2	67.5	64.4	65.2	65.3	65.6	66.2	66.4	67.8
33	43.3	48.0	55.8	57.8	59.2	58.3	57.4	55.7	57.3	57.1	56.9	56.5	56.2	<40	56.1	59.3	62.4	66.4	64.0	64.7	65.0	65.3	62.2	66.0	66.6	67.3	67.6	64.5	65.2	65.4	65.7	66.3	66.4	67.8
32	43.3	48.0	55.8	57.9	59.2	58.3	57.5	55.8	57.3	57.2	57.0	56.6	56.3	<40	56.2	59.4	62.5	66.5	64.0	64.8	65.1	65.3	62.3	66.1	66.7	67.4	67.7	64.6	65.4	65.5	65.7	66.4	66.6	67.9
31	43.4	48.0	55.8	57.9	59.2	58.3	57.5	55.8	57.4	57.3	57.1	56.7	56.4	<40	56.3	59.5	62.7	66.7	64.1	64.9	65.2	65.4	62.4	66.2	66.7	67.5	67.8	64.7	65.5	65.6	65.8	66.5	66.7	68.0
30	43.4	48.1	55.8	57.9	59.2	58.3	57.5	55.8	57.5	57.4	57.2	56.8	56.5	<40	56.4	59.6	62.8	66.7	64.2	65.0	65.4	65.5	62.6	66.3	66.9	67.6	67.9	64.8	65.6	65.7	66.0	66.6	66.8	68.1
29	43.4	48.1	55.8	57.9	59.3	58.3	57.5	55.8	57.6	57.5	57.3	56.9	56.6	<40	56.5	59.7	62.9	66.8	64.3	65.1	65.5	65.6	62.7	66.4	67.0	67.8	68.0	64.9	65.6	65.8	66.1	66.7	66.9	68.2
28	43.5	48.1	55.9	57.9	59.3	58.4	57.6	55.9	57.7	57.6	57.4	57.0	56.7	<40	56.7	59.8	63.0	67.0	64.5	65.2	65.5	65.7	62.8	66.5	67.1	67.9	68.2	65.0	65.8	65.9	66.2	66.8	67.0	68.3
27	43.5	48.2	55.9	58.0	59.3	58.4	57.6	55.9	57.8	57.7	57.5	57.1	56.8	<40	56.7	59.9	63.2	67.1	64.5	65.3	65.6	65.8	62.9	66.6	67.2	68.0	68.3	65.1	65.9	66.0	66.3	66.9	67.1	68.4
26	43.5	48.2	55.9	58.0	59.3	58.4	57.6	55.9	57.9	57.8	57.6	57.2	56.9	<40	56.8	60.0	63.3	67.2	64.7	65.4	65.7	65.8	63.0	66.8	67.4	68.2	68.4	65.2	66.0	66.1	66.4	67.0	67.2	68.5
25	43.6	48.2	55.9	58.0	59.3	58.4	57.6	55.9	57.9	57.9	57.7	57.3	57.0	<40	56.9	60.2	63.4	67.3	64.8	65.5	65.8	66.0	63.2	66.9	67.5	68.3	68.5	65.3	66.1	66.3	66.5	67.2	67.4	68.6
24	43.6	48.3	56.0	58.0	59.4	58.5	57.7	55.9	58.0	58.0	57.8	57.4	57.1	<40	57.1	60.3	63.6	67.4	64.9	65.7	65.9	66.1	63.3	67.1	67.6	68.4	68.7	65.4	66.2	66.3	66.6	67.3	67.5	68.8
23	43.6	48.3	56.0	58.1	59.4	58.5	57.7	56.0	58.0	58.1	57.9	57.5	57.3	<40	57.2	60.4	63.6	67.6	65.0	65.8	66.0	66.1	63.4	67.2	67.8	68.6	68.8	65.5	66.4	66.5	66.8	67.4	67.6	68.8
22	43.7	48.3	56.0	58.1	59.4	58.5	57.7	56.0	58.1	58.2	58.0	57.6	57.4	<40	57.3	60.6	63.8	67.8	65.1	65.9	66.2	66.3	63.6	67.3	67.9	68.7	69.0	65.6	66.5	66.6	66.9	67.5	67.7	69.0
21	43.7	48.4	56.0	58.1	59.4	58.5	57.7	56.0	58.2	58.3	58.1	57.7	57.5	<40	57.5	60.7	63.9	67.9	65.3	66.0	66.3	66.4	63.7	67.5	68.1	68.9	69.1	65.7	66.6	66.8	67.0	67.7	67.9	69.1
20	43.7	48.4	56.0	58.1	59.4	58.5	57.7	56.1	58.3	58.4	58.2	57.8	57.6	<40	57.6	60.8	64.1	68.1	65.5	66.2	66.4	66.5	63.9	67.6	68.2	69.1	69.2	65.9	66.7	66.9	67.2	67.8	68.0	69.2
19	43.7	48.4	56.1	58.1	59.5	58.5	57.7	56.1	58.4	58.5	58.3	57.9	57.8	<40	57.8	60.9	64.3	68.3	65.6	66.4	66.5	66.6	64.0	67.7	68.4	69.2	69.4	66.0	66.9	67.0	67.3	68.0	68.1	69.4
18	43.8	48.5	56.1	58.1	59.5	58.6	57.8	56.1	58.5	58.6	58.4	58.1	57.9	<40	57.9	61.1	64.4	68.4	65.7	66.5	66.7	66.8	64.2	67.9	68.5	69.4	69.6	66.2	67.0	67.2	67.5	68.1	68.3	69.5
17	43.8	48.5	56.1	58.2	59.5	58.6	57.8	56.1	58.6	58.7	58.6	58.2	58.0	<40	58.1	61.3	64.6	68.6	65.9	66.6	66.8	66.9	64.3	68.0	68.7	69.6	69.7	66.3	67.2	67.3	67.6	68.3	68.5	69.7
16	43.8	48.5	56.1	58.2	59.5	58.6	57.8	56.1	58.7	58.8	58.7	58.3	58.1	<40	58.2	61.4	64.8	68.8	66.1	66.8	67.0	67.1	64.5	68.1	68.9	69.8	69.9	66.4	67.3	67.5	67.7	68.4	68.6	69.8
15	43.9	48.6	56.1	58.2	59.5	58.6	57.8	56.2	58.8	58.9	58.8	58.4	58.3	<40	58.4	61.6	65.0	69.0	66.2	67.0	67.2	67.2	64.6	68.3	69.1	70.0	70.1	66.6	67.5	67.6	67.9	68.6	68.8	70.0
14	43.9	48.6	56.2	58.2	59.5	58.6	57.8	56.2	58.8	59.0	58.9	58.5	58.4	<40	58.5	61.8	65.1	69.2	66.4	67.2	67.3	67.4	64.8	68.5	69.2	70.2	70.3	66.7	67.6	67.8	68.1	68.7	69.0	70.1
13	43.9	48.6	56.2	58.2	59.6	58.6	57.9	56.2	58.9	59.2	59.0	58.7	58.5	<40	58.6	61.9	65.3	69.4	66.6	67.4	67.5	67.6	65.0	68.7	69.4	70.4	69.9	66.9	67.8	68.0	68.2	69.0	69.2	70.3
12	43.9	48.6	56.2	58.2	59.6	58.6	57.9	56.2	59.0	59.3	59.1	58.8	58.7	<40	58.8	62.1	65.5	69.6	66.7	67.5	67.6	67.7	65.1	68.8	69.7	70.2	70.2	67.0	68.0	68.1	68.4	69.2	69.3	70.4
11	44.0	48.7	56.2	58.2	59.6	58.6	57.9	56.2	59.1	59.3	59.2	58.9	58.8	<40	58.9	62.2	65.7	69.8	67.0	67.7	67.7	67.9	65.3	69.0	69.8	64.7	70.4	67.2	68.2	68.3	68.6	69.4	69.5	67.7
10	44.0	48.7	56.2	58.2	59.6	58.6	57.9	56.2	59.2	59.4	59.3	59.0	58.9	<40	59.1	62.4	65.9	70.1	67.2	67.9	67.9	68.0	65.5	69.2	70.0	64.9	64.8	67.4	68.4	68.5	68.8	69.5	69.8	67.9
9	44.0	48.7	56.2	58.2	59.5	58.6	57.9	56.2	59.2	59.5	59.4	59.1	59.1	<40	59.2	62.6	66.1	70.3	67.4	68.0	68.1	68.2	65.7	69.4	70.3	65.1	65.1	67.6	68.6	68.7	69.0	69.8	70.0	68.1
8	44.0	48.7	56.2	58.2	59.5	58.6	57.9	56.2	59.3	59.6	59.5	59.2	59.2	<40	59.4	62.8	66.3	64.8	67.6	68.3	68.3	68.3	65.8	69.7	64.9	65.4	65.4	67.8	68.8	68.9	69.2	70.0	70.2	68.3
7	44.0	48.7	56.1	58.2	59.5	58.6	57.9	56.3	59.4	59.7	59.6	59.4	59.3	<40	59.6	63.0	66.6	65.1	67.8	68.5	68.4	68.5	66.0	69.9	65.2	65.6	65.7	68.0	69.0	69.0	69.4	70.2	70.4	68.5
6	44.1	48.8	56.1	58.1	59.5	58.6	57.8	56.3	59.4	59.8	59.7	59.5	59.4	<40	59.7	63.2	66.8	65.4	68.1	68.7	68.6	68.7	66.2	70.1	65.4	65.9	66.0	68.3	69.3	69.2	69.6	70.4	64.9	68.7
5	44.1	48.8	56.1	58.1	59.4	58.5	57.8	56.3	59.5	59.9	59.7	59.5	59.5	<40	59.9	63.4	67.0	65.7	68.3	68.9	68.7	68.8	66.3	70.3	65.7	66.2	66.3	68.5	69.4	69.4	69.8	64.9	65.1	69.0
4	44.1	48.8	56.1	58.0	59.4	58.4	57.7	56.2	59.5	59.9	59.8	59.6	59.6	<40	60.0	63.5	67.2	66.0	68.5	69.1	68.8	69.0	66.5	64.9	65.9	66.4	66.7	68.8	69.7	69.6	70.0	65.1	65.3	69.2
3	44.1	48.8	56.1	57.9	59.3	58.3	57.6	56.2	59.6	60.0	59.9	59.7	59.7	<40	60.1	63.7	67.3	66.3	68.8	69.3	69.0	69.1	66.6	65.1	66.2	66.7	67.1	69.0	69.9	69.8	70.2	65.3	65.6	69.5
2	44.0	48.7	56.1	57.8	59.2	58.1	57.4	56.0	59.6	60.0	59.9	59.8	59.8	<40	60.2	63.8	67.5	66.7	69.1	69.5	69.1	69.2	66.8	65.3	66.4	67.0	67.5	69.3	70.1	69.9	70.3	65.5	65.8	69.8
1	43.9	48.7	56.1	57.7	59.0				59.6	60.1	60.0	59.8	59.8	<40	60.3	63.9	67.7	67.0	69.3	69.6	69.2	69.3	66.9	65.4						70.1	64.7	65.7	66.0	70.0
Max	44.1	48.8	56.2	58.2	59.6	58.6	57.9	56.3	59.6	60.1	60.0	59.8	59.8	<40	60.3	63.9	67.7	70.3	69.3	69.6	69.2	69.3	66.9	70.3	70.3	70.4	70.4	69.3	70.1	70.1	70.3	70.4	70.4	70.4
Min	43.2	47.8	55.6	57.7	59.0	58.1	57.4	55.6	56.8	56.5	56.4	55.9	55.6	<40	55.6	58.6	61.9	64.8	63.4	64.2	64.4	64.9	61.5	64.9	64.9	64.7	64.8	63.9	64.7	64.8	64.7	64.9	64.9	67.2
Exceedance	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Noise sensitive receivers with exceedance (≥70.5 dB(A))

Floor	R527 max	R528 max	R529 max	R530 max	R531 max	R532 max	R533 max	R534 max	R535 max	R536 max	R537 max	R538 max
40	63.8	61.5	55.4	58.6	60.5	61.8	64.8	65.2	65.4	66.0	66.2	66.7
39	63.8	61.5	55.5	58.7	60.5	61.8	64.8	65.2	65.4	66.1	66.2	66.8
38	63.9	61.6	55.5	58.7	60.5	61.8	64.9	65.3	65.5	66.1	66.2	66.8
37	63.9	61.6	55.5	58.8	60.6	61.9	64.9	65.3	65.5	66.1	66.2	66.8
36	64.0	61.6	55.6	58.8	60.6	61.9	64.9	65.3	65.5	66.1	66.3	66.8
35	64.0	61.7	55.6	58.8	60.6	61.9	64.9	65.3	65.5	66.1	66.3	66.9
34	64.1	61.7	55.7	58.9	60.7	62.0	64.9	65.4	65.6	66.2	66.3	66.9
33	64.1	61.8	55.7	58.9	60.7	62.0	65.0	65.4	65.6	66.2	66.3	66.9
32	64.2	61.8	55.7	59.0	60.7	62.0	65.0	65.4	65.6	66.2	66.4	66.9
31	64.3	61.9	55.8	59.0	60.8	62.0	65.0	65.4	65.6	66.2	66.4	67.0
30	64.3	61.9	55.8	59.0	60.8	62.0	65.0	65.4	65.7	66.3	66.4	67.0
29	64.4	61.9	55.8	59.1	60.8	62.1	65.1	65.5	65.7	66.3	66.4	67.0
28	64.4	62.0	55.9	59.1	60.8	62.0	65.1	65.5	65.7	66.3	66.5	67.1
27	64.5	62.0	55.9	59.1	60.8	62.1	65.1	65.5	65.7	66.4	66.5	67.1
26	64.5	62.0	55.9	59.1	60.8	62.1	65.1	65.5	65.7	66.4	66.5	67.1
25	64.5	62.0	56.0	59.2	60.8	62.1	65.1	65.5	65.8	66.4	66.6	67.1
24	64.6	62.0	56.0	59.2	60.8	62.1	65.2	65.6	65.8	66.4	66.6	67.2
23	64.6	62.0	56.0	59.2	60.7	62.1	65.2	65.6	65.8	66.5	66.6	67.2
22	64.6	62.0	56.1	59.2	60.7	62.1	65.2	65.6	65.9	66.5	66.6	67.2
21	64.6	62.0	56.1	59.3	60.7	62.1	65.2	65.7	65.9	66.5	66.7	67.2
20	64.7	61.9	56.2	59.3	60.7	62.1	65.2	65.7	65.9	66.5	66.7	67.3
19	64.7	61.9	56.2	59.2	60.6	62.1	65.3	65.7	65.9	66.6	66.7	67.3
18	64.7	61.8	56.2	59.3	60.6	62.1	65.3	65.7	65.9	66.6	66.8	67.3
17	64.7	61.8	56.3	59.3	60.6	62.2	65.3	65.7	66.0	66.6	66.8	67.4
16	64.7	61.8	56.3	59.3	60.6	62.2	65.3	65.8	66.0	66.6	66.8	67.4
15	64.7	61.7	56.3	59.2	60.6	62.2	65.3	65.8	66.0	66.7	66.8	67.4
14	64.7	61.7	56.3	59.2	60.6	62.2	65.4	65.8	66.0	66.7	66.9	67.4
13	64.7	61.7	56.4	59.3	60.5	62.2	65.4	65.8	66.1	66.7	66.9	67.5
12	64.7	61.7	56.4	59.2	60.5	62.2	65.4	65.9	66.1	66.7	66.9	67.5
11	64.7	61.6	56.4	59.2	60.5	62.2	65.4	65.9	66.1	66.7	66.9	67.5
10	64.7	61.6	56.4	59.2	60.5	62.2	65.4	65.9	66.1	66.8	66.9	67.5
9	64.7	61.6	56.4	59.2	60.4	62.2	65.4	65.9	66.1	66.8	66.9	67.5
8	64.7	61.5	56.5	59.1	60.3	62.1	65.4	65.8	66.1	66.7	66.9	67.5
7	64.7	61.5	56.5	59.1	60.2	62.1	65.4	65.8	66.1	66.7	66.9	67.5
6	64.7	61.3	56.5	59.2	60.1	62.0	65.3	65.8	66.0	66.7	66.9	67.5
5	64.7	61.2	56.5	59.1	59.9	61.9	65.3	65.8	66.0	66.7	66.8	67.4
4	64.6	61.0	56.5	59.1	59.7	61.8	65.3	65.7	66.0	66.6	66.8	67.4
3	64.5	60.7	56.6	59.1	59.5	61.6	65.2	65.6	65.9	66.5	66.7	67.2
2	64.4	60.4	56.6	59.1	59.4	61.6	65.1	65.5	65.8	66.4	66.5	66.9
1	64.3	60.2	56.6	59.1	59.3	61.5	65.0	65.4	65.6	66.1	66.1	66.3
Max	64.7	62.0	56.6	59.3	60.8	62.2	65.4	65.9	66.1	66.8	66.9	67.5
Min	63.8	60.2	55.4	58.6	59.3	61.5	64.8	65.2	65.4	66.0	66.1	66.3
Exceedance	0	0	0	0	0	0	0	0	0	0	0	0

Appendix 6.1

ArchSD Reply of
Public Wet Market

Subject: RE: (Confidential) TC 133A - HD's PRH Scheme for Coordination with ArchSD and FEHD

Date: 14/04/2023 18:28
Subject: Re: (Confidential) TC 133A - HD's PRH Scheme for Coordination with ArchSD and FEHD

Dear

Like any other buildings, the design of the public market building, especially the design associated with general environmental impacts to neighboring sites, shall be designed in accordance with the statutory requirements as stipulated in the building regulations and associated practice notes or guidelines. We may further discuss in details for any specific environmental concerns associated with the environmental studies that you may be aware of, in the detailed design stage as necessary.

Date: 14/04/2023 10:23
Subject: Re: (Confidential) TC 133A - HD's PRH Scheme for Coordination with ArchSD and FEHD

Dear

I refer to the TCA 133A PRH layout (scheme 20) provided on 15/2/2023.

We are carrying out the EAS for the PRH development and requires your written advice that the proposed public market will not cause any adverse environmental impacts.
Grateful if you can confirm that the public market design will comply with statutory requirements to ensure no environmental impacts on the public housing development and keep coordination with HD if necessary.

You reply **by 17/4/2023** will be appreciated.
Thanks and sorry for the rush.

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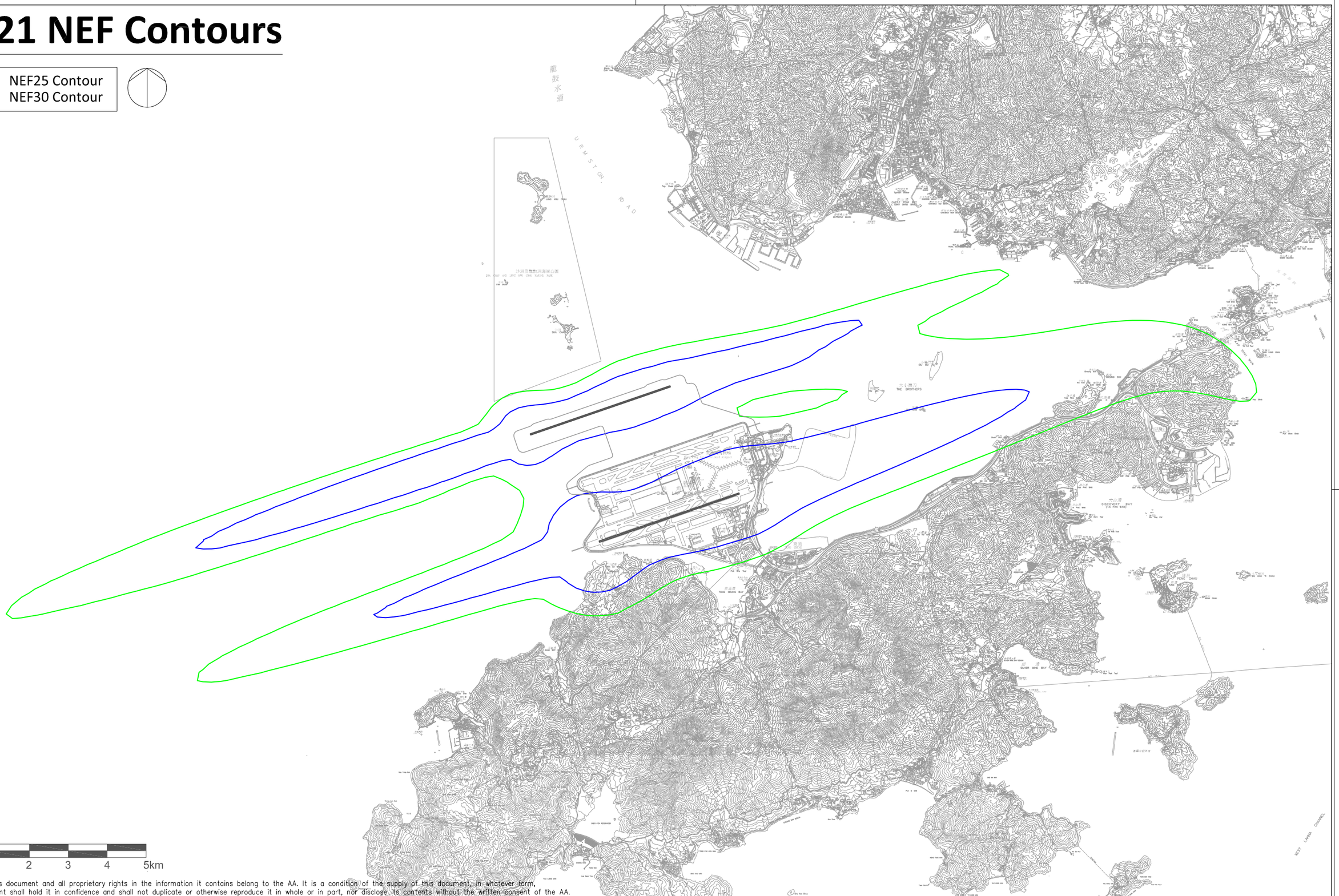
Appendix 7.1

NEF Noise Contours extracted from 3RS EIA

2021 NEF Contours

NEF25 Contour
NEF30 Contour



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E	11MAR14	FINAL	TWKW

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Clymene Enterprises
Deltares
Ecosystems Limited
SDA Marine Limited
Urbis Limited
URS Hong Kong Ltd

Title

Noise Contours of Year 2021

Consultant's Signatures for Approval		Date
Design	HC	13SEP13
Checkers	HC	13SEP13
Design Supervisor	EC	21MAR14
Authorised Representative	AFK	21MAR14

EXPANSION OF HONG KONG INTERNATIONAL AIRPORT INTO A THREE-RUNWAY SYSTEM

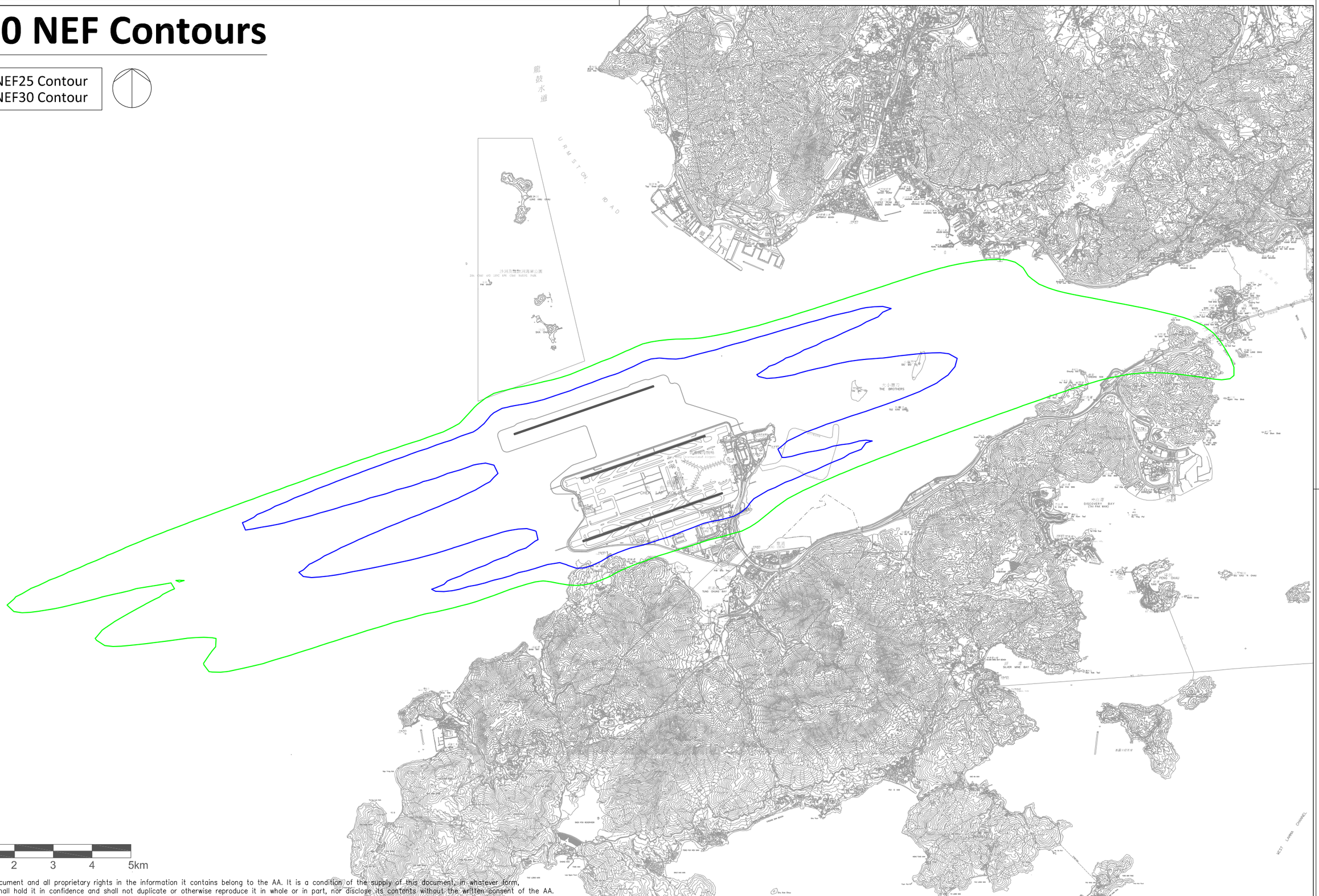
Drawing No. MCL/P132/EIA/7-3-008

Scale at A3: AS

Rev. E

2030 NEF Contours

NEF25 Contour
NEF30 Contour



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Noise Contours of Year 2030

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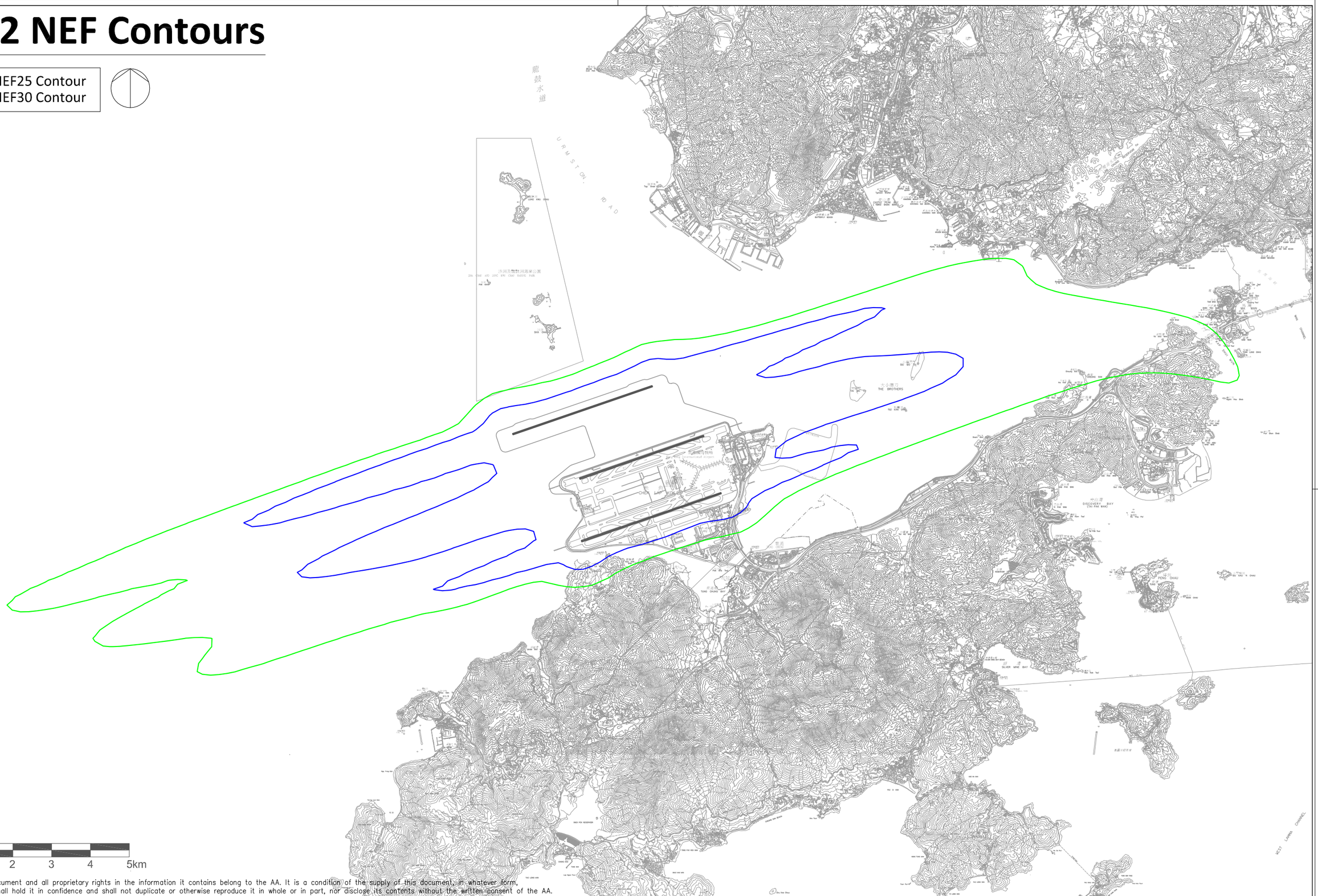
Rev. E

2032 NEF Contours

NEF25 Contour
NEF30 Contour



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Noise Contours of Year 2032

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Drawing No. MCL/P132/EIA/7-3-009

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Rev. E

Appendix 8B

Technical Assessments – Part 6

Environmental Assessment Study
(for Tung Chung Area 133B)

Hong Kong Housing Authority

Public Housing Development at Tung Chung Area 133B

Environmental Assessment Study Final Report

287645-11

Final Report | April 2024

This report takes into account the particular instructions and requirements of our client.

It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

Job number 287645-11

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ARUP

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Appendix 2.1

Layout and Schematic Sections

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Location of Noise Mitigation Measures

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Traffic Forecast

Appendix 4.4

Predicted Traffic Noise Levels for Residential Blocks (Basecase)

Appendix 4.5

Predicted Traffic Noise Levels for Residential Blocks (Mitigated)

Appendix 6.1

ArchSD Reply of Public Wet Market

Appendix 7.1

NEF Noise Contours extracted from 3RS EIA

Executive Summary

Ove Arup & Partners Hong Kong Ltd (Arup) was commissioned by Hong Kong Housing Authority (HKHA) to conduct an Environmental Assessment Study (EAS) on the proposed public housing development (Scheme received on 13 February 2023 with 2,448 no. of flats) at Tung Chung Area 133B with respect to the Hong Kong Planning Standards and Guidelines (HKPSG).

The subject site is located on the reclaimed land in Tung Chung East (TCE). It is bounded by Road L6 to the west and Road D2 to the north. Road traffic noise assessment has predicted that only 7 flats will be exposed to noise level in excess of the 70dB(A) criterion under the base scenario. The maximum noise level is 72dB(A) and the compliance rate is 99.7%. Fixed glazing is recommended to mitigate the affected residential units. With the mitigation measure in place, a 100% noise compliance rate could be achieved. Adverse road traffic noise impacts on the proposed residential development are not anticipated.

There is no existing or planned railway identified within the 300m assessment area. Potential rail noise impact is therefore not anticipated for the proposed development.

The major fixed noise sources include the planned salt water pumping station/ sewage pumping station, fire station and sports ground in Tung Chung Area 132, 136 and 138 respectively. They are located far away from the proposed housing site and are screened by the other planned developments in the vicinity. Based on the latest implementation programme of TCE, the other planned development in vicinity of the subject site will be in place (e.g. Area 133C, 134 and 135) to provide screening from the potential fixed noise sources. The approved TCNTE EIA indicates that the predicted fixed noise levels on the proposed residential development at Tung Chung Area 133B would comply with the respective noise criteria. Potential fixed noise sources impact is therefore not anticipated.

With reference to the approved EIA (AEIAR-185/2014) for Expansion of Hong Kong International Airport (HKIA) into a Three-Runway System (3RS), the subject site is located outside the NEF25 contour for all future scenarios for 3RS operation of HKIA. Hence, aircraft noise impact is not anticipated.

Two Public Transport Interchanges (PTIs) are planned within Tung Chung Area 113 and the subject site respectively. PTI at Area 113 is located far away from the proposed housing site at Area 133B and will be designed under deck and with no line-of-sight to the nearby noise sensitive receivers. The PTIs are also screened by other planned high-rise residential developments in between. Potential noise nuisance is therefore not anticipated. A PTI is planned underneath Block 1 and Block 3 at the northern side within the subject site with the ingress and egress connecting onto the proposed Road D2 and Road L6 respectively. The requirements as stipulated under HKPSG have been fully considered and adopted in the current PTI design. The PTI will be designed such that there is no line of sight to the sensitive receivers in the vicinity as far as practicable. With the implementation of proper design including podium decking, self-screening, full height louvre/ fins, hanger louvre/ fins and absorptive lining on the ceiling and interior walls of the PTI to avoid direct line of sight to the sensitive receivers as far as practicable, adverse noise nuisance is not anticipated.

The layout plans of the proposed kindergarten, management office and social welfare facilities are being studied and yet to be available at this stage. Hence, noise assessments will be supplemented in the next stage.

The current scheme has allowed sufficient setback distances from the surrounding roads to meet the minimum requirement for the residential blocks as stipulated in HKPSG. Any planned air sensitive rooms at the proposed kindergarten, management office and social welfare facilities shall also be provided with the setback distance requirements as stipulated in HKPSG. There is no chimney found within the 500m assessment area. No adverse air quality impact on the proposed development is anticipated. The planned PTIs at Area 113 and 133B will be designed under deck by others and HKHA respectively, with due consideration to the HKPSG and Practice Note for Professional Persons (ProPECC PN) 1/22 "Control of Air Pollution in Semi-Confined Public Transport Interchanges". Hence, no adverse air quality impact on the proposed development is anticipated.

It is concluded that there are no adverse environmental impacts on the subject site at Tung Chung Area 133B for housing development.

1 Introduction

1.1.1.1 Ove Arup & Partners Hong Kong Ltd (Arup) was commissioned by Hong Kong Housing Authority (HKHA) to conduct an Environmental Assessment Study (EAS) on the proposed public housing development at Tung Chung Area 133B.

1.1.1.2 The reclamation at Tung Chung East to form a total of 130 ha of land for development of Tung Chung New Town Extension (TCNTE) (East) was currently being undertaken and the associated site formation and infrastructure works will be carried out by Civil Engineering and Development Department (CEDD).

1.1.1.3 The subject site is located on Area 133B of the reclaimed land in TCNTE (East). The land of Area 133B has already been reclaimed and formed. It will be bounded by Road L6 to the west and Road D2 to the north. The gross site area is about 1.8 ha. In accordance with the "Approved Tung Chung Extension Area Outline Zoning Plan (OZP) No. S/I-TCE/2", the current land use zoning of the subject site is "Residential (Group A)3" ("R(A)3").

1.1.1.4 This EAS is conducted on the Scheme received on 13 February 2023 provided by HKHA to evaluate the potential environmental impacts on the proposed development with respect to guidance for environmental considerations provided in Chapter 9 – Environment of the Hong Kong Planning Standards & Guidelines (HKPSG). Road traffic noise impact assessment has been conducted in this EAS. In addition, potential rail noise impact, fixed noise impact, aircraft noise impact, noise nuisance arising from the planned public transport interchange (PTI) and air quality impact have also been qualitatively reviewed in this EAS.

1.1.1.5 The EAS was conducted on the following scheme:

Scheme	EAS version	Submission date
Scheme dated 13 February 2023	Draft Final EAS Report	18 May 2023
Scheme dated 13 February 2023	Draft Final EAS Report	11 March 2024

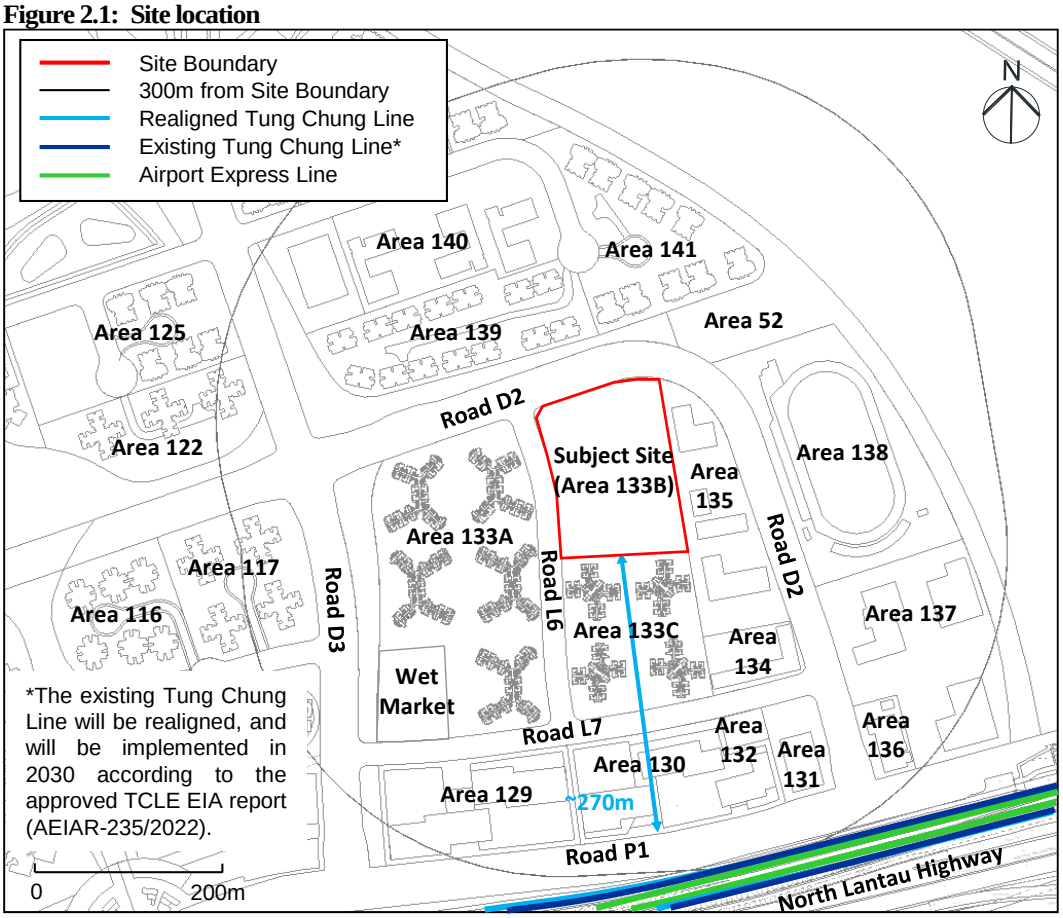
1.1.1.6 This EAS has been updated for the Scheme dated 13 February 2023 with incorporation of EPD's comments provided on 18 March 2024.

2 Site Location and Building Layout

2.1 Site Location and Description

2.1.1.1 The subject site is located on Area 133B of the reclaimed land in TCNTE (East). It will be bounded by Road L6 to the west and Road D2 to the north (**Figure 2.1**). Road P1 will be at some 270m to the south of the subject site. Another two public housing sites at Area 133A and Area 133C are planned to its west and south respectively. The site will also be surrounded by other developments in its immediate vicinity, including Areas 134 and 135 to the east, and Areas 139 to 141 to the north. The area to the southwest corner of Tung Chung Area 133A is reserved for a public wet market to be developed and managed under Food and Environmental Hygiene Department (FEHD).

Figure 2.1: Site location

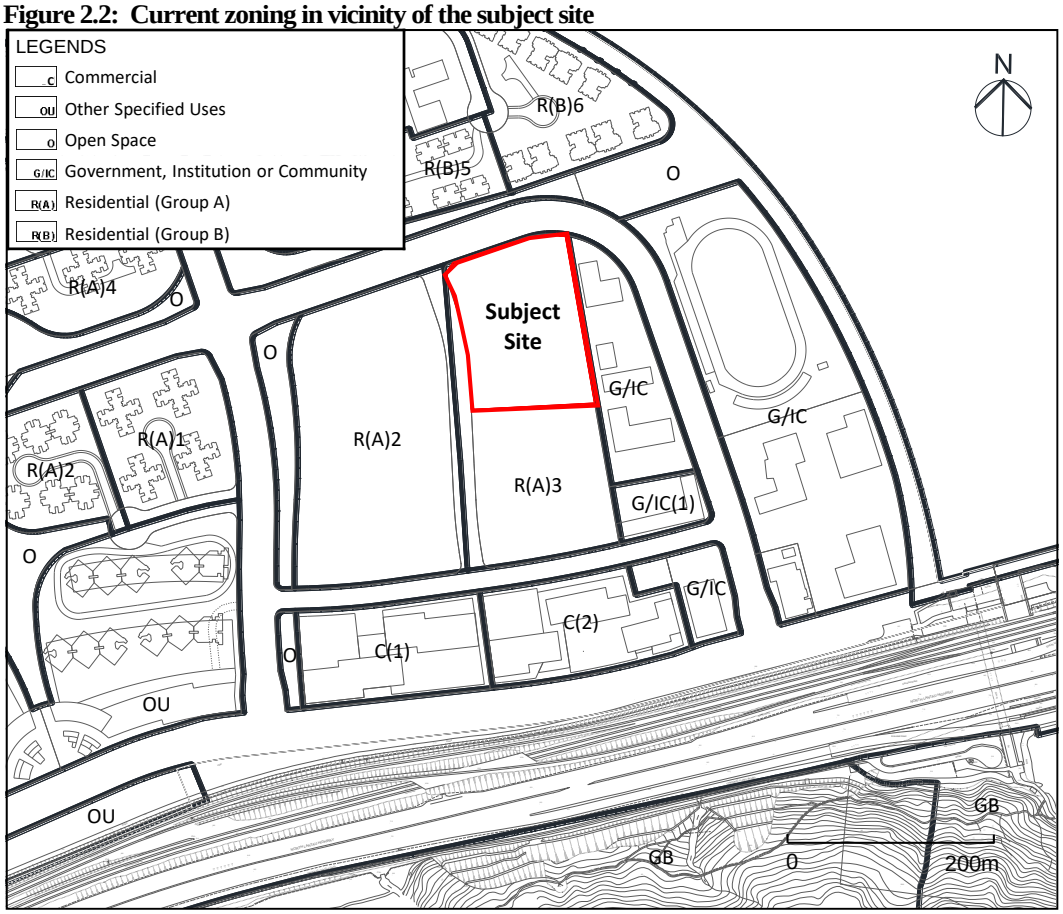


2.1.1.2 The existing Tung Chung Line (TCL) and Airport Express Line (AEL) are located outside 300m to the south of the subject site. A section of existing TCL will be slightly diverted for the planned Tung Chung Line Extension (TCLE) with the provision of a new Tung Chung East (TCE) Station on the reclaimed land. The planned TCLE and TCE station are also located outside 300m to the south and southwest of the subject housing site respectively (**Figure 2.1**).

2.1.1.3 In accordance with the Tung Chung Extension Area Outline Zoning Plan (OZP) No. S/I-TCE/2, the existing land use zoning of the subject site is "Residential (Group A)3"

("R(A)3"). The areas in vicinity of the subject site are mainly zoned as "R(A)", "Residential (Group B)" ("R(B)"), Open Space" ("O"), "Government, Institution or Community" ("G/IC"), "Commercial" ("C") and "Other Specified Uses" ("OU") (**Figure 2.2**).

Figure 2.2: Current zoning in vicinity of the subject site



2.2 Building Design

2.2.1.1 The latest site layout plan (Scheme received on 13 February 2023) is illustrated in **Figure 2.3**. The proposed development consists of four domestic blocks with a total of 2,448 residential flats. **Figures 2.4 to 2.7** illustrate the typical floor plans of the residential blocks.

2.2.1.2 A Public Transport Interchange (PTI) is planned on G/F underneath Block 1 and Block 3 of the proposed development. Besides, kindergarten, management office and social welfare facilities are planned on P1/F to P5/F of the proposed development, however their locations and layout plans are still being investigated. Hence, assessments on the kindergarten, management office and social welfare facilities will be supplemented when the layout is confirmed in the next stage.

2.2.1.3 The anticipated occupation year of population of the proposed development is Year 2030. The key development parameters for the residential blocks under current scheme are given in **Table 2.1**. The detailed layout plan and schematic section plan are provided in **Appendix 2.1**.

Table 2.1: Key development parameters of residential blocks

Parameters	Block 1	Block 2	Block 3	Block 4
No. of Domestic Storeys	32	36	32	36
Floor to Floor Height (m) [1]	2.75			
First Level (mPD)	40.30	21.65	40.30	15.15
First NSR Level (mPD) [2]	41.50	22.85	41.50	16.35
Main Roof Level (mPD) [2]	128.34	120.69	128.34	114.19
Number of Flats per Storey	18 (1/F-32/F)	18 (1/F-36/F)	18 (1/F-32/F)	18 (1/F-36/F)
Number of Flats per Block	576	648	576	648
Total Number of Flats	2,448			
Proposed Occupation Year of Population	2030			

Notes:
[1] For modeling purpose, a floor-to-floor height of 2.7m is assumed for domestic block.
[2] For modeling purpose, the first NSR level and main roof level are rounded down to one decimal place.

Figure 2.3: Site layout plan – Typical Floor (Scheme received on 13 February 2023)

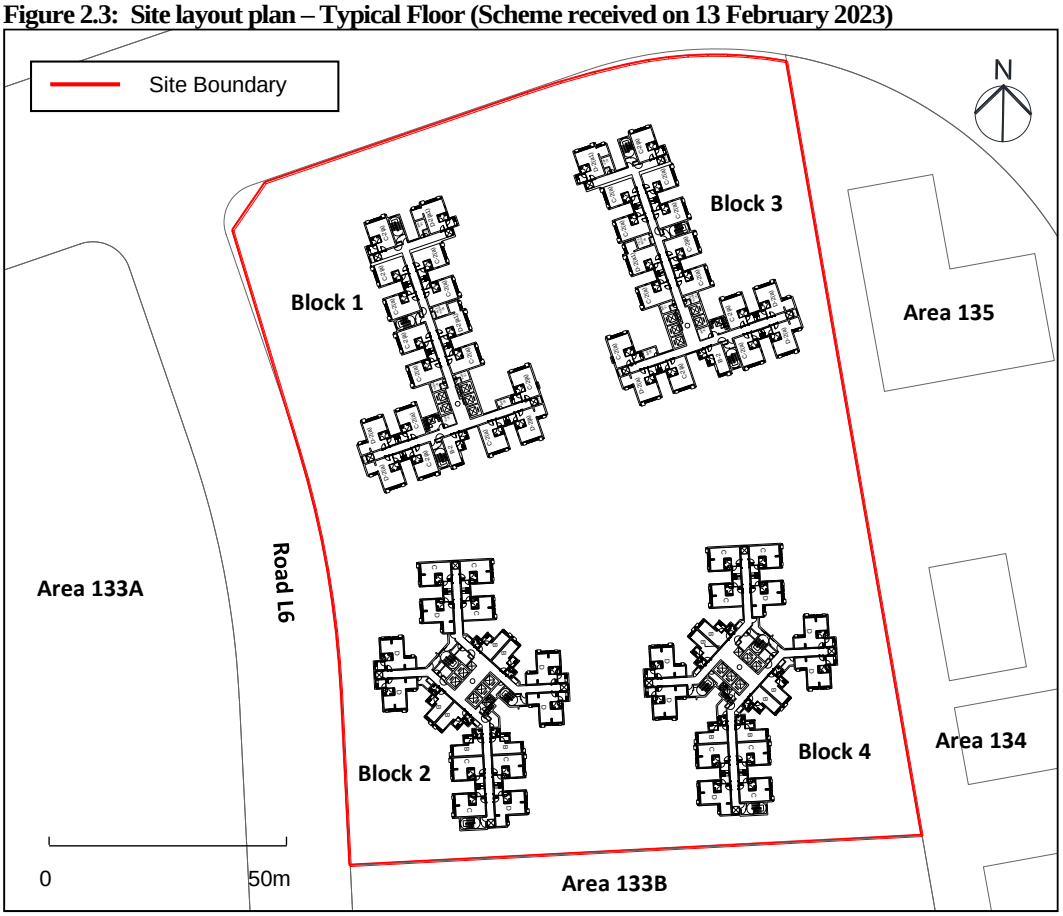


Figure 2.4: Typical floor plan of Residential Block 1 (Scheme received on 13 February 2023)

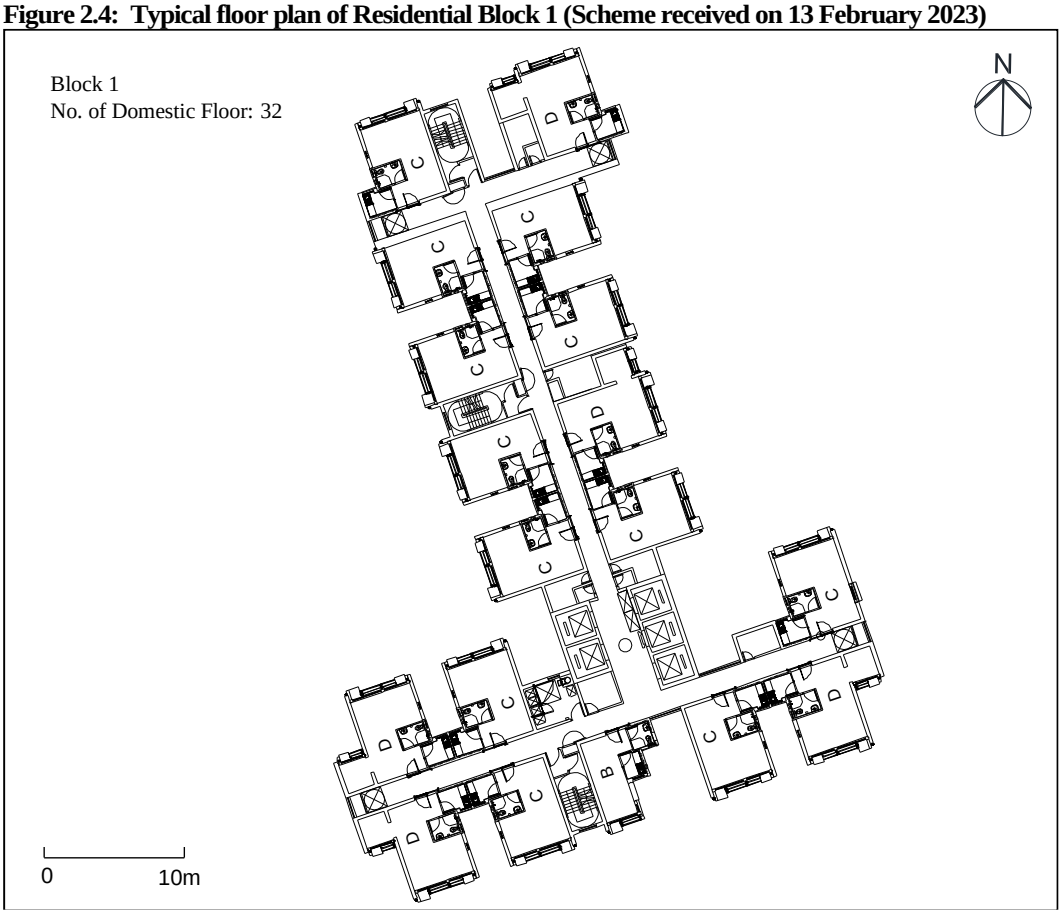


Figure 2.5: Typical floor plan of Residential Block 2 (Scheme received on 13 February 2023)

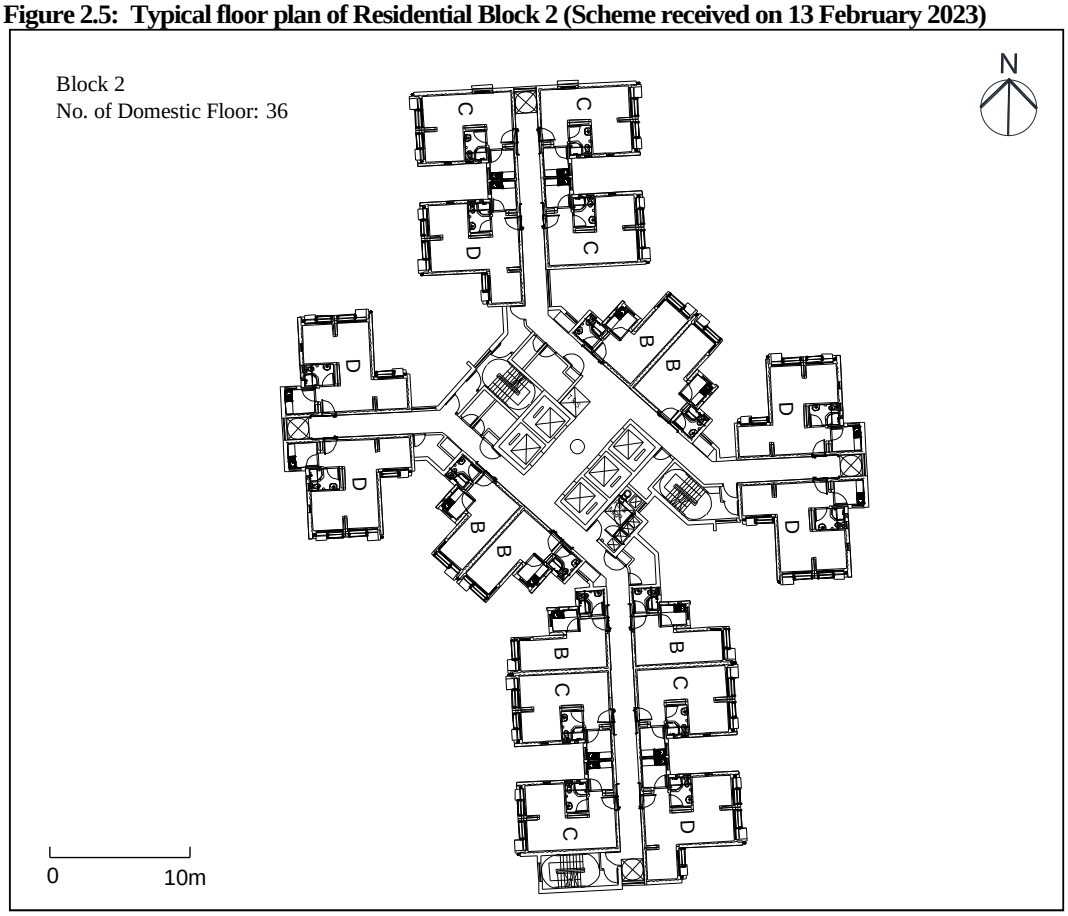


Figure 2.6: Typical floor plan of Residential Block 3 (Scheme received on 13 February 2023)

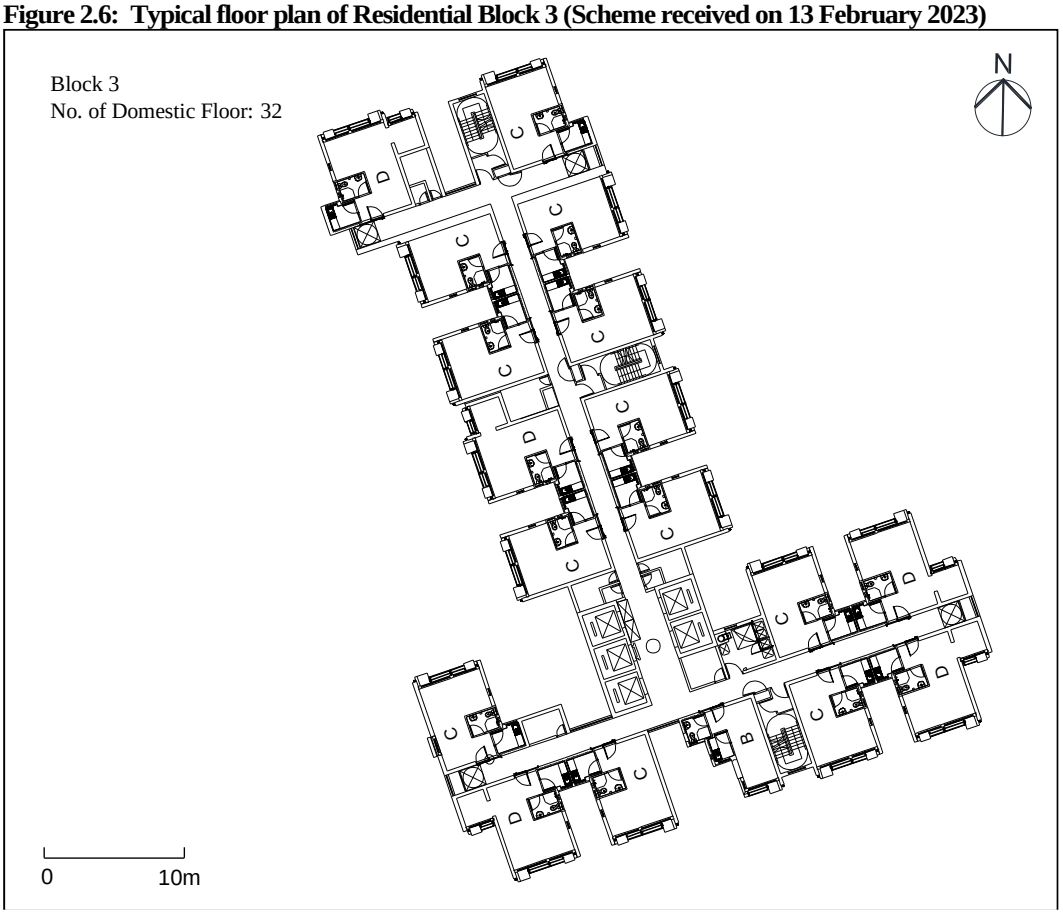
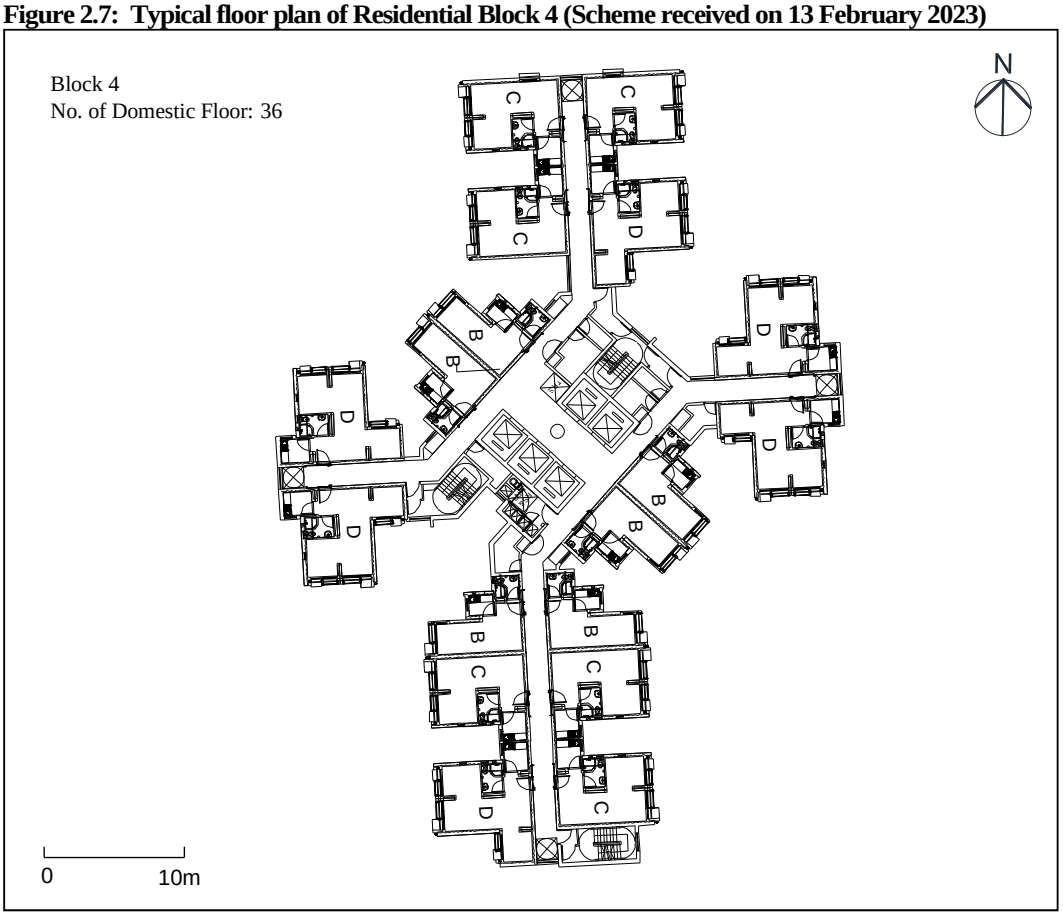


Figure 2.7: Typical floor plan of Residential Block 4 (Scheme received on 13 February 2023)



3 Site Inspection

3.1.1.1 The subject site is located on the reclaimed land of Area 133B in TCE. The land has already been formed. The reclamation at the remaining areas of TCNTE (East) was still being undertaken and the associated site formation and infrastructure works will be carried out by Civil Engineering and Development Department (CEDD).

3.1.1.2 The subject site will be bounded by Road L6 to the west and Road D2 to the north. Another two public housing sites at Area 133A and Area 133C are planned to its west and south respectively. The site will also be surrounded by other developments in its immediate vicinity, including Areas 134 and 135 to the east, and Areas 139 to 141 to the north.

3.1.1.3 Based on site observation, the subject site is currently occupied by CEDD as works area for storage of construction plants or construction materials. Photographs taken at site are given in **Photo 1** and **Photo 2** below.

Photo 1: Subject Site (occupied by CEDD as works area)	**Photo 2: Subject Site (occupied by CEDD as works area)**
	

4 Road Traffic Noise Impact Assessment

4.1 Concerned Road Sections and Noise Sensitive Receivers

4.1.1.1 With reference to the HKPSG, Noise Sensitive Receivers (NSRs) shall include residential uses (all domestic premises including temporary housing accommodation), institutional uses (educational institutions including kindergarten, child care centres and all others where unaided voice communication is required), hotels, hostels, offices, places of public worship, courts of law, hospitals, clinics, convalescences, residential care homes for the elderly, amphitheatres, auditoria, libraries, performing arts centres and country parks. Based on the current development plan, the proposed domestic blocks, kindergarten, management office and social welfare facilities are planned within the site and all of them are regarded as NSRs.

4.2 Noise Criteria

4.2.1.1 In accordance with the HKPSG, the maximum permissible hourly road traffic noise level at 1m from the external facades of the representative NSRs for the proposed development is summarized in **Table 4.1**. The criterion applies to premises relying on opened windows as primary means for ventilation. As mentioned in **Section 2.2**, the layouts of the kindergarten, management office and social welfare facilities at P1/F to P5/F are still being investigated. Hence, assessment will be supplemented in the next stage.

Table 4.1: Summary of noise criterion for road traffic noise

Proposed Developments / Facilities	Noise Sensitive Room with Openable Windows as Primary Means for Ventilation [1]	Uses	Noise Standards for Road Traffic Noise, $L_{10(1\ hour)}$ dB(A)
Residential Block 1 to Block 4	Residential Units	Domestic	70

Notes:
[1] All sensitive rooms which rely on opened windows as primary means for ventilation are identified.

4.3 Noise Assessment Points

4.3.1.1 Assessment points for the residential blocks have been assigned to all openable windows of the NSRs for ventilation. The locations of the selected assessment points are given in **Figures 4.1 to 4.4**.

Figure 4.1: Selected assessment points for Block 1 (road traffic noise assessment)

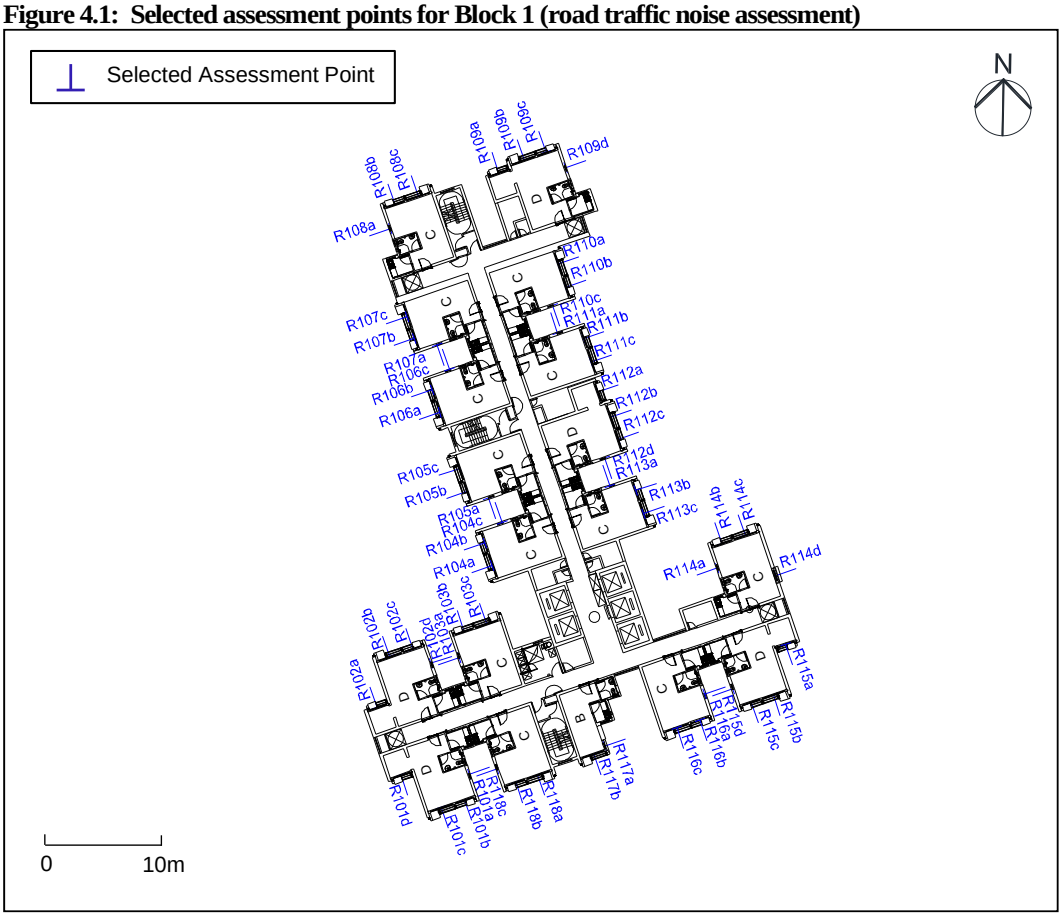


Figure 4.2: Selected assessment points for Block 2 (road traffic noise assessment)

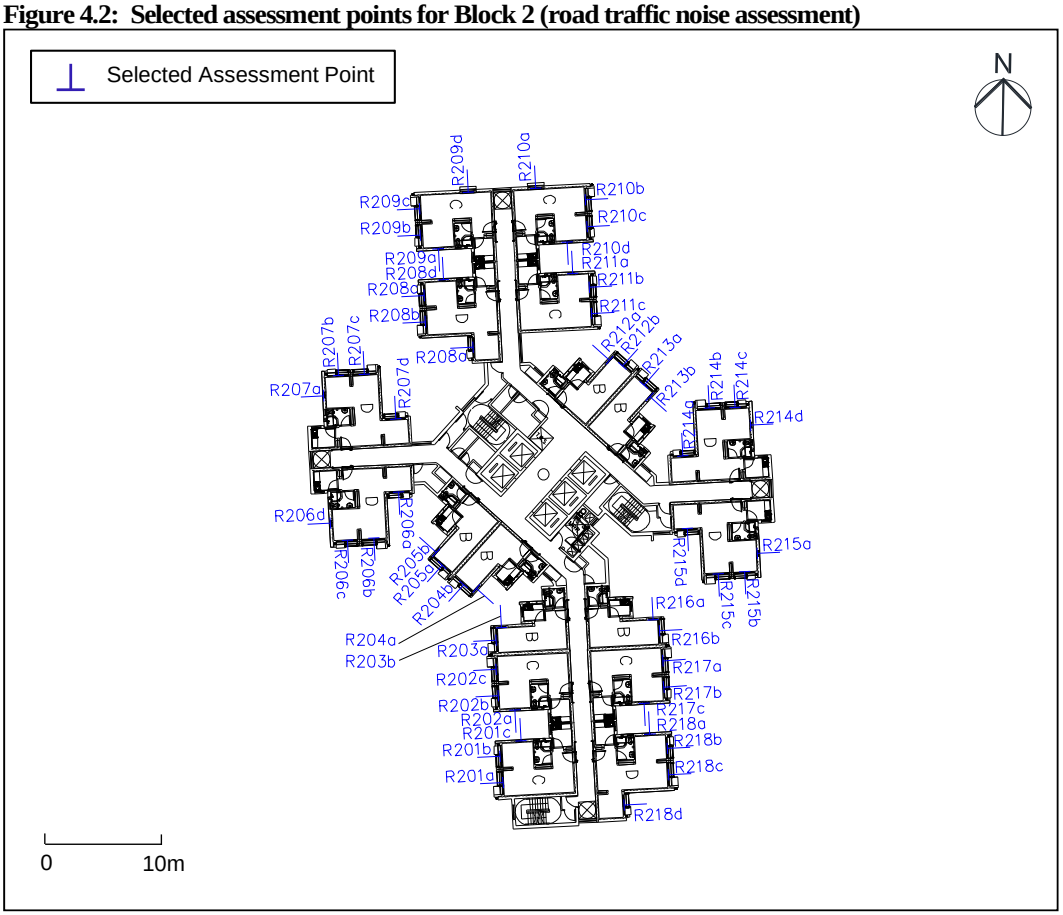
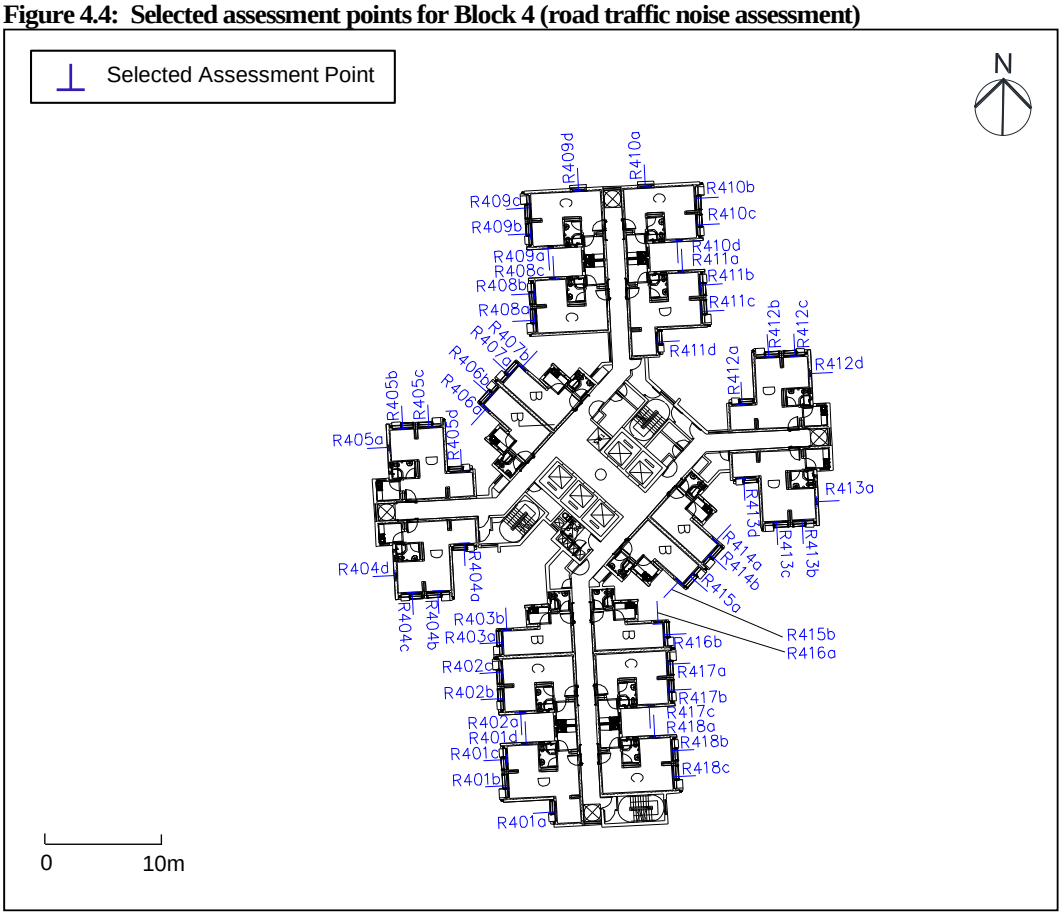


Figure 4.3: Selected assessment points for Block 3 (road traffic noise assessment)



Figure 4.4: Selected assessment points for Block 4 (road traffic noise assessment)



4.4 Assessment Methodology

4.4.1.1 The prediction is based on the calculation method in accordance with the UK Department of the Transport "Calculation of Road Traffic Noise" (CRTN) and the traffic noise levels at the facades of the selected assessment points have been predicted.

Proposed Noise Mitigation Measures

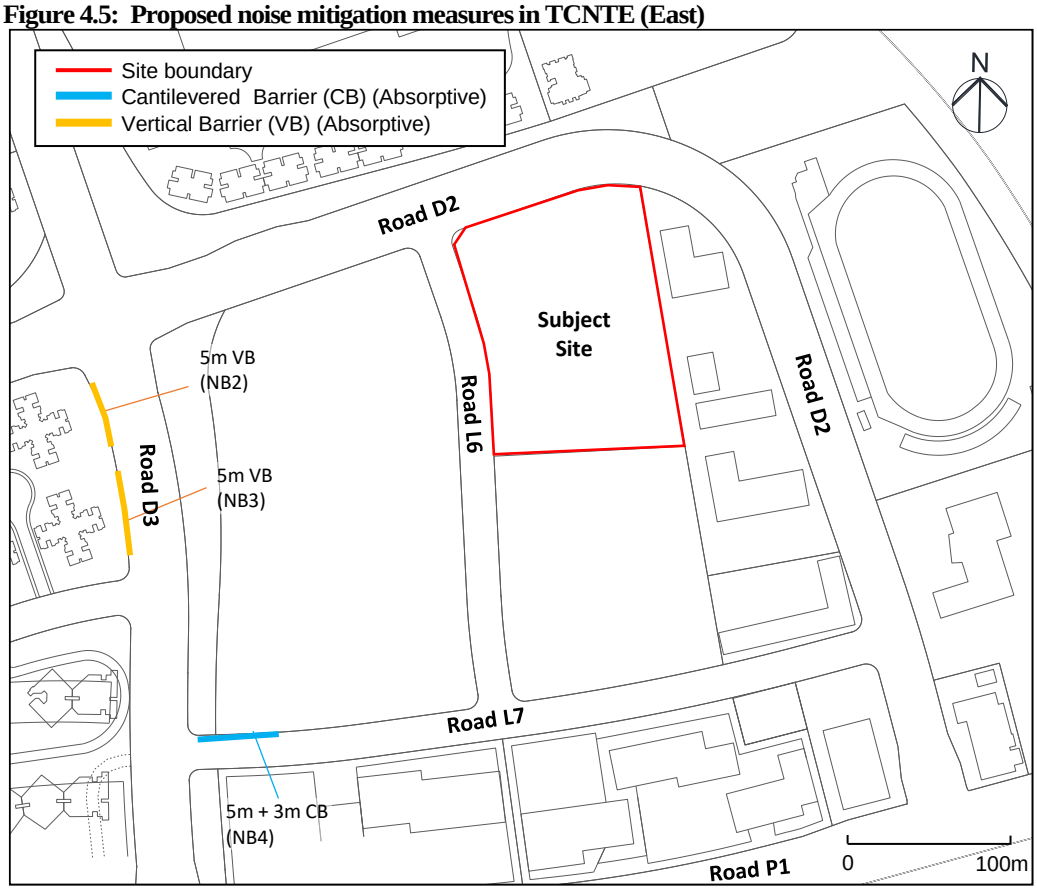
4.4.1.2 The approved TCNTE EIA (AEIAR-196/2016) has proposed at-source noise mitigation measures on some planned roads in TCNTE (East) to relieve the noise impacts caused by its associated new road infrastructure works. The proposed noise mitigation measures were reviewed in Civil Engineering and Development Department (CEDD)'s Environmental Review studies for Enhancement of the Development Intensity in TCNTE (East). The proposed noise barriers on Road L7 and Road D3 which are within 300m of the subject housing site are described below (**Figure 4.5**).

- One section of cantilevered noise barrier (5m high with 3m cantilever arm) of about 60m in length along a section of Road L7; and
- Two 5m high vertical noise barrier of about 120m in total length along a section of Road D3.

4.4.1.3 The tender drawings of the noise barriers provided by CEDD are shown in **Appendix 4.1**.

4.4.1.4 The noise barriers in TCNTE as described above have been incorporated into the base case of the traffic noise model of the present EAS. It shall however be noted that the proposed noise mitigation measures are still being reviewed by CEDD. Should there be any change in the proposed noise mitigation measures under CEDD's study, the road traffic noise assessment will be updated in the subsequent stage of the EAS.

Figure 4.5: Proposed noise mitigation measures in TCNTE (East)



4.5 Traffic Flow Data for Assessment

4.5.1.1 Based on the information provided by HKHA, the tentative occupation year of the proposed development is Year 2030. According to CEDD's Environmental Review studies for Enhancement of the Development Intensity in TCNTE (East), the maximum traffic projection for road traffic noise assessment is Year 2045 (which is 15 years upon the ultimate commissioning year of the TCNTE (East)). The same set of projected traffic flow data for Year 2045 has been adopted for the assessment in current EAS.

4.5.1.2 Reply from Transport Department (TD) on the traffic forecast for CEDD's Environmental Review studies for Enhancement of the Development Intensity in TCNTE (East) is given in **Appendix 4.2**.

4.5.1.3 The traffic flow data for the major roads surrounding the subject site is presented in **Figure 4.6** and **Table 4.2** below. The traffic flow data for all roads is given in **Appendix 4.3**.

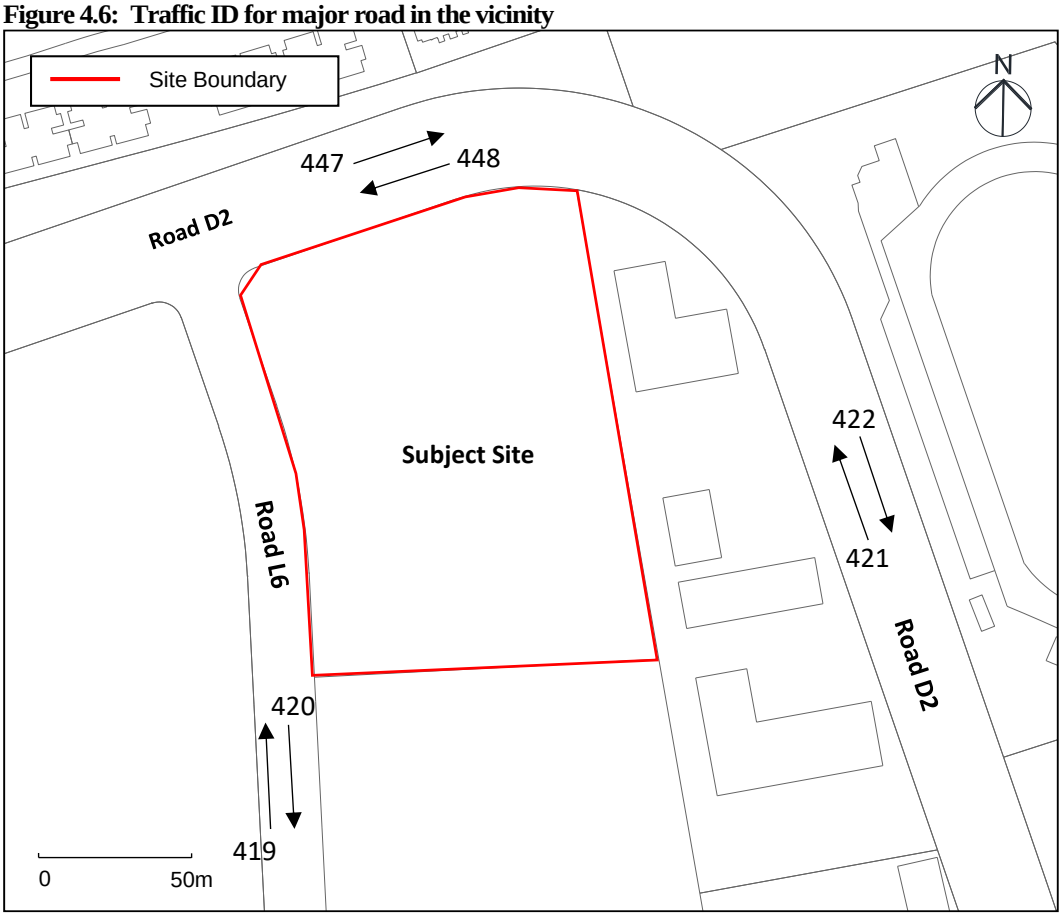
Table 4.2: Predicted peak hourly traffic flow data

Road ID [1]	Street [2]	Speed Limit (km/hr)	Year 2045	
			Traffic Flow (veh/hr)	% of Heavy Vehicles
419	Road L6 NB	50	220	26.0%
420	Road L6 SB	50	260	33.8%
421	Road D2 NB	50	29	89.0%

Road ID [1]	Street [2]	Speed Limit (km/hr)	Year 2045	
			Traffic Flow (veh/hr)	% of Heavy Vehicles
422	Road D2 SB	50	812	16.3%
447	Road D2 EB	50	730	21.0%
448	Road D2 WB	50	45	95.7%

Notes:
[1] Only the major roads are shown in the table above. Hence, the flow ID is not in sequential order
[2] NB = North bound, SB = South bound, EB = East bound, WB = West bound

Figure 4.6: Traffic ID for major road in the vicinity



4.6 Assessment Results for Residential Blocks

4.6.1.1 Optimised building layout, design and orientation have already been incorporated into the current scheme for the basecase scenario, as described below:

Building Block Design, Layout and Orientation

4.6.1.2 During the process of designing the development layout, due consideration has been given to avoid the road traffic noise impacts as much as practicable. Different block designs have been investigated. Quasi-T shape block design has been adopted for Block 1 and Block 3, with optimised building orientation such as most of the flats are deposited away from Road L6 and Road D2 as far as possible. Cross shape building block design has been

adopted for Block 2 and Block 4 which could provide self-screening effect and reduce view angle to the nearby roads.

4.6.1.3 The current scheme is found to be the optimal option from perspectives of development efficiency, flat production, noise performance, scenery and angle of view, etc.

Podium

4.6.1.4 Block 1 and Block 3 are situated on top of a podium of approximate 23.4m (+29.45 mPD) high while Block 2 is situated on top of a podium of approximate 7.5m (+13.5 mPD) high for the current scheme. With the non-domestic floor, transfer zone and E&M zone, the first domestic floors for Block 1 and Block 3 have been raised to +40.3mPD and for Block 2 to +21.65mPD, which can increase the separation distance between the residential units and the nearby roads to achieve larger noise reduction. Detailed layout and section drawings could be referred to **Appendix 2.1**.

Building setback

4.6.1.5 The current building blocks and orientation have been deposited with optimised setback distance from the nearby roads to reduce the noise impacts as far as practicable.

4.6.1.6 With the above proper designs, it is estimated that only a total of 7 residential flats will be exposed to noise level in excess of the 70dB(A) criterion and the overall noise compliance rate is 99.7%. Results of the road traffic noise assessments for the proposed residential development are summarised in **Table 4.3**. Details are presented in **Appendix 4.4**. Without these building designs, it is expected that the noise compliance rate would be lower.

Table 4.3: Road traffic noise assessment results – Residential Blocks (Basecase Scenarios)

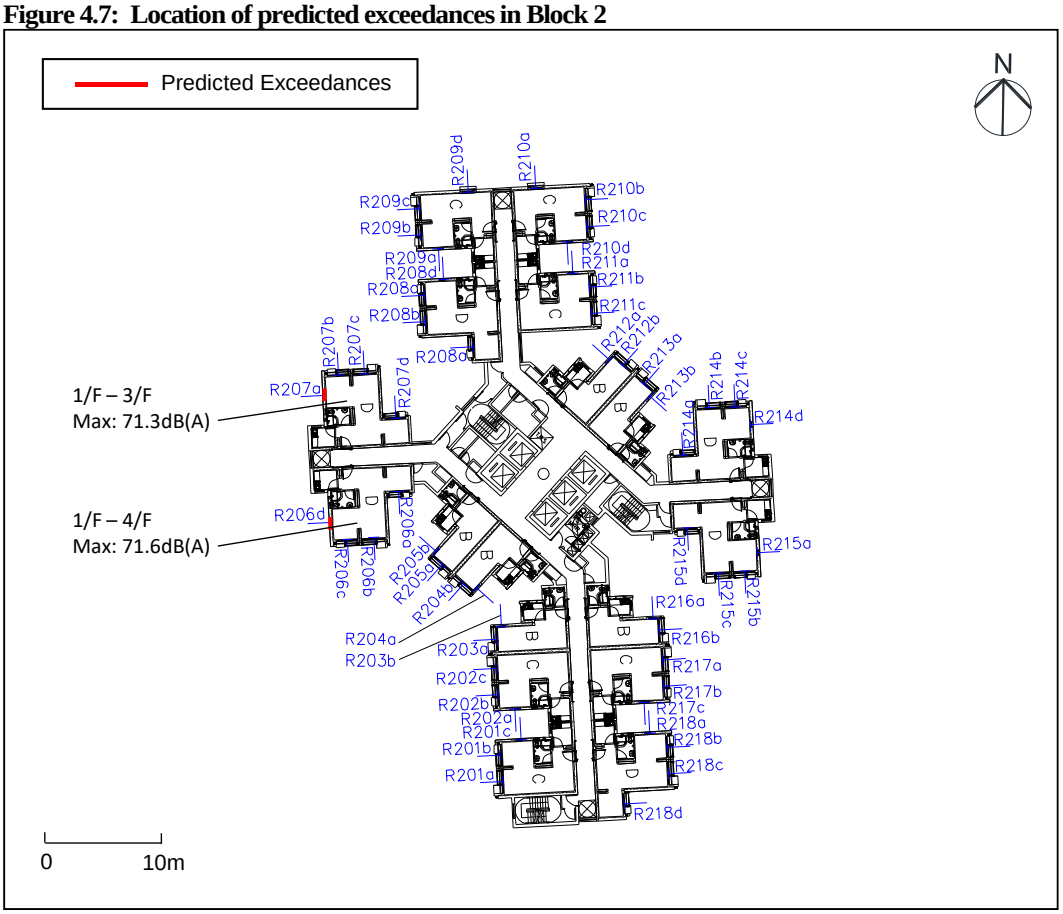
Scenario	Total No. of Flats	No. of Flats Exceeding the Noise Criteria	Max Noise Levels, dB(A)	Compliance Rate
Basecase Scenario	2,448	7	72	99.7%

4.6.1.7 Results indicate that the predicted exceedances are located on the western facades of Block 2 (side windows of the affected flat units), which are primarily affected by Road L6. The locations of the predicted exceedances are given in **Table 4.4** below and shown in **Figure 4.7** below.

Table 4.4: Location of the predicted exceedances – Residential Blocks (Basecase Scenario)

Block	Exceeded NSR	Exceeded Floor	Number of Exceedance
2	R206d	1/F – 4/F	4
	R207a	1/F – 3/F	3
Total number of Exceedance		-	7

Figure 4.7: Location of predicted exceedances in Block 2



4.7 Noise Mitigation Measures for Residential Blocks

4.7.1.1 Proper building layout and design have been adopted in the current scheme as described in the section above. Practicable noise mitigation measures have been investigated.

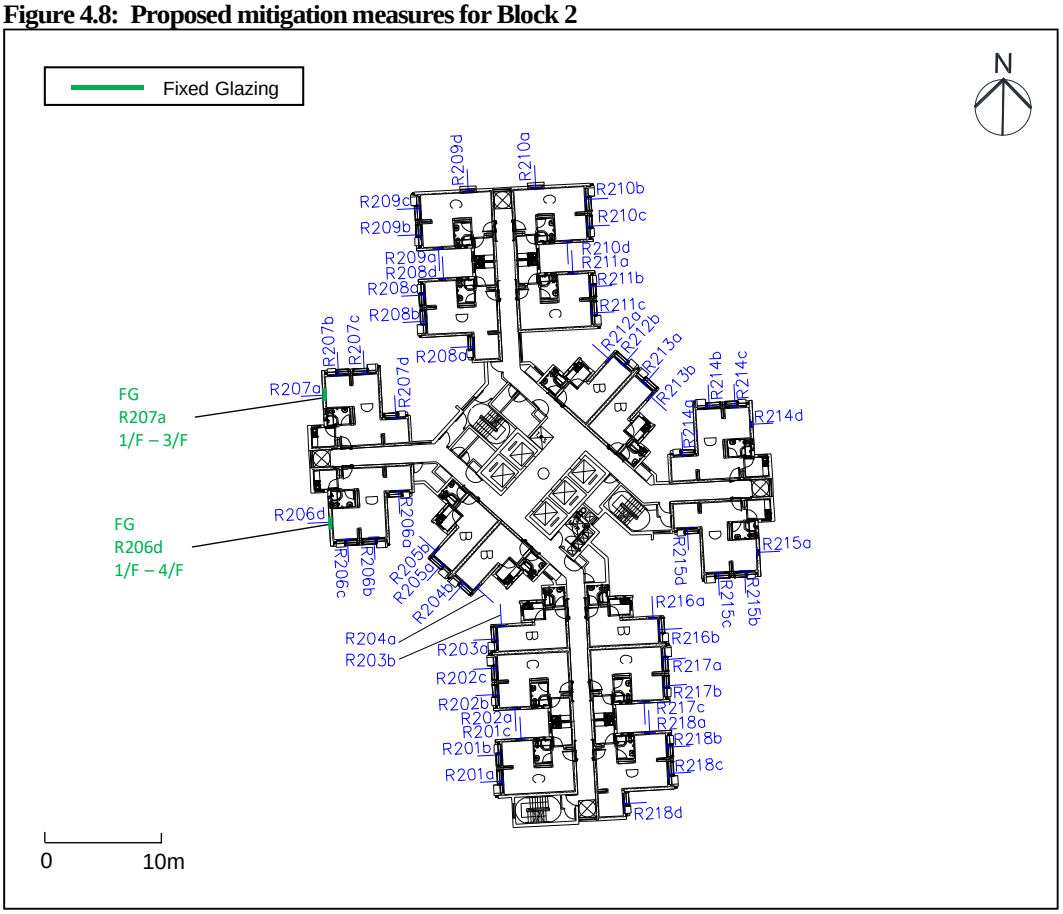
4.7.1.2 Considering that the exceedances are predicted at the side windows, it is proposed to convert the openable side window to fixed glazing. The proposed fixed glazing should be normally closed for noise reduction and need not to be opened for meeting the ventilation requirement. The maximum predicted noise level at the side windows is 71.6dB(A). With reference to the HKPSG, 6mm window pane is considered sufficient for shielding off noise and appropriate for sound insulation purpose. At least 6mm window pane will be provided to the proposed fixed glazing from noise perspective and these fixed glazing could only be opened by Allen key for cleansing and maintenance purposes. The purpose of fixed glazing will be stated in the Decoration Handbook to let the future occupants be well aware of its intended purpose. The locations of the proposed fixed glazing windows are summarized in **Table 4.5** and indicated in **Figure 4.8**.

Table 4.5: Location of proposed fixed glazing for mitigating road traffic noise

Fixed glazing at NSR	Floor Requiring Fixed glazing
R206d	1/F – 4/F
R207a	1/F – 3/F

4.7.1.3 With the provision of the recommended fixed glazing, all residential flats will be protected and a compliance rate of 100% could be achieved. Detailed results are attached in **Appendix 4.5.**

Figure 4.8: Proposed mitigation measures for Block 2



5 Review of Rail Noise Impact Assessment

5.1.1.1 As mentioned in **Section 2.1**, the existing TCL and AEL, as well as the planned TCLE and TCE station are all located outside 300m from the subject housing site. Area 133B will also be screened by another two housing developments at Area 133A and 133C. No adverse rail noise source impact on the proposed development is therefore anticipated.

6 Review of Fixed Noise Impact

6.1 Identification of Fixed Noise Sources

6.1.1.1 Three planned fixed noise sources within 300m assessment area of the subject site are identified according to the approved TCLE EIA report (AEIAR-235/2022) and TCNTE EIA (AEIAR-196/2016). They include the planned salt water pumping station/ sewage pumping station in Area 132, fire station in Area 136 and sports ground in Area 138 (**Figure 6.1**). The basic information of the identified planned fixed noise sources is summarised in **Table 6.1**.

Table 6.1: Basic information of identified fixed noise sources (identified in the approved TCLE EIA and TCNTE EIA)

Operators/Locations	Identified Potential Noise Sources
Salt Water Pumping Station/ Sewage Pumping Station (CNS01) in Area 132	• Operation: Pumps and exhaust of mechanical ventilation system to be operated during daytime, evening time and night-time periods.
Fire Station in Area 136 (CNS02)	• Operation: Station operations include loudspeakers, siren, fire engine sirens, condenser and transformer, etc.
Sports Ground in Area 138 (CNS06)	• Operation: Operation of the facility and public address (PA) system

Salt Water Pumping Station/ Sewage Pumping Station (CNS01) in Area 132

6.1.1.2 The salt water pumping station/ sewage pumping station is located at about 170m to the southeast of the subject site to cater for the demand increase in water supply and sewage load for the future population. Noise sources include the pumps and exhaust of mechanical ventilation system to be operated during daytime, evening time and night-time periods.

6.1.1.3 With reference to the approved TCNTE EIA (AEIAR-196/2016), it was recommended that the future Contractor of the salt water pumping station/ sewage pumping station would review the latest available information during their detailed design stage and the maximum allowable Sound Power Level (SWL) set out in the approved TCNTE EIA. It was also recommended that the future Contractor of the salt water pumping station/ sewage pumping station would implement mitigation measures, such as installing acoustic silencers for the exhaust of mechanical ventilation system, etc as appropriate to ensure the overall maximum SWLs of the noise sources would comply with the maximum allowable SWL as set out in the approved TCNTE EIA. The committed high-rise residential development at Tung Chung Area 133C will be located between the salt water pumping station/ sewage pumping station and Tung Chung Area 133B. Based on the information provided by HKHA, the tentative occupation year of the proposed high-rise residential development at Tung Chung Area 133C is the same as that of Area 133B (i.e. Year 2030). The building blocks in Area 133C will provide noise screening to the salt water pumping station/ sewage pumping station to the proposed housing development at Tung Chung Area 133B.

Fire Station (CNS02) in Area 136

6.1.1.4 The fire station is located at about 240m to the southeast of the subject site. Noise sources include loudspeakers, siren, fire engine sirens, condenser and transformer, etc. from the station operations. The committed G/IC developments at Tung Chung Area 134 and 135 will be located between the fire station and Tung Chung Area 133B. According to the approved TCLE EIA (AEIAR-235/2022), the tentative occupation year of the proposed G/IC development at Tung Chung Area 134 and 135 (i.e. Phase 4 in TCNTE (East)) is Year 2030. At that time when Tung Chung Area 133B is occupied, the building blocks in Area 134 and 135 shall have been likely in place and could also provide noise screening to the proposed housing development at Tung Chung Area 133B.

Sports Ground (CNS06) in Area 138

6.1.1.5 The sports ground is located at about 110m to the east of the subject site. Noise sources include the operation of the facility and PA system. The committed G/IC development at Tung Chung Area 135 will be located between the sports ground and Tung Chung Area 133B. According to the approved TCLE EIA (AEIAR-235/2022), the tentative occupation year of the proposed G/IC development at Tung Chung Area 135 (i.e. Phase 4 in TCNTE (East)) is Year 2030. At that time when Tung Chung Area 133B is occupied, the building blocks in Area 135 shall have been likely in place and could also provide partial noise screening to the proposed housing development at Tung Chung Area 133B.

6.1.1.6 With reference to the approved TCNTE EIA (AEIAR-196/2016), it was recommended to incorporate measures for the PA system and/ or the sound amplification system, if used during the outdoor noise activities. The recommended measures include the adoption of a cluster of small power loudspeakers instead of a few large power loudspeakers, adoption of directional loudspeakers with orientation to point away from the nearby NSRs; and the inclusion of a "Limiter" device in the system to set the upper bound of the output sound level. Besides, as concluded in the TCNTE EIA, the sports ground is a Designated Project under Item O.7 of Schedule 2 of Technical Memorandum on the Environmental Impact Assessment Process, a separate EIA study would be required to be conducted by the future operator to fulfil all the statutory requirements and procedures under the EIAO. Any potential environmental noise impacts caused by the planned sports ground shall be addressed in the respective future EIA and mitigated by appropriate at source mitigation measures where necessary to ensure no noise exceedance at all nearby sensitive receivers including the proposed housing site in Area 133B.

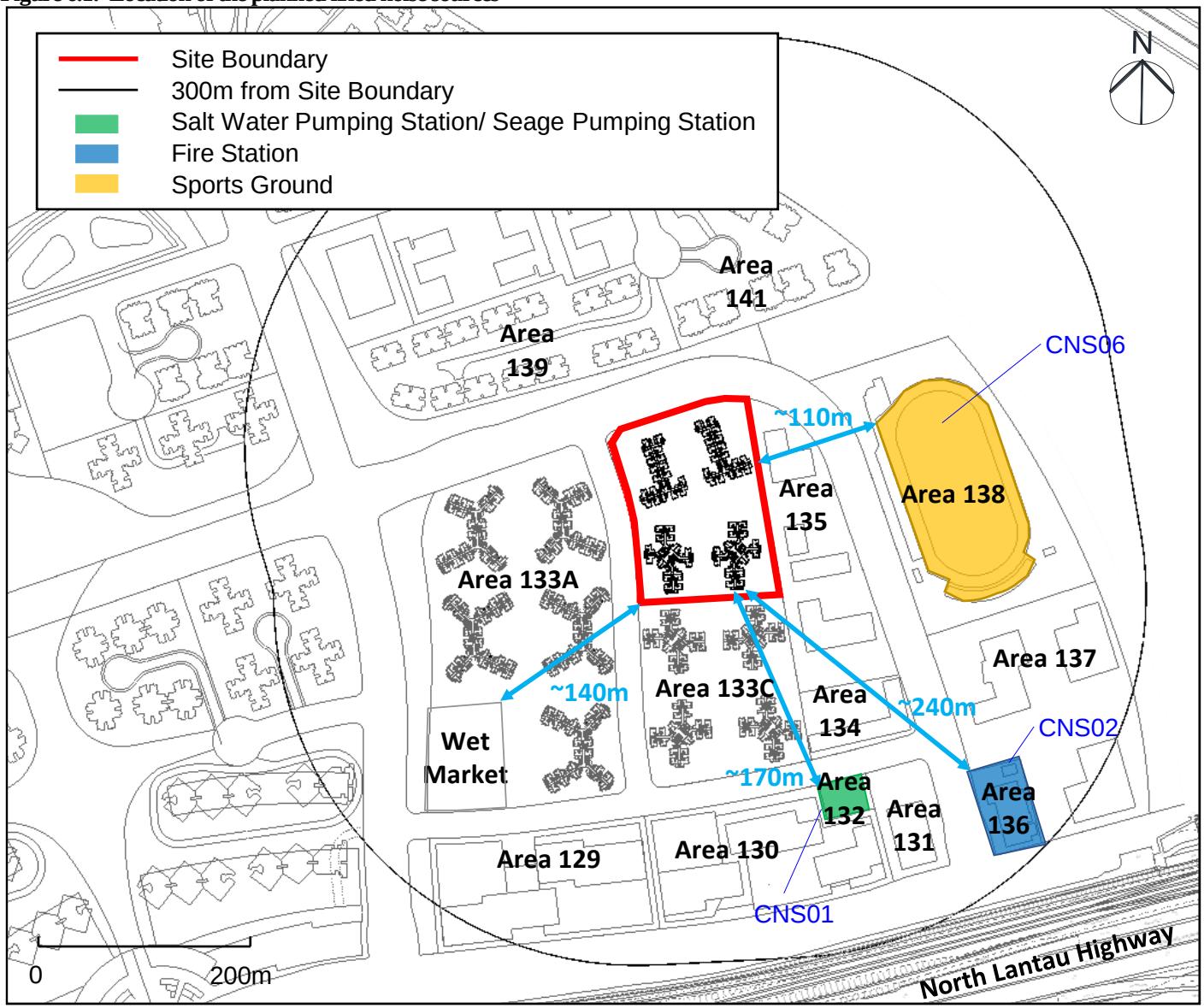
Planned Public Wet Market

6.1.1.7 The area to the southwest corner of Tung Chung Area 133A is reserved for a public wet market to be developed and managed under Food and Environmental Hygiene Department (FEHD). **Figure 6.1** shows the location of the planned public wet market. As confirmed by Architectural Services Department (ArchSD), the design of the public market will consider the public housing developments to ensure the environmental impact will comply with statutory requirements (**Appendix 6.1**).

6.1.1.8 Nonetheless, the public wet market is located at about 140m to the boundary of Tung Chung Area 133B and will be screened by Area 133A development. In view of the large separation

distance and screening by Area 133A, potential noise impact on Area 133B is not anticipated.

Figure 6.1: Location of the planned fixed noise sources



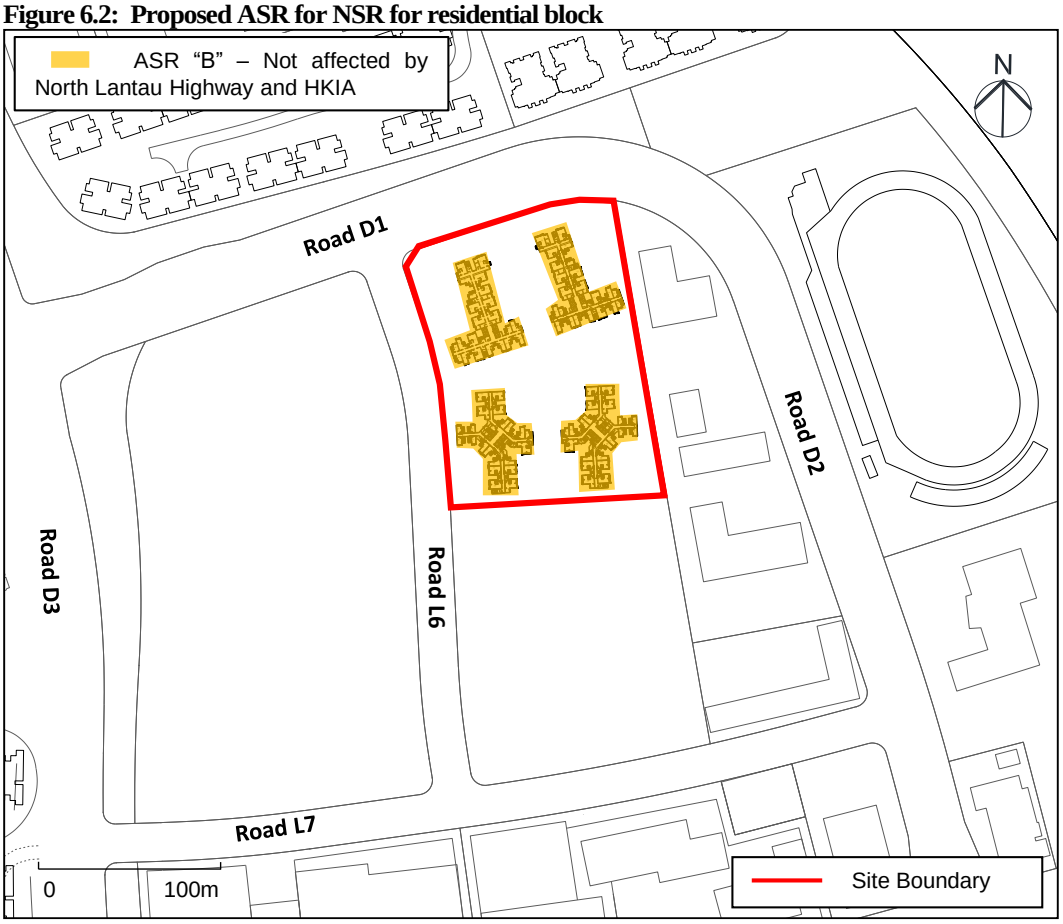
6.2 Fixed Noise Criteria

6.2.1.1 According to Section 4.2.13 in Chapter 9 of the HKPSG, noise assessments for fixed noise sources would normally be conducted in accordance with the Technical Memorandum for the Assessment of Noise from Places Other Than Domestic Premises, Public Places or Construction Sites (IND-TM) under the Noise Control Ordinance. The IND-TM lays down statutory Acceptable Noise Level (ANL). The HKPSG also states that in order to plan for a better environment, all planned fixed noise sources should be so located and designed that when assessed in accordance with the TM, the level of the intruding noise at the façade of the nearest sensitive use should be at least 5 dB(A) below the appropriate ANL of the IND-TM or, in the case of the prevailing background noise level being 5 dB(A) lower than the ANL, should not be higher than the prevailing background noise level.

6.2.1.2 The site is planned for high-rise residential development. It is surrounded by planned residential developments in TCNTE (East). The types of area (i) rural area; (ii) low density residential area consisting of low-rise or isolated high-rise developments; and (iii) urban area according to IND-TM cannot reflect the future environs of the subject site and are all not applicable. Thus, the whole site shall fall into type (iv) “Area other than those above” according to IND-TM.

6.2.1.3 Review of the Annual Traffic Census (ATC) for Year 2021 indicates that North Lantau Highway had an AADT of 38,690, which is considered as an Influencing Factor (IF) under the IND-TM. Hong Kong International Airport (HKIA) is located on the north of the subject site and it is also considered as an IF. North Lantau Highway and HKIA are located outside 300m to the south and north of the subject site respectively with high-rise developments in between to provide screening. The subject housing site is therefore considered to be not affected by the IFs, and hence an ASR of B is assigned. The Acceptable Noise Level (ANL) for ASR of “B” should be 65dB(A) and 55dB(A) for daytime and night-time respectively. The proposed ASR for the NSRs is indicated in **Figure 6.2** below. The ASR assigned in this EAS report is for assessment purpose only and shall not prejudice the Authority's decision on enforcement based on contemporary conditions.

Figure 6.2: Proposed ASR for NSR for residential block



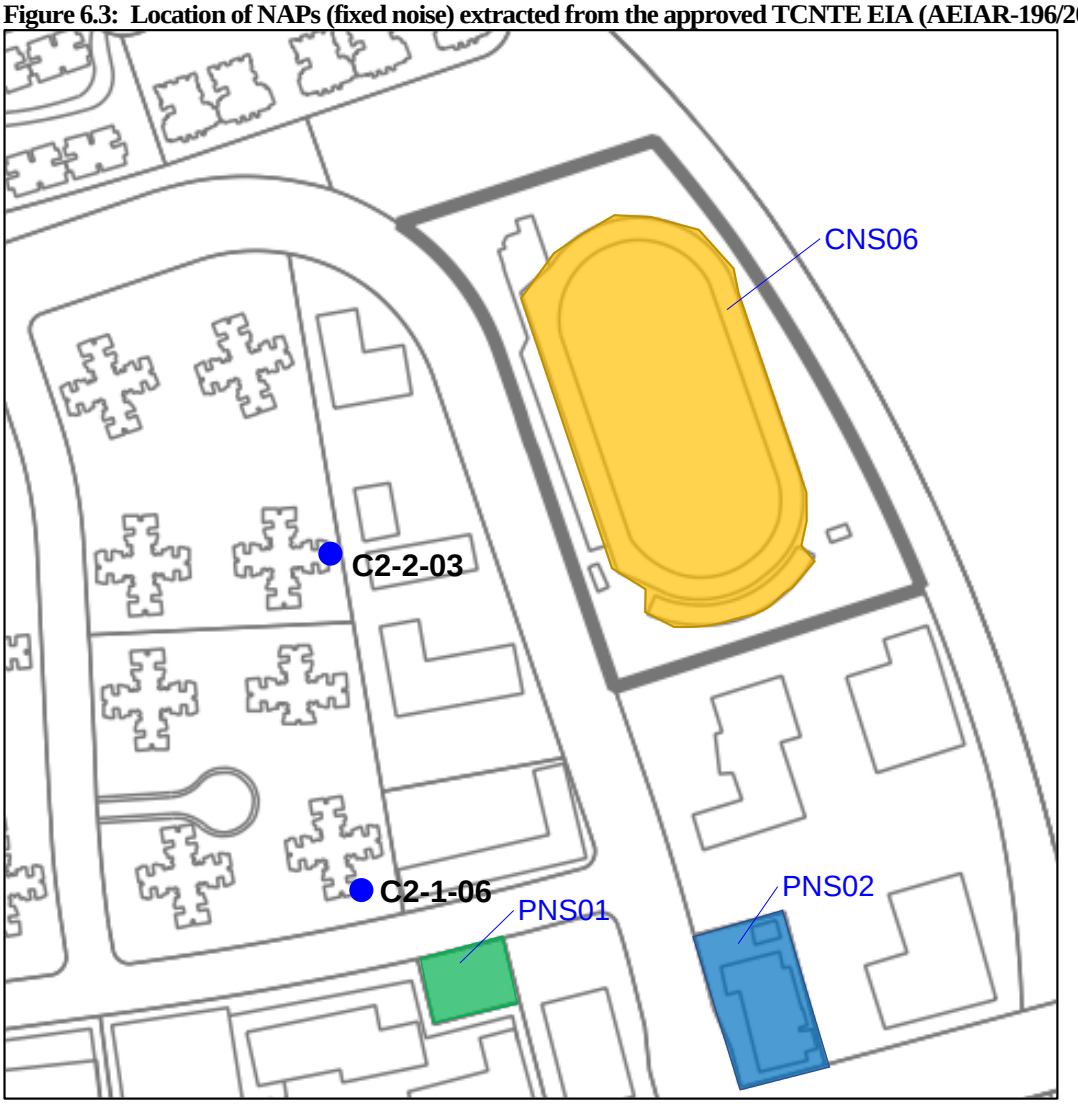
6.3 Review of Potential Fixed Noise Impacts

6.3.1.1 With reference to the approved TCNTE EIA (AEIAR-196/2016), fixed noise sources impact assessment was conducted at the proposed residential development at Tung Chung Area 133C considering the salt water pumping station/ sewage pumping station and fire station. The approved TCNTE EIA has assessed the potential fixed noise sources impact on the building facade (i.e. NAP C2-1-06) which is the nearest south-eastern facade of tentative buildings blocks at Area 133C in the approved TCNTE EIA (**Figure 6.3**). The maximum predicted cumulative noise levels on this NAP C2-1-06 is 54 dB(A), which comply with the night-time noise criterion for ASR of B. In the assessment, night-time criterion was assessed as the worst case scenario, and screening effect was not considered for conservative assessment. The proposed residential blocks for the current scheme at Tung Chung Area 133B have much larger separation distance from these fixed noise sources, as compared to this NAP at Area 133C in the approved TCNTE EIA. Given the use of proper design of the planned salt water pumping station/ sewage pumping station and fire station, much larger separation distance, as well as the screening by Area 133C developments, and with reference to the predicted noise levels in the approved TCNTE EIA, potential fixed noise impact on the current scheme is therefore not anticipated.

6.3.1.2 According to the approved TCNTE EIA (AEIAR-196/2016), noise assessment was conducted at the proposed residential development at Tung Chung Area 133B considering the noise from operation and PA system noise from the sports ground. The proposed

residential blocks for the current scheme at Tung Chung Area 133B have similar separation distance from the planned sports ground as in the approved TCNTE EIA. Openable side window is designed under the current scheme at Tung Chung Area 133B, which is also similar to that assumed in the approved TCNTE EIA (AEIAR-196/2016). The approved TCNTE EIA has assessed the potential noise impact on the nearest building façade (i.e. NAP C2-2-03) which is the nearest eastern facade of tentative buildings blocks at Area 133B in the approved TCNTE EIA (**Figure 6.3**). The predicted noise levels on this NAP C2-2-03 is 53 dB(A) for daytime, which comply with the respective noise criterion for ASR of B. In the assessment, only day time criterion was assessed as worst case scenario. As recommended, any night-time noise impact from the operation of sports ground shall be conducted in detailed design stage. As discussed in **Section 6.1**, the sports ground is a Designated Project and a separate EIA study would be required to be conducted by the future operator to fulfil all the statutory requirements and procedures under the EIAO. Any potential environmental noise impacts caused by the planned sports ground shall be addressed in the respective future EIA and mitigated by appropriate at source mitigation measures where necessary to ensure no noise exceedance at all nearby sensitive receivers including the proposed housing site in Area 133B. As such, potential noise impact from the sports ground is not anticipated.

Figure 6.3: Location of NAPs (fixed noise) extracted from the approved TCNTE EIA (AEIAR-196/2016)



7 Review of Potential Aircraft Noise Impact

7.1 Aircraft Noise Criteria

7.1.1.1 In accordance with the HKPSG, exposure to aircraft noise is described by Noise Exposure Forecast (NEF) contours. NEF contours should be used together with the standards to define areas where certain noise sensitive uses should not be located within specified NEF contours. The NEF standards applicable to the Hong Kong International Airport (HKIA) at Chek Lap Kok as stipulated in HKPSG should not be exceeded. The aircraft noise standard is given in **Table 7.1**.

Table 7.1: Noise standards for aircraft noise

Parameters	Noise Standard [1]
	Aircraft Noise (Noise Exposure Forecast: NEF)
All domestic premises including temporary housing accommodation	25
Offices	30
Educational institutions including kindergartens, child care centres and all others where unaided voice communication is required	25
Hospitals, clinics, convalescences and homes for the aged, diagnostic rooms, wards	25

Notes:
[1] The above standards apply to uses which rely on opened windows for ventilation.

7.2 NEF Contours for the Three-Runway System (3RS)

7.2.1.1 In order to cope with the future air traffic demand, the HKIA is developing into a Three-runway System (3RS). The aircraft noise impacts for the 3RS have been addressed in the approved Expansion of Hong Kong International Airport into a Three-Runway System (3RS) EIA (AEIAR-185/2014). Three scenarios were assessed in the said EIA, including: (i) the interim phase operation mode representing the phase during which the existing North Runway is closed and the proposed 3rd runway is operating with the existing South Runway (Year 2021); (ii) the worst operation mode with maximum noise emission (Year 2030); and (iii) full operation of the 3RS at design capacity (Year 2032). The NEF noise contours predicted in 3RS EIA are shown in **Appendix 7.1**.

7.2.1.2 Operation familisation for flights on the third runway, designated as the new North Runway of HKIA, started in July 2022. The Centre Runway has been temporarily closed for reconfiguration as part of the 3RS development; while HKIA will continue to operate as a two-runway system with the new North Runway and the South Runway. The 3RS project is targeted to complete in 2024.

7.2.1.3 The tentative occupation year of the development is 2030. At that time, the 3RS shall have been completed and commissioned. As shown in **Figures 7.1 to 7.2**, the site is located more than 500m outside the NEF25 contour for the worst 3RS operation mode in Year 2030 and full 3RS operation mode in Year 2032. The HKPSG standard will therefore be complied.

Figure 7.1: Location of the proposed development and NEF25 contour in 2030

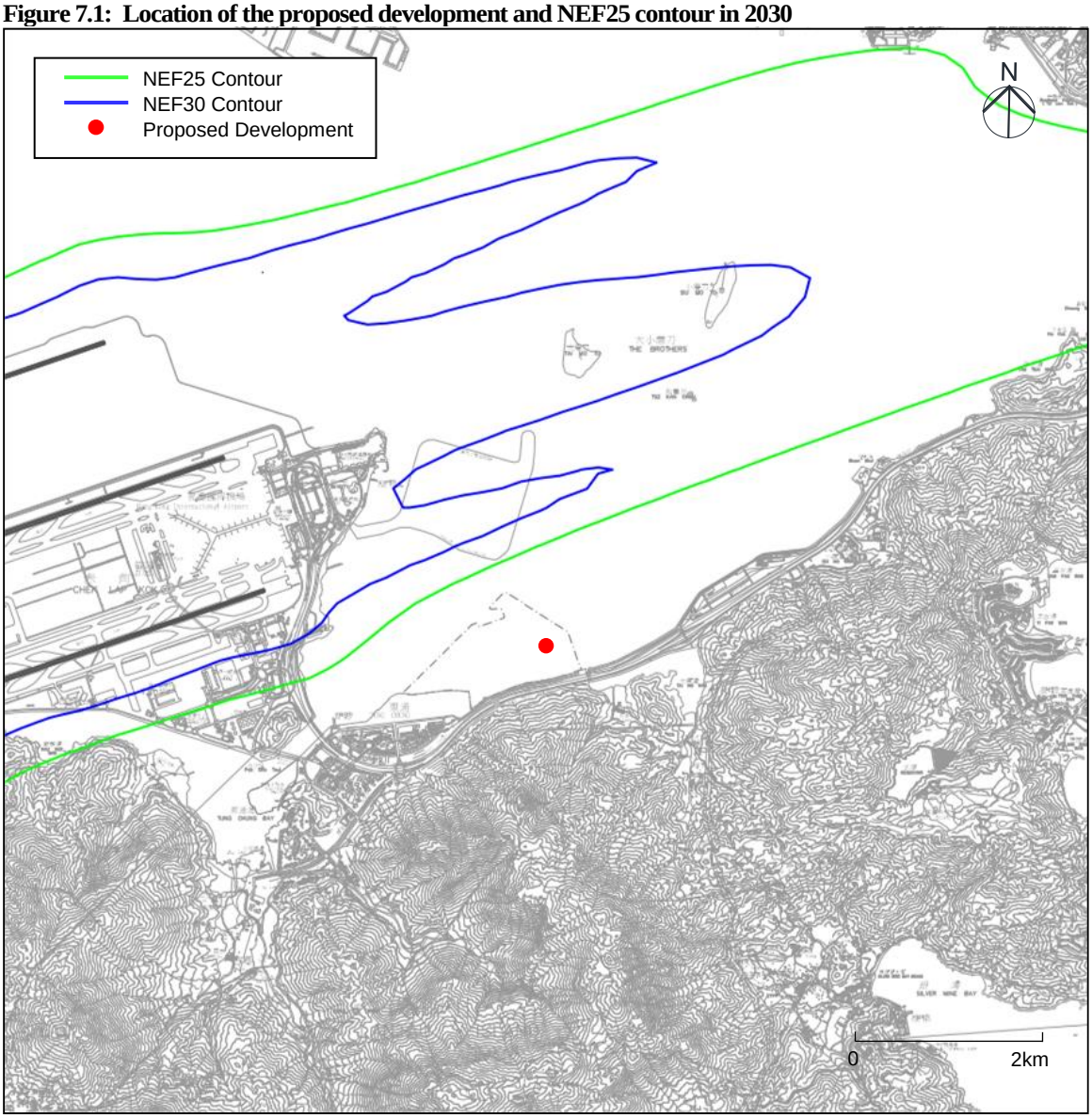
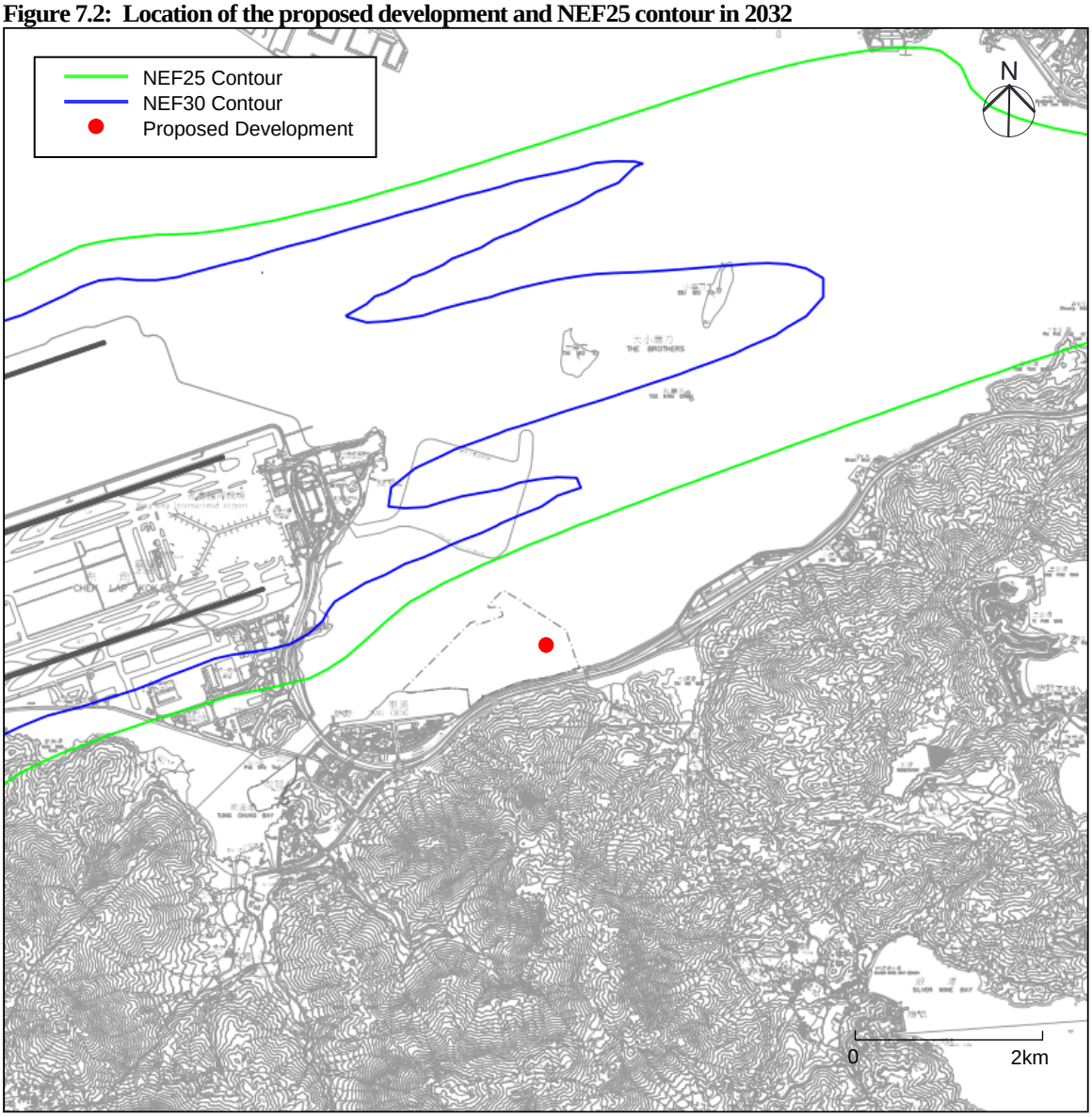


Figure 7.2: Location of the proposed development and NEF25 contour in 2032



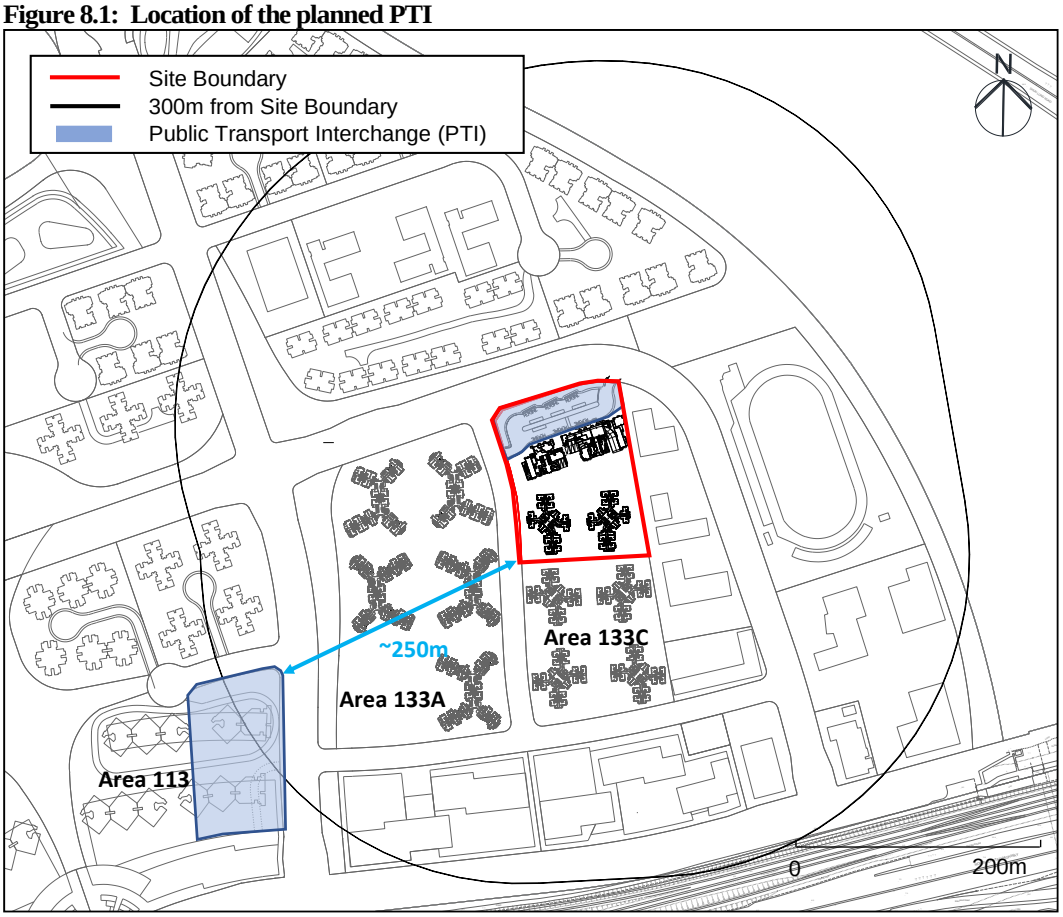
7.2.1.4 Given that the proposed development site is located outside the predicted NEF25 contours in both worst and full 3RS operation scenarios, no adverse aircraft noise impact arising from the future operation of the 3RS is anticipated.

8 Review of Noise Nuisance Arising from Public Transport Interchange

8.1 Planned PTI at Area 113

8.1.1.1 A Public Transport Interchange (PTI) is planned within Tung Chung Area 113 and at about 250m to the southwest. The location of the PTI is shown in **Figure 8.1**.

Figure 8.1: Location of the planned PTI



8.1.1.2 Key noise generating sources inside PTI include ventilation fans, idling engine and manoeuvring vehicles, etc. With reference to the approved TCLE EIA (AEIAR-235/2022), the PTI would be decked under proposed building structures and designed with no direct line-of-sight at the noise sensitive use in the vicinity of the PTI and therefore the noise emissions will be adequately controlled.

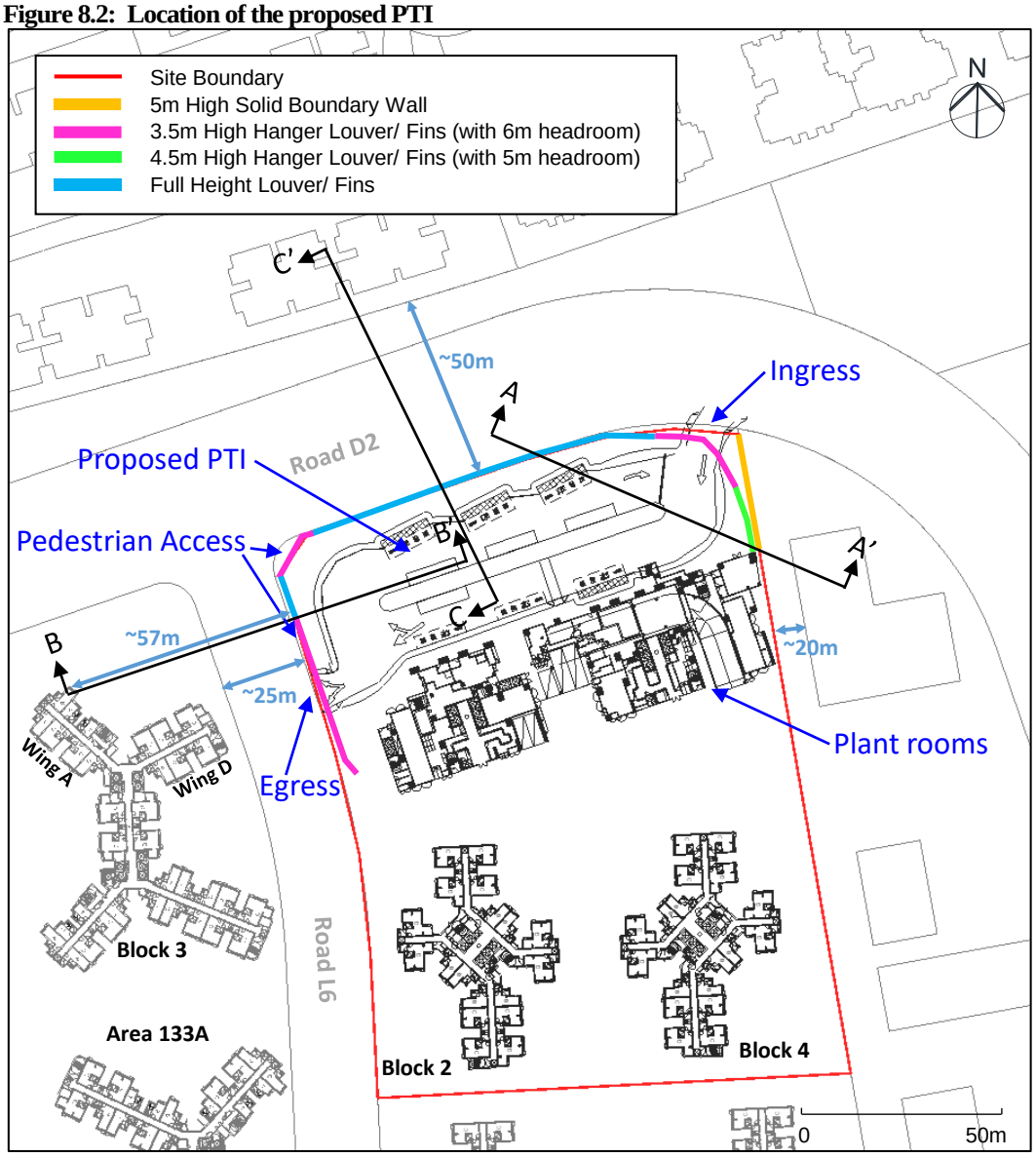
8.1.1.3 Tung Chung Area 133B is located far away from the PTI at Area 113 and is screened by the planned high-rise residential developments in Area 133A which will also be occupied in 2030. In consideration of the decking design of the PTI, large separation and screening by high-rise buildings, potential noise nuisance arising from the planned PTI at Area 113 on the subject housing site is therefore not anticipated.

8.2 Planned PTI at Area 133B

8.2.1.1 A PTI is planned on G/F underneath Block 1 and Block 3 at the northern side within the subject site (**Figures 8.1** and **8.2**). In accordance with HKPSG, while specific noise level standards are not applicable for PTI/ bus terminus, noise should be a major consideration in determining their locations and site layout. HKPSG recommends that the sitting of facilities such as PTI/ bus terminus should take into account the potential locations of ingress/ egress and the consequent noise disturbances due to traffic routings, particularly during sensitive hours. Therefore, efforts should be made to ensure that the noise impact caused by these facilities will be minimised. Some general considerations that need to be taken during the planning stage include the following:

- locate the facilities so that there is no line-of-sight of the noise sources at the noise sensitive uses;
- provide screening to the noise sources as far as possible by making use of natural landscape, embankment or noise tolerant buildings;
- avoid locating open-form major PTI/bus terminus in proximity to noise sensitive uses;
- consider adopting a complete podium decking over noisy facilities; and
- locate lairs and sidings away from noise sensitive uses and separate them with high solid barriers.

Figure 8.2: Location of the proposed PTI



8.2.1.2 During the planning and design stage, effort has been made to meet the HKPSG's requirements as far as practicable. Open-form design has been avoided. The proposed design is discussed in the following sections.

Strategic Location of the Planned PTI and its Ingress and Egress

8.2.1.3 The PTI is planned within the housing site and is unavoidably close to the future residential blocks. The current PTI is underneath Block 1 and Block 3, and is strategically located as far away as possible from most of the residential blocks of Areas 133A and 133C, with the ingress and egress connecting onto the planned Road D2 and Road L6 respectively. The location is considered the most optimum option from planning and transport point of views.

Podium Decking Design

8.2.1.4 Based on the current design, the proposed PTI has a podium decking to cover the whole extent of the bus drop off, pick up, stacking and routing area. The social welfare facilities

and domestic flats of Block 1 and Block 3 of Area 133B starting from P2/F are located above the podium deck and transfer plate and will have no direct line of sight to the PTI; while there are no noise sensitive uses planned underneath at G/F to P1/F. Therefore, potential noise nuisance is avoided.

Self-screening

8.2.1.5 Plant rooms for PTI and lift lobby, etc. are planned underneath Block 1 and Block 3 at the southern side of the proposed PTI (**Figure 8.2**). They can provide noise screening to screen off the noise from the PTI to Block 2 and Block 4 at the southern side.

Full Height Solid Wall

8.2.1.6 During the process of designing the PTI layout, feasibility of adopting full height solid wall has been investigated to minimise adverse noise nuisance to the surrounding residential development. Considering the cost effectiveness and aim of maximizing the development potential for the subject site, mechanical smoke extraction system shall be avoided as additional plant rooms and massive air ducts for the system will be required. In accordance with HKHA's past experience in the public housing development at Queen's Hill, Fire Services Department (FSD) advised that the provision of dynamic smoke extraction system would be necessary unless "two side openings with an aggregated area of at least 50% of the Public Transport Terminus (PTT) floor area" could be provided. As such, in addition to the vehicular ingress and egress, part of the western and northern PTI facades shall maintain at least 50% openings for avoiding the provision of mechanical smoke extraction system. Besides, openings on PTI facades are also required to allow wind flow, and thus, enhance the air ventilation quality of pedestrian level. Instead of a solid wall, full height louvre/ fins and hanger louvre/ fins design have been adopted which could avoid the smoke extraction system and allow good air ventilation, and on the same time, also block the line of sight to the PTI as far as practicable. The proposed design is discussed in the following sections.

Full Height Louvre/ Fins on Western Facade of PTI, Hanger Louvre/ Fins at Vehicular Egress and at Pedestrian Access

8.2.1.7 The vehicular ingress and egress of PTI will connect to the planned Road D2 and Road L6 respectively, with optimised setback from the public housing blocks as far as practicable. According to the latest building plan of Area 133A provided by HKHA, the planned PTI is located at about 25m from the site boundary of Area 133A (see **Figure 8.2**). For Wing D of Block 3 at Area 133A which is closest to the PTI, blank façade and staircase are designed at the eastern side to avoid the direct view angle to the vehicular egress of the planned PTI, and the NSRs at Wing D will only have view angle to the northern and southern side without direct line of sight to the PTI. For the Wing A of Block 3 at Area 133A, the nearest NSR is at about 57m away from the planned PTI (see **Figure 8.2**). To further minimise the potential noise nuisance, a full height louvre/ fins has been designed on the western facade of the PTI, and at the vehicular egress connecting to Road L6 where opening is unavoidably required, a 3.5m high hanger louver/fins (tilting downwards) with 6m headroom is designed to block the line of sight to Area 133A as far as practicable (see **Figures 8.2 to 8.3**). According to Transport Planning & Design Manual (TPDM) Vol. 9 Chapter 2 Section 2.8.3, 6m headroom shall be provided to facilitate good ventilation and visual acceptance. The current 6m

headroom is the minimum for the vehicular ingress and egress from traffic point of view. Given the proper design of PTI, adverse noise nuisance to the residential development at Area 133A is not anticipated.

Full Height Louvre/ Fins on Northern Façade of PTI, Hanger Louvre/ Fins at Vehicular Ingress and at Pedestrian Access

8.2.1.8 The area to the north of the subject site across planned Road D2 is planned for private residential developments (i.e. Tung Chung Area 139 and 141). According to the latest building plan from CEDD's Environmental Review studies for Enhancement of the Development Intensity in TCNTE (East), the planned PTI is located at about 50m from the site boundary of Area 139 and 141 (see **Figure 8.2**). To minimise the potential noise nuisance, full height louvre/ fins (tilting downwards) has been adopted on northern façade of the PTI. Similarly, at the vehicular ingress and the pedestrian access (see **Figures 8.2** and **8.4**), a 3.5m hanger louvre/ fins with a minimum of 6m headroom has been proposed to meet the requirement of TPDM. Given the proper design of PTI, adverse noise nuisance to the residential development at Area 139 and 141 is not anticipated.

Solid Wall on Eastern Site Boundary and Hanger Louvre/ Fins at on Eastern Façade of PTI

8.2.1.9 The area to the east of the subject site is planned for G/IC development (i.e. Tung Chung Area 135). According to the latest building plan from CEDD's Environmental Review studies for Enhancement of the Development Intensity in TCNTE (East), the planned PTI is located at about 20m from the sensitive uses (i.e. a school) of Area 135. Similarly, to minimise the potential noise nuisance arising from the PTI, a 4.5m hanger louvre/ fins with about a 5m headroom has also been proposed (see **Figures 8.2** and **8.5**). To block the line of sight to the G/F and 1/F of the school development, a 5m high solid wall has been proposed along the eastern site boundary. With provision of both solid boundary wall and hanger louvre/ fins design, the line of sight to the PTI will be blocked. Given the proper design of PTI, adverse noise nuisance to G/IC development at Area 135 is not anticipated.

Absorptive lining

8.2.1.10 To minimize reverberance, absorptive lining would be provided on the ceiling and interior walls of the PTI as far as practicable.

Acoustic louvre at exhausts

8.2.1.11 For the exhausts located on the façade of the PTI, horizontal louvres and acoustic silencers will be provided to ensure the noise level at nearby NSRs from the fixed plant operation in full compliance with the noise standards as stipulated in the IND-TM and Noise Control Ordinance. The design will also be determined and follow the recommendations of the HKPSG besides complying with the NCO noise limits in the next detailed design stage.

8.2.1.12 The requirements as stipulated under HKPSG have been fully considered and adopted in the current PTI design. The PTI will be designed such that there is no line of sight to the sensitive receivers in the vicinity as far as practicable. With the proper design, potential noise nuisances arising from the PTI is not anticipated.

Figure 8.3: Section drawing illustrating Tung Chung Area 133A and the planned PTI (B-B')

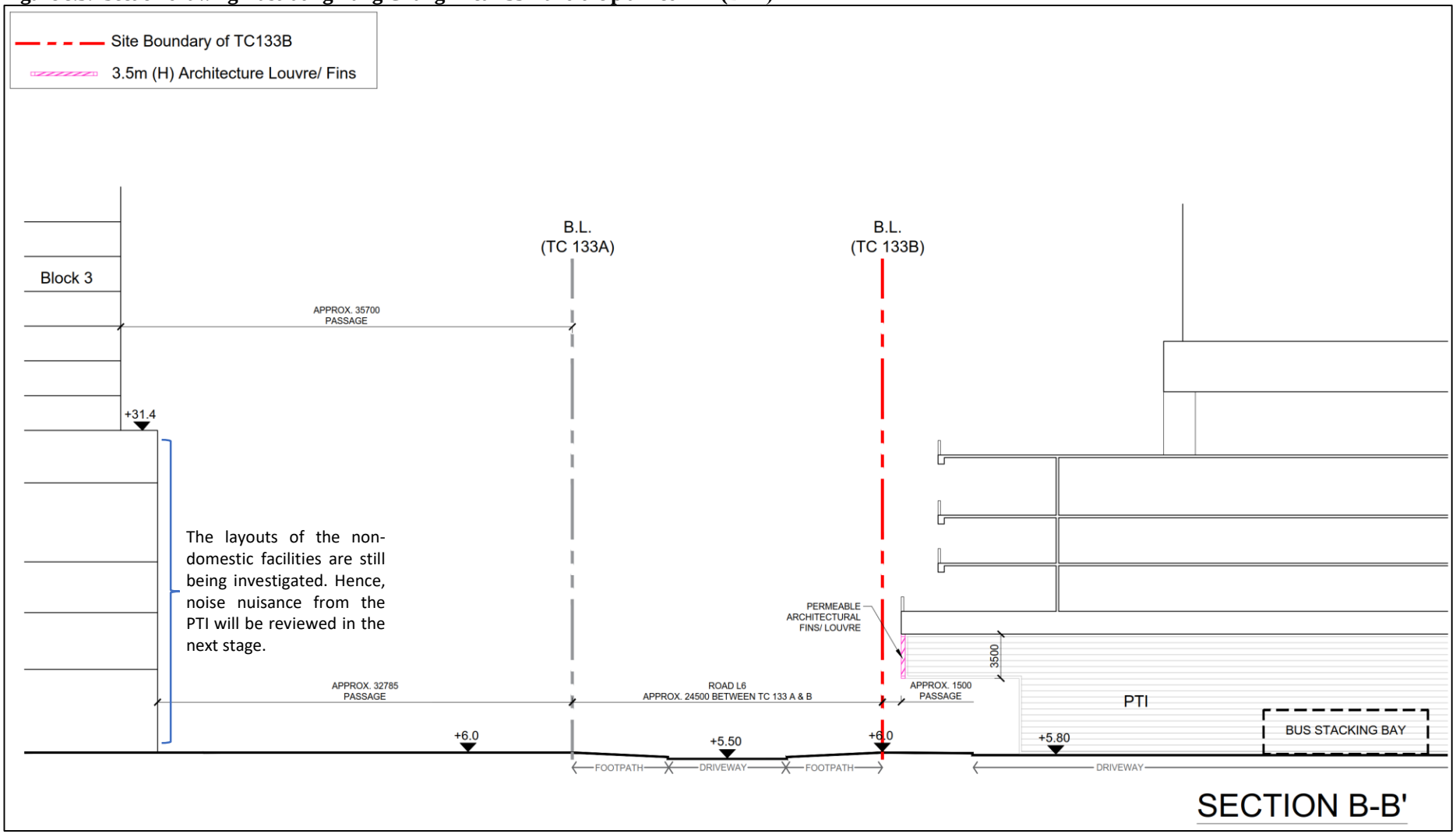


Figure 8.4: Section drawing illustrating private development at Tung Chung Area 139 and Area 141, and the planned PTI (C-C')

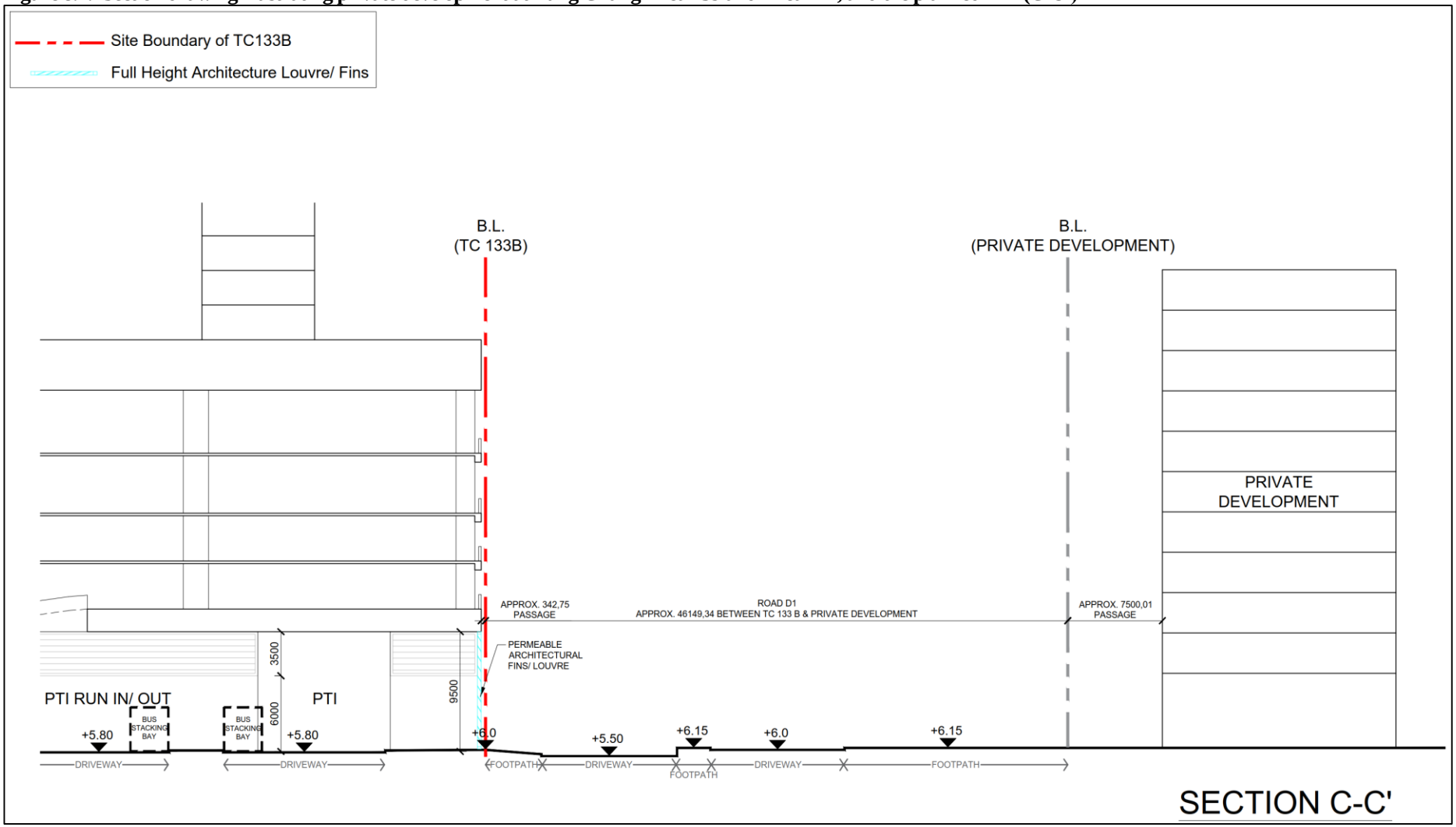
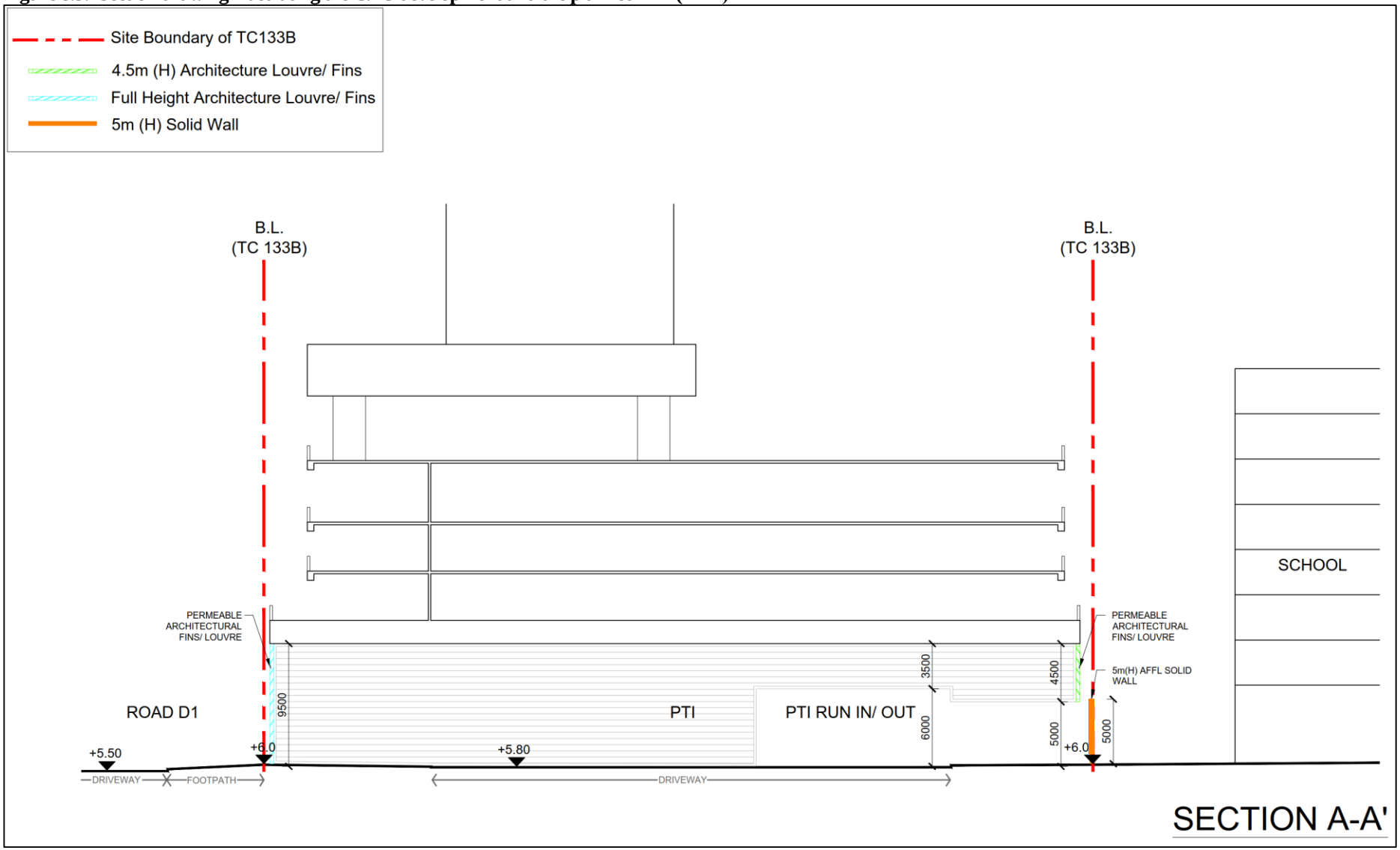


Figure 8.5: Section drawing illustrating the G/IC development and the planned PTI (A-A')



9 Review of Air Quality Impact

9.1 Vehicular Emissions

9.1.1.1 Hong Kong Planning Standards and Guidelines (HKPSG) provides environmental guidance for residential developments on air quality. The guidelines recommend the minimum buffer distance required for active and passive recreational uses.

9.1.1.2 The buffer distances between the sensitive uses of the current development scheme and the surrounding major roads are summarised in **Table 9.1**, and illustrated in **Figure 9.1 to 9.2** below.

Table 9.1: Separation distances between the proposed development and nearby major roads

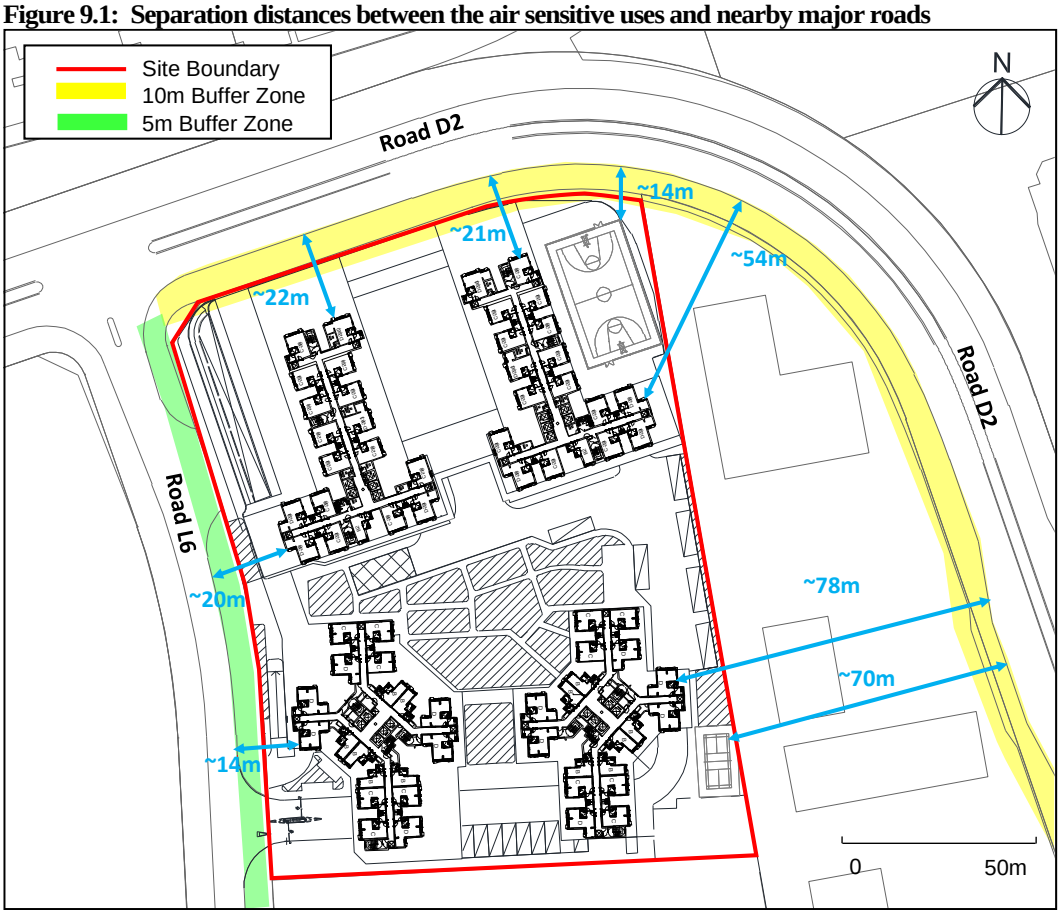
Name of Road	Type of Road [1]	HKPSG Recommended Buffer Distance for Active and Passive Recreational Use	Shortest Horizontal Distance from the Air Sensitive Uses to Road Kerb
			Residential Blocks/Recreational Areas
Road L6	LD	>5m	~14m
Road D2	DD	>10m	~14m

Note:
[1] DD – District Distributor, LD – Local Distributor. The road classifications are given in the Roadworks and Noise Mitigation Measures Design Report under TCNTE (East) – Design and Construction and the respective Technical Note on Traffic Forecast for Environmental Impact Assessment for Planning Review for Population Increase and Development Intensity in TCNTE (East) has referenced the road classification. Reply from TD on the Technical Note is given in **Appendix 4.2**.

9.1.1.3 It can be found that the proposed residential blocks for the current scheme can satisfy the setback distance requirements as stipulated in HKPSG and there are also no other sensitive active and passive recreational uses located within the minimum buffer zone (see **Figure 9.1**). Adverse vehicular emission impacts on the proposed residential development are therefore not anticipated.

9.1.1.4 The detailed internal layout plans for kindergarten, management office and social welfare facilities at P1/F to P5/F are yet to be available at this stage. Any planned air sensitive rooms at these non-domestic facilities shall be provided with sufficient setback distances as stipulated in HKPSG.

Figure 9.1: Separation distances between the air sensitive uses and nearby major roads



9.2 Chimney Emissions

9.2.1.1 Based on site visit conducted in June 2023, there is no existing chimney within 500m of the subject site. According to the Air Quality Impact Assessments Review for Population Increase and Development Intensity - CASE 2: Scenario 2A (Final) under TCNTE (East) – Design and Construction conducted in May 2021, no chimney is also planned within 500m of the subject site. Hence, no adverse air quality due to chimney emission is anticipated.

9.3 Planned Public Transport Interchange

Planned PTI at Area 113

9.3.1.1 A PTI is planned at Area 113 as shown in **Figure 8.1**. With reference to the approved TCNTE EIA (AEIAR-196/2016) and TCLE EIA (AEIAR-235/2022), the PTI would be decked under proposed building structures. The proposed PTI at Area 113 is planned by other parties, any design, maintenance, and operating requirements stipulated in ProPECC PN 1/22 relevant to any air quality impacts to its neighbouring developments including the planned public housing at Area 133B shall be considered and addressed by other parties. The proposed residential building blocks at Tung Chung Area 133B is located far away from the PTI at Area 113 (at least 250m). In consideration of the decking design of the PTI and large separation distance, potential air pollutant nuisance arising from the planned PTI at Area 113 on the subject housing site is therefore not anticipated.

Planned PTI at Area 133B

9.3.1.2 A PTI is planned on G/F underneath Block 1 and Block 3 of the proposed development as shown in **Figure 8.1**. During the planning and design stage, effort has been made to meet the HKPSG's requirements as far as practicable. Open-form design has been avoided.

9.3.1.3 The PTI is planned within the housing site and is unavoidably close to the future residential blocks. Nonetheless, the current PTI is strategically located as far away as possible from most of the residential blocks, with the ingress and egress connecting onto the planned Road D2 and Road L6 respectively.

9.3.1.4 Based on the current design, the proposed PTI has a podium decking to cover the whole extent of the bus drop off, pick up, stacking and routing area. The social welfare facilities and domestic flats of Block 1 and Block 3 starting from P2/F are located above the podium deck and transfer plate; while there are no air sensitive uses planned underneath at G/F to P1/F. Potential air quality impacts arising from PTI on the subject housing development are not anticipated.

9.3.1.5 The PTI will follow the guidelines stipulated in Practice Note for Professional Persons (ProPECC PN) 1/22 "Control of Air Pollution in Semi-Confined Public Transport Interchanges" as appropriate for designing and operating the PTI to meet the air quality guidelines inside the PTI.

9.3.1.6 Besides, the air quality impact considering the planned PTIs at Area 113 and Area 133B has been addressed in the Final Air Quality Impact Assessments Review for Population Increase and Development Intensity – CASE 2: Scenario 2A (Final) (Ref. PI17-02) issued in May 2021 under Tung Chung New Town Extension (East) – Design and Construction Study. The cumulative air quality assessment (with PTIs addressed) concluded that all air sensitive receivers at Area 133B comply with the relevant AQOs. No adverse air quality impacts are anticipated.

10 Conclusion

10.1.1.1 An EAS has been conducted for the proposed housing development at Tung Chung Area 133B.

10.1.1.2 The subject site is located on Area 133B of the reclaimed land in TCNTE (East). With implementation of the recommended fixed glazing for the affected units of the residential block, a road traffic noise compliance rate of 100% could be achieved.

10.1.1.3 As there is no existing or planned railway identified within the 300m assessment area, potential adverse rail noise impact is not anticipated.

10.1.1.4 The major fixed noise sources in vicinity of the subject site are the planned salt water pumping station/ sewage pumping station in Area 132, fire station in Area 136 and sports ground in Area 138. They are located far away from the proposed housing site and are screened by the other planned developments in the vicinity. Based on the approved TCNTE EIA, the predicted fixed noise levels on the proposed residential development at Tung Chung Area 133B would comply with the respective noise criteria. Potential fixed noise sources impact is therefore not anticipated.

10.1.1.5 With reference to the approved EIA (AEIAR-185/2014) for 3RS, the subject site is located outside the NEF25 contour for all future scenarios for 3RS operation of HKIA. Hence, aircraft noise impact is not anticipated.

10.1.1.6 Two PTIs are planned at Tung Chung Area 113 and the subject site. PTI at Area 113 is located far away from the proposed housing site at Area 133B and will be designed under deck and with no line-of-sight to the nearby noise sensitive receivers. The PTI is also screened by other planned high-rise residential developments in between. Potential noise nuisance is therefore not anticipated. A PTI is proposed underneath Block 1 and Block 3 at the northern side within the subject site. With the implementation of proper design including podium decking, self-screening, full height louvre/ fins, hanger louvre/ fins and absorptive lining on the ceiling and interior walls of the PTI to avoid direct line of sight to the sensitive uses as far as practicable, adverse noise nuisance is not anticipated.

10.1.1.7 Kindergarten, management office and social welfare facilities are planned on P1/F to P5/F. However, their layouts are still being investigated. Hence, noise assessments on these non-domestic facilities will be supplemented when the layout is confirmed in the next stage.

10.1.1.8 The current scheme has allowed adequate setback distance for all air sensitive uses from the major roads to meet the minimum requirement as stipulated in HKPSG. There is also no chimney found within 500m of the study area. Both the planned PTIs at Area 113 and Area 133B will be under deck and designed by others and HKHA respectively, with due consideration to the HKPSG and Practice Note for Professional Persons (ProPECC PN) 1/22 “Control of Air Pollution in Semi-Confined Public Transport Interchanges”. Hence no adverse air quality impact is anticipated.

10.1.1.9 It is concluded that there are no adverse environmental impacts on the proposed housing development at Tung Chung Area 133B.

Appendix 2.1

Layout and
Schematic Sections

BLK 1
32 + 6 Storeys

BLK 3
32 + 6 Storeys

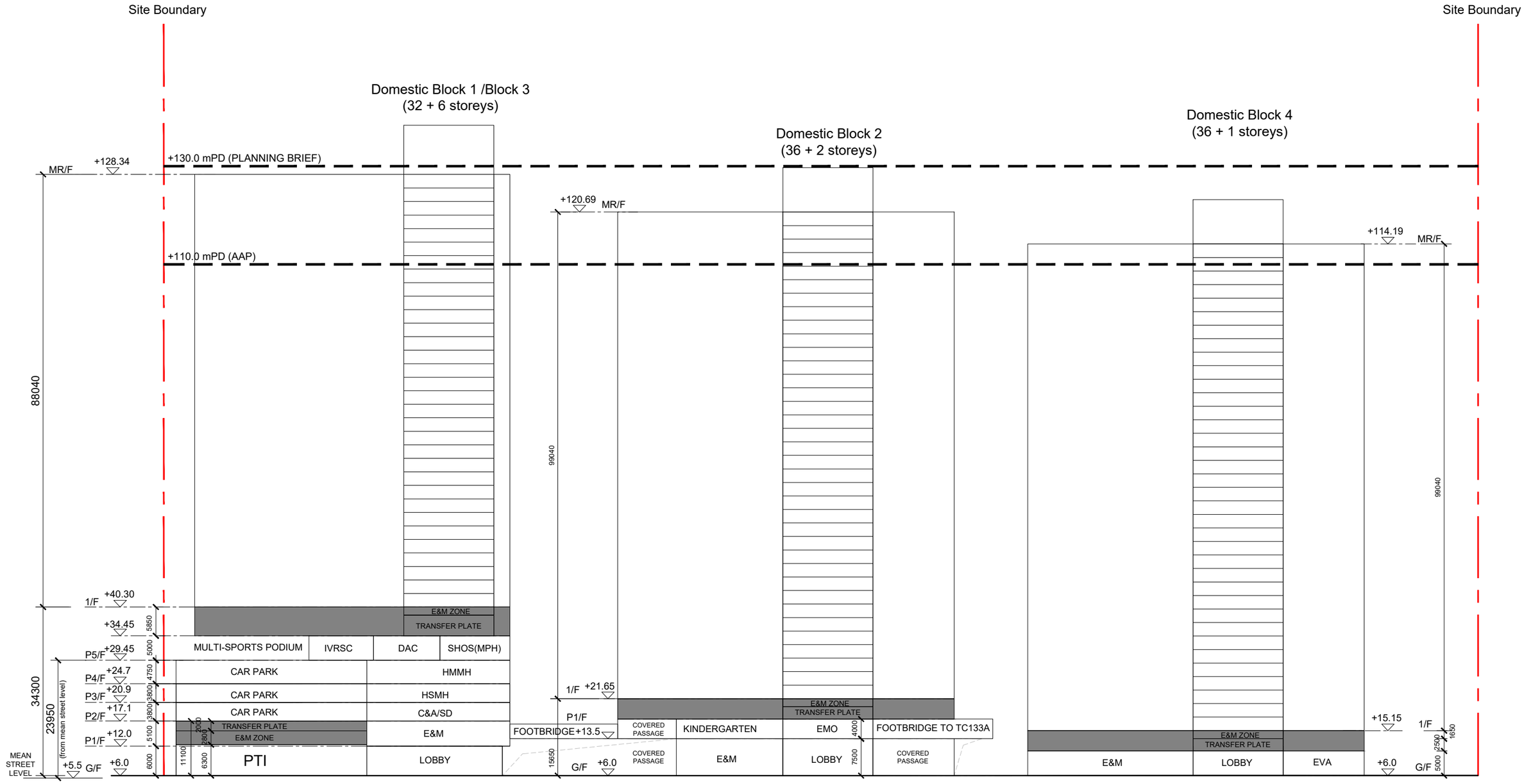
BLK 2
36 + 2 Storeys

BLK 4
37 + 1 Storeys (PRH)
36 + 1 Storeys (GSH)

TYP/F (GSH)

TUNG CHUNG EAST AREA 133B - SCHEME 20B
Site Layout Plan - Typical Floor Plan (GSH)
Dwg No. : SITE - 07(GSH) /A

SCALE BAR 1:500 (A3 Size)
0 5 10 20 30



SITE SECTION 1

TUNG CHUNG EAST AREA 133B
Scheme 20B - SITE SECTION 1
Dwg No. : SITE - 08 (GSH)

SCALE BAR 1:800 (A3 size)

0 8 16 24

Appendix 4.1

Location of Noise Mitigation Measures

Project Management Initials: Designer: CYCK Checked: CCHY Approved: SWKM ISO A1 594mm x 841mm

GENERAL:

1.1 THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE SPECIFICATIONS AND THE PARTICULAR REQUIREMENTS WHICH ARE SHOWN ON INDIVIDUAL DRAWINGS.

1.2 UNLESS OTHERWISE SPECIFIED, THESE GENERAL NOTES ARE APPLICABLE TO ALL THE STRUCTURES.

1.3 ALL REFERENCES OF STANDARD DRAWING SHALL REFER TO THE LATEST VERSION OF THAT STANDARD DRAWING.

1.4 NO DIMENSIONS ARE TO BE OBTAINED FROM SCALING DRAWINGS.

1.5 ALL STRUCTURAL DRAWINGS MUST BE READ IN CONJUNCTION WITH ALL RELEVANT CIVIL, GEOTECHNICAL, ARCHITECTURAL AND MECHANICAL AND ELECTRICAL WORK DRAWINGS, AND THE OTHER CONTRACT DOCUMENTS.

1.6 ALL SETTING OUT DIMENSIONS SHALL BE VERIFIED AGAINST THE LATEST RELEVANT ARCHITECTURAL DRAWINGS BEFORE WORK COMMENCES. THE SUPERVISOR SHALL BE INFORMED IMMEDIATELY OF ANY DISCREPANCIES DISCOVERED.

1.7 ALL DESIGN AND CONSTRUCTION SHALL COMPLY WITH BS EN 1991 EUROCODE 1 : ACTIONS ON STRUCTURES, BS EN 1992 EUROCODE 2 : DESIGN OF CONCRETE STRUCTURES, BS EN 1993 EUROCODE 3 : DESIGE OF STEEL STRUCTURES AS MODIFIED BY THE STRUCTURES DESIGN MANUAL FOR HIGHWAYS AND RAILWAYS (2013 EDITION).

1.8 ABBREVIATIONS:

ABBREVIATIONS USED ARE AS DEFINED IN "STANDARD METHOD OF DETAILING STRUCTURAL CONCRETE" PUBLISHED BY THE INSTITUTION OF STRUCTURAL ENGINEERS UNLESS NOTED OTHERWISE.

STANDARD ABBREVIATIONS:

DIA.	DIAMETER
MAX.	MAXIMUM
MIN.	MINIMUM
M/S	MARGINAL STRIP
NOM.	NOMINAL
TYP.	TYPICAL
C.J.	CONSTRUCTION JOINT
M.J.	MOVEMENT JOINT
F.G.L.	FINISH GROUND LEVEL
F.S.L.	FINISH STRUCTURE LEVEL
F.R.L.	FINISH ROAD LEVEL
F.F.L.	FINISH FLOOR LEVEL
E.G.L.	EXISTING GROUND LEVEL
N.T.S.	NOT TO SCALE
S.O.L.	SETTING OUT LINE
C/W	CARRIAGEWAY
G.M.S.	GALVANIZED MILD STEEL
S.S.	STAINLESS STEEL
H/S	HARD SHOULDER
P.J.	PARAPET JOINT
S.O.P.	SETTING OUT POINT

1.9 ALL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE HONG KONG GOVERNMENT GENERAL SPECIFICATION FOR CIVIL ENGINEERING WORKS 2006 EDITION.

1.10 ALLOWANCE IS TO BE MADE BY THE CONTRACTOR FOR PRECAMBER IN THE FORMWORK SUCH THAT THE ALIGNMENT OF THE COMPLETED STRUCTURE CONFORMS TO THE ALIGNMENT SHOWN ON THE DRAWING.

1.11 PARAPETS ARE CAST VERTICALLY.

DIMENSIONS AND LEVELS:

2.1 COORDINATES ARE BASED ON HONG KONG METRIC GRID (1980) UNLESS OTHERWISE NOTED.

2.2 LEVELS ARE IN METRES RELATIVE TO HONG KONG PRINCIPAL DATUM (mPD) UNLESS OTHERWISE NOTED.

2.3 DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.

2.4 SETTING OUT DIMENSIONS, LEVELS, COORDINATES ARE TO BE CALCULATED BY THE CONTRACTOR. NO INFORMATION SHOULD BE SCALED PHYSICALLY OR ELECTRONICALLY FROM THE DRAWINGS OR FILES.

2.5 INFERRED ROCKHEAD LEVEL AND UTILITIES SHOWN ON DRAWING IS INDICATIVE AND FOR INFORMATION ONLY.

CONCRETE:

3.1 CONCRETE GRADES AND NOMINAL COVERS SHALL BE AS FOLLOWS UNLESS OTHERWISE NOTED:

UNDERSIDE OF FOOTINGS AND PILE CAPS IN DIRECT CONTACT WITH GROUND	C32/40	75
FOOTINGS AND PILE CAPS OTHER THAN ABOVE STATED	C32/40	50
LAND PILE	C32/40	75
PARAPET	C32/40	50
BLINDING	C16/20	-
ELSEWHERE	C16/20	35

C32/40
Fck (MPa) CHARACTERISTIC CYLINDER STRENGTH — Fck.cube (MPa) CHARACTERISTIC CUBE STRENGTH

NOMINAL COVER MEASURED FROM THE FACE OF THE CONCRETE TO THE OUTERMOST REINFORCEMENT, INCLUDING LINKS.
MINIMUM COVER TO BE NOMINAL COVER MINUS 5mm
THE MINIMUM COVER SHALL NOT BE LESS THAN THE ADJACENT REINFORCEMENT DIAMETER.
FULL COVER IS TO BE MAINTAINED AT GROOVES AND OTHER ARCHITECTURAL FEATURES TO THE CONCRETE SURFACE.

3.2 CONCRETE GRADES SPECIFY THE REQUIRED MINIMUM 28 DAYS CHARACTERISTIC CYLINDER OR CUBE STRENGTH IN MPa WITH THE MAXIMUM SIZE OF AGGREGATE NOT EXCEEDING 20mm. THE REACTIVE ALKALI OF CONCRETE EXPRESSED AS THE EQUIVALENT SODIUM OXIDE PER CUBIC METRE OF CONCRETE SHALL NOT EXCEED 3KG.

3.3 CONSTITUENT MATERIALS, MIX DESIGN AND TESTING REQUIREMENTS ARE DEFINED IN THE HONG KONG GOVERNMENT GENERAL SPECIFICATION FOR CIVIL ENGINEERING WORKS 2006 EDITION.

3.4 DEFINITION OF VARIOUS CLASSES OF SURFACE FINISH IS IN ACCORDANCE WITH THE HONG KONG GOVERNMENT GENERAL SPECIFICATION FOR CIVIL ENGINEERING WORKS 2006 EDITION.

CONCRETE FINISHES, UNLESS SHOWN OTHERWISE, SHALL BE FORMED FINISHES:

SURFACES IN CONTACT WITH SOIL	F1
UNEXPOSED SURFACES	F2
EXPOSED SURFACES	F5

UNFORMED FINISHES:

UNEXPOSED SURFACES	U2
EXPOSED SURFACES	U5
TREATED FINISH	T4

3.5 ALL CONSTRUCTION JOINTS SHALL BE LOCATED AS SHOWN ON THE DRAWINGS OR AS ACCEPTED BY THE PROJECT MANAGER.

3.6 BLINDING CONCRETE SHALL BE 75mm THICK UNLESS SHOWN OTHERWISE.

3.7 ALL EXTERNAL CORNERS SHALL BE 20mm x 20mm CHAMFERS UNLESS SHOWN OTHERWISE.

3.8 KICKERS SHALL BE 100mm HIGH UNLESS SHOWN OTHERWISE.

3.9 ALL LEVELS SHALL BE STRUCTURAL LEVEL UNLESS SHOWN OTHERWISE.

REINFORCEMENT:

4.1 STEEL REINFORCEMENT SHALL COMPLY WITH CONSTRUCTION STANDARD CS2 : 2012 OF HONG KONG.

SYMBOL	TYPE OF BAR
R	MILD STEEL BAR OF GRADE 250
T	HIGH YIELD DEFORMED BAR OF GRADE 500B

4.2 STEEL REINFORCEMENT SHALL COMPLY WITH THE REQUIREMENTS OF CONSTRUCTION STANDARD CS2 : 2012 AND SHALL BE BENT IN ACCORDANCE WITH BS EN 1992 AND BS 8666.

4.3 REINFORCEMENT NOTATION IS AS FOLLOWS:

50/T25001/150 (EF)
NO. OF BARS
TYPE OF BAR (SEE 4.1)
BAR DIAMETER
BAR LOCATION (SEE 4.6)
BAR SPACING
BAR MARK

4.4 REINFORCEMENT IS SHOWN DIAGRAMMATICALLY ON THE DRAWINGS AND DOES NOT INTEND TO SHOW THE PRECISE LOCATION OF BARS. UNLESS OTHERWISE INDICATED ON THE DRAWINGS, BAR SPACING IS MEASURED PERPENDICULAR TO THE BAR.

4.5 TOP OR NEAR SIDE BARS SHOWN AS ————————
ALL OTHER BARS SHOWN AS — — — — — — —.

4.6 ABBREVIATIONS:

T	TOP
B	BOTTOM
NF	NEAR FACE
FF	FAR FACE
EF	EACH FACE
BW	BOTH WAYS
AP	ALTERNATELY PLACED (BARS OF ONE MARK ALTERNATING WITH BARS OF ANOTHER MARK)
AR	ALTERNATELY REVERSED (ALTERNATE BARS TURNED END FOR END AND POSSIBLY MOVED ALONG THEIR LENGTH, AS INDICATED BY TYPICAL BAR)
AS	ALTERNATELY STAGGERED (BARS OF ONE MARK WITH ALTERNATE BARS MOVED ALONG THEIR LENGTH SO THAT TWO SETS OF PLAN POSITIONS ARE OCCUPIED, AS INDICATED BY TYPICAL BAR)
V	VARIES (BARS OF VARYING DIMENSIONS)
RL	RANDOM LENGTH (BARS OF SECONDARY REINFORCEMENT IN WHICH THE POSITION OF LAPS ARE NOT DEFINED)
A.L.	ANCHORAGE LENGTH
T.A.L.	TENSILE ANCHORAGE LENGTH
T.L.L.	TENSILE LAP LENGTH
LV	LENGTH VARIES
U-BAR	U-SHAPED BAR
L-BAR	L-SHAPED BAR

4.7 BARS SHALL BE LAPPED AT THE LOCATIONS SHOWN ON THE DRAWINGS. THE CONTRACTOR SHALL OBTAIN ACCEPTANCE FROM THE PROJECT MANAGER IF BARS ARE TO BE LAPPED ELSEWHERE.

4.8 DESIGN ANCHORAGE LENGTHS AND LAP LENGTHS FOR VARIOUS BAR SIZES ARE AS FOLLOWS UNLESS SHOWN OTHERWISE ON THE DRAWINGS:

BASIC REQUIRED ANCHORAGE LENGTHS, lb.rqd

BAR DIAMETER \ CONCRETE GRADE	C25/30	C28/35	C32/40	C35/45	C40/50
10	740	700	650	580	550
12	890	830	780	700	660
16	1190	1110	1040	930	880
20	1480	1390	1300	1160	1090
25	1850	1730	1620	1440	1370
32	2370	2210	2080	1850	1750
40	3220	3010	2820	2510	2370
50	4510	4210	3820	3510	3330

- A FACTOR OF 0.7 CAN BE APPLIED TO THE BASIC REQUIRED ANCHORAGE LENGTHS(lb.rqd) IN THE ABOVE TABLE FOR GOOD BOND CONDITIONS AS DEFINED IN CLAUSE 8.4.2(2) AND FIGURE 8.2 OF BS EN 1992-1-1:2004.
- DESIGN ANCHORAGE LENGTHS SHALL BE DETERMINED USING BASIC REQUIRED ANCHORAGE LENGTHS ABOVE AND EQUATION (8.4) IN ACCORDANCE WITH CLAUSE 8.4.4 OF BS EN 1992-1-1:2004.
- DESIGN LAP LENGTHS SHALL BE DETERMINED USING BASIC REQUIRED ANCHORAGE LENGTHS ABOVE AND EQUATION (8.10) IN ACCORDANCE WITH CLAUSE 8.7.3 OF BS EN 1992-1-1:2004.

4.9 SCHEDULING, DIMENSIONING, BENDING AND CUTTING OF REINFORCEMENT SHALL BE IN ACCORDANCE WITH BS EN 1992 AND BS 8666.

4.10 IN A BUNDLE, ANCHORAGE LENGTHS, LAP LENGTHS AND OTHER REQUIREMENTS SHALL BE DETERMINED IN ACCORDANCES WITH CLAUSES 8.9.2 AND 8.9.3 OF BS EN 1992-1-1:2004 RESPECTIVELY.
BASIC REQUIRED ANCHORAGE LENGTHS, lb.rqd, BASED ON THE BUNDLES' EQUIVALENT DIAMETERS ARE AS SHOWN IN THE FOLLOWING TABLES AND SHALL BE USED TO DETERMINE THE BUNDLES' ANCHORAGE AND LAP LENGTHS AS REQUIRED BY BS EN 1992-1-1:2004.

2-BAR BUNDLES - BASIC REQUIRED ANCHORAGE LENGTHS, lb.rqd

BAR DIAMETER \ CONCRETE GRADE	C25/30	C28/35	C32/40	C35/45	C40/50
10	1050	980	920	820	780
12	1260	1180	1100	980	930
16	1680	1570	1470	1310	1240
20	2100	1960	1830	1630	1550
25	2710	2530	2370	2110	2000
32	3860	3610	3380	3010	2850

3-BAR BUNDLES - BASIC REQUIRED ANCHORAGE LENGTHS, lb.rqd

BAR DIAMETER \ CONCRETE GRADE	C25/30	C28/35	C32/40	C35/45	C40/50
10	1290	1200	1130	1000	950
12	1540	1440	1350	1200	1140
16	2050	1920	1800	1600	1510
20	2470	2310	2170	1930	1820
25	3320	3100	2900	2580	2450
32	4690	4380	4110	3650	3460

- A FACTOR OF 0.7 CAN BE APPLIED TO THE BASIC REQUIRED ANCHORAGE LENGTHS(lb.rqd) IN THE ABOVE TABLES FOR GOOD BOND CONDITIONS AS DEFINED IN CLAUSE 8.4.2(2) AND FIGURE 8.2 OF BS EN 1992-1-1:2004.

4.11 BARS INDICATED AS RANDOM LENGTH (RL) SHALL BE LAPPED AS NECESSARY SUBJECT TO THE FOLLOWING CONDITIONS:
(A) LAPS IN ADJACENT BARS SHALL BE STAGGERED.
(B) MINIMUM LAP LENGTH SHALL BE IN ACCORDANCE WITH NOTE 4.8.
(C) NOT MORE THAN ONE BAR PER LINE SHALL BE SHORTER THAN
6 METRES FOR 16mm DIA. OR SMALLER OR
9 METRES FOR 20mm DIA. OR LARGER .

4.12 WELDING OF REINFORCEMENT SHALL NOT BE PERMITTED WITHOUT ACCEPTANCE OF THE PROJECT MANAGER.

4.13 STEEL SPACERS OF SIMILAR DIAMETER TO BARS BUT NOT LESS THAN 25mm DIAMETER SHALL BE PROVIDED BETWEEN ADJACENT LAYERS OF PARALLEL REINFORCEMENT AND SPACED AT NOT MORE THAN 60xSMALLER BAR DIAMETER OR 1.5m WHICHEVER IS SMALLER.

4.14 THE CONTRACTOR SHALL PROVIDE ADEQUATE CHAIRS, SPACING LINKS TO SUPPORT THE TOP LAYER OF REINFORCEMENT IN THE SLABS AND BARS SHALL BE PROVIDED TO KEEP VERTICAL WALL REINFROCEMENT IN ITS CORRECT ALIGNMENT.

4.15 ALL LAPS SHOWN ON THE DRAWINGS ARE INDICATIVE ONLY. THE CONTRACTOR SHALL PREPARE THE BENDING SCHEDULE TO THE PROJECT MANAGER'S ACCEPTANCE.

WATERPROOFING OF CONCRETE SURFACES BELOW GROUND

5.1 TWO COATS OF BITUMINOUS PAINT SHALL BE APPLIED TO SURFACES OF ABUTMENTS, RETAINING WALLS, PILE CAPS AND FOOTINGS WHICH WILL FINALLY BE IN CONTACT WITH SOIL.

5.2 BITUMINOUS PAINT AND ITS APPLICATION SHALL COMPLY WITH THE SPECIFICATION SECTION 20, PART 1 : WATERPROOFING.

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PROJECT 項目

TUNG CHUNG NEW TOWN EXTENSION (EAST) - DESIGN AND CONSTRUCTION

CONTRACT TITLE

TUNG CHUNG NEW TOWN EXTENSION - MAJOR INFRASTRUCTURE WORKS IN TUNG CHUNG EAST

CLIENT 業主

CEDD 土木工程拓展署 Civil Engineering and Development Department

CONSULTANT 工程顧問公司

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ISSUE/REVISION 修訂

I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 複核
-	DEC. 20	TENDER DRAWING	CCHY

STATUS 階段

SCALE 比例: N.T.S.
DIMENSION UNIT 尺寸單位: MILLIMETRES

KEY PLAN 索引圖

PROJECT NO. 項目編號: 60507694
CONTRACT NO. 合約編號: NL/2020/03

SHEET TITLE 圖紙名稱

NOISE BARRIER GENERAL NOTES FOR STRUCTURE

SHEET NUMBER 圖紙編號

60507694/C3/6001

Plot File by: Jie.Yang@aecom.com 29-December-2020
PATH: pw:\\aecom-as-pw.bentley.com:AECOM_DS02_ASDocuments\60507694 TCNTE - D&C\CAD PRODUCTION\DRAWING\CONTRACTC3\6000\C3_6001.dgn

Project Management Initials: Designer: CYCK Checked: CCHY Approved: SWKM ISO A1 594mm x 841mm

GENERAL:

1. ALL DIMENSIONS AND LEVELS INCLUDING AS CONSTRUCTED HOLDING DOWN BOLT POSITIONS AFFECTING NEW STEELWORK SHOULD BE CHECKED ON SITE BY THE CONTRACTOR AND INCORPORATED INTO WORKSHOP DRAWINGS.

2. STRUCTURAL STEEL SECTION TO COMPLY WITH THE STANDARDS AS STIPULATED IN THE SPECIFICATIONS SHOULD NOT BE REPLACED WITH OTHER SECTIONS COMPLYING WITH OTHER STANDARDS UNLESS ACCEPTED BY THE PROJECT MANAGER. ALL SECTIONS SHALL BE HOT ROLLED.

3. UNLESS OTHERWISE SPECIFIED, ALL STRUCTURAL STEEL MEMBERS AND ALL STRUCTURAL HOLLOW SECTION SHALL COMPLY WITH BS EN 10025:1993 AND BS EN 10210 PART 1 AND PART 2 RESPECTIVELY.

MEMBERS	GRADE
HOLLOW SECTIONS	:GRADE S355JOH OR EQUIVALENT
SECTIONS OTHER THAN HOLLOW SECTIONS	:GRADE S355JO OR EQUIVALENT
PLATES FOR STRUCTURAL ELEMENTS	:GRADE S355JO OR EQUIVALENT
PLATES FOR NONSTRUCTURAL ELEMENT	:GRADE S355JO OR EQUIVALENT
CONNECTION BOLTS AND HOLDING DOWN BOLTS	:STAINLESS STEEL GRADE A4-80(BS EN ISO 3506-1 & 2)

4. IN ACCORDANCE WITH BS EN 10025:1993.THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE NOTCH TOUGHNESS AND THE CHARPY IMPACT REQUIREMENTS OF THE STEEL. (I.E. SELECTION OF STEEL SUBGRADE). THE STEEL SHOULD SATISFY THE REQUIREMENTS OF BS EN 1993-1-10 : 2005 BASED ON A MINIMUM TEMPERATURE OF 10° C.

   THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT THE STEEL HAS ADEQUATE THROUGH THICKNESS PROPERTIES TO SATISFY THE THROUGH THICKNESS PROPERTIES AND WELDING SEQUENCE THAT THE MATERIAL, AT OR ADJACENT TO WELDED LOCATIONS , IS FREE OF LAMINATIONS, CENTERLINE SEGEGATION, OR OTHER CRACK LINE INDICATIONS ON COMPLETION OF WELDING. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE QUALITY CLASS OF STEEL WITH ENHANCED THROUGH THICKNESS PROPERTIES (EN 10164) WHICH IS REQUIRED COMPATIBLE WITH HIS CHOSEN METHOD OF WORKING.

   NOT LESS THAN THREE WEEKS PRIOR TO ORDERING THE STEEL, THE CONTRACTOR SHOULD SUBMIT A REPORT FOR REVIEW WHICH DOCUMENTS THE SUBGRADE SELECTION AND THE STRATEGY (MATERIAL SELECTION, WELDING PROCEDURE AND INSPECTION) WHICH WOULD BE IMPLEMENTED FOR CONTROLLING THE THROUGH THICKNESS STRESS DURING WELDING AND ENSURING THAT THE ABOVE CRITERIA ARE SATISFIED.

5. DIMENSIONS AND TOLERANCES ARE IN ACCORDANCE WITH BS EN 10056 PART 1 AND PART 2.

6. THE CONTRACTOR SHOULD BE RESPONSIBLE FOR THE PROVISION OF ALL PACKING TO ACHIEVE ADEQUATE TOLERANCE AT THE CONNECTIONS.

7. END OF ALL HOLLOW SECTIONS SHALL BE SEALED WITH 10mm THK. PLATE UNLESS OTHERWISE SPECIFIED.

8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN, FABRICATION, ERECTION AND REMOVAL OF ALL TEMPORARY WORKS AND TEMPORARY BRACING NECESSARY TO MAINTAIN STRUCTURAL STABILITY OF THE STEELWORK DURING CONSTRUCTION.

9. BEFORE FABRICATION OF THE STEELWORK, THE CONTRACTOR SHALL SUBMIT A FULL-SET OF WORKSHOP DRAWINGS, TOGETHER WITH DETAILS OF HIS PROPOSED METHOD OF HANDLING, TRANSPORTATION AND ERECTION OF THE COMPLETED STEEL FRAME TO THE PROJECT MANAGER FOR HIS ACCEPTANCE. ANY MODIFICATION ON STEELWORK TO ACCOMMODATE THE PROPOSED CONSTRUCTION SHALL BE DESIGNED BY THE CONTRACTOR, AND CLEARLY INDICATED IN THE WORKSHOP DRAWINGS FOR THE ACCEPTANCE OF THE PROJECT MANAGER.

10. AFTER FABRICATION ALL STRUCTURAL STEEL IS TO BE HOT-DIP GALVANIZED IN ACCORDANCE WITH BS EN ISO1461:1999 TO AND A MINIMUM OF 85um. SURFACES SHALL BE PROPERLY PREPARED, ALL RUST, OIL, PAINT, AND OTHER SURFACE CONTAMINANTS; MILL SCALE AND WELDING SLAG SHALL BE REMOVED BY GRIT BLASTING CUT FACES AND OUTSIDE ARISES SHALL BE GROUND SMOOTH. THE SIZES AND POSITIONS OF ANY VENT HOLES REQUITED BY THE GALVANIZER, TOGETHER WITH HIS PROPOSED METHOD OF RE-SEALING, SHALL BE NOTIFIED TO THE PROJECT MANAGER.

BOLTING:

1. STAINLESS STEEL SHALL COMPLY WITH THE STANDARDS AS STIPULATED IN THE GENERAL SPECIFICATION FOR CIVIL ENGINEERING WORKS.

2. ALL STAINLESS STEEL BOLTS AND RETAINING SCREWS SHALL BE GRADE A4-80. STAINLESS STEEL TO BS EN ISO 3506-1 & 2 WITH COMPATIBLE STAINLESS STEEL WASHERS. A NYLON OR OTHER ACCEPTED PLASTICS WASHER IS TO BE PROVIDED BETWEEN THE SURFACES OF ANY DIFFERENT METAL SUCH AS ALUMINIUM ALLOY, STAINLESS STEEL AND GALVANIZED STEEL.

3. UNLESS OTHERWISE SPECIFIED IN THE DRAWINGS, ALL FASTENERS SHALL BE STAINLESS STEEL BOLTS OR HSFG BOLTS AS ACCEPTED BY THE PROJECT MANAGER.HSFG BOLTS SHALL BE PROTECTED WITH ELECTROPLATED ZINC PLATE FOR THE BOLTS AND CADMIUM PLATE FOR THE NUTS TO BS 3382.

4. THE DIAMETER OF A BOLT HOLE SHALL BE 2mm LARGER THAN THE NOMINAL DIAMETER OF THE BOLT, UNLESS SHOWN OTHERWISE.

5. AT SLOTTED HOLE CONNECTIONS EITHER SELF LOCKING NUTS SHOULD BE USED OR THE BOLTS NUTS SHOULD BE COATED WITH EPOXY RESIN ADHESIVE IMMEDIATELY PRIOR TO TIGHTENING.

6. FOR GRADE OF BOLTS, NUTS AND WASHERS REFER TO THE STEELWORK SPECIFICATION.

7. ALL FASTENERS WHICH ARE USED WITH UNGALVANISED, PAINTED STEELWORK ARE TO BE SHERADIZED TO BS 4921, TABLE 1, CLASS 1. UNLESS NOTED OTHERWISE AND SHALL RECEIVE A COMPATIBLE PRIMER AND FINISHING COAT(S) ONLY AS SPECIFIED FOR THE STEELWORK TO WHICH IT CONNECTS. ALL FASTENERS, (EXCEPT HSFG BOLTS) WELDS & SHIMS WHICH ARE USED WITH GALVANISED STEELWORK SHALL BE HOT DIP GALVANISED TO BS EN 1461:2009 UNLESS NOTED OTHERWISE. WHERE GALVANISED STEEL IS BOLTED TO PAINTED STEEL, USING BLACK BOLTS, THESE BOLTS ARE TO BE GALVANISED.

8. THE THREAD OF ALL RETAINING (BOLTS WITHOUT NUTS) SHOULD BE COATED WITH AN EPOXY RESIN ADHESIVE IMMEDIATELY PRIOR TO TIGHTENING. MANUFACTURERS DETAILS OF THE ADHESIVE SHOULD BE AGREED WITH THE PROJECT MANAGER.

9. HIGH STRENGTH FRICTION GRIP BOLTS, WHERE SPECIFIED, SHALL BE GENERAL GRADE TO BS 4395 WITH STANDARD HARDENED WASHERS OVER THE HOLES IN THE OUTER PILES.

WELDING:

1. WELDING AND WELDING CONSUMABLES SHALL COMPLY WITH THE REQUIREMENTS OF BS EN 1011, BS EN 1993-3-1-8 AND BS EN ISO 2560.

2. ALL WELDING SHALL BE CARRIED OUT BY CERTIFIED WELDERS AS DESCRIBED IN THE SPECIFICATION.

3. THE SYMBOLS FOR WELDING ARE IN ACCORDANCE WITH BS EN ISO 2553 : 1993.

4. CONNECTIONS SHALL BE FULL STRENGTH BUTT WELDS UNLESS OTHERWISE NOTED.

5. MINIMUM FILLET WELD SHALL BE 6mm LEG LENGTH UNLESS OTHERWISE SPECIFIED. ELECTRODE FOR FILLET WELDS SHALL BE GRADE E-46 TO BS EN 2560 WITH MINIMUM YIELD STRENGTH OF 460 N/mm² UNLESS OTHERWISE SPECIFIED.

6. SITE WELDS SHALL BE KEPT TO A MINIMUM AND SHALL ONLY BE PERMITTED WITH THE PRIOR WRITTEN ACCEPTANCE OF THE PROJECT MANAGER.

7. BUTT WELDS ARE TO BE COMPLETED PENETRATION WELDS PRODUCED BY METHODS ACCEPTED BY THE PROJECT MANAGER AFTER DEMONSTRATION AT PROCEDURE TRIALS.

8. WELDING CONSUMABLES SHOULD PRODUCE DEPOSITED WELD METAL HAVING MECHANICAL PROPERTIES NOT INFERIOR THE MINIMA OF THE PARENT METAL.

9. NON-DESTRUCTIVE TESTING OF WELDS SHALL BE APPLIED IN THE FORM OF:
   - VISUAL INSPECTION TO BS EN 970 FOR ALL WELDS.
   - SURFACE FLAW DETECTION TO BS 6072, BS EN 571.
   - ULTRASONIC EXAMINATION TO BS 3923 OR RADIOGRAPHIC EXAMINATION TO BS EN 1435.
   - THE LOCATION AND EXTENT OF TESTING SHALL BE IN ACCORDANCE WITH THE GENERAL SPECIFICATION AND PARTICULAR SPECIFICATION OF THE CONTRACT.

10. ALL IMPROPER MATERIALS INCLUDING LAG, DIRT, IRREGULARITIES AND OIL ETC. SHALL BE REMOVED FROM JOINTS PRIOR TO WELDING

11. ALL FILLET WELDS ARE TO BE ALL ROUND UNLESS OTHERWISE STATED.

CORROSION PROTECTION:

1. STEELWORK SHALL BE CORROSION PROTECTED AS DESCRIBED IN BS EN 1090-2 ANNEX F, STRUCTURAL DESIGEN MANUAL FOR HIGHWAYS AND RAILWAYS AND THE SPECIFCATION.

2. CORROSION PROTECTION SHALL BE APPLIED TO THE INSIDE SURFACES OF ALL HOLES.

3. ALL STEEL COMPONENTS SHALL BE HOT-DIP GALVANIZED TO BS EN ISO 1461:1999 AFTER FABRICATION BY SPECIALIST CONTRACTOR IN THE "CLASS V: HOT DIP GALVANIZING" OF THE "SPECIALIZED OPERATIONS FOR HIGHWAY STRUCTURE" CATEGORY OF THE LIST OF APPROVED SUPPLIERS OF MATERIALS AND SPECIALIST CONTRACTORS OF PUBLIC WORKS.

4. POSITION OF GALVANIZING VENT HOLES SHALL BE AGREED WITH THE GALVANIZER, SUBJECT TO THE ACCEPTANCE OF THE PROJECT MANAGER.

5. WHERE MEMBERS ARE TOO LARGE FOR AVAILABLE GALVANIZING BATHS, SUB-ASSEMBLIES SHALL BE PREPARED AS ABOVE AND SUBSEQUENT WELDED JOINTS SHALL BE ZINC SPRAYED IN ACCORDANCE WITH BS 2569 TO A MINIMUM THICKNESS OF 0.2 mm. TWO COSTS OF GOOD QUALITY ZINC-RICH PAINT COMPLYING WITH BS 4652 SHALL THEN BE APPLIED ACROSS THE ENTIRE ZINC SPRAYED AREAS INCLUDING AT LEAST 25 mm OF THE PARENT GALVANIZED COATING, OR, AT THE DISCRETION OF THE SUPERVISOR, BY THE USE OF LOW MELTING POINT ZINC ALLOY REPAIR RODS MADE SPECIFICALLY FOR THIS PURPOSE RESULTING IN A MINIMUM COATING THICKNESS OF 0.2 mm. ANY DAMAGE OF GALVANIZED COATINGS SHALL BE MADE GOOD IN A SIMILAR WAY TO THE TREATMENT OF WELDED JOINTS.

6. DETAILS OF PAINT USED SHOULD BE ACCEPTED BY THE PROJECT MANAGER PRIOR TO APPLICATION TO THE STEELWORK.

7. STEEL WHICH IS CAST-IN SHOULD REMAIN UNPAINTED. THE STEEL SHOULD BE BLAST CLEANED (EITHER PRIOR TO OR AFTER FABRICATION) TO THE STANDARDS AS STIPULATED IN THE SPECIFICATIONS.

8. IMMEDIATELY PRIOR TO ERECTION ALL STEELWORK SHOULD BE SPRAY WASHED WITH WATER AND DETERGENT, THEN SPRAY RINSED WITH CLEAN WATER.

9. PAINTING SYSTEM TO BE AS FOLLOWS AND CONFORM TO PARTICULAR SPECIFICATION CLAUSE 18 & STRUCTURES DESIGN MANUAL FOR HIGHWAYS AND RAILWAYS (2013 EDITION) cl. 16.4.
   (i) STRUCTURAL STEELWORK TO BE SYSTEM II.
   (ii) STEEL PARAPET TO BE SYSTEM I.

10. THE STEEL SURFACE TO BE PAINTED SHALL BE THOROUGHLY CLEANED AND PREPARED, FREE FROM GREASE, DIRT, SCALE AND RUST. THE CONTRACTOR SHALL SUBMIT THE PROPOSED METHOD STATEMENT FOR STEEL SURFACE PREPARATION WORKS TO THE PROJECT MANAGER FOR ACCEPTANCE PRIOR TO THE COMMENCEMENT OF PAINTING WORKS.

SHEAR CONNECTORS:

1. ALL SHEAR STUD CONNECTORS SHALL BE 105mm LONG TO BS EN ISO 13918 AND WELDED TO THE STEEL SECTION WITH AUTOMATIC STUD WELD UNLESS OTHERWISE STATED.

2. SHEAR STUD CONNECTORS SHALL HAVE A MIN. YIELD STRENGTH OF 385 N/mm2 WITH A MIN. ELONGATION OF 15% AND ULTIMATE TENSILE STRENGTH OF 495 N/mm2. TESTS ON SHEAR STUD CONNECTORS SHALL BE CARRIED OUT IN ACCORDANCE WITH BS EN ISO 13918 AND BS EN 10002-1.

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29-December-2020

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PROJECT
項目

TUNG CHUNG NEW TOWN EXTENSION (EAST) - DESIGN AND CONSTRUCTION

CONTRACT TITLE

TUNG CHUNG NEW TOWN EXTENSION - MAJOR INFRASTRUCTURE WORKS IN TUNG CHUNG EAST

CLIENT
業主

CEDD 土木工程拓展署 Civil Engineering and Development Department

CONSULTANT
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ISSUE/REVISION
修訂

I/R 修訂	DATE 日期	DESCRIPTION 內容/摘要	CHK. 複核
-	DEC. 20	TENDER DRAWING	CCHY

STATUS
現況

SCALE 比例: A1 N.T.S.

DIMENSION UNIT 尺寸單位: MILLIMETRES

KEY PLAN
索引圖

PROJECT NO. 項目編號: 60507694

CONTRACT NO. 合約編號: NL/2020/03

SHEET TITLE
圖紙名稱

NOISE BARRIER
GENERAL NOTES
FOR STEEL WORKS

SHEET NUMBER
圖紙編號

60507694/C3/6002

ISO A1 594mm x 841mm
Approved: SWKM
Checked: CCHY
Designer: CYCK
Project Management Initials:
CL
DTPL

GENERAL:

1. ALL DESIGN AND CONSTRUCTION SHOULD COMPLY WITH STRUCTURES DESIGN MANUAL FOR HIGHWAYS AND RAILWAYS IN CONJUNCTION WITH BS8004.
2. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE STATED.
3. ALL LEVELS ARE IN METRES ABOVE HONG KONG PRINCIPAL DATUM.
4. ALL SETTING OUT DIMENSIONS MUST BE VERIFIED AGAINST THE LATEST RELEVANT GENERAL ARRANGEMENT DRAWINGS BEFORE WORK COMMENCES. THE SUPERVISOR MUST BE INFORMED IMMEDIATELY OF ANY DISCREPANCIES DISCOVERED.
5. THE FOUNDING LEVELS OF PILES ARE APPROXIMATE AS DETERMINED FROM BOREHOLE INFORMATION. THE ACTUAL FOUNDING LEVEL FOR EACH PILE SHOULD BE DETERMINED BY THE MAIN CONTRACTOR TO THE ACCEPTANCE FROM THE PROJECT MANAGER AFTER EXCAVATION OF EACH PILE.
6. WHERE ANY DOUBT EXISTS AS TO THE CAPACITY OF ANY PILE TO SUSTAIN ADEQUATELY AND WITHOUT UNDUE SETTLEMENT, THE LOAD FOR WHICH IT HAS BEEN DESIGNED. THE PILE SHOULD BE TESTED IN ACCORDANCE WITH STRUCTURES DESIGN MANUAL FOR HIGHWAYS AND RAILWAYS AND THE SPECIFICATIONS.
7. THE CONTRACTOR SHOULD EXERCISE DUE CARE DURING THE WORK ON SITE TO AVOID DAMAGE TO ADJACENT STRUCTURES.
8. THE CONTRACTOR SHOULD BE RESPONSIBLE FOR ANY NECESSARY ACTIONS TO DIVERT OR PROTECT ALL SERVICES AND UTILITIES AFFECTED BY THE WORK.
9. THE CONTRACTOR SHOULD MAINTAIN ALL EXISTING SURFACE CHANNELS AND SANDTRAPS DURING THE WORKS AND ALL SURFACE WATER MUST PASS THROUGH THE SANDTRAPS BEFORE DISCHARGING TO THE PUBLIC SURFACE DRAINAGE SYSTEM.
10. ALL SETTING OUT TO THE EXISTING STRUCTURE AND UTILITIES SHOULD BE VERIFIED ON SITE PRIOR TO CONSTRUCTION. INFORM THE PROJECT MANAGER IMMEDIATELY OF ANY DISCREPANCIES DISCOVERED.
11. REINFORCING STARTER BARS PROTRUDING ABOVE PILE CUT-OFF LEVEL SHOULD BE PROTECTED BY ACCEPTED METHOD.
12. THE CONTRACTOR SHOULD BE RESPONSIBLE FOR REMOVAL OF SURPLUS LENGTH BY CUTTING OF CONCRETE TO THE CUT-OFF LEVEL SPECIFIED ON DRAWING.CARE SHOULD BE TAKEN TO AVOID SHATTERING OR OTHERWISE DAMAGING THE REST OF THE UNIT. ANY CRACKS OR DEFECTIVE CONCRETE SHOULD BE CUT AWAY AND MADE GOOD BY ACCEPTED GROUT OF EQUAL OR HIGHER STRENGTH PROPERLY BONDED TO THE OLD CONCRETE.
13. WHEREVER NECESSARY THE CONTRACTOR SHOULD BE RESPONSIBLE FOR THE APPLICATION OF CONSTRUCTION NOISE PERMIT REQUIRED UNDER THE NOISE CONTROL ORDINANCE.
14. BLASTING IS NOT PERMITTED.
15. ALLOWANCE SHALL BE MADE FOR ALL ANCILLARY TREATMENTS AND ALL WORKS NECESSARY TO ENSURE THE STABILITY OF ROADWAY, ADJACENT STRUCTURES AND UNDERGROUND CONSTRUCTION AND SERVICES.
16. PRIOR TO THE COMMENCEMENT OF FOUNDATION WORK, THE FOLLOWING DOCUMENTS SHALL BE SUBMITTED TO THE PROJECT MANAGER FOR COMMENTS AND ACCEPTANCE: THE DESIGN AND METHOD OF EXECUTION OF ANY ASSOCIATED TEMPORARY WORKS
17. UPON COMPLETION OF FOUNDATION WORK, AS-BUILT RECORDS OF ALL FOUNDATIONS CONSTRUCTED SHALL BE SUBMITTED TO THE PROJECT MANAGER FOR ACCEPTANCE. THE CONTENT AND FORMAT OF THE RECORDS SHALL BE IN ACCORDANCE WITH THE GENERAL SPECIFICATION OR AS ACCEPTED BY THE PROJECT MANAGER.

NOTES ON MONITORING:

1. THE EXACT LOCATION OF THE PROPOSED PIEZOMETERS OR BORE HOLES etc. SHOULD BE PEGGED OUT ON SITE BY THE CONTRACTOR AND ACCEPTED BY THE PROJECT MANAGER PRIOR TO THE COMMENCEMENT OF BORED HOLE SINKING.
2. SHOULD THERE BE ANY RELOCATION OR ADDITION OF BORED HOLES, THE ACCEPTANCE FROM THE PROJECT MANAGER MUSH BE OBTAINED.
3. MONITORING POINTS SHOULD BE INSTALLED AND INITIAL READING TAKEN BEFORE WORKS COMMENCE. FOR DETAILS OF MONITORING SEE INSTRUMENTATION DRAWINGS.
4. IF ANY OF THE SETTLEMENT OR VIBRATION CRITERIA IS EXCEEDED, WORK SHOULD CEASE AND THE SUPERVISOR SHOULD BE NOTIFIED. REMEDIAL WORKS PROPOSAL SHOULD BE SUBMITTED FOR ACCEPTANCE.
5. VIBRATION EFFECT ONTO THE ADJACENT STRUCTURES DUE TO THE OPERATION FOR INSTALLATION/REMOVAL OF TEMPORARY CASING AND TO REMOVE OBSTRUCTION OR TO FORM ROCK SOCKET SHOULD BE MONITORED BY THE CONTRACTOR. IN THE EVENT THE ALLOWABLE VIBRATION LIMIT IS EXCEEDED, THE WORK SHOULD BE STOPPED IMMEDIATELY AND AN ALTERNATE PROPOSAL SHOULD BE SUBMITTED TO THE PROJECT MANAGER FOR ACCEPTANCE PRIOR TO RESUMPTION OF THE WORK.

NOTES ON PAD FOOTING

1. THE MIN. ALLOWABLE BEARING CAPACITY OF THE FOUNDING MATERIAL IS 265kPa. THE CONTRACTOR SHALL REMOVE 500mm THICK LOOSE MATERIAL BELOW THE FORMATION LEVEL TO REACH A LEVEL WITH MIN. ALLOWABLE BEARING CAPACITY OF 265kPa. THE CONTRACTOR SHALL THEN BACKFILL WITH 20/20D CONCRETE TO THE REQUIRED FORMATION LEVEL.

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PROJECT
項目

TUNG CHUNG NEW TOWN EXTENSION (EAST) - DESIGN AND CONSTRUCTION

CONTRACT TITLE

TUNG CHUNG NEW TOWN EXTENSION - MAJOR INFRASTRUCTURE WORKS IN TUNG CHUNG EAST

CLIENT
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CEDD 土木工程拓展署 Civil Engineering and Development Department

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I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 複核
-	DEC. 20	TENDER DRAWING	CCHY

STATUS
階段

SCALE 比例 — A1 N.T.S.

DIMENSION UNIT 尺寸單位 — MILLIMETRES

KEY PLAN
索引圖

PROJECT NO. 項目編號 — 60507694

CONTRACT NO. 合約編號 — NL/2020/03

SHEET TITLE
圖紙名稱

NOISE BARRIER
GENERAL NOTES
FOR FOUNDATIONS

SHEET NUMBER
圖紙編號

60507694/C3/6003

Project Management Initials: Designer: CYCK Checked: CCHY Approved: SWKM ISO A1 594mm x 841mm

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE SPECIFIED.
2. ALL LEVELS ARE IN METRES ABOVE PRINCIPAL DATUM.
3. ASTERISKED DIMENSIONS ARE TO BE ADJUSTED ON SITE TO SUIT ACTUAL SITE CONDITIONS AS DETERMINED BY THE SUPERVISOR.
4. THE HEIGHT OF EACH SOUND ABSORPTIVE PANEL SHALL BE 500mm.
5. THE CONTRACTOR SHALL PROPOSE AND DESIGN THE DETAILS AND MATERIALS FOR SEALING THE GAP BETWEEN NOISE BARRIER PANELS AND CONCRETE FOOTING FOR THE SUPERVISOR'S APPROVAL. COLOURS OF SEALING MATERIALS SHALL BE COMPATIBLE WITH THE COLOURS OF THE ADJACENT NOISE BARRIER PANELS.
6. THE LOCATION OF NOISE BARRIER FOOTING MOVEMENT JOINT SHALL BE DETERMINED BY THE CONTRACTOR BUT SPACING SHALL NOT EXCEED 12000 c/c UNLESS OTHERWISE SPECIFIED.
7. ABSORPTIVE PANELS, TRANSPARENT PANELS AND THE FIXING DETAILS OF THE PANELS SHALL BE DESIGNED BY THE CONTRACTOR IN ACCORDANCE WITH PARTICULAR SPECIFICATION.
8. MOVEMENT JOINT FOR PANEL SHALL BE DESIGNED BY THE CONTRACTOR AND APPROVED BY THE SUPERVISOR.
9. THE CONTRACTOR SHALL PROPOSE THE FIXING DETAILS OF NOISE BARRIER PANELS TO ACCOMMODATE LEVEL CHANGE AND CURVATURE CHANGE ALONG THE VERTICAL AND HORIZONTAL PROFILES OF THE ROAD FOR THE SUPERVISOR'S APPROVAL.
10. THE CONTRACTOR SHALL PROPOSE THE FIXING DETAILS OF NOISE BARRIER PANELS TO ACCOMMODATE THE LEVEL DROP ON SLOPE GROUND FOR THE SUPERVISOR'S APPROVAL.
11. THE CONTRACTOR SHALL DESIGN ANY MOUNTING FRAME NECESSARY FOR THE NOISE BARRIER PANELS AND SUBMIT ICE CERTIFIED DESIGN CALCULATIONS AND SHOP DRAWINGS FOR THE SUPERVISOR'S APPROVAL. THE COST OF THE MOUNTING FRAME AND ITS ASSOCIATED CONNECTION ELEMENTS IS DEEMED TO BE INCLUDED IN THE PRICE FOR NOISE BARRIER PANELS.
12. NO VERTICAL MEMBERS OF THE MOUNTING FRAMES ARE PERMITTED BETWEEN BARRIER POSTS FOR ALL NOISE BARRIERS.
13. HORIZONTAL MEMBERS OF THE MOUNTING FRAME SHALL BE LIMITED TO THE MINIMUM REQUIRED AND THE SPACING BETWEEN THESE MEMBERS SHALL BE AGREED WITH THE SUPERVISOR.
14. THE CONTRACTOR SHALL PROPOSE THE FIXING DETAILS AT THE INTERFACE OF THE TRANSPARENT AND ABSORPTIVE NOISE BARRIER PANELS FOR THE SUPERVISOR'S APPROVAL.
15. THE DESIGN OF THE NOISE BARRIER PANEL MOUNTING FRAMES AND THE FIXING DETAILS SHALL BE CARRIED OUT IN ACCORDANCE WITH THE STRUCTURES DESIGN MANUAL FOR HIGHWAYS AND RAILWAYS PUBLISHED BY HIGHWAYS DEPARTMENT (2013).
16. IN CASE THE NOISE BARRIER ELEMENT(S) IS / ARE COMBUSTIBLE, A SECTION OF MINIMUM 4.0m IN LENGTH FIRE BREAK MADE OF NON-COMBUSTIBLE MATERIAL SHALL BE REQUIRED FOR EVERY 100M IN LENGTH NOISE BARRIER.
17. THE NOISE BARRIER PANEL SHALL NOT REFLECT LIGHT IN SUCH A WAY AS TO PREJUDICE ROAD SAFETY AND CAUSE NUISANCE TO THE NEARBY RESIDENTS.
18. THE SLANTED PANELS SHALL HAVE NON-GLARING MATT SURFACE AT TOP REQUIRING BUT NOT LIMITED TO THE FOLLOWINGS FEATURES AND SUBJECT TO THE SATISFACTION BY THE SUPERVISOR:

A: THE MATT SURFACE SHALL NOT BE PRODUCED BY DESTRUCTIVE METHOD SUCH AS MECHANICAL BLAST, CHEMICAL ETCHING ETC. IN ORDER NOT TO CHANGE THE PROPERTIES OF MATERIAL;

B: THE APPEARANCE OF NON-GLARING SURFACE SHALL NOT BE BLEMISHED EITHER WITH FINGERPRINTS OR AFTER PROCESSING THE MATT SURFACE;

C: LIGHT TRANSMISSION OF NON-GLARING PANELS SHALL BE 68±5%;

D: THE SPECULAR GLOSS VALUE OF THE NON-GLARING PANELS SHALL BE TESTED ACCORDING TO BS2782: PART 5 METHOD 520A.

ANGLE OF INCIDENCE	SPECULAR GLOSS VALUE
20°	10 (MAX.)
60°	30 (MAX.)
85°	20 (MAX.)

19. THE STEELWORK SHALL BE PAINTED IN ACCORDANCE WITH THE PS REQUIREMENTS AND MATCH WITH EXISTING.
20. THE CONTRACTOR SHALL DESIGN THE NOISE BARRIER PANEL MOUNTING FRAME/ SUB-FRAME, SUCH THAT ALL NOISE BARRIER PANEL COULD BE REPLACED INDIVIDUALLY IN FUTURE, WITHOUT DISMANTLING OTHER PANELS NOT GOING TO BE REPLACED.
21. ERECTION TOLERANCE OF STEELWORK TO BE AS FOLLOWS.
    LINEAR DIMENSION UP TO 10m ±10mm
    LINEAR DIMENSION 10 TO 20m ±20mm
    FINISHING COAT COLOUR TO BE DETERMINED BY THE SUPERVISOR.
22. FASTENERS FOR NOISE BARRIER AND SEMI ENCLOSURE SHALL BE GRADE A4-80 STAINLESS STEEL TO BS EN ISO 3506-1 & 2 WITH COMPATIBLE STAINLESS STEEL WASHERS A NYLON OR OTHER APPROVED PLASTICS WASHER IS TO BE PROVIDED BETWEEN THE SURFACES OF ANY DIFFERENT METAL SUCH AS ALUMINIUM ALLOY, STAINLESS STEEL AND GALVANIZED STEEL.
23. FASTENERS FOR ALUMINIUM COMPONENTS AND HOLDING DOWN BOLTS ARRANGEMENTS SHALL BE GRADE A4-80 STAINLESS STEEL TO BS EN ISO 3506-1 & 2 RESPECTIVELY WITH COMPATIBLE STAINLESS STEEL WASHERS A NYLON OR OTHER APPROVED PLASTICS WASHER IS TO BE PROVIDED BETWEEN THE SURFACES OF ANY DIFFERENT METAL SUCH AS ALUMINIUM ALLOY, STAINLESS STEEL AND GALVANIZED STEEL.

NOTES FOR NOISE BARRIER PANELS:

1. THE FIXING AND CLAMPING SYSTEMS OF THE NOISE BARRIER PANELS TO THE STEEL VERTICAL POSTS SHOWN ON THE DRAWINGS ARE INDICATIVE ONLY. THE CONTRACTOR SHALL DESIGN SUCH SYSTEMS TO THE SATISFACTION OF THE SUPERVISOR.
2. THE PROPOSED NOISE BARRIER PANELS AND THE ASSOCIATED FIXING AND CLAMPING SYSTEM SHALL BE CAPABLE OF SUSTAINING THE FOLLOWING DESIGNED LOAD AND MOVEMENT :
   NOMINAL WIND PRESSURE = 3.3kN/m
   HORIZONTAL MOVEMENT OF THE PANELS OVER M.J. = 5mm
3. THE NOISE BARRIER WORKS SHALL INCORPORATE HOLDING DEVICES TO PREVENT PANELS FORM FALLING OFF IN THE EVENT OF ACCIDENTAL IMPACT BY VEHICLE. THE HOLDING DEVICES SHALL COMPLY WITH THE FOLLOWING REQUIREMENTS:

(1): THE DEVICES SHALL HOLD THE FOUR CORNERS OF EACH PANEL MEMBER BY WIRE ROPES. THE DESIGN HOLDING FORCE FOR EACH PANEL SHALL BE 10kN.

(2): THE DEVICES SHALL ALLOW A RELATIVE MOVEMENT OF 0.3m BETWEEN THE PANELS AND THE STRUCTURAL FRAMES.

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PROJECT 項目

TUNG CHUNG NEW TOWN EXTENSION (EAST) - DESIGN AND CONSTRUCTION

CONTRACT TITLE

TUNG CHUNG NEW TOWN EXTENSION - MAJOR INFRASTRUCTURE WORKS IN TUNG CHUNG EAST

CLIENT 業主

CEDD 土木工程拓展署 Civil Engineering and Development Department

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ISSUE/REVISION 修訂

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STATUS 狀況

SCALE 比例 A1 N.T.S.

DIMENSION UNIT 尺寸單位 MILLIMETRES

KEY PLAN 索引圖

PROJECT NO. 項目編號 60507694

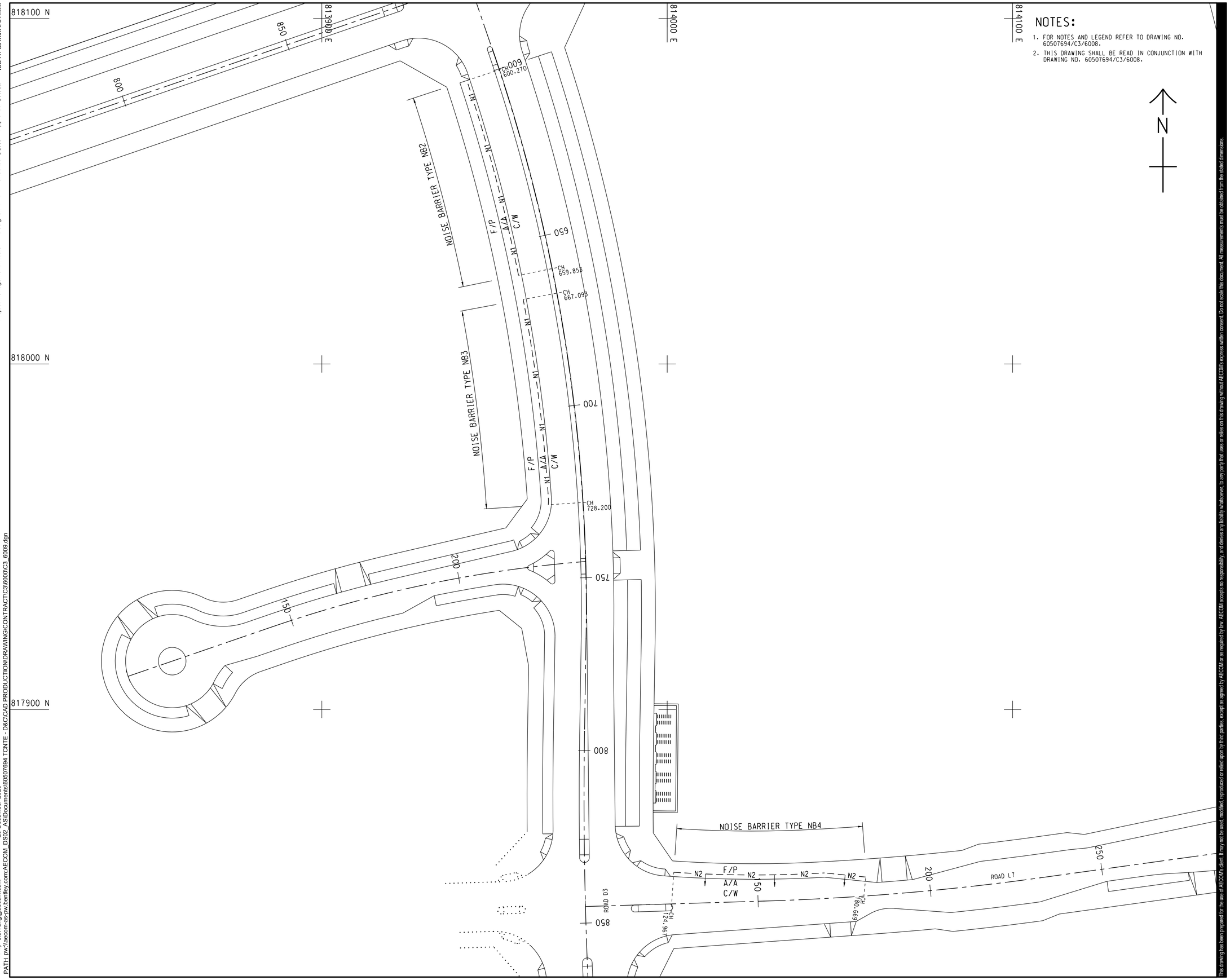
CONTRACT NO. 合約編號 NL/2020/03

SHEET TITLE 圖紙名稱

NOISE BARRIER
GENERAL NOTES
FOR NOISE PANEL

SHEET NUMBER 圖紙編號

60507694/C3/6004



NOTES:

1. FOR NOTES AND LEGEND REFER TO DRAWING NO. 60507694/C3/6008.
2. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH DRAWING NO. 60507694/C3/6008.

AECOM

PROJECT
項目

TUNG CHUNG NEW TOWN EXTENSION (EAST) - DESIGN AND CONSTRUCTION

CONTRACT TITLE

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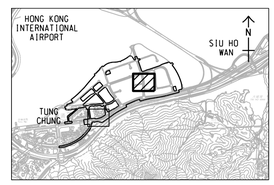
-	DEC. 20	TENDER DRAWING	CCHY

STATUS
階段

SCALE 比例: A1 1 : 500

DIMENSION UNIT 尺寸單位: METRES

KEY PLAN 索引圖 A1 1 : 50000



PROJECT NO. 項目編號: 60507694

CONTRACT NO. 合約編號: NL/2020/03

SHEET TITLE
圖紙名稱

NOISE BARRIER LAYOUT PLAN

SHEET 2 OF 2

SHEET NUMBER
圖紙編號

60507694/C3/6009

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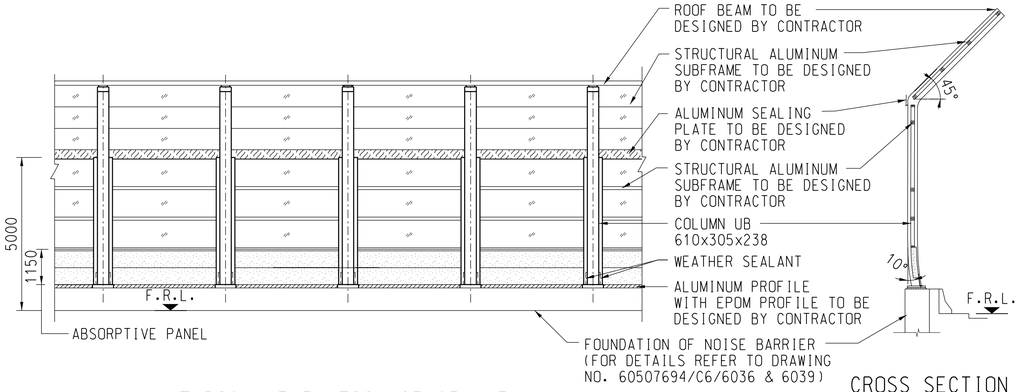
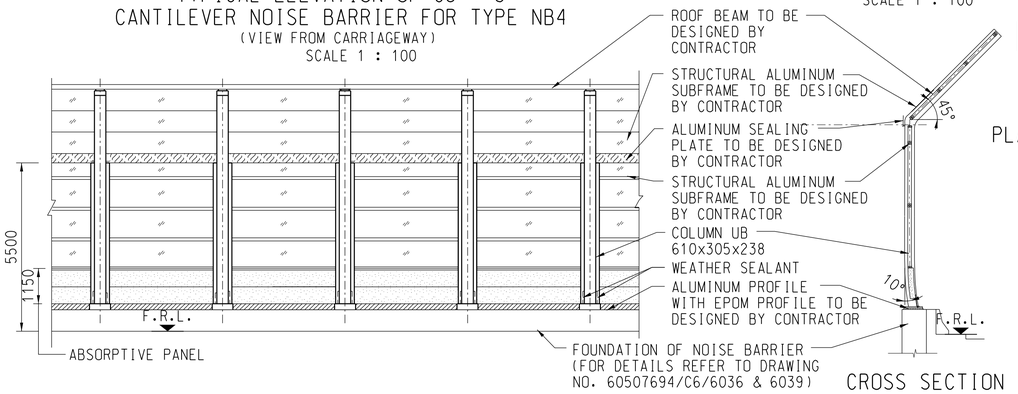


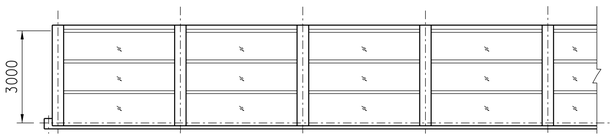
TYPICAL ELEVATION OF C5 + 3
CANTILEVER NOISE BARRIER FOR TYPE NB4
(VIEW FROM CARRIAGEWAY)
SCALE 1 : 100

CROSS SECTION
SCALE 1 : 100

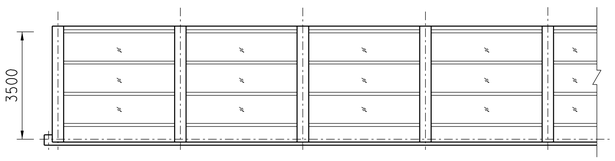


TYPICAL ELEVATION OF C5.5 + 3.5
CANTILEVER NOISE BARRIER FOR TYPE NB1
(VIEW FROM CARRIAGEWAY)
SCALE 1 : 100

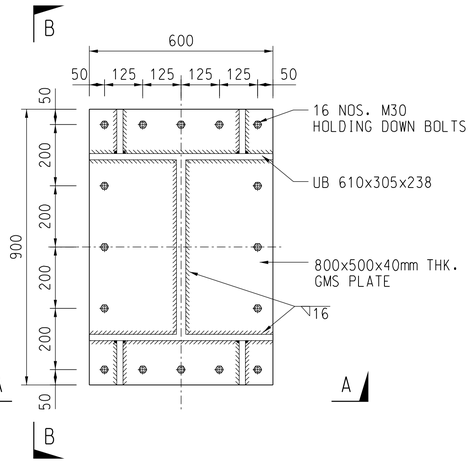
CROSS SECTION
SCALE 1 : 100



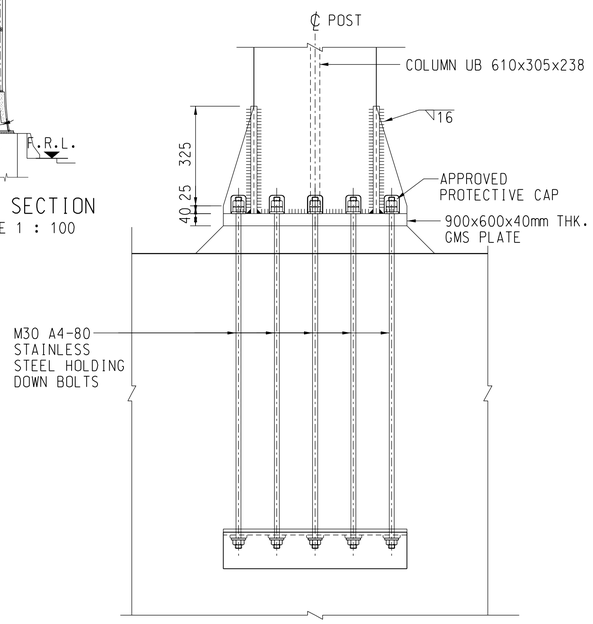
TYPICAL PLAN OF C5 + 3 CANTILEVER NOISE BARRIER FOR TYPE NB4
SCALE 1 : 100



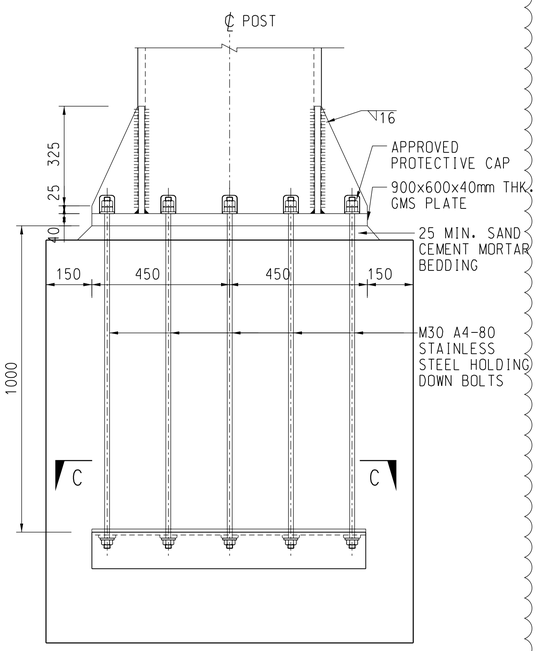
TYPICAL PLAN OF C5.5 + 3.5 CANTILEVER NOISE BARRIER FOR TYPE NB1
SCALE 1 : 100



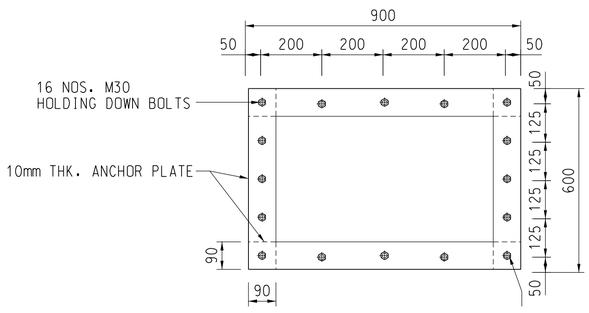
PLAN OF ANCHORAGE FOR NOISE BARRIER POST
SCALE 1 : 10



SECTION A - A
SCALE 1 : 10



SECTION B - B
SCALE 1 : 10



SECTION C - C
SCALE 1 : 10

NOTES

1. FOR GENERAL NOTES REFER TO DRAWING NO. 60507694/C3/6021.
2. THE CONTRACTOR SHALL MAY PROPOSE ALTERNATIVE HORIZONTAL SUBFRAMES AND CONNECTION DETAILS OF THE HORIZONTAL SUBFRAME TO VERTIACL POST CONNECTION AND SUBMIT RELEVANT ICE CERTIFIED CALCULATION AND SHOP DRAWINGS FOR THE PROJECT MANAGER"S APPROVAL.
3. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF THE HORIZONTAL SUBFRAMES AND THE CONNECTION DETAILS OF THE HORIZONTAL SUBFRAME TO VERTICAL POST CONNECTION TAKING ACCOUNT OF THE HORIZONTAL AND VERTICAL PROFILES OF THE ROAD.
4. ALL THE FIXING DETAILS OF NOISE BARRIER PANELS ARE INDICATIVE ONLY THE CONNTRACTOR SHALL DESIGN THE MOUNTING FRAME NECESSARY FOR THE NOISE VARRIER PANELS AND SUBMIT RELEVANT ICE CERTIFIED CALCULETIONS AND SHOP DRAWINGS FOR THE PROJECT MANGER'S APPROVAL.
5. THE SIZE AND SPACING OF THE VERTICAL MOUNTING FRAME SHALL BE LIMITED TO THE MINIMUM REQUIRED AND TO BE AGREED WITH THE PROJECT MANAGER.
6. FOR NOISE BARRIER TRANSPARENT AND ABSORPTIVE PANEL DETAILS REFER DRAWING NO. 60507694/C3/6021

AECOM

PROJECT
項目

TUNG CHUNG NEW TOWN EXTENSION (EAST) - DESIGN AND CONSTRUCTION

CONTRACT TITLE

TUNG CHUNG NEW TOWN EXTENSION - MAJOR INFRASTRUCTURE WORKS IN TUNG CHUNG EAST

CLIENT
業主

CEDD 土木工程拓展署 Civil Engineering and Development Department

CONSULTANT
工程顧問公司

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ISSUE/REVISION
修訂

I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 複核
A	FEB. 21	TENDER ADDEDUM NO. 2	CCHY
-	DEC. 20	TENDER DRAWING	CCHY

STATUS
階段

SCALE 比例: A1 AS SHOWN
DIMENSION UNIT 尺寸單位: MILLIMETRES

KEY PLAN
索引圖

PROJECT NO. 項目編號: 60507694
CONTRACT NO. 合約編號: NL/2020/03

SHEET TITLE
圖紙名稱

CANTILEVER NOISE BARRIER TYPICAL DETAILS

SHEET NUMBER
圖紙編號

60507694/C3/6022A

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Project Management Initials: Designer: CYCK Checked: CCHY Approved: SWKM ISO A1 594mm x 841mm
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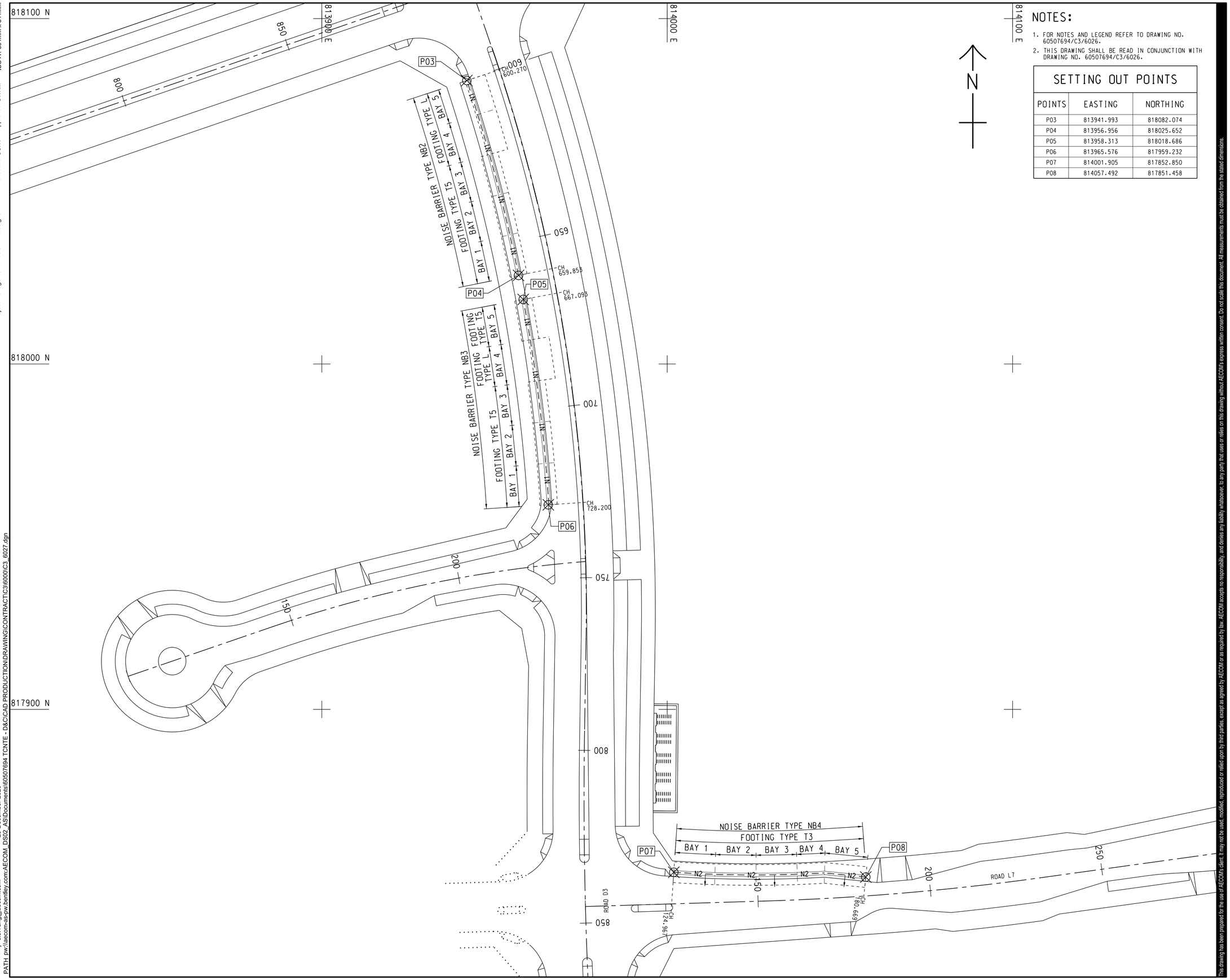
22 二月 2021



NOTES:

1. FOR NOTES AND LEGEND REFER TO DRAWING NO. 60507694/C3/6026.
2. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH DRAWING NO. 60507694/C3/6026.

N

SETTING OUT POINTS

POINTS	EASTING	NORTHING
P03	813941.993	818082.074
P04	813956.956	818025.652
P05	813958.313	818018.686
P06	813965.576	817959.232
P07	814001.905	817852.850
P08	814057.492	817851.458

Project Management Initials:
Designer: CYCK
Checked: CCHY
Approved: SWKM
ISO A1 594mm x 841mm

Plot File by: Jie.Yang@aecom.com
PATH: pw:\\aecom-as-pw.bentley.com:AECOM_DS02_ASIDocuments\60507694 TCNTE - D&C\CAD PRODUCTION\DRAWING\CONTRACT\C3\6000\IC3_6027.dgn
29-December-2020

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AECOM

PROJECT
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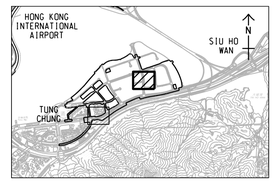
I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 複核
-	DEC. 20	TENDER DRAWING	CCHY

STATUS
階段

SCALE 比例
A1 1 : 500

DIMENSION UNIT 尺寸單位
METRES

KEY PLAN 索引圖 A1 1 : 50000



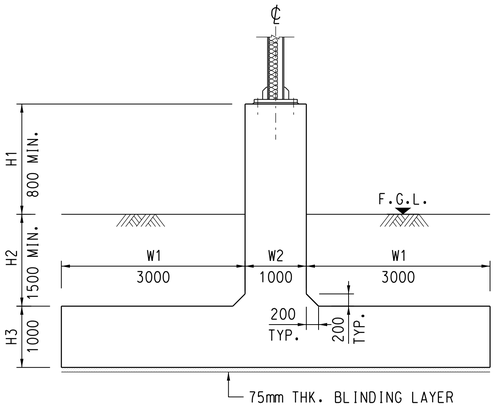
PROJECT NO. 項目編號
60507694

CONTRACT NO. 合約編號
NL/2020/03

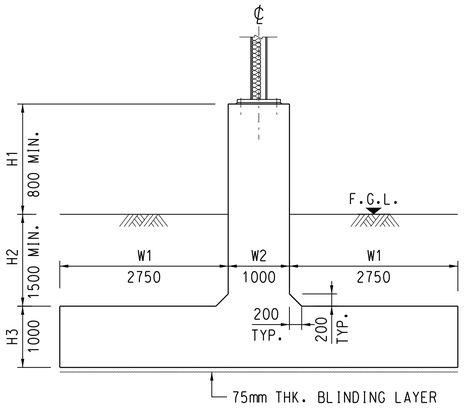
SHEET TITLE 圖紙名稱
NOISE BARRIER FOUNDATION LAYOUT PLAN

SHEET 2 OF 2

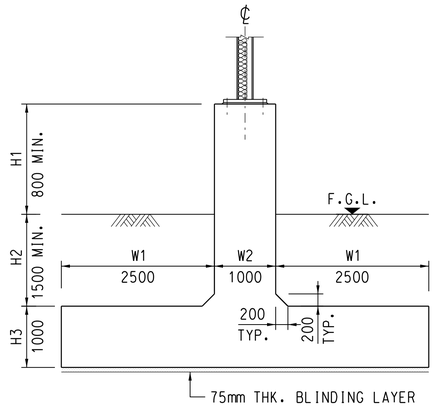
SHEET NUMBER 圖紙編號
60507694/C3/6027



NOISE BARRIER FOOTING TYPE T1
SCALE 1 : 50



NOISE BARRIER FOOTING TYPE T2
SCALE 1 : 50

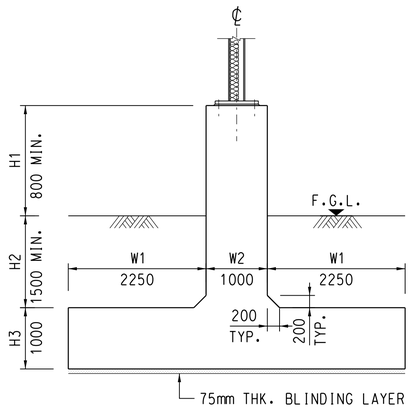


NOISE BARRIER FOOTING TYPE T3
SCALE 1 : 50

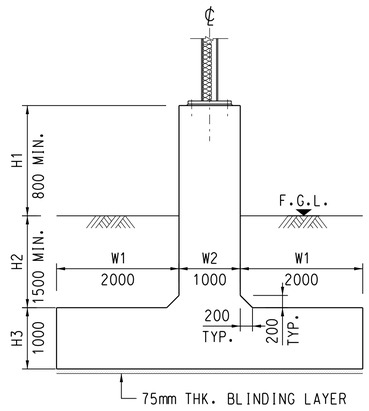
NOTES:

1. GENERAL NOTES FOR FOUNDATIONS REFER TO DRAWING NO. 60507694/C3/6003.
2. FOUNDATION TYPE REFER TO DRAWINGS NOS. 60507694/C3/6008 AND 6009.
3. REINFORCEMENT DETAILS OF FOOTING REFER TO DRAWING NO. 60507694/C3/6039.

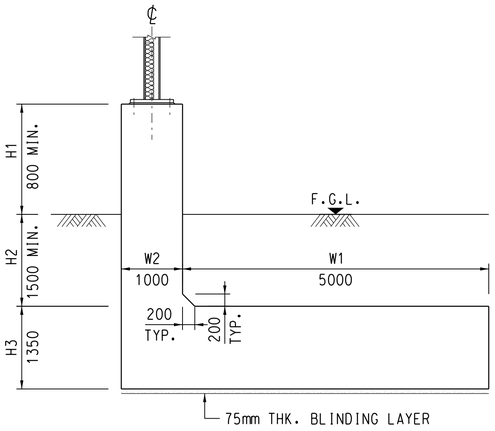
NOISE BARRIER	FOOTING TYPE	FOOTING DIMENSION (mm)				
		H1	H2	H3	W1	W2
NB1	T1	MIN.800	MIN.1500	1200	3000	1000
	T2	MIN.800	MIN.1500	1000	2750	1000
	T3	MIN.800	MIN.1500	1000	2500	1000
	T4	MIN.800	MIN.1500	1000	2250	1000
NB2	T5	MIN.800	MIN.1500	1000	2000	1000
	L	MIN.800	MIN.1500	1350	5000	1000
NB3	T5	MIN.800	MIN.1500	1000	2000	1000
	L	MIN.800	MIN.1500	1350	5000	1000
NB4	T3	MIN.800	MIN.1500	1000	2500	1000



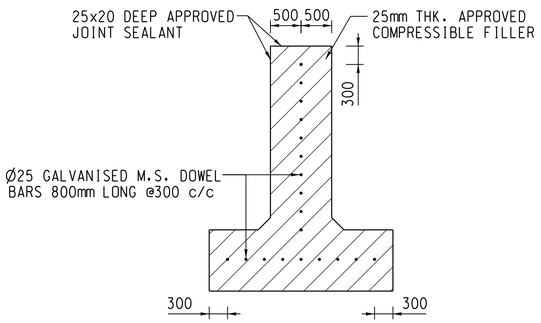
NOISE BARRIER FOOTING TYPE T4
SCALE 1 : 50



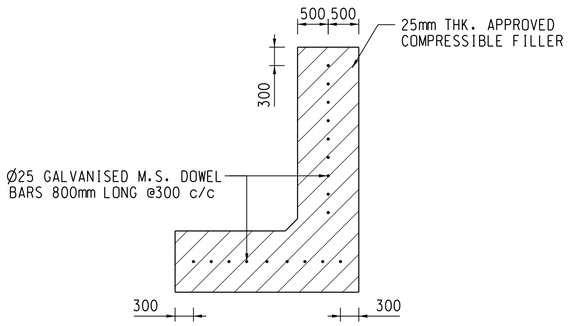
NOISE BARRIER FOOTING TYPE T5
SCALE 1 : 50



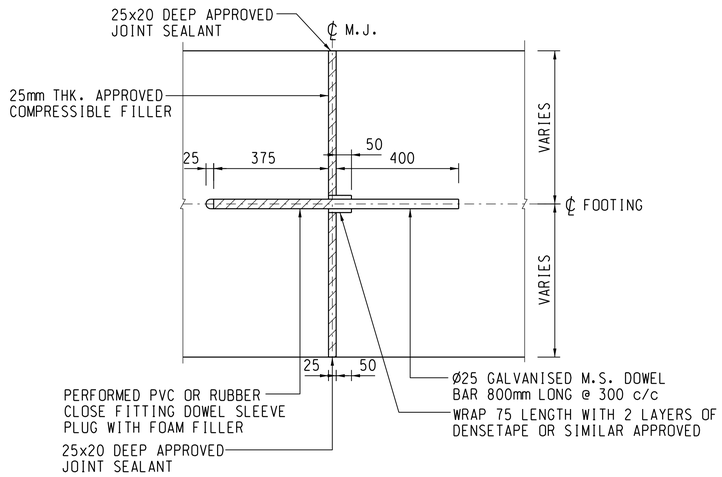
NOISE BARRIER FOOTING TYPE L
SCALE 1 : 50



SECTION THROUGH MOVEMENT JOINT OF
NOISE BARRIER / ENCLOSURE TYPE T FOOTING
SCALE 1 : 50



SECTION THROUGH MOVEMENT JOINT OF
NOISE BARRIER / ENCLOSURE TYPE L FOOTING
SCALE 1 : 50



MOVEMENT JOINT FOR NOISE BARRIER/ENCLOSURE FOUNDATION
SCALE 1 : 10

AECOM

PROJECT
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I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 複核
-	DEC. 20	TENDER DRAWING	CCHY

STATUS
階段

SCALE 比例: A1 AS SHOWN

DIMENSION UNIT 尺寸單位: MILLIMETRES

KEY PLAN
索引圖

PROJECT NO. 項目編號: 60507694

CONTRACT NO. 合約編號: NL/2020/03

SHEET TITLE
圖紙名稱

NOISE BARRIER FOUNDATION DETAILS

SHEET NUMBER
圖紙編號

60507694/C3/6036

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Project Management Initials: Designer: CYCK Checked: CCHY Approved: SWKM ISO A1 594mm x 841mm

Plot File by: Jie.Yang@aecom.com
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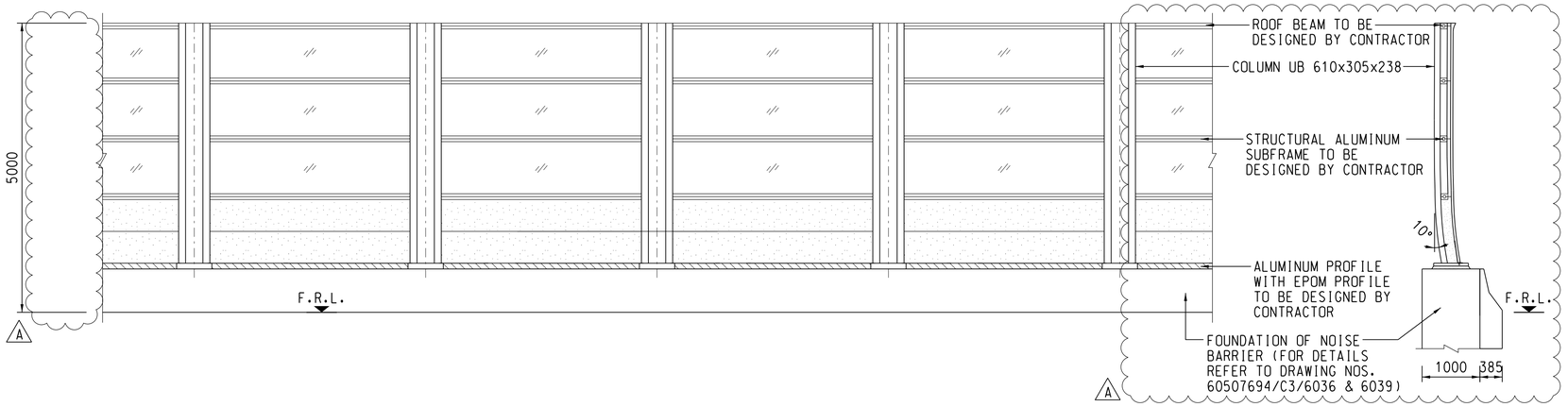
29-December-2020



TYPICAL ELEVATION OF V5 VERTICAL NOISE BARRIER FOR TYPE NB2 AND NB3
(VIEW FROM CARRIAGEWAY)
SCALE 1 : 50

TIPICAL CROSS SECTION FOR TYPE NB2 AND NB3
SCALE 1 : 50

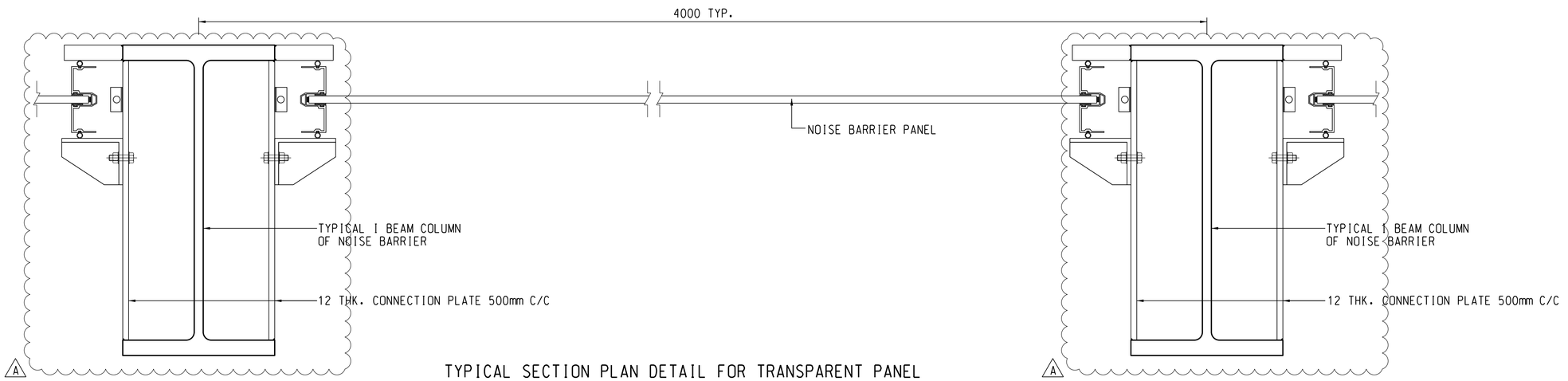
NOTES:

1. STRUCTURAL ARRANGEMENT OF NOISE BARRIER SUCH AS POST LOCATION AS INDICATED ON THE DRAWINGS IS FOR REFERENCE ONLY.
2. THE CONTRACTOR SHALL MAY PROPOSE ALTERNATIVE HORIZONTAL SUBFRAMES AND CONNECTION DETAILS OF THE HORIZONTAL SUBFRAME TO VERTIACL POST CONNECTION AND SUBMIT RELEVANT ICE CERTIFIED CALCULATION AND SHOP DRAWINGS FOR THE PROJECT MANAGER'S APPROVAL.
3. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF THE HORIZONTAL SUBFRAMES AND THE CONNECTION DETAILS OF THE HORIZONTAL SUBFRAME TO VERTICAL POST CONNECTION TAKING ACCOUNT OF THE HORIZONTAL AND VERTICAL PROFILES OF THE ROAD.
4. ALL THE FIXING DETAILS OF NOISE BARRIER PANELS ARE INDICATIVE ONLY THE CONNTRACTOR SHALL DESIGN THE MOUNTING FRAME NECESSARY FOR THE NOISE VARRIER PANELS AND SUBMIT RELEVANT ICE CERTIFIED CALCULETIONS AND SHOP DRAWINGS FOR THE PROJECT MANAGER'S APPROVAL.
5. THE SIZE AND SPACING OF THE VERTICAL MOUNTING FRAME SHALL BE LIMITED TO THE MINIMUM REQUIRED AND TO BE AGREED WITH THE PROJECT MANAGER.
6. FOR ANCHOR DETAILS REFER DRAWING NO. 60507694/C3/6022.

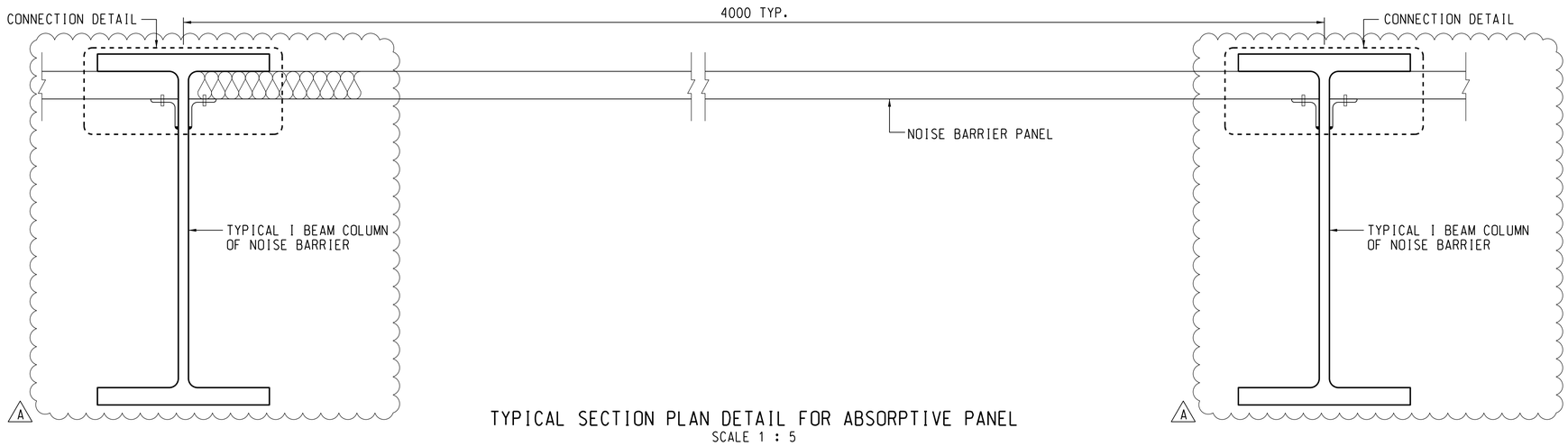
LEGEND:

TRANSPARENT WITH ANTI - BIRD COLISION LINEAR PATTERN PANEL (CLEAR)

ABSORPTIVE PANEL



TYPICAL SECTION PLAN DETAIL FOR TRANSPARENT PANEL
SCALE 1 : 5



TYPICAL SECTION PLAN DETAIL FOR ABSORPTIVE PANEL
SCALE 1 : 5

AECOM

PROJECT
項目

TUNG CHUNG NEW TOWN EXTENSION (EAST) - DESIGN AND CONSTRUCTION

CONTRACT TITLE

TUNG CHUNG NEW TOWN EXTENSION - MAJOR INFRASTRUCTURE WORKS IN TUNG CHUNG EAST

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A	FEB. 21	TENDER ADDEDUM NO. 2	CCHY
-	DEC. 20	TENDER DRAWING	CCHY

STATUS
階段

SCALE 比例
A1 AS SHOWN

DIMENSION UNIT 尺寸單位
MILLIMETRES

KEY PLAN
索引圖

PROJECT NO. 項目編號
60507694

CONTRACT NO. 合約編號
NL/2020/03

SHEET TITLE
圖紙名稱
VERTICAL NOISE BARRIER TYPICAL DETAILS

SHEET NUMBER
圖紙編號
60507694/C3/6021A

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Project Management Initials: Designer: CYCK Checked: CCHY Approved: SWKM ISO A1 594mm x 841mm

Plot File by: Shuyan.Wang@aecom.com 24-February-2021
PATH: pw:\\aecom-as-pw.bentley.com:AECOM_DS02_AS\Documents\60507694 TCNTE - D&C\CAD PRODUCTION\DRAWING\CONTRACT\C3\60000\C3_6021.dgn

Appendix 4.2

TD Endorsement on Traffic Forecast

By Fax
3922 9797

運輸署
Transport Department

本署檔案 Our Ref. : (NGW0W) in TD NR182/90-19
來函檔號 Your Ref. : CCHY:CYCK:mlpm:60507694/11.11-2021008757L
電 話 Tel. :
圖文傳真 Fax :
電 郵 Email :

23 June 2021

AECOM
12/F, Grand Central Plaza, Tower 2,
138 Shatin Rural Committee Road,
Shatin, Hong Kong

Dear Sir,

Agreement No. CE 69/2015 (CE)
Tung Chung New Town Extension (East) – Design and Construction

Additional Services
Review for Population Increase and Development Intensity

Planning Review for Population Increase and Development Intensity – Technical Note on Traffic Forecast for Environmental Impact Assessment (Ref. PI00-01)

I refer to your captioned letter dated 11 June 2021. Please find our comments as follows:

1. Please note that the Environmental Assessment is not under our purview. We are not in a position to provide comments on the traffic figures tailor-made for the environmental assessment study.

2. Notwithstanding the above, we have no comment on the methodology of the traffic forecast, provided that you have made reference to the TIA reports under TCNTE(TCE) projects and the traffic data of the technical note shall tally with those for the TIA reports. In case there is any discrepancy in the traffic data between the TIA reports and the EIA report, please highlight it for our consideration.

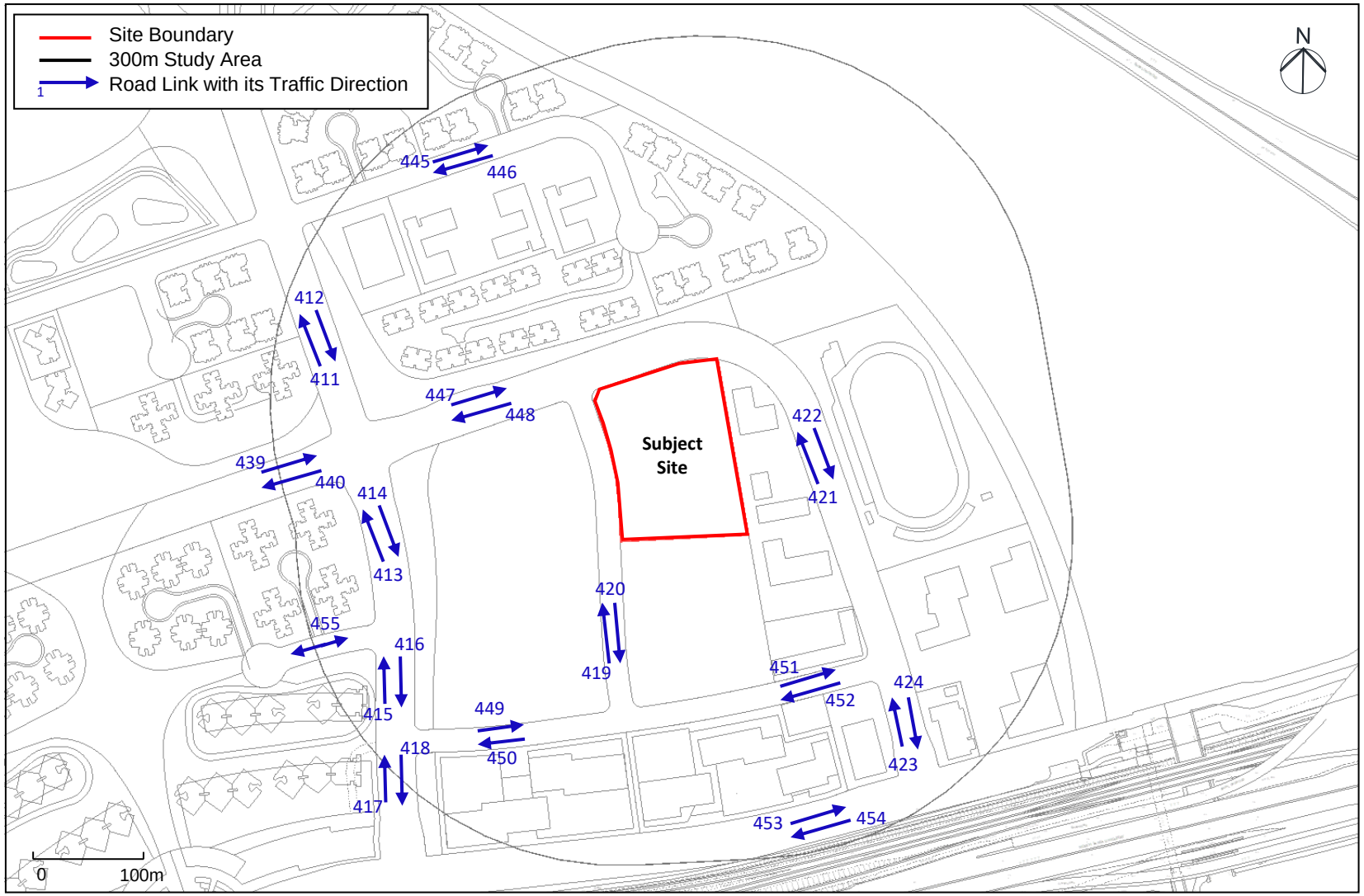
新界分區辦事處
NT Regional Office
九龍聯運街三十號旺角政府合署七樓
7th Floor, Mong Kok Government Offices, 30 Luen Wan Street, Kowloon.
圖文傳真 Fax No.: 2381 3799 (新界區) (NTRO)
網址 Web Site: http://www.td.gov.hk

我們的信念 - 我們會 • 發揮潛能 • 各盡所長 • 公平開放 • 細意關懷 • 承擔責任 • 積極進取 • 力求至善
Our Values - We will • bring out the best in people • be fair, open and caring • take responsibility • be proactive • strive for excellence

Yours faithfully,

Appendix 4.3

Traffic Forecast


Site Boundary
300m Study Area
Road Link with its Traffic Direction
1
N
Subject Site
445
446
412
411
447
448
422
421
439
440
414
413
420
419
455
416
415
449
450
451
452
424
423
418
417
453
454
0
100m

Year 2045 Traffic Flow (AM Peak)

Link ID	Road Name	Speed Limit	Peak Flow (Veh/hr)	Heavy Vehicle (HV) Composition %
1	North Lantau Highway	110	4,261	30.5%
2	North Lantau Highway	110	5,169	28.7%
8	North Lantau Highway	110	2,896	26.9%
9	North Lantau Highway	110	2,195	27.3%
213	Cheung Tung Road	50	300	17.0%
214	Cheung Tung Road	50	221	29.0%
407	Road D5	50	419	31.7%
408	Road D5	50	252	35.1%
409	Road D3	50	104	20.2%
410	Road D3	50	145	20.0%
411	Road D3	50	215	30.7%
412	Road D3	50	510	26.5%
413	Road D3	50	371	19.6%
414	Road D3	50	212	28.0%
415	Road D3	50	314	19.6%
416	Road D3	50	212	28.0%
417	Road D3	50	1,021	20.9%
418	Road D3	50	564	25.4%
419	Road L6	50	220	26.0%
420	Road L6	50	260	33.8%
421	Road D2	50	29	89.0%
422	Road D2	50	812	16.3%
423	Road D2	50	118	22.5%
424	Road D2	50	1,212	17.7%
439	Road D1	50	311	17.9%
440	Road D1	50	81	34.0%
443	Road P1	50	1,074	22.4%
444	Road P1	50	987	20.9%
445	Road L2	50	130	20.2%
446	Road L2	50	136	20.0%
447	Road D2	50	730	21.0%
448	Road D2	50	45	95.7%
449	Road L7	50	459	26.2%
450	Road L7	50	134	43.6%
451	Road L7	50	422	27.1%
452	Road L7	50	58	38.5%
453	Road P1	50	1,173	20.2%
454	Road P1	50	1,543	17.7%
455	Road L9	50	226	20.1%
501	Road P1	50	2,267	18.8%
502	Road P1	50	1,543	17.7%
2401	Shun Long Road	80	701	25.8%
2411	Shun Long Road	80	908	20.2%
465	Road L10	50	213	20.1%
467	Road L2	50	379	29.3%
468	Road L2	50	131	38.8%

Note:

[1] Some traffic flow are not used as they are outside 300m study area of Tung Chung Area 133B, which will be used for Tung Chung Area 133A or 133C.

Appendix 4.4

Predicted Traffic Noise Levels for Residential Blocks (Basecase)

Floor	R101a	R101b	R101c	R101d	R102a	R102b	R102c	R102d	R103a	R103b	R103c	R104a	R104b	R104c	R105a	R105b	R105c	R106a	R106b	R106c	R107a	R107b	R107c
36																							
35																							
34																							
33																							
32	27.2	61.7	62.3	62.9	65.1	64.9	64.6	56.9	58.7	64.2	64.0	64.4	64.6	61.0	60.1	65.1	65.3	65.6	65.7	61.7	60.8	65.8	65.8
31	26.9	61.8	62.4	63.0	65.2	65.0	64.6	57.0	58.8	64.2	64.0	64.4	64.7	61.1	60.1	65.2	65.3	65.7	65.7	61.8	60.9	65.9	65.9
30	26.7	61.9	62.5	63.1	65.2	65.0	64.7	57.0	58.8	64.3	64.1	64.5	64.8	61.2	60.2	65.2	65.4	65.7	65.8	61.8	61.0	65.9	66.0
29	26.5	62.0	62.6	63.2	65.3	65.1	64.7	57.0	58.8	64.3	64.1	64.6	64.8	61.3	60.3	65.3	65.5	65.8	65.9	61.9	61.1	66.0	66.1
28	26.4	62.0	62.6	63.3	65.3	65.1	64.8	57.1	58.9	64.4	64.2	64.6	64.9	61.4	60.4	65.4	65.5	65.9	66.0	62.0	61.2	66.1	66.2
27	26.3	62.1	62.8	63.4	65.4	65.2	64.9	57.0	58.9	64.5	64.2	64.7	65.0	61.4	60.5	65.4	65.6	66.0	66.1	62.1	61.3	66.2	66.2
26	26.2	62.3	62.9	63.5	65.5	65.3	64.9	57.1	58.9	64.5	64.3	64.7	65.0	61.5	60.6	65.5	65.7	66.0	66.1	62.2	61.4	66.2	66.3
25	26.0	62.4	63.0	63.6	65.6	65.4	65.0	57.0	58.9	64.6	64.3	64.8	65.1	61.6	60.7	65.6	65.8	66.1	66.2	62.3	61.4	66.3	66.4
24	25.8	62.5	63.1	63.7	65.6	65.4	65.0	57.0	58.9	64.6	64.4	64.9	65.1	61.7	60.8	65.7	65.8	66.2	66.3	62.4	61.5	66.4	66.5
23	25.7	62.5	63.2	63.8	65.7	65.5	65.1	56.8	58.9	64.7	64.5	65.0	65.2	61.8	60.9	65.7	65.9	66.3	66.4	62.5	61.6	66.5	66.6
22	25.7	62.7	63.3	63.9	65.7	65.5	65.2	56.7	58.9	64.7	64.6	65.0	65.3	61.9	61.0	65.8	66.0	66.4	66.4	62.5	61.7	66.6	66.6
21	25.7	62.8	63.4	64.0	65.8	65.6	65.2	56.5	58.8	64.8	64.6	65.1	65.4	62.0	61.1	65.9	66.1	66.4	66.5	62.6	61.8	66.7	66.7
20	25.7	62.9	63.5	64.1	65.8	65.6	65.3	56.2	58.7	64.8	64.6	65.2	65.4	62.1	61.2	66.0	66.1	66.5	66.6	62.7	61.9	66.7	66.8
19	25.7	63.0	63.6	64.3	65.9	65.7	65.3	55.8	58.4	64.9	64.6	65.2	65.5	62.2	61.3	66.1	66.2	66.6	66.7	62.8	62.0	66.8	66.9
18	25.7	63.1	63.8	64.4	66.0	65.7	65.4	55.7	58.4	64.9	64.7	65.2	65.5	62.3	61.4	66.1	66.3	66.7	66.8	62.9	62.1	66.9	67.0
17	25.8	63.2	63.9	64.5	66.1	65.8	65.4	55.3	58.3	65.0	64.8	65.3	65.6	62.4	61.5	66.2	66.4	66.8	66.9	63.0	62.2	67.0	67.1
16	25.8	63.3	64.0	64.7	66.1	65.9	65.4	55.1	58.3	65.0	64.8	65.3	65.6	62.5	61.6	66.3	66.4	66.9	67.0	63.2	62.4	67.1	67.2
15	25.8	63.4	64.1	64.8	66.3	65.9	65.5	55.0	58.2	65.1	64.9	65.4	65.7	62.6	61.6	66.3	66.5	67.0	67.1	63.3	62.5	67.2	67.3
14	25.8	63.6	64.2	65.0	66.4	66.1	65.6	54.9	58.3	65.1	64.9	65.4	65.7	62.7	61.7	66.3	66.6	67.0	67.1	63.3	62.6	67.3	67.4
13	25.8	63.7	64.4	65.1	66.5	66.1	65.8	54.8	58.3	65.2	65.0	65.5	65.8	62.8	61.8	66.3	66.6	67.1	67.2	63.5	62.7	67.4	67.5
12	25.8	63.9	64.5	65.3	66.6	66.3	65.8	54.9	58.4	65.3	65.1	65.6	65.9	62.9	61.7	66.4	66.6	67.2	67.3	63.6	62.8	67.5	67.6
11	25.8	63.9	64.7	65.4	66.8	66.3	65.9	54.8	58.4	65.4	65.2	65.6	65.9	62.9	61.6	66.4	66.6	67.1	67.3	63.7	62.9	67.6	67.7
10	25.8	64.1	64.8	65.6	66.8	66.5	66.0	54.8	58.4	65.5	65.2	65.6	65.9	63.0	61.7	66.4	66.6	67.1	67.3	63.8	63.0	67.6	67.8
9	25.8	64.2	64.9	65.7	67.0	66.6	66.1	54.8	58.5	65.5	65.2	65.6	65.9	63.1	61.7	66.5	66.7	67.1	67.3	64.0	63.2	67.7	67.8
8	25.8	64.4	65.1	65.9	67.1	66.7	66.2	54.8	58.5	65.6	65.3	65.7	65.9	63.1	61.7	66.5	66.7	67.1	67.3	64.0	63.2	67.6	67.8
7	25.8	64.5	65.3	66.1	67.3	66.8	66.2	54.7	58.5	65.6	65.3	65.7	66.0	63.2	61.7	66.5	66.7	67.2	67.3	64.1	63.3	67.6	67.8
6	25.9	64.7	65.4	66.2	67.4	66.9	66.3	54.6	58.6	65.6	65.3	65.7	65.9	63.1	61.6	66.5	66.7	67.1	67.2	64.1	63.2	67.5	67.6
5	25.9	64.7	65.5	66.3	67.4	66.9	66.3	54.4	58.6	65.7	65.3	65.6	65.9	62.9	61.2	66.5	66.6	67.1	67.2	63.9	63.0	67.4	67.5
4	25.9	64.8	65.5	66.4	67.5	66.9	66.3	53.8	58.4	65.5	65.1	65.4	65.6	62.2	60.4	66.2	66.4	66.8	66.9	63.4	62.3	67.2	67.3
3	25.9	64.9	65.4	66.3	67.2	66.7	66.2	52.8	58.1	65.3	64.8	64.9	65.2	60.6	58.1	65.7	65.9	66.3	66.5	62.2	60.7	66.8	66.8
2	25.9	65.0	65.4	65.7	66.6	66.6	66.2	50.0	57.4	65.0	64.0	63.7	63.9	59.3	55.9	64.4	64.6	65.1	65.2	61.4	59.4	65.5	65.6
1	25.9	65.2	65.5	65.0	65.8	66.5	66.1	46.9	56.8	64.1	62.7	62.5	62.8	58.4	53.9	63.3	63.5	63.9	64.1	60.9	58.6	64.3	64.4
Max	27.2	65.2	65.5	66.4	67.5	66.9	66.3	57.1	58.9	65.7	65.3	65.7	66.0	63.2	61.8	66.5	66.7	67.2	67.3	64.1	63.3	67.7	67.8
Min	25.7	61.7	62.3	62.9	65.1	64.9	64.6	46.9	56.8	64.1	62.7	62.5	62.8	58.4	53.9	63.3	63.5	63.9	64.1	60.9	58.6	64.3	64.4

# Total Flats	2448
Exceedance	7
Compliance Rate	99.7%

Noise sensitive receivers with exceedance (≥70.5 dB(A))

Floor	R108a	R108b	R108c	R109a	R109b	R109c	R109d	R110a	R110b	R110c	R111a	R111b	R111c	R112a	R112b	R112c	R112d	R113a	R113b	R113c	R114a	R114b	R114c
36																							
35																							
34																							
33																							
32	66.1	66.5	66.3	66.0	66.0	66.0	63.1	53.2	57.6	28.3	50.3	58.5	58.5	58.4	58.5	58.3	28.1	28.3	58.0	57.9	55.5	58.2	58.3
31	66.2	66.6	66.3	66.0	66.1	66.1	63.2	53.3	57.6	28.4	50.4	58.6	58.6	58.5	58.5	58.4	28.2	28.4	58.1	58.0	55.5	58.3	58.4
30	66.3	66.6	66.4	66.1	66.1	66.1	63.3	53.4	57.7	28.4	50.5	58.6	58.7	58.5	58.6	58.5	28.2	28.4	58.2	58.0	55.6	58.3	58.5
29	66.4	66.7	66.5	66.2	66.2	66.2	63.4	53.4	57.8	28.4	50.6	58.7	58.8	58.6	58.7	58.6	28.2	28.4	58.3	58.1	55.7	58.3	58.5
28	66.4	66.8	66.5	66.3	66.3	66.3	63.5	53.5	57.9	28.5	50.6	58.8	58.8	58.7	58.8	58.6	28.3	28.5	58.3	58.2	55.7	58.4	58.6
27	66.5	66.9	66.6	66.4	66.4	66.4	63.5	53.6	58.0	28.6	50.7	58.9	58.9	58.8	58.8	58.7	28.3	28.5	58.4	58.3	55.7	58.4	58.7
26	66.6	66.9	66.7	66.4	66.5	66.4	63.6	53.7	58.1	28.6	50.8	59.0	59.0	58.9	58.9	58.8	28.4	28.6	58.5	58.3	55.8	58.5	58.7
25	66.7	67.0	66.8	66.5	66.6	66.5	63.7	53.8	58.1	28.7	50.9	59.0	59.1	58.9	59.0	58.9	28.4	28.6	58.6	58.4	55.9	58.5	58.7
24	66.8	67.1	66.8	66.6	66.6	66.6	63.8	53.9	58.2	28.7	51.0	59.1	59.2	59.0	59.1	58.9	28.4	28.7	58.6	58.5	55.9	58.6	58.7
23	66.9	67.2	67.0	66.7	66.8	66.7	63.9	54.0	58.3	28.8	51.0	59.2	59.2	59.1	59.2	59.0	28.5	28.8	58.7	58.5	55.9	58.7	58.8
22	66.9	67.3	67.1	66.8	66.8	66.8	64.0	54.1	58.4	28.8	51.1	59.3	59.3	59.2	59.3	59.1	28.5	28.7	58.7	58.6	56.0	58.7	58.8
21	67.0	67.4	67.1	66.9	66.9	66.9	64.1	54.1	58.5	28.8	51.2	59.4	59.4	59.3	59.3	59.2	28.6	28.8	58.8	58.6	56.0	58.7	58.8
20	67.1	67.4	67.2	66.9	67.0	66.9	64.2	54.2	58.6	28.9	51.3	59.5	59.5	59.3	59.4	59.2	28.6	28.8	58.9	58.7	56.0	58.7	58.9
19	67.2	67.5	67.3	67.0	67.1	67.0	64.3	54.3	58.7	28.9	51.4	59.6	59.6	59.4	59.4	59.3	28.6	28.9	58.9	58.7	55.9	58.7	58.8
18	67.3	67.6	67.4	67.1	67.1	67.1	64.4	54.4	58.8	29.0	51.5	59.7	59.7	59.5	59.5	59.4	28.6	28.9	58.9	58.7	56.0	58.7	58.8
17	67.4	67.7	67.4	67.2	67.2	67.2	64.5	54.5	58.9	29.0	51.5	59.8	59.8	59.6	59.6	59.4	28.7	28.9	58.9	58.7	56.0	58.7	58.8
16	67.5	67.8	67.6	67.3	67.4	67.3	64.6	54.6	59.0	29.0	51.6	59.8	59.9	59.7	59.6	59.5	28.7	29.0	58.9	58.6	55.8	58.5	58.6
15	67.6	67.9	67.6	67.4	67.4	67.4	64.7	54.7	59.1	29.1	51.6	59.9	59.9	59.7	59.6	59.4	28.7	29.0	58.8	58.5	55.5	58.4	58.5
14	67.7	68.0	67.7	67.5	67.5	67.5	64.8	54.7	59.2	29.1	51.6	60.0	60.0	59.8	59.7	59.4	28.8	29.1	58.7	58.3	55.2	58.2	58.3
13	67.8	68.1	67.9	67.6	67.6	67.6	64.9	54.8	59.2	29.2	51.5	60.1	60.0	59.8	59.6	59.3	28.8	29.1	58.6	58.1	54.6	57.8	57.9
12	67.9	68.2	68.0	67.7	67.7	67.7	64.9	54.8	59.3	29.2	51.5	60.1	60.1	59.8	59.6	59.3	28.8	29.1	58.4	57.7	53.5	57.1	57.3
11	68.1	68.3	68.0	67.7	67.7	67.7	65.1	54.8	59.4	29.2	51.4	60.2	60.1	59.7	59.5	59.1	28.8	29.1	57.8	57.1	52.4	55.8	56.0
10	68.1	68.4	68.2	67.9	67.8	67.8	65.1	54.7	59.4	29.3	51.2	60.2	60.0	59.6	59.2	58.8	28.8	29.2	57.1	55.9	51.2	54.6	54.8
9	68.2	68.5	68.2	67.9	67.9	67.8	65.2	54.5	59.4	29.3	51.1	60.1	59.9	59.3	58.9	58.1	28.8	29.2	55.5	54.2	50.4	53.1	53.3
8	68.3	68.7	68.3	67.9	67.9	67.8	65.3	54.1	59.3	29.3	50.6	60.0	59.6	58.9	58.0	57.0	28.8	29.2	54.5	52.9	49.8	52.1	52.3
7	68.4	68.7	68.4	67.9	67.9	67.8	65.4	53.8	59.2	29.3	49.7	59.7	59.0	57.8	56.5	55.1	28.9	29.2	52.6	51.7	49.4	51.3	51.6
6	68.4	68.8	68.4	67.9	67.9	67.9	65.5	53.2	59.1	29.3	47.5	59.0	57.9	56.1	54.8	53.5	28.9	29.2	51.5	50.8	49.0	50.7	51.0
5	68.3	68.7	68.3	67.9	67.9	68.0	65.4	52.5	58.6	29.3	45.4	57.5	55.6	54.1	52.7	52.1	28.9	29.2	50.6	50.1	48.9	50.3	50.6
4	67.9	68.5	68.0	67.8	67.8	67.9	65.3	50.6	57.4	29.4	43.2	54.9	53.2	51.9	51.2	51.0	28.9	29.3	49.9	49.6	48.8	50.0	50.3
3	66.9	67.7	67.5	67.3	67.5	67.6	64.9	47.9	55.1	29.4	41.4	52.3	50.9	50.4	50.1	50.2	28.9	29.3	49.5	49.3	48.7	49.8	50.1
2	65.5	66.2	66.1	66.1	66.4	66.7	64.5	45.3	52.0	29.5	39.8	50.0	49.0	49.3	49.3	49.7	29.0	29.4	49.2	49.0	48.6	49.6	49.9
1	64.2	64.8	64.7	65.0	65.5	65.9	63.9	43.3	49.3	29.4	38.4	48.1	47.3	48.3	48.6	49.2	29.0	29.3	48.8	48.6	48.4	49.3	49.6
Max	68.4	68.8	68.4	67.9	67.9	68.0	65.5	54.8	59.4	29.5	51.6	60.2	60.1	59.8	59.7	59.5	29.0	29.4	58.9	58.7	56.0	58.7	58.9
Min	64.2	64.8	64.7	65.0	65.5	65.9	63.1	43.3	49.3	28.3	38.4	48.1	47.3	48.3	48.6	49.2	28.1	28.3	48.8	48.6	48.4	49.3	49.6

Noise sensitive receivers with exceedance (≥70.5 dB(A))

Floor	R114d	R115a	R115b	R115c	R115d	R116a	R116b	R116c	R117a	R117b	R118a	R118b	R118c	R201a	R201b	R201c	R202a	R202b	R202c	R203a	R203b	R204a	R204b
36														63.8	63.7	60.9	60.5	63.5	63.4	63.2	62.1	62.2	62.8
35														63.9	63.8	61.0	60.6	63.6	63.5	63.3	62.2	62.3	62.9
34														64.0	63.9	61.1	60.7	63.7	63.6	63.4	62.3	62.4	63.0
33														64.1	64.0	61.2	60.8	63.8	63.7	63.5	62.4	62.5	63.1
32	58.7	55.1	59.2	59.3	27.6	28.8	59.6	59.8	57.6	60.5	60.9	61.1	48.9	64.2	64.1	61.3	60.9	63.8	63.7	63.5	62.6	62.5	63.2
31	58.7	55.2	59.2	59.3	27.3	28.5	59.6	59.8	57.6	60.5	61.0	61.2	48.9	64.2	64.2	61.4	61.0	63.9	63.8	63.6	62.7	62.5	63.2
30	58.8	55.0	59.2	59.3	27.1	28.1	59.6	59.8	57.6	60.5	61.1	61.3	47.7	64.3	64.3	61.6	61.2	64.1	64.0	63.7	62.8	62.7	63.4
29	58.8	54.9	59.2	59.3	26.9	27.8	59.7	59.9	57.6	60.6	61.1	61.4	47.8	64.5	64.4	61.7	61.3	64.2	64.1	63.8	62.8	62.8	63.5
28	58.8	54.8	59.2	59.3	26.9	27.5	59.7	59.9	57.7	60.7	61.2	61.5	47.8	64.6	64.5	61.8	61.4	64.3	64.2	63.9	62.9	62.9	63.6
27	58.8	54.8	59.2	59.4	26.6	27.2	59.8	60.0	57.7	60.8	61.3	61.5	47.9	64.7	64.6	61.9	61.5	64.4	64.3	64.0	63.0	63.0	63.8
26	58.9	54.7	59.3	59.4	26.5	26.9	59.8	60.0	57.9	60.9	61.4	61.6	49.1	64.9	64.8	62.0	61.6	64.6	64.5	64.2	63.1	63.2	63.9
25	58.8	54.6	59.3	59.5	26.4	26.7	59.9	60.1	58.0	61.0	61.5	61.7	49.1	65.0	64.9	62.1	61.7	64.7	64.6	64.3	63.3	63.3	64.0
24	58.8	54.7	59.3	59.5	26.2	26.4	60.0	60.2	57.9	61.0	61.6	61.8	48.0	65.1	65.0	62.3	61.9	64.8	64.7	64.4	63.4	63.4	64.1
23	58.9	54.7	59.4	59.6	26.2	26.2	60.1	60.2	58.1	61.2	61.7	61.9	49.2	65.2	65.1	62.4	62.0	64.9	64.8	64.5	63.5	63.5	64.2
22	58.8	54.7	59.5	59.7	26.3	26.2	60.1	60.3	58.2	61.2	61.8	62.0	49.3	65.3	65.2	62.5	62.1	65.0	64.9	64.7	63.6	63.7	64.3
21	58.8	54.8	59.5	59.7	26.2	26.1	60.2	60.4	58.3	61.4	61.9	62.1	49.4	65.4	65.3	62.6	62.2	65.1	65.0	64.8	63.8	63.8	64.5
20	58.8	54.8	59.6	59.8	26.3	26.2	60.3	60.5	58.3	61.5	62.0	62.2	49.4	65.5	65.4	62.8	62.4	65.2	65.1	64.9	63.9	63.9	64.6
19	58.7	54.8	59.7	59.8	26.3	26.2	60.3	60.5	58.5	61.5	62.1	62.3	49.4	65.7	65.6	62.9	62.5	65.4	65.3	65.1	64.0	64.1	64.7
18	58.7	54.8	59.7	59.9	26.3	26.2	60.4	60.6	58.5	61.6	62.2	62.4	49.5	65.8	65.7	63.1	62.7	65.5	65.4	65.2	64.2	64.2	64.9
17	58.6	54.9	59.8	60.0	26.3	26.2	60.5	60.7	58.6	61.7	62.3	62.5	49.6	66.0	65.9	63.2	62.8	65.7	65.6	65.4	64.3	64.4	65.0
16	58.5	54.9	59.9	60.0	26.3	26.2	60.5	60.8	58.7	61.8	62.4	62.6	49.6	66.1	66.0	63.3	62.9	65.8	65.7	65.5	64.5	64.4	65.2
15	58.2	54.9	59.9	60.1	26.4	26.3	60.6	60.8	58.8	62.0	62.5	62.7	49.8	66.3	66.2	63.5	63.0	66.0	65.9	65.7	64.6	64.6	65.4
14	57.7	55.0	60.0	60.1	26.4	26.2	60.7	60.9	58.9	62.0	62.6	62.9	49.8	66.4	66.4	63.7	63.2	66.1	66.1	65.8	64.8	64.7	65.5
13	57.0	55.0	60.1	60.2	26.4	26.2	60.7	61.0	59.0	62.1	62.7	62.9	49.9	66.6	66.5	63.7	63.3	66.3	66.2	65.9	64.9	64.9	65.7
12	56.0	55.0	60.1	60.3	26.4	26.3	60.9	61.1	59.1	62.2	62.8	63.1	49.9	66.8	66.7	63.9	63.5	66.5	66.4	66.1	65.1	65.1	65.9
11	55.3	55.1	60.2	60.4	26.4	26.3	60.9	61.2	59.2	62.3	63.0	63.2	50.0	67.0	66.9	64.0	63.6	66.7	66.6	66.3	65.3	65.2	66.1
10	54.6	55.1	60.3	60.5	26.5	26.3	61.0	61.3	59.3	62.4	63.1	63.3	50.1	67.1	67.0	64.2	63.8	66.8	66.7	66.4	65.4	65.4	66.1
9	54.1	55.1	60.4	60.5	26.5	26.3	61.0	61.3	59.3	62.5	63.1	63.4	50.2	67.3	67.2	64.4	64.0	67.0	66.9	66.6	65.6	65.6	66.3
8	53.8	55.1	60.4	60.6	26.5	26.3	61.2	61.4	59.5	62.6	63.2	63.5	50.2	67.5	67.4	64.5	64.1	67.1	67.0	66.8	65.8	65.8	66.5
7	53.5	55.2	60.4	60.6	26.5	26.3	61.2	61.6	59.6	62.7	63.4	63.7	50.4	67.7	67.6	64.7	64.3	67.3	67.2	67.0	66.0	65.9	66.7
6	53.4	55.2	60.3	60.6	26.6	26.3	61.3	61.6	59.7	62.8	63.5	63.8	50.5	67.7	67.7	64.9	64.5	67.5	67.4	67.1	66.0	66.0	66.9
5	53.3	55.2	60.2	60.5	26.6	26.4	61.3	61.7	59.8	63.0	63.6	63.9	50.6	67.9	67.8	65.0	64.6	67.5	67.4	67.3	66.2	66.2	67.1
4	53.2	55.2	60.0	60.3	26.6	26.3	61.2	61.7	59.9	63.1	63.7	64.0	50.7	68.0	67.9	65.2	64.8	67.7	67.6	67.4	66.3	66.4	67.3
3	53.2	55.3	59.8	60.1	26.6	26.3	61.1	61.5	59.9	63.2	63.9	64.1	50.8	68.1	68.0	65.4	65.0	67.7	67.7	67.5	66.4	66.5	67.4
2	53.2	55.3	59.5	59.8	26.7	26.4	60.8	61.4	59.9	63.2	64.0	64.3	50.9	67.9	67.9	65.5	65.1	67.6	67.7	67.4	66.5	66.4	67.4
1	53.0	55.3	59.3	59.6	26.7	26.4	60.4	61.1	59.9	63.2	64.1	64.5	51.0	67.9	67.8	65.6	65.2	67.7	67.6	67.5	66.5	66.5	67.4
Max	58.9	55.3	60.4	60.6	27.6	28.8	61.3	61.7	59.9	63.2	64.1	64.5	51.0	68.1	68.0	65.6	65.2	67.7	67.7	67.5	66.5	66.5	67.4
Min	53.0	54.6	59.2	59.3	26.2	26.1	59.6	59.8	57.6	60.5	60.9	61.1	47.7	63.8	63.7	60.9	60.5	63.5	63.4	63.2	62.1	62.2	62.8

Noise sensitive receivers with exceedance (≥70.5 dB(A))

Floor	R205a	R205b	R206a	R206b	R206c	R206d	R207a	R207b	R207c	R207d	R208a	R208b	R208c	R208d	R209a	R209b	R209c	R209d	R210a	R210b	R210c	R210d	R211a
36	62.6	61.9	52.3	62.5	63.2	65.4	65.1	63.1	62.6	47.9	56.7	63.2	63.5	60.6	60.4	64.2	64.3	61.8	60.5	52.6	52.0	51.2	51.0
35	62.7	62.0	52.4	62.6	63.3	65.5	65.2	63.2	62.6	47.8	56.8	63.3	63.6	60.7	60.5	64.3	64.4	61.9	60.6	52.6	52.0	51.2	51.0
34	62.8	62.1	52.5	62.7	63.4	65.6	65.3	63.3	62.7	47.9	56.9	63.4	63.7	60.8	60.6	64.4	64.5	62.0	60.7	52.7	52.0	51.3	51.1
33	62.9	62.2	52.4	62.7	63.5	65.7	65.4	63.4	62.8	47.9	57.0	63.5	63.8	60.9	60.7	64.5	64.6	62.1	60.8	52.7	52.1	51.3	51.1
32	63.0	62.3	52.5	62.8	63.6	65.8	65.5	63.5	62.9	48.0	57.1	63.6	63.9	61.0	60.8	64.6	64.6	62.2	60.8	52.7	52.1	51.4	51.1
31	63.1	62.4	52.6	62.9	63.7	65.9	65.6	63.6	63.0	47.8	57.2	63.7	64.0	61.1	60.9	64.7	64.8	62.2	60.9	52.8	52.1	51.4	51.2
30	63.2	62.5	52.8	63.1	63.8	66.0	65.7	63.7	63.1	47.9	57.3	63.8	64.1	61.2	61.0	64.8	64.9	62.3	61.0	52.8	52.2	51.4	51.2
29	63.4	62.6	52.8	63.2	64.0	66.1	65.8	63.8	63.2	47.9	57.4	63.9	64.2	61.3	61.1	64.9	65.0	62.4	61.1	52.8	52.2	51.4	51.2
28	63.5	62.7	52.9	63.3	64.1	66.2	65.9	63.9	63.3	47.9	57.5	64.0	64.3	61.5	61.3	65.0	65.1	62.5	61.1	52.9	52.2	51.5	51.3
27	63.6	62.8	53.0	63.5	64.2	66.3	66.0	64.0	63.4	47.8	57.7	64.1	64.4	61.6	61.4	65.1	65.2	62.6	61.2	52.9	52.3	51.5	51.3
26	63.7	62.9	53.1	63.6	64.3	66.5	66.2	64.1	63.5	47.8	57.8	64.2	64.5	61.7	61.5	65.2	65.3	62.7	61.3	52.9	52.3	51.5	51.3
25	63.8	63.1	53.2	63.7	64.5	66.6	66.3	64.3	63.6	47.8	57.9	64.3	64.7	61.8	61.6	65.3	65.4	62.8	61.4	53.0	52.3	51.6	51.4
24	64.0	63.2	53.2	63.8	64.6	66.7	66.4	64.4	63.8	47.5	58.0	64.4	64.8	62.0	61.8	65.4	65.5	62.9	61.5	53.0	52.4	51.6	51.4
23	64.0	63.3	53.4	63.9	64.7	66.9	66.6	64.5	63.8	47.5	58.2	64.6	64.8	62.1	61.9	65.5	65.6	63.0	61.5	53.0	52.4	51.6	51.4
22	64.2	63.5	53.4	64.0	64.9	67.0	66.7	64.6	64.0	47.3	58.3	64.7	65.0	62.2	62.0	65.7	65.8	63.0	61.6	53.0	52.4	51.7	51.5
21	64.3	63.6	53.6	64.2	65.0	67.1	66.8	64.7	64.1	47.1	58.4	64.8	65.1	62.4	62.2	65.8	65.9	63.2	61.6	53.1	52.5	51.7	51.5
20	64.4	63.7	53.6	64.3	65.2	67.2	67.0	64.9	64.2	46.7	58.6	64.9	65.3	62.5	62.3	66.0	66.0	63.3	61.6	53.1	52.5	51.7	51.5
19	64.6	63.9	53.7	64.5	65.3	67.4	67.1	65.0	64.3	46.2	58.7	65.0	65.4	62.7	62.4	66.1	66.2	63.3	61.6	53.1	52.5	51.7	51.5
18	64.7	64.0	53.8	64.7	65.4	67.6	67.3	65.1	64.5	45.6	58.9	65.2	65.5	62.8	62.6	66.2	66.3	63.4	61.4	53.2	52.5	51.8	51.6
17	64.9	64.2	54.0	64.8	65.6	67.7	67.5	65.3	64.6	44.8	59.0	65.3	65.6	63.0	62.8	66.3	66.4	63.5	61.3	53.2	52.6	51.8	51.6
16	65.1	64.3	54.1	65.0	65.8	67.9	67.6	65.4	64.8	43.8	59.2	65.4	65.8	63.1	62.9	66.5	66.6	63.5	61.3	53.2	52.6	51.8	51.6
15	65.2	64.4	54.2	65.2	66.0	68.1	67.8	65.6	64.9	43.0	59.3	65.6	66.0	63.3	63.1	66.6	66.7	63.5	61.2	53.2	52.6	51.8	51.6
14	65.4	64.6	54.4	65.4	66.1	68.2	67.9	65.8	65.1	41.8	59.5	65.7	66.1	63.4	63.2	66.8	66.9	63.3	61.2	53.2	52.6	51.9	51.7
13	65.6	64.8	54.5	65.6	66.3	68.4	68.1	65.9	65.2	40.8	59.7	65.9	66.2	63.6	63.4	66.9	67.0	63.2	61.2	53.3	52.7	51.9	51.7
12	65.7	65.0	54.6	65.7	66.6	68.6	68.3	66.1	65.4	39.9	59.8	66.0	66.4	63.8	63.6	67.1	67.1	63.1	61.3	53.3	52.7	51.9	51.7
11	65.9	65.2	54.8	65.9	66.8	68.9	68.6	66.3	65.6	38.9	60.0	66.2	66.5	64.0	63.8	67.2	67.2	63.1	61.4	53.3	52.7	51.9	51.7
10	66.0	65.4	55.0	66.1	67.0	69.1	68.8	66.5	65.8	38.0	60.2	66.3	66.6	64.2	64.0	67.3	67.2	63.2	61.4	53.3	52.7	51.9	51.7
9	66.2	65.5	55.1	66.3	67.2	69.3	69.0	66.7	65.9	37.0	60.4	66.4	66.8	64.3	64.1	67.3	67.3	63.2	61.5	53.3	52.7	52.0	51.7
8	66.4	65.8	55.3	66.5	67.4	69.6	69.2	67.0	66.1	36.0	60.5	66.5	66.8	64.5	64.3	67.4	67.4	63.2	61.5	53.4	52.7	52.0	51.8
7	66.6	65.9	55.4	66.8	67.6	69.8	69.5	67.2	66.4	35.2	60.7	66.6	66.9	64.7	64.5	67.5	67.4	63.1	61.5	53.4	52.8	52.0	51.8
6	66.8	66.1	55.6	67.0	67.9	70.1	69.8	67.4	66.6	34.4	60.7	66.8	67.1	64.8	64.6	67.6	67.5	62.9	61.3	53.4	52.8	52.0	51.8
5	67.0	66.3	55.8	67.2	68.1	70.3	70.0	67.7	66.8	33.5	60.6	66.9	67.2	64.9	64.6	67.7	67.6	62.8	61.4	53.4	52.8	52.0	51.8
4	67.2	66.5	55.9	67.5	68.4	**70.6**	70.3	68.0	67.1	32.7	59.9	66.9	67.3	64.7	64.3	67.7	67.6	62.7	61.3	53.4	52.8	52.0	51.8
3	67.4	66.7	56.1	67.8	68.7	**70.9**	**70.6**	68.2	67.3	31.7	56.8	66.7	66.9	63.4	62.4	67.4	67.4	62.6	61.4	53.4	52.8	52.0	51.8
2	67.6	66.8	56.0	68.0	69.0	**71.3**	**71.0**	68.5	67.3	31.0	53.0	64.9	65.0	60.7	58.3	65.7	65.8	62.6	61.5	53.4	52.8	52.0	51.8
1	67.5	66.9	55.5	68.2	69.2	**71.6**	**71.3**	68.4	66.0	30.3	49.9	62.0	62.3	56.8	54.6	63.9	64.6	62.7	61.5	53.5	52.8	52.0	51.8
Max	67.6	66.9	56.1	68.2	69.2	**71.6**	**71.3**	68.5	67.3	48.0	60.7	66.9	67.3	64.9	64.6	67.7	67.6	63.5	61.6	53.5	52.8	52.0	51.8
Min	62.6	61.9	52.3	62.5	63.2	65.4	65.1	63.1	62.6	30.3	49.9	62.0	62.3	56.8	54.6	63.9	64.3	61.8	60.5	52.6	52.0	51.2	51.0

Noise sensitive receivers with exceedance (≥70.5 dB(A))

Floor	R211b	R211c	R212a	R212b	R213a	R213b	R214a	R214b	R214c	R214d	R215a	R215b	R215c	R215d	R216a	R216b	R217a	R217b	R217c	R218a	R218b	R218c	R218d
36	50.2	49.2	47.1	46.3	43.0	34.6	35.9	41.9	43.7	44.1	37.2	35.1	34.1	24.7	32.8	34.4	34.7	35.4	31.6	34.2	40.4	45.6	52.0
35	50.3	49.3	47.1	46.2	42.9	34.2	35.3	41.0	42.7	43.6	36.5	34.3	33.3	24.3	32.0	33.6	34.0	34.7	30.8	33.1	39.0	45.2	52.0
34	50.3	49.3	47.2	46.2	42.8	33.9	35.0	40.4	42.3	42.9	35.8	33.6	32.6	24.0	31.3	33.0	33.4	34.1	30.3	32.3	38.1	45.0	52.0
33	50.3	49.3	47.2	46.3	42.9	33.6	33.8	39.9	41.5	41.9	35.2	33.0	32.0	23.8	30.7	32.5	32.8	33.5	29.8	31.5	37.3	44.8	52.0
32	50.4	49.4	47.2	46.3	42.9	33.4	33.1	39.0	40.5	41.2	34.8	32.6	31.5	23.8	30.1	31.9	32.4	33.0	29.3	31.0	36.6	44.7	51.4
31	50.4	49.4	47.3	46.3	42.9	33.2	32.6	38.4	39.9	40.6	34.5	32.3	31.1	23.7	29.7	31.6	32.1	32.7	29.0	30.5	36.1	44.7	51.4
30	50.4	49.4	47.3	46.4	42.9	33.1	32.1	37.8	39.3	40.0	34.4	32.2	31.1	23.6	29.7	31.6	32.0	32.6	29.0	30.2	35.7	44.6	51.5
29	50.5	49.5	47.3	46.4	42.9	33.0	31.7	37.3	38.7	39.5	34.3	32.2	31.1	23.6	29.7	31.6	32.0	32.6	28.9	30.0	35.3	44.6	52.0
28	50.4	49.5	47.4	46.4	42.9	32.8	31.2	36.8	38.3	39.1	34.3	32.2	31.1	23.7	29.6	31.5	32.0	32.5	28.9	29.8	35.0	44.6	52.0
27	50.5	49.5	47.4	46.5	43.0	32.8	30.8	36.4	37.8	38.6	34.2	32.2	31.1	23.6	29.6	31.5	32.0	32.4	28.9	29.7	34.7	44.5	52.0
26	50.5	49.6	47.4	46.5	43.0	32.6	30.5	36.1	37.4	38.2	34.2	32.2	31.1	23.5	29.6	31.5	32.0	32.4	28.9	29.5	34.5	44.5	52.1
25	50.5	49.6	47.5	46.4	43.0	32.5	30.2	35.7	37.0	37.8	34.1	32.2	31.1	23.5	29.5	31.4	31.9	32.4	28.8	29.3	34.4	44.5	52.1
24	50.6	49.6	47.5	46.5	43.1	32.5	29.9	35.4	36.6	37.5	34.1	32.2	31.1	23.5	29.5	31.4	31.9	32.4	28.8	29.2	34.2	44.5	52.1
23	50.6	49.7	47.5	46.5	43.1	32.3	29.7	35.1	36.4	37.2	34.0	32.2	31.1	23.5	29.5	31.4	31.9	32.4	28.8	29.2	34.0	44.5	52.1
22	50.6	49.7	47.6	46.5	43.1	32.2	29.4	34.8	36.0	36.9	34.0	32.2	31.1	23.4	29.5	31.4	31.9	32.4	28.7	29.0	33.9	44.6	52.2
21	50.7	49.7	47.6	46.5	43.1	32.2	29.2	34.7	35.7	36.6	34.0	32.2	31.1	23.4	29.5	31.4	31.8	32.3	28.7	28.9	33.8	44.6	52.2
20	50.7	49.7	47.6	46.6	43.1	32.1	29.0	34.4	35.5	36.3	33.9	32.2	31.1	23.4	29.5	31.4	31.8	32.3	28.7	28.9	33.7	44.6	52.2
19	50.7	49.7	47.6	46.6	43.1	32.1	28.8	34.2	35.2	36.1	33.9	32.2	31.1	23.4	29.4	31.4	31.8	32.3	28.6	28.8	33.6	44.6	52.2
18	50.7	49.7	47.7	46.6	43.1	32.0	28.8	34.0	35.0	35.9	33.9	32.2	31.1	23.3	29.5	31.3	31.8	32.3	28.6	28.8	33.5	44.6	52.3
17	50.7	49.8	47.7	46.6	43.2	32.0	28.6	33.9	34.8	35.7	33.8	32.2	31.1	23.3	29.4	31.3	31.8	32.3	28.6	28.7	33.5	44.6	52.3
16	50.8	49.8	47.7	46.7	43.2	31.9	28.5	33.7	34.6	35.5	33.8	32.2	31.1	23.3	29.4	31.3	31.8	32.3	28.5	28.6	33.4	44.6	52.3
15	50.8	49.8	47.7	46.7	43.2	31.9	28.4	33.5	34.4	35.3	33.8	32.2	31.1	23.3	29.4	31.3	31.8	32.3	28.6	28.7	33.4	44.7	52.3
14	50.8	49.8	47.8	46.7	43.2	31.9	28.3	33.4	34.3	35.2	33.8	32.2	31.1	23.2	29.4	31.3	31.8	32.3	28.6	28.6	33.3	44.7	52.4
13	50.8	49.9	47.8	46.7	43.3	31.9	28.2	33.3	34.1	35.0	33.8	32.2	31.1	23.3	29.4	31.3	31.8	32.3	28.6	28.6	33.3	44.7	52.4
12	50.8	49.9	47.8	46.8	43.3	31.8	28.2	33.2	34.0	34.9	33.7	32.2	31.1	23.3	29.4	31.3	31.8	32.3	28.6	28.6	33.3	44.7	52.4
11	50.9	49.9	47.8	46.8	43.3	31.8	28.1	33.1	33.9	34.8	33.7	32.2	31.1	23.2	29.4	31.3	31.8	32.3	28.5	28.6	33.3	44.7	52.4
10	50.9	49.9	47.8	46.8	43.3	31.8	28.1	33.0	33.8	34.7	33.7	32.2	31.1	23.2	29.4	31.3	31.8	32.3	28.6	28.6	33.3	44.8	52.4
9	50.9	49.9	47.8	46.8	43.3	31.8	27.9	33.0	33.7	34.5	33.7	32.2	31.1	23.1	29.4	31.3	31.8	32.3	28.6	28.6	33.2	44.8	52.4
8	50.9	50.0	47.9	46.8	43.4	31.8	28.0	32.9	33.6	34.5	33.7	32.2	31.0	23.1	29.4	31.3	31.8	32.3	28.6	28.5	33.2	44.8	52.5
7	50.9	50.0	47.9	46.8	43.4	31.9	27.9	33.0	33.6	34.5	33.7	32.2	31.1	23.1	29.4	31.3	31.8	32.3	28.5	28.5	33.2	44.8	52.5
6	50.9	50.0	47.9	46.9	43.4	31.9	27.9	32.9	33.5	34.4	33.7	32.2	31.1	23.1	29.4	31.3	31.8	32.3	28.5	28.5	33.2	44.8	52.5
5	51.0	50.0	47.9	46.9	43.4	31.9	27.8	32.8	33.5	34.3	33.7	32.2	31.1	23.1	29.4	31.3	31.8	32.3	28.5	28.5	33.2	44.8	52.5
4	51.0	50.0	47.9	46.9	43.4	31.9	27.8	32.8	33.4	34.3	33.7	32.2	31.1	23.1	29.4	31.3	31.8	32.3	28.5	28.5	33.2	44.8	52.5
3	51.0	50.0	47.9	46.9	43.4	31.9	27.7	32.8	33.3	34.2	33.7	32.2	31.1	23.1	29.4	31.3	31.8	32.3	28.5	28.5	33.2	44.8	52.5
2	51.0	50.1	47.9	46.9	43.4	31.9	27.7	32.8	33.3	34.2	33.8	32.3	31.1	23.1	29.5	31.3	31.8	32.3	28.6	28.5	33.2	44.8	52.5
1	51.0	50.1	47.9	46.9	43.4	31.9	27.7	32.8	33.3	34.2	33.8	32.3	31.2	23.0	29.5	31.4	31.9	32.3	28.6	28.6	33.2	44.9	52.5
Max	51.0	50.1	47.9	46.9	43.4	34.6	35.9	41.9	43.7	44.1	37.2	35.1	34.1	24.7	32.8	34.4	34.7	35.4	31.6	34.2	40.4	45.6	52.5
Min	50.2	49.2	47.1	46.2	42.8	31.8	27.7	32.8	33.3	34.2	33.7	32.2	31.0	23.0	29.4	31.3	31.8	32.3	28.5	28.5	33.2	44.5	51.4

Noise sensitive receivers with exceedance (≥70.5 dB(A))

Floor	R301a	R301b	R301c	R301d	R302a	R302b	R302c	R302d	R303a	R303b	R303c	R304a	R304b	R304c	R304d	R305a	R305b	R305c	R306a	R306b	R306c	R307a	R307b
36																							
35																							
34																							
33																							
32	40.8	58.8	58.8	53.9	58.0	58.2	57.9	55.2	57.7	57.9	32.6	31.5	58.5	58.9	59.0	59.2	59.2	51.5	31.9	58.6	55.1	63.8	65.7
31	40.6	58.8	58.8	54.0	58.0	58.3	58.0	55.2	57.7	58.0	32.2	31.2	58.5	58.9	59.1	59.3	59.3	51.5	31.4	58.6	55.1	63.9	65.8
30	40.5	58.9	58.8	54.1	58.1	58.3	58.1	55.2	57.7	58.1	31.9	31.1	58.6	59.0	59.1	59.3	59.3	51.5	31.2	58.7	55.2	63.9	65.9
29	40.3	58.9	58.9	54.1	58.1	58.3	58.1	55.3	57.8	58.1	31.8	31.0	58.6	59.0	59.1	59.4	59.4	51.6	31.1	58.8	55.3	64.0	65.9
28	40.1	59.0	58.9	54.1	58.2	58.4	58.1	55.4	57.8	58.1	31.7	31.0	58.6	59.1	59.2	59.4	59.4	51.7	31.1	58.8	55.3	64.1	66.0
27	39.9	59.0	58.9	54.2	58.2	58.4	58.2	55.3	57.9	58.2	31.6	30.9	58.7	59.0	59.2	59.4	59.5	51.7	31.0	58.8	55.4	64.1	66.1
26	39.7	59.0	58.9	54.3	58.3	58.5	58.2	55.4	57.9	58.2	31.5	30.9	58.8	59.1	59.3	59.5	59.5	51.8	31.0	58.8	55.5	64.2	66.1
25	39.3	58.9	58.9	54.3	58.2	58.4	58.2	55.5	57.9	58.3	31.6	31.0	58.8	59.1	59.3	59.5	59.5	51.8	31.1	58.9	55.5	64.3	66.2
24	38.6	59.0	58.9	54.3	58.2	58.5	58.2	55.5	58.0	58.2	31.7	31.1	58.8	59.2	59.3	59.5	59.5	51.9	31.2	58.9	55.6	64.3	66.3
23	37.6	58.9	58.8	54.4	58.2	58.5	58.2	55.5	58.0	58.3	31.7	31.1	58.8	59.2	59.3	59.6	59.5	51.9	31.2	58.9	55.6	64.4	66.4
22	36.2	58.8	58.8	54.5	58.1	58.5	58.2	55.5	58.0	58.3	31.8	31.2	58.9	59.2	59.4	59.6	59.6	52.0	31.3	59.0	55.6	64.5	66.5
21	35.0	58.8	58.8	54.5	58.1	58.4	58.1	55.5	58.0	58.4	31.8	31.2	58.9	59.3	59.4	59.7	59.6	52.0	31.3	59.0	55.6	64.5	66.5
20	33.8	58.8	58.7	54.6	58.0	58.3	58.0	55.6	57.9	58.3	31.9	31.3	58.9	59.2	59.4	59.7	59.7	52.0	31.4	59.0	55.7	64.5	66.6
19	32.9	58.7	58.7	54.6	58.0	58.2	57.9	55.4	57.9	58.3	32.0	31.4	58.9	59.2	59.5	59.7	59.7	52.1	31.5	59.1	55.7	64.6	66.7
18	32.2	58.8	58.8	54.7	57.8	58.0	57.7	55.5	57.8	58.2	32.0	31.4	58.9	59.3	59.5	59.8	59.8	52.1	31.5	59.1	55.7	64.7	66.8
17	31.5	58.8	58.8	54.7	57.7	58.0	57.7	55.5	57.6	58.0	32.1	31.5	58.9	59.2	59.5	59.9	59.8	52.2	31.6	59.2	55.7	64.8	66.9
16	31.0	58.8	58.8	54.7	57.5	57.8	57.5	55.3	57.3	57.8	32.2	31.6	58.8	59.2	59.6	59.9	59.9	52.2	31.7	59.2	55.8	64.9	67.0
15	30.4	58.8	58.9	54.8	57.3	57.6	57.3	55.0	57.1	57.6	32.2	31.6	58.6	59.2	59.5	59.9	59.9	52.2	31.7	59.4	55.8	65.0	67.1
14	30.0	58.8	58.8	54.8	56.7	57.4	57.0	54.7	56.9	57.4	32.3	31.6	58.4	59.0	59.5	59.9	59.9	52.2	31.8	59.3	55.8	65.1	67.2
13	29.6	58.8	58.8	54.8	55.8	57.0	56.7	54.0	56.7	57.2	32.3	31.7	58.1	58.7	59.3	59.8	59.9	52.1	31.9	59.3	55.8	65.2	67.3
12	29.3	58.8	58.8	54.7	54.7	56.4	56.0	52.7	56.3	56.9	32.4	31.8	57.9	58.5	59.0	59.7	59.9	52.0	31.9	59.4	55.9	65.3	67.4
11	29.0	58.8	58.8	54.7	53.8	54.9	54.5	51.1	55.6	56.5	32.5	31.8	57.7	58.2	58.7	59.4	59.7	51.7	32.0	59.4	55.8	65.4	67.6
10	28.6	58.7	58.7	54.5	52.9	53.7	53.2	49.4	54.2	55.7	32.5	31.9	57.4	58.0	58.4	58.9	59.4	51.0	32.1	59.2	55.7	65.5	67.7
9	28.4	58.6	58.7	54.3	52.3	51.9	51.3	47.8	52.6	53.9	32.6	31.9	56.8	57.6	58.1	58.7	58.9	49.6	32.1	59.0	55.5	65.6	67.8
8	28.2	58.7	58.6	53.9	51.8	50.7	50.0	46.5	50.7	52.6	32.7	32.0	55.6	56.9	57.7	58.4	58.6	48.2	32.2	58.5	55.2	65.8	67.9
7	27.9	58.6	58.6	53.6	51.5	49.6	48.8	45.1	49.2	50.4	32.7	32.1	53.6	55.4	57.0	58.0	58.3	46.0	32.3	57.8	54.2	65.9	68.0
6	27.8	58.6	58.6	53.4	51.2	48.8	47.8	44.0	47.8	48.8	32.8	32.1	51.5	54.0	55.2	57.1	57.7	44.4	32.3	57.1	53.3	66.0	68.1
5	27.6	58.6	58.6	53.2	51.0	48.0	46.9	42.9	46.5	47.4	32.8	32.2	49.7	51.5	53.4	55.1	56.6	43.0	32.4	56.5	51.8	66.0	68.2
4	27.5	58.6	58.6	52.9	50.8	47.3	46.0	41.8	45.4	46.2	32.9	32.2	48.2	50.0	51.7	53.1	54.4	41.8	32.4	55.8	50.8	66.0	68.3
3	27.4	58.6	58.6	52.4	50.7	46.8	45.3	40.9	44.4	45.1	32.9	32.3	46.8	48.8	50.6	51.5	52.3	40.7	32.5	54.1	50.1	65.9	68.3
2	27.3	58.5	58.5	51.4	50.6	46.4	44.7	39.8	43.5	44.1	33.0	32.3	45.6	47.7	49.6	50.3	50.8	39.7	32.6	52.1	49.6	65.7	68.2
1	27.2	58.5	58.4	50.7	50.4	45.9	44.1	38.9	42.5	43.1	33.1	32.4	44.5	46.9	48.9	49.4	49.7	38.8	32.6	50.5	49.1	65.2	68.0
Max	40.8	59.0	58.9	54.8	58.3	58.5	58.2	55.6	58.0	58.4	33.1	32.4	58.9	59.3	59.6	59.9	59.9	52.2	32.6	59.4	55.9	66.0	68.3
Min	27.2	58.5	58.4	50.7	50.4	45.9	44.1	38.9	42.5	43.1	31.5	30.9	44.5	46.9	48.9	49.4	49.7	38.8	31.0	50.5	49.1	63.8	65.7

Noise sensitive receivers with exceedance (≥70.5 dB(A))

Floor	R307c	R307d	R308a	R308b	R308c	R309a	R309b	R309c	R310a	R310b	R310c	R311a	R311b	R311c	R312a	R312b	R312c	R313a	R313b	R313c	R314a	R314b	R314c
36																							
35																							
34																							
33																							
32	65.7	65.6	65.6	65.8	64.6	64.0	63.9	58.9	59.2	63.6	63.5	63.1	62.8	57.7	58.7	62.3	62.2	61.8	62.1	58.2	57.1	62.7	63.1
31	65.8	65.7	65.6	65.9	64.7	64.0	63.9	58.9	59.3	63.7	63.5	63.1	62.8	57.7	58.7	62.4	62.3	61.8	62.1	58.2	57.1	62.8	63.1
30	65.8	65.7	65.7	65.9	64.7	64.1	64.0	59.0	59.4	63.8	63.6	63.1	62.9	57.6	58.7	62.4	62.3	61.9	62.1	58.3	57.1	62.8	63.2
29	65.9	65.8	65.7	66.0	64.8	64.1	64.0	59.0	59.4	63.8	63.6	63.2	62.9	57.5	58.7	62.5	62.3	61.9	62.2	58.3	57.2	62.9	63.2
28	66.0	65.9	65.8	66.1	64.9	64.2	64.1	59.0	59.4	63.9	63.7	63.2	62.9	57.5	58.6	62.5	62.3	61.9	62.2	58.4	57.3	62.9	63.3
27	66.0	65.9	65.9	66.1	64.9	64.2	64.2	59.0	59.5	63.9	63.8	63.2	62.9	57.3	58.5	62.5	62.4	61.9	62.2	58.4	57.2	62.9	63.3
26	66.1	66.0	66.0	66.2	65.0	64.3	64.2	58.9	59.5	64.0	63.8	63.3	63.0	57.0	58.3	62.5	62.3	61.9	62.2	58.4	57.3	62.9	63.3
25	66.2	66.1	66.1	66.3	65.0	64.3	64.2	58.8	59.5	64.0	63.8	63.2	62.9	56.6	58.1	62.4	62.3	61.8	62.1	58.5	57.3	62.9	63.4
24	66.3	66.2	66.2	66.4	65.0	64.3	64.2	58.8	59.5	64.0	63.8	63.2	62.8	56.5	58.0	62.4	62.2	61.8	62.1	58.6	57.4	62.9	63.3
23	66.4	66.3	66.3	66.5	65.1	64.3	64.2	58.7	59.6	64.0	63.8	63.2	62.8	56.1	57.8	62.3	62.1	61.7	62.1	58.5	57.4	62.9	63.3
22	66.4	66.3	66.4	66.6	65.1	64.3	64.2	58.7	59.7	63.9	63.7	63.1	62.8	55.9	57.6	62.3	62.1	61.7	62.0	58.5	57.3	62.8	63.3
21	66.5	66.4	66.5	66.7	65.2	64.4	64.3	58.7	59.7	63.9	63.7	63.1	62.8	55.7	57.5	62.3	62.0	61.6	61.9	58.6	57.4	62.7	63.2
20	66.6	66.5	66.6	66.8	65.3	64.4	64.3	58.8	59.8	64.0	63.7	63.1	62.8	55.5	57.5	62.2	61.9	61.5	61.8	58.6	57.4	62.6	63.1
19	66.7	66.6	66.6	66.9	65.4	64.5	64.4	58.8	59.9	64.0	63.7	63.1	62.8	55.4	57.4	62.2	61.9	61.5	61.8	58.5	57.2	62.5	62.9
18	66.8	66.7	66.7	67.0	65.5	64.6	64.4	58.9	60.0	64.1	63.8	63.2	62.8	55.3	57.4	62.2	61.9	61.5	61.8	58.5	57.2	62.3	62.7
17	66.9	66.8	66.9	67.1	65.6	64.7	64.5	59.0	60.1	64.1	63.8	63.1	62.8	55.3	57.4	62.2	61.9	61.5	61.7	58.4	57.0	62.2	62.5
16	67.0	66.9	67.0	67.2	65.6	64.7	64.6	59.1	60.1	64.2	63.9	63.2	62.9	55.3	57.5	62.2	61.9	61.4	61.6	58.2	56.7	62.1	62.3
15	67.1	67.0	67.1	67.3	65.7	64.8	64.6	59.1	60.2	64.2	63.9	63.2	62.9	55.4	57.5	62.2	61.9	61.3	61.5	57.8	56.3	62.0	62.2
14	67.2	67.1	67.2	67.4	65.8	64.8	64.6	59.2	60.3	64.3	64.0	63.3	62.9	55.4	57.5	62.2	61.8	61.1	61.4	57.2	55.5	61.9	62.0
13	67.3	67.2	67.4	67.6	65.9	64.9	64.7	59.3	60.4	64.2	64.0	63.3	62.9	55.4	57.6	62.1	61.6	60.8	61.1	56.4	54.2	61.7	61.8
12	67.4	67.4	67.5	67.7	66.0	65.0	64.8	59.4	60.5	64.3	64.0	63.2	62.9	55.5	57.7	61.9	61.4	60.6	60.9	55.9	53.3	61.4	61.6
11	67.6	67.5	67.6	67.8	66.2	65.1	64.8	59.5	60.6	64.3	64.0	63.2	62.8	55.6	57.7	61.6	61.0	60.4	60.6	54.8	51.4	61.2	61.4
10	67.7	67.6	67.7	68.0	66.3	65.1	64.9	59.5	60.6	64.3	64.0	63.0	62.6	55.6	57.8	61.2	60.8	60.1	60.4	53.9	50.2	60.8	61.1
9	67.8	67.7	67.8	68.1	66.4	65.2	64.9	59.6	60.7	64.2	63.9	62.7	62.1	55.6	57.9	60.9	60.4	59.9	60.1	53.0	48.8	60.7	60.9
8	67.9	67.9	68.0	68.2	66.5	65.2	64.9	59.7	60.8	64.1	63.7	62.2	61.7	55.7	57.9	60.6	60.1	59.6	59.9	51.9	47.7	60.5	60.7
7	68.0	68.0	68.1	68.3	66.6	65.2	64.8	59.8	60.8	63.8	63.3	61.8	61.3	55.8	58.0	60.4	59.9	59.3	59.7	50.6	46.7	60.3	60.5
6	68.1	68.1	68.2	68.5	66.7	65.1	64.6	59.8	60.7	63.3	62.6	61.3	60.9	55.8	58.0	60.1	59.7	59.2	59.5	49.1	45.8	60.2	60.4
5	68.2	68.1	68.4	68.6	66.8	64.7	64.2	59.7	60.5	62.4	61.9	60.9	60.5	55.9	58.0	59.7	59.3	58.6	59.2	47.6	44.9	60.0	60.3
4	68.2	68.2	68.4	68.6	66.7	64.2	63.3	59.6	60.0	61.6	61.2	60.4	60.0	56.0	57.8	59.0	58.4	57.8	58.4	46.4	44.1	59.6	60.0
3	68.3	68.2	68.4	68.6	66.6	63.0	62.0	59.1	59.3	60.8	60.5	59.4	59.1	55.7	57.1	58.1	57.5	57.0	57.8	45.3	43.4	59.0	59.5
2	68.2	68.1	68.2	68.5	66.1	61.2	60.5	57.8	58.0	59.7	59.3	58.4	58.0	54.9	55.8	57.0	56.7	56.0	56.8	44.4	42.8	58.5	59.0
1	68.0	67.9	68.1	68.2	65.0	58.9	58.3	55.1	55.4	57.6	57.2	56.5	56.1	52.1	53.0	55.4	55.0	54.4	55.5	43.6	42.1	57.5	58.5
Max	68.3	68.2	68.4	68.6	66.8	65.2	64.9	59.8	60.8	64.3	64.0	63.3	63.0	57.7	58.7	62.5	62.4	61.9	62.2	58.6	57.4	62.9	63.4
Min	65.7	65.6	65.6	65.8	64.6	58.9	58.3	55.1	55.4	57.6	57.2	56.5	56.1	52.1	53.0	55.4	55.0	54.4	55.5	43.6	42.1	57.5	58.5

Noise sensitive receivers with exceedance (≥70.5 dB(A))

Floor	R314d	R315a	R315b	R315c	R315d	R316a	R316b	R316c	R317a	R317b	R318a	R318b	R318c	R401a	R401b	R401c	R401d	R402a	R402b	R402c	R403a	R403b	R404a
36														55.1	54.9	54.8	52.4	51.9	53.6	53.3	52.7	49.6	27.0
35														55.1	54.9	54.9	52.5	52.0	53.7	53.3	52.8	49.7	26.7
34														55.2	55.1	54.9	52.5	52.0	53.8	53.4	52.9	49.7	26.6
33														55.2	55.1	55.0	52.6	52.1	53.8	53.4	52.9	49.8	26.5
32	63.1	61.2	60.7	59.9	41.0	48.9	59.3	59.2	59.1	56.2	58.9	58.9	29.3	55.2	55.2	55.0	52.7	52.2	53.9	53.5	53.0	49.9	26.4
31	63.1	61.1	60.7	59.8	40.6	48.6	59.3	59.3	59.1	56.2	58.9	58.9	29.0	55.3	55.2	55.1	52.7	52.2	53.9	53.5	53.1	49.9	26.2
30	63.1	61.0	60.6	59.8	40.1	48.3	59.3	59.2	59.1	56.2	59.0	58.9	28.7	55.4	55.3	55.2	52.8	52.3	54.0	53.6	53.2	50.0	26.1
29	63.1	60.9	60.6	59.7	39.3	48.0	59.3	59.3	59.1	56.2	59.0	59.0	28.3	55.4	55.3	55.2	52.8	52.4	54.0	53.6	53.2	50.1	26.1
28	63.1	60.8	60.5	59.6	38.2	47.6	59.3	59.3	59.1	56.2	59.0	59.0	28.0	55.5	55.4	55.3	52.8	52.4	54.1	53.7	53.2	50.2	25.9
27	63.1	60.7	60.5	59.6	37.2	47.1	59.4	59.3	59.2	56.3	59.1	59.0	27.6	55.5	55.5	55.3	52.9	52.5	54.2	53.8	53.3	50.2	25.8
26	63.2	60.6	60.4	59.6	36.1	46.4	59.4	59.3	59.2	56.3	59.1	59.1	27.2	55.5	55.5	55.3	52.9	52.6	54.2	53.8	53.3	50.3	25.6
25	63.2	60.5	60.4	59.5	35.1	45.3	59.4	59.4	59.2	56.3	59.1	59.0	26.8	55.6	55.5	55.4	52.9	52.6	54.2	53.9	53.4	50.4	25.6
24	63.1	60.3	60.3	59.5	34.2	43.9	59.4	59.4	59.2	56.2	59.1	59.1	26.5	55.7	55.6	55.5	53.0	52.7	54.3	53.9	53.4	50.4	25.5
23	63.0	60.0	60.2	59.5	33.4	42.7	59.4	59.4	59.3	56.3	59.1	59.0	26.3	55.7	55.6	55.5	53.0	52.8	54.3	53.9	53.5	50.5	25.4
22	63.0	59.8	60.1	59.5	32.8	41.3	59.4	59.4	59.3	56.3	59.1	59.0	26.1	55.8	55.7	55.5	52.9	52.8	54.4	54.0	53.5	50.6	25.2
21	62.9	59.5	60.0	59.5	32.1	40.2	59.4	59.3	59.2	56.3	59.0	59.0	25.9	55.8	55.8	55.6	53.0	52.9	54.5	54.1	53.6	50.6	25.2
20	62.7	59.2	59.9	59.5	31.5	39.3	59.4	59.4	59.2	56.3	58.9	58.8	25.9	55.9	55.8	55.7	53.0	53.0	54.5	54.1	53.6	50.7	25.1
19	62.5	58.7	59.8	59.5	30.9	38.3	59.4	59.4	59.2	56.4	58.9	58.8	26.0	55.9	55.8	55.7	52.8	53.0	54.6	54.1	53.6	50.8	25.0
18	62.1	58.4	59.6	59.4	30.5	37.5	59.4	59.3	59.1	56.3	58.8	58.8	26.0	55.9	55.9	55.7	52.8	53.1	54.6	54.2	53.7	50.8	24.9
17	61.8	58.1	59.4	59.3	30.0	36.7	59.3	59.3	59.0	56.4	58.8	58.8	26.0	56.0	56.0	55.8	52.6	53.2	54.7	54.3	53.7	50.9	24.9
16	61.5	57.9	59.2	59.1	29.7	35.9	59.1	59.1	58.9	56.4	58.8	58.8	26.1	56.1	56.0	55.8	52.3	53.2	54.7	54.3	53.8	51.0	24.7
15	61.2	57.9	59.0	58.9	29.3	35.2	58.8	58.8	58.7	56.5	58.8	58.8	26.0	56.1	56.1	55.9	52.1	53.3	54.8	54.4	53.9	51.0	24.6
14	61.0	57.8	58.9	58.7	29.0	34.5	58.7	58.6	58.7	56.5	58.8	58.7	26.0	56.2	56.1	55.9	51.9	53.3	54.8	54.4	53.9	51.1	24.6
13	60.6	57.8	58.8	58.7	28.8	33.8	58.6	58.5	58.6	56.6	58.7	58.7	26.0	56.2	56.1	56.0	51.8	53.4	54.9	54.4	53.9	51.1	24.5
12	60.4	57.7	58.7	58.6	28.5	33.2	58.5	58.5	58.6	56.6	58.7	58.7	26.1	56.2	56.2	56.0	51.6	53.4	54.9	54.5	54.0	51.2	24.4
11	60.2	57.2	58.7	58.5	28.3	32.6	58.5	58.5	58.7	56.6	58.6	58.7	26.1	56.2	56.2	56.0	51.4	53.5	54.9	54.5	54.0	51.2	24.3
10	60.0	55.8	58.4	58.3	28.1	32.0	58.4	58.5	58.6	56.7	58.7	58.6	26.1	56.3	56.3	56.1	51.0	53.5	55.0	54.6	54.0	51.3	24.3
9	59.9	54.6	57.9	58.0	28.0	31.4	58.4	58.5	58.7	56.7	58.6	58.7	26.1	56.3	56.3	56.1	50.8	53.6	55.0	54.6	54.1	51.3	24.1
8	59.8	53.7	57.6	57.9	27.8	30.9	58.4	58.6	58.7	56.8	58.7	58.6	26.2	56.4	56.4	56.2	50.5	53.6	55.0	54.6	54.1	51.4	24.1
7	59.7	53.1	57.5	57.9	27.7	30.4	58.4	58.6	58.7	56.8	58.7	58.7	26.1	56.4	56.4	56.2	50.1	53.7	55.1	54.7	54.1	51.4	24.0
6	59.5	52.9	57.5	57.9	27.6	30.0	58.5	58.6	58.8	56.9	58.7	58.7	26.2	56.4	56.4	56.2	49.3	53.7	55.1	54.7	54.1	51.5	24.0
5	59.4	52.8	57.6	57.9	27.5	29.6	58.5	58.6	58.7	56.9	58.7	58.7	26.1	56.5	56.5	56.3	46.8	53.7	55.1	54.7	54.2	51.5	23.9
4	59.3	52.8	57.6	57.9	27.4	29.2	58.5	58.6	58.7	57.0	58.7	58.7	26.1	56.5	56.5	56.3	44.2	53.8	55.2	54.7	54.2	51.5	23.9
3	59.0	52.8	57.6	57.9	27.4	28.9	58.6	58.7	58.8	57.0	58.6	58.6	26.2	56.5	56.5	56.3	42.0	53.8	55.2	54.7	54.2	51.5	23.8
2	58.8	52.9	57.6	58.0	27.3	28.7	58.6	58.7	58.8	57.0	58.6	58.6	26.2	56.5	56.5	56.3	40.4	53.8	55.2	54.7	54.2	51.6	23.7
1	58.5	52.9	57.6	58.0	27.2	28.5	58.6	58.7	58.8	57.1	58.7	58.6	26.2	56.6	56.6	56.3	40.8	53.8	55.2	54.8	54.3	51.6	23.7
Max	63.2	61.2	60.7	59.9	41.0	48.9	59.4	59.4	59.3	57.1	59.1	59.1	29.3	56.6	56.6	56.3	53.0	53.8	55.2	54.8	54.3	51.6	27.0
Min	58.5	52.8	57.5	57.9	27.2	28.5	58.4	58.5	58.6	56.2	58.6	58.6	25.9	55.1	54.9	54.8	40.4	51.9	53.6	53.3	52.7	49.6	23.7

Noise sensitive receivers with exceedance (≥70.5 dB(A))

Floor	R404b	R404c	R404d	R405a	R405b	R405c	R405d	R406a	R406b	R407a	R407b	R408a	R408b	R408c	R409a	R409b	R409c	R409d	R410a	R410b	R410c	R410d	R411a
36	51.9	51.6	50.6	52.0	50.2	50.3	42.6	49.0	49.8	50.7	50.3	49.0	50.2	49.9	49.4	51.9	52.5	57.7	58.7	60.1	60.1	58.7	58.9
35	51.8	51.5	50.0	51.8	49.9	50.0	42.2	48.7	49.5	50.4	50.1	48.6	49.9	49.9	49.5	51.6	52.2	57.8	58.7	60.0	60.0	58.6	58.9
34	51.8	51.6	50.1	52.1	49.7	49.8	41.9	48.5	49.3	50.2	50.0	48.3	49.7	50.0	49.4	51.6	52.1	57.8	58.8	60.0	60.0	58.5	59.0
33	51.9	51.7	50.1	51.7	49.5	49.7	41.6	48.3	49.1	50.2	49.9	48.1	49.6	50.0	49.5	51.5	52.0	57.9	58.8	59.9	59.9	58.4	59.0
32	52.0	51.8	50.7	52.0	49.4	49.6	41.4	48.1	48.9	50.0	49.8	48.0	49.5	50.0	49.6	51.3	51.9	57.9	58.9	60.0	59.9	58.3	59.0
31	52.1	51.8	50.7	51.9	49.2	49.4	41.1	48.1	48.8	50.0	49.8	47.8	49.4	50.0	49.6	51.3	51.9	58.0	58.8	60.0	59.9	58.3	59.0
30	52.1	51.8	50.8	51.9	49.2	49.4	40.9	47.9	48.7	49.9	49.7	47.7	49.3	50.1	49.7	51.3	51.9	58.0	58.9	59.9	59.9	58.0	58.9
29	52.1	51.8	50.8	52.0	49.1	49.3	40.7	47.9	48.6	49.8	49.6	47.6	49.3	50.2	49.8	51.3	51.8	58.1	58.8	59.9	59.8	57.9	58.8
28	52.2	51.9	50.8	51.9	49.0	49.2	40.6	47.8	48.4	49.8	49.6	47.5	49.3	50.2	49.8	51.3	51.9	58.1	58.8	59.8	59.7	57.5	58.5
27	52.3	51.9	50.8	51.9	49.0	49.2	40.4	47.7	48.4	49.7	49.6	47.5	49.3	50.2	49.9	51.3	51.9	58.1	58.8	59.6	59.5	57.0	58.2
26	52.3	52.0	50.8	51.9	49.0	49.2	40.4	47.7	48.3	49.7	49.6	47.5	49.3	50.3	50.0	51.2	51.9	58.2	58.8	59.3	59.2	56.6	57.9
25	52.3	52.0	50.9	51.9	49.0	49.1	40.2	47.6	48.2	49.7	49.6	47.5	49.3	50.3	50.0	51.3	52.0	58.2	58.9	59.2	59.0	56.5	57.9
24	52.4	52.1	50.9	52.0	49.0	49.2	40.1	47.6	48.2	49.7	49.6	47.5	49.3	50.4	50.0	51.3	52.0	58.3	58.9	59.1	58.9	56.3	57.8
23	52.5	52.1	50.9	52.0	48.9	49.1	40.0	47.6	48.1	49.7	49.6	47.5	49.3	50.4	50.1	51.3	51.9	58.3	59.0	59.0	58.8	56.3	57.8
22	52.5	52.2	50.9	52.0	49.0	49.1	40.0	47.5	48.1	49.7	49.6	47.5	49.3	50.5	50.0	51.4	52.0	58.4	59.0	59.1	58.8	56.3	57.8
21	52.5	52.2	51.0	52.0	49.0	49.2	39.9	47.5	48.1	49.7	49.6	47.4	49.3	50.5	50.1	51.5	52.0	58.4	59.1	59.0	58.8	56.3	57.8
20	52.6	52.3	51.0	52.0	49.0	49.2	39.9	47.5	48.0	49.7	49.7	47.5	49.4	50.6	50.1	51.5	52.1	58.5	59.1	59.1	58.9	56.4	57.9
19	52.7	52.3	51.0	52.1	49.0	49.2	39.8	47.5	48.0	49.7	49.6	47.5	49.4	50.6	50.2	51.5	52.2	58.5	59.2	59.1	58.9	56.3	57.9
18	52.7	52.4	51.1	52.1	49.0	49.2	39.8	47.5	48.0	49.6	49.6	47.5	49.4	50.7	50.3	51.5	52.2	58.5	59.2	59.1	58.9	56.4	58.0
17	52.7	52.4	51.1	52.1	49.0	49.2	39.8	47.5	48.0	49.6	49.6	47.6	49.4	50.7	50.3	51.6	52.2	58.6	59.3	59.1	58.9	56.4	58.0
16	52.8	52.4	51.1	52.1	49.0	49.2	39.7	47.5	47.9	49.6	49.5	47.6	49.5	50.8	50.4	51.7	52.3	58.6	59.3	59.2	59.0	56.5	58.0
15	52.8	52.4	51.2	52.1	48.9	49.1	39.7	47.5	48.0	49.5	49.4	47.6	49.6	50.8	50.4	51.7	52.3	58.7	59.3	59.2	59.0	56.5	58.1
14	52.8	52.5	51.2	52.0	48.8	49.1	39.6	47.5	48.0	49.3	49.1	47.6	49.6	50.9	50.5	51.8	52.3	58.7	59.3	59.2	59.0	56.5	58.1
13	52.9	52.5	51.2	51.9	48.4	48.9	39.3	47.4	47.9	49.1	48.8	47.7	49.6	50.9	50.5	51.8	52.3	58.8	59.4	59.1	58.9	56.6	58.2
12	52.9	52.6	51.2	51.9	48.2	48.7	38.8	47.5	47.9	46.8	48.7	47.7	49.6	51.0	50.6	51.9	52.4	58.8	59.3	59.1	58.8	56.6	58.2
11	53.0	52.6	51.2	51.8	48.0	48.5	37.2	47.4	47.8	45.6	46.4	47.8	49.7	50.9	50.6	51.9	52.3	58.8	59.3	59.0	58.8	56.7	58.3
10	53.0	52.7	51.2	51.7	47.8	48.4	35.2	47.2	47.7	44.7	45.8	47.8	49.7	51.0	50.7	52.0	52.4	58.9	59.4	59.0	58.8	56.7	58.3
9	53.0	52.7	51.2	51.6	47.6	48.3	32.9	47.2	47.6	44.2	45.5	47.9	49.8	51.0	50.7	52.0	52.4	58.9	59.4	59.1	58.9	56.7	58.3
8	53.1	52.7	51.3	51.6	47.6	48.2	31.5	47.1	47.6	43.8	45.2	47.8	49.8	51.1	50.8	52.0	52.4	58.9	59.4	59.0	58.9	56.8	58.4
7	53.1	52.7	51.3	51.6	47.5	48.2	30.5	47.2	47.5	43.4	44.9	47.8	49.7	51.0	50.8	52.0	52.5	59.0	59.5	59.1	58.9	56.8	58.4
6	53.1	52.8	51.4	51.6	47.5	48.1	29.9	47.2	47.5	42.9	44.4	47.6	49.7	51.0	50.7	51.9	52.5	59.0	59.5	59.1	58.9	56.8	58.4
5	53.1	52.8	51.4	51.6	47.6	48.1	29.4	47.2	47.6	42.0	43.8	47.4	49.6	51.0	50.8	52.0	52.6	59.0	59.5	59.1	59.0	56.8	58.4
4	53.1	52.8	51.4	51.6	47.6	48.1	28.9	47.2	47.5	41.6	43.5	47.4	49.5	51.0	50.8	52.0	52.6	59.0	59.5	59.1	59.0	56.9	58.5
3	53.1	52.8	51.4	51.6	47.5	48.2	28.6	47.2	47.5	41.3	43.2	47.4	49.6	51.0	50.8	52.0	52.6	59.0	59.5	59.2	59.0	56.9	58.5
2	53.2	52.8	51.4	51.6	47.5	48.2	28.2	47.1	47.5	41.1	43.1	47.3	49.6	51.0	50.8	52.0	52.6	59.1	59.6	59.2	59.0	56.9	58.5
1	53.2	52.8	51.4	51.6	47.5	48.2	28.0	47.1	47.5	41.0	43.1	47.3	49.6	51.1	50.8	52.1	52.6	59.1	59.6	59.2	59.0	56.9	58.5
Max	53.2	52.8	51.4	52.1	50.2	50.3	42.6	49.0	49.8	50.7	50.3	49.0	50.2	51.1	50.8	52.1	52.6	59.1	59.6	60.1	60.1	58.7	59.0
Min	51.8	51.5	50.0	51.6	47.5	48.1	28.0	47.1	47.5	41.0	43.1	47.3	49.3	49.9	49.4	51.2	51.8	57.7	58.7	59.0	58.8	56.3	57.8

Noise sensitive receivers with exceedance (≥70.5 dB(A))

Floor	R411b	R411c	R411d	R412a	R412b	R412c	R412d	R413a	R413b	R413c	R413d	R414a	R414b	R415a	R415b	R416a	R416b	R417a	R417b	R417c	R418a	R418b	R418c
36	60.2	59.5	55.4	48.8	59.5	60.0	61.0	60.4	57.4	55.3	23.5	53.5	56.4	57.2	55.6	57.2	58.2	59.0	59.4	56.8	57.8	59.6	59.5
35	60.2	59.5	55.4	48.8	59.5	60.1	61.0	60.4	57.3	55.1	23.5	53.2	56.3	57.0	55.4	57.0	58.2	59.0	59.3	56.8	57.8	59.5	59.5
34	60.1	59.6	55.3	48.9	59.6	60.1	61.1	60.4	57.2	55.0	23.6	53.2	56.3	56.8	55.1	56.8	57.8	58.8	59.2	56.6	57.6	59.5	59.3
33	60.0	59.6	55.3	48.9	59.6	60.2	61.0	60.4	57.2	54.9	23.4	53.0	56.1	56.7	55.0	56.5	57.5	58.5	59.0	56.5	57.4	59.2	59.1
32	59.9	59.6	55.1	48.8	59.7	60.3	61.1	60.5	57.2	54.9	23.5	53.0	56.1	56.5	54.8	56.1	57.1	58.0	58.6	56.2	56.9	58.9	58.8
31	59.9	59.6	54.9	48.9	59.8	60.3	61.0	60.5	57.2	54.9	23.4	53.0	55.9	56.3	54.7	55.7	56.5	57.4	58.1	55.9	56.4	58.4	58.3
30	59.8	59.5	54.5	48.9	59.7	60.3	61.0	60.4	57.1	54.9	23.4	53.0	55.7	55.9	54.5	55.1	55.8	56.7	57.5	55.6	55.9	57.9	57.7
29	59.6	59.4	53.7	49.0	59.7	60.2	60.8	60.4	57.0	54.9	23.5	53.0	55.3	55.3	54.2	54.8	55.4	56.0	56.8	55.1	55.3	57.3	57.0
28	59.4	59.3	52.5	49.0	59.5	60.2	60.6	60.3	56.7	54.7	23.5	52.9	54.9	55.0	54.0	54.4	54.9	55.4	56.1	54.6	54.8	56.6	56.4
27	59.1	58.8	51.8	49.0	59.3	60.0	60.4	59.9	56.3	54.5	23.5	52.8	54.5	54.6	53.9	54.2	54.7	55.1	55.3	54.3	54.5	56.0	55.9
26	58.8	58.6	51.0	49.1	58.9	59.6	60.1	59.3	55.6	54.0	23.5	52.5	54.1	54.2	53.7	54.0	54.5	54.8	54.9	54.1	54.3	55.6	55.4
25	58.5	58.3	50.6	49.0	58.5	59.1	59.5	58.2	54.6	53.5	23.6	51.6	53.6	53.8	53.2	53.7	54.3	54.6	54.6	54.0	54.1	55.3	55.2
24	58.5	58.3	50.0	49.0	58.3	58.7	59.0	57.1	53.2	52.1	23.6	49.6	52.8	53.0	52.3	53.0	54.0	54.4	54.4	54.0	54.1	55.1	55.0
23	58.5	58.2	49.8	49.0	58.1	58.4	58.5	56.0	51.6	50.4	23.6	47.5	51.1	51.7	51.5	52.4	53.5	54.2	54.2	54.0	54.0	55.0	54.9
22	58.4	58.2	49.7	48.8	57.9	58.2	58.1	54.5	49.7	48.2	23.6	45.4	49.8	50.7	50.8	52.0	53.1	53.8	54.1	54.0	54.1	54.9	54.8
21	58.4	58.1	49.5	48.7	57.9	58.0	57.7	53.3	48.0	46.5	23.6	43.8	48.9	50.3	50.6	51.8	53.0	53.6	53.9	53.9	54.0	54.9	54.8
20	58.4	58.2	49.5	48.5	57.7	57.9	57.3	52.3	46.7	45.2	23.6	42.5	48.5	49.9	50.4	51.8	52.8	53.6	53.9	54.0	54.1	54.8	54.8
19	58.5	58.2	49.4	48.3	57.8	57.8	57.2	51.8	45.8	44.5	23.7	41.6	48.1	49.8	50.3	51.7	52.8	53.6	53.9	54.0	54.0	54.9	54.7
18	58.5	58.2	49.4	48.1	57.7	57.8	57.0	51.4	45.2	43.8	23.7	40.9	47.9	49.6	50.3	51.7	52.8	53.6	53.9	54.1	54.1	54.9	54.8
17	58.5	58.2	49.5	47.7	57.7	57.8	57.0	51.2	44.7	43.5	23.7	40.3	47.8	49.6	50.3	51.6	52.8	53.6	53.9	54.1	54.1	54.9	54.8
16	58.5	58.2	49.4	46.9	57.7	57.8	57.0	51.1	44.3	43.1	23.6	39.9	47.7	49.6	50.3	51.6	52.8	53.6	53.9	54.0	54.1	54.9	54.8
15	58.5	58.2	49.5	45.3	57.7	57.7	57.0	50.9	44.0	42.9	23.6	39.5	47.6	49.5	50.2	51.7	52.8	53.6	54.0	54.1	54.2	54.9	54.8
14	58.4	58.1	49.5	43.1	57.5	57.7	56.8	50.8	43.8	42.7	23.7	39.2	47.6	49.5	50.3	51.7	52.8	53.6	54.0	54.1	54.2	54.9	54.8
13	58.3	58.1	49.6	40.9	57.5	57.6	56.8	50.8	43.7	42.6	23.7	39.0	47.6	49.5	50.3	51.7	52.9	53.6	53.9	54.1	54.2	55.0	54.9
12	58.3	58.1	49.5	38.9	57.4	57.6	56.7	50.8	43.7	42.5	23.7	38.8	47.6	49.5	50.3	51.8	52.9	53.6	54.0	54.2	54.2	55.0	54.9
11	58.3	58.1	49.5	37.2	57.4	57.6	56.7	50.8	43.5	42.4	23.7	38.8	47.5	49.6	50.4	51.8	52.9	53.6	54.0	54.2	54.3	55.0	54.9
10	58.4	58.0	49.6	35.9	57.5	57.6	56.7	50.8	43.5	42.4	23.7	38.7	47.6	49.6	50.4	51.8	52.9	53.7	54.0	54.2	54.3	55.1	55.0
9	58.4	58.1	49.6	34.8	57.5	57.6	56.8	50.8	43.5	42.4	23.7	38.6	47.6	49.6	50.4	51.9	53.0	53.7	54.1	54.3	54.3	55.1	55.0
8	58.4	58.1	49.6	33.7	57.5	57.6	56.8	50.8	43.5	42.4	23.7	38.6	47.6	49.7	50.5	51.9	53.0	53.7	54.1	54.3	54.4	55.1	55.0
7	58.4	58.1	49.7	32.7	57.5	57.7	56.8	50.9	43.5	42.4	23.7	38.6	47.7	49.7	50.5	51.8	53.0	53.7	54.1	54.3	54.4	55.1	55.0
6	58.4	58.2	49.7	31.9	57.5	57.7	56.9	50.9	43.5	42.4	23.7	38.5	47.7	49.7	50.4	51.8	53.1	53.8	54.1	54.3	54.4	55.1	55.0
5	58.4	58.2	49.7	31.2	57.6	57.7	56.9	50.9	43.5	42.4	23.7	38.6	47.7	49.7	50.4	51.9	53.1	53.8	54.1	54.3	54.4	55.1	55.1
4	58.5	58.2	49.7	30.5	57.6	57.8	56.9	50.9	43.5	42.5	23.7	38.6	47.7	49.7	50.4	51.9	53.1	53.8	54.2	54.4	54.4	55.1	55.1
3	58.5	58.2	49.7	29.9	57.6	57.8	56.9	50.9	43.5	42.5	23.6	38.6	47.7	49.8	50.5	51.9	53.1	53.8	54.2	54.4	54.4	55.1	55.1
2	58.5	58.2	49.8	29.2	57.6	57.8	57.0	51.0	43.6	42.5	23.6	38.6	47.8	49.8	50.5	51.9	53.1	53.8	54.2	54.4	54.5	55.1	55.1
1	58.5	58.3	49.8	28.7	57.6	57.8	57.0	51.0	43.6	42.5	23.6	38.6	47.8	49.8	50.5	51.9	53.1	53.8	54.2	54.4	54.5	55.1	55.1
Max	60.2	59.6	55.4	49.1	59.8	60.3	61.1	60.5	57.4	55.3	23.7	53.5	56.4	57.2	55.6	57.2	58.2	59.0	59.4	56.8	57.8	59.6	59.5
Min	58.3	58.0	49.4	28.7	57.4	57.6	56.7	50.8	43.5	42.4	23.4	38.5	47.5	49.5	50.2	51.6	52.8	53.6	53.9	53.9	54.0	54.8	54.7

Noise sensitive receivers with exceedance (≥70.5 dB(A))

Floor	R101max	R102max	R103max	R104max	R105max	R106max	R107max	R108max	R109max	R110max	R111max	R112max	R113max	R114max	R115max	R116max	R117max	R118max	R201max	R202max	R203max	R204max	R205max
36																			63.8	63.5	63.2	62.8	62.6
35																			63.9	63.6	63.3	62.9	62.7
34																			64.0	63.7	63.4	63.0	62.8
33																			64.1	63.8	63.5	63.1	62.9
32	62.9	65.1	64.2	64.6	65.3	65.7	65.8	66.5	66.0	57.6	58.5	58.5	58.0	58.7	59.3	59.8	60.5	61.1	64.2	63.8	63.5	63.2	63.0
31	63.0	65.2	64.2	64.7	65.3	65.7	65.9	66.6	66.1	57.6	58.6	58.5	58.1	58.7	59.3	59.8	60.5	61.2	64.2	63.9	63.6	63.2	63.1
30	63.1	65.2	64.3	64.8	65.4	65.8	66.0	66.6	66.1	57.7	58.7	58.6	58.2	58.8	59.3	59.8	60.5	61.3	64.3	64.1	63.7	63.4	63.2
29	63.2	65.3	64.3	64.8	65.5	65.9	66.1	66.7	66.2	57.8	58.8	58.7	58.3	58.8	59.3	59.9	60.6	61.4	64.5	64.2	63.8	63.5	63.4
28	63.3	65.3	64.4	64.9	65.5	66.0	66.2	66.8	66.3	57.9	58.8	58.8	58.3	58.8	59.3	59.9	60.7	61.5	64.6	64.3	63.9	63.6	63.5
27	63.4	65.4	64.5	65.0	65.6	66.1	66.2	66.9	66.4	58.0	58.9	58.8	58.4	58.8	59.4	60.0	60.8	61.5	64.7	64.4	64.0	63.8	63.6
26	63.5	65.5	64.5	65.0	65.7	66.1	66.3	66.9	66.5	58.1	59.0	58.9	58.5	58.9	59.4	60.0	60.9	61.6	64.9	64.6	64.2	63.9	63.7
25	63.6	65.6	64.6	65.1	65.8	66.2	66.4	67.0	66.6	58.1	59.1	59.0	58.6	58.8	59.5	60.1	61.0	61.7	65.0	64.7	64.3	64.0	63.8
24	63.7	65.6	64.6	65.1	65.8	66.3	66.5	67.1	66.6	58.2	59.2	59.1	58.6	58.8	59.5	60.2	61.0	61.8	65.1	64.8	64.4	64.1	64.0
23	63.8	65.7	64.7	65.2	65.9	66.4	66.6	67.2	66.8	58.3	59.2	59.2	58.7	58.9	59.6	60.2	61.2	61.9	65.2	64.9	64.5	64.2	64.0
22	63.9	65.7	64.7	65.3	66.0	66.4	66.6	67.3	66.8	58.4	59.3	59.3	58.7	58.8	59.7	60.3	61.2	62.0	65.3	65.0	64.7	64.3	64.2
21	64.0	65.8	64.8	65.4	66.1	66.5	66.7	67.4	66.9	58.5	59.4	59.3	58.8	58.8	59.7	60.4	61.4	62.1	65.4	65.1	64.8	64.5	64.3
20	64.1	65.8	64.8	65.4	66.1	66.6	66.8	67.4	67.0	58.6	59.5	59.4	58.9	58.9	59.8	60.5	61.5	62.2	65.5	65.2	64.9	64.6	64.4
19	64.3	65.9	64.9	65.5	66.2	66.7	66.9	67.5	67.1	58.7	59.6	59.4	58.9	58.8	59.8	60.5	61.5	62.3	65.7	65.4	65.1	64.7	64.6
18	64.4	66.0	64.9	65.5	66.3	66.8	67.0	67.6	67.1	58.8	59.7	59.5	58.9	58.8	59.9	60.6	61.6	62.4	65.8	65.5	65.2	64.9	64.7
17	64.5	66.1	65.0	65.6	66.4	66.9	67.1	67.7	67.2	58.9	59.8	59.6	58.9	58.8	60.0	60.7	61.7	62.5	66.0	65.7	65.4	65.0	64.9
16	64.7	66.1	65.0	65.6	66.4	67.0	67.2	67.8	67.4	59.0	59.9	59.7	58.9	58.6	60.0	60.8	61.8	62.6	66.1	65.8	65.5	65.2	65.1
15	64.8	66.3	65.1	65.7	66.5	67.1	67.3	67.9	67.4	59.1	59.9	59.7	58.8	58.5	60.1	60.8	62.0	62.7	66.3	66.0	65.7	65.4	65.2
14	65.0	66.4	65.1	65.7	66.6	67.1	67.4	68.0	67.5	59.2	60.0	59.8	58.7	58.3	60.1	60.9	62.0	62.9	66.4	66.1	65.8	65.5	65.4
13	65.1	66.5	65.2	65.8	66.6	67.2	67.5	68.1	67.6	59.2	60.1	59.8	58.6	57.9	60.2	61.0	62.1	62.9	66.6	66.3	65.9	65.7	65.6
12	65.3	66.6	65.3	65.9	66.6	67.3	67.6	68.2	67.7	59.3	60.1	59.8	58.4	57.3	60.3	61.1	62.2	63.1	66.8	66.5	66.1	65.9	65.7
11	65.4	66.8	65.4	65.9	66.6	67.3	67.7	68.3	67.7	59.4	60.2	59.7	57.8	56.0	60.4	61.2	62.3	63.2	67.0	66.7	66.3	66.1	65.9
10	65.6	66.8	65.5	65.9	66.6	67.3	67.8	68.4	67.9	59.4	60.2	59.6	57.1	54.8	60.5	61.3	62.4	63.3	67.1	66.8	66.4	66.1	66.0
9	65.7	67.0	65.5	65.9	66.7	67.3	67.8	68.5	67.9	59.4	60.1	59.3	55.5	54.1	60.5	61.3	62.5	63.4	67.3	67.0	66.6	66.3	66.2
8	65.9	67.1	65.6	65.9	66.7	67.3	67.8	68.7	67.9	59.3	60.0	58.9	54.5	53.8	60.6	61.4	62.6	63.5	67.5	67.1	66.8	66.5	66.4
7	66.1	67.3	65.6	66.0	66.7	67.3	67.8	68.7	67.9	59.2	59.7	57.8	52.6	53.5	60.6	61.6	62.7	63.7	67.7	67.3	67.0	66.7	66.6
6	66.2	67.4	65.6	65.9	66.7	67.2	67.6	68.8	67.9	59.1	59.0	56.1	51.5	53.4	60.6	61.6	62.8	63.8	67.7	67.5	67.1	66.9	66.8
5	66.3	67.4	65.7	65.9	66.6	67.2	67.5	68.7	68.0	58.6	57.5	54.1	50.6	53.3	60.5	61.7	63.0	63.9	67.9	67.5	67.3	67.1	67.0
4	66.4	67.5	65.5	65.6	66.4	66.9	67.3	68.5	67.9	57.4	54.9	51.9	49.9	53.2	60.3	61.7	63.1	64.0	68.0	67.7	67.4	67.3	67.2
3	66.3	67.2	65.3	65.2	65.9	66.5	66.8	67.7	67.6	55.1	52.3	50.4	49.5	53.2	60.1	61.5	63.2	64.1	68.1	67.7	67.5	67.4	67.4
2	65.7	66.6	65.0	63.9	64.6	65.2	65.6	66.2	66.7	52.0	50.0	49.7	49.2	53.2	59.8	61.4	63.2	64.3	67.9	67.7	67.4	67.4	67.6
1	65.5	66.5	64.1	62.8	63.5	64.1	64.4	64.8	65.9	49.3	48.1	49.2	48.8	53.0	59.6	61.1	63.2	64.5	67.9	67.7	67.5	67.4	67.5
Max	66.4	67.5	65.7	66.0	66.7	67.3	67.8	68.8	68.0	59.4	60.2	59.8	58.9	58.9	60.6	61.7	63.2	64.5	68.1	67.7	67.5	67.4	67.6
Min	62.9	65.1	64.1	62.8	63.5	64.1	64.4	64.8	65.9	49.3	48.1	49.2	48.8	53.0	59.3	59.8	60.5	61.1	63.8	63.5	63.2	62.8	62.6

Total	2448
Exceedance	7
Compliance Rate	99.7%

Noise sensitive receivers with exceedance (≥70.5 dB(A))

Floor	R206max	R207max	R208max	R209max	R210max	R211max	R212max	R213max	R214max	R215max	R216max	R217max	R218max	R301max	R302max	R303max	R304max	R305max	R306max	R307max	R308max	R309max	R310max
36	65.4	65.1	63.5	64.3	60.5	51.0	47.1	43.0	44.1	37.2	34.4	35.4	52.0										
35	65.5	65.2	63.6	64.4	60.6	51.0	47.1	42.9	43.6	36.5	33.6	34.7	52.0										
34	65.6	65.3	63.7	64.5	60.7	51.1	47.2	42.8	42.9	35.8	33.0	34.1	52.0										
33	65.7	65.4	63.8	64.6	60.8	51.1	47.2	42.9	41.9	35.2	32.5	33.5	52.0										
32	65.8	65.5	63.9	64.6	60.8	51.1	47.2	42.9	41.2	34.8	31.9	33.0	51.4	58.8	58.2	57.9	59.0	59.2	58.6	65.7	65.8	64.0	63.6
31	65.9	65.6	64.0	64.8	60.9	51.2	47.3	42.9	40.6	34.5	31.6	32.7	51.4	58.8	58.3	58.0	59.1	59.3	58.6	65.8	65.9	64.0	63.7
30	66.0	65.7	64.1	64.9	61.0	51.2	47.3	42.9	40.0	34.4	31.6	32.6	51.5	58.9	58.3	58.1	59.1	59.3	58.7	65.9	65.9	64.1	63.8
29	66.1	65.8	64.2	65.0	61.1	51.2	47.3	42.9	39.5	34.3	31.6	32.6	52.0	58.9	58.3	58.1	59.1	59.4	58.8	65.9	66.0	64.1	63.8
28	66.2	65.9	64.3	65.1	61.1	51.3	47.4	42.9	39.1	34.3	31.5	32.5	52.0	59.0	58.4	58.1	59.2	59.4	58.8	66.0	66.1	64.2	63.9
27	66.3	66.0	64.4	65.2	61.2	51.3	47.4	43.0	38.6	34.2	31.5	32.4	52.0	59.0	58.4	58.2	59.2	59.5	58.8	66.1	66.1	64.2	63.9
26	66.5	66.2	64.5	65.3	61.3	51.3	47.4	43.0	38.2	34.2	31.5	32.4	52.1	59.0	58.5	58.2	59.3	59.5	58.8	66.1	66.2	64.3	64.0
25	66.6	66.3	64.7	65.4	61.4	51.4	47.5	43.0	37.8	34.1	31.4	32.4	52.1	58.9	58.4	58.3	59.3	59.5	58.9	66.2	66.3	64.3	64.0
24	66.7	66.4	64.8	65.5	61.5	51.4	47.5	43.1	37.5	34.1	31.4	32.4	52.1	59.0	58.5	58.2	59.3	59.5	58.9	66.3	66.4	64.3	64.0
23	66.9	66.6	64.8	65.6	61.5	51.4	47.5	43.1	37.2	34.0	31.4	32.4	52.1	58.9	58.5	58.3	59.3	59.6	58.9	66.4	66.5	64.3	64.0
22	67.0	66.7	65.0	65.8	61.6	51.5	47.6	43.1	36.9	34.0	31.4	32.4	52.2	58.8	58.5	58.3	59.4	59.6	59.0	66.5	66.6	64.3	63.9
21	67.1	66.8	65.1	65.9	61.6	51.5	47.6	43.1	36.6	34.0	31.4	32.3	52.2	58.8	58.4	58.4	59.4	59.7	59.0	66.5	66.7	64.4	63.9
20	67.2	67.0	65.3	66.0	61.6	51.5	47.6	43.1	36.3	33.9	31.4	32.3	52.2	58.8	58.3	58.3	59.4	59.7	59.0	66.6	66.8	64.4	64.0
19	67.4	67.1	65.4	66.2	61.6	51.5	47.6	43.1	36.1	33.9	31.4	32.3	52.2	58.7	58.2	58.3	59.5	59.7	59.1	66.7	66.9	64.5	64.0
18	67.6	67.3	65.5	66.3	61.4	51.6	47.7	43.1	35.9	33.9	31.3	32.3	52.3	58.8	58.0	58.2	59.5	59.8	59.1	66.8	67.0	64.6	64.1
17	67.7	67.5	65.6	66.4	61.3	51.6	47.7	43.2	35.7	33.8	31.3	32.3	52.3	58.8	58.0	58.0	59.5	59.9	59.2	66.9	67.1	64.7	64.1
16	67.9	67.6	65.8	66.6	61.3	51.6	47.7	43.2	35.5	33.8	31.3	32.3	52.3	58.8	57.8	57.8	59.6	59.9	59.2	67.0	67.2	64.7	64.2
15	68.1	67.8	66.0	66.7	61.2	51.6	47.7	43.2	35.3	33.8	31.3	32.3	52.3	58.9	57.6	57.6	59.5	59.9	59.4	67.1	67.3	64.8	64.2
14	68.2	67.9	66.1	66.9	61.2	51.7	47.8	43.2	35.2	33.8	31.3	32.3	52.4	58.8	57.4	57.4	59.5	59.9	59.3	67.2	67.4	64.8	64.3
13	68.4	68.1	66.2	67.0	61.2	51.7	47.8	43.3	35.0	33.8	31.3	32.3	52.4	58.8	57.0	57.2	59.3	59.9	59.3	67.3	67.6	64.9	64.2
12	68.6	68.3	66.4	67.1	61.3	51.7	47.8	43.3	34.9	33.7	31.3	32.3	52.4	58.8	56.4	56.9	59.0	59.9	59.4	67.4	67.7	65.0	64.3
11	68.9	68.6	66.5	67.2	61.4	51.7	47.8	43.3	34.8	33.7	31.3	32.3	52.4	58.8	54.9	56.5	58.7	59.7	59.4	67.6	67.8	65.1	64.3
10	69.1	68.8	66.6	67.3	61.4	51.7	47.8	43.3	34.7	33.7	31.3	32.3	52.4	58.7	53.7	55.7	58.4	59.4	59.2	67.7	68.0	65.1	64.3
9	69.3	69.0	66.8	67.3	61.5	51.7	47.8	43.3	34.5	33.7	31.3	32.3	52.4	58.7	52.3	53.9	58.1	58.9	59.0	67.8	68.1	65.2	64.2
8	69.6	69.2	66.8	67.4	61.5	51.8	47.9	43.4	34.5	33.7	31.3	32.3	52.5	58.7	51.8	52.6	57.7	58.6	58.5	67.9	68.2	65.2	64.1
7	69.8	69.5	66.9	67.5	61.5	51.8	47.9	43.4	34.5	33.7	31.3	32.3	52.5	58.6	51.5	50.4	57.0	58.3	57.8	68.0	68.3	65.2	63.8
6	70.1	69.8	67.1	67.6	61.3	51.8	47.9	43.4	34.4	33.7	31.3	32.3	52.5	58.6	51.2	48.8	55.2	57.7	57.1	68.1	68.5	65.1	63.3
5	70.3	70.0	67.2	67.7	61.4	51.8	47.9	43.4	34.3	33.7	31.3	32.3	52.5	58.6	51.0	47.4	53.4	56.6	56.5	68.2	68.6	64.7	62.4
4	**70.6**	70.3	67.3	67.7	61.3	51.8	47.9	43.4	34.3	33.7	31.3	32.3	52.5	58.6	50.8	46.2	51.7	54.4	55.8	68.3	68.6	64.2	61.6
3	**70.9**	**70.6**	66.9	67.4	61.4	51.8	47.9	43.4	34.2	33.7	31.3	32.3	52.5	58.6	50.7	45.1	50.6	52.3	54.1	68.3	68.6	63.0	60.8
2	**71.3**	**71.0**	65.0	65.8	61.5	51.8	47.9	43.4	34.2	33.8	31.3	32.3	52.5	58.5	50.6	44.1	49.6	50.8	52.1	68.2	68.5	61.2	59.7
1	**71.6**	**71.3**	62.3	64.6	61.5	51.8	47.9	43.4	34.2	33.8	31.4	32.3	52.5	58.5	50.4	43.1	48.9	49.7	50.5	68.0	68.2	58.9	57.6
Max	**71.6**	**71.3**	67.3	67.7	61.6	51.8	47.9	43.4	44.1	37.2	34.4	35.4	52.5	59.0	58.5	58.4	59.6	59.9	59.4	68.3	68.6	65.2	64.3
Min	65.4	65.1	62.3	64.3	60.5	51.0	47.1	42.8	34.2	33.7	31.3	32.3	51.4	58.5	50.4	43.1	48.9	49.7	50.5	65.7	65.8	58.9	57.6

Noise sensitive receivers with exceedance (≥70.5 dB(A))

Floor	R311max	R312max	R313max	R314max	R315max	R316max	R317max	R318max	R401max	R402max	R403max	R404max	R405max	R406max	R407max	R408max	R409max	R410max	R411max	R412max	R413max	R414max	R415max
36									55.1	53.6	52.7	51.9	52.0	49.8	50.7	50.2	57.7	60.1	60.2	61.0	60.4	56.4	57.2
35									55.1	53.7	52.8	51.8	51.8	49.5	50.4	49.9	57.8	60.0	60.2	61.0	60.4	56.3	57.0
34									55.2	53.8	52.9	51.8	52.1	49.3	50.2	50.0	57.8	60.0	60.1	61.1	60.4	56.3	56.8
33									55.2	53.8	52.9	51.9	51.7	49.1	50.2	50.0	57.9	59.9	60.0	61.0	60.4	56.1	56.7
32	63.1	62.3	62.1	63.1	61.2	59.3	59.1	58.9	55.2	53.9	53.0	52.0	52.0	48.9	50.0	50.0	57.9	60.0	59.9	61.1	60.5	56.1	56.5
31	63.1	62.4	62.1	63.1	61.1	59.3	59.1	58.9	55.3	53.9	53.1	52.1	51.9	48.8	50.0	50.0	58.0	60.0	59.9	61.0	60.5	55.9	56.3
30	63.1	62.4	62.1	63.2	61.0	59.3	59.1	59.0	55.4	54.0	53.2	52.1	51.9	48.7	49.9	50.1	58.0	59.9	59.8	61.0	60.4	55.7	55.9
29	63.2	62.5	62.2	63.2	60.9	59.3	59.1	59.0	55.4	54.0	53.2	52.1	52.0	48.6	49.8	50.2	58.1	59.9	59.6	60.8	60.4	55.3	55.3
28	63.2	62.5	62.2	63.3	60.8	59.3	59.1	59.0	55.5	54.1	53.2	52.2	51.9	48.4	49.8	50.2	58.1	59.8	59.4	60.6	60.3	54.9	55.0
27	63.2	62.5	62.2	63.3	60.7	59.4	59.2	59.1	55.5	54.2	53.3	52.3	51.9	48.4	49.7	50.2	58.1	59.6	59.1	60.4	59.9	54.5	54.6
26	63.3	62.5	62.2	63.3	60.6	59.4	59.2	59.1	55.5	54.2	53.3	52.3	51.9	48.3	49.7	50.3	58.2	59.3	58.8	60.1	59.3	54.1	54.2
25	63.2	62.4	62.1	63.4	60.5	59.4	59.2	59.1	55.6	54.2	53.4	52.3	51.9	48.2	49.7	50.3	58.2	59.2	58.5	59.5	58.2	53.6	53.8
24	63.2	62.4	62.1	63.3	60.3	59.4	59.2	59.1	55.7	54.3	53.4	52.4	52.0	48.2	49.7	50.4	58.3	59.1	58.5	59.0	57.1	52.8	53.0
23	63.2	62.3	62.1	63.3	60.2	59.4	59.3	59.1	55.7	54.3	53.5	52.5	52.0	48.1	49.7	50.4	58.3	59.0	58.5	58.5	56.0	51.1	51.7
22	63.1	62.3	62.0	63.3	60.1	59.4	59.3	59.1	55.8	54.4	53.5	52.5	52.0	48.1	49.7	50.5	58.4	59.1	58.4	58.2	54.5	49.8	50.8
21	63.1	62.3	61.9	63.2	60.0	59.4	59.2	59.0	55.8	54.5	53.6	52.5	52.0	48.1	49.7	50.5	58.4	59.1	58.4	58.0	53.3	48.9	50.6
20	63.1	62.2	61.8	63.1	59.9	59.4	59.2	58.9	55.9	54.5	53.6	52.6	52.0	48.0	49.7	50.6	58.5	59.1	58.4	57.9	52.3	48.5	50.4
19	63.1	62.2	61.8	62.9	59.8	59.4	59.2	58.9	55.9	54.6	53.6	52.7	52.1	48.0	49.7	50.6	58.5	59.2	58.5	57.8	51.8	48.1	50.3
18	63.2	62.2	61.8	62.7	59.6	59.4	59.1	58.8	55.9	54.6	53.7	52.7	52.1	48.0	49.6	50.7	58.5	59.2	58.5	57.8	51.4	47.9	50.3
17	63.1	62.2	61.7	62.5	59.4	59.3	59.0	58.8	56.0	54.7	53.7	52.7	52.1	48.0	49.6	50.7	58.6	59.3	58.5	57.8	51.2	47.8	50.3
16	63.2	62.2	61.6	62.3	59.2	59.1	58.9	58.8	56.1	54.7	53.8	52.8	52.1	47.9	49.6	50.8	58.6	59.3	58.5	57.8	51.1	47.7	50.3
15	63.2	62.2	61.5	62.2	59.0	58.8	58.7	58.8	56.1	54.8	53.9	52.8	52.1	48.0	49.5	50.8	58.7	59.3	58.5	57.7	50.9	47.6	50.2
14	63.3	62.2	61.4	62.0	58.9	58.7	58.7	58.8	56.2	54.8	53.9	52.8	52.0	48.0	49.3	50.9	58.7	59.3	58.4	57.7	50.8	47.6	50.3
13	63.3	62.1	61.1	61.8	58.8	58.6	58.6	58.7	56.2	54.9	53.9	52.9	51.9	47.9	49.1	50.9	58.8	59.4	58.3	57.6	50.8	47.6	50.3
12	63.2	61.9	60.9	61.6	58.7	58.5	58.6	58.7	56.2	54.9	54.0	52.9	51.9	47.9	48.7	51.0	58.8	59.3	58.3	57.6	50.8	47.6	50.3
11	63.2	61.6	60.6	61.4	58.7	58.5	58.7	58.7	56.2	54.9	54.0	53.0	51.8	47.8	46.4	50.9	58.8	59.3	58.3	57.6	50.8	47.5	50.4
10	63.0	61.2	60.4	61.1	58.4	58.5	58.6	58.7	56.3	55.0	54.0	53.0	51.7	47.7	45.8	51.0	58.9	59.4	58.4	57.6	50.8	47.6	50.4
9	62.7	60.9	60.1	60.9	58.0	58.5	58.7	58.7	56.3	55.0	54.1	53.0	51.6	47.6	45.5	51.0	58.9	59.4	58.4	57.6	50.8	47.6	50.4
8	62.2	60.6	59.9	60.7	57.9	58.6	58.7	58.7	56.4	55.0	54.1	53.1	51.6	47.6	45.2	51.1	58.9	59.4	58.4	57.6	50.8	47.6	50.5
7	61.8	60.4	59.7	60.5	57.9	58.6	58.7	58.7	56.4	55.1	54.1	53.1	51.6	47.5	44.9	51.0	59.0	59.5	58.4	57.7	50.9	47.7	50.5
6	61.3	60.1	59.5	60.4	57.9	58.6	58.8	58.7	56.4	55.1	54.1	53.1	51.6	47.5	44.4	51.0	59.0	59.5	58.4	57.7	50.9	47.7	50.4
5	60.9	59.7	59.2	60.3	57.9	58.6	58.7	58.7	56.5	55.1	54.2	53.1	51.6	47.6	43.8	51.0	59.0	59.5	58.4	57.7	50.9	47.7	50.4
4	60.4	59.0	58.4	60.0	57.9	58.6	58.7	58.7	56.5	55.2	54.2	53.1	51.6	47.5	43.5	51.0	59.0	59.5	58.5	57.8	50.9	47.7	50.4
3	59.4	58.1	57.8	59.5	57.9	58.7	58.8	58.6	56.5	55.2	54.2	53.1	51.6	47.5	43.2	51.0	59.0	59.5	58.5	57.8	50.9	47.7	50.5
2	58.4	57.0	56.8	59.0	58.0	58.7	58.8	58.6	56.5	55.2	54.2	53.2	51.6	47.5	43.1	51.0	59.1	59.6	58.5	57.8	51.0	47.8	50.5
1	56.5	55.4	55.5	58.5	58.0	58.7	58.8	58.7	56.6	55.2	54.3	53.2	51.6	47.5	43.1	51.1	59.1	59.6	58.5	57.8	51.0	47.8	50.5
Max	63.3	62.5	62.2	63.4	61.2	59.4	59.3	59.1	56.6	55.2	54.3	53.2	52.1	49.8	50.7	51.1	59.1	60.1	60.2	61.1	60.5	56.4	57.2
Min	56.5	55.4	55.5	58.5	57.9	58.5	58.6	58.6	55.1	53.6	52.7	51.8	51.6	47.5	43.1	49.9	57.7	59.0	58.3	57.6	50.8	47.5	50.2

Noise sensitive receivers with exceedance (≥70.5 dB(A))

Floor	R416max	R417max	R418max
36	58.2	59.4	59.6
35	58.2	59.3	59.5
34	57.8	59.2	59.5
33	57.5	59.0	59.2
32	57.1	58.6	58.9
31	56.5	58.1	58.4
30	55.8	57.5	57.9
29	55.4	56.8	57.3
28	54.9	56.1	56.6
27	54.7	55.3	56.0
26	54.5	54.9	55.6
25	54.3	54.6	55.3
24	54.0	54.4	55.1
23	53.5	54.2	55.0
22	53.1	54.1	54.9
21	53.0	53.9	54.9
20	52.8	54.0	54.8
19	52.8	54.0	54.9
18	52.8	54.1	54.9
17	52.8	54.1	54.9
16	52.8	54.0	54.9
15	52.8	54.1	54.9
14	52.8	54.1	54.9
13	52.9	54.1	55.0
12	52.9	54.2	55.0
11	52.9	54.2	55.0
10	52.9	54.2	55.1
9	53.0	54.3	55.1
8	53.0	54.3	55.1
7	53.0	54.3	55.1
6	53.1	54.3	55.1
5	53.1	54.3	55.1
4	53.1	54.4	55.1
3	53.1	54.4	55.1
2	53.1	54.4	55.1
1	53.1	54.4	55.1
Max	58.2	59.4	59.6
Min	52.8	53.9	54.8

Noise sensitive receivers with exceedance (≥70.5 dB(A))

Appendix 4.5

Predicted Traffic Noise Levels for Residential Blocks (Mitigated)

Floor	R101a	R101b	R101c	R101d	R102a	R102b	R102c	R102d	R103a	R103b	R103c	R104a	R104b	R104c	R105a	R105b	R105c	R106a	R106b	R106c	R107a	R107b	R107c
36																							
35																							
34																							
33																							
32	27.2	61.7	62.3	62.9	65.1	64.9	64.6	56.9	58.7	64.2	64.0	64.4	64.6	61.0	60.1	65.1	65.3	65.6	65.7	61.7	60.8	65.8	65.8
31	26.9	61.8	62.4	63.0	65.2	65.0	64.6	57.0	58.8	64.2	64.0	64.4	64.7	61.1	60.1	65.2	65.3	65.7	65.7	61.8	60.9	65.9	65.9
30	26.7	61.9	62.5	63.1	65.2	65.0	64.7	57.0	58.8	64.3	64.1	64.5	64.8	61.2	60.2	65.2	65.4	65.7	65.8	61.8	61.0	65.9	66.0
29	26.5	62.0	62.6	63.2	65.3	65.1	64.7	57.0	58.8	64.3	64.1	64.6	64.8	61.3	60.3	65.3	65.5	65.8	65.9	61.9	61.1	66.0	66.1
28	26.4	62.0	62.6	63.3	65.3	65.1	64.8	57.1	58.9	64.4	64.2	64.6	64.9	61.4	60.4	65.4	65.5	65.9	66.0	62.0	61.2	66.1	66.2
27	26.3	62.1	62.8	63.4	65.4	65.2	64.9	57.0	58.9	64.5	64.2	64.7	65.0	61.4	60.5	65.4	65.6	66.0	66.1	62.1	61.3	66.2	66.2
26	26.2	62.3	62.9	63.5	65.5	65.3	64.9	57.1	58.9	64.5	64.3	64.7	65.0	61.5	60.6	65.5	65.7	66.0	66.1	62.2	61.4	66.2	66.3
25	26.0	62.4	63.0	63.6	65.6	65.4	65.0	57.0	58.9	64.6	64.3	64.8	65.1	61.6	60.7	65.6	65.8	66.1	66.2	62.3	61.4	66.3	66.4
24	25.8	62.5	63.1	63.7	65.6	65.4	65.0	57.0	58.9	64.6	64.4	64.9	65.1	61.7	60.8	65.7	65.8	66.2	66.3	62.4	61.5	66.4	66.5
23	25.7	62.5	63.2	63.8	65.7	65.5	65.1	56.8	58.9	64.7	64.5	65.0	65.2	61.8	60.9	65.7	65.9	66.3	66.4	62.5	61.6	66.5	66.6
22	25.7	62.7	63.3	63.9	65.7	65.5	65.2	56.7	58.9	64.7	64.6	65.0	65.3	61.9	61.0	65.8	66.0	66.4	66.4	62.5	61.7	66.6	66.6
21	25.7	62.8	63.4	64.0	65.8	65.6	65.2	56.5	58.8	64.8	64.6	65.1	65.4	62.0	61.1	65.9	66.1	66.4	66.5	62.6	61.8	66.7	66.7
20	25.7	62.9	63.5	64.1	65.8	65.6	65.3	56.2	58.7	64.8	64.6	65.2	65.4	62.1	61.2	66.0	66.1	66.5	66.6	62.7	61.9	66.7	66.8
19	25.7	63.0	63.6	64.3	65.9	65.7	65.3	55.8	58.4	64.9	64.6	65.2	65.5	62.2	61.3	66.1	66.2	66.6	66.7	62.8	62.0	66.8	66.9
18	25.7	63.1	63.8	64.4	66.0	65.7	65.4	55.7	58.4	64.9	64.7	65.2	65.5	62.3	61.4	66.1	66.3	66.7	66.8	62.9	62.1	66.9	67.0
17	25.8	63.2	63.9	64.5	66.1	65.8	65.4	55.3	58.3	65.0	64.8	65.3	65.6	62.4	61.5	66.2	66.4	66.8	66.9	63.0	62.2	67.0	67.1
16	25.8	63.3	64.0	64.7	66.1	65.9	65.4	55.1	58.3	65.0	64.8	65.3	65.6	62.5	61.6	66.3	66.4	66.9	67.0	63.2	62.4	67.1	67.2
15	25.8	63.4	64.1	64.8	66.3	65.9	65.5	55.0	58.2	65.1	64.9	65.4	65.7	62.6	61.6	66.3	66.5	67.0	67.1	63.3	62.5	67.2	67.3
14	25.8	63.6	64.2	65.0	66.4	66.1	65.6	54.9	58.3	65.1	64.9	65.4	65.7	62.7	61.7	66.3	66.6	67.0	67.1	63.3	62.6	67.3	67.4
13	25.8	63.7	64.4	65.1	66.5	66.1	65.8	54.8	58.3	65.2	65.0	65.5	65.8	62.8	61.8	66.3	66.6	67.1	67.2	63.5	62.7	67.4	67.5
12	25.8	63.9	64.5	65.3	66.6	66.3	65.8	54.9	58.4	65.3	65.1	65.6	65.9	62.9	61.7	66.4	66.6	67.2	67.3	63.6	62.8	67.5	67.6
11	25.8	63.9	64.7	65.4	66.8	66.3	65.9	54.8	58.4	65.4	65.2	65.6	65.9	62.9	61.6	66.4	66.6	67.1	67.3	63.7	62.9	67.6	67.7
10	25.8	64.1	64.8	65.6	66.8	66.5	66.0	54.8	58.4	65.5	65.2	65.6	65.9	63.0	61.7	66.4	66.6	67.1	67.3	63.8	63.0	67.6	67.8
9	25.8	64.2	64.9	65.7	67.0	66.6	66.1	54.8	58.5	65.5	65.2	65.6	65.9	63.1	61.7	66.5	66.7	67.1	67.3	64.0	63.2	67.7	67.8
8	25.8	64.4	65.1	65.9	67.1	66.7	66.2	54.8	58.5	65.6	65.3	65.7	65.9	63.1	61.7	66.5	66.7	67.1	67.3	64.0	63.2	67.6	67.8
7	25.8	64.5	65.3	66.1	67.3	66.8	66.2	54.7	58.5	65.6	65.3	65.7	66.0	63.2	61.7	66.5	66.7	67.2	67.3	64.1	63.3	67.6	67.8
6	25.9	64.7	65.4	66.2	67.4	66.9	66.3	54.6	58.6	65.6	65.3	65.7	65.9	63.1	61.6	66.5	66.7	67.1	67.2	64.1	63.2	67.5	67.6
5	25.9	64.7	65.5	66.3	67.4	66.9	66.3	54.4	58.6	65.7	65.3	65.6	65.9	62.9	61.2	66.5	66.6	67.1	67.2	63.9	63.0	67.4	67.5
4	25.9	64.8	65.5	66.4	67.5	66.9	66.3	53.8	58.4	65.5	65.1	65.4	65.6	62.2	60.4	66.2	66.4	66.8	66.9	63.4	62.3	67.2	67.3
3	25.9	64.9	65.4	66.3	67.2	66.7	66.2	52.8	58.1	65.3	64.8	64.9	65.2	60.6	58.1	65.7	65.9	66.3	66.5	62.2	60.7	66.8	66.8
2	25.9	65.0	65.4	65.7	66.6	66.6	66.2	50.0	57.4	65.0	64.0	63.7	63.9	59.3	55.9	64.4	64.6	65.1	65.2	61.4	59.4	65.5	65.6
1	25.9	65.2	65.5	65.0	65.8	66.5	66.1	46.9	56.8	64.1	62.7	62.5	62.8	58.4	53.9	63.3	63.5	63.9	64.1	60.9	58.6	64.3	64.4
Max	27.2	65.2	65.5	66.4	67.5	66.9	66.3	57.1	58.9	65.7	65.3	65.7	66.0	63.2	61.8	66.5	66.7	67.2	67.3	64.1	63.3	67.7	67.8
Min	25.7	61.7	62.3	62.9	65.1	64.9	64.6	46.9	56.8	64.1	62.7	62.5	62.8	58.4	53.9	63.3	63.5	63.9	64.1	60.9	58.6	64.3	64.4

# Total Flats	2448
Exceedance	0.0
Compliance Rate	100%

Noise sensitive receivers with exceedance (≥70.5 dB(A))

\- Noise sensitive receivers applied with fixed glazing

Noise sensitive receivers applied with acoustic window (non-absorptive)

Noise sensitive receivers applied with acoustic window (absorptive)

(These predicted noise levels are the equivalent noise levels at 1m from the external facade after accounting the reduction in noise levels inside the flat offered by the proposed acoustic window)

Floor	R108a	R108b	R108c	R109a	R109b	R109c	R109d	R110a	R110b	R110c	R111a	R111b	R111c	R112a	R112b	R112c	R112d	R113a	R113b	R113c	R114a	R114b	R114c
36																							
35																							
34																							
33																							
32	66.1	66.5	66.3	66.0	66.0	66.0	63.1	53.2	57.6	28.3	50.3	58.5	58.5	58.4	58.5	58.3	28.1	28.3	58.0	57.9	55.5	58.2	58.3
31	66.2	66.6	66.3	66.0	66.1	66.1	63.2	53.3	57.6	28.4	50.4	58.6	58.6	58.5	58.5	58.4	28.2	28.4	58.1	58.0	55.5	58.3	58.4
30	66.3	66.6	66.4	66.1	66.1	66.1	63.3	53.4	57.7	28.4	50.5	58.6	58.7	58.5	58.6	58.5	28.2	28.4	58.2	58.0	55.6	58.3	58.5
29	66.4	66.7	66.5	66.2	66.2	66.2	63.4	53.4	57.8	28.4	50.6	58.7	58.8	58.6	58.7	58.6	28.2	28.4	58.3	58.1	55.7	58.3	58.5
28	66.4	66.8	66.5	66.3	66.3	66.3	63.5	53.5	57.9	28.5	50.6	58.8	58.8	58.7	58.8	58.6	28.3	28.5	58.3	58.2	55.7	58.4	58.6
27	66.5	66.9	66.6	66.4	66.4	66.4	63.5	53.6	58.0	28.6	50.7	58.9	58.9	58.8	58.8	58.7	28.3	28.5	58.4	58.3	55.7	58.4	58.7
26	66.6	66.9	66.7	66.4	66.5	66.4	63.6	53.7	58.1	28.6	50.8	59.0	59.0	58.9	58.9	58.8	28.4	28.6	58.5	58.3	55.8	58.5	58.7
25	66.7	67.0	66.8	66.5	66.6	66.5	63.7	53.8	58.1	28.7	50.9	59.0	59.1	58.9	59.0	58.9	28.4	28.6	58.6	58.4	55.9	58.5	58.7
24	66.8	67.1	66.8	66.6	66.6	66.6	63.8	53.9	58.2	28.7	51.0	59.1	59.2	59.0	59.1	58.9	28.4	28.7	58.6	58.5	55.9	58.6	58.7
23	66.9	67.2	67.0	66.7	66.8	66.7	63.9	54.0	58.3	28.8	51.0	59.2	59.2	59.1	59.2	59.0	28.5	28.8	58.7	58.5	55.9	58.7	58.8
22	66.9	67.3	67.1	66.8	66.8	66.8	64.0	54.1	58.4	28.8	51.1	59.3	59.3	59.2	59.3	59.1	28.5	28.7	58.7	58.6	56.0	58.7	58.8
21	67.0	67.4	67.1	66.9	66.9	66.9	64.1	54.1	58.5	28.8	51.2	59.4	59.4	59.3	59.3	59.2	28.6	28.8	58.8	58.6	56.0	58.7	58.8
20	67.1	67.4	67.2	66.9	67.0	66.9	64.2	54.2	58.6	28.9	51.3	59.5	59.5	59.3	59.4	59.2	28.6	28.8	58.9	58.7	56.0	58.7	58.9
19	67.2	67.5	67.3	67.0	67.1	67.0	64.3	54.3	58.7	28.9	51.4	59.6	59.6	59.4	59.4	59.3	28.6	28.9	58.9	58.7	55.9	58.7	58.8
18	67.3	67.6	67.4	67.1	67.1	67.1	64.4	54.4	58.8	29.0	51.5	59.7	59.7	59.5	59.5	59.4	28.6	28.9	58.9	58.7	56.0	58.7	58.8
17	67.4	67.7	67.4	67.2	67.2	67.2	64.5	54.5	58.9	29.0	51.5	59.8	59.8	59.6	59.6	59.4	28.7	28.9	58.9	58.7	56.0	58.7	58.8
16	67.5	67.8	67.6	67.3	67.4	67.3	64.6	54.6	59.0	29.0	51.6	59.8	59.9	59.7	59.6	59.5	28.7	29.0	58.9	58.6	55.8	58.5	58.6
15	67.6	67.9	67.6	67.4	67.4	67.4	64.7	54.7	59.1	29.1	51.6	59.9	59.9	59.7	59.6	59.4	28.7	29.0	58.8	58.5	55.5	58.4	58.5
14	67.7	68.0	67.7	67.5	67.5	67.5	64.8	54.7	59.2	29.1	51.6	60.0	60.0	59.8	59.7	59.4	28.8	29.1	58.7	58.3	55.2	58.2	58.3
13	67.8	68.1	67.9	67.6	67.6	67.6	64.9	54.8	59.2	29.2	51.5	60.1	60.0	59.8	59.6	59.3	28.8	29.1	58.6	58.1	54.6	57.8	57.9
12	67.9	68.2	68.0	67.7	67.7	67.7	64.9	54.8	59.3	29.2	51.5	60.1	60.1	59.8	59.6	59.3	28.8	29.1	58.4	57.7	53.5	57.1	57.3
11	68.1	68.3	68.0	67.7	67.7	67.7	65.1	54.8	59.4	29.2	51.4	60.2	60.1	59.7	59.5	59.1	28.8	29.1	57.8	57.1	52.4	55.8	56.0
10	68.1	68.4	68.2	67.9	67.8	67.8	65.1	54.7	59.4	29.3	51.2	60.2	60.0	59.6	59.2	58.8	28.8	29.2	57.1	55.9	51.2	54.6	54.8
9	68.2	68.5	68.2	67.9	67.9	67.8	65.2	54.5	59.4	29.3	51.1	60.1	59.9	59.3	58.9	58.1	28.8	29.2	55.5	54.2	50.4	53.1	53.3
8	68.3	68.7	68.3	67.9	67.9	67.8	65.3	54.1	59.3	29.3	50.6	60.0	59.6	58.9	58.0	57.0	28.8	29.2	54.5	52.9	49.8	52.1	52.3
7	68.4	68.7	68.4	67.9	67.9	67.8	65.4	53.8	59.2	29.3	49.7	59.7	59.0	57.8	56.5	55.1	28.9	29.2	52.6	51.7	49.4	51.3	51.6
6	68.4	68.8	68.4	67.9	67.9	67.9	65.5	53.2	59.1	29.3	47.5	59.0	57.9	56.1	54.8	53.5	28.9	29.2	51.5	50.8	49.0	50.7	51.0
5	68.3	68.7	68.3	67.9	67.9	68.0	65.4	52.5	58.6	29.3	45.4	57.5	55.6	54.1	52.7	52.1	28.9	29.2	50.6	50.1	48.9	50.3	50.6
4	67.9	68.5	68.0	67.8	67.8	67.9	65.3	50.6	57.4	29.4	43.2	54.9	53.2	51.9	51.2	51.0	28.9	29.3	49.9	49.6	48.8	50.0	50.3
3	66.9	67.7	67.5	67.3	67.5	67.6	64.9	47.9	55.1	29.4	41.4	52.3	50.9	50.4	50.1	50.2	28.9	29.3	49.5	49.3	48.7	49.8	50.1
2	65.5	66.2	66.1	66.1	66.4	66.7	64.5	45.3	52.0	29.5	39.8	50.0	49.0	49.3	49.3	49.7	29.0	29.4	49.2	49.0	48.6	49.6	49.9
1	64.2	64.8	64.7	65.0	65.5	65.9	63.9	43.3	49.3	29.4	38.4	48.1	47.3	48.3	48.6	49.2	29.0	29.3	48.8	48.6	48.4	49.3	49.6
Max	68.4	68.8	68.4	67.9	67.9	68.0	65.5	54.8	59.4	29.5	51.6	60.2	60.1	59.8	59.7	59.5	29.0	29.4	58.9	58.7	56.0	58.7	58.9
Min	64.2	64.8	64.7	65.0	65.5	65.9	63.1	43.3	49.3	28.3	38.4	48.1	47.3	48.3	48.6	49.2	28.1	28.3	48.8	48.6	48.4	49.3	49.6

Noise sensitive receivers with exceedance (≥70.5 dB(A))
- Noise sensitive receivers applied with fixed glazing
Noise sensitive receivers applied with acoustic window (non-absorptive)
Noise sensitive receivers applied with acoustic window (absorptive)

(These predicted noise levels are the equivalent noise levels at 1m from the external facade after accounting the reduction in noise levels inside the flat offered by the proposed acoustic window)

Floor	R114d	R115a	R115b	R115c	R115d	R116a	R116b	R116c	R117a	R117b	R118a	R118b	R118c	R201a	R201b	R201c	R202a	R202b	R202c	R203a	R203b	R204a	R204b
36														63.8	63.7	60.9	60.5	63.5	63.4	63.2	62.1	62.2	62.8
35														63.9	63.8	61.0	60.6	63.6	63.5	63.3	62.2	62.3	62.9
34														64.0	63.9	61.1	60.7	63.7	63.6	63.4	62.3	62.4	63.0
33														64.1	64.0	61.2	60.8	63.8	63.7	63.5	62.4	62.5	63.1
32	58.7	55.1	59.2	59.3	27.6	28.8	59.6	59.8	57.6	60.5	60.9	61.1	48.9	64.2	64.1	61.3	60.9	63.8	63.7	63.5	62.6	62.5	63.2
31	58.7	55.2	59.2	59.3	27.3	28.5	59.6	59.8	57.6	60.5	61.0	61.2	48.9	64.2	64.2	61.4	61.0	63.9	63.8	63.6	62.7	62.5	63.2
30	58.8	55.0	59.2	59.3	27.1	28.1	59.6	59.8	57.6	60.5	61.1	61.3	47.7	64.3	64.3	61.6	61.2	64.1	64.0	63.7	62.8	62.7	63.4
29	58.8	54.9	59.2	59.3	26.9	27.8	59.7	59.9	57.6	60.6	61.1	61.4	47.8	64.5	64.4	61.7	61.3	64.2	64.1	63.8	62.8	62.8	63.5
28	58.8	54.8	59.2	59.3	26.9	27.5	59.7	59.9	57.7	60.7	61.2	61.5	47.8	64.6	64.5	61.8	61.4	64.3	64.2	63.9	62.9	62.9	63.6
27	58.8	54.8	59.2	59.4	26.6	27.2	59.8	60.0	57.7	60.8	61.3	61.5	47.9	64.7	64.6	61.9	61.5	64.4	64.3	64.0	63.0	63.0	63.8
26	58.9	54.7	59.3	59.4	26.5	26.9	59.8	60.0	57.9	60.9	61.4	61.6	49.1	64.9	64.8	62.0	61.6	64.6	64.5	64.2	63.1	63.2	63.9
25	58.8	54.6	59.3	59.5	26.4	26.7	59.9	60.1	58.0	61.0	61.5	61.7	49.1	65.0	64.9	62.1	61.7	64.7	64.6	64.3	63.3	63.3	64.0
24	58.8	54.7	59.3	59.5	26.2	26.4	60.0	60.2	57.9	61.0	61.6	61.8	48.0	65.1	65.0	62.3	61.9	64.8	64.7	64.4	63.4	63.4	64.1
23	58.9	54.7	59.4	59.6	26.2	26.2	60.1	60.2	58.1	61.2	61.7	61.9	49.2	65.2	65.1	62.4	62.0	64.9	64.8	64.5	63.5	63.5	64.2
22	58.8	54.7	59.5	59.7	26.3	26.2	60.1	60.3	58.2	61.2	61.8	62.0	49.3	65.3	65.2	62.5	62.1	65.0	64.9	64.7	63.6	63.7	64.3
21	58.8	54.8	59.5	59.7	26.2	26.1	60.2	60.4	58.3	61.4	61.9	62.1	49.4	65.4	65.3	62.6	62.2	65.1	65.0	64.8	63.8	63.8	64.5
20	58.8	54.8	59.6	59.8	26.3	26.2	60.3	60.5	58.3	61.5	62.0	62.2	49.4	65.5	65.4	62.8	62.4	65.2	65.1	64.9	63.9	63.9	64.6
19	58.7	54.8	59.7	59.8	26.3	26.2	60.3	60.5	58.5	61.5	62.1	62.3	49.4	65.7	65.6	62.9	62.5	65.4	65.3	65.1	64.0	64.1	64.7
18	58.7	54.8	59.7	59.9	26.3	26.2	60.4	60.6	58.5	61.6	62.2	62.4	49.5	65.8	65.7	63.1	62.7	65.5	65.4	65.2	64.2	64.2	64.9
17	58.6	54.9	59.8	60.0	26.3	26.2	60.5	60.7	58.6	61.7	62.3	62.5	49.6	66.0	65.9	63.2	62.8	65.7	65.6	65.4	64.3	64.4	65.0
16	58.5	54.9	59.9	60.0	26.3	26.2	60.5	60.8	58.7	61.8	62.4	62.6	49.6	66.1	66.0	63.3	62.9	65.8	65.7	65.5	64.5	64.4	65.2
15	58.2	54.9	59.9	60.1	26.4	26.3	60.6	60.8	58.8	62.0	62.5	62.7	49.8	66.3	66.2	63.5	63.0	66.0	65.9	65.7	64.6	64.6	65.4
14	57.7	55.0	60.0	60.1	26.4	26.2	60.7	60.9	58.9	62.0	62.6	62.9	49.8	66.4	66.4	63.7	63.2	66.1	66.1	65.8	64.8	64.7	65.5
13	57.0	55.0	60.1	60.2	26.4	26.2	60.7	61.0	59.0	62.1	62.7	62.9	49.9	66.6	66.5	63.7	63.3	66.3	66.2	65.9	64.9	64.9	65.7
12	56.0	55.0	60.1	60.3	26.4	26.3	60.9	61.1	59.1	62.2	62.8	63.1	49.9	66.8	66.7	63.9	63.5	66.5	66.4	66.1	65.1	65.1	65.9
11	55.3	55.1	60.2	60.4	26.4	26.3	60.9	61.2	59.2	62.3	63.0	63.2	50.0	67.0	66.9	64.0	63.6	66.7	66.6	66.3	65.3	65.2	66.1
10	54.6	55.1	60.3	60.5	26.5	26.3	61.0	61.3	59.3	62.4	63.1	63.3	50.1	67.1	67.0	64.2	63.8	66.8	66.7	66.4	65.4	65.4	66.1
9	54.1	55.1	60.4	60.5	26.5	26.3	61.0	61.3	59.3	62.5	63.1	63.4	50.2	67.3	67.2	64.4	64.0	67.0	66.9	66.6	65.6	65.6	66.3
8	53.8	55.1	60.4	60.6	26.5	26.3	61.2	61.4	59.5	62.6	63.2	63.5	50.2	67.5	67.4	64.5	64.1	67.1	67.0	66.8	65.8	65.8	66.5
7	53.5	55.2	60.4	60.6	26.5	26.3	61.2	61.6	59.6	62.7	63.4	63.7	50.4	67.7	67.6	64.7	64.3	67.3	67.2	67.0	66.0	65.9	66.7
6	53.4	55.2	60.3	60.6	26.6	26.3	61.3	61.6	59.7	62.8	63.5	63.8	50.5	67.7	67.7	64.9	64.5	67.5	67.4	67.1	66.0	66.0	66.9
5	53.3	55.2	60.2	60.5	26.6	26.4	61.3	61.7	59.8	63.0	63.6	63.9	50.6	67.9	67.8	65.0	64.6	67.5	67.4	67.3	66.2	66.2	67.1
4	53.2	55.2	60.0	60.3	26.6	26.3	61.2	61.7	59.9	63.1	63.7	64.0	50.7	68.0	67.9	65.2	64.8	67.7	67.6	67.4	66.3	66.4	67.3
3	53.2	55.3	59.8	60.1	26.6	26.3	61.1	61.5	59.9	63.2	63.9	64.1	50.8	68.1	68.0	65.4	65.0	67.7	67.7	67.5	66.4	66.5	67.4
2	53.2	55.3	59.5	59.8	26.7	26.4	60.8	61.4	59.9	63.2	64.0	64.3	50.9	67.9	67.9	65.5	65.1	67.6	67.7	67.4	66.5	66.4	67.4
1	53.0	55.3	59.3	59.6	26.7	26.4	60.4	61.1	59.9	63.2	64.1	64.5	51.0	67.9	67.8	65.6	65.2	67.7	67.6	67.5	66.5	66.5	67.4
Max	58.9	55.3	60.4	60.6	27.6	28.8	61.3	61.7	59.9	63.2	64.1	64.5	51.0	68.1	68.0	65.6	65.2	67.7	67.7	67.5	66.5	66.5	67.4
Min	53.0	54.6	59.2	59.3	26.2	26.1	59.6	59.8	57.6	60.5	60.9	61.1	47.7	63.8	63.7	60.9	60.5	63.5	63.4	63.2	62.1	62.2	62.8

Noise sensitive receivers with exceedance (≥70.5 dB(A))
- Noise sensitive receivers applied with fixed glazing
Noise sensitive receivers applied with acoustic window (non-absorptive)
Noise sensitive receivers applied with acoustic window (absorptive)

(These predicted noise levels are the equivalent noise levels at 1m from the external facade after accounting the reduction in noise levels inside the flat offered by the proposed acoustic window)

Floor	R205a	R205b	R206a	R206b	R206c	R206d	R207a	R207b	R207c	R207d	R208a	R208b	R208c	R208d	R209a	R209b	R209c	R209d	R210a	R210b	R210c	R210d	R211a
36	62.6	61.9	52.3	62.5	63.2	65.4	65.1	63.1	62.6	47.9	56.7	63.2	63.5	60.6	60.4	64.2	64.3	61.8	60.5	52.6	52.0	51.2	51.0
35	62.7	62.0	52.4	62.6	63.3	65.5	65.2	63.2	62.6	47.8	56.8	63.3	63.6	60.7	60.5	64.3	64.4	61.9	60.6	52.6	52.0	51.2	51.0
34	62.8	62.1	52.5	62.7	63.4	65.6	65.3	63.3	62.7	47.9	56.9	63.4	63.7	60.8	60.6	64.4	64.5	62.0	60.7	52.7	52.0	51.3	51.1
33	62.9	62.2	52.4	62.7	63.5	65.7	65.4	63.4	62.8	47.9	57.0	63.5	63.8	60.9	60.7	64.5	64.6	62.1	60.8	52.7	52.1	51.3	51.1
32	63.0	62.3	52.5	62.8	63.6	65.8	65.5	63.5	62.9	48.0	57.1	63.6	63.9	61.0	60.8	64.6	64.6	62.2	60.8	52.7	52.1	51.4	51.1
31	63.1	62.4	52.6	62.9	63.7	65.9	65.6	63.6	63.0	47.8	57.2	63.7	64.0	61.1	60.9	64.7	64.8	62.2	60.9	52.8	52.1	51.4	51.2
30	63.2	62.5	52.8	63.1	63.8	66.0	65.7	63.7	63.1	47.9	57.3	63.8	64.1	61.2	61.0	64.8	64.9	62.3	61.0	52.8	52.2	51.4	51.2
29	63.4	62.6	52.8	63.2	64.0	66.1	65.8	63.8	63.2	47.9	57.4	63.9	64.2	61.3	61.1	64.9	65.0	62.4	61.1	52.8	52.2	51.4	51.2
28	63.5	62.7	52.9	63.3	64.1	66.2	65.9	63.9	63.3	47.9	57.5	64.0	64.3	61.5	61.3	65.0	65.1	62.5	61.1	52.9	52.2	51.5	51.3
27	63.6	62.8	53.0	63.5	64.2	66.3	66.0	64.0	63.4	47.8	57.7	64.1	64.4	61.6	61.4	65.1	65.2	62.6	61.2	52.9	52.3	51.5	51.3
26	63.7	62.9	53.1	63.6	64.3	66.5	66.2	64.1	63.5	47.8	57.8	64.2	64.5	61.7	61.5	65.2	65.3	62.7	61.3	52.9	52.3	51.5	51.3
25	63.8	63.1	53.2	63.7	64.5	66.6	66.3	64.3	63.6	47.8	57.9	64.3	64.7	61.8	61.6	65.3	65.4	62.8	61.4	53.0	52.3	51.6	51.4
24	64.0	63.2	53.2	63.8	64.6	66.7	66.4	64.4	63.8	47.5	58.0	64.4	64.8	62.0	61.8	65.4	65.5	62.9	61.5	53.0	52.4	51.6	51.4
23	64.0	63.3	53.4	63.9	64.7	66.9	66.6	64.5	63.8	47.5	58.2	64.6	64.8	62.1	61.9	65.5	65.6	63.0	61.5	53.0	52.4	51.6	51.4
22	64.2	63.5	53.4	64.0	64.9	67.0	66.7	64.6	64.0	47.3	58.3	64.7	65.0	62.2	62.0	65.7	65.8	63.0	61.6	53.0	52.4	51.7	51.5
21	64.3	63.6	53.6	64.2	65.0	67.1	66.8	64.7	64.1	47.1	58.4	64.8	65.1	62.4	62.2	65.8	65.9	63.2	61.6	53.1	52.5	51.7	51.5
20	64.4	63.7	53.6	64.3	65.2	67.2	67.0	64.9	64.2	46.7	58.6	64.9	65.3	62.5	62.3	66.0	66.0	63.3	61.6	53.1	52.5	51.7	51.5
19	64.6	63.9	53.7	64.5	65.3	67.4	67.1	65.0	64.3	46.2	58.7	65.0	65.4	62.7	62.4	66.1	66.2	63.3	61.6	53.1	52.5	51.7	51.5
18	64.7	64.0	53.8	64.7	65.4	67.6	67.3	65.1	64.5	45.6	58.9	65.2	65.5	62.8	62.6	66.2	66.3	63.4	61.4	53.2	52.5	51.8	51.6
17	64.9	64.2	54.0	64.8	65.6	67.7	67.5	65.3	64.6	44.8	59.0	65.3	65.6	63.0	62.8	66.3	66.4	63.5	61.3	53.2	52.6	51.8	51.6
16	65.1	64.3	54.1	65.0	65.8	67.9	67.6	65.4	64.8	43.8	59.2	65.4	65.8	63.1	62.9	66.5	66.6	63.5	61.3	53.2	52.6	51.8	51.6
15	65.2	64.4	54.2	65.2	66.0	68.1	67.8	65.6	64.9	43.0	59.3	65.6	66.0	63.3	63.1	66.6	66.7	63.5	61.2	53.2	52.6	51.8	51.6
14	65.4	64.6	54.4	65.4	66.1	68.2	67.9	65.8	65.1	41.8	59.5	65.7	66.1	63.4	63.2	66.8	66.9	63.3	61.2	53.2	52.6	51.9	51.7
13	65.6	64.8	54.5	65.6	66.3	68.4	68.1	65.9	65.2	40.8	59.7	65.9	66.2	63.6	63.4	66.9	67.0	63.2	61.2	53.3	52.7	51.9	51.7
12	65.7	65.0	54.6	65.7	66.6	68.6	68.3	66.1	65.4	39.9	59.8	66.0	66.4	63.8	63.6	67.1	67.1	63.1	61.3	53.3	52.7	51.9	51.7
11	65.9	65.2	54.8	65.9	66.8	68.9	68.6	66.3	65.6	38.9	60.0	66.2	66.5	64.0	63.8	67.2	67.2	63.1	61.4	53.3	52.7	51.9	51.7
10	66.0	65.4	55.0	66.1	67.0	69.1	68.8	66.5	65.8	38.0	60.2	66.3	66.6	64.2	64.0	67.3	67.2	63.2	61.4	53.3	52.7	51.9	51.7
9	66.2	65.5	55.1	66.3	67.2	69.3	69.0	66.7	65.9	37.0	60.4	66.4	66.8	64.3	64.1	67.3	67.3	63.2	61.5	53.3	52.7	52.0	51.7
8	66.4	65.8	55.3	66.5	67.4	69.6	69.2	67.0	66.1	36.0	60.5	66.5	66.8	64.5	64.3	67.4	67.4	63.2	61.5	53.4	52.7	52.0	51.8
7	66.6	65.9	55.4	66.8	67.6	69.8	69.5	67.2	66.4	35.2	60.7	66.6	66.9	64.7	64.5	67.5	67.4	63.1	61.5	53.4	52.8	52.0	51.8
6	66.8	66.1	55.6	67.0	67.9	70.1	69.8	67.4	66.6	34.4	60.7	66.8	67.1	64.8	64.6	67.6	67.5	62.9	61.3	53.4	52.8	52.0	51.8
5	67.0	66.3	55.8	67.2	68.1	70.3	70.0	67.7	66.8	33.5	60.6	66.9	67.2	64.9	64.6	67.7	67.6	62.8	61.4	53.4	52.8	52.0	51.8
4	67.2	66.5	55.9	67.5	68.4	-	70.3	68.0	67.1	32.7	59.9	66.9	67.3	64.7	64.3	67.7	67.6	62.7	61.3	53.4	52.8	52.0	51.8
3	67.4	66.7	56.1	67.8	68.7	-	-	68.2	67.3	31.7	56.8	66.7	66.9	63.4	62.4	67.4	67.4	62.6	61.4	53.4	52.8	52.0	51.8
2	67.6	66.8	56.0	68.0	69.0	-	-	68.5	67.3	31.0	53.0	64.9	65.0	60.7	58.3	65.7	65.8	62.6	61.5	53.4	52.8	52.0	51.8
1	67.5	66.9	55.5	68.2	69.2	-	-	68.4	66.0	30.3	49.9	62.0	62.3	56.8	54.6	63.9	64.6	62.7	61.5	53.5	52.8	52.0	51.8
Max	67.6	66.9	56.1	68.2	69.2	70.3	70.3	68.5	67.3	48.0	60.7	66.9	67.3	64.9	64.6	67.7	67.6	63.5	61.6	53.5	52.8	52.0	51.8
Min	62.6	61.9	52.3	62.5	63.2	65.4	65.1	63.1	62.6	30.3	49.9	62.0	62.3	56.8	54.6	63.9	64.3	61.8	60.5	52.6	52.0	51.2	51.0

Noise sensitive receivers with exceedance (≥70.5 dB(A))
- Noise sensitive receivers applied with fixed glazing
Noise sensitive receivers applied with acoustic window (non-absorptive)
Noise sensitive receivers applied with acoustic window (absorptive)

(These predicted noise levels are the equivalent noise levels at 1m from the external facade after accounting the reduction in noise levels inside the flat offered by the proposed acoustic window)

Floor	R211b	R211c	R212a	R212b	R213a	R213b	R214a	R214b	R214c	R214d	R215a	R215b	R215c	R215d	R216a	R216b	R217a	R217b	R217c	R218a	R218b	R218c	R218d
36	50.2	49.2	47.1	46.3	43.0	34.6	35.9	41.9	43.7	44.1	37.2	35.1	34.1	24.7	32.8	34.4	34.7	35.4	31.6	34.2	40.4	45.6	52.0
35	50.3	49.3	47.1	46.2	42.9	34.2	35.3	41.0	42.7	43.6	36.5	34.3	33.3	24.3	32.0	33.6	34.0	34.7	30.8	33.1	39.0	45.2	52.0
34	50.3	49.3	47.2	46.2	42.8	33.9	35.0	40.4	42.3	42.9	35.8	33.6	32.6	24.0	31.3	33.0	33.4	34.1	30.3	32.3	38.1	45.0	52.0
33	50.3	49.3	47.2	46.3	42.9	33.6	33.8	39.9	41.5	41.9	35.2	33.0	32.0	23.8	30.7	32.5	32.8	33.5	29.8	31.5	37.3	44.8	52.0
32	50.4	49.4	47.2	46.3	42.9	33.4	33.1	39.0	40.5	41.2	34.8	32.6	31.5	23.8	30.1	31.9	32.4	33.0	29.3	31.0	36.6	44.7	51.4
31	50.4	49.4	47.3	46.3	42.9	33.2	32.6	38.4	39.9	40.6	34.5	32.3	31.1	23.7	29.7	31.6	32.1	32.7	29.0	30.5	36.1	44.7	51.4
30	50.4	49.4	47.3	46.4	42.9	33.1	32.1	37.8	39.3	40.0	34.4	32.2	31.1	23.6	29.7	31.6	32.0	32.6	29.0	30.2	35.7	44.6	51.5
29	50.5	49.5	47.3	46.4	42.9	33.0	31.7	37.3	38.7	39.5	34.3	32.2	31.1	23.6	29.7	31.6	32.0	32.6	28.9	30.0	35.3	44.6	52.0
28	50.4	49.5	47.4	46.4	42.9	32.8	31.2	36.8	38.3	39.1	34.3	32.2	31.1	23.7	29.6	31.5	32.0	32.5	28.9	29.8	35.0	44.6	52.0
27	50.5	49.5	47.4	46.5	43.0	32.8	30.8	36.4	37.8	38.6	34.2	32.2	31.1	23.6	29.6	31.5	32.0	32.4	28.9	29.7	34.7	44.5	52.0
26	50.5	49.6	47.4	46.5	43.0	32.6	30.5	36.1	37.4	38.2	34.2	32.2	31.1	23.5	29.6	31.5	32.0	32.4	28.9	29.5	34.5	44.5	52.1
25	50.5	49.6	47.5	46.4	43.0	32.5	30.2	35.7	37.0	37.8	34.1	32.2	31.1	23.5	29.5	31.4	31.9	32.4	28.8	29.3	34.4	44.5	52.1
24	50.6	49.6	47.5	46.5	43.1	32.5	29.9	35.4	36.6	37.5	34.1	32.2	31.1	23.5	29.5	31.4	31.9	32.4	28.8	29.2	34.2	44.5	52.1
23	50.6	49.7	47.5	46.5	43.1	32.3	29.7	35.1	36.4	37.2	34.0	32.2	31.1	23.5	29.5	31.4	31.9	32.4	28.8	29.2	34.0	44.5	52.1
22	50.6	49.7	47.6	46.5	43.1	32.2	29.4	34.8	36.0	36.9	34.0	32.2	31.1	23.4	29.5	31.4	31.9	32.4	28.7	29.0	33.9	44.6	52.2
21	50.7	49.7	47.6	46.5	43.1	32.2	29.2	34.7	35.7	36.6	34.0	32.2	31.1	23.4	29.5	31.4	31.8	32.3	28.7	28.9	33.8	44.6	52.2
20	50.7	49.7	47.6	46.6	43.1	32.1	29.0	34.4	35.5	36.3	33.9	32.2	31.1	23.4	29.5	31.4	31.8	32.3	28.7	28.9	33.7	44.6	52.2
19	50.7	49.7	47.6	46.6	43.1	32.1	28.8	34.2	35.2	36.1	33.9	32.2	31.1	23.4	29.4	31.4	31.8	32.3	28.6	28.8	33.6	44.6	52.2
18	50.7	49.7	47.7	46.6	43.1	32.0	28.8	34.0	35.0	35.9	33.9	32.2	31.1	23.3	29.5	31.3	31.8	32.3	28.6	28.8	33.5	44.6	52.3
17	50.7	49.8	47.7	46.6	43.2	32.0	28.6	33.9	34.8	35.7	33.8	32.2	31.1	23.3	29.4	31.3	31.8	32.3	28.6	28.7	33.5	44.6	52.3
16	50.8	49.8	47.7	46.7	43.2	31.9	28.5	33.7	34.6	35.5	33.8	32.2	31.1	23.3	29.4	31.3	31.8	32.3	28.5	28.6	33.4	44.6	52.3
15	50.8	49.8	47.7	46.7	43.2	31.9	28.4	33.5	34.4	35.3	33.8	32.2	31.1	23.3	29.4	31.3	31.8	32.3	28.6	28.7	33.4	44.7	52.3
14	50.8	49.8	47.8	46.7	43.2	31.9	28.3	33.4	34.3	35.2	33.8	32.2	31.1	23.2	29.4	31.3	31.8	32.3	28.6	28.6	33.3	44.7	52.4
13	50.8	49.9	47.8	46.7	43.3	31.9	28.2	33.3	34.1	35.0	33.8	32.2	31.1	23.3	29.4	31.3	31.8	32.3	28.6	28.6	33.3	44.7	52.4
12	50.8	49.9	47.8	46.8	43.3	31.8	28.2	33.2	34.0	34.9	33.7	32.2	31.1	23.3	29.4	31.3	31.8	32.3	28.6	28.6	33.3	44.7	52.4
11	50.9	49.9	47.8	46.8	43.3	31.8	28.1	33.1	33.9	34.8	33.7	32.2	31.1	23.2	29.4	31.3	31.8	32.3	28.5	28.6	33.3	44.7	52.4
10	50.9	49.9	47.8	46.8	43.3	31.8	28.1	33.0	33.8	34.7	33.7	32.2	31.1	23.2	29.4	31.3	31.8	32.3	28.6	28.6	33.3	44.8	52.4
9	50.9	49.9	47.8	46.8	43.3	31.8	27.9	33.0	33.7	34.5	33.7	32.2	31.1	23.1	29.4	31.3	31.8	32.3	28.6	28.6	33.2	44.8	52.4
8	50.9	50.0	47.9	46.8	43.4	31.8	28.0	32.9	33.6	34.5	33.7	32.2	31.0	23.1	29.4	31.3	31.8	32.3	28.6	28.5	33.2	44.8	52.5
7	50.9	50.0	47.9	46.8	43.4	31.9	27.9	33.0	33.6	34.5	33.7	32.2	31.1	23.1	29.4	31.3	31.8	32.3	28.5	28.5	33.2	44.8	52.5
6	50.9	50.0	47.9	46.9	43.4	31.9	27.9	32.9	33.5	34.4	33.7	32.2	31.1	23.1	29.4	31.3	31.8	32.3	28.5	28.5	33.2	44.8	52.5
5	51.0	50.0	47.9	46.9	43.4	31.9	27.8	32.8	33.5	34.3	33.7	32.2	31.1	23.1	29.4	31.3	31.8	32.3	28.5	28.5	33.2	44.8	52.5
4	51.0	50.0	47.9	46.9	43.4	31.9	27.8	32.8	33.4	34.3	33.7	32.2	31.1	23.1	29.4	31.3	31.8	32.3	28.5	28.5	33.2	44.8	52.5
3	51.0	50.0	47.9	46.9	43.4	31.9	27.7	32.8	33.3	34.2	33.7	32.2	31.1	23.1	29.4	31.3	31.8	32.3	28.5	28.5	33.2	44.8	52.5
2	51.0	50.1	47.9	46.9	43.4	31.9	27.7	32.8	33.3	34.2	33.8	32.3	31.1	23.1	29.5	31.3	31.8	32.3	28.6	28.5	33.2	44.8	52.5
1	51.0	50.1	47.9	46.9	43.4	31.9	27.7	32.8	33.3	34.2	33.8	32.3	31.2	23.0	29.5	31.4	31.9	32.3	28.6	28.6	33.2	44.9	52.5
Max	51.0	50.1	47.9	46.9	43.4	34.6	35.9	41.9	43.7	44.1	37.2	35.1	34.1	24.7	32.8	34.4	34.7	35.4	31.6	34.2	40.4	45.6	52.5
Min	50.2	49.2	47.1	46.2	42.8	31.8	27.7	32.8	33.3	34.2	33.7	32.2	31.0	23.0	29.4	31.3	31.8	32.3	28.5	28.5	33.2	44.5	51.4

Noise sensitive receivers with exceedance (≥70.5 dB(A))
- Noise sensitive receivers applied with fixed glazing
Noise sensitive receivers applied with acoustic window (non-absorptive)
Noise sensitive receivers applied with acoustic window (absorptive)

(These predicted noise levels are the equivalent noise levels at 1m from the external facade after accounting the reduction in noise levels inside the flat offered by the proposed acoustic window)

Floor	R301a	R301b	R301c	R301d	R302a	R302b	R302c	R302d	R303a	R303b	R303c	R304a	R304b	R304c	R304d	R305a	R305b	R305c	R306a	R306b	R306c	R307a	R307b
36																							
35																							
34																							
33																							
32	40.8	58.8	58.8	53.9	58.0	58.2	57.9	55.2	57.7	57.9	32.6	31.5	58.5	58.9	59.0	59.2	59.2	51.5	31.9	58.6	55.1	63.8	65.7
31	40.6	58.8	58.8	54.0	58.0	58.3	58.0	55.2	57.7	58.0	32.2	31.2	58.5	58.9	59.1	59.3	59.3	51.5	31.4	58.6	55.1	63.9	65.8
30	40.5	58.9	58.8	54.1	58.1	58.3	58.1	55.2	57.7	58.1	31.9	31.1	58.6	59.0	59.1	59.3	59.3	51.5	31.2	58.7	55.2	63.9	65.9
29	40.3	58.9	58.9	54.1	58.1	58.3	58.1	55.3	57.8	58.1	31.8	31.0	58.6	59.0	59.1	59.4	59.4	51.6	31.1	58.8	55.3	64.0	65.9
28	40.1	59.0	58.9	54.1	58.2	58.4	58.1	55.4	57.8	58.1	31.7	31.0	58.6	59.1	59.2	59.4	59.4	51.7	31.1	58.8	55.3	64.1	66.0
27	39.9	59.0	58.9	54.2	58.2	58.4	58.2	55.3	57.9	58.2	31.6	30.9	58.7	59.0	59.2	59.4	59.5	51.7	31.0	58.8	55.4	64.1	66.1
26	39.7	59.0	58.9	54.3	58.3	58.5	58.2	55.4	57.9	58.2	31.5	30.9	58.8	59.1	59.3	59.5	59.5	51.8	31.0	58.8	55.5	64.2	66.1
25	39.3	58.9	58.9	54.3	58.2	58.4	58.2	55.5	57.9	58.3	31.6	31.0	58.8	59.1	59.3	59.5	59.5	51.8	31.1	58.9	55.5	64.3	66.2
24	38.6	59.0	58.9	54.3	58.2	58.5	58.2	55.5	58.0	58.2	31.7	31.1	58.8	59.2	59.3	59.5	59.5	51.9	31.2	58.9	55.6	64.3	66.3
23	37.6	58.9	58.8	54.4	58.2	58.5	58.2	55.5	58.0	58.3	31.7	31.1	58.8	59.2	59.3	59.6	59.5	51.9	31.2	58.9	55.6	64.4	66.4
22	36.2	58.8	58.8	54.5	58.1	58.5	58.2	55.5	58.0	58.3	31.8	31.2	58.9	59.2	59.4	59.6	59.6	52.0	31.3	59.0	55.6	64.5	66.5
21	35.0	58.8	58.8	54.5	58.1	58.4	58.1	55.5	58.0	58.4	31.8	31.2	58.9	59.3	59.4	59.7	59.6	52.0	31.3	59.0	55.6	64.5	66.5
20	33.8	58.8	58.7	54.6	58.0	58.3	58.0	55.6	57.9	58.3	31.9	31.3	58.9	59.2	59.4	59.7	59.7	52.0	31.4	59.0	55.7	64.5	66.6
19	32.9	58.7	58.7	54.6	58.0	58.2	57.9	55.4	57.9	58.3	32.0	31.4	58.9	59.2	59.5	59.7	59.7	52.1	31.5	59.1	55.7	64.6	66.7
18	32.2	58.8	58.8	54.7	57.8	58.0	57.7	55.5	57.8	58.2	32.0	31.4	58.9	59.3	59.5	59.8	59.8	52.1	31.5	59.1	55.7	64.7	66.8
17	31.5	58.8	58.8	54.7	57.7	58.0	57.7	55.5	57.6	58.0	32.1	31.5	58.9	59.2	59.5	59.9	59.8	52.2	31.6	59.2	55.7	64.8	66.9
16	31.0	58.8	58.8	54.7	57.5	57.8	57.5	55.3	57.3	57.8	32.2	31.6	58.8	59.2	59.6	59.9	59.9	52.2	31.7	59.2	55.8	64.9	67.0
15	30.4	58.8	58.9	54.8	57.3	57.6	57.3	55.0	57.1	57.6	32.2	31.6	58.6	59.2	59.5	59.9	59.9	52.2	31.7	59.4	55.8	65.0	67.1
14	30.0	58.8	58.8	54.8	56.7	57.4	57.0	54.7	56.9	57.4	32.3	31.6	58.4	59.0	59.5	59.9	59.9	52.2	31.8	59.3	55.8	65.1	67.2
13	29.6	58.8	58.8	54.8	55.8	57.0	56.7	54.0	56.7	57.2	32.3	31.7	58.1	58.7	59.3	59.8	59.9	52.1	31.9	59.3	55.8	65.2	67.3
12	29.3	58.8	58.8	54.7	54.7	56.4	56.0	52.7	56.3	56.9	32.4	31.8	57.9	58.5	59.0	59.7	59.9	52.0	31.9	59.4	55.9	65.3	67.4
11	29.0	58.8	58.8	54.7	53.8	54.9	54.5	51.1	55.6	56.5	32.5	31.8	57.7	58.2	58.7	59.4	59.7	51.7	32.0	59.4	55.8	65.4	67.6
10	28.6	58.7	58.7	54.5	52.9	53.7	53.2	49.4	54.2	55.7	32.5	31.9	57.4	58.0	58.4	58.9	59.4	51.0	32.1	59.2	55.7	65.5	67.7
9	28.4	58.6	58.7	54.3	52.3	51.9	51.3	47.8	52.6	53.9	32.6	31.9	56.8	57.6	58.1	58.7	58.9	49.6	32.1	59.0	55.5	65.6	67.8
8	28.2	58.7	58.6	53.9	51.8	50.7	50.0	46.5	50.7	52.6	32.7	32.0	55.6	56.9	57.7	58.4	58.6	48.2	32.2	58.5	55.2	65.8	67.9
7	27.9	58.6	58.6	53.6	51.5	49.6	48.8	45.1	49.2	50.4	32.7	32.1	53.6	55.4	57.0	58.0	58.3	46.0	32.3	57.8	54.2	65.9	68.0
6	27.8	58.6	58.6	53.4	51.2	48.8	47.8	44.0	47.8	48.8	32.8	32.1	51.5	54.0	55.2	57.1	57.7	44.4	32.3	57.1	53.3	66.0	68.1
5	27.6	58.6	58.6	53.2	51.0	48.0	46.9	42.9	46.5	47.4	32.8	32.2	49.7	51.5	53.4	55.1	56.6	43.0	32.4	56.5	51.8	66.0	68.2
4	27.5	58.6	58.6	52.9	50.8	47.3	46.0	41.8	45.4	46.2	32.9	32.2	48.2	50.0	51.7	53.1	54.4	41.8	32.4	55.8	50.8	66.0	68.3
3	27.4	58.6	58.6	52.4	50.7	46.8	45.3	40.9	44.4	45.1	32.9	32.3	46.8	48.8	50.6	51.5	52.3	40.7	32.5	54.1	50.1	65.9	68.3
2	27.3	58.5	58.5	51.4	50.6	46.4	44.7	39.8	43.5	44.1	33.0	32.3	45.6	47.7	49.6	50.3	50.8	39.7	32.6	52.1	49.6	65.7	68.2
1	27.2	58.5	58.4	50.7	50.4	45.9	44.1	38.9	42.5	43.1	33.1	32.4	44.5	46.9	48.9	49.4	49.7	38.8	32.6	50.5	49.1	65.2	68.0
Max	40.8	59.0	58.9	54.8	58.3	58.5	58.2	55.6	58.0	58.4	33.1	32.4	58.9	59.3	59.6	59.9	59.9	52.2	32.6	59.4	55.9	66.0	68.3
Min	27.2	58.5	58.4	50.7	50.4	45.9	44.1	38.9	42.5	43.1	31.5	30.9	44.5	46.9	48.9	49.4	49.7	38.8	31.0	50.5	49.1	63.8	65.7

Noise sensitive receivers with exceedance (≥70.5 dB(A))
Noise sensitive receivers applied with fixed glazing
Noise sensitive receivers applied with acoustic window (non-absorptive)
Noise sensitive receivers applied with acoustic window (absorptive)

(These predicted noise levels are the equivalent noise levels at 1m from the external facade after accounting the reduction in noise levels inside the flat offered by the proposed acoustic window)

Floor	R307c	R307d	R308a	R308b	R308c	R309a	R309b	R309c	R310a	R310b	R310c	R311a	R311b	R311c	R312a	R312b	R312c	R313a	R313b	R313c	R314a	R314b	R314c
36																							
35																							
34																							
33																							
32	65.7	65.6	65.6	65.8	64.6	64.0	63.9	58.9	59.2	63.6	63.5	63.1	62.8	57.7	58.7	62.3	62.2	61.8	62.1	58.2	57.1	62.7	63.1
31	65.8	65.7	65.6	65.9	64.7	64.0	63.9	58.9	59.3	63.7	63.5	63.1	62.8	57.7	58.7	62.4	62.3	61.8	62.1	58.2	57.1	62.8	63.1
30	65.8	65.7	65.7	65.9	64.7	64.1	64.0	59.0	59.4	63.8	63.6	63.1	62.9	57.6	58.7	62.4	62.3	61.9	62.1	58.3	57.1	62.8	63.2
29	65.9	65.8	65.7	66.0	64.8	64.1	64.0	59.0	59.4	63.8	63.6	63.2	62.9	57.5	58.7	62.5	62.3	61.9	62.2	58.3	57.2	62.9	63.2
28	66.0	65.9	65.8	66.1	64.9	64.2	64.1	59.0	59.4	63.9	63.7	63.2	62.9	57.5	58.6	62.5	62.3	61.9	62.2	58.4	57.3	62.9	63.3
27	66.0	65.9	65.9	66.1	64.9	64.2	64.2	59.0	59.5	63.9	63.8	63.2	62.9	57.3	58.5	62.5	62.4	61.9	62.2	58.4	57.2	62.9	63.3
26	66.1	66.0	66.0	66.2	65.0	64.3	64.2	58.9	59.5	64.0	63.8	63.3	63.0	57.0	58.3	62.5	62.3	61.9	62.2	58.4	57.3	62.9	63.3
25	66.2	66.1	66.1	66.3	65.0	64.3	64.2	58.8	59.5	64.0	63.8	63.2	62.9	56.6	58.1	62.4	62.3	61.8	62.1	58.5	57.3	62.9	63.4
24	66.3	66.2	66.2	66.4	65.0	64.3	64.2	58.8	59.5	64.0	63.8	63.2	62.8	56.5	58.0	62.4	62.2	61.8	62.1	58.6	57.4	62.9	63.3
23	66.4	66.3	66.3	66.5	65.1	64.3	64.2	58.7	59.6	64.0	63.8	63.2	62.8	56.1	57.8	62.3	62.1	61.7	62.1	58.5	57.4	62.9	63.3
22	66.4	66.3	66.4	66.6	65.1	64.3	64.2	58.7	59.7	63.9	63.7	63.1	62.8	55.9	57.6	62.3	62.1	61.7	62.0	58.5	57.3	62.8	63.3
21	66.5	66.4	66.5	66.7	65.2	64.4	64.3	58.7	59.7	63.9	63.7	63.1	62.8	55.7	57.5	62.3	62.0	61.6	61.9	58.6	57.4	62.7	63.2
20	66.6	66.5	66.6	66.8	65.3	64.4	64.3	58.8	59.8	64.0	63.7	63.1	62.8	55.5	57.5	62.2	61.9	61.5	61.8	58.6	57.4	62.6	63.1
19	66.7	66.6	66.6	66.9	65.4	64.5	64.4	58.8	59.9	64.0	63.7	63.1	62.8	55.4	57.4	62.2	61.9	61.5	61.8	58.5	57.2	62.5	62.9
18	66.8	66.7	66.7	67.0	65.5	64.6	64.4	58.9	60.0	64.1	63.8	63.2	62.8	55.3	57.4	62.2	61.9	61.5	61.8	58.5	57.2	62.3	62.7
17	66.9	66.8	66.9	67.1	65.6	64.7	64.5	59.0	60.1	64.1	63.8	63.1	62.8	55.3	57.4	62.2	61.9	61.5	61.7	58.4	57.0	62.2	62.5
16	67.0	66.9	67.0	67.2	65.6	64.7	64.6	59.1	60.1	64.2	63.9	63.2	62.9	55.3	57.5	62.2	61.9	61.4	61.6	58.2	56.7	62.1	62.3
15	67.1	67.0	67.1	67.3	65.7	64.8	64.6	59.1	60.2	64.2	63.9	63.2	62.9	55.4	57.5	62.2	61.9	61.3	61.5	57.8	56.3	62.0	62.2
14	67.2	67.1	67.2	67.4	65.8	64.8	64.6	59.2	60.3	64.3	64.0	63.3	62.9	55.4	57.5	62.2	61.8	61.1	61.4	57.2	55.5	61.9	62.0
13	67.3	67.2	67.4	67.6	65.9	64.9	64.7	59.3	60.4	64.2	64.0	63.3	62.9	55.4	57.6	62.1	61.6	60.8	61.1	56.4	54.2	61.7	61.8
12	67.4	67.4	67.5	67.7	66.0	65.0	64.8	59.4	60.5	64.3	64.0	63.2	62.9	55.5	57.7	61.9	61.4	60.6	60.9	55.9	53.3	61.4	61.6
11	67.6	67.5	67.6	67.8	66.2	65.1	64.8	59.5	60.6	64.3	64.0	63.2	62.8	55.6	57.7	61.6	61.0	60.4	60.6	54.8	51.4	61.2	61.4
10	67.7	67.6	67.7	68.0	66.3	65.1	64.9	59.5	60.6	64.3	64.0	63.0	62.6	55.6	57.8	61.2	60.8	60.1	60.4	53.9	50.2	60.8	61.1
9	67.8	67.7	67.8	68.1	66.4	65.2	64.9	59.6	60.7	64.2	63.9	62.7	62.1	55.6	57.9	60.9	60.4	59.9	60.1	53.0	48.8	60.7	60.9
8	67.9	67.9	68.0	68.2	66.5	65.2	64.9	59.7	60.8	64.1	63.7	62.2	61.7	55.7	57.9	60.6	60.1	59.6	59.9	51.9	47.7	60.5	60.7
7	68.0	68.0	68.1	68.3	66.6	65.2	64.8	59.8	60.8	63.8	63.3	61.8	61.3	55.8	58.0	60.4	59.9	59.3	59.7	50.6	46.7	60.3	60.5
6	68.1	68.1	68.2	68.5	66.7	65.1	64.6	59.8	60.7	63.3	62.6	61.3	60.9	55.8	58.0	60.1	59.7	59.2	59.5	49.1	45.8	60.2	60.4
5	68.2	68.1	68.4	68.6	66.8	64.7	64.2	59.7	60.5	62.4	61.9	60.9	60.5	55.9	58.0	59.7	59.3	58.6	59.2	47.6	44.9	60.0	60.3
4	68.2	68.2	68.4	68.6	66.7	64.2	63.3	59.6	60.0	61.6	61.2	60.4	60.0	56.0	57.8	59.0	58.4	57.8	58.4	46.4	44.1	59.6	60.0
3	68.3	68.2	68.4	68.6	66.6	63.0	62.0	59.1	59.3	60.8	60.5	59.4	59.1	55.7	57.1	58.1	57.5	57.0	57.8	45.3	43.4	59.0	59.5
2	68.2	68.1	68.2	68.5	66.1	61.2	60.5	57.8	58.0	59.7	59.3	58.4	58.0	54.9	55.8	57.0	56.7	56.0	56.8	44.4	42.8	58.5	59.0
1	68.0	67.9	68.1	68.2	65.0	58.9	58.3	55.1	55.4	57.6	57.2	56.5	56.1	52.1	53.0	55.4	55.0	54.4	55.5	43.6	42.1	57.5	58.5
Max	68.3	68.2	68.4	68.6	66.8	65.2	64.9	59.8	60.8	64.3	64.0	63.3	63.0	57.7	58.7	62.5	62.4	61.9	62.2	58.6	57.4	62.9	63.4
Min	65.7	65.6	65.6	65.8	64.6	58.9	58.3	55.1	55.4	57.6	57.2	56.5	56.1	52.1	53.0	55.4	55.0	54.4	55.5	43.6	42.1	57.5	58.5

Noise sensitive receivers with exceedance (≥70.5 dB(A))
Noise sensitive receivers applied with fixed glazing
Noise sensitive receivers applied with acoustic window (non-absorptive)
Noise sensitive receivers applied with acoustic window (absorptive)

(These predicted noise levels are the equivalent noise levels at 1m from the external facade after accounting the reduction in noise levels inside the flat offered by the proposed acoustic window)

Floor	R314d	R315a	R315b	R315c	R315d	R316a	R316b	R316c	R317a	R317b	R318a	R318b	R318c	R401a	R401b	R401c	R401d	R402a	R402b	R402c	R403a	R403b	R404a
36														55.1	54.9	54.8	52.4	51.9	53.6	53.3	52.7	49.6	27.0
35														55.1	54.9	54.9	52.5	52.0	53.7	53.3	52.8	49.7	26.7
34														55.2	55.1	54.9	52.5	52.0	53.8	53.4	52.9	49.7	26.6
33														55.2	55.1	55.0	52.6	52.1	53.8	53.4	52.9	49.8	26.5
32	63.1	61.2	60.7	59.9	41.0	48.9	59.3	59.2	59.1	56.2	58.9	58.9	29.3	55.2	55.2	55.0	52.7	52.2	53.9	53.5	53.0	49.9	26.4
31	63.1	61.1	60.7	59.8	40.6	48.6	59.3	59.3	59.1	56.2	58.9	58.9	29.0	55.3	55.2	55.1	52.7	52.2	53.9	53.5	53.1	49.9	26.2
30	63.1	61.0	60.6	59.8	40.1	48.3	59.3	59.2	59.1	56.2	59.0	58.9	28.7	55.4	55.3	55.2	52.8	52.3	54.0	53.6	53.2	50.0	26.1
29	63.1	60.9	60.6	59.7	39.3	48.0	59.3	59.3	59.1	56.2	59.0	59.0	28.3	55.4	55.3	55.2	52.8	52.4	54.0	53.6	53.2	50.1	26.1
28	63.1	60.8	60.5	59.6	38.2	47.6	59.3	59.3	59.1	56.2	59.0	59.0	28.0	55.5	55.4	55.3	52.8	52.4	54.1	53.7	53.2	50.2	25.9
27	63.1	60.7	60.5	59.6	37.2	47.1	59.4	59.3	59.2	56.3	59.1	59.0	27.6	55.5	55.5	55.3	52.9	52.5	54.2	53.8	53.3	50.2	25.8
26	63.2	60.6	60.4	59.6	36.1	46.4	59.4	59.3	59.2	56.3	59.1	59.1	27.2	55.5	55.5	55.3	52.9	52.6	54.2	53.8	53.3	50.3	25.6
25	63.2	60.5	60.4	59.5	35.1	45.3	59.4	59.4	59.2	56.3	59.1	59.0	26.8	55.6	55.5	55.4	52.9	52.6	54.2	53.9	53.4	50.4	25.6
24	63.1	60.3	60.3	59.5	34.2	43.9	59.4	59.4	59.2	56.2	59.1	59.1	26.5	55.7	55.6	55.5	53.0	52.7	54.3	53.9	53.4	50.4	25.5
23	63.0	60.0	60.2	59.5	33.4	42.7	59.4	59.4	59.3	56.3	59.1	59.0	26.3	55.7	55.6	55.5	53.0	52.8	54.3	53.9	53.5	50.5	25.4
22	63.0	59.8	60.1	59.5	32.8	41.3	59.4	59.4	59.3	56.3	59.1	59.0	26.1	55.8	55.7	55.5	52.9	52.8	54.4	54.0	53.5	50.6	25.2
21	62.9	59.5	60.0	59.5	32.1	40.2	59.4	59.3	59.2	56.3	59.0	59.0	25.9	55.8	55.8	55.6	53.0	52.9	54.5	54.1	53.6	50.6	25.2
20	62.7	59.2	59.9	59.5	31.5	39.3	59.4	59.4	59.2	56.3	58.9	58.8	25.9	55.9	55.8	55.7	53.0	53.0	54.5	54.1	53.6	50.7	25.1
19	62.5	58.7	59.8	59.5	30.9	38.3	59.4	59.4	59.2	56.4	58.9	58.8	26.0	55.9	55.8	55.7	52.8	53.0	54.6	54.1	53.6	50.8	25.0
18	62.1	58.4	59.6	59.4	30.5	37.5	59.4	59.3	59.1	56.3	58.8	58.8	26.0	55.9	55.9	55.7	52.8	53.1	54.6	54.2	53.7	50.8	24.9
17	61.8	58.1	59.4	59.3	30.0	36.7	59.3	59.3	59.0	56.4	58.8	58.8	26.0	56.0	56.0	55.8	52.6	53.2	54.7	54.3	53.7	50.9	24.9
16	61.5	57.9	59.2	59.1	29.7	35.9	59.1	59.1	58.9	56.4	58.8	58.8	26.1	56.1	56.0	55.8	52.3	53.2	54.7	54.3	53.8	51.0	24.7
15	61.2	57.9	59.0	58.9	29.3	35.2	58.8	58.8	58.7	56.5	58.8	58.8	26.0	56.1	56.1	55.9	52.1	53.3	54.8	54.4	53.9	51.0	24.6
14	61.0	57.8	58.9	58.7	29.0	34.5	58.7	58.6	58.7	56.5	58.8	58.7	26.0	56.2	56.1	55.9	51.9	53.3	54.8	54.4	53.9	51.1	24.6
13	60.6	57.8	58.8	58.7	28.8	33.8	58.6	58.5	58.6	56.6	58.7	58.7	26.0	56.2	56.1	56.0	51.8	53.4	54.9	54.4	53.9	51.1	24.5
12	60.4	57.7	58.7	58.6	28.5	33.2	58.5	58.5	58.6	56.6	58.7	58.7	26.1	56.2	56.2	56.0	51.6	53.4	54.9	54.5	54.0	51.2	24.4
11	60.2	57.2	58.7	58.5	28.3	32.6	58.5	58.5	58.7	56.6	58.6	58.7	26.1	56.2	56.2	56.0	51.4	53.5	54.9	54.5	54.0	51.2	24.3
10	60.0	55.8	58.4	58.3	28.1	32.0	58.4	58.5	58.6	56.7	58.7	58.6	26.1	56.3	56.3	56.1	51.0	53.5	55.0	54.6	54.0	51.3	24.3
9	59.9	54.6	57.9	58.0	28.0	31.4	58.4	58.5	58.7	56.7	58.6	58.7	26.1	56.3	56.3	56.1	50.8	53.6	55.0	54.6	54.1	51.3	24.1
8	59.8	53.7	57.6	57.9	27.8	30.9	58.4	58.6	58.7	56.8	58.7	58.6	26.2	56.4	56.4	56.2	50.5	53.6	55.0	54.6	54.1	51.4	24.1
7	59.7	53.1	57.5	57.9	27.7	30.4	58.4	58.6	58.7	56.8	58.7	58.7	26.1	56.4	56.4	56.2	50.1	53.7	55.1	54.7	54.1	51.4	24.0
6	59.5	52.9	57.5	57.9	27.6	30.0	58.5	58.6	58.8	56.9	58.7	58.7	26.2	56.4	56.4	56.2	49.3	53.7	55.1	54.7	54.1	51.5	24.0
5	59.4	52.8	57.6	57.9	27.5	29.6	58.5	58.6	58.7	56.9	58.7	58.7	26.1	56.5	56.5	56.3	46.8	53.7	55.1	54.7	54.2	51.5	23.9
4	59.3	52.8	57.6	57.9	27.4	29.2	58.5	58.6	58.7	57.0	58.7	58.7	26.1	56.5	56.5	56.3	44.2	53.8	55.2	54.7	54.2	51.5	23.9
3	59.0	52.8	57.6	57.9	27.4	28.9	58.6	58.7	58.8	57.0	58.6	58.6	26.2	56.5	56.5	56.3	42.0	53.8	55.2	54.7	54.2	51.5	23.8
2	58.8	52.9	57.6	58.0	27.3	28.7	58.6	58.7	58.8	57.0	58.6	58.6	26.2	56.5	56.5	56.3	40.4	53.8	55.2	54.7	54.2	51.6	23.7
1	58.5	52.9	57.6	58.0	27.2	28.5	58.6	58.7	58.8	57.1	58.7	58.6	26.2	56.6	56.6	56.3	40.8	53.8	55.2	54.8	54.3	51.6	23.7
Max	63.2	61.2	60.7	59.9	41.0	48.9	59.4	59.4	59.3	57.1	59.1	59.1	29.3	56.6	56.6	56.3	53.0	53.8	55.2	54.8	54.3	51.6	27.0
Min	58.5	52.8	57.5	57.9	27.2	28.5	58.4	58.5	58.6	56.2	58.6	58.6	25.9	55.1	54.9	54.8	40.4	51.9	53.6	53.3	52.7	49.6	23.7

Noise sensitive receivers with exceedance (≥70.5 dB(A))

\- Noise sensitive receivers applied with fixed glazing

Noise sensitive receivers applied with acoustic window (non-absorptive)

Noise sensitive receivers applied with acoustic window (absorptive)

(These predicted noise levels are the equivalent noise levels at 1m from the external facade after accounting the reduction in noise levels inside the flat offered by the proposed acoustic window)

Floor	R404b	R404c	R404d	R405a	R405b	R405c	R405d	R406a	R406b	R407a	R407b	R408a	R408b	R408c	R409a	R409b	R409c	R409d	R410a	R410b	R410c	R410d	R411a
36	51.9	51.6	50.6	52.0	50.2	50.3	42.6	49.0	49.8	50.7	50.3	49.0	50.2	49.9	49.4	51.9	52.5	57.7	58.7	60.1	60.1	58.7	58.9
35	51.8	51.5	50.0	51.8	49.9	50.0	42.2	48.7	49.5	50.4	50.1	48.6	49.9	49.9	49.5	51.6	52.2	57.8	58.7	60.0	60.0	58.6	58.9
34	51.8	51.6	50.1	52.1	49.7	49.8	41.9	48.5	49.3	50.2	50.0	48.3	49.7	50.0	49.4	51.6	52.1	57.8	58.8	60.0	60.0	58.5	59.0
33	51.9	51.7	50.1	51.7	49.5	49.7	41.6	48.3	49.1	50.2	49.9	48.1	49.6	50.0	49.5	51.5	52.0	57.9	58.8	59.9	59.9	58.4	59.0
32	52.0	51.8	50.7	52.0	49.4	49.6	41.4	48.1	48.9	50.0	49.8	48.0	49.5	50.0	49.6	51.3	51.9	57.9	58.9	60.0	59.9	58.3	59.0
31	52.1	51.8	50.7	51.9	49.2	49.4	41.1	48.1	48.8	50.0	49.8	47.8	49.4	50.0	49.6	51.3	51.9	58.0	58.8	60.0	59.9	58.3	59.0
30	52.1	51.8	50.8	51.9	49.2	49.4	40.9	47.9	48.7	49.9	49.7	47.7	49.3	50.1	49.7	51.3	51.9	58.0	58.9	59.9	59.9	58.0	58.9
29	52.1	51.8	50.8	52.0	49.1	49.3	40.7	47.9	48.6	49.8	49.6	47.6	49.3	50.2	49.8	51.3	51.8	58.1	58.8	59.9	59.8	57.9	58.8
28	52.2	51.9	50.8	51.9	49.0	49.2	40.6	47.8	48.4	49.8	49.6	47.5	49.3	50.2	49.8	51.3	51.9	58.1	58.8	59.8	59.7	57.5	58.5
27	52.3	51.9	50.8	51.9	49.0	49.2	40.4	47.7	48.4	49.7	49.6	47.5	49.3	50.2	49.9	51.3	51.9	58.1	58.8	59.6	59.5	57.0	58.2
26	52.3	52.0	50.8	51.9	49.0	49.2	40.4	47.7	48.3	49.7	49.6	47.5	49.3	50.3	50.0	51.2	51.9	58.2	58.8	59.3	59.2	56.6	57.9
25	52.3	52.0	50.9	51.9	49.0	49.1	40.2	47.6	48.2	49.7	49.6	47.5	49.3	50.3	50.0	51.3	52.0	58.2	58.9	59.2	59.0	56.5	57.9
24	52.4	52.1	50.9	52.0	49.0	49.2	40.1	47.6	48.2	49.7	49.6	47.5	49.3	50.4	50.0	51.3	52.0	58.3	58.9	59.1	58.9	56.3	57.8
23	52.5	52.1	50.9	52.0	48.9	49.1	40.0	47.6	48.1	49.7	49.6	47.5	49.3	50.4	50.1	51.3	51.9	58.3	59.0	59.0	58.8	56.3	57.8
22	52.5	52.2	50.9	52.0	49.0	49.1	40.0	47.5	48.1	49.7	49.6	47.5	49.3	50.5	50.0	51.4	52.0	58.4	59.0	59.1	58.8	56.3	57.8
21	52.5	52.2	51.0	52.0	49.0	49.2	39.9	47.5	48.1	49.7	49.6	47.4	49.3	50.5	50.1	51.5	52.0	58.4	59.1	59.0	58.8	56.3	57.8
20	52.6	52.3	51.0	52.0	49.0	49.2	39.9	47.5	48.0	49.7	49.7	47.5	49.4	50.6	50.1	51.5	52.1	58.5	59.1	59.1	58.9	56.4	57.9
19	52.7	52.3	51.0	52.1	49.0	49.2	39.8	47.5	48.0	49.7	49.6	47.5	49.4	50.6	50.2	51.5	52.2	58.5	59.2	59.1	58.9	56.3	57.9
18	52.7	52.4	51.1	52.1	49.0	49.2	39.8	47.5	48.0	49.6	49.6	47.5	49.4	50.7	50.3	51.5	52.2	58.5	59.2	59.1	58.9	56.4	58.0
17	52.7	52.4	51.1	52.1	49.0	49.2	39.8	47.5	48.0	49.6	49.6	47.6	49.4	50.7	50.3	51.6	52.2	58.6	59.3	59.1	58.9	56.4	58.0
16	52.8	52.4	51.1	52.1	49.0	49.2	39.7	47.5	47.9	49.6	49.5	47.6	49.5	50.8	50.4	51.7	52.3	58.6	59.3	59.2	59.0	56.5	58.0
15	52.8	52.4	51.2	52.1	48.9	49.1	39.7	47.5	48.0	49.5	49.4	47.6	49.6	50.8	50.4	51.7	52.3	58.7	59.3	59.2	59.0	56.5	58.1
14	52.8	52.5	51.2	52.0	48.8	49.1	39.6	47.5	48.0	49.3	49.1	47.6	49.6	50.9	50.5	51.8	52.3	58.7	59.3	59.2	59.0	56.5	58.1
13	52.9	52.5	51.2	51.9	48.4	48.9	39.3	47.4	47.9	49.1	48.8	47.7	49.6	50.9	50.5	51.8	52.3	58.8	59.4	59.1	58.9	56.6	58.2
12	52.9	52.6	51.2	51.9	48.2	48.7	38.8	47.5	47.9	46.8	48.7	47.7	49.6	51.0	50.6	51.9	52.4	58.8	59.3	59.1	58.8	56.6	58.2
11	53.0	52.6	51.2	51.8	48.0	48.5	37.2	47.4	47.8	45.6	46.4	47.8	49.7	50.9	50.6	51.9	52.3	58.8	59.3	59.0	58.8	56.7	58.3
10	53.0	52.7	51.2	51.7	47.8	48.4	35.2	47.2	47.7	44.7	45.8	47.8	49.7	51.0	50.7	52.0	52.4	58.9	59.4	59.0	58.8	56.7	58.3
9	53.0	52.7	51.2	51.6	47.6	48.3	32.9	47.2	47.6	44.2	45.5	47.9	49.8	51.0	50.7	52.0	52.4	58.9	59.4	59.1	58.9	56.7	58.3
8	53.1	52.7	51.3	51.6	47.6	48.2	31.5	47.1	47.6	43.8	45.2	47.8	49.8	51.1	50.8	52.0	52.4	58.9	59.4	59.0	58.9	56.8	58.4
7	53.1	52.7	51.3	51.6	47.5	48.2	30.5	47.2	47.5	43.4	44.9	47.8	49.7	51.0	50.8	52.0	52.5	59.0	59.5	59.1	58.9	56.8	58.4
6	53.1	52.8	51.4	51.6	47.5	48.1	29.9	47.2	47.5	42.9	44.4	47.6	49.7	51.0	50.7	51.9	52.5	59.0	59.5	59.1	58.9	56.8	58.4
5	53.1	52.8	51.4	51.6	47.6	48.1	29.4	47.2	47.6	42.0	43.8	47.4	49.6	51.0	50.8	52.0	52.6	59.0	59.5	59.1	59.0	56.8	58.4
4	53.1	52.8	51.4	51.6	47.6	48.1	28.9	47.2	47.5	41.6	43.5	47.4	49.5	51.0	50.8	52.0	52.6	59.0	59.5	59.1	59.0	56.9	58.5
3	53.1	52.8	51.4	51.6	47.5	48.2	28.6	47.2	47.5	41.3	43.2	47.4	49.6	51.0	50.8	52.0	52.6	59.0	59.5	59.2	59.0	56.9	58.5
2	53.2	52.8	51.4	51.6	47.5	48.2	28.2	47.1	47.5	41.1	43.1	47.3	49.6	51.0	50.8	52.0	52.6	59.1	59.6	59.2	59.0	56.9	58.5
1	53.2	52.8	51.4	51.6	47.5	48.2	28.0	47.1	47.5	41.0	43.1	47.3	49.6	51.1	50.8	52.1	52.6	59.1	59.6	59.2	59.0	56.9	58.5
Max	53.2	52.8	51.4	52.1	50.2	50.3	42.6	49.0	49.8	50.7	50.3	49.0	50.2	51.1	50.8	52.1	52.6	59.1	59.6	60.1	60.1	58.7	59.0
Min	51.8	51.5	50.0	51.6	47.5	48.1	28.0	47.1	47.5	41.0	43.1	47.3	49.3	49.9	49.4	51.2	51.8	57.7	58.7	59.0	58.8	56.3	57.8

Noise sensitive receivers with exceedance (≥70.5 dB(A))
Noise sensitive receivers applied with fixed glazing
Noise sensitive receivers applied with acoustic window (non-absorptive)
Noise sensitive receivers applied with acoustic window (absorptive)

(These predicted noise levels are the equivalent noise levels at 1m from the external facade after accounting the reduction in noise levels inside the flat offered by the proposed acoustic window)

Floor	R411b	R411c	R411d	R412a	R412b	R412c	R412d	R413a	R413b	R413c	R413d	R414a	R414b	R415a	R415b	R416a	R416b	R417a	R417b	R417c	R418a	R418b	R418c
36	60.2	59.5	55.4	48.8	59.5	60.0	61.0	60.4	57.4	55.3	23.5	53.5	56.4	57.2	55.6	57.2	58.2	59.0	59.4	56.8	57.8	59.6	59.5
35	60.2	59.5	55.4	48.8	59.5	60.1	61.0	60.4	57.3	55.1	23.5	53.2	56.3	57.0	55.4	57.0	58.2	59.0	59.3	56.8	57.8	59.5	59.5
34	60.1	59.6	55.3	48.9	59.6	60.1	61.1	60.4	57.2	55.0	23.6	53.2	56.3	56.8	55.1	56.8	57.8	58.8	59.2	56.6	57.6	59.5	59.3
33	60.0	59.6	55.3	48.9	59.6	60.2	61.0	60.4	57.2	54.9	23.4	53.0	56.1	56.7	55.0	56.5	57.5	58.5	59.0	56.5	57.4	59.2	59.1
32	59.9	59.6	55.1	48.8	59.7	60.3	61.1	60.5	57.2	54.9	23.5	53.0	56.1	56.5	54.8	56.1	57.1	58.0	58.6	56.2	56.9	58.9	58.8
31	59.9	59.6	54.9	48.9	59.8	60.3	61.0	60.5	57.2	54.9	23.4	53.0	55.9	56.3	54.7	55.7	56.5	57.4	58.1	55.9	56.4	58.4	58.3
30	59.8	59.5	54.5	48.9	59.7	60.3	61.0	60.4	57.1	54.9	23.4	53.0	55.7	55.9	54.5	55.1	55.8	56.7	57.5	55.6	55.9	57.9	57.7
29	59.6	59.4	53.7	49.0	59.7	60.2	60.8	60.4	57.0	54.9	23.5	53.0	55.3	55.3	54.2	54.8	55.4	56.0	56.8	55.1	55.3	57.3	57.0
28	59.4	59.3	52.5	49.0	59.5	60.2	60.6	60.3	56.7	54.7	23.5	52.9	54.9	55.0	54.0	54.4	54.9	55.4	56.1	54.6	54.8	56.6	56.4
27	59.1	58.8	51.8	49.0	59.3	60.0	60.4	59.9	56.3	54.5	23.5	52.8	54.5	54.6	53.9	54.2	54.7	55.1	55.3	54.3	54.5	56.0	55.9
26	58.8	58.6	51.0	49.1	58.9	59.6	60.1	59.3	55.6	54.0	23.5	52.5	54.1	54.2	53.7	54.0	54.5	54.8	54.9	54.1	54.3	55.6	55.4
25	58.5	58.3	50.6	49.0	58.5	59.1	59.5	58.2	54.6	53.5	23.6	51.6	53.6	53.8	53.2	53.7	54.3	54.6	54.6	54.0	54.1	55.3	55.2
24	58.5	58.3	50.0	49.0	58.3	58.7	59.0	57.1	53.2	52.1	23.6	49.6	52.8	53.0	52.3	53.0	54.0	54.4	54.4	54.0	54.1	55.1	55.0
23	58.5	58.2	49.8	49.0	58.1	58.4	58.5	56.0	51.6	50.4	23.6	47.5	51.1	51.7	51.5	52.4	53.5	54.2	54.2	54.0	54.0	55.0	54.9
22	58.4	58.2	49.7	48.8	57.9	58.2	58.1	54.5	49.7	48.2	23.6	45.4	49.8	50.7	50.8	52.0	53.1	53.8	54.1	54.0	54.1	54.9	54.8
21	58.4	58.1	49.5	48.7	57.9	58.0	57.7	53.3	48.0	46.5	23.6	43.8	48.9	50.3	50.6	51.8	53.0	53.6	53.9	53.9	54.0	54.9	54.8
20	58.4	58.2	49.5	48.5	57.7	57.9	57.3	52.3	46.7	45.2	23.6	42.5	48.5	49.9	50.4	51.8	52.8	53.6	53.9	54.0	54.1	54.8	54.8
19	58.5	58.2	49.4	48.3	57.8	57.8	57.2	51.8	45.8	44.5	23.7	41.6	48.1	49.8	50.3	51.7	52.8	53.6	53.9	54.0	54.0	54.9	54.7
18	58.5	58.2	49.4	48.1	57.7	57.8	57.0	51.4	45.2	43.8	23.7	40.9	47.9	49.6	50.3	51.7	52.8	53.6	53.9	54.1	54.1	54.9	54.8
17	58.5	58.2	49.5	47.7	57.7	57.8	57.0	51.2	44.7	43.5	23.7	40.3	47.8	49.6	50.3	51.6	52.8	53.6	53.9	54.1	54.1	54.9	54.8
16	58.5	58.2	49.4	46.9	57.7	57.8	57.0	51.1	44.3	43.1	23.6	39.9	47.7	49.6	50.3	51.6	52.8	53.6	53.9	54.0	54.1	54.9	54.8
15	58.5	58.2	49.5	45.3	57.7	57.7	57.0	50.9	44.0	42.9	23.6	39.5	47.6	49.5	50.2	51.7	52.8	53.6	54.0	54.1	54.2	54.9	54.8
14	58.4	58.1	49.5	43.1	57.5	57.7	56.8	50.8	43.8	42.7	23.7	39.2	47.6	49.5	50.3	51.7	52.8	53.6	54.0	54.1	54.2	54.9	54.8
13	58.3	58.1	49.6	40.9	57.5	57.6	56.8	50.8	43.7	42.6	23.7	39.0	47.6	49.5	50.3	51.7	52.9	53.6	53.9	54.1	54.2	55.0	54.9
12	58.3	58.1	49.5	38.9	57.4	57.6	56.7	50.8	43.7	42.5	23.7	38.8	47.6	49.5	50.3	51.8	52.9	53.6	54.0	54.2	54.2	55.0	54.9
11	58.3	58.1	49.5	37.2	57.4	57.6	56.7	50.8	43.5	42.4	23.7	38.8	47.5	49.6	50.4	51.8	52.9	53.6	54.0	54.2	54.3	55.0	54.9
10	58.4	58.0	49.6	35.9	57.5	57.6	56.7	50.8	43.5	42.4	23.7	38.7	47.6	49.6	50.4	51.8	52.9	53.7	54.0	54.2	54.3	55.1	55.0
9	58.4	58.1	49.6	34.8	57.5	57.6	56.8	50.8	43.5	42.4	23.7	38.6	47.6	49.6	50.4	51.9	53.0	53.7	54.1	54.3	54.3	55.1	55.0
8	58.4	58.1	49.6	33.7	57.5	57.6	56.8	50.8	43.5	42.4	23.7	38.6	47.6	49.7	50.5	51.9	53.0	53.7	54.1	54.3	54.4	55.1	55.0
7	58.4	58.1	49.7	32.7	57.5	57.7	56.8	50.9	43.5	42.4	23.7	38.6	47.7	49.7	50.5	51.8	53.0	53.7	54.1	54.3	54.4	55.1	55.0
6	58.4	58.2	49.7	31.9	57.5	57.7	56.9	50.9	43.5	42.4	23.7	38.5	47.7	49.7	50.4	51.8	53.1	53.8	54.1	54.3	54.4	55.1	55.0
5	58.4	58.2	49.7	31.2	57.6	57.7	56.9	50.9	43.5	42.4	23.7	38.6	47.7	49.7	50.4	51.9	53.1	53.8	54.1	54.3	54.4	55.1	55.1
4	58.5	58.2	49.7	30.5	57.6	57.8	56.9	50.9	43.5	42.5	23.7	38.6	47.7	49.7	50.4	51.9	53.1	53.8	54.2	54.4	54.4	55.1	55.1
3	58.5	58.2	49.7	29.9	57.6	57.8	56.9	50.9	43.5	42.5	23.6	38.6	47.7	49.8	50.5	51.9	53.1	53.8	54.2	54.4	54.4	55.1	55.1
2	58.5	58.2	49.8	29.2	57.6	57.8	57.0	51.0	43.6	42.5	23.6	38.6	47.8	49.8	50.5	51.9	53.1	53.8	54.2	54.4	54.5	55.1	55.1
1	58.5	58.3	49.8	28.7	57.6	57.8	57.0	51.0	43.6	42.5	23.6	38.6	47.8	49.8	50.5	51.9	53.1	53.8	54.2	54.4	54.5	55.1	55.1
Max	60.2	59.6	55.4	49.1	59.8	60.3	61.1	60.5	57.4	55.3	23.7	53.5	56.4	57.2	55.6	57.2	58.2	59.0	59.4	56.8	57.8	59.6	59.5
Min	58.3	58.0	49.4	28.7	57.4	57.6	56.7	50.8	43.5	42.4	23.4	38.5	47.5	49.5	50.2	51.6	52.8	53.6	53.9	53.9	54.0	54.8	54.7

Noise sensitive receivers with exceedance (≥70.5 dB(A))
- Noise sensitive receivers applied with fixed glazing
Noise sensitive receivers applied with acoustic window (non-absorptive)
Noise sensitive receivers applied with acoustic window (absorptive)

(These predicted noise levels are the equivalent noise levels at 1m from the external facade after accounting the reduction in noise levels inside the flat offered by the proposed acoustic window)

Floor	R101max	R102max	R103max	R104max	R105max	R106max	R107max	R108max	R109max	R110max	R111max	R112max	R113max	R114max	R115max	R116max	R117max	R118max	R201max	R202max	R203max	R204max	R205max
36																			63.8	63.5	63.2	62.8	62.6
35																			63.9	63.6	63.3	62.9	62.7
34																			64.0	63.7	63.4	63.0	62.8
33																			64.1	63.8	63.5	63.1	62.9
32	62.9	65.1	64.2	64.6	65.3	65.7	65.8	66.5	66.0	57.6	58.5	58.5	58.0	58.7	59.3	59.8	60.5	61.1	64.2	63.8	63.5	63.2	63.0
31	63.0	65.2	64.2	64.7	65.3	65.7	65.9	66.6	66.1	57.6	58.6	58.5	58.1	58.7	59.3	59.8	60.5	61.2	64.2	63.9	63.6	63.2	63.1
30	63.1	65.2	64.3	64.8	65.4	65.8	66.0	66.6	66.1	57.7	58.7	58.6	58.2	58.8	59.3	59.8	60.5	61.3	64.3	64.1	63.7	63.4	63.2
29	63.2	65.3	64.3	64.8	65.5	65.9	66.1	66.7	66.2	57.8	58.8	58.7	58.3	58.8	59.3	59.9	60.6	61.4	64.5	64.2	63.8	63.5	63.4
28	63.3	65.3	64.4	64.9	65.5	66.0	66.2	66.8	66.3	57.9	58.8	58.8	58.3	58.8	59.3	59.9	60.7	61.5	64.6	64.3	63.9	63.6	63.5
27	63.4	65.4	64.5	65.0	65.6	66.1	66.2	66.9	66.4	58.0	58.9	58.8	58.4	58.8	59.4	60.0	60.8	61.5	64.7	64.4	64.0	63.8	63.6
26	63.5	65.5	64.5	65.0	65.7	66.1	66.3	66.9	66.5	58.1	59.0	58.9	58.5	58.9	59.4	60.0	60.9	61.6	64.9	64.6	64.2	63.9	63.7
25	63.6	65.6	64.6	65.1	65.8	66.2	66.4	67.0	66.6	58.1	59.1	59.0	58.6	58.8	59.5	60.1	61.0	61.7	65.0	64.7	64.3	64.0	63.8
24	63.7	65.6	64.6	65.1	65.8	66.3	66.5	67.1	66.6	58.2	59.2	59.1	58.6	58.8	59.5	60.2	61.0	61.8	65.1	64.8	64.4	64.1	64.0
23	63.8	65.7	64.7	65.2	65.9	66.4	66.6	67.2	66.8	58.3	59.2	59.2	58.7	58.9	59.6	60.2	61.2	61.9	65.2	64.9	64.5	64.2	64.0
22	63.9	65.7	64.7	65.3	66.0	66.4	66.6	67.3	66.8	58.4	59.3	59.3	58.7	58.8	59.7	60.3	61.2	62.0	65.3	65.0	64.7	64.3	64.2
21	64.0	65.8	64.8	65.4	66.1	66.5	66.7	67.4	66.9	58.5	59.4	59.3	58.8	58.8	59.7	60.4	61.4	62.1	65.4	65.1	64.8	64.5	64.3
20	64.1	65.8	64.8	65.4	66.1	66.6	66.8	67.4	67.0	58.6	59.5	59.4	58.9	58.9	59.8	60.5	61.5	62.2	65.5	65.2	64.9	64.6	64.4
19	64.3	65.9	64.9	65.5	66.2	66.7	66.9	67.5	67.1	58.7	59.6	59.4	58.9	58.8	59.8	60.5	61.5	62.3	65.7	65.4	65.1	64.7	64.6
18	64.4	66.0	64.9	65.5	66.3	66.8	67.0	67.6	67.1	58.8	59.7	59.5	58.9	58.8	59.9	60.6	61.6	62.4	65.8	65.5	65.2	64.9	64.7
17	64.5	66.1	65.0	65.6	66.4	66.9	67.1	67.7	67.2	58.9	59.8	59.6	58.9	58.8	60.0	60.7	61.7	62.5	66.0	65.7	65.4	65.0	64.9
16	64.7	66.1	65.0	65.6	66.4	67.0	67.2	67.8	67.4	59.0	59.9	59.7	58.9	58.6	60.0	60.8	61.8	62.6	66.1	65.8	65.5	65.2	65.1
15	64.8	66.3	65.1	65.7	66.5	67.1	67.3	67.9	67.4	59.1	59.9	59.7	58.8	58.5	60.1	60.8	62.0	62.7	66.3	66.0	65.7	65.4	65.2
14	65.0	66.4	65.1	65.7	66.6	67.1	67.4	68.0	67.5	59.2	60.0	59.8	58.7	58.3	60.1	60.9	62.0	62.9	66.4	66.1	65.8	65.5	65.4
13	65.1	66.5	65.2	65.8	66.6	67.2	67.5	68.1	67.6	59.2	60.1	59.8	58.6	57.9	60.2	61.0	62.1	62.9	66.6	66.3	65.9	65.7	65.6
12	65.3	66.6	65.3	65.9	66.6	67.3	67.6	68.2	67.7	59.3	60.1	59.8	58.4	57.3	60.3	61.1	62.2	63.1	66.8	66.5	66.1	65.9	65.7
11	65.4	66.8	65.4	65.9	66.6	67.3	67.7	68.3	67.7	59.4	60.2	59.7	57.8	56.0	60.4	61.2	62.3	63.2	67.0	66.7	66.3	66.1	65.9
10	65.6	66.8	65.5	65.9	66.6	67.3	67.8	68.4	67.9	59.4	60.2	59.6	57.1	54.8	60.5	61.3	62.4	63.3	67.1	66.8	66.4	66.1	66.0
9	65.7	67.0	65.5	65.9	66.7	67.3	67.8	68.5	67.9	59.4	60.1	59.3	55.5	54.1	60.5	61.3	62.5	63.4	67.3	67.0	66.6	66.3	66.2
8	65.9	67.1	65.6	65.9	66.7	67.3	67.8	68.7	67.9	59.3	60.0	58.9	54.5	53.8	60.6	61.4	62.6	63.5	67.5	67.1	66.8	66.5	66.4
7	66.1	67.3	65.6	66.0	66.7	67.3	67.8	68.7	67.9	59.2	59.7	57.8	52.6	53.5	60.6	61.6	62.7	63.7	67.7	67.3	67.0	66.7	66.6
6	66.2	67.4	65.6	65.9	66.7	67.2	67.6	68.8	67.9	59.1	59.0	56.1	51.5	53.4	60.6	61.6	62.8	63.8	67.7	67.5	67.1	66.9	66.8
5	66.3	67.4	65.7	65.9	66.6	67.2	67.5	68.7	68.0	58.6	57.5	54.1	50.6	53.3	60.5	61.7	63.0	63.9	67.9	67.5	67.3	67.1	67.0
4	66.4	67.5	65.5	65.6	66.4	66.9	67.3	68.5	67.9	57.4	54.9	51.9	49.9	53.2	60.3	61.7	63.1	64.0	68.0	67.7	67.4	67.3	67.2
3	66.3	67.2	65.3	65.2	65.9	66.5	66.8	67.7	67.6	55.1	52.3	50.4	49.5	53.2	60.1	61.5	63.2	64.1	68.1	67.7	67.5	67.4	67.4
2	65.7	66.6	65.0	63.9	64.6	65.2	65.6	66.2	66.7	52.0	50.0	49.7	49.2	53.2	59.8	61.4	63.2	64.3	67.9	67.7	67.4	67.4	67.6
1	65.5	66.5	64.1	62.8	63.5	64.1	64.4	64.8	65.9	49.3	48.1	49.2	48.8	53.0	59.6	61.1	63.2	64.5	67.9	67.7	67.5	67.4	67.5
Max	66.4	67.5	65.7	66.0	66.7	67.3	67.8	68.8	68.0	59.4	60.2	59.8	58.9	58.9	60.6	61.7	63.2	64.5	68.1	67.7	67.5	67.4	67.6
Min	62.9	65.1	64.1	62.8	63.5	64.1	64.4	64.8	65.9	49.3	48.1	49.2	48.8	53.0	59.3	59.8	60.5	61.1	63.8	63.5	63.2	62.8	62.6

Total	2448
Exceedance	0.0
Compliance Rate	100%

Noise sensitive receivers with exceedance (≥70.5 dB(A))

Floor	R206max	R207max	R208max	R209max	R210max	R211max	R212max	R213max	R214max	R215max	R216max	R217max	R218max	R301max	R302max	R303max	R304max	R305max	R306max	R307max	R308max	R309max	R310max
36	65.4	65.1	63.5	64.3	60.5	51.0	47.1	43.0	44.1	37.2	34.4	35.4	52.0										
35	65.5	65.2	63.6	64.4	60.6	51.0	47.1	42.9	43.6	36.5	33.6	34.7	52.0										
34	65.6	65.3	63.7	64.5	60.7	51.1	47.2	42.8	42.9	35.8	33.0	34.1	52.0										
33	65.7	65.4	63.8	64.6	60.8	51.1	47.2	42.9	41.9	35.2	32.5	33.5	52.0										
32	65.8	65.5	63.9	64.6	60.8	51.1	47.2	42.9	41.2	34.8	31.9	33.0	51.4	58.8	58.2	57.9	59.0	59.2	58.6	65.7	65.8	64.0	63.6
31	65.9	65.6	64.0	64.8	60.9	51.2	47.3	42.9	40.6	34.5	31.6	32.7	51.4	58.8	58.3	58.0	59.1	59.3	58.6	65.8	65.9	64.0	63.7
30	66.0	65.7	64.1	64.9	61.0	51.2	47.3	42.9	40.0	34.4	31.6	32.6	51.5	58.9	58.3	58.1	59.1	59.3	58.7	65.9	65.9	64.1	63.8
29	66.1	65.8	64.2	65.0	61.1	51.2	47.3	42.9	39.5	34.3	31.6	32.6	52.0	58.9	58.3	58.1	59.1	59.4	58.8	65.9	66.0	64.1	63.8
28	66.2	65.9	64.3	65.1	61.1	51.3	47.4	42.9	39.1	34.3	31.5	32.5	52.0	59.0	58.4	58.1	59.2	59.4	58.8	66.0	66.1	64.2	63.9
27	66.3	66.0	64.4	65.2	61.2	51.3	47.4	43.0	38.6	34.2	31.5	32.4	52.0	59.0	58.4	58.2	59.2	59.5	58.8	66.1	66.1	64.2	63.9
26	66.5	66.2	64.5	65.3	61.3	51.3	47.4	43.0	38.2	34.2	31.5	32.4	52.1	59.0	58.5	58.2	59.3	59.5	58.8	66.1	66.2	64.3	64.0
25	66.6	66.3	64.7	65.4	61.4	51.4	47.5	43.0	37.8	34.1	31.4	32.4	52.1	58.9	58.4	58.3	59.3	59.5	58.9	66.2	66.3	64.3	64.0
24	66.7	66.4	64.8	65.5	61.5	51.4	47.5	43.1	37.5	34.1	31.4	32.4	52.1	59.0	58.5	58.2	59.3	59.5	58.9	66.3	66.4	64.3	64.0
23	66.9	66.6	64.8	65.6	61.5	51.4	47.5	43.1	37.2	34.0	31.4	32.4	52.1	58.9	58.5	58.3	59.3	59.6	58.9	66.4	66.5	64.3	64.0
22	67.0	66.7	65.0	65.8	61.6	51.5	47.6	43.1	36.9	34.0	31.4	32.4	52.2	58.8	58.5	58.3	59.4	59.6	59.0	66.5	66.6	64.3	63.9
21	67.1	66.8	65.1	65.9	61.6	51.5	47.6	43.1	36.6	34.0	31.4	32.3	52.2	58.8	58.4	58.4	59.4	59.7	59.0	66.5	66.7	64.4	63.9
20	67.2	67.0	65.3	66.0	61.6	51.5	47.6	43.1	36.3	33.9	31.4	32.3	52.2	58.8	58.3	58.3	59.4	59.7	59.0	66.6	66.8	64.4	64.0
19	67.4	67.1	65.4	66.2	61.6	51.5	47.6	43.1	36.1	33.9	31.4	32.3	52.2	58.7	58.2	58.3	59.5	59.7	59.1	66.7	66.9	64.5	64.0
18	67.6	67.3	65.5	66.3	61.4	51.6	47.7	43.1	35.9	33.9	31.3	32.3	52.3	58.8	58.0	58.2	59.5	59.8	59.1	66.8	67.0	64.6	64.1
17	67.7	67.5	65.6	66.4	61.3	51.6	47.7	43.2	35.7	33.8	31.3	32.3	52.3	58.8	58.0	58.0	59.5	59.9	59.2	66.9	67.1	64.7	64.1
16	67.9	67.6	65.8	66.6	61.3	51.6	47.7	43.2	35.5	33.8	31.3	32.3	52.3	58.8	57.8	57.8	59.6	59.9	59.2	67.0	67.2	64.7	64.2
15	68.1	67.8	66.0	66.7	61.2	51.6	47.7	43.2	35.3	33.8	31.3	32.3	52.3	58.9	57.6	57.6	59.5	59.9	59.4	67.1	67.3	64.8	64.2
14	68.2	67.9	66.1	66.9	61.2	51.7	47.8	43.2	35.2	33.8	31.3	32.3	52.4	58.8	57.4	57.4	59.5	59.9	59.3	67.2	67.4	64.8	64.3
13	68.4	68.1	66.2	67.0	61.2	51.7	47.8	43.3	35.0	33.8	31.3	32.3	52.4	58.8	57.0	57.2	59.3	59.9	59.3	67.3	67.6	64.9	64.2
12	68.6	68.3	66.4	67.1	61.3	51.7	47.8	43.3	34.9	33.7	31.3	32.3	52.4	58.8	56.4	56.9	59.0	59.9	59.4	67.4	67.7	65.0	64.3
11	68.9	68.6	66.5	67.2	61.4	51.7	47.8	43.3	34.8	33.7	31.3	32.3	52.4	58.8	54.9	56.5	58.7	59.7	59.4	67.6	67.8	65.1	64.3
10	69.1	68.8	66.6	67.3	61.4	51.7	47.8	43.3	34.7	33.7	31.3	32.3	52.4	58.7	53.7	55.7	58.4	59.4	59.2	67.7	68.0	65.1	64.3
9	69.3	69.0	66.8	67.3	61.5	51.7	47.8	43.3	34.5	33.7	31.3	32.3	52.4	58.7	52.3	53.9	58.1	58.9	59.0	67.8	68.1	65.2	64.2
8	69.6	69.2	66.8	67.4	61.5	51.8	47.9	43.4	34.5	33.7	31.3	32.3	52.5	58.7	51.8	52.6	57.7	58.6	58.5	67.9	68.2	65.2	64.1
7	69.8	69.5	66.9	67.5	61.5	51.8	47.9	43.4	34.5	33.7	31.3	32.3	52.5	58.6	51.5	50.4	57.0	58.3	57.8	68.0	68.3	65.2	63.8
6	70.1	69.8	67.1	67.6	61.3	51.8	47.9	43.4	34.4	33.7	31.3	32.3	52.5	58.6	51.2	48.8	55.2	57.7	57.1	68.1	68.5	65.1	63.3
5	70.3	70.0	67.2	67.7	61.4	51.8	47.9	43.4	34.3	33.7	31.3	32.3	52.5	58.6	51.0	47.4	53.4	56.6	56.5	68.2	68.6	64.7	62.4
4	68.4	70.3	67.3	67.7	61.3	51.8	47.9	43.4	34.3	33.7	31.3	32.3	52.5	58.6	50.8	46.2	51.7	54.4	55.8	68.3	68.6	64.2	61.6
3	68.7	68.2	66.9	67.4	61.4	51.8	47.9	43.4	34.2	33.7	31.3	32.3	52.5	58.6	50.7	45.1	50.6	52.3	54.1	68.3	68.6	63.0	60.8
2	69.0	68.5	65.0	65.8	61.5	51.8	47.9	43.4	34.2	33.8	31.3	32.3	52.5	58.5	50.6	44.1	49.6	50.8	52.1	68.2	68.5	61.2	59.7
1	69.2	68.4	62.3	64.6	61.5	51.8	47.9	43.4	34.2	33.8	31.4	32.3	52.5	58.5	50.4	43.1	48.9	49.7	50.5	68.0	68.2	58.9	57.6
Max	70.3	70.3	67.3	67.7	61.6	51.8	47.9	43.4	44.1	37.2	34.4	35.4	52.5	59.0	58.5	58.4	59.6	59.9	59.4	68.3	68.6	65.2	64.3
Min	65.4	65.1	62.3	64.3	60.5	51.0	47.1	42.8	34.2	33.7	31.3	32.3	51.4	58.5	50.4	43.1	48.9	49.7	50.5	65.7	65.8	58.9	57.6

Noise sensitive receivers with exceedance (≥70.5 dB(A))

Floor	R311max	R312max	R313max	R314max	R315max	R316max	R317max	R318max	R401max	R402max	R403max	R404max	R405max	R406max	R407max	R408max	R409max	R410max	R411max	R412max	R413max	R414max	R415max
36									55.1	53.6	52.7	51.9	52.0	49.8	50.7	50.2	57.7	60.1	60.2	61.0	60.4	56.4	57.2
35									55.1	53.7	52.8	51.8	51.8	49.5	50.4	49.9	57.8	60.0	60.2	61.0	60.4	56.3	57.0
34									55.2	53.8	52.9	51.8	52.1	49.3	50.2	50.0	57.8	60.0	60.1	61.1	60.4	56.3	56.8
33									55.2	53.8	52.9	51.9	51.7	49.1	50.2	50.0	57.9	59.9	60.0	61.0	60.4	56.1	56.7
32	63.1	62.3	62.1	63.1	61.2	59.3	59.1	58.9	55.2	53.9	53.0	52.0	52.0	48.9	50.0	50.0	57.9	60.0	59.9	61.1	60.5	56.1	56.5
31	63.1	62.4	62.1	63.1	61.1	59.3	59.1	58.9	55.3	53.9	53.1	52.1	51.9	48.8	50.0	50.0	58.0	60.0	59.9	61.0	60.5	55.9	56.3
30	63.1	62.4	62.1	63.2	61.0	59.3	59.1	59.0	55.4	54.0	53.2	52.1	51.9	48.7	49.9	50.1	58.0	59.9	59.8	61.0	60.4	55.7	55.9
29	63.2	62.5	62.2	63.2	60.9	59.3	59.1	59.0	55.4	54.0	53.2	52.1	52.0	48.6	49.8	50.2	58.1	59.9	59.6	60.8	60.4	55.3	55.3
28	63.2	62.5	62.2	63.3	60.8	59.3	59.1	59.0	55.5	54.1	53.2	52.2	51.9	48.4	49.8	50.2	58.1	59.8	59.4	60.6	60.3	54.9	55.0
27	63.2	62.5	62.2	63.3	60.7	59.4	59.2	59.1	55.5	54.2	53.3	52.3	51.9	48.4	49.7	50.2	58.1	59.6	59.1	60.4	59.9	54.5	54.6
26	63.3	62.5	62.2	63.3	60.6	59.4	59.2	59.1	55.5	54.2	53.3	52.3	51.9	48.3	49.7	50.3	58.2	59.3	58.8	60.1	59.3	54.1	54.2
25	63.2	62.4	62.1	63.4	60.5	59.4	59.2	59.1	55.6	54.2	53.4	52.3	51.9	48.2	49.7	50.3	58.2	59.2	58.5	59.5	58.2	53.6	53.8
24	63.2	62.4	62.1	63.3	60.3	59.4	59.2	59.1	55.7	54.3	53.4	52.4	52.0	48.2	49.7	50.4	58.3	59.1	58.5	59.0	57.1	52.8	53.0
23	63.2	62.3	62.1	63.3	60.2	59.4	59.3	59.1	55.7	54.3	53.5	52.5	52.0	48.1	49.7	50.4	58.3	59.0	58.5	58.5	56.0	51.1	51.7
22	63.1	62.3	62.0	63.3	60.1	59.4	59.3	59.1	55.8	54.4	53.5	52.5	52.0	48.1	49.7	50.5	58.4	59.1	58.4	58.2	54.5	49.8	50.8
21	63.1	62.3	61.9	63.2	60.0	59.4	59.2	59.0	55.8	54.5	53.6	52.5	52.0	48.1	49.7	50.5	58.4	59.1	58.4	58.0	53.3	48.9	50.6
20	63.1	62.2	61.8	63.1	59.9	59.4	59.2	58.9	55.9	54.5	53.6	52.6	52.0	48.0	49.7	50.6	58.5	59.1	58.4	57.9	52.3	48.5	50.4
19	63.1	62.2	61.8	62.9	59.8	59.4	59.2	58.9	55.9	54.6	53.6	52.7	52.1	48.0	49.7	50.6	58.5	59.2	58.5	57.8	51.8	48.1	50.3
18	63.2	62.2	61.8	62.7	59.6	59.4	59.1	58.8	55.9	54.6	53.7	52.7	52.1	48.0	49.6	50.7	58.5	59.2	58.5	57.8	51.4	47.9	50.3
17	63.1	62.2	61.7	62.5	59.4	59.3	59.0	58.8	56.0	54.7	53.7	52.7	52.1	48.0	49.6	50.7	58.6	59.3	58.5	57.8	51.2	47.8	50.3
16	63.2	62.2	61.6	62.3	59.2	59.1	58.9	58.8	56.1	54.7	53.8	52.8	52.1	47.9	49.6	50.8	58.6	59.3	58.5	57.8	51.1	47.7	50.3
15	63.2	62.2	61.5	62.2	59.0	58.8	58.7	58.8	56.1	54.8	53.9	52.8	52.1	48.0	49.5	50.8	58.7	59.3	58.5	57.7	50.9	47.6	50.2
14	63.3	62.2	61.4	62.0	58.9	58.7	58.7	58.8	56.2	54.8	53.9	52.8	52.0	48.0	49.3	50.9	58.7	59.3	58.4	57.7	50.8	47.6	50.3
13	63.3	62.1	61.1	61.8	58.8	58.6	58.6	58.7	56.2	54.9	53.9	52.9	51.9	47.9	49.1	50.9	58.8	59.4	58.3	57.6	50.8	47.6	50.3
12	63.2	61.9	60.9	61.6	58.7	58.5	58.6	58.7	56.2	54.9	54.0	52.9	51.9	47.9	48.7	51.0	58.8	59.3	58.3	57.6	50.8	47.6	50.3
11	63.2	61.6	60.6	61.4	58.7	58.5	58.7	58.7	56.2	54.9	54.0	53.0	51.8	47.8	46.4	50.9	58.8	59.3	58.3	57.6	50.8	47.5	50.4
10	63.0	61.2	60.4	61.1	58.4	58.5	58.6	58.7	56.3	55.0	54.0	53.0	51.7	47.7	45.8	51.0	58.9	59.4	58.4	57.6	50.8	47.6	50.4
9	62.7	60.9	60.1	60.9	58.0	58.5	58.7	58.7	56.3	55.0	54.1	53.0	51.6	47.6	45.5	51.0	58.9	59.4	58.4	57.6	50.8	47.6	50.4
8	62.2	60.6	59.9	60.7	57.9	58.6	58.7	58.7	56.4	55.0	54.1	53.1	51.6	47.6	45.2	51.1	58.9	59.4	58.4	57.6	50.8	47.6	50.5
7	61.8	60.4	59.7	60.5	57.9	58.6	58.7	58.7	56.4	55.1	54.1	53.1	51.6	47.5	44.9	51.0	59.0	59.5	58.4	57.7	50.9	47.7	50.5
6	61.3	60.1	59.5	60.4	57.9	58.6	58.8	58.7	56.4	55.1	54.1	53.1	51.6	47.5	44.4	51.0	59.0	59.5	58.4	57.7	50.9	47.7	50.4
5	60.9	59.7	59.2	60.3	57.9	58.6	58.7	58.7	56.5	55.1	54.2	53.1	51.6	47.6	43.8	51.0	59.0	59.5	58.4	57.7	50.9	47.7	50.4
4	60.4	59.0	58.4	60.0	57.9	58.6	58.7	58.7	56.5	55.2	54.2	53.1	51.6	47.5	43.5	51.0	59.0	59.5	58.5	57.8	50.9	47.7	50.4
3	59.4	58.1	57.8	59.5	57.9	58.7	58.8	58.6	56.5	55.2	54.2	53.1	51.6	47.5	43.2	51.0	59.0	59.5	58.5	57.8	50.9	47.7	50.5
2	58.4	57.0	56.8	59.0	58.0	58.7	58.8	58.6	56.5	55.2	54.2	53.2	51.6	47.5	43.1	51.0	59.1	59.6	58.5	57.8	51.0	47.8	50.5
1	56.5	55.4	55.5	58.5	58.0	58.7	58.8	58.7	56.6	55.2	54.3	53.2	51.6	47.5	43.1	51.1	59.1	59.6	58.5	57.8	51.0	47.8	50.5
Max	63.3	62.5	62.2	63.4	61.2	59.4	59.3	59.1	56.6	55.2	54.3	53.2	52.1	49.8	50.7	51.1	59.1	60.1	60.2	61.1	60.5	56.4	57.2
Min	56.5	55.4	55.5	58.5	57.9	58.5	58.6	58.6	55.1	53.6	52.7	51.8	51.6	47.5	43.1	49.9	57.7	59.0	58.3	57.6	50.8	47.5	50.2

Noise sensitive receivers with exceedance (≥ 70.5 dB(A))

Floor	R416max	R417max	R418max
36	58.2	59.4	59.6
35	58.2	59.3	59.5
34	57.8	59.2	59.5
33	57.5	59.0	59.2
32	57.1	58.6	58.9
31	56.5	58.1	58.4
30	55.8	57.5	57.9
29	55.4	56.8	57.3
28	54.9	56.1	56.6
27	54.7	55.3	56.0
26	54.5	54.9	55.6
25	54.3	54.6	55.3
24	54.0	54.4	55.1
23	53.5	54.2	55.0
22	53.1	54.1	54.9
21	53.0	53.9	54.9
20	52.8	54.0	54.8
19	52.8	54.0	54.9
18	52.8	54.1	54.9
17	52.8	54.1	54.9
16	52.8	54.0	54.9
15	52.8	54.1	54.9
14	52.8	54.1	54.9
13	52.9	54.1	55.0
12	52.9	54.2	55.0
11	52.9	54.2	55.0
10	52.9	54.2	55.1
9	53.0	54.3	55.1
8	53.0	54.3	55.1
7	53.0	54.3	55.1
6	53.1	54.3	55.1
5	53.1	54.3	55.1
4	53.1	54.4	55.1
3	53.1	54.4	55.1
2	53.1	54.4	55.1
1	53.1	54.4	55.1
Max	58.2	59.4	59.6
Min	52.8	53.9	54.8

Noise sensitive receivers with exceedance (≥70.5 dB(A))

Appendix 6.1

ArchSD Reply of
Public Wet Market

Subject: RE: (Confidential) TC 133A - HD's PRH Scheme for Coordination with ArchSD and FEHD

Date: 14/04/2023 18:28
Subject: Re: (Confidential) TC 133A - HD's PRH Scheme for Coordination with ArchSD and FEHD

Dear

Like any other buildings, the design of the public market building, especially the design associated with general environmental impacts to neighboring sites, shall be designed in accordance with the statutory requirements as stipulated in the building regulations and associated practice notes or guidelines. We may further discuss in details for any specific environmental concerns associated with the environmental studies that you may be aware of, in the detailed design stage as necessary.

Date: 14/04/2023 10:23
Subject: Re: (Confidential) TC 133A - HD's PRH Scheme for Coordination with ArchSD and FEHD

Dear

I refer to the TCA 133A PRH layout (scheme 20) provided on 15/2/2023.

We are carrying out the EAS for the PRH development and requires your written advice that the proposed public market will not cause any adverse environmental impacts.
Grateful if you can confirm that the public market design will comply with statutory requirements to ensure no environmental impacts on the public housing development and keep coordination with HD if necessary.

You reply **by 17/4/2023** will be appreciated.
Thanks and sorry for the rush.

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Housing Authority/Housing Department Website -- https://www.housingauthority.gov.hk
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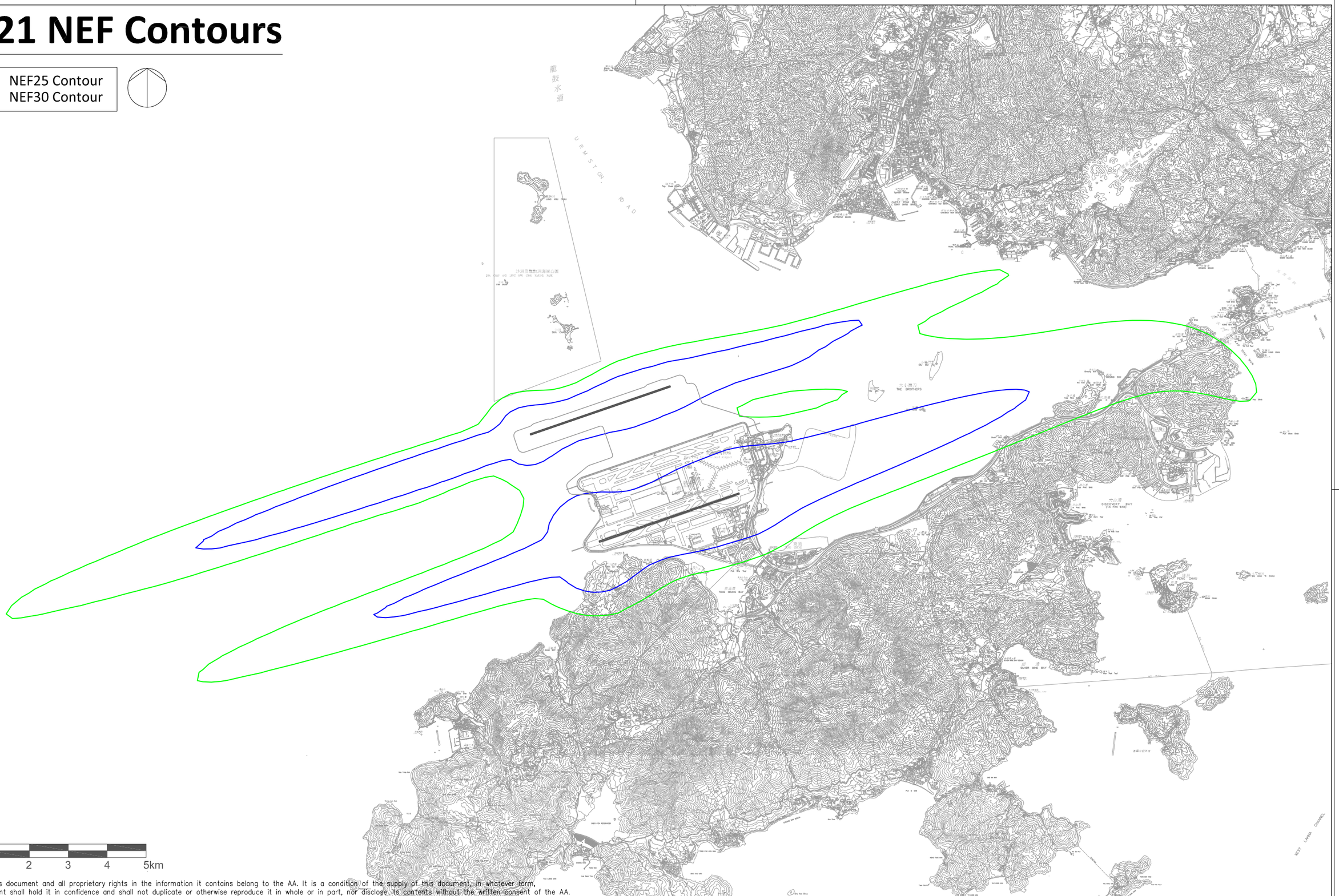
Appendix 7.1

NEF Noise Contours extracted from 3RS EIA

2021 NEF Contours

NEF25 Contour
NEF30 Contour



0 1 2 3 4 5km

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C	28OCT13	SECOND DRAFT	TWKW
D	28JAN14	THIRD DRAFT	TWKW
E	11MAR14	FINAL	TWKW

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Mott MacDonald
In association with
ARUP
Atkins China Limited
Clymene Enterprises
Deltares
Ecosystems Limited
SDA Marine Limited
Urbis Limited
URS Hong Kong Ltd

Title

Noise Contours of Year 2021

Consultant's Signatures for Approval		Date
Design	HC	13SEP13
Checkers	HC	13SEP13
Design Supervisor	EC	21MAR14
Authorised Representative	AFK	21MAR14

EXPANSION OF HONG KONG INTERNATIONAL AIRPORT INTO A THREE-RUNWAY SYSTEM

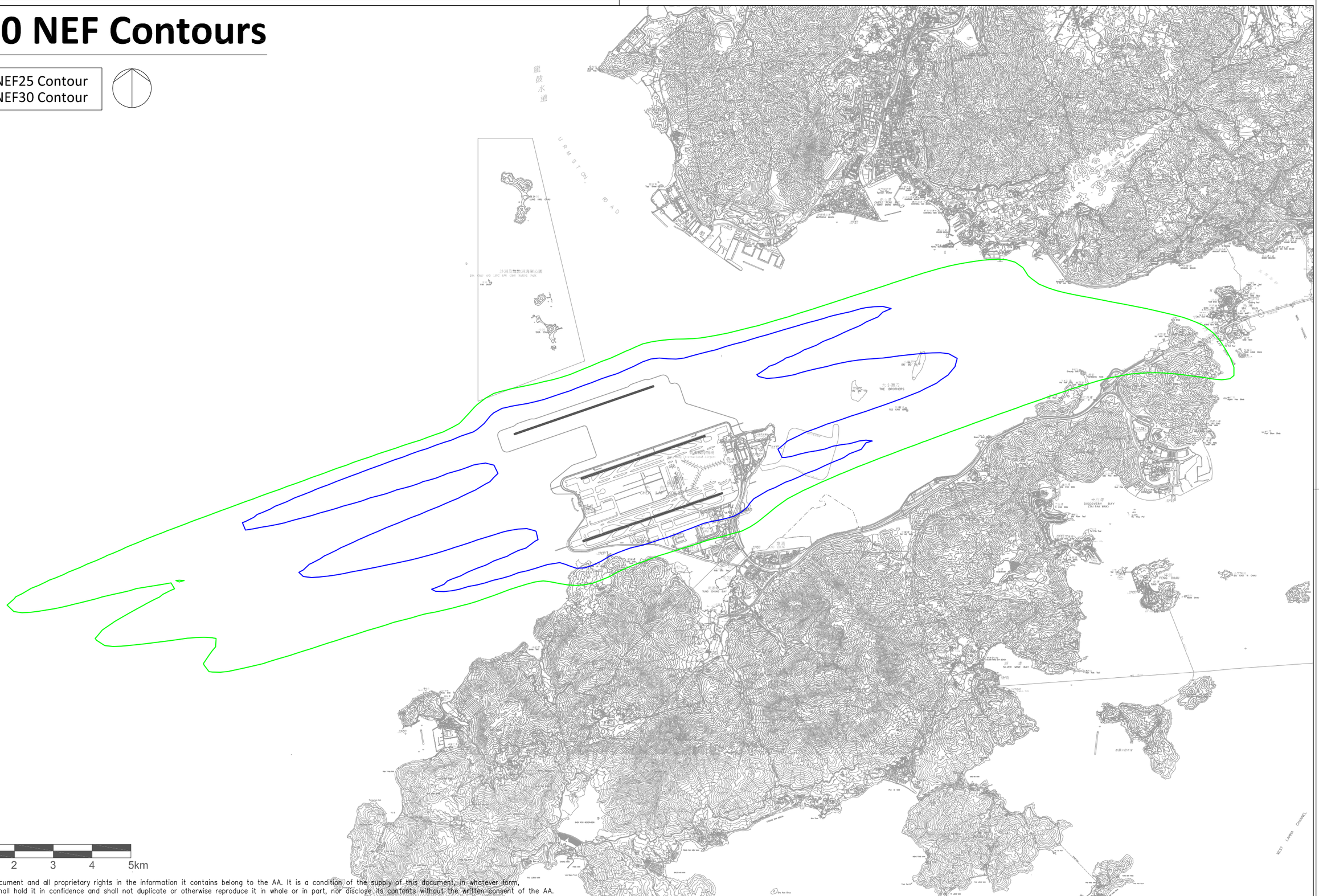
Drawing No. MCL/P132/EIA/7-3-008

Scale at A3: AS

Rev. E

2030 NEF Contours

NEF25 Contour
NEF30 Contour



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SDA Marine Limited
Urbis Limited
URS Hong Kong Ltd

Title

Noise Contours of Year 2030

Consultant's Signatures for Approval		Date
Design	HC	13SEP13
Checkers	HC	13SEP13
Design Supervisor	EC	21MAR14
Authorised Representative	AFK	21MAR14

EXPANSION OF HONG KONG INTERNATIONAL AIRPORT INTO A THREE-RUNWAY SYSTEM

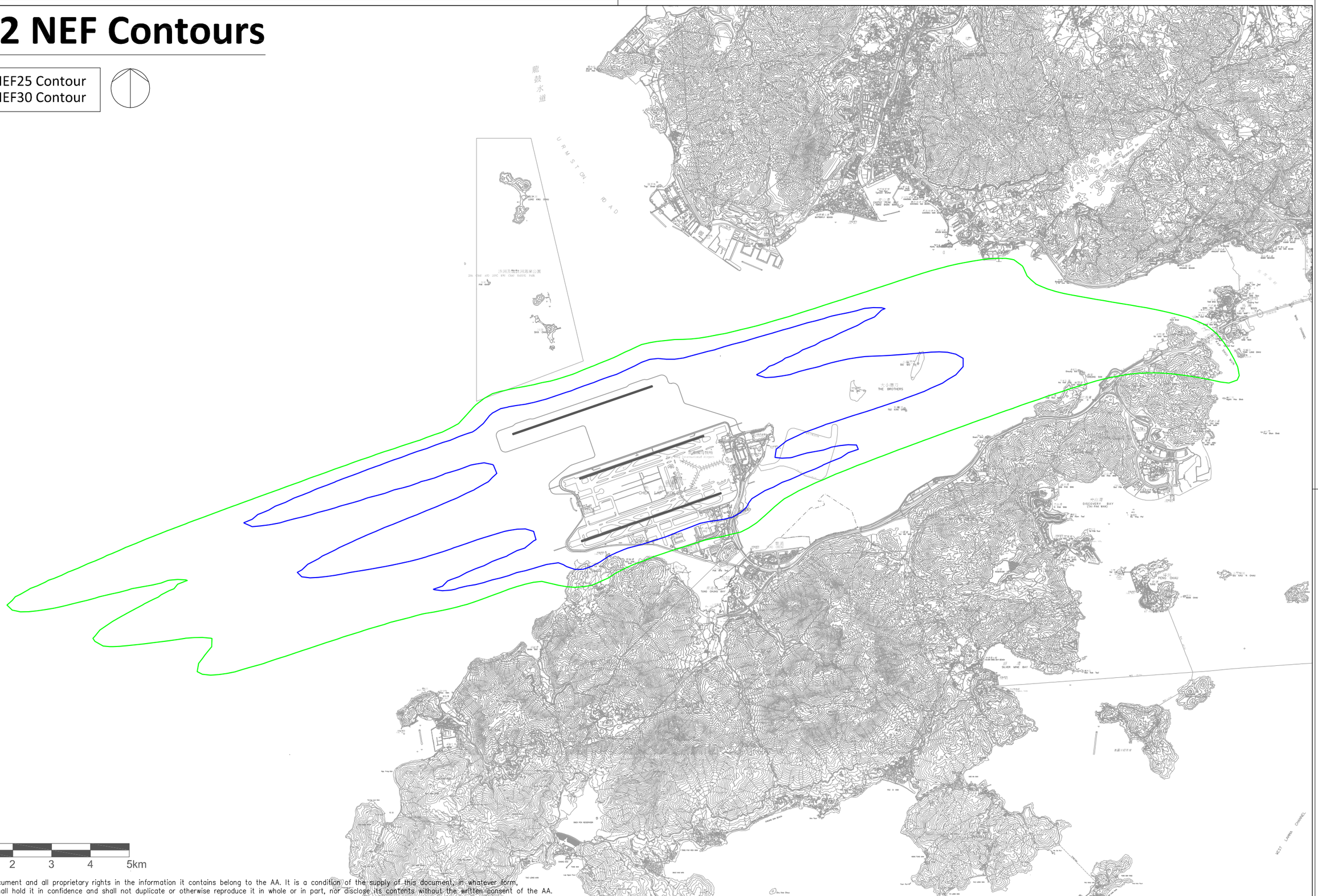
Drawing No. MCL/P132/EIA/7-3-007

Scale at A3: AS

Rev. E

2032 NEF Contours

NEF25 Contour
NEF30 Contour



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Rev.	Date	Description	Checked
A	28JUN13	FIRST DRAFT	TWKW
B	27AUG13	REVISED DRAFT	TWKW
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In association with
ARUP
Atkins China Limited
Clymene Enterprises
Deltares
Ecosystems Limited
SDA Marine Limited
Urbis Limited
URS Hong Kong Ltd

Title

Noise Contours of Year 2032

Consultant's Signatures for Approval		Date
Design	HC	13SEP13
Checkers	HC	13SEP13
Design Supervisor	EC	21MAR14
Authorised Representative	AFK	21MAR14

EXPANSION OF HONG KONG INTERNATIONAL AIRPORT INTO A THREE-RUNWAY SYSTEM

Drawing No. MCL/P132/EIA/7-3-009

Scale at A3 AS

Rev. E

Appendix 8C

Technical Assessments – Part 6

Environmental Assessment Study
(for Tung Chung Area 133C)

Hong Kong Housing Authority

Public Housing Development at Tung Chung Area 133C

Environmental Assessment Study Final Report

287645-12

Final Report | April 2024

This report takes into account the particular instructions and requirements of our client.

It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

Job number 287645-12

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ARUP

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Executive Summary

Ove Arup & Partners Hong Kong Ltd (Arup) was commissioned by Hong Kong Housing Authority (HKHA) to conduct an Environmental Assessment Study (EAS) on the proposed public housing development (Scheme received on 13 February 2023 with 2,571 no. of flats) at Tung Chung Area 133C with respect to the Hong Kong Planning Standards and Guidelines (HKPSG).

The subject site is located on the reclaimed land in Tung Chung East (TCE). It is bounded by Road L6 to the west and Road L7 to the south. Road traffic noise assessment has predicted that the proposed residential development could comply with the respective noise criteria. No mitigation measures are therefore required.

The Tung Chung Line (TCL) and Airport Express Line (AEL) are located about 170m to the south of the subject site. A section of existing TCL will be diverted for the planned Tung Chung Line Extension (TCLE) with the provision of a new TCE Station. The planned TCLE and TCE station are located at approximately 170m to the south and outside 300m to the southwest of the subject housing site respectively. Based on the latest implementation programme of TCE, there are other planned high-rise developments in vicinity of the subject site to be in place to provide noise screening from the rail tracks. The rail noise impact assessment in the approved TCLE EIA indicates that the proposed residential development could comply with the respective noise criteria for base scenario. Potential rail noise impact is therefore not anticipated.

The major fixed noise sources include the planned salt water pumping station/ sewage pumping station, fire station and sports ground in Tung Chung Area 132, 136 and 138 respectively and the planned public wet market area to the southwest corner of Tung Chung Area 133A. Based on the latest implementation programme of TCE, the other planned development in vicinity of the subject site will be in place to provide screening from the potential fixed noise sources. The approved TCNTE EIA indicates that the predicted fixed noise levels on the proposed residential development at Tung Chung Area 133C would comply with the respective noise criteria. Potential fixed noise sources impact is therefore not anticipated. As confirmed by Architectural Services Department (ArchSD), the design of the public market will consider the public housing developments to ensure the environmental impact will comply with statutory requirements.

With reference to the approved EIA (AEIAR-185/2014) for Expansion of Hong Kong International Airport (HKIA) into a Three-Runway System (3RS), the subject site is located outside the NEF25 contour for all future scenarios for 3RS operation of HKIA. Hence, aircraft noise impact is not anticipated.

Two Public Transport Interchanges (PTIs) are planned within Tung Chung Area 113 and Area 133B respectively. Both are located far away from the proposed housing site at Area 133C and will be designed under deck and with no line-of-sight to the nearby noise sensitive receivers. The PTIs are also screened by other planned high-rise residential developments in between. Potential noise nuisance is therefore not anticipated.

The layout plans of the proposed kindergarten and social welfare facilities are being studied and yet to be available at this stage. Hence, noise assessments will be supplemented in the next stage.

The current scheme has allowed sufficient setback distances from the surrounding roads to meet the minimum requirement for the residential blocks as stipulated in HKPSG. Any planned air sensitive rooms at the proposed kindergarten and social welfare facilities shall also be provided with the setback distance requirements as stipulated in HKPSG. There is no chimney found within the 500m assessment area. The planned PTIs at Area 113 and 133B will be designed under deck by others and HKHA respectively, with due consideration to the HKPSG and Practice Note for Professional Persons (ProPECC PN) 1/22 "Control of Air Pollution in Semi-Confined Public Transport Interchanges". Hence, no adverse air quality impact on the proposed development is anticipated.

It is concluded that there are no adverse environmental impacts on the subject site at Tung Chung Area 133C for housing development.

1 Introduction

1.1.1.1 Ove Arup & Partners Hong Kong Ltd (Arup) was commissioned by Hong Kong Housing Authority (HKHA) to conduct an Environmental Assessment Study (EAS) on the proposed public housing development at Tung Chung Area 133C.

1.1.1.2 The reclamation at Tung Chung East to form a total of 130 ha of land for development of Tung Chung New Town Extension (TCNTE) (East) was currently being undertaken and the associated site formation and infrastructure works will be carried out by Civil Engineering and Development Department (CEDD).

1.1.1.3 The subject site is located on Area 133C of the reclaimed land in TCNTE (East). The land of Area 133C has already been reclaimed and formed. It will be bounded by Road L6 to the west and Road L7 to the south. The gross site area is about 1.8 ha. In accordance with the "Approved Tung Chung Extension Area Outline Zoning Plan (OZP) No. S/I-TCE/2", the current land use zoning of the subject site is "Residential (Group A)3" ("R(A)3").

1.1.1.4 This EAS is conducted on the Scheme received on 13 February 2023 provided by HKHA to evaluate the potential environmental impacts on the proposed development with respect to guidance for environmental considerations provided in Chapter 9 – Environment of the Hong Kong Planning Standards & Guidelines (HKPSG). Road traffic noise impact assessment has been conducted in this EAS. In addition, potential rail noise impact, fixed noise impact, aircraft noise impact, noise nuisance arising from the planned public transport interchange (PTI) and air quality impact have also been qualitatively reviewed in this EAS.

1.1.1.5 The EAS was conducted on the following scheme:

Scheme	EAS version	Submission date
Scheme dated 13 February 2023	Draft EAS Report	21 April 2023
Scheme dated 13 February 2023	Draft Final EAS Report	7 June 2023
Scheme dated 13 February 2023	Draft Final EAS Report	11 March 2024

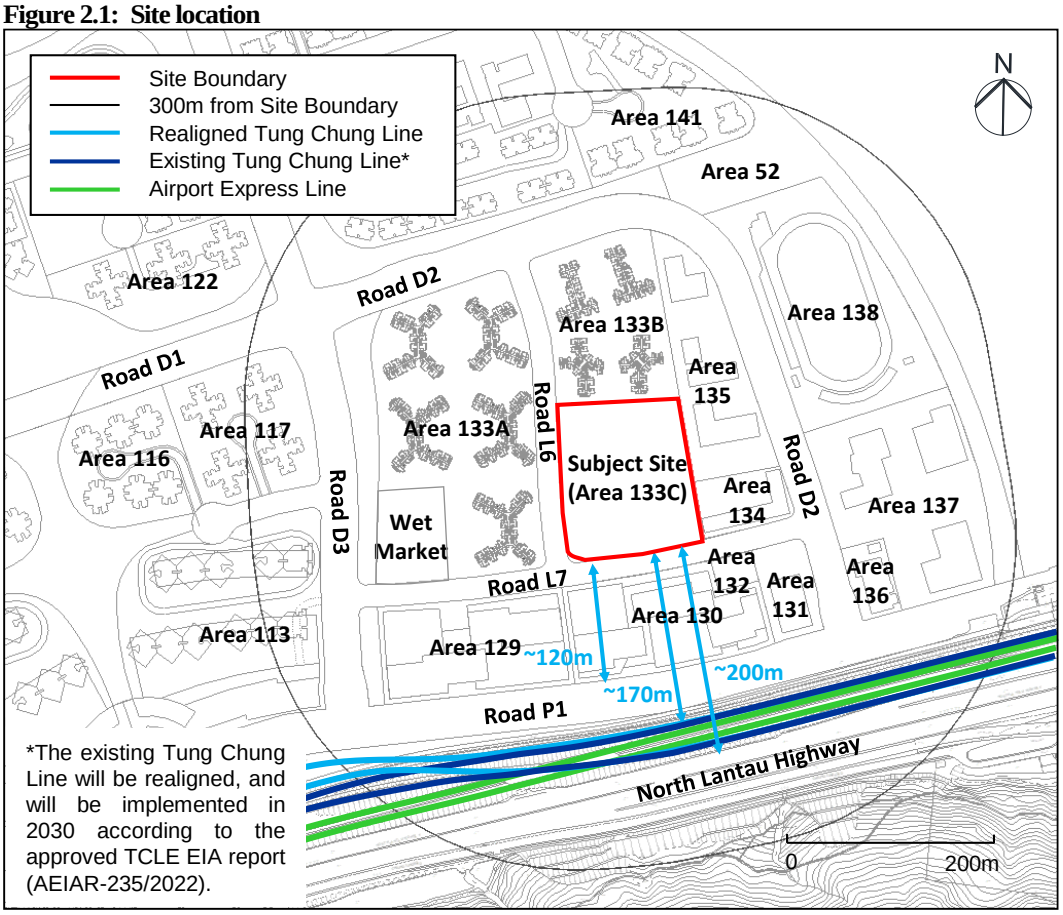
1.1.1.6 This EAS has been updated for the Scheme dated 13 February 2023 with incorporation of EPD's comments provided on 18 March 2024.

2 Site Location and Building Layout

2.1 Site Location and Description

2.1.1.1 The subject site is located on Area 133C of the reclaimed land in TCNTE (East). It will be bounded by Road L6 to the west and Road L7 to the south (**Figure 2.1**). Road P1 and North Lantau Highway will be at some 120m and 200m to the south respectively. Another two public housing sites at Area 133A and Area 133B are planned to its west and north respectively. The site will also be surrounded by other developments in its immediate vicinity, including Areas 134 and 135 to the east, and Areas 129 to 132 to the south. The area to the southwest corner of Tung Chung Area 133A is reserved for a public wet market to be developed and managed under Food and Environmental Hygiene Department (FEHD).

Figure 2.1: Site location

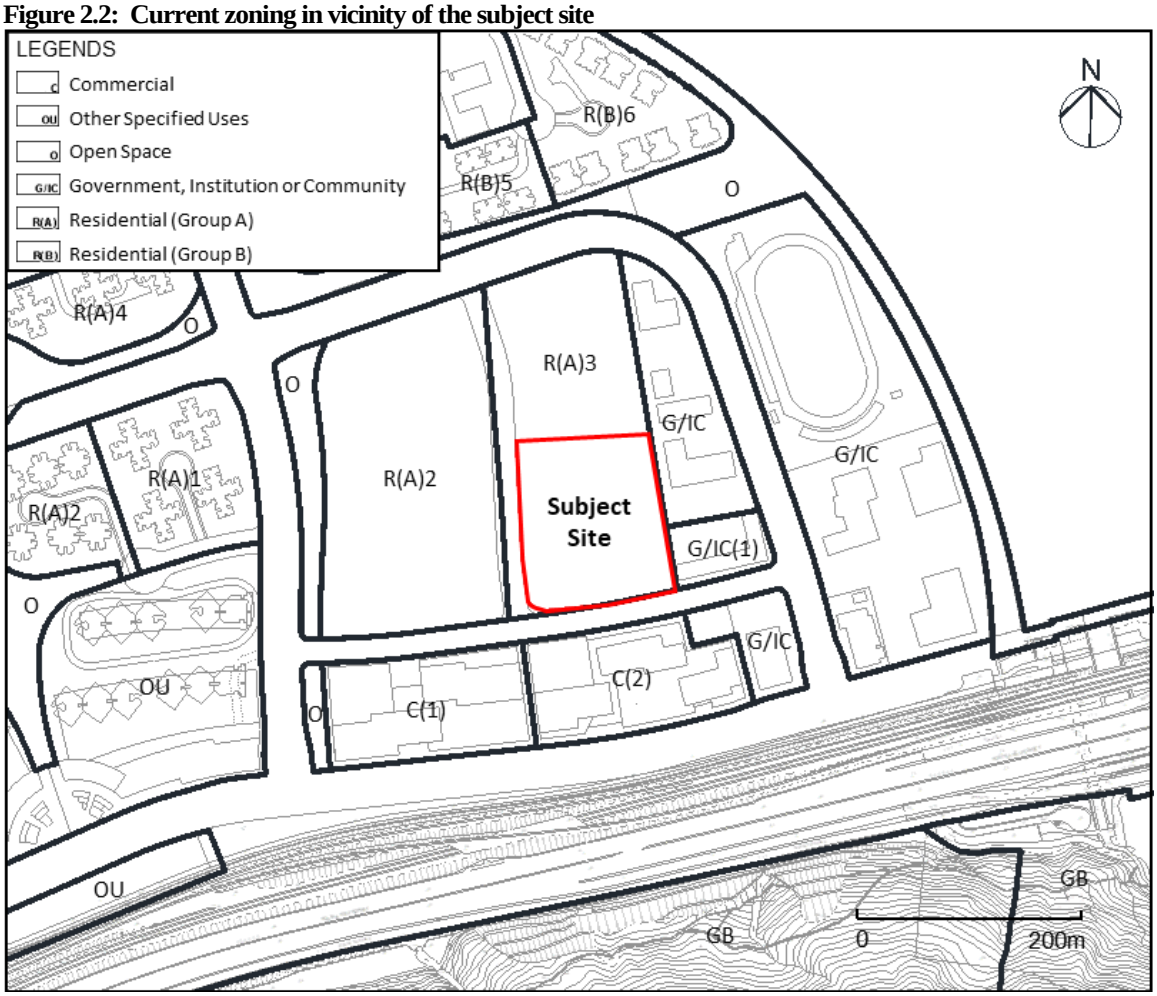


2.1.1.2 The existing Tung Chung Line (TCL) and Airport Express Line (AEL) are located about 170m to the south of the subject site. A section of existing TCL will be slightly diverted for the planned Tung Chung Line Extension (TCLE) with the provision of a new Tung Chung East (TCE) Station on the reclaimed land. The planned TCLE and TCE station are located at approximately 170m to the south and outside 300m to the southwest of the subject housing site respectively (**Figure 2.1**).

2.1.1.3 In accordance with the Tung Chung Extension Area Outline Zoning Plan (OZP) No. S/I-TCE/2, the existing land use zoning of the subject site is "Residential (Group A)3"

("R(A)3"). The areas in vicinity of the subject site are mainly zoned as "R(A)", "Residential (Group B)" ("R(B)"), Open Space" ("O"), "Government, Institution or Community" ("G/IC"), "Commercial" ("C") and "Other Specified Uses" ("OU") (**Figure 2.2**).

Figure 2.2: Current zoning in vicinity of the subject site



2.2 Building Design

2.2.1.1 The latest site layout plan (Scheme received on 13 February 2023) is illustrated in **Figure 2.3**. The proposed development consists of four domestic blocks with a total of 2,571 residential flats. **Figures 2.4 to 2.7** illustrate the typical floor plans of the residential blocks.

2.2.1.2 Kindergarten and social welfare facilities are planned on G/F, P1/F to P4/F of the proposed development. Their locations and layout plans are still being investigated. Hence, assessments on the kindergarten and social welfare facilities will be supplemented when the layout is confirmed in the next stage.

2.2.1.3 The anticipated occupation year of population of the proposed development is Year 2030. The key development parameters for the residential blocks under current scheme are given in **Table 2.1**. The detailed layout plan and schematic section plan are provided in **Appendix 2.1**.

Table 2.1: Key development parameters of residential blocks

Parameters	Block 1	Block 2	Block 3	Block 4
No. of Domestic Storeys	36		29	28
Floor to Floor Height (m) [1]	2.75			
First Level (mPD)	16.15		37.65	
First NSR Level (mPD) [2]	17.35		38.85	
Main Roof Level (mPD) [2]	115.19		117.44	114.69
Number of Flats per Storey	20 (1/F-36/F)		15 (1/F) 20 (2/F-29/F)	16 (1/F) 20 (2/F-28/F)
Number of Flats per Block	720	720	575	556
Total Number of Flats	2,571			
Proposed Occupation Year of Population	2030			

Notes:
[1] For modeling purpose, a floor-to-floor height of 2.7m is assumed for domestic block.
[2] For modeling purpose, the first NSR level and main roof level are round down to one decimal place.

Figure 2.3: Site layout plan – Typical Floor (Scheme received on 13 February 2023)

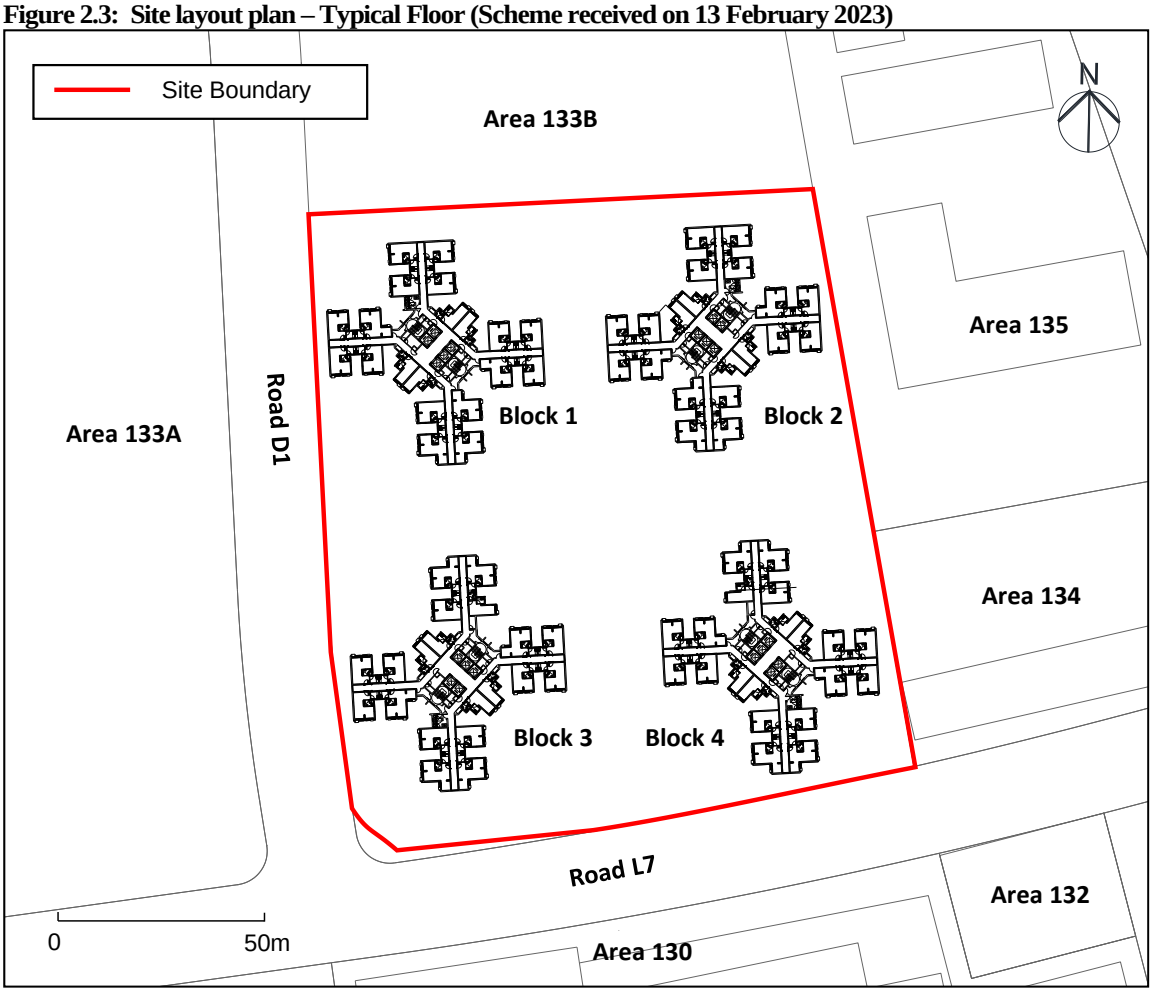


Figure 2.4: Typical floor plan of Residential Block 1 (Scheme received on 13 February 2023)

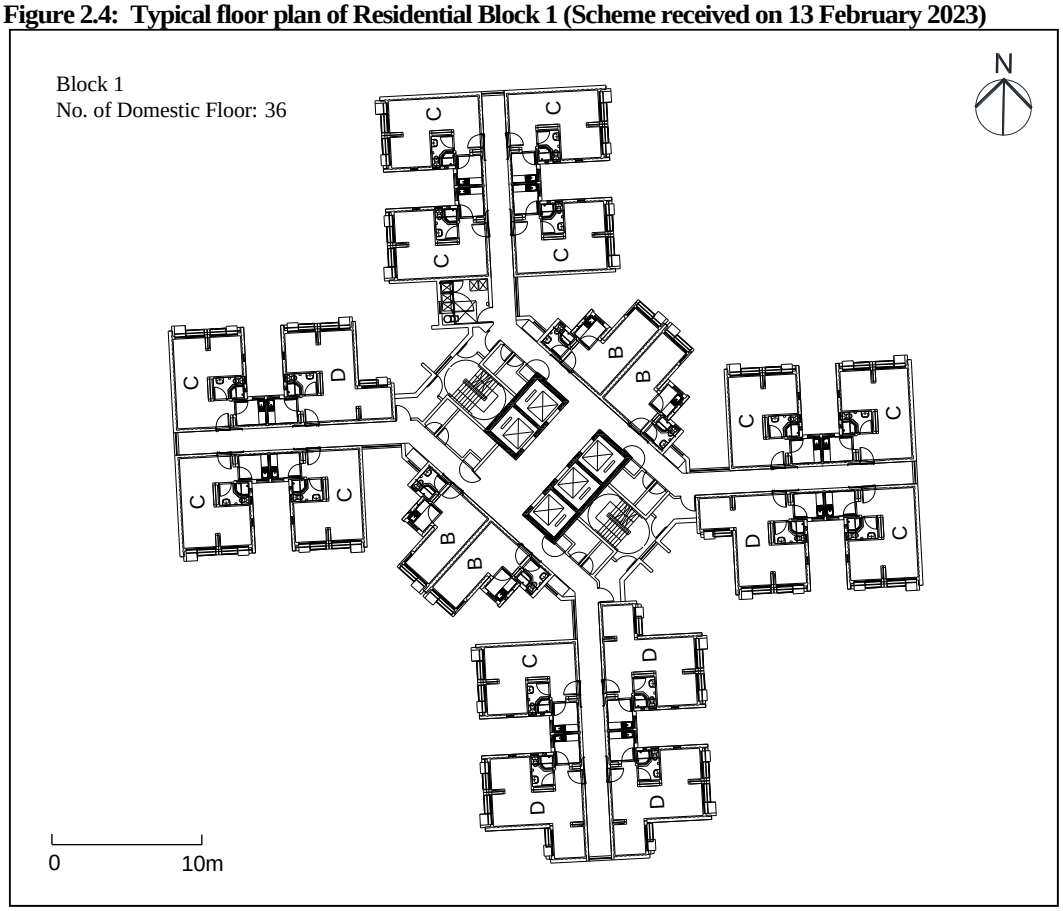


Figure 2.5: Typical floor plan of Residential Block 2 (Scheme received on 13 February 2023)

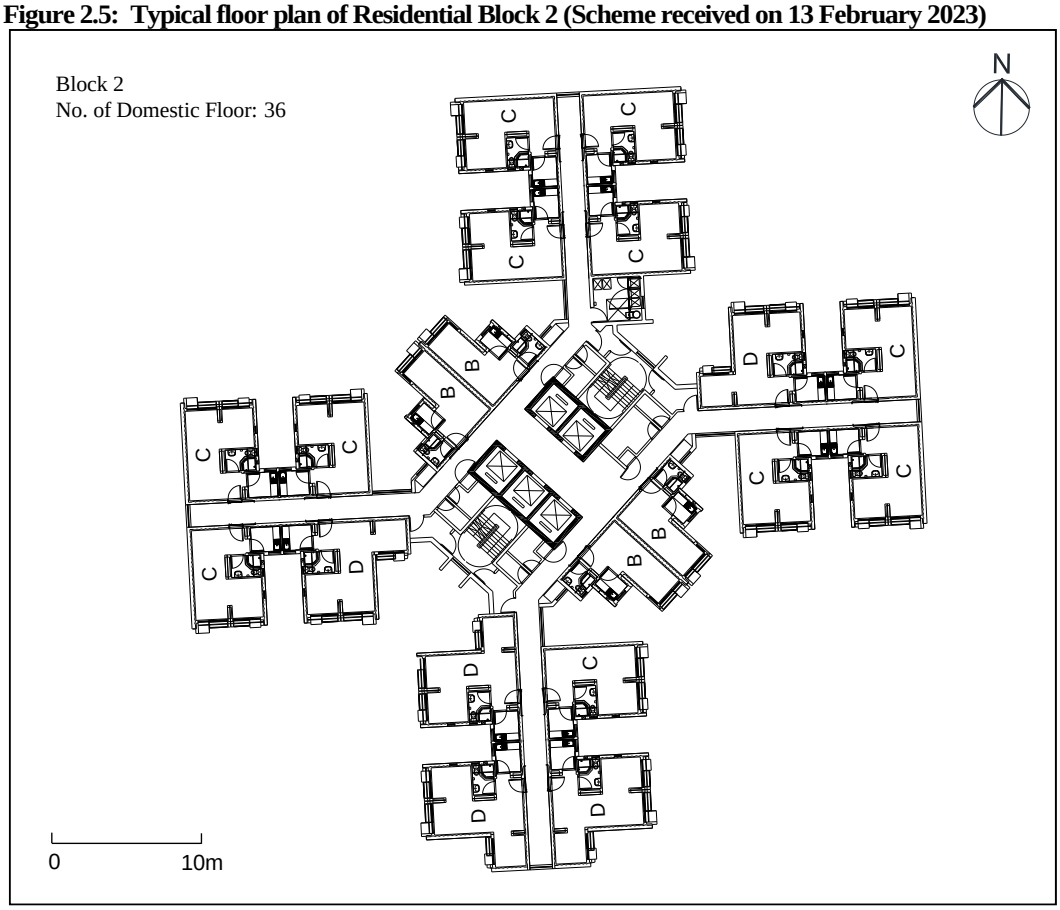


Figure 2.6: Typical floor plan of Residential Block 3 (Scheme received on 13 February 2023)

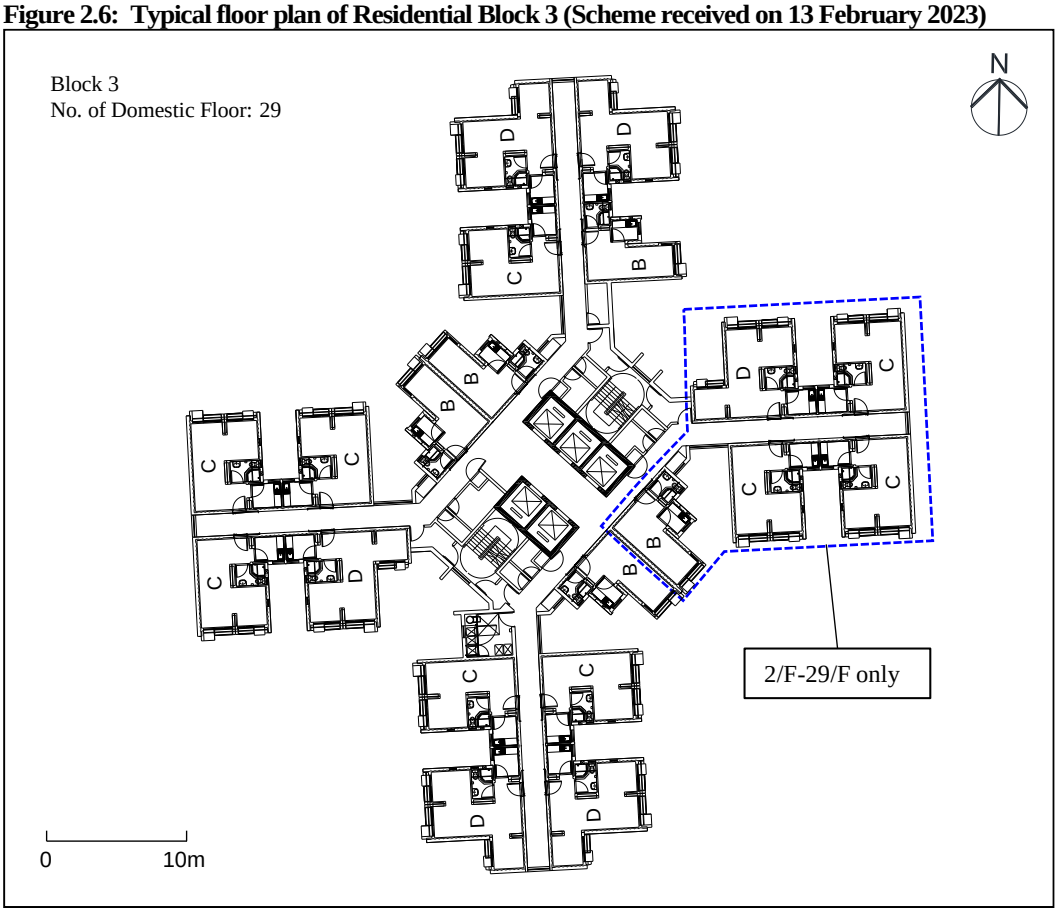
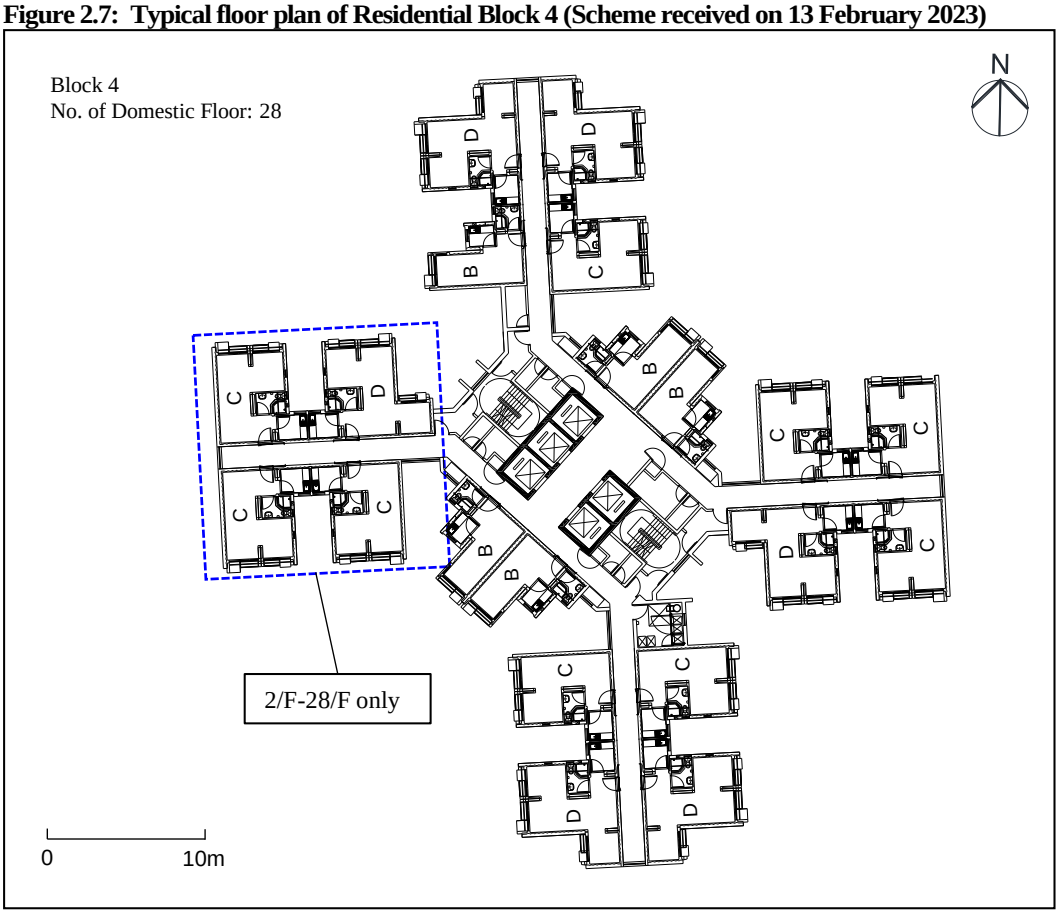


Figure 2.7: Typical floor plan of Residential Block 4 (Scheme received on 13 February 2023)



3 Site Inspection

3.1.1.1 The subject site is located on the reclaimed land of Area 133C in TCE. The land has already been formed. The reclamation at the remaining areas of TCNTE (East) was still being undertaken and the associated site formation and infrastructure works will be carried out by Civil Engineering and Development Department (CEDD).

3.1.1.2 The subject site will be bounded by Road L6 to the west and Road L7 to the south. Another two public housing sites at Area 133A and Area 133B are planned to its west and north respectively. The site will also be surrounded by other developments in its immediate vicinity, including Areas 134 and 135 to the east, and Areas 129 to 132 to the south.

3.1.1.3 Based on site observation, the subject site is currently occupied by CEDD as works area for storage of construction plants or construction materials. Photographs taken at site are given in **Photo 1** and **Photo 2** below.

Photo 1: Subject Site (occupied by CEDD as works area)	**Photo 2: Subject Site (occupied by CEDD as works area)**
	

4 Road Traffic Noise Impact Assessment

4.1 Concerned Road Sections and Noise Sensitive Receivers

4.1.1.1 With reference to the HKPSG, Noise Sensitive Receivers (NSRs) shall include residential uses (all domestic premises including temporary housing accommodation), institutional uses (educational institutions including kindergarten, child care centres and all others where unaided voice communication is required), hotels, hostels, offices, places of public worship, courts of law, hospitals, clinics, convalescences, residential care homes for the elderly, amphitheatres, auditoria, libraries, performing arts centres and country parks. Based on the current development plan, the proposed domestic blocks, kindergarten and social welfare facilities are planned within the site and all of them are regarded as NSRs.

4.2 Noise Criteria

4.2.1.1 In accordance with the HKPSG, the maximum permissible hourly road traffic noise level at 1m from the external facades of the representative NSRs for the proposed development is summarized in **Table 4.1**. The criterion applies to premises relying on opened windows as primary means for ventilation. As mentioned in **Section 2.2**, the layouts of the kindergarten and social welfare facilities at G/F, P1/F to P4/F are still being investigated. Hence, assessment will be supplemented in the next stage.

Table 4.1: Summary of noise criterion for road traffic noise

Proposed Developments / Facilities	Noise Sensitive Room with Openable Windows as Primary Means for Ventilation [1]	Uses	Noise Standards for Road Traffic Noise, $L_{10(1\ hour)}$ dB(A)
Residential Block 1 to Block 4	Residential Units	Domestic	70

Notes:
[1] All sensitive rooms which rely on opened windows as primary means for ventilation are identified.

4.3 Noise Assessment Points

4.3.1.1 Assessment points for the residential blocks have been assigned to all openable windows of the NSRs for ventilation. The locations of the selected assessment points are given in **Figure 4.1 to 4.4**.

Figure 4.1: Selected assessment points for Block 1 (road traffic noise assessment)

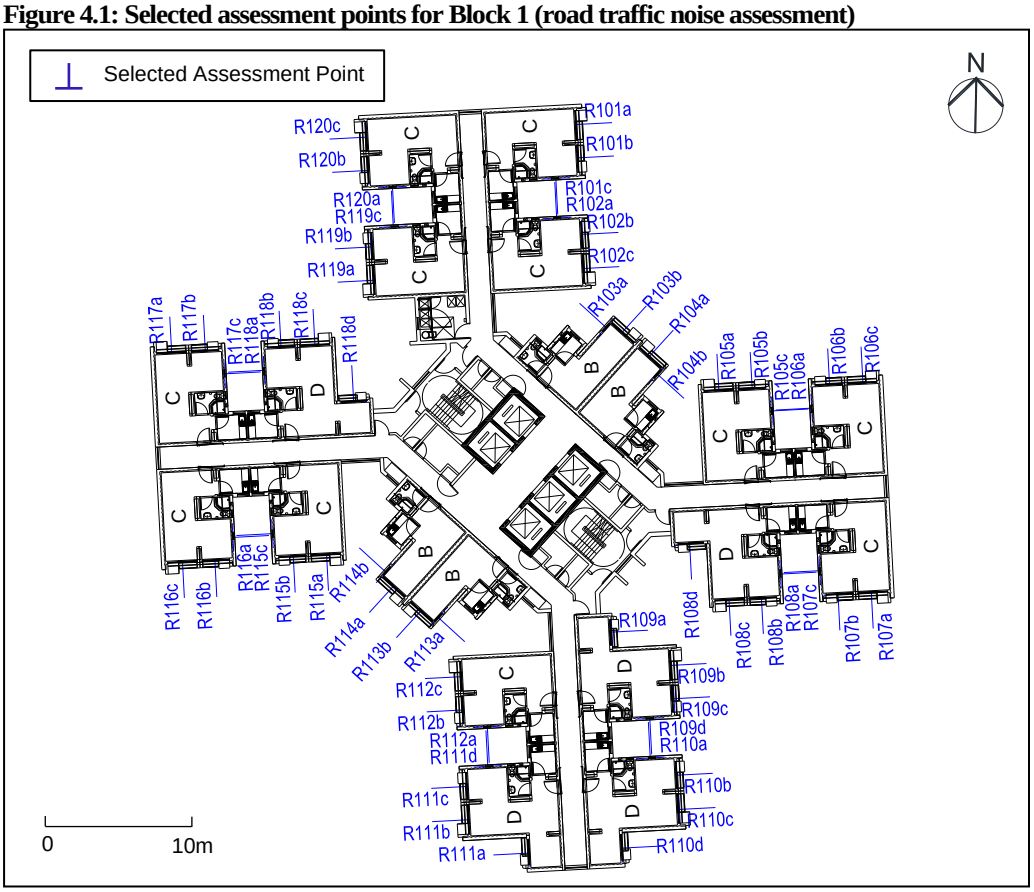


Figure 4.2: Selected assessment points for Block 2 (road traffic noise assessment)

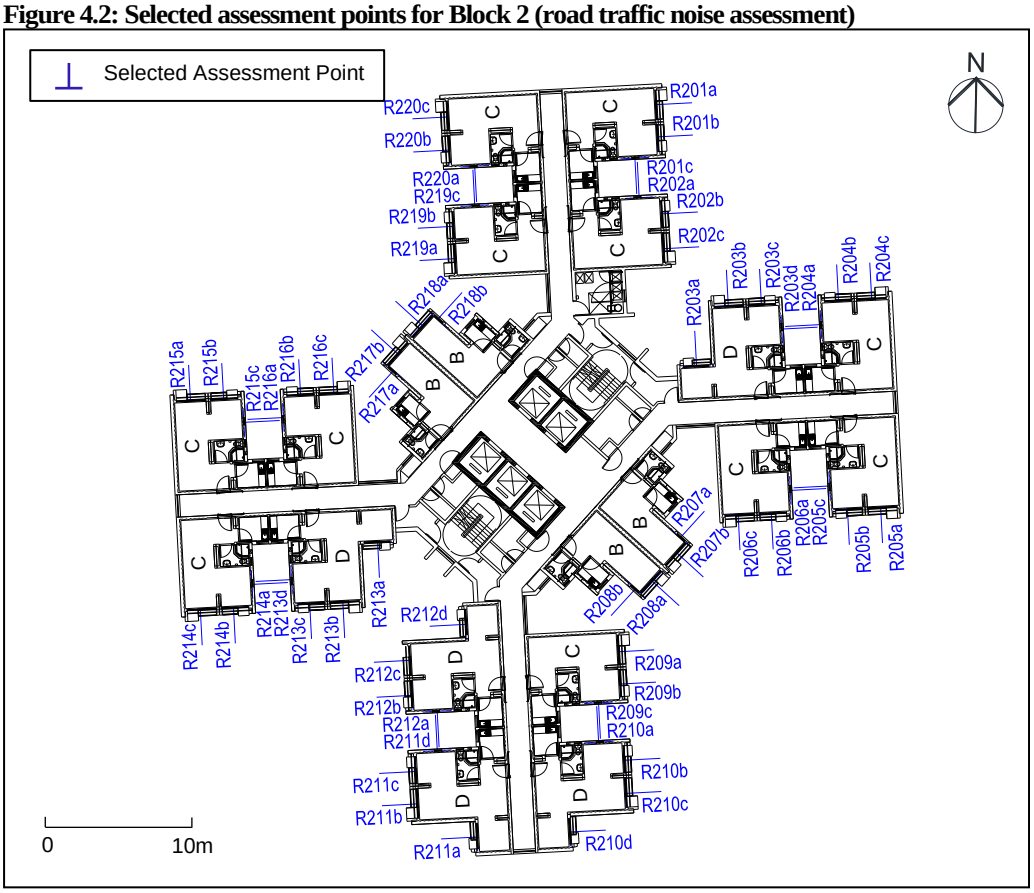


Figure 4.3: Selected assessment points for Block 3 (road traffic noise assessment)

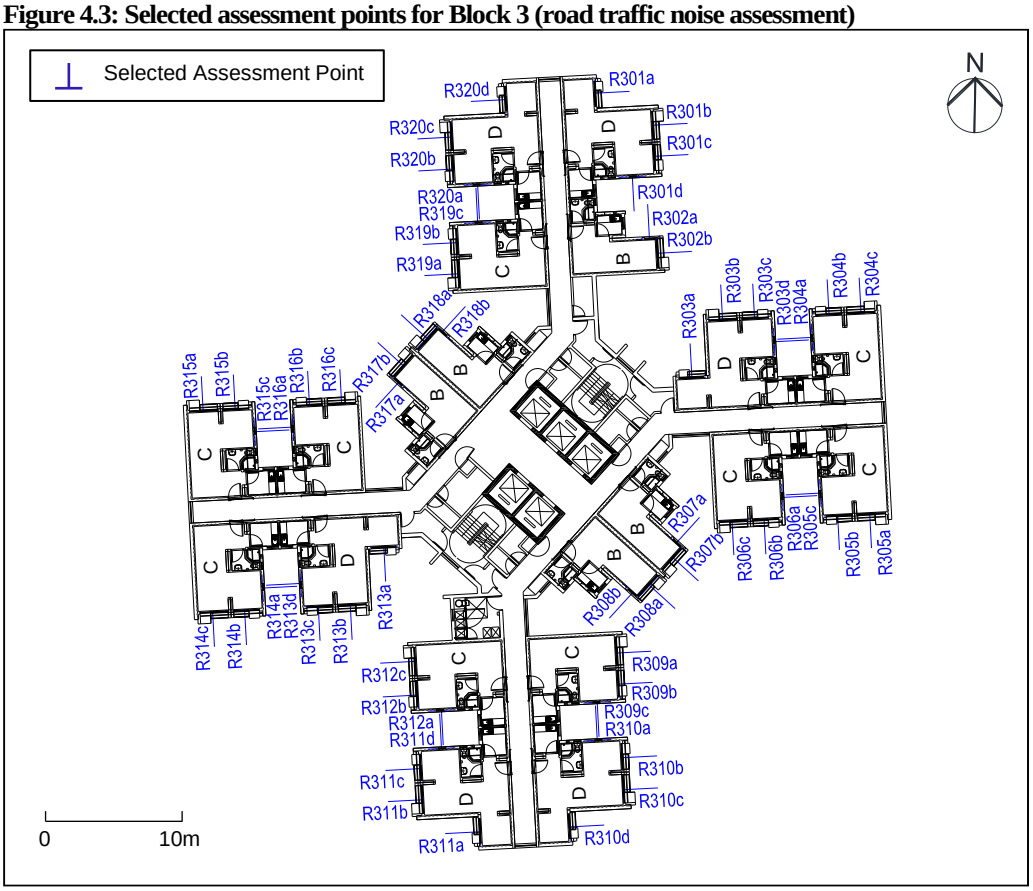
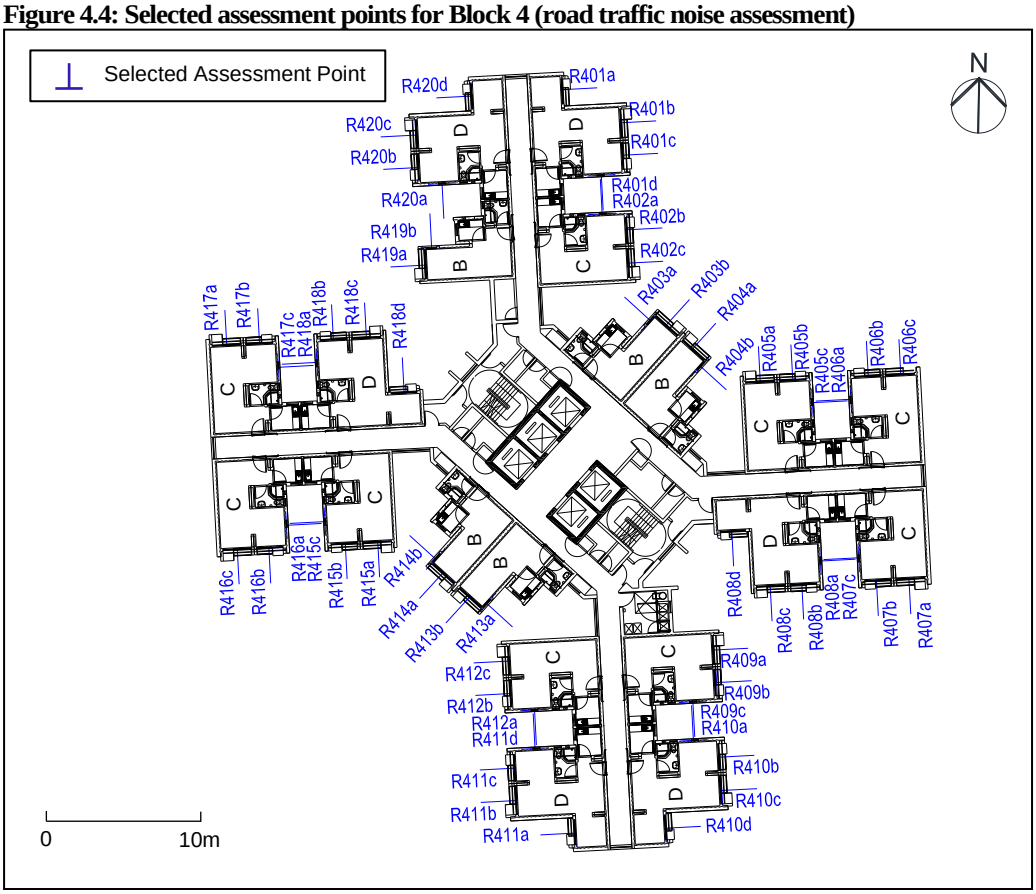


Figure 4.4: Selected assessment points for Block 4 (road traffic noise assessment)



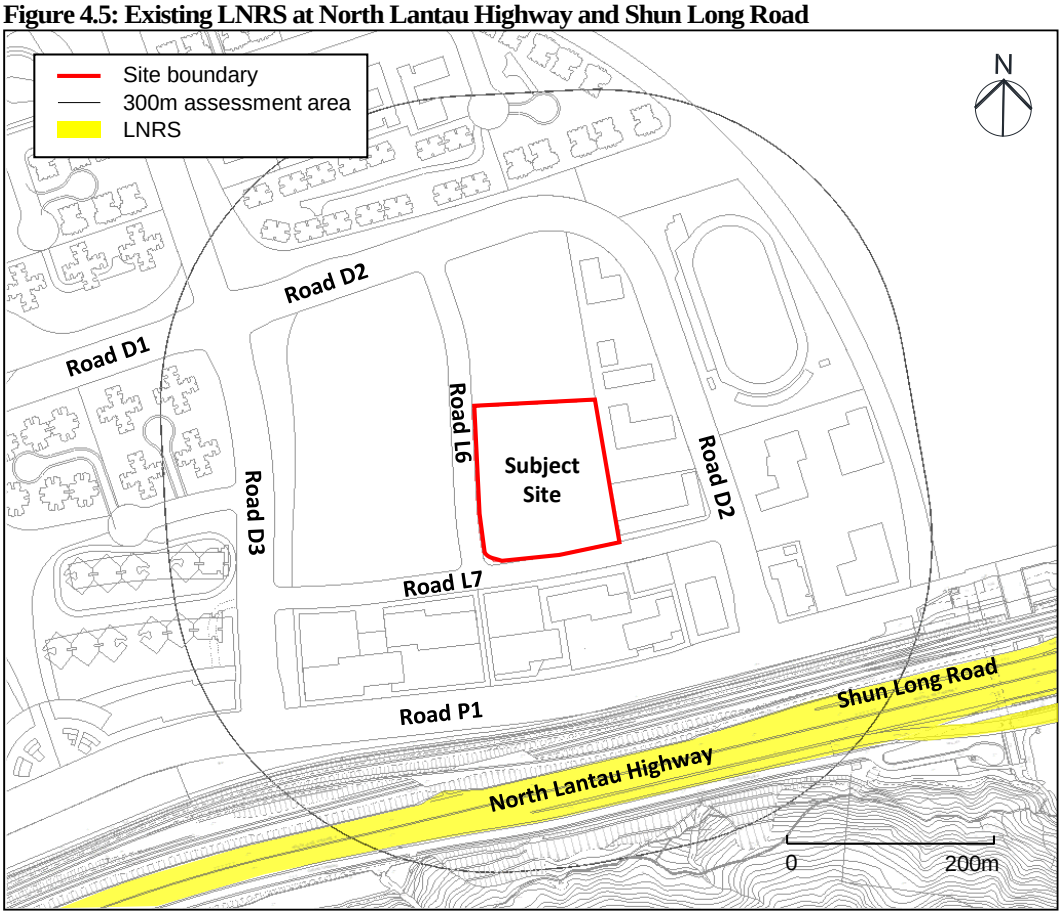
4.4 Assessment Methodology

4.4.1.1 The prediction is based on the calculation method in accordance with the UK Department of the Transport "Calculation of Road Traffic Noise" (CRTN) and the traffic noise levels at the facades of the selected assessment points have been predicted.

Existing Noise Mitigation Measures

4.4.1.2 Low noise road surfacing (LNRS) is currently in place on North Lantau Highway and Shun Long Road. Letter of reply from Highways Department (HyD) is attached in **Appendix 4.1**. The extent of LNRS is illustrated in **Figure 4.5**.

Figure 4.5: Existing LNRS at North Lantau Highway and Shun Long Road



Proposed Noise Mitigation Measures

4.4.1.3 The approved TCNTE EIA (AEIAR-196/2016) has proposed at-source noise mitigation measures on some planned roads in TCNTE (East) to relieve the noise impacts caused by its associated new road infrastructure works. The proposed noise mitigation measures were reviewed in Civil Engineering and Development Department (CEDD)'s Environmental Review studies for Enhancement of the Development Intensity in TCNTE (East). The proposed noise barriers on Road L7 and Road D3 which are within 300m of the subject housing site are described below (**Figure 4.6**).

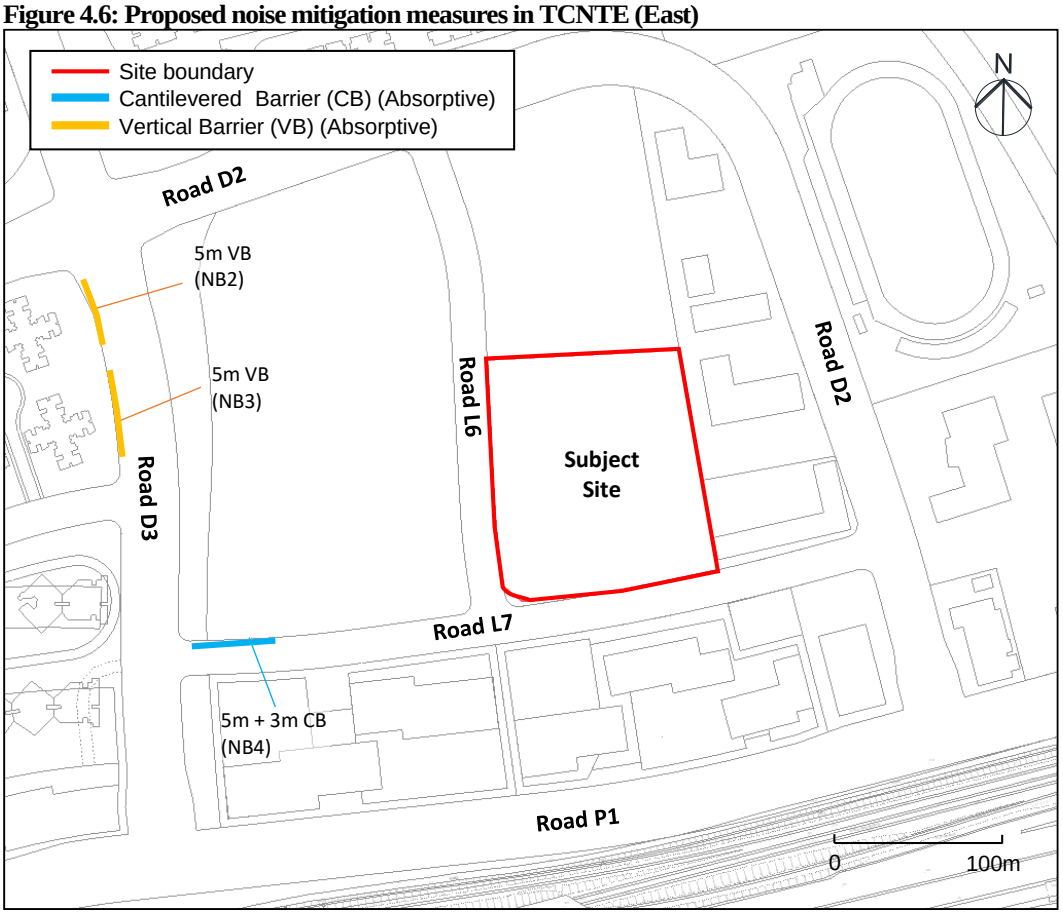
- One section of cantilevered noise barrier (5m high with 3m cantilever arm) of about 60m in length along a section of Road L7; and

- Two 5m high vertical noise barrier of about 120m in total length along a section of Road D3.

4.4.1.4 The tender drawings of the noise barriers provided by CEDD are shown in **Appendix 4.2**.

4.4.1.5 The noise barriers in TCNTE as described above have been incorporated into the base case of the traffic noise model of the present EAS. It shall however be noted that the proposed noise mitigation measures are still being reviewed by CEDD. Should there be any change in the proposed noise mitigation measures under CEDD's study, the road traffic noise assessment will be updated in the subsequent stage of the EAS.

Figure 4.6: Proposed noise mitigation measures in TCNTE (East)



4.5 Traffic Flow Data for Assessment

4.5.1.1 Based on the information provided by HKHA, the tentative occupation year of the proposed development is Year 2030. According to CEDD's Environmental Review studies for Enhancement of the Development Intensity in TCNTE (East), the maximum traffic projection for road traffic noise assessment is Year 2045 (which is 15 years upon the ultimate commissioning year of the TCNTE (East)). The same set of projected traffic flow data for Year 2045 has been adopted for the assessment in current EAS.

4.5.1.2 Reply from Transport Department (TD) on the traffic forecast for CEDD's Environmental Review studies for Enhancement of the Development Intensity in TCNTE (East) is given in **Appendix 4.3**.

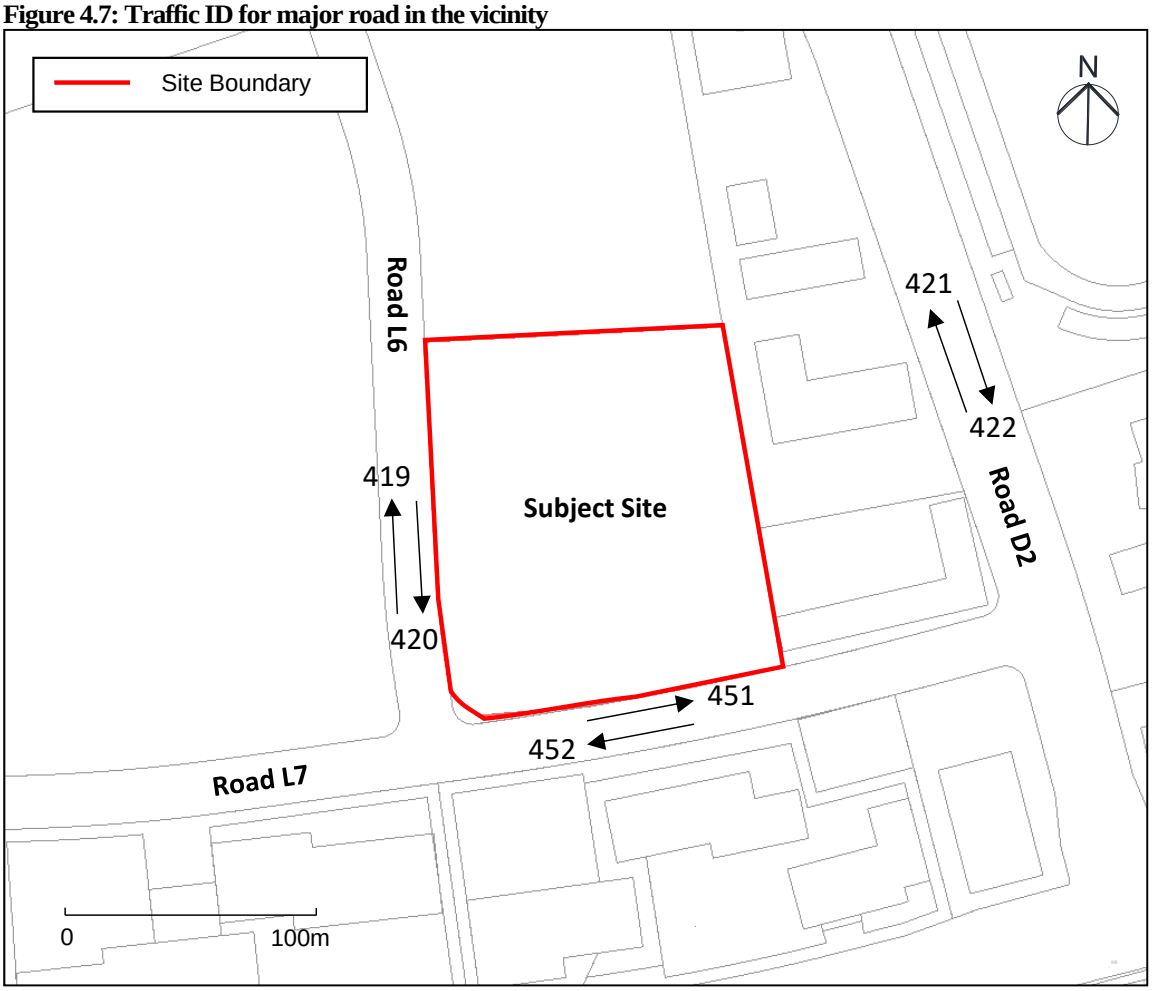
4.5.1.3 The traffic flow data for the major roads surrounding the subject site is presented in **Figure 4.7** and **Table 4.2** below. The traffic flow data for all roads is given in **Appendix 4.4**.

Table 4.2: Predicted peak hourly traffic flow data

Road ID [1]	Street [2]	Speed Limit (km/hr)	Year 2045	
			Traffic Flow (veh/hr)	% of Heavy Vehicles
419	Road L6 NB	50	220	26.0%
420	Road L6 SB	50	260	33.8%
421	Road D2 NB	50	29	89.0%
422	Road D2 SB	50	812	16.3%
451	Road L7 EB	50	422	27.1%
452	Road L7 WB	50	58	38.5%

Notes:
[1] Only the major roads are shown in the table above. Hence, the flow ID is not in sequential order
[2] NB = North bound, SB = South bound, EB = East bound, WB = West bound

Figure 4.7: Traffic ID for major road in the vicinity



4.6 Assessment Results for Residential Blocks

4.6.1.1 Optimised building layout, design and orientation have already been incorporated into the current scheme for the basecase scenario, as described below:

Building Block Design, Layout and Orientation

4.6.1.2 During the process of designing the development layout, due consideration has been given to avoid the road traffic noise impacts as much as practicable. Different block designs have been investigated. Cross shape building block design has been adopted which could provide self-screening effect and reduce view angle to the nearby roads.

4.6.1.3 The current scheme is found to be the optimal option from perspectives of development efficiency, flat production, noise performance, scenery and angle of view, etc.

Podium

4.6.1.4 Block 3 and 4 are situated on top of a podium of approximate 23m (+29 mPD) high for the current scheme which can increase the separation distance between the residential units and the nearby roads to achieve larger noise reduction. Detailed layout and section drawings could be referred to **Appendix 2.1**.

Building setback

4.6.1.5 The current building blocks have been deposited with optimised setback distance from the nearby roads to reduce the noise impacts as far as practicable.

4.6.1.6 The predicted façade noise levels of the proposed domestic block are presented in **Appendix 4.5**. With the above proper designs, it is estimated that a 100% noise compliance rate can be achieved for the base scenario. The predicted maximum noise level is 70 dB(A). No adverse road traffic noise impact on the proposed residential development is anticipated and hence noise mitigation measures are not required.

5 Review of Rail Noise Impact Assessment

5.1 Rail Noise Criteria

5.1.1.1 Noise planning standards for rail noise have been specified in Table 4.1 of the HKPSG Chapter 9, i.e. $L_{eq(24hr)}$ of 65 dB(A) and $L_{max(2300\text{-}0700hours)}$ of 85 dB(A). Besides, Acceptable Noise Levels (ANL) are also stipulated in the Technical Memorandum for Assessment of Noise from Places other than Domestic Premises, Public Places or Construction Sites Sites (IND-TM) issued under the Noise Control Ordinance as shown in **Table 5.1**. Rail noise impact is reviewed according to the recommendation of the HKPSG, which includes compliance with the relevant requirement of the NCO.

Table 5.1: Noise criteria for rail noise

Area Sensitivity Rating	Time Period [1]	Acceptable Noise Levels, $L_{eq(30\ mins)}$ dB(A) under IND-TM	Maximum A-weighted SPL, $L_{max\ (2300\text{-}0700hrs)}$ dB(A) under HKPSG	24 hours Equivalent SPL, $L_{eq(24\ hr)}$ dB(A) under HKPSG
A	Daytime & Evening	60	85	65
	Night-time	50		
B	Daytime & Evening	65		
	Night-time	55		
C	Daytime & Evening	70		
	Night-time	60		

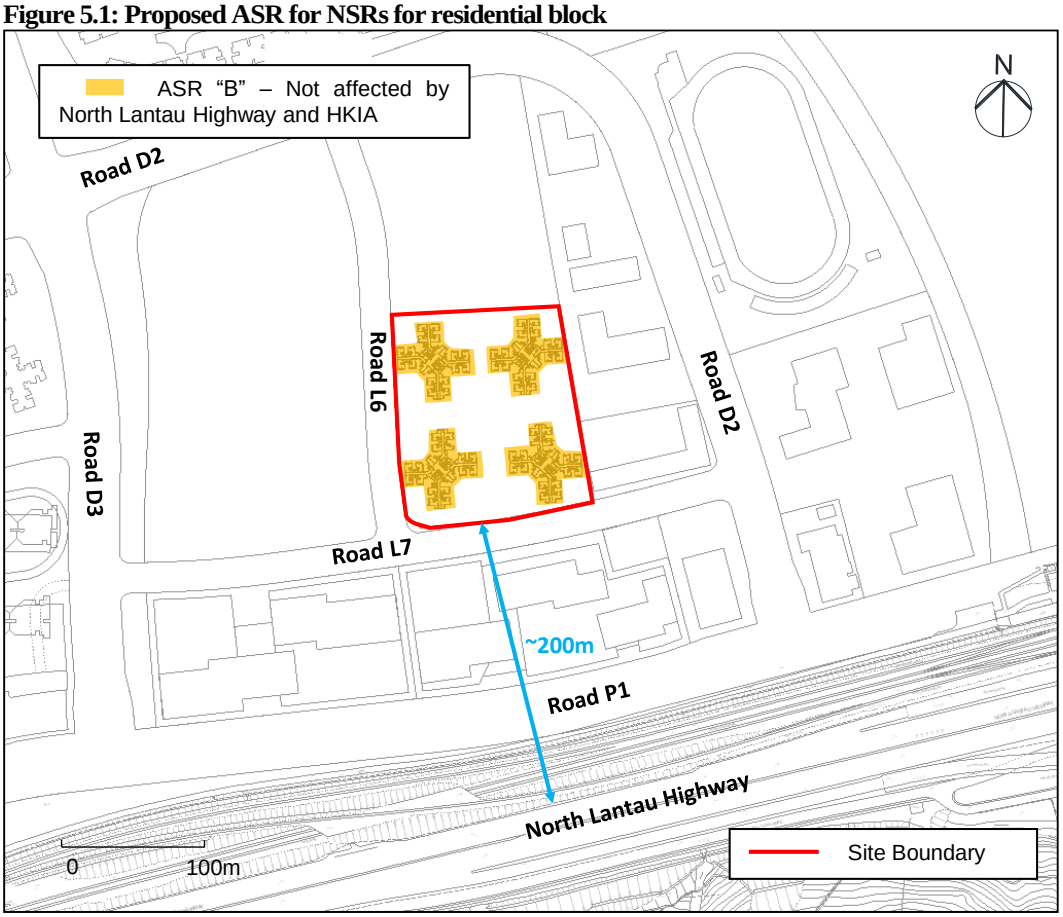
Note:
[1] Daytime: 0700 to 1900 hours, Evening: 1900 to 2300 hours, Night-time: 2300 to 0700 hours

5.1.1.2 The site is planned for high-rise residential development. It is surrounded by planned residential developments in TCNTE (East). The types of area (i) rural area; (ii) low density residential area consisting of low-rise or isolated high-rise developments; and (iii) urban area according to IND-TM cannot reflect the future environs of the subject site and are all not applicable. Thus, the whole site shall fall into type (iv) “Area other than those above" according to IND-TM.

5.1.1.3 Review of the Annual Traffic Census (ATC) for Year 2021 indicates that North Lantau Highway had an AADT of 38,690, which is considered as an Influencing Factor (IF) under the IND-TM. Hong Kong International Airport (HKIA) is located on the west of the subject site and it is also considered as an IF. North Lantau Highway is located at about 200m to the south of the subject site with high-rise developments in between to provide screening, while HKIA is located outside 300m to the north of the subject site. The subject housing site is therefore considered to be not affected by the IFs, and hence an ASR of B is assigned. The Acceptable Noise Level (ANL) for ASR of “B” should be 65dB(A) and 55dB(A) for daytime and night-time respectively. The proposed ASR for the NSRs is indicated in **Figure 5.1** below. The ASR assigned in this EAS report is for

assessment purpose only and shall not prejudice the Authority's decision on enforcement based on contemporary conditions.

Figure 5.1: Proposed ASR for NSRs for residential block



5.2 Review of Potential Rail Noise Impact

5.2.1.1 The existing Tung Chung Line (TCL) and Airport Express Line (AEL) are located about 170m to the south of the subject site. A section of existing TCL will be diverted for the planned Tung Chung Line Extension (TCLE) with the provision of a new TCE Station.

5.2.1.2 The TCLE is a Designated Project under Environmental Impact Assessment Ordinance (EIAO). An Environmental Impact Assessment (EIA) was conducted and approved under EIAO on 12 July 2022 (AEIAR-235/2022).

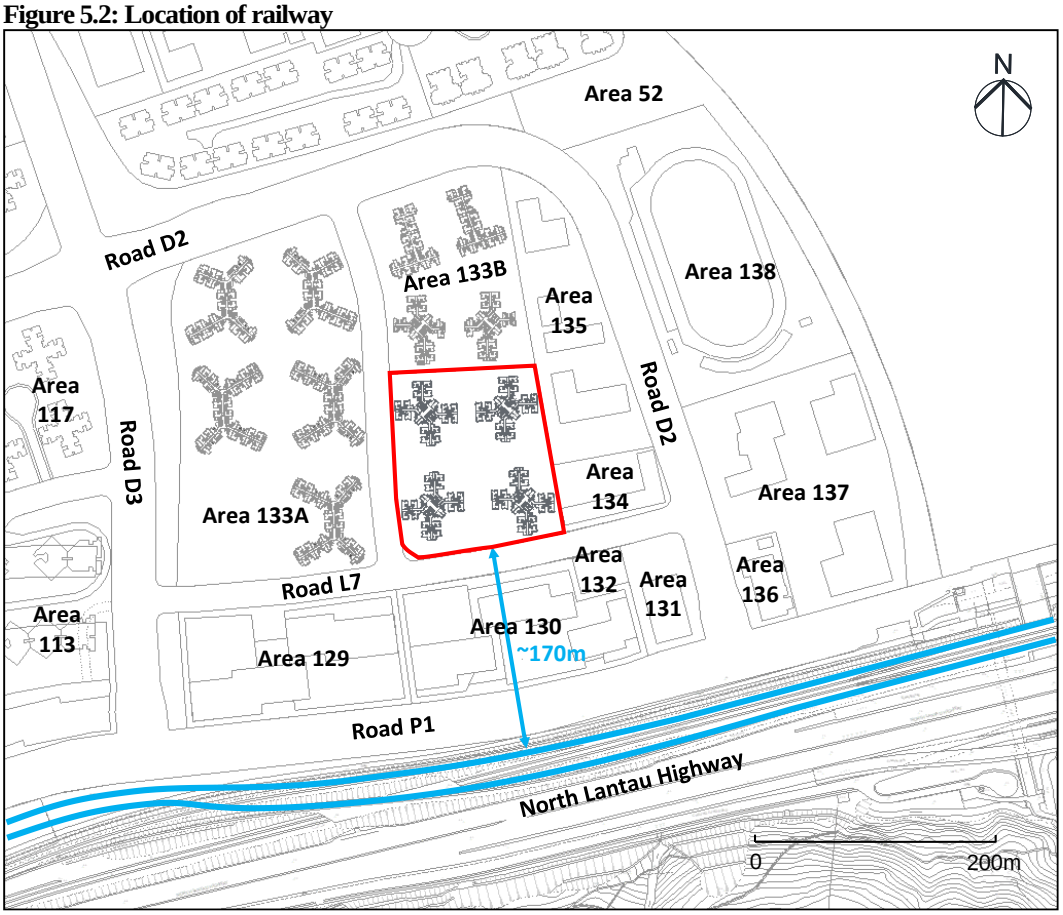
5.2.1.3 The planned TCLE are located at about 170m to the south of the subject site as shown in **Figure 5.2**. The committed high-rise residential development at Tung Chung Area 133A, commercial development at Area 129 and 130, and G/IC developments at Area 131, 132, 136 and 137 are located between the railway and Tung Chung Area 133C. Based on the information provided by HKHA, the tentative occupation year of the proposed high-rise residential development at Tung Chung Area 133A is the same as that of Area 133C (i.e. Year 2030). The building blocks in Area 133A will provide partial noise screening to the railway to the proposed housing development at Tung Chung Area 133C.

5.2.1.4 Besides, according to the approved TCLE EIA (AEIAR-235/2022), the tentative occupation year of the proposed high-rise commercial development at Tung Chung Area

129 and 130, and G/IC developments at Area 131, 132, 136 and 137 (i.e. Phase 4 in TCNTE (East)) are also Year 2030. At that time when Tung Chung Area 133C is occupied, the building blocks in Area 129, 130, 131, 132, 136 and 137 shall have been likely in place and could also provide noise screening to the proposed housing development at Tung Chung Area 133C.

5.2.1.5 In consideration of the screening provided by the high-rise residential development at Tung Chung Area 133A, high-rise commercial development at Tung Chung Area 129 and 130, and G/IC developments at Area 131, 132, 136 and 137, as well as the large separation distance between the subject site and the railway, adverse rail noise impact arising from the railway is not anticipated.

Figure 5.2: Location of railway

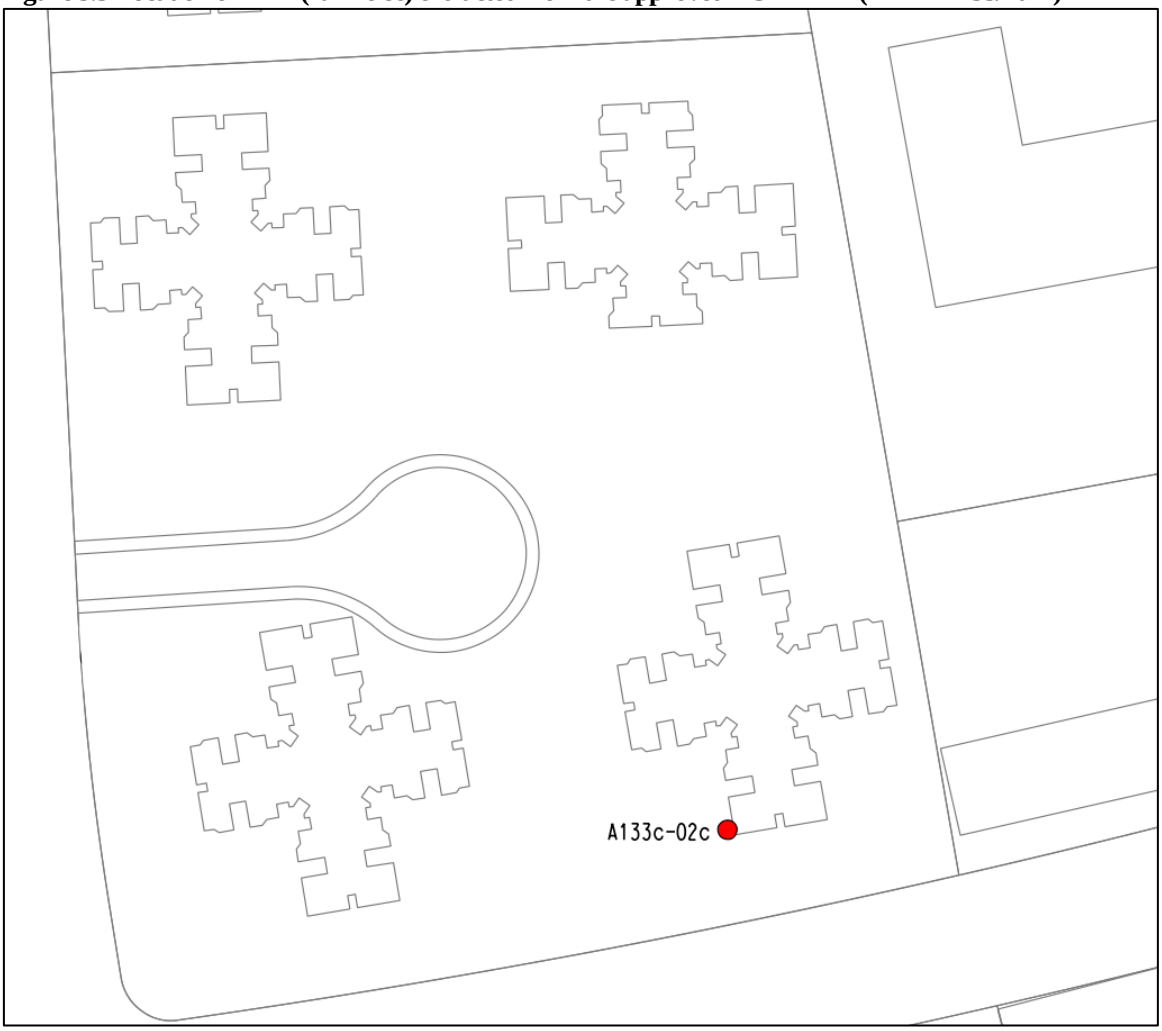


5.2.1.6 In addition, with reference to the approved TCLE EIA (AEIAR-235/2022), rail noise impact assessment was conducted at the proposed residential development at Tung Chung Area 133C. Blank façade was assumed at the southern façade to avoid direct 180° view angle facing the railway. The approved TCLE EIA has assessed the potential rail noise impacts on the nearest building façade (i.e. NAP A133c-02c) which is the southwestern facade of tentative buildings block at Area 133C in the approved TCLE EIA (**Figure 5.3**). The predicted noise level on NAP A133c-02c is $Leq_{(30mins)}$ <50 dB(A) for daytime and night-time which complies with the respective noise criteria for ASR of B, and the predicted L_{max} is below 71 dB(A) which could also comply with the noise standard of HKPSG.

5.2.1.7 The proposed residential blocks for the current scheme at Tung Chung Area 133C have similar separation distance from the railway and the southern blank façade is also designed to avoid the direct view angle to the railway. Given the low predicted noise levels in the approved TCLE EIA, similar setback distance and view angle to the railway and the same screening provided by the nearby developments including Tung Chung Area 129, 130, 131, 132, 133A, 136 and 137, potential rail noise impact is therefore not anticipated on the current scheme.

5.2.1.8 The rail noise impact assessments in the approved TCLE EIA have taken into account the noise screening effect of the nearby planned developments to the proposed housing development in Area 133C. HKHA has committed to closely liaise with CEDD regarding the implementation programmes of the developments in Area 129, 130, 131, 132, 136 and 137. The programme on another public housing site in Area 133A would also be closely monitored by HKHA.

Figure 5.3 Location of NAP (rail noise) extracted from the approved TCLE EIA (AEIAR-235/2022)



6 Review of Fixed Noise Impact

6.1 Identification of Fixed Noise Sources

6.1.1.1 Three planned fixed noise sources within 300m assessment area of the subject site are identified according to the approved TCLE EIA report (AEIAR-235/2022) and TCNTE EIA (AEIAR-196/2016). They include the planned salt water pumping station/ sewage pumping station in Area 132, fire station in Area 136 and sports ground in Area 138 (**Figure 6.1**). The basic information of the identified planned fixed noise sources is summarised in **Table 6.1**.

Table 6.1: Basic information of identified fixed noise sources (identified in TCLE EIA and TCNTE EIA)

Operators/Locations	Identified Potential Noise Sources
Salt Water Pumping Station/ Sewage Pumping Station (CNS01) in Area 132	• Operation: Pumps and exhaust of mechanical ventilation system to be operated during daytime, evening time and night-time periods.
Fire Station in Area 136 (CNS02)	• Operation: Station operations include loudspeakers, siren, fire engine sirens, condenser and transformer, etc.
Sports Ground in Area 138 (CNS06)	• Operation: Operation of the facility and public address (PA) system

Salt Water Pumping Station/ Sewage Pumping Station (CNS01) in Area 132

6.1.1.2 The salt water pumping station/ sewage pumping station is located at about 40m to the southeast of the subject site to cater for the demand increase in water supply and sewage load for the future population. Noise sources include the pumps and exhaust of mechanical ventilation system to be operated during daytime, evening time and night-time periods. With reference to the approved TCNTE EIA (AEIAR-196/2016), it was recommended that the future Contractor of the salt water pumping station/ sewage pumping station would review the latest available information during their detailed design stage and the maximum allowable Sound Power Level (SWL) set out in the approved TCNTE EIA. It was also recommended that the future Contractor of the salt water pumping station/ sewage pumping station would implement mitigation measures, such as installing acoustic silencers for the exhaust of mechanical ventilation system, etc as appropriate to ensure the overall maximum SWLs of the noise sources would comply with the maximum allowable SWL as set out in the approved TCNTE EIA.

Fire Station (CNS02) in Area 136

6.1.1.3 The fire station is located at about 140m to the southeast of the subject site. Noise sources include loudspeakers, siren, fire engine sirens, condenser and transformer, etc. from the station operations. The committed G/IC developments at Tung Chung Area 131, 132 and 134 will be located between the fire station and Tung Chung Area 133C. According to the approved TCLE EIA (AEIAR-235/2022), the tentative occupation year of the proposed G/IC development at Tung Chung Area 131, 132 and 134 (i.e. Phase 4 in TCNTE (East)) is Year 2030. At that time when Tung Chung Area 133C is occupied, the

building blocks in Area 131, 132 and 134 shall have been likely in place and could also provide noise screening to the proposed housing development at Tung Chung Area 133C.

Sports Ground (CNS06) in Area 138

6.1.1.4 The sports ground is located at about 120m to the east of the subject site. Noise sources include the operation of the facility and PA system. The committed G/IC development at Tung Chung Area 134 and 135 will be located between the sports ground and Tung Chung Area 133C. According to the approved TCLE EIA (AEIAR-235/2022), the tentative occupation year of the proposed G/IC commercial development at Tung Chung Area 134 and 135 (i.e. Phase 4 in TCNTE (East)) is Year 2030. At that time when Tung Chung Area 133C is occupied, the building blocks in Area 134 and 135 shall have been likely in place and could also provide partial noise screening to the proposed housing development at Tung Chung Area 133C.

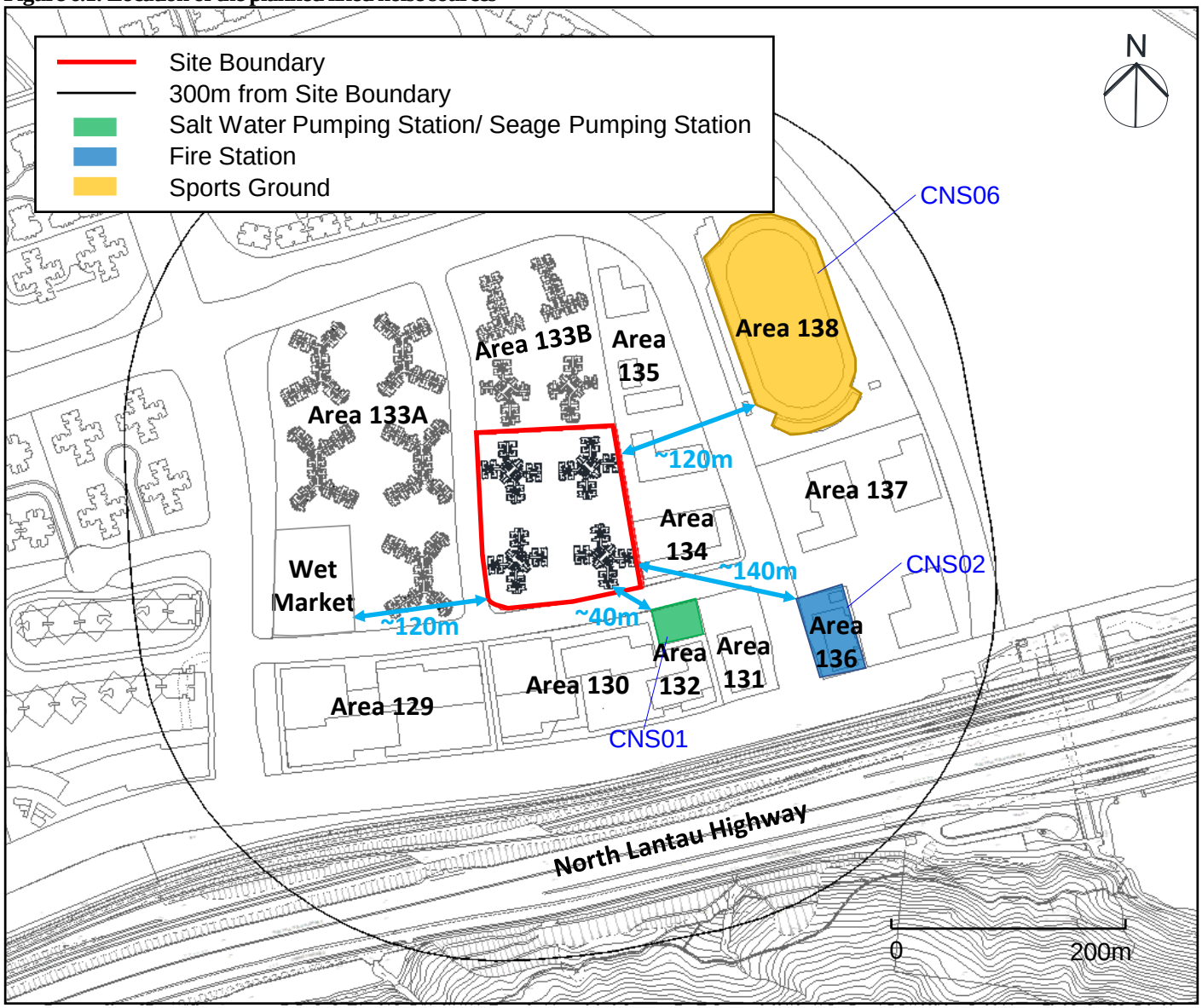
6.1.1.5 With reference to the approved TCNTE EIA (AEIAR-196/2016), it was recommended to incorporate measures for the PA system and/ or the sound amplification system, if used during the outdoor noise activities. The recommended measures include the adoption of a cluster of small power loudspeakers instead of a few large power loudspeakers, adoption of directional loudspeakers with orientation to point away from the nearby NSRs; and the inclusion of a "Limiter" device in the system to set the upper bound of the output sound level. Besides, as concluded in the TCNTE EIA, the sports ground is a Designated Project under Item O.7 of Schedule 2 of Technical Memorandum on the Environmental Impact Assessment Process, a separate EIA study would be required to be conducted by the future operator to fulfil all the statutory requirements and procedures under the EIAO. Any potential environmental noise impacts caused by the planned sports ground shall be addressed in the respective future EIA and mitigated by appropriate at source mitigation measures where necessary to ensure no noise exceedance at all nearby sensitive receivers including the proposed housing site in Area 133C.

Planned Public Wet Market

6.1.1.6 The area to the southwest corner of Tung Chung Area 133A is reserved for a public wet market to be developed and managed under Food and Environmental Hygiene Department (FEHD). **Figure 6.1** shows the location of the planned public wet market. As confirmed by Architectural Services Department (ArchSD), the design of the public market will consider the public housing developments to ensure the environmental impact will comply with statutory requirements (**Appendix 6.1**).

6.1.1.7 Nonetheless, the public wet market is located at about 120m to the boundary of Tung Chung Area 133C and will be screened by Area 133A development. In view of the large separation distance and screening by Area 133A, potential noise impact on Area 133C is not anticipated.

Figure 6.1: Location of the planned fixed noise sources



6.2 Fixed Noise Criteria

6.2.1.1 According to Section 4.2.13 in Chapter 9 of the HKPSG, noise assessments for fixed noise sources would normally be conducted in accordance with the Technical Memorandum for the Assessment of Noise from Places Other Than Domestic Premises, Public Places or Construction Sites (IND-TM) under the Noise Control Ordinance. The IND-TM lays down statutory Acceptable Noise Level (ANL). The HKPSG also states that in order to plan for a better environment, all planned fixed noise sources should be so located and designed that when assessed in accordance with the TM, the level of the intruding noise at the façade of the nearest sensitive use should be at least 5 dB(A) below the appropriate ANL of the IND-TM or, in the case of the prevailing background noise level being 5 dB(A) lower than the ANL, should not be higher than the prevailing background noise level.

6.2.1.2 The proposed ASRs and respective ANLs for the development are described in **Section 5.1** above. An ASR of "B" shall be applied to all facades. The ANL for ASR of "B" should be 65 dB(A) and 55 dB(A) for daytime and night-time respectively. The ASR assigned in this EAS report is for assessment purpose only and it shall not prejudice the Authority's decision on enforcement based on contemporary conditions.

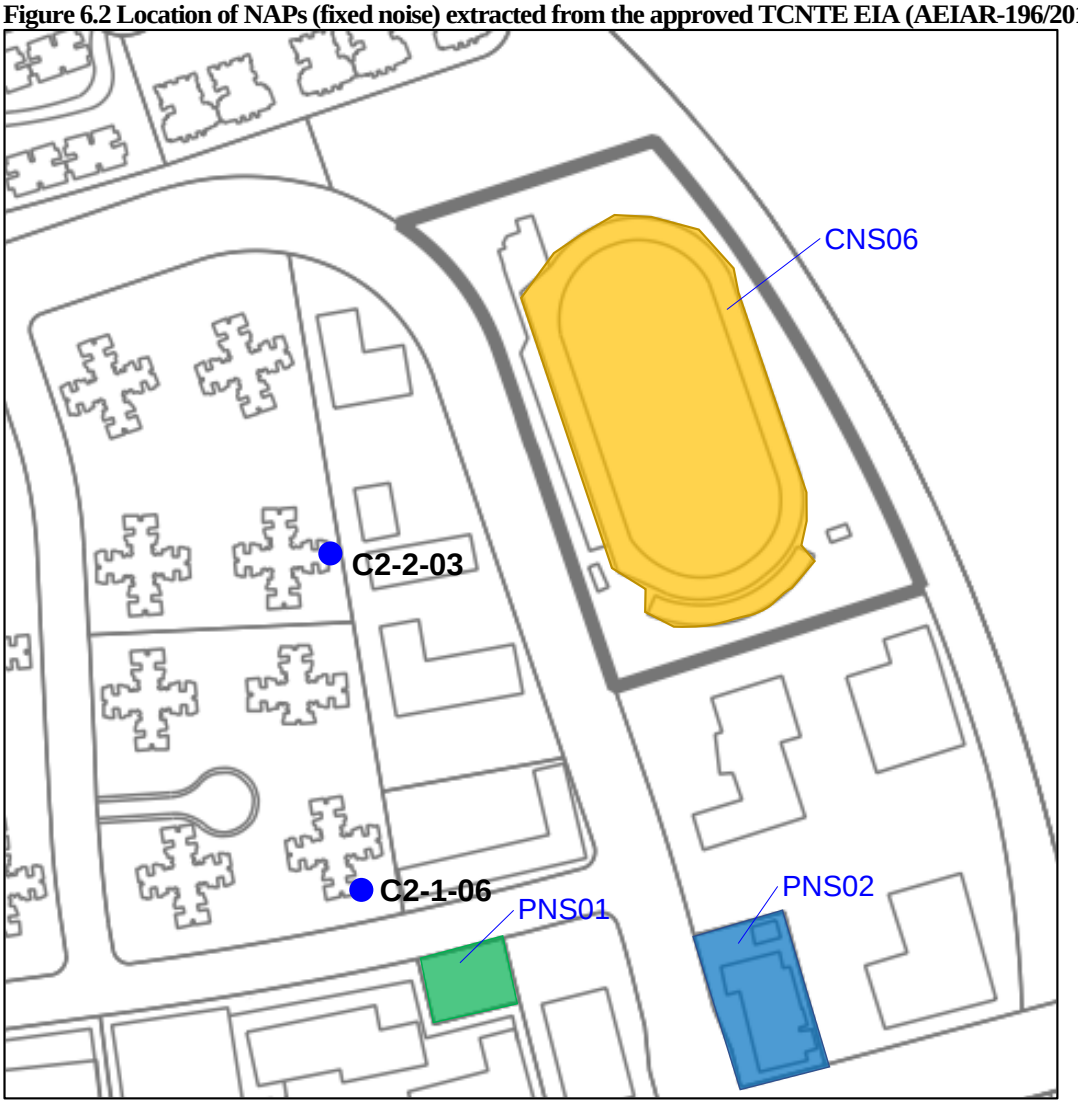
6.3 Review of Potential Fixed Noise Impacts

6.3.1.1 With reference to the approved TCNTE EIA (AEIAR-196/2016), fixed noise sources impact assessment was conducted at the proposed residential development at Tung Chung Area 133C considering the salt water pumping station/ sewage pumping station and fire station. The proposed residential blocks for the current scheme at Tung Chung Area 133C have similar separation distance from these fixed noise sources, as in the approved TCNTE EIA. The approved TCNTE EIA has assessed the potential fixed noise sources impact on the nearest building facade (i.e. NAP C2-1-06) which is the nearest south-eastern facade of tentative buildings blocks at Area 133C in the approved TCNTE EIA (**Figure 6.2**). The maximum predicted cumulative noise levels on this NAP C2-1-06 is 54 dB(A), which comply with the night-time noise criterion for ASR of B. In the assessment, night-time criterion was assessed as the worst case scenario, and screening effect was not considered for conservative assessment. Given the use of proper design of the planned salt water pumping station/ sewage pumping station and fire station, similar setback distance, as well as the screening by the nearby developments, and with reference to the predicted noise levels in the approved TCNTE EIA, potential fixed noise impact on the current scheme is therefore not anticipated.

6.3.1.2 According to the approved TCNTE EIA (AEIAR-196/2016), noise assessment was conducted at the proposed residential development at Tung Chung Area 133B considering the noise from operation and PA system noise from the sports ground. The proposed residential blocks for the current scheme at Tung Chung Area 133C have similar separation distance from the planned sports ground as in the approved TCNTE EIA. The approved TCNTE EIA has assessed the potential noise impact on the nearest building façade (i.e. NAP C2-2-03) which is the nearest eastern facade of tentative buildings blocks at Area 133B in the approved TCNTE EIA (**Figure 6.2**). The predicted noise levels on

this NAP C2-2-03 is 53 dB(A) for daytime, which comply with the respective noise criterion for ASR of B. In the assessment, only day time criterion was assessed as worst case scenario. As recommended, any night-time noise impact from the operation of sports ground shall be conducted in detailed design stage. Besides, openable window was assumed at the eastern façade towards the sports ground in the approved TCNTE EIA (AEIAR-196/2016), while blank façade was designed under the current scheme to avoid direct 180° view angle facing the planned sports ground. As discussed in **Section 6.1**, the sports ground is a Designated Project and a separate EIA study would be required to be conducted by the future operator to fulfil all the statutory requirements and procedures under the EIAO. Any potential environmental noise impacts caused by the planned sports ground shall be addressed in the respective future EIA and mitigated by appropriate at source mitigation measures where necessary to ensure no noise exceedance at all nearby sensitive receivers including the proposed housing site in Area 133C. As such, potential noise impact from the sports ground is not anticipated.

Figure 6.2 Location of NAPs (fixed noise) extracted from the approved TCNTE EIA (AEIAR-196/2016)



7 Review of Potential Aircraft Noise Impact

7.1 Aircraft Noise Criteria

7.1.1.1 In accordance with the HKPSG, exposure to aircraft noise is described by Noise Exposure Forecast (NEF) contours. NEF contours should be used together with the standards to define areas where certain noise sensitive uses should not be located within specified NEF contours. The NEF standards applicable to the Hong Kong International Airport (HKIA) at Chek Lap Kok as stipulated in HKPSG should not be exceeded. The aircraft noise standard is given in **Table 7.1**.

Table 7.1: Noise standards for aircraft noise

Parameters	Noise Standard [1]
	Aircraft Noise (Noise Exposure Forecast: NEF)
All domestic premises including temporary housing accommodation	25
Offices	30
Educational institutions including kindergartens, child care centres and all others where unaided voice communication is required	25
Hospitals, clinics, convalescences and homes for the aged, diagnostic rooms, wards	25

Notes:
[1] The above standards apply to uses which rely on opened windows for ventilation.

7.2 NEF Contours for the Three-Runway System (3RS)

7.2.1.1 In order to cope with the future air traffic demand, the HKIA is developing into a Three-runway System (3RS). The aircraft noise impacts for the 3RS have been addressed in the approved Expansion of Hong Kong International Airport into a Three-Runway System (3RS) EIA (AEIAR-185/2014). Three scenarios were assessed in the said EIA, including: (i) the interim phase operation mode representing the phase during which the existing North Runway is closed and the proposed 3rd runway is operating with the existing South Runway (Year 2021); (ii) the worst operation mode with maximum noise emission (Year 2030); and (iii) full operation of the 3RS at design capacity (Year 2032). The NEF noise contours predicted in 3RS EIA are shown in **Appendix 7.1**.

7.2.1.2 Operation familisation for flights on the third runway, designated as the new North Runway of HKIA, started in July 2022. The Centre Runway has been temporarily closed for reconfiguration as part of the 3RS development; while HKIA will continue to operate as a two-runway system with the new North Runway and the South Runway. The 3RS project is targeted to complete in 2024.

7.2.1.3 The tentative occupation year of the development is 2030. At that time, the 3RS shall have been completed and commissioned. As shown in **Figures 7.1 to 7.2**, the site is located more than 500m outside the NEF25 contour for the worst 3RS operation mode in Year

2030 and full 3RS operation mode in Year 2032. The HKPSG standard will therefore be complied.

Figure 7.1: Location of the proposed development and NEF25 contour in 2030

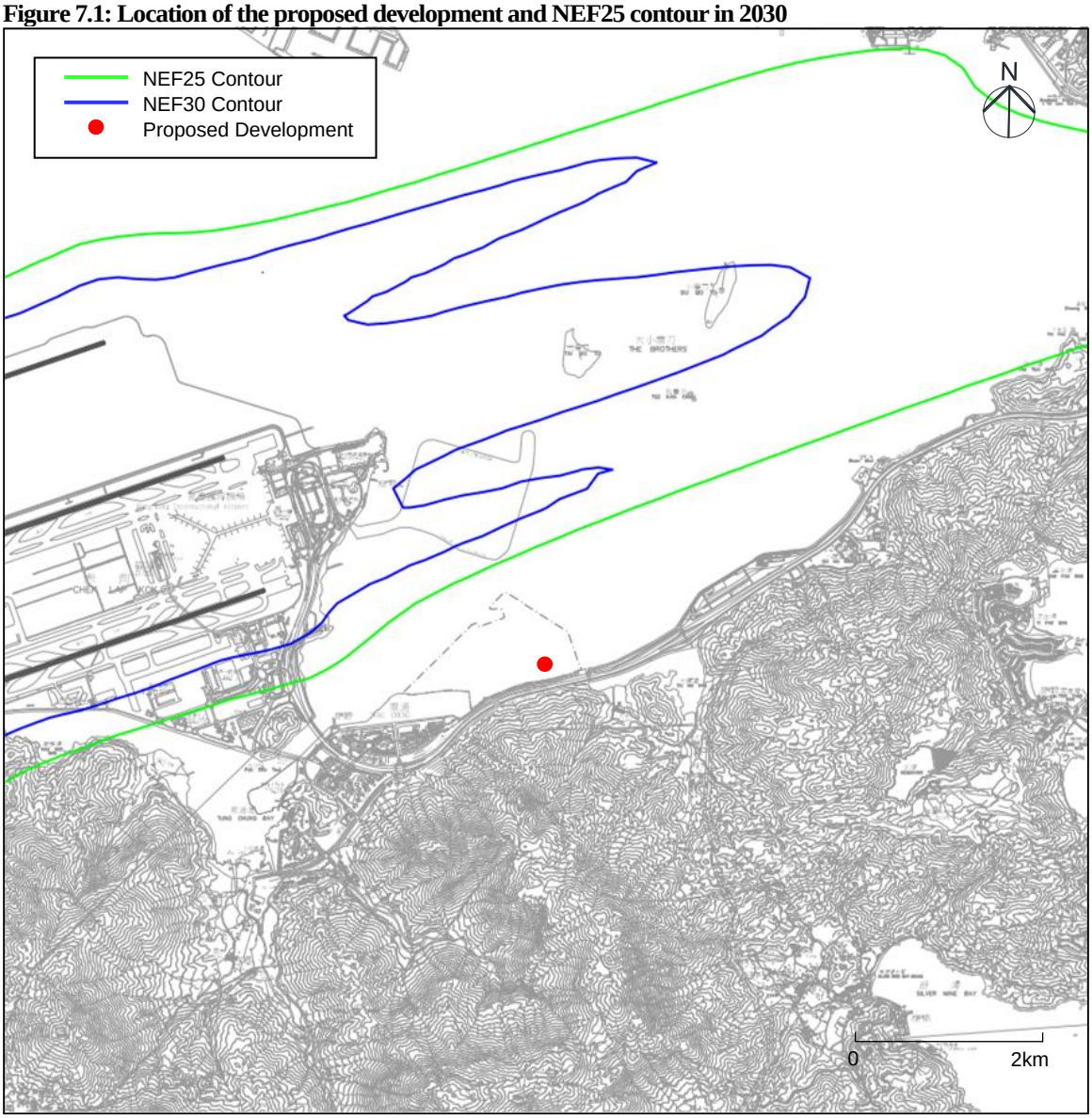
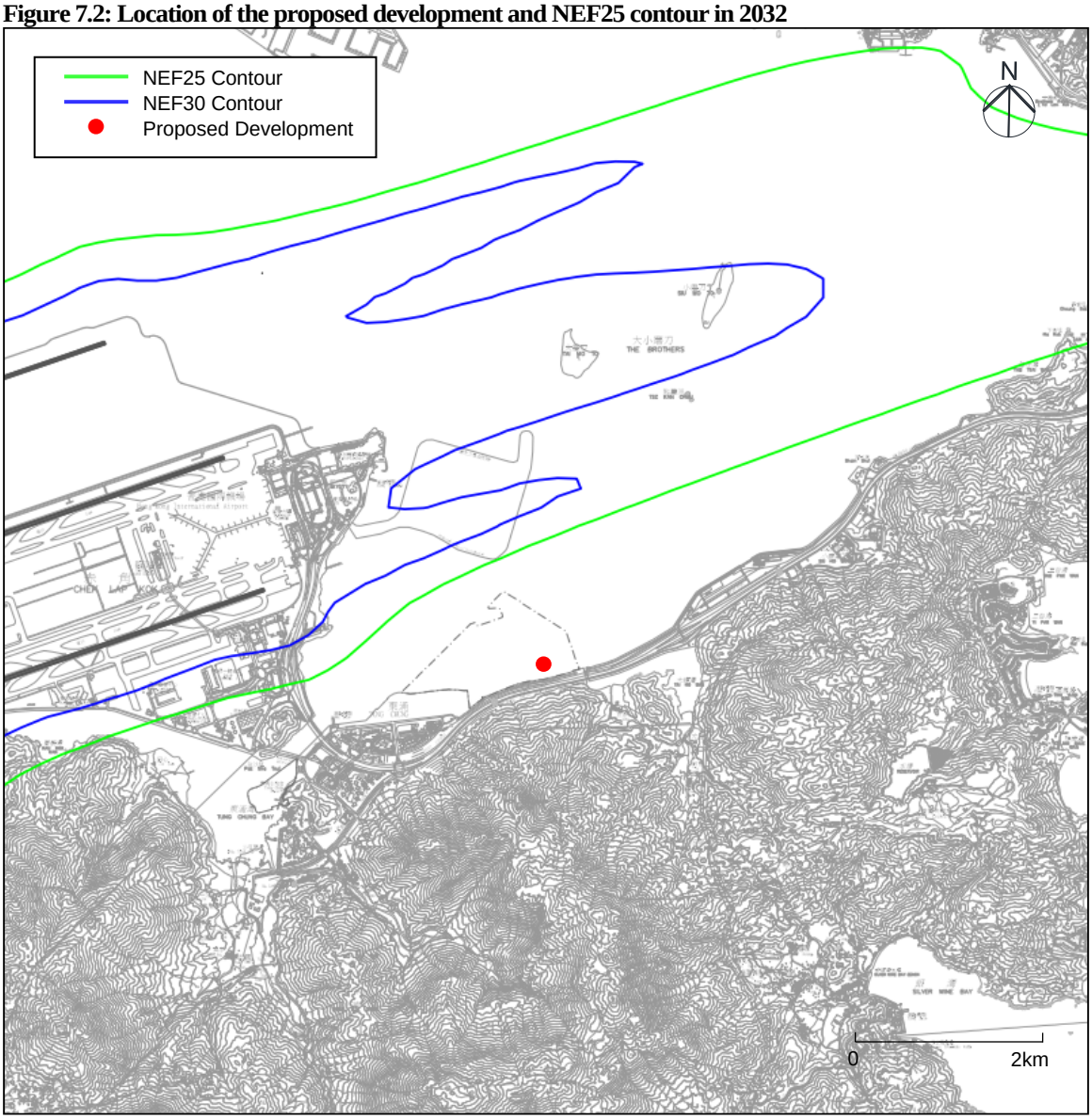


Figure 7.2: Location of the proposed development and NEF25 contour in 2032



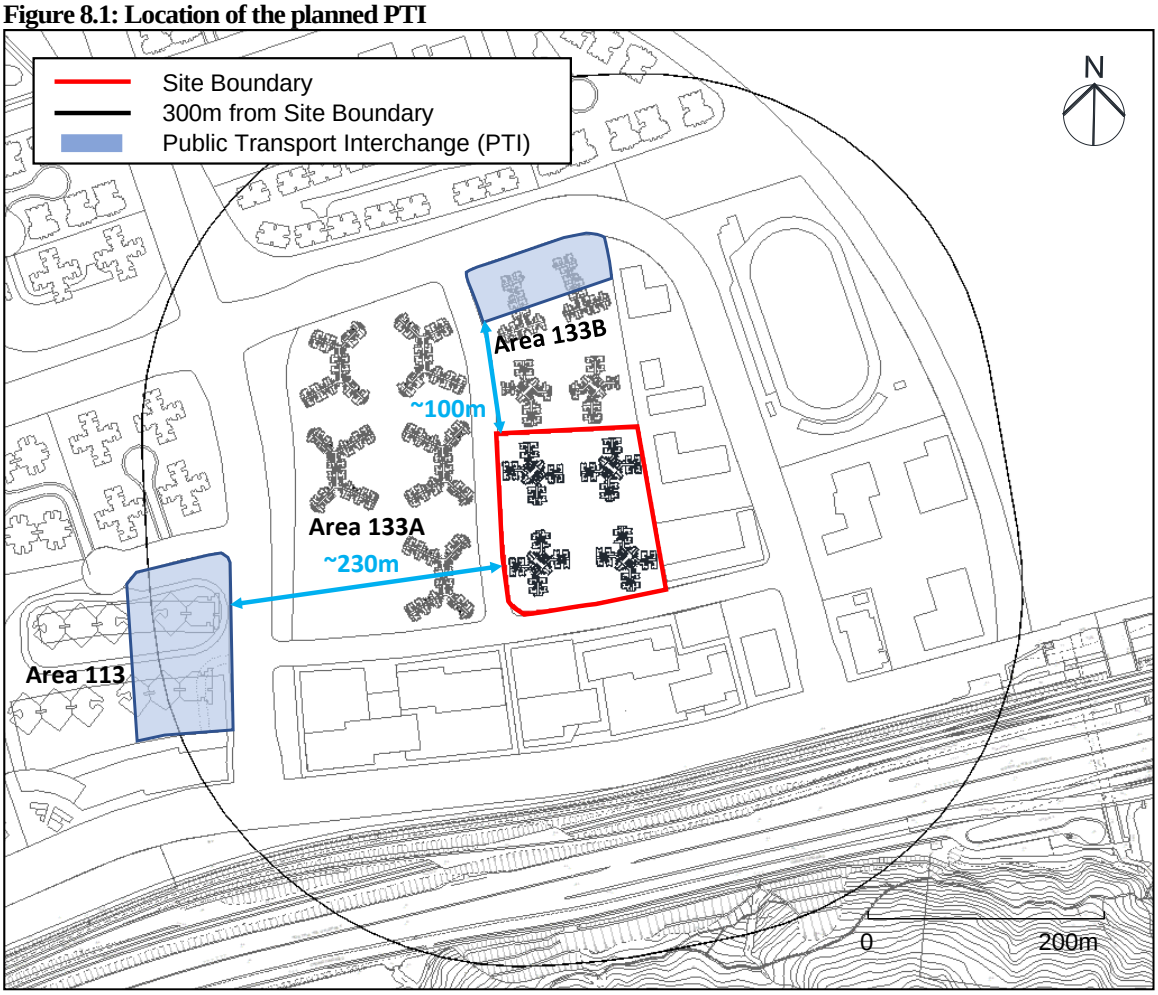
7.2.1.4 Given that the proposed development site is located outside the predicted NEF25 contours in both worst and full 3RS operation scenarios, no adverse aircraft noise impact arising from the future operation of the 3RS is anticipated.

8 Review of Noise Nuisance Arising from Public Transport Interchange

8.1 Planned Public Transport Interchange in TCNTE (East)

8.1.1.1 Two Public Transport Interchange (PTI) are planned within Tung Chung Area 113 and Area 133B located at about 230m to the west and 100m to the north of the subject site, respectively. The location of the PTI is shown in **Figure 8.1**.

Figure 8.1: Location of the planned PTI



Planned PTI at Area 113

8.1.1.2 Key noise generating sources inside PTI include ventilation fans, idling engine and manoeuvring vehicles, etc. With reference to the approved TCLE EIA (AEIAR-235/2022), the PTI would be decked under proposed building structures and designed with no direct line-of-sight at the noise sensitive use in the vicinity of the PTI and therefore the noise emissions will be adequately controlled.

8.1.1.3 Tung Chung Area 133C is located far away from the PTI at Area 113 (about 230m) and is largely screened by the planned high-rise residential developments in Area 133A which will also be occupied in 2030. In consideration of the decking design of the PTI, large

separation and screening by high-rise buildings, potential noise nuisance arising from the planned PTI at Area 113 on the subject housing site is therefore not anticipated.

Planned PTI at Area 133B

8.1.1.4 As advised by HKHA, the planned PTI at Area 133B will be designed with due consideration to the HKPSG. The planned PTI will be covered under a podium decking with full height double bank louvre, solid boundary wall and hanger louver/fins at vehicular and pedestrian accesses, to avoid line of sights to the planned noise sensitive uses in the proximity as far as practicable.

8.1.1.5 Besides, absorptive lining will be provided on interior walls of the PTI as far as practicable to minimise the reverberance and acoustic silencer will be installed at exhaust fan system. The design of PTI will meet the requirements of the Technical Schedule of Public Transport Interchange to be conducted in detailed design stage. Design details of the planned PTI could be referred to the EAS report of Tung Chung Area 133B.

8.1.1.6 Nonetheless, Tung Chung Area 133C is located far away from the PTI at Tung Chung Area 133B (about 100m) and is screened by the planned high-rise residential developments in Area 133B itself which will also be occupied in 2030. In consideration of the proper design of the PTI, large separation and screening by high-rise buildings, potential noise nuisance arising from the planned PTI at Area 133B on the subject housing site is therefore not anticipated.

9 Review of Air Quality Impact

9.1 Vehicular Emissions

9.1.1.1 Hong Kong Planning Standards and Guidelines (HKPSG) provides environmental guidance for residential developments on air quality. The guidelines recommend the minimum buffer distance required for active and passive recreational uses.

9.1.1.2 The buffer distances between the sensitive uses of the current development scheme and the surrounding major roads are summarised in **Table 9.1**, and illustrated in **Figure 9.1 to 9.2** below.

Table 9.1: Separation distances between the proposed development and nearby major roads

Name of Road	Type of Road [1]	HKPSG Recommended Buffer Distance for Active and Passive Recreational Use	Shortest Horizontal Distance from the Air Sensitive Uses to Road Kerb
			Residential Blocks/Recreational Areas
Road L6	LD	>5m	~11m
Road L7	LD	>5m	>10m
Road D2	DD	>10m	~84m

Note:
[1] DD – District Distributor, LD – Local Distributor. The road classifications are given in the Roadworks and Noise Mitigation Measures Design Report under TCNTE (East) – Design and Construction and the respective Technical Note on Traffic Forecast for Environmental Impact Assessment for Planning Review for Population Increase and Development Intensity in TCNTE (East) has referenced the road classification. Reply from TD on the Technical Note is given in **Appendix 4.3**.

9.1.1.3 It can be found that the proposed residential blocks for the current scheme can satisfy the setback distance requirements as stipulated in HKPSG (see **Figure 9.1**). There are also no other sensitive active and passive recreational uses located within the minimum buffer zone (see **Figure 9.2**). Adverse vehicular emission impacts on the proposed residential development are therefore not anticipated.

9.1.1.4 The detailed internal layout plans for kindergarten and social welfare facilities at G/F, P1/F to P4/F are yet to be available at this stage. Any planned air sensitive rooms at these non-domestic facilities shall be provided with sufficient setback distances as stipulated in HKPSG.

Figure 9.1: Separation distances between the air sensitive uses and nearby major roads (residential blocks)

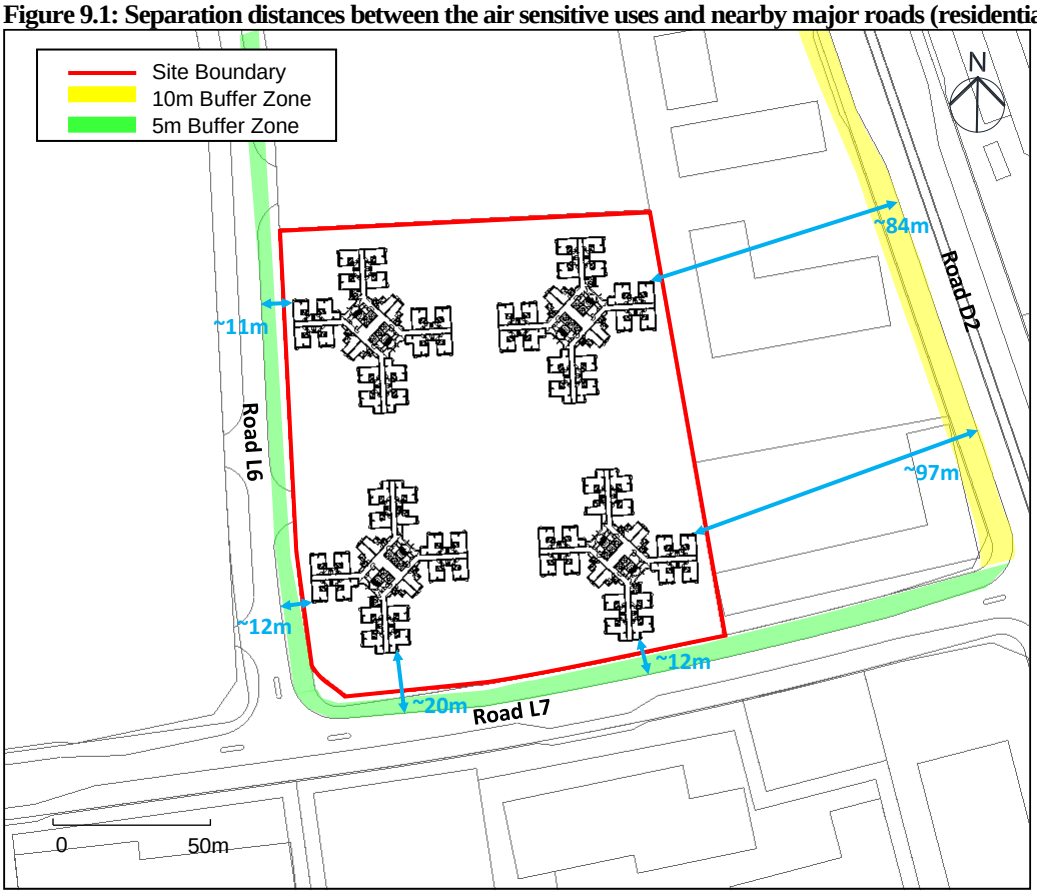
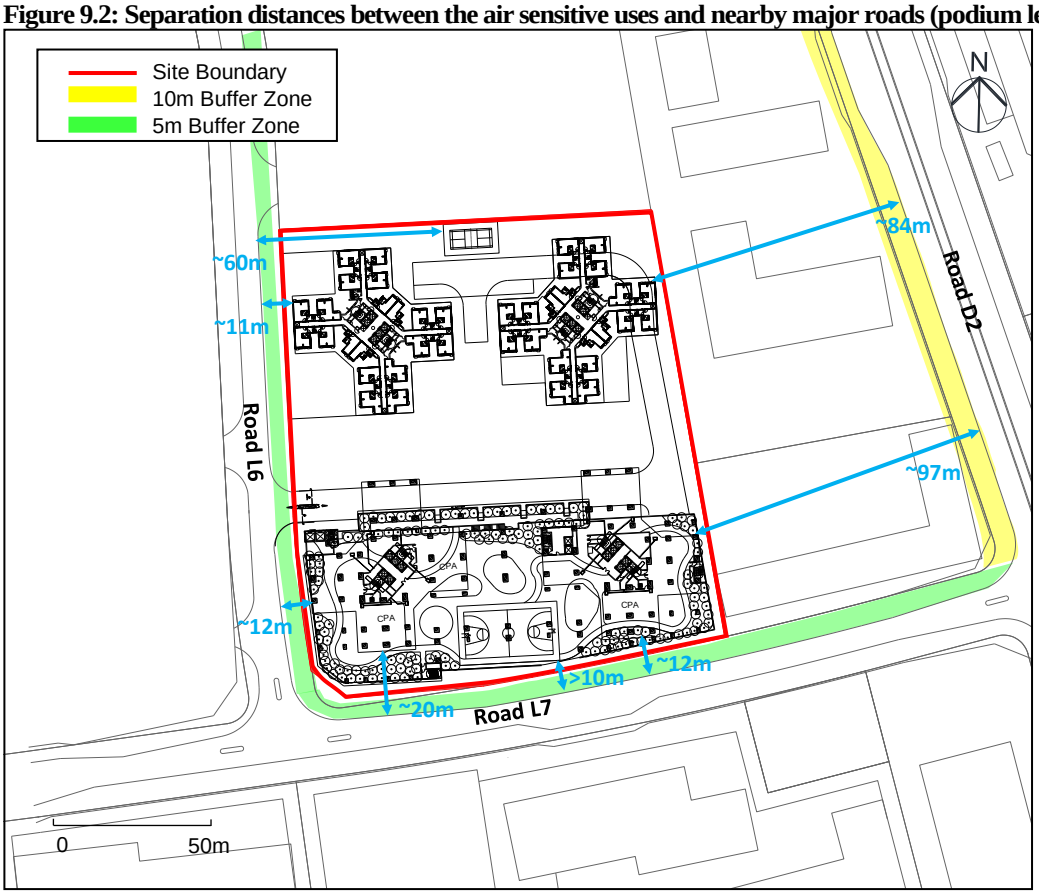


Figure 9.2: Separation distances between the air sensitive uses and nearby major roads (podium level)



9.2 Chimney Emissions

9.2.1.1 Based on site visit conducted June 2023, there is no existing chimney within 500m of the subject site. According to the Air Quality Impact Assessments Review for Population Increase and Development Intensity - CASE 2: Scenario 2A (Final) under TCNTE (East) – Design and Construction conducted in May 2021, no chimney is also planned within 500m of the subject site. Hence, no adverse air quality due to chimney emission is anticipated.

9.3 Planned Public Transport Interchange

Planned PTI at Area 113

9.3.1.1 A planned PTI is planned at Area 113 as shown in **Figure 8.1**. With reference to the approved TCNTE EIA (AEIAR-196/2016) and TCLE EIA (AEIAR-235/2022), the PTI would be decked under proposed Area 113 development. The proposed PTI at Area 113 is planned by other parties, any design, maintenance, and operating requirements stipulated in ProPECC PN 1/22 relevant to any air quality impacts to its neighbouring developments including the planned public housing at Area 133C shall be considered and addressed by other parties. Tung Chung Area 133C is located far away from the PTI at Area 113 (about 230m). In consideration of the decking design of the PTI and large separation distance, potential air quality impact arising from the planned PTI at Area 113 on the subject housing site is therefore not anticipated.

Planned PTI at Area 133B

9.3.1.2 The planned PTI at Area 133B as shown in **Figure 8.1** will be designed with due consideration to the HKPSG as far as practicable. Open-form design has been avoided. The planned PTI will be covered under a podium decking to cover the whole extent of the bus drop off, pick up, stacking and routing area. Design details of the planned PTI at Area 133B shall be referred to the EAS report of Tung Chung Area 133B.

9.3.1.3 Nonetheless, Tung Chung Area 133C is located far away from the PTI at Area 133B (about 100m). In consideration of the decking design of the PTI and separation distance, potential air quality impact arising from the planned PTI at Area 133B on the subject housing site is therefore not anticipated.

9.3.1.4 Besides, the Practice Note for Professional Persons (ProPECC PN) 1/22 “Control of Air Pollution in Semi-Confined Public Transport Interchanges” will be followed as appropriate for designing and operating the PTI to meet the air quality guidelines inside the PTI.

9.3.1.5 Besides, the air quality impact considering the planned PTIs at Area 113 and Area 133B has been addressed in the Final Air Quality Impact Assessments Review for Population Increase and Development Intensity – CASE 2: Scenario 2A (Final) (Ref. PI17-02) issued in May 2021 under Tung Chung New Town Extension (East) – Design and Construction Study. The cumulative air quality assessment (with PTIs addressed) concluded that all air sensitive receivers at Area 133C comply with the relevant AQOs. No adverse air quality impacts are anticipated.

10 Conclusion

10.1.1.1 An EAS has been conducted for the proposed housing development at Tung Chung Area 133C.

10.1.1.2 The subject site is located on Area 133C of the reclaimed land in TCNTE (East). Road traffic noise assessment indicates that the proposed development could comply with the respective noise criteria and hence no adverse road traffic noise impact is anticipated.

10.1.1.3 The TCL, AEL and future TCLE will be running at about 170m to the south of the subject site. They are screened by other planned residential high-rise developments. The rail noise impact assessment in the approved TCLE EIA indicates that the proposed residential development could comply with the respective noise criteria. Potential rail noise impact is therefore not anticipated.

10.1.1.4 The major fixed noise sources in vicinity of the subject site are the planned salt water pumping station/ sewage pumping station in Area 132, fire station in Area 136, sports ground in Area 138, and the planned public wet market area to the southwest corner of Tung Chung Area 133A. They are screened by the other planned developments in vicinity of the subject site. The approved TCNTE EIA indicates that the predicted fixed noise levels on the proposed residential development at Tung Chung Area 133C would comply with the respective noise criteria. As confirmed by Architectural Services Department (ArchSD), the design of the public market will consider the public housing developments to ensure the environmental impact will comply with statutory requirements. Potential fixed noise sources impact is therefore not anticipated.

10.1.1.5 With reference to the approved EIA (AEIAR-185/2014) for 3RS, the subject site is located outside the NEF25 contour for all future scenarios for 3RS operation of HKIA. Hence, aircraft noise impact is not anticipated.

10.1.1.6 Two PTIs are planned at Tung Chung Area 113 and 133B. Both are located far away from the proposed housing site at Area 133C and will be designed under deck and with no line-of-sight to the nearby noise sensitive receivers. The PTIs are also screened by other planned high-rise residential developments in between. Potential noise nuisance is therefore not anticipated.

10.1.1.7 Kindergarten and social welfare facilities are planned at G/F, P1/F to P4/F. However, their layouts are still being investigated. Hence, noise assessments on these non-domestic facilities will be supplemented when the layout is confirmed in the next stage.

10.1.1.8 The current scheme has allowed adequate setback distance for all air sensitive uses from the major roads to meet the minimum requirement as stipulated in HKPSG. There is also no chimney found within 500m of the study area. Both the planned PTIs at Area 113 and Area 133B will be under deck and designed by others and HKHA respectively, with due consideration to the HKPSG and Practice Note for Professional Persons (ProPECC PN) 1/22 “Control of Air Pollution in Semi-Confined Public Transport Interchanges”. Hence no adverse air quality impact is anticipated.

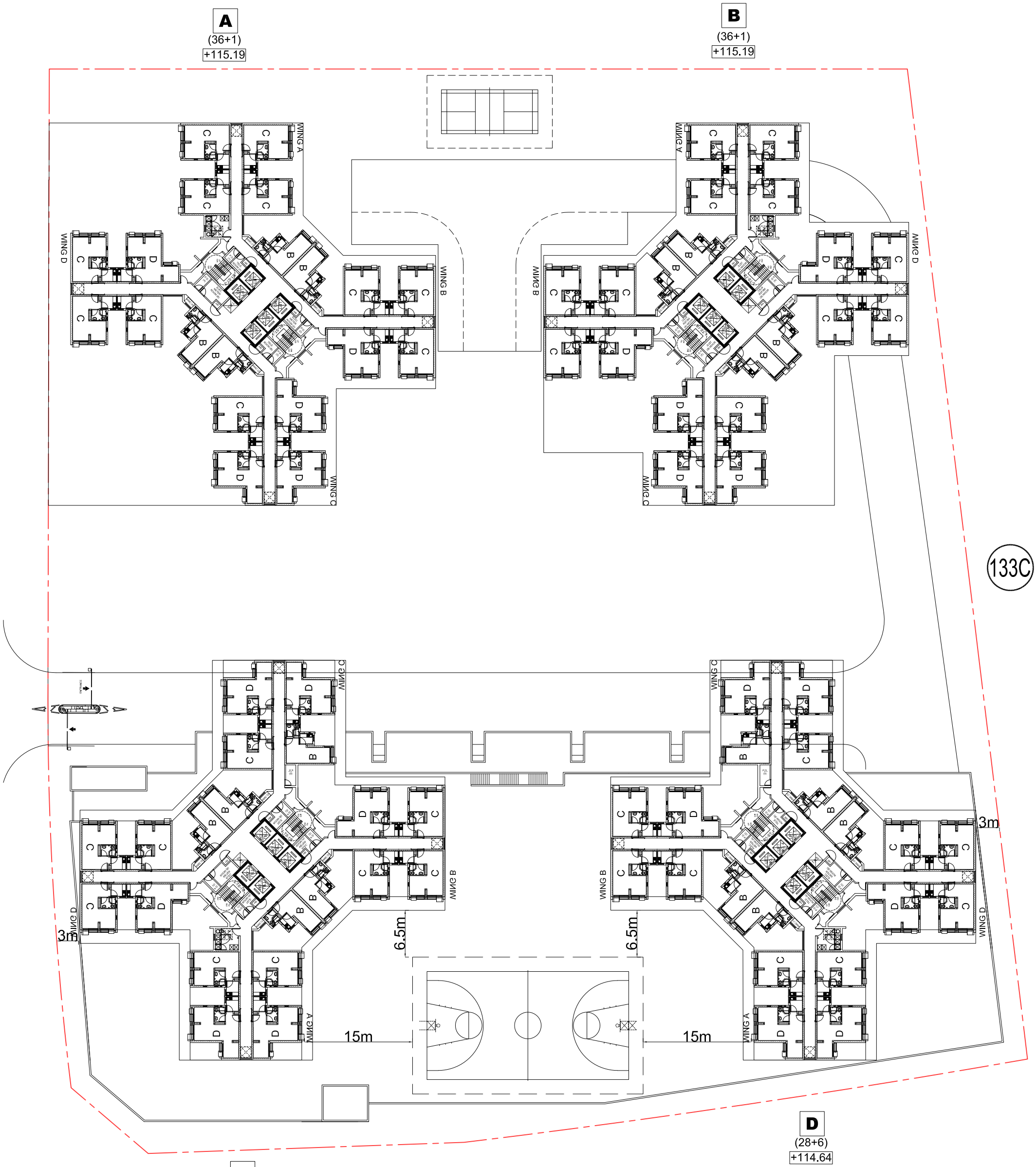
10.1.1.9 It is concluded that there are no adverse environmental impacts on the proposed housing development at Tung Chung Area 133C.

Appendix 2.1

Layout and
Schematic Sections

20230210_SCHEME 22

TC 133C -- 2571 Units



MASTER LAYOUT PLAN

SCALE BAR 1:500 (A3 SIze)

0 5 10 20 30

TUNG CHUNG EAST AREA 133C
SCHEME 15 Dwg No. : 007

LEGEND

- DOMESTIC
- WELFARE
- EMO
- KINDERGARTEN
- CARPARK
- PLANT ROOM / BLANK OF HOUSE

20230210_SCHEME 22

TC 133C -- 2571 Units



TYPICAL 1F

SCALE BAR 1:500 (A3 SIze)

0 5 10 20 30

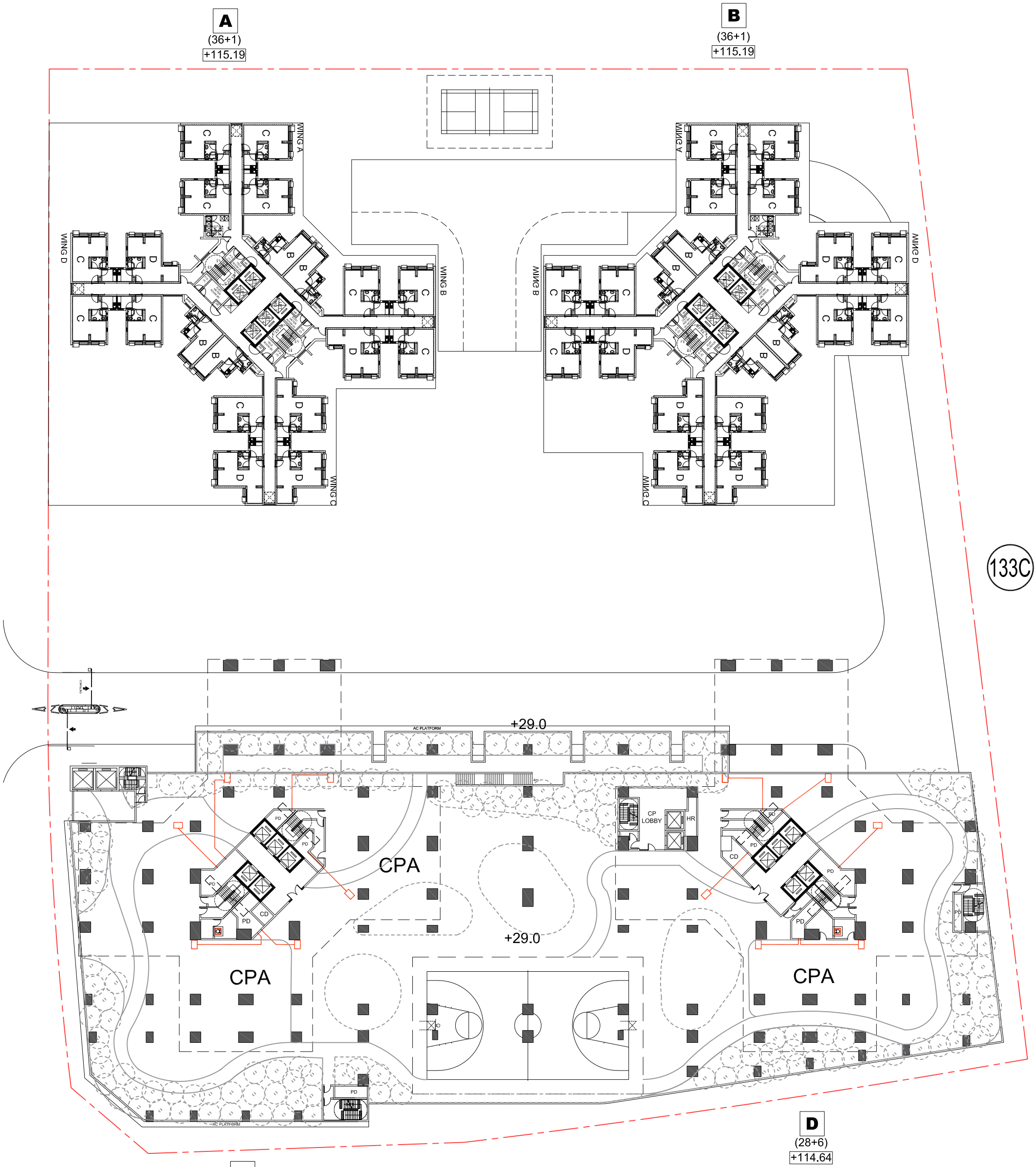
TUNG CHUNG EAST AREA 133C
SCHEME 15 Dwg No. : 007

LEGEND

- DOMESTIC
- WELFARE
- EMO
- KINDERGARTEN
- CARPARK
- PLANT ROOM / BLANK OF HOUSE

20230210_SCHEME 22

TC 133C -- 2571 Units



PODIUM FIFTH (P5/F) FLOOR PLAN

P5/F

+29.0

TUNG CHUNG EAST AREA 133C
SCHEME 15 Dwg No. : 006

SCALE BAR 1:500 (A3 Size)
0 5 10 20 30

SCALE BAR 1:500 (A3 Size)
0 5 10

LEGEND

- DOMESTIC
- WELFARE
- EMO
- KINDERGARTEN
- CARPARK
- PLANT ROOM / BLANK OF HOUSE

Site Boundary

Site Boundary

20230306_SCHEME 22A

TC 133C -- 2571 Units

Domestic Block A & B
(36 + 1 storey)

Domestic Block
(29 + 6 storey) (Block C)
(28 + 6 Storey) (Block D)

+130.0 mPD (PLANNING BRIEF)

+127.19 TR/F

+129.44 TR/F

SCALE BAR 1:500 (A3 size)

0 10 20 30

+115.19 MR/F

+117.44 MR/F

+110.0 mPD
(AHR LEVEL)
(AAP)

36/F
35/F
30/F
25/F
20/F
15/F
10/F
5/F
1/F

29/F
25/F
20/F
15/F
10/F
5/F
1/F

99040

79790

31650

1650 2500 E&M ZONE TRANSFER PLATE

KINDERGARTEN

+16.15 1/F

+12.0

4150 6000

+6.0 G/F

LOBBY PODIUM GARDEN

HCS	LIFT CORE	CAR PARK
RCHE+DCU	LIFT CORE	CAR PARK
RCHE	LIFT CORE	CAR PARK
CCC	LIFT CORE	CAR PARK
EVA	LOBBY	DCCE

+37.65 1/F

+33.5

4150

+29.0 P5/F

4500

+24.0 P4/F

5000

+20.0 P3/F

4000

+16.0 P2/F

4000

+12.0 P1/F

4000

+6.0 G/F

6000

Low zone

Mid zone
+25.75

Mean Street
Level
+5.75

20230306_SCHEME 22A

TC 133C -- 2571 Units

SCALE BAR 1:500 (A3 size)

0 10 20 30

Site Boundary

Domestic Block
(29 + 6 storey) (Block C)

+130.0 mPD (PLANNING BRIEF)

+129.44 TR/F

+117.44 MR/F

29/F

25/F

20/F

15/F

10/F

5/F

2/F

1/F

E&M ZONE

TRANSFER PLATE

1650

2500

Site Boundary

Domestic Block
(28 + 6 storey) (Block D)

+126.64 TR/F

+114.69 MR/F

28/F

25/F

20/F

15/F

10/F

5/F

2/F

1/F

E&M ZONE

TRANSFER PLATE

1650

2500

+110.0 mPD
(AHR LEVEL)
(AAP)

77040

31650

	LOBBY	PODIUM GARDEN	LOBBY	
HCS	LIFT CORE	CAR PARK	LIFT CORE	CAR PARK
RCHE+DCU	LIFT CORE	CAR PARK	LIFT CORE	CAR PARK
RCHE	LIFT CORE	CAR PARK	LIFT CORE	CAR PARK
CCC	LIFT CORE	CAR PARK	LIFT CORE	CAR PARK
DCCE	LOBBY	CAR PARK	LOBBY	RCP

+37.65 1/F

4150

+33.5

4500

+29.0 P5/F

5000

+24.0 P4/F

4000

+20.0 P3/F

4000

+16.0 P2/F

4000

+12.0 P1/F

6000

+6.0 G/F

Low zone

Mid zone
+25.75

Mean Street Level
+5.75

Appendix 4.1

Letter of Reply
from HyD

From:
To:
Cc:
Subject: Fw: Tung Chung Area 133A, 133B, 133C - Road Surface details at Shun Long Road
Date: Friday, March 17, 2023 4:24:29 PM
Attachments: ATT00001.gif
ATT00002.gif
J3518-P-OAP-02-09201-2.pdf
J3518-P-OAP-02-04401-2.pdf
J3518-P-OAP-16-00301-2_A1.pdf
J3518-P-OAP-16-00113-1_A1.pdf
J3518-P-OAP-16-00112-1_A1.pdf

Dear

I forward the reply from HyD regarding the caption for your use. Thanks.

Regards,

From:
To:
Cc:
Date: 17/03/2023 16:15
Subject: Re: Fw: Tung Chung Area 133A, 133B, 133C - Road Surface details at North Lantau Highway

---

Dear

Both viaduct and at-grade section of Shun Long Road at the concerned area shows that the surface pavement is 30mm PMFC. For further details, you may approach Sandra Leung as Leo Ip has just re-deployed to other team. Thanks.

Regards,

www.hyd.gov.hk

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From:
To:
Cc:
Date: 17/03/2023 09:24
Subject: Re: Tung Chung Area 133A, 133B, 133C - Road Surface details at North Lantau Highway

---

Dear

I refer to your email below regarding the captioned.

Please note that polymer modified friction course has been used at the concerned extent of North Lantau Highway near the developments.

Please feel free to contact me if you have any query.

Thanks.

Best Regards,

From:
To:
Cc:
Date: 15/03/2023 11:14
Subject: Tung Chung Area 133A, 133B, 133C - Road Surface details at North Lantau Highway

---

Dear

I tried to call but in vain.
An environmental assessment study for the Proposed Public Housing Developments at Tung Chung Area 133A, 133B and 133C is under our consultant's (ie. Ove Arup) preparation. In the study, the road surface details of existing road networks nearby the developments (see attachment 1) would be crucial for our road traffic noise impact assessment.

It would be grateful if you could provide us the details of the road surface, especially the extent and details of friction course materials or Low Noise Road Surfacing materials, used on the North Lantau Highway nearby the developments for our assessment.

Your reply by 24 March 2023 would be much appreciated. Should you have any enquiries, please do not hesitate to contact me or the consultant at Thanks.

Regards,

.
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Facebook -- https://www.facebook.com/HKHousingAuthority
Instagram -- https://www.instagram.com/hkhousingauthority
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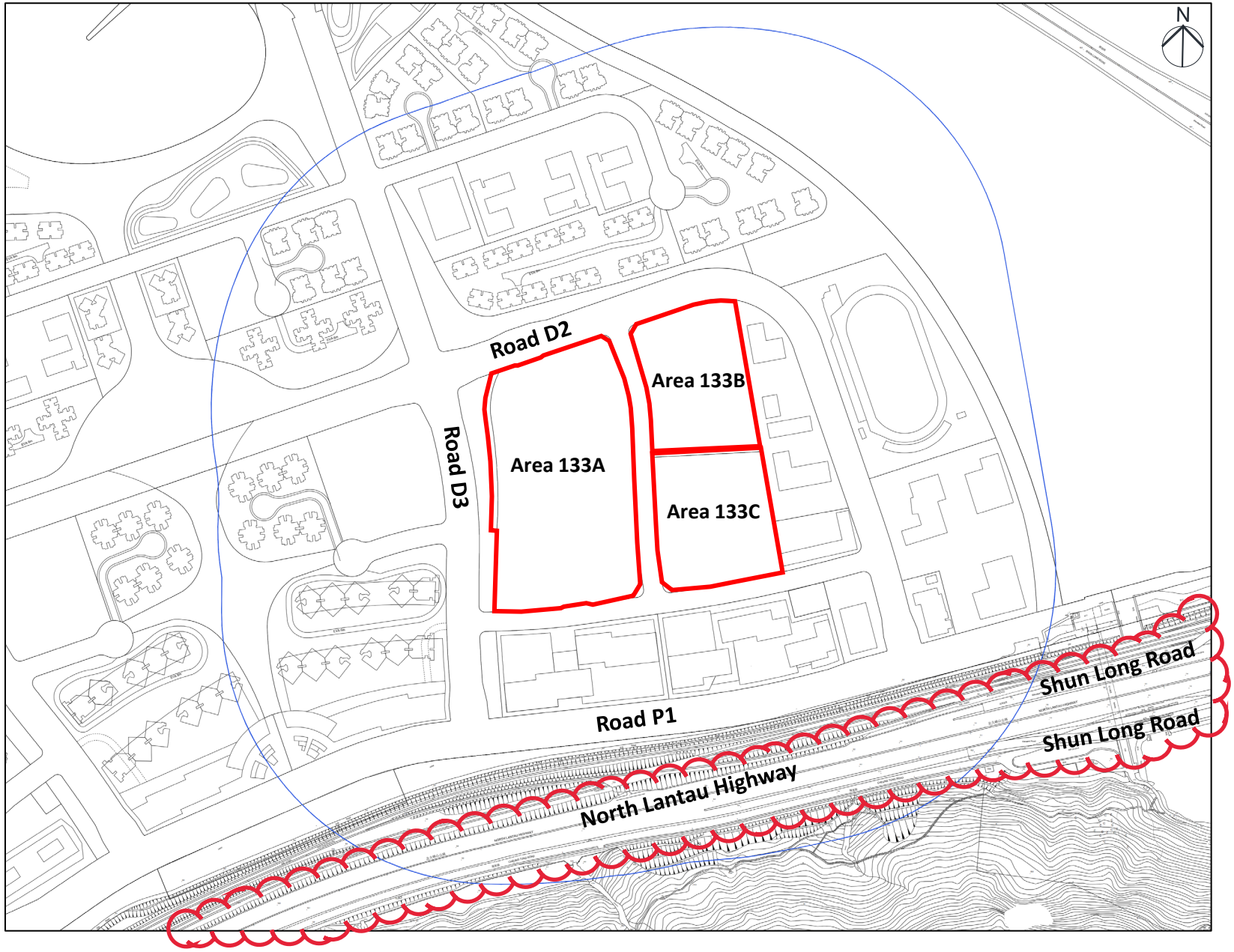
Attachment 1

Legend

- Site Boundary
- 300m Assessment Area
- Friction course materials along these sections of North Lantau Highway near Tung Chung (East) New Town Extension



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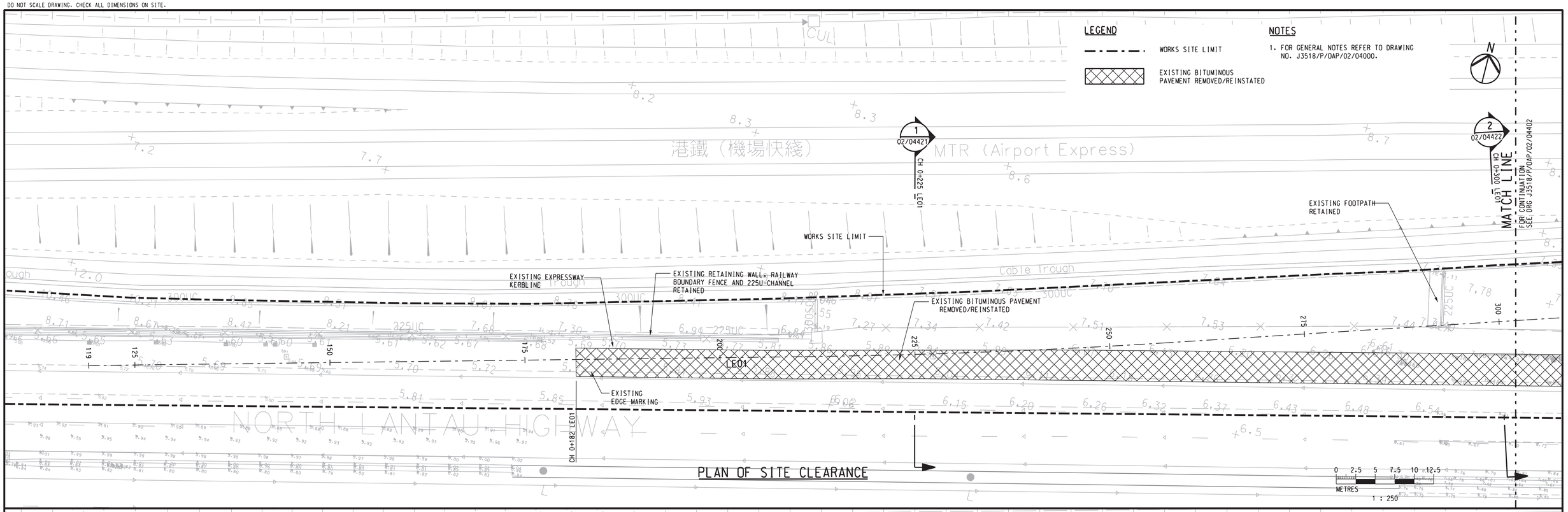

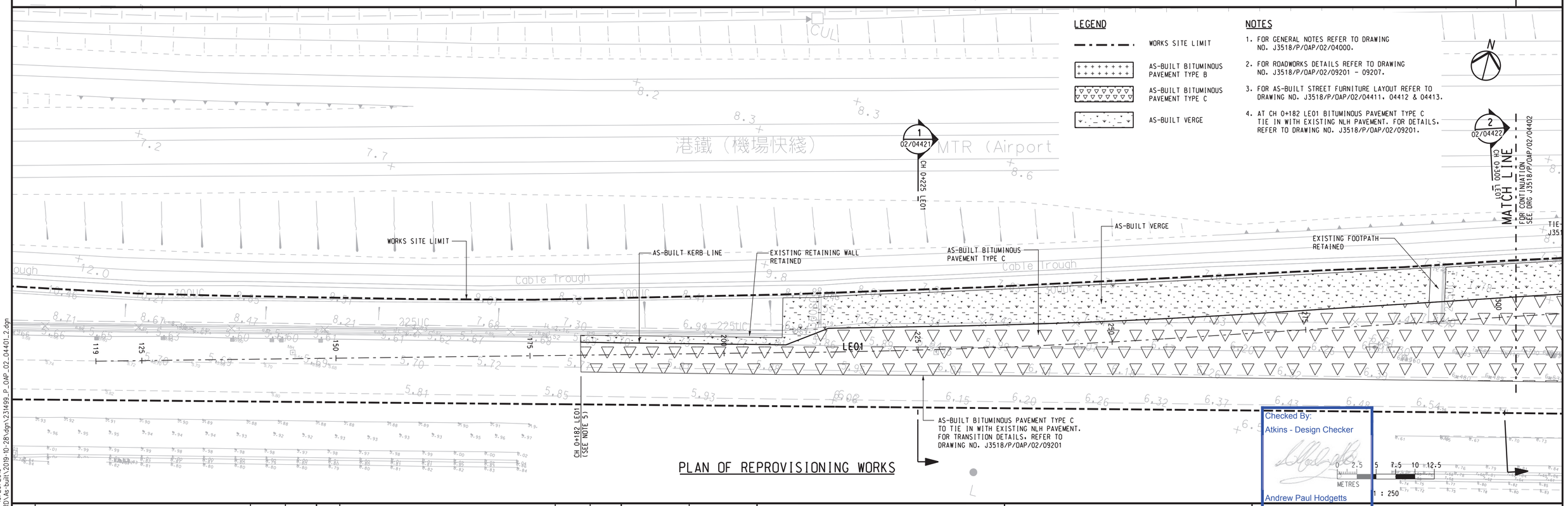

Checked By:
Atkins - Design Checker
Andrew Paul Hodgetts
Chinese Auth. Rep.

Rev	Description	By	Date
1	AS-CONSTRUCTED	SK	03/19
2	REVISED AS PER SOR COMMENT	SK	10/19

Rev	Description	By	Date

Drawn: A.LIE	Date: 01/14
Checked: TL	Approved: DOP
Scale: 1:250 @ A1 / 1:500 @ A3	

Client: 路政署 HIGHWAYS DEPARTMENT 港珠澳大橋香港工程管理處 Hong Kong - Zhuhai - Macao Bridge Hong Kong Project Management Office

Project Title: Contract No. HY/2012/07 Tuen Mun - Chek Lap Kok Link Southern Connection Viaduct Section

Supervising Officer: AECOM

Contractor: Gammon

Originator: ARUP

Drawing title: VIADUCT A AT-GRADE ROAD PAVEMENT LAYOUT (SHEET 1 OF 2)

Drawing no. J3518/P/OAP/02/04401 Rev. 2

Printed by : johnny.cheng 10/29/2019
Filename : J:\23149\RECORD\As-built\2019-10-28\dgn\231499_P_OAP_02_04401_2.dgn

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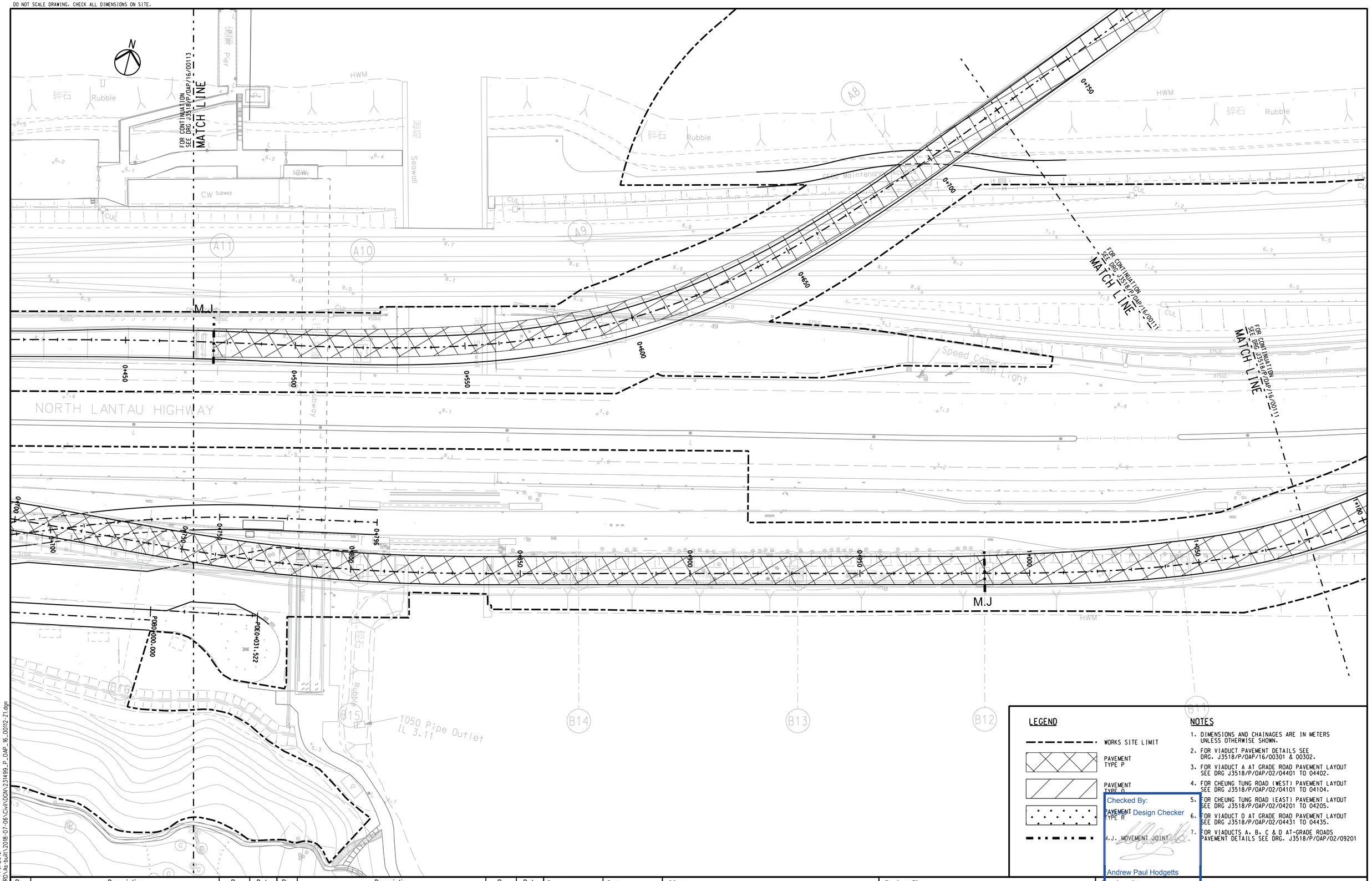

LEGEND

- WORKS SITE LIMIT
- PAVEMENT TYPE P
- PAVEMENT TYPE Q
- PAVEMENT TYPE R
- M.J. MOVEMENT JOINT

NOTES

1. DIMENSIONS AND CHAINAGES ARE IN METERS UNLESS OTHERWISE SHOWN.
2. FOR VIADUCT PAVEMENT DETAILS SEE DRG. J3518/P/OAP/16/00301 & 00302.
3. FOR VIADUCT A AT GRADE ROAD PAVEMENT LAYOUT SEE DRG J3518/P/OAP/02/04401 TO 04402.
4. FOR CHELUNG TUNG ROAD (WEST) PAVEMENT LAYOUT SEE DRG J3518/P/OAP/02/04101 TO 04104.
5. FOR CHELUNG TUNG ROAD (EAST) PAVEMENT LAYOUT SEE DRG J3518/P/OAP/02/04201 TO 04205.
6. FOR VIADUCT D AT GRADE ROAD PAVEMENT LAYOUT SEE DRG J3518/P/OAP/02/04431 TO 04435.
7. FOR VIADUCTS A, B, C & D AT-GRADE ROADS PAVEMENT DETAILS SEE DRG. J3518/P/OAP/02/09201

Checked By: Design Checker
Andrew Paul Hodgetts
Resident Engr's Rep.

Rev	Description	By	Date	Rev	Description	By	Date
1	AS-CONSTRUCTED	SK	07/18				

Drawn: LTF	Date: 06/14
Checked: KYL	Approved: DOP
Scale: 1:500 @ A1 / 1:1000 @ A3	

Client: 路政署 HIGHWAYS DEPARTMENT 港珠澳大橋香港工程管理處 Hong Kong - Zhuhai - Macao Bridge Hong Kong Project Management Office

Project Title: Contract No. HY/2012/07 Tuen Mun - Chek Lap Kok Link Southern Connection Viaduct Section

Supervising Officer: AECOM

Contractor: Gammon

Originator: ARUP

Drawing title: VIADUCT PAVEMENT LAYOUT PLAN SHEET 12 OF 13

Drawing no. J3518/P/OAP/16/00112 Rev. 1

Printed by : reman.yick 7/6/2018
Filename : J:\23149\RECORD\As-built\2018-07-06\Civil\DGN\23149_P_OAP_16_00112_Z1.dgn

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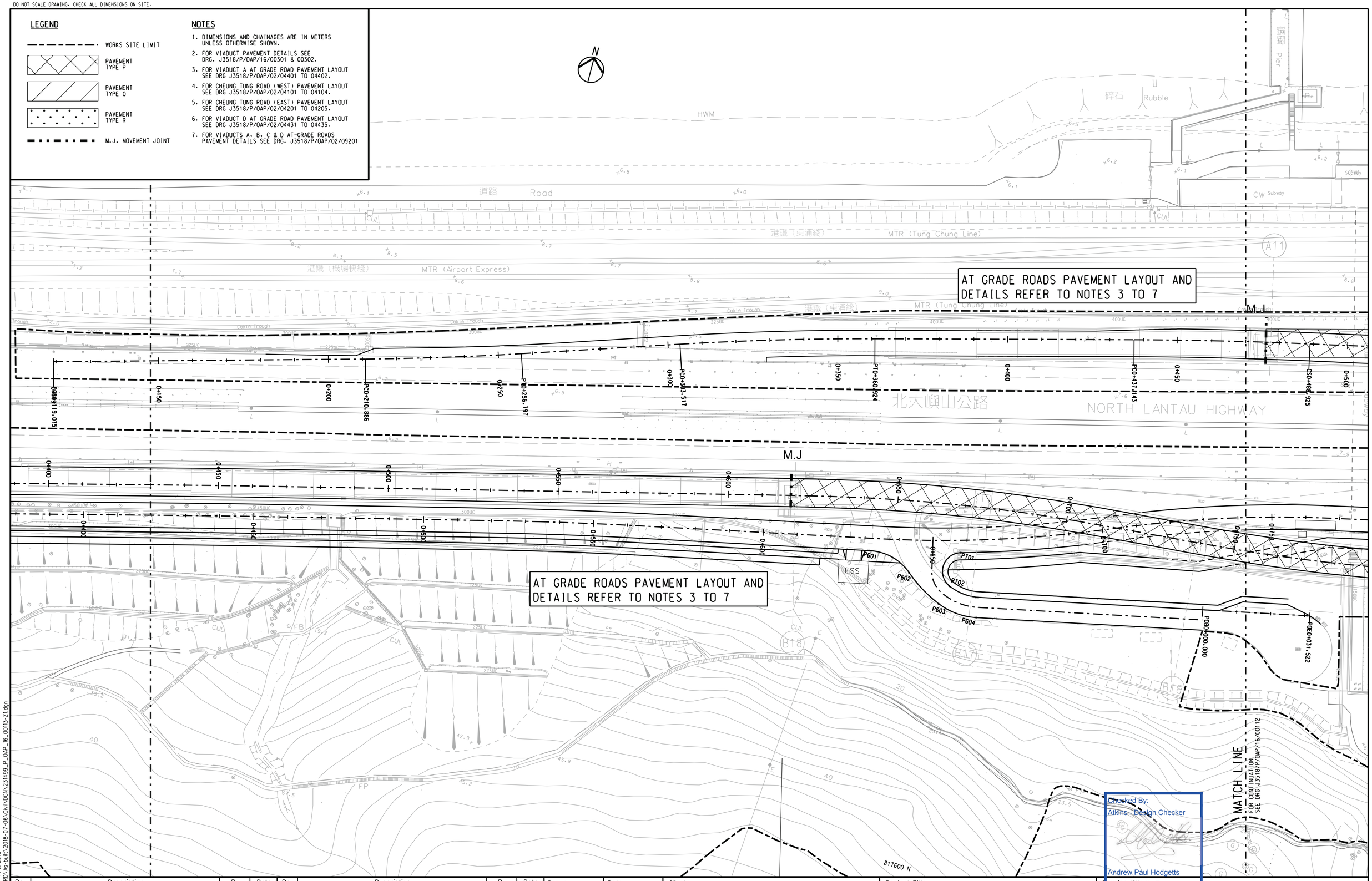
LEGEND

- WORKS SITE LIMIT
- PAVEMENT TYPE P
- PAVEMENT TYPE Q
- PAVEMENT TYPE R
- M.J. MOVEMENT JOINT

NOTES

1. DIMENSIONS AND CHAINAGES ARE IN METERS UNLESS OTHERWISE SHOWN.
2. FOR VIADUCT PAVEMENT DETAILS SEE DRG. J3518/P/OAP/16/00301 & 00302.
3. FOR VIADUCT A AT GRADE ROAD PAVEMENT LAYOUT SEE DRG J3518/P/OAP/02/04401 TO 04402.
4. FOR CHEUNG TUNG ROAD (WEST) PAVEMENT LAYOUT SEE DRG J3518/P/OAP/02/04101 TO 04104.
5. FOR CHEUNG TUNG ROAD (EAST) PAVEMENT LAYOUT SEE DRG J3518/P/OAP/02/04201 TO 04205.
6. FOR VIADUCT D AT GRADE ROAD PAVEMENT LAYOUT SEE DRG J3518/P/OAP/02/04431 TO 04435.
7. FOR VIADUCTS A, B, C & D AT-GRADE ROADS PAVEMENT DETAILS SEE DRG. J3518/P/OAP/02/09201



Checked By:
Atkins - Design Checker
Andrew Paul Hodgetts
Checker Auth. Rep.

Rev	Description	By	Date	Rev	Description	By	Date
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Drawn	Date
LTF	06/14
Checked	Approved
KYL	DOP
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1:500 @ A1 / 1:1000 @ A3	

Client: 路政署 HIGHWAYS DEPARTMENT 港珠澳大橋香港工程管理處 Hong Kong - Zhuhai - Macao Bridge Hong Kong Project Management Office

Project Title: Contract No. HY/2012/07 Tuen Mun - Chek Lap Kok Link Southern Connection Viaduct Section

Supervising Officer: AECOM

Contractor: Gammon

Originator: ARUP

Drawing title: VIADUCT PAVEMENT LAYOUT PLAN SHEET 13 OF 13

Drawing no. J3518/P/OAP/16/00113 Rev. 1

Printed by : reman.yick 7/6/2018
Filename : J:\231499\RECORD\As-built\2018-07-06\Civil\DGN\231499_P_OAP_16_00113-Z1.dgn

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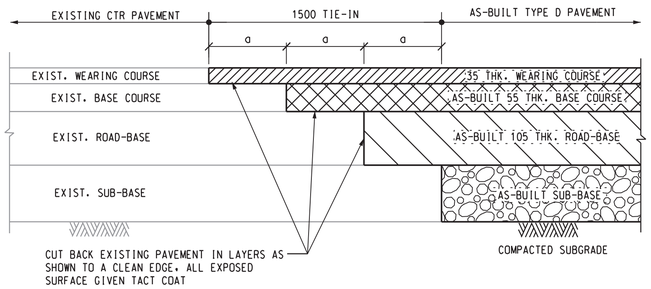
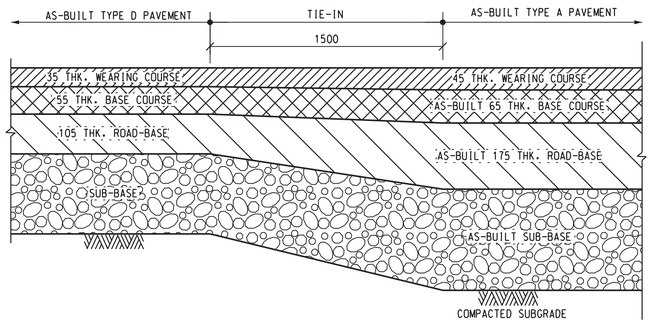


NOTE:
IF AS-BUILT SUB-BASE THCIKNESS DOES NOT MATCH WITH EXISTING,
1500 TIE-IN WILL BE REQUIRED FOR THICKNESS TRANSITION.

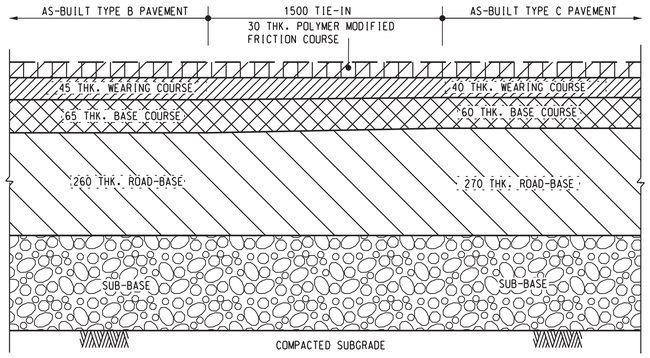
TIE-IN OF NEW FLEXIBLE PAVEMENT (TYPE D) WITH EXISTING FLEXIBLE PAVEMENT ON CHEUNG TUNG ROAD

a=150 FOR LONGITUDINAL JOINT
a=500 FOR TRANSVERSE JOINT
N.T.S.



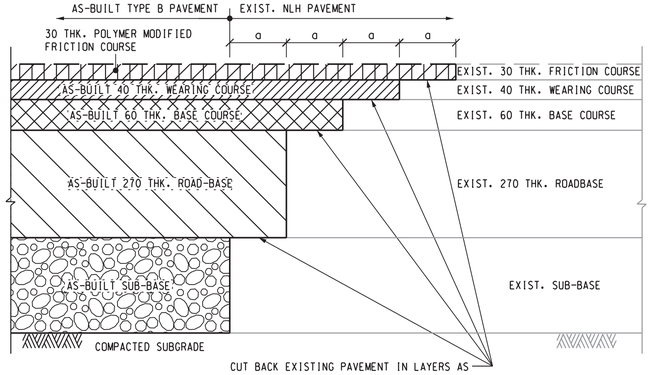
TIE-IN OF NEW FLEXIBLE PAVEMENT BETWEEN TYPE A AND TYPE D

N.T.S.



TIE-IN OF NEW FLEXIBLE PAVEMENT BETWEEN TYPE B AND TYPE C

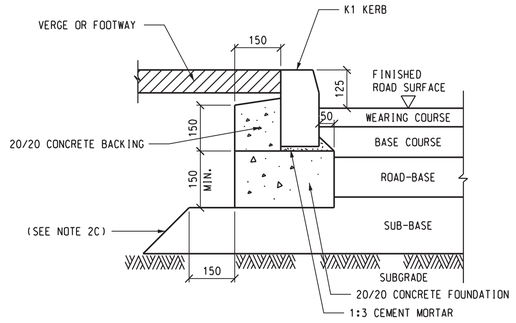
N.T.S.



NOTE:
IF AS-BUILT SUB-BASE THCIKNESS DOES NOT MATCH WITH EXISTING,
1500 TIE-IN WILL BE REQUIRED FOR THICKNESS TRANSITION.

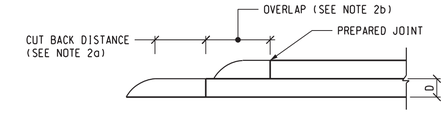
TIE-IN OF NEW FLEXIBLE PAVEMENT (TYPE C) WITH EXISTING FLEXIBLE PAVEMENT AT NLH

a=150 FOR LONGITUDINAL JOINT
a=500 FOR TRANSVERSE JOINT
N.T.S.



TYPICAL BITUMINOUS PAVEMENT CROSS-SECTION

N.T.S.



JOINTS IN BITUMINOUS MATERIALS LAYERS

N.T.S.

NOTES

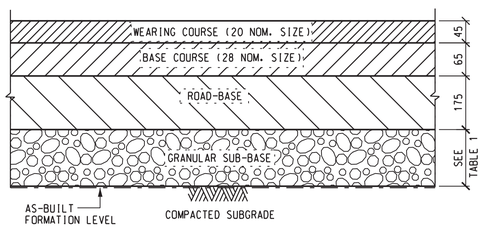
1. ALL DIMENSIONS ARE IN MILLIMETERS.
2. NOTES FOR BITUMINOUS PAVEMENT:
   (a) MINIMUM CUT BACK DISTANCE = 2 x D OR 100 WHICHEVER IS GREATER.
   (b) MINIMUM OVERLAP BETWEEN ADJOINING LAYERS:
   150 FOR JOINTS LONGITUDINAL TO CARRIAGEWAY.
   500 FOR JOINTS TRANSVERSE TO CARRIAGEWAY.
   (c) WHERE THE CROSSFALL OF ROAD SURFACE IS TOWARDS THE KERB THE SUB-BASE SHOULD BE CARRIED THROUGH TO THE EDGE OF THE EMBANKMENT OR TO THE FILTER DRAIN.
   (d) REFER TO THE GENERAL SPECIFICATION FOR THE NOMINAL SIZES OF MATERIALS.
   (e) KERB UNITS ARE LAID ON 1 : 3 CEMENT MORTAR NOT LESS THAN 10 mm THICK AND NOT MORE THAN 40 mm THICK.
3. NOTES FOR FOOTWAY PAVEMENT:
   (a) THE FINISHES TO THE CONCRETE SURFACE IS CLASS U4.
   (b) CONCRETE FOOTWAY AND PAVED AREAS AREA LAID IN BAYS NOT EXCEEDING 20 SQ.m WITH A MAXIMUM JOINT SPACING OF 5m.
   (c) EXPANSION JOINTS IS PROVIDED AT MAX. SPACING OF 100m.
4. THE POLYMER MODIFIED FRICTION COURSE IS 10mm NOMINAL SIZE AND SHALL COMPLY WITH APPENDIX A OF HyD GUIDANCE NOTES RD/GN/032.
5. FOR NOTES ON ROAD PAVEMENT CONSTRUCTION, REFER TO GENERAL NOTE 12 ON DRAWING NO. J3518/P/OAP/02/04000.

TABLE 1. DESIGN THICKNESS OF CAPPING LAYER/SUB-BASE

SUBGRADE MODULUS OF ELASTICITY (MPa)	SUBGRADE CBR VALUE (%)	PLASTICITY INDEX (PI) (%)	MINIMUM THICKNESS (mm)	
			CAPPING LAYER	GRANULAR SUB-BASE
< 20	-	> 50	600	150
20 - < 50	-	> 20 - 50	350	150
50 - < 150	5 - < 15	≤ 20	-	225
≥ 150	≥ 15	-	-	150

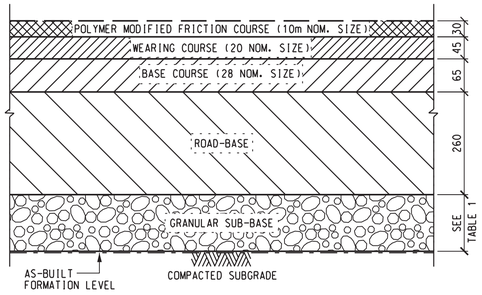
NOTE 1. FOR WEAK SUBGRADES (<50 MPa), AN OVERLAYING CAPPING LAYER OF MIN. CBR VALUE OF 15% IS REQUIRED.

2. FOR ABNORMALLY WEAK SUBGRADE (<20 MPa), GEOTEXTILES SHOULD BE USED TO SEPARATE THE SOIL AND THE CAPPING LAYER IN ORDER TO REDUCE DEFORMATIONS UNDER CONSTRUCTION TRAFFIC.



PAVEMENT DETAIL TYPE A (FOR REPROVISIONED CHEUNG TUNG ROAD)

N.T.S.



PAVEMENT DETAIL TYPE B (FOR VIADUCT APPROACH RAMP AND ROAD)

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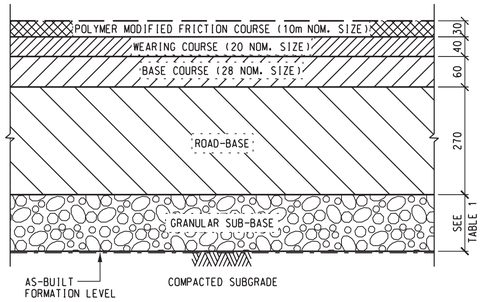
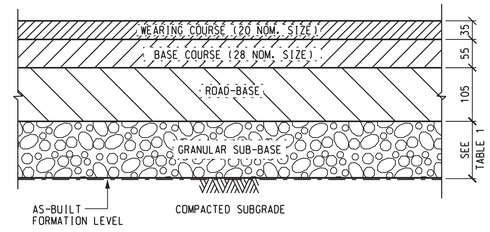


PAVEMENT DETAIL TYPE C (FOR NLH EXPRESSWAY)

N.T.S.

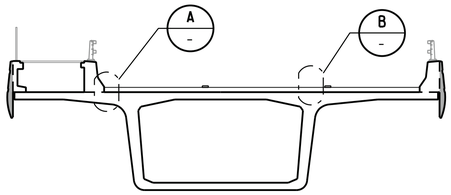


PAVEMENT DETAIL TYPE D (FOR REPROVISIONED CHEUNG TUNG ROAD - SIMILAR PAVEMENT CONFIGURATION AS EXISTING)

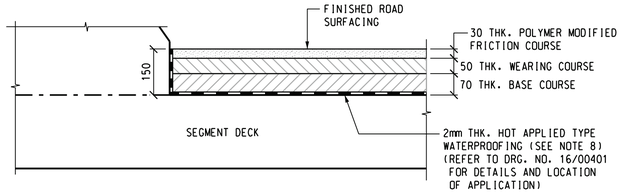
N.T.S.

Checked By:
Andrew Paul Hodgetts
Chartered Engineer
Andrew Paul Hodgetts
Chartered Engineer
Authorised Person (Checker)

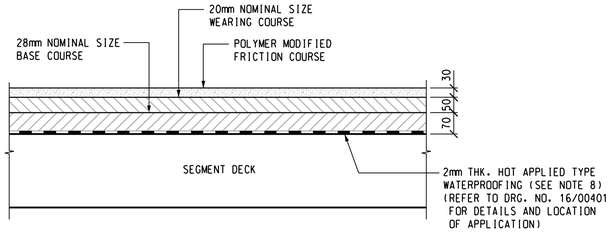
DO NOT SCALE DRAWING. CHECK ALL DIMENSIONS ON SITE.



PAVEMENT TYPE P
TYPICAL DECK SECTION
N.T.S.



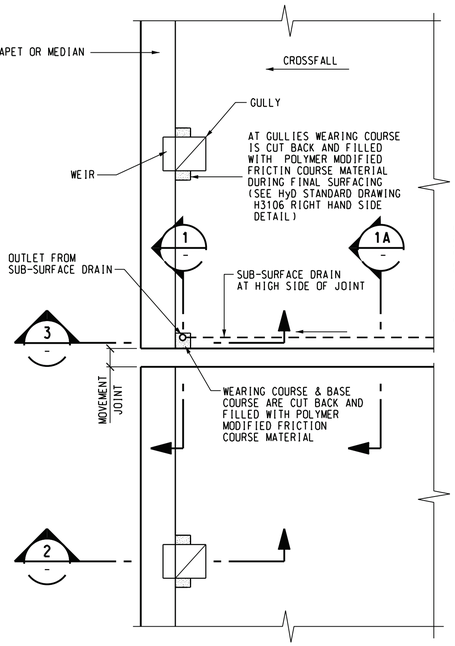
DETAIL A
SCALE N.T.S.



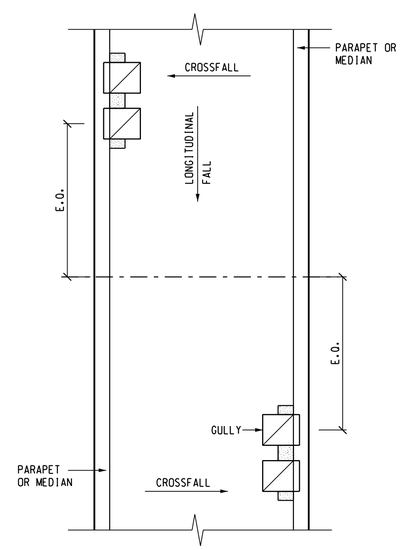
DETAIL B
SCALE N.T.S.

NOTES

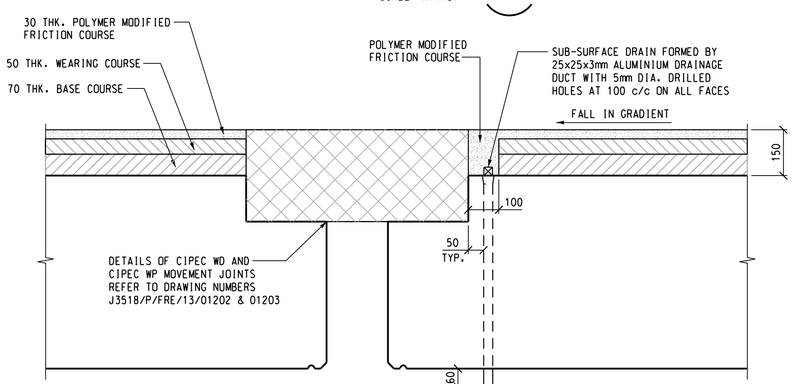
1. ALL DIMENSION ARE IN MILLIMETER UNLESS OTHERWISE STATED.
2. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH ALL ROADWORK DRAWINGS AND HyD STANDARD DRAWINGS.
3. ALL STANDARD DRAWINGS REFERRED TO IN THE DRAWINGS SHALL BE THE LATEST VERSION.
4. REFER TO GENERAL SPECIFICATION AND EMPLOYER'S REQUIREMENTS FOR THE NOMINAL SIZES OF MATERIALS.
5. FOR DETAILS OF TRANSITION BETWEEN VIADUCT F AND AT-GRADE ROADS SEE DRG. J3518/P/OAP/16/00302.
6. MINIMUM OVERLAP BETWEEN ADJOINING LAYERS:
   150 FOR JOINTS LONGITUDINAL TO CARRIAGEWAY
   500 FOR JOINTS TRANSVERSE TO CARRIAGEWAY
7. FOR VIADUCTS A, B, C & D AT-GRADE ROADS PAVEMENT DETAILS SEE DRG. J3518/P/OAP/02/09201.
8. HOT APPLIED FLINTKOTE BRIDGE COAT WITH FLINTKOTE PF-4 PRIMER IS USED FOR WATERPROOFING.



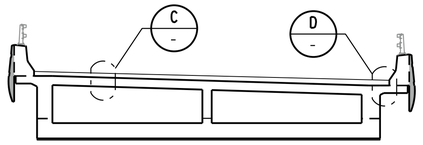
TYPICAL PLAN ARRANGEMENT
N.T.S.



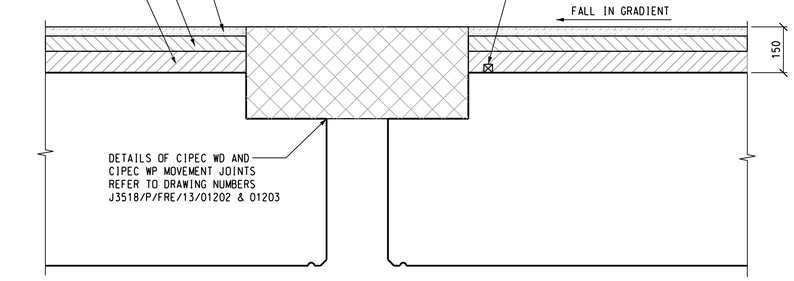
TYPICAL LAYOUT OF EXTENT OF
POLYMER MODIFIED FRICTION COURSE MATERIAL
AT CHANGE OF CROSS FALL
N.T.S.



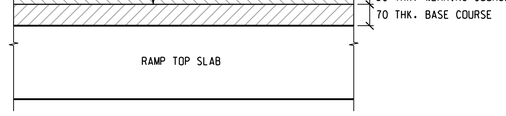
SECTION 1
SCALE N.T.S.



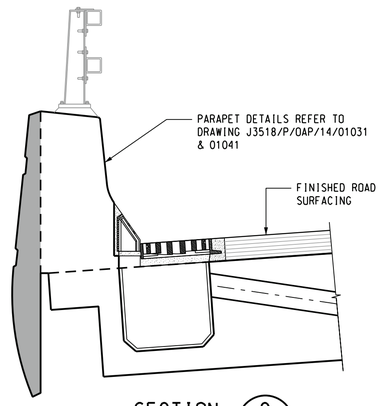
PAVEMENT TYPE S
TYPICAL RAMP SECTION
N.T.S.



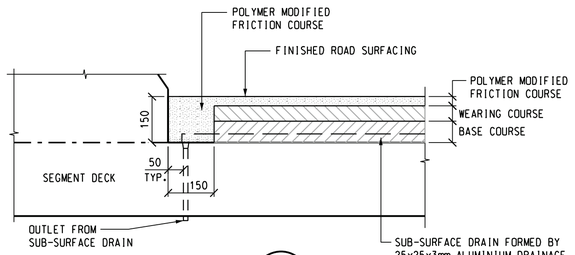
SECTION 1A
SCALE N.T.S.



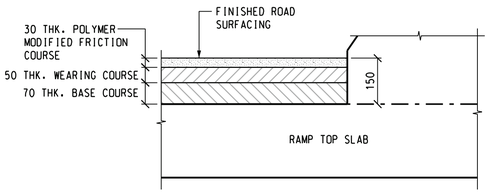
DETAIL C
SCALE N.T.S.



SECTION 2
SCALE N.T.S.



SECTION 3
SCALE N.T.S.



DETAIL D
SCALE N.T.S.

Checked By:
Atkins - Design Checker
Andrew Paul Hodgetts
Works Auth. Rep.

Rev	Description	By	Date	Rev	Description	By	Date
1	AS-CONSTRUCTED	SK	07/18				
2	SECOND ISSUE	SK	03/19				

Drawn: JC	Date: 05/14
Checked: KYL	Approved: DOP
Scale: 1:50 @ A1 / 1:100 @ A3	

Client: 路政署 HIGHWAYS DEPARTMENT 港珠澳大橋香港工程管理處 Hong Kong - Zhuhai - Macao Bridge Hong Kong Project Management Office

Project Title: Contract No. HY/2012/07 Tuen Mun - Chek Lap Kok Link Southern Connection Viaduct Section

Supervising Officer: AECOM

Contractor: Gammon

Originator: ARUP

Drawing title: VIADUCT PAVEMENT DETAILS SHEET 1 OF 3

Drawing no. J3518/P/OAP/16/00301 Rev. 2

Printed by : remon.yick 3/22/2019
Filename : J:\23149\RECORD\As-built\2019-03-22\DGN\231499_P_OAP_16_00301_2.dgn

Appendix 4.2

Location of Noise Mitigation Measures

Project Management Initials: Designer: CYCK Checked: CCHY Approved: SWKM ISO A1 594mm x 841mm

GENERAL:

1.1 THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE SPECIFICATIONS AND THE PARTICULAR REQUIREMENTS WHICH ARE SHOWN ON INDIVIDUAL DRAWINGS.

1.2 UNLESS OTHERWISE SPECIFIED, THESE GENERAL NOTES ARE APPLICABLE TO ALL THE STRUCTURES.

1.3 ALL REFERENCES OF STANDARD DRAWING SHALL REFER TO THE LATEST VERSION OF THAT STANDARD DRAWING.

1.4 NO DIMENSIONS ARE TO BE OBTAINED FROM SCALING DRAWINGS.

1.5 ALL STRUCTURAL DRAWINGS MUST BE READ IN CONJUNCTION WITH ALL RELEVANT CIVIL, GEOTECHNICAL, ARCHITECTURAL AND MECHANICAL AND ELECTRICAL WORK DRAWINGS, AND THE OTHER CONTRACT DOCUMENTS.

1.6 ALL SETTING OUT DIMENSIONS SHALL BE VERIFIED AGAINST THE LATEST RELEVANT ARCHITECTURAL DRAWINGS BEFORE WORK COMMENCES. THE SUPERVISOR SHALL BE INFORMED IMMEDIATELY OF ANY DISCREPANCIES DISCOVERED.

1.7 ALL DESIGN AND CONSTRUCTION SHALL COMPLY WITH BS EN 1991 EUROCODE 1 : ACTIONS ON STRUCTURES, BS EN 1992 EUROCODE 2 : DESIGN OF CONCRETE STRUCTURES, BS EN 1993 EUROCODE 3 : DESIGE OF STEEL STRUCTURES AS MODIFIED BY THE STRUCTURES DESIGN MANUAL FOR HIGHWAYS AND RAILWAYS (2013 EDITION).

1.8 ABBREVIATIONS:

ABBREVIATIONS USED ARE AS DEFINED IN "STANDARD METHOD OF DETAILING STRUCTURAL CONCRETE" PUBLISHED BY THE INSTITUTION OF STRUCTURAL ENGINEERS UNLESS NOTED OTHERWISE.

STANDARD ABBREVIATIONS:

DIA.	DIAMETER
MAX.	MAXIMUM
MIN.	MINIMUM
M/S	MARGINAL STRIP
NOM.	NOMINAL
TYP.	TYPICAL
C.J.	CONSTRUCTION JOINT
M.J.	MOVEMENT JOINT
F.G.L.	FINISH GROUND LEVEL
F.S.L.	FINISH STRUCTURE LEVEL
F.R.L.	FINISH ROAD LEVEL
F.F.L.	FINISH FLOOR LEVEL
E.G.L.	EXISTING GROUND LEVEL
N.T.S.	NOT TO SCALE
S.O.L.	SETTING OUT LINE
C/W	CARRIAGEWAY
G.M.S.	GALVANIZED MILD STEEL
S.S.	STAINLESS STEEL
H/S	HARD SHOULDER
P.J.	PARAPET JOINT
S.O.P.	SETTING OUT POINT

1.9 ALL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE HONG KONG GOVERNMENT GENERAL SPECIFICATION FOR CIVIL ENGINEERING WORKS 2006 EDITION.

1.10 ALLOWANCE IS TO BE MADE BY THE CONTRACTOR FOR PRECAMBER IN THE FORMWORK SUCH THAT THE ALIGNMENT OF THE COMPLETED STRUCTURE CONFORMS TO THE ALIGNMENT SHOWN ON THE DRAWING.

1.11 PARAPETS ARE CAST VERTICALLY.

DIMENSIONS AND LEVELS:

2.1 COORDINATES ARE BASED ON HONG KONG METRIC GRID (1980) UNLESS OTHERWISE NOTED.

2.2 LEVELS ARE IN METRES RELATIVE TO HONG KONG PRINCIPAL DATUM (mPD) UNLESS OTHERWISE NOTED.

2.3 DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.

2.4 SETTING OUT DIMENSIONS, LEVELS, COORDINATES ARE TO BE CALCULATED BY THE CONTRACTOR. NO INFORMATION SHOULD BE SCALED PHYSICALLY OR ELECTRONICALLY FROM THE DRAWINGS OR FILES.

2.5 INFERRED ROCKHEAD LEVEL AND UTILITIES SHOWN ON DRAWING IS INDICATIVE AND FOR INFORMATION ONLY.

CONCRETE:

3.1 CONCRETE GRADES AND NOMINAL COVERS SHALL BE AS FOLLOWS UNLESS OTHERWISE NOTED:

UNDERSIDE OF FOOTINGS AND PILE CAPS IN DIRECT CONTACT WITH GROUND	C32/40	75
FOOTINGS AND PILE CAPS OTHER THAN ABOVE STATED	C32/40	50
LAND PILE	C32/40	75
PARAPET	C32/40	50
BLINDING	C16/20	-
ELSEWHERE	C16/20	35

C32/40
Fck (MPa) CHARACTERISTIC CYLINDER STRENGTH — Fck.cube (MPa) CHARACTERISTIC CUBE STRENGTH

NOMINAL COVER MEASURED FROM THE FACE OF THE CONCRETE TO THE OUTERMOST REINFORCEMENT, INCLUDING LINKS.
MINIMUM COVER TO BE NOMINAL COVER MINUS 5mm
THE MINIMUM COVER SHALL NOT BE LESS THAN THE ADJACENT REINFORCEMENT DIAMETER.
FULL COVER IS TO BE MAINTAINED AT GROOVES AND OTHER ARCHITECTURAL FEATURES TO THE CONCRETE SURFACE.

3.2 CONCRETE GRADES SPECIFY THE REQUIRED MINIMUM 28 DAYS CHARACTERISTIC CYLINDER OR CUBE STRENGTH IN MPa WITH THE MAXIMUM SIZE OF AGGREGATE NOT EXCEEDING 20mm. THE REACTIVE ALKALI OF CONCRETE EXPRESSED AS THE EQUIVALENT SODIUM OXIDE PER CUBIC METRE OF CONCRETE SHALL NOT EXCEED 3KG.

3.3 CONSTITUENT MATERIALS, MIX DESIGN AND TESTING REQUIREMENTS ARE DEFINED IN THE HONG KONG GOVERNMENT GENERAL SPECIFICATION FOR CIVIL ENGINEERING WORKS 2006 EDITION.

3.4 DEFINITION OF VARIOUS CLASSES OF SURFACE FINISH IS IN ACCORDANCE WITH THE HONG KONG GOVERNMENT GENERAL SPECIFICATION FOR CIVIL ENGINEERING WORKS 2006 EDITION.

CONCRETE FINISHES, UNLESS SHOWN OTHERWISE, SHALL BE FORMED FINISHES:

SURFACES IN CONTACT WITH SOIL	F1
UNEXPOSED SURFACES	F2
EXPOSED SURFACES	F5

UNFORMED FINISHES:

UNEXPOSED SURFACES	U2
EXPOSED SURFACES	U5
TREATED FINISH	T4

3.5 ALL CONSTRUCTION JOINTS SHALL BE LOCATED AS SHOWN ON THE DRAWINGS OR AS ACCEPTED BY THE PROJECT MANAGER.

3.6 BLINDING CONCRETE SHALL BE 75mm THICK UNLESS SHOWN OTHERWISE.

3.7 ALL EXTERNAL CORNERS SHALL BE 20mm x 20mm CHAMFERS UNLESS SHOWN OTHERWISE.

3.8 KICKERS SHALL BE 100mm HIGH UNLESS SHOWN OTHERWISE.

3.9 ALL LEVELS SHALL BE STRUCTURAL LEVEL UNLESS SHOWN OTHERWISE.

REINFORCEMENT:

4.1 STEEL REINFORCEMENT SHALL COMPLY WITH CONSTRUCTION STANDARD CS2 : 2012 OF HONG KONG.

SYMBOL	TYPE OF BAR
R	MILD STEEL BAR OF GRADE 250
T	HIGH YIELD DEFORMED BAR OF GRADE 500B

4.2 STEEL REINFORCEMENT SHALL COMPLY WITH THE REQUIREMENTS OF CONSTRUCTION STANDARD CS2 : 2012 AND SHALL BE BENT IN ACCORDANCE WITH BS EN 1992 AND BS 8666.

4.3 REINFORCEMENT NOTATION IS AS FOLLOWS:

50/T25001/150 (EF)
NO. OF BARS
TYPE OF BAR (SEE 4.1)
BAR DIAMETER
BAR LOCATION (SEE 4.6)
BAR SPACING
BAR MARK

4.4 REINFORCEMENT IS SHOWN DIAGRAMMATICALLY ON THE DRAWINGS AND DOES NOT INTEND TO SHOW THE PRECISE LOCATION OF BARS. UNLESS OTHERWISE INDICATED ON THE DRAWINGS, BAR SPACING IS MEASURED PERPENDICULAR TO THE BAR.

4.5 TOP OR NEAR SIDE BARS SHOWN AS ————————
ALL OTHER BARS SHOWN AS — — — — — — —.

4.6 ABBREVIATIONS:

T	TOP
B	BOTTOM
NF	NEAR FACE
FF	FAR FACE
EF	EACH FACE
BW	BOTH WAYS
AP	ALTERNATELY PLACED (BARS OF ONE MARK ALTERNATING WITH BARS OF ANOTHER MARK)
AR	ALTERNATELY REVERSED (ALTERNATE BARS TURNED END FOR END AND POSSIBLY MOVED ALONG THEIR LENGTH, AS INDICATED BY TYPICAL BAR)
AS	ALTERNATELY STAGGERED (BARS OF ONE MARK WITH ALTERNATE BARS MOVED ALONG THEIR LENGTH SO THAT TWO SETS OF PLAN POSITIONS ARE OCCUPIED, AS INDICATED BY TYPICAL BAR)
V	VARIES (BARS OF VARYING DIMENSIONS)
RL	RANDOM LENGTH (BARS OF SECONDARY REINFORCEMENT IN WHICH THE POSITION OF LAPS ARE NOT DEFINED)
A.L.	ANCHORAGE LENGTH
T.A.L.	TENSILE ANCHORAGE LENGTH
T.L.L.	TENSILE LAP LENGTH
LV	LENGTH VARIES
U-BAR	U-SHAPED BAR
L-BAR	L-SHAPED BAR

4.7 BARS SHALL BE LAPPED AT THE LOCATIONS SHOWN ON THE DRAWINGS. THE CONTRACTOR SHALL OBTAIN ACCEPTANCE FROM THE PROJECT MANAGER IF BARS ARE TO BE LAPPED ELSEWHERE.

4.8 DESIGN ANCHORAGE LENGTHS AND LAP LENGTHS FOR VARIOUS BAR SIZES ARE AS FOLLOWS UNLESS SHOWN OTHERWISE ON THE DRAWINGS:

BASIC REQUIRED ANCHORAGE LENGTHS, lb.rqd

BAR DIAMETER \ CONCRETE GRADE	C25/30	C28/35	C32/40	C35/45	C40/50
10	740	700	650	580	550
12	890	830	780	700	660
16	1190	1110	1040	930	880
20	1480	1390	1300	1160	1090
25	1850	1730	1620	1440	1370
32	2370	2210	2080	1850	1750
40	3220	3010	2820	2510	2370
50	4510	4210	3820	3510	3330

- A FACTOR OF 0.7 CAN BE APPLIED TO THE BASIC REQUIRED ANCHORAGE LENGTHS(lb.rqd) IN THE ABOVE TABLE FOR GOOD BOND CONDITIONS AS DEFINED IN CLAUSE 8.4.2(2) AND FIGURE 8.2 OF BS EN 1992-1-1:2004.
- DESIGN ANCHORAGE LENGTHS SHALL BE DETERMINED USING BASIC REQUIRED ANCHORAGE LENGTHS ABOVE AND EQUATION (8.4) IN ACCORDANCE WITH CLAUSE 8.4.4 OF BS EN 1992-1-1:2004.
- DESIGN LAP LENGTHS SHALL BE DETERMINED USING BASIC REQUIRED ANCHORAGE LENGTHS ABOVE AND EQUATION (8.10) IN ACCORDANCE WITH CLAUSE 8.7.3 OF BS EN 1992-1-1:2004.

4.9 SCHEDULING, DIMENSIONING, BENDING AND CUTTING OF REINFORCEMENT SHALL BE IN ACCORDANCE WITH BS EN 1992 AND BS 8666.

4.10 IN A BUNDLE, ANCHORAGE LENGTHS, LAP LENGTHS AND OTHER REQUIREMENTS SHALL BE DETERMINED IN ACCORDANCES WITH CLAUSES 8.9.2 AND 8.9.3 OF BS EN 1992-1-1:2004 RESPECTIVELY.
BASIC REQUIRED ANCHORAGE LENGTHS, lb.rqd, BASED ON THE BUNDLES' EQUIVALENT DIAMETERS ARE AS SHOWN IN THE FOLLOWING TABLES AND SHALL BE USED TO DETERMINE THE BUNDLES' ANCHORAGE AND LAP LENGTHS AS REQUIRED BY BS EN 1992-1-1:2004.

2-BAR BUNDLES - BASIC REQUIRED ANCHORAGE LENGTHS, lb.rqd

BAR DIAMETER \ CONCRETE GRADE	C25/30	C28/35	C32/40	C35/45	C40/50
10	1050	980	920	820	780
12	1260	1180	1100	980	930
16	1680	1570	1470	1310	1240
20	2100	1960	1830	1630	1550
25	2710	2530	2370	2110	2000
32	3860	3610	3380	3010	2850

3-BAR BUNDLES - BASIC REQUIRED ANCHORAGE LENGTHS, lb.rqd

BAR DIAMETER \ CONCRETE GRADE	C25/30	C28/35	C32/40	C35/45	C40/50
10	1290	1200	1130	1000	950
12	1540	1440	1350	1200	1140
16	2050	1920	1800	1600	1510
20	2470	2310	2170	1930	1820
25	3320	3100	2900	2580	2450
32	4690	4380	4110	3650	3460

- A FACTOR OF 0.7 CAN BE APPLIED TO THE BASIC REQUIRED ANCHORAGE LENGTHS(lb.rqd) IN THE ABOVE TABLES FOR GOOD BOND CONDITIONS AS DEFINED IN CLAUSE 8.4.2(2) AND FIGURE 8.2 OF BS EN 1992-1-1:2004.

4.11 BARS INDICATED AS RANDOM LENGTH (RL) SHALL BE LAPPED AS NECESSARY SUBJECT TO THE FOLLOWING CONDITIONS:
(A) LAPS IN ADJACENT BARS SHALL BE STAGGERED.
(B) MINIMUM LAP LENGTH SHALL BE IN ACCORDANCE WITH NOTE 4.8.
(C) NOT MORE THAN ONE BAR PER LINE SHALL BE SHORTER THAN
6 METRES FOR 16mm DIA. OR SMALLER OR
9 METRES FOR 20mm DIA. OR LARGER .

4.12 WELDING OF REINFORCEMENT SHALL NOT BE PERMITTED WITHOUT ACCEPTANCE OF THE PROJECT MANAGER.

4.13 STEEL SPACERS OF SIMILAR DIAMETER TO BARS BUT NOT LESS THAN 25mm DIAMETER SHALL BE PROVIDED BETWEEN ADJACENT LAYERS OF PARALLEL REINFORCEMENT AND SPACED AT NOT MORE THAN 60xSMALLER BAR DIAMETER OR 1.5m WHICHEVER IS SMALLER.

4.14 THE CONTRACTOR SHALL PROVIDE ADEQUATE CHAIRS, SPACING LINKS TO SUPPORT THE TOP LAYER OF REINFORCEMENT IN THE SLABS AND BARS SHALL BE PROVIDED TO KEEP VERTICAL WALL REINFROCEMENT IN ITS CORRECT ALIGNMENT.

4.15 ALL LAPS SHOWN ON THE DRAWINGS ARE INDICATIVE ONLY. THE CONTRACTOR SHALL PREPARE THE BENDING SCHEDULE TO THE PROJECT MANAGER'S ACCEPTANCE.

WATERPROOFING OF CONCRETE SURFACES BELOW GROUND

5.1 TWO COATS OF BITUMINOUS PAINT SHALL BE APPLIED TO SURFACES OF ABUTMENTS, RETAINING WALLS, PILE CAPS AND FOOTINGS WHICH WILL FINALLY BE IN CONTACT WITH SOIL.

5.2 BITUMINOUS PAINT AND ITS APPLICATION SHALL COMPLY WITH THE SPECIFICATION SECTION 20, PART 1 : WATERPROOFING.

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AECOM

PROJECT 項目

TUNG CHUNG NEW TOWN EXTENSION (EAST) - DESIGN AND CONSTRUCTION

CONTRACT TITLE

TUNG CHUNG NEW TOWN EXTENSION - MAJOR INFRASTRUCTURE WORKS IN TUNG CHUNG EAST

CLIENT 業主

CEDD 土木工程拓展署 Civil Engineering and Development Department

CONSULTANT 工程顧問公司

AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS 分判工程顧問公司

ISSUE/REVISION 修訂

I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 複核
-	DEC. 20	TENDER DRAWING	CCHY

STATUS 階段

SCALE 比例: N.T.S.
DIMENSION UNIT 尺寸單位: MILLIMETRES

KEY PLAN 索引圖

PROJECT NO. 項目編號: 60507694
CONTRACT NO. 合約編號: NL/2020/03

SHEET TITLE 圖紙名稱

NOISE BARRIER GENERAL NOTES FOR STRUCTURE

SHEET NUMBER 圖紙編號

60507694/C3/6001

Plot File by: Jie.Yang@aecom.com 29-December-2020
PATH: pw:\\aecom-as-pw.bentley.com:AECOM_DS02_ASDocuments\60507694 TCNTE - D&C\CAD PRODUCTION\DRAWING\CONTRACTC3\6000\C3_6001.dgn

Project Management Initials: Designer: CYCK Checked: CCHY Approved: SWKM ISO A1 594mm x 841mm

GENERAL:

1. ALL DIMENSIONS AND LEVELS INCLUDING AS CONSTRUCTED HOLDING DOWN BOLT POSITIONS AFFECTING NEW STEELWORK SHOULD BE CHECKED ON SITE BY THE CONTRACTOR AND INCORPORATED INTO WORKSHOP DRAWINGS.

2. STRUCTURAL STEEL SECTION TO COMPLY WITH THE STANDARDS AS STIPULATED IN THE SPECIFICATIONS SHOULD NOT BE REPLACED WITH OTHER SECTIONS COMPLYING WITH OTHER STANDARDS UNLESS ACCEPTED BY THE PROJECT MANAGER. ALL SECTIONS SHALL BE HOT ROLLED.

3. UNLESS OTHERWISE SPECIFIED, ALL STRUCTURAL STEEL MEMBERS AND ALL STRUCTURAL HOLLOW SECTION SHALL COMPLY WITH BS EN 10025:1993 AND BS EN 10210 PART 1 AND PART 2 RESPECTIVELY.

MEMBERS	GRADE
HOLLOW SECTIONS	:GRADE S355JOH OR EQUIVALENT
SECTIONS OTHER THAN HOLLOW SECTIONS	:GRADE S355JO OR EQUIVALENT
PLATES FOR STRUCTURAL ELEMENTS	:GRADE S355JO OR EQUIVALENT
PLATES FOR NONSTRUCTURAL ELEMENT	:GRADE S355JO OR EQUIVALENT
CONNECTION BOLTS AND HOLDING DOWN BOLTS	:STAINLESS STEEL GRADE A4-80(BS EN ISO 3506-1 & 2)

4. IN ACCORDANCE WITH BS EN 10025:1993.THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE NOTCH TOUGHNESS AND THE CHARPY IMPACT REQUIREMENTS OF THE STEEL. (I.E. SELECTION OF STEEL SUBGRADE). THE STEEL SHOULD SATISFY THE REQUIREMENTS OF BS EN 1993-1-10 : 2005 BASED ON A MINIMUM TEMPERATURE OF 10° C.

   THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT THE STEEL HAS ADEQUATE THROUGH THICKNESS PROPERTIES TO SATISFY THE THROUGH THICKNESS PROPERTIES AND WELDING SEQUENCE THAT THE MATERIAL, AT OR ADJACENT TO WELDED LOCATIONS , IS FREE OF LAMINATIONS, CENTERLINE SEGEGATION, OR OTHER CRACK LINE INDICATIONS ON COMPLETION OF WELDING. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE QUALITY CLASS OF STEEL WITH ENHANCED THROUGH THICKNESS PROPERTIES (EN 10164) WHICH IS REQUIRED COMPATIBLE WITH HIS CHOSEN METHOD OF WORKING.

   NOT LESS THAN THREE WEEKS PRIOR TO ORDERING THE STEEL, THE CONTRACTOR SHOULD SUBMIT A REPORT FOR REVIEW WHICH DOCUMENTS THE SUBGRADE SELECTION AND THE STRATEGY (MATERIAL SELECTION, WELDING PROCEDURE AND INSPECTION) WHICH WOULD BE IMPLEMENTED FOR CONTROLLING THE THROUGH THICKNESS STRESS DURING WELDING AND ENSURING THAT THE ABOVE CRITERIA ARE SATISFIED.

5. DIMENSIONS AND TOLERANCES ARE IN ACCORDANCE WITH BS EN 10056 PART 1 AND PART 2.

6. THE CONTRACTOR SHOULD BE RESPONSIBLE FOR THE PROVISION OF ALL PACKING TO ACHIEVE ADEQUATE TOLERANCE AT THE CONNECTIONS.

7. END OF ALL HOLLOW SECTIONS SHALL BE SEALED WITH 10mm THK. PLATE UNLESS OTHERWISE SPECIFIED.

8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN, FABRICATION, ERECTION AND REMOVAL OF ALL TEMPORARY WORKS AND TEMPORARY BRACING NECESSARY TO MAINTAIN STRUCTURAL STABILITY OF THE STEELWORK DURING CONSTRUCTION.

9. BEFORE FABRICATION OF THE STEELWORK, THE CONTRACTOR SHALL SUBMIT A FULL-SET OF WORKSHOP DRAWINGS, TOGETHER WITH DETAILS OF HIS PROPOSED METHOD OF HANDLING, TRANSPORTATION AND ERECTION OF THE COMPLETED STEEL FRAME TO THE PROJECT MANAGER FOR HIS ACCEPTANCE. ANY MODIFICATION ON STEELWORK TO ACCOMMODATE THE PROPOSED CONSTRUCTION SHALL BE DESIGNED BY THE CONTRACTOR, AND CLEARLY INDICATED IN THE WORKSHOP DRAWINGS FOR THE ACCEPTANCE OF THE PROJECT MANAGER.

10. AFTER FABRICATION ALL STRUCTURAL STEEL IS TO BE HOT-DIP GALVANIZED IN ACCORDANCE WITH BS EN ISO1461:1999 TO AND A MINIMUM OF 85um. SURFACES SHALL BE PROPERLY PREPARED, ALL RUST, OIL, PAINT, AND OTHER SURFACE CONTAMINANTS; MILL SCALE AND WELDING SLAG SHALL BE REMOVED BY GRIT BLASTING CUT FACES AND OUTSIDE ARISES SHALL BE GROUND SMOOTH. THE SIZES AND POSITIONS OF ANY VENT HOLES REQUITED BY THE GALVANIZER, TOGETHER WITH HIS PROPOSED METHOD OF RE-SEALING, SHALL BE NOTIFIED TO THE PROJECT MANAGER.

BOLTING:

1. STAINLESS STEEL SHALL COMPLY WITH THE STANDARDS AS STIPULATED IN THE GENERAL SPECIFICATION FOR CIVIL ENGINEERING WORKS.

2. ALL STAINLESS STEEL BOLTS AND RETAINING SCREWS SHALL BE GRADE A4-80. STAINLESS STEEL TO BS EN ISO 3506-1 & 2 WITH COMPATIBLE STAINLESS STEEL WASHERS. A NYLON OR OTHER ACCEPTED PLASTICS WASHER IS TO BE PROVIDED BETWEEN THE SURFACES OF ANY DIFFERENT METAL SUCH AS ALUMINIUM ALLOY, STAINLESS STEEL AND GALVANIZED STEEL.

3. UNLESS OTHERWISE SPECIFIED IN THE DRAWINGS, ALL FASTENERS SHALL BE STAINLESS STEEL BOLTS OR HSFG BOLTS AS ACCEPTED BY THE PROJECT MANAGER.HSFG BOLTS SHALL BE PROTECTED WITH ELECTROPLATED ZINC PLATE FOR THE BOLTS AND CADMIUM PLATE FOR THE NUTS TO BS 3382.

4. THE DIAMETER OF A BOLT HOLE SHALL BE 2mm LARGER THAN THE NOMINAL DIAMETER OF THE BOLT, UNLESS SHOWN OTHERWISE.

5. AT SLOTTED HOLE CONNECTIONS EITHER SELF LOCKING NUTS SHOULD BE USED OR THE BOLTS NUTS SHOULD BE COATED WITH EPOXY RESIN ADHESIVE IMMEDIATELY PRIOR TO TIGHTENING.

6. FOR GRADE OF BOLTS, NUTS AND WASHERS REFER TO THE STEELWORK SPECIFICATION.

7. ALL FASTENERS WHICH ARE USED WITH UNGALVANISED, PAINTED STEELWORK ARE TO BE SHERADIZED TO BS 4921, TABLE 1, CLASS 1. UNLESS NOTED OTHERWISE AND SHALL RECEIVE A COMPATIBLE PRIMER AND FINISHING COAT(S) ONLY AS SPECIFIED FOR THE STEELWORK TO WHICH IT CONNECTS. ALL FASTENERS, (EXCEPT HSFG BOLTS) WELDS & SHIMS WHICH ARE USED WITH GALVANISED STEELWORK SHALL BE HOT DIP GALVANISED TO BS EN 1461:2009 UNLESS NOTED OTHERWISE. WHERE GALVANISED STEEL IS BOLTED TO PAINTED STEEL, USING BLACK BOLTS, THESE BOLTS ARE TO BE GALVANISED.

8. THE THREAD OF ALL RETAINING (BOLTS WITHOUT NUTS) SHOULD BE COATED WITH AN EPOXY RESIN ADHESIVE IMMEDIATELY PRIOR TO TIGHTENING. MANUFACTURERS DETAILS OF THE ADHESIVE SHOULD BE AGREED WITH THE PROJECT MANAGER.

9. HIGH STRENGTH FRICTION GRIP BOLTS, WHERE SPECIFIED, SHALL BE GENERAL GRADE TO BS 4395 WITH STANDARD HARDENED WASHERS OVER THE HOLES IN THE OUTER PILES.

WELDING:

1. WELDING AND WELDING CONSUMABLES SHALL COMPLY WITH THE REQUIREMENTS OF BS EN 1011, BS EN 1993-3-1-8 AND BS EN ISO 2560.

2. ALL WELDING SHALL BE CARRIED OUT BY CERTIFIED WELDERS AS DESCRIBED IN THE SPECIFICATION.

3. THE SYMBOLS FOR WELDING ARE IN ACCORDANCE WITH BS EN ISO 2553 : 1993.

4. CONNECTIONS SHALL BE FULL STRENGTH BUTT WELDS UNLESS OTHERWISE NOTED.

5. MINIMUM FILLET WELD SHALL BE 6mm LEG LENGTH UNLESS OTHERWISE SPECIFIED. ELECTRODE FOR FILLET WELDS SHALL BE GRADE E-46 TO BS EN 2560 WITH MINIMUM YIELD STRENGTH OF 460 N/mm² UNLESS OTHERWISE SPECIFIED.

6. SITE WELDS SHALL BE KEPT TO A MINIMUM AND SHALL ONLY BE PERMITTED WITH THE PRIOR WRITTEN ACCEPTANCE OF THE PROJECT MANAGER.

7. BUTT WELDS ARE TO BE COMPLETED PENETRATION WELDS PRODUCED BY METHODS ACCEPTED BY THE PROJECT MANAGER AFTER DEMONSTRATION AT PROCEDURE TRIALS.

8. WELDING CONSUMABLES SHOULD PRODUCE DEPOSITED WELD METAL HAVING MECHANICAL PROPERTIES NOT INFERIOR THE MINIMA OF THE PARENT METAL.

9. NON-DESTRUCTIVE TESTING OF WELDS SHALL BE APPLIED IN THE FORM OF:
   - VISUAL INSPECTION TO BS EN 970 FOR ALL WELDS.
   - SURFACE FLAW DETECTION TO BS 6072, BS EN 571.
   - ULTRASONIC EXAMINATION TO BS 3923 OR RADIOGRAPHIC EXAMINATION TO BS EN 1435.
   - THE LOCATION AND EXTENT OF TESTING SHALL BE IN ACCORDANCE WITH THE GENERAL SPECIFICATION AND PARTICULAR SPECIFICATION OF THE CONTRACT.

10. ALL IMPROPER MATERIALS INCLUDING LAG, DIRT, IRREGULARITIES AND OIL ETC. SHALL BE REMOVED FROM JOINTS PRIOR TO WELDING

11. ALL FILLET WELDS ARE TO BE ALL ROUND UNLESS OTHERWISE STATED.

CORROSION PROTECTION:

1. STEELWORK SHALL BE CORROSION PROTECTED AS DESCRIBED IN BS EN 1090-2 ANNEX F, STRUCTURAL DESIGEN MANUAL FOR HIGHWAYS AND RAILWAYS AND THE SPECIFCATION.

2. CORROSION PROTECTION SHALL BE APPLIED TO THE INSIDE SURFACES OF ALL HOLES.

3. ALL STEEL COMPONENTS SHALL BE HOT-DIP GALVANIZED TO BS EN ISO 1461:1999 AFTER FABRICATION BY SPECIALIST CONTRACTOR IN THE "CLASS V: HOT DIP GALVANIZING" OF THE "SPECIALIZED OPERATIONS FOR HIGHWAY STRUCTURE" CATEGORY OF THE LIST OF APPROVED SUPPLIERS OF MATERIALS AND SPECIALIST CONTRACTORS OF PUBLIC WORKS.

4. POSITION OF GALVANIZING VENT HOLES SHALL BE AGREED WITH THE GALVANIZER, SUBJECT TO THE ACCEPTANCE OF THE PROJECT MANAGER.

5. WHERE MEMBERS ARE TOO LARGE FOR AVAILABLE GALVANIZING BATHS, SUB-ASSEMBLIES SHALL BE PREPARED AS ABOVE AND SUBSEQUENT WELDED JOINTS SHALL BE ZINC SPRAYED IN ACCORDANCE WITH BS 2569 TO A MINIMUM THICKNESS OF 0.2 mm. TWO COSTS OF GOOD QUALITY ZINC-RICH PAINT COMPLYING WITH BS 4652 SHALL THEN BE APPLIED ACROSS THE ENTIRE ZINC SPRAYED AREAS INCLUDING AT LEAST 25 mm OF THE PARENT GALVANIZED COATING, OR, AT THE DISCRETION OF THE SUPERVISOR, BY THE USE OF LOW MELTING POINT ZINC ALLOY REPAIR RODS MADE SPECIFICALLY FOR THIS PURPOSE RESULTING IN A MINIMUM COATING THICKNESS OF 0.2 mm. ANY DAMAGE OF GALVANIZED COATINGS SHALL BE MADE GOOD IN A SIMILAR WAY TO THE TREATMENT OF WELDED JOINTS.

6. DETAILS OF PAINT USED SHOULD BE ACCEPTED BY THE PROJECT MANAGER PRIOR TO APPLICATION TO THE STEELWORK.

7. STEEL WHICH IS CAST-IN SHOULD REMAIN UNPAINTED. THE STEEL SHOULD BE BLAST CLEANED (EITHER PRIOR TO OR AFTER FABRICATION) TO THE STANDARDS AS STIPULATED IN THE SPECIFICATIONS.

8. IMMEDIATELY PRIOR TO ERECTION ALL STEELWORK SHOULD BE SPRAY WASHED WITH WATER AND DETERGENT, THEN SPRAY RINSED WITH CLEAN WATER.

9. PAINTING SYSTEM TO BE AS FOLLOWS AND CONFORM TO PARTICULAR SPECIFICATION CLAUSE 18 & STRUCTURES DESIGN MANUAL FOR HIGHWAYS AND RAILWAYS (2013 EDITION) cl. 16.4.
   (i) STRUCTURAL STEELWORK TO BE SYSTEM II.
   (ii) STEEL PARAPET TO BE SYSTEM I.

10. THE STEEL SURFACE TO BE PAINTED SHALL BE THOROUGHLY CLEANED AND PREPARED, FREE FROM GREASE, DIRT, SCALE AND RUST. THE CONTRACTOR SHALL SUBMIT THE PROPOSED METHOD STATEMENT FOR STEEL SURFACE PREPARATION WORKS TO THE PROJECT MANAGER FOR ACCEPTANCE PRIOR TO THE COMMENCEMENT OF PAINTING WORKS.

SHEAR CONNECTORS:

1. ALL SHEAR STUD CONNECTORS SHALL BE 105mm LONG TO BS EN ISO 13918 AND WELDED TO THE STEEL SECTION WITH AUTOMATIC STUD WELD UNLESS OTHERWISE STATED.

2. SHEAR STUD CONNECTORS SHALL HAVE A MIN. YIELD STRENGTH OF 385 N/mm2 WITH A MIN. ELONGATION OF 15% AND ULTIMATE TENSILE STRENGTH OF 495 N/mm2. TESTS ON SHEAR STUD CONNECTORS SHALL BE CARRIED OUT IN ACCORDANCE WITH BS EN ISO 13918 AND BS EN 10002-1.

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PROJECT
項目

TUNG CHUNG NEW TOWN EXTENSION (EAST) - DESIGN AND CONSTRUCTION

CONTRACT TITLE

TUNG CHUNG NEW TOWN EXTENSION - MAJOR INFRASTRUCTURE WORKS IN TUNG CHUNG EAST

CLIENT
業主

CEDD 土木工程拓展署 Civil Engineering and Development Department

CONSULTANT
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ISSUE/REVISION
修訂

I/R 修訂	DATE 日期	DESCRIPTION 內容/摘要	CHK. 複核
-	DEC. 20	TENDER DRAWING	CCHY

STATUS
現況

SCALE 比例: A1 N.T.S.

DIMENSION UNIT 尺寸單位: MILLIMETRES

KEY PLAN
索引圖

PROJECT NO. 項目編號: 60507694

CONTRACT NO. 合約編號: NL/2020/03

SHEET TITLE
圖紙名稱

NOISE BARRIER
GENERAL NOTES
FOR STEEL WORKS

SHEET NUMBER
圖紙編號

60507694/C3/6002

ISO A1 594mm x 841mm
Approved: SWKM
Checked: CCHY
Designer: CYCK
Project Management Initials:
CL
DTPL

GENERAL:

1. ALL DESIGN AND CONSTRUCTION SHOULD COMPLY WITH STRUCTURES DESIGN MANUAL FOR HIGHWAYS AND RAILWAYS IN CONJUNCTION WITH BS8004.
2. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE STATED.
3. ALL LEVELS ARE IN METRES ABOVE HONG KONG PRINCIPAL DATUM.
4. ALL SETTING OUT DIMENSIONS MUST BE VERIFIED AGAINST THE LATEST RELEVANT GENERAL ARRANGEMENT DRAWINGS BEFORE WORK COMMENCES. THE SUPERVISOR MUST BE INFORMED IMMEDIATELY OF ANY DISCREPANCIES DISCOVERED.
5. THE FOUNDING LEVELS OF PILES ARE APPROXIMATE AS DETERMINED FROM BOREHOLE INFORMATION. THE ACTUAL FOUNDING LEVEL FOR EACH PILE SHOULD BE DETERMINED BY THE MAIN CONTRACTOR TO THE ACCEPTANCE FROM THE PROJECT MANAGER AFTER EXCAVATION OF EACH PILE.
6. WHERE ANY DOUBT EXISTS AS TO THE CAPACITY OF ANY PILE TO SUSTAIN ADEQUATELY AND WITHOUT UNDUE SETTLEMENT, THE LOAD FOR WHICH IT HAS BEEN DESIGNED. THE PILE SHOULD BE TESTED IN ACCORDANCE WITH STRUCTURES DESIGN MANUAL FOR HIGHWAYS AND RAILWAYS AND THE SPECIFICATIONS.
7. THE CONTRACTOR SHOULD EXERCISE DUE CARE DURING THE WORK ON SITE TO AVOID DAMAGE TO ADJACENT STRUCTURES.
8. THE CONTRACTOR SHOULD BE RESPONSIBLE FOR ANY NECESSARY ACTIONS TO DIVERT OR PROTECT ALL SERVICES AND UTILITIES AFFECTED BY THE WORK.
9. THE CONTRACTOR SHOULD MAINTAIN ALL EXISTING SURFACE CHANNELS AND SANDTRAPS DURING THE WORKS AND ALL SURFACE WATER MUST PASS THROUGH THE SANDTRAPS BEFORE DISCHARGING TO THE PUBLIC SURFACE DRAINAGE SYSTEM.
10. ALL SETTING OUT TO THE EXISTING STRUCTURE AND UTILITIES SHOULD BE VERIFIED ON SITE PRIOR TO CONSTRUCTION. INFORM THE PROJECT MANAGER IMMEDIATELY OF ANY DISCREPANCIES DISCOVERED.
11. REINFORCING STARTER BARS PROTRUDING ABOVE PILE CUT-OFF LEVEL SHOULD BE PROTECTED BY ACCEPTED METHOD.
12. THE CONTRACTOR SHOULD BE RESPONSIBLE FOR REMOVAL OF SURPLUS LENGTH BY CUTTING OF CONCRETE TO THE CUT-OFF LEVEL SPECIFIED ON DRAWING.CARE SHOULD BE TAKEN TO AVOID SHATTERING OR OTHERWISE DAMAGING THE REST OF THE UNIT. ANY CRACKS OR DEFECTIVE CONCRETE SHOULD BE CUT AWAY AND MADE GOOD BY ACCEPTED GROUT OF EQUAL OR HIGHER STRENGTH PROPERLY BONDED TO THE OLD CONCRETE.
13. WHEREVER NECESSARY THE CONTRACTOR SHOULD BE RESPONSIBLE FOR THE APPLICATION OF CONSTRUCTION NOISE PERMIT REQUIRED UNDER THE NOISE CONTROL ORDINANCE.
14. BLASTING IS NOT PERMITTED.
15. ALLOWANCE SHALL BE MADE FOR ALL ANCILLARY TREATMENTS AND ALL WORKS NECESSARY TO ENSURE THE STABILITY OF ROADWAY, ADJACENT STRUCTURES AND UNDERGROUND CONSTRUCTION AND SERVICES.
16. PRIOR TO THE COMMENCEMENT OF FOUNDATION WORK, THE FOLLOWING DOCUMENTS SHALL BE SUBMITTED TO THE PROJECT MANAGER FOR COMMENTS AND ACCEPTANCE: THE DESIGN AND METHOD OF EXECUTION OF ANY ASSOCIATED TEMPORARY WORKS
17. UPON COMPLETION OF FOUNDATION WORK, AS-BUILT RECORDS OF ALL FOUNDATIONS CONSTRUCTED SHALL BE SUBMITTED TO THE PROJECT MANAGER FOR ACCEPTANCE. THE CONTENT AND FORMAT OF THE RECORDS SHALL BE IN ACCORDANCE WITH THE GENERAL SPECIFICATION OR AS ACCEPTED BY THE PROJECT MANAGER.

NOTES ON MONITORING:

1. THE EXACT LOCATION OF THE PROPOSED PIEZOMETERS OR BORE HOLES etc. SHOULD BE PEGGED OUT ON SITE BY THE CONTRACTOR AND ACCEPTED BY THE PROJECT MANAGER PRIOR TO THE COMMENCEMENT OF BORED HOLE SINKING.
2. SHOULD THERE BE ANY RELOCATION OR ADDITION OF BORED HOLES, THE ACCEPTANCE FROM THE PROJECT MANAGER MUSH BE OBTAINED.
3. MONITORING POINTS SHOULD BE INSTALLED AND INITIAL READING TAKEN BEFORE WORKS COMMENCE. FOR DETAILS OF MONITORING SEE INSTRUMENTATION DRAWINGS.
4. IF ANY OF THE SETTLEMENT OR VIBRATION CRITERIA IS EXCEEDED, WORK SHOULD CEASE AND THE SUPERVISOR SHOULD BE NOTIFIED. REMEDIAL WORKS PROPOSAL SHOULD BE SUBMITTED FOR ACCEPTANCE.
5. VIBRATION EFFECT ONTO THE ADJACENT STRUCTURES DUE TO THE OPERATION FOR INSTALLATION/REMOVAL OF TEMPORARY CASING AND TO REMOVE OBSTRUCTION OR TO FORM ROCK SOCKET SHOULD BE MONITORED BY THE CONTRACTOR. IN THE EVENT THE ALLOWABLE VIBRATION LIMIT IS EXCEEDED, THE WORK SHOULD BE STOPPED IMMEDIATELY AND AN ALTERNATE PROPOSAL SHOULD BE SUBMITTED TO THE PROJECT MANAGER FOR ACCEPTANCE PRIOR TO RESUMPTION OF THE WORK.

NOTES ON PAD FOOTING

1. THE MIN. ALLOWABLE BEARING CAPACITY OF THE FOUNDING MATERIAL IS 265kPa. THE CONTRACTOR SHALL REMOVE 500mm THICK LOOSE MATERIAL BELOW THE FORMATION LEVEL TO REACH A LEVEL WITH MIN. ALLOWABLE BEARING CAPACITY OF 265kPa. THE CONTRACTOR SHALL THEN BACKFILL WITH 20/20D CONCRETE TO THE REQUIRED FORMATION LEVEL.

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PROJECT
項目

TUNG CHUNG NEW TOWN EXTENSION (EAST) - DESIGN AND CONSTRUCTION

CONTRACT TITLE

TUNG CHUNG NEW TOWN EXTENSION - MAJOR INFRASTRUCTURE WORKS IN TUNG CHUNG EAST

CLIENT
業主

CEDD 土木工程拓展署 Civil Engineering and Development Department

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ISSUE/REVISION
修訂

I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 複核
-	DEC. 20	TENDER DRAWING	CCHY

STATUS
階段

SCALE 比例 — A1 N.T.S.

DIMENSION UNIT 尺寸單位 — MILLIMETRES

KEY PLAN
索引圖

PROJECT NO. 項目編號 — 60507694

CONTRACT NO. 合約編號 — NL/2020/03

SHEET TITLE
圖紙名稱

NOISE BARRIER
GENERAL NOTES
FOR FOUNDATIONS

SHEET NUMBER
圖紙編號

60507694/C3/6003

Project Management Initials: Designer: CYCK Checked: CCHY Approved: SWKM ISO A1 594mm x 841mm

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE SPECIFIED.
2. ALL LEVELS ARE IN METRES ABOVE PRINCIPAL DATUM.
3. ASTERISKED DIMENSIONS ARE TO BE ADJUSTED ON SITE TO SUIT ACTUAL SITE CONDITIONS AS DETERMINED BY THE SUPERVISOR.
4. THE HEIGHT OF EACH SOUND ABSORPTIVE PANEL SHALL BE 500mm.
5. THE CONTRACTOR SHALL PROPOSE AND DESIGN THE DETAILS AND MATERIALS FOR SEALING THE GAP BETWEEN NOISE BARRIER PANELS AND CONCRETE FOOTING FOR THE SUPERVISOR'S APPROVAL. COLOURS OF SEALING MATERIALS SHALL BE COMPATIBLE WITH THE COLOURS OF THE ADJACENT NOISE BARRIER PANELS.
6. THE LOCATION OF NOISE BARRIER FOOTING MOVEMENT JOINT SHALL BE DETERMINED BY THE CONTRACTOR BUT SPACING SHALL NOT EXCEED 12000 c/c UNLESS OTHERWISE SPECIFIED.
7. ABSORPTIVE PANELS, TRANSPARENT PANELS AND THE FIXING DETAILS OF THE PANELS SHALL BE DESIGNED BY THE CONTRACTOR IN ACCORDANCE WITH PARTICULAR SPECIFICATION.
8. MOVEMENT JOINT FOR PANEL SHALL BE DESIGNED BY THE CONTRACTOR AND APPROVED BY THE SUPERVISOR.
9. THE CONTRACTOR SHALL PROPOSE THE FIXING DETAILS OF NOISE BARRIER PANELS TO ACCOMMODATE LEVEL CHANGE AND CURVATURE CHANGE ALONG THE VERTICAL AND HORIZONTAL PROFILES OF THE ROAD FOR THE SUPERVISOR'S APPROVAL.
10. THE CONTRACTOR SHALL PROPOSE THE FIXING DETAILS OF NOISE BARRIER PANELS TO ACCOMMODATE THE LEVEL DROP ON SLOPE GROUND FOR THE SUPERVISOR'S APPROVAL.
11. THE CONTRACTOR SHALL DESIGN ANY MOUNTING FRAME NECESSARY FOR THE NOISE BARRIER PANELS AND SUBMIT ICE CERTIFIED DESIGN CALCULATIONS AND SHOP DRAWINGS FOR THE SUPERVISOR'S APPROVAL. THE COST OF THE MOUNTING FRAME AND ITS ASSOCIATED CONNECTION ELEMENTS IS DEEMED TO BE INCLUDED IN THE PRICE FOR NOISE BARRIER PANELS.
12. NO VERTICAL MEMBERS OF THE MOUNTING FRAMES ARE PERMITTED BETWEEN BARRIER POSTS FOR ALL NOISE BARRIERS.
13. HORIZONTAL MEMBERS OF THE MOUNTING FRAME SHALL BE LIMITED TO THE MINIMUM REQUIRED AND THE SPACING BETWEEN THESE MEMBERS SHALL BE AGREED WITH THE SUPERVISOR.
14. THE CONTRACTOR SHALL PROPOSE THE FIXING DETAILS AT THE INTERFACE OF THE TRANSPARENT AND ABSORPTIVE NOISE BARRIER PANELS FOR THE SUPERVISOR'S APPROVAL.
15. THE DESIGN OF THE NOISE BARRIER PANEL MOUNTING FRAMES AND THE FIXING DETAILS SHALL BE CARRIED OUT IN ACCORDANCE WITH THE STRUCTURES DESIGN MANUAL FOR HIGHWAYS AND RAILWAYS PUBLISHED BY HIGHWAYS DEPARTMENT (2013).
16. IN CASE THE NOISE BARRIER ELEMENT(S) IS / ARE COMBUSTIBLE, A SECTION OF MINIMUM 4.0m IN LENGTH FIRE BREAK MADE OF NON-COMBUSTIBLE MATERIAL SHALL BE REQUIRED FOR EVERY 100M IN LENGTH NOISE BARRIER.
17. THE NOISE BARRIER PANEL SHALL NOT REFLECT LIGHT IN SUCH A WAY AS TO PREJUDICE ROAD SAFETY AND CAUSE NUISANCE TO THE NEARBY RESIDENTS.
18. THE SLANTED PANELS SHALL HAVE NON-GLARING MATT SURFACE AT TOP REQUIRING BUT NOT LIMITED TO THE FOLLOWINGS FEATURES AND SUBJECT TO THE SATISFACTION BY THE SUPERVISOR:

A: THE MATT SURFACE SHALL NOT BE PRODUCED BY DESTRUCTIVE METHOD SUCH AS MECHANICAL BLAST, CHEMICAL ETCHING ETC. IN ORDER NOT TO CHANGE THE PROPERTIES OF MATERIAL;

B: THE APPEARANCE OF NON-GLARING SURFACE SHALL NOT BE BLEMISHED EITHER WITH FINGERPRINTS OR AFTER PROCESSING THE MATT SURFACE;

C: LIGHT TRANSMISSION OF NON-GLARING PANELS SHALL BE 68±5%;

D: THE SPECULAR GLOSS VALUE OF THE NON-GLARING PANELS SHALL BE TESTED ACCORDING TO BS2782: PART 5 METHOD 520A.

ANGLE OF INCIDENCE	SPECULAR GLOSS VALUE
20°	10 (MAX.)
60°	30 (MAX.)
85°	20 (MAX.)

19. THE STEELWORK SHALL BE PAINTED IN ACCORDANCE WITH THE PS REQUIREMENTS AND MATCH WITH EXISTING.
20. THE CONTRACTOR SHALL DESIGN THE NOISE BARRIER PANEL MOUNTING FRAME/ SUB-FRAME, SUCH THAT ALL NOISE BARRIER PANEL COULD BE REPLACED INDIVIDUALLY IN FUTURE, WITHOUT DISMANTLING OTHER PANELS NOT GOING TO BE REPLACED.
21. ERECTION TOLERANCE OF STEELWORK TO BE AS FOLLOWS.
    LINEAR DIMENSION UP TO 10m ±10mm
    LINEAR DIMENSION 10 TO 20m ±20mm
    FINISHING COAT COLOUR TO BE DETERMINED BY THE SUPERVISOR.
22. FASTENERS FOR NOISE BARRIER AND SEMI ENCLOSURE SHALL BE GRADE A4-80 STAINLESS STEEL TO BS EN ISO 3506-1 & 2 WITH COMPATIBLE STAINLESS STEEL WASHERS A NYLON OR OTHER APPROVED PLASTICS WASHER IS TO BE PROVIDED BETWEEN THE SURFACES OF ANY DIFFERENT METAL SUCH AS ALUMINIUM ALLOY, STAINLESS STEEL AND GALVANIZED STEEL.
23. FASTENERS FOR ALUMINIUM COMPONENTS AND HOLDING DOWN BOLTS ARRANGEMENTS SHALL BE GRADE A4-80 STAINLESS STEEL TO BS EN ISO 3506-1 & 2 RESPECTIVELY WITH COMPATIBLE STAINLESS STEEL WASHERS A NYLON OR OTHER APPROVED PLASTICS WASHER IS TO BE PROVIDED BETWEEN THE SURFACES OF ANY DIFFERENT METAL SUCH AS ALUMINIUM ALLOY, STAINLESS STEEL AND GALVANIZED STEEL.

NOTES FOR NOISE BARRIER PANELS:

1. THE FIXING AND CLAMPING SYSTEMS OF THE NOISE BARRIER PANELS TO THE STEEL VERTICAL POSTS SHOWN ON THE DRAWINGS ARE INDICATIVE ONLY. THE CONTRACTOR SHALL DESIGN SUCH SYSTEMS TO THE SATISFACTION OF THE SUPERVISOR.
2. THE PROPOSED NOISE BARRIER PANELS AND THE ASSOCIATED FIXING AND CLAMPING SYSTEM SHALL BE CAPABLE OF SUSTAINING THE FOLLOWING DESIGNED LOAD AND MOVEMENT :
   NOMINAL WIND PRESSURE = 3.3kN/m
   HORIZONTAL MOVEMENT OF THE PANELS OVER M.J. = 5mm
3. THE NOISE BARRIER WORKS SHALL INCORPORATE HOLDING DEVICES TO PREVENT PANELS FORM FALLING OFF IN THE EVENT OF ACCIDENTAL IMPACT BY VEHICLE. THE HOLDING DEVICES SHALL COMPLY WITH THE FOLLOWING REQUIREMENTS:

(1): THE DEVICES SHALL HOLD THE FOUR CORNERS OF EACH PANEL MEMBER BY WIRE ROPES. THE DESIGN HOLDING FORCE FOR EACH PANEL SHALL BE 10kN.

(2): THE DEVICES SHALL ALLOW A RELATIVE MOVEMENT OF 0.3m BETWEEN THE PANELS AND THE STRUCTURAL FRAMES.

Plot File by: WUJX3
PATH: pw:\\aecom-as-pw.bentley.com:AECOM_DS02_ASDocuments\60507694 TCNTE - D&C\CAD PRODUCTION\DRAWING\CONTRACT\C3\6000\C3_6004.dgn
29-December-2020

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AECOM

PROJECT 項目

TUNG CHUNG NEW TOWN EXTENSION (EAST) - DESIGN AND CONSTRUCTION

CONTRACT TITLE

TUNG CHUNG NEW TOWN EXTENSION - MAJOR INFRASTRUCTURE WORKS IN TUNG CHUNG EAST

CLIENT 業主

CEDD 土木工程拓展署 Civil Engineering and Development Department

CONSULTANT 工程顧問公司

AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS 分判工程顧問公司

ISSUE/REVISION 修訂

I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 複核
-	DEC. 20	TENDER DRAWING	CCHY

STATUS 狀況

SCALE 比例 A1 N.T.S.

DIMENSION UNIT 尺寸單位 MILLIMETRES

KEY PLAN 索引圖

PROJECT NO. 項目編號 60507694

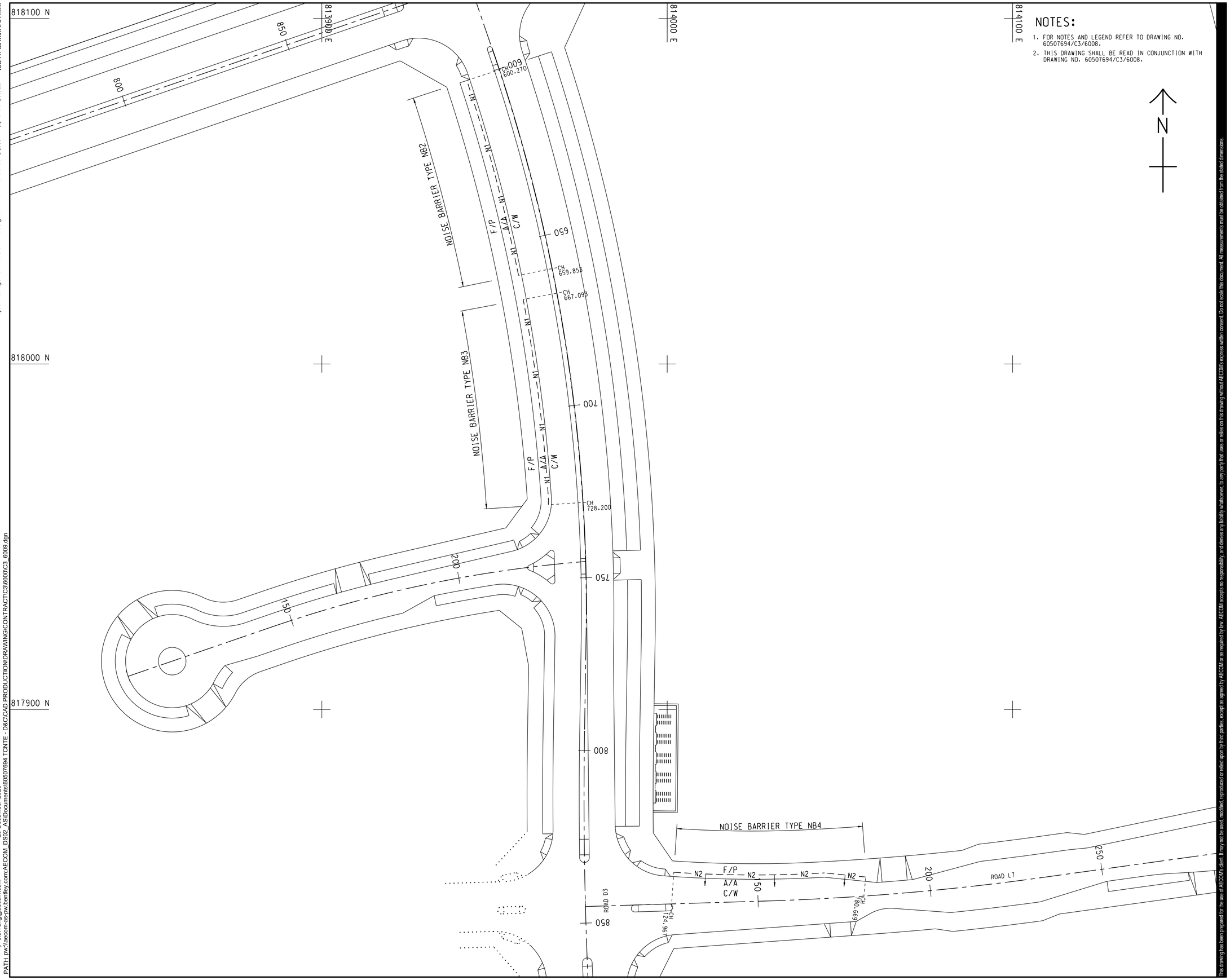
CONTRACT NO. 合約編號 NL/2020/03

SHEET TITLE 圖紙名稱

NOISE BARRIER
GENERAL NOTES
FOR NOISE PANEL

SHEET NUMBER 圖紙編號

60507694/C3/6004



NOTES:

1. FOR NOTES AND LEGEND REFER TO DRAWING NO. 60507694/C3/6008.
2. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH DRAWING NO. 60507694/C3/6008.

AECOM

PROJECT
項目

TUNG CHUNG NEW TOWN EXTENSION (EAST) - DESIGN AND CONSTRUCTION

CONTRACT TITLE

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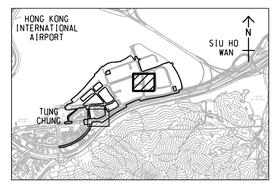
-	DEC. 20	TENDER DRAWING	CCHY

STATUS
階段

SCALE 比例: A1 1 : 500

DIMENSION UNIT 尺寸單位: METRES

KEY PLAN 索引圖 A1 1 : 50000



PROJECT NO. 項目編號: 60507694

CONTRACT NO. 合約編號: NL/2020/03

SHEET TITLE
圖紙名稱

NOISE BARRIER LAYOUT PLAN

SHEET 2 OF 2

SHEET NUMBER
圖紙編號

60507694/C3/6009

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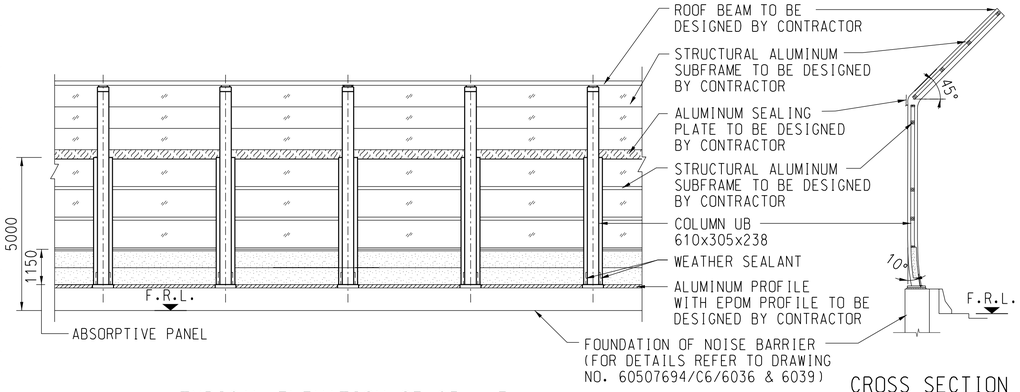
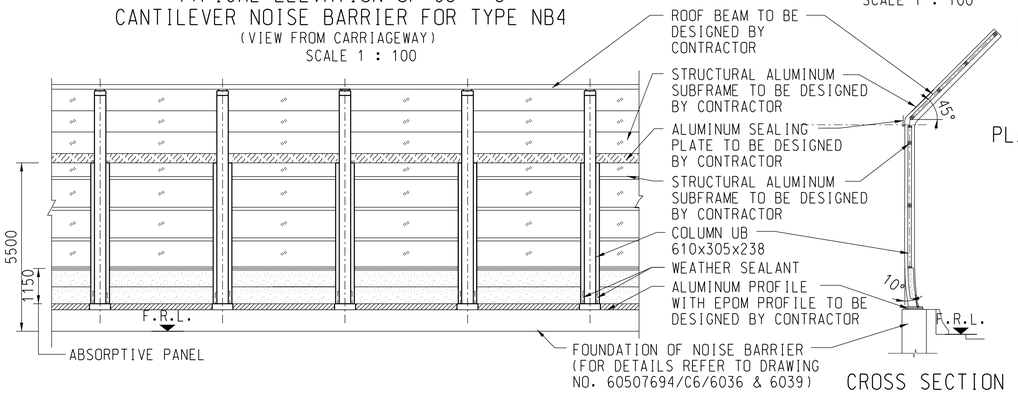


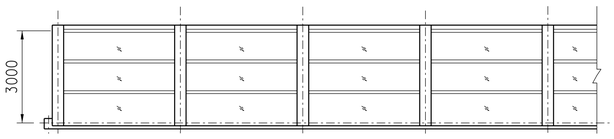
TYPICAL ELEVATION OF C5 + 3
CANTILEVER NOISE BARRIER FOR TYPE NB4
(VIEW FROM CARRIAGEWAY)
SCALE 1 : 100

CROSS SECTION
SCALE 1 : 100

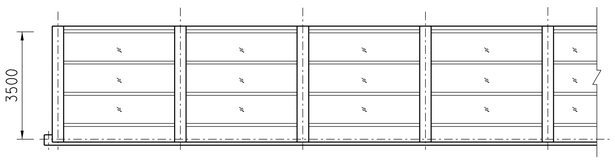


TYPICAL ELEVATION OF C5.5 + 3.5
CANTILEVER NOISE BARRIER FOR TYPE NB1
(VIEW FROM CARRIAGEWAY)
SCALE 1 : 100

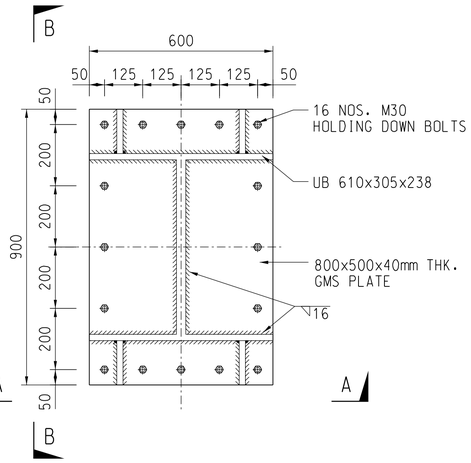
CROSS SECTION
SCALE 1 : 100



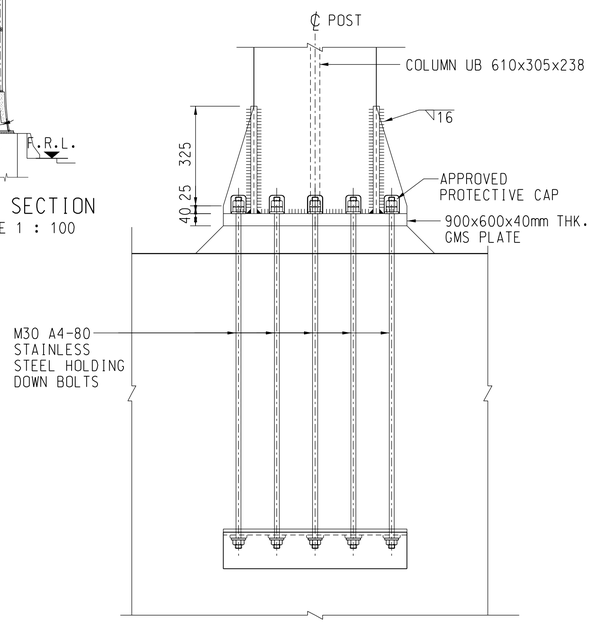
TYPICAL PLAN OF C5 + 3 CANTILEVER NOISE BARRIER FOR TYPE NB4
SCALE 1 : 100



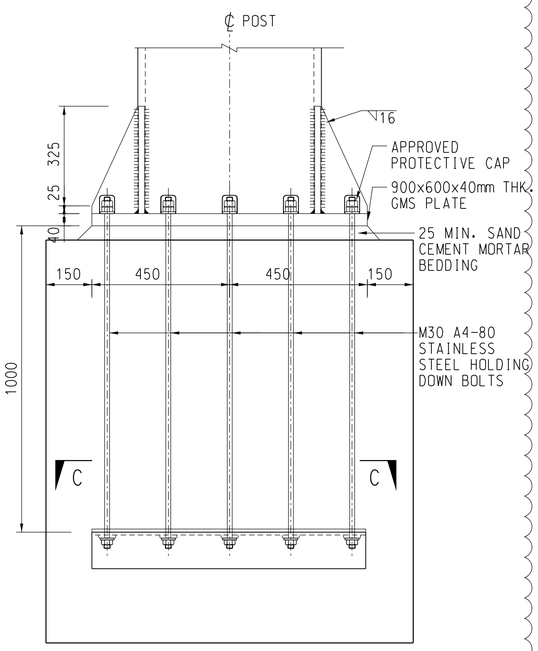
TYPICAL PLAN OF C5.5 + 3.5 CANTILEVER NOISE BARRIER FOR TYPE NB1
SCALE 1 : 100



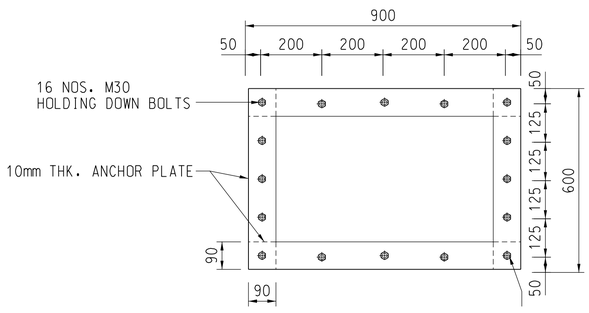
PLAN OF ANCHORAGE FOR NOISE BARRIER POST
SCALE 1 : 10



SECTION A - A
SCALE 1 : 10



SECTION B - B
SCALE 1 : 10



SECTION C - C
SCALE 1 : 10

NOTES

1. FOR GENERAL NOTES REFER TO DRAWING NO. 60507694/C3/6021.
2. THE CONTRACTOR SHALL MAY PROPOSE ALTERNATIVE HORIZONTAL SUBFRAMES AND CONNECTION DETAILS OF THE HORIZONTAL SUBFRAME TO VERTIACL POST CONNECTION AND SUBMIT RELEVANT ICE CERTIFIED CALCULATION AND SHOP DRAWINGS FOR THE PROJECT MANAGER"S APPROVAL.
3. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF THE HORIZONTAL SUBFRAMES AND THE CONNECTION DETAILS OF THE HORIZONTAL SUBFRAME TO VERTICAL POST CONNECTION TAKING ACCOUNT OF THE HORIZONTAL AND VERTICAL PROFILES OF THE ROAD.
4. ALL THE FIXING DETAILS OF NOISE BARRIER PANELS ARE INDICATIVE ONLY THE CONNTRACTOR SHALL DESIGN THE MOUNTING FRAME NECESSARY FOR THE NOISE VARRIER PANELS AND SUBMIT RELEVANT ICE CERTIFIED CALCULETIONS AND SHOP DRAWINGS FOR THE PROJECT MANGER'S APPROVAL.
5. THE SIZE AND SPACING OF THE VERTICAL MOUNTING FRAME SHALL BE LIMITED TO THE MINIMUM REQUIRED AND TO BE AGREED WITH THE PROJECT MANAGER.
6. FOR NOISE BARRIER TRANSPARENT AND ABSORPTIVE PANEL DETAILS REFER DRAWING NO. 60507694/C3/6021

AECOM

PROJECT
項目

TUNG CHUNG NEW TOWN EXTENSION (EAST) - DESIGN AND CONSTRUCTION

CONTRACT TITLE

TUNG CHUNG NEW TOWN EXTENSION - MAJOR INFRASTRUCTURE WORKS IN TUNG CHUNG EAST

CLIENT
業主

CEDD 土木工程拓展署 Civil Engineering and Development Department

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ISSUE/REVISION
修訂

I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 複核
A	FEB. 21	TENDER ADDEDUM NO. 2	CCHY
-	DEC. 20	TENDER DRAWING	CCHY

STATUS
階段

SCALE 比例: A1 AS SHOWN
DIMENSION UNIT 尺寸單位: MILLIMETRES

KEY PLAN
索引圖

PROJECT NO. 項目編號: 60507694
CONTRACT NO. 合約編號: NL/2020/03

SHEET TITLE
圖紙名稱

CANTILEVER NOISE BARRIER TYPICAL DETAILS

SHEET NUMBER
圖紙編號

60507694/C3/6022A

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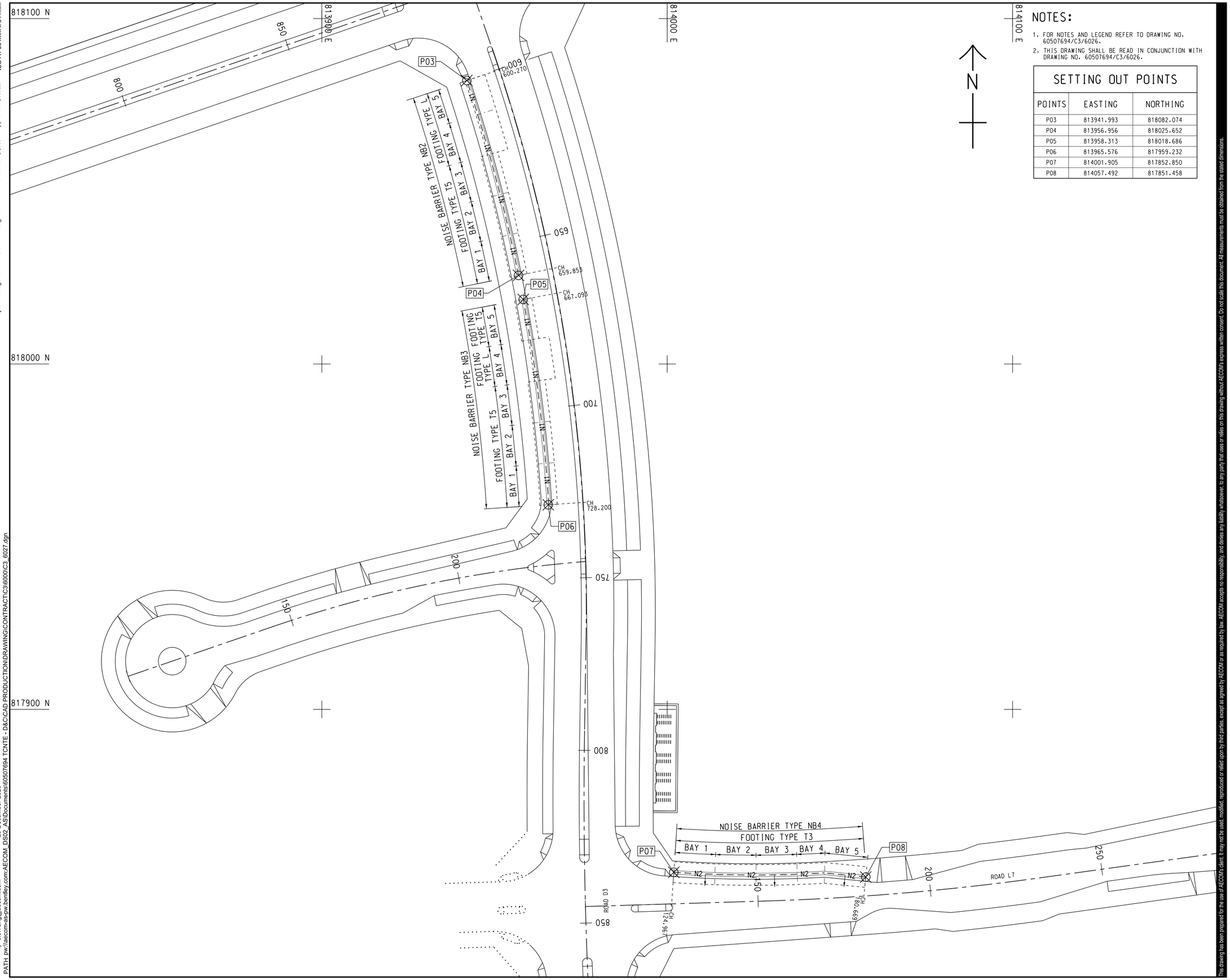
22 二月 2021



NOTES:

1. FOR NOTES AND LEGEND REFER TO DRAWING NO. 60507694/C3/6026.
2. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH DRAWING NO. 60507694/C3/6026.

N

SETTING OUT POINTS

POINTS	EASTING	NORTHING
P03	813941.993	818082.074
P04	813956.956	818025.652
P05	813958.313	818018.686
P06	813965.576	817959.232
P07	814001.905	817852.850
P08	814057.492	817851.458

Project Management Initials:
Designer: CYCK
Checked: CCHY
Approved: SWKM
ISO A1 594mm x 841mm

Plot File by: Jie.Yang@aecom.com
PATH: pw:\\aecom-as-pw.bentley.com:AECOM_DS02_ASIDocuments\60507694 TCNTE - D&C\CAD PRODUCTION\DRAWING\CONTRACT\C3\6000\IC3_6027.dgn
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PROJECT
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TUNG CHUNG NEW TOWN EXTENSION (EAST) - DESIGN AND CONSTRUCTION

CONTRACT TITLE

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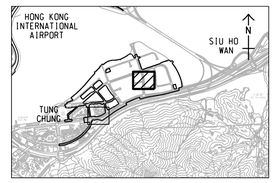
-	DEC. 20	TENDER DRAWING	CCHY

STATUS
階段

SCALE 比例
A1 1 : 500

DIMENSION UNIT 尺寸單位
METRES

KEY PLAN 索引圖 A1 1 : 50000



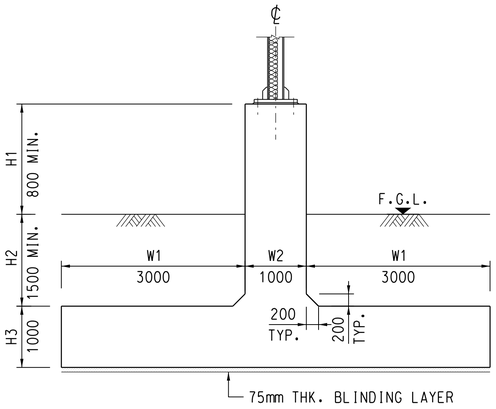
PROJECT NO. 項目編號
60507694

CONTRACT NO. 合約編號
NL/2020/03

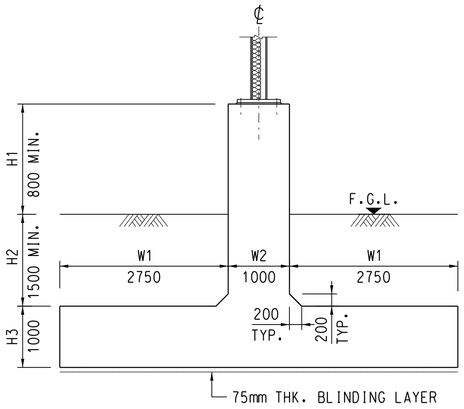
SHEET TITLE 圖紙名稱
NOISE BARRIER FOUNDATION LAYOUT PLAN

SHEET 2 OF 2

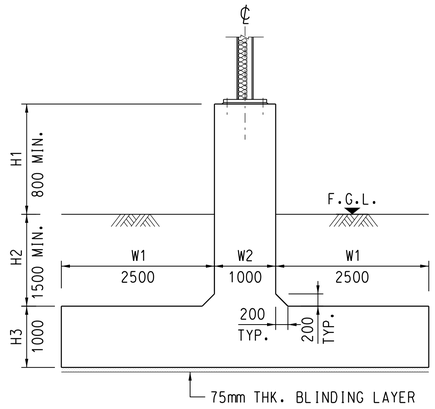
SHEET NUMBER 圖紙編號
60507694/C3/6027



NOISE BARRIER FOOTING TYPE T1
SCALE 1 : 50



NOISE BARRIER FOOTING TYPE T2
SCALE 1 : 50

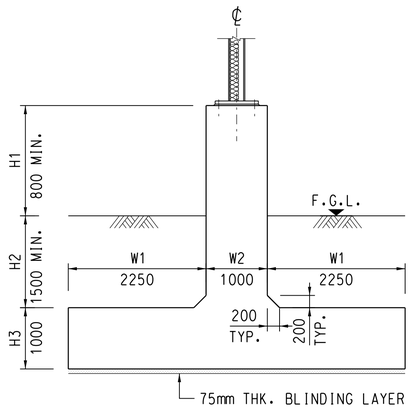


NOISE BARRIER FOOTING TYPE T3
SCALE 1 : 50

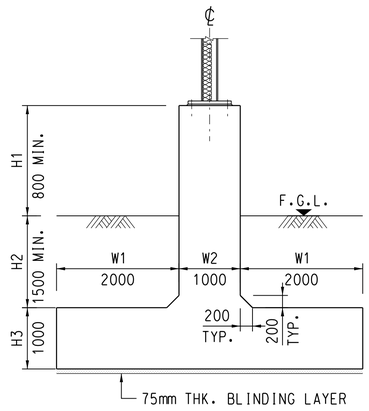
NOTES:

1. GENERAL NOTES FOR FOUNDATIONS REFER TO DRAWING NO. 60507694/C3/6003.
2. FOUNDATION TYPE REFER TO DRAWINGS NOS. 60507694/C3/6008 AND 6009.
3. REINFORCEMENT DETAILS OF FOOTING REFER TO DRAWING NO. 60507694/C3/6039.

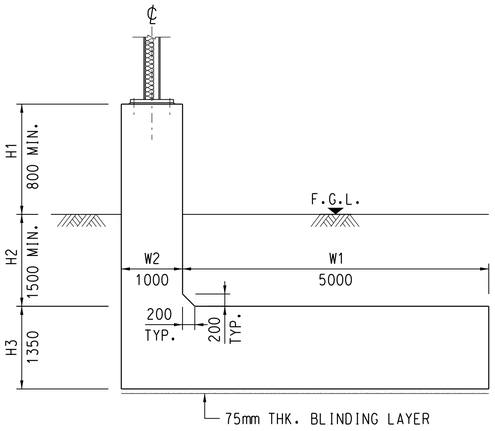
NOISE BARRIER	FOOTING TYPE	FOOTING DIMENSION (mm)				
		H1	H2	H3	W1	W2
NB1	T1	MIN.800	MIN.1500	1200	3000	1000
	T2	MIN.800	MIN.1500	1000	2750	1000
	T3	MIN.800	MIN.1500	1000	2500	1000
	T4	MIN.800	MIN.1500	1000	2250	1000
NB2	T5	MIN.800	MIN.1500	1000	2000	1000
	L	MIN.800	MIN.1500	1350	5000	1000
NB3	T5	MIN.800	MIN.1500	1000	2000	1000
	L	MIN.800	MIN.1500	1350	5000	1000
NB4	T3	MIN.800	MIN.1500	1000	2500	1000



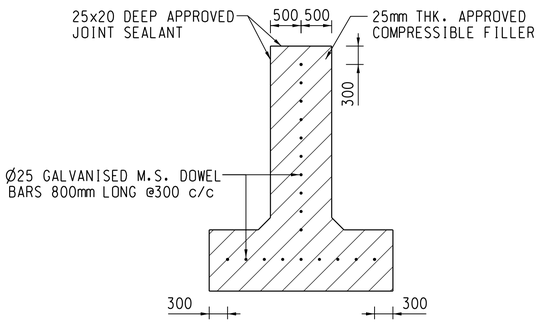
NOISE BARRIER FOOTING TYPE T4
SCALE 1 : 50



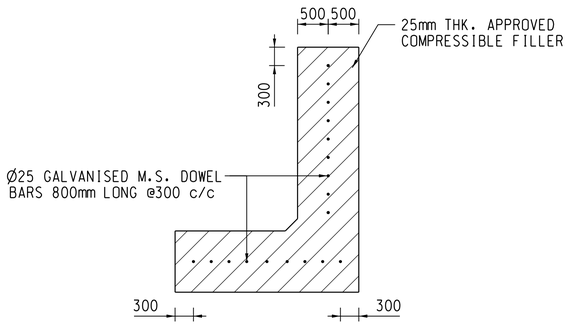
NOISE BARRIER FOOTING TYPE T5
SCALE 1 : 50



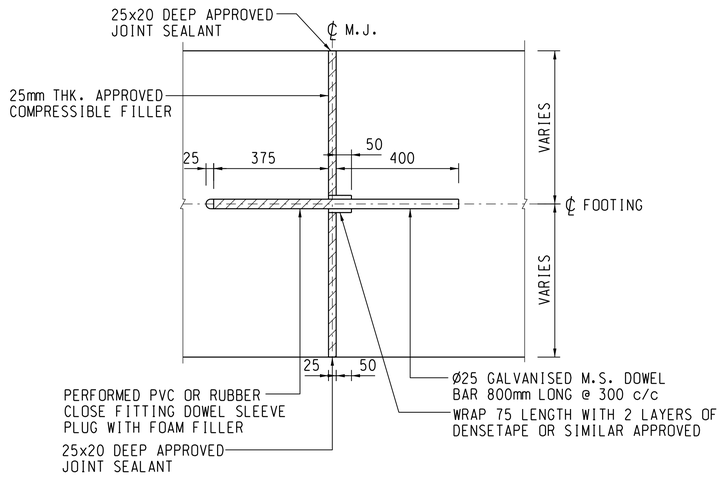
NOISE BARRIER FOOTING TYPE L
SCALE 1 : 50



SECTION THROUGH MOVEMENT JOINT OF
NOISE BARRIER / ENCLOSURE TYPE T FOOTING
SCALE 1 : 50



SECTION THROUGH MOVEMENT JOINT OF
NOISE BARRIER / ENCLOSURE TYPE L FOOTING
SCALE 1 : 50



MOVEMENT JOINT FOR NOISE BARRIER/ENCLOSURE FOUNDATION
SCALE 1 : 10

AECOM

PROJECT
項目

TUNG CHUNG NEW TOWN EXTENSION (EAST) - DESIGN AND CONSTRUCTION

CONTRACT TITLE

TUNG CHUNG NEW TOWN EXTENSION - MAJOR INFRASTRUCTURE WORKS IN TUNG CHUNG EAST

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-	DEC. 20	TENDER DRAWING	CCHY

STATUS
階段

SCALE 比例: A1 AS SHOWN

DIMENSION UNIT 尺寸單位: MILLIMETRES

KEY PLAN
索引圖

PROJECT NO. 項目編號: 60507694

CONTRACT NO. 合約編號: NL/2020/03

SHEET TITLE
圖紙名稱

NOISE BARRIER FOUNDATION DETAILS

SHEET NUMBER
圖紙編號

60507694/C3/6036

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Project Management Initials: Designer: CYCK Checked: CCHY Approved: SWKM ISO A1 594mm x 841mm

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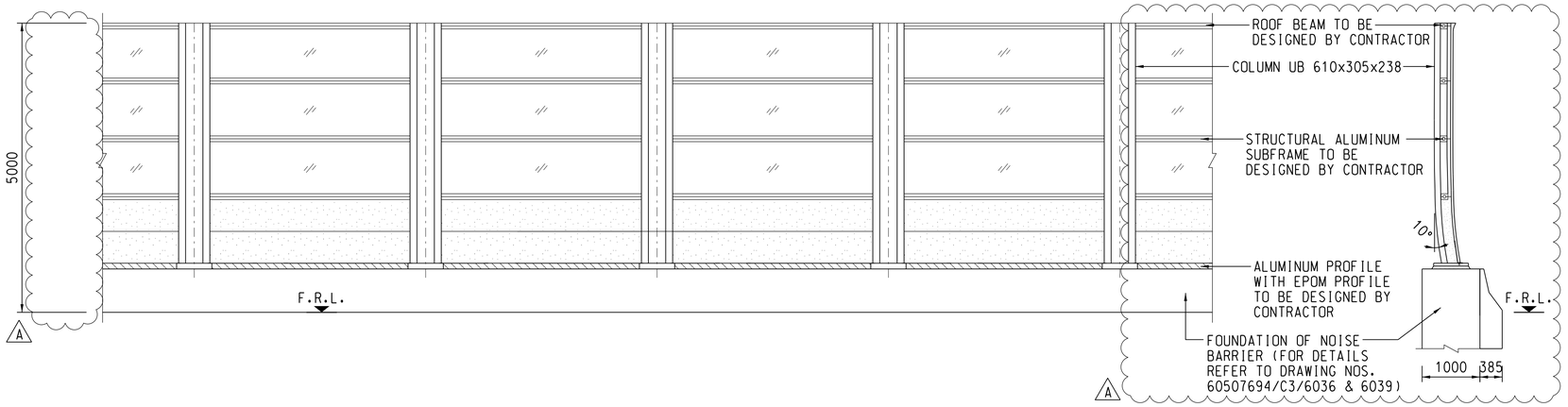
29-December-2020



TYPICAL ELEVATION OF V5 VERTICAL NOISE BARRIER FOR TYPE NB2 AND NB3
(VIEW FROM CARRIAGEWAY)
SCALE 1 : 50

TIPICAL CROSS SECTION FOR TYPE NB2 AND NB3
SCALE 1 : 50

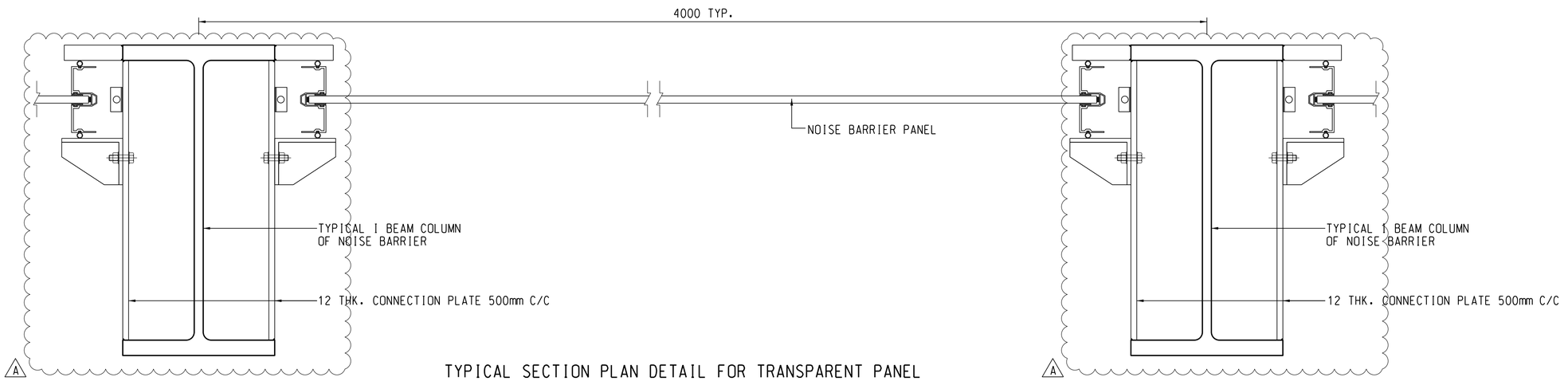
NOTES:

1. STRUCTURAL ARRANGEMENT OF NOISE BARRIER SUCH AS POST LOCATION AS INDICATED ON THE DRAWINGS IS FOR REFERENCE ONLY.
2. THE CONTRACTOR SHALL MAY PROPOSE ALTERNATIVE HORIZONTAL SUBFRAMES AND CONNECTION DETAILS OF THE HORIZONTAL SUBFRAME TO VERTIACL POST CONNECTION AND SUBMIT RELEVANT ICE CERTIFIED CALCULATION AND SHOP DRAWINGS FOR THE PROJECT MANAGER'S APPROVAL.
3. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF THE HORIZONTAL SUBFRAMES AND THE CONNECTION DETAILS OF THE HORIZONTAL SUBFRAME TO VERTICAL POST CONNECTION TAKING ACCOUNT OF THE HORIZONTAL AND VERTICAL PROFILES OF THE ROAD.
4. ALL THE FIXING DETAILS OF NOISE BARRIER PANELS ARE INDICATIVE ONLY THE CONNTRACTOR SHALL DESIGN THE MOUNTING FRAME NECESSARY FOR THE NOISE VARRIER PANELS AND SUBMIT RELEVANT ICE CERTIFIED CALCULETIONS AND SHOP DRAWINGS FOR THE PROJECT MANAGER'S APPROVAL.
5. THE SIZE AND SPACING OF THE VERTICAL MOUNTING FRAME SHALL BE LIMITED TO THE MINIMUM REQUIRED AND TO BE AGREED WITH THE PROJECT MANAGER.
6. FOR ANCHOR DETAILS REFER DRAWING NO. 60507694/C3/6022.

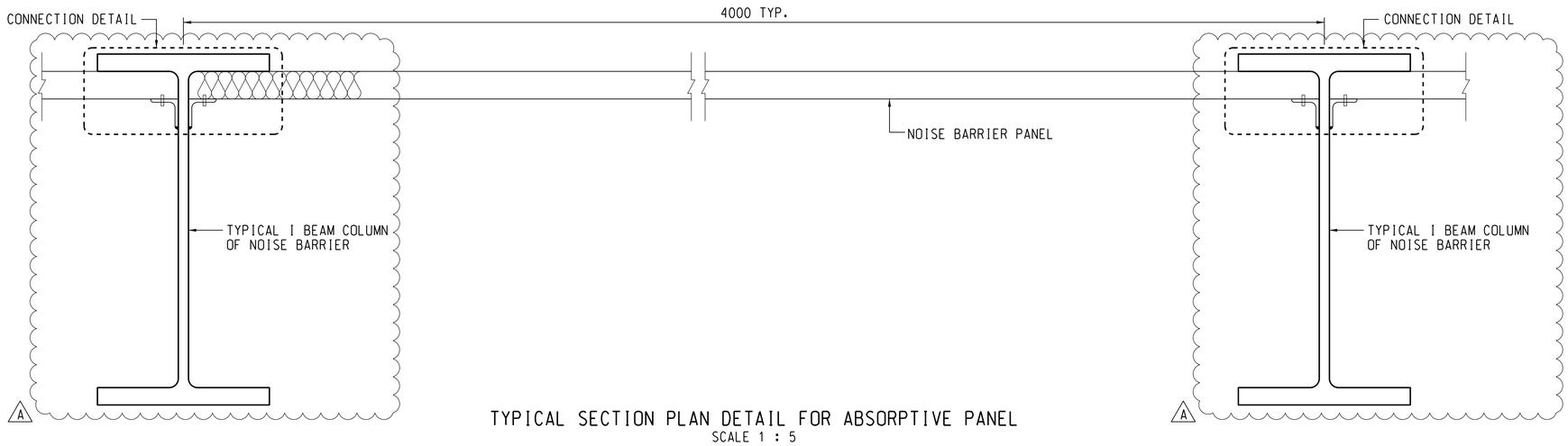
LEGEND:

TRANSPARENT WITH ANTI - BIRD COLISION LINEAR PATTERN PANEL (CLEAR)

ABSORPTIVE PANEL



TYPICAL SECTION PLAN DETAIL FOR TRANSPARENT PANEL
SCALE 1 : 5



TYPICAL SECTION PLAN DETAIL FOR ABSORPTIVE PANEL
SCALE 1 : 5

AECOM

PROJECT
項目

TUNG CHUNG NEW TOWN EXTENSION (EAST) - DESIGN AND CONSTRUCTION

CONTRACT TITLE

TUNG CHUNG NEW TOWN EXTENSION - MAJOR INFRASTRUCTURE WORKS IN TUNG CHUNG EAST

CLIENT
業主

CEDD 土木工程拓展署 Civil Engineering and Development Department

CONSULTANT
工程顧問公司

AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS
分判工程顧問公司

ISSUE/REVISION
修訂

I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 複核
A	FEB. 21	TENDER ADDEDUM NO. 2	CCHY
-	DEC. 20	TENDER DRAWING	CCHY

STATUS
階段

SCALE 比例
A1 AS SHOWN

DIMENSION UNIT 尺寸單位
MILLIMETRES

KEY PLAN
索引圖

PROJECT NO. 項目編號
60507694

CONTRACT NO. 合約編號
NL/2020/03

SHEET TITLE
圖紙名稱
VERTICAL NOISE BARRIER TYPICAL DETAILS

SHEET NUMBER
圖紙編號
60507694/C3/6021A

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Project Management Initials: Designer: CYCK Checked: CCHY Approved: SWKM ISO A1 594mm x 841mm

Plot File by: Shuyan.Wang@aecom.com 24-February-2021
PATH: pw:\\aecom-as-pw.bentley.com:AECOM_DS02_AS\Documents\60507694 TCNTE - D&C\CAD PRODUCTION\DRAWING\CONTRACT\C3\60000\C3_6021.dgn

Appendix 4.3

TD Endorsement on Traffic Forecast

By Fax
3922 9797

運輸署
Transport Department

本署檔案 Our Ref. : (NGW0W) in TD NR182/90-19
來函檔號 Your Ref. : CCHY:CYCK:mlpm:60507694/11.11-2021008757L
電 話 Tel. :
圖文傳真 Fax :
電 郵 Email :

23 June 2021

AECOM
12/F, Grand Central Plaza, Tower 2,
138 Shatin Rural Committee Road,
Shatin, Hong Kong

Dear Sir,

Agreement No. CE 69/2015 (CE)
Tung Chung New Town Extension (East) – Design and Construction

Additional Services
Review for Population Increase and Development Intensity

Planning Review for Population Increase and Development Intensity – Technical Note on Traffic Forecast for Environmental Impact Assessment (Ref. PI00-01)

I refer to your captioned letter dated 11 June 2021. Please find our comments as follows:

1. Please note that the Environmental Assessment is not under our purview. We are not in a position to provide comments on the traffic figures tailor-made for the environmental assessment study.

2. Notwithstanding the above, we have no comment on the methodology of the traffic forecast, provided that you have made reference to the TIA reports under TCNTE(TCE) projects and the traffic data of the technical note shall tally with those for the TIA reports. In case there is any discrepancy in the traffic data between the TIA reports and the EIA report, please highlight it for our consideration.

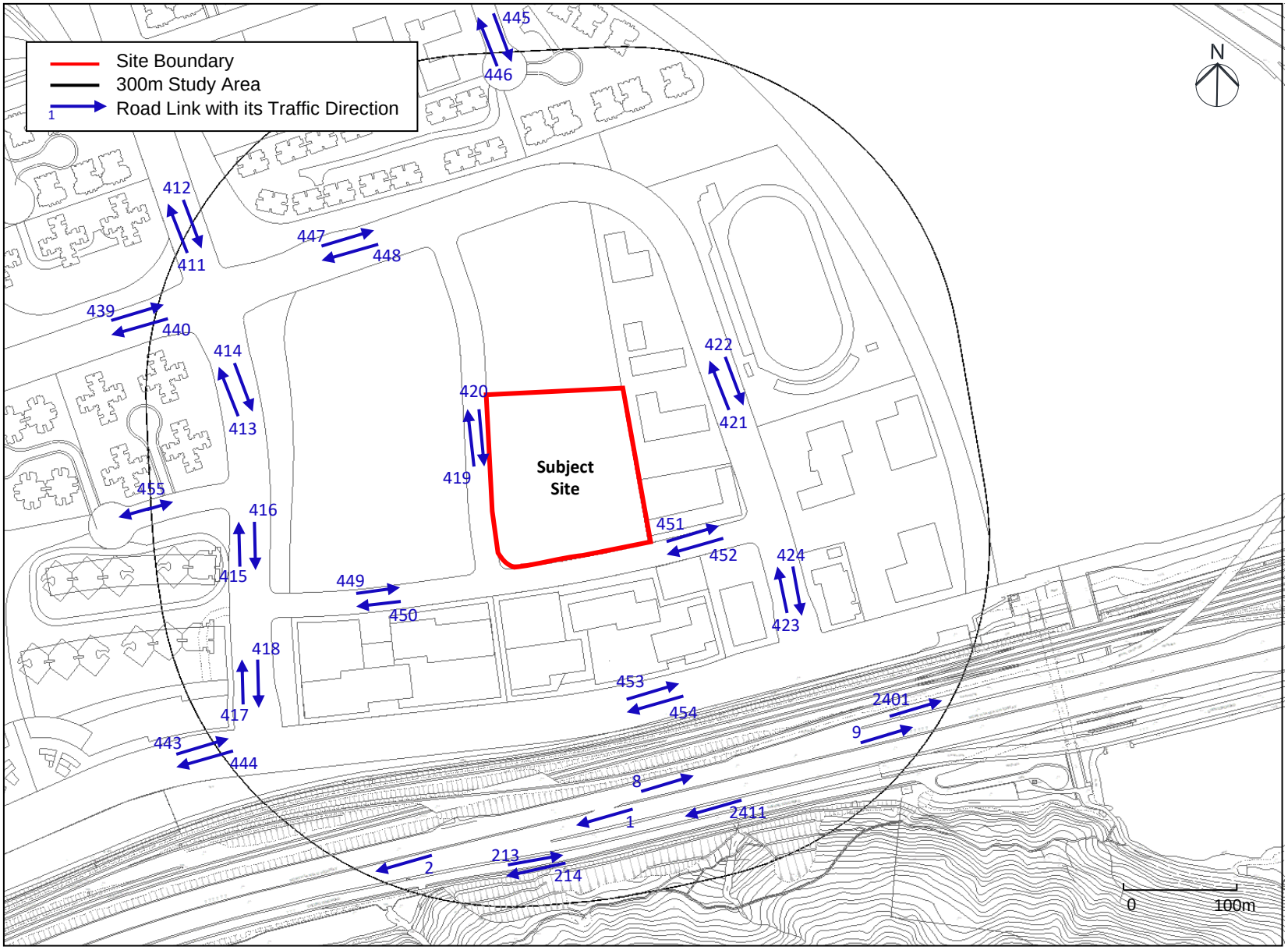
新界分區辦事處
NT Regional Office
九龍聯運街三十號旺角政府合署七樓
7th Floor, Mong Kok Government Offices, 30 Luen Wan Street, Kowloon.
圖文傳真 Fax No.: 2381 3799 (新界區) (NTRO)
網址 Web Site: http://www.td.gov.hk

我們的信念 - 我們會 • 發揮潛能 • 各盡所長 • 公平開放 • 細意關懷 • 承擔責任 • 積極進取 • 力求至善
Our Values - We will • bring out the best in people • be fair, open and caring • take responsibility • be proactive • strive for excellence

Yours faithfully,

Appendix 4.4

Traffic Forecast


Site Boundary
300m Study Area
Road Link with its Traffic Direction
1
N
Subject Site
445
446
412
411
447
448
439
440
414
413
420
419
422
421
455
416
415
451
452
424
423
449
450
418
417
453
454
2401
9
443
444
8
1
2411
2
213
214
0
100m

Year 2045 Traffic Flow (AM Peak)

Link ID	Road Name	Speed Limit	Peak Flow (Veh/hr)	Heavy Vehicle (HV) Composition %
1	North Lantau Highway	110	4,261	30.5%
2	North Lantau Highway	110	5,169	28.7%
8	North Lantau Highway	110	2,896	26.9%
9	North Lantau Highway	110	2,195	27.3%
213	Cheung Tung Road	50	300	17.0%
214	Cheung Tung Road	50	221	29.0%
407	Road D5	50	419	31.7%
408	Road D5	50	252	35.1%
409	Road D3	50	104	20.2%
410	Road D3	50	145	20.0%
411	Road D3	50	215	30.7%
412	Road D3	50	510	26.5%
413	Road D3	50	371	19.6%
414	Road D3	50	212	28.0%
415	Road D3	50	314	19.6%
416	Road D3	50	212	28.0%
417	Road D3	50	1,021	20.9%
418	Road D3	50	564	25.4%
419	Road L6	50	220	26.0%
420	Road L6	50	260	33.8%
421	Road D2	50	29	89.0%
422	Road D2	50	812	16.3%
423	Road D2	50	118	22.5%
424	Road D2	50	1,212	17.7%
439	Road D1	50	311	17.9%
440	Road D1	50	81	34.0%
443	Road P1	50	1,074	22.4%
444	Road P1	50	987	20.9%
445	Road L2	50	130	20.2%
446	Road L2	50	136	20.0%
447	Road D2	50	730	21.0%
448	Road D2	50	45	95.7%
449	Road L7	50	459	26.2%
450	Road L7	50	134	43.6%
451	Road L7	50	422	27.1%
452	Road L7	50	58	38.5%
453	Road P1	50	1,173	20.2%
454	Road P1	50	1,543	17.7%
455	Road L9	50	226	20.1%
501	Road P1	50	2,267	18.8%
502	Road P1	50	1,543	17.7%
2401	Shun Long Road	80	701	25.8%
2411	Shun Long Road	80	908	20.2%
465	Road L10	50	213	20.1%
467	Road L2	50	379	29.3%
468	Road L2	50	131	38.8%

Note:

[1] Some traffic flow are not used as they are outside 300m study area of Tung Chung Area 133C, which will be used for Tung Chung Area 133A or 133B.

Appendix 4.5

Predicted Traffic Noise Levels for Residential Blocks (Basecase)

Floor	R101a	R101b	R101c	R102a	R102b	R102c	R103a	R103b	R104a	R104b	R105a	R105b	R105c	R106a	R106b	R106c	R107a	R107b	R107c	R108a	R108b	R108c	R108d	R109a	R109b	R109c	R109d	R110a	R110b	R110c	R110d	R111a
36	50.2	49.2	48.0	47.6	46.3	44.1	<40	<40	<40	<40	<40	<40	<40	<40	45.7	47.9	51.6	47.3	<40	<40	46.7	46.6	<40	<40	46.0	44.3	<40	<40	41.4	44.4	46.7	62.4
35	49.8	49.2	48.1	47.7	46.3	44.0	<40	<40	<40	<40	<40	<40	<40	<40	45.6	47.8	51.4	46.9	<40	<40	46.4	46.3	<40	<40	45.7	43.9	<40	<40	41.0	44.2	46.6	62.5
34	49.9	49.2	48.0	47.7	46.2	43.9	<40	<40	<40	<40	<40	<40	<40	<40	45.5	47.8	51.3	46.4	<40	<40	46.0	45.9	<40	<40	45.4	43.5	<40	<40	40.6	44.0	46.5	62.6
33	49.9	49.3	48.0	47.7	46.3	43.9	<40	<40	<40	<40	<40	<40	<40	<40	45.5	47.7	51.1	46.0	<40	<40	45.4	45.3	<40	<40	44.8	43.0	<40	<40	40.2	43.8	46.4	62.7
32	49.8	49.2	48.0	47.7	46.2	43.9	<40	<40	<40	<40	<40	<40	<40	<40	45.4	47.7	50.9	45.2	<40	<40	44.5	44.3	<40	<40	44.1	42.4	<40	<40	<40	43.6	46.4	62.8
31	49.8	49.2	48.1	47.8	46.2	43.9	<40	<40	<40	<40	<40	<40	<40	<40	45.4	47.7	50.6	43.9	<40	<40	43.2	43.0	<40	<40	42.8	41.6	<40	<40	<40	43.5	46.4	62.9
30	49.9	49.3	48.1	47.8	46.2	43.9	<40	<40	<40	<40	<40	<40	<40	<40	45.4	47.8	50.4	43.0	<40	<40	42.1	42.0	<40	<40	41.8	40.9	<40	<40	<40	43.4	46.3	63.0
29	49.9	49.3	48.1	47.8	46.3	43.8	<40	<40	<40	<40	<40	<40	<40	<40	45.3	47.8	50.2	42.2	<40	<40	41.3	41.1	<40	<40	40.9	40.2	<40	<40	<40	43.4	46.3	63.1
28	49.9	49.3	48.2	47.8	46.3	43.9	<40	<40	<40	<40	<40	<40	<40	<40	45.3	47.9	50.2	41.7	<40	<40	40.7	40.5	<40	<40	40.3	<40	<40	<40	<40	43.3	46.4	63.2
27	50.0	49.3	48.2	47.9	46.3	43.9	<40	<40	<40	<40	<40	<40	<40	<40	45.3	47.9	50.1	41.2	<40	<40	40.2	40.0	<40	<40	<40	<40	<40	<40	<40	43.3	46.4	63.3
26	50.0	49.4	48.2	47.9	46.3	43.9	<40	<40	<40	<40	<40	<40	<40	<40	45.3	47.9	50.1	40.8	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	43.2	46.3	63.4
25	50.0	49.4	48.2	47.9	46.4	43.9	<40	<40	<40	<40	<40	<40	<40	<40	45.3	47.9	50.1	40.5	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	43.2	46.3	63.4
24	50.0	49.4	48.2	47.9	46.4	44.0	<40	<40	<40	<40	<40	<40	<40	<40	45.3	48.0	50.0	40.2	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	43.1	46.3	63.6
23	50.1	49.4	48.3	48.0	46.4	44.0	<40	<40	<40	<40	<40	<40	<40	<40	45.4	48.0	50.1	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	43.1	46.4	63.6
22	50.1	49.5	48.3	48.0	46.4	44.0	<40	<40	<40	<40	<40	<40	<40	<40	45.4	48.1	50.0	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	43.1	46.3	63.7
21	50.1	49.5	48.3	48.0	46.5	44.0	<40	<40	<40	<40	<40	<40	<40	<40	45.4	48.1	50.1	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	43.0	46.3	63.9
20	50.1	49.5	48.3	48.0	46.5	44.0	<40	<40	<40	<40	<40	<40	<40	<40	45.5	48.2	50.0	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	43.0	46.3	63.9
19	50.1	49.5	48.4	48.1	46.5	44.0	<40	<40	<40	<40	<40	<40	<40	<40	45.5	48.3	50.1	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	43.0	46.3	64.0
18	50.2	49.5	48.4	48.1	46.5	44.0	<40	<40	<40	<40	<40	<40	<40	<40	45.5	48.3	50.1	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	43.0	46.4	64.2
17	50.2	49.6	48.4	48.1	46.5	44.0	<40	<40	<40	<40	<40	<40	<40	<40	45.5	48.4	50.1	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	43.0	46.4	64.3
16	50.2	49.6	48.4	48.1	46.6	44.0	<40	<40	<40	<40	<40	<40	<40	<40	45.6	48.5	50.1	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	42.9	46.4	64.4
15	50.2	49.6	48.4	48.1	46.6	44.1	<40	<40	<40	<40	<40	<40	<40	<40	45.6	48.5	50.0	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	42.9	46.4	64.5
14	50.2	49.6	48.4	48.1	46.5	44.1	<40	<40	<40	<40	<40	<40	<40	<40	45.7	48.6	50.0	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	42.9	46.4	64.7
13	50.2	49.6	48.5	48.2	46.5	44.1	<40	<40	<40	<40	<40	<40	<40	<40	45.7	48.7	49.8	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	42.9	46.3	64.8
12	50.3	49.6	48.5	48.2	46.6	44.1	<40	<40	<40	<40	<40	<40	<40	<40	45.8	48.7	49.5	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	42.9	46.4	65.0
11	50.3	49.7	48.5	48.2	46.6	44.1	<40	<40	<40	<40	<40	<40	<40	<40	45.8	48.8	49.2	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	42.9	46.4	65.1
10	50.3	49.7	48.5	48.2	46.6	44.1	<40	<40	<40	<40	<40	<40	<40	<40	45.8	48.8	49.0	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	42.9	46.4	65.2
9	50.3	49.7	48.5	48.2	46.6	44.1	<40	<40	<40	<40	<40	<40	<40	<40	45.8	48.8	48.8	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	42.9	46.4	65.4
8	50.3	49.7	48.5	48.2	46.6	44.2	<40	<40	<40	<40	<40	<40	<40	<40	45.8	48.8	48.7	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	42.9	46.4	65.4
7	50.3	49.7	48.5	48.2	46.6	44.2	<40	<40	<40	<40	<40	<40	<40	<40	45.7	48.3	48.8	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	42.9	46.4	65.5
6	50.3	49.7	48.5	48.2	46.6	44.2	<40	<40	<40	<40	<40	<40	<40	<40	45.3	47.3	48.7	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	42.9	46.4	65.4
5	50.3	49.7	48.6	48.2	46.7	44.2	<40	<40	<40	<40	<40	<40	<40	<40	44.5	45.9	48.7	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	42.8	46.4	65.3
4	50.4	49.7	48.6	48.2	46.7	44.2	<40	<40	<40	<40	<40	<40	<40	<40	44.0	44.6	48.7	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	42.8	46.4	65.1
3	50.4	49.7	48.6	48.3	46.7	44.2	<40	<40	<40	<40	<40	<40	<40	<40	43.8	44.3	48.7	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	42.8	46.4	65.0
2	50.4	49.8	48.6	48.2	46.7	44.1	<40	<40	<40	<40	<40	<40	<40	<40	43.7	44.0	48.7	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	42.6	46.4	65.0
1	50.4	49.7	48.6	48.2	46.6	43.9	<40	<40	<40	<40	<40	<40	<40	<40	43.6	43.9	48.7	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	42.1	46.3	65.0
Max	50.4	49.8	48.6	48.3	46.7	44.2	<40	<40	<40	<40	<40	<40	<40	<40	45.8	48.8	51.6	47.3	<40	<40	46.7	46.6	<40	<40	46.0	44.3	<40	<40	41.4	44.4	46.7	65.5
Min	49.8	49.2	48.0	47.6	46.2	43.8	<40	<40	<40	<40	<40	<40	<40	<40	43.6	43.9	48.7	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	42.1	46.3	62.4

# Total Flats	2571
Exceedance	0
Compliance Rate	100%

Noise sensitive receivers with exceedance (≥70.5 dB(A))

Floor	R111b	R111c	R111d	R112a	R112b	R112c	R113a	R113b	R114a	R114b	R115a	R115b	R115c	R116a	R116b	R116c	R117a	R117b	R117c	R118a	R118b	R118c	R118d	R119a	R119b	R119c	R120a	R120b	R120c	R201a	R201b	R201c
36	63.7	63.6	60.2	60.6	63.2	63.0	62.5	62.8	62.6	62.2	62.5	62.6	58.8	57.1	63.1	63.6	63.3	62.8	55.7	58.2	62.5	62.3	47.7	62.6	62.9	60.7	59.8	63.5	63.7	59.8	59.6	56.6
35	63.8	63.7	60.3	60.6	63.3	63.1	62.6	62.9	62.7	62.3	62.6	62.7	58.9	57.2	63.2	63.6	63.4	62.9	55.7	58.3	62.6	62.5	47.7	62.7	63.0	60.8	59.9	63.6	63.8	59.7	59.5	56.5
34	63.9	63.7	60.4	60.7	63.3	63.2	62.7	63.0	62.8	62.4	62.7	62.8	59.0	57.3	63.3	63.8	63.5	63.0	55.8	58.4	62.7	62.6	47.8	62.8	63.1	60.9	60.0	63.7	63.9	59.6	59.3	56.5
33	63.9	63.8	60.5	60.8	63.4	63.3	62.8	63.0	62.9	62.5	62.8	62.9	59.1	57.4	63.4	63.9	63.7	63.1	55.8	58.5	62.8	62.7	47.8	62.9	63.2	61.0	60.1	63.8	64.0	59.4	59.2	56.4
32	64.1	63.9	60.7	61.0	63.5	63.4	62.9	63.1	63.0	62.7	62.9	63.0	59.2	57.5	63.5	64.0	63.8	63.3	56.0	58.6	62.8	62.8	47.8	63.0	63.3	61.1	60.2	63.9	64.1	59.3	59.1	56.5
31	64.2	64.0	60.8	61.1	63.6	63.4	63.0	63.2	63.2	62.7	63.0	63.1	59.3	57.5	63.6	64.1	63.9	63.4	56.0	58.7	62.9	62.9	47.8	63.2	63.5	61.2	60.3	64.1	64.3	59.2	59.0	56.4
30	64.2	64.1	60.9	61.2	63.7	63.5	63.1	63.4	63.3	62.8	63.1	63.3	59.4	57.6	63.7	64.2	64.0	63.5	56.1	58.8	63.1	62.9	47.9	63.3	63.6	61.3	60.4	64.2	64.4	59.0	58.8	56.4
29	64.3	64.2	61.0	61.3	63.8	63.6	63.2	63.5	63.4	62.9	63.3	63.4	59.5	57.7	63.8	64.4	64.2	63.5	56.2	58.9	63.2	63.0	47.9	63.4	63.7	61.5	60.6	64.3	64.5	58.7	58.6	56.3
28	64.5	64.4	61.1	61.4	64.0	63.8	63.3	63.6	63.5	63.0	63.4	63.5	59.6	57.8	64.0	64.5	64.3	63.7	56.3	59.0	63.3	63.2	47.9	63.5	63.8	61.6	60.7	64.4	64.6	58.4	58.2	56.0
27	64.6	64.5	61.2	61.5	64.1	63.9	63.5	63.7	63.6	63.2	63.4	63.6	59.7	57.9	64.1	64.6	64.4	63.8	56.4	59.1	63.4	63.3	47.9	63.7	63.9	61.7	60.8	64.5	64.8	57.9	57.9	55.6
26	64.7	64.6	61.3	61.6	64.2	64.0	63.5	63.8	63.8	63.3	63.5	63.7	59.9	58.0	64.3	64.7	64.5	63.9	56.4	59.2	63.6	63.4	47.9	63.8	64.1	61.8	60.9	64.7	64.9	57.5	57.4	55.1
25	64.8	64.7	61.5	61.8	64.3	64.1	63.6	63.9	63.8	63.4	63.7	63.8	60.0	58.1	64.4	64.8	64.7	64.1	56.5	59.3	63.7	63.6	48.0	63.9	64.1	62.0	61.1	64.8	65.0	56.9	56.8	54.4
24	64.9	64.8	61.6	61.9	64.4	64.2	63.8	64.0	64.0	63.6	63.8	64.0	60.1	58.2	64.5	65.0	64.8	64.2	56.7	59.4	63.9	63.7	48.0	64.0	64.3	62.1	61.2	64.9	65.1	56.3	56.1	53.9
23	65.0	64.9	61.7	62.0	64.5	64.3	63.9	64.2	64.1	63.7	64.0	64.1	60.2	58.4	64.7	65.1	64.9	64.4	56.7	59.5	64.0	63.9	48.0	64.2	64.4	62.2	61.3	65.0	65.3	55.7	55.4	53.4
22	65.1	65.0	61.9	62.2	64.6	64.4	64.0	64.3	64.2	63.7	64.1	64.3	60.3	58.4	64.8	65.3	65.1	64.6	56.8	59.7	64.1	64.0	48.0	64.3	64.5	62.4	61.5	65.1	65.4	55.4	54.9	53.2
21	65.3	65.2	62.0	62.3	64.8	64.6	64.1	64.4	64.4	63.9	64.3	64.4	60.5	58.6	64.9	65.5	65.3	64.7	56.9	59.8	64.3	64.2	48.0	64.4	64.7	62.5	61.6	65.3	65.6	55.0	54.6	52.9
20	65.3	65.2	62.1	62.4	64.8	64.6	64.2	64.5	64.5	64.0	64.4	64.6	60.6	58.7	65.1	65.6	65.4	64.9	57.0	59.9	64.4	64.3	48.1	64.5	64.8	62.7	61.8	65.4	65.7	55.0	54.4	52.8
19	65.5	65.4	62.3	62.6	65.0	64.8	64.3	64.6	64.6	64.2	64.5	64.8	60.7	58.8	65.3	65.8	65.6	65.0	57.2	60.1	64.6	64.5	48.1	64.7	65.0	62.8	61.9	65.6	65.8	54.9	54.3	52.7
18	65.6	65.5	62.4	62.7	65.1	64.9	64.4	64.8	64.7	64.3	64.7	64.9	60.9	59.0	65.5	66.0	65.8	65.2	57.3	60.3	64.7	64.6	48.1	64.9	65.2	63.0	62.1	65.8	66.0	54.9	54.3	52.7
17	65.8	65.7	62.5	62.9	65.3	65.1	64.6	64.9	64.9	64.4	64.8	65.0	61.1	59.1	65.7	66.1	66.0	65.3	57.4	60.4	64.9	64.7	48.1	65.0	65.3	63.1	62.2	65.9	66.1	54.8	54.3	52.6
16	65.9	65.7	62.6	63.0	65.4	65.1	64.7	65.0	65.0	64.6	65.0	65.2	61.2	59.2	65.8	66.3	66.2	65.5	57.5	60.6	65.1	64.9	48.1	65.2	65.5	63.3	62.4	66.1	66.3	54.8	54.2	52.6
15	66.0	65.9	62.8	63.2	65.5	65.3	64.9	65.2	65.2	64.7	65.2	65.4	61.4	59.4	66.0	66.5	66.4	65.8	57.6	60.7	65.3	65.1	48.1	65.4	65.7	63.5	62.6	66.3	66.5	54.9	54.3	52.7
14	66.2	66.1	62.9	63.3	65.7	65.5	65.0	65.4	65.3	64.9	65.3	65.6	61.6	59.5	66.2	66.7	66.6	66.0	57.8	60.9	65.5	65.3	48.2	65.6	65.9	63.6	62.7	66.5	66.7	54.8	54.3	52.7
13	66.3	66.2	63.1	63.4	65.8	65.6	65.1	65.5	65.5	65.0	65.5	65.8	61.7	59.7	66.4	67.0	66.9	66.2	58.0	61.1	65.7	65.5	48.2	65.7	66.0	63.8	62.9	66.6	66.8	54.9	54.3	52.7
12	66.5	66.4	63.3	63.6	66.0	65.8	65.3	65.7	65.6	65.2	65.7	65.9	61.9	59.9	66.6	67.2	67.1	66.4	58.1	61.3	65.9	65.7	48.2	65.9	66.2	64.0	63.1	66.8	67.0	54.9	54.3	52.8
11	66.7	66.6	63.4	63.7	66.2	66.0	65.5	65.8	65.8	65.4	65.9	66.1	62.2	60.1	66.9	67.4	67.3	66.7	58.3	61.5	66.1	65.9	48.2	66.1	66.4	64.2	63.3	67.0	67.2	54.9	54.3	52.8
10	66.9	66.7	63.6	63.9	66.4	66.1	65.6	66.0	66.0	65.6	66.1	66.4	62.3	60.2	67.1	67.7	67.6	66.9	58.5	61.7	66.3	66.1	48.2	66.3	66.6	64.4	63.5	67.2	67.4	55.0	54.4	52.8
9	66.9	66.8	63.7	64.1	66.5	66.2	65.8	66.2	66.2	65.7	66.3	66.6	62.6	60.4	67.3	67.9	67.8	67.2	58.7	61.9	66.5	66.4	48.2	66.5	66.8	64.6	63.7	67.4	67.6	55.0	54.4	52.9
8	67.1	67.0	63.7	64.1	66.6	66.4	65.9	66.4	66.4	65.9	66.5	66.8	62.8	60.6	67.6	68.2	68.1	67.5	58.9	62.2	66.7	66.6	48.2	66.7	67.0	64.7	63.7	67.6	67.8	55.0	54.4	52.9
7	67.2	67.1	63.6	64.1	66.7	66.4	66.0	66.5	66.5	66.1	66.7	67.1	63.0	60.8	67.9	68.6	68.5	67.8	59.1	62.4	67.0	66.8	48.2	66.8	67.2	64.8	63.9	67.8	68.0	55.1	54.4	52.9
6	67.2	67.1	63.3	63.8	66.7	66.5	65.9	66.5	66.6	66.2	66.9	67.3	63.3	61.0	68.2	68.9	68.8	68.1	59.4	62.7	67.3	67.0	48.2	66.9	67.4	64.8	63.8	67.9	68.1	55.1	54.5	52.9
5	67.0	66.9	62.4	63.3	66.4	66.2	65.6	66.4	66.6	66.3	67.1	67.5	63.5	61.2	68.5	69.2	69.1	68.4	59.6	62.9	67.5	67.2	48.3	67.1	67.5	64.7	63.6	68.0	68.3	55.1	54.5	53.0
4	66.5	66.3	60.3	62.1	65.8	65.5	64.8	65.9	66.4	66.0	67.1	67.7	63.7	61.4	68.8	69.5	69.5	68.7	59.9	63.2	67.7	67.3	48.3	66.9	67.3	64.2	62.6	68.0	68.2	55.1	54.5	53.0
3	65.9	65.7	58.2	61.2	65.0	64.7	64.0	64.8	65.2	64.9	66.7	67.6	63.8	61.6	69.1	69.9	69.9	69.0	60.1	63.4	67.7	66.9	48.3	66.2	66.6	62.9	60.3	67.4	67.7	55.2	54.5	53.0
2	65.7	65.3	56.0	60.2	64.5	64.0	63.2	63.7	63.8	63.4	64.9	66.6	63.7	61.7	69.2	70.3	70.3	69.2	60.4	63.4	66.7	65.6	48.3	65.3	65.8	61.7	57.5	66.9	67.3	55.1	54.5	53.0
1	65.5	65.0	54.4	57.4	63.5	62.7	61.5	61.9	61.9	61.4	62.6	63.8	62.1	61.0	68.7	70.4	70.4	68.4	60.5	62.4	64.5	64.0	48.2	64.0	64.9	59.7	54.6	66.6	67.2	55.1	54.6	53.0
Max	67.2	67.1	63.7	64.1	66.7	66.5	66.0	66.5	66.6	66.3	67.1	67.7	63.8	61.7	69.2	70.4	70.4	69.2	60.5	63.4	67.7	67.3	48.3	67.1	67.5	64.8	63.9	68.0	68.3	59.8	59.6	56.6
Min	63.7	63.6	54.4	57.4	63.2	62.7	61.5	61.9	61.9	61.4	62.5	62.6	58.8	57.1	63.1	63.6	63.3	62.8	55.7	58.2	62.5	62.3	47.7	62.6	62.9	59.7	54.6	63.5	63.7	54.8	54.2	52.6

Noise sensitive receivers with exceedance (≥ 70.5 dB(A))

Floor	R202a	R202b	R202c	R203a	R203b	R203c	R203d	R204a	R204b	R204c	R205a	R205b	R205c	R206a	R206b	R206c	R207a	R207b	R208a	R208b	R209a	R209b	R209c	R210a	R210b	R210c	R210d	R211a	R211b	R211c	R211d	R212a
36	55.9	58.9	58.6	43.8	58.7	58.9	55.1	50.6	59.3	59.5	56.8	56.5	41.4	42.9	55.9	55.6	55.4	55.6	55.7	55.5	57.0	60.5	57.8	55.5	61.5	61.6	60.8	54.8	54.8	54.6	52.4	53.8
35	56.0	58.8	58.6	43.7	58.7	58.8	55.2	50.7	59.3	59.5	56.5	56.1	41.4	42.3	55.5	55.4	55.1	55.3	55.3	55.1	56.7	60.1	57.6	55.5	61.1	61.2	60.4	54.9	54.9	54.7	52.5	53.9
34	56.0	58.7	58.6	43.8	58.7	58.9	55.1	50.6	59.3	59.5	56.1	55.9	41.4	41.8	55.3	55.1	54.9	55.0	55.0	54.9	56.2	59.6	57.4	55.3	60.7	60.9	60.1	54.9	54.9	54.7	52.6	54.0
33	56.0	58.6	58.5	43.8	58.8	58.9	55.2	50.6	59.3	59.5	56.0	55.7	41.4	41.5	55.1	55.0	54.8	54.9	54.8	54.7	55.9	59.2	57.1	55.2	60.2	60.4	59.7	55.0	55.0	54.7	52.6	54.0
32	56.1	58.6	58.5	43.8	58.7	58.9	55.1	50.4	59.3	59.5	55.8	55.6	41.4	41.3	55.1	54.9	54.7	54.8	54.7	54.6	55.5	58.6	56.7	55.1	59.8	60.0	59.2	55.0	55.0	54.7	52.7	54.1
31	56.0	58.5	58.4	43.8	58.7	58.9	55.0	50.3	59.3	59.5	55.8	55.6	41.4	41.1	55.0	54.8	54.6	54.7	54.6	54.4	55.2	57.7	56.1	54.9	59.2	59.4	58.7	55.0	55.0	54.8	52.7	54.2
30	56.0	58.3	58.2	43.9	58.5	58.8	54.8	49.9	59.3	59.5	55.8	55.6	41.4	41.1	55.0	54.7	54.6	54.5	54.5	54.2	54.9	56.9	55.4	54.7	58.4	58.6	58.0	55.1	55.1	54.9	52.8	54.2
29	55.9	58.0	57.9	43.9	58.3	58.7	54.3	49.3	59.2	59.4	55.7	55.5	41.4	41.0	54.9	54.7	54.5	54.5	54.4	54.1	54.6	56.1	54.9	54.6	57.6	57.9	57.2	55.1	55.1	54.9	52.9	54.3
28	55.8	57.6	57.5	43.8	58.0	58.4	53.6	48.2	59.1	59.3	55.7	55.5	41.5	41.0	54.9	54.6	54.2	54.3	54.2	53.9	54.4	55.6	54.6	54.4	56.8	57.0	56.5	55.2	55.2	55.0	52.9	54.3
27	55.4	57.2	57.0	43.7	57.6	58.0	52.4	47.5	58.8	59.1	55.7	55.5	41.5	40.9	54.7	54.5	54.0	54.2	54.0	53.5	54.1	55.2	54.4	54.2	56.2	56.3	56.0	55.3	55.3	55.1	53.0	54.4
26	54.8	56.6	56.4	43.7	56.8	57.3	50.7	46.7	58.3	58.6	55.6	55.4	41.5	40.8	54.6	54.2	53.5	53.7	53.5	53.0	53.9	54.9	54.3	54.2	55.7	55.8	55.5	55.3	55.3	55.1	53.0	54.5
25	54.1	55.8	55.3	43.7	55.7	56.5	49.1	46.2	57.7	58.2	55.4	55.2	41.4	40.7	54.1	53.7	52.6	53.0	52.9	52.3	53.5	54.7	54.3	54.1	55.5	55.5	55.2	55.3	55.3	55.1	53.1	54.5
24	53.6	54.9	54.3	43.5	54.5	55.0	48.0	45.9	56.9	57.5	55.1	54.7	41.3	40.6	53.2	52.5	51.2	51.9	52.0	51.9	53.3	54.4	54.3	54.1	55.3	55.4	55.1	55.3	55.3	55.1	53.2	54.6
23	53.2	54.0	53.2	43.3	53.1	53.6	47.3	45.6	55.6	56.6	54.2	53.7	41.2	40.2	51.4	50.6	49.7	51.1	51.6	51.6	53.1	54.2	54.2	54.1	55.1	55.2	55.0	55.4	55.4	55.2	53.2	54.6
22	52.9	53.2	52.3	43.1	51.6	52.0	46.6	45.3	53.7	54.7	52.5	51.8	41.0	<40	49.7	49.0	48.1	50.2	51.3	51.5	53.0	54.0	54.1	54.1	55.1	55.2	54.9	55.4	55.5	55.3	53.3	54.7
21	52.5	52.3	50.9	42.8	49.8	50.3	46.2	45.1	51.4	52.5	51.0	50.4	40.5	<40	48.3	47.9	47.3	49.9	51.2	51.4	53.0	54.0	54.2	54.2	55.0	55.1	54.9	55.5	55.5	55.3	53.3	54.7
20	52.3	51.7	49.9	42.8	48.2	48.6	45.7	44.9	49.7	50.4	50.0	49.5	<40	<40	47.4	47.0	46.6	49.7	51.1	51.4	52.9	53.9	54.1	54.2	55.0	55.0	54.8	55.5	55.6	55.4	53.4	54.8
19	52.3	51.4	49.4	42.7	47.1	47.6	45.4	44.8	48.5	49.1	49.5	48.7	<40	<40	46.3	46.0	46.1	49.5	51.1	51.3	53.0	53.9	54.2	54.3	55.0	55.0	54.9	55.6	55.6	55.4	53.4	54.9
18	52.2	51.3	49.0	42.6	46.3	46.7	45.1	44.7	47.7	48.2	48.8	47.8	<40	<40	44.4	44.6	45.7	49.5	51.0	51.3	53.0	53.9	54.2	54.2	54.9	55.0	54.8	55.7	55.7	55.5	53.5	54.9
17	52.3	51.1	48.8	42.6	45.7	46.1	44.9	44.6	47.1	47.4	47.5	46.1	<40	<40	42.3	43.6	45.3	49.4	51.0	51.3	52.9	53.9	54.2	54.2	55.0	55.0	54.8	55.7	55.7	55.5	53.6	55.0
16	52.3	51.1	48.6	42.5	45.2	45.6	44.8	44.5	46.6	46.9	46.3	44.8	<40	<40	41.1	43.1	45.2	49.3	51.1	51.3	53.0	53.9	54.3	54.3	54.9	55.0	54.9	55.8	55.8	55.6	53.6	55.0
15	52.3	51.0	48.5	42.5	44.8	45.3	44.6	44.4	46.2	46.5	45.8	44.1	<40	<40	40.2	42.6	45.1	49.4	51.0	51.3	52.9	53.9	54.2	54.3	54.9	55.0	54.8	55.8	55.9	55.6	53.7	55.1
14	52.3	51.0	48.4	42.5	44.5	45.0	44.5	44.4	45.9	46.2	45.5	43.7	<40	<40	<40	42.4	45.0	49.3	51.0	51.4	52.9	53.9	54.2	54.3	55.0	55.1	54.8	55.8	55.9	55.7	53.7	55.1
13	52.3	51.0	48.4	42.5	44.3	44.8	44.4	44.4	45.7	46.0	45.3	43.4	<40	<40	<40	42.1	44.8	49.3	51.1	51.4	53.0	53.9	54.2	54.3	55.0	55.0	54.8	55.9	55.9	55.7	53.7	55.2
12	52.4	51.0	48.3	42.5	44.1	44.6	44.5	44.4	45.5	45.9	45.2	43.2	<40	<40	<40	42.0	44.8	49.4	51.1	51.4	53.0	53.9	54.3	54.4	55.0	55.0	54.9	55.9	56.0	55.8	53.8	55.2
11	52.4	51.0	48.3	42.5	44.0	44.5	44.4	44.4	45.4	45.7	45.1	43.0	<40	<40	<40	41.9	44.7	49.4	51.1	51.4	53.0	53.9	54.3	54.4	55.0	55.0	54.9	56.0	56.0	55.8	53.8	55.2
10	52.4	51.0	48.4	42.6	43.9	44.3	44.4	44.4	45.4	45.7	45.0	42.9	<40	<40	<40	41.8	44.7	49.4	51.1	51.5	53.1	53.9	54.3	54.4	55.0	55.1	54.9	56.0	56.1	55.9	53.9	55.3
9	52.5	51.0	48.4	42.6	43.9	44.3	44.4	44.4	45.3	45.6	45.0	42.9	<40	<40	<40	41.7	44.7	49.4	51.1	51.5	53.1	54.0	54.4	54.4	55.0	55.1	54.9	56.1	56.1	55.9	53.9	55.3
8	52.5	51.1	48.3	42.6	43.8	44.2	44.4	44.4	45.3	45.6	45.0	42.9	<40	<40	<40	41.6	44.7	49.4	51.1	51.5	53.1	54.0	54.4	54.5	55.0	55.1	55.0	56.1	56.2	56.0	53.9	55.4
7	52.5	51.1	48.3	42.6	43.7	44.2	44.4	44.4	45.2	45.5	45.0	42.8	<40	<40	<40	41.7	44.8	49.4	51.1	51.5	53.1	54.0	54.4	54.5	55.0	55.1	55.0	56.1	56.2	56.0	54.0	55.4
6	52.5	51.1	48.3	42.6	43.6	44.2	44.3	44.4	45.2	45.5	45.1	42.8	<40	<40	<40	41.7	44.8	49.4	51.2	51.5	53.1	54.0	54.4	54.5	55.1	55.1	55.0	56.2	56.2	56.0	54.0	55.4
5	52.6	51.1	48.3	42.6	43.6	44.2	44.2	44.4	45.1	45.5	45.0	42.9	<40	<40	<40	41.7	44.7	49.4	51.2	51.6	53.2	54.0	54.4	54.5	55.1	55.2	55.0	56.2	56.2	56.1	54.0	55.3
4	52.6	51.1	48.3	42.6	43.7	44.2	44.2	44.4	45.1	45.5	45.0	42.8	<40	<40	<40	41.7	44.8	49.5	51.2	51.6	53.2	54.0	54.4	54.5	55.1	55.2	55.0	56.2	56.2	56.0	54.0	55.4
3	52.6	51.2	48.3	42.6	43.7	44.2	44.2	44.4	45.1	45.5	45.0	42.8	<40	<40	<40	41.7	44.8	49.5	51.2	51.6	53.2	54.1	54.5	54.6	55.1	55.2	55.0	56.2	56.2	56.0	53.9	55.3
2	52.6	51.2	48.4	42.6	43.7	44.2	44.2	44.4	45.1	45.5	45.0	42.8	<40	<40	<40	41.7	44.7	49.5	51.2	51.6	53.2	54.1	54.5	54.6	55.1	55.2	55.0	56.1	56.2	56.0	53.8	55.3
1	52.6	51.2	48.4	42.6	43.7	44.2	44.2	44.5	45.1	45.5	45.0	42.8	<40	<40	<40	41.7	44.7	49.5	51.2	51.6	53.2	54.1	54.5	54.6	55.1	55.2	55.0	56.2	56.2	55.9	53.8	55.2
Max	56.1	58.9	58.6	43.9	58.8	58.9	55.2	50.7	59.3	59.5	56.8	56.5	41.5	42.9	55.9	55.6	55.4	55.6	55.7	55.5	57.0	60.5	57.8	55.5	61.5	61.6	60.8	56.2	56.2	56.1	54.0	55.4
Min	52.2	51.0	48.3	42.5	43.6	44.2	44.2	44.4	45.1	45.5	45.0	42.8	<40	<40	<40	41.6	44.7	49.3	51.0	51.3	52.9	53.9	54.1	54.1	54.9	55.0	54.8	54.8	54.8	54.6	52.4	53.8

Noise sensitive receivers with exceedance (≥ 70.5 dB(A))

Floor	R212b	R212c	R212d	R213a	R213b	R213c	R213d	R214a	R214b	R214c	R215a	R215b	R215c	R216a	R216b	R216c	R217a	R217b	R218a	R218b	R219a	R219b	R219c	R220a	R220b	R220c	R301a	R301b	R301c	R301d	R302a	R302b
36	53.9	53.6	<40	<40	53.2	53.1	<40	40.5	53.2	53.3	52.2	52.1	40.4	<40	50.7	50.7	50.6	50.9	51.0	51.0	51.2	51.7	51.7	51.7	52.3	52.5						
35	54.0	53.7	<40	<40	53.2	53.2	<40	40.3	53.3	53.4	52.0	52.0	40.1	<40	50.8	50.7	50.6	50.9	51.1	51.1	51.3	51.8	51.8	51.8	52.4	52.6						
34	54.0	53.7	<40	<40	53.3	53.2	<40	40.1	53.4	53.4	51.8	51.8	<40	<40	50.8	50.8	50.7	51.0	51.2	51.1	51.3	51.8	51.9	51.9	52.4	52.6						
33	54.1	53.8	<40	<40	53.4	53.3	<40	40.0	53.4	53.5	51.7	51.6	<40	<40	50.9	50.8	50.8	51.1	51.2	51.2	51.4	51.9	51.9	51.9	52.5	52.7						
32	54.2	53.8	<40	<40	53.4	53.4	<40	<40	53.4	53.5	51.5	51.6	<40	<40	51.0	50.9	50.8	51.1	51.3	51.2	51.4	51.9	52.0	52.0	52.5	52.7						
31	54.2	53.8	<40	<40	53.5	53.4	<40	<40	53.5	53.5	51.5	51.5	<40	<40	51.0	51.0	50.9	51.2	51.4	51.3	51.5	52.0	52.0	52.0	52.6	52.8						
30	54.2	53.9	<40	<40	53.5	53.5	<40	<40	53.5	53.6	51.5	51.4	<40	<40	51.1	51.0	51.0	51.2	51.4	51.4	51.6	52.1	52.1	52.1	52.7	52.9						
29	54.2	53.9	<40	<40	53.5	53.5	<40	<40	53.6	53.7	51.5	51.5	<40	<40	51.2	51.1	51.0	51.3	51.5	51.4	51.6	52.1	52.2	52.2	52.7	52.9	52.2	52.1	51.2	50.3	49.4	48.4
28	54.3	54.0	<40	<40	53.6	53.5	<40	<40	53.7	53.7	51.5	51.5	<40	<40	51.2	51.2	51.1	51.4	51.5	51.5	51.7	52.2	52.2	52.2	52.8	53.0	52.3	52.0	51.0	50.3	49.4	48.4
27	54.4	54.1	<40	<40	53.6	53.6	<40	<40	53.8	53.8	51.6	51.5	<40	<40	51.3	51.2	51.1	51.4	51.6	51.5	51.7	52.2	52.3	52.3	52.8	53.0	52.3	51.9	50.9	50.2	49.3	48.4
26	54.4	54.1	<40	<40	53.7	53.7	<40	<40	53.8	53.8	51.6	51.6	<40	<40	51.4	51.3	51.2	51.5	51.7	51.6	51.8	52.3	52.3	52.3	52.9	53.1	52.3	51.9	50.9	50.1	49.3	48.4
25	54.5	54.2	<40	<40	53.8	53.7	<40	<40	53.8	53.9	51.6	51.6	<40	<40	51.4	51.4	51.3	51.6	51.7	51.6	51.9	52.4	52.4	52.4	52.9	53.1	52.3	51.8	50.9	50.1	49.3	48.5
24	54.5	54.2	<40	<40	53.8	53.8	<40	<40	53.9	53.9	51.7	51.6	<40	<40	51.5	51.4	51.3	51.6	51.8	51.7	51.9	52.4	52.4	52.4	53.0	53.2	52.4	51.8	50.8	50.1	49.3	48.5
23	54.6	54.3	<40	<40	53.9	53.9	<40	<40	53.9	54.0	51.8	51.7	<40	<40	51.6	51.5	51.4	51.7	51.8	51.8	52.0	52.5	52.5	52.5	53.1	53.3	52.4	51.7	50.8	50.1	49.3	48.5
22	54.7	54.4	<40	<40	54.0	53.9	<40	<40	54.0	54.1	51.9	51.8	<40	<40	51.6	51.6	51.4	51.7	51.9	51.8	52.0	52.5	52.5	52.5	53.1	53.3	52.4	51.8	50.9	50.1	49.3	48.5
21	54.7	54.4	<40	<40	54.0	54.0	<40	<40	54.1	54.1	51.9	51.9	<40	<40	51.7	51.6	51.5	51.8	51.9	51.9	52.1	52.6	52.6	52.6	53.2	53.4	52.4	51.8	50.9	50.1	49.3	48.5
20	54.8	54.5	<40	<40	54.1	54.1	<40	<40	54.1	54.2	52.0	51.9	<40	<40	51.7	51.7	51.6	51.8	52.0	51.9	52.1	52.6	52.6	52.6	53.2	53.4	52.5	51.8	50.9	50.1	49.4	48.6
19	54.8	54.5	<40	<40	54.1	54.1	<40	<40	54.2	54.3	52.0	52.0	<40	<40	51.8	51.7	51.6	51.9	52.1	52.0	52.2	52.7	52.7	52.7	53.3	53.5	52.5	51.8	50.9	50.2	49.4	48.6
18	54.9	54.6	<40	<40	54.2	54.2	<40	<40	54.3	54.3	52.0	52.1	<40	<40	51.9	51.8	51.7	52.0	52.1	52.0	52.2	52.7	52.7	52.7	53.3	53.5	52.5	51.9	50.9	50.2	49.4	48.6
17	54.9	54.6	<40	<40	54.3	54.2	<40	<40	54.3	54.4	52.1	52.1	<40	<40	51.9	51.8	51.7	52.0	52.2	52.1	52.3	52.8	52.8	52.8	53.4	53.6	52.5	51.9	51.0	50.2	49.4	48.6
16	55.0	54.6	<40	<40	54.3	54.3	<40	<40	54.4	54.4	52.2	52.2	<40	<40	52.0	51.9	51.8	52.1	52.2	52.1	52.3	52.8	52.8	52.8	53.4	53.6	52.5	51.9	51.0	50.2	49.4	48.7
15	55.0	54.7	<40	<40	54.4	54.3	<40	<40	54.4	54.5	52.2	52.1	<40	<40	52.0	52.0	51.7	52.1	52.3	52.2	52.4	52.9	52.9	52.9	53.5	53.7	52.6	51.9	51.0	50.2	49.5	48.7
14	55.1	54.7	<40	<40	54.4	54.4	<40	<40	54.4	54.5	52.3	52.2	<40	<40	52.0	51.9	51.8	52.1	52.3	52.2	52.4	52.9	52.9	52.8	53.5	53.7	52.6	51.9	51.0	50.3	49.5	48.6
13	55.1	54.7	<40	<40	54.4	54.4	<40	<40	54.5	54.5	52.4	52.3	<40	<40	52.1	51.9	51.7	52.0	52.4	52.3	52.5	53.0	53.0	52.9	53.6	53.8	52.6	52.0	51.1	50.3	49.5	48.6
12	55.2	54.8	<40	<40	54.5	54.4	<40	<40	54.5	54.5	52.3	52.2	<40	<40	52.0	51.9	51.7	52.0	52.4	52.3	52.5	53.0	53.0	52.9	53.6	53.8	52.6	52.0	51.1	50.3	49.5	48.6
11	55.2	54.8	<40	<40	54.5	54.5	<40	<40	54.5	54.5	52.2	52.3	<40	<40	52.0	51.8	51.5	51.8	52.4	52.3	52.6	53.1	53.1	53.0	53.7	53.9	52.6	52.0	51.1	50.3	49.5	48.6
10	55.2	54.9	<40	<40	54.6	54.5	<40	<40	54.5	54.6	52.1	52.1	<40	<40	51.7	51.5	51.3	51.5	52.5	52.4	52.6	53.1	53.1	53.0	53.7	53.9	52.7	52.0	51.1	50.3	49.5	48.7
9	55.3	54.9	<40	<40	54.6	54.6	<40	<40	54.6	54.5	51.9	51.8	<40	<40	51.3	51.2	51.0	51.3	52.5	52.4	52.6	53.1	53.1	53.0	53.7	53.9	52.7	52.0	51.1	50.4	49.6	48.7
8	55.3	55.0	<40	<40	54.6	54.6	<40	<40	54.6	54.6	51.4	51.3	<40	<40	51.2	51.0	50.8	51.1	52.6	52.5	52.7	53.2	53.2	53.0	53.8	54.0	52.7	52.0	51.1	50.4	49.6	48.7
7	55.3	55.0	<40	<40	54.6	54.6	<40	<40	54.7	54.6	51.1	51.1	<40	<40	50.9	50.8	50.7	51.1	52.6	52.5	52.7	53.2	53.2	53.0	53.8	54.0	52.7	52.0	51.1	50.4	49.6	48.7
6	55.3	54.9	<40	<40	54.7	54.7	<40	<40	54.6	54.6	50.9	50.9	<40	<40	50.9	50.9	50.7	51.1	52.6	52.5	52.7	53.2	53.2	53.0	53.8	54.0	52.7	52.0	51.1	50.4	49.6	48.7
5	55.4	55.0	<40	<40	54.6	54.6	<40	<40	54.7	54.6	50.9	50.9	<40	<40	50.9	50.8	50.6	51.0	52.6	52.5	52.8	53.3	53.2	53.0	53.9	54.1	52.7	52.0	51.1	50.4	49.6	48.7
4	55.3	54.9	<40	<40	54.5	54.6	<40	<40	54.6	54.6	50.8	50.8	<40	<40	50.8	50.7	50.7	51.1	52.7	52.6	52.8	53.3	53.3	53.1	53.9	54.1	52.7	52.0	51.1	50.4	49.6	48.7
3	55.3	54.8	<40	<40	54.4	54.4	<40	<40	54.4	54.4	50.7	50.8	<40	<40	50.9	50.7	50.7	51.1	52.7	52.6	52.8	53.3	53.3	53.1	53.9	54.1	52.7	52.1	51.1	50.4	49.6	48.8
2	55.2	54.7	<40	<40	54.2	54.1	<40	<40	54.0	54.0	50.5	50.6	<40	<40	50.8	50.8	50.7	51.1	52.7	52.6	52.8	53.3	53.3	53.1	53.9	54.1	52.8	52.0	51.2	50.4	49.7	48.8
1	55.1	54.5	<40	<40	54.0	54.0	<40	<40	53.7	53.6	50.0	50.4	<40	<40	50.8	50.8	50.7	51.0	52.7	52.6	52.8	53.3	53.3	53.1	53.9	54.1	52.8	52.0	51.2	50.5	49.7	48.8
Max	55.4	55.0	<40	<40	54.7	54.7	<40	40.5	54.7	54.6	52.4	52.3	40.4	<40	52.1	52.0	51.8	52.1	52.7	52.6	52.8	53.3	53.3	53.1	53.9	54.1	52.8	52.1	51.2	50.5	49.7	48.8
Min	53.9	53.6	<40	<40	53.2	53.1	<40	<40	53.2	53.3	50.0	50.4	<40	<40	50.7	50.7	50.6	50.9	51.0	51.0	51.2	51.7	51.7	51.7	52.3	52.5	52.2	51.7	50.8	50.1	49.3	48.4

Noise sensitive receivers with exceedance (≥ 70.5 dB(A))

Floor	R303a	R303b	R303c	R303d	R304a	R304b	R304c	R305a	R305b	R305c	R306a	R306b	R306c	R307a	R307b	R308a	R308b	R309a	R309b	R309c	R310a	R310b	R310c	R310d	R311a	R311b	R311c	R311d	R312a	R312b	R312c	R313a
36																																
35																																
34																																
33																																
32																																
31																																
30																																
29	<40	46.5	46.4	<40	46.5	48.3	51.2	65.7	65.8	62.8	62.9	65.4	65.2	64.7	65.0	64.7	64.2	64.3	64.3	62.1	60.0	64.5	64.9	65.1	65.1	65.4	64.9	59.2	61.4	64.2	63.9	56.3
28	<40	46.5	46.4	<40	46.5	48.3	51.2	65.7	65.8	62.9	62.9	65.4	65.2	64.7	65.0	64.7	64.2	64.3	64.3	62.1	60.0	64.6	64.9	65.2	65.2	65.5	65.0	59.3	61.5	64.3	64.0	56.4
27	<40	46.5	46.4	<40	46.6	48.3	51.2	65.6	65.8	63.0	62.9	65.4	65.2	64.7	65.0	64.8	64.3	64.3	64.4	62.2	60.0	64.6	65.0	65.3	65.4	65.6	65.1	59.4	61.5	64.4	64.1	56.5
26	<40	46.5	46.4	<40	46.6	48.2	51.2	65.7	65.8	63.0	63.0	65.4	65.2	64.6	65.0	64.8	64.2	64.4	64.4	62.1	60.0	64.6	65.0	65.4	65.5	65.7	65.2	59.5	61.6	64.5	64.2	56.6
25	<40	46.5	46.3	<40	46.6	48.2	51.2	65.6	65.8	63.0	63.0	65.4	65.1	64.6	65.0	64.7	64.2	64.3	64.4	62.1	60.0	64.7	65.1	65.4	65.6	65.8	65.3	59.6	61.7	64.6	64.3	56.7
24	<40	46.5	46.4	<40	46.6	48.2	51.3	65.6	65.8	63.1	63.1	65.3	65.1	64.5	64.9	64.7	64.1	64.3	64.4	61.9	59.9	64.7	65.1	65.4	65.7	66.0	65.4	59.7	61.8	64.8	64.4	56.8
23	<40	46.5	46.4	<40	46.6	48.2	51.3	65.6	65.7	63.1	63.1	65.3	65.0	64.4	64.8	64.6	64.0	64.2	64.3	61.7	59.7	64.7	65.1	65.5	65.8	66.1	65.5	59.8	61.9	64.9	64.5	56.8
22	<40	46.6	46.4	<40	46.6	48.2	51.4	65.5	65.6	63.1	63.1	65.2	64.9	64.2	64.6	64.4	63.7	64.0	64.2	61.4	59.5	64.6	65.1	65.4	65.9	66.2	65.6	60.0	62.1	65.0	64.6	56.9
21	<40	46.6	46.4	<40	46.6	48.3	51.4	65.4	65.5	63.1	63.1	64.9	64.6	63.9	64.3	64.0	63.4	63.7	63.9	61.0	59.1	64.4	65.0	65.4	66.0	66.3	65.7	60.1	62.2	65.1	64.7	56.9
20	<40	46.6	46.5	<40	46.6	48.3	51.5	65.2	65.3	63.0	63.0	64.7	64.3	63.5	64.0	63.6	62.9	63.4	63.6	60.2	58.4	64.2	64.8	65.4	66.1	66.4	65.8	60.1	62.2	65.2	64.9	57.0
19	<40	46.6	46.5	<40	46.7	48.3	51.6	65.1	65.1	63.0	62.9	64.3	63.9	63.0	63.6	63.4	62.5	63.2	63.4	59.8	57.7	64.1	64.8	65.3	66.2	66.6	66.0	60.2	62.3	65.4	65.0	57.0
18	<40	46.6	46.5	<40	46.7	48.3	51.6	64.8	64.9	62.8	62.7	64.0	63.6	62.6	63.2	63.0	62.2	62.9	63.3	59.4	57.1	64.1	64.7	65.3	66.3	66.7	66.1	60.4	62.5	65.5	65.1	57.0
17	<40	46.6	46.4	<40	46.7	48.3	51.6	64.6	64.6	62.6	62.5	63.8	63.3	62.2	62.9	62.7	61.9	62.8	63.3	59.2	56.7	64.1	64.8	65.4	66.5	66.8	66.2	60.4	62.5	65.6	65.2	57.0
16	<40	46.6	46.4	<40	46.7	48.3	51.7	64.3	64.3	62.3	62.1	63.4	62.9	61.7	62.6	62.5	61.7	62.7	63.2	59.0	56.4	64.1	64.9	65.5	66.6	66.9	66.3	60.5	62.6	65.7	65.3	56.9
15	<40	46.6	46.5	<40	46.7	48.3	51.7	63.9	63.9	61.9	61.7	62.9	62.3	61.0	62.1	62.1	61.3	62.5	63.1	58.8	56.0	64.2	64.9	65.6	66.7	67.0	66.4	60.6	62.7	65.8	65.4	56.6
14	<40	46.6	46.5	<40	46.7	48.3	51.8	63.3	63.3	61.5	61.3	62.2	61.6	60.3	61.5	61.6	60.8	62.3	63.0	58.6	55.8	64.2	65.1	65.7	66.8	67.1	66.6	60.6	62.7	65.9	65.5	56.3
13	<40	46.7	46.5	<40	46.7	48.3	51.8	62.9	62.9	61.3	61.0	61.7	61.0	59.6	60.7	61.0	60.0	62.0	62.8	58.3	55.3	64.3	65.1	65.9	67.0	67.3	66.7	60.6	62.8	66.0	65.6	55.6
12	<40	46.7	46.5	<40	46.7	48.4	51.9	62.4	62.4	60.9	60.6	61.2	60.4	58.9	59.9	60.1	59.1	61.7	62.6	57.9	54.7	64.3	65.3	66.0	67.1	67.4	66.8	60.4	62.7	66.1	65.6	54.6
11	<40	46.7	46.5	<40	46.7	48.3	51.9	61.9	62.0	60.6	60.4	60.6	59.9	58.3	59.0	59.0	57.7	60.9	62.3	57.5	54.1	64.3	65.3	66.2	67.2	67.5	66.8	60.2	62.6	66.1	65.6	53.5
10	<40	46.7	46.5	<40	46.8	48.4	51.9	61.6	61.7	60.4	60.2	60.3	59.5	57.8	58.2	58.0	56.7	59.8	61.6	56.9	53.5	64.2	65.4	66.3	67.2	67.6	66.9	59.6	62.2	66.0	65.5	51.9
9	<40	46.7	46.5	<40	46.8	48.4	51.9	61.4	61.5	60.3	60.1	60.0	59.2	57.4	57.7	57.0	55.4	58.4	60.6	56.3	52.9	64.1	65.4	66.4	67.2	67.6	66.9	58.5	61.5	65.9	65.3	50.7
8	<40	46.7	46.5	<40	46.8	48.4	51.9	61.2	61.3	60.2	60.0	59.8	59.0	57.2	57.2	56.2	54.3	57.1	59.2	55.2	52.3	63.8	65.3	66.4	67.3	67.6	66.8	56.9	60.8	65.5	64.9	49.1
7	<40	46.8	46.5	<40	46.8	48.4	51.8	61.0	61.2	60.1	59.9	59.7	58.8	56.9	56.8	55.6	53.3	55.8	58.0	54.4	51.9	63.2	65.2	66.5	67.3	67.3	66.4	55.4	60.2	64.8	64.1	47.8
6	<40	46.8	46.5	<40	46.8	48.4	51.7	60.9	61.1	60.1	59.9	59.5	58.6	56.7	56.4	55.0	52.4	54.7	56.4	53.3	51.5	62.0	64.7	66.4	67.3	67.0	66.0	53.8	59.7	64.2	63.3	46.6
5	<40	46.8	46.5	<40	46.8	48.4	51.5	60.8	61.0	60.0	59.8	59.4	58.5	56.5	56.2	54.6	51.5	53.7	55.2	52.5	51.2	60.4	63.7	66.1	67.1	66.5	65.2	52.3	59.5	63.3	62.6	45.6
4	<40	46.8	46.5	<40	46.8	48.4	51.2	60.7	60.9	60.0	59.8	59.3	58.4	56.4	55.9	54.1	50.8	52.9	54.2	51.8	50.8	58.5	62.0	65.3	66.7	65.6	64.3	50.8	59.3	62.5	61.9	44.4
3	<40	46.8	46.6	<40	46.8	48.4	50.7	60.7	60.8	60.0	59.8	59.2	58.3	56.3	55.7	53.8	50.0	52.0	53.1	51.0	50.3	56.7	59.8	63.3	65.6	64.6	63.5	49.3	59.2	61.8	61.2	43.5
2	<40	46.8	46.6	<40	46.8	48.4	50.1	60.6	60.8	60.0	59.8	59.2	58.2	56.2	55.6	53.4	49.0	51.0	52.1	50.1	49.3	55.0	57.4	60.7	64.2	63.6	62.6	47.9	58.9	61.0	60.5	42.6
1																53.0	47.8	49.5	50.7	48.7	47.9	53.5	55.5	58.0	62.5	62.4	60.9	46.5	58.2	59.9	59.4	41.7
Max	<40	46.8	46.6	<40	46.8	48.4	51.9	65.7	65.8	63.1	63.1	65.4	65.2	64.7	65.0	64.8	64.3	64.4	64.4	62.2	60.0	64.7	65.4	66.5	67.3	67.6	66.9	60.6	62.8	66.1	65.6	57.0
Min	<40	46.5	46.3	<40	46.5	48.2	50.1	60.6	60.8	60.0	59.8	59.2	58.2	56.2	55.6	53.0	47.8	49.5	50.7	48.7	47.9	53.5	55.5	58.0	62.5	62.4	60.9	46.5	58.2	59.9	59.4	41.7

Noise sensitive receivers with exceedance (≥ 70.5 dB(A))

Floor	R313b	R313c	R313d	R314a	R314b	R314c	R315a	R315b	R315c	R316a	R316b	R316c	R317a	R317b	R318a	R318b	R319a	R319b	R319c	R320a	R320b	R320c	R320d	R401a	R401b	R401c	R401d	R402a	R402b	R402c	R403a	R403b
36																																
35																																
34																																
33																																
32																																
31																																
30																																
29	63.9	64.2	61.5	60.3	65.0	65.6	63.1	62.7	56.3	58.6	62.3	62.0	61.8	62.2	62.3	62.1	62.5	62.7	60.3	59.6	63.0	63.1	61.7									
28	64.0	64.3	61.6	60.4	65.1	65.7	63.1	62.8	56.4	58.7	62.4	62.1	61.8	62.3	62.4	62.2	62.5	62.8	60.4	59.7	63.1	63.2	61.8	55.8	65.0	64.4	61.4	55.4	61.2	57.7	55.7	55.9
27	64.1	64.4	61.7	60.5	65.2	65.8	63.2	62.9	56.5	58.8	62.5	62.2	61.9	62.4	62.5	62.3	62.6	62.9	60.4	59.8	63.2	63.3	61.9	55.8	64.9	64.2	61.3	55.3	61.1	57.4	55.5	55.7
26	64.2	64.5	61.8	60.6	65.3	65.9	63.4	62.9	56.6	58.9	62.6	62.4	62.0	62.5	62.6	62.4	62.7	63.0	60.5	59.9	63.3	63.4	62.0	55.7	64.8	64.1	61.2	55.2	60.9	57.1	55.4	55.5
25	64.3	64.6	61.9	60.7	65.4	66.0	63.5	63.1	56.7	59.0	62.7	62.5	62.1	62.6	62.7	62.5	62.8	63.1	60.6	60.0	63.4	63.5	62.1	55.7	64.6	64.0	61.1	55.0	60.7	56.8	55.2	55.4
24	64.4	64.7	62.0	60.8	65.5	66.1	63.6	63.2	56.9	59.1	62.8	62.6	62.2	62.7	62.8	62.5	62.9	63.1	60.7	60.1	63.5	63.6	62.2	55.6	64.4	63.8	61.0	55.0	60.5	56.4	55.0	55.2
23	64.5	64.8	62.1	60.8	65.6	66.2	63.7	63.3	56.9	59.2	62.9	62.7	62.4	62.8	62.9	62.6	63.0	63.2	60.8	60.2	63.6	63.7	62.3	55.4	64.2	63.6	60.8	54.9	60.3	56.0	54.9	55.1
22	64.6	65.0	62.2	60.9	65.8	66.3	63.8	63.4	57.0	59.3	63.0	62.8	62.5	63.0	63.0	62.7	63.1	63.3	61.0	60.3	63.7	63.8	62.4	55.3	63.8	63.4	60.6	54.9	60.3	55.8	54.9	55.0
21	64.8	65.1	62.3	61.0	65.9	66.5	64.0	63.5	57.1	59.4	63.2	62.9	62.6	63.1	63.1	62.8	63.2	63.4	61.1	60.4	63.8	63.9	62.5	55.1	63.3	63.1	60.4	54.9	60.1	55.5	54.8	55.0
20	64.9	65.2	62.4	61.1	66.0	66.6	64.1	63.7	57.3	59.5	63.3	63.0	62.7	63.1	63.2	62.9	63.3	63.5	61.2	60.5	63.9	64.0	62.7	55.1	62.7	62.6	60.1	54.9	59.9	55.4	54.8	54.9
19	65.0	65.3	62.5	61.2	66.1	66.7	64.2	63.8	57.4	59.7	63.4	63.1	62.8	63.2	63.3	63.0	63.5	63.7	61.3	60.6	64.0	64.2	62.8	55.0	61.9	61.8	59.4	54.9	59.6	55.3	54.8	55.0
18	65.0	65.4	62.5	61.3	66.2	66.8	64.4	63.9	57.5	59.8	63.6	63.2	63.0	63.4	63.4	63.2	63.6	63.8	61.4	60.6	64.1	64.3	62.9	55.1	60.3	60.5	58.3	54.9	59.0	55.3	54.8	55.0
17	65.2	65.5	62.6	61.3	66.3	66.9	64.5	64.1	57.6	59.9	63.7	63.4	63.1	63.5	63.6	63.2	63.6	63.9	61.4	60.7	64.2	64.3	63.0	55.0	58.6	58.8	56.3	55.0	57.6	55.2	54.9	55.0
16	65.2	65.6	62.7	61.3	66.4	67.0	64.7	64.2	57.7	60.1	63.8	63.5	63.2	63.5	63.7	63.3	63.7	63.9	61.6	60.8	64.3	64.4	63.1	55.0	57.4	57.3	54.7	55.0	56.4	55.2	54.9	55.0
15	65.4	65.7	62.8	61.3	66.5	67.0	64.8	64.4	57.9	60.2	64.0	63.7	63.3	63.7	63.7	63.4	63.9	64.1	61.6	60.7	64.5	64.6	63.2	55.1	56.8	56.6	54.0	55.1	55.9	55.2	54.9	55.0
14	65.5	65.9	62.7	61.2	66.6	67.2	65.0	64.5	58.0	60.3	64.1	63.8	63.4	63.8	63.9	63.5	63.9	64.1	61.7	60.7	64.5	64.6	63.3	55.1	56.4	56.2	53.5	55.1	55.6	55.1	54.9	55.1
13	65.5	65.9	62.6	60.9	66.6	67.2	65.1	64.7	58.1	60.5	64.2	63.9	63.6	63.9	64.0	63.5	63.9	64.2	61.8	60.7	64.6	64.7	63.4	55.1	56.1	56.0	53.2	55.1	55.6	55.2	54.9	55.1
12	65.5	65.9	62.6	60.6	66.6	67.2	65.3	64.9	58.2	60.6	64.4	64.1	63.6	64.0	64.0	63.6	64.0	64.2	61.8	60.6	64.6	64.8	63.6	55.2	56.0	55.9	53.1	55.2	55.5	55.2	55.0	55.1
11	65.5	65.9	62.6	60.5	66.7	67.2	65.5	65.1	58.4	60.8	64.5	64.2	63.7	64.1	64.0	63.5	63.9	64.2	61.8	60.7	64.7	64.8	63.7	55.2	55.8	55.7	53.0	55.2	55.5	55.2	55.0	55.2
10	65.5	65.9	62.5	60.3	66.8	67.4	65.7	65.2	58.6	61.0	64.7	64.3	63.7	64.1	64.0	63.6	64.1	64.3	62.0	60.7	64.8	64.9	63.8	55.2	55.8	55.6	52.9	55.2	55.4	55.3	55.0	55.2
9	65.4	65.9	62.4	59.9	66.8	67.4	65.9	65.4	58.8	61.1	64.8	64.4	63.7	64.1	64.0	63.6	64.1	64.3	62.0	60.7	64.8	65.0	64.0	55.2	55.7	55.7	52.9	55.3	55.4	55.2	55.1	55.2
8	65.3	65.9	62.2	59.4	66.9	67.5	66.1	65.6	58.9	61.3	64.9	64.5	63.6	64.0	64.0	63.7	64.2	64.5	62.2	60.8	65.0	65.2	64.1	55.2	55.7	55.6	52.9	55.3	55.5	55.2	55.1	55.3
7	64.9	65.8	62.0	59.0	66.9	67.6	66.3	65.8	59.1	61.5	65.0	64.5	63.5	63.9	64.0	63.8	64.3	64.6	62.3	60.9	65.1	65.3	64.3	55.3	55.7	55.6	52.8	55.3	55.5	55.3	55.1	55.3
6	64.4	65.5	61.8	58.4	66.9	67.7	66.5	66.0	59.3	61.7	65.0	64.3	63.5	64.0	64.1	63.9	64.4	64.7	62.5	61.1	65.2	65.4	64.4	55.3	55.7	55.6	52.9	55.4	55.4	55.3	55.2	55.3
5	63.3	65.2	61.6	58.0	67.0	67.8	66.7	66.2	59.5	61.9	64.9	64.1	63.6	64.1	64.3	64.0	64.6	64.9	62.6	61.2	65.4	65.6	64.6	55.3	55.7	55.6	52.9	55.4	55.4	55.3	55.2	55.4
4	62.6	64.4	61.4	57.6	67.1	67.9	66.9	66.3	59.7	62.0	64.5	64.0	63.6	64.2	64.4	64.0	64.7	65.0	62.8	61.3	65.5	65.7	64.7	55.3	55.7	55.6	52.9	55.3	55.5	55.4	55.2	55.4
3	61.9	63.6	60.9	56.7	67.2	68.1	67.2	66.4	59.9	62.2	64.2	63.9	63.6	64.1	64.3	64.0	64.8	65.2	63.0	61.5	65.7	65.9	64.8	55.4	55.7	55.6	52.9	55.4	55.5	55.4	55.2	55.4
2	61.4	62.6	60.0	55.2	67.2	68.3	67.4	66.3	60.1	62.2	63.9	63.7	63.2	63.9	64.2	64.1	65.0	65.4	63.1	61.6	65.9	66.1	64.9	55.4	55.7	55.7	53.0	55.4	55.5	55.4	55.3	55.4
1	60.4	61.9	58.8	52.3	66.7	68.5	67.4	65.6	60.2	61.8	63.3	62.7	62.3	63.4	64.2	64.1	65.2	65.5	63.2	61.8	66.1	66.2	65.1	55.4	55.7	55.7	53.0	55.4	55.6	55.4	55.3	55.5
Max	65.5	65.9	62.8	61.3	67.2	68.5	67.4	66.4	60.2	62.2	65.0	64.5	63.7	64.2	64.4	64.1	65.2	65.5	63.2	61.8	66.1	66.2	65.1	55.9	65.0	64.4	61.4	55.4	61.2	57.7	55.7	55.9
Min	60.4	61.9	58.8	52.3	65.0	65.6	63.1	62.7	56.3	58.6	62.3	62.0	61.8	62.2	62.3	62.1	62.5	62.7	60.3	59.6	63.0	63.1	61.7	55.0	55.7	55.6	52.8	54.9	55.4	55.1	54.8	54.9

Noise sensitive receivers with exceedance (≥70.5 dB(A))

Floor	R404a	R404b	R405a	R405b	R405c	R406a	R406b	R406c	R407a	R407b	R407c	R408a	R408b	R408c	R408d	R409a	R409b	R409c	R410a	R410b	R410c	R410d	R411a	R411b	R411c	R411d	R412a	R412b	R412c	R413a	R413b	R414a
36																																
35																																
34																																
33																																
32																																
31																																
30																																
29																																
28	55.9	55.7	56.0	56.1	50.7	46.2	56.5	56.9	68.3	68.2	59.2	60.0	67.9	67.7	55.4	67.5	67.5	66.1	60.9	67.8	67.9	67.7	63.3	63.0	62.4	55.1	57.9	61.9	61.8	61.6	62.0	62.1
27	55.7	55.6	55.9	56.0	50.1	45.0	56.4	56.8	68.3	68.1	59.3	60.1	67.8	67.6	55.6	67.4	67.5	66.0	60.9	67.7	67.9	67.7	63.4	63.1	62.5	55.2	58.0	62.0	61.9	61.7	62.1	62.1
26	55.6	55.5	55.7	55.9	49.5	44.4	56.3	56.7	68.1	68.0	59.4	60.2	67.7	67.5	55.7	67.4	67.5	66.0	60.9	67.7	67.9	67.7	63.5	63.2	62.6	55.2	58.1	62.1	62.0	61.9	62.2	62.2
25	55.4	55.2	55.6	55.8	48.5	43.2	56.2	56.6	68.0	67.9	59.5	60.3	67.6	67.4	55.7	67.3	67.4	66.0	60.9	67.6	67.8	67.7	63.6	63.3	62.6	55.4	58.2	62.2	62.1	62.0	62.3	62.3
24	55.2	55.1	55.4	55.6	47.2	42.2	56.0	56.4	67.9	67.8	59.6	60.4	67.5	67.2	55.8	67.2	67.3	65.9	60.9	67.6	67.8	67.7	63.8	63.4	62.7	55.4	58.3	62.4	62.2	62.0	62.4	62.4
23	55.1	55.0	55.3	55.4	45.9	41.0	55.8	56.2	67.8	67.7	59.7	60.5	67.3	67.0	55.9	67.0	67.2	65.8	60.8	67.5	67.7	67.6	63.9	63.5	62.8	55.5	58.4	62.5	62.3	62.1	62.5	62.5
22	55.0	54.9	55.2	55.3	44.1	<40	55.7	56.1	67.6	67.4	59.7	60.5	67.1	66.8	56.0	66.8	67.0	65.7	60.9	67.4	67.6	67.5	64.0	63.6	63.0	55.7	58.5	62.6	62.4	62.2	62.6	62.6
21	55.0	54.9	55.2	55.3	42.8	<40	55.6	56.0	67.3	67.2	59.9	60.6	66.7	66.5	56.0	66.5	66.8	65.4	60.8	67.2	67.5	67.5	64.1	63.7	63.1	55.8	58.6	62.7	62.6	62.3	62.6	62.6
20	54.9	54.8	55.1	55.3	41.6	<40	55.6	56.0	67.0	66.8	60.0	60.8	66.5	66.2	56.1	66.1	66.4	65.1	60.6	67.0	67.3	67.4	64.2	63.8	63.2	55.8	58.7	62.8	62.6	62.3	62.7	62.7
19	55.0	54.9	55.2	55.2	40.6	<40	55.6	56.0	66.6	66.5	60.1	60.9	66.1	65.9	56.1	65.9	66.2	64.8	60.4	66.9	67.2	67.3	64.3	64.0	63.3	55.9	58.9	62.9	62.7	62.4	62.7	62.7
18	55.0	54.9	55.1	55.3	<40	<40	55.6	56.0	66.3	66.2	60.1	60.9	65.8	65.6	56.2	65.6	65.9	64.5	60.3	66.7	67.1	67.2	64.4	64.1	63.5	56.0	59.0	63.1	62.8	62.5	62.8	62.7
17	55.0	55.0	55.1	55.3	<40	<40	55.6	56.0	65.8	65.7	60.2	60.9	65.3	65.1	56.2	65.2	65.6	64.0	60.2	66.5	66.9	67.0	64.6	64.2	63.6	56.1	59.1	63.1	62.9	62.5	62.8	62.6
16	55.0	55.0	55.2	55.3	<40	<40	55.7	56.0	65.3	65.2	60.2	61.0	64.7	64.5	56.1	64.7	65.1	63.3	59.9	66.1	66.6	66.7	64.7	64.4	63.7	56.2	59.2	63.3	63.0	62.4	62.8	62.5
15	55.0	54.9	55.2	55.3	<40	<40	55.7	56.0	64.7	64.6	60.2	61.0	64.1	63.9	56.0	64.1	64.7	62.4	59.5	65.8	66.3	66.4	64.9	64.4	63.9	56.2	59.2	63.4	63.0	62.4	62.7	62.3
14	55.1	55.0	55.3	55.3	<40	<40	55.8	56.0	64.1	64.0	60.2	61.0	63.6	63.4	55.7	63.8	64.3	61.9	59.4	65.5	66.1	66.3	65.0	64.6	64.0	56.2	59.3	63.4	63.1	62.3	62.5	61.9
13	55.1	55.0	55.3	55.4	<40	<40	55.8	56.1	63.5	63.5	60.0	60.9	63.2	62.8	55.1	63.6	64.2	61.6	59.3	65.4	66.0	66.2	65.2	64.8	64.1	56.2	59.3	63.4	63.0	62.1	62.2	61.3
12	55.2	55.1	55.3	55.4	<40	<40	55.8	56.1	63.3	63.2	59.7	60.5	62.8	62.6	54.2	63.5	64.1	61.4	59.3	65.4	66.0	66.2	65.3	64.9	64.3	56.2	59.4	63.5	63.0	61.7	61.7	60.5
11	55.2	55.1	55.4	55.5	<40	<40	55.8	56.2	63.1	63.1	59.1	60.0	62.7	62.3	52.9	63.4	64.1	61.3	59.4	65.5	66.1	66.3	65.5	65.0	64.3	56.2	59.4	63.4	62.8	61.0	60.8	59.7
10	55.2	55.1	55.4	55.5	<40	<40	55.9	56.2	63.0	62.9	58.0	58.9	62.3	61.9	52.1	63.3	64.1	61.3	59.4	65.6	66.2	66.5	65.7	65.2	64.5	56.3	59.5	63.4	62.4	60.1	60.1	58.5
9	55.2	55.2	55.4	55.5	<40	<40	55.9	56.3	62.6	62.5	56.7	58.0	61.7	61.2	50.4	63.1	64.0	61.3	59.4	65.7	66.3	66.6	65.9	65.4	64.6	56.4	59.5	63.1	61.7	59.1	58.8	57.3
8	55.2	55.2	55.4	55.6	<40	<40	55.9	56.3	62.0	61.7	55.2	56.6	60.7	60.2	49.2	62.6	64.0	61.2	59.5	65.9	66.4	66.8	66.1	65.4	64.7	56.4	59.4	62.5	60.5	57.7	57.5	56.0
7	55.3	55.2	55.5	55.6	<40	<40	56.0	56.3	61.2	61.2	53.7	55.2	60.0	59.5	48.0	61.8	63.7	61.3	59.6	65.9	66.6	66.9	66.2	65.6	64.7	56.3	59.2	61.3	59.2	56.4	56.2	54.8
6	55.3	55.3	55.5	55.6	<40	<40	56.0	56.4	60.6	60.2	52.3	53.8	59.4	58.9	46.9	61.1	63.1	61.1	59.6	66.0	66.8	67.1	66.4	65.8	64.6	56.2	58.6	60.1	57.8	55.0	54.9	53.7
5	55.3	55.3	55.5	55.7	<40	<40	56.0	56.4	60.0	59.8	51.1	52.3	58.9	58.4	45.9	60.0	61.9	60.8	59.5	66.1	66.9	67.4	66.7	65.8	64.3	55.7	57.4	58.2	55.9	53.5	53.5	52.4
4	55.4	55.3	55.5	55.7	<40	<40	56.1	56.4	59.8	59.6	49.9	51.0	58.5	57.9	44.7	59.1	60.9	60.0	59.3	66.0	67.1	67.5	66.8	65.6	63.0	54.4	55.8	56.2	54.2	52.1	52.1	51.1
3	55.4	55.3	55.6	55.7	<40	<40	56.1	56.5	59.7	59.5	48.6	49.7	58.0	56.8	43.7	57.8	59.7	59.2	58.8	65.7	67.2	67.8	66.9	65.0	61.3	52.2	53.4	54.4	52.7	50.8	50.9	50.1
2	55.4	55.4	55.6	55.7	<40	<40	56.1	56.5	59.7	59.3	47.5	48.5	56.4	54.3	42.8	56.3	58.4	58.4	58.2	64.4	67.0	67.9	66.9	62.8	58.4	49.4	50.9	52.7	51.2	49.5	49.7	49.0
1	55.4	55.4	55.6	55.8	<40	<40	56.2	56.5	59.6	58.8	46.4	47.4	53.3	51.8	41.8	55.2	57.0	57.5	57.5	62.6	66.4	68.0	66.5	59.9	55.8	46.8	48.7	51.1	49.8	48.4	48.5	48.0
Max	55.9	55.7	56.0	56.1	50.7	46.2	56.5	56.9	68.3	68.2	60.2	61.0	67.9	67.7	56.2	67.5	67.5	66.1	60.9	67.8	67.9	68.0	66.9	65.8	64.7	56.4	59.5	63.5	63.1	62.5	62.8	62.7
Min	54.9	54.8	55.1	55.2	<40	<40	55.6	56.0	59.6	58.8	46.4	47.4	53.3	51.8	41.8	55.2	57.0	57.5	57.5	62.6	66.0	66.2	63.3	59.9	55.8	46.8	48.7	51.1	49.8	48.4	48.5	48.0

Noise sensitive receivers with exceedance (≥70.5 dB(A))

Floor	R414b	R415a	R415b	R415c	R416a	R416b	R416c	R417a	R417b	R417c	R418a	R418b	R418c	R418d	R419a	R419b	R420a	R420b	R420c	R420d
36																				
35																				
34																				
33																				
32																				
31																				
30																				
29																				
28	61.9	62.3	62.5	60.0	59.2	62.9	63.0	54.6	54.3	<40	47.1	54.0	54.0	<40	54.4	54.4	<40	54.6	55.0	53.9
27	62.0	62.4	62.6	60.0	59.3	62.9	63.0	54.6	54.4	<40	47.1	54.1	54.0	<40	54.5	54.4	<40	54.7	55.1	54.0
26	62.0	62.4	62.6	60.0	59.3	63.0	63.1	54.6	54.5	<40	47.1	54.2	54.1	<40	54.5	54.5	<40	54.7	55.0	54.0
25	62.1	62.5	62.7	60.1	59.3	63.0	63.1	54.6	54.5	<40	47.1	54.2	54.2	<40	54.6	54.5	<40	54.8	55.1	54.1
24	62.2	62.6	62.8	60.1	59.3	63.1	63.2	54.6	54.5	<40	47.2	54.3	54.2	<40	54.6	54.6	<40	54.8	55.1	54.1
23	62.2	62.6	62.8	60.0	59.3	63.2	63.2	54.7	54.6	<40	47.2	54.3	54.3	<40	54.6	54.7	<40	54.8	55.1	54.1
22	62.3	62.7	62.9	60.0	59.2	63.2	63.2	54.8	54.6	<40	47.2	54.4	54.3	<40	54.6	54.7	<40	54.9	55.2	54.2
21	62.2	62.7	62.8	60.0	59.1	63.2	63.2	54.8	54.7	<40	47.2	54.4	54.3	<40	54.7	54.8	<40	54.9	55.2	54.2
20	62.2	62.6	62.8	59.8	58.9	63.1	63.2	54.8	54.7	<40	47.2	54.4	54.3	<40	54.8	54.8	<40	55.0	55.2	54.3
19	62.2	62.6	62.7	59.6	58.5	63.1	63.1	54.9	54.8	<40	47.2	54.5	54.4	<40	54.8	54.8	<40	55.0	55.2	54.3
18	62.1	62.5	62.7	59.1	57.9	62.9	62.9	54.9	54.9	<40	47.2	54.5	54.5	<40	54.9	54.9	<40	55.1	55.3	54.4
17	61.9	62.3	62.5	58.4	56.9	62.7	62.6	55.0	54.9	<40	47.2	54.6	54.5	<40	54.9	54.9	<40	55.1	55.3	54.4
16	61.6	62.0	62.1	57.5	56.0	62.2	62.3	55.1	55.0	<40	47.3	54.6	54.6	<40	55.0	54.9	<40	55.2	55.4	54.5
15	61.0	61.4	61.6	56.7	55.5	61.6	61.7	55.1	55.1	<40	47.3	54.7	54.6	<40	55.0	55.0	<40	55.2	55.4	54.5
14	60.4	60.8	61.0	55.7	54.2	61.1	61.1	55.2	55.1	<40	47.3	54.8	54.7	<40	55.1	55.0	<40	55.3	55.5	54.6
13	59.8	60.1	60.2	54.5	53.2	60.2	60.2	55.2	55.1	<40	47.3	54.8	54.7	<40	55.1	55.1	<40	55.3	55.5	54.6
12	58.8	59.2	59.4	53.5	52.2	59.2	59.2	55.2	55.1	<40	47.3	54.9	54.8	<40	55.2	55.1	<40	55.4	55.5	54.7
11	57.6	58.0	58.1	52.6	51.3	58.0	57.9	55.3	55.2	<40	47.3	54.9	54.8	<40	55.2	55.2	<40	55.4	55.5	54.7
10	56.5	56.8	56.9	51.6	50.5	57.0	57.0	55.3	55.3	<40	47.3	54.9	54.9	<40	55.2	55.2	<40	55.4	55.6	54.8
9	55.2	55.6	55.7	50.8	49.7	55.6	55.7	55.4	55.3	<40	47.3	54.9	54.9	<40	55.2	55.3	<40	55.4	55.6	54.8
8	54.0	54.4	54.5	49.9	48.9	54.5	54.5	55.4	55.4	<40	47.3	55.0	54.9	<40	55.3	55.3	<40	55.5	55.7	54.8
7	52.8	53.3	53.4	49.2	48.2	53.5	53.5	55.5	55.4	<40	47.3	55.0	54.9	<40	55.3	55.4	<40	55.5	55.7	54.9
6	51.8	52.2	52.4	48.3	47.4	52.4	52.4	55.6	55.5	<40	47.3	55.1	55.0	<40	55.4	55.4	<40	55.6	55.8	54.9
5	50.7	51.2	51.4	47.6	46.7	51.5	51.5	55.6	55.5	<40	47.3	55.1	55.0	<40	55.4	55.4	<40	55.6	55.8	55.0
4	49.8	50.2	50.5	46.8	46.0	50.6	50.6	55.7	55.6	<40	47.3	55.2	55.1	<40	55.4	55.4	<40	55.6	55.8	55.0
3	48.8	49.3	49.5	46.1	45.2	49.7	49.7	55.7	55.5	<40	47.4	55.1	55.0	<40	55.5	55.4	<40	55.7	55.9	55.0
2	48.0	48.4	48.7	45.4	44.6	48.8	48.9	55.6	55.5	<40	47.4	55.0	54.9	<40	55.5	55.5	<40	55.7	55.9	55.1
1	47.1														55.5	55.5	<40	55.8	56.0	55.1
Max	62.3	62.7	62.9	60.1	59.3	63.2	63.2	55.7	55.6	<40	47.4	55.2	55.1	<40	55.5	55.5	<40	55.8	56.0	<40
Min	47.1	48.4	48.7	45.4	44.6	48.8	48.9	54.6	54.3	<40	47.1	54.0	54.0	<40	54.4	54.4	<40	54.6	55.0	<40

Noise sensitive receivers with exceedance (≥70.5 dB(A))

Floor	R101 max	R102 max	R103 max	R104 max	R105 max	R106 max	R107 max	R108 max	R109 max	R110 max	R111 max	R112 max	R113 max	R114 max	R115 max	R116 max	R117 max	R118 max	R119 max	R120 max	R201 max	R202 max	R203 max	R204 max	R205 max	R206 max	R207 max	R208 max	R209 max	R210 max	R211 max	R212 max	R213 max	R214 max	R215 max	R216 max	R217 max	R218 max
36	50.2	47.6	<40	<40	<40	47.9	51.6	46.7	46.0	46.7	63.7	63.2	62.8	62.6	62.6	63.6	63.3	62.5	62.9	63.7	59.8	58.9	58.9	59.5	56.8	55.9	55.6	55.7	60.5	61.6	54.8	53.9	53.2	53.3	52.2	50.7	50.9	51.0
35	49.8	47.7	<40	<40	<40	47.8	51.4	46.4	45.7	46.6	63.8	63.3	62.9	62.7	62.7	63.6	63.4	62.6	63.0	63.8	59.7	58.8	58.8	59.5	56.5	55.5	55.3	55.3	60.1	61.2	54.9	54.0	53.2	53.4	52.0	50.8	50.9	51.1
34	49.9	47.7	<40	<40	<40	47.8	51.3	46.0	45.4	46.5	63.9	63.3	63.0	62.8	62.8	63.8	63.5	62.7	63.1	63.9	59.6	58.7	58.9	59.5	56.1	55.3	55.0	55.0	59.6	60.9	54.9	54.0	53.3	53.4	51.8	50.8	51.0	51.2
33	49.9	47.7	<40	<40	<40	47.7	51.1	45.4	44.8	46.4	63.9	63.4	63.0	62.9	62.9	63.9	63.7	62.8	63.2	64.0	59.4	58.6	58.9	59.5	56.0	55.1	54.9	54.8	59.2	60.4	55.0	54.1	53.4	53.5	51.7	50.9	51.1	51.2
32	49.8	47.7	<40	<40	<40	47.7	50.9	44.5	44.1	46.4	64.1	63.5	63.1	63.0	63.0	64.0	63.8	62.8	63.3	64.1	59.3	58.6	58.9	59.5	55.8	55.1	54.8	54.7	58.6	60.0	55.0	54.2	53.4	53.5	51.6	51.0	51.1	51.3
31	49.8	47.8	<40	<40	<40	47.7	50.6	43.2	42.8	46.4	64.2	63.6	63.2	63.2	63.1	64.1	63.9	62.9	63.5	64.3	59.2	58.5	58.9	59.5	55.8	55.0	54.7	54.6	57.7	59.4	55.0	54.2	53.5	53.5	51.5	51.0	51.2	51.4
30	49.9	47.8	<40	<40	<40	47.8	50.4	42.1	41.8	46.3	64.2	63.7	63.4	63.3	63.3	64.2	64.0	63.1	63.6	64.4	59.0	58.3	58.8	59.5	55.8	55.0	54.6	54.5	56.9	58.6	55.1	54.2	53.5	53.6	51.5	51.1	51.2	51.4
29	49.9	47.8	<40	<40	<40	47.8	50.2	41.3	40.9	46.3	64.3	63.8	63.5	63.4	63.4	64.4	64.2	63.2	63.7	64.5	58.7	58.0	58.7	59.4	55.7	54.9	54.5	54.4	56.1	57.9	55.1	54.3	53.5	53.7	51.5	51.2	51.3	51.5
28	49.9	47.8	<40	<40	<40	47.9	50.2	40.7	40.3	46.4	64.5	64.0	63.6	63.5	63.5	64.5	64.3	63.3	63.8	64.6	58.4	57.6	58.4	59.3	55.7	54.9	54.3	54.2	55.6	57.0	55.2	54.3	53.6	53.7	51.5	51.2	51.4	51.5
27	50.0	47.9	<40	<40	<40	47.9	50.1	40.2	<40	46.4	64.6	64.1	63.7	63.6	63.6	64.6	64.4	63.4	63.9	64.8	57.9	57.2	58.0	59.1	55.7	54.7	54.2	54.0	55.2	56.3	55.3	54.4	53.6	53.8	51.6	51.3	51.4	51.6
26	50.0	47.9	<40	<40	<40	47.9	50.1	<40	<40	46.3	64.7	64.2	63.8	63.8	63.7	64.7	64.5	63.6	64.1	64.9	57.5	56.6	57.3	58.6	55.6	54.6	53.7	53.5	54.9	55.8	55.3	54.5	53.7	53.8	51.6	51.4	51.5	51.7
25	50.0	47.9	<40	<40	<40	47.9	50.1	<40	<40	46.3	64.8	64.3	63.9	63.8	63.8	64.8	64.7	63.7	64.1	65.0	56.9	55.8	56.5	58.2	55.4	54.1	53.0	52.9	54.7	55.5	55.3	54.5	53.8	53.9	51.6	51.4	51.6	51.7
24	50.0	47.9	<40	<40	<40	48.0	50.0	<40	<40	46.3	64.9	64.4	64.0	64.0	64.0	65.0	64.8	63.9	64.3	65.1	56.3	54.9	55.0	57.5	55.1	53.2	51.9	52.0	54.4	55.4	55.3	54.6	53.8	53.9	51.7	51.5	51.6	51.8
23	50.1	48.0	<40	<40	<40	48.0	50.1	<40	<40	46.4	65.0	64.5	64.2	64.1	64.1	65.1	64.9	64.0	64.4	65.3	55.7	54.0	53.6	56.6	54.2	51.4	51.1	51.6	54.2	55.2	55.4	54.6	53.9	54.0	51.8	51.6	51.7	51.8
22	50.1	48.0	<40	<40	<40	48.1	50.0	<40	<40	46.3	65.1	64.6	64.3	64.2	64.3	65.3	65.1	64.1	64.5	65.4	55.4	53.2	52.0	54.7	52.5	49.7	50.2	51.5	54.1	55.2	55.5	54.7	54.0	54.1	51.9	51.6	51.7	51.9
21	50.1	48.0	<40	<40	<40	48.1	50.1	<40	<40	46.3	65.3	64.8	64.4	64.4	64.4	65.5	65.3	64.3	64.7	65.6	55.0	52.5	50.3	52.5	51.0	48.3	49.9	51.4	54.2	55.1	55.5	54.7	54.0	54.1	51.9	51.7	51.8	51.9
20	50.1	48.0	<40	<40	<40	48.2	50.0	<40	<40	46.3	65.3	64.8	64.5	64.5	64.6	65.6	65.4	64.4	64.8	65.7	55.0	52.3	48.6	50.4	50.0	47.4	49.7	51.4	54.1	55.0	55.6	54.8	54.1	54.2	52.0	51.7	51.8	52.0
19	50.1	48.1	<40	<40	<40	48.3	50.1	<40	<40	46.3	65.5	65.0	64.6	64.6	64.8	65.8	65.6	64.6	65.0	65.8	54.9	52.3	47.6	49.1	49.5	46.3	49.5	51.3	54.2	55.0	55.6	54.9	54.1	54.3	52.0	51.8	51.9	52.1
18	50.2	48.1	<40	<40	<40	48.3	50.1	<40	<40	46.4	65.6	65.1	64.8	64.7	64.9	66.0	65.8	64.7	65.2	66.0	54.9	52.2	46.7	48.2	48.8	44.6	49.5	51.3	54.2	55.0	55.7	54.9	54.2	54.3	52.1	51.9	52.0	52.1
17	50.2	48.1	<40	<40	<40	48.4	50.1	<40	<40	46.4	65.8	65.3	64.9	64.9	65.0	66.1	66.0	64.9	65.3	66.1	54.8	52.3	46.1	47.4	47.5	43.6	49.4	51.3	54.2	55.0	55.7	55.0	54.3	54.4	52.1	51.9	52.0	52.2
16	50.2	48.1	<40	<40	<40	48.5	50.1	<40	<40	46.4	65.9	65.4	65.0	65.0	65.2	66.3	66.2	65.1	65.5	66.3	54.8	52.3	45.6	46.9	46.3	43.1	49.3	51.3	54.3	55.0	55.8	55.0	54.3	54.4	52.2	52.0	52.1	52.2
15	50.2	48.1	<40	<40	<40	48.5	50.0	<40	<40	46.4	66.0	65.5	65.2	65.2	65.4	66.5	66.4	65.3	65.7	66.5	54.9	52.3	45.3	46.5	45.8	42.6	49.4	51.3	54.2	55.0	55.9	55.1	54.4	54.5	52.2	52.0	52.1	52.3
14	50.2	48.1	<40	<40	<40	48.6	50.0	<40	<40	46.4	66.2	65.7	65.4	65.3	65.6	66.7	66.6	65.5	65.9	66.7	54.8	52.3	45.0	46.2	45.5	42.4	49.3	51.4	54.2	55.1	55.9	55.1	54.4	54.5	52.3	52.0	52.1	52.3
13	50.2	48.2	<40	<40	<40	48.7	49.8	<40	<40	46.3	66.3	65.8	65.5	65.5	65.8	67.0	66.9	65.7	66.0	66.8	54.9	52.3	44.8	46.0	45.3	42.1	49.3	51.4	54.2	55.0	55.9	55.2	54.4	54.5	52.4	52.1	52.0	52.4
12	50.3	48.2	<40	<40	<40	48.7	49.5	<40	<40	46.4	66.5	66.0	65.7	65.6	65.9	67.2	67.1	65.9	66.2	67.0	54.9	52.4	44.6	45.9	45.2	42.0	49.4	51.4	54.3	55.0	56.0	55.2	54.5	54.5	52.3	52.0	52.0	52.4
11	50.3	48.2	<40	<40	<40	48.8	49.2	<40	<40	46.4	66.7	66.2	65.8	65.8	66.1	67.4	67.3	66.1	66.4	67.2	54.9	52.4	44.5	45.7	45.1	41.9	49.4	51.4	54.3	55.0	56.0	55.2	54.5	54.5	52.3	52.0	51.8	52.4
10	50.3	48.2	<40	<40	<40	48.8	49.0	<40	<40	46.4	66.9	66.4	66.0	66.0	66.4	67.7	67.6	66.3	66.6	67.4	55.0	52.4	44.4	45.7	45.0	41.8	49.4	51.5	54.3	55.1	56.1	55.3	54.6	54.6	52.1	51.7	51.5	52.5
9	50.3	48.2	<40	<40	<40	48.8	48.8	<40	<40	46.4	66.9	66.5	66.2	66.2	66.6	67.9	67.8	66.5	66.8	67.6	55.0	52.5	44.4	45.6	45.0	41.7	49.4	51.5	54.4	55.1	56.1	55.3	54.6	54.6	51.9	51.3	51.3	52.5
8	50.3	48.2	<40	<40	<40	48.8	48.7	<40	<40	46.4	67.1	66.6	66.4	66.4	66.8	68.2	68.1	66.7	67.0	67.8	55.0	52.5	44.4	45.6	45.0	41.6	49.4	51.5	54.4	55.1	56.2	55.4	54.6	54.6	51.4	51.2	51.1	52.6
7	50.3	48.2	<40	<40	<40	48.3	48.8	<40	<40	46.4	67.2	66.7	66.5	66.5	67.1	68.6	68.5	67.0	67.2	68.0	55.1	52.5	44.4	45.5	45.0	41.7	49.4	51.5	54.4	55.1	56.2	55.4	54.6	54.7	51.1	50.9	51.1	52.6
6	50.3	48.2	<40	<40	<40	47.3	48.7	<40	<40	46.4	67.2	66.7	66.5	66.6	67.3	68.9	68.8	67.3	67.4	68.1	55.1	52.5	44.3	45.5	45.1	41.7	49.4	51.5	54.4	55.1	56.2	55.4	54.7	54.6	50.9	50.9	51.1	52.6
5	50.3	48.2	<40	<40	<40	45.9	48.7	<40	<40	46.4	67.0	66.4	66.4	66.6	67.5	69.2	69.1	67.5	67.5	68.3	55.1	52.6	44.2	45.5	45.0	41.7	49.4	51.6	54.4	55.2	56.2	55.4	54.6	54.7	50.9	50.9	51.0	52.6
4	50.4	48.2	<40	<40	<40	44.6	48.7	<40	<40	46.4	66.5	65.8	65.9	66.4	67.7	69.5	69.5	67.7	67.3	68.2	55.1	52.6	44.2	45.5	45.0	41.7	49.5	51.6	54.4	55.2	56.2	55.4	54.6	54.6	50.8	50.8	51.1	52.7
3	50.4	48.3	<40	<40	<40	44.3	48.7	<40	<40	46.4	65.9	65.0	64.8	65.2	67.6	69.9	69.9	67.7	66.6	67.7	55.2	52.6	44.2	45.5	45.0	41.7	49.5	51.6	54.5	55.2	56.2	55.3	54.4	54.4	50.8	50.9	51.1	52.7
2	50.4	48.2	<40	<40	<40	44.0	48.7	<40	<40	46.4	65.7	64.5	63.7	63.8	66.6	70.3	70.3	66.7	65.8	67.3	55.1	52.6	44.2	45.5	45.0	41.7	49.5	51.6	54.5	55.2	56.2	55.3	54.2	54.0	50.6	50.8	51.1	52.7
1	50.4	48.2	<40	<40	<40	43.9	48.7	<40	<40	46.3	65.5	63.5	61.9	61.9	63.8	70.4	70.4	64.5	64.9	67.2	55.1	52.6	44.2	45.5	45.0	41.7	49.5	51.6	54.5	55.2	56.2	55.2	54.0	53.7	50.4	50.8	51.0	52.7
Max	50.4	48.3	<40	<40	<40	48.8	51.6	46.7	46.0	46.7	67.2	66.7	66.5	66.6	67.7	70.4	70.4	67.7	67.5	68.3	59.8	58.9	58.9	59.5	56.8	55.9	55.6	55.7	60.5	61.6	56.2	55.4	54.7	54.7	52.4	52.1	52.1	52.7
Min	49.8	47.6	<40	<40	<40	43.9	48.7	<40	<40	46.3	63.7	63.2	61.9	61.9	62.6	63.6	63.3	62.5	62.9	63.7	54.8	52.2	44.2	45.5	45.0	41.6	49.3	51.3	54.1	55.0	54.8	53.9	53.2	53.3	50.4	50.7	50.9	51.0

Total	2571
Exceedance	0
Compliance Rate	100%

Noise sensitive receivers with exceedance (≥70.5 dB(A))

Floor	R219 max	R220 max	R301 max	R302 max	R303 max	R304 max	R305 max	R306 max	R307 max	R308 max	R309 max	R310 max	R311 max	R312 max	R313 max	R314 max	R315 max	R316 max	R317 max	R318 max	R319 max	R320 max	R401 max	R402 max	R403 max	R404 max	R405 max	R406 max	R407 max	R408 max	R409 max	R410 max	R411 max	R412 max	R413 max	R414 max	R415 max	R416 max
36	51.7	52.5																																				
35	51.8	52.6																																				
34	51.9	52.6																																				
33	51.9	52.7																																				
32	52.0	52.7																																				
31	52.0	52.8																																				
30	52.1	52.9																																				
29	52.2	52.9	52.2	49.4	46.5	51.2	65.8	65.4	65.0	64.7	64.3	65.1	65.4	64.2	64.2	65.6	63.1	62.3	62.2	62.3	62.7	63.1																
28	52.2	53.0	52.3	49.4	46.5	51.2	65.8	65.4	65.0	64.7	64.3	65.2	65.5	64.3	64.3	65.7	63.1	62.4	62.3	62.4	62.8	63.2	65.0	61.2	55.9	55.9	56.1	56.9	68.3	67.9	67.5	67.9	63.3	61.9	62.0	62.1	62.5	63.0
27	52.3	53.0	52.3	49.3	46.5	51.2	65.8	65.4	65.0	64.8	64.4	65.3	65.6	64.4	64.4	65.8	63.2	62.5	62.4	62.5	62.9	63.3	64.9	61.1	55.7	55.7	56.0	56.8	68.3	67.8	67.5	67.9	63.4	62.0	62.1	62.1	62.6	63.0
26	52.3	53.1	52.3	49.3	46.5	51.2	65.8	65.4	65.0	64.8	64.4	65.4	65.7	64.5	64.5	65.9	63.4	62.6	62.5	62.6	63.0	63.4	64.8	60.9	55.5	55.6	55.9	56.7	68.1	67.7	67.5	67.9	63.5	62.1	62.2	62.2	62.6	63.1
25	52.4	53.1	52.3	49.3	46.5	51.2	65.8	65.4	65.0	64.7	64.4	65.4	65.8	64.6	64.6	66.0	63.5	62.7	62.6	62.7	63.1	63.5	64.6	60.7	55.4	55.4	55.8	56.6	68.0	67.6	67.4	67.8	63.6	62.2	62.3	62.3	62.7	63.1
24	52.4	53.2	52.4	49.3	46.5	51.3	65.8	65.3	64.9	64.7	64.4	65.4	66.0	64.8	64.7	66.1	63.6	62.8	62.7	62.8	63.1	63.6	64.4	60.5	55.2	55.2	55.6	56.4	67.9	67.5	67.3	67.8	63.8	62.4	62.4	62.4	62.8	63.2
23	52.5	53.3	52.4	49.3	46.5	51.3	65.7	65.3	64.8	64.6	64.3	65.5	66.1	64.9	64.8	66.2	63.7	62.9	62.8	62.9	63.2	63.7	64.2	60.3	55.1	55.1	55.4	56.2	67.8	67.3	67.2	67.7	63.9	62.5	62.5	62.5	62.8	63.2
22	52.5	53.3	52.4	49.3	46.6	51.4	65.6	65.2	64.6	64.4	64.2	65.4	66.2	65.0	65.0	66.3	63.8	63.0	63.0	63.0	63.3	63.8	63.8	60.3	55.0	55.0	55.3	56.1	67.6	67.1	67.0	67.6	64.0	62.6	62.6	62.6	62.9	63.2
21	52.6	53.4	52.4	49.3	46.6	51.4	65.5	64.9	64.3	64.0	63.9	65.4	66.3	65.1	65.1	66.5	64.0	63.2	63.1	63.1	63.4	63.9	63.3	60.1	55.0	55.0	55.3	56.0	67.3	66.7	66.8	67.5	64.1	62.7	62.6	62.6	62.8	63.2
20	52.6	53.4	52.5	49.4	46.6	51.5	65.3	64.7	64.0	63.6	63.6	65.4	66.4	65.2	65.2	66.6	64.1	63.3	63.1	63.2	63.5	64.0	62.7	59.9	54.9	54.9	55.3	56.0	67.0	66.5	66.4	67.4	64.2	62.8	62.7	62.7	62.8	63.2
19	52.7	53.5	52.5	49.4	46.6	51.6	65.1	64.3	63.6	63.4	63.4	65.3	66.6	65.4	65.3	66.7	64.2	63.4	63.2	63.3	63.7	64.2	61.9	59.6	55.0	55.0	55.2	56.0	66.6	66.1	66.2	67.3	64.3	62.9	62.7	62.7	62.7	63.1
18	52.7	53.5	52.5	49.4	46.6	51.6	64.9	64.0	63.2	63.0	63.3	65.3	66.7	65.5	65.4	66.8	64.4	63.6	63.4	63.4	63.8	64.3	60.5	59.0	55.0	55.0	55.3	56.0	66.3	65.8	65.9	67.2	64.4	63.1	62.8	62.7	62.7	62.9
17	52.8	53.6	52.5	49.4	46.6	51.6	64.6	63.8	62.9	62.7	63.3	65.4	66.8	65.6	65.5	66.9	64.5	63.7	63.5	63.6	63.9	64.3	58.8	57.6	55.0	55.0	55.3	56.0	65.8	65.3	65.6	67.0	64.6	63.1	62.8	62.6	62.5	62.7
16	52.8	53.6	52.5	49.4	46.6	51.7	64.3	63.4	62.6	62.5	63.2	65.5	66.9	65.7	65.6	67.0	64.7	63.8	63.5	63.7	63.9	64.4	57.4	56.4	55.0	55.0	55.3	56.0	65.3	64.7	65.1	66.7	64.7	63.3	62.8	62.5	62.1	62.3
15	52.9	53.7	52.6	49.5	46.6	51.7	63.9	62.9	62.1	62.1	63.1	65.6	67.0	65.8	65.7	67.0	64.8	64.0	63.7	63.7	64.1	64.6	56.8	55.9	55.0	55.0	55.3	56.0	64.7	64.1	64.7	66.4	64.9	63.4	62.7	62.3	61.6	61.7
14	52.9	53.7	52.6	49.5	46.6	51.8	63.3	62.2	61.5	61.6	63.0	65.7	67.1	65.9	65.9	67.2	65.0	64.1	63.8	63.9	64.1	64.6	56.4	55.6	55.1	55.1	55.3	56.0	64.1	63.6	64.3	66.3	65.0	63.4	62.5	61.9	61.0	61.1
13	53.0	53.8	52.6	49.5	46.7	51.8	62.9	61.7	60.7	61.0	62.8	65.9	67.3	66.0	65.9	67.2	65.1	64.2	63.9	64.0	64.2	64.7	56.1	55.6	55.1	55.1	55.4	56.1	63.5	63.2	64.2	66.2	65.2	63.4	62.2	61.3	60.2	60.2
12	53.0	53.8	52.6	49.5	46.7	51.9	62.4	61.2	59.9	60.1	62.6	66.0	67.4	66.1	65.9	67.2	65.3	64.4	64.0	64.0	64.2	64.8	56.0	55.5	55.1	55.2	55.4	56.1	63.3	62.8	64.1	66.2	65.3	63.5	61.7	60.5	59.4	59.2
11	53.1	53.9	52.6	49.5	46.7	51.9	62.0	60.6	59.0	59.0	62.3	66.2	67.5	66.1	65.9	67.2	65.5	64.5	64.1	64.0	64.2	64.8	55.8	55.5	55.2	55.2	55.5	56.2	63.1	62.7	64.1	66.3	65.5	63.4	61.0	59.7	58.1	58.0
10	53.1	53.9	52.7	49.5	46.7	51.9	61.7	60.3	58.2	58.0	61.6	66.3	67.6	66.0	65.9	67.4	65.7	64.7	64.1	64.0	64.3	64.9	55.8	55.4	55.2	55.2	55.5	56.2	63.0	62.3	64.1	66.5	65.7	63.4	60.1	58.5	56.9	57.0
9	53.1	53.9	52.7	49.6	46.7	51.9	61.5	60.1	57.7	57.0	60.6	66.4	67.6	65.9	65.9	67.4	65.9	64.8	64.1	64.0	64.3	65.0	55.7	55.4	55.2	55.2	55.5	56.3	62.6	61.7	64.0	66.6	65.9	63.1	59.1	57.3	55.7	55.7
8	53.2	54.0	52.7	49.6	46.7	51.9	61.3	60.0	57.2	56.2	59.2	66.4	67.6	65.5	65.9	67.5	66.1	64.9	64.0	64.0	64.5	65.2	55.7	55.5	55.3	55.2	55.6	56.3	62.0	60.7	64.0	66.8	66.1	62.5	57.7	56.0	54.5	54.5
7	53.2	54.0	52.7	49.6	46.8	51.8	61.2	59.9	56.9	55.6	58.0	66.5	67.3	64.8	65.8	67.6	66.3	65.0	63.9	64.0	64.6	65.3	55.7	55.5	55.3	55.3	55.6	56.3	61.2	60.0	63.7	66.9	66.2	61.3	56.4	54.8	53.4	53.5
6	53.2	54.0	52.7	49.6	46.8	51.7	61.1	59.9	56.7	55.0	56.4	66.4	67.3	64.2	65.5	67.7	66.5	65.0	64.0	64.1	64.7	65.4	55.7	55.4	55.3	55.3	55.6	56.4	60.6	59.4	63.1	67.1	66.4	60.1	55.0	53.7	52.4	52.4
5	53.3	54.1	52.7	49.6	46.8	51.5	61.0	59.8	56.5	54.6	55.2	66.1	67.1	63.3	65.2	67.8	66.7	64.9	64.1	64.3	64.9	65.6	55.7	55.4	55.4	55.3	55.7	56.4	60.0	58.9	61.9	67.4	66.7	58.2	53.5	52.4	51.4	51.5
4	53.3	54.1	52.7	49.6	46.8	51.2	60.9	59.8	56.4	54.1	54.2	65.3	66.7	62.5	64.4	67.9	66.9	64.5	64.2	64.4	65.0	65.7	55.7	55.5	55.4	55.4	55.7	56.4	59.8	58.5	60.9	67.5	66.8	56.2	52.1	51.1	50.5	50.6
3	53.3	54.1	52.7	49.6	46.8	50.7	60.8	59.8	56.3	53.8	53.1	63.3	65.6	61.8	63.6	68.1	67.2	64.2	64.1	64.3	65.2	65.9	55.7	55.5	55.4	55.4	55.7	56.5	59.7	58.0	59.7	67.8	66.9	54.4	50.9	50.1	49.5	49.7
2	53.3	54.1	52.8	49.7	46.8	50.1	60.8	59.8	56.2	53.4	52.1	60.7	64.2	61.0	62.6	68.3	67.4	63.9	63.9	64.2	65.4	66.1	55.7	55.5	55.4	55.4	55.7	56.5	59.7	56.4	58.4	67.9	66.9	52.7	49.7	49.0	48.7	48.9
1	53.3	54.1	52.8	49.7						53.0	50.7	58.0	62.5	59.9	61.9	68.5	67.4	63.3	63.4	64.2	65.5	66.2	55.7	55.6	55.5	55.4	55.8	56.5	59.6	53.3	57.5	68.0	66.5	51.1	48.5	48.0		
Max	53.3	54.1	52.8	49.7	46.8	51.9	65.8	65.4	65.0	64.8	64.4	66.5	67.6	66.1	65.9	68.5	67.4	65.0	64.2	64.4	65.5	66.2	65.0	61.2	55.9	55.9	56.1	56.9	68.3	67.9	67.5	68.0	66.9	63.5	62.8	62.7	62.9	63.2
Min	51.7	52.5	52.2	49.3	46.5	50.1	60.8	59.8	56.2	53.0	50.7	58.0	62.5	59.9	61.9	65.6	63.1	62.3	62.2	62.3	62.7	63.1	55.7	55.4	54.9	54.9	55.2	56.0	59.6	53.3	57.5	66.2	63.3	51.1	48.5	48.0	48.7	48.9

Noise sensitive receivers with exceedance (≥70.5 dB(A))

Floor	R417 max	R418 max	R419 max	R420 max
36				
35				
34				
33				
32				
31				
30				
29				
28	54.6	54.0	54.4	55.0
27	54.6	54.1	54.5	55.1
26	54.6	54.2	54.5	55.0
25	54.6	54.2	54.6	55.1
24	54.6	54.3	54.6	55.1
23	54.7	54.3	54.7	55.1
22	54.8	54.4	54.7	55.2
21	54.8	54.4	54.8	55.2
20	54.8	54.4	54.8	55.2
19	54.9	54.5	54.8	55.2
18	54.9	54.5	54.9	55.3
17	55.0	54.6	54.9	55.3
16	55.1	54.6	55.0	55.4
15	55.1	54.7	55.0	55.4
14	55.2	54.8	55.1	55.5
13	55.2	54.8	55.1	55.5
12	55.2	54.9	55.2	55.5
11	55.3	54.9	55.2	55.5
10	55.3	54.9	55.2	55.6
9	55.4	54.9	55.3	55.6
8	55.4	55.0	55.3	55.7
7	55.5	55.0	55.4	55.7
6	55.6	55.1	55.4	55.8
5	55.6	55.1	55.4	55.8
4	55.7	55.2	55.4	55.8
3	55.7	55.1	55.5	55.9
2	55.6	55.0	55.5	55.9
1			55.5	56.0
Max	55.7	55.2	55.5	56.0
Min	54.6	54.0	54.4	55.0

Noise sensitive receivers with exceedance ($\geq$70.5 dB(A))

Appendix 6.1

ArchSD Reply of
Public Wet Market

Subject: RE: (Confidential) TC 133A - HD's PRH Scheme for Coordination with ArchSD and FEHD

Date: 14/04/2023 18:28
Subject: Re: (Confidential) TC 133A - HD's PRH Scheme for Coordination with ArchSD and FEHD

Dear

Like any other buildings, the design of the public market building, especially the design associated with general environmental impacts to neighboring sites, shall be designed in accordance with the statutory requirements as stipulated in the building regulations and associated practice notes or guidelines. We may further discuss in details for any specific environmental concerns associated with the environmental studies that you may be aware of, in the detailed design stage as necessary.

Date: 14/04/2023 10:23
Subject: Re: (Confidential) TC 133A - HD's PRH Scheme for Coordination with ArchSD and FEHD

Dear

I refer to the TCA 133A PRH layout (scheme 20) provided on 15/2/2023.

We are carrying out the EAS for the PRH development and requires your written advice that the proposed public market will not cause any adverse environmental impacts.
Grateful if you can confirm that the public market design will comply with statutory requirements to ensure no environmental impacts on the public housing development and keep coordination with HD if necessary.

You reply **by 17/4/2023** will be appreciated.
Thanks and sorry for the rush.

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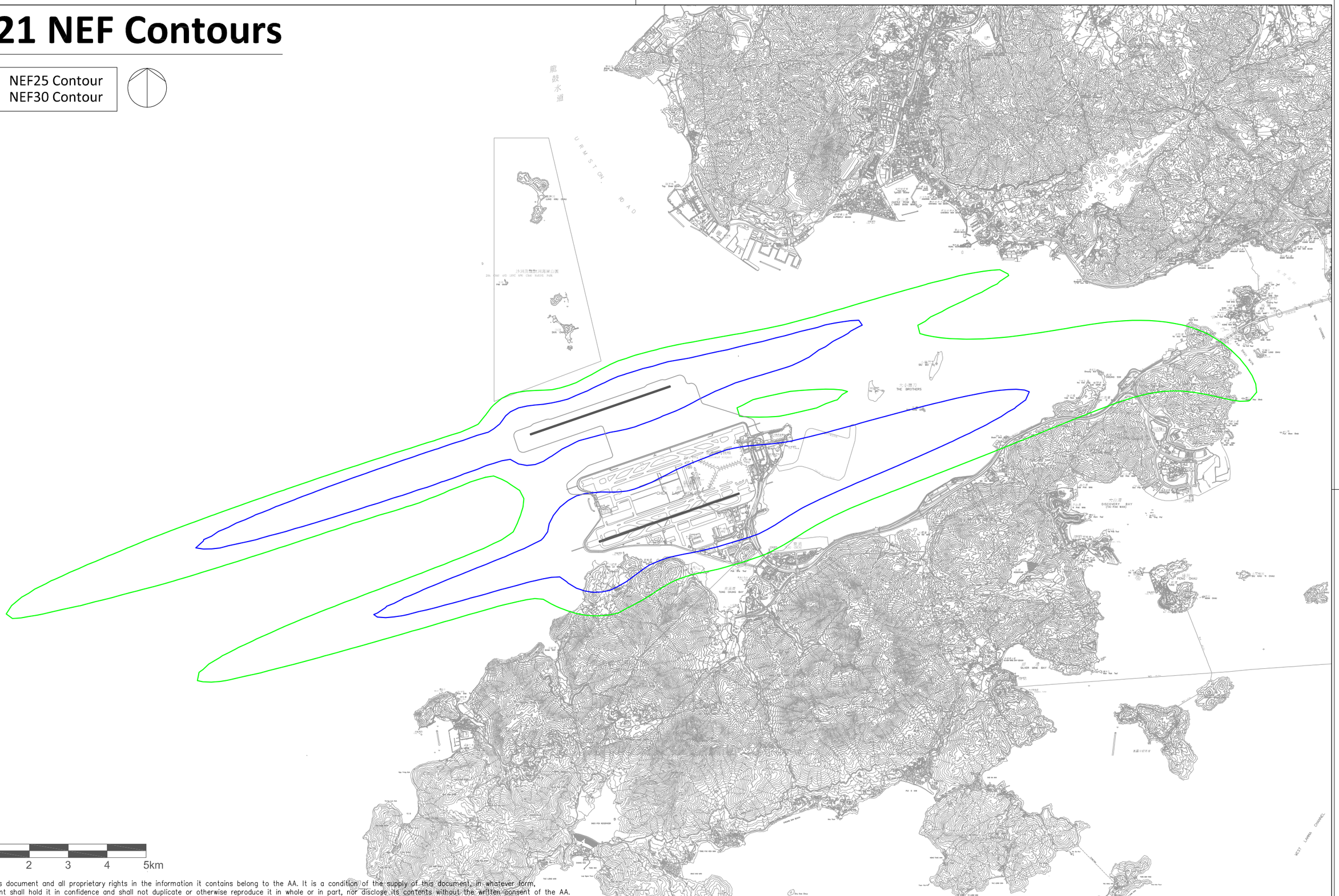
Appendix 7.1

NEF Noise Contours extracted from 3RS EIA

2021 NEF Contours

NEF25 Contour
NEF30 Contour



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E	11MAR14	FINAL	TWKW

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Deltares
Ecosystems Limited
SDA Marine Limited
Urbis Limited
URS Hong Kong Ltd

Title

Noise Contours of Year 2021

Consultant's Signatures for Approval		Date
Design	HC	13SEP13
Checkers	HC	13SEP13
Design Supervisor	EC	21MAR14
Authorised Representative	AFK	21MAR14

EXPANSION OF HONG KONG INTERNATIONAL AIRPORT INTO A THREE-RUNWAY SYSTEM

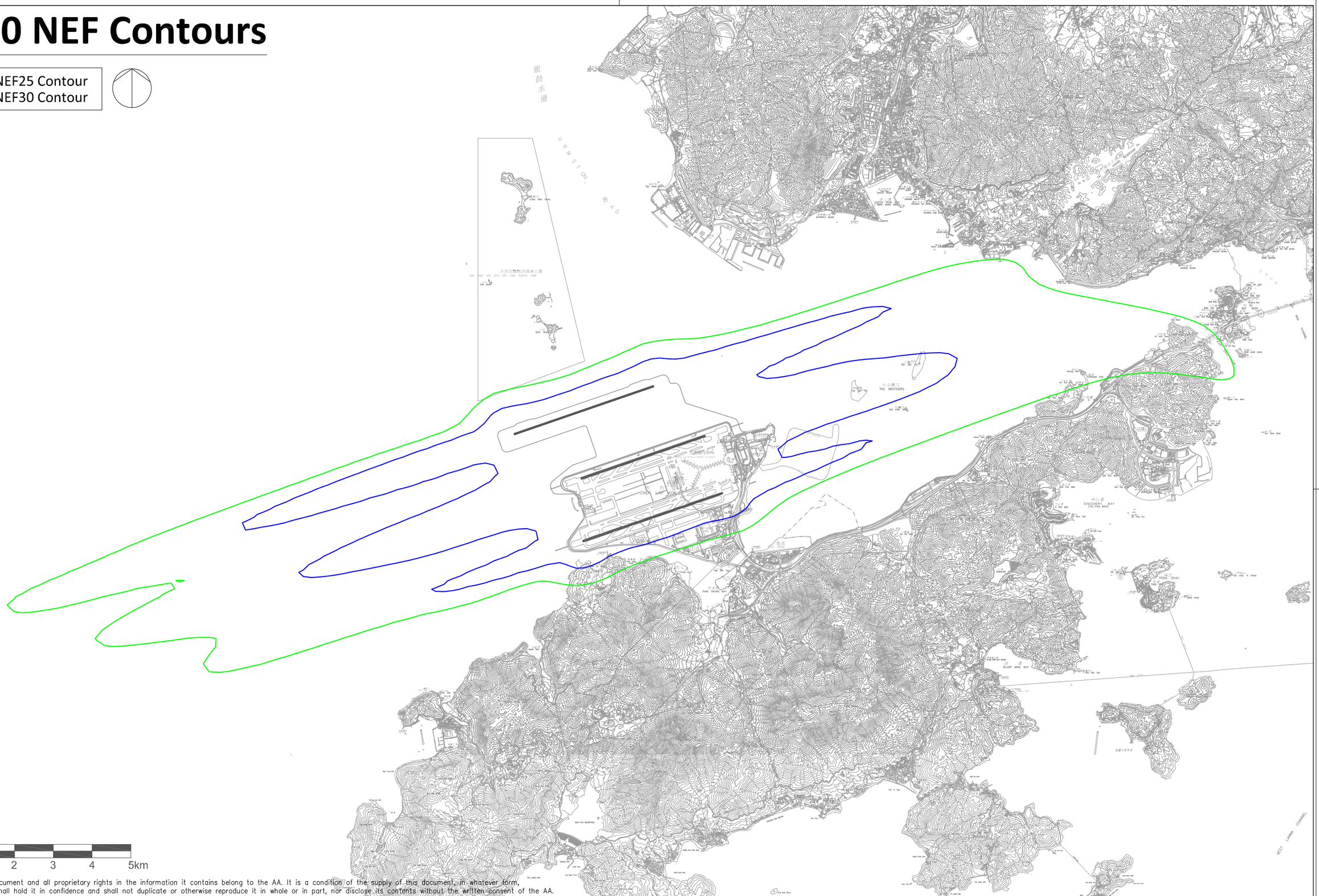
Drawing No. MCL/P132/EIA/7-3-008

Scale at A3: AS

Rev. E

2030 NEF Contours

NEF25 Contour
NEF30 Contour



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Noise Contours of Year 2030

Consultant's Signatures for Approval		Date
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Checkers	HC	13SEP13
Design Supervisor	EC	21MAR14
Authorised Representative	AFK	21MAR14

EXPANSION OF HONG KONG INTERNATIONAL AIRPORT INTO A THREE-RUNWAY SYSTEM

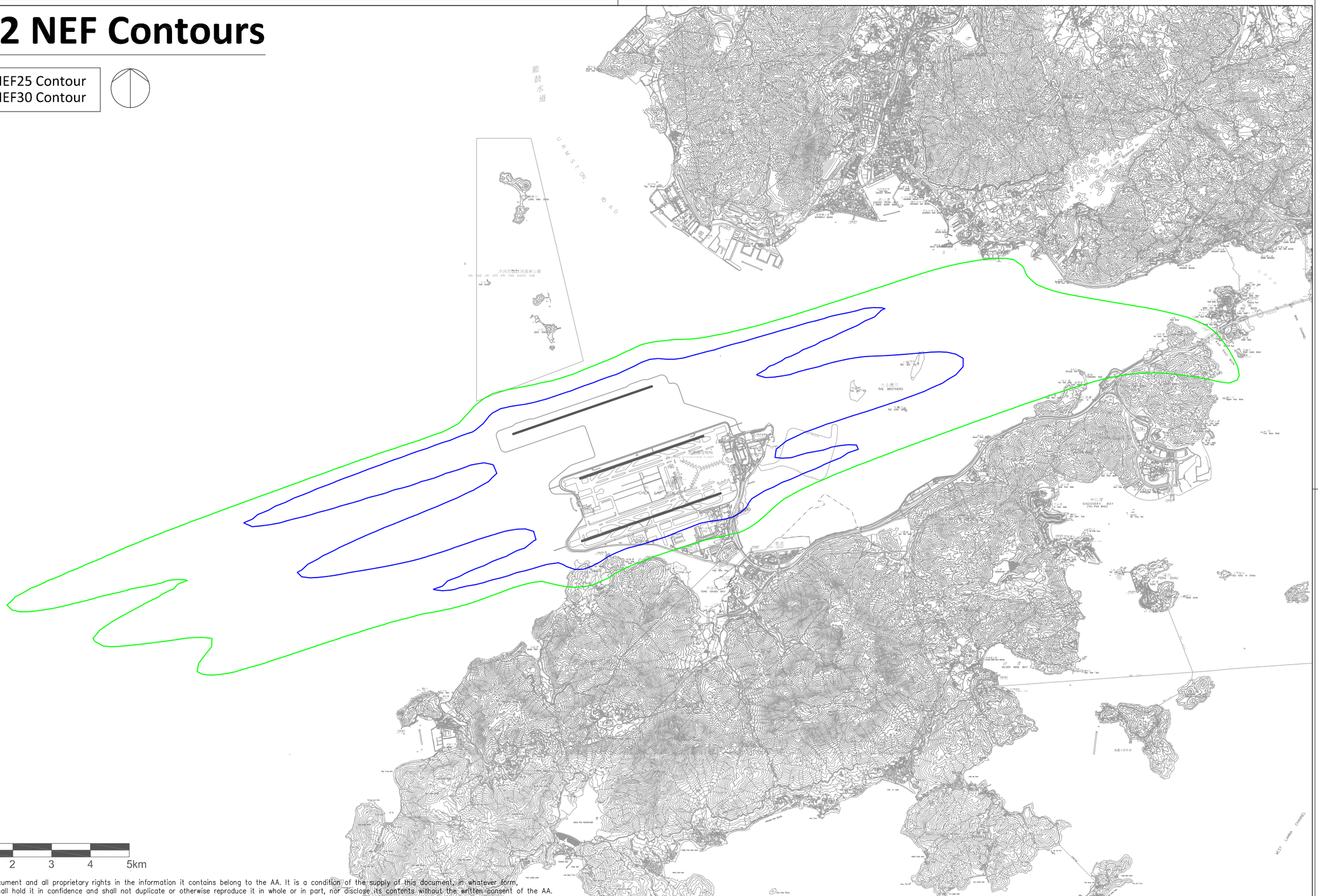
Drawing No. MCL/P132/EIA/7-3-007

Scale at A3: AS

Rev. E

2032 NEF Contours

NEF25 Contour
NEF30 Contour



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Noise Contours of Year 2032

Consultant's Signatures for Approval		Date
Design	HC	13SEP13
Checkers	HC	13SEP13
Design Supervisor	EC	21MAR14
Authorised Representative	AFK	21MAR14

EXPANSION OF HONG KONG INTERNATIONAL AIRPORT INTO A THREE-RUNWAY SYSTEM

Drawing No. MCL/P132/EIA/7-3-009

Scale at A3 AS

Rev. E

香港房屋委員會
Hong Kong Housing Authority

Our Ref. HD(P) 8/3/IS27

Tel No. 2761 5301
Fax No. 2761 5870

Your Ref.

Date: 3rd June 2024
By Email

Secretary, Town Planning Board
15/F, North Point Government Offices,
333 Java Road, North Point
Hong Kong

Dear Sir/Madam,

Section 16 Planning Application for Proposed Minor Relaxation of Restrictions of Plot Ratio and Building Height for the Public Housing Developments at Tung Chung Areas 133A, 133B and 133C
(Application no. A/I-TCE/4)

Reference is made to the captioned Section 16 application received by the Town Planning Board on 26.4.2024 and the comments received from Planning Department dated 21.5.2024, 27.5.2024, 29.5.2024 and 30.5.2024. We submit herewith the table summarizing the responses to comments.

Should you have any queries or need further information, please contact me at 2761 5310. Thank you for your attention.

Yours faithfully,

(Alan LAU)
for Director of Housing

Encl.

S.16 Application No. A/I-TCE/4

Proposed Minor Relaxation of Restrictions of Plot Ratio and Building Height for the Public Housing Developments at Tung Chung Areas 133A, 133B and 133C

Response to Comments

Departmental Comments

	Comments	Housing Department's Response
1.	**Civil Aviation Department** (7.5.2024)	
	We have no comment on the planning application in question from airport height restriction perspective.	Noted.
	On the other hand, we are of the view that due to the proximity between the subject locations (Tung Chung Areas 133A, 133B and 133C) and the Hong Kong International Airport (HKIA), aircraft noise generated by approaching and departing aircraft should be anticipated. In addition, the captioned areas are close to the helicopter holding areas and helicopter flight paths (i.e. Pak Mong route), which might also contribute to the elevated noise environment. In fact, aircraft noise complaints from the residents in Tung Chung area have been received by this Department from time to time. Therefore, we recommend the implementation of the appropriate noise mitigation measures (e.g. using acoustic insulation/specific building designs etc.) to enhance the indoor living environment. You may wish to note that we have made similar comments on various residential developments which are located in close proximity to the HKIA and helicopter routes (e.g. proposed residential developments atop Siu Ho Wan Depot, public housing developments at Tung Chung East Reclamation areas 119 and 122, residential development proposal at Ma Wan South, etc.)	As addressed in the Environmental Assessment Study (EAS), the aircraft noise impacts have been already assessed in the approved Expansion of Hong Kong International Airport into a Three-Runway System (3RS) Environmental Impact Assessment (EIA) Report (AEIAR-185/2014) and the helicopter noise impact has been assessed in the approved EIA report for the Study of Tung Chung New Town Development Extension (TCNTE) (AEIAR-196/2016). The proposed development is in full compliance with the noise standards/requirements of the HKPSG. The potential environmental impacts on the proposed development have been evaluated in the EAS adhering to the guidance for environmental considerations stipulated in the HKPSG.

	Comments	Housing Department's Response
	and the concerned departments/organizations (e.g. Housing Department, CEDD's consultant, etc.) have taken our views on the anticipated aircraft/helicopter noise issues as well as suggestions for implementing appropriate noise mitigation measures.	
2.	**Planning Department (UD & L's Landscape Section)** (16.5.2024)	
	Landscape Observations According to the aerial photo in 2022, Tung Chung Areas 133A, 133B and 133C are situated in an area of reclamation landscape character surrounded by vacant reclamation sites. According to the supporting planning statement para. 4.5.3," The Application Sites are lately reclaimed sites with no landscape resources and existing trees". The proposed development is considered not incompatible with the landscape character of the surrounding.	Noted.
	According to the Landscape Master Plans in Appendix 2A, 2B & 2C, at-grade greenery and podium landscape with tree planting, shrubs, and lawn are proposed. Landscape provisions such as communal play areas, ball courts, seating lawns and jogging paths are proposed for enjoyment of the residents. Please note that I have **no comment** from landscape planning perspective on the application.	Noted.
	Advisory Remarks to the Applicant With reference to the planting proposal in Landscape Master Plans (Appendix 2A), optimization of native species should be considered. Please consider to include planting with native species to enhance bio-diversity.	Noted.

<table>
<tr><th></th><th>Comments</th><th>Housing Department's Response</th></tr>
<tr><td></td><td>The applicant is reminded that approval of the S16 application under Town Planning Ordinance does not imply approval of the site coverage of greenery requirements under DEVB TC(W) No. 3/2012. The site coverage of greenery calculation should be submitted separately to BD/relevant departments for approval. Similarly for any proposed tree preservation/removal scheme and compensatory planting proposal under DEVB TC(W) No. 4/2020, the applicant is reminded to approach relevant authorities direct to obtain the necessary approval.</td><td>Noted.</td></tr>
<tr><td>3.</td><td colspan="2"><u>Planning Department (Urban Design Section) (20.5.2024)</u></td></tr>
<tr><td></td><td><u>Background</u>
2. The applicant seeks planning permission for proposed minor relaxation of PR and BH restrictions for permitted public housing developments at Tung Chung Areas 133A, 133B and 133C (the Sites). Area 133A falls mainly within an area zoned "Residential (Group A)2" ("R(A)2") with a small portion within "Open Space" ("O") on the approved Tung Chung Extension Area Outline Zoning Plan No. S/I-TCE/2 (the OZP) while Areas 133B and 133C fall within "Residential (Group A)3" ("R(A)3") on the OZP. "R(A)2" is subject to a maximum PR of 6.5 and BH of 115mPD, while "R(A)3" is subject to a maximum PR of 6.4 and BH of 110mPD.

3. Based on the information submitted, the minor relaxation of PR and BHR are summarized as follows:

<table>
<tr><td></td><td>Area 133A</td><td>Area 133B</td><td>Area 133C</td></tr>
<tr><td>Increase in PR</td><td>6.5 to 7.0 (+7.7%)</td><td>6.4 to 6.8 (+6.3%)</td><td>6.4 to 6.7 (+4.7)</td></tr>
<tr><td>Increase</td><td>115 to 135</td><td>110 to 130</td><td>110 to 125</td></tr>
</table></td><td>Noted.

Noted.</td></tr>
</table>

	Comments	Housing Department's Response

in BH	mpD (+17.4%)	mPD (+18.2%)	mPD (+13.6%)

4. The Sites are currently situated on newly reclaimed land in the Tung Chung Extension Area, which is to be developed into an urban cluster with a stepped BH profile gradually reducing from the mountain backdrop in the south to the waterfront area in the north. The Sites are bound by the proposed Road D1 to the north; proposed Road D3 and planned District Open Space (DOS) to the west; proposed Road L7 to the south and areas zoned "Government, Institution and Community" ("G/IC") to the east. Across the roads, the Sites are surrounded by planned residential, commercial and GIC developments. 20m-wide Non-Building Areas (NBA) along the east-west direction in Areas 133A and 133C are stipulated in Figure 6 of the Explanatory Statement of the OZP.

Noted.

<u>Observation and Comments</u>

Urban Design and Visual

5. The Sites are located within an urban cluster to be developed into the Tung Chung Extension Area. The BH Restriction in the surrounding range from 45-55mPD for sites near the waterfront to 100-185mPD for sites closer to the mountain backdrop in the south. The proposed maximum BH of 125-135mPD and PR of 6.7-7.0 of the Sites is still lower than the maximum BH of commercial and residential development to the south and southeast of the Sites (i.e. 140-185mPD). Although the proposed increase in BH will render the stepped BH profile of Tung Chung Extension Area less prominent, the overall descending BH profile concept would still be maintained.

Noted.

	Comments	Housing Department's Response
	6. As demonstrated by the photomontages, the proposed increase in BH and PR would lead to a slightly larger building bulk visible only at some local viewpoints, but not observable for long-range viewers. In the VIA, the applicant has proposed mitigation measures such as podium setback from open space in Area 133A, landscape area in Area 133B and building block setback between Areas 133B and 133C to ameliorate the visual impact in the locality. Overall, significant adverse visual impact arising from the proposed minor relaxation of BHR and PR restriction is not anticipated.	Noted.
	Air Ventilation 7. An Air Ventilation Assessment – Expert Evaluation has been submitted to compare the ventilation performance of the Baseline Scheme, i.e. an OZP compliant scheme and the Proposed Scheme at pedestrian level.	Noted.
	8. When comparing with the Baseline Scheme, the proposed scheme maintains the 20m east-west running NBA in Areas 133A and 133C despite the addition of a 1-storey footbridge at P1/F across the NBA connecting to the proposed wet market. In addition, the proposed scheme has incorporated the following major mitigation measures to alleviate the potential impact on the surrounding wind environment: (i) 9m setback from the west boundary and 13m setback from the north boundary above podium level (29.5mPD); and (ii) 15-17m wide building separation along the east-west axis between Areas 133A and 133B to allow E wind to penetrate through the site.	Noted.

	Comments	Housing Department's Response
	9. With the above features incorporated in the Proposed Scheme, no significant adverse impact on the pedestrian wind environment of the surrounding areas is anticipated when compared to the Baseline Scheme.	Noted.
4.	**Environmental Protection Department** (17.5.2024)	
	We noted that the noise and air quality issues were assessed in the EAS report and the sewerage issue was assessed in the SIA report respectively. Both reports are considered to be acceptable to us. We also noted that the scenario of the screening buildings in TCAs 129 and 130 temporarily not in place was not assessed in the EAS. Still, we consider the EAS acceptable as both the rail noise and the traffic noise issues for the scenario of the screening buildings in TCAs 129 and 130 temporarily not in place have been addressed separately in an Environmental Review Report (ERR), namely, "Review on Potential Noise Impact at Area 133 with Interim Omission of Buildings in Area 129 and 130 (Ref. ER-05) (May 2024)". The report was submitted by CEDD under the Tung Chung New Town Extension EIA. The findings in the ERR is considered to be acceptable as well.	Noted.
5.	**Fire Services Department** (21.5.2024)	
	Please be advised that I have no specific comment on the captioned application. Detailed fire safety requirements will be formulated upon receipt of formal submission of general building plans and referral from relevant licensing authority.	Noted.
	Furthermore, the EVA provision in the captioned site shall comply with the standard as stipulated in Section 6, Part D of the Code	Noted.

	Comments	Housing Department's Response
	of Practice for Fire Safety in Buildings 2011 under the Building (Planning) Regulation 41D which is administered by the Buildings Department.	
6.	**Electrical and Mechanical Department** (22.5.2024)	
	1. Is the cooling capacity of 800 cooling tons recommended by Housing on 5 October 2022 adequate for Area 133A, considering the relaxation of plot ratio restrictions? 2. According to your previous advice, no commercial facilities will be designed in Area 133B and 133C and there should be no connection to the DCS. However, are there any commercial facilities that require district cooling services allowed within Area 133B and 133C after the relaxation of plot ratio restrictions?	It is confirmed that the cooling capacity is sufficient, considering the relaxation of plot ratio. There is no commercial facilities that require district cooling services within Tung Chung Area (TC) 133 B & C after the relaxation of plot ratio restrictions.
7.	**Food and Environmental Hygiene Department** (23.5.2024)	
	Schematic Drawings for Tung Chung Area 133A at Appendix 1A The site boundary of the proposed public market at Area 133A is of rectangular shape with a portion encroaching on the non-building area. However, ArchSD has previously informed that the footprint of the bridge connecting Block 1 of housing site to market site will be Site Coverage countable. ArchSD had discussed the matter with HD earlier and HD has no objection to modifying the site boundary of market site (as extracted below) so as to maintain the market site area to be 6,000m2 and the footbridge to remain inside housing site. The exact setting out will be further coordinated with HD. Therefore, the site boundary of the public market shall be subject to further review.	Noted. HD will further review with Food and Environmental Hygiene Department (FEHD)/Architectural Services Department (ArchSD) at detailed design stage for exact setting out of the notional site boundary of the proposed public market at TC 133A.

	Comments	Housing Department's Response
	Schematic Drawings for Area 133B PTI (including proposed Public Toilet) Please kindly note that our previous comments (copy attached below) the proposed public toilet (PT) in Area 133B PTI to HD dated 26 Oct 2023 as reiterated during the pre-submission circulation are still valid and have not been duly addressed in the pre-submission RtC. Subject to funding availability from the project proponent of the PTI (HD/TD), the location and extent of the 'PT' as indicated in the current submission has not yet been agreed by FEHD. The applicant is thus requested to update us on the present position of our outstanding comments or FEHD will not be able to answer for any public comment or query in relation to future provision of PT services thereat. Subject to the applicant's timely response to our previous comments, we may consider to impose approving conditions on this planning application.	During recent coordination between Housing Buraue (HB) /Transport Department (TD)/Highway Department (HyD)/ Housing Department (HD), HB advised HyD that HB would invite HyD to be the Controlling Officier of the PTI project at TC 133, endorsement of the PDS was scheduled in end of 2024. Noted FEHD's comments in location and extent of the PT. Kindly note that the drawings in s.16 are remarked "*for reference only and subject to design review*". HD will further liaise with the concerned department including FEHD at detailed design stage.
8.	**Leisure and Cultural Services Department** (23.5.2024)	
	Comments from SD/NTW LCSD has no comment on the Hong Kong Housing Authority (HKHA)'s proposed minor relaxation of plot ratios and building height restrictions for permitted public housing developments on the subject sites. Furthermore, the EVA provision in the captioned site shall comply with the standard as stipulated in Section 6, Part D of the Code of Practice for Fire Safety in Buildings 2011 under the Building (Planning) Regulation 41D which is administered by the Buildings Department.	Noted. Code of Practice for Fire Safety in Buildings 2011 will be complied.

	Comments	Housing Department's Response
	Government's vision is to build a quality, liveable living environment for her people, and the public has rightly been aspiring to such. It is HKHA's duty under the Housing Ordinance to secure the provision of housing and such amenities ancillary thereto as HKHA thinks fit for such kinds or classes of persons as HKHA may, subject to the approval of the Chief Executive, determine. If HKHA determines to provide housing which is devoid of recreation facilities as amenities ancillary thereto for the particular kinds or classes of persons involved, subject to CE's approval, it will be a decision that HKHA will have to justify or defend for itself.	Proposed recreational facilities in public housing developments were agreed among concerned departments in the approved planning briefs.
	On the interface issue between the public housing developments and their adjoining open spaces, HKHA needs to liaise with CEDD/LCSD and obtain their comments and prior agreement beforehand.	Noted.
	<u>Nil comment from IsDLSO</u>	
	For the proposed provision of Dedicated Pedestrian Zone (DPZ) in Area 133A, please note that our previous comments on the DPZ below are still valid for your observation and compliance.	Noted. Interfacing with open space at TC 145B will be further coordinated with LCSD at detailed design stage.
	"Given the site constraints as elaborated by HD at the meeting among LCSD, HD, PlanD and CEDD on 9 Jun 2022 and PlanD has expressed that the concerned DPZ/EVA (the 6m-wide zone or area at an absolute minimum) as part of the Linear Park in Area 145B adjacent to PHD in Area 133 can be carved out without affecting HD's Net Site Area and GFA calculation, LCSD has no	

	Comments	Housing Department's Response
	objection towards the DPZ proposal to facilitate the concerned housing development for meeting the statutory requirements of the concerned authorities. That said, prior agreement on the exact areas to be carved out from the Linear Park in Area 145B should be reached amongst the concerned departments, including PlanD, LandsD, CEDD and LCSD, with administrative logistics and relevant formalities such as planning application, liaision with LandsD and other relevant departments on site boundary and engineering conditions, etc, to be led and handled by HD. Besides, the exit/entrance of the wet market should not be designed facing LCSD's Linear Park for avoidance of anticipated management problem. HD and ArchSD should closely liaise with CEDD, the works agents of LCSD's Linear Park, on the interfacing issues with LCSD's prior comments sought as appropriate. HD will be responsible for the management and maintenance of the DPZ and should also be responsible for monitoring the management of DPZ, e.g. interfacing issue with the nearby retail facilities, to ensure that it will serve the required purpose."	
	<u>Comments from CEDD (in connection with the interfacing with the Linear Park in Area 145B)</u>	
	The Applicant does not provide any information on the interface area between Area 133A and Area 145B in the drawing TCA 133A Landscape Master Plan (IS29/-/S16/L/LMP-01). The Applicant should provide suitable planting and furniture to maintain reasonable greenery, tree canopies and seatings for residents / open space users. The Applicant should indicate appropriate	Noted. The design at the interfacing with open space at TC145B will be further coordinated with LCSD at detailed design stage.

	Comments	Housing Department's Response
	future connections with the open space and indicate the proposed paving material in the landscape master plan for coordination.	
	There are discrepancies between the drawings in Appendix 1A and Appendix 2A. The hatched at-grade open space 地面休憩空間 near Block 2 of Area 133A in Appendix 1A was found empty in the Landscape Master Plan in Appendix 2A. The proposed layout and design of the concerned area are to be clarified by the Applicant.	The concerned empty area near Block 2 is roof of kindergarten.
	The proposed layout at the Non-Building Area near the future wet market is to be revised to accommodate future pedestrian circulation. The current layout is too congested with planters, the main entrance of the housing estate, and the wet market. The convergence of circulation paths at one location is undesirable.	Noted. The circulation at the entrance will be further coordinated with ArchSD at detailed design stage.
	The Applicant should note the open space at Area 145B will be open to the public 24/7, and there is no fence or gates at the interface with Area 133B. In the drawings provided, the Applicant should clarify that no fence, wall, kerb or railing at the boundary of Area 145B, and barrier-free passages shall be allowed at all times.	Noted. Interfacing with open space at TC 145B will be further coordinated with LCSD at detailed design stage.
	For the TCA 133A Landscape Master Plan (IS29/-/S16/L/LMP-01), the Applicant should clarify the grey dotted line with annotation. Please provide annotations for easier understanding of the proposed finish floor levels, paving material and furniture.	The concerned grey dotted line is representing the proposed EVA.
	For the drawing IS29/-/S16/L/LO-01 in Appendix 2A, the Applicant should provide	Noted. Buffer greening will be provided along the interfacing area outside the EVA.

	Comments	Housing Department's Response
	greenery treatment along the interface area between Area 133A and Area 145B.	
	The Applicant should review the combination of 6m wide EVA + 10m wide commercial frontage or a 6m footpath and 10m wide commercial frontage along the interface between Area 133A and Area 145B, the paved area will be highly exposed to sunshine. The Applicant should ensure sufficient drainage and lighting will be provided.	6m wide EVA is required to serve the public housing development. We will ensure sufficient drainage and lighting provision along the concerned area.
	Please indicate the proposed finish floor level of EVA in the drawing IS29/-/S16/A/LO-01 in Appendix 1A for reference.	The proposed finish floor level will be at about +6mPD subject to detail design.
	The Applicant should provide sufficient drainage at the lot boundary, and all surface runoff shall not flow outside the lot boundary.	Noted.
	The Applicant should provide fixed and durable demarcation along the lot boundary.	Noted.
	The Applicant should clarify the legend of the jogging path in the Landscape Master Plan (IS29/-/S16/L/LMP-01). The Applicant should not directly connect any jogging path to the open space.	Noted.
	The Applicant should match the paving material at the NBA area with the paving material of the open space.	Noted. Selection of paving material will be further coordinated with LCSD at detailed design stage.
9.	**Transport Department** (24.5.2024)	
	The applicant should advise that the following of HKPSG are complied with:	
	(a) The car parking spaces should also be of "shared-use" by van-type light goods vehicles or taxis in addition to the private	Noted.

	Comments	Housing Department's Response
	cars.	
	(b) The light goods vehicles parking spaces should be of "shared-use" by light goods vehicles and light buses. The dimensions are 8m in length, 3.5m in width and 3.6m in minimum headroom.	Noted.
	(c) The loading/unloading bays provided for each residential block should be of "shared-use" by coaches/buses and medium/heavy goods vehicles for overnight parking. The dimensions are 12m in length, 3.5m in width and 4.7m in minimum headroom.	Noted for the dimensions. The loading/unloading bays may be utilised for overnight parking in accordance with HKPSG. The loading/unloading standard including the overnight parking requirement should be applied with due consideration of the site constraint and local situation.
	(d) Apart from residential blocks, the loading/unloading bays at estate commercial centres or any other retail/commercial developments should also be utilized by coaches/buses and medium/heavy goods vehicles for overnight parking.	Loading/unloading bay may be utilised for overnight parking in accordance with HKPSG. The loading/unloading standard including the overnight parking requirement should be applied with due consideration of the site constraint and local situation.
	(e) Sufficient carparking provisions, taxi and private car lay-bys and loading/unloading provisions, if necessary, should be allowed within the Sites for the kindergarten.	For TC 133A – One loading / unloading bays for domestic will share use with other non-domestic facilities which include kindergarten. For TC 133B – One loading / unloading bays for domestic will share use with other non-domestic facilities which include kindergarten. For TC 133C – One loading / unloading area for welfare facilities will share use with non-domestic facilities which include kindergarten.

The following 13 departments have no comments:

1.	Highways Department (3.5.2024)
2.	Water Supplies Department (8.5.2024)

3.	Government Flying Service (12.5.2024)
4.	Drainage Services Department (14.5.2024)
5.	Architectural Services Department (16.5.2024)
6.	Education Bureau (17.5.2024)
7.	Civil Engineering and Development Department (Geotechnical Engineering Office) (17.5.2024)
8.	Social Welfare Department (20.5.2024)
9.	Hong Kong Police Force (21.5.2024)
10.	Electrical and Mechanical Services Department (22.5.2024)
11.	Civil Engineering and Development Department (Sustainable Lantau Office) (28.5.2024)
12.	Home Affairs Department (30.5.2024)
13.	Planning Department (Sai Kung & Island District Planning Office) (30.5.2024)

香港房屋委員會
Hong Kong Housing Authority

Our Ref. HD(P) 8/3/IS27

Tel No. 2761 5301
Fax No. 2761 5870

Your Ref.

Date: 14th June 2024
By Email

Secretary, Town Planning Board
15/F, North Point Government Offices,
333 Java Road, North Point
Hong Kong

Dear Sir/Madam,

Section 16 Planning Application for Proposed Minor Relaxation of Restrictions of Plot Ratio and Building Height for the Public Housing Developments at Tung Chung Areas 133A, 133B and 133C
(Application no. A/I-TCE/4)

Reference is made to the captioned Section 16 application received by the Town Planning Board on 26.4.2024 and the comments received from Planning Department dated 27.5.2024, 29.5.2024, 7.6.2024 and 11.6.2024. We submit herewith the table summarizing the responses to comments. Refined figures for the Visual Impact Assessment report, which involve no change to the photomontages, and only relate to newly added annotations to provide clarifications, are also attached.

Should you have any queries or need further information, please contact me at 2761 5310. Thank you for your attention.

Yours faithfully,

(Alan LAU)
for Director of Housing

Encl.

S.16 Application No. A/I-TCE/4

Proposed Minor Relaxation of Restrictions of Plot Ratio and Building Height for the Public Housing Developments at Tung Chung Areas 133A, 133B and 133C

Response to Comments

	Comments	Housing Department's Response
1.	**Planning Department (Sai Kung & Islands District Planning Office)** (7 & 11.6.2024)	
	Please provide the following supplementary info for our processing.	
	Annotation on photomontages of VIA – please add (i) BHR under OZP to baseline scheme; and (ii) BH of proposed scheme; (iii) proposed level of BH relaxation;	Relevant photomontages amended and attached.
	Definition and Function of Dedicated Pedestrian Zone (DPZ) and Justifications for including "O" zone (i.e. the DPZ") into the development; and	The DPZ is a 6.5m wide zone serves as an Emergency Vehicular Access (EVA) and pedestrian path, thus releasing more area for integrated open space and greening. The proposed DPZ does not count toward the plot ratio and local open space within the public housing developments. The DPZ is also accessible to public and could have function of open space.
	The GFA allocated for Social Welfare Facilities in (i) each of the Sites; and (ii) % of domestic GFA allocated for SWFs in the three Sites in total;	As agreed with SWD, about 5% of domestic GFA for each TC 133B and TC 133C would be allocated for Social Welfare Facilities (ie. TC133B approximately 5,800 sqm and TC133C 6,100 sqm) and no Social Welfare Facilities at TC 133A. The currently proposed Social Welfare Facilities would make up to about 2.3% of total domestic GFA of TC 133A, B & C three sites.

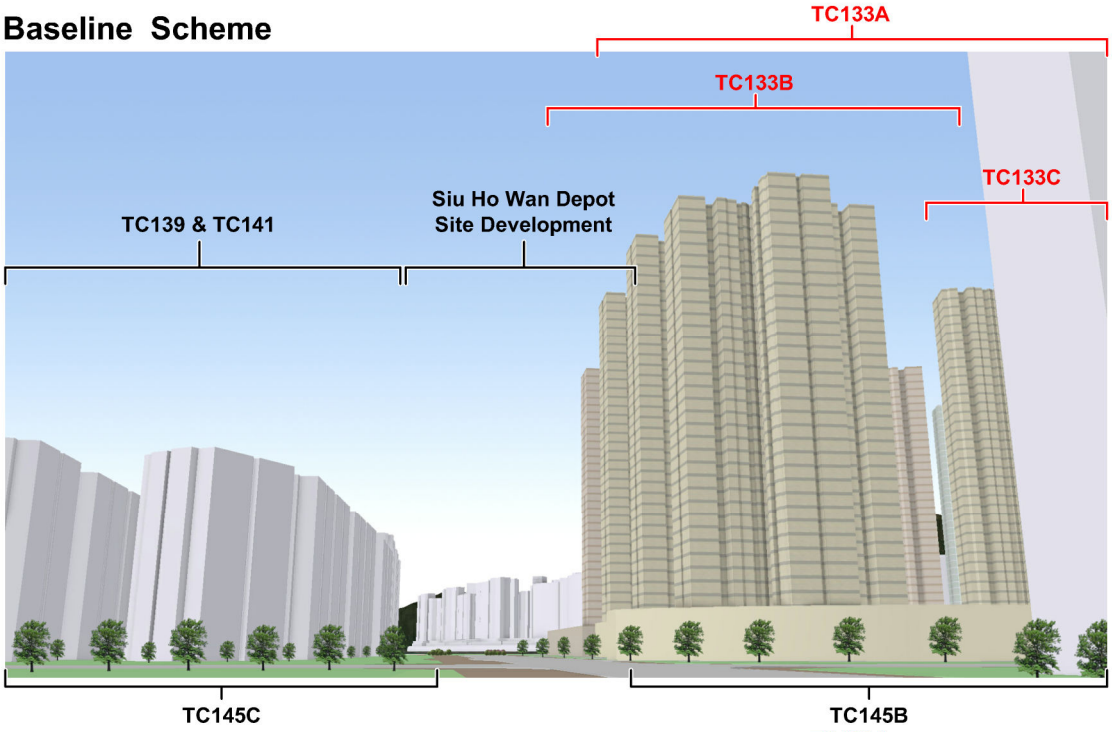
	Comments	Housing Department's Response
2.	**Public Comment (from Ms. Marry Mulvihill)** (24.5.2024)	
	About Flat size / average household size Why the large divergence between the flat production and design population for TC 133A and C while TC 133B is relatively in harmony with around 20% increase in both areas? The different in TC 133A is alarming, 50% increase in production with only 18% in population. So is the plan to reduce the size of the units, to provide more nano flats? This is contray to public expectations and pledges that the quality and size of housing will improve not diminish.	Please note that an average household size assumption of 3.06 was adopted for the baseline scheme; while the population of current scheme are based on the individual household size of the proposed flat mix or average household size of 2.7, as remarked in table 2-4 in the planning statement. HA has been adopting Modular Flat Design (MFD) in public housing development. There are currently four types of modular flat design: Type A flat (1-2 person), Type B flat (2-3 person), Type C flat (3-4 person) and Type D flat (4-5 person).
	About the Open Space Then the Open Space. It is incredible that the paper state that there will be 1 sqm. OS per resident with no increase in footprint and with all the OS facilities on one level. By adding additional units the quality of the OS is further compromised and it appears impossible to provide the quantity stated. In addition, the OS is not open, much of it is covered. For TC 133B it is practically all covered and surrounded by high walls. It is obvious that there will be poor ventilation, and little or no penetration of sunlight. The community services will also suffer from poor ventilation and lack of natural light, most alarming as some of these facilities will cater to the elderly, disabled and young children.	The current provision of open space is not less than 1 sqm per person which fulfilled the requirement of The Hong Kong Planning Standards and Guidelines. Cross ventilation is provided in passive recreation facilities under cover. The design and provision of community facilities will observe relevant requirements and guidelines. The AVA submitted has demonstrated that there is no adverse impact on air ventilation.
	About design of blocks The design of some of the blocks is alarming. A significant portion of the towers will have no support. But Tung Chung is a waterside	The structural design will be complied with relevant statutory requirements.

	Comments	Housing Department's Response
	location, the land is reclaimed. In view of the predictions of ferocious storms in coming decades, is the design even safe? Reclaimed land is highly susceptible to soil liquefaction and other issues. **About visual impact** The additional height completely overturns design principles PlanD has trotted out for years, that there be descending levels of height towards the waterfront. These developments are the reverse. They create a significant wall effect both along the waterfront and for those homeowners unlucky enough to have invested in homes behind the sites.	VIA and AVA have been conducted, which demonstrated that there would be no adverse impact to the surrounding from the proposed developments with appropriate design. Besides, the proposed BH fits into the descending building height profile toward the waterfront in TCNTE Area.
3.	**Public Comment (from MTRC)** (24.5.2024)	
	The Corporation has, in general, no objection to the captioned Section 16 application (Application No. A/I-TCE/4) for a proposed minor relaxation of plot ratio and building height restrictions for the permitted public housing development in Government Land at Areas 133A, 113B and 133C in Tung Chung. As the proposed developments are situated close to the MTR Tung Chung Line (TCL) and the Airport Express (AEL), noise from train operations could have a potential impact on any future occupants. We note from the Environmental Assessment Reports that the design schemes of Areas 133A and 133 C has been changed or refined as compared with the approved Environmental Impact Assessment (EIA) Report for Tung Chung Line Extension (AEIAR-235/2022) (approved EIA). Also, due to the proposed relaxation of the GFA and building height at the application sites, there	We note that MTRC has no objection to our Section 16 application. We note that MTRC has conducted a detailed railway noise impact assessment which covers the proposed residential developments at Tung Chung Area 133A and 133C in their EIA Report for Tung Chung Line Extension (AEIAR-235/2022) ("approved MTRC's TCLE EIA report") approved by EPD in 2022. Compared to the building layout plans adopted in the approved MTRC's TCLE EIA report, the

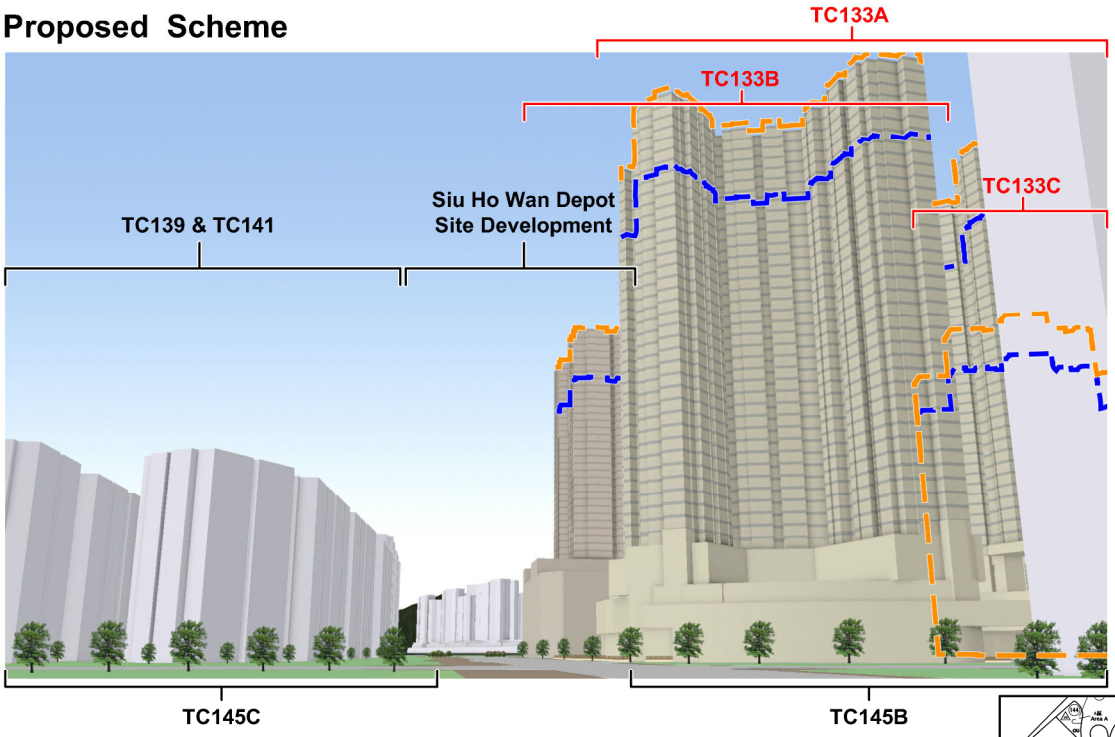
	Comments	Housing Department's Response
	would be a greater number of occupants who are expected to have potential impact by train noise. The predicted noise levels at the noise sensitive receivers were just evaluated qualitatively by making reference to the results in the approved EIA report, and no detailed noise assessment was carried out based on the revised schemes. In order to have a more comprehensive and accurate estimate of the railway noise impact, we recommend the applicant's consultant to conduct a detailed quantitative noise review based on the latest building layouts of the proposed developments.	two residential blocks originally planned at the southwestern corner of Area 133A are now excluded in our revised scheme submitted under this Section 16 application as that portion of the site is now reserved for a public wet market. Other proposed residential blocks in Areas 133A and 133C in our revised scheme have similar setback distance and either smaller or same view angles to the railway compared to the original scheme adopted in the approved MTRC's TCLE EIA. As our revised scheme is optimized with respect to the rail noise impacts compared to the original scheme adopted in the approved MTRC's TCLE EIA report, the "qualitative" rail noise review in our Environment Assessment Study (EAS) Reports by making reference to the findings of the approved MTRC's TCLE EIA can adequately justify the railway noise compliance for the revised scheme for both Areas 133A and 133C and our EAS reports have been approved by EPD. It is considered that the detailed "quantitative" rail noise review suggested by MTRC is not required.
	We have also noticed from the Environmental Assessment Reports that key mitigation measure of railway noise impact is the noise screen structures of the high-rise residential / commercial development and G/IC development at Areas 113, 129, 130, 131, 132, 136 and 137. It is recommended that, should a programme mismatch occur between the implementation of these developments with noise screening structures and occupation of the residential sites at Area 133A and 133C, supplementary noise reviews shall be conducted by the applicant's consultant for the	It is noted that the Government has conducted an environmental review to confirm the predicted railway noise level and the road traffic noise level of Area 133 will comply with the criteria and considered acceptable under the interim arrangement without the concerned noise screening buildings. EPD has no comments to the Government's environmental review report and placed it in EIAO Ordinance Registry for access by the public. As the Government's environmental review report has concluded no potential rail noise impact on Area 133 under the interim

	Comments	Housing Department's Response
	concerned residential sites. Besides, to cater for the contingency that the noise screening structures are finally built shorter than those assumed in the noise assessment/approved EIA, given some of the flats may have a direct line-of-sight towards the rail lines in such case, we suggest that the applicants' consultant shall conduct supplementary noise assessment, to be reviewed and approved by the Environmental Protection Department, and implement necessary noise mitigation measures to ensure full compliance with statutory requirements.	arrangement without the concerned noise screening buildings, it is considered that the supplementary noise assessment suggested by MTRC is not required.
	Should approval be granted to the Section 16 Planning Application, we urge the Town Planning Board gives due consideration to our concerns and impose related development requirements through planning approval conditions.	As MTRC's concerns mentioned in Items 2 and 3 above have been properly addressed under our EAS reports and the Government's environmental review reports approved by EPD, it is not necessary to impose development requirements through planning approval conditions.

Baseline Scheme

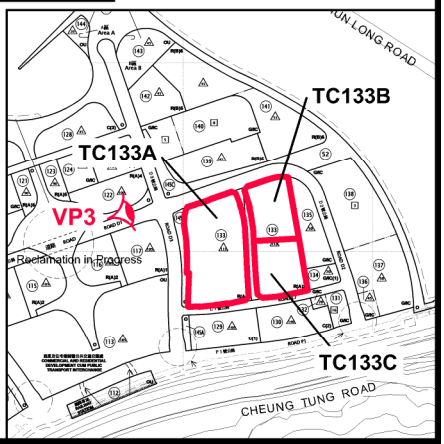


Proposed Scheme



LEGEND:

- TC133A
- TC133B
- TC133C
- Maximum Building Height Restriction Under OZP at 115mPD for TC133A and 110mPD for 133B & 133C
- Proposed Maximum Building Height Restriction at 135mPD for TC133A, 130mPD for 133B and 125mPD for 133C



PHOTOMONTAGE AT VIEWPOINT 3 (VIEW FROM THE PLANNED CENTRAL GREEN AT TUNG CHUNG AREA 118)

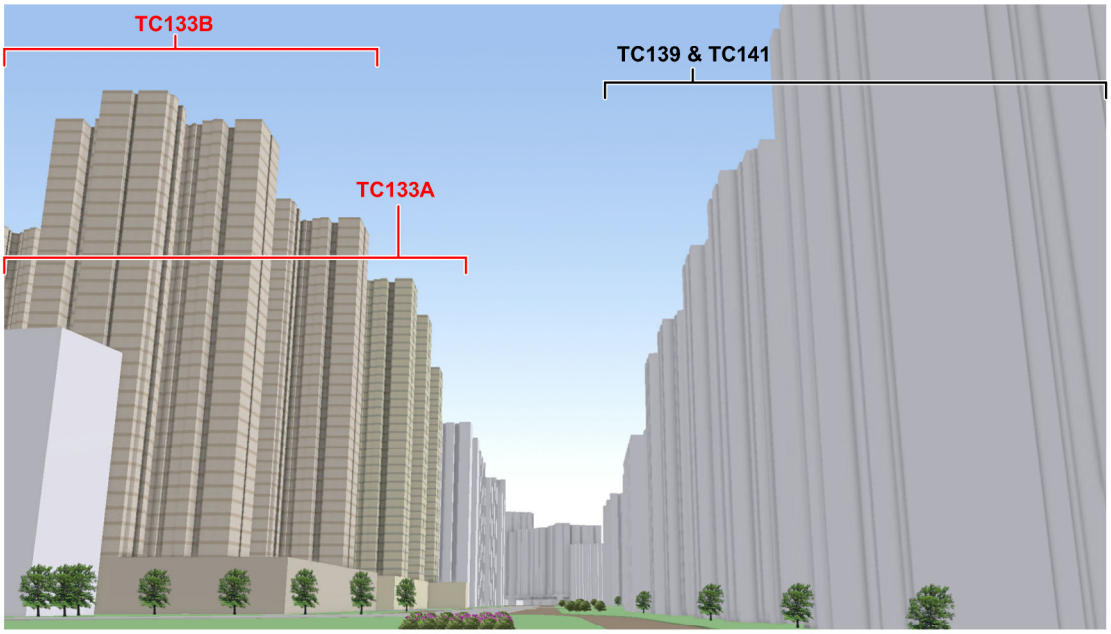
HOUSING DEPARTMENT
PLANNING SECTIONS

Figure 6

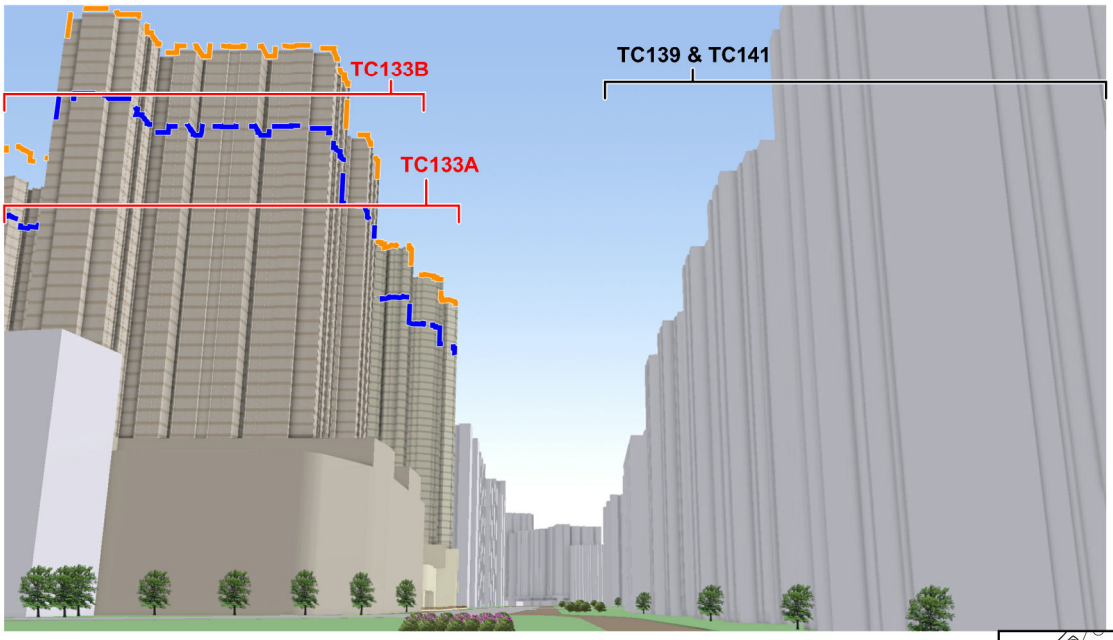
DATE :
12. 6. 2024

24_0434I_VP3

Baseline Scheme

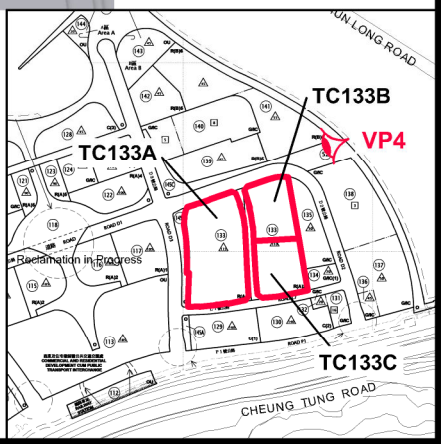


Proposed Scheme



LEGEND:

- TC133A
- TC133B
- TC133C
- Maximum Building Height Restriction Under OZP at 115mPD for TC133A and 110mPD for 133B & 133C
- Proposed Maximum Building Height Restriction at 135mPD for TC133A, 130mPD for 133B and 125mPD for 133C



PHOTOMONTAGE AT VIEWPOINT 4 (VIEW FROM THE PLANNED CIVIC WATERFRONT PARK AT TUNG CHUNG AREA 52)

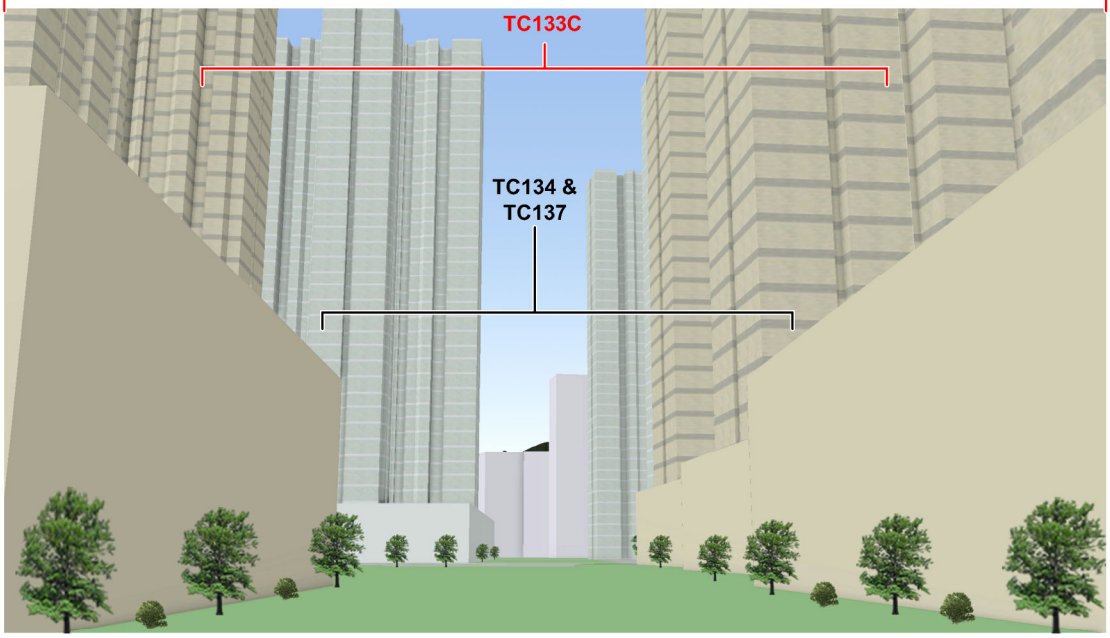
HOUSING DEPARTMENT
PLANNING SECTIONS

Figure 7

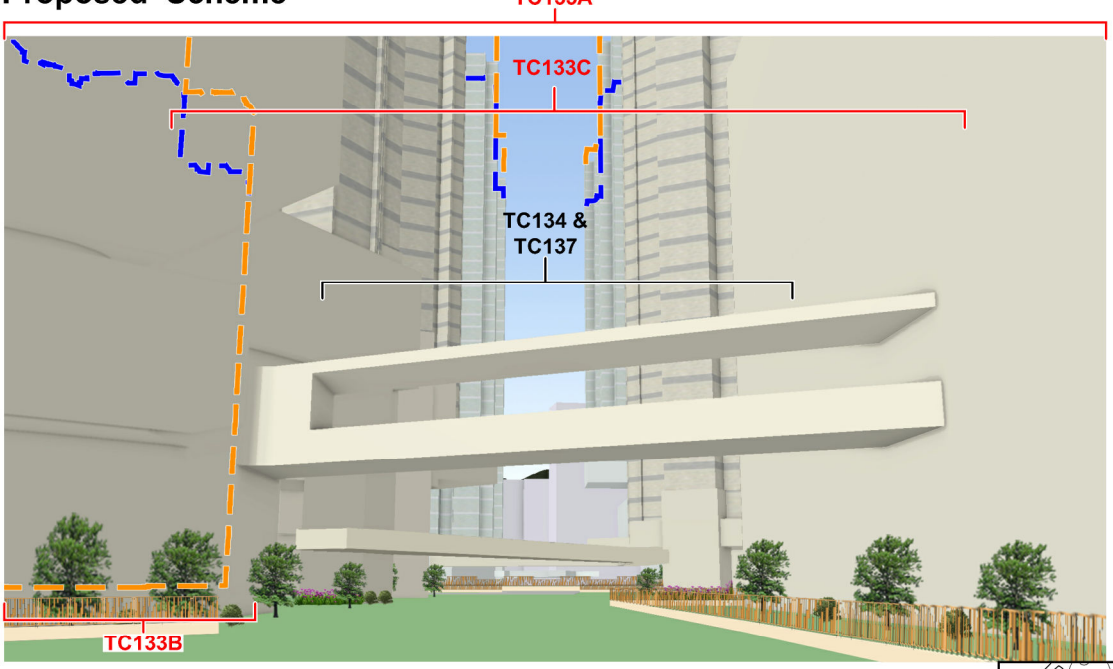
DATE :
12. 6. 2024

24_0434I_VP4

Baseline Scheme

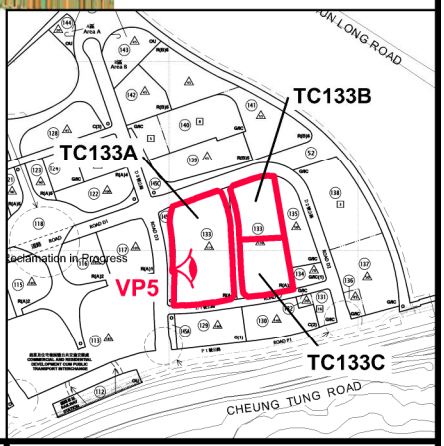


Proposed Scheme



LEGEND:

- TC133A
- TC133B
- TC133C
- Maximum Building Height Restriction Under OZP at 115mPD for TC133A and 110mPD for 133B & 133C
- Proposed Maximum Building Height Restriction at 135mPD for TC133A, 130mPD for 133B and 125mPD for 133C



PHOTOMONTAGE AT VIEWPOINT 5 (VIEW FROM THE PLANNED N-S LINEAR PARK AT AREA 145B)

HOUSING DEPARTMENT
PLANNING SECTIONS

Figure 8

DATE :
12. 6. 2024

24_0434I_VP5_v2

Appendix II of
RNTPC Paper No. A/I-TCE/4

Similar Applications

Application No.	Location	Zoning	Date of Consideration	Decision of the RNTPC	Approval Condition
A/I-TCE/1 Proposed Minor Relaxation of Plot Ratio (PR) Restriction for Permitted Public Housing Development and Proposed Public Vehicle Park	Government Land at Area 99, Tung Chung, Lantau Island	"R(A)3"	6.11.2020	Approved with condition	(a)
A/I-TCE/2 Proposed Minor Relaxation of PR Restriction for Permitted Public Housing Development	Government Land at Area 109, Tung Chung, Lantau Island	"R(A)5"	18.2.2022	Approved	-
A/I-TCE/3 Proposed Minor Relaxation of PR and Building Height Restrictions for Permitted Public Housing Development	Government Land at Area 103, Tung Chung, Lantau Island	"R(A)5"	9.9.2022	Approved	-
A/I-TCTC/67 Proposed Minor Relaxation of PR and BH Restrictions for Permitted Public Housing Developments	Government Land at Areas 42 and 46, Tung Chung, Lantau Island	"R(A)2" and "R(A)3"	22.12.2023	Approved	-

Approval Condition:

(a) The design and provision of vehicular access, car parking and loading/unloading facilities to the satisfaction of the Commissioner for Transport or of the Town Planning Board.

MTR Corporation Limited
香港鐵路有限公司
www.mtr.com.hk

Secretary, Town Planning Board
15/F, North Point Government Offices,
333 Java Road,
North Point,
Hong Kong

Our ref: T&ESD/E&IC/ES/EnvE/L1246

Date: 24 MAY 2024

By Post and Fax
(Fax no.: 2877 0245 / 2522 8426)

Dear Sir/Madam,

Comments on the Section 16 Planning Application regarding Proposed Minor Relaxation of Plot Ratio and Building Height Restrictions for Permitted Public Housing Developments in Government Land at Area 133A, Area 133B and Area 133C in Tung Chung, Lantau Island
(Application No. A/I-TCE/4)
Operational Railway Noise Concerns

The Corporation has, in general, no objection to the captioned Section 16 application (Application No. A/I-TCE/4) for a proposed minor relaxation of plot ratio and building height restrictions for the permitted public housing development in Government Land at Areas 133A, 133B and 133C in Tung Chung. As the proposed developments are situated close to the MTR Tung Chung Line (TCL) and the Airport Express (AEL), noise from train operations could have a potential impact on any future occupants.

We note from the Environmental Assessment Reports that the design schemes of Areas 133A and 133C has been changed or refined as compared with the approved Environmental Impact Assessment (EIA) Report for Tung Chung Line Extension (AEIAR-235/2022) (approved EIA). Also, due to the proposed relaxation of the GFA and building height at the application sites, there would be a greater number of occupants who are expected to have potential impact by train noise. The predicted noise levels at the noise sensitive receivers were just evaluated qualitatively by making reference to the results in the approved EIA report, and no detailed noise assessment was carried out based on the revised schemes. In order to have a more comprehensive and accurate estimate of the railway noise impact, we recommend the applicant's consultant to conduct a detailed quantitative noise review based on the latest building layouts of the proposed developments.

MTR Corporation Limited
香港鐵路有限公司
www.mtr.com.hk

Our ref: T&ESD/E&IC/ES/EnvE/L1246
Date : 24 MAY 2024

We have also noticed from the Environmental Assessment Reports that key mitigation measure of railway noise impact is the noise screening structures of the high-rise residential/ commercial development and G/IC development at Areas 113, 129, 130, 131, 132, 136 and 137. It is recommended that, should a programme mismatch occur between the implementation of these developments with noise screening structures and occupation of the residential sites at Areas 133A and 133C, supplementary noise reviews shall be conducted by the applicant's consultant for the concerned residential sites. Besides, to cater for the contingency that the noise screening structures are finally built shorter than those assumed in the noise assessment/approved EIA, given some of the flats may have a direct line-of-sight towards the rail lines in such case, we suggest that the applicants' consultant shall conduct supplementary noise assessment, to be reviewed and approved by the Environmental Protection Department, and implement necessary noise mitigation measures to ensure full compliance with statutory requirements.

Should approval be granted to the Section 16 Planning Application, we urge the Town Planning Board gives due consideration to our concerns and impose related development requirements through planning approval conditions.

Should you have any queries, please feel free to contact our Lead Environmental Manager Ms. Catherine Leung at

Yours faithfully,

Chan Hing Keung
Chief of Operations Engineering Service & Innovation

c.c Mr. TSANG Sai Wing, Terence - Assistant Director of EPD (Environmental Assessment)
Mr. LEE Chee Kwan - Principal Environmental Protection Officer (Assessment & Noise)

☐Urgent ☐Return receipt ☐Expand Group ☐Restricted ☐Prevent Copy

From: [redacted]
Sent: 2024-05-24 星期五 21:26:17
To: tpbpd/PLAND <tpbpd@pland.gov.hk>
Subject: A/I-TCE/4 Area 133A, Area 133B and Area 133C, Tung Chung PH

A/I-TCE/4

Government Land at Area 133A, Area 133B and Area 133C, Tung Chung, Lantau Island

Proposed MAJOR Relaxation of PR and BHR for Permitted Public Housing

PR 6.5 to 7. 0 6.4 to 6.8 BHR 115mPD to 135mPD / 110mPD to 130mPD

Dear TPB Members,

Of course the application will be approved, what member would dare object to PH and be labelled a trouble maker?

However, members do have a duty to ask questions.

Why the large divergence between the flat production and design population for A and C while B is relatively in harmony with around 20% increase in both areas?

The difference in A is alarming, 50% increase in production with only 18% in population.

So is the plan to reduce the size of the units, to provide more nano flats? This is contrary to public expectations and pledges that the quality and size of housing will improve not diminish.

Then the Open Space. It is incredible that the paper state that there will be 1sq.m OS per resident with no increase in footprint and with all the OS facilities on one level. By adding additional units the quality of the OS is further compromised and it appears impossible to provide the quantity stated.

In addition, the OS is not open, much of it is covered. For B it is practically all covered and surrounded by high walls. It is obvious that there will be poor ventilation, and little or no penetration of sunlight.

The community services will also suffer from poor ventilation and lack of natural light, most alarming as some of these facilities will cater to the elderly, disabled and young children.

The design of some of the blocks is alarming. A significant portion of the towers will have no support. But Tung Chung is a waterside location, the land is reclaimed. In view of the predictions of ferocious storms in coming decades, is the design even safe? Reclaimed land is highly susceptible to soil liquefaction and other issues.

Visual Impact. The additional height completely overturns design principles PlanD has trotted out for years, that there be descending levels of height towards the waterfront. These developments are the reverse. They create a significant wall effect both along the waterfront and for those homeowners unlucky enough to have invested in homes behind the sites.

Members must remember that whatever pressure they are under, the main purposes and functions of the TPB remain unchanged:

"*To promote the health, safety, convenience and general welfare of the community*"

"The TPB also remains an independent statutory decision making body, which has a specific responsibility to take account of a wide range of matters which fall within the ambit of Town Planning. It must take account of relevant matters and not take account of irrelevant matters".

Decisions must be reached on the merits of the plan not the political implications.

Mary Mulvihill

Appendix IV of
RNTPC Paper No. A/I-TCE/4

Advisory Clauses

(a) to note the comments of Director of Fire Services that:

- the EVA provision in the application site shall comply with the standard as stipulated in Section 6, Part D of the Code of Practice for Fire Safety in Buildings 2011 under the Building (Planning) Regulation 41D which is administered by the Buildings Department;

(b) to note the comments of Director-General of Civil Aviation that:

- in view of the proximity between the subject locations (Tung Chung Areas 133A, 133B and 133C) and the Hong Kong International Airport (HKIA), aircraft noise generated by approaching and departing aircraft should be anticipated. In addition, the captioned area are close to the helicopter holding areas and helicopter flight paths (i.e. Pak Mong route), which might also contribute to the elevated noise environment. In fact, aircraft noise complaints from the residents in Tung Chung area have been received by his Department from time to time. Therefore, the implementation of the appropriate noise mitigation measures (e.g. using acoustic insulation/specific building designs etc.) to enhance the indoor living environment is recommended. Similar comments have been provided for various residential developments which are located in close proximity to the HKIA and helicopter routes (e.g. proposed residential developments atop Siu Ho Wan Depot, public housing developments at Tung Chung East Reclamation areas 119 and 122, residential development proposal at Ma Wan South, etc.) and the concerned departments/organizations (e.g. Housing Department, CEDD's consultant, etc.) have taken his views on the anticipated aircraft/helicopter noise issues as well as suggestions for implementing appropriate noise mitigation measures;

(c) to note the comments of Chief Town Planner/Urban Design and Landscape, Planning Department that:

- optimisation of native species should be considered in respect of planting so as to enhance bio-diversity;

- approval of s.16 application under the Town Planning Ordinance does not imply approval of the site coverage of greenery requirements under DEVB TC(W) No. 3/2012. The site coverage of greenery calculation should be submitted separately to BD/relevant departments for approval. Similarly for any proposed tree preservation/removal scheme and compensatory planting proposal under DEVB TC(W) No. 4/2020, the applicant is reminded to approach relevant authorities direct to obtain the necessary approval;

(d) to note that comments of Director of Leisure and Cultural Services that:

- it is Hong Kong Housing Authority (HKHA)'s duty under the Housing Ordinance to secure the provision of housing and such amenities ancillary thereto as HKHA

thinks fit for such kinds or classes of persons as HKHA may determine, subject to the approval of the Chief Executive (CE). If HKHA determines to provide housing which is devoid of recreation facilities as amenities ancillary thereto for the particular kinds or classes of persons involved, subject to CE's approval, it will be a decision that HKHA will have to justify or defend for itself;

- on the interface issue between the public housing developments and their adjoining open spaces, HKHA needs to liaise with CEDD/LCSD and obtain their comments and prior agreement beforehand;

(e) to note the comments of Director of Food and Environmental Hygiene that:

- as far as the provision of a public toilet (PT) at the PTI of TC 133B is concerned, the applicant should keep DFEH informed of the implementation programme of the public housing development; and to closely liaise with concerned B/Ds on the design and implementation of the concerned PT; and

- detailed comments on the location and detailed design of the PT shall be provided at later stage.