

This document is received on 27 JUL 2021.  
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; and  
位於鄉郊地區土地上及/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  
位於鄉郊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.info.gov.hk/tpb/en/plan\\_application/apply.html](https://www.info.gov.hk/tpb/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.info.gov.hk/tpb/tc/plan\\_application/apply.html](https://www.info.gov.hk/tpb/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

For Official Use Only 請勿填寫此欄	Application No. 申請編號	A/TM/1565
	Date Received 收到日期	27 JUL 2021

- 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。
- 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.info.gov.hk/tpb/>. 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.info.gov.hk/tpb/>), 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 樓及新界沙田上禾輦路 1 號沙田政府合署 14 樓) 索取。
- 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)  
The Kowloon Motor Bus Co. (1933) Ltd.

### 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 in DD138 & DD300, Site A, B and C of Tuen Mun Chek Lap Kok Tunnel Road
(b) Site area and/or gross floor area involved 涉及的地盤面積及/或總樓面面積	<input checked="" type="checkbox"/> Site area 地盤面積 ..... 16,845 ..... sq.m 平方米 <input checked="" type="checkbox"/> About 約 <input checked="" type="checkbox"/> Gross floor area 總樓面面積 Site A - 57,845 sq.m 平方米 <input checked="" type="checkbox"/> About 約 Site B - 1,041
(c) Area of Government land included (if any) 所包括的政府土地面積 (倘有)	..... 16,845 ..... sq.m 平方米 <input checked="" type="checkbox"/> About 約



(d) Name and number of the related statutory plan(s) 有關法定圖則的名稱及編號	S/TM/35
(e) Land use zone(s) involved 涉及的土地用途地帶	Road
(f) Current use(s) 現時用途	Vacant Site  (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"<sup>#&</sup> (please proceed to Part 6 and attach documentary proof of ownership).  
是唯一的「現行土地擁有人」<sup>#&</sup> (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"<sup>#&</sup> (please attach documentary proof of ownership).  
是其中一名「現行土地擁有人」<sup>#&</sup> (請夾附業權證明文件)。
- ☐ is not a "current land owner"<sup>#</sup>.  
並不是「現行土地擁有人」<sup>#</sup>。

- ☒ 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)"<sup>#</sup>.  
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」<sup>#</sup>。

(b) The applicant 申請人 –

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

Details of consent of "current land owner(s)" <sup>#</sup> obtained 取得「現行土地擁有人」 <sup>#</sup> 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)"<sup>#</sup>  
已通知 ..... 名「現行土地擁有人」<sup>#</sup>。

Details of the "current land owner(s)" <sup>#</sup> notified 已獲通知「現行土地擁有人」 <sup>#</sup> 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)<sup>#&</sup>  
於 \_\_\_\_\_ (日/月/年)向每一名「現行土地擁有人」<sup>#</sup>郵遞要求同意書<sup>&</sup>

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)<sup>&</sup>  
於 \_\_\_\_\_ (日/月/年)在指定報章就申請刊登一次通知<sup>&</sup>
- ☐ posted notice in a prominent position on or near application site/premises on \_\_\_\_\_ (DD/MM/YYYY)<sup>&</sup>  
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<sup>&</sup>
- ☐ sent notice to relevant owners' corporation(s)/owners' committee(s)/mutual aid committee(s)/management office(s) or rural committee on \_\_\_\_\_ (DD/MM/YYYY)<sup>&</sup>  
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<sup>&</sup>

Others 其他

- ☐ others (please specify)  
其他（請指明）

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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) Change of use within existing building or part thereof  
第(i)類 更改現有建築物或其部分內的用途
- ☐ Type (ii) Diversion of stream / excavation of land / filling of land / filling of pond as required under Notes of Statutory Plan(s)  
第(ii)類 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) Public utility installation / Utility installation for private project  
第(iii)類 公用事業設施裝置/私人發展計劃的公用設施裝置
- ☐ Type (iv) Minor relaxation of stated development restriction(s) as provided under Notes of Statutory Plan(s)  
第(iv)類 略為放寬於法定圖則《註釋》內列明的發展限制
- ☒ Type (v) Use / development other than (i) to (iii) above  
第(v)類 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 <input type="checkbox"/> About 約		
	Non-domestic part 非住用部分 ..... sq.m 平方米 <input type="checkbox"/> About 約		
	Total 總計 ..... sq.m 平方米 <input type="checkbox"/> 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	<input type="checkbox"/> Diversion of stream 河道改道 <input type="checkbox"/> Filling of pond 填塘 Area of filling 填塘面積 ..... sq.m 平方米 <input type="checkbox"/> About 約 Depth of filling 填塘深度 ..... m 米 <input type="checkbox"/> About 約  <input type="checkbox"/> Filling of land 填土 Area of filling 填土面積 ..... sq.m 平方米 <input type="checkbox"/> About 約 Depth of filling 填土厚度 ..... m 米 <input type="checkbox"/> About 約  <input type="checkbox"/> Excavation of land 挖土 Area of excavation 挖土面積 ..... sq.m 平方米 <input type="checkbox"/> About 約 Depth of excavation 挖土深度 ..... m 米 <input type="checkbox"/> 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	<input type="checkbox"/> Public utility installation 公用事業設施裝置 <input checked="" type="checkbox"/> 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)
	Site B - 2-storey substation	1	56.5 m (L) x 11 m (W) x 15.6 m (H)
(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 From 由 ..... to 至 .....  
地積比率限制
- ☐ Gross floor area restriction From 由 .....sq. m 平方米 to 至 .....sq. m 平方米  
總樓面面積限制
- ☐ Site coverage restriction From 由 .....% to 至 ..... %  
上蓋面積限制
- ☐ Building height restriction From 由 .....m 米 to 至 ..... m 米  
建築物高度限制
- From 由 ..... 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 From 由 .....m to 至 ..... m  
非建築用地限制
- ☐ 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 bus depots and public utility installation  
(electricity substation)

(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	Site A - 57,845, Site B - 1,041, Site C - 0	..... sq.m 平方米	<input checked="" type="checkbox"/> About 約
Proposed plot ratio 擬議地積比率	Site A - 7.30, Site B - 0.79, Site C - 0	.....	<input checked="" type="checkbox"/> About 約
Proposed site coverage 擬議上蓋面積	Site A - G/F to 1/F: 94, 2/F to R/F: 60, Site B - 47, Site C - 0	..... %	<input checked="" type="checkbox"/> About 約
Proposed no. of blocks 擬議座數	Site A - 1, Site B - 1, Site C - 0	.....	
Proposed no. of storeys of each block 每座建築物的擬議層數	Site A - 11, Site B - 2, Site C - 0	..... storeys 層	
	<input type="checkbox"/> include 包括.....storeys of basements 層地庫		
	<input type="checkbox"/> 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	..... mPD 米(主水平基準上)	<input type="checkbox"/> About 約	
	Site A - 82.5, Site B - 15.6, Site C - 0..... m 米	<input checked="" type="checkbox"/> About 約	

<input type="checkbox"/> Domestic part 住用部分		
GFA 總樓面面積	..... sq. m 平方米	<input type="checkbox"/> About 約
number of Units 單位數目	.....	
average unit size 單位平均面積	.....sq. m 平方米	<input type="checkbox"/> About 約
estimated number of residents 估計住客數目	.....	
<input checked="" type="checkbox"/> Non-domestic part 非住用部分		
	<u>GFA 總樓面面積</u>	
<input type="checkbox"/> eating place 食肆	..... sq. m 平方米	<input type="checkbox"/> About 約
<input type="checkbox"/> hotel 酒店	..... sq. m 平方米	<input type="checkbox"/> About 約
	(please specify the number of rooms 請註明房間數目) .....	
<input type="checkbox"/> office 辦公室	..... sq. m 平方米	<input type="checkbox"/> About 約
<input type="checkbox"/> shop and services 商店及服務行業	..... sq. m 平方米	<input type="checkbox"/> About 約
<input type="checkbox"/> 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) .....	
	.....	
	.....	
<input checked="" type="checkbox"/> 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)	
	Site A: multi-storey bus depot; GFA: 57,845 m2...	
	Site B: power substation; GFA: 1,041 m2	
	Site C: charging-enabling bus parking bays; GFA: 0 m2	
	.....	
<input type="checkbox"/> Open space 休憩用地	(please specify land area(s) 請註明地面面積)	
<input type="checkbox"/> private open space 私人休憩用地	..... sq. m 平方米	<input type="checkbox"/> Not less than 不少於
<input type="checkbox"/> public open space 公眾休憩用地	..... sq. m 平方米	<input type="checkbox"/> 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]
Site A - 1	11	Site A: G/F: bus washing, bus maintenance, waste water treatment, transformer rm. 1/F to 2/F: bus maintenance, charging-enabling bus parking bays, ancillary office 3/F to 10/F: charging-enabling bus parking bays, ancillary office / store R/F: charging-enabling bus parking bays
Site B - 1	2	Site B: G/F to 1/F: power substation
Site C - 0	0	Site C: G/F: charging-enabling bus parking bays
(d) Proposed use(s) of uncovered area (if any) 露天地方 (倘有) 的擬議用途		
.....		
.....		
.....		
.....		
.....		

**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)

Year 2025

**8. Vehicular Access Arrangement of the Development Proposal****擬議發展計劃的行人通道安排**

Any vehicular access to the site/subject building? 是否有車路通往地盤／有關建築物？	Yes 是          No 否	<input checked="" type="checkbox"/> 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)) Tuen Mun Chek Lap Kok Tunnel Road <input type="checkbox"/> 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) <input type="checkbox"/>
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          No 否	<input checked="" type="checkbox"/> (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 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) Site A - _____ Franchised Buses 333 charging-enabling bus parking bays, _____ 81 bus maintenance bays _____ Site B - 0 _____ Site C - 73 charging- enabling bus parking bays _____ Total: 406 (parking)- 81 (maintenance)
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          No 否	<input type="checkbox"/> (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 _____ Others (Please Specify) 其他 (請列明) _____ <input checked="" type="checkbox"/>

## 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，請另頁表示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。

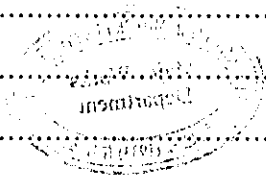
<p>Does the development proposal involve alteration of existing building? 擬議發展計劃是否包括現有建築物的改動?</p>	<p>Yes 是</p> <p>No 否</p>	<p><input type="checkbox"/> Please provide details 請提供詳情</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p><input checked="" type="checkbox"/></p>																														
<p>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。)</p>	<p>Yes 是</p> <p>No 否</p>	<p><input type="checkbox"/> (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)</p> <p><input type="checkbox"/> Diversion of stream 河道改道</p> <p><input type="checkbox"/> Filling of pond 填塘 Area of filling 填塘面積 ..... sq.m 平方米 <input type="checkbox"/> About 約 Depth of filling 填塘深度 ..... m 米 <input type="checkbox"/> About 約</p> <p><input type="checkbox"/> Filling of land 填土 Area of filling 填土面積 ..... sq.m 平方米 <input type="checkbox"/> About 約 Depth of filling 填土厚度 ..... m 米 <input type="checkbox"/> About 約</p> <p><input type="checkbox"/> Excavation of land 挖土 Area of excavation 挖土面積 ..... sq.m 平方米 <input type="checkbox"/> About 約 Depth of excavation 挖土深度 ..... m 米 <input type="checkbox"/> About 約</p> <p><input checked="" type="checkbox"/></p>																														
<p>Would the development proposal cause any adverse impacts? 擬議發展計劃會否造成不良影響?</p>		<table border="0"> <tr> <td>On environment 對環境</td> <td>Yes 會 <input type="checkbox"/></td> <td>No 不會 <input checked="" type="checkbox"/></td> </tr> <tr> <td>On traffic 對交通</td> <td>Yes 會 <input type="checkbox"/></td> <td>No 不會 <input checked="" type="checkbox"/></td> </tr> <tr> <td>On water supply 對供水</td> <td>Yes 會 <input type="checkbox"/></td> <td>No 不會 <input checked="" type="checkbox"/></td> </tr> <tr> <td>On drainage 對排水</td> <td>Yes 會 <input type="checkbox"/></td> <td>No 不會 <input checked="" type="checkbox"/></td> </tr> <tr> <td>On slopes 對斜坡</td> <td>Yes 會 <input type="checkbox"/></td> <td>No 不會 <input checked="" type="checkbox"/></td> </tr> <tr> <td>Affected by slopes 受斜坡影響</td> <td>Yes 會 <input type="checkbox"/></td> <td>No 不會 <input checked="" type="checkbox"/></td> </tr> <tr> <td>Landscape Impact 構成景觀影響</td> <td>Yes 會 <input type="checkbox"/></td> <td>No 不會 <input checked="" type="checkbox"/></td> </tr> <tr> <td>Tree Felling 砍伐樹木</td> <td>Yes 會 <input type="checkbox"/></td> <td>No 不會 <input checked="" type="checkbox"/></td> </tr> <tr> <td>Visual Impact 構成視覺影響</td> <td>Yes 會 <input type="checkbox"/></td> <td>No 不會 <input checked="" type="checkbox"/></td> </tr> <tr> <td>Others (Please Specify) 其他 (請列明)</td> <td>Yes 會 <input type="checkbox"/></td> <td>No 不會 <input checked="" type="checkbox"/></td> </tr> </table> <p>.....</p> <p>.....</p> <p>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)</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>	On environment 對環境	Yes 會 <input type="checkbox"/>	No 不會 <input checked="" type="checkbox"/>	On traffic 對交通	Yes 會 <input type="checkbox"/>	No 不會 <input checked="" type="checkbox"/>	On water supply 對供水	Yes 會 <input type="checkbox"/>	No 不會 <input checked="" type="checkbox"/>	On drainage 對排水	Yes 會 <input type="checkbox"/>	No 不會 <input checked="" type="checkbox"/>	On slopes 對斜坡	Yes 會 <input type="checkbox"/>	No 不會 <input checked="" type="checkbox"/>	Affected by slopes 受斜坡影響	Yes 會 <input type="checkbox"/>	No 不會 <input checked="" type="checkbox"/>	Landscape Impact 構成景觀影響	Yes 會 <input type="checkbox"/>	No 不會 <input checked="" type="checkbox"/>	Tree Felling 砍伐樹木	Yes 會 <input type="checkbox"/>	No 不會 <input checked="" type="checkbox"/>	Visual Impact 構成視覺影響	Yes 會 <input type="checkbox"/>	No 不會 <input checked="" type="checkbox"/>	Others (Please Specify) 其他 (請列明)	Yes 會 <input type="checkbox"/>	No 不會 <input checked="" type="checkbox"/>
On environment 對環境	Yes 會 <input type="checkbox"/>	No 不會 <input checked="" type="checkbox"/>																														
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Others (Please Specify) 其他 (請列明)	Yes 會 <input type="checkbox"/>	No 不會 <input checked="" type="checkbox"/>																														



**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 see attached planning statement

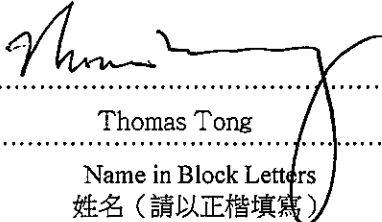


**11. Declaration 聲明**

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 an application to the Board 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

  
.....  
Thomas Tong  
.....  
Name in Block Letters  
姓名（請以正楷填寫）

☒ Applicant 申請人 / ☐ Authorised Agent 獲授權代理人

.....  
Commercial Director

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 香港園境師學會 /

☐ RPP 註冊專業規劃師

Others 其他 .....

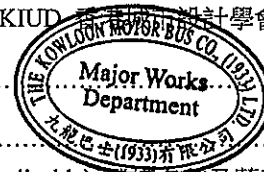
on behalf of  
代表 The Kowloon Motor Bus Co. (1933) Ltd.

☒ Company 公司 / ☒ Organisation Name and Chop (if applicable) 機構名稱及蓋章（如適用）

Date 日期

16 JUL 2021

..... (DD/MM/YYYY 日/月/年)

**Remark 備註**

The materials submitted in an application to the Board 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<sup>@</sup>

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

<sup>@</sup> 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。

<b>Gist of Application 申請摘要</b>			
(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 deposited 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存放於規劃署規劃資料查詢處以供一般參閱。)			
Application No. 申請編號	(For Official Use Only) (請勿填寫此欄)		
Location/address 位置/地址	Government Land in DD138 & DD300, Site A, B and C of Tuen Mun Chek Lap Kok Tunnel Road		
Site area 地盤面積	16,845	sq. m 平方米	<input checked="" type="checkbox"/> About 約
	(includes Government land of 包括政府土地	sq. m 平方米	<input type="checkbox"/> About 約)
Plan 圖則	S/TM/35		
Zoning 地帶	Road		
Applied use/ development 申請用途/發展	Proposed bus depots and public utility installation (electricity substation )		
(i) Gross floor area and/or plot ratio 總樓面面積及/或 地積比率		sq.m 平方米	Plot Ratio 地積比率
	Domestic 住用	<input type="checkbox"/> About 約 <input type="checkbox"/> Not more than 不多於	<input type="checkbox"/> About 約 <input type="checkbox"/> Not more than 不多於
	Non-domestic 非住用	Site A - 57,845 <input checked="" type="checkbox"/> About 約 Site B - 1,041 <input type="checkbox"/> Not more than Site C - 0 不多於	Site A - 7.30 <input checked="" type="checkbox"/> About 約 Site B - 0.79 <input type="checkbox"/> Not more than Site C - 0 不多於
(ii) No. of block 幢數	Domestic 住用		
	Non-domestic 非住用	Site A - 1 Site B - 1 Site C - 0	
	Composite 綜合用途		

(iii) Building height/No. of storeys 建築物高度／層數	Domestic 住用		m 米 <input type="checkbox"/> (Not more than 不多於)
			mPD 米(主水平基準上) <input type="checkbox"/> (Not more than 不多於)
			Storeys(s) 層 <input type="checkbox"/> (Not more than 不多於) ( <input type="checkbox"/> Include 包括 <input type="checkbox"/> Exclude 不包括 <input type="checkbox"/> Carport 停車間 <input type="checkbox"/> Basement 地庫 <input type="checkbox"/> Refuge Floor 防火層 <input type="checkbox"/> Podium 平台)
	Non-domestic 非住用	Site A - 82.5 Site B - 15.6 Site C - 0	m 米 <input checked="" type="checkbox"/> (Not more than 不多於)
			mPD 米(主水平基準上) <input type="checkbox"/> (Not more than 不多於)
		Site A - 11 Site B - 2 Site C - 0	Storeys(s) 層 <input checked="" type="checkbox"/> (Not more than 不多於) ( <input type="checkbox"/> Include 包括 <input type="checkbox"/> Exclude 不包括 <input type="checkbox"/> Carport 停車間 <input type="checkbox"/> Basement 地庫 <input type="checkbox"/> Refuge Floor 防火層 <input type="checkbox"/> Podium 平台)
	Composite 綜合用途		m 米 <input type="checkbox"/> (Not more than 不多於)
			mPD 米(主水平基準上) <input type="checkbox"/> (Not more than 不多於)
			Storeys(s) 層 <input type="checkbox"/> (Not more than 不多於) ( <input type="checkbox"/> Include 包括 <input type="checkbox"/> Exclude 不包括 <input type="checkbox"/> Carport 停車間 <input type="checkbox"/> Basement 地庫 <input type="checkbox"/> Refuge Floor 防火層 <input type="checkbox"/> Podium 平台)
(iv) Site coverage 上蓋面積	Site A - G/F to 1/F: 94, 2/F to R/F: 60 Site B - 47 Site C - 0		
(v) No. of units 單位數目			
(vi) Open space 休憩用地	Private 私人	sq.m 平方米 <input type="checkbox"/> Not less than 不少於	
	Public 公眾	sq.m 平方米 <input type="checkbox"/> 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) _____ Franchised Buses _____	Site A - 333 charging-enabling bus parking bays, 81 bus maintenance bays Site B - 0 Site C - 73 charging- enabling bus parking bays Total: 486 (parking), 81 (maintenance)
	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 中型貨車車位 Heavy Goods Vehicle Spaces 重型貨車車位 Others (Please Specify) 其他 (請列明) _____ _____	

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

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。

Our Ref: MWD/0785/21

1 December 2021

Planning Department  
District Planning Branch  
Board Division  
Town Planning Board Section  
15/F, North Point Government Offices,  
333 Java Road, Hong Kong

(By Hand)

Dear Sir / Madam,

**S16 planning application on. A/TM/565**  
**Proposed Bus Depots with Ancillary Public Utility Installation**  
**(Electricity Substation) in area shown as 'Road'**  
**Government Land in D.D. 138 and D.D. 300, Tuen Mun, New Territories**

We would like to submit the Consolidated Report to supersede the full set submitted documents including planning statement, drawings, photomontage and assessment reports received by Town Planning Board on 27 July 2021 and the further information submitted on 7 September 2021, 18 October 2021 and 19 November 2021.

The contents of the technical assessment are identical to the pervious submissions with replacement pages to the noise impact assessment and the air quality impact assessment (amended in yellow).

Should you have any query or further information, please do not hesitate to contact our Mr. Alan Fung at Tel: 2786 8847 or me at Tel: 2786 6075.

Thank you for your attention.

Yours faithfully,  
For and on behalf of  
The Kowloon Motor Bus Company (1933) Limited



Jacky Ng  
Head of Major Works Department

Encl.



# **Multi-storey Depot for Electric Buses Tuen Mun - Chek Lap Kok Link Free-up Area**



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  - 5.3 Air Quality Impact Assessment (AQIA)
6. Landscape & Visual Impact Assessment
7. Drainage & Sewerage Impact Assessment
8. Landfill Gas Hazard Assessment
9. Land Contamination Assessment
10. Traffic Impact Assessment
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12. Confirmation Letter from CLP on Sufficient Power Supply
13. Response to Comment



## **Planning Statement**

### **Multi-storey Depot for Electric Buses Tuen Mun - Chek Lap Kok Link Free-up Area**

The sites fall within areas shown as “Road” on the approved Tuen Mun Outline Zoning Plan (“OZP”) No. S/TM/35, comprise 3 portions, namely Site A, B and C at the northbound and southbound of the original toll plaza of Tuen Mun-Chek Lap Lok Link (“TMCLKL”). While the Government waived the toll fees for using the new TMCLKL Tunnel, the toll arrangement is no longer required and the sites are then freed up for other purpose.

To cope with housing problems, the Government requested KMB to return its Yuen Long and Tin Shui Wai running depot by end 2021 and designated TMCLKL Free-up Area as replacement. KMB would simply develop the sites to a temporary open air parking area to absorb the fleet from Yuen Long/Tin Shui Wai in 2H 2021.

With an aim to optimize the land resource, KMB with support of Transport Department proposes to build a multi-storey permanent depot at Site A. Remaining portion of the free up area, say part of Site B will be used for a 2 storey power substation while others & Site C are situated on top of elevated highway structures and considered not feasible for building development, where Site C will be used for bus parking only.

Site A is approximately in the area of 7,926 sq. m. and KMB is intended to develop the site to a 11 storey multi storey depot for electric bus. The benefits of a modernized multi-storey permanent depot include:

1. to consolidate overnight termini/on-street bus parking at New Territories West into one large scale permanent depot to enhance operational efficiency and bus security and relieve public nuisance.
2. having modernize depot facilities and sufficient charging facilities to cater for the Company’s electric bus strategy. It is going to support the Roadmap on popularization of Electric Vehicles released by Environment Bureau in March 2021. 406 charging-enabling bus parking bays will be provided after the launch of this multi-storey depot. It is a bold step forward to allow wider use of eBus, especially double deck eBus in KMB bus service.

Traffic consultant has been appointed to study the impact of these 406 buses to surrounding. It is observed that the eBus fleet returning to TM CLK Depot at late night is no longer needed to wait for refueling which is normally occurred at the conventional depot entrance but can go straight directly to parking spaces for overnight charging. It eliminates the possible vehicle tail back concern to adjacent traffic flow. As a matter of fact, the buses coming back at late night or going out in early morning would not crash with ambient traffic peak. Traffic consultant concluded that the traffic impact imposed to the road network and junctions due to the proposed depot development is negligible.

Regarding to the environmental impact to surrounding, please understand that electric bus is of zero emission with no toxic gases and particulates generated. No engine and gearbox is required in an eBus. Electric bus is of simply design with mainly HV battery, electronic management system and drive motors. The battery, motors and associated electronics require replacement in daily operation only with rare onsite repair. There is no need to change engine oil, conduct engine and gearbox overhaul as at conventional diesel bus depot. In this connection, the eBus Depot will be clean, zero emission and quiet.

As such, the proposed eBus depot is considered environmentally superior to conventional fuel bus depot in terms of air and noise pollution. Noise generated from bus servicing is considered minimal, though residential development would not be expected in vicinity of the proposed TM CLK depot site.

Franchised buses are one of major sources of nitrogen oxides emissions, accounting for 17% of vehicular emissions. The community is pushing ahead to electrifying the bus fleet. While the Government and the franchised bus operators are working hard on double-deck eBus trial, provision of supporting charging facilities in depots is essential. However, facilities enhancement in existing depots is not smooth due to space constraints for newly required electricity substation and limited power capacity left behind. New depot with tailor-designed charging facilities and abundant power supply is the basic requirement for the promotion of eBus strategy.

The favorite location of TM CLK is unique for the setting up of the first eBus depot. It is confirmed from CLP that sufficient power supply can be provided for the new site. Design of bus depot will well cater for bigger parking space with charger and charging power connection.

The depot for 406 electric vehicles would allow a valuable opportunity in training a team of engineers/ technicians in Hong Kong for electric vehicles and lay a strong foundation for the Roadmap in popularization of Electric Vehicles as issued by Environment Bureau in March 2021.

As such, we would like to submit a planning application to the Town Planning Board to allow the development of a 11-storey depot building in Site A of TMCLKL free up area, a 2 storey substation in portion of Site B and the bus parking in Site C.

## 規劃聲明

### 屯門赤鱗角連接路騰出場地作興建電動巴士多層車廠

屯門分區計劃大綱草圖編號 S/TM/35("OZP")所示 "道路" 區域內共分三個部分，當中包括屯門-赤鱗角連接路收費廣場("TMCLKL")北行及南行的 A、B 及 C 地段。由於政府免收使用新 TMCLKL 隧道收費，收費安排不再需要，可以騰出上述的三個地段作其他用途。

因應房屋需求問題，政府要求九巴在 2021 年底前歸還位於元朗及天水圍的車場，並同意將 TMCLKL 上述的三塊地段作為更換。九巴會在 2021 年下半年會先將地段發展為臨時露天泊車場以作元朗及天水圍車隊使用。

為地盡其用，九巴在運輸署的支持下，建議在 A 地段興建一個永久多層車廠。另外在部分 B 地段興建一個 2 層高的電力變壓房，其餘部分的 B 地段以及 C 地段位置均位於公路結構之上，不適合建築發展，繼續留作露天泊車之用。

地段 A 面積約為 7,926 平方米，九巴打算將該地段發展為一 11 層高的電動巴士多層車廠。其好處包括：

1. 將新界西分散各總站、街道的夜泊巴士收納於一幢多層車廠內，以提高保安及營運效率，減少對市民的滋擾。
2. 配合九巴的電動巴士政策，管理層希望建造有現代化設備及充足的充電設施車廠，它將有助實踐環境局於 2021 年 3 月發佈的電動汽車普及路線圖。這個多層車場啟用後，將提供 406 個充電巴士泊車位。這是一個大膽的進步，令電動巴士有更好的配套，有助九龍巴士公司採用更多雙層電動巴士。

九巴已委任交通顧問研究這 406 輛巴士對周圍地區的影響。據觀察，TMCLKL 車廠運作跟傳統柴油巴士廠有不同。一般柴油車隊需要於深夜回廠時停在入口處等候加油，車龍有機會倒灌回公路，但電動巴士會直接前往上層的停車位充電，撇除影響相鄰交通的疑慮。事實上，巴士出入車廠的時間主要是深夜或清晨，與一般附近交通高峰期不會重疊。交通顧問的結論是，車廠的發展對附近道路和連接路口造成的交通影響是微不足道。

對於周圍環境的影響，請各位明白電動巴士為零排放，電動巴士沒有引擎和變速箱，運作時不會產生有害氣體和微粒，電動車設計簡單，主要有高壓電池、電子管理系統和電動馬達。電池、馬達和相關電子零件在日常運營中只需間中更換，不像柴油車廠需頻繁更換巴士機油，維修引擎及變速箱。所以 TMCLKL 新一代電巴車廠可做到清潔，零排放和安靜。

我們理解 TMCLKL 車廠場地附近不會有住宅發展，但無論如何，電動巴士車廠在空氣及噪音對環境影響被評定為優勝於傳統柴油巴士車廠，電動巴士行駛時產生的噪音亦較少。

專營巴士是氮氧化物排放的主要來源之一，佔車輛排放的 17%。社區大眾都在推動巴士車隊電動化。雖然政府及專營巴士營辦商正不斷進行雙層巴士可靠性測試，但提供車廠的充電配套設施致為重要。然而，在現成車廠增加充電設施並不順利及受到限制，因為現成車廠剩餘電力有限，要增大電力供應，又沒有足夠空間建造大型變電站。所以建造一個全新有足夠電力供應、設施為電動巴士度身訂造的車廠可更效率推動巴士電動化進程。

在 TMCLKL 地段上興建電動巴士廠是適合及難得的。中電亦已確實可為新址提供充足的電力供應。巴士廠設計亦會滿足更大的充電泊位及預早鋪設好電纜管道。

有近 406 輛電動車的 TMCLKL 車廠將為香港電動汽車工程師或技術人員提供寶貴的培訓機會，並為環境局於 2021 年 3 月頒佈的電動車普化路線圖奠定堅實的基礎。

因此，我們想向城市規劃委員會提交規劃申請，以便在 TMCLKL A 地段開發一座 11 層高的車廠、部份 B 地段建造 2 層變電站及 C 地段作露天泊車之用。

### Requirements of a multi-storey depot at Site A

The patronage of LWB Routes will have an increase from current 257 up to 309 in 2026 according to KMB's Five-Year Plan.

As at November 2021, LWB possesses one depot at Siu Ho Wan and one parking site at Tai Po Dai Wah Street.

Overnight Parking situation is summarized below:

• Siu Ho Wan	55
• Tai Po (Dai Wah Street)	10
• KMB depots	95
• On-street / bus termini	92
	<hr/>
	252

Tai Po (Dai Wah Street) Depot will have to be returned to LCSD. In view of parking and servicing demands for KMB depots are tight and On-Street parking is unfavorable to the community and security, it is necessary to build a modern multi-storey depot at the new free up area at TM-CLK Link. The new depot will accommodate the coming parking and maintenance need of LWB and provide electric bus charging facilities.

Capacity of the new multi-storey depot at Site A:

Parking Spaces	a)	from replaced sites	
	-	Tin Shui Wai	119
	-	Wang Lok Street	42
	b)	LWB	
	-	Tai Po (Dai Wah St)	10
	-	KMB depots	187
	-	On-street	52
	-	New (309 - 257)	<hr/>
			410
		<u>minus</u>	
		provision in TM-CLK Site C	<hr/>
			73
			<hr/>
			337

Note 1: 95 (KMB depots) + 92 (on-street) = 187

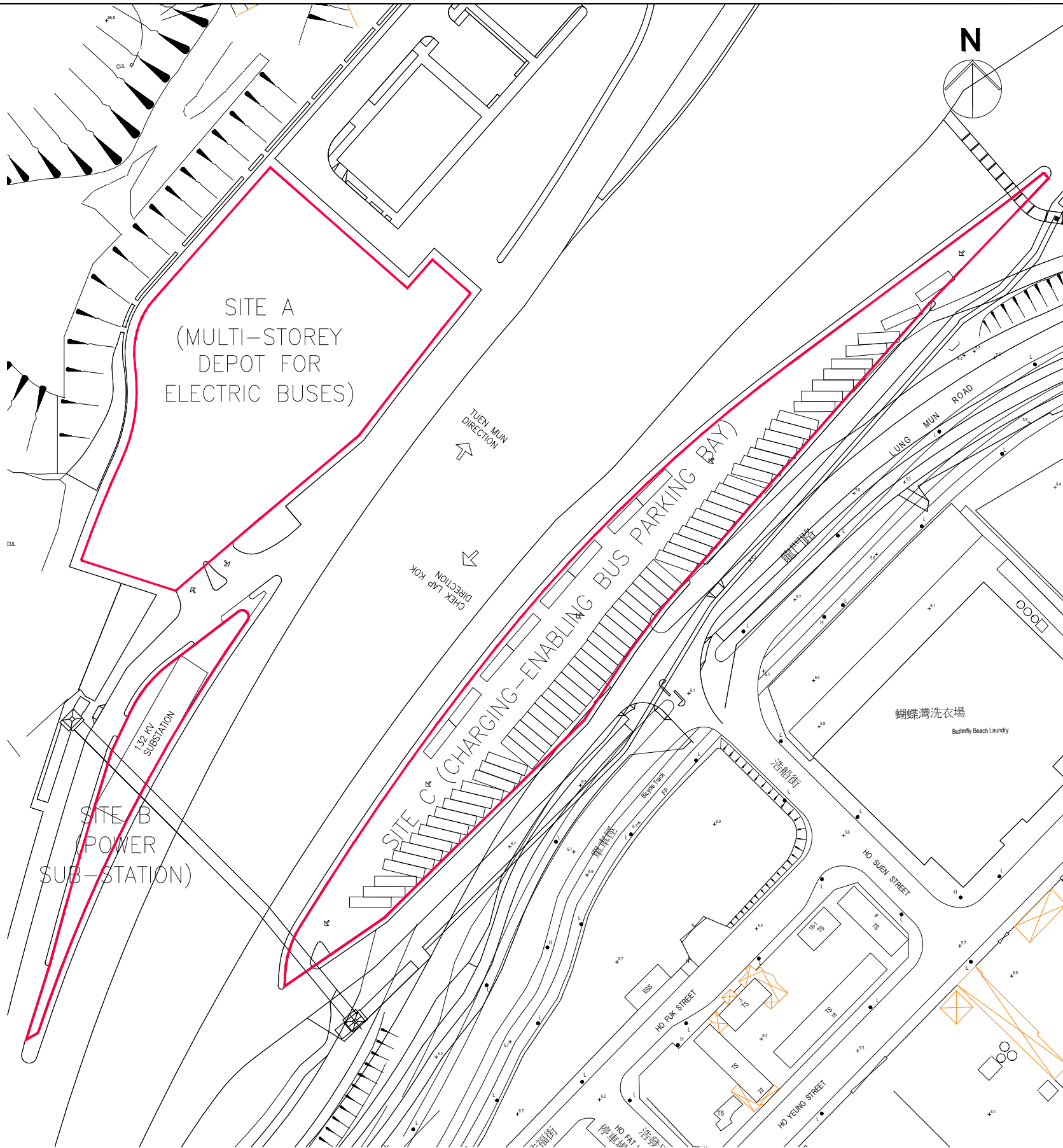
GROSS FLOOR AREA & SITE COVERAGE CALCULATION – SITE A				
PROPOSED SITE USAGE			MULTI–STOREY DEPOT FOR ELECTRIC BUSES	
SITE CLASSIFICATION			CLASS A	
SITE AREA			7926 M2	
SITE COVERAGE			G/F–1/F: 93.58% (FIRST 15M) 2/F–R/F: 60%	
BUILDING HEIGHT			82.5M (FLOOR LEVEL OF G/F TO FLOOR LEVEL OF R/F)	
PERMITTED PLOT RATIO UNDER B(P)R			15	
NON–DOMESTIC GFA	GF	7417 M2	57845.32 M2	
	1F	7417 M2		
	2F	4755.6 M2		
	3F–10F	4755.6 M2		
	RF	210.92 M2		
ACTUAL PLOT RATIO			7.30	

GROSS FLOOR AREA & SITE COVERAGE CALCULATION – SITE B	
PROPOSED SITE USAGE	POWER SUB–STATION
SITE CLASSIFICATION	CLASS A
SITE AREA	1321 M2
SITE COVERAGE	47.01% (621M2/1321M2)
BUILDING HEIGHT	15.6M
PERMITTED PLOT RATIO UNDER B(P)R	5
NON–DOMESTIC GFA	1040.6 M2
ACTUAL PLOT RATIO	0.788
REMARKS: THE SUBJECT BUILDING SHALL BE DISREGARDED FROM GFA AND PLOT RATIO CALCULATION IN ACCORDANCE WITH B(P)R23(3)(b).	

GROSS FLOOR AREA & SITE COVERAGE CALCULATION – SITE C	
PROPOSED SITE USAGE	CHARGING–ENABLING BUS PARKING
SITE CLASSIFICATION	CLASS A
SITE AREA	7598 M2
SITE COVERAGE	0
BUILDING HEIGHT	0M
PERMITTED PLOT RATIO UNDER B(P)R	5
NON–DOMESTIC GFA	0 M2
ACTUAL PLOT RATIO	0

NOS. OF CHARGING–ENABLING BUS PARKING BAYS AND MAINTENANCE BAYS IN SITE A		
	MAINTENANCE BAYS	CHARGING–ENABLING BUS PARKING BAYS
GF	21	
1F	42	
2F	18	31
3F		33
4F		33
5F		33
6F		33
7F		33
8F		33
9F		33
10F		33
RF		38
TOTAL	81	333

NOS. OF CHARGING–ENABLING BUS PARKING BAYS AND MAINTENANCE BAYS IN SITE C		
	MAINTENANCE BAYS	CHARGING–ENABLING BUS PARKING BAYS
GF	0	73



Schematic Master Layout Plan

NOTES AND CONDITIONS:

1.

ALL DESIGNS ARE THE PROPERTY OF FRUIT DESIGN AND BUILD AND CANNOT BE USED WITHOUT THEIR WRITTEN PERMISSION.

2.

ALL MEASUREMENTS MUST BE VERIFIED ON SITE BEFORE CONSTRUCTION.

3.

CONTRACTORS SHALL NOTIFY THE DESIGNER OF ANY DISCREPANCY BEFORE STARTING WORK.

4.

ALL DIMENSIONS ARE IN MILLIMETER EXCEPT OTHERWISE NOTED.

5.

ALL WORKS SHALL BE CARRIED OUT IN COMPLIANCE TO THE BUILDINGS ORDINANCE, BUILDINGS REGULATIONS AND CODE OF PRACTICES.

6.

THIS DRAWING SHALL BE READ IN CONJUNCTION WITH OTHER DRAWINGS AND SPECIFICATIONS OF THE TENDER DOCUMENTS AND SHALL BE MUTUALLY EXPLANATORY.

7.

THE CONTRACTOR SHALL FOLLOW MANUFACTURER'S INSTRUCTION & RECOMMENDATION IN CASE PROPRIETARY PRODUCT / SYSTEM / IS ADOPTED / SPECIFIED / APPROVED.

8.

DESIGN INTENT DRAWING ONLY. CONTRACTOR IS RESPONSIBLE FOR DESIGN AND SHOP DRAWING / CALCULATION SUBMISSION / MATERIAL SIZES / THICKNESS INDICATIVE.

REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

FRUIT  
DESIGN &  
BUILD LTD

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PROJECT:

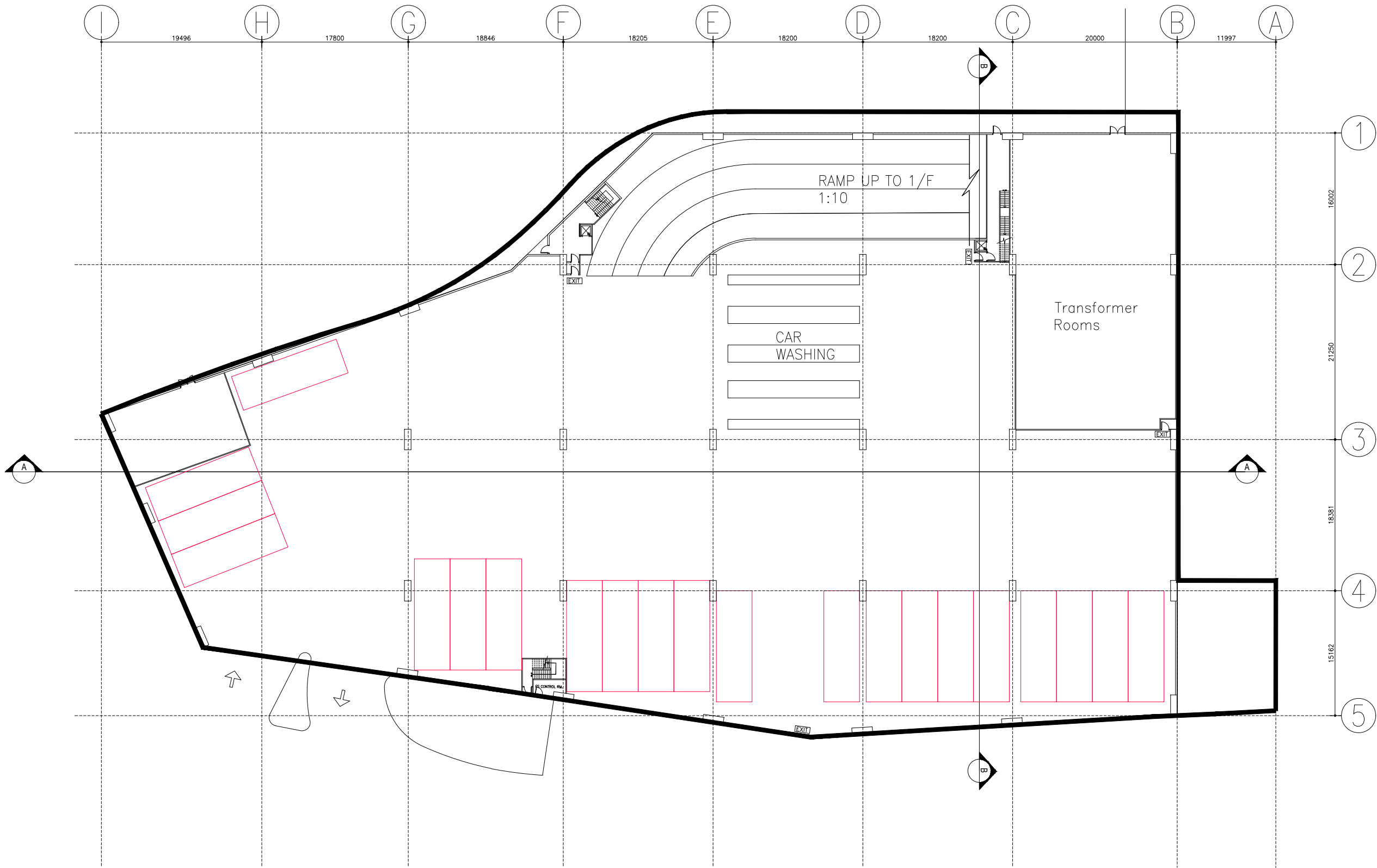
TMCLK DEPOT

DRAWING TITLE:

SCHEMATIC MASTER LAYOUT PLAN

SCALE:	1:1500
DATE:	13/09/2021
DRAWN BY:	CC
CHECKED BY:	NC
APPROVED BY:	-
JOB. NO.:	FDB-P-21031
DWG. NO.:	AA01





LEGEND

- Maintenance Bay (13500mm x 4350mm)
- Parking Space (13000mm x 3300mm)

G/F



- NOTES AND CONDITIONS:
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PROJECT:

TMCLK DEPOT

DRAWING TITLE :

G/F LAYOUT (SITE A)

SCALE: 1:500

DATE: 13/09/2021

DRAWN BY: CC

CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: AA02



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REV	DESCRIPTION	DATE

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PROJECT:

TMCLK DEPOT

DRAWING TITLE :

1/F LAYOUT (SITE A)

SCALE: 1:500

DATE: 13/09/2021

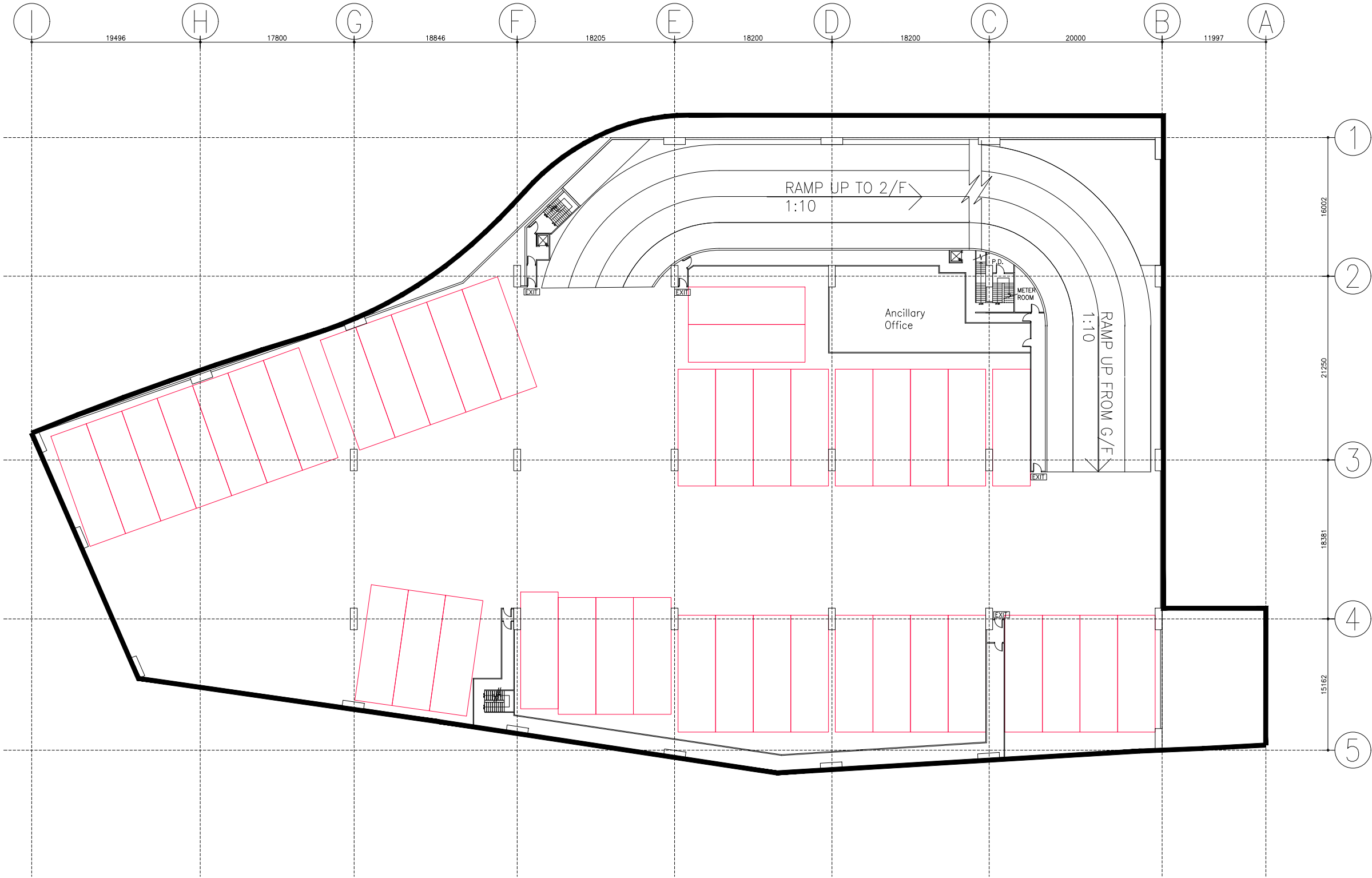
DRAWN BY: CC

CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: AA03



LEGEND

- Maintenance Bay  
(13500mm x 4350mm)
- Parking Space  
(13000mm x 3300mm)

1/F



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REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

FRUIT  
DESIGN &  
BUILD LTD

A member of FDB Holdings Limited

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Wan Chai, Hong Kong

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PROJECT:

TMCLK DEPOT

DRAWING TITLE:

2/F LAYOUT (SITE A)

SCALE: 1:500

DATE: 13/09/2021

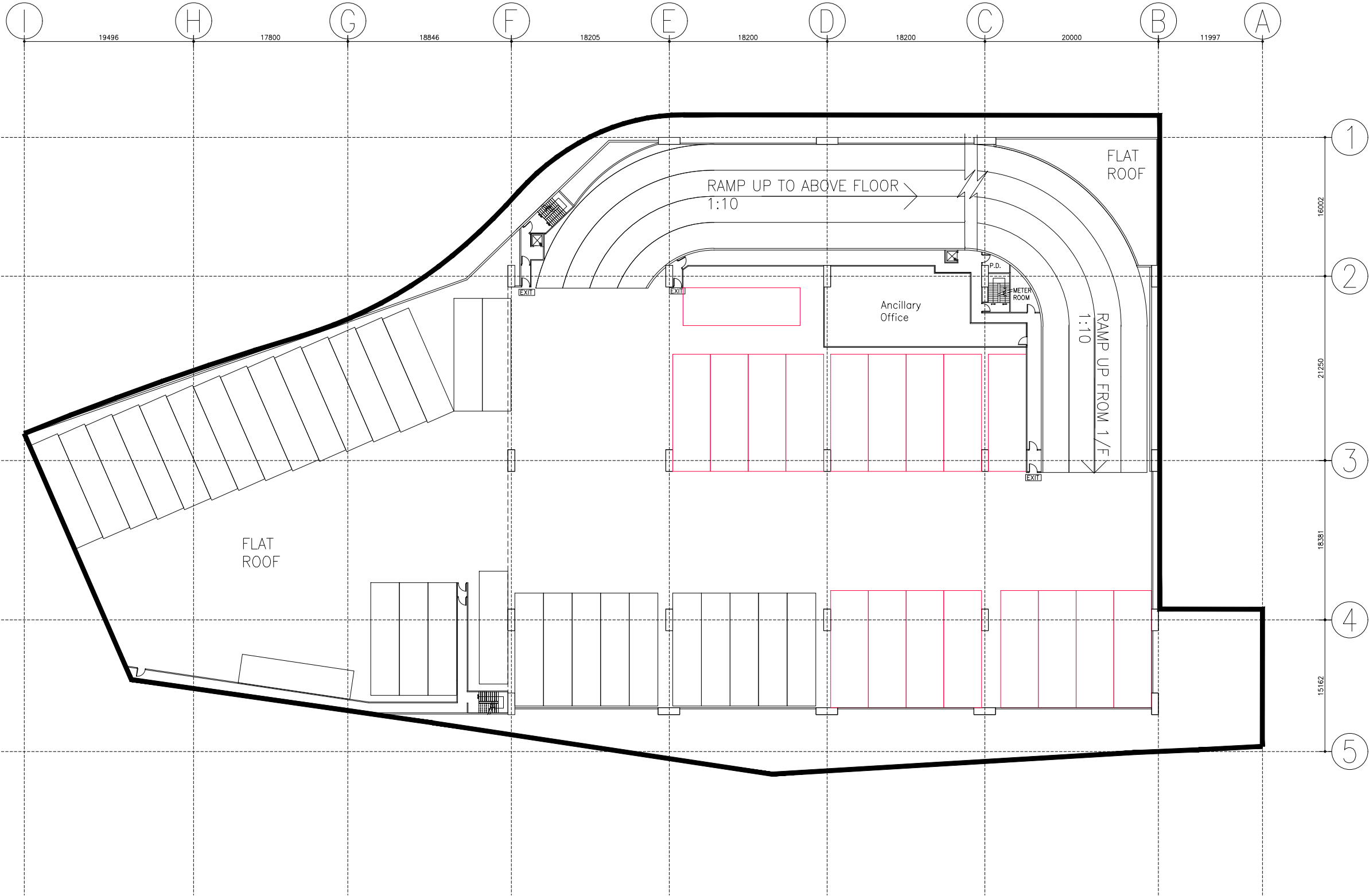
DRAWN BY: CC

CHECKED BY: NC

APPROVED BY:-

JOB. NO.: FDB-P-21031

DWG. NO.: AA04



LEGEND

- Maintenance Bay  
(13500mm x 4350mm)
- Parking Space  
(13000mm x 3300mm)

2/F



- NOTES AND CONDITIONS:
1. ALL DESIGNS ARE THE PROPERTY OF FRUIT DESIGN AND BUILD AND CANNOT BE USED WITHOUT THEIR WRITTEN PERMISSION.
  2. ALL MEASUREMENTS MUST BE VERIFIED ON SITE BEFORE CONSTRUCTION.
  3. CONTRACTORS SHALL NOTIFY THE DESIGNER OF ANY DISCREPANCY BEFORE STARTING WORK.
  4. ALL DIMENSIONS ARE IN MILLIMETER EXCEPT OTHERWISE NOTED.
  5. ALL WORKS SHALL BE CARRIED OUT IN COMPLIANCE TO THE BUILDINGS ORDINANCE, BUILDINGS REGULATIONS AND CODE OF PRACTICES.
  6. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH OTHER DRAWINGS AND SPECIFICATIONS OF THE TENDER DOCUMENTS AND SHALL BE MUTUALLY EXPLANATORY.
  7. THE CONTRACTOR SHALL FOLLOW MANUFACTURER'S INSTRUCTION & RECOMMENDATION IN CASE PROPRIETARY PRODUCT / SYSTEM / IS ADOPTED / SPECIFIED / APPROVED.
  8. DESIGN INTENT DRAWING ONLY. CONTRACTOR IS RESPONSIBLE FOR DESIGN AND SHOP DRAWING / CALCULATION SUBMISSION / MATERIAL SIZES / THICKNESS INDICATIVE.

REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

FRUIT

DESIGN &

BUILD LTD

A member of FDB Holdings Limited

A | 6/F, The Sun's Group Centre, 200 Gloucester Road,  
Wan Chai, Hong Kong

T | +852 3188 5595    F | +852 3188 5958

PROJECT:

TMCLK DEPOT

DRAWING TITLE :

3/F-10/F LAYOUT (SITE A)

SCALE: 1:500

DATE: 13/09/2021

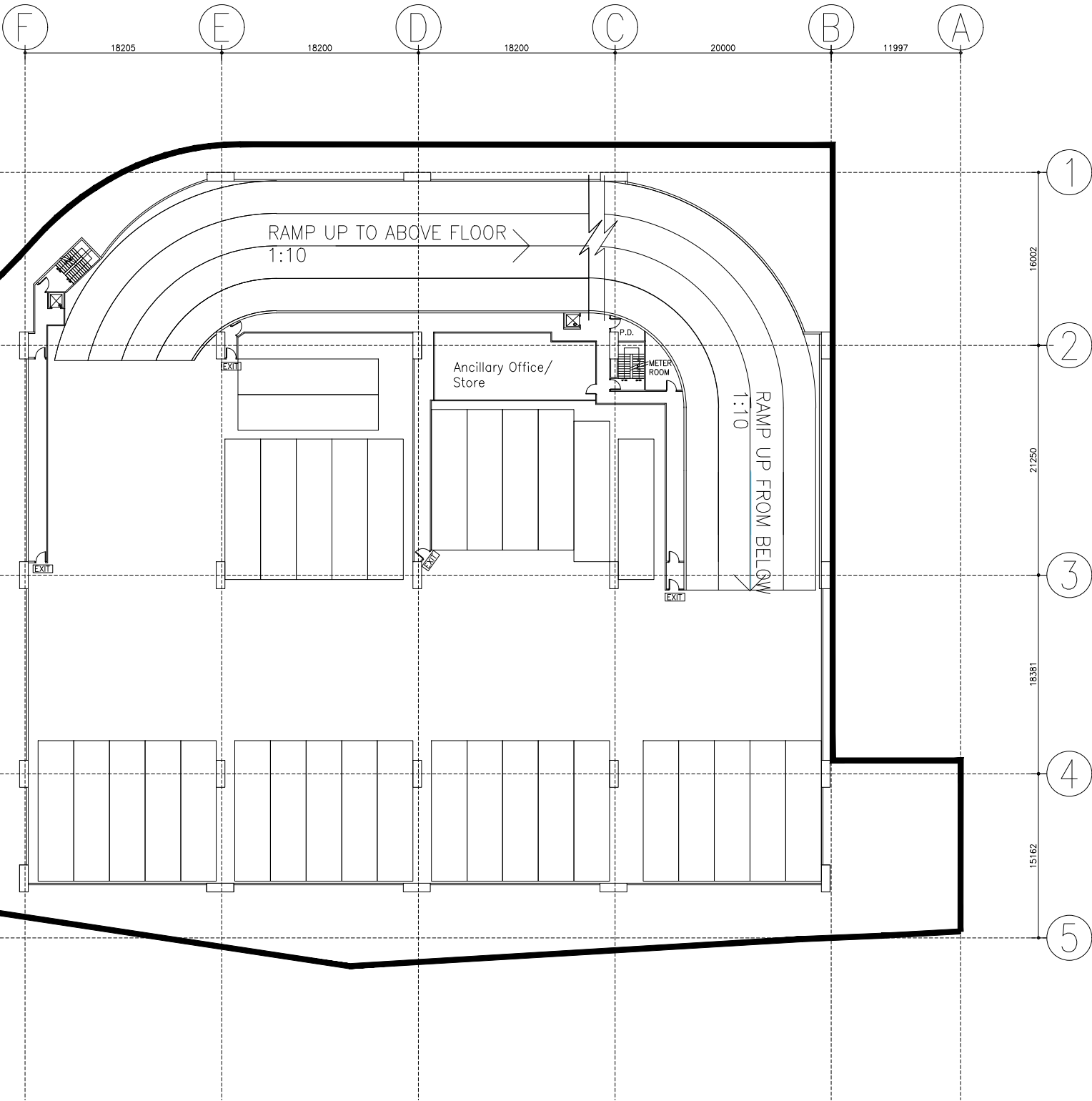
DRAWN BY: CC

CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: AA05



LEGEND

- Maintenance Bay  
(13500mm x 4350mm)
- Parking Space  
(13000mm x 3300mm)

3/F-10/F



- NOTES AND CONDITIONS:
1. ALL DESIGNS ARE THE PROPERTY OF FRUIT DESIGN AND BUILD AND CANNOT BE USED WITHOUT THEIR WRITTEN PERMISSION.
  2. ALL MEASUREMENTS MUST BE VERIFIED ON SITE BEFORE CONSTRUCTION.
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  7. THE CONTRACTOR SHALL FOLLOW MANUFACTURER'S INSTRUCTION & RECOMMENDATION IN CASE PROPRIETARY PRODUCT / SYSTEM / IS ADOPTED / SPECIFIED / APPROVED.
  8. DESIGN INTENT DRAWING ONLY. CONTRACTOR IS RESPONSIBLE FOR DESIGN AND SHOP DRAWING / CALCULATION SUBMISSION / MATERIAL SIZES / THICKNESS INDICATIVE.

REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

FRUIT  
DESIGN &  
BUILD LTD

A member of FDB Holdings Limited

A | 6/F, The Sun's Group Centre, 200 Gloucester Road,  
Wan Chai, Hong Kong

T | +852 3188 5595    F | +852 3188 5958

PROJECT:

TMCLK DEPOT

DRAWING TITLE :

R/F LAYOUT (SITE A)

SCALE: 1:500

DATE: 13/09/2021

DRAWN BY: CC

CHECKED BY: NC

APPROVED BY: -

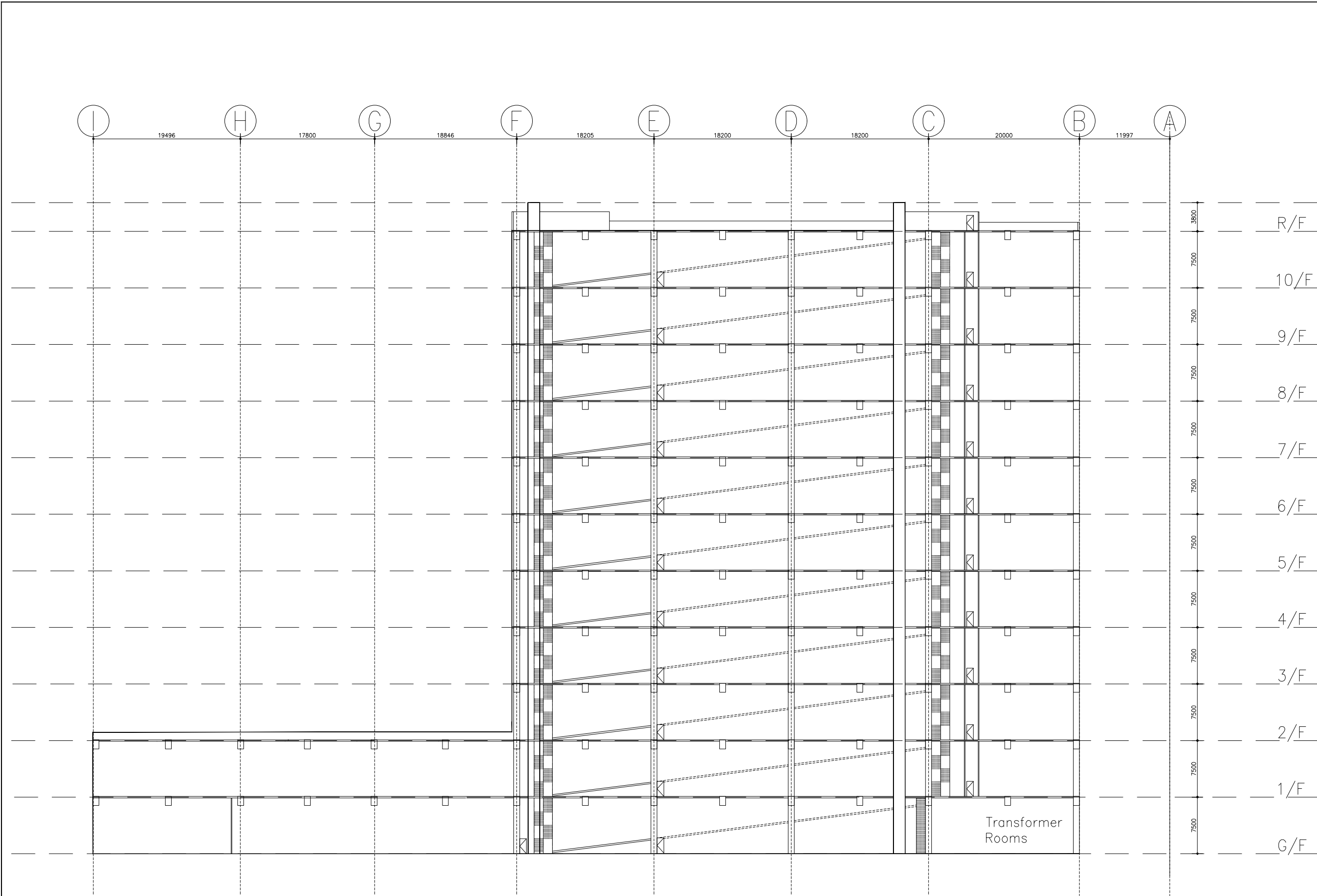
JOB. NO.: FDB-P-21031

DWG. NO.: AA06

LEGEND

- Maintenance Bay  
(13500mm x 4350mm)
- Parking Space  
(13000mm x 3300mm)

R/F



SECTION A-A

- NOTES AND CONDITIONS:
1. ALL DESIGNS ARE THE PROPERTY OF FRUIT DESIGN AND BUILD AND CANNOT BE USED WITHOUT THEIR WRITTEN PERMISSION.
  2. ALL MEASUREMENTS MUST BE VERIFIED ON SITE BEFORE CONSTRUCTION.
  3. CONTRACTORS SHALL NOTIFY THE DESIGNER OF ANY DISCREPANCY BEFORE STARTING WORK.
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  8. DESIGN INTENT DRAWING ONLY. CONTRACTOR IS RESPONSIBLE FOR DESIGN AND SHOP DRAWING / CALCULATION SUBMISSION / MATERIAL SIZES / THICKNESS INDICATIVE.

REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

**FRUIT  
DESIGN &  
BUILD LTD**

A member of FDB Holdings Limited

A | 6/F, The Sun's Group Centre, 200 Gloucester Road,  
Wan Chai, Hong Kong

T | +852 3188 5955 F | +852 3188 5958

PROJECT:

TMCLK DEPOT

DRAWING TITLE :

SECTION A-A (SITE A)

SCALE: 1:500

DATE: 13/09/2021

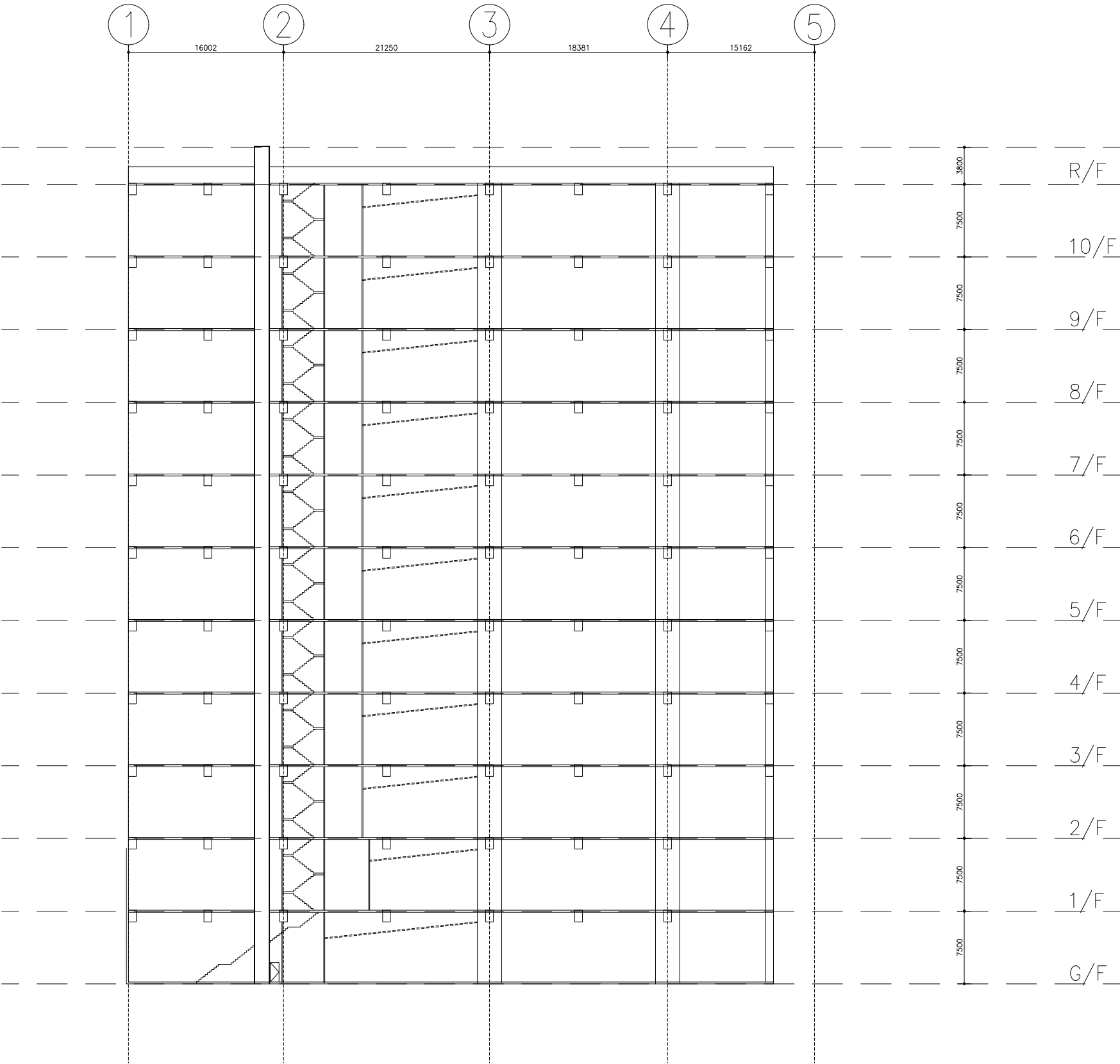
DRAWN BY: CC

CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: ST01



SECTION B-B

- NOTES AND CONDITIONS:
1. ALL DESIGNS ARE THE PROPERTY OF FRUIT DESIGN AND BUILD AND CANNOT BE USED WITHOUT THEIR WRITTEN PERMISSION.
  2. ALL MEASUREMENTS MUST BE VERIFIED ON SITE BEFORE CONSTRUCTION.
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REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

**FRUIT  
DESIGN &  
BUILD LTD**

A member of FDB Holdings Limited

A | 6/F, The Sun's Group Centre, 200 Gloucester Road,  
Wan Chai, Hong Kong

T | +852 3188 5955    F | +852 3188 5958

PROJECT:

TMCLK DEPOT

DRAWING TITLE :

SECTION B-B (SITE A)

SCALE: 1:500

DATE: 13/09/2021

DRAWN BY: CC

CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: ST02







SOUTH-WEST ELEVATION

NOTES AND CONDITIONS:  

1. ALL DESIGNS ARE THE PROPERTY OF FRUIT DESIGN AND BUILD AND CANNOT BE USED WITHOUT THEIR WRITTEN PERMISSION.  
2. ALL MEASUREMENTS MUST BE VERIFIED ON SITE BEFORE CONSTRUCTION.  
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8. DESIGN INTENT DRAWING ONLY. CONTRACTOR IS RESPONSIBLE FOR DESIGN AND SHOP DRAWING / CALCULATION SUBMISSION / MATERIAL SIZES / THICKNESS INDICATIVE.

REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:  

FRUIT  
DESIGN &  
BUILD LTD

A member of FDB Holdings Limited  
A | 6/F, The Sun's Group Centre, 200 Gloucester Road,  
Wan Chai, Hong Kong  
T | +852 3188 5955    F | +852 3188 5958

PROJECT:  

TMCLK DEPOT

DRAWING TITLE :  
SOUTH-WEST ELEVATION (SITE A)

SCALE: 1:500

DATE: 13/09/2021

DRAWN BY: CC

CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: EL02



NORTH-EAST ELEVATION

- NOTES AND CONDITIONS:
1. ALL DESIGNS ARE THE PROPERTY OF FRUIT DESIGN AND BUILD AND CANNOT BE USED WITHOUT THEIR WRITTEN PERMISSION.
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REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

**FRUIT  
DESIGN &  
BUILD LTD**

A member of FDB Holdings Limited

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Wan Chai, Hong Kong

T | +852 3188 5956 F | +852 3188 5958

PROJECT:

TMCLK DEPOT

DRAWING TITLE :

NORTH-EAST ELEVATION (SITE A)

SCALE: 1:500

DATE: 13/09/2021

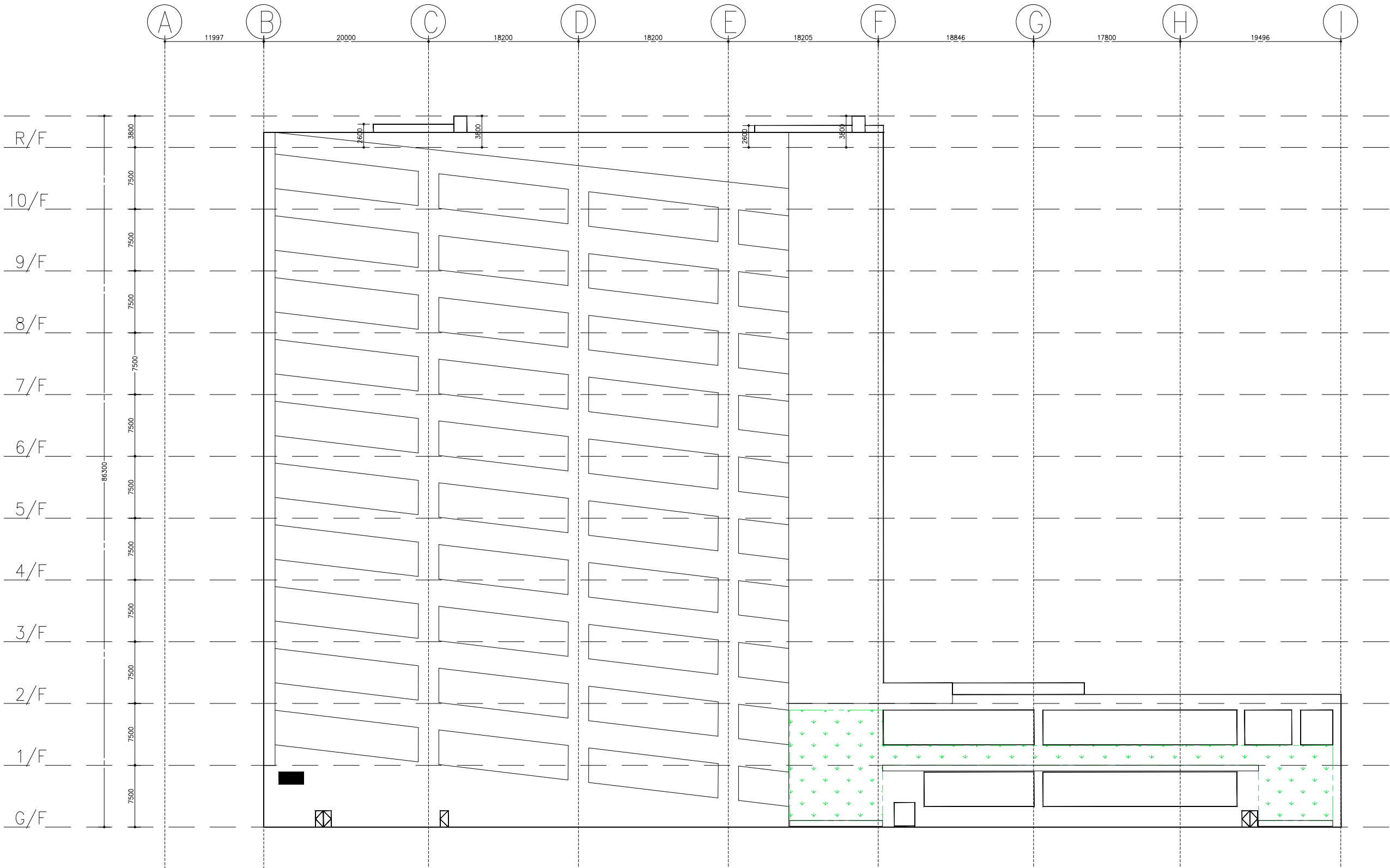
DRAWN BY: CC

CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: EL03



NORTH-WEST ELEVATION

- NOTES AND CONDITIONS:
1. ALL DESIGNS ARE THE PROPERTY OF FRUIT DESIGN AND BUILD AND CANNOT BE USED WITHOUT THEIR WRITTEN PERMISSION.
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REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

**FRUIT  
DESIGN &  
BUILD LTD**

A member of FDB Holdings Limited

A | 6/F, The Sun's Group Centre, 200 Gloucester Road,  
Wan Chai, Hong Kong

T | +852 3188 5955 F | +852 3188 5958

PROJECT:

TMCLK DEPOT

DRAWING TITLE :

NORTH-WEST ELEVATION (SITE A)

SCALE: 1:500

DATE: 13/09/2021

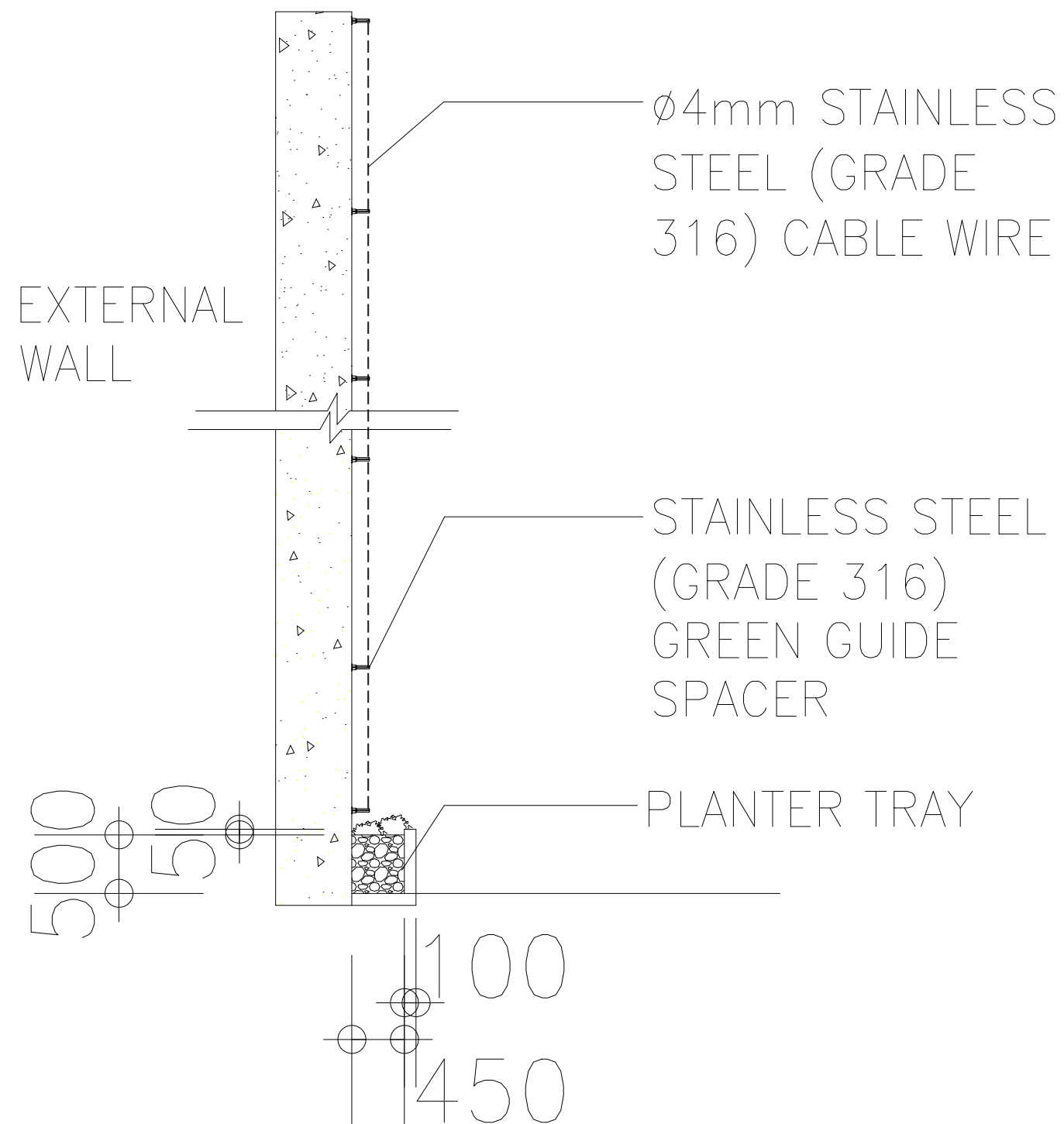
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CHECKED BY: NC

APPROVED BY: -

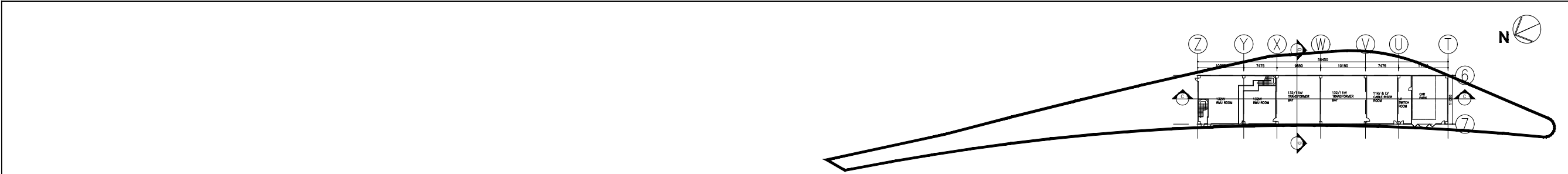
JOB. NO.: FDB-P-21031

DWG. NO.: EL04

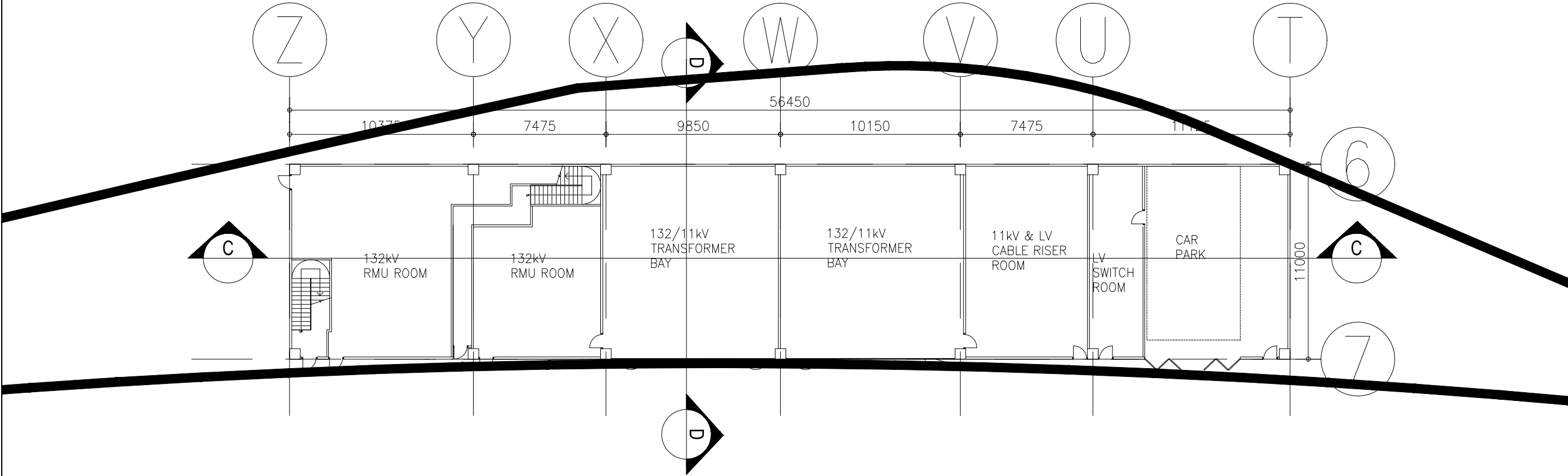


# DETAIL OF VERTICAL GREENING

NOTES AND CONDITIONS:		
1. ALL DESIGNS ARE THE PROPERTY OF FRUIT DESIGN AND BUILD AND CANNOT BE USED WITHOUT THEIR WRITTEN PERMISSION.		
2. ALL MEASUREMENTS MUST BE VERIFIED ON SITE BEFORE CONSTRUCTION.		
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8. DESIGN INTENT DRAWING ONLY. CONTRACTOR IS RESPONSIBLE FOR DESIGN AND SHOP DRAWING / CALCULATION SUBMISSION / MATERIAL SIZES / THICKNESS INDICATIVE.		
REV	DESCRIPTION	DATE
A	REVISED DETAILS	12 NOV 2021
CLIENT:		
BUILDING CONSULTANT:		
<div><div>FRUIT DESIGN &amp; BUILD LTD</div><div><small>A member of FDB Holdings Limited</small></div><div><small>A   6/F, The Sun's Group Centre, 200 Gloucester Road, Wan Chai, Hong Kong</small></div><div><small>T   +852 3188 5595 F   +852 3188 5958</small></div></div>		
PROJECT:		
TMCLK DEPOT		
DRAWING TITLE :		
DETAIL OF VERTICAL GREENING		
SCALE:	1:50	
DATE:	13/09/2021	
DRAWN BY:	CC	
CHECKED BY:	NC	
APPROVED BY: -		
JOB. NO. :	FDB-P-21031	
DWG. NO. :	DD01	



G/F Scale: 1:1000



G/F Scale 1:250

- NOTES AND CONDITIONS:
1. ALL DESIGNS ARE THE PROPERTY OF FRUIT DESIGN AND BUILD AND CANNOT BE USED WITHOUT THEIR WRITTEN PERMISSION.
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REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

**FRUIT  
DESIGN &  
BUILD LTD**

A member of FDB Holdings Limited  
A | 6/F, The Sun's Group Centre, 200 Gloucester Road,  
Wan Chai, Hong Kong  
T | +852 3188 5595 F | +852 3188 5958

PROJECT:

TMCLK DEPOT

DRAWING TITLE :

G/F LAYOUT (SITE B)

SCALE: As stated

DATE: 13/09/2021

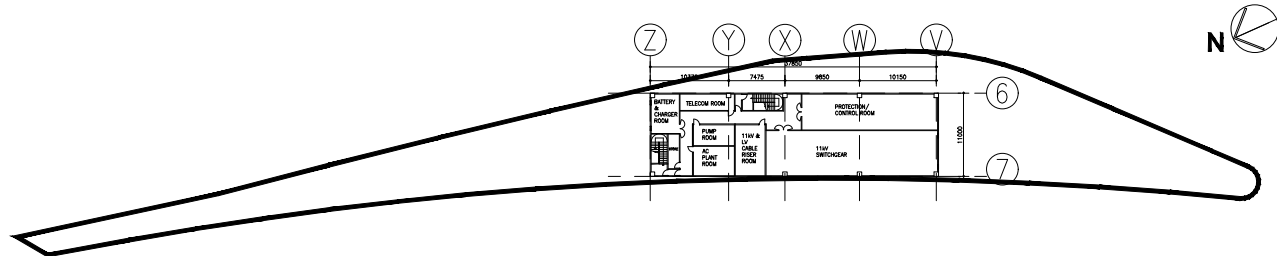
DRAWN BY: CC

CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: AA07



1/F Scale: 1:1000

- NOTES AND CONDITIONS:
1. ALL DESIGNS ARE THE PROPERTY OF FRUIT DESIGN AND BUILD AND CANNOT BE USED WITHOUT THEIR WRITTEN PERMISSION.
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REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

FRUIT  
DESIGN &  
BUILD LTD

A member of FDB Holdings Limited

A | 6/F, The Sun's Group Centre, 200 Gloucester Road,  
Wan Chai, Hong Kong

T | +852 3188 5595 F | +852 3188 5958

PROJECT:

TMCLK DEPOT

DRAWING TITLE :  
1/F LAYOUT (SITE B)

SCALE: 1:250

DATE: 13/09/2021

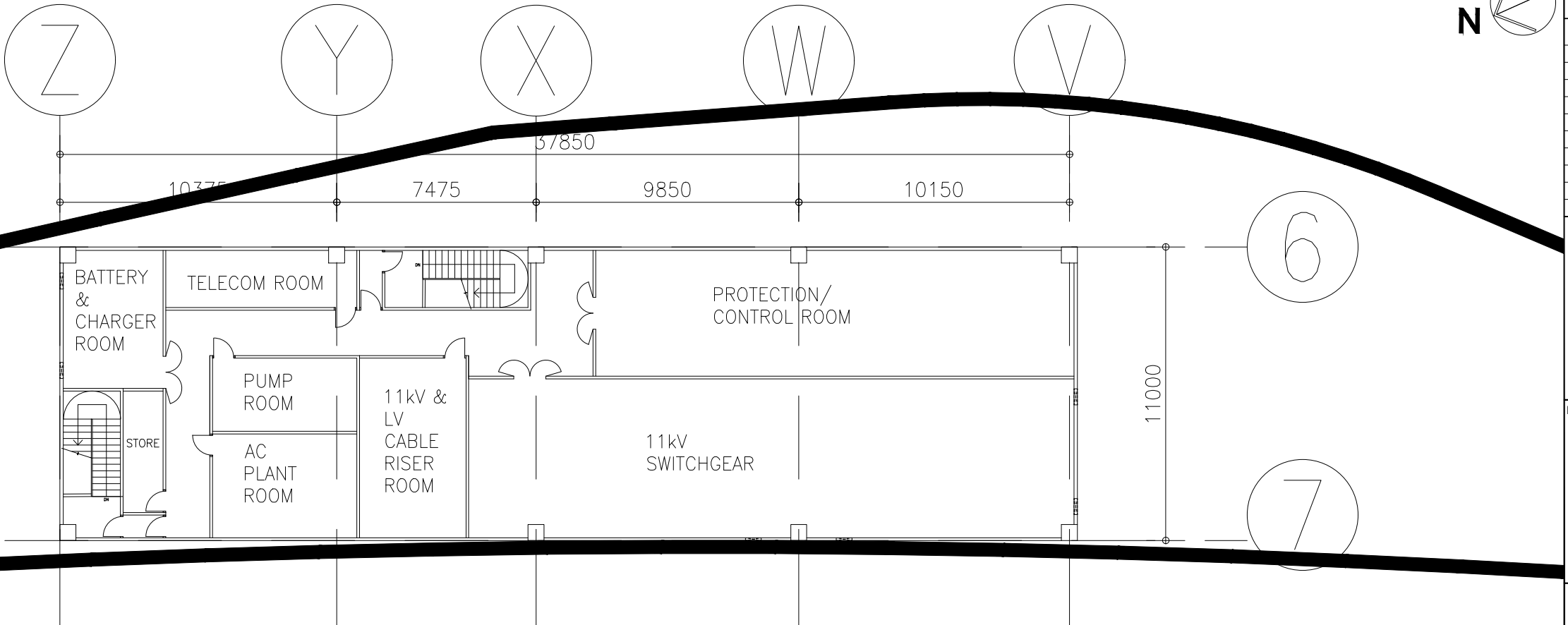
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CHECKED BY: NC

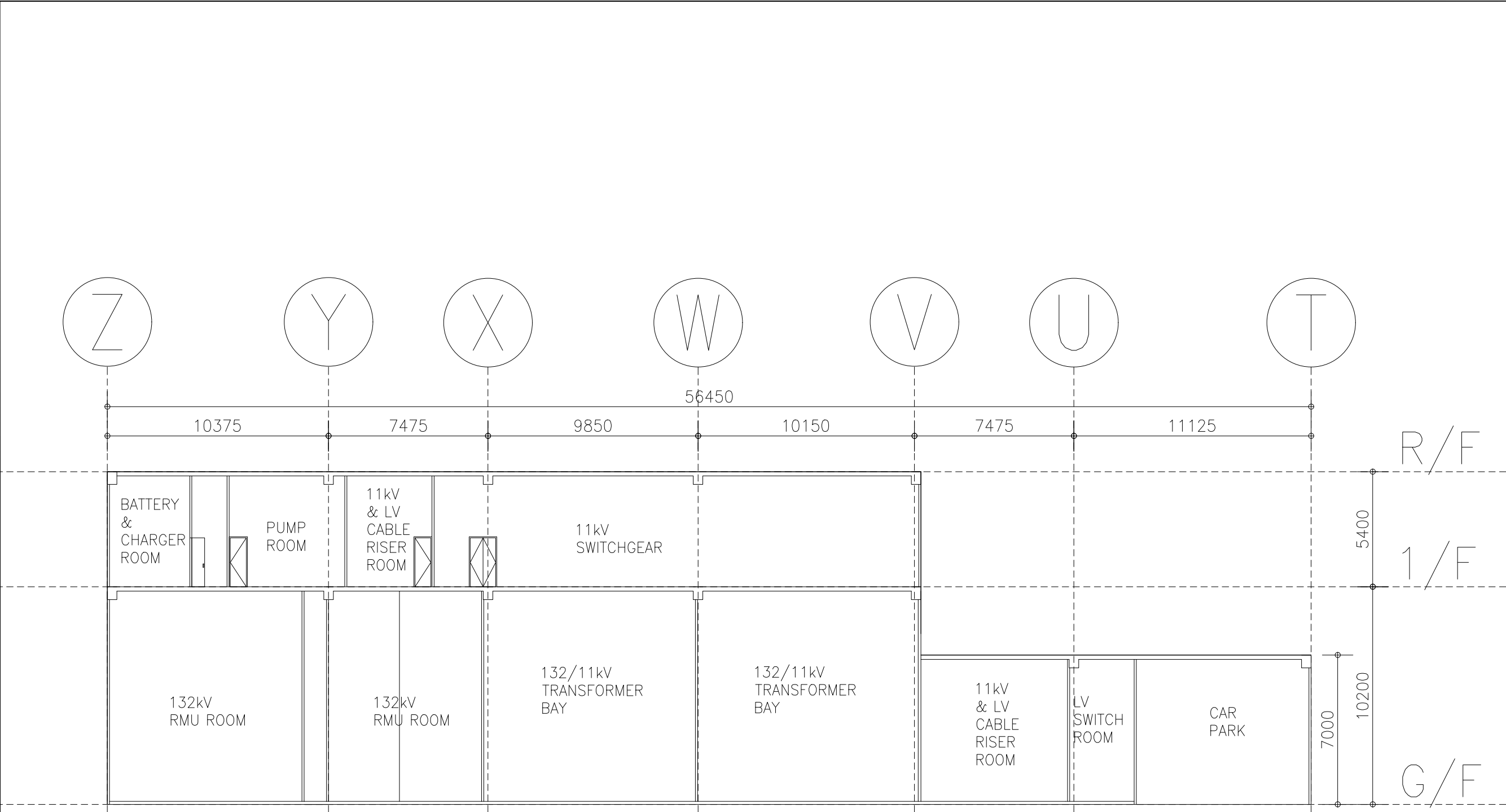
APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: AA08



1/F Scale: 1:250



SECTION C-C

NOTES AND CONDITIONS:

1.

ALL DESIGNS ARE THE PROPERTY OF FRUIT DESIGN AND BUILD AND CANNOT BE USED WITHOUT THEIR WRITTEN PERMISSION.

2.

ALL MEASUREMENTS MUST BE VERIFIED ON SITE BEFORE CONSTRUCTION.

3.

CONTRACTORS SHALL NOTIFY THE DESIGNER OF ANY DISCREPANCY BEFORE STARTING WORK.

4.

ALL DIMENSIONS ARE IN MILLIMETER EXCEPT OTHERWISE NOTED.

5.

ALL WORKS SHALL BE CARRIED OUT IN COMPLIANCE TO THE BUILDINGS ORDINANCE, BUILDINGS REGULATIONS AND CODE OF PRACTICES.

6.

THIS DRAWING SHALL BE READ IN CONJUNCTION WITH OTHER DRAWINGS AND SPECIFICATIONS OF THE TENDER DOCUMENTS AND SHALL BE MUTUALLY EXPLANATORY.

7.

THE CONTRACTOR SHALL FOLLOW MANUFACTURER'S INSTRUCTION & RECOMMENDATION IN CASE PROPRIETARY PRODUCT / SYSTEM / IS ADOPTED / SPECIFIED / APPROVED.

8.

DESIGN INTENT DRAWING ONLY. CONTRACTOR IS RESPONSIBLE FOR DESIGN AND SHOP DRAWING / CALCULATION SUBMISSION / MATERIAL SIZES / THICKNESS INDICATIVE.

REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

FRUIT

DESIGN &

BUILD LTD

A member of FDB Holdings Limited

A | 6/F, The Sun's Group Centre, 200 Gloucester Road,  
Wan Chai, Hong Kong

T | +852 3188 5595 F | +852 3188 5958

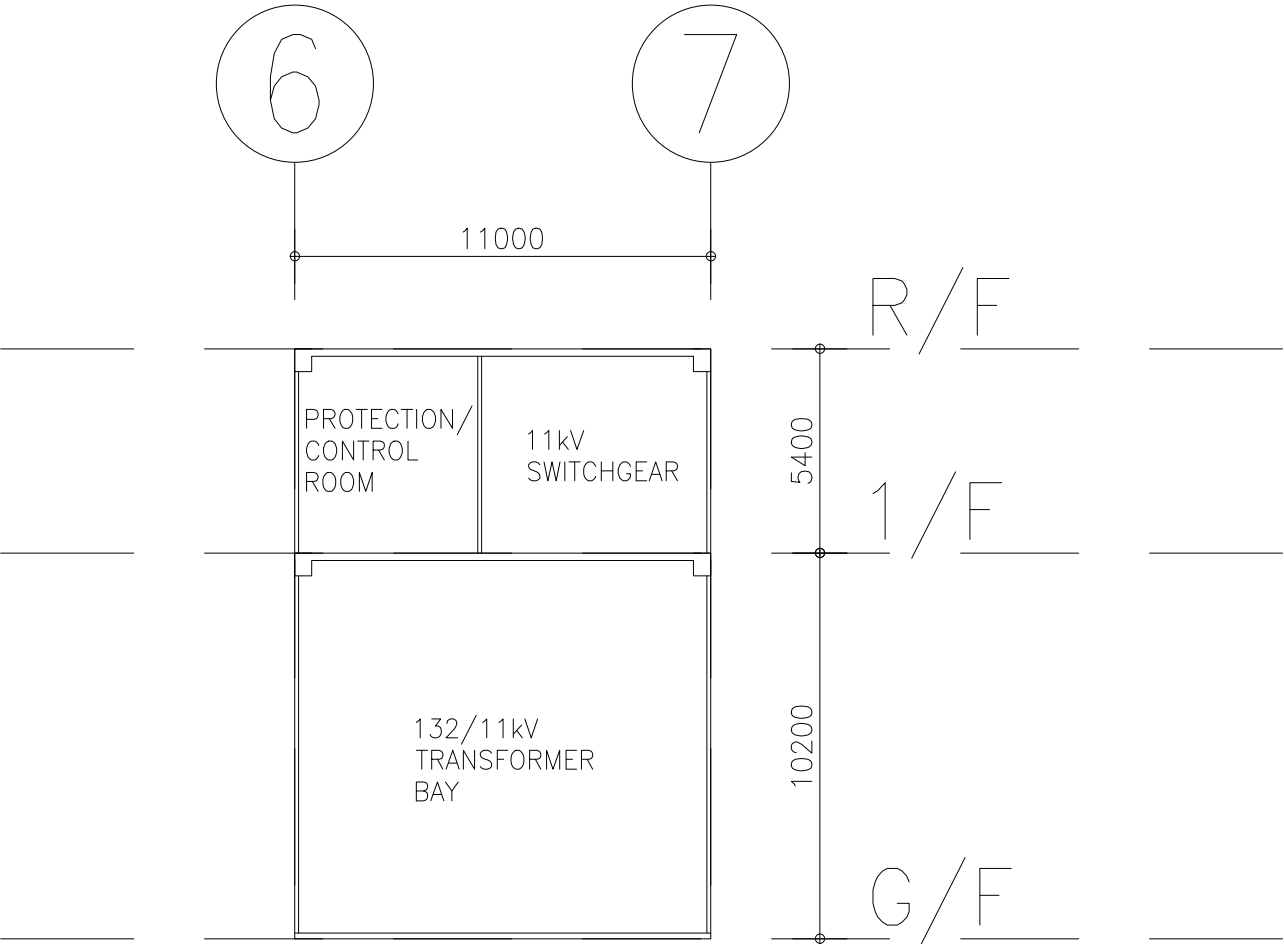
PROJECT :

TMCLK DEPOT

DRAWING TITLE :

SECTION C-C (SITE B)

SCALE:	1:200
DATE:	13/09/2021
DRAWN BY:	CC
CHECKED BY:	NC
APPROVED BY:	-
JOB. NO.:	FDB-P-21031
DWG. NO.:	ST03



SECTION D-D

- NOTES AND CONDITIONS:
1. ALL DESIGNS ARE THE PROPERTY OF FRUIT DESIGN AND BUILD AND CANNOT BE USED WITHOUT THEIR WRITTEN PERMISSION.
  2. ALL MEASUREMENTS MUST BE VERIFIED ON SITE BEFORE CONSTRUCTION.
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  8. DESIGN INTENT DRAWING ONLY. CONTRACTOR IS RESPONSIBLE FOR DESIGN AND SHOP DRAWING / CALCULATION SUBMISSION / MATERIAL SIZES / THICKNESS INDICATIVE.

REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

**FRUIT  
DESIGN &  
BUILD LTD**

A member of FDB Holdings Limited

A | 6/F, The Sun's Group Centre, 200 Gloucester Road,  
Wan Chai, Hong Kong

T | +852 3188 5995    F | +852 3188 5998

PROJECT:

TMCLK DEPOT

DRAWING TITLE :

SECTION D-D (SITE B)

SCALE: 1:200

DATE: 13/09/2021

DRAWN BY: CC

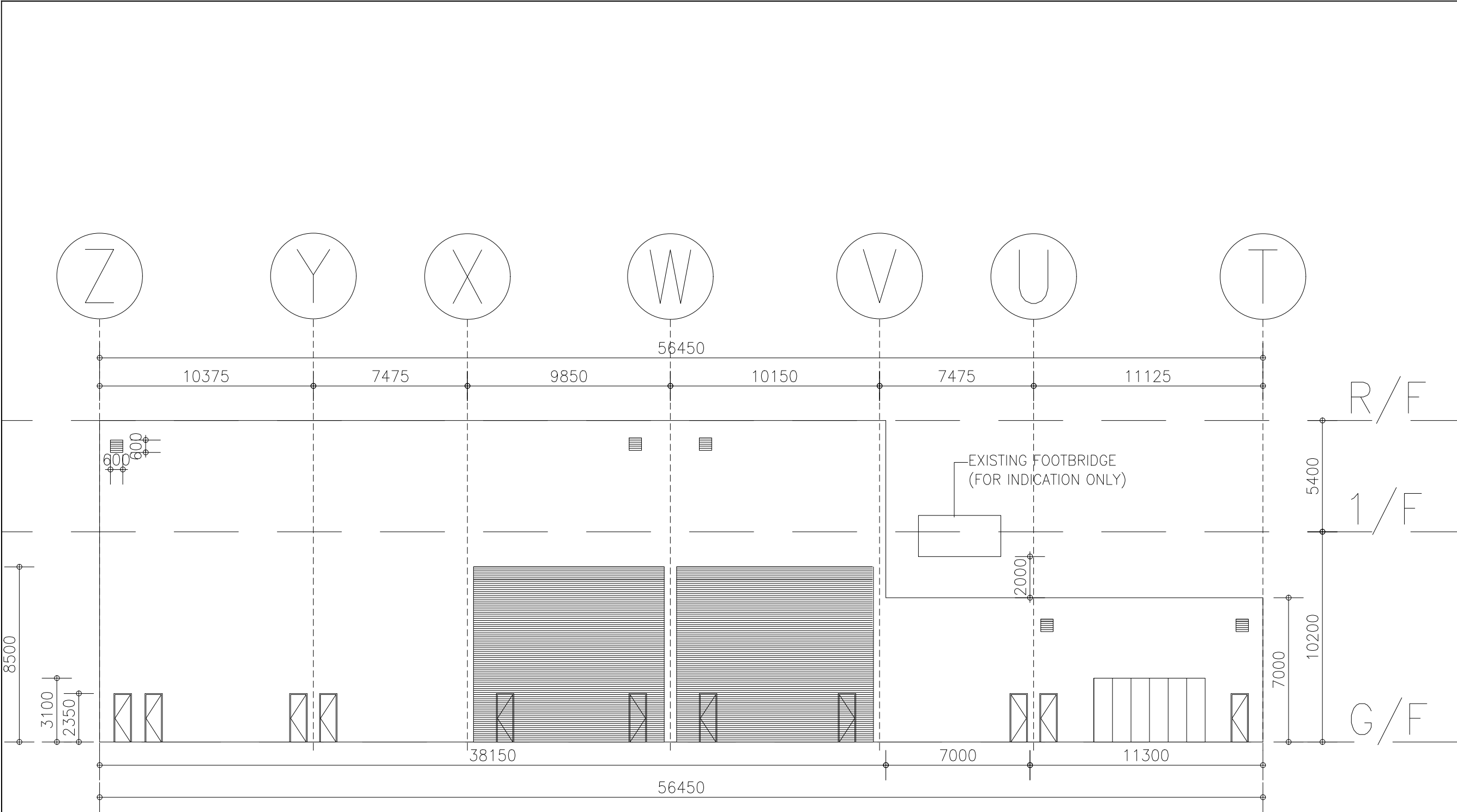
CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: ST04





- NOTES AND CONDITIONS:
1. ALL DESIGNS ARE THE PROPERTY OF FRUIT DESIGN AND BUILD AND CANNOT BE USED WITHOUT THEIR WRITTEN PERMISSION.
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REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

**FRUIT  
DESIGN &  
BUILD LTD**

A member of FDB Holdings Limited

A | 6/F, The Sun's Group Centre, 200 Gloucester Road,  
Wan Chai, Hong Kong

T | +852 3188 5595    F | +852 3188 5958

PROJECT:

TMCLK DEPOT

DRAWING TITLE :

NORTH-WEST ELEVATION (SITE B)

SCALE: 1:200

DATE: 13/09/2021

DRAWN BY: CC

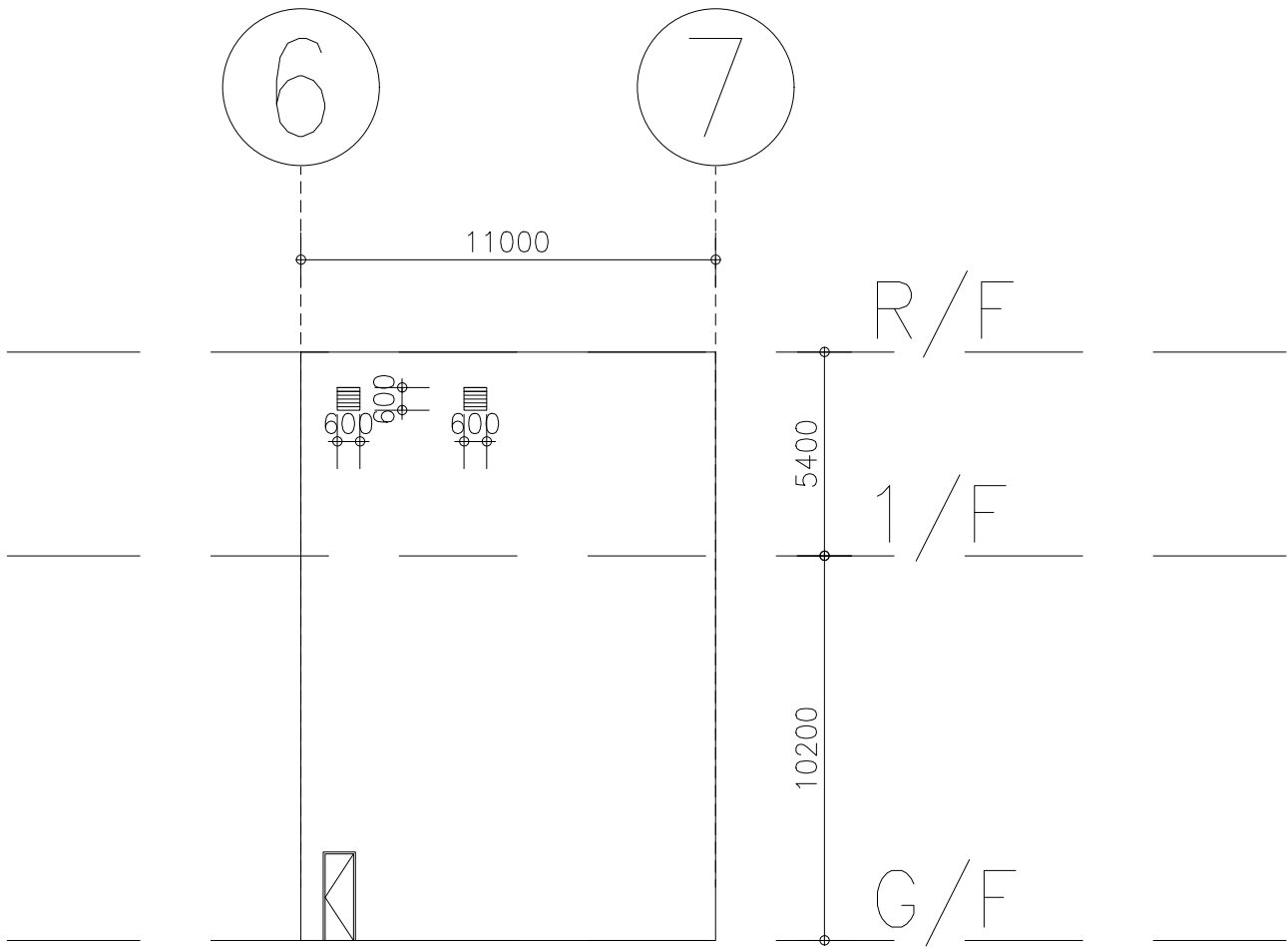
CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: EL05

# NORTH-WEST ELEVATION



NORTH-EAST ELEVATION

- NOTES AND CONDITIONS:
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REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

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DESIGN &  
BUILD LTD**

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Wan Chai, Hong Kong

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PROJECT:

TMCLK DEPOT

DRAWING TITLE :

NORTH-EAST ELEVATION (SITE B)

SCALE: 1:250

DATE: 13/09/2021

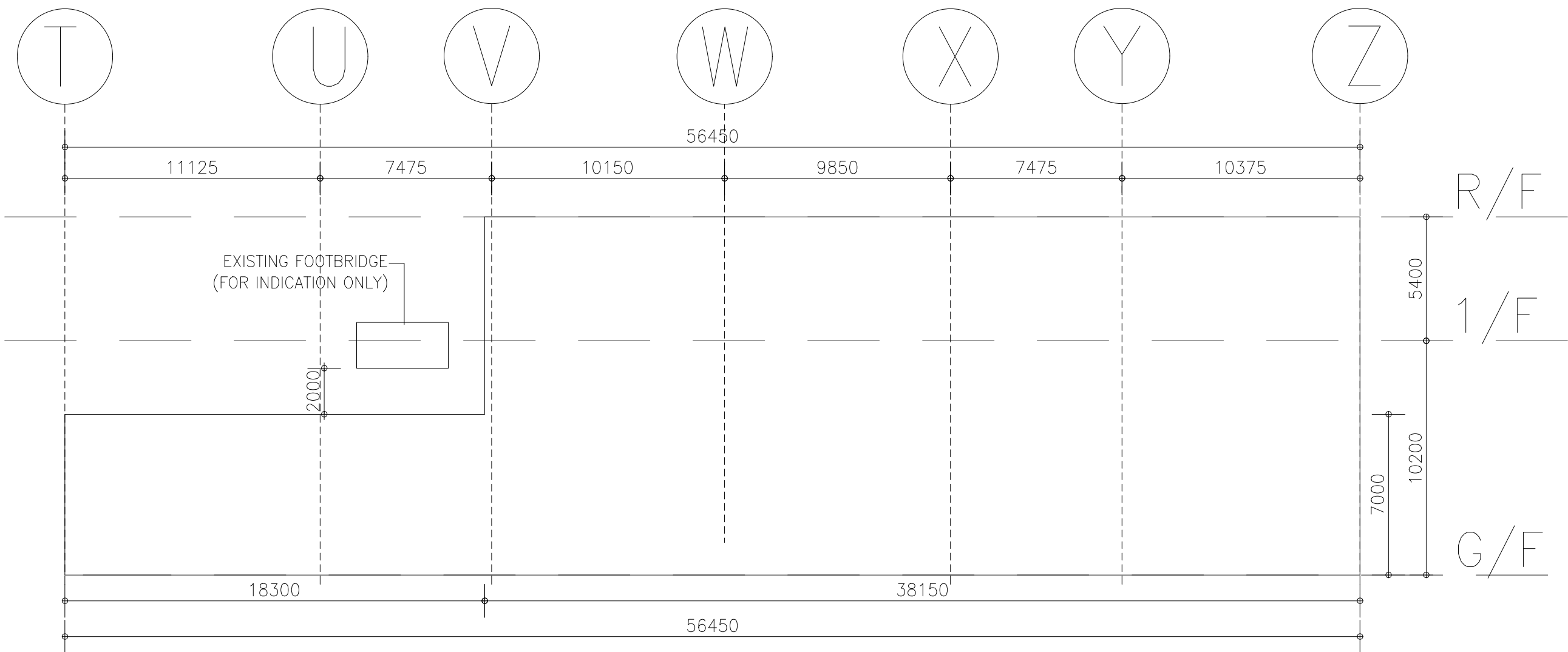
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DWG. NO.: EL06



SOUTH-EAST ELEVATION

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PROJECT:

TMCLK DEPOT

DRAWING TITLE :

SOUTHEAST ELEVATION (SITE B)

SCALE: 1:200

DATE: 13/09/2021

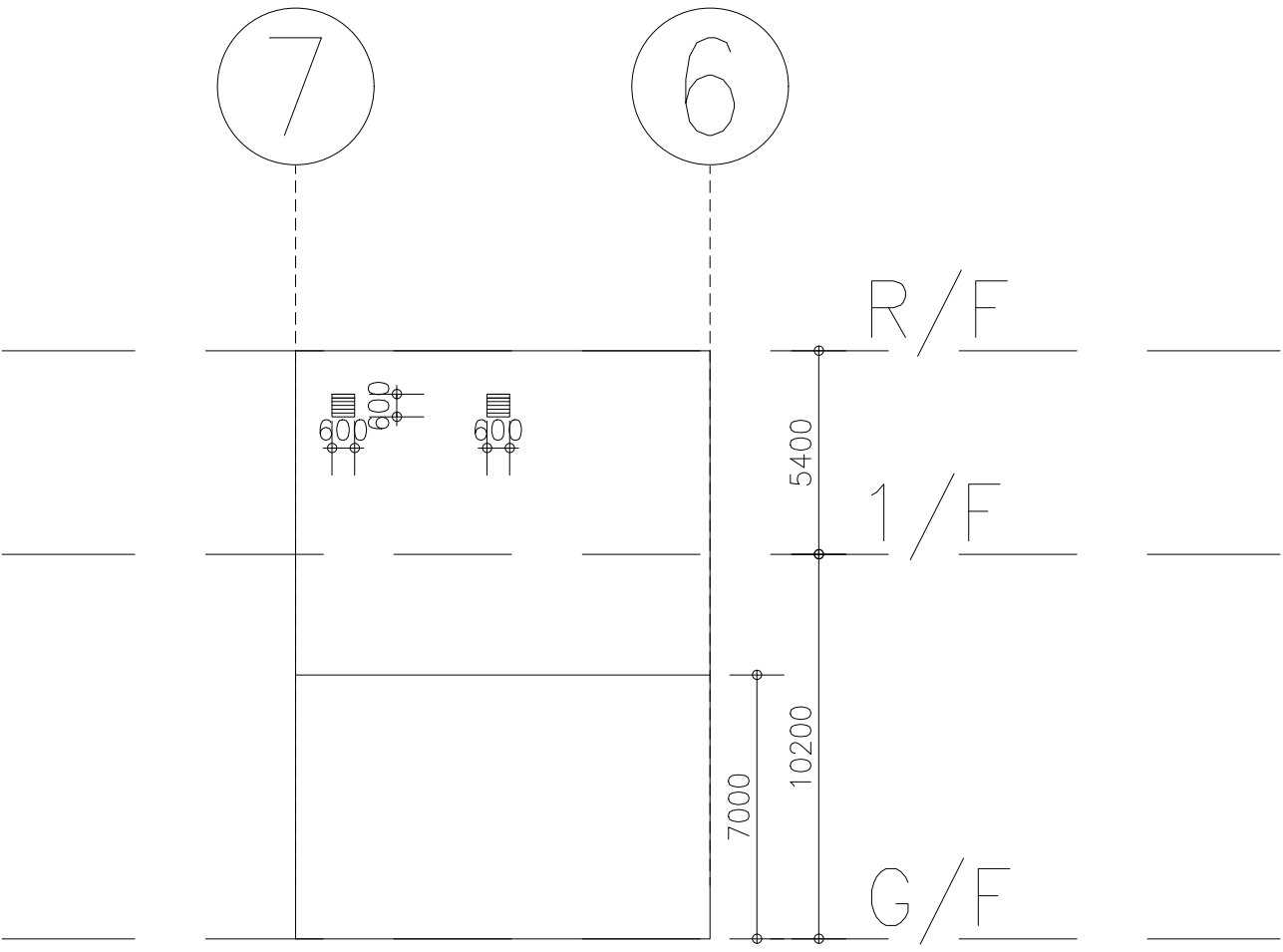
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SOUTH-WEST ELEVATION

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PROJECT:

TMCLK DEPOT

DRAWING TITLE :

SOUTHWEST ELEVATION (SITE B)

SCALE: 1:200

DATE: 13/09/2021

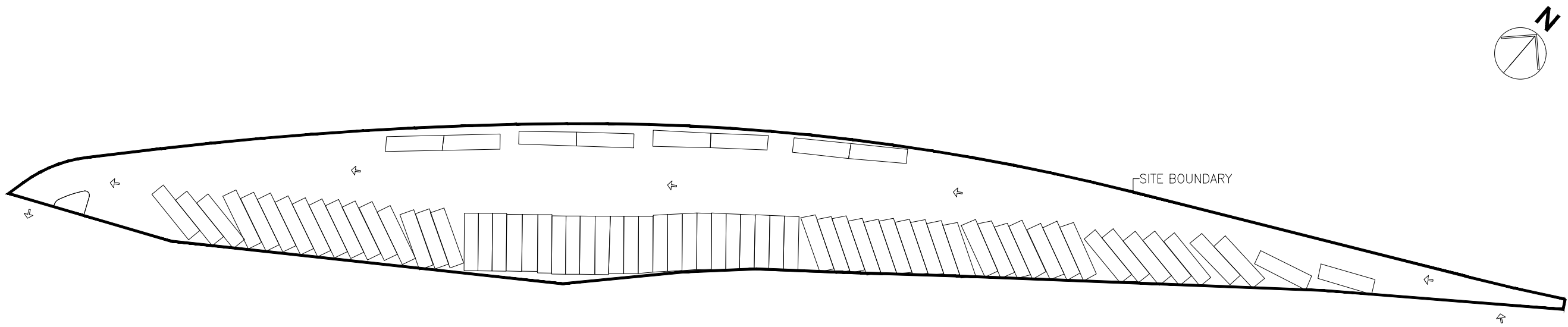
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JOB. NO.: FDB-P-21031

DWG. NO.: EL08



LEGEND



Parking Space  
(13000mm x 3250mm)

G/F

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REV	DESCRIPTION	DATE

CLIENT:

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PROJECT:

TMCLK DEPOT

DRAWING TITLE :

G/F LAYOUT (SITE C)

SCALE: 1:1000

DATE: 13/09/2021

DRAWN BY: CC

CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

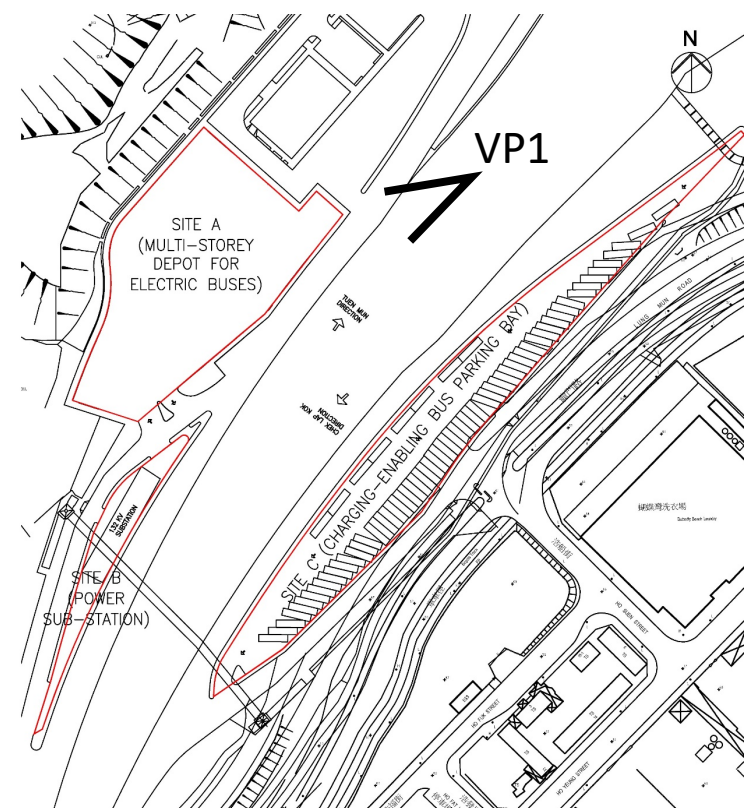
DWG. NO.: AA09

# TMCLK KMB Depot



TMCLK DEPOT - SITE B Perspective View NE – VP1

MULTI-STOREY DEPOT FOR ELETRIC BUSES IN SITE A



KEY PLAN

LEGEND

- PROPOSED VERTICAL GREEN PANEL
- PROPOSED THEME TREE / LARGE TREE / SHURBS
- PROPOSED SOLAR PANEL
- VIEWPOINT

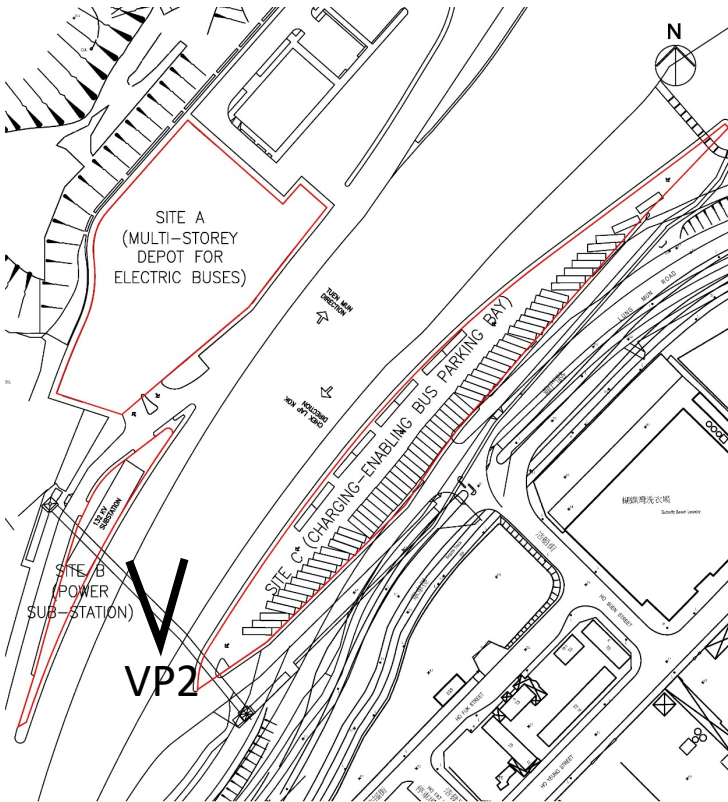
Remarks:  
KMB is liaising with CLP regarding the construction of the substation in Site B.

The current design of this substation is preliminary and the final design will be confirmed by CLP in later stage.





TMCLK DEPOT - SITE B Perspective View SW – VP2







KEY PLAN

BEFORE



LEGEND

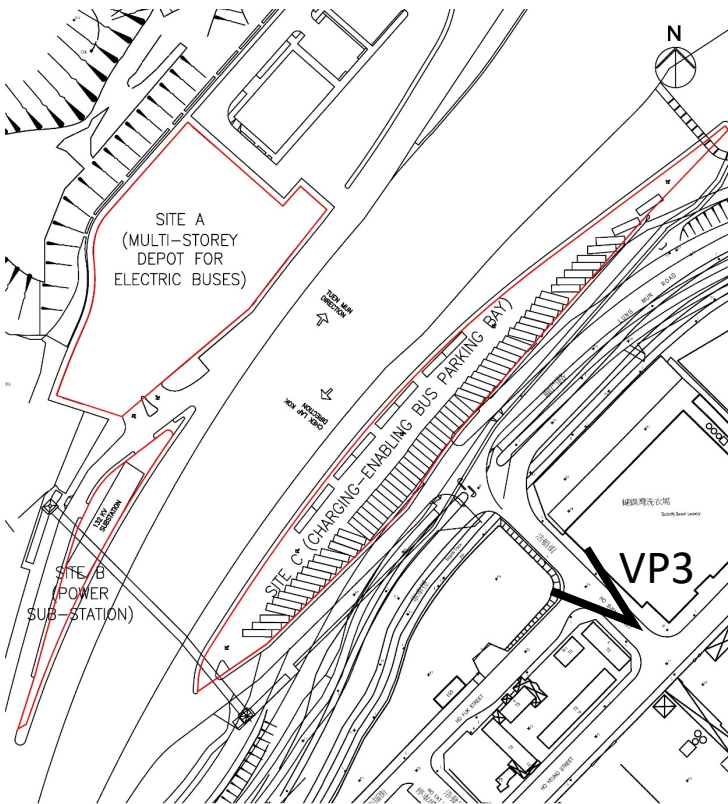
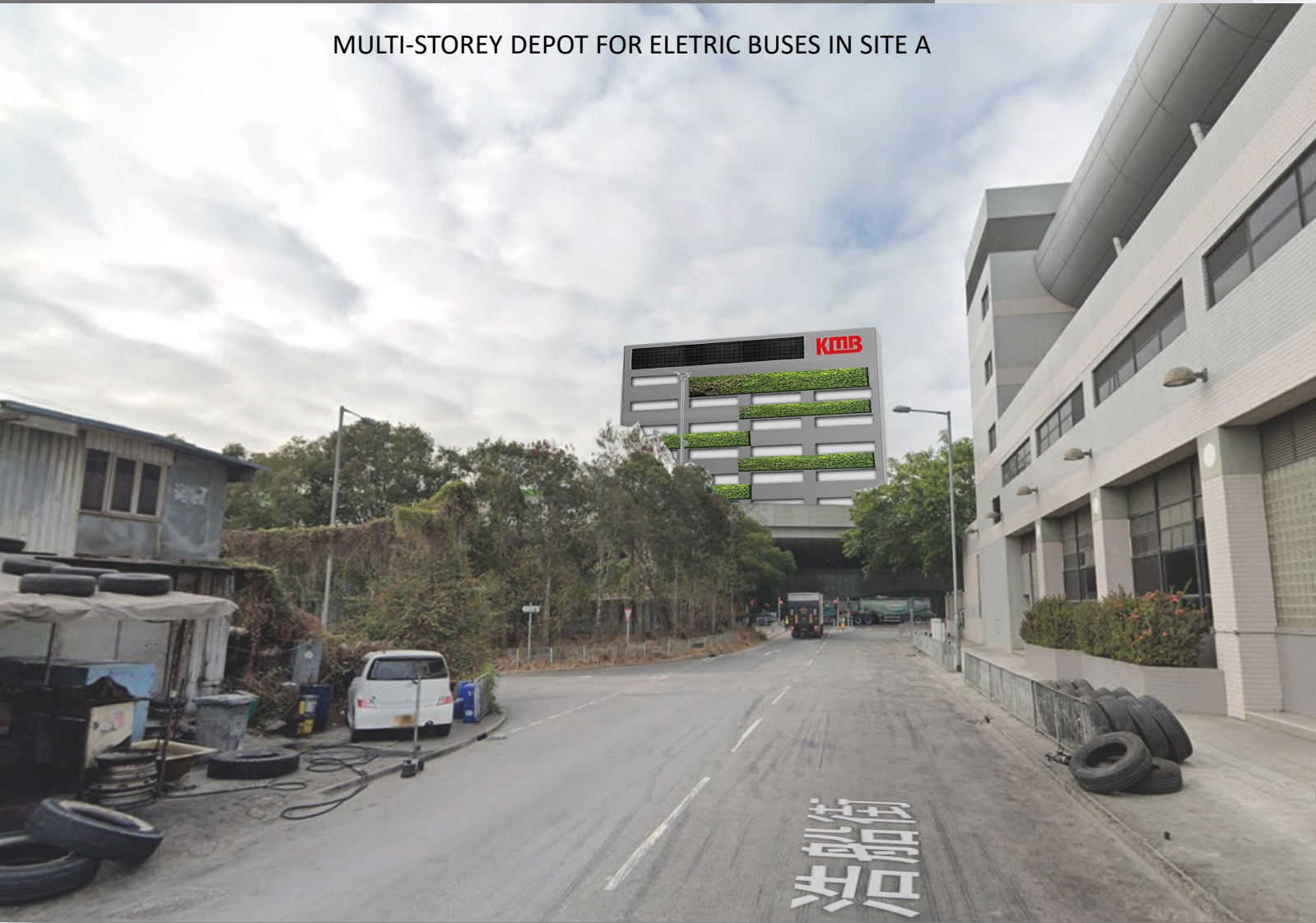
-  PROPOSED VERTICAL GREEN PANEL
-  PROPOSED THEME TREE / LARGE TREE / SHURBS
-  PROPOSED SOLAR PANEL
-  VIEWPOINT

Remarks:  
KMB is liaising with CLP regarding the construction of the substation in Site B.

The current design of this substation is preliminary and the final design will be confirmed by CLP in



MULTI-STOREY DEPOT FOR ELETRIC BUSES IN SITE A







KEY PLAN

BEFORE



LEGEND

-  PROPOSED VERTICAL GREEN PANEL
-  PROPOSED THEME TREE / LARGE TREE / SHURBS
-  PROPOSED SOLAR PANEL
-  VIEWPOINT

Issue No. : Issue 3  
Issue Date : Nov 2021  
Project No. : 1906



## **NOISE IMPACT ASSESSMENT**

### **FOR**

### **PROPOSED BUS DEPOTS WITH ANCILLARY PUBLIC UTILITY INSTALLATION (ELECTRICITY SUBSTATION) IN AREA SHOWN AS 'ROAD', GOVERNMENT LAND IN D.D. 138 AND D.D. 300, TUEN MUN, NEW TERRITORIES (NEAR THE BUILDING AT 20 TUEN MUN CHEK LAP KOK TUNNEL ROAD)**

Prepared by

Allied Environmental Consultants Limited

**COMMERCIAL-IN-CONFIDENCE**

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香港灣仔告士打道 160 號海外信託銀行大廈 27 樓

## Document Verification



<b>Project Title</b>	Proposed Bus Depots with Ancillary Public Utility Installation (Electricity Substation) in area shown as 'Road', Government Land in D.D. 138 and D.D. 300, Tuen Mun, New Territories (near the building at 20 Tuen Mun Chek Lap Kok Tunnel Road)	<b>Project No.</b> 1906
<b>Document Title</b>	Noise Impact Assessment	

Issue No.	Issue Date	Description	Prepared by	Checked by	Approved by
Issue 1	May 2021	1st Submission	Jamie Kam	Cathy Man	Grace Kwok
Issue 1 rev.1	July 2021	1st Submission	Jamie Kam	Cathy Man	Grace Kwok
Issue 2	Sept 2021	2nd Submission	Jamie Kam	Cathy Man	Grace Kwok
Issue 3	Nov 2021	3rd Submission	Jamie Kam	Cathy Man	Grace Kwok

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- Appendix3.3 Proposed Traffic Routing
- Appendix7.1 Traffic Forecast for Road Traffic Noise Impact Assessment
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## **1. Introduction**

- 1.1.1. Allied Environmental Consultants Limited (AEC) was commissioned by the Kowloon Motor Bus Company (1933) Limited (KMB) to conduct Noise Impact Assessment (NIA) to support of a Section 16 Planning Application for proposed bus depots with ancillary public utility installation (hereafter referred to as the “Proposed Development”) of Tuen Mun – Chek Lap Kok Link (TMCLK) Free Up Area (hereafter referred to as the “Project Sites”).
- 1.1.2. The Proposed Development includes a multi-storey permanent depot at Site A; a 2-storey power substation at Site B and charging-enabling bus parking bays at Site C.
- 1.1.3. The Project Sites comprise of three free up areas, namely Site A, B and C, with total area of 16,845m<sup>2</sup> (Site A: 7,926 m<sup>2</sup>; Site B: 1,321 m<sup>2</sup> and Site C: 7,598 m<sup>2</sup>). The Project Sites are served as the proposed depot for electric buses (“eBus”) only. eBus will be charged and parked overnight at Site A and Site C, whilst vehicular maintenance activities and bus washing will also be carried out within Site A only.



## 2. Objectives

- 2.1.1. In support of the Section 16 Planning Application for the Proposed Development, Noise Impact Assessment (NIA) is conducted to address noise impact on the noise sensitive uses in the Proposed Development and in the vicinity of Project Site, and recommend mitigation measures to minimize the noise impact where necessary.

## 3. Description of the Proposed Development and its Environs

- 3.1.1. The Project Sites are located near to Pillar Point, Tuen Mun. The location of the Project Site and its environs is shown in **Figure 3-1**.
- 3.1.2. The Project Sites are located at Tuen Mun Chek Lap Kok Tunnel Road and at the east of the Tuen Mun Chek Lap Kok Tunnel Interchange. The Project Site falls into “Road” under the Approved Tuen Mun Outline Zoning Plan (OZP) No. S/TM/35.
- 3.1.3. Based on the best available information from Development Permission Area Plans, Outline Development Plans, Layout Plans and other relevant published and uses plan by Lands Department or Planning Department, no committed or planned developments are identified within 300m from the boundary of Project Sites. As advised by Planning Department (PlanD), the consultant has visited the Town Planning Board Statutory Planning Portal 2 to obtain records for land zoning. The website as of 8 October 2021 has confirmed that there are no planning applications made at the vicinity, which implies no committed or planned developments. Correspondence from PlanD can be referred in **Appendix 3-1**.
- 3.1.4. Therefore, it is revealed that no existing, committed or planned sensitive receivers is identified within 300m area from the boundary of Project Sites.
- 3.1.5. The Proposed Development will be operated 24 hours continuously. It aims to provide 406 charging-enabling bus parking bays for electric buses (eBus). Minor vehicle repair / testing activities will also be carried out within Site A, including bus washing, tyre changing or charging, parts replacement, motor testing, battery charging and braking test.

3.1.6. The multi-storey depot building at site A comprises a transformer room, bus washing area, maintenance bays, ancillary office and parking spaces. The ancillary office in Site A and protection/ control room in Site B will be served with mechanical ventilation and air conditioning system (MVAC system) and will not rely on openable windows for ventilation purpose. Site B will be used for a power substation; while Site C is for bus parking only. **Appendix 3-2** shows the master layout plan of the Proposed Development.

3.1.7. The eBus fleet returning to Project Sites at midnight will go through the bus washing bays and will be parked overnight for charging (parked at either Site A or Site C). The eBus fleet will travel to and from the depot at midnight and in early morning through Lung Fu Road and Lung Mun Road. The proposed traffic routing of the Proposed Development is included in **Appendix 3.3**.

## 4. EIA Ordinance Implications

4.1.1. As a multi-storey depot for electric buses is proposed at the Project Site, a Designated Project (DP) under Schedule 2, Part I, Category A.6 of the EIAO has been considered:

4.1.2. Category A.6: A transport depot located less than 200 m from the nearest boundary of an existing or planned---

- (a) residential area;
- (b) place of worship;
- (c) educational institution; or
- (d) health care institution.

4.1.3. With reference to the Development Permission Area Plans, Outline Development Plans, Layout Plans and other relevant published land uses plan by Lands Department or Planning Department, neither residential area, place of worship, educational institution, nor health care institution is identified or will be planned within 200m from Project Site boundary. Therefore, the proposed bus depot does not constitute DP under EIAO and Environmental Permit (EP) is not required for this Project.



## **5. Environmental Legislation, Standards and Criteria**

### **5.1. Traffic Noise**

- 5.1.1. Noise standards are recommended in Chapter 9, “Environment” of the Hong Kong Planning Standards and Guidelines (“HKPSG”) for planning against noise impact from sources such as road traffic, railway and aircraft. The applicable standard based on the proposed used is road traffic standard on domestic premises, which is  $L_{10(1\text{-hour})}$  70dB(A). The noise standard applies to uses which rely on openable windows for ventilation only.

### **5.2. Existing and Planned Fixed Plant Noise**

- 5.2.1. Existing Fixed Plant Noise is controlled under the NCO’s *Technical Memorandum on Noise from Places other than Domestic Premises, Public Places or Construction Sites* (IND-TM), which shall not exceed the Acceptable Noise Level (ANL) for a Noise Sensitive Receiver.
- 5.2.2. More stringent criteria are applicable for planned fixed plants, as stipulated in the Chapter 9, “Environment” of the HKPSG with the following requirements: 5dB(A) below the appropriate ANLs in the IND-TM; or the prevailing background noise levels, whichever is lower.

## 6. Identification of Noise Sensitive Receivers

- 6.1.1. With reference to **Figure3-1**, the Project Sites are situated at the west of Tuen Mun Chek Lap Kok Tunnel Road. Garages in temporary structures, and buildings for industrial uses (e.g. Sun Hing Logistics Centre (Tuen Mun) and Butterfly Beach Landry) are mainly found at the east of the Project Sites.
- 6.1.2. As mentioned in S3.1.3, no existing, committed nor planned noise sensitive uses is identified on any Development Permission Area Plans, Outline Development Plans, Layout Plans and other relevant published and uses plan by Lands Department or Planning Department within 300m radius of the Project Sites.
- 6.1.3. The ancillary office at Site A and protection/control room at Site B will be served with MVAC system and will not rely on openable windows for ventilation. Therefore, the office and protection/control room itself are not regarded as a representative NSR. In view of the operational nature of the proposed depot, which is used for parking and overnight charging with minor maintenance work will be conducted, the Proposed Development itself is not noise sensitive in nature and it is not considered as an NSR.

Project No. 1906

Noise Impact Assessment for Proposed Bus Depots with Ancillary Public Utility Installation (Electricity Substation) in area shown as 'Road', Government Land in D.D. 138 and D.D. 300, Tuen Mun, New Territories (near the building at 20 Tuen Mun Chek Lap Kok Tunnel Road)

---

## 7. Road Traffic Noise Review

### 7.1. Overview

- 7.1.1. As eBus is fully powered by electricity and no engine is required, its operation is quiet in nature, engine noise from eBus is not expected, while tyre noise from eBuses travelling to and from the depot is anticipated.
- 7.1.2. Furthermore, with reference to the Traffic Impact Assessment (TIA) submitted by the Applicant for the captioned, Queue Length Analysis for the bus washing system has been conducted, which revealed that the available queuing area in Site A is adequate to satisfy the operational demand and avoid queuing of buses on public roads. Therefore, queueing issue of buses along Lung Fu Road and Lung Mun Road is not anticipated.
- 7.1.3. No existing/ planned NSRs are identified within 300m assessment area. As the eBuses will travel to and from the proposed depot via Lung Fu Road and Lung Mun Road as shown in **Appendix 3.3**, noise impact from the road traffic generated by the project on representative NSRs along these access roads is evaluated in this review.

### 7.2. Assessment Methodology

- 7.2.1. The traffic noise impact was evaluated with reference to the "Calculation of Road Traffic Noise" published by the Department of Transport UK and Guidance Note titled "Road Traffic Noise Impact Assessment under the Environmental Impact Assessment Ordinance" (GN 12/2010). The traffic noise impact would be considered insignificant only if the road traffic noise induced by eBuses entering and leaving the proposed depot would not cause the overall traffic noise level to increase by 1.0 dB(A) or more.
- 7.2.2. With reference to the traffic data of Year 2028 in TIA report and advice from project traffic consultant, traffic flow of Year 2028 for "With project" and "Without project" scenarios are adopted for this review (see **Appendix 7.1**). The traffic data adopted in this NIA is extracted from the Project's TIA which has been endorsed by the Transport Department.

- 7.2.3. The operational peak of the proposed Project is between 06:00 to 07:00 hours with maximum trip generation of 134veh/hr throughout a day. By comparing the noise levels between “with project” and “without project” during operation peak, the noise contribution from the road traffic generated by the proposed Project is considered insignificant when the difference in traffic noise levels at the NSRs with and without the project is less than 1.0 dB(A).

### 7.3. Identified Noise Sensitive Receivers (NSRs) for TNIA

- 7.3.1. Referring to the traffic routing in Appendix 3.3, eBuses will enter or leave the proposed development along Lung Mun Road and Lung Fu Road. Representative noise sensitive receivers (NSRs), such as residential developments, located along those access roads with shortest separation distance are selected for review. NSR1 Yee Tsui House, which is approximately 30m away from the road kerb of Lung Mun Road, is the worst location due to close proximity. Other existing NSRs, e.g. residential towers of Melody Garden and Butterfly Estate, are beyond 30m from Lung Mun Road.

- 7.3.2. Figure 7.1 shows the location of representative NSRs along access roads.

**Table 7-1 Representative Existing NSRs along Access Roads**

NSR ID	Description	Use	Approx. Horizontal Distance from the Project Site, m
NSR1	Yee Tsui House	Residential	1003
NSR2	Melody Garden	Residential	1131
NSR3	Butterfly Estate	Residential	1352
NSR4	Siu Shan Court	Residential	1405

#### **7.4. Predicted Road Traffic Noise Level at representative NSR**

- 7.4.1. The predicted overall traffic noise levels at the representative NSRs along access roads during operational peak for “with project” and “without project” scenarios are summarized on **Appendix 7.2**. The assessment result indicated that noise contribution from road traffic generated by the proposed project (along Lung Fu Road and Lung Mun Road) is 0.9 dB(A) at all identified representative NSRs. The noise contribution is considered insignificant (i.e. less than 1.0 dB(A)). Hence, the operation of the proposed project is anticipated to have no significant contribution to road traffic noise impact on the NSRs. Nevertheless, KMB will carefully schedule the bus fleet to reduce the no. of vehicles travelling to and from the depot at the same time as far as practicable.

### **8. Fixed Plant Noise Impact Assessment**

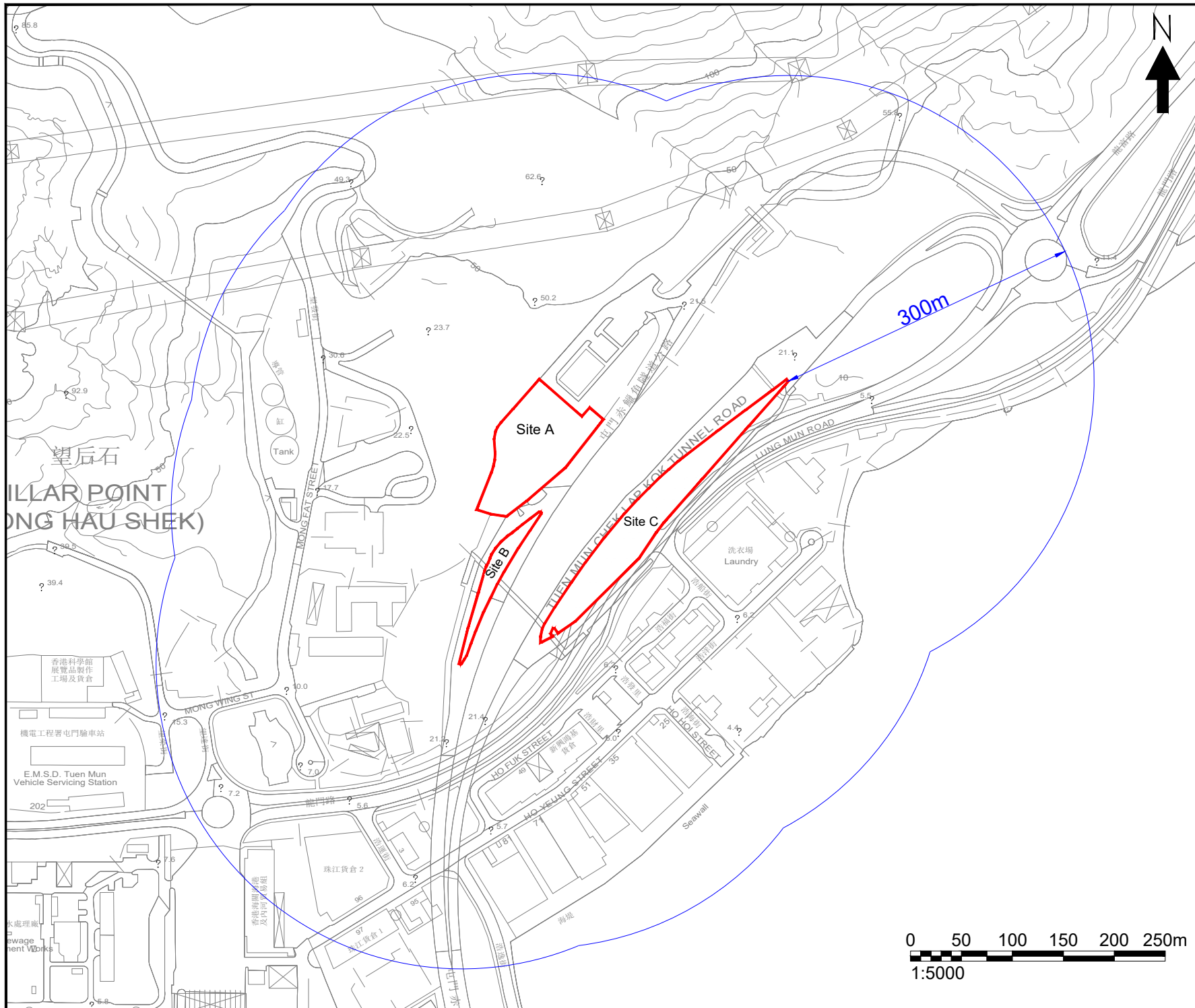
- 8.1.1. Fixed plant noise sources from the Proposed Development include vehicle repair / testing activities, MVAC equipment at Site A; power substation at Site B and other fixed noise sources. As Site C is used for charging-enabling bus parking bays only, no fixed noise sources are identified.
- 8.1.2. Since there are no NSRs identified within 300m area of the Project Sites, cumulative fixed noise impact from the operation of proposed development is not envisaged and therefore not assessed in this NIA.

## **9. Conclusion**

- 9.1.1. There are no existing and planned noise sensitive receivers identified within 300m assessment area from the boundary of Project Sites, hence no adverse noise impact from the Proposed Development (including road traffic noise impact and fixed plant noise impact) to the surrounding NSRs is anticipated.
- 9.1.2. Moreover, the bus depot itself is not noise sensitive in nature. The proposed office at Site A and protection/control room at Site B within the depot building is served with MVAC system and will not rely on openable windows for ventilation, hence they are not a representative NSR. No adverse noise impact on the Proposed Development is anticipated.
- 9.1.3. Road Traffic Noise Review was conducted to compare the noise levels for the “With Project” and “Without Project” Scenarios during operation peak. It is concluded that noise contribution from the induced road traffic on existing NSRs along Lung Fu Road and Lung Mun Road is insignificant.

## ***Figures***

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NOTES :

PROJECT SITE

Consultant



**AEC**

**Allied Environmental Consultants Limited**

Project No. : 1906

File Name :

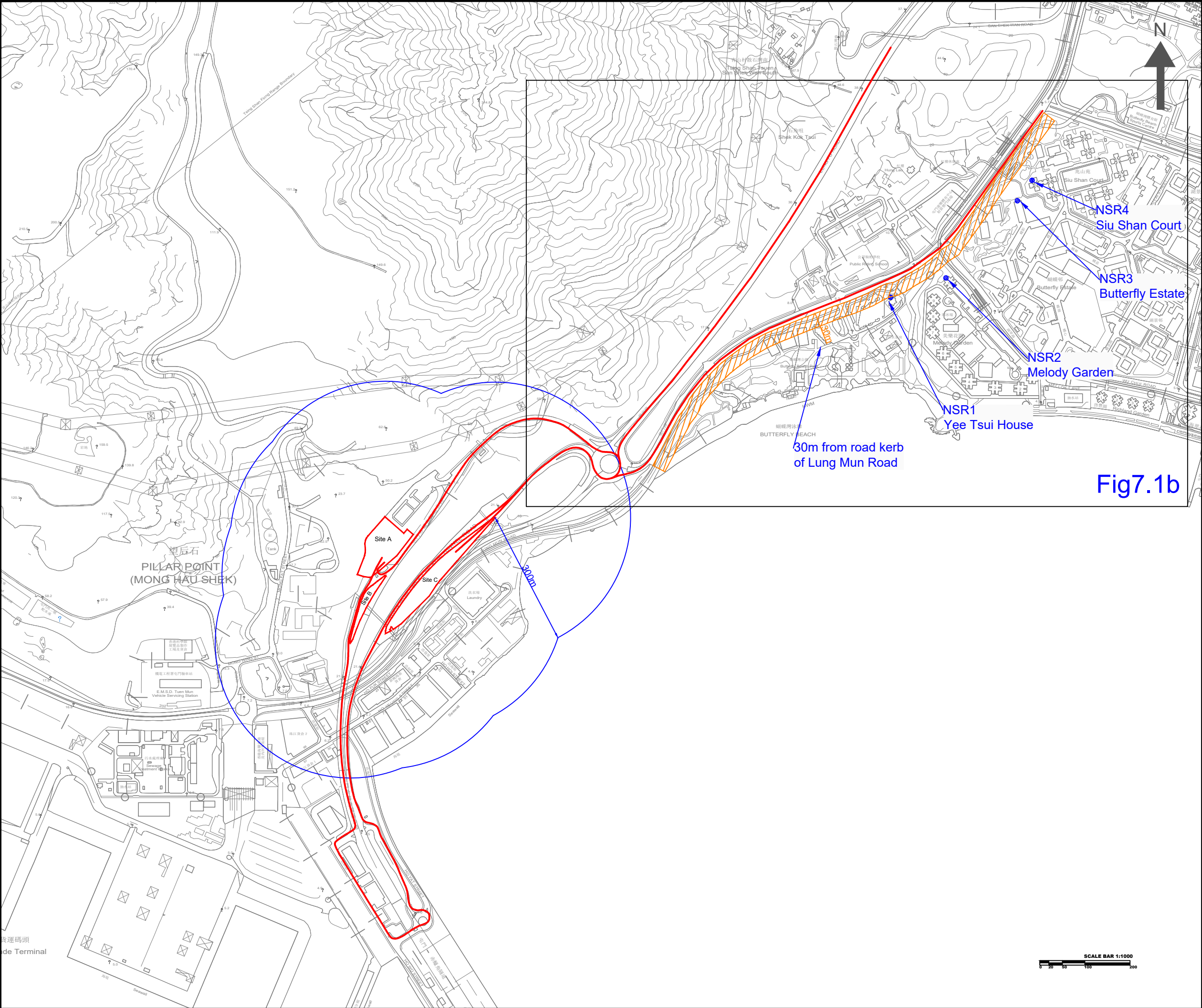
Project : PROPOSED BUS DEPOTS WITH ANCILLARY PUBLIC UTILITY INSTALLATION (ELECTRICITY SUBSTATION) IN AREA SHOWN AS 'ROAD' GOV LAND IN D.D. 138 AND D.D. 300, TUEN MUN, NEW TERRITORIES

Drawing Title : LOCATOR OF PROJECT SITE AND ASSESSMENT AREA

Drawing No : FIGURE 3-1	Revision : 1
Scale : AS SHOWN	Date : AUG 2021

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- NOTES :
- PROJECT SITE
  - ASSESSMENT AREA
  - PROPOSED TRAFFIC ROUTING

Fig7.1b

Consultant

**Allied Environmental Consultants Limited**

Project No. : 1906

Drawing By : /

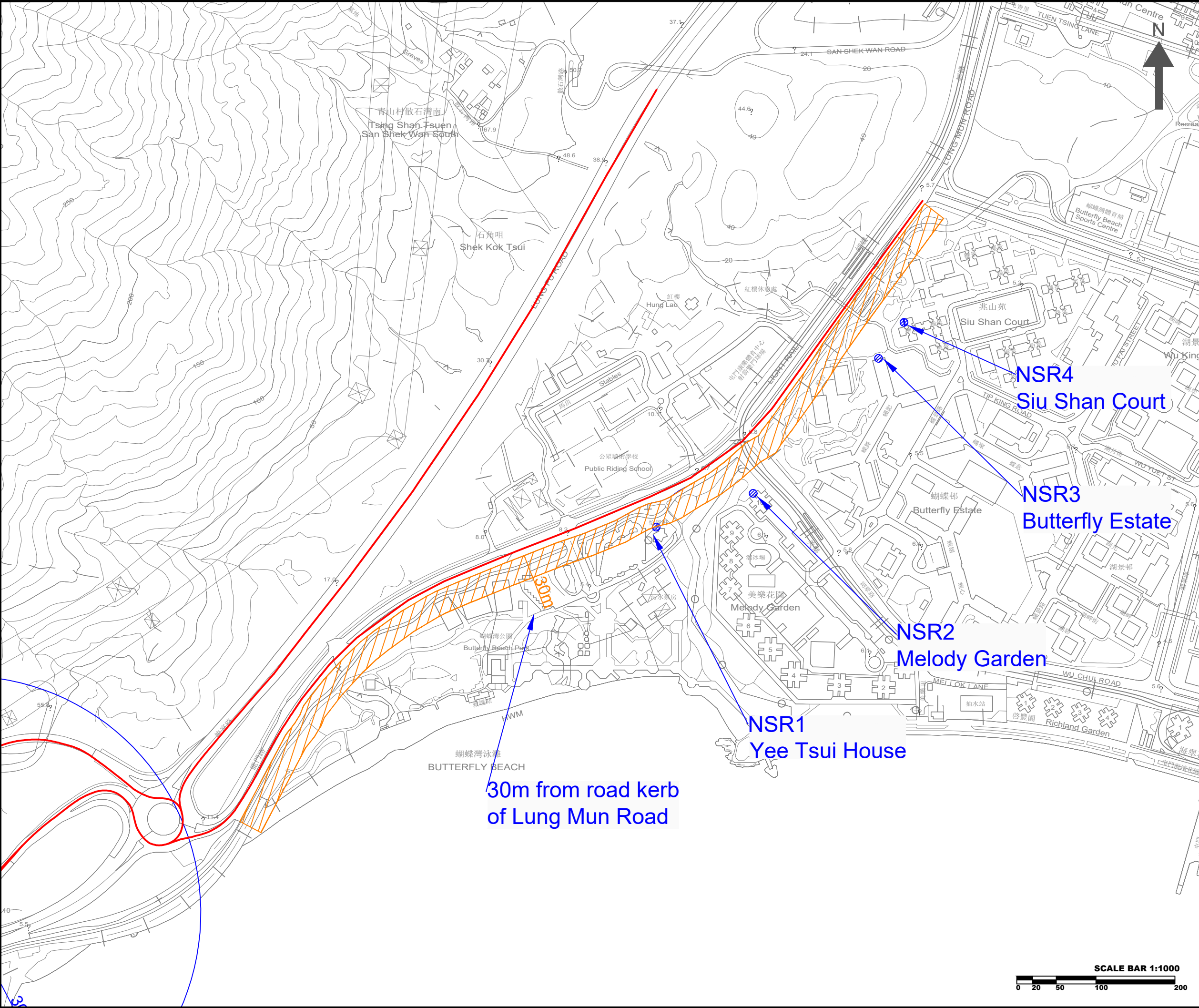
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PROPOSED BUS DEPOTS WITH ANCILLARY  
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(ELECTRICITY SUBSTATION) IN AREA  
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D.D. 138 AND D.D. 300, TUEN MUN, NEW  
TERRITORIES

Drawing Title :  
REPRESENTATIVE NOISE SENSITIVE  
RECEIVERS (NSR) FOR ROAD TRAFFIC  
NOISE ASSESSMENT

Drawing No : Fig7.1a	Revision : 0
Scale : AS SHOWN	Date : NOV 2021

DO NOT SCALE OFF DRAWING. THIS DRAWING IS NOT FOR CONSTRUCTION PURPOSES UNLESS EXPRESSLY STATED. ALL RIGHTS RESERVED AND REPRODUCTION IN ANY FORM MUST BE APPROVED BY ALLIED ENVIRONMENTAL CONSULTANTS LIMITED.





- NOTES :
- PROJECT SITE
  - ASSESSMENT AREA
  - TRAFFIC ROUTING

Consultant

**AEC**

**Allied Environmental Consultants Limited**

Project No. : 1906

Drawing By : /

Project :  
PROPOSED BUS DEPOTS WITH ANCILLARY  
PUBLIC UTILITY INSTALLATION  
(ELECTRICITY SUBSTATION) IN AREA  
SHOWN AS 'ROAD', GOVERNMENT LAND IN  
D.D. 138 AND D.D. 300, TUEN MUN, NEW  
TERRITORIES

Drawing Title :  
REPRESENTATIVE NOISE SENSITIVE  
RECEIVERS (NSR) FOR ROAD TRAFFIC  
NOISE ASSESSMENT

Drawing No : Fig7.1b	Revision : 0
Scale : AS SHOWN	Date : NOV 2021

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APPROVED BY ALLIED ENVIRONMENTAL CONSULTANTS LIMITED.

## ***Appendix 3-1***

---

***Correspondence from Planning Department***



Ms. LO Sum Yuen, Angela  
Planning Department  
Tuen Mun and Yuen Long West District Planning  
Office  
14/F, Sha Tin Government Offices, 1 Sheung Wo Che  
Road, Sha Tin, NT

27/F, Overseas Trust Bank Building  
160 Gloucester Road  
Wan Chai  
Hong Kong  
T: +852 2815 7028  
F: +852 2815 5399  
[info@aechk.com](mailto:info@aechk.com)  
[www.asecg.com](http://www.asecg.com)

8 April 2021

By Fax & E-mail

Dear Sir / Madam,

**INSTALLATION OF DEPOT FACILITIES FOR THE KOWLOON MOTOR BUS CO. (1933) LTD. AT TUEN MUN –  
CHEK LAP KOK LINK("TMCLK") FREE UP AREAS  
REQUEST FOR INFORMATION - PLANNED CONSTRUCTION ACTIVITIES AND PLANNED DEVELOPMENTS**

We are an environmental consultant commissioned by the Kowloon Motor Bus Co.(1933) Ltd. to conduct the Environmental Assessment study for the captioned project.

In order to have a precise assessment, it would be grateful if you could advise whether there is any construction work, within 300m/ 500m from the site boundary of the captioned project, as shown in the enclosed figure.

Please provide the following information, if any:

- Any committed/planned development(s) as potential environment sensitive uses (e.g. offices, residential uses, educational uses etc.);
- Location and site boundary of the committed/ planned development; and
- Construction works programme and completion year.

Due to tight programme of the captioned project, it is highly appreciated if your reply on the above request could be available **on or before 23 April 2021.**

Thank you very much for your assistance. Should you have any queries, please feel free to contact the undersigned at 3915 7148 or Ms. Jamie KAM ([jamiiekam@aechk.com](mailto:jamiiekam@aechk.com)) at 3915 7163.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Cathy Man'.

Cathy Man  
Principle Consultant  
([cm@aechk.com](mailto:cm@aechk.com))  
CM/jk

Encl.

cc. KMB (Attn: Mr. Jacky NG & Mr. Alan FUNG) – by email (w/e)

**規 劃 署**

屯門及元朗西規劃處  
新界沙田上禾輦路1號  
沙田政府合署14樓



**By Fax (2815 5399)**  
**Planning Department**

Tuen Mun and Yuen Long West  
District Planning Office  
14/F, Sha Tin Government Offices,  
1 Sheung Wo Che Road, Sha Tin, N.T.

本函檔號 Your Reference [-/21-0004] and [819.2124/21-0001]  
本署檔號 Our Reference ( ) in PDTM 4/5/48  
電話號碼 Tel. No.: 2158 6333  
傳真機號碼 Fax No.: 2489 9711

13 April 2021

Allied Environmental Consultants Limited  
27/F, Overseas Trust Bank Building  
160 Gloucester Road  
Wan Chai, Hong Kong  
(Attn.: Ms Cathy MAN)

Dear Ms MAN,

**Installation of Depot Facilities for KMB at  
Tuen Mun – Chek Lap Kok Link ("TMCLK") Free Up Areas  
Request for Information for Land Contamination Assessment  
and Planned Construction Activities and Planned Development**

I refer to your letters dated 25 March and 8 April 2021 regarding request for information.

You are advised to visit Town Planning Board's Statutory Planning Portal 2 at  
<http://www2.ozp.tpb.gov.hk/gos> for information relating to the subject site and the surrounding area.

Yours sincerely,

( Ms Angela LO )  
for District Planning Officer/  
Tuen Mun and Yuen Long West  
Planning Department

C.C.  
Site Record

CK/AL/al

## ***Appendix 3-2***

---

### ***Master Layout Plan of Proposed Development***



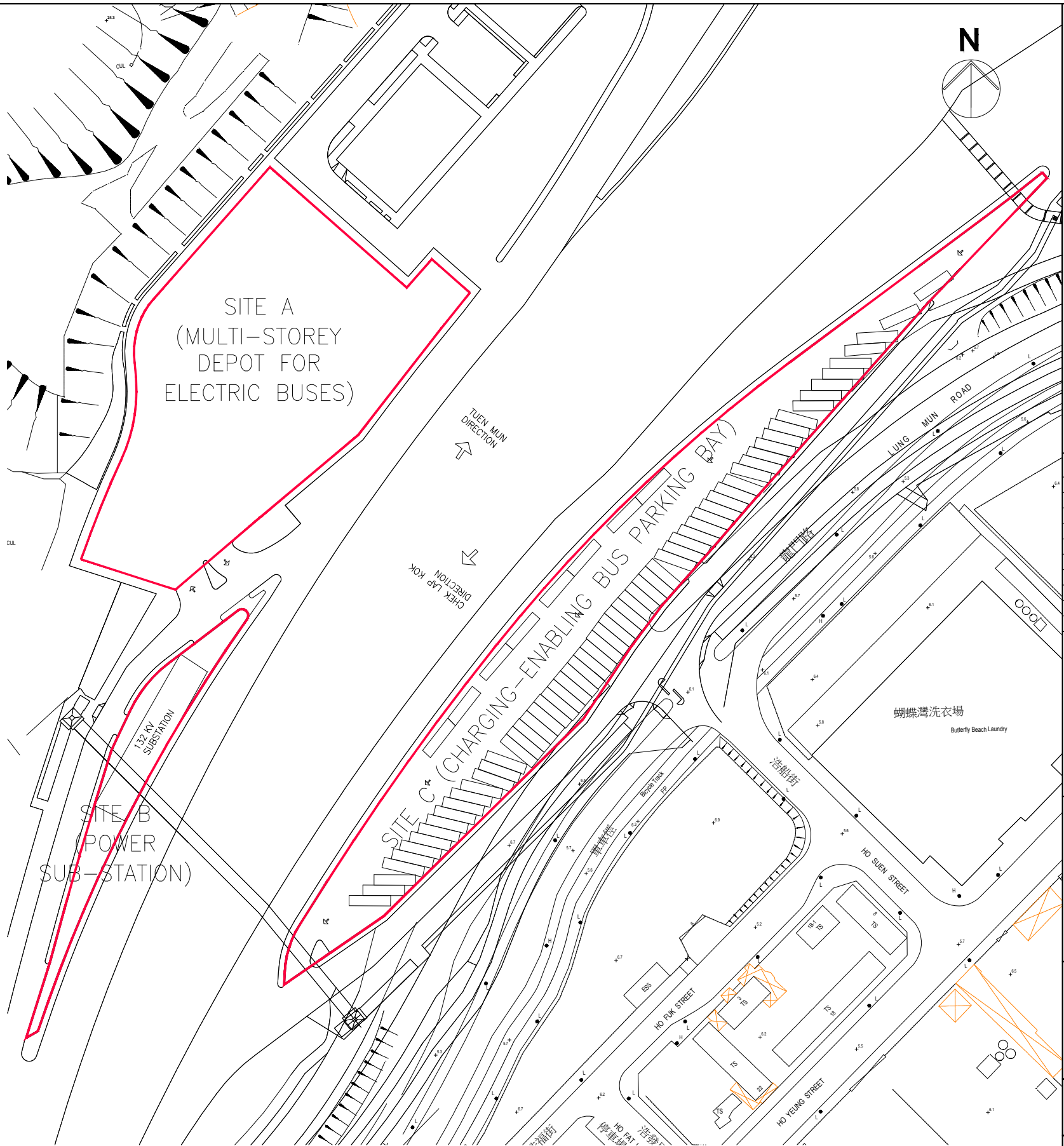
GROSS FLOOR AREA & SITE COVERAGE CALCULATION – SITE A				
PROPOSED SITE USAGE			MULTI–STOREY DEPOT FOR ELECTRIC BUSES	
SITE CLASSIFICATION			CLASS A	
SITE AREA			7926 M2	
SITE COVERAGE			G/F–1/F: 93.58% (FIRST 15M) 2/F–R/F: 60%	
BUILDING HEIGHT			82.5M (FLOOR LEVEL OF G/F TO FLOOR LEVEL OF R/F)	
PERMITTED PLOT RATIO UNDER B(P)R			15	
NON–DOMESTIC GFA	GF	7417 M2	57845.32 M2	
	1F	7417 M2		
	2F	4755.6 M2		
	3F–10F	4755.6 M2		
	RF	210.92 M2		
ACTUAL PLOT RATIO			7.30	

GROSS FLOOR AREA & SITE COVERAGE CALCULATION – SITE B	
PROPOSED SITE USAGE	POWER SUB–STATION
SITE CLASSIFICATION	CLASS A
SITE AREA	1321 M2
SITE COVERAGE	47.01% (621M2/1321M2)
BUILDING HEIGHT	15.6M
PERMITTED PLOT RATIO UNDER B(P)R	5
NON–DOMESTIC GFA	1040.6 M2
ACTUAL PLOT RATIO	0.788
REMARKS: THE SUBJECT BUILDING SHALL BE DISREGARDED FROM GFA AND PLOT RATIO CALCULATION IN ACCORDANCE WITH B(P)R23(3)(b).	

GROSS FLOOR AREA & SITE COVERAGE CALCULATION – SITE C	
PROPOSED SITE USAGE	CHARGING–ENABLING BUS PARKING
SITE CLASSIFICATION	CLASS A
SITE AREA	7598 M2
SITE COVERAGE	0
BUILDING HEIGHT	0M
PERMITTED PLOT RATIO UNDER B(P)R	5
NON–DOMESTIC GFA	0 M2
ACTUAL PLOT RATIO	0

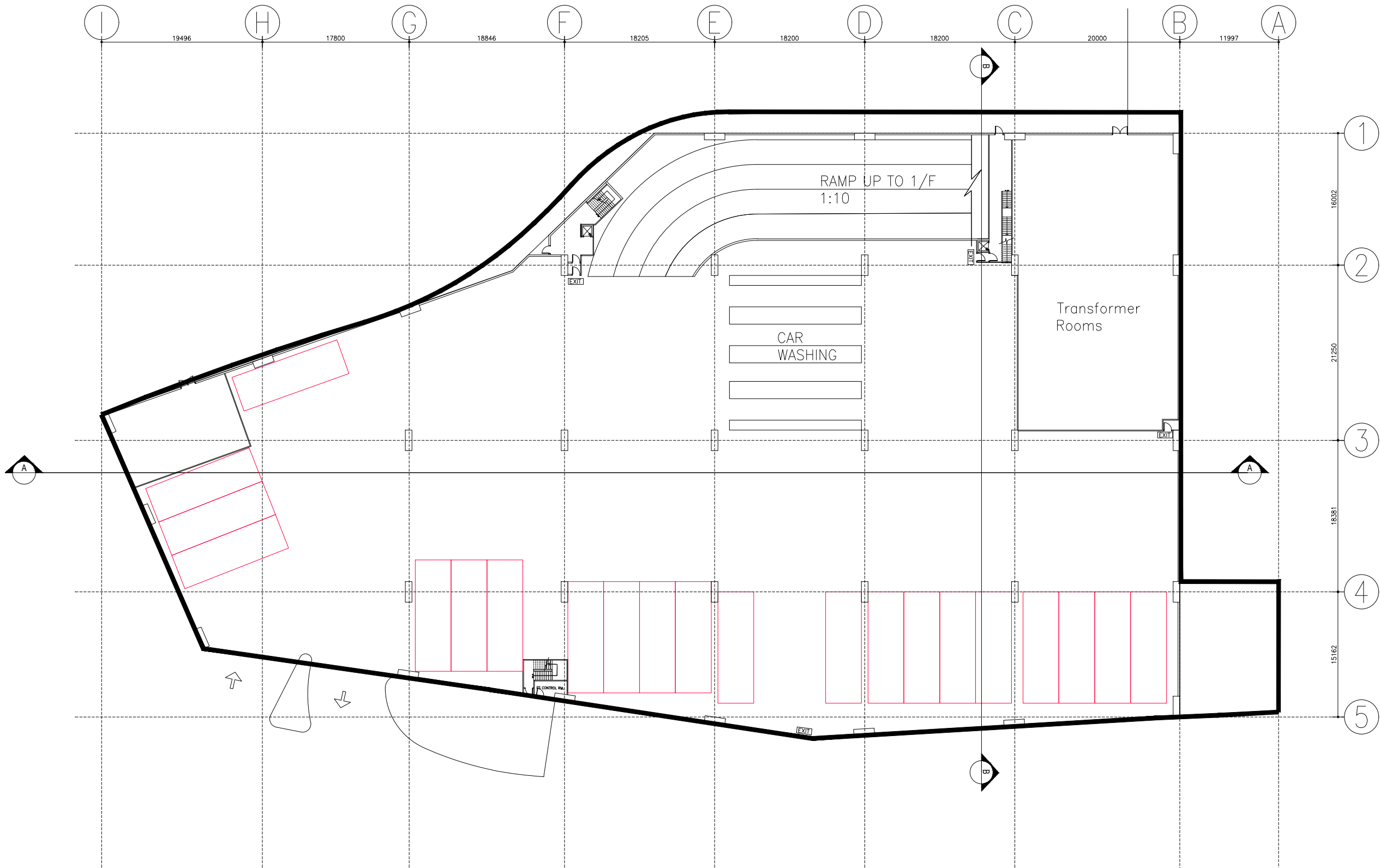
NOS. OF CHARGING–ENABLING BUS PARKING BAYS AND MAINTENANCE BAYS IN SITE A		
	MAINTENANCE BAYS	CHARGING–ENABLING BUS PARKING BAYS
GF	21	
1F	42	
2F	18	31
3F		33
4F		33
5F		33
6F		33
7F		33
8F		33
9F		33
10F		33
RF		38
TOTAL	81	333

NOS. OF CHARGING–ENABLING BUS PARKING BAYS AND MAINTENANCE BAYS IN SITE C		
	MAINTENANCE BAYS	CHARGING–ENABLING BUS PARKING BAYS
GF	0	73



# Schematic Master Layout Plan

NOTES AND CONDITIONS:		
1. ALL DESIGNS ARE THE PROPERTY OF FRUIT DESIGN AND BUILD AND CANNOT BE USED WITHOUT THEIR WRITTEN PERMISSION.		
2. ALL MEASUREMENTS MUST BE VERIFIED ON SITE BEFORE CONSTRUCTION.		
3. CONTRACTORS SHALL NOTIFY THE DESIGNER OF ANY DISCREPANCY BEFORE STARTING WORK.		
4. ALL DIMENSIONS ARE IN MILLIMETER EXCEPT OTHERWISE NOTED.		
5. ALL WORKS SHALL BE CARRIED OUT IN COMPLIANCE TO THE BUILDINGS ORDINANCE, BUILDINGS REGULATIONS AND CODE OF PRACTICES.		
6. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH OTHER DRAWINGS AND SPECIFICATIONS OF THE TENDER DOCUMENTS AND SHALL BE MUTUALLY EXPLANATORY.		
7. THE CONTRACTOR SHALL FOLLOW MANUFACTURER'S INSTRUCTION & RECOMMENDATION IN CASE PROPRIETARY PRODUCT / SYSTEM / IS ADOPTED / SPECIFIED / APPROVED.		
8. DESIGN INTENT DRAWING ONLY. CONTRACTOR IS RESPONSIBLE FOR DESIGN AND SHOP DRAWING / CALCULATION SUBMISSION / MATERIAL SIZES / THICKNESS INDICATIVE.		
REV	DESCRIPTION	DATE
CLIENT:		
BUILDING CONSULTANT:		
<div><div>FRUIT DESIGN &amp; BUILD LTD</div><div><small>A member of FDB Holdings Limited</small> <small>A   6/F, The Sun's Group Centre, 200 Gloucester Road, Wan Chai, Hong Kong</small> <small>T   +852 3188 5595 F   +852 3188 5958</small></div></div>		
PROJECT:		
TMCLK DEPOT		
DRAWING TITLE :		
SCHEMATIC MASTER LAYOUT PLAN		
SCALE:	1:1500	
DATE:	13/09/2021	
DRAWN BY:	CC	
CHECKED BY:	NC	
APPROVED BY: -		
JOB. NO.:	FDB-P-21031	
DWG. NO.:	AA01	



LEGEND

- Maintenance Bay  
(13500mm x 4350mm)
- Parking Space  
(13000mm x 3300mm)

G/F



- NOTES AND CONDITIONS:
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REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

**FRUIT  
DESIGN &  
BUILD LTD**

A member of FDB Holdings Limited  
A | 6/F, The Sun's Group Centre, 200 Gloucester Road,  
Wan Chai, Hong Kong  
T | +852 3188 5955 F | +852 3188 5958

PROJECT:

TMCLK DEPOT

DRAWING TITLE :

G/F LAYOUT (SITE A)

SCALE: 1:500

DATE: 13/09/2021

DRAWN BY: CC

CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: AA02





- NOTES AND CONDITIONS:
1. ALL DESIGNS ARE THE PROPERTY OF FRUIT DESIGN AND BUILD AND CANNOT BE USED WITHOUT THEIR WRITTEN PERMISSION.
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REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

FRUIT  
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BUILD LTD

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Wan Chai, Hong Kong

T | +852 3188 5595    F | +852 3188 5958

PROJECT:

TMCLK DEPOT

DRAWING TITLE :

1/F LAYOUT (SITE A)

SCALE: 1:500

DATE: 13/09/2021

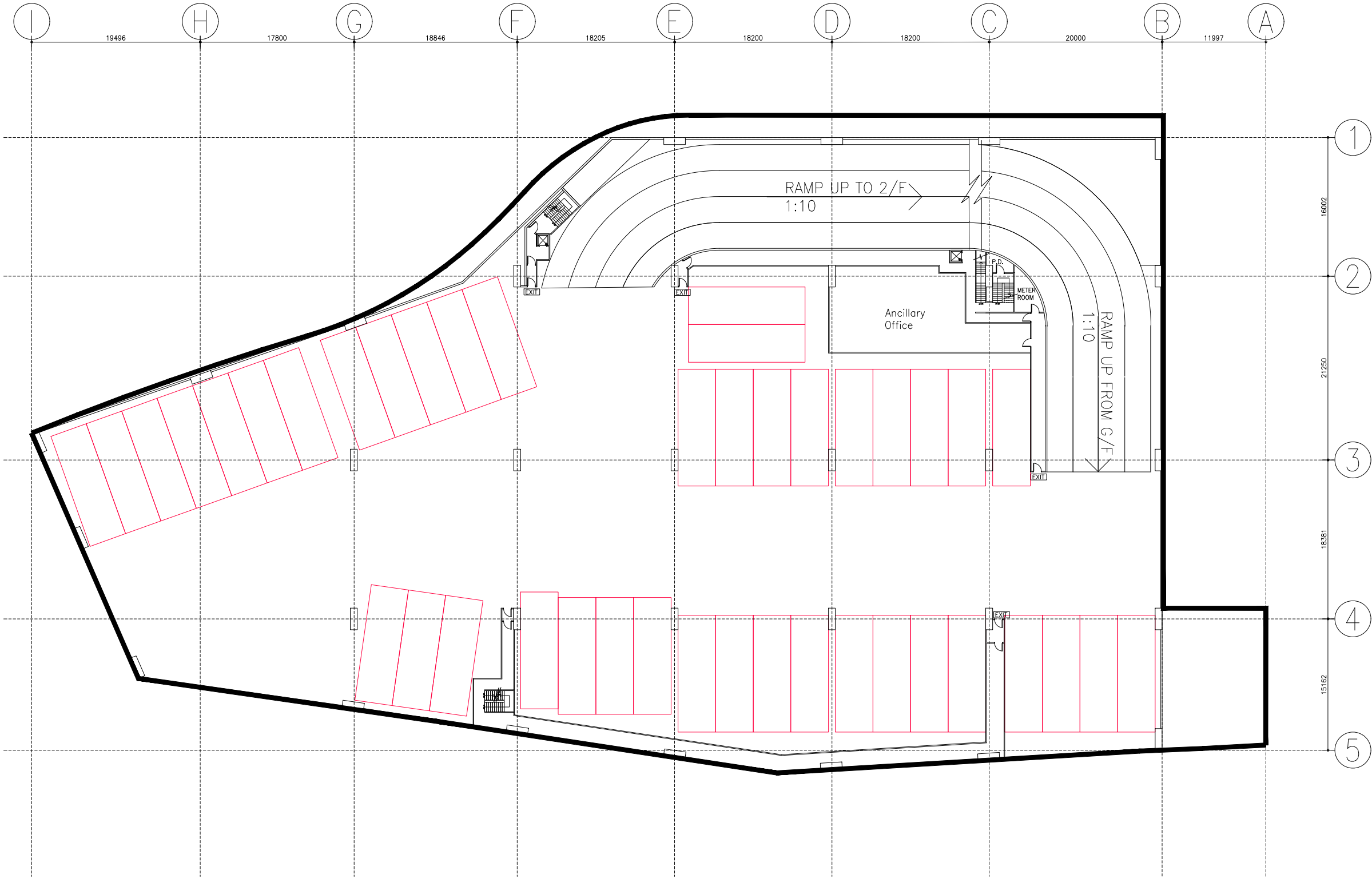
DRAWN BY: CC

CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: AA03



LEGEND

- Maintenance Bay  
(13500mm x 4350mm)
- Parking Space  
(13000mm x 3300mm)

1/F



- NOTES AND CONDITIONS:
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REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

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BUILD LTD

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Wan Chai, Hong Kong

T | +852 3188 5595    F | +852 3188 5958

PROJECT:

TMCLK DEPOT

DRAWING TITLE :

2/F LAYOUT (SITE A)

SCALE: 1:500

DATE: 13/09/2021

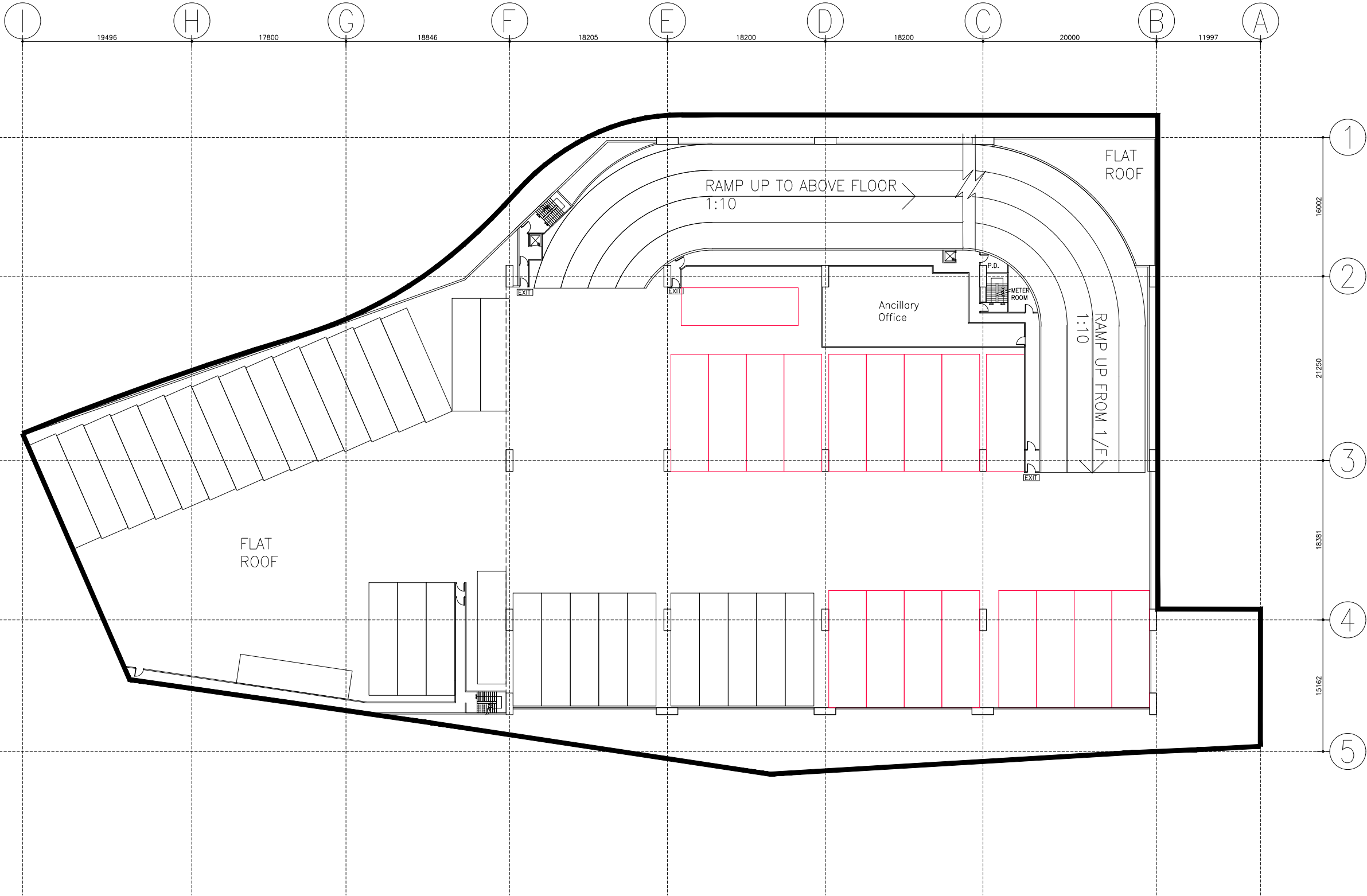
DRAWN BY: CC

CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: AA04



LEGEND

- Maintenance Bay  
(13500mm x 4350mm)
- Parking Space  
(13000mm x 3300mm)



- NOTES AND CONDITIONS:
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REV	DESCRIPTION	DATE

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BUILDING CONSULTANT:

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BUILD LTD

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Wan Chai, Hong Kong

T | +852 3188 5595    F | +852 3188 5958

PROJECT:

TMCLK DEPOT

DRAWING TITLE :

3/F-10/F LAYOUT (SITE A)

SCALE: 1:500

DATE: 13/09/2021

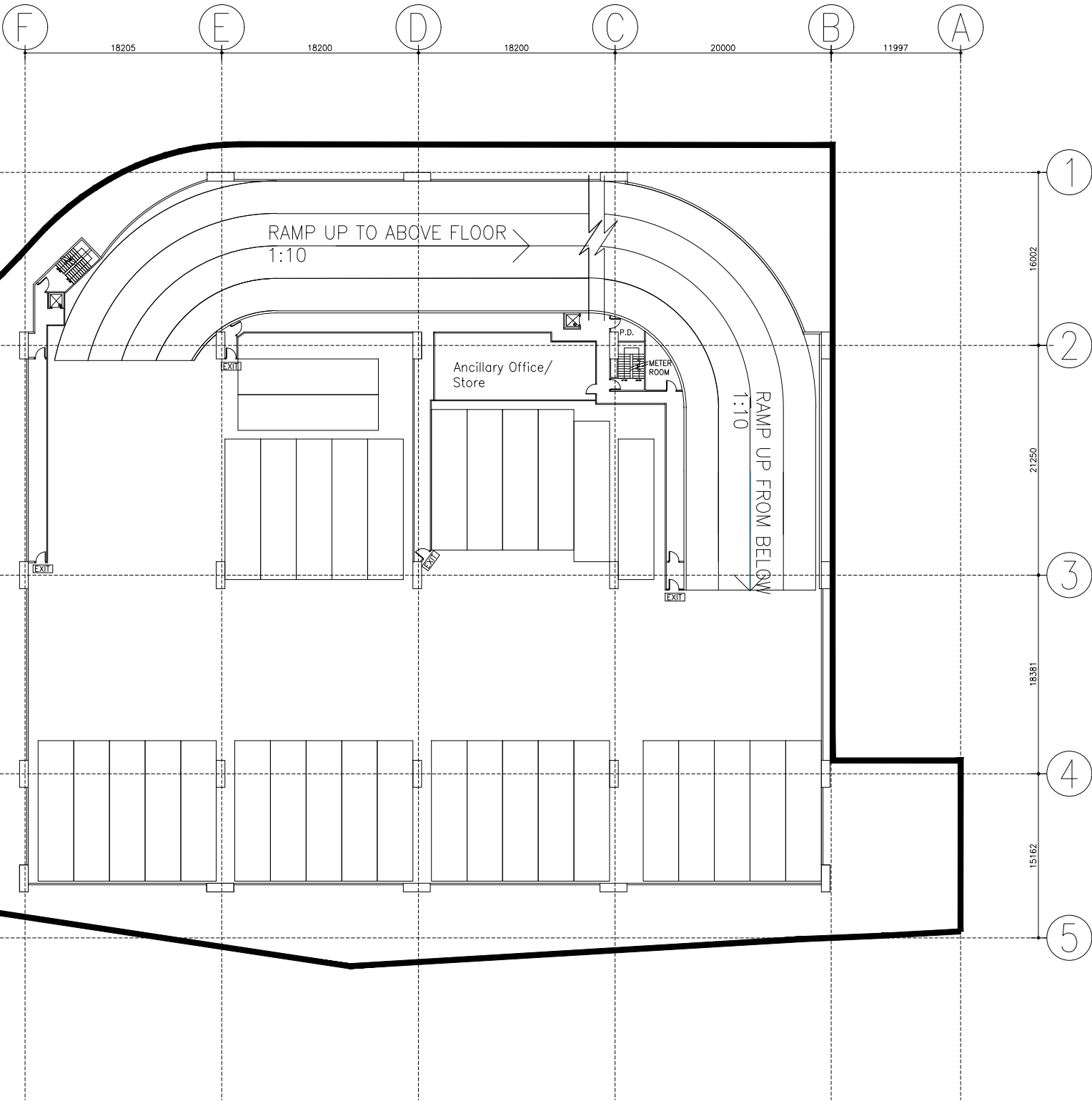
DRAWN BY: CC

CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: AA05



LEGEND

- Maintenance Bay  
(13500mm x 4350mm)
- Parking Space  
(13000mm x 3300mm)

3/F-10/F



- NOTES AND CONDITIONS:
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REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

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Wan Chai, Hong Kong

T | +852 3188 5595    F | +852 3188 5958

PROJECT:

TMCLK DEPOT

DRAWING TITLE :

R/F LAYOUT (SITE A)

SCALE: 1:500

DATE: 13/09/2021

DRAWN BY: CC

CHECKED BY: NC

APPROVED BY: -

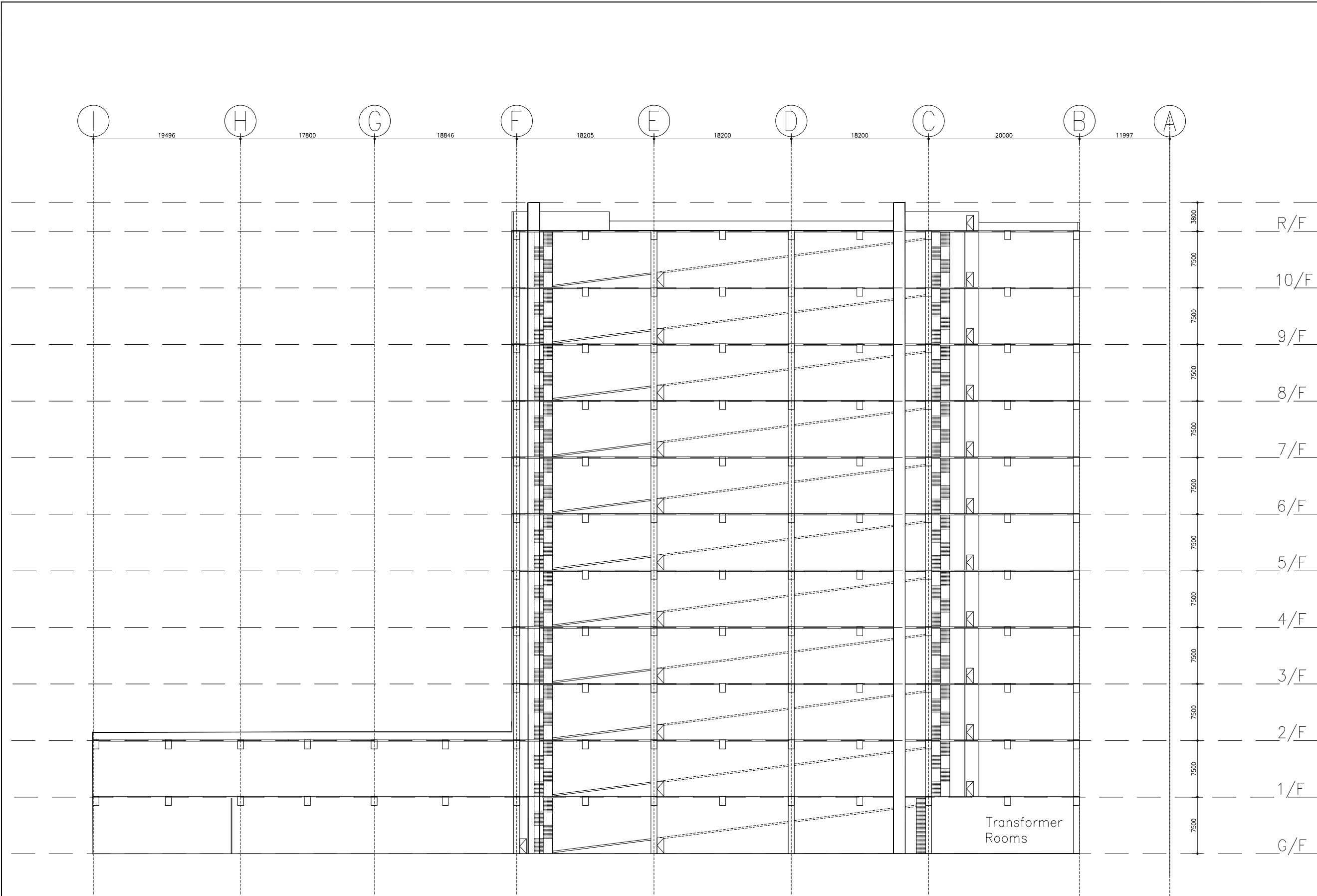
JOB. NO.: FDB-P-21031

DWG. NO.: AA06

LEGEND

- Maintenance Bay  
(13500mm x 4350mm)
- Parking Space  
(13000mm x 3300mm)

R/F



SECTION A-A

- NOTES AND CONDITIONS:
1. ALL DESIGNS ARE THE PROPERTY OF FRUIT DESIGN AND BUILD AND CANNOT BE USED WITHOUT THEIR WRITTEN PERMISSION.
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REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

**FRUIT  
DESIGN &  
BUILD LTD**

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Wan Chai, Hong Kong

T | +852 3188 5955 F | +852 3188 5958

PROJECT:

TMCLK DEPOT

DRAWING TITLE :

SECTION A-A (SITE A)

SCALE: 1:500

DATE: 13/09/2021

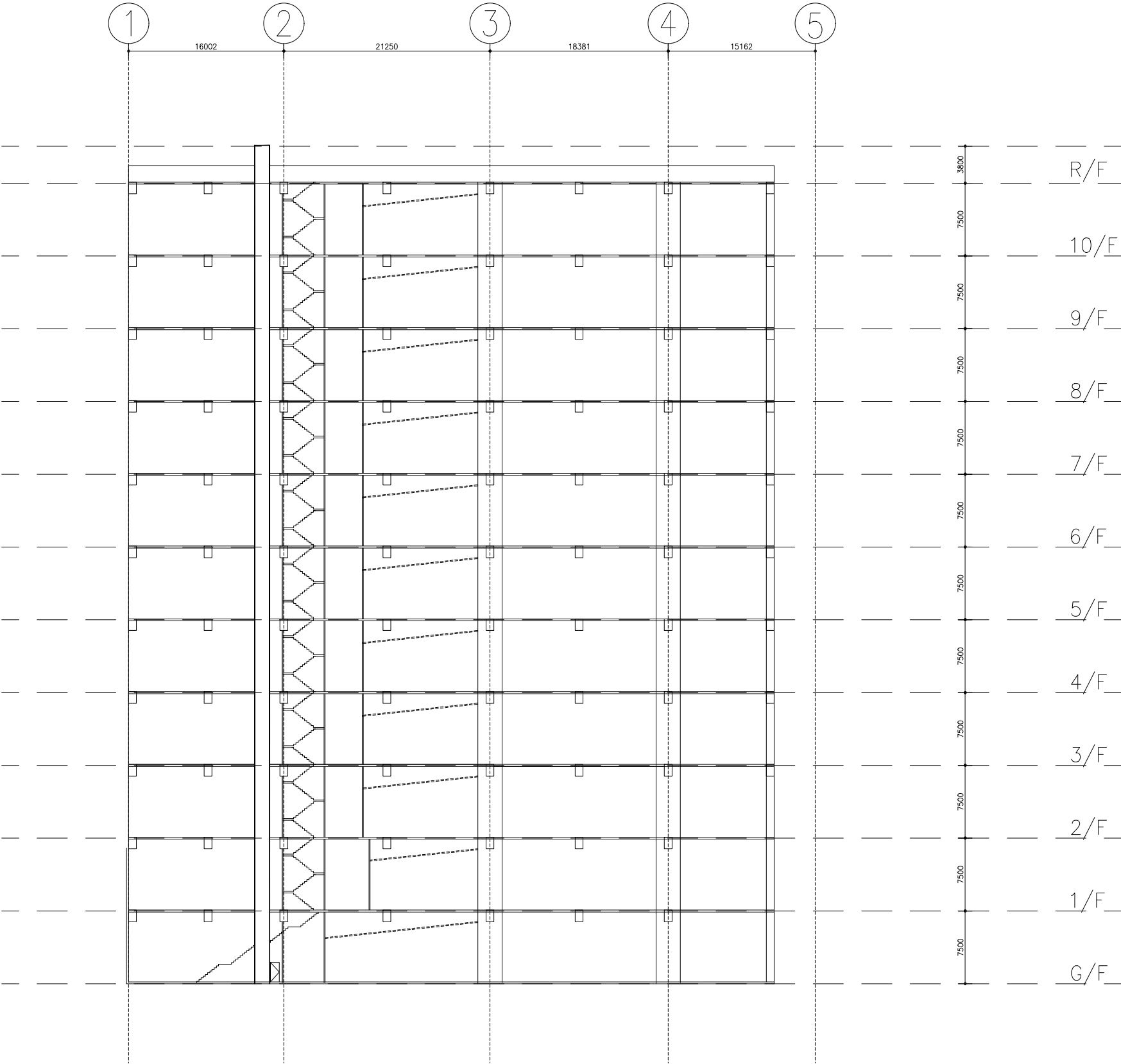
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CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: ST01



SECTION B-B

- NOTES AND CONDITIONS:
1. ALL DESIGNS ARE THE PROPERTY OF FRUIT DESIGN AND BUILD AND CANNOT BE USED WITHOUT THEIR WRITTEN PERMISSION.
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REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

FRUIT  
DESIGN &  
BUILD LTD

A member of FDB Holdings Limited  
A | 6/F, The Sun's Group Centre, 200 Gloucester Road,  
Wan Chai, Hong Kong  
T | +852 3188 5955 F | +852 3188 5958

PROJECT:

TMCLK DEPOT

DRAWING TITLE :	SECTION B-B (SITE A)
SCALE:	1:500
DATE:	13/09/2021
DRAWN BY:	CC
CHECKED BY:	NC
APPROVED BY: -	
JOB. NO. :	FDB-P-21031
DWG. NO. :	ST02



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[illegible]

BUILDING CONSULTANT:

**FRUIT**  
DESIGN &  
BUILD LTD

**A member of FDB Holdings Limited**

A | 6/F, The Sun's Group Centre, 200 Gloucester Road  
Wan Chai, Hong Kong

T | +852 3188 5595 F | +852 3188 595

PROJECT :

TMCLK DEPOT

DRAWING TITLE :

SOUTH-EAST ELEVATION (SITE A)

SCALE: 1:500

DATE: 13/09/2021

DRAWN BY: CC

CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: EL01



SOUTH-WEST ELEVATION

- NOTES AND CONDITIONS:
1. ALL DESIGNS ARE THE PROPERTY OF FRUIT DESIGN AND BUILD AND CANNOT BE USED WITHOUT THEIR WRITTEN PERMISSION.
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REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

**FRUIT  
DESIGN &  
BUILD LTD**

A member of FDB Holdings Limited

A | 6/F, The Sun's Group Centre, 200 Gloucester Road,  
Wan Chai, Hong Kong

T | +852 3188 5955 F | +852 3188 5958

PROJECT:

TMCLK DEPOT

DRAWING TITLE :

SOUTH-WEST ELEVATION (SITE A)

SCALE: 1:500

DATE: 13/09/2021

DRAWN BY: CC

CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: EL02





NORTH-EAST ELEVATION

- NOTES AND CONDITIONS:
1. ALL DESIGNS ARE THE PROPERTY OF FRUIT DESIGN AND BUILD AND CANNOT BE USED WITHOUT THEIR WRITTEN PERMISSION.
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  3. CONTRACTORS SHALL NOTIFY THE DESIGNER OF ANY DISCREPANCY BEFORE STARTING WORK.
  4. ALL DIMENSIONS ARE IN MILLIMETER EXCEPT OTHERWISE NOTED.
  5. ALL WORKS SHALL BE CARRIED OUT IN COMPLIANCE TO THE BUILDINGS ORDINANCE, BUILDINGS REGULATIONS AND CODE OF PRACTICES.
  6. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH OTHER DRAWINGS AND SPECIFICATIONS OF THE TENDER DOCUMENTS AND SHALL BE MUTUALLY EXPLANATORY.
  7. THE CONTRACTOR SHALL FOLLOW MANUFACTURER'S INSTRUCTION & RECOMMENDATION IN CASE PROPRIETARY PRODUCT / SYSTEM / IS ADOPTED / SPECIFIED / APPROVED.
  8. DESIGN INTENT DRAWING ONLY. CONTRACTOR IS RESPONSIBLE FOR DESIGN AND SHOP DRAWING / CALCULATION SUBMISSION / MATERIAL SIZES / THICKNESS INDICATIVE.

REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

**FRUIT  
DESIGN &  
BUILD LTD**

A member of FDB Holdings Limited

A | 6/F, The Sun's Group Centre, 200 Gloucester Road,  
Wan Chai, Hong Kong

T | +852 3188 5955 F | +852 3188 5958

PROJECT:

TMCLK DEPOT

DRAWING TITLE :

NORTH-EAST ELEVATION (SITE A)

SCALE: 1:500

DATE: 13/09/2021

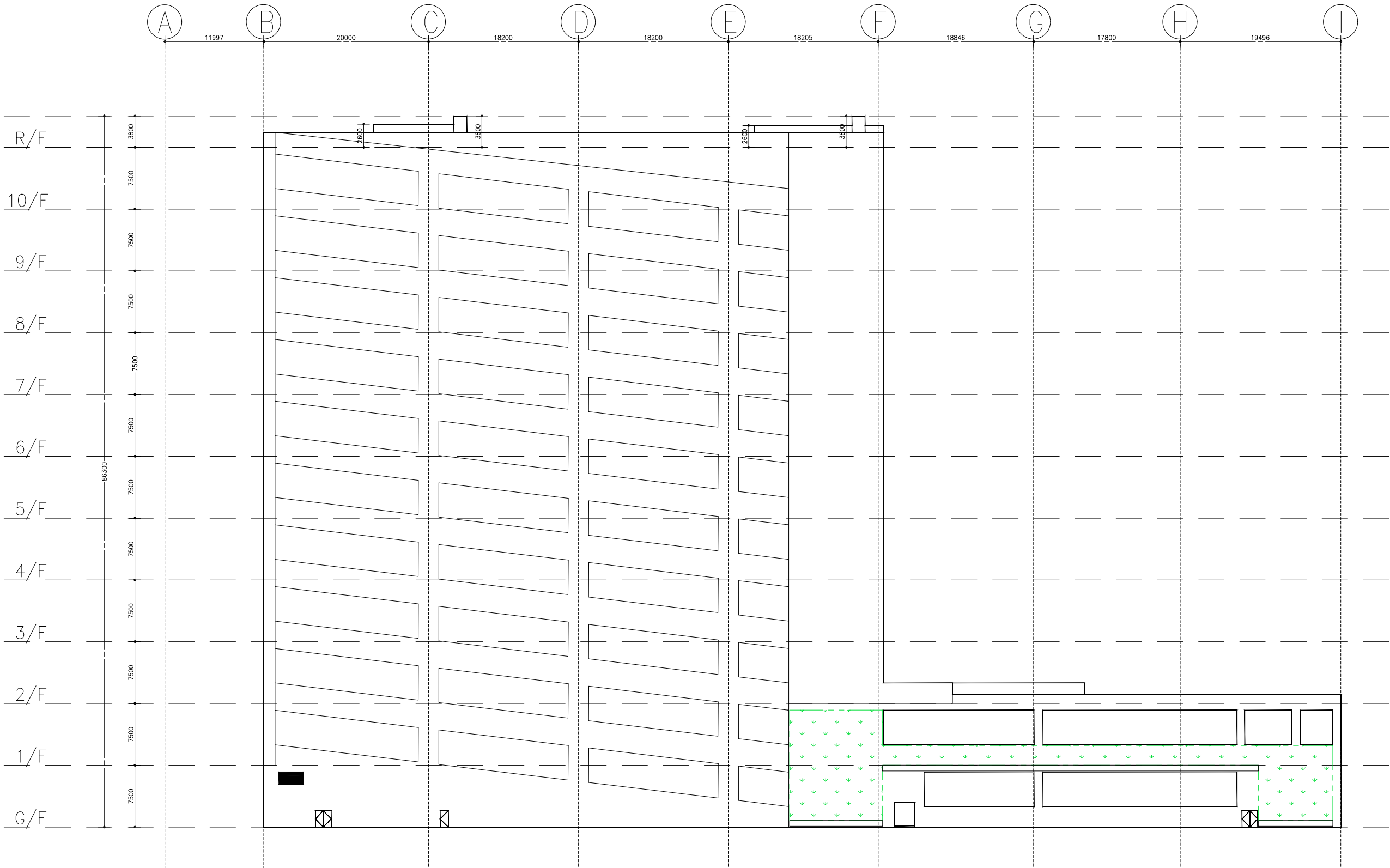
DRAWN BY: CC

CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: EL03



NORTH-WEST ELEVATION

- NOTES AND CONDITIONS:
1. ALL DESIGNS ARE THE PROPERTY OF FRUIT DESIGN AND BUILD AND CANNOT BE USED WITHOUT THEIR WRITTEN PERMISSION.
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REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

**FRUIT  
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BUILD LTD**

A member of FDB Holdings Limited

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Wan Chai, Hong Kong

T | +852 3188 5955 F | +852 3188 5958

PROJECT:

TMCLK DEPOT

DRAWING TITLE :

NORTH-WEST ELEVATION (SITE A)

SCALE: 1:500

DATE: 13/09/2021

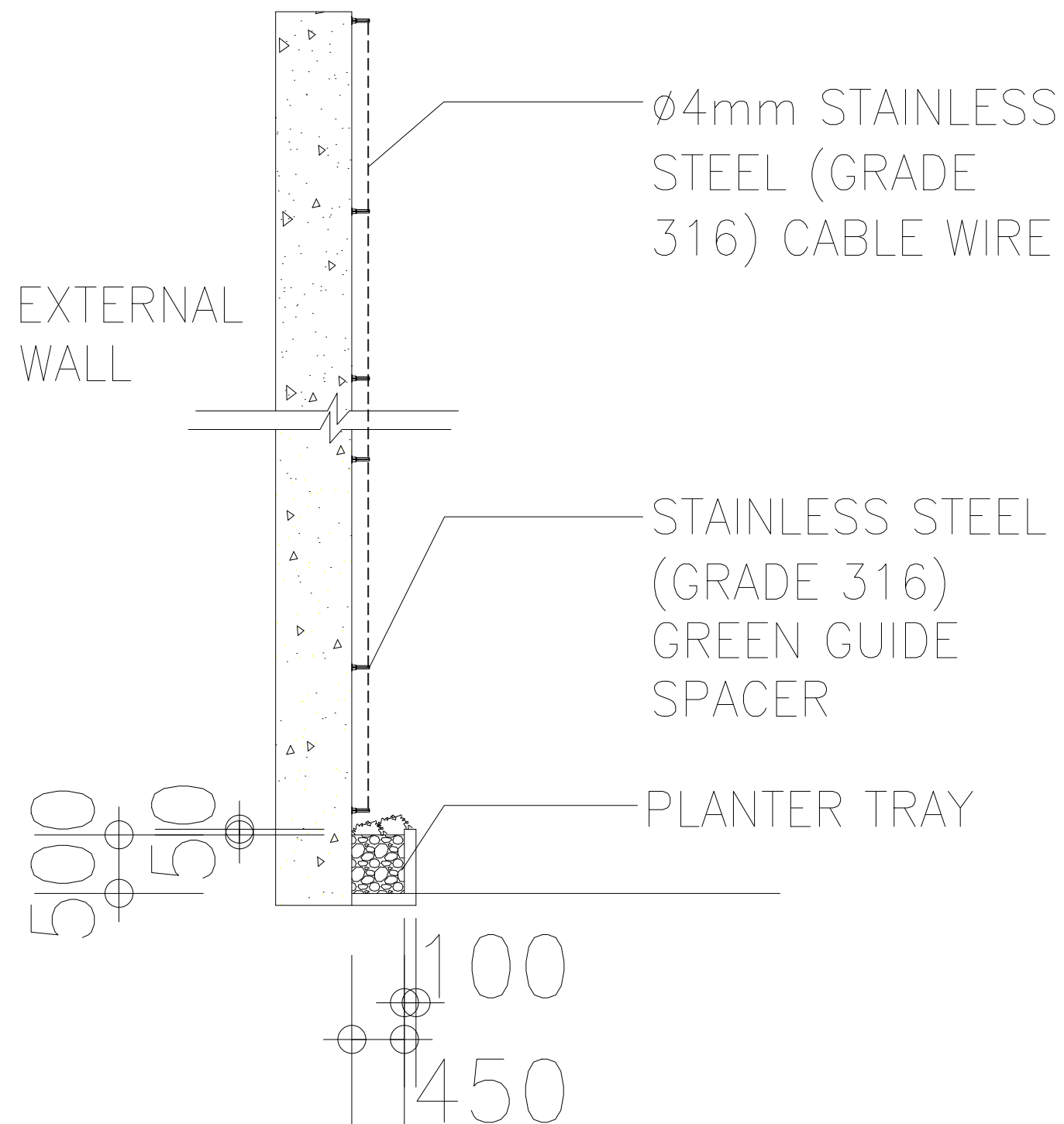
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CHECKED BY: NC

APPROVED BY: -

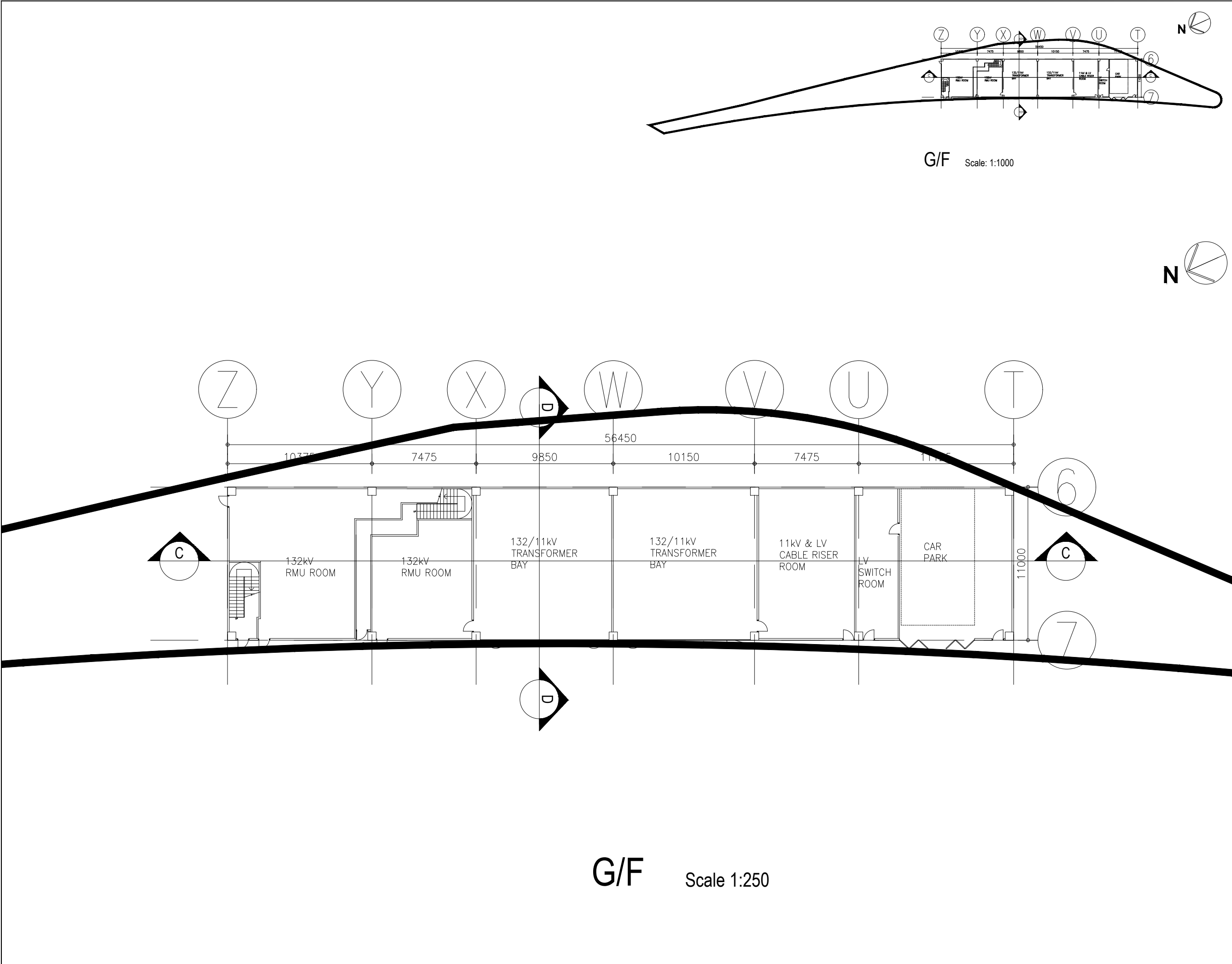
JOB. NO.: FDB-P-21031

DWG. NO.: EL04



# DETAIL OF VERTICAL GREENING

NOTES AND CONDITIONS:		
1. ALL DESIGNS ARE THE PROPERTY OF FRUIT DESIGN AND BUILD AND CANNOT BE USED WITHOUT THEIR WRITTEN PERMISSION.		
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8. DESIGN INTENT DRAWING ONLY. CONTRACTOR IS RESPONSIBLE FOR DESIGN AND SHOP DRAWING / CALCULATION SUBMISSION / MATERIAL SIZES / THICKNESS INDICATIVE.		
REV	DESCRIPTION	DATE
A	REVISED DETAILS	12 NOV 2021
CLIENT:		
BUILDING CONSULTANT:		
<div>FRUIT DESIGN &amp; BUILD LTD</div> <div>A member of FDB Holdings Limited</div> <div>A   6/F, The Sun's Group Centre, 200 Gloucester Road, Wan Chai, Hong Kong</div> <div>T   +852 3188 5595 F   +852 3188 5958</div>		
PROJECT:		
TMCLK DEPOT		
DRAWING TITLE :		
DETAIL OF VERTICAL GREENING		
SCALE:	1:50	
DATE:	13/09/2021	
DRAWN BY:	CC	
CHECKED BY:	NC	
APPROVED BY: -		
JOB. NO. :	FDB-P-21031	
DWG. NO. :	DD01	



- NOTES AND CONDITIONS:
1. ALL DESIGNS ARE THE PROPERTY OF FRUIT DESIGN AND BUILD AND CANNOT BE USED WITHOUT THEIR WRITTEN PERMISSION.
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REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

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DESIGN &  
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A member of FDB Holdings Limited  
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Wan Chai, Hong Kong  
T | +852 3188 5595 F | +852 3188 5958

PROJECT:

TMCLK DEPOT

DRAWING TITLE :

G/F LAYOUT (SITE B)

SCALE: As stated

DATE: 13/09/2021

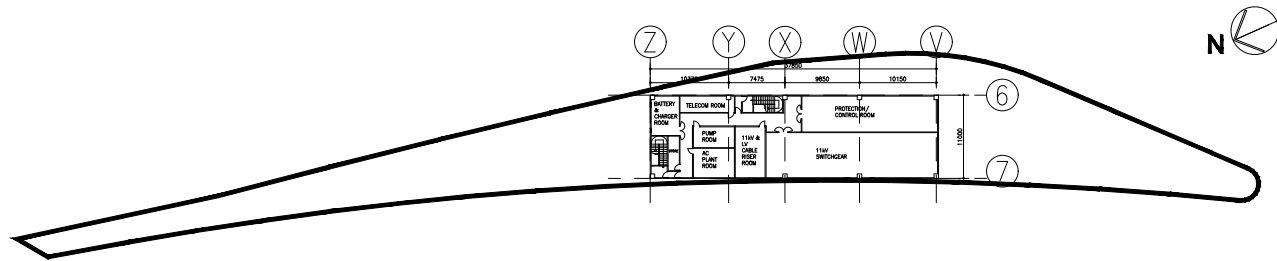
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CHECKED BY: NC

APPROVED BY: -

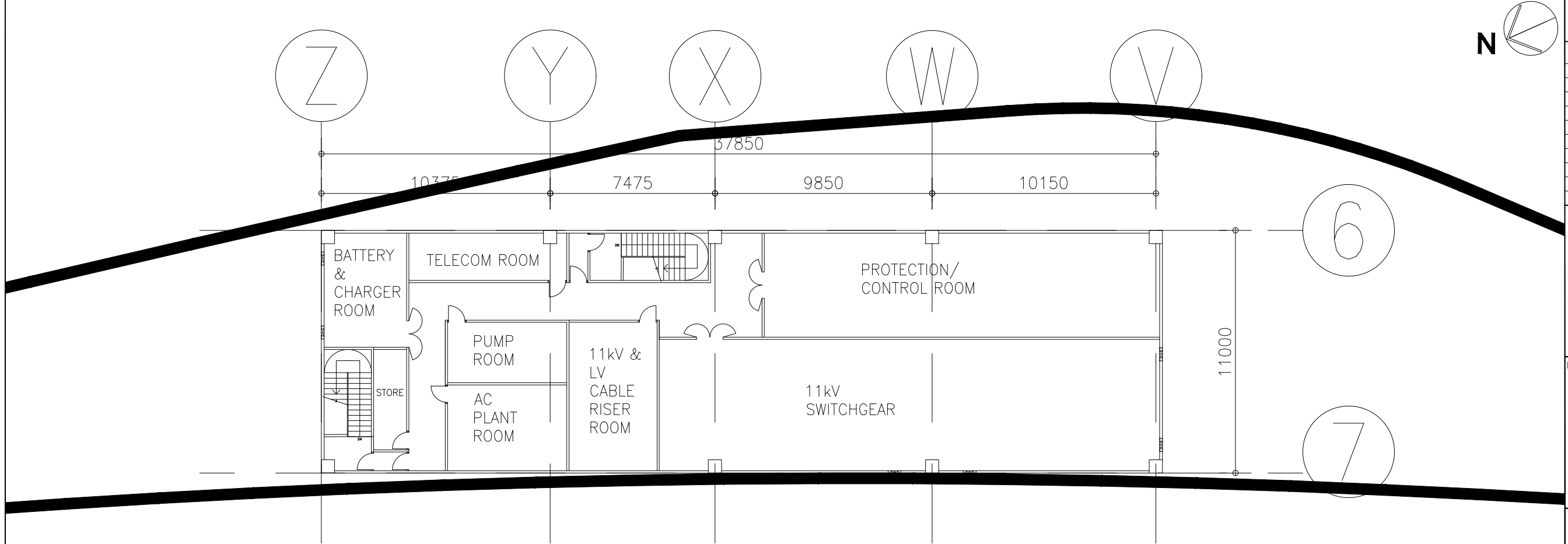
JOB. NO.: FDB-P-21031

DWG. NO.: AA07



1/F Scale: 1:1000

- NOTES AND CONDITIONS:
1. ALL DESIGNS ARE THE PROPERTY OF FRUIT DESIGN AND BUILD AND CANNOT BE USED WITHOUT THEIR WRITTEN PERMISSION.
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1/F Scale 1:250

REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

**FRUIT  
DESIGN &  
BUILD LTD**

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Wan Chai, Hong Kong

T | +852 3188 5595 F | +852 3188 5958

PROJECT:

TMCLK DEPOT

DRAWING TITLE :

1/F LAYOUT (SITE B)

SCALE: 1:250

DATE: 13/09/2021

DRAWN BY: CC

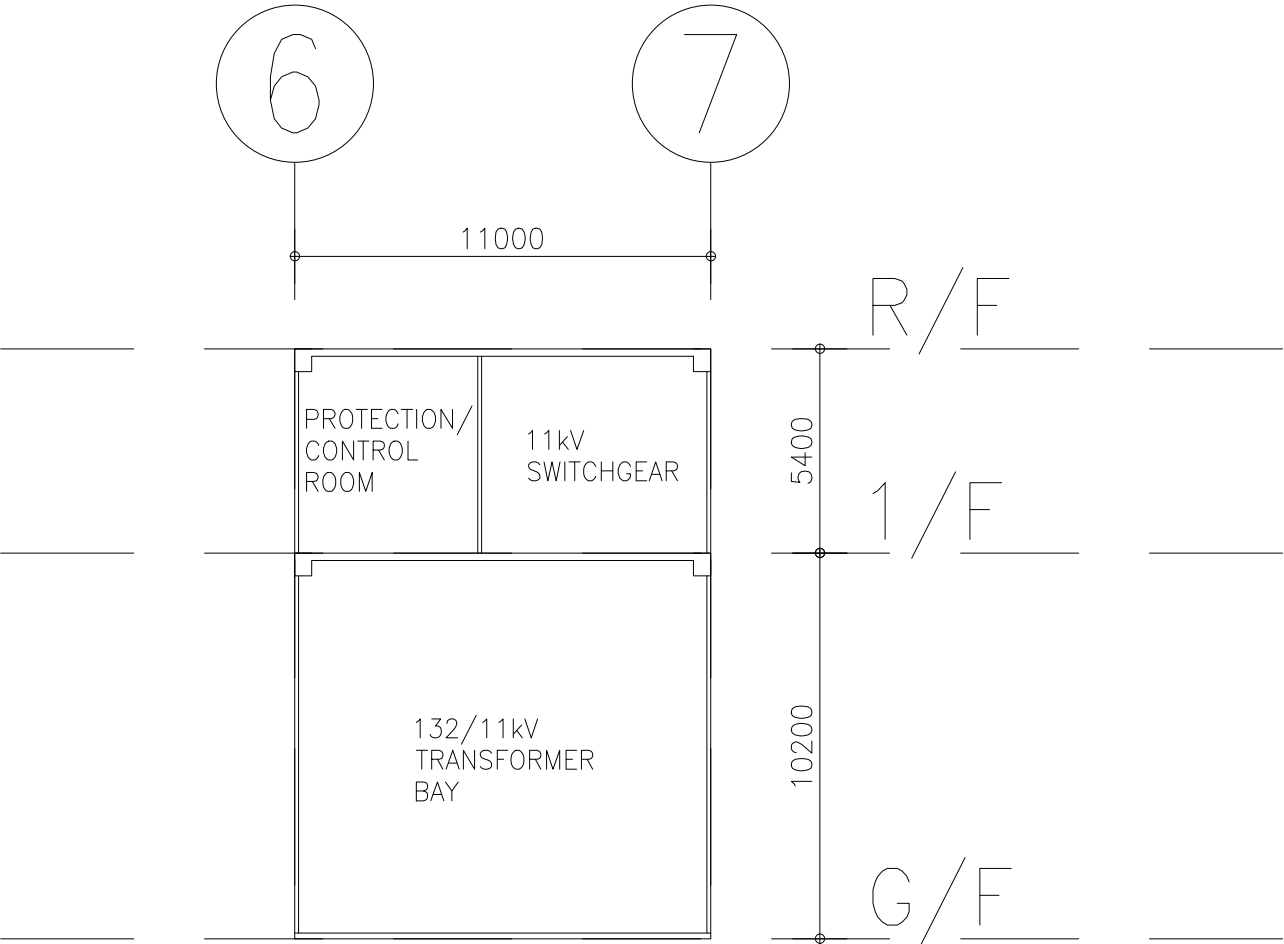
CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: AA08





SECTION D-D

- NOTES AND CONDITIONS:
1. ALL DESIGNS ARE THE PROPERTY OF FRUIT DESIGN AND BUILD AND CANNOT BE USED WITHOUT THEIR WRITTEN PERMISSION.
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REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

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DESIGN &  
BUILD LTD**

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Wan Chai, Hong Kong

T | +852 3188 5995    F | +852 3188 5998

PROJECT:

TMCLK DEPOT

DRAWING TITLE :

SECTION D-D (SITE B)

SCALE: 1:200

DATE: 13/09/2021

DRAWN BY: CC

CHECKED BY: NC

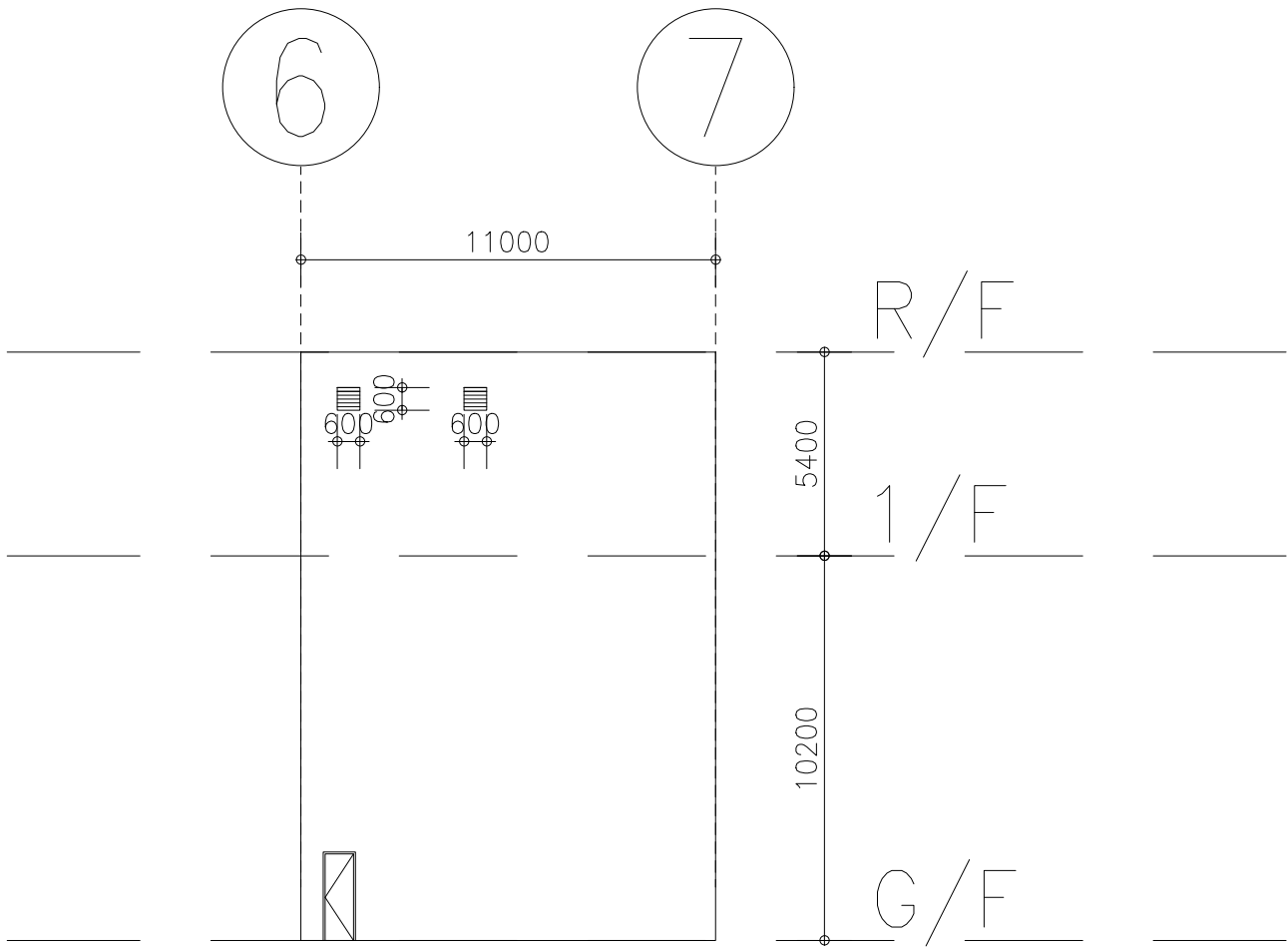
APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: ST04







NORTH-EAST ELEVATION

- NOTES AND CONDITIONS:
1. ALL DESIGNS ARE THE PROPERTY OF FRUIT DESIGN AND BUILD AND CANNOT BE USED WITHOUT THEIR WRITTEN PERMISSION.
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REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

FRUIT  
DESIGN &  
BUILD LTD

A member of FDB Holdings Limited  
A | 6/F, The Sun's Group Centre, 200 Gloucester Road,  
Wan Chai, Hong Kong  
T | +852 3188 5595 F | +852 3188 5958

PROJECT:

TMCLK DEPOT

DRAWING TITLE :

NORTH-EAST ELEVATION (SITE B)

SCALE: 1:250

DATE: 13/09/2021

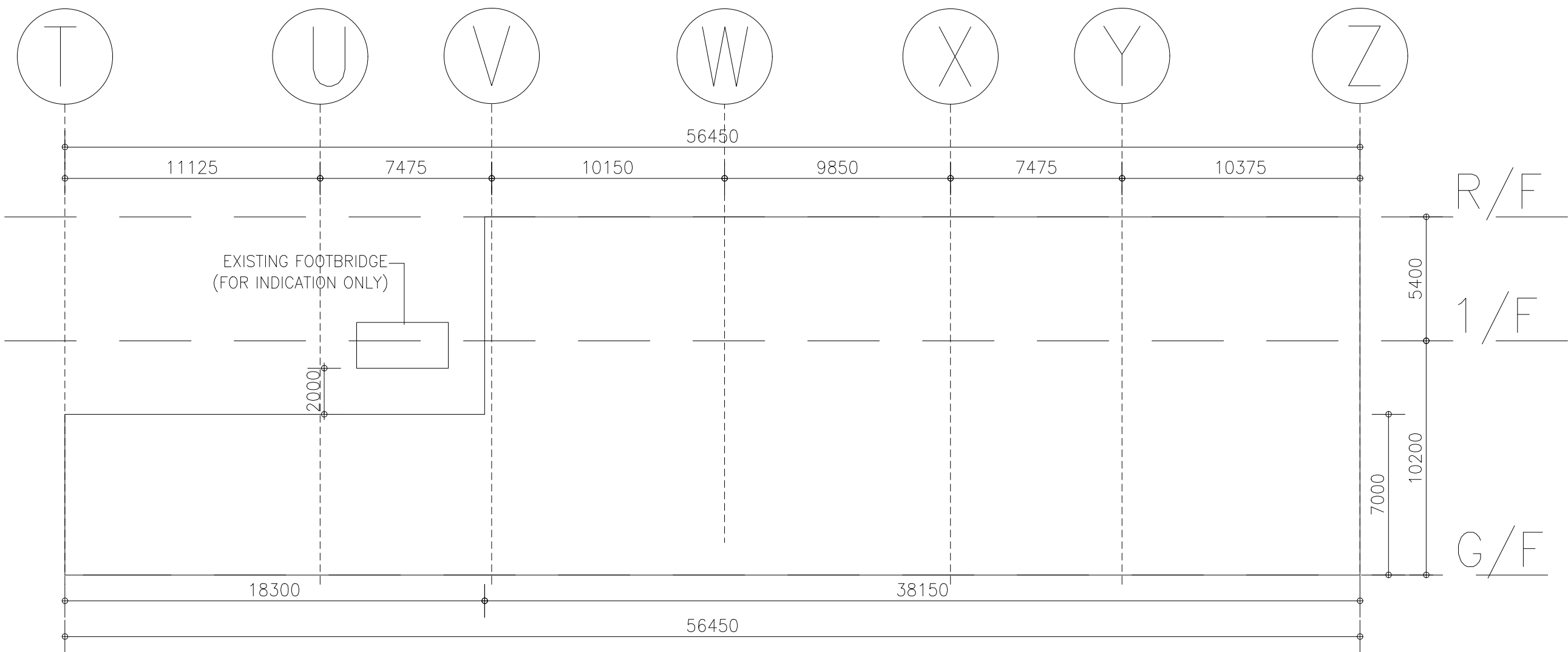
DRAWN BY: CC

CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: EL06



SOUTH-EAST ELEVATION

- NOTES AND CONDITIONS:
- 1. ALL DESIGNS ARE THE PROPERTY OF FRUIT DESIGN AND BUILD AND CANNOT BE USED WITHOUT THEIR WRITTEN PERMISSION.
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REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

FRUIT  
DESIGN &  
BUILD LTD

A member of FDB Holdings Limited

A | 6/F, The Sun's Group Centre, 200 Gloucester Road,  
Wan Chai, Hong Kong

T | +852 3188 5595    F | +852 3188 5958

PROJECT:

TMCLK DEPOT

DRAWING TITLE :

SOUTHEAST ELEVATION (SITE B)

SCALE: 1:200

DATE: 13/09/2021

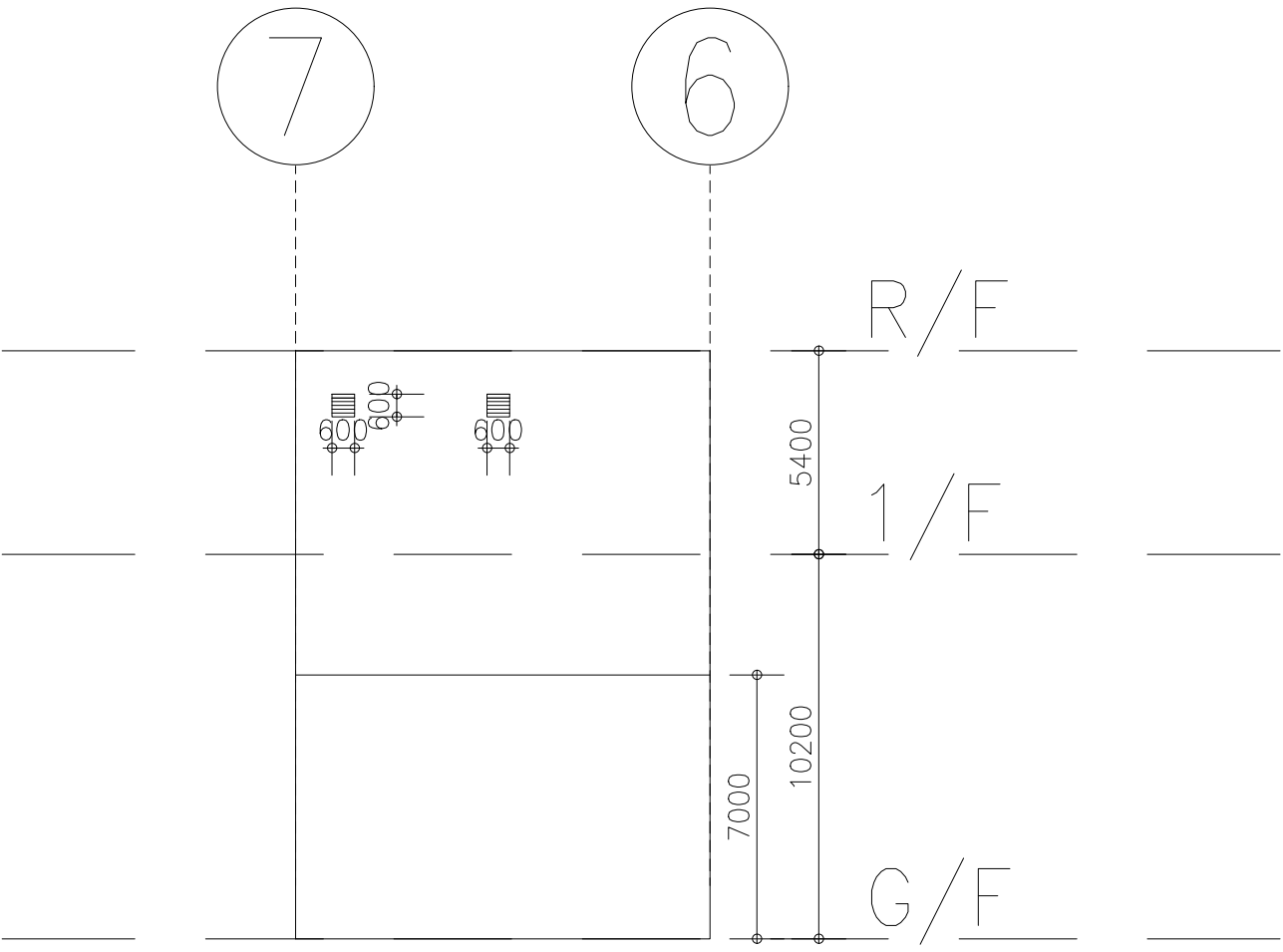
DRAWN BY: CC

CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: EL07



SOUTH-WEST ELEVATION

- NOTES AND CONDITIONS:
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REV	DESCRIPTION	DATE

CLIENT:

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BUILD LTD**

A member of FDB Holdings Limited

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Wan Chai, Hong Kong

T | +852 3188 5955      F | +852 3188 5958

PROJECT:

TMCLK DEPOT

DRAWING TITLE :

SOUTHWEST ELEVATION (SITE B)

SCALE: 1:200

DATE: 13/09/2021

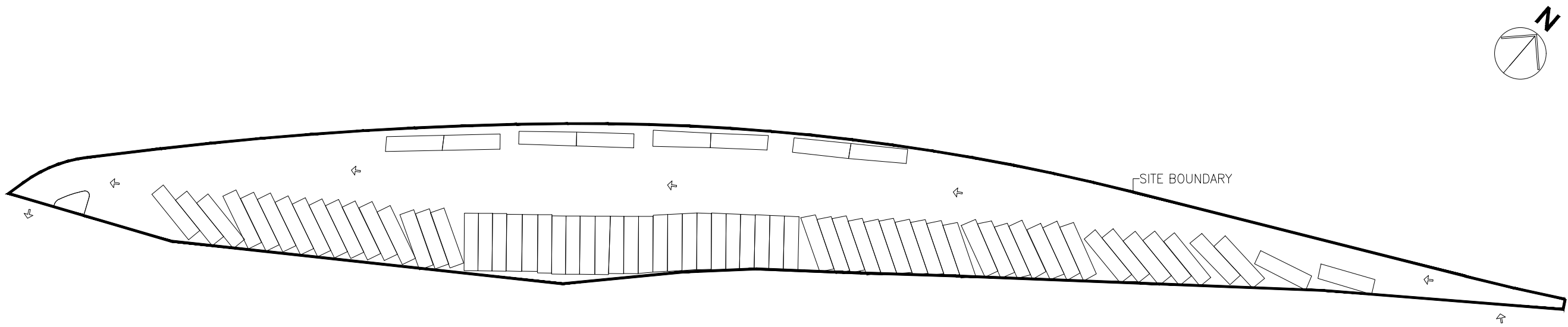
DRAWN BY: CC

CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: EL08



LEGEND



Parking Space  
(13000mm x 3250mm)

G/F

- NOTES AND CONDITIONS:
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REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

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A member of FDB Holdings Limited

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Wan Chai, Hong Kong

T | +852 3188 5995      F | +852 3188 5998

PROJECT:

TMCLK DEPOT

DRAWING TITLE :

G/F LAYOUT (SITE C)

SCALE: 1:1000

DATE: 13/09/2021

DRAWN BY: CC

CHECKED BY: NC

APPROVED BY: -

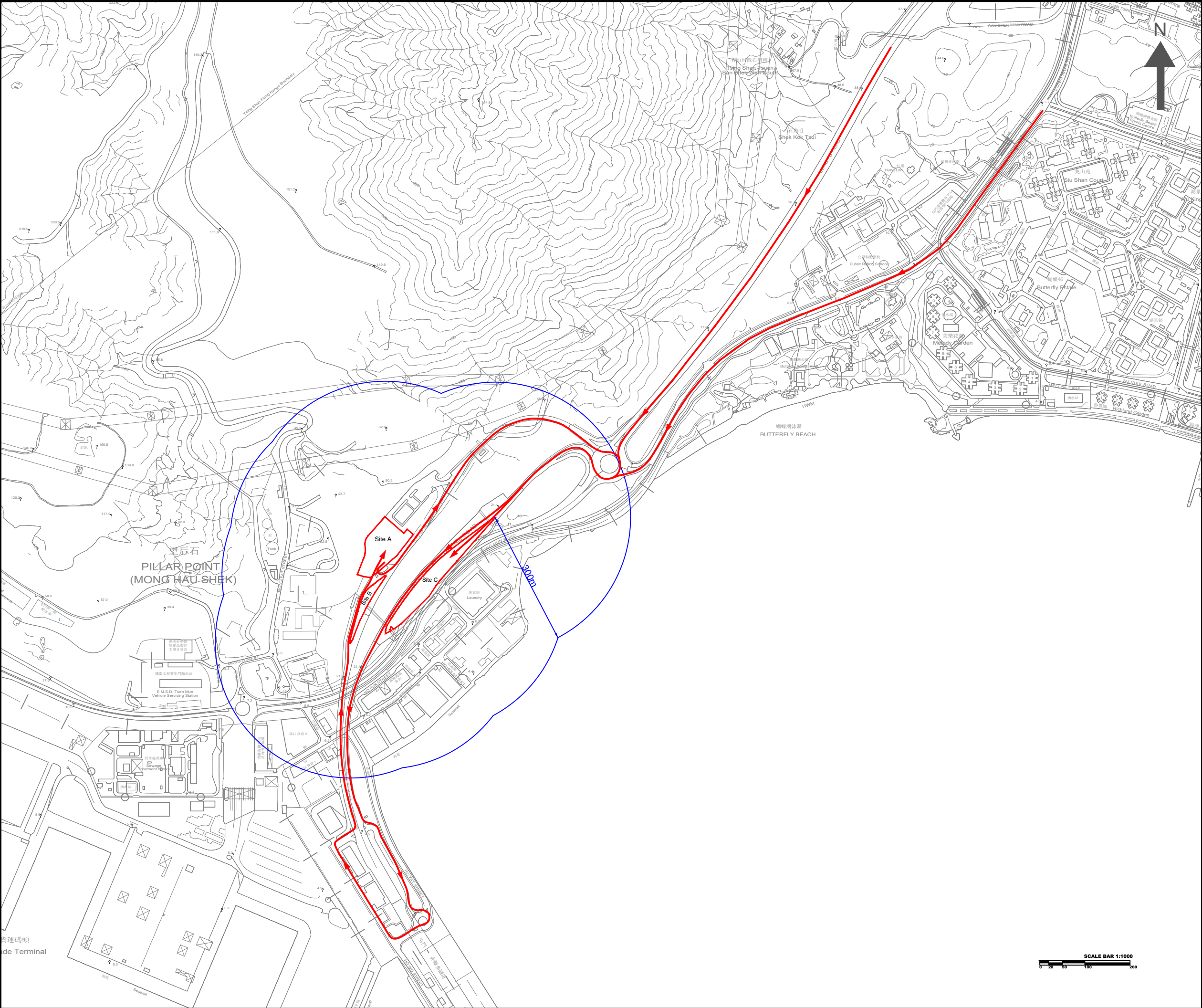
JOB. NO.: FDB-P-21031

DWG. NO.: AA09

## ***Appendix 3-3***

---

### ***Proposed Traffic Routing***



NOTES :

PROJECT SITE

ASSESSMENT AREA

INGRESS TRAFFIC ROUTING

Consultant

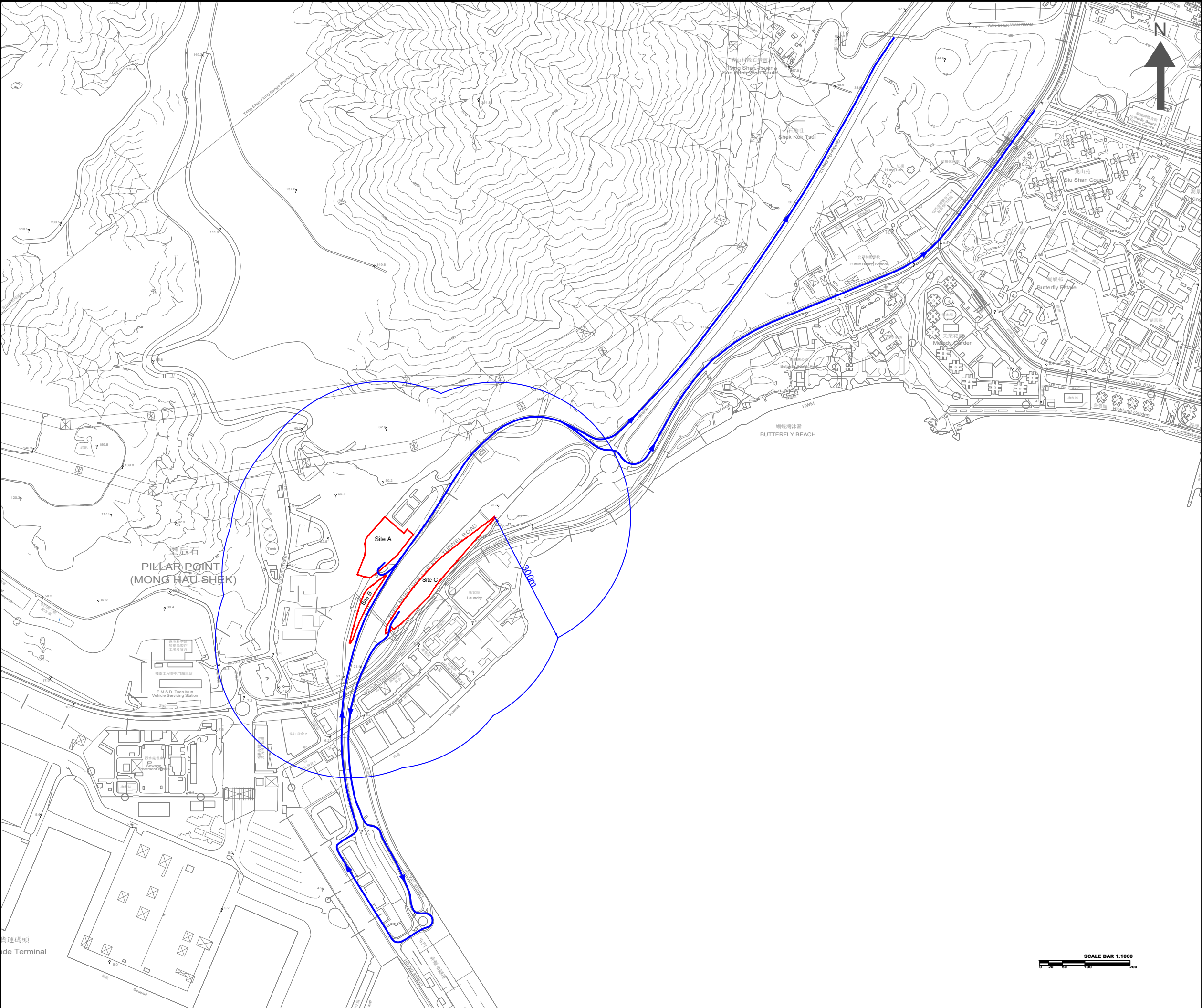


**AEC**

**Allied Environmental Consultants Limited**

Project No. : 1906	
Drawing By : /	
Project : PROPOSED BUS DEPOTS WITH ANCILLARY PUBLIC UTILITY INSTALLATION (ELECTRICITY SUBSTATION) IN AREA SHOWN AS 'ROAD', GOVERNMENT LAND IN D.D. 138 AND D.D. 300, TUEN MUN, NEW TERRITORIES	
Drawing Title : PROPOSED TRAFFIC ROUTING (INGRESS ROUTING)	
Drawing No : APPENDIX 3-1a	Revision : 0
Scale : AS SHOWN	Date : AUG 2021
DO NOT SCALE OFF DRAWING. THIS DRAWING IS NOT FOR CONSTRUCTION PURPOSES UNLESS EXPRESSLY STATED. ALL RIGHTS RESERVED AND REPRODUCTION IN ANY FORM MUST BE APPROVED BY ALLIED ENVIRONMENTAL CONSULTANTS LIMITED.	





NOTES :

PROJECT SITE

ASSESSMENT AREA

EGRESS TRAFFIC ROUTING

Consultant



**AEC**

Allied Environmental Consultants Limited

Project No. : 1906

Drawing By : /

Project :  
PROPOSED BUS DEPOTS WITH ANCILLARY  
PUBLIC UTILITY INSTALLATION  
(ELECTRICITY SUBSTATION) IN AREA  
SHOWN AS 'ROAD', GOVERNMENT LAND IN  
D.D. 138 AND D.D. 300, TUEN MUN, NEW  
TERRITORIES

Drawing Title :  
PROPOSED TRAFFIC ROUTING  
(EGRESS ROUTING)

Drawing No : APPENDIX 3-1b	Revision : 0
Scale : AS SHOWN	Date : AUG 2021

DO NOT SCALE OFF DRAWING. THIS DRAWING IS NOT FOR CONSTRUCTION  
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## ***Appendix 7-1***

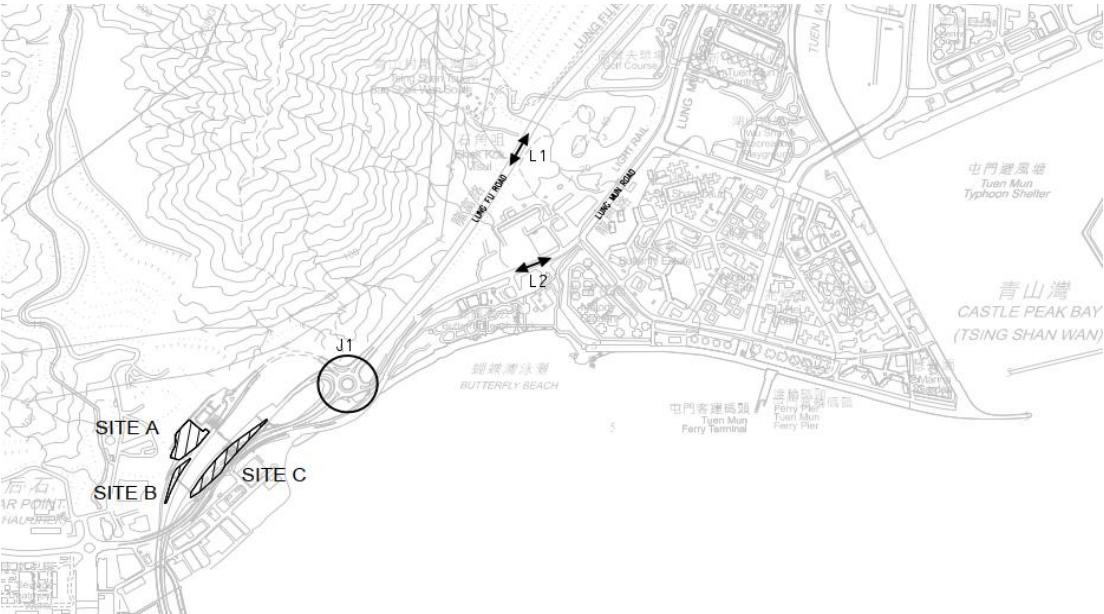
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### ***Traffic Forecast for Road Traffic Noise Impact Assessment***



Project: Multi-storey Depot for Electric Buses at Tuen Mun - Chek Lap Kok Link Free-Up Area

Traffic Forecast for Road Traffic Noise Impact Assessment



Link Index	Link	Without Project in 2028		With Project in 2028	
		Early Morning (0600-0700)		Early Morning (0600-0700)	
		Flows (veh/hr)	HV%	Flows (veh/hr)	HV%
L1	Lung Fu Road (between Lung Mun Road & Wong Chu Road)	950	70%	1020	72%
L2	Lung Mun Road (between Lung Fu Road & Wu Chui Road)	490	34%	560	41%

## ***Appendix 7-2***

---

### ***Detail Calculation for Road Traffic Noise Impact Assessment***

Project: Multi-storey Depot for Electric Buses at Tuen Mun - Chek Lap Kok Link Free-Up Area  
Traffic Noise Impact Assessment  
Time Period: 0600-0700 (Operational Peak)

NSR1	Yee Chui House
x	813855.7
y	826232.7
z	10.2

Lung Fu Road Segment	
x	813621.5
y	826387.5
z	28.2

Lung Mun Road Segment	
x	813840.1
y	826269.5
z	7.8

	Road: Lung Fu Road		Road: Lung Mun Road	
	Without Project	With Project	Without Project	With Project
Traffic flow (Q)	950	1020	490	560
Heavy Vehicle % (p)	70	72	34	41
Traffic Speed (V)	70	70	70	70
Basic Noise Level (BNL), dB(A)	72.0	72.3	69.1	69.7
Heavy Vehicle Corr, dB(A)	7.2	7.4	4.8	5.4
Road Surface Corr, dB(A)	-1	-1	-1	-1
<b>Basic Noise Level (BNL)</b>	<b>78.2</b>	<b>78.6</b>	<b>72.9</b>	<b>74.1</b>
Horizontal Distance (hd) from NSR to Effective Source Line, m	280.7	280.7	40.0	40.0
Shortest Slant Distance (d'), m	281.3	281.3	40.0	40.0
Angle of View, degree	180	180	180	180
Distance Corr, dB(A)	-13.2	-13.2	-4.7	-4.7
Façade Corr, dB(A)	2.5	2.5	2.5	2.5
Angle of View, dB(A)	0	0	0	0
<b>Predicted Noise Level, dB(A)</b>	<b>67.5</b>	<b>67.9</b>	<b>70.7</b>	<b>71.9</b>

<b>Predicted Noise Level</b>	<b>dB(A)</b>
Without Project	72.4
With Project	73.3
<b>Difference, dB(A)</b>	<b>0.9</b>

Project: Multi-storey Depot for Electric Buses at Tuen Mun - Chek Lap Kok Link Free-Up Area  
Traffic Noise Impact Assessment  
Time Period: 0600-0700 (Operational Peak)

NSR2	Melody Garden
x	813978.4
y	826275.5
z	11.2

Lung Fu Road Segment	
x	813670.2
y	826463.8
z	33.2

Lung Mun Road Segment	
x	813938.3
y	826323.7
z	6.8

	Road: Lung Fu Road		Road: Lung Mun Road	
	Without Project	With Project	Without Project	With Project
Traffic flow (Q)	950	1020	490	560
Heavy Vehicle % (p)	70	72	34	41
Traffic Speed (V)	70	70	70	70
Basic Noise Level (BNL), dB(A)	72.0	72.3	69.1	69.7
Heavy Vehicle Corr, dB(A)	7.2	7.4	4.8	5.4
Road Surface Corr, dB(A)	-1	-1	-1	-1
<b>Basic Noise Level (BNL)</b>	<b>78.2</b>	<b>78.6</b>	<b>72.9</b>	<b>74.1</b>
Horizontal Distance (hd) from NSR to Effective Source Line, m	361.1	361.1	62.7	62.7
Shortest Slant Distance (d'), m	361.8	361.8	62.9	62.9
Angle of View, degree	180	180	180	180
Distance Corr, dB(A)	-14.3	-14.3	-6.7	-6.7
Façade Corr, dB(A)	2.5	2.5	2.5	2.5
Angle of View, dB(A)	0	0	0	0
<b>Predicted Noise Level, dB(A)</b>	<b>66.4</b>	<b>66.9</b>	<b>68.7</b>	<b>69.9</b>

<b>Predicted Noise Level</b>	<b>dB(A)</b>
Without Project	70.8
With Project	71.7
<b>Difference, dB(A)</b>	<b>0.9</b>

Project: Multi-storey Depot for Electric Buses at Tuen Mun - Chek Lap Kok Link Free-Up Area  
Traffic Noise Impact Assessment  
Time Period: 0600-0700 (Operational Peak)

NSR3	Butterfly Estate
x	814128.3
y	826444.2
z	11.2

Lung Fu Road Segment	
x	813774.1
y	826642.9
z	39.2

Lung Mun Road Segment	
x	814074.3
y	826491.3
z	6.5

	Road: Lung Fu Road		Road: Lung Mun Road	
	Without Project	With Project	Without Project	With Project
Traffic flow (Q)	950	1020	490	560
Heavy Vehicle % (p)	70	72	34	41
Traffic Speed (V)	70	70	70	70
Basic Noise Level (BNL), dB(A)	72.0	72.3	69.1	69.7
Heavy Vehicle Corr, dB(A)	7.2	7.4	4.8	5.4
Road Surface Corr, dB(A)	-1	-1	-1	-1
<b>Basic Noise Level (BNL)</b>	<b>78.2</b>	<b>78.6</b>	<b>72.9</b>	<b>74.1</b>
Horizontal Distance (hd) from NSR to Effective Source Line, m	406.2	406.2	71.7	71.7
Shortest Slant Distance (d'), m	407.2	407.2	71.9	71.9
Angle of View, degree	180	180	180	180
Distance Corr, dB(A)	-14.8	-14.8	-7.3	-7.3
Façade Corr, dB(A)	2.5	2.5	2.5	2.5
Angle of View, dB(A)	0	0	0	0
<b>Predicted Noise Level, dB(A)</b>	<b>65.9</b>	<b>66.3</b>	<b>68.2</b>	<b>69.3</b>

<b>Predicted Noise Level</b>	<b>dB(A)</b>
Without Project	70.2
With Project	71.1
<b>Difference, dB(A)</b>	<b>0.9</b>

Project: Multi-storey Depot for Electric Buses at Tuen Mun - Chek Lap Kok Link Free-Up Area  
Traffic Noise Impact Assessment  
Time Period: 0600-0700 (Operational Peak)

NSR4	Siu Shan Court
x	814169.3
y	826491.8
z	11.2

Lung Fu Road Segment	
x	813798.5
y	826688.0
z	38.5

Lung Mun Road Segment	
x	814107.6
y	826537.2
z	6.4

	Road: Lung Fu Road		Road: Lung Mun Road	
	Without Project	With Project	Without Project	With Project
Traffic flow (Q)	950	1020	490	560
Heavy Vehicle % (p)	70	72	34	41
Traffic Speed (V)	70	70	70	70
Basic Noise Level (BNL), dB(A)	72.0	72.3	69.1	69.7
Heavy Vehicle Corr, dB(A)	7.2	7.4	4.8	5.4
Road Surface Corr, dB(A)	-1	-1	-1	-1
<b>Basic Noise Level (BNL)</b>	<b>78.2</b>	<b>78.6</b>	<b>72.9</b>	<b>74.1</b>
Horizontal Distance (hd) from NSR to Effective Source Line, m	419.5	419.5	76.6	76.6
Shortest Slant Distance (d'), m	420.4	420.4	76.7	76.7
Angle of View, degree	180	180	180	180
Distance Corr, dB(A)	-14.9	-14.9	-7.5	-7.5
Façade Corr, dB(A)	2.5	2.5	2.5	2.5
Angle of View, dB(A)	0	0	0	0
<b>Predicted Noise Level, dB(A)</b>	<b>65.8</b>	<b>66.2</b>	<b>67.9</b>	<b>69.0</b>

<b>Predicted Noise Level</b>	<b>dB(A)</b>
Without Project	70.0
With Project	70.9
<b>Difference, dB(A)</b>	<b>0.9</b>

Issue No. : 2  
Issue Date : October 2021  
Project No. : 1906



**AIR VENTILATION ASSESSMENT –  
EXPERT EVALUATION**

**FOR**

**MULTI-STOREY DEPOT FOR  
ELECTRIC BUSES AT TUEN MUN –  
CHEK LAP KOK LINK FREE-UP AREA**

Prepared By:

Allied Environmental Consultants Limited

**COMMERCIAL-IN-CONFIDENCE**



## Document Verification



**Project Title** Multi-Storey Depot for Electric Buses at Tuen Mun – Chek Lap Kok Link Free-up Area

**Project No.** 1906

**Document Title** Air Ventilation Assessment – Expert Evaluation

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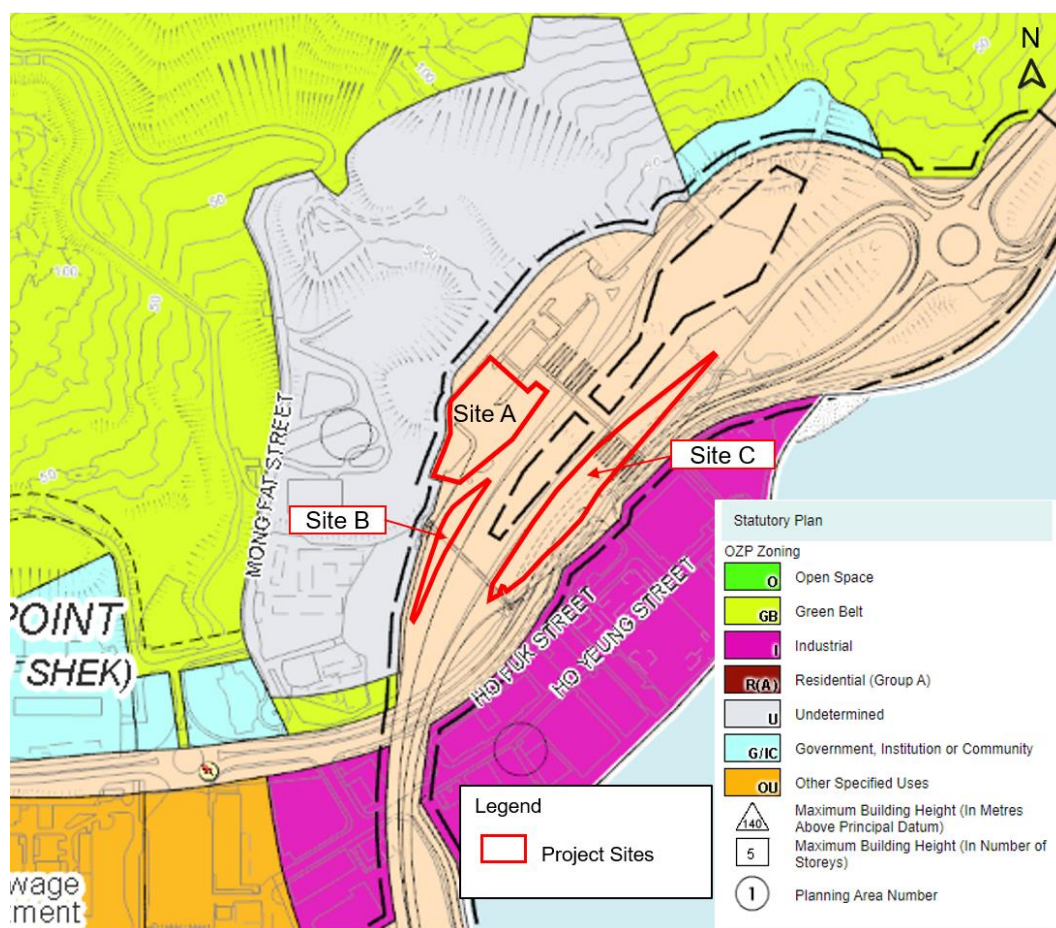
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## 1. INTRODUCTION

- 1.1.1. Allied Environmental Consultants (“AEC”) has been appointed to conduct an Air Ventilation Assessment – Expert Evaluation (“AVA-EE”) to support of Section 16 Planning Application for proposed bus depots with ancillary public utility installation (hereafter referred to as the “Proposed Development”) of Tuen Mun – Chek Lap Kok Link (TMCLKL) Free Up Area (hereafter referred to as the “Project Sites”).
- 1.1.2. The Project Sites comprise of three free up areas, namely Site A, B and C with total area of 16,845m<sup>2</sup> (Site A: 7,926 m<sup>2</sup>; Site B: 1,321m<sup>2</sup> and Site C: 7,598 m<sup>2</sup>). KMB is intended to develop the Site A to a 11-storey multi-storey depot for electric buses (“eBus”). Site B will be used for a 2 storey substation while Site C will be used for charging-enabling bus parking bays only. **Figure 1** shows the location of the Project Sites and its surrounding.



**Figure 1** Location of TMCLKL Free-up Area and Project Sites

## **2. ENVIRONMENTAL IMPACT ASSESSMENT ORDINANCE (EIAO) IMPLICATIONS**

2.1.1. As a multi-storey depot and supporting facilities for electric buses are proposed at the Project Sites, a Designated Project (DP) under Schedule 2, Part I, Category A.6 of the EIAO has been considered:

2.1.2. Category A.6 of the EIAO has been considered: Category A.6: A transport depot located less than 200 m from the nearest boundary of an existing or planned---

(a) residential area;

(b) place of worship;

(c) educational institution; or

(d) health care institution.

2.1.3. With reference to the Development Permission Area Plans, Outline Development Plans, Layout Plans and other relevant published land uses plan by Lands Department or Planning Department, neither residential area, place of worship, educational institution, nor health care institution is identified or will be planned within 200m from Project Sites boundary. Therefore, the proposed bus depot does not constitute DP under EIAO and Environmental Permit (EP) is not required for this Project.

## **3. OBJECTIVES**

3.1.1. The main objectives of this study are to conduct a qualitative review and to evaluate potential air ventilation impact on the pedestrian wind environment within and in the vicinity of the Project Sites using the methodology framework set out by relevant environmental standards, guidelines and technical circulars.

3.1.2. The methodology framework of this study is set out in the Technical Circular No. 1/06 and its Annex A - Technical Guide for Air Ventilation Assessment for Development in Hong Kong. The Technical Circular is jointly issued by Housing, Planning and Lands Bureau (HPLB) and Environment, Transport and Work Bureau (ETWB) in July 2006 (Technical Guide).

3.1.3. The scope of this study shall cover the following:

- To identify any potentially affected areas due to the proposed building design including building heights, layout and deposition;
- To provide recommendations for alleviating the potential air ventilation impact identified;
- To identify any major wind corridors which should be preserved or reserved; and
- To identify good design features.

## 4. ASSESSMENT METHODOLOGY

### 4.1. WIND AVAILABILITY DATA

#### Hong Kong Observatory

- 4.1.1. The Hong Kong Observatory records the metrological data in Hong Kong. Among all the weather stations in Hong Kong, the nearest weather station to the Project Sites is Tuen Mun Weather Station. Thus, the wind data from Tuen Mun Weather Station shall be used for the discussion on overall wind environment in the region.
- 4.1.2. According to the wind availability data from Tuen Mun Weather Station from 1988-2020, the annual wind rose revealed winds flowing from NNE, SSE and S while the summer wind rose revealed winds flowing from NNE, ESE, SSE and S.

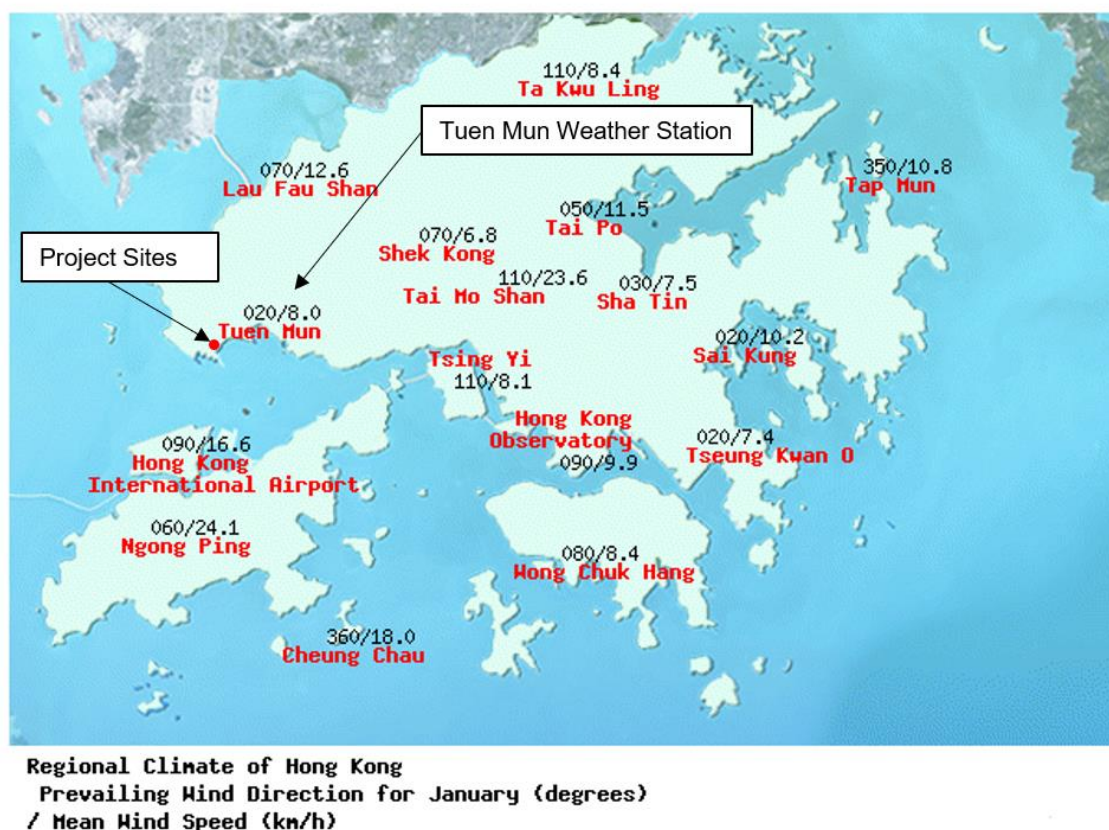
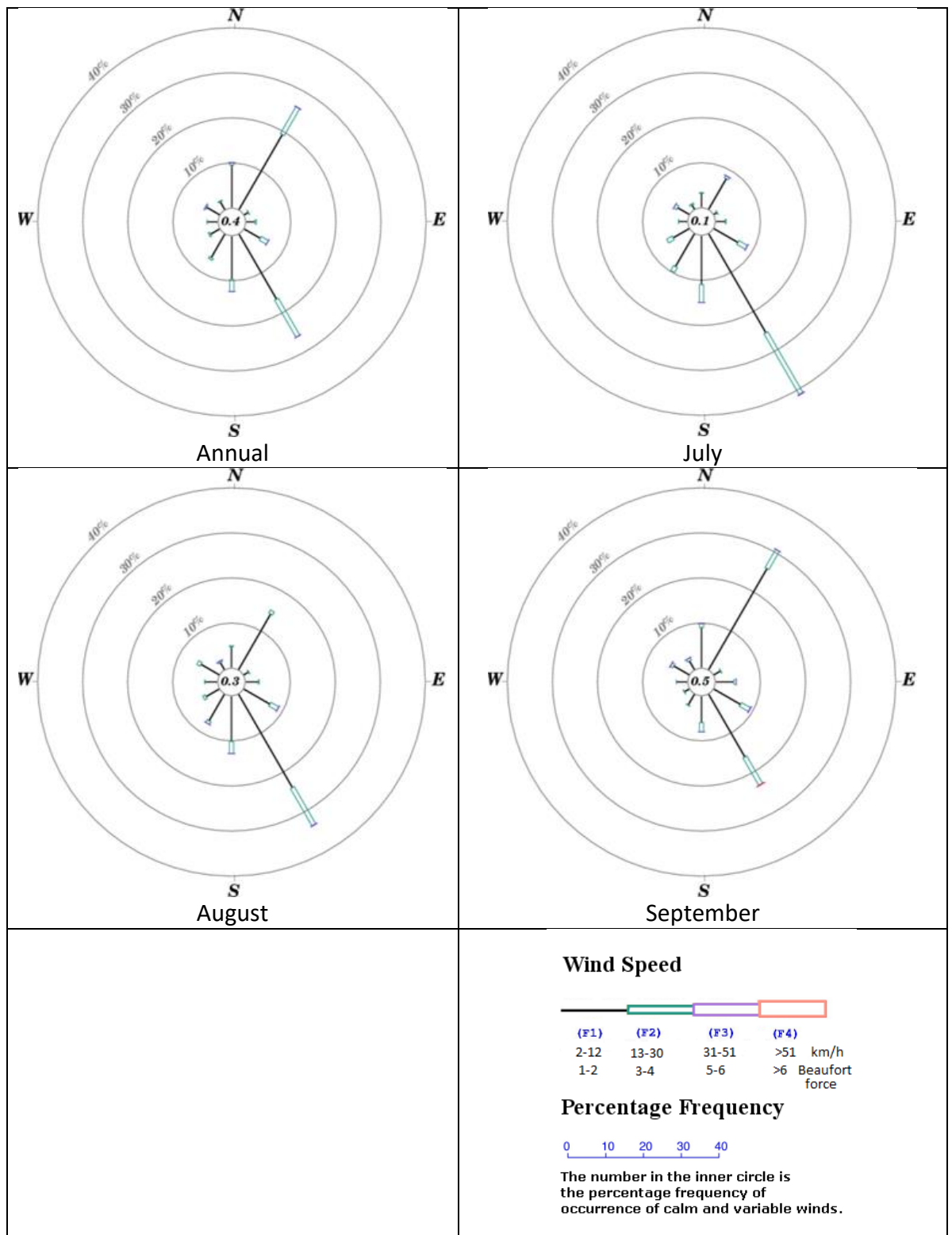


Figure 2

Location of Hong Kong Observatory Weather Station





**Figure 3 Annual Wind Rose of Tuen Mun Weather Station between 1988-2020**

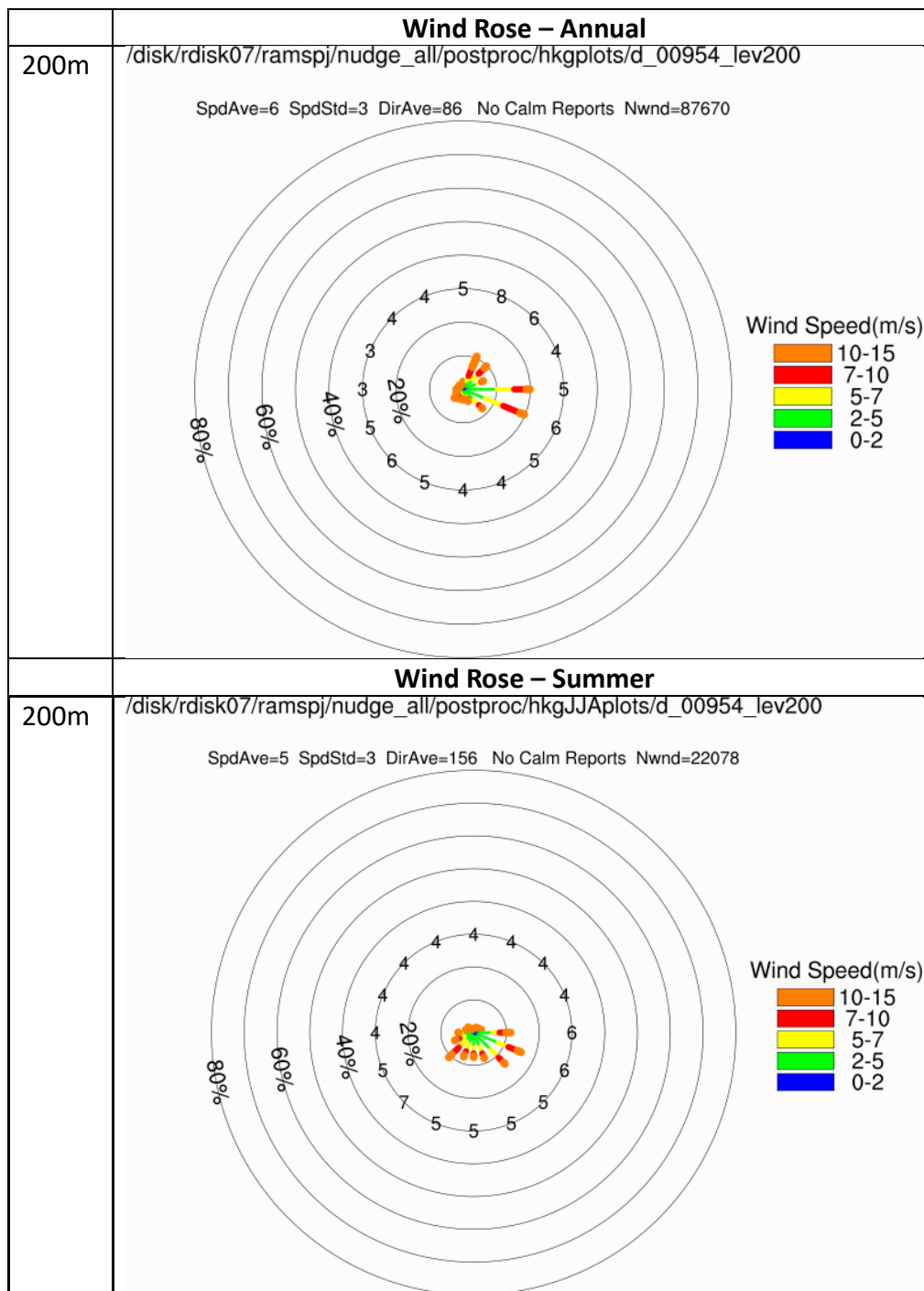


### Regional Atmospheric Modelling System (RAMS)

- 4.1.3. Wind availability to the Project Sites is evaluated with reference to the “Consultancy Study on Establishment of Simulated Site Wind Availability Data for Air Ventilation Assessments in Hong Kong”<sup>1</sup> simulated by the meso-scale model of Regional Atmospheric Modelling System (RAMS) Version 6.0 at the horizontal resolution of 0.5km \* 0.5km.
- 4.1.4. The Project Sites is located within grid (X034, Y053) in Pillar Point area. Wind availability data at 200m was adopted in this study. According to Planning Department (PlanD)’s simulated data, wind roses, wind direction and wind probability data are provided in **Figure 4** and **Table 1**.

---

<sup>1</sup> [http://www.pland.gov.hk/pland\\_en/info\\_serv/site\\_wind/site\\_wind/081073.html](http://www.pland.gov.hk/pland_en/info_serv/site_wind/site_wind/081073.html)



**Figure 4**      **Wind Rose at Grid (X034, Y053)**

**Table 1 Wind Probability at 200m at Grid (X034, Y053)**

Wind Direction	Annual Probability	Summer Probability
N	2.3%	1.2%
NNE	<b>11.1%</b>	1.6%
NE	9.8%	2.0%
ENE	6.5%	2.6%
E	<b>20.0%</b>	<b>11.4%</b>
ESE	<b>19.7%</b>	<b>15.8%</b>
SE	8.1%	<b>13.6%</b>
SSE	3.8%	<b>8.4%</b>
S	3.1%	7.5%
SSW	3.1%	8.0%
SW	3.7%	<b>10.8%</b>
WSW	2.2%	6.3%
W	2.0%	4.7%
WNW	1.4%	2.5%
NW	1.6%	2.3%
NNW	1.5%	1.1%

4.1.5. According to RAMS wind data, annual prevailing winds are the incoming winds flowing from NNE, E and ESE while summer prevailing winds are flowing E, ESE, SE, SSE and SW.

4.1.6. Among the two sets of wind data, **Table 2** summarises the identified prevailing wind conditions of in Tuen Mun and Pillar Point area. For a comprehensive discussion on air ventilation performance of the Project Sites and the wind environment at pedestrian level, RAMS data is more appropriate as it is the most updated.

**Table 2 Wind Data Summary**

Sources	Annual Wind	Summer Wind
HKO Tuen Mun Weather Station (1988-2020)	NNE, SSE and S	NNE, ESE, SSE and S.
RAMS data (Grid X034, Y053)	NNE, E, ESE	E, ESE, SE, SSE, SW
Summary	<b><u>NNE, E, ESE</u></b> , SSE and S	NNE, <b><u>E, ESE, SE, SSE</u></b> , S, <b><u>SW</u></b>

## 5. PROJECT DESCRIPTION

### 5.1. SITE LOCATION AND PROPOSED DEVELOPMENT

- 5.1.1. The Project Sites is surrounded by the Toll Control Building of the TMCLKL to the north, Tuen Mun Chek Lap Kok Tunnel Road, Butterfly Beach Laundry and some sawmills to the south east. Some site offices are also observed at the southwestern part of the Project Sites.
- 5.1.2. The Project Sites is zoned “Road” on the approved Tuen Mun Outline Zoning Plan (“OZP”) No. S/TM/35. The surrounding areas are mainly zoned “Industrial” (“I”), “Undetermined” (“U”), “Government, Institution or Community” (“G/IC”) and “Green Belt (“GB”)”. **Figure 1** shows the location of the Project Sites.

### 5.2. SURROUNDING ENVIRONMENT

#### Urban Morphology

- 5.2.1. As mentioned in Section 4.1, the Project Sites is surrounding by “I”, “U”, “G/IC” and “GB” zone with different building height. **Figure 5** and **Table 3** and shows the location of the surrounding location and the relevant building height respectively.

**Table 3** *Building Heights of Major Development in the Surroundings*

	Surrounding Buildings	Building Heights (mPD)
1	Butterfly Beach Laundry	~26
2	Sawmill along the Ho Fuk Street and Ho Yeung Street	~26
3	Pillar Point Fire Station	~26
4	Sunhing Hungkai Tuen Mun Godown	~26
5	Chu Kong Warehouse Block 2	~30
6	Customs and Excise Department Harbour And River Trade Division	~30
7	Site Offices	1 to 2 storeys
8	Toll Control Building of TMCLKL	3 storeys



5.2.2. Based on the best available information from Development Permission Area Plans, Outline Development Plans, Layout Plans and other relevant published and uses plan by Lands Department or Planning Department, no committed or planned developments are identified in the vicinity of the Project Sites. As advised by Planning Department (PlanD), the consultant has visited the Town Planning Board Statutory Planning Portal 2 to obtain records for land zoning. The website as of 8 October 2021 has confirmed that there are no planning applications has been made at the vicinity, which implies no committed or planned developments. Correspondence from PlanD can be referred in **Appendix C**.

### Road/ Street Pattern

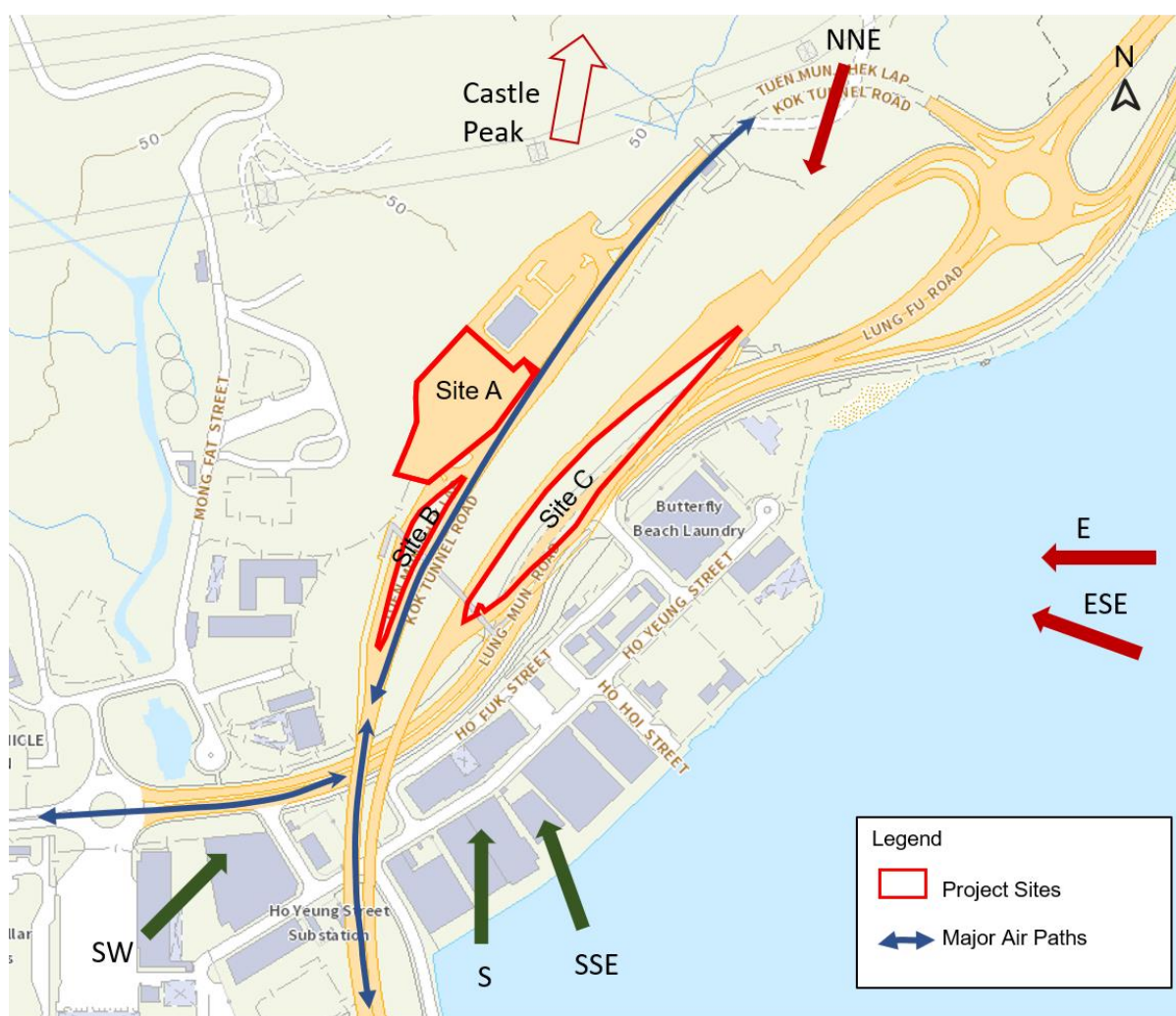
- 5.2.3. Road network facilitates wind penetration to the Project Sites and the surrounding areas. The annual and summer wind would be facilitated by the major wind corridor of Tuen Mun Chek Lap Kok Tunnel Road. The major air paths around the Project Sites are illustrated in **Figure 6**.

### Coastal Area

- 5.2.4. The Project Sites is located near to the sea. It is expected that the sea breeze would be favour the wind performance around the Project Sites.

### Topography

- 5.2.5. The Project Sites is located at around 21.4mPD near to the toll plaza of the TMCLKL. The Castle Peak (over 550mPD) is located at the northern part of the Project Sites.



**Figure 6** Prevailing Wind Environment in the Project Sites

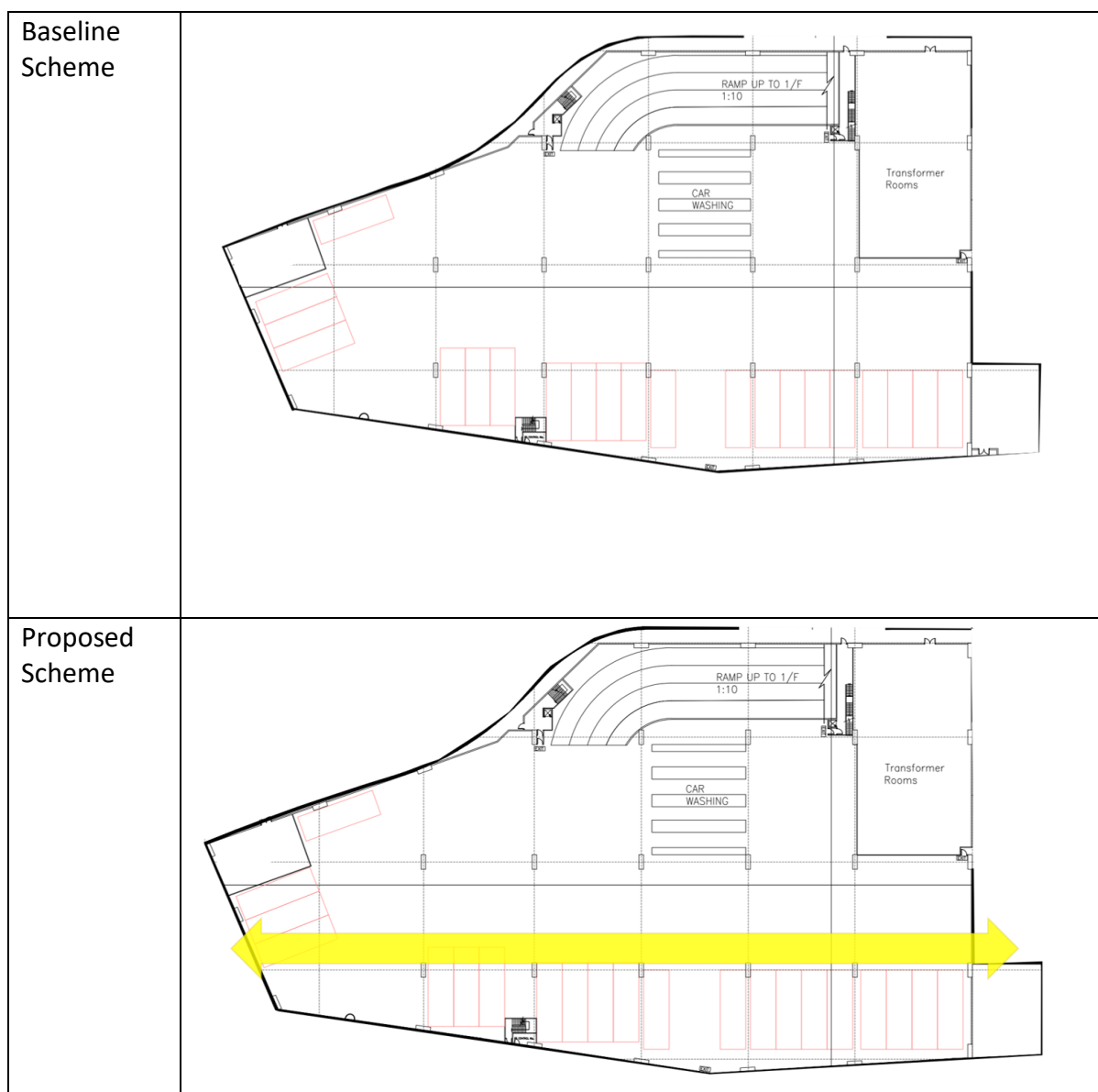
## 6. BASELINE SCHEME AND PROPOSED SCHEME

- 6.1.1. In order to cater the KMB's operational needs and the electric bus strategy as well as support the Roadmap on popularization of Electric Vehicles released by Environmental Bureau in March 2021, the 11-storey depot at Site A are proposed.
- 6.1.2. Both the Baseline Scheme and Proposed Scheme present the 11-storey scheme with maximum building height of 82.5m. Same design control parameters including the plot ratio and site coverage are adopted in two schemes. Two schemes consist of charging-enabling bus parking bays, maintenance bay, car washing space and ancillary offices.
- 6.1.3. Layout plans and section drawing under Baseline Scheme and Proposed Scheme are shown **Appendix A** and **Appendix B** respectively.
- 6.1.4. The site coverage of Baseline Scheme and Proposed Scheme are comparable, air ventilation performance enhancement features have been introduced in Proposed Scheme to facilitate the wind environment nearby. The enhancement features will be discussed in next section.



### Air path at G/F

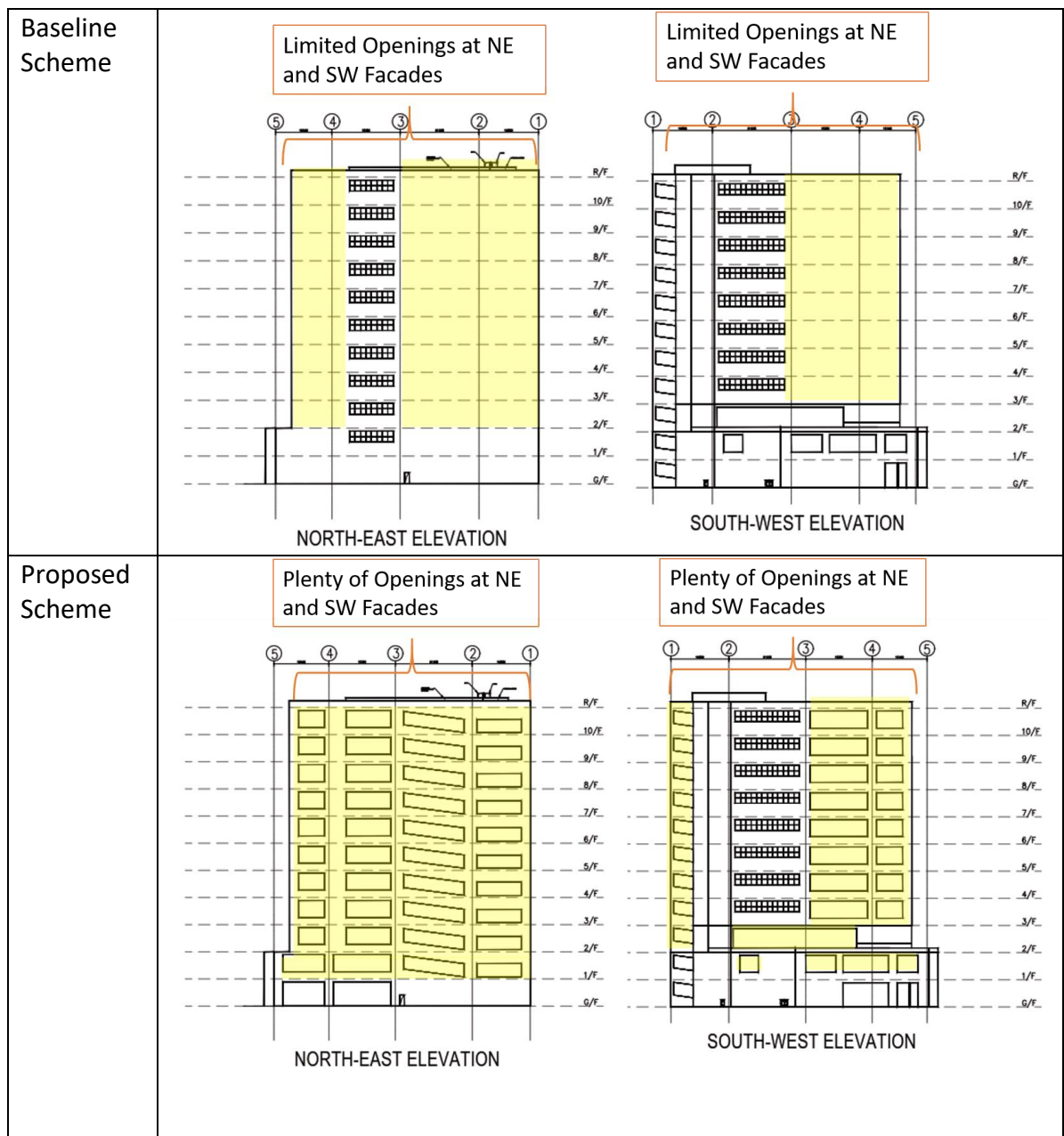
- 6.1.5. The Proposed Scheme has a NE-SW axis aligned air path at ground floor. Openings are adopted at the NE and SW facades of the Proposed Scheme and form an approximately 15m-wide air path and facilitate the air flow towards the downwind regions.
- 6.1.6. It is expected this air path would be effective to facilitate the annual wind from Castle Peak and the summer prevailing wind coming from the sea.
- 6.1.7. **Figure 7** shows the air at G/F under Baseline and Proposed Scheme.



**Figure 7** Ground Layout Plan

### Vast Opening at the Building Façade

6.1.8. The proposed development is a multi-storey depot with vast openings at the building façades to optimize the use of natural ventilation. It is anticipated the openings would be effective to enhance the wind penetration especially under the annual NNE and summer SW condition. More wind would reach the downwind regions via the openings, thus the adverse air ventilation impacts caused by the Proposed Scheme would be minimized. The sectional drawing of Baseline and Proposed Scheme are illustrated in **Figure 8**.

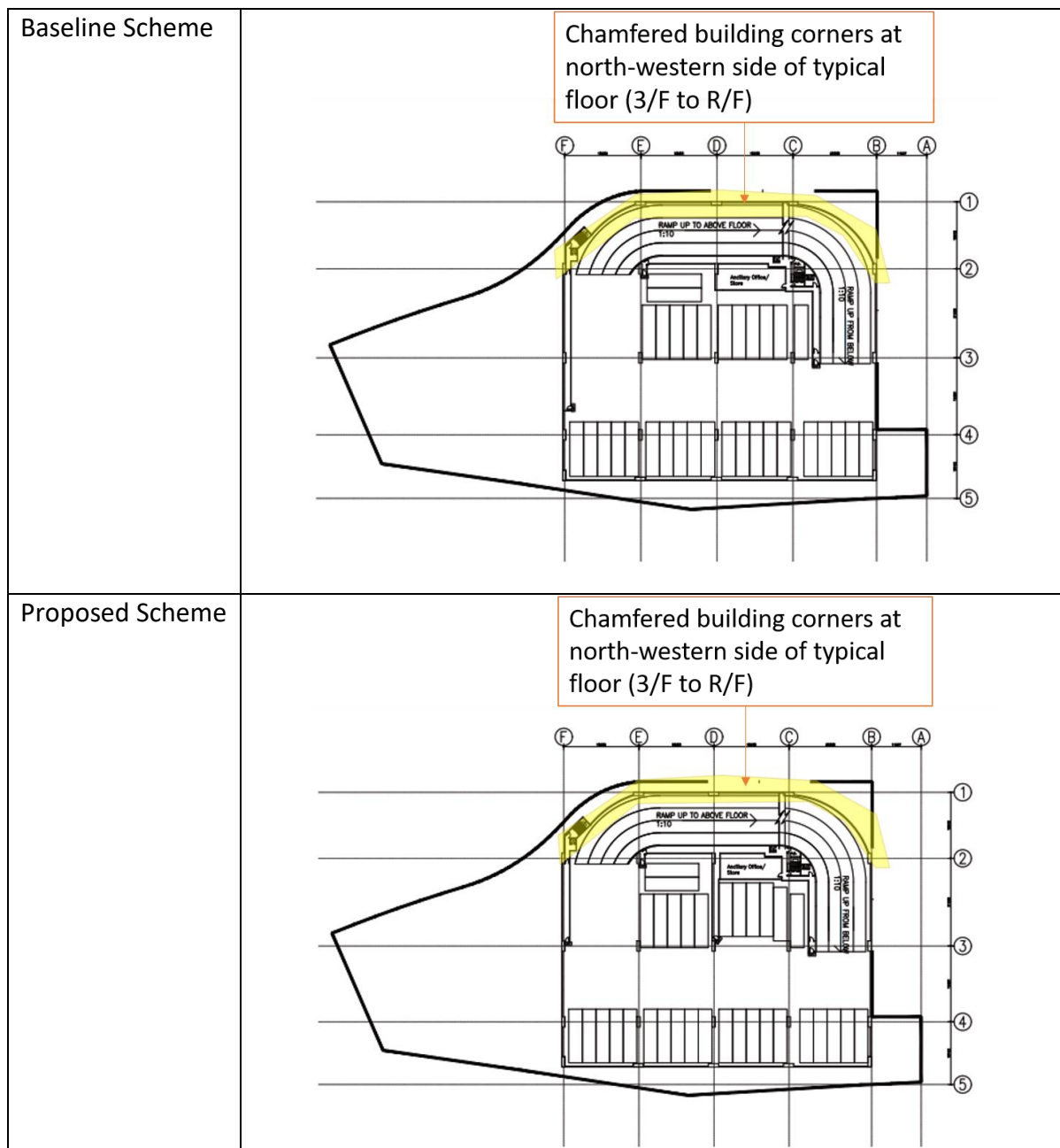


**Figure 8**      **Section Drawings**

### Chamfered Design at North-western Side of Typical Floors

6.1.9. Chamfered building corners would be adopted at the north-western side of typical floors (i.e. 3/F to R/F) under both Baseline Scheme and Proposed Scheme, allowing smoother wind flow around the building structure. This feature is anticipated to attract incoming SW wind toward the downwind regions.

6.1.10. The design of the typical floors of Baseline and Proposed Scheme are illustrated in **Figure 9**.



**Figure 9**      **Layout Plan**

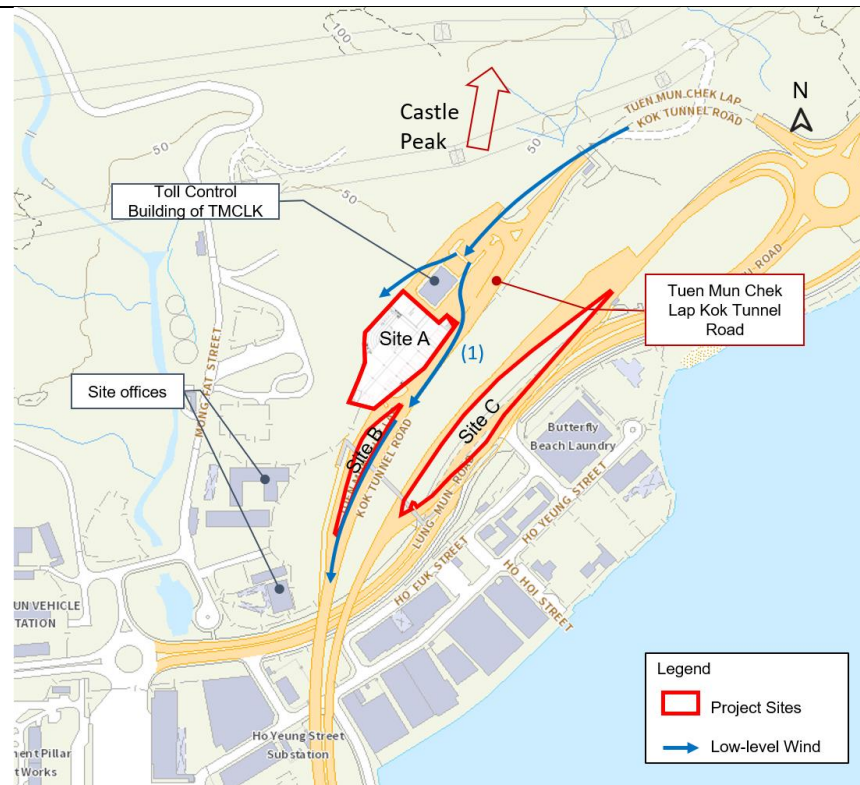
## 7. EXPERT EVALUATION

### 7.1. ANNUAL PREVAILING WIND

#### NNE Wind

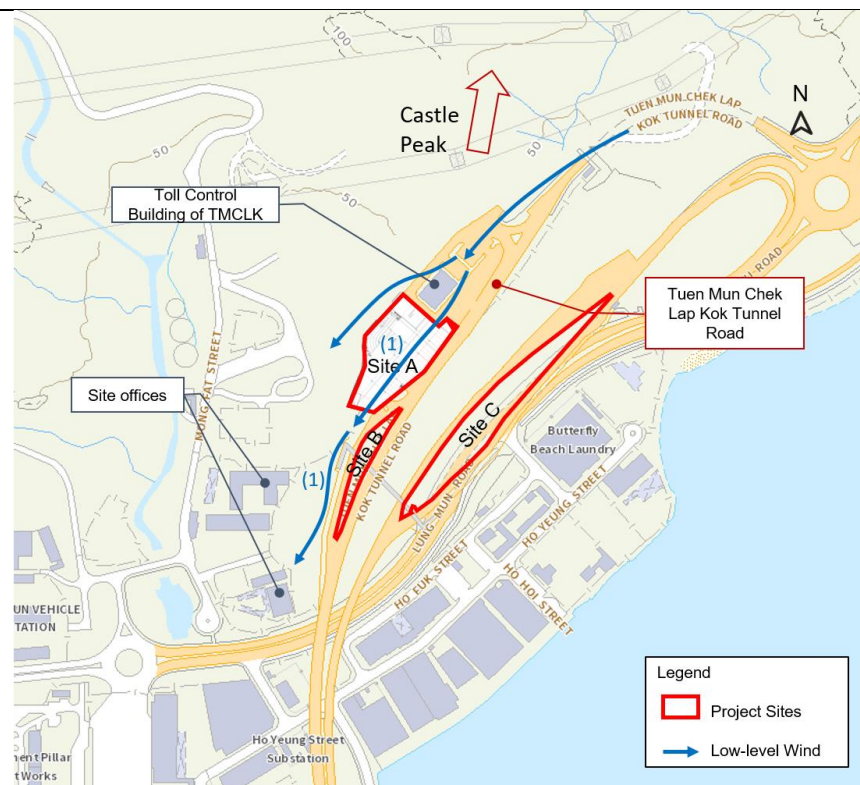
- 7.1.1. The Castle Peak is located at the immediate north of the Project Sites. Under annual condition, NNE wind would flow along the downhill of Castle Peak and reach the Project Sites via the Tuen Mun – Chek Lap Kok Tunnel Road.
- 7.1.2. Under the Baseline Scheme, the incoming NNE wind enter the Project Sites via the major breezeway of the Tuen Mun Chek Lap Kok Tunnel Road. Part of the low-level wind would be able to skim over the Toll Control Building of TMCLKL and reach the north-eastern portion of the Project Sites. Considering that there is no opening adopted at the NE facades under the Baseline Scheme, the NNE wind is difficult to penetrate the Baseline Scheme and reach the downwind regions. However, the incoming wind would be diverted to the southeast and northwest of the Project Sites. It is expected that some diverted wind would flow along the existing breezeway of Tuen Mun – Chek Lap Kok Tunnel Road and reach the downwind region ([Blue Arrow \(1\)](#) in **Figure 10**).
- 7.1.3. Under the Proposed Scheme, plenty of vast openings are adopted at the NE and SW facades to improve the permeability of the Proposed Scheme. Incoming NNE wind is expected to penetrate the Project Sites via these vast openings. Moreover, there is one approximately 15m-wide NE-SW axis aligned air path at the G/F. The low-level NNE wind is expected to reach the downwind regions including the site offices at the southwestern part of the Project Sites via this air path. Better air ventilation is expected at the immediate downwind regions under the Proposed Scheme. ([Blue Arrow \(1\)](#) in **Figure 11**)

## Baseline Scheme



**Figure 10 NNE Wind (Baseline Scheme)**

## Proposed Scheme



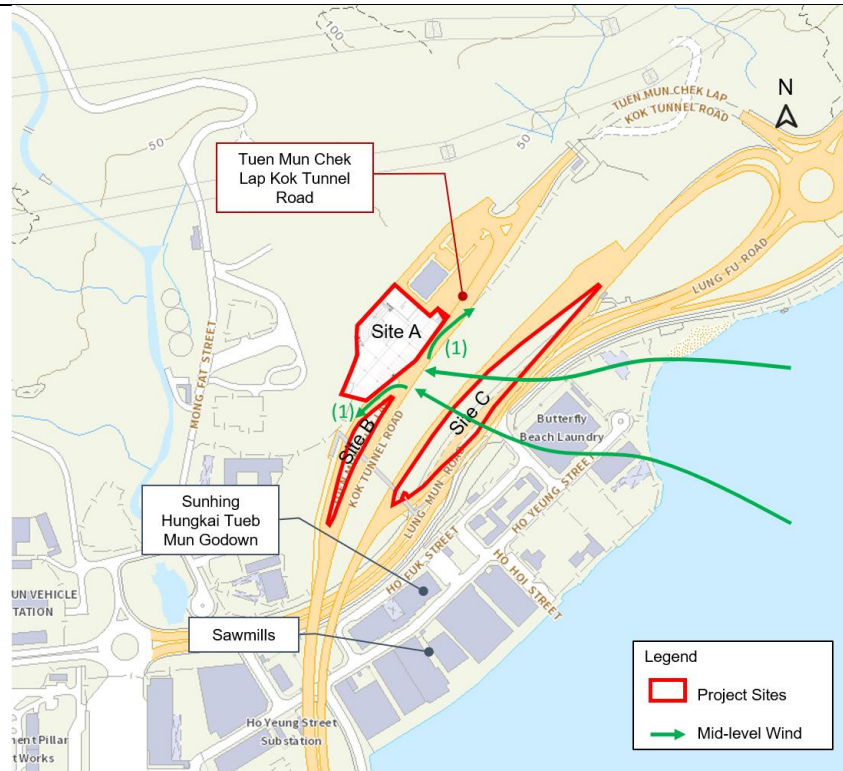
**Figure 11 NNE Wind (Proposed Scheme)**

### **E and ESE Wind**

- 7.1.4. E and ESE direction are two major dominant annual prevailing wind and they mainly come from the sea. There is a cluster of industrial developments (including Butterfly Beach Laundry, Sunhing Hungkai Tuen Mun Godown and sawmills) located along the waterfront with the maximum height of 30mPD. Although the industrial developments may form a wind barrier to impede the E and ESE wind, the mid-level E and ESE sea breeze is expected to skim over the aforementioned developments to reach the eastern portion of the Project Sites as the Project Sites is located on significantly higher ground elevation compared with the developments along the waterfront.
- 7.1.5. Under the Baseline Scheme, the openings along the SE facades are limited. The incoming wind would enter the Project Sites via the openings at the G/F site entrance only. Thus, not much annual wind is expected to penetrate the Project Sites. Moreover, the 11-storey Baseline Scheme would act as a barrier and reduce wind availability to the downwind region e.g. the Toll Control Building of TMCLKL. Nevertheless, the Baseline Scheme will create downwash effect to increase pedestrian wind availability along the Tuen Mun Chek Lap Kok Tunnel Road. (Green Arrow (1) in **Figure 14**) Thus, adverse effect caused by the Baseline Scheme is minimized.
- 7.1.6. Under the Proposed Scheme, openings along the SE and NW facades would allow the mid-level wind to penetrate to its downwind regions (Green Arrow (1) in **Figure 13**). Nevertheless, the Proposed Scheme will create downwash effect to increase pedestrian wind availability along the Tuen Mun Chek Lap Kok Tunnel Road. Thus, adverse effect caused by the Proposed Scheme is minimized.

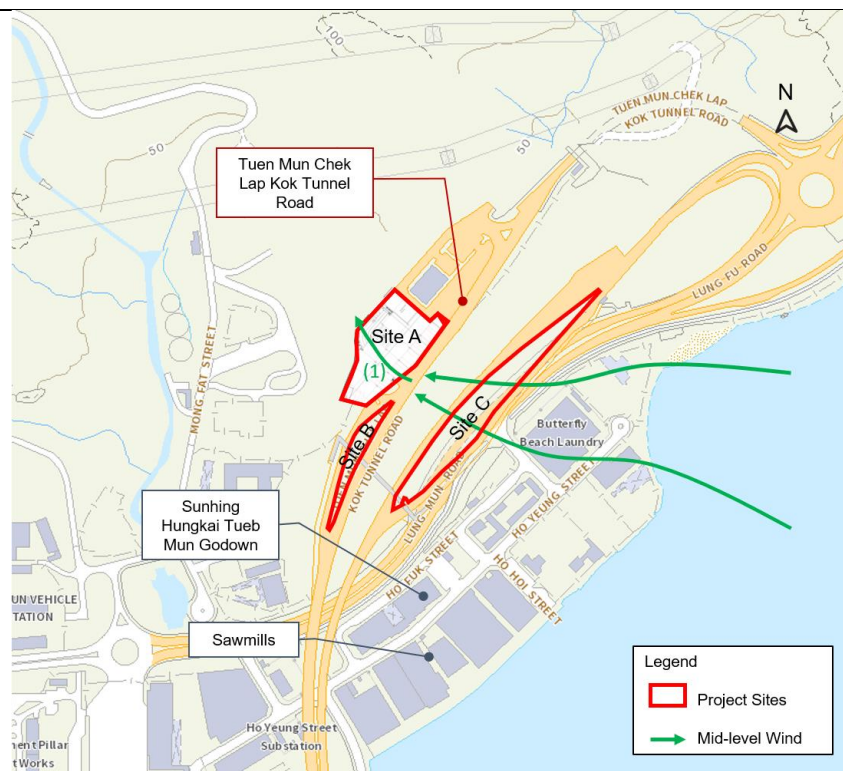


## Baseline Scheme



**Figure 12** *E and ESE Wind (Baseline Scheme)*

## Proposed Scheme



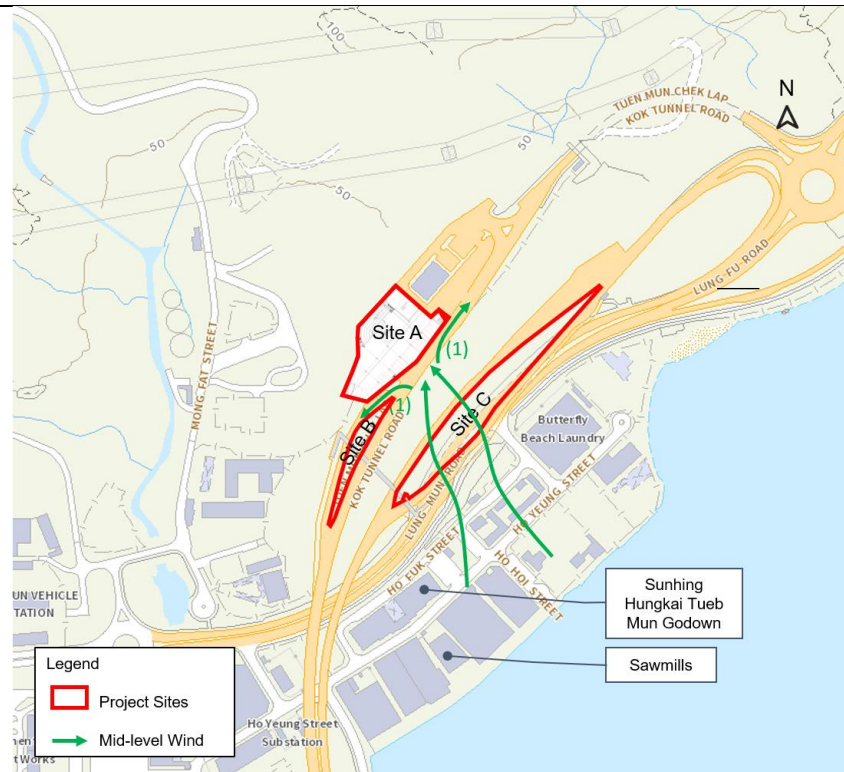
**Figure 13** *E and ESE Wind (Proposed Scheme)*



### **SE and SSE Wind**

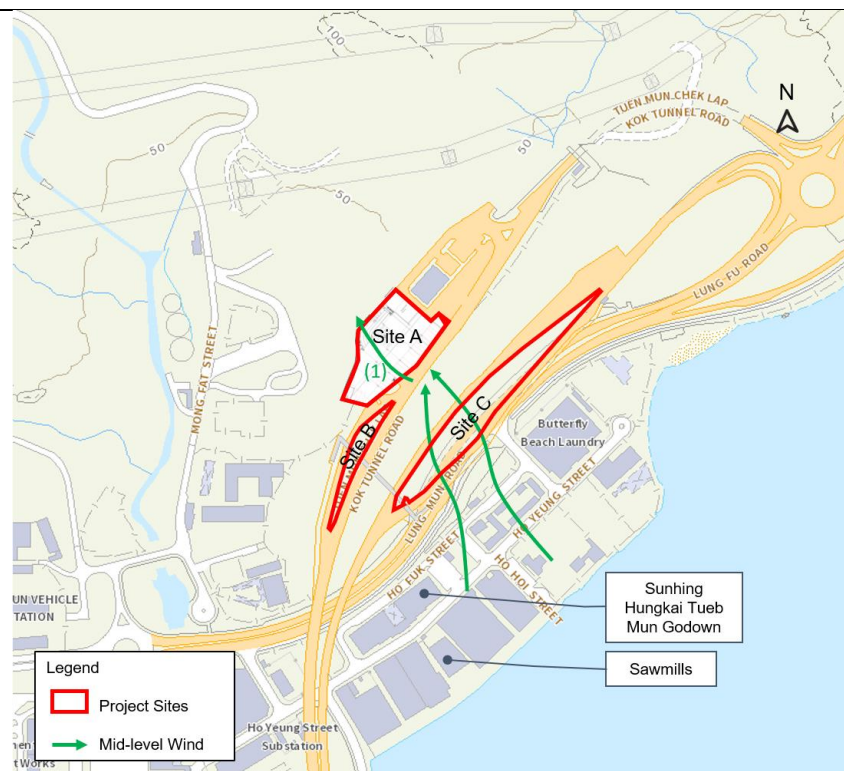
- 7.1.7. Similar to E and ESE direction, the summer SE and SSE wind would mainly come from the sea. There is a cluster of industrial developments (including Butterfly Beach Laundry, Sunhing Hungkai Tuen Mun Godown and sawmills) located along the waterfront with the maximum height of 30mPD. Although the industrial developments may form a wind barrier to impede the SE and SSE wind, the mid-level SE and SSE wind is expected to skim over the aforementioned developments to reach the eastern portion of the Project Sites as the Project Sites is located on significantly higher ground elevation compared with the developments along the waterfront.
- 7.1.8. Under the Baseline Scheme, the openings along the SE facades are limited. The incoming wind would enter the Project Sites via the openings at the G/F site entrance only. Thus, not much summer wind is expected to penetrate the Project Sites. Moreover, the 11-storey Baseline Scheme would act as a barrier and reduce wind availability to the downwind region e.g. the Toll Control Building of TMCLKL. Nevertheless, the Baseline Scheme will create downwash effect to increase pedestrian wind availability along the Tuen Mun Chek Lap Kok Tunnel Road. (Green Arrow (1) in **Figure 14**) Thus, adverse effect caused by the Baseline Scheme is minimized.
- 7.1.9. Under the Proposed Scheme, openings along the SE and NW facades would allow the mid-level wind to penetrate to its downwind regions (Green Arrow (1) in **Figure 15**). Nevertheless, the Proposed Scheme will create downwash effect to increase pedestrian wind availability along the Tuen Mun Chek Lap Kok Tunnel Road. Thus, adverse effect caused by the Proposed Scheme is minimized.

## Baseline Scheme



**Figure 14** SE and SSE Wind (Baseline Scheme)

## Proposed Scheme



**Figure 15** SE and SSE Wind (Proposed Scheme)

## 7.2. SUMMER PREVAILING WIND

### SW Wind

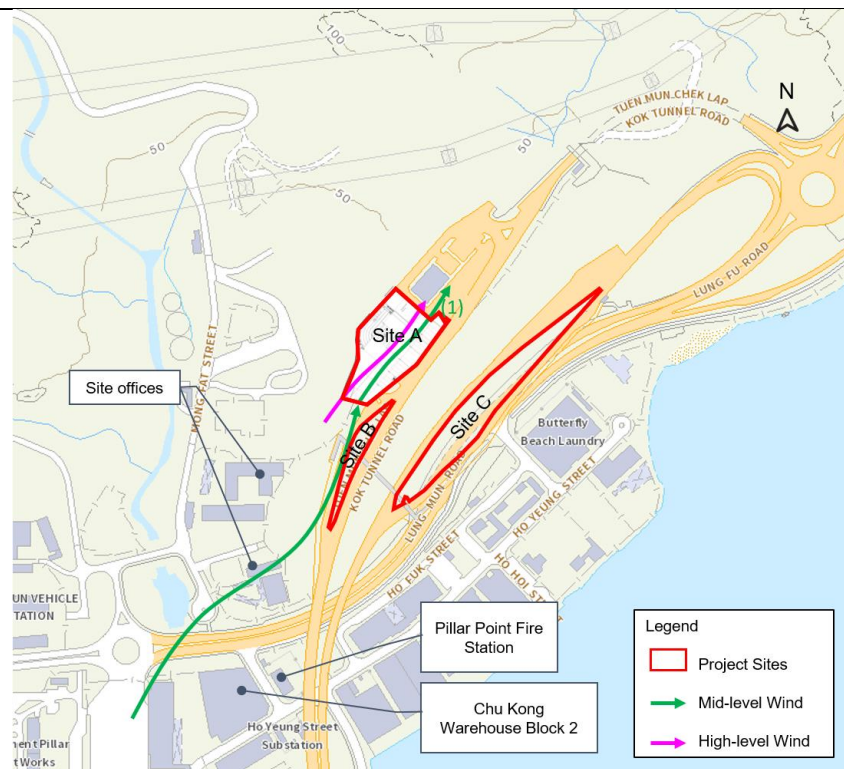
- 7.2.1. The summer SW wind coming from the sea may slightly reduce by building cluster including Pillar Point Fire Station, Chu Kong Warehouse Block 2 with the maximum height of 30mPD located along the waterfront. Although the industrial developments may form a wind barrier to impede the SW wind, the mid-level SW wind is expected to skim over the aforementioned developments to reach the southern portion of the Project Sites as the Project Sites is located on significantly higher ground elevation compared with the developments along the waterfront.
- 7.2.2. Under the Baseline Scheme, limited openings are observed at the SW façade, so it is expected that not much SW wind is able to enter the Project Sites. Wake zone may be created at the immediate downwind region of the Project Sites i.e. Toll Control Building of TMCLKL. Thus, the wind environment around Toll Control Building may be slightly affected. However, the chamfered building corners at north-western side of the typical floor of the Baseline Scheme would facilitate the air flow of the mid-level SW wind (**Green Arrow (1)** in **Figure 16**). Also, part of the mid-level SW wind would be diverted to northeast i.e. the Tuen Mun Chek Lap Kok Tunnel Road, thus, the adverse impact to wind performance is minimized (**Green Arrow (2)** in **Figure 16**).
- 7.2.3. Under the Proposed Scheme, the openings at SW and NE façade at G/F form a NE-SW axis aligned air path to facilitate the air flow within the Project Sites and its surroundings. It is anticipated that the incoming SW wind would reach the downwind region including the Toll Control Building of TMCLKL via this air path. (**Green Arrow (1)** in **Figure 17**) Furthermore, the openings at SW and NE façades at the 3/F to R/F is expected to maximize the permeability of Proposed Scheme. More high-level wind is anticipated to penetrate the Proposed Scheme and reach the downwind region through these openings. (**Magenta Arrow** in **Figure 17**), thus an improvement on wind performance under the Proposed Scheme is expected.

## Baseline Scheme



**Figure 16** *SW Wind (Baseline Scheme)*

## Proposed Scheme



**Figure 17** *SW Wind (Proposed Scheme)*

## 8. CONCLUSIONS

- 8.1.1. An AVA-EE study was conducted for Multi-Storey Depot for Electric Buses at Tuen Mun – Chek Lap Kok Free-up Area to provide qualitative evaluation of wind performance of the proposed development under the Baseline and the Proposed Scheme.
- 8.1.2. Both Baseline Scheme and Proposed Scheme presents the 11-storey depot with maximum building height of 82.5m. The Proposed Scheme adopted the following good design features to minimize the adverse effect to the air ventilation performance.

### Air Path at G/F

- 8.1.3. Two NE-SW axis aligned air path at G/F is adopted. It is anticipated that this design feature is effective to improve the wind performance of surroundings area especially in annual NNE and summer SW condition.

### Vast Opening at the Building Façades

- 8.1.4. The proposed development is a multi-storey depot with vast openings at the building façades to optimize the use of natural ventilation. It is anticipated the openings would be effective to enhance the wind penetration especially under the annual NNE and summer SW condition. More wind would reach the downwind regions via the openings, thus the adverse air ventilation impacts caused by the Proposed Scheme would be minimized.

### Chamfered Design at North-western Side of Typical Floors

- 8.1.5. Chamfered building corners would be adopted at the north-western side of typical floors (i.e. 3/F to R/F) under both Baseline Scheme and Proposed Scheme, allowing smoother wind flow around the building structure. Chamfered building corners is anticipated to attract incoming summer SW wind toward the downwind regions.
- 8.1.6. Considering no obstruction to the identified major air paths to the Project Sites, no adverse air ventilation impact is anticipated in the Proposed Scheme. Besides, the good design features (i.e. air path at G/F, vast opening at the building façade and chamfered design at north-western side of typical floor) implemented in the Proposed Scheme would improve the wind performance at its downwind regions.

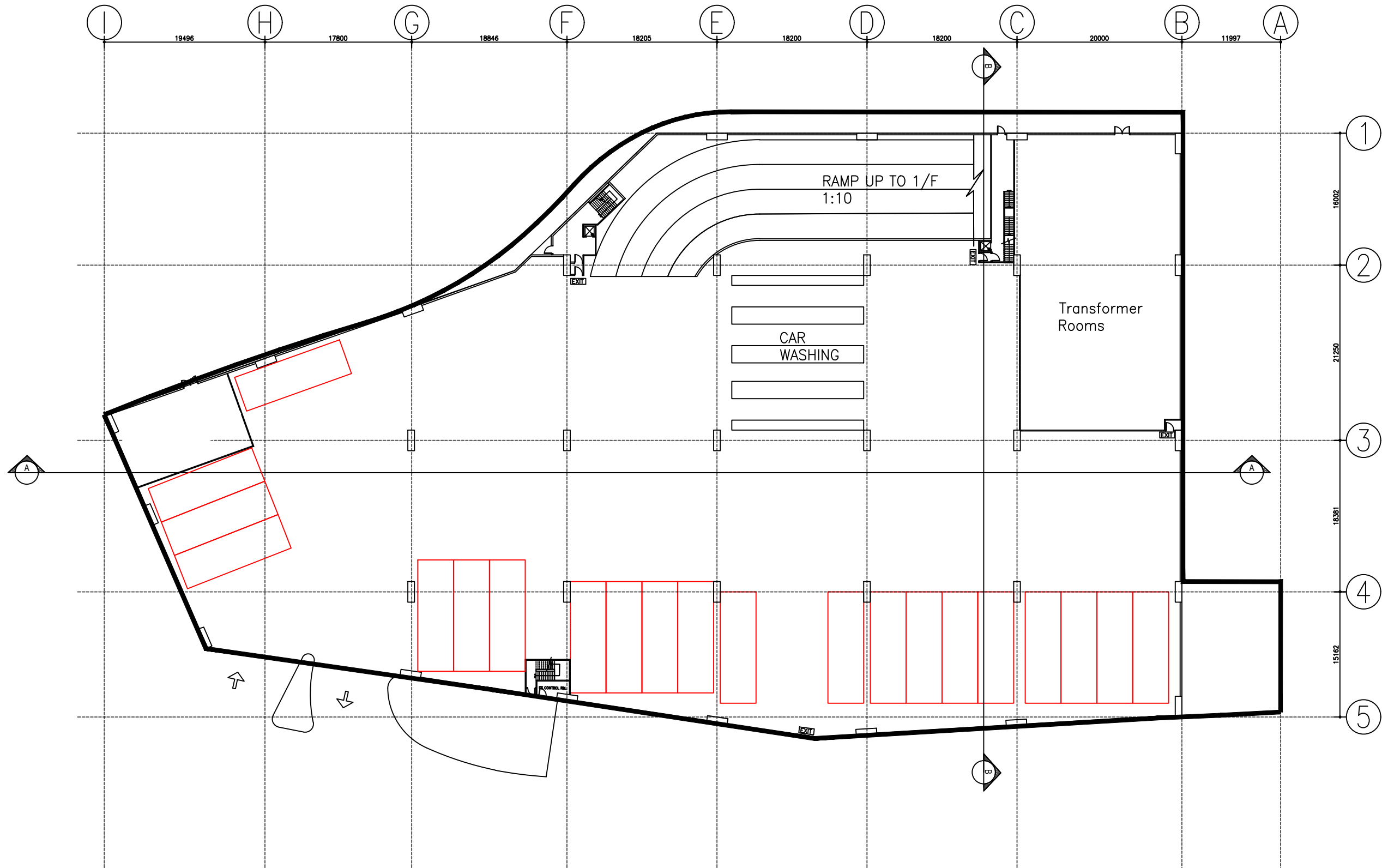
## ***Appendix A – Layout Plans and Sectional Drawings of the Baseline Scheme***

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#### LEGEND

- Maintenance Bay  
(13500mm x 4350mm)
- Parking Space  
(13000mm x 3300mm)

G/F

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Wan Chai, Hong Kong  
T | +852 3188 5595 F | +852 3188 5598

PROJECT:

TMCLK DEPOT

DRAWING TITLE:

G/F LAYOUT (SITE A)

SCALE: 1:500

DATE: 30/6/2021

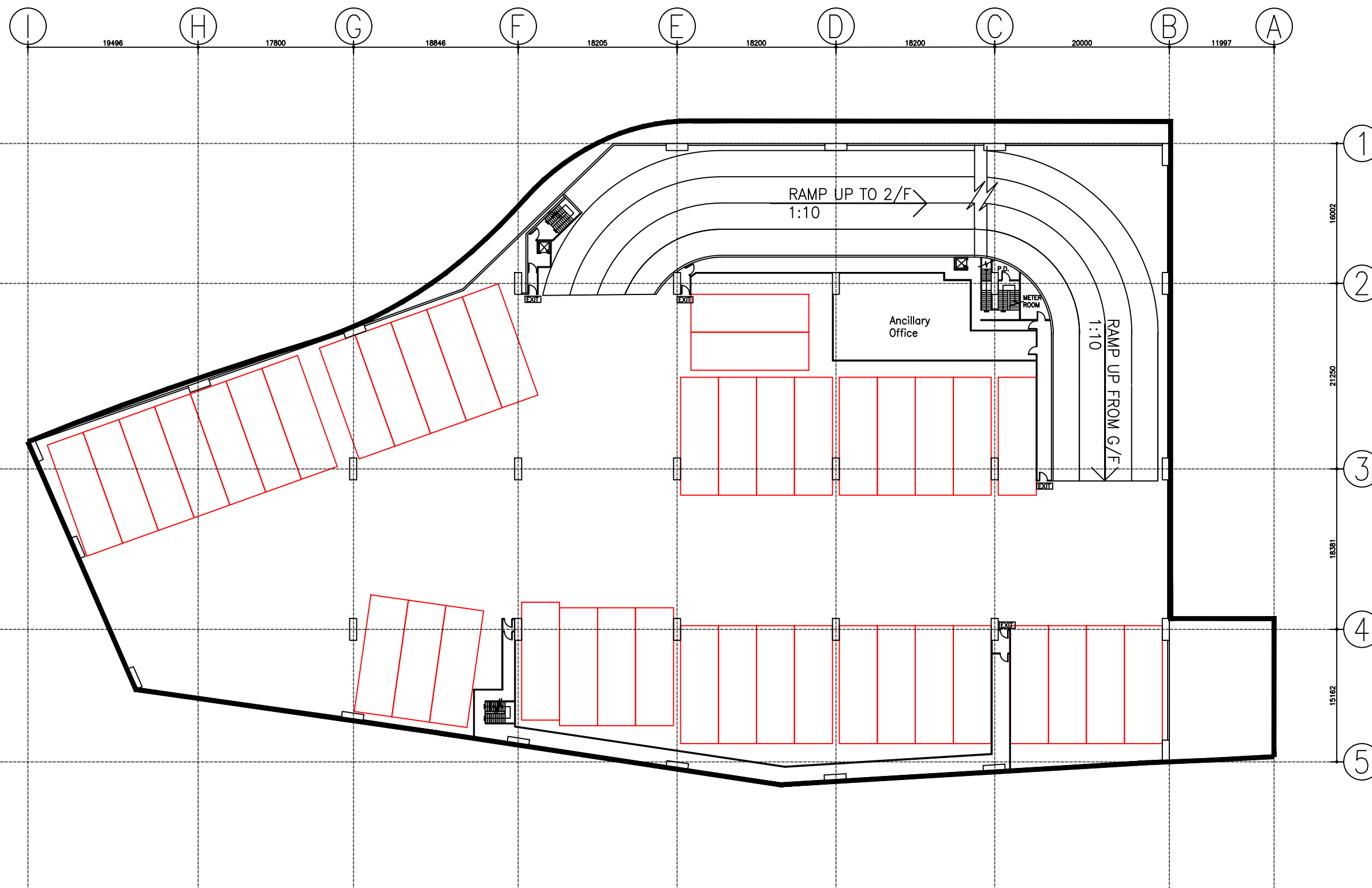
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DWG. NO.: AA02



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PROJECT:

TMCLK DEPOT

DRAWING TITLE :

1/F LAYOUT (SITE A)

SCALE: 1:500

DATE: 30/6/2021

DRAWN BY: PT

CHECKED BY: -

APPROVED BY: -

JOB. NO. :

DWG. NO. : AA03

LEGEND

Maintenance Bay  
(13500mm x 4350mm)

Parking Space  
(13000mm x 3300mm)

1/F



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PROJECT:

TMCLK DEPOT

DRAWING TITLE :

2/F LAYOUT (SITE A)

SCALE: 1:500

DATE: 30/6/2021

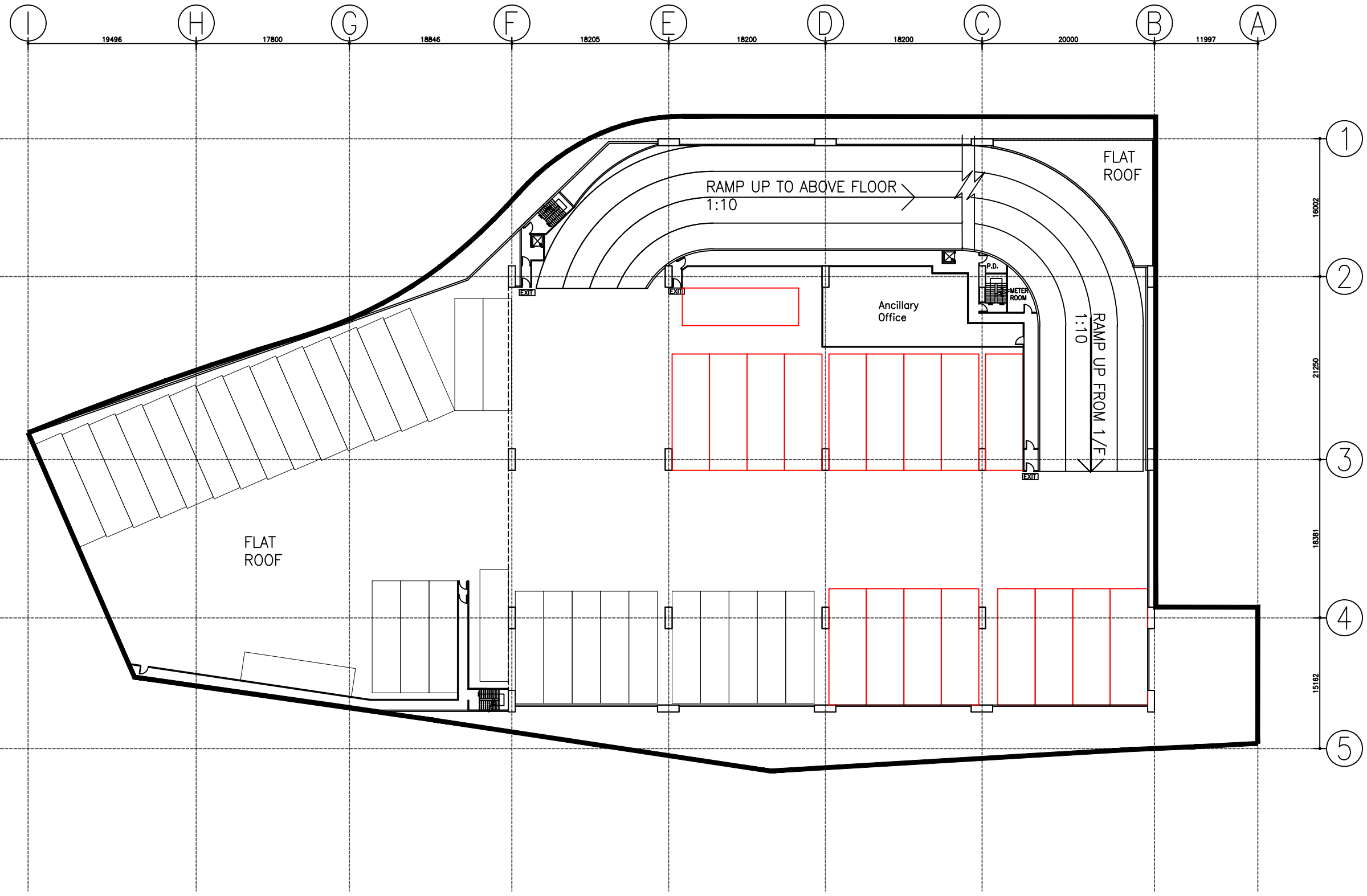
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JOB. NO. :

DWG. NO. : AA04



LEGEND

Maintenance Bay  
(13500mm x 4350mm)

Parking Space  
(13000mm x 3300mm)

2/F



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PROJECT:

TMCLK DEPOT

DRAWING TITLE :

3/F-10/F LAYOUT (SITE A)

SCALE: 1:500

DATE: 30/6/2021

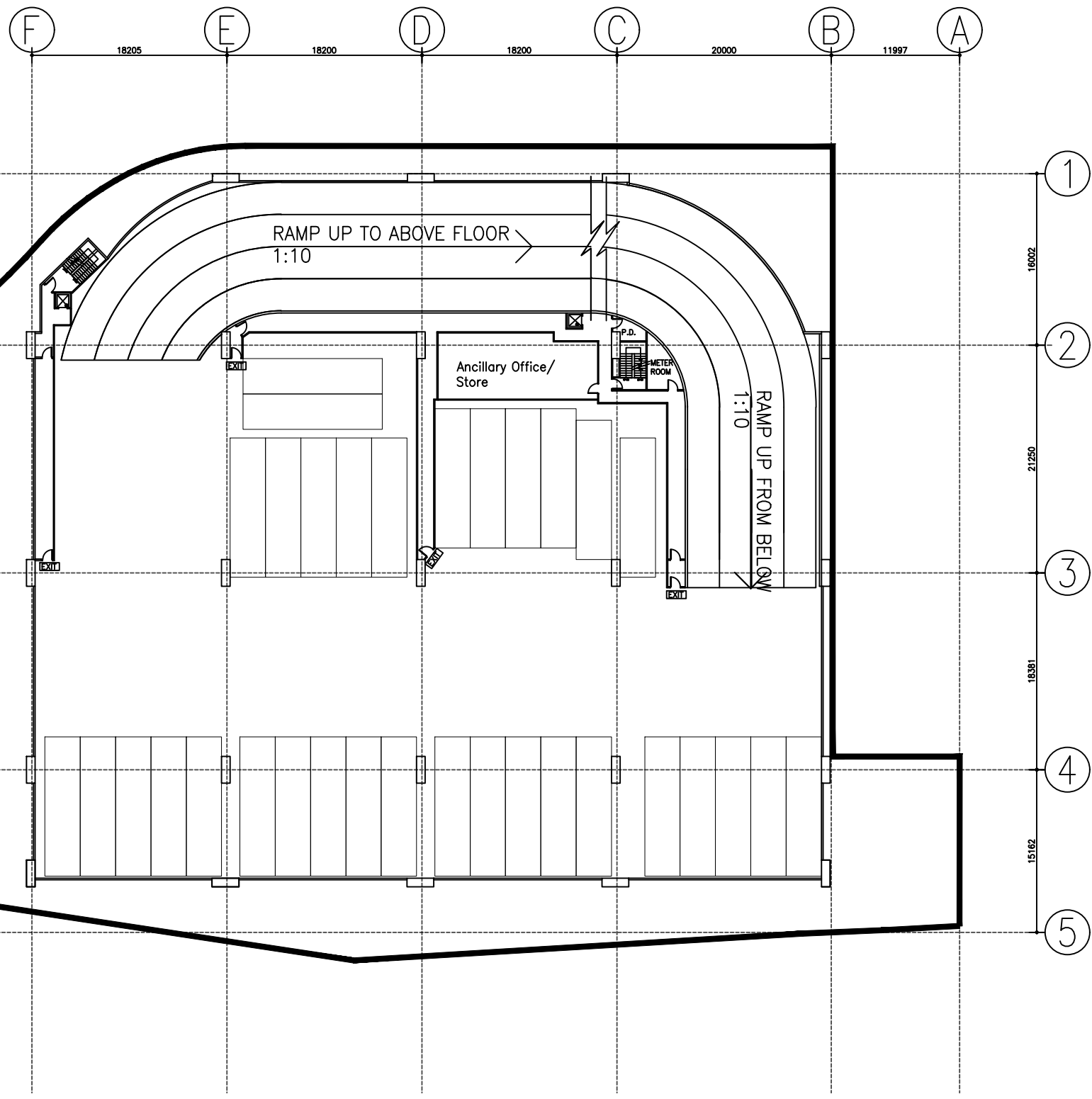
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APPROVED BY: -

JOB. NO. :

DWG. NO. : AA05



LEGEND

- Maintenance Bay  
(13500mm x 4350mm)
- Parking Space  
(13000mm x 3300mm)

3/F-10/F



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PROJECT:

TMCLK DEPOT

DRAWING TITLE :

R/F LAYOUT (SITE A)

SCALE: 1:500

DATE: 30/6/2021

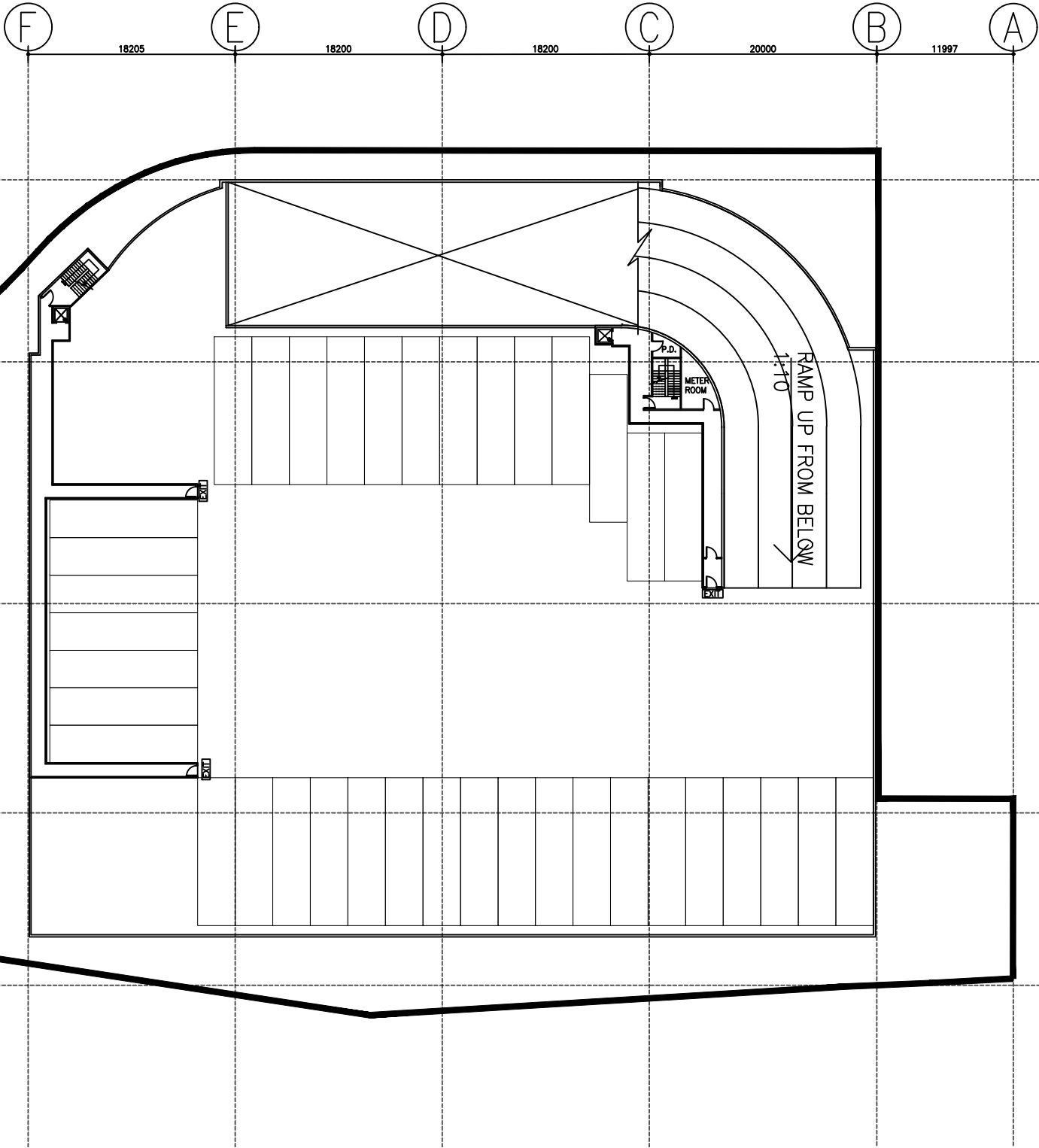
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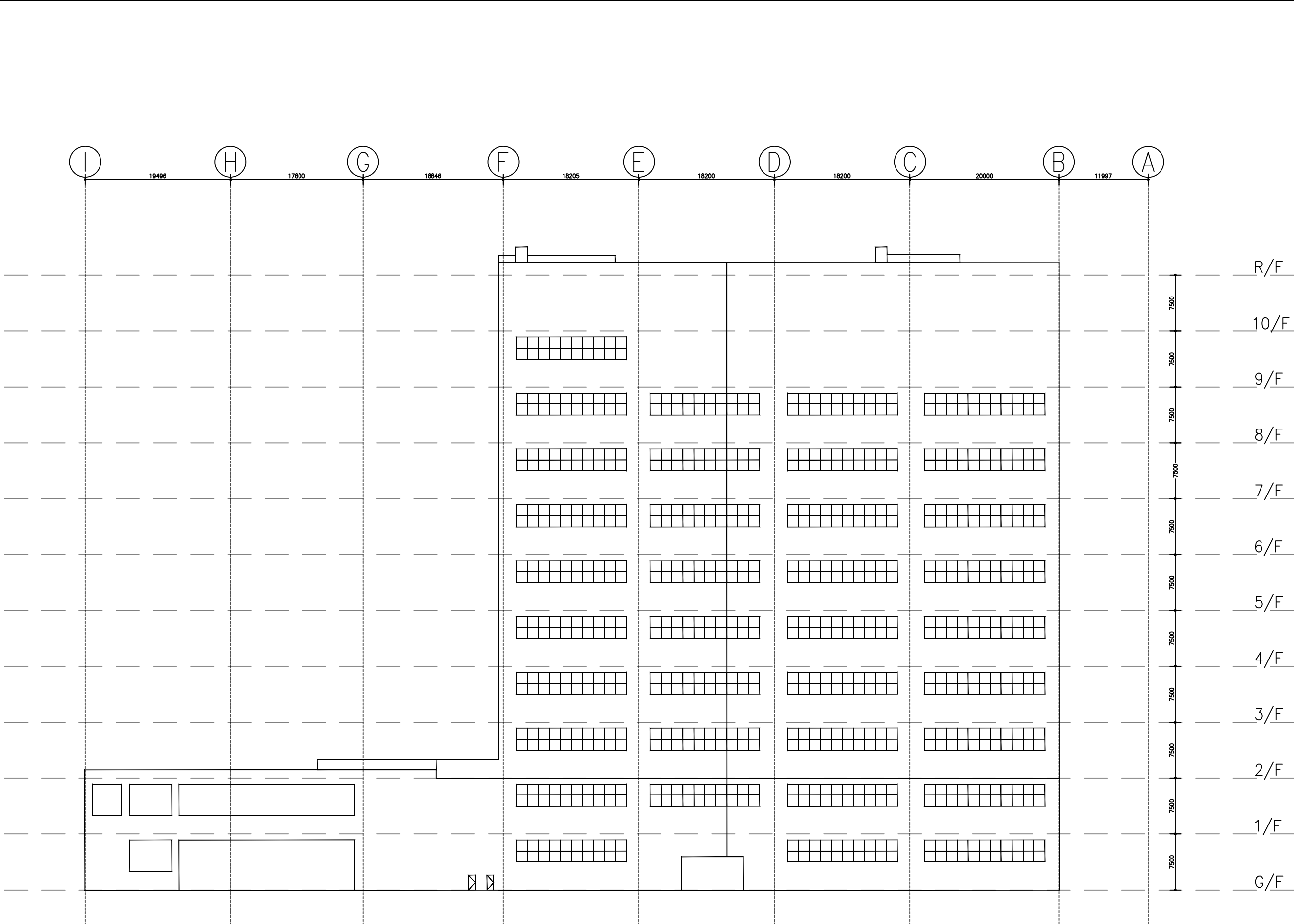
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LEGEND

- Maintenance Bay  
(13500mm x 4350mm)
- Parking Space  
(13000mm x 3300mm)

R/F



SOUTH-EAST ELEVATION

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SOUTH-EAST ELEVATION (SITE A)

SCALE: 1:500

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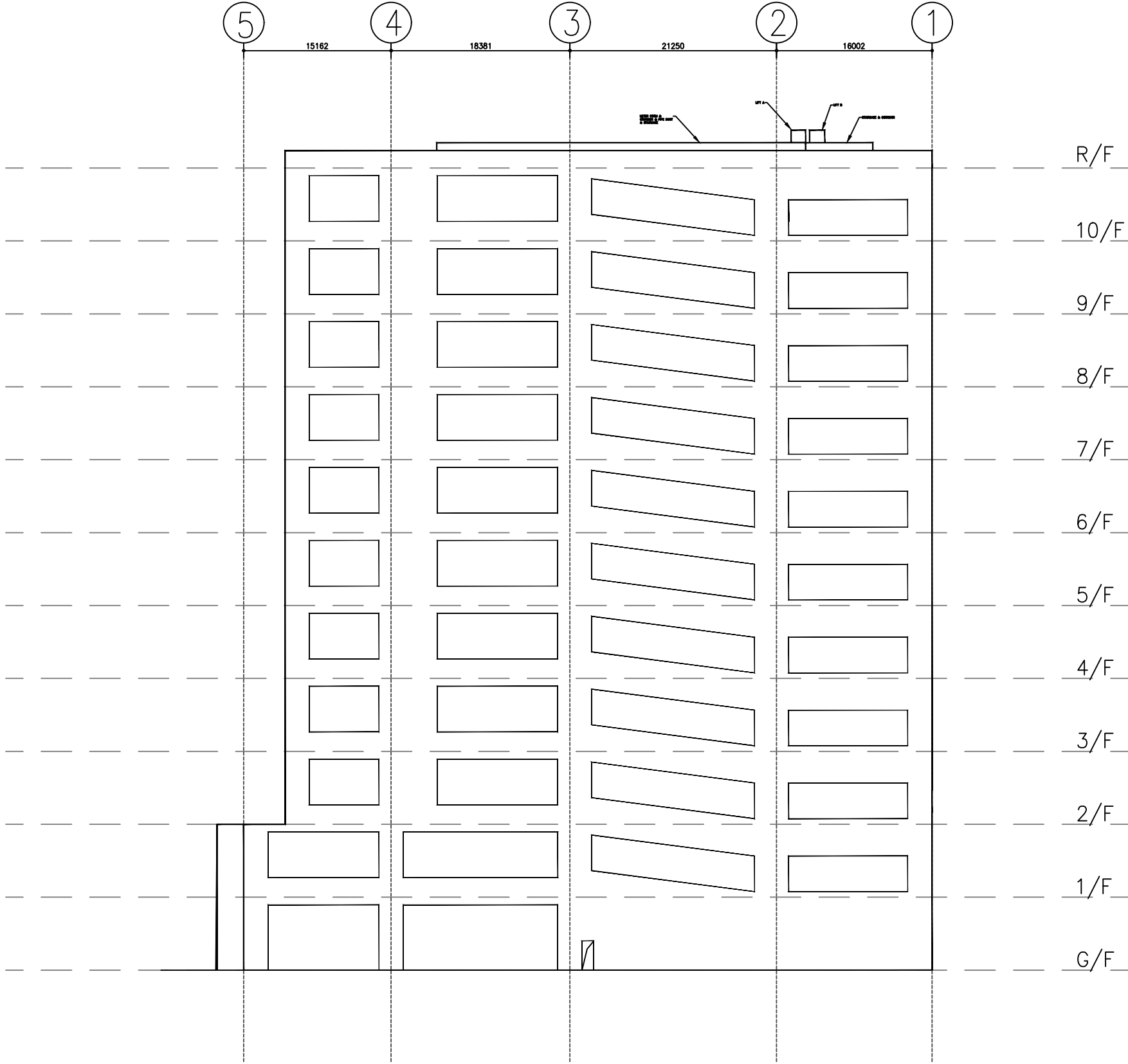
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NORTH-EAST ELEVATION

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DRAWING TITLE :

NORTH-EAST ELEVATION (SITE A)

SCALE:        1:500

DATE:         30/6/2021

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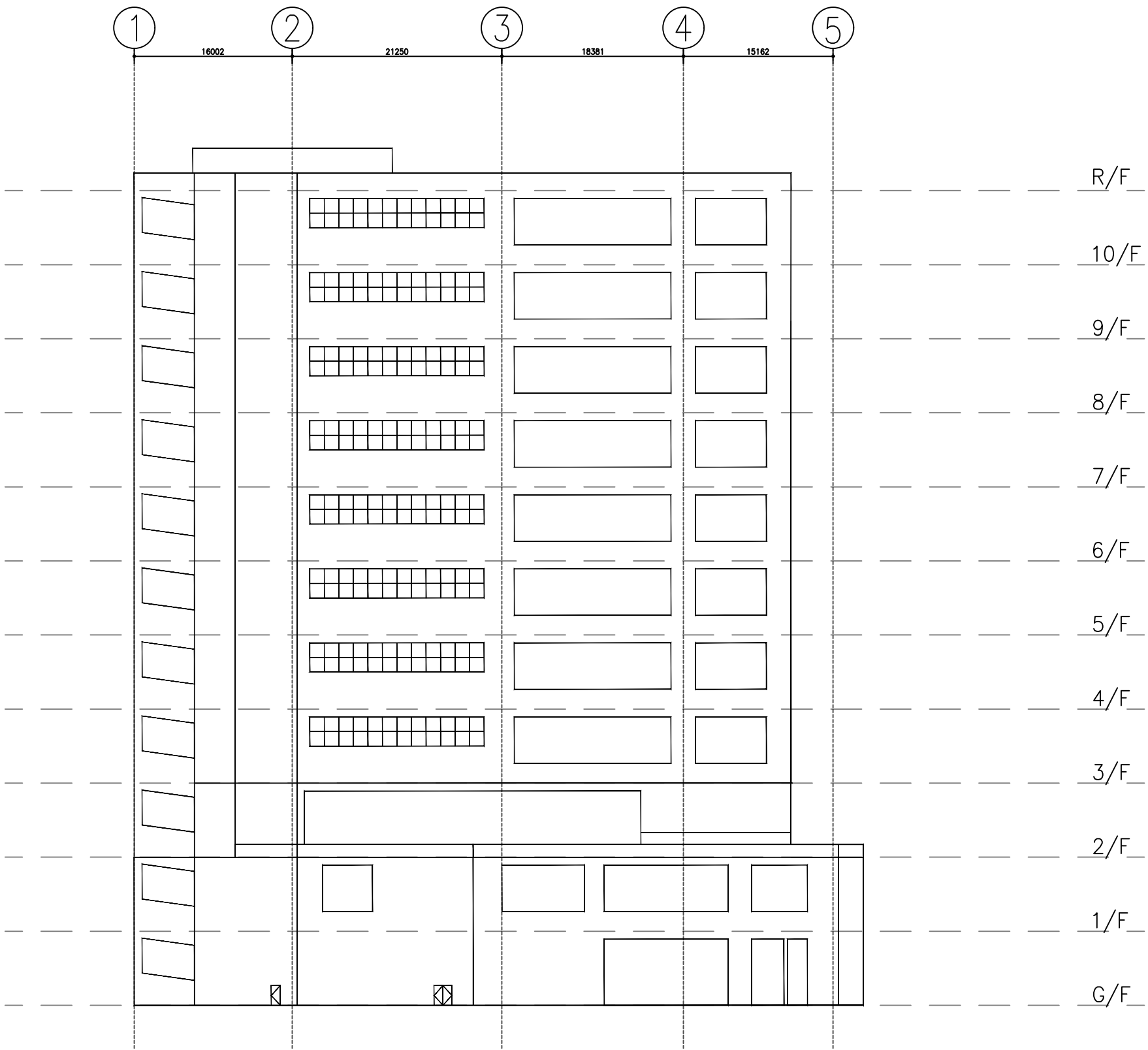
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DWG. NO. :   EL03





SOUTH-WEST ELEVATION

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REV	DESCRIPTION	DATE

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BUILDING CONSULTANT:

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Wan Chai, Hong Kong

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PROJECT:

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DRAWING TITLE :

SOUTH-WEST ELEVATION (SITE A)

SCALE: 1:500

DATE: 30/6/2021

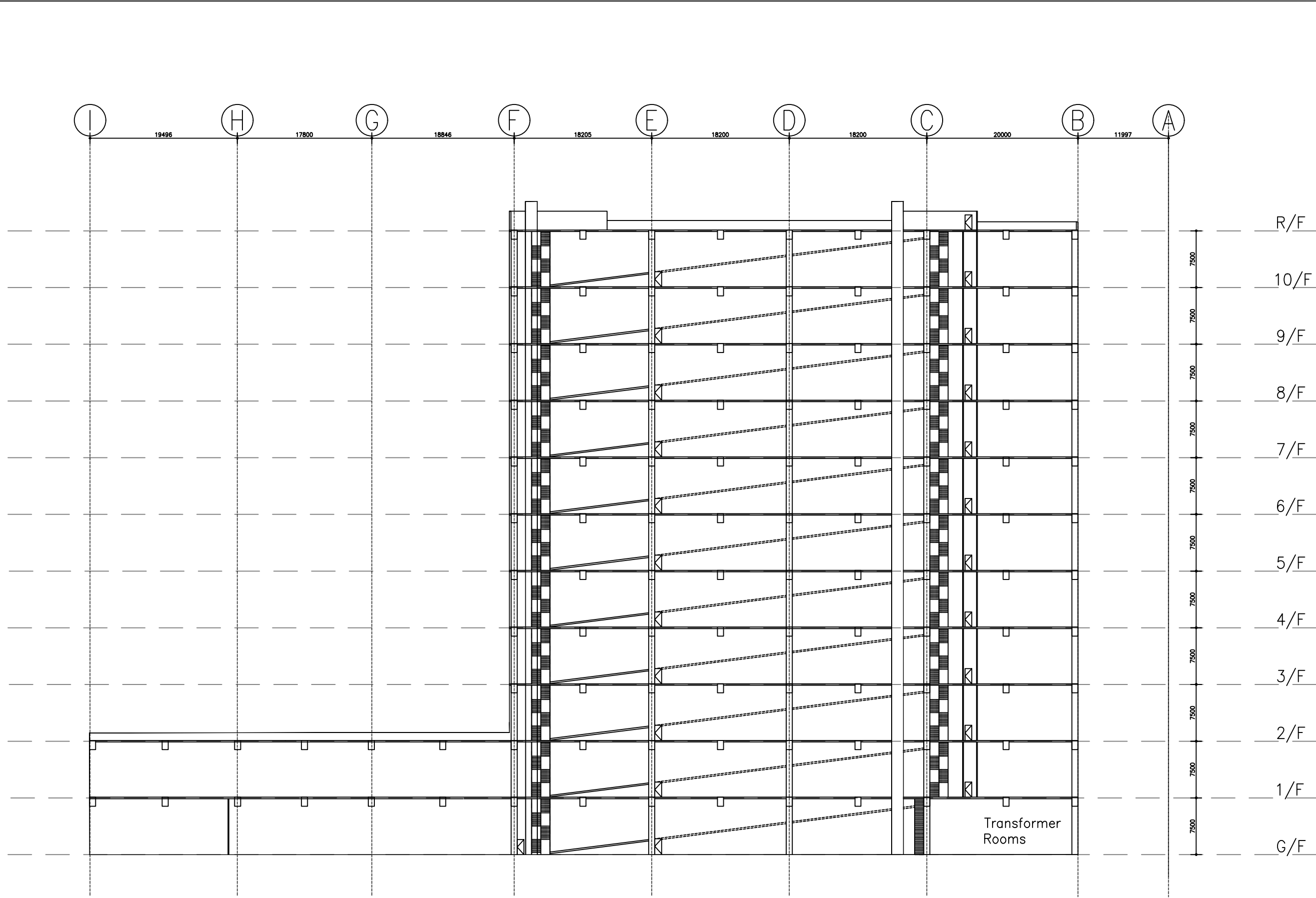
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DWG. NO. : EL02



SECTION A-A

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REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

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BUILD LTD**

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PROJECT:

TMCLK DEPOT

DRAWING TITLE :

SECTION A-A (SITE A)

SCALE: 1:500

DATE: 30/6/2021

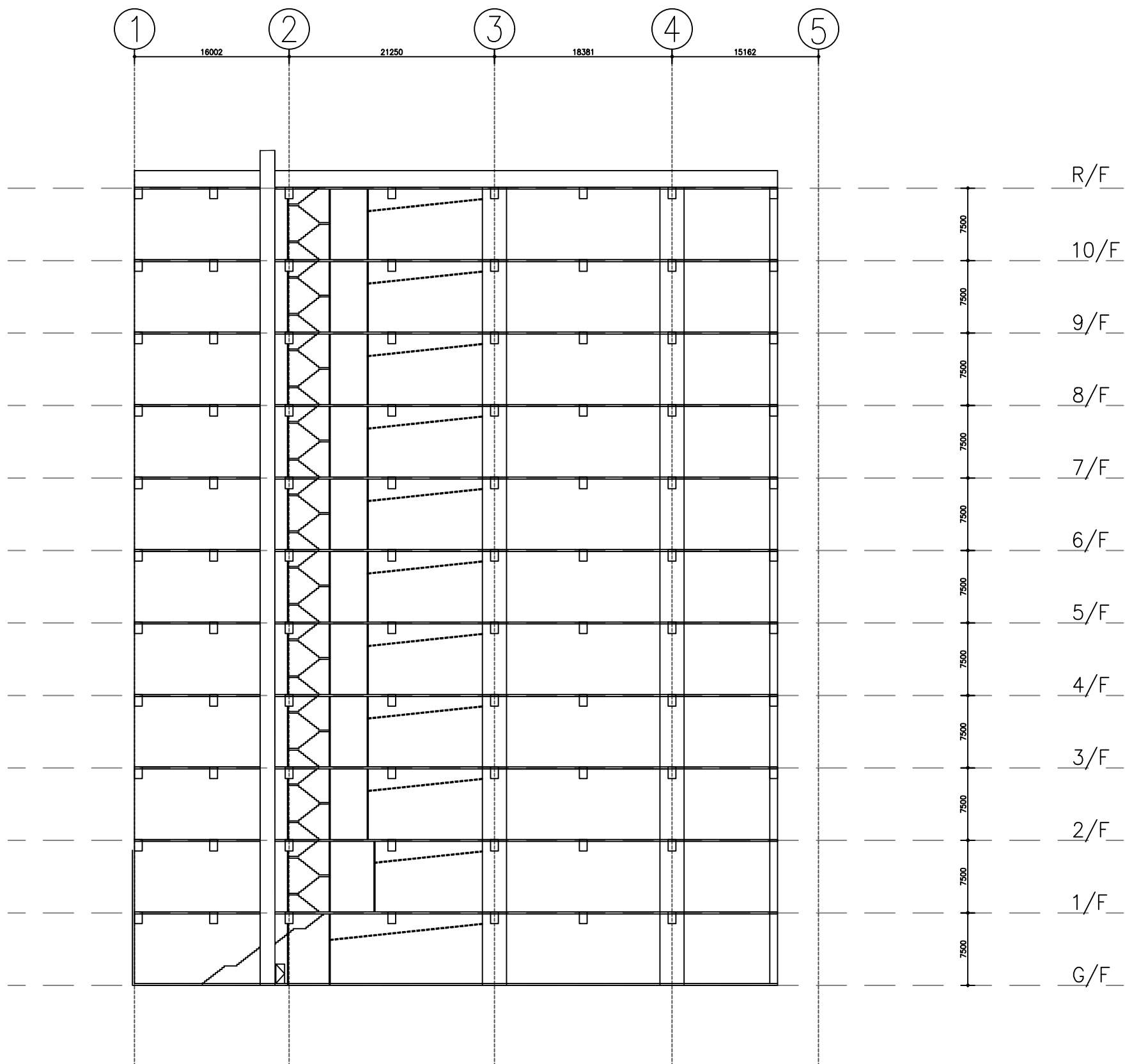
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DWG. NO. : ST01



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REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

**FRUIT  
DESIGN &  
BUILD LTD**

A member of FDB Holdings Limited

A | 6/F, The Sun's Group Centre, 200 Gloucester Road,  
Wan Chai, Hong Kong

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PROJECT:

TMCLK DEPOT

DRAWING TITLE :

SECTION B-B (SITE A)

SCALE: 1:500

DATE: 30/6/2021

DRAWN BY: PT

CHECKED BY: -

APPROVED BY: -

JOB. NO. :

DWG. NO. : ST02

## ***Appendix B – Layout Plans and Sectional Drawings of the Proposed Scheme***

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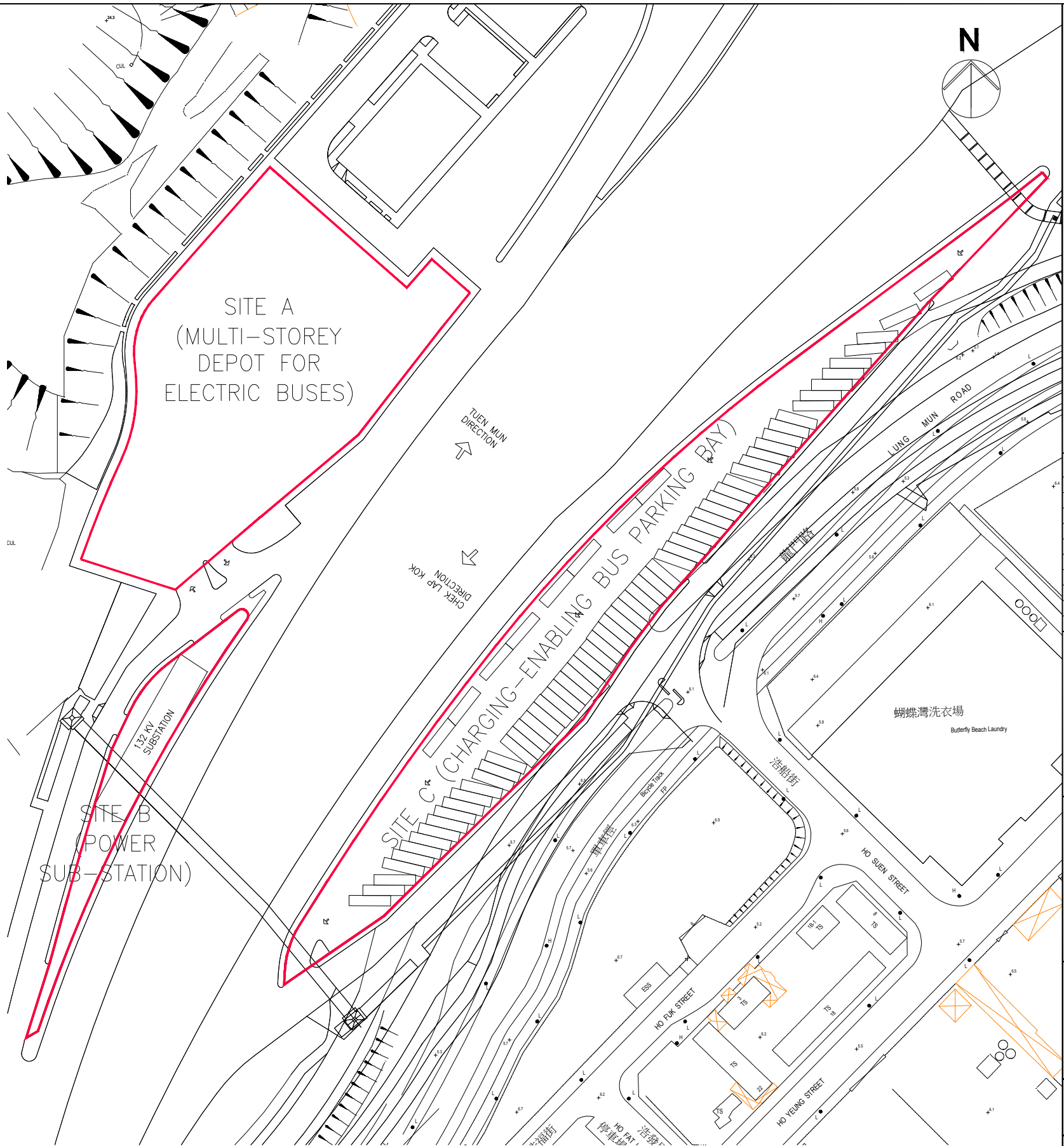
GROSS FLOOR AREA & SITE COVERAGE CALCULATION – SITE A				
PROPOSED SITE USAGE			MULTI–STOREY DEPOT FOR ELECTRIC BUSES	
SITE CLASSIFICATION			CLASS A	
SITE AREA			7926 M2	
SITE COVERAGE			G/F–1/F: 93.58% (FIRST 15M) 2/F–R/F: 60%	
BUILDING HEIGHT			82.5M (FLOOR LEVEL OF G/F TO FLOOR LEVEL OF R/F)	
PERMITTED PLOT RATIO UNDER B(P)R			15	
NON–DOMESTIC GFA	GF	7417 M2	57845.32 M2	
	1F	7417 M2		
	2F	4755.6 M2		
	3F–10F	4755.6 M2		
	RF	210.92 M2		
ACTUAL PLOT RATIO			7.30	

GROSS FLOOR AREA & SITE COVERAGE CALCULATION – SITE B	
PROPOSED SITE USAGE	POWER SUB–STATION
SITE CLASSIFICATION	CLASS A
SITE AREA	1321 M2
SITE COVERAGE	47.01% (621M2/1321M2)
BUILDING HEIGHT	15.6M
PERMITTED PLOT RATIO UNDER B(P)R	5
NON–DOMESTIC GFA	1040.6 M2
ACTUAL PLOT RATIO	0.788
REMARKS: THE SUBJECT BUILDING SHALL BE DISREGARDED FROM GFA AND PLOT RATIO CALCULATION IN ACCORDANCE WITH B(P)R23(3)(b).	

GROSS FLOOR AREA & SITE COVERAGE CALCULATION – SITE C	
PROPOSED SITE USAGE	CHARGING–ENABLING BUS PARKING
SITE CLASSIFICATION	CLASS A
SITE AREA	7598 M2
SITE COVERAGE	0
BUILDING HEIGHT	0M
PERMITTED PLOT RATIO UNDER B(P)R	5
NON–DOMESTIC GFA	0 M2
ACTUAL PLOT RATIO	0

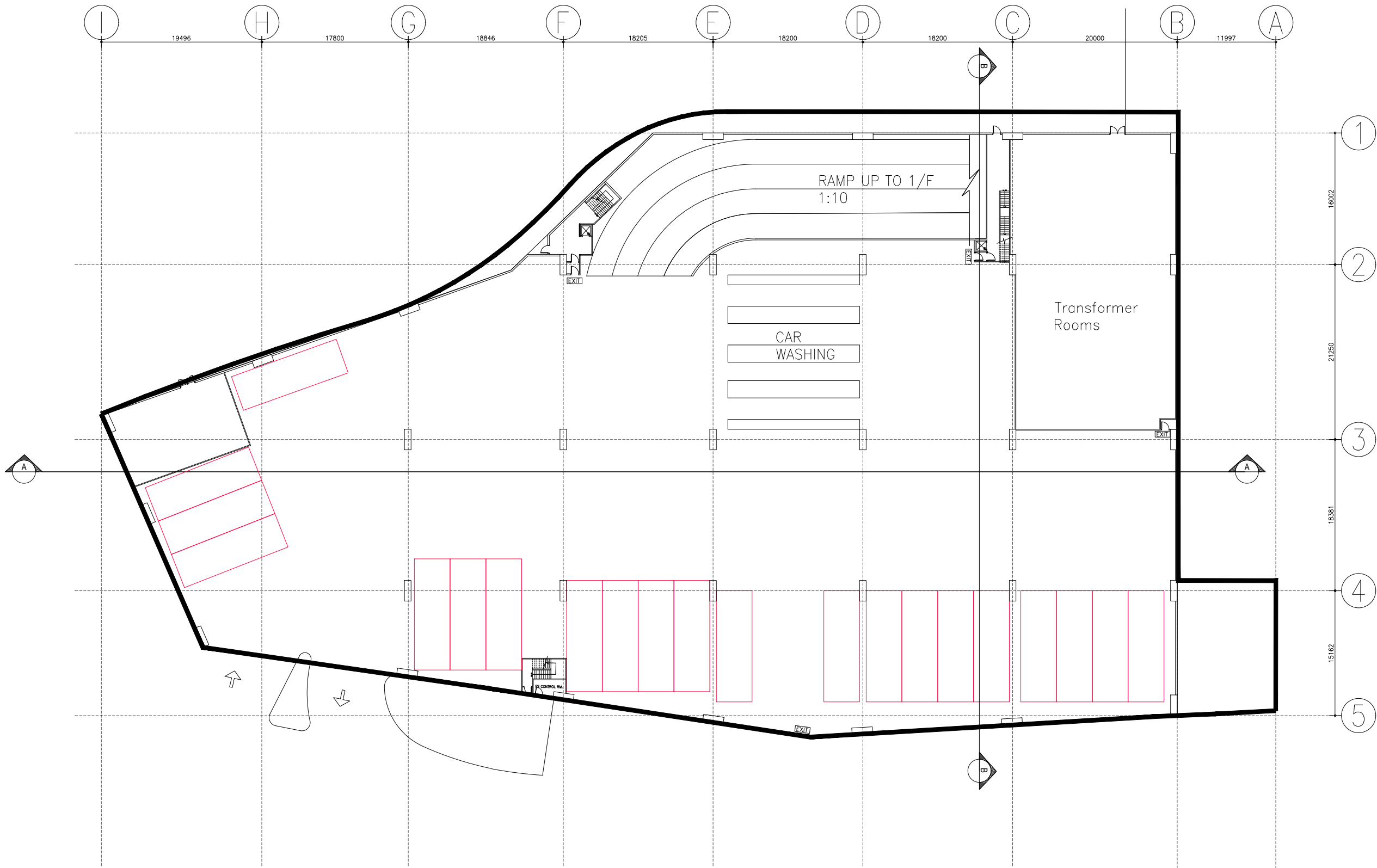
NOS. OF CHARGING–ENABLING BUS PARKING BAYS AND MAINTENANCE BAYS IN SITE A		
	MAINTENANCE BAYS	CHARGING–ENABLING BUS PARKING BAYS
GF	21	
1F	42	
2F	18	31
3F		33
4F		33
5F		33
6F		33
7F		33
8F		33
9F		33
10F		33
RF		38
TOTAL	81	333

NOS. OF CHARGING–ENABLING BUS PARKING BAYS AND MAINTENANCE BAYS IN SITE C		
	MAINTENANCE BAYS	CHARGING–ENABLING BUS PARKING BAYS
GF	0	73



Schematic Master Layout Plan

NOTES AND CONDITIONS:		
1. ALL DESIGNS ARE THE PROPERTY OF FRUIT DESIGN AND BUILD AND CANNOT BE USED WITHOUT THEIR WRITTEN PERMISSION.		
2. ALL MEASUREMENTS MUST BE VERIFIED ON SITE BEFORE CONSTRUCTION.		
3. CONTRACTORS SHALL NOTIFY THE DESIGNER OF ANY DISCREPANCY BEFORE STARTING WORK.		
4. ALL DIMENSIONS ARE IN MILLIMETER EXCEPT OTHERWISE NOTED.		
5. ALL WORKS SHALL BE CARRIED OUT IN COMPLIANCE TO THE BUILDINGS ORDINANCE, BUILDINGS REGULATIONS AND CODE OF PRACTICES.		
6. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH OTHER DRAWINGS AND SPECIFICATIONS OF THE TENDER DOCUMENTS AND SHALL BE MUTUALLY EXPLANATORY.		
7. THE CONTRACTOR SHALL FOLLOW MANUFACTURER'S INSTRUCTION & RECOMMENDATION IN CASE PROPRIETARY PRODUCT / SYSTEM / IS ADOPTED / SPECIFIED / APPROVED.		
8. DESIGN INTENT DRAWING ONLY. CONTRACTOR IS RESPONSIBLE FOR DESIGN AND SHOP DRAWING / CALCULATION SUBMISSION / MATERIAL SIZES / THICKNESS INDICATIVE.		
REV	DESCRIPTION	DATE
CLIENT:		
BUILDING CONSULTANT:		
<b>FRUIT DESIGN &amp; BUILD LTD</b>		
<small>A member of FDB Holdings Limited</small>		
<small>A   6/F, The Sun's Group Centre, 200 Gloucester Road, Wan Chai, Hong Kong</small>		
<small>T   +852 3188 5595 F   +852 3188 5958</small>		
PROJECT:		
TMCLK DEPOT		
DRAWING TITLE:		
SCHEMATIC MASTER LAYOUT PLAN		
SCALE:	1:1500	
DATE:	13/09/2021	
DRAWN BY:	CC	
CHECKED BY:	NC	
APPROVED BY: -		
JOB. NO.:	FDB-P-21031	
DWG. NO.:	AA01	



LEGEND

- Maintenance Bay  
(13500mm x 4350mm)
- Parking Space  
(13000mm x 3300mm)

G/F



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PROJECT:

TMCLK DEPOT

DRAWING TITLE:

G/F LAYOUT (SITE A)

SCALE: 1:500

DATE: 13/09/2021

DRAWN BY: CC

CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: AA02



- NOTES AND CONDITIONS:
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PROJECT:

TMCLK DEPOT

DRAWING TITLE :

1/F LAYOUT (SITE A)

SCALE: 1:500

DATE: 13/09/2021

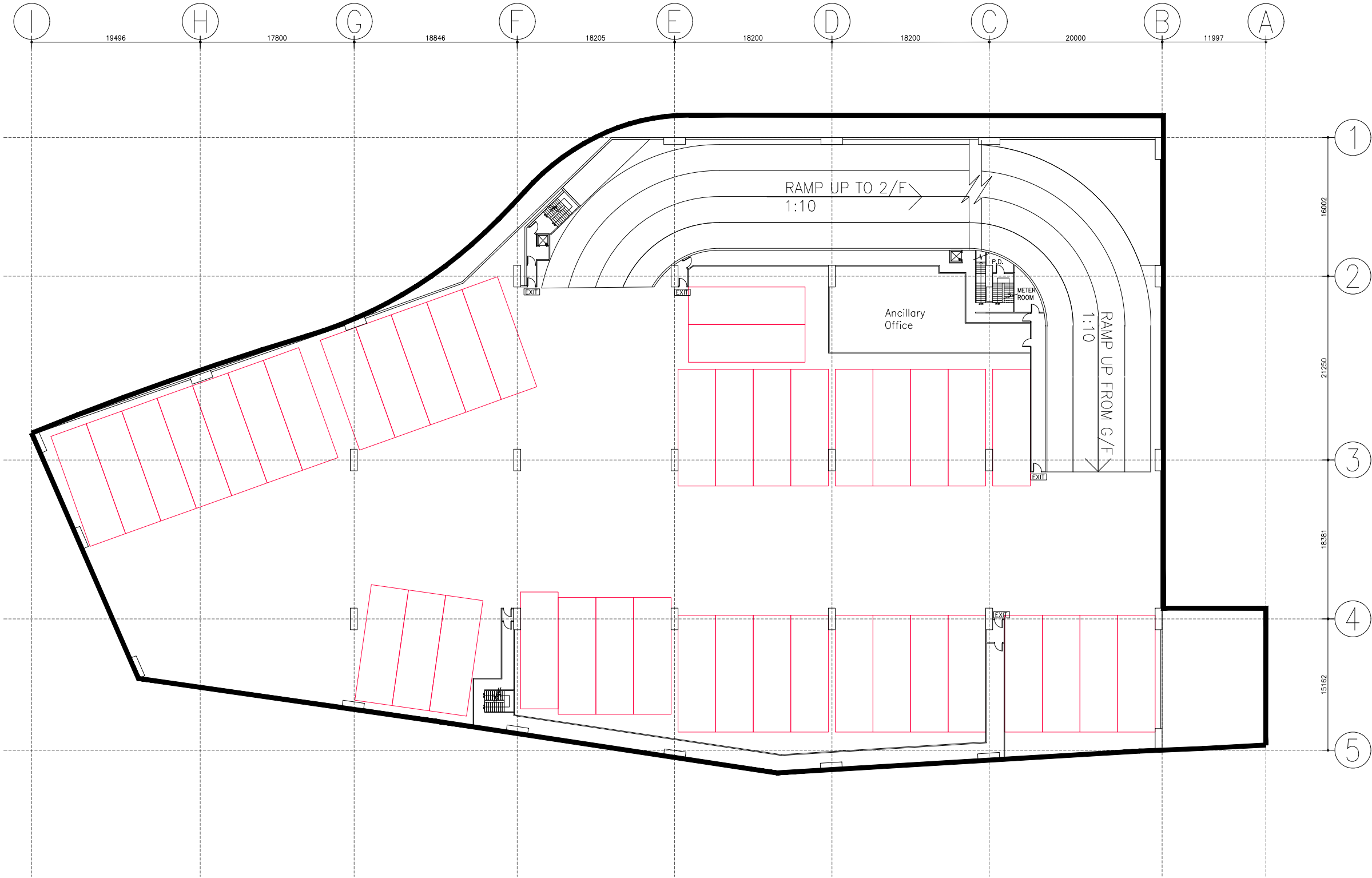
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CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: AA03



LEGEND

- Maintenance Bay  
(13500mm x 4350mm)
- Parking Space  
(13000mm x 3300mm)

1/F





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PROJECT:

TMCLK DEPOT

DRAWING TITLE :

2/F LAYOUT (SITE A)

SCALE: 1:500

DATE: 13/09/2021

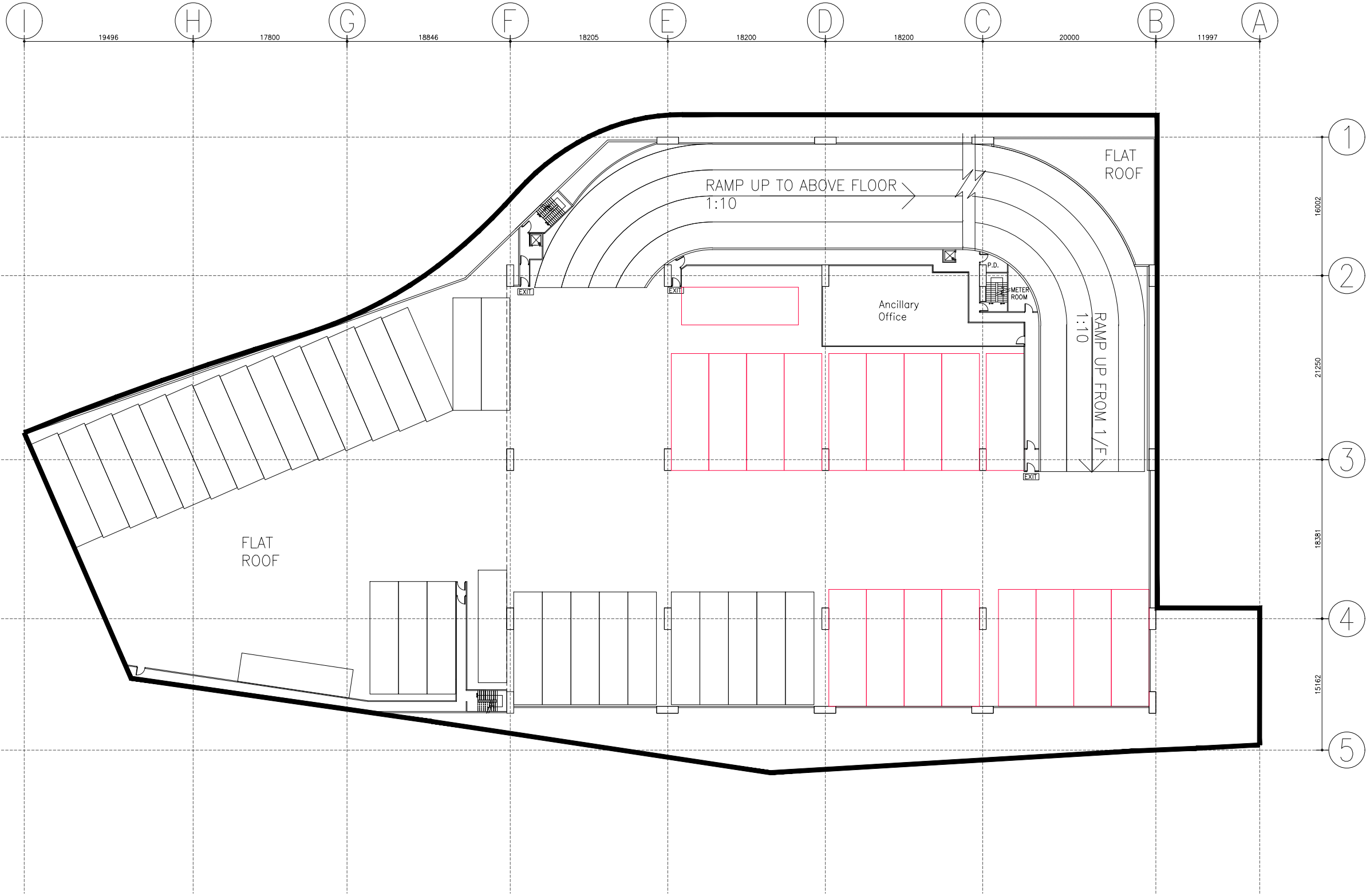
DRAWN BY: CC

CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: AA04



LEGEND

- Maintenance Bay  
(13500mm x 4350mm)
- Parking Space  
(13000mm x 3300mm)

2/F



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PROJECT:

TMCLK DEPOT

DRAWING TITLE:

3/F-10/F LAYOUT (SITE A)

SCALE: 1:500

DATE: 13/09/2021

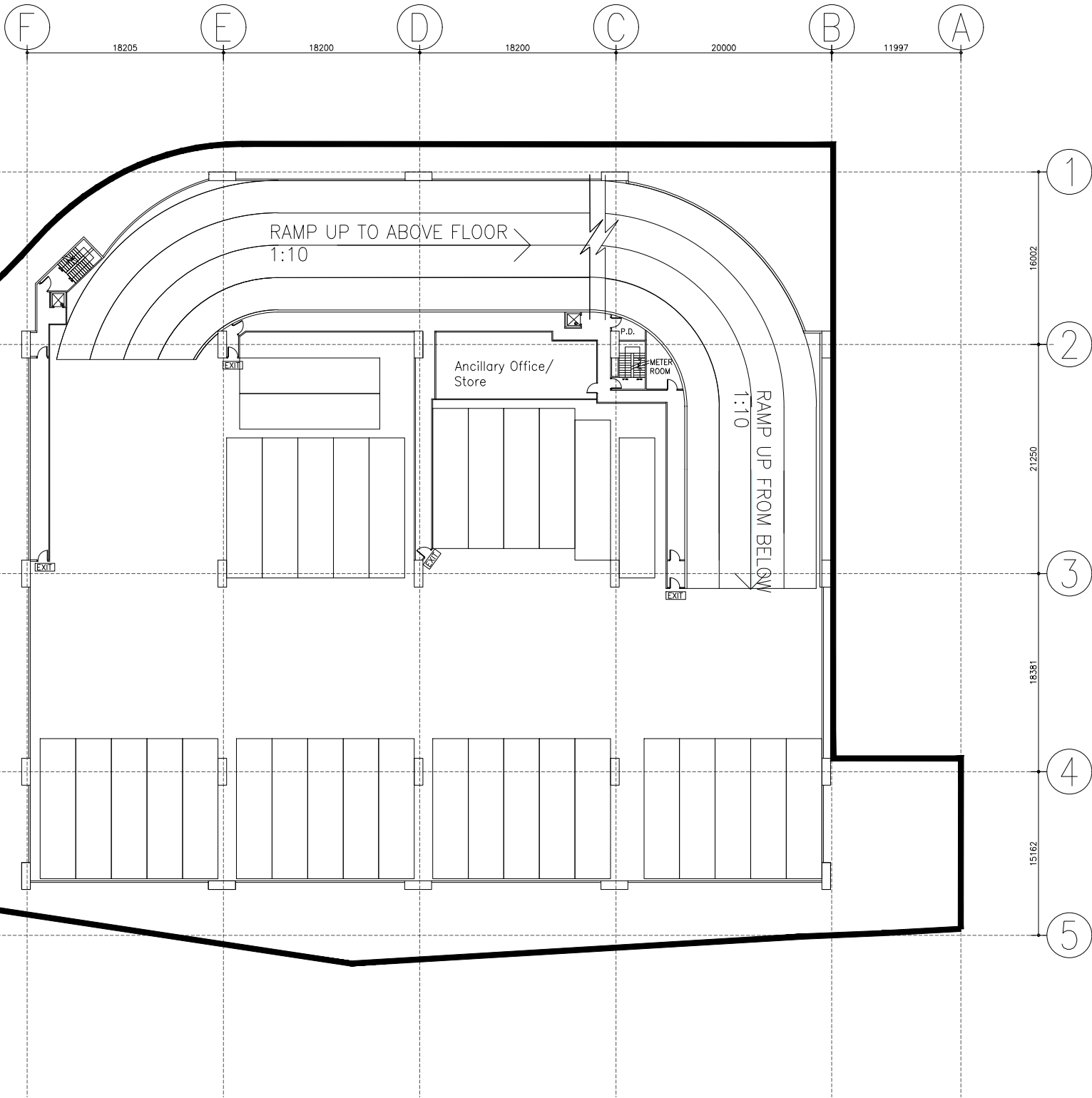
DRAWN BY: CC

CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: AA05



LEGEND

- Maintenance Bay  
(13500mm x 4350mm)
- Parking Space  
(13000mm x 3300mm)

3/F-10/F



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Wan Chai, Hong Kong

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PROJECT:

TMCLK DEPOT

DRAWING TITLE :

R/F LAYOUT (SITE A)

SCALE: 1:500

DATE: 13/09/2021

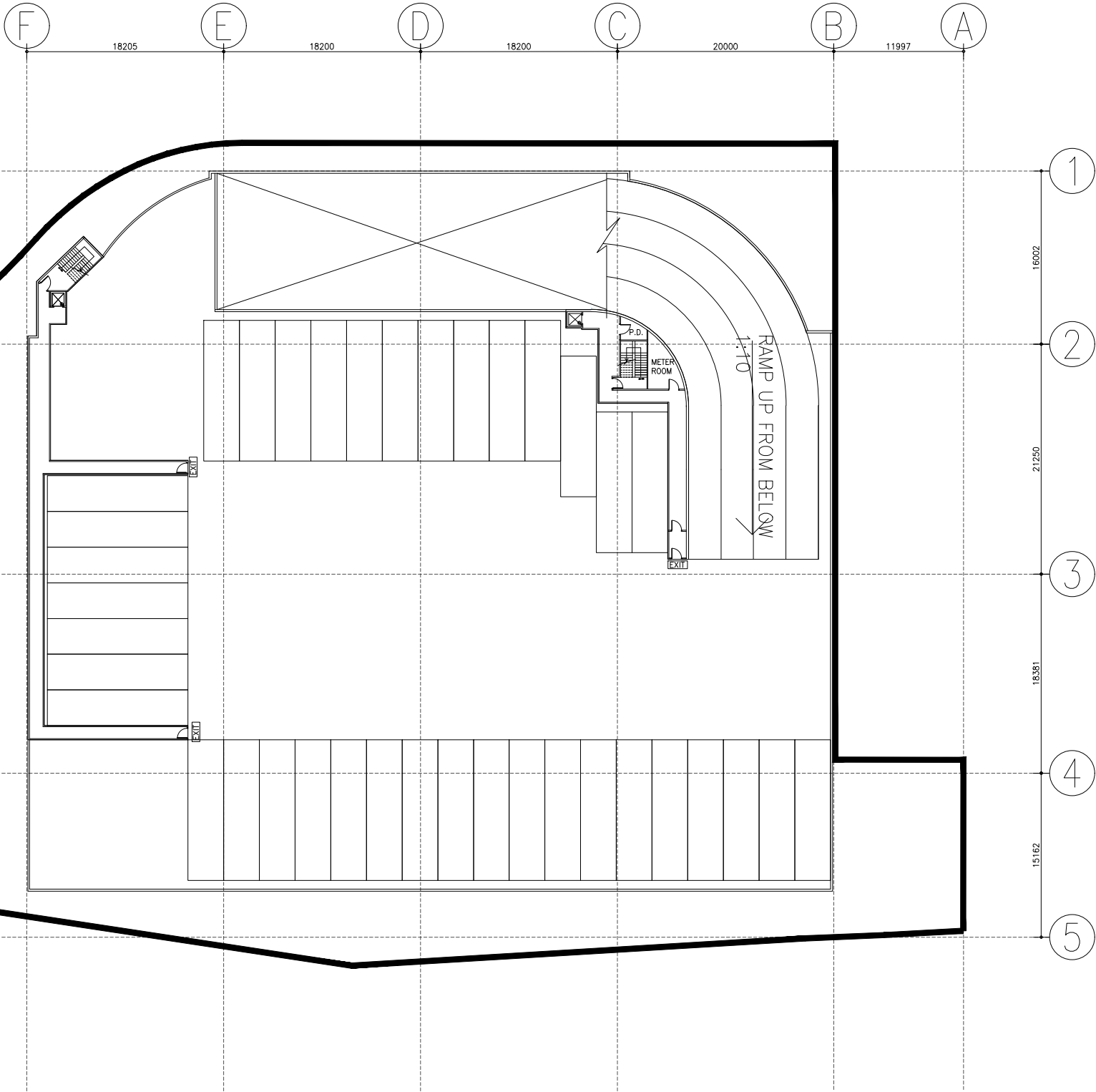
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CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

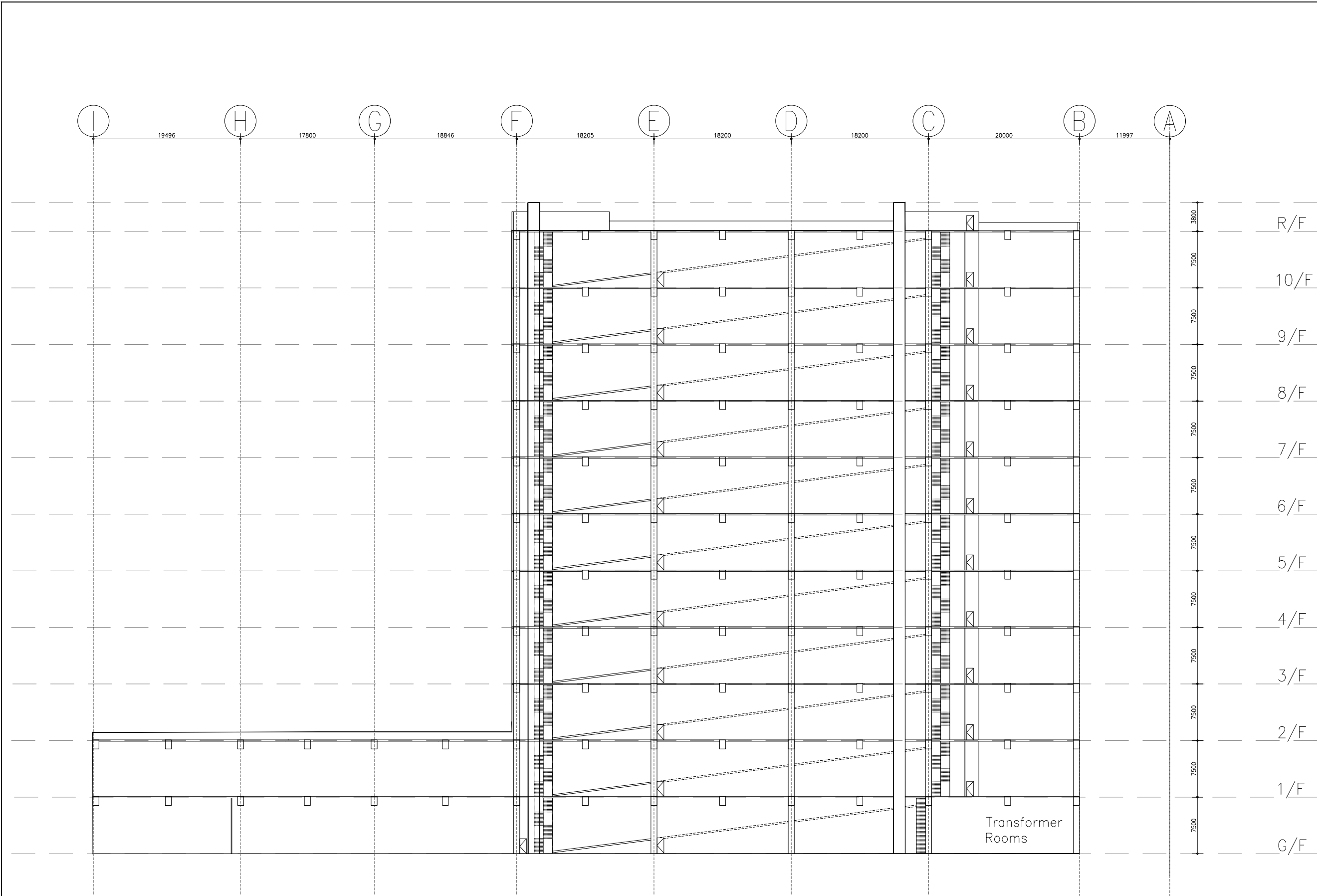
DWG. NO.: AA06



LEGEND

- Maintenance Bay  
(13500mm x 4350mm)
- Parking Space  
(13000mm x 3300mm)

R/F



SECTION A-A

- NOTES AND CONDITIONS:
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PROJECT:

TMCLK DEPOT

DRAWING TITLE :

SECTION A-A (SITE A)

SCALE: 1:500

DATE: 13/09/2021

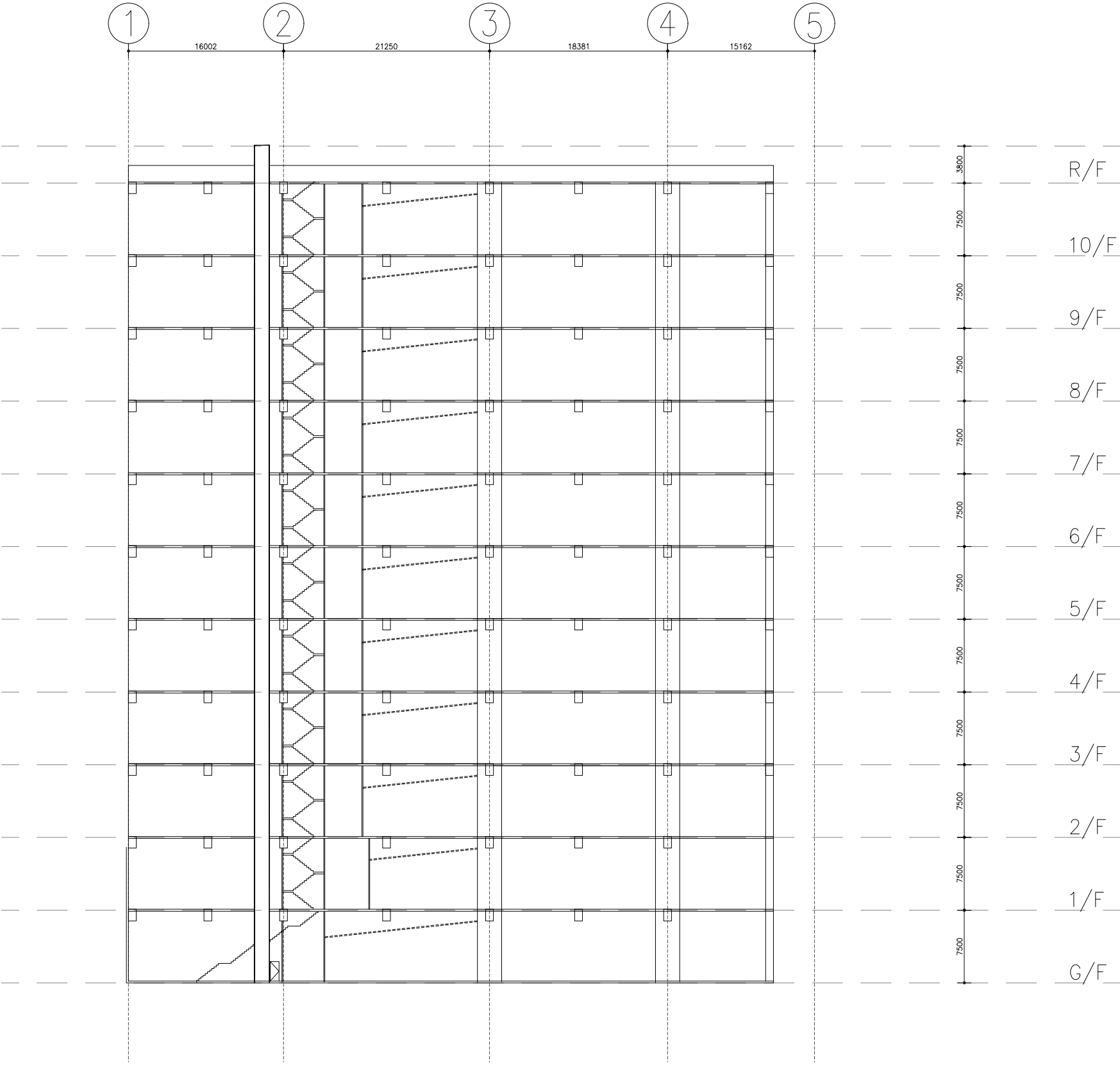
DRAWN BY: CC

CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: ST01



SECTION B-B

- NOTES AND CONDITIONS:
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PROJECT:

TMCLK DEPOT

DRAWING TITLE :

SECTION B-B (SITE A)

SCALE: 1:500

DATE: 13/09/2021

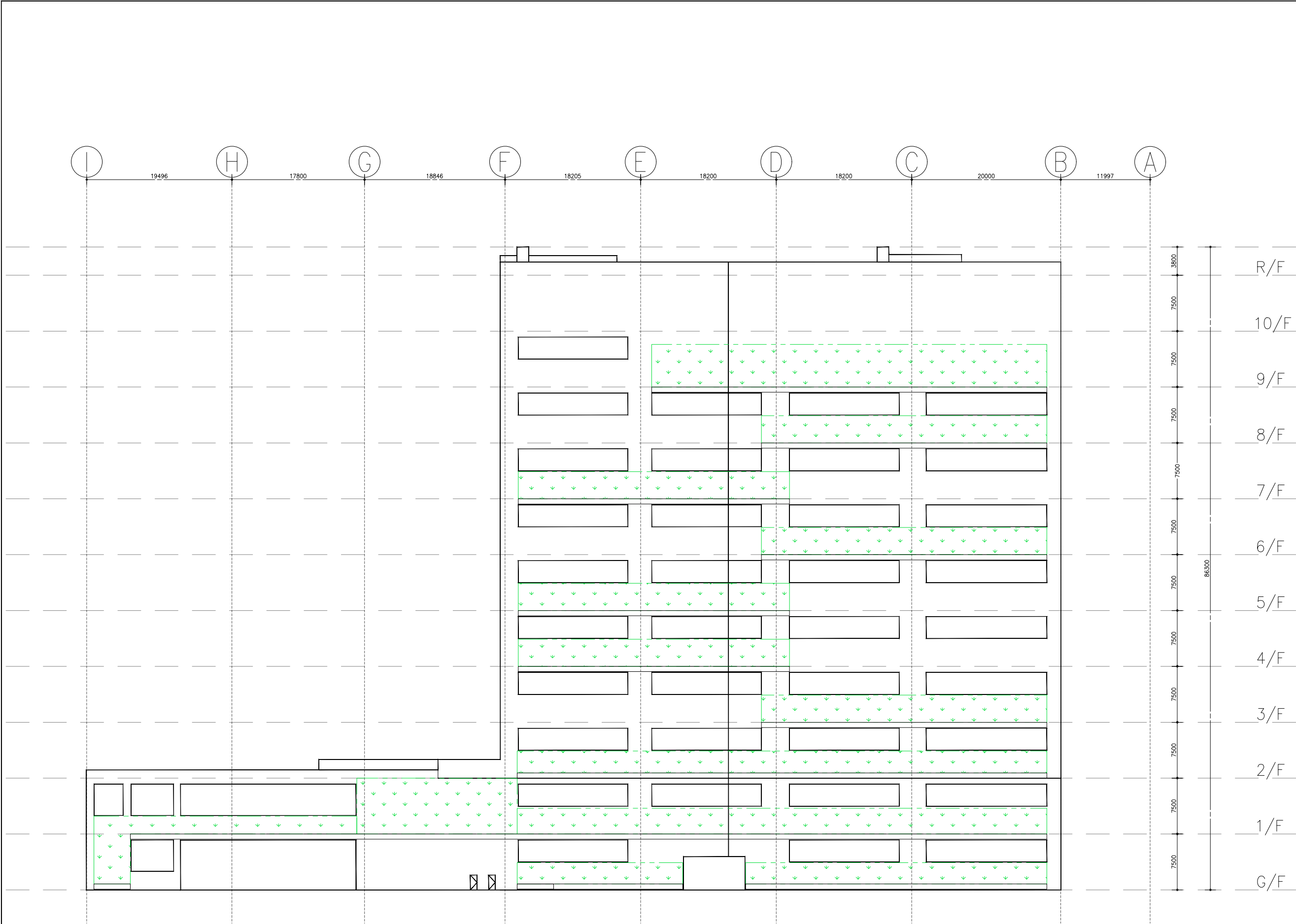
DRAWN BY: CC

CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: ST02



SOUTH-EAST ELEVATION

- NOTES AND CONDITIONS:
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PROJECT:

TMCLK DEPOT

DRAWING TITLE :

SOUTH-EAST ELEVATION (SITE A)

SCALE: 1:500

DATE: 13/09/2021

DRAWN BY: CC

CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: EL01



SOUTH-WEST ELEVATION

NOTES AND CONDITIONS:

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PROJECT:

TMCLK DEPOT

DRAWING TITLE :

SOUTH-WEST ELEVATION (SITE A)

SCALE:

1:500

DATE:

13/09/2021

DRAWN BY:

CC

CHECKED BY:

NC

APPROVED BY: -

JOB. NO.:

FDB-P-21031

DWG. NO.:

EL02





NORTH-EAST ELEVATION

- NOTES AND CONDITIONS:
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T | +852 3188 5955    F | +852 3188 5958

PROJECT:

TMCLK DEPOT

DRAWING TITLE :

NORTH-EAST ELEVATION (SITE A)

SCALE: 1:500

DATE: 13/09/2021

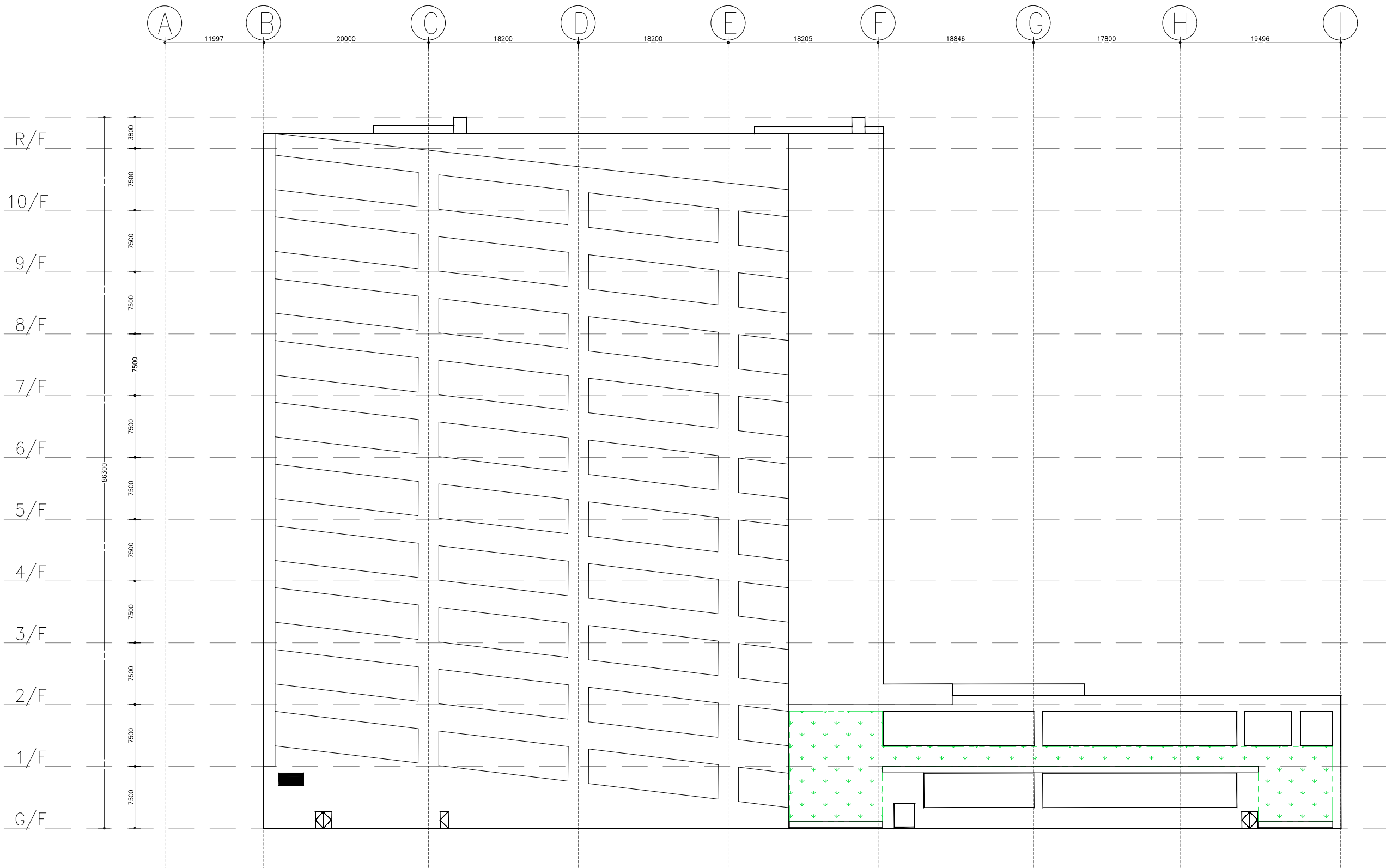
DRAWN BY: CC

CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: EL03



NORTH-WEST ELEVATION

- NOTES AND CONDITIONS:
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A | 6/F, The Sun's Group Centre, 200 Gloucester Road,  
Wan Chai, Hong Kong

T | +852 3188 5955 F | +852 3188 5958

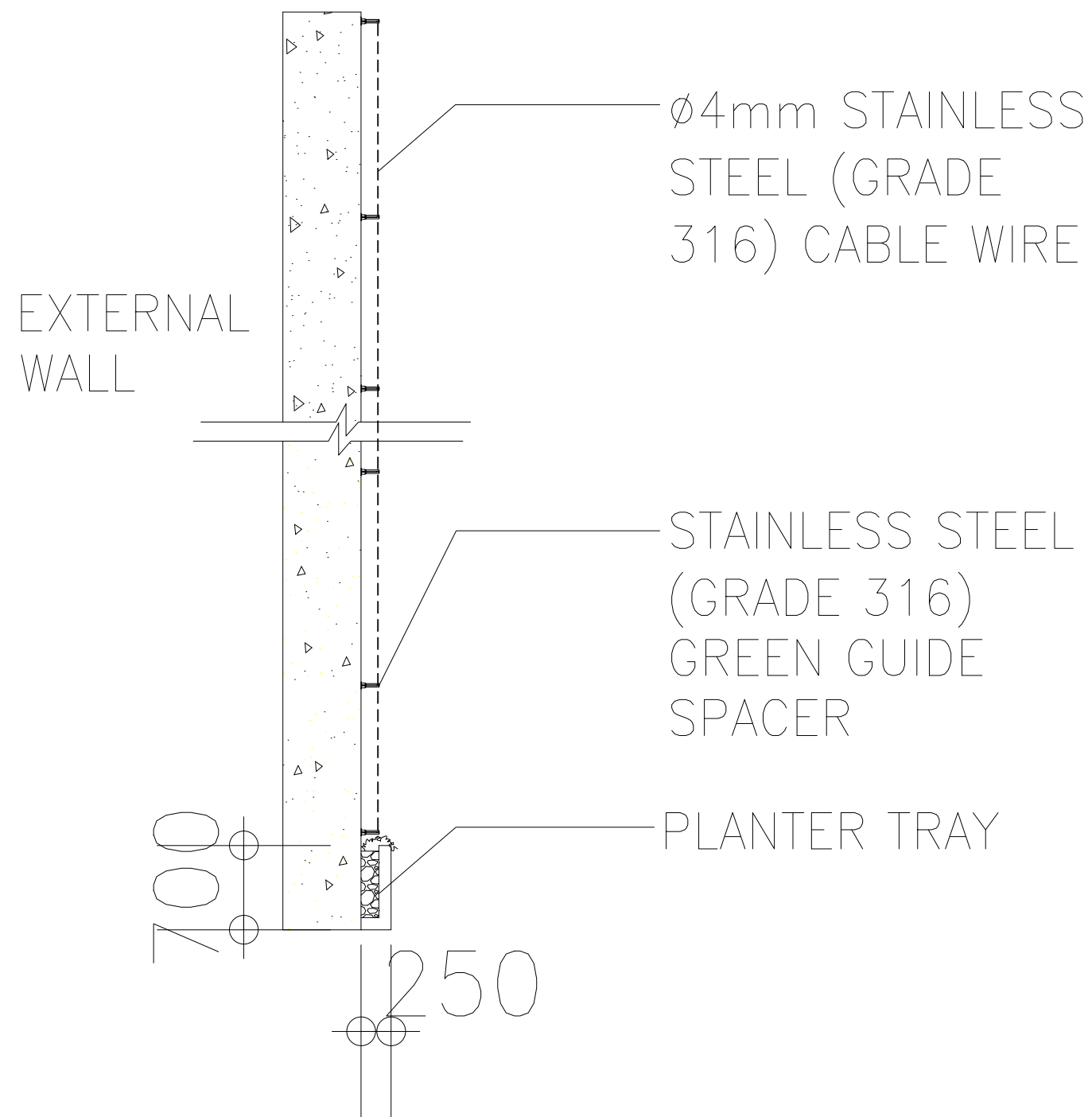
PROJECT:

TMCLK DEPOT

DRAWING TITLE :

NORTH-WEST ELEVATION (SITE A)

SCALE:	1:500
DATE:	13/09/2021
DRAWN BY:	CC
CHECKED BY:	NC
APPROVED BY:	-
JOB. NO.:	FDB-P-21031
DWG. NO.:	EL04



## DETAIL OF VERTICAL GREENING

- NOTES AND CONDITIONS:
1. ALL DESIGNS ARE THE PROPERTY OF FRUIT DESIGN AND BUILD AND CANNOT BE USED WITHOUT THEIR WRITTEN PERMISSION.
  2. ALL MEASUREMENTS MUST BE VERIFIED ON SITE BEFORE CONSTRUCTION.
  3. CONTRACTORS SHALL NOTIFY THE DESIGNER OF ANY DISCREPANCY BEFORE STARTING WORK.
  4. ALL DIMENSIONS ARE IN MILLIMETER EXCEPT OTHERWISE NOTED.
  5. ALL WORKS SHALL BE CARRIED OUT IN COMPLIANCE TO THE BUILDINGS ORDINANCE, BUILDINGS REGULATIONS AND CODE OF PRACTICES.
  6. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH OTHER DRAWINGS AND SPECIFICATIONS OF THE TENDER DOCUMENTS AND SHALL BE MUTUALLY EXPLANATORY.
  7. THE CONTRACTOR SHALL FOLLOW MANUFACTURER'S INSTRUCTION & RECOMMENDATION IN CASE PROPRIETARY PRODUCT / SYSTEM / IS ADOPTED / SPECIFIED / APPROVED.
  8. DESIGN INTENT DRAWING ONLY. CONTRACTOR IS RESPONSIBLE FOR DESIGN AND SHOP DRAWING / CALCULATION SUBMISSION / MATERIAL SIZES / THICKNESS INDICATIVE.

REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

**FRUIT  
DESIGN &  
BUILD LTD**

A member of FDB Holdings Limited

A | 6/F, The Sun's Group Centre, 200 Gloucester Road,  
Wan Chai, Hong Kong

T | +852 3188 5595 F | +852 3188 5958

PROJECT:

TMCLK DEPOT

DRAWING TITLE :

DETAIL OF VERTICAL GREENING

SCALE: 1:50

DATE: 13/09/2021

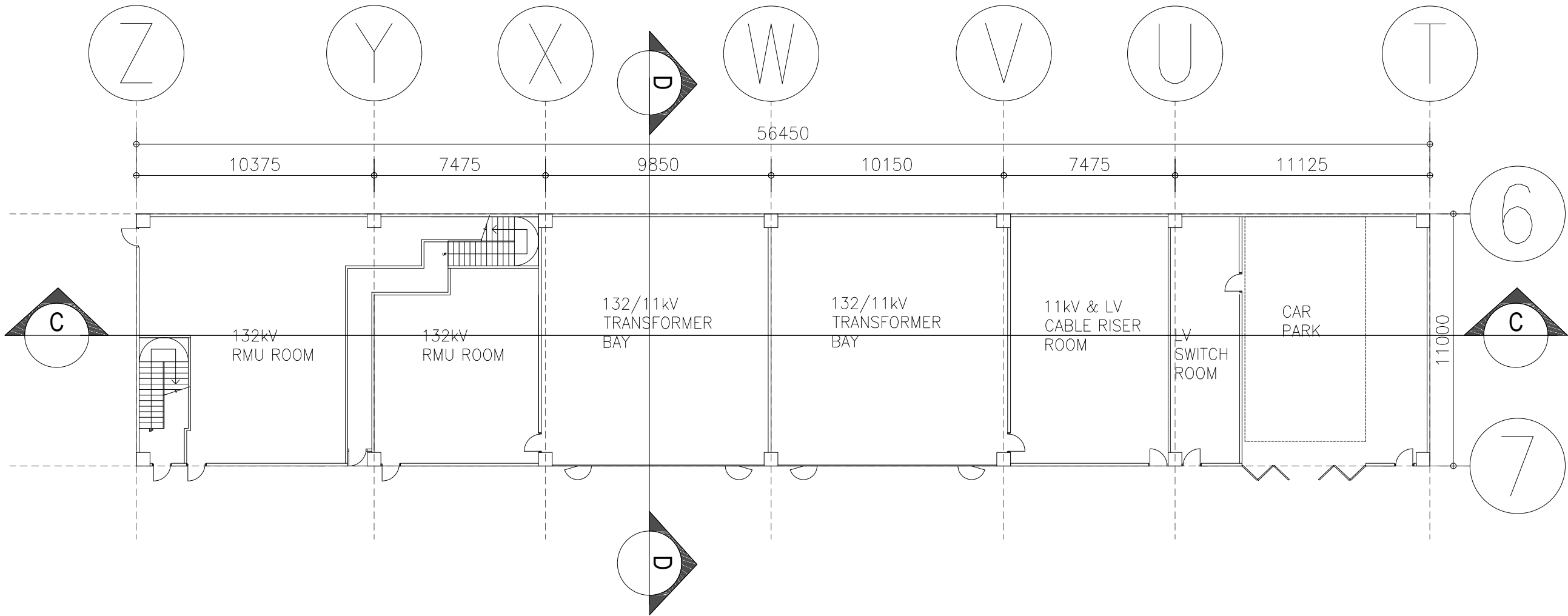
DRAWN BY: CC

CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: DD01



- NOTES AND CONDITIONS:
1. ALL DESIGNS ARE THE PROPERTY OF FRUIT DESIGN AND BUILD AND CANNOT BE USED WITHOUT THEIR WRITTEN PERMISSION.
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REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

**FRUIT  
DESIGN &  
BUILD LTD**

A member of FDB Holdings Limited

A | 6/F, The Sun's Group Centre, 200 Gloucester Road,  
Wan Chai, Hong Kong

T | +852 3188 5955 F | +852 3188 5958

PROJECT:

TMCLK DEPOT

DRAWING TITLE:

G/F LAYOUT (SITE B)

SCALE: 1:250

DATE: 13/09/2021

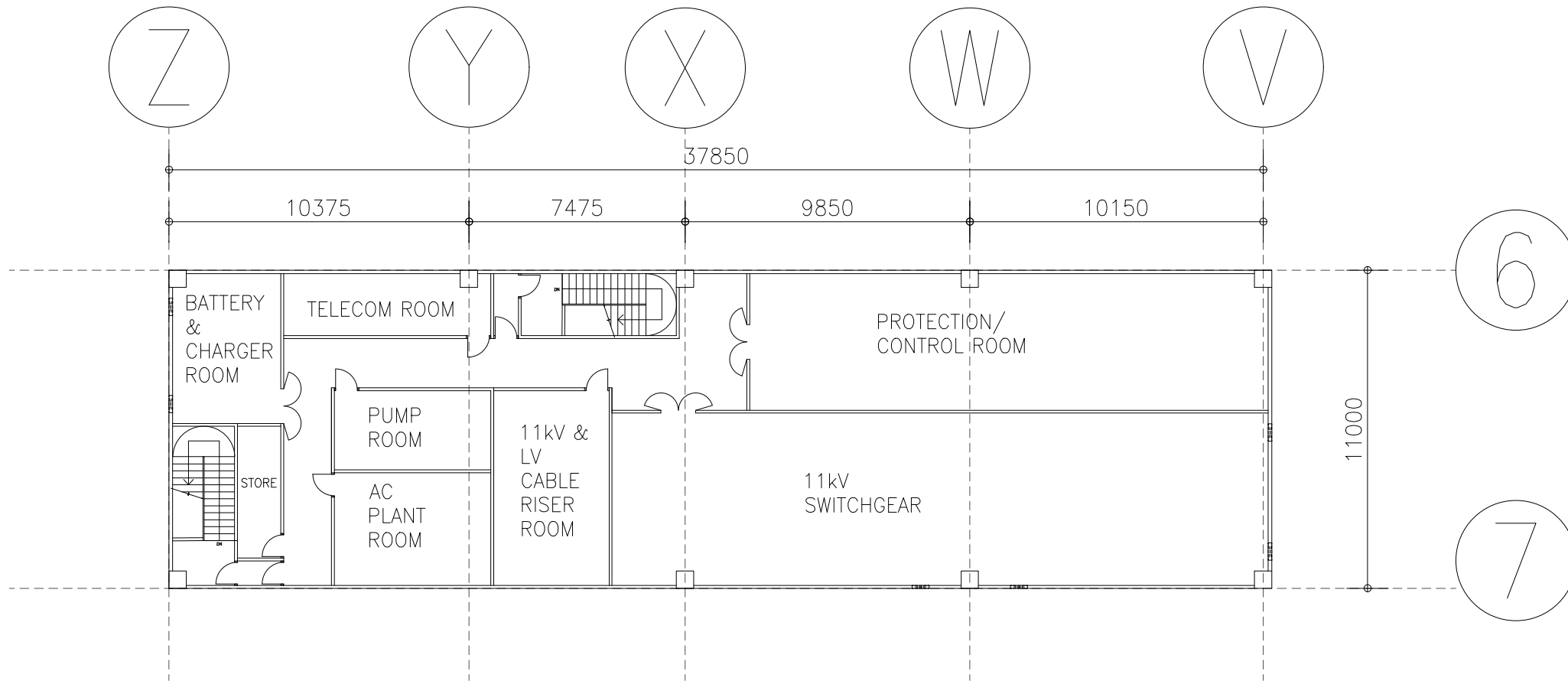
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CHECKED BY: NC

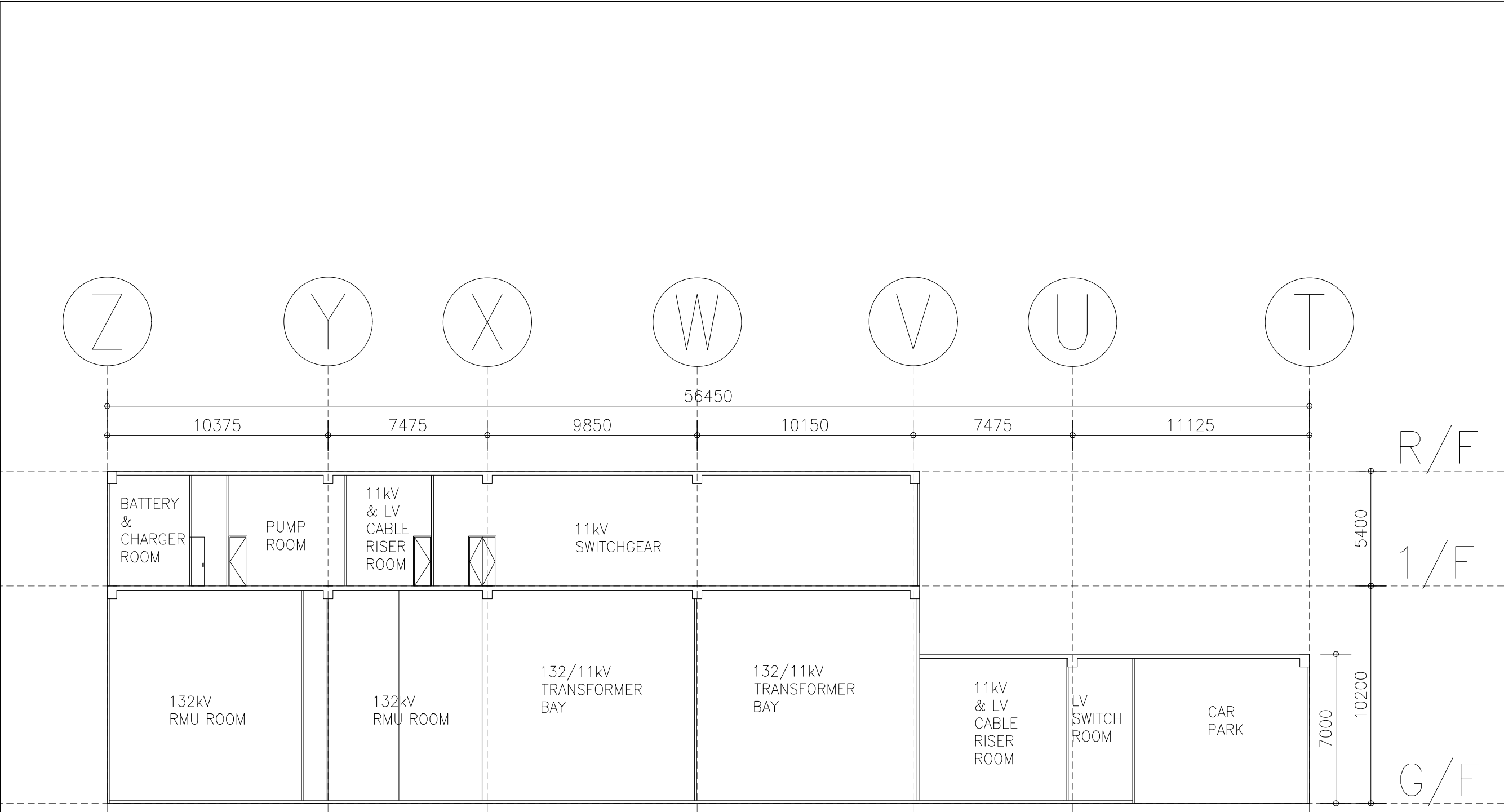
APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: AA07



NOTES AND CONDITIONS:		
1. ALL DESIGNS ARE THE PROPERTY OF FRUIT DESIGN AND BUILD AND CANNOT BE USED WITHOUT THEIR WRITTEN PERMISSION.		
2. ALL MEASUREMENTS MUST BE VERIFIED ON SITE BEFORE CONSTRUCTION.		
3. CONTRACTORS SHALL NOTIFY THE DESIGNER OF ANY DISCREPANCY BEFORE STARTING WORK.		
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8. DESIGN INTENT DRAWING ONLY. CONTRACTOR IS RESPONSIBLE FOR DESIGN AND SHOP DRAWING / CALCULATION SUBMISSION / MATERIAL SIZES / THICKNESS INDICATIVE.		
REV	DESCRIPTION	DATE
CLIENT:		
BUILDING CONSULTANT:		
<div><div>FRUIT DESIGN &amp; BUILD LTD</div><div>A member of FDB Holdings Limited</div><div>A   6/F, The Sun's Group Centre, 200 Gloucester Road, Wan Chai, Hong Kong</div><div>T   +852 3188 5595 F   +852 3188 5958</div></div>		
PROJECT:		
TMCLK DEPOT		
DRAWING TITLE :		
1/F LAYOUT (SITE B)		
SCALE:	1:250	
DATE:	13/09/2021	
DRAWN BY:	CC	
CHECKED BY:	NC	
APPROVED BY: -		
JOB. NO. :	FDB-P-21031	
DWG. NO. :	AA08	



SECTION C-C

- NOTES AND CONDITIONS:
1. ALL DESIGNS ARE THE PROPERTY OF FRUIT DESIGN AND BUILD AND CANNOT BE USED WITHOUT THEIR WRITTEN PERMISSION.
  2. ALL MEASUREMENTS MUST BE VERIFIED ON SITE BEFORE CONSTRUCTION.
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REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

FRUIT  
DESIGN &  
BUILD LTD

A member of FDB Holdings Limited

A | 6/F, The Sun's Group Centre, 200 Gloucester Road,  
Wan Chai, Hong Kong

T | +852 3188 5955    F | +852 3188 5958

PROJECT :

TMCLK DEPOT

DRAWING TITLE :

SECTION C-C (SITE B)

SCALE: 1:200

DATE: 13/09/2021

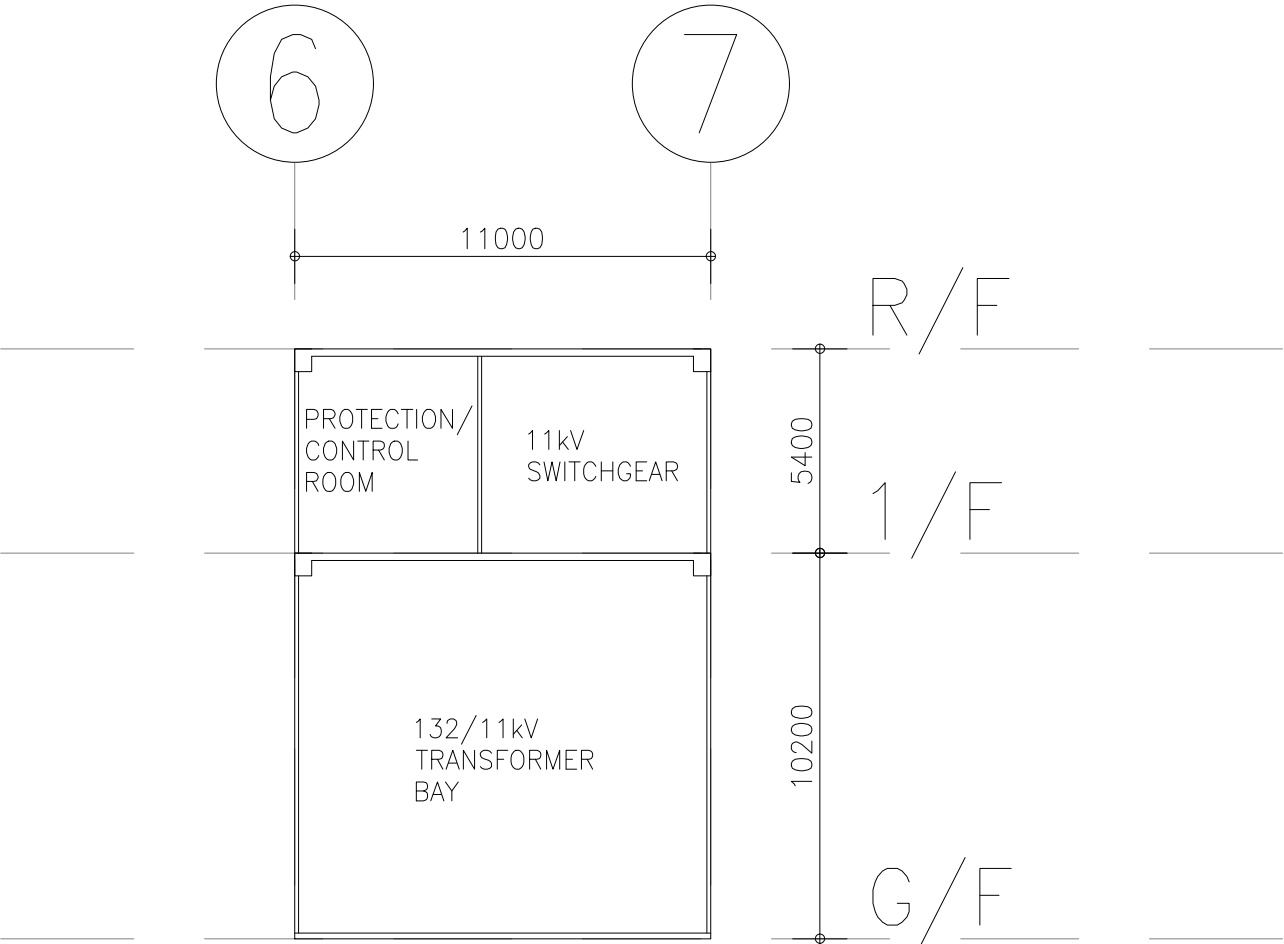
DRAWN BY: CC

CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: ST03



SECTION D-D

- NOTES AND CONDITIONS:
- 1. ALL DESIGNS ARE THE PROPERTY OF FRUIT DESIGN AND BUILD AND CANNOT BE USED WITHOUT THEIR WRITTEN PERMISSION.
  - 2. ALL MEASUREMENTS MUST BE VERIFIED ON SITE BEFORE CONSTRUCTION.
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  - 8. DESIGN INTENT DRAWING ONLY. CONTRACTOR IS RESPONSIBLE FOR DESIGN AND SHOP DRAWING / CALCULATION SUBMISSION / MATERIAL SIZES / THICKNESS INDICATIVE.

REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

**FRUIT  
DESIGN &  
BUILD LTD**

A member of FDB Holdings Limited

A | 6/F, The Sun's Group Centre, 200 Gloucester Road,  
Wan Chai, Hong Kong

T | +852 3188 5595      F | +852 3188 5958

PROJECT:

TMCLK DEPOT

DRAWING TITLE :

SECTION D-D (SITE B)

SCALE: 1:200

DATE: 13/09/2021

DRAWN BY: CC

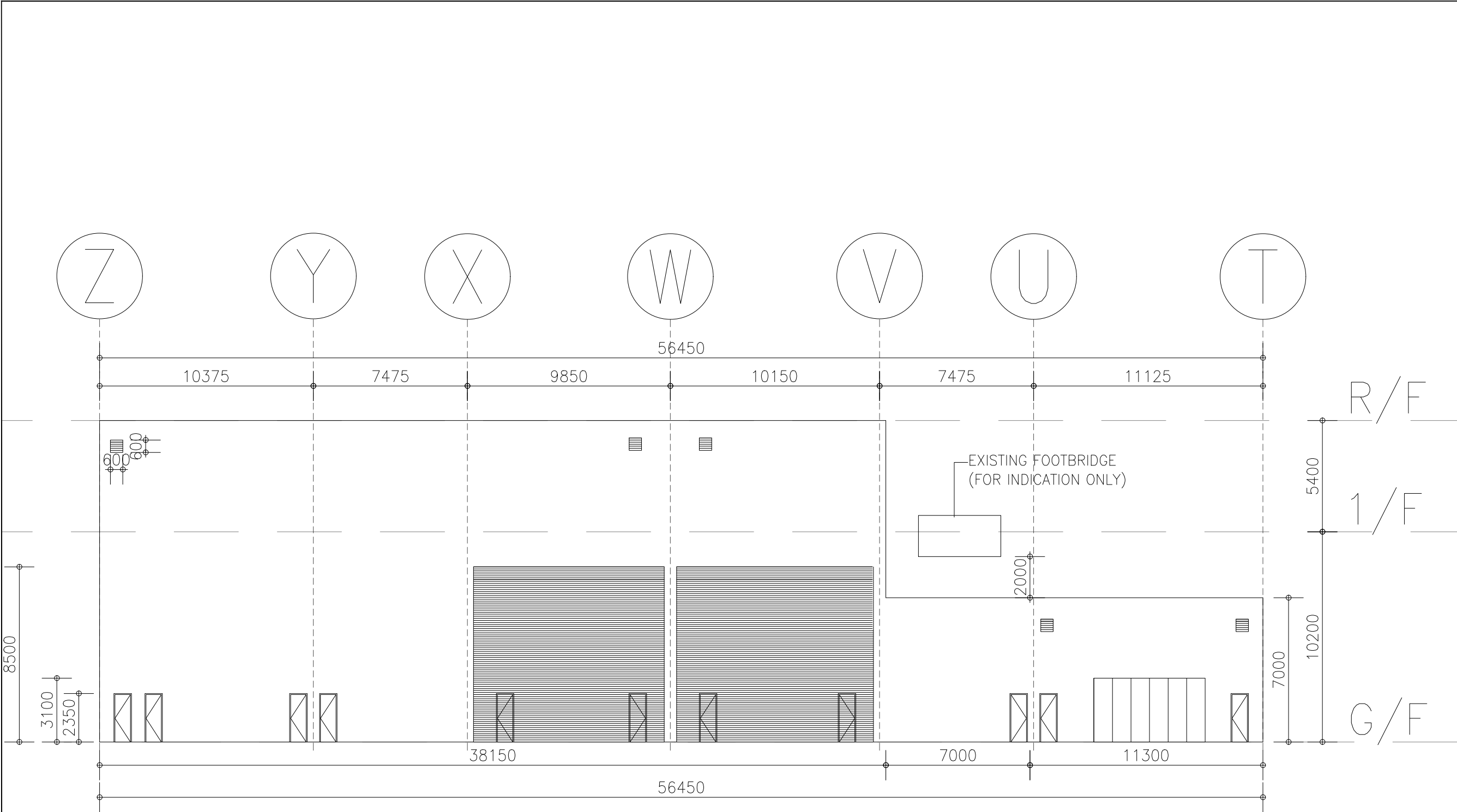
CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: ST04





- NOTES AND CONDITIONS:
1. ALL DESIGNS ARE THE PROPERTY OF FRUIT DESIGN AND BUILD AND CANNOT BE USED WITHOUT THEIR WRITTEN PERMISSION.
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REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

**FRUIT  
DESIGN &  
BUILD LTD**

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Wan Chai, Hong Kong

T | +852 3188 5595    F | +852 3188 5958

PROJECT:

TMCLK DEPOT

DRAWING TITLE :

NORTH-WEST ELEVATION (SITE B)

SCALE: 1:200

DATE: 13/09/2021

DRAWN BY: CC

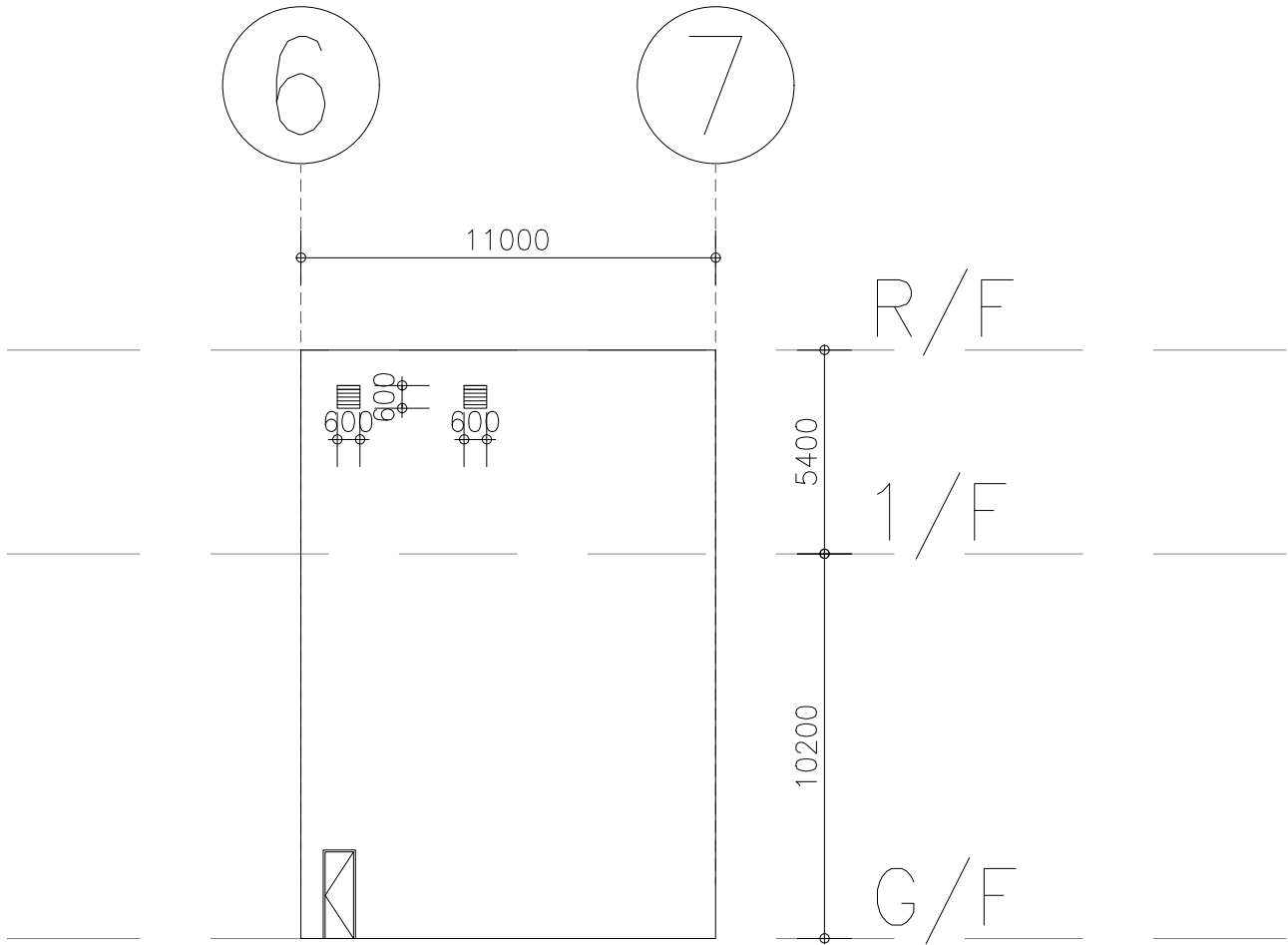
CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: EL05

# NORTH-WEST ELEVATION



NORTH-EAST ELEVATION

- NOTES AND CONDITIONS:
1. ALL DESIGNS ARE THE PROPERTY OF FRUIT DESIGN AND BUILD AND CANNOT BE USED WITHOUT THEIR WRITTEN PERMISSION.
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REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

FRUIT  
DESIGN &  
BUILD LTD

A member of FDB Holdings Limited  
A | 6/F, The Sun's Group Centre, 200 Gloucester Road,  
Wan Chai, Hong Kong  
T | +852 3188 5595    F | +852 3188 5958

PROJECT:

TMCLK DEPOT

DRAWING TITLE :

NORTH-EAST ELEVATION (SITE B)

SCALE: 1:250

DATE: 13/09/2021

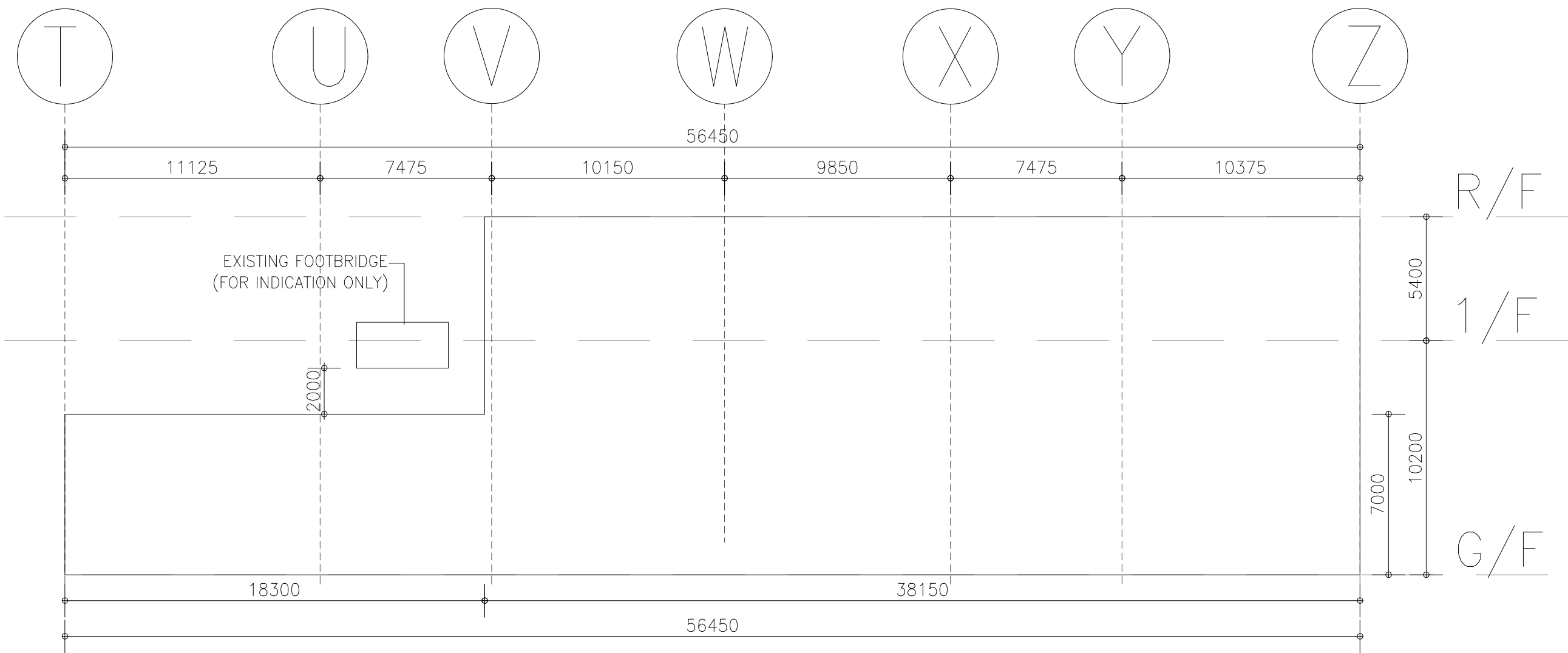
DRAWN BY: CC

CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: EL06



SOUTH-EAST ELEVATION

- NOTES AND CONDITIONS:
1. ALL DESIGNS ARE THE PROPERTY OF FRUIT DESIGN AND BUILD AND CANNOT BE USED WITHOUT THEIR WRITTEN PERMISSION.
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REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

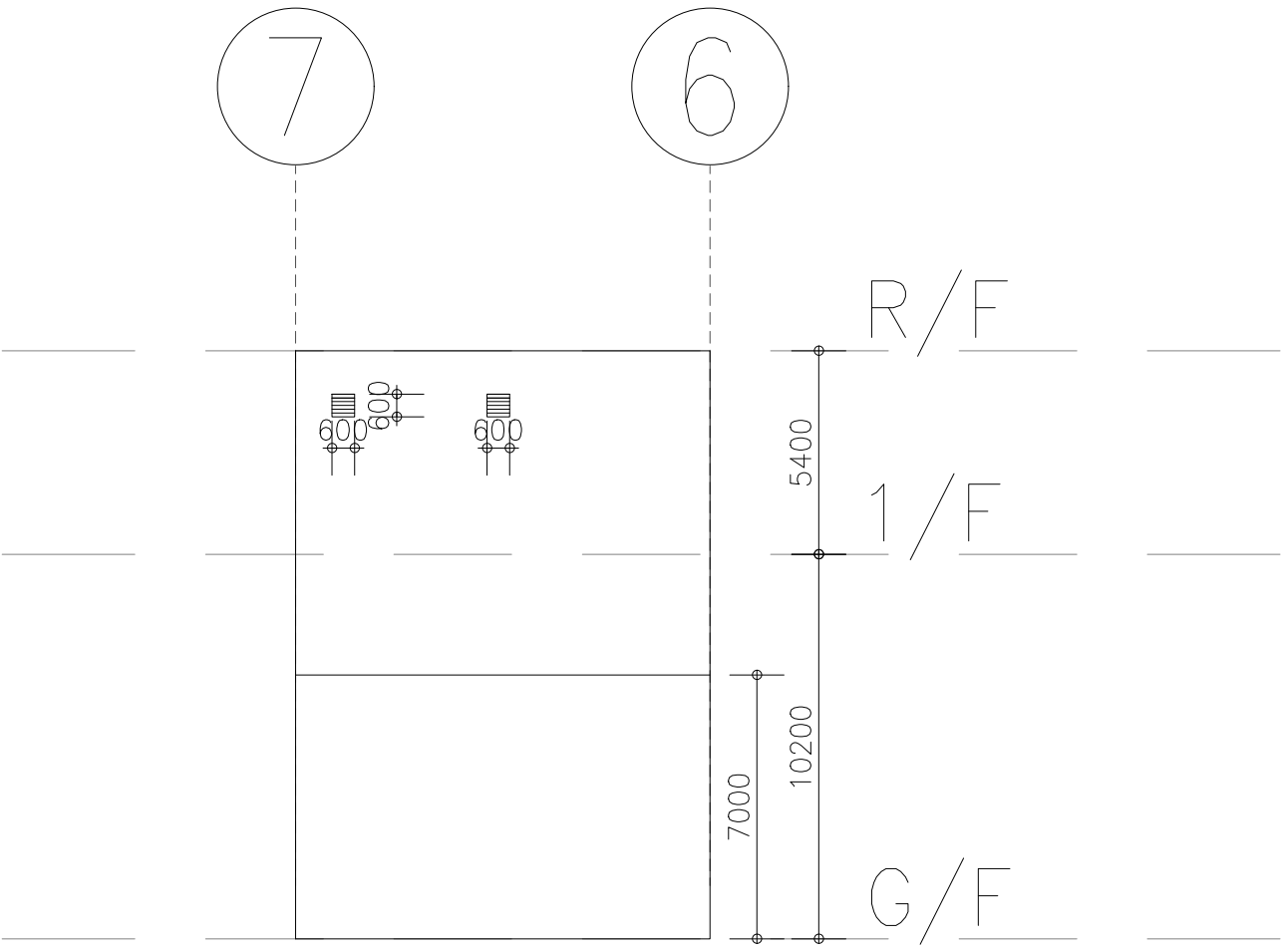
FRUIT  
DESIGN &  
BUILD LTD

A member of FDB Holdings Limited  
A | 6/F, The Sun's Group Centre, 200 Gloucester Road,  
Wan Chai, Hong Kong  
T | +852 3188 5595 F | +852 3188 5958

PROJECT:

TMCLK DEPOT

DRAWING TITLE :	SOUTHEAST ELEVATION (SITE B)
SCALE:	1:200
DATE:	13/09/2021
DRAWN BY:	CC
CHECKED BY:	NC
APPROVED BY: -	
JOB. NO.:	FDB-P-21031
DWG. NO.:	EL07



SOUTH-WEST ELEVATION

NOTES AND CONDITIONS:

1. ALL DESIGNS ARE THE PROPERTY OF FRUIT DESIGN AND BUILD AND CANNOT BE USED WITHOUT THEIR WRITTEN PERMISSION.

2. ALL MEASUREMENTS MUST BE VERIFIED ON SITE BEFORE CONSTRUCTION.

3. CONTRACTORS SHALL NOTIFY THE DESIGNER OF ANY DISCREPANCY BEFORE STARTING WORK.

4. ALL DIMENSIONS ARE IN MILLIMETER EXCEPT OTHERWISE NOTED.

5. ALL WORKS SHALL BE CARRIED OUT IN COMPLIANCE TO THE BUILDINGS ORDINANCE, BUILDINGS REGULATIONS AND CODE OF PRACTICES.

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REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

FRUIT  
DESIGN &  
BUILD LTD

A member of FDB Holdings Limited

A | 6/F, The Sun's Group Centre, 200 Gloucester Road,  
Wan Chai, Hong Kong

T | +852 3188 5995    F | +852 3188 5998

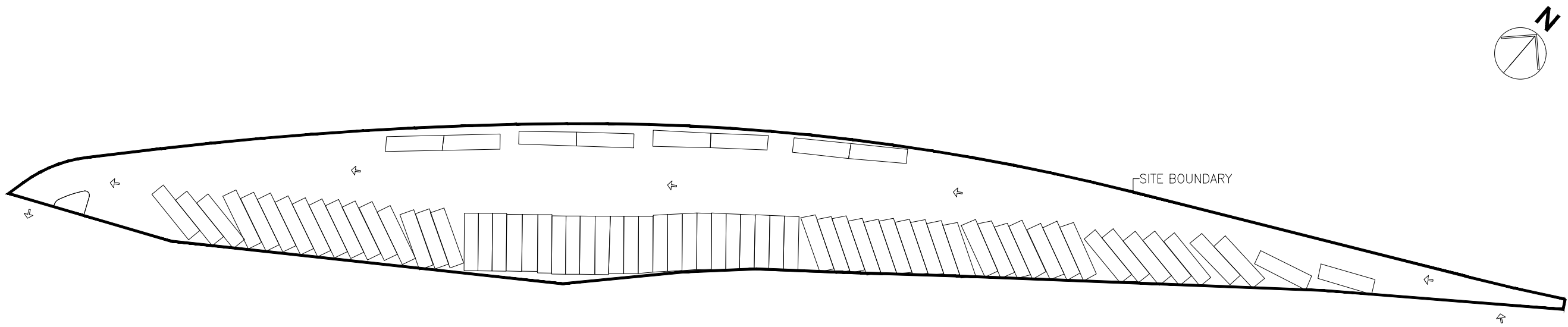
PROJECT :

TMCLK DEPOT

DRAWING TITLE :

SOUTHWEST ELEVATION (SITE B)

SCALE:	1:200
DATE:	13/09/2021
DRAWN BY:	CC
CHECKED BY:	NC
APPROVED BY:	-
JOB. NO. :	FDB-P-21031
DWG. NO. :	EL08



LEGEND



Parking Space  
(13000mm x 3250mm)

G/F

- NOTES AND CONDITIONS:
- 1. ALL DESIGNS ARE THE PROPERTY OF FRUIT DESIGN AND BUILD AND CANNOT BE USED WITHOUT THEIR WRITTEN PERMISSION.
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REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

FRUIT  
DESIGN &  
BUILD LTD

A member of FDB Holdings Limited

A | 6/F, The Sun's Group Centre, 200 Gloucester Road,  
Wan Chai, Hong Kong

T | +852 3188 5995      F | +852 3188 5998

PROJECT :

TMCLK DEPOT

DRAWING TITLE :

G/F LAYOUT (SITE C)

SCALE: 1:1000

DATE: 13/09/2021

DRAWN BY: CC

CHECKED BY: NC

APPROVED BY: -

JOB. NO. : FDB-P-21031

DWG. NO. : AA09

## ***Appendix C – Correspondence from PlanD***

---



Ms. LO Sum Yuen, Angela  
Planning Department  
Tuen Mun and Yuen Long West District Planning  
Office  
14/F, Sha Tin Government Offices, 1 Sheung Wo Che  
Road, Sha Tin, NT

27/F, Overseas Trust Bank Building  
160 Gloucester Road  
Wan Chai  
Hong Kong  
T: +852 2815 7028  
F: +852 2815 5399  
[info@aechk.com](mailto:info@aechk.com)  
[www.asecg.com](http://www.asecg.com)

8 April 2021

By Fax & E-mail

Dear Sir / Madam,

**INSTALLATION OF DEPOT FACILITIES FOR THE KOWLOON MOTOR BUS CO. (1933) LTD. AT TUEN MUN –  
CHEK LAP KOK LINK("TMCLK") FREE UP AREAS  
REQUEST FOR INFORMATION - PLANNED CONSTRUCTION ACTIVITIES AND PLANNED DEVELOPMENTS**

We are an environmental consultant commissioned by the Kowloon Motor Bus Co.(1933) Ltd. to conduct the Environmental Assessment study for the captioned project.

In order to have a precise assessment, it would be grateful if you could advise whether there is any construction work, within 300m/ 500m from the site boundary of the captioned project, as shown in the enclosed figure.

Please provide the following information, if any:

- Any committed/planned development(s) as potential environment sensitive uses (e.g. offices, residential uses, educational uses etc.);
- Location and site boundary of the committed/ planned development; and
- Construction works programme and completion year.

Due to tight programme of the captioned project, it is highly appreciated if your reply on the above request could be available **on or before 23 April 2021.**

Thank you very much for your assistance. Should you have any queries, please feel free to contact the undersigned at 3915 7148 or Ms. Jamie KAM ([jamiiekam@aechk.com](mailto:jamiiekam@aechk.com)) at 3915 7163.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Cathy Man'.

Cathy Man  
Principle Consultant  
([cm@aechk.com](mailto:cm@aechk.com))  
CM/jk

Encl.

cc. KMB (Attn: Mr. Jacky NG & Mr. Alan FUNG) – by email (w/e)



**規 劃 署**

屯門及元朗西規劃處  
新界沙田上禾輦路1號  
沙田政府合署14樓



**By Fax (2815 5399)**  
**Planning Department**

Tuen Mun and Yuen Long West  
District Planning Office  
14/F, Sha Tin Government Offices,  
1 Sheung Wo Che Road, Sha Tin, N.T.

本函檔號 Your Reference [-/21-0004] and [819.2124/21-0001]  
本署檔號 Our Reference ( ) in PDTM 4/5/48  
電話號碼 Tel. No.: 2158 6333  
傳真機號碼 Fax No.: 2489 9711

13 April 2021

Allied Environmental Consultants Limited  
27/F, Overseas Trust Bank Building  
160 Gloucester Road  
Wan Chai, Hong Kong  
(Attn.: Ms Cathy MAN)

Dear Ms MAN,

**Installation of Depot Facilities for KMB at  
Tuen Mun – Chek Lap Kok Link ("TMCLK") Free Up Areas  
Request for Information for Land Contamination Assessment  
and Planned Construction Activities and Planned Development**

I refer to your letters dated 25 March and 8 April 2021 regarding request for information.

You are advised to visit Town Planning Board's Statutory Planning Portal 2 at  
<http://www2.ozp.tpb.gov.hk/gos> for information relating to the subject site and the surrounding area.

Yours sincerely,

( Ms Angela LO )  
for District Planning Officer/  
Tuen Mun and Yuen Long West  
Planning Department

C.C.  
Site Record

CK/AL/al

Issue No. : Issue 3  
Issue Date : November 2021  
Project No. : 1906



## **AIR QUALITY IMPACT ASSESSMENT**

**FOR**

**PROPOSED BUS DEPOTS  
WITH ANCILLARY PUBLIC  
UTILITY INSTALLATION  
(ELECTRICITY SUBSTATION)  
IN AREA SHOWN AS 'ROAD',  
GOVERNMENT LAND IN D.D.  
138 AND D.D. 300, TUEN  
MUN, NEW TERRITORIES**

Prepared by

Allied Environmental Consultants Limited

**COMMERCIAL-IN-CONFIDENCE**

**Allied Environmental Consultants Limited**

Member of AEC Group (HKEX Stock Code: 8320.HK)

27/F, Overseas Trust Bank Building, 160 Gloucester Road, Wan Chai, Hong Kong

www.aecg.com T: +852 2815 7028 F: +852 2815 5399

**沛然環境評估工程顧問有限公司**

沛然環保集團成員 (港交所股份代號: 8320.HK)

香港灣仔告士打道 160 號海外信託銀行大廈 27 樓

## Document Verification



<b>Project Title</b>	Proposed Bus Depots with Ancillary Public Utility Installation (Electricity Substation) in area shown as 'Road', Government Land in D.D. 138 and D.D. 300, Tuen Mun, New Territories	<b>Project No.</b>	1906
<b>Document Title</b>	Air Quality Impact Assessment		

Issue No.	Issue Date	Description	Prepared by	Checked by	Approved by
Issue 1	May 2021	1st Submission	Chris Lo	Joanne Ng	Grace Kwok
Issue 1	July 2021	1st Submission	Chris Lo	Joanne Ng	Grace Kwok
Rev. 1					
Issue 2	August 2021	2nd Submission	Chris Lo	Joanne Ng	Grace Kwok
Issue 3	November 2021	3rd Submission	Chris Lo	Joanne Ng	Grace Kwok

Two handwritten signatures in blue ink are shown. The signature on the left is 'Chris Lo' and the signature on the right is 'Joanne Ng'. They are written in a cursive, flowing style.

### Allied Environmental Consultants Limited

Member of AEC Group (HKEX Stock Code: 8320.HK)

27/F, Overseas Trust Bank Building, 160 Gloucester Road, Wan Chai, Hong Kong

www.aecg.com T: +852 2815 7028 F: +852 2815 5399

### 沛然環境評估工程顧問有限公司

沛然環保集團成員 (港交所股份代號: 8320.HK)

香港灣仔告士打道 160 號海外信託銀行大廈 27 樓

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1.	Introduction .....	1
2.	Objectives.....	1
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## 1. Introduction

- 1.1.1. Allied Environmental Consultants Limited (AEC) was commissioned by the Kowloon Motor Bus Company (1933) Limited (KMB) to conduct an Air Quality Impact Assessment (AQIA) in support of a Section 16 Planning Application for proposed bus depots with ancillary public utility installation (hereafter referred to as the "Proposed Development") of Tuen Mun – Chek Lap Kok Link (TMCLK) Free Up Area (hereafter referred to as the "Project Sites").
- 1.1.2. The Proposed Development includes a multi-storey permanent depot at Site A; a 2-storey power substation at Site B and charging-enabling bus parking bays at Site C.
- 1.1.3. The Project Sites comprise of three free up areas, namely Site A, B and C, with total area of 16,845m<sup>2</sup> (Site A: 7,926 m<sup>2</sup>; Site B: 1,321 m<sup>2</sup> and Site C: 7,598 m<sup>2</sup>). The Project Sites are served as the proposed depot for electric buses ("eBus") only. eBus will be charged and parked overnight at Site A and Site C, whilst vehicular maintenance activities and bus washing will also be carried out within Site A only.

## 2. Objectives

- 2.1.1. In support of the Section 16 Planning Application for the Proposed Development, an Air Quality Impact Assessment (AQIA) is conducted to address air quality impact on the air sensitive uses in the Proposed Development and in the vicinity of Project Site, and recommend mitigation measures to minimize the air quality impact where necessary.

## 3. Description of the Proposed Development

- 3.1.1. The Project Site is located near to Pillar Point, Tuen Mun. The location of the Project Site and its environs is shown in **Figure 3-1**.
- 3.1.2. The Project Site is located at Tuen Mun Chek Lap Kok Tunnel Road and at the east of the Tuen Mun Chek Lap Kok Tunnel Interchange. The Project Site falls into "Road" under the Approved Tuen Mun Outline Zoning Plan No. S/TM/35.

- 3.1.3. Based on the best available information from Development Permission Area Plans, Outline Development Plans, Layout Plans and other relevant published and uses plan by Lands Department or Planning Department, no committed or planned developments are identified within 500m from the boundary of Project Sites. As advised by Planning Department (PlanD), the consultant has visited the Town Planning Board Statutory Planning Portal 2 to obtain records for land zoning. The website as of 8 October 2021 has confirmed that there are no planning applications made at the vicinity, which implies no committed or planned developments. Correspondence from PlanD can be referred in **Appendix 3-1**.
- 3.1.4. The Proposed Development will be operated 24 hours continuously. It aims to provide 406 charging-enabling bus parking bays for electric buses (eBus). Minor vehicle repair / testing activities will also be carried out within Site A, including bus washing, tyre changing or charging, parts replacement, motor testing, battery charging and braking test.
- 3.1.5. The multi-storey depot building at site A comprises a transformer room, bus washing area, maintenance bays, ancillary office and parking spaces. The ancillary office will be served with mechanical ventilation and air conditioning system (MVAC system) and will not rely on openable windows for ventilation purpose. Site B will be used for a power substation; while Site C is for bus parking only. **Appendix 3-2** shows the master layout plan of the Proposed Development.

## 4. EIA Ordinance Implications

- 4.1.1. As a multi-storey depot for electric buses is proposed at the Project Site, a Designated Project (DP) under Schedule 2, Part I, Category A.6 of the EIAO has been considered:
- Category A.6: A transport depot located less than 200 m from the nearest boundary of an existing or planned:
    - a) Residential area;
    - b) Place of worship;
    - c) Educational institution; or
    - d) Health care institution.



- 4.1.2. With reference to the Development Permission Area Plans, Outline Development Plans, Layout Plans and other relevant published land uses plan by Lands Department or Planning Department, neither residential area, place of worship, educational institution, nor health care institution is identified or will be planned within 200m from Project Site boundary. Therefore, the proposed bus depot does not constitute DP under EIAO and Environmental Permit (EP) is not required for this Proposed Development.

## 5. Environmental Legislation, Standards and Guidelines

### 5.1. Hong Kong Air Quality Objectives

5.1.1. Air quality in Hong Kong is governed under the Air Pollution Control Ordinance ("APCO") (Cap. 311) and its subsidiary Regulations. Under this legislation, the Government has designated Air Control Zones ("ACZ") for the whole territory, along with the Air Quality Objectives ("AQOs"). A review of the AQOs have been completed by the EPD, with the introduction of the Air Pollution Control (Amendment) Bill 2021 which is set to take effect on 1 January 2022. In view of the above, the upcoming AQOs for 2022 will be adopted for the assessment. The AQOs stipulate the statutory limits for 7 pollutants and dictate the maximum number of allowable exceedances over specified time periods. For details, please refer to **Table 5-1** below.

**Table 5-1 Hong Kong Air Quality Objectives (AQOs)**

Pollutant	Averaging Time	Concentration Limit ( $\mu\text{g}/\text{m}^3$ ) <sup>[1]</sup>	Number of Exceedances to be allowed
Sulphur Dioxide (SO <sub>2</sub> )	10-minute	500	3
	24-hour	50	3
RSP or PM <sub>10</sub> <sup>[2]</sup>	24-hour	100	9
	Annual	50	N/A
FSP or PM <sub>2.5</sub> <sup>[3]</sup>	24-hour	50	35
	Annual	25	N/A
Nitrogen Dioxide (NO <sub>2</sub> )	1-hour	200	18
	Annual	40	N/A
Ozone (O <sub>3</sub> )	8-hour	160	9
Carbon monoxide (CO)	1-hour	30,000	0
	8-hour	10,000	0
Lead (Pb)	Annual	0.5	N/A

Note:

[1] All measurements of the concentration of gaseous air pollutants, i.e., sulphur dioxide, nitrogen dioxide, ozone and carbon monoxide, are to be adjusted to a reference temperature of 293 Kelvin and a reference pressure of 101.325 kilopascal.

[2] Respirable suspended particulates means suspended particles in air with a nominal aerodynamic diameter of 10 µm or less.

[3] Fine suspended particulates means suspended particles in air with a nominal aerodynamic diameter of 2.5 µm or less.

## 5.2. Hong Kong Planning Standards and Guidelines

5.2.1. General design guidelines are stated in the Hong Kong Planning Standards and Guidelines ("HKPSG") as indicated in **Table 5-2**.

**Table 5-2 Guidelines on Usage of Open Space Site under HKPSG**

Polluting Uses	Parameters	Buffer Distance	Permitted Uses
Road and Highways	<u>Type of Road</u>		
	Trunk Road and Primary Distributor	>20m	Active and passive recreation uses
		3 - 20m	Passive recreational uses
		<3m	Amenity areas
	District Distributor	>10m	Active and passive recreational uses
		<10m	Passive recreational uses
	Local Distributor	>5m	Active and passive recreational uses
	Under Flyovers	<5m	Passive recreational uses
Industrial areas	<u>Difference in Height between Industrial Chimney Exit and the Site</u>		
	<20m	>200m	Active and passive recreational uses
		5 - 200m	Passive recreational uses
	20 - 30m	>100m	Active and passive recreational uses
		5 - 100m	Passive recreational uses
	30m - 40m	>50m	Active and passive recreational uses
		5 - 50m	Passive recreational uses
	>40m	>10m	Active and passive recreational uses
Construction and earth moving activities	-	<50m	Passive recreational uses
		>50m	Active and passive recreational uses

## 6. Identification of Air Sensitive Receivers

- 6.1.1. According to Annex 12 of Guidelines of Air Quality Assessment of the Environmental Impact Assessment Ordinance Technical Memorandum ("EIAO-TM"), "Any domestic premises, hotel, hostel, hospital, clinic, nursery, temporary housing accommodation, school, educational institution, office, factory, shop, shopping centre, place of public worship, library, court of law, sports stadium or performing arts centre shall be considered to be a sensitive receiver". In addition, "Any other premises or place with which, in terms of duration or number of people affected, has a similar sensitivity to the air pollutants as the aforementioned premises and places shall also be considered to be a sensitive receiver".
- 6.1.2. The ASRs within 500m assessment area of the Project Site is detailed in below **Table 6-1**. The corresponding locations of the ASRs are shown in **Figure 6-1**.

**Table 6-1 Identified ASRs within 500m area of the Project Site**

ASR ID	Location / Development	Approx. Distance from Project Site Boundary (m)	Land Use
Project Site	Site A of the Proposed Development	- [1]	- [1]
ASR 1	Butterfly Beach Laundry	184	Industrial
ASR 2	Tuen Mun Vehicle Servicing Station	394	GIC
ASR 3	Customs And Excise Department Harbour and River Trade Division	304	GIC
ASR 4	Pillar Point Fire Station	71	GIC

Note:

[1]: The ASR of the Project Sites is identified to be the fresh air intake for the office at the permanent depot at Site A of Project Sites. No ASRs are identified at Site B and Site C of the Project Sites.

- 6.1.3. With reference to **Section 3.1.6**, no air sensitive use will be present at Site B and Site C of the Project Site, with Site B being the sub-station for the Project Site, and Site C being used for parking and charging of eBus. Sensitive use within Site A of the Project Site, i.e. office, will not rely on natural ventilation from openable windows, but instead MVAC system for ventilation.

## **7. Potential Air Quality Impact in Construction Phase**

7.1.1. In the construction phase, various activities of the Proposed Development would generate fugitive dust which may have potential impacts on the surrounding ASRs. The following activities in the construction phase would have potential impact to the surrounding ASRs:

- Excavation;
- Foundation;
- Temporary storage of materials; and
- Handling and transportation of materials.

7.1.2. It is anticipated no extensive site formation is expected for the Proposed Development. Moreover, deep excavation is not expected at Site A and Site B of the Proposed Development. In view of this, dust emission from the Proposed Development is anticipated to be localised and limited.

7.1.3. Although the abovementioned activities would generate fugitive dust during the construction phase, the surrounding ASRs would not be subject to the adverse dust impact when the following mitigation measures under the Regulations are implemented to this Project.

7.1.4. Under the Air Pollution Control (Construction Dust) Regulation and good site practices, the Contractors are required to inform EPD and adopt proper dust suppression measures while carrying out "Notifiable Works" and "Regulatory Works" to meet the requirements stipulated in the Regulation. The major control measures relevant to this Project are listed below. Based on the control measures listed below, significant dust generated from the construction of the planned developments is not anticipated. Hence, adverse dust impact during the construction phase of the proposed residential development would not be anticipated.

### **Control Measures:**

- Skip hoist for material transport should be totally enclosed by impervious sheeting.
- All dusty materials should be sprayed with water prior to any loading, unloading or transfer operation so as to maintain the dusty materials wet.
- All stockpiles of aggregate or spoil should be covered and/or water applied.
- The height from which excavated materials are dropped should be controlled to a minimum practical height to limit fugitive dust generation from unloading.

- Every vehicle should be washed to remove any dusty materials from its body and wheels before leaving the construction sites.
- The load of dusty materials carried by a vehicle leaving a construction site should be covered entirely by clean impervious sheeting to ensure dust materials do not leak from the vehicle.
- Provision of hoarding of not less than 2.4m high from ground level along the length of the site boundary except for the site entrance or exit.
- Exposed earth shall be properly treated by compaction, turfing, hydroseeding, vegetation planting or sealing with latex, vinyl, bitumen, shotcrete or other suitable surface stabilizer within 6 months after the last construction activity on the construction site or part of the construction site where the exposed earth lies.
- The working area of any excavation or earth moving operation shall be sprayed with water or a dust suppression chemical immediately before, during and immediately after the operation so as to maintain the entire surface wet.

7.1.5. With reference to DEVB's TC no. 13/2020 (Timely Application of Temporary Electricity and Water Supply for Public Works Contracts and Wider Use of Electric Vehicles in Public Works Contracts), timely provision of electricity and the increase in use of electric vehicles will also be considered, and utilised as far as practicable to further reduce the need for fuel-using construction-related machines for the Proposed Development.

7.1.6. With the implementation of good site practices and sufficient dust suppression measures as stipulated under the Air Pollution Control (Construction Dust) Regulation, significant dust generated from the construction of the Proposed Development is not anticipated. Hence, adverse dust impact during the construction phase would not be anticipated.

7.1.7. Construction-related machines employed in the Project Site will follow the requirements as stipulated in the Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation to control potential emissions from non-road mobile machinery. Therefore, gaseous emission from construction equipment would be minor and would not cause any adverse air quality impact.

## 8. Potential Air Quality Impact in Operation Phase

8.1.1. Study area for AQIA has been identified by a distance of 500m from the boundary of the Project Site. **Figure 3-1** illustrates the extent of the study area. Key air pollution sources identified in the vicinity of the Project Site are as follows:

- Vehicular Emissions from Open Road Traffic;
- Industrial Emissions from Chimneys; and
- Vehicular Emissions from within the Project Site.

### 8.2. Vehicular Emissions from Open Road Traffic

8.2.1. The Project Site is situated on the TMCLK link, and adjacent to Lung Mun Road. Lung Mun Road is classified as Local Distributor (LD) according to the Traffic Census, 2020 from Transport Department (TD). There is currently no available data for the TMCLK link in Traffic Census, 2020 from Transport Department (TD). However, according to Section 1.2.1.3 of the "Tuen Mun Chek Lap Kok Link EIA Report [AEIAR-146/2009]", the scope of the TMCLK link comprises of a dual 2-lane trunk road. For conservative approach, TMCLK link is classified as primary distributor (PD) based on the information from the abovementioned EIA report.

8.2.2. With reference to the HKPSG, recommended minimum buffer distance from the nearby roads to minimise potential adverse air quality impact due to open-road vehicular emissions have been adopted as summarised in **Table 8-1**.

**Table 8-1 Buffer distance from the Adjacent Road**

Road Name	Road Type	HKPSG Guideline Buffer Distance Requirement
TMCLK link <sup>[1]</sup>	Primary Distributor	20m
Lung Mun Road	Local Distributor	5m

Notes:

[1]: For conservative approach, the recommended minimum buffer distance from the nearby roads to minimise potential adverse air quality impact due to open-road vehicular emissions for PD under HKPSG is also adopted for the tunnel portal of TMCLK link.



- 8.2.3. Buffer zone for open road traffic emission is presented in **Figure 8-1**. With reference to **Section 6.1.3**, the air sensitive use at the Project Site is the office at Site A. No air sensitive uses are identified at Site B nor Site C of the Project Site. Sensitive use, i.e. office, will not rely on natural ventilation from openable windows, but instead MVAC system for ventilation. With careful planning, fresh air intake location for sensitive uses will be located away from the buffer zones. Area suitable for air sensitive use / fresh air intake / openable window outside the buffer zone is shown in **Figure 8-1a** to **Figure 8-1e**. With the implementation of the mitigation measures above, adverse air quality impact on the Proposed Development is not anticipated during operation phase.

### **8.3. Vehicular Emissions from Tunnel Portal**

- 8.3.1. According to Section 3.2.3.7 of the AEIAR-146/2009, the northbound traffic from TMCLK uses the northbound slip road (TMCLK slip road) to enter the Tuen Mun South Road network. The slip road takes the form of a single carriageway tunnel.
- 8.3.2. As shown in **Figure 8-1**, the tunnel portal of TMCLK slip road is more than 200m away from the closest boundary of the Project Site. In view of the distance away from the tunnel portal, and with the implementation of the mitigation measures as discussed in **Section 8.2.3**, adverse air quality impact on the Proposed Development from tunnel portal emission is not anticipated during operation phase.

### **8.4. Industrial Emissions from Chimneys**

- 8.4.1. Review of Specified Process license register was conducted on 12 April 2021. It is noted no records of industrial chimney located within 200m radius of the Project Site was identified.
- 8.4.2. Further study of EIA report in the vicinity of the Project Site was conducted (i.e. Expansion of Hong Kong International Airport into a Three-Runway System [AEIAR-185/2014]). 4 nos. of chimneys are identified at 2 sources, from the flare at Pillar Point Valley Landfill and Butterfly Beach Laundry. The locations of chimneys are given in **Figure 8-1**.

- 8.4.3. Buffer zone for industrial emission from chimneys is presented in **Figure 8-1**. With reference to **Section 5.1.3**, the air sensitive use at the Project Site is the office at Site A. No air sensitive uses are present at Site B nor Site C of the Project Site. Sensitive use, i.e. office, will not rely on natural ventilation from openable windows, but instead MVAC system for ventilation. With careful planning, fresh air intake location for sensitive uses will be located away from the buffer zones. Area suitable for air sensitive use / fresh air intake / openable window outside the buffer zone is shown in **Figure 8-1a** to **Figure 8-1e**. With the implementation of the mitigation measures above, no adverse air quality impact on the Proposed Development is anticipated during operation phase.

## **8.5. Vehicular Emissions from Project Site**

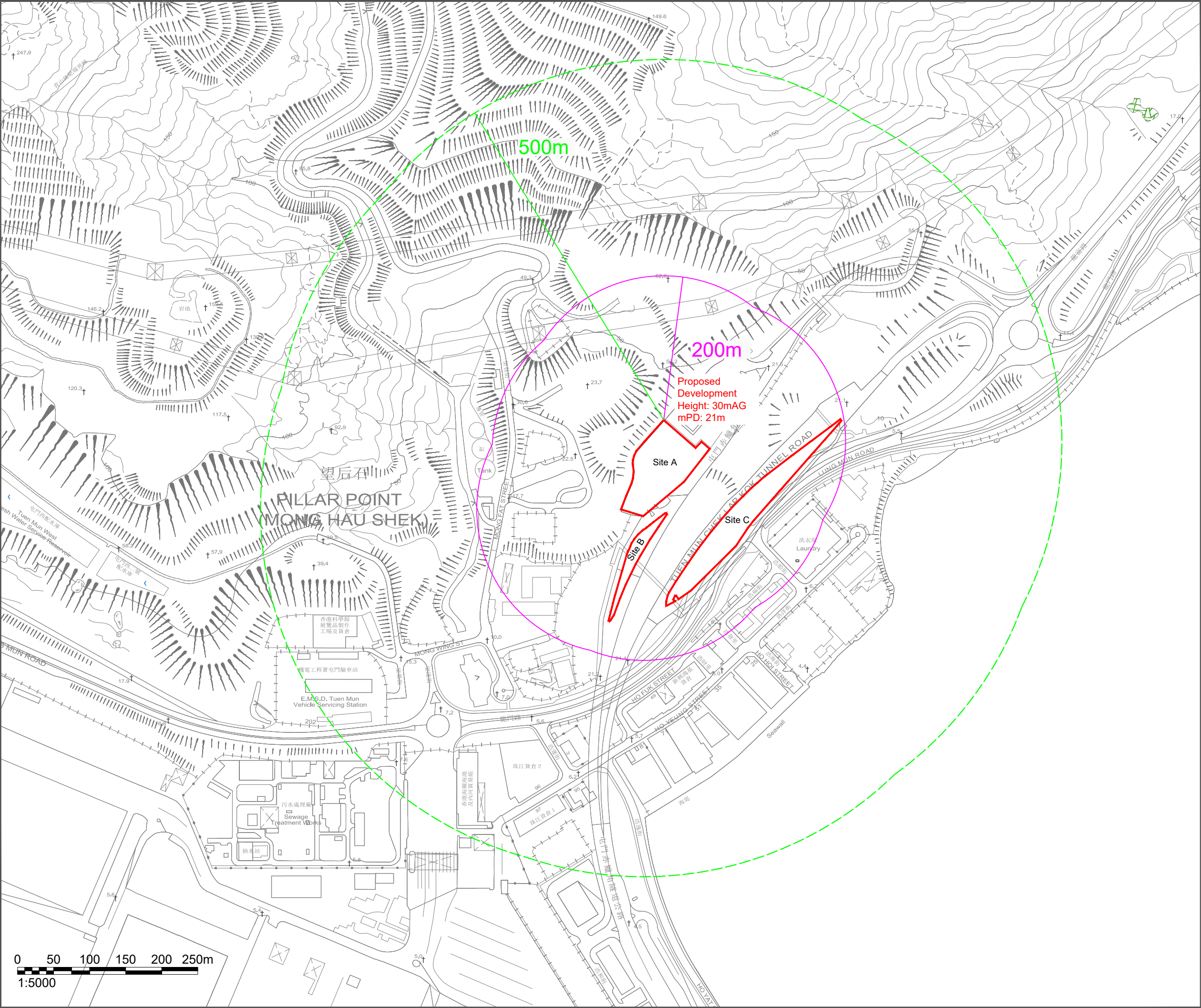
- 8.5.1. With reference to the nature of the Proposed Development (i.e. bus depot), vehicle travelling within the Project Site, and vehicles idling during maintenance, washing and refuelling within the Project Site are identified as the main potential sources of vehicle emission from within the Proposed Development.
- 8.5.2. As advised by the Applicant, electric buses (eBus) will be parked at the Proposed Development. eBus is of zero emission with no toxic gases and particulates generated. No engine and gearbox are required in an eBus. eBus is of simple design with mainly High Voltage (HV) battery, electronic management system and drive motors. The battery, motors and associated electronics require replacement in daily operation only with rare onsite repair. Changing of engine oil and conduction of engine and gearbox overhaul as at conventional diesel bus depot are not required. The eBus Depot will be clean, with zero emission and quiet. As such, the proposed depot is considered environmentally superior to conventional fuel bus depot. Since eBus do not require the use of diesel, no tailpipe emission will be generated, and therefore no adverse air quality impact from the Proposed Development to the surrounding ASRs is anticipated.


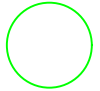
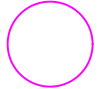
## **8.6. Fugitive Dust Emission from Project Site**

- 8.6.1. Since the ground surface of the Proposed Development will be concrete-paved, activities occurring within the depot are unlikely to cause any fugitive dust emission to the surrounding ASRs. Air quality impact from fugitive dust emission during operation phase of Proposed Development is not anticipated.

## **9. Conclusions**

- 9.1.1. Potential users in the Project Site will not rely on natural ventilation from openable windows, but instead MVAC system for ventilation to minimize the effect of vehicular emissions and industrial emissions as promulgated in the HKPSG. Fresh air intake for potential users in the Project Site will be located outside the buffer zones of open road traffic emission and industrial emissions from chimney. No adverse air quality impact is anticipated at the Project Site during operation phase.
- 9.1.2. As advised by Applicant, electric buses (eBus) will be parked at the Proposed Development. eBus is of zero emission with no toxic gases and particulates generated. Since eBus do not require the use of diesel, no tailpipe emission will be generated, and therefore no adverse air quality impact from the Proposed Development to the surrounding ASRs is anticipated



- NOTES :
-  Subject Site
  -  500m Assessment Area
  -  200m Assessment Area

Consultant



**Allied Environmental Consultants Limited**

Project No. : 1906

File Name : CL

Project :

Proposed Bus Depots with Ancillary Public Utility Installation (Electricity Substation) in area shown as 'Road', Government Land in D.D. 138 and D.D. 300, Tuen Mun, New Territories

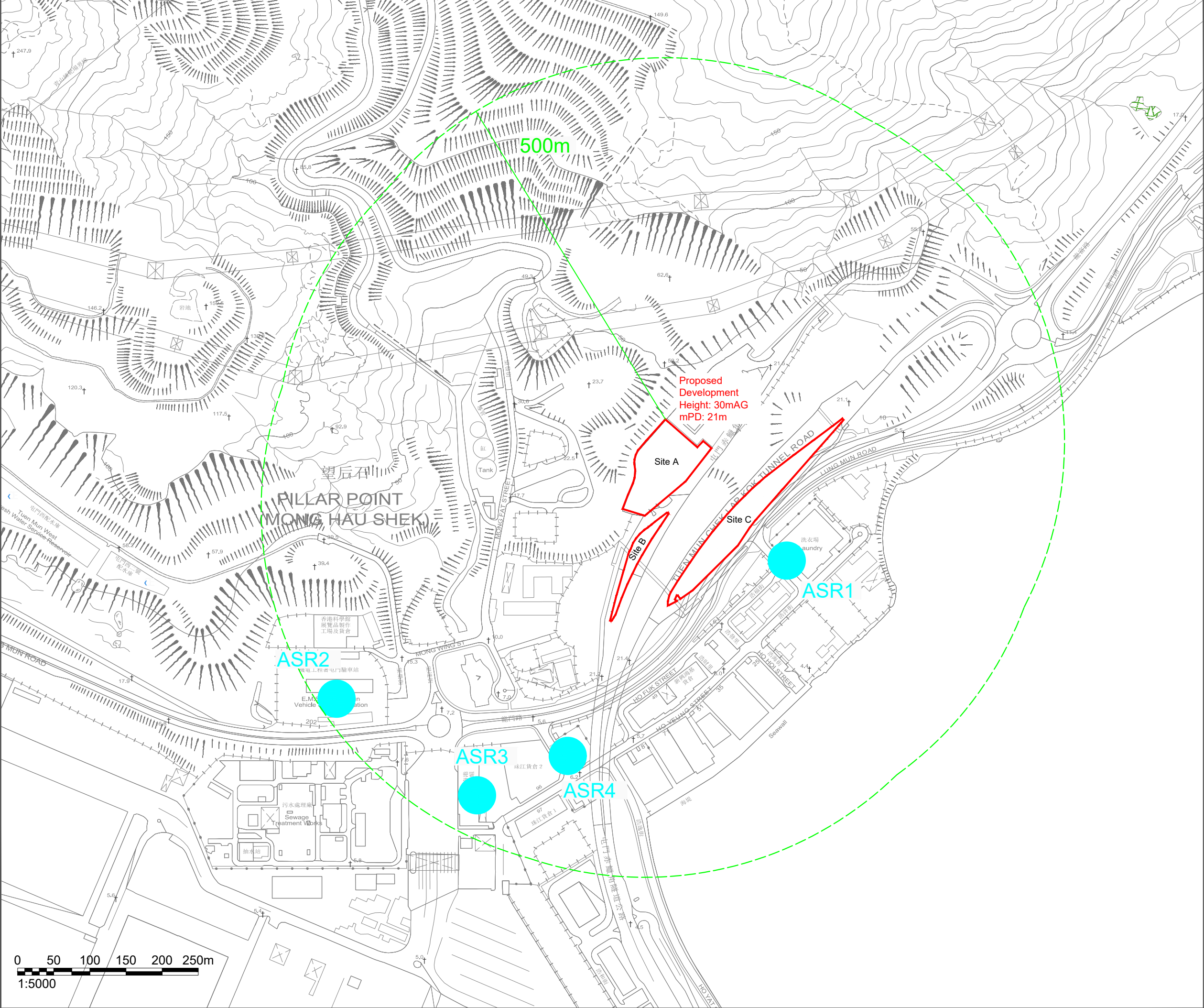
Drawing Title :

Location of Subject Site and Assessment Area

Drawing No : Figure 3-1	Revision : 1
Scale : As Shown	Date : August 2021

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NOTES :

Project Site

500m  
Assessment Area

Air Sensitive  
Receivers

ASR10

Consultant

**Allied Environmental Consultants Limited**

Project No. : 1906

File Name : CL

Project :

Proposed Bus Depots with Ancillary Public Utility Installation (Electricity Substation) in area shown as 'Road', Government Land in D.D. 138 and D.D. 300, Tuen Mun, New Territories

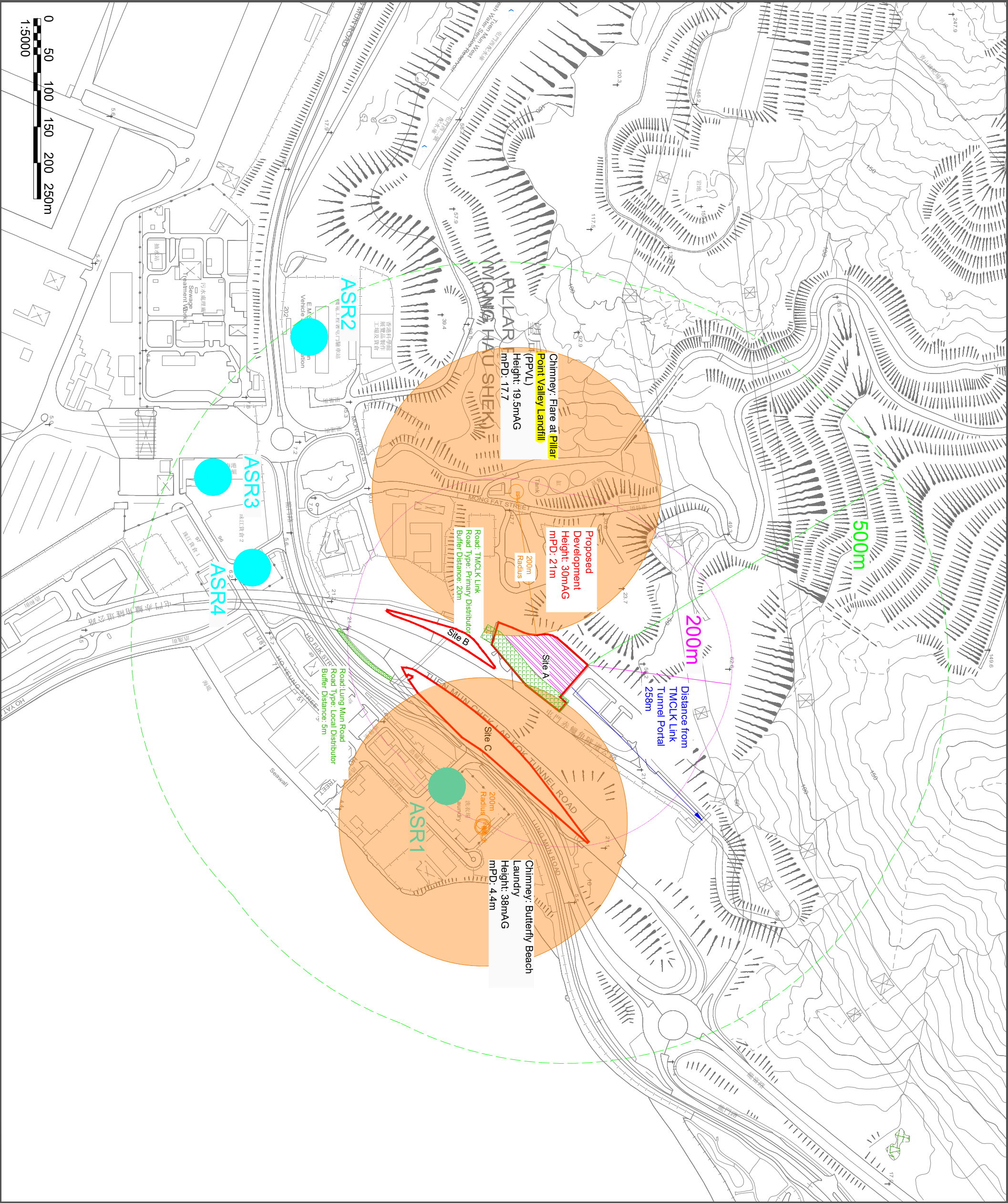
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Location of Air Sensitive Receivers

Drawing No :	Revision :
Figure 6-1	1
Scale :	Date :
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- NOTES :
- Subject Site

500m Assessment Area

200m Assessment Area

PPVL

Chimney Sources

Chimney Buffer Distance

Road Buffer Distance


Area Suitable for Fresh Air Intake

ASR1

Air Sensitive Receivers

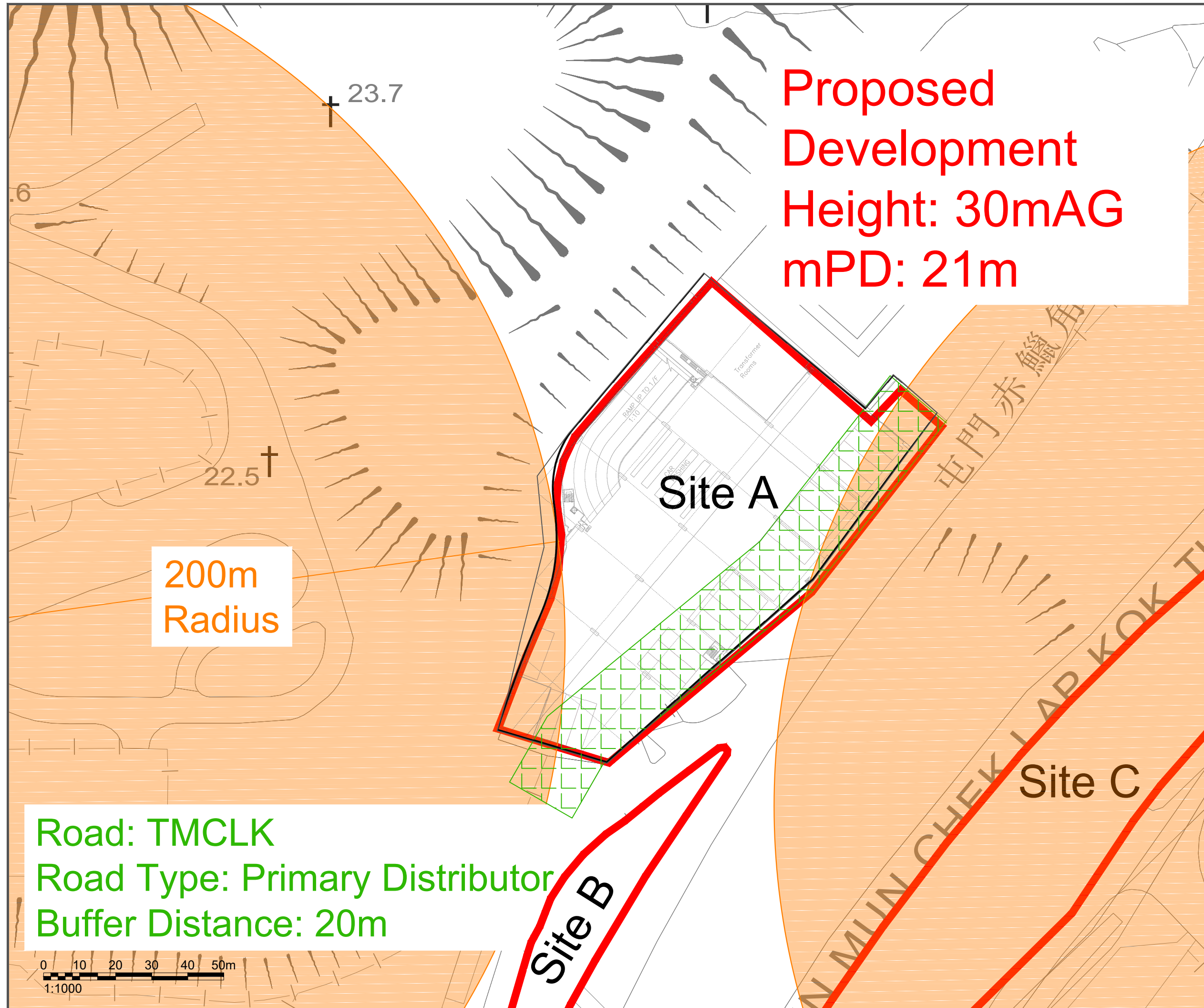
Distance from Tunnel Portal

Consultant



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Project No. : 1906	
File Name : CL	
Project : Multi-Storey Depot for Electric Buses at Tuen Mun - Chek Lap Kok Link ("TMCLK") Free up Areas	
Drawing Title : Buffer Distances for Chimney and Road, and Suitable Location for Fresh Air Intake	
Drawing No. : <b>Figure 8-1A</b>	Revision : <b>2</b>
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NOTES :

- Subject Site
- Chimney Sources
- Chimney Buffer Distance
- Road Buffer Distance

Consultant

**AEC**

**Allied Environmental Consultants Limited**

Project No. : 1906

File Name : CL

Project :

Multi-Storey Depot for Electric Buses  
at Tuen Mun - Chek Lap Kok Link  
("TMCLK") Free Up Areas

Drawing Title :

Buffer Distances for Chimney and Road,  
and Suitable Location for Fresh Air  
Intake (G/F)

Drawing No : Figure 8-1B

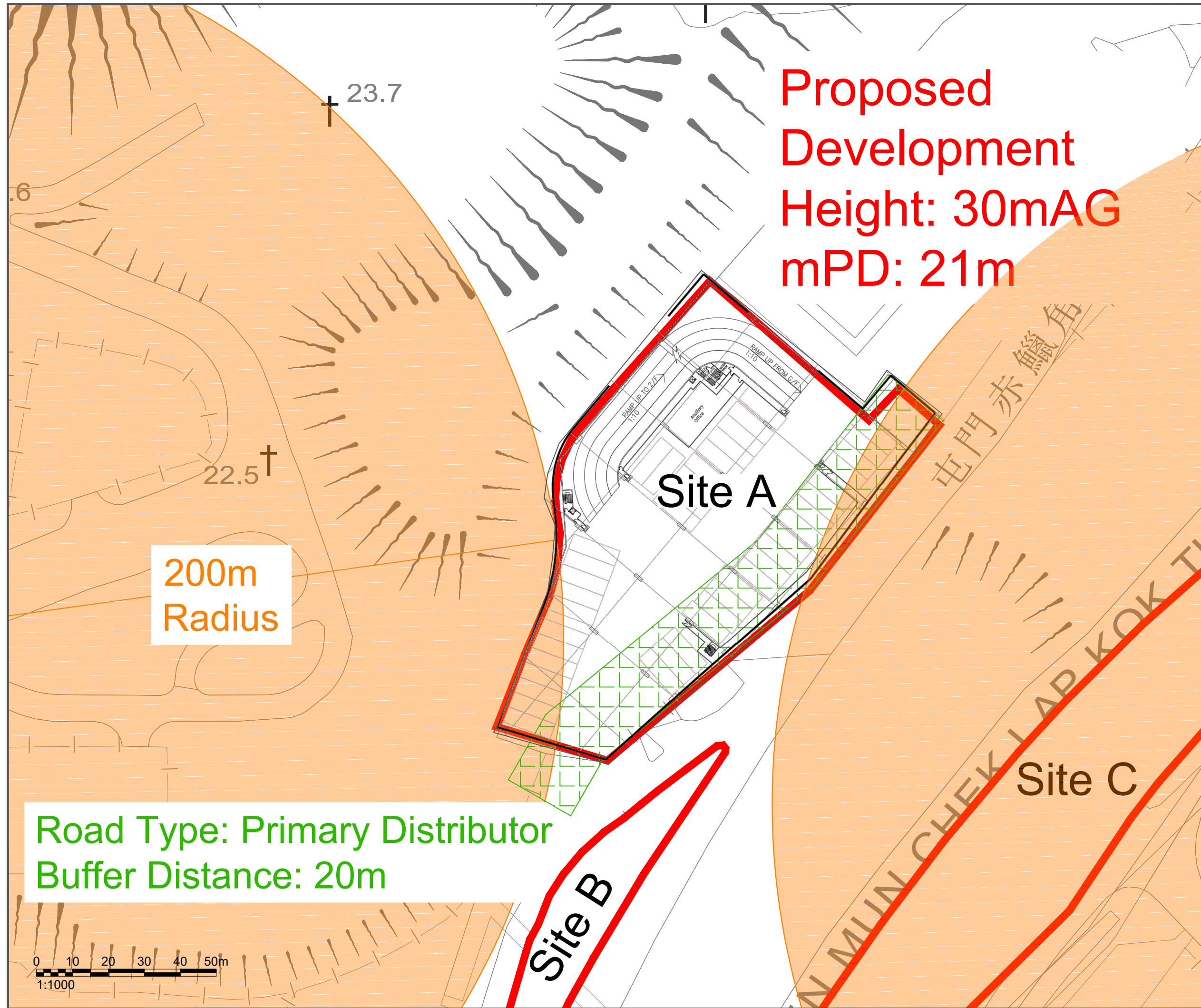
Revision :

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Date : August 2021

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NOTES :

- Subject Site
- Chimney Sources
- Chimney Buffer Distance
- Road Buffer Distance

Consultant

**AEC**

**Allied Environmental Consultants Limited**

Project No. : 1906

File Name : CL

Project :

Proposed Bus Depots with Ancillary Public Utility Installation (Electricity Substation) in area shown as 'Road', Government Land in D.D. 138 and D.D. 300, Tuen Mun, New Territories

Drawing Title :

Buffer Distances for Chimney and Road, and Suitable Location for Fresh Air Intake (1/F)

Drawing No : Figure 8-1C

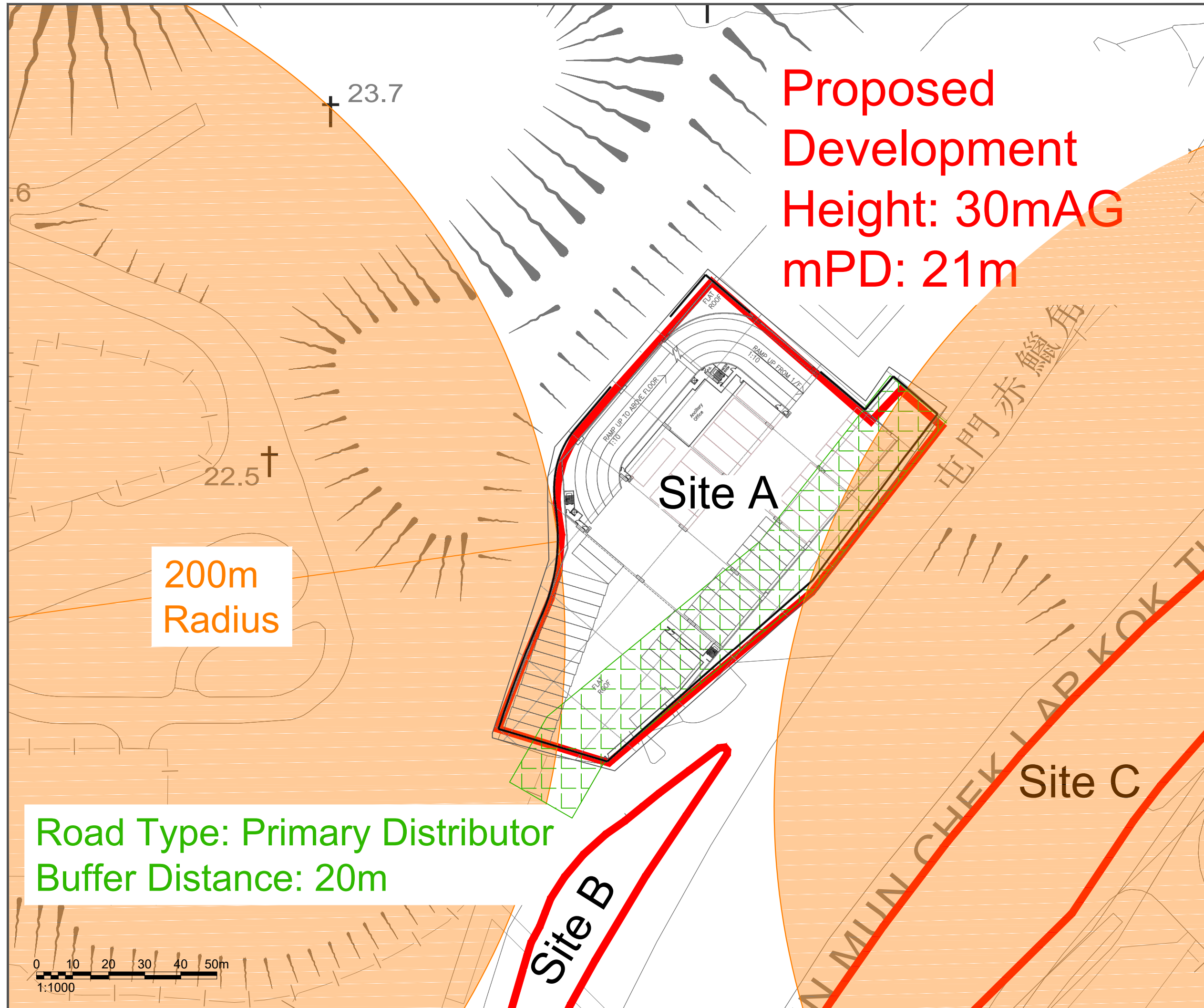
Revision :

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NOTES :

- Subject Site
- Chimney Sources
- Chimney Buffer Distance
- Road Buffer Distance

Consultant

**Allied Environmental Consultants Limited**

Project No. : 1906

File Name : CL

Project :

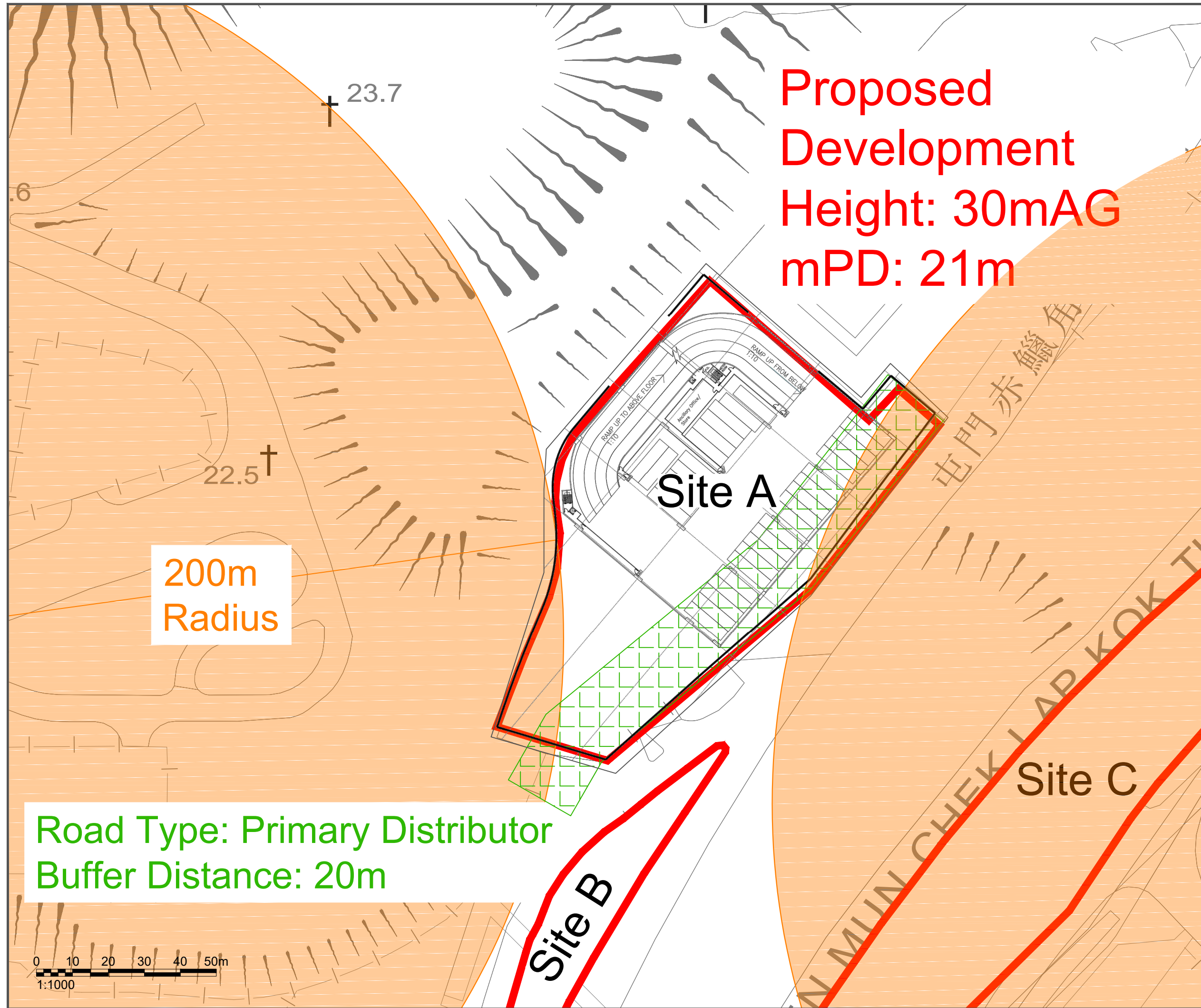
Proposed Bus Depots with Ancillary Public Utility Installation (Electricity Substation) in area shown as 'Road', Government Land in D.D. 138 and D.D. 300, Tuen Mun, New Territories

Drawing Title :

Buffer Distances for Chimney and Road, and Suitable Location for Fresh Air Intake (2/F)

Drawing No : Figure 8-1D	Revision :
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Proposed  
Development  
Height: 30mAG  
mPD: 21m

- NOTES :
- Subject Site
  - PPVL Chimney Sources
  - Chimney Buffer Distance
  - Road Buffer Distance

Consultant

**AEC**

**Allied Environmental Consultants Limited**

Project No. : 1906

File Name : CL

Project :

Proposed Bus Depots with Ancillary Public Utility Installation (Electricity Substation) in area shown as 'Road', Government Land in D.D. 138 and D.D. 300, Tuen Mun, New Territories

Drawing Title :

Buffer Distances for Chimney and Road, and Suitable Location for Fresh Air Intake (3/F- 10/F)

Drawing No : Figure 8-1E	Revision :
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***Appendix 3-1***

---

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[www.asecg.com](http://www.asecg.com)

8 April 2021

By Fax & E-mail

Dear Sir / Madam,

**INSTALLATION OF DEPOT FACILITIES FOR THE KOWLOON MOTOR BUS CO. (1933) LTD. AT TUEN MUN –  
CHEK LAP KOK LINK("TMCLK") FREE UP AREAS  
REQUEST FOR INFORMATION - PLANNED CONSTRUCTION ACTIVITIES AND PLANNED DEVELOPMENTS**

We are an environmental consultant commissioned by the Kowloon Motor Bus Co.(1933) Ltd. to conduct the Environmental Assessment study for the captioned project.

In order to have a precise assessment, it would be grateful if you could advise whether there is any construction work, within 300m/ 500m from the site boundary of the captioned project, as shown in the enclosed figure.

Please provide the following information, if any:

- Any committed/planned development(s) as potential environment sensitive uses (e.g. offices, residential uses, educational uses etc.);
- Location and site boundary of the committed/ planned development; and
- Construction works programme and completion year.

Due to tight programme of the captioned project, it is highly appreciated if your reply on the above request could be available **on or before 23 April 2021.**

Thank you very much for your assistance. Should you have any queries, please feel free to contact the undersigned at 3915 7148 or Ms. Jamie KAM ([jamiiekam@aechk.com](mailto:jamiiekam@aechk.com)) at 3915 7163.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Cathy Man'.

Cathy Man  
Principle Consultant  
([cm@aechk.com](mailto:cm@aechk.com))  
CM/jk

Encl.

cc. KMB (Attn: Mr. Jacky NG & Mr. Alan FUNG) – by email (w/e)

**規 劃 署**

屯門及元朗西規劃處  
新界沙田上禾輦路1號  
沙田政府合署14樓

**By Fax (2815 5399)****Planning Department**

Tuen Mun and Yuen Long West  
District Planning Office  
14/F, Sha Tin Government Offices,  
1 Sheung Wo Che Road, Sha Tin, N.T.

本函檔號 Your Reference [-/21-0004] and [819.2124/21-0001]  
本署檔號 Our Reference ( ) in PDTM 4/5/48  
電話號碼 Tel. No.: 2158 6333  
傳真機號碼 Fax No.: 2489 9711

13 April 2021

Allied Environmental Consultants Limited  
27/F, Overseas Trust Bank Building  
160 Gloucester Road  
Wan Chai, Hong Kong  
(Attn.: Ms Cathy MAN)

Dear Ms MAN,

**Installation of Depot Facilities for KMB at  
Tuen Mun – Chek Lap Kok Link ("TMCLK") Free Up Areas  
Request for Information for Land Contamination Assessment  
and Planned Construction Activities and Planned Development**

I refer to your letters dated 25 March and 8 April 2021 regarding request for information.

You are advised to visit Town Planning Board's Statutory Planning Portal 2 at <http://www2.ozp.tpb.gov.hk/gos> for information relating to the subject site and the surrounding area.

Yours sincerely,

( Ms Angela LO )  
for District Planning Officer/  
Tuen Mun and Yuen Long West  
Planning Department

C.C.  
Site Record

CK/AL/al

***Appendix 3-2***

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*Master Layout Plan of Proposed Development*



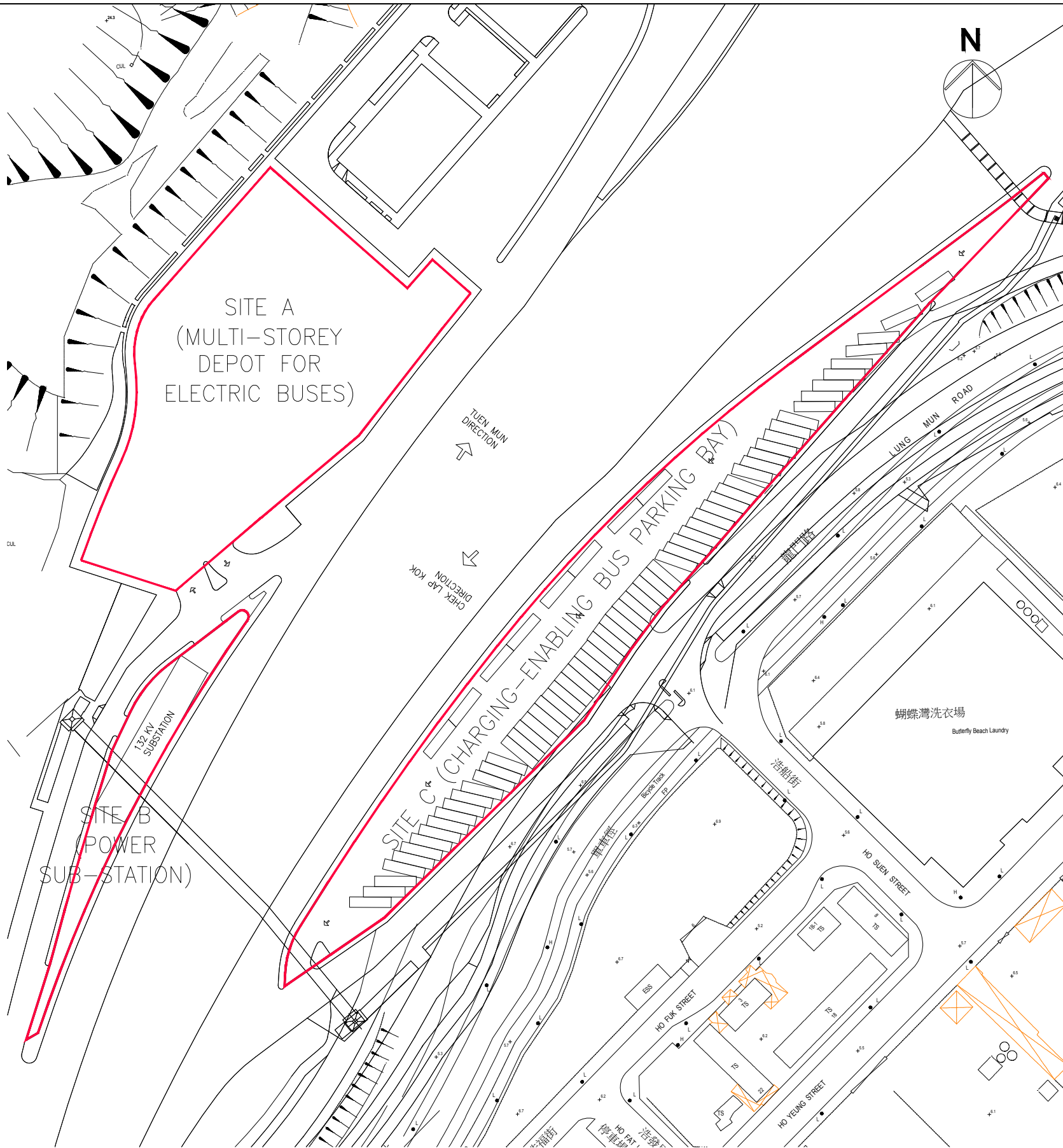
GROSS FLOOR AREA & SITE COVERAGE CALCULATION – SITE A				
PROPOSED SITE USAGE			MULTI–STOREY DEPOT FOR ELECTRIC BUSES	
SITE CLASSIFICATION			CLASS A	
SITE AREA			7926 M2	
SITE COVERAGE			G/F–1/F: 93.58% (FIRST 15M) 2/F–R/F: 60%	
BUILDING HEIGHT			82.5M (FLOOR LEVEL OF G/F TO FLOOR LEVEL OF R/F)	
PERMITTED PLOT RATIO UNDER B(P)R			15	
NON–DOMESTIC GFA	GF	7417 M2	57845.32 M2	
	1F	7417 M2		
	2F	4755.6 M2		
	3F–10F	4755.6 M2		
	RF	210.92 M2		
ACTUAL PLOT RATIO			7.30	

GROSS FLOOR AREA & SITE COVERAGE CALCULATION – SITE B	
PROPOSED SITE USAGE	POWER SUB–STATION
SITE CLASSIFICATION	CLASS A
SITE AREA	1321 M2
SITE COVERAGE	47.01% (621M2/1321M2)
BUILDING HEIGHT	15.6M
PERMITTED PLOT RATIO UNDER B(P)R	5
NON–DOMESTIC GFA	1040.6 M2
ACTUAL PLOT RATIO	0.788
REMARKS: THE SUBJECT BUILDING SHALL BE DISREGARDED FROM GFA AND PLOT RATIO CALCULATION IN ACCORDANCE WITH B(P)R23(3)(b).	

GROSS FLOOR AREA & SITE COVERAGE CALCULATION – SITE C	
PROPOSED SITE USAGE	CHARGING–ENABLING BUS PARKING
SITE CLASSIFICATION	CLASS A
SITE AREA	7598 M2
SITE COVERAGE	0
BUILDING HEIGHT	0M
PERMITTED PLOT RATIO UNDER B(P)R	5
NON–DOMESTIC GFA	0 M2
ACTUAL PLOT RATIO	0

NOS. OF CHARGING–ENABLING BUS PARKING BAYS AND MAINTENANCE BAYS IN SITE A		
	MAINTENANCE BAYS	CHARGING–ENABLING BUS PARKING BAYS
GF	21	
1F	42	
2F	18	31
3F		33
4F		33
5F		33
6F		33
7F		33
8F		33
9F		33
10F		33
RF		38
TOTAL	81	333

NOS. OF CHARGING–ENABLING BUS PARKING BAYS AND MAINTENANCE BAYS IN SITE C		
	MAINTENANCE BAYS	CHARGING–ENABLING BUS PARKING BAYS
GF	0	73



# Schematic Master Layout Plan

NOTES AND CONDITIONS:

1.

ALL DESIGNS ARE THE PROPERTY OF FRUIT DESIGN AND BUILD AND CANNOT BE USED WITHOUT THEIR WRITTEN PERMISSION.

2.

ALL MEASUREMENTS MUST BE VERIFIED ON SITE BEFORE CONSTRUCTION.

3.

CONTRACTORS SHALL NOTIFY THE DESIGNER OF ANY DISCREPANCY BEFORE STARTING WORK.

4.

ALL DIMENSIONS ARE IN MILLIMETER EXCEPT OTHERWISE NOTED.

5.

ALL WORKS SHALL BE CARRIED OUT IN COMPLIANCE TO THE BUILDINGS ORDINANCE, BUILDINGS REGULATIONS AND CODE OF PRACTICES.

6.

THIS DRAWING SHALL BE READ IN CONJUNCTION WITH OTHER DRAWINGS AND SPECIFICATIONS OF THE TENDER DOCUMENTS AND SHALL BE MUTUALLY EXPLANATORY.

7.

THE CONTRACTOR SHALL FOLLOW MANUFACTURER'S INSTRUCTION & RECOMMENDATION IN CASE PROPRIETARY PRODUCT / SYSTEM / IS ADOPTED / SPECIFIED / APPROVED.

8.

DESIGN INTENT DRAWING ONLY. CONTRACTOR IS RESPONSIBLE FOR DESIGN AND SHOP DRAWING / CALCULATION SUBMISSION / MATERIAL SIZES / THICKNESS INDICATIVE.

REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

FRUIT  
DESIGN &  
BUILD LTD

A member of FDB Holdings Limited

A | 6/F, The Sun's Group Centre, 200 Gloucester Road,  
Wan Chai, Hong Kong

T | +852 3188 5595 F | +852 3188 5598

PROJECT :

TMCLK DEPOT

DRAWING TITLE :

SCHEMATIC MASTER LAYOUT PLAN

SCALE:

1:1500

DATE:

13/09/2021

DRAWN BY:

CC

CHECKED BY:

NC

APPROVED BY: -

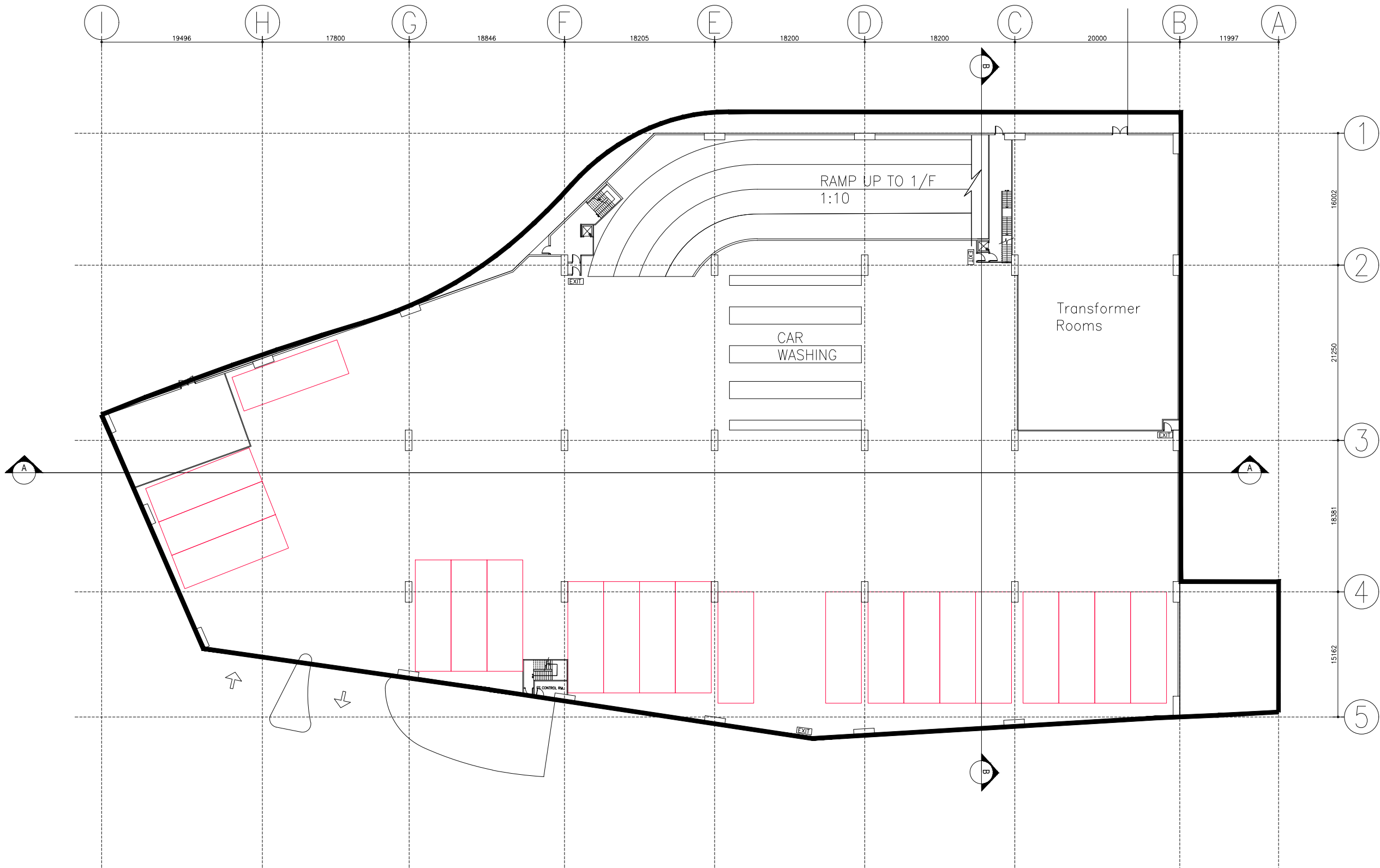
JOB. NO. :

FDB-P-21031

DWG. NO. :

AA01





LEGEND

- Maintenance Bay  
(13500mm x 4350mm)
- Parking Space  
(13000mm x 3300mm)

G/F



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REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

**FRUIT  
DESIGN &  
BUILD LTD**

A member of FDB Holdings Limited  
A | 6/F, The Sun's Group Centre, 200 Gloucester Road,  
Wan Chai, Hong Kong  
T | +852 3188 5955 F | +852 3188 5958

PROJECT:

TMCLK DEPOT

DRAWING TITLE :

G/F LAYOUT (SITE A)

SCALE: 1:500

DATE: 13/09/2021

DRAWN BY: CC

CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: AA02



- NOTES AND CONDITIONS:
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REV	DESCRIPTION	DATE

CLIENT:

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FRUIT  
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BUILD LTD

A member of FDB Holdings Limited

A | 6/F, The Sun's Group Centre, 200 Gloucester Road,  
Wan Chai, Hong Kong

T | +852 3188 5595    F | +852 3188 5958

PROJECT:

TMCLK DEPOT

DRAWING TITLE :

1/F LAYOUT (SITE A)

SCALE: 1:500

DATE: 13/09/2021

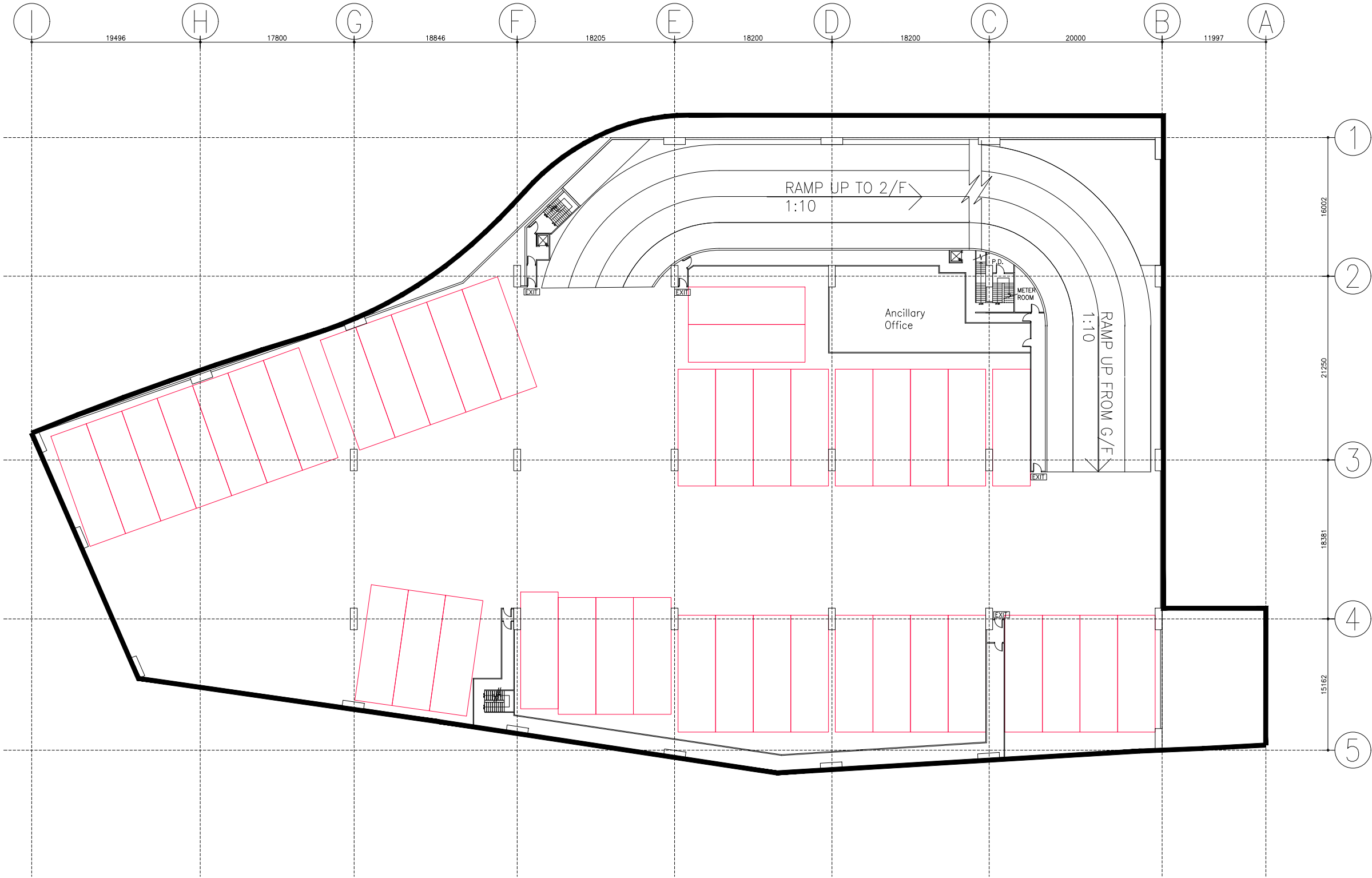
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CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: AA03



LEGEND

- Maintenance Bay  
(13500mm x 4350mm)
- Parking Space  
(13000mm x 3300mm)

1/F



- NOTES AND CONDITIONS:
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  8. DESIGN INTENT DRAWING ONLY. CONTRACTOR IS RESPONSIBLE FOR DESIGN AND SHOP DRAWING / CALCULATION SUBMISSION / MATERIAL SIZES / THICKNESS INDICATIVE.

REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

FRUIT  
DESIGN &  
BUILD LTD

A member of FDB Holdings Limited

A | 6/F, The Sun's Group Centre, 200 Gloucester Road,  
Wan Chai, Hong Kong

T | +852 3188 5595    F | +852 3188 5958

PROJECT:

TMCLK DEPOT

DRAWING TITLE:

2/F LAYOUT (SITE A)

SCALE: 1:500

DATE: 13/09/2021

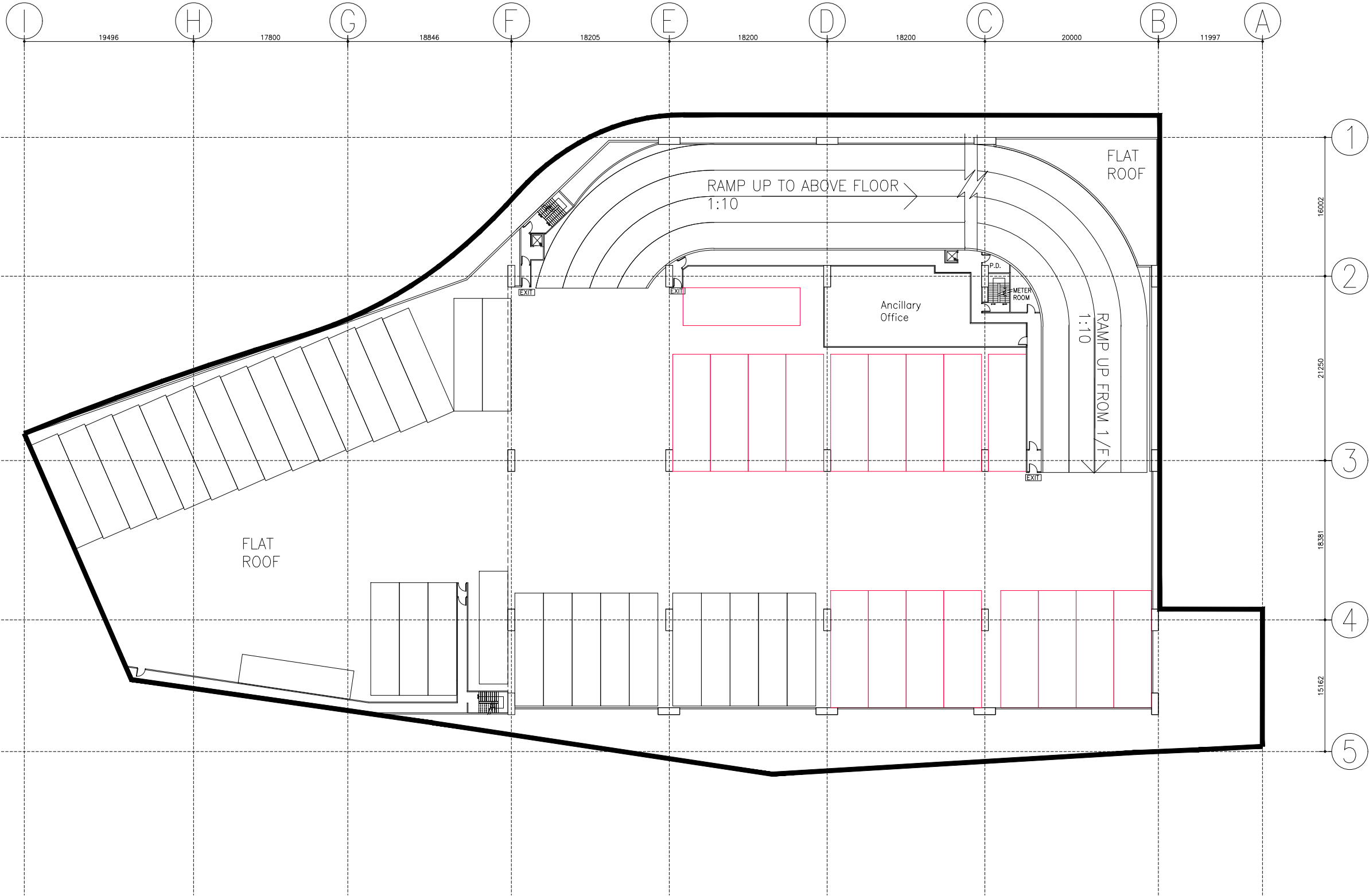
DRAWN BY: CC

CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: AA04



LEGEND

- Maintenance Bay  
(13500mm x 4350mm)
- Parking Space  
(13000mm x 3300mm)

2/F



- NOTES AND CONDITIONS:
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REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

FRUIT  
DESIGN &  
BUILD LTD

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Wan Chai, Hong Kong

T | +852 3188 5595    F | +852 3188 5958

PROJECT:

TMCLK DEPOT

DRAWING TITLE :

3/F-10/F LAYOUT (SITE A)

SCALE: 1:500

DATE: 13/09/2021

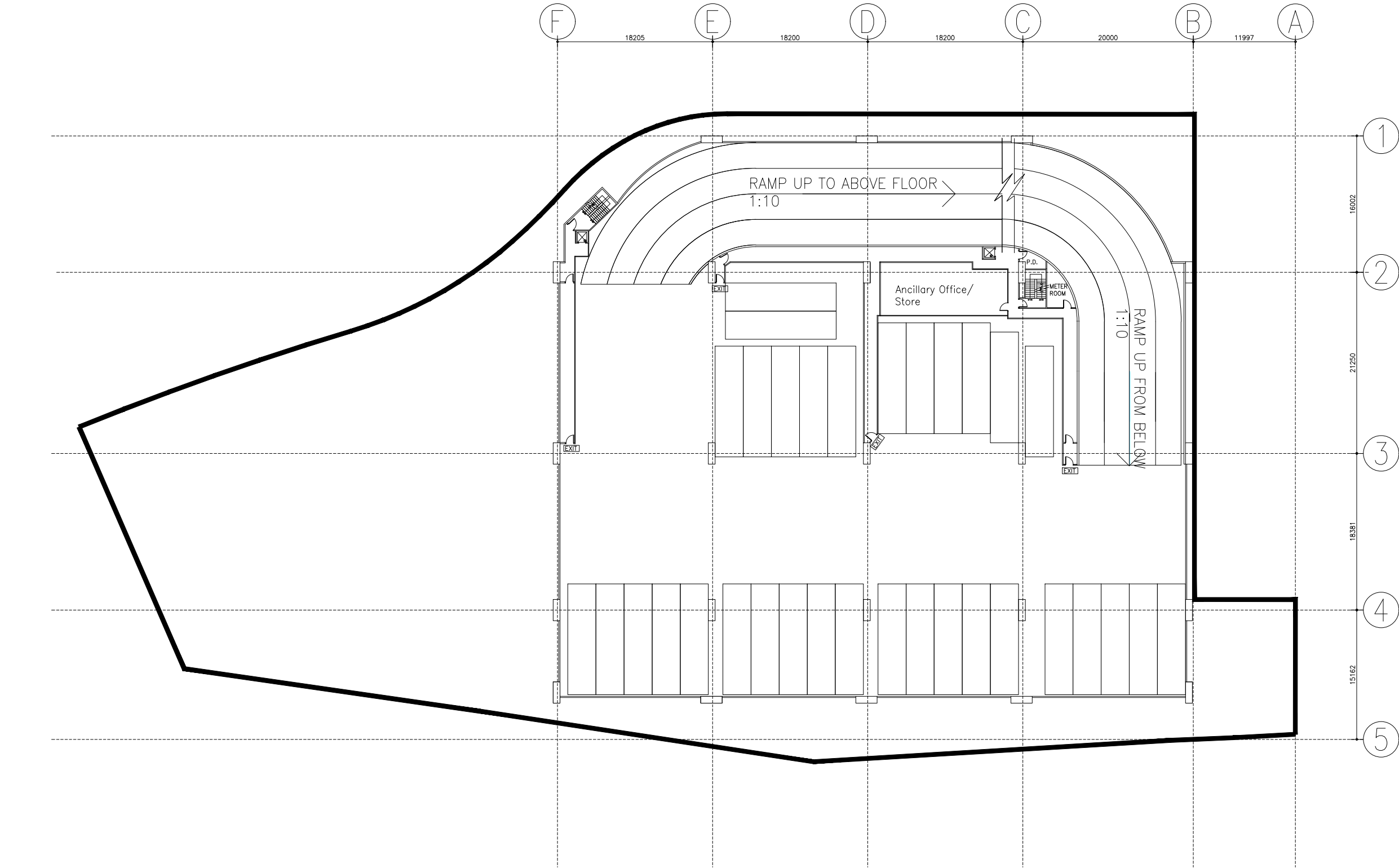
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CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: AA05



LEGEND

- Maintenance Bay  
(13500mm x 4350mm)
- Parking Space  
(13000mm x 3300mm)

3/F-10/F



- NOTES AND CONDITIONS:
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REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

FRUIT  
DESIGN &  
BUILD LTD

A member of FDB Holdings Limited

A | 6/F, The Sun's Group Centre, 200 Gloucester Road,  
Wan Chai, Hong Kong

T | +852 3188 5595    F | +852 3188 5958

PROJECT:

TMCLK DEPOT

DRAWING TITLE :

R/F LAYOUT (SITE A)

SCALE: 1:500

DATE: 13/09/2021

DRAWN BY: CC

CHECKED BY: NC

APPROVED BY: -

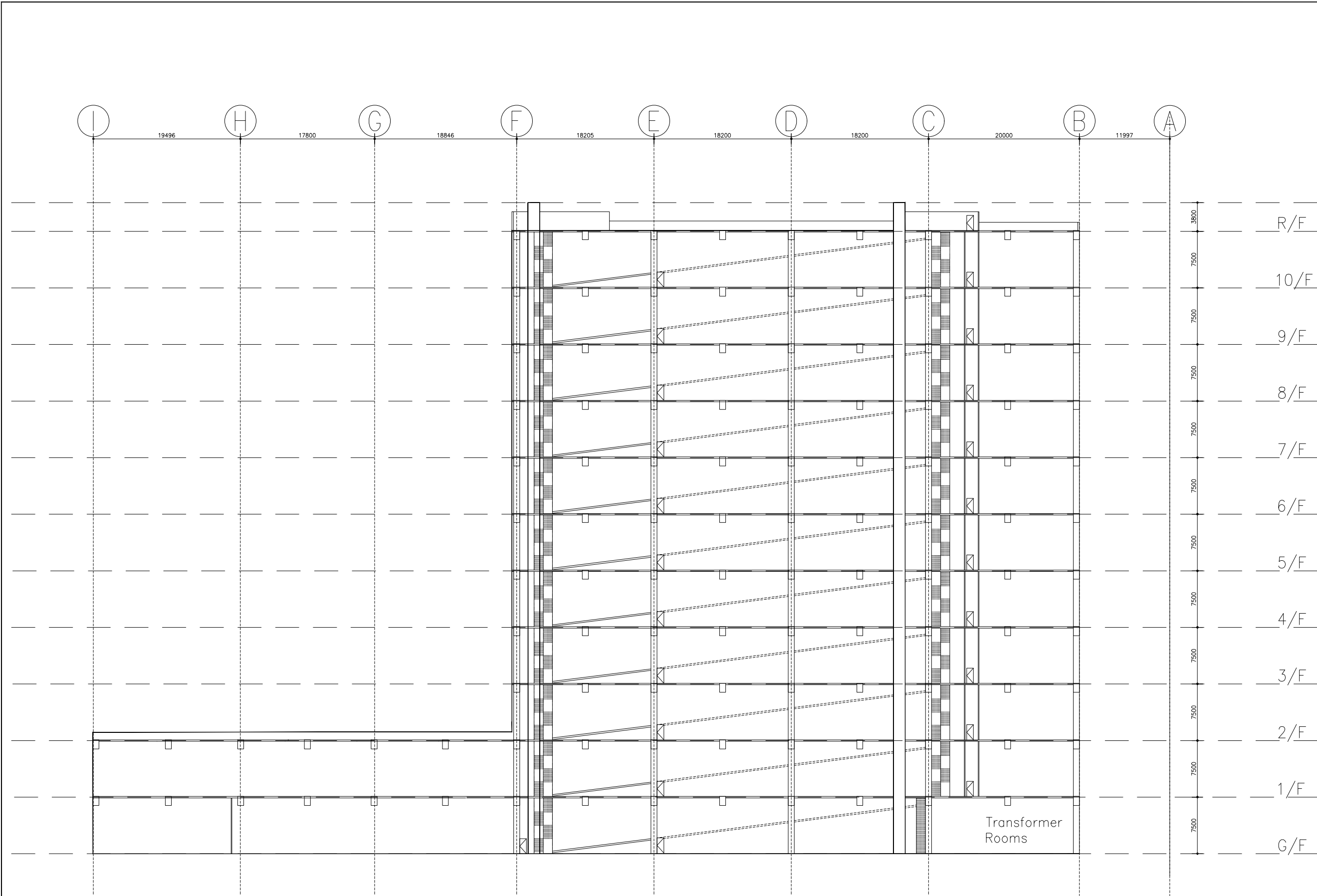
JOB. NO.: FDB-P-21031

DWG. NO.: AA06

LEGEND

- Maintenance Bay  
(13500mm x 4350mm)
- Parking Space  
(13000mm x 3300mm)

R/F



SECTION A-A

- NOTES AND CONDITIONS:
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REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

**FRUIT  
DESIGN &  
BUILD LTD**

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Wan Chai, Hong Kong

T | +852 3188 5995 F | +852 3188 5998

PROJECT:

TMCLK DEPOT

DRAWING TITLE :

SECTION A-A (SITE A)

SCALE: 1:500

DATE: 13/09/2021

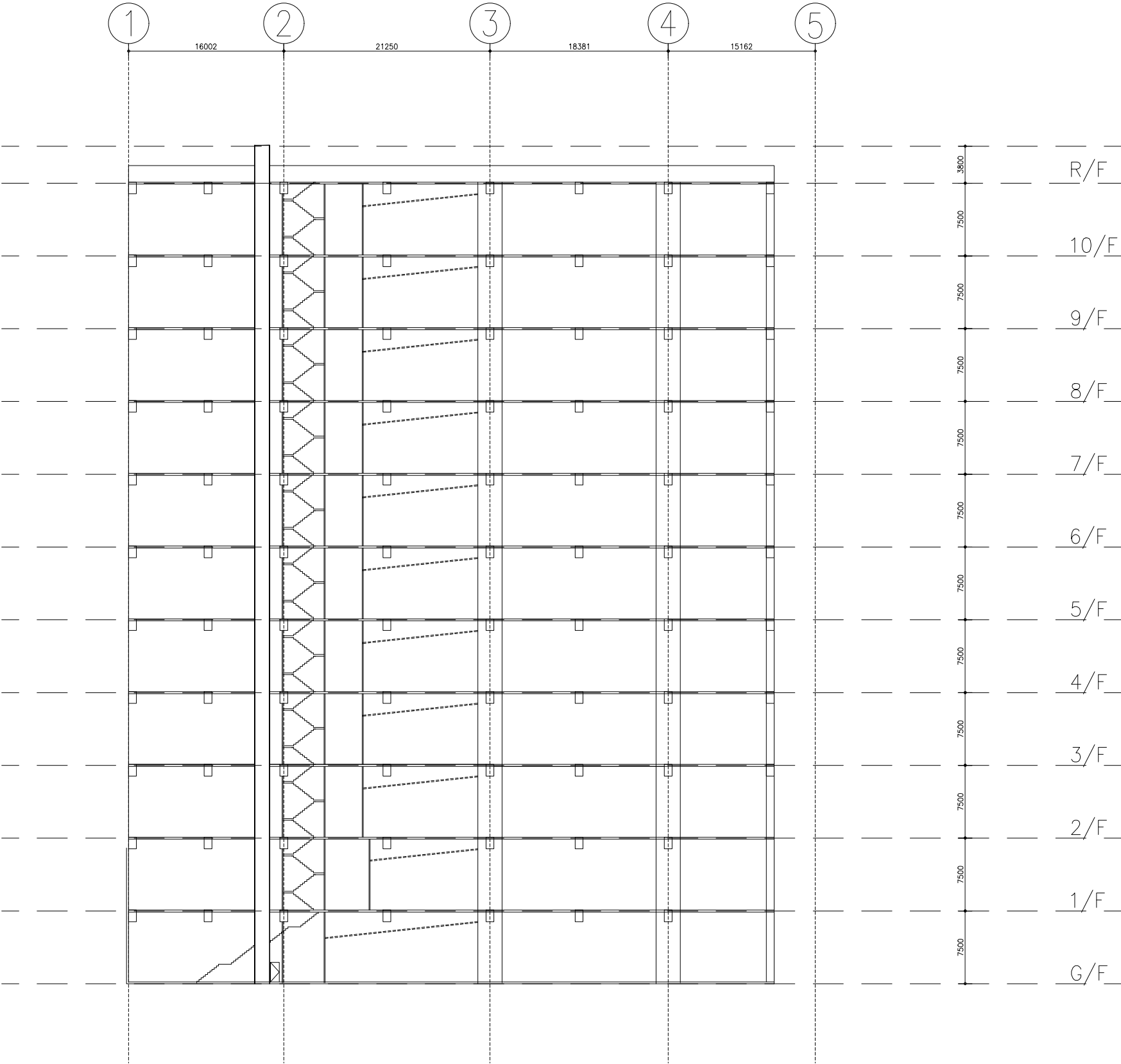
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CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: ST01



SECTION B-B

- NOTES AND CONDITIONS:
1. ALL DESIGNS ARE THE PROPERTY OF FRUIT DESIGN AND BUILD AND CANNOT BE USED WITHOUT THEIR WRITTEN PERMISSION.
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REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

**FRUIT  
DESIGN &  
BUILD LTD**

A member of FDB Holdings Limited

A | 6/F, The Sun's Group Centre, 200 Gloucester Road,  
Wan Chai, Hong Kong

T | +852 3188 5955    F | +852 3188 5958

PROJECT:

TMCLK DEPOT

DRAWING TITLE :

SECTION B-B (SITE A)

SCALE: 1:500

DATE: 13/09/2021

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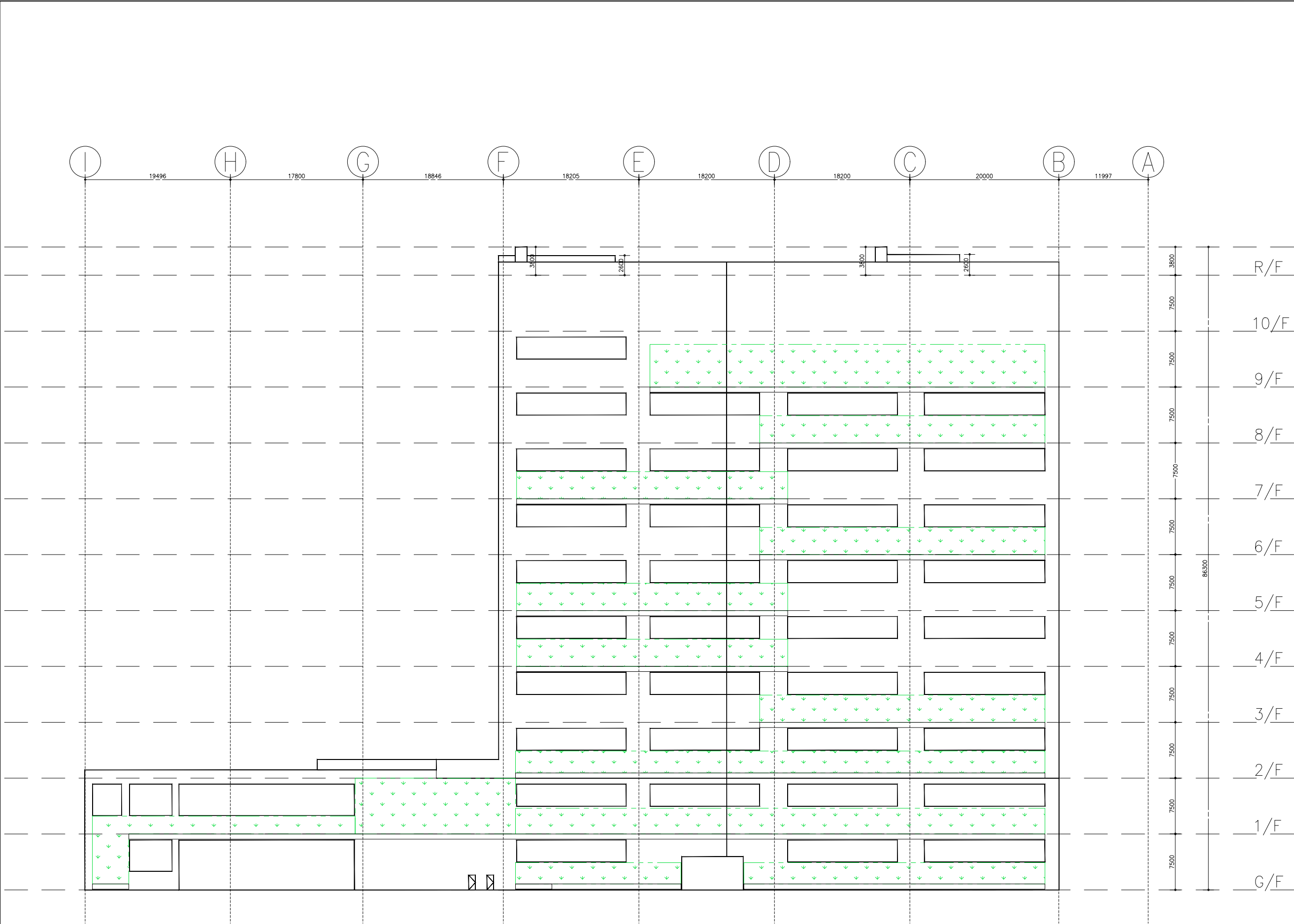
CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: ST02





SOUTH-EAST ELEVATION

- NOTES AND CONDITIONS:
1. ALL DESIGNS ARE THE PROPERTY OF FRUIT DESIGN AND BUILD AND CANNOT BE USED WITHOUT THEIR WRITTEN PERMISSION.
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REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

**FRUIT  
DESIGN &  
BUILD LTD**

A member of FDB Holdings Limited

A | 6/F, The Sun's Group Centre, 200 Gloucester Road,  
Wan Chai, Hong Kong

T | +852 3188 5955    F | +852 3188 5958

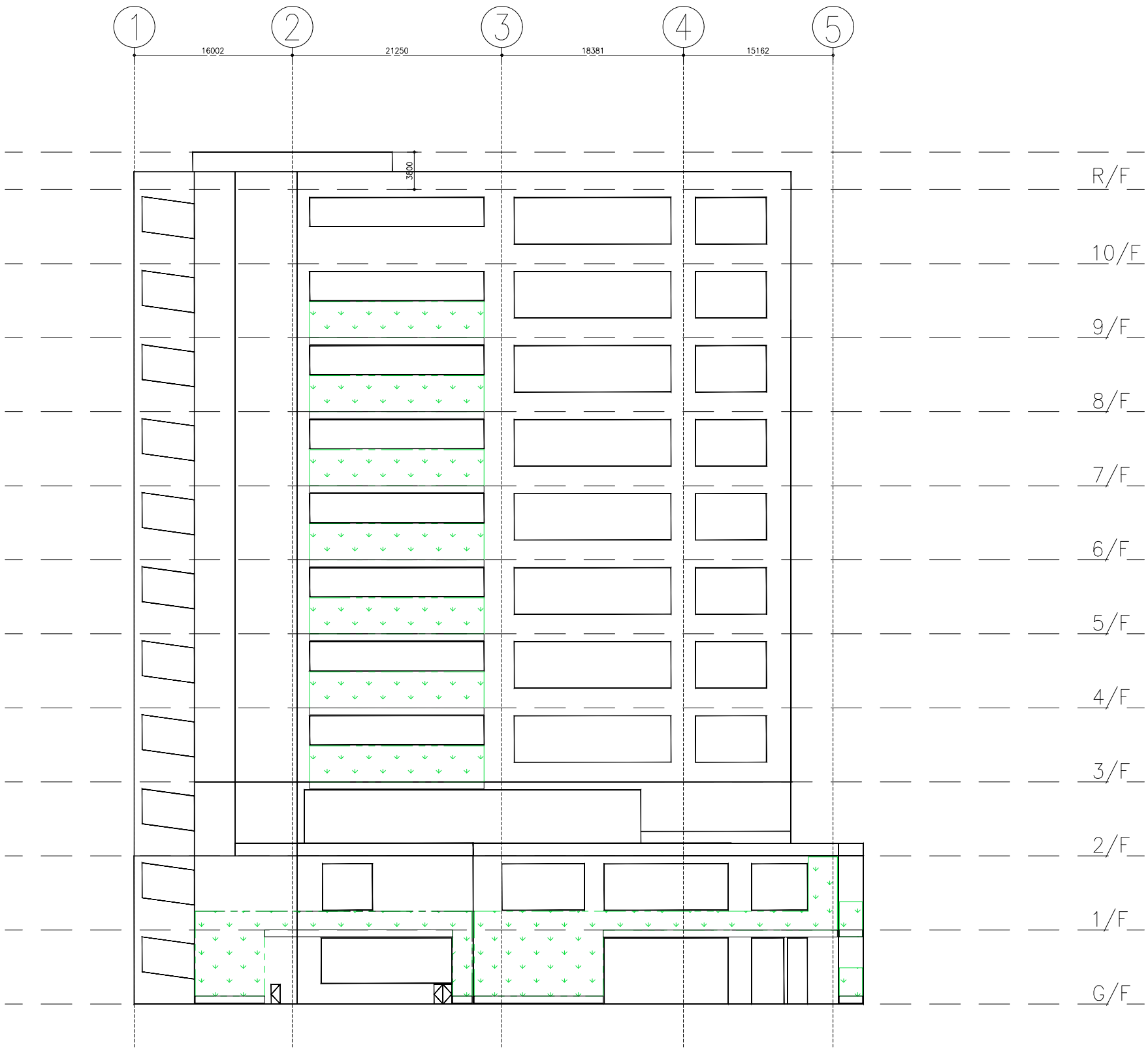
PROJECT:

TMCLK DEPOT

DRAWING TITLE :

SOUTH-EAST ELEVATION (SITE A)

SCALE:	1:500
DATE:	13/09/2021
DRAWN BY:	CC
CHECKED BY:	NC
APPROVED BY:	-
JOB. NO.:	FDB-P-21031
DWG. NO.:	EL01



SOUTH-WEST ELEVATION

NOTES AND CONDITIONS:  

1. ALL DESIGNS ARE THE PROPERTY OF FRUIT DESIGN AND BUILD AND CANNOT BE USED WITHOUT THEIR WRITTEN PERMISSION.

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REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

FRUIT  
DESIGN &  
BUILD LTD

A member of FDB Holdings Limited

A | 6/F, The Sun's Group Centre, 200 Gloucester Road,  
Wan Chai, Hong Kong

T | +852 3188 5955     F | +852 3188 5958

PROJECT:

TMCLK DEPOT

DRAWING TITLE :

SOUTH-WEST ELEVATION (SITE A)

SCALE:     1:500

DATE:        13/09/2021

DRAWN BY:    CC

CHECKED BY: NC

APPROVED BY:-

JOB. NO.:    FDB-P-21031

DWG. NO.:   EL02



NORTH-EAST ELEVATION

- NOTES AND CONDITIONS:
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REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

**FRUIT  
DESIGN &  
BUILD LTD**

A member of FDB Holdings Limited

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PROJECT:

TMCLK DEPOT

DRAWING TITLE :

NORTH-EAST ELEVATION (SITE A)

SCALE: 1:500

DATE: 13/09/2021

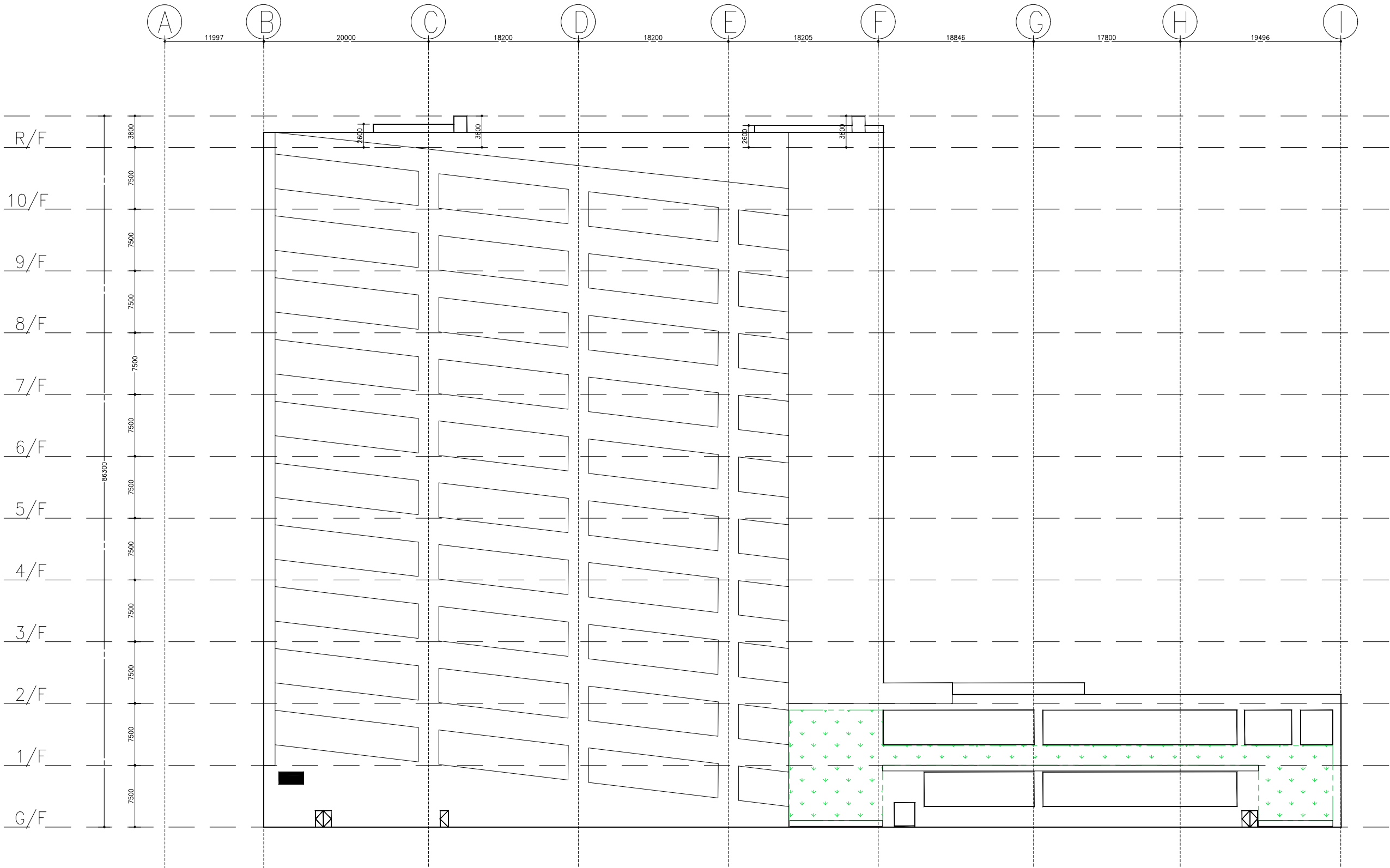
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CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: EL03



NORTH-WEST ELEVATION

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REV	DESCRIPTION	DATE

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PROJECT:

TMCLK DEPOT

DRAWING TITLE:

NORTH-WEST ELEVATION (SITE A)

SCALE: 1:500

DATE: 13/09/2021

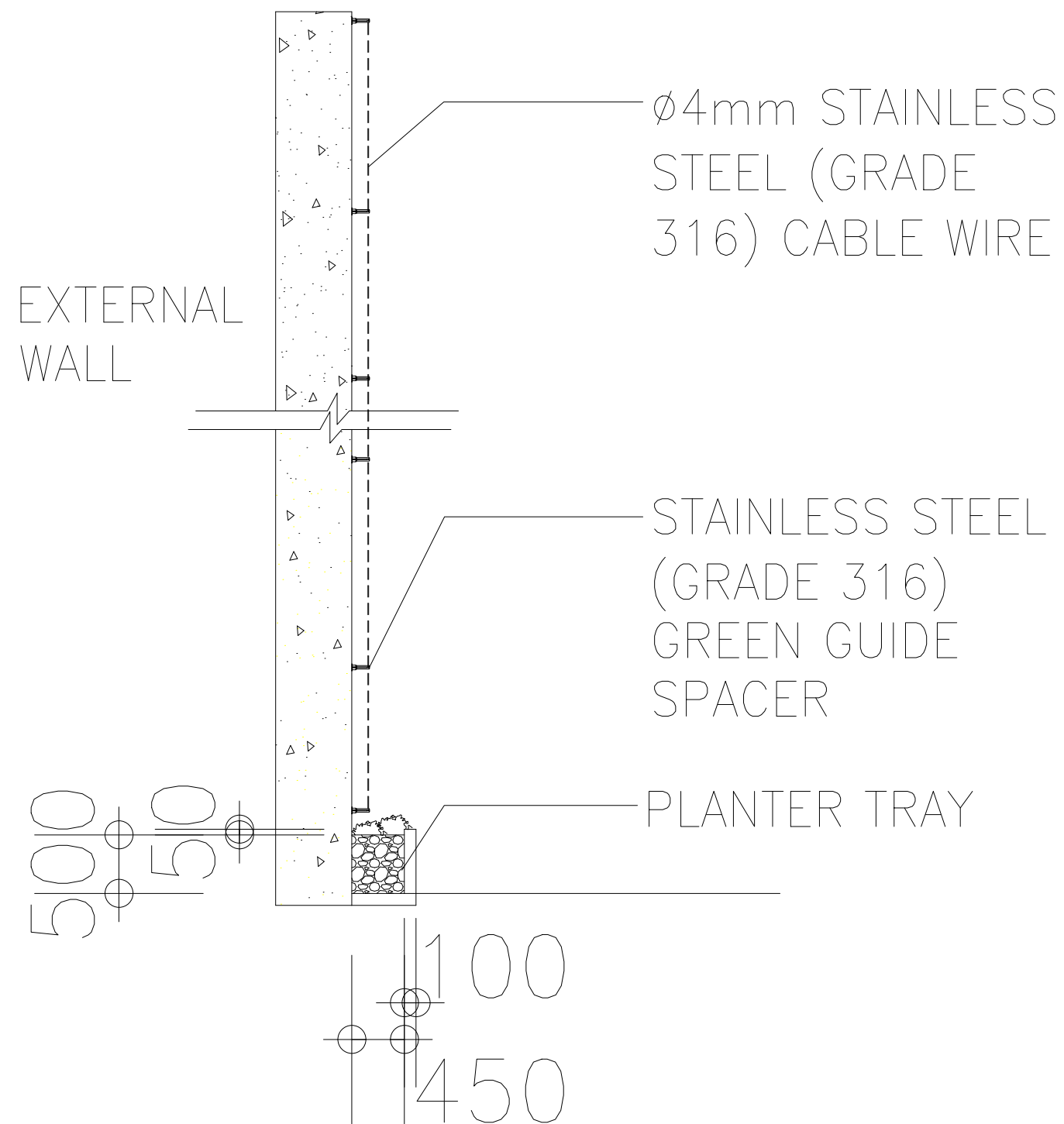
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APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: EL04



## DETAIL OF VERTICAL GREENING

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REV	DESCRIPTION	DATE
A	REVISED DETAILS	12 NOV 2021

CLIENT:

BUILDING CONSULTANT:

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PROJECT:

TMCLK DEPOT

DRAWING TITLE :

DETAIL OF VERTICAL GREENING

SCALE: 1:50

DATE: 13/09/2021

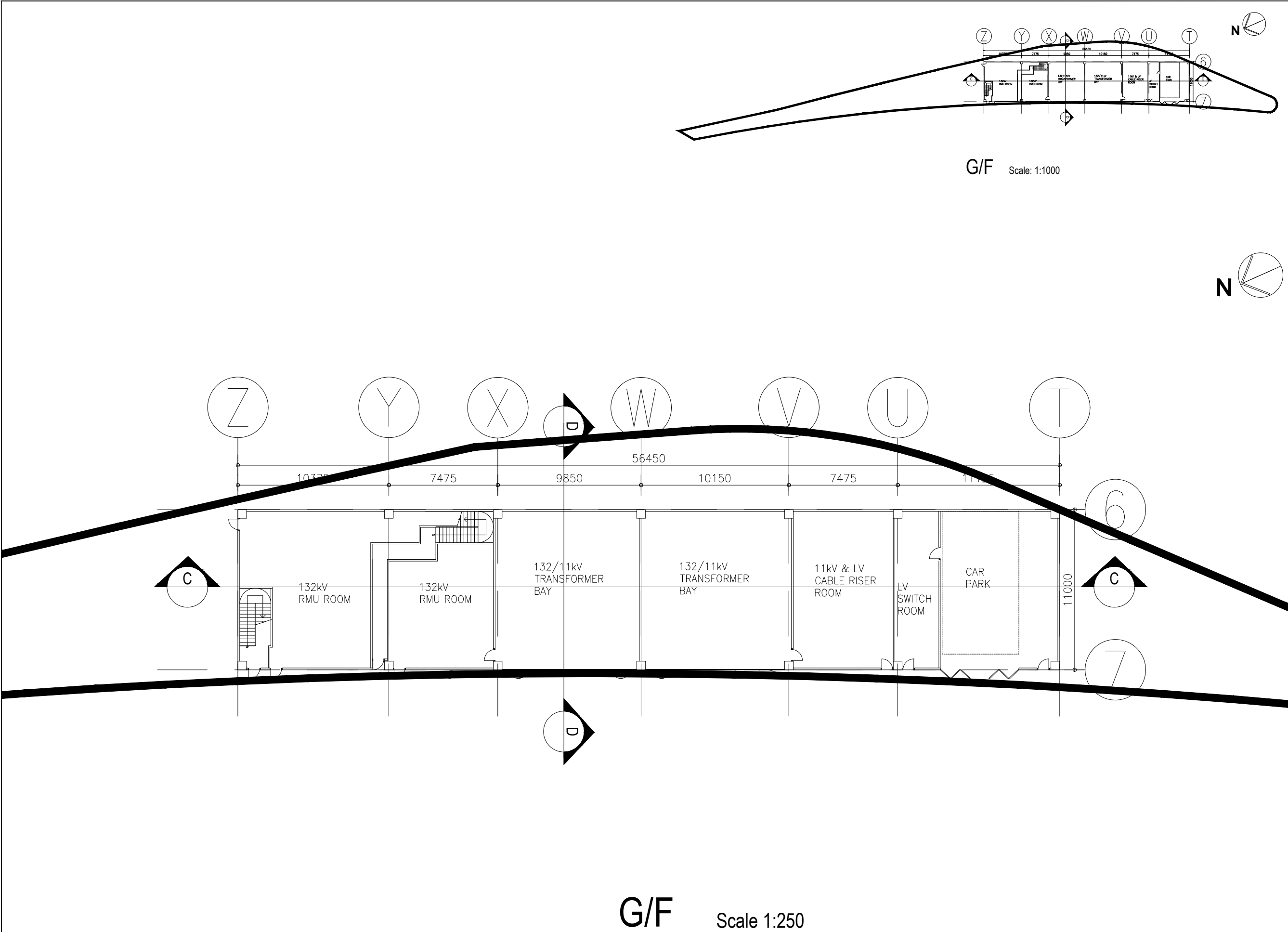
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CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: DD01



G/F Scale 1:250

G/F Scale: 1:1000

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REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

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BUILD LTD**

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PROJECT:

TMCLK DEPOT

DRAWING TITLE :

G/F LAYOUT (SITE B)

SCALE: As stated

DATE: 13/09/2021

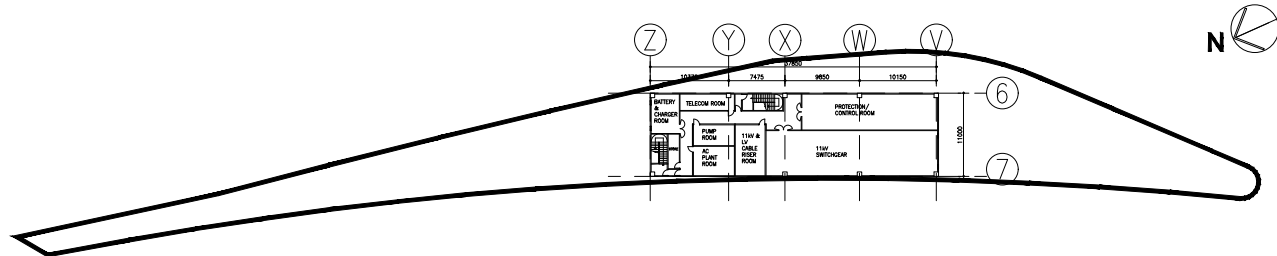
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APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: AA07



1/F Scale: 1:1000

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PROJECT:

TMCLK DEPOT

DRAWING TITLE:

1/F LAYOUT (SITE B)

SCALE: 1:250

DATE: 13/09/2021

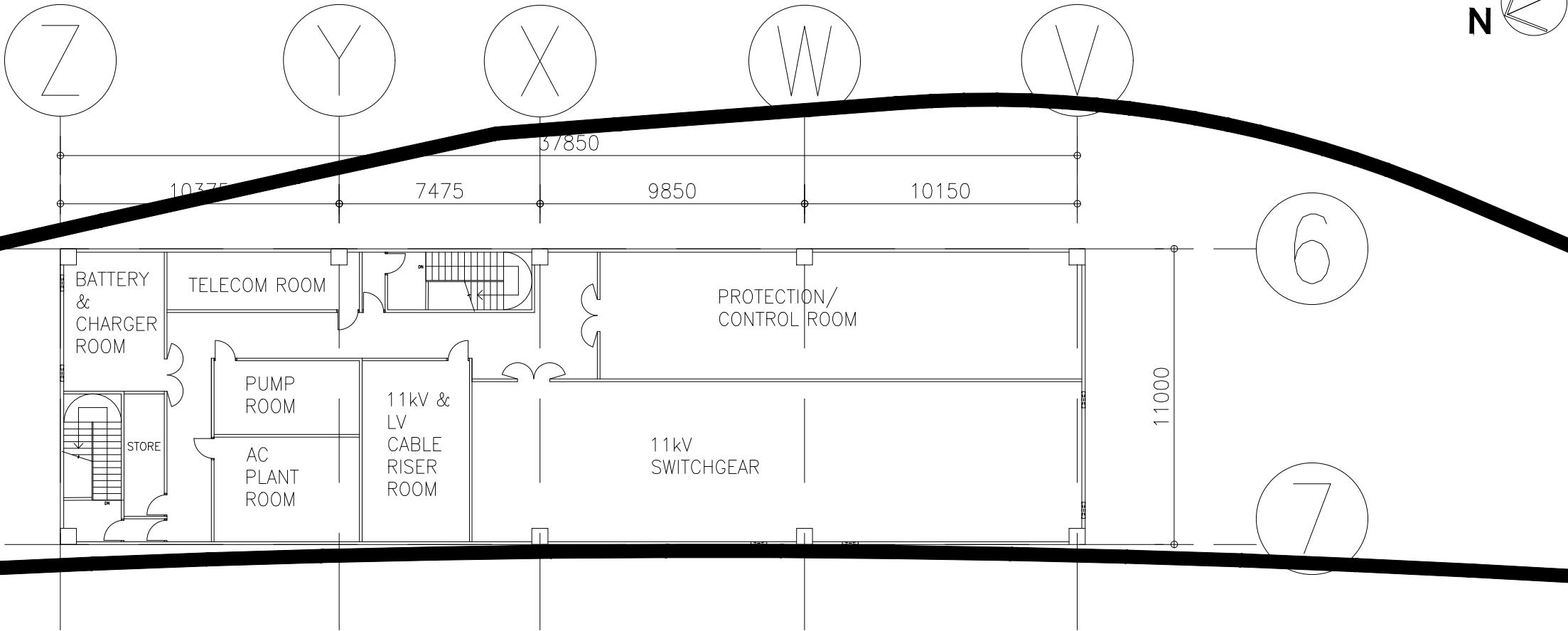
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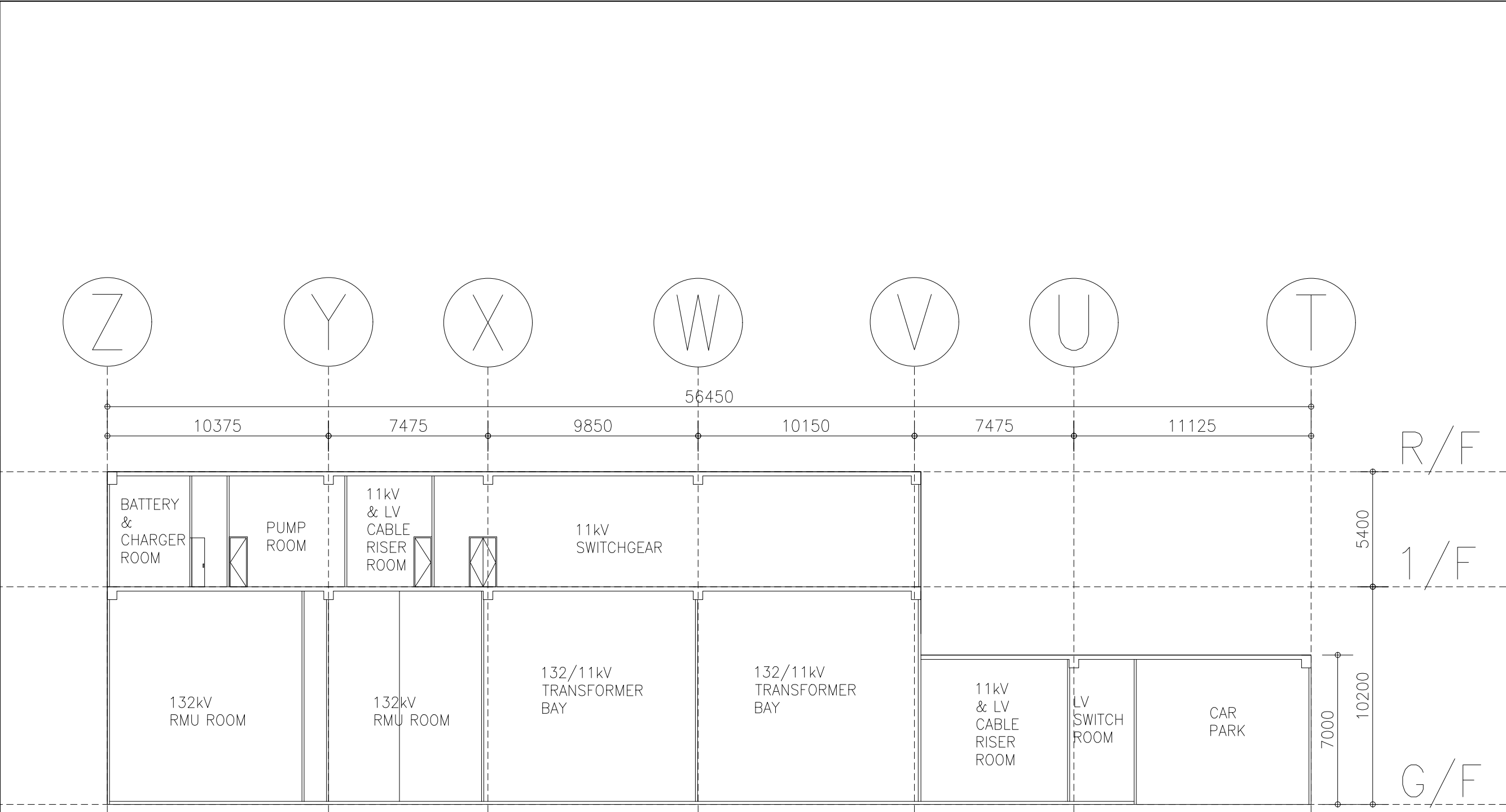
JOB. NO.: FDB-P-21031

DWG. NO.: AA08



1/F Scale 1:250





SECTION C-C

NOTES AND CONDITIONS:

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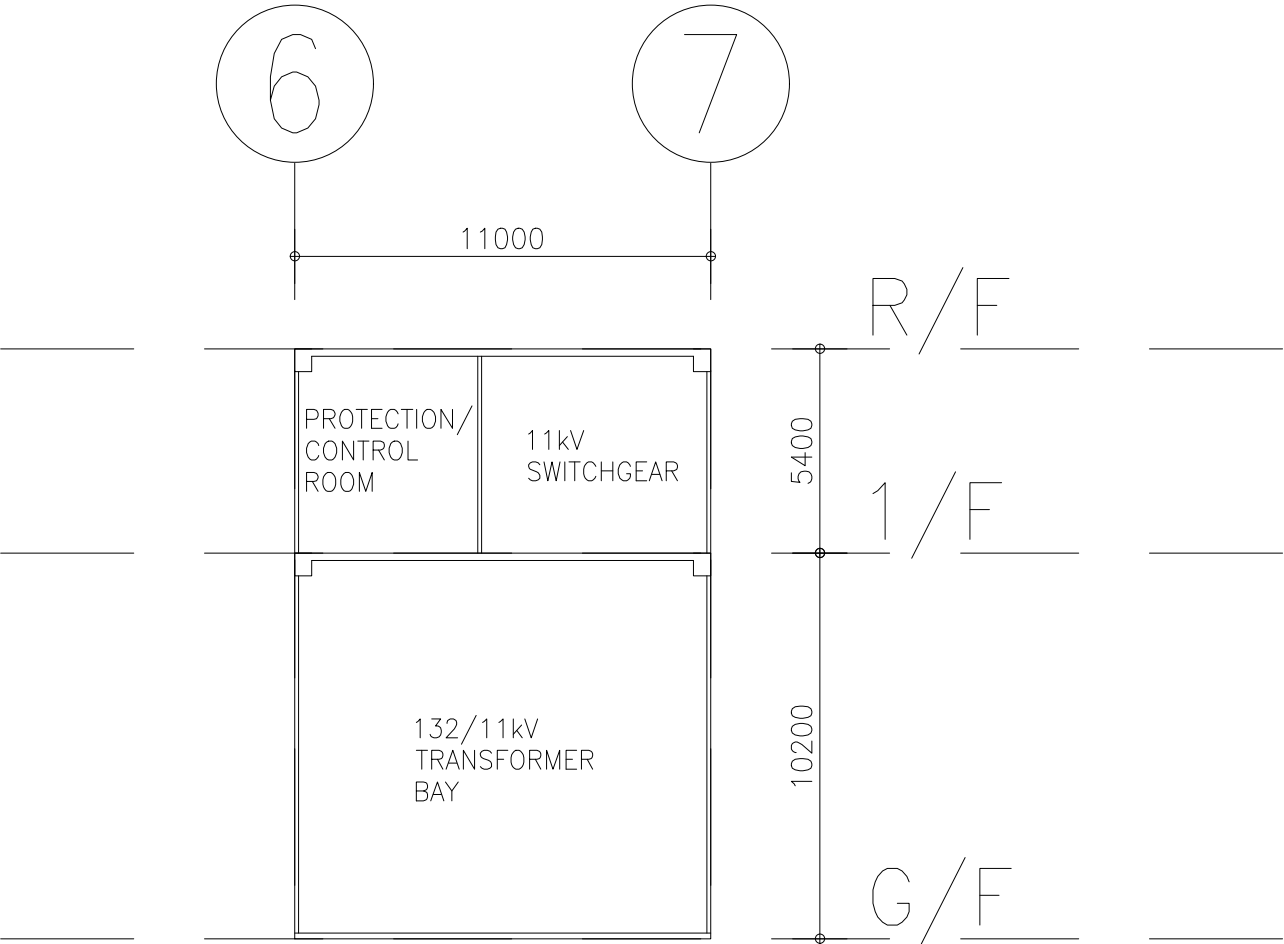
PROJECT :

TMCLK DEPOT

DRAWING TITLE :

SECTION C-C (SITE B)

SCALE:	1:200
DATE:	13/09/2021
DRAWN BY:	CC
CHECKED BY:	NC
APPROVED BY:	-
JOB. NO.:	FDB-P-21031
DWG. NO.:	ST03



SECTION D-D

- NOTES AND CONDITIONS:
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REV	DESCRIPTION	DATE

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PROJECT:

TMCLK DEPOT

DRAWING TITLE :

SECTION D-D (SITE B)

SCALE: 1:200

DATE: 13/09/2021

DRAWN BY: CC

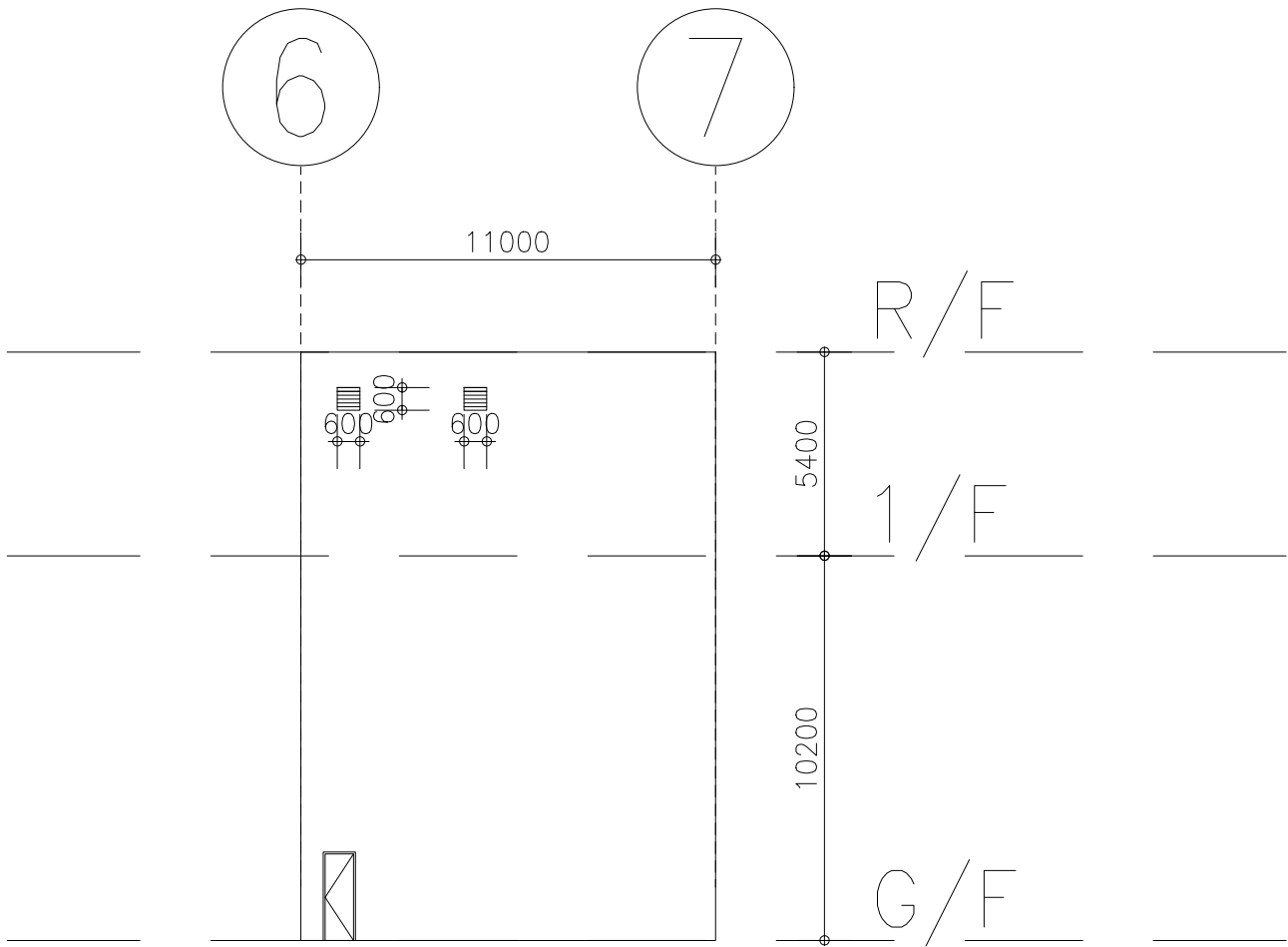
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DWG. NO.: ST04





NORTH-EAST ELEVATION

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PROJECT:

TMCLK DEPOT

DRAWING TITLE :

NORTH-EAST ELEVATION (SITE B)

SCALE: 1:250

DATE: 13/09/2021

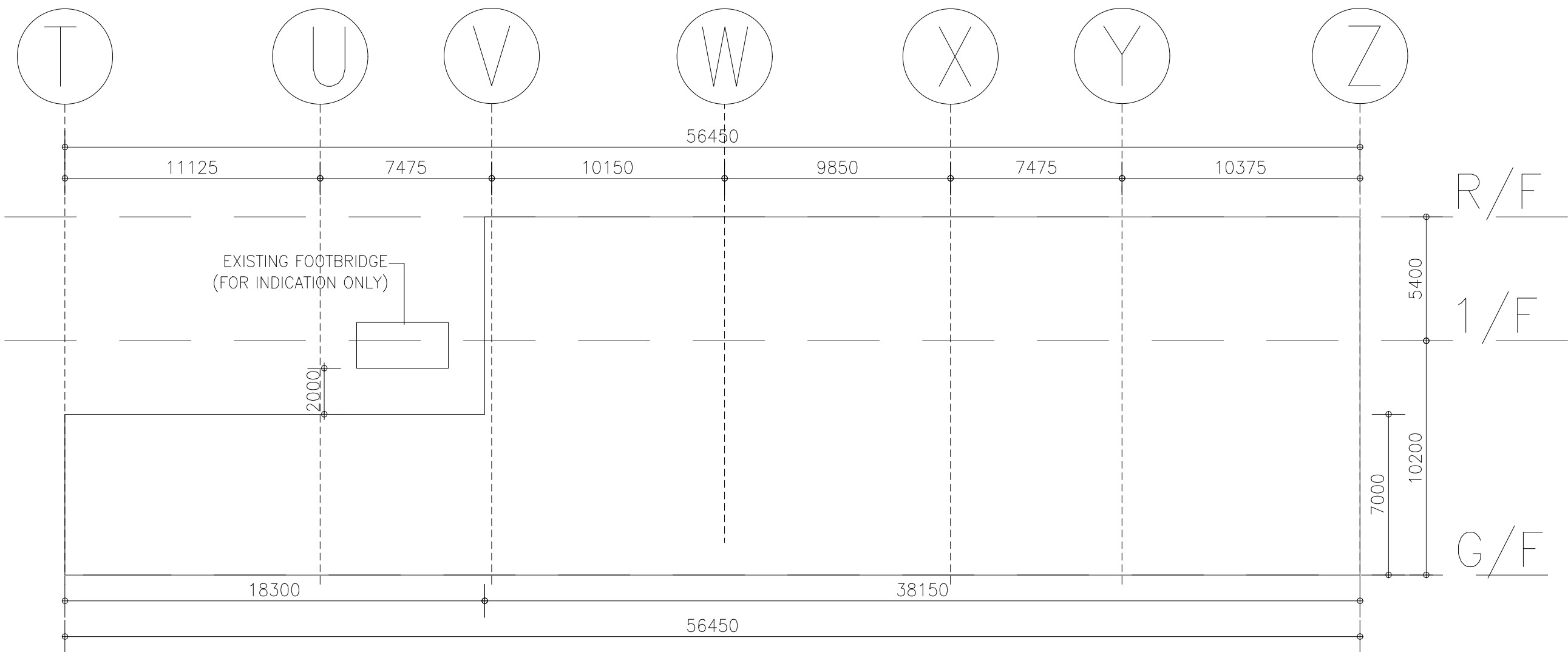
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APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: EL06



SOUTH-EAST ELEVATION

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REV	DESCRIPTION	DATE

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PROJECT:

TMCLK DEPOT

DRAWING TITLE :

SOUTHEAST ELEVATION (SITE B)

SCALE: 1:200

DATE: 13/09/2021

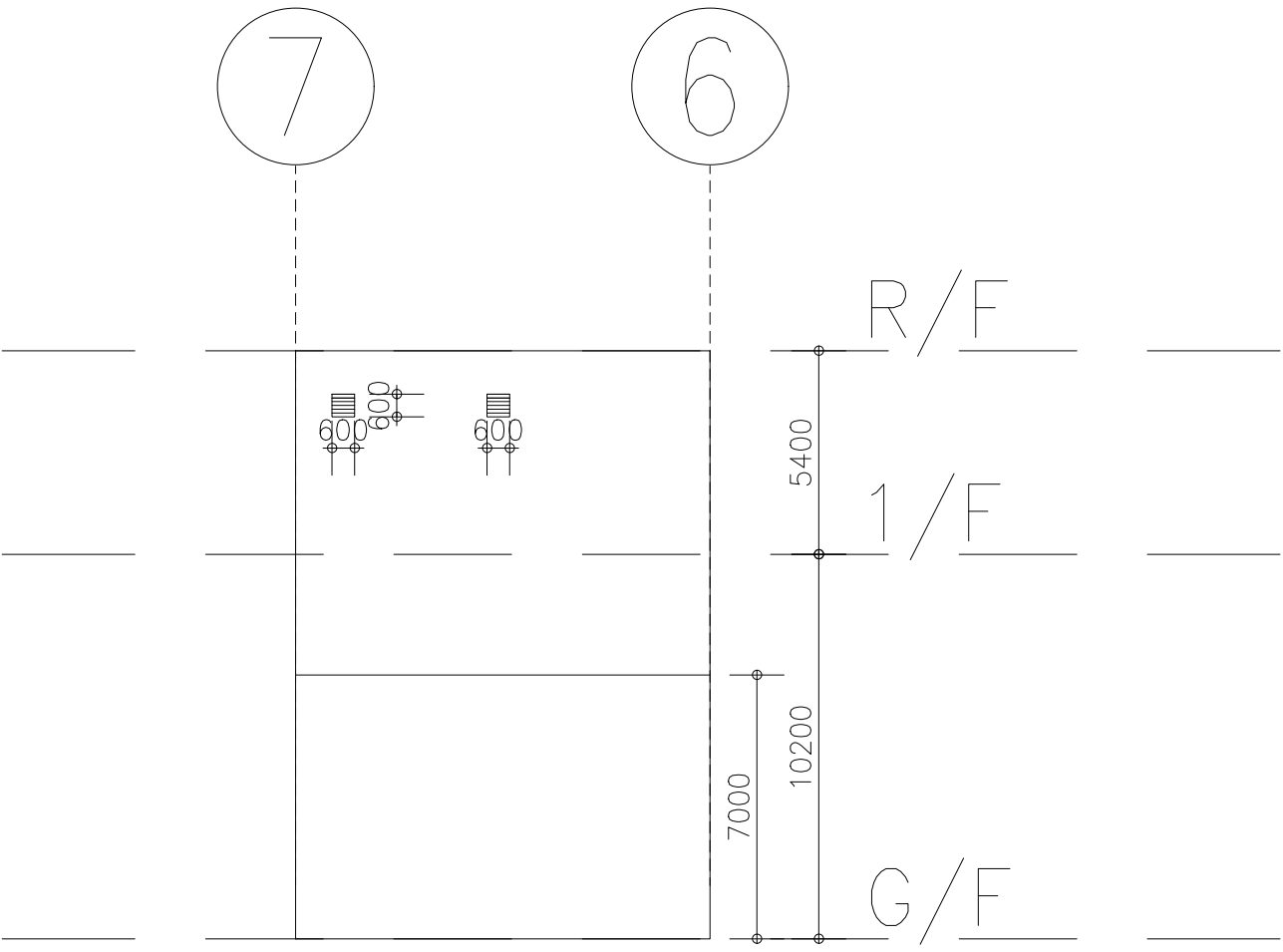
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APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: EL07



SOUTH-WEST ELEVATION

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PROJECT:

TMCLK DEPOT

DRAWING TITLE :

SOUTHWEST ELEVATION (SITE B)

SCALE: 1:200

DATE: 13/09/2021

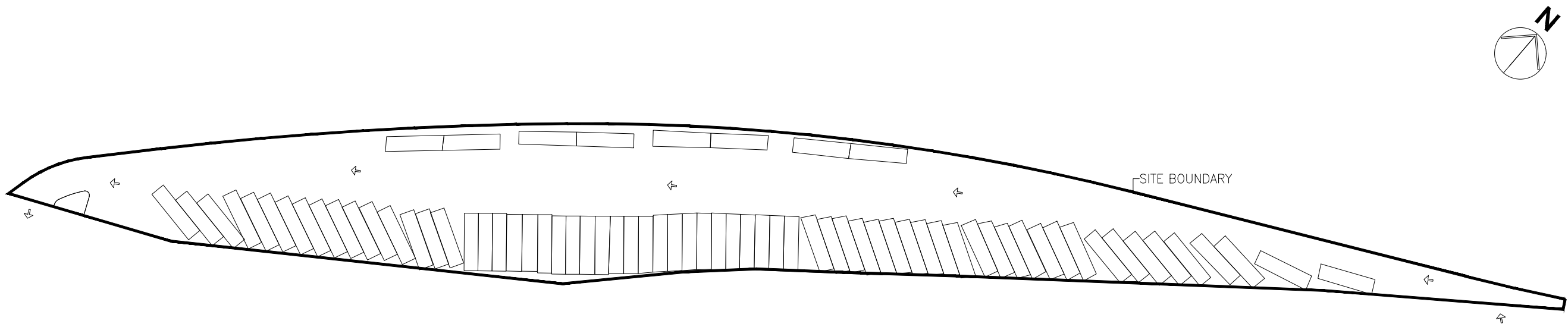
DRAWN BY: CC

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JOB. NO.: FDB-P-21031

DWG. NO.: EL08



LEGEND



Parking Space  
(13000mm x 3250mm)

G/F

- NOTES AND CONDITIONS:
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PROJECT:

TMCLK DEPOT

DRAWING TITLE :

G/F LAYOUT (SITE C)

SCALE: 1:1000

DATE: 13/09/2021

DRAWN BY: CC

CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: AA09



Issue No. : 3  
Issue Date : December 2021  
Project No. : 1906



## **LANDSCAPE AND VISUAL IMPACT ASSESSMENT & LANDSCAPE PROPOSAL**

**FOR**

## **MULTI-STOREY DEPOT FOR ELECTRIC BUSES AT TUEN MUN – CHEK LAP KOK LINK FREE-UP AREA**

Prepared by

Allied Environmental Consultants Limited

**COMMERCIAL-IN-CONFIDENCE**

**Allied Environmental Consultants Limited**

Member of AEC Group (HKEX Stock Code: 8320.HK)

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**沛然環境評估工程顧問有限公司**

沛然環保集團成員 ( 港交所股份代號 : 8320.HK )

香港灣仔告士打道 160 號海外信託銀行大廈 27 樓

## Document Verification



<b>Project Title</b>			Multi-Storey Depot for Electric Buses at Tuen Mun – Chek Lap Kok Link Free-up Area	<b>Project No.</b> 1906	
<b>Document Title</b>			Landscape and Visual Impact Assessment & Landscape Proposal		
<b>Issue No.</b>	<b>Issue Date</b>	<b>Description</b>	<b>Prepared by</b>	<b>Checked by</b>	<b>Approved by</b>
Issue 1	May 2021	1st Submission	Various	Cathy Man	Grace Kwok
Issue 1 (Rev.1)	July 2021	1st Submission	Various	Cathy Man	Grace Kwok
Issue 2	Oct 2021	2nd Submission	Various	Cathy Man	Grace Kwok
Issue 3	Nov 2021	3rd Submission	Various	Cathy Man	Grace Kwok

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### 沛然環境評估工程顧問有限公司

沛然環保集團成員 (港交所股份代號: 8320.HK)

香港灣仔告士打道 160 號海外信託銀行大廈 27 樓

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Figure 5 Visual Envelop and Key Public Viewpoints

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Appendix A Landscape Master Plan

Appendix B Correspondence from PlanD

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Appendix D Master Layout Plan of the Proposed Development

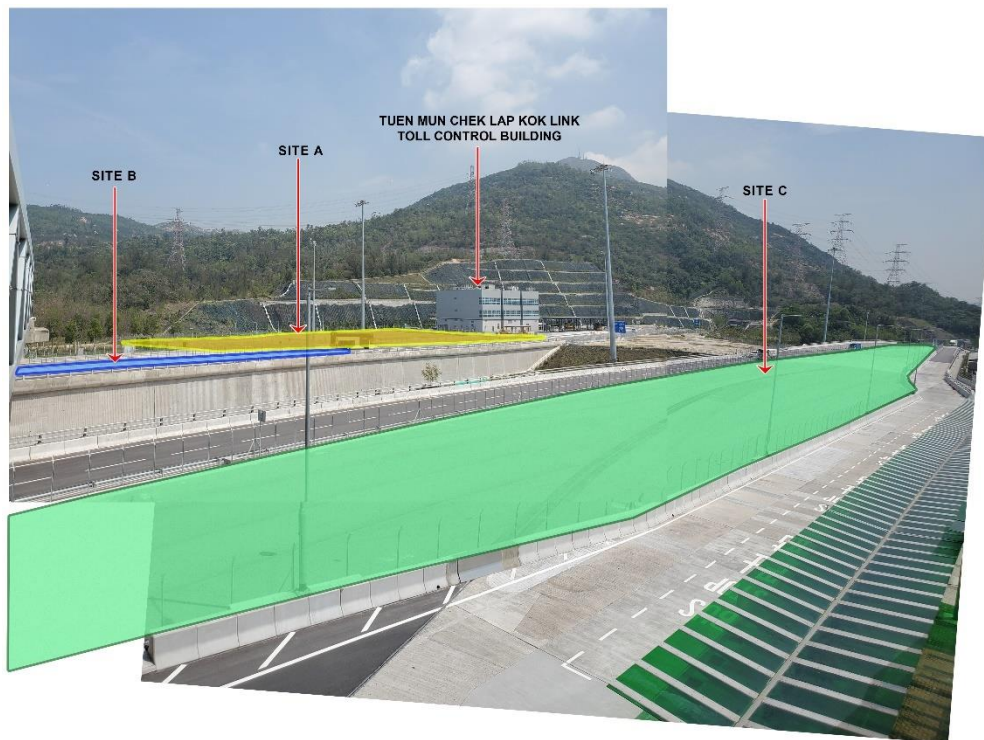
# 1. Introduction

## 1.1. Background

- 1.1.1. Allied Environmental Consultants Limited (AEC) was commissioned by the Kowloon Motor Bus Company (1933) Limited (KMB) to prepare the landscape and visual impact assessment & landscape proposal to support of Section 16 Planning Application for proposed bus depots with ancillary public utility installation (hereafter referred to as the “Proposed Development”) of Tuen Mun – Chek Lap Kok Link (TMCLKL) Free Up Area (hereafter referred to as the “Project Sites”).
- 1.1.2. This report has been prepared with consideration of site characteristics, architectural design and proposed site usage.

## 1.2. Site Description

- 1.2.1. The Project Sites including Sites A, B, and C are all designated as “Road” on the approved Tuen Mun outline Zoning Plan (“OZP”) No. S/TM/35 in as shown in **Figure 1**. KMB intends to develop Site A into a 11-storey (86.3m) depot for electric buses (“eBus”). Site B will be used for a 2-storey (15.6m) power substation. Site C, which is situated on top of elevated highway structures, will be used to provide charging-enabling bus parking bays. **Figure 2A** and **Figure 2B** show the locations of the Project Sites and their surroundings.
- 1.2.2. Project Sites A, B, and C are currently all vacant lands located adjacent to the Toll Control Building of the Chek Lap Kok Link. Figure 3 shows the existing conditions of the three sites.



**Figure 3 Project Sites looking from the pedestrian footbridge over the Chek Lap Kok Link**

- 1.2.3. The Project Sites are currently an open ground with no trees within the Lot. The conservation trees is not an issue at this site.
- 1.2.4. Site A has an area of 7,926 m<sup>2</sup>. It is fronting the TMCLKL northbound traffic on its southeastern edge. To its northeast is the TMCLKL Toll Control Building and a bus interchange is about 50m to its southwest. A man-made slope backs the Site with combination of vine and shrubs planting at the toe of the slope.
- 1.2.5. Site B has an area of 1,321 m<sup>2</sup>. It is a tear drop shaped piece of land located in between the TMCLK northbound traffic lanes and the bus stop. The Site is proposed for housing the future 132kV power sub-station.
- 1.2.6. Site C has an area of 7,598 m<sup>2</sup>. It is an open area located in between the TMCLK southbound traffic lanes and the bus stop. The Site is proposed for charging-enabling bus parking bays.

- 1.2.7. Based on the best available information from Development Permission Area Plans, Outline Development Plans, Layout Plans and other relevant published and uses plan by Lands Department or Planning Department, no committed or planned developments are identified in the vicinity of the Project Sites. As advised by Planning Department (PlanD), the consultant has visited the Town Planning Board Statutory Planning Portal 2 to obtain records for land zoning. The website as of 8 October 2021 has confirmed that there are no planning applications has been made at the vicinity, which implies no committed or planned developments. Correspondence from PlanD can be referred to in **Appendix B**.



## **2. Environmental Impact Assessment Ordinance (EIAO)**

### **Implications**

- 2.1.1. As a multi-storey depot and supporting facilities for electric buses are proposed at the Project Sites, a Designated Project (DP) under Schedule 2, Part I, Category A.6 of the EIAO has been considered:
- 2.1.2. Category A.6 of the EIAO has been considered: Category A.6: A transport depot located less than 200 m from the nearest boundary of an existing or planned---
- (a) residential area;
  - (b) place of worship;
  - (c) educational institution; or
  - (d) health care institution.
- 2.1.3. With reference to the Development Permission Area Plans, Outline Development Plans, Layout Plans and other relevant published land uses plan by Lands Department or Planning Department, neither residential area, place of worship, educational institution, nor health care institution is identified or will be planned within 200m from Project Site boundary. Therefore, the proposed bus depot does not constitute DP under EIAO and Environmental Permit (EP) is not required for this Project.

## **3. Landscape and Visual Impact Assessment**

### **3.1. Existing Landscape and Visual Conditions**

- 3.1.1. The Project Sites, inclusive of Sites A, B and C, currently comprise of concrete and asphalt pavement only and do not contain any vegetation. The Sites are situated at the urban fringe of Tuen Mun and the surroundings of the Sites comprise of large areas of highways and associated artificial slopes. The northwest of the Sites comprise of vegetated hills zoned as “Green Belt” To the southeast of the Sites is a strip of industrial waterfront land running sawmill operations.

- 3.1.2. A 500m study boundary has been defined for the landscape impact assessment. **Figure 2A** and **Figure 2B** show the 500m study area. Five Landscape Character Areas (LCAs) have been identified in **Figure 4** and briefly described below:
- 3.1.3. LCA1 – Hillside Woodland. About half of the landscape study area comprises of hillside woodland that slopes up towards the north up to Castle Peak. Part of these hills have been modified during the construction of the Pillar Point Range and the Tuen Mun Chek Lap Kok Tunnel Road.
- 3.1.4. LCA2 – Transport Corridor Landscape. About one-third of the landscape study area comprises of highways made up of the Tuen Mun Chek Lap Kok Tunnel Road and Lung Fu Road. These areas include large strips of retaining walls/slopes with limited roadside planting.
- 3.1.5. LCA3 – Urban Industrial Landscape. The waterfront strip largely comprises of low-rise industrial buildings mainly relating to sawmill operations. There are limited site and roadside plantings that exist within this area.
- 3.1.6. LCA4 – Institutional Landscape. There are some institutional sites towards the west side of the landscape study area and include the Customs and Excise Department, Drainage Services Department Pillar Point Sewage Treatment Works, and the EMSD Tuen Mun Vehicle Servicing Station. There are some areas of site and roadside planting in this area without particularly significant landscape value.
- 3.1.7. LCA5 – Inshore Water Landscape. The shoreline within the landscape study area is largely used for industrial operations and there is only a small strip of beach that is cut off from the Butterfly beach. This strip of coastal landscape also do not have particularly high landscape and ecological value.
- 3.1.8. The Landscape Resources (LRs) identified within the identified LCAs are shown in **Figure 4** and described below:
- LR1 – Hillside Vegetation. The forested hillsides have the most important landscape value within the landscape study area but also contain a large expanse of retaining walls/slopes. These disturbed and replanted areas tend to have limited landscape and ecological value prior to longer term restoration.
  - LR2 – Roadside Planting. Rather limited quantity and quality.
  - LR3 – Vegetation within LCA3. Limited quantity and quality.
  - LR4 – Vegetation within Institutional LCA4. Limited quantity and quality.
  - LR5 – Coastal Landscape – The hard edges of the engineered coastline and the very

limited landscape and ecological value.

3.1.9. The visual assessment methodology is made reference to the *Planning Board Guidelines on submissions of Visual Impact Assessment for Planning Applications to the Town Planning Board* (TGB PG-No. 41). The assessment area of the Visual Impact Assessment (VIA) covers the general view sheds formed by natural or man-made features such as ridgeline or buildings.

3.1.10. The key visual elements that could be seen from the site area include the vegetated hills to the north that has the ridgeline of Castle Peak as a backdrop, and the roadside vegetation as foreground. Towards the west and south are generally low-rise development and the open sky is generally visible. The ocean may also be seen from the coastline, upper stories of buildings, and from the higher elevations from the hills.

3.1.11. Three Key Public Viewpoints have been selected to illustrate the visual impacts of the proposed development to vehicular travelers on the Tuen Mun-Chek Lap Kok Link and the occupational viewers from the industrial area to the south of the development site. The three viewpoints are listed below. Key Public Viewers have been selected and shown in **Figure 5**.

- VP1 – taken from the east side of Site A to represent the development as seen by the southbound vehicular travelers;
- VP2 – taken from the south side of Sites A and B as seen by the northbound vehicular travelers;
- VP3 – taken from the east side of Sites A, B, and C as seen by the occupational viewers from the industrial area.

Note that Sites A and B can be directly seen from VP1 and VP2, while VP3 covers all three Project Sites. Since the proposal for Site C only includes charging-enabling bus parking bays, it is not expected to cause any significant visual impacts.

### 3.2. Possible Landscape and Visual Impacts

3.2.1. The expected sources of landscape and visual impact arising from the construction phase of the Project are as follows:

- Visual appearance of any temporary use prior to the development;
- Construction activities on the existing available land;
- Shadows casted onto vegetation adjacent to site; and
- Obstruction or intrusion into view by the development.

- 3.2.2. Since there is no existing vegetation on the Project Sites, the main landscape impacts of the project would stem from the disturbance of vegetation on the adjacent sites arising from the spreading of dust during construction and the shadows casted by the new construction. The impact of dust shall be properly controlled during construction while the casting of shadows will be a permanent impact for the vegetation to the north and northwest side of the new building, although this impact is expected to be quite limited. There is no expected landscape impact to the LCAs.
- 3.2.3. Temporary aesthetic concerns may arise from the construction activities and PME, which can be however minimized by using appropriate mitigation such as site hoarding.
- 3.2.4. There are no residences and recreational sites within the visual envelope and only a small number of occupational for the industrial and institutional viewers affected. The most impacted public viewers would include the north and south bound users of the Tuen Mun Chek Lap Kok Tunnel Road.
- 3.2.5. Photomontages illustrating the proposed development as seen from VP1, VP2, and VP3 are provided in **Appendix C**. The evaluation of visual impacts of the three VPs as illustrated by the three photomontages are given in the table below:

View Point (Distance from Site in metres)	Visual Composition	Visual Obstruction	Effect on Public Viewers	Effect on Visual Resources
<b>VP1 (50m)</b>	The proposed 11-storey building (Site A) and 2-storey power substation (Site B) is largely in keeping with the overall character of the surrounding infrastructural landscape.	The proposed development partially blocks the hills in the background and the open sky.	Although there are some blockage to the hills and open sky, the effect on public viewers are expected to be slight as the impacted viewers are largely vehicular travelers and the duration of impact is very short.	Partial blockage of the hills and open sky.
<b>VP2 (50m)</b>	The proposed 11-storey building (Site A) and 2-storey power substation	The proposed development partially blocks the hills in the background and	Although there are some blockage to the hills and open sky, the effect on	Partial blockage of the hills and open sky.

	(Site B) is largely in keeping with the overall character of the surrounding infrastructural landscape.	the open sky.	public viewers are expected to be slight as the impacted viewers are largely vehicular travelers and the duration of impact is very short.	
<b>VP3 (200m from Sites A and B; 100m from Site C)</b>	Only the upper stories of the new building of Site A can be seen from this angle, as the lower levels are hidden by trees. The proposed is largely in keeping with the overall character of the surrounding infrastructural (and industrial) landscape.	The proposed development limitedly blocks the open sky.	From this distance, the blockage to the open sky is rather small and there is expected to be very small number of impacted viewers. The effect on public viewers is expected to be slight.	Limited blockage of the open sky.

3.2.6. From the photomontage illustrations, the proposed 11-storey building and 2-storey power substations at Sites A and B are largely in keeping with the surrounding transport corridor and does not exceedingly block the northerly view towards the slopes. It is therefore also expected that the visual impacts shall be acceptable with the proposed architectural design style of the building enhanced by green façade treatment.

3.2.7. Site C is proposed to be remain as an open area for providing electrical charging facilities for the eBuses. The landscape characteristics shall remain the same as the surrounding transportation corridor and the charging facilities are not expected to impose any significant visual impacts to public viewers.

3.2.8. Taking into account all the above considerations, the overall visual impact of the proposed developments at the Project Sites is **slightly adverse**.

## **4. Landscape Proposal**

### **4.1. Design Objectives**

- 4.1.1. Maximize planting opportunity and integrated into the proposed bus depot building;
- 4.1.2. Ensure all landscape treatments are planned and designed to minimize future maintenance requirements.

### **4.2. Description**

- 4.2.1. The landscape proposal has been prepared with consideration of site characteristics, architectural design and proposed site usage.
- 4.2.2. For Site A, in order to take full advantage of the floor area for the bus depot, the proposed building shall have a minimum of 90% site coverage on Ground Floor with limited space reserved for emergency access and other utilities requirement.
- 4.2.3. Planting opportunity to the proposed bus depot development is maximised wherever possible and space availability. An area on the ground level to the northeastern corner of Site A is proposed to be planted with a combination of trees, shrubs and ground cover. This would add green coverage to the relatively open and deserted setting of the traffic corridor.
- 4.2.4. Additional planting opportunities are also proposed at two locations on 1/F next to the access ramp. These 2 planters are proposed to receive combination of large shrubs and ground cover planting.
- 4.2.5. In addition to the above planting proposals, landscape treatment in form of climber vertical green panels on all four building façades is also proposed.
- 4.2.6. The climber vertical green panels shall be in form of wire meshed design allowing climber species to grow. It is intended that the climber vertical green panels would add interest to the typical monotonous design of the building façades while also helps mitigate the visual impact of the proposed depot building to its surrounding visual sensitive receivers.
- 4.2.7. Both southwest and southeast façades are considered the most exposed to view façades to receive the greenest coverage. Wire meshed panels arranged in patterns are proposed to be installed on these two external walls.
- 4.2.8. The northeast and northwest façades is proposed to have a vertical green panel section on the lower floors with consideration of the building design and orientation.

- 4.2.9. Selected flowering climber species will be planted for different climber vertical green panel sections to accentuate the greening effect.
- 4.2.10. The proposed site usage of Site B is to house a 132kV power sub-station that supports the future electric bus depot. Since the Site is on top of the abutment of the flyover structure and is located in between busy traffic lanes, the existing paved treatment is recommended to be maintained for Site B.
- 4.2.11. For Site C, the area shall be used for charging and enabling of bus parking bay and the existing open characteristics is proposed to be maintained to facilitate the electric bus traffic.
- 4.2.12. Summary of Proposed Green Coverage is shown as below.

Total Site Area (Site A, B and C) = 16,845m <sup>2</sup>	
Site A	7,926m <sup>2</sup>
Site B	1,321m <sup>2</sup>
Site C	7,598m <sup>2</sup>
Greenery Provided	
Below 15m of Bus Depot Building in Site A	
Planter on G/F and 1/F	337.534m <sup>2</sup>
Vertical Greening	Approx. 1,257.736m <sup>2</sup>
$(337.534 + 1,257.736) \text{ m}^2 / 16,845 \text{ m}^2 = 9.47\%$	
Above 15m of Bus Depot Building in Site A	
Vertical Greening	Approx. 1,782.162m <sup>2</sup>
Total Greening	Approx. 3,377.432m <sup>2</sup>
$3,377.432 \text{ m}^2 / 16,845 \text{ m}^2 = 20.05\%$	

- 4.2.13. The landscape master plan is shown in **Appendix A**.

### 4.3. Hard and Soft Landscape Materials

Proposed Materials	
Pave Material	Location
Concrete Paving Blocks	Access Footpaths



**4.4. Brief Schedule on Soft Work Elements**

Proposed New Tree Planting				
Design Function	Tree Type	Species	Remarks	Proposed Spacing
Aesthetic and Landscape Enhancement	Theme Tree	<i>Tabebuia chrysantha</i>	Heavy standard	Various arrangement
	Small Tree	<i>Ficus microcarpa</i> var <i>crassifolia</i> <i>Garcinia subelliptica</i>	Light to heavy standard	
Proposed Shrub / Ground Cover Planting				
Design Function	Type	Species	Remarks	Proposed Spacing (mm)
Accent Shrub Planting	Large shrub	<i>Aglaia odorata</i> <i>Pittosporum tobira</i>	<i>Ball &amp; Burlap</i>	-Various between 750 – 1000mm
	Small shrub and ground cover	<i>Calliandra haematocephala</i> <i>Camellia japonica</i> <i>Duranta repens</i> <i>Gardenia augusta</i> <i>Liriope spicata</i>	- Potted plants -Various between 150 – 500mm in height.	-Various between 300 – 750mm in spacing.
Proposed Vertical Greening				
Design Function	Type	Species	Remarks	Proposed Spacing (mm)
Accent Planting	Vertical Green	<i>Pseudocalymma alliaceum</i> <i>Quisqualis indica</i> <i>Jasminum lanceolarium</i> <i>Clematis Paniculata</i>	Wire mesh panel.	300mm in spacing.

**4.5. Soil Depth**

4.5.1. The requirement of soil depth shall be incorporated into the design of the future development. The soil depth provisions for planting excluding drainage layer at all planting locations are as follows:

<b>Planting Type</b>	<b>Soil Depth</b>
Tree	Minimum 1200mm
Shrub	Minimum 800mm
Groundcover	Minimum 600mm
Climber	Minimum 500mm

#### **4.6. Drainage Provision**

- 4.6.1. All planted areas within the development are distributed both on grade and on structure. The planting area on structure will be properly drained with planter drainage design while on-grade planters will be drained naturally.
- 4.6.2. The planters for the climber proposed vertical green panels shall be properly drained with drainage pipes and properly discharged.

#### **4.7. Irrigation Provision**

- 4.7.1. The proposed irrigation system for all landscaped areas will be by means of automatic irrigation and will be incorporated in the design stages.
- 4.7.2. The planters for the proposed climber vertical green panels are linked with an automatic irrigation system and will be incorporated in the design stages.
- 4.7.3. The proposed source of water supply is subjected to final approval from the Water Services Department.

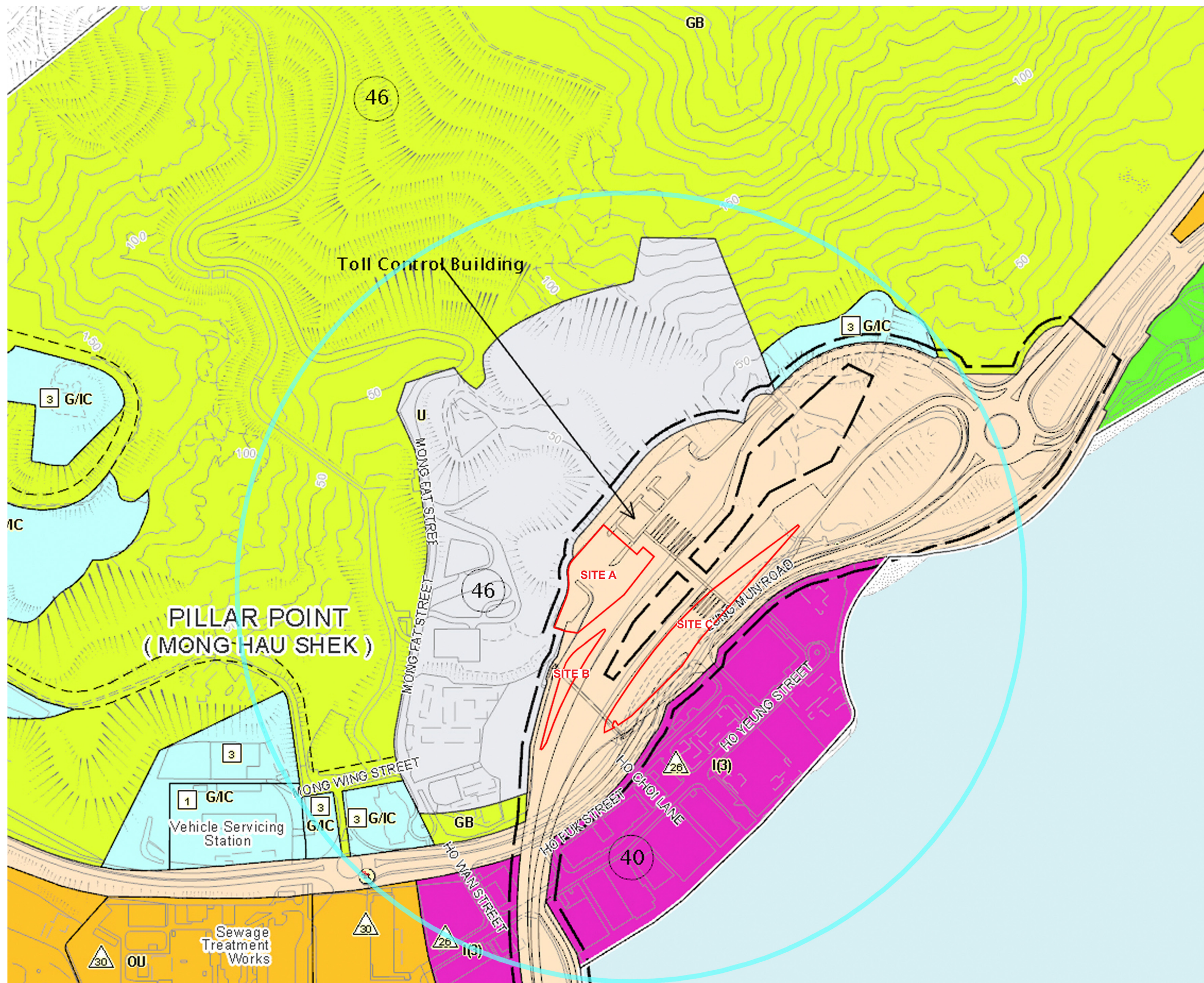
Project No.: 1906

Landscape and Visual Impact Assessment & Landscape Proposal for Multi-Storey Depot for  
Electric Buses at Tuen Mun – Chek Lap Kok Link Free-up Area

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## ***Figures***





# LEGEND

- GB Green Belt
- I Industrial
- U Undetermined
- G/IC Government, Institution or Community
- OU Other Specified Uses
- 140 Maximum Building Height (In Metres Above Principal Datum)
- 5 Maximum Building Height (In Number of Storeys)
- 1 Planning Area Number
- 500m LIA Boundary
- Site Boundary

Figure 1 - Outline Zoning Plan No. S/TM/35





## LEGEND

- 500m LIA Boundary
- Site Boundary

Figure 2A - Aerial Photo (from GeoInfo Map)



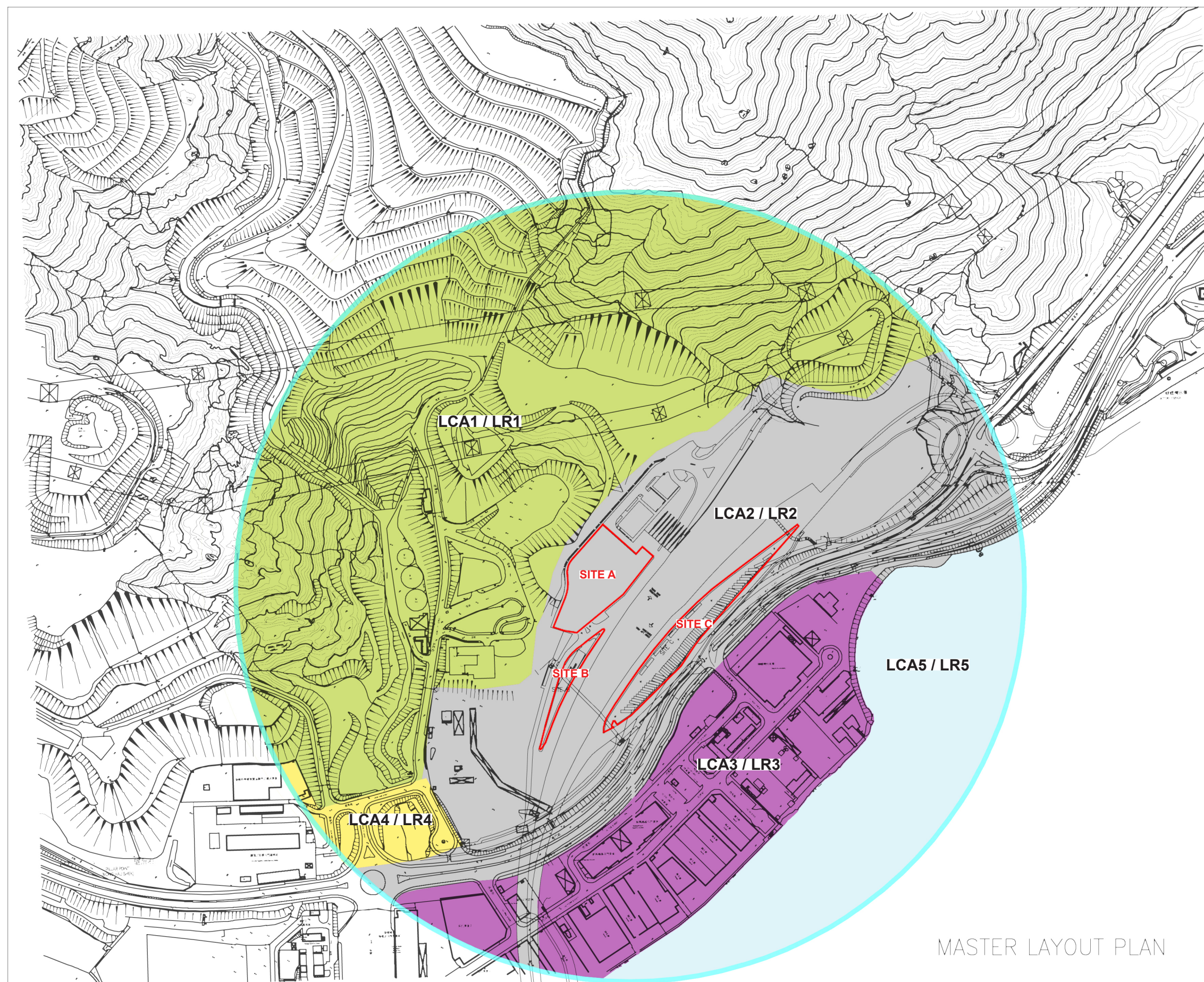


# LEGEND

- 500m LIA Boundary
- Site Boundary

Figure 2B - Aerial Photo (from GeoInfo Map)





## LEGEND

### Landscape Character Areas (LCAs)

- LCA1 - Hillside Woodland
- LCA2 - Transport Corridor Landscape
- LCA3 - Urban Industrial Landscape
- LCA4 - Institutional Landscape
- LCA5 - Inshore Water Landscape

### Landscape Resources (LRs)

- LR1 - Hillside Vegetation
- LR2 - Roadside Vegetation
- LR3 - Site and Roadside Vegetation
- LR4 - Site and Roadside Vegetation
- LR5 - Coastal Ecology

500m LIA Boundary

Site Boundary

MASTER LAYOUT PLAN

**Figure 4 - Landscape Character Areas (LCAs) and Landscape Resources (LRs)**



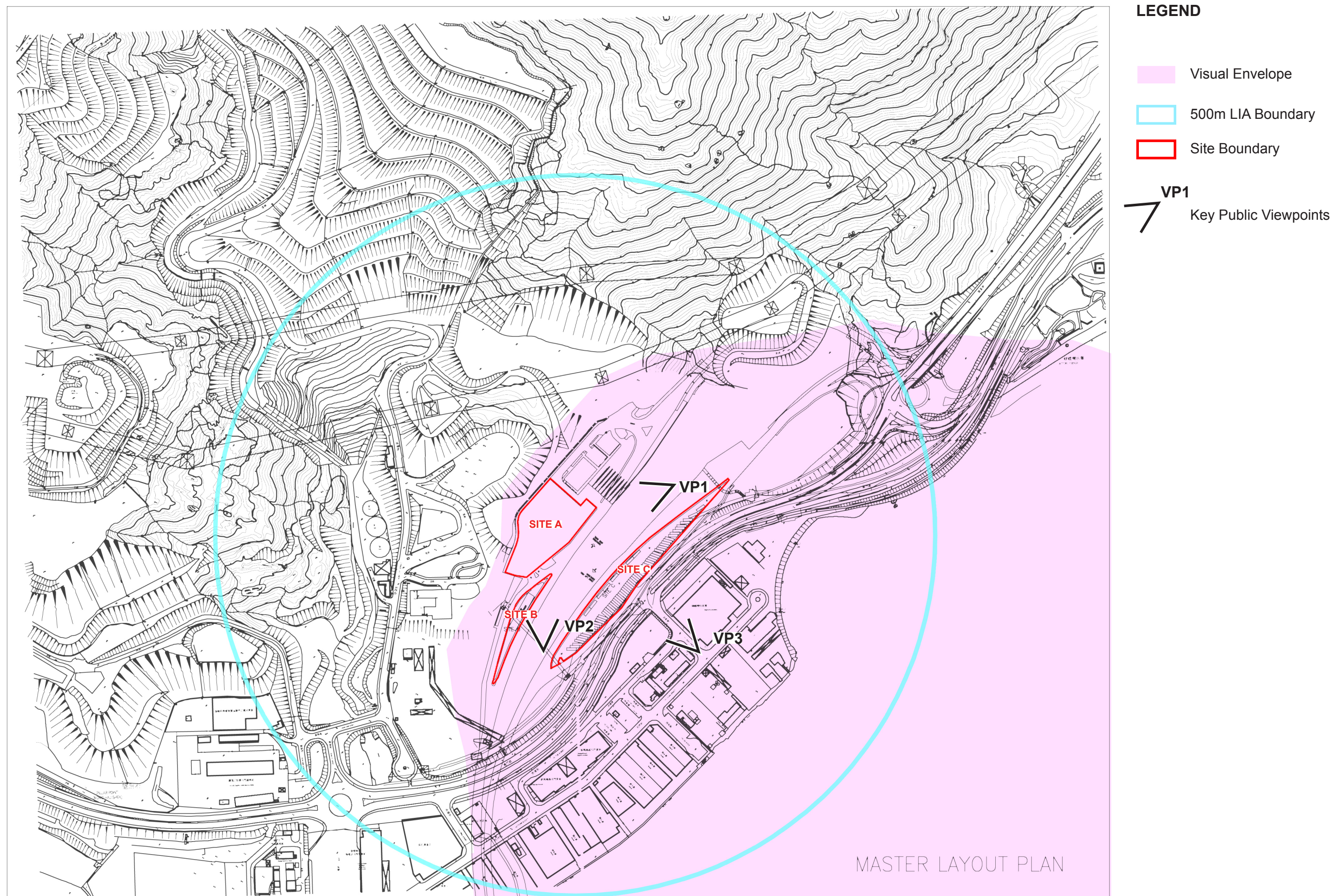


Figure 5 - Visual Envelope and Key Public Viewpoints

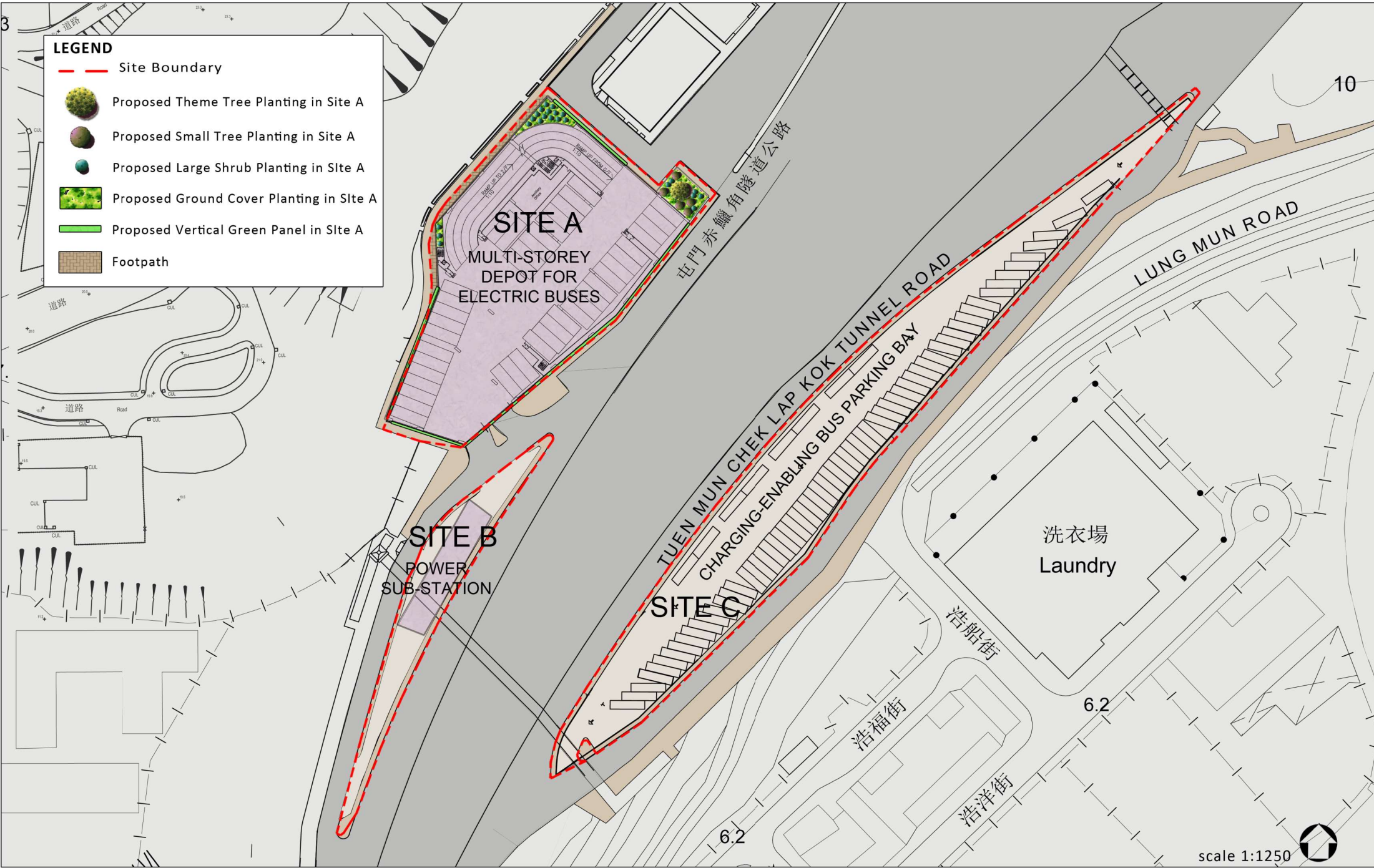


Project No.: 1906

Landscape and Visual Impact Assessment & Landscape Proposal for Multi-Storey Depot for  
Electric Buses at Tuen Mun – Chek Lap Kok Link Free-up Area

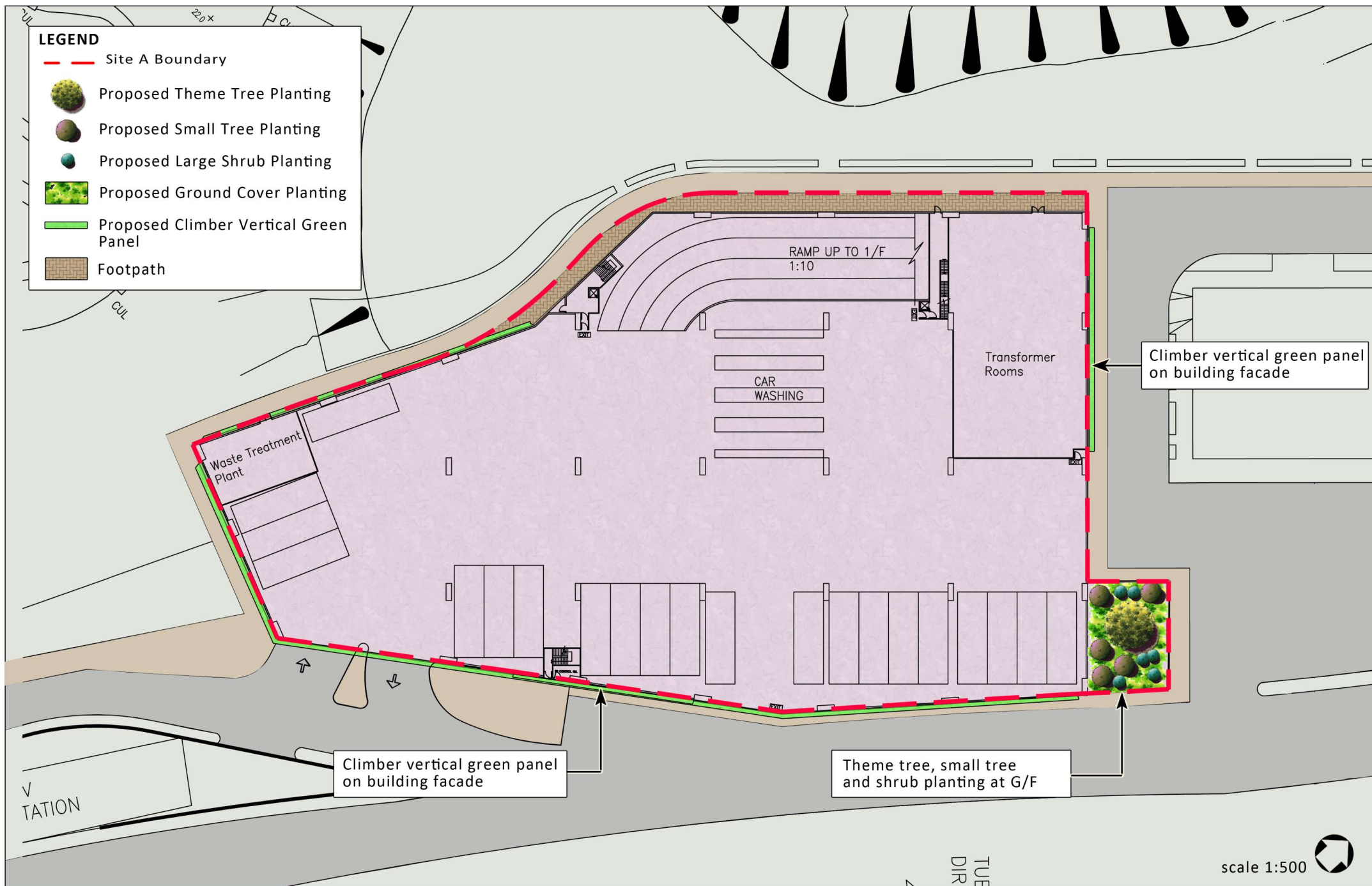
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## ***Appendix A –Landscape Master Plan***



Multi-storey Depot for Electric Buses  
Tuen Mun - Chek Lap Kok Link Free-up Area

Landscape Master Plan - Sites A, B & C  
Drawing No. LP-01 rev. A

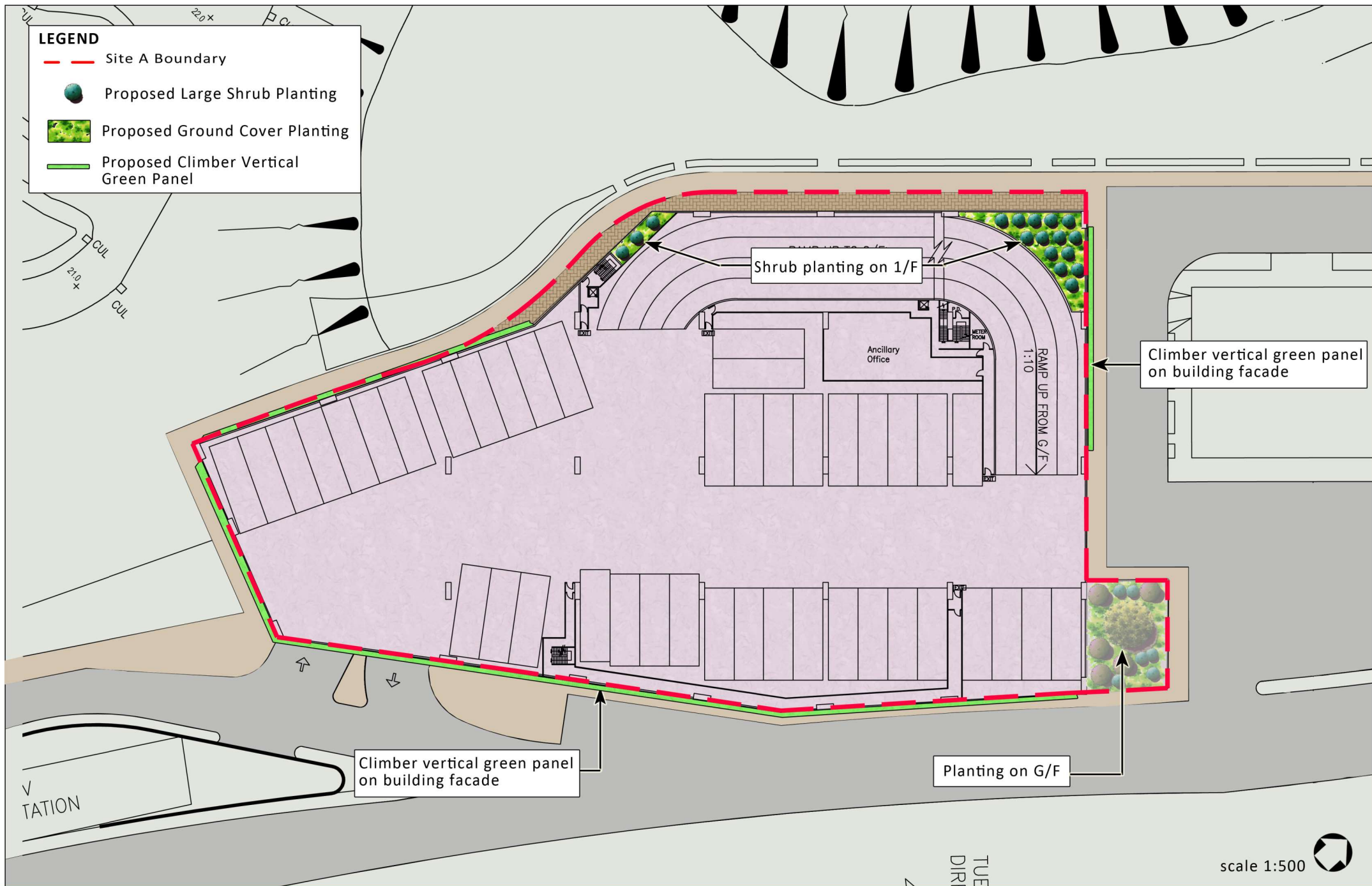


# Multi-storey Depot for Electric Buses Tuen Mun - Chek Lap Kok Link Free-up Area

Landscape Master Plan - G/F

Drawing No. LP-02 rev. A





# Multi-storey Depot for Electric Buses Tuen Mun - Chek Lap Kok Link Free-up Area

Landscape Master Plan - 1/F

Drawing No. LP-03 rev. A

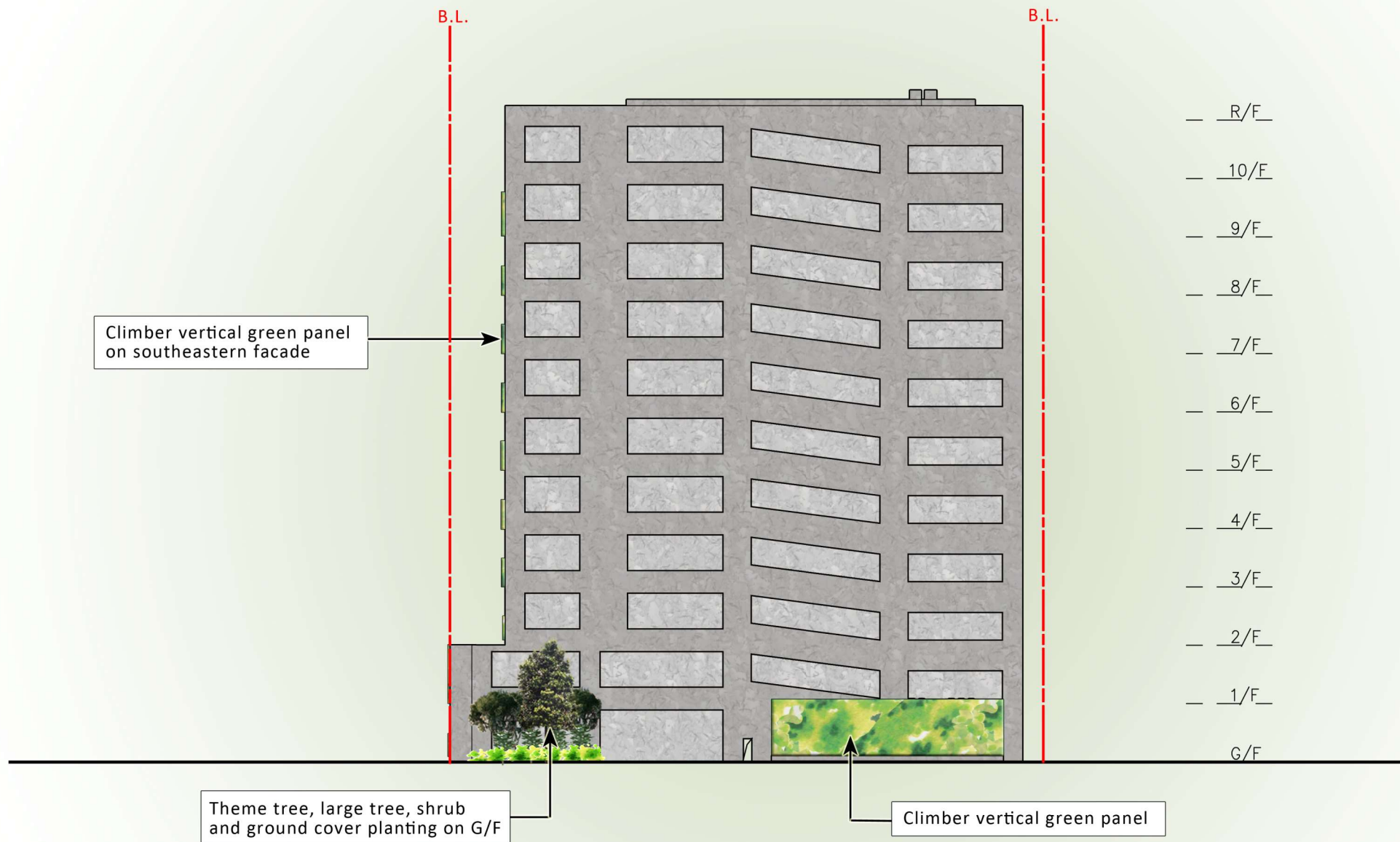


# Multi-storey Depot for Electric Buses Tuen Mun - Chek Lap Kok Link Free-up Area

Southeast Elevation

Drawing No. LP-04 rev. A





scale 1:500

# Multi-storey Depot for Electric Buses Tuen Mun - Chek Lap Kok Link Free-up Area

Northeast Elevation

Drawing No. LP-05

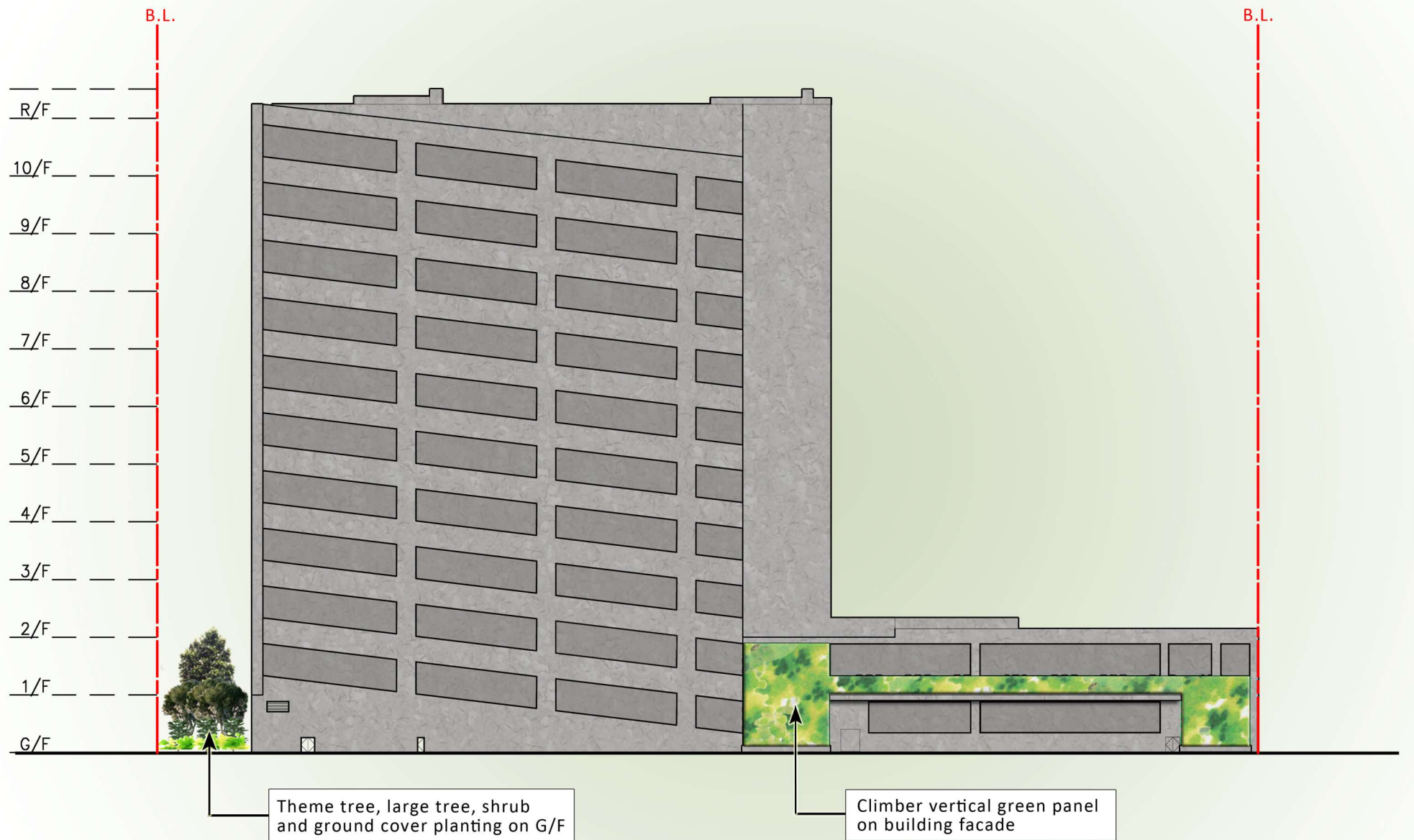


scale 1:500

# Multi-storey Depot for Electric Buses Tuen Mun - Chek Lap Kok Link Free-up Area

Southwest Elevation

Drawing No. LP-06



# Multi-storey Depot for Electric Buses Tuen Mun - Chek Lap Kok Link Free-up Area

Northwest Elevation

Drawing No. LP-07

Project No.: 1906

Landscape and Visual Impact Assessment & Landscape Proposal for Multi-Storey Depot for  
Electric Buses at Tuen Mun – Chek Lap Kok Link Free-up Area

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## ***Appendix B –Correspondence from PlanD***



Ms. LO Sum Yuen, Angela  
Planning Department  
Tuen Mun and Yuen Long West District Planning  
Office  
14/F, Sha Tin Government Offices, 1 Sheung Wo Che  
Road, Sha Tin, NT

27/F, Overseas Trust Bank Building  
160 Gloucester Road  
Wan Chai  
Hong Kong  
T: +852 2815 7028  
F: +852 2815 5399  
[info@aechk.com](mailto:info@aechk.com)  
[www.asecg.com](http://www.asecg.com)

8 April 2021

By Fax & E-mail

Dear Sir / Madam,

**INSTALLATION OF DEPOT FACILITIES FOR THE KOWLOON MOTOR BUS CO. (1933) LTD. AT TUEN MUN –  
CHEK LAP KOK LINK("TMCLK") FREE UP AREAS  
REQUEST FOR INFORMATION - PLANNED CONSTRUCTION ACTIVITIES AND PLANNED DEVELOPMENTS**

We are an environmental consultant commissioned by the Kowloon Motor Bus Co.(1933) Ltd. to conduct the Environmental Assessment study for the captioned project.

In order to have a precise assessment, it would be grateful if you could advise whether there is any construction work, within 300m/ 500m from the site boundary of the captioned project, as shown in the enclosed figure.

Please provide the following information, if any:

- Any committed/planned development(s) as potential environment sensitive uses (e.g. offices, residential uses, educational uses etc.);
- Location and site boundary of the committed/ planned development; and
- Construction works programme and completion year.

Due to tight programme of the captioned project, it is highly appreciated if your reply on the above request could be available **on or before 23 April 2021.**

Thank you very much for your assistance. Should you have any queries, please feel free to contact the undersigned at 3915 7148 or Ms. Jamie KAM ([jamiiekam@aechk.com](mailto:jamiiekam@aechk.com)) at 3915 7163.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Cathy Man'.

Cathy Man  
Principle Consultant  
([cm@aechk.com](mailto:cm@aechk.com))  
CM/jk

Encl.

cc. KMB (Attn: Mr. Jacky NG & Mr. Alan FUNG) – by email (w/e)

**規 劃 署**

屯門及元朗西規劃處  
新界沙田上禾輦路1號  
沙田政府合署14樓



**By Fax (2815 5399)**  
**Planning Department**

Tuen Mun and Yuen Long West  
District Planning Office  
14/F, Sha Tin Government Offices,  
1 Sheung Wo Che Road, Sha Tin, N.T.

本函檔號 Your Reference [-/21-0004] and [819.2124/21-0001]  
本署檔號 Our Reference ( ) in PDTM 4/5/48  
電話號碼 Tel. No.: 2158 6333  
傳真機號碼 Fax No.: 2489 9711

13 April 2021

Allied Environmental Consultants Limited  
27/F, Overseas Trust Bank Building  
160 Gloucester Road  
Wan Chai, Hong Kong  
(Attn.: Ms Cathy MAN)

Dear Ms MAN,

**Installation of Depot Facilities for KMB at  
Tuen Mun – Chek Lap Kok Link ("TMCLK") Free Up Areas  
Request for Information for Land Contamination Assessment  
and Planned Construction Activities and Planned Development**

I refer to your letters dated 25 March and 8 April 2021 regarding request for information.

You are advised to visit Town Planning Board's Statutory Planning Portal 2 at <http://www2.ozp.tpb.gov.hk/gos> for information relating to the subject site and the surrounding area.

Yours sincerely,

( Ms Angela LO )  
for District Planning Officer/  
Tuen Mun and Yuen Long West  
Planning Department

C.C.  
Site Record

CK/AL/al



Project No.: 1906

Landscape and Visual Impact Assessment & Landscape Proposal for Multi-Storey Depot for  
Electric Buses at Tuen Mun – Chek Lap Kok Link Free-up Area

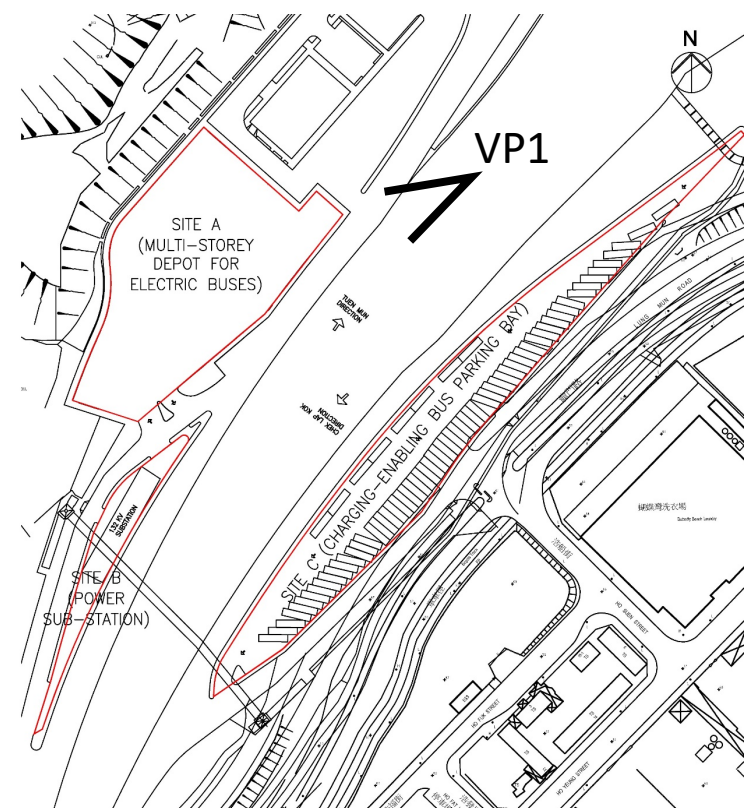
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## ***Appendix C –Photomontages***

# TMCLK KMB Depot





TMCLK DEPOT - SITE B Perspective View NE – VP1

MULTI-STOREY DEPOT FOR ELETRIC BUSES IN SITE A



KEY PLAN

LEGEND

-  PROPOSED VERTICAL GREEN PANEL
-  PROPOSED THEME TREE / LARGE TREE / SHURBS
-  PROPOSED SOLAR PANEL
-  VIEWPOINT

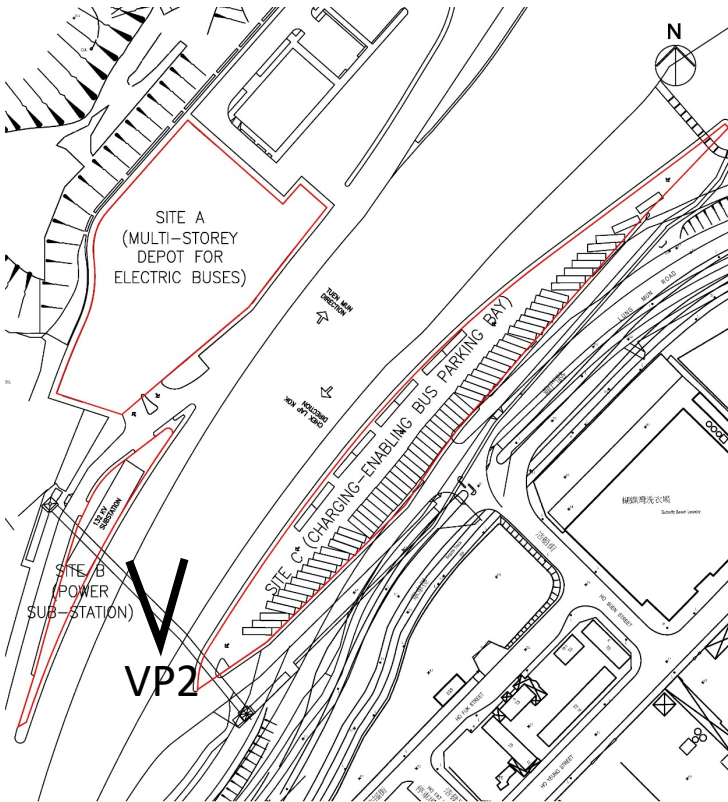
Remarks:  
KMB is liaising with CLP regarding the construction of the substation in Site B.

The current design of this substation is preliminary and the final design will be confirmed by CLP in later stage.





TMCLK DEPOT - SITE B Perspective View SW – VP2







KEY PLAN

Remarks:  
KMB is liaising with CLP regarding the construction of the substation in Site B.

The current design of this substation is preliminary and the final design will be confirmed by CLP in

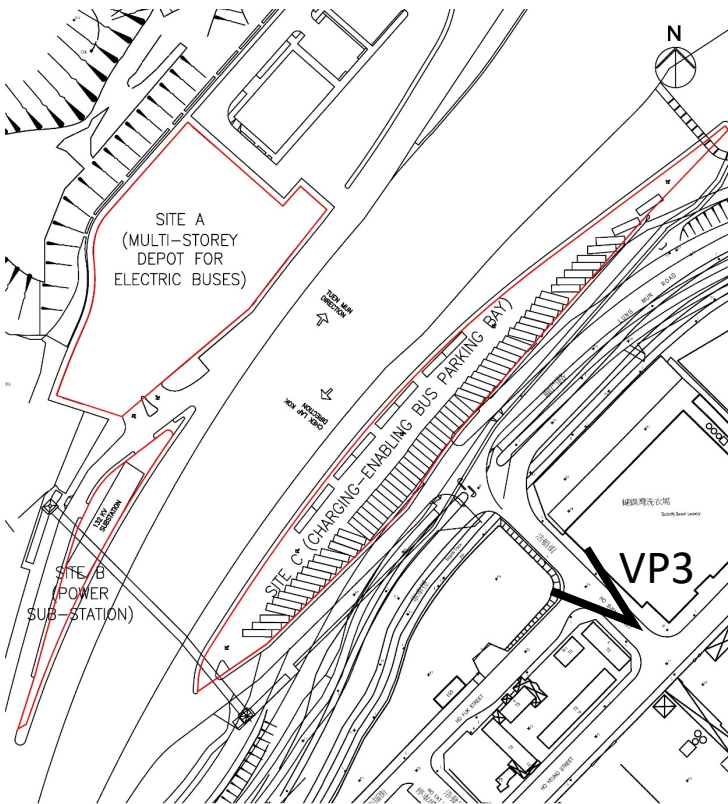
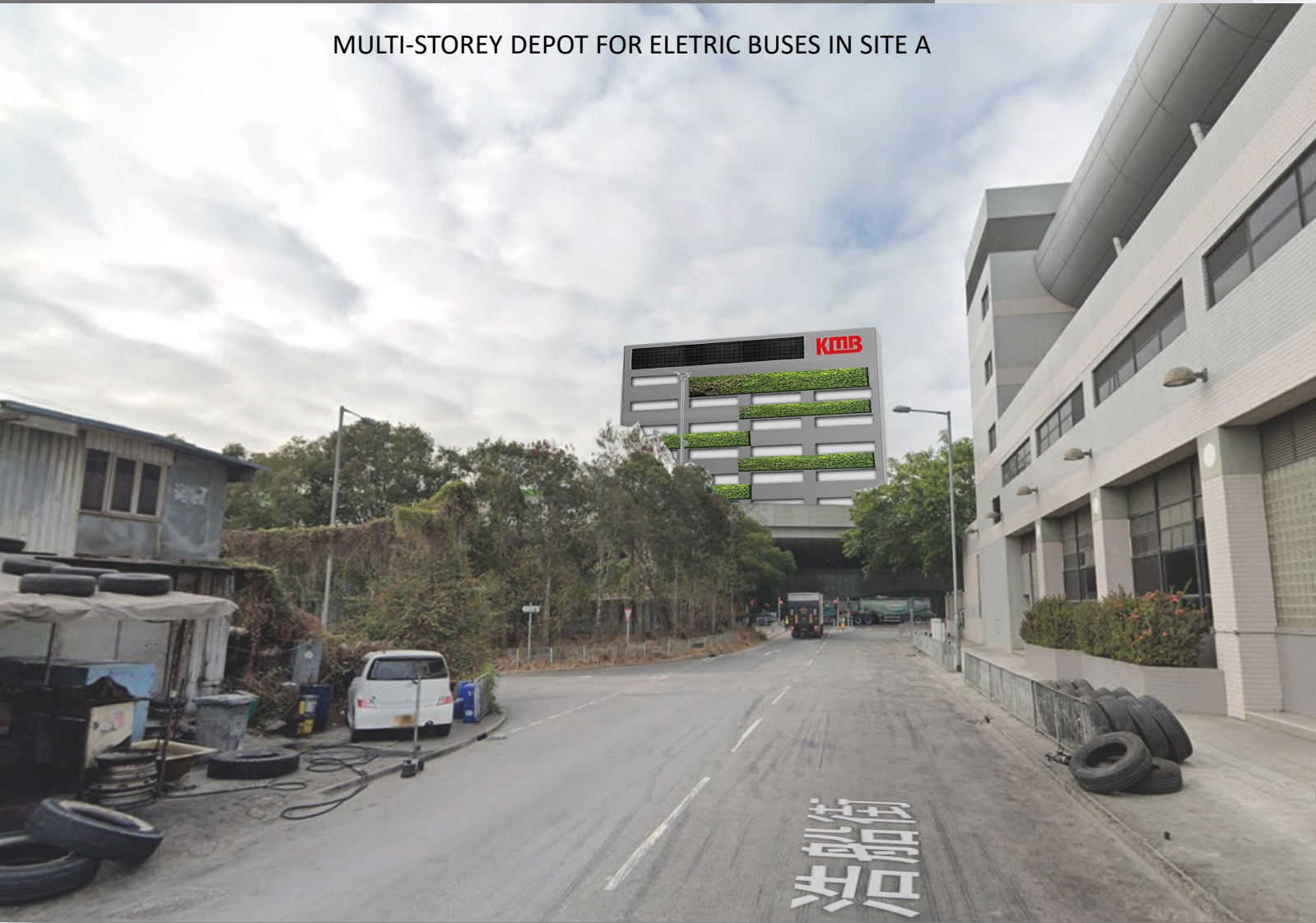
LEGEND

-  PROPOSED VERTICAL GREEN PANEL
-  PROPOSED THEME TREE / LARGE TREE / SHURBS
-  PROPOSED SOLAR PANEL
-  VIEWPOINT





MULTI-STOREY DEPOT FOR ELETRIC BUSES IN SITE A




KEY PLAN

BEFORE



LEGEND

-  PROPOSED VERTICAL GREEN PANEL
-  PROPOSED THEME TREE / LARGE TREE / SHURBS
-  PROPOSED SOLAR PANEL
-  VIEWPOINT

Project No.: 1906

Landscape and Visual Impact Assessment & Landscape Proposal for Multi-Storey Depot for  
Electric Buses at Tuen Mun – Chek Lap Kok Link Free-up Area

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## ***Appendix D –Master Layout Plan of the Proposed Development***



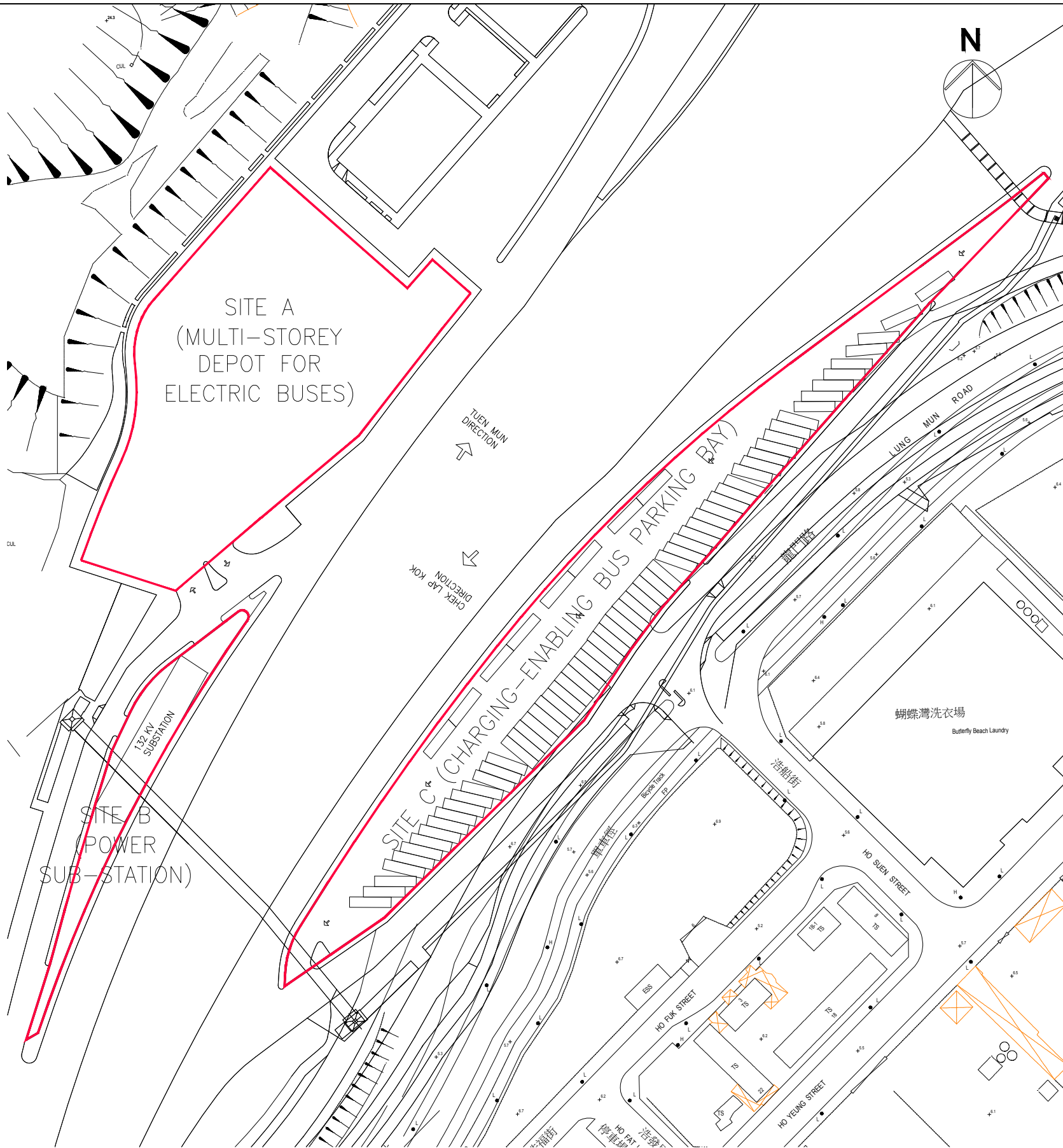
GROSS FLOOR AREA & SITE COVERAGE CALCULATION – SITE A				
PROPOSED SITE USAGE			MULTI–STOREY DEPOT FOR ELECTRIC BUSES	
SITE CLASSIFICATION			CLASS A	
SITE AREA			7926 M2	
SITE COVERAGE			G/F–1/F: 93.58% (FIRST 15M) 2/F–R/F: 60%	
BUILDING HEIGHT			82.5M (FLOOR LEVEL OF G/F TO FLOOR LEVEL OF R/F)	
PERMITTED PLOT RATIO UNDER B(P)R			15	
NON–DOMESTIC GFA	GF	7417 M2	57845.32 M2	
	1F	7417 M2		
	2F	4755.6 M2		
	3F–10F	4755.6 M2		
	RF	210.92 M2		
ACTUAL PLOT RATIO			7.30	

GROSS FLOOR AREA & SITE COVERAGE CALCULATION – SITE B	
PROPOSED SITE USAGE	POWER SUB–STATION
SITE CLASSIFICATION	CLASS A
SITE AREA	1321 M2
SITE COVERAGE	47.01% (621M2/1321M2)
BUILDING HEIGHT	15.6M
PERMITTED PLOT RATIO UNDER B(P)R	5
NON–DOMESTIC GFA	1040.6 M2
ACTUAL PLOT RATIO	0.788
REMARKS: THE SUBJECT BUILDING SHALL BE DISREGARDED FROM GFA AND PLOT RATIO CALCULATION IN ACCORDANCE WITH B(P)R23(3)(b).	

GROSS FLOOR AREA & SITE COVERAGE CALCULATION – SITE C	
PROPOSED SITE USAGE	CHARGING–ENABLING BUS PARKING
SITE CLASSIFICATION	CLASS A
SITE AREA	7598 M2
SITE COVERAGE	0
BUILDING HEIGHT	0M
PERMITTED PLOT RATIO UNDER B(P)R	5
NON–DOMESTIC GFA	0 M2
ACTUAL PLOT RATIO	0

NOS. OF CHARGING–ENABLING BUS PARKING BAYS AND MAINTENANCE BAYS IN SITE A		
	MAINTENANCE BAYS	CHARGING–ENABLING BUS PARKING BAYS
GF	21	
1F	42	
2F	18	31
3F		33
4F		33
5F		33
6F		33
7F		33
8F		33
9F		33
10F		33
RF		38
TOTAL	81	333

NOS. OF CHARGING–ENABLING BUS PARKING BAYS AND MAINTENANCE BAYS IN SITE C		
	MAINTENANCE BAYS	CHARGING–ENABLING BUS PARKING BAYS
GF	0	73



Schematic Master Layout Plan

NOTES AND CONDITIONS:

1.

ALL DESIGNS ARE THE PROPERTY OF FRUIT DESIGN AND BUILD AND CANNOT BE USED WITHOUT THEIR WRITTEN PERMISSION.

2.

ALL MEASUREMENTS MUST BE VERIFIED ON SITE BEFORE CONSTRUCTION.

3.

CONTRACTORS SHALL NOTIFY THE DESIGNER OF ANY DISCREPANCY BEFORE STARTING WORK.

4.

ALL DIMENSIONS ARE IN MILLIMETER EXCEPT OTHERWISE NOTED.

5.

ALL WORKS SHALL BE CARRIED OUT IN COMPLIANCE TO THE BUILDINGS ORDINANCE, BUILDINGS REGULATIONS AND CODE OF PRACTICES.

6.

THIS DRAWING SHALL BE READ IN CONJUNCTION WITH OTHER DRAWINGS AND SPECIFICATIONS OF THE TENDER DOCUMENTS AND SHALL BE MUTUALLY EXPLANATORY.

7.

THE CONTRACTOR SHALL FOLLOW MANUFACTURER'S INSTRUCTION & RECOMMENDATION IN CASE PROPRIETARY PRODUCT / SYSTEM / IS ADOPTED / SPECIFIED / APPROVED.

8.

DESIGN INTENT DRAWING ONLY. CONTRACTOR IS RESPONSIBLE FOR DESIGN AND SHOP DRAWING / CALCULATION SUBMISSION / MATERIAL SIZES / THICKNESS INDICATIVE.

REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

FRUIT  
DESIGN &  
BUILD LTD

A member of FDB Holdings Limited

A | 6/F, The Sun's Group Centre, 200 Gloucester Road,  
Wan Chai, Hong Kong

T | +852 3188 5595 F | +852 3188 5598

PROJECT:

TMCLK DEPOT

DRAWING TITLE:

SCHEMATIC MASTER LAYOUT PLAN

SCALE:

1:1500

DATE:

13/09/2021

DRAWN BY:

CC

CHECKED BY:

NC

APPROVED BY:

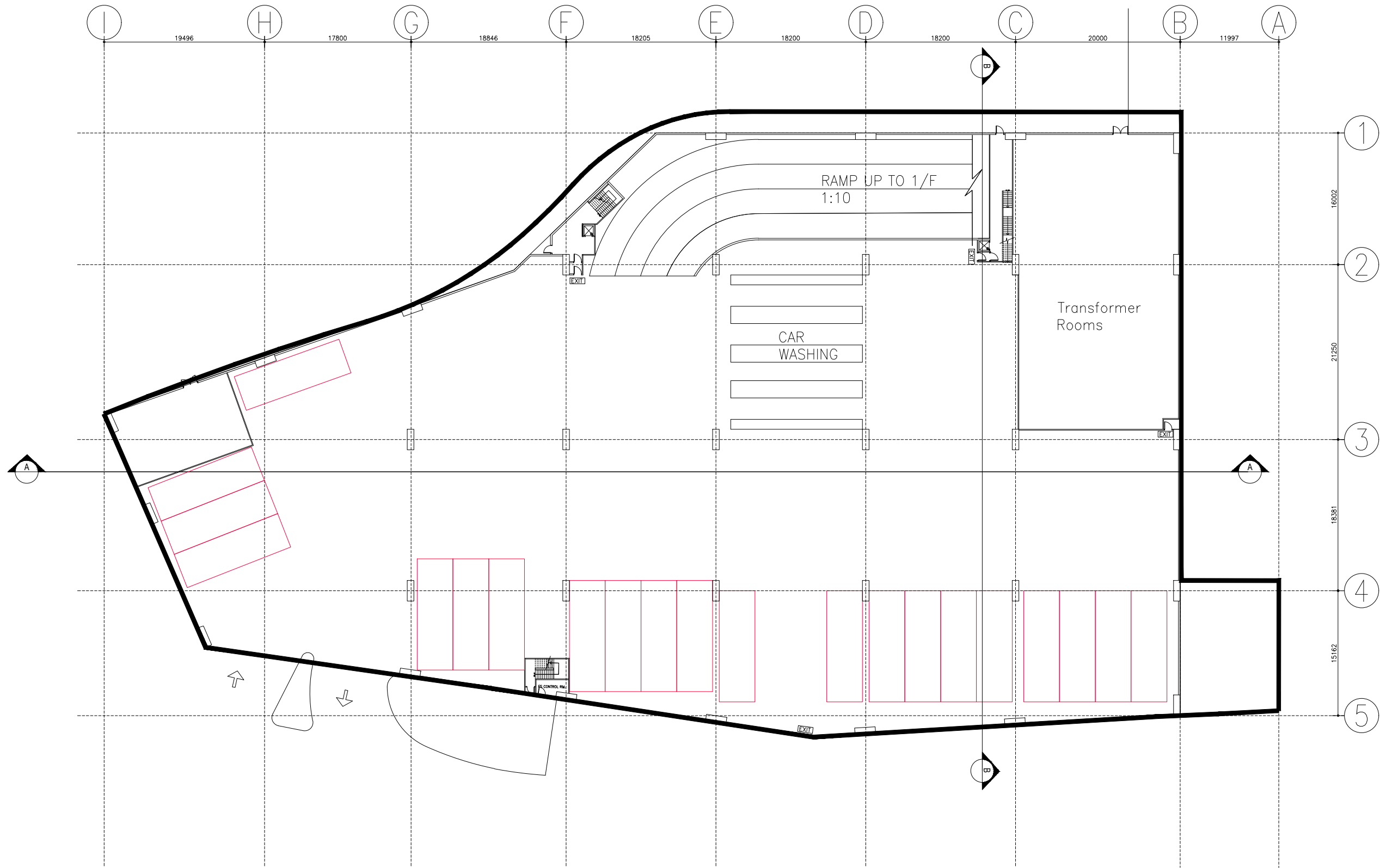
-

JOB. NO.:

FDB-P-21031

DWG. NO.:

AA01



#### LEGEND

- Maintenance Bay  
(13500mm x 4350mm)
- Parking Space  
(13000mm x 3300mm)

G/F



#### NOTES AND CONDITIONS:

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BUILD LTD**

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Wan Chai, Hong Kong  
T | +852 3188 5955 F | +852 3188 5958

PROJECT:

TMCLK DEPOT

DRAWING TITLE:

G/F LAYOUT (SITE A)

SCALE: 1:500

DATE: 13/09/2021

DRAWN BY: CC

CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: AA02



- NOTES AND CONDITIONS:
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REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

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BUILD LTD**

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Wan Chai, Hong Kong  
T | +852 3188 5595 F | +852 3188 5958

PROJECT:

TMCLK DEPOT

DRAWING TITLE :

1/F LAYOUT (SITE A)

SCALE: 1:500

DATE: 13/09/2021

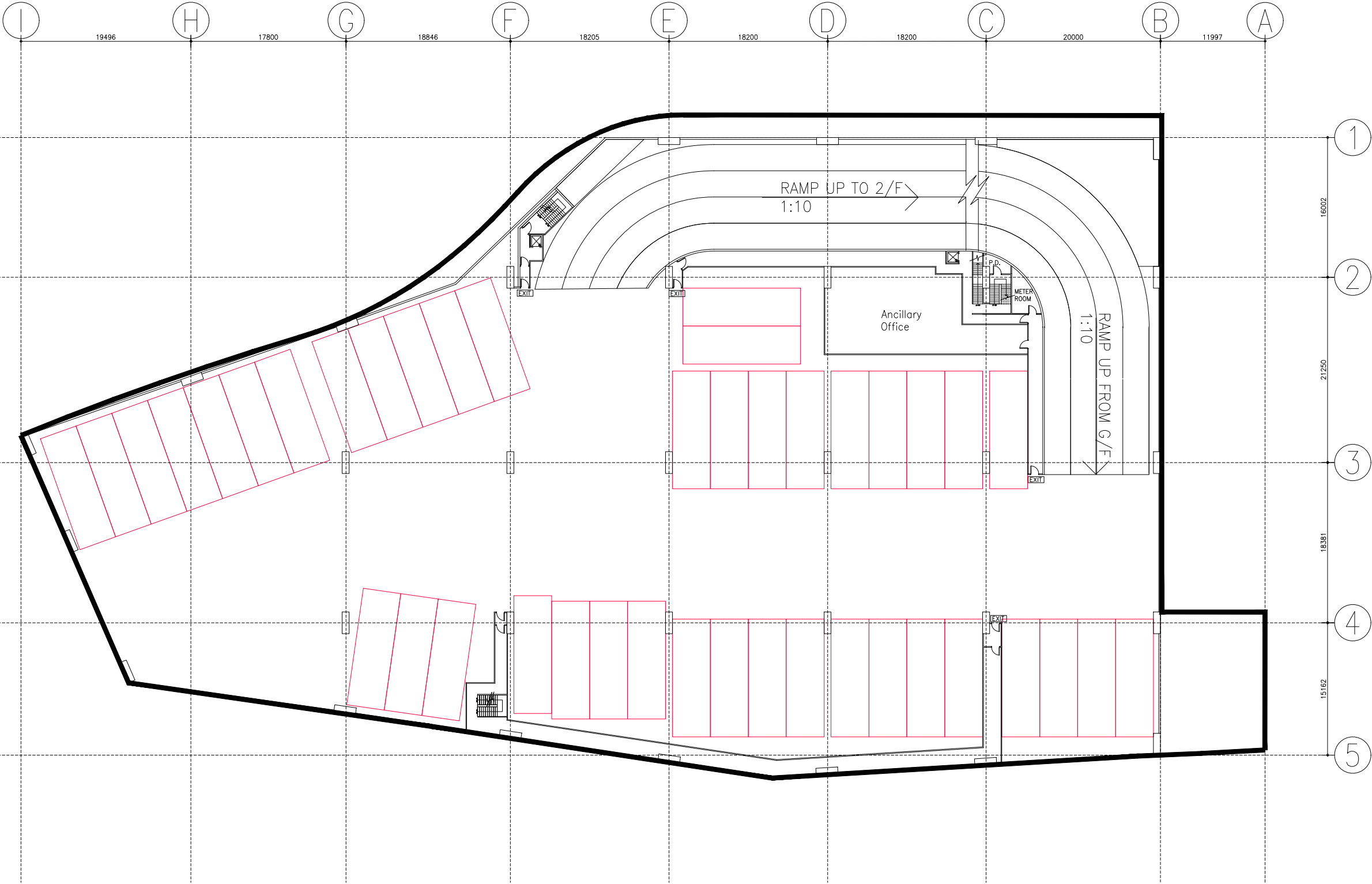
DRAWN BY: CC

CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: AA03



LEGEND

- Maintenance Bay  
(13500mm x 4350mm)
- Parking Space  
(13000mm x 3300mm)

1/F



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REV	DESCRIPTION	DATE

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BUILD LTD

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PROJECT:

TMCLK DEPOT

DRAWING TITLE:

2/F LAYOUT (SITE A)

SCALE: 1:500

DATE: 13/09/2021

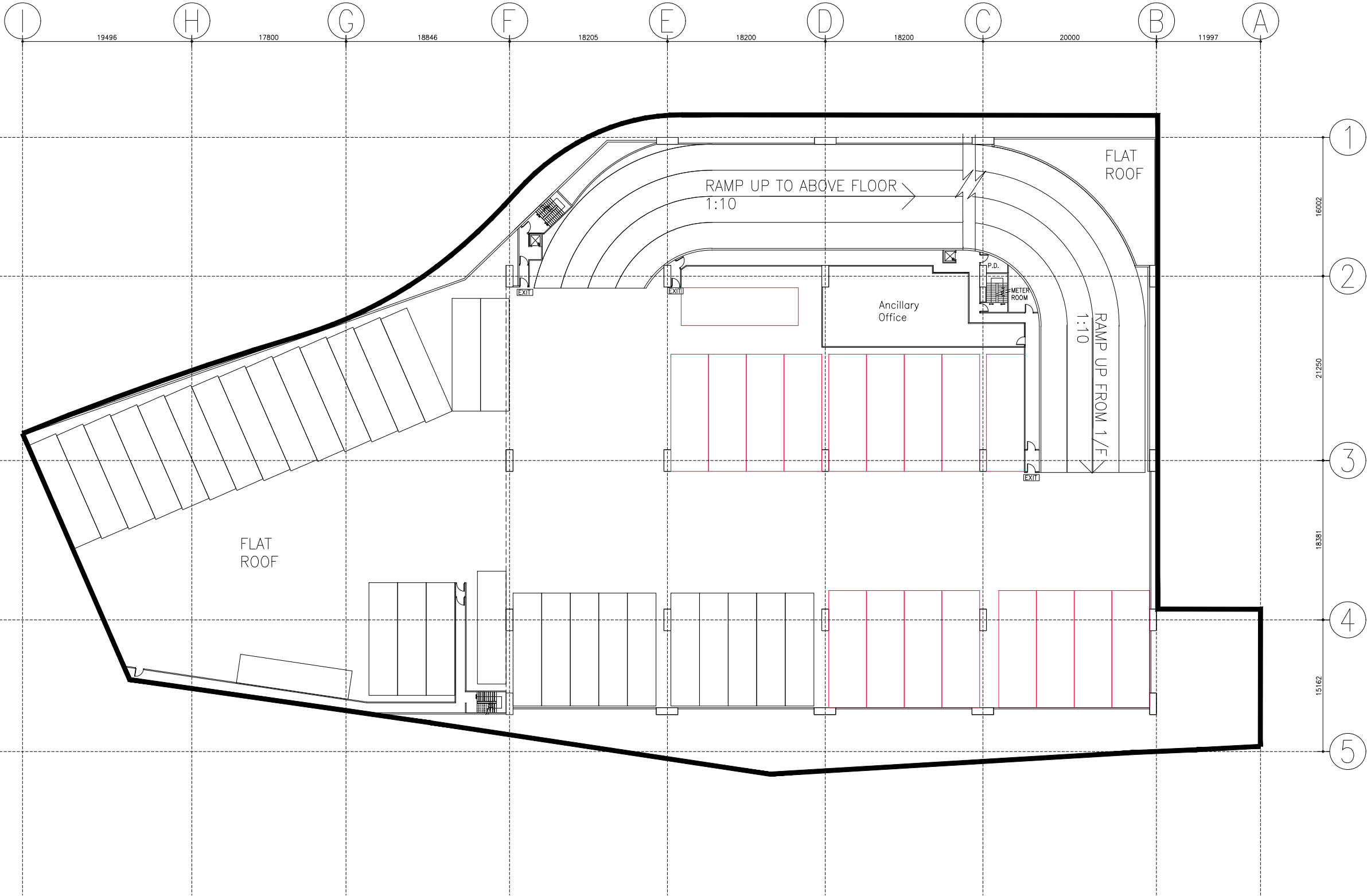
DRAWN BY: CC

CHECKED BY: NC

APPROVED BY:-

JOB. NO.: FDB-P-21031

DWG. NO.: AA04



LEGEND

- Maintenance Bay  
(13500mm x 4350mm)
- Parking Space  
(13000mm x 3300mm)

2/F



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REV	DESCRIPTION	DATE

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BUILD LTD

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Wan Chai, Hong Kong

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PROJECT:

TMCLK DEPOT

DRAWING TITLE :

3/F-10/F LAYOUT (SITE A)

SCALE: 1:500

DATE: 13/09/2021

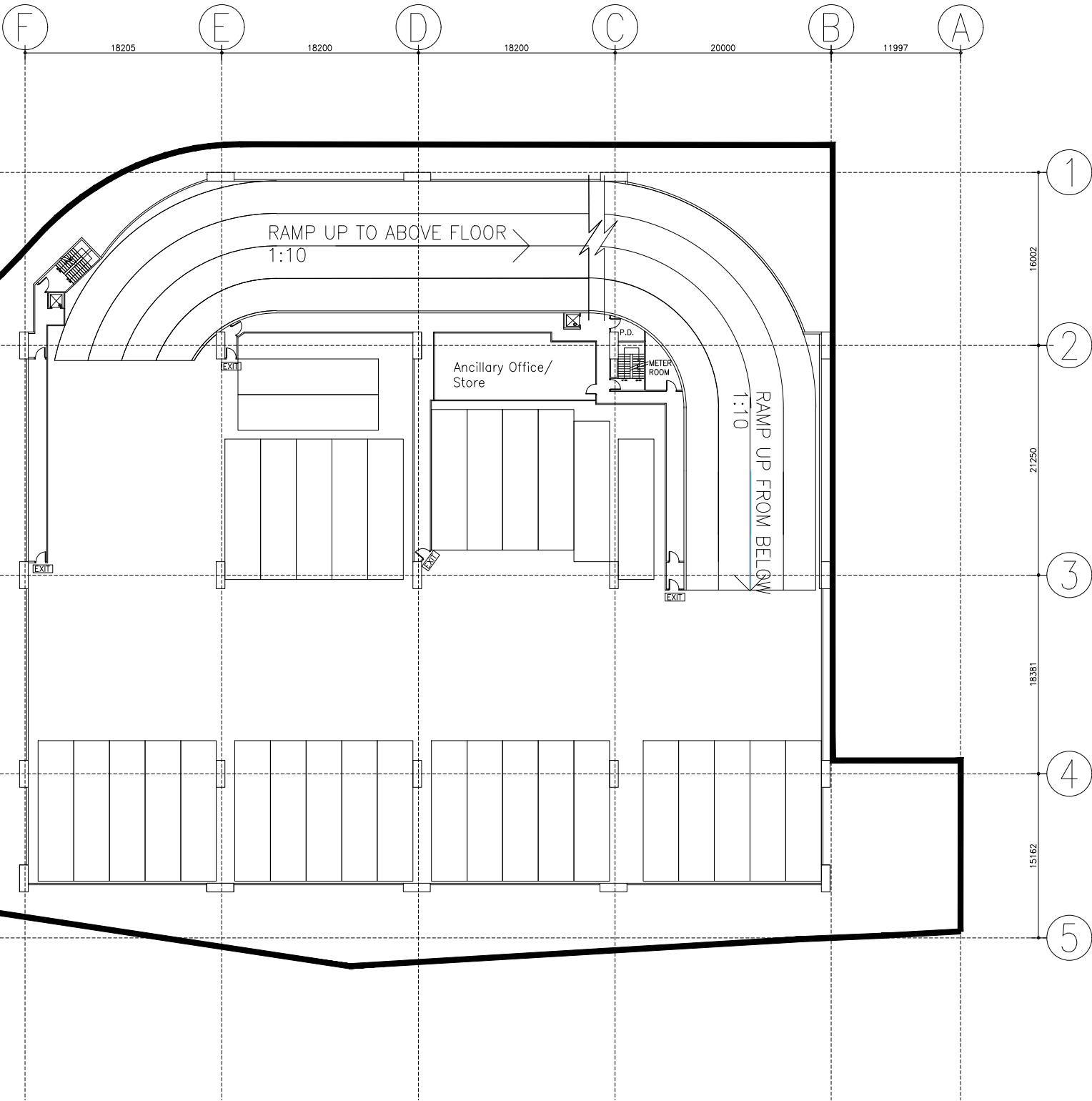
DRAWN BY: CC

CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: AA05



LEGEND

- Maintenance Bay  
(13500mm x 4350mm)
- Parking Space  
(13000mm x 3300mm)

3/F-10/F



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REV	DESCRIPTION	DATE

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PROJECT:

TMCLK DEPOT

DRAWING TITLE :

R/F LAYOUT (SITE A)

SCALE: 1:500

DATE: 13/09/2021

DRAWN BY: CC

CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

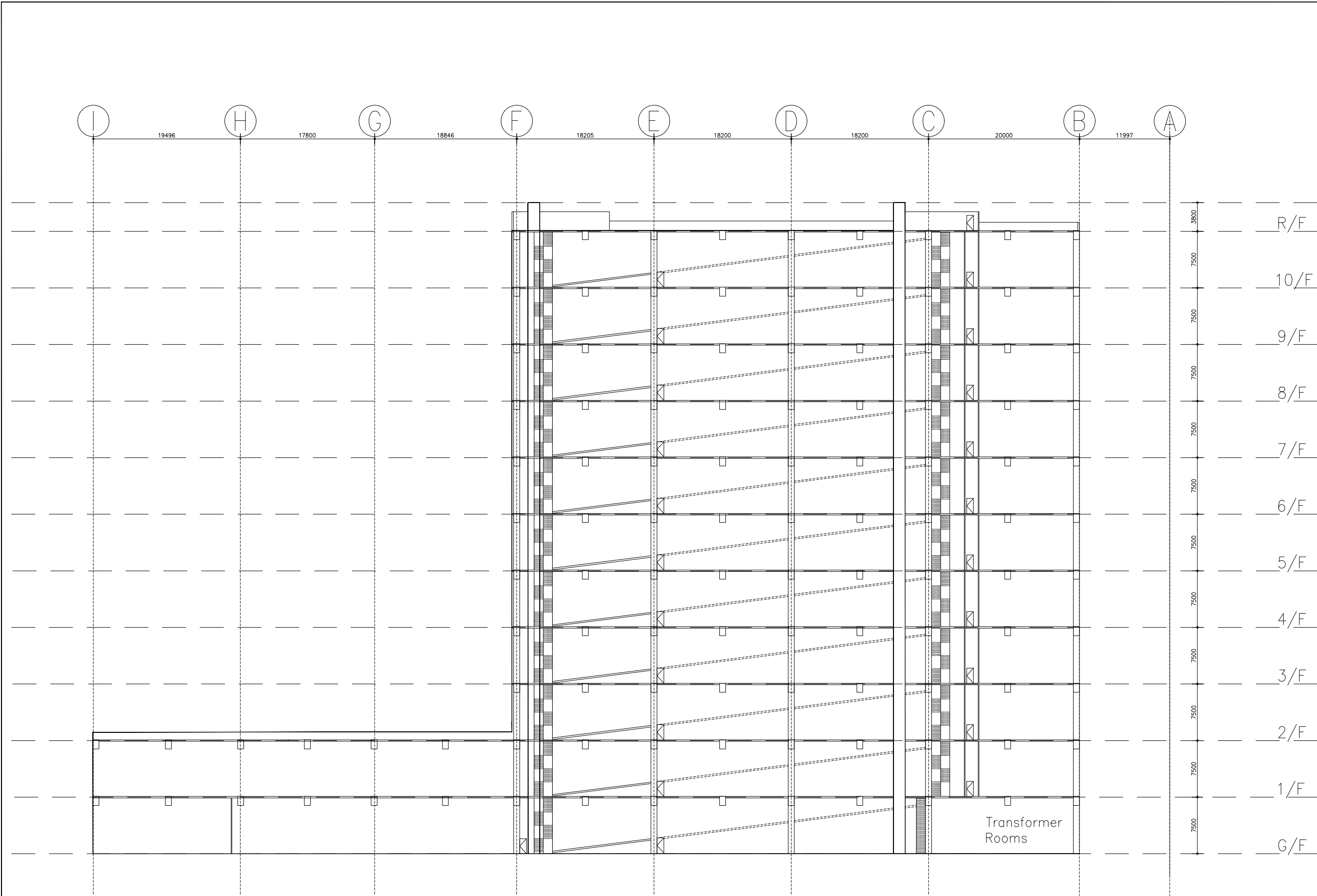
DWG. NO.: AA06

LEGEND

- Maintenance Bay  
(13500mm x 4350mm)
- Parking Space  
(13000mm x 3300mm)

R/F





SECTION A-A

- NOTES AND CONDITIONS:
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REV	DESCRIPTION	DATE

CLIENT:

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Wan Chai, Hong Kong

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PROJECT:

TMCLK DEPOT

DRAWING TITLE :

SECTION A-A (SITE A)

SCALE: 1:500

DATE: 13/09/2021

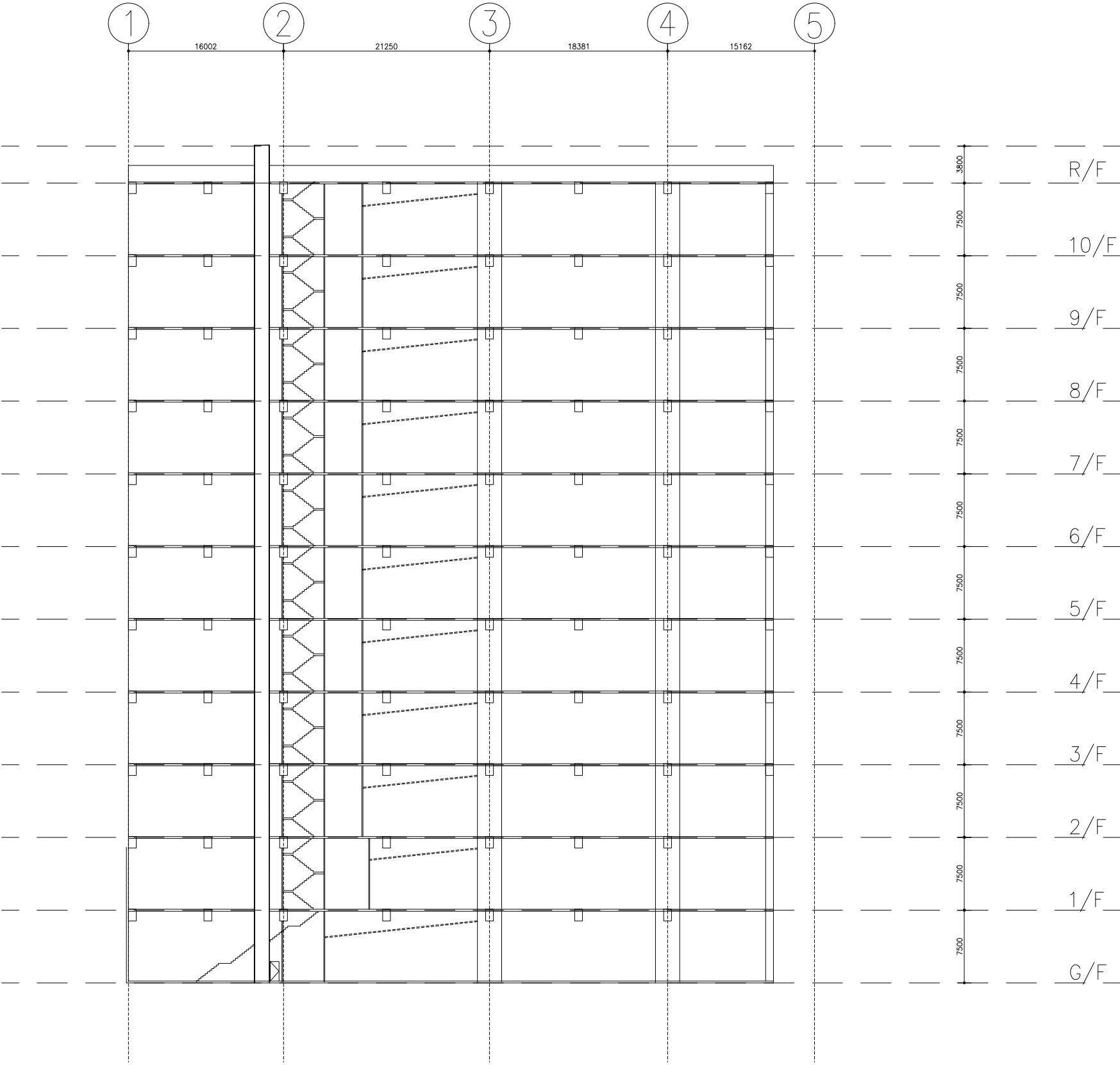
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CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: ST01



SECTION B-B

- NOTES AND CONDITIONS:
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REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

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Wan Chai, Hong Kong

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PROJECT:

TMCLK DEPOT

DRAWING TITLE :

SECTION B-B (SITE A)

SCALE: 1:500

DATE: 13/09/2021

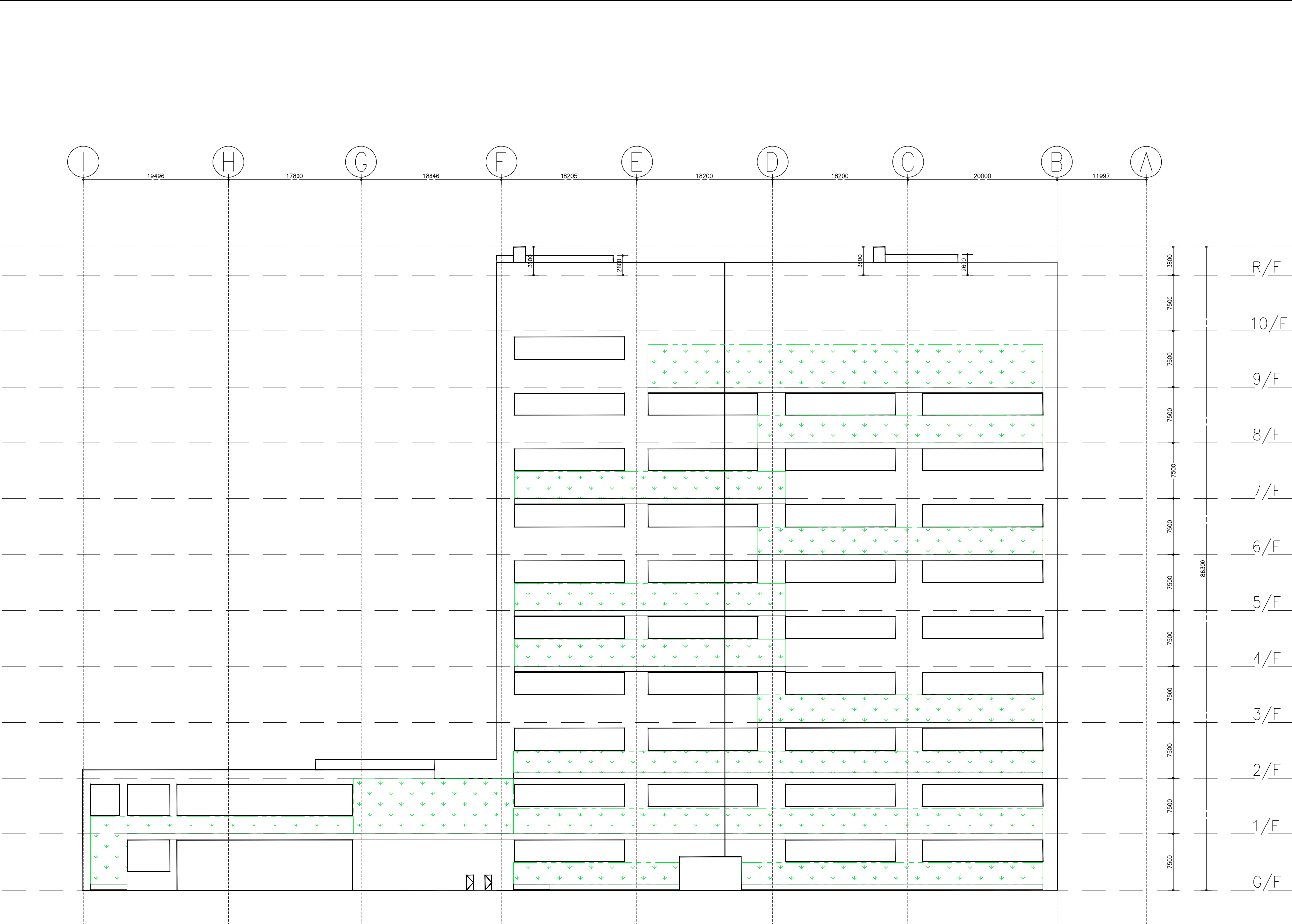
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CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: ST02



SOUTH-EAST ELEVATION

- NOTES AND CONDITIONS:
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REV	DESCRIPTION	DATE

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Wan Chai, Hong Kong

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PROJECT:

TMCLK DEPOT

DRAWING TITLE :

SOUTH-EAST ELEVATION (SITE A)

SCALE: 1:500

DATE: 13/09/2021

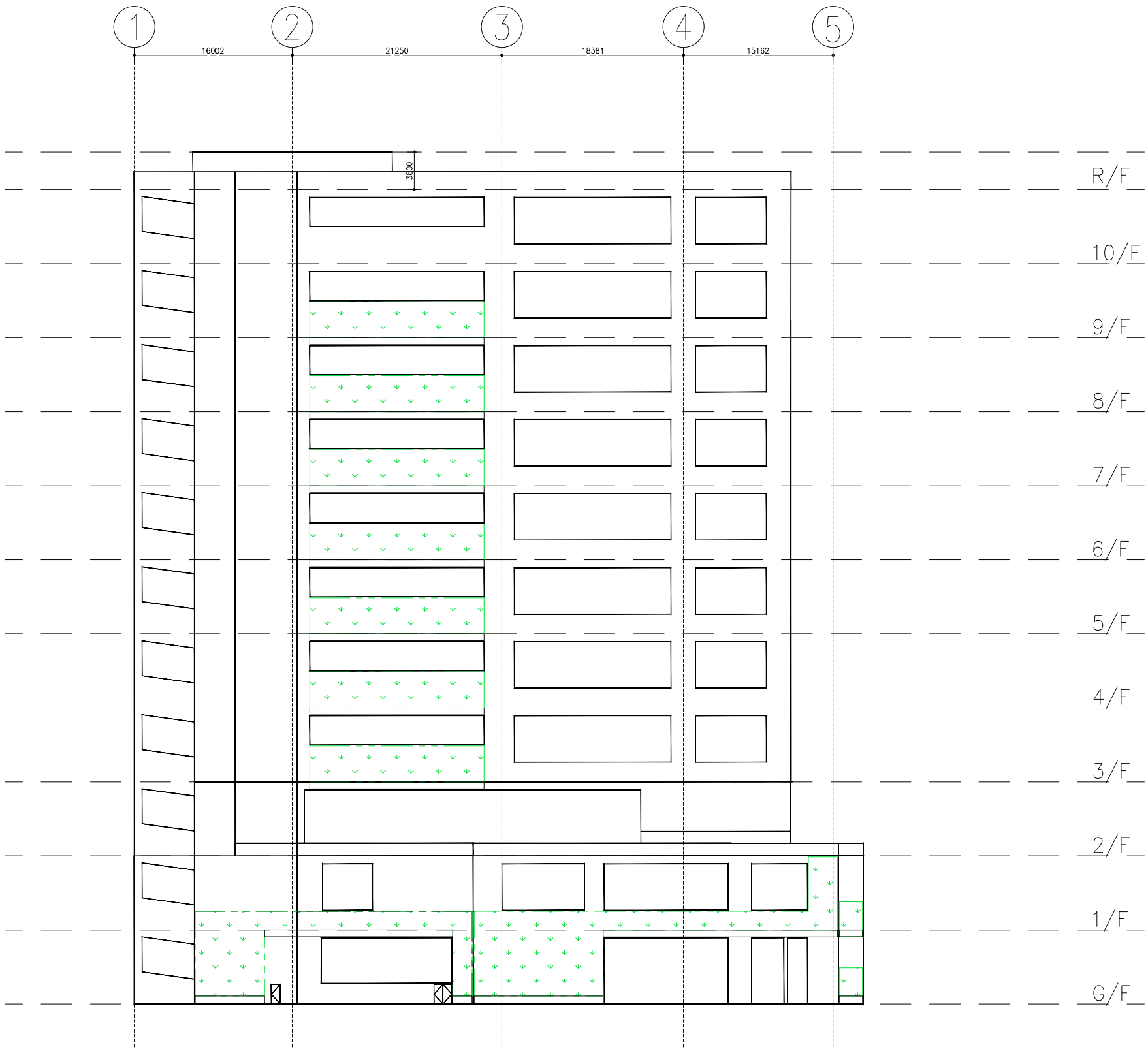
DRAWN BY: CC

CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: EL01



SOUTH-WEST ELEVATION

NOTES AND CONDITIONS:

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REV	DESCRIPTION	DATE

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T | +852 3188 5955      F | +852 3188 5958

PROJECT:

TMCLK DEPOT

DRAWING TITLE :

SOUTH-WEST ELEVATION (SITE A)

SCALE:	1:500
DATE:	13/09/2021
DRAWN BY:	CC
CHECKED BY:	NC
APPROVED BY: -	
JOB. NO.:	FDB-P-21031
DWG. NO.:	EL02



NORTH-EAST ELEVATION

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REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

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Wan Chai, Hong Kong

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PROJECT:

TMCLK DEPOT

DRAWING TITLE :

NORTH-EAST ELEVATION (SITE A)

SCALE: 1:500

DATE: 13/09/2021

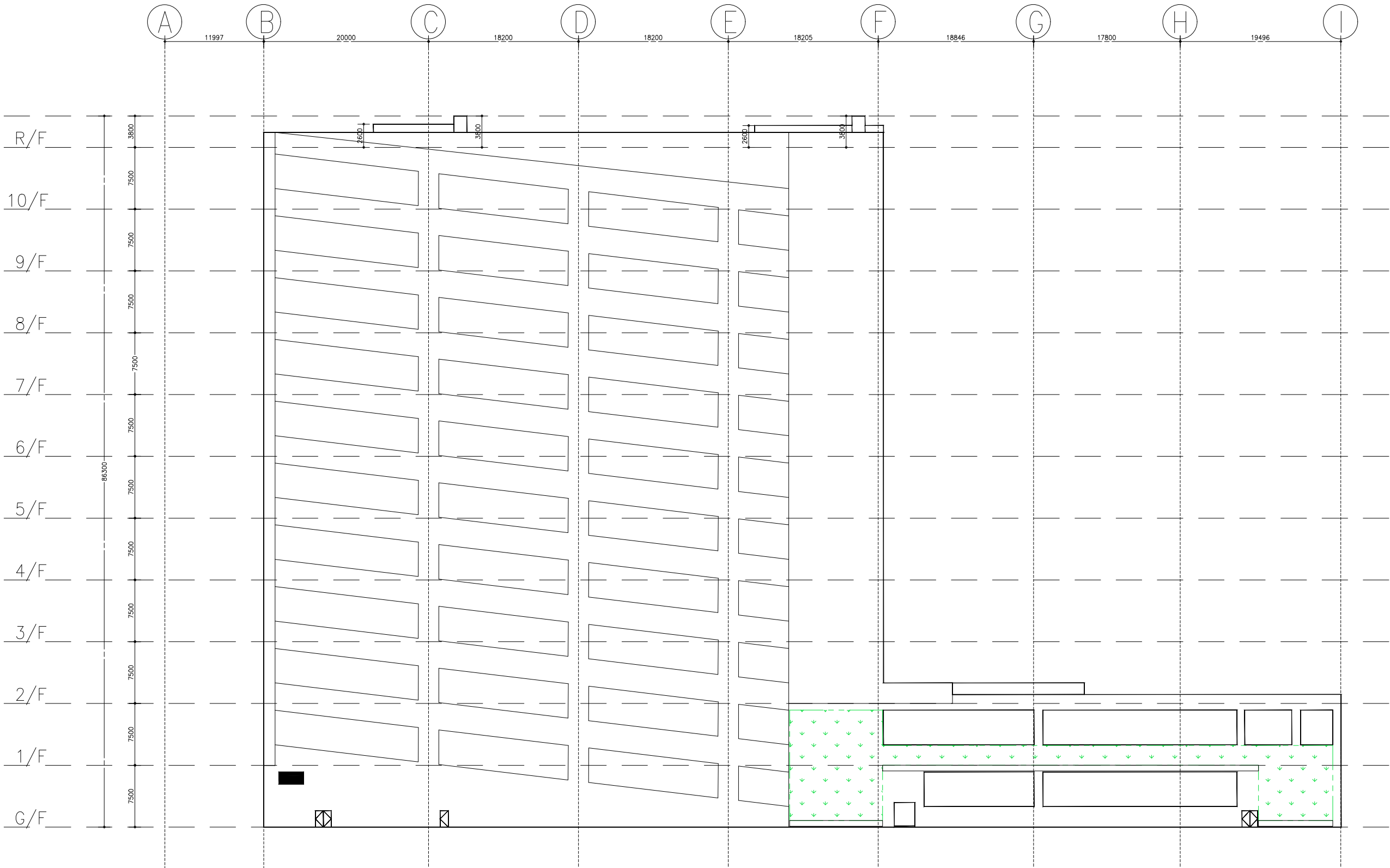
DRAWN BY: CC

CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: EL03



NORTH-WEST ELEVATION

- NOTES AND CONDITIONS:
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REV	DESCRIPTION	DATE

CLIENT:

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T | +852 3188 5955 F | +852 3188 5958

PROJECT:

TMCLK DEPOT

DRAWING TITLE:

NORTH-WEST ELEVATION (SITE A)

SCALE: 1:500

DATE: 13/09/2021

DRAWN BY: CC

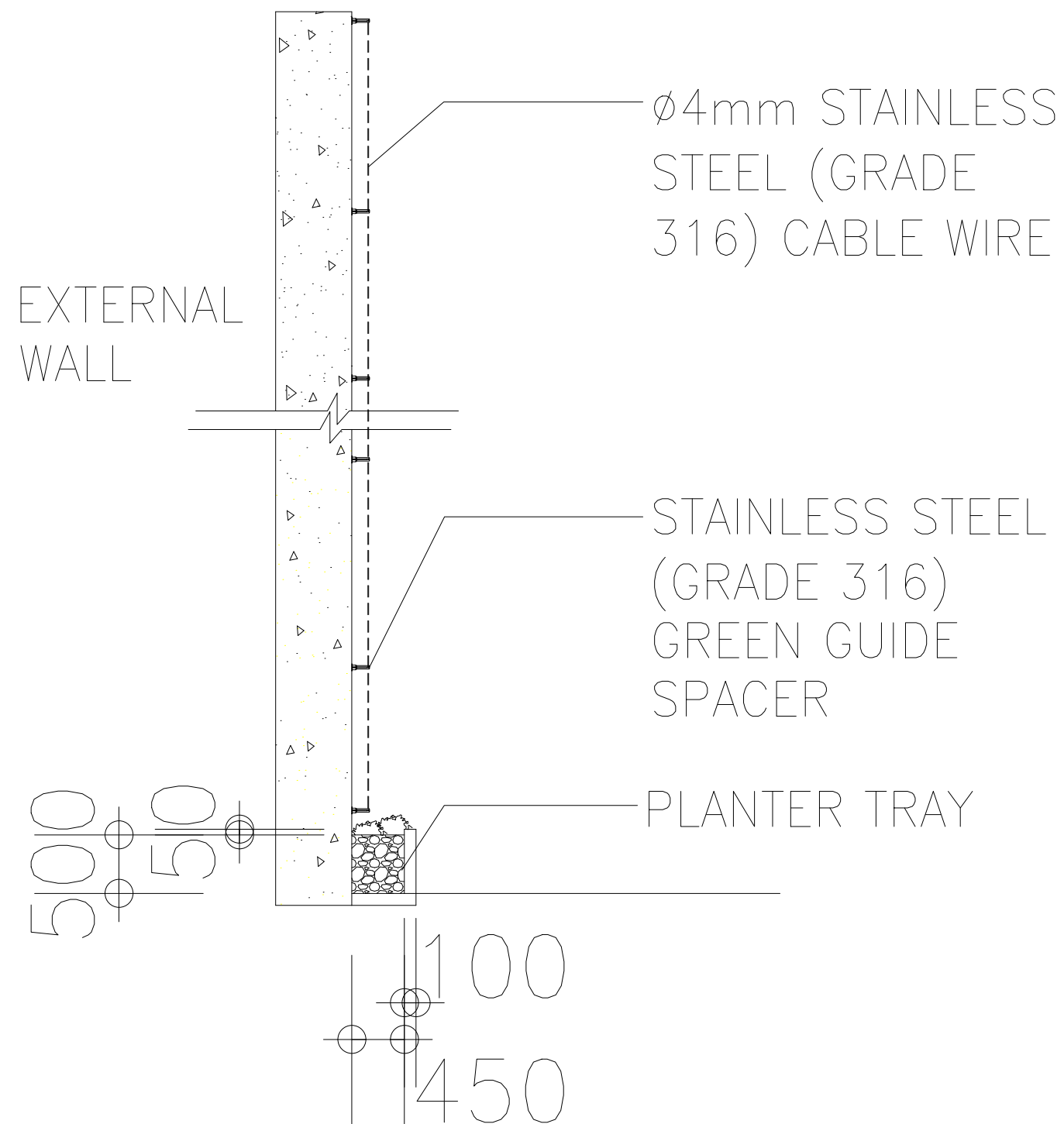
CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

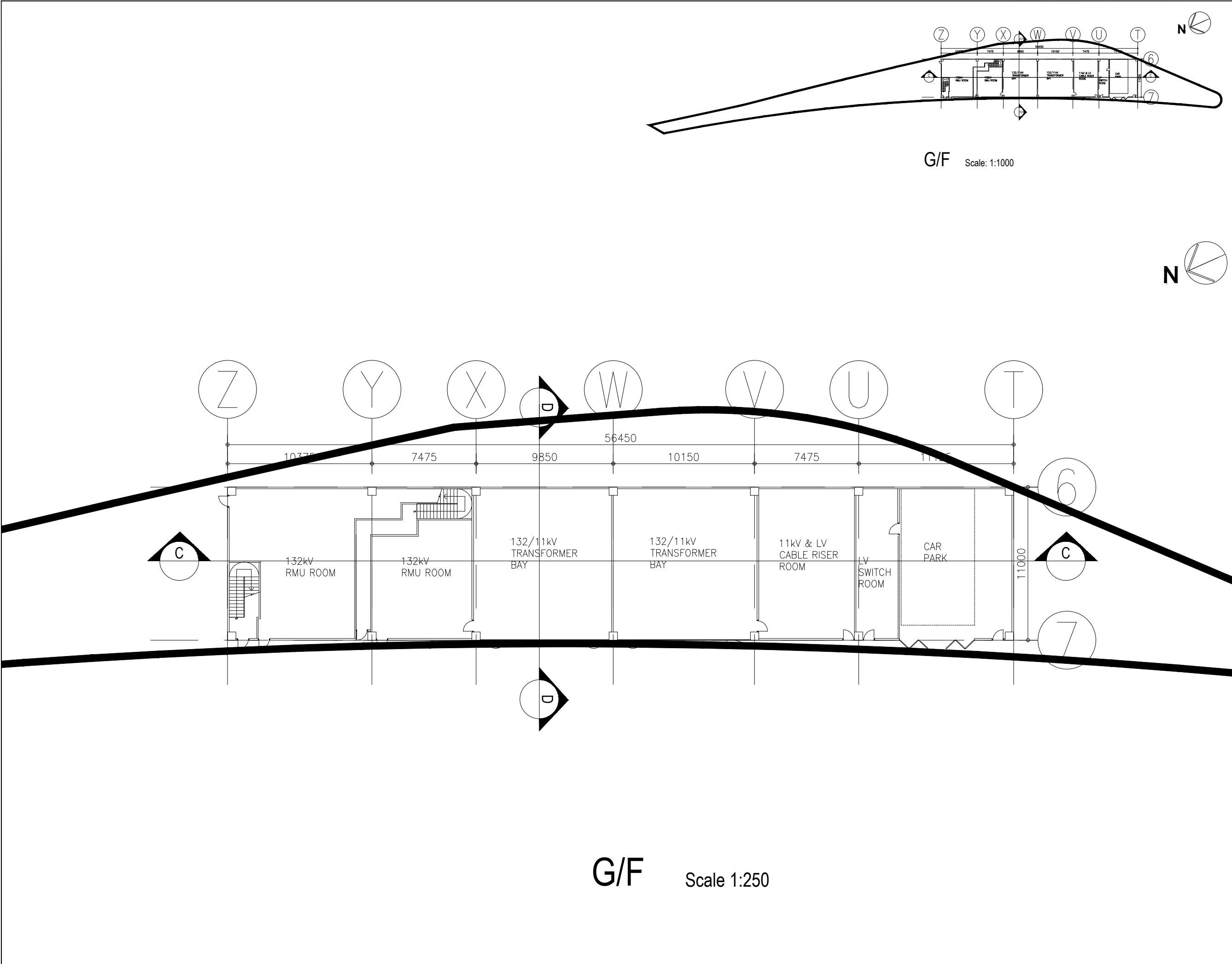
DWG. NO.: EL04





# DETAIL OF VERTICAL GREENING

NOTES AND CONDITIONS:		
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BUILDING CONSULTANT:		
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PROJECT:		
TMCLK DEPOT		
DRAWING TITLE :		
DETAIL OF VERTICAL GREENING		
SCALE:	1:50	
DATE:	13/09/2021	
DRAWN BY:	CC	
CHECKED BY:	NC	
APPROVED BY: -		
JOB. NO. :	FDB-P-21031	
DWG. NO. :	DD01	



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PROJECT:

TMCLK DEPOT

DRAWING TITLE :

G/F LAYOUT (SITE B)

SCALE:      As stated

DATE:        13/09/2021

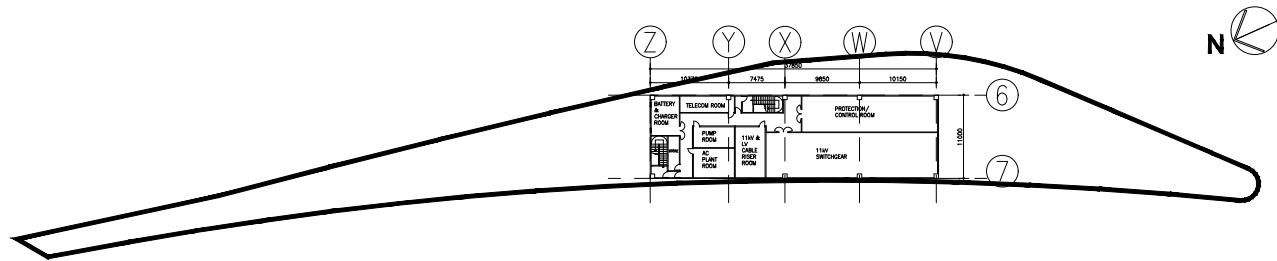
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JOB. NO.:    FDB-P-21031

DWG. NO.:   AA07



1/F Scale: 1:1000

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PROJECT:

TMCLK DEPOT

DRAWING TITLE :

1/F LAYOUT (SITE B)

SCALE: 1:250

DATE: 13/09/2021

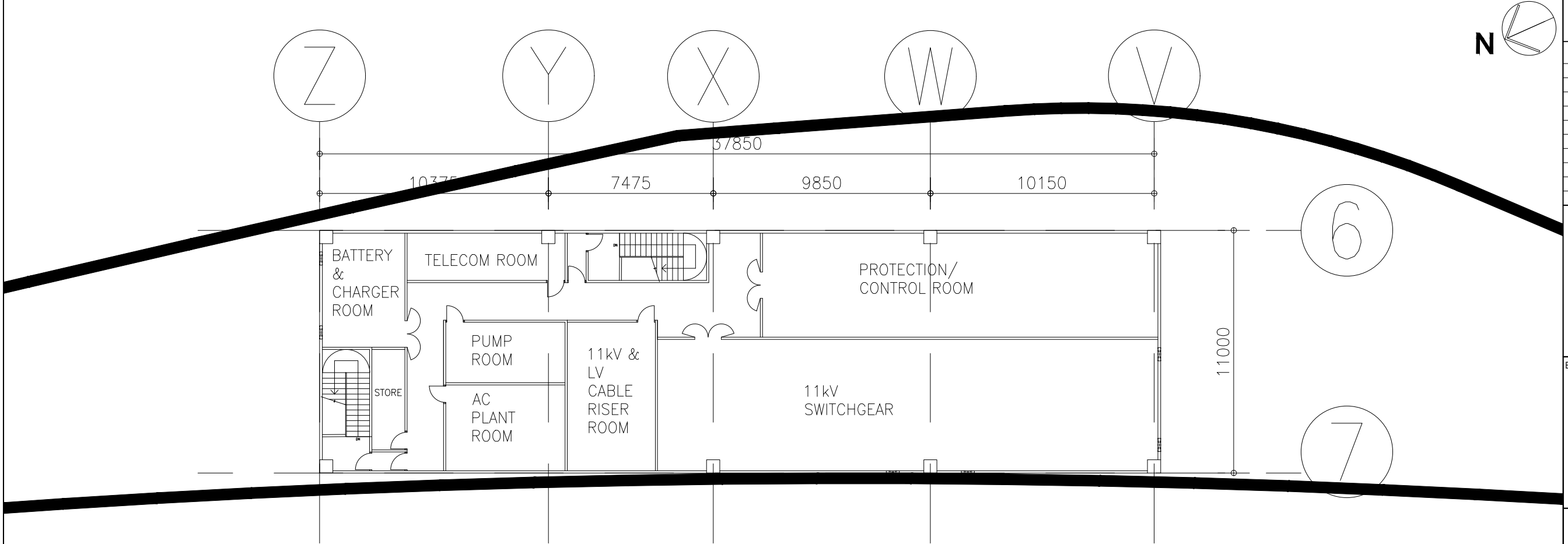
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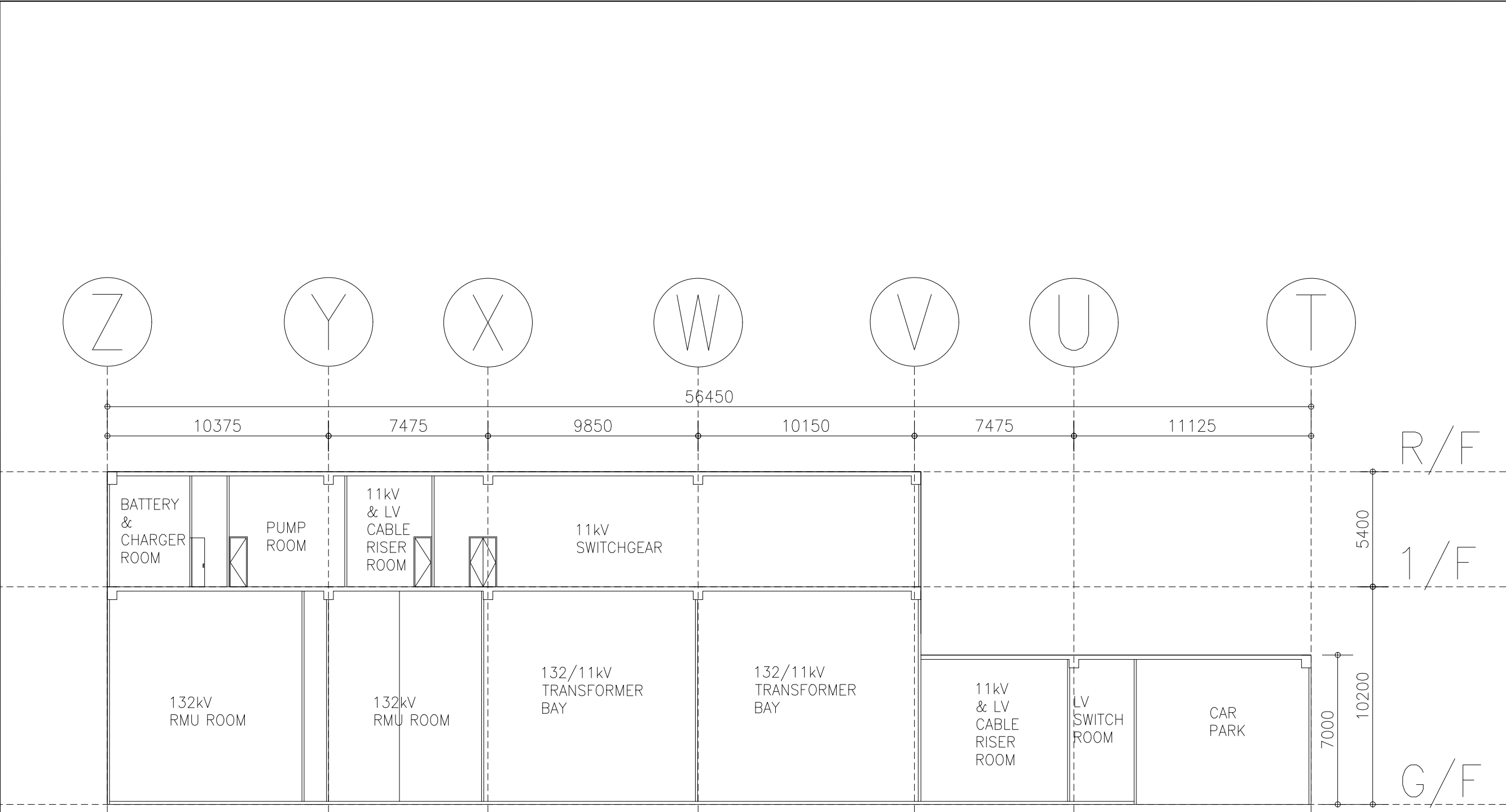
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DWG. NO.: AA08



1/F Scale: 1:250



SECTION C-C

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PROJECT:

TMCLK DEPOT

DRAWING TITLE :

SECTION C-C (SITE B)

SCALE: 1:200

DATE: 13/09/2021

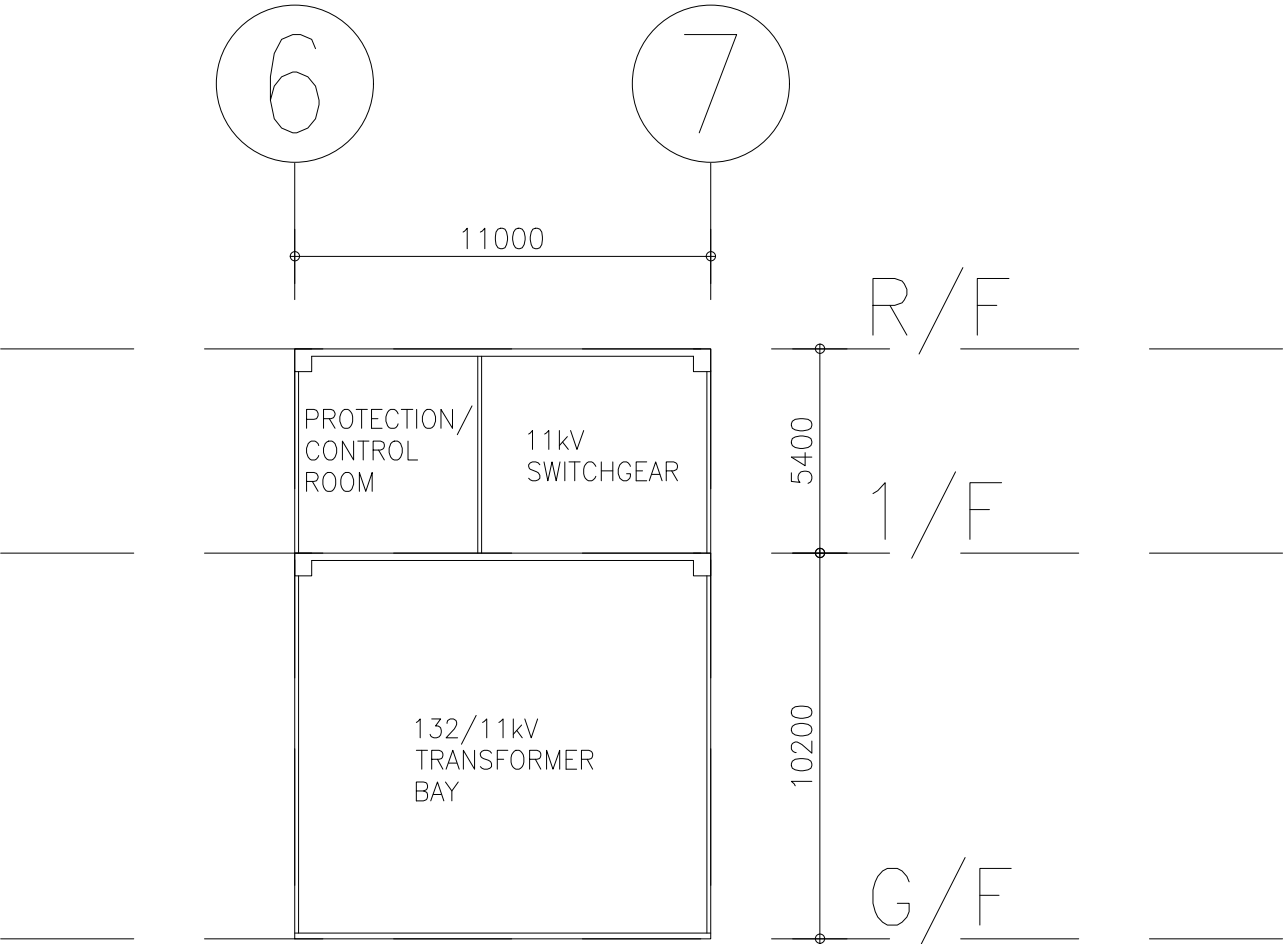
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JOB. NO.: FDB-P-21031

DWG. NO.: ST03



SECTION D-D

- NOTES AND CONDITIONS:
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PROJECT:

TMCLK DEPOT

DRAWING TITLE :

SECTION D-D (SITE B)

SCALE: 1:200

DATE: 13/09/2021

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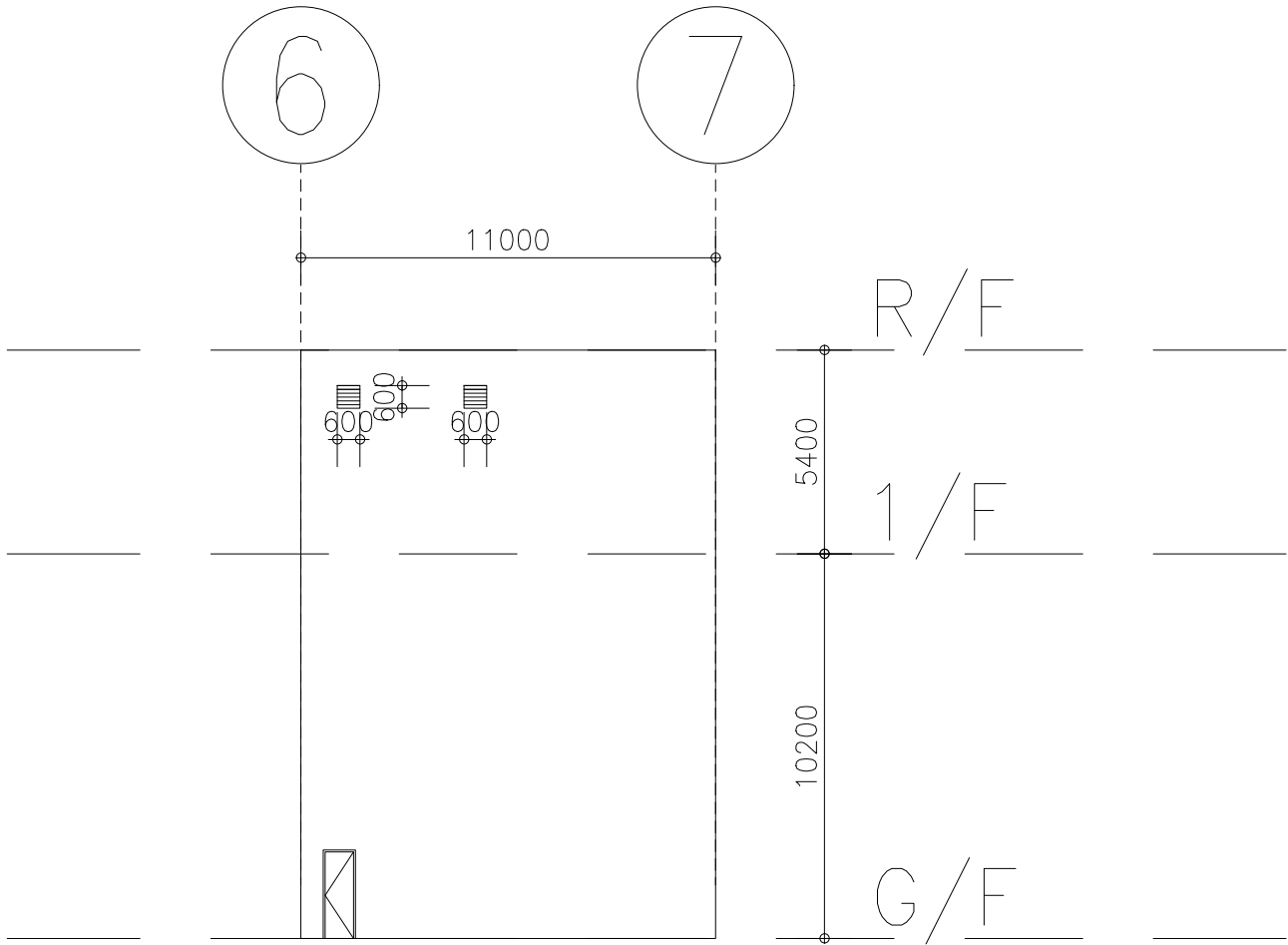
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NORTH-EAST ELEVATION

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PROJECT:

TMCLK DEPOT

DRAWING TITLE :

NORTH-EAST ELEVATION (SITE B)

SCALE: 1:250

DATE: 13/09/2021

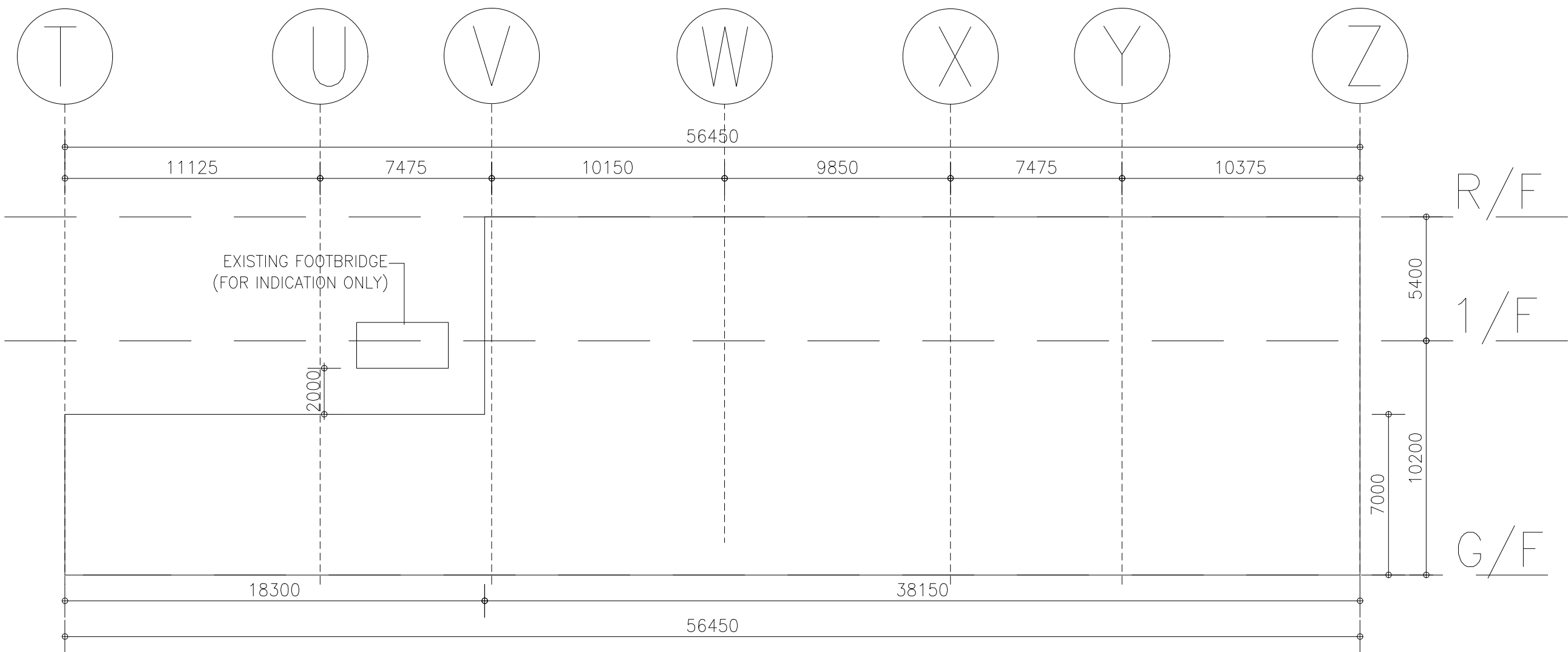
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DWG. NO.: EL06



SOUTH-EAST ELEVATION

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REV	DESCRIPTION	DATE

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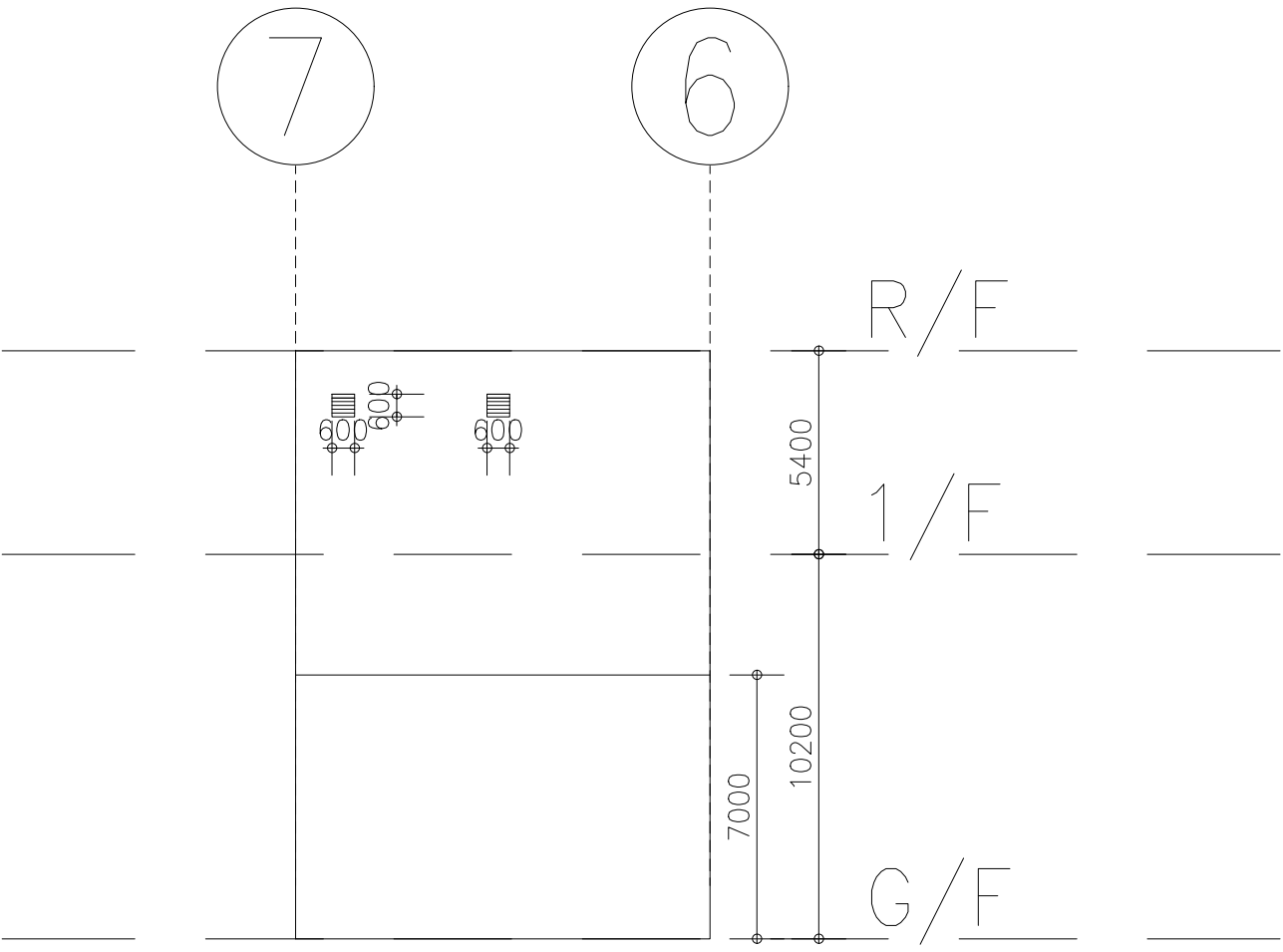
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PROJECT:

TMCLK DEPOT

DRAWING TITLE :	SOUTHEAST ELEVATION (SITE B)
SCALE:	1:200
DATE:	13/09/2021
DRAWN BY:	CC
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APPROVED BY: -	
JOB. NO.:	FDB-P-21031
DWG. NO.:	EL07



SOUTH-WEST ELEVATION

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PROJECT:

TMCLK DEPOT

DRAWING TITLE :

SOUTHWEST ELEVATION (SITE B)

SCALE: 1:200

DATE: 13/09/2021

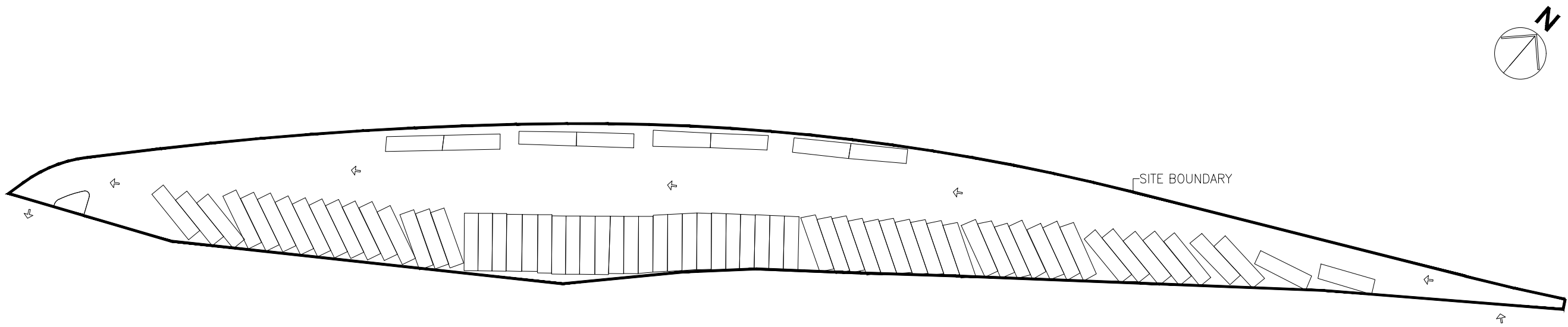
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JOB. NO.: FDB-P-21031

DWG. NO.: EL08



LEGEND



Parking Space  
(13000mm x 3250mm)

G/F

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PROJECT:

TMCLK DEPOT

DRAWING TITLE :

G/F LAYOUT (SITE C)

SCALE: 1:1000

DATE: 13/09/2021

DRAWN BY: CC

CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: AA09

Issue No. : 3  
Issue Date : Nov 2021  
Project No. : 1906



## **DRAINAGE AND SEWERAGE IMPACT ASSESSMENT**

**FOR**

**PROPOSED BUS DEPOTS  
WITH ANCILLARY PUBLIC  
UTILITY INSTALLATION  
(ELECTRICITY SUBSTATION)  
IN AREA SHOWN AS 'ROAD',  
GOVERNMENT LAND IN D.D.  
138 AND D.D. 300, TUEN  
MUN, NEW TERRITORIES  
(NEAR THE BUILDING AT 20  
TUEN MUN CHEK LAP KOK  
ROAD)**

Prepared by

Allied Environmental Consultants Limited

**COMMERCIAL-IN-CONFIDENCE**

**Allied Environmental Consultants Limited**

Member of AEC Group (HKEX Stock Code: 8320.HK)

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**沛然環境評估工程顧問有限公司**

沛然環保集團成員 (港交所股份代號: 8320.HK)

香港灣仔告士打道 160 號海外信託銀行大廈 27 樓

## Document Verification



<b>Project Title</b>	Proposed Bus Depots with Ancillary Public Utility Installation (Electricity Substation) in Area shown as 'Road', Government Land in D.D. 138 and D.D. 300, Tuen Mun, New Territories (Near the Building at 20 Tuen Mun Chek Lap Kok Road)	<b>Project No.</b> 1906
<b>Document Title</b>	Drainage and Sewerage Impact Assessment	

<b>Issue No.</b>	<b>Issue Date</b>	<b>Description</b>	<b>Prepared by</b>	<b>Checked by</b>	<b>Approved by</b>
Issue 1	May 2021	1 <sup>st</sup> Submission	Jamie Kam	Cathy Man	Grace Kwok
Issue 1 rev1	July 2021	1 <sup>st</sup> Submission	Jamie Kam	Cathy Man	Grace Kwok
Issue 2	Oct 2021	2 <sup>nd</sup> Submission	Jamie Kam	Cathy Man	Grace Kwok
Issue 3	Nov 2021	3 <sup>rd</sup> Submission	Jamie Kam	Cathy Man	Grace Kwok

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Appendix 3-3	Correspondence from Planning Department
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Appendix 6-2	Calculation of Sewerage Generation
Appendix 6-3	Detailed Hydraulic Calculation of Sewerage Flow
Appendix 7-1	Photos of Existing Site

## **1. Introduction**

- 1.1.1. Allied Environmental Consultants Limited (AEC) was commissioned by the Kowloon Motor Bus Company (1933) Limited (KMB) to conduct a Drainage and Sewerage Impact Assessment (DSIA) to support a Section 16 Planning Application for proposed bus depots with ancillary public utility installation (hereafter referred to as the “Proposed Development”) of Tuen Mun – Chek Lap Kok Link (TMCLK) Free Up Area (hereinafter referred to as “Project Sites”).
- 1.1.2. The Proposed Development include a multi-storey permanent depot at Site A; a 2-storey power substation at Site B and charging-enabling bus parking bays at Site C.
- 1.1.3. The Project Sites comprise of three free up areas, namely Site A, B and C, with total area of 16,845m<sup>2</sup> (Site A: 7,926 m<sup>2</sup>; Site B: 1,321m<sup>2</sup> and Site C: 7,598 m<sup>2</sup>). The Project Sites are served as the proposed depot for electric buses (“eBus”) only. eBus will be charged and parked overnight at Site A and Site C, vehicular maintenance activities and bus washing will also be carried out within Site A only. A total of 406 charging-enabling bus parking bays for eBus will be provided in the Project Sites.

## 2. Objectives

- 2.1.1. In support of the Section 16 Planning Application for the Proposed Development, this section presents drainage and sewerage impact assessment, which identifies and assesses the potential impacts on public sewerage and drainage system and recommends mitigation measures where required, for the construction and operation of the proposed Project.

## 3. The Proposed Development

- 3.1.1. The Project Sites are located at Tuen Mun Chek Lap Kok Tunnel Road and at the east of the Tuen Mun Chek Lap Kok Tunnel Interchange. The Project Sites fall into “Road” under the Approved Tuen Mun Outline Zoning Plan No. S/TM/35. The location of the Project Site and its environs is shown in **Figure 3-1**. Toll Control Building of Tuen Mun Chek Lap Kok Tunnel is situated at the northeast of the Site A.
- 3.1.2. Site A of the Proposed Project will be constructed in the form of an 11-storey depot for electric buses (eBuses) only, comprising various facilities for vehicle washing and repair operation, charging-enabling bus parking bays as well as offices. Site B is the power substation; while site C is served for bus parking only. In other words, sewage generated from the Proposed Project is solely from Site A. Moreover, no catering service or canteen is proposed in the Project Sites. The Project Sites are entirely paved with concrete surface based on on-site observation and the proposed depot will be fully covered. The master layout plan of the Proposed Project is shown in **Appendix 3-1**.
- 3.1.3. Automatic vehicle washing machine will be installed in site A, which is equipped with simple filtration and disinfection to treat wastewater from vehicle washing. The treated effluent will be reused for vehicle washing only, and will not be reused on other purposes such as portable uses, flushing, irrigation or floor cleaning.
- 3.1.4. Utility Plan showing the sewage and stormwater drainage system serving Site A is given in **Appendix 3-2**. The sewage and stormwater generated from the Project Sites is expected to be discharged to the public sewerage and drainage system.

- 3.1.5. Based on the best available information from Development Permission Area Plans, Outline Development Plans, Layout Plans and other relevant published and uses plan by Lands Department or Planning Department, no committed or planned developments are identified in the vicinity of the Project Sites. As advised by Planning Department (PlanD), the consultant has visited the Town Planning Board Statutory Planning Portal 2 to obtain records for land zoning. The website as of 8 October 2021 has confirmed that there are no planning applications made at the vicinity, which implies no committed or planned developments. Correspondence from PlanD can be referred in **Appendix 3-3**.

## **4. EIA Ordinance Implications**

- 4.1.1. As a multi-storey depot and supporting facilities for electric buses are proposed at the Project Sites, a Designated Project (DP) under Schedule 2, Part I, Category A.6 of the EIAO has been considered:
- 4.1.2. Category A.6: A transport depot located less than 200 m from the nearest boundary of an existing or planned---
- (a) residential area;
  - (b) place of worship;
  - (c) educational institution; or
  - (d) health care institution.
- 4.1.3. With reference to the Development Permission Area Plans, Outline Development Plans, Layout Plans and other relevant published land uses plan by Lands Department or Planning Department, neither residential area, place of worship, educational institution, nor health care institution is identified or will be planned within 200m from boundary of Project Sites. Therefore, the proposed bus depot does not constitute DP under EIAO and Environmental Permit (EP) is not required for this Project.

## **5. Environmental Legislation, Standards and Guidelines**

### **5.1. General**

- 5.1.1. Water quality in Hong Kong is legislated by the provisions of the Water Pollution Control Ordinance (Cap 358), 1980 ("WPCO"). Territorial Water has been subdivided into ten Water Control Zones ("WCZ") and four supplementary water control zones. The study area lies within the North Western Water Control Zone. A Technical Memorandum on Standards for Effluents discharged into Drainage and Sewerage Systems, Inland and Coastal Water (TMES) has been issued, which requires licensing of all discharges into all public sewers and drains. The water quality standards will have to be met during the operation stages.
- 5.1.2. Besides as stipulated in the Building (Standards of Sanitary Fitments, Plumbing, Drainage Works and Latrines) Regulations 41(1), 40(2), 41(1), 90 and recap in ProPECC PN 5/93, domestic sewage should be discharged to a foul water sewer and surface water should be discharged via rainwater pipes to stormwater drains during operational phase.
- 5.1.3. The following standards and guidelines are adopted for estimation, assessment and evaluation of sewerage implication of the Proposed Development:
- Hong Kong Planning Standards and Guidelines issued by the Planning Department;
  - Sewerage Manual Part 1 published by DSD;
  - Guidelines for Estimating Sewage Flows for Sewage Infrastructure Planning Version 1.0 (Report No.: EPD/TP1/05) ("GESF") published by Environmental Protection Department
  - Water Supplies Department (WSD) Water Quality Criteria;
  - Technical Memorandum on Standards for Effluents Discharged into Drainage and Sewerage Systems, Inland and Coastal Waters (WPCO-TM);
  - Practice Note for Professional Persons on Drainage Plans subject to Comment by the Environmental Protection Department (ProPECC PN 5/93).



## 6. Sewage Impact Assessment

### 6.1. Existing Sewerage Facilities

- 6.1.1. Latest drainage record plan showing the existing sewerage system in **Appendix 6-1** has been reviewed to estimate the potential sewerage impact on the downstream flows associated with the proposed development.
- 6.1.2. The sewage from existing development, the Toll Control Building (Catchment A), will be discharged at FM1.1. Based on **Appendix 6-1**, sewer pipes of 225mm diameter were constructed within Site A in east-to-west direction (from FM1.1 to FM1.5) and eventually connected to the terminal manhole at southwest of the Site A (FM1.5) for discharging sewer to public sewage system.
- 6.1.3. The existing public sewers of pipe diameter ranging from 225mm to 250mm continue running in an east-west direction (From FM1.5 to FM1.6-1), then the sewer pipes run across the Tuen Mun Chek Lap Kok Tunnel Road towards south-eastern direction. The sewage is then discharged to the sewer special manhole (FSH1005385), which is connect to sewer pipe with 2500mm diameter running along Lung Mun Road. **Figure 6-1** illustrates an overview of the existing sewerage system and existing catchment.
- 6.1.4. As mentioned in **S3.1.5**, no committed or planned developments are identified at the vicinity of the Project Sites. Hence, no planned discharges are expected to the newly constructed sewer between FM1.1 and FM1.12A.

## 6.2. Estimation of Sewage Flow from Proposed Development

6.2.1. As mentioned in S3.1.2, Site B is served for the power substation; while site C is served for bus parking only, sewage generation is therefore not expected. The sewage generated due to Project Sites is solely from Site A, which includes effluent from depot staff and overflow of water from automatic vehicle washing machines. No catering services will be provided in the Project Sites. The generated sewage will not comprise of any heavy metal.

6.2.2. Based on the total number of staff as advised by the operator, the amount of sewage generated from staff in depot is estimated in **Table 6-1** and **Appendix 6-2**.

*Table 6-1 Total Number of Staff and the Estimated Sewage Generation*

Staff	Person	Unit Flow Factor <sup>[1]</sup>	Average Dry Weather Flow (ADWF)
		m <sup>3</sup> /person/day	m <sup>3</sup> /day
Office Staff	50	0.18	9
Maintenance Staff	320	0.18	57.6
<b>Total</b>			<b>66.6</b>

Remarks:

[1]: Referring to Table T-2, Category J3 (Transport, Storage and Communication) and Commercial Employee, under the Guidelines for Estimating Sewage Flow for Sewage Infrastructure Planning Version 1.0 (EPD/TP 1/05) issued by the Environmental Protection Department.

6.2.3. The automatic vehicle washing machines would be equipped with water recycling system. According to the operator, around 70% of the wastewater will be recycled and reused by the automatic vehicle washing machines. Water loss from evaporation is expected. The wastewater will be collected and discharged to the on-site STP only when the sump pit of 1m<sup>3</sup> (size of 1m x 1m x 1m) overflows. It is assumed that 30% of the water from vehicle washing machines will be discharged to sewer as a conservative approach. In view of the overflow of water from vehicle washing machines, petrol Interceptor will be installed in Site A to remove oil or petrol before being discharged into public sewer. The petrol interceptors should be regularly cleaned and maintained in good working condition. Oily waste collected by petrol interceptors is considered and disposed of as chemical waste.

**Table 6-2 Parameters and Estimated Sewage Generation of Automatic Vehicle Washing Machine**

Parameters		Unit	Remarks
No. of Service	500	wash/day	Provided by 4 automatic vehicle washing machines
Water Consumption	250	L/min	
Duration of each Washing	2	min/wash	
Estimated Water Consumption	250	m <sup>3</sup> /day	
Efficiency of Wastewater Recycling	70	%	It is assumed that 70% of wastewater in the machine will be reused, and 30% will be discharged to sewer.
<b>Average Dry Weather Flow (ADWF)</b>	<b>75</b>	m <sup>3</sup> /day	

6.2.4. To summarize, the total average dry weather flows (ADWF) from staff and automatic vehicle washing machines is estimated to be 141.6 m<sup>3</sup>/d (66.6 m<sup>3</sup>/d + 75 m<sup>3</sup>/d). The detail calculation of sewage generation from the proposed project is shown in **Appendix 6-2**.

6.2.5. A peaking factor of 8 and a catchment inflow factor of 1.10 have been applied to the estimated ADWF to establish the peak wet weather flow (PWWF) of 0.0144 m<sup>3</sup>/s for Site A, which includes the stormwater allowances in accordance with the GESF, in order to provide a conservative basis for the performance assessment of the sewerage facilities.

### 6.3. Assessment of Sewerage Impact

6.3.1. The sewerage impact on various segments of the sewer is evaluated by comparing the estimated peak flow against the capacity of the respective sewer segments.

6.3.2. The daily peak sewage generated by the proposed development and Catchment A is estimated to be 0.015m<sup>3</sup>/s. The total daily peak sewage of the proposed development takes up 14.2% in capacity of existing 225mm gravity foul sewer (i.e. pipe section from FM1.10 to FM1.11). The sewage generated from the proposed development only contribute 0.4% of the capacity of sewer pipe of 2500mm diameter along Lung Mun Road (FWD1066202).

6.3.3. **Table 6.3** tabulates the sewage contribution on the concerned existing sewers after development. Detail calculation on capacity checking of sewers is included in **Appendix 6-3**.

**Table 6-3 Sewage Contribution on the Concerned Existing Sewers After Development**

Pipe Segments		Diameter, mm	Max Capacity of Sewer, m <sup>3</sup> /s	Estimated Peak Flow, m <sup>3</sup> /s	Used Capacity, %
From	To				
FM1.5	FM1.6	225	0.118	0.015	12.9%
FM1.6	FM1.6-1	250	0.143	0.015	10.6%
FM1.6-1	FM1.7	250	0.143	0.015	10.7%
FM1.7	FM1.8	225	0.119	0.015	12.8%
FM1.8	FM1.9	225	0.118	0.015	13.0%
FM1.9	FM1.10	225	0.120	0.015	12.7%
FM1.10	FM1.11	225	0.108	0.015	14.2%
FM1.11	FM1.12	225	0.113	0.015	13.5%
FM1.12	FM1.12A	225	0.113	0.015	13.4%
FM1.12A	FSH1005385	225	0.163	0.015	9.4%
FSH1005385	FSH1005384	2500	3.796	0.015	0.4%
FSH1005384	FSH1005383	2500	5.039	0.015	0.3%
FSH1005383	FSH1005382	2500	5.569	0.015	0.3%

6.3.4. As a result, the capacity of public sewerage system is considered sufficient to cater for the increased sewage generated from the proposed development. No adverse sewerage impact arising from the Project Sites on the existing public sewers is anticipated. No sewer improvement or upgrading works are considered necessary.

## 7. Drainage Impact Assessment

### 7.1. Existing Site and Drainage System

- 7.1.1. According to the **Appendix 3-2** and onsite survey, stormwater drains and u-channels are found within the Project Sites. Stormwater from the proposed development shall be discharged to the existing surface water channel within Project Sites and eventually convey to public drainage network at the southwestern side of site boundary.

### 7.2. Potential Impact on Public Stormwater System

- 7.2.1. The Project Sites are a currently a gently flat land, and paved with concrete surface. It is currently a vacant site. The proposed development is basically built on the paved surface without major changes in surface properties and gradient, which will not significantly alter the overall catchment characteristics. Moreover, eBuses are fully powered by electricity, leakage of diesel or engine oil that contaminate the surface runoff is not expected during heavy rainfall. The site photos are given in **Appendix 7-1**.
- 7.2.2. All maintenance activities will be carried out in the enclosed depot. No maintenance activity will be carried out on roof floor except for access to plant rooms. Proper drainage will be provided in each plant room on roof floor to ensure no wastewater or run-off from plant room will enter the uncovered portion of the roof. Contamination of rainwater from plant room is not anticipated.
- 7.2.3. The Proposed Project is for electric buses only and no engine oil and gearbox oil are required. However, only minimal lubricating oil will be used during bus maintenance. Oil interceptors will be installed at drainage system downstream of any oil/fuel pollution sources. Oil interceptors will be emptied and cleaned regularly to prevent the release of oil and grease into the stormwater drainage.

- 7.2.4. No fertilisers or pesticides will be routinely used for vegetation management in landscape area in accordance with the General Specification for Building (2012 edition) by Architectural Services Department (ASD). During heavy rainfall, trace of pollutants may be wash-off and is often bound or adsorbed onto particles (i.e. loose soil or litter). The stormwater drainage system on site will be equipped with silt trap to remove the particles and associated pollutants. The stormwater discharge will satisfy the effluent standards and requirements stipulated in the WPCO-TM, notably, with respect to prohibited substances as stated in clauses 8.4 and 9.1, as the case may be. The detailed design of silt traps will be reviewed and confirmed during detailed design stage so that WPCO-TM, in particular, the aforesaid requirements pertaining to prohibited substances, will be complied with.
- 7.2.5. Since the stormwater will be properly treated to satisfy the effluent standards prior to discharge and complies with the clearance requirements as listed in the WPCO and its TM, no adverse water quality impact on the public stormwater drainage system is anticipated during operation of the Project. It is assumed that the drainage situation with the proposed development is the same as the existing situation, no additional drainage work is required.



## 8. Conclusion

### **Sewerage Impact Assessment**

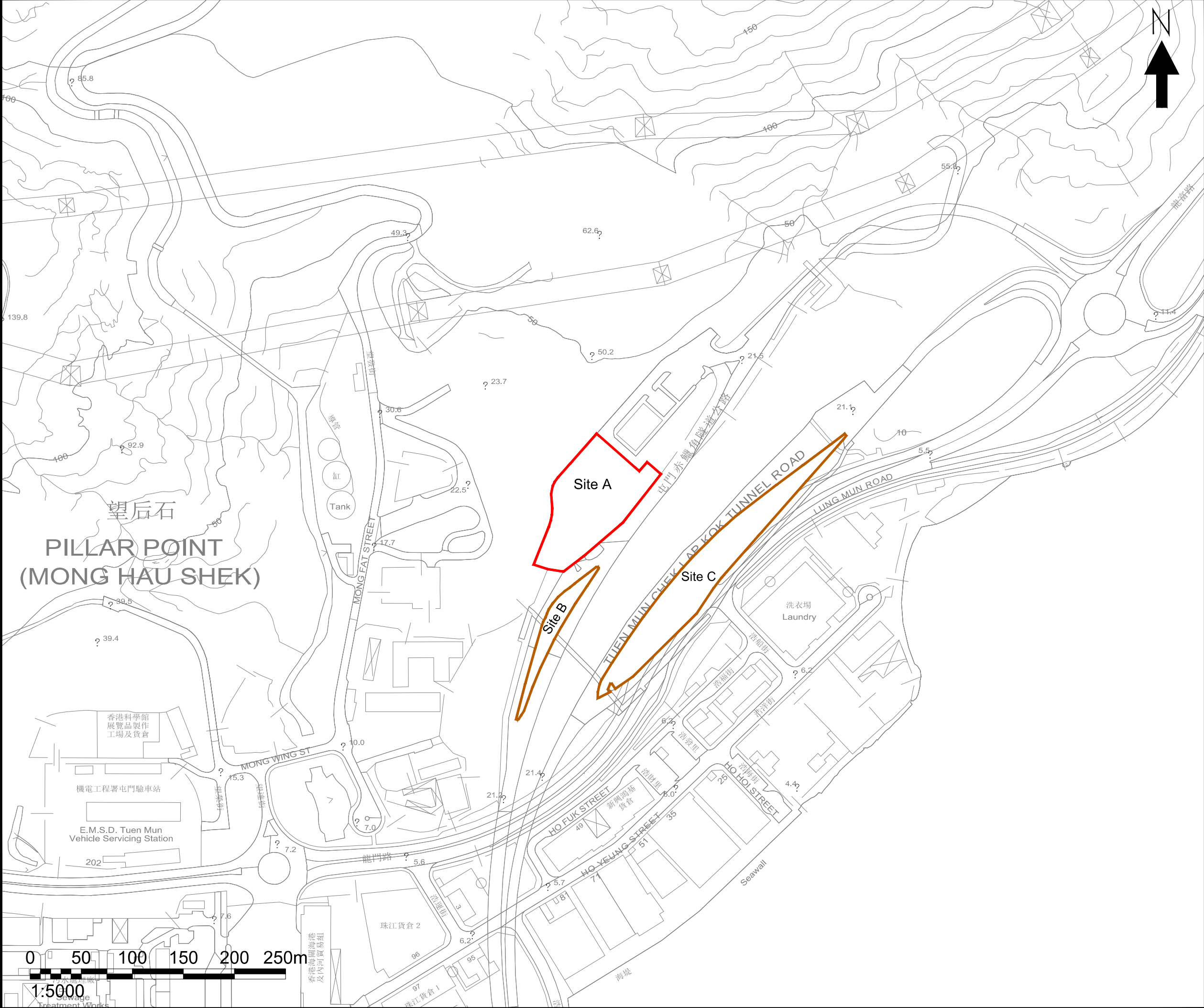
- 8.1.1. Potential water pollution sources during operation phase of the proposed development have been identified as sewage from workforce, and wastewater from automatic vehicle cleaning machine at Site A. Site B is served for the power substation; while site C is served for bus parking only, sewage generation is not expected.
- 8.1.2. The sewage generated from Project Sites is solely from Site A. An ADWF of 141.6 m<sup>3</sup>/day is expected, with the daily peak sewage generated by the Site A is estimated to be 0.0144 m<sup>3</sup>/s.
- 8.1.3. Based on the assessment result, the capacity of existing public sewer is considered sufficient to cater the increased sewage generated from the Project Sites, in addition to the existing discharge from existing Toll Control Building. Therefore, adverse sewerage impact arising from the Proposed Development on the existing public sewer is not anticipated.

### **Drainage Impact Assessment**

- 8.1.4. The Project Sites are gently flat and entirely paved with concrete surface. There is no significant change on gradient and surface characteristics. As the proposed depot is served for eBuses only, use of diesel and engine oil is not expected. Increase in stormwater generation due to the proposed project is considered insignificant.
- 8.1.5. Silt trap will be installed to remove particles / pollutants from the drainage collected within the Project Sites prior to discharging into the public stormwater drainage system. The effluent standards and requirement stipulated in the WPCO-TM will be satisfied. There is no additional impact impose to the public drainage system due to the proposed development, and therefore adverse drainage impact is not envisaged.

## ***Figures***

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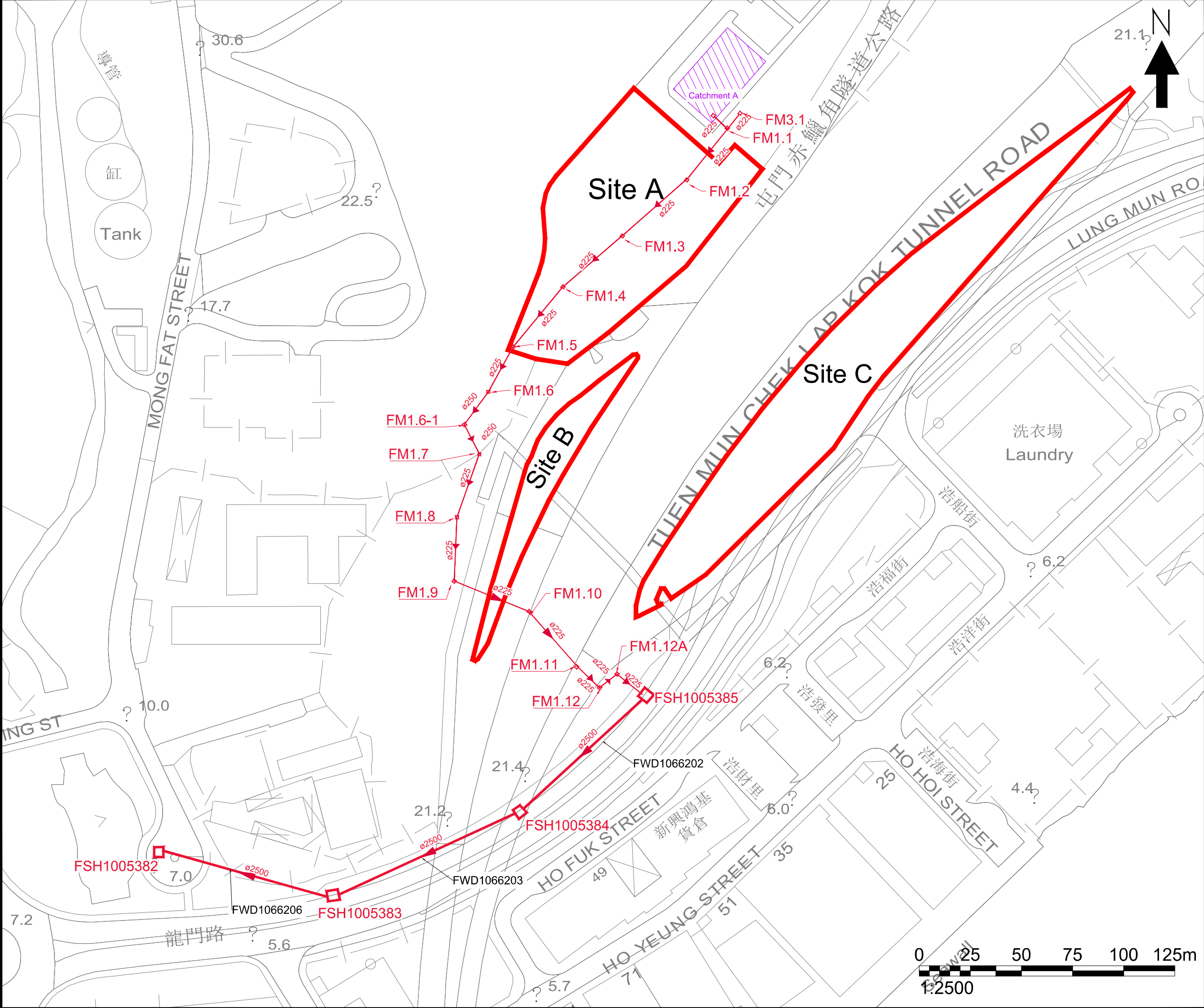
NOTES :  
PROJECT SITE

Consultant



**Allied Environmental Consultants Limited**

Project No. : 1906	
File Name :	
Project : Proposed Bus Depots with Ancillary Public Utility Installation (Electricity Substation) in Area shown as 'Road', Government Land in D.D. 138 and D.D. 300, Tuen Mun, New Territories (Near the Building at 20 Tuen Mun Chek Lap Kok Road)	
Drawing Title : LOCATION OF PROJECT SITE	
Drawing No : FIGURE 3-1	Revision : 0
Scale : AS SHOWN	Date : APR 2021
THIS DRAWING IS NOT FOR CONSTRUCTION PURPOSES UNLESS EXPRESSLY STATED. ALL RIGHTS RESERVED AND REPRODUCTION IN ANY FORM MUST BE APPROVED BY ALLIED SUSTAINABILITY AND ENVIRONMENTAL CONSULTANTS GROUP LIMITED	



- NOTES :
- PROJECT SITE
  - EXISTING SEWERAGE PIPE
  - EXISTING SEWERAGE MANHOLE
  - EXISTING CATCHMENT

Consultant



**Allied Environmental Consultants Limited**

Project No. : 1906	
File Name :	
Project : Proposed Bus Depots with Ancillary Public Utility Installation (Electricity Substation) in Area shown as 'Road', Government Land in D.D. 138 and D.D. 300, Tuen Mun, New Territories (Near the Building at 20 Tuen Mun Chek Lap Kok Road)	
Drawing Title : OVERVIEW OF EXISTING SEWERAGE SYSTEM AND EXISTING CATCHMENT	
Drawing No : FIGURE 6-1	Revision : 1
Scale : AS SHOWN	Date : OCT 2021
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### ***Appendix 3-1***

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#### ***Master Layout Plan of Project Sites***



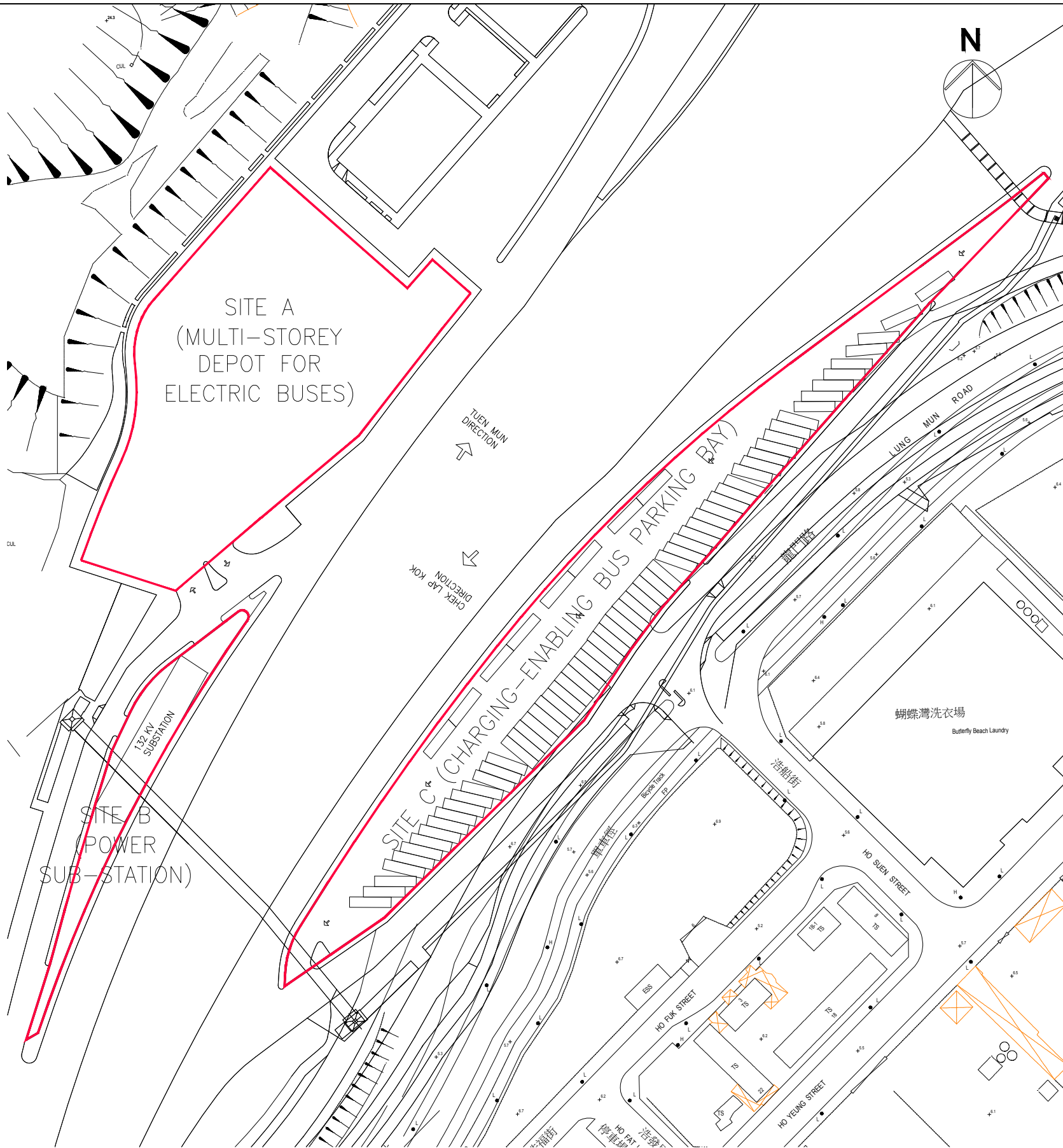
GROSS FLOOR AREA & SITE COVERAGE CALCULATION – SITE A				
PROPOSED SITE USAGE			MULTI–STOREY DEPOT FOR ELECTRIC BUSES	
SITE CLASSIFICATION			CLASS A	
SITE AREA			7926 M2	
SITE COVERAGE			G/F–1/F: 93.58% (FIRST 15M) 2/F–R/F: 60%	
BUILDING HEIGHT			82.5M (FLOOR LEVEL OF G/F TO FLOOR LEVEL OF R/F)	
PERMITTED PLOT RATIO UNDER B(P)R			15	
NON–DOMESTIC GFA	GF	7417 M2	57845.32 M2	
	1F	7417 M2		
	2F	4755.6 M2		
	3F–10F	4755.6 M2		
	RF	210.92 M2		
ACTUAL PLOT RATIO			7.30	

GROSS FLOOR AREA & SITE COVERAGE CALCULATION – SITE B	
PROPOSED SITE USAGE	POWER SUB–STATION
SITE CLASSIFICATION	CLASS A
SITE AREA	1321 M2
SITE COVERAGE	47.01% (621M2/1321M2)
BUILDING HEIGHT	15.6M
PERMITTED PLOT RATIO UNDER B(P)R	5
NON–DOMESTIC GFA	1040.6 M2
ACTUAL PLOT RATIO	0.788
REMARKS: THE SUBJECT BUILDING SHALL BE DISREGARDED FROM GFA AND PLOT RATIO CALCULATION IN ACCORDANCE WITH B(P)R23(3)(b).	

GROSS FLOOR AREA & SITE COVERAGE CALCULATION – SITE C	
PROPOSED SITE USAGE	CHARGING–ENABLING BUS PARKING
SITE CLASSIFICATION	CLASS A
SITE AREA	7598 M2
SITE COVERAGE	0
BUILDING HEIGHT	0M
PERMITTED PLOT RATIO UNDER B(P)R	5
NON–DOMESTIC GFA	0 M2
ACTUAL PLOT RATIO	0

NOS. OF CHARGING–ENABLING BUS PARKING BAYS AND MAINTENANCE BAYS IN SITE A		
	MAINTENANCE BAYS	CHARGING–ENABLING BUS PARKING BAYS
GF	21	
1F	42	
2F	18	31
3F		33
4F		33
5F		33
6F		33
7F		33
8F		33
9F		33
10F		33
RF		38
TOTAL	81	333

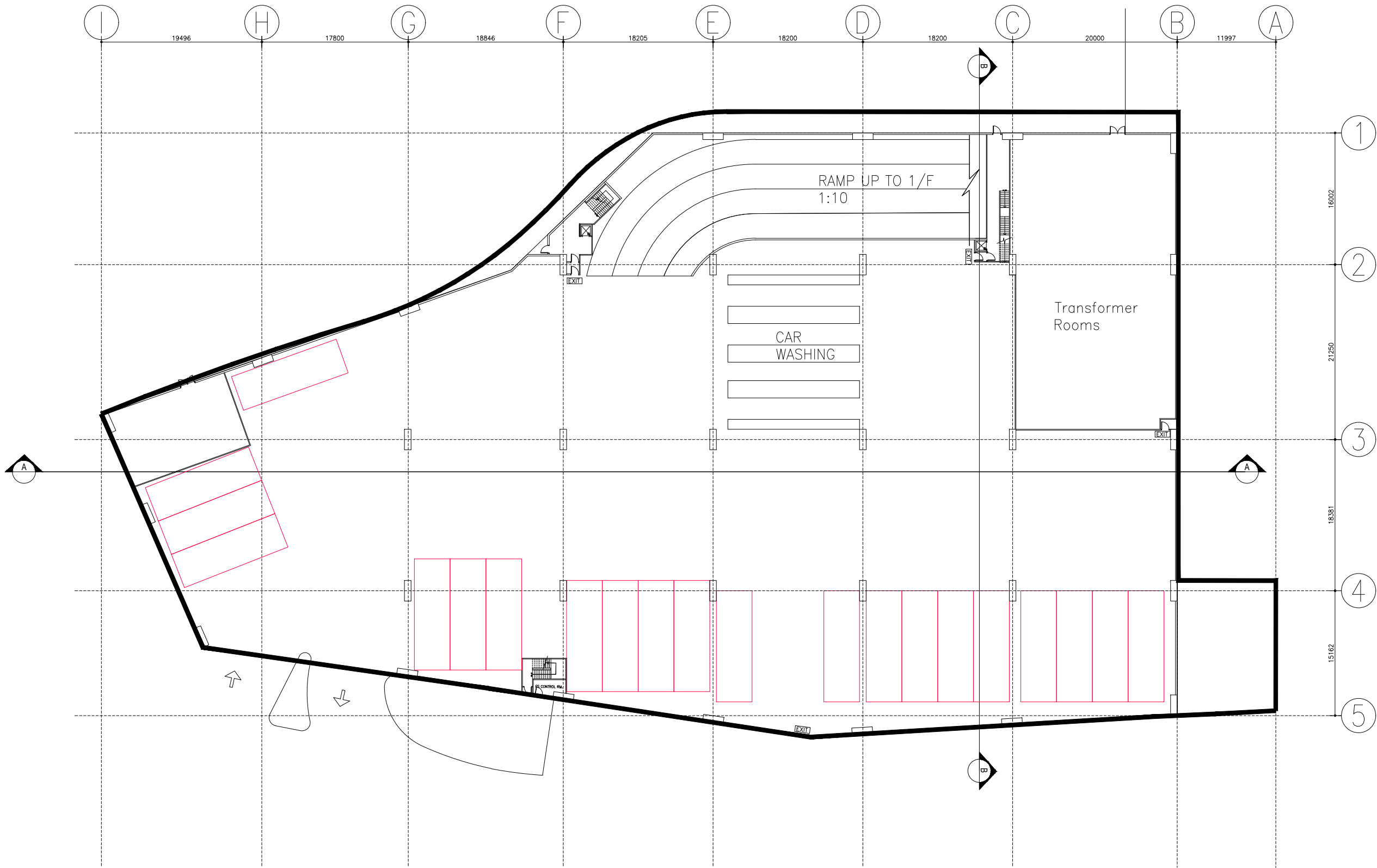
NOS. OF CHARGING–ENABLING BUS PARKING BAYS AND MAINTENANCE BAYS IN SITE C		
	MAINTENANCE BAYS	CHARGING–ENABLING BUS PARKING BAYS
GF	0	73



# Schematic Master Layout Plan

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<small>T   +852 3188 5595 F   +852 3188 5958</small>		
PROJECT:		
TMCLK DEPOT		
DRAWING TITLE:		
SCHEMATIC MASTER LAYOUT PLAN		
SCALE:	1:1500	
DATE:	13/09/2021	
DRAWN BY:	CC	
CHECKED BY:	NC	
APPROVED BY:-		
JOB. NO.:	FDB-P-21031	
DWG. NO.:	AA01	





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PROJECT:

TMCLK DEPOT

DRAWING TITLE:

G/F LAYOUT (SITE A)

SCALE: 1:500

DATE: 13/09/2021

DRAWN BY: CC

CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: AA02



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PROJECT:

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DRAWING TITLE :

1/F LAYOUT (SITE A)

SCALE: 1:500

DATE: 13/09/2021

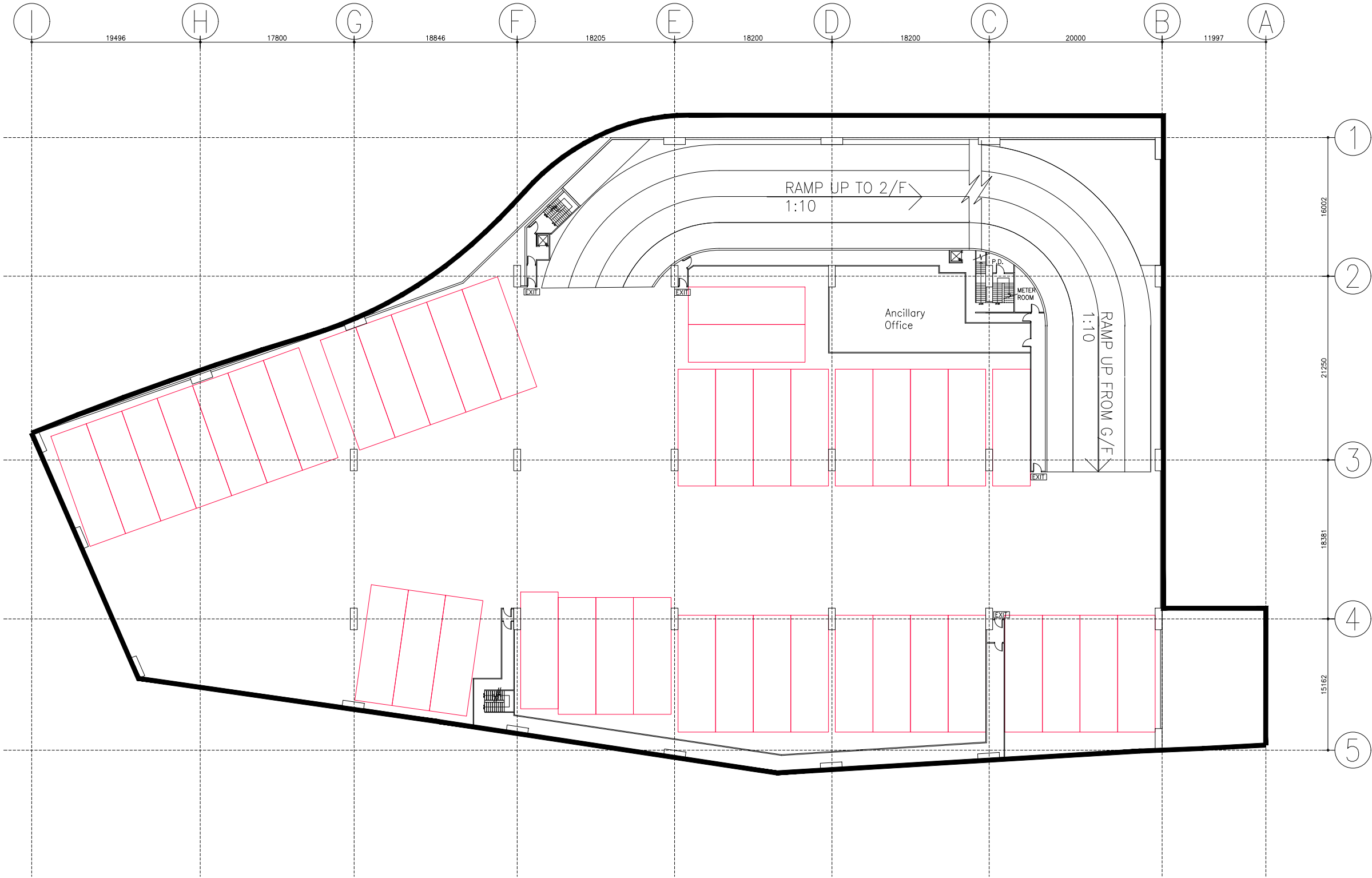
DRAWN BY: CC

CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: AA03



LEGEND

- Maintenance Bay  
(13500mm x 4350mm)
- Parking Space  
(13000mm x 3300mm)

1/F



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PROJECT:

TMCLK DEPOT

DRAWING TITLE :

2/F LAYOUT (SITE A)

SCALE: 1:500

DATE: 13/09/2021

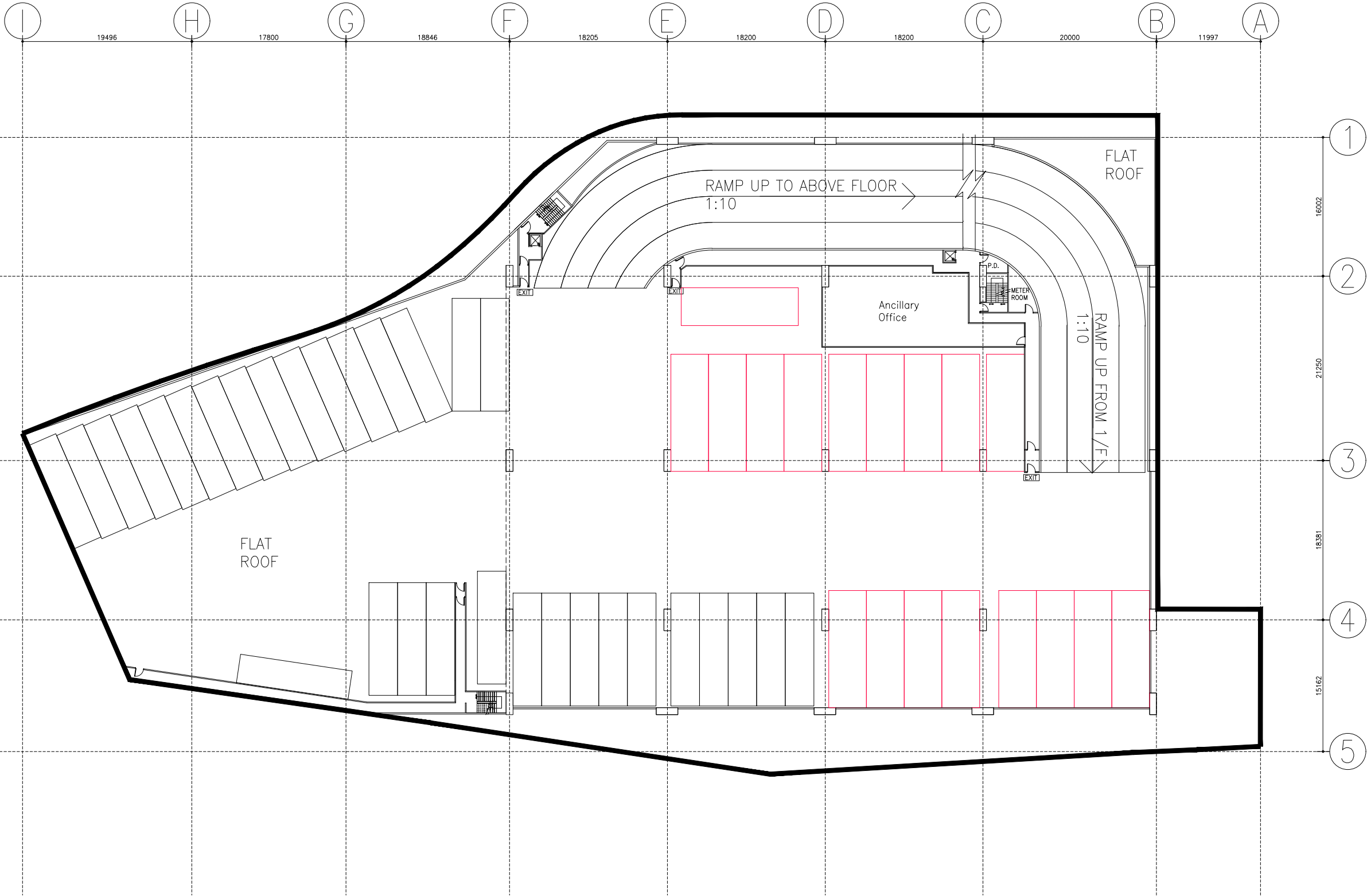
DRAWN BY: CC

CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: AA04



LEGEND

- Maintenance Bay  
(13500mm x 4350mm)
- Parking Space  
(13000mm x 3300mm)

2/F



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PROJECT:

TMCLK DEPOT

DRAWING TITLE :

3/F-10/F LAYOUT (SITE A)

SCALE: 1:500

DATE: 13/09/2021

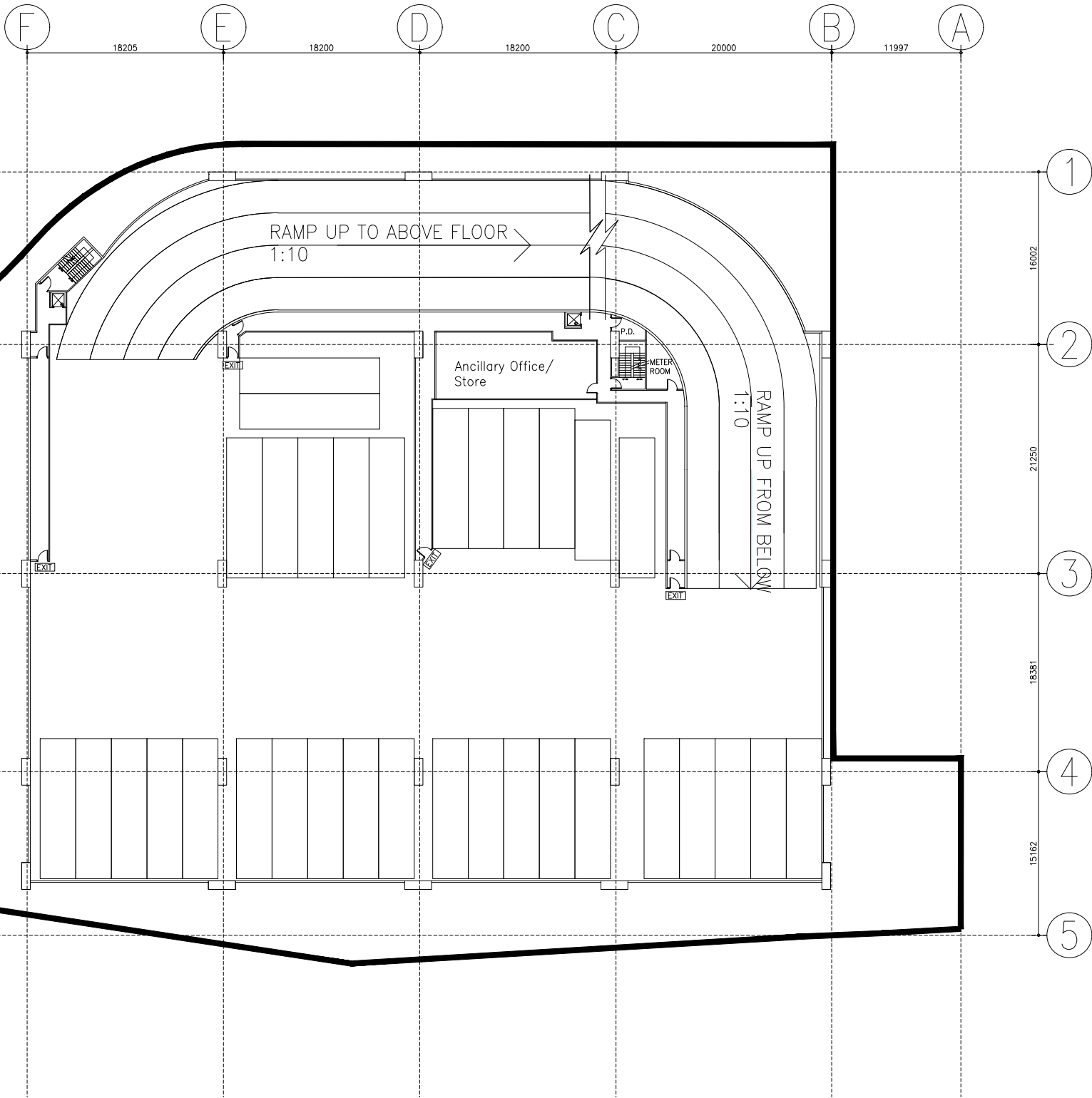
DRAWN BY: CC

CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: AA05



LEGEND

- Maintenance Bay  
(13500mm x 4350mm)
- Parking Space  
(13000mm x 3300mm)

3/F-10/F



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PROJECT:

TMCLK DEPOT

DRAWING TITLE :

R/F LAYOUT (SITE A)

SCALE: 1:500

DATE: 13/09/2021

DRAWN BY: CC

CHECKED BY: NC

APPROVED BY: -

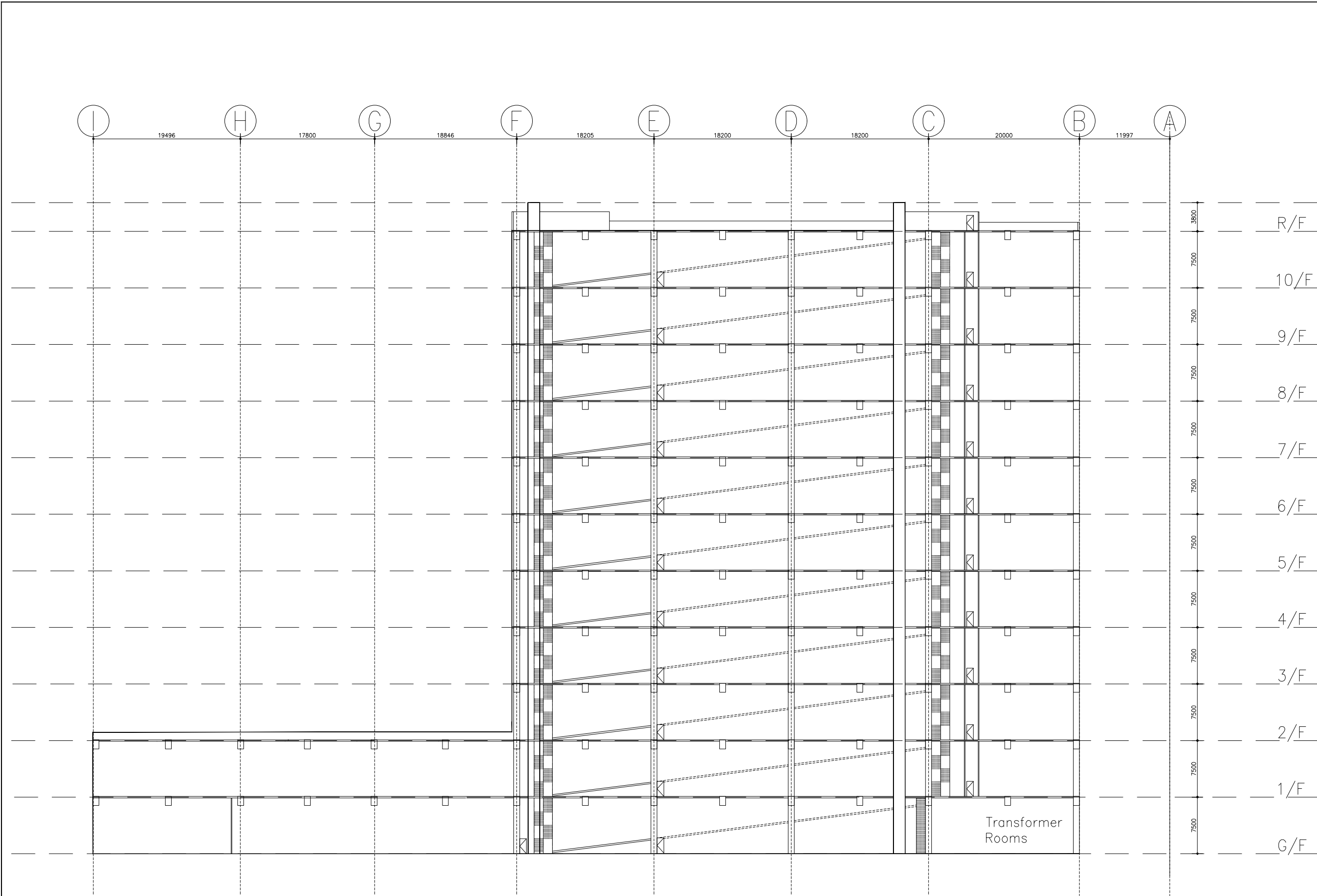
JOB. NO.: FDB-P-21031

DWG. NO.: AA06

LEGEND

- Maintenance Bay  
(13500mm x 4350mm)
- Parking Space  
(13000mm x 3300mm)

R/F



SECTION A-A

- NOTES AND CONDITIONS:
1. ALL DESIGNS ARE THE PROPERTY OF FRUIT DESIGN AND BUILD AND CANNOT BE USED WITHOUT THEIR WRITTEN PERMISSION.
  2. ALL MEASUREMENTS MUST BE VERIFIED ON SITE BEFORE CONSTRUCTION.
  3. CONTRACTORS SHALL NOTIFY THE DESIGNER OF ANY DISCREPANCY BEFORE STARTING WORK.
  4. ALL DIMENSIONS ARE IN MILLIMETER EXCEPT OTHERWISE NOTED.
  5. ALL WORKS SHALL BE CARRIED OUT IN COMPLIANCE TO THE BUILDINGS ORDINANCE, BUILDINGS REGULATIONS AND CODE OF PRACTICES.
  6. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH OTHER DRAWINGS AND SPECIFICATIONS OF THE TENDER DOCUMENTS AND SHALL BE MUTUALLY EXPLANATORY.
  7. THE CONTRACTOR SHALL FOLLOW MANUFACTURER'S INSTRUCTION & RECOMMENDATION IN CASE PROPRIETARY PRODUCT / SYSTEM / IS ADOPTED / SPECIFIED / APPROVED.
  8. DESIGN INTENT DRAWING ONLY. CONTRACTOR IS RESPONSIBLE FOR DESIGN AND SHOP DRAWING / CALCULATION SUBMISSION / MATERIAL SIZES / THICKNESS INDICATIVE.

REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

**FRUIT  
DESIGN &  
BUILD LTD**

A member of FDB Holdings Limited

A | 6/F, The Sun's Group Centre, 200 Gloucester Road,  
Wan Chai, Hong Kong

T | +852 3188 5995 F | +852 3188 5998

PROJECT:

TMCLK DEPOT

DRAWING TITLE :

SECTION A-A (SITE A)

SCALE: 1:500

DATE: 13/09/2021

DRAWN BY: CC

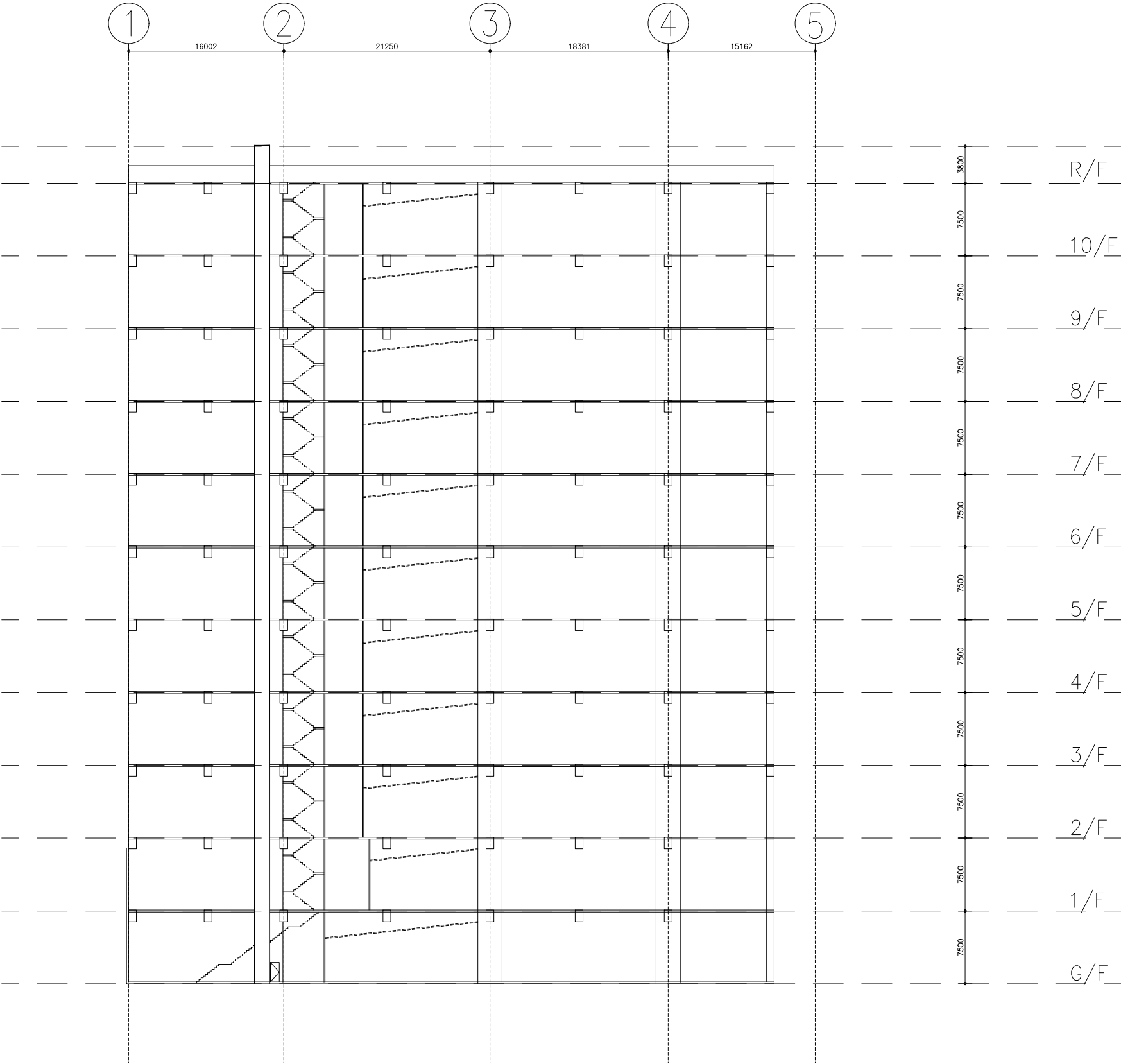
CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: ST01





SECTION B-B

- NOTES AND CONDITIONS:
1. ALL DESIGNS ARE THE PROPERTY OF FRUIT DESIGN AND BUILD AND CANNOT BE USED WITHOUT THEIR WRITTEN PERMISSION.
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REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

**FRUIT  
DESIGN &  
BUILD LTD**

A member of FDB Holdings Limited

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Wan Chai, Hong Kong

T | +852 3188 5955    F | +852 3188 5958

PROJECT:

TMCLK DEPOT

DRAWING TITLE :

SECTION B-B (SITE A)

SCALE: 1:500

DATE: 13/09/2021

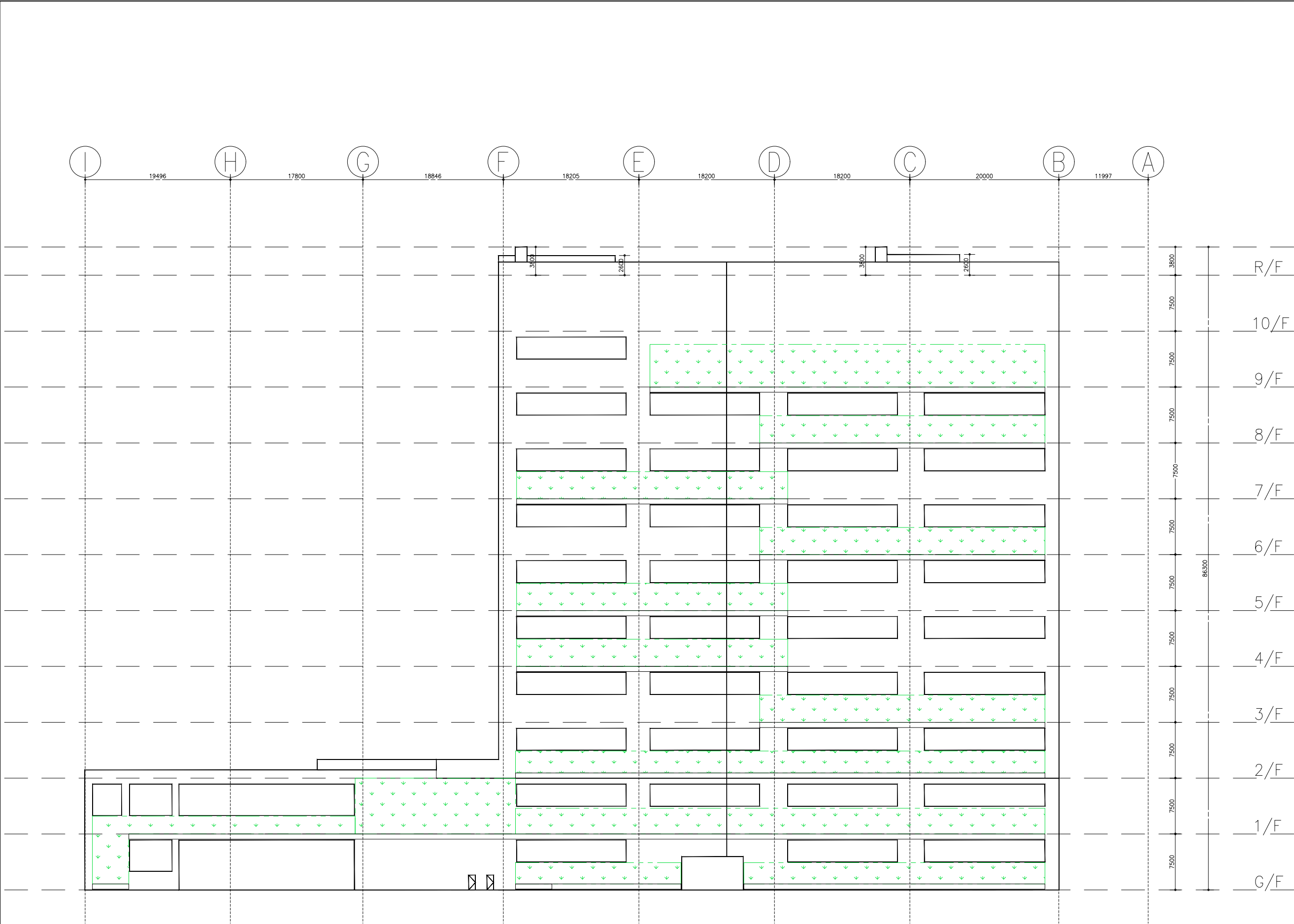
DRAWN BY: CC

CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: ST02



SOUTH-EAST ELEVATION

- NOTES AND CONDITIONS:
1. ALL DESIGNS ARE THE PROPERTY OF FRUIT DESIGN AND BUILD AND CANNOT BE USED WITHOUT THEIR WRITTEN PERMISSION.
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REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

**FRUIT  
DESIGN &  
BUILD LTD**

A member of FDB Holdings Limited

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Wan Chai, Hong Kong

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PROJECT:

TMCLK DEPOT

DRAWING TITLE :

SOUTH-EAST ELEVATION (SITE A)

SCALE: 1:500

DATE: 13/09/2021

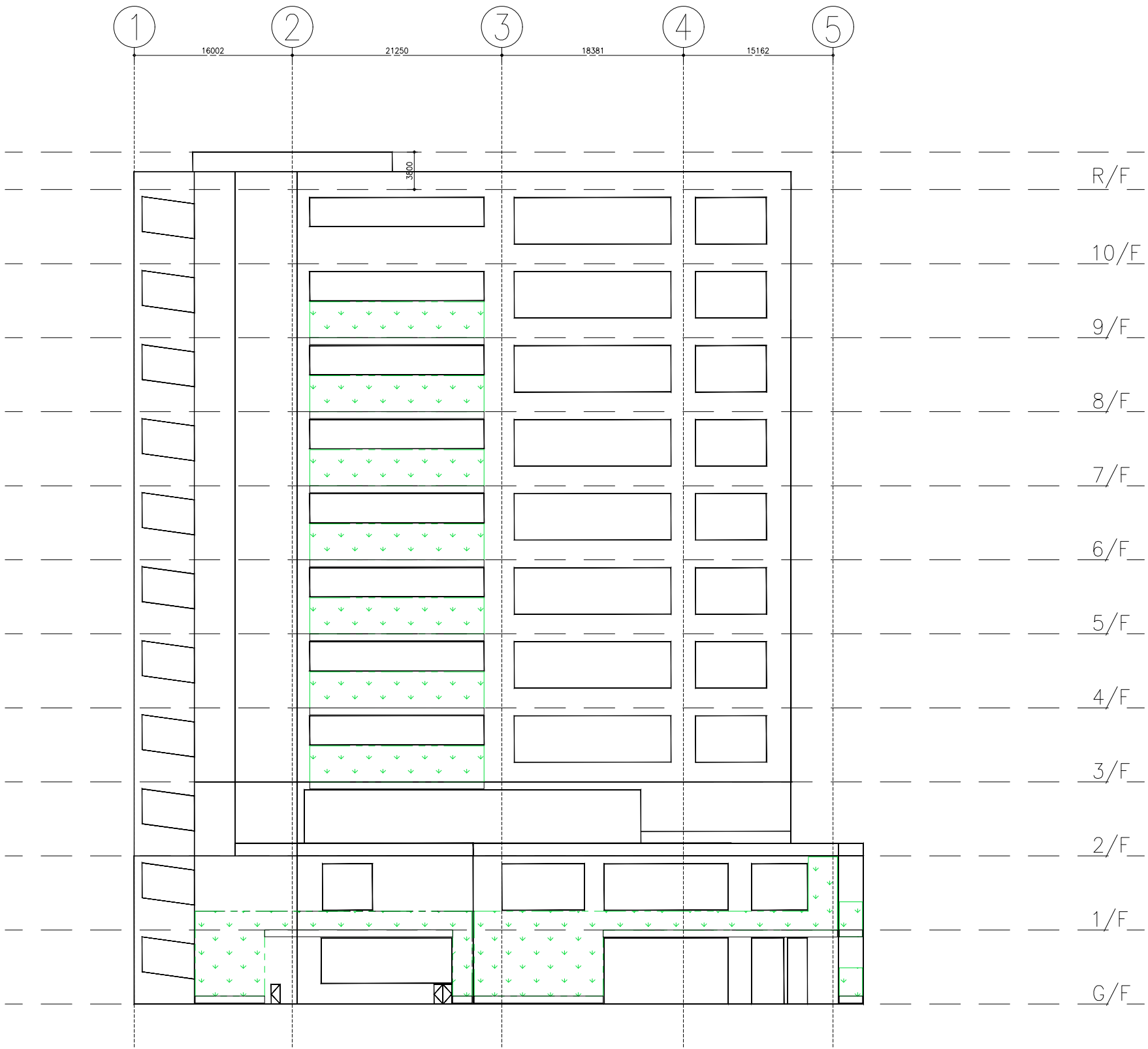
DRAWN BY: CC

CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: EL01



SOUTH-WEST ELEVATION

NOTES AND CONDITIONS:

1. ALL DESIGNS ARE THE PROPERTY OF FRUIT DESIGN AND BUILD AND CANNOT BE USED WITHOUT THEIR WRITTEN PERMISSION.

2. ALL MEASUREMENTS MUST BE VERIFIED ON SITE BEFORE CONSTRUCTION.

3. CONTRACTORS SHALL NOTIFY THE DESIGNER OF ANY DISCREPANCY BEFORE STARTING WORK.

4. ALL DIMENSIONS ARE IN MILLIMETER EXCEPT OTHERWISE NOTED.

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REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

FRUIT  
DESIGN &  
BUILD LTD

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A | 6/F, The Sun's Group Centre, 200 Gloucester Road,  
Wan Chai, Hong Kong

T | +852 3188 5955 F | +852 3188 5958

PROJECT:

TMCLK DEPOT

DRAWING TITLE :

SOUTH-WEST ELEVATION (SITE A)

SCALE:	1:500
DATE:	13/09/2021
DRAWN BY:	CC
CHECKED BY:	NC
APPROVED BY: -	
JOB. NO.:	FDB-P-21031
DWG. NO.:	EL02



NORTH-EAST ELEVATION

- NOTES AND CONDITIONS:
1. ALL DESIGNS ARE THE PROPERTY OF FRUIT DESIGN AND BUILD AND CANNOT BE USED WITHOUT THEIR WRITTEN PERMISSION.
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REV	DESCRIPTION	DATE

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Wan Chai, Hong Kong

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PROJECT:

TMCLK DEPOT

DRAWING TITLE :

NORTH-EAST ELEVATION (SITE A)

SCALE: 1:500

DATE: 13/09/2021

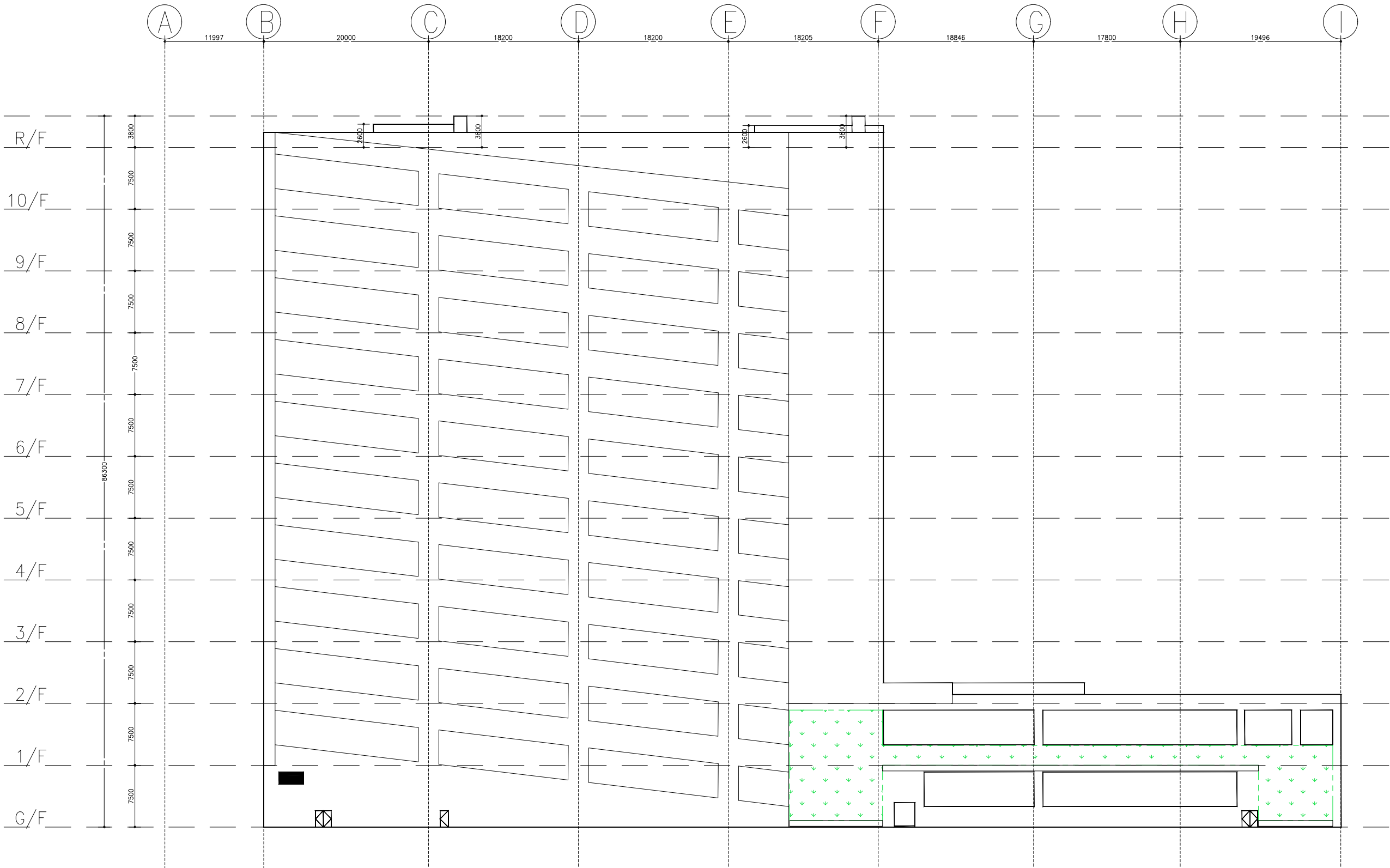
DRAWN BY: CC

CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: EL03



NORTH-WEST ELEVATION

- NOTES AND CONDITIONS:
1. ALL DESIGNS ARE THE PROPERTY OF FRUIT DESIGN AND BUILD AND CANNOT BE USED WITHOUT THEIR WRITTEN PERMISSION.
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REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

**FRUIT  
DESIGN &  
BUILD LTD**

A member of FDB Holdings Limited  
A | 6/F, The Sun's Group Centre, 200 Gloucester Road,  
Wan Chai, Hong Kong  
T | +852 3188 5955 F | +852 3188 5958

PROJECT:

TMCLK DEPOT

DRAWING TITLE:

NORTH-WEST ELEVATION (SITE A)

SCALE: 1:500

DATE: 13/09/2021

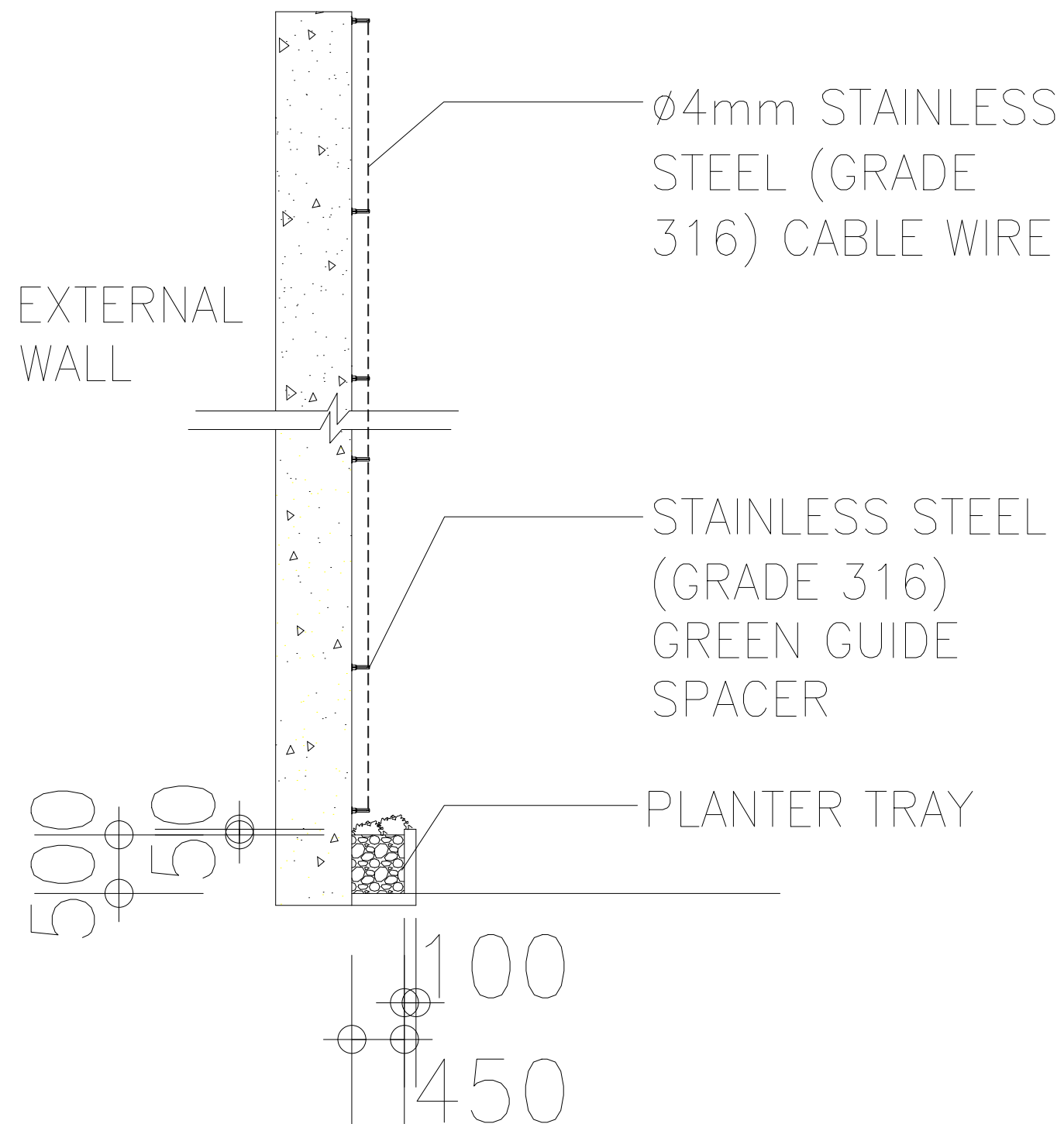
DRAWN BY: CC

CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

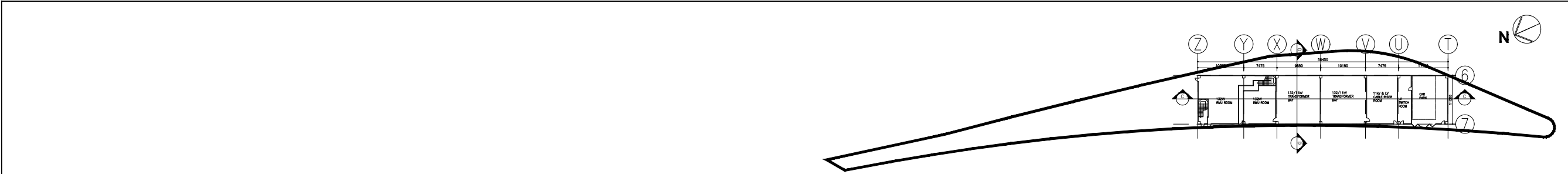
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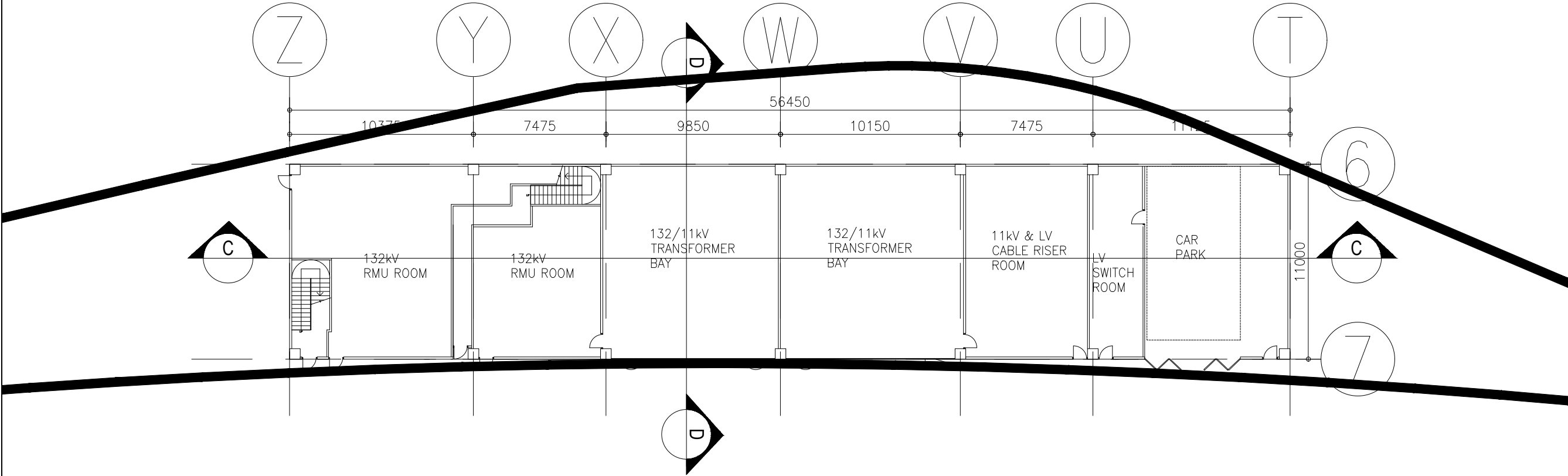
## DETAIL OF VERTICAL GREENING

NOTES AND CONDITIONS:		
1. ALL DESIGNS ARE THE PROPERTY OF FRUIT DESIGN AND BUILD AND CANNOT BE USED WITHOUT THEIR WRITTEN PERMISSION.		
2. ALL MEASUREMENTS MUST BE VERIFIED ON SITE BEFORE CONSTRUCTION.		
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8. DESIGN INTENT DRAWING ONLY. CONTRACTOR IS RESPONSIBLE FOR DESIGN AND SHOP DRAWING / CALCULATION SUBMISSION / MATERIAL SIZES / THICKNESS INDICATIVE.		
REV	DESCRIPTION	DATE
A	REVISED DETAILS	12 NOV 2021
CLIENT:		
BUILDING CONSULTANT:		
<div><div><div>FRUIT DESIGN &amp; BUILD LTD</div><div><small>A member of FDB Holdings Limited</small></div><div><small>A   6/F, The Sun's Group Centre, 200 Gloucester Road, Wan Chai, Hong Kong</small></div><div><small>T   +852 3188 5595      F   +852 3188 5958</small></div></div></div>		
PROJECT:		
TMCLK DEPOT		
DRAWING TITLE :		
DETAIL OF VERTICAL GREENING		
SCALE:	1:50	
DATE:	13/09/2021	
DRAWN BY:	CC	
CHECKED BY:	NC	
APPROVED BY: -		
JOB. NO. :	FDB-P-21031	
DWG. NO. :	DD01	





G/F Scale: 1:1000



G/F Scale 1:250

- NOTES AND CONDITIONS:
1. ALL DESIGNS ARE THE PROPERTY OF FRUIT DESIGN AND BUILD AND CANNOT BE USED WITHOUT THEIR WRITTEN PERMISSION.
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REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

**FRUIT  
DESIGN &  
BUILD LTD**

A member of FDB Holdings Limited  
A | 6/F, The Sun's Group Centre, 200 Gloucester Road,  
Wan Chai, Hong Kong  
T | +852 3188 5595 F | +852 3188 5958

PROJECT:

TMCLK DEPOT

DRAWING TITLE :

G/F LAYOUT (SITE B)

SCALE: As stated

DATE: 13/09/2021

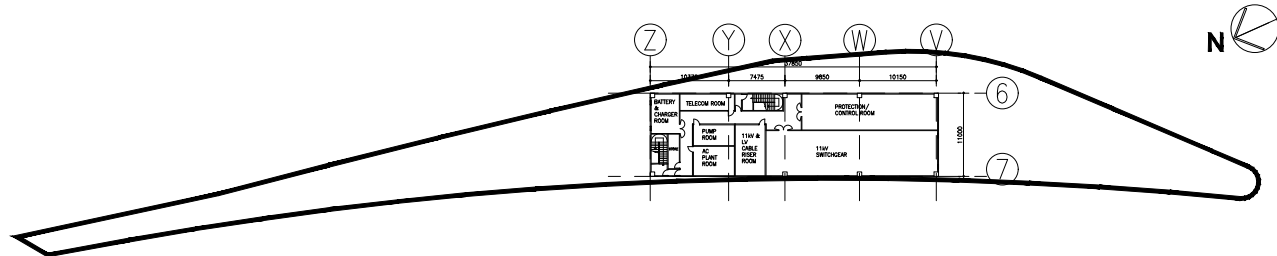
DRAWN BY: CC

CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: AA07



1/F Scale: 1:1000

- NOTES AND CONDITIONS:
1. ALL DESIGNS ARE THE PROPERTY OF FRUIT DESIGN AND BUILD AND CANNOT BE USED WITHOUT THEIR WRITTEN PERMISSION.
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REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

FRUIT  
DESIGN &  
BUILD LTD

A member of FDB Holdings Limited

A | 6/F, The Sun's Group Centre, 200 Gloucester Road,  
Wan Chai, Hong Kong

T | +852 3188 5595 F | +852 3188 5958

PROJECT:

TMCLK DEPOT

DRAWING TITLE :  
1/F LAYOUT (SITE B)

SCALE: 1:250

DATE: 13/09/2021

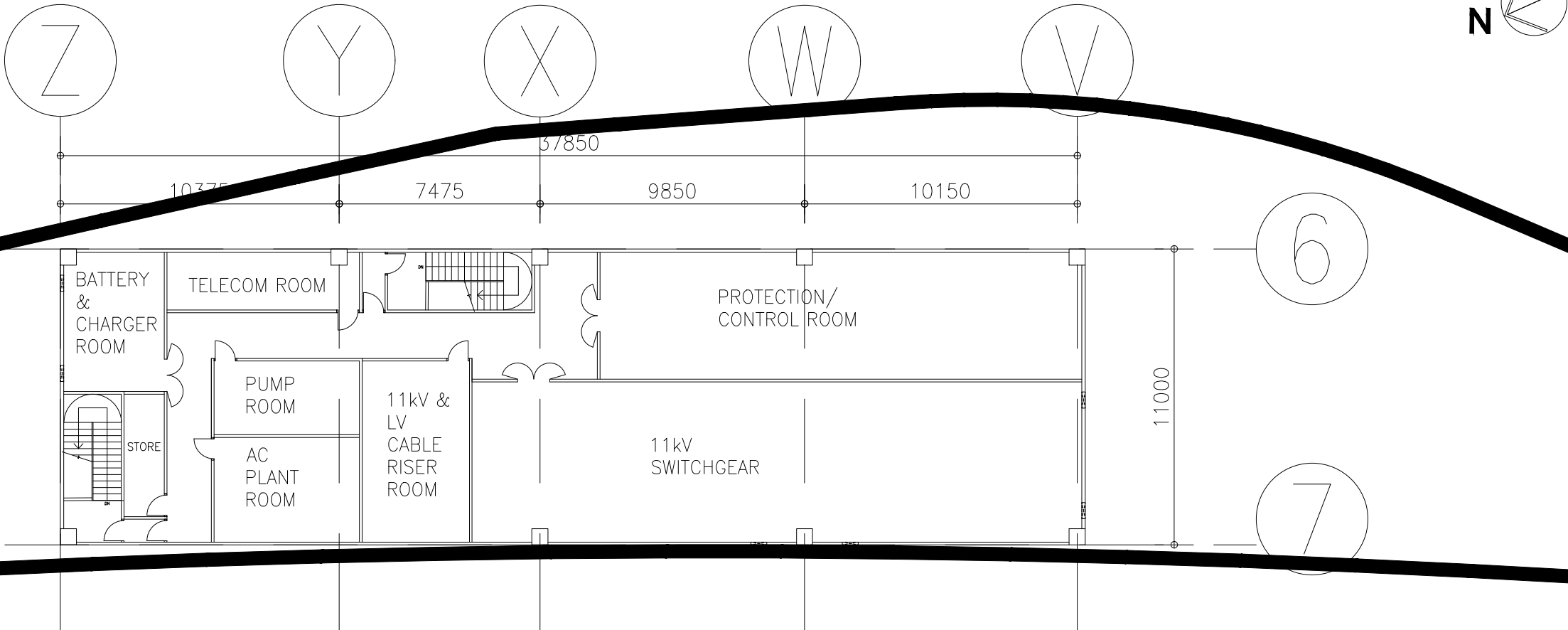
DRAWN BY: CC

CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

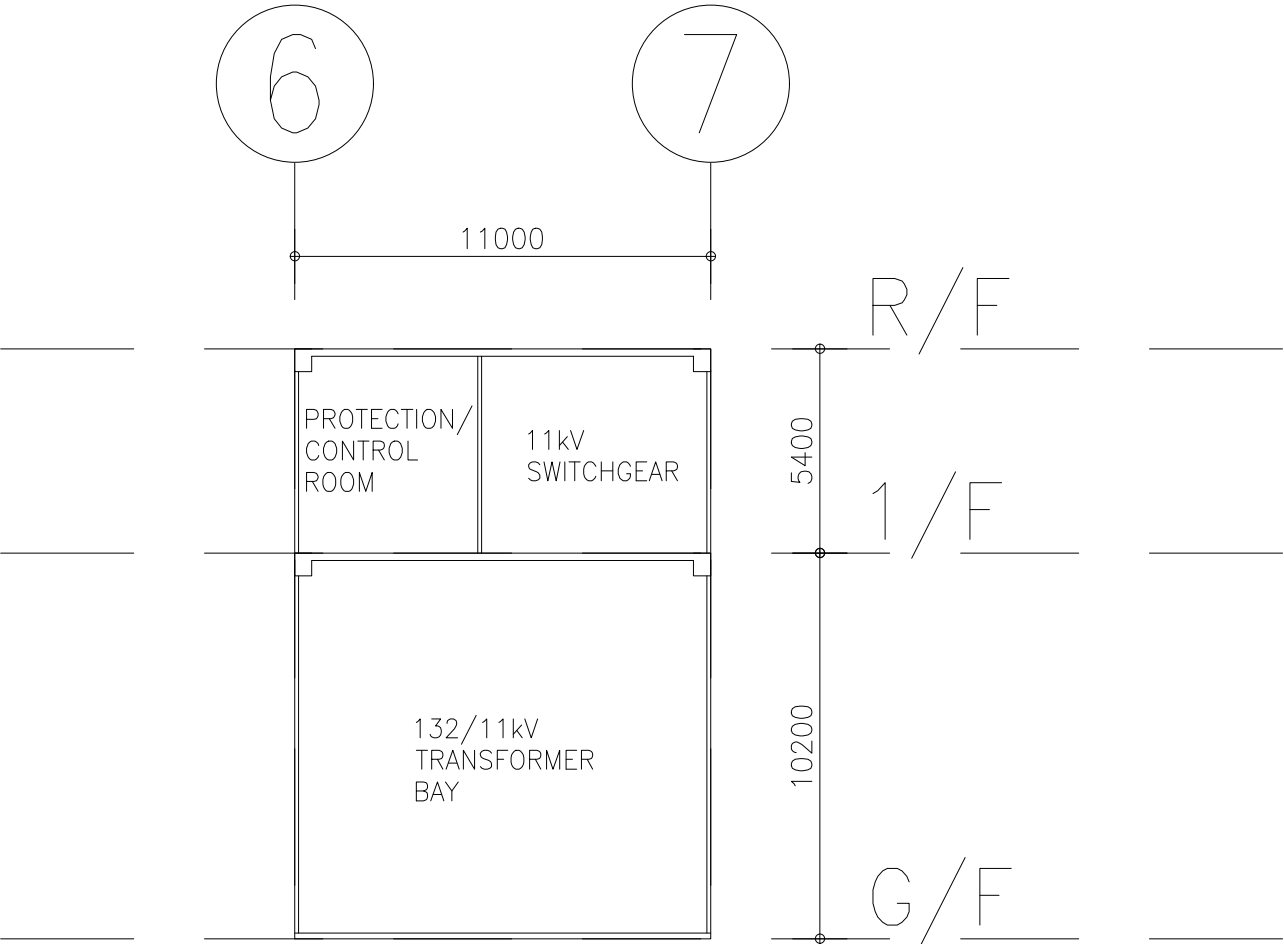
DWG. NO.: AA08



1/F Scale 1:250



DWG. NO. : ST03



SECTION D-D

- NOTES AND CONDITIONS:
1. ALL DESIGNS ARE THE PROPERTY OF FRUIT DESIGN AND BUILD AND CANNOT BE USED WITHOUT THEIR WRITTEN PERMISSION.
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REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

**FRUIT  
DESIGN &  
BUILD LTD**

A member of FDB Holdings Limited

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Wan Chai, Hong Kong

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PROJECT:

TMCLK DEPOT

DRAWING TITLE :

SECTION D-D (SITE B)

SCALE: 1:200

DATE: 13/09/2021

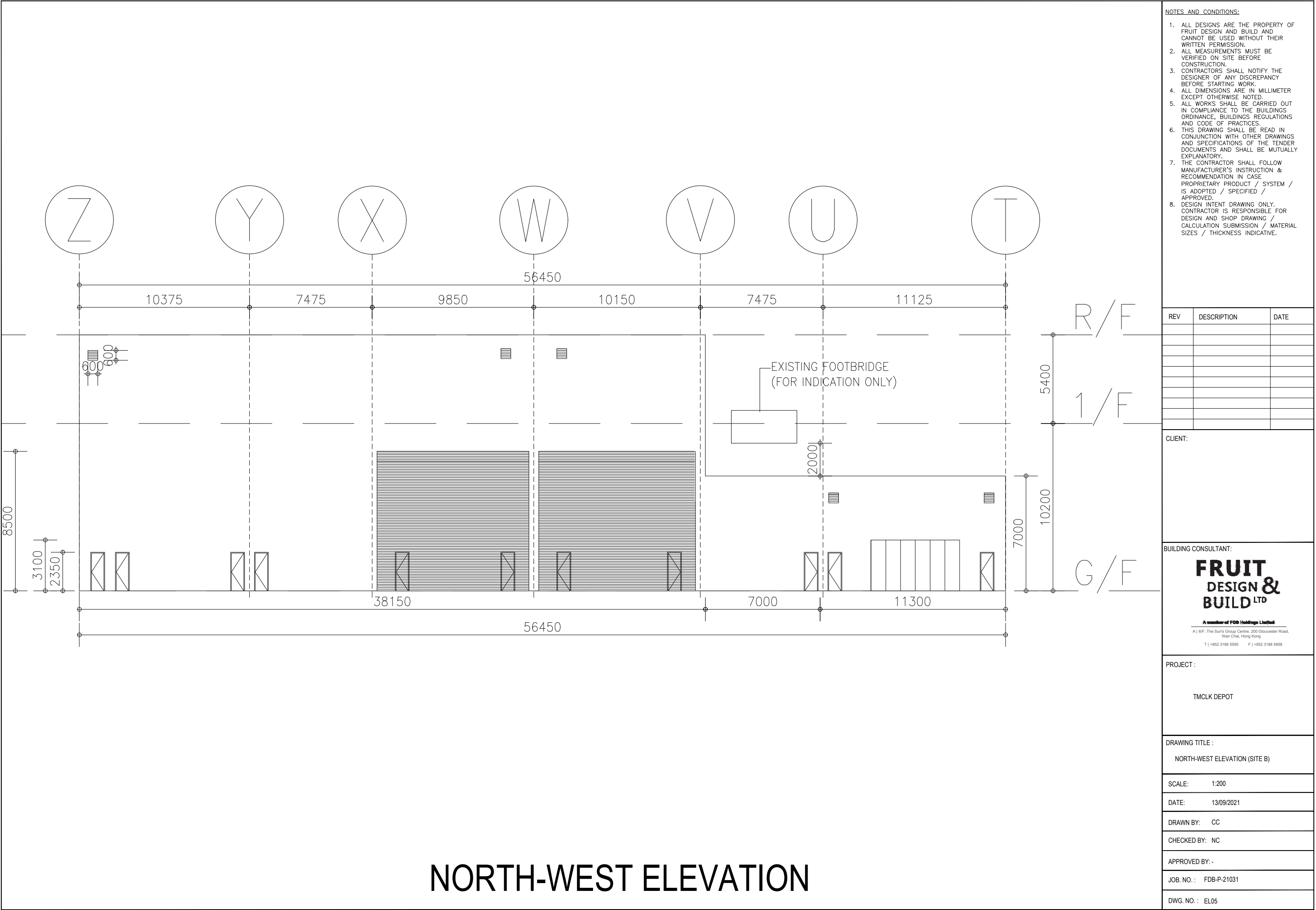
DRAWN BY: CC

CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: ST04



- NOTES AND CONDITIONS:
1. ALL DESIGNS ARE THE PROPERTY OF FRUIT DESIGN AND BUILD AND CANNOT BE USED WITHOUT THEIR WRITTEN PERMISSION.
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REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

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BUILD LTD**

A member of FDB Holdings Limited

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Wan Chai, Hong Kong

T | +852 3188 5595 F | +852 3188 5958

PROJECT:

TMCLK DEPOT

DRAWING TITLE :

NORTH-WEST ELEVATION (SITE B)

SCALE: 1:200

DATE: 13/09/2021

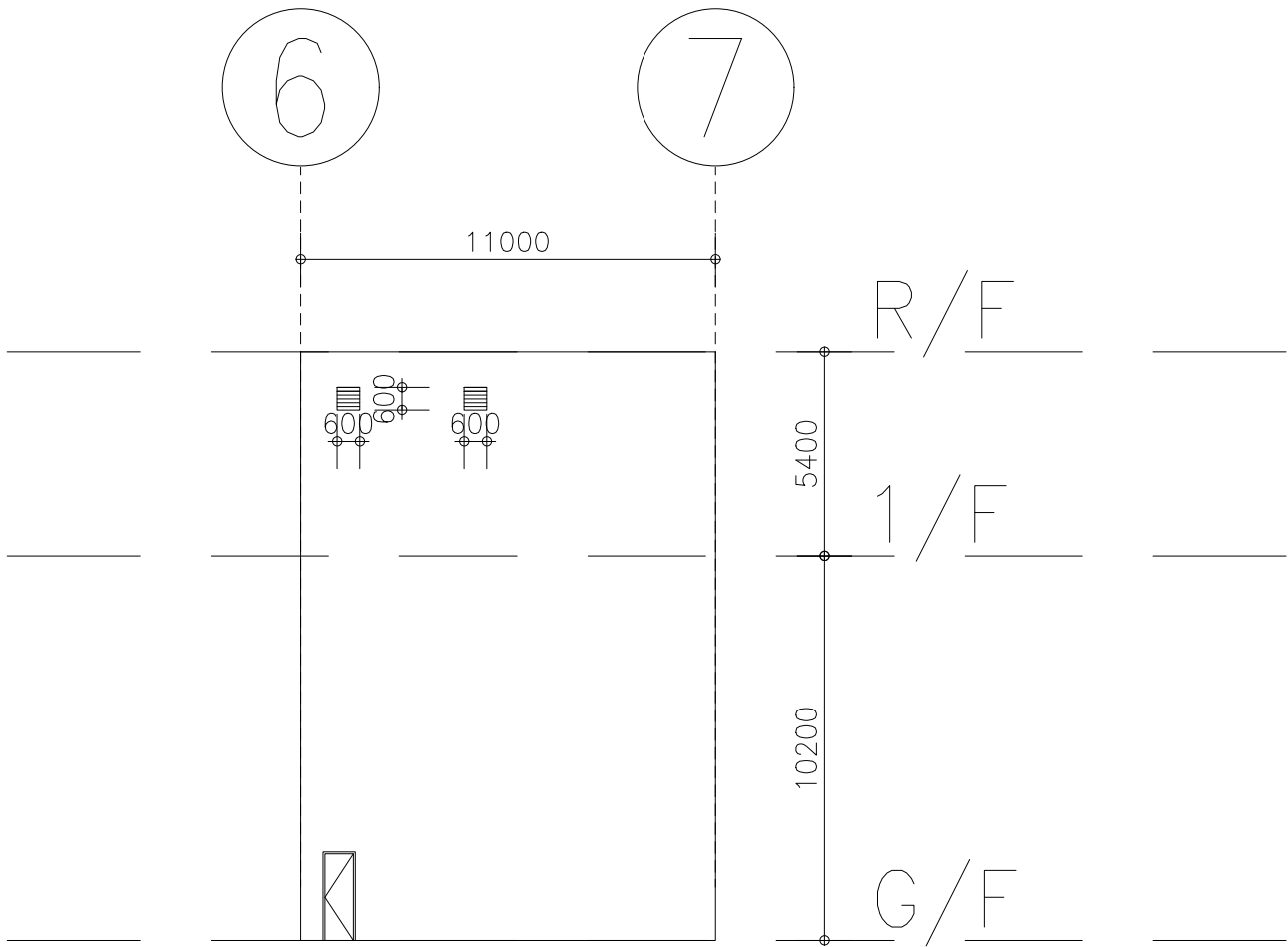
DRAWN BY: CC

CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: EL05



NORTH-EAST ELEVATION

- NOTES AND CONDITIONS:
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REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

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DESIGN &  
BUILD LTD**

A member of FDB Holdings Limited

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Wan Chai, Hong Kong

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PROJECT:

TMCLK DEPOT

DRAWING TITLE :

NORTH-EAST ELEVATION (SITE B)

SCALE: 1:250

DATE: 13/09/2021

DRAWN BY: CC

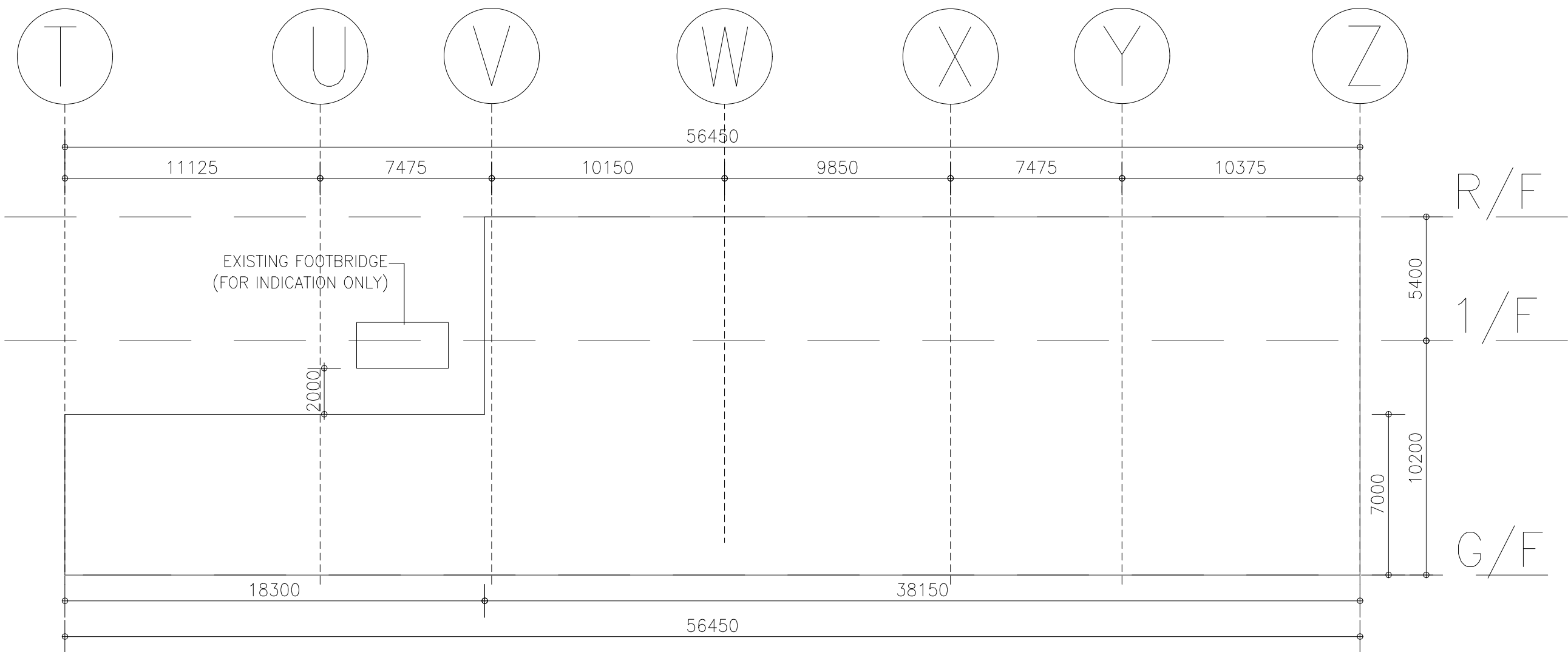
CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: EL06





SOUTH-EAST ELEVATION

- NOTES AND CONDITIONS:
- 1. ALL DESIGNS ARE THE PROPERTY OF FRUIT DESIGN AND BUILD AND CANNOT BE USED WITHOUT THEIR WRITTEN PERMISSION.
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REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

FRUIT  
DESIGN &  
BUILD LTD

A member of FDB Holdings Limited

A | 6/F, The Sun's Group Centre, 200 Gloucester Road,  
Wan Chai, Hong Kong

T | +852 3188 5595    F | +852 3188 5958

PROJECT:

TMCLK DEPOT

DRAWING TITLE :

SOUTHEAST ELEVATION (SITE B)

SCALE: 1:200

DATE: 13/09/2021

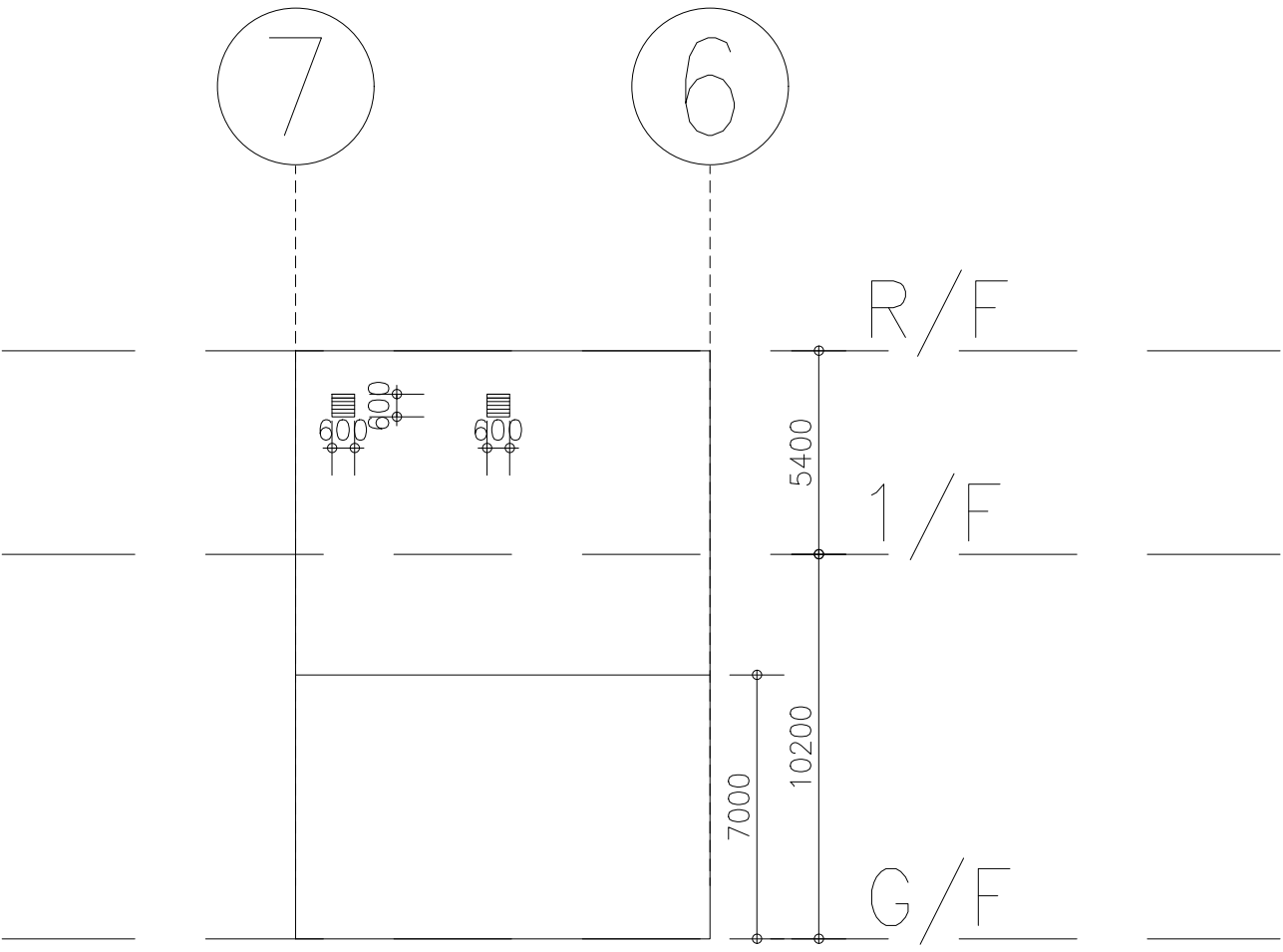
DRAWN BY: CC

CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: EL07



SOUTH-WEST ELEVATION

- NOTES AND CONDITIONS:
1. ALL DESIGNS ARE THE PROPERTY OF FRUIT DESIGN AND BUILD AND CANNOT BE USED WITHOUT THEIR WRITTEN PERMISSION.
  2. ALL MEASUREMENTS MUST BE VERIFIED ON SITE BEFORE CONSTRUCTION.
  3. CONTRACTORS SHALL NOTIFY THE DESIGNER OF ANY DISCREPANCY BEFORE STARTING WORK.
  4. ALL DIMENSIONS ARE IN MILLIMETER EXCEPT OTHERWISE NOTED.
  5. ALL WORKS SHALL BE CARRIED OUT IN COMPLIANCE TO THE BUILDINGS ORDINANCE, BUILDINGS REGULATIONS AND CODE OF PRACTICES.
  6. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH OTHER DRAWINGS AND SPECIFICATIONS OF THE TENDER DOCUMENTS AND SHALL BE MUTUALLY EXPLANATORY.
  7. THE CONTRACTOR SHALL FOLLOW MANUFACTURER'S INSTRUCTION & RECOMMENDATION IN CASE PROPRIETARY PRODUCT / SYSTEM / IS ADOPTED / SPECIFIED / APPROVED.
  8. DESIGN INTENT DRAWING ONLY. CONTRACTOR IS RESPONSIBLE FOR DESIGN AND SHOP DRAWING / CALCULATION SUBMISSION / MATERIAL SIZES / THICKNESS INDICATIVE.

REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

**FRUIT  
DESIGN &  
BUILD LTD**

A member of FDB Holdings Limited

A | 6/F, The Sun's Group Centre, 200 Gloucester Road,  
Wan Chai, Hong Kong

T | +852 3188 5955      F | +852 3188 5958

PROJECT:

TMCLK DEPOT

DRAWING TITLE :

SOUTHWEST ELEVATION (SITE B)

SCALE: 1:200

DATE: 13/09/2021

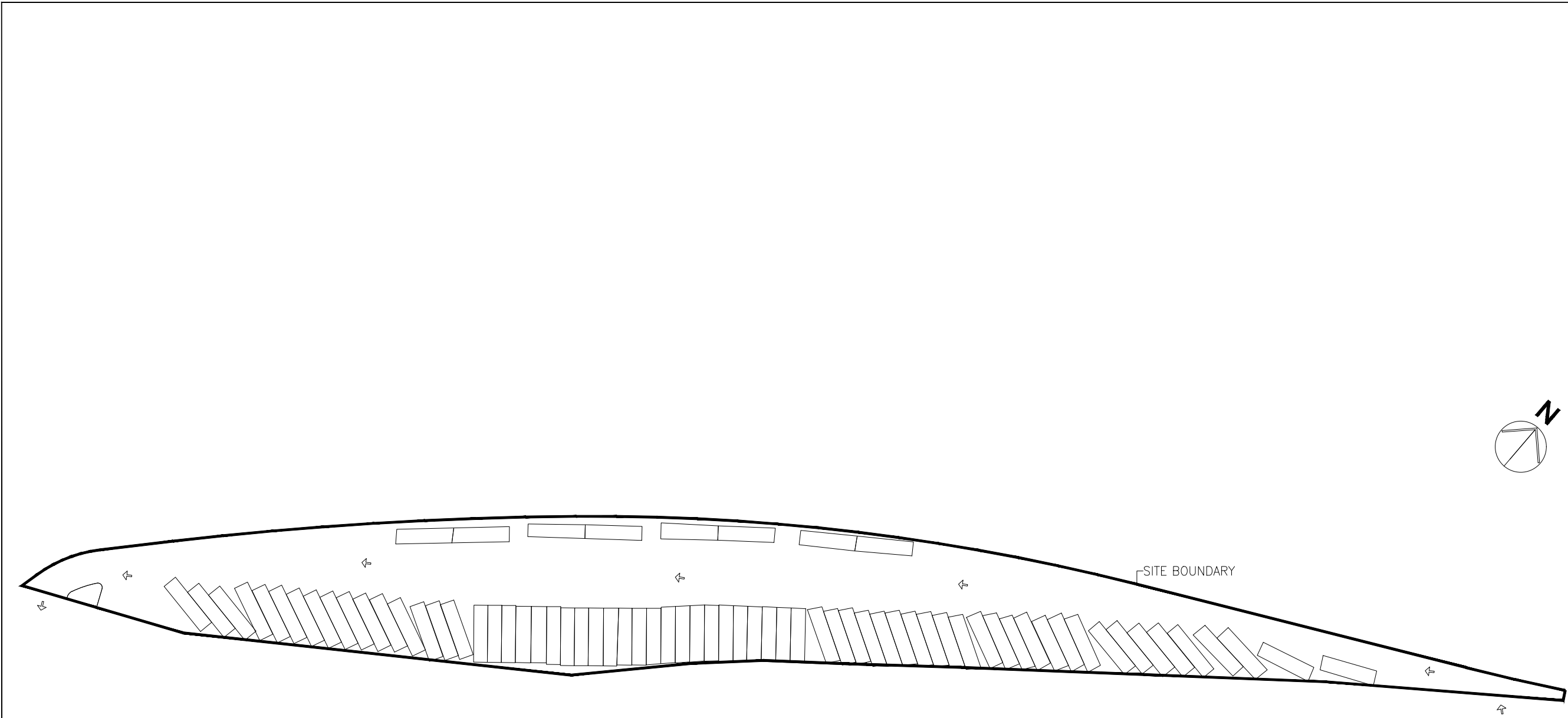
DRAWN BY: CC

CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: EL08



LEGEND



Parking Space  
(13000mm x 3250mm)

G/F

- NOTES AND CONDITIONS:
1. ALL DESIGNS ARE THE PROPERTY OF FRUIT DESIGN AND BUILD AND CANNOT BE USED WITHOUT THEIR WRITTEN PERMISSION.
  2. ALL MEASUREMENTS MUST BE VERIFIED ON SITE BEFORE CONSTRUCTION.
  3. CONTRACTORS SHALL NOTIFY THE DESIGNER OF ANY DISCREPANCY BEFORE STARTING WORK.
  4. ALL DIMENSIONS ARE IN MILLIMETER EXCEPT OTHERWISE NOTED.
  5. ALL WORKS SHALL BE CARRIED OUT IN COMPLIANCE TO THE BUILDINGS ORDINANCE, BUILDINGS REGULATIONS AND CODE OF PRACTICES.
  6. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH OTHER DRAWINGS AND SPECIFICATIONS OF THE TENDER DOCUMENTS AND SHALL BE MUTUALLY EXPLANATORY.
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  8. DESIGN INTENT DRAWING ONLY. CONTRACTOR IS RESPONSIBLE FOR DESIGN AND SHOP DRAWING / CALCULATION SUBMISSION / MATERIAL SIZES / THICKNESS INDICATIVE.

REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

**FRUIT  
DESIGN &  
BUILD LTD**

A member of FDB Holdings Limited

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Wan Chai, Hong Kong

T | +852 3188 5995      F | +852 3188 5998

PROJECT:

TMCLK DEPOT

DRAWING TITLE :

G/F LAYOUT (SITE C)

SCALE: 1:1000

DATE: 13/09/2021

DRAWN BY: CC

CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

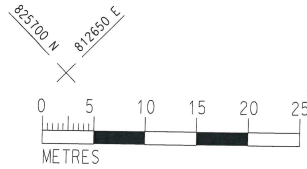
DWG. NO.: AA09

***Appendix 3-2***

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*Utility Plan of Site A*

ITEM NO.	CATEGORY	DESCRIPTION
B1A	STRUCTURE	MOVEMENT JOINT
B1B	FOUNDATION	ABUTMENT OF BRIDGE
B2	STRUCTURE	VIADEUCT OF BRIDGE
C1	STRUCTURE	ISOLATION JOINT
C2	STRUCTURE AND FOUNDATION	PIER, BEAM AND SLAB OF PLAZA DECK
C3A	STRUCTURE	MOVEMENT JOINT
C3B	FOUNDATION	PIER OR ABUTMENT OF BRIDGE
C3C	STRUCTURE	RETAINING WALL STRUCTURE RWLB
C4	STRUCTURE	ABANDONED SUBWAY
C5	STRUCTURE	BEAM AND SLAB OF PLAZA DECK
C6	STRUCTURE	RETAINING WALL STRUCTURE RWLB
A1	STREET FURNITURE	NON-ILLUMINATED TRAFFIC BOLLARD AND ROADSIDE KERB



# NOTES:

1. ALL INFORMATION PROVIDED FOR REFERENCE ONLY.

# LEGEND:

- FREE UP AREA (FOR INDICATIVE)
- DRAINAGE
- SEWERAGE
- UTILITIES
- TCSS
- WATERMAIN (ABANDONED)
- E&M

# FOR INFORMATION

B	DEC. 20	FOR INFORMATION	CCY	AKYN	KW
A	NOV. 20	FOR INFORMATION	CCY	AKYN	KW
-	SEP. 20	FOR INFORMATION	JT	CCY	KW
REV.	DATE	DESCRIPTION	CHK.	PREP.	DRAWN

CLIENT  
**HIGHWAYS DEPARTMENT**  
 主要工程管理處 (專業事務)  
 Major Works Project Management Office (Special Duties)

**AECOM** Imagine it. Delivered.

PROJECT  
**TUEN MUN - CHEK LAP KOK LINK**

CONTRACT TITLE  
**TUEN MUN - CHEK LAP KOK LINK - NORTHERN CONNECTION TOLL PLAZA AND ASSOCIATED WORKS**

PROJECT NO. <b>60240249</b>	CONTRACT NO. <b>HY/2013/12</b>
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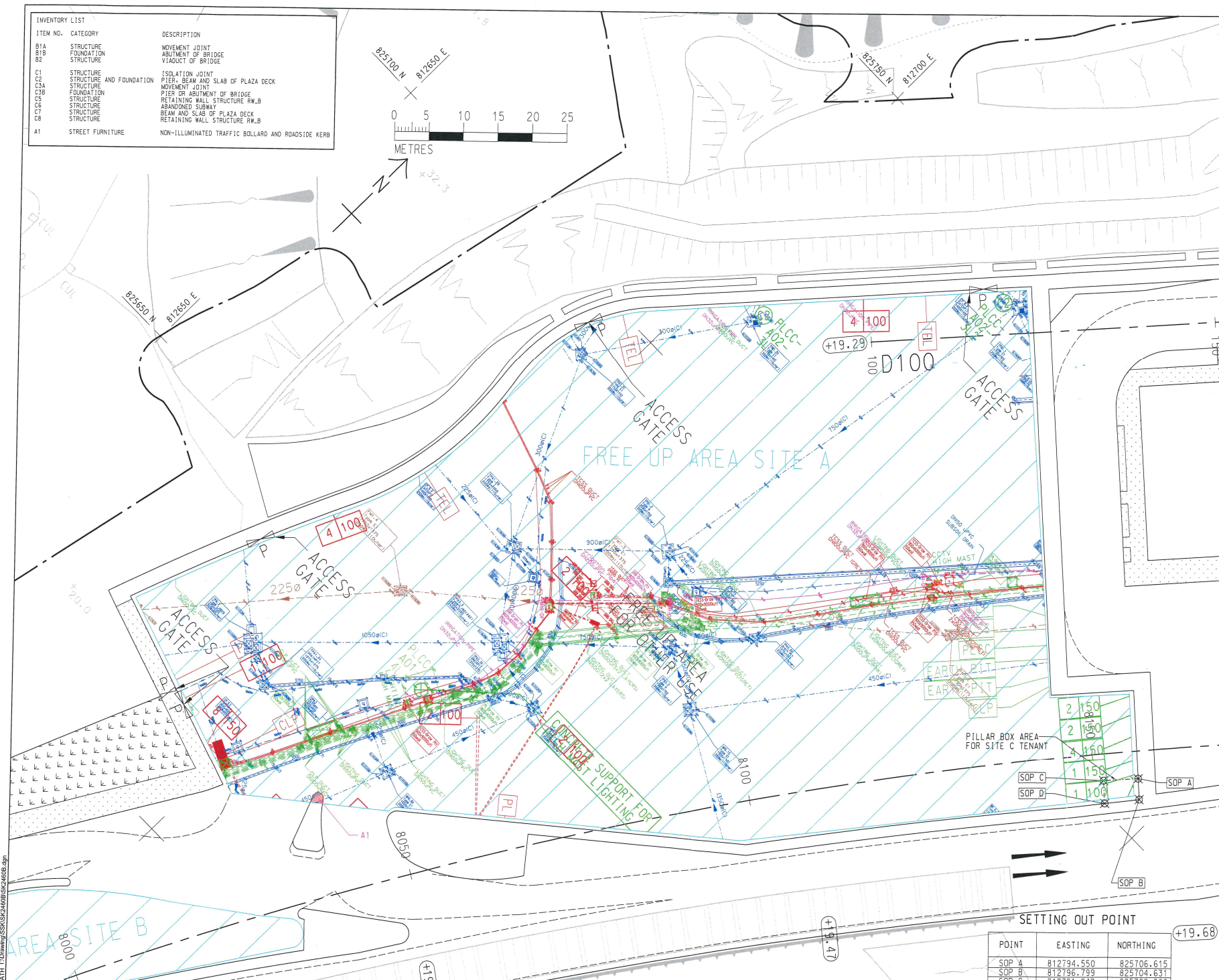
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MEMORANDUM TO WORKING DRAWING NO.  
**60240249/C3/1007A**

CHECKED <b>CCY</b>	PREPARED <b>AKYN</b>	DRAWN <b>KW</b>
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TITLE  
**AS-BUILT UJS FOR FREE-UP AREAS**

SKETCH NO.  
**60240249/C3/SK2460B**



POINT	EASTING	NORTHING
SOP A	812794.550	825706.615
SOP B	812796.799	825704.631
SOP C	812791.242	825702.866
SOP D	812793.713	825700.686

***Appendix 3-3***

---

*Correspondence from Planning Department*





Ms. LO Sum Yuen, Angela  
Planning Department  
Tuen Mun and Yuen Long West District Planning  
Office  
14/F, Sha Tin Government Offices, 1 Sheung Wo Che  
Road, Sha Tin, NT

27/F, Overseas Trust Bank Building  
160 Gloucester Road  
Wan Chai  
Hong Kong  
T: +852 2815 7028  
F: +852 2815 5399  
[info@aechk.com](mailto:info@aechk.com)  
[www.asecg.com](http://www.asecg.com)

8 April 2021

By Fax & E-mail

Dear Sir / Madam,

**INSTALLATION OF DEPOT FACILITIES FOR THE KOWLOON MOTOR BUS CO. (1933) LTD. AT TUEN MUN –  
CHEK LAP KOK LINK("TMCLK") FREE UP AREAS  
REQUEST FOR INFORMATION - PLANNED CONSTRUCTION ACTIVITIES AND PLANNED DEVELOPMENTS**

We are an environmental consultant commissioned by the Kowloon Motor Bus Co.(1933) Ltd. to conduct the Environmental Assessment study for the captioned project.

In order to have a precise assessment, it would be grateful if you could advise whether there is any construction work, within 300m/ 500m from the site boundary of the captioned project, as shown in the enclosed figure.

Please provide the following information, if any:

- Any committed/planned development(s) as potential environment sensitive uses (e.g. offices, residential uses, educational uses etc.);
- Location and site boundary of the committed/ planned development; and
- Construction works programme and completion year.

Due to tight programme of the captioned project, it is highly appreciated if your reply on the above request could be available **on or before 23 April 2021.**

Thank you very much for your assistance. Should you have any queries, please feel free to contact the undersigned at 3915 7148 or Ms. Jamie KAM ([jamiiekam@aechk.com](mailto:jamiiekam@aechk.com)) at 3915 7163.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Cathy Man'.

Cathy Man  
Principle Consultant  
([cm@aechk.com](mailto:cm@aechk.com))  
CM/jk

Encl.

cc. KMB (Attn: Mr. Jacky NG & Mr. Alan FUNG) – by email (w/e)

**規 劃 署**

屯門及元朗西規劃處  
新界沙田上禾輦路1號  
沙田政府合署14樓



**By Fax (2815 5399)**  
**Planning Department**

Tuen Mun and Yuen Long West  
District Planning Office  
14/F, Sha Tin Government Offices,  
1 Sheung Wo Che Road, Sha Tin, N.T.

本函檔號 Your Reference [-/21-0004] and [819.2124/21-0001]  
本署檔號 Our Reference ( ) in PDTM 4/5/48  
電話號碼 Tel. No.: 2158 6333  
傳真機號碼 Fax No.: 2489 9711

13 April 2021

Allied Environmental Consultants Limited  
27/F, Overseas Trust Bank Building  
160 Gloucester Road  
Wan Chai, Hong Kong  
(Attn.: Ms Cathy MAN)

Dear Ms MAN,

**Installation of Depot Facilities for KMB at  
Tuen Mun – Chek Lap Kok Link ("TMCLK") Free Up Areas  
Request for Information for Land Contamination Assessment  
and Planned Construction Activities and Planned Development**

I refer to your letters dated 25 March and 8 April 2021 regarding request for information.

You are advised to visit Town Planning Board's Statutory Planning Portal 2 at <http://www2.ozp.tpb.gov.hk/gos> for information relating to the subject site and the surrounding area.

Yours sincerely,

( Ms Angela LO )  
for District Planning Officer/  
Tuen Mun and Yuen Long West  
Planning Department

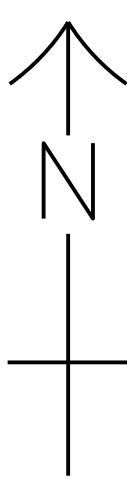
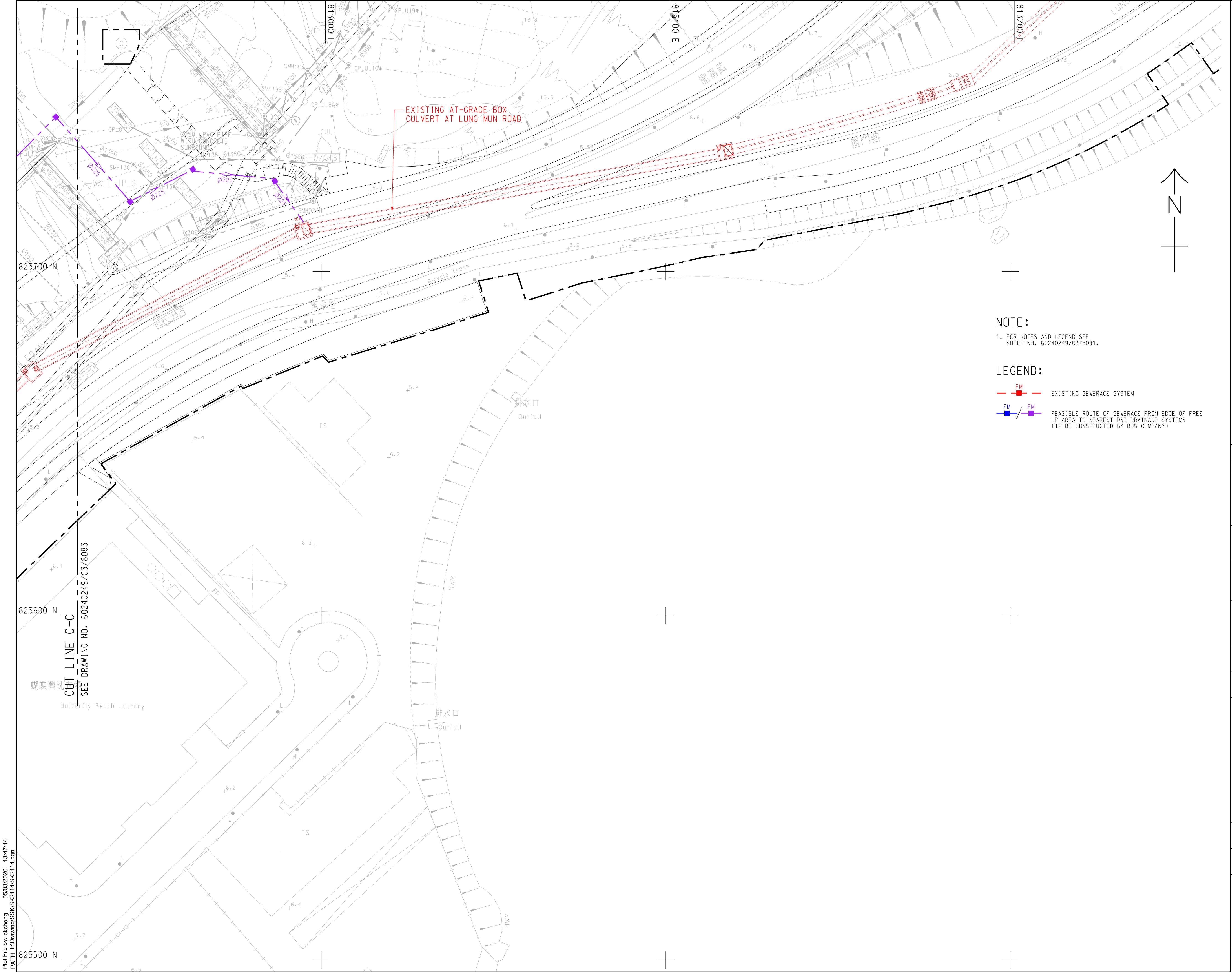
C.C.  
Site Record

CK/AL/al

***Appendix 6-1***

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***Drainage Record Plan of Existing Sewerage System***



NOTE:

1. FOR NOTES AND LEGEND SEE SHEET NO. 60240249/C3/8081.

LEGEND:

- EXISTING SEWERAGE SYSTEM
- FEASIBLE ROUTE OF SEWERAGE FROM EDGE OF FREE UP AREA TO NEAREST DSD DRAINAGE SYSTEMS (TO BE CONSTRUCTED BY BUS COMPANY)

FOR COMMENT

REV.	DATE	DESCRIPTION	CHK.	PREP.	DRAWN
-	MAR. 20	FOR COMMENT	TFL	VL	KW

CLIENT

路政署HIGHWAYS DEPARTMENT

港珠澳大橋香港工程管理局Hong Kong - Zhuhai - Macao Bridge Hong Kong Project Management Office

PROJECT

TUEN MUN - CHEK LAP KOK LINK

CONTRACT TITLE

TUEN MUN - CHEK LAP KOK LINK - NORTHERN CONNECTION TOLL PLAZA AND ASSOCIATED WORKS

PROJECT NO.

60240249

CONTRACT NO.

HY/2013/12

SCALE

A1 1:500

DATE

02 MAR. 2020

KEY PLAN

A3 1:100000

AMENDMENT TO WORKING DRAWING NO.

60240249/C3/1303C

CHECKED

TFL

PREPARED

VL

DRAWN

KW

TITLE

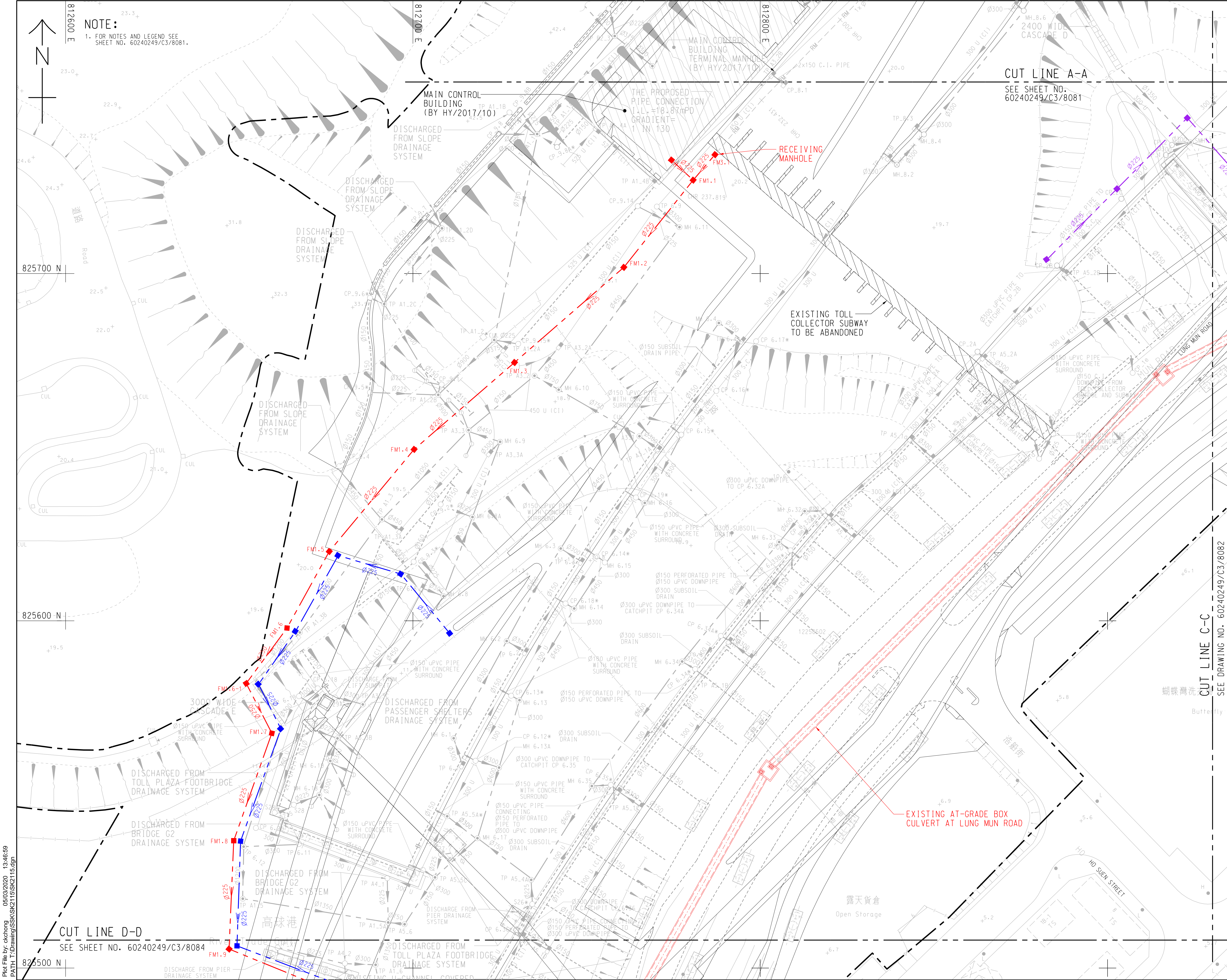
DRAINAGE AND SEWERAGE LAYOUT

SHEET 2 OF 4

SKETCH NO.

60240249/C3/SK2114





FOR COMMENT

REV.	DATE	DESCRIPTION	CHK.	PREP.	DRAWN
-	MAR. 20	FOR COMMENT	TFL	VL	KW

路政署  
HONG KONG PROJECT MANAGEMENT OFFICE

Imagine it.  
Delivered.

PROJECT  
Tuen Mun - Chek Lap Kok Link

CONTRACT TITLE  
Tuen Mun - Chek Lap Kok Link - Northern Connection Toll Plaza and Associated Works

PROJECT NO.  
60240249

CONTRACT NO.  
HY/2013/12

SCALE  
A1 1:500

DATE  
02 MAR. 2020

KEY PLAN  
A3 1:100000

AMENDMENT TO WORKING DRAWING NO.  
60240249/C3/1304C

CHECKED  
TFL

PREPARED  
VL

DRAWN  
KW

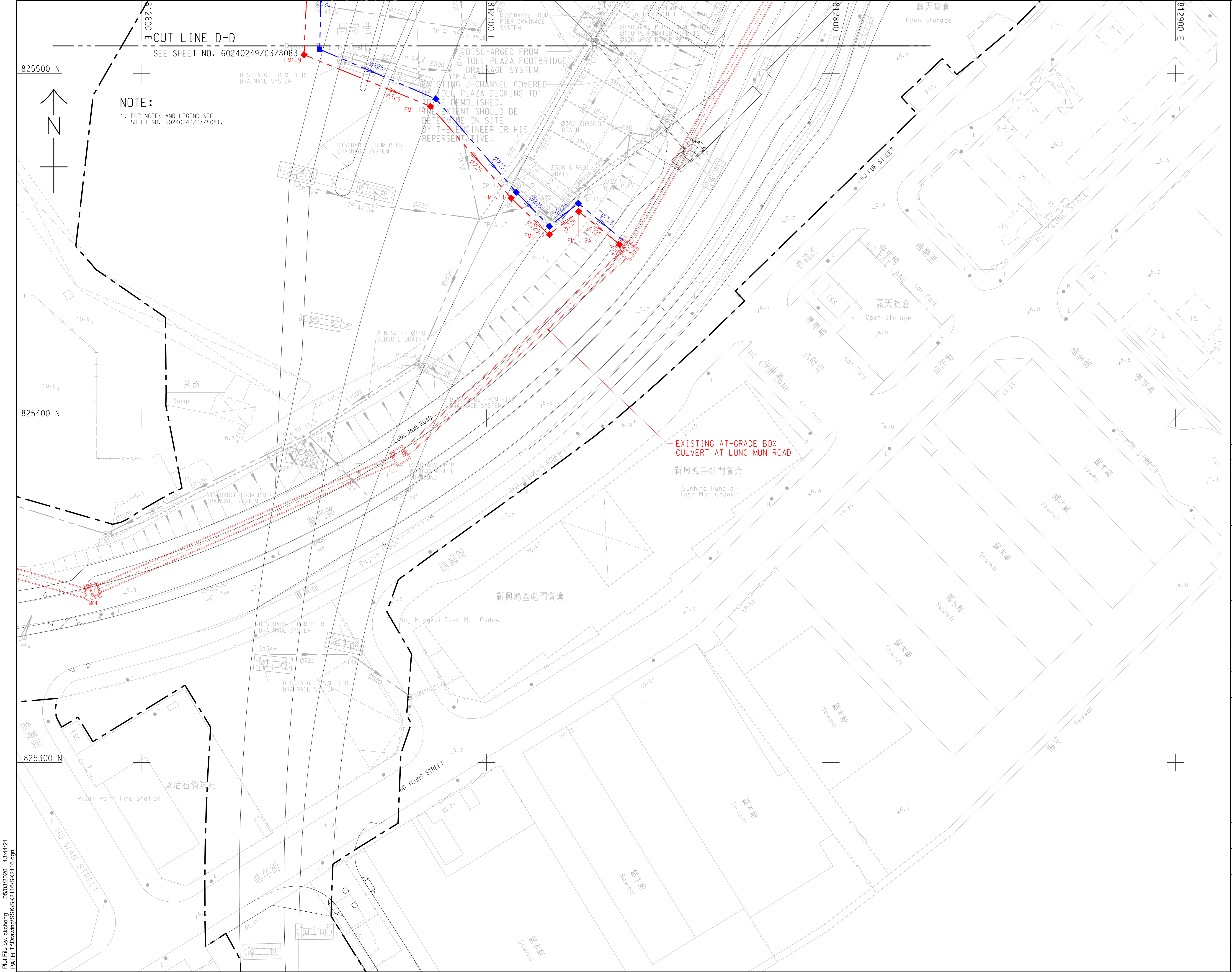
TITLE  
DRAINAGE AND SEWERAGE LAYOUT

SHEET 3 OF 4

SKETCH NO.  
60240249/C3/SK2115

Plot File by: ckhong 05/03/2020 13:46:59  
PATH T:\Drawing\SSK\SK2115\SK2115.dgn





NOTE:  
1. FOR NOTES AND LEGEND SEE SHEET NO. 60240249/C3/8081.

EXISTING AT-GRADE BOX CULVERT AT LUNG MUN ROAD

FOR COMMENT

-	MAR. 20	FOR COMMENT	TFL	VL	KW
REV.	DATE	DESCRIPTION	CHK.	PREP.	DRAWN

CLIENT

**HIGHWAYS DEPARTMENT**  
港珠澳大橋香港工程管理局  
Hong Kong - Zhuhai - Macao Bridge  
Hong Kong Project Management Office

**AECOM**

Imagine it.  
Delivered.

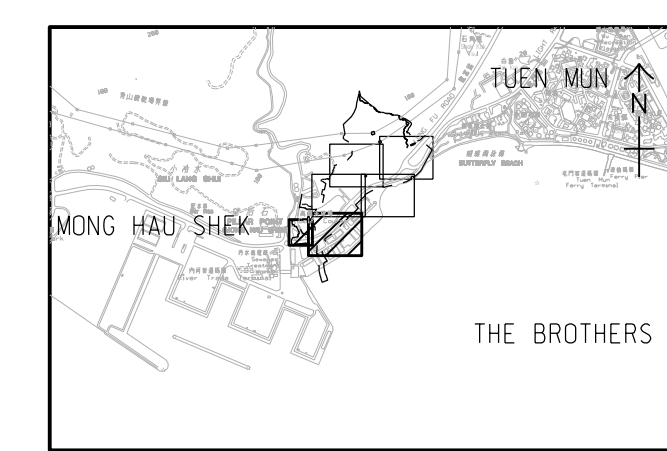
PROJECT  
**TUEN MUN -  
CHEK LAP KOK LINK**

CONTRACT TITLE  
**TUEN MUN - CHEK LAP KOK LINK -  
NORTHERN CONNECTION TOLL  
PLAZA AND ASSOCIATED WORKS**

PROJECT NO. <b>60240249</b>	CONTRACT NO. <b>HY/2013/12</b>
--------------------------------	-----------------------------------

SCALE <b>A1 1:500</b>	DATE <b>02 MAR. 2020</b>
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KEY PLAN A3 1:100000



AMENDMENT TO WORKING DRAWING NO.  
**60240249/C3/1305C**

CHECKED <b>TFL</b>	PREPARED <b>VL</b>	DRAWN <b>KW</b>
-----------------------	-----------------------	--------------------

TITLE  
**DRAINAGE AND SEWERAGE LAYOUT**

SHEET 4 OF 4

SKETCH NO.  
**60240249/C3/SK2116**



## ***Appendix 6-2***

---

### *Calculation of Sewerage Generation*

**KMB Bus Depot at Tuen Mun Chek Lap Kok Link (TMCLK) Free Up Area**

**Table 1. Estimation of Sewage Generation from Staff at Office and KMB Depot**

<b><i>KMB Office Staff</i></b>			<b><i>Remarks</i></b>
Approx. Number	50	person	Estimated by KMB, max no. of people in weekday
Unit Flow Factor	0.18	m <sup>3</sup> /person/day	The planning unit flow for J3 in Table T-2 of GESF is adopted as worst case scenario.
Average Dry Weather Flow (ADWF)	<u>9</u>	m <sup>3</sup> /day	
<b><i>KMB Maintenance Staff</i></b>			
Approx. Number	320	person	Estimated by KMB, reference to PP, weekday
Unit Flow Factor	0.18	m <sup>3</sup> /person/day	The planning unit flow for J3 in Table T-2 of GESF is adopted as worst case scenario.
Average Dry Weather Flow (ADWF)	<u>57.6</u>	m <sup>3</sup> /day	
Total Average Dry Weather Flow (ADWF)			
<u><u>66.6</u></u>			m <sup>3</sup> /day

**Table 2. Estimation of Sewage Generation from Automatic Vehicle Washing Machine**

Number of Service	500	wash/day	As advised by KMB operator, bus washing duration will be less than 2mins/ bus
Water Consumption	250	L/min	
Duration of Washing	2	min/wash	
Estimated Water Use	250	m <sup>3</sup> /day	
Wastewater Recycling Efficiency of Automatic Vehicle Washing Machine	0.7		As advised by supplier, 70% - 80% of water will be reused. Water loss from evaporation is expected. Wastewater from automatic vehicle washing machine will be discharged to sewer only when there is sump pit (with size of 1m*1m*1m) overflow. As worst case scenario, it is assumed 30% of water will be discharged to sewer.
Total Average Dry Weather Flow (ADWF)			
	75	m <sup>3</sup> /day	

**Table 3. Summary (Combining sewage from staff and Automatic VehicleWashing Machine)**

Total Average Dry Weather Flow (ADWF)	<u><u>141.6</u></u>	m <sup>3</sup> /day	
Peaking Factor	8		Table T-5 of GESF
Catment Inflow Factor (P <sub>CIF</sub> )	1.10		Table T-4 of GESF (Tuen Mun)
Peak Wet Weather Flow (PWWF)	1246.08	m <sup>3</sup> /day	
	0.0144	m <sup>3</sup> /s	

**Table 4 - Sewage Generation from Catchment Area**

Catchment	Description	Magnitude	Unit	Remark
A1	<b>Toll Control Building</b>			
	Estimated Floor Area	2997	m <sup>2</sup>	3 storey building, Area measured in Basemap
	Assumed occupied area per person	29.4	m <sup>2</sup> /person	Referred to the worker density of All Economic Activities (All Types) in Table 8 of CIFSUS.
	Total number of persons	102	persons	
	Unit flow	0.08	m <sup>3</sup> /person/day	Referred to the planning unit flow for J12 in Table T-2 of GESF.
<b>Total Average dry weather flow of Catchment A</b>		<b>8.2</b>	<b>m<sup>3</sup>/day</b>	

### ***Appendix 6-3***

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#### ***Detailed Hydraulic Calculation of Sewerage Flow***

App 6-3 - Estimated Pipe Capacity and Adequacy Check for the Existing Sewerage System After Development

sewer A		sewer B		sewer A diameter		sewer A outlet		sewer B inlet		Hydraulic pipeline roughness (m) [b]	Hydraulic Gradient s	Mean Velocity (m/s) [c] V	Max Capacity of Sewer (m³/s)	Total Average Dry Weather Flow m³/day	Catchment Inflow Factor [f]	Revised Total Average Dry Weather Flow m³/day	Contributing Population [d]	Peaking Factor [e]	Peak Discharge through Manhole (m³/s)	Proposed Development Contribution	Percentage of capacity	Remark
Sewer No.		Internal Diameter (m) [a]	Cross-section Area (m²)	Length (m) [a]	Inlet mPD (m) [a]	Outlet mPD (m) [a]																
From	To						D	A	I													
FM1.5	FM1.6	0.225	0.0398	23.92	18.0	16.00	0.003	0.08361	2.96	0.118	150	1.1	165	610	8.0	0.015	1.5%	12.9%	Project Site + Catchment A			
FM1.6	FM1.6-1	0.250	0.0491	18.03	15.98	14.71	0.003	0.07044	2.92	0.143	150	1.1	165	610	8.0	0.015	1.2%	10.6%	Project Site + Catchment A			
FM1.6-1	FM1.7	0.250	0.0491	14.45	14.70	13.69	0.003	0.06990	2.91	0.143	150	1.1	165	610	8.0	0.015	1.2%	10.7%	Project Site + Catchment A			
FM1.7	FM1.8	0.225	0.0398	31.32	13.68	11.00	0.003	0.08557	3.00	0.119	150	1.1	165	610	8.0	0.015	1.5%	12.8%	Project Site + Catchment A			
FM1.8	FM1.9	0.225	0.0398	29.47	10.98	8.53	0.003	0.08314	2.96	0.118	150	1.1	165	610	8.0	0.015	1.5%	13.0%	Project Site + Catchment A			
FM1.9	FM1.10	0.225	0.0398	38.01	8.51	5.22	0.003	0.08656	3.02	0.120	150	1.1	165	610	8.0	0.015	1.4%	12.7%	Project Site + Catchment A			
FM1.10	FM1.11	0.225	0.0398	33.2	5.19	2.87	0.003	0.06988	2.71	0.108	150	1.1	165	610	8.0	0.015	1.6%	14.2%	Project Site + Catchment A			
FM1.11	FM1.12	0.225	0.0398	12.67	2.9	1.87	0.003	0.07735	2.85	0.113	150	1.1	165	610	8.0	0.015	1.5%	13.5%	Project Site + Catchment A			
FM1.12	FM1.12A	0.225	0.0398	9.3	1.86	1.14	0.003	0.07742	2.85	0.113	150	1.1	165	610	8.0	0.015	1.5%	13.4%	Project Site + Catchment A			
FM1.12A	FSH1005385	0.225	0.0398	13.93	1.13	-1.09	0.003	0.15937	4.09	0.163	150	1.1	165	610	8.0	0.015	1.1%	9.4%	Project Site + Catchment A			
FSH1005385	FSH1005384	2.500	4.9087	79.16	-1.12	-1.14	0.003	0.00025	0.77	3.796	150	1.1	165	610	8.0	0.015	0.05%	0.4%	Project Site + Catchment A			
FSH1005384	FSH1005383	2.500	4.9087	94.53	-1.15	-1.192	0.003	0.00044	1.03	5.039	150	1.1	165	610	8.0	0.015	0.03%	0.3%	Project Site + Catchment A			
FSH1005383	FSH1005382	2.500	4.9087	82.98	-1.195	-1.24	0.003	0.00054	1.13	5.569	150	1.1	165	610	8.0	0.015	0.03%	0.3%	Project Site + Catchment A			

Note:  
[e] Information from Drainage Layout Plan or measured from basemap

[b] Assume sli med of clayware in "Poor" condition.  
[c] The velocity is calculated using the Colebrook-White Formula:

$$V' = -2 \left( 2gDS \right)^{0.5} \log \left( \frac{k}{3.7D} + \frac{2.5V}{D \left( 2gDS \right)^{0.5}} \right)$$

where  
k = Colebrook-White roughness coefficient, in meter  
V = mean velocity (m/s)  
D = circular cross-section pipe, inside diameter (m)  
S = slope, in meters per meter  
v = kinematic viscosity of water, in meter per second (0.000001306 m²/s)  
g = gravitational acceleration (m/s²) (9.807m/s²)

[d] The Contributing Population is defined as:  
Contributing Population =  $\frac{\text{Calculated total average flow (m³/day)}}{0.27 \text{ (m³/person/day)}}$

[e] Reference from Table T-5 of Guidelines for Estimating Sewage Flows for Sewerage Infrastructure Planning  
[f] Reference from Table T-4 of Guidelines for Estimating Sewage Flows for Sewerage Infrastructure Planning. Catchment inflow factor of Turn Mun is adopted.

## ***Appendix 7-1***

---

### ***Photos of Existing Site***





Photo 1: Entrance of the Subject Site



Photo 2: Overview of Subject Site (From Southwest View)



Photo 3: Overview of Subject Site (From Northwest View)



Photo 4: Overview of Subject Site (From North View)



Photo 5: Overview of Subject Site (From Northeast View)



Photo 6: Overview of Subject Site (From Southeast View)



Photo 7: Drainage within the Subject Site



Photo 8: Drainage within the Subject Site



Issue No. : 3  
Issue Date : November 2021  
Project No. : 1906



## **LANDFILL GAS HAZARD ASSESSMENT**

### **FOR**

**PROPOSED BUS DEPOTS  
WITH ANCILLARY PUBLIC  
UTILITY INSTALLATION  
(ELECTRICITY SUBSTATION)  
IN AREA SHOWN AS 'ROAD',  
GOVERNMENT LAND IN D.D.  
138 AND D.D. 300, TUEN  
MUN, NEW TERRITORIES  
(NEAR THE BUILDING AT 20  
TUEN MUN CHEK LAP KOK  
TUNNEL ROAD)**

Prepared by

Allied Environmental Consultants Limited

**COMMERCIAL-IN-CONFIDENCE**

**Allied Environmental Consultants Limited**

Member of AEC Group (HKEX Stock Code: 8320.HK)

27/F, Overseas Trust Bank Building, 160 Gloucester Road, Wan Chai, Hong Kong

www.aecg.com T: +852 2815 7028 F: +852 2815 5399

**沛然環境評估工程顧問有限公司**

沛然環保集團成員 (港交所股份代號: 8320.HK)

香港灣仔告士打道 160 號海外信託銀行大廈 27 樓

## Document Verification



<b>Project Title</b>	Proposed Bus Depots with Ancillary Public Utility Installation (Electricity Substation) in area shown as 'Road', Government Land in D.D. 138 and D.D. 300, Tuen Mun, New Territories (near the building at 20 Tuen Mun Chek Lap Kok Tunnel Road)	<b>Project No.</b> 1906
<b>Document Title</b>	Landfill Gas Hazard Assessment	

Issue No.	Issue Date	Description	Prepared by	Checked by	Approved by
Issue 1	May 2021	1st Submission	Cherry Lee	Cathy Man	Grace Kwok
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## 1. Introduction

### 1.1. General

- 1.1.1. Allied Environmental Consultants Limited (AEC) was commissioned by the Kowloon Motor Bus Company (1933) Limited (KMB) to conduct Landfill gas (LFG) Hazard Assessment to support of a Section 16 Planning Application for proposed bus depots with ancillary public utility installation (hereafter referred to as the "Proposed Development") of Tuen Mun – Chek Lap Kok Link (TMCLK) Free Up Area (hereafter referred to as the "Project Sites").

### 1.2. Background

- 1.2.1. The Project Sites comprise of three free up areas, namely Site A, B and C with total area of 16,845m<sup>2</sup> (Site A: 7,926 m<sup>2</sup>; Site B: 1,321m<sup>2</sup> and Site C: 7,598 m<sup>2</sup>). KMB is intended to develop the Site A to a 11-storey multi-storey depot for electric buses ("eBus"). Site B will be used for a 2 storey substation while Site C will be used for charging-enabling bus parking bays only. **Figure 1** shows the location of the Project Sites and its surrounding.
- 1.2.2. Based on the best available information from Development Permission Area Plans, Outline Development Plans, Layout Plans and other relevant published and uses plan by Lands Department or Planning Department, no committed or planned developments are identified in the vicinity of the Project Sites. As advised by Planning Department (PlanD), the consultant has visited the Town Planning Board Statutory Planning Portal 2 to obtain records for land zoning. The website as of 8 October 2021 has confirmed that there are no planning applications has been made at the vicinity, which implies no committed or planned developments. Correspondence from PlanD can be referred in **Appendix C**.
- 1.2.3. The Site A and Site B fall within the 250m Consultation Zone of Pillar Point Valley Landfill (PPVL) while Site C is outside the 250m Consultation Zone, LFG hazard assessment addressing the landfill gas hazards and recommending the mitigation measures will be conducted for the Site A and Site B. **Figure 2** shows the location of the Project Sites and the consultation zone of the existing closed PPVL.
- 1.2.4. Two guidance notes regarding LFG hazard assessment, namely ProPECC PN 3/96 - Landfill Gas Hazard Assessment for Development Adjacent to Landfills and EPD/TR8/97 - Landfill Gas Hazard Assessment Guidance Note have been issued by Environmental Protection Department (EPD). These two guidance notes set out the conditions under which LFG hazard assessment should be carried out and provide guidance on undertaking the LFG hazard assessment.

## **2. Environmental Impact Assessment Ordinance (EIAO)**

### **Implications**

- 2.1.1. As a multi-storey depot and supporting facilities for electric buses are proposed at the Project Sites, a Designated Project (DP) under Schedule 2, Part I, Category A.6 of the EIAO has been considered:
- 2.1.2. Category A.6 of the EIAO has been considered: Category A.6: A transport depot located less than 200 m from the nearest boundary of an existing or planned---
- (a) residential area;
  - (b) place of worship;
  - (c) educational institution; or
  - (d) health care institution.
- 2.1.3. With reference to the Development Permission Area Plans, Outline Development Plans, Layout Plans and other relevant published land uses plan by Lands Department or Planning Department, neither residential area, place of worship, educational institution, nor health care institution is identified or will be planned within 200m from Project Site boundary. Therefore, the proposed bus depot does not constitute DP under EIAO and Environmental Permit (EP) is not required for this Project.

## **3. Desktop Review and Analysis**

### **3.1. Review of Previous Environmental Impact Assessment (EIA) Study**

- 3.1.1. This study is conducted with reference to the approved EIA for the TMCLK (AEIAR-146/2009) approved in October 2009.

### **3.2. History of PPVL**

- 3.2.1. PPVL is a 65 ha landfill, which was commissioned in 1983 and was closed in 1996. Throughout its operation life of 15 years, PPVL had received approximately 11 million tonnes of waste.
- 3.2.2. In the construction of the PPVL, a liner system was installed across the narrow floor of the valley, being 30 metres wide at its narrowest point. The liner system consists of a groundwater collection layer with pipes for discharge together with a leachate collection layer, also with a network of pipes for discharge. These two layers are separated by either a PVC or an HDPE membrane.

3.2.3. After the PPVL was closed, restoration works were commenced in year 2004. The restoration works were completed in 2006 and the principle element or works are as follows:

- High integrity capping systems across the top platform of the landfill to reduce infiltration, reduce leachate generation and control leachate levels;
- Modification to the existing leachate and groundwater collection systems to intercept the flows and ensure that they are conveyed to the proposed leachate treatment works;
- Passive landfill gas system in specific areas to prevent landfill gas migration offsite;
- Active landfill gas extraction system to control and collect landfill gas for use at the leachate treatment works;
- Realignment of the natural stream at the toe of the landfill and the formation of a platform on the eastern left bank of the stream for the construction of the treatment compound; and
- A leachate treatment works for the treatment of collected leachate.

### 3.3. Potential Landfill Gas Hazards

3.3.1. As shown in **Figure 2**, the Site A and Site B falls within the 250m Consultation Zone of existing PPVL. In accordance with the LFG Hazard Assessment Guidance Note, the risk to the development due to LFG may be evaluated based upon the following three criteria:

- Source – location, nature and likely quantities/ concentrations of landfill gas which has the potential to affect the development;
- Pathway – the ground and groundwater conditions, through which LFG must pass in order to reach the development; and
- Target – elements of the development that are sensitive to the effects of LFG.

#### Source

3.3.2. The PPVL restoration works were carried out in 2004 with the aim of minimizing the risks associated with off-site migration of LFG through a passive LFG management system. LFG monitoring has been carried out since completion of the restoration works.

3.3.3. Gas monitoring wells have been installed around the site to monitor the potential landfill gas migration. The updated PPVL landfill gas monitoring data (from February 2020 to February 2021) upon the preparation of this report was obtained from EPD. The monitoring data from February 2020 to February 2021 was shown in **Appendix A** and the findings are summarized in **Table 1**.

**Table 1 Summary of PPVL Gas Monitoring Results from Feb 2020 to Feb 2021**

Monitoring Locations	Methane (% v/v)		Carbon Dioxide (% v/v)	
	Range (%)	Average (% of readings <0.1)	Range (%)	Average (% of readings <0.1)
P5	0.0 – 0.3	0.03	0.1 – 2.7	1.32
GM1	0.0	0.0	6.6 – 11.2	8.67
GM2	0.0	0.0	5.9 – 10.1	8.48
GM4	0.0 – 0.1	0.01	1.6 – 6.1	4.52
GM5	0.0	0.0	2.7 – 8.2	4.61
GVQ1	0.0	0.0	1.9 – 9.4	5.95
GVQ2	0.0	0.0	0.1 – 9.8	4.65
GVQ3	0.0	0.0	0.1 – 4.5	2.33

- 3.3.4. With reference to the corresponding data from TMCLKL EIA, the source of PPLV was classified as Medium. **Table 2** shows the comparison between two sets of PPVL landfill gas monitoring data. Considering there is no significant change in average carbon dioxide concentration between TMCLKL EIA and the updated landfill gas monitoring data (Feb 2020 – Feb 2021), the classification of source of PPVL as Medium is still valid.

**Table 2 Comparison of the Available Landfill Gas Monitoring Data**

Landfill gas monitoring data	Range of average carbon dioxide (%v/v)
TMCLKL EIA	1.2 – 8.9
Updated landfill gas monitoring data (from February 2020 to February 2021)	1.32 – 8.67

- 3.3.5. According to the approved TMCLK EIA, the Source term is classified as MEDIUM. In view that the size and age of the landfill, the nature of landfill has control measures and the recent landfill gas monitoring results, as a conservative approach, the “MEDIUM” category is maintained.

#### Pathway

- 3.3.6. According to the geological map shown in **Appendix B**, the geology of the Site A and Site B is mainly fine to medium grained granite. Also, photogeological lineament is observed in south west corner of the site near the roundabout, and mineral veins are also observed in east side of the site near the tunnel portal. However, both of these features are only within the consultation zone of the PPVL and do not pass through the landfill.

- 3.3.7. There is no information of any conduit (man-made or natural feature such as a fault plane) leads directly from the landfill to the Site A and Site B presented at this stage.
- 3.3.8. Based to the TMCLK EIA, the ground water level ranges from +17.6 to +115.7mPD in 2008 and the elevation of the Site A and Site B ranges from approximately 18.9 mPD to 19.5mPD.
- 3.3.9. Site A and Site B are located at approximately 169m and 186m away from the site boundary of the PPVL respectively. Therefore, the Site A and Site B is categorized as **Long/indirect**.

Target

- 3.3.10. During construction phase, deep excavation is not expected at Site A and Site B. Also, the construction would be mainly carried out in an outdoor environment. Therefore, it is considered as **Low sensitivity** for general works in construction pahse.
- 3.3.11. During construction phase, the site office staffs who worked in the site office at Site A and Site B (which is considered as an indoor environment) with potential LFG hazards should be well informed of the situation and specific safety procedures should be given to them to follow. Therefore, it is considered as **Medium sensitivity** for site office works in construction phase.
- 3.3.12. During operation phase, the maintenance workers, drivers and other supporting staffs at Site A would be working within the depot facilities, which is expected to be fully covered with vast amount of openings at the building facades to optimize the use of natural ventilation, supplemented with mechanical ventilation system. The main works within the depot facilities would be charging-enabling bus parking bay with simple repair/ maintenance works. Thus, it is anticipated that majority of staff would mainly stay in an outdoor environment during the operation. It is also expected that no major indoor activities will be involved.
- 3.3.13. In addition, there shall be no basement design and the rooms or voids with services and utilities penetrating from the ground at Site A, such as plant rooms should be restricted to the staffs only. Therefore, it is considered as **Low sensitivity** in operation phase at Site A.
- 3.3.14. During operation phase, the maintenance workers and supporting staffs would be working in the enclosed room which is considered as indoor environment within the substation at Site B. Therefore, it is considered as **Medium sensitivity** in operation phase at Site B.

Summary of Qualitative Source-Pathway-Target Analysis

3.3.15. Based on the above information, a qualitative source-pathway-target analysis has been undertaken and the overall risk level for both construction and operation phases are summarized below:

**Table 3 Qualitative Risk Assessment Matrix**

Source	Pathway	Targets	Risk
<b>PPVL (<i>Medium</i>)</b> According to the approved TMCLK EIA, the source of PPVL is classified as Medium	During Construction phase		
	Over 100m away from PPVL, no fault/fissure, no man-made conduit ( <b>Long / indirect</b> )	<u>Site A and Site B</u> Construction workers, well trained and follow specific safety procedures, mainly outdoor works ( <b>Low sensitivity</b> )	<b>Very Low</b>
		<u>Site A and Site B</u> Well trained site office staff and follow specific safety procedures, indoor environment ( <b>Medium Sensitivity</b> )	<b>Low</b>
		During Operation phase	
		<u>Site A</u> Majority of maintenance workers and supporting staffs worked in outdoor environment (i.e. enclosed depot with vast openings at façades at Site A) ( <b>Low sensitivity</b> )	<b>Very Low</b>
		<u>Site B</u> Maintenance workers and supporting staffs worked in indoor environment (i.e. enclosed rooms within substation at Site B) ( <b>Medium sensitivity</b> )	<b>Low</b>



- 3.3.16. According to the qualitative assessment above, **Table 4** concluded the Landfill gas risk of each activities under construction and operation phase.

**Table 4 Summary Risk Matrix under Different Phases**

Targets	Level of Risk
During Construction phase	
General Works (Outdoor)	Very Low
Site Office (Indoor)	Low
During Operation phase	
Site A: Daily operation (mainly in outdoor environment)	Very Low
Site B: Maintenance work (mainly in indoor environment)	Low

### 3.4. Recommended Precautionary and Protection Measures

- 3.4.1. Based on the LFG risk identified in previous section, the precautionary and protection measures listed in Landfill Gas Hazard Assessment Guidance Note shall be recommended for implementation.

**Table 5 Implication and Protection Measures**

Targets	Level of Risk	Implication
During Construction phase		
General Works (Outdoor)	Very Low	The risk is so low that no precautionary measures are required.
Site Office (Indoor)	Low	Some precautionary measures* will be required to ensure that the planned development is safe.
During Operation phase		
Site A: Daily operation (mainly in outdoor environment)	Very Low	The risk is so low that no precautionary measures are required.
Site B: Daily operation (mainly in indoor environment)	Low	Some precautionary measures* will be required to ensure that the planned development is safe.
Remarks		
<p>* Required Precautionary measures includes the passive control of gas only.</p> <p>Provision of barriers to the movement of gas e.g. membranes in floors or walls, or in trenches, coupled with high permeability vents such as no-fines gravel in trenches or voids/permeable layers below structures.</p>		

3.4.2. As mentioned in **Table 5**, precautionary measures ("passive control") will be required in Site B to ensure that the proposed development in Site B is safe. Definitions of "passive control" are annotated in Chapter 4 of the Guidance Note. The following precautionary and protection measures are considered appropriate:

- **Construction Phase**

- All workers should be aware of potential presence of LFG;
- Safety precautions should be made available during trenching and excavation; and
- Train and provide breathing apparatus and gas detection equipment for confined spaces or deep trenching

- **Operational Phase**

- Alert workers and visitors of possible LFG hazards;
- Prohibit smoking and open fires on site; and
- Conduct regular LFG monitoring at mobile offices, equipment stores, etc.

Monitoring

- **Construction Phase**

3.4.3. Periodically during ground-works construction, the works area should be monitored for methane, carbon dioxide and oxygen using appropriately calibrated portable gas detection equipment.

3.4.4. The monitoring frequency and areas to be monitored should be set down prior to commencement of ground-works either by the Safety Officer or by an appropriately qualified person.

3.4.5. Routine monitoring should be carried out in all excavations, manholes and chambers and any other confined spaces that may have been created by, for example, the temporary storage of building materials on the site surface.

3.4.6. The measurement to be carried out will be reviewed depends on the excavation level in detailed design stage. Depending on the results of the measurements, actions required will vary and should be set down by the Safety Officer or other appropriately qualified person. As a minimum these should encompass those actions specified in **Table 6**.

**Table 6 Actions in the Event of Landfill Gas Detected in Confined Areas**

Parameter	Measurement	Action
Oxygen	<19%	Ventilate to restore oxygen to > 19 %
	<18%	1. Stop works 2. Evacuate personnel/prohibit entry 3. Increase ventilation to restore oxygen to > 19 %
Methane	> 10 % LEL (i.e. > 0.5 % by volume)	- Prohibit hot works - Ventilate to restore methane to < 10% LEL
	> 20 % LEL (i.e. > 1 % by volume)	1. Stop works 2. Evacuate personnel/prohibit entry 3. Increase ventilation to restore methane to <10 % LEL
Carbon Dioxide	0.5%	Ventilate to restore carbon dioxide to <0.5%
	>1.5%	1. Stop works 2. Evacuate personnel/prohibit entry 3. Increase ventilation to restore carbon dioxide to <0.5%

- Operational Phase**

3.4.7. During the operation phase, the majority of maintenance workers and supporting staffs in Site A will work in outdoor environment (i.e. enclosed depot with vast openings at façades) which mainly rely on the natural ventilation. Monitoring is considered as not necessary for Site A.

3.4.8. In Site B, some maintenance workers and supporting staffs will work in the enclosed room within the substation. The monitoring arrangement will be adjusted during the detailed design stage.

## 4. Conclusion

4.1.1. The Site A and Site B fall within the 250m Consultation Zone of PPVL, a preliminary review has been conducted to evaluate the potential LFG hazard imposed on the proposed depot development by the PPVL.

4.1.2. The qualitative LFG hazard assessment shows that the overall level of landfill gas risk posed by the PPVL to Site A and Site B is Low and Very Low in both construction phase and operation phase. Appropriate protective measures shall be provided to minimize the LFG risk according to the Landfill Gas Hazard Assessment Guidance Note.

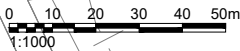
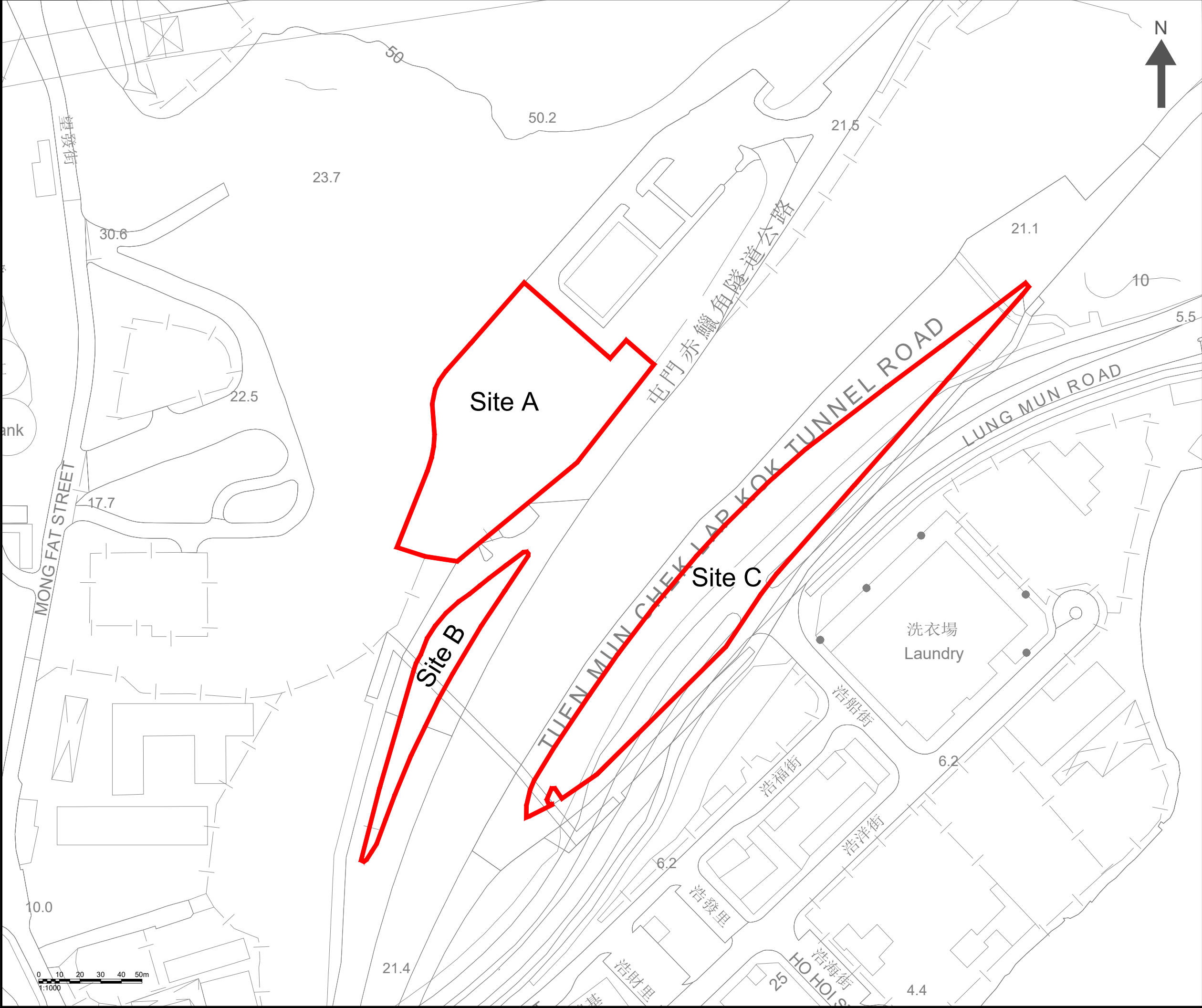
- 4.1.3. Provided that recommended protection measures implemented properly with reference to relevant guidelines, the safety of the site workers and all personnel presences at the Site A and B would be safeguarded and no adverse landfill gas hazard arisen from the proposed depot is anticipated.
- 4.1.4. Detailed LFGHA shall be conducted with the detailed design of the proposed development during detailed design stage to review the potential targets and the risk due to the LFG migration with the Project. Design of the protection measures, requirement for maintenance and monitoring shall be proposed and submitted for EPD's approval.

Project No.: 1906

Landfill Gas Hazard Assessment for Proposed Bus Depots with Ancillary Public Utility Installation (Electricity Substation) in area shown as 'Road', Government Land in D.D. 138 and D.D. 300, Tuen Mun, New Territories (near the building at 20 Tuen Mun Chek Lap Kok Tunnel Road)

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## ***Figures***



NOTES :  
 PROJECT SITES

Consultant



**AEC**

**Allied Environmental Consultants Limited**

Project No. : 1906

Drawing By : CL

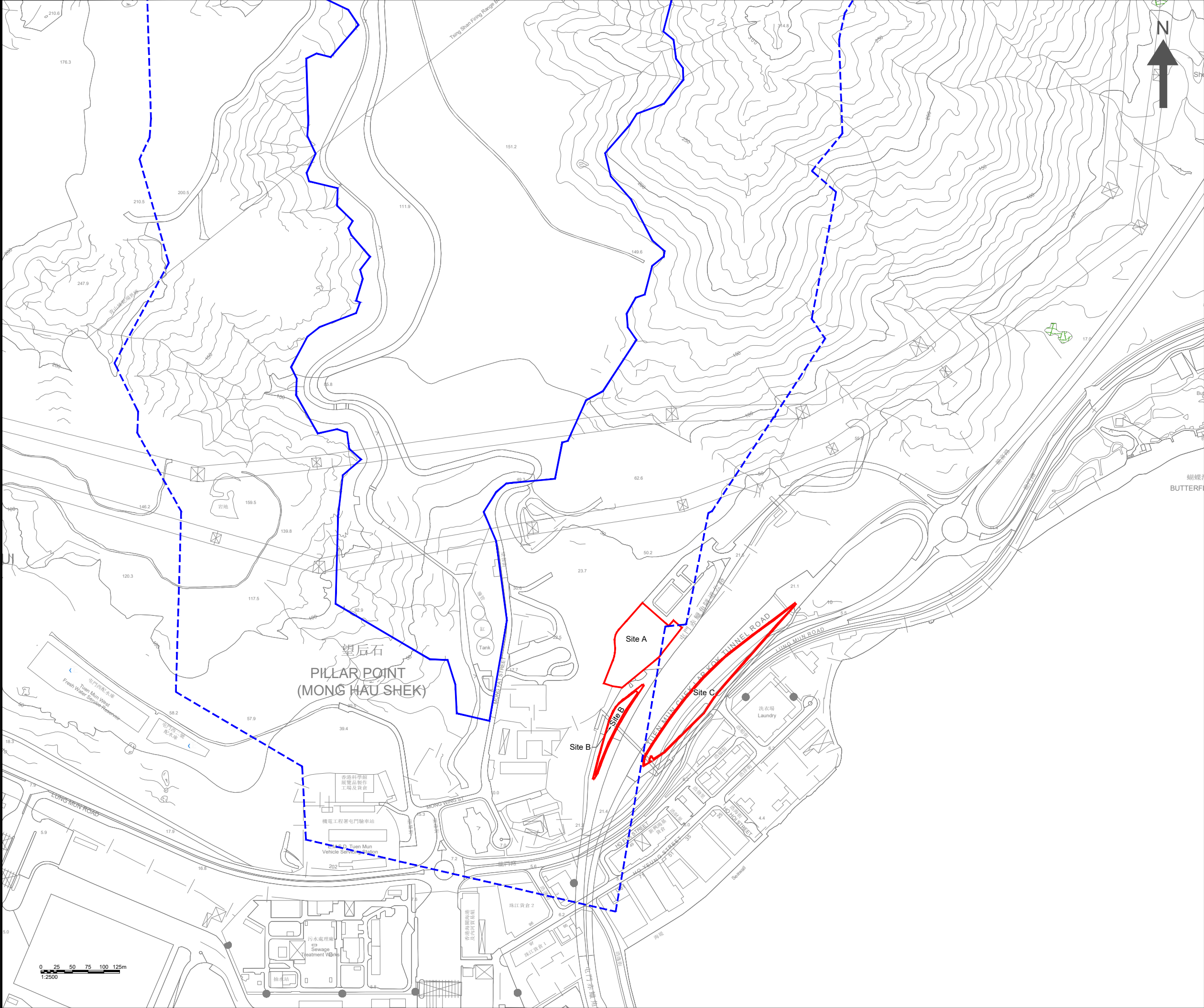
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MULTI-STOREY DEPOT FOR ELECTRIC  
BUSES AT TUEN MUN - CHEK LAP KOK LINK  
FREE-UP AREA

Drawing Title :  
SITE ENVIRONS

Drawing No : <b>FIGURE 1</b>	Revision : <b>1</b>
Scale : <b>AS SHOWN</b>	Date : <b>AUG 2021</b>

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NOTES :

PROJECT SITES

PILLAR POINT VALLEY LANDFILL

PILLAR POINT VALLEY LANDFILL - 250M CONSULTATION ZONE

Consultant



**Allied Environmental Consultants Limited**

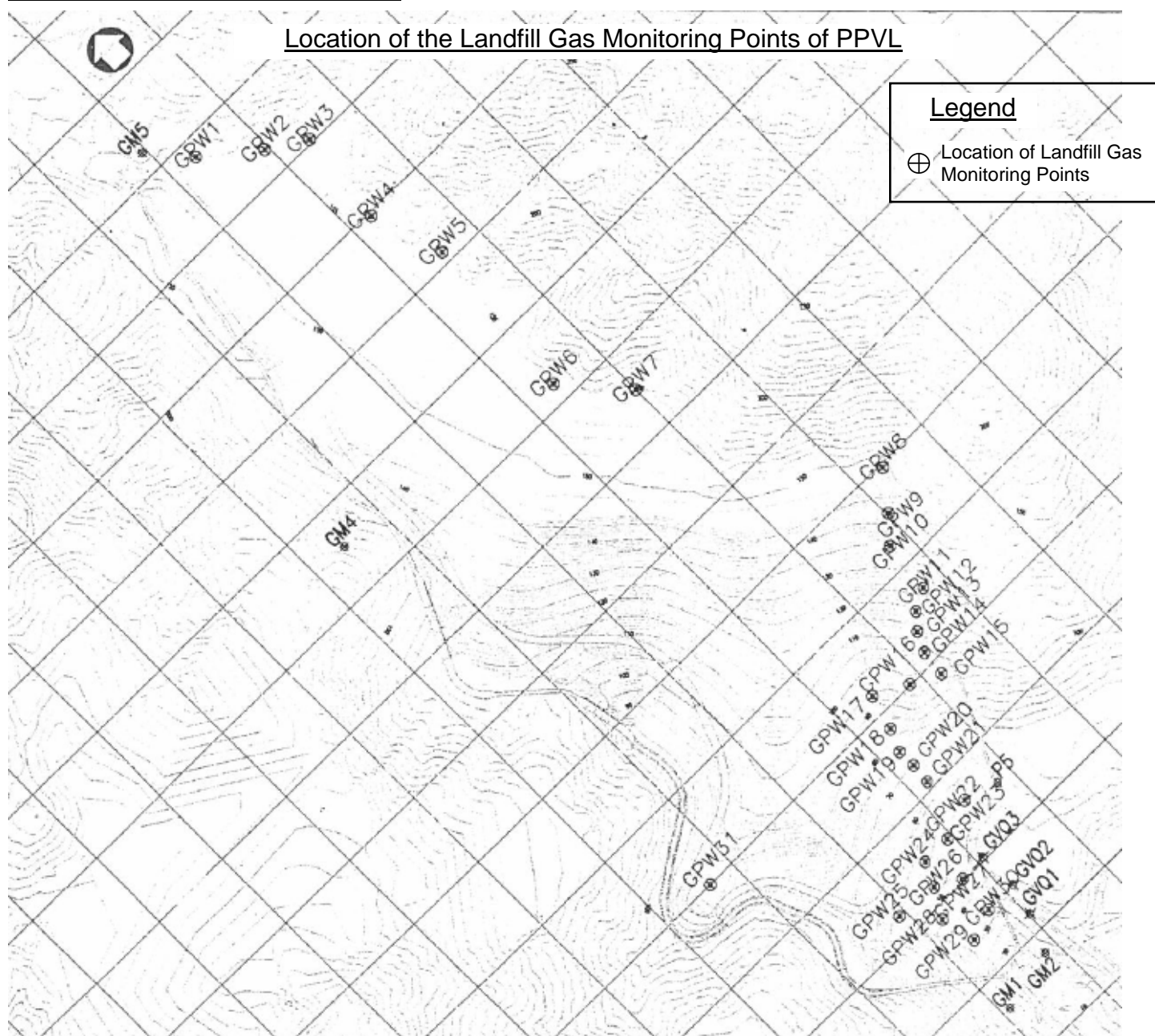
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Drawing No : FIGURE 2	Revision : 1
Scale : AS SHOWN	Date : AUG 2021
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## ***Appendix A – Landfill Gas Monitoring Data (Feb 2020 to Feb 2021)***



Provided by EPD on 10 May 2021

Sampling date	Weather conditions	Sample location	Sampling time	Atmospheric pressure (mBar)	Atmospheric temperature (°C)	Gas pressure (mBar)	Methane (%)	Carbon dioxide (%)
8/2/2020	Cloudy	GM1	8:50	1018	18.7	0.00	0.0	8.5
		GM4	9:25	1011	18.7	0.07	0.0	4.0
		GM5	9:33	1003	18.7	0.06	0.0	4.0
		GVQ2	10:46	1016	16.7	0.09	0.0	5.5
		GVQ1	10:48	1017	16.7	0.27	0.0	3.6
		GVQ3	10:53	1016	16.7	0.13	0.0	2.8
		GM2	10:58	1017	16.7	0.19	0.0	8.7
12/2/2020	Fine	P5	15:47	1013	24.2	0.00	0.0	0.2



Sampling date	Weather conditions	Sample location	Sampling time	Atmospheric pressure (mBar)	Atmospheric temperature (°C)	Gas pressure (mBar)	Methane (%)	Carbon dioxide (%)
2/3/2020	Cloudy	GM5	13:51	1017	25.1	0.17	0.0	3.8
		GM4	14:04	1011	25.1	0.27	0.0	3.7
		GVQ3	14:20	1001	25.1	0.30	0.0	2.0
		GVQ2	14:24	1013	25.1	0.23	0.0	6.5
		GVQ1	14:29	1014	25.1	0.31	0.0	3.4
		GM1	14:43	1014	25.1	0.21	0.0	7.7
		GM2	14:56	1014	25.1	0.47	0.0	8.1
5/3/2020	Cloudy	P5	11:13	1020	16.8	0.14	0.3	2.0

Sampling date	Weather conditions	Sample location	Sampling time	Atmospheric pressure (mBar)	Atmospheric temperature (°C)	Gas pressure (mBar)	Methane (%)	Carbon dioxide (%)
15/4/2020	Fine	GVQ3	8:32	1013	23.5	-0.04	0.0	3.1
" "	" "	GVQ2	8:36	1015	23.5	-0.03	0.0	6.8
" "	" "	GVQ1	8:39	1015	23.5	0.06	0.0	5.9
" "	" "	GM2	8:42	1016	23.5	-0.13	0.0	8.0
" "	" "	GM1	8:54	1015	23.5	0.04	0.0	8.3
17/4/2020	Fine	GM4	13:58	1010	26.3	0.01	0.0	3.9
" "	" "	GM5	14:05	997	26.3	0.19	0.0	5.2
22/4/2020	Fine	P5	10:35	1010	23.6	-0.13	0.0	0.9

Sampling date	Weather conditions	Sample location	Sampling time	Atmospheric pressure (mBar)	Atmospheric temperature (°C)	Gas pressure (mBar)	Methane (%)	Carbon dioxide (%)
06/05/2020	Fine	P5	14:42	1004	30.7	-0.07	0.0	0.1
07/05/2020	Cloudy	GM5	9:48	995	29.4	0.30	0.0	5.4
		GM4	9:57	996	29.4	0.41	0.0	3.6
		GVQ3	10:17	1006	29.4	0.36	0.0	0.1
		GVQ2	10:20	1008	29.4	0.30	0.0	4.6
		GVQ1	10:23	1008	29.4	0.35	0.0	1.9
		GM2	10:28	1009	29.4	0.29	0.0	6.0
		GM1	10:40	1011	29.4	0.36	0.0	7.5

Sampling date	Weather conditions	Sample location	Sampling time	Atmospheric pressure (mBar)	Atmospheric temperature (°C)	Gas pressure (mBar)	Methane (%)	Carbon dioxide (%)
11/06/2020	Sunny	P5	10:10	1008	30.3	0.05	0.0	0.6
12/06/2020	Sunny	GM1	8:57	1005	30.5	0.04	0.0	7.3
12/06/2020	Sunny	GM5	9:14	992	30.5	0.19	0.0	8.2
12/06/2020	Sunny	GM4	9:38	992	30.5	0.25	0.0	4.5
12/06/2020	Sunny	GVQ2	9:49	1005	30.5	-21.03	0.0	0.1
12/06/2020	Sunny	GVQ3	9:54	1004	30.5	0.40	0.0	3.3
12/06/2020	Sunny	GVQ1	9:59	1004	30.5	0.31	0.0	6.1
12/06/2020	Sunny	GM2	10:05	1005	30.5	0.24	0.0	7.9

Sampling date	Weather conditions	Sample location	Sampling time	Atmospheric pressure (mBar)	Atmospheric temperature (°C)	Gas pressure (mBar)	Methane (%)	Carbon dioxide (%)
06/07/2020	Sunny	GM2	8:46	1007	29.5	0.03	0.0	9.5
06/07/2020	Sunny	GVQ1	8:51	1006	29.5	0.05	0.0	8.0
06/07/2020	Sunny	GVQ2	8:54	1006	29.5	0.07	0.0	8.3
06/07/2020	Sunny	GVQ3	8:57	1005	29.5	0.23	0.0	3.1
06/07/2020	Sunny	GM1	9:11	1005	29.5	0.10	0.0	9.9
06/07/2020	Sunny	P5	16:17	1006	29.5	0.04	0.0	0.6
07/07/2020	Fine	GM5	13:28	994	30.3	-0.19	0.0	6.3
07/07/2020	Fine	GM4	14:09	994	30.3	0.16	0.0	5.5

Sampling date	Weather conditions	Sample location	Sampling time	Atmospheric pressure (mBar)	Atmospheric temperature (°C)	Gas pressure (mBar)	Methane (%)	Carbon dioxide (%)
04/08/2020	Cloudy	GM1	13:24	1003	27.9	0.19	0.0	6.6
" "	" "	GM5	13:44	1004	" "	0.25	0.0	3.4
" "	" "	GM4	13:55	989	" "	0.19	0.0	6.0
" "	" "	GVQ3	14:05	990	" "	0.36	0.0	2.9
" "	" "	GVQ2	14:09	1001	" "	-29.72	0.0	0.2
" "	" "	GVQ1	14:11	1001	" "	0.35	0.0	4.1
" "	" "	GM2	14:16	1002	" "	0.32	0.0	9.5
05/08/2020	Rainy	P5	11:44	1008	27.3	0.10	0.0	2.7

Sampling date	Weather conditions	Sample location	Sampling time	Atmospheric pressure (mBar)	Atmospheric temperature (°C)	Gas pressure (mBar)	Methane (%)	Carbon dioxide (%)
01/09/2020	Sunny	GM5	13:16	990	34.9	0.07	0.0	3.7
" "	" "	GM4	13:28	990	" "	0.30	0.0	5.4
" "	" "	GVQ3	13:53	997	" "	0.25	0.0	2.8
" "	" "	GVQ2	13:55	1002	" "	0.32	0.0	7.7
" "	" "	GVQ1	13:59	1000	" "	0.34	0.0	8.0
" "	" "	GM2	14:04	1003	" "	0.38	0.0	9.3
" "	" "	GM1	14:27	1002	" "	0.43	0.0	8.1
03/09/2020	Sunny	P5	11:02	1005	32.3	0.04	0.0	0.8

Sampling date	Weather conditions	Sample location	Sampling time	Atmospheric pressure (mBar)	Atmospheric temperature (°C)	Gas pressure (mBar)	Methane (%)	Carbon dioxide (%)
08/10/2020	Sunny	P5	13:15	1010	23.1	0.04	0.0	1.9
05/10/2020	Cloudy	GM5	14:35	995	25.9	0.03	0.0	4.4
" "	" "	GM4	13:47	995	" "	0.13	0.1	6.1
07/10/2020	Cloudy	GVQ3	15:41	1010	25.9	0.13	0.0	4.5
" "	" "	GVQ2	15:36	1010	" "	0.21	0.0	1.3
" "	" "	GVQ1	15:33	1010	" "	0.51	0.0	6.6
" "	" "	GM1	15:53	1013	" "	0.17	0.0	9.7
" "	" "	GM2	15:30	998	" "	0.13	0.0	5.9

Sampling date	Weather conditions	Sample location	Sampling time	Atmospheric pressure (mBar)	Atmospheric temperature (°C)	Gas pressure (mBar)	Methane (%)	Carbon dioxide (%)
03/11/2020	Cloudy	P5	14:52	1011	22.14	0.03	0.0	1.6
04/11/2020	Sunny	GM5	10:24	1002	23.30	0.03	0.0	4.2
" "	" "	GM4	10:15	1003	" "	-0.03	0.0	5.3
" "	" "	GVQ3	10:36	1002	" "	0.17	0.0	2.1
" "	" "	GVQ2	10:39	1016	" "	0.21	0.0	9.8
" "	" "	GVQ1	10:42	1016	" "	0.19	0.0	9.4
" "	" "	GM1	10:57	1016	" "	0.12	0.0	11.2
" "	" "	GM2	10:46	1016	" "	0.20	0.0	9.9

Sampling date	Weather conditions	Sample location	Sampling time	Atmospheric pressure (mBar)	Atmospheric temperature (°C)	Gas pressure (mBar)	Methane (%)	Carbon dioxide (%)
01/12/2020	Sunny	P5	14:54	1019	25.43	0.06	0.0	2.4
02/12/2020	Sunny	GM5	14:01	1002	24.21	0.24	0.0	4.9
" "	" "	GM4	13:54	1017	" "	0.14	0.0	4.6
" "	" "	GVQ3	13:31	1016	" "	0.24	0.0	1.2
" "	" "	GVQ2	13:29	1017	" "	0.20	0.0	4.6
" "	" "	GVQ1	13:27	1017	" "	0.14	0.0	9.3
" "	" "	GM1	14:29	1016	" "	0.19	0.0	10.8
" "	" "	GM2	13:25	1017	" "	0.15	0.0	8.7

Sampling date	Weather conditions	Sample location	Sampling time	Atmospheric pressure (mBar)	Atmospheric temperature (°C)	Gas pressure (mBar)	Methane (%)	Carbon dioxide (%)
06/01/2021	Sunny	P5	14:39	1014	19.3	-0.08	0.0	1.8
05/01/2021	Cloudy	GM5	9:03	1005	17.2	0.01	0.0	3.7
" "	" "	GM4	8:51	1006	" "	0.03	0.0	4.5
" "	" "	GVQ3	8:42	1018	" "	-0.08	0.0	1.4
" "	" "	GVQ2	8:40	1019	" "	0.03	0.0	2.7
" "	" "	GVQ1	8:37	1020	" "	0.03	0.0	7.0
" "	" "	GM1	10:19	1022	" "	0.19	0.0	9.5
" "	" "	GM2	8:33	1019	" "	-0.06	0.0	10.1

Sampling date	Weather conditions	Sample location	Sampling time	Atmospheric pressure (mBar)	Atmospheric temperature (°C)	Gas pressure (mBar)	Methane (%)	Carbon dioxide (%)
01/02/2021	Sunny	GM2	13:09	1016	25.84	-0.06	0.0	8.6
" "	" "	GVQ1	13:12	1016	" "	-0.02	0.0	4.1
" "	" "	GVQ2	13:14	1015	" "	0.04	0.0	2.4
" "	" "	GVQ3	13:17	1015	" "	0.10	0.0	1.0
" "	" "	GM4	13:31	1010	" "	0.20	0.0	1.6
" "	" "	GM5	13:52	1001	" "	0.21	0.0	2.7
" "	" "	GM1	14:54	1014	" "	0.25	0.0	7.6
03/02/2021	Sunny	P5	14:20	1016	23.19	0.06	0.1	1.5

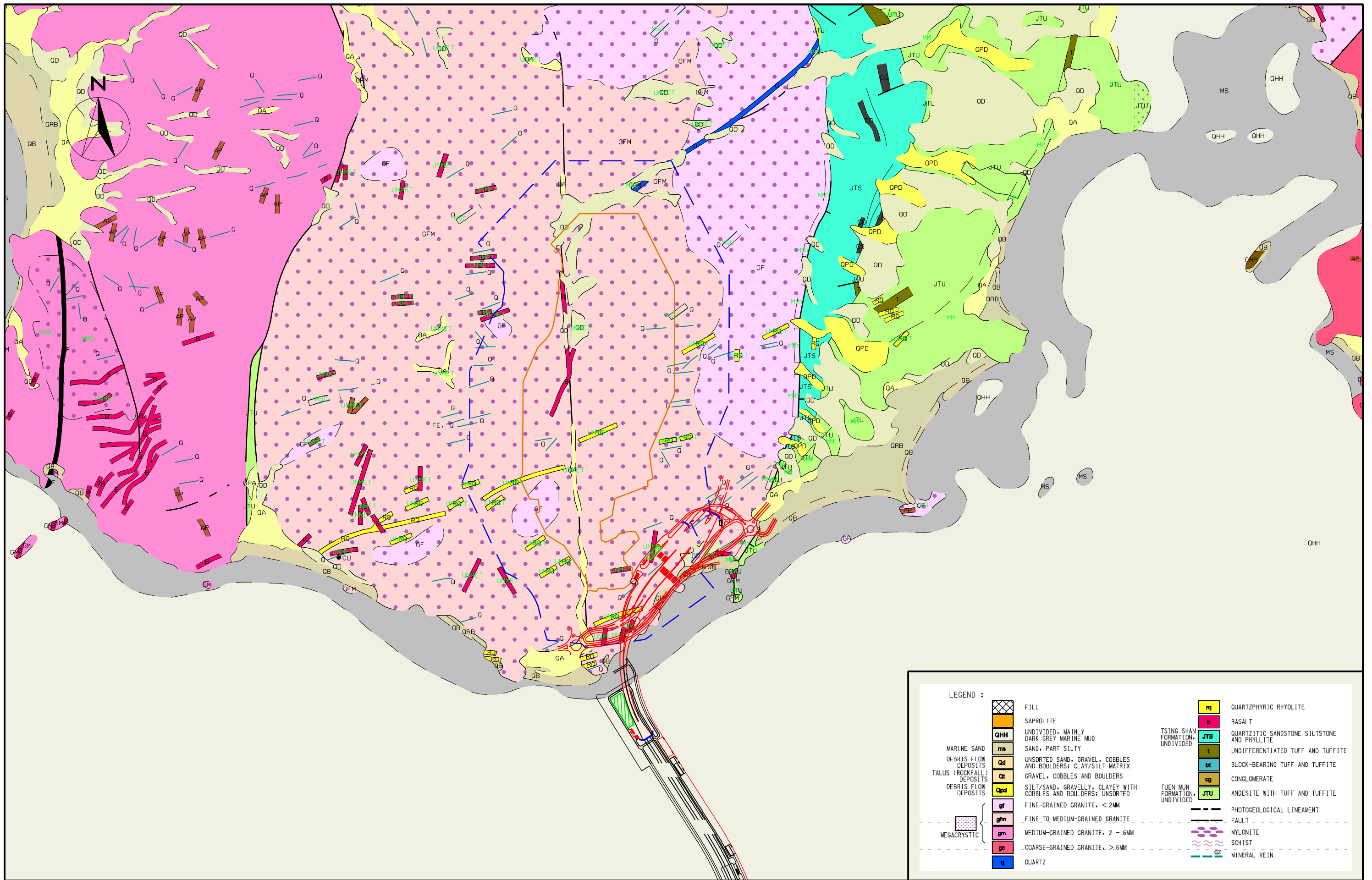


Project No.: 1906

Landfill Gas Hazard Assessment for Proposed Bus Depots with Ancillary Public Utility Installation (Electricity Substation) in area shown as 'Road', Government Land in D.D. 138 and D.D. 300, Tuen Mun, New Territories (near the building at 20 Tuen Mun Chek Lap Kok Tunnel Road)

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## ***Appendix B – Geological Map***



Project No.: 1906

Landfill Gas Hazard Assessment for Proposed Bus Depots with Ancillary Public Utility Installation (Electricity Substation) in area shown as 'Road', Government Land in D.D. 138 and D.D. 300, Tuen Mun, New Territories (near the building at 20 Tuen Mun Chek Lap Kok Tunnel Road)

---

## ***Appendix C –Correspondence from PlanD***



Ms. LO Sum Yuen, Angela  
Planning Department  
Tuen Mun and Yuen Long West District Planning  
Office  
14/F, Sha Tin Government Offices, 1 Sheung Wo Che  
Road, Sha Tin, NT

27/F, Overseas Trust Bank Building  
160 Gloucester Road  
Wan Chai  
Hong Kong  
T: +852 2815 7028  
F: +852 2815 5399  
[info@aechk.com](mailto:info@aechk.com)  
[www.asecg.com](http://www.asecg.com)

8 April 2021

By Fax & E-mail

Dear Sir / Madam,

**INSTALLATION OF DEPOT FACILITIES FOR THE KOWLOON MOTOR BUS CO. (1933) LTD. AT TUEN MUN –  
CHEK LAP KOK LINK("TMCLK") FREE UP AREAS  
REQUEST FOR INFORMATION - PLANNED CONSTRUCTION ACTIVITIES AND PLANNED DEVELOPMENTS**

We are an environmental consultant commissioned by the Kowloon Motor Bus Co.(1933) Ltd. to conduct the Environmental Assessment study for the captioned project.

In order to have a precise assessment, it would be grateful if you could advise whether there is any construction work, within 300m/ 500m from the site boundary of the captioned project, as shown in the enclosed figure.

Please provide the following information, if any:

- Any committed/planned development(s) as potential environment sensitive uses (e.g. offices, residential uses, educational uses etc.);
- Location and site boundary of the committed/ planned development; and
- Construction works programme and completion year.

Due to tight programme of the captioned project, it is highly appreciated if your reply on the above request could be available **on or before 23 April 2021.**

Thank you very much for your assistance. Should you have any queries, please feel free to contact the undersigned at 3915 7148 or Ms. Jamie KAM ([jamiiekam@aechk.com](mailto:jamiiekam@aechk.com)) at 3915 7163.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Cathy Man'.

Cathy Man  
Principle Consultant  
([cm@aechk.com](mailto:cm@aechk.com))  
CM/jk

Encl.

cc. KMB (Attn: Mr. Jacky NG & Mr. Alan FUNG) – by email (w/e)

**規 劃 署**

屯門及元朗西規劃處  
新界沙田上禾輦路1號  
沙田政府合署14樓



**By Fax (2815 5399)**  
**Planning Department**

Tuen Mun and Yuen Long West  
District Planning Office  
14/F, Sha Tin Government Offices,  
1 Sheung Wo Che Road, Sha Tin, N.T.

本函檔號 Your Reference [-/21-0004] and [819.2124/21-0001]  
本署檔號 Our Reference ( ) in PDTM 4/5/48  
電話號碼 Tel. No.: 2158 6333  
傳真機號碼 Fax No.: 2489 9711

13 April 2021

Allied Environmental Consultants Limited  
27/F, Overseas Trust Bank Building  
160 Gloucester Road  
Wan Chai, Hong Kong  
(Attn.: Ms Cathy MAN)

Dear Ms MAN,

**Installation of Depot Facilities for KMB at  
Tuen Mun – Chek Lap Kok Link ("TMCLK") Free Up Areas  
Request for Information for Land Contamination Assessment  
and Planned Construction Activities and Planned Development**

I refer to your letters dated 25 March and 8 April 2021 regarding request for information.

You are advised to visit Town Planning Board's Statutory Planning Portal 2 at <http://www2.ozp.tpb.gov.hk/gos> for information relating to the subject site and the surrounding area.

Yours sincerely,

( Ms Angela LO )  
for District Planning Officer/  
Tuen Mun and Yuen Long West  
Planning Department

C.C.  
Site Record

CK/AL/al

Project No.: 1906

Landfill Gas Hazard Assessment for Proposed Bus Depots with Ancillary Public Utility Installation (Electricity Substation) in area shown as 'Road', Government Land in D.D. 138 and D.D. 300, Tuen Mun, New Territories (near the building at 20 Tuen Mun Chek Lap Kok Tunnel Road)

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## ***Appendix D –Master Layout Plan of Proposed Development***



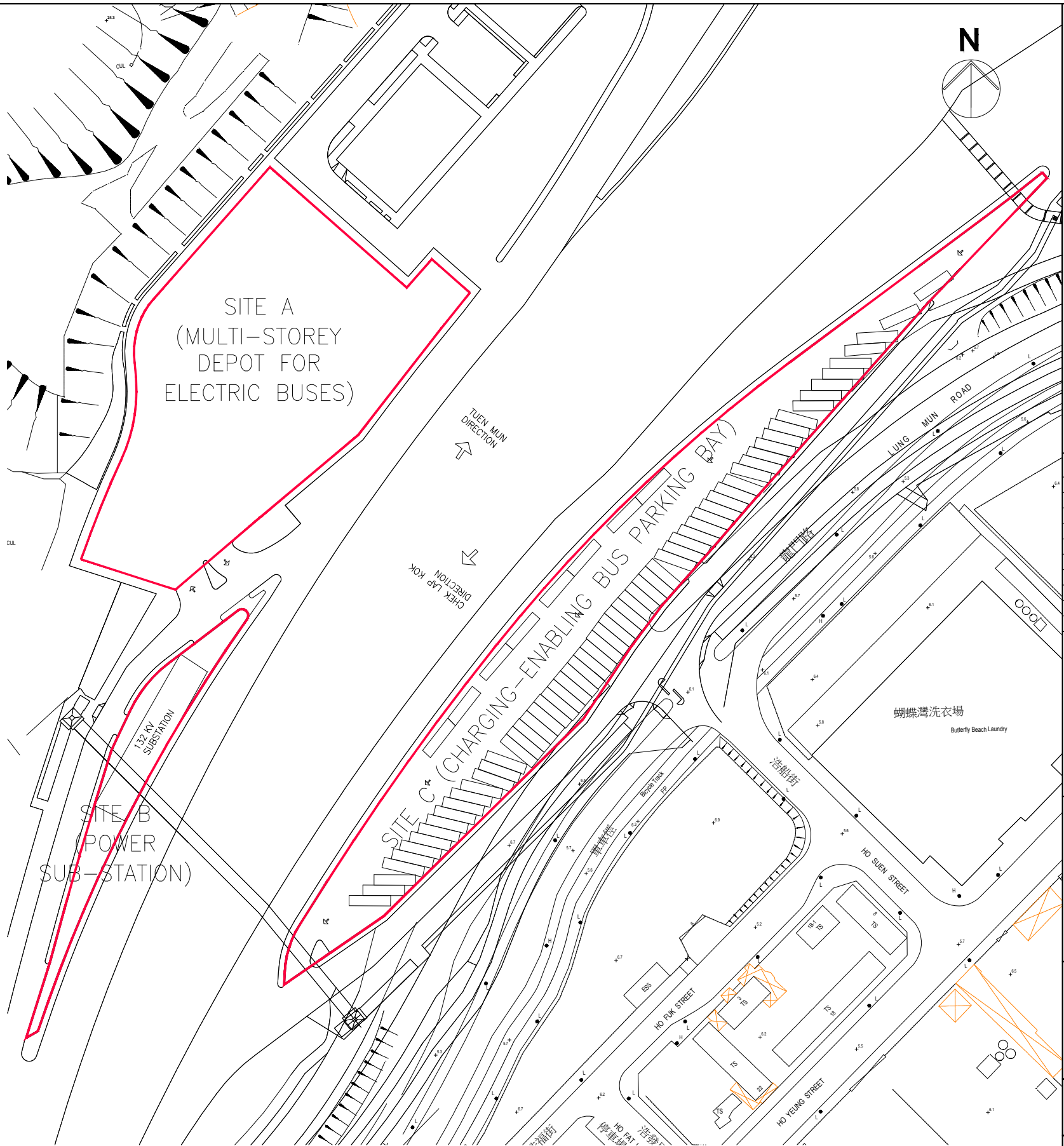
GROSS FLOOR AREA & SITE COVERAGE CALCULATION – SITE A				
PROPOSED SITE USAGE			MULTI–STOREY DEPOT FOR ELECTRIC BUSES	
SITE CLASSIFICATION			CLASS A	
SITE AREA			7926 M2	
SITE COVERAGE			G/F–1/F: 93.58% (FIRST 15M) 2/F–R/F: 60%	
BUILDING HEIGHT			82.5M (FLOOR LEVEL OF G/F TO FLOOR LEVEL OF R/F)	
PERMITTED PLOT RATIO UNDER B(P)R			15	
NON–DOMESTIC GFA	GF	7417 M2	57845.32 M2	
	1F	7417 M2		
	2F	4755.6 M2		
	3F–10F	4755.6 M2		
	RF	210.92 M2		
ACTUAL PLOT RATIO			7.30	

GROSS FLOOR AREA & SITE COVERAGE CALCULATION – SITE B	
PROPOSED SITE USAGE	POWER SUB–STATION
SITE CLASSIFICATION	CLASS A
SITE AREA	1321 M2
SITE COVERAGE	47.01% (621M2/1321M2)
BUILDING HEIGHT	15.6M
PERMITTED PLOT RATIO UNDER B(P)R	5
NON–DOMESTIC GFA	1040.6 M2
ACTUAL PLOT RATIO	0.788
REMARKS: THE SUBJECT BUILDING SHALL BE DISREGARDED FROM GFA AND PLOT RATIO CALCULATION IN ACCORDANCE WITH B(P)R23(3)(b).	

GROSS FLOOR AREA & SITE COVERAGE CALCULATION – SITE C	
PROPOSED SITE USAGE	CHARGING–ENABLING BUS PARKING
SITE CLASSIFICATION	CLASS A
SITE AREA	7598 M2
SITE COVERAGE	0
BUILDING HEIGHT	0M
PERMITTED PLOT RATIO UNDER B(P)R	5
NON–DOMESTIC GFA	0 M2
ACTUAL PLOT RATIO	0

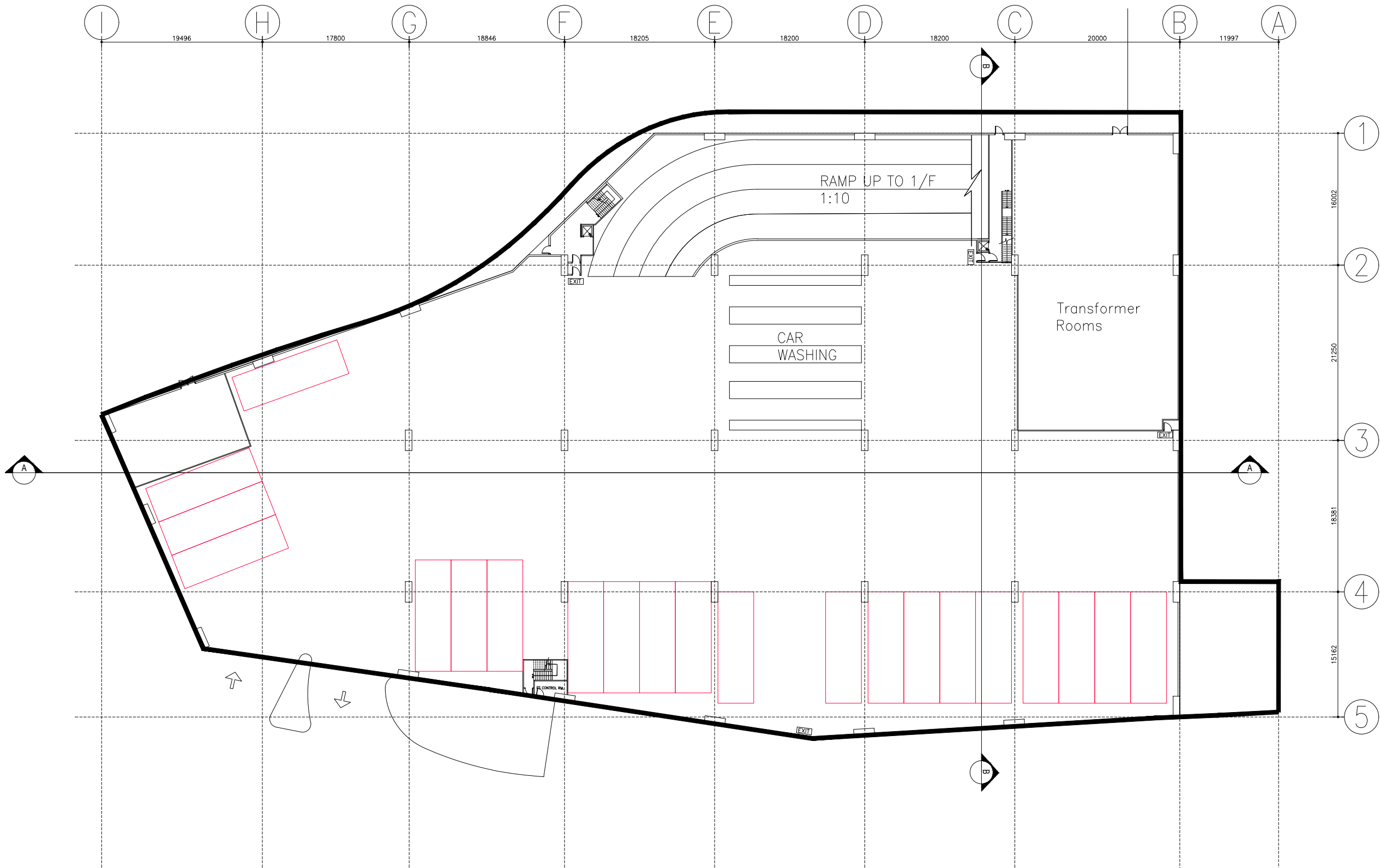
NOS. OF CHARGING–ENABLING BUS PARKING BAYS AND MAINTENANCE BAYS IN SITE A		
	MAINTENANCE BAYS	CHARGING–ENABLING BUS PARKING BAYS
GF	21	
1F	42	
2F	18	31
3F		33
4F		33
5F		33
6F		33
7F		33
8F		33
9F		33
10F		33
RF		38
TOTAL	81	333

NOS. OF CHARGING–ENABLING BUS PARKING BAYS AND MAINTENANCE BAYS IN SITE C		
	MAINTENANCE BAYS	CHARGING–ENABLING BUS PARKING BAYS
GF	0	73



Schematic Master Layout Plan

NOTES AND CONDITIONS:		
1. ALL DESIGNS ARE THE PROPERTY OF FRUIT DESIGN AND BUILD AND CANNOT BE USED WITHOUT THEIR WRITTEN PERMISSION.		
2. ALL MEASUREMENTS MUST BE VERIFIED ON SITE BEFORE CONSTRUCTION.		
3. CONTRACTORS SHALL NOTIFY THE DESIGNER OF ANY DISCREPANCY BEFORE STARTING WORK.		
4. ALL DIMENSIONS ARE IN MILLIMETER EXCEPT OTHERWISE NOTED.		
5. ALL WORKS SHALL BE CARRIED OUT IN COMPLIANCE TO THE BUILDINGS ORDINANCE, BUILDINGS REGULATIONS AND CODE OF PRACTICES.		
6. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH OTHER DRAWINGS AND SPECIFICATIONS OF THE TENDER DOCUMENTS AND SHALL BE MUTUALLY EXPLANATORY.		
7. THE CONTRACTOR SHALL FOLLOW MANUFACTURER'S INSTRUCTION & RECOMMENDATION IN CASE PROPRIETARY PRODUCT / SYSTEM / IS ADOPTED / SPECIFIED / APPROVED.		
8. DESIGN INTENT DRAWING ONLY. CONTRACTOR IS RESPONSIBLE FOR DESIGN AND SHOP DRAWING / CALCULATION SUBMISSION / MATERIAL SIZES / THICKNESS INDICATIVE.		
REV	DESCRIPTION	DATE
CLIENT:		
BUILDING CONSULTANT:		
<div><div><div>FRUIT DESIGN &amp; BUILD LTD</div><div><div>A member of FDB Holdings Limited</div><div>A   6/F, The Sun's Group Centre, 200 Gloucester Road, Wan Chai, Hong Kong</div><div>T   +852 3188 5595      F   +852 3188 5598</div></div></div></div>		
PROJECT:		
TMCLK DEPOT		
DRAWING TITLE :		
SCHEMATIC MASTER LAYOUT PLAN		
SCALE:	1:1500	
DATE:	13/09/2021	
DRAWN BY:	CC	
CHECKED BY:	NC	
APPROVED BY: -		
JOB. NO.:	FDB-P-21031	
DWG. NO.:	AA01	



LEGEND

- Maintenance Bay  
(13500mm x 4350mm)
- Parking Space  
(13000mm x 3300mm)

G/F



- NOTES AND CONDITIONS:
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  8. DESIGN INTENT DRAWING ONLY. CONTRACTOR IS RESPONSIBLE FOR DESIGN AND SHOP DRAWING / CALCULATION SUBMISSION / MATERIAL SIZES / THICKNESS INDICATIVE.

REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

FRUIT  
DESIGN &  
BUILD LTD

A member of FDB Holdings Limited

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Wan Chai, Hong Kong

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PROJECT:

TMCLK DEPOT

DRAWING TITLE :

G/F LAYOUT (SITE A)

SCALE: 1:500

DATE: 13/09/2021

DRAWN BY: CC

CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: AA02



- NOTES AND CONDITIONS:
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  2. ALL MEASUREMENTS MUST BE VERIFIED ON SITE BEFORE CONSTRUCTION.
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REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

FRUIT  
DESIGN &  
BUILD LTD

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A | 6/F, The Sun's Group Centre, 200 Gloucester Road,  
Wan Chai, Hong Kong

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PROJECT:

TMCLK DEPOT

DRAWING TITLE :

1/F LAYOUT (SITE A)

SCALE: 1:500

DATE: 13/09/2021

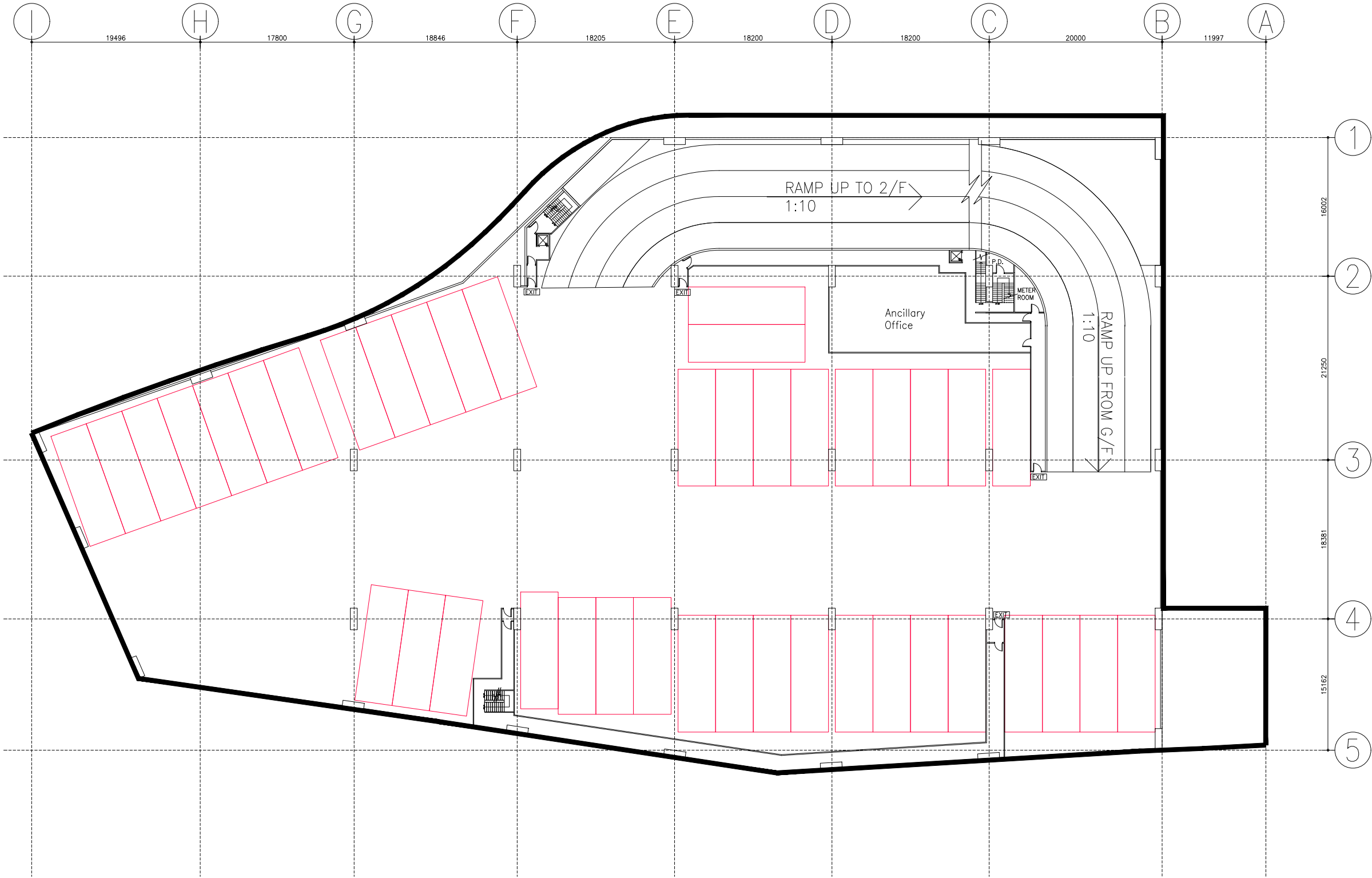
DRAWN BY: CC

CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: AA03



LEGEND

- Maintenance Bay  
(13500mm x 4350mm)
- Parking Space  
(13000mm x 3300mm)

1/F



- NOTES AND CONDITIONS:
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  8. DESIGN INTENT DRAWING ONLY. CONTRACTOR IS RESPONSIBLE FOR DESIGN AND SHOP DRAWING / CALCULATION SUBMISSION / MATERIAL SIZES / THICKNESS INDICATIVE.

REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

FRUIT  
DESIGN &  
BUILD LTD

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Wan Chai, Hong Kong

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PROJECT:

TMCLK DEPOT

DRAWING TITLE :

2/F LAYOUT (SITE A)

SCALE: 1:500

DATE: 13/09/2021

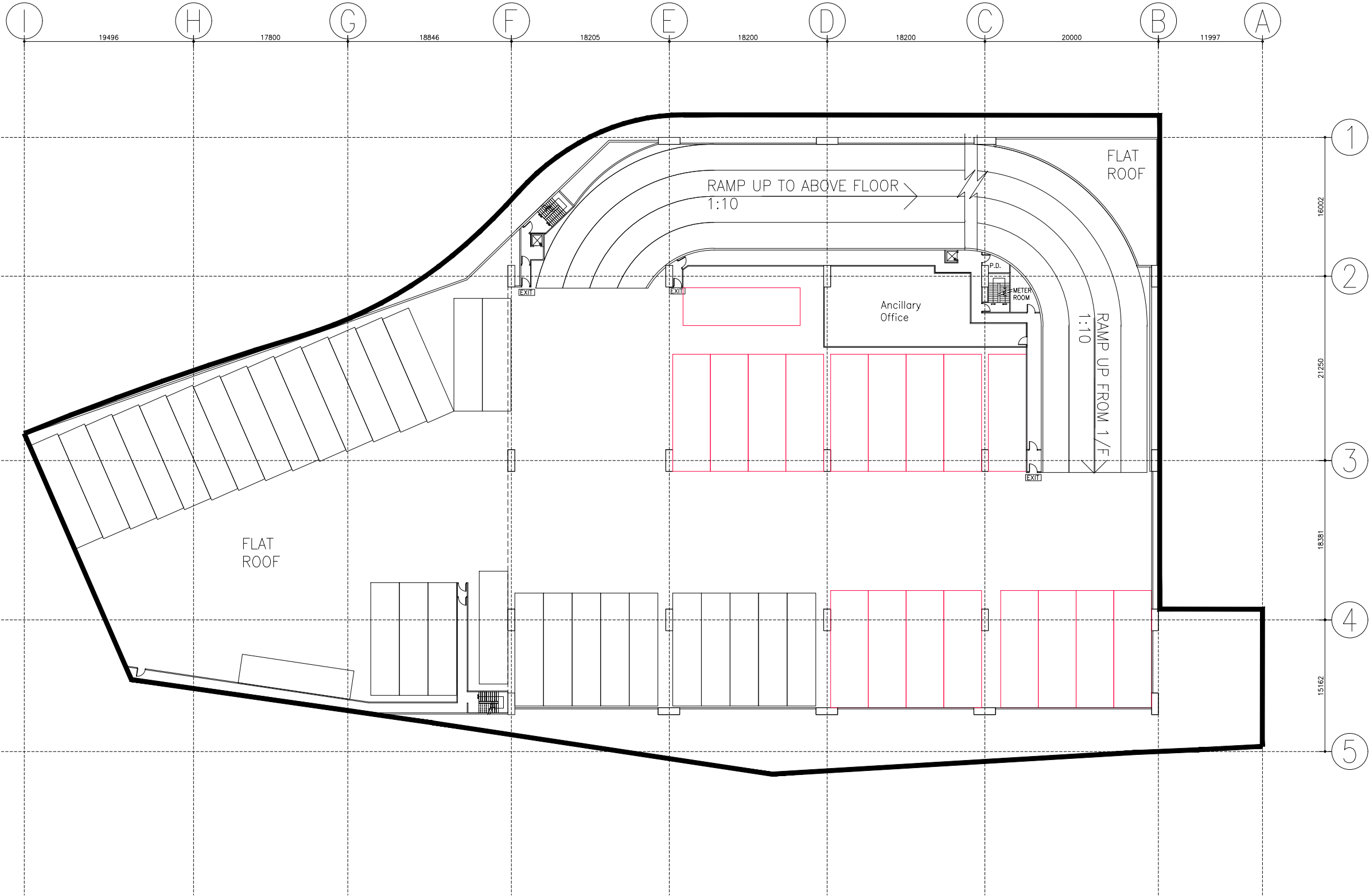
DRAWN BY: CC

CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: AA04



LEGEND

- Maintenance Bay  
(13500mm x 4350mm)
- Parking Space  
(13000mm x 3300mm)

2/F



- NOTES AND CONDITIONS:
1. ALL DESIGNS ARE THE PROPERTY OF FRUIT DESIGN AND BUILD AND CANNOT BE USED WITHOUT THEIR WRITTEN PERMISSION.
  2. ALL MEASUREMENTS MUST BE VERIFIED ON SITE BEFORE CONSTRUCTION.
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  8. DESIGN INTENT DRAWING ONLY. CONTRACTOR IS RESPONSIBLE FOR DESIGN AND SHOP DRAWING / CALCULATION SUBMISSION / MATERIAL SIZES / THICKNESS INDICATIVE.

REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

FRUIT  
DESIGN &  
BUILD LTD

A member of FDB Holdings Limited

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Wan Chai, Hong Kong

T | +852 3188 5595    F | +852 3188 5958

PROJECT:

TMCLK DEPOT

DRAWING TITLE :

3/F-10/F LAYOUT (SITE A)

SCALE: 1:500

DATE: 13/09/2021

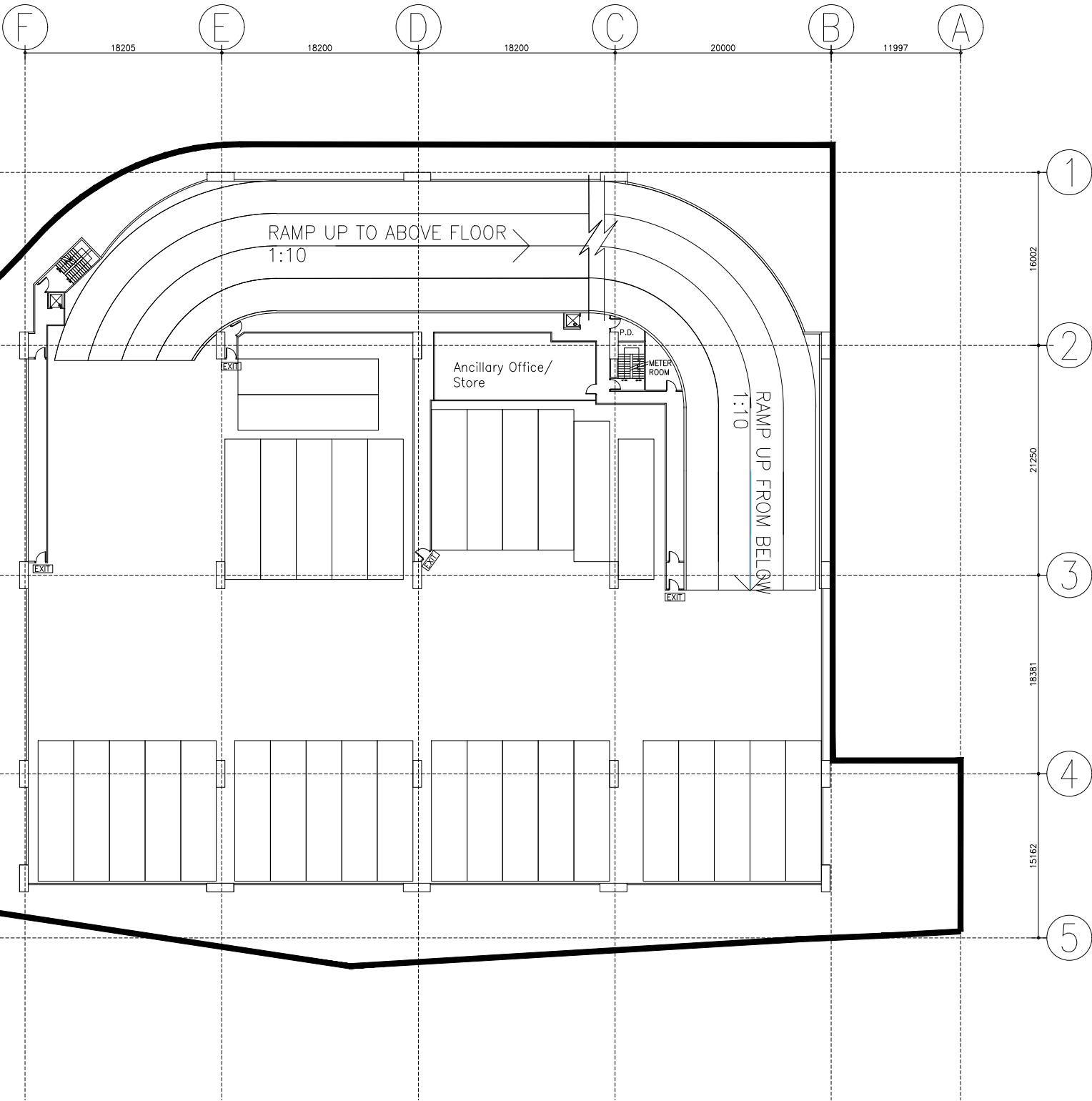
DRAWN BY: CC

CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: AA05



LEGEND

- Maintenance Bay  
(13500mm x 4350mm)
- Parking Space  
(13000mm x 3300mm)

3/F-10/F



- NOTES AND CONDITIONS:
1. ALL DESIGNS ARE THE PROPERTY OF FRUIT DESIGN AND BUILD AND CANNOT BE USED WITHOUT THEIR WRITTEN PERMISSION.
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  8. DESIGN INTENT DRAWING ONLY. CONTRACTOR IS RESPONSIBLE FOR DESIGN AND SHOP DRAWING / CALCULATION SUBMISSION / MATERIAL SIZES / THICKNESS INDICATIVE.

REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

FRUIT  
DESIGN &  
BUILD LTD

A member of FDB Holdings Limited

A | 6/F, The Sun's Group Centre, 200 Gloucester Road,  
Wan Chai, Hong Kong

T | +852 3188 5595    F | +852 3188 5958

PROJECT:

TMCLK DEPOT

DRAWING TITLE :

R/F LAYOUT (SITE A)

SCALE: 1:500

DATE: 13/09/2021

DRAWN BY: CC

CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

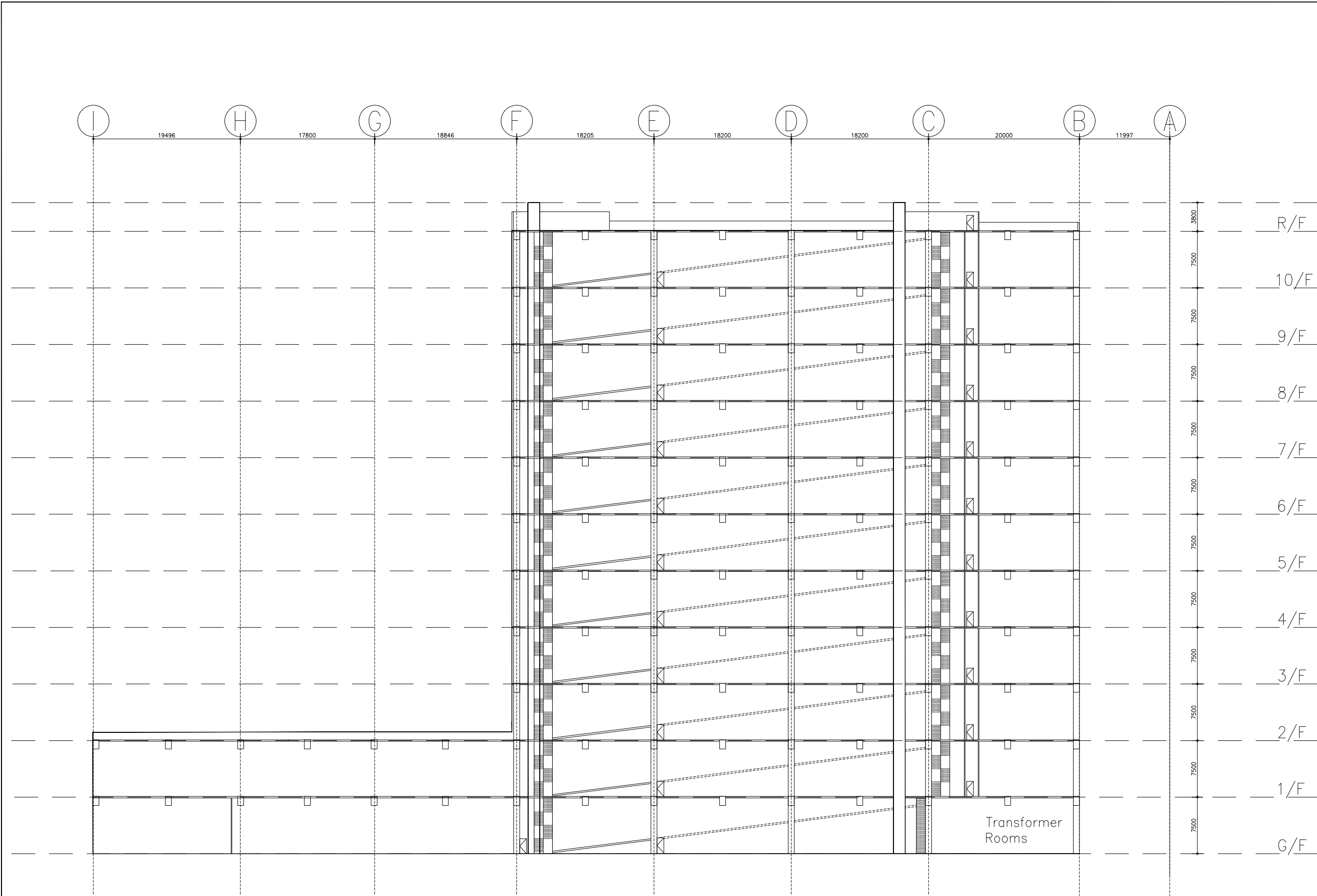
DWG. NO.: AA06

LEGEND

- Maintenance Bay  
(13500mm x 4350mm)
- Parking Space  
(13000mm x 3300mm)

R/F





SECTION A-A

- NOTES AND CONDITIONS:
1. ALL DESIGNS ARE THE PROPERTY OF FRUIT DESIGN AND BUILD AND CANNOT BE USED WITHOUT THEIR WRITTEN PERMISSION.
  2. ALL MEASUREMENTS MUST BE VERIFIED ON SITE BEFORE CONSTRUCTION.
  3. CONTRACTORS SHALL NOTIFY THE DESIGNER OF ANY DISCREPANCY BEFORE STARTING WORK.
  4. ALL DIMENSIONS ARE IN MILLIMETER EXCEPT OTHERWISE NOTED.
  5. ALL WORKS SHALL BE CARRIED OUT IN COMPLIANCE TO THE BUILDINGS ORDINANCE, BUILDINGS REGULATIONS AND CODE OF PRACTICES.
  6. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH OTHER DRAWINGS AND SPECIFICATIONS OF THE TENDER DOCUMENTS AND SHALL BE MUTUALLY EXPLANATORY.
  7. THE CONTRACTOR SHALL FOLLOW MANUFACTURER'S INSTRUCTION & RECOMMENDATION IN CASE PROPRIETARY PRODUCT / SYSTEM / IS ADOPTED / SPECIFIED / APPROVED.
  8. DESIGN INTENT DRAWING ONLY. CONTRACTOR IS RESPONSIBLE FOR DESIGN AND SHOP DRAWING / CALCULATION SUBMISSION / MATERIAL SIZES / THICKNESS INDICATIVE.

REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

**FRUIT  
DESIGN &  
BUILD LTD**

A member of FDB Holdings Limited

A | 6/F, The Sun's Group Centre, 200 Gloucester Road,  
Wan Chai, Hong Kong

T | +852 3188 5955 F | +852 3188 5958

PROJECT:

TMCLK DEPOT

DRAWING TITLE :

SECTION A-A (SITE A)

SCALE: 1:500

DATE: 13/09/2021

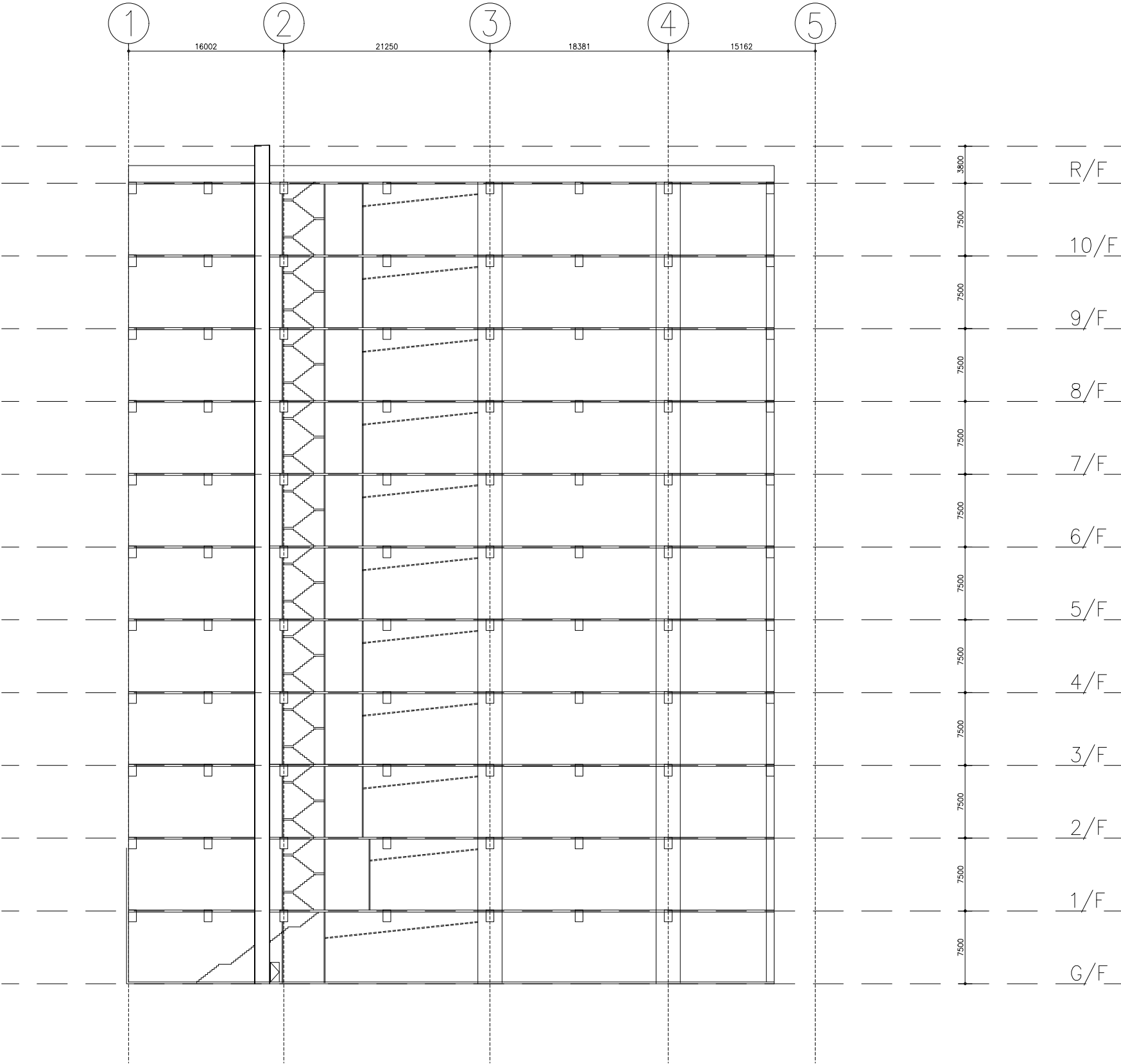
DRAWN BY: CC

CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: ST01



SECTION B-B

- NOTES AND CONDITIONS:
1. ALL DESIGNS ARE THE PROPERTY OF FRUIT DESIGN AND BUILD AND CANNOT BE USED WITHOUT THEIR WRITTEN PERMISSION.
  2. ALL MEASUREMENTS MUST BE VERIFIED ON SITE BEFORE CONSTRUCTION.
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  8. DESIGN INTENT DRAWING ONLY. CONTRACTOR IS RESPONSIBLE FOR DESIGN AND SHOP DRAWING / CALCULATION SUBMISSION / MATERIAL SIZES / THICKNESS INDICATIVE.

REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

**FRUIT  
DESIGN &  
BUILD LTD**

A member of FDB Holdings Limited

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Wan Chai, Hong Kong

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PROJECT:

TMCLK DEPOT

DRAWING TITLE :

SECTION B-B (SITE A)

SCALE: 1:500

DATE: 13/09/2021

DRAWN BY: CC

CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: ST02



1. ALL DESIGNS ARE THE PROPERTY OF FRUIT DESIGN AND BUILD AND CANNOT BE USED WITHOUT THEIR WRITTEN PERMISSION.
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[illegible]

BUILDING CONSULTANT:

**FRUIT**  
DESIGN &  
BUILD LTD

**A member of FDB Holdings Limited**

A | 6/F, The Sun's Group Centre, 200 Gloucester Road  
Wan Chai, Hong Kong

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PROJECT :

TMCLK DEPOT

DRAWING TITLE :

SOUTH-EAST ELEVATION (SITE A)

SCALE: 1:500

DATE: 13/09/2021

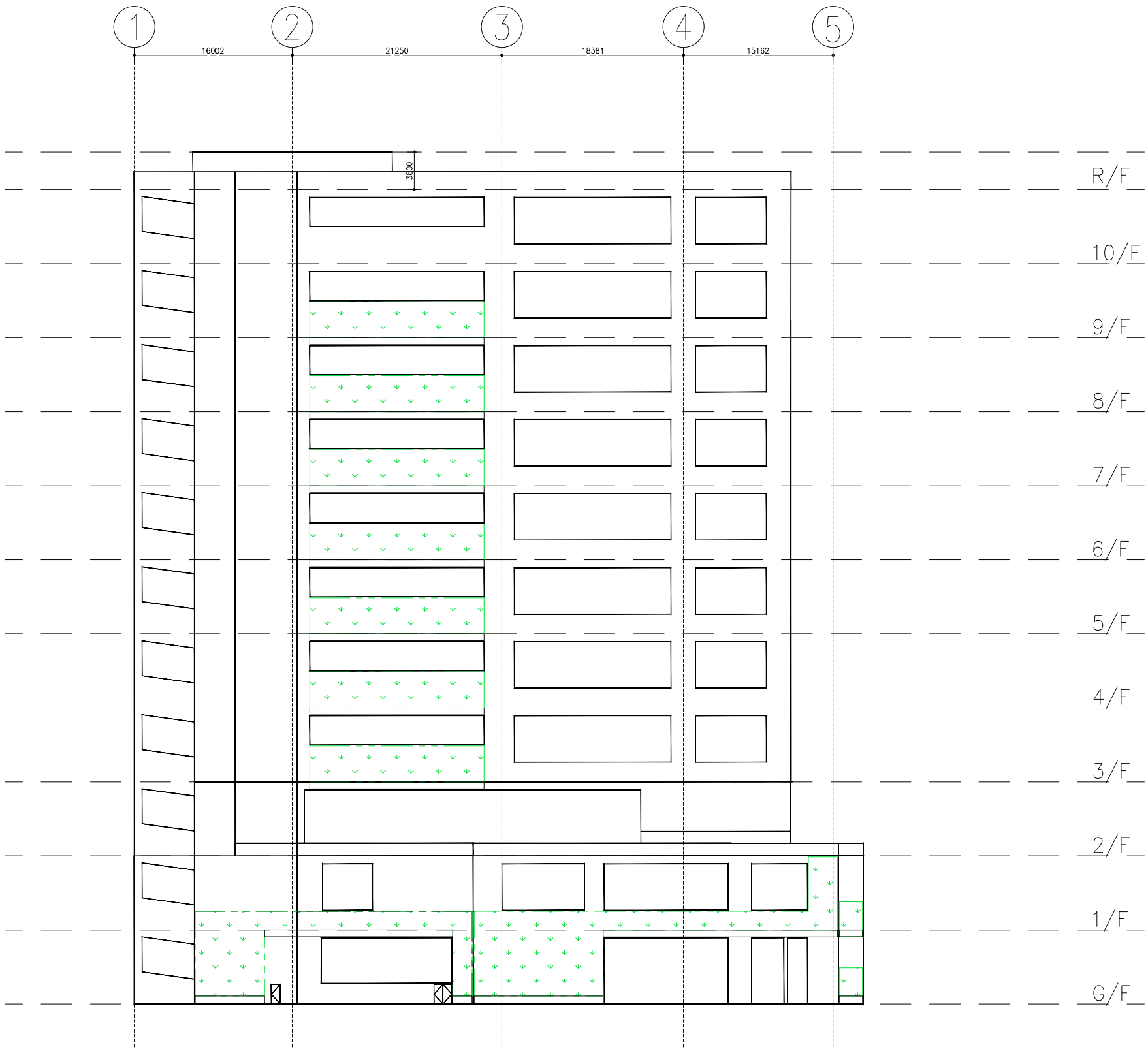
DRAWN BY: CC

CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: EL01



SOUTH-WEST ELEVATION

- NOTES AND CONDITIONS:
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REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

**FRUIT  
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BUILD LTD**

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A | 6/F, The Sun's Group Centre, 200 Gloucester Road,  
Wan Chai, Hong Kong

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PROJECT:

TMCLK DEPOT

DRAWING TITLE :

SOUTH-WEST ELEVATION (SITE A)

SCALE: 1:500

DATE: 13/09/2021

DRAWN BY: CC

CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: EL02



NORTH-EAST ELEVATION

- NOTES AND CONDITIONS:
1. ALL DESIGNS ARE THE PROPERTY OF FRUIT DESIGN AND BUILD AND CANNOT BE USED WITHOUT THEIR WRITTEN PERMISSION.
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REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

**FRUIT  
DESIGN &  
BUILD LTD**

A member of FDB Holdings Limited

A | 6/F, The Sun's Group Centre, 200 Gloucester Road,  
Wan Chai, Hong Kong

T | +852 3188 5955 F | +852 3188 5958

PROJECT:

TMCLK DEPOT

DRAWING TITLE :

NORTH-EAST ELEVATION (SITE A)

SCALE: 1:500

DATE: 13/09/2021

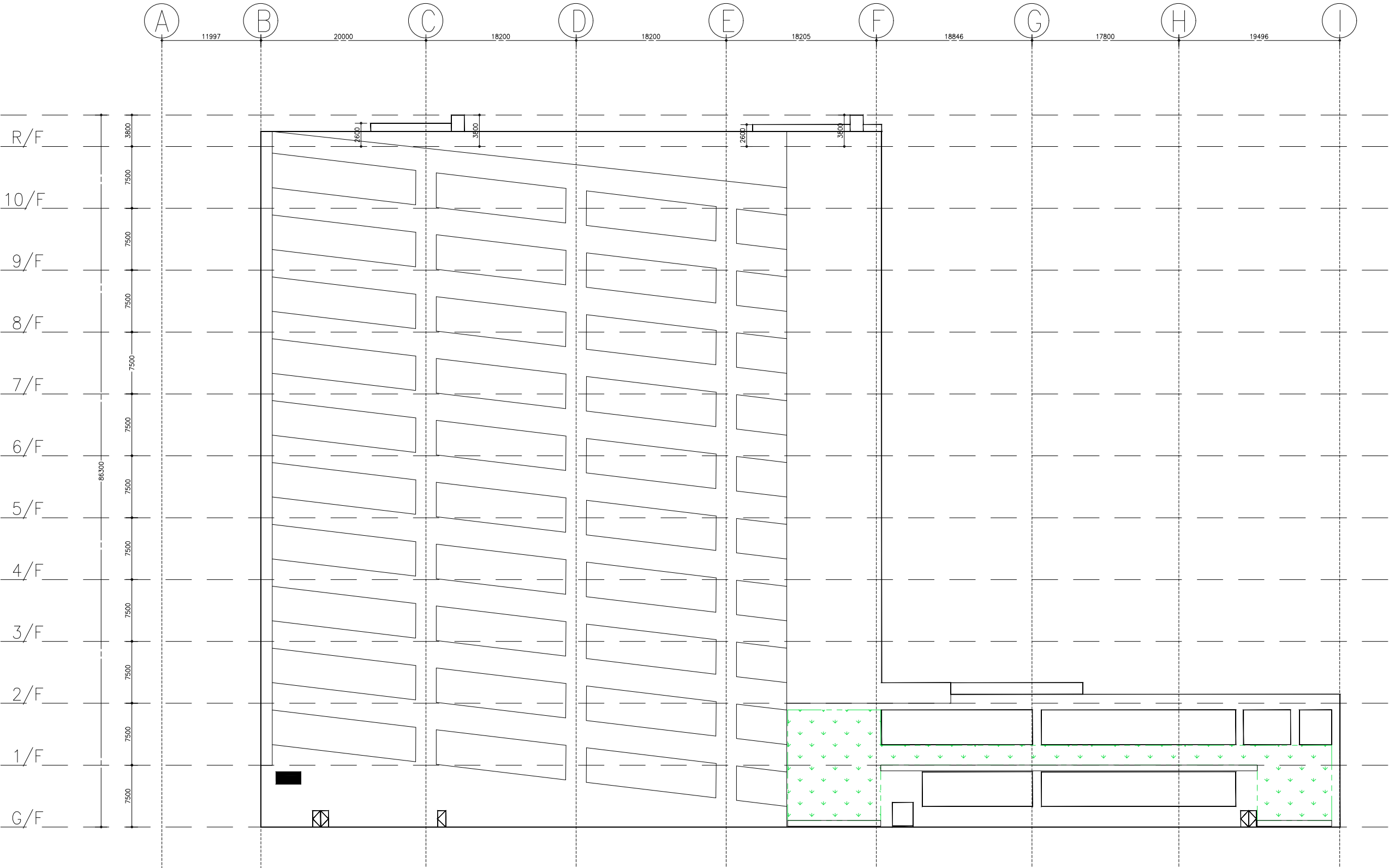
DRAWN BY: CC

CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: EL03



NORTH-WEST ELEVATION

- NOTES AND CONDITIONS:
1. ALL DESIGNS ARE THE PROPERTY OF FRUIT DESIGN AND BUILD AND CANNOT BE USED WITHOUT THEIR WRITTEN PERMISSION.
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REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

**FRUIT  
DESIGN &  
BUILD LTD**

A member of FDB Holdings Limited  
A | 6/F, The Sun's Group Centre, 200 Gloucester Road,  
Wan Chai, Hong Kong  
T | +852 3188 5955 F | +852 3188 5958

PROJECT:

TMCLK DEPOT

DRAWING TITLE:

NORTH-WEST ELEVATION (SITE A)

SCALE: 1:500

DATE: 13/09/2021

DRAWN BY: CC

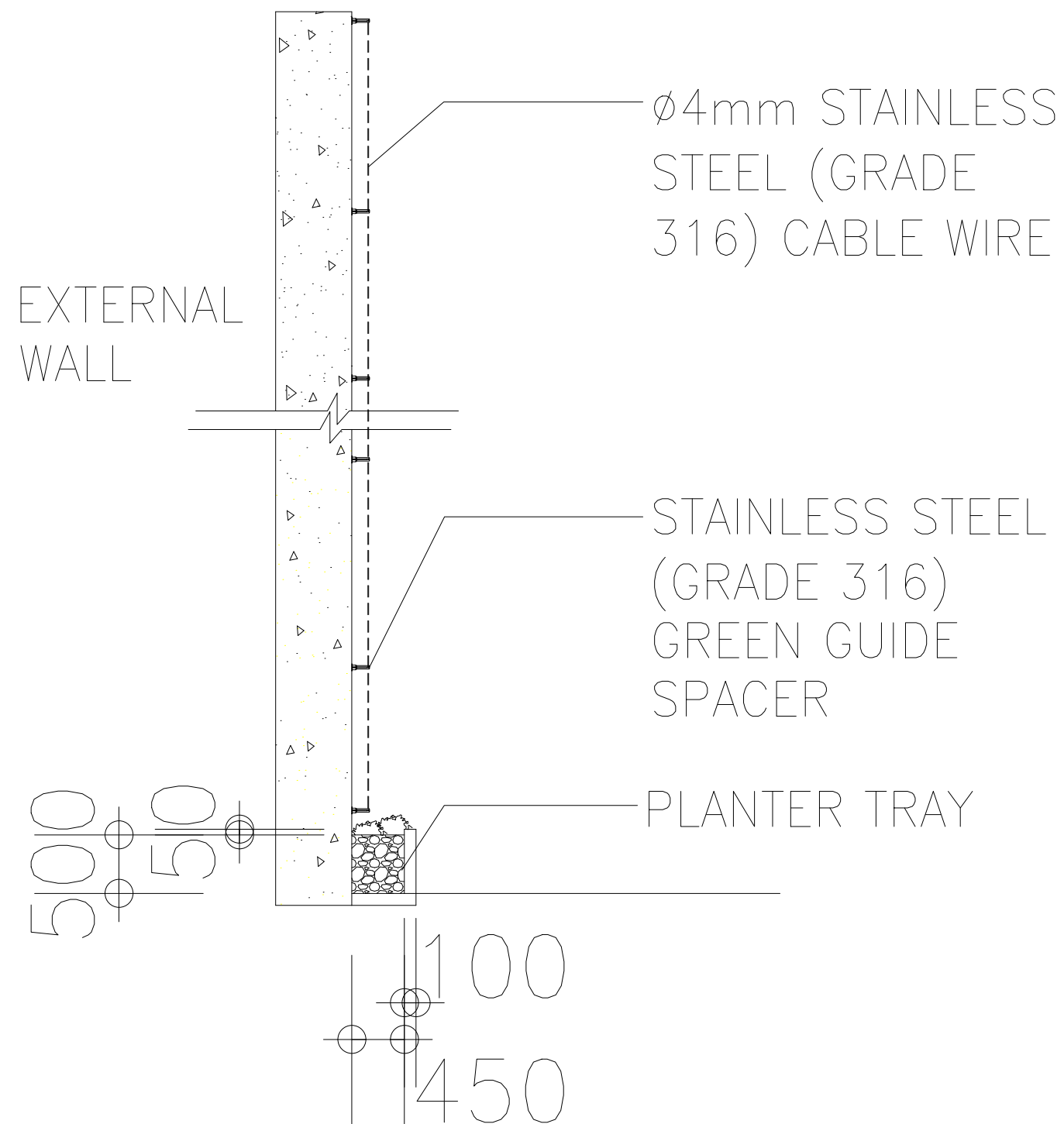
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APPROVED BY: -

JOB. NO.: FDB-P-21031

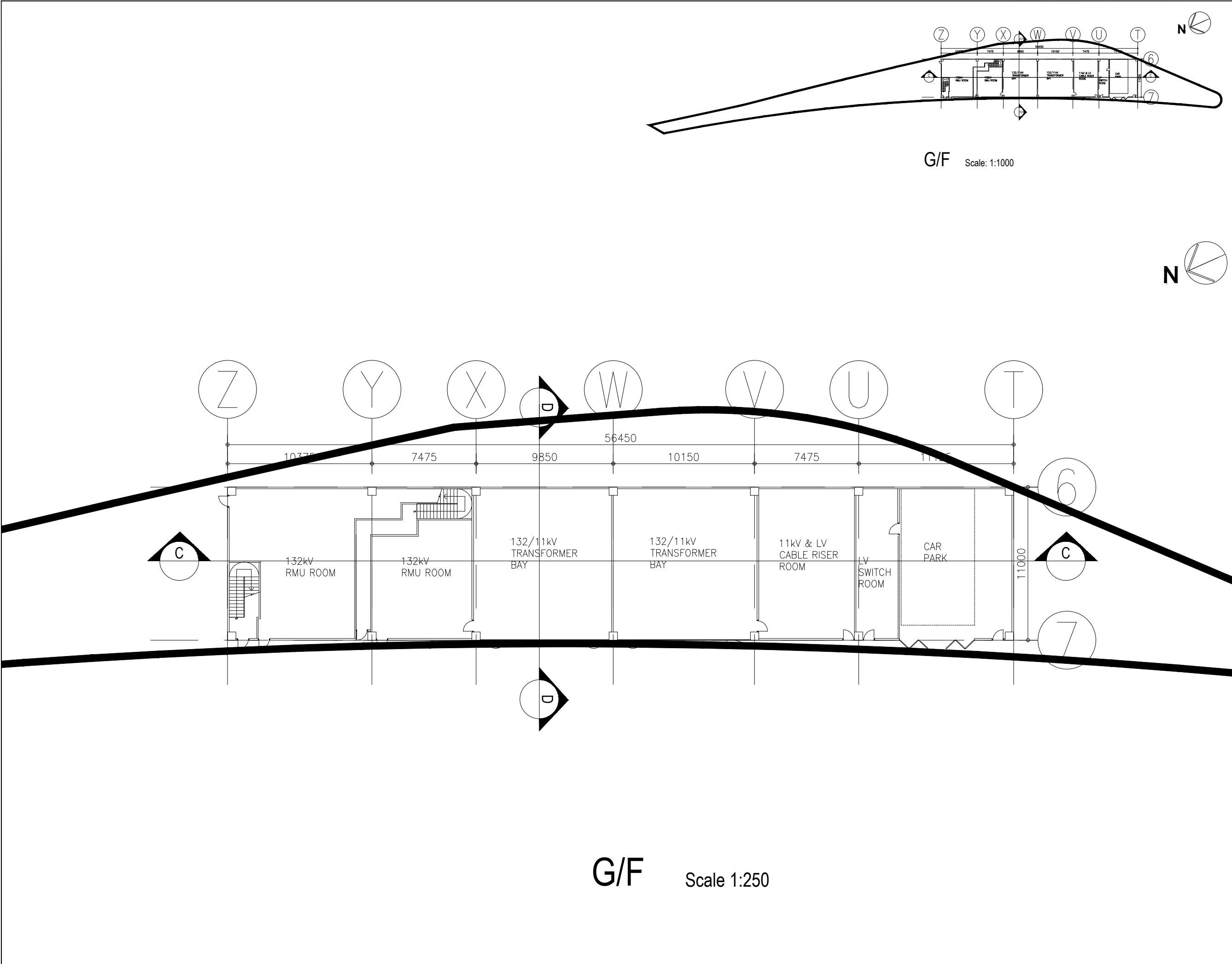
DWG. NO.: EL04





# DETAIL OF VERTICAL GREENING

NOTES AND CONDITIONS:		
1. ALL DESIGNS ARE THE PROPERTY OF FRUIT DESIGN AND BUILD AND CANNOT BE USED WITHOUT THEIR WRITTEN PERMISSION.		
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8. DESIGN INTENT DRAWING ONLY. CONTRACTOR IS RESPONSIBLE FOR DESIGN AND SHOP DRAWING / CALCULATION SUBMISSION / MATERIAL SIZES / THICKNESS INDICATIVE.		
REV	DESCRIPTION	DATE
A	REVISED DETAILS	12 NOV 2021
CLIENT:		
BUILDING CONSULTANT:		
<div><div>FRUIT DESIGN &amp; BUILD LTD</div><div><small>A member of FDB Holdings Limited</small></div><div><small>A   6/F, The Sun's Group Centre, 200 Gloucester Road, Wan Chai, Hong Kong</small></div><div><small>T   +852 3188 5595 F   +852 3188 5958</small></div></div>		
PROJECT:		
TMCLK DEPOT		
DRAWING TITLE :		
DETAIL OF VERTICAL GREENING		
SCALE:	1:50	
DATE:	13/09/2021	
DRAWN BY:	CC	
CHECKED BY:	NC	
APPROVED BY: -		
JOB. NO. :	FDB-P-21031	
DWG. NO. :	DD01	



- NOTES AND CONDITIONS:
1. ALL DESIGNS ARE THE PROPERTY OF FRUIT DESIGN AND BUILD AND CANNOT BE USED WITHOUT THEIR WRITTEN PERMISSION.
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REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

**FRUIT  
DESIGN &  
BUILD LTD**

A member of FDB Holdings Limited  
A | 6/F, The Sun's Group Centre, 200 Gloucester Road,  
Wan Chai, Hong Kong  
T | +852 3188 5595 F | +852 3188 5958

PROJECT:

TMCLK DEPOT

DRAWING TITLE :

G/F LAYOUT (SITE B)

SCALE: As stated

DATE: 13/09/2021

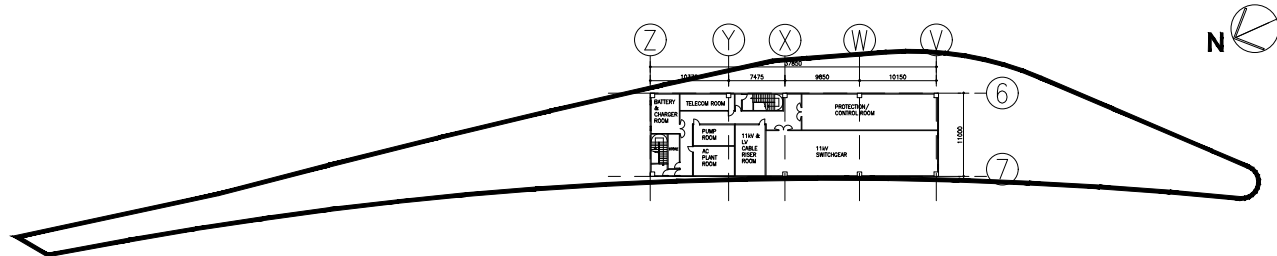
DRAWN BY: CC

CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: AA07



1/F Scale: 1:1000

- NOTES AND CONDITIONS:
1. ALL DESIGNS ARE THE PROPERTY OF FRUIT DESIGN AND BUILD AND CANNOT BE USED WITHOUT THEIR WRITTEN PERMISSION.
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REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

FRUIT  
DESIGN &  
BUILD LTD

A member of FDB Holdings Limited

A | 6/F, The Sun's Group Centre, 200 Gloucester Road,  
Wan Chai, Hong Kong

T | +852 3188 5595 F | +852 3188 5958

PROJECT:

TMCLK DEPOT

DRAWING TITLE :  
1/F LAYOUT (SITE B)

SCALE: 1:250

DATE: 13/09/2021

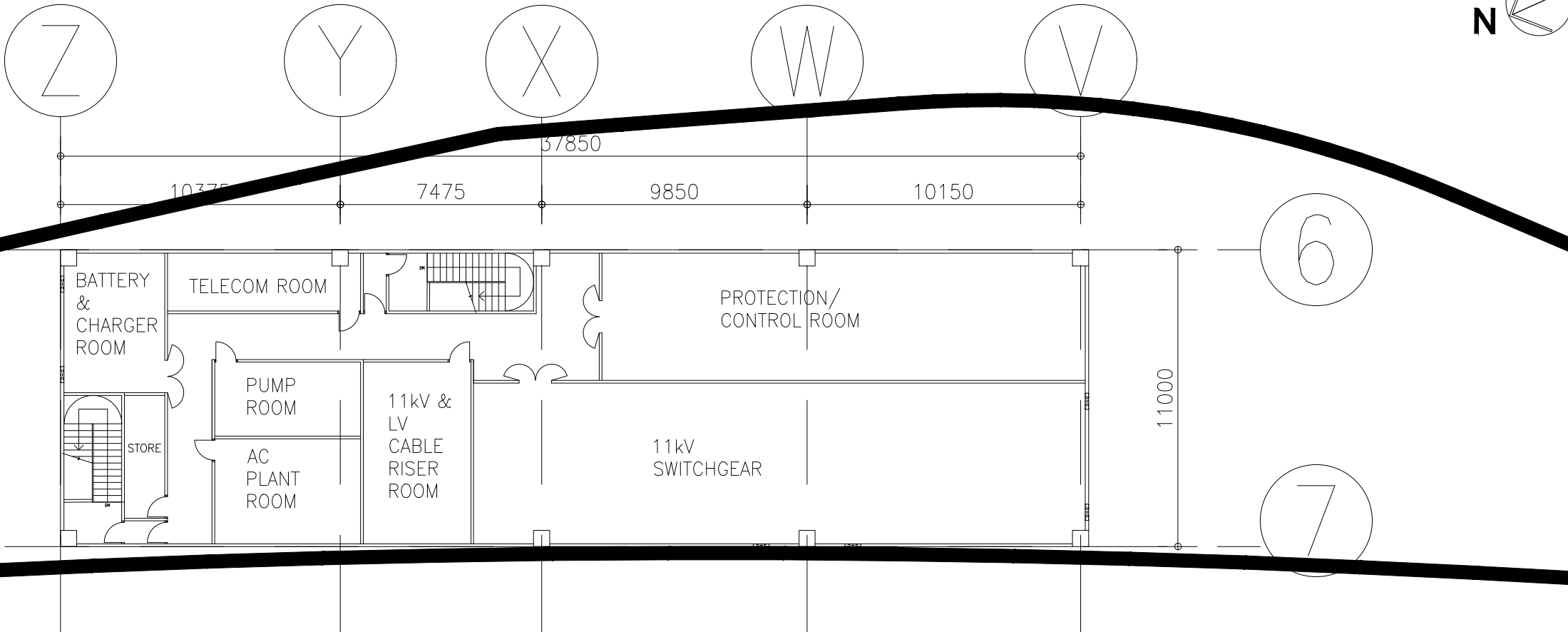
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CHECKED BY: NC

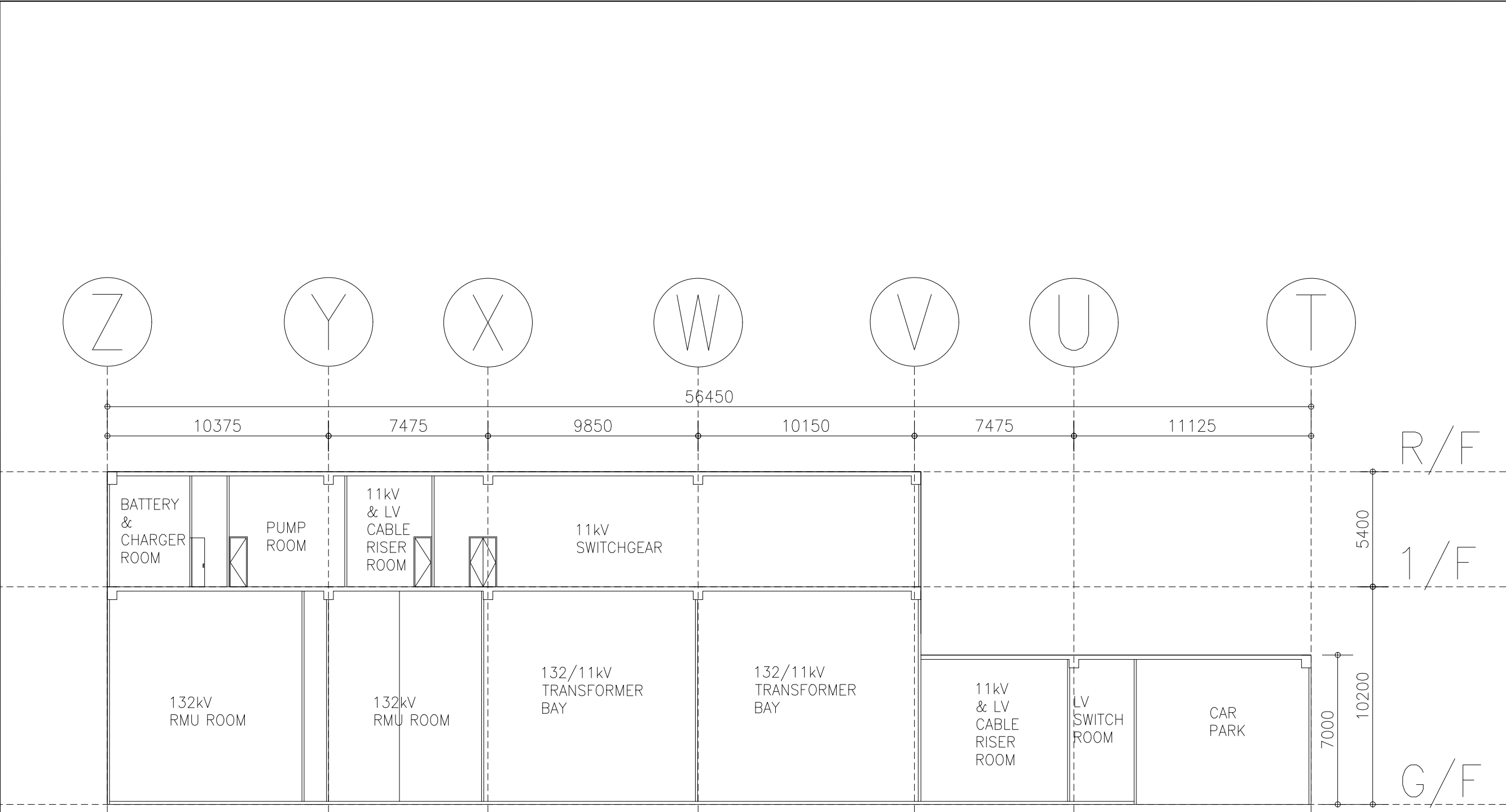
APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: AA08



1/F Scale 1:250



SECTION C-C

NOTES AND CONDITIONS:

1. ALL DESIGNS ARE THE PROPERTY OF FRUIT DESIGN AND BUILD AND CANNOT BE USED WITHOUT THEIR WRITTEN PERMISSION.

2. ALL MEASUREMENTS MUST BE VERIFIED ON SITE BEFORE CONSTRUCTION.

3. CONTRACTORS SHALL NOTIFY THE DESIGNER OF ANY DISCREPANCY BEFORE STARTING WORK.

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REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

FRUIT  
DESIGN &  
BUILD LTD

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A | 6/F, The Sun's Group Centre, 200 Gloucester Road,  
Wan Chai, Hong Kong

T | +852 3188 5595     F | +852 3188 5958

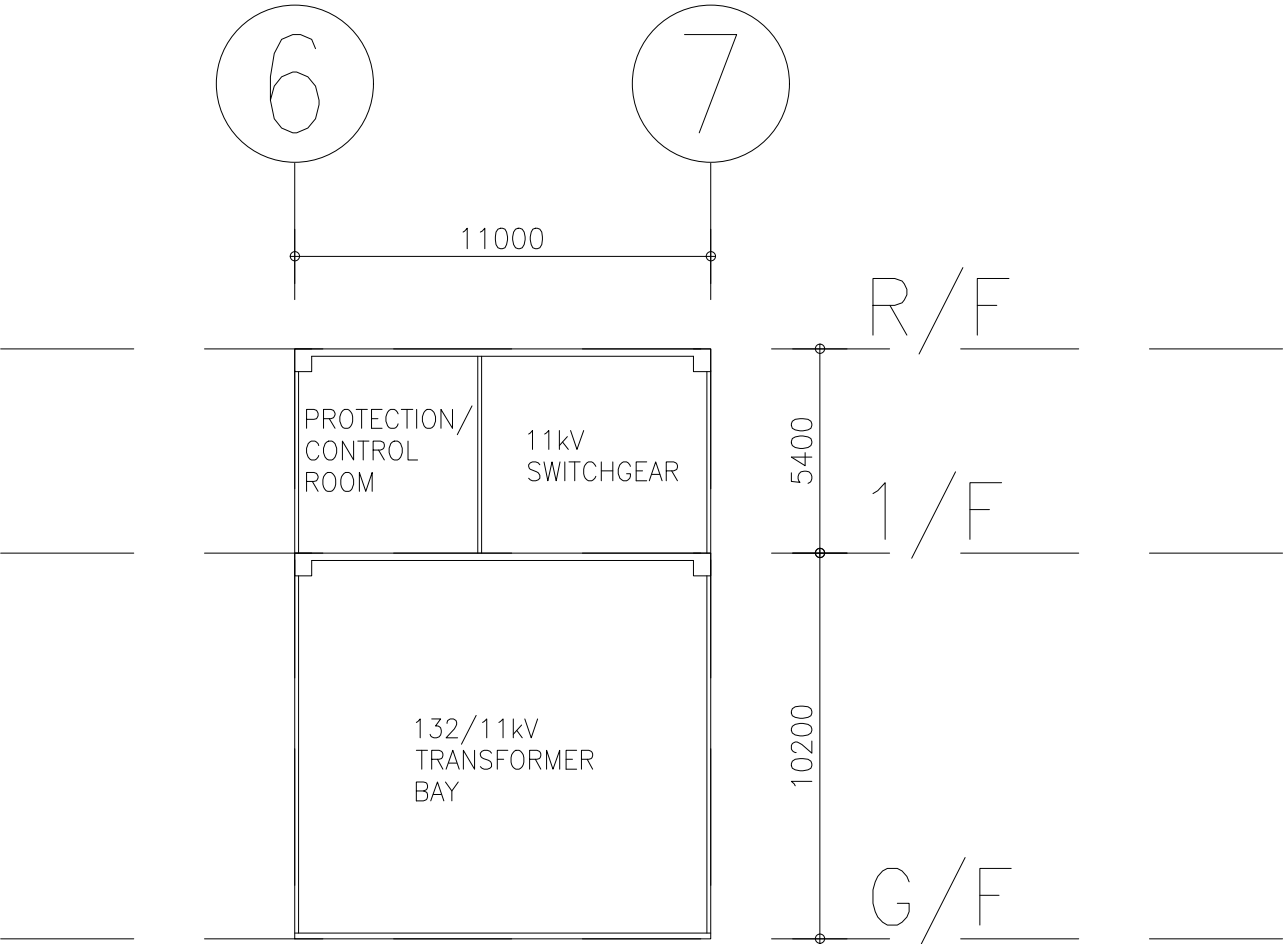
PROJECT :

TMCLK DEPOT

DRAWING TITLE :

SECTION C-C (SITE B)

SCALE:	1:200
DATE:	13/09/2021
DRAWN BY:	CC
CHECKED BY:	NC
APPROVED BY:	-
JOB. NO.:	FDB-P-21031
DWG. NO.:	ST03



SECTION D-D

- NOTES AND CONDITIONS:
1. ALL DESIGNS ARE THE PROPERTY OF FRUIT DESIGN AND BUILD AND CANNOT BE USED WITHOUT THEIR WRITTEN PERMISSION.
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REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

**FRUIT  
DESIGN &  
BUILD LTD**

A member of FDB Holdings Limited

A | 6/F, The Sun's Group Centre, 200 Gloucester Road,  
Wan Chai, Hong Kong

T | +852 3188 5995    F | +852 3188 5998

PROJECT:

TMCLK DEPOT

DRAWING TITLE :

SECTION D-D (SITE B)

SCALE: 1:200

DATE: 13/09/2021

DRAWN BY: CC

CHECKED BY: NC

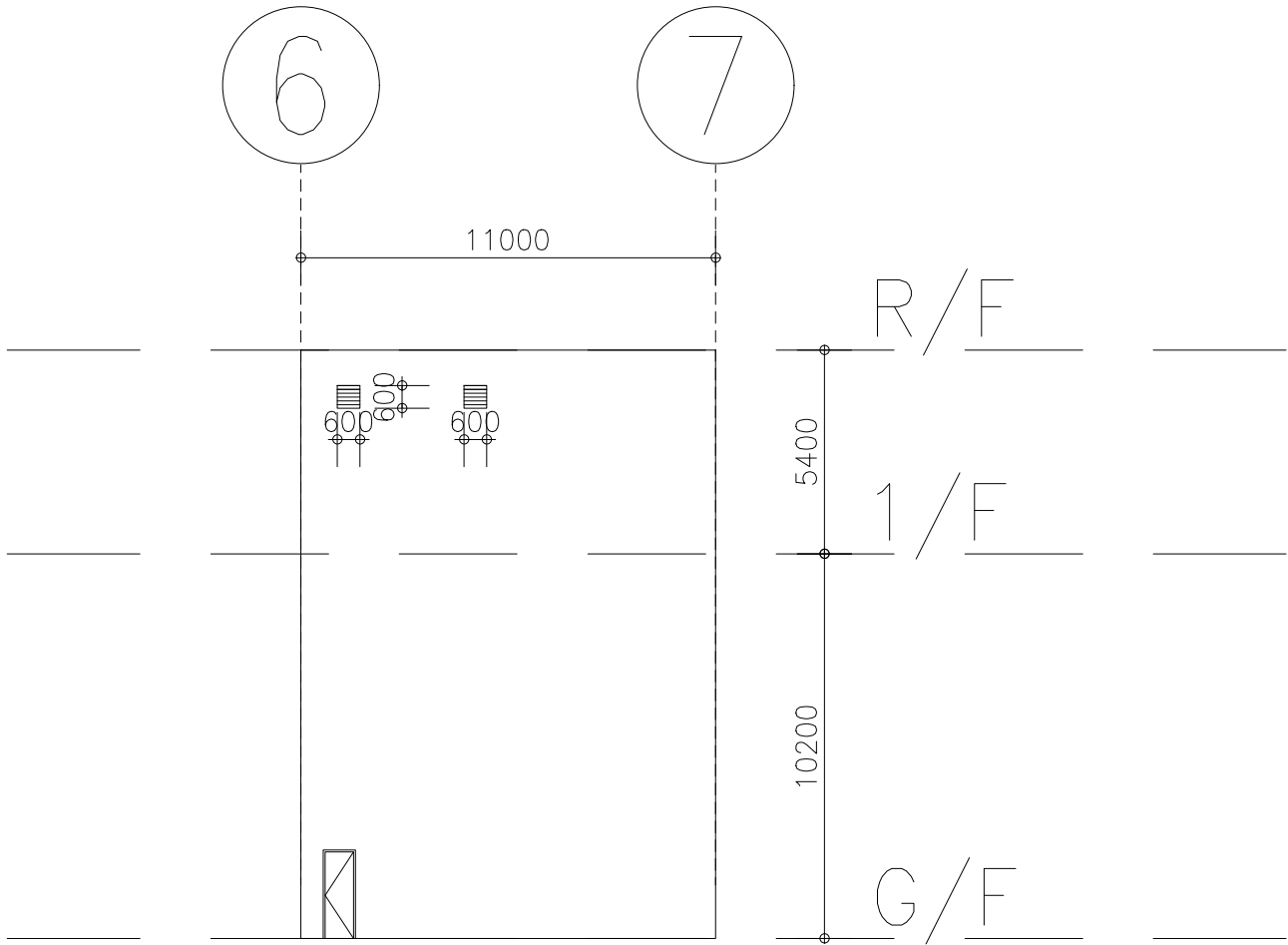
APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: ST04







NORTH-EAST ELEVATION

- NOTES AND CONDITIONS:
1. ALL DESIGNS ARE THE PROPERTY OF FRUIT DESIGN AND BUILD AND CANNOT BE USED WITHOUT THEIR WRITTEN PERMISSION.
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REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

FRUIT  
DESIGN &  
BUILD LTD

A member of FDB Holdings Limited  
A | 6/F, The Sun's Group Centre, 200 Gloucester Road,  
Wan Chai, Hong Kong  
T | +852 3188 5955 F | +852 3188 5958

PROJECT:

TMCLK DEPOT

DRAWING TITLE :

NORTH-EAST ELEVATION (SITE B)

SCALE: 1:250

DATE: 13/09/2021

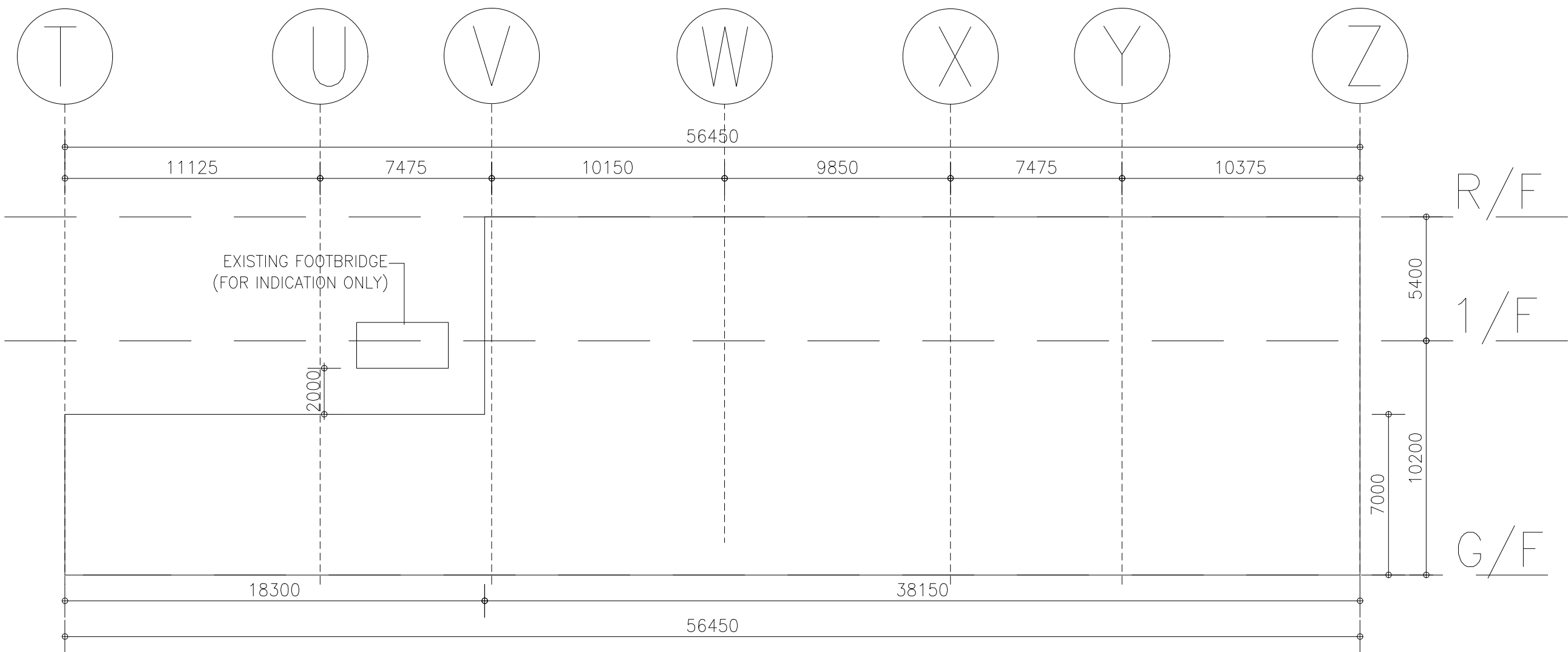
DRAWN BY: CC

CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: EL06



SOUTH-EAST ELEVATION

- NOTES AND CONDITIONS:
- 1. ALL DESIGNS ARE THE PROPERTY OF FRUIT DESIGN AND BUILD AND CANNOT BE USED WITHOUT THEIR WRITTEN PERMISSION.
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REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

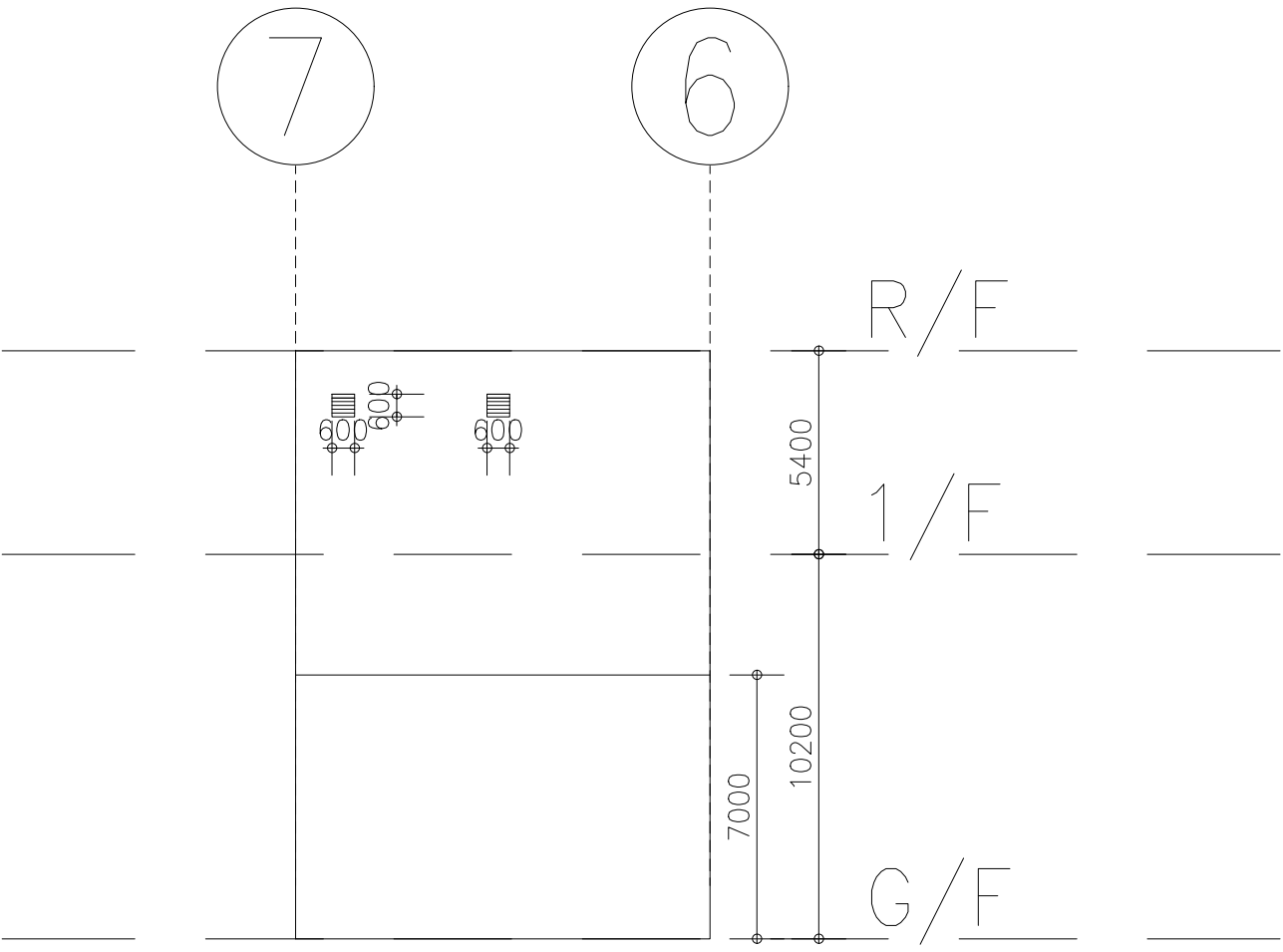
FRUIT  
DESIGN &  
BUILD LTD

A member of FDB Holdings Limited  
A | 6/F, The Sun's Group Centre, 200 Gloucester Road,  
Wan Chai, Hong Kong  
T | +852 3188 5595    F | +852 3188 5958

PROJECT:

TMCLK DEPOT

DRAWING TITLE :	SOUTHEAST ELEVATION (SITE B)
SCALE:	1:200
DATE:	13/09/2021
DRAWN BY:	CC
CHECKED BY:	NC
APPROVED BY: -	
JOB. NO.:	FDB-P-21031
DWG. NO.:	EL07



SOUTH-WEST ELEVATION

- NOTES AND CONDITIONS:
1. ALL DESIGNS ARE THE PROPERTY OF FRUIT DESIGN AND BUILD AND CANNOT BE USED WITHOUT THEIR WRITTEN PERMISSION.
  2. ALL MEASUREMENTS MUST BE VERIFIED ON SITE BEFORE CONSTRUCTION.
  3. CONTRACTORS SHALL NOTIFY THE DESIGNER OF ANY DISCREPANCY BEFORE STARTING WORK.
  4. ALL DIMENSIONS ARE IN MILLIMETER EXCEPT OTHERWISE NOTED.
  5. ALL WORKS SHALL BE CARRIED OUT IN COMPLIANCE TO THE BUILDINGS ORDINANCE, BUILDINGS REGULATIONS AND CODE OF PRACTICES.
  6. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH OTHER DRAWINGS AND SPECIFICATIONS OF THE TENDER DOCUMENTS AND SHALL BE MUTUALLY EXPLANATORY.
  7. THE CONTRACTOR SHALL FOLLOW MANUFACTURER'S INSTRUCTION & RECOMMENDATION IN CASE PROPRIETARY PRODUCT / SYSTEM / IS ADOPTED / SPECIFIED / APPROVED.
  8. DESIGN INTENT DRAWING ONLY. CONTRACTOR IS RESPONSIBLE FOR DESIGN AND SHOP DRAWING / CALCULATION SUBMISSION / MATERIAL SIZES / THICKNESS INDICATIVE.

REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

**FRUIT  
DESIGN &  
BUILD LTD**

A member of FDB Holdings Limited

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Wan Chai, Hong Kong

T | +852 3188 5595      F | +852 3188 5958

PROJECT:

TMCLK DEPOT

DRAWING TITLE :

SOUTHWEST ELEVATION (SITE B)

SCALE: 1:200

DATE: 13/09/2021

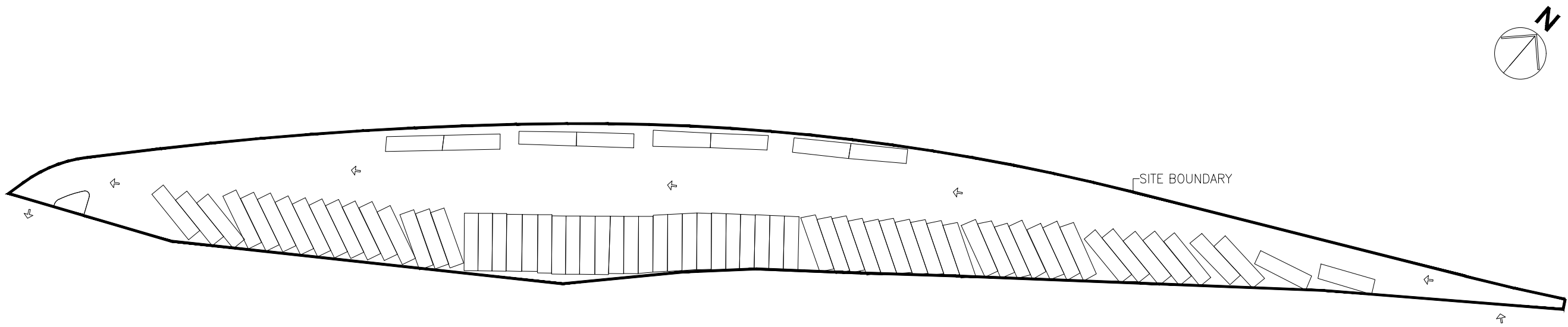
DRAWN BY: CC

CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: EL08



LEGEND



Parking Space  
(13000mm x 3250mm)

G/F

- NOTES AND CONDITIONS:
1. ALL DESIGNS ARE THE PROPERTY OF FRUIT DESIGN AND BUILD AND CANNOT BE USED WITHOUT THEIR WRITTEN PERMISSION.
  2. ALL MEASUREMENTS MUST BE VERIFIED ON SITE BEFORE CONSTRUCTION.
  3. CONTRACTORS SHALL NOTIFY THE DESIGNER OF ANY DISCREPANCY BEFORE STARTING WORK.
  4. ALL DIMENSIONS ARE IN MILLIMETER EXCEPT OTHERWISE NOTED.
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  8. DESIGN INTENT DRAWING ONLY. CONTRACTOR IS RESPONSIBLE FOR DESIGN AND SHOP DRAWING / CALCULATION SUBMISSION / MATERIAL SIZES / THICKNESS INDICATIVE.

REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

**FRUIT  
DESIGN &  
BUILD LTD**

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Wan Chai, Hong Kong

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PROJECT:

TMCLK DEPOT

DRAWING TITLE :

G/F LAYOUT (SITE C)

SCALE: 1:1000

DATE: 13/09/2021

DRAWN BY: CC

CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: AA09

Issue No. : 3  
Issue Date : November 2021  
Project No. : 1906



## **SITE APPRAISAL REPORT**

### **FOR**

### **PROPOSED BUS DEPOTS WITH ANCILLARY PUBLIC UTILITY INSTALLATION (ELECTRICITY SUBSTATION) IN AREA SHOWN AS 'ROAD', GOVERNMENT LAND IN D.D. 138 AND D.D. 300, TUEN MUN, NEW TERRITORIES (NEAR THE BUILDING AT 20 TUEN MUN CHEK LAP KOK TUNNEL ROAD)**

Prepared by

Allied Environmental Consultants Limited

**COMMERCIAL-IN-CONFIDENCE**

**Allied Environmental Consultants Limited**

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**沛然環境評估工程顧問有限公司**

沛然環保集團成員 (港交所股份代號: 8320.HK)

香港灣仔告士打道 160 號海外信託銀行大廈 27 樓

## Document Verification



<b>Project Title</b>	Proposed Bus Depots with Ancillary Public Utility Installation (Electricity Substation) in area shown as 'Road', Government Land in D.D. 138 and D.D. 300, Tuen Mun, New Territories (near the building at 20 Tuen Mun Chek Lap Kok Tunnel Road)	<b>Project No.</b> 1906
<b>Document Title</b>	Site Appraisal Report	

<b>Issue No.</b>	<b>Issue Date</b>	<b>Description</b>	<b>Prepared by</b>	<b>Checked by</b>	<b>Approved by</b>
Issue 1	May 2021	1st Submission	Cherry Lee	Cathy Man	Grace Kwok
Issue 1 (Rev. 1)	July 2021	1st Submission	Cherry Lee	Cathy Man	Grace Kwok
Issue 2	Oct 2021	2nd Submission	Cherry Lee	Cathy Man	Grace Kwok
Issue 3	Nov 2021	3rd Submission	Cherry Lee	Cathy Man	Grace Kwok

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### 沛然環境評估工程顧問有限公司

沛然環保集團成員 (港交所股份代號: 8320.HK)

香港灣仔告士打道 160 號海外信託銀行大廈 27 樓



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## 1. Introduction

### 1.1. Background

- 1.1.1. Allied Environmental Consultants Limited (AEC) was commissioned by the Kowloon Motor Bus Company (1933) Limited (KMB) to conduct a Site Appraisal to assess the contamination status and identify possible contamination source and remedial measure (if necessary) to support of Section 16 Planning Application for proposed bus depots with ancillary public utility installation (hereafter referred to as the "Proposed Development") of Tuen Mun – Chek Lap Kok Link (TMCLKL) Free Up Area (hereafter referred to as the "Project Sites").
- 1.1.2. The Project Sites comprise of three free up areas, namely Site A, B and C with total area of 16,845m<sup>2</sup> (Site A: 7,926 m<sup>2</sup>; Site B: 1,321m<sup>2</sup> and Site C: 7,598 m<sup>2</sup>). KMB is intended to develop the Site A to a 11-storey multi-storey depot for electric buses ("eBus"). Site B will be used for a 2 storey substation while Site C will be used for charging-enabling bus parking bays which is situated on top of elevated highway structures. **Figure 1** shows the location of the Project Sites and its surrounding.
- 1.1.3. Based on the best available information from Development Permission Area Plans, Outline Development Plans, Layout Plans and other relevant published and uses plan by Lands Department or Planning Department, no committed or planned developments are identified in the vicinity of the Project Sites. As advised by Planning Department (PlanD), the consultant has visited the Town Planning Board Statutory Planning Portal 2 to obtain records for land zoning. The website as of 8 October 2021 has confirmed that there are no planning applications has been made at the vicinity, which implies no committed or planned developments. Correspondence from PlanD can be referred in **Appendix G**.

## 2. Environmental Impact Assessment Ordinance (EIAO) Implications

- 2.1.1. As a multi-storey depot and supporting facilities for electric buses are proposed at the Project Sites, a Designated Project (DP) under Schedule 2, Part I, Category A.6 of the EIAO has been considered:
- 2.1.2. Category A.6 of the EIAO has been considered: Category A.6: A transport depot located less than 200 m from the nearest boundary of an existing or planned---

- 2.1.3. (a) residential area;
- 2.1.4. (b) place of worship;
- 2.1.5. (c) educational institution; or
- 2.1.6. (d) health care institution.
- 2.1.7. With reference to the Development Permission Area Plans, Outline Development Plans, Layout Plans and other relevant published land uses plan by Lands Department or Planning Department, neither residential area, place of worship, educational institution, nor health care institution is identified or will be planned within 200m from Project Site boundary. Therefore, the proposed bus depot does not constitute DP under EIAO and Environmental Permit (EP) is not required for this Project.

### 3. Objectives

- 3.1.1. The objectives of this Site Appraisal are
  - To assess the potential land contamination impact at the Project Sites due to current and historical land uses, on and off-site activities that could result in contamination of the site; and
  - To propose forthcoming actions in case the potential land contamination identified.
- 3.1.2. This Site Appraisal Report has been prepared following the guidance and steps outlined in the Practice Guide for Investigation and Remediation of Contaminated Land (Aug 2011), Guidance Manual for Use of Risk-Based Remediation Goals (RBRGs) for Contaminated Land Management (Dec 2007), and the Guidance Note for Contaminated Land Assessment and Remediation. All guidance notes and guidance manual are published by the Environmental Protection Department (EPD) of the Government of HKSAR.

### 4. Currently Available Information

#### 4.1. Site Environs

- 4.1.1. The Project Sites is located near to the Pillar Point, Tuen Mun. The location of the Project Sites and its environs are shown in **Figure 1**.

- 4.1.2. The Project Sites are located at Tuen Mun Chek Lap Kok Tunnel Road. The Project Sites fall into "Road" under the Approved Tuen Mun Outline Zoning Plan No. S/TM/35.

#### **4.2. Review of Previous Environmental Impact Assessment Study**

- 4.2.1. This desktop study is conducted with reference to the approved Environmental Impact Assessment (EIA) Report for the TMCLKL (AEIAR-146/2009) approved in October 2009. The Project Sites fall within the Assessment Area for the TMCLKL.

- 4.2.2. According to the TMCLKL EIA, it is observed that no apparent pollution source was identified in the immediate vicinity of the Project Sites which would lead to significant land contamination concern. No historical potential contamination activities are anticipated or were identified in the Project Sites until 2009.

#### **4.3. Land Use**

- 4.3.1. According to the aerial photos taken by the Lands Department, the entire Project Sites was undeveloped before 1980. Part of the Project Sites was covered by the natural vegetation. In 1980s, the Project Sites was developed and most of the vegetation was removed for the construction of the public road nearby.
- 4.3.2. After the completion of the road works nearby, the Site A and Site B was converted to open storage area and Pillar Point Vietnamese Refugee Camp respectively. The Pillar Point Vietnamese Refugee Camp at Site B was then demolished and converted to golf driving range (River Trade Golf) in 2003.
- 4.3.3. Site C is located at the elevated highway of TMCLKL above the Lung Mun Road. Based on the information from website of Highways Department (HyD), the construction works of TMCLKL started in 2013. The aerial photos from the Lands Department show that there is no structure within Site C before the construction of the elevated highway in 2017. After the elevated highway formed in 2017, Site C remain unchanged as part of TMCLKL until now. While Site A and Site B was used as part of the toll plaza of TMCLKL until now.
- 4.3.4. As advised by KMB, the Project Sites will be free up and used for KMB depot facilities with ancillary public utility installation (electricity substation) under a STT in the later stage.
- 4.3.5. The aerial photos are attached in **Appendix A**. A summary of the land use of the Project Sites is given in **Table 1**.

**Table 1 Land Use Summary on the Project Sites**

Period / Year	Land Use / Description	Sources of Information
<b>Site A</b>		
Before 1980	The Site A was covered by natural vegetation.	Aerial Photographs available from the Lands Department (LandsD).
1980-1994	Most of vegetation within the Site A was removed for constructing public road nearby in 1980s.	Aerial Photographs available from the LandsD.
1994-2013	Part of Site A was converted to the open storage area since 1994.	Aerial Photographs available from the LandsD.
2013-2020	The construction works of the TMCLKL started in Jun 2013. According to HyD, the advance work and ground investigation works were commenced in Nov 2011 and May 2012 respectively.	Aerial Photographs available from the LandsD and website of HyD.
2020-Present	According to the website of Transport Department (TD), the TMCLKL was opened to public on 27 Dec 2020. The land use of Site A is remained unchanged as part of the toll plaza of TMCLKL til now (2021).	Aerial Photographs available from the LandsD and website of HyD.
Future land use	It is proposed to install depot facilities for KMB under the 5 years STT. The normal operation works may include charging-enabling bus parking bays, simple repairing works etc.	Information from KMB.
<b>Site B</b>		
Before 1980	The Site B was covered by natural vegetation.	Aerial Photographs available from the LandsD.
1980-1988	Most of vegetation within Site B was removed for site formation and constructing public road in 1980s. It is observed that the Site B became vacant since 1985.	Aerial Photographs available from the LandsD.
1988-2003	The vegetation within Site B was removed and the construction of Pillar Point Vietnamese Refugee Camp started in 1988. According to the Table 13.2 of TMCLKL EIA, Site B was used as the Pillar Point Vietnamese Refugee Camp from 1989 to 2000. The Pillar Point Vietnamese Refugee Camp was then demolished in 2003	TMCLKL EIA, aerial Photographs available from the LandsD.



Period / Year	Land Use / Description	Sources of Information
	and the land was reinstated.	
2003-2013	The Site B was then converted to the golf driving range (River Trade Golf). According to the Table 13.2 of TMCLKL EIA, no pollution sources were identified.	TMCLKL EIA, aerial Photographs available from the LandsD.
2013-2020	The construction works of the TMCLKL was started in Jun 2013. According to the HyD, the advance work and ground investigation works were commenced in Nov 2011 and May 2012 respectively.	TMCLKL EIA, aerial Photographs available from the LandsD and website of HyD.
2020-Present	According to the website of TD, the TMCLKL was opened to public on 27 Dec 2020. The land use of Site A is remained unchanged as part of the toll plaza of TMCLKL til now (2021).	Aerial Photographs available from the LandsD and website of HyD.
Future land use	It is proposed to install depot facilities for KMB under the 5 years STT. The normal operation works may include bus parking, simple repairing works etc.	Information from KMB
<b>Site C</b>		
Before 2013	<p>The newly formed elevated highway which Site C located in has not yet existed and no structure was observed within Site C before 2013.</p> <p>The Lung Mun Road is located beneath the newly formed elevated highway since 1980s.</p>	Aerial Photographs available from the LandsD
2013-2020	The construction works of the TMCLKL were started in Jun 2013. The Site C is located in the newly formed elevated highway which is one part of TMCLKL. According to the aerial photo, this elevated highway was constructed in 2017 and remain unchanged as the public road.	EIA of TMCLKL, Aerial Photographs available from the LandsD, website of HyD.
2020-Present	According to the website of TD, the TMCLKL was opened to public on 27 Dec 2020. The land use of Site C is remained unchanged as the public road of TMCLKL til now (2021).	Aerial Photographs available from the LandsD, website of HyD.
Future land use	It is proposed to install depot facilities	Information from KMB

Period / Year	Land Use / Description	Sources of Information
	for KMB under the 5 years STT. The normal operation works may include bus parking, simple repairing works etc. The entire Site C will be used for bus parking area. No excavation work will be carried out within Site C and beneath the elevated highway.	

#### 4.4. Information from Government Departments

- 4.4.1. The following HKSAR Government Departments have been enquired on the latest update on the availability of land use status and records of land contamination and/or spillage for the Project Sites. The summary of correspondence is presented in **Table 2** below. Copy of the letters replied from various Government Departments are included in **Appendix B** for reference.

**Table 2 Enquiries and Responses on Land Contamination Related Records in the Project Sites**

Consultant's Letter Ref.	Department	Response Letter Ref.	Response Date	Summary
-/21-0001	Environmental Protection Department	- (Via email)	06 Aug 2021	There was no record of spillage/leakage of chemical waste or chemical for the past five years at the Project Sites.
-/21-0003	Fire Services Department	(137) in FSD GR 6-5/4 R Pt.32	31 Mar 2021	The case is being handled. Dangerous Goods License Records from 1990 to present moment and the incident record of past three years of fire and special services incident will be provided.
819.2124/21-0006		(57) in FSD GR 6-5/4 R Pt.33	26 Apr 2021	No dangerous goods licence was in respect of the Project Sites.  A total of one incident record was found at the Project Sites. (listed below) Date: 7.1.2020 Type of Incident: Special service (Sewer Rescue) Address: Tuen Mun – Chek Lap Kok Link Construction
-/21-0004 and 819.2124/21-0001	Planning Department	( ) in PDTM 4/5/48	13 Apr 2021	It is advised to visit Town Planning Board's Statutory Planning Portal 2 for information relating to the Project Sites and the surrounding area.
1906/21-0007	Lands Department	(9) in DLOTM 22/MAT/20 Pt.3	24 August 2021	This office does not hold such information that the requested, it is advised to approach the Environmental Department and Highways Department for information.

4.4.2. The Consultant visited the Building Records Access and Viewing On-line (BRAVO) of Building Department over the internet to obtain records for completed private building. There is neither records of building, structural, drainage, alternation & additions, site formation, minor works nor existing building available at the Project Sites. The captured screen of BRAVO is provided in **Appendix C** for reference.

4.4.3. In addition, the Consultant visited historical aerial photographs taken by the Lands Department to review the past land use of the Project Sites. Details have been summarised in Sections 2.3

4.4.4. The Consultant visited the territory-wide register of chemical waste producers maintained at the Territory Control Office in Wan Chai on 28 April 2021. The register record is updated as of 17 February 2021. There is currently one registered chemical waste producer at the Project Sites by the name of Gammon Construction Limited at construction site of "TMCLKL" -northern Connection Tunnel building, electrical and mechanical works (Contract No. HY/2017/10). Details of the chemical waste producer is provided in **Appendix D**.

#### **4.5. Site Visit and Observation**

4.5.1. Site visit was conducted on 30 April 2021 to identify potential sources of contamination.

4.5.2. Upon the site visit, the Project Sites was observed to be consistent with the abovementioned available information and it is observed that the whole Project Sites was vacant without any buildings and structures. The entire Project Sites is paved by concrete with good condition and no crack is observed (Photo 2 to 6, 9 to 11 of **Appendix F**).

4.5.3. During the site visit, it was observed that there were no other signs of obvious/ suspected contamination such as abnormal odour and/or distress vegetation, and no aboveground/ underground storage tank and pipe works within the whole Project Sites.

4.5.4. A Site Walkover Checklist has been completed with the Tenant's representative as required in the EPD's Practice Guide and attached in **Appendix E**. Photo records of the Project Sites taken during the site visit are presented in **Appendix F**.

### **5. Potential Land Contamination Appraisal**

5.1.1. According to the desktop study and site appraisal presented in Section 3 above, no potential land contamination locations in the Project Sites are identified.

5.1.2. According to the aerial photos available from the LandsD, **part of** Site A was used for open storage since 1994. **Section 13.4.2.7 and Table 13.2 of TMCLKL EIA also stated that the Works Area 19 (part of Site A is located within Works Area 19) was used for open car parks, open storage and site office since 2004 and no potential contamination hotspots have been identified within this area. Relevant sections extracted from TMCLKL EIA are shown in Appendix I.** Site A was then converted to the toll plaza of TMCLKL in 2013 until now.

- 5.1.3. Site B was used for Pillar Point Vietnamese Refugee Camp from 1989 to 2000. In 2003, the Pillar Point Vietnamese Refugee Camp was demolished and converted to the golf driving range (River Trade Golf). Site B was then converted to the toll plaza of TMCLKL in 2013 until now.
- 5.1.4. According to the Section 13.4.2.11 and Table 13.4 of TMCLKL EIA, the toll plaza would be constructed on the land occupied by the River Trade Golf at Tuen Mun Area 46 (i.e. Site B) and part of the rural hill slopes immediately outside the boundary of the closed Pillar Point Valley Landfill (i.e. Site A). Based on the historical, existing land use and the on-site photos shown in Figure 13.21 of TMCLKL EIA, no contamination issue would be anticipated. Relevant sections extracted from TMCLKL EIA are shown in **Appendix I**.
- 5.1.5. Site C is located at the elevated highway of TMCLKL above the Lung Mun Road. There is no structure within Site C before the construction of the elevated highway C. Site C remain unchanged as part of TMCLKL since 2017 until now.
- 5.1.6. Based on the historical information and site visit observation, no apparent pollution sources were identified within Project Sites which would lead to significant land contamination concern. No historical or current potential contamination activities are anticipated or were identified within the Project Sites.

#### Future Operation

- 5.1.7. The new temporary depot facilities at Site A will be operated for 5 years under STT. eBus parking and simple vehicle repair/testing activities are expected to be carried out within the proposed depot facilities. Site B will be used for a 2 storey substation while others and Site C will be used for charging-enabling bus parking bays. Site C will be used for bus parking and no excavation work will be carried out within Site C and beneath the elevated highway.
- 5.1.8. Since the entire Project Sites will be fully paved to prevent any leakage to the ground, it is anticipated the land contamination issue is insignificant during the operation stage with implementing good site practices.
- 5.1.9. Further land contamination assessment will be conducted to identify future potential contaminating activities (if any) during the operation phase. It will be conducted according to Guidance Note for Contaminated Land Assessment and Remediation (Aug 2007), The Guidance Manual for Use of Risk-based Remediation Goals for Contaminated Land Management (Dec 2007) and Practice Guide for Investigation and Remediation of Contaminated Land (Aug 2011).

## **6. Conclusion**

- 6.1.1. This Site Appraisal of Project Sites is conducted to assess the contamination status and identify possible contamination source. Based on the aerial photographs and information from various HKSAR Government Departments, the Project Sites should unlikely be any previous land contamination history. During the site visit, the entire Project Sites is vacant and there were no signs of obvious/ suspected contamination. Thus, no land contamination issue is anticipated and site investigation is considered unnecessary at the Project Sites.
- 6.1.2. It is also anticipated that no potentially contaminating activities will be carried out in the operation phase with implementing good site practices. However, the detailed site appraisal/ land contamination assessment will be conducted according to the prevailing standards under Environmental Impact Assessment Ordinance in the later stage in order to fully investigate the land contamination impact within the Project Sites.

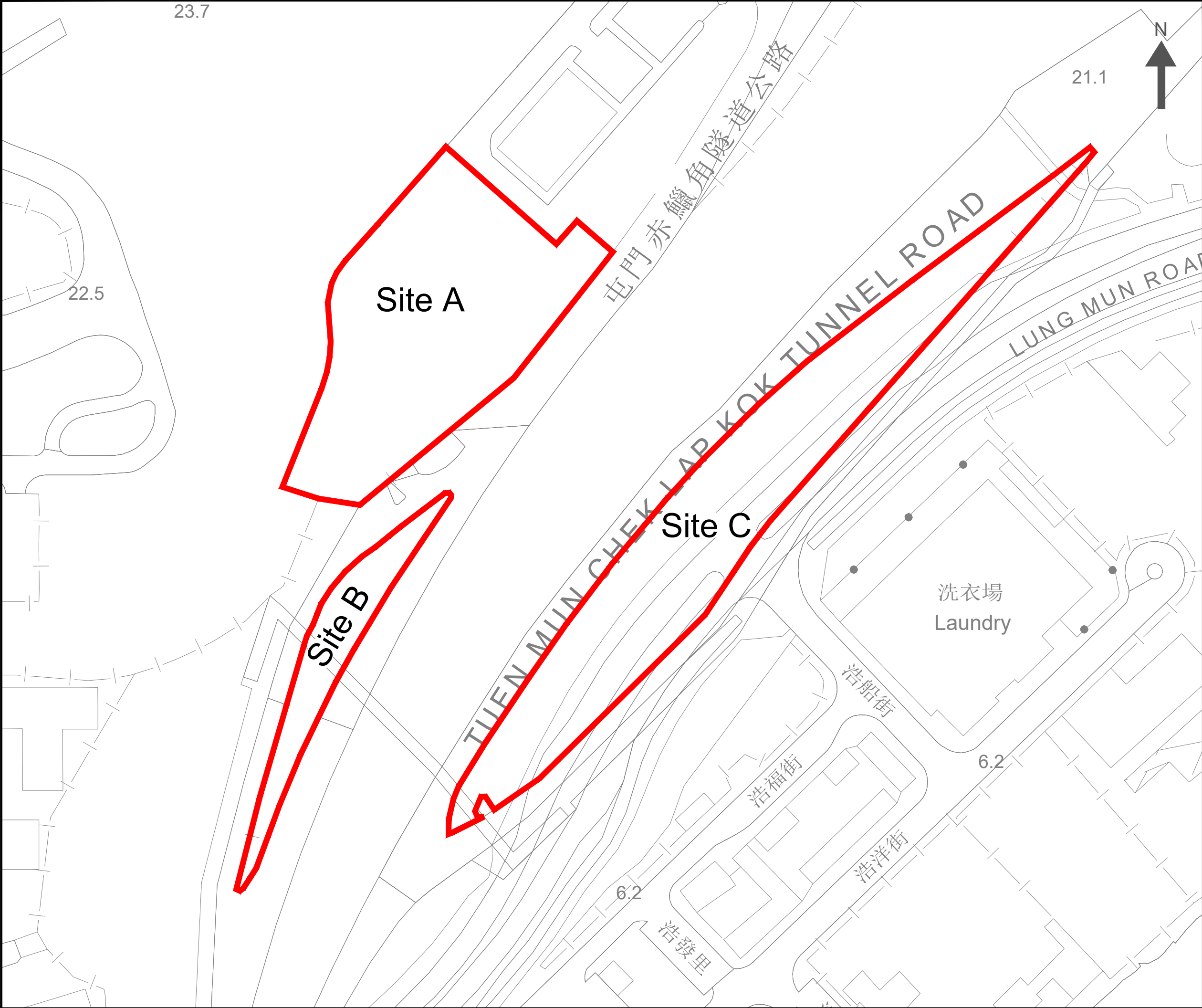


Project No.: 1906

Site Appraisal Report for Proposed Bus Depots with Ancillary Public Utility Installation (Electricity Substation) in area shown as 'Road', Government Land in D.D. 138 and D.D. 300, Tuen Mun, New Territories (near the building at 20 Tuen Mun Chek Lap Kok Tunnel Road)

---


***Figure***



NOTES :

PROJECT SITES

Consultant



**Allied Environmental Consultants Limited**

Project No. : 1906

Drawing By : CL

Project :  
PROPOSED BUS DEPOTS WITH ANCILLARY  
PUBLIC UTILITY INSTALLATION  
(ELECTRICITY SUBSTATION) IN AREA  
SHOWN AS 'ROAD', GOVERNMENT LAND IN  
D.D. 138 AND D.D. 300, TUEN MUN, NEW  
TERRITORIES (NEAR THE BUILDING AT 20  
TUEN MUN CHEK LAP KOK TUNNEL ROAD)

Drawing Title :  
LOCATION OF PROJECT SITE

Drawing No : <b>FIGURE 1</b>	Revision : <b>1</b>
Scale : <b>AS SHOWN</b>	Date : <b>AUG 2021</b>

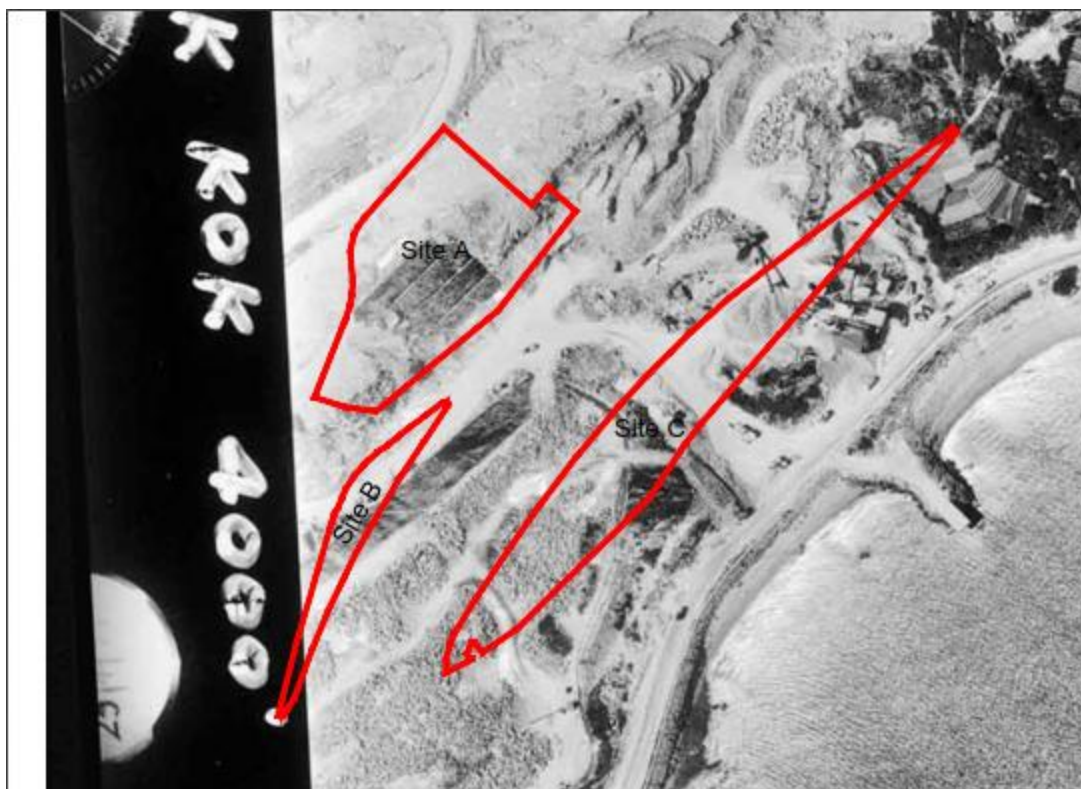
DO NOT SCALE OFF DRAWING. THIS DRAWING IS NOT FOR CONSTRUCTION PURPOSES UNLESS EXPRESSLY STATED. ALL RIGHTS RESERVED AND REPRODUCTION IN ANY FORM MUST BE APPROVED BY ALLIED ENVIRONMENTAL CONSULTANTS LIMITED.

Project No.: 1906

Site Appraisal Report for Proposed Bus Depots with Ancillary Public Utility Installation (Electricity Substation) in area shown as 'Road', Government Land in D.D. 138 and D.D. 300, Tuen Mun, New Territories (near the building at 20 Tuen Mun Chek Lap Kok Tunnel Road)

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## ***Appendix A – Aerial Photos***

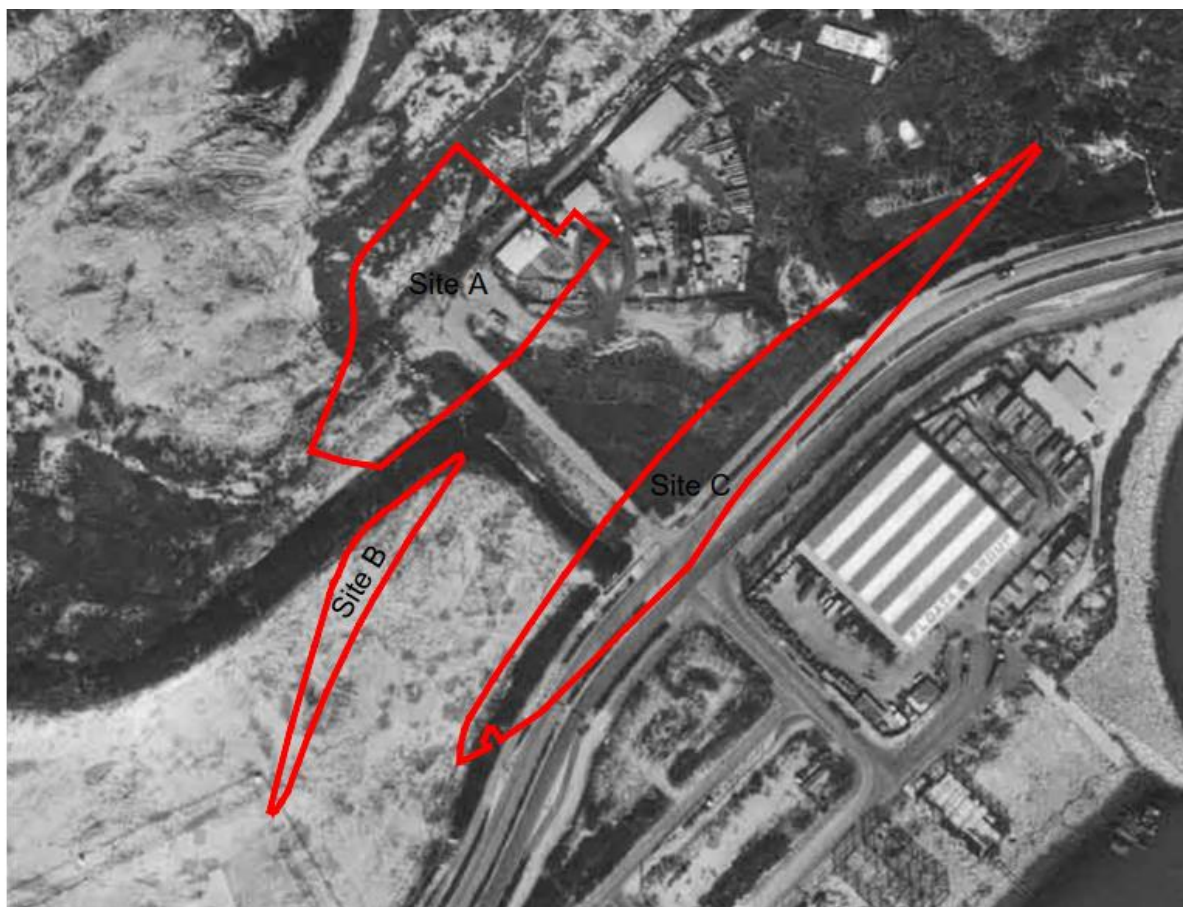


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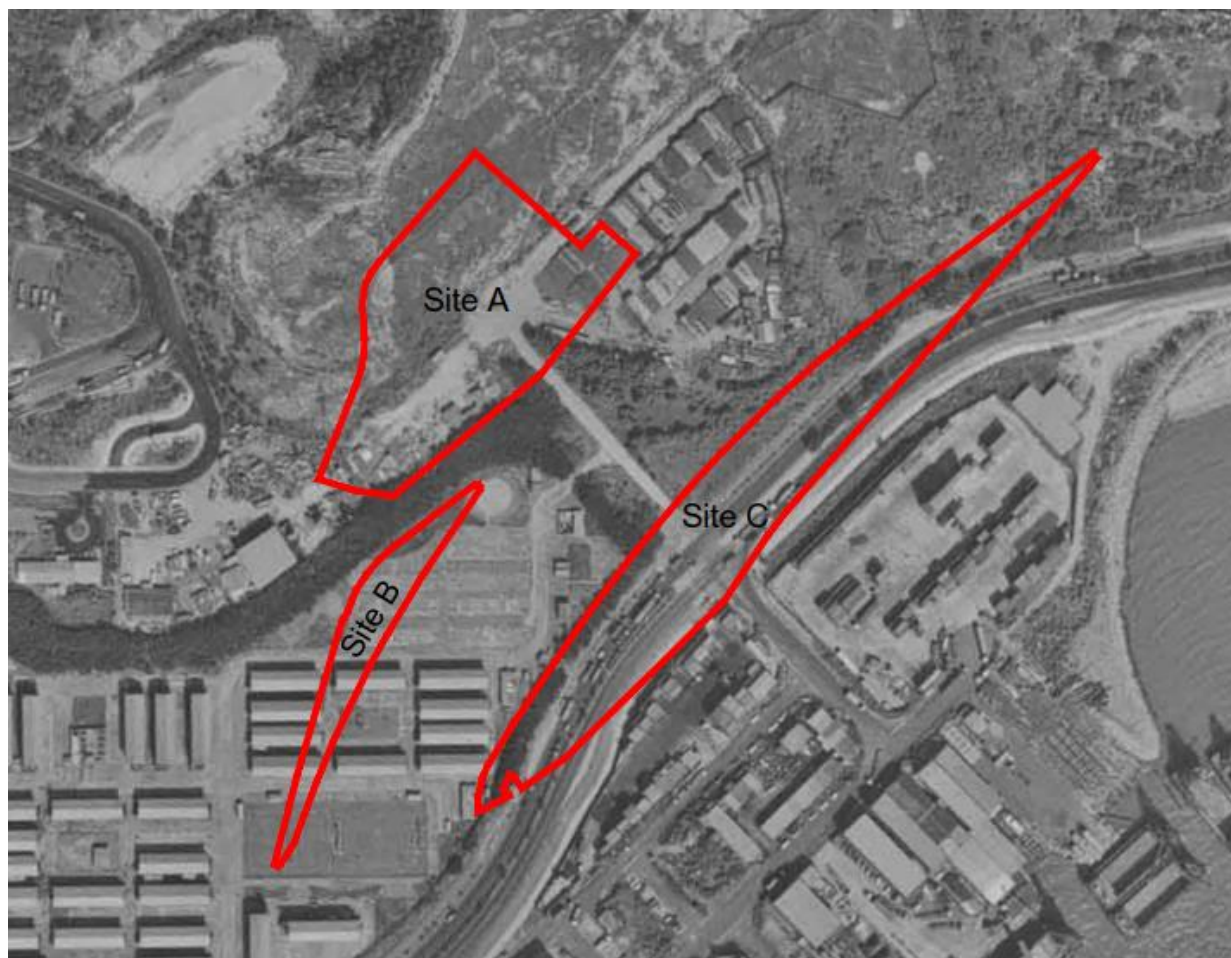
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Year 1988



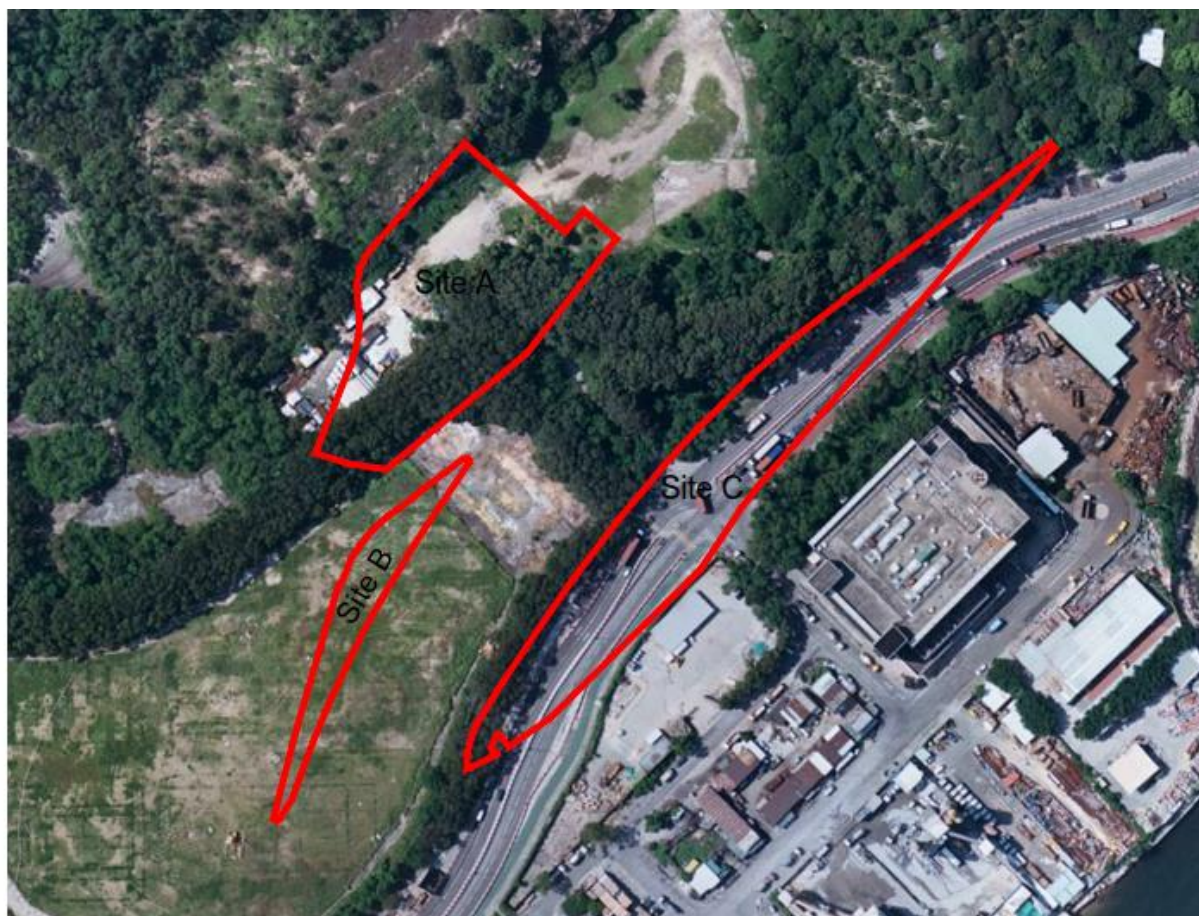


Year 1994

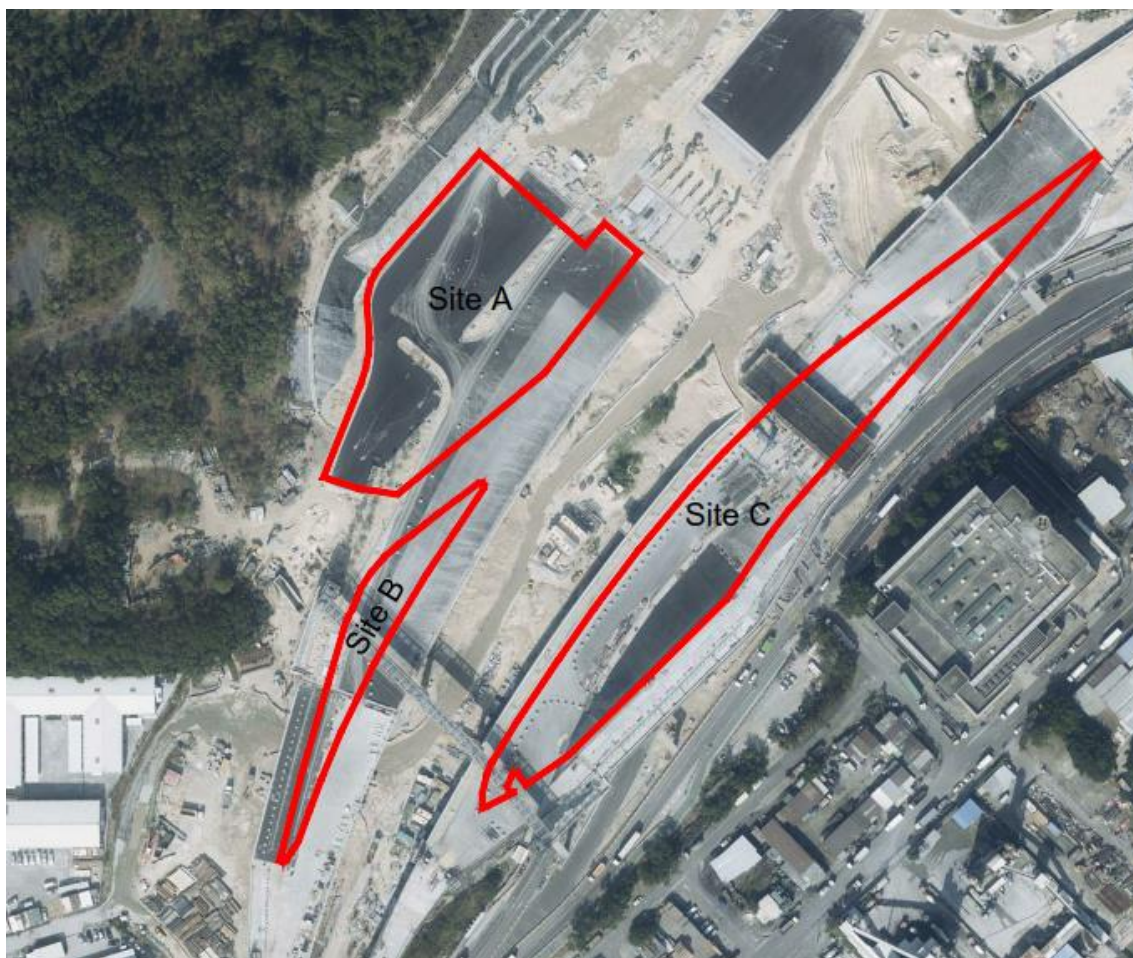


Year 2003





Year 2013



Year 2017





Year 2020

Project No.: 1906

Site Appraisal Report for Proposed Bus Depots with Ancillary Public Utility Installation (Electricity Substation) in area shown as 'Road', Government Land in D.D. 138 and D.D. 300, Tuen Mun, New Territories (near the building at 20 Tuen Mun Chek Lap Kok Tunnel Road)

---

## ***Appendix B – Copy of Letters Replies from Various Government Department***





Environmental Protection Department  
Regional Office (West)  
8/F., Tsuen Wan Government Offices,  
38 Sai Lau Kok Road, Tsuen Wan,  
New Territories

27/F, Overseas Trust Bank Building  
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[info@aechk.com](mailto:info@aechk.com)  
[www.aecg.com](http://www.aecg.com)

25 March 2021

By Post

Dear Sir/Madam,

**INSTALLATION OF DEPOT FACILITIES FOR KMB AT TUEN MUN – CHEK LAP KOK LINK ("TMCLK")  
FREE UP AREAS**

**Request for Information for Land Contamination Assessment**

We are conducting a Land Contamination Assessment study for Installation of Depot Facilities for KMB at Tuen Mun Chek Lap Kok Link ("TMCLK") Free Up Areas (Subject Site). As required by the "Practice Guide for Investigation and Remediation of Contaminated Land" published by the Environmental Protection Department of the HKSAR (EPD), information pertaining to the change of land uses/past activities/incidents/accidents at the Subject Site are required as part of the vetting process.

Of particular interests is whether there are any registered chemical waste producers under your record in the Subject Site, any waste disposal record, any accidental spillage record, any submission relating to land contamination assessment and any information you could provide which might be useful for our study. We enclosed herewith a site map showing the location of the Subject Site for your reference.

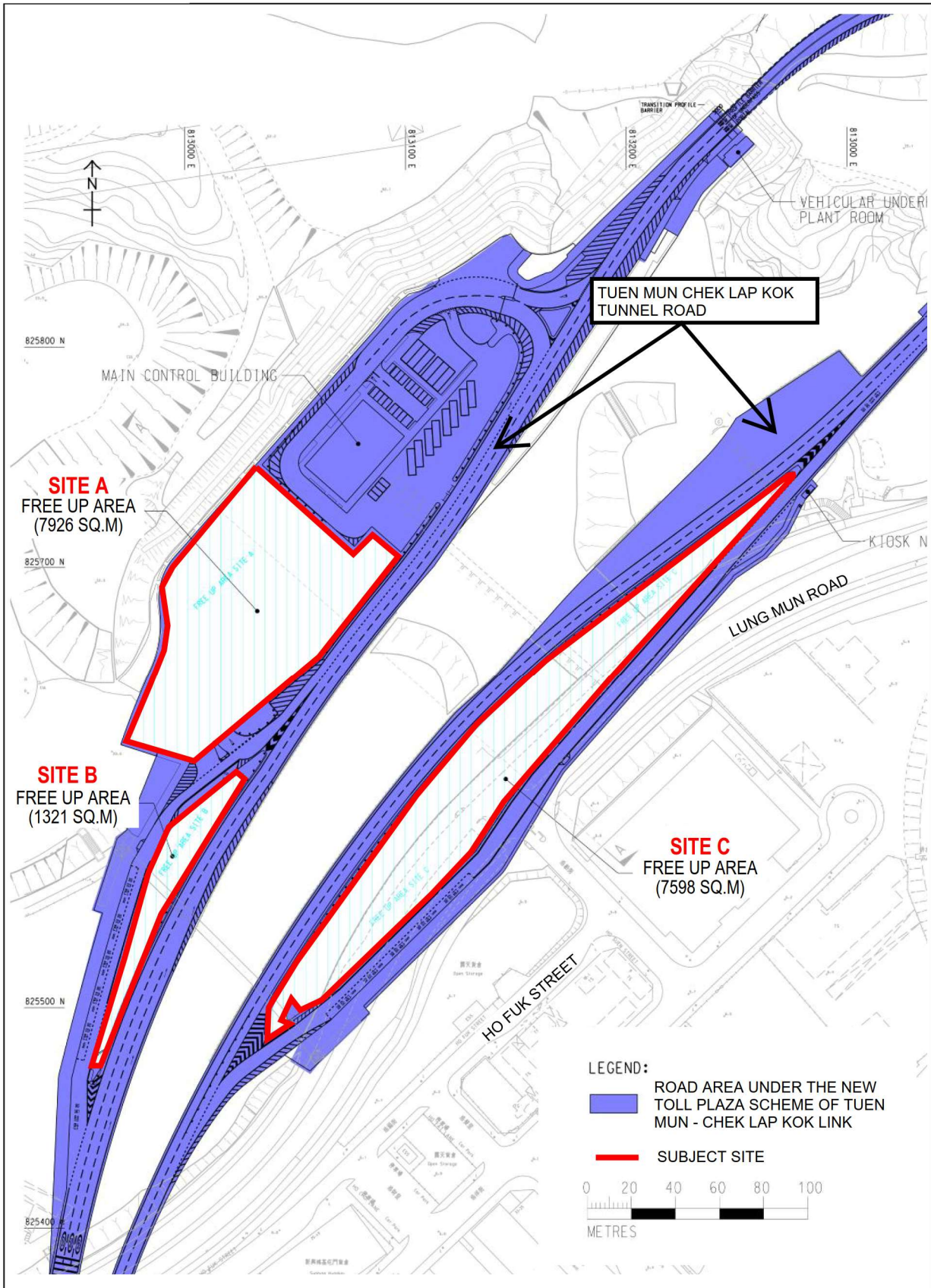
Due to tight schedule, it is highly appreciated if the above information could be available and returned to us via either fax (Fax No. 2815 5399) or email by 09 Apr 2021.

Thank you very much for your kind attention and assistance. Should you have any queries, please feel free to contact the undersigned at 3915 7148 or [cherrylee@aechk.com](mailto:cherrylee@aechk.com) and 3915 7153.

Yours sincerely,  
A handwritten signature in black ink, appearing to be 'Cathy Man'.

Cathy Man  
Principal Consultant  
CM/cl

Encl.



## Cherry Lee

---

**From:** lokamwah@epd.gov.hk  
**Sent:** Friday, August 06, 2021 10:13 AM  
**To:** Cherry Lee  
**Subject:** Re: Request for Information for Land Contamination Assessment for KMB Depot at TMCLK Free Up Areas

Dear Cherry,

According to our records, there was no record of spillage/leakage of chemical waste or chemicals for the past five years at the subject site.

Regarding the chemical waste producer registration, you may contact our Territory Control Group at 2835 1017 for making an appointment to view the records.

Regards,  
Alfred Lo  
E(MP)2  
EPD

Cherry Lee <[cherrylee@aechk.com](mailto:cherrylee@aechk.com)>

06/07/2021 14:56

To "hotline\_w@epd.gov.hk" <[hotline\\_w@epd.gov.hk](mailto:hotline_w@epd.gov.hk)>, "enquiry@epd.gov.hk" <[enquiry@epd.gov.hk](mailto:enquiry@epd.gov.hk)>  
cc

SubjectFW: Request for Information for Land Contamination Assessment for KMB Depot at TMCLK Free Up Areas

Dear Sir/Madam,

I refer to our email below and letter dated 25 Mar 2021 (see attachment).

Would you please advise whether there are any registered chemical waste producers under your record in the Subject Site, any waste disposal record, any accidental spillage record, any submission relating to land contamination assessment and any information you could provide which might be useful for our land contamination study.

It is highly appreciated if your reply on the above request could be available on or before 13 Jul 2021.

Best Regards,



**Cherry Lee – Consultant**

**Environmental Consultancy | Green & Healthy Building**

T: (852) 2815 7028 | D: (852) 3915 7153 | F: (852) 2815 5399 | E: [cherrylee@aechk.com](mailto:cherrylee@aechk.com)

**Allied Environmental Consultants Limited** Member of AEC Group (HKEX Stock Code: 8320.HK)



Fire Services Department / Management Group  
9/F, Fire Services Headquarters Building  
1 Hong Chong Road  
Tsim Sha Tsui East  
Kowloon

27/F, Overseas Trust Bank Building  
160 Gloucester Road  
Wan Chai  
Hong Kong  
T: +852 2815 7028  
F: +852 2815 5399  
[info@aechk.com](mailto:info@aechk.com)  
[www.aecg.com](http://www.aecg.com)

25 March 2021

By Post

Dear Sir/Madam,

**INSTALLATION OF DEPOT FACILITIES FOR KMB AT TUEN MUN – CHEK LAP KOK LINK (“TMCLK”)  
FREE UP AREAS  
Request for Information for Land Contamination Assessment**

We are conducting a Land Contamination Assessment study Installation of Depot Facilities for KMB at Tuen Mun Chek Lap Kok Link (“TMCLK”) Free Up Areas (Subject Site). As required by the “Practice Guide for Investigation and Remediation of Contaminated Land” published by the Environmental Protection Department of the HKSAR (EPD), information pertaining to the change of land uses/past activities/incidents/accidents at the Subject Site are required as part of the vetting process.

Of particular interests are spill and incident reports (including records of fire at the Subject Site) that we believe your Department might have record of. Furthermore, we would also like to know whether anywhere of the subject site had applied or possessed license for dangerous goods storage. We enclosed herewith a site map showing the location of the Subject Site for your reference.

Due to tight schedule, it is highly appreciated if the above information could be available and returned to us via either fax (Fax No. 2815 5399) or email by 09 Apr 2021.

Thank you very much for your kind attention and assistance. Should you have any queries, please feel free to contact the undersigned at 3915 7148 or [cherrylee@aechk.com](mailto:cherrylee@aechk.com) and 3915 7153.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Cathy Man', written over the typed name.

Cathy Man

Principal Consultant  
CM/cl

Encl.

**Allied Environmental Consultants Limited**

Member of AEC Group (HKEX Stock Code: 8320.HK)

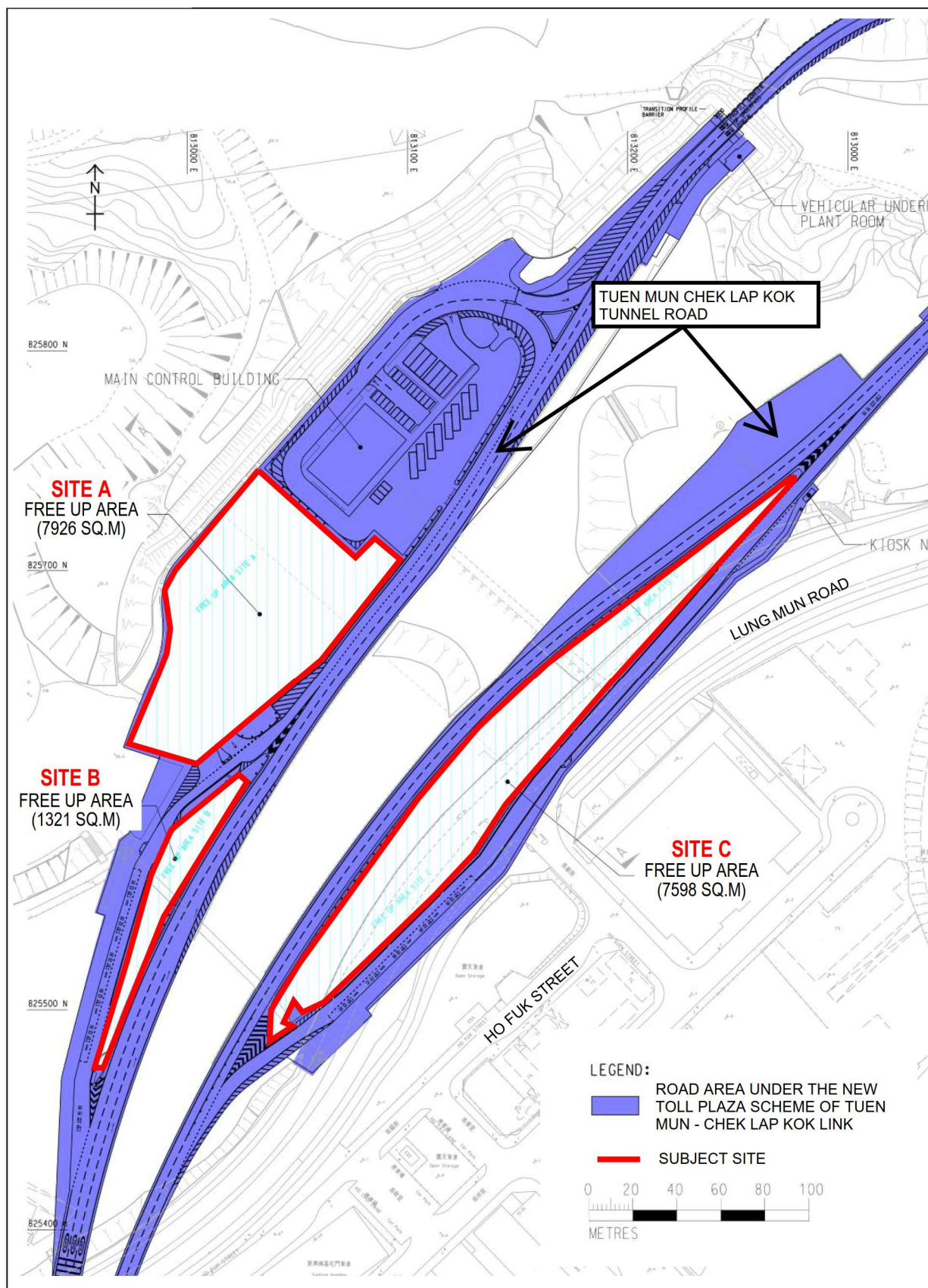
27/F, Overseas Trust Bank Building, 160 Gloucester Road, Wan Chai, Hong Kong

**沛然環境評估工程顧問有限公司**

沛然環保集團成員 (港交所股份代號: 8320.HK)

香港灣仔告士打道 160 號海外信託銀行大廈 27 樓





消防處  
香港九龍尖沙咀東部康莊道1號  
消防總部大廈



FIRE SERVICES DEPARTMENT  
FIRE SERVICES HEADQUARTERS  
BUILDING,  
No.1 Hong Chong Road,  
Tsim Sha Tsui East, Kowloon,  
Hong Kong.

本處檔號 OUR REF. : (137) in FSD GR 6-5/4 R Pt. 32  
來函檔號 YOUR REF. : [-/21-0003]  
電子郵件 E-mail : hkfsdcnq@hkfsd.gov.hk  
圖文傳真 FAX NO. : 2739 5879  
電話 TEL NO. : 2733 7741

31 March 2021

Allied Environmental Consultants Limited  
27/F, Overseas Trust Bank Building,  
160 Gloucester Road,  
Wan Chai, Hong Kong.  
**(Attn: Ms. Cathy MAN, Principal Consultant)**

*By fax (2815 5399) only*

Dear Ms. MAN,

**Installation of Depot Facilities for KMB at  
Tuen Mun – Chek Lap Kok Link ("TMCLK") Free up Areas  
Request for Information of Dangerous Goods & Incident Records**

I refer to your letter of 25.3.2021 regarding the captioned subject.

Your case is being handled, and a reply will be furnished to you as soon as possible. Please be advised that due to time lapse, this Department can only provide the following information for your requested information:

- (i) Dangerous Goods Licence Record: from the year of 1990 to present moment.
- (ii) Incident Record: Past three years of fire and special services incidents.

Please also submit the appointment letter from your client for record.

Should you have further questions, please feel free to contact the undersigned.

Yours sincerely,

for Director of Fire Services



Our Ref. [819.2124/21-0006]



Fire Services Department / Management Group  
9/F, Fire Services Headquarters Building  
1 Hong Chong Road  
Tsim Sha Tsui East  
Kowloon  
(Attn: Mr. NG Wing-chit)

27/F, Overseas Trust Bank Building  
160 Gloucester Road  
Wan Chai  
Hong Kong  
T: +852 2815 7028  
F: +852 2815 5399  
[info@aechk.com](mailto:info@aechk.com)  
[www.asecg.com](http://www.asecg.com)

22 April 2021

By Fax (2739 5879)

Dear Mr. NG,

**INSTALLATION OF DEPOT FACILITIES FOR KMB AT TUEN MUN – CHEK LAP KOK LINK (“TMCLK”)  
FREE UP AREAS  
Submission of Appointment Letter**

With reference to your letter (Ref.: (137) in FSD GR 6-5/4 R Pt.32) dated on 31 March 2021 regarding information request of dangerous goods and incident records, we are pleased to submit an Appointment Letter from our client for your record.

Thank you very much for your assistance. Should you have any queries, please feel free to contact the undersigned at 3915 7148 or our Ms. Cherry Lee ([cherrylee@aechk.com](mailto:cherrylee@aechk.com)) at 3915 7153.

Yours sincerely,

A handwritten signature in blue ink, appearing to read 'Cathy Man', is written over the typed name.

Cathy Man  
Principal Consultant  
CM/cl

Encl.

Appointment Letter

**Allied Environmental Consultants Limited**

Member of AEC Group (HKEX Stock Code: 8320.HK)

27/F, Overseas Trust Bank Building, 160 Gloucester Road, Wan Chai, Hong Kong

**沛然環境評估工程顧問有限公司**

沛然環保集團成員 (港交所股份代號: 8320.HK)

香港灣仔告士打道 160 號海外信託銀行大廈 27 樓

Our Ref : MWD/0229/21

22 April 2021

Fire Services Department  
Fire Services Headquarters Command  
Management Group (MG)  
9th Floor, Fire Services Headquarters Building,  
1 Hong Chong Road,  
Tsim Sha Tsui East, Kowloon

Attn: Mr. NG Wing Chit

(By Email & By Post)

Dear Sir,

**Appointment of Environmental Consultant  
Installation of Depot Facilities for KMB  
at Tuen Mun – Chek Lap Kok Link ('TMCLK') Free Up Areas**

We, as the project client for the captioned development, confirmed that Allied Environmental Consultants Limited is appointed as the Environmental Consultant for the captioned project.

Should you have any query, please do not hesitate to contact our Mr. Alan Fung at Tel: 2786 8847 or me at Tel: 2786 6075.

Thank you for your attention.

Yours faithfully,  
For and on behalf of  
The Kowloon Motor Bus Company (1933) Limited



Jacky Ng  
Head of Major Works Department

消防處  
香港九龍尖沙咀東部康莊道 1 號  
消防處總部大廈



FIRE SERVICES DEPARTMENT  
FIRE SERVICES HEADQUARTERS BUILDING,  
No.1 Hong Chong Road,  
Tsim Sha Tsui East, Kowloon,  
Hong Kong

本處檔號 OUR REF. : (57) in FSD GR 6-5/4 R Pt. 33  
來函檔號 YOUR REF. : [819.1879/21-0004]  
電子郵件 E-mail : hkfsdenq@hkfsd.gov.hk  
圖文傳真 FAX NO. : 2739 5879  
電話 TEL NO. : 2733 7741

26 April 2021

Allied Environmental Consultants Limited  
27/F, Overseas Trust Bank Building,  
160 Gloucester Road,  
Wan Chai, Hong Kong.  
**(Attn: Ms. Cathy MAN, Principal Consultant)**

Dear Ms. MAN,

**Installation of Depot Facilities for KMB at  
Tuen Mun – Chek Lap Kok Link (“TMCLK”) Free up Areas  
Request for Information of Dangerous Goods & Incident Records**

I refer to your letter of 25.3.2021 and subsequent letter of 22.4.2021 regarding the captioned request and reply below in response to your questions:-

1. No Dangerous Goods Licence was issued in respect of the captioned address.
2. A total of one incident record was found at the subject location. Please refer to **Appendix A** for details.

If you have further questions, please feel free to contact the undersigned.

Yours sincerely,

(NG Wing-chit)  
for Director of Fire Services

**Installation of Depot Facilities for KMB at  
Tuen Mun – Chek Lap Kok Link (“TMCLK”) Free up Areas  
Request for Information of Dangerous Goods & Incident Records**

No.	Date	Type of Incident	Address
1.	7.1.2020	Special Service (Sewer rescue)	Tuen Mun – Chek Lap Kok Link Construction



Planning Department  
Tuen Mun and Yuen Long West District Planning Office  
14/F, Sha Tin Government Offices  
New Territories

27/F, Overseas Trust Bank Building  
160 Gloucester Road  
Wan Chai  
Hong Kong  
T: +852 2815 7028  
F: +852 2815 5399  
[info@aechk.com](mailto:info@aechk.com)  
[www.aecg.com](http://www.aecg.com)

25 March 2021

By Post

Dear Sir/Madam,

**INSTALLATION OF DEPOT FACILITIES FOR KMB AT TUEN MUN – CHEK LAP KOK LINK ("TMCLK")  
FREE UP AREAS  
Request for Information for Land Contamination Assessment**

We are conducting a Land Contamination Assessment study for Installation of Depot Facilities for KMB at Tuen Mun Chek Lap Kok Link ("TMCLK") Free Up Areas (Subject Site). As required by the "Practice Guide for Investigation and Remediation of Contaminated Land" published by the Environmental Protection Department of the HKSAR (EPD), information pertaining to the change of land uses/past activities/incidents/accidents at the Subject Site are required as part of the vetting process.

Of particular interests are current and historical site information, any change on the land use and any information you could provide that might be useful for our study. We enclosed herewith a site map showing the location of the subject site for your reference.

Due to tight schedule, it is highly appreciated if the above information could be available and returned to us via either fax (Fax No. 2815 5399) or email by 09 Apr 2021.

Thank you very much for your kind attention and assistance. Should you have any queries, please feel free to contact the undersigned at 3915 7148 or [cherrylee@aechk.com](mailto:cherrylee@aechk.com) and 3915 7153.

Yours sincerely,

A handwritten signature in black ink, appearing to be 'Cathy Man', written over a circular stamp or seal.

Cathy Man

Principal Consultant

CM/cl

Encl.

**Allied Environmental Consultants Limited**

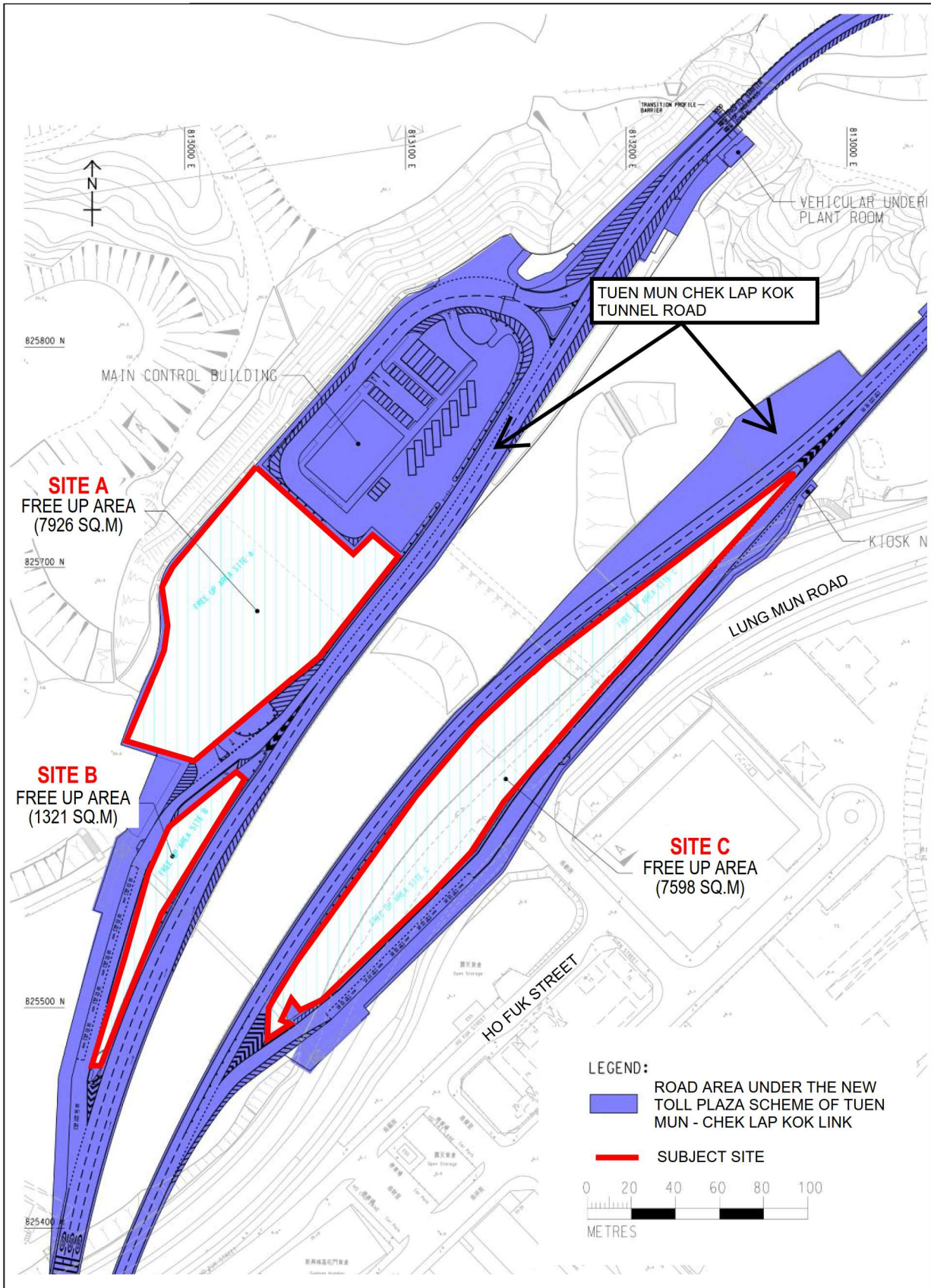
Member of AEC Group (HKEX Stock Code: 8320.HK)

27/F, Overseas Trust Bank Building, 160 Gloucester Road, Wan Chai, Hong Kong

**沛然環境評估工程顧問有限公司**

沛然環保集團成員 (港交所股份代號: 8320.HK)

香港灣仔告士打道 160 號海外信託銀行大廈 27 樓





**規 劃 署**

屯門及元朗西規劃處  
新界沙田上禾輦路1號  
沙田政府合署14樓



**By Fax (2815 5399)**  
**Planning Department**

Tuen Mun and Yuen Long West  
District Planning Office  
14/F, Sha Tin Government Offices,  
1 Sheung Wo Che Road, Sha Tin, N.T.

本函檔號 Your Reference [-/21-0004] and [819.2124/21-0001]  
本署檔號 Our Reference ( ) in PDTM 4/5/48  
電話號碼 Tel. No.: 2158 6333  
傳真機號碼 Fax No.: 2489 9711

13 April 2021

Allied Environmental Consultants Limited  
27/F, Overseas Trust Bank Building  
160 Gloucester Road  
Wan Chai, Hong Kong  
(Attn.: Ms Cathy MAN)

Dear Ms MAN,

**Installation of Depot Facilities for KMB at  
Tuen Mun – Chek Lap Kok Link ("TMCLK") Free Up Areas  
Request for Information for Land Contamination Assessment  
and Planned Construction Activities and Planned Development**

I refer to your letters dated 25 March and 8 April 2021 regarding request for information.

You are advised to visit Town Planning Board's Statutory Planning Portal 2 at <http://www2.ozp.tpb.gov.hk/gos> for information relating to the subject site and the surrounding area.

Yours sincerely,

( Ms Angela LO )  
for District Planning Officer/  
Tuen Mun and Yuen Long West  
Planning Department

C.C.  
Site Record

CK/AL/al



Lands Department  
District Lands Office, Tuen Mun  
6/F and 7/F, Tuen Mun Government Offices,  
1 Tuen Hi Road, Tuen Mun,  
New Territories

27/F, Overseas Trust Bank Building  
160 Gloucester Road  
Wan Chai  
Hong Kong  
T: +852 2815 7028  
F: +852 2815 5399  
[info@aechk.com](mailto:info@aechk.com)  
[www.aecg.com](http://www.aecg.com)

16 August 2021

By Fax (2459 0795)

Dear Sir/Madam,

**INSTALLATION OF DEPOT FACILITIES FOR KMB AT TUEN MUN – CHEK LAP KOK LINK (“TMCLK”) FREE UP AREAS**

**Request for Information for Land Contamination Assessment**

We are conducting a Land Contamination Assessment study for Installation of Depot Facilities for KMB at Tuen Mun Chek Lap Kok Link (“TMCLK”) Free Up Areas (Subject Site). As required by the “Practice Guide for Investigation and Remediation of Contaminated Land” published by the Environmental Protection Department of the HKSAR (EPD), information pertaining to the change of land uses/past activities/incidents/accidents at the Subject Site are required as part of the vetting process.

Of particular interests are information on spillage accidents, illegal/contaminating land uses or uncontrolled dumping uses, current and historical land use information, and any information you could provide which might be useful for our study. We enclosed herewith a site map showing the location of the subject site for your reference.

Due to tight schedule, it is highly appreciated if the above information could be available and returned to us via either fax (Fax No. 2815 5399) or email by 30 Aug 2021.

Thank you very much for your kind attention and assistance. Should you have any queries, please feel free to contact the undersigned at 3915 7153 or [cherrylee@aechk.com](mailto:cherrylee@aechk.com).

Yours sincerely,

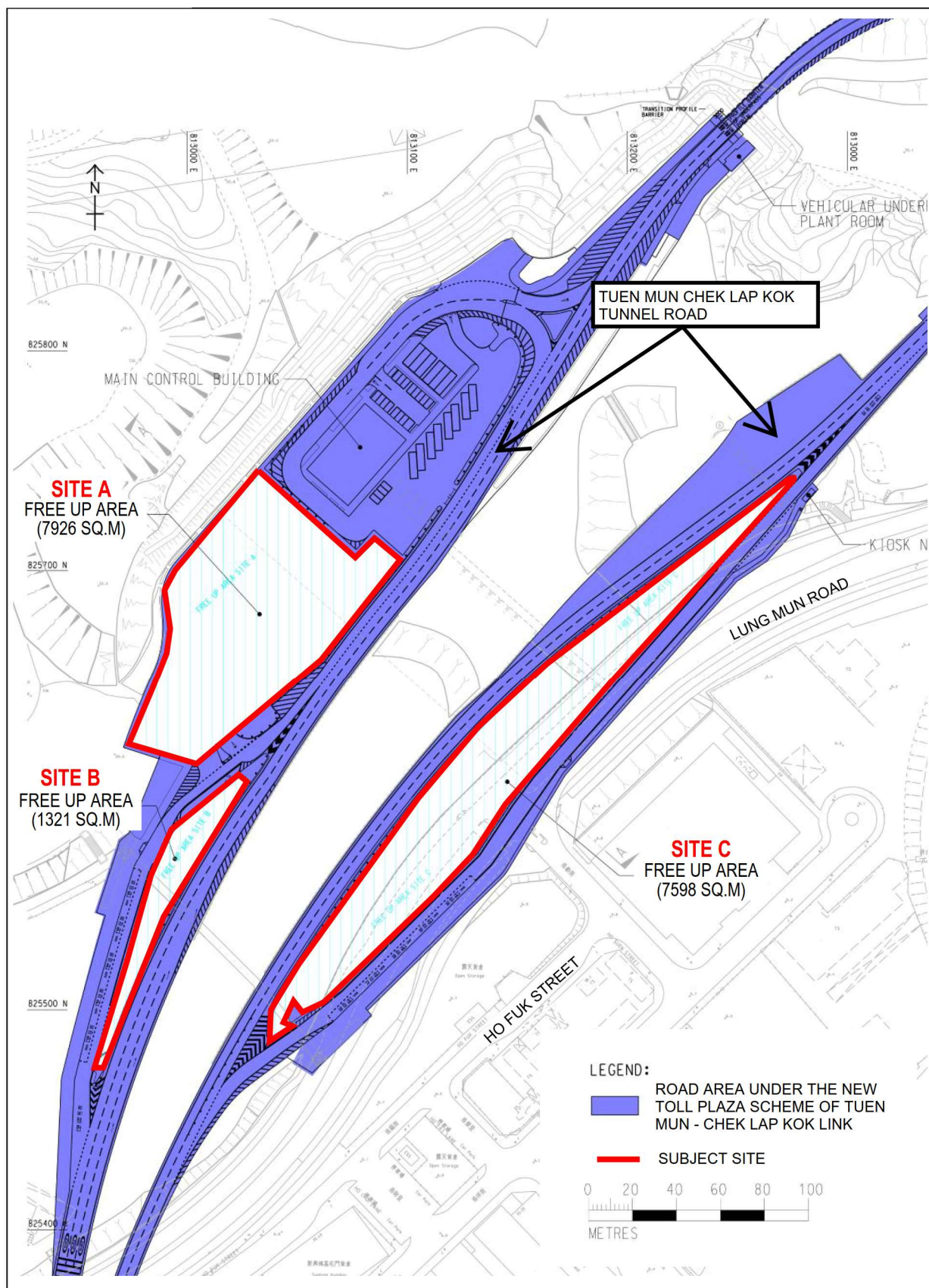
A handwritten signature in black ink, appearing to read 'Cathy Man'.

Cathy Man

Principal Consultant

CM/cl

Encl.



電話 Tel: 2451 3130  
圖文傳真 Fax: 2459 0795  
電郵地址 Email: [estmwl@landsd.gov.hk](mailto:estmwl@landsd.gov.hk)  
本處檔號 Our Ref: (9) in DLOTM 22/MAT/20 Pt.3  
(來函請註明本函檔號 Please quote this reference in your reply)  
來函檔號 Your Ref: 1906/21-0007



地政總署  
屯門地政處  
DISTRICT LANDS OFFICE,  
TUEN MUN  
LANDS DEPARTMENT

我們矢志努力不懈，提供盡善盡美的土地行政服務。  
We strive to achieve excellence in land administration.

新界屯門屯門路一號屯門政府合署六樓  
6/F., TUEN MUN GOVERNMENT OFFICES  
1 TUEN HI ROAD, TUEN MUN, N.T.  
網址 Web Site: [www.landsgov.hk](http://www.landsgov.hk)

Allied Environmental Consultants Limited  
27/F, Overseas Trust Bank Building,  
160 Gloucester Road,  
Wan Chai,  
Hong Kong

**By Post & Fax (2815 5399)**

24 August 2021

(Attn.: Ms. Cathy MAN)

Dear Madam,

**Request for Information for Land Contamination Assessment  
Installation of Depot Facilities for KMB at Tuen Mun – Chek Lap Kok Link ("TMCLK")  
Tuen Mun, New Territories**

I refer to your letter dated 16 August 2021.

As this office does not hold such information you requested, you are advised to approach the Environmental Department and Highways Department for information.

Should you have any enquiry, please contact the undersigned at 2451 3130.

Yours faithfully,

(Priscilla TSO)

for District Lands Officer, Tuen Mun

本信息及其任何附件只供收件人使用，而其中可能載有機密及／或屬法律特權的資料。敬請注意，未經許可，不得擅自披露或使用本信息。倘本信息誤傳給你，請立即通知本署，並刪除或銷毀本信息。本署絕不承擔因使用本信息而引致的任何法律責任。

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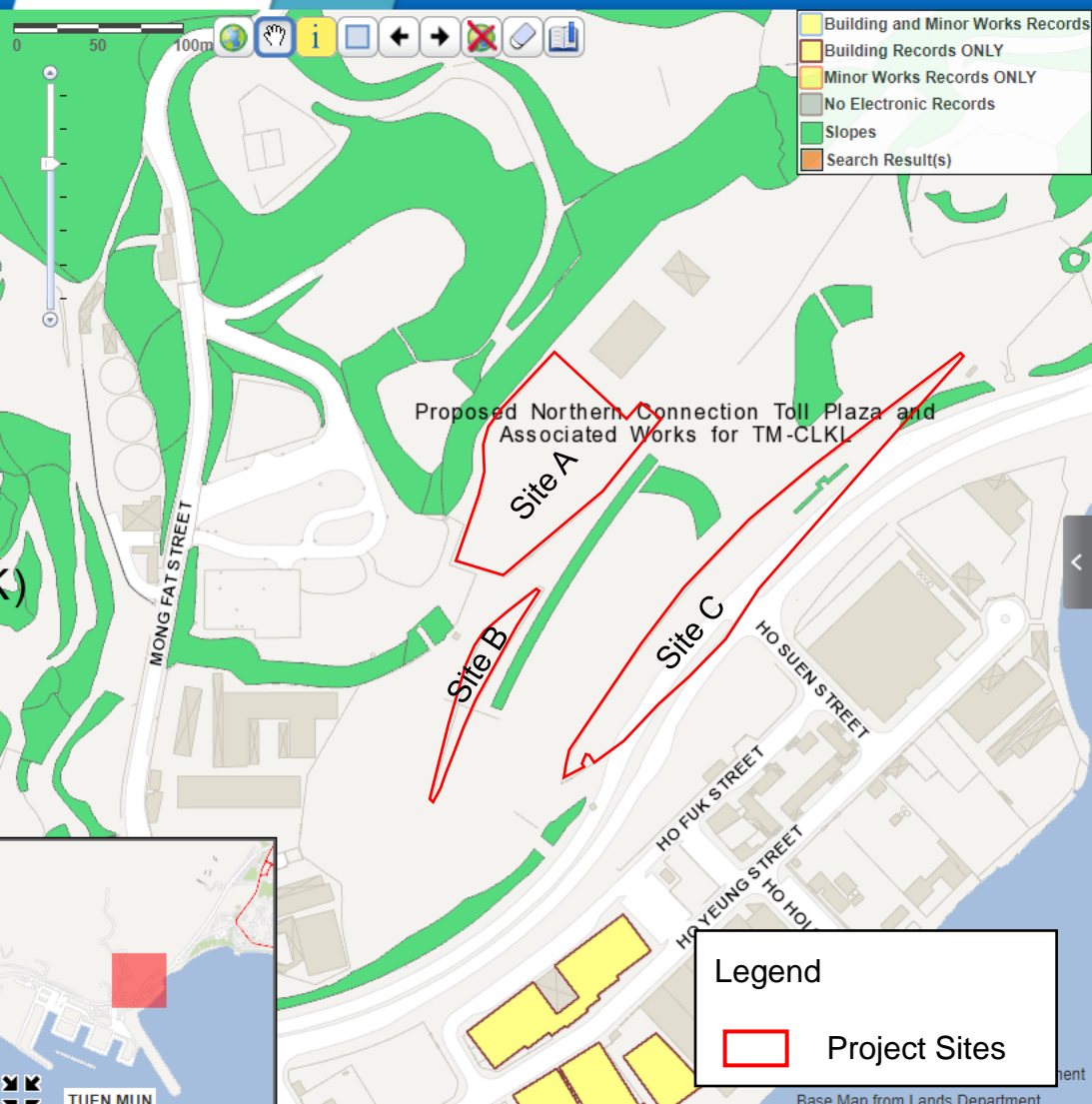
Project No.: 1906

Site Appraisal Report for Proposed Bus Depots with Ancillary Public Utility Installation (Electricity Substation) in area shown as 'Road', Government Land in D.D. 138 and D.D. 300, Tuen Mun, New Territories (near the building at 20 Tuen Mun Chek Lap Kok Tunnel Road)

---

## ***Appendix C – Screen Capture of BRAVO***





Building

The Slope

Location Search

Advanced Search

File Type

☒ All
 ☒ Building
 ☒ Structural
 ☒ Drainage
 ☒ Alterations & Additions
 ☒ Site Formation
 ☒ Minor Works
 ☒ Existing Buildings
 ☒ Others

🔍

Reset

Plan / Document / MW	File Ref.	Address	Building Name	Lot No.	File Type	OP No.	Modification	Remarks
	<a href="#">2/7612/96/10</a>	201-205 LUNG MUN ROAD		TMTL 393	Building	<a href="#">46/98/P&amp;R/O</a>	<a href="#">View</a>	
	<a href="#">2/7612/96/11</a>	201-205 LUNG MUN ROAD		TMTL 393	Building	<a href="#">5/99/P&amp;R/O</a>	<a href="#">View</a>	
	<a href="#">2/7612/96/12</a>	201-205 LUNG MUN ROAD		TMTL 393	Building	<a href="#">18/99/P&amp;R/O</a>	<a href="#">View</a>	
	<a href="#">2/7612/96/13</a>	201-205 LUNG MUN ROAD		TMTL 393	Building	<a href="#">View</a>	<a href="#">View</a>	
	<a href="#">2/7612/96/14</a>	201-205 LUNG MUN ROAD		TMTL 393	Building	<a href="#">38/98/P&amp;R/O</a>	<a href="#">View</a>	
	<a href="#">2/7612/96/16</a>	201-205 LUNG MUN ROAD		TMTL 393	Building	<a href="#">View</a>	<a href="#">View</a>	
	<a href="#">2/7612/96/18</a>	201-205 LUNG MUN ROAD		TMTL 393	Building	<a href="#">45/98/P&amp;R/O</a>	<a href="#">View</a>	
	<a href="#">2/7612/96/</a>	201-205 LUNG MUN		TMTL	Building	<a href="#">View</a>	<a href="#">View</a>	
							<a href="#">View</a>	
							<a href="#">View</a>	
	<a href="#">2/7612/96/</a>	201-205 LUNG MUN		TMTL	Building	<a href="#">PB3/2000/C</a>	<a href="#">View</a>	

There is nether of building, structural, drainage, alternation & additions, site formation, minor works nor existing building available at the Subject Site.



Project No.: 1906

Site Appraisal Report for Proposed Bus Depots with Ancillary Public Utility Installation (Electricity Substation) in area shown as 'Road', Government Land in D.D. 138 and D.D. 300, Tuen Mun, New Territories (near the building at 20 Tuen Mun Chek Lap Kok Tunnel Road)

---

## ***Appendix D – Chemical Waste Producers Records***

Project No. 1906

Proposed Bus Depots with Ancillary Public Utility Installation (Electricity Substation) in area shown as 'Road', Government Land in D.D. 138 and D.D. 300, Tuen Mun, New Territories (near the building at 20 Tuen Mun Chek Lap Kok Tunnel Road)

Appendix D

**Valid WPN as of 17.02.2021**

<b>Waste Producer Name</b>	<b>Premises Address</b>	<b>Nature of Business</b>
Gammon Construction Limited	Construction site of "TM-CLKL" -northern Connection Tunnel building, electrical and Mechanical Works (Contract No. HY/2017/10)	Civil Engineering

**No invalid WPN as of 17.02.2021**

Project No.: 1906

Site Appraisal Report for Proposed Bus Depots with Ancillary Public Utility Installation (Electricity Substation) in area shown as 'Road', Government Land in D.D. 138 and D.D. 300, Tuen Mun, New Territories (near the building at 20 Tuen Mun Chek Lap Kok Tunnel Road)

---

## ***Appendix E – Site Walkover Checklist***

# Annex C1

## Site Walkover Checklist (30<sup>th</sup> April 2021)

### GENERAL SITE DETAILS

SITE OWNER/CLIENT Kowloon Motor Bus Company (1933) Limited

PROPERTY ADDRESS Tuen Mun – Chek Lap Kok Link Free Up Areas

### PERSON CONDUCTING THE QUESTIONNAIRE

NAME Cherry Lee

POSITION Consultant (Allied Environmental Consultants Limited)

### AUTHORIZED OWNER/CLIENT REPRESENTATIVE (IF APPLICABLE)

NAME Alan Fung

POSITION Senior Officer – Major Works

TELEPHONE 2786 8847

### SITE ACTIVITIES

Briefly describe activities carried out on site, including types of products/chemicals/materials handled.

**Obtain a flow schematic if possible.**

Number of employees:	Full-time:	<u>Not applicable</u>
	Part-time:	<u>Not applicable</u>
	Temporary/Seasonal:	<u>Not applicable</u>
Maximum no. of people on site at any time:		<u>Not applicable</u>
Typical hours of operation:		<u>Not applicable</u>
Number of shifts:		<u>Not applicable</u>
Days per week:		<u>Not applicable</u>
Weeks per year:		<u>Not applicable</u>
Scheduled plant shut-down:		<u>Not applicable</u>

Detail the main sources of energy at the site:

Gas	<del>Yes</del> /No
Electricity	Yes/ <del>No</del>
Coal	<del>Yes</del> /No
Oil	<del>Yes</del> /No
Other	<del>Yes</del> /No

## **SITE DESCRIPTION**

This section is intended to gather information on site setting and environmental receptors on, adjacent or close to the site.

What is the total site area:	Site A: Approximately 7,9262 m <sup>2</sup> Site B: Approximately 1,041 m <sup>2</sup> Site C: Approximately 7,598 m <sup>2</sup>
------------------------------	---

What area of the site is covered by buildings (%):	0%
--	----

Please list all current and previous owners/occupiers if possible. Current Occupier : Kowloon Motor Bus Company (1933) Limited	Lands Department
---	------------------

Is a site plan available? If yes, please attach.	<del>Yes</del> /No
--	--------------------

Are there any other parties on site as tenants or sub-tenants?	<del>Yes</del> /No
--	--------------------

If yes, identify those parties: \_\_\_\_\_

Describe surrounding land use (residential, industrial, rural, etc.) and identify neighbouring facilities and types of industry.

North:	Greenery, slope and toll main control building of Tuen Mun -Chek Lap Kok Link
--------	---

South:	Tuen Mun -Chek Lap Kok Tunnel Road, industrial building developments at further south
--------	---

East:	Toll plaza of the Tuen Mun -Chek Lap Kok Link
-------	---

West:	Greenery and Closed Pillar Point Valley Landfill at further west
-------	--

## Annex C1 – Site Walkover Checklist (Page 43)

Describe the topography of the area (flat terrain, rolling hills, mountains, by a large body of water, vegetation, etc.).

Site A and B: Flat terrain; Site C: located on an elevated road

State the size and location of the nearest residential communities.

No residential development nearby

Are there any sensitive habitats nearby, such as nature reserves, parks, wetlands or sites of special scientific interest?

N/A

### Questionnaire with Existing/Previous Site Owner or Occupier

Ref.		Yes/No	Notes
1.	What are the main activities/operations at the above address?	-	The entire Project Sites are vacant.
2.	How long have you been occupying the site?	-	Since 2021
3.	Were you the first occupant on site? (If yes, what was the usage of the site prior to occupancy?)	No	-
4.	Prior to your occupancy, who occupied the site?		Lands Department
5.	What were the main activities/operations during their occupancy?	-	It is part of the toll plaza of the TMCLKL.
6.	Have there been any major changes in operations carried out at the site in the last 10 years?	No	-
7.	Have any polluting activities been carried out in the vicinity of the site in the past?	-	No information
8.	To the best of your knowledge, has the site ever been used as a petrol filling station/car service garage?	No	-
9.	Are there any boreholes/wells or natural springs either on the site or in the surrounding area?	-	No information
10.	Do you have any registered hazardous installations as defined under relevant ordinances? (If yes, please provide details.)	-	No information
11.	Are any chemicals used in your daily operations? (If yes, please provide details.)	-	No information
	• Where do you store these chemicals?	-	No information
12.	Material inventory lists, including quantities and locations available? (If yes, how often are these inventories updated?)	-	No information
13.	Has the facility produced a separate hazardous substance inventory?	No	-



14.	Have there ever been any incidents or accidents (e.g. spills, fires, injuries, etc.) involving any of these materials? (If yes, please provide details.)	-	No information
15.	How are materials received (e.g. rail, truck, etc.) and stored on site (e.g. drums, tanks, carboys, bags, silos, cisterns, vaults and cylinders)?	No	The entire Project Sites are vacant.
16.	Do you have any underground storage tanks? (If yes, please provide details.)	No	-
	▪ How many underground storage tanks do you have on site?	No	-
	▪ What are the tanks constructed of?	-	Not applicable
	▪ What are the contents of these tanks?	-	Not applicable
	▪ Are the pipelines above or below ground?	-	Not applicable
	▪ If the pipelines are below ground, has any leak and integrity testing been performed?	-	Not applicable
	▪ Have there been any spills associated with these tanks?	-	Not applicable
17.	Are there any disused underground storage tanks?	No	-
18.	Do you have regular check for any spillage and monitoring of chemicals handled? (If yes, please provide details.)	Not applicable	-
19.	How are the wastes disposed of?	-	Not applicable
20.	Have you ever received any notices of violation of environmental regulations or received public complaints? (If yes, please provide details.)	-	No information
21.	Have any spills occurred on site? (If yes, please provide details.)	-	No information
	• When did the spill occur?	-	No information
	• What were the substances spilled?	-	No information
	• What was the quantity of material spilled?	-	No information
	• Did you notify the relevant departments of the spill?	-	No information
	• What were the actions taken to clean up the spill?	-	No information
	• What were the areas affected?	-	No information
22.	Do you have any records of major renovation of your site or rearrangement of underground utilities, pipe work/underground tanks (If yes, please provide details.)	-	No information
23.	Have disused underground tanks been removed or otherwise secured (e.g. concrete, sand, etc.)?	-	No information
24.	Are there any known contaminations on site? (If yes, please provide details.)	No	
25.	Has the site ever been remediated? (If yes, please provide details.)	No	

### Observations

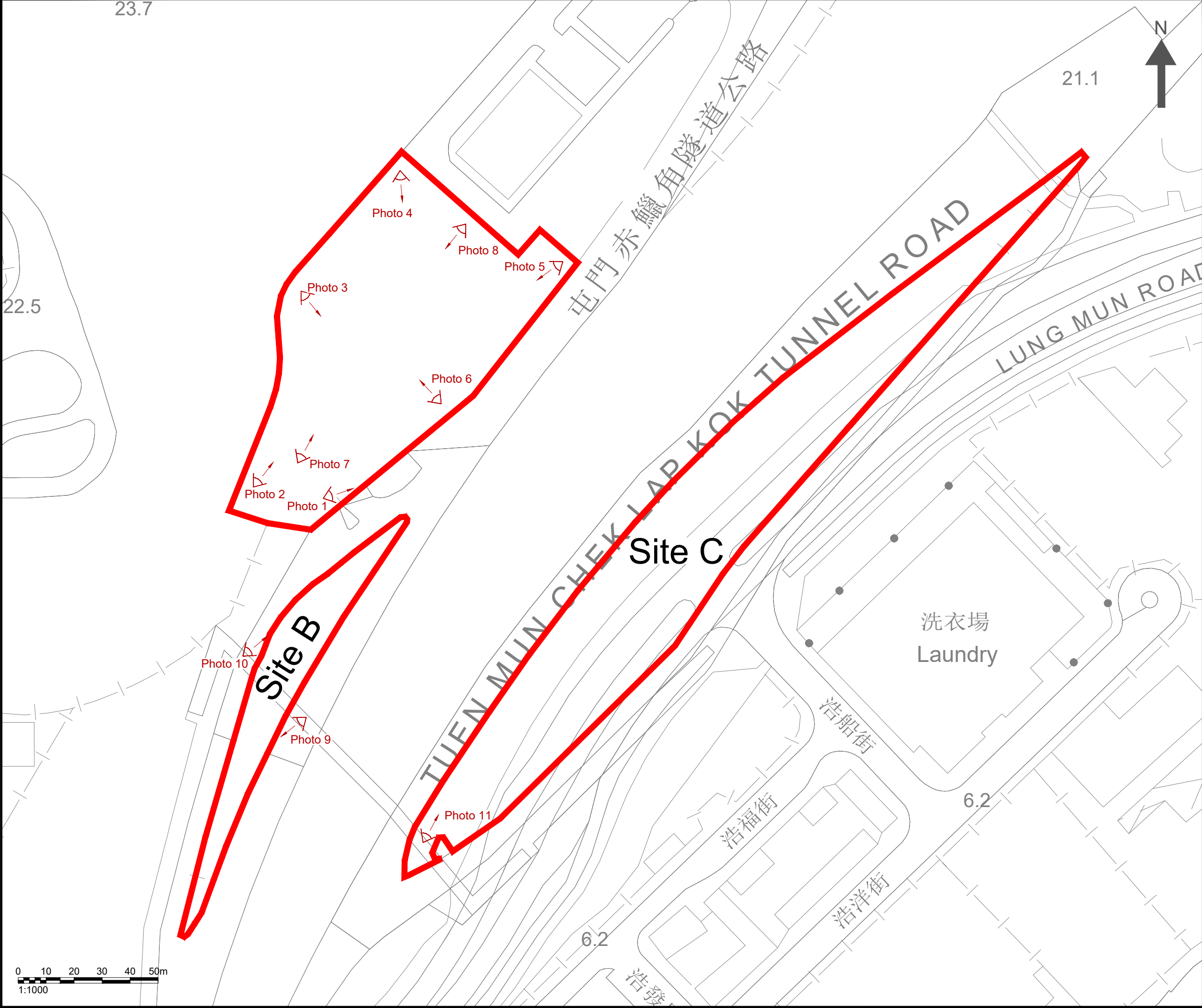
1.	Are chemical storage areas provided with secondary containment (i.e. bund walls and floors)?	No	The entire Project Sites are vacant.
2.	What are the conditions of the bund walls and floors?	No	The entire Project Sites are vacant.
3.	Are any surface water drains located near to drum storage and unloading areas?	No	
4.	Are any solid or liquid waste (other than wastewater) generated at the site? (If yes, please provide details.)	-	The entire Project Sites are vacant.
5.	Is there a storage site for the wastes?	No	-
6.	Is there an on-site landfill?	No	The entire Project Sites are vacant.
7.	Were any stressed vegetation noted on site during the site reconnaissance? (If yes, please indicate location and approximate size.)	No	
8.	Were any stained surfaces noted on-site during the site reconnaissance? (If yes, please provide details.)	No	The entire Project Sites are vacant.
9.	Are there any potential off-site sources of contamination?	-	No information
10.	Does the site have any equipment which might contain polychlorinated biphenyls (PCBs)?	No	The entire Project Sites are vacant.
11.	Are there any sumps, effluent pits, interceptors or lagoons on site?	No	The entire Project Sites are vacant.
12.	Any noticeable odours during site walkover?	No	-
13.	Are any of the following chemicals used on site: fuels, lubricating oils, hydraulic fluids, cleaning solvents, used chemical solutions, acids, anti-corrosive paints, thinners, coal, ash, oily tanks and bilge sludge, metal wastes, wood preservatives and polyurethane foam?	No	The entire Project Sites are vacant.

Project No.: 1906


Site Appraisal Report for Proposed Bus Depots with Ancillary Public Utility Installation (Electricity Substation) in area shown as 'Road', Government Land in D.D. 138 and D.D. 300, Tuen Mun, New Territories (near the building at 20 Tuen Mun Chek Lap Kok Tunnel Road)

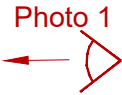
---

## ***Appendix F – Site Visit Photo Records***



NOTES :

 PROJECT SITES

 PHOTO VIEW POINT

Consultant



**Allied Environmental Consultants Limited**

Project No. : 1906

Drawing By : CL

Project :  
PROPOSED BUS DEPOTS WITH ANCILLARY  
PUBLIC UTILITY INSTALLATION  
(ELECTRICITY SUBSTATION) IN AREA  
SHOWN AS 'ROAD', GOVERNMENT LAND IN  
D.D. 138 AND D.D. 300, TUEN MUN, NEW  
TERRITORIES (NEAR THE BUILDING AT 20  
TUEN MUN CHEK LAP KOK TUNNEL ROAD)

Drawing Title :  
PHOTOLOG LOCATION

Drawing No : APPENDIX F	Revision : 0
Scale : AS SHOWN	Date : AUG 2021

DO NOT SCALE OFF DRAWING. THIS DRAWING IS NOT FOR CONSTRUCTION  
PURPOSES UNLESS EXPRESSLY STATED.  
ALL RIGHTS RESERVED AND REPRODUCTION IN ANY FORM MUST BE  
APPROVED BY ALLIED ENVIRONMENTAL CONSULTANTS LIMITED.



Project No. 1906

Proposed Bus Depots with Ancillary Public Utility Installation (Electricity Substation) in area shown as 'Road', Government Land in D.D. 138 and D.D. 300, Tuen Mun, New Territories (near the building at 20 Tuen Mun Chek Lap Kok Tunnel Road)

Appendix F



Photo 1: Entrance of the Site A



Photo 2: Overview of Site A (From Southwest View)



Photo 3: Overview of Site A (From Northwest View)

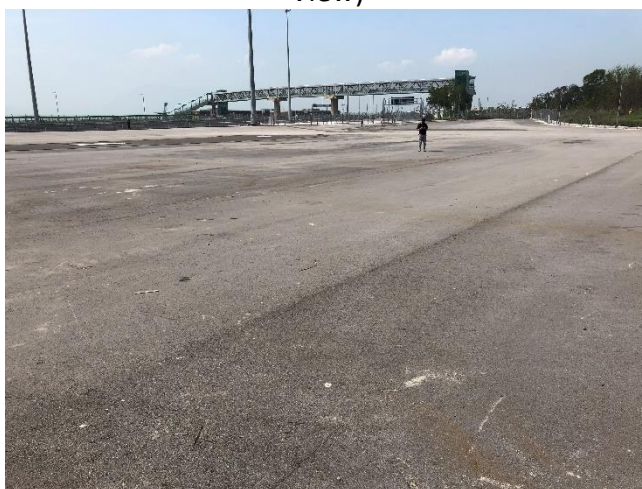


Photo 4: Overview of Site A (From North View)



Photo 5: Overview of Site A (From Northeast View)



Photo 6: Overview of Site A (From Southeast View)





Photo 7: Drainage within the Site A



Photo 8: Drainage within the Site A



Photo 9: Overview of Site B (Southwestern portion)



Photo 10: General View of Site B (Northeastern portion)



Photo 11: General View of Site C



Project No.: 1906

Site Appraisal Report for Proposed Bus Depots with Ancillary Public Utility Installation (Electricity Substation) in area shown as 'Road', Government Land in D.D. 138 and D.D. 300, Tuen Mun, New Territories (near the building at 20 Tuen Mun Chek Lap Kok Tunnel Road)

---

## ***Appendix G –Correspondence from PlanD***



Ms. LO Sum Yuen, Angela  
Planning Department  
Tuen Mun and Yuen Long West District Planning  
Office  
14/F, Sha Tin Government Offices, 1 Sheung Wo Che  
Road, Sha Tin, NT

27/F, Overseas Trust Bank Building  
160 Gloucester Road  
Wan Chai  
Hong Kong  
T: +852 2815 7028  
F: +852 2815 5399  
[info@aechk.com](mailto:info@aechk.com)  
[www.asecg.com](http://www.asecg.com)

8 April 2021

By Fax & E-mail

Dear Sir / Madam,

**INSTALLATION OF DEPOT FACILITIES FOR THE KOWLOON MOTOR BUS CO. (1933) LTD. AT TUEN MUN –  
CHEK LAP KOK LINK("TMCLK") FREE UP AREAS  
REQUEST FOR INFORMATION - PLANNED CONSTRUCTION ACTIVITIES AND PLANNED DEVELOPMENTS**

We are an environmental consultant commissioned by the Kowloon Motor Bus Co.(1933) Ltd. to conduct the Environmental Assessment study for the captioned project.

In order to have a precise assessment, it would be grateful if you could advise whether there is any construction work, within 300m/ 500m from the site boundary of the captioned project, as shown in the enclosed figure.

Please provide the following information, if any:

- Any committed/planned development(s) as potential environment sensitive uses (e.g. offices, residential uses, educational uses etc.);
- Location and site boundary of the committed/ planned development; and
- Construction works programme and completion year.

Due to tight programme of the captioned project, it is highly appreciated if your reply on the above request could be available **on or before 23 April 2021.**

Thank you very much for your assistance. Should you have any queries, please feel free to contact the undersigned at 3915 7148 or Ms. Jamie KAM ([jamiiekam@aechk.com](mailto:jamiiekam@aechk.com)) at 3915 7163.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Cathy Man'.

Cathy Man  
Principle Consultant  
([cm@aechk.com](mailto:cm@aechk.com))  
CM/jk

Encl.

cc. KMB (Attn: Mr. Jacky NG & Mr. Alan FUNG) – by email (w/e)

**規 劃 署**

屯門及元朗西規劃處  
新界沙田上禾輦路1號  
沙田政府合署14樓



**By Fax (2815 5399)**  
**Planning Department**

Tuen Mun and Yuen Long West  
District Planning Office  
14/F, Sha Tin Government Offices,  
1 Sheung Wo Che Road, Sha Tin, N.T.

本函檔號 Your Reference [-/21-0004] and [819.2124/21-0001]  
本署檔號 Our Reference ( ) in PDTM 4/5/48  
電話號碼 Tel. No.: 2158 6333  
傳真機號碼 Fax No.: 2489 9711

13 April 2021

Allied Environmental Consultants Limited  
27/F, Overseas Trust Bank Building  
160 Gloucester Road  
Wan Chai, Hong Kong  
(Attn.: Ms Cathy MAN)

Dear Ms MAN,

**Installation of Depot Facilities for KMB at  
Tuen Mun – Chek Lap Kok Link ("TMCLK") Free Up Areas  
Request for Information for Land Contamination Assessment  
and Planned Construction Activities and Planned Development**

I refer to your letters dated 25 March and 8 April 2021 regarding request for information.

You are advised to visit Town Planning Board's Statutory Planning Portal 2 at <http://www2.ozp.tpb.gov.hk/gos> for information relating to the subject site and the surrounding area.

Yours sincerely,

( Ms Angela LO )  
for District Planning Officer/  
Tuen Mun and Yuen Long West  
Planning Department

C.C.  
Site Record

CK/AL/al

Project No.: 1906

Site Appraisal Report for Proposed Bus Depots with Ancillary Public Utility Installation (Electricity Substation) in area shown as 'Road', Government Land in D.D. 138 and D.D. 300, Tuen Mun, New Territories (near the building at 20 Tuen Mun Chek Lap Kok Tunnel Road)

---

## ***Appendix H –Master Layout Plan of Proposed Development***

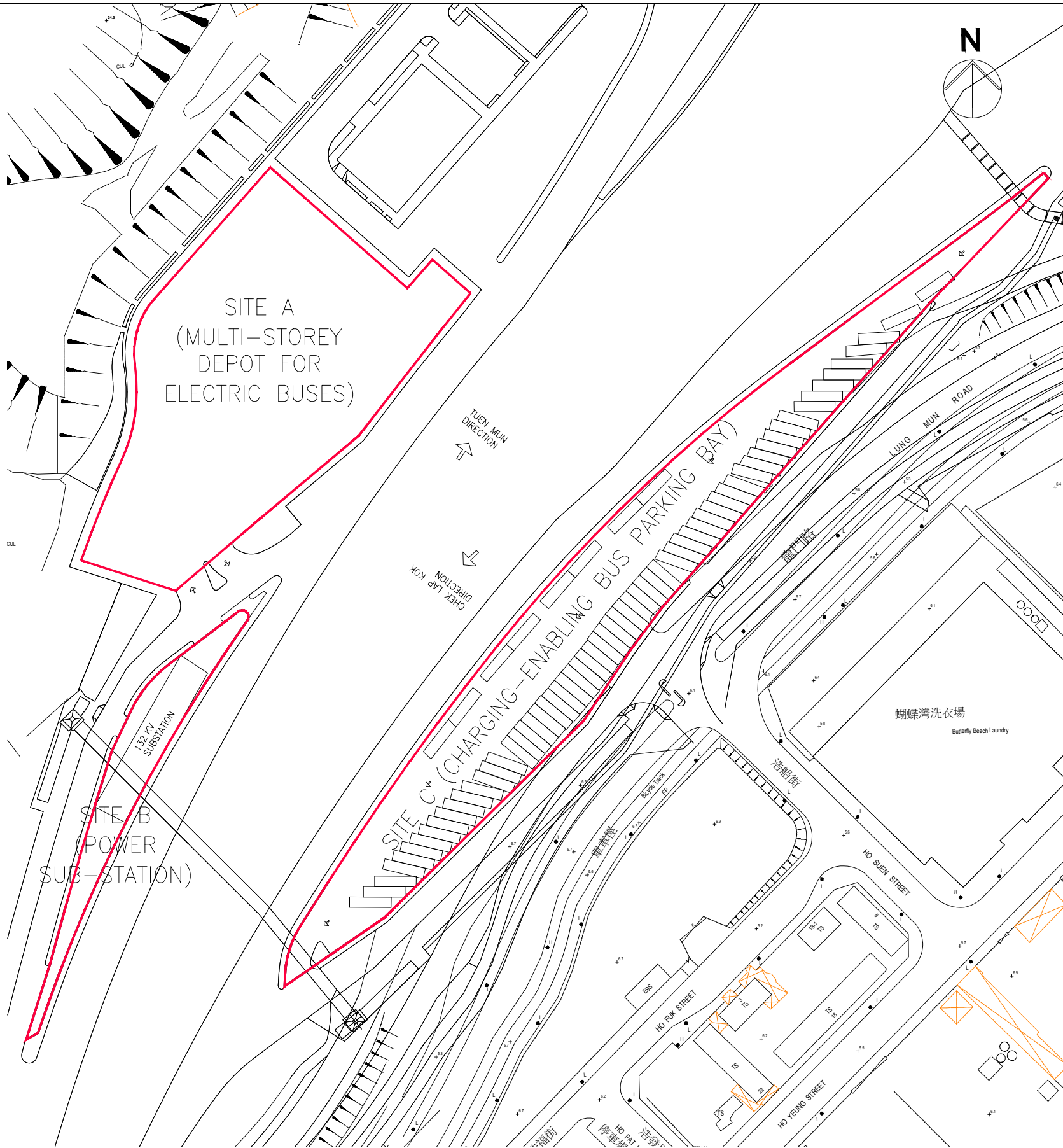
GROSS FLOOR AREA & SITE COVERAGE CALCULATION – SITE A				
PROPOSED SITE USAGE			MULTI–STOREY DEPOT FOR ELECTRIC BUSES	
SITE CLASSIFICATION			CLASS A	
SITE AREA			7926 M2	
SITE COVERAGE			G/F–1/F: 93.58% (FIRST 15M) 2/F–R/F: 60%	
BUILDING HEIGHT			82.5M (FLOOR LEVEL OF G/F TO FLOOR LEVEL OF R/F)	
PERMITTED PLOT RATIO UNDER B(P)R			15	
NON–DOMESTIC GFA	GF	7417 M2	57845.32 M2	
	1F	7417 M2		
	2F	4755.6 M2		
	3F–10F	4755.6 M2		
	RF	210.92 M2		
ACTUAL PLOT RATIO			7.30	

GROSS FLOOR AREA & SITE COVERAGE CALCULATION – SITE B	
PROPOSED SITE USAGE	POWER SUB–STATION
SITE CLASSIFICATION	CLASS A
SITE AREA	1321 M2
SITE COVERAGE	47.01% (621M2/1321M2)
BUILDING HEIGHT	15.6M
PERMITTED PLOT RATIO UNDER B(P)R	5
NON–DOMESTIC GFA	1040.6 M2
ACTUAL PLOT RATIO	0.788
REMARKS: THE SUBJECT BUILDING SHALL BE DISREGARDED FROM GFA AND PLOT RATIO CALCULATION IN ACCORDANCE WITH B(P)R23(3)(b).	

GROSS FLOOR AREA & SITE COVERAGE CALCULATION – SITE C	
PROPOSED SITE USAGE	CHARGING–ENABLING BUS PARKING
SITE CLASSIFICATION	CLASS A
SITE AREA	7598 M2
SITE COVERAGE	0
BUILDING HEIGHT	0M
PERMITTED PLOT RATIO UNDER B(P)R	5
NON–DOMESTIC GFA	0 M2
ACTUAL PLOT RATIO	0

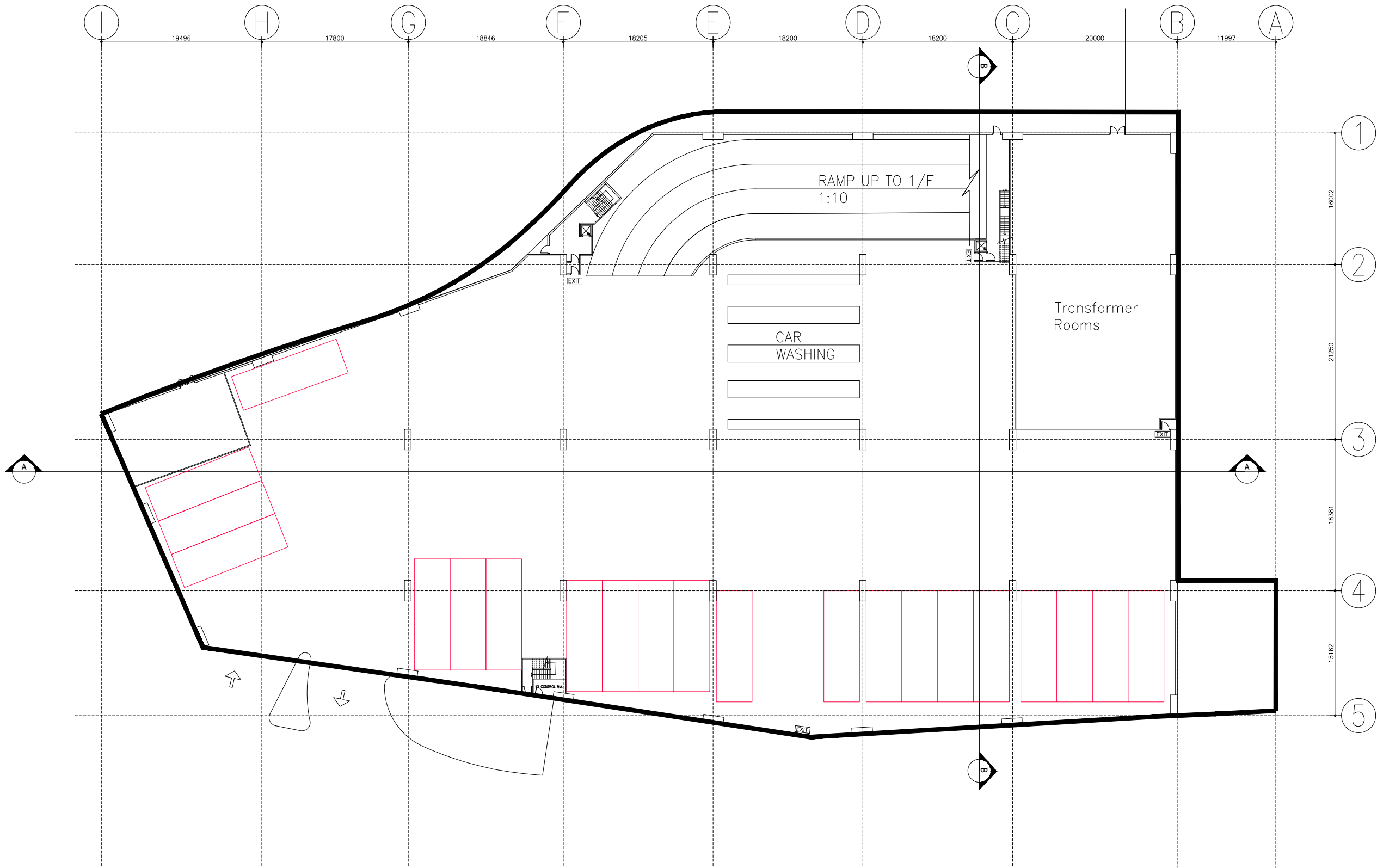
NOS. OF CHARGING–ENABLING BUS PARKING BAYS AND MAINTENANCE BAYS IN SITE A		
	MAINTENANCE BAYS	CHARGING–ENABLING BUS PARKING BAYS
GF	21	
1F	42	
2F	18	31
3F		33
4F		33
5F		33
6F		33
7F		33
8F		33
9F		33
10F		33
RF		38
TOTAL	81	333

NOS. OF CHARGING–ENABLING BUS PARKING BAYS AND MAINTENANCE BAYS IN SITE C		
	MAINTENANCE BAYS	CHARGING–ENABLING BUS PARKING BAYS
GF	0	73



Schematic Master Layout Plan

NOTES AND CONDITIONS:		
1. ALL DESIGNS ARE THE PROPERTY OF FRUIT DESIGN AND BUILD AND CANNOT BE USED WITHOUT THEIR WRITTEN PERMISSION.		
2. ALL MEASUREMENTS MUST BE VERIFIED ON SITE BEFORE CONSTRUCTION.		
3. CONTRACTORS SHALL NOTIFY THE DESIGNER OF ANY DISCREPANCY BEFORE STARTING WORK.		
4. ALL DIMENSIONS ARE IN MILLIMETER EXCEPT OTHERWISE NOTED.		
5. ALL WORKS SHALL BE CARRIED OUT IN COMPLIANCE TO THE BUILDINGS ORDINANCE, BUILDINGS REGULATIONS AND CODE OF PRACTICES.		
6. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH OTHER DRAWINGS AND SPECIFICATIONS OF THE TENDER DOCUMENTS AND SHALL BE MUTUALLY EXPLANATORY.		
7. THE CONTRACTOR SHALL FOLLOW MANUFACTURER'S INSTRUCTION & RECOMMENDATION IN CASE PROPRIETARY PRODUCT / SYSTEM / IS ADOPTED / SPECIFIED / APPROVED.		
8. DESIGN INTENT DRAWING ONLY. CONTRACTOR IS RESPONSIBLE FOR DESIGN AND SHOP DRAWING / CALCULATION SUBMISSION / MATERIAL SIZES / THICKNESS INDICATIVE.		
REV	DESCRIPTION	DATE
CLIENT:		
BUILDING CONSULTANT:		
<b>FRUIT DESIGN &amp; BUILD LTD</b>		
<small>A member of FDB Holdings Limited</small>		
<small>A   6/F, The Sun's Group Centre, 200 Gloucester Road, Wan Chai, Hong Kong</small>		
<small>T   +852 3188 5595 F   +852 3188 5958</small>		
PROJECT:		
TMCLK DEPOT		
DRAWING TITLE:		
SCHEMATIC MASTER LAYOUT PLAN		
SCALE:	1:1500	
DATE:	13/09/2021	
DRAWN BY:	CC	
CHECKED BY:	NC	
APPROVED BY: -		
JOB. NO.:	FDB-P-21031	
DWG. NO.:	AA01	



LEGEND

- Maintenance Bay  
(13500mm x 4350mm)
- Parking Space  
(13000mm x 3300mm)

G/F



- NOTES AND CONDITIONS:
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  8. DESIGN INTENT DRAWING ONLY. CONTRACTOR IS RESPONSIBLE FOR DESIGN AND SHOP DRAWING / CALCULATION SUBMISSION / MATERIAL SIZES / THICKNESS INDICATIVE.

REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

**FRUIT  
DESIGN &  
BUILD LTD**

A member of FDB Holdings Limited  
A | 6/F, The Sun's Group Centre, 200 Gloucester Road,  
Wan Chai, Hong Kong  
T | +852 3188 5955 F | +852 3188 5958

PROJECT:

TMCLK DEPOT

DRAWING TITLE :

G/F LAYOUT (SITE A)

SCALE: 1:500

DATE: 13/09/2021

DRAWN BY: CC

CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: AA02





- NOTES AND CONDITIONS:
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  8. DESIGN INTENT DRAWING ONLY. CONTRACTOR IS RESPONSIBLE FOR DESIGN AND SHOP DRAWING / CALCULATION SUBMISSION / MATERIAL SIZES / THICKNESS INDICATIVE.

REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

FRUIT  
DESIGN &  
BUILD LTD

A member of FDB Holdings Limited

A | 6/F, The Sun's Group Centre, 200 Gloucester Road,  
Wan Chai, Hong Kong

T | +852 3188 5595    F | +852 3188 5958

PROJECT:

TMCLK DEPOT

DRAWING TITLE :

1/F LAYOUT (SITE A)

SCALE: 1:500

DATE: 13/09/2021

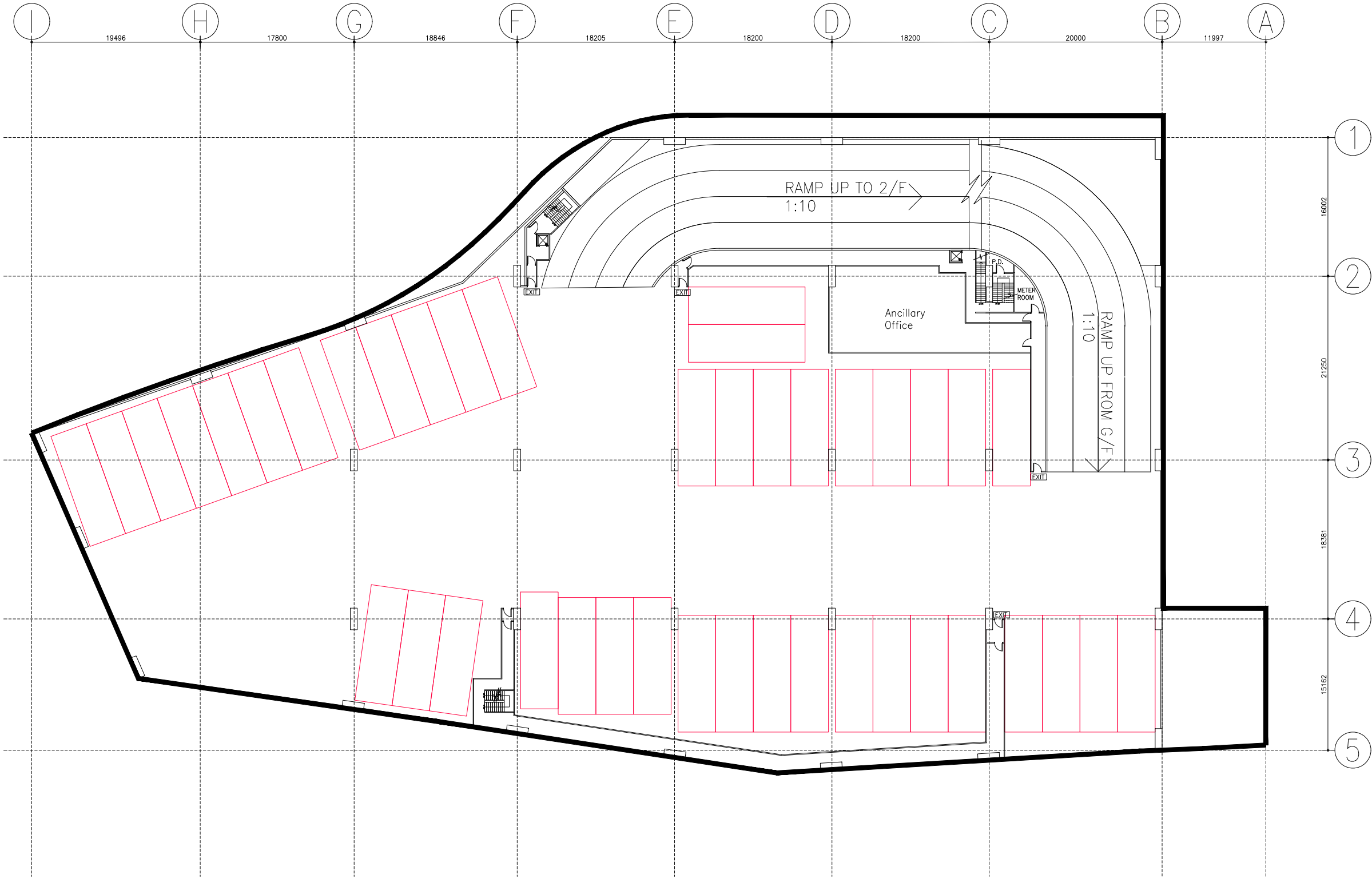
DRAWN BY: CC

CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: AA03



LEGEND

- Maintenance Bay  
(13500mm x 4350mm)
- Parking Space  
(13000mm x 3300mm)

1/F



- NOTES AND CONDITIONS:
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  8. DESIGN INTENT DRAWING ONLY. CONTRACTOR IS RESPONSIBLE FOR DESIGN AND SHOP DRAWING / CALCULATION SUBMISSION / MATERIAL SIZES / THICKNESS INDICATIVE.

REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

FRUIT  
DESIGN &  
BUILD LTD

A member of FDB Holdings Limited

A | 6/F, The Sun's Group Centre, 200 Gloucester Road,  
Wan Chai, Hong Kong

T | +852 3188 5595    F | +852 3188 5958

PROJECT:

TMCLK DEPOT

DRAWING TITLE:

2/F LAYOUT (SITE A)

SCALE: 1:500

DATE: 13/09/2021

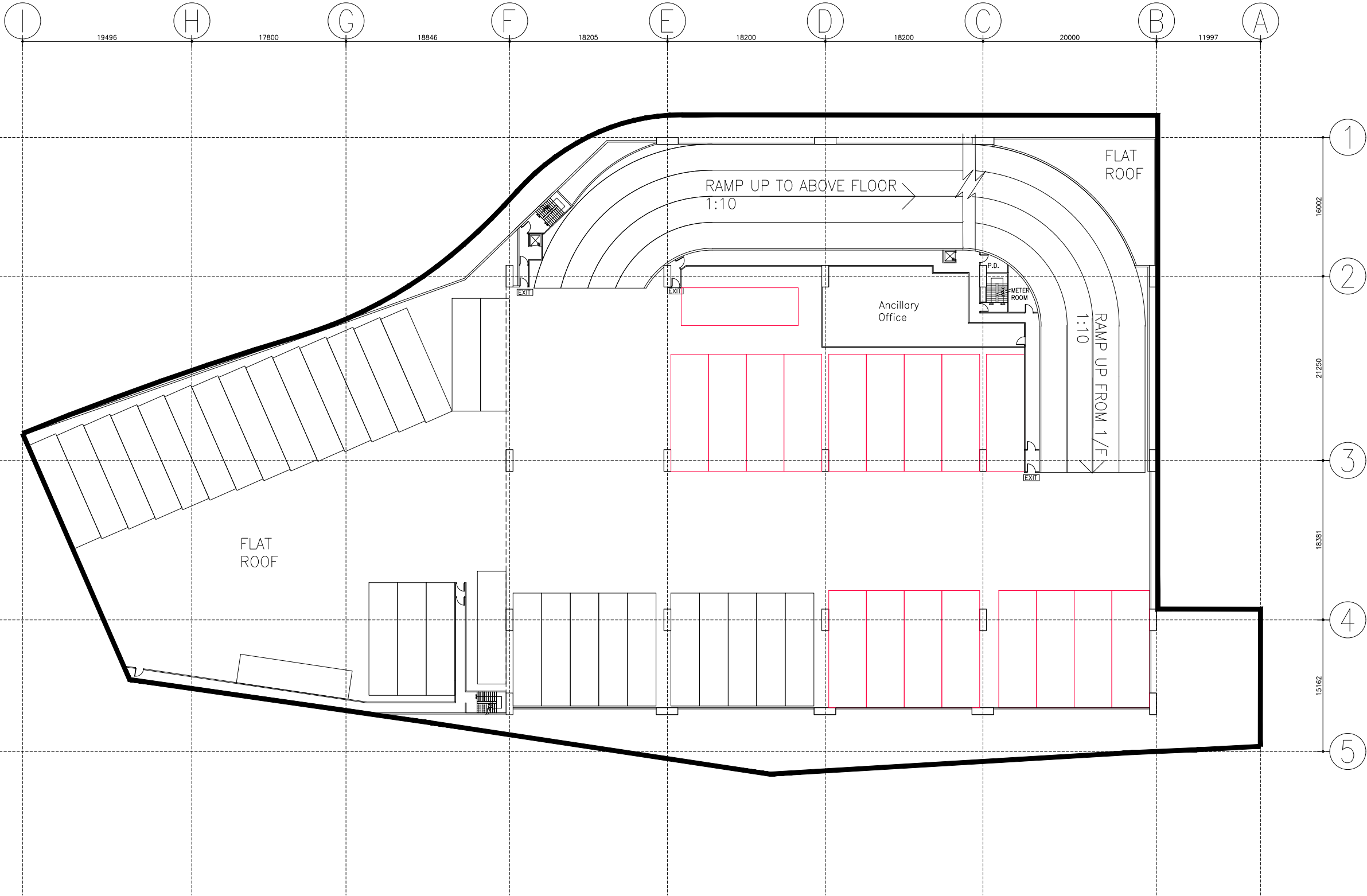
DRAWN BY: CC

CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: AA04



LEGEND

- Maintenance Bay  
(13500mm x 4350mm)
- Parking Space  
(13000mm x 3300mm)

2/F



- NOTES AND CONDITIONS:
1. ALL DESIGNS ARE THE PROPERTY OF FRUIT DESIGN AND BUILD AND CANNOT BE USED WITHOUT THEIR WRITTEN PERMISSION.
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  8. DESIGN INTENT DRAWING ONLY. CONTRACTOR IS RESPONSIBLE FOR DESIGN AND SHOP DRAWING / CALCULATION SUBMISSION / MATERIAL SIZES / THICKNESS INDICATIVE.

REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

FRUIT  
DESIGN &  
BUILD LTD

A member of FDB Holdings Limited

A | 6/F, The Sun's Group Centre, 200 Gloucester Road,  
Wan Chai, Hong Kong

T | +852 3188 5595    F | +852 3188 5958

PROJECT:

TMCLK DEPOT

DRAWING TITLE :

3/F-10/F LAYOUT (SITE A)

SCALE: 1:500

DATE: 13/09/2021

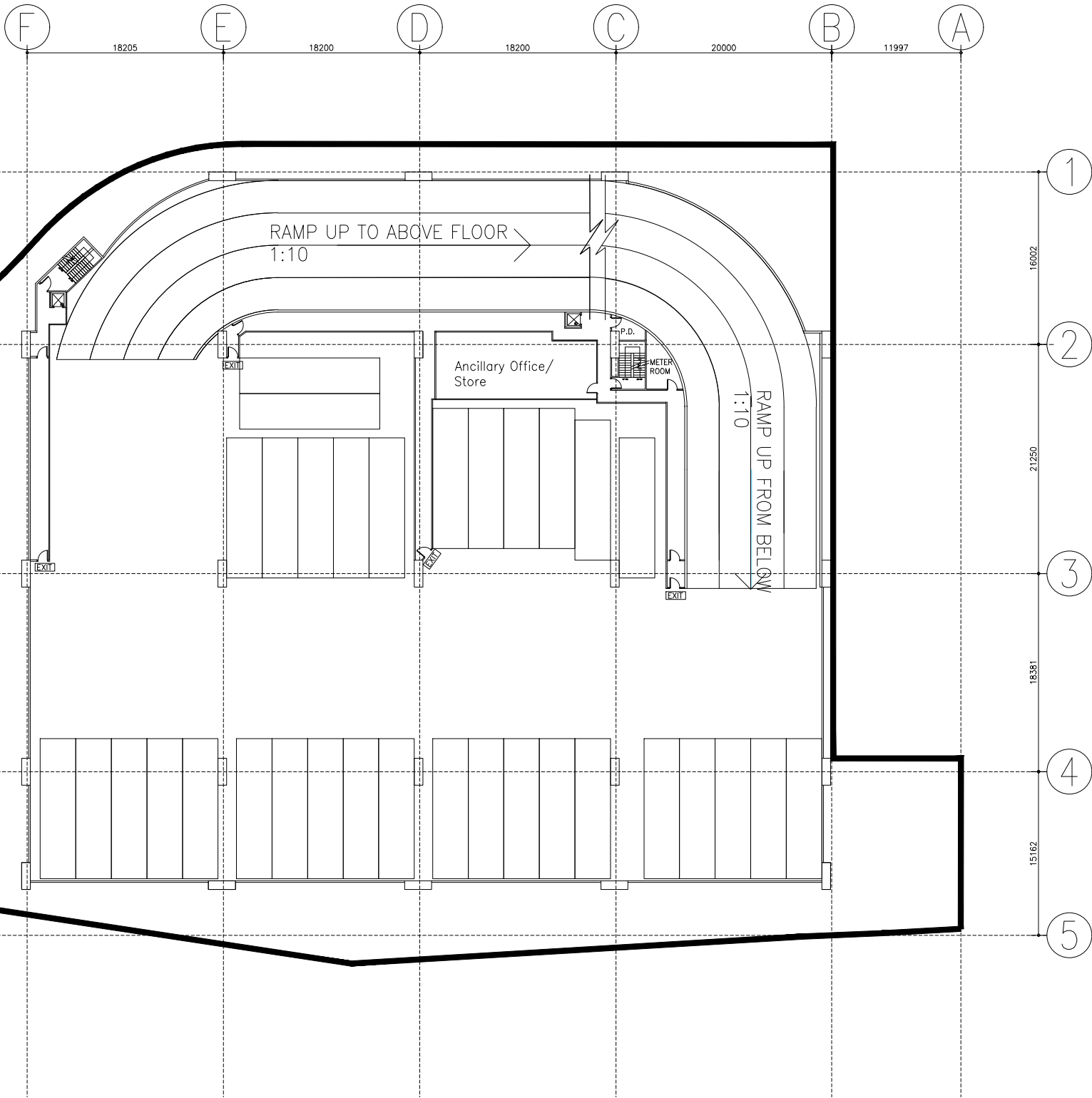
DRAWN BY: CC

CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: AA05



LEGEND

- Maintenance Bay  
(13500mm x 4350mm)
- Parking Space  
(13000mm x 3300mm)

3/F-10/F



- NOTES AND CONDITIONS:
1. ALL DESIGNS ARE THE PROPERTY OF FRUIT DESIGN AND BUILD AND CANNOT BE USED WITHOUT THEIR WRITTEN PERMISSION.
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  8. DESIGN INTENT DRAWING ONLY. CONTRACTOR IS RESPONSIBLE FOR DESIGN AND SHOP DRAWING / CALCULATION SUBMISSION / MATERIAL SIZES / THICKNESS INDICATIVE.

REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

FRUIT  
DESIGN &  
BUILD LTD

A member of FDB Holdings Limited

A | 6/F, The Sun's Group Centre, 200 Gloucester Road,  
Wan Chai, Hong Kong

T | +852 3188 5595    F | +852 3188 5958

PROJECT:

TMCLK DEPOT

DRAWING TITLE :

R/F LAYOUT (SITE A)

SCALE: 1:500

DATE: 13/09/2021

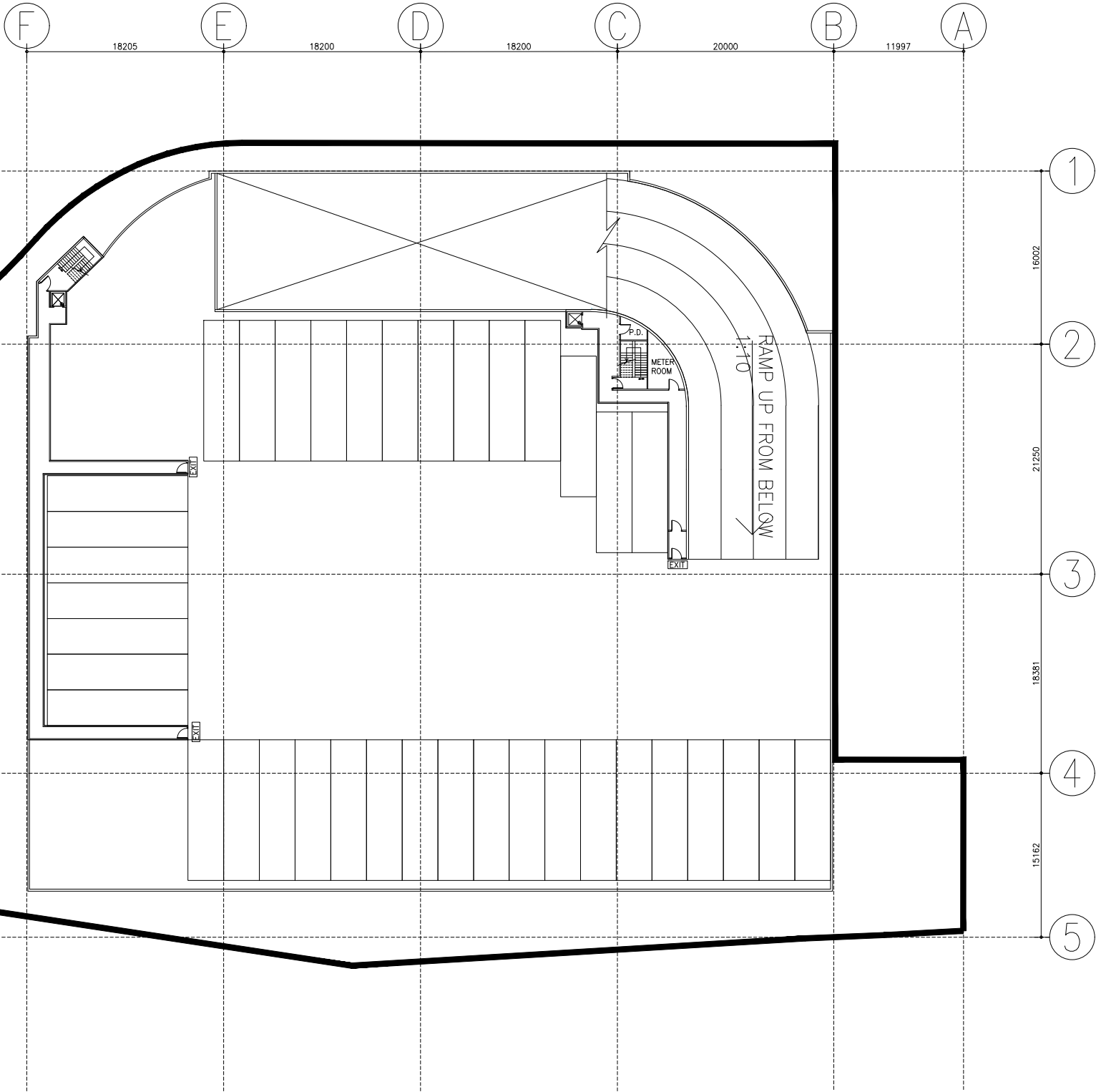
DRAWN BY: CC

CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

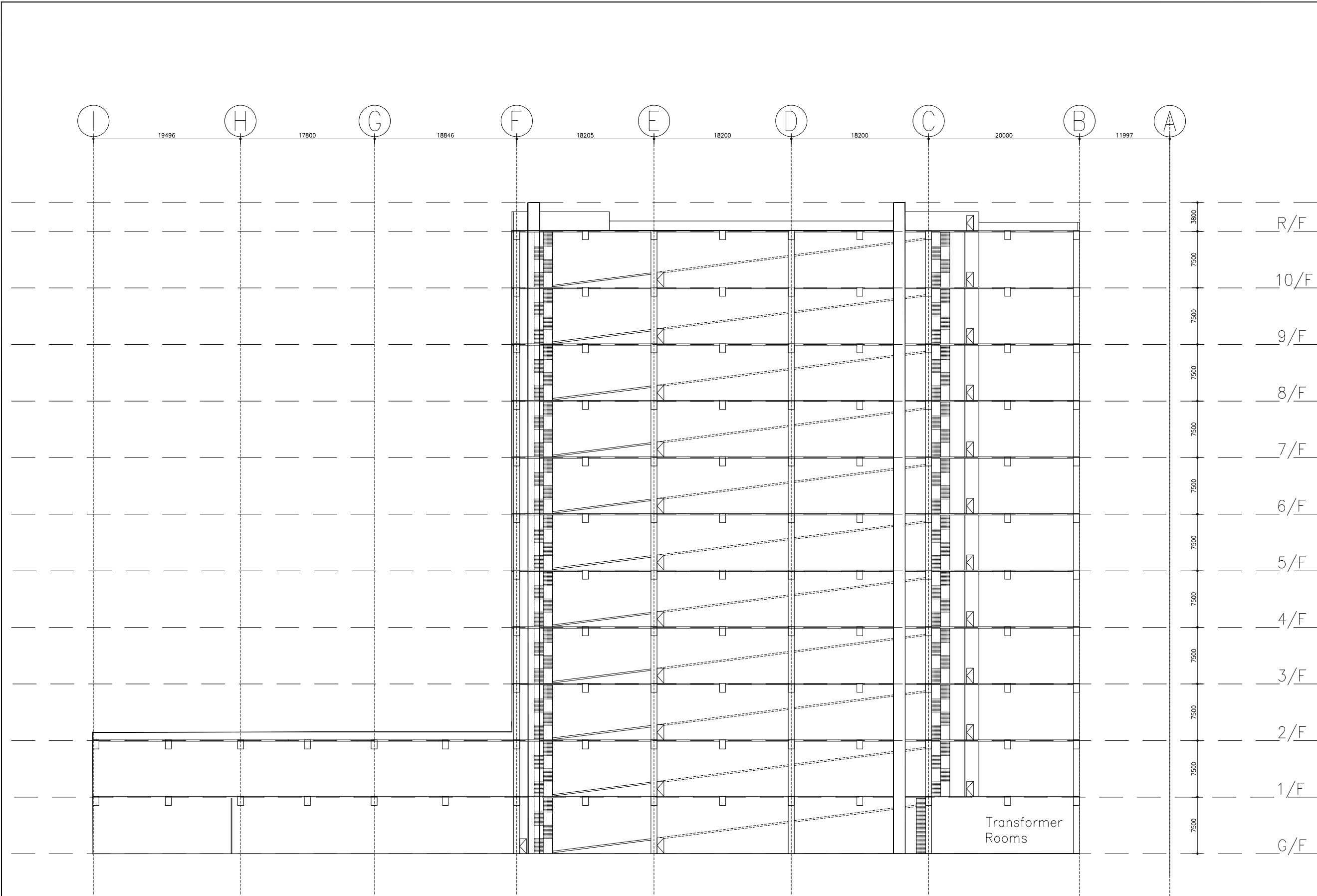
DWG. NO.: AA06



LEGEND

- Maintenance Bay  
(13500mm x 4350mm)
- Parking Space  
(13000mm x 3300mm)

R/F



SECTION A-A

- NOTES AND CONDITIONS:
1. ALL DESIGNS ARE THE PROPERTY OF FRUIT DESIGN AND BUILD AND CANNOT BE USED WITHOUT THEIR WRITTEN PERMISSION.
  2. ALL MEASUREMENTS MUST BE VERIFIED ON SITE BEFORE CONSTRUCTION.
  3. CONTRACTORS SHALL NOTIFY THE DESIGNER OF ANY DISCREPANCY BEFORE STARTING WORK.
  4. ALL DIMENSIONS ARE IN MILLIMETER EXCEPT OTHERWISE NOTED.
  5. ALL WORKS SHALL BE CARRIED OUT IN COMPLIANCE TO THE BUILDINGS ORDINANCE, BUILDINGS REGULATIONS AND CODE OF PRACTICES.
  6. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH OTHER DRAWINGS AND SPECIFICATIONS OF THE TENDER DOCUMENTS AND SHALL BE MUTUALLY EXPLANATORY.
  7. THE CONTRACTOR SHALL FOLLOW MANUFACTURER'S INSTRUCTION & RECOMMENDATION IN CASE PROPRIETARY PRODUCT / SYSTEM / IS ADOPTED / SPECIFIED / APPROVED.
  8. DESIGN INTENT DRAWING ONLY. CONTRACTOR IS RESPONSIBLE FOR DESIGN AND SHOP DRAWING / CALCULATION SUBMISSION / MATERIAL SIZES / THICKNESS INDICATIVE.

REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

**FRUIT  
DESIGN &  
BUILD LTD**

A member of FDB Holdings Limited

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Wan Chai, Hong Kong

T | +852 3188 5995 F | +852 3188 5998

PROJECT:

TMCLK DEPOT

DRAWING TITLE :

SECTION A-A (SITE A)

SCALE: 1:500

DATE: 13/09/2021

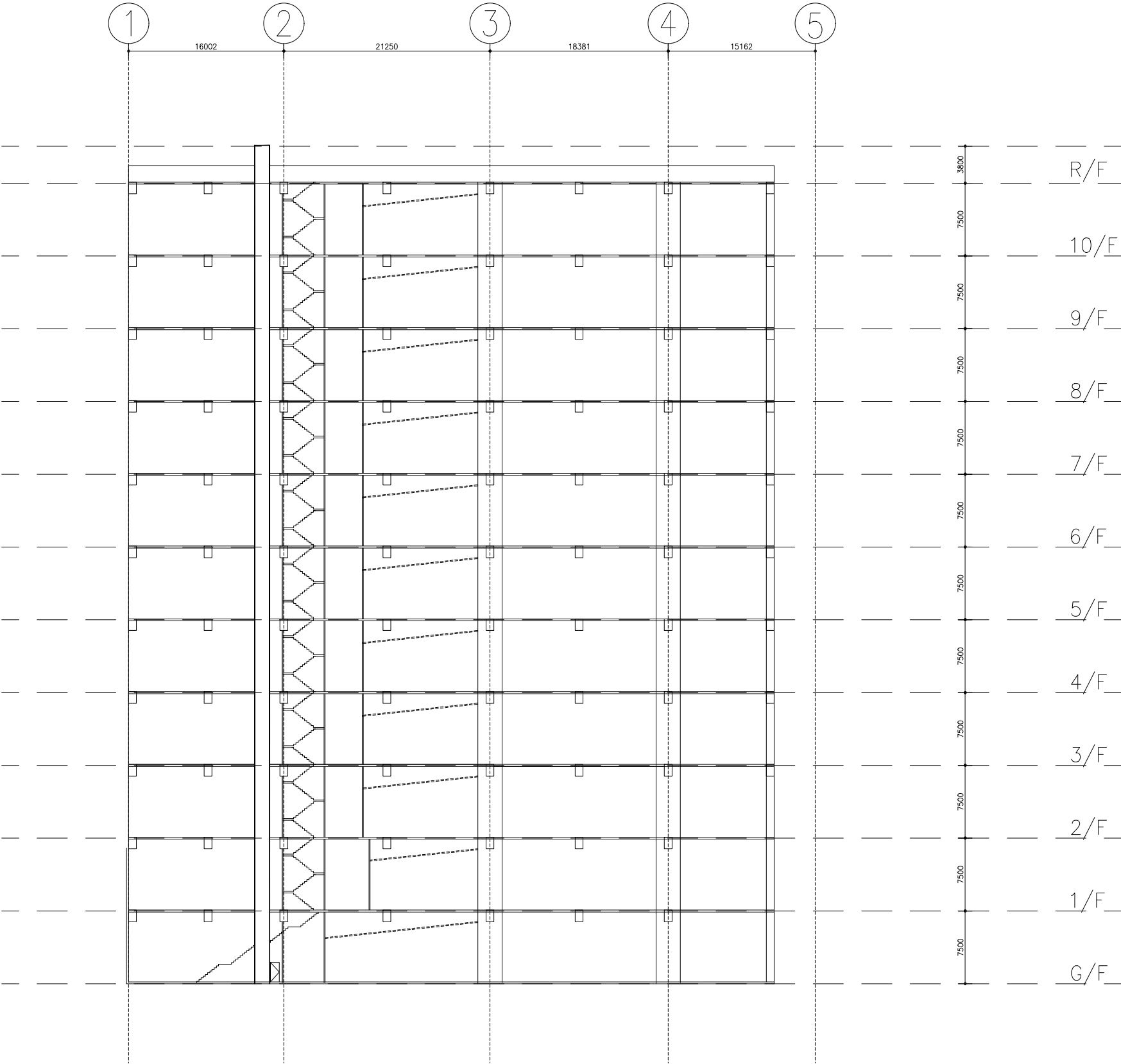
DRAWN BY: CC

CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: ST01



SECTION B-B

- NOTES AND CONDITIONS:
1. ALL DESIGNS ARE THE PROPERTY OF FRUIT DESIGN AND BUILD AND CANNOT BE USED WITHOUT THEIR WRITTEN PERMISSION.
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REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

**FRUIT  
DESIGN &  
BUILD LTD**

A member of FDB Holdings Limited

A | 6/F, The Sun's Group Centre, 200 Gloucester Road,  
Wan Chai, Hong Kong

T | +852 3188 5955    F | +852 3188 5958

PROJECT:

TMCLK DEPOT

DRAWING TITLE :

SECTION B-B (SITE A)

SCALE: 1:500

DATE: 13/09/2021

DRAWN BY: CC

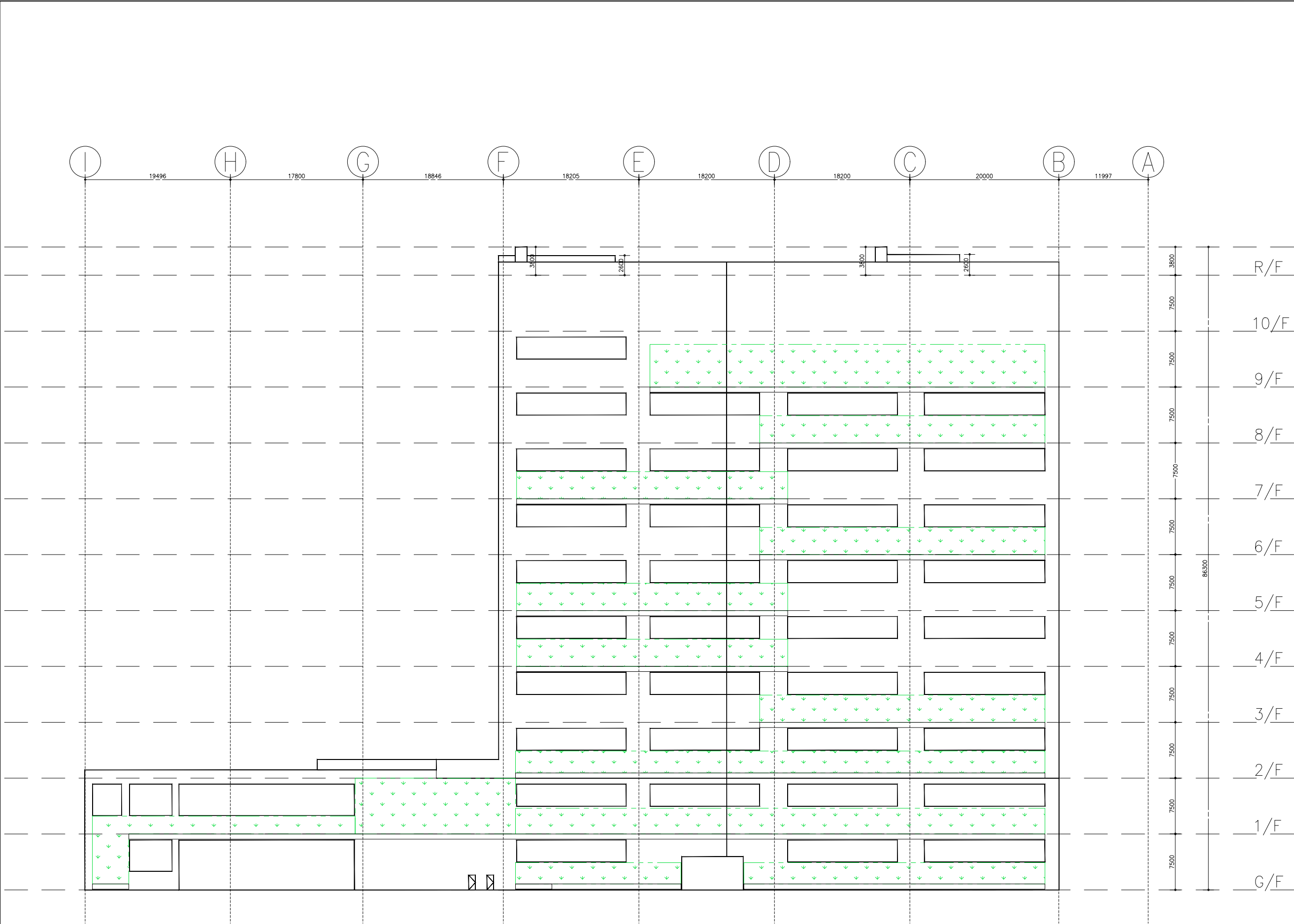
CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: ST02





SOUTH-EAST ELEVATION

- NOTES AND CONDITIONS:
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REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

**FRUIT  
DESIGN &  
BUILD LTD**

A member of FDB Holdings Limited

A | 6/F, The Sun's Group Centre, 200 Gloucester Road,  
Wan Chai, Hong Kong

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PROJECT:

TMCLK DEPOT

DRAWING TITLE :

SOUTH-EAST ELEVATION (SITE A)

SCALE: 1:500

DATE: 13/09/2021

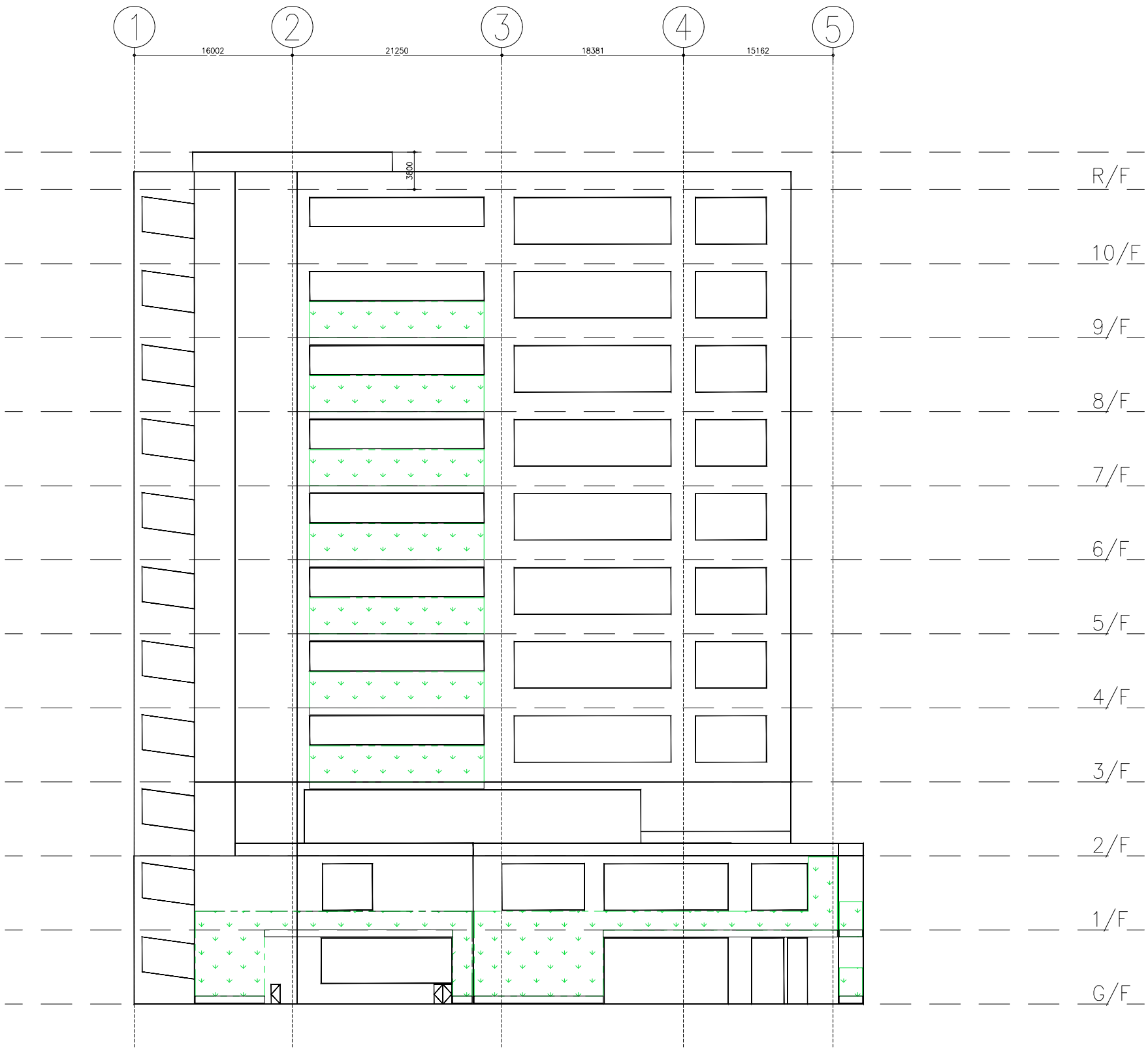
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CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: EL01



SOUTH-WEST ELEVATION

NOTES AND CONDITIONS:

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3. CONTRACTORS SHALL NOTIFY THE DESIGNER OF ANY DISCREPANCY BEFORE STARTING WORK.

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REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

FRUIT  
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BUILD LTD

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Wan Chai, Hong Kong

T | +852 3188 5955      F | +852 3188 5958

PROJECT:

TMCLK DEPOT

DRAWING TITLE :

SOUTH-WEST ELEVATION (SITE A)

SCALE:	1:500
DATE:	13/09/2021
DRAWN BY:	CC
CHECKED BY:	NC
APPROVED BY: -	
JOB. NO.:	FDB-P-21031
DWG. NO.:	EL02



NORTH-EAST ELEVATION

- NOTES AND CONDITIONS:
1. ALL DESIGNS ARE THE PROPERTY OF FRUIT DESIGN AND BUILD AND CANNOT BE USED WITHOUT THEIR WRITTEN PERMISSION.
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REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

**FRUIT  
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BUILD LTD**

A member of FDB Holdings Limited

A | 6/F, The Sun's Group Centre, 200 Gloucester Road,  
Wan Chai, Hong Kong

T | +852 3188 5955 F | +852 3188 5958

PROJECT:

TMCLK DEPOT

DRAWING TITLE :

NORTH-EAST ELEVATION (SITE A)

SCALE: 1:500

DATE: 13/09/2021

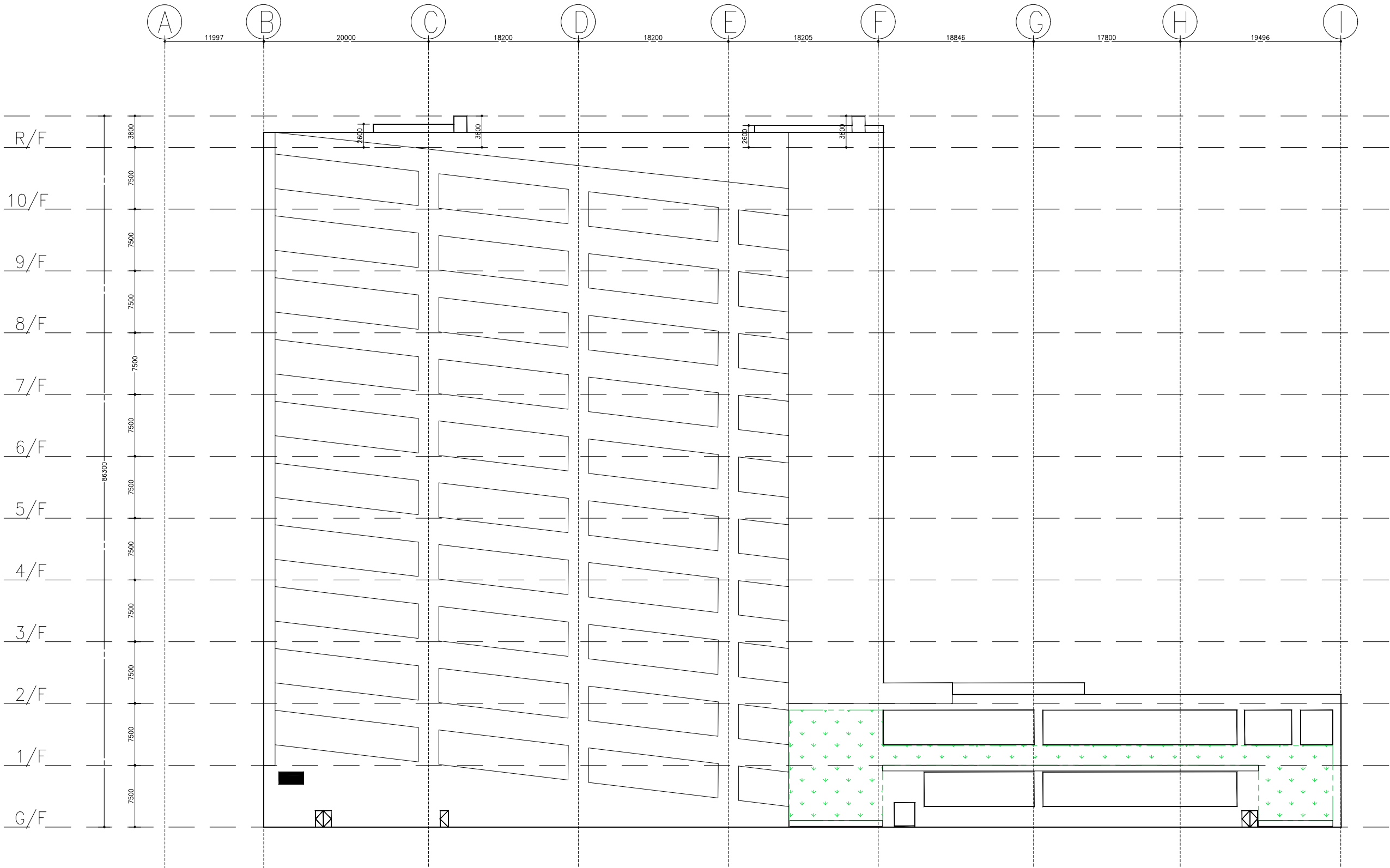
DRAWN BY: CC

CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: EL03



NORTH-WEST ELEVATION

NOTES AND CONDITIONS:

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REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

**FRUIT  
DESIGN &  
BUILD LTD**

A member of FDB Holdings Limited

A | 6/F, The Sun's Group Centre, 200 Gloucester Road,  
Wan Chai, Hong Kong

T | +852 3188 5955 F | +852 3188 5958

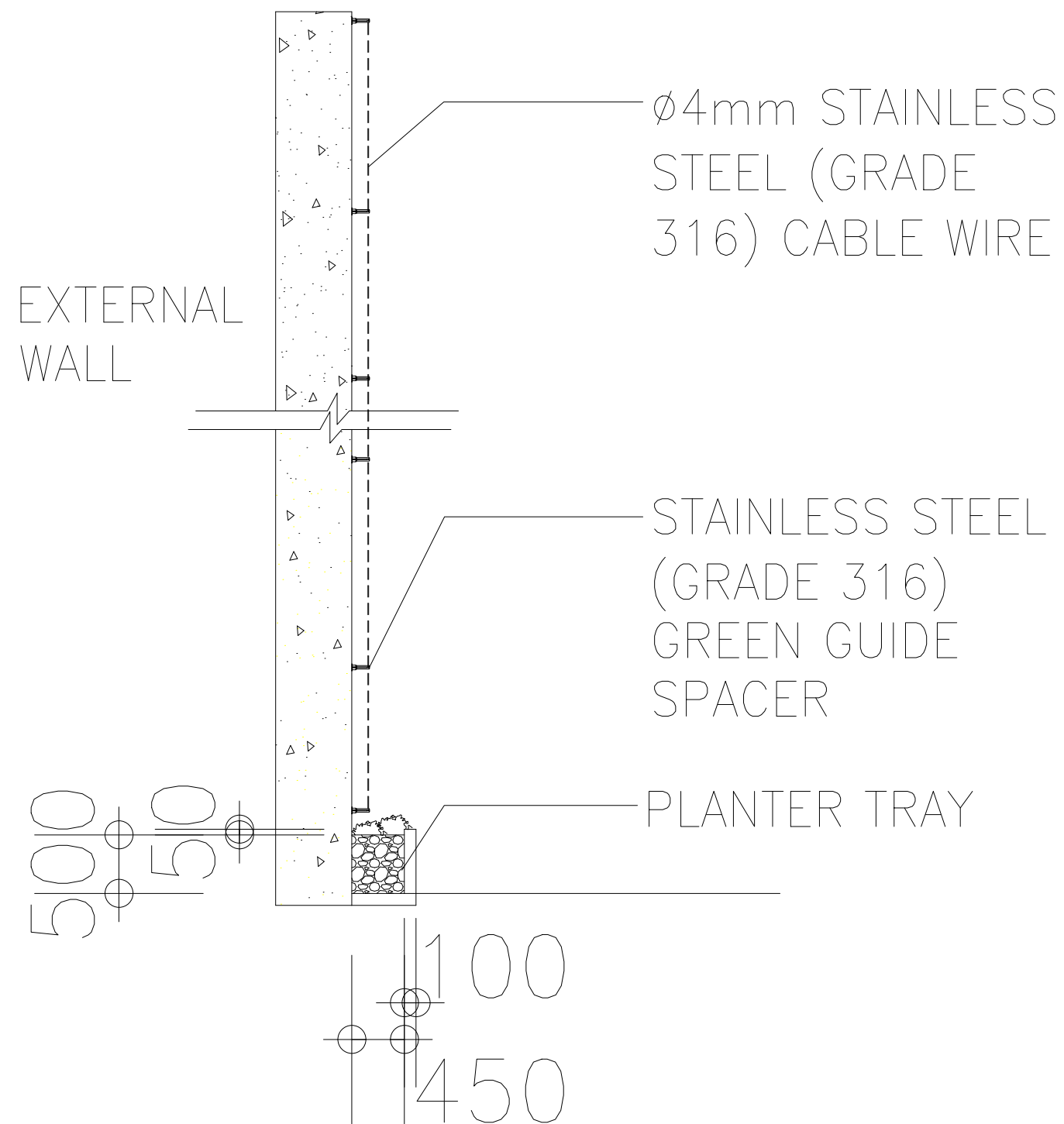
PROJECT:

TMCLK DEPOT

DRAWING TITLE :

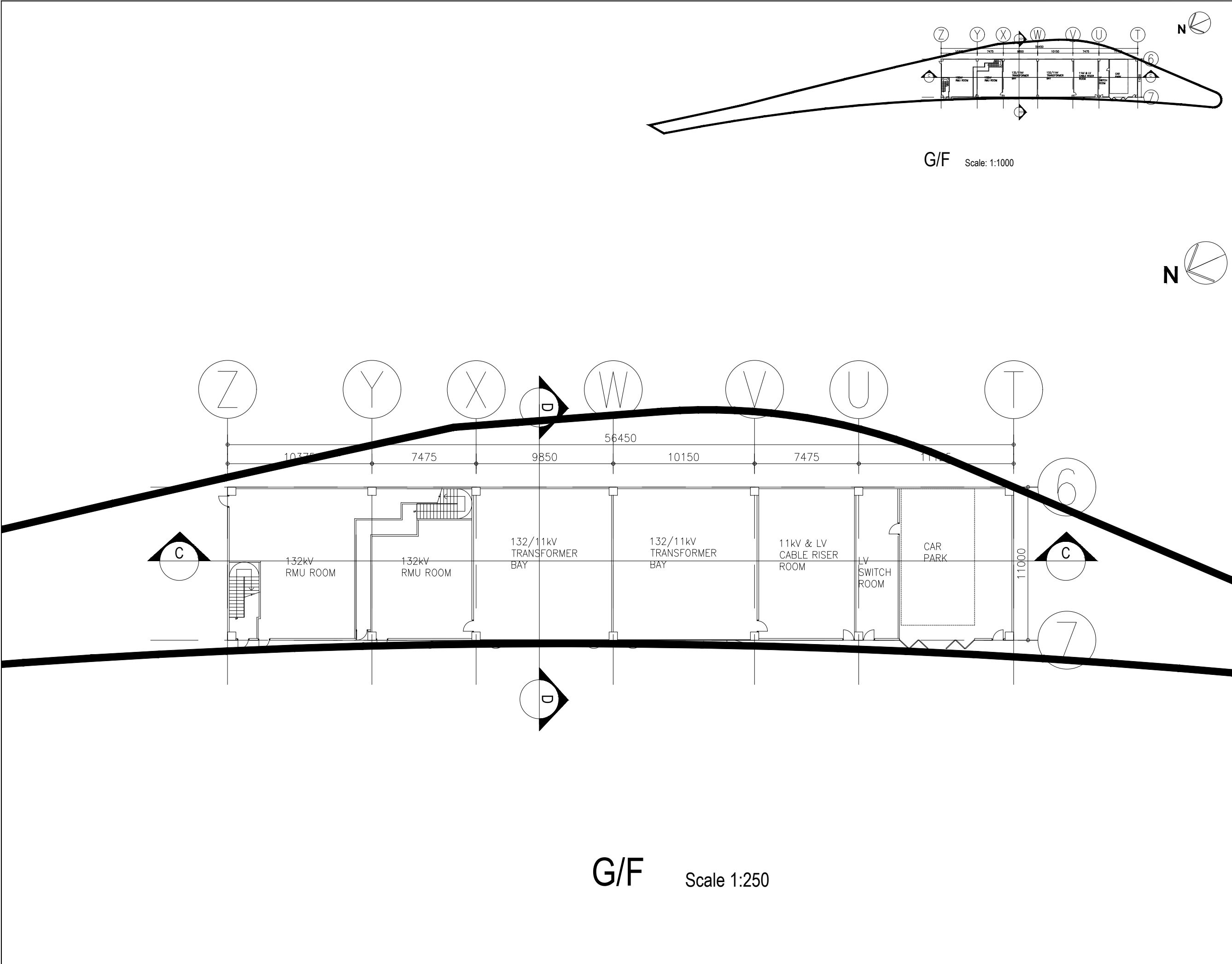
NORTH-WEST ELEVATION (SITE A)

SCALE:	1:500
DATE:	13/09/2021
DRAWN BY:	CC
CHECKED BY:	NC
APPROVED BY:	-
JOB. NO.:	FDB-P-21031
DWG. NO.:	EL04



# DETAIL OF VERTICAL GREENING

NOTES AND CONDITIONS:		
1. ALL DESIGNS ARE THE PROPERTY OF FRUIT DESIGN AND BUILD AND CANNOT BE USED WITHOUT THEIR WRITTEN PERMISSION.		
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8. DESIGN INTENT DRAWING ONLY. CONTRACTOR IS RESPONSIBLE FOR DESIGN AND SHOP DRAWING / CALCULATION SUBMISSION / MATERIAL SIZES / THICKNESS INDICATIVE.		
REV	DESCRIPTION	DATE
A	REVISED DETAILS	12 NOV 2021
CLIENT:		
BUILDING CONSULTANT:		
<div>FRUIT DESIGN &amp; BUILD LTD</div> <div>A member of FDB Holdings Limited</div> <div>A   6/F, The Sun's Group Centre, 200 Gloucester Road, Wan Chai, Hong Kong</div> <div>T   +852 3188 5595 F   +852 3188 5958</div>		
PROJECT:		
TMCLK DEPOT		
DRAWING TITLE :		
DETAIL OF VERTICAL GREENING		
SCALE:	1:50	
DATE:	13/09/2021	
DRAWN BY:	CC	
CHECKED BY:	NC	
APPROVED BY: -		
JOB. NO. :	FDB-P-21031	
DWG. NO. :	DD01	



- NOTES AND CONDITIONS:
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REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

**FRUIT  
DESIGN &  
BUILD LTD**

A member of FDB Holdings Limited  
A | 6/F, The Sun's Group Centre, 200 Gloucester Road,  
Wan Chai, Hong Kong  
T | +852 3188 5595 F | +852 3188 5958

PROJECT:

TMCLK DEPOT

DRAWING TITLE :

G/F LAYOUT (SITE B)

SCALE: As stated

DATE: 13/09/2021

DRAWN BY: CC

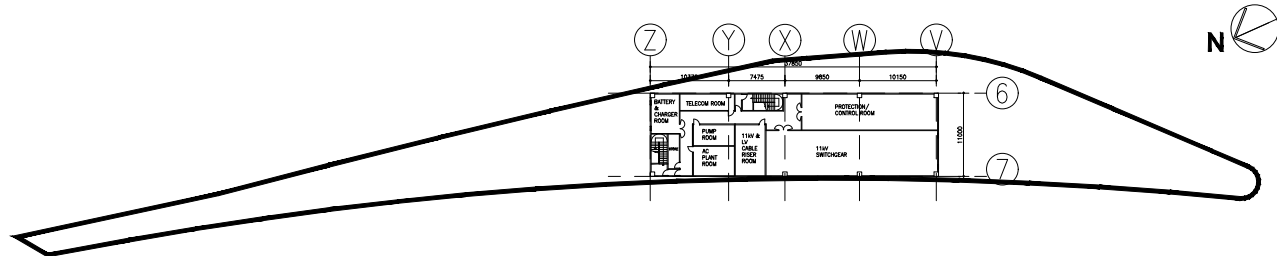
CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: AA07





1/F Scale: 1:1000

- NOTES AND CONDITIONS:
1. ALL DESIGNS ARE THE PROPERTY OF FRUIT DESIGN AND BUILD AND CANNOT BE USED WITHOUT THEIR WRITTEN PERMISSION.
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REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

FRUIT  
DESIGN &  
BUILD LTD

A member of FDB Holdings Limited

A | 6/F, The Sun's Group Centre, 200 Gloucester Road,  
Wan Chai, Hong Kong

T | +852 3188 5595 F | +852 3188 5958

PROJECT:

TMCLK DEPOT

DRAWING TITLE :  
1/F LAYOUT (SITE B)

SCALE: 1:250

DATE: 13/09/2021

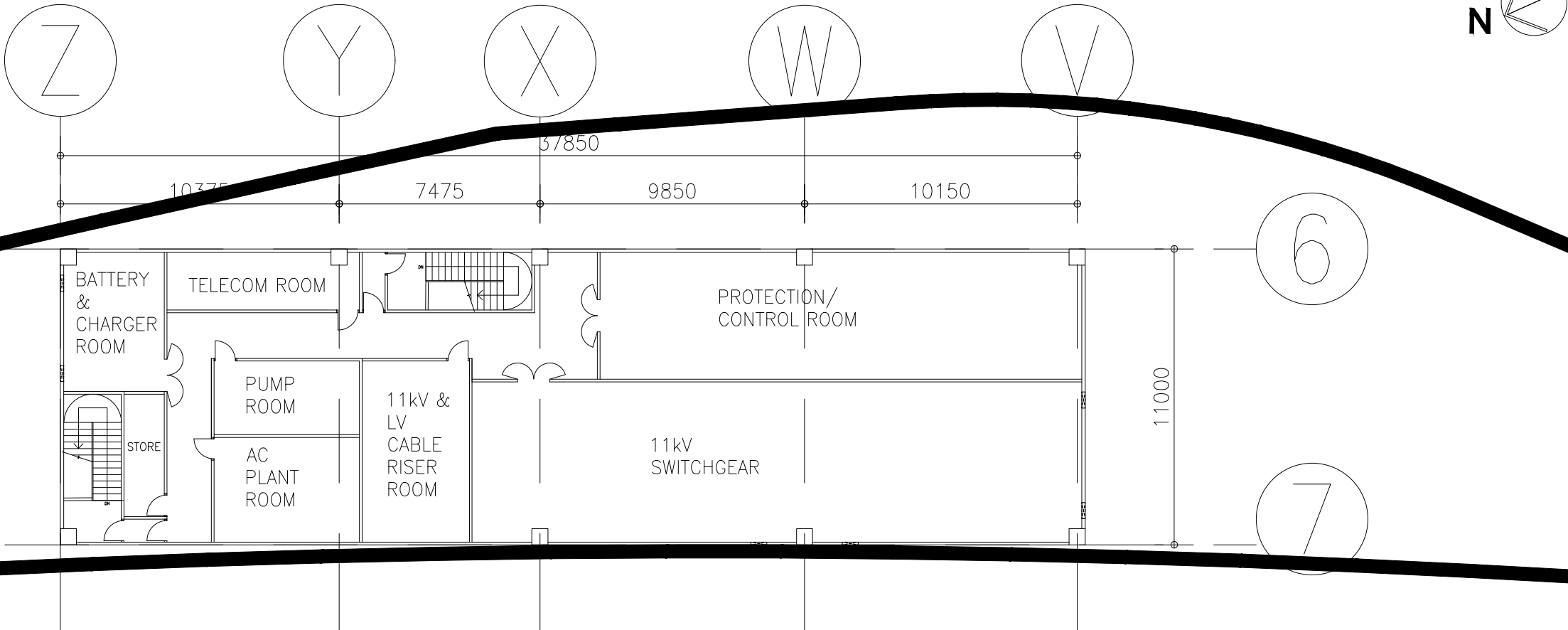
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CHECKED BY: NC

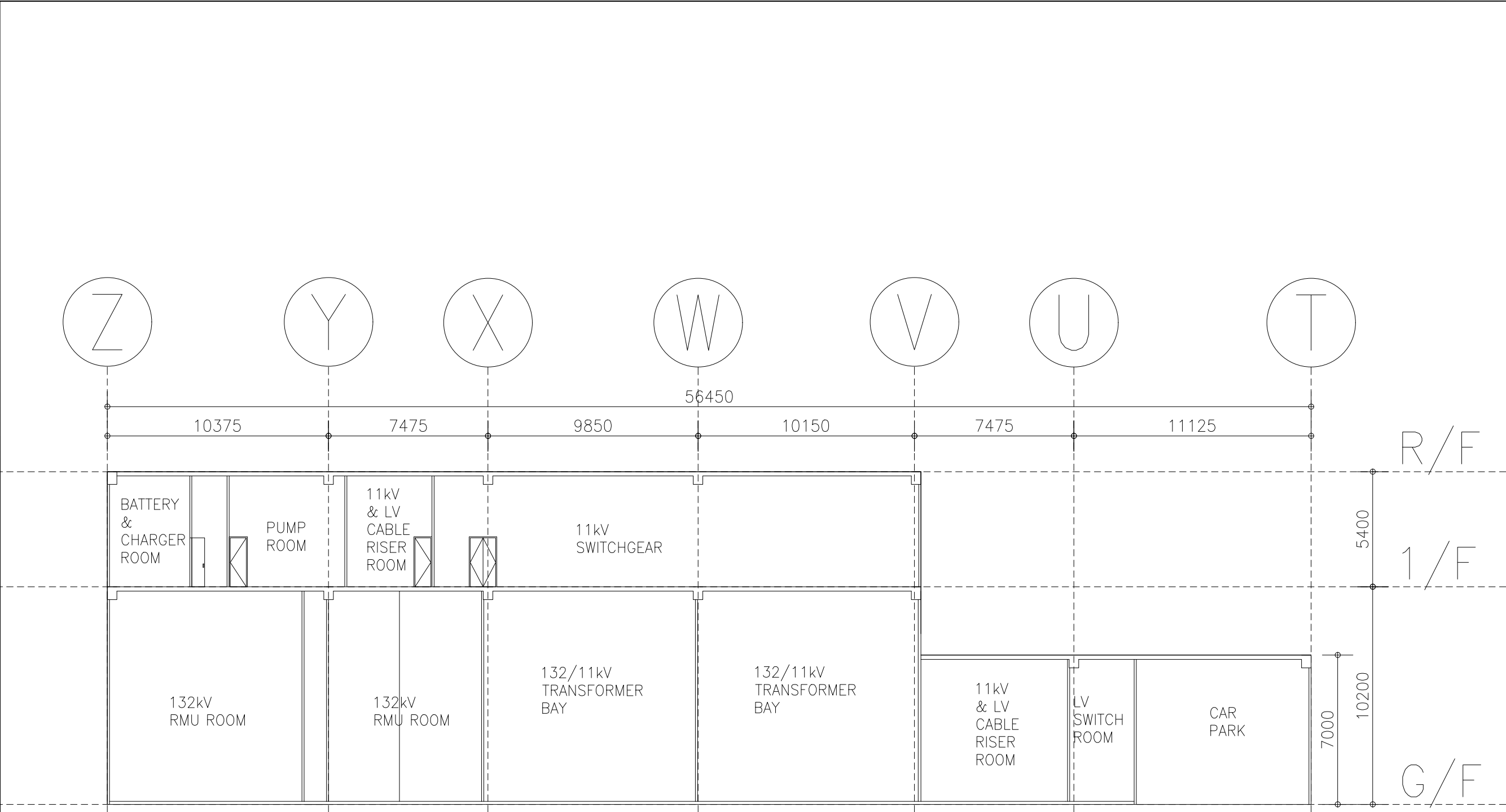
APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: AA08



1/F Scale 1:250



SECTION C-C

NOTES AND CONDITIONS:

1.

ALL DESIGNS ARE THE PROPERTY OF FRUIT DESIGN AND BUILD AND CANNOT BE USED WITHOUT THEIR WRITTEN PERMISSION.

2.

ALL MEASUREMENTS MUST BE VERIFIED ON SITE BEFORE CONSTRUCTION.

3.

CONTRACTORS SHALL NOTIFY THE DESIGNER OF ANY DISCREPANCY BEFORE STARTING WORK.

4.

ALL DIMENSIONS ARE IN MILLIMETER EXCEPT OTHERWISE NOTED.

5.

ALL WORKS SHALL BE CARRIED OUT IN COMPLIANCE TO THE BUILDINGS ORDINANCE, BUILDINGS REGULATIONS AND CODE OF PRACTICES.

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REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

FRUIT  
DESIGN &  
BUILD LTD

A member of FDB Holdings Limited

A | 6/F, The Sun's Group Centre, 200 Gloucester Road,  
Wan Chai, Hong Kong

T | +852 3188 5595 F | +852 3188 5958

PROJECT :

TMCLK DEPOT

DRAWING TITLE :

SECTION C-C (SITE B)

SCALE:

1:200

DATE:

13/09/2021

DRAWN BY:

CC

CHECKED BY:

NC

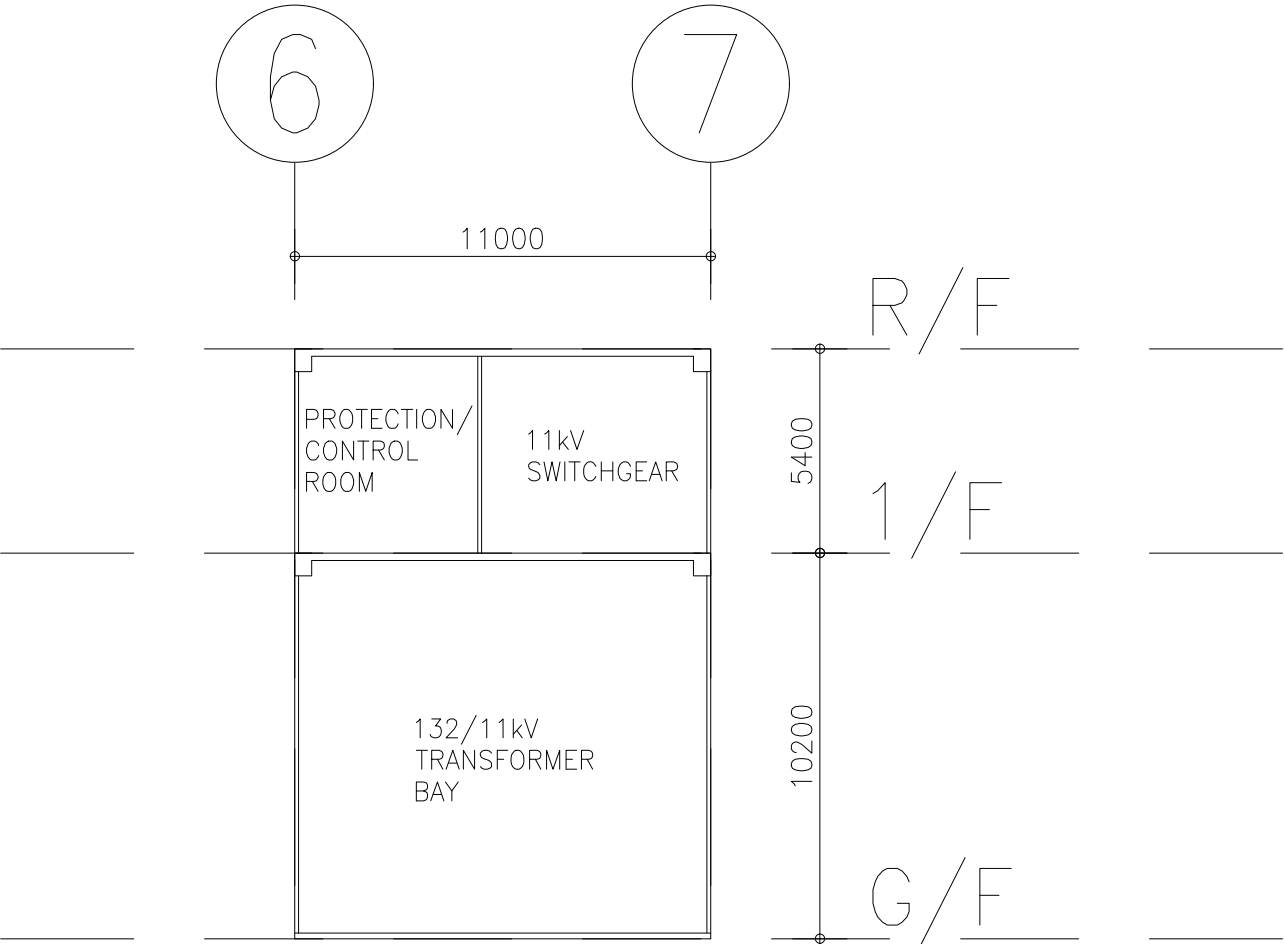
APPROVED BY: -

JOB. NO.:

FDB-P-21031

DWG. NO.:

ST03



SECTION D-D

- NOTES AND CONDITIONS:
1. ALL DESIGNS ARE THE PROPERTY OF FRUIT DESIGN AND BUILD AND CANNOT BE USED WITHOUT THEIR WRITTEN PERMISSION.
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REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

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BUILD LTD**

A member of FDB Holdings Limited

A | 6/F, The Sun's Group Centre, 200 Gloucester Road,  
Wan Chai, Hong Kong

T | +852 3188 5995    F | +852 3188 5998

PROJECT:

TMCLK DEPOT

DRAWING TITLE :

SECTION D-D (SITE B)

SCALE: 1:200

DATE: 13/09/2021

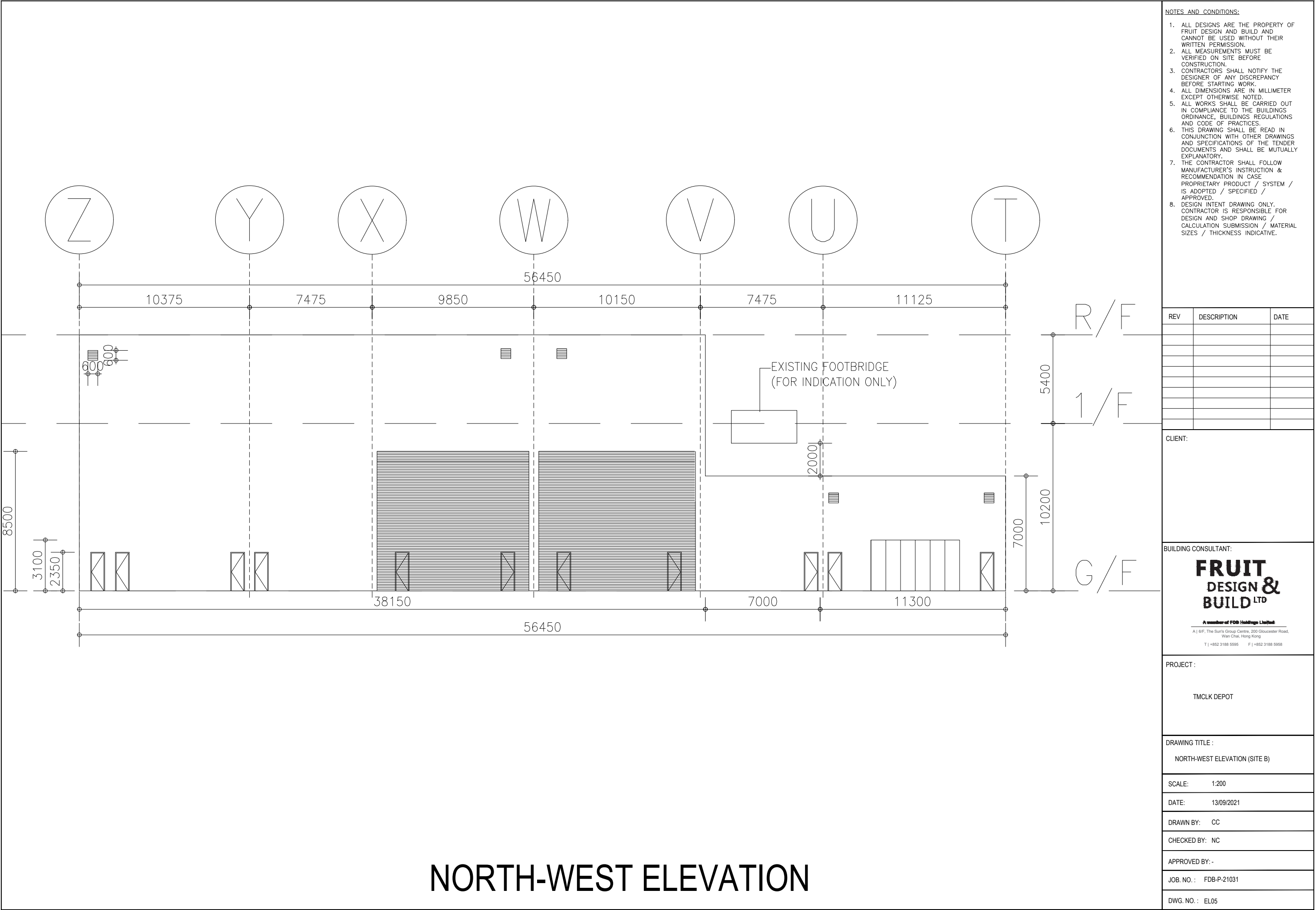
DRAWN BY: CC

CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: ST04



- NOTES AND CONDITIONS:
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REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

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Wan Chai, Hong Kong

T | +852 3188 5595 F | +852 3188 5958

PROJECT:

TMCLK DEPOT

DRAWING TITLE :

NORTH-WEST ELEVATION (SITE B)

SCALE: 1:200

DATE: 13/09/2021

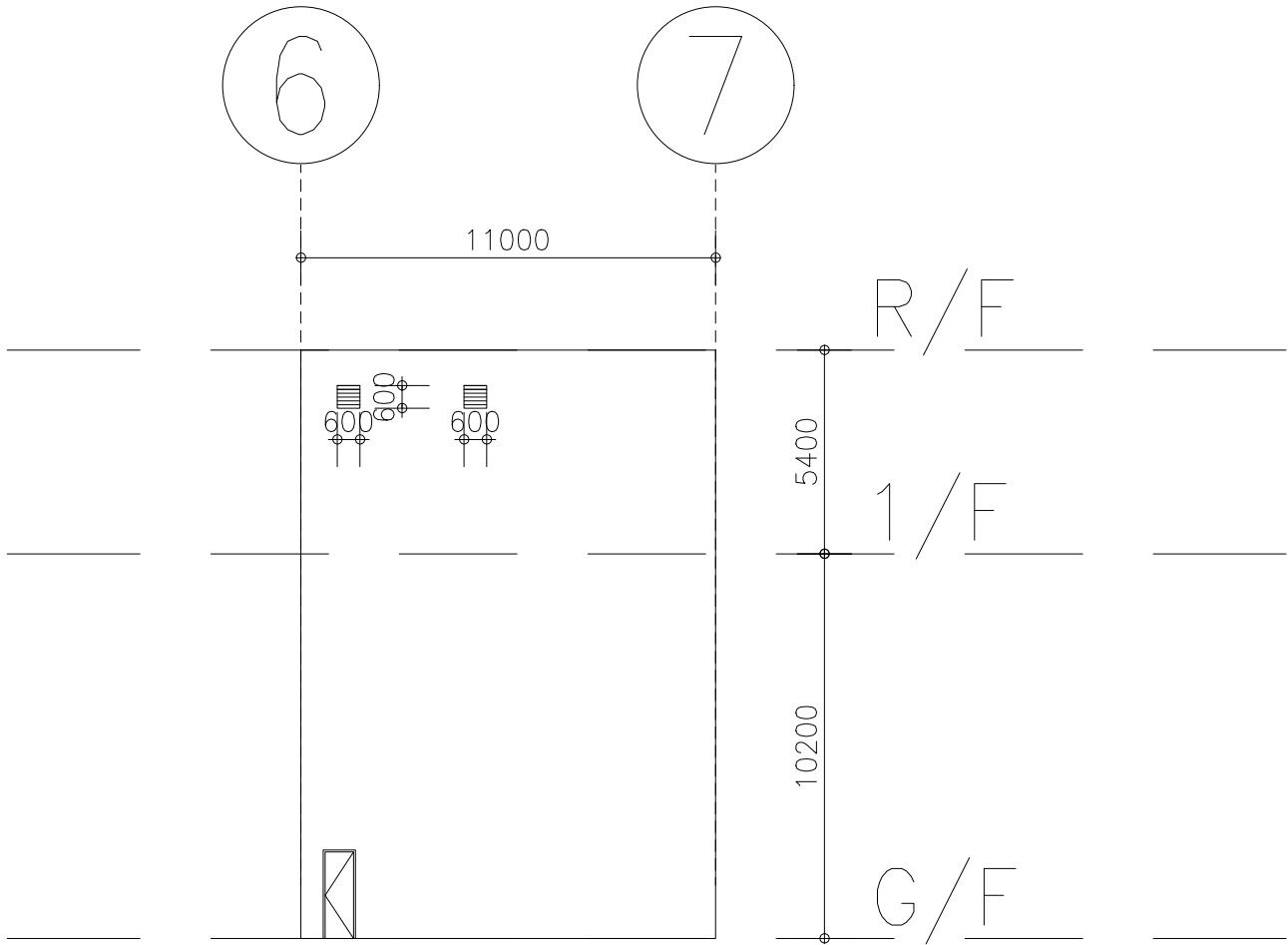
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CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: EL05



NORTH-EAST ELEVATION

- NOTES AND CONDITIONS:
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REV	DESCRIPTION	DATE

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BUILD LTD

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A | 6/F, The Sun's Group Centre, 200 Gloucester Road,  
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T | +852 3188 5995 F | +852 3188 5998

PROJECT:

TMCLK DEPOT

DRAWING TITLE :

NORTH-EAST ELEVATION (SITE B)

SCALE: 1:250

DATE: 13/09/2021

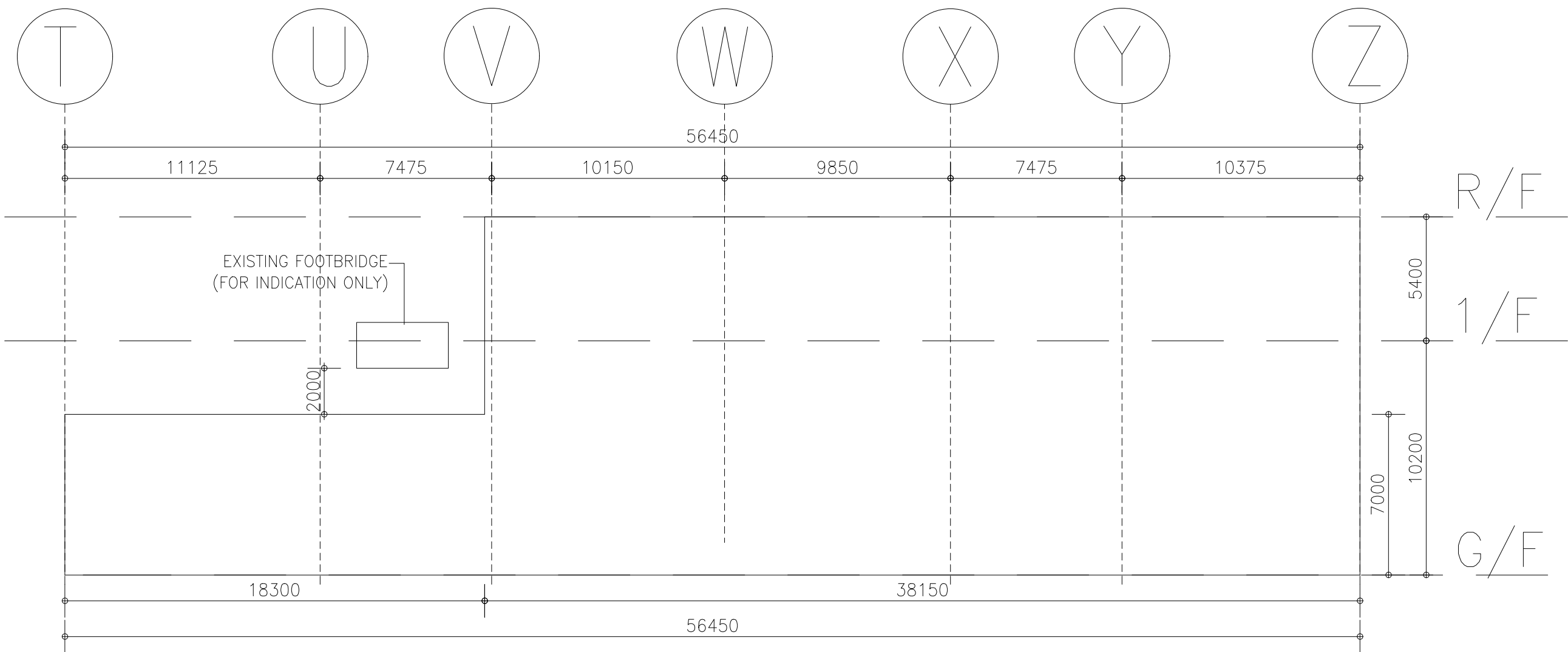
DRAWN BY: CC

CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: EL06



SOUTH-EAST ELEVATION

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REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

FRUIT  
DESIGN &  
BUILD LTD

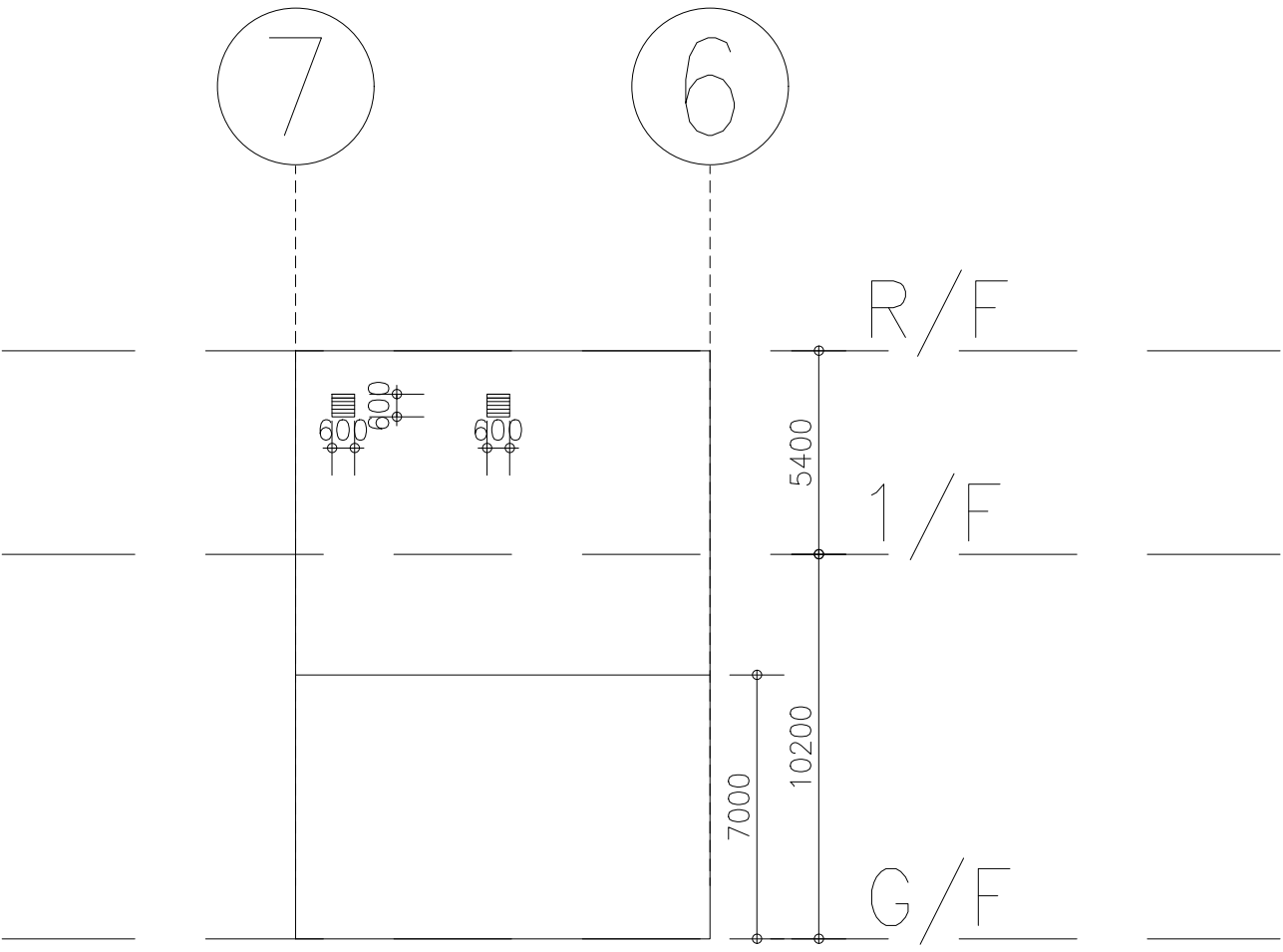
A member of FDB Holdings Limited  
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Wan Chai, Hong Kong  
T | +852 3188 5595    F | +852 3188 5958

PROJECT:

TMCLK DEPOT

DRAWING TITLE :	SOUTHEAST ELEVATION (SITE B)
SCALE:	1:200
DATE:	13/09/2021
DRAWN BY:	CC
CHECKED BY:	NC
APPROVED BY: -	
JOB. NO.:	FDB-P-21031
DWG. NO.:	EL07





SOUTH-WEST ELEVATION

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PROJECT:

TMCLK DEPOT

DRAWING TITLE :

SOUTHWEST ELEVATION (SITE B)

SCALE: 1:200

DATE: 13/09/2021

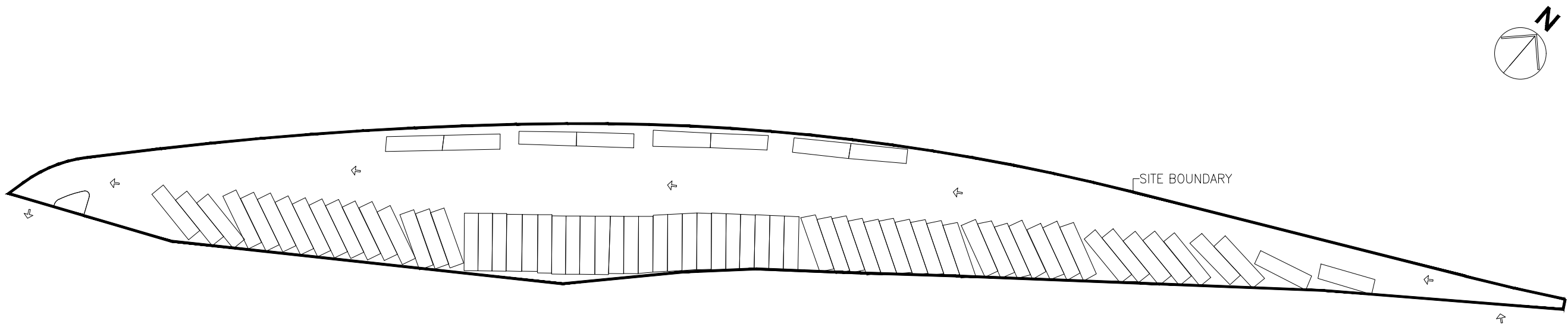
DRAWN BY: CC

CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: EL08



LEGEND



Parking Space  
(13000mm x 3250mm)

G/F

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REV	DESCRIPTION	DATE

CLIENT:

BUILDING CONSULTANT:

**FRUIT  
DESIGN &  
BUILD LTD**

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Wan Chai, Hong Kong

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PROJECT:

TMCLK DEPOT

DRAWING TITLE :

G/F LAYOUT (SITE C)

SCALE: 1:1000

DATE: 13/09/2021

DRAWN BY: CC

CHECKED BY: NC

APPROVED BY: -

JOB. NO.: FDB-P-21031

DWG. NO.: AA09

Project No.: 1906

Site Appraisal Report for Proposed Bus Depots with Ancillary Public Utility Installation (Electricity Substation) in area shown as 'Road', Government Land in D.D. 138 and D.D. 300, Tuen Mun, New Territories (near the building at 20 Tuen Mun Chek Lap Kok Tunnel Road)

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## ***Appendix I –Extracted TMCLKL EIA***

## Appendix K Preliminary Site Appraisal Checklist

**13. LAND CONTAMINATION****13.1 Background**

13.1.1.1 Contaminated land refers to the land which was polluted by hazardous substances or contaminants due to historic industrial operations at the site in the previous years. These contaminants, if present, may pose hazards or adverse effects to the future land users and the nearby environment. The preferred layout of the TM-CLKL is shown in [Figure 3.1](#). The northern and southern connections are shown in [Figures 3.2a, 3.2b and 3.7](#).

13.1.1.2 Sites previously used for petrol filling stations, boatyards and vehicle repair/dismantling workshops could be contaminated as a result of the operations carried out on the sites. Sites which may have been contaminated due to their former usage are prone to causing impacts to human receptors, e.g. site workers during the construction phase. In order to avoid or minimise the risks and hazards associated with these sites, site contamination assessment should be conducted and, remediation measures should be implemented to clean up the land if necessary, prior to any redevelopment works.

13.1.1.3 Contaminated land is caused by spillage, leakage or disposal of toxic chemicals to the ground. Soil at or below the ground surface and sometimes groundwater may be contaminated depending on the subsurface conditions. Contaminated land is a health concern if the public is exposed to toxic chemicals through the impacted soil or groundwater. In Hong Kong, examples of industrial or commercial activities that may potentially cause land contamination include boatyards, petrol filling stations, vehicle repair/maintenance or dismantling workshops, metal or mechanical workshops or oil installations etc.

13.1.1.4 The potentially polluting activities generally involve:

- underground oil or chemical storage in tanks that may leak due to corrosion; or
- operations that may cause spillage of chemicals. Ground surface condition is also a factor affecting the severity of contamination. Spillage over bare soil results in more serious contamination than that over a capped surface.

13.1.1.5 Before a contaminated site is re-developed, it would be necessary to assess the level of contamination by collecting soil and groundwater samples for laboratory analyses. If contamination is above an acceptable level, defined by a set of standards, remediation would be required to render the site safe for future use.

13.1.1.6 In the north, the alignment makes the landfall on elevated viaducts, crossing Lung Mun Road before meeting the proposed toll plaza at grade. While the viaduct will be built on columns, it is assumed that all the land areas underneath and within the works sites would be affected by the works. As such, any contamination within the whole works area will need to be identified. The same situation occurs for the southern landing of the TM-CLKL on Lantau, where the marine elevated viaduct gradually descends to merge with the existing North Lantau Highway at grade and,

again, all the land areas underneath and within the works sites would be assumed to be potentially affected by the works.

13.1.1.7 Construction workers could be exposed to potentially contaminated soil due to the release of contaminants during site formation, excavation and foundation works for the construction of viaduct segments and bridge columns. Also, possible remediation works could be required. The implications of any land contamination associated with the TM-CLKL development have been assessed in this Section.

**13.2 Environmental Legislation and Standards**

13.2.1.1 The following legislation relevant to the land contamination issues as a result of handling, treatment and disposal of contaminated materials:

- Waste Disposal Ordinance (Cap 354);
- Waste Disposal (Chemical Waste) (General) Regulation (Cap 354C); and
- Code of Practice of the Packaging, Labelling and Storage of Chemical Waste, EPD (1992).

13.2.1.2 The following EPD publications provide guidance on the land contamination assessment in this Assignment:

- Guidance Note for Contaminated Land Assessment and Remediation;
- Guidance Manual for Use of Risk-Based Remediation Goals (RBRGs) for Contaminated Land Management; and
- Guidance Notes for Investigation Remediation of Contaminated Sites of Petrol Filling Stations, Boatyards, and Car Repair/Dismantling Workshops.

**13.3 Assessment Methodology**

13.3.1.1 The contaminated land assessment methodology comprised the following key survey tasks in order to identify and evaluate the potential of land contamination within the study area:

- (a) a desktop review to appraise the current and historical land uses within the study area in connection with land uses and potential activities leading to land contamination with the aid of aerial photographs, survey maps, geological map;
- (b) a site reconnaissance to identify any visual contamination hotspots;
- (c) definition of field sampling and laboratory testing regimes and supervise for the field and laboratory testing works based on the Risk-Based Remediation Goals (RBRGs) promulgated since August 2007 in Hong Kong, if contaminated land hotspots were identified;
- (d) interpretation and assessment of the findings of the site investigation (if required) for soil and groundwater samples following the philosophy of the RBRGs which estimate the extent of remediation required to the level of risk under certain land uses for the protection of human health; and
- (e) recommendation of any necessary contamination remediation works for the future TM-CLKL operation based on the conclusion of the land contamination assessment.



13.3.1.2 The findings of the survey are detailed in the sections below.

### **13.4 Survey Findings**

#### **13.4.1 Ground Conditions**

13.4.1.1 The available geotechnical information relevant to the development of the TM-CLKL project has been reviewed. The information included the available archived borehole records, geological maps, historic maps, aerial photographs, and the findings of the Final Desk Top Study Report of Ground Investigation Records under this Assignment. A summary of the reviewed information is summarised below.

##### **Topography**

13.4.1.2 The northern landfall of the Tuen Mun – Chek Lap Kok Link is targeted at the reclamation seafront (Tuen Mun Reclamation) adjacent to River Trade Terminal to form a portal area for the subsea tunnel. In these regions, the ground levels vary approximately between +4.5mPD and +6.5mPD.

13.4.1.3 The proposed subsea tunnel runs southward across the Urmston Road Channel, where the seabed level drops and varies from -11mPD to -19mPD approximately.

13.4.1.4 Beyond the Urmston Road Channel, the subsea tunnel connects the reclamation attached to the east of the proposed HKBCF to form a portal area (HKBCF Reclamation), where the seabed level varies from -19mPD to -3mPD to -19mPD approximately.

##### **Geology**

13.4.1.5 The geological condition along the proposed TMCLKL has been reviewed based on available published records, existing available ground investigation records and geophysical survey. A copy of the relevant portion of the 1:20000 geological map is reproduced as **Figure 13.1**. The geological plans and geological sections along the proposed TMCLKL are shown in **Figures 13.2-13.4** and **Figures 13.5-13.7** respectively. Discussions of the general geological condition in the study area are provided as below.

##### **Superficial Geology**

13.4.1.6 The superficial deposits at north Lantau onshore area consists of alluvium (Qa), beach deposits (Qb), debris flow deposits (Qd, Qpd) while the Tuen Mun onshore area is dominated with alluvium (Qa) and beach deposits (Qb).

13.4.1.7 A layer of debris flow deposits (Qd, Qpd) are mantled on the lower flanks of the hillsides, consisting sand, gravel, cobbles and boulder in silty matrix. Alluvium (Qa) is found deposited around the perennial stream courses. It mainly comprises of silt, sand and gravel. The beach deposits (Qb), dominated with sand, are found within the inlet of Tai Ho Wan and Tuen Mun onshore area.

13.4.1.8 The offshore superficial deposits in the vicinity of The Brothers are Hang Hau formation (QHH). It consists soft to very soft marine mud with some sand. As shown in the geological map the Channel and Transgressive Deposits (Qct) are also noted beneath the Hang Hau Formation (QHH). These deposits may include

extensive sand lenses near the onshore area and offshore area of Tuen Mun, at 1-2 km north of the Brothers Islands.

##### **Solid Geology**

13.4.1.9 The geological maps indicate at the proposed southern connection at Chek Lap Kok is dominated with the Lantau Granite. The granitic intrusion on the northern side of the fault, which forms part of the Lantau pluton and extend to the Brothers Islands, includes a number of intrusive dykes of feldsparphyric rhyolite, quartzphyric rhyolite, basalt and quartz veins. These intrusions typically form sub-vertical, narrow dykes that mostly run sub-parallel to the fault zone itself, although their exact offshore locations and extent are not well defined due to the presence of thick marine and alluvial deposits in the study area.

13.4.1.10 Moreover, notably different conditions are recorded in the vicinity of the Brothers Islands. In the area, outcrops of graphite bearing siltstone and other meta-sedimentary rocks forming part of the Lok Ma Chau Formation is recorded. These deposits include a number of steeply dipping (typically between 40 to 60 deg.) south-southeast striking quartzite (qz) and graphite (gr) dykes on Tai Mo To. The graphite seams were previously mined between 1952 and 1971 and many areas of the abandoned mine may remain in an unstable condition and care should be taken for any engineering works in the vicinity.

13.4.1.11 To the north of The Brothers, the bedrock is back to granitic nature with outcrops at onshore area of Tuen Mun, suggesting the likely presence of steeply dipping basalt and quartzphyric rhyolite dykes.

13.4.1.12 In addition, the proposed alignment entered the zone of designated area of Northshore Lantau, between CH.0 and CH.1550. A number of complex geological conditions are known arise in the designated area, for example, very deep weathering, presence of large fault bounded blocks of meta-sedimentary and marble deposits of the Tolo Harbour Formation, with associated karst and collapse related features. These collapse structures form unusually thick superficial deposits that comprise an assortment of debris flow deposits, laminated sediments and block breccias. The majority of these deposits are soft and unconsolidated.

##### **Structural Geology**

13.4.1.13 The major faults anticipated in the area are summarized as the following:

- At CH.2000, the proposed alignment encountered a major fault at 45 deg. which run from the southern side of Chek Lap Kok, through the eastern part of Tai Mo To, before continuing northeast and link with the southern part of the Tai Lam Fault; and
- At CH.8000, an inferred ENE-striking fault is apparent running along the shoreline at Tuen Mun.

13.4.1.14 In addition to the above mentioned faults, which are all regional features that extend several kilometres in distance, it is anticipated that some minor faults with less pronounced effect may be encountered in the study area.

##### **Ground Conditions**



13.4.1.15 A general description of these sub-surface stratifications encountered along the proposed TMCLKL is given below.

#### **Marine Deposit**

13.4.1.16 A layer of Marine Deposit with thickness varied from approximately 6m to 20m was found under beneath seabed level. The material was generally described as Soft to firm, dark grey, sandy clayey Silt to sandy, silty Clay with occasional shell fragments.

#### **Alluvium**

13.4.1.17 A layer of Alluvium with thickness varied from approximately 6m to 38m was found under beneath Marine Deposit. The SPT 'N' value with range from 20 to 80. The material was generally described as:

- Firm, grey, mottled yellowish brown sand silty Clay to sandy clayey Silt; and
- Medium to dense, grey to yellowish brown, silty, medium to coarse Sand with occasional sub-angular, fine to coarse gravel of moderately strong quartz.

#### **Saprolitic Soils**

13.4.1.18 The saprolitic soil stratum, comprising grade V to IV material, was encountered under beneath Alluvium. The thickness of saprolite varied from approximately from 10 to 40m with SPT 'N' value with range from 35 to 100. The saprolitic soils primarily consisted of extremely weak to week, light gray to yellowish brown, mottled yellow and olive grey completely to highly decomposed, fine to medium grained Granite (Very stiff, sandy Silt with occasional angular, coarse gravel).

#### **Bedrock**

13.4.1.19 Granite was generally described as strong, pinkish grey, spotted dark green, dappled brown, slightly decomposed fine to coarse grained granite. Joints were closely to medium spaced, locally very closely and widely spaced, rough stepped and rough planar, occasional rough undulating, extremely narrow to very narrow, iron and manganese stained, occasional kaolin chlorite coated.

#### **Hydrogeology**

13.4.1.20 A subsea tunnel and marine viaduct form the major parts of the alignment for the TM-CLKL. The remaining part of the alignment will be formed on reclaimed land with levels slightly above the sea level. Under these conditions, it implies that the groundwater will have insignificant influence on the proposed works.

#### **Groundwater Level**

13.4.1.21 The existing groundwater regime at the northern portal area of the subsea tunnel is heavily influenced by the close proximity of the sea. Generally the groundwater table lies at +2mPD (approximately 3m below ground level).

### **13.4.2 Land Use**

13.4.2.1 The proposed alignment at its southern and northern landing points, together with any work areas to be used for site offices, storage, maintenance or pre-casting for example, could potentially interface with areas of potentially contaminated land if they exist. As such, the past and current landuses of the study areas close to Tai Ho Wan for the southern viaduct and proposed work sites, in Pillar Point and Tuen Mun Area 46 for the northern viaduct, slip roads, toll plaza and works sites and at Wok Tai Wan in Tsing Yi for Works Area 23 have been reviewed to identify any interface with areas of potentially contaminated land. Locations of the northern landing (the link roads connecting Lung Mun Road and toll plaza) and southern landings (link roads connecting to the NLH) and the works areas proposed for use during the construction period of TM-CLKL are shown in [Figures 13.8-13.9, 3.8a-3.8b](#) and [13.10-13.14](#). Details of the works areas are shown in [Table 13.1](#).

**Table 13.1 Location of TM-CLKL Works Areas**

Works Area	Location
<b>Lantau</b>	
WA4	The site is an Un-allocated Land at the existing reclamation for North Lantau Highway beside Cheung Tung Road in Lantau which is next to the Tai Ho Offtake and Pigging Station.
WA5	The site is under Temporary Government Land Allocation near Yam O Wan beside Cheung Tung Road in Lantau.
WA6	The site is under Temporary Government Land Allocation near Yam O Wan beside Cheung Tung Road in Lantau.
WA23	The site is under Temporary Government Land Allocation at the reclaimed land at Wok Tai Wan in Tsing Yi, which is a landfall of Tsing Ma Bridge.
<b>Tuen Mun</b>	
WA18	The site is under Short Term Tenancy at Tuen Mun Area 46 at the existing River Trade Golf at Pillar Point in Tuen Mun.
WA19	The site is under Temporary Government Land Allocation at the existing closed Pillar Point Valley Landfill at Pillar Point at Tuen Mun at Tuen Mun Area 46

#### **Past Land Use and Activities**

13.4.2.2 The northern connection at Pillar Point in Tuen Mun was developed mainly on land reclaimed at the coastal areas near Butterfly Beach. This reclamation for special industrial use has been completed since the 1980s to cater for the increasing traffic demand in association with the development in Tuen Mun. The proposed northern connection will encroach upon the coastal reclamation area which was the coastline of Pillar Point in Tuen Mun more than 20 years ago (before 1988). Also, the proposed toll plaza and its associated link roads would be located on the site of the former Pillar Point Vietnamese Refugee Camp (between 1989 and 2000) and, also, the rural, undisturbed woodlands at and adjacent to Tuen Mun Area 46, as shown in [Figure 13.15](#). No apparent pollution sources were identified in the immediate vicinity of the site which would lead to significant land contamination concerns. Based on the available information, no historic potential contamination activities were anticipated and identified in that area.

13.4.2.3 Between the date of the earliest available aerial photographs in 1945 and the developed airport and Tung Chung New town during 1990s, the land-use at the onshore areas at North Lantau, between Tai Ho and Chek Lap Kok was primarily for agricultural terraces and cut/fill platforms with some dwellings in the low-lying



valley areas. The North Lantau Highway where the southern viaduct will connect and some of the works areas are proposed is on land reclaimed after 1992, as shown in [Figure 13.16](#). There are several proposed works areas along Cheung Tung Road which comprise reclaimed land including adjacent to Tai Ho Offtake and Pigging Station storage areas or have been occupied as previous contract works areas, including the site offices for Penny's Bay Reclamation and site offices for Yam O Road watermain laying. However, there were no historic contamination hotspots identified adjacent to the proposed southern connection at north Lantau.

13.4.2.4 The past land uses of the main works sites for the project including the six works areas are summarised in **Table 13.2** below:

**Table 13.2 Past Land Uses of the Project Site**

Area	Past Land Use Description
Elevated viaduct at Pillar Point	The elevated viaducts would be located on the land reclaimed in 1980s at the coastal zone in Pillar Point, as shown in <a href="#">Figure 13.15</a> . The sawmills gradually moved onto the reclamation areas in late 1980s from the coastal site near Butterfly Bay. No other apparent pollution sources were identified in the immediate vicinity of the site which may lead to significant land contamination concerns.
Toll Plaza and associated buildings	The toll plaza is proposed to be located on the site of the former Pillar Point Vietnamese Refugee Camp (operation between 1989 and 2000) and the rural, undisturbed woodlands at and adjacent to Tuen Mun Area 46 shown in <a href="#">Figure 13.15</a> . The camp was then demolished and the land reinstated, until 2003 when the River Trade Golf started to operate.
Elevated viaduct at Tai Ho Wan	The elevated viaducts would be located on land reclaimed after 1992 for the North Lantau Highway, as shown in <a href="#">Figure 13.16</a> . The land has remained unoccupied since it was reclaimed. No other apparent pollution sources were identified in the immediate vicinity of the site which may lead to significant land contamination concerns.
Works Area 4	The site is located on reclaimed land. According to the historic photographs shown in <a href="#">Figure 13.17</a> , the site had not been reclaimed prior to 1992. Since that time, site formation works for the North Lantau Highway were apparent and the subsequently the site is known to have been used for site offices and as a storage area for the Penny's Bay Reclamation project which was concrete-paved. The MTR Siu Ho Wan Depot is located more than 400m from the site which is too far to influence the site and no other apparent pollution sources were identified in the immediate vicinity which may have lead to significant land contamination concerns.

Area	Past Land Use Description
Works Area 5	The site is located on reclaimed land. According to the historic photographs shown in <a href="#">Figure 13.18</a> , the site was undeveloped prior to around 1993. Since then, site formation works for the North Lantau Highway were apparent. It was not until 1998 that building structures were established for the subsequent Penny's Bay Reclamation project when the site was known to have been used for site offices and as a storage area which was concrete-paved. No other apparent pollution sources were identified in the immediate vicinity of the site which may lead to significant land contamination concerns.
Works Area 6	The site is located on reclaimed land. According to the historic photographs shown in <a href="#">Figure 13.19</a> , the site was undeveloped prior to around 1995. Since then, site formation works for the North Lantau Highway were apparent. Site offices for the previous Yam O Road Watermain works were then established in circa 2000. No other apparent pollution sources were identified in the immediate vicinity of the site which may lead to significant land contamination concern.
Works Area 23	The site is located on reclaimed land. According to the historic photographs shown in <a href="#">Figure 13.20</a> , the site had not been reclaimed prior to around 1986. In around 1987, land reclamation works commenced, apparently for the landing of Tsing Ma Bridge tower. Barging points and concrete batching plants were known to exist on the site during the construction phase of the Tsing Ma Bridge and North Lantau Highway. The Hong Kong United Dockyard and Shell Oil Depot are located more than 100m and 600m, respectively, from the site. No other apparent pollution sources were identified in the immediate vicinity of the site which may lead to significant land contamination concerns.
Works Area 18	The site formed part of the former Pillar Point Vietnamese Refugee Camp between 1989 and 2000 but, according to the historic photographs shown in <a href="#">Figure 13.15</a> , the part of the site in question was undeveloped prior to 2003 and comprised natural vegetated hillside. Since 2003, a golf driving range (the River Trade Golf) has been established which covers part of the works area and no pollution sources were identified. The landfill gas flare and ammonia stripping plant of the closed Pillar Point Valley Landfill are located at more than 50m from the site. No other apparent pollution sources were identified in the immediate vicinity of the site which may lead to significant land contamination concerns.
Works Area 19	The site is within the closed Pillar Point Valley Landfill boundary which commenced operation to receive waste in 1983 and closed in 1996. The site comprised the works sites for the restoration works of the landfill between 2004 and 2006. According to the historic photographs shown in <a href="#">Figure 13.15</a> , part of the site was undeveloped with signs of vegetation whilst some areas show the presence of site offices and the area has been used for open storage since 2004. The landfill gas flare and ammonia stripping plant of the closed Pillar Point Valley Landfill are in close proximity to the site. No other apparent pollution sources were identified in the immediate vicinity of the site which may lead to significant land contamination concern.

#### Existing Land Use and Activities



13.4.2.5 A series of sawmill factories have existed along the coastal reclamation area in the Pillar Point area of Tuen Mun since around 1988 and these are subject to short term tenancies under the Government land leasing terms. The operation of these sawmills involves the loading and unloading of timber materials between barges and warehouses at the barging point. Further processing of these timber materials will mainly be cutting to the prescribed length and size for temporary storage and delivery. In addition, the River Trade Golf facility is located at Tuen Mun Area 46, which will interface with the proposed toll plaza, and which comprises a golf driving range and recreation area and has been in operation since 2007. This is also subject to a short term tenancy. Also, the proposed toll plaza and part of its associated link roads would be located at the existing River Trade Golf and the rural, undisturbed woodlands at and adjacent to Tuen Mun Area 46 (Figures 13.18 and 13.21). No apparent pollution sources were identified in the immediate vicinity of the site which would lead to significant land contamination concern. No historic or current potential contamination activities are anticipated or were identified in these areas.

Site B was used as golf facility. No apparent pollution sources were identified.

Part of Site A is within Works Area 19 (WA19). Some open storage exist within WA19 and no potential contamination hotspots have been identified.

In terms of the southern end of the project, the site formation and associated infrastructure development for Hong Kong International Airport was carried out in the 1990s and included the construction of the North Lantau Highway (Figure 13.9). These works involved the formation of a number of man-made cut slopes at the toe of the natural terrain hillside along the North Lantau coastline and the formation of several major reclamation areas, most notably at Chek Lap Kok itself and at the Siu Ho Wan MTR Depot. There are several locations on the reclaimed land along Cheung Tung Road which are currently vacant (e.g. adjacent to Tai Ho Offtake and Piggings Station) or occupied as works areas (e.g. storage areas and site offices for Penny's Bay Reclamation, site offices for Yam O Road Watermains, etc). However, there were no existing contamination hotspots identified adjacent to the proposed southern connection at north Lantau.

13.4.2.7 In addition, one of the proposed works areas, WA19 (Figure 3.8a and Figure 13.15), will interface with the Pillar Point Landfill. The existing closed Pillar Point Valley Landfill commenced its operation to receive waste from 1983 and closed in 1996, and the landfill restoration work commenced in 2004 and completed in 2006. Only some open car parks, storage areas and site offices exist within this area and no potential contamination hotspots have been identified.

13.4.2.8 A summary of the existing land uses of the main works sites for the project including the six works areas are summarised in Table 13.3 below:

**Table 13.3 Existing Land Uses of the Project Site**

Area	Existing Land Use Description
Elevated viaduct at Pillar Point	The elevated viaducts would be located within the footprint of the sawmills on the coastal reclamation area in Pillar Point. The viaducts also would also cross the Pillar Point Fire Station which is located north of the sawmills. No other apparent pollution sources were identified in the immediate vicinity of the site which may lead to significant land contamination concerns.
Toll Plaza and associated buildings	The site would be located partly at the existing River Trade Golf and partly on the rural, undisturbed woodlands at and adjacent to Tuen Mun Area 46. No other apparent pollution sources were identified in the immediate vicinity of the site which may lead to significant land contamination concerns.

Area	Existing Land Use Description
Elevated viaduct at Tai Ho Wan	The elevated viaducts would be located on land reclaimed after 1992 for the North Lantau Highway. The areas beside North Lantau Highway and Cheung Tong Road, are currently vacant. No other apparent pollution sources were identified in the immediate vicinity of the site which may lead to significant land contamination concerns.
Works Area 4	The site is currently concrete-paved and unoccupied. No other apparent pollution sources were identified in the immediate vicinity of the site which may lead to significant land contamination concerns.
Works Area 5	The site is current paved and used as site offices and a storage area for Penny's Bay Reclamation project. No other apparent pollution sources were identified in the immediate vicinity of the site which may lead to significant land contamination concerns.
Works Area 6	The site is currently paved and unoccupied. No other apparent pollution sources were identified in the immediate vicinity of the site which may lead to significant land contamination concerns.
Works Area 23	The site is currently an open storage of concrete casted blocks. No other apparent pollution sources were identified in the immediate vicinity of the site which may lead to significant land contamination concerns.
Works Area 18	The site is currently paved and used as an open car park for the River Trade Golf. The landfill gas flare and ammonia stripping plant of the closed Pillar Point Valley Landfill are located more than 50m from the site. No other apparent pollution sources were identified in the immediate vicinity of the site which may lead to significant land contamination concerns.
Works Area 19	The site is currently paved and unoccupied. The landfill gas flare and ammonia stripping plant of the closed Pillar Point Valley Landfill are in close proximity to the site. No other apparent pollution sources were identified in the immediate vicinity of the site which may lead to significant land contamination concern.

### Future Land Use

13.4.2.9 In accordance with the Guidance Note for Contaminated Land Assessment and Remediation, Guidance Manual for Use of Risk-Based Remediation Goals for Contaminated Land Management, there are 4 different post-restoration land use scenarios (Urban Residential, Rural Residential, Industrial, Public Parks) reflecting the typical physical settings in Hong Kong are categorised under which people could be exposed to contaminated soil and groundwater.

13.4.2.10 RBRGs have been developed to protect workers at industrial sites, the public visiting public parks, and residents in urban and rural areas. Separate sets of RBRGs have been developed according to different land uses, as the ways in which people come into contact with contaminated soil and/or groundwater, including the intensity and frequency of their contact, are largely dependent on the type of land use.

13.4.2.11 The future land use includes land that will be occupied during both the construction and operation phases of the project. During the construction phase, the demarcation



of works sites would include the footprints of the works items as described in Section 3 of this EIA report and would encroach upon the following areas:

- Marine tunnel portals would be constructed at the new reclamations of the TM-CLKL project at Pillar Point of Tuen Mun (northern connection) and at the north-eastern end of the HKBCF (Figures 3.2a and 3.2b). As such, no land contamination issues would be anticipated;
- The northern viaduct of TM-CLKL would be constructed from the northern portal of the submarine tunnel in Tuen Mun, encroaching upon an area of about 3,500 m<sup>2</sup> of the Pillar Point reclamation area which is currently occupied by two sawmills (Wai Sang Sawmill Ltd and Shou Cheong Sawmill Ltd) (see Figure 3.4a), before passing over Lung Mun Road and descending to the proposed toll plaza in Area 46. The slip roads would span over the hill slopes and adjacent to the existing Lung Mun Road. However, no potential contamination hotspots have been identified in these areas;
- At the southern connection, the elevated marine viaducts would connect the southern portal on the reclamation to the NLH transport corridor (Figure 13.8). As described above the NLH transport corridor is on reclaimed land and as such, no contamination issues would be anticipated based on the historic and existing land uses in this area.

13.4.2.12 A summary of the future land uses of the main works sites for the project including the six works areas are summarised in Table 13.4 below:

**Table 13.4 Future Land Uses of the Project Site**

Area	Future Land Use Description
Elevated viaduct at Pillar Point	The site is proposed for the future elevated viaducts. No other apparent pollution sources were identified in the immediate vicinity of the site which may lead to significant land contamination concerns.
Toll Plaza and associated buildings	The site is proposed for the future toll plaza and its associated buildings. No other apparent pollution sources were identified in the immediate vicinity of the site which may lead to significant land contamination concerns.
Elevated viaduct at Tai Ho Wan	The site is proposed for the future elevated viaducts. No other apparent pollution sources were identified in the immediate vicinity of the site which may lead to significant land contamination concerns.
Works Area 4	The site is proposed to be used for the general storage of materials and viaduct segment and site office. Concrete pavement works will be carried out as necessary. No major site formation works will be carried out.
Works Area 5	The site is proposed to be used for the site offices and the general storage of materials and viaduct segments on the concrete paved land, which would be the same as its existing use. No major site formation works will be carried out.

Area	Future Land Use Description
Works Area 6	The site is proposed to be used for site offices and the general storage of materials and viaduct segments and on the concrete paved land, which would be the same as its previous use. No major site formation works will be carried out.
Works Area 23	The site is proposed to be used for site offices and as the casting yard for fabrication of precast units, storage of work boat and materials, which would be the same as its previous use. Concrete pavement works will be carried out as necessary. No major site formation works will be carried out.
Works Area 18	The site is proposed to be used for the general storage of materials and viaduct segment and site office on the concrete paved land. No major site formation works will be carried out.
Works Area 19	The site is proposed to be used for the general storage of materials and viaduct segment and site office on the concrete paved land, which would be the same as its previous use. No major site formation works will be carried out.

13.4.2.13 During the operation phase, the future land use of the entire TM-CLKL would be classified as “Roads”. The corresponding RBRGs for the land use in accordance with the Guidance Note for Contaminated Land Assessment and Remediation, Guidance Manual for Use of Risk-Based Remediation Goals for Contaminated Land Management would be “Lower of Industrial or Public Park”, based on which the land contamination assessment and remediation (if required) criteria would be carried out.

#### 13.4.3 Reconnaissance Site Visit

13.4.3.1 Reconnaissance site visits were carried out on 19 August 2008 and 15 January 2009 to both the areas where the proposed northern and southern connections of the TM-CLKL would be constructed. An additional visit to the area of the proposed northern connection, specifically to the 2 possibly affected sawmills, was carried out on the 3 March 2009 in which interviews were also conducted with the owners of the sawmills in order to verify the desktop review findings and identify if any additional polluting activities may exist to cause hotspots of land contamination. The observations of the reconnaissance site visit were in line with the desktop review and no contamination hotspots were identified.

#### 13.4.4 Sensitive Receivers

13.4.4.1 If contamination hotspots were identified, the future construction workers would be more prone to be exposed to the potential contaminated material than the future land users within the study area, due to their exposure to potential contaminants during excavation and preparation of foundation works. Depending on the nature of the contaminants, hazards during preparation of foundations and subsurface services could be significant. The principal exposure routes for workers would include:

- Ingestion of contaminated soil through eating, drinking or smoking on site;
- Dermal contact with contaminated spoil; and
- Inhalation of contaminants if they are volatile.

### **13.5 Impact Assessment**

13.5.1.1 Based on the above initial site appraisal, reconnaissance site visits and the review of previous relevant information, no land contamination hotspots were identified at the southern connection of the TM-CLKL in the north Lantau area.

13.5.1.2 In addition, at the proposed northern connection on TM-CLKL at Pillar Point, Tuen Mun, no potential land contamination hotspots identified at the sawmill factories, the land that would be encroached upon by the selected alignment layout. Details of the preliminary site appraisal of these sawmills are summarised in the preliminary site appraisal checklist (based on Guidance Notes for Investigation Remediation of Contaminated Sites of Petrol Filling Stations, Boatyards, and Car Repair/Dismantling Workshop ) as included in **Appendix K**.

13.5.1.3 Based on the above review and site visits, there would be no potential land contamination hotspots identified according to the Guidance Notes for Investigation Remediation of Contaminated Sites of Petrol Filling Stations, Boatyards, and Car Repair/Dismantling Workshop. Therefore, no further site investigation works for the land contamination assessment would be recommended.

### **13.6 Mitigation Measures**

13.6.1.1 The results of the assessment did not reveal any contamination hotspots that might be affected by the proposed works and as such no mitigation measures in the form of contaminated land remediation is required.

### **13.7 Residual Impacts**

13.7.1.1 No significant contaminated land impacts are predicted during the construction and operational phases and as such, no residual impacts are also predicted.

### **13.8 Environmental Monitoring and Audit**

13.8.1.1 No EM&A activities for the construction and operational phases are recommended as no significant impacts are predicted.





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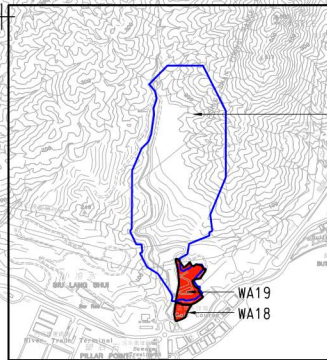
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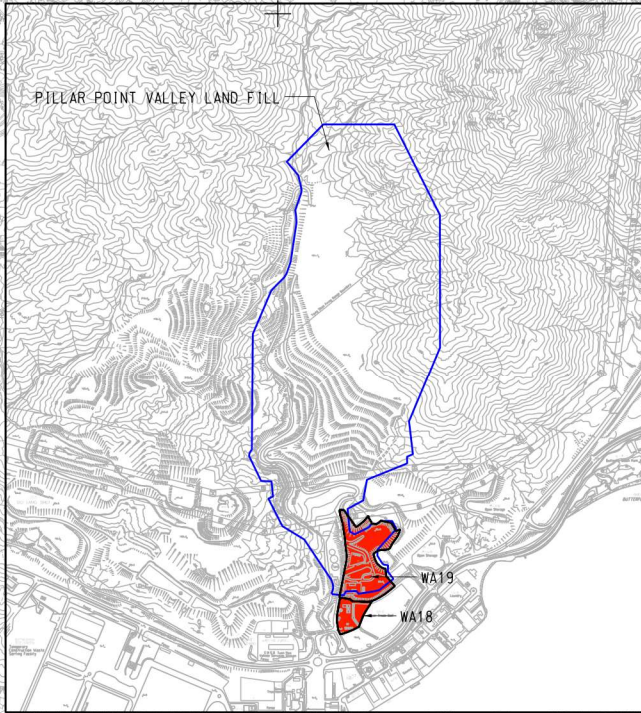
INSET A



PILLAR POINT VALLEY LAND FILL

CASTLE PEAK BAY  
(TSING SHAN WAN)

INSET A



PILLAR POINT VALLEY LAND FILL

WA19  
WA18

LEGEND:



PROPOSED WORKS AREA

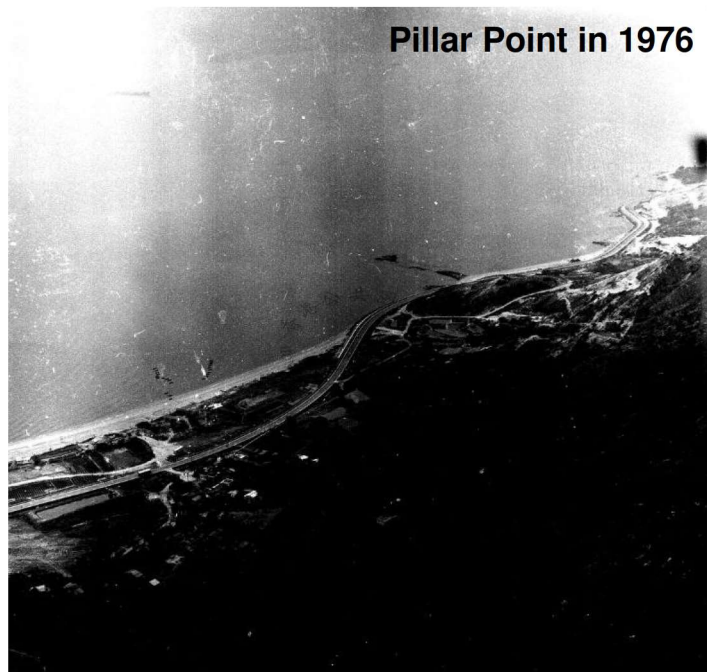
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AGREEMENT NO. CE 52/2007(HY)  
TUEN MUN - CHEK LAP KOK LINK - INVESTIGATION  
PROPOSED WORKS AREAS FOR TMCKL (TUEN MUN SIDE)

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Pillar Point in 1976



Reclamation at Pillar Point in 1980s



Pillar Point in 2005



CW67846 4 Nov 2005 4000' PILLAR POINT

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Survey & Mapping Office, Lands Department  
The Government of Hong Kong Special Administrative Region

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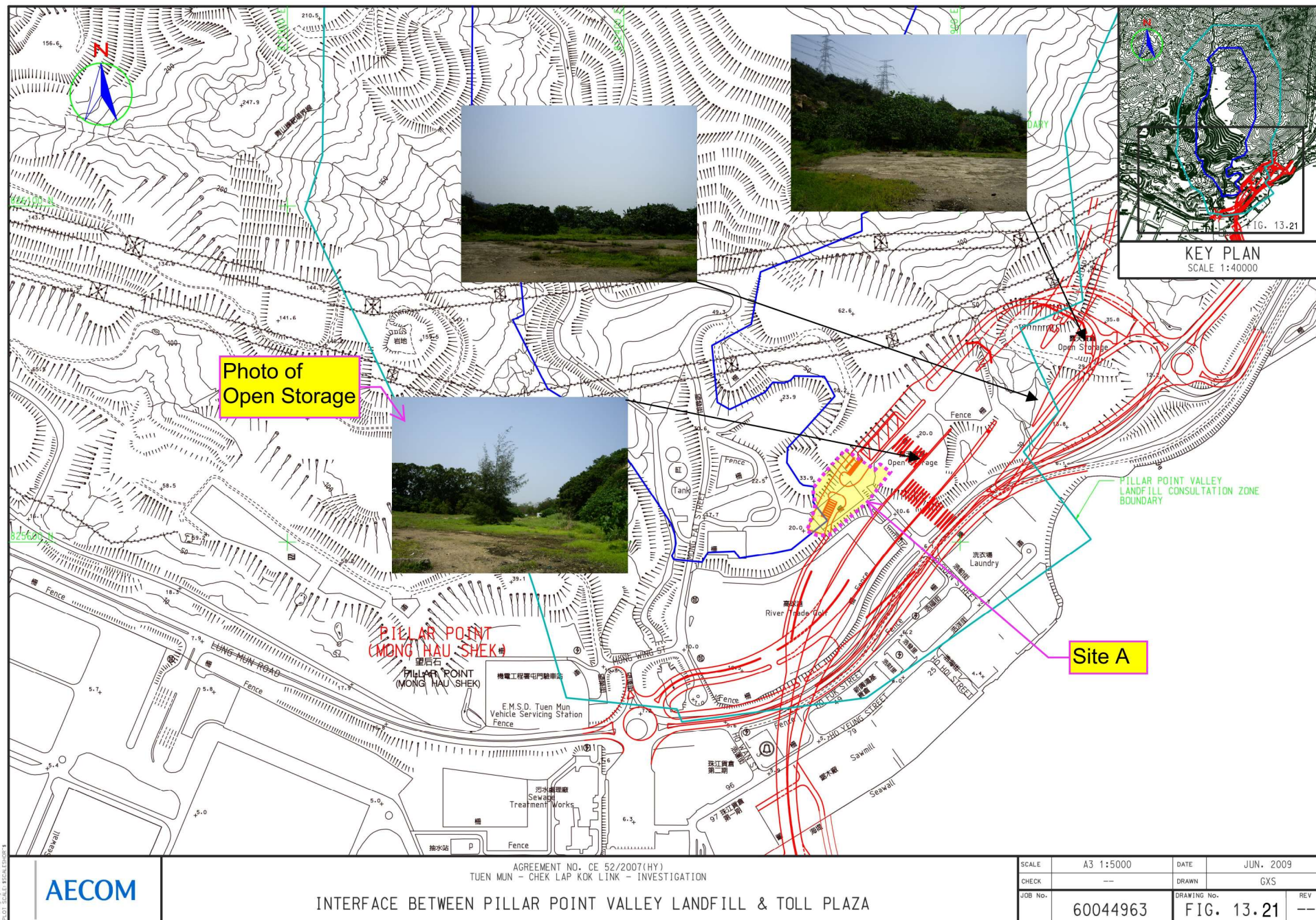
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AGREEMENT NO. CE 52/2007(HY)  
TUEN MUN - CHEK LAP KOK LINK - INVESTIGATION  
HISTORIC PHOTOGRAPHS AT NORTHERN LANDING

SHEET 1 OF 1

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		REV	--





Plotting: 01/7/2009  
 PLOT SCALE: 1:5000

**Section 16 Planning Application for  
Multi-storey Depot for Electric Buses at  
Tuen Mun - Chek Lap Kok Link Free-up Area**

**Traffic Impact Assessment**

**October 2021**

**AECOM**

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Annex B	Swept Path Analysis

## **1 INTRODUCTION**

### **1.1 Background**

- 1.1.1 As announced in the Chief Executive's 2019 Policy Address, the Government proposes waiving the tolls of the new Tuen Mun – Chek Lap Kok Tunnel (TM-CLKT) and the Lantau Link when the new TM-CLKT is commissioned in end 2020. As to better utilize the free up area from the original toll plaza at the Northern Connection of Tuen Mun – Chek Lap Kok Link (TM-CLKL), KMB with support of Transport Department proposes to build a multi-storey permanent depot and relative facilities as shown in **Figure 1.1**.
- 1.1.2 In the Hong Kong Roadmap on Popularisation of Electric Vehicles announced by the Environment Bureau in March 2021, adoption of electric vehicles and their associated supporting facilities are promoted. One of the key measures under the Roadmap is the promotion of electric commercial vehicles including franchised buses.
- 1.1.3 As to mitigate the emissions from the buses to improve air quality, the Government has conducted the research and trial with a view of electrifying the bus fleet. It is stated that the provision of charging-enabling bus parking bays in bus depot is of great importance of electrification of franchised bus fleet. Besides, due to the difference of the engineering design between electric buses and conventional buses, the daily maintenance of electric buses (eBus) would be relatively less demanding than that of conventional buses for which would require changing engine oil, conducting engine and gearbox overhaul. In this connection, the eBus Depot will be clean, zero emission and quiet.
- 1.1.4 In order to align the vision of the above-mentioned Roadmap and maximize the land use potential of the free up area as bus depot, it is proposed to develop a multi-storey depot for eBus comprising charging-enabling bus parking bays, washing, maintenance pits, workshop and ancillary office. As a result, the overall parking capacity of the bus depot can be increased to about 406 franchised bus parking spaces and 81 maintenance bays.
- 1.1.5 AECOM was commissioned by the Applicant to prepare a Traffic Impact Assessment (TIA) report in support of Section 16 Planning Application for the proposed multi-storey depot for electric buses at TM-CLKL free up area.

### **1.2 Objectives**

- 1.2.1 The main objectives of this report are as follows:-
- Outline the proposed development parameters, access arrangement and internal transport facilities;
  - Review the current traffic condition in the vicinity;
  - Estimate the potential traffic generations and attractions of the proposed development;
  - Produce traffic forecasts on the surrounding road network at the adopted design year;
  - Assess traffic impact on the surrounding road network induced from the proposed development; and
  - Develop traffic improvement proposal(s) if necessary.

### **1.3 Structure of TIA Report**

1.3.1 Following this introductory chapter, the TIA is structured as follows:

- Chapter 2:** Proposed Development, describes the proposed development schedule and its internal traffic facilities provisions, access arrangement, etc.;
- Chapter 3:** Existing Traffic Condition, reviews the current traffic conditions;
- Chapter 4:** Traffic Impact Assessment, describe the traffic forecasting methodology and presents the forecasted traffic flows in design year, assesses the traffic impact induced on the surrounding road network;
- Chapter 5:** Summary and Conclusion, summarizes the findings of the study and presents the conclusion of this TIA.



## 2 PROPOSED DEVELOPMENT

### 2.1 Indicative Development Schedule

- 2.1.1 The subject site is comprised of 3 land parcels, namely Site A, B & C. The proposed multi-storey building of the bus depot is located in Site A for bus charging, washing, parking and maintenance with ancillary office. Site B is used as 2-storey power substation. Site C is solely used as charging-enabling bus parking bays.
- 2.1.2 The indicative development schedule of the proposed bus depot (Proposed Development) is shown in **Table 2.1**.

**Table 2.1 Indicative Development Schedule**

Parameters	Site A	Site B	Site C	Total
Site Area	7,926 m <sup>2</sup>	1,321 m <sup>2</sup>	7,598 m <sup>2</sup>	16,845 m <sup>2</sup>
No. of Storeys	11	-	-	-
No. of Bus Parking Spaces (13m (L) x 3.3m (W))	333	-	73	406
No of Maintenance Bays (13.5m (L) x 4.35m (W))	81	-	-	-
No. of Washing Bays	4	-	-	-

- 2.1.3 The G/F, 1/F –10/F and roof floor layouts of the Proposed Development are shown in **Figure 2.1** to **Figure 2.5**.

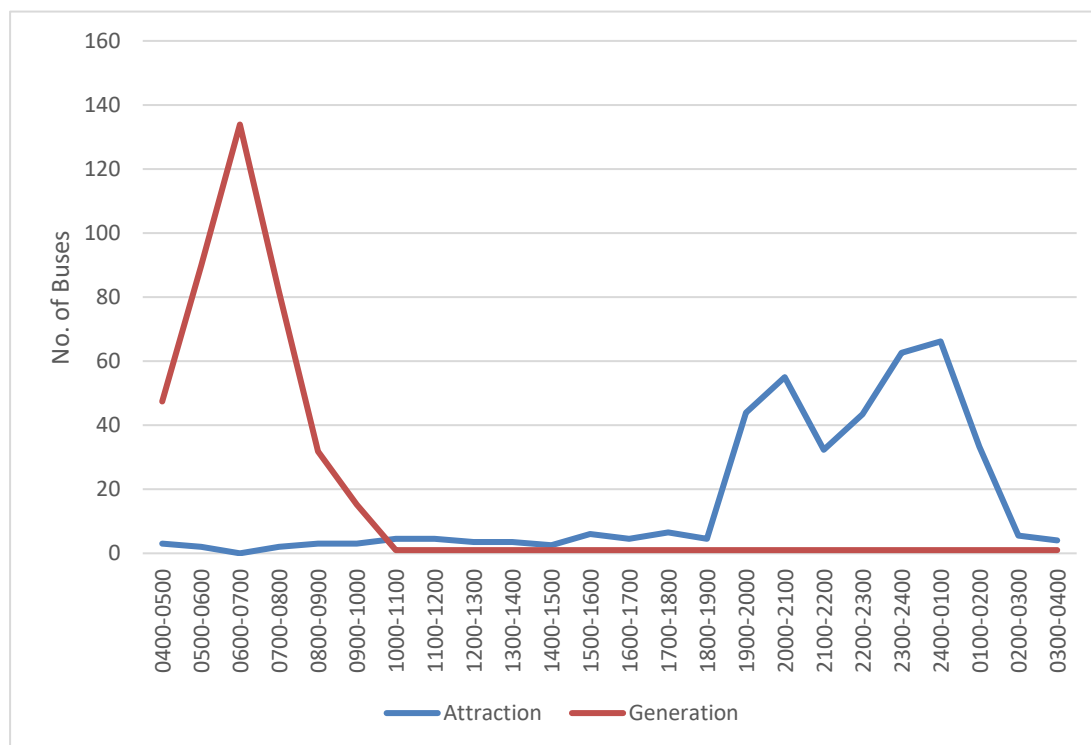
### 2.2 Site Access

- 2.2.1 As shown in **Figure 2.1**, separated run-in and run-out are proposed for Site A, B & C.
- 2.2.2 The ingress and egress routings of the Proposed Development are shown in **Figure 2.6**.
- 2.2.3 The swept path analysis of buses ingress/egress to/from Site A and Site C is conducted and shown in **Annex B** (Drawings: **SK1 – SK2**).

### 2.3 Trip Generation of the Proposed Development

- 2.3.1 As given by the bus operator, the daily profile of bus generation and attraction of the proposed bus depot was estimated and shown in **Chart 2.1**.

**Chart 2.1 Estimated Daily Profile of Traffic Generation and Attraction of Proposed Bus Depot**



2.3.2 As shown, the operation and normal commuting peaks are staggered, the traffic impact arising from the Proposed Development during the normal commuting AM & PM peak hours is considered minimal, the relevant assessment of traffic impact would be discussed in **Chapter 4**.

2.3.3 The trip generation of the Proposed Development in commuting AM & PM peaks and identified operational periods are summarized in **Table 2.2**.

**Table 2.2 Traffic Generation of the Proposed Multi-storey Bus Depot**

Proposed Multi-storey Bus Depot		Commuting Peak				Operational Period					
		AM (07:30 – 08:30)		PM (17:15 – 18:15)		Early Morning (06:00-07:00)		Late Evening (20:00-21:00)		Mid-night (24:00 – 01:00)	
		Gen	Att	Gen	Att	Gen	Att	Gen	Att	Gen	Att
Trip End	veh/hr <sup>(1)</sup>	82	2	1	7	134	0	1	55	1	66
	pcu/hr <sup>(2)</sup>	205	6	3	17	335	0	3	138	3	166

(1) Total number of vehicles include maintenance vehicles and private cars of staff

(2) PCU factor of 2.5 is applied for conversion of veh/hr to pcu/hr

## **2.4 Bus Depot Facilities**

### Site A

- 2.4.1 The proposed multi-storey building in Site A will provide 4 sets of bus washing machine, 81 maintenance bays, workshop, ancillary office and 333 charging-enabling bus parking bays. The swept path analysis of buses maneuvering inside the depot is conducted and shown in **Annex B** (Drawings: **SK3 – SK18**).

### Site B

- 2.4.2 Site B will provide a 2-storey power substation.

### Site C

- 2.4.3 Site C will provide 73 charging-enabling bus parking bays.

## **2.5 Queue Length Analysis**

- 2.5.1 Queue length analysis was conducted for the operation of bus washing to ensure no tail back to the main road of TM-CLKL.

### Number of Washing Machines

- 2.5.2 As stated in **Section 2.4.1**, there are 4 washing machines in the system which can serve 4 buses simultaneously.

### Estimation of Arrival Rate

- 2.5.3 As a conservative approach, the trip attraction during mid-night operational period (i.e. 24:00 – 01:00) is adopted to obtain the maximum traffic attraction of the Proposed Development. By referring to the **Table 2.2**, the traffic attraction of the Proposed Development during mid-night operational period would be 66 buses/hr.

### Estimation of Service Rate

- 2.5.4 The service time for completing a cycle of bus washing operations (including changing time) is approximate 2 minute as advised by bus operator. It is therefore estimated that the service rate of the washing machine is 30 buses/hr.

### Queuing Situation

- 2.5.5 The queuing situation in the proposed washing system can be determined based on a multiple channel queuing system, thus Poisson distribution and multi-servers queuing (M/M/N) theory is used. The probabilities of different number of buses in the washing system are calculated for the washing system.

2.5.6 The probability that  $n$  buses are in the washing system is given by:

$$P(n) = \frac{1}{\sum_{n=0}^{N-1} \frac{e^n}{n!} + \frac{e^N}{N! \left(1 - \frac{e}{N}\right)}} \quad \text{for } n = 0$$

$$P(n) = \frac{e^n}{n!} P(0) \quad \text{for } 0 < n \leq N$$

$$P(n) = \frac{e^n}{N^{n-N} N!} P(0) \quad \text{for } n > N$$

Where:

$P(n)$	=	Probability of $n$ buses in the system
$e$	=	$\lambda / \mu$
$\lambda$	=	Arrival Rate = 66 buses/hr
$\mu$	=	Servicing rate = 30 buses/hr
$n$	=	Number of buses in the system
$N$	=	Number of washing machines = 4

2.5.7 The probabilities that  $n$  buses are in the washing system are summarized in **Table 2.3**.

**Table 2.3 Probability of  $n$  Buses in the System**

No. of Buses in the System, $n$	Probability, $P(n)$	Accumulated Probability, $\sum_{x=0}^n P(x)$
0	0.105	0.105
1	0.230	0.335
2	0.253	0.588
3	0.186	0.773
4	0.102	0.875
5	0.056	0.931
6	0.031	0.962

2.5.8 According to the analysis, the probability for 6 or more buses in the washing system is 0.038 (i.e.  $1 - 0.962$ ), which is less than about 4 out of 100 times (i.e. confidence level of 95%). Hence, provision of at least 2 bus queuing spaces within site is required.

2.5.9 Based on the MLP, the available queuing area in Site A could accommodate at least 3 buses which provides adequate spare capacity to handle the peak arrival flows without queuing back to the public road. The queuing arrangement is shown in **Figure 2.7**.

### 3 EXISTING TRAFFIC CONDITION

#### 3.1 Local Road Network

- 3.1.1 The existing road network in vicinity of the proposed bus depot is shown in **Figure 3.1**.
- 3.1.2 The Proposed Development is located at the free up area of the original toll plaza of TM-CLKL Northern Connection. The Northern Connection of TM-CLKL is connected to the Lung Mun Road / Lung Fu Road roundabout.
- 3.1.3 The section of Lung Mun Road between Mong Hau Shek and Wu Chui Road is Local Distributor (LD) and the section between Wu Chui Road and Wong Chu Road is District Distributor (DD) running in east-west direction. It connects Tsing Wun Road on its east and Lung Kwu Tan Road on its west.
- 3.1.4 Lung Fu Road is District Distributor (DD) running in north-south direction. It connects Wong Chu Road on its north and Lung Mun Road on its south.
- 3.1.5 Wong Chu Road is Primary Distributor (PD) running in east-west direction. It connects Tuen Mun Road on its east and Lung Fu Road on its west.
- 3.1.6 Tuen Mun – Chek Lap Kok Tunnel is a dual 2-lane carriageway running in north-south direction. It connects Lung Mun Road / Lung Fu Road roundabout on its north and artificial island at the Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities on its south.

#### 3.2 Traffic Survey

- 3.2.1 The identified critical junction and road links as shown in **Table 3.1** and **Figure 3.1** would be assessed in this TIA.

**Table 3.1 Critical Junctions and Road Links**

Ref.	Name of Junction / Road Link	Type	Fig. No.
<b>Junction</b>			
J1	Lung Mun Road / Lung Fu Road	Roundabout	3.2
<b>Road Link</b>			
L1	Lung Fu Road between Lung Mun Road & Wong Chu Road		
L2	Lung Mun Road between Lung Fu Road & Wu Chui Road		
L3	Wong Chu Road between Lung Fu Road & Tuen Mun Road		
L4	Tuen Mun – Chek Lap Kok Tunnel		

- 3.2.2 The existing layout of Lung Mun Road/ Lung Fu Road roundabout (J1) is shown in **Figure 3.2**.
- 3.2.3 Series of manual classified traffic counts surveys were carried out to establish the current traffic condition in the vicinity. The surveys were undertaken on a typical weekday on February 2021 at 07:30 - 09:30 and 17:00 - 19:00 to appraise the existing traffic conditions of the above junction and road links.
- 3.2.4 The survey results indicated that the morning (AM) and evening (PM) peak hours were at 07:30 – 08:30 and 17:15 – 18:15 respectively.

- 3.2.5 Due to the impact of COVID-19 pandemic on the current traffic condition, the road traffic generation related to the air freight has been affected. Hence, adjustment of the observed traffic flows would be made with reference to the Monthly Traffic and Transport Digest published by Transport Department (TD). The vehicular flow of November 2019 and 2020 of Lantau Link were selected to reflect the impact of COVID-19 pandemic to the traffic to/from Lantau Island.
- 3.2.6 It is found that the vehicular flow of November 2019 is higher than that of November 2020 by about 1.56. As such, a factor of **1.56** is multiplied onto the observed traffic flows related to the TM-CLKL to reflect the impact of COVID-19 pandemic on the traffic to/from Lantau Island.
- 3.2.7 For the traffic flows in early morning and late evening of operational periods, reference was made to the historical traffic data in ATC. It is found that the hourly traffic flows of Tuen Mun Road (Ref: ATC no. 5012) and Lantau Link (Ref: ATC no. 5027) were reduced by about 88% and 44% respectively from 0730-0830 to 0600-0700, as well as 36% and 27% respectively from 1700-1800 to 2000-2100. For conservative approach, the traffic flows for early morning and late evening of operational periods are formulated by applying a less reduction ratio (i.e. 44% for AM; 27% for PM) onto the observed AM and PM peak hour traffic flows.
- 3.2.8 The 2021 adjusted hourly traffic flows in AM / PM commuting peaks and identified operational periods are shown in **Figure 3.3**.

### 3.3 Junction Capacity Assessment

- 3.3.1 Based on the adjusted 2021 traffic flows, the existing junction performances of the critical junction are summarized in **Table 3.3**. Capacity calculation sheets are attached in **Annex A**.

**Table 3.2 Existing Junction Performance**

Ref.	Junction	2021 DFC*			
		Commuting Peak		Operational Period	
		AM	PM	Early Morning	Late Evening
J1	Lung Mun Road / Lung Fu Road	0.72	0.73	0.38	0.49

\* DFC = Design Flow / Capacity ratio for priority junction or roundabout

- 3.3.2 At present, all critical junction is operating satisfactorily without capacity problem.



### 3.4 Road Link Assessment

3.4.1 The volume / capacity (V/C) ratios of the road links based on the adjusted 2021 traffic flows have been assessed. The results are summarized in **Table 3.3**.

**Table 3.3 Existing Road Link Performance**

Ref.	Road Link	Dir.	Capacity (pcu/hr)	2021							
				Traffic Flows (pcu/hr)				V/C			
				Com. Peak*		Op. Period*		Com. Peak*		Op. Period*	
				AM	PM	Early Morning	Late Evening	AM	PM	Early Morning	Late Evening
L1	Lung Fu Road (between Lung Mun Road & Wong Chu Road)	NB	3200	655	2040	370	1465	0.21	0.64	0.12	0.46
		SB	3200	2085	1625	1130	1190	0.66	0.51	0.36	0.38
L2	Lung Mun Road (between Lung Fu Road & Wu Chui Road)	EB	3200	280	890	160	640	0.09	0.28	0.05	0.20
		WB	3200	690	395	380	285	0.22	0.13	0.12	0.09
L3	Wong Chu Road (between Lung Fu Road & Hoi Wong Road)	EB	3600	2500	3070	1320	2080	0.70	0.86	0.37	0.58
		WB	3600	3090	2305	1465	1575	0.86	0.65	0.41	0.44
L4	Tuen Mun – Chek Lap Kok Tunnel	NB	3600	445	1445	250	1050	0.13	0.41	0.07	0.30
		SB	3600	1275	955	710	700	0.36	0.27	0.20	0.20

\* Com. Peak = Commuting Peak; Op. Period = Operational Period

3.4.2 As shown in **Table 3.4**, all the critical road links operate within capacity in year 2021.

## 4 TRAFFIC IMPACT ASSESSMENT

### 4.1 Design Year

- 4.1.1 The Proposed Development is tentatively scheduled for operation in 2025. Year 2028 is selected as the design year in this Traffic Impact Assessment for assessment purpose (i.e. 3 years after the completion of the proposed multi-storey bus depot according to Transport Department's "Guidelines and Requirements of Traffic Impact Assessment Studies").

### 4.2 Traffic Forecast

- 4.2.1 In order to carry out traffic forecasts and examine traffic impact due to the Proposed Development in year 2028, Annual Growth Rate method is applied to estimate 2028 traffic forecast from the base year traffic flows of 2021.
- 4.2.2 The traffic growth rate was made reference to 2016-based Territorial Population and Employment Data Matrix (TPEDM) data which is available in Planning Department's website. **Table 4.1** shows the years 2021 and 2026 planning data of Tuen Mun.

**Table 4.1 Planning Data of 2016-based TPEDM**

Planning Data District	2021		2026		Annual Growth Rate
	Population	Employment	Population	Employment	
Tuen Mun	489 450	132 350	534 600	140 550	1.66%
	621 800		675 150		

- 4.2.3 The annual growth rate of Tuen Mun area from years 2021 to 2026 is 1.66% per annum as shown in **Table 4.1**. As such, annual growth rate of **1.66%** per annum is adopted for projecting the peak hour traffic flows from years 2021 to 2028.
- 4.2.4 By applying the adopted growth rate +1.66% per annum to 2021 adjusted observed traffic flow, the 2028 reference traffic forecast (without proposed development) for commuting peak and identified operational periods has been obtained and shown in **Figure 4.1**.
- 4.2.5 As given by the bus operator, It is assumed that 50% of development traffic would be heading to Yuen Long/ Tin Shui Wai via Lung Fu Road while the remaining 50% traffic would be heading to Tuen Mun district via Lung Mun Road.
- 4.2.6 The trip ends of the proposed multi-storey bus depot as stated in **Section. 2.3.3** were then added to 2028 reference traffic flows to produce 2028 design traffic forecast (with proposed development) for commuting peak and identified operational periods as shown in **Figure 4.3**.

### 4.3 Junction Capacity Assessment

- 4.3.1 The operational performance of the identified critical junction based on year 2028 traffic forecasts (both "Reference Case" and "Design Case" scenarios) have been assessed. The results of junction capacity analysis are summarized in **Table 4.2**.

**Table 4.2 Junction Performance in 2028**

Ref.	Junction	2028 DFC*							
		Reference Case				Design Case			
		Com. Peak*		Op. Period*		Com. Peak*		Op. Period*	
		AM	PM	Early Morning	Late Evening	AM	PM	Early Morning	Late Evening
J1	Lung Mun Road / Lung Fu Road	0.82	0.85	0.43	0.57	0.84	0.85	0.45	0.59

\* DFC = Design Flow / Capacity ratio for priority junction or roundabout

\*\* Com. Peak = Commuting Peak; Op. Period = Operational Period

4.3.2 As shown in **Tables 4.2**, the critical junction would be operated within capacity in year 2028 for both “Reference Case” and “Design Case” scenarios. Therefore, it is anticipated that the traffic impact induced by the proposed development would be minimal.

#### 4.4 Road Link Assessment

4.4.1 The volume / capacity (V/C) ratios of the road links based on 2028 traffic forecasts (both “Reference Case” and “Design Case” scenarios) have been assessed. The results are summarized in **Table 4.3**.

**Table 4.3 Road Link Performance in 2028**

Ref.	Road Link	Dir.	Capacity (pcu/hr)	2028 Reference Case				2028 Design Case			
				Traffic Flows (pcu/hr)		V/C		Traffic Flows (pcu/hr)		V/C	
				Com. Peak*	Op. Period*	Com. Peak*	Op. Period*	Com. Peak*	Op. Period*	Com. Peak*	Op. Period*
				AM (PM)	Early Morning (Late Evening)	AM (PM)	Early Morning (Late Evening)	AM (PM)	Early Morning (Late Evening)	AM (PM)	Early Morning (Late Evening)
L1	Lung Fu Road (between Lung Mun Road & Wong Chu Road)	NB	3200	735 (2290)	415 (1645)	0.23 (0.72)	0.13 (0.52)	838 (2292)	583 (1647)	0.27 (0.72)	0.19 (0.52)
		SB	3200	2340 (1825)	1270 (1335)	0.74 (0.58)	0.40 (0.42)	2343 (1834)	1270 (1404)	0.74 (0.58)	0.40 (0.44)
L2	Lung Mun Road (between Lung Fu Road & Wu Chui Road)	EB	3200	315 (1005)	180 (720)	0.10 (0.32)	0.06 (0.23)	417 (1006)	347 (721)	0.14 (0.32)	0.11 (0.23)
		WB	3200	775 (440)	425 (320)	0.25 (0.14)	0.14 (0.10)	778 (448)	425 (389)	0.25 (0.14)	0.14 (0.13)
L3	Wong Chu Road (between Lung Fu Road & Hoi Wong Road)	EB	3600	2805 (3445)	1480 (2335)	0.78 (0.96)	0.42 (0.65)	2908 (3447)	1648 (2337)	0.81 (0.96)	0.46 (0.65)
		WB	3600	3465 (2585)	1645 (1765)	0.97 (0.72)	0.46 (0.50)	3468 (2594)	1645 (1834)	0.97 (0.73)	0.46 (0.51)
L4	Tuen Mun – Chek Lap Kok Tunnel	NB	3600	500 (1620)	280 (1180)	0.14 (0.45)	0.08 (0.33)	705 (1623)	615 (1183)	0.20 (0.46)	0.18 (0.33)
		SB	3600	1430 (1070)	800 (785)	0.40 (0.30)	0.23 (0.22)	1436 (1087)	800 (923)	0.40 (0.31)	0.23 (0.26)

\* Com. Peak = Commuting Peak; Op. Period = Operational Period

4.4.2 As shown in **Table 4.3**, all the critical road links would operate within capacity in year 2028. Therefore, it is anticipated that the traffic impact induced by the proposed development would be minimal.

---

## **5 SUMMARY AND CONCLUSION**

### **5.1 Summary**

- 5.1.1 Since the Government announced waiving the tolls of TM-CLKT in 2019 Policy Address, KMB with support of Transport Department proposes to build a multi-storey permanent depot and relative facilities at the free up area from the original toll plaza at the Northern Connection of TM-CLKL.
- 5.1.2 In the Hong Kong Roadmap on Popularisation of Electric Vehicles announced by the Environment Bureau in March 2021, adoption of electric vehicles and their associated supporting facilities are promoted. The provision of charging facilities in bus termini is of great importance of electrification of franchised bus fleet.
- 5.1.3 In order to align the vision of the mentioned Roadmap and enhance the usage of the subject bus depot site, it is proposed to build a multi-storey building to increase the parking capacity and to accommodate multiple uses including charging-enabling bus parking bays, bus washing, workshop, maintenance, ancillary office, etc.
- 5.1.4 The proposed multi-storey bus depot (Proposed Development) will provide 4 bus washing machines, 81 maintenance bays, workshop, ancillary office and a total of about 406 charging-enabling bus parking bays (including Site C).
- 5.1.5 Queue Length Analysis for the bus washing system has been conducted and revealed that the provision of 2 number of queuing spaces in Site A is adequate to avoid queuing of buses on Tuen Mun – Chek Lap Kok Tunnel Road.
- 5.1.6 In order to review the existing and future traffic condition, traffic count surveys were conducted at the identified critical junction and road links which includes:-
- J1 – Lung Mun Road / Lung Fu Road Roundabout
  - L1 – Lung Fu Road between Lung Mun Road & Wong Chu Road
  - L2 – Lung Mun Road between Lung Fu Road & Wu Chui Road
  - L3 – Wong Chu Road between Lung Fu Road & Hoi Wong Road
  - L4 – Tuen Mun – Chek Lap Kok Tunnel
- 5.1.7 At present, all the critical junction and road links operate within capacity.
- 5.1.8 The Proposed Development is tentatively scheduled for operation in 2025. Hence, traffic impact assessments for design year 2028 have been conducted to ascertain the feasibility of the Proposed Development from traffic viewpoints.
- 5.1.9 The 2028 reference traffic forecast without Proposed Development was derived by Annual Growth Rate method applying to 2021 base year observed traffic flow with adjustments made in order to reflect the impact due to COVID-19 pandemic.
- 5.1.10 The trip ends of the Proposed Development were then added to 2028 reference traffic flows to produce 2028 design traffic forecast.
- 5.1.11 Junction capacity assessments have been undertaken for both 2028 reference and design scenarios. The results indicated that all the identified critical junction and road links would operate within capacity in 2028. Therefore, it is anticipated that the traffic impact induced by the proposed development would be minimal.

## **5.2 Conclusion**

- 5.2.1 In light of the findings of this TIA, it is concluded that the traffic impact imposed onto the road network due to the Proposed Development is negligible. Hence, the Proposed Development is considered acceptable from traffic engineering point of view.

***Figure***

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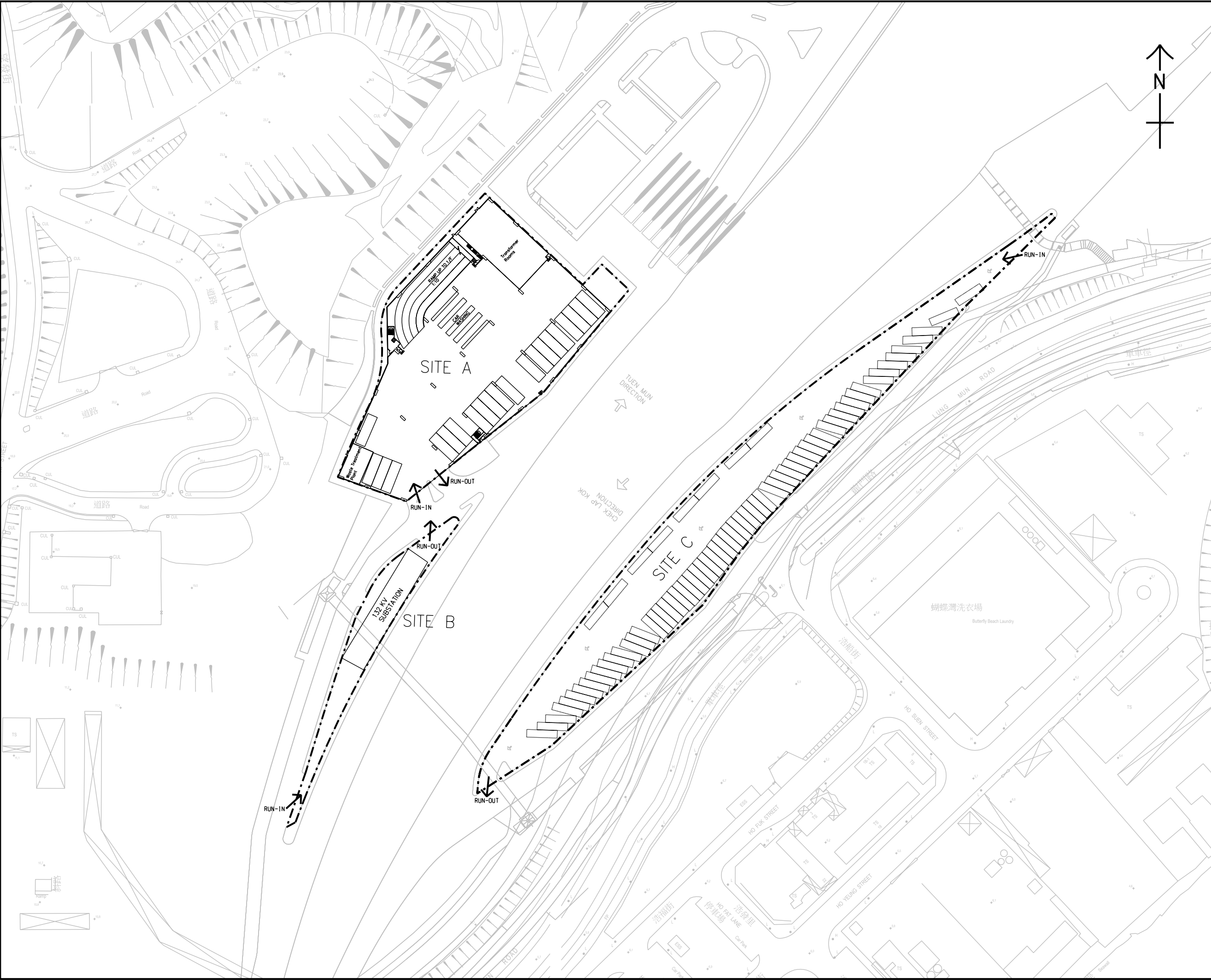
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FIGURE 1.1

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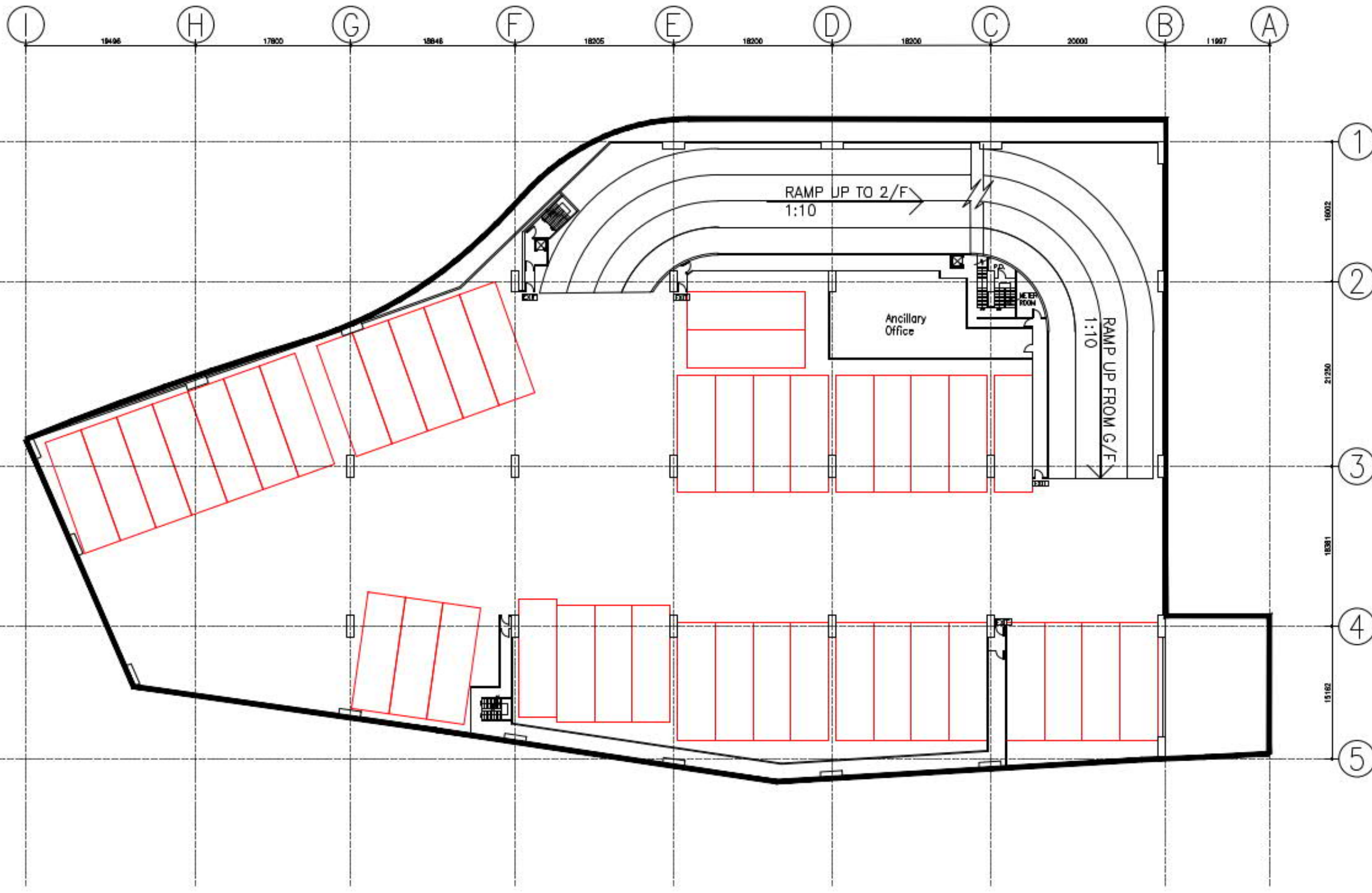
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INDICATIVE GROUND FLOOR LAYOUT

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FIGURE 2.1

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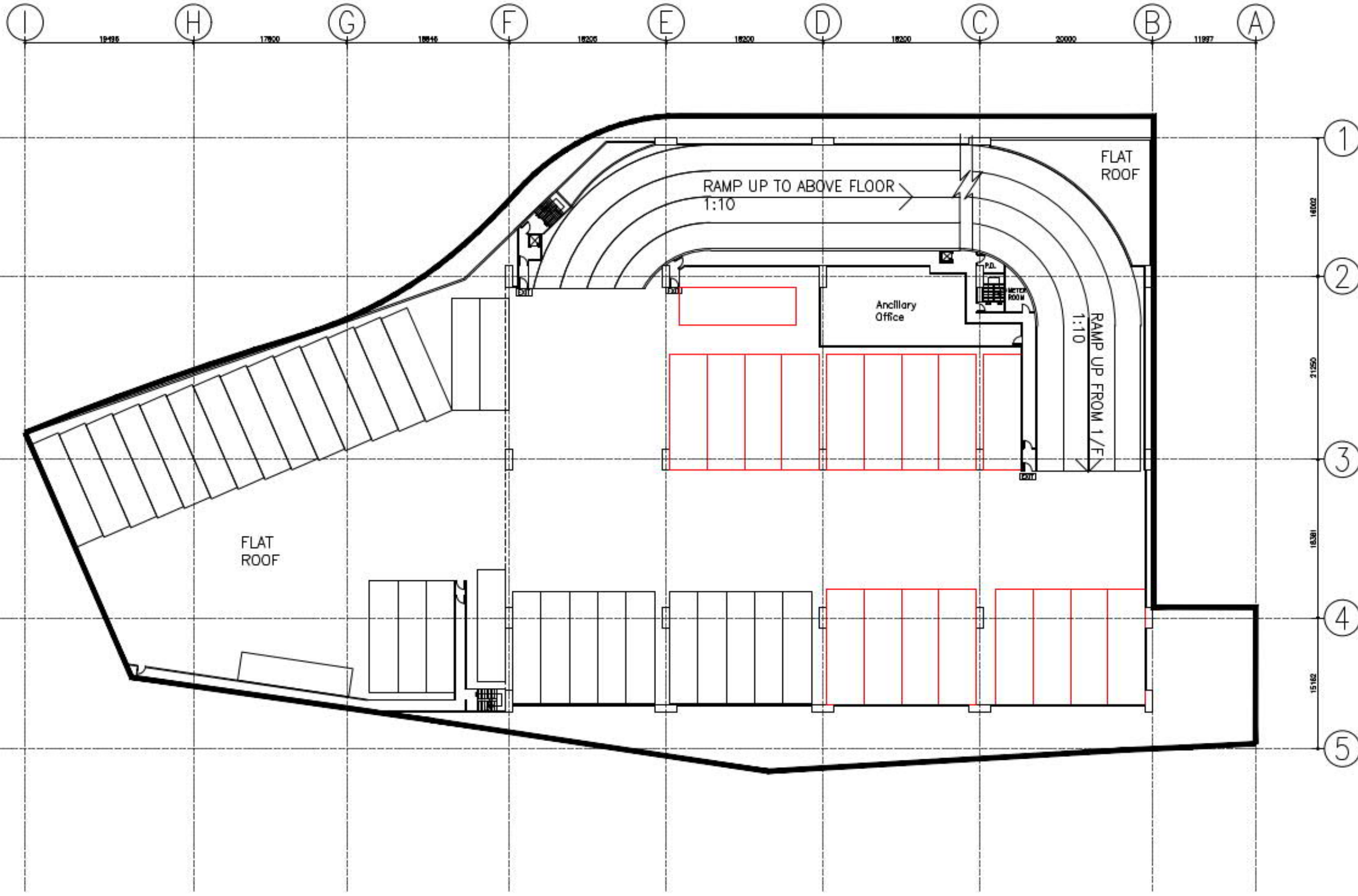
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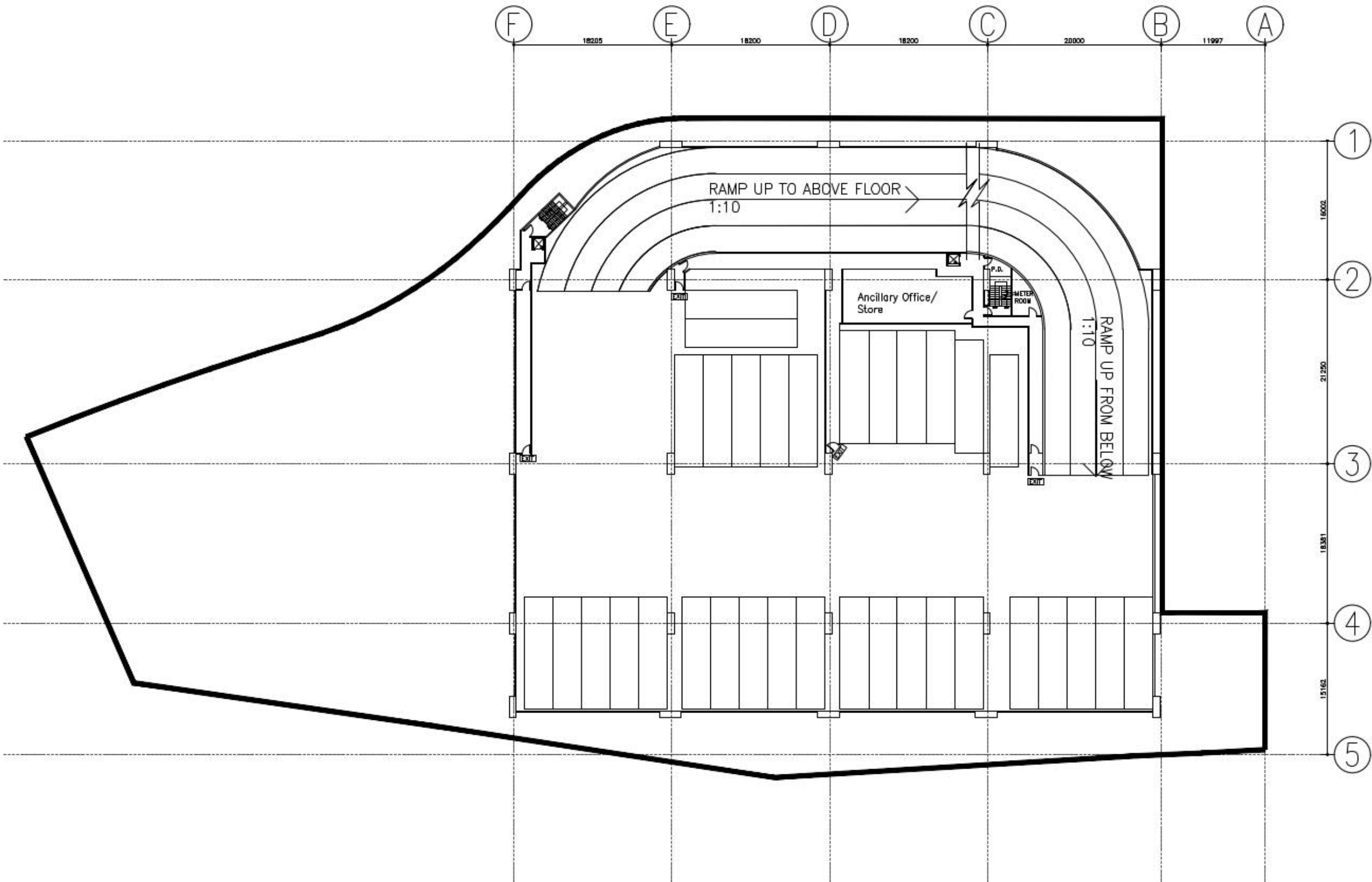
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FIGURE 2.3

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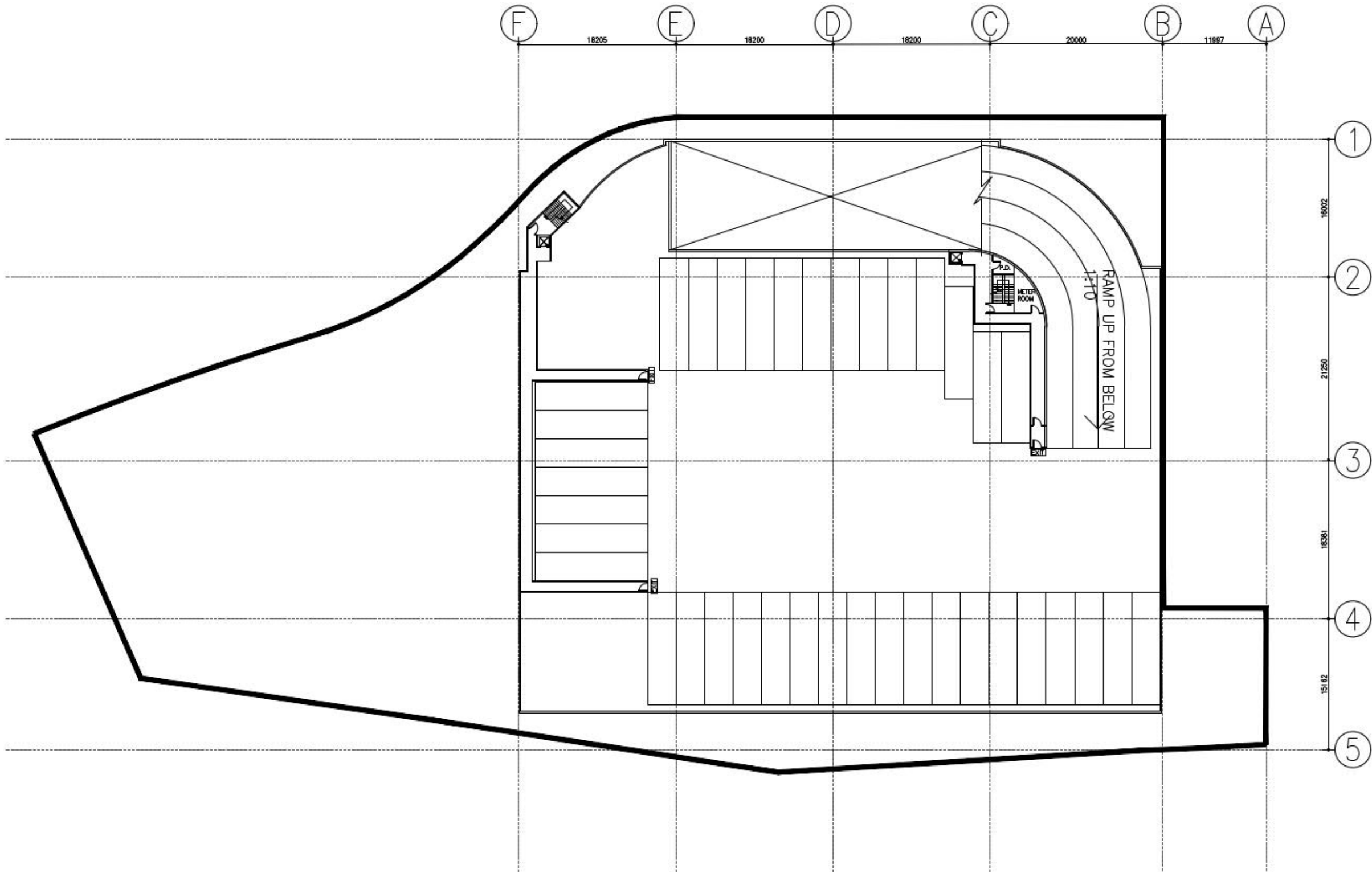
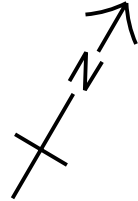
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FIGURE 2.4

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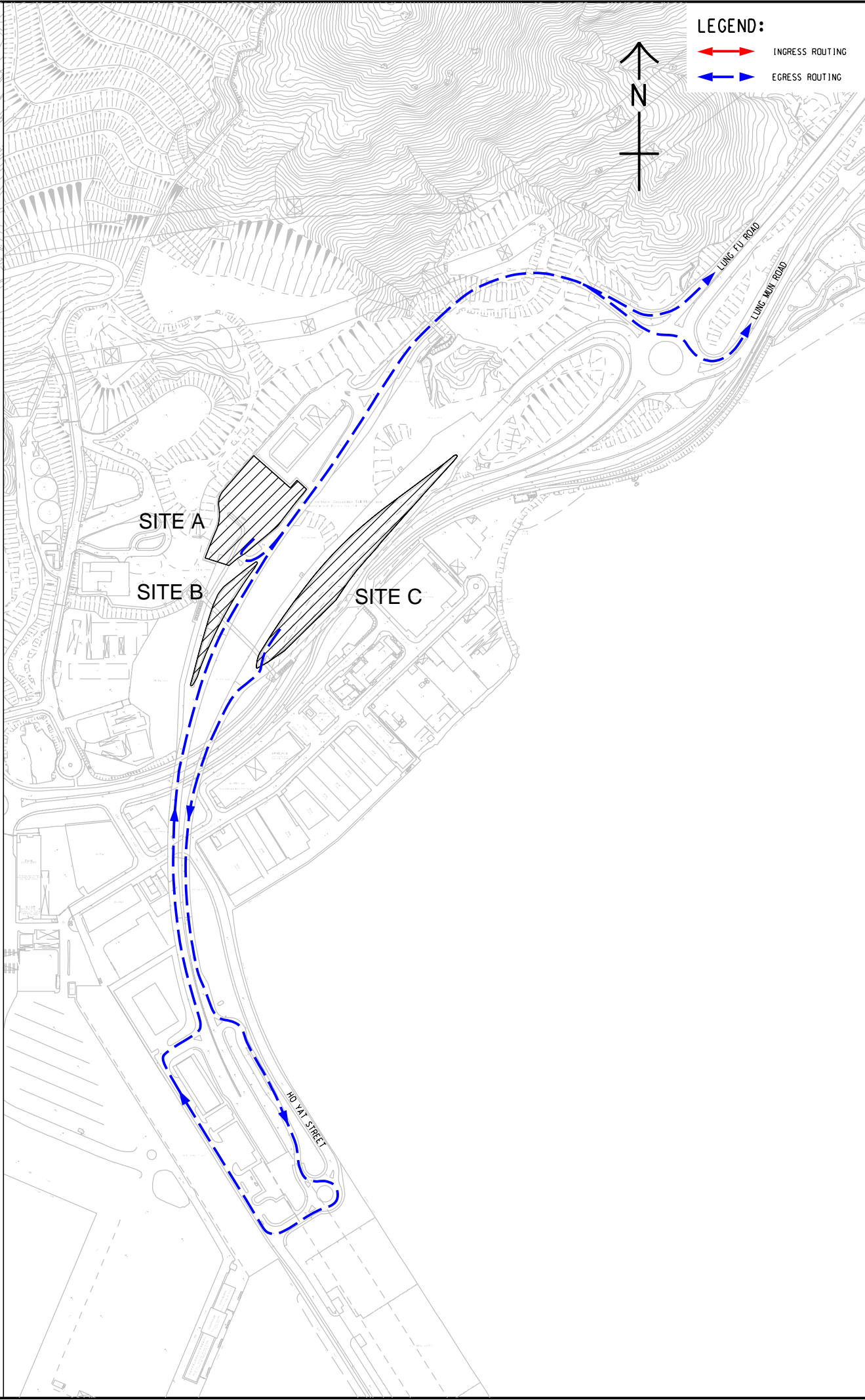
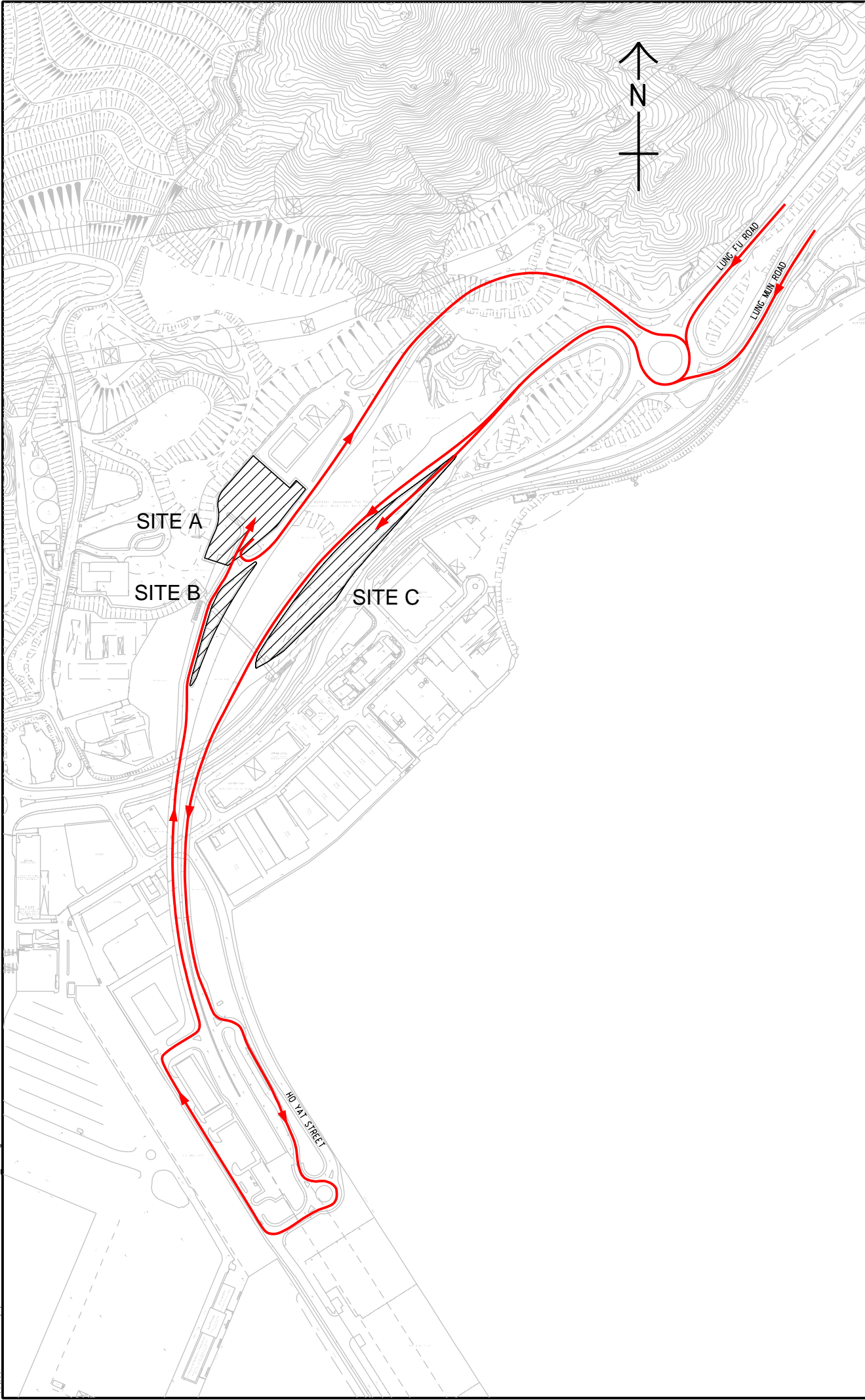
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FIGURE 2.5



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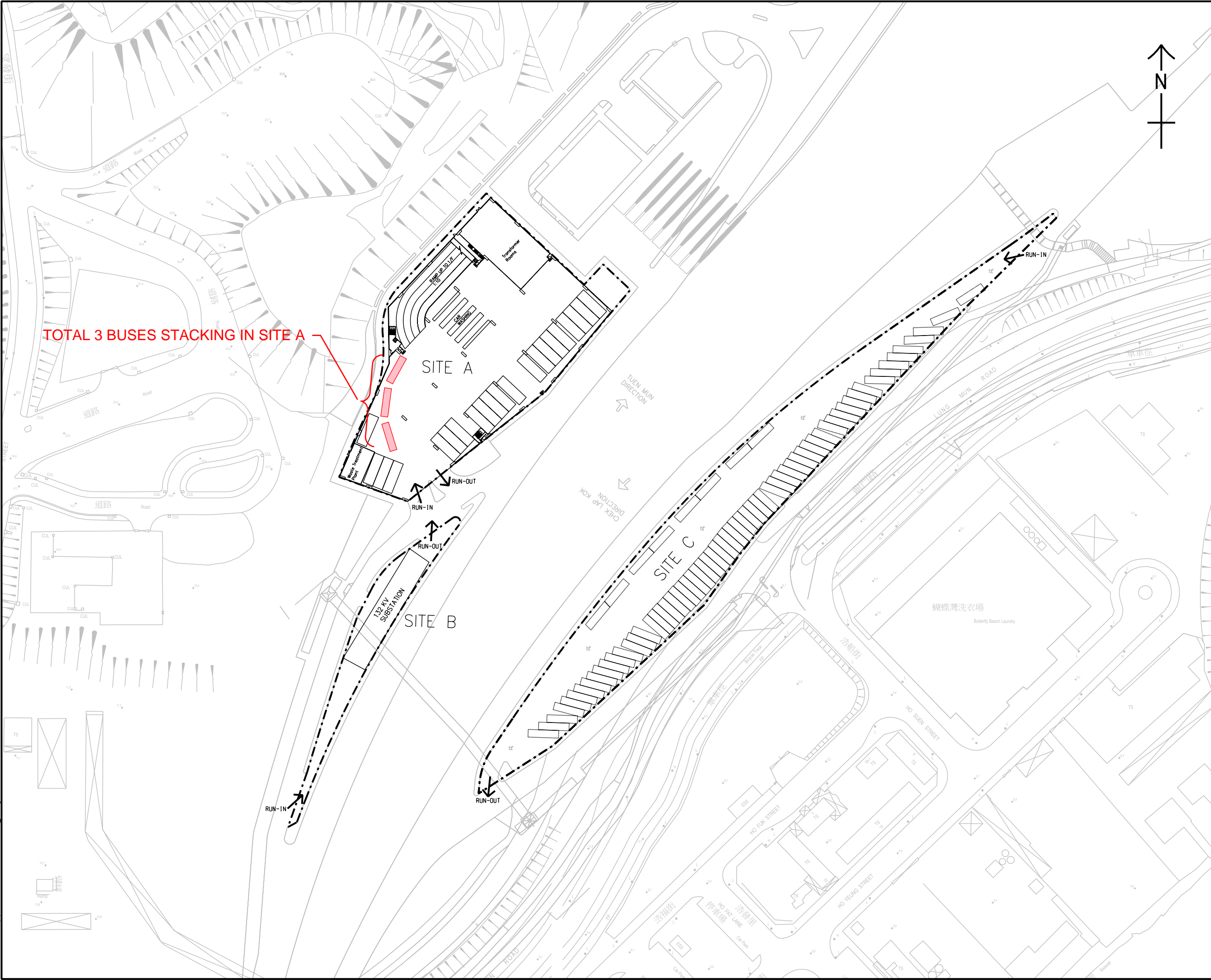
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FIGURE 2.6

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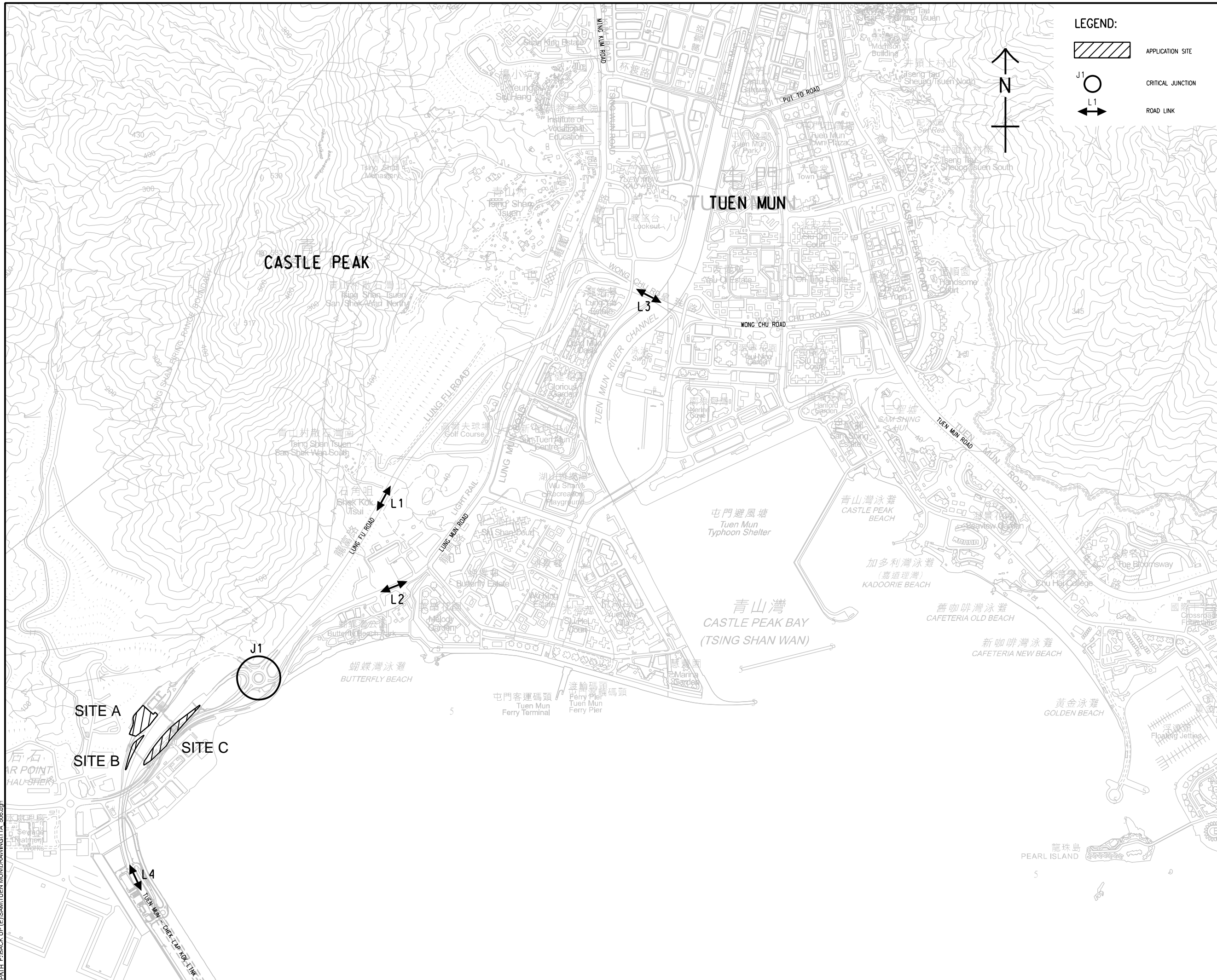
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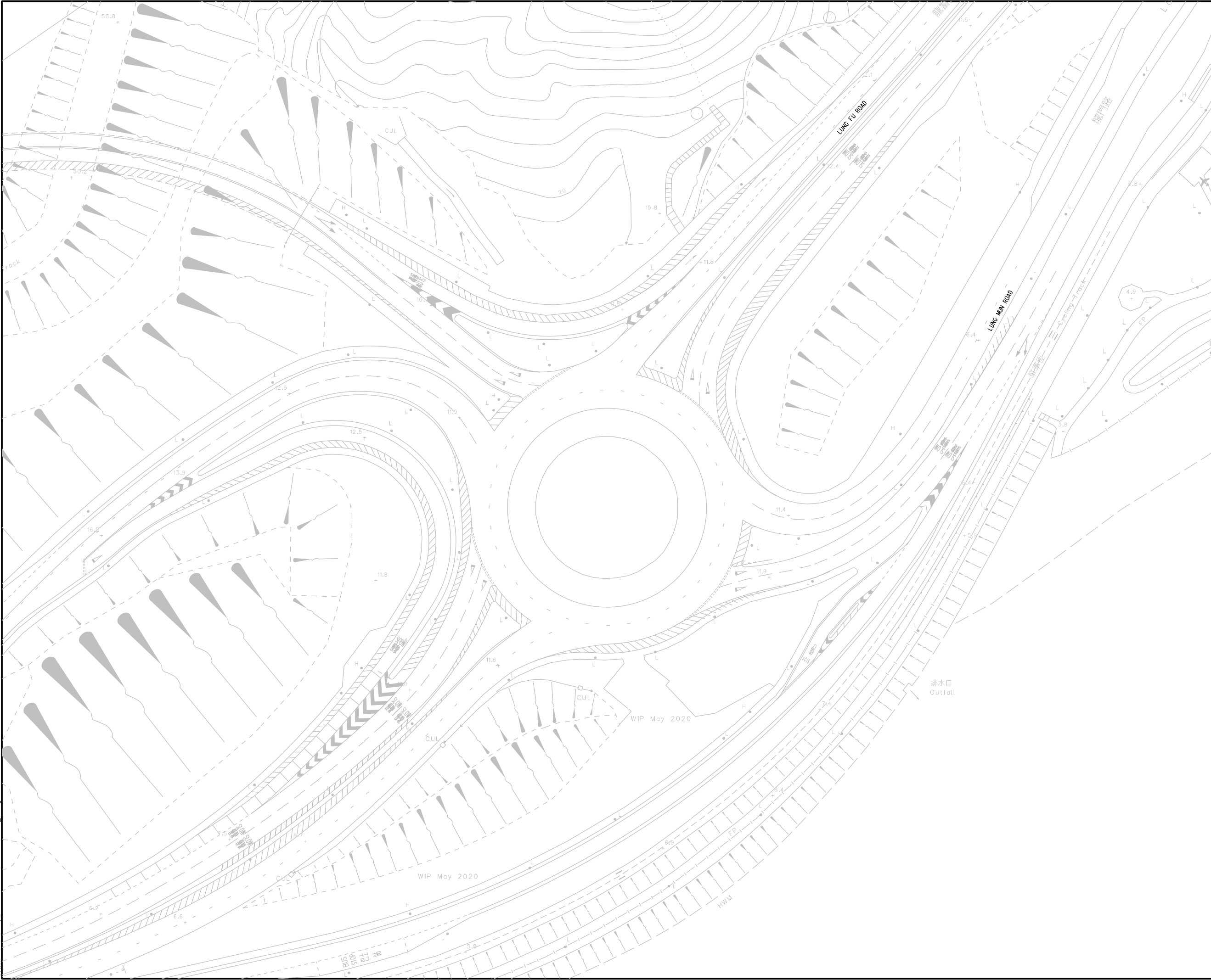
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FIGURE 3.1

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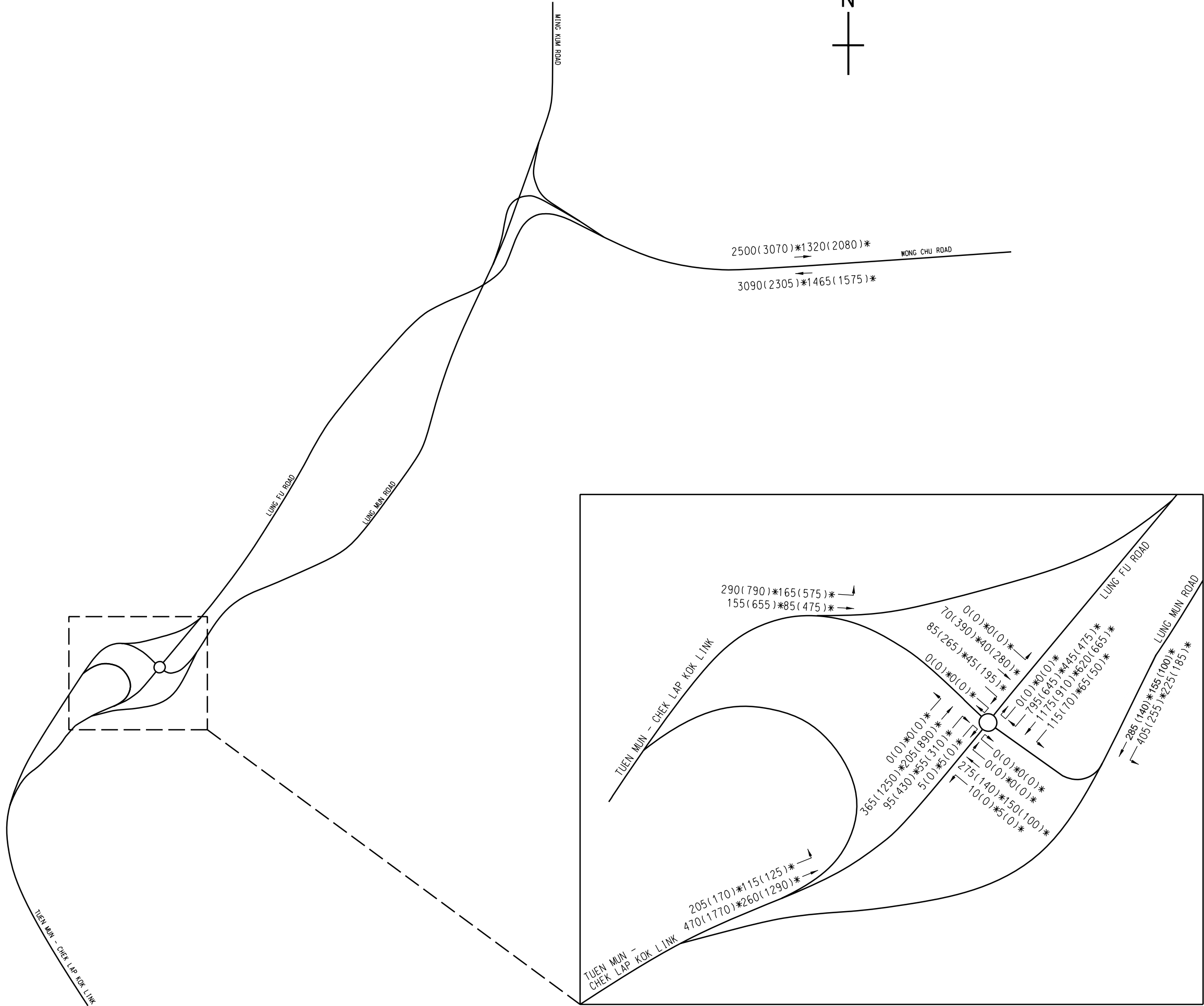
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**EXISTING JUNCTION LAYOUT OF**  
**LUNG MUN ROAD / LUN FU ROAD (J1)**

**SHEET NUMBER**  
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FIGURE 3.2



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**SHEET TITLE**  
圖紙名稱

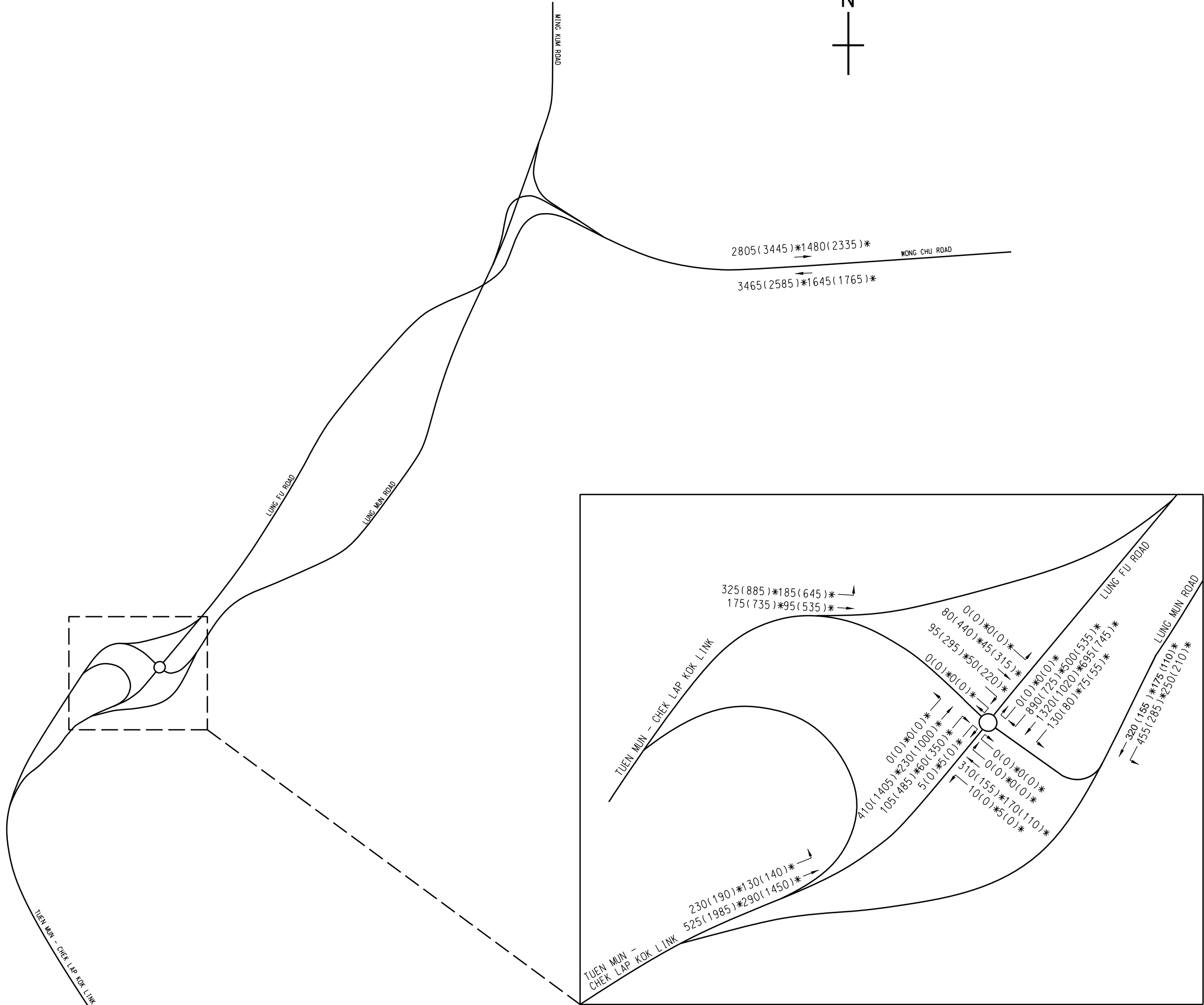
2021 ADJUSTED OBSERVED TRAFFIC FLOWS (WITH ADJUSTMENT)

**SHEET NUMBER**  
圖紙編號

FIGURE 3.3

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**AECOM**

**PROJECT**  
項目

**SECTION 16 PLANNING**  
**APPLICATION FOR**  
**MULTI-STOREY DEPOT**  
**FOR ELECTRIC BUSES AT**  
**TUEN MUN - CHEK LAP**  
**KOK LINK FREE-UP AREA**

**CLIENT**  
客戶

**CONSULTANT**  
顧問公司

AECOM Asia Company Ltd.  
www.aecom.com

**SUB-CONSULTANTS**  
分包工程師公司

**ISSUE/REVISION**  
修訂

I/R	DATE	DESCRIPTION	CHK.

**STATUS**  
狀態

**SCALE**  
比例尺

**DIMENSION UNIT**  
尺寸單位

**KEY PLAN**  
索引圖

**PROJECT NO.**  
項目編號

**CONTRACT NO.**  
合約編號

**SHEET TITLE**  
圖紙名稱

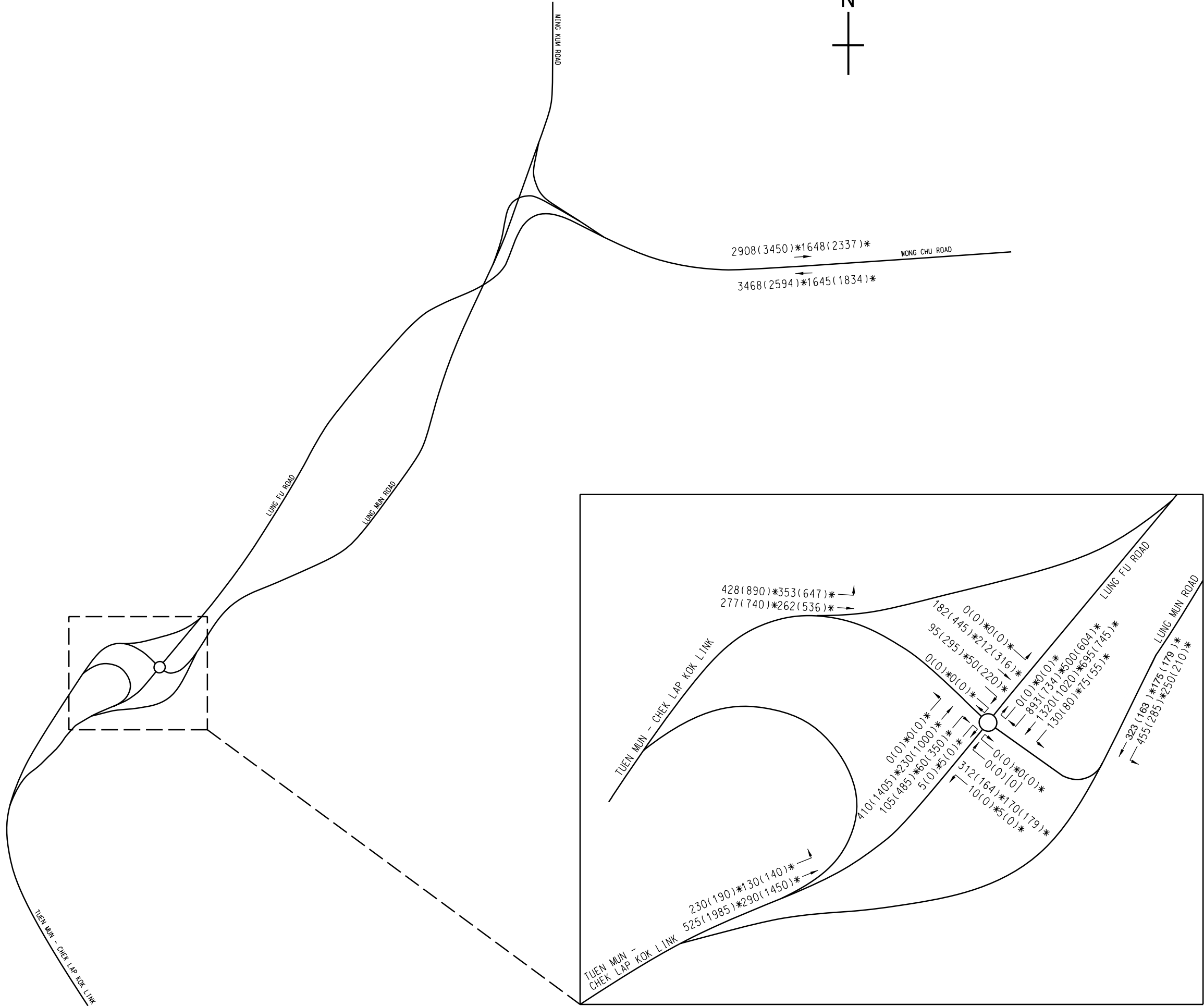
2028 REFERENCE TRAFFIC FLOWS  
WITHOUT THE PROPOSED  
DEVELOPMENT

**SHEET NUMBER**  
圖紙編號

FIGURE 4.1

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AECOM

PROJECT

SECTION 16 PLANNING  
APPLICATION FOR  
MULTI-STOREY DEPOT  
FOR ELECTRIC BUSES AT  
TUEN MUN - CHEK LAP  
KOK LINK FREE-UP AREA

CLIENT

CONSULTANT

AECOM Asia Company Ltd.  
www.aecom.com

SUB-CONSULTANTS

ISSUE/REVISION

I/R	DATE	DESCRIPTION	CHK.

STATUS

SCALE

DIMENSION UNIT

KEY PLAN

PROJECT NO.

CONTRACT NO.

SHEET TITLE

2028 DESIGN TRAFFIC FLOWS WITH  
THE PROPOSED DEVELOPMENT

SHEET NUMBER

FIGURE 4.2

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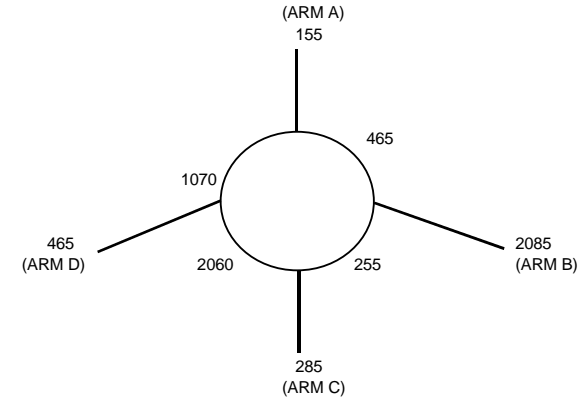
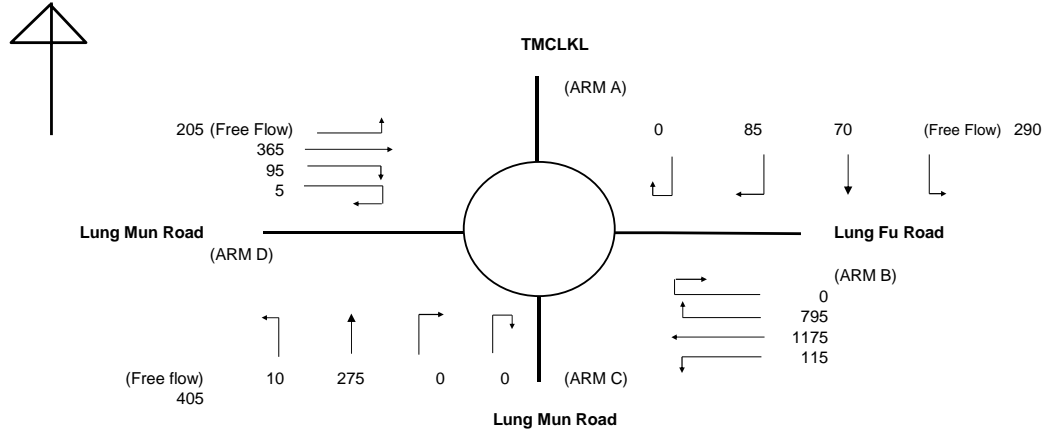
## ***Annex A***

### ***Junction Capacity Calculation Sheets***

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# ROUNDAABOUT CAPACITY CALCULATION

Junction	J1 - Lung Fu Road / Lung Mun Road	Scenario	Observed 2021 AM	Project No.	Prepared By	Checked By	Date
							28/Apr/21



ARM	A	B	C	D
INPUT PARAMETERS:				
V = Approach half width (m)	7.30	7.30	7.30	7.30
E = Entry width (m)	7.60	10.00	8.00	9.00
L = Effective length of flare (m)	3.20	79.00	21.00	38.00
R = Entry radius (m)	20.00	35.82	53.00	44.00
D = Inscribed circle diameter (m)	78.60	78.60	78.60	78.60
A = Entry angle (degree)	29.00	25.50	10.00	22.50
Q = Entry flow (pcu/h)	155	2085	285	465
Qc= Circulating flow across entry (pcu/h)	465	255	2060	1070
OUTPUT PARAMETERS:				
S = Sharpness of flare = 1.6(E-V)/L	0.15	0.05	0.05	0.07
K = 1-0.00347(A-30)-0.978(1/R-0.05)	1.00	1.04	1.10	1.05
X2= V + ((E-V)/(1+2S))	7.53	9.73	7.93	8.79
M = EXP((D-60)/10)	6.42	6.42	6.42	6.42
F = 303*X2	2282	2949	2404	2662
Td= 1+(0.5/(1+M))	1.07	1.07	1.07	1.07
Fc= 0.21*Td(1+0.2*X2)	0.56	0.66	0.58	0.62
Qe= K(F-Fc*Qc)	2028	2884	1330	2107
DFC = Design flow/Capacity = Q/Qe	0.08	0.72	0.21	0.22

TOTAL ENTRY FLOWS = 3280 PCU

CRITICAL DFC = 0.72

# ROUNDBABOUT CAPACITY CALCULATION

Junction	J1 - Lung Fu Road / Lung Mun Road	Scenario	Observed 2021 PM	Project No.	Prepared By	Checked By	Date
							28/Apr/21

Diagram illustrating the roundabout layout and traffic flow. The roundabout has four arms: (ARM A) TMCLKL, (ARM B) Lung Fu Road, (ARM C) Lung Mun Road, and (ARM D) Lung Mun Road. Traffic flow values are provided for each arm and direction. A north arrow is shown pointing upwards.

ARM	A	B	C	D
INPUT PARAMETERS:				
V = Approach half width (m)	7.30	7.30	7.30	7.30
E = Entry width (m)	7.60	10.00	8.00	9.00
L = Effective length of flare (m)	3.20	79.00	21.00	38.00
R = Entry radius (m)	20.00	35.82	53.00	44.00
D = Inscribed circle diameter (m)	78.60	78.60	78.60	78.60
A = Entry angle (degree)	29.00	25.50	10.00	22.50
Q = Entry flow (pcu/h)	655	1625	140	1680
Qc= Circulating flow across entry (pcu/h)	1680	1085	1820	785
OUTPUT PARAMETERS:				
S = Sharpness of flare = 1.6(E-V)/L	0.15	0.05	0.05	0.07
K = 1-0.00347(A-30)-0.978(1/R-0.05)	1.00	1.04	1.10	1.05
X2= V + ((E-V)/(1+2S))	7.53	9.73	7.93	8.79
M = EXP((D-60)/10)	6.42	6.42	6.42	6.42
F = 303*X2	2282	2949	2404	2662
Td= 1+(0.5/(1+M))	1.07	1.07	1.07	1.07
Fc= 0.21*Td(1+0.2*X2)	0.56	0.66	0.58	0.62
Qe= K(F-Fc*Qc)	1343	2316	1483	2292
DFC = Design flow/Capacity = Q/Qe	0.49	0.70	0.09	0.73

TOTAL ENTRY FLOWS = 4890 PCU

**CRITICAL DFC = 0.73**

# ROUNDBABOUT CAPACITY CALCULATION

Junction	J1 - Lung Fu Road / Lung Mun Road	Scenario	Reference 2028 AM	Project No.	Prepared By	Checked By	Date
							28/Apr/21

Diagram illustrating the roundabout layout and traffic flow. The roundabout has four arms: (ARM A) TMCLKL, (ARM B) Lung Fu Road, (ARM C) Lung Mun Road, and (ARM D) Lung Mun Road. Traffic flow values are provided for each arm, including free flow and circulating flow.

ARM	A	B	C	D
INPUT PARAMETERS:				
V = Approach half width (m)	7.30	7.30	7.30	7.30
E = Entry width (m)	7.60	10.00	8.00	9.00
L = Effective length of flare (m)	3.20	79.00	21.00	38.00
R = Entry radius (m)	20.00	35.82	53.00	44.00
D = Inscribed circle diameter (m)	78.60	78.60	78.60	78.60
A = Entry angle (degree)	29.00	25.50	10.00	22.50
Q = Entry flow (pcu/h)	175	2340	320	520
Qc= Circulating flow across entry (pcu/h)	520	285	2310	1200
OUTPUT PARAMETERS:				
S = Sharpness of flare = 1.6(E-V)/L	0.15	0.05	0.05	0.07
K = 1-0.00347(A-30)-0.978(1/R-0.05)	1.00	1.04	1.10	1.05
X2= V + ((E-V)/(1+2S))	7.53	9.73	7.93	8.79
M = EXP((D-60)/10)	6.42	6.42	6.42	6.42
F = 303*X2	2282	2949	2404	2662
Td= 1+(0.5/(1+M))	1.07	1.07	1.07	1.07
Fc= 0.21*Td(1+0.2*X2)	0.56	0.66	0.58	0.62
Qe= K(F-Fc*Qc)	1997	2864	1171	2022
DFC = Design flow/Capacity = Q/Qe	0.09	0.82	0.27	0.26

TOTAL ENTRY FLOWS = 3680 PCU

CRITICAL DFC = 0.82

# ROUNDBABOUT CAPACITY CALCULATION

Junction	J1 - Lung Fu Road / Lung Mun Road	Scenario	Reference 2028 PM	Project No.	Prepared By	Checked By	Date
							28/Apr/21

The diagram illustrates a roundabout with four arms. Arm A (TMCLKL) has a flow of 0. Arm B (Lung Fu Road) has a flow of 295. Arm C (Lung Mun Road) has a flow of 440. Arm D (Lung Mun Road) has a flow of 885. The diagram also shows the flow of vehicles from the surrounding roads into the roundabout and the flow of vehicles circulating within the roundabout.

ARM	A	B	C	D
INPUT PARAMETERS:				
V = Approach half width (m)	7.30	7.30	7.30	7.30
E = Entry width (m)	7.60	10.00	8.00	9.00
L = Effective length of flare (m)	3.20	79.00	21.00	38.00
R = Entry radius (m)	20.00	35.82	53.00	44.00
D = Inscribed circle diameter (m)	78.60	78.60	78.60	78.60
A = Entry angle (degree)	29.00	25.50	10.00	22.50
Q = Entry flow (pcu/h)	735	1825	155	1890
Qc= Circulating flow across entry (pcu/h)	1890	1220	2040	880
OUTPUT PARAMETERS:				
S = Sharpness of flare = 1.6(E-V)/L	0.15	0.05	0.05	0.07
K = 1-0.00347(A-30)-0.978(1/R-0.05)	1.00	1.04	1.10	1.05
X2= V + ((E-V)/(1+2S))	7.53	9.73	7.93	8.79
M = EXP((D-60)/10)	6.42	6.42	6.42	6.42
F = 303*X2	2282	2949	2404	2662
Td= 1+(0.5/(1+M))	1.07	1.07	1.07	1.07
Fc= 0.21*Td(1+0.2*X2)	0.56	0.66	0.58	0.62
Qe= K(F-Fc*Qc)	1224	2223	1343	2230
DFC = Design flow/Capacity = Q/Qe	0.60	0.82	0.12	0.85

TOTAL ENTRY FLOWS = 5490 PCU

CRITICAL DFC = 0.85



# ROUNDBABOUT CAPACITY CALCULATION

Junction	J1 - Lung Fu Road / Lung Mun Road	Scenario	Design 2028 AM	Project No.	Prepared By	Checked By	Date
							28/Apr/21

Diagram illustrating the roundabout layout and traffic flow. The roundabout has four arms: (ARM A) TMCLKL, (ARM B) Lung Fu Road, (ARM C) Lung Mun Road, and (ARM D) Lung Mun Road. Traffic flow values are provided for each arm, including free flow and circulating flow. A north arrow is shown in the top left.

ARM	A	B	C	D
INPUT PARAMETERS:				
V = Approach half width (m)	7.30	7.30	7.30	7.30
E = Entry width (m)	7.60	10.00	8.00	9.00
L = Effective length of flare (m)	3.20	79.00	21.00	38.00
R = Entry radius (m)	20.00	35.82	53.00	44.00
D = Inscribed circle diameter (m)	78.60	78.60	78.60	78.60
A = Entry angle (degree)	29.00	25.50	10.00	22.50
Q = Entry flow (pcu/h)	277	2343	323	520
Qc= Circulating flow across entry (pcu/h)	520	387	2313	1206
OUTPUT PARAMETERS:				
S = Sharpness of flare = 1.6(E-V)/L	0.15	0.05	0.05	0.07
K = 1-0.00347(A-30)-0.978(1/R-0.05)	1.00	1.04	1.10	1.05
X2= V + ((E-V)/(1+2S))	7.53	9.73	7.93	8.79
M = EXP((D-60)/10)	6.42	6.42	6.42	6.42
F = 303*X2	2282	2949	2404	2662
Td= 1+(0.5/(1+M))	1.07	1.07	1.07	1.07
Fc= 0.21*Td(1+0.2*X2)	0.56	0.66	0.58	0.62
Qe= K(F-Fc*Qc)	1997	2794	1169	2018
DFC = Design flow/Capacity = Q/Qe	0.14	0.84	0.28	0.26

TOTAL ENTRY FLOWS = 3891 PCU

CRITICAL DFC = 0.84

# ROUNDBABOUT CAPACITY CALCULATION

Junction	J1 - Lung Fu Road / Lung Mun Road	Scenario	Design 2028 PM	Project No.	Prepared By	Checked By	Date
							28/Apr/21

Diagram illustrating the roundabout layout and traffic flow. The roundabout has four arms: (ARM A) TMCLKL, (ARM B) Lung Fu Road, (ARM C) Lung Mun Road, and (ARM D) Lung Mun Road. Traffic flows are indicated with arrows and values. A north arrow points upwards.

Diagram illustrating the roundabout layout and traffic flow. The roundabout has four arms: (ARM A) 736, (ARM B) 1834, (ARM C) 163, and (ARM D) 1890. Internal flow values are also shown: 1890, 2049, 1221, and 897.

ARM	A	B	C	D
INPUT PARAMETERS:				
V = Approach half width (m)	7.30	7.30	7.30	7.30
E = Entry width (m)	7.60	10.00	8.00	9.00
L = Effective length of flare (m)	3.20	79.00	21.00	38.00
R = Entry radius (m)	20.00	35.82	53.00	44.00
D = Inscribed circle diameter (m)	78.60	78.60	78.60	78.60
A = Entry angle (degree)	29.00	25.50	10.00	22.50
Q = Entry flow (pcu/h)	736	1834	163	1890
Qc= Circulating flow across entry (pcu/h)	1890	1221	2049	897
OUTPUT PARAMETERS:				
S = Sharpness of flare = 1.6(E-V)/L	0.15	0.05	0.05	0.07
K = 1-0.00347(A-30)-0.978(1/R-0.05)	1.00	1.04	1.10	1.05
X2= V + ((E-V)/(1+2S))	7.53	9.73	7.93	8.79
M = EXP((D-60)/10)	6.42	6.42	6.42	6.42
F = 303*X2	2282	2949	2404	2662
Td= 1+(0.5/(1+M))	1.07	1.07	1.07	1.07
Fc= 0.21*Td(1+0.2*X2)	0.56	0.66	0.58	0.62
Qe= K(F-Fc*Qc)	1224	2223	1337	2219
DFC = Design flow/Capacity = Q/Qe	0.60	0.83	0.12	0.85

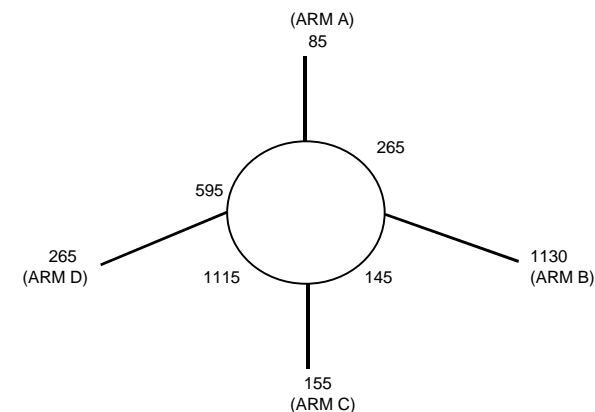
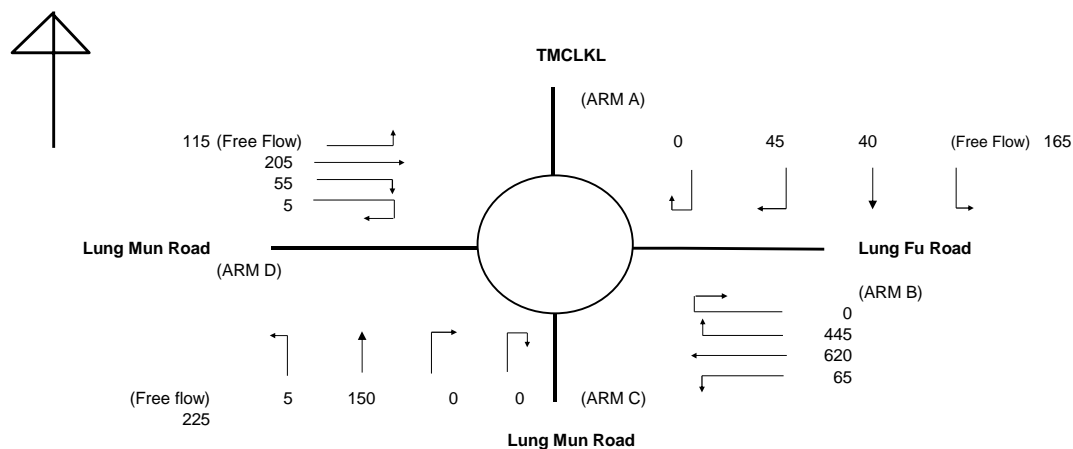
  

TOTAL ENTRY FLOWS = 5510 PCU

CRITICAL DFC = 0.85

# ROUNDBABOUT CAPACITY CALCULATION

Junction	J1 - Lung Fu Road / Lung Mun Road	Scenario	Observed 2021 AM Operation Peak	Project No.	Prepared By	Checked By	Date
							28/Apr/21



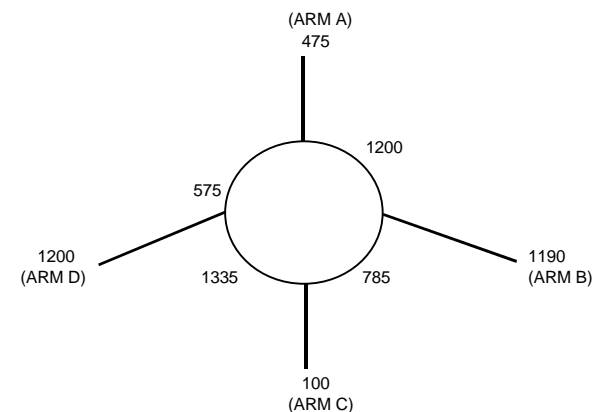
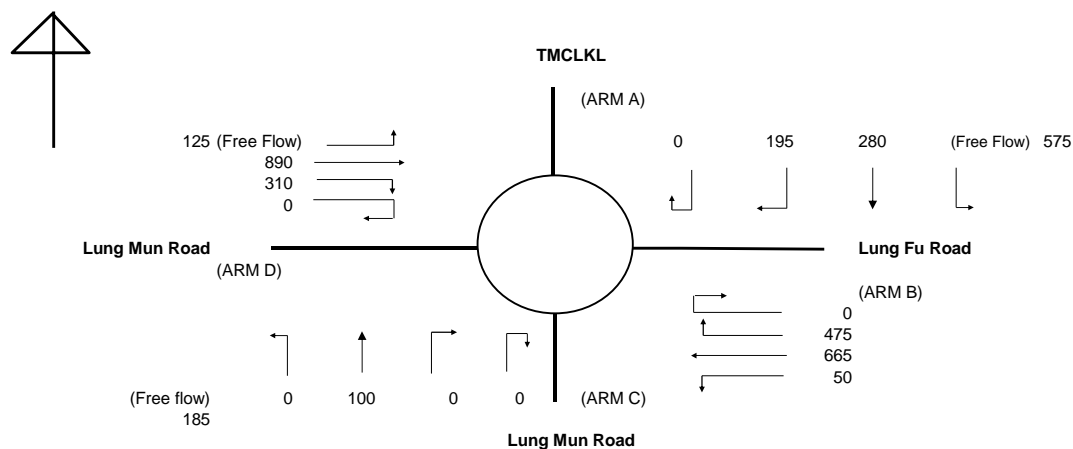
ARM	A	B	C	D
INPUT PARAMETERS:				
V = Approach half width (m)	7.30	7.30	7.30	7.30
E = Entry width (m)	7.60	10.00	8.00	9.00
L = Effective length of flare (m)	3.20	79.00	21.00	38.00
R = Entry radius (m)	20.00	35.82	53.00	44.00
D = Inscribed circle diameter (m)	78.60	78.60	78.60	78.60
A = Entry angle (degree)	29.00	25.50	10.00	22.50
Q = Entry flow (pcu/h)	85	1130	155	265
Qc= Circulating flow across entry (pcu/h)	265	145	1115	595
OUTPUT PARAMETERS:				
S = Sharpness of flare = 1.6(E-V)/L	0.15	0.05	0.05	0.07
K = 1-0.00347(A-30)-0.978(1/R-0.05)	1.00	1.04	1.10	1.05
X2= V + ((E-V)/(1+2S))	7.53	9.73	7.93	8.79
M = EXP((D-60)/10)	6.42	6.42	6.42	6.42
F = 303*X2	2282	2949	2404	2662
Td= 1+(0.5/(1+M))	1.07	1.07	1.07	1.07
Fc= 0.21*Td(1+0.2*X2)	0.56	0.66	0.58	0.62
Qe= K(F-Fc*Qc)	2140	2960	1933	2416
DFC = Design flow/Capacity = Q/Qe	0.04	0.38	0.08	0.11

TOTAL ENTRY FLOWS = 1800 PCU

CRITICAL DFC = 0.38

# ROUNDBABOUT CAPACITY CALCULATION

Junction	J1 - Lung Fu Road / Lung Mun Road	Scenario	Observed 2021 PM Operation Peak	Project No.	Prepared By	Checked By	Date
							28/Apr/21



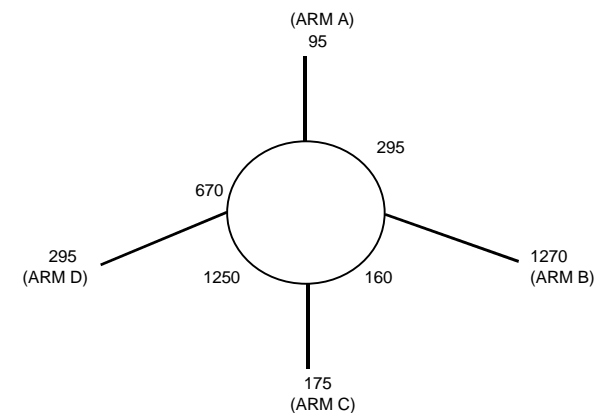
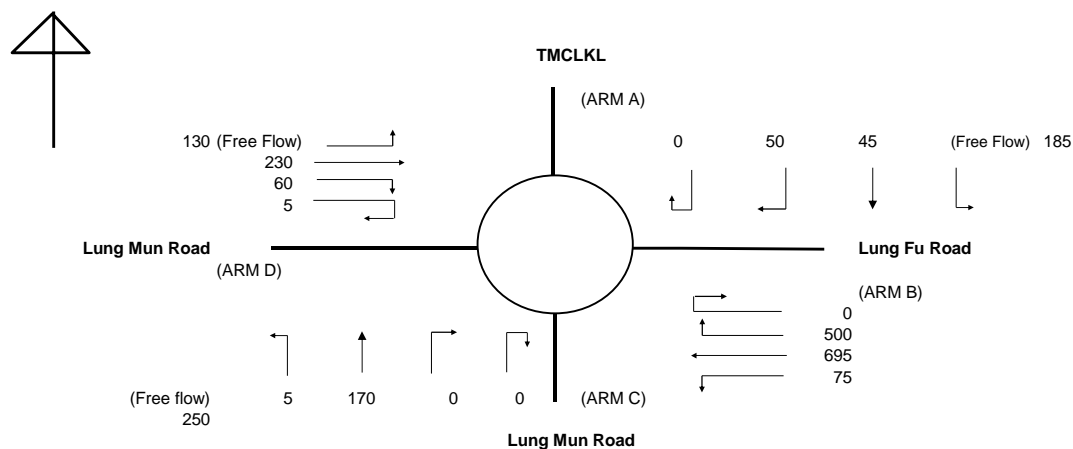
ARM	A	B	C	D
INPUT PARAMETERS:				
V = Approach half width (m)	7.30	7.30	7.30	7.30
E = Entry width (m)	7.60	10.00	8.00	9.00
L = Effective length of flare (m)	3.20	79.00	21.00	38.00
R = Entry radius (m)	20.00	35.82	53.00	44.00
D = Inscribed circle diameter (m)	78.60	78.60	78.60	78.60
A = Entry angle (degree)	29.00	25.50	10.00	22.50
Q = Entry flow (pcu/h)	475	1190	100	1200
Qc= Circulating flow across entry (pcu/h)	1200	785	1335	575
OUTPUT PARAMETERS:				
S = Sharpness of flare = 1.6(E-V)/L	0.15	0.05	0.05	0.07
K = 1-0.00347(A-30)-0.978(1/R-0.05)	1.00	1.04	1.10	1.05
X2= V + ((E-V)/(1+2S))	7.53	9.73	7.93	8.79
M = EXP((D-60)/10)	6.42	6.42	6.42	6.42
F = 303*X2	2282	2949	2404	2662
Td= 1+(0.5/(1+M))	1.07	1.07	1.07	1.07
Fc= 0.21*Td(1+0.2*X2)	0.56	0.66	0.58	0.62
Qe= K(F-Fc*Qc)	1613	2521	1792	2429
DFC = Design flow/Capacity = Q/Qe	0.29	0.47	0.06	0.49

TOTAL ENTRY FLOWS = 3540 PCU

CRITICAL DFC = 0.49

# ROUNDBABOUT CAPACITY CALCULATION

Junction	J1 - Lung Fu Road / Lung Mun Road	Scenario	Reference 2028 AM Operation Peak	Project No.	Prepared By	Checked By	Date
							28/Apr/21



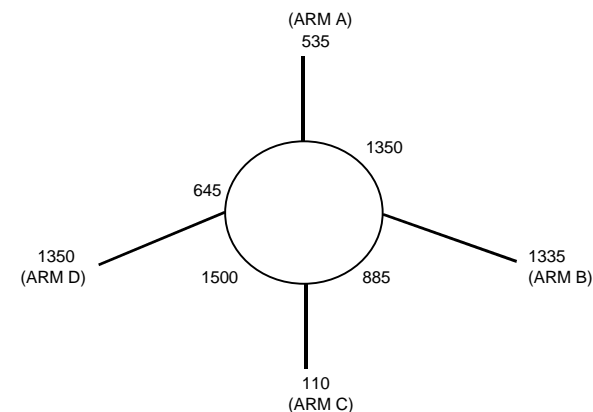
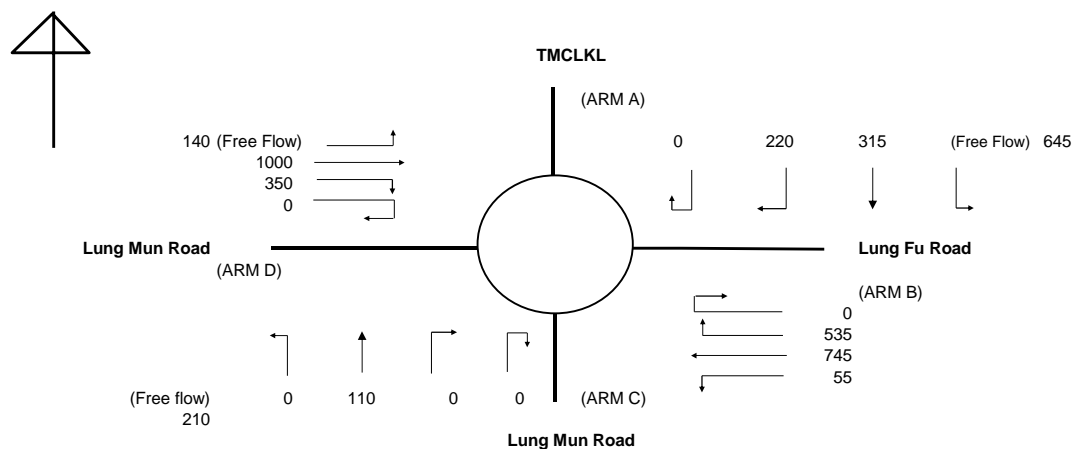
ARM	A	B	C	D
INPUT PARAMETERS:				
V = Approach half width (m)	7.30	7.30	7.30	7.30
E = Entry width (m)	7.60	10.00	8.00	9.00
L = Effective length of flare (m)	3.20	79.00	21.00	38.00
R = Entry radius (m)	20.00	35.82	53.00	44.00
D = Inscribed circle diameter (m)	78.60	78.60	78.60	78.60
A = Entry angle (degree)	29.00	25.50	10.00	22.50
Q = Entry flow (pcu/h)	95	1270	175	295
Qc= Circulating flow across entry (pcu/h)	295	160	1250	670
OUTPUT PARAMETERS:				
S = Sharpness of flare = 1.6(E-V)/L	0.15	0.05	0.05	0.07
K = 1-0.00347(A-30)-0.978(1/R-0.05)	1.00	1.04	1.10	1.05
X2= V + ((E-V)/(1+2S))	7.53	9.73	7.93	8.79
M = EXP((D-60)/10)	6.42	6.42	6.42	6.42
F = 303*X2	2282	2949	2404	2662
Td= 1+(0.5/(1+M))	1.07	1.07	1.07	1.07
Fc= 0.21*Td(1+0.2*X2)	0.56	0.66	0.58	0.62
Qe= K(F-Fc*Qc)	2123	2949	1847	2367
DFC = Design flow/Capacity = Q/Qe	0.04	0.43	0.09	0.12

TOTAL ENTRY FLOWS = 2020 PCU

CRITICAL DFC = 0.43

# ROUNDBABOUT CAPACITY CALCULATION

Junction	J1 - Lung Fu Road / Lung Mun Road	Scenario	Reference 2028 PM Operation Peak	Project No.	Prepared By	Checked By	Date
							28/Apr/21



ARM	A	B	C	D
INPUT PARAMETERS:				
V = Approach half width (m)	7.30	7.30	7.30	7.30
E = Entry width (m)	7.60	10.00	8.00	9.00
L = Effective length of flare (m)	3.20	79.00	21.00	38.00
R = Entry radius (m)	20.00	35.82	53.00	44.00
D = Inscribed circle diameter (m)	78.60	78.60	78.60	78.60
A = Entry angle (degree)	29.00	25.50	10.00	22.50
Q = Entry flow (pcu/h)	535	1335	110	1350
Qc= Circulating flow across entry (pcu/h)	1350	885	1500	645
OUTPUT PARAMETERS:				
S = Sharpness of flare = 1.6(E-V)/L	0.15	0.05	0.05	0.07
K = 1-0.00347(A-30)-0.978(1/R-0.05)	1.00	1.04	1.10	1.05
X2= V + ((E-V)/(1+2S))	7.53	9.73	7.93	8.79
M = EXP((D-60)/10)	6.42	6.42	6.42	6.42
F = 303*X2	2282	2949	2404	2662
Td= 1+(0.5/(1+M))	1.07	1.07	1.07	1.07
Fc= 0.21*Td(1+0.2*X2)	0.56	0.66	0.58	0.62
Qe= K(F-Fc*Qc)	1529	2453	1687	2383
DFC = Design flow/Capacity = Q/Qe	0.35	0.54	0.07	0.57

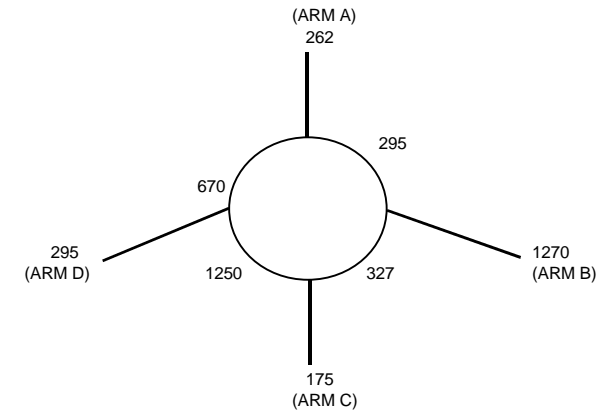
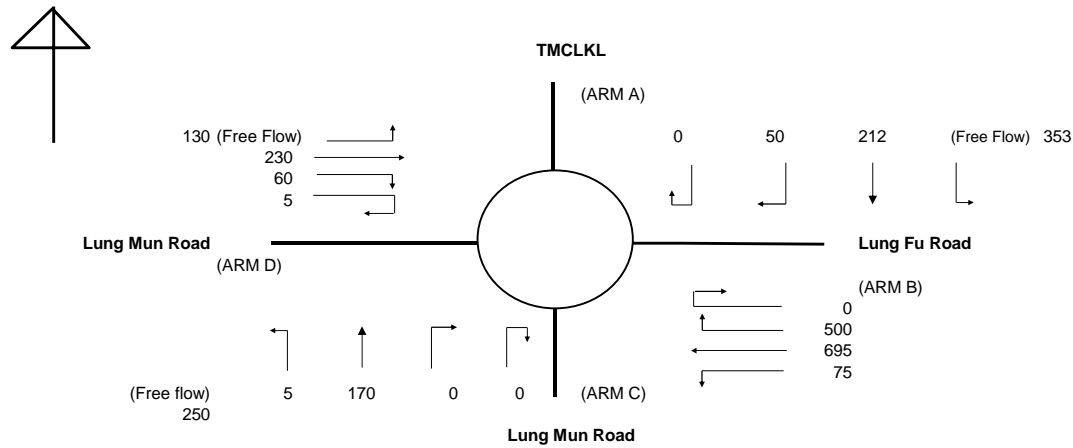
TOTAL ENTRY FLOWS = 3975 PCU

CRITICAL DFC = 0.57



# ROUNDBABOUT CAPACITY CALCULATION

Junction	J1 - Lung Fu Road / Lung Mun Road	Scenario	Design 2028 AM Operation Peak	Project No.	Prepared By	Checked By	Date
							28/Apr/21



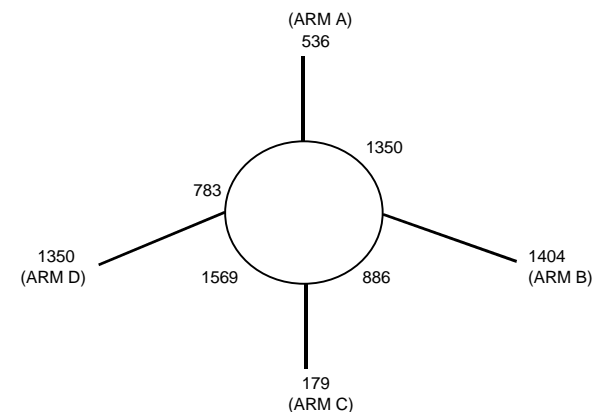
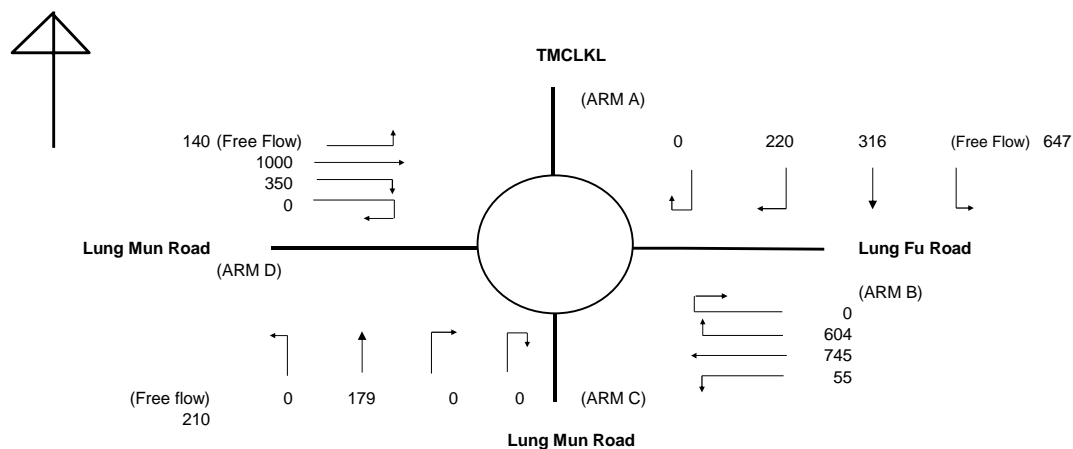
ARM	A	B	C	D
INPUT PARAMETERS:				
V = Approach half width (m)	7.30	7.30	7.30	7.30
E = Entry width (m)	7.60	10.00	8.00	9.00
L = Effective length of flare (m)	3.20	79.00	21.00	38.00
R = Entry radius (m)	20.00	35.82	53.00	44.00
D = Inscribed circle diameter (m)	78.60	78.60	78.60	78.60
A = Entry angle (degree)	29.00	25.50	10.00	22.50
Q = Entry flow (pcu/h)	262	1270	175	295
Qc= Circulating flow across entry (pcu/h)	295	327	1250	670
OUTPUT PARAMETERS:				
S = Sharpness of flare = 1.6(E-V)/L	0.15	0.05	0.05	0.07
K = 1-0.00347(A-30)-0.978(1/R-0.05)	1.00	1.04	1.10	1.05
X2= V + ((E-V)/(1+2S))	7.53	9.73	7.93	8.79
M = EXP((D-60)/10)	6.42	6.42	6.42	6.42
F = 303*X2	2282	2949	2404	2662
Td= 1+(0.5/(1+M))	1.07	1.07	1.07	1.07
Fc= 0.21*Td(1+0.2*X2)	0.56	0.66	0.58	0.62
Qe= K(F-Fc*Qc)	2123	2835	1847	2367
DFC = Design flow/Capacity = Q/Qe	0.12	0.45	0.09	0.12

TOTAL ENTRY FLOWS = 2355 PCU

CRITICAL DFC = 0.45

# ROUNDBABOUT CAPACITY CALCULATION

Junction	J1 - Lung Fu Road / Lung Mun Road	Scenario	Design 2028 PM Operation Peak	Project No.	Prepared By	Checked By	Date
							28/Apr/21



ARM	A	B	C	D
INPUT PARAMETERS:				
V = Approach half width (m)	7.30	7.30	7.30	7.30
E = Entry width (m)	7.60	10.00	8.00	9.00
L = Effective length of flare (m)	3.20	79.00	21.00	38.00
R = Entry radius (m)	20.00	35.82	53.00	44.00
D = Inscribed circle diameter (m)	78.60	78.60	78.60	78.60
A = Entry angle (degree)	29.00	25.50	10.00	22.50
Q = Entry flow (pcu/h)	536	1404	179	1350
Qc= Circulating flow across entry (pcu/h)	1350	886	1569	783
OUTPUT PARAMETERS:				
S = Sharpness of flare = 1.6(E-V)/L	0.15	0.05	0.05	0.07
K = 1-0.00347(A-30)-0.978(1/R-0.05)	1.00	1.04	1.10	1.05
X2= V + ((E-V)/(1+2S))	7.53	9.73	7.93	8.79
M = EXP((D-60)/10)	6.42	6.42	6.42	6.42
F = 303*X2	2282	2949	2404	2662
Td= 1+(0.5/(1+M))	1.07	1.07	1.07	1.07
Fc= 0.21*Td(1+0.2*X2)	0.56	0.66	0.58	0.62
Qe= K(F-Fc*Qc)	1529	2452	1643	2293
DFC = Design flow/Capacity = Q/Qe	0.35	0.57	0.11	0.59

TOTAL ENTRY FLOWS = 4116 PCU

CRITICAL DFC = 0.59

## ***Annex B***

### ***Swept Path Analysis***

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# SITE A

INGRESS

EGRESS

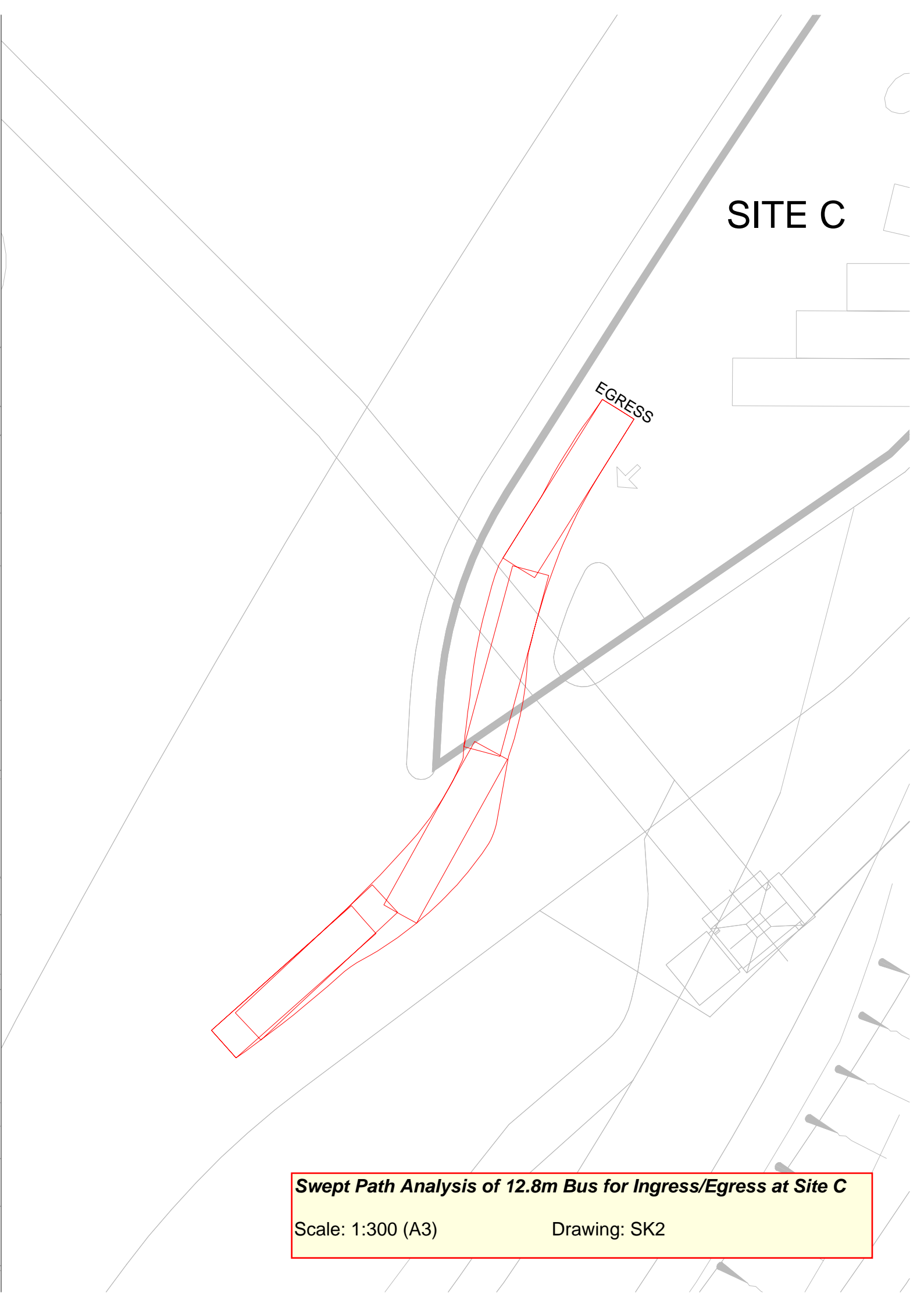
Waste Treatment  
Plant

CONTROL RM

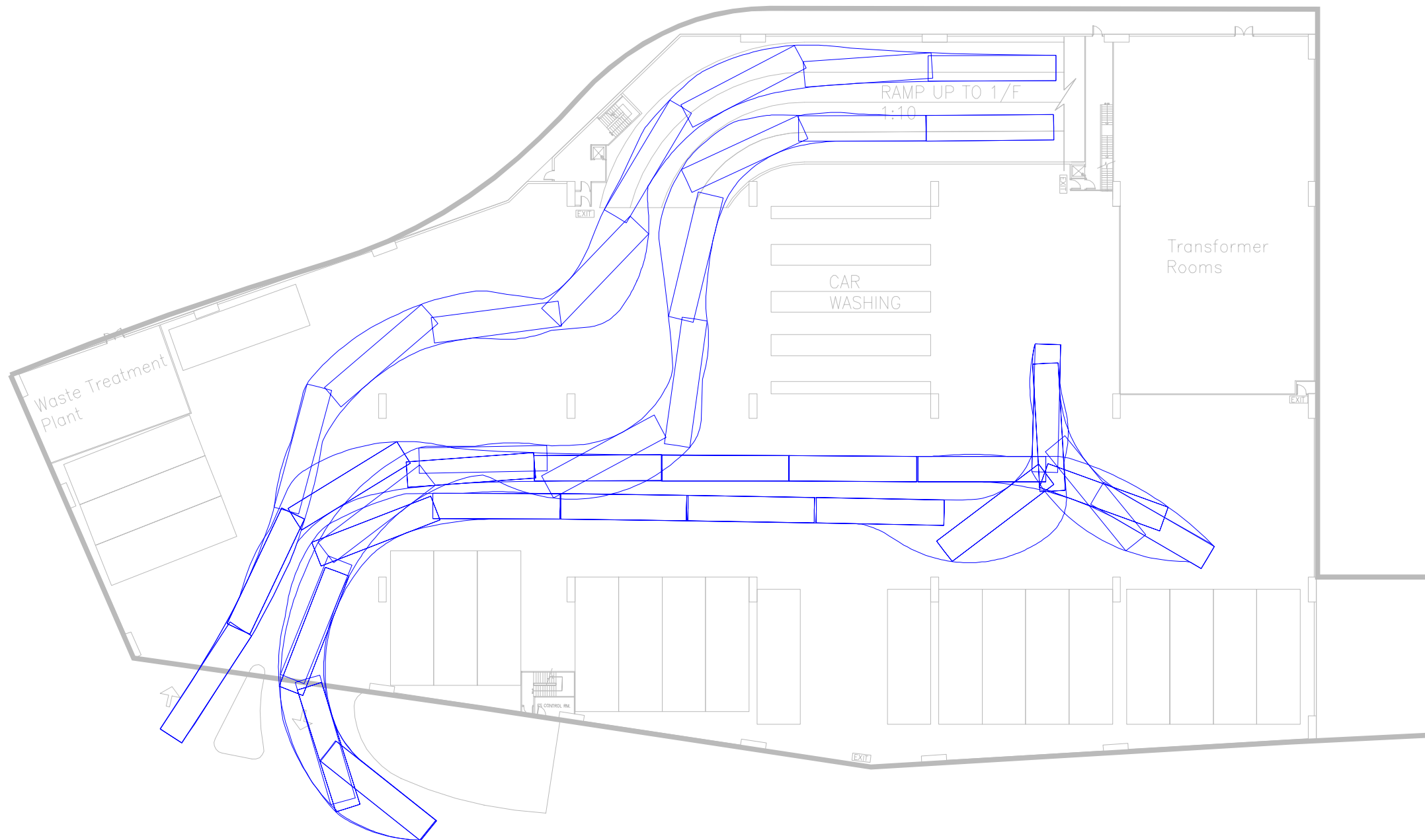
**Swept Path Analysis of 12.8m Bus for Ingress/Egress at Site A**

Scale: 1:300 (A3)

Drawing: SK1



**Swept Path Analysis of 12.8m Bus for Ingress/Egress at Site C**  
Scale: 1:300 (A3) Drawing: SK2



G/F

**Swept Path Analysis of 12.8m Bus for GF Circulation at Site A**

Scale: 1:500 (A3)

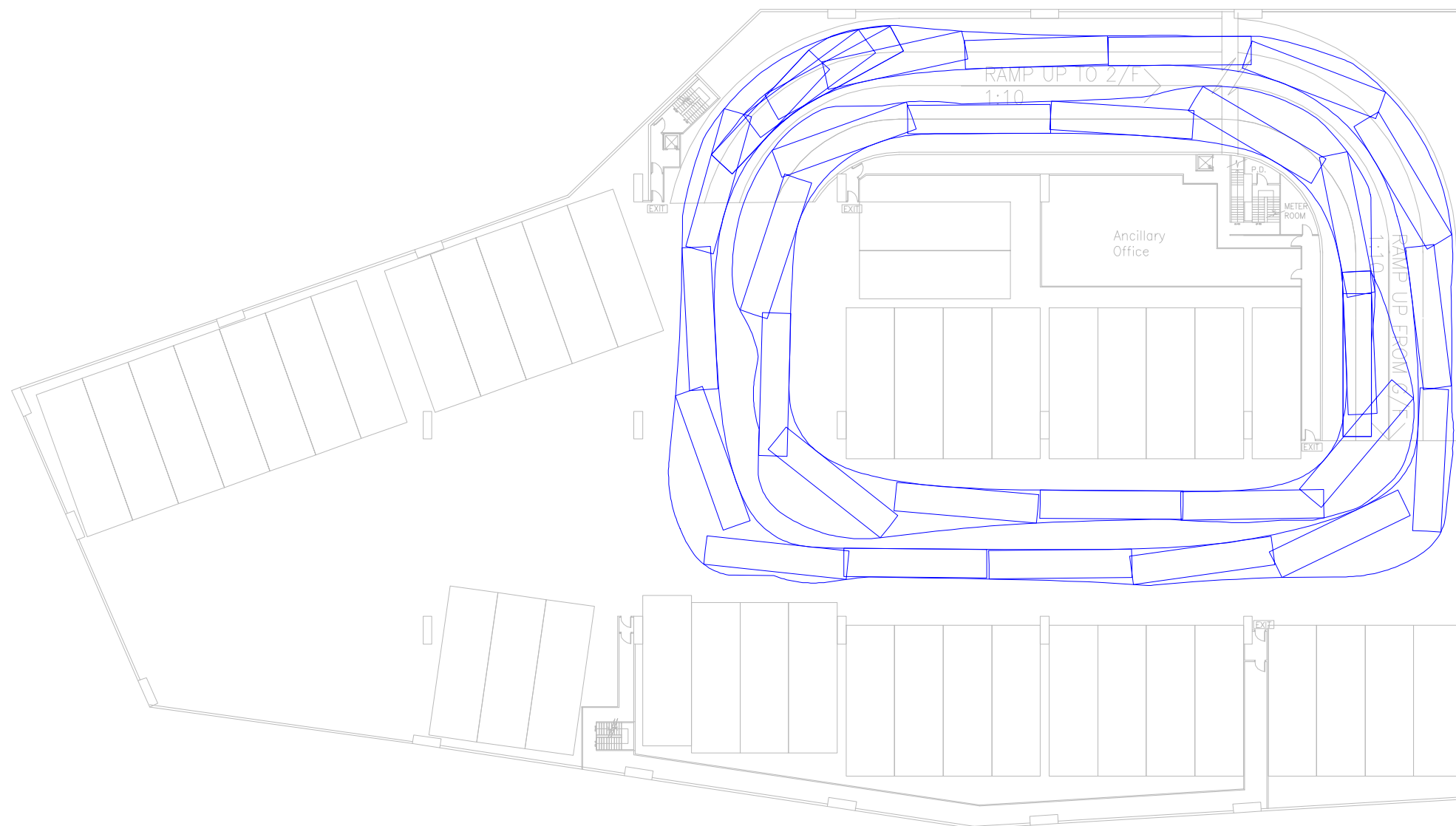
Drawing: SK3





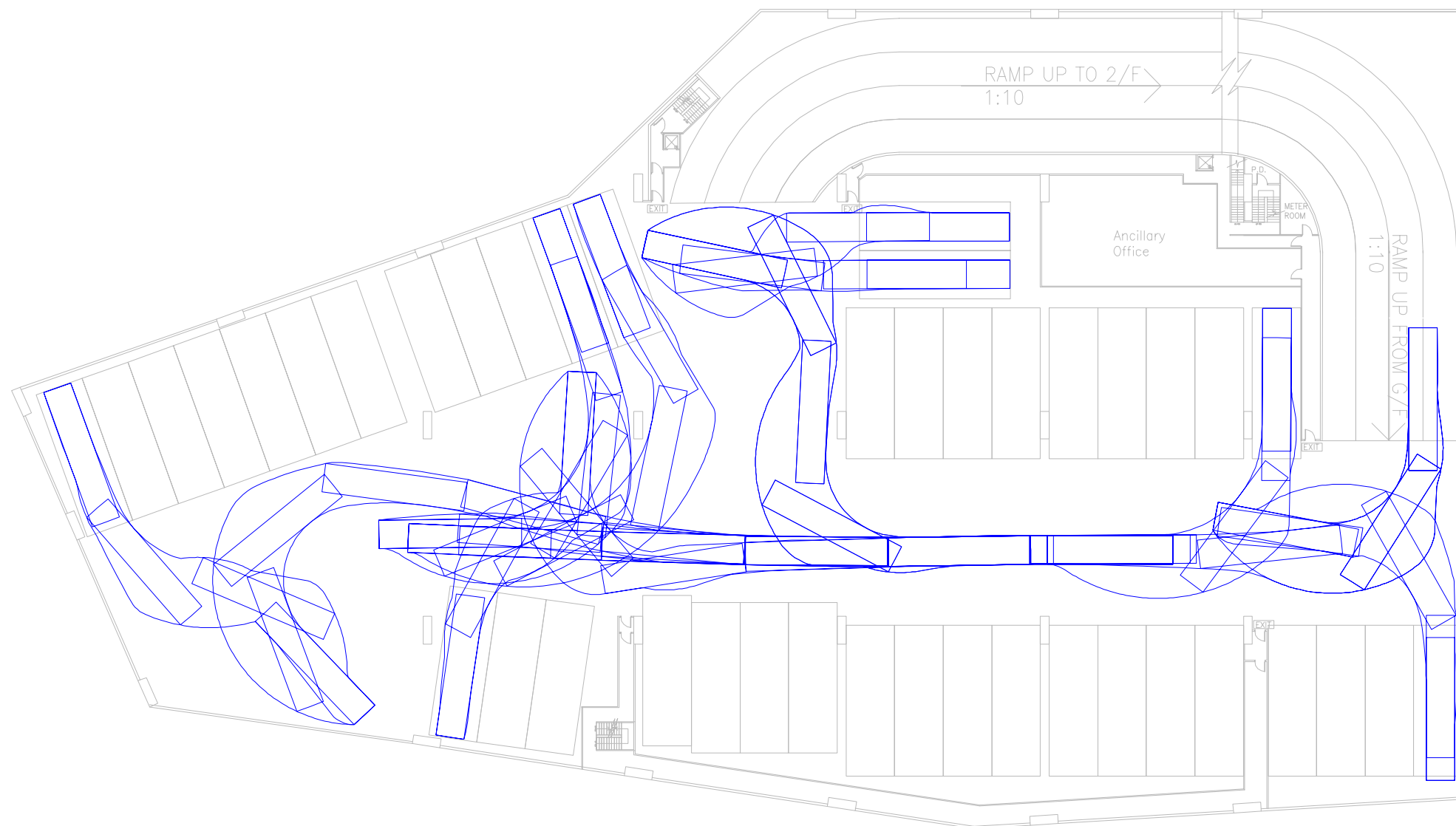






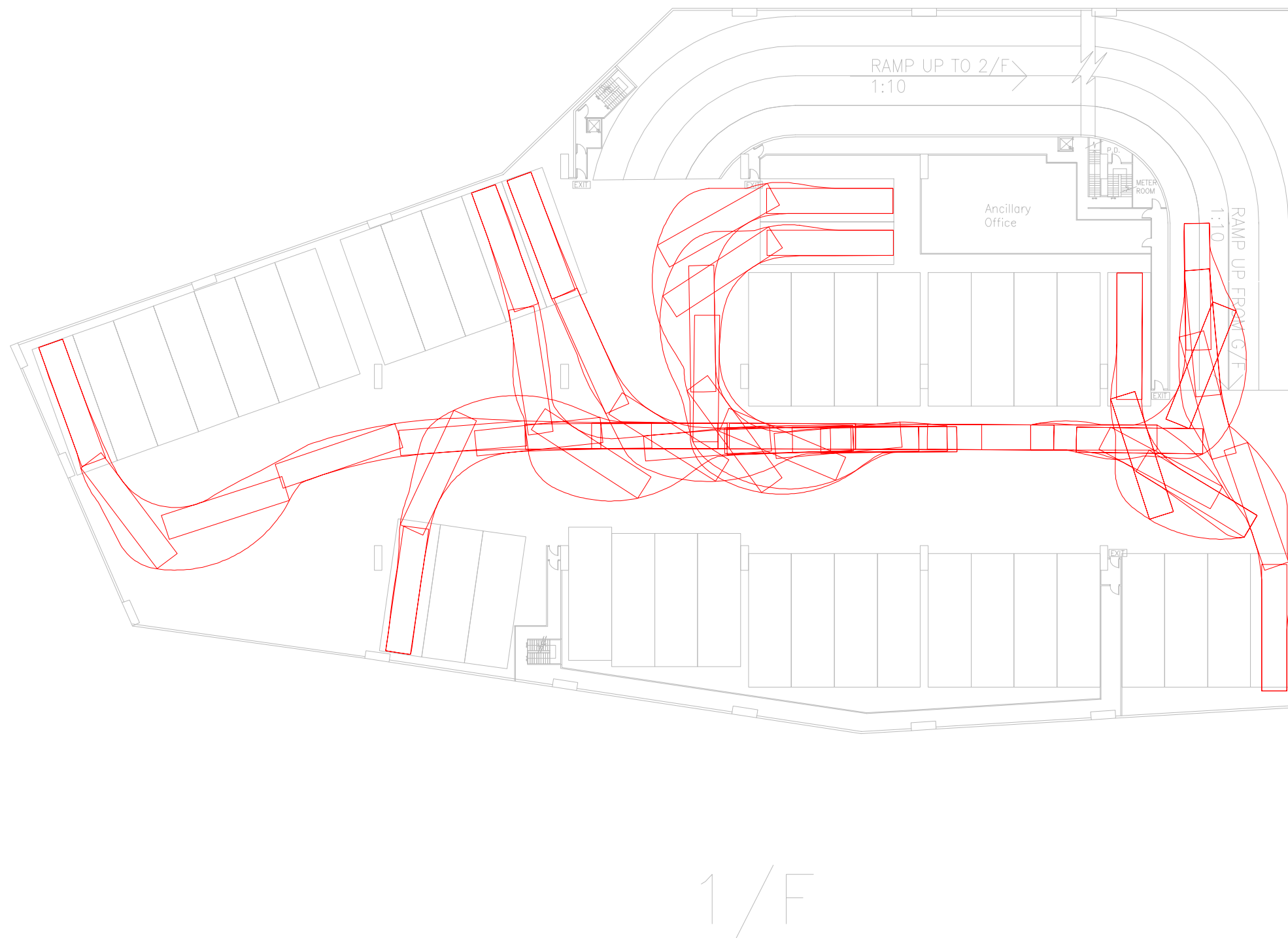
1/F

**Swept Path Analysis of 12.8m Bus for 1F Circulation at Site A**  
Scale: 1:500 (A3)      Drawing: SK7



1/F

**Swept Path Analysis of 12.8m Bus for 1F Parking (Ingress) at Site A**  
Scale: 1:500 (A3)      Drawing: SK8

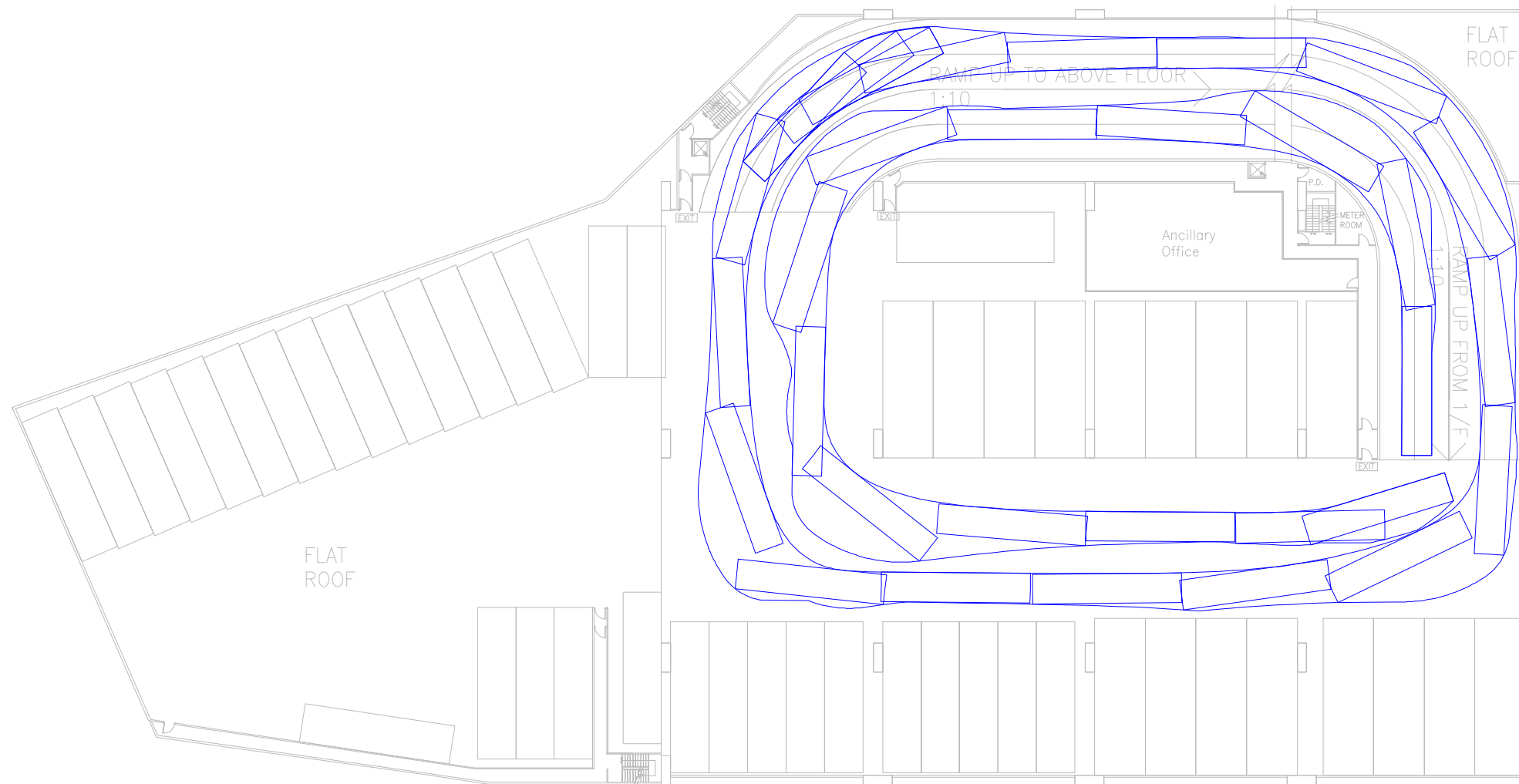


**Swept Path Analysis of 12.8m Bus for 1F Parking (Egress) at Site A**

Scale: 1:500 (A3)

Drawing: SK9



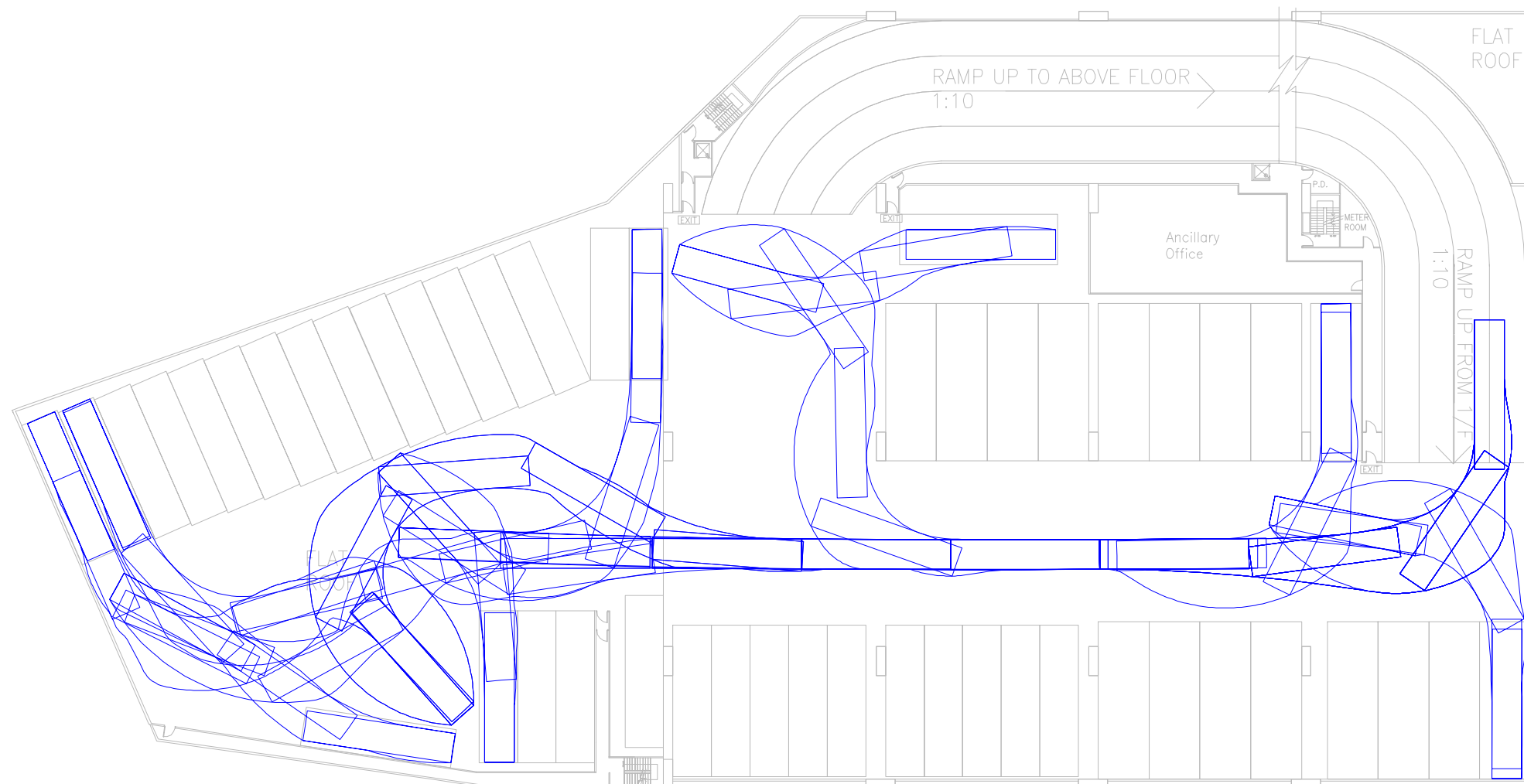


2/F

**Swept Path Analysis of 12.8m Bus for 2F Circulation at Site A**

Scale: 1:500 (A3)

Drawing: SK10

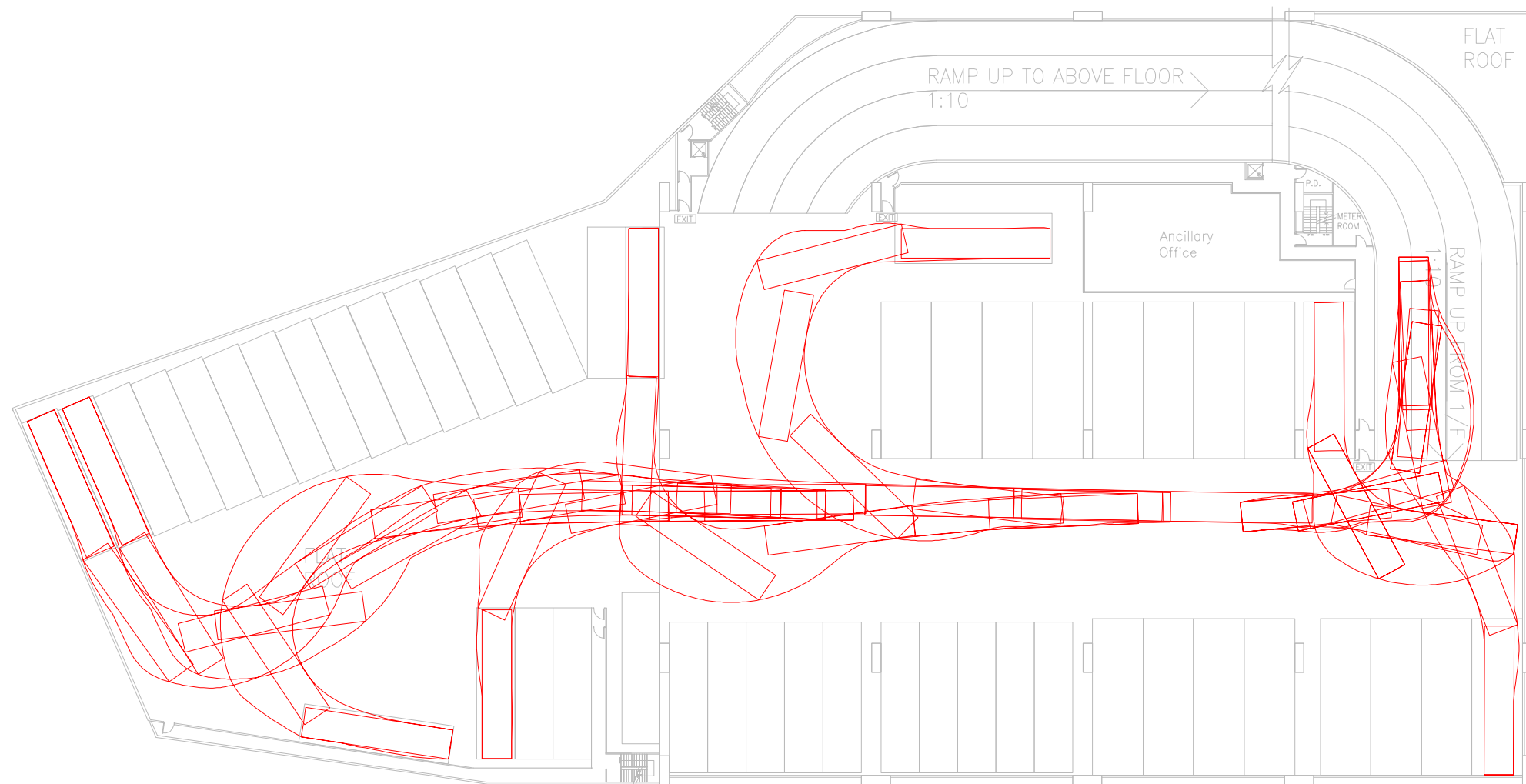


2/F

**Swept Path Analysis of 12.8m Bus for 2F Parking (Ingress) at Site A**

Scale: 1:500 (A3)

Drawing: SK11

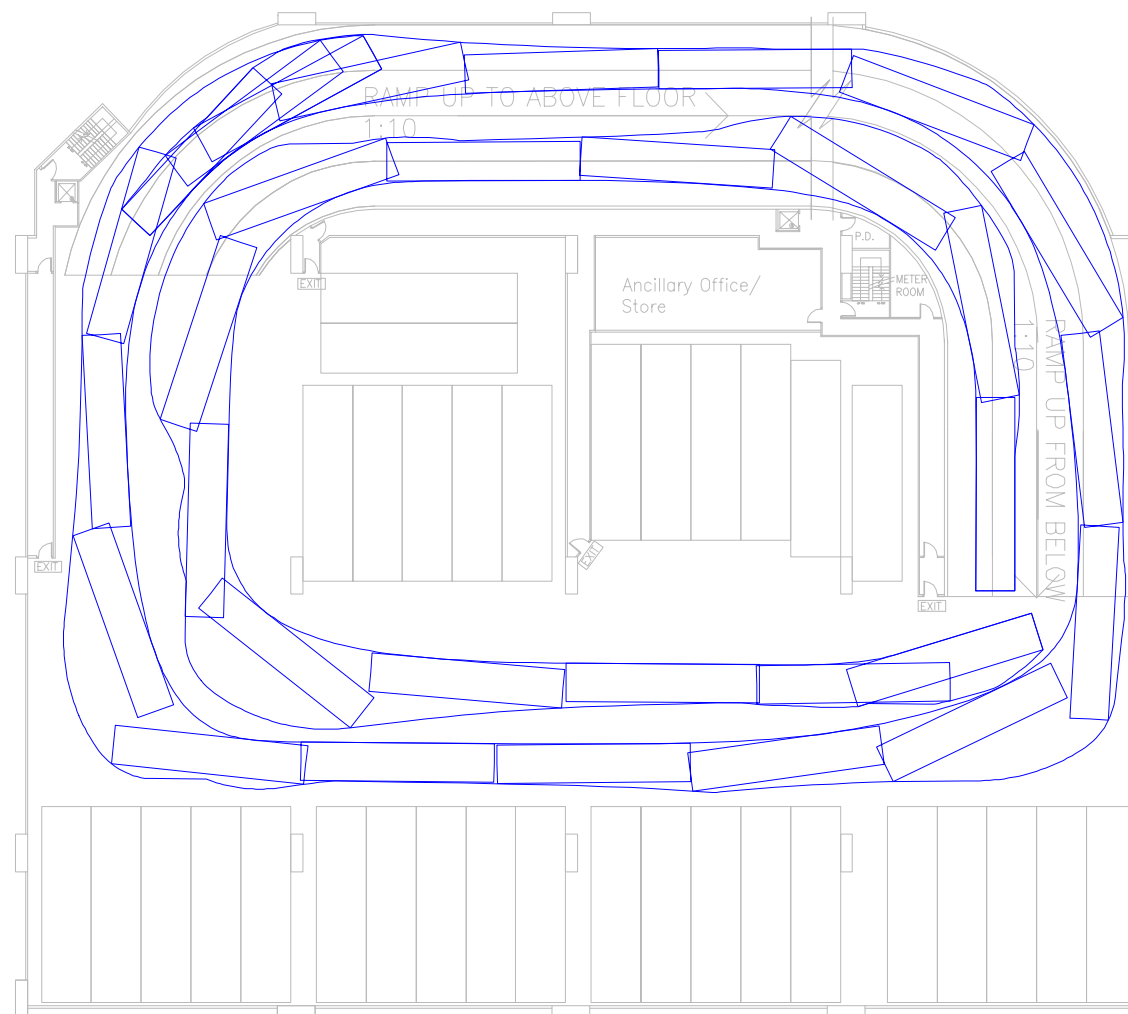


2/F

**Swept Path Analysis of 12.8m Bus for 2F Parking (Egress) at Site A**

Scale: 1:500 (A3)

Drawing: SK12

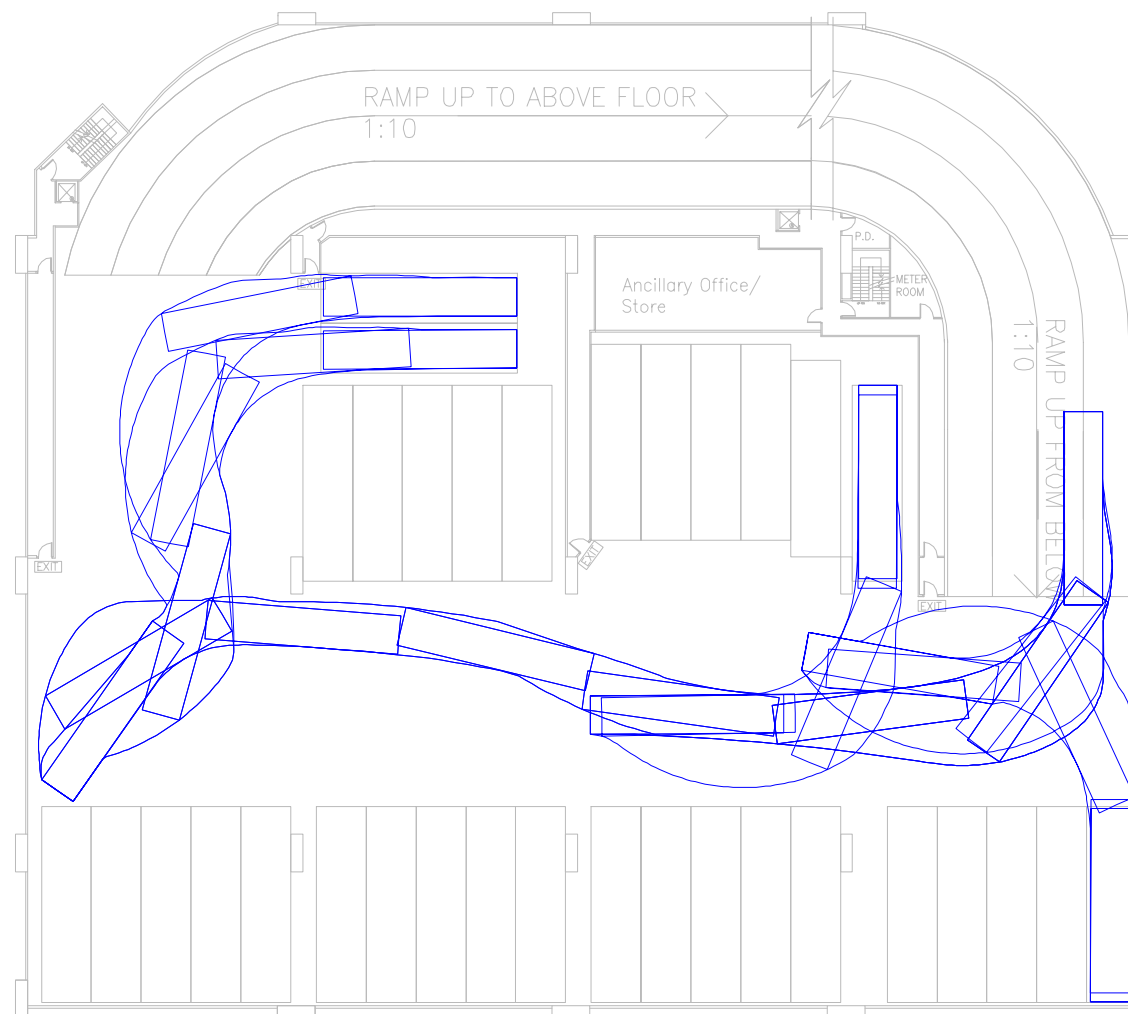


3/F – 10/F

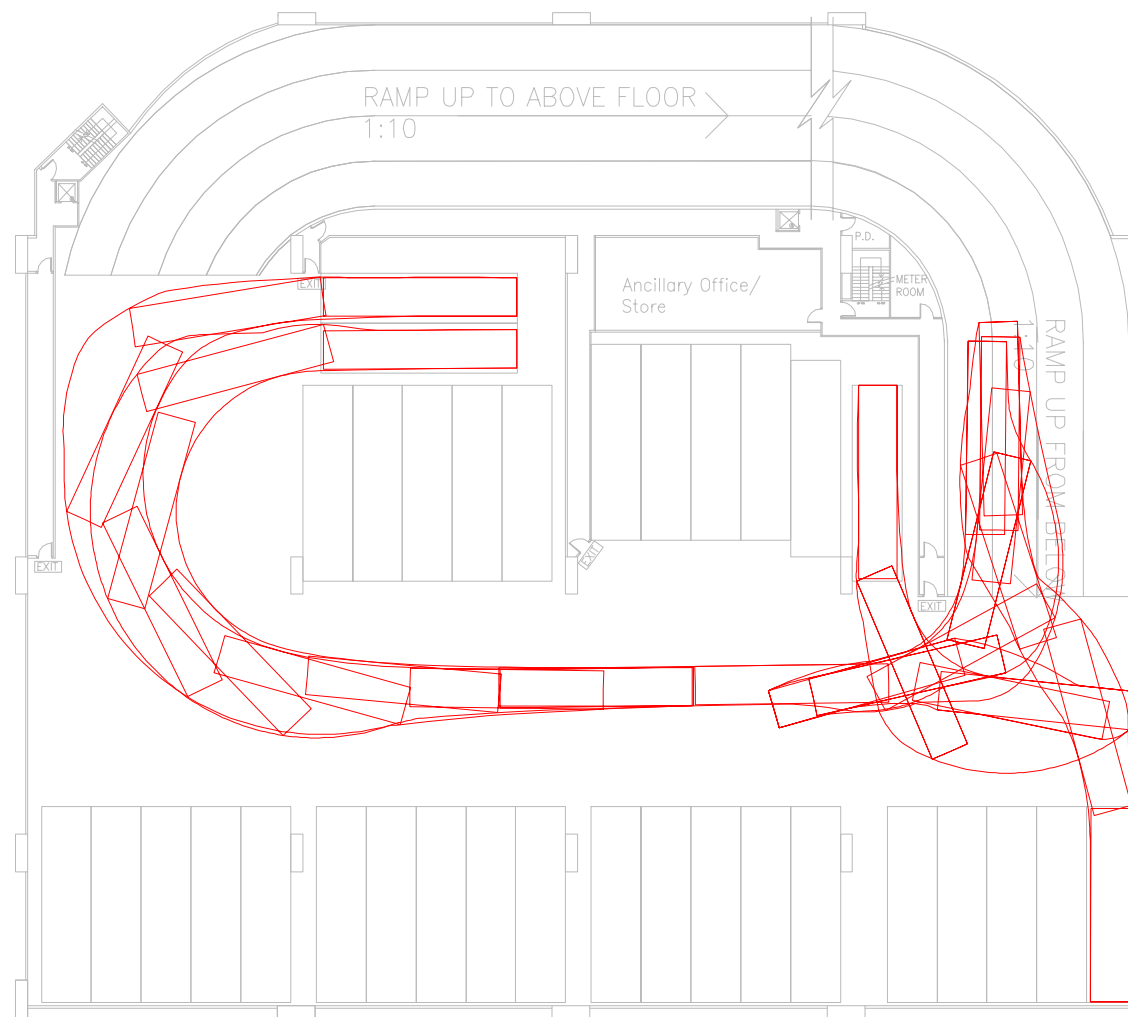
**Swept Path Analysis of 12.8m Bus for 3-10F Circulation at Site A**

Scale: 1:500 (A3)

Drawing: SK13



3/F – 10/F

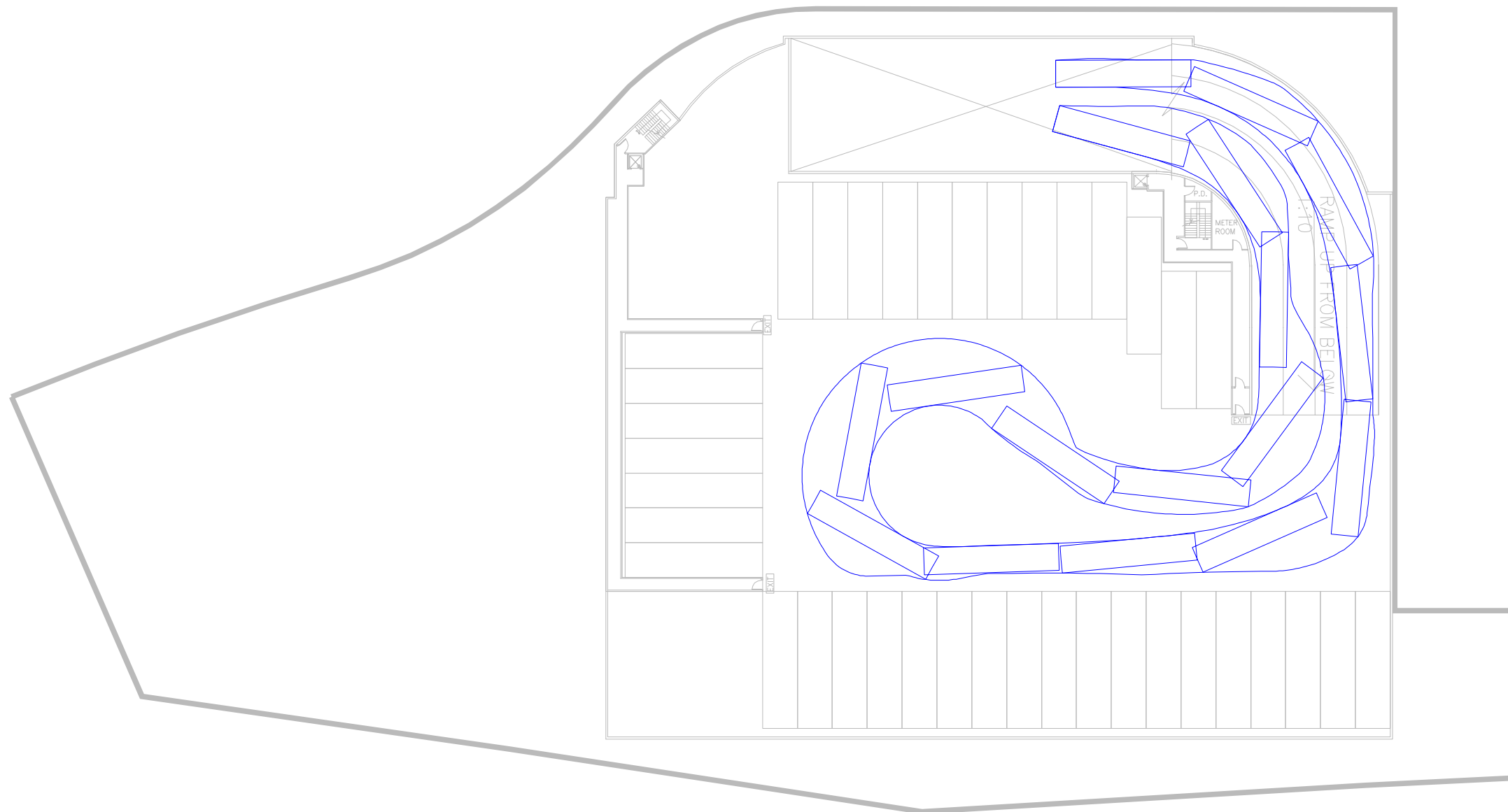


**Swept Path Analysis of 12.8m Bus for 3-10F Parking (Egress) at Site A**

Scale: 1:500 (A3)

Drawing: SK15



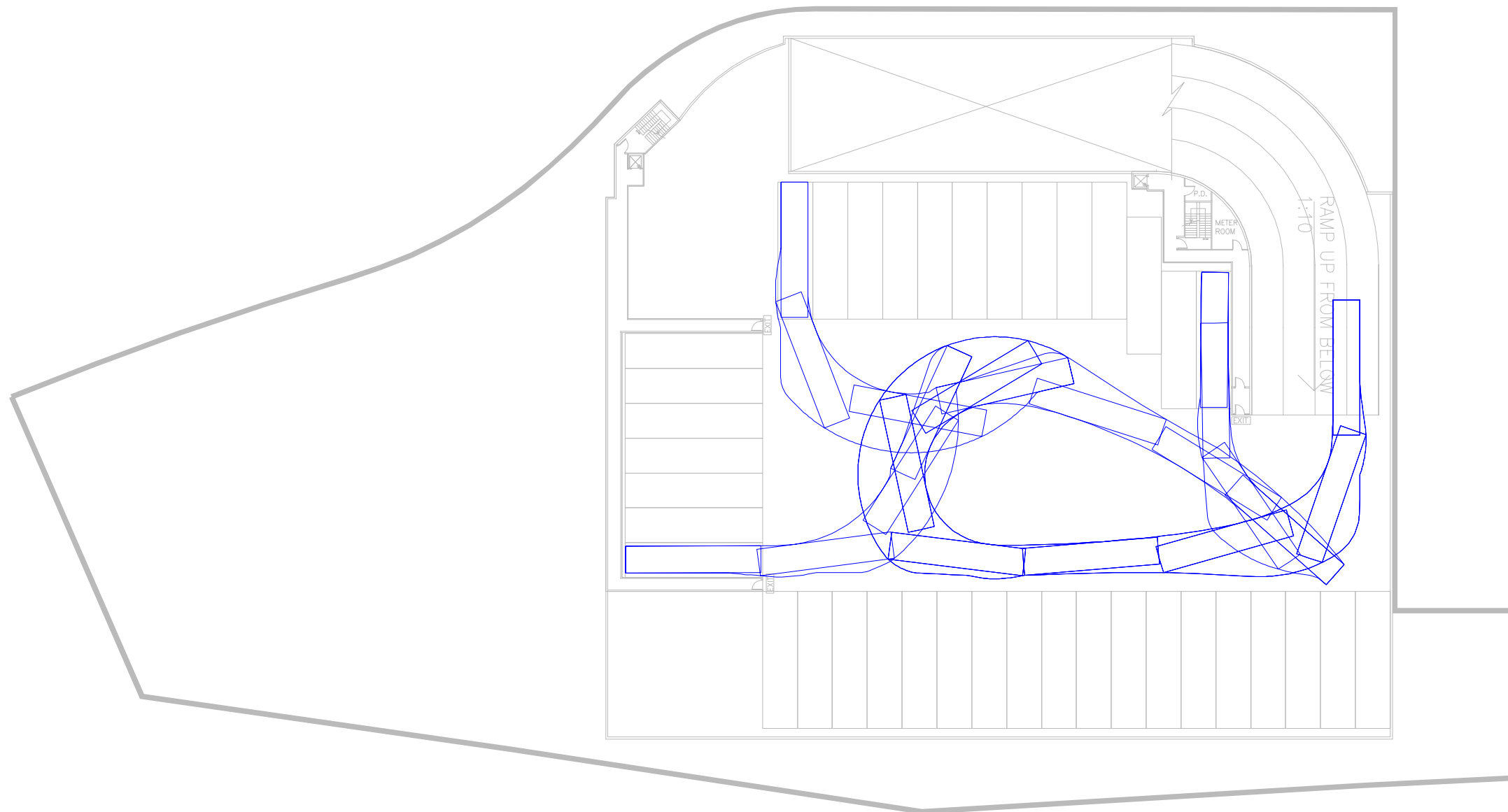


ROOF FLOOR

**Swept Path Analysis of 12.8m Bus for RF Circulation at Site A**

Scale: 1:500 (A3)

Drawing: SK16

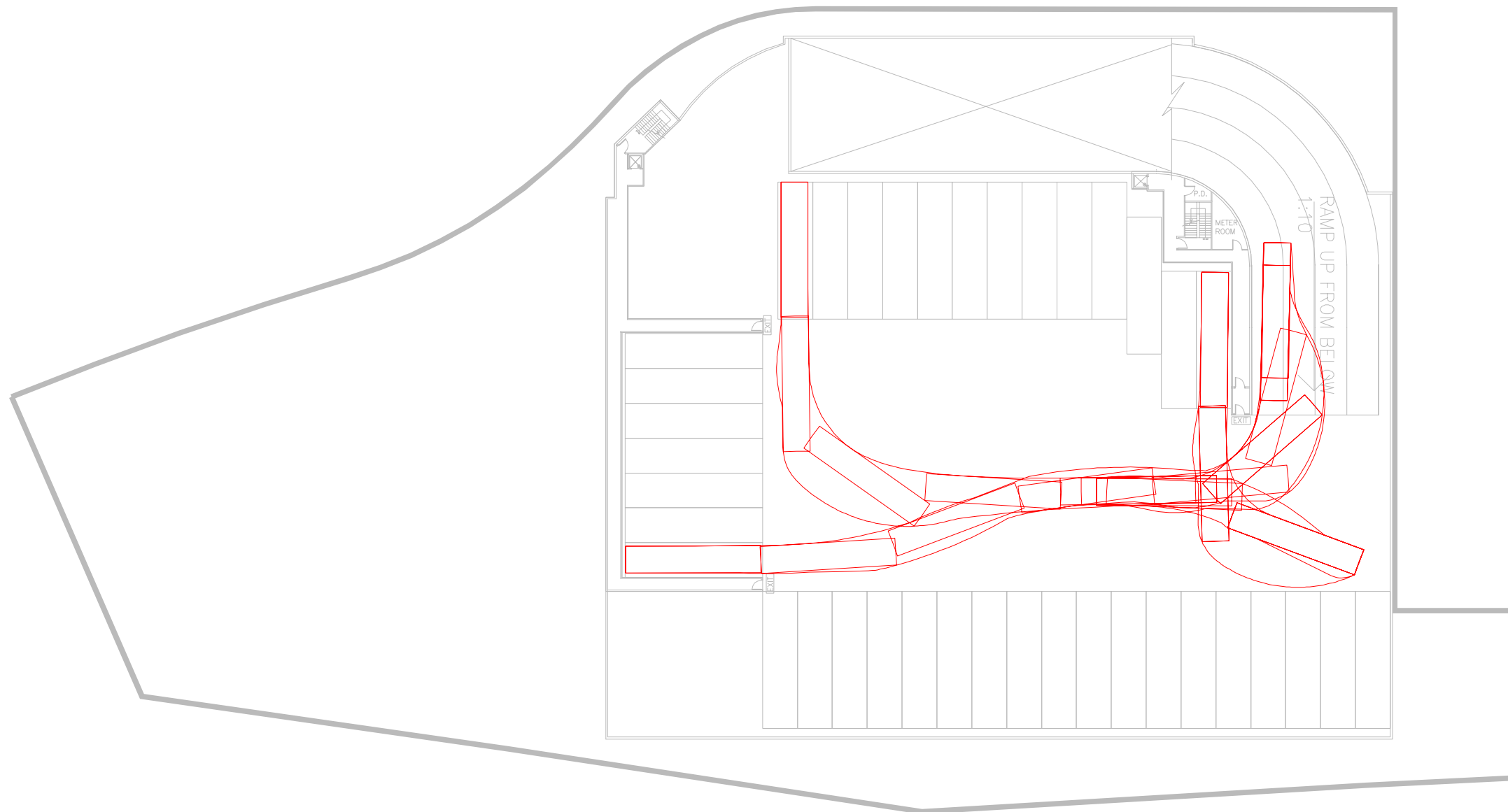


ROOF FLOOR

**Swept Path Analysis of 12.8m Bus for RF Parking (Ingress) at Site A**

Scale: 1:500 (A3)

Drawing: SK17



ROOF FLOOR

**Swept Path Analysis of 12.8m Bus for RF Parking (Egress) at Site A**

Scale: 1:500 (A3)

Drawing: SK18

本署檔號  
OUR REF: EP 11/V1/77/2  
來函檔號  
YOUR REF:  
電話  
TEL. NO.: 2594 6309  
圖文傳真  
FAX NO.: 2572 0306  
電子郵件  
E-MAIL: daveho@epd.gov.hk  
網址  
HOMEPAGE: <http://www.epd.gov.hk>

**Environmental Protection Department**

33rd floor, Revenue Tower,  
5 Gloucester Road,  
Wan Chai, Hong Kong.



環境保護署  
香港灣仔  
告士打道5號  
稅務大樓33樓

(By Post and Email)

Mr. Thomas Tong  
Commercial Director  
The Kowloon Motor Bus Co. (1933) Ltd.  
15/F, 9 Po Lun Street,  
Lai Chi Kok, Kowloon

3 May 2021

Dear Mr. TONG,

**Policy Support for Planning Application for Proposed Green Bus Depot  
at Site A of Tuen Mun – Chek Lap Kok Link Free-up Areas**

I refer to your letter dated 23 April 2021 on the captioned. While not being the responsible Bureau/Department for approval of the planning application for the project, the Environment Bureau and the Environmental Protection Department are in-principle in support of the Kowloon Motor Bus Co. (1933) Limited's (KMB) proposal and are looking forward to the early completion of the "Smart Green Bus Depot" at Tuen Mun which is an important infrastructure for supporting the electrification of franchised buses.

The development of charging infrastructure is pivotal for achieving our ultimate goal that all franchised buses are new energy vehicles including electric vehicles in the future. KMB's forward-looking initiative of building "Smart Green Bus Depot" at the above site, which is for providing near 400 charging-enabling bus parking bays for supporting the charging needs of the expanding electric bus fleet, is in line with our vision of "Zero Carbon Emissions · Clean Air · Smart City" set out in the Hong Kong Roadmap on Popularisation of Electric Vehicles announced by the Government in March 2021.

I thank you for your continual support on greener and sustainable transportation for Hong Kong.

Yours sincerely,

A handwritten signature in black ink, appearing to be 'Dave'.

(Dave T.Y. HO)

for Director of Environmental Protection

Our Ref : MWD/0234/21  
23 April 2021

Environment Bureau  
16/F, East Wing,  
Central Government Offices,  
2 Tim Mei Avenue, Tamar, HK

Attn: Mr. WONG Kam Sing, GBS.JP

(By Email: [sen@enb.gov.hk](mailto:sen@enb.gov.hk) & By Post)

Dear Sir,

**Request for Policy Support for Planning Application  
for Proposed Green Bus Depot  
at Site A of Tuen Mun - Chek Lap Kok Link Free-up Areas**

We would like to seek your policy support to build a "Smart Green Bus Depot" at Site A of Tuen Mun - Chek Lap Kok Link ("TMCLKL") Free-up Areas, Tuen Mun to provide sufficient charging facilities to cater for KMB's electric bus strategy. It is going to support the Roadmap on Popularization of Electric Vehicles released by Environment Bureau in March 2021.

The sites fall within the areas show as "Road" on the approved Tuen Mun Outline Zoning Plan ("OZP") No. S/TM/35, which comprise 3 portions, namely Site A, B and C at the northbound and southbound of the original toll plaza of TMCLKL as shown in Annex 1. While the Government waived the toll fees for using the new TMCLKL Tunnel, the toll arrangement is no longer required and the sites are then freed up for other purpose.

To cope with housing problems, the Government requested KMB to return its Yuen Long and Tin Shui Wai running depot by end 2021 and designated TMCLKL Free-up Areas as replacement.

With an aim to optimizing the land resource, KMB with support from Transport Department proposes to build a multi-storey depot at Site A. Remaining portion of the free up area, say part of Site B and the whole of Site C, is situated on top of elevated highway structures and considered not feasible for building development.

Site A is approximately in the area of 85,000 sq.ft. and KMB would submit a planning application to the Town Planning Board to develop a multi-storey depot for electric bus. The benefit of a modernize multi-storey permanent depot includes:

1. To consolidate overnight termini / on-street bus parking at New Territories West into one large scale permanent depot to enhance operational efficiency and bus security and relieve public nuisance; and
2. Near 400 charging-enabling bus parking bays will be provided after the launch of this multi-storey depot. It is a bold step forward to allow wider use of electric bus, especially double deck electric bus is KMB bus service.

cont'd.../2

P.2

Our Ref:  
23 April 2021

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Regarding to the environmental impact to surrounding, electric buses will provide quiet and smooth operation and have no emission and less noise and vibration than internal combustion engines. Electric buses fleet returning to TMCLKL Depot at late night peak will not need to wait for refueling which is normally situated at the depot entrance but can go straight directly to parking spaces for overnight charging. It eliminates possible vehicle tail back concern to adjacent traffic flow.

Besides, the proposed electric bus depot is considered environmentally superior to conventional fuel bus depot in terms of air and noise pollution.


The favorite location of TMCLKL is unique for setting up of the first electric bus depot. The depot for nearly 400 electric vehicles would allow a valuable opportunity in training a team of engineers / technicians in Hong Kong for electric vehicles. Thus, we would like to seek your policy support to develop to a multi-storey depot at Site A of TMCLKL.

We understand that your policy support would be subject to other departmental comments. The new depot will support sustainability goals, reduce carbon emission, air and noise pollution.

We look forward to receiving your policy support, and shall be grateful for your support for this planning application.

Should you have any query, please do not hesitate to contact me at Tel: 2786 8733.

Yours faithfully,  
For and on behalf of  
The Kowloon Motor Bus Company (1933) Limited

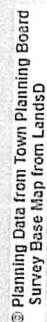
  
P.P. Thomas Tong  
Commercial Director

Encl.: (1 page)

c.c. EPD – Mr. Dave HO (by Email)



**Outline Zoning Plan No. S/TM/35 - Tuen Mun**  
(Extracted from Town Planning Board's website)



28 April 2021

The Kowloon Motor Bus Co. (1933) Ltd.  
15/F, 9 Po Lun Street  
Lai Chi Kok, Kowloon

Attention: Mr. Jacky Ng

Our Ref.: NR/S208-21/HW/TF  
Your Ref.: MWD/0232/21

Dear Mr. Ng,

**RE: Electricity Supply Provision for Electric Bus Depot at  
Site A of Tuen Mun Chek Lap Kok Free-Up Areas**

We refer to your letter dated 23 April 2021 and the online meeting on 23 April 2021 regarding the application of electricity supply for the captioned location.

It has been one of our company supply conditions that, the customer shall provide, free of cost to CLP suitable accommodation on or adjacent to his premises to house such equipment as CLP may require for the purposes of providing and metering the supply. Considering the latest estimation on power demand is 36.7MVA, to meet such very large power demand to individual customer, both 132kV and 11kV plant rooms within the premises provided by KMB are the mandatory requirements.

As reminded in the online meeting, it's crucial that KMB to critically review the electrical loading for the best optimization and estimation on the maximum peak demand, including electric charger system and the load management system. Accurate electrical loading optimization and estimation are critical factors to affect the practicality of supply provision. In this regard, we look forward to receive the formal supply application after your review on the peak demand with breakdown by types of electrical installation, load growth by year, energization target date, proposed layout of 132kV accommodation and etc.

For the 132kV supply of which include budget submission for Government bodies' approval, detailed design of the transmission plant rooms and cable outlets arrangement, as well as cabling works to substations at remote areas. The tentative energization schedule should be 2026 subjected to detailed engineering study and system outage requirements. Moreover, it is required to handover the civil structure of the 132kV developer substation at least 18 months lead time before energization.

中華電力有限公司  
CLP Power Hong Kong Limited

北區  
North Region

香港新界上水嘉富坊 16 號  
16 Ka Fu Close, Sheung Shui  
New Territories, Hong Kong

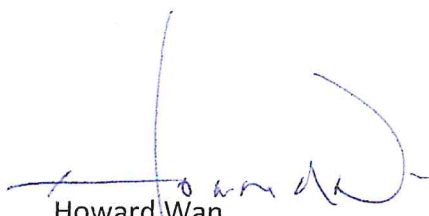
電話 Tel (852) 2678 2156  
傳真 Fax (852) 2678 2180  
網址 Website [www.clpgroup.com](http://www.clpgroup.com)

Cont'd Page 2 of 2

Our Ref.: NR/S208-21/HW/TF

We would proactively work with you on the design and requirements. Should you have any queries on 132kV plant room, please contact our Mr. KW Leung on telephone number 2678 6375. Should you have any queries regarding the design and requirements of 11kV distribution substation, please contact our Mr. Kevin Lui on telephone number 2678 1759.

Yours sincerely,



Howard Wan  
Senior Planning and Design Manager (North Region)  
hw/kl

c.c. AMD/NP – Mr. KW Leung (By email)  
AMD/NP – Mr. YS Ng (By email)  
AMD/NP – Mr. Jack Lam (By email)  
CBD/CCE – Mr. Simon Tsui (By email)  
CBD/CCE – Ms. Angela Lee (By email)

Comments		Response
<b>Comments from Secretary for the Environment (Received on 13 August 2021)</b> <b>(Contact Person: Mr. Nelson IP, Tel: 2594 6460)</b>		
We confirm that the Environment Bureau and the Environmental Protection Department are in principle in support of KMB's proposal which is an important infrastructure for supporting the electrification of franchised buses. The development of charging infrastructure is pivotal for achieving Government's ultimate goal that all franchised buses are new energy vehicles including electric vehicles in the future. KMB's proposed bus depot at the above site, which is for providing near 400 charging-enabling bus parking bays for supporting the charging needs of the expanding electric bus fleet, is in line with Government's vision of "Zero Carbon Emissions · Clean Air · Smart City" set out in the Hong Kong Roadmap on Popularisation of Electric Vehicles announced by the Government in March 2021.		Thanks for support of the proposed bus depot development for electric buses.
<b>Comments from Environmental Protection Department (Received on 13 August 2021)</b> <b>(Contact Person: Ms. Virginia WONG, Tel: 2835 1109)</b>		
The application site falls within areas shown as "Road" on the approved Tuen Mun OZP No. S/TM/35. The proposed developments include (i) a multi-storey permanent depot (Site A); (ii) a 2 storey power substation (Site B) and (iii) charging-enabling bus parking bays (Site C) at the Free-up Area of Tuen Mun – Chek Lap Kok Link.		Noted.
No assessment was made on the proposed 2 storey power substation (Site B) and the charging-enabling bus parking bays (Site C). The applicant / consultant should assess the potential impacts associated with Site B and Site C as well.		For Site B, there is no bus operation, washing and maintenance activities to be carried out in the site. The 2-storey power station of about 600 sq.m. would not cause adverse impact on the environment.
The applicant should provide further detailed assessment for Site B and Site C to ascertain the environmental acceptability of the proposed development.		For Site C, it has been a bus parking site under existing STT. There is no change for the use under this application.
The applicant should state clearly in all the relevant environmental assessments that no existing / planned residential area / place of worship / educational institution / health care institution within 200m area around the site. The proposed bus depot does not constitute DP under EIAO and Environmental Permit is not required for the project.		Noted.  With reference to OZP, it is revealed that there is no existing / planned residential area, place of worship, educational institution or health care institution within 200m area from the boundary of Project Site.
<b>Air Quality Impact Assessment (AQIA)</b>		
1.	Section 3.1.3. Please elaborate on the minor vehicle repair or testing activities to be carried out within the bus depot.	The minor vehicle repair or testing activities include tyre changing or charging, parts replacement, motor testing, battery charging and braking test for eBus only.
2.	Table 4.1 and Section 4.1.1. Please note that the new AQOs will take effect on 1.1.2022 and the air quality assessment may need to make reference to the new AQOS.	It is understood that the Review on Air Quality Objectives (AQOs) was recently completed by the EPD, with the latest AQOs for Hong Kong set to take effect on the 1 January 2022. In view of this, the upcoming AQOs have been adopted for the AQIA.
3.	Table 4.2. According to Table 3.1 of Chapter 9 of the HKPSG, the buffer distance between chimney and active open space shall be 10-200m. Please refer to Table 3.1 (rather than Table 1. 3) of Chapter 9 of the HKPSG for the buffer distance between chimney and active open space.	Please be clarified that fresh air intake location for sensitive uses (i.e. office) will be located far away from the buffer zones. Thus, no adverse air quality impact on the Proposed Development is anticipated during operation phase.

Comments		Response
4.	Table 5.1. Please provide separation distance between ASRs and the project site boundary for the evaluation of the construction dust impact. Please also clarify the proposed project shall also be considered as an ASR and added in the table.	<p>The approximate separation distance between Air Sensitive Receivers (ASRs) and the boundary of Project Site are presented in the Table 1 in Annex 1.1.</p> <p>Please be clarified that no air sensitive use will be present at Site B and Site C of the Project Site. Sensitive use within Site A of the Project Site, i.e. office, will not rely on natural ventilation from openable windows, but instead MVAC for ventilation. Air sensitive use is only present in Site A.</p>
5.	Section 6. Please provide some details about the construction activities which may induce potential air quality impacts.	<p>In the construction phase, various activities of the Proposed Development would generate fugitive dust which may have potential impacts on the surrounding ASRs. The activities in the construction phase listed in Annex 1.2 would have potential impact to the surrounding ASRs.</p> <p>Although the abovementioned activities would generate fugitive dust during the construction phase, the surrounding ASRs would not be subject to the adverse dust impact when the following mitigation measures under the Regulations (mentioned in Annex 1.2) are implemented to this Project.</p> <p>With the implementation of good site practices and sufficient dust suppression measures as stipulated under the Air Pollution Control (Construction Dust) Regulation shown in Annex 1.2, significant dust generated from the construction of the Proposed Development is not anticipated. Hence, adverse dust impact during the construction phase would not be anticipated.</p>
6.	Section 7.2 and Figure 7. 1A. Please evaluate the vehicular emission impact from the Tuen Mun Chek Lap Kok Tunnel Road and the Lung Mun Road to the subject site, especially site B and site C.	<p>With reference to the assessment area for the Proposed Development, it is noted that a section of the TMCLK slip road to Tuen Mun South Road network takes the form of a single carriageway tunnel. In view of this, the air quality impact arises from vehicular emission from tunnel portal on the Proposed Development is also assessed. For conservative approach, the recommended minimum buffer distance from the nearby roads to minimise potential adverse air quality impact due to open-road vehicular emissions for PD under HKPSG (i.e. 20m of buffer distance) is adopted for TMCLK slip road.</p> <p><u>Vehicular Emissions from Tunnel Portal</u></p> <p>According to Section 3.2.3.7 of the AEIAR-146/2009, the northbound traffic from TMCLK uses the northbound slip road (TMCLK slip road) to enter the Tuen Mun South Road network. The slip road takes the form of a single carriageway tunnel. With reference to Section 7.2.1, TMCLK is classified as a PD. Since the slip road connects the TMCLK with Tuen Mun South Road network, the TMCLK slip road is also classified as a PD.</p> <p>For conservative approach, the recommended minimum buffer distance from the nearby roads to minimise potential adverse air quality impact due to open-road vehicular emissions for PD under HKPSG is adopted for TMCLK slip road. The recommended minimum buffer distance for TMCLK have been adopted as summarised in Annex 1.3.</p> <p>The air sensitive use at the Project Site is the office at Site A. No air sensitive uses are present at Site B nor Site C of the Project Site. Sensitive use, i.e. office, will not rely on natural ventilation from openable windows, but instead MVAC for ventilation. With careful planning, fresh air intake location for sensitive uses will be located away from the buffer zones. With the implementation of the mitigation measures above, no adverse air quality impact on the Proposed Development is anticipated during operation phase.</p>



Comments		Response
7.	Section 7.3. We would like to remind the applicant that it should be the responsibility of the applicant and their consultants to ensure the validity of the chimney data by their own site surveys. Should the information of industrial chimneys be subsequently found to be incorrect, the assessment result as presented in the planning application would be invalidated.	Noted.
8.	Figure 3. 1. Please clarify the use of Site B and Site C and if they are covered by this proposed project. If yes, please review and confirm any Air Sensitive Use and potential air quality impacts arising from Site B and Site C and assess their air quality impacts.	Site B comprise of a 2-storey substation building for the power supply for depot building in Site A and Site C. Site C comprise of charging-enabling bus parking bays. It is used for parking only.  In view of the usage at Site B (substation with no industrial emission) and Site C (i.e. parking of eBus with no vehicular emission), no air emission is expected. It is confirmed that no bus maintenance works will be carried out in Site B and Site C. As such potential air quality impacts arising from Site A-C is not expected."
9.	Figure 7. 1A. A portion of site A within 200 m of the Flare at Siu Lang Shui Landfill chimney is marked area suitable for fresh air intake. Please check and rectify.	Noted. The figure will be provided later.
<b>Noise Impact Assessment (NIA)</b>		
<b>Technical Comment</b>		
1.	S.1.1.1 - Other than Site A, the applicant / consultant should address the potential noise impact associated with Site B and Site C in the NIA report as well.	Noise assessment has covered Site B and Site C. Site B comprises of a substation while Site C will be used for bus parking only. No office use will be proposed at Site B and Site C. The use of Site B and Site C are not noise sensitive in nature, therefore no NSR is defined at these sites.
2.	S.5.1.3 - We have reservations about this statement. Offices with open window / door for ventilation are considered as potential noise sensitive uses under Appendix 4.1 of Chapter 9 of the HKPSG. Noted from the planning application that potential noise sensitive uses, e. g. ancillary office, have been proposed under the project, the applicant / consultant is required to revisit their findings and assess the potential noise impact on any identified noise sensitive receivers of the proposed development in the NIA report.	As confirmed by the operator, the ancillary office at Site A will be served with MVAC system and will not rely on openable windows for ventilation purpose. Thus, the office itself is not regarded as an NSR. Noise impact on the proposed development is not envisaged. As mentioned, Site B comprises of a substation while Site C will be used for bus parking only. No office use will be proposed at Site B and Site C. The use of Site B and Site C are not noise sensitive in nature, therefore no NSR is defined at these sites.
3.	S.6.1.1- We are concerned about the potential noise impact on the NSRs (e.g. residential developments) along the access roads (e.g. Lung Fu Road and Lung Mun Road) from buses traveling to and from the depot at midnight and in early morning. The problem may be more severe if there will be buses queuing near the NSRS. The applicant / consultant is therefore required to assess the potential noise impact from the traveling / queuing buses and propose measures to minimize the impact if necessary.	Although proposed bus routing will travel through Lung Fu Road and Lung Mun Road, eBus is fully powered by electricity and no engine is required, so its operation is quiet in nature. Moreover, queuing issue is not anticipated based on result of Traffic Impact Assessment (TIA), noise impact on NSRs along access roads is not envisaged.
<b>Textual and Presentation Comment (NIA)</b>		
4.	S.4.1.1 and S.4.2.2- "Environmental" should read as "Environment".	Noted.
5.	S.5.1.2-The consultant should clearly state whether there are any existing, committed or planned sensitive receivers on any Development Permission Area Plans, Outline Development Plans, Layout Plans and other relevant published and uses plan by Lands Department or Planning Department in the vicinity of the project.	With reference to OZP, it is revealed that there is no existing / planned residential area, place of worship, educational institution or health care institution within 200m area from the boundary of Project Site.



Comments		Response
<b>Landfill Gas Hazard Assessment (LFGHA)</b>		
<b>General Comments (LFGHA)</b>		
1.	<p>It is noted that apart from the multi-storey (11-storey) bus depot, a 2-storey power substation and charging-enabling bus parking bays are also proposed in the project. All of these proposed developments fall within the 250 m consultation zone. In accordance with the Guidance Note, the LFGHA is required for any development which is proposed within a 250m consultation zone. However, as mentioned in Section 1.1.2, this LFGHA seems only focus on the proposed depot at Site A. Please clarify.</p> <p>If the intention of this report is prepared for the proposed development for both Site A, B and C. The LFGHA should not only focus on the evaluation of the risk which landfill gas may pose to proposed bus depot at site A. but also for the proposed 2-storey power substation at Site B and charging enabling bus parking bays at site C. Therefore, all proposed development at Site A, Site B and site C should be discussed in Section 2. 3.</p>	Please be clarified that only Site A and Site B fall within the 250m Consultation Zone of Pillar Point Valley Landfill (PPVL) while Site C is outside the 250m Consultation Zone. The LFGH risk level of Site A and B during construction and operation phase have been identified. Please refer to comment #18.
2.	It is noted that the proposed multi-storey bus depot at Site A have encroached into the boundary of Pillar Point Valley Landfill (PPVL). Please advise, with justifications, if any structures / excavation works would disturb any elements of the landfill gas management system, such as the capping system.	Site A and Site B are not encroached into the boundary of PPVL. It is confirmed that structures / excavation works at Site A and Site B would not disturb any elements of the landfill gas management system, such as the capping system
3.	Suggest replacing "Subject Site" by "Project Sites" and the "Project Sites" shall include "Site A", "Site B" and "Site C".	Noted.
4.	Suggest replacing "Pillar Point Valley (PPV) Landfill" by "Pillar Point Valley Landfill (PPVL)".	Noted.
5.	Please be reminded that the potential targets and the risk due to LFG migration with the Project should be reviewed with the detailed design of proposed development during design stage. If a major change in the risk categories of the proposed development are found, the LFGHA should be amended accordingly.	Noted. Detailed LFGHA shall be conducted with the detailed design of the proposed development during detailed design stage to review the potential targets and the risk due to the LFG migration with the Project. Design of the protection measures, requirement for maintenance and monitoring shall be proposed and submitted for EPD's approval.
<b>Specific Comments (LFGHA)</b>		
6.	<p>Section 1.1.2</p> <p>(i) Please refer to General Comment #1 and #3.</p>	Please be clarified that only Site A and Site B fall within the 250m Consultation Zone of Pillar Point Valley Landfill (PPVL) while Site C is outside the 250m Consultation Zone. The qualitative risk assessment matrix of Site A and B during construction and operation phase have been identified and shown in Table 3 of Annex 3.
7.	<p>Section 1.2.2</p> <p>(i) Please refer to General Comment #3 and #4.</p>	Noted.
8.	<p>Section 1.2.3</p> <p>(i) The title of ProPECC PN 3/96 should be Landfill Gas Hazard Assessment for Developments Adjacent to Landfills.</p>	Noted.

Comments		Response
9.	Section 2.1 (i) It is noted that this study is conducted with reference to an approved EIA report from another project conducted years ago (Register No: AEIAR-146/2009). Please note that updated landfill gas monitoring data should be used to ensure the authenticity of the assessment.	The updated landfill gas monitoring data (Feb 2020 – Feb 2021) upon the preparation of this report has been provided in previous submission.  As verbally discussed with EPD specialist, the monitoring data for the abovementioned period is considered sufficient for this study.
10.	Section 2.2 (i) Please refer to General Comment #4 for the sub-heading.	Noted.
11.	Section 2.2.1 (i) Please delete “As stated in the TMCLK EIA”. (ii) Suggest amending “33. 79 ha landfill” as “65 ha landfill”. (iii) Suggest amending “14 years” as “15 years”.	Noted.
12.	Section 2.3.1 (i) Suggest amending as “the risk to the development due to LFG should be evaluated...”	Noted.
13.	Section 2.3.2 (i) Please amend as “LFG monitoring has been <u>carried</u> out since the completion of the restoration works.”	Noted.
14.	Section 2.3.3 (i) Please replace “the recent LFG monitoring” by “the findings”. (ii) Please replace “the data” by “the findings”.	Noted.
15.	Section 2.3.4 (i) It is noted that the LFG source was categorized as “Medium” with reference to an approved EIA report from another project conducted years ago (Register No. : AEIAE-146/2009). Please note that updated landfill gas monitoring data should be used to ensure the authenticity of the assessment.	The updated landfill gas monitoring data (Feb 2020 – Feb 2021) upon the preparation of this report has been provided in previous submission and shown in Table 1 of Annex 2.  With reference to the corresponding data from TMCLKL EIA, the source of PPLV was classified as Medium. Table 2 of Annex 2 shows the comparison between two sets of PPVL landfill gas monitoring data. Considering there is no significant change in average carbon dioxide concentration between TMCLKL EIA and the updated landfill gas monitoring data (Feb 2020 – Feb 2021), the classification of source of PPVL as Medium is still valid.
16.	Section 2. 3. 5-2. 3. 8 (i) Only the proposed bus depot at Site A has been discussed in the “Pathway” section. Please refer to General Comment (1). (ii) It is noted that the LFG source was categorized as “Medium” with reference to an approved EIA report from another project conducted years ago (Register No. : AEIAE-146/2009). Please note that updated landfill gas monitoring data should be used to ensure the authenticity of the assessment.	(i) Pathway of Site B are identified below.  According to the geological map, the geology of the Site A and Site B is mainly fine to medium grained granite. Also, photogeological lineament is observed in south west corner of the site near the roundabout, and mineral veins are also observed in east side of the site near the tunnel portal. However, both of these features are only within the consultation zone of the PPVL and do not pass through the landfill.  There is no information of any conduit (man-made or natural feature such as a fault plane) leads

Comments		Response
		<p>directly from the landfill to the Site A and Site B presented at this stage.</p> <p>Based to the TMCLK EIA, the ground water level ranges from +17.6 to +115.7mPD in 2008 and the elevation of the Site A and Site B ranges from approximately 18.9 mPD to 19.5mPD.</p> <p>Site A and Site B are located at approximately 169m and 186m away from the site boundary of the PPVL respectively. Therefore, the Site A and Site B is categorized as <b>Long/indirect.</b>"</p> <p>(ii) The updated landfill gas monitoring data (Feb 2020 – Feb 2021) upon the preparation of this report has been provided in previous submission. Please refer to our reply in Comment #15 for details.</p>
17.	Section 2.3.9, 2.3.10 (i) Please amend as "During construction <u>phase</u> ".	Noted.
18.	Section 2. 3. 13-Table 2 (I) Please amend "Source-Pathway-Target Summary" as "Qualitative Risk Assessment Matrix". You are reminded that there could be multiple targets which possess different risk levels in a single project.	<p>Noted.</p> <p>The multiple targets of Site A and Site B in construction phase and operation phase are shown in Table 2 in Annex 3.</p>
19.	Section 2. 3. 14-Table 3 (i) Please amend "Qualitative Risk" as "Level of Risk" and provide the relevant category, implication for each targets with reference to Table 4. 1 of the "Landfill Gas Hazard Assessment Guidance Note".	<p>Noted.</p> <p>The level of risk, relevant category and implication for each target are presented in Table 4 in Annex 2.</p>
20.	Section 2. 4 (i) Please provide protection measures based on this qualitative LFGHA for the proposed development during construction and operational phase. Please be reminded that during the detailed design stage of the proposed development, a more detailed assessment including the design of the protection measures, requirement for maintenance and monitoring should be provided by the detailed design consultant and submitted for EPD's agreement. The potential risk due to LFG migration and monitoring programme and contingency plan should be reviewed and updated where necessary during the evolvement of the design.	<p>Protection measures during the construction and operational phases are provided in Table 4 in Annex 2.</p> <p>Detailed LFGHA shall be conducted with the detailed design of the proposed development during detailed design stage to review the potential targets and the risk due to the LFG migration with the Project. Design of the protection measures, requirement for maintenance and monitoring shall be proposed and submitted for EPD's approval.</p>
21.	Figure 1 (i) Suggest replacing "Subject Site" by "Project Sites" for the notes and state clearly that the "Project Sites" comprises of "Site A", "Site B" and "Site C".	Noted.
22.	Figure 2 (i) Suggest replacing "Subject Site" by "Project Sites" and state clearly that the "Project Sites" comprises of "Site A", "Site B" and "Site C".	Noted.
23.	Appendix A (i) Please provide the drawing details, e. g. drawing title, drawing no., revision. for the location plan for landfill gas monitoring points of PPVL. <del>Window / door for ventilation will be provided in the proposed development. Our previous comment still stand if affirmative.</del>	Noted.

Comments		Response
	[According to the tele-conversation with the EPD LFG specialist on 19 Aug, the sentence "Window / door for ventilation will be provided in the proposed development. Our previous comment still stand if affirmative." is irrelevant and should be deleted.]	
<b>Land Contamination Assessment</b>		
1.	Section 1.1.2: As the planning application covered all three sites, please clarify whether the land contamination assessment of Sites B and C would be covered in other submissions or not.	Noted. The land contamination assessment has been covered all three sites. Based on the desktop review and site visit, no land contamination issue at all three sites is expected.
2.	Section 3.3.2: Please provide the relevant aerial photos showing the open storage area and review whether there is any potential land contamination issue due to the past land use as an open storage area.	According to Table 13.2 of TMCLKL EIA, no apparent pollution sources were identified in the immediate vicinity of the Project Sites which has been used for open storage in the past, thus potential land contamination issue due to the past land use as an open storage area is not expected. The aerial photos available from the LandsD and the land use summary are shown in Annex 3.1.  Also, site visit was conducted on 30 April 2021, the entire Project Sites are paved with good condition. No sign of obvious/ suspected contamination was identified. It is believed that land contamination issue with the Project Sites is not expected. Please refer to Annex 3.2 for the photo record of site inspection.
3.	Section 3.4: Please follow up with the outstanding replies.	Noted. All outstanding replies were received.
4.	Section 4.1.2: Please clarify which section of the approved TMCLKL ELA report is referring to.	According to the aerial photos available from the LandsD, Site A was used for open storage since 1994. Section 13.4.2.4 and Table 13.2 of TMCLKL EIA also stated that Site A was used for open storage since 2004. Site A was then converted to the toll plaza of TMCLKL in 2013.
<b>Comments from Commissioner of Police (Received on 13 August 2021) (Contact Person: Mr. TAM Tsz-wai, Alan, Tel: 3661 5708)</b>		
He has no comment on the application.		Noted.
<b>Comments from Director of Food and Environmental Hygiene (Received on 13 August 2021) (Contact Person: Ms. Sandy CHAN, Tel: 3141 1232)</b>		
If the proposal involves any commercial / trading activities, its state should not as to be a nuisance or injurious or dangerous to health and surrounding environment. Also, for any waste generated from the commercial / trading activities, the applicant should handle on their own / at their expenses.		Noted.
<b>Comments from Project Manager (West), Civil Engineering and Development Department (Received on 13 August 2021) (Contact Person: Ms. Jackie CHENG, Tel: 2158 5639)</b>		

Comments	Response
He has no comment on the application.	Noted.
<b>Comments from Director of Agriculture, Fisheries and Conservation (Received on 13 August 2021) (Contact Person: Ms Scarlet CHENG; 2150 6934)</b>	
According to the Geospatial Information Hub (GIH) of the Lands Department, the subject sites are paved and are located within disturbed and developed areas. No vegetation is present within all sites. I have no comment on the subject application from nature conservative perspective.	Noted.
<b>Comments from Chief Town Planner/Urban Design and Landscape, Planning Department (Received on 19 August 2021) Landscape Section (Contact Person: Mr. Eric WONG; 2231 4747)</b>	
According to the aerial photo of 2020, the site is located in an area of miscellaneous urban fringe landscape character, dominated by infrastructure. The site is currently hard paved and no existing tree is observed within the site. The proposed development is considered not incompatible with the surrounding environment.	Noted.
With reference to the Planning Statement, the application site comprises 3 portions, namely Site A, B and C. The applicant proposes to build a multi-storey permanent depot at Site A, while Site B will be used for a 2 storey power substation and Site C is situated on top of elevated highway structures. In view that significant adverse landscape impact arising from the proposed development is not anticipated, we have <u>no objection</u> to the application from landscape planning perspective.	Noted.
<p>Please note below our comments on the submission from landscape planning perspective:</p> <p>(a) Discrepancies were found on the locations of the proposed planting areas between the paragraph 3.2.4 of the Landscape Proposal and 1/F Landscape Plan (drawing no. LP-02). Please clarify.</p> <p>(b) The applicant should clarify how horticultural maintenance works for the proposed vertical green wall on building façade at 1/F can be carried out. The applicant is reminded of the long-term commitment in providing proper maintenance to the vertical green wall for healthy and sustainable plant growth.</p> <p>(c) The applicant should provide details and blowup sections for the proposed planters and vertical green wall so as to demonstrate the viability of the landscape proposal.</p>	<p>(a) Please be clarified that paragraph 3.2.4 should be: "Additional planting opportunities are also proposed at two locations on <b>1/F</b> next to the access ramp. These 2 planters are proposed to receive combination of large shrubs and ground cover planting."</p> <p>(b) KMB will appoint the vertical green wall supplier to provide horticultural maintenance works for the proposed vertical green wall on building façade at 1/F.</p> <p>(c) Architectural sections of the proposed vertical green wall (that shows the proposed VG is feasible on the façade of the building) will be provided.</p>
<b>Comments from Head of the Geotechnical Engineering Office, Civil Engineering and Development Department (Received on 19 August 2021) (Contact Person: Mr. WONG Chun Fai, Jeffrey; 2762 5400)</b>	
The applicant should submit all geotechnical submissions regarding the proposed development to the Buildings Department for approval according to the Buildings Ordinance.	Noted.

Comments		Response
<b>Comments from Director of Electrical and Mechanical Services Department (Received on 19 August 2021)</b> <b>(Contact Person: Mr. SIU Hiu-fai, Stanley; 3757 6231)</b>		
He has no particular comment on the application from electricity supply safety aspect at this stage. However, in the interests of public safety and ensuring the continuity of electricity supply, the parties concerned with planning, designing, organizing, supervising and conducting any activity near the underground cable or overhead line under the mentioned application should approach the electricity supplier (i.e. CLP Power) for the requisition of cable plans (and overhead line alignment drawings, where applicable) to find out whether there is any underground cable and/or overhead line within and/or in the vicinity of the concerned site. They should also be reminded to observe the Electricity Supply Lines (Protection) Regulation (the Regulation) and the "Code of Practice on Working near Electricity Supply Lines" established under the Regulation when carrying out works in the vicinity of the electricity supply lines. He has no particular comment on the application as far as electricity supply safety is concerned.		Noted
<b>Comments from Chief Town Planner/Studies and Research 1, Planning Department (Received on 19 August 2021)</b> <b>(Contact Person: Mr. AU Ho Cheong, Henry; 2231 4688)</b>		
His comments/observations from the perspective of the proposed "Planning and Engineering Study for Lung Kwu Tan Reclamation and the Re-planning of Tuen Mun West Area" (the proposed P&E Study) are as follows.		-
1	The application site falls within the Study Area of the proposed P&E Study. The Applicant should refer to the attached extract plan for our Study Area boundary and the PWSC Paper – PWSC (2019-20)26 for the latest project plan ( <a href="https://www.legco.gov.hk/yr19-20/english/fc/pwsc/papers/p19-26e.pdf">https://www.legco.gov.hk/yr19-20/english/fc/pwsc/papers/p19-26e.pdf</a> ).	Noted.
2	According to the Planning Statement, the Applicant has proposed a permanent bus depot of 11-storey (at about 82.5m) under 24-hour operation at Site A and an open-air bus parking area at Site C. It is understood that a total of about 406 charging-enabling bus parking bays and 81 maintenance bays would be provided at Sites A and C.	Noted.
3	As mentioned in the 2020 Policy Address, uses in Tuen Mun West Area is to be reviewed under the proposed Planning and Engineering Study with "a view to increasing the potential of the Tuen Mun West area for residential development and/or other more beneficial uses". As such, under the preliminary concept of the proposed P&E Study, the areas to the immediate west of Site A and south of Site C in Tuen Mun Areas 40 and 46 are identified as potential development sites for housing developments and/or other beneficial uses. The Applicant's proposal, especially the bus depot at Site A, would impose constraints on our future use and design of these development sites in close proximity of the Application Site. However, potential impacts have not been taken into account in the current application. As stated in the Planning Statement, no planned residential development, educational institutions and other sensitive uses have been assumed in all technical assessments including Noise Impact Assessment, Air Quality Impact Assessment, Landscape and Visual Impact Assessment (LVIA) and Air Ventilation Assessment.	Noted. The landscape design will be reviewed subject to the completion of the Planning and Engineering Study on Tuen Mun West area.  According to landscape proposal in the previous submission, landscape features had been incorporated in the design (e.g. vertical greenery and planters).



Comments		Response
4	In view of the above, the Applicant is requested to acknowledge these potential uses and address whether there would be any potential impacts on the identified development sites in Tuen Mun West area under the proposed P&E Study including noise, air, landscape and visual, and air ventilation. Relevant mitigation measures at source, e.g. vertical greening, roof top greening (as covers over bus parking spaces), façade design, etc., should be considered appropriately.	The applicant acknowledged the potential uses in Tuen Mun West Area. However, the proposed Planning and Engineering Study has not commenced yet and there is no detailed information on the initial land uses within Tuen Mun West Area during the preparation of this environmental assessment.
5	According to the LVIA, the Landscape Master Plan only covers Site A. The Applicant should provide landscape proposals and boundary landscape treatments for Sites B and C as well, especially that high-rise residential developments could be recommended in the area south of Site C under the proposed P&E Study.	Noted. Landscape Master Plan of Site A to C will be provided later.
<b>Comments from District Lands Officer, Lands Department (Received on 24 August 2021) (Contact Person: Miss Wai Ming CHAN; 2451 3182)</b>		
(i)	The application site which comprises 3 pieces of Government land is annotated as "Site A", "Site B" and "Site C" in the application. The site is held under a short term tenancy (STT) for a temporary bus depot subject to, among others, the following restrictions:  (a) The total built-over area and height of structures erected shall not exceed 2,000m2 and 8 m respectively, and (b) No structures or building shall be erected within portions of Site A and Site B and the whole of Site C.	Noted. KMB would simply develop the sites to a temporary open air parking area in 2H of 2021 under existing short term tenancy. To optimize the land resource, KMB with support of Transport Department proposes to build a multi-storey permanent depot at Site A. Once the approval is granted, KMB will apply for a fresh land document for the proposed bus depot development.
(ii)	It is noted that the anticipated completion of the proposed development is in year 2025 while the term of the tenancy is up to July 2026 only and renewal of the tenancy is not permitted under the existing conditions.	
(iii)	The proposal does not comply with the terms and conditions of the tenancy. Should the application be approved by the Town Planning Board, KMB is required to obtain policy support from the relevant policy bureau and apply for a fresh land document for the proposed bus depot development. However, there is no guarantee that their application will be approved and I hereby reserve my right to take appropriate action should any breach of tenancy conditions be found. The said application will be considered by the Lands Department acting in the capacity as the landlord at its sole discretion. In the event that the said application is approved, it would be subject to such terms and conditions as the Government shall deem fit to do so, including, among others, charging of rent and administrative fee. Upon approval and commencement of the new land document, the existing STTMM0003 will be terminated in the relevant time.	

Comments		Response
<b>Comments from Senior Engineer, Highways Department (Received on 24 August 2021)</b> <b>(Contact Person: Mr. WONG Chi Yuen, Sammy; 3526 0036)</b>		
He has the following comments from highways maintenance point of view:		-
1.	From our understanding, some HyD assets such as drainage pipes, manholes, utility ducts, drawpits, movement joints, isolation joints, etc are located within Site A, B and C (the Site). KMB shall allow HyD staff and the contractors whom employed by HyD to enter the Site to carry out inspections and maintenance works.	Noted.
2.	KMB shall not erect any structures on top of the HyD assets. KMB shall remove any materials/ objects/ covers/ vehicles on top of the HyD assets when requested by HyD.	Noted.
3.	KMB is not allowed to excavate where above HyD's structures. Unless when carrying out repairing works to the pavement in the Premises with prior agreement by HyD, and the excavation depth shall not exceed the existing pavement depth.	Noted.
4.	KMB shall be responsible for general cleaning of the isolation joint in Site C.	Noted.
5.	KMB should protect the highway structure within or adjacent to the Site.	Noted.
6.	Drainage reserve and protection for the drainage maintained by HyD should be provided within the Site.	Noted.
7.	According to DWG. No: EL04, it shows that the vertical clearance between the existing footbridge adjacent to the proposed 132kV substation is 1000mm only. Please clarify that clearance is up to the top of the roof parapet or the roof floor to check whether there are sufficient working space. Minimum 2000mm clearance should be provided around the existing footbridge for normal maintenance works.	Noted.
8.	Please be reminded that metal louvers/ windows etc. for the 132kV substation should not be constructed right under the footbridge, such that the footbridge will not be seriously affected/ damaged in case of fire. The south-east elevation of the substation should be submitted for our review and comment.	Noted.
9.	The proposed access arrangement of the application site should be commented and approved by TD.	Noted.
10.	The applicant should design and construct the run in/out of the application site to the satisfaction of TD and HyD in accordance with the latest version of Highways Standard Drawing to match with the existing adjacent pavement at their own cost. Please be reminded that public concerns were received regarding the induced traffic flow from the Site may cause damages to the nearby road network. The applicant should review the design of the run in/out	Noted.

Comments		Response
	of the site and ensure that the design will be capable to withstand the induced traffic flow. Any defects or complaints related to the run in/ out should be handled by the applicant with the agreement from HyD at their own cost.	
11.	Adequate drainage measures should be provided to prevent surface water running from the application site to the nearby public roads and drains.	Noted.
<b>Comments from Environmental Protection Department (Received on 26 August 2021)</b> <b>(Contact Person: Ms. Virginia WONG, Tel: 2835 1109)</b> Drainage and Sewage Impact Assessment		
1.	Please clarify if there would be any kind of oil produced during car washing, maintenance and other operations or activities in the depot. If yes, oil interceptor should be installed.	The proposed depot is for electric buses and no engine oil and gearbox oil is required in the electric buses. Only minimal lube oil will be produced during maintenance and waste water treatment plant has been provided under the application.
2.	We could not find the existing 225mm sewer between FM1.1 and FM1.12A in our 2021 drainage record. Please verify with Drainage Services Department or other department if the concerned sewer is available.	Please be clarified that the drainage plan attached in Appendix 4.1 was provided by Transport Department.  Based on the site survey conducted on 30 April 2021, the existing 225mm sewers between FM1.1 and FM1.12A and manholes were available on site.  Manholes found on site are tallied with the drainage plan attached in Appendix 4.1.
3.	Please confirm no catering service or canteen in the depot.	Please be confirmed no catering service or canteen in the depot.
4.	"FMH1005385" should read "FSH1005385" in Para 4.1.2.	Noted.
5.	Please clarify if there is any existing and planned discharges to the sewer between FM1.1 and FM1.12A. If yes, please include in the capacity check.	Based on the best available information during the time of preparation, no planned development is identified based on any Development Permission Area Plans, Outline Development Plans, Layout Plans and other relevant published and uses plan by Lands Department or Planning Department in the vicinity of the project. Therefore, please be clarified that there will be no existing and planned discharges to the newly constructed sewer between FM1.1 and FM1.12A.

Comments		Response
Comments from Secretary for the Environment (Received on 13 August 2021) (Contact Person: Mr. Nelson IP, Tel: 2594 6460)		
We confirm that the Environment Bureau and the Environmental Protection Department are in principle in support of KMB's proposal which is an important infrastructure for supporting the electrification of franchised buses. The development of charging infrastructure is pivotal for achieving Government's ultimate goal that all franchised buses are new energy vehicles including electric vehicles in the future. KMB's proposed bus depot at the above site, which is for providing near 400 charging-enabling bus parking bays for supporting the charging needs of the expanding electric bus fleet, is in line with Government's vision of "Zero Carbon Emissions · Clean Air · Smart City" set out in the Hong Kong Roadmap on Popularisation of Electric Vehicles announced by the Government in March 2021.		Thanks for support of the proposed bus depot development for electric buses.
Comments from Environmental Protection Department (Received on 13 August 2021) (Contact Person: Ms. Virginia WONG, Tel: 2835 1109)		
The application site falls within areas shown as "Road" on the approved Tuen Mun OZP No. S/TM/35. The proposed developments include (i) a multi-storey permanent depot (Site A); (ii) a 2 storey power substation (Site B) and (iii) charging-enabling bus parking bays (Site C) at the Free-up Area of Tuen Mun – Chek Lap Kok Link.		Noted.
No assessment was made on the proposed 2 storey power substation (Site B) and the charging-enabling bus parking bays (Site C). The applicant / consultant should assess the potential impacts associated with Site B and Site C as well.		Noted. Potential environmental impacts associated with Site B and Site C are included and evaluated in the revised reports.
The applicant should provide further detailed assessment for Site B and Site C to ascertain the environmental acceptability of the proposed development.		
The applicant should state clearly in all the relevant environmental assessments that no existing / planned residential area / place of worship / educational institution / health care institution within 200m area around the site. The proposed bus depot does not constitute DP under EIAO and Environmental Permit is not required for the project.		Noted.  With reference to the Development Permission Area Plans, Outline Development Plans, Layout Plans and other relevant published land uses plan by Lands Department or Planning Department, neither residential area, place of worship, educational institution, nor health care institution is identified or will be planned within 200m from Project Site boundary. The proposed bus depot does not constitute DP under EIAO and EP is not required. A Chapter of "EIA Ordinance Implications" is supplemented in all environmental assessments.  The abovementioned information is state clearly in all the relevant environmental assessments report.
Air Quality Impact Assessment (AQIA)		
1.	Section 3.1.3. Please elaborate on the minor vehicle repair or testing activities to be carried out within the bus depot.	The minor vehicle repair or testing activities include tyre changing or charging, parts replacement, motor testing, battery charging and braking test for eBus only. Section 3.1.5 is revised accordingly.

Comments		Response
2.	Table 4.1 and Section 4.1.1. Please note that the new AQOs will take effect on 1.1.2022 and the air quality assessment may need to make reference to the new AQOS.	It is understood that the Review on Air Quality Objectives (AQOs) was recently completed by the EPD, with the latest AQOs for Hong Kong set to take effect on the 1 January 2022. In view of this, the upcoming AQOs have been adopted for the AQIA. Section 5.1.1 and Table 5-1 are revised accordingly.
3.	Table 4.2. According to Table 3.1 of Chapter 9 of the HKPSG, the buffer distance between chimney and active open space shall be 10-200m. Please refer to Table 3.1 (rather than Table 1. 3) of Chapter 9 of the HKPSG for the buffer distance between chimney and active open space.	Table 5.2 (previous 4.2) is updated accordingly to indicate the buffer distance of 10-200m between chimney and active open space with reference to Table 3.1 of Ch9 of the HKPSG.
4.	Table 5.1. Please provide separation distance between ASRs and the project site boundary for the evaluation of the construction dust impact. Please also clarify the proposed project shall also be considered as an ASR and added in the table.	The approximate separation distance between Air Sensitive Receivers (ASRs) and the boundary of Project Site are presented in the Table 6.1.  Please be clarified that no air sensitive use will be present at Site B and Site C of the Project Site. Sensitive use within Site A of the Project Site, i.e. office, will not rely on natural ventilation from openable windows, but instead MVAC for ventilation. Air sensitive use is only present in Site A.
5.	Section 6. Please provide some details about the construction activities which may induce potential air quality impacts.	Section 7: In the construction phase, various activities of the Proposed Development would generate fugitive dust which may have potential impacts on the surrounding ASRs. The activities in the construction phase listed in Section 7.1 would have potential impact to the surrounding ASRs. In view of this, and with reference to the Air Pollution Control (Construction Dust) Regulation, good site practices and a number of other dust suppression measures will be implemented during the construction phase of the Proposed Development. With implementation of adequate good site practice and dust suppression measures, adverse air quality impact arises from the Proposed Development during construction phase is not anticipated. Section 7 is revised accordingly
6.	Section 7.2 and Figure 7. 1A. Please evaluate the vehicular emission impact from the Tuen Mun Chek Lap Kok Tunnel Road and the Lung Mun Road to the subject site, especially site B and site C.	With reference to the assessment area for the Proposed Development, it is noted that a section of the TMCLK slip road to Tuen Mun South Road network takes the form of a single carriageway tunnel. In view of this, the air quality impact arises from vehicular emission from tunnel portal on the Proposed Development is also assessed. For conservative approach, the recommended minimum buffer distance from the nearby roads to minimise potential adverse air quality impact due to open-road vehicular emissions for PD under HKPSG (i.e. 20m of buffer distance) is adopted for TMCLK slip road.  <u>Vehicular Emissions from Tunnel Portal</u> According to Section 3.2.3.7 of the AEIAR-146/2009, the northbound traffic from TMCLK uses the northbound slip road (TMCLK slip road) to enter the Tuen Mun South Road network. The slip road takes the form of a single carriageway tunnel. With reference to Section 7.2.1, TMCLK is classified as a PD. Since the slip road connects the TMCLK with Tuen Mun South Road network, the TMCLK slip road is also classified as a PD.  For conservative approach, the recommended minimum buffer distance from the nearby roads to minimise potential adverse air quality impact due to open-road vehicular emissions for PD under HKPSG is adopted for TMCLK slip road. The recommended minimum buffer distance for TMCLK have been adopted as summarised in Table 8.1.

Comments		Response
		The air sensitive use at the Project Site is the office at Site A. No air sensitive uses are present at Site B nor Site C of the Project Site. Sensitive use, i.e. office, will not rely on natural ventilation from openable windows, but instead MVAC for ventilation. With careful planning, fresh air intake location for sensitive uses will be located away from the buffer zones. With the implementation of the mitigation measures above, no adverse air quality impact on the Proposed Development is anticipated during operation phase.
7.	Section 7.3. We would like to remind the applicant that it should be the responsibility of the applicant and their consultants to ensure the validity of the chimney data by their own site surveys. Should the information of industrial chimneys be subsequently found to be incorrect, the assessment result as presented in the planning application would be invalidated.	Noted.
8.	Figure 3. 1. Please clarify the use of Site B and Site C and if they are covered by this proposed project. If yes, please review and confirm any Air Sensitive Use and potential air quality impacts arising from Site B and Site C and assess their air quality impacts.	<p>Site B comprise of a 2-storey substation building for the power supply for depot building in Site A and Site C. Site C comprise of charging-enabling bus parking bays. It is used for parking only.</p> <p>In view of the usage at Site B (substation with no industrial emission) and Site C (i.e. parking of eBus with no vehicular emission), no air emission is expected. It is confirmed that no bus maintenance works will be carried out in Site B and Site C. As such potential air quality impacts arising from Site A-C is not expected."</p> <p>The air quality impact assessment on the Proposed Development (including Site A, Site B and Site C) arise from vehicle emission from open road and industrial emission from chimneys are provided in Section 7.2 and Section 7.3 accordingly.</p>
9.	Figure 7. 1A. A portion of site A within 200 m of the Flare at Siu Lang Shui Landfill chimney is marked area suitable for fresh air intake. Please check and rectify.	Figure 8-1A (previous Figure 7.1A) is updated accordingly.
<b>Noise Impact Assessment (NIA)</b> <b>Technical Comment</b>		
1.	S.1.1.1 - Other than Site A, the applicant / consultant should address the potential noise impact associated with Site B and Site C in the NIA report as well.	Noted. Noise assessment has been revised to cover Site B and Site C. Site B comprises of a substation while Site C will be used for bus parking only. No office use will be proposed at Site B and Site C. The use of Site B and Site C are not noise sensitive in nature, therefore no NSR is identified at these sites. No planned NSRs are identified in the vicinity based on best available information. Adverse noise impact from Site A and Site C is not expected.
2.	S.5.1.3 - We have reservations about this statement. Offices with open window / door for ventilation are considered as potential noise sensitive uses under Appendix 4.1 of Chapter 9 of the HKPSG. Noted from the planning application that potential noise sensitive uses, e. g. ancillary office, have been proposed under the project, the applicant / consultant is required to revisit their findings and assess the potential noise impact on any identified noise sensitive receivers of the proposed development in the NIA report.	As confirmed by the operator, the ancillary office at Site A will be served with MVAC system and will not rely on openable windows for ventilation purpose. Thus, the office itself is not regarded as a representative NSR. Noise impact on the Site A is not envisaged. As mentioned, Site B comprises of a substation while Site C will be used for bus parking only. No office use and other sensitive uses will be proposed at Site B and Site C. The use of Site B and Site C are not noise sensitive in nature, therefore no NSR is defined at these sites.
3.	S.6.1.1- We are concerned about the potential noise impact on the NSRs (e.g. residential developments) along the access roads (e.g. Lung Fu Road and Lung Mun Road) from buses traveling to and from the depot at midnight and in early morning. The problem may be more	As shown in Appendix 3-3, although proposed bus routing will travel through Lung Fu Road and Lung Mun Road, eBus is fully powered by electricity and no engine is required, so its operation is quiet in nature, engine noise is not expected.



Comments		Response
	severe if there will be buses queuing near the NSRS. The applicant / consultant is therefore required to assess the potential noise impact from the traveling / queuing buses and propose measures to minimize the impact if necessary.	<p>According to the Traffic Impact Assessment (TIA) under this Planning Application, provision of at least 2 bus queuing space is required, while the available queuing area in Site A can accommodate at least 3 buses which provides adequate spare capacity to handle the peak arrival flows without queuing back to the public road.</p> <p>Besides, the TIA also revealed that the maximum trip generation during operational peak (06:00-07:00) is 134 veh/hr. With reference to Traffic Census 2020, the Annual Average Daily Traffic (AADT) of Lung Fu Road and Lung Mun Road is 16,190 veh/hr and 12,230 veh/hr respectively. The additional traffic flow from the proposed depot during operation peak only contribute around 1% of traffic flow of Lung Mun Road and Lung Fu Road.</p> <p>In view of the sufficient queuing area provided and insignificant increase of traffic flow due to the project, the potential noise impact arising from tyre noise is minimal.</p> <p>Section 7.1.2 to Section 7.1.4 are revised.</p>
<b>Textual and Presentation Comment (NIA)</b>		
4.	S.4.1.1 and S.4.2.2- "Environmental" should read as "Environment".	Noted.
5.	S.5.1.2-The consultant should clearly state whether there are any existing, committed or planned sensitive receivers on any Development Permission Area Plans, Outline Development Plans, Layout Plans and other relevant published and uses plan by Lands Department or Planning Department in the vicinity of the project.	<p>Noted and stated in S6.1.2 (previous S.5.1.2).</p> <p>Please be clarified that no existing, committed or planned sensitive receivers identified within 300m from the Project Sites, with reference to the plans mentioned in this comment.</p> <p>Reply from PlanD is also enclosed in Appendix.</p>
<b>Landfill Gas Hazard Assessment (LFGHA)</b>		
<b>General Comments (LFGHA)</b>		
1.	<p>It is noted that apart from the multi-storey (11-storey) bus depot. a 2-storey power substation and charging-enabling bus parking bays are also proposed in the project. All of these proposed developments fall within the 250 m consultation zone. In accordance with the Guidance Note, the LFGHA is required for any development which is proposed within a 250m consultation zone. However, as mentioned in Section 1.1.2, this LFGHA seems only focus on the proposed depot at Site A. Please clarify.</p> <p>If the intention of this report is prepared for the proposed development for both Site A, B and C. The LFGHA should not only focus on the evaluation of the risk which landfill gas may pose to proposed bus depot at site A. but also for the proposed 2-storcy power substation at Site B and charging enabling bus parking bays at site C. Therefore, all proposed development at Site A. Site B and site C should be discussed in Section 2. 3.</p>	<p>Please be clarified that only Site A and Site B fall within the 250m Consultation Zone of Pillar Point Valley Landfill (PPVL) while Site C is outside the 250m Consultation Zone as shown in Figure 2. The LFGH risk level of Site A and B during construction and operation phase are included in evaluated in the revised report.</p>

Comments		Response
2.	It is noted that the proposed multi-storey bus depot at Site A have encroached into the boundary of Pillar Point Valley Landfill (PPVL). Please advise, with justifications, if any structures / excavation works would disturb any elements of the landfill gas management system, such as the capping system.	As shown the site boundary of PPVL given in Figure 2, Site A and Site B are not encroached into the boundary of PPVL. It is confirmed that structures / excavation works at Site A and Site B would not disturb any elements of the landfill gas management system, such as the capping system
3.	Suggest replacing "Subject Site" by "Project Sites" and the "Project Sites" shall include "Site A", "Site B" and "Site C".	Noted, typo error is rectified.
4.	Suggest replacing "Pillar Point Valley (PPV) Landfill" by "Pillar Point Valley Landfill (PPVL)".	Noted, typo error is rectified.
5.	Please be reminded that the potential targets and the risk due to LFG migration with the Project should be reviewed with the detailed design of proposed development during design stage. If a major change in the risk categories of the proposed development are found, the LFGHA should be amended accordingly.	Noted. S 4.1.4 is revised below.  "Detailed LFG hazard assessment including the design of protection measures, requirement for maintenance and monitoring will be conducted by detailed design consultant according to the prevailing standards and guidelines. Potential targets, risk due to LFG migration with the Project, monitoring programme and contingency plan will be reviewed with the details design of proposed development during the design stage. If a major change in the risk categories of the proposed development are found, the LFG hazard assessment will be updated accordingly."
<b>Specific Comments (LFGHA)</b>		
6.	Section 1.1.2 (ii) Please refer to General Comment #1 and #3.	S1.1.1 (combined former S 1.1.2) is revised as below.  "Allied Environmental Consultants Limited (AEC) was commissioned by the Kowloon Motor Bus Company (1933) Limited (KMB) to conduct Landfill gas (LFG) Hazard Assessment to support of a Section 16 Planning Application for proposed bus depots with ancillary public utility installation (hereafter referred to as the "Proposed Development") of Tuen Mun – Chek Lap Kok Link (TMCLK) Free Up Area (hereafter referred to as the "Project Sites"). The Project Sites comprise of three free up areas, namely Site A, B and C."  Please be clarified that only Site A and Site B fall within the 250m Consultation Zone of Pillar Point Valley Landfill (PPVL) while Site C is outside the 250m Consultation Zone, thus, this LFG hazard assessment will be conducted for the Site A and Site B. S 1.2.1 and S 1.2.2 is revised as below "The Project Sites comprise of three free up areas, namely Site A, B and C with total area of 16,845m2 (Site A: 7,926 m2; Site B: 1,321m2 and Site C: 7,598 m2). KMB is intended to develop the Site A to a 11-storey multi-storey depot for electric buses ("eBus"). Site B will be used for a 2 storey substation while Site C will be used for charging-enabling bus parking bays only. Figure 1 shows the location of the Project Sites and its surrounding." " "The Site A and Site B fall within the 250m Consultation Zone of Pillar Point Valley Landfill (PPVL) while Site C is outside the 250m Consultation Zone, LFG hazard assessment addressing the landfill gas hazards and recommending the mitigation measures will be conducted for the Site A and Site B. Figure 2 shows the location of the Project Sites and the consultation zone of the existing closed PPVL."

Comments		Response
7.	Section 1.2.2 (ii) Please refer to General Comment #3 and #4.	Noted, typo error is rectified. S1.2.2 is revised as below.  "The Site A and Site B fall within the 250m Consultation Zone of Pillar Point Valley Landfill (PPVL) while Site C is outside the 250m Consultation Zone, LFG hazard assessment addressing the landfill gas hazards and recommending the mitigation measures will be conducted for the Site A and Site B. Figure 2 shows the location of the Project Sites and the consultation zone of the existing closed PPVL.
8.	Section 1.2.3 (ii) The title of ProPECC PN 3/96 should be Landfill Gas Hazard Assessment for Developments Adjacent to Landfills.	Noted, typo error in s1.2.4 (former S1.2.3) is rectified.
9.	Section 2.1 (ii) It is noted that this study is conducted with reference to an approved EIA report from another project conducted years ago (Register No: AEIAR-146/2009). Please note that updated landfill gas monitoring data should be used to ensure the authenticity of the assessment.	The updated landfill gas monitoring data (Feb 2020 – Feb 2021) upon the preparation of this report has been provided in Appendix A. S2.3.3 and Table 1 show the analysis and summary of the latest monitoring data.
10.	Section 2.2 (ii) Please refer to General Comment #4 for the sub-heading.	The sub-heading of S3.2 (former S2.2) is revised to "History of PPVL".
11.	Section 2.2.1 (iv) Please delete "As stated in the TMCLK EIA". (v) Suggest amending "33. 79 ha landfill" as "65 ha landfill". (vi) Suggest amending "14 years" as "15 years".	S3.2.1 (former S 2.2.1) is revised.
12.	Section 2.3.1 (ii) Suggest amending as "the risk to the development due to LFG should be evaluated..."	S3.3.1 (former 2.3.1) is revised.
13.	Section 2.3.2 (ii) Please amend as "LFG monitoring has been <u>carried</u> out since the completion of the restoration works."	S3.3.2 (former 2.3.2) is revised.
14.	Section 2.3.3 (iii) Please replace "the recent LFG monitoring" by "the findings". (iv) Please replace "the data" by "the findings".	S3.3.3 (former 2.3.3) is revised.
15.	Section 2.3.4 (ii) It is noted that the LFG source was categorized as "Medium" with reference to an approved EIA report from another project conducted years ago (Register No. : AEIAE-146/2009). Please note that updated landfill gas monitoring data should be used to ensure the authenticity of the assessment.	The updated landfill gas monitoring data (Feb 2020 – Feb 2021) upon the preparation of this report has been provided in Appendix A. S3.3.3 below and Table 1 show the analysis and summary of the latest monitoring data.  "Gas monitoring wells have been installed around the site to monitor the potential landfill gas migration. The updated PPVL landfill gas monitoring data (from February 2020 to February 2021) upon the preparation of this report was obtained from EPD. The findings from February 2020 to February 2021 was shown in Appendix A and summarized in Table 1. From the findings, the range of average methane concentration in all monitoring wells fluctuated between 0.0% to 0.3%. The average carbon dioxide concentration fluctuated between 1.32 to 8.67%v/v. With reference to the corresponding data from the

Comments		Response
		<p>TMCLK EIA, the average carbon dioxide content was around 1.2 to 8.9 %v/v and the source of PPVL was categorized as Medium. Considering there is no significant change in average carbon dioxide concentration between TMCLKL EIA and the updated landfill gas monitoring data (Feb 2020 – Feb 2021), the classification of source of PPVL as Medium is still valid.”</p>
16.	<p>Section 2.3.5-2.3.8</p> <p>(iii) Only the proposed bus depot at Site A has been discussed in the “Pathway” section. Please refer to General Comment (1).</p> <p>(iv) It is noted that the LFG source was categorized as “Medium” with reference to an approved EIA report from another project conducted years ago (Register No. : AEIAE-146/2009). Please note that updated landfill gas monitoring data should be used to ensure the authenticity of the assessment.</p>	<p>(i) Pathway of Site B are identified in S3.3.5 (former S2.3.5) to 3.3.8 (former S2.3.8) and listed below.</p> <p>“According to the geological map shown in <b>Appendix B</b>, the geology of the Site A and Site B is mainly fine to medium grained granite. Also, photogeological lineament is observed in south west corner of the site near the roundabout, and mineral veins are also observed in east side of the site near the tunnel portal. However, both of these features are only within the consultation zone of the PPVL and do not pass through the landfill.</p> <p>There is no information of any conduit (man-made or natural feature such as a fault plane) leads directly from the landfill to the Site A and Site B presented at this stage.</p> <p>Based to the TMCLK EIA, the ground water level ranges from +17.6 to +115.7mPD in 2008 and the elevation of the Site A and Site B ranges from approximately 18.9 mPD to 19.5mPD.</p> <p>Site A and Site B are located at approximately 169m and 186m away from the site boundary of the PPVL respectively. Therefore, the Site A and Site B is categorized as <b>Long/indirect.</b>”</p> <p>(ii) The updated landfill gas monitoring data (Feb 2020 – Feb 2021) upon the preparation of this report has been provided in Appendix A. S3.3.3 below and Table 1 show the analysis and summary of the latest monitoring data.</p> <p>“Gas monitoring wells have been installed around the site to monitor the potential landfill gas migration. The updated PPVL landfill gas monitoring data (from February 2020 to February 2021) upon the preparation of this report was obtained from EPD. The findings from February 2020 to February 2021 was shown in <b>Appendix A</b> and summarized in <i>Table 1</i>. From the findings, the range of average methane concentration in all monitoring wells fluctuated between 0.0% to 0.3%. The average carbon dioxide concentration fluctuated between 1.32 to 8.67%v/v. With reference to the corresponding data from the TMCLK EIA, the average carbon dioxide content was around 1.2 to 8.9 %v/v and the source of PPVL was categorized as Medium. Considering there is no significant change in average carbon dioxide concentration between TMCLKL EIA and the updated landfill gas monitoring data (Feb 2020 – Feb 2021), the classification of source of PPVL as Medium is still valid.”</p>
17.	<p>Section 2.3.9, 2.3.10</p> <p>(ii) Please amend as “During construction <u>phase</u>”.</p>	S3.3.9 (former S2.3.9) and S3.3.10 (former S2.3.10) are revised.

Comments		Response																					
18.	<p>Section 2. 3. 13-Table 2</p> <p>(II) Please amend “Source-Pathway-Target Summary” as “Qualitative Risk Assessment Matrix”. You are reminded that there could be multiple targets which possess different risk levels in a single project.</p>	<p>Title of Table 2 is revised to “Qualitative Risk Assessment Matrix”.</p> <p>Table 2 is revised to show the multiple targets of Site A and Site B in construction phase and operation phase.</p> <table><tr><th>Source</th><th>Pathway</th><th>Targets</th><th>Risk</th></tr><tr><td rowspan="6">Pillar Point Valley Landfill <i>(Medium)</i>  According to the approved TMCLK EIA, the source of PPVL is classified as Medium</td><td colspan="3">During Construction</td></tr><tr><td rowspan="2">Over 100m away from PPVL, no fault/fissure, no man-made conduit <b>(Long / indirect)</b></td><td><u>Site A and Site B</u>  Construction workers, well trained and follow specific safety procedures, mainly outdoor works <b>(Low sensitivity)</b></td><td><b>Very Low</b></td></tr><tr><td><u>Site A and Site B</u>  Well trained site office staff and follow specific safety procedures, indoor environment <b>(Medium Sensitivity)</b></td><td><b>Low</b></td></tr><tr><td colspan="3">During Operation</td></tr><tr><td rowspan="2">Over 100m away from PPVL, no fault/fissure, no man-made conduit <b>(Long / indirect)</b></td><td><u>Site A</u>  Majority of Maintenance workers and supporting staffs worked in outdoor environment (i.e. enclosed depot with vast openings at façades at Site A)  <b>(Low sensitivity)</b></td><td><b>Very Low</b></td></tr><tr><td><u>Site B</u>  Maintenance workers and supporting staffs worked in indoor environment (i.e. enclosed rooms within substation at Site B) <b>(Medium sensitivity)</b></td><td><b>Low</b></td></tr></table>	Source	Pathway	Targets	Risk	Pillar Point Valley Landfill <i>(Medium)</i>  According to the approved TMCLK EIA, the source of PPVL is classified as Medium	During Construction			Over 100m away from PPVL, no fault/fissure, no man-made conduit <b>(Long / indirect)</b>	<u>Site A and Site B</u>  Construction workers, well trained and follow specific safety procedures, mainly outdoor works <b>(Low sensitivity)</b>	<b>Very Low</b>	<u>Site A and Site B</u>  Well trained site office staff and follow specific safety procedures, indoor environment <b>(Medium Sensitivity)</b>	<b>Low</b>	During Operation			Over 100m away from PPVL, no fault/fissure, no man-made conduit <b>(Long / indirect)</b>	<u>Site A</u>  Majority of Maintenance workers and supporting staffs worked in outdoor environment (i.e. enclosed depot with vast openings at façades at Site A)  <b>(Low sensitivity)</b>	<b>Very Low</b>	<u>Site B</u>  Maintenance workers and supporting staffs worked in indoor environment (i.e. enclosed rooms within substation at Site B) <b>(Medium sensitivity)</b>	<b>Low</b>
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Comments		Response																								
19.	<p>Section 2. 3. 14-Table 3</p> <p>(ii) Please amend “Qualitative Risk” as “Level of Risk” and provide the relevant category, implication for each targets with reference to Table 4. 1 of the “Landfill Gas Hazard Assessment Guidance Note”.</p>	<p>Table 3 is revised accordingly below and shows the relevant category, implication for each target.</p> <table> <tr> <th>Targets</th><th>Level of Risk</th><th>Implication</th></tr> <tr> <td colspan="3">During Construction phase</td></tr> <tr> <td>General Works (Outdoor)</td><td>Very Low</td><td>The risk is so low that no precautionary measures are required.</td></tr> <tr> <td>Site Office (Indoor)</td><td>Low</td><td>Some precautionary measures* will be required to ensure that the planned development is safe.</td></tr> <tr> <td colspan="3">During Operation phase</td></tr> <tr> <td>Site A: Daily operation (mainly in outdoor environment)</td><td>Very Low</td><td>The risk is so low that no precautionary measures are required.</td></tr> <tr> <td>Site B: Daily operation (mainly in indoor environment)</td><td>Low</td><td>Some precautionary measures* will be required to ensure that the planned development is safe.</td></tr> <tr> <td colspan="3"> Remarks   * Required Precautionary measures includes the passive control of gas only.   Provision of barriers to the movement of gas e.g. membranes in floors or walls, or in trenches, coupled with high permeability vents such as no-fines gravel in trenches or voids/permeable layers below structures. </td></tr> </table>	Targets	Level of Risk	Implication	During Construction phase			General Works (Outdoor)	Very Low	The risk is so low that no precautionary measures are required.	Site Office (Indoor)	Low	Some precautionary measures* will be required to ensure that the planned development is safe.	During Operation phase			Site A: Daily operation (mainly in outdoor environment)	Very Low	The risk is so low that no precautionary measures are required.	Site B: Daily operation (mainly in indoor environment)	Low	Some precautionary measures* will be required to ensure that the planned development is safe.	Remarks  * Required Precautionary measures includes the passive control of gas only.  Provision of barriers to the movement of gas e.g. membranes in floors or walls, or in trenches, coupled with high permeability vents such as no-fines gravel in trenches or voids/permeable layers below structures.		
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20.	<p>Section 2. 4</p> <p>(ii) Please provide protection measures based on this qualitative LFGHA for the proposed development during construction and operational phase. Please be reminded that during the detailed design stage of the proposed development, a more detailed assessment including the design of the protection measures, requirement for maintenance and monitoring should be provided by the detailed design consultant and submitted for EPD's agreement. The potential risk due to LFG migration and monitoring programme and contingency plan should be reviewed and updated where necessary during the evolution of the design.</p>	<p>Protection measures are provided in Table 4 and extracted below:</p> <table> <tr> <th>Targets</th><th>Level of Risk</th><th>Implication</th></tr> <tr> <td colspan="3">During Construction phase</td></tr> <tr> <td>General Works (Outdoor)</td><td>Very Low</td><td>The risk is so low that no precautionary measures are required.</td></tr> <tr> <td>Site Office (Indoor)</td><td>Low</td><td>Some precautionary measures* will be required to ensure that the planned development is safe.</td></tr> <tr> <td colspan="3">During Operation phase</td></tr> <tr> <td>Site A: Daily operation (mainly in outdoor environment)</td><td>Very Low</td><td>The risk is so low that no precautionary measures are required.</td></tr> </table>	Targets	Level of Risk	Implication	During Construction phase			General Works (Outdoor)	Very Low	The risk is so low that no precautionary measures are required.	Site Office (Indoor)	Low	Some precautionary measures* will be required to ensure that the planned development is safe.	During Operation phase			Site A: Daily operation (mainly in outdoor environment)	Very Low	The risk is so low that no precautionary measures are required.						
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Comments		Response		
			Site B: Daily operation (mainly in indoor environment)	Low  Some precautionary measures* will be required to ensure that the planned development is safe.
		<div>Remarks  * Required Precautionary measures includes the passive control of gas only.  Provision of barriers to the movement of gas e.g. membranes in floors or walls, or in trenches, coupled with high permeability vents such as no-fines gravel in trenches or voids/permeable layers below structures.</div>  A more detailed assessment will be provided by the detailed design consultant for EPD’s approval. S4.1.4 is revised as below. “Detailed LFG hazard assessment including the design of protection measures, requirement for maintenance and monitoring will be conducted by detailed design consultant according to the prevailing standards and guidelines. Potential targets, risk due to LFG migration with the Project, monitoring programme and contingency plan will be reviewed with the details design of proposed development during the design stage. If a major change in the risk categories of the proposed development are found, the LFG hazard assessment will be updated accordingly.”		
21.	Figure 1 (ii) Suggest replacing “Subject Site” by “Project Sites” for the notes and state clearly that the “Project Sites” comprises of “Site A”, “Site B” and “Site C”.	Figure 1 is updated accordingly.		
22.	Figure 2 (ii) Suggest replacing “Subject Site” by “Project Sites” and state clearly that the “Project Sites” comprises of “Site A”, “Site B” and “Site C”.	Figure 2 is updated accordingly.		
23.	Appendix A (ii) Please provide the drawing details, e. g. drawing title, drawing no., revision. for the location plan for landfill gas monitoring points of PPVL. <del>Window / door for ventilation will be provided in the proposed development. Our previous comment still stand if affirmative.</del>  [According to the tele-conversation with the EPD LFG specialist on 19 Aug 2021, the sentence “Window / door for ventilation will be provided in the proposed development. Our previous comment still stand if affirmative.” is irrelevant and should be deleted.]	The drawing details of landfill gas monitoring points of PPVL is provided. Please refer to Appendix A.		
Land Contamination Assessment				
1.	Section 1.1.2: As the planning application covered all three sites, please clarify whether the land contamination assessment of Sites B and C would be covered in other submissions or not.	Noted. The land contamination assessment has been covered all three sites. Based on the desktop review and site visit, no land contamination issue at all three sites is expected.		
2.	Section 3.3.2: Please provide the relevant aerial photos showing the open storage area and review whether there is any potential land contamination issue due to the past land use as an open storage area.	The relevant aerial photos of Site A, B and C showing the open storage area are provided in Appendix A.		

Comments		Response
		<p>According to Table 13.2 of TMCLKL EIA, no apparent pollution sources were identified in the immediate vicinity of the Project Sites which has been used for open storage in the past, thus potential land contamination issue due to the past land use as an open storage area is not expected.</p> <p>Also, site visit was conducted on 30 April 2021, the entire Project Sites are paved with good condition. No sign of obvious/ suspected contamination was identified. It is believed that land contamination issue with the Project Sites is not expected. Please refer to Annex 3.2 for the photo record of site inspection.</p>
3.	Section 3.4: Please follow up with the outstanding replies.	Noted. All outstanding replies were received. Table 2 and Appendix B are updated.
4.	Section 4.1.2: Please clarify which section of the approved TMCLKL ELA report is referring to.	<p>S5.1.2 (former S4.1.2) is updated as below.</p> <p>"According to the aerial photos available from the LandsD, Site A was used for open storage since 1994. Section 13.4.2.4 and Table 13.2 of TMCLKL EIA also stated that Site A was used for open storage since 2004. Site A was then converted to the toll plaza of TMCLKL in 2013."</p> <p>Also, according to the aerial photos available from the LandsD, Site A was used for open storage since 1994</p>
<b>Comments from Commissioner of Police (Received on 13 August 2021)</b> <b>(Contact Person: Mr. TAM Tsz-wai, Alan, Tel: 3661 5708)</b>		
He has no comment on the application.		Noted.
<b>Comments from Director of Food and Environmental Hygiene (Received on 13 August 2021)</b> <b>(Contact Person: Ms. Sandy CHAN, Tel: 3141 1232)</b>		
If the proposal involves any commercial / trading activities, its state should not as to be a nuisance or injurious or dangerous to health and surrounding environment. Also, for any waste generated from the commercial / trading activities, the applicant should handle on their own / at their expenses.		Noted.
<b>Comments from Project Manager (West), Civil Engineering and Development Department (Received on 13 August 2021)</b> <b>(Contact Person: Ms. Jackie CHENG, Tel: 2158 5639)</b>		
He has no comment on the application.		Noted.
<b>Comments from Director of Agriculture, Fisheries and Conservation (Received on 13 August 2021)</b> <b>(Contact Person: Ms Scarlet CHENG; 2150 6934)</b>		
According to the Geospatial Information Hub (GIH) of the Lands Department, the subject sites are paved and are located within disturbed and developed areas. No vegetation is present within all sites. I have no comment on the subject application from nature conservative perspective.		Noted.
<b>Comments from Chief Town Planner/Urban Design and Landscape, Planning Department (Received on 19 August 2021)</b> <b>Landscape Section</b> <b>(Contact Person: Mr. Eric WONG; 2231 4747)</b>		


Comments	Response
According to the aerial photo of 2020, the site is located in an area of miscellaneous urban fringe landscape character, dominated by infrastructure. The site is currently hard paved and no existing tree is observed within the site. The proposed development is considered not incompatible with the surrounding environment.	Noted.
With reference to the Planning Statement, the application site comprises 3 portions, namely Site A, B and C. The applicant proposes to build a multi-storey permanent depot at Site A, while Site B will be used for a 2 storey power substation and Site C is situated on top of elevated highway structures. In view that significant adverse landscape impact arising from the proposed development is not anticipated, we have <u>no objection</u> to the application from landscape planning perspective.	Noted.
<p>Please note below our comments on the submission from landscape planning perspective:</p> <p>(d) Discrepancies were found on the locations of the proposed planting areas between the paragraph 3.2.4 of the Landscape Proposal and 1/F Landscape Plan (drawing no. LP-02). Please clarify.</p> <p>(e) The applicant should clarify how horticultural maintenance works for the proposed vertical green wall on building façade at 1/F can be carried out. The applicant is reminded of the long-term commitment in providing proper maintenance to the vertical green wall for healthy and sustainable plant growth.</p> <p>(f) The applicant should provide details and blowup sections for the proposed planters and vertical green wall so as to demonstrate the viability of the landscape proposal.</p>	<p>(a) Please be clarified that paragraph 4.2.4 (former paragraph 3.2.4) is revised as below  “Additional planting opportunities are also proposed at two locations on <b>1/F</b> next to the access ramp. These 2 planters are proposed to receive combination of large shrubs and ground cover planting.”</p> <p>(b) KMB will appoint the vertical green wall supplier to provide horticultural maintenance works for the proposed vertical green wall on building façade at 1/F. The regular horticultural maintenance works shall be carried out by the vertical green wall supplier.</p> <p>(c) Architectural sections of the proposed vertical green wall (that shows the proposed VG is feasible on the façade of the building) is provided. Please refer to the latest layout drawing in Appendix D of the LVIA and landscape proposal.</p>
<b>Comments from Head of the Geotechnical Engineering Office, Civil Engineering and Development Department (Received on 19 August 2021)</b> <b>(Contact Person: Mr. WONG Chun Fai, Jeffrey; 2762 5400)</b>	
The applicant should submit all geotechnical submissions regarding the proposed development to the Buildings Department for approval according to the Buildings Ordinance.	Noted.
<b>Comments from Director of Electrical and Mechanical Services Department (Received on 19 August 2021)</b> <b>(Contact Person: Mr. SIU Hiu-fai, Stanley; 3757 6231)</b>	
He has no particular comment on the application from electricity supply safety aspect at this stage. However, in the interests of public safety and ensuring the continuity of electricity supply, the parties concerned with planning, designing, organizing, supervising and conducting any activity near the underground cable or overhead line under the mentioned application should approach the electricity supplier (i.e. CLP Power) for the requisition of cable plans (and overhead line alignment drawings, where applicable) to find out whether there is any underground cable and/or overhead line within and/or in the vicinity of the concerned site. They should also be reminded to observe the Electricity Supply Lines (Protection) Regulation (the Regulation) and the “Code of Practice on Working near Electricity Supply Lines” established under the Regulation when carrying out works in the vicinity of the electricity supply lines. He has no particular comment on the application as far as electricity supply safety is concerned.	Noted

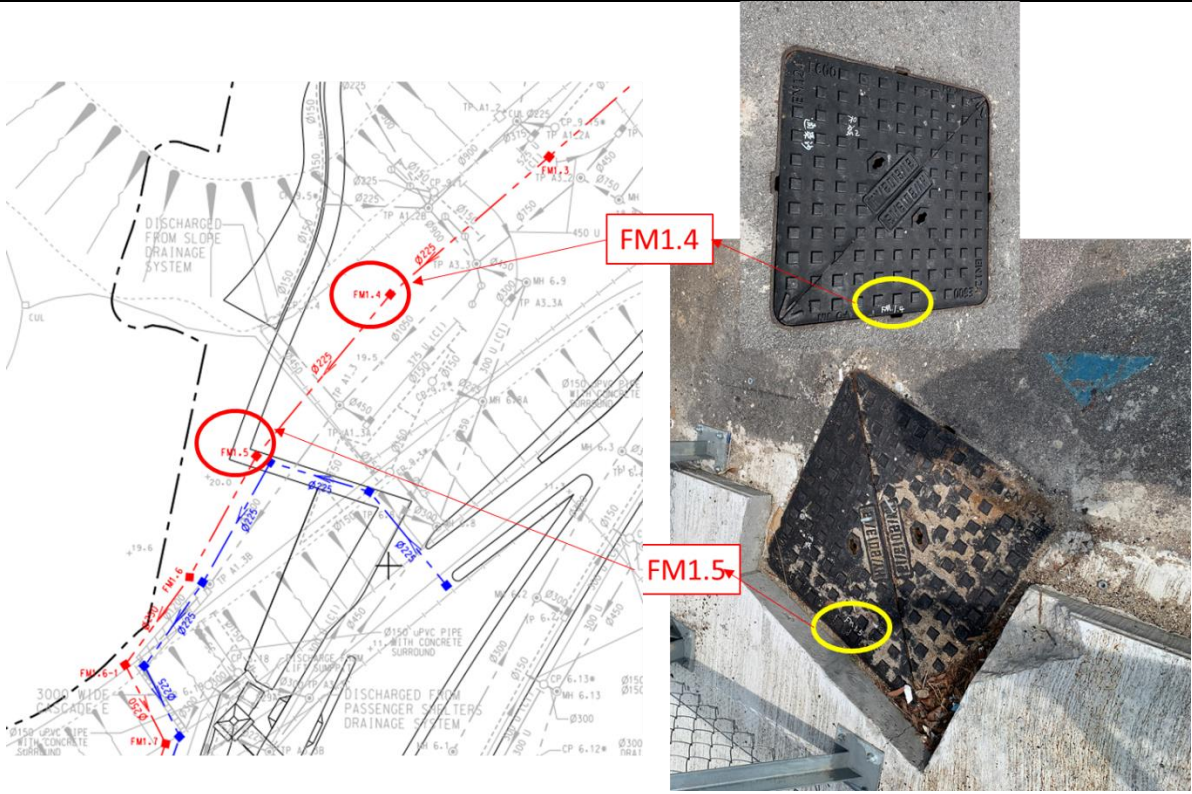
Comments		Response
<b>Comments from Chief Town Planner/Studies and Research 1, Planning Department (Received on 19 August 2021) (Contact Person: Mr. AU Ho Cheong, Henry; 2231 4688)</b>		
His comments/observations from the perspective of the proposed "Planning and Engineering Study for Lung Kwu Tan Reclamation and the Re-planning of Tuen Mun West Area" (the proposed P&E Study) are as follows.		-
1	The application site falls within the Study Area of the proposed P&E Study. The Applicant should refer to the attached extract plan for our Study Area boundary and the PWSC Paper – PWSC (2019-20)26 for the latest project plan ( <a href="https://www.legco.gov.hk/yr19-20/english/fc/pwsc/papers/p19-26e.pdf">https://www.legco.gov.hk/yr19-20/english/fc/pwsc/papers/p19-26e.pdf</a> ).	Noted.
2	According to the Planning Statement, the Applicant has proposed a permanent bus depot of 11-storey (at about 82.5m) under 24-hour operation at Site A and an open-air bus parking area at Site C. It is understood that a total of about 406 charging-enabling bus parking bays and 81 maintenance bays would be provided at Sites A and C.	Noted.
3	As mentioned in the 2020 Policy Address, uses in Tuen Mun West Area is to be reviewed under the proposed Planning and Engineering Study with "a view to increasing the potential of the Tuen Mun West area for residential development and/or other more beneficial uses". As such, under the preliminary concept of the proposed P&E Study, the areas to the immediate west of Site A and south of Site C in Tuen Mun Areas 40 and 46 are identified as potential development sites for housing developments and/or other beneficial uses. The Applicant's proposal, especially the bus depot at Site A, would impose constraints on our future use and design of these development sites in close proximity of the Application Site. However, potential impacts have not been taken into account in the current application. As stated in the Planning Statement, no planned residential development, educational institutions and other sensitive uses have been assumed in all technical assessments including Noise Impact Assessment, Air Quality Impact Assessment, Landscape and Visual Impact Assessment (LVIA) and Air Ventilation Assessment.	Noted. The landscape design will be reviewed subject to the completion of the Planning and Engineering Study on Tuen Mun West area.  According to landscape proposal in the previous submission, landscape features had been incorporated in the design (e.g. vertical greenery and planters).
4	In view of the above, the Applicant is requested to acknowledge these potential uses and address whether there would be any potential impacts on the identified development sites in Tuen Mun West area under the proposed P&E Study including noise, air, landscape and visual, and air ventilation. Relevant mitigation measures at source, e.g. vertical greening, roof top greening (as covers over bus parking spaces), façade design, etc., should be considered appropriately.	The applicant acknowledged the potential uses in Tuen Mun West Area. However, the proposed Planning and Engineering Study has not commenced yet and there is no detailed information on the initial land uses within Tuen Mun West Area during the preparation of this environmental assessment.
5	According to the LVIA, the Landscape Master Plan only covers Site A. The Applicant should provide landscape proposals and boundary landscape treatments for Sites B and C as well, especially that high-rise residential developments could be recommended in the area south of Site C under the proposed P&E Study.	Noted. The LVIA and Landscape Master Plan of Site A to C is provided. Please refer to the Appendix A of the revised Landscape Proposal for the landscape master plan of three sites.

Comments		Response
Comments from District Lands Officer, Lands Department (Received on 24 August 2021) (Contact Person: Miss Wai Ming CHAN; 2451 3182)		
(i)	The application site which comprises 3 pieces of Government land is annotated as “Site A”, “Site B” and “Site C” in the application. The site is held under a short term tenancy (STT) for a temporary bus depot subject to, among others, the following restrictions:  (c) The total built-over area and height of structures erected shall not exceed 2,000m2 and 8 m respectively, and (d) No structures or building shall be erected within portions of Site A and Site B and the whole of Site C.	Noted. KMB would simply develop the sites to a temporary open air parking area in 2H of 2021 under existing short term tenancy. To optimize the land resource, KMB with support of Transport Department proposes to build a multi-storey permanent depot at Site A. Once the approval is granted, KMB will apply for a fresh land document for the proposed bus depot development.
(ii)	It is noted that the anticipated completion of the proposed development is in year 2025 while the term of the tenancy is up to July 2026 only and renewal of the tenancy is not permitted under the existing conditions.	
(iii)	The proposal does not comply with the terms and conditions of the tenancy. Should the application be approved by the Town Planning Board, KMB is required to obtain policy support from the relevant policy bureau and apply for a fresh land document for the proposed bus depot development. However, there is no guarantee that their application will be approved and I hereby reserve my right to take appropriate action should any breach of tenancy conditions be found. The said application will be considered by the Lands Department acting in the capacity as the landlord at its sole discretion. In the event that the said application is approved, it would be subject to such terms and conditions as the Government shall deem fit to do so, including, among others, charging of rent and administrative fee. Upon approval and commencement of the new land document, the existing STTMM0003 will be terminated in the relevant time.	
Comments from Senior Engineer, Highways Department (Received on 24 August 2021) (Contact Person: Mr. WONG Chi Yuen, Sammy; 3526 0036)		
He has the following comments from highways maintenance point of view:		-
1.	From our understanding, some HyD assets such as drainage pipes, manholes, utility ducts, drawpits, movement joints, isolation joints, etc are located within Site A, B and C (the Site). KMB shall allow HyD staff and the contractors whom employed by HyD to enter the Site to carry out inspections and maintenance works.	Noted.
2.	KMB shall not erect any structures on top of the HyD assets. KMB shall remove any materials/ objects/ covers/ vehicles on top of the HyD assets when requested by HyD.	Noted.

Comments		Response
3.	KMB is not allowed to excavate where above HyD's structures. Unless when carrying out repairing works to the pavement in the Premises with prior agreement by HyD, and the excavation depth shall not exceed the existing pavement depth.	Noted.
4.	KMB shall be responsible for general cleaning of the isolation joint in Site C.	Noted.
5.	KMB should protect the highway structure within or adjacent to the Site.	Noted.
6.	Drainage reserve and protection for the drainage maintained by HyD should be provided within the Site.	Noted.
7.	According to DWG. No: EL04, it shows that the vertical clearance between the existing footbridge adjacent to the proposed 132kV substation is 1000mm only. Please clarify that clearance is up to the top of the roof parapet or the roof floor to check whether there are sufficient working space. Minimum 2000mm clearance should be provided around the existing footbridge for normal maintenance works.	Noted.
8.	Please be reminded that metal louvers/ windows etc. for the 132kV substation should not be constructed right under the footbridge, such that the footbridge will not be seriously affected/ damaged in case of fire. The south-east elevation of the substation should be submitted for our review and comment.	Noted.
9.	The proposed access arrangement of the application site should be commented and approved by TD.	Noted.
10.	The applicant should design and construct the run in/out of the application site to the satisfaction of TD and HyD in accordance with the latest version of Highways Standard Drawing to match with the existing adjacent pavement at their own cost. Please be reminded that public concerns were received regarding the induced traffic flow from the Site may cause damages to the nearby road network. The applicant should review the design of the run in/out of the site and ensure that the design will be capable to withstand the induced traffic flow. Any defects or complaints related to the run in/ out should be handled by the applicant with the agreement from HyD at their own cost.	Noted.
11.	Adequate drainage measures should be provided to prevent surface water running from the application site to the nearby public roads and drains.	Noted. Based on site survey conducted on 30 April 2021, the site is fully paved with drainage channels provided to prevent surface water running to nearby public roads and drains.



Comments		Response
		
<b>Comments from Environmental Protection Department (Received on 26 August 2021)</b> <b>(Contact Person: Ms. Virginia WONG, Tel: 2835 1109)</b> Drainage and Sewage Impact Assessment		
1.	Please clarify if there would be any kind of oil produced during car washing, maintenance and other operations or activities in the depot. If yes, oil interceptor should be installed.	The proposed depot is for electric buses. No engine oil and gearbox oil is required in the electric buses. Only minimal lubricant oil will be used during maintenance. Oil interceptor will be installed at drainage system downstream of any oil/ fuel pollution sources. Oil interceptors will be emptied and cleaned regularly to prevent the release of oil and grease into the storm water drainage.
2.	We could not find the existing 225mm sewer between FM1.1 and FM1.12A in our 2021 drainage record. Please verify with Drainage Services Department or other department if the concerned sewer is available.	<p>Please be clarified that the drainage plan attached in Appendix 6.1 (previous Appendix 4.1) was provided by Transport Department.</p> <p>Based on the site survey conducted on 30 April 2021, the existing 225mm sewers between FM1.1 and FM1.12A and manholes were available on site.</p> <p>Manholes found on site are tallied with the drainage plan are shown in Appendix 6.1.</p>

Comments	Response
	
3. Please confirm no catering service or canteen in the depot.	Please be confirmed no catering service or canteen in the depot, which is also clarified in Section 3.1.2.
4. "FMH1005385" should read "FSH1005385" in Para 4.1.2.	Noted. Para 6.1.2 is revised (previous para 4.1.2).
5. Please clarify if there is any existing and planned discharges to the sewer between FM1.1 and FM1.12A. If yes, please include in the capacity check.	<p>Based on Appendix 6-1, the sewage from the existing Toll Control Building (Catchment A) is discharged at FM1.1, which has been included in the revised capacity check in Appendix 6-3.</p> <p>Based on the best available information during the time of preparation, no planned development is identified based on any Development Permission Area Plans, Outline Development Plans, Layout Plans and other relevant published and uses plan by Lands Department or Planning Department in the vicinity of the Project Sites.</p> <p>As advised by Planning Department (PlanD), the consultant has visited the Town Planning Board Statutory Planning Portal 2 to obtain records for land zoning. The website as of 8 October 2021 has confirmed that there are no planning applications made at the vicinity, which implies no committed or planned developments. Correspondence from PlanD has been attached in <b>Appendix 3-3</b>.</p> <p>Therefore, please be clarified that there will be no planned discharges to the newly constructed sewer between FM1.1 and FM1.12A.</p>
<b>Comments from the Commissioner for Transport (Received on 27 August 2021, 09:33)</b> <b>(Contact Person: Mr. Louis IP, Tel: 2399 2261)</b>	
According to the findings of the Traffic Impact Assessment (TIA), the proposed development would not induce adverse traffic impact on the adjacent road network.	Please note that the run-in/out were built by the Government and there are no changes in our design.

Comments		Response
<p>In this regard, we have no objection in principle to the proposed development from traffic engineering point of view subject to the following information to be further submitted:-</p> <p>i.) Swept path for Buses ingress/egress to and from Site A and Site C &amp;  ii.) Swept path for Buses maneuvering inside the Depot (e.g. enter/leave the washing bay and parking)</p> <p>Having said the above, since the proposed development is still under the detailed design. In this regards, the applicant shall submit the finalized TIA report for our further review and approval.</p>		<p>i.) The swept path analysis of buses ingress/egress to/from Site A and Site C has been incorporated into the revised TIA report.</p> <p>ii.) The swept path analysis of buses maneuvering inside the depot has been incorporated into the revised TIA report.</p>
<b>Comments from Drainage Services Department (Received on 3 September 2021)</b> <b>(Contact Person: Mr. T Y NG, Tel: 2300 1630) (By email)</b> <b>Drainage and Sewage Impact Assessment</b>		
SIA		
1.	Section 4.2.1 - Please advise if the generated sewage will comprise of some heavy metal or not.	<p>Since the generated sewage is come from depot staff and automatic vehicle washing machines, please be confirmed that the generated sewage will not comprise of any heavy metal.</p> <p>S6.2.1 is revised for clarification.</p>
2.	Appendix 4-2 - Please advise the volume of sump pit (to avoid overflowing to sewer) for easy reference.	The volume of sump pit is 1m <sup>3</sup> (size of 1mx1mx1m). It is also indicated in the revised Appendix 4-2 and clarified in S6.2.3.
3.	Appendix 4-2 - Please advise the facilities of the upstream of the existing sewer (i.e. FM 1.5). Please note that the sewage generated from the existing facilities should also be taken into account in the hydraulic assessment.	Based on Appendix 6-1, the sewage from the existing Toll Control Building (Catchment A) is discharged at FM1.1. Revised calculation on sewage generation and capacity check are attached in Appendix 6-2 and Appendix 6-3 respectively.
4.	The SIA report needs to meet the full satisfaction of Sewerage Infrastructure Group (SIG) of Environmental Protection Department (EPD), the planning authority of sewerage infrastructure.	Noted.
5.	Notwithstanding the above, I have no in-principle objection to the captioned application from public sewerage viewpoint. Should the application be approved, a condition should be stipulated requiring the applicant to submit a revised SIA addressed the above comments and to implement and maintain the mitigation measures identified to the satisfaction of EPD and this department.	Noted.
DIA		
1.	On the understanding that the site is fully paved as at today and there should not be any significant drainage impact incurred by the proposed development, I have no adverse comment on the DIA from public drainage viewpoint.	Noted.
<b>Comments from Chief Architect/Central Management Division 2, Architectural Services Department (Received on 3 September 2021)</b> <b>Application No. A/TM/565</b> <b>(Contact Person: Mr Calvin CHAN, Tel: 2154 2398)</b> <b>(By email)</b>		
2.	Based on the information provided, it is noted that the proposed permanent depots consists of one block with building height of 11 storeys (about 82.5m). Since the adjacent "Industrial" developments are permitted in the OZP, we would have no comment from architectural and visual impact point of view, subject to PlanD's view.	Noted.
3.	It is suggested to provide 20% greenery in accordance with PNAP App-152.	Noted. Planters and vertical green at Project Sites are maximized to achieve 20% greenery. Please refer to Section 4.2.12 of the revised LVIA and landscape proposal for the summary of Proposed Green Coverage.

Comments				Response																											
				<table><tr><td colspan="2">Total Site Area (Site A, B and C) = 16,845m<sup>2</sup></td></tr><tr><td>Site A</td><td>7,926m<sup>2</sup></td></tr><tr><td>Site B</td><td>1,321m<sup>2</sup></td></tr><tr><td>Site C</td><td>7,598m<sup>2</sup></td></tr><tr><td colspan="2">Greenery Provided</td></tr><tr><td colspan="2">Below 15m of Bus Depot Building in Site A</td></tr><tr><td>Planter on G/F and 1/F</td><td>337.534m<sup>2</sup></td></tr><tr><td>Vertical Greening</td><td>Approx. 1,257.736m<sup>2</sup></td></tr><tr><td colspan="2">(337.534+1,257.736) m<sup>2</sup> / 16,845 m<sup>2</sup> = 9.47%</td></tr><tr><td colspan="2">Above 15m of Bus Depot Building in Site A</td></tr><tr><td>Vertical Greening</td><td>Approx. 1,782.162m<sup>2</sup></td></tr><tr><td>Total Greening</td><td>Approx. 3,377.432m<sup>2</sup></td></tr><tr><td colspan="2">3,377.432m<sup>2</sup> / 16,845 m<sup>2</sup> = <b>20.05%</b></td></tr></table>		Total Site Area (Site A, B and C) = 16,845m <sup>2</sup>		Site A	7,926m <sup>2</sup>	Site B	1,321m <sup>2</sup>	Site C	7,598m <sup>2</sup>	Greenery Provided		Below 15m of Bus Depot Building in Site A		Planter on G/F and 1/F	337.534m <sup>2</sup>	Vertical Greening	Approx. 1,257.736m <sup>2</sup>	(337.534+1,257.736) m <sup>2</sup> / 16,845 m <sup>2</sup> = 9.47%		Above 15m of Bus Depot Building in Site A		Vertical Greening	Approx. 1,782.162m <sup>2</sup>	Total Greening	Approx. 3,377.432m <sup>2</sup>	3,377.432m <sup>2</sup> / 16,845 m <sup>2</sup> = <b>20.05%</b>	
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Application Site and Scheme																															
2.	The application site falls within an area shown as 'Road' on the approved Tuen Mun Outline Zoning Plan (OZP) No. S/TM/35. It comprises three separate portions, namely Sites A to C, located at the northbound and southbound of the original toll plaza of Tuen Mun-Chek Lap Kok Link (TMCLKL), which have been freed up for other purposes as the toll fees for using TMCLKL has been waived. To the further southeast of the site across TMCLKL is a stretch of industrial developments with BH restriction of 26mPD fronting the sea. To the northwest is an extensive sloping area covered with vegetation zoned "Undetermined" on the OZP.			Noted.																											
3.	<div>The applicant seeks planning permission to develop bus depots with ancillary public utility installation (electricity substation) at the site with major development parameters as follows:</div> <table><tr><td>Proposal</td><td>Site A</td><td>Site B</td><td>Site C</td></tr><tr><td>Use</td><td>multi-storey depot for electric bus</td><td>power substation</td><td>charging-enabling bus parking bays</td></tr><tr><td>Site Area</td><td>about 7,926m<sup>2</sup></td><td>about 1,321m<sup>2</sup></td><td>about 7,598m<sup>2</sup></td></tr><tr><td>Gross Floor Area</td><td>about 57,845.32m<sup>2</sup></td><td>about 1,040.6m<sup>2</sup></td><td>-</td></tr><tr><td>Plot Ratio</td><td>about 7.3</td><td>about 0.79</td><td>-</td></tr><tr><td>Site Coverage</td><td>about 94% (G/F-1/F) about 60% (2/F - R/F)</td><td>about 47%</td><td>-</td></tr></table>			Proposal	Site A	Site B	Site C	Use	multi-storey depot for electric bus	power substation	charging-enabling bus parking bays	Site Area	about 7,926m <sup>2</sup>	about 1,321m <sup>2</sup>	about 7,598m <sup>2</sup>	Gross Floor Area	about 57,845.32m <sup>2</sup>	about 1,040.6m <sup>2</sup>	-	Plot Ratio	about 7.3	about 0.79	-	Site Coverage	about 94% (G/F-1/F) about 60% (2/F - R/F)	about 47%	-	Noted.			
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Comments					Response
	Building Height	not more than 82.5m (11 storeys)	not more than 15.6m (2 storeys)	-	
4	The applicant has put forth the following major design features for the multi-storey depot for electric bus at Site A : a. 15m wide openings at the NE and SW façades on G/F; b. Vast openings at the NE and SW façades on various floors (1/F -10/F); c. Chamfered design of typical floors (3/F to R/F) at the NW façades; and The vertical green panels shall form a green wall covering a section of 1/F façade of the building.				Noted.
Urban Design and Visual					
5	The site is located at the previous toll plaza of TMCLKL. The surrounding areas are mainly roads and industrial developments in the southeast fronting the sea and the vegetated sloping areas in the northwest. According to paragraph 2.2.4 of the visual impact assessment (VIA) at Section 6, the applicant claims that there is only a small number of industrial and institutional viewers without residential and recreational sites within the visual envelope. It also states that the major public viewers would be the road users of TMCLKL and the proposed development is largely in keeping with the surrounding transport corridor and does not exceedingly block the view towards the slopes. Hence, the applicant concludes that the visual impact shall be acceptable with appropriate design and other mitigation measures. However, you may wish to ask the applicant to provide sufficient information in the following aspects to substantiate the application:				Noted.
Development Concept					
	a. According to the submission, the application consists of three separate portions, namely Sites A to C, with different uses. However, only layout, section and elevation plans showing the development concept for the multi-storey depot for electric bus at Site A has been provided. The VIA at Section 6 mainly covers the proposal at Site A. As this application also covers Sites B and C, the applicant may wish to provide the development concept for the proposals at the remaining portions and review the VIA accordingly. More detailed comments on the VIA are at Comments 5(e) to (h) below.				The layout, section and elevation plan of Site A, B and C are provided.  Please be clarified that the VIA has covered all three sites (Site A to Site C).  Since the three sites are basically directly adjacent to one another, the affected public viewers and key public viewpoints remain valid. The viewpoints illustrations and their assessments of visual impacts is supplemented in section 3.1.6 of the LVIA report.
	b. Noting that there are openings at the NE and SW façades of the multi-storey depot for electric bus at Site A to enhance permeability, please clarify whether there are any similar proposals in the SE and NW façades.				There are similar proposals at the SE and NW façade..  Please refer to the sectional drawing of SE and NW elevation.
	c. Height of rooftop structures should be shown on appropriate plan(s).				The height of rooftop structures is indicated in the R/F layout (DWG No. AA06) and the sectional drawings (DWG No. ST01 to ST02 and EL01 to EL04).
	d. It is noted from the submitted AVA-EE that the applicant has devised an "OZP compliance scheme" with a maximum building height of 82.5m for comparison purpose in the submission. As the site falls within an area shown as 'Road' on the OZP, the applicant may clarify why such scheme complies with the OZP.				Please be clarified that there is no building height restriction of the Project Sites under the OZP, thus the scheme is not "OZP compliance scheme".  <u>The 11-storey depot scheme is proposed to cater KMB’s operational needs and electric bus strategy as well as support the Roadmap on popularization of Electric Vehicles released by Environmental Bureau in March 2021. The Baseline Scheme and Proposed Scheme in AVA-EE share the same design control parameters including the plot ratio and site coverage for study. Air ventilation performance enhancement features have been introduced in the Proposed Scheme to facilitate the wind environment nearby.</u>  Proposed Scheme

Comments		Response																																																																																								
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	<p>e. Paragraph 2.1.4 - The applicant indicates that the methodology of the VIA has been made reference to TPB PG-No. 41. In this connection, the applicant may wish to review the VIA having regard to the said guideline. In particular, no public view points (VPs) has been identified. There is also no information on the appraisal of visual change and evaluation of overall visual impact in the submission. Besides, following Comment 5(a) above, the assessment should cover the entire development scheme.</p>	<p>The public viewpoints of road users (VP1 and VP2) and workers from the coastal industrial area (VP3) are covered in the assessment. Please refer to the Figure 5 of the LVIA and landscape proposal for the location of viewpoints. Photomontages at three viewpoints showing the visual change are provided in Appendix C.</p> <p>Evaluation of overall visual impact is discussed in Section 3.2.5 to 3.2.7 of the revised LVIA and landscape proposal and extracted below.</p> <p>Section 3.2.5: “From the photomontage illustrations, the proposed building is largely in keeping with the surrounding transport corridor and does not exceedingly block the northerly view towards the slopes. It is therefore also expected that the visual impacts shall be acceptable with the proposed orientation of building and green façade treatment.”</p> <p>Section 3.2.6: Potential development sites for housing developments and/or other beneficial uses may be identified in areas to the immediate west of Site A (Area 46) and south of Site C (Area 40) in Tuen Mun in the future. While the proposed 11-storey depot building in Area A sits between Area 46 and the ocean, it would not exceedingly block the easterly sea view given its moderate height. Conversely, it is also anticipated that the proposed depot building would not exceedingly block the northerly view from Area 40 towards the green slopes to the north. It is expected that the visual impacts of the proposed building in Site A will be moderate to low and considered acceptable with appropriate façade design and other mitigation measures.”</p> <p>Section 3.2.7: “Site C is proposed to be remain as an open area for providing electrical charging facilities for the eBuses. The landscape characteristics shall remain the same as the surrounding transportation corridor and the</p>																																																																																								



Comments		Response
		charging facilities are not expected to impose any significant visual impacts on the potential developments in Area 40."
	f. Paragraph 2.1.6 and Figure 6 - The information of VPs together with the reasons for their selection is missing. Site A is not annotated in Figure 6.	The public viewpoints of road users (VP1 and VP2) and workers from the coastal industrial area (VP3) (i.e. Tuen Mun Area 40) are added in the assessment. The information and reason of the VPs has been added in Section 3.1.6 in the LVIA and landscape proposal and extracted below: Three Key Public Viewpoints have been selected to illustrate the visual impacts of the proposed development to vehicular travelers on the Tuen Mun-Chek Lap Kok Link and the occupational viewers from the industrial area to the south of the development site. The three viewpoints are listed below. Key Public Viewers have been selected and shown in Figure 5. <ul style="list-style-type: none"> <li>• VP1 – taken from the east side of Site A to represent the development as seen by the southbound vehicular travelers;</li> <li>• VP2 – taken from the south side of Sites A and B as seen by the northbound vehicular travelers;</li> <li>• VP3 – taken from the east side of Sites A, B, and C as seen by the occupational viewers from the industrial area.</li> </ul>
	g. Paragraph 2.2.4 - Please clarify the appropriate design and other mitigation measures claimed in this paragraph. With the aid of photomontages, please also illustrate how the proposed development would blend in with the surrounding environment without blocking major views to the slopes in the background.	Please be clarified that the appropriate design and the mitigation measure to reduce the visual impact included proposed orientation of building and green façade treatment. Section 3.2.5 of LVIA and landscape proposal is revised as below.  "Photomontages illustrating the proposed development as seen from VP1, VP2, and VP3 are provided in Appendix C. From the photomontage illustrations, the proposed building is largely in keeping with the surrounding transport corridor and does not exceedingly block the northerly view towards the slopes. It is therefore also expected that the visual impacts shall be acceptable with the proposed orientation of building and green façade treatment."
	Photomontages – h. Please review the three photomontages in accordance with the requirements of TPB PG-No. 41. A location plan showing the angle of the associated VPs should also be provided. The openings at the NE and SW façades are shown in solid black colour which looks impermeable. Only the building outline of the proposed development is shown on the photomontage of block view without visual rendering. The chamfered design of typical floors (3/F to R/F) at the NW façades are not reflected in the photomontages. It is difficult to assess the effectiveness of the design measures proposed by the applicant. Besides, only the proposed depot at Site A is shown in the submitted photomontages. Other sites under this application should also be reflected in the photomontages.	The photomontages covering Site A to C are provided in Appendix C of the LVIA and landscape proposal. The vertical green and other designs are incorporated in the updated photomontages. The location plan of the angle of the VPs is also provided.
Air Ventilation		
6.	The site does not fall within the criteria for air ventilation assessment (AVA) under Technical Circular No. 1/06 on AVAs jointly published by the then HPLB and ETWB in 2006. No significant adverse air ventilation impact is anticipated.	Noted.
<b>Comments from Chief Engineer/Construction, Water Supplies Department (Received on 16 September 2021) (Contact Person: Abbey L CHEUK, Tel: 2152 5772) (By email)</b>		
	We have no adverse comment on the application. The applicant shall comply with the "Conditions of Working in the Vicinity of Waterworks Installations" (enclosed), in particular, no structures shall be erected within 3 m from the centre line of mains of the affected water mains as shown in clouded shapes in the attached drawing.	Noted.

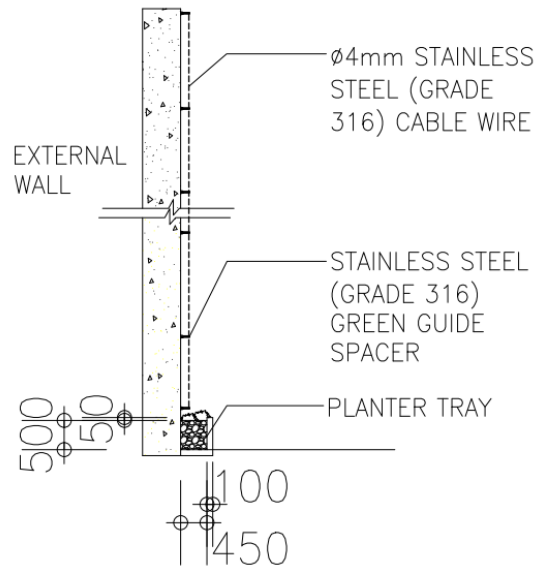
Comments		Response
<b>Comments from Chief Town Planner/Urban Design and Landscape, Planning Department (Received on 17 September 2021)</b> <b>(Contact Person: Isabella TSUI, Tel: 2231 4846)</b> <b>(By email)</b>		
	Having reviewed the R-to-C and the submitted F.I., please note below our comments on the F.I. from landscape planning perspective:	-
(a)	Details and blowup sections for the proposed planters on G/F & 1/F and vertical green wall at 1/F are not yet provided to demonstrate the viability of the landscape proposal	The details and blowup section of proposed planters and vertical green wall (i.e. climbers) at 1/F. Please refer to Please refer to the latest layout drawing (DWG. No.: DD01).
(b)	The response that "KMB will appoint vertical green wall supplier to provide horticultural maintenance works for the proposed vertical green wall on building façade at 1/F" is noted. However how horticultural maintenance works for the proposed vertical greening can be carried out is not clarified. The Applicant is reminded that provision of access for vegetation maintenance should be catered to ensure healthy and sustainable plant growth.	Mobile working platform will be provided for the vertical green wall supplier/subcontractor for regular horticultural maintenance works of proposed vertical greening.
<b>Comments from Chief Town Planner/Studies and Research 1, Planning Department (Received on 20 September 2021)</b> <b>(Contact Person: Ms Jess CHAN, Tel: 2231 4637)</b> <b>(By email)</b>		
	Our further comments from the perspective of the proposed "Planning and Engineering Study for Lung Kwu Tan Reclamation and the Re-planning of Tuen Mun West Area" (the proposed P&E Study) are as follows.  According to the submitted R-to-C table, the applicant stated that he has acknowledged the potential uses in Tuen Mun West Area and will review the landscape design of the proposal. However, there are no further details or specific recommendations in the F.I. on whether there will be potential impacts (particular air and noise) of the proposed bus depot on the future developments in the area; and if so, how they can be mitigated.	The applicant acknowledged the potential uses in Tuen Mun West Area. However, the proposed Planning and Engineering Study has not commenced yet and there is no detailed information on the initial land uses within Tuen Mun West Area during the preparation of this environmental assessment.  Also, based on the review of any Development Permission Area Plans, Outline Development Plans, Layout Plans and other relevant published and uses plan by Lands Department or Planning Department during the preparation of this planning application, it is confirmed that no existing, committed / planned sensitive receivers identified at the vicinity of the Project Sites.  <u>Air Quality</u> Please be clarified that only eBus will be parked at the Proposed Development. Since eBus do not require the use of diesel, no tailpipe emission will be generated, and therefore no adverse air quality impact from the Proposed Development to the surrounding air sensitive receivers (ASRs) is anticipated.  <u>Noise</u> Based on the best available information during the preparation of assessment, there are no existing, committed and planned noise sensitive receivers (NSRs) identified within 300m assessment area, hence no adverse noise impact from the Proposed Development (including road traffic noise impact and fixed plant noise impact) to the surrounding NSRs is anticipated. Nevertheless, Fixed Plant will be housed indoor or ventilation louvres will be carefully design to avoid facing NSRs in the area. Noisy maintenance activities will be avoided to carried out in nighttime as far as practicable.
	The potential development sites under the proposed P&E Study lie to the immediate west of the application site of the bus depot. The currently proposed 11-storey depot under 24-hour operation and the depot design with vast openings would likely impose noise, air quality and visual constraints/impacts on the development sites. <u>The applicant should endeavour to improve the design and disposition of the proposed bus depot so as not to compromise the design flexibility of</u>	The applicant acknowledged the potential uses in Tuen Mun West Area. However, the proposed Planning and Engineering Study has not commenced yet and there is no detailed information on the initial land uses within Tuen Mun West Area during the preparation of this environmental assessment.

Comments		Response
	the potential development sites in close proximity. Possible measures to alleviate the proposal's potential adverse impacts may include reducing the number and size of openings on the western façade facing the potential development sites, and providing suitable façade treatments (e.g. vertical greening) and roof-top greening.	Possible measures including the vertical greening is proposed to minimize the potential adverse visual impacts. Please refer to the updated master landscape plan.
<b>Comments from Environmental Protection Department (Received on 23 September 2021)</b> <b>(Contact Person: Ms Virginia WONG, Tel: 2835 1109)</b> <b>(By email)</b>		
	There is no revised report submitted for review and comment. The applicant has submitted RTC and Revised Pages only for our review. Please find our partial comments on planning application are as below:	The revised reports and the RtoC table are provided.
Air Quality Impact Assessment (AQIA)		
1	<u>Comments on the R-t-c</u> R-t-c 1. Please elaborate whether dust emission impact is expected during operation phase due to these minor vehicle repair and testing activities.	Section 8.6.1 is updated to elaborate dust emission impact during operation phase due to minor vehicle repair and testing activities. It is not anticipated as the ground surface will be concrete paved. Section 5.8.6 is updated for clarification.
2	R-t-c 3. Please include a Figure to illustrate that the air sensitive uses will be located far away from buffer zones. Please mark the location of the fresh air intake (of mechanical ventilation) of the office in the Figure for clarity.	It is noted that the location of the fresh air intake for the air sensitive uses of the Proposed Development is being finalised. In view of this, area of the Project Site that are suitable for the placement of fresh air intake (i.e. area outside of buffer distance of air sensitive uses from chimney and open road emission) is proposed instead. Air intake of the Proposed Development will be required to be positioned in the area suitable for fresh air intake. Figures 8-1a-e are included to demonstrate the buffer zone for air sensitive uses from chimneys and open road traffic for clarification. Area suitable for air intake of the Project Site is included in Figure 8-1a for clarification.
3	R-t-c 6. It is unclear based on the R-t-c that there is no adverse air quality impact from vehicular emissions. Please include a Figure to illustrate. Other than the Tuen Mun Chek Lap Kok Link Road and Tuen Mun Chek Lap Kok Slip Road, please also evaluate whether there will be vehicular emission impact from the Lung Mun Road.	Vehicular emission impact from Lung Mun Road on ASR identified at Site A is not expected given the buffer distance of 5m can be maintained as shown in Figure 8-1A. No ASR identified at Site B and C, impact from Lung Mun Road is not anticipated. Figure 8-1A and Section 8.3.1- 8.3.2 are updated accordingly for clarification
4	Comments on the replacement pages Table 1. Suggest to elaborate in the footnote that the ASR within the subject site refer to the fresh air intake (of mechanical ventilation) of the office of the bus depot, and there is no air sensitive uses at site B and C of the proposed development with justification.	Footnote for Table 6-1 is updated accordingly.
5	Table 2. Please provide source of reference of Tuen Mun Chek Lap Kok Slip Road as a Primary Distributor, and elaborate whether it is a conservative assumption. Please also clarify if there is any tunnel portal with vehicular emissions within 200m from the air-sensitive uses of the proposed development.	There is currently no available data for the TMCLK in Traffic Census, 2019 from Transport Department (TD). According to Section 1.2.1.3 of "Tuen Mun Chek Lap Kok Link EIA Report", Tuen Mun Chek Lap Kok Slip Road is a dual 2-lane trunk road. Maximum buffer distance of 20m for Primary Distributor is adopted as a conservative approach.  It is confirmed that there is no tunnel portal with vehicular emissions within 200m from the ASR at Site A.  Section 8.2.1 and Figure 8-1A are revised accordingly.
6	Major Control Measures to minimize the air quality impacts. (a) Suggest to remove the word "Major" and list out all control measures to be implemented. (b) The following additional mitigation measures are recommended to suppress dust from the proposed excavation works: <ul style="list-style-type: none"> <li>Exposed earth shall be properly treated by compaction, turfing, hydroseeding, vegetation planting or sealing with latex, vinyl, bitumen, shotcrete or other suitable surface stabilizer within 6 months after the last construction activity on the construction site or part of the construction site where the exposed earth lies.</li> </ul>	Section 7.1.3- 7.1.4 are revised accordingly.

Comments		Response
	<ul style="list-style-type: none"> <li>The working area of any excavation or earth moving operation shall be sprayed with water or a dust suppression chemical immediately before, during and immediately after the operation so as to maintain the entire surface wet.</li> </ul> <p>(c) Other than the above mitigation measures, electric power supply shall be provided to the on-site machinery as far as practicable for construction activities.</p>	
Land Contamination Assessment		
1	Rtc item (3): Please provide the relevant replies.	The relevant replies are provided in updated Appendix B. The summary of correspondence is presented in updated Table 2.
2	Annex 3.1, Table 1: Please present the land use history of Site C before being used as the elevated highway before 2013.	Site C is located on the elevated highway of TMCLKL above the Lung Mun Road. Based on the information from website of Highways Department (HyD), the construction works of TMCLKL started in 2013. The aerial photos available from the Lands Department show that there is no structure within Site C before the construction of the elevated highway and Site C in 2017.
3	Annex 3.2 : Please present the aerial photos in chronological order.	Noted. The aerial photos in Appendix A are presented in chronological order.
Noise Impact Assessment (NIA)		
	Comments provided in due course.	Noted.
Landfill Gas Hazard Assessment (LFGHA)		
	No further comment on the revised pages.	Noted.
Sewerage Impact Assessment (SIA)		
	No further comment on the revised pages.	Please be clarified that the sewage from the existing Toll Control Building (Catchment A) is discharged at FM1.1, which has been included in the revised capacity check in Appendix 6-3 of DSIA report.
<b>Comments from Buildings Department (BD) (Received on 24 September 2021)</b> <b>(Contact Person: Mr Joseph WONG, Tel: 2626 1427)</b> <b>(By email)</b>		
	<p>There is no record of approval by the Building Authority (BA) for the structures existing at the application site and BD is not in a position to offer comments on their suitability for the use related to the application. BD is not in a position to provide comment on the government lands.</p> <p>I have the following comments under the Buildings Ordinance (BO) and the applicant's attention is drawn to the following points:-</p>	-
(a)	If the existing structures (not being a New Territories Exempted House) are erected on leased land without approval of the BD, they are unauthorized building works (UBW) under the Buildings Ordinance (BO) and should not be designated for any proposed use under the captioned application.	Noted.
(b)	For UBW erected on leased land, enforcement action may be taken by the BD to effect their removal in accordance with BD's enforcement policy against UBW as and when necessary. The granting of any planning approval should not be construed as an acceptance of any existing building works or UBW on the application site under the BO.	Noted.

Comments		Response
(c)	Before any new building works (including open sheds as temporary buildings) are to be carried out on the application site, the prior approval and consent of the BD should be obtained, otherwise they are UBW. An Authorized Person (AP) should be appointed as the co-ordinator for the proposed building works in accordance with the BO.	Noted.
(d)	The site shall be provided with means of obtaining access thereto from a street and emergency vehicular access in accordance with Regulations 5 and 41D of the Building (Planning) Regulations respectively.	Noted.
(e)	If the site does not abut on a specified street of not less than 4.5m wide, its permitted development intensity shall be determined under Regulation 19(3) of the Building (Planning) Regulation at the building plan submission stage.	Noted.
(f)	Detailed comments under the BO will be provided at building plan submission stage.	Noted.
<b>Comments from Chief Highway Engineer/New Territories West, Highways Department (Received on 27 September 2021)</b> <b>(Contact Person: Mr Sammy WONG, Tel: 3526 0036)</b> <b>(By email)</b>		
	Our comments remain valid, in particular KMB's clarification and additional drawings are required for items 7 & 8 and are found outstanding.	Noted, the comments have been incorporated into the revised Master Layout Plans.
<b>Comments from Director of Environmental Protection (Received on 04 October 2021)</b> <b>(Contact Person: Ms. Virginia WONG, Tel: 2835 1109)</b> <b>(By email)</b>		
	In this Further Information, the applicant has only submitted an RtC table and did not provide any updated noise impact assessment nor other documents to support the subject application. We shall therefore <b>reserve our detailed comment until a full submission</b> is made by the applicant.	Noted, the comments have been incorporated into the revised report.
	Nonetheless, we would like to point out to the applicant/consultant that road noise doesn't just come from the engine, but also the impact of tyre on the road, particularly at high speed. Referring to RtC Item no. 3, simply discussing the engine noise of eBus is <b>insufficient to justify that the project will not pose any adverse road traffic noise impact</b> from its induced traffic on the NSRs along the access roads (e.g. Lung Mun Road and Lung Fu Road). The applicant/consultant should review and address the potential noise impact from the travelling buses more thoroughly, and propose measures to minimize the impact if necessary.	<p>As shown in Appendix 3-3, although proposed bus routing will travel through Lung Fu Road and Lung Mun Road, eBus is fully powered by electricity and no engine is required, so its operation is quiet in nature, engine noise is not expected.</p> <p>According to the Traffic Impact Assessment (TIA) under this Planning Application, provision of at least 2 bus queuing space is required, while the available queuing area in Site A can accommodate at least 3 buses which provides adequate spare capacity to handle the peak arrival flows without queuing back to the public road.</p> <p>Besides, the TIA also revealed that the maximum trip generation during operational peak (06:00-07:00) is 134 veh/hr. With reference to Traffic Census 2020, the Annual Average Daily Traffic (AADT) of Lung Fu Road and Lung Mun Road is 16,190 veh/hr and 12,230 veh/hr respectively. The additional traffic flow from the proposed depot during operation peak only contribute around 1% of traffic flow of Lung Mun Road and Lung Fu Road.</p> <p>In view of the sufficient queuing area provided and insignificant increase of traffic flow due to the project, the potential noise impact arising from tyre noise is minimal.</p> <p>Section 7.1.2 to Section 7.1.4 are revised.</p>



Comments		Response
<b>Comments from Highways Department (Received on 29 October 2021)</b> <b>Application No. A/TM/565</b> <b>(Contact Person: Ms Sandra LEUNG, Tel: 3526 0058)</b> <b>(By email)</b>		
1	As per drawing no. EL05, it is noted that 2000mm clearance would be provided underneath the existing footbridge. As no access to the roof was indicated in the drawing, please be reminded that appropriate access ladder/ staircase should be provided for HyD and HyD's contractor to perform inspection/ maintenance works to the existing footbridge. Please also clarify whether parapet would be provided at the roof area.	Noted, no parapet would be provided at roof area, but to ensure the safety of workers during maintenance works, fall arrest system with anchorage would be provided at roof area.
<b>Comments from Chief Town Planner/Urban Design and Landscape, Planning Department (Received on 03 November 2021)</b> <b>Application No. A/TM/565</b> <b>(Contact Person: Ms Isabella TSUI; Tel.: 2231 4846)</b> <b>(By email)</b>		
	Having reviewed the R-to-C and the submitted F.I., it is noted that vertical green panels with climbers are proposed on various levels (from G/F up to 9/F) of the building façade in Site A in the revised Landscape Proposal. Please note our following comments from landscape planning perspective:	-
(a)	(a) Dwg no. DD01- The internal width of the planter tray less than 250mm is too narrow for the sustainable growth of the proposed climbers.	<p>As discussed with PlanD's officer, at least 450mm planter tray will be provided. Please refer to the updated Dwg no. DD01 and extracted below.</p>  <p>DETAIL OF VERTICAL GREENING</p>
(b)	It is noted that vertical green panels are used extensively on building façades on various floors (from G/F up to 9/F). The applicant is reminded of the long-term commitment in providing proper maintenance to the vertical green panels for healthy and sustainable plant growth.	Noted.



	Comments	Response
	The Applicant is reminded that approval of the Section 16 application under Town Planning Ordinance does not imply approval of the site coverage of greenery requirements under APP PNAP-152 and/or under the lease. The site coverage of greenery calculation should be submitted separately to BD for approval.	Noted.
Comments from EPD (Received on 04 November 2021) Application No. A/TM/565 (Contact Person: Ms Ms Virginia WONG, Tel: 2835 1109) (By email)		
Air Quality Impact Assessment (AQIA)		
1	Section 3.1.2. Please rectify the typo of "Tune" in line 1.	Typo in S.3.1.2 is updated accordingly for clarification:  "The Project Site is located at Tuen Mun Chek Lap Kok Tunnel Road and at the east of the <b>Tuen</b> Mun Chek Lap Kok Tunnel Interchange."
2	Section 3.1.4. No sensitive receivers within 500 from project boundary does not tally with the description in Section 6.1.2. Please check and revise.	It is noted that there are 5 nos. of planning and existing air sensitive receivers within the 500m assessment area for air quality impact from the Proposed Development. S.3.1.4 is removed accordingly to avoid confusion.
3	Section 3.1.5. Please clarify the meaning of "tyre charging" in line 4. Tyre pressure checking?	It is clarified that tyre charging is the checking of tyre pressure.
4	Section 7.1.1. Please elaborate on the scale of the excavation works to confirm no significant dust impact would be expected from the proposed development as stated in Section 7.1.5.	It is clarified that no extensive site formation is expected for the Proposed Development. Moreover, excavation work is anticipated to be limited to Site A and Site B of the Proposed Development. In view of this, dust emission from the Proposed Development is anticipated to be localised and limited. S.7.1.2 is included accordingly for clarification:  "It is anticipated no extensive site formation is expected for the Proposed Development. Moreover, deep excavation is not expected at Site A and Site B of the Proposed Development. In view of this, dust emission from the Proposed Development is anticipated to be localised and limited."
5	Section 8.2.1. TMCLK should read <b>TMCLK link</b> in line 2, 4, 5.	The typos in S.8.2.1 are updated accordingly for clarification:  "The Project Site is situated on the TMCLK link, and adjacent to Lung Mun Road. <b>Lung Mun Road is classified as Local Distributor (LD) according to the Traffic Census, 2020 from Transport Department (TD)</b> . There is currently no available data for the <b>TMCLK link</b> in Traffic Census, 2020 from Transport Department (TD). However, according to Section 1.2.1.3 of the "Tuen Mun Chek Lap Kok Link EIA Report [AEIAR-146/2009]), the scope of the <b>TMCLK link</b> comprises of a dual 2-lane trunk road. For conservative approach, <b>TMCLK link</b> is classified as primary distributor (PD) based on the information from the abovementioned EIA report."
6	Section 8.2.2. Please provide source of reference of the road type of Lung Mun Road as Local Distributor.	The source of reference of the road type of Lung Mun Road as local distributor (LD) is from the Traffic Census, 2020 from Transport Department (TD), with the section of Lung Mun Road between Mong Hau Shek and Wu Chui Road classified as LD. The abovementioned section of Lung Mun Road is noted to run at front of the Proposed Development. Section 8.2.1 is updated accordingly for clarification:  "The Project Site is situated on the TMCLK link, and adjacent to Lung Mun Road. <b>Lung Mun Road is classified as Local Distributor (LD) according to the Traffic Census, 2020 from Transport Department (TD)</b> . There is currently no available data for the <b>TMCLK link</b> in Traffic Census, 2020 from Transport Department (TD). However, according to Section 1.2.1.3 of the "Tuen Mun Chek Lap Kok Link EIA Report [AEIAR-146/2009]),

	Comments	Response
		the scope of the <b>TMCLK link</b> comprises of a dual 2-lane trunk road. For conservative approach, <b>TMCLK link</b> is classified as primary distributor (PD) based on the information from the abovementioned EIA report.”
7	Section 8.3 and Figures 8-1, 8-1a to 8-1e. Apart from the open slip road, please note that a buffer of at least 200m shall be allowed from the air sensitive uses at the proposed development from the tunnel portal. Please state this clearly in the section and show the buffer zones in the figures.	<p>It is noted that the tunnel portal of TMCLK slip road is located more than 200m away from the closest boundary of the Project Site. As discussed in S.8.2.3., no air sensitive uses are identified at Site B nor Site C of the Project Site. Sensitive use, i.e. office, will not rely on natural ventilation from openable windows, but instead MVAC for ventilation. Fresh air intake will also be located away from the buffer distance from road traffic emission and industrial emission. In view of the above, no adverse air quality impact on the Proposed Development from tunnel portal emission is anticipated during operation phase. S.8.3.2 is updated accordingly for clarification;</p> <p><b>“As shown in Figure 8-1, the tunnel portal of TMCLK slip road is more than 200m away from the closest boundary of the Project Site. In view of the distance away from the tunnel portal, and with the implementation of the mitigation measures as discussed in Section 8.2.3, adverse air quality impact on the Proposed Development from tunnel portal emission is not anticipated during operation phase.”</b></p> <p>Figure 8-1 is also updated accordingly.</p>
Noise Impact Assessment (NIA)		
1	<p><b>Technical Comment</b></p> <p>Re. S.7.1.4 of the NIA regarding the road traffic noise impact assessment, the consultant should note that it is <u>inappropriate to directly compare the AADT with the peak hour traffic flow</u>. To assess the significance of the road traffic noise contribution of the project, the consultant should compare the overall traffic noise levels at the NSRs along the access roads in the “with project” scenario with the “without project” scenario during the peak hours of the induced traffic (i.e. at late night and early morning as per S.3.1.7 of the NIA) with the induced ebus fleet considered as 100% heavy vehicle. The noise contribution from the road traffic generated by the project will be considered insignificant when the difference in the traffic noise levels is less than 1.0 dB(A). If the noise contribution from the project is found to be significant and the road traffic noise levels at the NSRs will exceed their relevant noise criteria, the consultant/applicant should propose mitigation measures (e.g. traffic management plan to reduce the no. of vehicles travelling to and from the depot at the same time) to minimize the impact.</p>	<p>The review of road traffic noise was conducted to compare the overall traffic noise levels at the NSRs along the access roads in the “with project” scenario with the “without project” scenario during the operation peak hours (i.e. 0600-0700) of the Project. The traffic data adopted in this review was based on the traffic flow of year 2028 in TIA report and advice from project traffic consultant.</p> <p>Representative existing NSRs (Yee Tsui House, Melody Garden, Butterfly Estate and Siu Shan Court) with shortest separation distance from Lung Mun Road are selected for assessment. It is concluded that the difference in traffic noise level for all representative NSRs is 0.9 dB(A), which the noise contribution from the proposed project is considered insignificant (less than 1.0 dB(A)). Hence, mitigation measures are not required. Nevertheless, KMB will carefully schedule the bus fleet to reduce the no. of vehicles travelling to and from the Depot at the same time as far as practicable.</p> <p>Section 7 is updated to include the road traffic noise assessment.</p>
2	Riding on our comment above, the consultant should confirm in the main text that the traffic data has been endorsed by the Transport Department.	It is confirmed the traffic data adopted in this noise review is extracted from TIA submitted to TD.
3	Other than the above, we have two more textual comments for tidying up the NIA as given below.	-
4	<p><b>Textual &amp; Presentation Comment</b></p> <p>S.3.1.6, S.6.1.3 and S.9.1.2 – Note that potential noise sensitive uses (e.g. protection/control room) have been proposed at Site B. For simplicity and easier interpretation, the applicant should confirm in the main text that all noise sensitive uses in the proposed developments, such as ancillary office and protection/control room, will be served with mechanical ventilation and will not rely on opened window/door for ventilation. Otherwise, the applicant should address the potential noise impact on the noise sensitive uses at the proposed development.</p>	<p>Noted, please be confirmed that the all noise sensitive uses in the proposed developments, such as ancillary office and protection/control room, will be served with mechanical ventilation and will not rely on opened window/door for ventilation.</p> <p>This is clarified in main text S.3.1.6, S.6.1.3 and S.9.1.2.</p>
5	S.7.1.2 – Should “Appendix 3.1” read as “Appendix 3.3”?	Noted, typological error is updated in S7.1.1.
Sewerage Impact Assessment (SIA)		

Comments		Response
1	For Site A, as the sewage generated includes overflow of water from vehicle washing system, petrol interceptor should be installed in Site A to prevent the oil or petrol from discharging into public sewer.	Noted, S6.2.3 is updated as follow. “... In view of the overflow of water from vehicle washing machines, petrol Interceptor will be installed in Site A to remove oil or petrol before being discharged into public sewer. The petrol interceptors should be regularly cleaned and maintained in good working condition. Oily waste collected by petrol interceptors is considered and disposed of as chemical waste.”
2	For Site B and Site C, as the applicant confirmed no sewage generation is expected, we have no further comment.	Noted.
Landfill Gas Hazard Assessment (LFGHA)		
1	Section 3.4 – (i) Besides the mitigation measures mentioned in section 3.4, precautionary and safety measures to be adopted during construction and operation phase for the identified targets within the consultation zone of PPVL should be included the report.	The precautionary, safety and protection measures to be adopted during the construction and operation phase mentioned in Landfill Gas Hazard Assessment Guidance Note (EPD/TR8/97) shall be recommended for implementation.  The precautionary, safety and protection measures to be adopted in Site B during construction phase and operation phase are discussed in Section 3.4.2.
	(ii) Monitoring requirements, programme and contingency plan related to landfill gas during construction and operational phase should be included in the report.	Monitoring will be carried out according to the Landfill Gas Hazard Assessment Guidance Note (EPD/TR8/97).  During the construction, the monitoring requirements, programme and contingency plan will be set down by the Safety Officer or by an appropriately qualified person. Please refer to S3.4.3 to S3.4.6 of the updated report.  During the operation phase, the majority of maintenance workers and supporting staffs in Site A will work in outdoor environment (i.e. enclosed depot with vast openings at façades) which mainly rely on the natural ventilation. Monitoring is considered as not necessary in Site A. In Site B, some maintenance workers and supporting staffs will work in the enclosed rooms within the substation. The monitoring arrangement will be adjusted during the detailed design stage. Please refer to S3.4.7 to 3.4.8 of the updated report.
Site Appraisal Report		
1.	Table 1, Site C (a) Structures were observed in the aerial photo of 1994 shown in Appendix A.	The aerial photo of Year 1994 in Appendix A is updated with correct scale. Please be clarified that the elevated highway of Site C has not yet existed and no structure was observed within Site C before 2013. Please refer to the updated Appendix A and updated Table 1 of the Site Appraisal Report.
	(b) Please present the landuse changes between Year 1979 and Year 2013 according to the aerial photos shown in Appendix A.	Site C is located on a newly formed elevated highway of TMCLKL. The newly formed elevated highway has not yet existed and no structure was observed within Site C before 2013. The Lung Mun Road is located beneath the elevated highway since 1980s. Table 1 of the Site Appraisal Report updated accordingly.  Please be clarified that the entire Site C will be used for bus parking area in the future. No excavation work will be carried out within Site C and beneath the elevated highway. Thus, the landuse changes beneath the elevated highway between Year 1979 and Year 2013 is not necessary in this Site Appraisal Report.
2.	Section 5.1.2: Please also present the findings from the TMCLKL EIA report regarding the potential land contamination sources of the open storage area of Site A.	The findings from the TMCLK EIA report regarding the potential land contamination sources of the open storage area of Site A is presented in S5.1.2 and listed below. The relevant part of TMCLK EIA report is also extracted in Appendix I for reference.

	Comments	Response
		<p>S5.1.2 "According to the aerial photos available from the LandsD, part of Site A was used for open storage since 1994. Section 13.4.2.7 and Table 13.2 of TMCLKL EIA also stated that part of Site A was used for open storage since 2004 and no potential contamination hotspots have been identified within this area. The extracted TMCLKL EIA is shown in Appendix I. Site A was then converted to the toll plaza of TMCLKL in 2013 until now."</p> <p>The findings from the TMCLK EIA report showing no contamination issue within the whole toll plaza (i.e. Site A and Site B) are also added in S5.1.4 and listed below.</p> <p>S5.1.4 "According to the Section 13.4.2.11 and Table 13.4 of TMCLKL EIA, the toll plaza would be constructed on the land occupied by the River Trade Golf at Tuen Mun Area 46 (i.e. Site B) and part of the rural hill slopes immediately outside the boundary of the closed Pillar Point Valley Landfill (i.e. Site A). Based on the historical, existing land use and the on-site photos shown in Figure 13.21 of TMCLKL EIA, no contamination issue would be anticipated. Relevant sections extracted from TMCLKL EIA are shown in Appendix I."</p>
<b>Comments from Planning Department (Received on 04 November 2021)</b> <b>Application No. A/TM/565</b> <b>(Contact Person: Mr Justin HO; Tel.: 2231 4941)</b> <b>(By email)</b>		
2	The submitted visual appraisal has demonstrated that the proposed developments are situated in the area predominated by industrial related activities such as shipbuilding or warehouses and some infrastructural facilities such as TM-CLK Link. As such, the proposed development is not considered incompatible with the surrounding environment from visual impact viewpoint. However, some of our previous comments on this application have not been properly addressed yet, which are recapped below together with our comments on the current submission from urban design and visual impact perspectives for your consideration.	<p>Noted. The proposed mitigation measures have been considered to minimize the visual impacts from the nearby visual impact viewpoint.</p> <p>The comments have been addressed, please refer to the updated landscape proposal and the response to comment below.</p>
3	<b><u>Responses-to-Comments</u></b> R-to-C, Item 5(a) – Like the layout plans for Sites A and C, please annotate the site boundary of Site B on the respective layout plans for easy reference.	The site boundary of Site B is added on the respective layout plans for easy review. Please refer to AA07 and AA08 for the layout of Site B.
4	R-to-C, Item 5(c) – The height of rooftop structures is not indicated. Please check and review.	The height of rooftop structures is indicated in the sectional drawings (DWG No. EL01 to EL04).
Visual Impact Assessment		
5	<b><u>General Comments</u></b> The analysis on visual impacts of all three sites needs more improvements. With reference to para. 3.2.5, only the visual impact of one building block is discussed without indicating which site is Site A and Site B and their building heights. Please ensure that the visual impacts for all three sites are properly discussed according to the photomontages. Also, visual appraisal for each VP should be provided and our further comments can be seen at para. 10 below.	The visual impacts for all three sites have been evaluated. According to the photomontages shown in Appendix C of the landscape proposal, the visual appraisal for three VP is provided in S3.2.5 of the updated landscape proposal.
6	6. The applicant should provide an evaluation and conclusion of the overall visual impact of the selected VPs and follow the classifications within a range of threshold (e.g. significantly adverse, moderately adverse, slightly adverse etc.) established in the TPB PG-No. 41.	<p>The visual impacts for from three VP are evaluated in S3.2.5 of the landscape proposal. The overall visual impact of the selected VPs is identified in S3.2.6 to S3.2.8 and extracted below</p> <p>3.2.6 "From the photomontage illustrations, the proposed 11-storey building and 2-storey power substations at Sites A and B are largely in keeping with the surrounding transport corridor and does</p>

	Comments	Response										
		<p>not exceedingly block the northerly view towards the slopes. It is therefore also expected that the visual impacts shall be acceptable with the proposed architectural design style of the building enhanced by green façade treatment.”</p> <p>S3.2.7 “Site C is proposed to be used for charging-enabling bus parking bays. The landscape characteristics shall remain the same as the surrounding transportation corridor and the charging facilities are not expected to impose any significant visual impacts to public viewers.”</p> <p>S3.2.8 “Taking into account all the above considerations, the overall visual impact of the proposed developments at the Project Sites is <b>slightly adverse</b>.”</p>										
7	<p><b>Specific Comments</b></p> <p>Para. 3.1.5 and Figure 5 – As the proposed VE includes part of sea water area near Tuen Mun Area 40, please consider whether it should be looked upon as a key visual element accordingly.</p>	<p>The sea is considered as a key visual element. S3.1.10 (former S3.1.5) is updated as below: “The key visual elements that could be seen from the site area include the vegetated hills to the north that has the ridgeline of Castle Peak as a backdrop, and the roadside vegetation as foreground. Towards the west and south are generally low-rise development and the open sky is generally visible. <b>The ocean may also be seen from the coastline, upper stories of buildings, and from the higher elevations from the hills.</b>”</p>										
8	<p>Para. 3.1.6 and Appendix C, VP3 – According to the schematic master layout plan, the viewing angle of VP3 that represents the public viewers from Ho Suen Street is not tallied with the photomontage which was taken at another viewpoint. Please check the submitted photomontage and clarify.</p>	<p>The photomontage at VP3 (from Ho Suen Street) is updated, please refer to Appendix C of the landscape proposal.</p>										
9	<p>Para. 3.2.4 and Figure 5 – The proposed developments would include a maximum height at about 102.5mPD at Site A while the site formation level at the Tuen Mun Area 46 to the north and west of Site A is around 10mPD to 62mPD. Given this rationale, the scale of the proposed development would be visible from Tuen Mun Area 46. Please check and revise if necessary.</p>	<p>As mentioned in S1.2.7, no committed or planned developments are identified in the vicinity of the Project Sites. Thus, no residences and recreational sites within the visual envelope is assumed in this assessment.</p>										
10	<p>Para. 3.2.5 –</p> <p>a. Please beef up the visual appraisal of change for each VP with reference to TPB PG-No.41. For example, visual changes such as the obstruction towards greenery backdrop, ridgeline and sky open as shown in the photomontages should be reflected in the discussion. Their cumulative visual impacts of all three sites should also be covered in the discussion.</p>	<p>S3.2.5 is updated accordingly. A table showing the visual changes is supplemented and extracted below.</p> <table><tr><th>View Point (Distance from Site in metres)</th><th>Visual Composition</th><th>Visual Obstruction</th><th>Effect on Public Viewers</th><th>Effect on Visual Resources</th></tr><tr><td>VP1 (50m)</td><td>The proposed 11-storey building (Site A) and 2-storey power substation (Site B) is largely in keeping with the overall character of the surrounding infrastructural landscape.</td><td>The proposed development partially blocks the hills in the background and the open sky.</td><td>Although there are some blockage to the hills and open sky, the effect on public viewers are expected to be slight as the impacted viewers are largely vehicular travelers and the duration of impact is very short.</td><td>Partial blockage of the hills and open sky.</td></tr></table>	View Point (Distance from Site in metres)	Visual Composition	Visual Obstruction	Effect on Public Viewers	Effect on Visual Resources	VP1 (50m)	The proposed 11-storey building (Site A) and 2-storey power substation (Site B) is largely in keeping with the overall character of the surrounding infrastructural landscape.	The proposed development partially blocks the hills in the background and the open sky.	Although there are some blockage to the hills and open sky, the effect on public viewers are expected to be slight as the impacted viewers are largely vehicular travelers and the duration of impact is very short.	Partial blockage of the hills and open sky.
View Point (Distance from Site in metres)	Visual Composition	Visual Obstruction	Effect on Public Viewers	Effect on Visual Resources								
VP1 (50m)	The proposed 11-storey building (Site A) and 2-storey power substation (Site B) is largely in keeping with the overall character of the surrounding infrastructural landscape.	The proposed development partially blocks the hills in the background and the open sky.	Although there are some blockage to the hills and open sky, the effect on public viewers are expected to be slight as the impacted viewers are largely vehicular travelers and the duration of impact is very short.	Partial blockage of the hills and open sky.								

Comments		Response				
		<b>VP2 (50m)</b>	The proposed 11-storey building (Site A) and 2-storey power substation (Site B) is largely in keeping with the overall character of the surrounding infrastructural landscape.	The proposed development partially blocks the hills in the background and the open sky.	Although there are some blockage to the hills and open sky, the effect on public viewers are expected to be slight as the impacted viewers are largely vehicular travelers and the duration of impact is very short.	Partial blockage of the hills and open sky.
		<b>VP3 (200m from Sites A and B; 100m from Site C)</b>	Only the upper stories of the new building of Site A can be seen from this angle, as the lower levels are hidden by trees. The proposed is largely in keeping with the overall character of the surrounding infrastructural (and industrial) landscape.	The proposed development limitedly blocks the open sky.	From this distance, the blockage to the open sky is rather small and there is expected to be very small number of impacted viewers. The effect on public viewers is expected to be slight.	Limited blockage of the open sky.
		The cumulative visual impacts of all three sites are also evaluated in S3.2.6 to S3.2.8 and extracted below: 3.2.6 “From the photomontage illustrations, the proposed 11-storey building and 2-storey power substations at Sites A and B are largely in keeping with the surrounding transport corridor and does not exceedingly block the northerly view towards the slopes. It is therefore also expected that the visual impacts shall be acceptable with the proposed architectural design style of the building enhanced by green façade treatment.”  S3.2.7 “Site C is proposed to be used for charging-enabling bus parking bays. The landscape characteristics shall remain the same as the surrounding transportation corridor and the charging facilities are not expected to impose any significant visual impacts to public viewers.”  S3.2.8 “Taking into account all the above considerations, the overall visual impact of the proposed developments at the Project Sites is <b>slightly adverse</b> .”				
b. Please explain how the proposed building orientation would effectively minimize the visual impact.		The description of building orientation has been removed. S3.2.6 (former S3.2.5) is updated as below. “From the photomontage illustrations, the proposed 11-storey building and 2-storey power substations at Sites A and B are largely in keeping with the surrounding transport corridor and does not exceedingly block the northerly view towards the slopes. It is therefore also expected that the visual impacts shall be acceptable <b>with the proposed architectural design style of the building</b>				



	Comments	Response
		<b>enhanced by green façade treatment.”</b>
11.	Para. 3.2.6 – a. It is noted in para. 1.2.7 that there is no committed or planned developments in the vicinity, but the potential development sites for housing development and other beneficial uses in Area 46 and 40 are discussed in this paragraph. Please clarify their inconsistency.	Former S3.2.6 is removed. As mentioned in S1.2.7, no committed or planned developments are identified in the vicinity of the Project Sites. Thus, no residences and recreational sites within the visual envelope is assumed in this assessment.
	b. Please provide more details of the “other mitigation measures” and elaborate how they would effectively minimize the visual impact.	Former S3.2.6 is removed. As mentioned in S1.2.7, no committed or planned developments are identified in the vicinity of the Project Sites. Thus, no residences and recreational sites within the visual envelope is assumed in this assessment.  Please note that the proposed mitigation measures within the Site A mentioned in Section 4 has been maximized to reduce the visual impact.
12	Appendix C, Photomontages – The consultant should improve the photomontages with reference to TPB PG-No. 41 as follows: a. VP1 – The photomontages of existing and future views should be taken in the same viewing angle in order to demonstrate the visual impact of the proposed development. Please check and review.	Existing and future views at the same viewing angle are adopted in the updated photomontage. Please refer to Appendix C of the updated landscape proposal.
	b. VP3 – i. Please provide a site photo of existing view for this VP. ii. As mentioned in para. 8 for VP3 above, the photomontage is not viewing from the proposed location as illustrated in the Schematic Master Layout Plan.	i. Existing view of VP3 is provided. ii. The photomontage at VP3 (from Ho Suen Street) is updated, please refer to Appendix C of the landscape proposal.
	c. The proposed mitigation measures should be indicated in the photomontages for easy reference. For example, the proposed planting on G/F are not shown in the photomontage for VP1.	The proposed mitigation measures (e.g. planting on G/F and vertical greening) are shown in the updated photomontage. Please refer to Appendix C of the landscape proposal.
	d. Please include a legend for each photomontage.	Legend is provided in the updated photomontage.
13.	Drawing Nos. EL06 to EL08 – It is unclear about the purposes of the dotted lines in the elevations. The outlook of proposed building mass should be outlined for identification and verification.	Please be clarified that the dotted line is the grid line and the floor level line. The outlook of proposed building mass has been outlined in the drawings.

Comments		Response
<b>Comments from Environmental Protection Department (Received on 24 November 2021)</b> <b>Application No. A/TM/565</b> <b>(Contact Person: Ms Josephine CHAU, Tel: 2835 1120)</b> <b>(By email)</b>		
1.	<u>Air Quality Impact</u> Figure 8-1A. The consultant is suggested to remove the 20 m buffer distance from the Tuen Mun Chek Lap Kok link Tunnel Portal in Figure 8-1A since it is incorrect. In addition, please clarify if the chimney of Siu Lan Shui Landfill has really 200m buffer distance from the boundary of Site A since it is inside the red circle and within the 200m buffer zone.	The 20 m buffer distance from the Tuen Mun Chek Lap Kok link Tunnel Portal is removed in updated Figure 8-1A.  Please be clarified that part of Site A is located within the 200m buffer zone of <b>Pillar Point Valley Landfill</b> . As mentioned in S8.4.3, sensitive use, i.e. office in Site A, will not rely on natural ventilation from openable windows, but instead MVAC system for ventilation. The fresh air intake location for sensitive uses (i.e. office in Site A) will be located away from the buffer zones. With careful planning, no adverse air quality impact on the Proposed Development is anticipated during operation phase.
<b>Comments from Highways Department (Received on 25 November 2021)</b> <b>Application No. A/TM/565</b> <b>(Contact Person: Ms Sandra LEUNG, Tel: 3526 0058)</b> <b>(By email)</b>		
1.	Reply to our previous comments on "appropriate access ladder/ staircase should be provided for HyD and HyD's contractor to access the roof area to perform inspections/ maintenance works to the existing footbridge" was outstanding.	Noted, appropriate access ladder / staircase will be provided.
2.	It is noted that parapet will not be provided at the roof and the workers will have safety risk of falling from height. The design of the proposed fall arrest system at the roof area such as the anchor and lifeline should be installed at two side of the footbridge to allow the workers with PPE to walk freely along the underside of footbridge during inspection and maintenance.	Noted.
3.	Please also indicate the remaining spaces between the building facade and the existing footbridge at drawing no. EL05.	Refer to your request, 2m clearance will be provided between the building facade and the existing footbridge.
<b>Comments from Environmental Protection Department (Received on 25 November 2021)</b> <b>Application No. A/TM/565</b> <b>(Contact Person: Ms Josephine CHAU, Tel: 2835 1120)</b> <b>(By email)</b>		
1.	<u>Noise</u> We have no adverse comment on the FI, subject to TD's endorsement of the TIA. For the sake of completeness, the consultant should mention in the main text that the traffic data adopted in the NIA is extracted from the Project's TIA which has been endorsed by TD.	Please be confirmed that the traffic data adopted in the NIA is extracted from the Project's TIA which has been endorsed by TD. S7.2.2 is revised for clarification.

Public Comments	Response
<b>Comments from Public (Received on 3 August 2021, 17:45:20)</b> <b>(Contact Person: Mr. Cheung , Ref No. 210803-174520-57462)</b>	
大量巴士守候入廠，所引致的車龍，很大機會會阻礙時速每小時高達 110 公里的車流，為高速公路帶來高度危險。	擬建項目為電巴士車廠，巴士返回車廠時不需要輪候入油，不會引致車龍於車廠外。此外，車廠出入口設於巴士專線路段，對公路其他行車線路段的車流不會造成影響。請知悉公路路段時速限制為 80 公里 (往機場方向)及 50 公里 (往屯門方向)。
<b>Comments from Public (Received on 04 August 2021, 23:25:08)</b> <b>(Contact Person: Mr. Wong , Ref No. 210804-232508-15488)</b>	
是否只用於泊車及維修用途? 九巴經常性使用車廠用作其他用途(例如:迷你倉)必要列明禁止有寫字樓及其他商業用途。	車廠一般用作: 洗車、泊車、維修及員工辦公室，而是必須。如需要進行其他商業用途，九巴會按法例要求各有關政府部門申請。
<b>Comments from Public (Received on 19 August 2021, 12:56:09)</b> <b>(Contact Person: Mr. Fung Ka Yu , Ref No. 210819-215609-82951)</b>	
本人想問下 11 層高的巴士廠會否加設冷氣設施給予維修員工去進行維修工作，因為有不少員工長時間在炎熱的地方工作好容易中暑，本人希望貴公司興建新車廠時是否應該加設冷氣設施給予員工一個舒適的地方工作。	會按法例要求，提供合適通風設備及或空調設備。
<b>Comments from Public (Received on 24 August 2021, 22:29)</b> <b>(Contact Person: Mary Mulvihill)</b>	
Strong objections. This facility is a recharging/parking facility that can be situated in any number of locations. KMB is a subsidiary of Sun Hung Kai. At one time it had large facilities that have gradually been hived off for residential development. No doubt in due course this waterfront site could in due course be redeveloped. Why is our government that says there is a shortage of land giving a large site like this to a property developer with a large land bank, some of which is brownfield that could be redeveloped and used to accommodate this depot. As public housing development proceeds, many small storage and other operators will be forced to relocate. This site is behind an industrial zone. It could and should be used as a dedicated industrial park that amalgamates operators in the same field. The only palatable outcome to selling this site to KMB, hopefully at full market value and not under some government handout on the excuse that it is promoting green energy or such, would be a land exchange for lots that can be developed into public housing. The Central Government has mandated a more equitable society. Government land must be used for the public benefit not to line developer packets.	To cope with housing problem, the existing Tin Shui Wai depot and Wang Lok Street bus parking sites are to be returned to the Government by 2022. TM – CLK free-up areas were granted to KMB by Government in July 2021 as replacement under short term tenancy.  To optimize the land resource, KMB applied to build a multi-storey depot with an aim to absorb the overnight parking at termini and on-street at Yuen Long District, which can relieve bus security and public nuisance problem. It can also accommodate electric bus charging facilities to cater for the electric bus strategy.
<b>Comments from Public (Received on 24 August 2021, 23:17:43)</b> <b>(Contact Person: 九巴財技關注組 , Ref No. 210824-231743-99276)</b>	
本人對有關申請有以下意見: 1. 關於交通評估(TIA)，有關對交通的評估，本人認為極有疑問。擬建的新車廠為於屯赤隧道主幹道上，即使製造輕微的擠塞或額外的車流，亦足以對主幹道及連接道路(例如經常為人詬病的龍門路迴旋處，以及皇珠路一帶)，特別是 TIA 未有涵蓋皇珠路的交通流量。巴士作為重型車輛，所帶來的車流影響實在是不可忽視。	1. 擬建項目的車輛出入口將會位於屯門赤鱸角連接路的巴士專線上以供出入車廠的巴士專用，而非直接連接屯門赤鱸角連接路的主幹道上。加上車廠的巴士大部分於上午繁忙時間之前和下午繁忙時間之後進出車廠。因此，擬建項目的交通流量預計對屯門赤鱸角連接路的影響甚微。  根據提交的交通影響評估報告中的表 4.2 和 4.3，研究已就龍門路/龍富路迴旋處及皇珠路的運作表現進行了容量分析，以評估擬建項目對以上路口及道路的影響。評估結果顯示，擬建項目在上下午高峰時段對交通造成的影響甚微。

Public Comments	Response
<p>2. TIA 完全依賴九巴提供的數據，但數據可信性成疑。根據九巴的數據，巴士回廠時間分散，與現時九巴營運模式不吻合。根據現時主要專利巴士營運情況，巴士回廠時間主要集中在晚上 11 時至凌晨 1 時之間，排隊等候洗車的車輛往往有數十輛至多。即使電動巴士不需入油，但是仍然需要洗車，所產生的車龍與傳統巴士並沒有分別。</p> <p>此外，電動巴士技術雖然已發展多年，但仍未完全成熟，因電池容量限制，本地、國內及海外經驗都顯示，電動巴士在上下午之間的非繁忙時段需要回廠充電，估計未來 10 年都不會有重大的技術突破，特別是在雙層冷氣電動巴士的使用。但 TIA 完全沒有估算中午回廠充電帶來的額外車流。(即使九巴在巴士總站興建額外充電站，亦只能緩解部分需要)</p> <p>3. 車廠是否真的只停泊電動巴士？根據九巴日前公佈，未來五年九巴打算興建兩個電動巴士車廠，可以停泊 800-1000 輛巴士(佔九巴全車隊達四份一)，即是相信還有另外一個在本申請以外的車廠。但是九巴購入電動巴士的計劃，相信難以達到在 2025 年便有一千部電動巴士投入服務。運輸署對專利巴士數量有嚴格控制，相信電動巴士將不會是車隊的額外部份，因此有理由相信九巴車隊全電動化前，申請書內的車廠亦會停泊傳統柴油巴士。申請人應交待停泊傳統巴士的污染問題(例如車上油缸泄漏)及舒緩措施。</p> <p>4. 申請書內提及用地曾於 2021 年先用作重置元朗及天水圍的車廠，但沒有提及興建多層巴士廠期間如何安置有關數量過百個的巴士車站。</p> <p>5. VIA 中的 block view 中，有關模擬圖並不合比例。在其他分析中，都是以巴士廠離地高 30 米作估算，但是一部雙層巴士高約 4.5 米，一般巴士廠每層的樓底高度約六米，十層高的巴士車廠等同高 60 米左右，高度就大約等於 Block view 中較近的一支電塔的塔頂位置。</p> <p>6. 一般的大型巴士廠(包括香港現存所有多層巴士廠)都會在不同的道路上設置超過一個出入口，以減低某個出入口因意外或其他外在因素而受阻，繼而影響公共交通服務的風險。不過在這個停泊超過 300 部巴士的車廠，卻只有一個位於相同地方的出入口，這個設計令人震驚。一旦該處發生事故(包輕微的堵塞事故)，數以百計的巴士便無法進出車廠，足以癱瘓等同數十條巴士路線的公共交通服務。</p> <p>此外，新多層巴士廠的進出路線是靠單一道路，特別是離開車廠的道路完全沒有緊急替代道路，一旦屯門赤鱗角公路往屯門出口有任何事故，包括經常有意外的龍門路的迴旋處，同樣地數以百計的巴士便無法離開車廠，嚴重影響公共交通服務。</p> <p>而巴士廠亦將會成為香港(甚至全世界)泊車層數最多的巴士廠，但每層之間只有一條行車通道，萬一低層通道有意外，將會影響大量巴士。</p> <p>7. 雖然巴士公司一般會安排職員巴士接載巴士車長來往巴士車廠上下班，但是現時的大型車廠基本上都是位於行人或單車可達的位置。但是新的巴士廠位於屯門赤鱗角公路範圍內，亦有班次稀疏的巴士路線途經，但該處目前並沒有行人路或單車徑連接其他道路，每天數以百計的巴士車長無法選擇靠步行或騎單車前往車廠上下班，有違環保出行的原則。建議政府應該考慮在屯門赤鱗角公路轉車站增設行人路來往龍門路以便行人及單車來往車廠及轉車站。</p>	<p>2. 擬建項目的每日交通產量和分布是參考及根據現有其他同類型巴士車廠的客觀數據來估算。根據提交的交通影響評估報告中的第 2.5 節，建議的 4 個洗車機數量應足以容納在高峰時段進入的巴士。若所有洗車機都同時被佔用，車廠工作人員將會引導等候洗車的巴士，臨時使用車廠內的 3 個巴士空位，以確保擬建項目外不會出現排隊情況。</p> <p>現時政府正大力推動電動車，並規定新興建的公共運輸交匯處均須配置巴士充電設施以便利電動巴士充電。在該政策和新充電設施的配套下，估計大部分的電動巴士未來在服務期間可以使用各區的公共運輸交匯處補充電力，並不會因要回廠充電而帶來額外車流。</p> <p>3. 電巴車廠只會停泊電巴士，不會產生傳統巴士的污染問題。</p> <p>4. 於車廠建設期間，SITE C 不會有工程進行，大約有 60 個車位可供巴士泊車，另外九巴會與政府商討以其他臨時用地以作餘下巴士泊車之用。</p> <p>5. 模擬圖已按比例修改。</p> <p>6. 九巴層經向政府要求車廠需要有緊急出入口及提交方案，但政府拒絕方案。有關車廠內部車路設計，現時所有車廠均只有一條行車路上落樓層，單一方向行駛以減少車廠內意外是為正常設計。</p> <p>7. 多謝建議，請轉介有關政府部門。</p>

Air Quality Impact Assessment (AQIA)

**Table 1**      **Identified ASRs within 500m area of the Project Site**

ASR ID	Location / Development	Shortest Distance from Project Site Boundary (m)	Closest Part of Project Site	Land Use
Subject Site	Site A of the Proposed Development	- <sup>[1]</sup>	- <sup>[1]</sup>	Commercial
ASR 1	Butterfly Beach Laundry	184	Site A	Industrial
ASR 2	Tuen Mun Vehicle Servicing Station	394	Site B	GIC
ASR 3	Customs And Excise Department Harbour and River Trade Division	304	Site B	GIC
ASR 4	Pillar Point Fire Station	71	Site C	GIC
Note: <sup>[1]</sup> : The ASR is within the Project Site				

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#### Air Quality Impact Assessment (AQIA)

Activities in the construction phase would have potential impact to the surrounding ASRs:

- Excavation;
- Foundation;
- Temporary storage of materials; and
- Handling and transportation of materials.

Major Control Measures to minimize the air quality impacts:

- Skip hoist for material transport should be totally enclosed by impervious sheeting.
- All dusty materials should be sprayed with water prior to any loading, unloading or transfer operation so as to maintain the dusty materials wet.
- All stockpiles of aggregate or spoil should be covered and/or water applied.
- The height from which excavated materials are dropped should be controlled to a minimum practical height to limit fugitive dust generation from unloading.
- Every vehicle should be washed to remove any dusty materials from its body and wheels before leaving the construction sites.
- The load of dusty materials carried by a vehicle leaving a construction site should be covered entirely by clean impervious sheeting to ensure dust materials do not leak from the vehicle.
- Provision of hoarding of not less than 2.4m high from ground level along the length of the site boundary except for the site entrance or exit.



Air Quality Impact Assessment (AQIA)

**Table 2**      **Buffer distance from the Nearby Tunnel Portal**

Road Name	Road Type	HKPSG Guideline Distance Requirement	Buffer
TMCLK slip road	Primary Distributor	20m	

Landfill Gas Hazard Assessment

**Table 1** *Summary of PPVL Gas Monitoring Results from Feb 2020 to Feb 2021*

Monitoring Locations	Methane (% v/v)		Carbon Dioxide (% v/v)	
	Range (%)	Average (% of readings <0.1)	Range (%)	Average (% of readings <0.1)
P5	0.0 – 0.3	0.03	0.1 – 2.7	1.32
GM1	0.0	0.0	6.6 – 11.2	8.67
GM2	0.0	0.0	5.9 – 10.1	8.48
GM4	0.0 – 0.1	0.01	1.6 – 6.1	4.52
GM5	0.0	0.0	2.7 – 8.2	4.61
GVQ1	0.0	0.0	1.9 – 9.4	5.95
GVQ2	0.0	0.0	0.1 – 9.8	4.65
GVQ3	0.0	0.0	0.1 – 4.5	2.33

**Table 2** *Comparison of the Available Landfill Gas Monitoring Data*

Landfill gas monitoring data	Range of average carbon dioxide (%v/v)
TMCLKL EIA	1.2 – 8.9
Updated landfill gas monitoring data (from February 2020 to February 2021)	1.32 – 8.67

Landfill Gas Hazard Assessment

**Table 3 Qualitative Risk Assessment Matrix**

Source	Pathway	Targets	Risk
Pillar Point Valley Landfill ( <b>Medium</b> ) According to the approved TMCLK EIA, the source of PPVL is classified as Medium	During Construction		
	Over 100m away from PPVL, no fault/fissure, no man-made conduit <b>(Long / indirect)</b>	<u>Site A and Site B</u> Construction workers, well trained and follow specific safety procedures, mainly outdoor works <b>(Low sensitivity)</b>	<b>Very Low</b>
		<u>Site A and Site B</u> Well trained site office staff and follow specific safety procedures, indoor environment <b>(Medium Sensitivity)</b>	<b>Low</b>
	During Operation		
	Over 100m away from PPVL, no fault/fissure, no man-made conduit <b>(Long / indirect)</b>	<u>Site A</u> Majority of Maintenance workers and supporting staffs worked in outdoor environment (i.e. enclosed depot with vast openings at façades at Site A) <b>(Low sensitivity)</b>	<b>Very Low</b>
		<u>Site B</u> Maintenance workers and supporting staffs worked in indoor environment (i.e. enclosed rooms within substation at Site B) <b>(Medium sensitivity)</b>	<b>Low</b>

Landfill Gas Hazard Assessment

**Table 4**      ***Implication and Protection Measures***

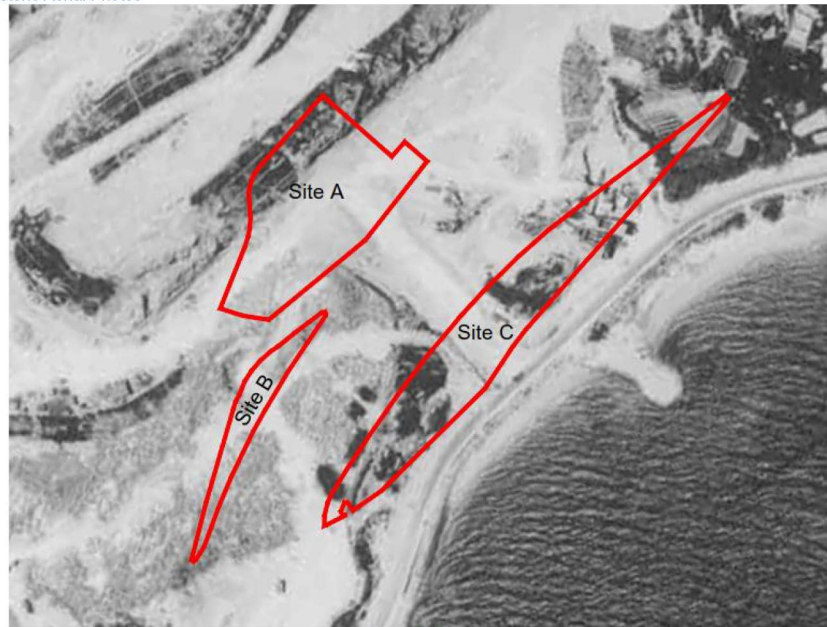
Targets	Level of Risk	Implication
During Construction phase		
General Works (Outdoor)	Very Low	The risk is so low that no precautionary measures are required.
Site Office (Indoor)	Low	Some precautionary measures* will be required to ensure that the planned development is safe.
During Operation phase		
Site A: Daily operation (mainly in outdoor environment)	Very Low	The risk is so low that no precautionary measures are required.
Site B: Daily operation (mainly in indoor environment)	Low	Some precautionary measures* will be required to ensure that the planned development is safe.
Remarks  * Required Precautionary measures includes the passive control of gas only.  Provision of barriers to the movement of gas e.g. membranes in floors or walls, or in trenches, coupled with high permeability vents such as no-fines gravel in trenches or voids/permeable layers below structures.		

Project No. 1906

Proposed Bus Depots with Ancillary Public Utility Installation (Electricity Substation) in area shown as 'Road', Government Land in D.D. 138 and D.D. 300, Tuen Mun, New Territories (near the building at 20 Tuen Mun Chek Lap Kok Tunnel Road)

Annex 3.1

Historic Aerial Photos



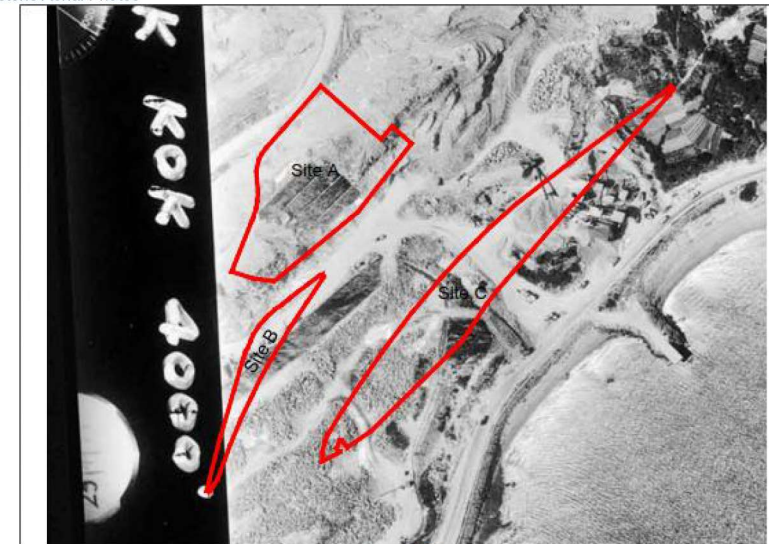
Year 1980

Project No. 1906

Proposed Bus Depots with Ancillary Public Utility Installation (Electricity Substation) in area shown as 'Road', Government Land in D.D. 138 and D.D. 300, Tuen Mun, New Territories (near the building at 20 Tuen Mun Chek Lap Kok Tunnel Road)

Annex 3.1

Historic Aerial Photos



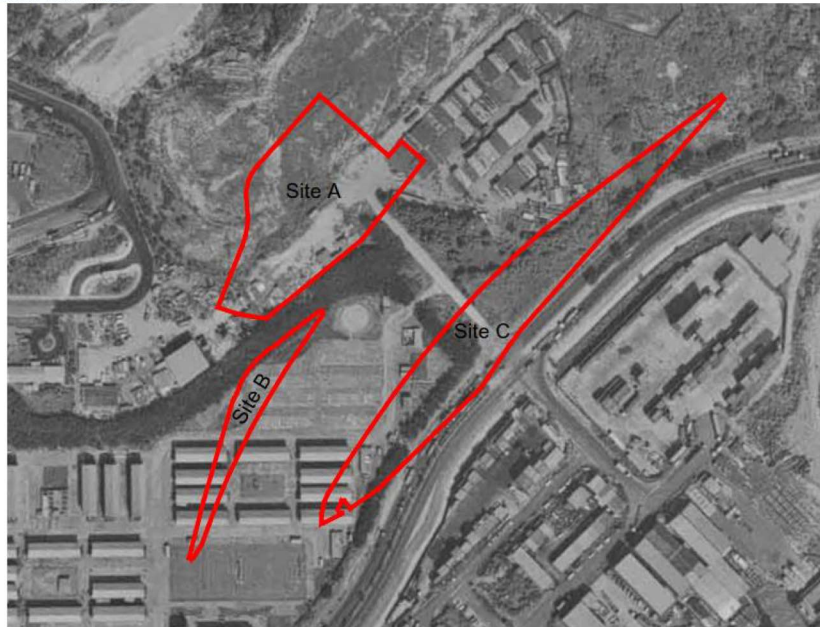
Year 1979

Project No. 1906

Proposed Bus Depots with Ancillary Public Utility Installation (Electricity Substation) in area shown as 'Road', Government Land in D.D. 138 and D.D. 300, Tuen Mun, New Territories (near the building at 20 Tuen Mun Chek Lap Kok Tunnel Road)

Annex 3.1

Historic Aerial Photos



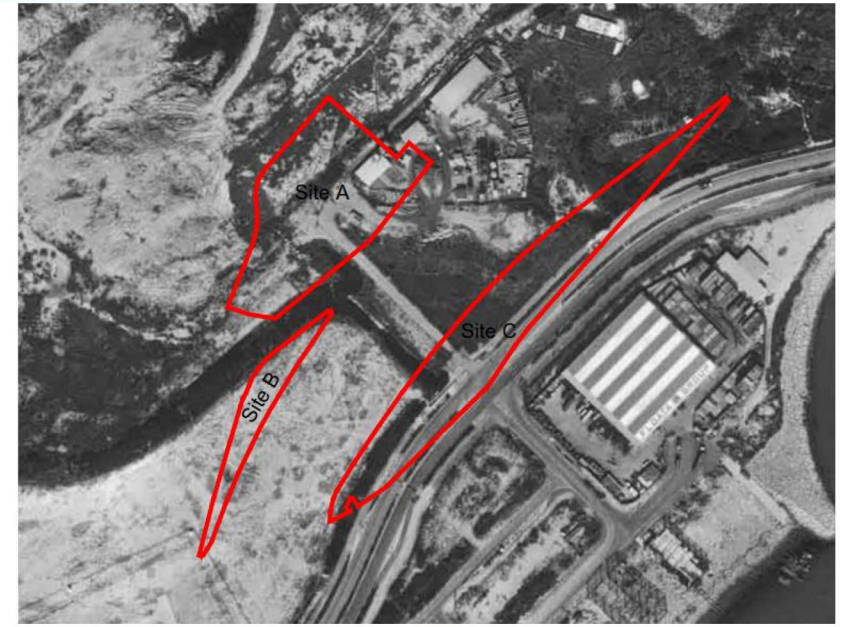
Year 1994

Project No. 1906

Proposed Bus Depots with Ancillary Public Utility Installation (Electricity Substation) in area shown as 'Road', Government Land in D.D. 138 and D.D. 300, Tuen Mun, New Territories (near the building at 20 Tuen Mun Chek Lap Kok Tunnel Road)

Annex 3.1

Historic Aerial Photos



Year 1988

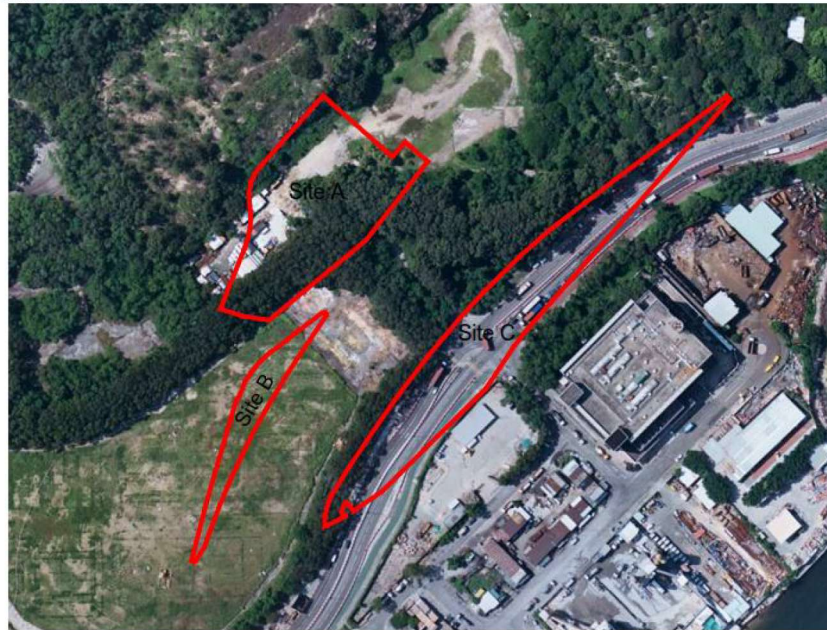


Project No. 1906

Proposed Bus Depots with Ancillary Public Utility Installation (Electricity Substation) in area shown as 'Road', Government Land in D.D. 138 and D.D. 300, Tuen Mun, New Territories (near the building at 20 Tuen Mun Chek Lap Kok Tunnel Road)

Annex 3.1

Historic Aerial Photos



Year 2013

Project No. 1906

Proposed Bus Depots with Ancillary Public Utility Installation (Electricity Substation) in area shown as 'Road', Government Land in D.D. 138 and D.D. 300, Tuen Mun, New Territories (near the building at 20 Tuen Mun Chek Lap Kok Tunnel Road)

Annex 3.1

Historic Aerial Photos



Year 2003

Project No. 1906

Proposed Bus Depots with Ancillary Public Utility Installation (Electricity Substation) in area shown as 'Road', Government Land in D.D. 138 and D.D. 300, Tuen Mun, New Territories (near the building at 20 Tuen Mun Chek Lap Kok Tunnel Road)

Annex 3.1

Historic Aerial Photos



Year 2020

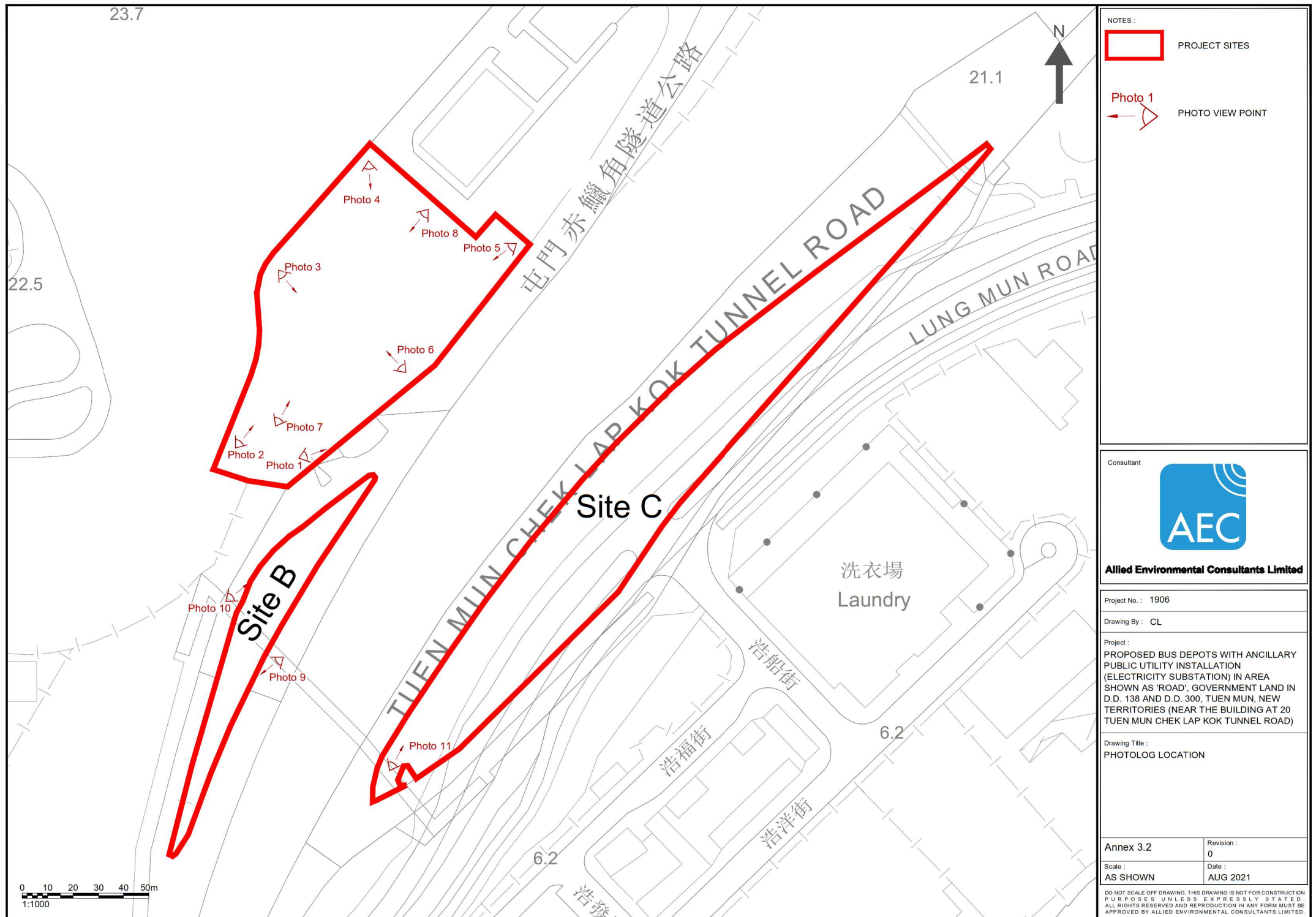
Land Contamination Assessment

**Table 1 Land Use Summary on the Project Sites**

Period / Year	Land Use / Description	Sources of Information
<b>Site A</b>		
Before 1980	The Site A was covered by natural vegetation.	Aerial Photographs available from the Lands Department (LandsD).
1980-1994	Most of vegetation within the Site A was removed for constructing public road nearby in 1980s.	Aerial Photographs available from the LandsD.
1994-2013	Site A was converted to the open storage area since 1994.	Aerial Photographs available from the LandsD.
2013-2020	The construction works of the TMCLKL started in Jun 2013. According to HyD, the advance work and ground investigation works were commenced in Nov 2011 and May 2012 respectively.	Aerial Photographs available from the LandsD and website of HyD.
2020-Present	According to the website of Transport Department (TD), the TMCLKL was opened to public on 27 Dec 2020. The land use of Site A is remained unchanged as part of the toll plaza of TMCLKL til now (2021).	Aerial Photographs available from the LandsD and website of HyD.
Future land use	It is proposed to install depot facilities for KMB under the 5 years STT. The normal operation works may include charging-enabling bus parking bays, simple repairing works etc.	Information from KMB.
<b>Site B</b>		
Before 1980	The Site B was covered by natural vegetation.	Aerial Photographs available from the LandsD.
1980-1988	Most of vegetation within Site B was removed for site formation and constructing public road in 1980s. It is observed that the Site B became vacant since 1985.	Aerial Photographs available from the LandsD.
1988-2003	The vegetation within Site B was removed and the construction of Pillar Point Vietnamese Refugee Camp started in 1988. According to the Table 13.2 of TMCLKL EIA, Site B was used as the Pillar Point Vietnamese Refugee Camp from 1989 to 2000. The Pillar Point Vietnamese Refugee Camp was then demolished in 2003 and the land was	TMCLKL EIA, aerial Photographs available from the LandsD.

Period / Year	Land Use / Description	Sources of Information
	reinstated.	
2003-2013	The Site B was then converted to the golf driving range (River Trade Golf). According to the Table 13.2 of TMCLKL EIA, no pollution sources were identified.	TMCLKL EIA, aerial Photographs available from the LandsD.
2013-2020	The construction works of the TMCLKL was started in Jun 2013. According to the HyD, the advance work and ground investigation works were commenced in Nov 2011 and May 2012 respectively.	TMCLKL EIA, aerial Photographs available from the LandsD and website of HyD.
2020-Present	According to the website of TD, the TMCLKL was opened to public on 27 Dec 2020. The land use of Site A is remained unchanged as part of the toll plaza of TMCLKL til now (2021).	Aerial Photographs available from the LandsD and website of HyD.
Future land use	It is proposed to install depot facilities for KMB under the 5 years STT. The normal operation works may include bus parking, simple repairing works etc.	Information from KMB
<b>Site C</b>		
Before 2013	The elevated highway of Site C has not yet existed until the commencement of the construction of TMCLKL.	Aerial Photographs available from the LandsD
2013-2020	The construction works of the TMCLKL were started in Jun 2013. The Site C is located in the elevated highway which is one part of TMCLKL. According to the aerial photo, this elevated highway was constructed in 2017 and remain unchanged as the public road.	EIA of TMCLKL, Aerial Photographs available from the LandsD , website of HyD.
2020-Present	According to the website of TD, the TMCLKL was opened to public on 27 Dec 2020. The land use of Site C is remained unchanged as the public road of TMCLKL til now (2021).	Aerial Photographs available from the LandsD, website of HyD.
Future land use	It is proposed to install depot facilities for KMB under the 5 years STT. The normal operation works may include bus parking, simple repairing works etc.	Information from KMB







Project No. 1906

Proposed Bus Depots with Ancillary Public Utility Installation (Electricity Substation) in area shown as 'Road', Government Land in D.D. 138 and D.D. 300, Tuen Mun, New Territories (near the building at 20 Tuen Mun Chek Lap Kok Tunnel Road)

Site Visit Photo Record

Annex 3.2

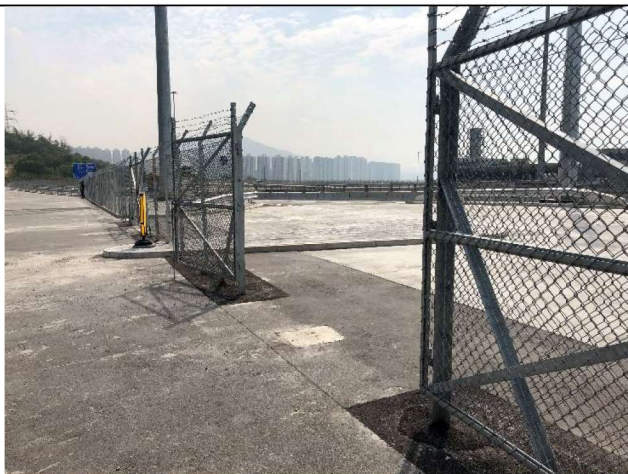


Photo 1: Entrance of the Site A



Photo 2: Overview of Site A (From Southwest View)



Photo 3: Overview of Site A (From Northwest View)

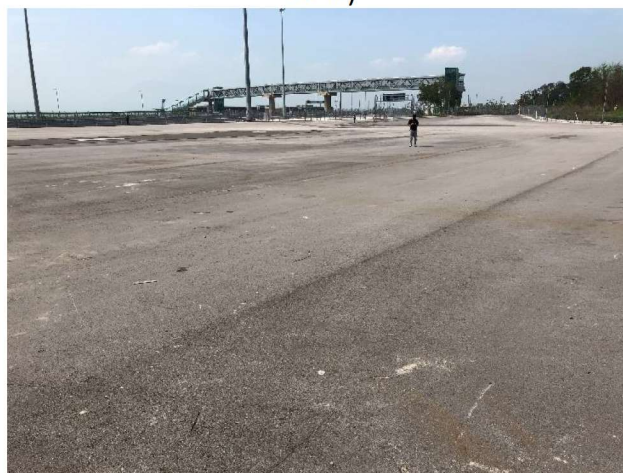


Photo 4: Overview of Site A (From North View)

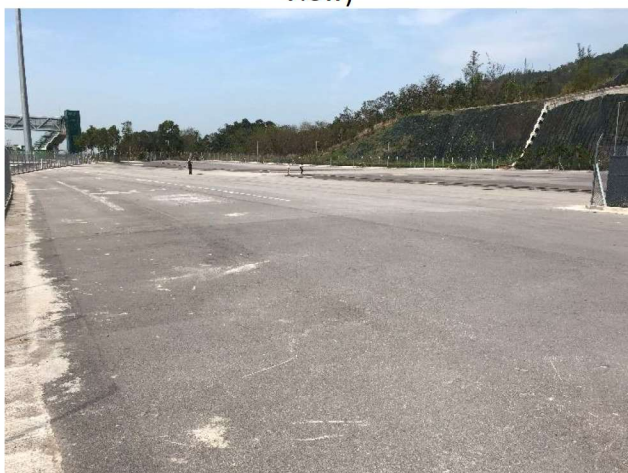


Photo 5: Overview of Site A (From Northeast View)



Photo 6: Overview of Site A (From Southeast View)



Project No. 1906

Proposed Bus Depots with Ancillary Public Utility Installation (Electricity Substation) in area shown as 'Road', Government Land in D.D. 138 and D.D. 300, Tuen Mun, New Territories (near the building at 20 Tuen Mun Chek Lap Kok Tunnel Road)

Site Visit Photo Record

Annex 3.2



Photo 7: Drainage within the Site A



Photo 8: Drainage within the Site A

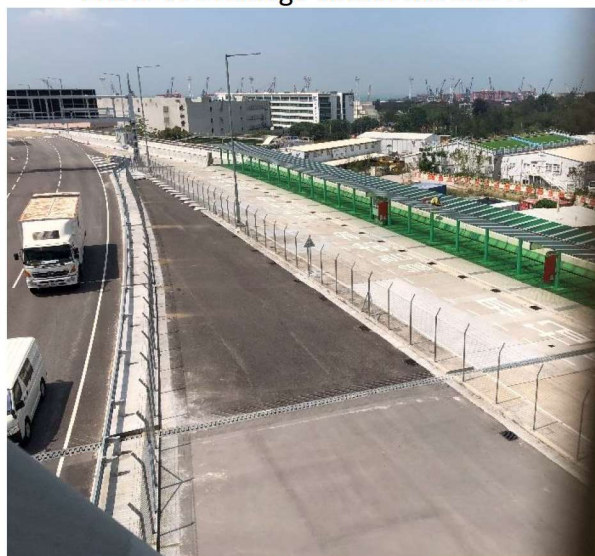


Photo 9: Overview of Site B (Southwestern portion)



Photo 10: General View of Site B (Northeastern portion)

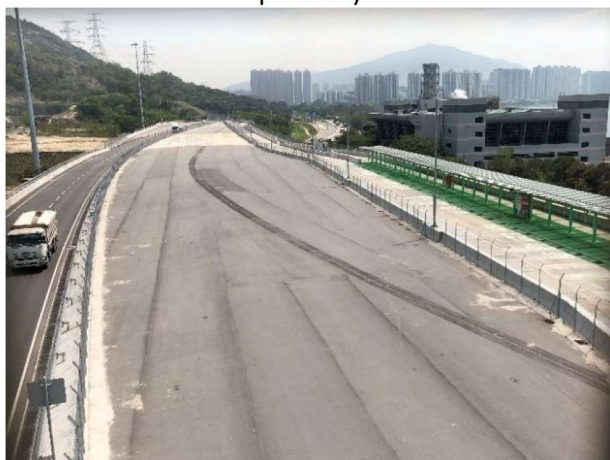


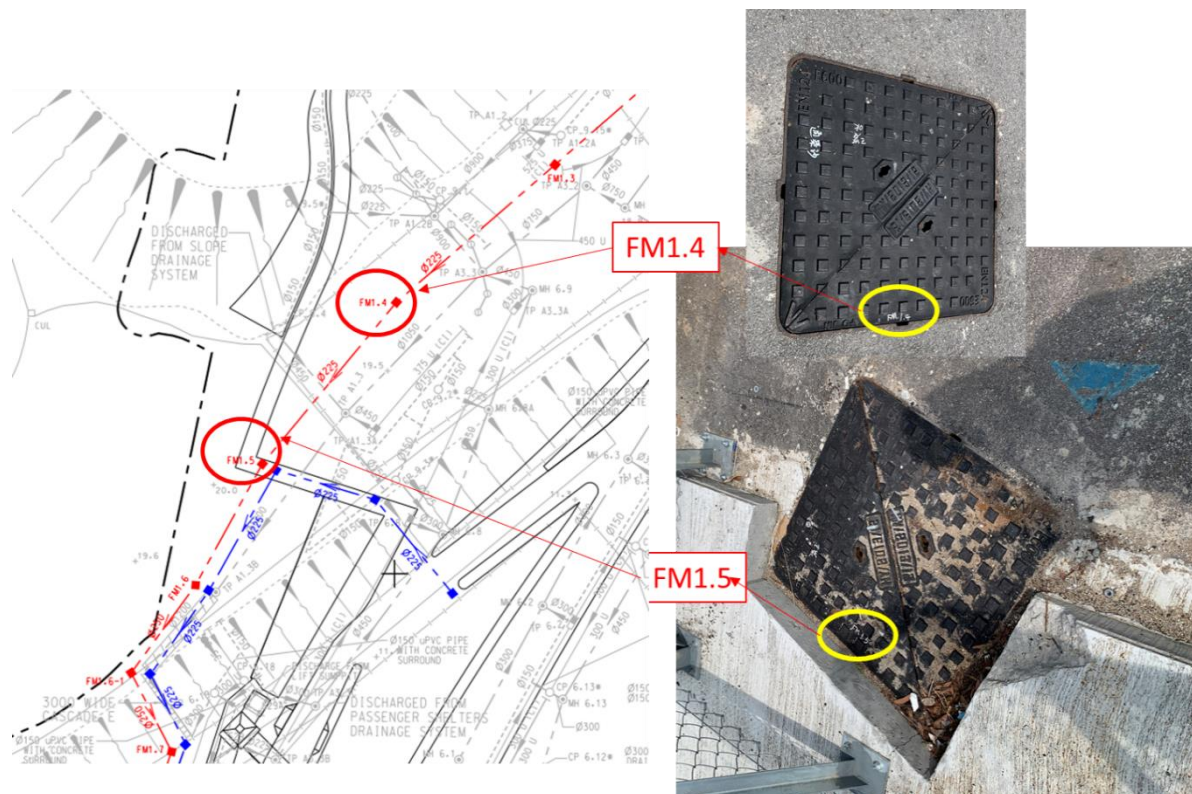
Photo 11: General View of Site C

## Sewage Impact Assessment (SIA)

### *Photos from Site Survey*

Based on the site survey conducted on 30 April 2021, the existing 225mm sewers between FM1.1 and FM1.12A and manholes were available on site.

Manholes found on site are tallied with the drainage plan attached in Appendix 4.1 of SIA report.





Comments		Response
<b>Comments from Secretary for the Environment (Received on 13 August 2021)</b> <b>(Contact Person: Mr. Nelson IP, Tel: 2594 6460)</b>		
We confirm that the Environment Bureau and the Environmental Protection Department are in principle in support of KMB's proposal which is an important infrastructure for supporting the electrification of franchised buses. The development of charging infrastructure is pivotal for achieving Government's ultimate goal that all franchised buses are new energy vehicles including electric vehicles in the future. KMB's proposed bus depot at the above site, which is for providing near 400 charging-enabling bus parking bays for supporting the charging needs of the expanding electric bus fleet, is in line with Government's vision of "Zero Carbon Emissions · Clean Air · Smart City" set out in the Hong Kong Roadmap on Popularisation of Electric Vehicles announced by the Government in March 2021.		Thanks for support of the proposed bus depot development for electric buses.
<b>Comments from Environmental Protection Department (Received on 13 August 2021)</b> <b>(Contact Person: Ms. Virginia WONG, Tel: 2835 1109)</b>		
The application site falls within areas shown as "Road" on the approved Tuen Mun OZP No. S/TM/35. The proposed developments include (i) a multi-storey permanent depot (Site A); (ii) a 2 storey power substation (Site B) and (iii) charging-enabling bus parking bays (Site C) at the Free-up Area of Tuen Mun – Chek Lap Kok Link.		Noted.
No assessment was made on the proposed 2 storey power substation (Site B) and the charging-enabling bus parking bays (Site C). The applicant / consultant should assess the potential impacts associated with Site B and Site C as well.		For Site B, there is no bus operation, washing and maintenance activities to be carried out in the site. The 2-storey power station of about 600 sq.m. would not cause adverse impact on the environment.
The applicant should provide further detailed assessment for Site B and Site C to ascertain the environmental acceptability of the proposed development.		For Site C, it has been a bus parking site under existing STT. There is no change for the use under this application.
The applicant should state clearly in all the relevant environmental assessments that no existing / planned residential area / place of worship / educational institution / health care institution within 200m area around the site. The proposed bus depot does not constitute DP under EIAO and Environmental Permit is not required for the project.		Noted.  With reference to OZP, it is revealed that there is no existing / planned residential area, place of worship, educational institution or health care institution within 200m area from the boundary of Project Site.
<b>Air Quality Impact Assessment (AQIA)</b>		
1.	Section 3.1.3. Please elaborate on the minor vehicle repair or testing activities to be carried out within the bus depot.	The minor vehicle repair or testing activities include tyre changing or charging, parts replacement, motor testing, battery charging and braking test for eBus only.
2.	Table 4.1 and Section 4.1.1. Please note that the new AQOs will take effect on 1.1.2022 and the air quality assessment may need to make reference to the new AQOS.	It is understood that the Review on Air Quality Objectives (AQOs) was recently completed by the EPD, with the latest AQOs for Hong Kong set to take effect on the 1 January 2022. In view of this, the upcoming AQOs have been adopted for the AQIA.
3.	Table 4.2. According to Table 3.1 of Chapter 9 of the HKPSG, the buffer distance between chimney and active open space shall be 10-200m. Please refer to Table 3.1 (rather than Table 1. 3) of Chapter 9 of the HKPSG for the buffer distance between chimney and active open space.	Please be clarified that fresh air intake location for sensitive uses (i.e. office) will be located far away from the buffer zones. Thus, no adverse air quality impact on the Proposed Development is anticipated during operation phase.

Comments		Response
4.	Table 5.1. Please provide separation distance between ASRs and the project site boundary for the evaluation of the construction dust impact. Please also clarify the proposed project shall also be considered as an ASR and added in the table.	<p>The approximate separation distance between Air Sensitive Receivers (ASRs) and the boundary of Project Site are presented in the Table 1 in Annex 1.1.</p> <p>Please be clarified that no air sensitive use will be present at Site B and Site C of the Project Site. Sensitive use within Site A of the Project Site, i.e. office, will not rely on natural ventilation from openable windows, but instead MVAC for ventilation. Air sensitive use is only present in Site A.</p>
5.	Section 6. Please provide some details about the construction activities which may induce potential air quality impacts.	<p>In the construction phase, various activities of the Proposed Development would generate fugitive dust which may have potential impacts on the surrounding ASRs. The activities in the construction phase listed in Annex 1.2 would have potential impact to the surrounding ASRs.</p> <p>Although the abovementioned activities would generate fugitive dust during the construction phase, the surrounding ASRs would not be subject to the adverse dust impact when the following mitigation measures under the Regulations (mentioned in Annex 1.2) are implemented to this Project.</p> <p>With the implementation of good site practices and sufficient dust suppression measures as stipulated under the Air Pollution Control (Construction Dust) Regulation shown in Annex 1.2, significant dust generated from the construction of the Proposed Development is not anticipated. Hence, adverse dust impact during the construction phase would not be anticipated.</p>
6.	Section 7.2 and Figure 7. 1A. Please evaluate the vehicular emission impact from the Tuen Mun Chek Lap Kok Tunnel Road and the Lung Mun Road to the subject site, especially site B and site C.	<p>With reference to the assessment area for the Proposed Development, it is noted that a section of the TMCLK slip road to Tuen Mun South Road network takes the form of a single carriageway tunnel. In view of this, the air quality impact arises from vehicular emission from tunnel portal on the Proposed Development is also assessed. For conservative approach, the recommended minimum buffer distance from the nearby roads to minimise potential adverse air quality impact due to open-road vehicular emissions for PD under HKPSG (i.e. 20m of buffer distance) is adopted for TMCLK slip road.</p> <p><u>Vehicular Emissions from Tunnel Portal</u></p> <p>According to Section 3.2.3.7 of the AEIAR-146/2009, the northbound traffic from TMCLK uses the northbound slip road (TMCLK slip road) to enter the Tuen Mun South Road network. The slip road takes the form of a single carriageway tunnel. With reference to Section 7.2.1, TMCLK is classified as a PD. Since the slip road connects the TMCLK with Tuen Mun South Road network, the TMCLK slip road is also classified as a PD.</p> <p>For conservative approach, the recommended minimum buffer distance from the nearby roads to minimise potential adverse air quality impact due to open-road vehicular emissions for PD under HKPSG is adopted for TMCLK slip road. The recommended minimum buffer distance for TMCLK have been adopted as summarised in Annex 1.3.</p> <p>The air sensitive use at the Project Site is the office at Site A. No air sensitive uses are present at Site B nor Site C of the Project Site. Sensitive use, i.e. office, will not rely on natural ventilation from openable windows, but instead MVAC for ventilation. With careful planning, fresh air intake location for sensitive uses will be located away from the buffer zones. With the implementation of the mitigation measures above, no adverse air quality impact on the Proposed Development is anticipated during operation phase.</p>

Comments		Response
7.	Section 7.3. We would like to remind the applicant that it should be the responsibility of the applicant and their consultants to ensure the validity of the chimney data by their own site surveys. Should the information of industrial chimneys be subsequently found to be incorrect, the assessment result as presented in the planning application would be invalidated.	Noted.
8.	Figure 3. 1. Please clarify the use of Site B and Site C and if they are covered by this proposed project. If yes, please review and confirm any Air Sensitive Use and potential air quality impacts arising from Site B and Site C and assess their air quality impacts.	Site B comprise of a 2-storey substation building for the power supply for depot building in Site A and Site C. Site C comprise of charging-enabling bus parking bays. It is used for parking only.  In view of the usage at Site B (substation with no industrial emission) and Site C (i.e. parking of eBus with no vehicular emission), no air emission is expected. It is confirmed that no bus maintenance works will be carried out in Site B and Site C. As such potential air quality impacts arising from Site A-C is not expected."
9.	Figure 7. 1A. A portion of site A within 200 m of the Flare at Siu Lang Shui Landfill chimney is marked area suitable for fresh air intake. Please check and rectify.	Noted. The figure will be provided later.
<b>Noise Impact Assessment (NIA)</b>		
<b>Technical Comment</b>		
1.	S.1.1.1 - Other than Site A, the applicant / consultant should address the potential noise impact associated with Site B and Site C in the NIA report as well.	Noise assessment has covered Site B and Site C. Site B comprises of a substation while Site C will be used for bus parking only. No office use will be proposed at Site B and Site C. The use of Site B and Site C are not noise sensitive in nature, therefore no NSR is defined at these sites.
2.	S.5.1.3 - We have reservations about this statement. Offices with open window / door for ventilation are considered as potential noise sensitive uses under Appendix 4.1 of Chapter 9 of the HKPSG. Noted from the planning application that potential noise sensitive uses, e. g. ancillary office, have been proposed under the project, the applicant / consultant is required to revisit their findings and assess the potential noise impact on any identified noise sensitive receivers of the proposed development in the NIA report.	As confirmed by the operator, the ancillary office at Site A will be served with MVAC system and will not rely on openable windows for ventilation purpose. Thus, the office itself is not regarded as an NSR. Noise impact on the proposed development is not envisaged. As mentioned, Site B comprises of a substation while Site C will be used for bus parking only. No office use will be proposed at Site B and Site C. The use of Site B and Site C are not noise sensitive in nature, therefore no NSR is defined at these sites.
3.	S.6.1.1- We are concerned about the potential noise impact on the NSRs (e.g. residential developments) along the access roads (e.g. Lung Fu Road and Lung Mun Road) from buses traveling to and from the depot at midnight and in early morning. The problem may be more severe if there will be buses queuing near the NSRS. The applicant / consultant is therefore required to assess the potential noise impact from the traveling / queuing buses and propose measures to minimize the impact if necessary.	Although proposed bus routing will travel through Lung Fu Road and Lung Mun Road, eBus is fully powered by electricity and no engine is required, so its operation is quiet in nature. Moreover, queuing issue is not anticipated based on result of Traffic Impact Assessment (TIA), noise impact on NSRs along access roads is not envisaged.
<b>Textual and Presentation Comment (NIA)</b>		
4.	S.4.1.1 and S.4.2.2- "Environmental" should read as "Environment".	Noted.
5.	S.5.1.2-The consultant should clearly state whether there are any existing, committed or planned sensitive receivers on any Development Permission Area Plans, Outline Development Plans, Layout Plans and other relevant published and uses plan by Lands Department or Planning Department in the vicinity of the project.	With reference to OZP, it is revealed that there is no existing / planned residential area, place of worship, educational institution or health care institution within 200m area from the boundary of Project Site.

Comments		Response
<b>Landfill Gas Hazard Assessment (LFGHA)</b>		
<b>General Comments (LFGHA)</b>		
1.	<p>It is noted that apart from the multi-storey (11-storey) bus depot, a 2-storey power substation and charging-enabling bus parking bays are also proposed in the project. All of these proposed developments fall within the 250 m consultation zone. In accordance with the Guidance Note, the LFGHA is required for any development which is proposed within a 250m consultation zone. However, as mentioned in Section 1.1.2, this LFGHA seems only focus on the proposed depot at Site A. Please clarify.</p> <p>If the intention of this report is prepared for the proposed development for both Site A, B and C. The LFGHA should not only focus on the evaluation of the risk which landfill gas may pose to proposed bus depot at site A, but also for the proposed 2-storey power substation at Site B and charging enabling bus parking bays at site C. Therefore, all proposed development at Site A, Site B and site C should be discussed in Section 2.3.</p>	Please be clarified that only Site A and Site B fall within the 250m Consultation Zone of Pillar Point Valley Landfill (PPVL) while Site C is outside the 250m Consultation Zone. The LFGH risk level of Site A and B during construction and operation phase have been identified. Please refer to comment #18.
2.	It is noted that the proposed multi-storey bus depot at Site A have encroached into the boundary of Pillar Point Valley Landfill (PPVL). Please advise, with justifications, if any structures / excavation works would disturb any elements of the landfill gas management system, such as the capping system.	Site A and Site B are not encroached into the boundary of PPVL. It is confirmed that structures / excavation works at Site A and Site B would not disturb any elements of the landfill gas management system, such as the capping system
3.	Suggest replacing "Subject Site" by "Project Sites" and the "Project Sites" shall include "Site A", "Site B" and "Site C".	Noted.
4.	Suggest replacing "Pillar Point Valley (PPV) Landfill" by "Pillar Point Valley Landfill (PPVL)".	Noted.
5.	Please be reminded that the potential targets and the risk due to LFG migration with the Project should be reviewed with the detailed design of proposed development during design stage. If a major change in the risk categories of the proposed development are found, the LFGHA should be amended accordingly.	Noted. Detailed LFGHA shall be conducted with the detailed design of the proposed development during detailed design stage to review the potential targets and the risk due to the LFG migration with the Project. Design of the protection measures, requirement for maintenance and monitoring shall be proposed and submitted for EPD's approval.
<b>Specific Comments (LFGHA)</b>		
6.	<p>Section 1.1.2</p> <p>(i) Please refer to General Comment #1 and #3.</p>	Please be clarified that only Site A and Site B fall within the 250m Consultation Zone of Pillar Point Valley Landfill (PPVL) while Site C is outside the 250m Consultation Zone. The qualitative risk assessment matrix of Site A and B during construction and operation phase have been identified and shown in Table 3 of Annex 3.
7.	<p>Section 1.2.2</p> <p>(i) Please refer to General Comment #3 and #4.</p>	Noted.
8.	<p>Section 1.2.3</p> <p>(i) The title of ProPECC PN 3/96 should be Landfill Gas Hazard Assessment for Developments Adjacent to Landfills.</p>	Noted.



Comments		Response
9.	Section 2.1 (i) It is noted that this study is conducted with reference to an approved EIA report from another project conducted years ago (Register No: AEIAR-146/2009). Please note that updated landfill gas monitoring data should be used to ensure the authenticity of the assessment.	The updated landfill gas monitoring data (Feb 2020 – Feb 2021) upon the preparation of this report has been provided in previous submission.  As verbally discussed with EPD specialist, the monitoring data for the abovementioned period is considered sufficient for this study.
10.	Section 2.2 (i) Please refer to General Comment #4 for the sub-heading.	Noted.
11.	Section 2.2.1 (i) Please delete “As stated in the TMCLK EIA”. (ii) Suggest amending “33. 79 ha landfill” as “65 ha landfill”. (iii) Suggest amending “14 years” as “15 years”.	Noted.
12.	Section 2.3.1 (i) Suggest amending as “the risk to the development due to LFG should be evaluated...”	Noted.
13.	Section 2.3.2 (i) Please amend as “LFG monitoring has been <u>carried</u> out since the completion of the restoration works.”	Noted.
14.	Section 2.3.3 (i) Please replace “the recent LFG monitoring” by “the findings”. (ii) Please replace “the data” by “the findings”.	Noted.
15.	Section 2.3.4 (i) It is noted that the LFG source was categorized as “Medium” with reference to an approved EIA report from another project conducted years ago (Register No. : AEIAE-146/2009). Please note that updated landfill gas monitoring data should be used to ensure the authenticity of the assessment.	The updated landfill gas monitoring data (Feb 2020 – Feb 2021) upon the preparation of this report has been provided in previous submission and shown in Table 1 of Annex 2.  With reference to the corresponding data from TMCLKL EIA, the source of PPLV was classified as Medium. Table 2 of Annex 2 shows the comparison between two sets of PPVL landfill gas monitoring data. Considering there is no significant change in average carbon dioxide concentration between TMCLKL EIA and the updated landfill gas monitoring data (Feb 2020 – Feb 2021), the classification of source of PPVL as Medium is still valid.
16.	Section 2. 3. 5-2. 3. 8 (i) Only the proposed bus depot at Site A has been discussed in the “Pathway” section. Please refer to General Comment (1). (ii) It is noted that the LFG source was categorized as “Medium” with reference to an approved EIA report from another project conducted years ago (Register No. : AEIAE-146/2009). Please note that updated landfill gas monitoring data should be used to ensure the authenticity of the assessment.	(i) Pathway of Site B are identified below.  According to the geological map, the geology of the Site A and Site B is mainly fine to medium grained granite. Also, photogeological lineament is observed in south west corner of the site near the roundabout, and mineral veins are also observed in east side of the site near the tunnel portal. However, both of these features are only within the consultation zone of the PPVL and do not pass through the landfill.  There is no information of any conduit (man-made or natural feature such as a fault plane) leads

Comments		Response
		<p>directly from the landfill to the Site A and Site B presented at this stage.</p> <p>Based to the TMCLK EIA, the ground water level ranges from +17.6 to +115.7mPD in 2008 and the elevation of the Site A and Site B ranges from approximately 18.9 mPD to 19.5mPD.</p> <p>Site A and Site B are located at approximately 169m and 186m away from the site boundary of the PPVL respectively. Therefore, the Site A and Site B is categorized as <b>Long/indirect.</b>"</p> <p>(ii) The updated landfill gas monitoring data (Feb 2020 – Feb 2021) upon the preparation of this report has been provided in previous submission. Please refer to our reply in Comment #15 for details.</p>
17.	Section 2.3.9, 2.3.10 (i) Please amend as "During construction <u>phase</u> ".	Noted.
18.	Section 2. 3. 13-Table 2 (I) Please amend "Source-Pathway-Target Summary" as "Qualitative Risk Assessment Matrix". You are reminded that there could be multiple targets which possess different risk levels in a single project.	<p>Noted.</p> <p>The multiple targets of Site A and Site B in construction phase and operation phase are shown in Table 2 in Annex 3.</p>
19.	Section 2. 3. 14-Table 3 (i) Please amend "Qualitative Risk" as "Level of Risk" and provide the relevant category, implication for each targets with reference to Table 4. 1 of the "Landfill Gas Hazard Assessment Guidance Note".	<p>Noted.</p> <p>The level of risk, relevant category and implication for each target are presented in Table 4 in Annex 2.</p>
20.	Section 2. 4 (i) Please provide protection measures based on this qualitative LFGHA for the proposed development during construction and operational phase. Please be reminded that during the detailed design stage of the proposed development, a more detailed assessment including the design of the protection measures, requirement for maintenance and monitoring should be provided by the detailed design consultant and submitted for EPD's agreement. The potential risk due to LFG migration and monitoring programme and contingency plan should be reviewed and updated where necessary during the evolvement of the design.	<p>Protection measures during the construction and operational phases are provided in Table 4 in Annex 2.</p> <p>Detailed LFGHA shall be conducted with the detailed design of the proposed development during detailed design stage to review the potential targets and the risk due to the LFG migration with the Project. Design of the protection measures, requirement for maintenance and monitoring shall be proposed and submitted for EPD's approval.</p>
21.	Figure 1 (i) Suggest replacing "Subject Site" by "Project Sites" for the notes and state clearly that the "Project Sites" comprises of "Site A", "Site B" and "Site C".	Noted.
22.	Figure 2 (i) Suggest replacing "Subject Site" by "Project Sites" and state clearly that the "Project Sites" comprises of "Site A", "Site B" and "Site C".	Noted.
23.	Appendix A (i) Please provide the drawing details, e. g. drawing title, drawing no., revision. for the location plan for landfill gas monitoring points of PPVL. <del>Window / door for ventilation will be provided in the proposed development. Our previous comment still stand if affirmative.</del>	Noted.

Comments		Response
	[According to the tele-conversation with the EPD LFG specialist on 19 Aug, the sentence "Window / door for ventilation will be provided in the proposed development. Our previous comment still stand if affirmative." is irrelevant and should be deleted.]	
<b>Land Contamination Assessment</b>		
1.	Section 1.1.2: As the planning application covered all three sites, please clarify whether the land contamination assessment of Sites B and C would be covered in other submissions or not.	Noted. The land contamination assessment has been covered all three sites. Based on the desktop review and site visit, no land contamination issue at all three sites is expected.
2.	Section 3.3.2: Please provide the relevant aerial photos showing the open storage area and review whether there is any potential land contamination issue due to the past land use as an open storage area.	According to Table 13.2 of TMCLKL EIA, no apparent pollution sources were identified in the immediate vicinity of the Project Sites which has been used for open storage in the past, thus potential land contamination issue due to the past land use as an open storage area is not expected. The aerial photos available from the LandsD and the land use summary are shown in Annex 3.1.  Also, site visit was conducted on 30 April 2021, the entire Project Sites are paved with good condition. No sign of obvious/ suspected contamination was identified. It is believed that land contamination issue with the Project Sites is not expected. Please refer to Annex 3.2 for the photo record of site inspection.
3.	Section 3.4: Please follow up with the outstanding replies.	Noted. All outstanding replies were received.
4.	Section 4.1.2: Please clarify which section of the approved TMCLKL ELA report is referring to.	According to the aerial photos available from the LandsD, Site A was used for open storage since 1994. Section 13.4.2.4 and Table 13.2 of TMCLKL EIA also stated that Site A was used for open storage since 2004. Site A was then converted to the toll plaza of TMCLKL in 2013.
<b>Comments from Commissioner of Police (Received on 13 August 2021) (Contact Person: Mr. TAM Tsz-wai, Alan, Tel: 3661 5708)</b>		
He has no comment on the application.		Noted.
<b>Comments from Director of Food and Environmental Hygiene (Received on 13 August 2021) (Contact Person: Ms. Sandy CHAN, Tel: 3141 1232)</b>		
If the proposal involves any commercial / trading activities, its state should not as to be a nuisance or injurious or dangerous to health and surrounding environment. Also, for any waste generated from the commercial / trading activities, the applicant should handle on their own / at their expenses.		Noted.
<b>Comments from Project Manager (West), Civil Engineering and Development Department (Received on 13 August 2021) (Contact Person: Ms. Jackie CHENG, Tel: 2158 5639)</b>		

Comments	Response
He has no comment on the application.	Noted.
<b>Comments from Director of Agriculture, Fisheries and Conservation (Received on 13 August 2021) (Contact Person: Ms Scarlet CHENG; 2150 6934)</b>	
According to the Geospatial Information Hub (GIH) of the Lands Department, the subject sites are paved and are located within disturbed and developed areas. No vegetation is present within all sites. I have no comment on the subject application from nature conservative perspective.	Noted.
<b>Comments from Chief Town Planner/Urban Design and Landscape, Planning Department (Received on 19 August 2021) Landscape Section (Contact Person: Mr. Eric WONG; 2231 4747)</b>	
According to the aerial photo of 2020, the site is located in an area of miscellaneous urban fringe landscape character, dominated by infrastructure. The site is currently hard paved and no existing tree is observed within the site. The proposed development is considered not incompatible with the surrounding environment.	Noted.
With reference to the Planning Statement, the application site comprises 3 portions, namely Site A, B and C. The applicant proposes to build a multi-storey permanent depot at Site A, while Site B will be used for a 2 storey power substation and Site C is situated on top of elevated highway structures. In view that significant adverse landscape impact arising from the proposed development is not anticipated, we have <u>no objection</u> to the application from landscape planning perspective.	Noted.
<p>Please note below our comments on the submission from landscape planning perspective:</p> <p>(a) Discrepancies were found on the locations of the proposed planting areas between the paragraph 3.2.4 of the Landscape Proposal and 1/F Landscape Plan (drawing no. LP-02). Please clarify.</p> <p>(b) The applicant should clarify how horticultural maintenance works for the proposed vertical green wall on building façade at 1/F can be carried out. The applicant is reminded of the long-term commitment in providing proper maintenance to the vertical green wall for healthy and sustainable plant growth.</p> <p>(c) The applicant should provide details and blowup sections for the proposed planters and vertical green wall so as to demonstrate the viability of the landscape proposal.</p>	<p>(a) Please be clarified that paragraph 3.2.4 should be: "Additional planting opportunities are also proposed at two locations on <b>1/F</b> next to the access ramp. These 2 planters are proposed to receive combination of large shrubs and ground cover planting."</p> <p>(b) KMB will appoint the vertical green wall supplier to provide horticultural maintenance works for the proposed vertical green wall on building façade at 1/F.</p> <p>(c) Architectural sections of the proposed vertical green wall (that shows the proposed VG is feasible on the façade of the building) will be provided.</p>
<b>Comments from Head of the Geotechnical Engineering Office, Civil Engineering and Development Department (Received on 19 August 2021) (Contact Person: Mr. WONG Chun Fai, Jeffrey; 2762 5400)</b>	
The applicant should submit all geotechnical submissions regarding the proposed development to the Buildings Department for approval according to the Buildings Ordinance.	Noted.

Comments		Response
<b>Comments from Director of Electrical and Mechanical Services Department (Received on 19 August 2021)</b> <b>(Contact Person: Mr. SIU Hiu-fai, Stanley; 3757 6231)</b>		
He has no particular comment on the application from electricity supply safety aspect at this stage. However, in the interests of public safety and ensuring the continuity of electricity supply, the parties concerned with planning, designing, organizing, supervising and conducting any activity near the underground cable or overhead line under the mentioned application should approach the electricity supplier (i.e. CLP Power) for the requisition of cable plans (and overhead line alignment drawings, where applicable) to find out whether there is any underground cable and/or overhead line within and/or in the vicinity of the concerned site. They should also be reminded to observe the Electricity Supply Lines (Protection) Regulation (the Regulation) and the "Code of Practice on Working near Electricity Supply Lines" established under the Regulation when carrying out works in the vicinity of the electricity supply lines. He has no particular comment on the application as far as electricity supply safety is concerned.		Noted
<b>Comments from Chief Town Planner/Studies and Research 1, Planning Department (Received on 19 August 2021)</b> <b>(Contact Person: Mr. AU Ho Cheong, Henry; 2231 4688)</b>		
His comments/observations from the perspective of the proposed "Planning and Engineering Study for Lung Kwu Tan Reclamation and the Re-planning of Tuen Mun West Area" (the proposed P&E Study) are as follows.		-
1	The application site falls within the Study Area of the proposed P&E Study. The Applicant should refer to the attached extract plan for our Study Area boundary and the PWSC Paper – PWSC (2019-20)26 for the latest project plan ( <a href="https://www.legco.gov.hk/yr19-20/english/fc/pwsc/papers/p19-26e.pdf">https://www.legco.gov.hk/yr19-20/english/fc/pwsc/papers/p19-26e.pdf</a> ).	Noted.
2	According to the Planning Statement, the Applicant has proposed a permanent bus depot of 11-storey (at about 82.5m) under 24-hour operation at Site A and an open-air bus parking area at Site C. It is understood that a total of about 406 charging-enabling bus parking bays and 81 maintenance bays would be provided at Sites A and C.	Noted.
3	As mentioned in the 2020 Policy Address, uses in Tuen Mun West Area is to be reviewed under the proposed Planning and Engineering Study with "a view to increasing the potential of the Tuen Mun West area for residential development and/or other more beneficial uses". As such, under the preliminary concept of the proposed P&E Study, the areas to the immediate west of Site A and south of Site C in Tuen Mun Areas 40 and 46 are identified as potential development sites for housing developments and/or other beneficial uses. The Applicant's proposal, especially the bus depot at Site A, would impose constraints on our future use and design of these development sites in close proximity of the Application Site. However, potential impacts have not been taken into account in the current application. As stated in the Planning Statement, no planned residential development, educational institutions and other sensitive uses have been assumed in all technical assessments including Noise Impact Assessment, Air Quality Impact Assessment, Landscape and Visual Impact Assessment (LVIA) and Air Ventilation Assessment.	Noted. The landscape design will be reviewed subject to the completion of the Planning and Engineering Study on Tuen Mun West area.  According to landscape proposal in the previous submission, landscape features had been incorporated in the design (e.g. vertical greenery and planters).

Comments		Response
4	In view of the above, the Applicant is requested to acknowledge these potential uses and address whether there would be any potential impacts on the identified development sites in Tuen Mun West area under the proposed P&E Study including noise, air, landscape and visual, and air ventilation. Relevant mitigation measures at source, e.g. vertical greening, roof top greening (as covers over bus parking spaces), façade design, etc., should be considered appropriately.	The applicant acknowledged the potential uses in Tuen Mun West Area. However, the proposed Planning and Engineering Study has not commenced yet and there is no detailed information on the initial land uses within Tuen Mun West Area during the preparation of this environmental assessment.
5	According to the LVIA, the Landscape Master Plan only covers Site A. The Applicant should provide landscape proposals and boundary landscape treatments for Sites B and C as well, especially that high-rise residential developments could be recommended in the area south of Site C under the proposed P&E Study.	Noted. Landscape Master Plan of Site A to C will be provided later.
<b>Comments from District Lands Officer, Lands Department (Received on 24 August 2021) (Contact Person: Miss Wai Ming CHAN; 2451 3182)</b>		
(i)	The application site which comprises 3 pieces of Government land is annotated as "Site A", "Site B" and "Site C" in the application. The site is held under a short term tenancy (STT) for a temporary bus depot subject to, among others, the following restrictions:  (a) The total built-over area and height of structures erected shall not exceed 2,000m2 and 8 m respectively, and (b) No structures or building shall be erected within portions of Site A and Site B and the whole of Site C.	Noted. KMB would simply develop the sites to a temporary open air parking area in 2H of 2021 under existing short term tenancy. To optimize the land resource, KMB with support of Transport Department proposes to build a multi-storey permanent depot at Site A. Once the approval is granted, KMB will apply for a fresh land document for the proposed bus depot development.
(ii)	It is noted that the anticipated completion of the proposed development is in year 2025 while the term of the tenancy is up to July 2026 only and renewal of the tenancy is not permitted under the existing conditions.	
(iii)	The proposal does not comply with the terms and conditions of the tenancy. Should the application be approved by the Town Planning Board, KMB is required to obtain policy support from the relevant policy bureau and apply for a fresh land document for the proposed bus depot development. However, there is no guarantee that their application will be approved and I hereby reserve my right to take appropriate action should any breach of tenancy conditions be found. The said application will be considered by the Lands Department acting in the capacity as the landlord at its sole discretion. In the event that the said application is approved, it would be subject to such terms and conditions as the Government shall deem fit to do so, including, among others, charging of rent and administrative fee. Upon approval and commencement of the new land document, the existing STTMM0003 will be terminated in the relevant time.	



Comments		Response
<b>Comments from Senior Engineer, Highways Department (Received on 24 August 2021)</b> <b>(Contact Person: Mr. WONG Chi Yuen, Sammy; 3526 0036)</b>		
He has the following comments from highways maintenance point of view:		-
1.	From our understanding, some HyD assets such as drainage pipes, manholes, utility ducts, drawpits, movement joints, isolation joints, etc are located within Site A, B and C (the Site). KMB shall allow HyD staff and the contractors whom employed by HyD to enter the Site to carry out inspections and maintenance works.	Noted.
2.	KMB shall not erect any structures on top of the HyD assets. KMB shall remove any materials/ objects/ covers/ vehicles on top of the HyD assets when requested by HyD.	Noted.
3.	KMB is not allowed to excavate where above HyD's structures. Unless when carrying out repairing works to the pavement in the Premises with prior agreement by HyD, and the excavation depth shall not exceed the existing pavement depth.	Noted.
4.	KMB shall be responsible for general cleaning of the isolation joint in Site C.	Noted.
5.	KMB should protect the highway structure within or adjacent to the Site.	Noted.
6.	Drainage reserve and protection for the drainage maintained by HyD should be provided within the Site.	Noted.
7.	According to DWG. No: EL04, it shows that the vertical clearance between the existing footbridge adjacent to the proposed 132kV substation is 1000mm only. Please clarify that clearance is up to the top of the roof parapet or the roof floor to check whether there are sufficient working space. Minimum 2000mm clearance should be provided around the existing footbridge for normal maintenance works.	Noted.
8.	Please be reminded that metal louvers/ windows etc. for the 132kV substation should not be constructed right under the footbridge, such that the footbridge will not be seriously affected/ damaged in case of fire. The south-east elevation of the substation should be submitted for our review and comment.	Noted.
9.	The proposed access arrangement of the application site should be commented and approved by TD.	Noted.
10.	The applicant should design and construct the run in/out of the application site to the satisfaction of TD and HyD in accordance with the latest version of Highways Standard Drawing to match with the existing adjacent pavement at their own cost. Please be reminded that public concerns were received regarding the induced traffic flow from the Site may cause damages to the nearby road network. The applicant should review the design of the run in/out	Noted.

Comments		Response
	of the site and ensure that the design will be capable to withstand the induced traffic flow. Any defects or complaints related to the run in/ out should be handled by the applicant with the agreement from HyD at their own cost.	
11.	Adequate drainage measures should be provided to prevent surface water running from the application site to the nearby public roads and drains.	Noted.
<b>Comments from Environmental Protection Department (Received on 26 August 2021)</b> <b>(Contact Person: Ms. Virginia WONG, Tel: 2835 1109)</b> Drainage and Sewage Impact Assessment		
1.	Please clarify if there would be any kind of oil produced during car washing, maintenance and other operations or activities in the depot. If yes, oil interceptor should be installed.	The proposed depot is for electric buses and no engine oil and gearbox oil is required in the electric buses. Only minimal lube oil will be produced during maintenance and waste water treatment plant has been provided under the application.
2.	We could not find the existing 225mm sewer between FM1.1 and FM1.12A in our 2021 drainage record. Please verify with Drainage Services Department or other department if the concerned sewer is available.	Please be clarified that the drainage plan attached in Appendix 4.1 was provided by Transport Department.  Based on the site survey conducted on 30 April 2021, the existing 225mm sewers between FM1.1 and FM1.12A and manholes were available on site.  Manholes found on site are tallied with the drainage plan attached in Appendix 4.1.
3.	Please confirm no catering service or canteen in the depot.	Please be confirmed no catering service or canteen in the depot.
4.	"FMH1005385" should read "FSH1005385" in Para 4.1.2.	Noted.
5.	Please clarify if there is any existing and planned discharges to the sewer between FM1.1 and FM1.12A. If yes, please include in the capacity check.	Based on the best available information during the time of preparation, no planned development is identified based on any Development Permission Area Plans, Outline Development Plans, Layout Plans and other relevant published and uses plan by Lands Department or Planning Department in the vicinity of the project. Therefore, please be clarified that there will be no existing and planned discharges to the newly constructed sewer between FM1.1 and FM1.12A.

Comments		Response
Comments from Secretary for the Environment (Received on 13 August 2021) (Contact Person: Mr. Nelson IP, Tel: 2594 6460)		
We confirm that the Environment Bureau and the Environmental Protection Department are in principle in support of KMB's proposal which is an important infrastructure for supporting the electrification of franchised buses. The development of charging infrastructure is pivotal for achieving Government's ultimate goal that all franchised buses are new energy vehicles including electric vehicles in the future. KMB's proposed bus depot at the above site, which is for providing near 400 charging-enabling bus parking bays for supporting the charging needs of the expanding electric bus fleet, is in line with Government's vision of "Zero Carbon Emissions · Clean Air · Smart City" set out in the Hong Kong Roadmap on Popularisation of Electric Vehicles announced by the Government in March 2021.		Thanks for support of the proposed bus depot development for electric buses.
Comments from Environmental Protection Department (Received on 13 August 2021) (Contact Person: Ms. Virginia WONG, Tel: 2835 1109)		
The application site falls within areas shown as "Road" on the approved Tuen Mun OZP No. S/TM/35. The proposed developments include (i) a multi-storey permanent depot (Site A); (ii) a 2 storey power substation (Site B) and (iii) charging-enabling bus parking bays (Site C) at the Free-up Area of Tuen Mun – Chek Lap Kok Link.		Noted.
No assessment was made on the proposed 2 storey power substation (Site B) and the charging-enabling bus parking bays (Site C). The applicant / consultant should assess the potential impacts associated with Site B and Site C as well.		Noted. Potential environmental impacts associated with Site B and Site C are included and evaluated in the revised reports.
The applicant should provide further detailed assessment for Site B and Site C to ascertain the environmental acceptability of the proposed development.		
The applicant should state clearly in all the relevant environmental assessments that no existing / planned residential area / place of worship / educational institution / health care institution within 200m area around the site. The proposed bus depot does not constitute DP under EIAO and Environmental Permit is not required for the project.		Noted.  With reference to the Development Permission Area Plans, Outline Development Plans, Layout Plans and other relevant published land uses plan by Lands Department or Planning Department, neither residential area, place of worship, educational institution, nor health care institution is identified or will be planned within 200m from Project Site boundary. The proposed bus depot does not constitute DP under EIAO and EP is not required. A Chapter of "EIA Ordinance Implications" is supplemented in all environmental assessments.  The abovementioned information is state clearly in all the relevant environmental assessments report.
Air Quality Impact Assessment (AQIA)		
1.	Section 3.1.3. Please elaborate on the minor vehicle repair or testing activities to be carried out within the bus depot.	The minor vehicle repair or testing activities include tyre changing or charging, parts replacement, motor testing, battery charging and braking test for eBus only. Section 3.1.5 is revised accordingly.

Comments		Response
2.	Table 4.1 and Section 4.1.1. Please note that the new AQOs will take effect on 1.1.2022 and the air quality assessment may need to make reference to the new AQOS.	It is understood that the Review on Air Quality Objectives (AQOs) was recently completed by the EPD, with the latest AQOs for Hong Kong set to take effect on the 1 January 2022. In view of this, the upcoming AQOs have been adopted for the AQIA. Section 5.1.1 and Table 5-1 are revised accordingly.
3.	Table 4.2. According to Table 3.1 of Chapter 9 of the HKPSG, the buffer distance between chimney and active open space shall be 10-200m. Please refer to Table 3.1 (rather than Table 1. 3) of Chapter 9 of the HKPSG for the buffer distance between chimney and active open space.	Table 5.2 (previous 4.2) is updated accordingly to indicate the buffer distance of 10-200m between chimney and active open space with reference to Table 3.1 of Ch9 of the HKPSG.
4.	Table 5.1. Please provide separation distance between ASRs and the project site boundary for the evaluation of the construction dust impact. Please also clarify the proposed project shall also be considered as an ASR and added in the table.	The approximate separation distance between Air Sensitive Receivers (ASRs) and the boundary of Project Site are presented in the Table 6.1.  Please be clarified that no air sensitive use will be present at Site B and Site C of the Project Site. Sensitive use within Site A of the Project Site, i.e. office, will not rely on natural ventilation from openable windows, but instead MVAC for ventilation. Air sensitive use is only present in Site A.
5.	Section 6. Please provide some details about the construction activities which may induce potential air quality impacts.	Section 7: In the construction phase, various activities of the Proposed Development would generate fugitive dust which may have potential impacts on the surrounding ASRs. The activities in the construction phase listed in Section 7.1 would have potential impact to the surrounding ASRs. In view of this, and with reference to the Air Pollution Control (Construction Dust) Regulation, good site practices and a number of other dust suppression measures will be implemented during the construction phase of the Proposed Development. With implementation of adequate good site practice and dust suppression measures, adverse air quality impact arises from the Proposed Development during construction phase is not anticipated. Section 7 is revised accordingly
6.	Section 7.2 and Figure 7. 1A. Please evaluate the vehicular emission impact from the Tuen Mun Chek Lap Kok Tunnel Road and the Lung Mun Road to the subject site, especially site B and site C.	With reference to the assessment area for the Proposed Development, it is noted that a section of the TMCLK slip road to Tuen Mun South Road network takes the form of a single carriageway tunnel. In view of this, the air quality impact arises from vehicular emission from tunnel portal on the Proposed Development is also assessed. For conservative approach, the recommended minimum buffer distance from the nearby roads to minimise potential adverse air quality impact due to open-road vehicular emissions for PD under HKPSG (i.e. 20m of buffer distance) is adopted for TMCLK slip road.  <u>Vehicular Emissions from Tunnel Portal</u> According to Section 3.2.3.7 of the AEIAR-146/2009, the northbound traffic from TMCLK uses the northbound slip road (TMCLK slip road) to enter the Tuen Mun South Road network. The slip road takes the form of a single carriageway tunnel. With reference to Section 7.2.1, TMCLK is classified as a PD. Since the slip road connects the TMCLK with Tuen Mun South Road network, the TMCLK slip road is also classified as a PD.  For conservative approach, the recommended minimum buffer distance from the nearby roads to minimise potential adverse air quality impact due to open-road vehicular emissions for PD under HKPSG is adopted for TMCLK slip road. The recommended minimum buffer distance for TMCLK have been adopted as summarised in Table 8.1.

Comments		Response
		The air sensitive use at the Project Site is the office at Site A. No air sensitive uses are present at Site B nor Site C of the Project Site. Sensitive use, i.e. office, will not rely on natural ventilation from openable windows, but instead MVAC for ventilation. With careful planning, fresh air intake location for sensitive uses will be located away from the buffer zones. With the implementation of the mitigation measures above, no adverse air quality impact on the Proposed Development is anticipated during operation phase.
7.	Section 7.3. We would like to remind the applicant that it should be the responsibility of the applicant and their consultants to ensure the validity of the chimney data by their own site surveys. Should the information of industrial chimneys be subsequently found to be incorrect, the assessment result as presented in the planning application would be invalidated.	Noted.
8.	Figure 3. 1. Please clarify the use of Site B and Site C and if they are covered by this proposed project. If yes, please review and confirm any Air Sensitive Use and potential air quality impacts arising from Site B and Site C and assess their air quality impacts.	<p>Site B comprise of a 2-storey substation building for the power supply for depot building in Site A and Site C. Site C comprise of charging-enabling bus parking bays. It is used for parking only.</p> <p>In view of the usage at Site B (substation with no industrial emission) and Site C (i.e. parking of eBus with no vehicular emission), no air emission is expected. It is confirmed that no bus maintenance works will be carried out in Site B and Site C. As such potential air quality impacts arising from Site A-C is not expected."</p> <p>The air quality impact assessment on the Proposed Development (including Site A, Site B and Site C) arise from vehicle emission from open road and industrial emission from chimneys are provided in Section 7.2 and Section 7.3 accordingly.</p>
9.	Figure 7. 1A. A portion of site A within 200 m of the Flare at Siu Lang Shui Landfill chimney is marked area suitable for fresh air intake. Please check and rectify.	Figure 8-1A (previous Figure 7.1A) is updated accordingly.
<b>Noise Impact Assessment (NIA)</b> <b>Technical Comment</b>		
1.	S.1.1.1 - Other than Site A, the applicant / consultant should address the potential noise impact associated with Site B and Site C in the NIA report as well.	Noted. Noise assessment has been revised to cover Site B and Site C. Site B comprises of a substation while Site C will be used for bus parking only. No office use will be proposed at Site B and Site C. The use of Site B and Site C are not noise sensitive in nature, therefore no NSR is identified at these sites. No planned NSRs are identified in the vicinity based on best available information. Adverse noise impact from Site A and Site C is not expected.
2.	S.5.1.3 - We have reservations about this statement. Offices with open window / door for ventilation are considered as potential noise sensitive uses under Appendix 4.1 of Chapter 9 of the HKPSG. Noted from the planning application that potential noise sensitive uses, e. g. ancillary office, have been proposed under the project, the applicant / consultant is required to revisit their findings and assess the potential noise impact on any identified noise sensitive receivers of the proposed development in the NIA report.	As confirmed by the operator, the ancillary office at Site A will be served with MVAC system and will not rely on openable windows for ventilation purpose. Thus, the office itself is not regarded as a representative NSR. Noise impact on the Site A is not envisaged. As mentioned, Site B comprises of a substation while Site C will be used for bus parking only. No office use and other sensitive uses will be proposed at Site B and Site C. The use of Site B and Site C are not noise sensitive in nature, therefore no NSR is defined at these sites.
3.	S.6.1.1- We are concerned about the potential noise impact on the NSRs (e.g. residential developments) along the access roads (e.g. Lung Fu Road and Lung Mun Road) from buses traveling to and from the depot at midnight and in early morning. The problem may be more	As shown in Appendix 3-3, although proposed bus routing will travel through Lung Fu Road and Lung Mun Road, eBus is fully powered by electricity and no engine is required, so its operation is quiet in nature, engine noise is not expected.

Comments		Response
	severe if there will be buses queuing near the NSRS. The applicant / consultant is therefore required to assess the potential noise impact from the traveling / queuing buses and propose measures to minimize the impact if necessary.	<p>According to the Traffic Impact Assessment (TIA) under this Planning Application, provision of at least 2 bus queuing space is required, while the available queuing area in Site A can accommodate at least 3 buses which provides adequate spare capacity to handle the peak arrival flows without queuing back to the public road.</p> <p>Besides, the TIA also revealed that the maximum trip generation during operational peak (06:00-07:00) is 134 veh/hr. With reference to Traffic Census 2020, the Annual Average Daily Traffic (AADT) of Lung Fu Road and Lung Mun Road is 16,190 veh/hr and 12,230 veh/hr respectively. The additional traffic flow from the proposed depot during operation peak only contribute around 1% of traffic flow of Lung Mun Road and Lung Fu Road.</p> <p>In view of the sufficient queuing area provided and insignificant increase of traffic flow due to the project, the potential noise impact arising from tyre noise is minimal.</p> <p>Section 7.1.2 to Section 7.1.4 are revised.</p>
<b>Textual and Presentation Comment (NIA)</b>		
4.	S.4.1.1 and S.4.2.2- "Environmental" should read as "Environment".	Noted.
5.	S.5.1.2-The consultant should clearly state whether there are any existing, committed or planned sensitive receivers on any Development Permission Area Plans, Outline Development Plans, Layout Plans and other relevant published and uses plan by Lands Department or Planning Department in the vicinity of the project.	<p>Noted and stated in S6.1.2 (previous S.5.1.2).</p> <p>Please be clarified that no existing, committed or planned sensitive receivers identified within 300m from the Project Sites, with reference to the plans mentioned in this comment.</p> <p>Reply from PlanD is also enclosed in Appendix.</p>
<b>Landfill Gas Hazard Assessment (LFGHA)</b>		
<b>General Comments (LFGHA)</b>		
1.	<p>It is noted that apart from the multi-storey (11-storey) bus depot. a 2-storey power substation and charging-enabling bus parking bays are also proposed in the project. All of these proposed developments fall within the 250 m consultation zone. In accordance with the Guidance Note, the LFGHA is required for any development which is proposed within a 250m consultation zone. However. as mentioned in Section 1.1.2, this LFGHA seems only focus on the proposed depot at Site A. Please clarify.</p> <p>If the intention of this report is prepared for the proposed development for both Site A, B and C. The LFGHA should not only focus on the evaluation of the risk which landfill gas may pose to proposed bus depot at site A. but also for the proposed 2-storcy power substation at Site B and charging enabling bus parking bays at site C. Therefore, all proposed development at Site A. Site B and site C should be discussed in Section 2. 3.</p>	<p>Please be clarified that only Site A and Site B fall within the 250m Consultation Zone of Pillar Point Valley Landfill (PPVL) while Site C is outside the 250m Consultation Zone as shown in Figure 2. The LFGH risk level of Site A and B during construction and operation phase are included in evaluated in the revised report.</p>



Comments		Response
2.	It is noted that the proposed multi-storey bus depot at Site A have encroached into the boundary of Pillar Point Valley Landfill (PPVL). Please advise, with justifications, if any structures / excavation works would disturb any elements of the landfill gas management system, such as the capping system.	As shown the site boundary of PPVL given in Figure 2, Site A and Site B are not encroached into the boundary of PPVL. It is confirmed that structures / excavation works at Site A and Site B would not disturb any elements of the landfill gas management system, such as the capping system
3.	Suggest replacing "Subject Site" by "Project Sites" and the "Project Sites" shall include "Site A", "Site B" and "Site C".	Noted, typo error is rectified.
4.	Suggest replacing "Pillar Point Valley (PPV) Landfill" by "Pillar Point Valley Landfill (PPVL)".	Noted, typo error is rectified.
5.	Please be reminded that the potential targets and the risk due to LFG migration with the Project should be reviewed with the detailed design of proposed development during design stage. If a major change in the risk categories of the proposed development are found, the LFGHA should be amended accordingly.	Noted. S 4.1.4 is revised below.  "Detailed LFG hazard assessment including the design of protection measures, requirement for maintenance and monitoring will be conducted by detailed design consultant according to the prevailing standards and guidelines. Potential targets, risk due to LFG migration with the Project, monitoring programme and contingency plan will be reviewed with the details design of proposed development during the design stage. If a major change in the risk categories of the proposed development are found, the LFG hazard assessment will be updated accordingly."
<b>Specific Comments (LFGHA)</b>		
6.	Section 1.1.2 (ii) Please refer to General Comment #1 and #3.	S1.1.1 (combined former S 1.1.2) is revised as below.  "Allied Environmental Consultants Limited (AEC) was commissioned by the Kowloon Motor Bus Company (1933) Limited (KMB) to conduct Landfill gas (LFG) Hazard Assessment to support of a Section 16 Planning Application for proposed bus depots with ancillary public utility installation (hereafter referred to as the "Proposed Development") of Tuen Mun – Chek Lap Kok Link (TMCLK) Free Up Area (hereafter referred to as the "Project Sites"). The Project Sites comprise of three free up areas, namely Site A, B and C."  Please be clarified that only Site A and Site B fall within the 250m Consultation Zone of Pillar Point Valley Landfill (PPVL) while Site C is outside the 250m Consultation Zone, thus, this LFG hazard assessment will be conducted for the Site A and Site B. S 1.2.1 and S 1.2.2 is revised as below "The Project Sites comprise of three free up areas, namely Site A, B and C with total area of 16,845m2 (Site A: 7,926 m2; Site B: 1,321m2 and Site C: 7,598 m2). KMB is intended to develop the Site A to a 11-storey multi-storey depot for electric buses ("eBus"). Site B will be used for a 2 storey substation while Site C will be used for charging-enabling bus parking bays only. Figure 1 shows the location of the Project Sites and its surrounding." " "The Site A and Site B fall within the 250m Consultation Zone of Pillar Point Valley Landfill (PPVL) while Site C is outside the 250m Consultation Zone, LFG hazard assessment addressing the landfill gas hazards and recommending the mitigation measures will be conducted for the Site A and Site B. Figure 2 shows the location of the Project Sites and the consultation zone of the existing closed PPVL."

Comments		Response
7.	Section 1.2.2 (ii) Please refer to General Comment #3 and #4.	Noted, typo error is rectified. S1.2.2 is revised as below.  "The Site A and Site B fall within the 250m Consultation Zone of Pillar Point Valley Landfill (PPVL) while Site C is outside the 250m Consultation Zone, LFG hazard assessment addressing the landfill gas hazards and recommending the mitigation measures will be conducted for the Site A and Site B. Figure 2 shows the location of the Project Sites and the consultation zone of the existing closed PPVL.
8.	Section 1.2.3 (ii) The title of ProPECC PN 3/96 should be Landfill Gas Hazard Assessment for Developments Adjacent to Landfills.	Noted, typo error in s1.2.4 (former S1.2.3) is rectified.
9.	Section 2.1 (ii) It is noted that this study is conducted with reference to an approved EIA report from another project conducted years ago (Register No: AEIAR-146/2009). Please note that updated landfill gas monitoring data should be used to ensure the authenticity of the assessment.	The updated landfill gas monitoring data (Feb 2020 – Feb 2021) upon the preparation of this report has been provided in Appendix A. S2.3.3 and Table 1 show the analysis and summary of the latest monitoring data.
10.	Section 2.2 (ii) Please refer to General Comment #4 for the sub-heading.	The sub-heading of S3.2 (former S2.2) is revised to "History of PPVL".
11.	Section 2.2.1 (iv) Please delete "As stated in the TMCLK EIA". (v) Suggest amending "33. 79 ha landfill" as "65 ha landfill". (vi) Suggest amending "14 years" as "15 years".	S3.2.1 (former S 2.2.1) is revised.
12.	Section 2.3.1 (ii) Suggest amending as "the risk to the development due to LFG should be evaluated..."	S3.3.1 (former 2.3.1) is revised.
13.	Section 2.3.2 (ii) Please amend as "LFG monitoring has been <u>carried</u> out since the completion of the restoration works."	S3.3.2 (former 2.3.2) is revised.
14.	Section 2.3.3 (iii) Please replace "the recent LFG monitoring" by "the findings". (iv) Please replace "the data" by "the findings".	S3.3.3 (former 2.3.3) is revised.
15.	Section 2.3.4 (ii) It is noted that the LFG source was categorized as "Medium" with reference to an approved EIA report from another project conducted years ago (Register No. : AEIAE-146/2009). Please note that updated landfill gas monitoring data should be used to ensure the authenticity of the assessment.	The updated landfill gas monitoring data (Feb 2020 – Feb 2021) upon the preparation of this report has been provided in Appendix A. S3.3.3 below and Table 1 show the analysis and summary of the latest monitoring data.  "Gas monitoring wells have been installed around the site to monitor the potential landfill gas migration. The updated PPVL landfill gas monitoring data (from February 2020 to February 2021) upon the preparation of this report was obtained from EPD. The findings from February 2020 to February 2021 was shown in Appendix A and summarized in Table 1. From the findings, the range of average methane concentration in all monitoring wells fluctuated between 0.0% to 0.3%. The average carbon dioxide concentration fluctuated between 1.32 to 8.67%v/v. With reference to the corresponding data from the

Comments		Response
		TMCLK EIA, the average carbon dioxide content was around 1.2 to 8.9 %v/v and the source of PPVL was categorized as Medium. Considering there is no significant change in average carbon dioxide concentration between TMCLKL EIA and the updated landfill gas monitoring data (Feb 2020 – Feb 2021), the classification of source of PPVL as Medium is still valid.”
16.	<p>Section 2.3.5-2.3.8</p> <p>(iii) Only the proposed bus depot at Site A has been discussed in the “Pathway” section. Please refer to General Comment (1).</p> <p>(iv) It is noted that the LFG source was categorized as “Medium” with reference to an approved EIA report from another project conducted years ago (Register No. : AEIAE-146/2009). Please note that updated landfill gas monitoring data should be used to ensure the authenticity of the assessment.</p>	<p>(i) Pathway of Site B are identified in S3.3.5 (former S2.3.5) to 3.3.8 (former S2.3.8) and listed below.</p> <p>“According to the geological map shown in <b>Appendix B</b>, the geology of the Site A and Site B is mainly fine to medium grained granite. Also, photogeological lineament is observed in south west corner of the site near the roundabout, and mineral veins are also observed in east side of the site near the tunnel portal. However, both of these features are only within the consultation zone of the PPVL and do not pass through the landfill.</p> <p>There is no information of any conduit (man-made or natural feature such as a fault plane) leads directly from the landfill to the Site A and Site B presented at this stage.</p> <p>Based to the TMCLK EIA, the ground water level ranges from +17.6 to +115.7mPD in 2008 and the elevation of the Site A and Site B ranges from approximately 18.9 mPD to 19.5mPD.</p> <p>Site A and Site B are located at approximately 169m and 186m away from the site boundary of the PPVL respectively. Therefore, the Site A and Site B is categorized as <b>Long/indirect.</b>”</p> <p>(ii) The updated landfill gas monitoring data (Feb 2020 – Feb 2021) upon the preparation of this report has been provided in Appendix A. S3.3.3 below and Table 1 show the analysis and summary of the latest monitoring data.</p> <p>“Gas monitoring wells have been installed around the site to monitor the potential landfill gas migration. The updated PPVL landfill gas monitoring data (from February 2020 to February 2021) upon the preparation of this report was obtained from EPD. The findings from February 2020 to February 2021 was shown in <b>Appendix A</b> and summarized in <i>Table 1</i>. From the findings, the range of average methane concentration in all monitoring wells fluctuated between 0.0% to 0.3%. The average carbon dioxide concentration fluctuated between 1.32 to 8.67%v/v. With reference to the corresponding data from the TMCLK EIA, the average carbon dioxide content was around 1.2 to 8.9 %v/v and the source of PPVL was categorized as Medium. Considering there is no significant change in average carbon dioxide concentration between TMCLKL EIA and the updated landfill gas monitoring data (Feb 2020 – Feb 2021), the classification of source of PPVL as Medium is still valid.”</p>
17.	<p>Section 2.3.9, 2.3.10</p> <p>(ii) Please amend as “During construction <u>phase</u>”.</p>	S3.3.9 (former S2.3.9) and S3.3.10 (former S2.3.10) are revised.

Comments		Response																				
18.	<p>Section 2. 3. 13-Table 2</p> <p>(II) Please amend “Source-Pathway-Target Summary” as “Qualitative Risk Assessment Matrix”. You are reminded that there could be multiple targets which possess different risk levels in a single project.</p>	<p>Title of Table 2 is revised to “Qualitative Risk Assessment Matrix”.</p> <p>Table 2 is revised to show the multiple targets of Site A and Site B in construction phase and operation phase.</p> <table><tr><th>Source</th><th>Pathway</th><th>Targets</th><th>Risk</th></tr><tr><td rowspan="6">Pillar Point Valley Landfill <i>(Medium)</i>  According to the approved TMCLK EIA, the source of PPVL is classified as Medium</td><td colspan="3">During Construction</td></tr><tr><td rowspan="4">Over 100m away from PPVL, no fault/fissure, no man-made conduit <b>(Long / indirect)</b></td><td><u>Site A and Site B</u>  Construction workers, well trained and follow specific safety procedures, mainly outdoor works <b>(Low sensitivity)</b></td><td><b>Very Low</b></td></tr><tr><td><u>Site A and Site B</u>  Well trained site office staff and follow specific safety procedures, indoor environment <b>(Medium Sensitivity)</b></td><td><b>Low</b></td></tr><tr><td colspan="2">During Operation</td></tr><tr><td rowspan="2">Over 100m away from PPVL, no fault/fissure, no man-made conduit <b>(Long / indirect)</b></td><td><u>Site A</u>  Majority of Maintenance workers and supporting staffs worked in outdoor environment (i.e. enclosed depot with vast openings at façades at Site A)  <b>(Low sensitivity)</b></td><td><b>Very Low</b></td></tr><tr><td><u>Site B</u>  Maintenance workers and supporting staffs worked in indoor environment (i.e. enclosed rooms within substation at Site B) <b>(Medium sensitivity)</b></td><td><b>Low</b></td></tr></table>	Source	Pathway	Targets	Risk	Pillar Point Valley Landfill <i>(Medium)</i>  According to the approved TMCLK EIA, the source of PPVL is classified as Medium	During Construction			Over 100m away from PPVL, no fault/fissure, no man-made conduit <b>(Long / indirect)</b>	<u>Site A and Site B</u>  Construction workers, well trained and follow specific safety procedures, mainly outdoor works <b>(Low sensitivity)</b>	<b>Very Low</b>	<u>Site A and Site B</u>  Well trained site office staff and follow specific safety procedures, indoor environment <b>(Medium Sensitivity)</b>	<b>Low</b>	During Operation		Over 100m away from PPVL, no fault/fissure, no man-made conduit <b>(Long / indirect)</b>	<u>Site A</u>  Majority of Maintenance workers and supporting staffs worked in outdoor environment (i.e. enclosed depot with vast openings at façades at Site A)  <b>(Low sensitivity)</b>	<b>Very Low</b>	<u>Site B</u>  Maintenance workers and supporting staffs worked in indoor environment (i.e. enclosed rooms within substation at Site B) <b>(Medium sensitivity)</b>	<b>Low</b>
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Comments		Response																								
19.	<p>Section 2. 3. 14-Table 3</p> <p>(ii) Please amend "Qualitative Risk" as "Level of Risk" and provide the relevant category, implication for each targets with reference to Table 4. 1 of the "Landfill Gas Hazard Assessment Guidance Note".</p>	<p>Table 3 is revised accordingly below and shows the relevant category, implication for each target.</p> <table> <tr> <th>Targets</th><th>Level of Risk</th><th>Implication</th></tr> <tr> <td colspan="3">During Construction phase</td></tr> <tr> <td>General Works (Outdoor)</td><td>Very Low</td><td>The risk is so low that no precautionary measures are required.</td></tr> <tr> <td>Site Office (Indoor)</td><td>Low</td><td>Some precautionary measures* will be required to ensure that the planned development is safe.</td></tr> <tr> <td colspan="3">During Operation phase</td></tr> <tr> <td>Site A: Daily operation (mainly in outdoor environment)</td><td>Very Low</td><td>The risk is so low that no precautionary measures are required.</td></tr> <tr> <td>Site B: Daily operation (mainly in indoor environment)</td><td>Low</td><td>Some precautionary measures* will be required to ensure that the planned development is safe.</td></tr> <tr> <td colspan="3"> Remarks   * Required Precautionary measures includes the passive control of gas only.   Provision of barriers to the movement of gas e.g. membranes in floors or walls, or in trenches, coupled with high permeability vents such as no-fines gravel in trenches or voids/permeable layers below structures. </td></tr> </table>	Targets	Level of Risk	Implication	During Construction phase			General Works (Outdoor)	Very Low	The risk is so low that no precautionary measures are required.	Site Office (Indoor)	Low	Some precautionary measures* will be required to ensure that the planned development is safe.	During Operation phase			Site A: Daily operation (mainly in outdoor environment)	Very Low	The risk is so low that no precautionary measures are required.	Site B: Daily operation (mainly in indoor environment)	Low	Some precautionary measures* will be required to ensure that the planned development is safe.	Remarks  * Required Precautionary measures includes the passive control of gas only.  Provision of barriers to the movement of gas e.g. membranes in floors or walls, or in trenches, coupled with high permeability vents such as no-fines gravel in trenches or voids/permeable layers below structures.		
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20.	<p>Section 2. 4</p> <p>(ii) Please provide protection measures based on this qualitative LFGHA for the proposed development during construction and operational phase. Please be reminded that during the detailed design stage of the proposed development, a more detailed assessment including the design of the protection measures, requirement for maintenance and monitoring should be provided by the detailed design consultant and submitted for EPD's agreement. The potential risk due to LFG migration and monitoring programme and contingency plan should be reviewed and updated where necessary during the evolution of the design.</p>	<p>Protection measures are provided in Table 4 and extracted below:</p> <table> <tr> <th>Targets</th><th>Level of Risk</th><th>Implication</th></tr> <tr> <td colspan="3">During Construction phase</td></tr> <tr> <td>General Works (Outdoor)</td><td>Very Low</td><td>The risk is so low that no precautionary measures are required.</td></tr> <tr> <td>Site Office (Indoor)</td><td>Low</td><td>Some precautionary measures* will be required to ensure that the planned development is safe.</td></tr> <tr> <td colspan="3">During Operation phase</td></tr> <tr> <td>Site A: Daily operation (mainly in outdoor environment)</td><td>Very Low</td><td>The risk is so low that no precautionary measures are required.</td></tr> </table>	Targets	Level of Risk	Implication	During Construction phase			General Works (Outdoor)	Very Low	The risk is so low that no precautionary measures are required.	Site Office (Indoor)	Low	Some precautionary measures* will be required to ensure that the planned development is safe.	During Operation phase			Site A: Daily operation (mainly in outdoor environment)	Very Low	The risk is so low that no precautionary measures are required.						
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Comments		Response			
			Site B: Daily operation (mainly in indoor environment)	Low	Some precautionary measures* will be required to ensure that the planned development is safe.
		<div>Remarks</div> <div>* Required Precautionary measures includes the passive control of gas only.</div> <div>Provision of barriers to the movement of gas e.g. membranes in floors or walls, or in trenches, coupled with high permeability vents such as no-fines gravel in trenches or voids/permeable layers below structures.</div>			
		A more detailed assessment will be provided by the detailed design consultant for EPD’s approval. S4.1.4 is revised as below. “Detailed LFG hazard assessment including the design of protection measures, requirement for maintenance and monitoring will be conducted by detailed design consultant according to the prevailing standards and guidelines. Potential targets, risk due to LFG migration with the Project, monitoring programme and contingency plan will be reviewed with the details design of proposed development during the design stage. If a major change in the risk categories of the proposed development are found, the LFG hazard assessment will be updated accordingly.”			
21.	Figure 1 (ii) Suggest replacing “Subject Site” by “Project Sites” for the notes and state clearly that the “Project Sites” comprises of “Site A”, “Site B” and “Site C”.	Figure 1 is updated accordingly.			
22.	Figure 2 (ii) Suggest replacing “Subject Site” by “Project Sites” and state clearly that the “Project Sites” comprises of “Site A”, “Site B” and “Site C”.	Figure 2 is updated accordingly.			
23.	Appendix A (ii) Please provide the drawing details, e. g. drawing title, drawing no., revision. for the location plan for landfill gas monitoring points of PPVL. <del>Window / door for ventilation will be provided in the proposed development. Our previous comment still stand if affirmative.</del>  [According to the tele-conversation with the EPD LFG specialist on 19 Aug 2021, the sentence “Window / door for ventilation will be provided in the proposed development. Our previous comment still stand if affirmative.” is irrelevant and should be deleted.]	The drawing details of landfill gas monitoring points of PPVL is provided. Please refer to Appendix A.			
Land Contamination Assessment					
1.	Section 1.1.2: As the planning application covered all three sites, please clarify whether the land contamination assessment of Sites B and C would be covered in other submissions or not.	Noted. The land contamination assessment has been covered all three sites. Based on the desktop review and site visit, no land contamination issue at all three sites is expected.			
2.	Section 3.3.2: Please provide the relevant aerial photos showing the open storage area and review whether there is any potential land contamination issue due to the past land use as an open storage area.	The relevant aerial photos of Site A, B and C showing the open storage area are provided in Appendix A.			




Comments		Response
		<p>According to Table 13.2 of TMCLKL EIA, no apparent pollution sources were identified in the immediate vicinity of the Project Sites which has been used for open storage in the past, thus potential land contamination issue due to the past land use as an open storage area is not expected.</p> <p>Also, site visit was conducted on 30 April 2021, the entire Project Sites are paved with good condition. No sign of obvious/ suspected contamination was identified. It is believed that land contamination issue with the Project Sites is not expected. Please refer to Annex 3.2 for the photo record of site inspection.</p>
3.	Section 3.4: Please follow up with the outstanding replies.	Noted. All outstanding replies were received. Table 2 and Appendix B are updated.
4.	Section 4.1.2: Please clarify which section of the approved TMCLKL ELA report is referring to.	<p>S5.1.2 (former S4.1.2) is updated as below.</p> <p>"According to the aerial photos available from the LandsD, Site A was used for open storage since 1994. Section 13.4.2.4 and Table 13.2 of TMCLKL EIA also stated that Site A was used for open storage since 2004. Site A was then converted to the toll plaza of TMCLKL in 2013."</p> <p>Also, according to the aerial photos available from the LandsD, Site A was used for open storage since 1994</p>
<b>Comments from Commissioner of Police (Received on 13 August 2021)</b> <b>(Contact Person: Mr. TAM Tsz-wai, Alan, Tel: 3661 5708)</b>		
He has no comment on the application.		Noted.
<b>Comments from Director of Food and Environmental Hygiene (Received on 13 August 2021)</b> <b>(Contact Person: Ms. Sandy CHAN, Tel: 3141 1232)</b>		
If the proposal involves any commercial / trading activities, its state should not as to be a nuisance or injurious or dangerous to health and surrounding environment. Also, for any waste generated from the commercial / trading activities, the applicant should handle on their own / at their expenses.		Noted.
<b>Comments from Project Manager (West), Civil Engineering and Development Department (Received on 13 August 2021)</b> <b>(Contact Person: Ms. Jackie CHENG, Tel: 2158 5639)</b>		
He has no comment on the application.		Noted.
<b>Comments from Director of Agriculture, Fisheries and Conservation (Received on 13 August 2021)</b> <b>(Contact Person: Ms Scarlet CHENG; 2150 6934)</b>		
According to the Geospatial Information Hub (GIH) of the Lands Department, the subject sites are paved and are located within disturbed and developed areas. No vegetation is present within all sites. I have no comment on the subject application from nature conservative perspective.		Noted.
<b>Comments from Chief Town Planner/Urban Design and Landscape, Planning Department (Received on 19 August 2021)</b> <b>Landscape Section</b> <b>(Contact Person: Mr. Eric WONG; 2231 4747)</b>		

Comments	Response
According to the aerial photo of 2020, the site is located in an area of miscellaneous urban fringe landscape character, dominated by infrastructure. The site is currently hard paved and no existing tree is observed within the site. The proposed development is considered not incompatible with the surrounding environment.	Noted.
With reference to the Planning Statement, the application site comprises 3 portions, namely Site A, B and C. The applicant proposes to build a multi-storey permanent depot at Site A, while Site B will be used for a 2 storey power substation and Site C is situated on top of elevated highway structures. In view that significant adverse landscape impact arising from the proposed development is not anticipated, we have <u>no objection</u> to the application from landscape planning perspective.	Noted.
<p>Please note below our comments on the submission from landscape planning perspective:</p> <p>(d) Discrepancies were found on the locations of the proposed planting areas between the paragraph 3.2.4 of the Landscape Proposal and 1/F Landscape Plan (drawing no. LP-02). Please clarify.</p> <p>(e) The applicant should clarify how horticultural maintenance works for the proposed vertical green wall on building façade at 1/F can be carried out. The applicant is reminded of the long-term commitment in providing proper maintenance to the vertical green wall for healthy and sustainable plant growth.</p> <p>(f) The applicant should provide details and blowup sections for the proposed planters and vertical green wall so as to demonstrate the viability of the landscape proposal.</p>	<p>(a) Please be clarified that paragraph 4.2.4 (former paragraph 3.2.4) is revised as below  "Additional planting opportunities are also proposed at two locations on <b>1/F</b> next to the access ramp. These 2 planters are proposed to receive combination of large shrubs and ground cover planting."</p> <p>(b) KMB will appoint the vertical green wall supplier to provide horticultural maintenance works for the proposed vertical green wall on building façade at 1/F. The regular horticultural maintenance works shall be carried out by the vertical green wall supplier.</p> <p>(c) Architectural sections of the proposed vertical green wall (that shows the proposed VG is feasible on the façade of the building) is provided. Please refer to the latest layout drawing in Appendix D of the LVIA and landscape proposal.</p>
<b>Comments from Head of the Geotechnical Engineering Office, Civil Engineering and Development Department (Received on 19 August 2021)</b> <b>(Contact Person: Mr. WONG Chun Fai, Jeffrey; 2762 5400)</b>	
The applicant should submit all geotechnical submissions regarding the proposed development to the Buildings Department for approval according to the Buildings Ordinance.	Noted.
<b>Comments from Director of Electrical and Mechanical Services Department (Received on 19 August 2021)</b> <b>(Contact Person: Mr. SIU Hiu-fai, Stanley; 3757 6231)</b>	
He has no particular comment on the application from electricity supply safety aspect at this stage. However, in the interests of public safety and ensuring the continuity of electricity supply, the parties concerned with planning, designing, organizing, supervising and conducting any activity near the underground cable or overhead line under the mentioned application should approach the electricity supplier (i.e. CLP Power) for the requisition of cable plans (and overhead line alignment drawings, where applicable) to find out whether there is any underground cable and/or overhead line within and/or in the vicinity of the concerned site. They should also be reminded to observe the Electricity Supply Lines (Protection) Regulation (the Regulation) and the "Code of Practice on Working near Electricity Supply Lines" established under the Regulation when carrying out works in the vicinity of the electricity supply lines. He has no particular comment on the application as far as electricity supply safety is concerned.	Noted

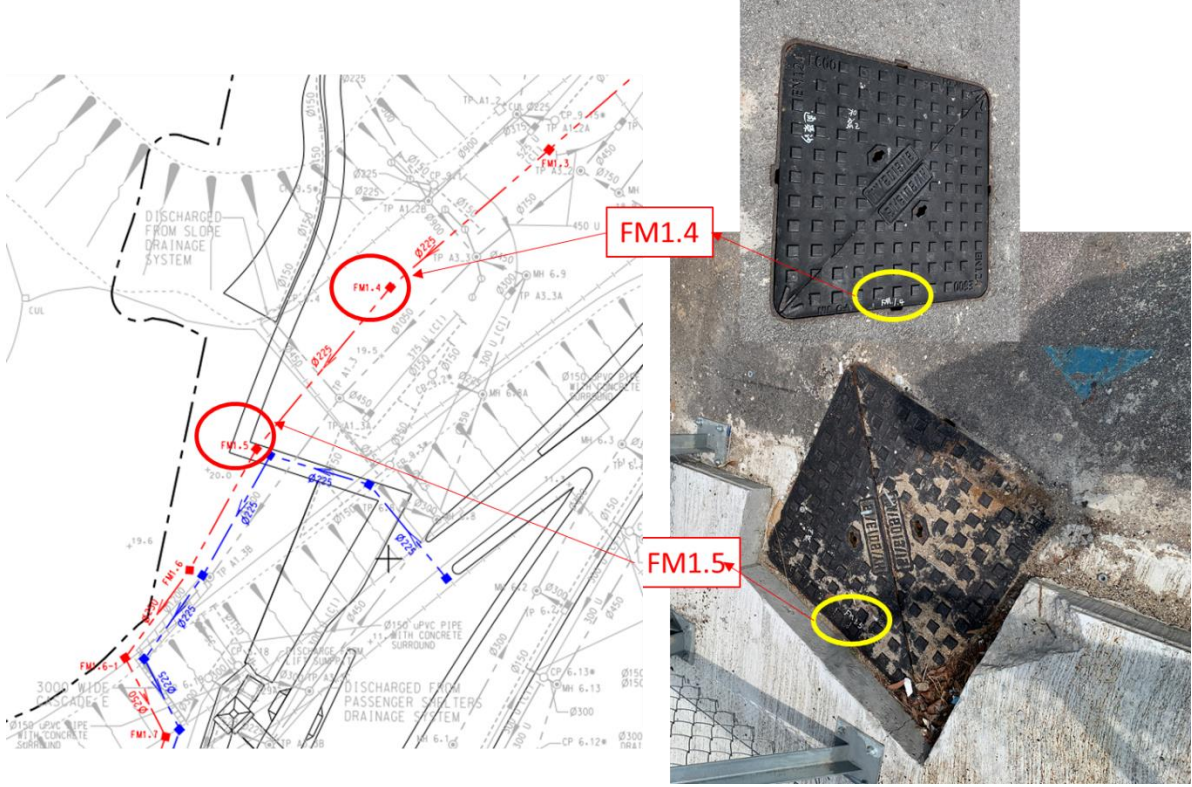
Comments		Response
<b>Comments from Chief Town Planner/Studies and Research 1, Planning Department (Received on 19 August 2021) (Contact Person: Mr. AU Ho Cheong, Henry; 2231 4688)</b>		
His comments/observations from the perspective of the proposed "Planning and Engineering Study for Lung Kwu Tan Reclamation and the Re-planning of Tuen Mun West Area" (the proposed P&E Study) are as follows.		-
1	The application site falls within the Study Area of the proposed P&E Study. The Applicant should refer to the attached extract plan for our Study Area boundary and the PWSC Paper – PWSC (2019-20)26 for the latest project plan ( <a href="https://www.legco.gov.hk/yr19-20/english/fc/pwsc/papers/p19-26e.pdf">https://www.legco.gov.hk/yr19-20/english/fc/pwsc/papers/p19-26e.pdf</a> ).	Noted.
2	According to the Planning Statement, the Applicant has proposed a permanent bus depot of 11-storey (at about 82.5m) under 24-hour operation at Site A and an open-air bus parking area at Site C. It is understood that a total of about 406 charging-enabling bus parking bays and 81 maintenance bays would be provided at Sites A and C.	Noted.
3	As mentioned in the 2020 Policy Address, uses in Tuen Mun West Area is to be reviewed under the proposed Planning and Engineering Study with "a view to increasing the potential of the Tuen Mun West area for residential development and/or other more beneficial uses". As such, under the preliminary concept of the proposed P&E Study, the areas to the immediate west of Site A and south of Site C in Tuen Mun Areas 40 and 46 are identified as potential development sites for housing developments and/or other beneficial uses. The Applicant's proposal, especially the bus depot at Site A, would impose constraints on our future use and design of these development sites in close proximity of the Application Site. However, potential impacts have not been taken into account in the current application. As stated in the Planning Statement, no planned residential development, educational institutions and other sensitive uses have been assumed in all technical assessments including Noise Impact Assessment, Air Quality Impact Assessment, Landscape and Visual Impact Assessment (LVIA) and Air Ventilation Assessment.	Noted. The landscape design will be reviewed subject to the completion of the Planning and Engineering Study on Tuen Mun West area.  According to landscape proposal in the previous submission, landscape features had been incorporated in the design (e.g. vertical greenery and planters).
4	In view of the above, the Applicant is requested to acknowledge these potential uses and address whether there would be any potential impacts on the identified development sites in Tuen Mun West area under the proposed P&E Study including noise, air, landscape and visual, and air ventilation. Relevant mitigation measures at source, e.g. vertical greening, roof top greening (as covers over bus parking spaces), façade design, etc., should be considered appropriately.	The applicant acknowledged the potential uses in Tuen Mun West Area. However, the proposed Planning and Engineering Study has not commenced yet and there is no detailed information on the initial land uses within Tuen Mun West Area during the preparation of this environmental assessment.
5	According to the LVIA, the Landscape Master Plan only covers Site A. The Applicant should provide landscape proposals and boundary landscape treatments for Sites B and C as well, especially that high-rise residential developments could be recommended in the area south of Site C under the proposed P&E Study.	Noted. The LVIA and Landscape Master Plan of Site A to C is provided. Please refer to the Appendix A of the revised Landscape Proposal for the landscape master plan of three sites.

Comments		Response
Comments from District Lands Officer, Lands Department (Received on 24 August 2021) (Contact Person: Miss Wai Ming CHAN; 2451 3182)		
(i)	The application site which comprises 3 pieces of Government land is annotated as “Site A”, “Site B” and “Site C” in the application. The site is held under a short term tenancy (STT) for a temporary bus depot subject to, among others, the following restrictions:  (c) The total built-over area and height of structures erected shall not exceed 2,000m2 and 8 m respectively, and (d) No structures or building shall be erected within portions of Site A and Site B and the whole of Site C.	Noted. KMB would simply develop the sites to a temporary open air parking area in 2H of 2021 under existing short term tenancy. To optimize the land resource, KMB with support of Transport Department proposes to build a multi-storey permanent depot at Site A. Once the approval is granted, KMB will apply for a fresh land document for the proposed bus depot development.
(ii)	It is noted that the anticipated completion of the proposed development is in year 2025 while the term of the tenancy is up to July 2026 only and renewal of the tenancy is not permitted under the existing conditions.	
(iii)	The proposal does not comply with the terms and conditions of the tenancy. Should the application be approved by the Town Planning Board, KMB is required to obtain policy support from the relevant policy bureau and apply for a fresh land document for the proposed bus depot development. However, there is no guarantee that their application will be approved and I hereby reserve my right to take appropriate action should any breach of tenancy conditions be found. The said application will be considered by the Lands Department acting in the capacity as the landlord at its sole discretion. In the event that the said application is approved, it would be subject to such terms and conditions as the Government shall deem fit to do so, including, among others, charging of rent and administrative fee. Upon approval and commencement of the new land document, the existing STTMM0003 will be terminated in the relevant time.	
Comments from Senior Engineer, Highways Department (Received on 24 August 2021) (Contact Person: Mr. WONG Chi Yuen, Sammy; 3526 0036)		
He has the following comments from highways maintenance point of view:		-
1.	From our understanding, some HyD assets such as drainage pipes, manholes, utility ducts, drawpits, movement joints, isolation joints, etc are located within Site A, B and C (the Site). KMB shall allow HyD staff and the contractors whom employed by HyD to enter the Site to carry out inspections and maintenance works.	Noted.
2.	KMB shall not erect any structures on top of the HyD assets. KMB shall remove any materials/ objects/ covers/ vehicles on top of the HyD assets when requested by HyD.	Noted.

Comments		Response
3.	KMB is not allowed to excavate where above HyD's structures. Unless when carrying out repairing works to the pavement in the Premises with prior agreement by HyD, and the excavation depth shall not exceed the existing pavement depth.	Noted.
4.	KMB shall be responsible for general cleaning of the isolation joint in Site C.	Noted.
5.	KMB should protect the highway structure within or adjacent to the Site.	Noted.
6.	Drainage reserve and protection for the drainage maintained by HyD should be provided within the Site.	Noted.
7.	According to DWG. No: EL04, it shows that the vertical clearance between the existing footbridge adjacent to the proposed 132kV substation is 1000mm only. Please clarify that clearance is up to the top of the roof parapet or the roof floor to check whether there are sufficient working space. Minimum 2000mm clearance should be provided around the existing footbridge for normal maintenance works.	Noted.
8.	Please be reminded that metal louvers/ windows etc. for the 132kV substation should not be constructed right under the footbridge, such that the footbridge will not be seriously affected/ damaged in case of fire. The south-east elevation of the substation should be submitted for our review and comment.	Noted.
9.	The proposed access arrangement of the application site should be commented and approved by TD.	Noted.
10.	The applicant should design and construct the run in/out of the application site to the satisfaction of TD and HyD in accordance with the latest version of Highways Standard Drawing to match with the existing adjacent pavement at their own cost. Please be reminded that public concerns were received regarding the induced traffic flow from the Site may cause damages to the nearby road network. The applicant should review the design of the run in/out of the site and ensure that the design will be capable to withstand the induced traffic flow. Any defects or complaints related to the run in/ out should be handled by the applicant with the agreement from HyD at their own cost.	Noted.
11.	Adequate drainage measures should be provided to prevent surface water running from the application site to the nearby public roads and drains.	Noted. Based on site survey conducted on 30 April 2021, the site is fully paved with drainage channels provided to prevent surface water running to nearby public roads and drains.

Comments		Response
		
<b>Comments from Environmental Protection Department (Received on 26 August 2021)</b> <b>(Contact Person: Ms. Virginia WONG, Tel: 2835 1109)</b> Drainage and Sewage Impact Assessment		
1.	Please clarify if there would be any kind of oil produced during car washing, maintenance and other operations or activities in the depot. If yes, oil interceptor should be installed.	The proposed depot is for electric buses. No engine oil and gearbox oil is required in the electric buses. Only minimal lubricant oil will be used during maintenance. Oil interceptor will be installed at drainage system downstream of any oil/ fuel pollution sources. Oil interceptors will be emptied and cleaned regularly to prevent the release of oil and grease into the storm water drainage.
2.	We could not find the existing 225mm sewer between FM1.1 and FM1.12A in our 2021 drainage record. Please verify with Drainage Services Department or other department if the concerned sewer is available.	<p>Please be clarified that the drainage plan attached in Appendix 6.1 (previous Appendix 4.1) was provided by Transport Department.</p> <p>Based on the site survey conducted on 30 April 2021, the existing 225mm sewers between FM1.1 and FM1.12A and manholes were available on site.</p> <p>Manholes found on site are tallied with the drainage plan are shown in Appendix 6.1.</p>



Comments	Response
	
3. Please confirm no catering service or canteen in the depot.	Please be confirmed no catering service or canteen in the depot, which is also clarified in Section 3.1.2.
4. "FMH1005385" should read "FSH1005385" in Para 4.1.2.	Noted. Para 6.1.2 is revised (previous para 4.1.2).
5. Please clarify if there is any existing and planned discharges to the sewer between FM1.1 and FM1.12A. If yes, please include in the capacity check.	<p>Based on Appendix 6-1, the sewage from the existing Toll Control Building (Catchment A) is discharged at FM1.1, which has been included in the revised capacity check in Appendix 6-3.</p> <p>Based on the best available information during the time of preparation, no planned development is identified based on any Development Permission Area Plans, Outline Development Plans, Layout Plans and other relevant published and uses plan by Lands Department or Planning Department in the vicinity of the Project Sites.</p> <p>As advised by Planning Department (PlanD), the consultant has visited the Town Planning Board Statutory Planning Portal 2 to obtain records for land zoning. The website as of 8 October 2021 has confirmed that there are no planning applications made at the vicinity, which implies no committed or planned developments. Correspondence from PlanD has been attached in <b>Appendix 3-3</b>.</p> <p>Therefore, please be clarified that there will be no planned discharges to the newly constructed sewer between FM1.1 and FM1.12A.</p>
<b>Comments from the Commissioner for Transport (Received on 27 August 2021, 09:33)</b> <b>(Contact Person: Mr. Louis IP, Tel: 2399 2261)</b>	
According to the findings of the Traffic Impact Assessment (TIA), the proposed development would not induce adverse traffic impact on the adjacent road network.	Please note that the run-in/out were built by the Government and there are no changes in our design.

Comments		Response
<p>In this regard, we have no objection in principle to the proposed development from traffic engineering point of view subject to the following information to be further submitted:-</p> <p>i.) Swept path for Buses ingress/egress to and from Site A and Site C &amp;  ii.) Swept path for Buses maneuvering inside the Depot (e.g. enter/leave the washing bay and parking)</p> <p>Having said the above, since the proposed development is still under the detailed design. In this regards, the applicant shall submit the finalized TIA report for our further review and approval.</p>		<p>i.) The swept path analysis of buses ingress/egress to/from Site A and Site C has been incorporated into the revised TIA report.</p> <p>ii.) The swept path analysis of buses maneuvering inside the depot has been incorporated into the revised TIA report.</p>
<b>Comments from Drainage Services Department (Received on 3 September 2021)</b> <b>(Contact Person: Mr. T Y NG, Tel: 2300 1630) (By email)</b> <b>Drainage and Sewage Impact Assessment</b>		
SIA		
1.	Section 4.2.1 - Please advise if the generated sewage will comprise of some heavy metal or not.	<p>Since the generated sewage is come from depot staff and automatic vehicle washing machines, please be confirmed that the generated sewage will not comprise of any heavy metal.</p> <p>S6.2.1 is revised for clarification.</p>
2.	Appendix 4-2 - Please advise the volume of sump pit (to avoid overflowing to sewer) for easy reference.	The volume of sump pit is 1m <sup>3</sup> (size of 1mx1mx1m). It is also indicated in the revised Appendix 4-2 and clarified in S6.2.3.
3.	Appendix 4-2 - Please advise the facilities of the upstream of the existing sewer (i.e. FM 1.5). Please note that the sewage generated from the existing facilities should also be taken into account in the hydraulic assessment.	Based on Appendix 6-1, the sewage from the existing Toll Control Building (Catchment A) is discharged at FM1.1. Revised calculation on sewage generation and capacity check are attached in Appendix 6-2 and Appendix 6-3 respectively.
4.	The SIA report needs to meet the full satisfaction of Sewerage Infrastructure Group (SIG) of Environmental Protection Department (EPD), the planning authority of sewerage infrastructure.	Noted.
5.	Notwithstanding the above, I have no in-principle objection to the captioned application from public sewerage viewpoint. Should the application be approved, a condition should be stipulated requiring the applicant to submit a revised SIA addressed the above comments and to implement and maintain the mitigation measures identified to the satisfaction of EPD and this department.	Noted.
DIA		
1.	On the understanding that the site is fully paved as at today and there should not be any significant drainage impact incurred by the proposed development, I have no adverse comment on the DIA from public drainage viewpoint.	Noted.
<b>Comments from Chief Architect/Central Management Division 2, Architectural Services Department (Received on 3 September 2021)</b> <b>Application No. A/TM/565</b> <b>(Contact Person: Mr Calvin CHAN, Tel: 2154 2398)</b> <b>(By email)</b>		
2.	Based on the information provided, it is noted that the proposed permanent depots consists of one block with building height of 11 storeys (about 82.5m). Since the adjacent "Industrial" developments are permitted in the OZP, we would have no comment from architectural and visual impact point of view, subject to PlanD's view.	Noted.
3.	It is suggested to provide 20% greenery in accordance with PNAP App-152.	Noted. Planters and vertical green at Project Sites are maximized to achieve 20% greenery. Please refer to Section 4.2.12 of the revised LVIA and landscape proposal for the summary of Proposed Green Coverage.

Comments				Response																											
				<table><tr><td colspan="2">Total Site Area (Site A, B and C) = 16,845m<sup>2</sup></td></tr><tr><td>Site A</td><td>7,926m<sup>2</sup></td></tr><tr><td>Site B</td><td>1,321m<sup>2</sup></td></tr><tr><td>Site C</td><td>7,598m<sup>2</sup></td></tr><tr><td colspan="2">Greenery Provided</td></tr><tr><td colspan="2">Below 15m of Bus Depot Building in Site A</td></tr><tr><td>Planter on G/F and 1/F</td><td>337.534m<sup>2</sup></td></tr><tr><td>Vertical Greening</td><td>Approx. 1,257.736m<sup>2</sup></td></tr><tr><td colspan="2">(337.534+1,257.736) m<sup>2</sup> / 16,845 m<sup>2</sup> = 9.47%</td></tr><tr><td colspan="2">Above 15m of Bus Depot Building in Site A</td></tr><tr><td>Vertical Greening</td><td>Approx. 1,782.162m<sup>2</sup></td></tr><tr><td>Total Greening</td><td>Approx. 3,377.432m<sup>2</sup></td></tr><tr><td colspan="2">3,377.432m<sup>2</sup> / 16,845 m<sup>2</sup> = <b>20.05%</b></td></tr></table>		Total Site Area (Site A, B and C) = 16,845m <sup>2</sup>		Site A	7,926m <sup>2</sup>	Site B	1,321m <sup>2</sup>	Site C	7,598m <sup>2</sup>	Greenery Provided		Below 15m of Bus Depot Building in Site A		Planter on G/F and 1/F	337.534m <sup>2</sup>	Vertical Greening	Approx. 1,257.736m <sup>2</sup>	(337.534+1,257.736) m <sup>2</sup> / 16,845 m <sup>2</sup> = 9.47%		Above 15m of Bus Depot Building in Site A		Vertical Greening	Approx. 1,782.162m <sup>2</sup>	Total Greening	Approx. 3,377.432m <sup>2</sup>	3,377.432m <sup>2</sup> / 16,845 m <sup>2</sup> = <b>20.05%</b>	
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Application Site and Scheme																															
2.	The application site falls within an area shown as 'Road' on the approved Tuen Mun Outline Zoning Plan (OZP) No. S/TM/35. It comprises three separate portions, namely Sites A to C, located at the northbound and southbound of the original toll plaza of Tuen Mun-Chek Lap Kok Link (TMCLKL), which have been freed up for other purposes as the toll fees for using TMCLKL has been waived. To the further southeast of the site across TMCLKL is a stretch of industrial developments with BH restriction of 26mPD fronting the sea. To the northwest is an extensive sloping area covered with vegetation zoned "Undetermined" on the OZP.			Noted.																											
3.	<div>The applicant seeks planning permission to develop bus depots with ancillary public utility installation (electricity substation) at the site with major development parameters as follows:</div> <table><tr><td>Proposal</td><td>Site A</td><td>Site B</td><td>Site C</td></tr><tr><td>Use</td><td>multi-storey depot for electric bus</td><td>power substation</td><td>charging-enabling bus parking bays</td></tr><tr><td>Site Area</td><td>about 7,926m<sup>2</sup></td><td>about 1,321m<sup>2</sup></td><td>about 7,598m<sup>2</sup></td></tr><tr><td>Gross Floor Area</td><td>about 57,845.32m<sup>2</sup></td><td>about 1,040.6m<sup>2</sup></td><td>-</td></tr><tr><td>Plot Ratio</td><td>about 7.3</td><td>about 0.79</td><td>-</td></tr><tr><td>Site Coverage</td><td>about 94% (G/F-1/F) about 60% (2/F - R/F)</td><td>about 47%</td><td>-</td></tr></table>			Proposal	Site A	Site B	Site C	Use	multi-storey depot for electric bus	power substation	charging-enabling bus parking bays	Site Area	about 7,926m <sup>2</sup>	about 1,321m <sup>2</sup>	about 7,598m <sup>2</sup>	Gross Floor Area	about 57,845.32m <sup>2</sup>	about 1,040.6m <sup>2</sup>	-	Plot Ratio	about 7.3	about 0.79	-	Site Coverage	about 94% (G/F-1/F) about 60% (2/F - R/F)	about 47%	-	Noted.			
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Comments					Response
	Building Height	not more than 82.5m (11 storeys)	not more than 15.6m (2 storeys)	-	
4	The applicant has put forth the following major design features for the multi-storey depot for electric bus at Site A : a. 15m wide openings at the NE and SW façades on G/F; b. Vast openings at the NE and SW façades on various floors (1/F -10/F); c. Chamfered design of typical floors (3/F to R/F) at the NW façades; and The vertical green panels shall form a green wall covering a section of 1/F façade of the building.				Noted.
Urban Design and Visual					
5	The site is located at the previous toll plaza of TMCLKL. The surrounding areas are mainly roads and industrial developments in the southeast fronting the sea and the vegetated sloping areas in the northwest. According to paragraph 2.2.4 of the visual impact assessment (VIA) at Section 6, the applicant claims that there is only a small number of industrial and institutional viewers without residential and recreational sites within the visual envelope. It also states that the major public viewers would be the road users of TMCLKL and the proposed development is largely in keeping with the surrounding transport corridor and does not exceedingly block the view towards the slopes. Hence, the applicant concludes that the visual impact shall be acceptable with appropriate design and other mitigation measures. However, you may wish to ask the applicant to provide sufficient information in the following aspects to substantiate the application:				Noted.
Development Concept					
	a. According to the submission, the application consists of three separate portions, namely Sites A to C, with different uses. However, only layout, section and elevation plans showing the development concept for the multi-storey depot for electric bus at Site A has been provided. The VIA at Section 6 mainly covers the proposal at Site A. As this application also covers Sites B and C, the applicant may wish to provide the development concept for the proposals at the remaining portions and review the VIA accordingly. More detailed comments on the VIA are at Comments 5(e) to (h) below.				The layout, section and elevation plan of Site A, B and C are provided.  Please be clarified that the VIA has covered all three sites (Site A to Site C).  Since the three sites are basically directly adjacent to one another, the affected public viewers and key public viewpoints remain valid. The viewpoints illustrations and their assessments of visual impacts is supplemented in section 3.1.6 of the LVIA report.
	b. Noting that there are openings at the NE and SW façades of the multi-storey depot for electric bus at Site A to enhance permeability, please clarify whether there are any similar proposals in the SE and NW façades.				There are similar proposals at the SE and NW façade..  Please refer to the sectional drawing of SE and NW elevation.
	c. Height of rooftop structures should be shown on appropriate plan(s).				The height of rooftop structures is indicated in the R/F layout (DWG No. AA06) and the sectional drawings (DWG No. ST01 to ST02 and EL01 to EL04).
	d. It is noted from the submitted AVA-EE that the applicant has devised an "OZP compliance scheme" with a maximum building height of 82.5m for comparison purpose in the submission. As the site falls within an area shown as 'Road' on the OZP, the applicant may clarify why such scheme complies with the OZP.				Please be clarified that there is no building height restriction of the Project Sites under the OZP, thus the scheme is not "OZP compliance scheme".  <u>The 11-storey depot scheme is proposed to cater KMB’s operational needs and electric bus strategy as well as support the Roadmap on popularization of Electric Vehicles released by Environmental Bureau in March 2021. The Baseline Scheme and Proposed Scheme in AVA-EE share the same design control parameters including the plot ratio and site coverage for study. Air ventilation performance enhancement features have been introduced in the Proposed Scheme to facilitate the wind environment nearby.</u>  Proposed Scheme

Comments		Response																																																																																								
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	<p>e. Paragraph 2.1.4 - The applicant indicates that the methodology of the VIA has been made reference to TPB PG-No. 41. In this connection, the applicant may wish to review the VIA having regard to the said guideline. In particular, no public view points (VPs) has been identified. There is also no information on the appraisal of visual change and evaluation of overall visual impact in the submission. Besides, following Comment 5(a) above, the assessment should cover the entire development scheme.</p>	<p>The public viewpoints of road users (VP1 and VP2) and workers from the coastal industrial area (VP3) are covered in the assessment. Please refer to the Figure 5 of the LVIA and landscape proposal for the location of viewpoints. Photomontages at three viewpoints showing the visual change are provided in Appendix C.</p> <p>Evaluation of overall visual impact is discussed in Section 3.2.5 to 3.2.7 of the revised LVIA and landscape proposal and extracted below.</p> <p>Section 3.2.5: “From the photomontage illustrations, the proposed building is largely in keeping with the surrounding transport corridor and does not exceedingly block the northerly view towards the slopes. It is therefore also expected that the visual impacts shall be acceptable with the proposed orientation of building and green façade treatment.”</p> <p>Section 3.2.6: Potential development sites for housing developments and/or other beneficial uses may be identified in areas to the immediate west of Site A (Area 46) and south of Site C (Area 40) in Tuen Mun in the future. While the proposed 11-storey depot building in Area A sits between Area 46 and the ocean, it would not exceedingly block the easterly sea view given its moderate height. Conversely, it is also anticipated that the proposed depot building would not exceedingly block the northerly view from Area 40 towards the green slopes to the north. It is expected that the visual impacts of the proposed building in Site A will be moderate to low and considered acceptable with appropriate façade design and other mitigation measures.”</p> <p>Section 3.2.7: “Site C is proposed to be remain as an open area for providing electrical charging facilities for the eBuses. The landscape characteristics shall remain the same as the surrounding transportation corridor and the</p>																																																																																								



Comments		Response
		charging facilities are not expected to impose any significant visual impacts on the potential developments in Area 40."
	f. Paragraph 2.1.6 and Figure 6 - The information of VPs together with the reasons for their selection is missing. Site A is not annotated in Figure 6.	The public viewpoints of road users (VP1 and VP2) and workers from the coastal industrial area (VP3) (i.e. Tuen Mun Area 40) are added in the assessment. The information and reason of the VPs has been added in Section 3.1.6 in the LVIA and landscape proposal and extracted below: Three Key Public Viewpoints have been selected to illustrate the visual impacts of the proposed development to vehicular travelers on the Tuen Mun-Chek Lap Kok Link and the occupational viewers from the industrial area to the south of the development site. The three viewpoints are listed below. Key Public Viewers have been selected and shown in Figure 5. <ul style="list-style-type: none"> <li>• VP1 – taken from the east side of Site A to represent the development as seen by the southbound vehicular travelers;</li> <li>• VP2 – taken from the south side of Sites A and B as seen by the northbound vehicular travelers;</li> <li>• VP3 – taken from the east side of Sites A, B, and C as seen by the occupational viewers from the industrial area.</li> </ul>
	g. Paragraph 2.2.4 - Please clarify the appropriate design and other mitigation measures claimed in this paragraph. With the aid of photomontages, please also illustrate how the proposed development would blend in with the surrounding environment without blocking major views to the slopes in the background.	Please be clarified that the appropriate design and the mitigation measure to reduce the visual impact included proposed orientation of building and green façade treatment. Section 3.2.5 of LVIA and landscape proposal is revised as below.  "Photomontages illustrating the proposed development as seen from VP1, VP2, and VP3 are provided in Appendix C. From the photomontage illustrations, the proposed building is largely in keeping with the surrounding transport corridor and does not exceedingly block the northerly view towards the slopes. It is therefore also expected that the visual impacts shall be acceptable with the proposed orientation of building and green façade treatment."
	Photomontages – h. Please review the three photomontages in accordance with the requirements of TPB PG-No. 41. A location plan showing the angle of the associated VPs should also be provided. The openings at the NE and SW façades are shown in solid black colour which looks impermeable. Only the building outline of the proposed development is shown on the photomontage of block view without visual rendering. The chamfered design of typical floors (3/F to R/F) at the NW façades are not reflected in the photomontages. It is difficult to assess the effectiveness of the design measures proposed by the applicant. Besides, only the proposed depot at Site A is shown in the submitted photomontages. Other sites under this application should also be reflected in the photomontages.	The photomontages covering Site A to C are provided in Appendix C of the LVIA and landscape proposal. The vertical green and other designs are incorporated in the updated photomontages. The location plan of the angle of the VPs is also provided.
Air Ventilation		
6.	The site does not fall within the criteria for air ventilation assessment (AVA) under Technical Circular No. 1/06 on AVAs jointly published by the then HPLB and ETWB in 2006. No significant adverse air ventilation impact is anticipated.	Noted.
<b>Comments from Chief Engineer/Construction, Water Supplies Department (Received on 16 September 2021) (Contact Person: Abbey L CHEUK, Tel: 2152 5772) (By email)</b>		
	We have no adverse comment on the application. The applicant shall comply with the "Conditions of Working in the Vicinity of Waterworks Installations" (enclosed), in particular, no structures shall be erected within 3 m from the centre line of mains of the affected water mains as shown in clouded shapes in the attached drawing.	Noted.

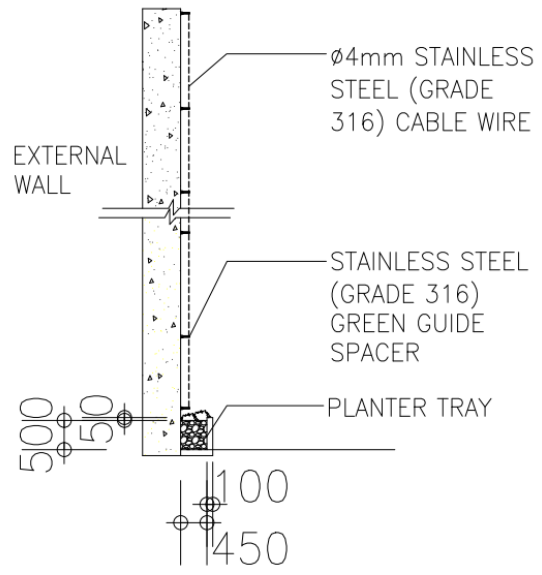


Comments		Response
<b>Comments from Chief Town Planner/Urban Design and Landscape, Planning Department (Received on 17 September 2021)</b> <b>(Contact Person: Isabella TSUI, Tel: 2231 4846)</b> <b>(By email)</b>		
	Having reviewed the R-to-C and the submitted F.I., please note below our comments on the F.I. from landscape planning perspective:	-
(a)	Details and blowup sections for the proposed planters on G/F & 1/F and vertical green wall at 1/F are not yet provided to demonstrate the viability of the landscape proposal	The details and blowup section of proposed planters and vertical green wall (i.e. climbers) at 1/F. Please refer to Please refer to the latest layout drawing (DWG. No.: DD01).
(b)	The response that "KMB will appoint vertical green wall supplier to provide horticultural maintenance works for the proposed vertical green wall on building façade at 1/F" is noted. However how horticultural maintenance works for the proposed vertical greening can be carried out is not clarified. The Applicant is reminded that provision of access for vegetation maintenance should be catered to ensure healthy and sustainable plant growth.	Mobile working platform will be provided for the vertical green wall supplier/subcontractor for regular horticultural maintenance works of proposed vertical greening.
<b>Comments from Chief Town Planner/Studies and Research 1, Planning Department (Received on 20 September 2021)</b> <b>(Contact Person: Ms Jess CHAN, Tel: 2231 4637)</b> <b>(By email)</b>		
	Our further comments from the perspective of the proposed "Planning and Engineering Study for Lung Kwu Tan Reclamation and the Re-planning of Tuen Mun West Area" (the proposed P&E Study) are as follows.  According to the submitted R-to-C table, the applicant stated that he has acknowledged the potential uses in Tuen Mun West Area and will review the landscape design of the proposal. However, there are no further details or specific recommendations in the F.I. on whether there will be potential impacts (particular air and noise) of the proposed bus depot on the future developments in the area; and if so, how they can be mitigated.	The applicant acknowledged the potential uses in Tuen Mun West Area. However, the proposed Planning and Engineering Study has not commenced yet and there is no detailed information on the initial land uses within Tuen Mun West Area during the preparation of this environmental assessment.  Also, based on the review of any Development Permission Area Plans, Outline Development Plans, Layout Plans and other relevant published and uses plan by Lands Department or Planning Department during the preparation of this planning application, it is confirmed that no existing, committed / planned sensitive receivers identified at the vicinity of the Project Sites.  <u>Air Quality</u> Please be clarified that only eBus will be parked at the Proposed Development. Since eBus do not require the use of diesel, no tailpipe emission will be generated, and therefore no adverse air quality impact from the Proposed Development to the surrounding air sensitive receivers (ASRs) is anticipated.  <u>Noise</u> Based on the best available information during the preparation of assessment, there are no existing, committed and planned noise sensitive receivers (NSRs) identified within 300m assessment area, hence no adverse noise impact from the Proposed Development (including road traffic noise impact and fixed plant noise impact) to the surrounding NSRs is anticipated. Nevertheless, Fixed Plant will be housed indoor or ventilation louvres will be carefully design to avoid facing NSRs in the area. Noisy maintenance activities will be avoided to carried out in nighttime as far as practicable.
	The potential development sites under the proposed P&E Study lie to the immediate west of the application site of the bus depot. The currently proposed 11-storey depot under 24-hour operation and the depot design with vast openings would likely impose noise, air quality and visual constraints/impacts on the development sites. <u>The applicant should endeavour to improve the design and disposition of the proposed bus depot so as not to compromise the design flexibility of</u>	The applicant acknowledged the potential uses in Tuen Mun West Area. However, the proposed Planning and Engineering Study has not commenced yet and there is no detailed information on the initial land uses within Tuen Mun West Area during the preparation of this environmental assessment.

Comments		Response
	the potential development sites in close proximity. Possible measures to alleviate the proposal's potential adverse impacts may include reducing the number and size of openings on the western façade facing the potential development sites, and providing suitable façade treatments (e.g. vertical greening) and roof-top greening.	Possible measures including the vertical greening is proposed to minimize the potential adverse visual impacts. Please refer to the updated master landscape plan.
<b>Comments from Environmental Protection Department (Received on 23 September 2021)</b> <b>(Contact Person: Ms Virginia WONG, Tel: 2835 1109)</b> <b>(By email)</b>		
	There is no revised report submitted for review and comment. The applicant has submitted RTC and Revised Pages only for our review. Please find our partial comments on planning application are as below:	The revised reports and the RtoC table are provided.
Air Quality Impact Assessment (AQIA)		
1	<u>Comments on the R-t-c</u> R-t-c 1. Please elaborate whether dust emission impact is expected during operation phase due to these minor vehicle repair and testing activities.	Section 8.6.1 is updated to elaborate dust emission impact during operation phase due to minor vehicle repair and testing activities. It is not anticipated as the ground surface will be concrete paved. Section 5.8.6 is updated for clarification.
2	R-t-c 3. Please include a Figure to illustrate that the air sensitive uses will be located far away from buffer zones. Please mark the location of the fresh air intake (of mechanical ventilation) of the office in the Figure for clarity.	It is noted that the location of the fresh air intake for the air sensitive uses of the Proposed Development is being finalised. In view of this, area of the Project Site that are suitable for the placement of fresh air intake (i.e. area outside of buffer distance of air sensitive uses from chimney and open road emission) is proposed instead. Air intake of the Proposed Development will be required to be positioned in the area suitable for fresh air intake. Figures 8-1a-e are included to demonstrate the buffer zone for air sensitive uses from chimneys and open road traffic for clarification. Area suitable for air intake of the Project Site is included in Figure 8-1a for clarification.
3	R-t-c 6. It is unclear based on the R-t-c that there is no adverse air quality impact from vehicular emissions. Please include a Figure to illustrate. Other than the Tuen Mun Chek Lap Kok Link Road and Tuen Mun Chek Lap Kok Slip Road, please also evaluate whether there will be vehicular emission impact from the Lung Mun Road.	Vehicular emission impact from Lung Mun Road on ASR identified at Site A is not expected given the buffer distance of 5m can be maintained as shown in Figure 8-1A. No ASR identified at Site B and C, impact from Lung Mun Road is not anticipated. Figure 8-1A and Section 8.3.1- 8.3.2 are updated accordingly for clarification
4	Comments on the replacement pages Table 1. Suggest to elaborate in the footnote that the ASR within the subject site refer to the fresh air intake (of mechanical ventilation) of the office of the bus depot, and there is no air sensitive uses at site B and C of the proposed development with justification.	Footnote for Table 6-1 is updated accordingly.
5	Table 2. Please provide source of reference of Tuen Mun Chek Lap Kok Slip Road as a Primary Distributor, and elaborate whether it is a conservative assumption. Please also clarify if there is any tunnel portal with vehicular emissions within 200m from the air-sensitive uses of the proposed development.	There is currently no available data for the TMCLK in Traffic Census, 2019 from Transport Department (TD). According to Section 1.2.1.3 of "Tuen Mun Chek Lap Kok Link EIA Report", Tuen Mun Chek Lap Kok Slip Road is a dual 2-lane trunk road. Maximum buffer distance of 20m for Primary Distributor is adopted as a conservative approach.  It is confirmed that there is no tunnel portal with vehicular emissions within 200m from the ASR at Site A.  Section 8.2.1 and Figure 8-1A are revised accordingly.
6	Major Control Measures to minimize the air quality impacts. (a) Suggest to remove the word "Major" and list out all control measures to be implemented. (b) The following additional mitigation measures are recommended to suppress dust from the proposed excavation works: <ul style="list-style-type: none"> <li>Exposed earth shall be properly treated by compaction, turfing, hydroseeding, vegetation planting or sealing with latex, vinyl, bitumen, shotcrete or other suitable surface stabilizer within 6 months after the last construction activity on the construction site or part of the construction site where the exposed earth lies.</li> </ul>	Section 7.1.3- 7.1.4 are revised accordingly.

Comments		Response
	<ul style="list-style-type: none"> <li>The working area of any excavation or earth moving operation shall be sprayed with water or a dust suppression chemical immediately before, during and immediately after the operation so as to maintain the entire surface wet.</li> </ul> <p>(c) Other than the above mitigation measures, electric power supply shall be provided to the on-site machinery as far as practicable for construction activities.</p>	
Land Contamination Assessment		
1	Rtc item (3): Please provide the relevant replies.	The relevant replies are provided in updated Appendix B. The summary of correspondence is presented in updated Table 2.
2	Annex 3.1, Table 1: Please present the land use history of Site C before being used as the elevated highway before 2013.	Site C is located on the elevated highway of TMCLKL above the Lung Mun Road. Based on the information from website of Highways Department (HyD), the construction works of TMCLKL started in 2013. The aerial photos available from the Lands Department show that there is no structure within Site C before the construction of the elevated highway and Site C in 2017.
3	Annex 3.2 : Please present the aerial photos in chronological order.	Noted. The aerial photos in Appendix A are presented in chronological order.
Noise Impact Assessment (NIA)		
	Comments provided in due course.	Noted.
Landfill Gas Hazard Assessment (LFGHA)		
	No further comment on the revised pages.	Noted.
Sewerage Impact Assessment (SIA)		
	No further comment on the revised pages.	Please be clarified that the sewage from the existing Toll Control Building (Catchment A) is discharged at FM1.1, which has been included in the revised capacity check in Appendix 6-3 of DSIA report.
<b>Comments from Buildings Department (BD) (Received on 24 September 2021)</b> <b>(Contact Person: Mr Joseph WONG, Tel: 2626 1427)</b> <b>(By email)</b>		
	<p>There is no record of approval by the Building Authority (BA) for the structures existing at the application site and BD is not in a position to offer comments on their suitability for the use related to the application. BD is not in a position to provide comment on the government lands.</p> <p>I have the following comments under the Buildings Ordinance (BO) and the applicant's attention is drawn to the following points:-</p>	-
(a)	If the existing structures (not being a New Territories Exempted House) are erected on leased land without approval of the BD, they are unauthorized building works (UBW) under the Buildings Ordinance (BO) and should not be designated for any proposed use under the captioned application.	Noted.
(b)	For UBW erected on leased land, enforcement action may be taken by the BD to effect their removal in accordance with BD's enforcement policy against UBW as and when necessary. The granting of any planning approval should not be construed as an acceptance of any existing building works or UBW on the application site under the BO.	Noted.

Comments		Response
(c)	Before any new building works (including open sheds as temporary buildings) are to be carried out on the application site, the prior approval and consent of the BD should be obtained, otherwise they are UBW. An Authorized Person (AP) should be appointed as the co-ordinator for the proposed building works in accordance with the BO.	Noted.
(d)	The site shall be provided with means of obtaining access thereto from a street and emergency vehicular access in accordance with Regulations 5 and 41D of the Building (Planning) Regulations respectively.	Noted.
(e)	If the site does not abut on a specified street of not less than 4.5m wide, its permitted development intensity shall be determined under Regulation 19(3) of the Building (Planning) Regulation at the building plan submission stage.	Noted.
(f)	Detailed comments under the BO will be provided at building plan submission stage.	Noted.
<b>Comments from Chief Highway Engineer/New Territories West, Highways Department (Received on 27 September 2021)</b> <b>(Contact Person: Mr Sammy WONG, Tel: 3526 0036)</b> <b>(By email)</b>		
	Our comments remain valid, in particular KMB's clarification and additional drawings are required for items 7 & 8 and are found outstanding.	Noted, the comments have been incorporated into the revised Master Layout Plans.
<b>Comments from Director of Environmental Protection (Received on 04 October 2021)</b> <b>(Contact Person: Ms. Virginia WONG, Tel: 2835 1109)</b> <b>(By email)</b>		
	In this Further Information, the applicant has only submitted an RtC table and did not provide any updated noise impact assessment nor other documents to support the subject application. We shall therefore <b>reserve our detailed comment until a full submission</b> is made by the applicant.	Noted, the comments have been incorporated into the revised report.
	Nonetheless, we would like to point out to the applicant/consultant that road noise doesn't just come from the engine, but also the impact of tyre on the road, particularly at high speed. Referring to RtC Item no. 3, simply discussing the engine noise of eBus is <b>insufficient to justify that the project will not pose any adverse road traffic noise impact</b> from its induced traffic on the NSRs along the access roads (e.g. Lung Mun Road and Lung Fu Road). The applicant/consultant should review and address the potential noise impact from the travelling buses more thoroughly, and propose measures to minimize the impact if necessary.	<p>As shown in Appendix 3-3, although proposed bus routing will travel through Lung Fu Road and Lung Mun Road, eBus is fully powered by electricity and no engine is required, so its operation is quiet in nature, engine noise is not expected.</p> <p>According to the Traffic Impact Assessment (TIA) under this Planning Application, provision of at least 2 bus queuing space is required, while the available queuing area in Site A can accommodate at least 3 buses which provides adequate spare capacity to handle the peak arrival flows without queuing back to the public road.</p> <p>Besides, the TIA also revealed that the maximum trip generation during operational peak (06:00-07:00) is 134 veh/hr. With reference to Traffic Census 2020, the Annual Average Daily Traffic (AADT) of Lung Fu Road and Lung Mun Road is 16,190 veh/hr and 12,230 veh/hr respectively. The additional traffic flow from the proposed depot during operation peak only contribute around 1% of traffic flow of Lung Mun Road and Lung Fu Road.</p> <p>In view of the sufficient queuing area provided and insignificant increase of traffic flow due to the project, the potential noise impact arising from tyre noise is minimal.</p> <p>Section 7.1.2 to Section 7.1.4 are revised.</p>

Comments		Response
<b>Comments from Highways Department (Received on 29 October 2021)</b> <b>Application No. A/TM/565</b> <b>(Contact Person: Ms Sandra LEUNG, Tel: 3526 0058)</b> <b>(By email)</b>		
1	As per drawing no. EL05, it is noted that 2000mm clearance would be provided underneath the existing footbridge. As no access to the roof was indicated in the drawing, please be reminded that appropriate access ladder/ staircase should be provided for HyD and HyD's contractor to perform inspection/ maintenance works to the existing footbridge. Please also clarify whether parapet would be provided at the roof area.	Noted, no parapet would be provided at roof area, but to ensure the safety of workers during maintenance works, fall arrest system with anchorage would be provided at roof area.
<b>Comments from Chief Town Planner/Urban Design and Landscape, Planning Department (Received on 03 November 2021)</b> <b>Application No. A/TM/565</b> <b>(Contact Person: Ms Isabella TSUI; Tel.: 2231 4846)</b> <b>(By email)</b>		
	Having reviewed the R-to-C and the submitted F.I., it is noted that vertical green panels with climbers are proposed on various levels (from G/F up to 9/F) of the building façade in Site A in the revised Landscape Proposal. Please note our following comments from landscape planning perspective:	-
(a)	(a) Dwg no. DD01- The internal width of the planter tray less than 250mm is too narrow for the sustainable growth of the proposed climbers.	<p>As discussed with PlanD's officer, at least 450mm planter tray will be provided. Please refer to the updated Dwg no. DD01 and extracted below.</p>  <p>DETAIL OF VERTICAL GREENING</p>
(b)	It is noted that vertical green panels are used extensively on building façades on various floors (from G/F up to 9/F). The applicant is reminded of the long-term commitment in providing proper maintenance to the vertical green panels for healthy and sustainable plant growth.	Noted.



	Comments	Response
	The Applicant is reminded that approval of the Section 16 application under Town Planning Ordinance does not imply approval of the site coverage of greenery requirements under APP PNAP-152 and/or under the lease. The site coverage of greenery calculation should be submitted separately to BD for approval.	Noted.
Comments from EPD (Received on 04 November 2021) Application No. A/TM/565 (Contact Person: Ms Ms Virginia WONG, Tel: 2835 1109) (By email)		
Air Quality Impact Assessment (AQIA)		
1	Section 3.1.2. Please rectify the typo of "Tune" in line 1.	Typo in S.3.1.2 is updated accordingly for clarification:  "The Project Site is located at Tuen Mun Chek Lap Kok Tunnel Road and at the east of the <b>Tuen</b> Mun Chek Lap Kok Tunnel Interchange."
2	Section 3.1.4. No sensitive receivers within 500 from project boundary does not tally with the description in Section 6.1.2. Please check and revise.	It is noted that there are 5 nos. of planning and existing air sensitive receivers within the 500m assessment area for air quality impact from the Proposed Development. S.3.1.4 is removed accordingly to avoid confusion.
3	Section 3.1.5. Please clarify the meaning of "tyre charging" in line 4. Tyre pressure checking?	It is clarified that tyre charging is the checking of tyre pressure.
4	Section 7.1.1. Please elaborate on the scale of the excavation works to confirm no significant dust impact would be expected from the proposed development as stated in Section 7.1.5.	It is clarified that no extensive site formation is expected for the Proposed Development. Moreover, excavation work is anticipated to be limited to Site A and Site B of the Proposed Development. In view of this, dust emission from the Proposed Development is anticipated to be localised and limited. S.7.1.2 is included accordingly for clarification:  "It is anticipated no extensive site formation is expected for the Proposed Development. Moreover, deep excavation is not expected at Site A and Site B of the Proposed Development. In view of this, dust emission from the Proposed Development is anticipated to be localised and limited."
5	Section 8.2.1. TMCLK should read <b>TMCLK link</b> in line 2, 4, 5.	The typos in S.8.2.1 are updated accordingly for clarification:  "The Project Site is situated on the TMCLK link, and adjacent to Lung Mun Road. <b>Lung Mun Road is classified as Local Distributor (LD) according to the Traffic Census, 2020 from Transport Department (TD)</b> . There is currently no available data for the <b>TMCLK link</b> in Traffic Census, 2020 from Transport Department (TD). However, according to Section 1.2.1.3 of the "Tuen Mun Chek Lap Kok Link EIA Report [AEIAR-146/2009]), the scope of the <b>TMCLK link</b> comprises of a dual 2-lane trunk road. For conservative approach, <b>TMCLK link</b> is classified as primary distributor (PD) based on the information from the abovementioned EIA report."
6	Section 8.2.2. Please provide source of reference of the road type of Lung Mun Road as Local Distributor.	The source of reference of the road type of Lung Mun Road as local distributor (LD) is from the Traffic Census, 2020 from Transport Department (TD), with the section of Lung Mun Road between Mong Hau Shek and Wu Chui Road classified as LD. The abovementioned section of Lung Mun Road is noted to run at front of the Proposed Development. Section 8.2.1 is updated accordingly for clarification:  "The Project Site is situated on the TMCLK link, and adjacent to Lung Mun Road. <b>Lung Mun Road is classified as Local Distributor (LD) according to the Traffic Census, 2020 from Transport Department (TD)</b> . There is currently no available data for the <b>TMCLK link</b> in Traffic Census, 2020 from Transport Department (TD). However, according to Section 1.2.1.3 of the "Tuen Mun Chek Lap Kok Link EIA Report [AEIAR-146/2009]),



	Comments	Response
		the scope of the <b>TMCLK link</b> comprises of a dual 2-lane trunk road. For conservative approach, <b>TMCLK link</b> is classified as primary distributor (PD) based on the information from the abovementioned EIA report.”
7	Section 8.3 and Figures 8-1, 8-1a to 8-1e. Apart from the open slip road, please note that a buffer of at least 200m shall be allowed from the air sensitive uses at the proposed development from the tunnel portal. Please state this clearly in the section and show the buffer zones in the figures.	<p>It is noted that the tunnel portal of TMCLK slip road is located more than 200m away from the closest boundary of the Project Site. As discussed in S.8.2.3., no air sensitive uses are identified at Site B nor Site C of the Project Site. Sensitive use, i.e. office, will not rely on natural ventilation from openable windows, but instead MVAC for ventilation. Fresh air intake will also be located away from the buffer distance from road traffic emission and industrial emission. In view of the above, no adverse air quality impact on the Proposed Development from tunnel portal emission is anticipated during operation phase. S.8.3.2 is updated accordingly for clarification;</p> <p><b>“As shown in Figure 8-1, the tunnel portal of TMCLK slip road is more than 200m away from the closest boundary of the Project Site. In view of the distance away from the tunnel portal, and with the implementation of the mitigation measures as discussed in Section 8.2.3, adverse air quality impact on the Proposed Development from tunnel portal emission is not anticipated during operation phase.”</b></p> <p>Figure 8-1 is also updated accordingly.</p>
Noise Impact Assessment (NIA)		
1	<p><b>Technical Comment</b></p> <p>Re. S.7.1.4 of the NIA regarding the road traffic noise impact assessment, the consultant should note that it is <u>inappropriate to directly compare the AADT with the peak hour traffic flow</u>. To assess the significance of the road traffic noise contribution of the project, the consultant should compare the overall traffic noise levels at the NSRs along the access roads in the “with project” scenario with the “without project” scenario during the peak hours of the induced traffic (i.e. at late night and early morning as per S.3.1.7 of the NIA) with the induced ebus fleet considered as 100% heavy vehicle. The noise contribution from the road traffic generated by the project will be considered insignificant when the difference in the traffic noise levels is less than 1.0 dB(A). If the noise contribution from the project is found to be significant and the road traffic noise levels at the NSRs will exceed their relevant noise criteria, the consultant/applicant should propose mitigation measures (e.g. traffic management plan to reduce the no. of vehicles travelling to and from the depot at the same time) to minimize the impact.</p>	<p>The review of road traffic noise was conducted to compare the overall traffic noise levels at the NSRs along the access roads in the “with project” scenario with the “without project” scenario during the operation peak hours (i.e. 0600-0700) of the Project. The traffic data adopted in this review was based on the traffic flow of year 2028 in TIA report and advice from project traffic consultant.</p> <p>Representative existing NSRs (Yee Tsui House, Melody Garden, Butterfly Estate and Siu Shan Court) with shortest separation distance from Lung Mun Road are selected for assessment. It is concluded that the difference in traffic noise level for all representative NSRs is 0.9 dB(A), which the noise contribution from the proposed project is considered insignificant (less than 1.0 dB(A)). Hence, mitigation measures are not required. Nevertheless, KMB will carefully schedule the bus fleet to reduce the no. of vehicles travelling to and from the Depot at the same time as far as practicable.</p> <p>Section 7 is updated to include the road traffic noise assessment.</p>
2	Riding on our comment above, the consultant should confirm in the main text that the traffic data has been endorsed by the Transport Department.	It is confirmed the traffic data adopted in this noise review is extracted from TIA submitted to TD.
3	Other than the above, we have two more textual comments for tidying up the NIA as given below.	-
4	<p><b>Textual &amp; Presentation Comment</b></p> <p>S.3.1.6, S.6.1.3 and S.9.1.2 – Note that potential noise sensitive uses (e.g. protection/control room) have been proposed at Site B. For simplicity and easier interpretation, the applicant should confirm in the main text that all noise sensitive uses in the proposed developments, such as ancillary office and protection/control room, will be served with mechanical ventilation and will not rely on opened window/door for ventilation. Otherwise, the applicant should address the potential noise impact on the noise sensitive uses at the proposed development.</p>	<p>Noted, please be confirmed that the all noise sensitive uses in the proposed developments, such as ancillary office and protection/control room, will be served with mechanical ventilation and will not rely on opened window/door for ventilation.</p> <p>This is clarified in main text S.3.1.6, S.6.1.3 and S.9.1.2.</p>
5	S.7.1.2 – Should “Appendix 3.1” read as “Appendix 3.3”?	Noted, typological error is updated in S7.1.1.
Sewerage Impact Assessment (SIA)		

Comments		Response
1	For Site A, as the sewage generated includes overflow of water from vehicle washing system, petrol interceptor should be installed in Site A to prevent the oil or petrol from discharging into public sewer.	Noted, S6.2.3 is updated as follow. “... In view of the overflow of water from vehicle washing machines, petrol Interceptor will be installed in Site A to remove oil or petrol before being discharged into public sewer. The petrol interceptors should be regularly cleaned and maintained in good working condition. Oily waste collected by petrol interceptors is considered and disposed of as chemical waste.”
2	For Site B and Site C, as the applicant confirmed no sewage generation is expected, we have no further comment.	Noted.
Landfill Gas Hazard Assessment (LFGHA)		
1	Section 3.4 – (i) Besides the mitigation measures mentioned in section 3.4, precautionary and safety measures to be adopted during construction and operation phase for the identified targets within the consultation zone of PPVL should be included the report.	The precautionary, safety and protection measures to be adopted during the construction and operation phase mentioned in Landfill Gas Hazard Assessment Guidance Note (EPD/TR8/97) shall be recommended for implementation.  The precautionary, safety and protection measures to be adopted in Site B during construction phase and operation phase are discussed in Section 3.4.2.
	(ii) Monitoring requirements, programme and contingency plan related to landfill gas during construction and operational phase should be included in the report.	Monitoring will be carried out according to the Landfill Gas Hazard Assessment Guidance Note (EPD/TR8/97).  During the construction, the monitoring requirements, programme and contingency plan will be set down by the Safety Officer or by an appropriately qualified person. Please refer to S3.4.3 to S3.4.6 of the updated report.  During the operation phase, the majority of maintenance workers and supporting staffs in Site A will work in outdoor environment (i.e. enclosed depot with vast openings at façades) which mainly rely on the natural ventilation. Monitoring is considered as not necessary in Site A. In Site B, some maintenance workers and supporting staffs will work in the enclosed rooms within the substation. The monitoring arrangement will be adjusted during the detailed design stage. Please refer to S3.4.7 to 3.4.8 of the updated report.
Site Appraisal Report		
1.	Table 1, Site C (a) Structures were observed in the aerial photo of 1994 shown in Appendix A.	The aerial photo of Year 1994 in Appendix A is updated with correct scale. Please be clarified that the elevated highway of Site C has not yet existed and no structure was observed within Site C before 2013. Please refer to the updated Appendix A and updated Table 1 of the Site Appraisal Report.
	(b) Please present the landuse changes between Year 1979 and Year 2013 according to the aerial photos shown in Appendix A.	Site C is located on a newly formed elevated highway of TMCLKL. The newly formed elevated highway has not yet existed and no structure was observed within Site C before 2013. The Lung Mun Road is located beneath the elevated highway since 1980s. Table 1 of the Site Appraisal Report updated accordingly.  Please be clarified that the entire Site C will be used for bus parking area in the future. No excavation work will be carried out within Site C and beneath the elevated highway. Thus, the landuse changes beneath the elevated highway between Year 1979 and Year 2013 is not necessary in this Site Appraisal Report.
2.	Section 5.1.2: Please also present the findings from the TMCLKL EIA report regarding the potential land contamination sources of the open storage area of Site A.	The findings from the TMCLK EIA report regarding the potential land contamination sources of the open storage area of Site A is presented in S5.1.2 and listed below. The relevant part of TMCLK EIA report is also extracted in Appendix I for reference.

	Comments	Response
		<p>S5.1.2 "According to the aerial photos available from the LandsD, part of Site A was used for open storage since 1994. Section 13.4.2.7 and Table 13.2 of TMCLKL EIA also stated that part of Site A was used for open storage since 2004 and no potential contamination hotspots have been identified within this area. The extracted TMCLKL EIA is shown in Appendix I. Site A was then converted to the toll plaza of TMCLKL in 2013 until now."</p> <p>The findings from the TMCLK EIA report showing no contamination issue within the whole toll plaza (i.e. Site A and Site B) are also added in S5.1.4 and listed below.</p> <p>S5.1.4 "According to the Section 13.4.2.11 and Table 13.4 of TMCLKL EIA, the toll plaza would be constructed on the land occupied by the River Trade Golf at Tuen Mun Area 46 (i.e. Site B) and part of the rural hill slopes immediately outside the boundary of the closed Pillar Point Valley Landfill (i.e. Site A). Based on the historical, existing land use and the on-site photos shown in Figure 13.21 of TMCLKL EIA, no contamination issue would be anticipated. Relevant sections extracted from TMCLKL EIA are shown in Appendix I."</p>
<b>Comments from Planning Department (Received on 04 November 2021)</b> <b>Application No. A/TM/565</b> <b>(Contact Person: Mr Justin HO; Tel.: 2231 4941)</b> <b>(By email)</b>		
2	The submitted visual appraisal has demonstrated that the proposed developments are situated in the area predominated by industrial related activities such as shipbuilding or warehouses and some infrastructural facilities such as TM-CLK Link. As such, the proposed development is not considered incompatible with the surrounding environment from visual impact viewpoint. However, some of our previous comments on this application have not been properly addressed yet, which are recapped below together with our comments on the current submission from urban design and visual impact perspectives for your consideration.	<p>Noted. The proposed mitigation measures have been considered to minimize the visual impacts from the nearby visual impact viewpoint.</p> <p>The comments have been addressed, please refer to the updated landscape proposal and the response to comment below.</p>
3	<b><u>Responses-to-Comments</u></b> R-to-C, Item 5(a) – Like the layout plans for Sites A and C, please annotate the site boundary of Site B on the respective layout plans for easy reference.	The site boundary of Site B is added on the respective layout plans for easy review. Please refer to AA07 and AA08 for the layout of Site B.
4	R-to-C, Item 5(c) – The height of rooftop structures is not indicated. Please check and review.	The height of rooftop structures is indicated in the sectional drawings (DWG No. EL01 to EL04).
Visual Impact Assessment		
5	<b><u>General Comments</u></b> The analysis on visual impacts of all three sites needs more improvements. With reference to para. 3.2.5, only the visual impact of one building block is discussed without indicating which site is Site A and Site B and their building heights. Please ensure that the visual impacts for all three sites are properly discussed according to the photomontages. Also, visual appraisal for each VP should be provided and our further comments can be seen at para. 10 below.	The visual impacts for all three sites have been evaluated. According to the photomontages shown in Appendix C of the landscape proposal, the visual appraisal for three VP is provided in S3.2.5 of the updated landscape proposal.
6	6. The applicant should provide an evaluation and conclusion of the overall visual impact of the selected VPs and follow the classifications within a range of threshold (e.g. significantly adverse, moderately adverse, slightly adverse etc.) established in the TPB PG-No. 41.	<p>The visual impacts for from three VP are evaluated in S3.2.5 of the landscape proposal. The overall visual impact of the selected VPs is identified in S3.2.6 to S3.2.8 and extracted below</p> <p>3.2.6 "From the photomontage illustrations, the proposed 11-storey building and 2-storey power substations at Sites A and B are largely in keeping with the surrounding transport corridor and does</p>

	Comments	Response										
		<p>not exceedingly block the northerly view towards the slopes. It is therefore also expected that the visual impacts shall be acceptable with the proposed architectural design style of the building enhanced by green façade treatment.”</p> <p>S3.2.7 “Site C is proposed to be used for charging-enabling bus parking bays. The landscape characteristics shall remain the same as the surrounding transportation corridor and the charging facilities are not expected to impose any significant visual impacts to public viewers.”</p> <p>S3.2.8 “Taking into account all the above considerations, the overall visual impact of the proposed developments at the Project Sites is <b>slightly adverse</b>.”</p>										
7	<p><b>Specific Comments</b></p> <p>Para. 3.1.5 and Figure 5 – As the proposed VE includes part of sea water area near Tuen Mun Area 40, please consider whether it should be looked upon as a key visual element accordingly.</p>	<p>The sea is considered as a key visual element. S3.1.10 (former S3.1.5) is updated as below: “The key visual elements that could be seen from the site area include the vegetated hills to the north that has the ridgeline of Castle Peak as a backdrop, and the roadside vegetation as foreground. Towards the west and south are generally low-rise development and the open sky is generally visible. <b>The ocean may also be seen from the coastline, upper stories of buildings, and from the higher elevations from the hills.</b>”</p>										
8	<p>Para. 3.1.6 and Appendix C, VP3 – According to the schematic master layout plan, the viewing angle of VP3 that represents the public viewers from Ho Suen Street is not tallied with the photomontage which was taken at another viewpoint. Please check the submitted photomontage and clarify.</p>	<p>The photomontage at VP3 (from Ho Suen Street) is updated, please refer to Appendix C of the landscape proposal.</p>										
9	<p>Para. 3.2.4 and Figure 5 – The proposed developments would include a maximum height at about 102.5mPD at Site A while the site formation level at the Tuen Mun Area 46 to the north and west of Site A is around 10mPD to 62mPD. Given this rationale, the scale of the proposed development would be visible from Tuen Mun Area 46. Please check and revise if necessary.</p>	<p>As mentioned in S1.2.7, no committed or planned developments are identified in the vicinity of the Project Sites. Thus, no residences and recreational sites within the visual envelope is assumed in this assessment.</p>										
10	<p>Para. 3.2.5 –</p> <p>a. Please beef up the visual appraisal of change for each VP with reference to TPB PG-No.41. For example, visual changes such as the obstruction towards greenery backdrop, ridgeline and sky open as shown in the photomontages should be reflected in the discussion. Their cumulative visual impacts of all three sites should also be covered in the discussion.</p>	<p>S3.2.5 is updated accordingly. A table showing the visual changes is supplemented and extracted below.</p> <table><tr><th>View Point (Distance from Site in metres)</th><th>Visual Composition</th><th>Visual Obstruction</th><th>Effect on Public Viewers</th><th>Effect on Visual Resources</th></tr><tr><td>VP1 (50m)</td><td>The proposed 11-storey building (Site A) and 2-storey power substation (Site B) is largely in keeping with the overall character of the surrounding infrastructural landscape.</td><td>The proposed development partially blocks the hills in the background and the open sky.</td><td>Although there are some blockage to the hills and open sky, the effect on public viewers are expected to be slight as the impacted viewers are largely vehicular travelers and the duration of impact is very short.</td><td>Partial blockage of the hills and open sky.</td></tr></table>	View Point (Distance from Site in metres)	Visual Composition	Visual Obstruction	Effect on Public Viewers	Effect on Visual Resources	VP1 (50m)	The proposed 11-storey building (Site A) and 2-storey power substation (Site B) is largely in keeping with the overall character of the surrounding infrastructural landscape.	The proposed development partially blocks the hills in the background and the open sky.	Although there are some blockage to the hills and open sky, the effect on public viewers are expected to be slight as the impacted viewers are largely vehicular travelers and the duration of impact is very short.	Partial blockage of the hills and open sky.
View Point (Distance from Site in metres)	Visual Composition	Visual Obstruction	Effect on Public Viewers	Effect on Visual Resources								
VP1 (50m)	The proposed 11-storey building (Site A) and 2-storey power substation (Site B) is largely in keeping with the overall character of the surrounding infrastructural landscape.	The proposed development partially blocks the hills in the background and the open sky.	Although there are some blockage to the hills and open sky, the effect on public viewers are expected to be slight as the impacted viewers are largely vehicular travelers and the duration of impact is very short.	Partial blockage of the hills and open sky.								

Comments		Response				
		<b>VP2 (50m)</b>	The proposed 11-storey building (Site A) and 2-storey power substation (Site B) is largely in keeping with the overall character of the surrounding infrastructural landscape.	The proposed development partially blocks the hills in the background and the open sky.	Although there are some blockage to the hills and open sky, the effect on public viewers are expected to be slight as the impacted viewers are largely vehicular travelers and the duration of impact is very short.	Partial blockage of the hills and open sky.
		<b>VP3 (200m from Sites A and B; 100m from Site C)</b>	Only the upper stories of the new building of Site A can be seen from this angle, as the lower levels are hidden by trees. The proposed is largely in keeping with the overall character of the surrounding infrastructural (and industrial) landscape.	The proposed development limitedly blocks the open sky.	From this distance, the blockage to the open sky is rather small and there is expected to be very small number of impacted viewers. The effect on public viewers is expected to be slight.	Limited blockage of the open sky.
		The cumulative visual impacts of all three sites are also evaluated in S3.2.6 to S3.2.8 and extracted below: 3.2.6 “From the photomontage illustrations, the proposed 11-storey building and 2-storey power substations at Sites A and B are largely in keeping with the surrounding transport corridor and does not exceedingly block the northerly view towards the slopes. It is therefore also expected that the visual impacts shall be acceptable with the proposed architectural design style of the building enhanced by green façade treatment.”  S3.2.7 “Site C is proposed to be used for charging-enabling bus parking bays. The landscape characteristics shall remain the same as the surrounding transportation corridor and the charging facilities are not expected to impose any significant visual impacts to public viewers.”  S3.2.8 “Taking into account all the above considerations, the overall visual impact of the proposed developments at the Project Sites is <b>slightly adverse</b> .”				
b. Please explain how the proposed building orientation would effectively minimize the visual impact.		The description of building orientation has been removed. S3.2.6 (former S3.2.5) is updated as below. “From the photomontage illustrations, the proposed 11-storey building and 2-storey power substations at Sites A and B are largely in keeping with the surrounding transport corridor and does not exceedingly block the northerly view towards the slopes. It is therefore also expected that the visual impacts shall be acceptable <b>with the proposed architectural design style of the building</b>				

	Comments	Response
		<b>enhanced by green façade treatment.”</b>
11.	Para. 3.2.6 – a. It is noted in para. 1.2.7 that there is no committed or planned developments in the vicinity, but the potential development sites for housing development and other beneficial uses in Area 46 and 40 are discussed in this paragraph. Please clarify their inconsistency.	Former S3.2.6 is removed. As mentioned in S1.2.7, no committed or planned developments are identified in the vicinity of the Project Sites. Thus, no residences and recreational sites within the visual envelope is assumed in this assessment.
	b. Please provide more details of the “other mitigation measures” and elaborate how they would effectively minimize the visual impact.	Former S3.2.6 is removed. As mentioned in S1.2.7, no committed or planned developments are identified in the vicinity of the Project Sites. Thus, no residences and recreational sites within the visual envelope is assumed in this assessment.  Please note that the proposed mitigation measures within the Site A mentioned in Section 4 has been maximized to reduce the visual impact.
12	Appendix C, Photomontages – The consultant should improve the photomontages with reference to TPB PG-No. 41 as follows: a. VP1 – The photomontages of existing and future views should be taken in the same viewing angle in order to demonstrate the visual impact of the proposed development. Please check and review.	Existing and future views at the same viewing angle are adopted in the updated photomontage. Please refer to Appendix C of the updated landscape proposal.
	b. VP3 – i. Please provide a site photo of existing view for this VP. ii. As mentioned in para. 8 for VP3 above, the photomontage is not viewing from the proposed location as illustrated in the Schematic Master Layout Plan.	i. Existing view of VP3 is provided. ii. The photomontage at VP3 (from Ho Suen Street) is updated, please refer to Appendix C of the landscape proposal.
	c. The proposed mitigation measures should be indicated in the photomontages for easy reference. For example, the proposed planting on G/F are not shown in the photomontage for VP1.	The proposed mitigation measures (e.g. planting on G/F and vertical greening) are shown in the updated photomontage. Please refer to Appendix C of the landscape proposal.
	d. Please include a legend for each photomontage.	Legend is provided in the updated photomontage.
13.	Drawing Nos. EL06 to EL08 – It is unclear about the purposes of the dotted lines in the elevations. The outlook of proposed building mass should be outlined for identification and verification.	Please be clarified that the dotted line is the grid line and the floor level line. The outlook of proposed building mass has been outlined in the drawings.



Comments		Response
<b>Comments from Environmental Protection Department (Received on 24 November 2021)</b> <b>Application No. A/TM/565</b> <b>(Contact Person: Ms Josephine CHAU, Tel: 2835 1120)</b> <b>(By email)</b>		
1.	<u>Air Quality Impact</u> Figure 8-1A. The consultant is suggested to remove the 20 m buffer distance from the Tuen Mun Chek Lap Kok link Tunnel Portal in Figure 8-1A since it is incorrect. In addition, please clarify if the chimney of Siu Lan Shui Landfill has really 200m buffer distance from the boundary of Site A since it is inside the red circle and within the 200m buffer zone.	The 20 m buffer distance from the Tuen Mun Chek Lap Kok link Tunnel Portal is removed in updated Figure 8-1A.  Please be clarified that part of Site A is located within the 200m buffer zone of <b>Pillar Point Valley Landfill</b> . As mentioned in S8.4.3, sensitive use, i.e. office in Site A, will not rely on natural ventilation from openable windows, but instead MVAC system for ventilation. The fresh air intake location for sensitive uses (i.e. office in Site A) will be located away from the buffer zones. With careful planning, no adverse air quality impact on the Proposed Development is anticipated during operation phase.
<b>Comments from Highways Department (Received on 25 November 2021)</b> <b>Application No. A/TM/565</b> <b>(Contact Person: Ms Sandra LEUNG, Tel: 3526 0058)</b> <b>(By email)</b>		
1.	Reply to our previous comments on "appropriate access ladder/ staircase should be provided for HyD and HyD's contractor to access the roof area to perform inspections/ maintenance works to the existing footbridge" was outstanding.	Noted, appropriate access ladder / staircase will be provided.
2.	It is noted that parapet will not be provided at the roof and the workers will have safety risk of falling from height. The design of the proposed fall arrest system at the roof area such as the anchor and lifeline should be installed at two side of the footbridge to allow the workers with PPE to walk freely along the underside of footbridge during inspection and maintenance.	Noted.
3.	Please also indicate the remaining spaces between the building facade and the existing footbridge at drawing no. EL05.	Refer to your request, 2m clearance will be provided between the building facade and the existing footbridge.
<b>Comments from Environmental Protection Department (Received on 25 November 2021)</b> <b>Application No. A/TM/565</b> <b>(Contact Person: Ms Josephine CHAU, Tel: 2835 1120)</b> <b>(By email)</b>		
1.	<u>Noise</u> We have no adverse comment on the FI, subject to TD's endorsement of the TIA. For the sake of completeness, the consultant should mention in the main text that the traffic data adopted in the NIA is extracted from the Project's TIA which has been endorsed by TD.	Please be confirmed that the traffic data adopted in the NIA is extracted from the Project's TIA which has been endorsed by TD. S7.2.2 is revised for clarification.

Public Comments	Response
<b>Comments from Public (Received on 3 August 2021, 17:45:20)</b> <b>(Contact Person: Mr. Cheung , Ref No. 210803-174520-57462)</b>	
大量巴士守候入廠，所引致的車龍，很大機會會阻礙時速每小時高達 110 公里的車流，為高速公路帶來高度危險。	擬建項目為電巴士車廠，巴士返回車廠時不需要輪候入油，不會引致車龍於車廠外。此外，車廠出入口設於巴士專線路段，對公路其他行車線路段的車流不會造成影響。請知悉公路路段時速限制為 80 公里 (往機場方向)及 50 公里 (往屯門方向)。
<b>Comments from Public (Received on 04 August 2021, 23:25:08)</b> <b>(Contact Person: Mr. Wong , Ref No. 210804-232508-15488)</b>	
是否只用於泊車及維修用途? 九巴經常性使用車廠用作其他用途(例如:迷你倉)必要列明禁止有寫字樓及其他商業用途。	車廠一般用作: 洗車、泊車、維修及員工辦公室，而是必須。如需要進行其他商業用途，九巴會按法例要求各有關政府部門申請。
<b>Comments from Public (Received on 19 August 2021, 12:56:09)</b> <b>(Contact Person: Mr. Fung Ka Yu , Ref No. 210819-215609-82951)</b>	
本人想問下 11 層高的巴士廠會否加設冷氣設施給予維修員工去進行維修工作，因為有不少員工長時間在炎熱的地方工作好容易中暑，本人希望貴公司興建新車廠時是否應該加設冷氣設施給予員工一個舒適的地方工作。	會按法例要求，提供合適通風設備及或空調設備。
<b>Comments from Public (Received on 24 August 2021, 22:29)</b> <b>(Contact Person: Mary Mulvihill)</b>	
Strong objections. This facility is a recharging/parking facility that can be situated in any number of locations. KMB is a subsidiary of Sun Hung Kai. At one time it had large facilities that have gradually been hived off for residential development. No doubt in due course this waterfront site could in due course be redeveloped. Why is our government that says there is a shortage of land giving a large site like this to a property developer with a large land bank, some of which is brownfield that could be redeveloped and used to accommodate this depot. As public housing development proceeds, many small storage and other operators will be forced to relocate. This site is behind an industrial zone. It could and should be used as a dedicated industrial park that amalgamates operators in the same field. The only palatable outcome to selling this site to KMB, hopefully at full market value and not under some government handout on the excuse that it is promoting green energy or such, would be a land exchange for lots that can be developed into public housing. The Central Government has mandated a more equitable society. Government land must be used for the public benefit not to line developer packets.	To cope with housing problem, the existing Tin Shui Wai depot and Wang Lok Street bus parking sites are to be returned to the Government by 2022. TM – CLK free-up areas were granted to KMB by Government in July 2021 as replacement under short term tenancy.  To optimize the land resource, KMB applied to build a multi-storey depot with an aim to absorb the overnight parking at termini and on-street at Yuen Long District, which can relieve bus security and public nuisance problem. It can also accommodate electric bus charging facilities to cater for the electric bus strategy.
<b>Comments from Public (Received on 24 August 2021, 23:17:43)</b> <b>(Contact Person: 九巴財技關注組 , Ref No. 210824-231743-99276)</b>	
本人對有關申請有以下意見: 1. 關於交通評估(TIA)，有關對交通的評估，本人認為極有疑問。擬建的新車廠為於屯赤隧道主幹道上，即使製造輕微的擠塞或額外的車流，亦足以對主幹道及連接道路(例如經常為人詬病的龍門路迴旋處，以及皇珠路一帶)，特別是 TIA 未有涵蓋皇珠路的交通流量。巴士作為重型車輛，所帶來的車流影響實在是不可忽視。	1. 擬建項目的車輛出入口將會位於屯門赤鱗角連接路的巴士專線上以供出入車廠的巴士專用，而非直接連接屯門赤鱗角連接路的主幹道上。加上車廠的巴士大部分於上午繁忙時間之前和下午繁忙時間之後進出車廠。因此，擬建項目的交通流量預計對屯門赤鱗角連接路的影響甚微。  根據提交的交通影響評估報告中的表 4.2 和 4.3，研究已就龍門路/龍富路迴旋處及皇珠路的運作表現進行了容量分析，以評估擬建項目對以上路口及道路的影響。評估結果顯示，擬建項目在上下午高峰時段對交通造成的影響甚微。

Public Comments	Response
<p>2. TIA 完全依賴九巴提供的數據，但數據可信性成疑。根據九巴的數據，巴士回廠時間分散，與現時九巴營運模式不吻合。根據現時主要專利巴士營運情況，巴士回廠時間主要集中在晚上 11 時至凌晨 1 時之間，排隊等候洗車的車輛往往有數十輛至多。即使電動巴士不需入油，但是仍然需要洗車，所產生的車龍與傳統巴士並沒有分別。</p> <p>此外，電動巴士技術雖然已發展多年，但仍未完全成熟，因電池容量限制，本地、國內及海外經驗都顯示，電動巴士在上下午之間的非繁忙時段需要回廠充電，估計未來 10 年都不會有重大的技術突破，特別是在雙層冷氣電動巴士的使用。但 TIA 完全沒有估算中午回廠充電帶來的額外車流。(即使九巴在巴士總站興建額外充電站，亦只能緩解部分需要)</p> <p>3. 車廠是否真的只停泊電動巴士？根據九巴日前公佈，未來五年九巴打算興建兩個電動巴士車廠，可以停泊 800-1000 輛巴士(佔九巴全車隊達四份一)，即是相信還有另外一個在本申請以外的車廠。但是九巴購入電動巴士的計劃，相信難以達到在 2025 年便有一千部電動巴士投入服務。運輸署對專利巴士數量有嚴格控制，相信電動巴士將不會是車隊的額外部份，因此有理由相信在九巴車隊全電動化前，申請書內的車廠亦會停泊傳統柴油巴士。申請人應交待停泊傳統巴士的污染問題(例如車上油缸泄漏)及舒緩措施。</p> <p>4. 申請書內提及用地曾於 2021 年先用作重置元朗及天水圍的車廠，但沒有提及興建多層巴士廠期間如何安置有關數量過百個的巴士車站。</p> <p>5. VIA 中的 block view 中，有關模擬圖並不合比例。在其他分析中，都是以巴士廠離地高 30 米作估算，但是一部雙層巴士高約 4.5 米，一般巴士廠每層的樓底高度約六米，十層高的巴士車廠等同高 60 米左右，高度就大約等於 Block view 中較近的一支電塔的塔頂位置。</p> <p>6. 一般的大型巴士廠(包括香港現存所有多層巴士廠)都會在不同的道路上設置超過一個出入口，以減低某個出入口因意外或其他外在因素而受阻，繼而影響公共交通服務的風險。不過在這個停泊超過 300 部巴士的車廠，卻只有一個位於相同地方的出入口，這個設計令人震驚。一旦該處發生事故(包輕微的堵塞事故)，數以百計的巴士便無法進出車廠，足以癱瘓等同數十條巴士路線的公共交通服務。</p> <p>此外，新多層巴士廠的進出路線是靠單一道路，特別是離開車廠的道路完全沒有緊急替代道路，一旦屯門赤鱗角公路往屯門出口有任何事故，包括經常有意外的龍門路的迴旋處，同樣地數以百計的巴士便無法離開車廠，嚴重影響公共交通服務。</p> <p>而巴士廠亦將會成為香港(甚至全世界)泊車層數最多的巴士廠，但每層之間只有一條行車通道，萬一低層通道有意外，將會影響大量巴士。</p> <p>7. 雖然巴士公司一般會安排職員巴士接載巴士車長來往巴士車廠上下班，但是現時的大型車廠基本上都是位於行人或單車可達的位置。但是新的巴士廠位於屯門赤鱗角公路範圍內，亦有班次稀疏的巴士路線途經，但該處目前並沒有行人路或單車徑連接其他道路，每天數以百計的巴士車長無法選擇靠步行或騎單車前往車廠上下班，有違環保出行的原則。建議政府應該考慮在屯門赤鱗角公路轉車站增設行人路來往龍門路以便行人及單車來往車廠及轉車站。</p>	<p>2. 擬建項目的每日交通產量和分布是參考及根據現有其他同類型巴士車廠的客觀數據來估算。根據提交的交通影響評估報告中的第 2.5 節，建議的 4 個洗車機數量應足以容納在高峰時段進入的巴士。若所有洗車機都同時被佔用，車廠工作人員將會引導等候洗車的巴士，臨時使用車廠內的 3 個巴士空位，以確保擬建項目外不會出現排隊情況。</p> <p>現時政府正大力推動電動車，並規定新興建的公共運輸交匯處均須配置巴士充電設施以便利電動巴士充電。在該政策和新充電設施的配套下，估計大部分的電動巴士未來在服務期間可以使用各區的公共運輸交匯處補充電力，並不會因要回廠充電而帶來額外車流。</p> <p>3. 電巴車廠只會停泊電巴士，不會產生傳統巴士的污染問題。</p> <p>4. 於車廠建設期間，SITE C 不會有工程進行，大約有 60 個車位可供巴士泊車，另外九巴會與政府商討以其他臨時用地以作餘下巴士泊車之用。</p> <p>5. 模擬圖已按比例修改。</p> <p>6. 九巴層經向政府要求車廠需要有緊急出入口及提交方案，但政府拒絕方案。有關車廠內部車路設計，現時所有車廠均只有一條行車路上落樓層，單一方向行駛以減少車廠內意外是為正常設計。</p> <p>7. 多謝建議，請轉介有關政府部門。</p>

Air Quality Impact Assessment (AQIA)

**Table 1**      **Identified ASRs within 500m area of the Project Site**

ASR ID	Location / Development	Shortest Distance from Project Site Boundary (m)	Closest Part of Project Site	Land Use
Subject Site	Site A of the Proposed Development	- <sup>[1]</sup>	- <sup>[1]</sup>	Commercial
ASR 1	Butterfly Beach Laundry	184	Site A	Industrial
ASR 2	Tuen Mun Vehicle Servicing Station	394	Site B	GIC
ASR 3	Customs And Excise Department Harbour and River Trade Division	304	Site B	GIC
ASR 4	Pillar Point Fire Station	71	Site C	GIC
Note: [1]: The ASR is within the Project Site				

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Air Quality Impact Assessment (AQIA)

Activities in the construction phase would have potential impact to the surrounding ASRs:

- Excavation;
- Foundation;
- Temporary storage of materials; and
- Handling and transportation of materials.

Major Control Measures to minimize the air quality impacts:

- Skip hoist for material transport should be totally enclosed by impervious sheeting.
- All dusty materials should be sprayed with water prior to any loading, unloading or transfer operation so as to maintain the dusty materials wet.
- All stockpiles of aggregate or spoil should be covered and/or water applied.
- The height from which excavated materials are dropped should be controlled to a minimum practical height to limit fugitive dust generation from unloading.
- Every vehicle should be washed to remove any dusty materials from its body and wheels before leaving the construction sites.
- The load of dusty materials carried by a vehicle leaving a construction site should be covered entirely by clean impervious sheeting to ensure dust materials do not leak from the vehicle.
- Provision of hoarding of not less than 2.4m high from ground level along the length of the site boundary except for the site entrance or exit.

Air Quality Impact Assessment (AQIA)

**Table 2**      **Buffer distance from the Nearby Tunnel Portal**

Road Name	Road Type	HKPSG Guideline Distance Requirement	Buffer
TMCLK slip road	Primary Distributor	20m	



Landfill Gas Hazard Assessment

**Table 1** *Summary of PPVL Gas Monitoring Results from Feb 2020 to Feb 2021*

Monitoring Locations	Methane (% v/v)		Carbon Dioxide (% v/v)	
	Range (%)	Average (% of readings <0.1)	Range (%)	Average (% of readings <0.1)
P5	0.0 – 0.3	0.03	0.1 – 2.7	1.32
GM1	0.0	0.0	6.6 – 11.2	8.67
GM2	0.0	0.0	5.9 – 10.1	8.48
GM4	0.0 – 0.1	0.01	1.6 – 6.1	4.52
GM5	0.0	0.0	2.7 – 8.2	4.61
GVQ1	0.0	0.0	1.9 – 9.4	5.95
GVQ2	0.0	0.0	0.1 – 9.8	4.65
GVQ3	0.0	0.0	0.1 – 4.5	2.33

**Table 2** *Comparison of the Available Landfill Gas Monitoring Data*

Landfill gas monitoring data	Range of average carbon dioxide (%v/v)
TMCLKL EIA	1.2 – 8.9
Updated landfill gas monitoring data (from February 2020 to February 2021)	1.32 – 8.67

Landfill Gas Hazard Assessment

**Table 3 Qualitative Risk Assessment Matrix**

Source	Pathway	Targets	Risk
Pillar Point Valley Landfill ( <b>Medium</b> ) According to the approved TMCLK EIA, the source of PPVL is classified as Medium	During Construction		
	Over 100m away from PPVL, no fault/fissure, no man-made conduit <b>(Long / indirect)</b>	<u>Site A and Site B</u> Construction workers, well trained and follow specific safety procedures, mainly outdoor works <b>(Low sensitivity)</b>	<b>Very Low</b>
		<u>Site A and Site B</u> Well trained site office staff and follow specific safety procedures, indoor environment <b>(Medium Sensitivity)</b>	<b>Low</b>
	During Operation		
	Over 100m away from PPVL, no fault/fissure, no man-made conduit <b>(Long / indirect)</b>	<u>Site A</u> Majority of Maintenance workers and supporting staffs worked in outdoor environment (i.e. enclosed depot with vast openings at façades at Site A) <b>(Low sensitivity)</b>	<b>Very Low</b>
		<u>Site B</u> Maintenance workers and supporting staffs worked in indoor environment (i.e. enclosed rooms within substation at Site B) <b>(Medium sensitivity)</b>	<b>Low</b>

Landfill Gas Hazard Assessment

**Table 4**      ***Implication and Protection Measures***

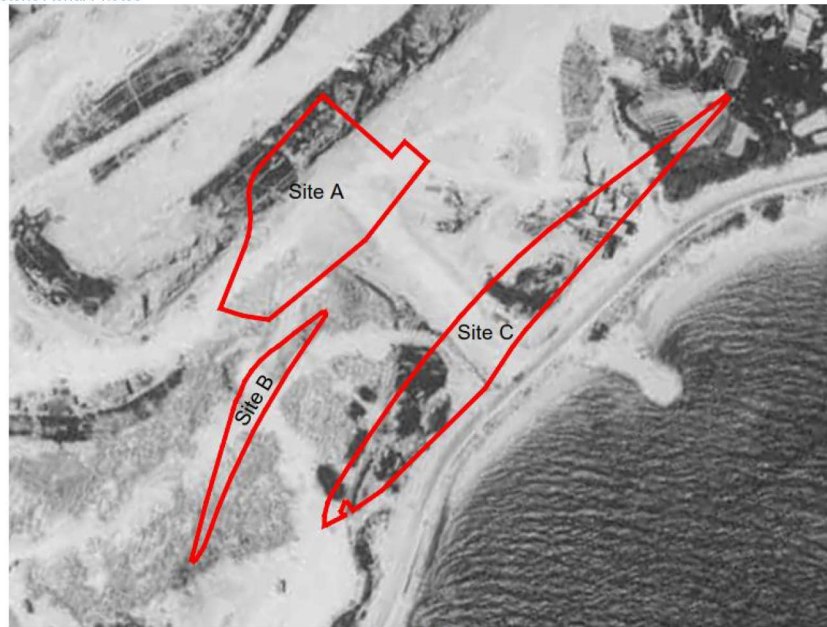
Targets	Level of Risk	Implication
During Construction phase		
General Works (Outdoor)	Very Low	The risk is so low that no precautionary measures are required.
Site Office (Indoor)	Low	Some precautionary measures* will be required to ensure that the planned development is safe.
During Operation phase		
Site A: Daily operation (mainly in outdoor environment)	Very Low	The risk is so low that no precautionary measures are required.
Site B: Daily operation (mainly in indoor environment)	Low	Some precautionary measures* will be required to ensure that the planned development is safe.
Remarks  * Required Precautionary measures includes the passive control of gas only.  Provision of barriers to the movement of gas e.g. membranes in floors or walls, or in trenches, coupled with high permeability vents such as no-fines gravel in trenches or voids/permeable layers below structures.		

Project No. 1906

Proposed Bus Depots with Ancillary Public Utility Installation (Electricity Substation) in area shown as 'Road', Government Land in D.D. 138 and D.D. 300, Tuen Mun, New Territories (near the building at 20 Tuen Mun Chek Lap Kok Tunnel Road)

Annex 3.1

Historic Aerial Photos



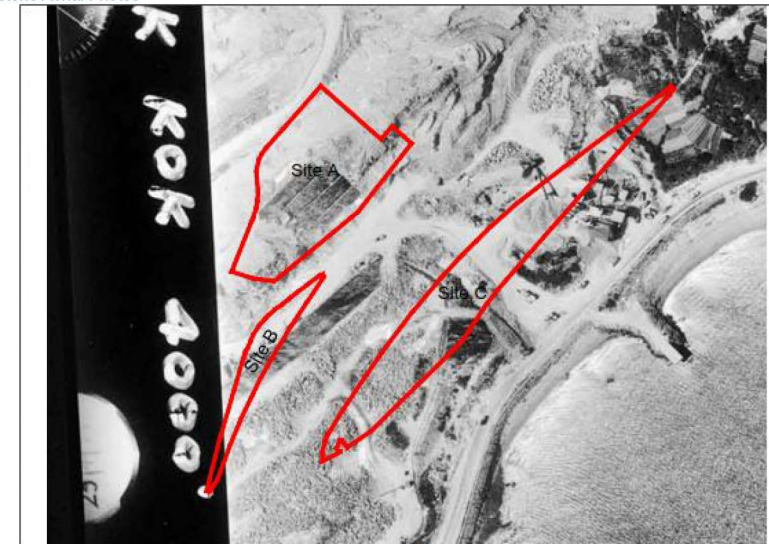
Year 1980

Project No. 1906

Proposed Bus Depots with Ancillary Public Utility Installation (Electricity Substation) in area shown as 'Road', Government Land in D.D. 138 and D.D. 300, Tuen Mun, New Territories (near the building at 20 Tuen Mun Chek Lap Kok Tunnel Road)

Annex 3.1

Historic Aerial Photos



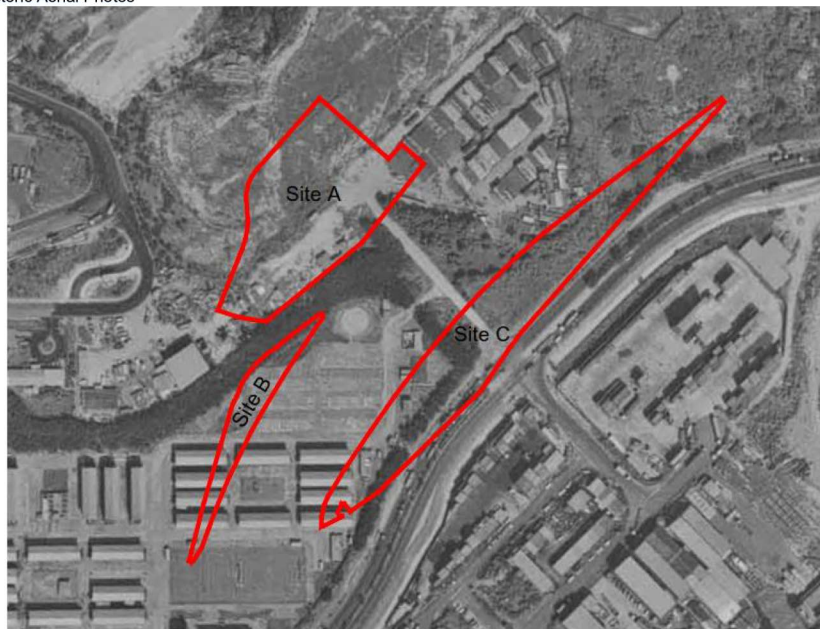
Year 1979

Project No. 1906

Proposed Bus Depots with Ancillary Public Utility Installation (Electricity Substation) in area shown as 'Road', Government Land in D.D. 138 and D.D. 300, Tuen Mun, New Territories (near the building at 20 Tuen Mun Chek Lap Kok Tunnel Road)

Annex 3.1

Historic Aerial Photos



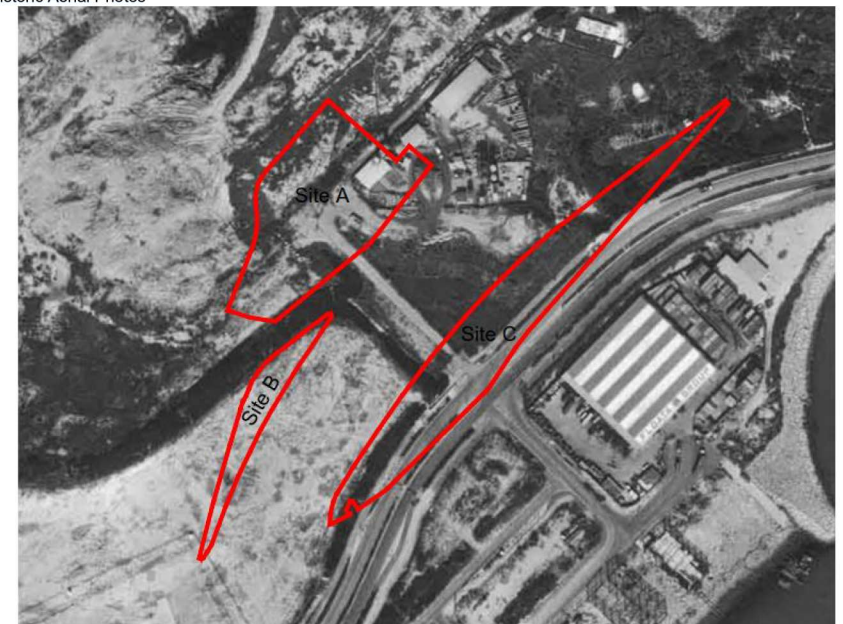
Year 1994

Project No. 1906

Proposed Bus Depots with Ancillary Public Utility Installation (Electricity Substation) in area shown as 'Road', Government Land in D.D. 138 and D.D. 300, Tuen Mun, New Territories (near the building at 20 Tuen Mun Chek Lap Kok Tunnel Road)

Annex 3.1

Historic Aerial Photos



Year 1988

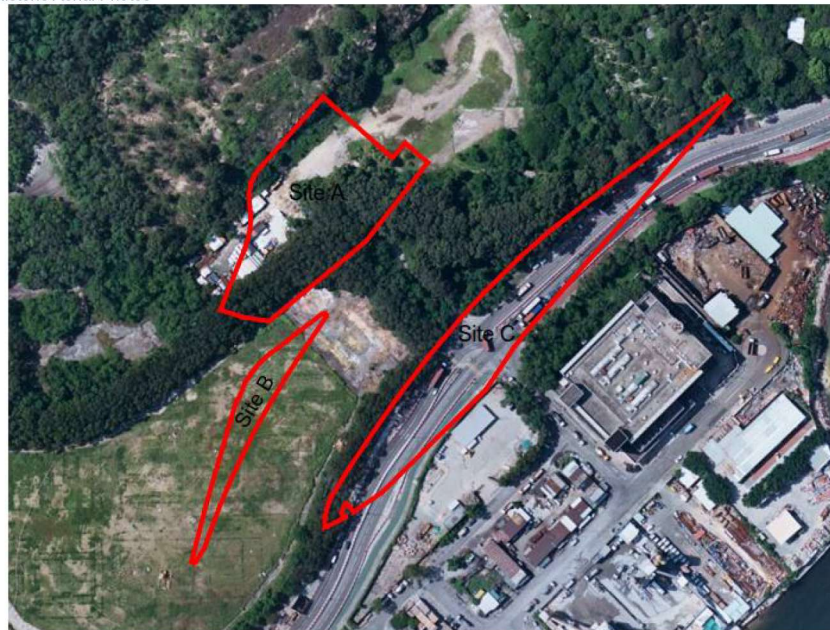


Project No. 1906

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Annex 3.1

Historic Aerial Photos



Year 2013

Project No. 1906

Proposed Bus Depots with Ancillary Public Utility Installation (Electricity Substation) in area shown as 'Road', Government Land in D.D. 138 and D.D. 300, Tuen Mun, New Territories (near the building at 20 Tuen Mun Chek Lap Kok Tunnel Road)

Annex 3.1

Historic Aerial Photos



Year 2003



Project No. 1906

Proposed Bus Depots with Ancillary Public Utility Installation (Electricity Substation) in area shown as 'Road', Government Land in D.D. 138 and D.D. 300, Tuen Mun, New Territories (near the building at 20 Tuen Mun Chek Lap Kok Tunnel Road)

Annex 3.1

Historic Aerial Photos



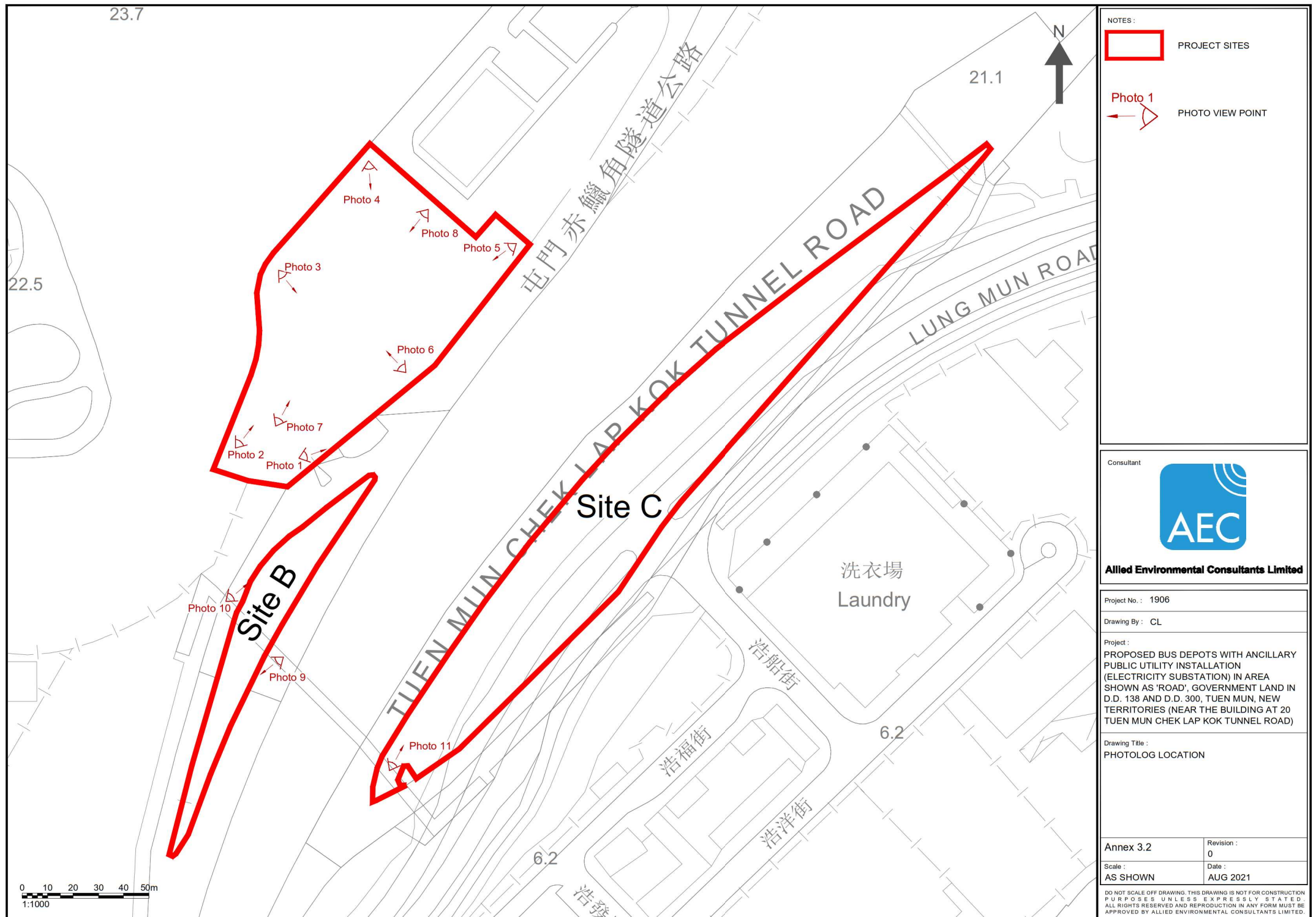
Year 2020

## Land Contamination Assessment

**Table 1 Land Use Summary on the Project Sites**

Period / Year	Land Use / Description	Sources of Information
<b>Site A</b>		
Before 1980	The Site A was covered by natural vegetation.	Aerial Photographs available from the Lands Department (LandsD).
1980-1994	Most of vegetation within the Site A was removed for constructing public road nearby in 1980s.	Aerial Photographs available from the LandsD.
1994-2013	Site A was converted to the open storage area since 1994.	Aerial Photographs available from the LandsD.
2013-2020	The construction works of the TMCLKL started in Jun 2013. According to HyD, the advance work and ground investigation works were commenced in Nov 2011 and May 2012 respectively.	Aerial Photographs available from the LandsD and website of HyD.
2020-Present	According to the website of Transport Department (TD), the TMCLKL was opened to public on 27 Dec 2020. The land use of Site A is remained unchanged as part of the toll plaza of TMCLKL til now (2021).	Aerial Photographs available from the LandsD and website of HyD.
Future land use	It is proposed to install depot facilities for KMB under the 5 years STT. The normal operation works may include charging-enabling bus parking bays, simple repairing works etc.	Information from KMB.
<b>Site B</b>		
Before 1980	The Site B was covered by natural vegetation.	Aerial Photographs available from the LandsD.
1980-1988	Most of vegetation within Site B was removed for site formation and constructing public road in 1980s. It is observed that the Site B became vacant since 1985.	Aerial Photographs available from the LandsD.
1988-2003	The vegetation within Site B was removed and the construction of Pillar Point Vietnamese Refugee Camp started in 1988. According to the Table 13.2 of TMCLKL EIA, Site B was used as the Pillar Point Vietnamese Refugee Camp from 1989 to 2000. The Pillar Point Vietnamese Refugee Camp was then demolished in 2003 and the land was	TMCLKL EIA, aerial Photographs available from the LandsD.

Period / Year	Land Use / Description	Sources of Information
	reinstated.	
2003-2013	The Site B was then converted to the golf driving range (River Trade Golf). According to the Table 13.2 of TMCLKL EIA, no pollution sources were identified.	TMCLKL EIA, aerial Photographs available from the LandsD.
2013-2020	The construction works of the TMCLKL was started in Jun 2013. According to the HyD, the advance work and ground investigation works were commenced in Nov 2011 and May 2012 respectively.	TMCLKL EIA, aerial Photographs available from the LandsD and website of HyD.
2020-Present	According to the website of TD, the TMCLKL was opened to public on 27 Dec 2020. The land use of Site A is remained unchanged as part of the toll plaza of TMCLKL til now (2021).	Aerial Photographs available from the LandsD and website of HyD.
Future land use	It is proposed to install depot facilities for KMB under the 5 years STT. The normal operation works may include bus parking, simple repairing works etc.	Information from KMB
<b>Site C</b>		
Before 2013	The elevated highway of Site C has not yet existed until the commencement of the construction of TMCLKL.	Aerial Photographs available from the LandsD
2013-2020	The construction works of the TMCLKL were started in Jun 2013. The Site C is located in the elevated highway which is one part of TMCLKL. According to the aerial photo, this elevated highway was constructed in 2017 and remain unchanged as the public road.	EIA of TMCLKL, Aerial Photographs available from the LandsD, website of HyD.
2020-Present	According to the website of TD, the TMCLKL was opened to public on 27 Dec 2020. The land use of Site C is remained unchanged as the public road of TMCLKL til now (2021).	Aerial Photographs available from the LandsD, website of HyD.
Future land use	It is proposed to install depot facilities for KMB under the 5 years STT. The normal operation works may include bus parking, simple repairing works etc.	Information from KMB





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Site Visit Photo Record

Annex 3.2

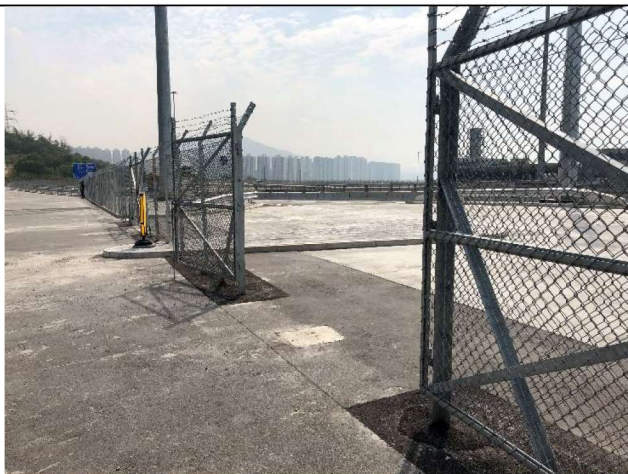


Photo 1: Entrance of the Site A



Photo 2: Overview of Site A (From Southwest View)



Photo 3: Overview of Site A (From Northwest View)

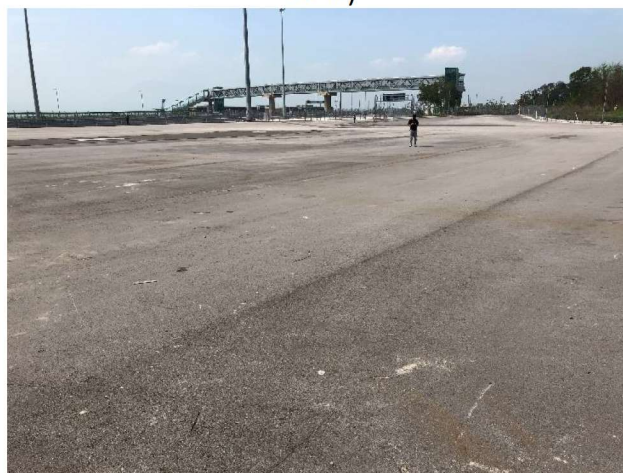


Photo 4: Overview of Site A (From North View)

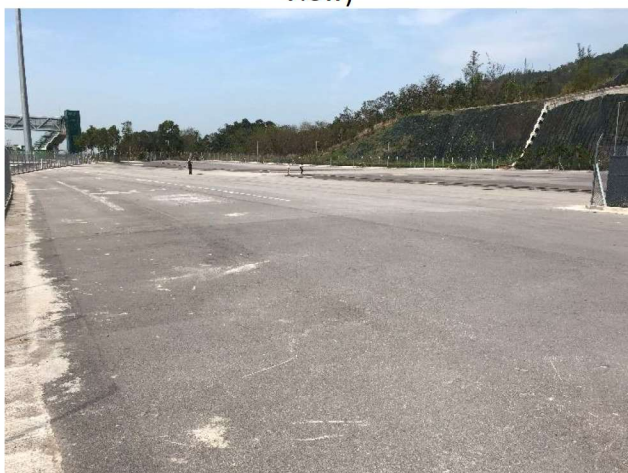


Photo 5: Overview of Site A (From Northeast View)



Photo 6: Overview of Site A (From Southeast View)



Project No. 1906

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Site Visit Photo Record

Annex 3.2



Photo 7: Drainage within the Site A



Photo 8: Drainage within the Site A

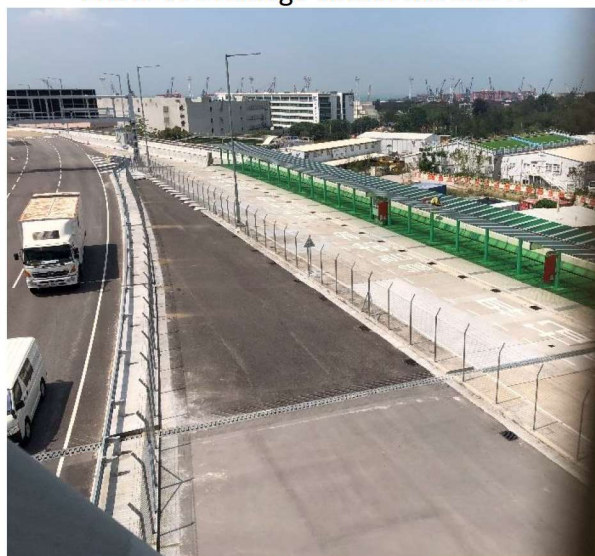


Photo 9: Overview of Site B (Southwestern portion)



Photo 10: General View of Site B (Northeastern portion)

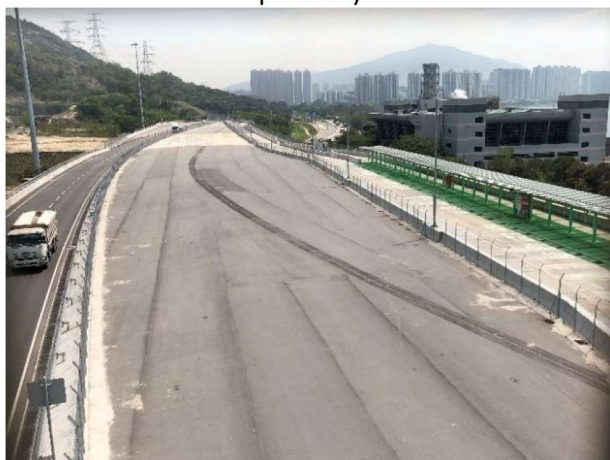


Photo 11: General View of Site C

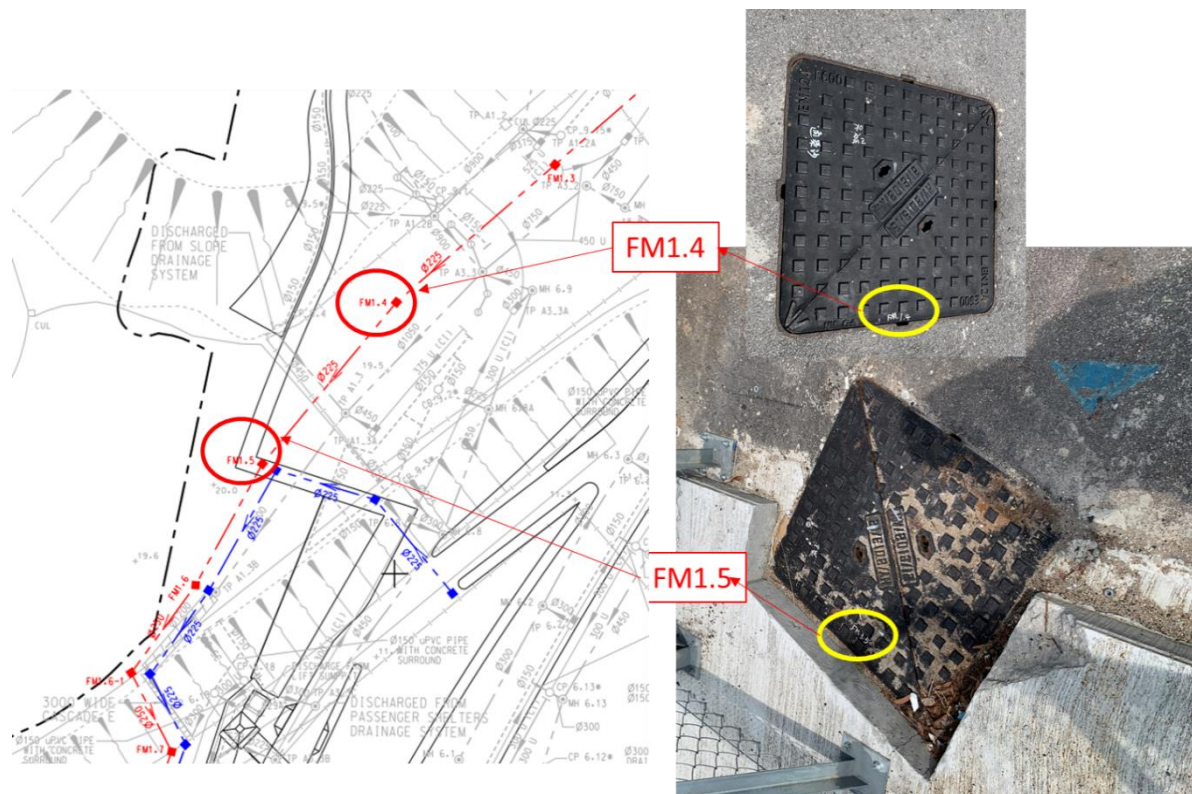


## Sewage Impact Assessment (SIA)

### *Photos from Site Survey*

Based on the site survey conducted on 30 April 2021, the existing 225mm sewers between FM1.1 and FM1.12A and manholes were available on site.

Manholes found on site are tallied with the drainage plan attached in Appendix 4.1 of SIA report.



就規劃申請/覆核提出意見 Making Comment on Planning Application / Review

參考編號

Reference Number:

210803-174520-57462

提交限期

Deadline for submission:

24/08/2021

提交日期及時間

Date and time of submission:

03/08/2021 17:45:20

有關的規劃申請編號

The application no. to which the comment relates:

A/TM/565

「提意見人」姓名/名稱

Name of person making this comment:

先生 Mr. Cheung

意見詳情

Details of the Comment :

大量巴士守候入廠，所引致的車龍，很大機會會阻礙時速每小時高達110公里的車流，為高速公路帶來高度危險

<b>就規劃申請/覆核提出意見 Making Comment on Planning Application / Review</b>	
<b>參考編號</b> Reference Number:	210804-232508-15488
<b>提交限期</b> Deadline for submission:	24/08/2021
<b>提交日期及時間</b> Date and time of submission:	04/08/2021 23:25:08
<b>有關的規劃申請編號</b> The application no. to which the comment relates:	A/TM/565
<b>「提意見人」姓名/名稱</b> Name of person making this comment:	先生 Mr. Wong
<b>意見詳情</b> Details of the Comment :	
是否只用於泊車及維修用途？九巴經常性使用車廠用作其他用途（例如：迷你倉）必要列明禁止有寫字樓及其他商業用途。	

## 就規劃申請/覆核提出意見 Making Comment on Planning Application / Review

參考編號

Reference Number:

210819-215609-82951

提交限期

Deadline for submission:

24/08/2021

提交日期及時間

Date and time of submission:

19/08/2021 21:56:09

有關的規劃申請編號

The application no. to which the comment relates:

A/TM/565

「提意見人」姓名/名稱

Name of person making this comment:

先生 Mr. Fung Ka Yu

意見詳情

Details of the Comment :

本人想問下11層高的巴士廠會否加設冷氣設施給予維修員工去進行維修工作,因為有不少員工長時間在炎熱的地方工作好容易中暑,本人希望貴公司興建新車廠時是否應該加設冷氣設施給予員工一個舒適的地方工作

☐ Urgent ☐ Return receipt ☐ Sign ☐ Encrypt ☐ Mark Subject Restricted ☐ Expand personal&public groups



A/TM/565 DD138 / DD300 Tuen Mun Chek Lap Kok Tunnel Road / KMB  
24/08/2021 22:29

From:

To: tpbpd <tpbpd@pland.gov.hk>

FileRef:

A/TM/565

Government Land in D.D. 138 and D.D. 300, 20 Tuen Mun Chek Lap Kok Tunnel Road

Site area :About 16,845sq.m

Zoning : Area shown as 'Road'

Applied development : KMB Bus Depots with Ancillary Public Utility Installation (Electricity Substation) / 406 Bus Parking / 81 Maintenance Bays

Dear TPB Members,

Strong objections. This facility is a recharging/parking facility that can be situated in any number of locations.

KMB is a subsidiary of Sun Hung Kai. At one time it had large facilities that have gradually been hived off for residential development.

No doubt in due course this waterfront site could in due course be redeveloped.

Why is our government that says there is a shortage of land giving a large site like this to a property developer with a large land bank, some of which is brownfield that could be redeveloped and used to accommodate this depot.

As public housing development proceeds, many small storage and other operators will be forced to relocate. This site is behind an industrial zone. It could and should be used as a dedicated industrial park that amalgamates operators in the same field.

The only palatable outcome to selling this site to KMB, hopefully at full market value and not under some government handout on the excuse that it is promoting green energy or such, would be a land exchange for lots that can be developed into public housing.

The Central Government has mandated a more equitable society. Government land must be used for the public benefit not to line developer packets.

Mary Mulvihill

## 就規劃申請/覆核提出意見 Making Comment on Planning Application / Review

## 參考編號

Reference Number:

210824-231743-99276

## 提交限期

Deadline for submission:

24/08/2021

## 提交日期及時間

Date and time of submission:

24/08/2021 23:17:43

## 有關的規劃申請編號

The application no. to which the comment relates:

A/TM/565

## 「提意見人」姓名/名稱

Name of person making this comment:

九巴財技關注組

## 意見詳情

Details of the Comment :

本人對有關申請有以下意見：

1. 關於交通評估(TIA)，有關對交通的評估，本人認為極有疑問。擬建的新車廠為於屯赤隧道主幹道上，即使製造輕微的擠塞或額外的車流，亦足以對主幹道及連接道路 (例如經常為人詬病的龍門路迴旋處，以及皇珠路一帶)，特別是TIA未有涵蓋皇珠路的交通流量。巴士作為重型車輛，所帶來的車流影響實在是不可忽視。

2. TIA完全依賴九巴提供的數據，但數據可信性成疑。根據九巴的數據，巴士回廠時間分散，與現時九巴營運模式不吻合。根據現時主要專利巴士營運情況，巴士回廠時間主要集中在晚上11時至凌晨1時之間，排隊等候洗車的車輛往往有數十輛至多。即使電動巴士不需入油，但是仍然需要洗車，所產生的車龍與傳統巴士並沒有分別。

此外，電動巴士技術雖然已發展多年，但仍未完全成熟，因電池容量限制，本地、國內及海外經驗都顯示，電動巴士在上下午之間的非繁忙時段需要回廠充電，估計未來10年都不會有重大的技術突破，特別是在雙層冷氣電動巴士的使用。但TIA完全沒有估算中午回廠充電帶來的額外車流。(即使九巴在巴士總站興建額外充電站，亦只能緩解部分需要)

3. 車廠是否真的只停泊電動巴士？根據九巴日前公佈，未來五年九巴打算興建兩個電動巴士車廠，可以停泊800-1000輛巴士(佔九巴全車隊達四份一)，即是相信還有另外一個在本申請以外的車廠。但是九巴購入電動巴士的計劃，相信難以達到在2025年便有一千部電動巴士投入服務。運輸署對專利巴士數量有嚴格控制，相信電動巴士將不會是車隊的額外部份，因此有理由相信在九巴車隊全電動化前，申請書內的車廠亦會停泊傳統柴油巴士。申請人應交待停泊傳統巴士的污染問題(例如車上油缸泄漏)及舒緩措施。

4. 申請書內提及用地會於2021年先用作重置元朗及天水圍的車廠，但沒有提及興建多層巴士廠期間如何安置有關數量過百個的巴士車位。

5. VIA中的block view中，有關模擬圖並不合比例。在其他分析中，都是以巴士廠離地高3



0米作估算，但是一部雙層巴士高約4.5米，一般巴士廠每層的樓底高度約六米，十層高的巴士車廠等同高60米左右，高度就大約等於block view中較近的一支電塔的塔頂位置。

6. 一般的大型巴士廠(包括香港現存所有多層巴士廠)都會在不同的道路上設置超過一個出入口，以減低某個出入口因意外或其他外在因素而受阻，繼而影響公共交通服務的風險。不過在這個停泊超過300部巴士的車廠，卻只有一個位於相同地方的出入口，這個設計令人震驚。一旦該處發生事故(包輕微的堵塞事故)，數以百計的巴士便無法進出車廠，足以癱瘓等同數十條巴士路線的公共交通服務。

此外，新多層巴士廠的進出路線是靠單一道路，特別是離開車廠的道路完全沒有緊急替代道路，一旦屯門赤鱗角公路往屯門出口有任何事故，包括經常有意外的龍門路的迴旋處，同樣地數以百計的巴士便無法離開車廠，嚴重影響公共交通服務。

而巴士廠亦將會成為香港(甚至全世界)泊車層數最多的巴士廠，但每層之間只有一條行車通道，萬一低層通道有意外，將會影響大量巴士。

7. 雖然巴士公司一般會安排職員巴士接載巴士車長來往巴士車廠上下班，但是現時的大型車廠基本上都是位於行人或單車可達的位置。但是新的巴士廠位於屯門赤鱗角公路範圍內，亦有班次稀疏的巴士路線途經，但該處目前並沒有行人路或單車徑連接其他道路，每天數以百計的巴士車長無法選擇靠步行或騎單車前往車廠上下班，有違環保出行的原則。建議政府應該考慮在屯門赤鱗角公路轉車站增設行人路來往龍門路以便行人及單車來往車廠及轉車站。

**Advisory clauses**

- (a) to note the comments of the District Lands Officer/Tuen Mun, Lands Department that
  - (i) the application site (the Site) comprises 3 pieces of Government Land (GL) which are annotated as “Site A”, “Site B” and “Site C” in the application. The Site is held under a Short Term Tenancy (STT) for a temporary bus depot and ancillary use subject to, among others, the following restrictions:
    - (I) the total built-over area and height of structures erected shall not exceed 2,000m<sup>2</sup> and 8m respectively; and
    - (II) no structures or building shall be erected within portions of Site A and Site B and the whole of Site C;
  - (ii) it is noted that the anticipated completion of the proposed development is in 2025 while the term of the STT is up to July 2026 only and renewal of the tenancy is not permitted under the existing conditions;
  - (iii) the proposal does not comply with the terms and conditions of the STT. Should the application be approved by the Board, KMB is required to obtain policy support from the relevant policy bureau and apply for a fresh land document for the proposed bus depot development. However, there is no guarantee that the application will be approved and he reserves his right to take appropriate action should any breach of tenancy conditions be found. The application will be considered by his department acting in the capacity as the landlord at its sole discretion. In the event that any such application is approved, it would be subject to such terms and conditions as the Government shall deem fit to do so, including, among others, charging of rent and administrative fee. Upon approval and commencement of the new land document, the existing STT will be terminated in the relevant time;
- (b) to note the comments of the Commissioner for Transport that before the commencement of the operation of the proposed development, a Traffic Management Plan (TMP) should be submitted and implemented. The details of the TMP shall include but not limited to the following:
  - (i) traffic management measures, including but not limited to contingency plan, alternative routes of franchised buses from public road to the bus depots, dedicated lane for operator’s vehicle, traffic signs to control movement of other vehicles etc., should be submitted such that the Tunnel Operation Road can be kept clear to ensure smooth and swift handling of the tunnel recovery operation during emergency and the same shall also apply to construction vehicles during construction stages;
  - (ii) temporary traffic scheme should be submitted to facilitate the safe and smooth traffic flow for franchised buses and other road users during peak operation hours of franchised buses; and
  - (iii) bus rescue strategies and arrangements between the applicant and the tunnel operator for handling bus breakdowns within the Tunnel Area should be submitted with an aim to avoid causing prolonged obstruction to the tunnel operations and the bus-bus interchange;

- (c) to note the comments of the Chief Highway Engineer/New Territories West, Highways Department that
- (i) the applicant should design and construct the run in/out of the Site to the satisfaction of TD and his department in accordance with the latest version of Highways Standard Drawing to match with the existing adjacent pavement at their own cost. The applicant should be reminded that public concerns were received regarding the induced traffic flow from the Site may cause damages to the nearby road network. The applicant should review the design of the run in/out of the Site and ensure that the design will be capable to withstand the induced traffic flow. Any defects or complaints related to the run in/out should be handled by the applicant with the agreement from his department at their own cost;
  - (ii) the proposed access arrangement of the Site should be commented and approved by TD;
  - (iii) adequate drainage measures should be provided to prevent surface water running from the Site to the nearby public roads and drains;
  - (iv) from his understanding, some assets of his department such as drainage pipes, manholes, utility ducts, drawpits, movement joints, isolation joints, etc. are located within the Site. The applicant shall allow his staff and the contractors whom employed by his department to enter the Site to carry out inspections and maintenance works;
  - (v) the applicant shall not erect any structures on top of the assets of his department. The applicant shall remove any materials/objects/covers/vehicles on top of the assets of his department when requested;
  - (vi) the applicant is not allowed to excavate where above his department's structures. Unless when carrying out repairing works to the pavement in the Site with prior agreement by his department, and the excavation depth shall not exceed the existing pavement depth;
  - (vii) the applicant shall be responsible for general cleaning of the isolation joint in Site C, and protecting the highway structure within or adjacent to the Site. Drainage reserve and protection for the drainage maintained by his department should be also provided within the Site; and
  - (viii) please be reminded that appropriate access ladder/staircase should be provided for his department and his department's contractor to perform inspection/maintenance works to the existing footbridge.
- (d) to note the comments of the Chief Building Surveyor/New Territories West, Buildings Department (BD) that
- (i) if the existing structures (not being a New Territories Exempted House) are erected on leased land without approval of the BD, they are unauthorized building works (UBW) under the Buildings Ordinance (BO) and should not be designated for any proposed use under the captioned application;
  - (ii) for UBW erected on leased land, enforcement action may be taken by the BD to effect their removal in accordance with BD's enforcement policy against UBW as and when necessary. The granting of any planning approval should not be construed as an acceptance of any existing building works or UBW on the Site under the BO;

- (iii) before any new building works (including open sheds as temporary buildings) are to be carried out on the application site, the prior approval and consent of the BD should be obtained, otherwise they are UBW. An Authorized Person (AP) should be appointed as the co-ordinator for the proposed building works in accordance with the BO;
  - (iv) the Site shall be provided with means of obtaining access thereto from a street and emergency vehicular access in accordance with Regulations 5 and 41D of the Building (Planning) Regulations (B(P)R) respectively;
  - (v) if the Site does not abut on a specified street of not less than 4.5m wide, its permitted development intensity shall be determined under Regulation 19(3) of the B(P)R at the building plan submission stage;
  - (vi) detailed comments under the BO will be provided at building plan submission stage; and
  - (vii) if the Site is still shown as 'road', application for modification of Section 31 of the BO is considered necessary during the building submission stage.
- (e) to note the comments of the Director of Fire Services that:
- (i) detailed fire safety requirements will be formulated upon receipt of formal submission of general building plans. The applicant is reminded of the following:
    - (I) proposed electric vehicle (EV) charging facilities should comply with the requirements stated in Fire Services Department Circular Letter No. 4/2020 Additional Fire Safety Requirements for Car Parking Facilities installed with EV Charging Facilities; and
    - (II) proposed CLP substation should comply with the requirements stated in Code of Practice - Fire protection for New CLP Power Substations and para. 4.5, 4.24 and 4.44 of Code of Practice for Minimum Fire Service Installations and Equipment 2012; and
  - (ii) furthermore, the EVA provision in the 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 BD;
- (f) to note the comments of the Chief Engineer/Construction, Water Supplies Department that the applicant shall comply with the "Condition of Working in the Vicinity of Waterworks Installations" (**Annex A**), in particular, no structures shall be erected within 3m from the centerline of the affected watermain;
- (g) to note the comments of the Head of the Geotechnical Engineering Office, Civil Engineering and Development Department that the applicant is reminded to submit all geotechnical submissions regarding the proposed development to BD for approval according to the BO;
- (h) to note the comments of the Director of Electrical and Mechanical Services that
- (i) in the interests of public safety and ensuring the continuity of electricity supply, the parties concerned with planning, designing, organizing, supervising and conducting any activity near the underground cable or overhead line under the mentioned application should approach the electricity supplier (i.e. CLP Power) for the requisition of cable plans (and overhead line alignment drawings, where applicable) to find out whether there is any underground cable and/or overhead line within and/or in the

vicinity of the concerned site; and

- (ii) they should also be reminded to observe the Electricity Supply Lines (Protection) Regulation (the Regulation) and the “Code of Practice on Working near Electricity Supply Lines” established under the Regulation when carrying out works in the vicinity of the electricity supply lines.
- (i) to note the comments of the Chief Architect/Central Management Division 2, Architectural Services Department that the applicant is suggested to provide 20% greenery in accordance with PNAP APP-152;
- (j) to note the comments of the Chief Town Planner/Urban Design and Landscape, Planning Department (PlanD) that the applicant is reminded of the long-term commitment in providing proper maintenance to the vertical green wall for healthy and sustainable plant growth, and that approval of s.16 application under Town Planning Ordinance does not imply approval of the site coverage of greenery calculation should be submitted separately to BD for approval; and
- (k) to note the comments of the Chief Town Planner/Studies and Research 1 that the Site falls within the Study Area of the proposed Planning and Engineering Study for Lung Kwu Tan Reclamation and the Re-planning of Tuen Mun West Area (the proposed P&E Study). The applicant should be advised to consider further measures to mitigate the potential environmental impacts, such as reducing the number and size of openings on the western façade at the detailed design stage of the proposed depot, as an effort to not compromise the design flexibility of the potential development sites for housing and/or other beneficial uses to the west of the Site to be investigated under the proposed P&E Study.

## **Conditions of Working in the Vicinity of Waterworks Installations**

### **Water Mains**

1. No water mains or their support shall be interfered with or buried without the prior approval of WSD.
2. The Contractor shall check the location of water mains and cables and other services by hand dug trial holes and take precautionary measures to protect them.
3. Free access shall be maintained at all times for the staff of WSD, their contractors and vehicles to go into and/or through the site to carry out installation, inspection, operation, maintenance or repair works.
4. No additional filling material is to be deposited over a water main without the approval of WSD.
5. No Structures shall be erected or materials stored within 3 metres from the centre line of mains of 900mm diameter or under, and 5 metres for mains exceeding 900mm in diameter.
6. Full details of any proposed temporary works affecting waterworks installations and of any temporary support or protective measure to mains shall be submitted to the Client Department for approval and to WSD for information. Work shall not commence until approval is given by the Client Department.
7. Diversion of WSD mains, other than those already shown on the contract drawings, shall only be considered when all other options such as protection of the mains or modification of design have been considered and found to be impracticable.
8. The programme for laying or diversions of all WSD mains shall be agreed with WSD in advance. A 14-day notice shall be served to WSD to confirm site availability for the commencement of any agreed diversion. WSD shall also be notified of any change required in the agreed programme as soon as possible.
9. All excavation works within 1.5m of water mains exceeding 900mm in diameter shall be carried out by hand. No excavation shall be carried out within lines 45° below the centre line of such mains or 45° below the edges of the foundation of their supports without approved ground support. If the support is in the form of steel sheets, they shall be left in place after works. Removal of support from underneath the mains is not permitted.
10. No earth fill ramps are to be used to form temporary crossings of the large diameter mains. Temporary ramps/bridges in steel, timber, or concrete shall be used with the deck and support piers clear of the mains so that no loading is imposed on the mains.
11. All temporary works near the large diameter water mains shall be kept to at least 1 metre away from the edge of the mains and the length of mains affected shall be well protected by a temporary timber cover raised 250mm clear of the mains to ensure no impact damage.