2022年 3月 14日
此文件在_____收到，城市規劃委員會只會在收到所有必要的資料及文件後才正式確認收到申請的日期。

This document is received on 14 MAR 2022.
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

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

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/NE-SSH/142
	Date Received 收到日期	14 MAR 2022

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

2. Please read the "Guidance Notes" carefully before you fill in this form. The document can be downloaded from the Board's website at http://www.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 樓及新界沙田上禾輋路 1 號沙田政府合署 14 樓)索取。

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

---

1. Name of Applicant 申請人姓名/名稱

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

Light Time Investments Limited

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)

Llewelyn-Davies Hong Kong Limited

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）	TPTL No. 253 and 157 RP; Lot Nos. 13, 14, 17, 37 RP (Part), 37 S.B RP (Part), 255, 749, 904 RP (Part), 909 RP (Part), 910 RP (Part), 914 (Part), 915 S.A RP (Part), 916 S.B (Part), 918 RP (Part), 1122, 1408 S.A.H (Part), 1408 S.E (Part), 1434 S.A ss. 5 RP (Part), 1435 S.D RP (Part) and 1484 (Part) in D.D. 165, Lot No. 19 (Part) in D.D. 207 and Lot Nos. 54 (Part), 55 (Part), 56, 57, 58, 59 (Part), 60 (Part), 63, 68 S.A, 69 S.A, 69 S.B, 70 S.A, 70 S.B (Part), 71 (Part), 72, 73, 78, 79, 80, 81 (Part), 82 (Part), 83 (Part), 84 S.A (Part), 109 (Part), 125, 127 S.A, 131 S.A, 135 S.A, 138 S.A, 183, 193 S.A RP (Part), 195 (Part), 196 S.A (Part), 204, 205 S.A, 262 (Part), 581, 587 RP, 588, 603 RP, 731 RP, 817, 851 (Part), 858 (Part), 891 S.A, 960 S.A, 1075 S.C (Part), 1075 RP (Part), 1078 (Part), 1109 S.A ss.1, 1109 S.A RP, 1109 RP, 1111 (Part), 1116 (Part), 1118 (Part), 1123 RP (Part), 1123 S.B (Part), 1124 RP (Part), 1124 S.A, 1126 (Part), 1127 S.A ss. 1, 1213 RP (Part), 1213 S.A RP (Part), 1213 S.A ss.1 S.A (Part), 1213 S.A ss.1 S.B (Part), 1213 S.A ss. 1 RP (Part), 1213 S.B RP (Part), 1213 S.B ss.2 S.A (Part), 1213 S.B ss.3 (Part) and 1221 S.B in D.D. 218 and Adjoining Government Land, Sai Sha, Shap Sz Heung, New Territories
(b) Site area and/or gross floor area involved 涉及的地盤面積及／或總樓面面積	☑ Site area 地盤面積 748,400 sq.m 平方米 ☐ About 約 ☑ Gross floor area 總樓面面積 Not more than 604,796 (1) sq.m 平方米 ☐ About 約
(c) Area of Government land included (if any) 所包括的政府土地面積（倘有）	109,297 sq.m 平方米 ☑ About 約

(1) Including total domestic GFA 538,213 sq. m (including 390 sq. m for 2 existing houses to be retained in Site C), total commercial GFA 12,077 sq. m, total residents' clubhouse GFA 13,446 sq. m, total transport interchange GFA 9,000 sq. m, sports centre GFA 17,500 sq. m, public vehicle park GFA 9,000 sq. m and welfare centre GFA 5,560 sq .m.

(d)	Name and number of the related statutory plan(s) 有關法定圖則的名稱及編號	Approved Shap Sz Heung Outline Zoning Plan No. S/NE-SSH/11 and Approved Ma On Shan Outline Zoning Plan No. S/MOS/24
(e)	Land use zone(s) involved 涉及的土地用途地帶	"CDA" with minor portions of "GIC", "V", "O", "GB" and areas shown as 'Road' on the Approved Shap Sz Heung Outline Zoning Plan No. S/NE-SSH/11, and "V", "GIC", "GB", "CP" and areas shown as 'Road' on the Approved Ma On Shan Outline Zoning Plan No. S/MOS/24
(f)	Current use(s) 現時用途	Majority of the Application Site is currently under construction. An area located at the northern portion of the Application Site is occupied by two temporary driving ranges. Part of the existing Sai Sha Road is also included in the Application 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"#& (please proceed to Part 6 and attach documentary proof of ownership).
是唯一的「現行土地擁有人」#& (請繼續填寫第 6 部分，並夾附業權證明文件)。

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

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

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

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

(a) According to the record(s) of the Land Registry as at 11/01/2022 (DD/MM/YYYY), this application involves a total of ..... "current land owner(s)"#.
根據土地註冊處截至 ..... 年 ..... 月 ..... 日的記錄，這宗申請共牽涉 ..... 名「現行土地擁有人」#。

(b) The applicant 申請人 –

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

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

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

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

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

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

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

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

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

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

☑ published notices in local newspapers on 13/01/2022 (DD/MM/YYYY)&
於_____(日/月/年)在指定報章就申請刊登一次通知&

☑ posted notice in a prominent position on or near application site/premises on 13/01/2022 (DD/MM/YYYY)&
於_____(日/月/年)在申請地點／申請處所或附近的顯明位置貼出關於該申請的通知&

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

Others 其他

☐ others (please specify)
其他（請指明）

_____

_____

_____

_____

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

6. Type(s) of Application 申請類別

☐	Type (i) 第(i)類	Change of use within existing building or part thereof 更改現有建築物或其部分內的用途
☐	Type (ii) 第(ii)類	Diversion of stream / excavation of land / filling of land / filling of pond as required under Notes of Statutory Plan(s) 根據法定圖則《註釋》內所要求的河道改道／挖土／填土／填塘工程
☐	Type (iii) 第(iii)類	Public utility installation / Utility installation for private project 公用事業設施裝置/私人發展計劃的公用設施裝置
☑	Type (iv) 第(iv)類	Minor relaxation of stated development restriction(s) as provided under Notes of Statutory Plan(s) 略為放寬於法定圖則《註釋》內列明的發展限制
☑	Type (v) 第(v)類	Use / development other than (i) to (iii) above 上述的(i)至(iii)項以外的用途／發展

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

(i) *For Type (i) application 供第(i)類申請*

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

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

Part 6 第 6 部分

(ii) *For Type (ii) application 供第(ii)類申請*

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

(iii) *For Type (iii) application 供第(iii)類申請*

(a) Nature and scale
性質及規模

☐ Public utility installation 公用事業設施裝置

☐ Utility installation for private project 私人發展計劃的公用設施裝置

Please specify the type and number of utility to be provided as well as the dimensions of each building/structure, where appropriate
請註明有關裝置的性質及數量，包括每座建築物/構築物(倘有)的長度、高度和闊度

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

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

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

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

☐	Plot ratio restriction 地積比率限制	From 由 ..... to 至 .....
☑	Gross floor area restriction 總樓面面積限制	Maximum domestic GFA: From 448,576 sq. m to Not more than 538,213 sq. m GFA for residents' club: From 8,957 sq. m to Not more than 13,446 sq. m GFA for commercial facilities: From 9,290 sq. m to Not more than 12,077sq. m
☐	Site coverage restriction 上蓋面積限制	
☑	Building height restriction 建築物高度限制	From 24 residential storeys over 1 storey of residential entrance lobby and a maximum 3 levels for ancillary car park to 31 residential storeys over one storey of lobby and 1 to 3 levels for carpark/ M&E/Clubhouse
☐	Non-building area restriction 非建築用地限制	From 由 .....m to 至 ..... m
☐	Others (please specify) 其他（請註明）	---------- ----------

(v) For Type (v) application 供第(v)類申請

(a) Proposed use(s)/development 擬議用途/發展	Proposed 'Flat', 'House'[4], 'Shop and Services', 'Eating Place', Religious Institution', 'School', 'Public Transport Terminus or Station', 'Place of Recreation, Sports or Culture' (Outdoor Recreational Facilities for the Use of Sports Field/ Ball Court/ Pool/ Driving Range/ Training Path for Cycling), 'Place of Entertainment', 'Open Space (Playground/Play Field only)', 'Indoor Playground', 'Social Welfare Facility' and 'Public Vehicle Park (excluding container vehicle)' uses with Minor Relaxation of Building Height and GFA Restrictions (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 (Same as approved planning application No. A/NE-SSH/120-1; lease executed on 21.10.2021 under TPTL 253 and TPTL 157RP)

Proposed gross floor area (GFA) 擬議總樓面面積	Not more than 604,796[1] sq.m 平方米	☐About 約
Proposed plot ratio 擬議地積比率	Dom: 0.832; Non-Dom: 0.103[2]	☑About 約
Proposed site coverage 擬議上蓋面積	Dom: Not more than 33.33%; Non-Dom 80% (below 15m)	☐About 約
Proposed no. of blocks 擬議座數[3]	Residential Tower: 46 (Site A & Site B); Commercial/Transport Interchange/Clubhouse Block (Site A & Site B): 53; Recreation & Sports Centre with Ancillary Facilities / E&M (Site C): 16 ; Welfare Centre and Public Vehicle Park (Site C): 1	
Proposed no. of storeys of each block 每座建築物的擬議層數	Please refer to Sheet 1 storeys 層 ☐ include 包括..... storeys of basements 層地庫 ☐ exclude 不包括..... storeys of basements 層地庫	
Proposed building height of each block 每座建築物的擬議高度	Please refer to Sheet 2 ..... mPD 米(主水平基準上) ..... m 米	☐About 約 ☐About 約

(1) Including total domestic GFA 538,213 sq. m (including 390 sq. m for 2 existing houses to be retained in Site C), total commercial GFA 12,077 sq. m, total residents' clubhouse GFA 13,446 sq. m, total transport interchange GFA 9,000 sq. m, recreation & sports centre with ancillary facilities GFA 17,500 sq. m, public vehicle park GFA 9,000 sq. m and welfare centre GFA 5,560 sq. m (Appendices A & D of Planning Statement refer)
(2) Based on total Development Site Area of 646,908 sq. m, total domestic GFA of 538,213 sq. m and total non-domestic GFA of 66,583 sq. m
(3) Excluding structures solely for ancillary E&M in Site A & Site B; and two existing houses in Site C to be retained. Please refer to Sheet 4 for counting of non-domestic blocks.
(4) Refers to two existing houses in Site C to be retained.

☑ Domestic part 住用部分

GFA 總樓面面積	Not more than 538,213 (1) sq. m 平方米	☐About 約
number of Units 單位數目	Not more than 9,700	
average unit size 單位平均面積	55.49 sq. m 平方米	☑About 約
estimated number of residents 估計住客數目	About 29,100	

☑ Non-domestic part 非住用部分

	GFA 總樓面面積	
☑ Eating Place / Shop and Services / School / Religious Institution / Place of Entertainment (in Site A & B)	Not more than 12,077 sq. m 平方米	☐About 約
☐ hotel 酒店	..... sq. m 平方米	☐About 約
	(please specify the number of rooms 請註明房間數目)	
☑ Place of Recreation, Sports or Culture (Outdoor Recreational Facilities for the Use of Sports Field/ Ball Court/ Pool/ Driving Range/ Training Path for Cycling) / Indoor Playground/ Eating Place / Shop and Services / Place of Entertainment (in Site C)	Not more than 17,500 sq. m 平方米	☐About 約
		☐About 約

☑ Government, institution or community facilities 政府、機構或社區設施

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

2 Reserved Primary School Sites in Site C with Total Site Area of not more than 12,400 sq. m (i.e. Not more than 6,200 sq. m each)

1 Welfare Centre: GFA about 5,560 sq. m

☑ 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)

Residents' Club - Not more than 13,446 sq. m

Public Vehicle Park - Not more than 9,000 sq. m

☑ Open space 休憩用地

(please specify land area(s) 請註明地面面積)

☑ private open space 私人休憩用地	43,500 sq. m 平方米	☑Not less than 不少於
☑ public open space 公眾休憩用地	8,000 (near Tseng Tau Village) sq. m 平方米	☑Not less than 不少於

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

[Block number] [座數]	[Floor(s)] [層數]	[Proposed use(s)] [擬議用途]
Please refer to Sheet 3		

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

Landscape Garden, Landscape Area, Public Open Space, Reserved School Sites, Public Road, Internal Road, Various Sports and Recreational Facilities

(1) Including 390 sq. m for 2 existing houses to be retained in Site C.

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)

It is anticipated that the Proposed Development will be completed by 2025-2030.

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

Any vehicular access to the site/subject building? 是否有車路通往地盤／有關建築物？	Yes 是	☑ There is an existing access. (please indicate the street name, where appropriate) 有一條現有車路。(請註明車路名稱(如適用)) Please refer to Indicative Master Layout Plan in Appendix B ☐ 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）
	No 否	☐
Any provision of parking space for the proposed use(s)? 是否有為擬議用途提供停車位？	Yes 是	☑ (Please specify type(s) and number(s) and illustrate on plan) 請註明種類及數目並於圖則上顯示) The internal transport facilities provision of Site A and Site B will follow the agreed sliding scale under the Traffic Impact Assessment under approved application No. A/NE-SSH/120-1. For Site C, please refer to Traffic Impact Assessment in Appendix F for details. Others (Please Specify) 其他 (請列明) Transport Interchange (Total GFA of not more than 9,000 sq. m) 2 Public Vehicle Park (Total GFA of not more than 9,000 sq. m) 1
	No 否	☐
Any provision of loading/unloading space for the proposed use(s)? 是否有為擬議用途提供上落客貨車位？	Yes 是	☑ (Please specify type(s) and number(s) and illustrate on plan) 請註明種類及數目並於圖則上顯示) The internal transport facilities provision of Site A and Site B will follow the agreed sliding scale under the Traffic Impact Assessment under approved application No. A/NE-SSH/120-1. For Site C, please refer to Traffic Impact Assessment in Appendix F for details. Others (Please Specify) 其他 (請列明)
	No 否	☐

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

If necessary, please use separate sheets to indicate the proposed measures to minimise possible adverse impacts or give justifications/reasons for not providing such measures.
如需要的話，請另頁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。

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

Would the development proposal cause any adverse impacts?
擬議發展計劃會否造成不良影響？

On environment 對環境	Yes 會 ☐	No 不會 ☑
On traffic 對交通	Yes 會 ☐	No 不會 ☑
On water supply 對供水	Yes 會 ☐	No 不會 ☑
On drainage 對排水	Yes 會 ☐	No 不會 ☑
On slopes 對斜坡	Yes 會 ☐	No 不會 ☑
Affected by slopes 受斜坡影響	Yes 會 ☐	No 不會 ☑
Landscape Impact 構成景觀影響	Yes 會 ☐	No 不會 ☑
Tree Felling 砍伐樹木	Yes 會 ☑	No 不會 ☐
Visual Impact 構成視覺影響	Yes 會 ☐	No 不會 ☑
Others (Please Specify) 其他 (請列明)	Yes 會 ☐	No 不會 ☑

_____

_____

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

Please refer to Appendices B – K of the attached Planning Statement.

.....

.....

.....

.....

.....

10. Justifications 理由

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

Please refer to Section 4 of the 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 ..... ☐ Applicant 申請人 / ☑ Authorised Agent 獲授權代理人

Dickson C.H. Hui ..... Director .....

Name in Block Letters 姓名（請以正楷填寫） Position (if applicable) 職位 （如適用）

Professional Qualification(s) 專業資格 ☑ Member 會員 / ☐ Fellow of 資深會員

☑ HKIP 香港規劃師學會 / ☐ HKIA 香港建築師學會 /
☐ HKIS 香港測量師學會 / ☐ HKIE 香港工程師學會 /
☐ HKILA 香港園境師學會/ ☑ HKIUD 香港城市設計學會 /
☐ RPP 註冊專業規劃師
Others 其他 ..... MRTPI

Llewelyn-Davies Hong Kong Limited
Authorized Signature

on behalf of 代表 Llewelyn-Davies Hong Kong Limited .....

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

Date 日期 28/01/2022 ..... (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@

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

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

Total number of niches 龕位總數 _____

Total number of single niches
單人龕位總數 _____

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

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

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

Total number of double niches
雙人龕位總數 _____

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

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

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

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

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

_____

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

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

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

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

Proposed operating hours 擬議營運時間 _____

_____

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

Gist of Application 申請摘要

(Please provide details in both English and Chinese as far as possible. This part will be circulated to relevant consultees, uploaded to the Town Planning Board's Website for browsing and free downloading by the public and 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	TPTL No. 253 and 157 RP; Lot Nos. 13, 14, 17, 37 RP, 37 S.B RP (Part), 255, 749, 904 RP (Part), 909 RP (Part), 910 RP (Part), 914 (Part), 915 S.A RP (Part), 916 S.B (Part), 918 RP (Part), 1122, 1408 S.A.H (Part), 1408 S.E (Part), 1434 S.A ss. 5 RP (Part), 1435 S.D RP (Part) and 1484 (Part) in D.D. 165, Lot No. 19 (Part) in D.D. 207 and Lot Nos. 54 (Part), 55 (Part), 56, 57, 58, 59 (Part), 60 (Part), 63, 68 S.A, 69 S.A, 69 S.B, 70 S.A, 70 S.B (Part), 71 (Part), 72, 73, 78, 79, 80, 81 (Part), 82 (Part), 83 (Part), 84 S.A (Part), 109 (Part), 125, 127 S.A, 131 S.A, 135 S.A, 138 S.A, 183, 193 S.A RP (Part), 195 (Part), 196 S.A (Part), 204, 205 S.A, 262 (Part), 581, 587 RP, 588, 603 RP, 731 RP, 817, 851 (Part), 858 (Part), 891 S.A, 960 S.A, 1075 S.C (Part), 1075 RP (Part), 1078 (Part), 1109 S.A ss.1, 1109 S.A RP, 1109 RP, 1111 (Part), 1116 (Part), 1118 (Part), 1123 RP (Part), 1123 S.B (Part), 1124 RP (Part), 1124 S.A, 1126 (Part), 1127 S.A ss. 1, 1213 RP (Part), 1213 S.A RP (Part), 1213 S.A ss.1 S.A (Part), 1213 S.A ss.1 S.B (Part), 1213 S.A ss. 1 RP (Part), 1213 S.B RP (Part), 1213 S.B ss.2 S.A (Part), 1213 S.B ss.3 (Part) and 1221 S.B in D.D. 218 and Adjoining Government Land, Sai Sha, Shap Sz Heung, New Territories
Site area 地盤面積	748,400 sq. m 平方米 ☑ About 約 (includes Government land of 包括政府土地 109,297 sq. m 平方米 ☑ About 約)
Plan 圖則	Approved Shap Sz Heung Outline Zoning Plan No. S/NE-SSH/11, and Approved Ma On Shan Outline Zoning Plan No. S/MOS/24
Zoning 地帶	"CDA" with minor portions of "GIC", "V", "O", "GB" and areas shown as 'Road' on the Approved Shap Sz Heung Outline Zoning Plan No. S/NE-SSH/11, and "V", "GIC", "GB", "CP" and areas shown as 'Road' on the Approved Ma On Shan Outline Zoning Plan No. S/MOS/24
Applied use/ development 申請用途/發展	Proposed 'Flat', 'House', 'Shop and Services', 'Eating Place', Religious Institution', 'School', 'Public Transport Terminus or Station', 'Place of Recreation, Sports or Culture' (including Outdoor Recreational Facilities for the Use of Sports Field/ Ball Court/ Pool/ Driving Range/ Training Path for Cycling), 'Place of Entertainment', 'Open Space' (Playground/Play Field only)', 'Indoor Playground', 'Social Welfare Facility' and 'Public Vehicle Park (excluding container vehicle)' uses with Minor Relaxation of Building Height and GFA Restrictions

			sq.m 平方米	Plot Ratio 地積比率@
(i)	Gross floor area and/or plot ratio 總樓面面積及／或地積比率	Domestic 住用	538,213 ☐ About 約 ☑ Not more than 不多於	0.832 ☑ About 約 ☐ Not more than 不多於
		Non-domestic 非住用	66,583 ☐ About 約 ☑ Not more than 不多於	0.103 ☑ About 約 ☐ Not more than 不多於
(ii)	No. of block 幢數	Domestic 住用	46	
		Non-domestic 非住用	Commercial/Transport Interchange/Clubhouse Block (Site A & B): 53 Recreation & Sports Centre and Ancillary Facilities / E&M (Site C): 16 Welfare Centre and Public Vehicle Park: 1	
		Composite 綜合用途		

@ Based on development site area of about 646,908 sq. m

(iii) Building height/No. of storeys 建築物高度／層數	Domestic 住用		m 米 ☐ (Not more than 不多於)
		69-147 **(SHEET 2 REFERS)**	mPD 米(主水平基準上) ☐ (Not more than 不多於)
		16-31 Over 1 to 3 levels of carpark / M&E / residential clubhouse facilities. **(SHEET 1 REFERS)**	Storeys(s) 層 ☐ (Not more than 不多於) *(☐Include 包括/☐ Exclude 不包括* ☐ *Carport 停車間* ☐ *Basement 地庫* ☐ *Refuge Floor 防火層* ☐ *Podium 平台)*
	Non-domestic 非住用		m 米 ☐ (Not more than 不多於)
		33-40 **(SHEET 2 REFERS)**	mPD 米(主水平基準上) ☐ (Not more than 不多於)
		3-5 Including 1 to 3 levels of basement carpark / M&E **(SHEET 1 REFERS)**	Storeys(s) 層 ☐ (Not more than 不多於) *(☐Include 包括/☐ Exclude 不包括* ☐ *Carport 停車間* ☐ *Basement 地庫* ☐ *Refuge Floor 防火層* ☐ *Podium 平台)*
	Composite 綜合用途		m 米 ☐ (Not more than 不多於)
			mPD 米(主水平基準上) ☐ (Not more than 不多於)
			Storeys(s) 層 ☐ (Not more than 不多於) *(☐Include 包括/☐ Exclude 不包括* ☐ *Carport 停車間* ☐ *Basement 地庫* ☐ *Refuge Floor 防火層* ☐ *Podium 平台)*
(iv) Site coverage 上蓋面積	Dom: Not more than 33.33%; Non-Dom 80% (below 15m) ☐ About 約		
(v) No. of units 單位數目	Not more than 9,700		
(vi) Open space 休憩用地	Private 私人	43,500 sq.m 平方米 ☑ Not less than 不少於	
	Public 公眾	8,000 (near Tseng Tau Village) sq.m 平方米 ☑ Not less than 不少於	

(vii) No. of parking spaces and loading / unloading spaces 停車位及上落客貨車位數目	Total no. of vehicle parking spaces 停車位總數 The internal transport facilities provision of Site A and Site B will follow the agreed sliding scale under the Traffic Impact Assessment under approved application No. A/NE-SSH/120-1. For Site C, please refer to Traffic Impact Assessment in Appendix F for details. Others (Please Specify) 其他 (請列明) Transport Interchange (Total GFA of not more than 9,000 sq. m) Public Vehicle Park (Total GFA of not more than 9,000 sq. m)	 2 1
	Total no. of vehicle loading/unloading bays/lay-bys 上落客貨車位／停車處總數 The internal transport facilities provision of Site A and Site B will follow the agreed sliding scale under the Traffic Impact Assessment under approved application No. A/NE-SSH/120-1. For Site C, please refer to Traffic Impact Assessment in Appendix F for details. 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
Plans and Drawings 圖則及繪圖		
Master layout plan(s)/Layout plan(s) 總綱發展藍圖／布局設計圖	☐	☑
Block plan(s) 樓宇位置圖	☐	☐
Floor plan(s) 樓宇平面圖	☐	☐
Sectional plan(s) 截視圖	☐	☑
Elevation(s) 立視圖	☐	☐
Photomontage(s) showing the proposed development 顯示擬議發展的合成照片	☐	☑
Master landscape plan(s)/Landscape plan(s) 園境設計總圖／園境設計圖	☐	☑
Others (please specify) 其他（請註明）	☐	☐
Reports 報告書		
Planning Statement/Justifications 規劃綱領/理據	☐	☑
Environmental assessment (noise, air and/or water pollutions) 環境評估（噪音、空氣及／或水的污染）	☐	☑
Traffic impact assessment (on vehicles) 就車輛的交通影響評估	☐	☐
Traffic impact assessment (on pedestrians) 就行人的交通影響評估	☐	☐
Visual impact assessment 視覺影響評估	☐	☐
Landscape impact assessment 景觀影響評估	☐	☐
Tree Survey 樹木調查	☐	☑
Geotechnical impact assessment 土力影響評估	☐	☐
Drainage impact assessment 排水影響評估	☐	☑
Sewerage impact assessment 排污影響評估	☐	☑
Risk Assessment 風險評估	☐	☐
Others (please specify) 其他（請註明）	☐	☑
Ecological Impact Assessment, Traffic Review and Water Supply Impact Assessment		

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

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

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

Sheet 1 – Proposed number of storys of each block

Site A:

Towers	**No. of Storeys** (1)
T1	23 residential storeys
T2	26 residential storeys
T3	28 residential storeys
T5	31 residential storeys
T6 to T10	31 residential storeys
T11	28 residential storeys
T12	30 residential storeys
T13 & T15	31 residential storeys
T16	28 residential storeys
T17	26 residential storeys
T18	22 residential storeys
Phase 2 Development	24 residential storeys
Non-domestic Blocks	**No. of Storeys**
Residential Clubhouse Facilities / Commercial / Transport Interchange	Not more than 4 (including 1 to 3 levels of basement carpark / M&E)

(1) Over 1 to 3 levels of carpark / M&E / residential clubhouse facilities; and excluding 1 level of residential lobby, refuge floor and transfer plate.

Site B:

Residential Towers	**No. of Storeys** [(2)]
T1	16 residential storeys
T2	22 residential storeys
T3	26 residential storeys
T5	30 residential storeys
T6	30 residential storeys
T7	26 residential storeys
T8	22 residential storeys
T9	16 residential storeys
T10	16 residential storeys
T11	20 residential storeys
T12	23 residential storeys
T15	27 residential storeys
T16	29 residential storeys
T17	31 residential storeys
T18	31 residential storeys
T19	31 residential storeys
T20	31 residential storeys
T21	31 residential storeys
T22	30 residential storeys
T23	27 residential storeys
T25	24 residential storeys
T26	21 residential storeys
T27	16 residential storeys
T28	31 residential storeys
T29	29 residential storeys
T30	27 residential storeys
T31	24 residential storeys
T32	21 residential storeys
T33	16 residential storeys
Non-domestic Blocks	**No. of Storeys**
Residential Clubhouse Facilities / Commercial / Transport Interchange	Not more than 3 (including 2 levels of basement carpark / M&E)

(2) Over 1 to 3 levels of carpark / M&E / residential clubhouse facilities; and excluding 1 level of residential lobby, refuge floor and transfer plate.

Site C:

Non-domestic Blocks	No. of Storeys
Recreation & Sports Centre with Ancillary Facilities / E&M	3 storeys above 2 levels of basement carpark
Welfare Centre & Public Vehicle Park Building	5 storeys above 1 level of basement carpark

Sheet 2 – Proposed Absolute Building Height

Site A:

Towers	**Max. Building Height (mPD)**	**Podium Deck Level (mPD)**	**Absolute Building Height (m)**
T1	107	29	78
T2	123	29	94
T3	129	29	100
T5	139	29	110
T6 to T10	147	32	115
T11	134	32	102
T12	141	32	109
T13 & T15	147	32	115
T16	139	35	104
T17	129	37.2	91.8
T18	112	37.2	74.8
Phase 2 Development	121	32	89

Site B:

Residential Towers	Max. Building Height (mPD)	Podium Deck Level (mPD)	Absolute Building Height (m)
T1	78	19	59
T2	101	19	82
T3	118	19	99
T5	128	19	109
T6	128	19	109
T7	118	19	99
T8	101	19	82
T9	78	19	59
T10	78	19	59
T11	92	19	73
T12	103	19	84
T15	120	19	101
T16	128	19	109
T17	131	19	112
T18	131	19	112
T19	131	19	112
T20	131	19	112
T21	131	19	112
T22	128	19	109
T23	111	15	96
T25	97	15	82
T26	86	15	71
T27	69	15	54
T28	124	15	109
T29	120	15	105
T30	114	15	99
T31	97	15	82
T32	86	15	71
T33	69	15	54

Site C:

Non-domestic Blocks	Max. Building Height (mPD)
Recreation & Sports Centre with Ancillary Facilities / E&M	40
Welfare Centre & Public Vehicle Park Building	33

Sheet 3 – Uses of Different Floors

Site A:

Blocks	Floors / Levels	Proposed Uses
T1 to T18 & Phase 2 Development	G/F or above	Lobby and Flat Units
Basement	+12.0	Commercial Carpark / M&E
	+18.5	Basement Carpark / M&E / Loading & Unloading / Commercial Carpark
	+24.5	Basement Carpark / M&E / Transport Interchange / Residential Clubhouse Facilities / Commercial Uses (1)
	+29.5	Basement Carpark / M&E / Residential Clubhouse Facilities / Commercial Uses (1)

Site B:

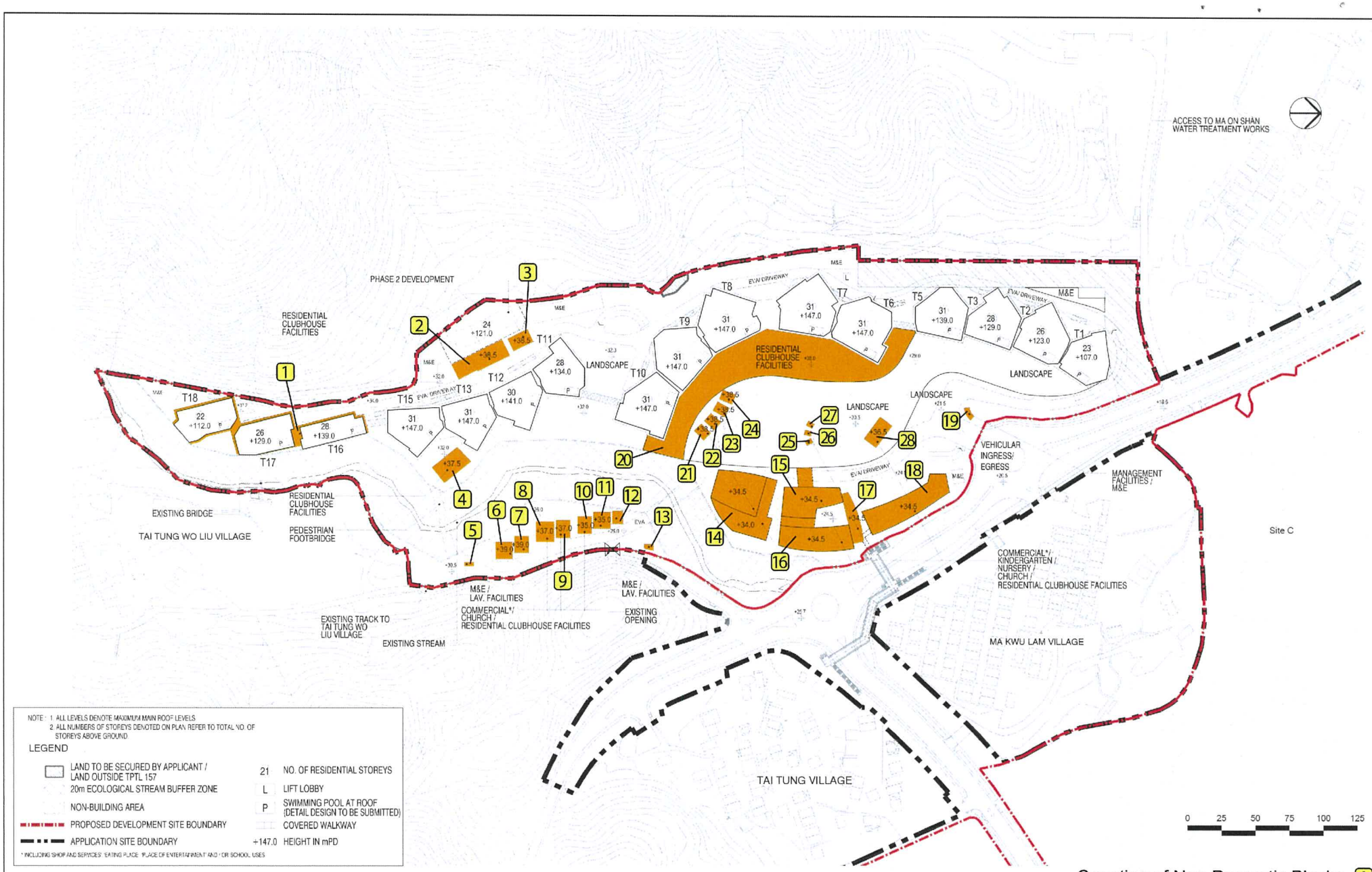
Blocks	Floors / Levels	Proposed Uses
T1 to T38	G/F or above	Lobby and Flat Units
Basement	+2.0	Basement Carpark / M&E / Ancillary Utility Installation / Residential Clubhouse Facilities
	+10.0	Basement Carpark / M&E / Transport Interchange / Residential Clubhouse Facilities / Commercial Uses (1)
	+16.0	Basement Carpark / M&E / Shuttle Lobby / Transport Interchange / Residential Clubhouse Facilities / Commercial Uses (1)

(1) Commercial uses include Shop and Services, Eating Place, Place of Entertainment, Religious Institution (Church), School and/ or Kindergarten / Nursery

Site C:

Blocks	Floors / Levels	Proposed Uses
Recreation & Sports Centre with Ancillary Facilities / E&M	2 levels of Basement	Basement Carpark
	G/F – 2/F	Place of Recreation, Sports or Culture / Eating Place / Shop and Services / Indoor Playground (2)
Welfare Centre & Public Vehicle Park Building	1 levels of Basement	Welfare Centre Carpark
	G/F	Public Vehicle Park (excluding container vehicle) / Social Welfare Facilities / Common Lobby
	1/F – 2/F	Public Vehicle Park (excluding container vehicle)
	3/F – 4/F	Social Welfare Facilities

(2) Recreation & Sports Centre with Ancillary Facilities / E&M include 'Place of Recreation, Sports or Culture', 'Place of Entertainment', 'Eating Place', 'Shop and Services' and / or 'Indoor Playground'.



NOTE : 1. ALL LEVELS DENOTE MAXIMUM MAIN ROOF LEVELS
2. ALL NUMBERS OF STOREYS DENOTED ON PLAN REFER TO TOTAL NO. OF STOREYS ABOVE GROUND

LEGEND

- LAND TO BE SECURED BY APPLICANT / LAND OUTSIDE TPTL 157
- 20m ECOLOGICAL STREAM BUFFER ZONE
- NON-BUILDING AREA
- PROPOSED DEVELOPMENT SITE BOUNDARY
- APPLICATION SITE BOUNDARY
- 21 NO. OF RESIDENTIAL STOREYS
- L LIFT LOBBY
- P SWIMMING POOL AT ROOF (DETAIL DESIGN TO BE SUBMITTED)
- COVERED WALKWAY
- +147.0 HEIGHT IN mPD

* INCLUDING SHOP AND SERVICES' 'EATING PLACE' 'PLACE OF ENTERTAINMENT' AND / OR SCHOOL USES

Counting of Non-Domestic Blocks 1

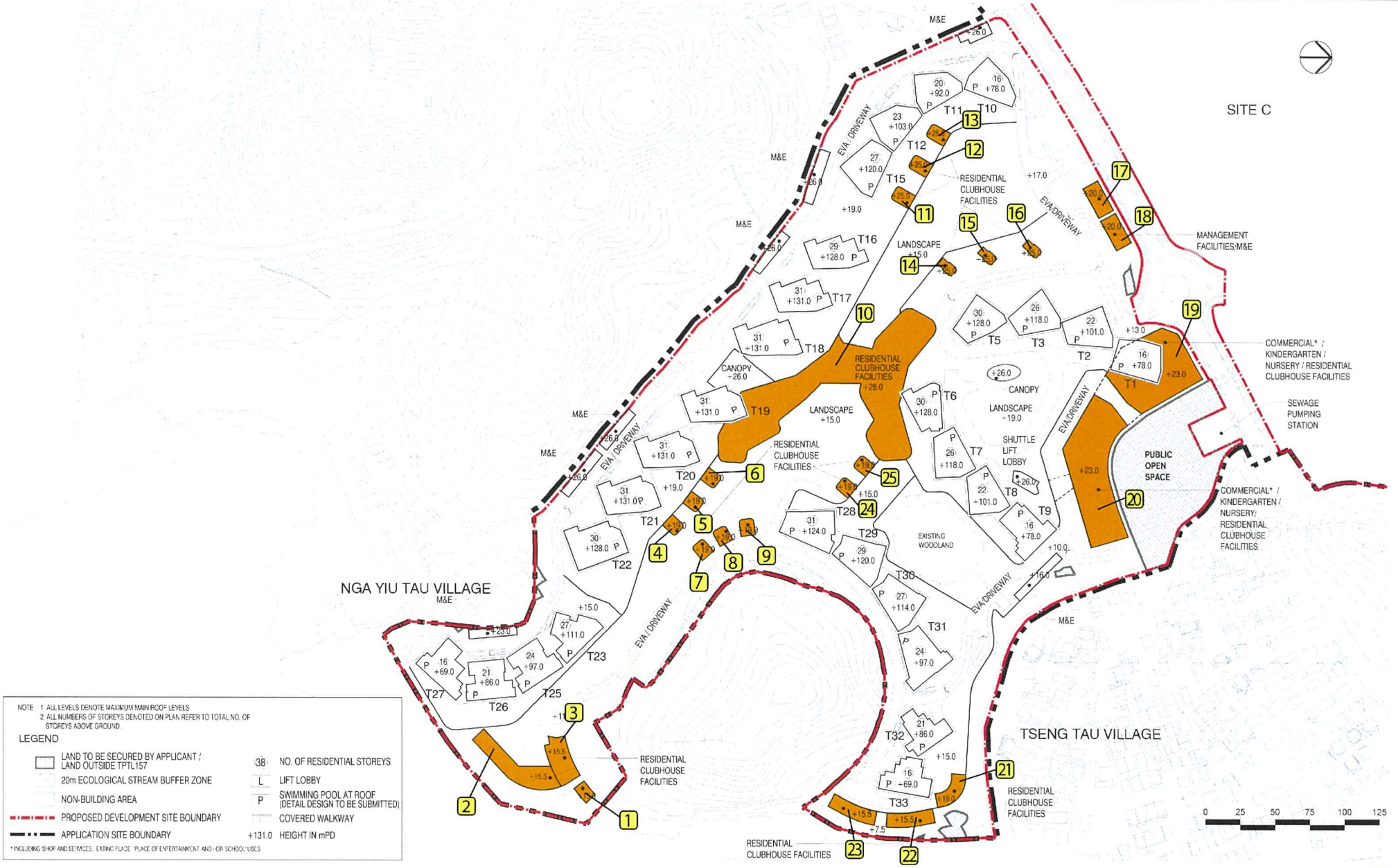
Remarks: No. of non-domestic blocks exclude the structures solely for ancillary M&E and shuttle lift uses.

llewelyn davies

Title

Counting of Non-Domestic Blocks (Site A)

Checked	DH	Drawn	PW
Rev	0	Date	Jan 2022
Scale		Figure	

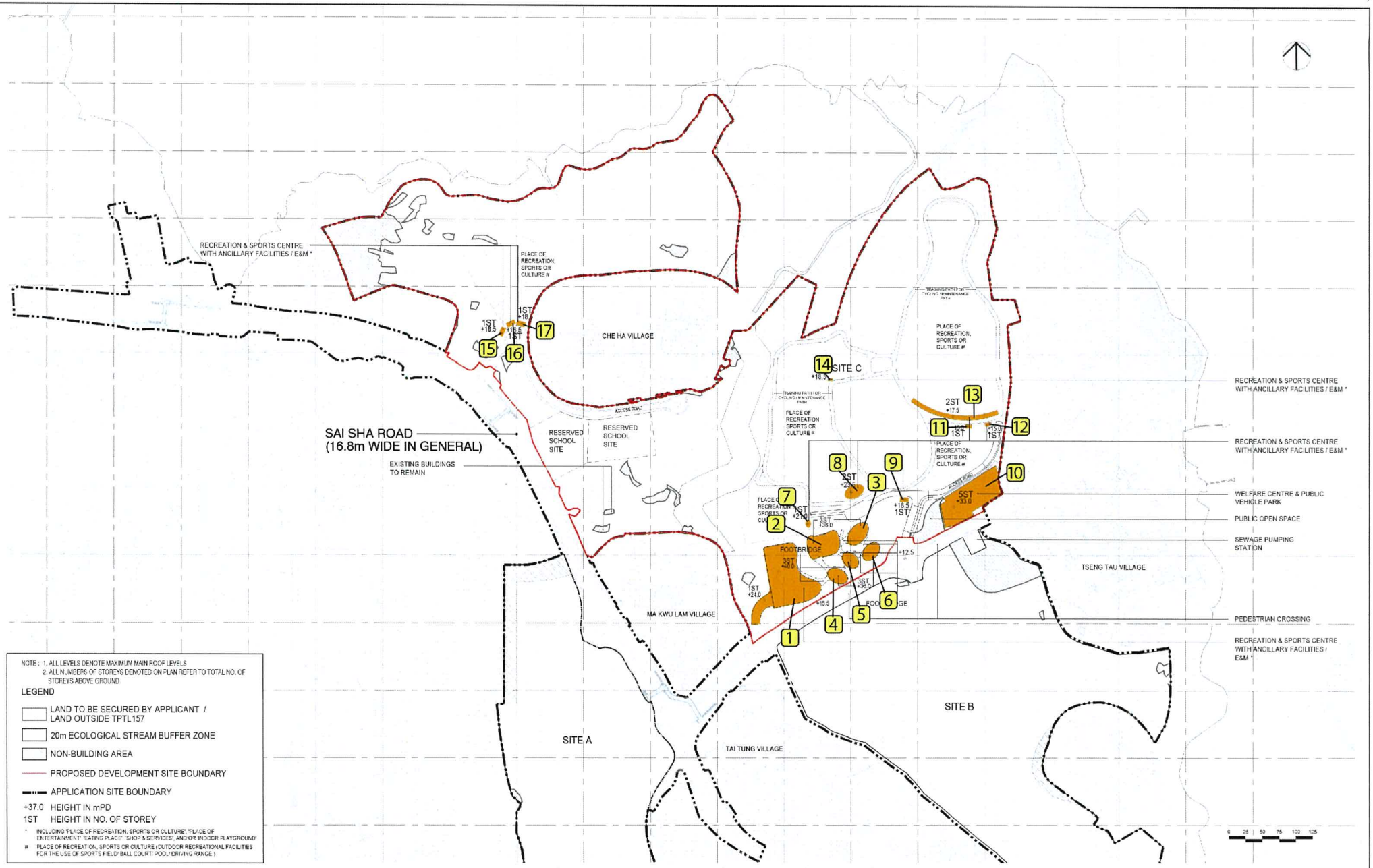


Counting of Non-Domestic Blocks 1

Remarks: No. of non-domestic blocks exclude the structures solely for ancillary M&E and shuttle lift uses.

llewelyn davies	Title: Counting of Non-Domestic Blocks (Site B)	Checked: DH / Drawn: PW	Rev: 0 / Date: Jan 2022
		Scale:	Figure:

Sheet 4



Counting of Non-Domestic Blocks 1

llewelyn davies

Title

Counting of Non-Domestic Blocks (Site C)

Checked	DH	Drawn	PW
Rev	0	Date	Jan 2022
Scale		Figure	

llewelyn davies
ARCHITECTS PLANNERS DESIGNERS
Llewelyn-Davies Hong Kong Ltd

14 September 2022

The Secretary
Town Planning Board
c/o Planning Department
15/F, North Point Government Offices
333 Java Road, Hong Kong

By Hand and By Email

Dear Sir

Section 16 Planning Application for Amendments to the Approved Development (Application No. A/NE-SSH/120-1) at Tai Po Town Lot 253 and 157 RP, various lots in D.D.165, 207 and 218 and Adjoining Government Land, Sai Sha, Shap Sz Heung, New Territories (Application No. A/NE-SSH/142)

Reference is made to the captioned application submitted to the Town Planning Board (the Board) on 28 January 2022, the consideration of which by the Board is now scheduled to be on 23 September 2022.

As requested by the District Planning Office/Sha Tin, Tai Po and North, Planning Department, the Applicant herewith submits 70 copies of this consolidated planning statement, which serve to consolidate previous Supplementary Submissions in one report and to supersede all previous submissions to facilitate processing of this planning application by the Planning Department and for easy reference of the Board. Please note that some background information and technical clarifications have been made for the Traffic Impact Assessment (TIA) report and agreed with the Transport Department (TD). The TIA contained in the current submission also serves as a consolidated TIA report with all of the comments from TD addressed.

As all issues have been satisfactorily addressed, the Board is cordially invited to approve the captioned application at the meeting as scheduled on 23 September 2022.

Thank you for your kind attention. Should there be any queries, please do not hesitate to contact the undersigned at 2957 9602, or Mr Arnold Koon at 2957 9667 / Mr Wilken Lau at 2957 9601.

Yours faithfully
for Llewelyn-Davies Hong Kong Ltd.

Winnie Wu
Associate Director

WW/AK/wl
Encl.

RECEIVED
2022 SEP 15 P 4:01
TOWN PLANNING BOARD

S:\13518 Sai Sha S16 – Site C (2021)_Consolidated FI\Cover letter\20220914 - TPB_consolidated PS Submission (Sai Sha Site C).doc

cc (w/ encl)
DPO/STN Attn: Mr. Harris LIU / Ms Sharon CHAN (by email)

Section 16 Planning Application for Amendments to the Approved Development (Application No. A/NE-SSH/120-1) – Amendments to Recreation and Sports Centre with Ancillary Facilities in Site C (Consolidated Submission)

llewelyn davies

In association with

AECOM Asia Company Limited

AXXA Group Limited

Ecosystems Limited

LWK & Partners (HK) Limited

Ove Arup & Partners Hong Kong Limited

Ramboll Hong Kong Limited

September 2022

TABLE OF CONTENTS

Page

EXECUTIVE SUMMARY **ES1**
行政摘要 **ES3**

1 INTRODUCTION 1

1.1 Consolidated Planning Statement 1
1.2 Background 1
1.3 Purpose of Submission 2

2 PROPOSED AMENDMENTS TO APPROVED SCHEME 3

2.1 Indicative Development Schedule 3
2.2 The Proposed Amendments to the Approved Scheme under A/NE-SSH/120-1 for Site C 5
2.3 Urban Design Proposal – Planning and Urban Design Merits of the Approved Scheme Retained 8

3 TECHNICAL CONSIDERATIONS 10

3.1 Landscape Design Consideration 10
3.2 Visual Appraisal 12
3.3 Traffic Consideration 15
3.4 Environmental Consideration 16
3.5 Ecological Consideration 17
3.6 Engineering Consideration 18
3.7 Risk Considerations 21
3.8 Air Ventilation Considerations 23

4 JUSTIFICATIONS FOR THE PROPOSED AMENDMENTS 26

4.1 Submission of Current Application is mainly due to Technical Change of Use in Planning Terms from Golf Driving Range to other Outdoor Sports & Recreational Uses 26
4.2 In Line with the Development Intention of Site C as a Recreational Hub 27
4.3 Proposed Amendments to the Current Scheme are Very Minor in Nature with No Increase in the GFA 27
4.4 Previous Planning and Design Merits of the Approved Scheme Remain Unchanged 28
4.5 Proposed Changes to the Approved Scheme are Technically Feasible with Worst Case Scenario Considered 28

5 CONCLUSION 31

Section 16 Planning Application for Amendments to the Approved Development (Application No. A/NE-SSH/120-1) – Amendments to Recreation and Sports Centre with Ancillary Facilities in Site C (Application No. A/NE-SSH/142)

LIST OF FIGURES

		Following Page
Figure 1.1	Extract of the Approved Shap Sz Heung Outline Zoning Plan No. S/NE-SSH/11	1
Figure 2.1	Indicative Master Layout Plan (Site C)	3
Figure 2.2	Indicative Section Plans (Site C)	3
Figure 2.3a	Comparison of Approved Scheme and Current Scheme on Site C	5
Figure 2.3b	Comparison of Approved Scheme and Current Scheme on Site C	5
Figure 2.3c	Comparison of Approved Scheme and Current Scheme on Site C	5
Figure 2.3d	Comparison of Approved Scheme and Current Scheme on Site C to the west of Che Ha Village (Blow up)	5
Figure 2.4	Visual Illustration of Diversified Sports and Recreational Facilities in Site C	5
Figure 2.5	Indicative Location of Outdoor and Indoor Sports and Recreational Facilities	5
Figure 2.6	Indicative Location of Hard and Soft Landscape on Various Outdoor Sports And Recreational Facilities	5
Figure 2.7	Indicative Section Plan of Golf Driving Range	6
Figure 2.8	Urban Design Concept Plan - Enhancement of Green-Blue Resources (Site C)	8
Figure 2.9	Urban Design Concept Plan - Commitment to Deliver Public Gains (Site C)	9
Figure 3.1	Indicative Landscape Master Plan (Site C)	10
Figure 3.2	Location of Vantage Points	14
Figure 3.3	Photomontages – Viewing from the Summit of Ma On Shan in Ma On Shan Country Park (VP 1)	14
Figure 3.4	Photomontages – Viewing from the Summit of Kai Kung Shan in Sai Kung East Country Park (VP 2)	14
Figure 3.5	Photomontages – Viewing from Cheung Sheung Country Trail Portion along the Coast of Yung Shue O (VP 3)	14
Figure 3.6	Photomontages – Viewing from Yung Shue O Pier (VP 4)	14
Figure 3.7	Photomontages – Viewing from Sham Chung Pier (VP 5)	14
Figure 3.8	Photomontages – Viewing from Pak Sha Tau Pier (VP 6)	14
Figure 3.9	Photomontages – Viewing from Tsat Sing Temple in Kwun Hang Village (VP7)	14
Figure A	Comparison of Indicative Location and Area of Hard and Soft Landscape on Various Outdoor Sports and Recreational Facilities under the Approved Scheme (under No. A/NE-SSH/120-1 approved on 14 Oct 2022) and Current Scheme	9
Figure B	Overall Indicative Master Layout Plan	9
Figure C	Overall Indicative Landscape Master Plan	9

Llewelyn-Davies Hong Kong Ltd September 2022

LIST OF TABLE

		Page
Table 2.1	Indicative Development Schedule of the Proposed Amendments on Site C	3
Table 3.1	Comparison between Approved Scheme and Current Scheme on Tree Treatment Proposal	11
Table 4.1	Comparison of Visitors for Various Sports and Recreational Facilities between the Approved Scheme and the Current Scheme	25

LIST OF APPENDICES

A	Indicative Development Schedule (Overall) (with no change to Site A and Site B under Application No. A/NE-SSH/120-1)
B	Indicative Master Layout Plan, Floor Plans and Sections (Overall) (with no change to Site A and Site B under Application No. A/NE-SSH/120-1)
C	Indicative Landscape Master Plan (Overall) (with no change to Site A and Site B under Application No. A/NE-SSH/120-1)
D	Comparison of Development Parameters between Previously Approved Scheme (Application No. A/NE-SSH/120), Approved Scheme (Application No. A/NE-SSH/120-1) and Current Scheme (Overall)
E	Consolidated Landscape Design Proposals of the Current Scheme (including Tree Assessment and Preservation Proposals) (Site C)
F	Consolidated Traffic Impact Assessment (Site C)
G	Consolidated Environmental Assessment (Site C)
H	Consolidated Ecological Impact Assessment (Site C)
I	Consolidated Drainage Impact Assessment (Site C)
J	Consolidated Sewerage Impact Assessment (Site C)
K	Consolidated Water Supply Impact Assessment (Site C)
L	Supplementary Drawings on AVA aspects

LIST OF ATTACHMENTS

1	Detailed Design Considerations and Extract of Relevant Clauses under Lease for the Proposed Increase of Building Height for Welfare Centre
2	Previous Response-to-Comments

Section 16 Planning Application for Amendments to the Approved Development (Application No. A/NE-SSH/120-1) – Amendments to Recreation and Sports Centre with Ancillary Facilities in Site C (Application No. A/NE-SSH/142)

EXECUTIVE SUMMARY

PURPOSE OF SUBMISSION

This application seeks approval from the Town Planning Board (the Board) for the proposed amendments to an approved scheme (under Application No. A/NE-SSH/120-1) (hereafter referred to as the "Approved Scheme") with replacement of some of the golf driving range facilities to other sports and recreational uses in Site C (hereafter referred to as the "Current Scheme") within the "Comprehensive Development Area" zone on the Approved Shap Sz Heung Outline Zoning Plan No. S/NE-SSH/11 at Sai Sha, Shap Sz Heung.

In view that the replacement of golf driving range (subsumed under 'Golf Course') for other outdoor sports and recreational facilities (subsumed under 'Place of Recreation, Sports of Culture') is considered as a material change of use that is neither a Class A nor Class B amendment under *TPB PG No. 36B – Town Planning Board Guidelines for Class A and Class B Amendments to Approved Development Proposal*, a fresh planning application under Section 16 of TPO is therefore submitted in order to facilitate the proposed minor amendments.

It should be highlighted that, the current planning application only intends to reflect the minor changes in Site C, whereas all of the development parameters and layouts for Site A, Site B as well as Sai Sha Road Widening are identical to the Approved Scheme and the relevant land lease already executed. **The proposed minor amendments to the Approved Scheme for Site C (i.e. the "Current Scheme") shall be the only subject matter of this planning application**.

Since the submission of the subject planning application in January 2022, several rounds of Further Information in response to departmental comments were submitted from June 2022 to September 2022. This planning statement serves as a consolidated report to cover all previous submissions in one report to facilitate processing of this planning application by the Planning Department.

PROPOSED AMENDMENTS TO THE APPROVED SCHEME (FOR SITE C ONLY)

As detailed design of the Approved Scheme proceeds, the Applicant takes the initiative to comprehensively review the provisions in Site C by diversifying the types of outdoor sports and recreational facilities under the Current Scheme which will strengthen Site C as a sports and recreational hub and benefit the community.

The overall layout of Site C under the current planning application is very similar to that of the Approved Scheme. Without any increase in GFA, the proposed amendments to the Approved Scheme in Site C are very minor in nature indeed, including:-

- Replacement of a 'golf driving range' in the southeastern portion of Site C with diversified outdoor sports and recreational facilities;
- As detailed design proceeds, replacement of an area previously for 'mini driving range / game area / recreation & sports centre with ancillary facilities' in the northwestern portion as landscaped area;
- Minor increase in number of non-domestic blocks - the previous larger building structures for accommodation of golf driving range facilities have been broken up into mostly smaller single-storey structures for ancillary facilities of sports and recreation activities in different parts of Site C;

- Refinement in building form for:

  (i) Recreation & Sports Centre to enhance pedestrian connectivity between ground level and second floor, and

  (ii) the remaining golf driving range structure for better operational efficiency and maintaining similar no. of bays as the Approved Scheme

- Minor increase in building height of 1m for the Welfare Centre & Public Vehicle Park Building in order to cater for the latest technical requirements as prescribed under lease;

- Refinement in configuration of reserved primary school sites; and

- Minor adjustment in alignment of access road to reserved primary school sites and Che Ha Village, internal road and emergency vehicular access (EVA).

KEY JUSTIFICATIONS

The key justifications for and merits of the latest proposal include:

- Submission of current application is mainly due to technical change of use in planning terms from golf driving range to other outdoor sports and recreational uses (e.g. sports field / ball court / pool / training path for cycling);
- The proposal concerns diversifying outdoor sports and recreational uses in Site C in addition to golf driving range to better serve the future community in the area. There will still be a golf driving range provided on the site;
- The Current Scheme is in line with the development intention of Site C as a sports and recreational hub which has been long established in various previous planning approvals for the subject "CDA" zone;
- The proposed amendments are very minor in nature with no increase in the GFA;
- Previous planning and design merits of the Approved Scheme for Site C remain unchanged; and
- The proposed amendments to the Approved Scheme are technically feasible even under a "worst case scenario" in traffic and drainage terms.

In light of the justifications of the latest proposal, the Board is cordially invited to consider this application favourably.

行政摘要
(聲明：此中文譯本僅供參考，如中文譯本和英文原文有歧異時，應以英文原文為準。)

申請目的

申請人現向城市規劃委員會(下稱城規會)遞交規劃申請，擬議修訂已批准發展(申請編號 A/NE-SSH/120-1) (下稱已批准方案)的地盤 C，將其中部份用作高爾夫球練習場的設施取代作其他體育及康樂用途(下稱當前方案)。

根據*城市規劃委員會規劃指引編號 36B-對核准發展計劃作出 A 類及 B 類修訂*，取代「高爾夫球練習場」(歸屬於「高爾夫球場」用途)作其他體育及康樂用途(歸屬於「康體文娛場所」用途)屬於對原核准發展計劃造成的改變。因此，申請人現根據城市規劃條例第 16 條向城規會遞交規劃申請，對已批准方案進行輕微修改。

值得留意的是，本規劃申請旨在反映地盤 C 的輕微修改，就已批准方案中的地盤 A、地盤 B 以及西沙路擴闊工程的發展參數及布局均不作任何改動，其相關地契亦已執行。**就地盤 C 的批准方案進行輕微修改(即當前方案)應是本規劃申請的唯一考慮議題。**

申請人於 2022 年 1 月提交本申請，為了回應政府部門的意見，申請人分別於 2022 年 6 月至 2022 年 9 月間，遞交數份補充資料。本規劃報告書整合了過往遞交的報告書及補充資料，以便城規會/規劃署處理是次規劃申請。

發展計劃概覽

申請人就已批准方案的設計進行深化，並全盤審視地盤 C 的設施。當前方案透過提供多元化戶外體育及康樂設備強化地盤 C 作為體育及康樂樞紐的角色，為社區帶來裨益。

本規劃申請中，地盤 C 的整體布局跟批准方案大致相同。當前方案不涉及任何樓面面積的增加，就地盤 C 批准方案作出的修改亦相當輕微，包括：

- 取代原本分別位於地盤 C 內東南方的「高爾夫球練習場」作多元化的戶外體育及康樂用途；
- 發展方案深化後，將地盤 C 內西北方原先用作「迷你高爾夫球練習場/短桿區/康樂及體育中心及附屬設施」的區域作園境用途；
- 略為增加非住用構築物數量。將先前體積較大用作高爾夫球練習場的構築物分拆成較細小的單層構築物，作地盤 C 各區的體育及康樂活動的附屬設施；
- 略為修改構築物的外形，包括：
  (i) 康樂及體育中心，以加強二樓及地面的行人連接；以及
  (ii) 餘下的高爾夫球練習場構築物，以優化營運效率及提供與已批准方案相約的球道數量
- 略為增加社福設施連公眾停車場高度 1 米，以滿足最新地契列明的技術要求；

- 略為修改預留小學用地的佈局；
- 略為修改通道走線，包括連接預留小學用地及輋下村的通道、地盤 C 內部通道及緊急車輛通道。

發展理據

以下為支持是次規劃申請的發展理據：

- 本規劃申請主要反映將高爾夫球練習場替代作其他戶外體育及康樂設施(例如：運動場/球場/游泳池/訓練單車徑)的規劃詞彙釋義的技術性修改；
- 除高爾夫球練習場外，於地盤 C 內提供多元化的戶外體育及康樂設施能夠為未來的社區帶來裨益。地盤 C 內將會繼續設有高爾夫球練習場；
- 當前方案符合已批准方案中建設地盤 C 成為體育及康樂樞紐的發展意向，與長久以來於本「綜合發展區」批給的各個規劃申請許可相符；
- 當前方案的修訂相當輕微，並且沒有增加總樓面面積；
- 當前方案保留地盤 C 先前已批准方案中的規劃及設計增益；
- 當前方案在各技術範籌，甚至於交通和排水方面的「最壞情況」下皆屬可行。

基於以上的發展理據，現懇請城規會能對是次規劃申請予以贊同。

1 INTRODUCTION

1.1 Consolidated Planning Statement

1.1.1 The current submission is intended to serve as a consolidated planning statement in support of the subject planning application (No. A/NE-SSH/142). This consolidated planning statement, based on the indicative scheme submitted on 13 June 2022 with finalised technical assessments submitted previously, serves to supersede the earlier submissions to facilitate processing of this planning application by the Planning Department and for consideration by the Board.

1.1.2 There are no material changes to the proposed scheme and other key development parameters, which are enclosed in this consolidated report again for easy reference. Full set of technical assessments are also enclosed in this consolidated report for easy reference.

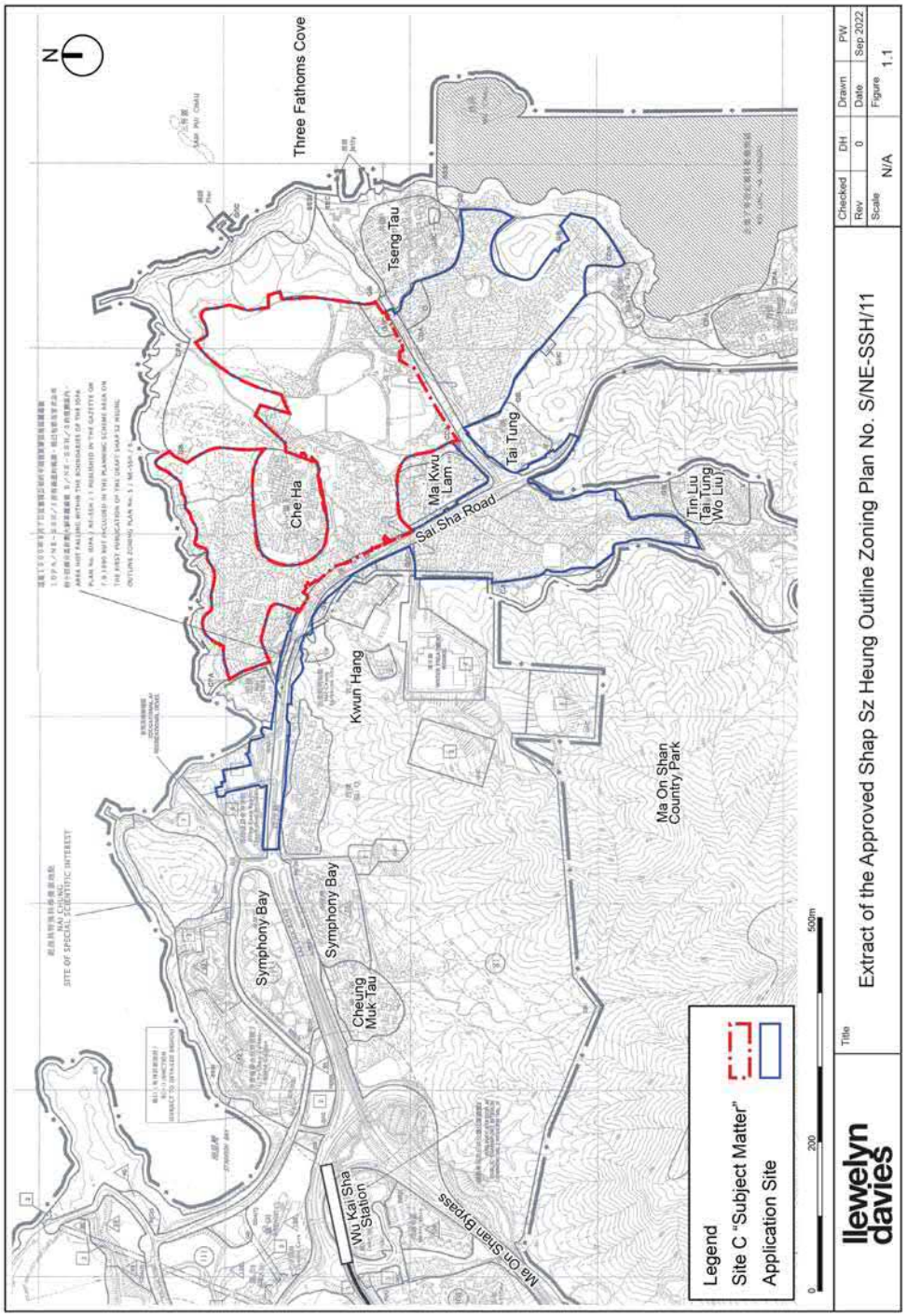
1.2 Background

1.2.1 A planning application (No. A/NE-SSH/120) under Section 16 of the Town Planning Ordinance (TPO) was submitted to the Town Planning Board (Board) on 29 June 2018 for a Proposed Comprehensive Residential and Recreational Development including Government, Institution or Community Facilities with Minor Relaxation of Gross Floor Area (GFA) and Building Height Restrictions at Tai Po Town Lot 157 (currently known as Tai Po Town Lot 253 for Site A and Site B and Tai Po Town Lot 157 RP for Site C), various lots in D.D. 165, 207 and 218 and adjoining Government land, Sai Sha, Shap Sz Heung, New Territories. It largely falls within an area zoned "Comprehensive Development Area" ("CDA")[1] on the Approved Shap Sz Heung Outline Zoning Plan No. S/NE-SSH/11 (the OZP) (**Figure 1.1** refers). The planning application was approved with conditions by the Board on 18 January 2019.

1.2.2 Subsequently, with a view to further increasing housing supply with additional 200 nos. of units as well as making further refinements to the previously approved scheme, the Applicant submitted a planning application (No. A/NE-SSH/120-1) under Section 16A of the TPO for proposed minor amendments to the approved scheme. The planning application was approved with conditions by the Director of Planning, under the delegated authority of the Board on 14 October 2020 (hereafter referred to as the "Approved Scheme").

1.2.3 The Approved Scheme covers an area of about 74.8ha (about 64.7ha for comprehensive residential and recreational development), comprises (i) Site A and Site B mainly for residential development, (ii) Site C mainly for recreational development and (iii) Sai Sha Road Widening. It has a maximum domestic GFA of not more than 538,213m^2, residents' club GFA of 13,446m^2, commercial GFA of 12,077m^2 (including kindergarten/ nursery and church), Transport Interchanges (TIs) GFA of 9,000m^2 and, a recreation & sports centre with ancillary facilities (GFA of 17,500m^2). Other public facilities including public vehicle park (GFA of 9,000m^2) and Welfare Centre (GFA of 5,560m^2) will also be provided. A total of

[1] Minor portions of the application site of the Approved Scheme fall within "Government, Institution or Community", "Open Space", "Green Belt" and "Road" on the Approved Shap Sz Heung Outline Zoning Plan No. S/NE-SSH/11 as well as "Village Type Development", "Government, Institution or Community", "Green Belt", "Country Park" and "Road" on the Draft Ma On Shan Outline Zoning Plan No. S/MOS/23.



9,700 nos. of flats with an average flat size of about 55.49m^2 is approved to accommodate about 29,100 residents based on a person-per-flat ratio of 3.0.

1.2.4 According to the Approved Scheme, Site C covers about 36.7ha with (i) 10 blocks of recreational and sports centre with ancillary facilities (GFA of not more than 17,500m^2) and golf driving range facilities[2], (ii) 1 block of welfare centre and public vehicle park building (GFA of not more than 14,560m^2) and (iii) 2 reserved primary school sites (total site area of not less than 12,400m^2).

1.3 Purpose of Submission

1.3.1 Subsequent to the approval of the above planning application (No. A/NE-SSH/120-1) (i.e. the "Approved Scheme"), the Applicant had proceeded with the detailed design of the comprehensive development. Refinements to Site C of the Approved Scheme are proposed with the intention of further promoting sports in the community and re-enforcing Site C as sports and recreation hub in Sai Sha by diversifying the sports facilities to be provided therein.

1.3.2 As such, the Applicant has proposed minor changes on the Indicative Master Layout Plans (MLP) with the replacement of a 'golf driving range' for various types of outdoor recreational facilities with associated minor increase in the number of blocks as ancillary structures for sports and recreational facilities in Site C without any increase/change in the total GFA. In view that the replacement of a golf driving range (subsumed under 'Golf Course') with other outdoor sports and recreational facilities (subsumed under 'Place of Recreation, Sports or Culture') is considered a material change of use that is neither a Class A nor Class B amendment under *TPB PG No. 36B – Town Planning Board Guidelines for Class A and Class B Amendments to Approved Development Proposal*, a fresh planning application under Section 16 of TPO is therefore submitted in order to facilitate the proposed minor amendments.

1.3.3 It should be highlighted that, the current planning application only intends to reflect the minor changes in Site C, whereas all of the development parameters and layouts for Site A, Site B as well as Sai Sha Road Widening are identical to the Approved Scheme. **The proposed minor amendments to the Approved Scheme for Site C (hereafter referred to as the "Current Scheme") shall be the only subject matter of this planning application**.

[2] Under the Approved Scheme, the counting of no. of blocks for recreation & sports centre with ancillary facilities excludes 2 nos. of structures for golf driving range uses. For sake of comparison with the Current Scheme, the aforementioned 2 nos. of structures for golf driving range uses are included in counting of no. of blocks for recreation & sports centre with ancillary facilities, making up a total of 10 nos. under the Approved Scheme.

2 PROPOSED AMENDMENTS TO APPROVED SCHEME

2.1 Indicative Development Schedule

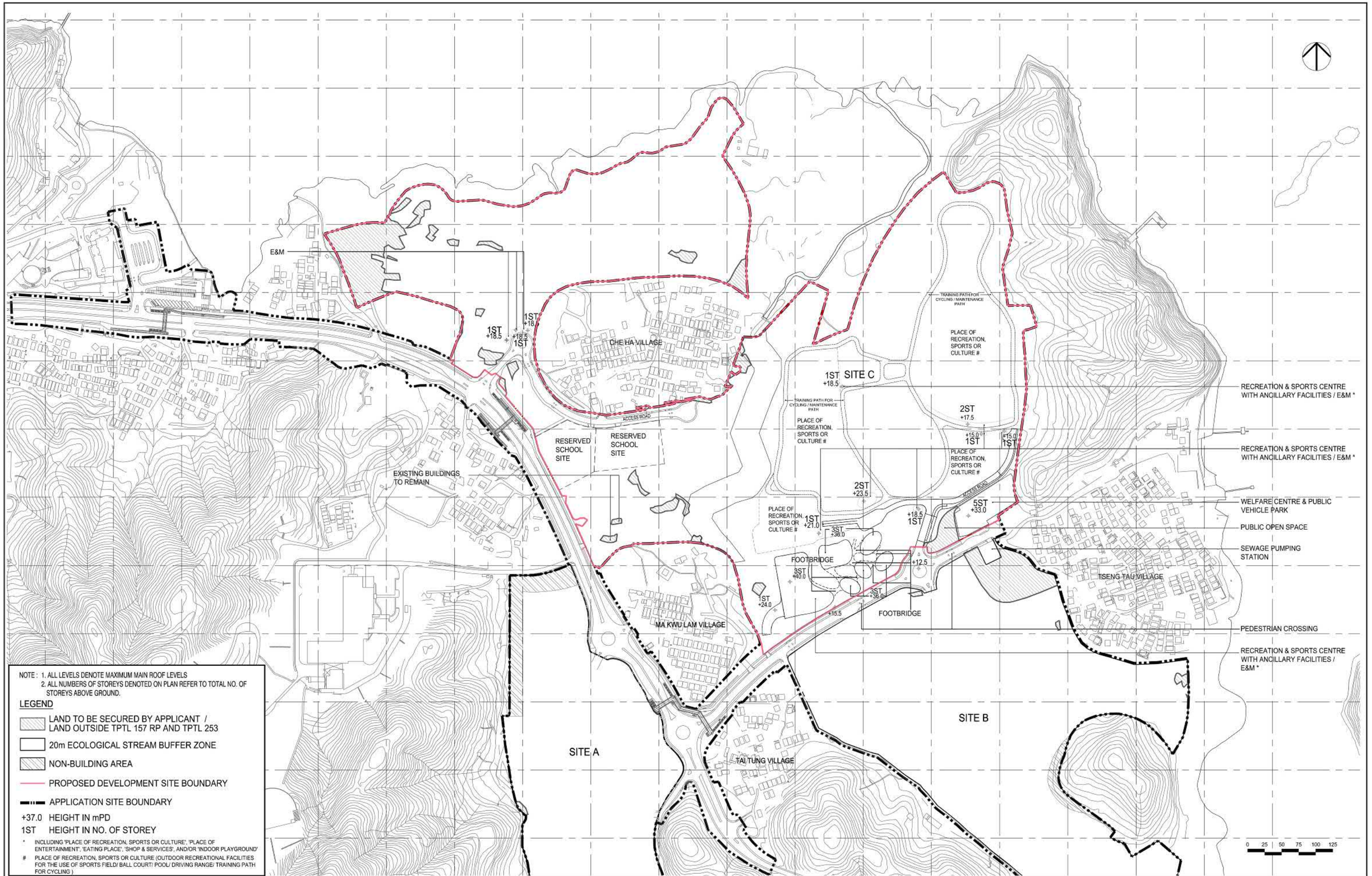
2.1.1 Without any change to the Approved Scheme for Site A and Site B, the Current Scheme only involves very minor changes in terms of (i) the types of outdoor sports and recreational uses, (ii) the no. of ancillary building blocks, (iii) the form and height of some of the buildings, (iv) the configuration of reserved school sites; and (v) the alignment of access road and internal road. The Indicative MLP and Indicative Section Plans for Site C are in **Figures 2.1** and **2.2** respectively. **Table 2.1** below shows the Indicative Development Schedule of the Current Scheme (Site C). It should be noted that all of the development parameters for Site C under the Current Scheme are the same as the Approved Scheme except for increase in no. of blocks.

Table 2.1 Indicative Development Schedule of the Proposed Amendment on Site C

Site C:	
Development Site Area (2)	About 366,983 m^2
Total no. of Non-domestic Blocks	14 (6)
Recreation & Sports Centre with Ancillary Facilities / E&M (3) (4)	
Non-domestic GFA (1)	Not more than 17,500m^2 • Sports Centre & Ancillary Facilities: not more than 5,500m^2 • Recreation Centre & Ancillary Facilities: Not more than 8,500m^2 • Retail & F&B Facilities: Not more than 3,500m^2
No. of Blocks	13 (6)
No. of Storeys	3 storeys above 2 levels of basement
Welfare Centre & Public Vehicle Park Building (5)	
Non-domestic GFA	Not more than 14,560m^2 • Welfare Centre: Not more than 5,560m^2 • Public Vehicle Park: Not more than 9,000m^2 (1)
No. of Blocks	1
No. of Storeys	5 storeys above 1 level of basement carpark
Reserved Primary School Sites	
Total Site Area	Not less than 12,400m^2 (i.e. not less than 6,200m^2 each)

Remarks:

(1) Under the approved scheme (Application No. A/NE-SSH/61-2), it also included the provision of Sports Centre and Ancillary Facilities, as well as Public Vehicle Park. GFAs of these facilities are specified in the development schedule.
(2) Excluding Sai Sha Road widening works area and sewage pumping station near Tseng Tau Village within Application Site boundary of the Approved Scheme.
(3) Recreation & Sports Centre with Ancillary Facilities include 'Place of Recreation, Sports or Culture' (Including Golf Driving Range), 'Place of Entertainment', 'Eating Place', 'Shop and Services' and / or 'Indoor Playground'.
(4) Recreation & Sports Centre with Ancillary Facilities include ancillary E&M facilities for the power supply of Sites A to C. As the E&M facilities are ancillary and directly related to the development, the associated GFA of not more than 3000m^2 shall be disregarded in this planning application in accordance with the provision of the Notes of the OZP.
(5) Light bus layby, car parking, and loading & unloading provisions subject to TD's approval.
(6) Exclude the structures solely for ancillary M&E and shuttle lift uses.



NOTE : 1. ALL LEVELS DENOTE MAXIMUM MAIN ROOF LEVELS
2. ALL NUMBERS OF STOREYS DENOTED ON PLAN REFER TO TOTAL NO. OF STOREYS ABOVE GROUND.

LEGEND

- LAND TO BE SECURED BY APPLICANT / LAND OUTSIDE TPTL 157 RP AND TPTL 253
- 20m ECOLOGICAL STREAM BUFFER ZONE
- NON-BUILDING AREA
- PROPOSED DEVELOPMENT SITE BOUNDARY
- APPLICATION SITE BOUNDARY
- +37.0 HEIGHT IN mPD
- 1ST HEIGHT IN NO. OF STOREY

* INCLUDING 'PLACE OF RECREATION, SPORTS OR CULTURE', 'PLACE OF ENTERTAINMENT', 'EATING PLACE', 'SHOP & SERVICES', AND/OR 'INDOOR PLAYGROUND'

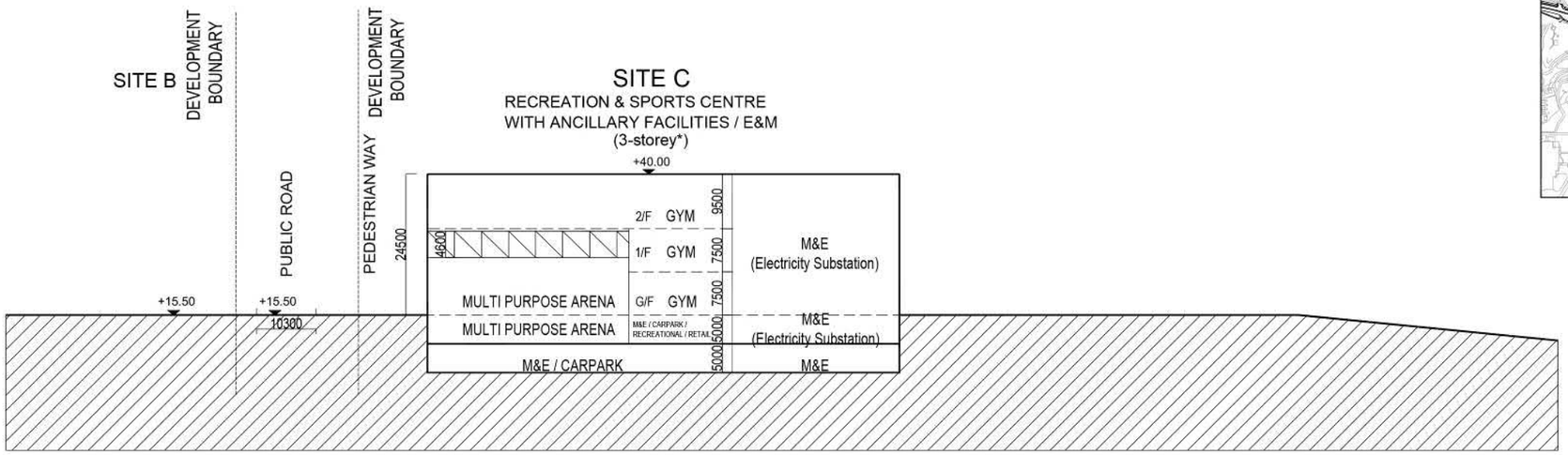
\# PLACE OF RECREATION, SPORTS OR CULTURE (OUTDOOR RECREATIONAL FACILITIES FOR THE USE OF SPORTS FIELD/ BALL COURT/ POOL/ DRIVING RANGE/ TRAINING PATH FOR CYCLING)

LWK +PARTNERS

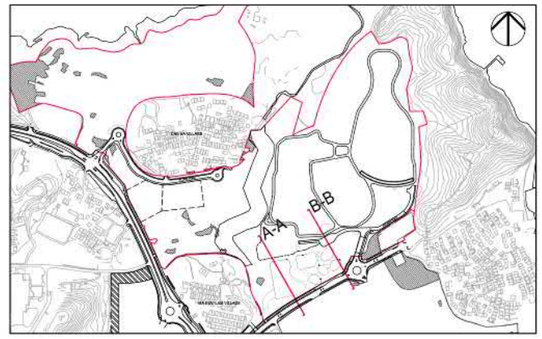
Title

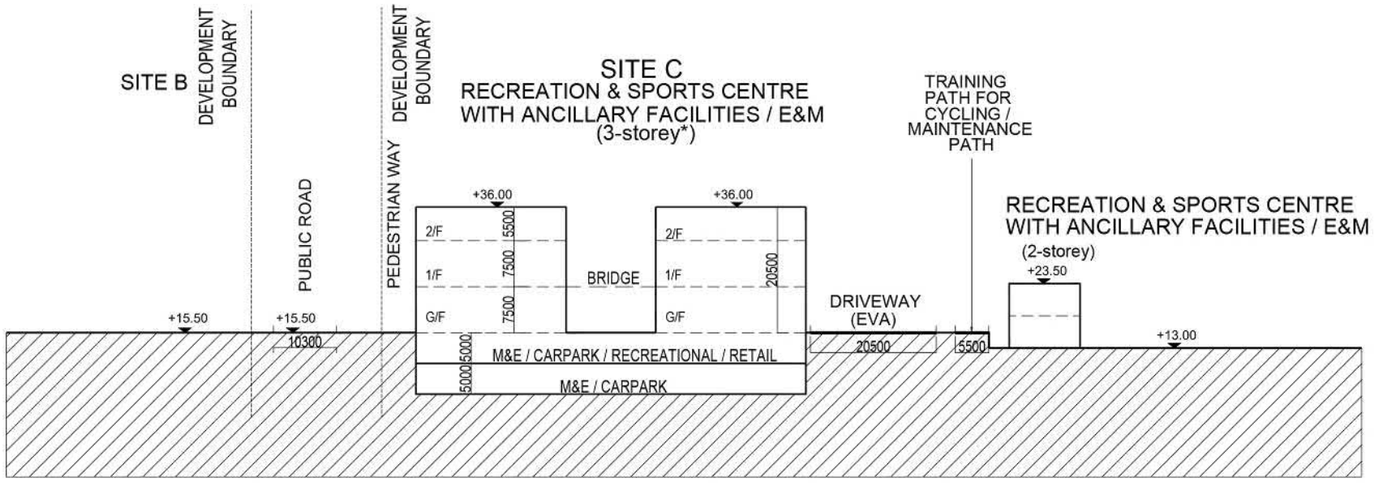
Indicative Master Layout Plan (Site C)

Checked	DH	Drawn	PW
Rev	0	Date	Sep 2022
Scale		Figure	2.1



SCHEMATIC SECTION A-A





SCHEMATIC SECTION B-B

NOTE:
*ALL NUMBERS OF STOREYS DENOTED ON PLAN REFER TO TOTAL NO. OF STOREYS ABOVE GROUND.

LWK +PARTNERS

Title

Indicative Section Plans (Site C)

Checked	DH	Drawn	PW
Rev	0	Date	Sep 2022
Scale		Figure	2.2

2.1.2 For fulfillment of statutory requirement for the subject "CDA" zone, the development parameters, Indicative MLP and Indicative Landscape Master Plan covering the entire subject "CDA" zone are enclosed at **Appendices A, B** and **C** respectively. It should be highlighted again, there is no change proposed to Site A and Site B under the Current Scheme as compared with the Approved Scheme. The development parameters, Indicative MLP and Indicative Landscape Master Plan for Site A and Site B are identical to those under the Approved Scheme (i.e. A/NE-SSH/120-1). The overall Indicative Master Layout Plan and overall Indicative Landscape Master Plan are in **Figures B and C**.

2.1.3 For easy reference, the Indicative Development Schedule of the Current Scheme, as compared to that of the Approved Scheme as well as the previously approved scheme under A/NE-SSH/120 is enclosed at **Appendix D**.

2.2 The Proposed Amendments to the Approved Scheme under A/NE-SSH/120-1 for Site C

The proposed amendments in this submission are mainly attributed to the (i) changes and diversification of outdoor sports and recreational facilities; (ii) minor increase in number of blocks as ancillary structures (i.e. mainly used as toilets, changing rooms and equipment storage) to enhance convenience of users in Site C; (iii) minor change in building form for the recreation and sports centre and golf driving range structure; (iv) minor increase in Building Height for Welfare Centre & Public Vehicle Park Building for fulfilment of latest lease requirement; (v) minor change in configuration of reserved primary school sites; (vi) minor change in alignment of access road to Che Ha Village; and (vii) minor change in alignment of internal road and emergency vehicular access. Apart from the proposed amendments highlighted below, the overall layout for Site C is largely the same as the Approved Scheme. Besides, no amendment has been proposed to the Site A and Site B of the Approved Scheme. Same as the Approved Scheme, the sports and recreational facilities are opened to the public on a fee-paying basis. The sports and recreational facilities will be privately managed and operated by the Applicant / future operators or tenants.

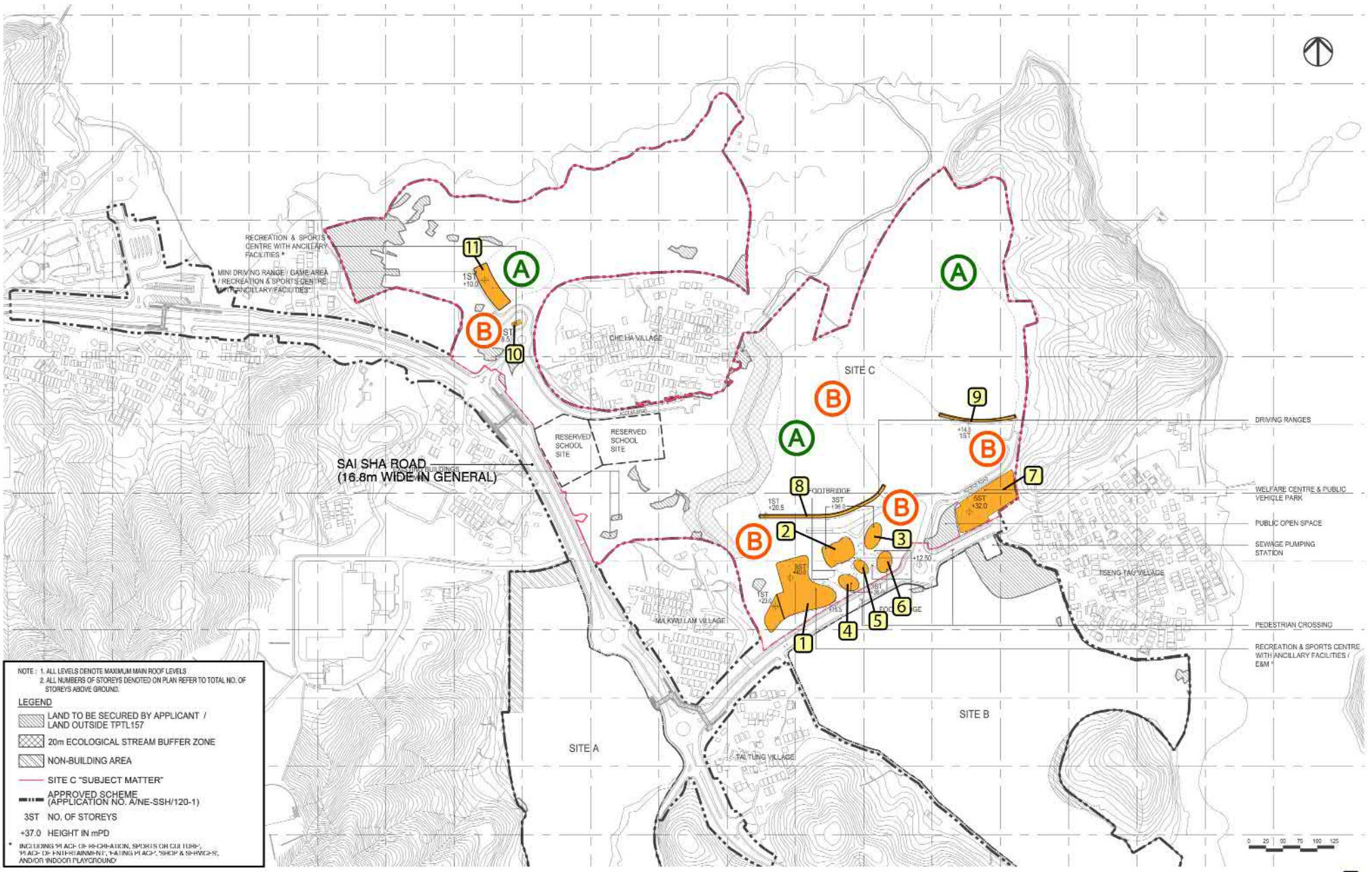
Figures 2.3a to 2.3d show the comparison of Approved Scheme and Current Scheme in Site C. Visual illustration showing the diversified sports and recreational facilities in Site C is in **Figure 2.4**.

2.2.1 Amendment Item A – Change and Diversification of Outdoor Sports and Recreational Facilities

- A 'golf driving range' in the southeastern portion in Site C under the Approved Scheme is proposed to be replaced by various types of sports and recreational facilities under the Current Scheme. The proposed change and diversification are intended for providing increased diversity of outdoor sports and recreational facilities in addition to the previously approved golf playing facilities, to better serve the community in the Sai Sha area. To further enhance landscape quality, an area previously for 'mini driving range / game area / recreation & sports centre with ancillary facilities' in the northwestern portion of Site C is removed as landscaped area.

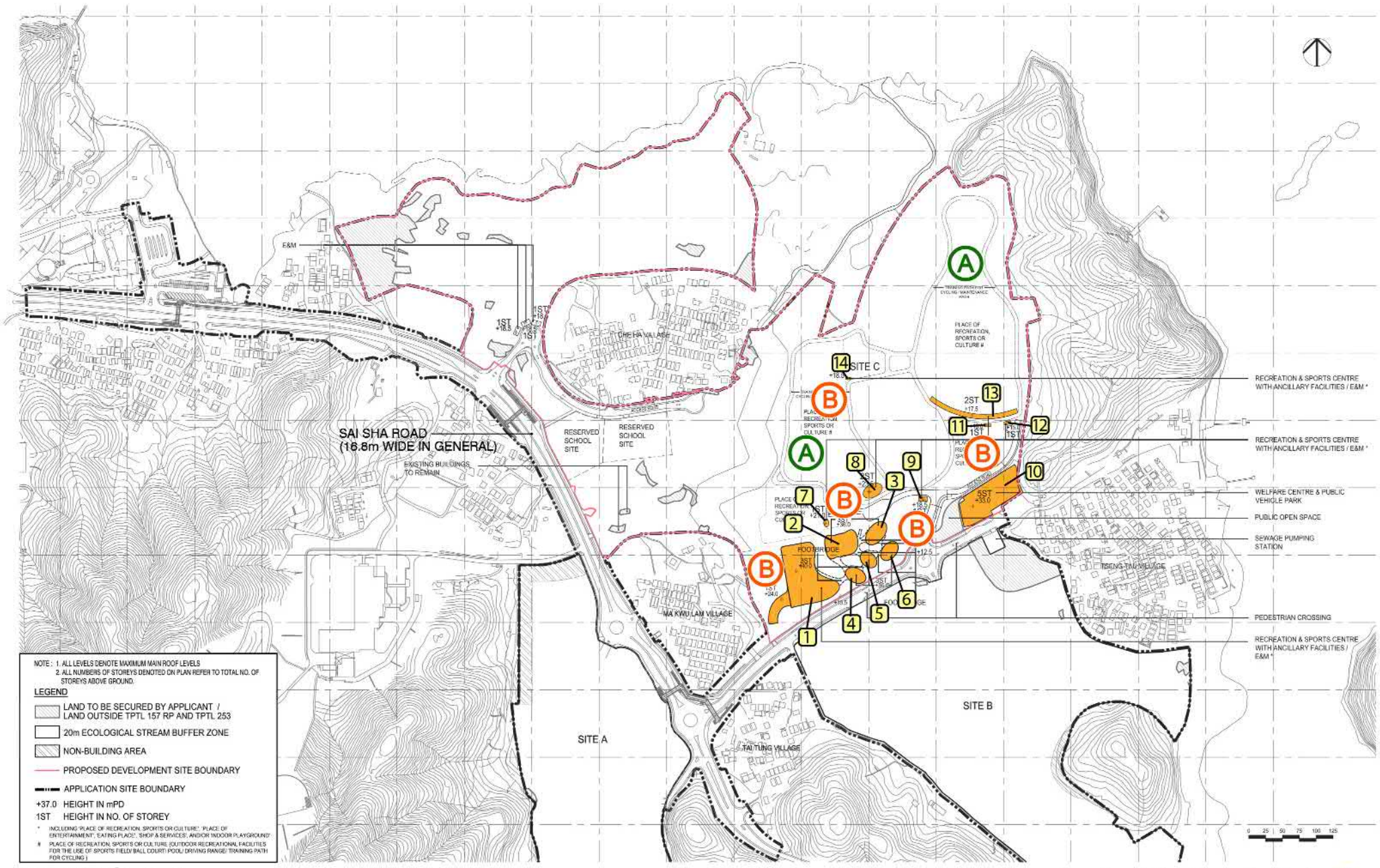
- This amendment involves the provision of outdoor recreational facilities for the use of sports field / ball court / pool / driving range / training path for cycling which accounts for about 78,916m^2 in terms of area [out of Site C's development site area of about 366,983 m^2 (i.e. about 22%)], with the soft landscape areas mainly for the use of golf driving range in the eastern portion of Site C and retained trees with other soft landscape, and the rest of the areas for outdoor recreational facilities are assumed to be fully hard landscape[3] to present the worst case scenario**. Figure 2.5** shows the indicative location of outdoor and indoor sports and recreational facilities. **Figure 2.6** shows the indicative location of hard and soft landscape on various outdoor sports and recreational facilities. It should be highlighted that, in determining the location of the proposed outdoor sports and

[3] Including paved area for sports field / ball court / pool / driving range / training path for cycling but excluding the small building blocks for ancillary supporting facilities such as toilets, changing rooms, service counters, equipment storages and shelters



Approved Scheme (Application No. A/NE-SSH/120-1)

Counting of Non-Domestic Blocks 1



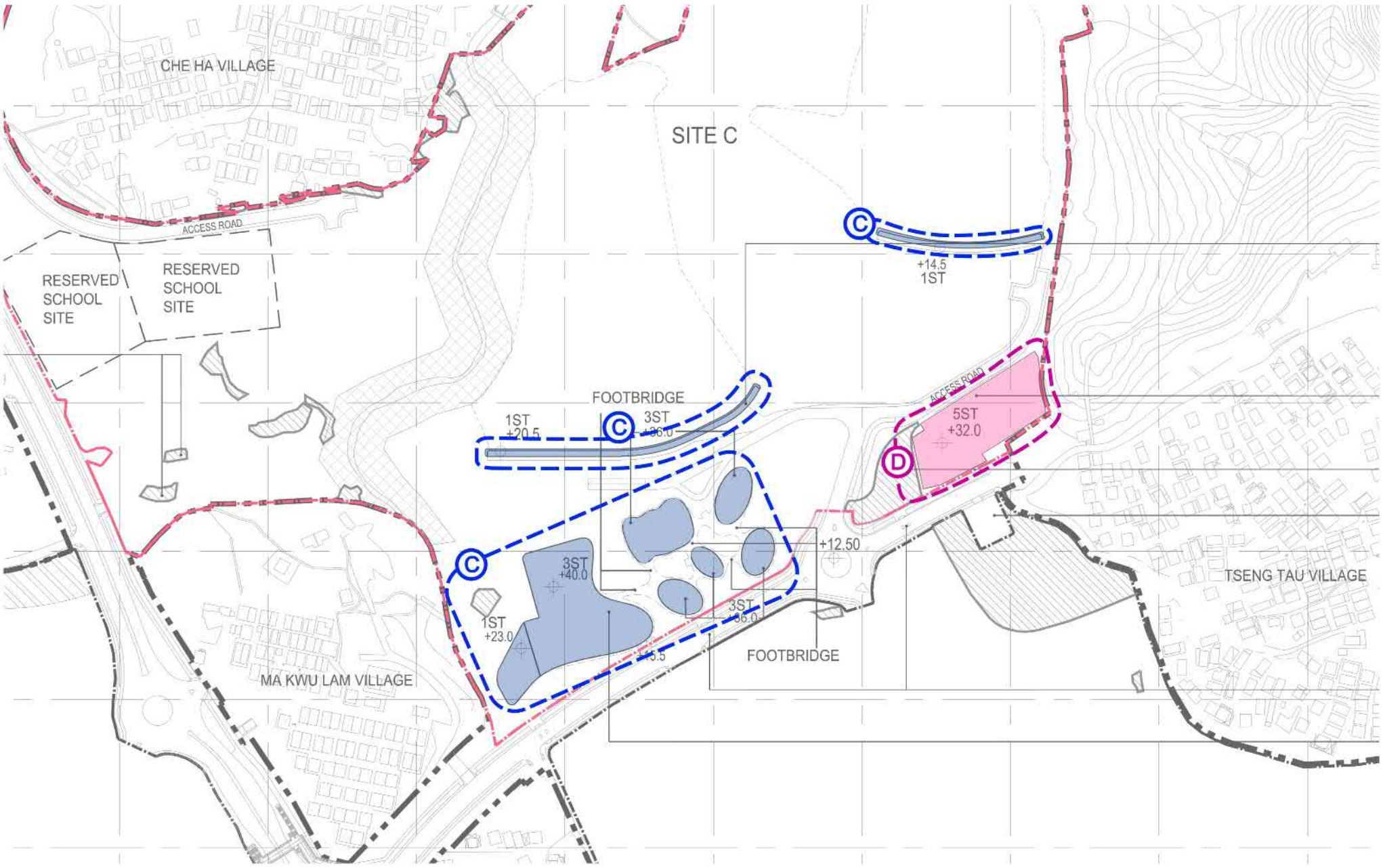
Proposed Scheme

Counting of Non-Domestic Blocks 1

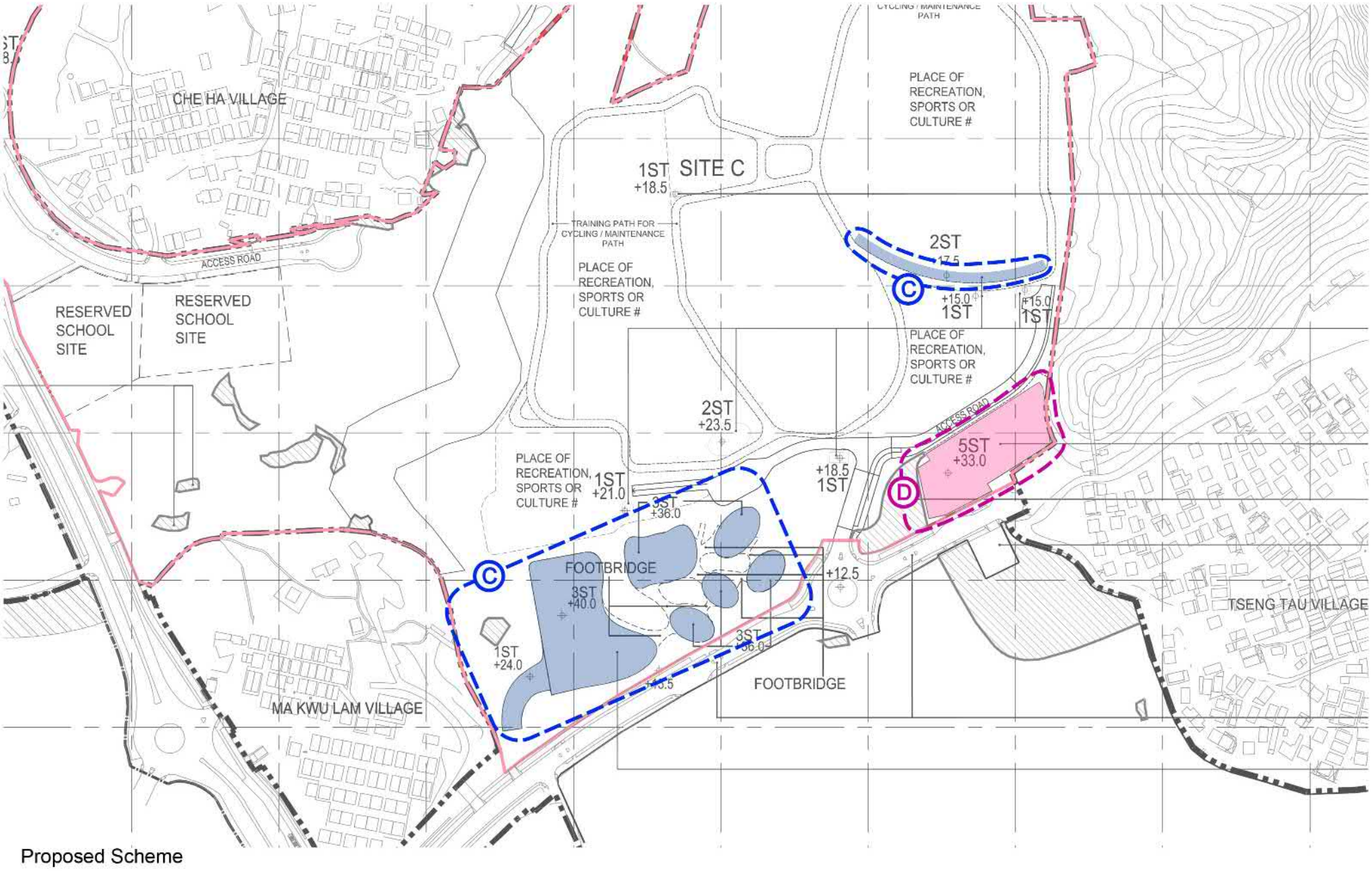
(A) Change and diversification of recreational facilities

(B) Minor increase in number of non-domestic blocks

llewelyn davies	Title: Comparison of Approved Scheme and Current Scheme on Site C	Checked: DH / Drawn: PW	
		Rev: 1 / Date: Sep 2022	
		Scale: N / A	Figure: 2.3a



Approved Scheme (Application No. A/NE-SSH/120-1)

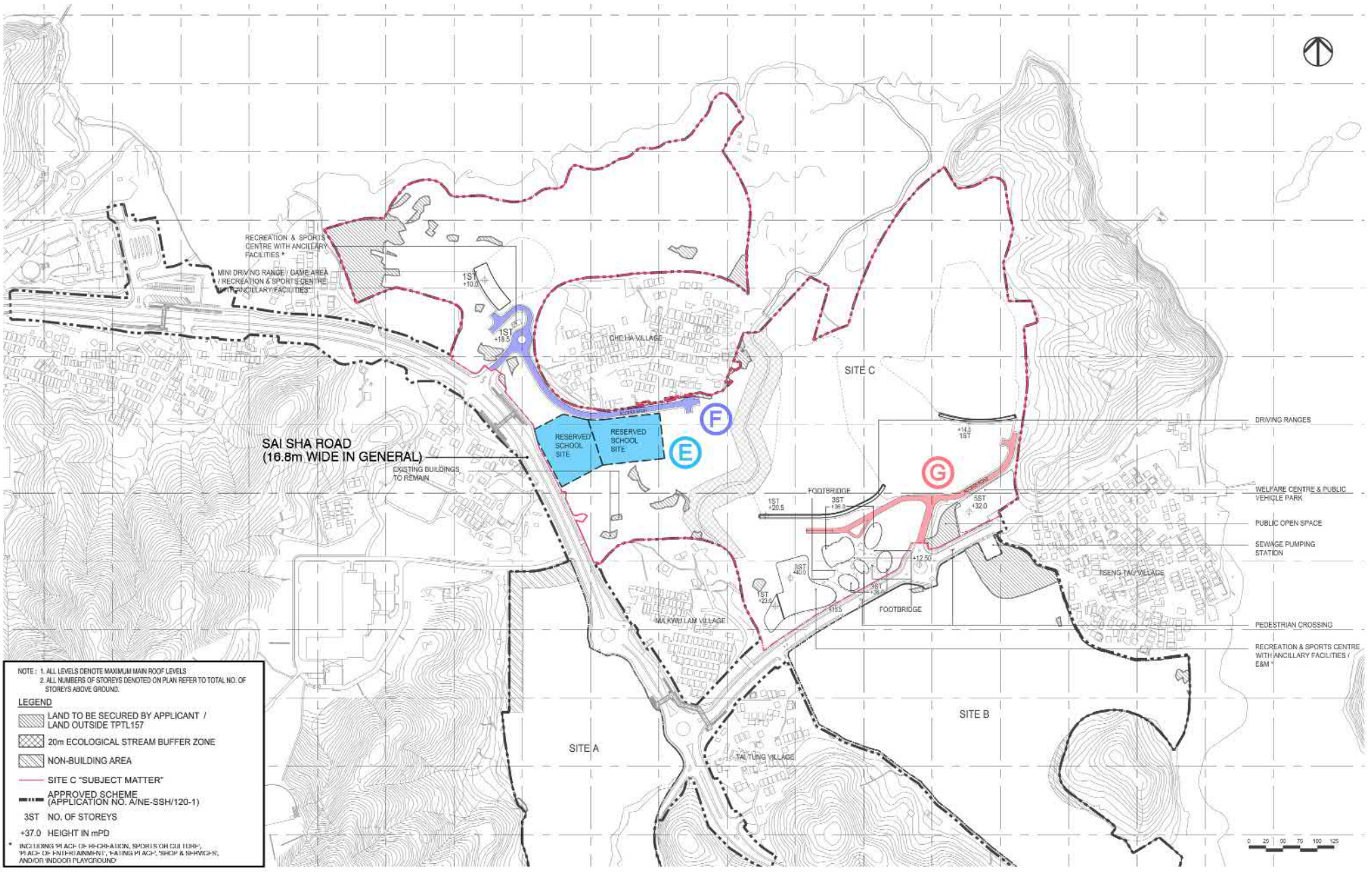


Proposed Scheme

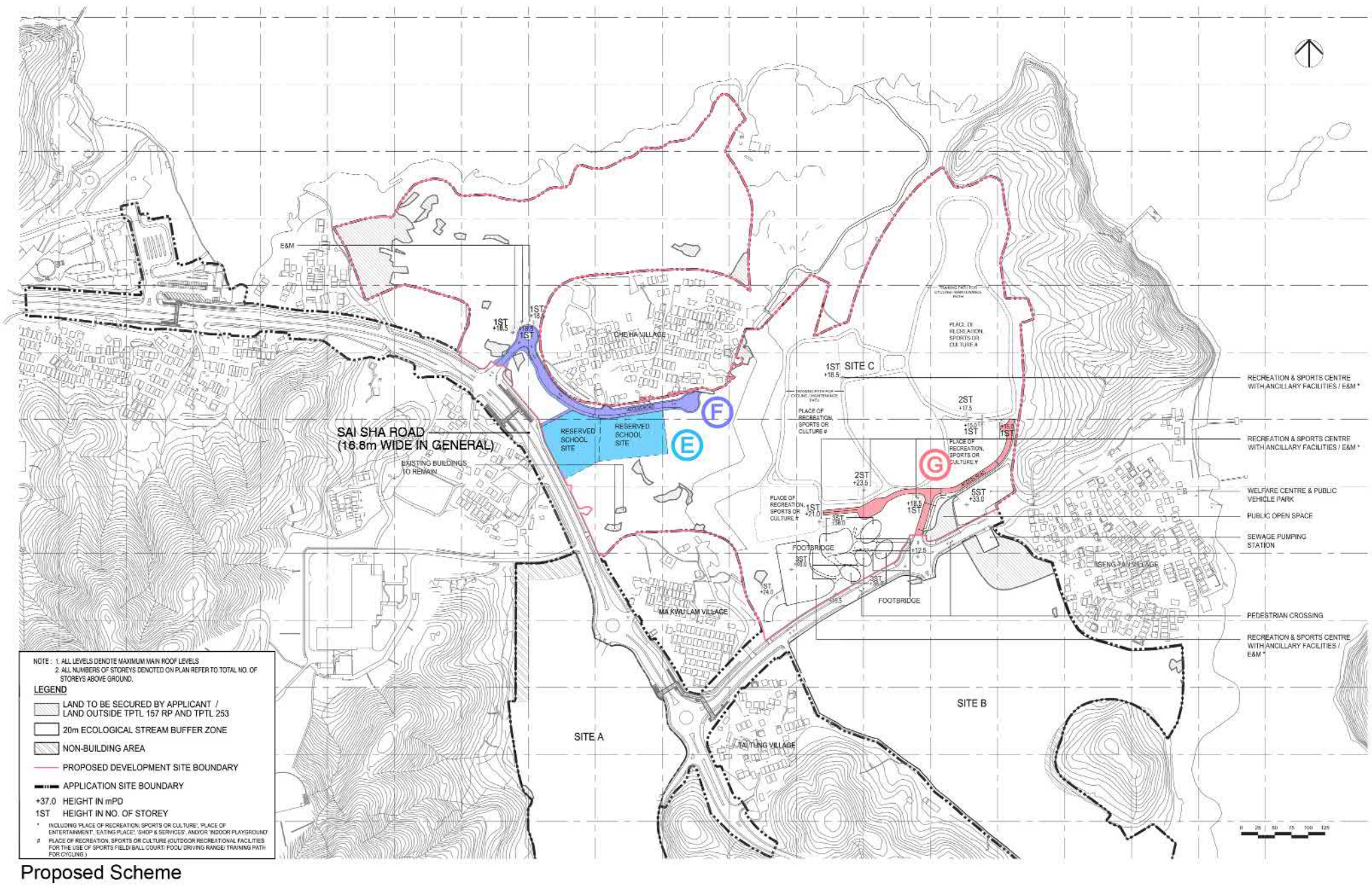
C Change in Building Form and Disposition for Recreation & Sports Centre with Ancillary Facilities and Remaining Golf Driving Range Structure

D Minor Increase in Building Height for Welfare Centre & Public Vehicle Park Building

llewelyn davies	Title: Comparison of Approved Scheme and Current Scheme on Site C	Checked	DH	Drawn PW
		Rev	1	Date Sep 2022
		Scale N / A		Figure 2.3b



Approved Scheme (Application No. A/NE-SSH/120-1)



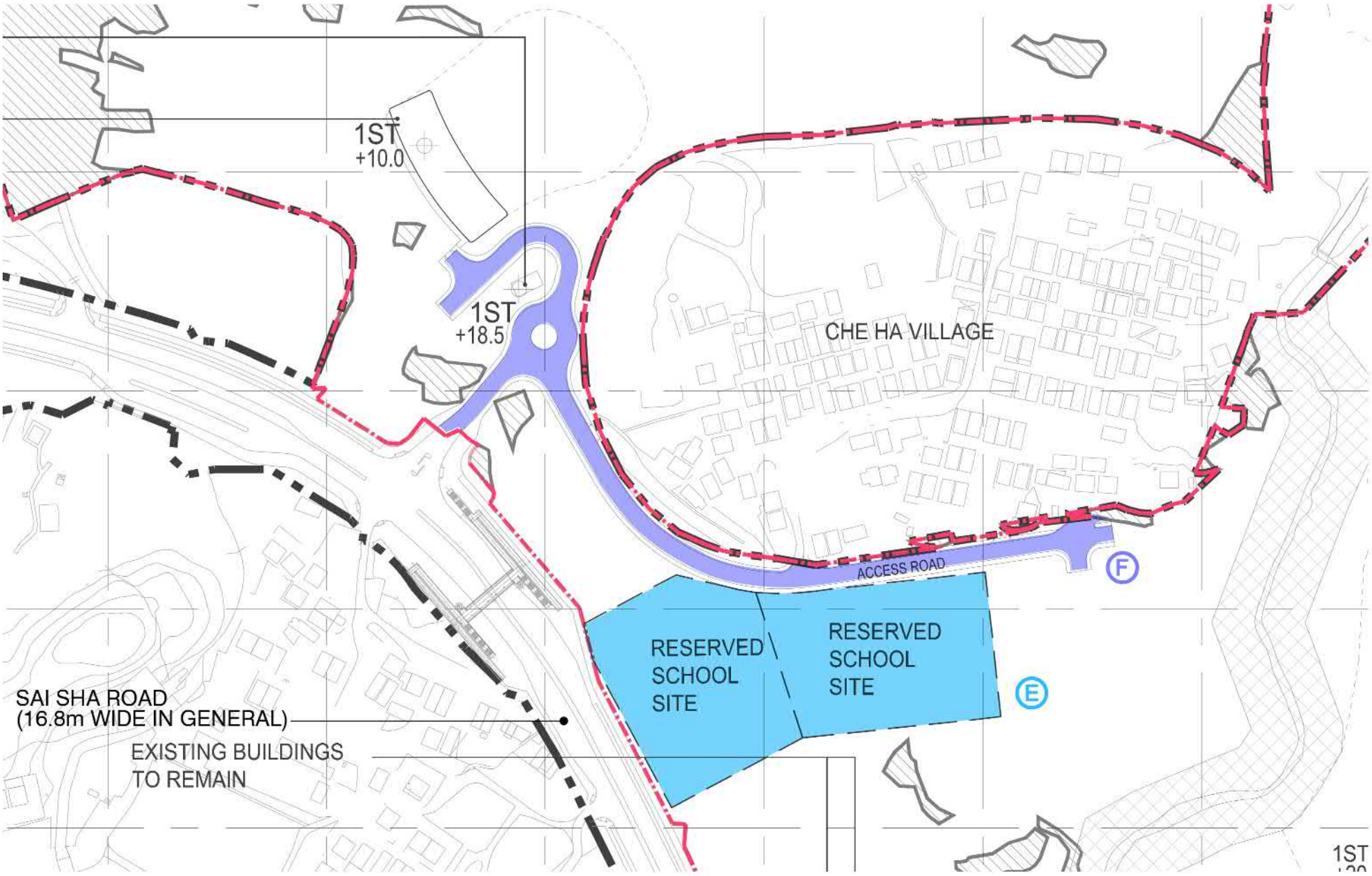
Proposed Scheme

(E) Minor Change in Configuration of Reserved Primary School Sites

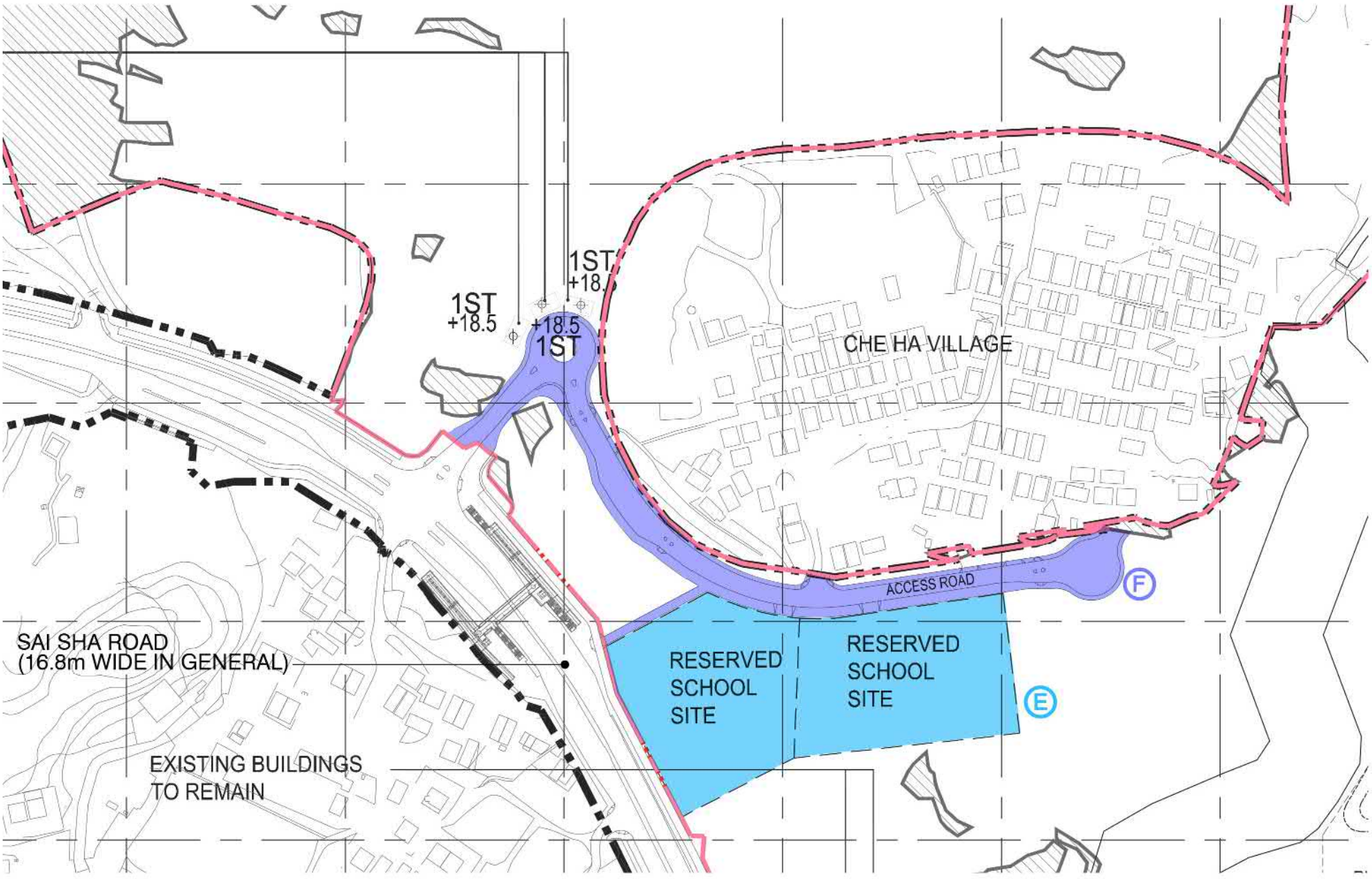
(F) Minor Change in Alignment of Access Road to Che Ha Village

(G) Minor Change in Alignment of Internal Road and Emergency Vehicular Access

llewelyn davies	Title: Comparison of Approved Scheme and Current Scheme on Site C	Checked: DH / Drawn: PW	Rev: 1 / Date: Sep 2022
		Scale: N / A	Figure: 2.3c



Approved Scheme (Application No. A/NE-SSH/120-1)



Proposed Scheme

(E) Minor Change in Configuration of Reserved Primary School Sites

(F) Minor Change in Alignment of Access Road to Che Ha Village

llewelyn davies	Title: Comparison of Approved Scheme and Current Scheme on Site C to the west of Che Ha Village (Blow up)	Checked: DH / Drawn: PW	
		Rev: 1 / Date: Sep 2022	
		Scale: N / A	Figure: 2.3d

llewelyn davies

Title

Visual Illustration of Diversified Sports and Recreational Facilities in Site C

Checked	DH	Drawn	PW
Rev	0	Date	Sep 2022
Scale		Figure	2.4

E&M

1ST
+18.5

1ST
+18

+18.5
1ST

CHE HA VILLAGE

ACCESS ROAD

RESERVED SCHOOL SITE

RESERVED SCHOOL SITE

EXISTING BUILDINGS TO REMAIN

TRAINING PATH FOR CYCLING / MAINTENANCE PATH

PLACE OF RECREATION, SPORTS OR CULTURE #

1ST SITE C
+18.5

RECREATION & SPORTS CENTRE WITH ANCILLARY FACILITIES / E&M *

TRAINING PATH FOR CYCLING / MAINTENANCE PATH

PLACE OF RECREATION, SPORTS OR CULTURE #

2ST
+17.5

+15.0
1ST

+15.0
1ST

RECREATION & SPORTS CENTRE WITH ANCILLARY FACILITIES / E&M *

PLACE OF RECREATION, SPORTS OR CULTURE #

2ST
+23.5

ACCESS ROAD

5ST
+33.0

WELFARE CENTRE & PUBLIC VEHICLE PARK

PLACE OF RECREATION, SPORTS OR CULTURE #

1ST
+21.0

+18.5
1ST

PUBLIC OPEN SPACE

3ST
+36.0

SEWAGE PUMPING STATION

FOOTBRIDGE

+12.5

3ST
+40.0

TSENG TAU VILLAGE

1ST
+24.0

3ST
+36.0

+15.5

FOOTBRIDGE

MA KWU LAM VILLAGE

PEDESTRIAN CROSSING

RECREATION & SPORTS CENTRE WITH ANCILLARY FACILITIES / E&M *

SITE B

SITE A

TAI TUNG VILLAGE

0 25 50 75 100 125

NOTE : 1. ALL LEVELS DENOTE MAXIMUM MAIN ROOF LEVELS
2. ALL NUMBERS OF STOREYS DENOTED ON PLAN REFER TO TOTAL NO. OF STOREYS ABOVE GROUND.

LEGEND

- LAND TO BE SECURED BY APPLICANT / LAND OUTSIDE TPTL 157 RP AND TPTL 253
- 20m ECOLOGICAL STREAM BUFFER ZONE
- NON-BUILDING AREA
- PROPOSED DEVELOPMENT SITE BOUNDARY
- APPLICATION SITE BOUNDARY
- +37.0 HEIGHT IN mPD
- 1ST HEIGHT IN NO. OF STOREY
- OUTDOOR SPORTS AND RECREATIONAL AREA
- INDOOR SPORTS AND RECREATIONAL AREA

* INCLUDING 'PLACE OF RECREATION, SPORTS OR CULTURE', 'PLACE OF ENTERTAINMENT', 'EATING PLACE', 'SHOP & SERVICES', AND/OR 'INDOOR PLAYGROUND'

\# PLACE OF RECREATION, SPORTS OR CULTURE (OUTDOOR RECREATIONAL FACILITIES FOR THE USE OF SPORTS FIELD/ BALL COURT/ POOL/ DRIVING RANGE/ TRAINING PATH FOR CYCLING)

REMARKS:
1. THE LOCATION AND EXTENT OF OUTDOOR AND INDOOR SPORTS AND RECREATIONAL FACILITIES ARE INDICATIVE ONLY WHICH WILL SUBJECT TO DETAILED DESIGN.

llewelyn davies

Title

Indicative Location of Outdoor and Indoor Sports and Recreational Facilities

Checked	DH	Drawn	PW
Rev	0	Date	Sep 2022
Scale		Figure	2.5

E&M

1ST +18.5

1ST +18

+18.5 1ST

CHE HA VILLAGE

ACCESS ROAD

RESERVED SCHOOL SITE

RESERVED SCHOOL SITE

EXISTING BUILDINGS TO REMAIN

TRAINING PATH FOR CYCLING / MAINTENANCE PATH

PLACE OF RECREATION, SPORTS OR CULTURE #

1ST SITE C +18.5

TRAINING PATH FOR CYCLING / MAINTENANCE PATH

PLACE OF RECREATION, SPORTS OR CULTURE #

2ST +17.5

+15.0 1ST

+15.0 1ST

PLACE OF RECREATION, SPORTS OR CULTURE #

2ST +23.5

ACCESS ROAD

PLACE OF RECREATION, SPORTS OR CULTURE #

1ST +21.0

5ST +33.0

+18.5 1ST

3ST +36.0

FOOTBRIDGE

3ST +40.0

+12.5

1ST +24.0

+15.5

3ST +36.0

FOOTBRIDGE

MA KWU LAM VILLAGE

TSENG TAU VILLAGE

SITE A

SITE B

TAI TUNG VILLAGE

RECREATION & SPORTS CENTRE WITH ANCILLARY FACILITIES / E&M *

RECREATION & SPORTS CENTRE WITH ANCILLARY FACILITIES / E&M *

WELFARE CENTRE & PUBLIC VEHICLE PARK

PUBLIC OPEN SPACE

SEWAGE PUMPING STATION

PEDESTRIAN CROSSING

RECREATION & SPORTS CENTRE WITH ANCILLARY FACILITIES / E&M *

0 25 50 75 100 125

SCALE 1 : 5000 (A3)

NOTE : 1. ALL LEVELS DENOTE MAXIMUM MAIN ROOF LEVELS
2. ALL NUMBERS OF STOREYS DENOTED ON PLAN REFER TO TOTAL NO. OF STOREYS ABOVE GROUND.

LEGEND

- LAND TO BE SECURED BY APPLICANT / LAND OUTSIDE TPTL 157 RP AND TPTL 253
- 20m ECOLOGICAL STREAM BUFFER ZONE
- NON-BUILDING AREA
- PROPOSED DEVELOPMENT SITE BOUNDARY
- APPLICATION SITE BOUNDARY
- +37.0 HEIGHT IN mPD
- 1ST HEIGHT IN NO. OF STOREY
- HARD LANDSCAPE (INCLUDING MAN-MADE GRASS)
- SOFT LANDSCAPE

* INCLUDING 'PLACE OF RECREATION, SPORTS OR CULTURE', 'PLACE OF ENTERTAINMENT', 'EATING PLACE', 'SHOP & SERVICES', AND/OR 'INDOOR PLAYGROUND'

\# PLACE OF RECREATION, SPORTS OR CULTURE (OUTDOOR RECREATIONAL FACILITIES FOR THE USE OF SPORTS FIELD/ BALL COURT/ POOL/ DRIVING RANGE/ TRAINING PATH FOR CYCLING)

REMARKS:

1. THE LOCATIONS OF HARD LANDSCAPE AND SOFT LANDSCAPE INDICATED ON PLAN ARE BASED ON THE LATEST OUTDOOR RECREATIONAL FACILITIES TO BE DESIGNATED THEREON AT THIS STAGE. THE AREAS PROPOSED FOR SOFT LANDSCAPE ARE MAINLY FOR THE USE OF GOLF DRIVING RANGE AND RETAINED TREES WITH OTHER SOFT LANDSCAPE. AS FOR THE REST OF AREAS FOR OUTDOOR RECREATIONAL FACILITIES, 100% HARD LANDSCAPE IS ASSUMED TO PRESENT THE WORST CASE SCENARIO FOR PLANNING APPLICATION PURPOSE. THE APPLICANT WILL CONTINUE TO EXPLORE OPPORTUNITIES TO MAXIMIZE GREENERY PROVISION AT DETAILED DESIGN STAGE.
2. THE LOCATION AND EXTENT OF HARD LANDSCAPE AND SOFT LANDSCAPE ARE INDICATIVE ONLY WHICH WILL BE SUBJECTED TO DETAILED DESIGN.

llewelyn davies

Title

Indicative Location of Hard and Soft Landscape on Various Outdoor Sports And Recreational Facilities

Checked	DH	Drawn	PW
Rev	0	Date	Sep 2022
Scale		Figure	2.6

recreational facilities, the Applicant has already avoided encroachment to existing woodlands. As compared to the Approved Scheme, except for those trees damaged by Typhoon *Cempaka* in July 2021 and Typhoon *Kompasu* in October 2021, no additional tree will be felled due to the proposed sports and recreational facilities under the current proposal. **Figure A** shows the comparison of indicative location and area of hard and soft landscape on various outdoor sports and recreational facilities under the Approved Scheme.

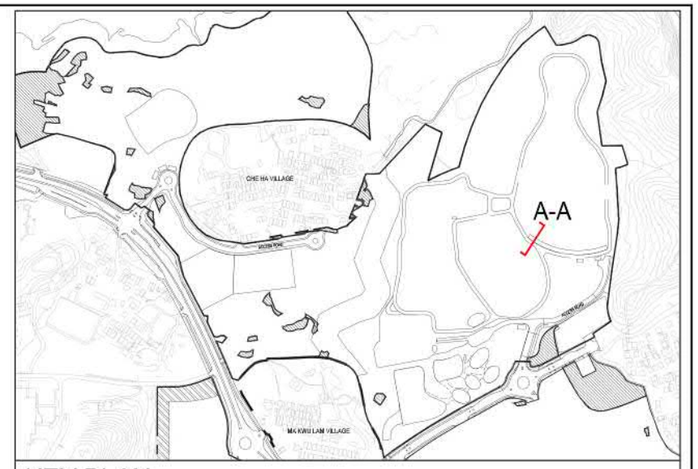
- It should also be noted that the two golf driving ranges under the Approved Scheme are consolidated into one for enhanced operational efficiency and hence slight adjustments in the design of the driving bay structure are made. The driving bay structure was 1 storey high (14.5mPD) under the Approved Scheme. With refinement in design, the structure is slightly increased by 3m to 17.5mPD and a semi-sunken design is adopted to make use of the level difference between the existing ground level of the golf driving range (about 7.5mPD) and the adjoining training path for cycling / maintenance path (about 11mPD) proposed under the Current Scheme so as to accommodate an additional storey of driving bays. The indicative section plan of the consolidated golf driving range is provided in **Figure 2.7**.

2.2.2 Amendment Item B – Minor Increase in the No. of Blocks as Ancillary Structures for Outdoor Sports and Recreational Facilities to Enhance Users' Experience and Convenience

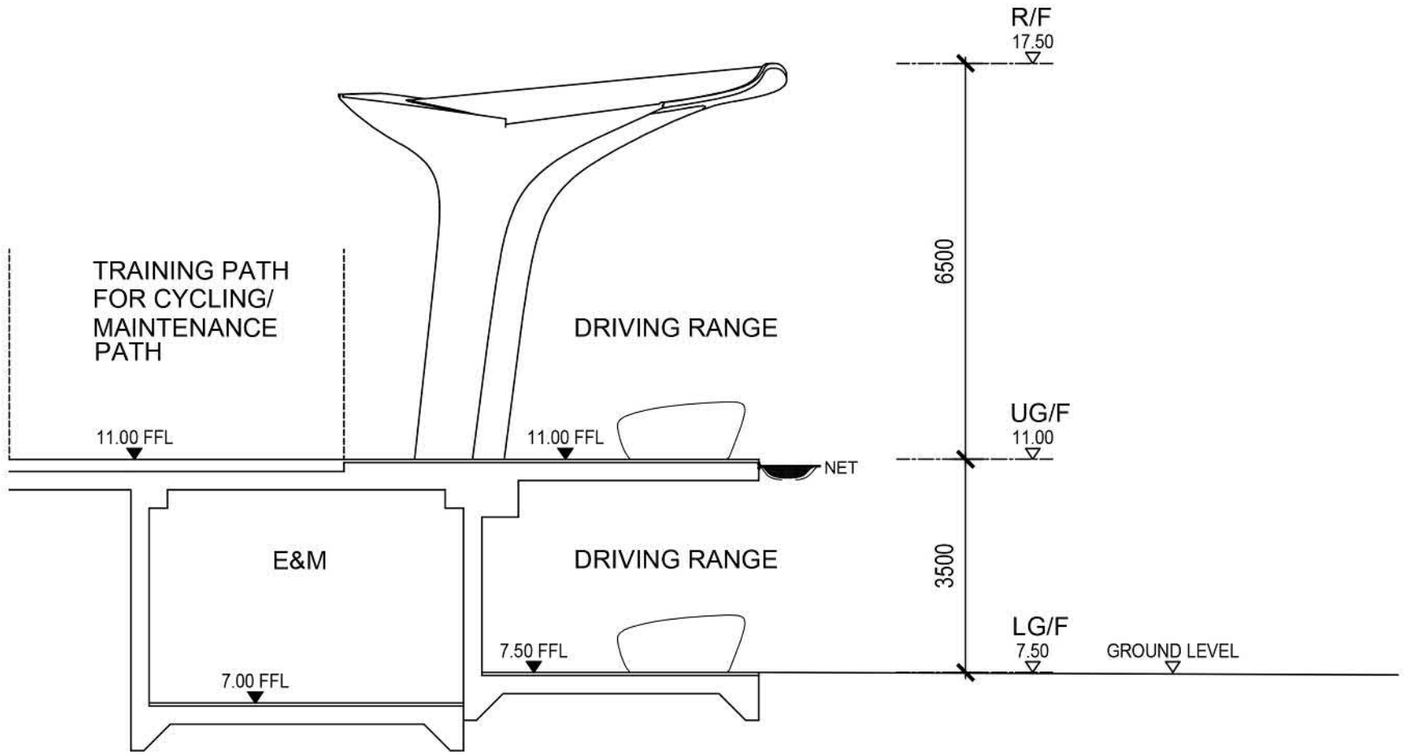
- With the proposed change and diversification of the outdoor sports and recreational facilities, the total number of ancillary blocks in Site C (mainly used as toilets, changing rooms, service counters, equipment storages and shelters) is increased by 3 (+30%) from 10[4] in the Approved Scheme to 16 in the Current Scheme, to enhance the convenience of users (excluding 1 no. of Welfare Centre & Public Vehicle Park).

- Through breaking down the larger building structures originally approved for the 'golf driving range' use into a number of smaller ancillary blocks as mentioned above, there will be no increase/change in total GFA for Site C due to the proposed diversification of outdoor sports and recreational facilities. The overall building footprint will also be very similar between the Approved Scheme and the Current Scheme. It should be highlighted that there is also no change to the maximum building height previously approved for Site C. The site remains predominantly low-rise and open-air in character.

[4] Under the Approved Scheme, the counting of no. of blocks for recreation & sports centre with ancillary facilities excludes 2 nos. of structures for golf driving range uses. For sake of comparison with the Current Scheme, the aforementioned 2 nos. of structures for golf driving range uses are included in counting of no. of blocks for recreation & sports centre with ancillary facilities, making up a total of 10 nos. under the Approved Scheme.



KEY PLAN



llewelyn davies

Title

Indicative Section Plan of Golf Driving Range

Checked	DH	Drawn	PW
Rev	0	Date	Sep 2022
Scale		Figure	2.7

2.2.3 Amendment Item C – Change in Building Form and Disposition for Recreation & Sports Centre with Ancillary Facilities and Remaining Golf Driving Range Structure

- As detailed design proceeds, the building form of the Recreation & Sports Centre located adjoining the eastern entrance of Site C has been slightly refined. Same as the Approved Scheme, footbridges linking up the blocks to ensure site accessibility and connectivity between different functional uses of the Recreation and Sports Centre, as well as to provide more recreational space for public enjoyment, will be provided. Under the Current Scheme, the shape of western block is refined with the second floor of the Recreation & Sports Centre ramping down to connect with the ground level of Site C for easy access by the general public at street level (**Figure 2.3b refers)**. The minor change in building form can encourage facilitate pedestrian circulation and connection between ground level and upper levels of various blocks through the usage of the footbridge networks of the Recreation & Sports Centre cluster. For the rest of the five blocks of Recreation & Sports Centre buildings, very minor change in building disposition is proposed.

- On the other hand, for operational efficiency and avoiding substantial reduction in the total no. of golf driving bays, the two golf driving ranges are consolidated into one. Under the general building plan submission for the Approved Scheme, 86 nos. of bays were proposed, whereas 70 nos. of bays are proposed under the Current Scheme (actual no. of bays to be adjusted at detailed design stage). Without re-locating the remaining golf driving range, the building form of the structure is slightly refined.

2.2.4 Amendment Item D – Minor Increase in Building Height for Welfare Centre & Public Vehicle Park Building for Fulfilment of Latest Lease Requirement

- Without any increase in GFA as well as change in building form as compared to the Approved Scheme, the main roof level of Welfare Centre & Public Vehicle Park Building is slightly increased by 1m (from 32mPD to 33mPD) in order to cater for the technical requirements of Government Accommodation (Welfare Centre portion) based on the Technical Schedule under the latest lease modification executed on 21 October 2021 for TPTL 157 RP. For the detailed design considerations and extract of relevant clauses under lease, please refer to **Attachment 1** of the current submission.

2.2.5 Amendment Item E – Minor Change in Configuration of Reserved Primary School Sites

- As committed in the Approved Scheme, 2 nos. of reserved primary school sites with a total site area of not less than 12,400m^2 (i.e. not less than 6,200m^2 each) have been reserved near Che Ha Tsuen within Site C. After the approval of the Approved Scheme, the Applicant has been in active liaison with the Education Bureau regarding the further details of the configuration of reserved school sites. Subsequently, slightly refinements have been made and the latest configuration has been incorporated into the latest land grant plan of Site C under TPTL 157 RP, which is also reflected on the Indicative MLP of the Current Scheme for Site C.

Section 16 Planning Application for Amendments to the Approved Development (Application No. A/NE-SSH/120-1) – Amendments to Recreation and Sports Centre with Ancillary Facilities in Site C (Application No. A/NE-SSH/142)

2.2.6 Amendment Item F – Minor Change in Alignment of Access Road to Che Ha Village

- To facilitate access of Che Ha Village and reserved primary school sites, an access road as well as a pedestrian access road branching off Sai Sha Road has been committed in the Approved Scheme. In conjunction with the latest amendments to the Approved Scheme, including minor change in configuration of reserved school sites and additional blocks ancillary to sports and recreational uses, the alignment of the access road has been slightly adjusted with roundabout design replacing the previous hammerhead design.

2.2.7 Amendment Item G – Minor Change in Alignment of Internal Road and Emergency Vehicular Access (EVA)

- Taking into account of the latest layout and disposition of building blocks within Site C, relevant amendments have been made on the alignment of internal road and EVA for necessary operational needs.

2.3 Urban Design Proposal – Planning and Urban Design Merits of the Approved Scheme Retained

2.3.1 The Current Scheme has maintained the planning and design merits previously incorporated in the Approved Scheme. Please refer to the Urban Design Drawings in **Figures 2.8 to 2.9** of the current submission for details.

Re-enforcing Site C as a Sports and Recreation Hub in Sai Sha

2.3.1 Compared to the Approved Scheme, the Current Scheme is proposed to replace 'golf driving range' to various types of outdoor sports and recreational facilities in Site C. The proposed amendment is for providing more flexibility and diversity of outdoor sports and recreational facilities in detailed design in the future. As the newly proposed sports and recreational facilities are open-air in nature, the current proposal will not constitute any increase or change in GFA. To materialise the continuous commitment to providing quality recreational facilities as Approved Scheme, through making very minor amendments to the Indicative MLP, the Current Scheme will be able to re-enforce Site C as a Sports and Recreation Hub in Sai Sha which is the same as that proposed in the Approved Scheme.

Compatible and Congruous with Surrounding Development Settings

2.3.3 While the Current Scheme involves additional 6 building blocks to provide ancillary facilities, they are all small blocks divided from the larger building blocks previously approved for the site. These small ancillary blocks are all practically required to mainly serve for toilet, changing room, service counter and equipment storage purposes to enhance the convenience of users. The Current Scheme involves no change in the total GFA and maximum building height (in total no. of storeys and mPD) for Site C when compared to the Approved Scheme. The Current Scheme would maintain low-rise and open-air character.

N

Three Fathoms Cove

CHE HA VILLAGE

SITE C

KWUN HANG VILLAGE

TSENG TAU VILLAGE

MA KWU LAM VILLAGE

SITE B

SITE A

TAI TUNG VILLAGE

Legend

- Site C "Subject Matter"
- Application Site
- Landscape Area (Hard and Soft Landscape)
- Public Open Space
- Existing Stream
- Ecological Stream Enhancement Area
- Preserved Existing Woodland
- Eco-Trail

llewelyn davies

Title

Urban Design Concept Plan - Enhancement of Green-Blue Resources (Site C)

Checked	DH	Drawn	PW
Rev	0	Date	Sep 2022
Scale		Figure	2.8

*Enhancement of Green-Blue Resources (**Figure 2.8** refers)*

2.3.4 To facilitate the public to enjoy the natural scenic view of Sai Sha area, the Current Scheme will continue to create an **eco-trail** along part of the north boundary of Site C and inside a preserved woodland of Site C to the north of Che Ha Tsuen. Interpretation boards and signage will also be provided to serve the educational purpose of the trail.

2.3.5 Regarding the natural Tai Tung Wo Liu Stream running from the south in Site A towards the seaside at the north through Site C, the **20m Ecological Stream Buffer Zone** will be retained in the Current Scheme. The Applicant will continue to work closely with the relevant government departments on the design strategy of the stream buffer area as committed in the Approved Scheme as well as in the Current Scheme.

*Commitment to Deliver Public Gains (**Figure 2.9** refers)*

2.3.6 Same as the Approved Scheme, the Current Scheme will endeavour to offer a rich mix of recreation, commercial and G/IC uses to create a new, sustainable and liveable neighbourhood in Sai Sha. To address the carparking need of Sai Sha area, a **multi-storey public vehicle park** will be provided in Site C. **Two reserved primary school sites** will be formed in Site C. Besides, in order to provide a wider range of supporting facilities, **social welfare facilities** with a GFA of 5,560m^2 will be provided in Site C together with the public vehicle park. The committed **public open spaces of not less than 8,000m^2** (including the area in Site B and Site C) adjoining Tseng Tau Village will still be provided as a continual commitment.

N

E&M

1ST +18.5

1ST +18.5

1ST +18.5

CHE HA VILLAGE

ACCESS ROAD

RESERVED SCHOOL SITE

④

RESERVED SCHOOL SITE

EXISTING BUILDINGS TO REMAIN

KWUN HANG VILLAGE

TRAINING PATH FOR CYCLING / MAINTENANCE PATH

PLACE OF RECREATION, SPORTS OR CULTURE #

①

1ST SITE C +18.5

RECREATION & SPORTS CENTRE WITH ANCILLARY FACILITIES / E&M *

2ST +17.5

+15.0 1ST

+15.0 1ST

PLACE OF RECREATION, SPORTS OR CULTURE #

RECREATION & SPORTS CENTRE WITH ANCILLARY FACILITIES / E&M *

①

2ST +23.5

PLACE OF RECREATION, SPORTS OR CULTURE #

1ST +21.0

3ST +36.0

FOOTBRIDGE

8ST +40.0

1ST +24.0

+15.5

ACCESS ROAD

5ST +33.0

②

WELFARE CENTRE & PUBLIC VEHICLE PARK

+18.5 1ST

③

PUBLIC OPEN SPACE

SEWAGE PUMPING STATION

+12.5

3ST +36.0

FOOTBRIDGE

TSENG TAU VILLAGE

PEDESTRIAN CROSSING

MA KWU LAM VILLAGE

RECREATION & SPORTS CENTRE WITH ANCILLARY FACILITIES / E&M *

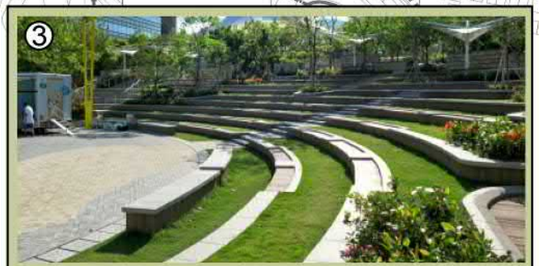
①

Recreational and Sports Facilities

④

Future Primary Schools

③



Public Open Space

②

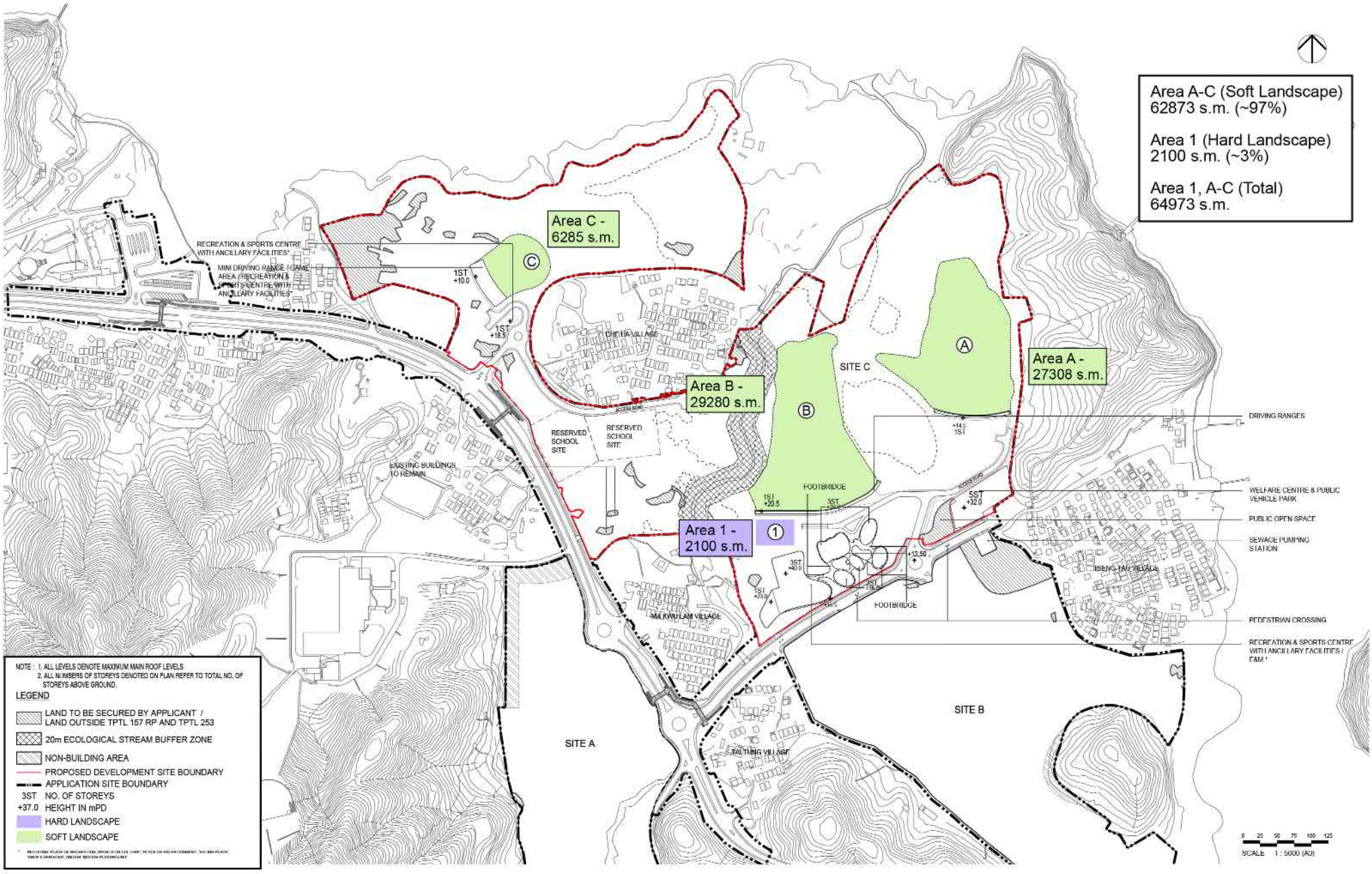
Social Welfare Centre & Public Vehicle Park

llewelyn davies

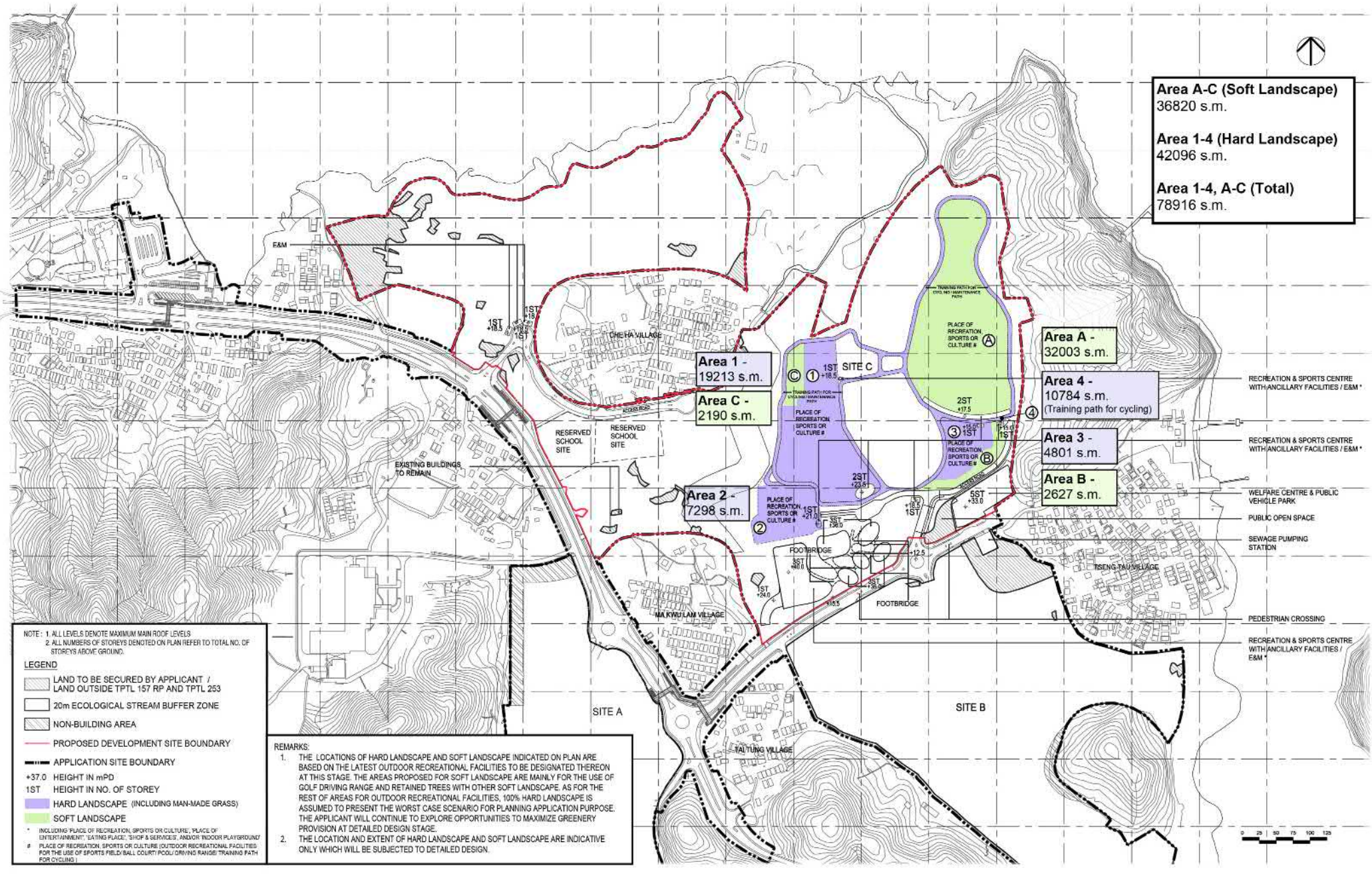
Title

Urban Design Concept Plan - Commitment to Deliver Public Gains (Site C)

Checked	DH	Drawn	PW
Rev	0	Date	Sep 2022
Scale		Figure	2.9



Approved Scheme (under No. A/NE-SSH/120-1 approved on 14 Oct 2022)



Proposed Scheme

llewelyn davies	Title: Comparison of Indicative Location and Area of Hard and Soft Landscape on Various Outdoor Sports and Recreational Facilities under the Approved Scheme (under No. A/NE-SSH/120-1 approved on 14 Oct 2022) and Current Scheme	Checked	DH	Drawn PW
		Rev	1	Date Sep 2022
		Scale	N / A	Figure A

N

CHE HA VILLAGE

SITE C

TSENG TAU VILLAGE

PUBLIC OPEN SPACE

MA KWU LAM VILLAGE

SITE B

SITE A

AREA RESERVED FOR PHASE 2 DEVELOPMENT

NGA YIU TAU VILLAGE

50 100 150 200 250

NOTE : 1. ALL LEVELS DENOTE MAXIMUM MAIN ROOF LEVELS
2. ALL NUMBERS OF STOREYS DENOTE MAXIMUM NUMBERS OF RESIDENTIAL STOREYS

LEGEND

- LAND TO BE SECURED BY APPLICANT / LAND OUTSIDE TPTL 157 RP AND TPTL 253
- NON-BUILDING AREA
- PROPOSED DEVELOPMENT SITE BOUNDARY
- APPLICATION SITE BOUNDARY

Remark: No change to layout of Site A and Site B as approved under Application No. A/NE-SSH/120-1

Title

Overall Indicative Master Layout Plan

Checked	DH	Drawn	PW
Rev	0	Date	Sep 2022
Scale		Figure	B

Overall Landscape Master Plan for Site A, B, C and Sai Sha Road

Remark: No change to layout of Site A and Site B as approved under Application No. A/NE-SSH/120-1

axxa group

Title

Indicative Landscape Master Plan (Overall)

Checked	DH	Drawn	PW
Rev	0	Date	Sep 2022
Scale	N/A	Figure	C

3 TECHNICAL CONSIDERATIONS

3.1 Landscape Design Consideration

3.1.1 The landscape design for the Site C is updated in accordance with the adjustments reflected on the Current Scheme. The consolidated Landscape Design Proposal is attached at **Appendix E** for illustration of the proposed landscape design concept with Indicative Landscape Master Plan of Site C in **Figure 3.1**.

3.1.2 The primary landscape objectives are for Site C are:

- To create a naturalistic environmental model within which the proposed development is located.
- To create a recreational hub in Sai Sha and to provide diversification of recreational and leisure facilities.
- To preserve the existing significant woodland, tree groups and ecological buffer zone to act as feature landscape amenity components.
- To emphasize and respond to the inherent topography.
- To integrate the proposed recreational development into the surrounding area through the creation of a sensitive naturalistic interface with the adjacent land uses.
- To create a high degree of visual interest and continuity through effective design.
- To maximize the potential of the retained existing trees.
- To utilize the retained trees to delineate and enhance the landscape character of the area and emphasize the individuality afforded by the environmental qualities of Site C.
- To introduce additional tree species that is consistent with and complimentary to those that exists within the environment of Sai Sha, Shap Sz Heung.

3.1.3 Based on the previous Tree Survey and Preservation Proposal approved by the Planning Department for compliance of approval condition (c) under Application No. A/NE-SSH/120-1 on 18 March 2021, there is a total of 5,113 nos. of trees surveyed and identified. Among these 5,113 nos. of trees, 4,443 nos. of existing trees are approved to be retained in-situ[5], 49 nos. of existing trees are approved to be transplanted and 621 nos. of existing trees are approved to be felled. In addition, Type C "Inaccessible Conserved Woodland" (total area approx. 38,000m^2) will remain intact and untouched by future development.

[5] including 34 nos. of individual trees, 1,481 nos. from Type D "Retained Tree Groups in Other Areas", 1,628 nos. from Type A "Non-Conserved Woodland Tree Group", 1,300 nos. from Type B "Accessible Conserved Woodland"

LEGEND

- APPLICATION SITE BOUNDARY
- SITE C LOT BOUNDARY
- PUBLIC OPEN SPACE BOUNDARY
- PROPOSED ROUTE OF ECO-TRAILS ALONG THE DEVELOPMENT BOUNDARY (INDICATIVE)
- PROPOSED PEDESTRIAN ACCESS (INDICATIVE)
- LOCATION OF PROPOSED INFORMATION BOARD
- EXISTING RETAINED TREES (27 nos.)
- PROPOSED TRANSPLANTED TREES (43 nos.)
- PROPOSED NEW TREES (1,700 nos.)
- LANDSCAPE AREA (SOFT LANDSCAPE)
- MAN-MADE GRASS
- HARD PAVED AREA
- VEHICULAR ACCESS ROAD
- TYPE A
  NON-CONSERVED WOODLAND TREE GROUP PROPOSED TO BE RETAINED (1,628 nos.)
- TYPE B
  ACCESSIBLE CONSERVED WOODLAND PROPOSED TO BE RETAINED (1,300 nos.)
- TYPE C
  INACCESSIBLE CONSERVED WOODLAND PROPOSED TO BE RETAINED (38,000 m²)
- TYPE D
  PROPOSED RETAINED TREE GROUP IN OTHER AREAS (1,481 nos.)
- EXISTING STREAM RESERVED AREA
- LAND TO BE SECURED BY APPLICANT/ LAND OUTSIDE TPTL 157 RP & TPTL 253
- 20m ECOLOGICAL STREAM BUFFER ZONE
- MARSH
- +5.0 PROPOSED LEVEL
- EXISTING FOOTPATH

* INCLUDING 'PLACE OF RECREATION, SPORTS OR CULTURE', 'PLACE OF ENTERTAINMENT', 'EATING PLACE', 'SHOP & SERVICES', AND/OR 'INDOOR PLAYGROUND'

PLACE OF RECREATION, SPORTS OR CULTURE (OUTDOOR RECREATIONAL FACILITIES FOR THE USE OF SPORTS FIELD/ BALL COURT/ POOL/ DRIVING RANGE/ TRAINING PATH FOR CYCLING)

0m 20m 40m 60m 120m 200m

axxa group

Title

Indicative Landscape Master Plan (Site C)

Checked	DH	Drawn	PW
Rev	0	Date	Sep 2022
Scale		Figure	3.1

3.1.4 Under the Current Scheme, there is no change to total no. of trees surveyed and the proposed tree treatments remain largely unchanged as compared to the Approved Scheme. However, 13 nos. of additional trees, including 7 nos. of approved retained trees and 6 nos. of approved transplanted trees, are proposed to be felled as they were either uprooted or having potential risk of tree failure due to torrential rain and strong wind brought by Typhoon *Cempaka* in July 2021 and Typhoon *Kompasu* in October 2021. Therefore, the nos. of trees proposed to be felled under the Current Scheme has become 634.

3.1.5 **Table 3.1** below shows the comparison between the Approved Scheme and Current Scheme on Tree Treatment Proposal:

Table 3.1 - Comparison between Approved Scheme and Current Scheme on Tree Treatment Proposal

Description	Approved Scheme (Approval Condition under A/NE-SSH/120-1) Approved on 18 Mar 2021	Current Scheme	Difference
Total Nos. of Trees **Surveyed**	5,113	5,113	0
Nos. of Trees Proposed to be **Retained**	4,443	4,436	-7
Nos. of Trees Proposed to be **Transplanted**	49	43	-6
Nos. of Trees Proposed to be **Felled**	621 (incl. 38 dead trees)	634 (incl. 38 dead trees)	+13

*Remarks:
(i) Approx. 14,000m^2 of Tree Group within Ecological Buffer Zone (EBZ) remain untouched;
(ii) Approved Retained Trees (27 nos.);
(iii) Type A Non-Conserved Woodland Tree Group (approx. 1628 nos.);
(iv) Type B Accessible Conserved Woodland (approx. 1300 nos.);
(v) Type C Inaccessible Conserved Woodland (total area approx. 38,000m^2); and
(vi) Type D Retained Tree Groups in Other Areas (1481 nos.).

3.1.6 While 634 nos. of trees will be felled, 1,700 nos. of new trees will be planted to enhance greenery within the Application Site.

3.1.7 Details of the Landscape Design and Tree Preservation Proposals for Site C is enclosed in **Appendix E** for consideration.

3.2 Visual Appraisal

3.2.1 In order to ensure the Current Scheme will be as visually compatible as that of the Approved Scheme, the Applicant has paid due effort in formulating the Current Scheme. As depicted in Section 2.3 above, the overall layout of the Current Scheme (with no change to Site A and Site B under Approved Scheme No. A/NE-SSH/120-1), including building form, disposition and building height, is largely the same as the Approved Scheme. The Current Scheme is practically the same as the Approved Scheme hence there is no change in terms of the visual consideration of the schemes.

3.2.2 To further demonstrate the Current Scheme is acceptable from visual aspect as compared with the Approved Scheme, a visual appraisal has been prepared below. The selected vantage points (VPs) for Site C are the same as those adopted in the Visual Impact Assessment approved under Applications No. A/NE-SSH/120 and A/NE-SSH/120-1 (the VPs with view angles not orienteering towards Site C are excluded under the current planning application), including:-

- VP1: Summit of Ma On Shan in Ma On Shan Country Park
- VP2: Summit of Kai Kung Shan in Sai Kung West Country Park
- VP3: Cheung Sheung Country Trail (Portion along the Coast of Yung Shue O)
- VP4: Yung Shue O Pier
- VP5: Sham Chung Pier
- VP6: Pak Sha Tau Pier
- VP7: Tsat Sing Temple in Kwun Hang Village

3.2.3 The locations of the selected VPs are shown in **Figure 3.2**.

Visual Appraisal of Potential Visual Impact

VP1 – Summit of Ma On Shan in Ma On Shan Country Park (refer to Figure 3.3)

3.2.4 Ma On Shan is one of the popular hiking destinations in Hong Kong. Locating to the south of Site C, the summit of Ma On Shan captures the panoramic view of Tolo Harbour and Three Fathoms Cove with Sai Sha area, at the foothill of Ma On Shan mountain ranges.

3.2.5 Located about 1.2km away from Site C and with an elevation of about 700mPD, the existing horizontal view mainly focuses on the sea view of Three Fathoms Cove and the mountain backdrop of Ma On Shan Country Park. Considering the distance between the VP and Site C, the minor amendments in the Current Scheme with replacement of some golf driving range facilities to other open-air sports and recreational facilities will not affect the open and panoramic view at this VP. The overall change to visual impact brought about by the Current Scheme is anticipated to be negligible.

VP2 – Summit of Kai Kung Shan in Sai Kung West Country Park (refer to Figure 3.4)

3.2.6 Kai Kung Shan is part of Maclehose Trail Stage 3 which is renowned for its undulating topography. The hiking trail through Kai Kung Shan connects to Shui Long Wo along Sai Sha Road which is at further southeast of Site C.

3.2.7 The summit of Kai Kung Shan, with an altitude of about 400mPD, also captures an open and unobstructed panoramic view overseeing Site C, Three Fathoms Cove and the mountain ranges of Ma On Shan to its west, with high-rise residential developments and Tolo Harbour at the background. The Approved Scheme proposed medium-rise residential development in Site A and Site B with Site C largely landscaped and green. Without significant amendments in Site C, the refinements adopted in the Current Scheme will not be noticeable from this VP. Besides, in view of the distance and elevation of the VP, the open and panoramic view at this VP will not be affected as a result of the proposed amendments. No visual change is anticipated as compared to the Approved Scheme at this VP.

VP3 – Cheung Sheung Country Trail (Portion along the Coast of Yung Shue O) (refer to Figure 3.5)

3.2.8 Cheung Sheung Country Trail is another popular hiking trail in Sai Sha area. A portion of the trail in Yung Shue O will pass through the coastal area opposite to Three Fathoms Cove to the east of Site C. The existing horizontal view mainly focuses on the sea view of Three Fathoms Cove and the mountain backdrop of Ma On Shan Country Park. The minor change in Site C will not be visible. No visual change is anticipated as compared to the Approved Scheme at this VP.

VP4 – Yung Shue O Pier (refer to Figure 3.6)

3.2.9 Yung Shue O Pier is a local open-air jetty and a marine access point for the village settlement in Yung Shue O which is located at about 1.4km to the southeast of **Site C**. Located along the eastern shore of the Three Fathoms Cove, the VP has a horizontal view across the water body. In view of the distance and elevation of the VP, the open and panoramic view at this VP will not be affected as a result of the proposed amendments. No visual change is anticipated viewing from this VP.

VP5 – Sham Chung Pier (refer to Figure 3.7)

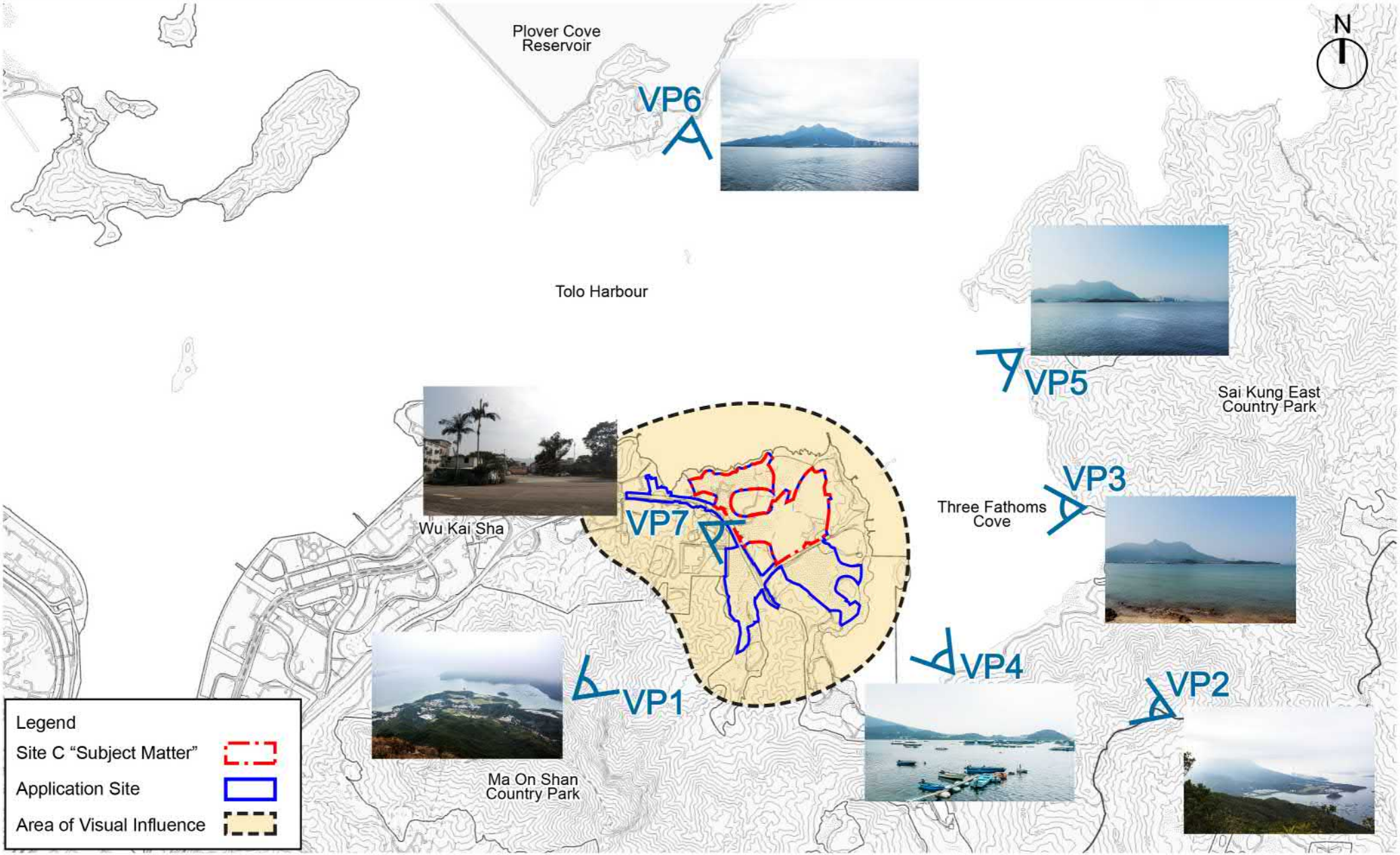
3.2.10 Sham Chung Pier is a local open-air pier and a marine access point for the village settlement in Sham Chung which is situated about 1.7km away from Site C. It captures an unobstructed view across Three Fathoms Cove with Sai Sha area in the foreground, and the tall mountain ranges of Ma On Shan Country Park and urbanised cityscape of Wu Kai Sha area at the rear of this VP. Viewing from this VP, the proposed amendments of Site C is not noticeable and hence would not affect the open and panoramic view. No visual change is anticipated viewing from this VP.

VP6 – Pak Sha Tau Pier (refer to Figure 3.8)

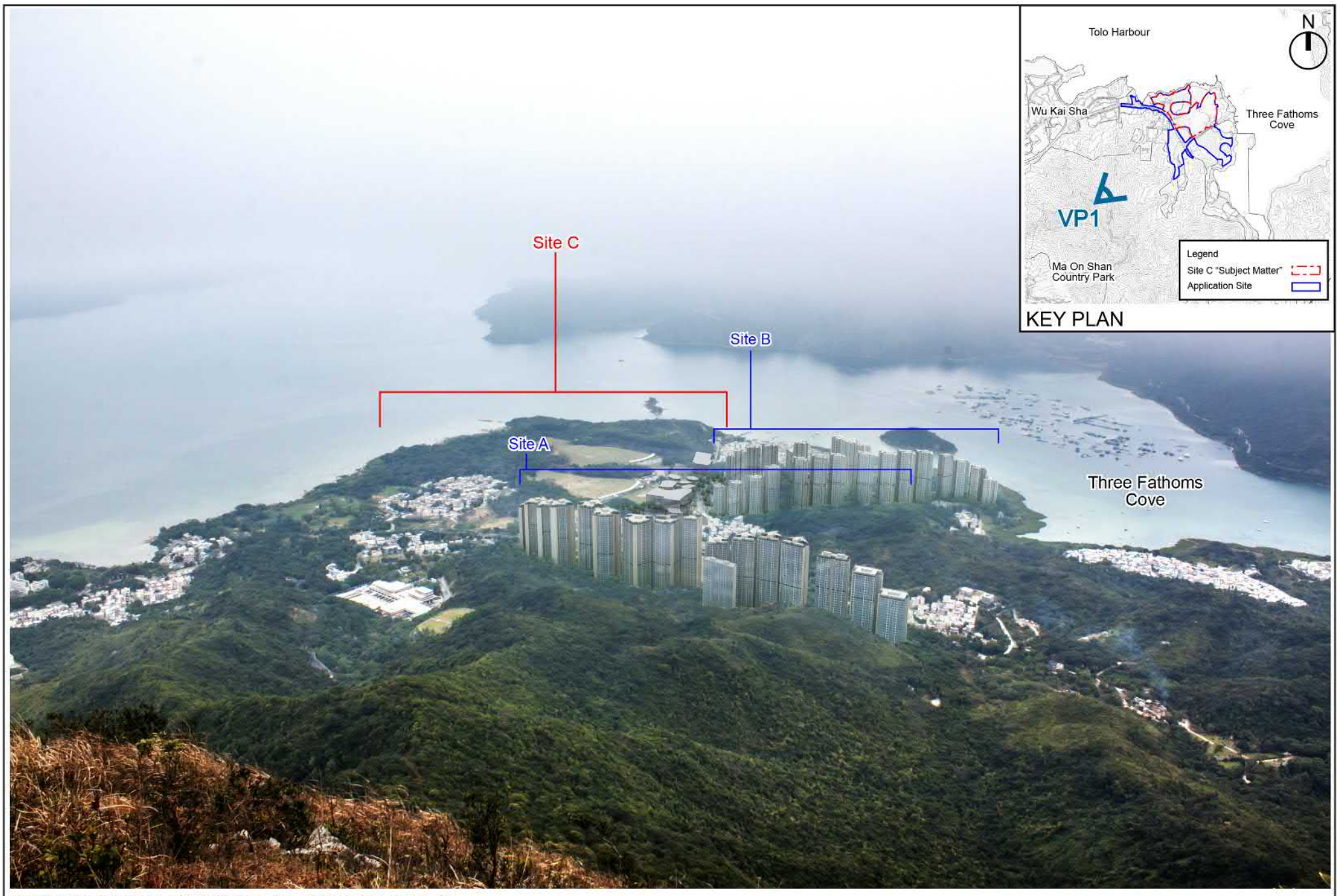
3.2.11 Pak Sha Tau Pier is a local open-air pier and a marine access point for Plover Cove area. The VP is located at about 2.5km from Site C across Tolo Harbour with an open and unobstructed view of the urbanised Wu Kai Sha and Ma On Shan New Town area on the right and the Sai Sha area on the left. Viewing from this VP, the proposed amendments to Site C is not visible. No visual change is anticipated viewing from this VP.

VP7 – Tsat Sing Temple in Kwun Hang Village (refer to Figure 3.9)

3.2.12 Tsat Sing Temple in Kwun Hang Village is a culturally significant historic building for worshipping with an open area at the front for gathering and performing rituals for the temple. This VP is located to the west of Site C, which has an existing view with some low-rise village structures at the front and an open sky view. The proposed amendments to Site C is not visible and will be blocked by the proposed medium-rise residential development in Site A and Site B of the Approved Scheme. Hence, adverse visual impact is not envisaged from this VP.



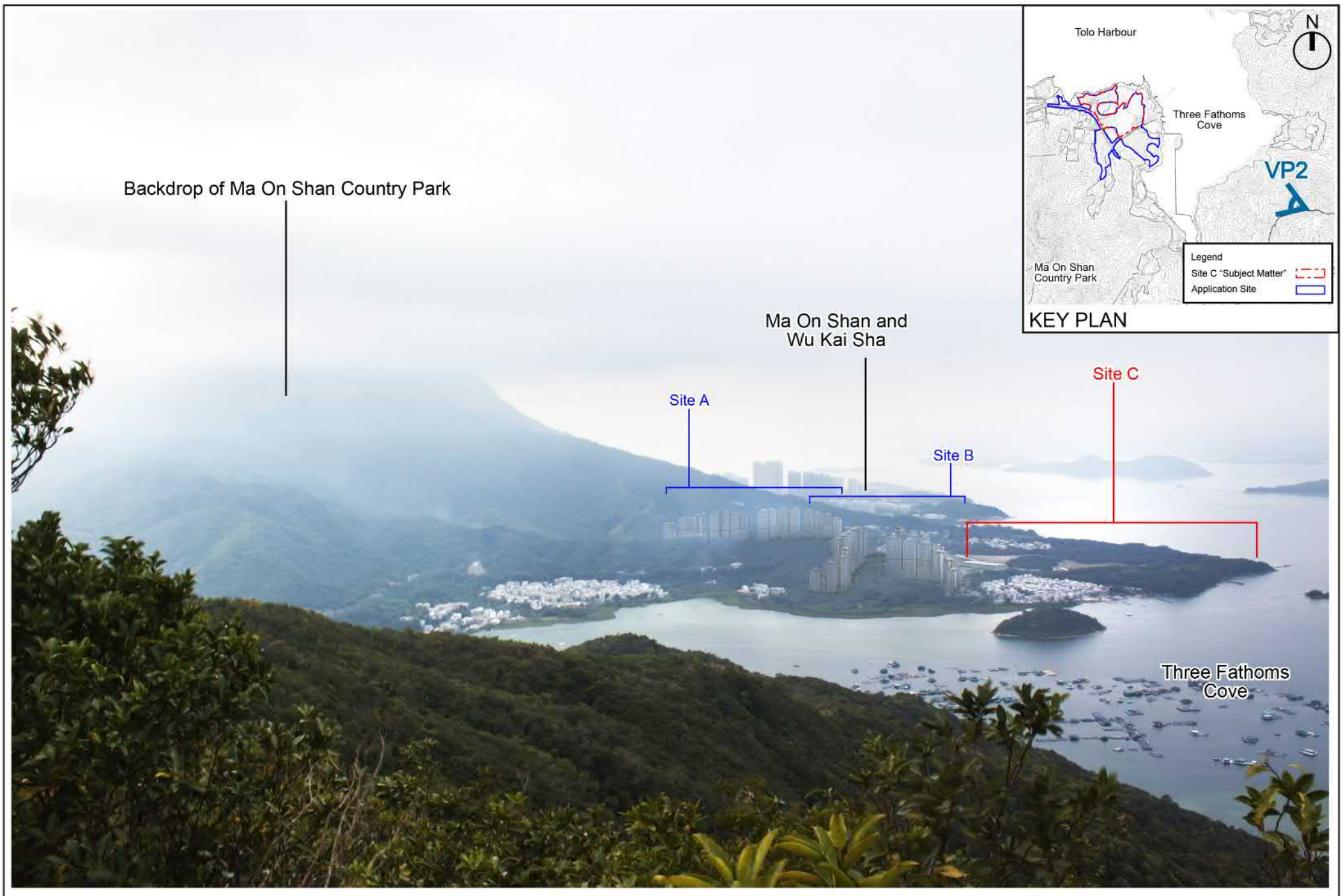
llewelyn davies	Title: Location of Vantage Points (Strategic Viewpoints)	Checked: DH / Drawn: PW	Rev: 0 / Date: Sep 2022
		Scale: N/A	Figure: 3.2



Approved Scheme (Application No. A/NE-SSH/120-1)

Proposed Scheme

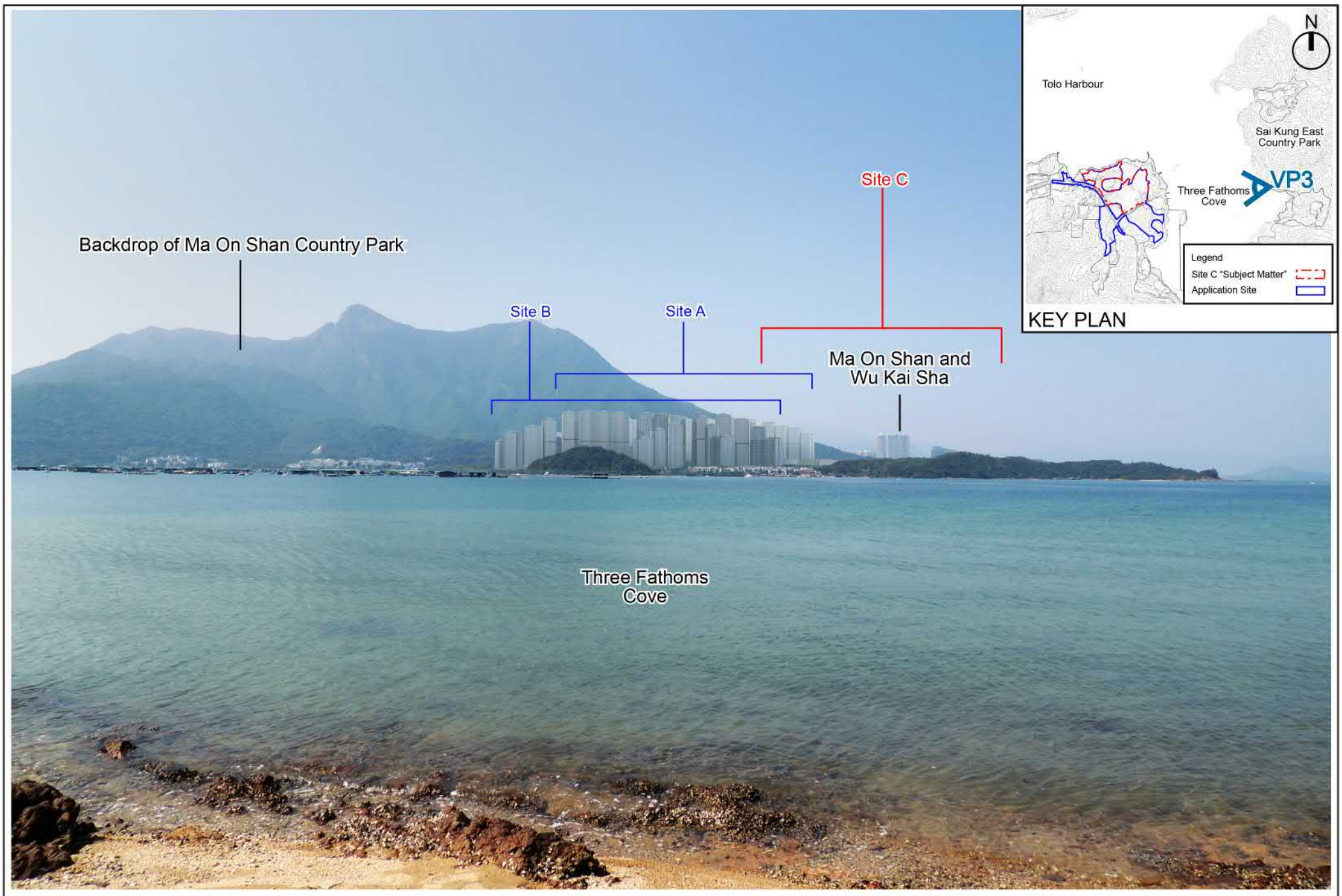
llewelyn davies	Title: Photomontages - Viewing from the Summit of Ma On Shan in Ma On Shan Country Park (VP 1)	Checked: DH	Drawn: PW	
		Rev: 1	Date: Sep 2022	
		Scale: N / A	Figure: 3.3	



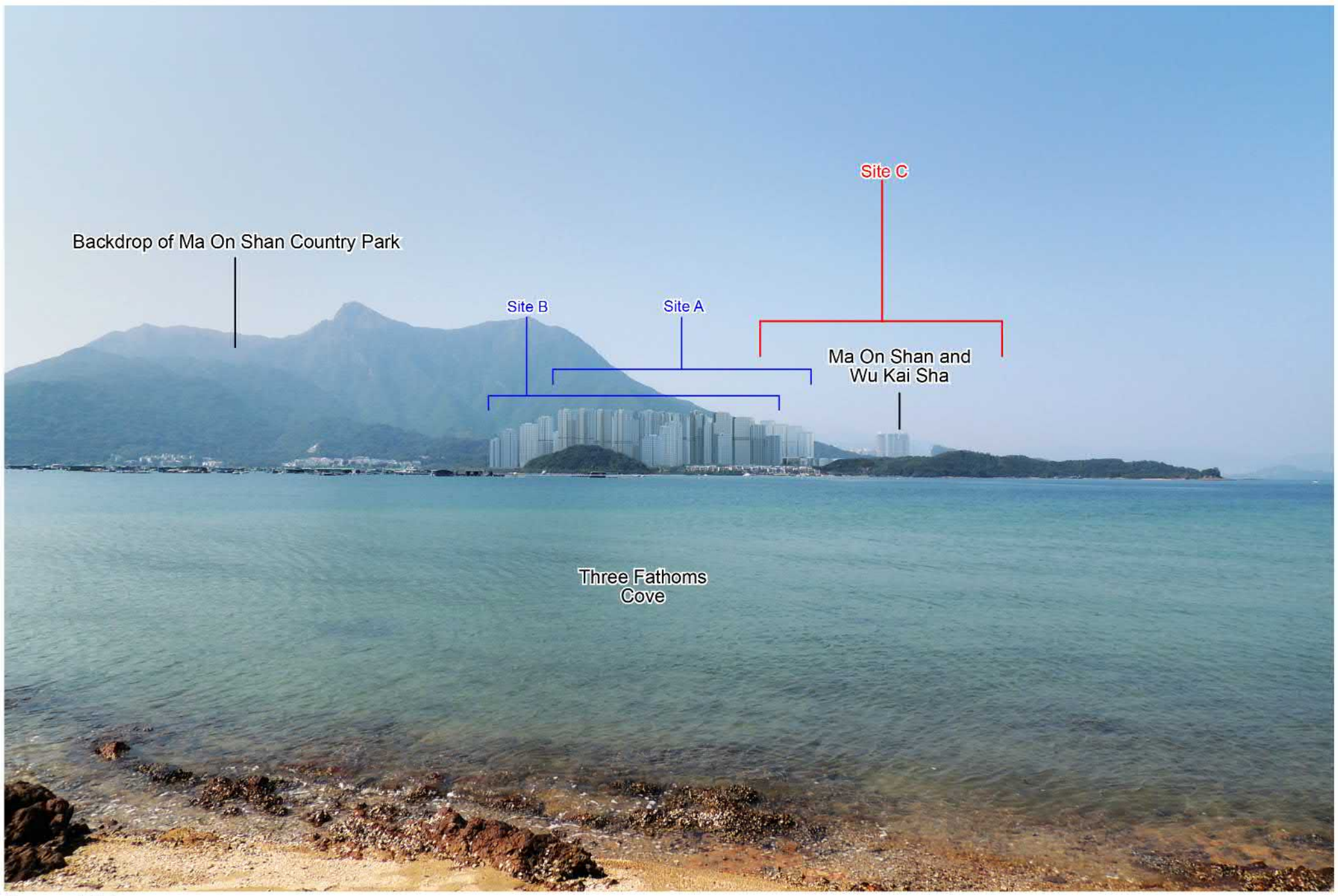
Approved Scheme (Application No. A/NE-SSH/120-1)

Proposed Scheme

llewelyn davies	Title	Photomontages - Viewing from the Summit of Kai Kung Shan in Sai Kung East Country Park (VP 2)	Checked / DH / Drawn / PW Rev / 1 / Date / Sep 2022 Scale N / A / Figure 3.4	

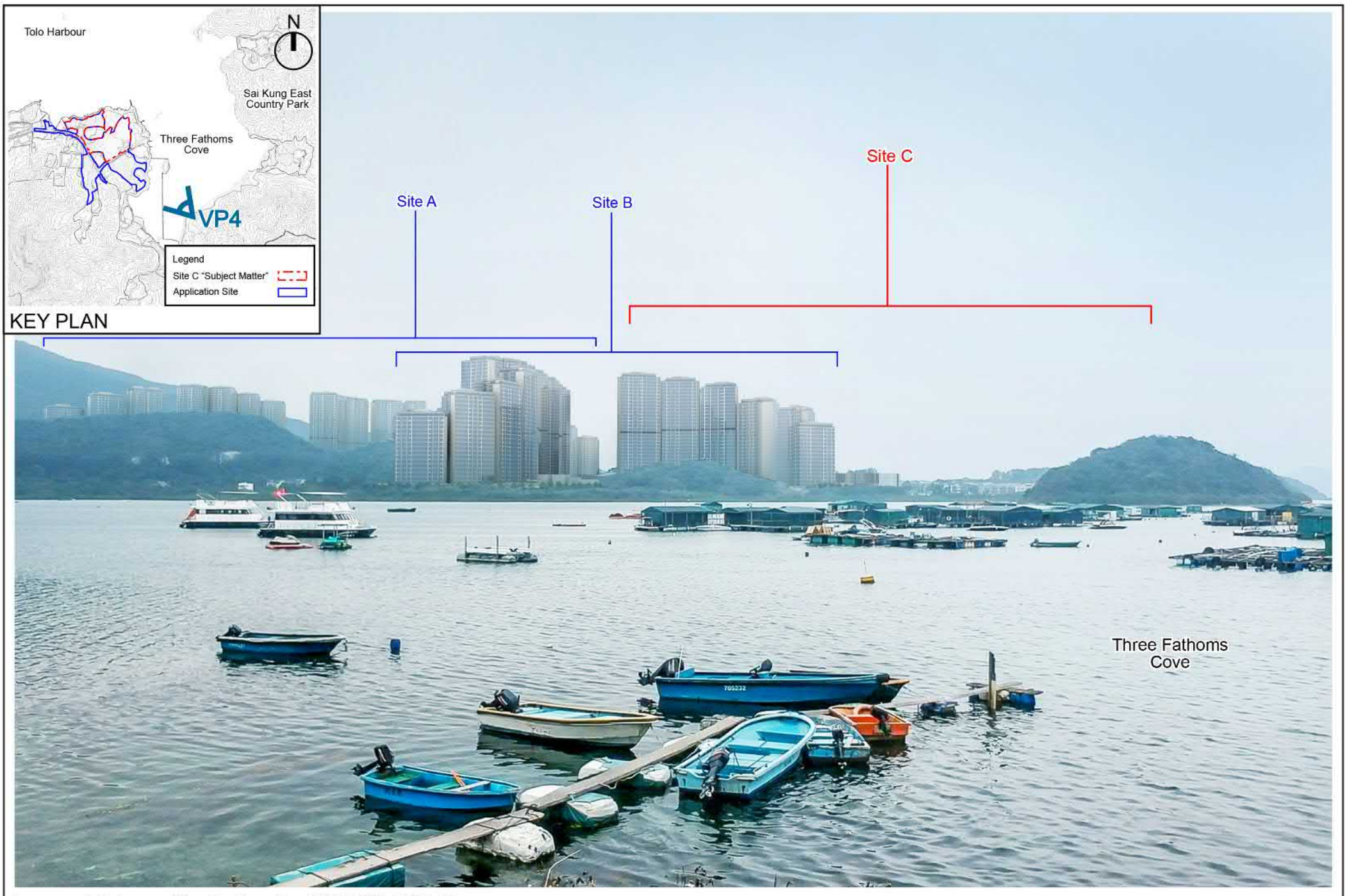


Approved Scheme (Application No. A/NE-SSH/120-1)

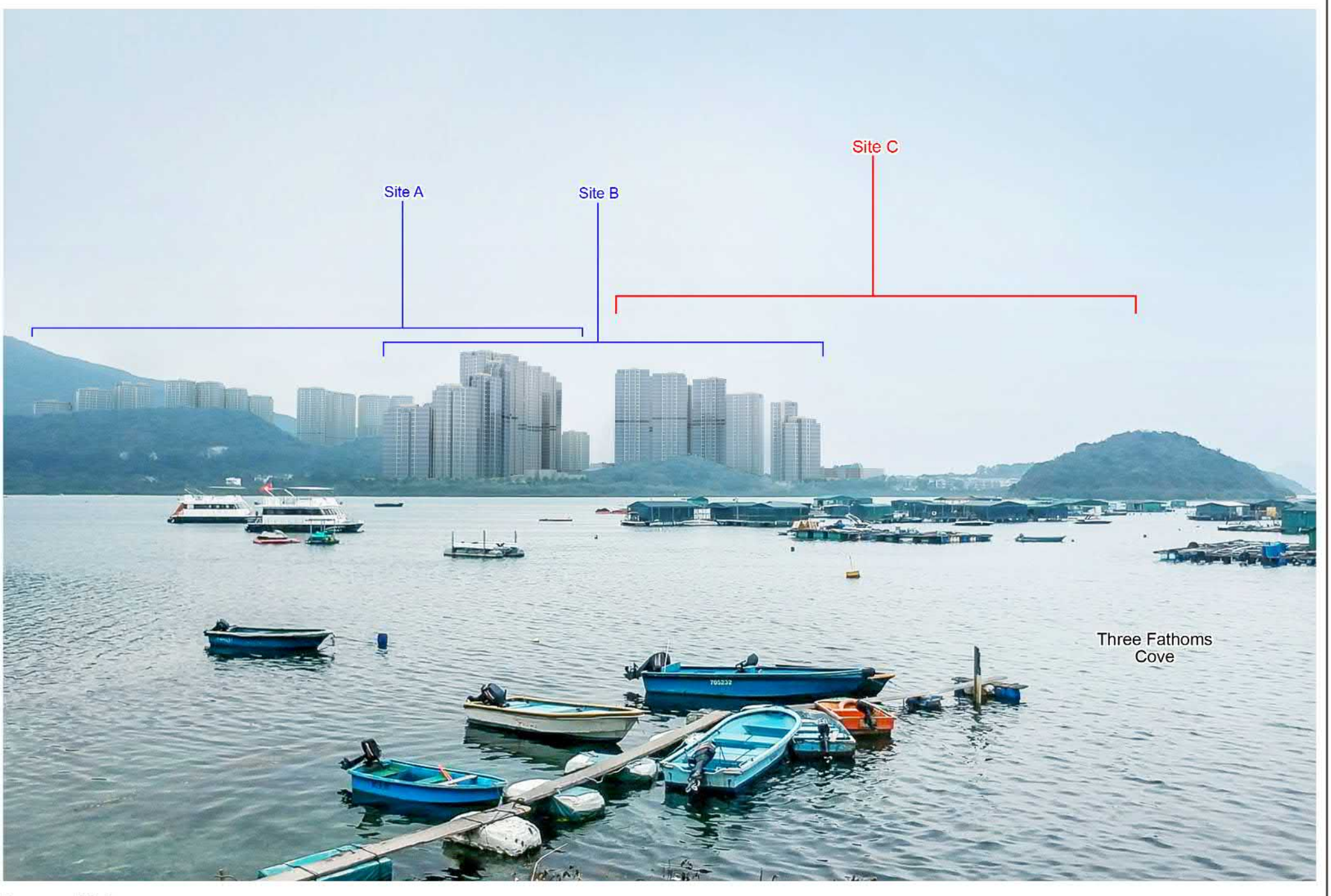


Proposed Scheme

llewelyn davies	Title: Photomontages - Viewing from Cheung Sheung Country Trail-Portion along the Coast of Yung Shue O (VP 3)	Checked: DH	Drawn: PW	
		Rev: 1	Date: Sep 2022	
		Scale: N / A	Figure: 3.5	

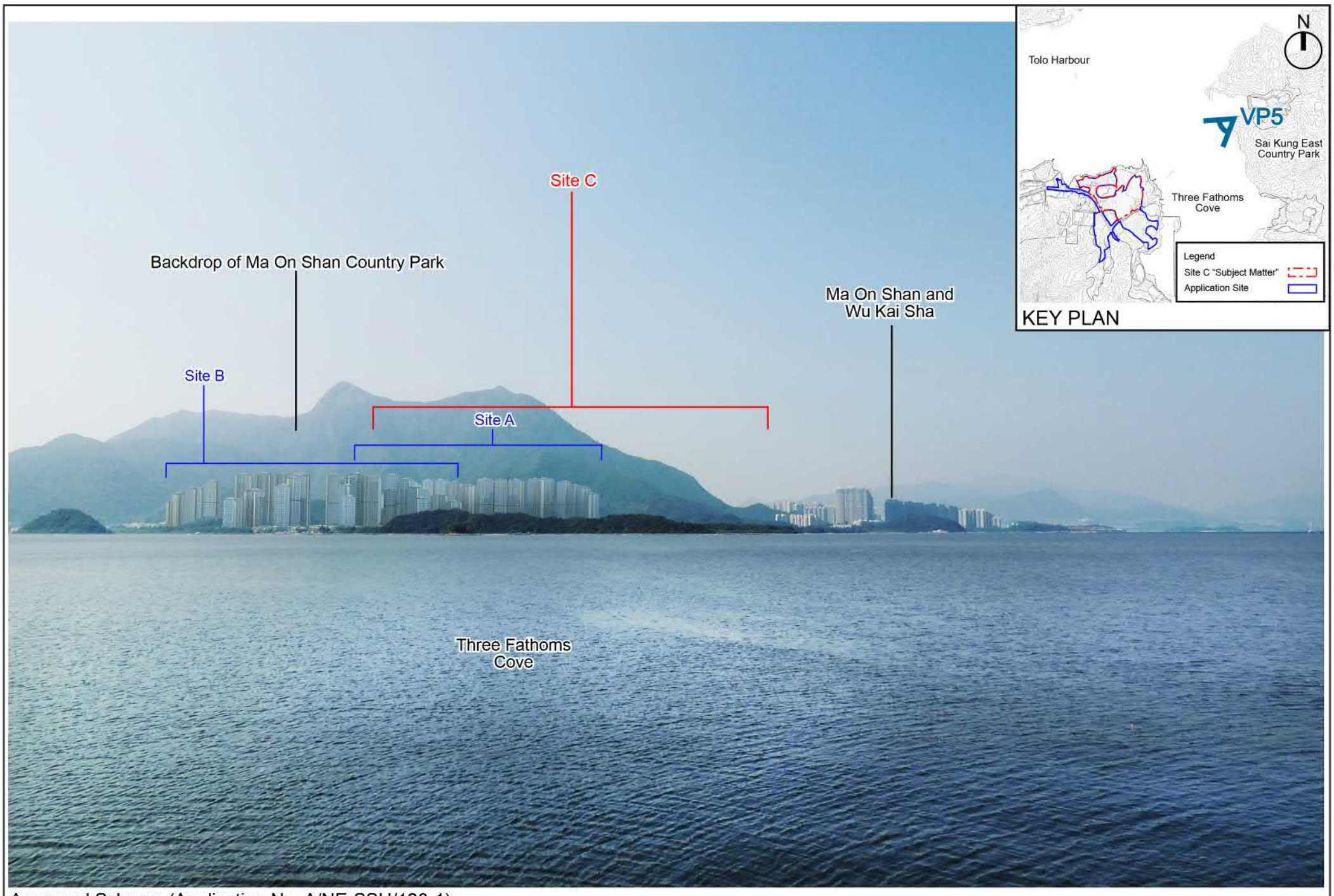


Approved Scheme (Application No. A/NE-SSH/120-1)

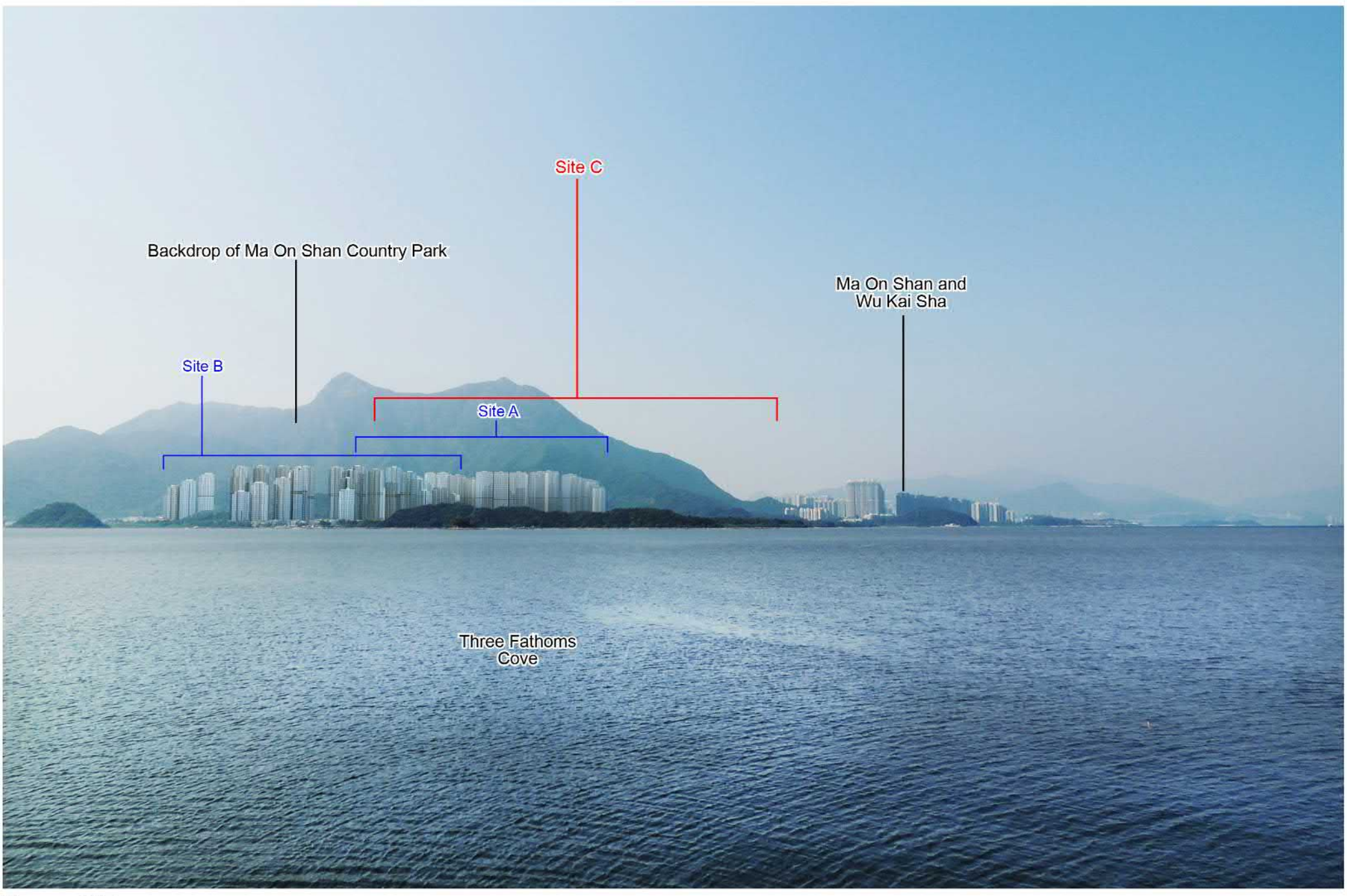


Proposed Scheme

llewelyn davies	Title: Photomontages - Viewing from Yung Shue O Pier (VP 4)	Checked: DH	Drawn: PW	
		Rev: 1	Date: Sep 2022	
		Scale: N / A	Figure: 3.6	

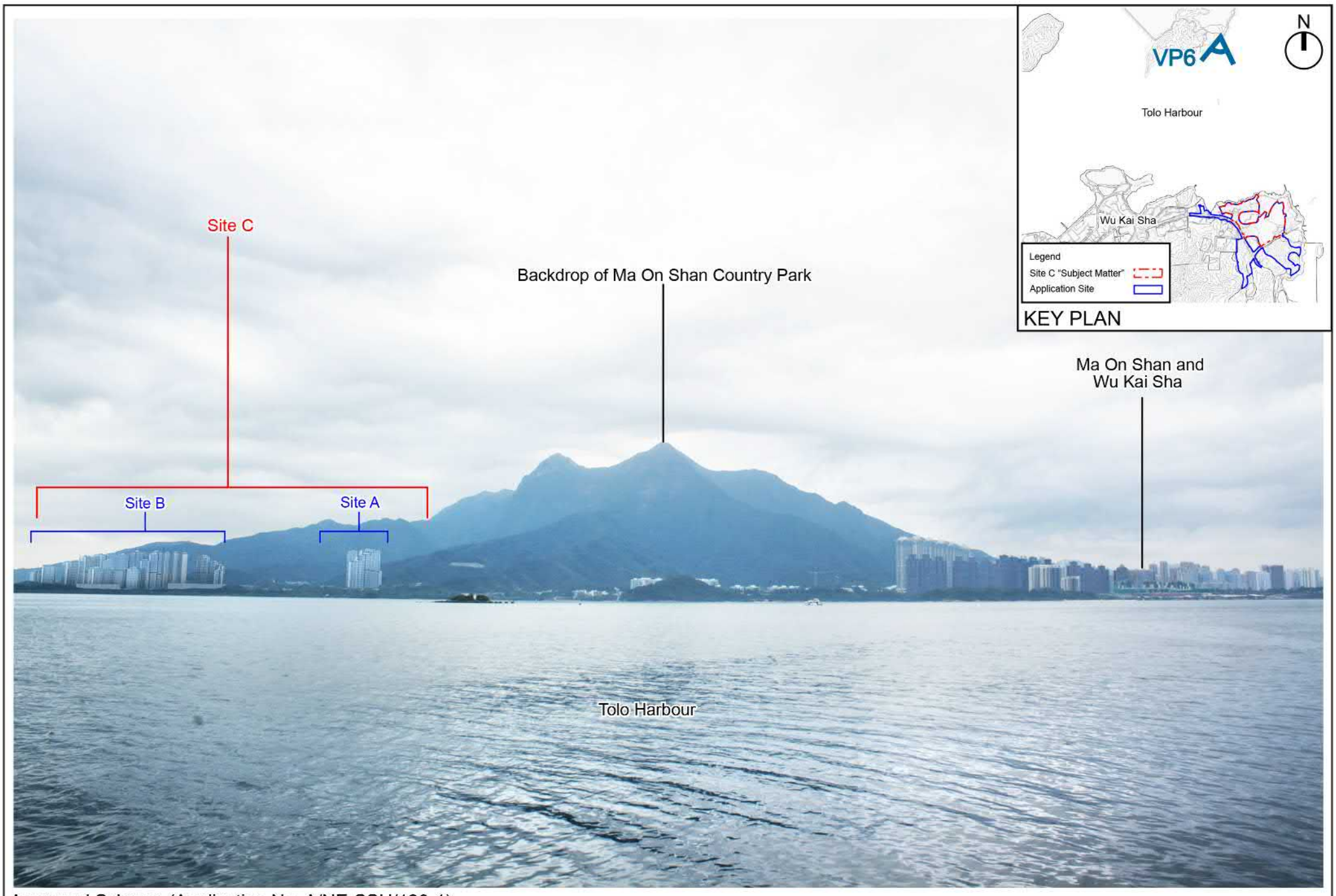


Approved Scheme (Application No. A/NE-SSH/120-1)

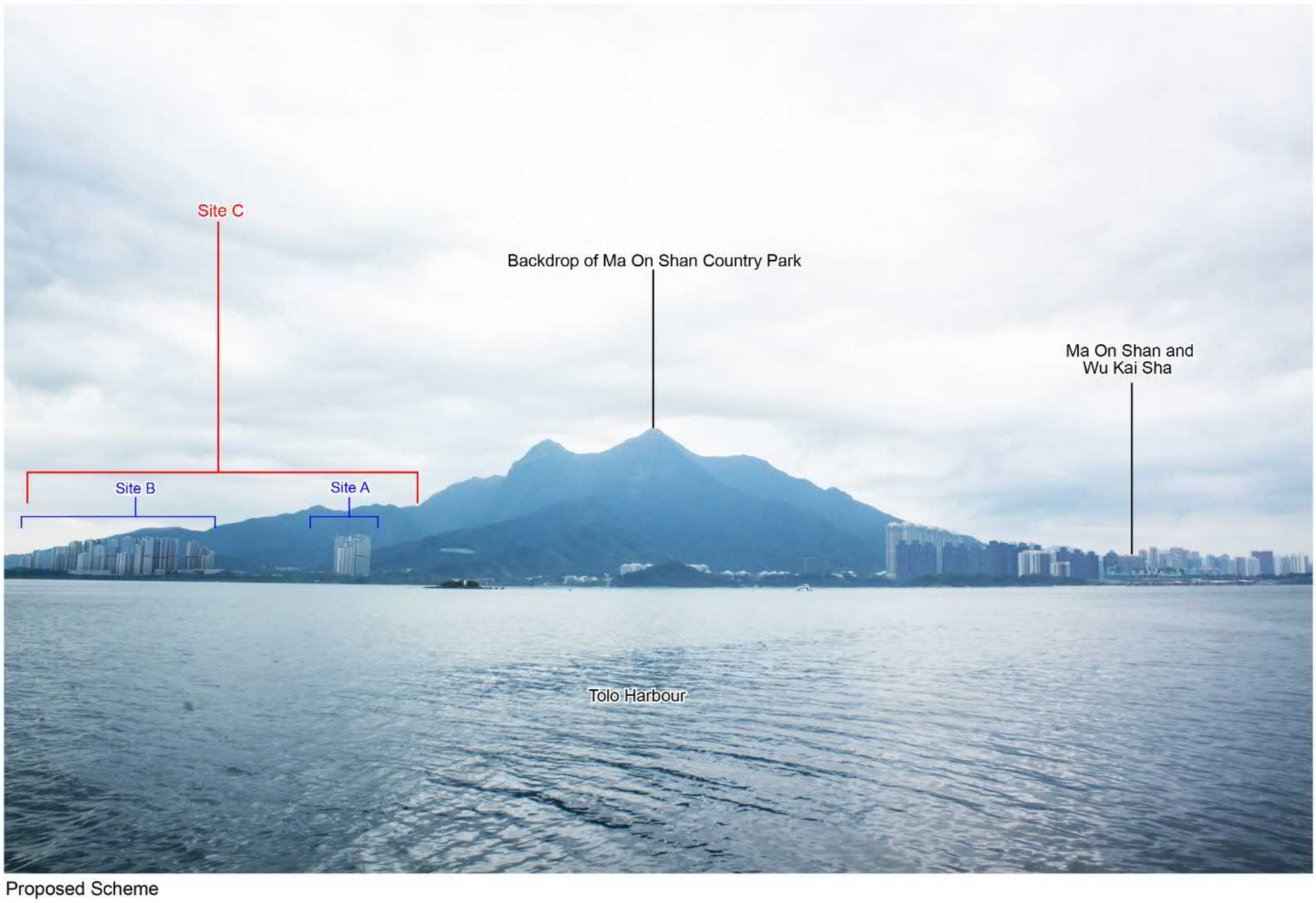


Proposed Scheme

llewelyn davies	Title: Photomontages - Viewing from Sham Chung Pier (VP 5)	Checked	DH	Drawn PW
		Rev	1	Date Sep 2022
		Scale N / A		Figure 3.7



Approved Scheme (Application No. A/NE-SSH/120-1)



Proposed Scheme

llewelyn davies	Title: Photomontages - Viewing from Pak Sha Tau Pier (VP 6)	Checked	DH	Drawn PW
		Rev	1	Date Sep 2022
		Scale N / A		Figure 3.8

KEY PLAN

Approved Scheme (Application No. A/NE-SSH/120-1)

Proposed Scheme

llewelyn davies	Title: Photomontages - Viewing from Tsat Sing Temple in Kwun Hang Village (VP 7)	Checked	DH	Drawn PW
		Rev	1	Date Sep 2022
		Scale N / A		Figure 3.9

3.3 Traffic Consideration

3.3.1 A Traffic Impact Assessment (TIA) has been conducted to assess the traffic impact by comparing the Approved Scheme under Application No. A/NE-SSH/120-1. For details of the consolidated TIA, please refer to **Appendix F**.

3.3.2 The requirements of car parking provision for the Current Scheme in Site C are reviewed. With no change in the approved development parameters and layouts for Site A and Site B, the analysis shows that the current provision according to lease requirements would be adequate to cater the car parking demand for the proposed replacement of a large golf driving range with other outdoor sports and recreational facilities which are targeted to serve the local community in the Sai Sha area.

3.3.3 The analysis also reveals that the change in trip ends due to the Current Scheme is minimal and its trip generation/ attraction is comparable to the Approved Scheme. Hence, the traffic impact caused by the Current Scheme is insignificant and acceptable from traffic engineering point of view.

3.4 Environmental Consideration

3.4.1 An Environmental Assessment (EA) has been conducted for the Current Scheme to assess the potential traffic noise, air quality, water quality and construction phase impacts. The details of the consolidated EA are provided in **Appendix G**.

3.4.2 According to the EA conducted, the Current Scheme has already provided adequate buffer distance from the nearby road in accordance with the buffer distance requirement stipulated in the HKPSG and the concerned separation distance can satisfy the buffer distance requirement in the HKPSG. Thus, it is considered that the Current Scheme would not be subject to unacceptable vehicular emissions impact.

3.4.3 With the proposed precautionary measures, the predicted road traffic noise level would comply with the relevant noise criteria and no adverse road traffic noise impact is anticipated. Environmental conscious designs are also recommended to avoid noise problem.

3.4.4 The proposed development in Site C will be served by planned public drainage system and sewerage system. Proper stormwater drainage system and sewerage system will also be provided to collect stormwater and sewage generated from the proposed development then discharge into the planned respective public drainage or sewage system accordingly. No fertilizer and pesticides/ herbicides would be required at the grass land of the proposed driving range and any grass land of recreational facilities. At landscaping area, fertilizer will only be applied when needed and slow release fertilizer should be selected as far as possible and over dosage should be avoided. There will be no direct discharge of stormwater runoff without treatment from the development in Site C. As such, no adverse water quality impact is anticipated.

3.4.5 In conclusion, the Current Scheme is sustainable in environmental terms.

3.5 Ecological Consideration

3.5.1 Further to the Ecological Impact Assessment (EcoIA) prepared for the Approved Scheme, the EcoIA for Site C under the proposed minor amendments has been conducted for the Current Scheme to evaluate if there are any potential ecological impacts due to the proposed development. The details of the consolidated EcoIA are provided in **Appendix H**.

3.5.2 The Current Scheme involves changing one of the golf driving ranges in the east with ancillary facilities in Site C with a variety of outdoor recreational facilities for the use of sports field / ball court / pool / driving range / training path for cycling. The Application Site boundary remains no change. The Ecological Buffer Zone, mature woodland and marsh habitats would be preserved as in the Approved Scheme. The increase of the estimated population for Site C due to this amendment is negligible.

3.5.3 While there would be new training paths for cycling and maintenance paths, these paths are located amongst the outdoor sports and recreational facilities; the place of recreation, sports or culture; and between these two areas. No tree felling would be required for these paths.

3.5.4 The level of construction and operational phase impacts would be the same as the Approved Scheme. Therefore, the mitigation measures for the Approved Scheme would still be applicable to the Current Scheme. No unacceptable ecological impacts are identified.

Section 16 Planning Application for Amendments to the Approved Development (Application No. A/NE-SSH/120-1) –
Amendments to Recreation and Sports Centre with Ancillary Facilities in Site C
(Application No. A/NE-SSH/142)

3.6 Engineering Consideration

Drainage Impact Assessment

3.6.1 Details of the proposed drainage arrangement for the Current Scheme and the anticipated drainage impact are discussed in the consolidated Drainage Impact Assessment (DIA) Report attached in **Appendix I** of this planning statement.

3.6.2 This revision of Site C intends to reinforce Site C as the sports and recreational hub in Sai Sha area by diversifying the sports and recreational facilities therein. At present, the surface runoff from Site C flows north towards Tolo Harbour water. An existing Tai Tung Wo Liu stream running through the centre of Site C will also convey stormwater towards Tolo Harbour. To mitigate the increase in surface runoff due to future change in paved to unpaved ratios of development areas, detention tank would be provided to control the discharge to Tai Tung Wo Liu, such that total runoff after the development would not exceed the amount before the development. Stormwater in the detention tank would be emptied after each storm event immediately within 24 hours. Therefore, the proposed development in Site C would not pose any significant drainage impact.

3.6.3 Che Ha Village situated in the middle of Site C as well as the eastern portion of Site C discharge surface runoff to Tai Tung Wo Liu Stream, whereas the western portion of Site C discharges to Tolo Harbour through the outfall before the shoreline to the north.

3.6.4 Basically, the surface runoff of Site C follows the land topography, which falls towards north to Tolo Harbour, the flow regime will be very similar to pre-development scenario but the proposed development in Site C improves drainage condition with managed turf surface and drainage system effectively guide overland flow towards the outfalls. Hence, no adverse drainage impact is envisaged.

Sewerage Impact Assessment

3.6.5 Details of the proposed sewage disposal arrangement for the Current Scheme and the anticipated sewerage impact are discussed in the consolidated Sewerage Impact Assessment (SIA) Report attached in **Appendix J** of this planning statement.

3.6.6 The proposed amendments of the Approved Scheme of Site C would only lead to an increase of 75 no. of persons and 11m^3/d Average Dry Weather Flow (ADWF). Such amendments bring negligible impact on the planned sewerage system. Hydraulic checking verified the proposed sewer would have sufficient capacity to cater for the minor change.

3.6.7 As with the Approved Scheme, the sewerage system serving the assessment area will mainly include two public sewage pumping stations (i.e. the Sai O Trunk Sewer Sewage Pumping Station (TSSPS) and Tseng Tau Sewage Pumping Station (SPS)) and the associated rising mains and gravity sewers. The collected sewage will be conveyed to the planned Sai O TSSPS with design capacity of 20,600m^3/d to serve all the existing and planned developments within its catchment areas. An interim stage is proposed to cater for the Site C recreation services before commissioning of Sai O TSSPS.

3.6.8 Therefore, no significant sewerage impact would be resulted.

Water Supply Impact Assessment

3.6.9 A Water Supply Impact Assessment (WSIA) has been conducted to assess the feasibility of the Current Scheme in terms of fresh and flushing water supply. This assessment also presents the assessment of the capacities of existing and proposed water supply systems needed to cater for the increase in water demands. The details of the consolidated WSIA are provided in **Appendix K**.

3.6.10 The water demand assessment for Site C is based on non-domestic Gross Floor Area. Since there is no change in Gross Floor Area of Site C, the total water demand remains the same for Site C which is 0.91MLD Fresh Water Demand and 0.12MLD Salt Water Demand.

3.6.11 Therefore, no significant water supply impact is envisaged.

3.7 Risk Considerations

Qualitative Risk Assessment for Chlorine Gas from Ma On Shan Water Treatment Works

3.7.1 The Ma On Shan Water Treatment Works (MOSWTW), which is located some 300m to the west of the Application Site, is currently classified as a potentially hazardous installation (PHI) due to its disinfection facilities which comprise a bulk storage of chlorine gas for which quantitative risk assessment covering a consultation zone of 1km from the chlorine store is required. It is, however, noted that upgrading works for the disinfection facilities in the MOSWTW (i.e. onsite chlorine generation (OSCG) plant) are now underway. The primary concern of the upgrading works is about the installation of on-site chlorine generation plant in the MOSWTW. Upon completion and operation of the new facilities, as explained by the government to the LegCo under Paper No. PWSC(2017-18)1, the transportation and storage of bulk of chlorine in the subject water treatment works will no longer be required.

3.7.2 The current proposed amendments concern Site C only, which is relatively far away from the MOSWTW, while the layout and development parameters for Site A and Site B are entirely identical to the Approved Scheme under planning application No. A/NE-SSH/120-1. In the previous planning approval under application No. A/NE-SSH/120, a preliminary Appraisal of Hazard Impact was conducted and mitigation measures such as proposed 10m high boundary fence walls; adoption of multi-storey car parks / podium development concept to raise the residential units from the passage of any leaked chlorine cloud; car park beneath the first 4 blocks (northernmost ones) at the Site A will be enclosed for the frontage facing the Ma On Shan WTW, so as to avoid passage of chlorine through it; and to consider, as a secondary defense, providing positive pressure at uses that would employ centralized air conditioning and with fresh air intake point located at not less than 10m aboveground, were only proposed at Site A due to its closest vicinity to the MOSWTW. No particular mitigation measure was required at Site B and Site C due to the presence of MOSWTW. Under current application, there is no change to Site A. According to latest information, it is understood that the completion date of the OSCG plant will be around 3rd quarter 2022, which is well before the anticipated occupation of the Proposed Development by 2025. It is also noted that the MOSWTW would be delisted from the PHI register by 2022. Upon completion of the OSCG plant, chlorine gas can be generated according to the demand and consumed upon production, thus bulk storage of chlorine gas drums within the MOSWTW, which constitutes a PHI, is no longer required. The corresponding risk associated with transportation and storage of bulk liquid chlorine at MOSWTW upon the proposed development will then be eliminated.

3.7.3 It should also be noted that a proposal has been submitted to TPB during the discharge of relevant planning approval condition under planning application No. A/NE-SSH/120-1 to remove the above-mentioned previously proposed hazard mitigation measures at Site A. Once the proposal is approved, same consideration will apply to the current proposed scheme, and no hazard mitigation measures will then be required for the proposed development at Site A accordingly.

Section 16 Planning Application for Amendments to the Approved Development (Application No. A/NE-SSH/120-1) – Amendments to Recreation and Sports Centre with Ancillary Facilities in Site C (Application No. A/NE-SSH/142)

Qualitative Risk Assessment for High Pressure Town Gas Pipeline at Sai Sha Road

3.7.4 It is understood that there are existing high pressure town gas pipelines along the existing Sai Sha Road.

3.7.5 The subject matter of current proposed amendments is Site C only, while the layout and development parameters for Site A and Site B are also entirely identical to the Approved Scheme under planning application No. A/NE-SSH/120-1. As compared with the Approved Scheme, the concerned amendments in Current Scheme are relatively far away and setback from Sai Sha Road with a separation distance of about 200m, which remains the 150 meters Consultation Zone as defined in the published “Guidance Note on Quantitative Risk Assessment Study for High Pressure Town Gas installations in Hong Kong”. The population at Site C is generally the same as the Approved Scheme as a result of the proposed amendments. As such, the proposed amendments will unlikely worsen the situation as compared with that in the Approved Scheme, and there will no adverse impact in terms of risk.

3.8 Air Ventilation Considerations

3.8.1 The overall layout of Site C under the current planning application (Proposed Scheme) is very similar to that of the approved application (Application No. A/NE-SSH/120-1) (Baseline Scheme). Site A and Site B are identical to the Approved Scheme under Application No. A/NE-SSH/120-1, while the amendments at Site C are very minor and without any increase in GFA. There is no change in terms of maximum building height for Site C. Since the open area of the Proposed Scheme is very similar to the Baseline Scheme, major wind corridors are maintained and the wind flow along the open area within the Site C would be comparable. An AVA-EE was previously submitted as part of the approved application under Application No. A/NE-SSH/120-1. The current Proposed Scheme is also compared with the Baseline Scheme in terms of AVA performance. Both the annual wind and summer wind have been compared (see **Appendix L**).

Annual Condition

NNE Wind

3.8.2 Annual NNE Wind mostly flows along the vast open space within Site C, the north of the recreation & sports centre with ancillary facilities and along the road connecting Sai Sha Road and Tseng Tau Village. The small and low-rise scattered blocks of the recreation & sports centre with ancillary facilities still retain the permeable design as the Baseline Scheme which will be beneficial to air ventilation (round shape buildings). The increase in height of Driving Range (by one storey) is slight. The wake area downstream would not be significantly larger as the concerned driving range is located in an open ground and is far away from other surrounding uses. On the other hand, the replacement of another driving range structure near the sports centre and the replacement of mini driving range structure in Proposed Scheme will benefit to AVA performance by allowing wind to flow through the area more smoothly with less obstruction. As illustrated in Figure 2A in **Appendix L**, the setback distance from access road to Tseng Tau Village and that to nearby village as provided in the Baseline Scheme, are generally maintained in current Proposed Scheme.

ESE Wind

3.8.3 Under ESE wind condition, wind would mainly pass through the vast open area within Site C to the north of the recreation & sports centre with ancillary facilities, and between Ma Kwu Lam Village and the recreation & sports centre with ancillary facilities (Figure 2B in **Appendix L** refers). Since the coverage of open area within Application Site is nearly the same in the Baseline Scheme and Proposed Scheme, the wind flow along the open area within Site C would be similar in both cases. For the area between Ma Kwu Lam Village and the proposed recreation & sports centre, as shown in Figure 2B in **Appendix L**, although there is reduced setback to the southwestern portion of the recreation & sports centre building (>5m), adequate building separation is still maintained between the concerned building and nearby Ma Kwu Lam Village (slightly <50m). The gap between the two areas is still wide enough to offer an effective ESE wind corridor for passage of incoming wind to Kwun Hang Village. The proposed increase in height of the driving range (by one storey) would create a wind shadow in the immediate leeward areas, but wind blockage to the surrounding environment would not be significant due to the limited receivers in the vicinity. Moreover, the replacement

of the driving range to the north of the recreation & sports centre with outdoor recreational areas allows for higher permeability for pedestrian level air movements.

E Wind

3.8.4 When wind comes from the east, air flow would mainly occur along the large open space within Site C, to the north of the recreation & sports centre with ancillary facilities and along the road connecting Sai Sha Road and Tseng Tau Village (Figure 2C in **Appendix L** refers). Under the Proposed Scheme, the ample open space within Site C offers free wind flow akin to the Baseline Scheme. As mentioned above, the one storey increase to the concerned driving range would form minimal wind blockage at pedestrian level and a slightly larger wake area immediately behind the concerned structure is expected. However, as it is far away from other surrounding uses, its impact will be negligible. Moreover, improved free flow is expected at the area to the north of the recreation & sports centre due to the replacement of the driving range to the north of the recreation & sports centre for an outdoor recreational area. As illustrated in Figure 2C in **Appendix L**, since the setback distance from the access road to Tseng Tau Village remains unchanged under the Proposed Scheme as compared to the Baseline Scheme, coupled with the access road to Tseng Tau Village, this path acts as the major air corridor to transfer E wind to downstream areas such as Tai Tung Village and Ma Kwu Lam Village. Despite the wind blockage of the recreation & sports centre with ancillary facilities which would leave a small wake of decreased wind flow behind the open space immediately downstream of the structure in both schemes, the negative impact would be mitigated by the permeable design and relatively low building height of the recreation & sports centre with ancillary facilities which aids wind penetration.

Summer Condition

S Wind

3.8.5 As for summer wind, wind from S direction mainly flow along the Sai Sha Road, the open area within site C and along the eastern boundary (Figure 2B in **Appendix L** refers). The overall building setback to the west of the recreation & sports centre near Ma Kwu Lam Village remain unchanged. The proposed outdoor sports and recreational facilities will not affect further downstream Che Ha Village. The slight increase in building shape and top level at a portion of recreation & sports centre building may increase blockage but such effect is insignificant and is limited to the immediate behind the block. However, the large separation distance (slightly <50m) between the recreation & sports centre building and nearby village, is considered ample for wind penetration. Therefore, the ventilation performance at Ma Kwu Lam and CHe Ha Village under the Proposed Scheme would not be worsened.

SSW Wind

3.8.6 As for summer wind, wind from SSW direction would mainly flow along Sai Sha Road, the open area within Site C and along the eastern boundary of the Site (Figure 2E in **Appendix L** refers). Sai Sha Road, aligning in approximately N-S and NNW-SSE directions, would be a main breezeway for free wind flow. The vast open area to the east of Site C could provide wind entrances to facilitate incoming wind. The building setback to the west of the recreation & sports centre near Ma Kwu Lam Village remain unchanged (60m wide) which would provide

passage for the prevailing wind to further reach the open space in the north. Despite the setback to the southwestern portion of the recreation & sports centre building (>5m), adequate building separation distance is still maintained between the concerned building and nearby village to slightly less than 50m, the width of this entrance is still considered ample for wind penetration. It is expected that the proposed outdoor sports and recreational facilities would not affect areas further downstream such as Che Ha Village from the air ventilation perspective. Additionally, the slight increase in building shape and top level at a portion of recreation & sports centre building may increase blockage, but such effect is insignificant as they are minor changes, and any impact is limited to the area immediate downstream of the block. Therefore, the ventilation performance at Ma Kwu Lam and Che Ha Village under the Proposed Scheme would be similar.

SSE Wind

3.8.7 SSE is one of the dominant winds in summer mainly flows along Sai Sha Road, the open space within Site C and along the eastern boundary (Figure 2F in **Appendix L** refers). Sai Sha Road is aligned in parallel to the N-S direction and NNW-SSE prevailing wind directions, and as such high wind availability flowing along Sai Sha Road is expected under SSE wind. Also, the open space to the east of Site C is desirable for all-level wind flow, maintaining wind comfort during the hot summertime. In addition, as indicated in Figure 2F in **Appendix L**, the setback distance to the west of the recreation & sports centre near Ma Kwu Lam Village stays unchanged in the Proposed Scheme which is effective for wind penetration. As mentioned above, the slight reduction in the setback and the separation to the southwest side of the recreation & sports centre building would not significantly affect wind at all levels flowing along the air pathway and reach the downstream areas such as Che Ha Village. The proposed change in building shape and the increase in building height (by 1m) at the western portion of the recreation & sports centre with ancillary facilities would not have any significant adverse impact on the wind flow pattern because the incoming wind could still flow atop the low-rise proposed development.

Summary

3.8.8 As the proposed changes to the development are minor and major wind corridors are kept in the Proposed Scheme, wind flow is predicted to be similar under both schemes. Minor increase to the building height as well as changes in building shape and disposition of the driving range and recreational centre would not impact the wind flow pattern significantly and some improvement to the wind environment may be possible due to the replacement of a golf driving range and a mini driving range with outdoor recreational area and landscape area/small E&M facilities respectively. Hence, no significant adverse impact on the surrounding pedestrian wind environment by the Proposed Scheme is expected when compared to the Baseline Scheme.

4 JUSTIFICATIONS FOR THE PROPOSED AMENDMENTS

4.1 Submission of Current Application is mainly due to Technical Change of Use in Planning Terms from Golf Driving Range to other Outdoor Sports & Recreational Uses

4.1.1 The current application is submitted due to the fact that the proposed replacement of golf driving range facilities (subsumed under 'Golf Course') with other outdoor sports and recreational facilities (subsumed under 'Place of Recreation, Sports or Culture') is considered as a material change of use that is neither a Class A nor Class B amendment under *TPB PG No. 36B – Town Planning Board Guidelines for Class A and Class B Amendments to Approved Development Proposal*. A fresh planning application under Section 16 of TPO is therefore submitted in order to facilitate the proposed minor amendments.

4.1.2 Nonetheless, according to the Definitions of Terms stipulated by the Board, 'Golf Course' (includes 'golf driving range') and 'Place of Recreation, Sports or Culture' are under the same Broad Use Terms – Recreation and Leisure. In this sense, the replacement of a 'golf driving range' with various kinds of outdoor sports and recreational facilities will not change the "Recreation and Leisure" nature of the proposed uses for Site C of which the planning intention of being a Sports and Recreation Hub remains unchanged. The current planning application is submitted primarily as a "technical amendments in planning terms" to allow greater flexibility for provision of recreational and leisure facilities, and therefore warrants the same favourable consideration from the Board.

4.1.3 It should also be highlighted that, according to Definitions of Terms, 'Golf Driving Range' is also subsumed under 'Place of Recreation, Sports or Culture':

Extract of Definition of Terms for 'Place of Recreation, Sports or Culture' by the Board:

Use	Definition	Remarks
Place of Recreation, Sports or Culture	Means any place or premises intended to be used for a place of recreation, sports or culture.	It includes, unless otherwise specified, civic centre and museum as defined in the Public Health and Municipal Services Ordinance (Cap. 132), arts centre, arts gallery, cultural complex, planetarium, concert hall, city hall/town hall, arts studio, rehearsal room for art performance, indoor recreation centre, indoor or outdoor stadium, sports ground/complex, fitness centre, gymnasium, public swimming pool/leisure pool, sports training ground, water recreation/sports centre, horse riding school, golf driving range, outdoor go-kart ground, radio control model aircraft flying field, outdoor radio control model car playing ground, motorcross ground, hobby farm, fishing ground, velodrome, oceanarium and aquarium, but excludes playground/playing field for local recreational use. ['Art Studio', **'Golf Driving Range'**, 'Public Swimming Pool', 'Horse Riding School', 'Boating Centre', 'Aquarium' subsumed under this term unless otherwise specified]

4.1.4 The Applicant wishes to clarify that, 'Golf Driving Range' would still be incorporated in Site C as applied under 'Place of Recreation, Sports or Culture' under the Current Scheme. In fact, there has been changing trends in sports development in Hong Kong and all over the world and it is difficult if not impossible to anticipate the changing needs of the society. Planning flexibility should be allowed to accommodate a diversity of sports and recreational uses at Site C that are all subsumed under the Broad Use Term of 'Place of Recreation, Sports or Culture'. No further planning application shall be required in terms of proposed sports and recreational uses which have been covered and subsumed under 'Place of Recreation, Sports or Culture' as of the current or future definitions as it may arise.

4.2 In Line with the Development Intention of Site C as a Recreational Hub

4.2.1 The Application Site (including Site C) is subject to various planning approvals with different design and layout. Nonetheless, the intention for recreational development in Site C has been consistent in the past planning approvals for decades since the designation of the subject "CDA" zone.

4.2.2 With detailed design on-going under the Approved Scheme, adhering to the development intention of creating a recreational hub in Site C, the Applicant takes the initiative to comprehensively review the Approved Scheme by proposing various types of outdoor sports and recreational facilities in Site C under the Current Scheme to meet the needs for more diverse facilities. It should be noted that for enhanced operational efficiency, the two golf driving ranges are proposed to be consolidated as one with adjustment in no. of bays provided. Through careful design refinement, the building height in mPD is only 3m taller than the Approved Scheme. By doing so, only minimal amendments to the Approved Scheme will be required to diversify the sports and recreational facilities to be provided as well as to allow greater flexibility in detailed design in the future.

4.2.3 In addition, the minor increase in the number of ancillary building blocks (mainly for toilet, changing room, service counter and equipment storage uses) in Site C is designated for enhancing the experience and convenience of users due to the proposed diversification of the outdoor sports and recreational facilities in Site C. The minor changes in development parameters will not constitute any departure from the development intention and intensity of Site C for being a recreational hub.

4.2.4 Moreover, the change in building form for the Recreation and Sports Centre can also facilitate access and encourage usage of the footbridges network in the Recreation and Sports Centre cluster.

4.3 Proposed Amendments to the Current Scheme are Very Minor in Nature with No Increase in the GFA

4.3.1 The Applicant proposes to divide the originally larger building structures in southeastern and western portions of Site C previously approved for the golf driving range use into several smaller structures to facilitate different types of sports and recreational facilities, and therefore there is no increase in GFA for Site C. While the number of blocks is increased with a view to enhancing users' convenience (e.g. toilets, changing rooms, service counters, equipment storages and shelters), the newly proposed blocks are mostly single-storey structures with small building footprints. The proposed smaller structures in the Current Scheme

would be widely distributed next to the recreational facilities in Site C. These ancillary facilities next to the relational facilities can provide the users with shorter walking distances for supporting uses, such as changing rooms and toilets and ultimately promoting convenience and enhance user experience as a whole.

4.3.2 Moreover, for the Welfare Centre & Public Vehicle Park Building, the increase of building height of 1m for fulfilment of technical requirements of Government Accommodation (Welfare Centre portion) based on the Technical Schedule under lease modification executed dated 21 October 2021 is also very minor in nature. There will be no change to the building footprint and building form as well.

4.3.3 There will be no change to the maximum building height of Site C as adopted under the Approved Scheme. As such, the proposed amendments are very minor in nature and total GFA in Site C in the Current Scheme will remain the same as the Approved Scheme.

4.4 Previous Planning and Design Merits of the Approved Scheme Remain Unchanged

4.4.1 The Applicant's commitment to creating a sustainable and liveable neighbourhood in Sai Sha area remains unchanged when formulating the Current Scheme. As detailed in Section 2.3 of the Planning Statement, all of the good planning and design attributes of the Approved Scheme have been retained. Besides, the planning gains as undertaken under the Approved Scheme in Site C will continue to materialise under the Current Scheme, including:-

- Public Open Space of not less than 8,000m^2 (including the area in both Site B and Site C)
- Recreation & Sports Facilities with total GFA of not more than 17,500m^2
- Eco-trail
- Welfare Centre and Public Vehicle Park Building with total GFA of not more than 14,560m^2
- 2 nos. of Reserved Primary School Sites with a site area of about 6,200m^2 each

4.5 Proposed Changes to the Approved Scheme are Technically Feasible with Worst Case Scenario Considered

4.5.1 As mentioned in Section 1, Site C was the subject of previous planning approvals for proposed comprehensive development (Application Nos. A/NE-SSH/120 and A/NE-SSH/120-1). Various technical assessments had been prepared and were all considered acceptable by relevant Government departments under the previous planning approvals.

4.5.2 The Current Scheme is very similar to the Approved Scheme, while the development parameters and planning merits of the Approved Scheme in Site A and Site B **remain unchanged**. The only changes are proposed due to diversification of recreational facilities and minor increase in the number of blocks to enhance the convenience of users in Site C.

4.5.3 In view of the very high similarity between the Approved Scheme and Current Scheme in terms of layout, the difference between the two schemes will be (i) number of visitors; and (ii) the change in hard landscape and soft landscape

associated with the replacement of golf driving ranges for other outdoor recreational facilities. These have been considered in relevant technical reports and being the "worst case scenario" when assessing the potential impacts of the Current Scheme.

4.5.4 The estimated number of visitors has been reviewed. With no change to the uses for Recreation & Sports Centre under the Approved Scheme, the change made under the Current Scheme in terms of proposed uses will only be confined to the outdoor recreational facilities, and hence the associated no. of users. **Table 4.1** below shows the comparison of visitors for various sports and recreational facilities between the Approved Scheme and the Current Scheme. As the proposed outdoor recreational facilities are mainly for leisure and training purposes, no spectator stands will be provided. Gathering of large crowd is not anticipated. Therefore, the visitors of the proposed outdoor recreational facilities will only be the users of facilities without spectators. Besides, since the proposed sports and recreational facilities are privately operated and managed, prior reservation for the use of facilities will be required with stringent control of no. of visitor per session. In particular, the cycling path within Site C is designed for training purpose only. Unlike other leisure cycling park which would result in gathering of substantial leisure cyclists, the training path for cycling will be reserved for athletes and trainers only on demand with restricted no. of users per session.

Table 4.1 – Comparison of Visitors for Various Sports and Recreational Facilities between the Approved Scheme and the Current Scheme

Indicative Outdoor Recreational Facilities (Subject to Detailed Design)	Assumed Visitors Per Session		Difference (b)-(a)
	Approved Scheme (A/NE-SSH/120-1) (a)	Current Scheme (b)	
Golf Driving Range	172	140	-32
Tennis Court	15 (3 courts under Approved Scheme)	25 (5 courts Current Scheme)	+10
Football Court	-	50	+50
Lacrosse	-	15	+15
Surfing Pool	-	2 (1 person surfing and 1 coach)	+2
Training Path for Cycling	-	30	+30
Total	187	262	+75

4.5.5 It is anticipated that the outdoor recreational facilities that would attract the most no. of visitors will be golf driving range. Other facilities such as tennis court and football court are not as "visitor generating" as golf driving range. With only 1 golf driving range remained under the Current Scheme, the impact on diversification of recreational facilities is anticipated to be negligible. Based on the above assumptions, Traffic Impact Assessment, Sewerage Impact Assessment and qualitative review on risk associated with Ma On Shan Water Treatment Works and high pressure town gas pipeline at Sai Sha Road have been conducted and no adverse traffic, sewerage and risk impacts are anticipated aroused from the very minor increase in visitors for Site C.

4.5.6 In landscape terms, the proposed layout of Current Scheme for Site C has already taken into account the location of existing woodlands and individual trees. As compared with the Approved Scheme, no additional trees will be felled except for 13 nos. of trees that were damaged by typhoons in 2021. 1,700 nos. of new trees will be planted on top of 4,436 nos. of retained trees and 43 nos. of transplanted trees to further enhance the greenery of the Application Site. No significant landscape impact is anticipated.

4.5.7 In ecological terms, without significant change in overall layout and recreational nature of Site C, and negligible change in population, the Ecological Impact Assessment conducted concludes that no unacceptable ecological impacts are identified.

4.5.8 As demonstrated in the assessment reports enclosed, it is noted that the Current Scheme is technically acceptable and shall not generate any significant impacts in terms of visual, landscape, traffic, environmental, ecology, engineering and risk aspects.

5 CONCLUSION

5.1 This Planning Application is submitted to the Board under Section 16 of the Town Planning Ordinance to propose amendments to Site C of the Approved Scheme (i.e. the subject matter of the current planning application). The proposed amendments are mainly made to refine and enhance the Approved Scheme upon detailed design associated with technical change of use in planning terms from golf driving range facilities to diversified sports and recreational facilities.

5.2 While the development parameters and planning merits of the Approved Scheme in **Site A and Site B remains unchanged**, the minor amendments proposed in the Current Scheme are mainly the change and diversification of recreational facilities with minor increase in the number of blocks as ancillary structures for recreational facilities to enhance the convenience of users in Site C.

5.3 The changes to the development parameters of Site C of the Approved Scheme are minimal. The proposed amendments to the Approved Scheme are mainly due to further refinements in design. The planning and design merits of the Approved Scheme will be inherited in the Current Scheme.

5.4 In view of the above justifications with technical feasibility ascertained, the Board is sincerely requested to approve this planning application to facilitate the timely implementation of the proposed comprehensive development.

Appendix A

Indicative Development Schedule (Overall) (with no change to Site A and Site B under Application No. A/NE-SSH/120-1)

(Same as that under FI 2 submitted on 23 June 2022)

Overall Indicative Development Schedule of the Proposed Amendment Scheme

The Overall Development (same as Application No. A/NE-SSH/120-1)	
Total Application Site Area (1)	About 748,400 m^2
Domestic GFA (2)	Not more than 538,213 m^2
Domestic Plot Ratio (3)	About 0.832
No. of Residential Storeys (4)	16-31 storeys
Site Coverage (above ground level) (3)	Domestic – not more than 33.33% Non-Domestic – not more than 80% (below 15m)
No. of Residential Towers	46
No. of Flats	Not more than 9,700
Average Flat Size	About 55.49 m^2
Anticipated Population (5)	About 29,100
Residents' Club GFA (6)	Not more than 13,446 m^2
Commercial GFA (7)	Not more than 12,077 m^2
Transport Interchange GFA (8)	Not more than 9,000 m^2
Recreation & Sports Centre with Ancillary Facilities GFA (8)	Not more than 17,500 m^2
Welfare Centre GFA	Not more than 5,560m^2
Public Vehicle Park GFA (8)	Not more than 9,000 m^2

Section 16 Planning Application for Amendments to the Approved Development (Application No. A/NE-SSH/120-1) –
Amendments to Recreation and Sports Centre with Ancillary Facilities in Site C
(Applicant No. A/NE-SSH/142)

Site A (same as Application No. A/NE-SSH/120-1):	
Development Site Area (9)	About 115,559 m^2
Domestic Portion	
Domestic GFA	Phase 1: Not more than 225,080 m^2 Phase 2: Not more than 15,170 m^2
No. of Blocks	Phase 1: 16 blocks Phase 2: 1 block
No. of Residential Storeys (4)	22 - 31 storeys
No. of Flats	Not more than 4,300
Average Flat Size	About 55.87 m^2
Anticipated Population (5)	About 12,900
Non-Domestic Portion	
Total Commercial GFA (10)	Not more than 6,788 m^2
Transport Interchange GFA (8)	Not more than 4,500 m^2
Residents' Club GFA (6)	Not more than 6,006 m^2
No. of Blocks (11) (12)	Not more than 28
No. of Storeys	Not more than 4 (including 1 to 3 levels of basement carpark / M&E)

Site B (same as Application No. A/NE-SSH/120-1):	
Development Site Area (9)	About 164,366 m^2
Domestic Portion	
Domestic GFA	Not more than 297,573 m^2
No. of Blocks	29
No. of Residential Storeys (4)	16 - 31 storeys
No. of Flats	Not more than 5,400
Average Flat Size	About 55.11 m^2
Anticipated Population (5)	About 16,200
Non-Domestic Portion	
Total Commercial GFA (10)	Not more than 5,289 m^2
Transport Interchange GFA (8)	Not more than 4,500 m^2
Residents' Club GFA (6)	Not more than 7,440 m^2
No. of Blocks (11) (12)	Not more than 25
No. of Storeys	Not more than 3 (including 2 levels of basement carpark / M&E)

Section 16 Planning Application for Amendments to the Approved Development (Application No. A/NE-SSH/120-1) –
Amendments to Recreation and Sports Centre with Ancillary Facilities in Site C
(Applicant No. A/NE-SSH/142)

Site C:	
Development Site Area (9)	About 366,983 m^2
Total No. of Non-domestic Blocks	14 (12)
Recreation & Sports Centre with Ancillary Facilities (13) (14)	
Non-domestic GFA (8)	Not more than 17,500m^2 • Sports Centre & Ancillary Facilities: not more than 5,500m^2 • Recreation Centre & Ancillary Facilities: Not more than 8,500m^2 • Retail & F&B Facilities: Not more than 3,500m^2
No. of Blocks	13 (12)
No. of Storeys	3 storeys above 2 levels of basement
Welfare Centre & Public Vehicle Park Building (15)	
Non-domestic GFA	Not more than 14,560m^2 • Welfare Centre: Not more than 5,560m^2 • Public Vehicle Park: Not more than 9,000m^2 (8)
No. of Blocks	1
No. of Storeys	5 storeys above 1 level of basement carpark
Reserved Primary School Sites	
Total Site Area	Not less than 12,400m^2 (i.e. not less than 6,200m^2 each)

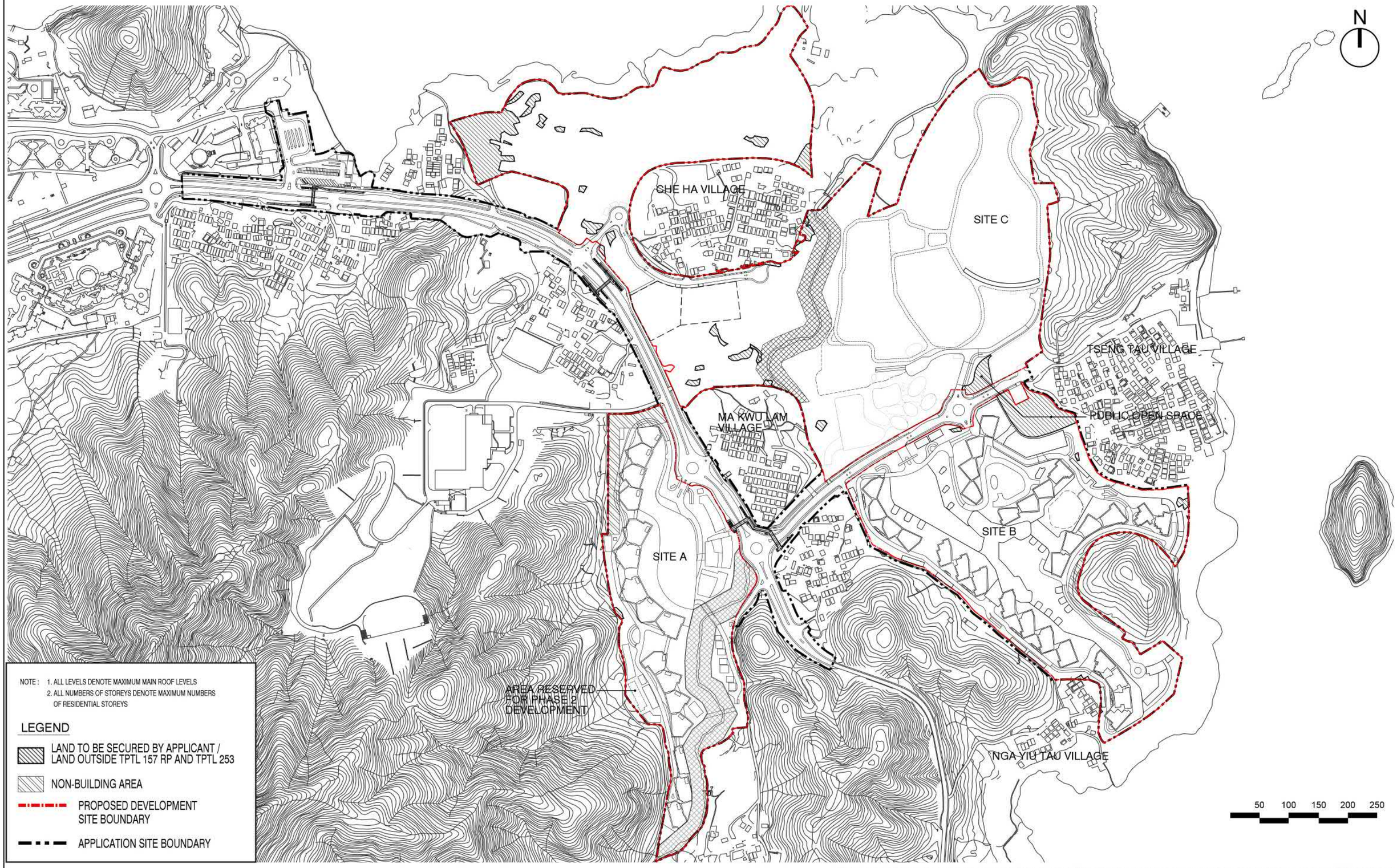
Remarks:

(1) Including Development Site Area of 646,908 m^2 (i.e. excluding Sai Sha Road widening works area and areas to be provided as sewage pumping station near Tseng Tau Village).
(2) Including 390m^2 for two existing houses in Site C to be retained.
(3) Calculated based on Development Site Area.
(4) Over 1 to 3 levels of carpark / M&E / residential clubhouse facilities.
(5) Based on a person-per-flat ratio of 3.0.
(6) The clubhouse GFA is about 2.5% of the domestic GFA for Site A and Site B respectively.
(7) Commercial GFA refers to commercial uses ('Eating Place' and 'Shop and Services'), 'School' (kindergarten, nursery, language, computer, commercial and tutorial schools, art school, ballet and other types of schools providing interest / hobby related courses), 'Place of Entertainment' and 'Religious Institution' (church).
(8) Under the approved scheme (Application No. A/NE-SSH/61-2), it also included the provision of Sports Centre and Ancillary Facilities, as well as Public Vehicle Park. GFAs of these facilities are specified in the development schedule.
(9) Excluding Sai Sha Road widening works area and sewage pumping station near Tseng Tau Village within Application Site boundary.
(10) Further to Remark (7) above, specifically, 2 nos. of kindergarten / nursery of not less than 6 classrooms each (1 each in Site A and Site B) and a church in Site A (commercial GFA of not less than 1,500m^2) will be provided.
(11) The main commercial clusters and transport interchanges are located at the entrance of Site A and Site B near Sai Sha Road, while other smaller commercial facilities / clubhouse blocks are scattered around the Development Sites for convenience and avoidance of massive building structures.
(12) Exclude the structures solely for ancillary M&E and shuttle lift uses in Site A, Site B and Site C.
(13) Recreation & Sports Centre with Ancillary Facilities include 'Place of Recreation, Sports or Culture', 'Place of Entertainment', 'Eating Place', 'Shop and Services' and / or 'Indoor Playground'.
(14) Recreation & Sports Centre with Ancillary Facilities include ancillary M&E facilities for the power supply of Sites A to C. As the M&E facilities are ancillary and directly related to the development, the associated GFA of not more than 3000m^2 shall be disregarded in this planning application in accordance with the provision of the Notes of the OZP.
(15) Light bus layby, car parking, and loading & unloading provisions subject to TD's approval.
(16) Car parking, loading and unloading provisions for the Proposed Development will be provided in accordance with TIA.

Appendix B

Indicative Master Layout Plan, Floor Plans and Sections (Overall) (with no change to Site A and Site B under Application No. A/NE-SSH/120-1)

(Consolidated based on FI 1 submitted on 13 June 2022)

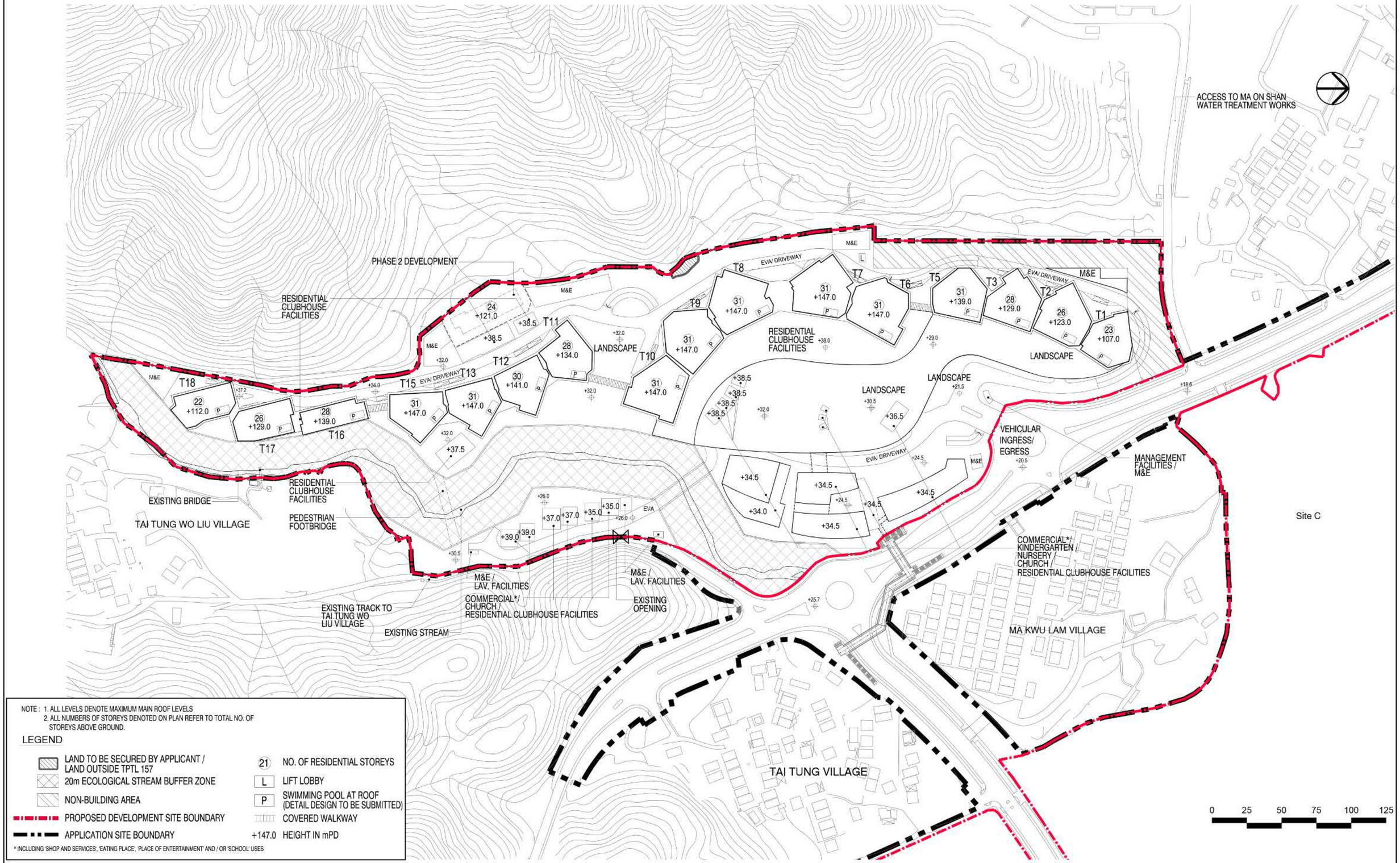


Remark: No change to layout of Site A and Site B as approved under Application No. A/NE-SSH/120-1

Title

Overall Indicative Master Layout Plan

Checked	DH	Drawn	PW
Rev	0	Date	Sep 2022
Scale		Figure	



NOTE : 1. ALL LEVELS DENOTE MAXIMUM MAIN ROOF LEVELS
2. ALL NUMBERS OF STOREYS DENOTED ON PLAN REFER TO TOTAL NO. OF STOREYS ABOVE GROUND.

LEGEND

- LAND TO BE SECURED BY APPLICANT / LAND OUTSIDE TPTL 157
- 20m ECOLOGICAL STREAM BUFFER ZONE
- NON-BUILDING AREA
- PROPOSED DEVELOPMENT SITE BOUNDARY
- APPLICATION SITE BOUNDARY
- 21 NO. OF RESIDENTIAL STOREYS
- L LIFT LOBBY
- P SWIMMING POOL AT ROOF (DETAIL DESIGN TO BE SUBMITTED)
- COVERED WALKWAY
- +147.0 HEIGHT IN mPD

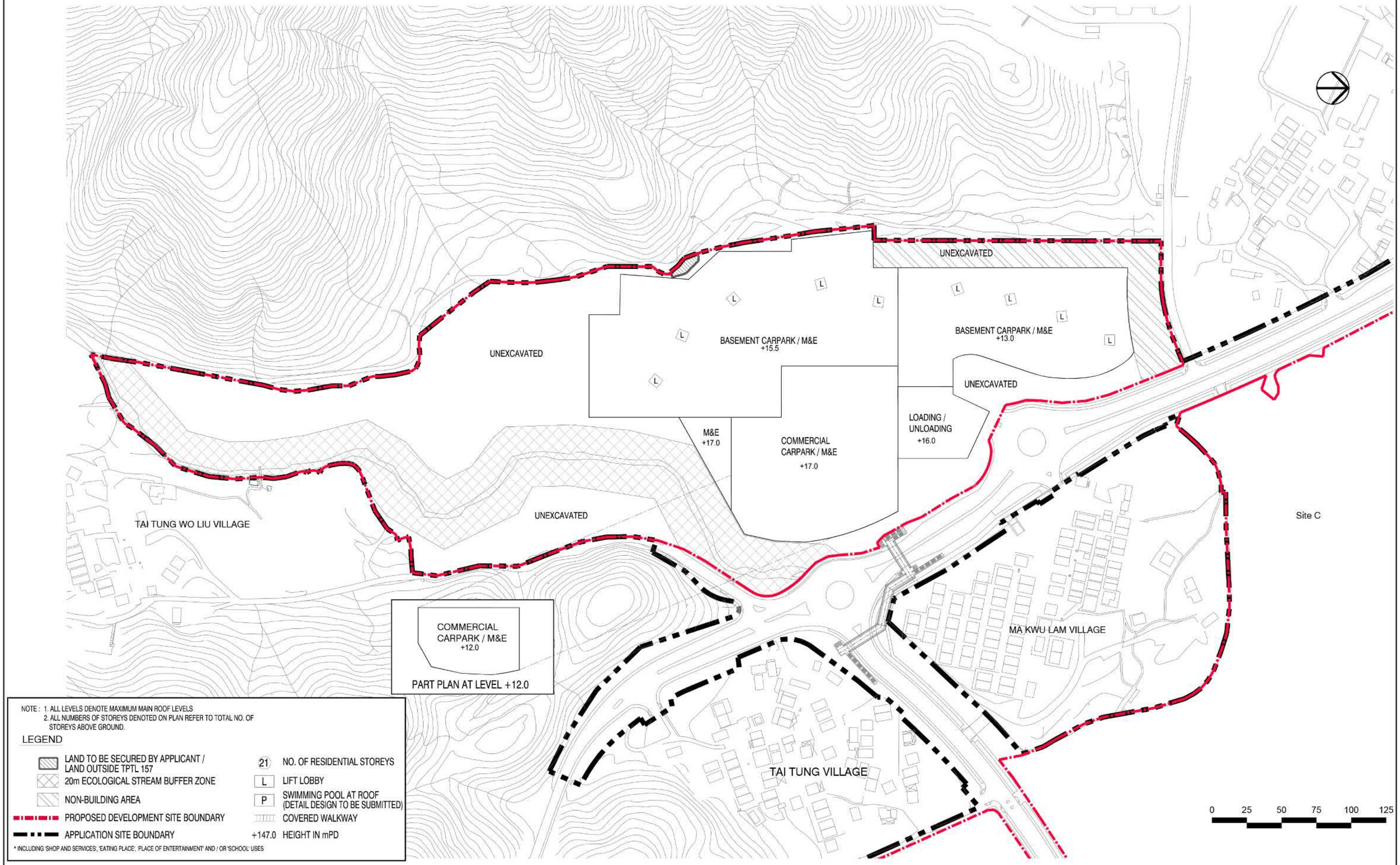
* INCLUDING 'SHOP AND SERVICES', 'EATING PLACE', 'PLACE OF ENTERTAINMENT' AND / OR 'SCHOOL' USES

Remark: No change to layout of Site A and Site B as approved under Application No. A/NE-SSH/120-1

Title

Indicative Master Layout Plan - Site A

Checked	DH	Drawn	PW
Rev	0	Date	Apr 2020
Scale		Figure	



NOTE : 1. ALL LEVELS DENOTE MAXIMUM MAIN ROOF LEVELS
2. ALL NUMBERS OF STOREYS DENOTED ON PLAN REFER TO TOTAL NO. OF STOREYS ABOVE GROUND.

LEGEND

- LAND TO BE SECURED BY APPLICANT / LAND OUTSIDE TPTL 157
- 20m ECOLOGICAL STREAM BUFFER ZONE
- NON-BUILDING AREA
- PROPOSED DEVELOPMENT SITE BOUNDARY
- APPLICATION SITE BOUNDARY
- 21 NO. OF RESIDENTIAL STOREYS
- L LIFT LOBBY
- P SWIMMING POOL AT ROOF (DETAIL DESIGN TO BE SUBMITTED)
- COVERED WALKWAY
- +147.0 HEIGHT IN mPD

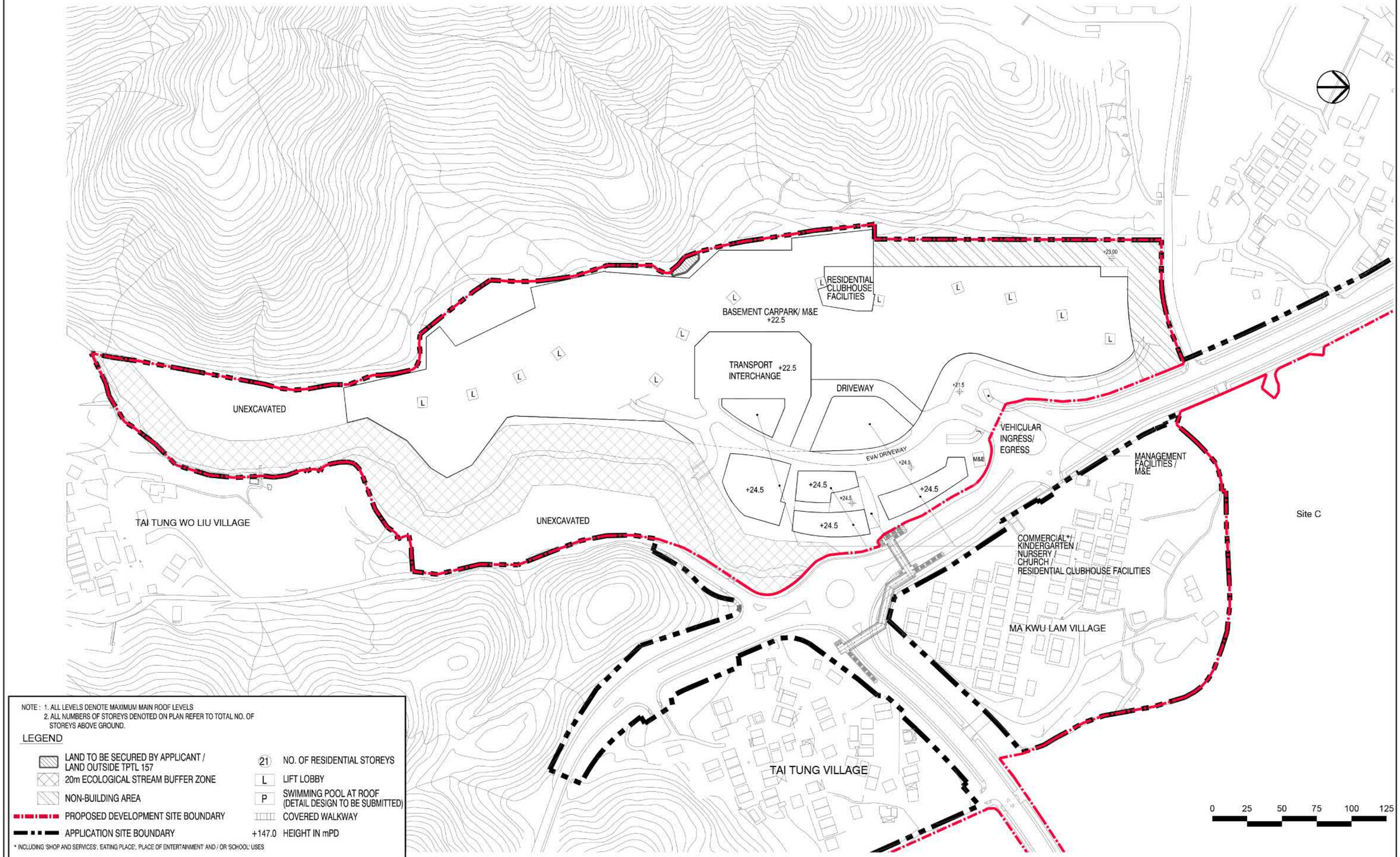
* INCLUDING 'SHOP AND SERVICES', 'EATING PLACE', 'PLACE OF ENTERTAINMENT' AND / OR 'SCHOOL' USES

Remark: No change to layout of Site A and Site B as approved under Application No. A/NE-SSH/120-1

Title

Indicative Master Layout Plan (+18.5) – Site A

Checked	DH	Drawn	PW
Rev	0	Date	Apr 2020
Scale		Figure	



NOTE : 1. ALL LEVELS DENOTE MAXIMUM MAIN ROOF LEVELS
2. ALL NUMBERS OF STOREYS DENOTED ON PLAN REFER TO TOTAL NO. OF STOREYS ABOVE GROUND.

LEGEND

	LAND TO BE SECURED BY APPLICANT / LAND OUTSIDE TPTL 157	21	NO. OF RESIDENTIAL STOREYS
	20m ECOLOGICAL STREAM BUFFER ZONE	L	LIFT LOBBY
	NON-BUILDING AREA	P	SWIMMING POOL AT ROOF (DETAIL DESIGN TO BE SUBMITTED)
	PROPOSED DEVELOPMENT SITE BOUNDARY		COVERED WALKWAY
	APPLICATION SITE BOUNDARY	+147.0	HEIGHT IN mPD

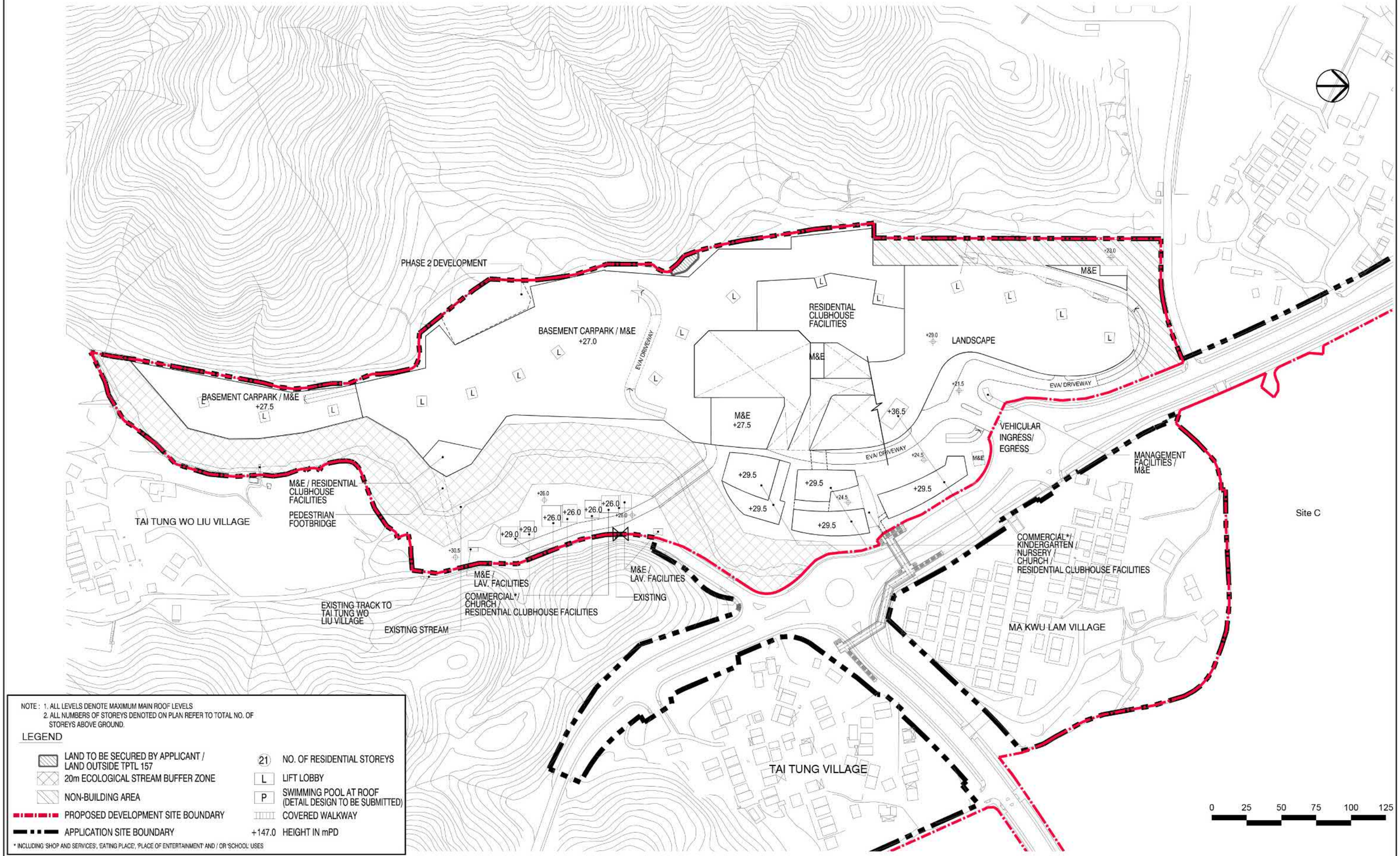
* INCLUDING 'SHOP AND SERVICES', 'EATING PLACE', 'PLACE OF ENTERTAINMENT' AND / OR 'SCHOOL' USES

Remark: No change to layout of Site A and Site B as approved under Application No. A/NE-SSH/120-1

Title

Indicative Master Layout Plan (+24.5) – Site A

Checked	DH	Drawn	PW
Rev	0	Date	Apr 2020
Scale		Figure	



NOTE : 1. ALL LEVELS DENOTE MAXIMUM MAIN ROOF LEVELS
2. ALL NUMBERS OF STOREYS DENOTED ON PLAN REFER TO TOTAL NO. OF STOREYS ABOVE GROUND.

LEGEND

- LAND TO BE SECURED BY APPLICANT / LAND OUTSIDE TPTL 157
- 20m ECOLOGICAL STREAM BUFFER ZONE
- NON-BUILDING AREA
- PROPOSED DEVELOPMENT SITE BOUNDARY
- APPLICATION SITE BOUNDARY
- (21) NO. OF RESIDENTIAL STOREYS
- L LIFT LOBBY
- P SWIMMING POOL AT ROOF (DETAIL DESIGN TO BE SUBMITTED)
- COVERED WALKWAY
- +147.0 HEIGHT IN mPD

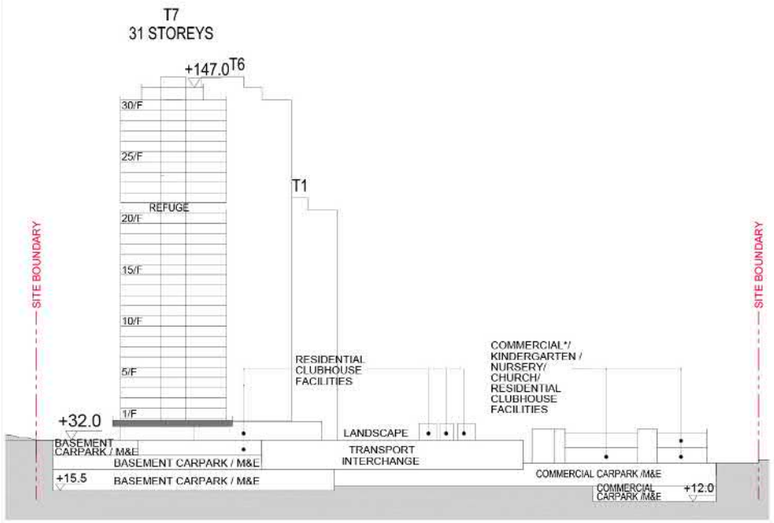
* INCLUDING 'SHOP AND SERVICES', 'EATING PLACE', 'PLACE OF ENTERTAINMENT' AND / OR 'SCHOOL' USES

Remark: No change to layout of Site A and Site B as approved under Application No. A/NE-SSH/120-1

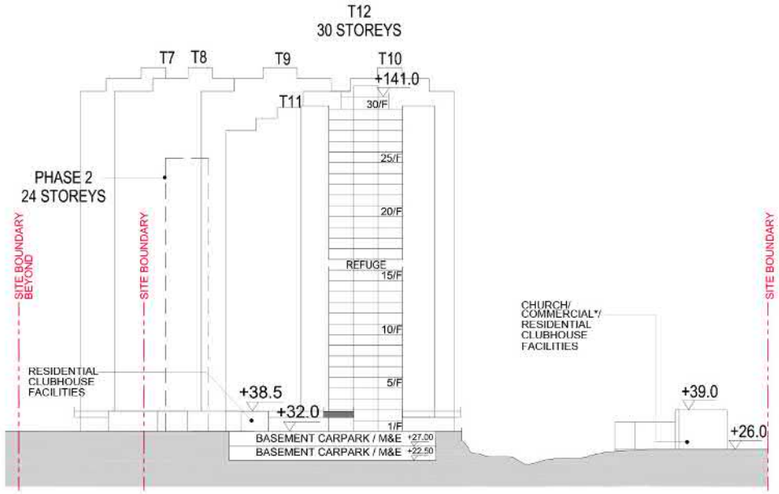
Title

Indicative Master Layout Plan (+29.5) - Site A

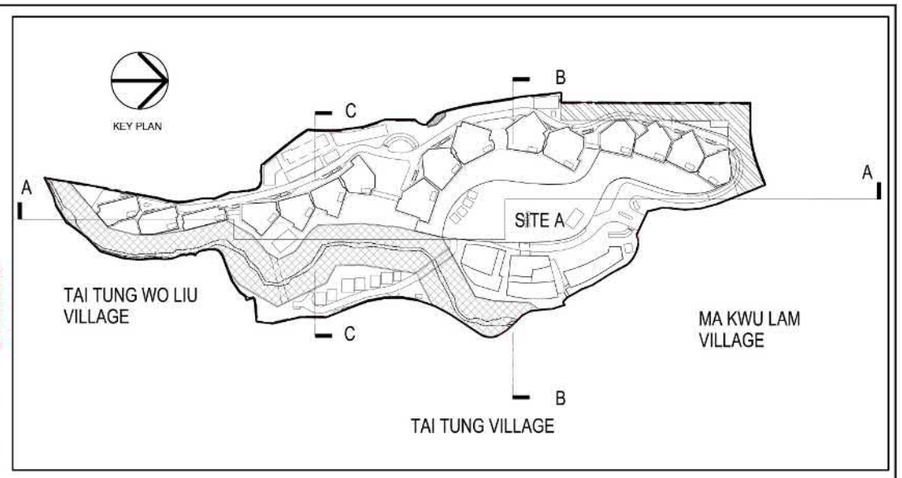
Checked	DH	Drawn	PW
Rev	0	Date	Apr 2020
Scale		Figure	

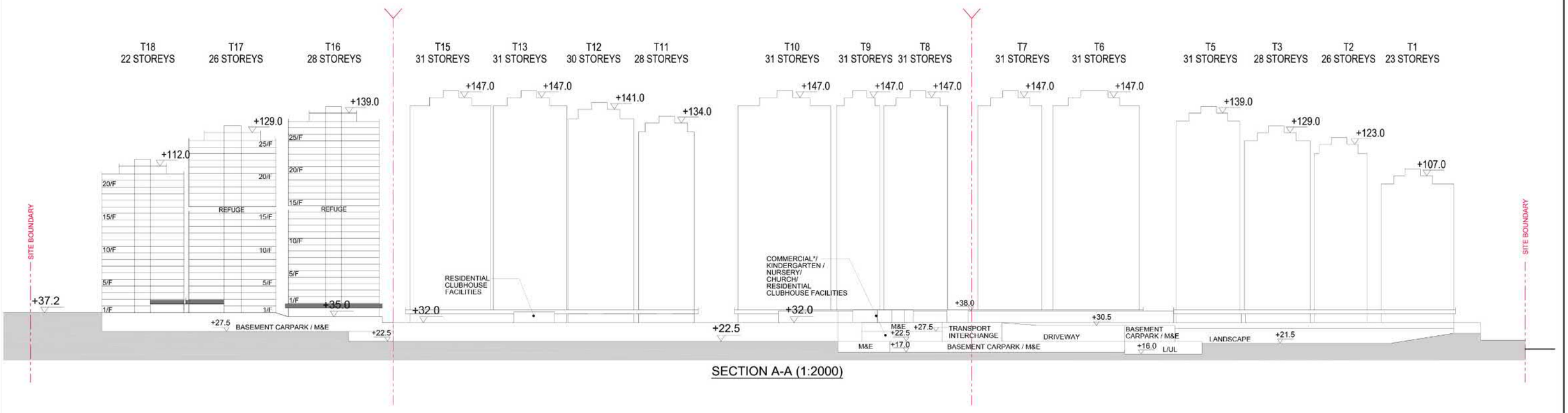


SECTION B-B



SECTION C-C





SECTION A-A (1:2000)

NOTE : 1. ALL LEVELS DENOTE MAXIMUM MAIN ROOF LEVELS
2. ALL NUMBERS OF STOREYS DENOTED ON PLAN REFER TO TOTAL NO. OF STOREYS ABOVE GROUND.

LEGEND

+147.0 HEIGHT IN mPD

0 20 40 60 80 100m

Remark: No change to layout of Site A and Site B as approved under Application No. A/NE-SSH/120-1

Title

Indicative Section Plan - Site A

Checked	DH	Drawn	PW
Rev	0	Date	Apr 2020
Scale		Figure	

SITE C

NOTE : 1. ALL LEVELS DENOTE MAXIMUM MAIN ROOF LEVELS
2. ALL NUMBERS OF STOREYS DENOTED ON PLAN REFER TO TOTAL NO. OF STOREYS ABOVE GROUND.

LEGEND

- LAND TO BE SECURED BY APPLICANT / LAND OUTSIDE TPTL157
- 20m ECOLOGICAL STREAM BUFFER ZONE
- NON-BUILDING AREA
- PROPOSED DEVELOPMENT SITE BOUNDARY
- APPLICATION SITE BOUNDARY
- (38) NO. OF RESIDENTIAL STOREYS
- L LIFT LOBBY
- P SWIMMING POOL AT ROOF (DETAIL DESIGN TO BE SUBMITTED)
- COVERED WALKWAY
- +131.0 HEIGHT IN mPD

* INCLUDING 'SHOP AND SERVICES', 'EATING PLACE', 'PLACE OF ENTERTAINMENT' AND / OR 'SCHOOL' USES

Remark: No change to layout of Site A and Site B as approved under Application No. A/NE-SSH/120-1

Title	Indicative Master Layout Plan - Site B	Checked	DH	Drawn PW
		Rev	0	Date Apr 2020
		Scale		Figure

SITE C

UNEXCAVATED

UNEXCAVATED

BASEMENT CARPARK / M&E +2.0

PUBLIC OPEN SPACE

L/UL /M&E +2.0

+2.0

M&E / ANCILLARY UTILITY INSTALLATION

M&E

NGA YIU TAU VILLAGE

BASEMENT CARPARK / M&E +3.0

+2.0

M&E / ANCILLARY UTILITY INSTALLATION

+5.0

RESIDENTIAL CLUBHOUSE FACILITIES / M&E

M&E / ANCILLARY UTILITY INSTALLATION

UNEXCAVATED

BASEMENT CARPARK / M&E +3.0

+2.0

+5.0

+5.0

+5.0

+5.0

RESIDENTIAL CLUBHOUSE FACILITIES / M&E

RESIDENTIAL CLUBHOUSE FACILITIES / M&E

TSENG TAU VILLAGE

0 25 50 75 100 125

NOTE : 1. ALL LEVELS DENOTE MAXIMUM MAIN ROOF LEVELS
2. ALL NUMBERS OF STOREYS DENOTED ON PLAN REFER TO TOTAL NO. OF STOREYS ABOVE GROUND.

LEGEND

- LAND TO BE SECURED BY APPLICANT / LAND OUTSIDE TPTL157
- 20m ECOLOGICAL STREAM BUFFER ZONE
- NON-BUILDING AREA
- PROPOSED DEVELOPMENT SITE BOUNDARY
- APPLICATION SITE BOUNDARY
- (38) NO. OF RESIDENTIAL STOREYS
- L LIFT LOBBY
- P SWIMMING POOL AT ROOF (DETAIL DESIGN TO BE SUBMITTED)
- COVERED WALKWAY
- +131.0 HEIGHT IN mPD

* INCLUDING 'SHOP AND SERVICES', 'EATING PLACE', 'PLACE OF ENTERTAINMENT' AND / OR 'SCHOOL' USES

Remark: No change to layout of Site A and Site B as approved under Application No. A/NE-SSH/120-1

Title

Indicative Master Layout Plan (+2) - Site B

Checked	DH	Drawn	PW
Rev	0	Date	Apr 2020
Scale		Figure	

SITE C

UNEXCAVATED

RESIDENTIAL CLUBHOUSE FACILITIES +8.0

COURTYARD +10.0

TRANSPORT INTERCHANGE +10.0

E/A/DRIVEWAY

+11.5~13.00

COMMERCIAL* / KINDERGARTEN / NURSERY / RESIDENTIAL CLUBHOUSE FACILITIES

SEWAGE PUMPING STATION

PUBLIC OPEN SPACE

SHUTTLE LIFT LOBBY

+11.5

COMMERCIAL* / KINDERGARTEN / NURSERY/ RESIDENTIAL CLUBHOUSE FACILITIES

BASEMENT CARPARK / M&E +8.0

BASEMENT CARPARK / M&E +8.0

EXISTING WOODLAND

M&E

NGA YIU TAU VILLAGE

EVA / DRIVEWAY

BASEMENT CARPARK / M&E +8.0

BASEMENT CARPARK / M&E +8.0

TSENG TAU VILLAGE

RESIDENTIAL CLUBHOUSE FACILITIES

RESIDENTIAL CLUBHOUSE FACILITIES

RESIDENTIAL CLUBHOUSE FACILITIES

+11.0

+7.5

0 25 50 75 100 125

NOTE : 1. ALL LEVELS DENOTE MAXIMUM MAIN ROOF LEVELS
2. ALL NUMBERS OF STOREYS DENOTED ON PLAN REFER TO TOTAL NO. OF STOREYS ABOVE GROUND.

LEGEND

- LAND TO BE SECURED BY APPLICANT / LAND OUTSIDE TPTL157
- 20m ECOLOGICAL STREAM BUFFER ZONE
- NON-BUILDING AREA
- PROPOSED DEVELOPMENT SITE BOUNDARY
- APPLICATION SITE BOUNDARY
- (38) NO. OF RESIDENTIAL STOREYS
- L LIFT LOBBY
- P SWIMMING POOL AT ROOF (DETAIL DESIGN TO BE SUBMITTED)
- COVERED WALKWAY
- +131.0 HEIGHT IN mPD

* INCLUDING 'SHOP AND SERVICES', 'EATING PLACE', 'PLACE OF ENTERTAINMENT' AND / OR 'SCHOOL' USES

Remark: No change to layout of Site A and Site B as approved under Application No. A/NE-SSH/120-1

Title

Indicative Master Layout Plan (+10) - Site B

Checked	DH	Drawn	PW
Rev	0	Date	Apr 2020
Scale		Figure	

SITE C

BASEMENT CARPARK / M&E +12.5

LANDSCAPE +15.0

RESIDENTIAL CLUBHOUSE FACILITIES

+15.0

+12.5

+16.0

+16.0

MANAGEMENT FACILITIES/M&E

BASEMENT CARPARK / M&E +12.5

COMMERCIAL* / KINDERGARTEN / NURSERY / RESIDENTIAL CLUBHOUSE FACILITIES

+18.0

+10.0

COURTYARD

RESIDENTIAL CLUBHOUSE FACILITIES +15.0

UPPER PART OF TRANSPORT INTERCHANGE

EVA/DRIVEWAY

SEWAGE PUMPING STATION

RESIDENTIAL CLUBHOUSE FACILITIES +15.0

LANDSCAPE +15.0

+16.5

FOOTBRIDGE LINK

PUBLIC OPEN SPACE

RESIDENTIAL CLUBHOUSE FACILITIES

+19.0

+15.0

+19.0

+19.0

+19.0

+19.0

+19.0

+19.0

+15.0

+11.0

SHUTTLE LIFT LOBBY

COMMERCIAL* / KINDERGARTEN / NURSERY/ RESIDENTIAL CLUBHOUSE FACILITIES

T28

T29

EXISTING WOODLAND

T30

EVA/DRIVEWAY

+16.0

M&E

NGA YIU TAU VILLAGE

M&E

+23.0

T23

T27

T26

T25

EVA / DRIVEWAY

T31

+11.0

T32

TSENG TAU VILLAGE

+11.0

+15.5

+15.5

+15.0

RESIDENTIAL CLUBHOUSE FACILITIES

T33

+15.5

RESIDENTIAL CLUBHOUSE FACILITIES

+15.5

+15.5

+7.5

+7.5

RESIDENTIAL CLUBHOUSE FACILITIES

0 25 50 75 100 125

NOTE : 1. ALL LEVELS DENOTE MAXIMUM MAIN ROOF LEVELS
2. ALL NUMBERS OF STOREYS DENOTED ON PLAN REFER TO TOTAL NO. OF STOREYS ABOVE GROUND.

LEGEND

- LAND TO BE SECURED BY APPLICANT / LAND OUTSIDE TPTL157
- 20m ECOLOGICAL STREAM BUFFER ZONE
- NON-BUILDING AREA
- PROPOSED DEVELOPMENT SITE BOUNDARY
- APPLICATION SITE BOUNDARY
- (38) NO. OF RESIDENTIAL STOREYS
- L LIFT LOBBY
- P SWIMMING POOL AT ROOF (DETAIL DESIGN TO BE SUBMITTED)
- COVERED WALKWAY
- +131.0 HEIGHT IN mPD

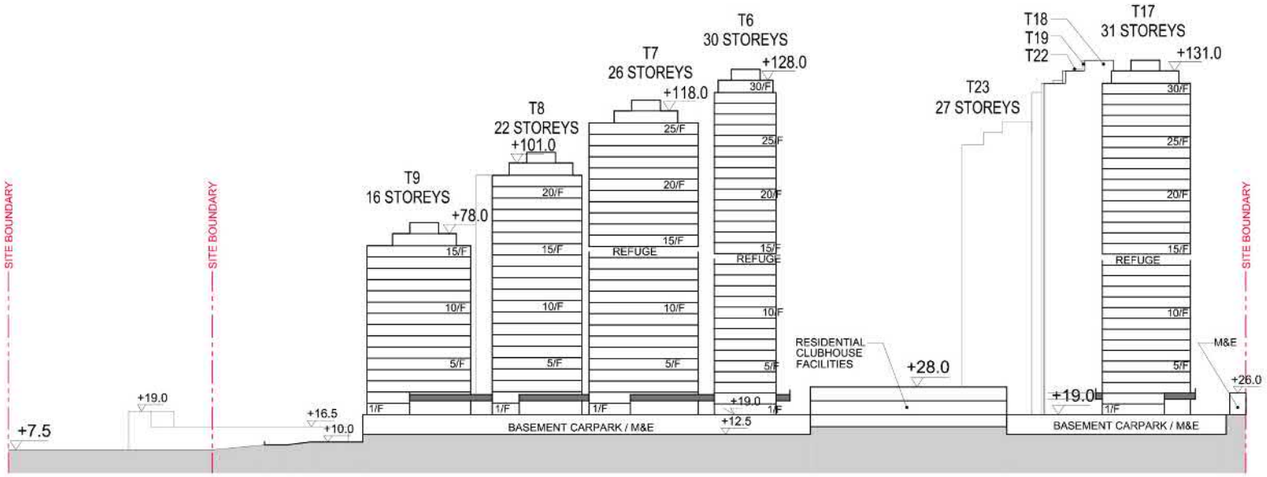
* INCLUDING 'SHOP AND SERVICES', 'EATING PLACE', 'PLACE OF ENTERTAINMENT' AND / OR 'SCHOOL' USES

Remark: No change to layout of Site A and Site B as approved under Application No. A/NE-SSH/120-1

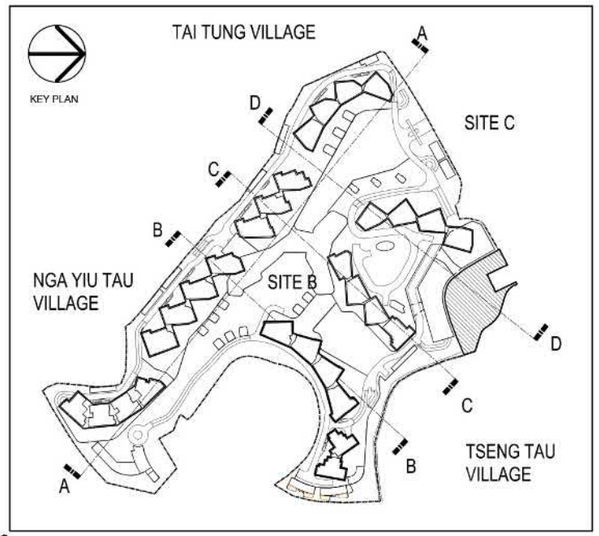
Title

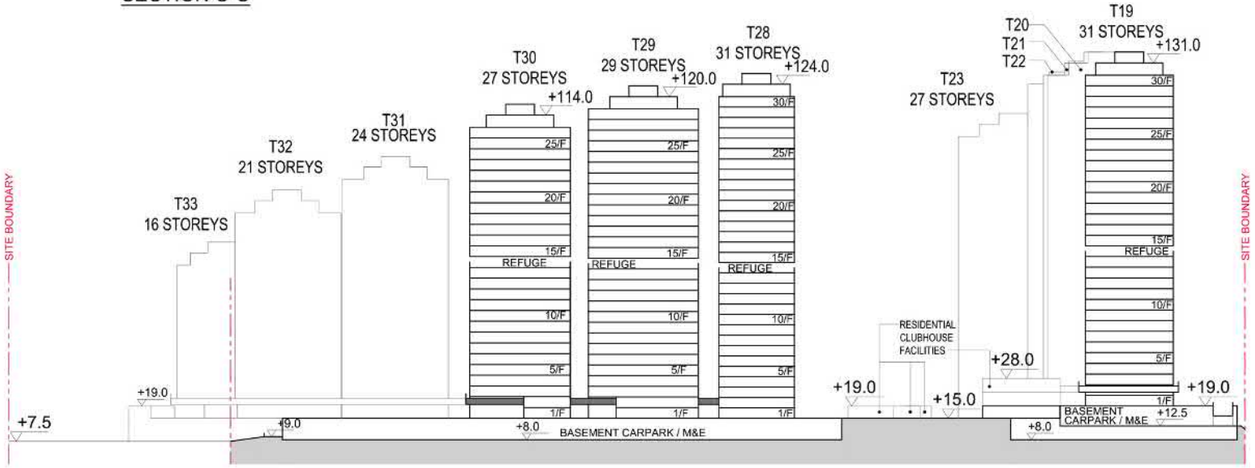
Indicative Master Layout Plan (+16) - Site B

Checked	DH	Drawn	PW
Rev	0	Date	Apr 2020
Scale		Figure	

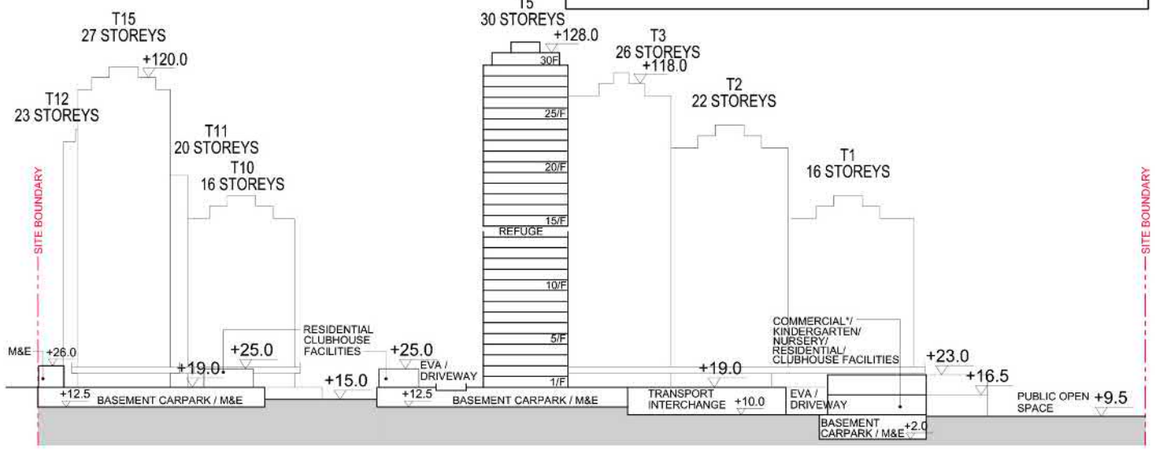


SECTION C-C

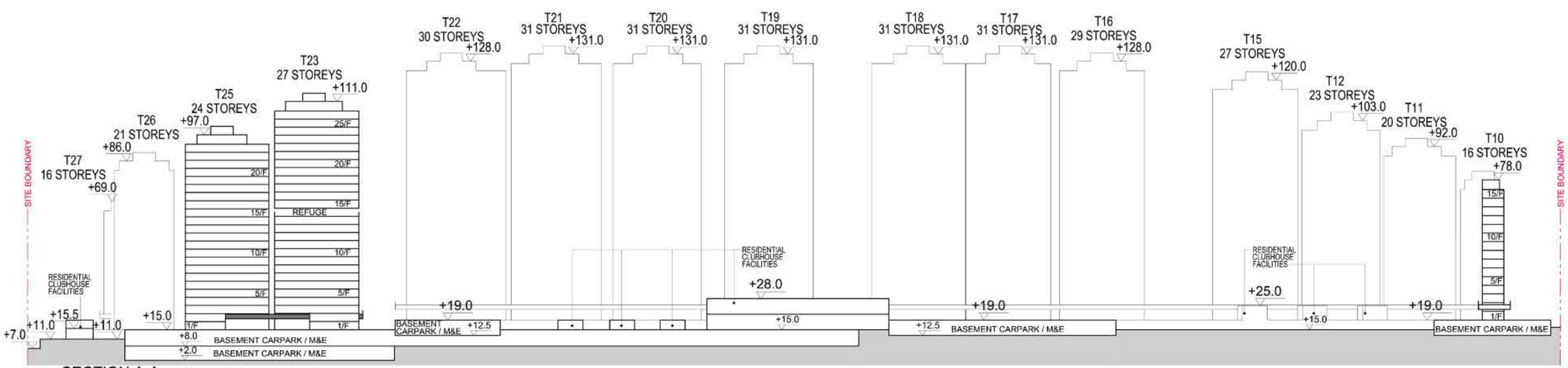




SECTION B-B



SECTION D-D



SECTION A-A

NOTE : 1. ALL LEVELS DENOTE MAXIMUM MAIN ROOF LEVELS
2. ALL NUMBERS OF STOREYS DENOTED ON PLAN REFER TO TOTAL NO. OF STOREYS ABOVE GROUND.

LEGEND

+131.0 HEIGHT IN mPD

0 20 40 60 80 100m

Remark: No change to layout of Site A and Site B as approved under Application No. A/NE-SSH/120-1

Title

Indicative Section Plan - Site B

Checked	DH	Drawn	PW
Rev	0	Date	Apr 2020
Scale		Figure	

E&M

1ST +18.5

1ST +18.5

1ST +18.5

CHE HA VILLAGE

ACCESS ROAD

RESERVED SCHOOL SITE

RESERVED SCHOOL SITE

EXISTING BUILDINGS TO REMAIN

SITE A

MA KWU LAM VILLAGE

TAI TUNG VILLAGE

TRAINING PATH FOR CYCLING / MAINTENANCE PATH

PLACE OF RECREATION, SPORTS OR CULTURE #

1ST +18.5 SITE C

TRAINING PATH FOR CYCLING / MAINTENANCE PATH

PLACE OF RECREATION, SPORTS OR CULTURE #

2ST +17.5

+15.0 1ST

+15.0 1ST

PLACE OF RECREATION, SPORTS OR CULTURE #

2ST +23.5

ACCESS ROAD

PLACE OF RECREATION, SPORTS OR CULTURE #

1ST +21.0

3ST +38.0

FOOTBRIDGE

3ST +40.0

1ST +24.0

+15.5

FOOTBRIDGE

3ST +38.0

+18.5 1ST

5ST +33.0

+12.5

TSENG TAU VILLAGE

SITE B

RECREATION & SPORTS CENTRE WITH ANCILLARY FACILITIES / E&M *

RECREATION & SPORTS CENTRE WITH ANCILLARY FACILITIES / E&M *

WELFARE CENTRE & PUBLIC VEHICLE PARK

PUBLIC OPEN SPACE

SEWAGE PUMPING STATION

PEDESTRIAN CROSSING

RECREATION & SPORTS CENTRE WITH ANCILLARY FACILITIES / E&M *

0 25 50 75 100 125

NOTE : 1. ALL LEVELS DENOTE MAXIMUM MAIN ROOF LEVELS
2. ALL NUMBERS OF STOREYS DENOTED ON PLAN REFER TO TOTAL NO. OF STOREYS ABOVE GROUND.

LEGEND

- LAND TO BE SECURED BY APPLICANT / LAND OUTSIDE TPTL 157 RP AND TPTL 253
- 20m ECOLOGICAL STREAM BUFFER ZONE
- NON-BUILDING AREA
- PROPOSED DEVELOPMENT SITE BOUNDARY
- APPLICATION SITE BOUNDARY
- +37.0 HEIGHT IN mPD
- 1ST HEIGHT IN NO. OF STOREY

* INCLUDING 'PLACE OF RECREATION, SPORTS OR CULTURE', 'PLACE OF ENTERTAINMENT', 'EATING PLACE', 'SHOP & SERVICES', AND/OR 'INDOOR PLAYGROUND'

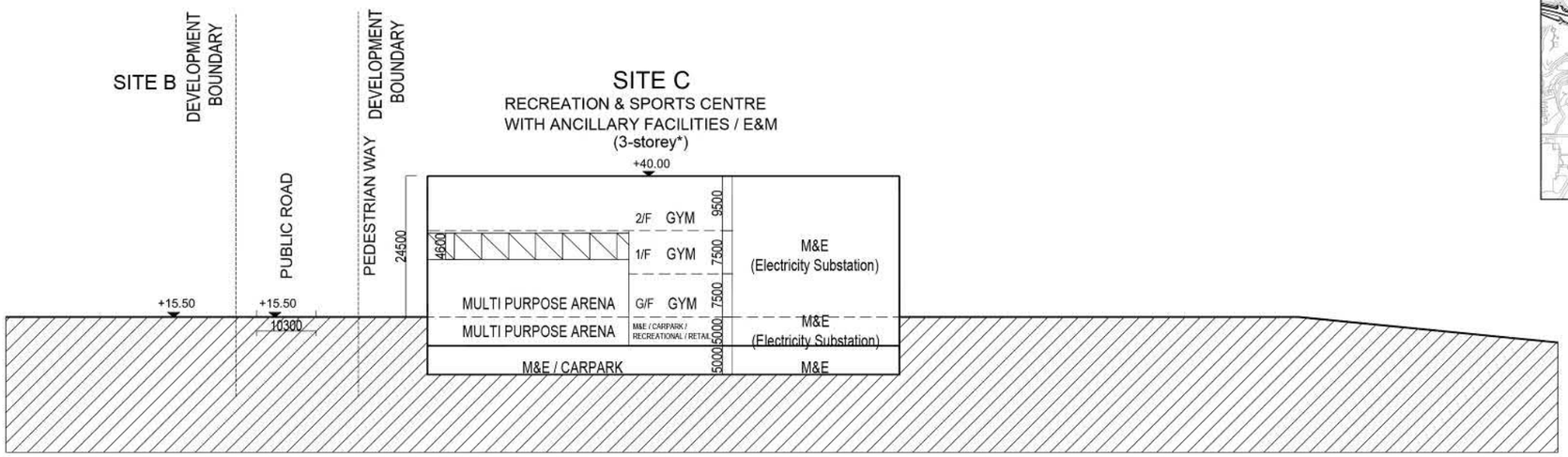
\# PLACE OF RECREATION, SPORTS OR CULTURE (OUTDOOR RECREATIONAL FACILITIES FOR THE USE OF SPORTS FIELD/ BALL COURT/ POOL/ DRIVING RANGE/ TRAINING PATH FOR CYCLING)

LWK +PARTNERS

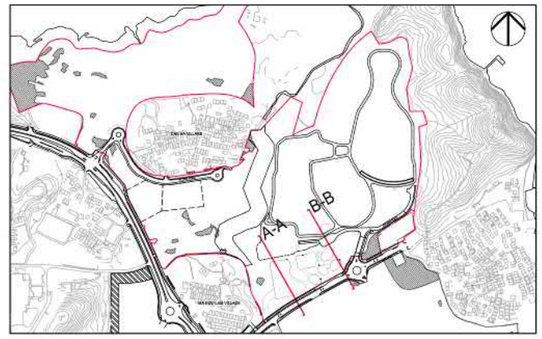
Title

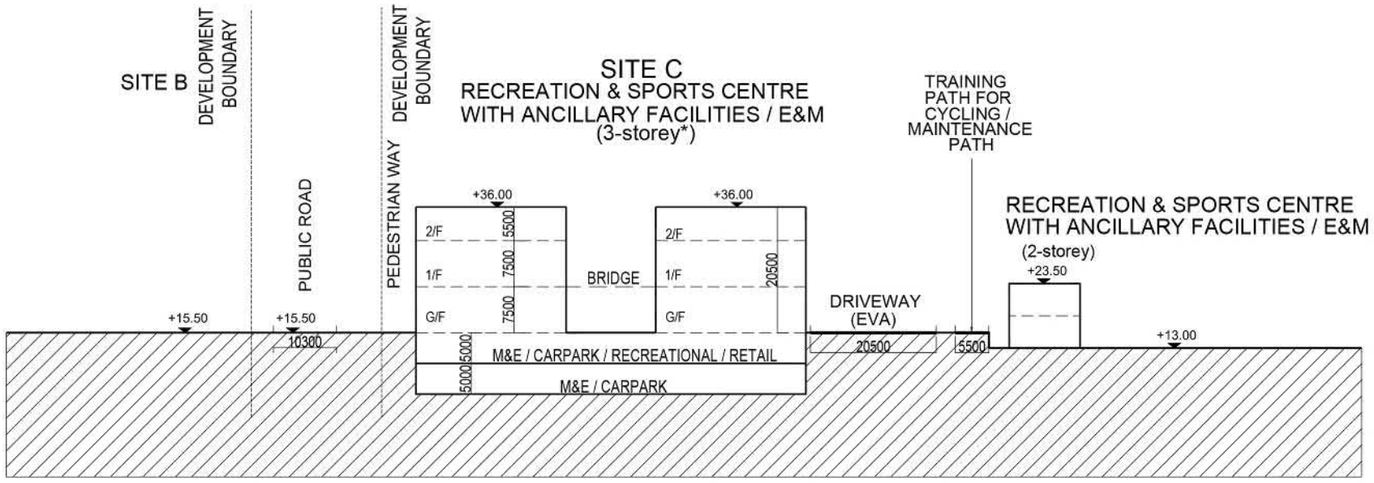
Indicative Master Layout Plan (Site C)

Checked	DH	Drawn	PW
Rev	0	Date	Sep 2022
Scale		Figure	



SCHEMATIC SECTION A-A





SCHEMATIC SECTION B-B

NOTE:
*ALL NUMBERS OF STOREYS DENOTED ON PLAN REFER TO TOTAL NO. OF STOREYS ABOVE GROUND.

LWK +PARTNERS

Title

Indicative Section Plans (Site C)

Checked	DH	Drawn	PW
Rev	0	Date	Sep 2022
Scale		Figure	

Appendix C

Indicative Landscape Master Plan (Overall)

(with no change to Site A and Site B under Application No. A/NE-SSH/120-1)

(Consolidated based on FI 1 submitted on 13 June 2022)

Overall Landscape Master Plan for Site A, B, C and Sai Sha Road

Remark: No change to layout of Site A and Site B as approved under Application No. A/NE-SSH/120-1

NAI CHUNG

SAI O

NAI CHUNG

CHE HA

SITE C

KWUN HANG

TSENG TAU

MA KWU LAM

SITE A

TAI TUNG

SITE B

NGA YIU TAU

LEGEND:

- APPLICATION SITE BOUNDARY
- PROPOSED SITE DEVELOPMENT BOUNDARY
- PUBLIC OPEN SPACE BOUNDARY
- LANDSCAPE AREA (SOFT LANDSCAPE)
- MAN-MADE GRASS
- LANDSCAPE AREA (HARD LANDSCAPE)
- EVA / DRIVEWAY (HARD LANDSCAPE)
- EXISTING RETAINED TREES
- PROPOSED TRANSPLANTED TREES
- PROPOSED COMPENSATORY TREES
- PROPOSED NEW TREES
- TYPE A
  NON-CONSERVED WOODLAND TREE GROUP
  PROPOSED TO BE RETAINED
- TYPE B
  ACCESSIBLE CONSERVED WOODLAND
  PROPOSED TO BE RETAINED
- TYPE C
  INACCESSIBLE CONSERVED WOODLAND
  PROPOSED TO BE RETAINED
- TYPE D
  PROPOSED RETAINED TREE GROUP
  IN OTHER AREAS
- MARSH
- EXISTING STREAM RESERVED AREA

0 10 30 50 100 200m

SCALE

1 : 3000 (A1)

1 : 6000 (A3)

COMMERCIAL* / KINDERGARTEN / NURSERY / CHURCH / RESIDENTIAL CLUBHOUSE FACILITIES
COURTYARD GARDEN
LANDSCAPE DECK WITH SEATING
FOOTBRIDGE
OUTDOOR SWIMMING POOL
LEISURE COURTYARD
FOOTBRIDGE
BASKETBALL HALF COURT
TENNIS COURT
RESIDENTIAL CLUBHOUSE FACILITIES
PHASE 2 DEVELOPMENT
RESIDENTIAL CLUBHOUSE FACILITIES
FOOTBRIDGE
CHILDREN PLAY AREA
SECTION A
SECTION B
SECTION C
SECTION D
SECTION E
E'
A'
AMENITY PLANTING
COURTYARD GARDEN
VEHICULAR INGRESS/ EGRESS
MANAGEMENT FACILITIES/ M&E
COMMERCIAL* / KINDERGARTEN / NURSERY / CHURCH RESIDENTIAL CLUBHOUSE FACILITIES
FOOTBRIDGE
CANOPY
FOOTBRIDGE
COMMERCIAL* / KINDERGARTEN / NURSERY / CHURCH RESIDENTIAL CLUBHOUSE FACILITIES
COURTYARD GARDEN
EXISTING BRIDGE
MAINTENANCE PATH
BBQ AREA
EXISTING TRACK TO TAI TUNG WO LIU VILLAGE
PEDESTRIAN FOOT BRIDGE
M&E / LAV. FACILITIES
COMMERCIAL*/ CHURCH / RESIDENTIAL CLUBHOUSE FACILITIES
M&E / LAV. FACILITIES
EXISTING OPENING
B'
C'
D'
T1 23
T2 26
T3 28
T5 31
T6 31
T7 31
T9 31
T10 31
T11 28
T12 30
T13 31
T15 31
T16 28
T17 26
T18 22
+121.00
+38.50
+32.00
+37.20
+34.00
+32.00
+32.00
+32.00
+38.00
+29.00
+30.50
+21.50
+22.75
+20.50
+24.50
+34.50
+34.50
+34.50
+34.00
+34.50
+26.00
+26.00
+30.50
+25.70
M&E

LEGEND

- APPLICATION SITE BOUNDARY
- SITE A PROPOSED DEVELOPMENT BOUNDARY
- LANDSCAPE AREA (SHRUB / GROUNDCOVER)
- LANDSCAPE AREA (LAWN)
- LANDSCAPE AREA (HARD LANDSCAPE)
- GREEN ROOF
- EVA/ DRIVEWAY (HARD LANDSCAPE)
- OUTDOOR SWIMMING POOL
- WATER FEATURE
- EXISTING STREAM
- NON-BUILDING AREA
- 20m ECOLOGICAL STREAM BUFFER ZONE
- +35.0 PROPOSED LEVEL
- TRANSPLANTED TREES (3 nos.)
- RETAINED TREES (191 nos.)
- COMPENSATORY TREES (752 nos.)
- NEW TREES (657 nos.)

* INCLUDING 'SHOP & SERVICES', 'EATING PLACE', 'PLACE OF ENTERTAINMENT', AND/OR 'SCHOOL' USES

0m 10m 20m 40m 80m
SCALE 1:2000 (A3)
1:1000 (A1)

Section 16 Planning Application for Amendments to the Approved Development (Application No. A/NE-SSH/120-1) - Amendments to Recreation and Sports Centre with Ancillary Facilities in Site C

Landscape Master Plan for Site A
Dwg. No. : LMP-S16ClassB-SA-01a

Date : MAR 2020
(A1-size)

Remark: No change to layout of Site A and Site B as approved under Application No. A/NE-SSH/120-1

TSENG TAU VILLAGE

LANDSCAPE DECK WITH SEATING

LANDSCAPE COURTYARD

ACCESS GATE

LEISURE COURTYARD

RESIDENTIAL CLUBHOUSE FACILITIES

SECTION C

SEWEGE PUMPING STATION

PUBLIC OPEN SPACE TO BE SUBMITTED UNDER SEPARATE SUBMISSION

COMMERCIAL*/ KINDERGARTEN / NURSERY / RESIDENTIAL CLUBHOUSE FACILITIES

FOOTBRIDGE

SHUTTLE LIFT LOBBY

AMENITY PLANTING

LEISURE COURTYARD

CANOPY

LANDSCAPE COURTYARD WITH SITTING

MANAGEMENT FACILITIES / M&E

RESIDENTIAL CLUBHOUSE FACILITIES

MAIN ENTRANCE

LEISURE PATH

AMENITY PLANTING

RESIDENTIAL CLUBHOUSE FACILITIES

EXISTING WOODLAND

M&E

SECTION B

SECTION H

CHILDREN PLAY AREA

RESIDENTIAL CLUBHOUSE FACILITIES

SECTION G

SECTION A

TREE BUFFER PLANTING

SECTION F

SECTION E

SECTION D

CANOPY

COURTYARD GARDEN

RESIDENTIAL CLUBHOUSE FACILITIES

A' B' D' E' F' G' H'

T1 T2 T3 T5 T6 T7 T8 T9 T10 T11 T12 T15 T16 T17 T18 T19 T20 T21 T22 T23 T25 T26 T27 T28 T29 T30 T31 T32 T33

+35.0 +26.00 +23.00 +20.50 +20.00 +19.00 +19.0 +18.00 +17.00 +15.50 +15.00 +13.00 +12.50 +11.50 +11.00 +7.00

LEGEND

- APPLICATION SITE BOUNDARY
- SITE B PROPOSED DEVELOPMENT BOUNDARY
- PUBLIC OPEN SPACE BOUNDARY
- LANDSCAPE AREA (SHRUB / GROUNDCOVER)
- LANDSCAPE AREA (LAWN)
- APPROVED RETAINED TREE GROUPS IN EXISTING WOODLAND AREA (130 nos.)
- LANDSCAPE AREA (HARD LANDSCAPE)
- EVA/ DRIVEWAY (HARD LANDSCAPE)
- WATER FEATURE
- OUTDOOR SWIMMING POOL
- CANOPY
- NON-BUILDING AREA
- LAND TO BE SECURED BY APPLICANT/ LAND OUTSIDE TPTL 157
- +35.0 PROPOSED LEVEL
- TREES APPROVED TO BE TRANSPLANTED (9 nos.)
- APPROVED RETAINED TREES (4 nos.)
- APPROVED RETAINED TREE GROUPS IN OTHER AREAS (247 nos.)
- COMPENSATORY TREES (96 nos.)
- NEW TREES (1569 nos.)

0m 10m 20m 40m 80m

SCALE 1:2000 (A3)
1:1000 (A1)

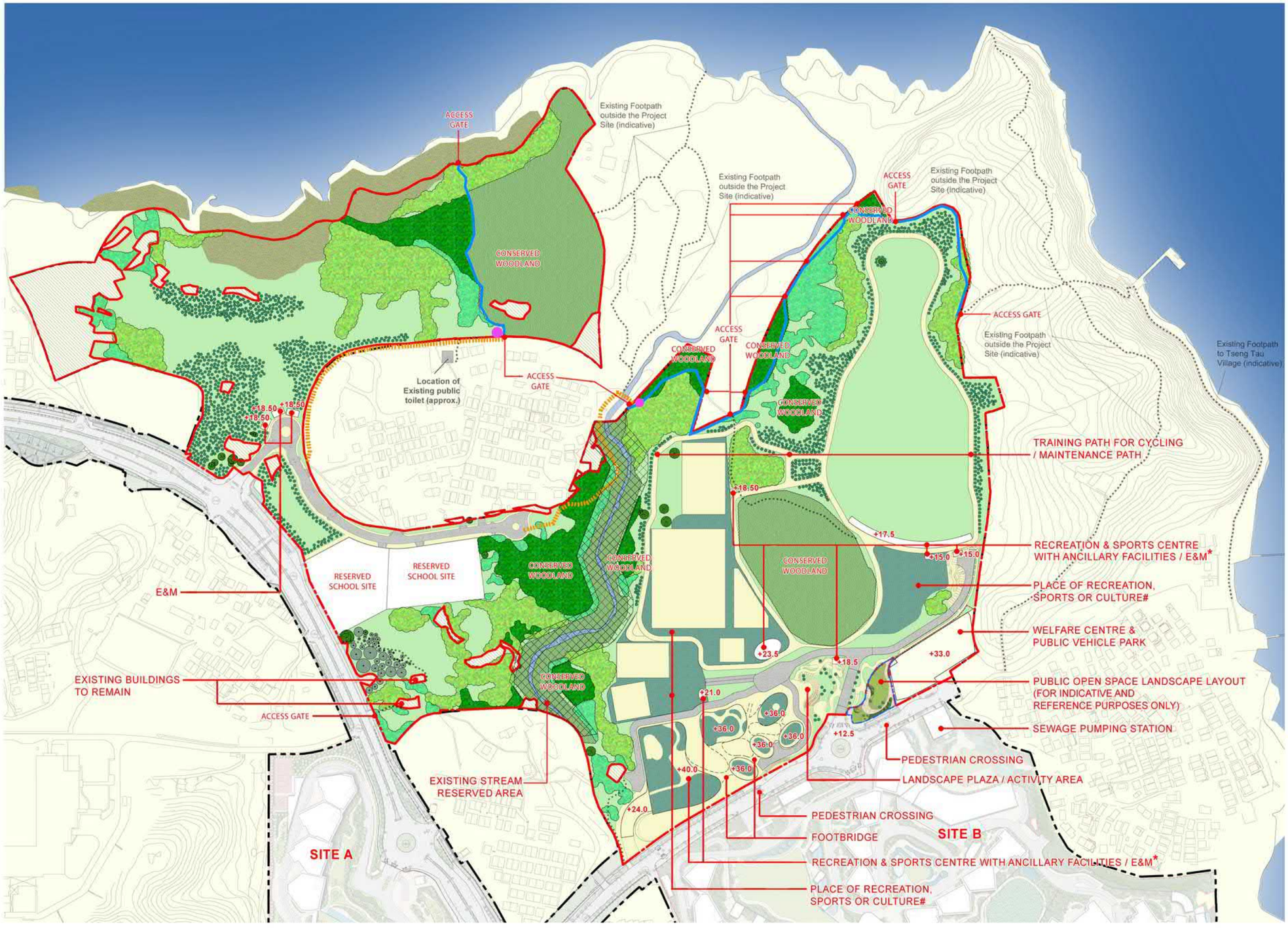
Section 16 Planning Application for Amendments to the Approved Development (Application No. A/NE-SSH/120-1)
- Amendments to Recreation and Sports Centre with Ancillary Facilities in Site C

Landscape Master Plan for Site B

Dwg. No. : LMP-S16ClassB-SB-01a

Date : MAR 2020
(A1-size)

Remark: No change to layout of Site A and Site B as approved under Application No. A/NE-SSH/120-1



LEGEND

- APPLICATION SITE BOUNDARY
- SITE C LOT BOUNDARY
- PUBLIC OPEN SPACE BOUNDARY
- PROPOSED ROUTE OF ECO-TRAILS ALONG THE DEVELOPMENT BOUNDARY (INDICATIVE)
- PROPOSED PEDESTRIAN ACCESS (INDICATIVE)
- LOCATION OF PROPOSED INFORMATION BOARD
- EXISTING RETAINED TREES (27 nos.)
- PROPOSED TRANSPLANTED TREES (43 nos.)
- PROPOSED NEW TREES (1,700 nos.)
- LANDSCAPE AREA (SOFT LANDSCAPE)
- MAN-MADE GRASS
- HARD PAVED AREA
- VEHICULAR ACCESS ROAD
- TYPE A
  NON-CONSERVED WOODLAND TREE GROUP
  PROPOSED TO BE RETAINED (1,628 nos.)
- TYPE B
  ACCESSIBLE CONSERVED WOODLAND
  PROPOSED TO BE RETAINED (1,300 nos.)
- TYPE C
  INACCESSIBLE CONSERVED WOODLAND
  PROPOSED TO BE RETAINED (38,000 m²)
- TYPE D
  PROPOSED RETAINED TREE GROUP
  IN OTHER AREAS (1,481 nos.)
- EXISTING STREAM RESERVED AREA
- LAND TO BE SECURED BY APPLICANT/ LAND OUTSIDE TPTL 157 RP & TPTL 253
- 20m ECOLOGICAL STREAM BUFFER ZONE
- MARSH
- +5.0 PROPOSED LEVEL
- EXISTING FOOTPATH

* INCLUDING 'PLACE OF RECREATION, SPORTS OR CULTURE', 'PLACE OF ENTERTAINMENT', 'EATING PLACE', 'SHOP & SERVICES', AND/OR 'INDOOR PLAYGROUND'

\# PLACE OF RECREATION, SPORTS OR CULTURE (OUTDOOR RECREATIONAL FACILITIES FOR THE USE OF SPORTS FIELD/ BALL COURT/ POOL/ DRIVING RANGE/ TRAINING PATH FOR CYCLING)

0m 20m 40m 60m 120m 200m

SCALE 1:4000 (A3)
1:2000 (A1)

Section 16 Planning Application for Amendments to the Approved Development (Application No. A/NE-SSH/120-1) – Amendments to Recreation and Sports Centre with Ancillary Facilities in Site C

Landscape Master Plan for Site C

Dwg. No. : 2009201-SC-NewS16-2021-LMP-01b

Date : APR 2022
(A1-size)

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\NewS16-2021\Site C\2022-05-04\2009201-SC-NewS16-2021-LMP-01b

Appendix D

Comparison of Development Parameters between Previously Approved Scheme (Application No. A/NE-SSH/120), Approved Scheme (Application No. A/NE-SSH/120-1) and Current Scheme (Overall)

(Same as that under FI 2 submitted on 23 June 2022)

Overall Indicative Development Schedule of the Proposed Amendment Scheme

- Development parameters as shown in (A) and (B) have already been approved under Application Nos. A/NE-SSH/120 and 120-1 respectively.
- Development parameters as shown in (C) under the Current Scheme follows those approved under (B) except for the no. of non-domestic blocks in Site C.

The Overall Development						
	(A)	(B)	(C)	Comparison		
	Approved Application No. A/NE-SSH/120	**Approved Application No. A/NE-SSH/120-1**	**Current Scheme**	**(B) – (A)**	**(C) – (A)**	**(C) – (B)**
Total Application Site Area (1)	About 748,400 m^2	About 748,400 m^2	About 748,400 m^2	-	-	-
Domestic GFA (2)	Not more than 538,213 m^2	Not more than 538,213 m^2	Not more than 538,213 m^2	-	-	-
Domestic Plot Ratio (3)	About 0.832	About 0.832	About 0.832	-	-	-
No. of Residential Storeys (4)	16-31 storeys	16-31 storeys	16-31 storeys	-	-	-
Site Coverage (above ground level) (3)	Domestic – not more than 33.33% Non-Domestic – not more than 80% (below 15m)	Domestic – not more than 33.33% Non-Domestic – not more than 80% (below 15m)	Domestic – not more than 33.33% Non-Domestic – not more than 80% (below 15m)	-	-	-
No. of Residential Towers	46	46	46	-	-	-
No. of Flats	Not more than 9,500	Not more than 9,700	Not more than 9,700	+200	+200	-
Average Flat Size	About 56.65 m^2	About 55.49 m^2	About 55.49 m^2	-1.16m^2	-1.16m^2	-
Anticipated Population (5)	About 28,500	About 29,100	About 29,100	+600	+600	-
Residents' Club GFA (6)	Not more than 13,446 m^2	Not more than 13,446 m^2	Not more than 13,446 m^2	-	-	-
Commercial GFA (7)	Not more than 12,077 m^2	Not more than 12,077 m^2	Not more than 12,077 m^2	-	-	-
Transport Interchange GFA (8)	Not more than 9,000 m^2	Not more than 9,000 m^2	Not more than 9,000 m^2	-	-	-
Recreation & Sports Centre with Ancillary Facilities GFA (8)	Not more than 17,500 m^2	Not more than 17,500 m^2	Not more than 17,500 m^2	-	-	-
Welfare Centre GFA	Not more than 5,560m^2	Not more than 5,560m^2	Not more than 5,560m^2	-	-	-
Public Vehicle Park GFA (8)	Not more than 9,000 m^2	Not more than 9,000 m^2	Not more than 9,000 m^2	-	-	-

Comparison Table
Section 16 Planning Application for Amendments to the Approved Development (Application No. A/NE-SSH/120-1) –
Amendments to Recreation and Sports Centre with Ancillary Facilities in Site C
(Application No. A/NE-SSH/142)

Site A						
	(A)	(B)	(C)	Comparison		
	Approved Application No. A/NE-SSH/120	**Approved Application No. A/NE-SSH/120-1**	**Current Scheme**	**(B) – (A)**	**(C) – (A)**	**(C) – (B)**
Development Site Area (9)	About 115,559 m^2	About 115,559 m^2	About 115,559 m^2	-	-	-
Domestic Portion						
Domestic GFA	Phase 1: Not more than 225,080 m^2 Phase 2: Not more than 15,170 m^2	Phase 1: Not more than 225,080 m^2 Phase 2: Not more than 15,170 m^2	Phase 1: Not more than 225,080 m^2 Phase 2: Not more than 15,170 m^2	-	-	-
No. of Blocks	Phase 1: 16 blocks Phase 2: 1 block	Phase 1: 16 blocks Phase 2: 1 block	Phase 1: 16 blocks Phase 2: 1 block	-	-	-
No. of Residential Storeys (4)	21 - 31 storeys	22 - 31 storeys	22 - 31 storeys	+1s	+1s	-
No. of Flats	Not more than 4,100	Not more than 4,300	Not more than 4,300	+200	+200	-
Average Flat Size	About 58.60 m^2	About 55.87 m^2	About 55.87 m^2	-2.73m^2	-2.73m^2	-
Anticipated Population (5)	About 12,300	About 12,900	About 12,900	+600	+600	-
Non-Domestic Portion						
Total Commercial GFA (10)	Not more than 6,788 m^2	Not more than 6,788 m^2	Not more than 6,788 m^2	-	-	-
Transport Interchange GFA (8)	Not more than 4,500 m^2	Not more than 4,500 m^2	Not more than 4,500 m^2	-	-	-
Residents' Club GFA (6)	Not more than 6,006 m^2	Not more than 6,006 m^2	Not more than 6,006 m^2	-	-	-
No. of Blocks (11) (12)	Not more than 15	Not more than 28	Not more than 28	+13	+13	-
No. of Storeys	Not more than 4 (including 1 to 2 levels of basement carpark / M&E)	Not more than 4 (including 1 to 3 levels of basement carpark / M&E)	Not more than 4 (including 1 to 3 levels of basement carpark / M&E)	- (+1 level of basement)	- (+1 level of basement)	-

Site B						
	(A)	(B)	(C)	Comparison		
	Approved Application No. A/NE-SSH/120	**Approved Application No. A/NE-SSH/120-1**	**Current Scheme**	**(B) – (A)**	**(C) – (A)**	**(C) – (B)**
Development Site Area [9]	About 164,366 m^2	About 164,366 m^2	About 164,366 m^2	-	-	-
Domestic Portion						
Domestic GFA	Not more than 297,573 m^2	Not more than 297,573 m^2	Not more than 297,573 m^2	-	-	-
No. of Blocks	29	29	29	-	-	-
No. of Residential Storeys [4]	16 - 31 storeys	16 - 31 storeys	16 - 31 storeys	-	-	-
No. of Flats	Not more than 5,400	Not more than 5,400	Not more than 5,400	-	-	-
Average Flat Size	About 55.11 m^2	About 55.11 m^2	About 55.11 m^2	-	-	-
Anticipated Population [5]	About 16,200	About 16,200	About 16,200	-	-	-
Non-Domestic Portion						
Total Commercial GFA [10]	Not more than 5,289 m^2	Not more than 5,289 m^2	Not more than 5,289 m^2	-	-	-
Transport Interchange GFA [8]	Not more than 4,500 m^2	Not more than 4,500 m^2	Not more than 4,500 m^2	-	-	-
Residents' Club GFA [6]	Not more than 7,440 m^2	Not more than 7,440 m^2	Not more than 7,440 m^2	-	-	-
No. of Blocks [11] [12]	Not more than 19	Not more than 25	Not more than 25	+6	+6	-
No. of Storeys	Not more than 3 (including 2 levels of basement carpark / M&E)	Not more than 3 (including 2 levels of basement carpark / M&E)	Not more than 3 (including 2 levels of basement carpark / M&E)	-	-	-

Comparison Table
Section 16 Planning Application for Amendments to the Approved Development (Application No. A/NE-SSH/120-1) – Amendments to Recreation and Sports Centre with Ancillary Facilities in Site C (Application No. A/NE-SSH/142)

Site C (Current Proposal)						
	(A)	(B)	(C)	Comparison		
	Approved Application No. A/NE-SSH/120	**Approved Application No. A/NE-SSH/120-1**	**Current Scheme**	**(B) – (A)**	**(C) – (A)**	**(C) – (B)**
Development Site Area [9]	About 366,983 m^2	About 366,983 m^2	About 366,983 m^2	-	-	-
Total No. of Non-domestic Blocks (including golf driving range and welfare centre)	8	11[17]	14 [12]	+3	+6	+3
Recreation & Sports Centre with Ancillary Facilities [13] [14]						
Non-domestic GFA [8]	Not more than 17,500m^2 • Sports Centre & Ancillary Facilities: not more than 12,000m^2 • Recreation Centre & Ancillary Facilities: Not more than 5,500m^2	Not more than 17,500m^2 • Sports Centre & Ancillary Facilities: not more than 5,500m^2 • Recreation Centre & Ancillary Facilities: Not more than 8,500m^2 • Retail & F&B Facilities: Not more than 3,500m^2	Not more than 17,500m^2 • Sports Centre & Ancillary Facilities: not more than 5,500m^2 • Recreation Centre & Ancillary Facilities: Not more than 8,500m^2 • Retail & F&B Facilities: Not more than 3,500m^2	- (Breakdown some of the Sports Centre& Ancillary Facilities to Retail and F&B Facilities)	- (Breakdown some of the Sports Centre& Ancillary Facilities to Retail and F&B Facilities)	-
No. of Blocks (including golf driving range)	7	10[17]	13 [12]	+3	+6	+3
No. of Storeys	3 storeys above 2 levels of basement	3 storeys above 2 levels of basement	3 storeys above 2 levels of basement	-	-	-
Welfare Centre & Public Vehicle Park Building [15]						
Non-domestic GFA	Not more than 14,560m^2 • Welfare Centre: Not more than 5,560m^2 • Public Vehicle Park: Not more than 9,000m^2 [8]	Not more than 14,560m^2 • Welfare Centre: Not more than 5,560m^2 • Public Vehicle Park: Not more than 9,000m^2 [8]	Not more than 14,560m^2 • Welfare Centre: Not more than 5,560m^2 • Public Vehicle Park: Not more than 9,000m^2 [8]	-	-	-
No. of Blocks	1	1	1	-	-	-
No. of Storeys	5 storeys above 1 level of basement	5 storeys above 1 level of basement	5 storeys above 1 level of basement	-	-	-

Site C (Current Proposal)						
	(A)	(B)	(C)	Comparison		
	Approved Application No. A/NE-SSH/120	**Approved Application No. A/NE-SSH/120-1**	**Current Scheme**	**(B) – (A)**	**(C) – (A)**	**(C) – (B)**
Reserved Primary School Sites						
Total Site Area	Not less than 12,400m^2 (i.e. not less than 6,200m^2 each)	Not less than 12,400m^2 (i.e. not less than 6,200m^2 each)	Not less than 12,400m^2 (i.e. not less than 6,200m^2 each)	-	-	-

Remarks:

(1) Including Development Site Area of 646,908 m^2 (i.e. excluding Sai Sha Road widening works area and areas to be provided as sewage pumping station near Tseng Tau Village).
(2) Including 390m^2 for two existing houses in Site C to be retained.
(3) Calculated based on Development Site Area.
(4) Over 1 to 3 levels of carpark / M&E / residential clubhouse facilities.
(5) Based on a person-per-flat ratio of 3.0.
(6) The clubhouse GFA is about 2.5% of the domestic GFA for Site A and Site B respectively.
(7) Commercial GFA refers to commercial uses ('Eating Place' and 'Shop and Services'), 'School' (kindergarten, nursery, language, computer, commercial and tutorial schools, art school, ballet and other types of schools providing interest / hobby related courses), 'Place of Entertainment' and 'Religious Institution' (church).
(8) Under the approved scheme (Application No. A/NE-SSH/61-2), it also included the provision of Sports Centre and Ancillary Facilities, as well as Public Vehicle Park. GFAs of these facilities are specified in the development schedule.
(9) Excluding Sai Sha Road widening works area and sewage pumping station near Tseng Tau Village within Application Site boundary.
(10) Further to Remark (7) above, specifically, 2 nos. of kindergarten / nursery of not less than 6 classrooms each (1 each in Site A and Site B) and a church in Site A (commercial GFA of not less than 1,500m^2) will be provided.
(11) The main commercial clusters and transport interchanges are located at the entrance of Site A and Site B near Sai Sha Road, while other smaller commercial facilities / clubhouse blocks are scattered around the Development Sites for convenience and avoidance of massive building structures.
(12) Exclude the structures solely for ancillary M&E and shuttle lift uses in Site A, Site B and Site C.
(13) Recreation & Sports Centre with Ancillary Facilities include 'Place of Recreation, Sports or Culture', 'Place of Entertainment', 'Eating Place', 'Shop and Services' and / or 'Indoor Playground'.
(14) Recreation & Sports Centre with Ancillary Facilities include ancillary M&E facilities for the power supply of Sites A to C. As the M&E facilities are ancillary and directly related to the development, the associated GFA of not more than 3000m^2 shall be disregarded in this planning application in accordance with the provision of the Notes of the OZP.
(15) Light bus layby, car parking, and loading & unloading provisions subject to TD's approval.
(16) Car parking, loading and unloading provisions for the Proposed Development will be provided in accordance with TIA.
(17) Under the Approved Scheme of Application No. A/NE-SSH/120-1, the counting of no. of blocks for recreation & sports centre with ancillary facilities excludes 3 nos. of structures for golf driving range uses. For sake of comparison with the Current Scheme, the 3 nos. of structures for golf driving range uses are included in counting of no. of blocks for recreation & sports centre with ancillary facilities, making up a total of 10 nos. under the Approved Scheme of Application No. A/NE-SSH/120-1. The total no. of non-domestic is 11 nos. including 1 block of welfare centre and public vehicle park.

Appendix E

Landscape Design Proposals of the Current Scheme (including Tree Assessment and Preservation Proposals) (Site C)

(Consolidated Report based on Further Information submitted on 13 June 2022)

(No objection from landscape planning perspective from Urban Design & Landscape Section (Landscape Unit), Planning Department received in July 2022)

Section 16 Planning Application for Amendments to the Approved Development (Application No. A/NE-SSH/120-1) – Amendments to Recreation and Sports Centre with Ancillary Facilities in Site C

LANDSCAPE MASTER PLAN – SITE C

CONSOLIDATED REPORT

SEPTEMBER 2022

Landscape Government Submission Consultant Axxa Group Limited

Signed by:

Mr. Jason TEO, Registered Landscape Architect (R101)

Table of Contents

1.0 Project Background and Introduction

2.0 Assessment of the Potential Impacts on Existing Trees

3.0 Landscape Objectives

4.0 Landscape Master Plan for Site C

- **4.1 Sports/ Recreation Development**
- **4.2 General Landscape Area**
- **4.3 Eco-Trail**
- **4.4 Recreational Facilities**
- **4.5 Access Road/ Main Entry/ Streetscape**
- **4.6 Boundary Treatment**
- **4.7 Buffer Planting/ Preservation of Existing Trees**

5.0 Hard Landscape (Paving Materials / Finishes) for Site C

- **5.1 Hard Landscape Materials**
- **5.2 Landscape Lighting**
- **5.3 Design Codes, Technical Standards & Safety Provision**

6.0 Soft Landscape (Planting Design / Materials) for Site C

- **6.1 Plant Material Tables**
- **6.2 Soil Depth and Drainage Provision for the Planted Area**
- **6.3 Irrigation and Proposed Source of Water Supply**
- **6.4 Future Maintenance and Management**

APPENDICES

APPENDIX A Correspondences
- **A1** DPO Approval letter (Ref. TPB/A/NE-SSH/120-1) dated 18 March 2021

APPENDIX B Landscape Master Plans
- **B1** Landscape Master Plan for Site C
- **B2** Overall Landscape Master Plan for Site A, B, C and Sai Sha Road

APPENDIX C Circulation Diagram for Site C

APPENDIX D Sections for Site C

APPENDIX E Fence Wall and Access Gate Indication Plan for Site C

APPENDIX F Fence Wall and Access Gate Sections and Elevations for Site C

APPENDIX G Blow Up Plan – Pedestrian Access between Site B POS and Site C POS

ANNEX

ANNEX A Tree Survey and Preservation Proposal – Site C

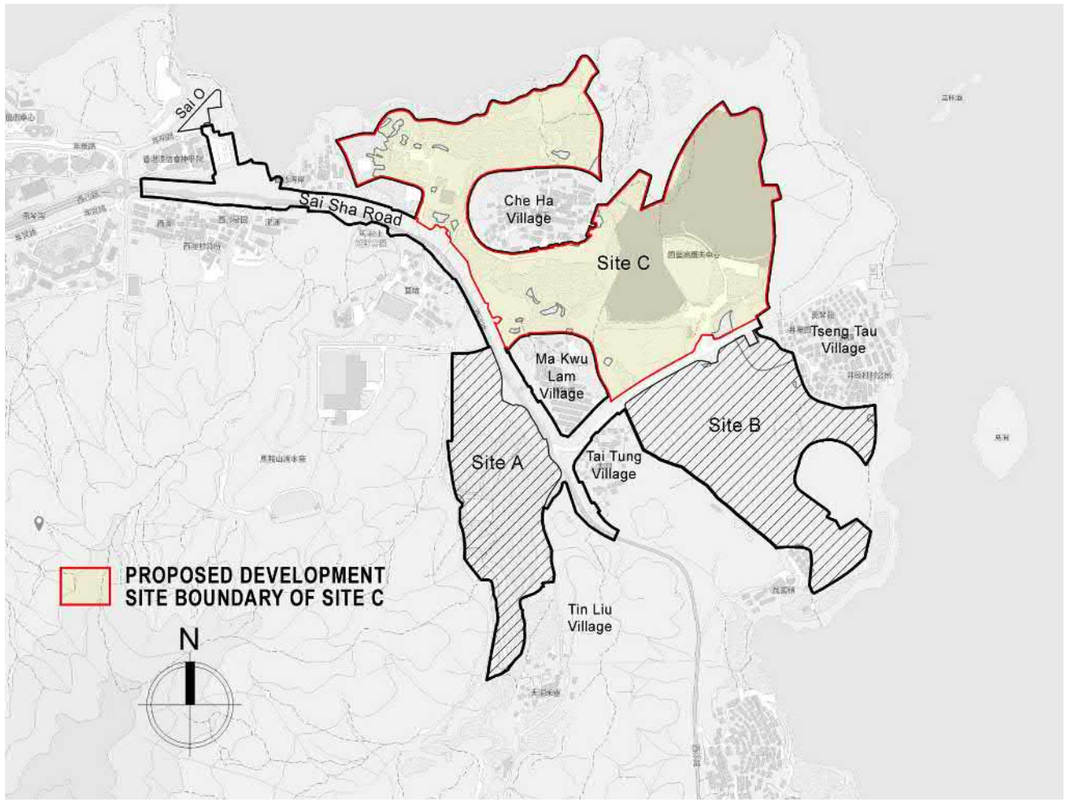
1.0 Project Background and Introduction

1.1 This Landscape Master Plan is submitted to support S16 Planning Application for Amendments to the Approved Development (under Application No. A/NE-SSH/120-1). The Application Site is the subject of an approved planning application no. A/NE-SSH/120-1 for proposed comprehensive residential and recreational development including government, institution, or community (G/IC) facilities with minor relaxation of gross floor area and building height restrictions which was approved by the Director of Planning, under the delegated authority of the Town Planning Board (the Board), under Section 16A of the Town Planning Ordinance in October 2020.

1.2 With the commitment to further enhance user experience in Site C, which is intended to be a recreational hub in Sai Sha, the subject Section 16 planning application is submitted to reflect the diversification of recreational facilities to be provided therein by replacing a golf driving range and a mini driving range/ game area/ recreation & sports centre with ancillary facilities with a variety of outdoor sports and recreational facilities.

1.3 It should be noted that, **the subject matter of the current application is Site C only**. The layout and development parameters for Site A and Site B are entirely identical to those approved under planning application no. A/NE-SSH/120-1 on 18 March 2021. This application only involves minor changes to the outdoor recreational facilities. The inclusion of Site A and Site B as part of the Application Site is to comply with the statutory requirement of the subject "Comprehensive Development Area" ("CDA") zone under the Notes of Shap Sz Heung Outline Zoning Plan which requires the submission of a Master Layout Plan covering the entire "CDA" zone for the approval of the Board. Please refer to **Figure 1** for Location Plan.

Fig. 1 Location of Application Site



1.4 Phased Submission Strategy is adopted for this large-scale project comprising of the above mentioned four portions, i.e. Site A, Site B, Site C and Road. This report sets out the Landscape Design and Tree Preservation Proposal for **Site C only**. The broad design intent of the landscape proposals for the proposed sports and recreational development in Site C is set out in details in Section 2 to Section 6 of this report. The tree preservation proposal for Site C is provided in Annex A.

2.0 Assessment of the Potential Impacts on Existing Trees

2.1 Only those living trees disturbed by the proposed development in Site C will be individually surveyed and studied. The rest which is unaffected by future development will be analysed by visual observation and categorized as follows in **Table 1**.

Table 1: Categories of Woodland Tree Groups

Type	Description	'Conserved Woodland' based on approved S16 MLP	Accessibility	Affected by Development	Individual Tree Survey
A	Non-Conserved Woodland Tree Group (1628 nos.)	NO	YES	NO	NO
B	Accessible Conserved Woodland (1300 nos.)	YES	YES	NO	NO
C	Inaccessible Conserved Woodland (38,000m²)	YES	NO	NO	NO
D	Retained Tree Groups in Other Areas (1481 nos.)	NO	YES	NO	NO

2.2 Woodland **Type A, B, C** and **D** will remain intact and untouched by future development. It is estimated that a total of 4409 nos. of trees living in Type A, B, D and trees living in an area of 38,000m² in Type C will be retained in-situ.

2.3 Based on the Tree Survey and Preservation Report (January 2022) in **Annex A**, please refer to **Table 2** below which summarize the proposed Tree Retention, Transplanting, Felling and Compensatory Proposal:

Table 2: Comparison Table showing Approved and Current Scheme on Tree Treatment Proposal

Comparison between Approved Scheme and Current Scheme on Tree Treatment Proposal			
Description	**Approved Scheme (Approval Condition under A/NE-SSH/120-1)** Approved on 18 Mar 2021	**Current Scheme**	**Difference**
Total Nos. of Trees ***Surveyed***	5113	5113	0
Nos. of Trees Proposed to be ***Retained***	4443	4436	-7
Nos. of Trees Proposed to be ***Transplanted***	49	43	-6
Nos. of Trees Proposed to be ***Felled***	621 (incl. 38 dead trees)	634 (incl. 38 dead trees)	+13

*Remarks:
(i) Approx. 14,000m² of Tree Group within Ecological Buffer Zone (EBZ) remain untouched;
(ii) Approved Retained Trees (27 nos.);
(iii) **Type A** Non-Conserved Woodland Tree Group (approx. 1628 nos.);
(iv) **Type B** Accessible Conserved Woodland (approx. 1300 nos.);
(v) **Type C** Inaccessible Conserved Woodland (total area approx. 38,000m²); and

(vi) **Type D** Retained Tree Groups in Other Areas (1481 nos.).

2.4 A total of **1700 nos.** of new trees will be planted to enhance greenery within the Application Site. Please refer to **Annex A** Tree Survey and Preservation Report for details of the current condition of the above trees and their treatment.

2.5 The primary intent of the proposed development is to accommodate the existing trees as far as possible into its design while taking measures to preserve and improve the trees' health condition. Consequently, the impact of the proposed development on the existing trees is kept to the minimal.

3.0 Landscape Objectives

The primary landscape objectives are:

- To create a naturalistic environmental model within which the proposed development is located.
- To create a recreational hub in Sai Sha and to provide diversification of recreational and leisure facilities.
- To preserve the existing significant woodland, tree groups and ecological buffer zone to act as feature landscape amenity components.
- To emphasize and respond to the inherent topography.
- To integrate the proposed recreational development into the surrounding area through the creation of a sensitive naturalistic interface with the adjacent land uses.
- To create a high degree of visual interest and continuity through effective design.
- To maximize the potential of the retained existing trees.
- To utilize the retained trees to delineate and enhance the landscape character of the area and emphasize the individuality afforded by the environmental qualities of the Site.
- To introduce additional tree species that is consistent with and complimentary to those that exists within the environment of Sai Sha, Shap Sz Heung.

4.0 Landscape Master Plan for Site C

The design approach of the Landscape Master Plans is to enhance the natural rural setting and harmonize in character with the natural surroundings. This section provides a broad description of the design, function and amenity provisions for the landscape components. Refer to **Appendix B** to **Appendix G** for details.

4.1 Sports/ Recreation Development

- With the commitment to further enhance user experience in Site C, which is intended to be a recreational hub in Sai Sha, the design seeks to reflect the proposed diversification of outdoor sports and recreational facilities. Under the current proposal, apart from golf driving range, Site C will offer other outdoor recreational venues for sports, including outdoor sports field/ ball court/ pool, to better serve the community in the Sai Sha area.
- The golf driving range layout follows the edge of the existing woodlands, with almost the entire course being placed within the former agricultural and fallow lands. Tree groups in Site C are conserved, which are considered as a significant contribution towards retaining the natural fauna and flora habitat of Site C.
- Recreation & Sports Centre with Ancillary Facilities (including 'Place of Recreation, Sports or Culture', 'Place of Entertainment', 'Eating Place', 'Shop & Services' and/ or 'Indoor Playground'), and Welfare Centre & Public Vehicle Park for the use of general public are proposed.

4.2 General Landscape Area

- The landscape design focuses on the conservation and enhancement of the natural woodland surroundings and the agricultural marsh in the northeast corner of the site.
- A combination of native woodland trees and ornamental flowering trees adds to the natural beauty of Site C and creates a sea of greenery.
- Ecological Buffer Zone – The design proposal of the Ecological Buffer Zone for compliance with approval condition (n) of the approved planning application *'the design (including the submission of detailed tree preservation and planting proposal) and provision of a 20m ecological buffer zone along each side of Tai Tung Wo Liu Stream to the satisfaction of the Director of Agriculture, Fisheries and Conservation or of the TPB'* was under separate submission to AFCD and was approved under planning application no. A/NE-SSH/120 on 8 January 2021. The corresponding approval condition (n) was also imposed under the Approved Scheme (under application No. A/NE-SSH/120-1). While this approval condition has yet to be discharged under the Approved Scheme, the design treatments of the Ecological Buffer Zone will be largely similar to those approved under approval condition (n) of application No. A/NE-SSH/120. In short, the proposed treatment at the existing stream reserved area at Site C is explained in the following aspects:
  - Preservation of existing trees: To retain the existing character of the stream environment, tree groups living in an area of 14,000m^2 within the Ecological Buffer Zone at Site C will remain untouched and will be retained in-situ.
  - Chain link fence (proposed height: 2.5m) with 0.6m openings is proposed for wildlife passage and for safety and security. The design of the proposed chain link fence will be kept basic and minimal with a purpose to blend into the surrounding environment in a non-intrusive manner.

4.3 Eco-Trail

- The proposed eco-trails follow the existing paths and are easily accessible from the nearby village. These proposed eco-trails pass through a range of attractive lowland habitats, notably the woodland at Che Ha Village and close to the Tai Tung Wo Liu Stream. These are interesting habitats within the area for eco-education purposes. As the trails are existing on-site, only minor upgrading works would be required with minimum disturbance to the nearby environment.
- Furthermore, the trails are on a flat lowland area and are easy to walk through. As the trails are close to an existing village, i.e. Che Ha Village, it can be readily integrated with the village areas and the future development in Site C.

4.4 Recreational Facilities

- Eco trail, golf driving range and various recreational venues are surrounded with lush planting, creating a very conductive environment for outdoor activities.
- Public open space designed for the use of general public and the community of Site C will be connected to the Public Open Space in Site B by the pedestrian crossing of Sai Sha Road (**Appendix G**).

4.5 Access Road / Main Entry / Streetscape

- The access road and main entry are defined by the provision of naturalistic tree and ornamental flowering shrub planting to create a strong visual presence and thematic landscape character.
- The main access road is designed with structured trees, coloured paving and patterns to delineate the road

bed and adjacent sidewalk to create an inviting environment upon which pedestrians will feel safe and comfortable.

- These measures are designed to enhance the character, vitality, amenity and safety of the proposed development.

4.6 Boundary Treatment

- In order to mitigate the visual impact of Site C development to the surrounding areas and the existing woodlands, trees are planted in groups to enhance the screening effect and to provide a gradual transition from the Recreation & Sports Centre with Ancillary Facilities (including 'Place of Recreation, Sports or Culture', 'Place of Entertainment', 'Eating Place', 'Shop & Services' and/ or 'Indoor Playground'), and Welfare Centre & Public Vehicle Park for the use of general public.

- Along the Application Site Boundary: existing 2.5m tall chain link fence will be retained, and additional 2.5m tall metal fence wall and 2.5m chain link fence wall are proposed to provide a physical/ clear demarcation along the application site boundary, and to define and avoid dispute on future vegetation management and maintenance responsibility against the adjoining vegetated areas. Wildlife passage would be in the form of opening at the toe of the chain link fence to minimize potential fragmentation impacts and facilitate wildlife movement (**Appendix F**).

- The existing conserved woodlands will continue to be retained and complemented to enhance the beauty of bucolic landscape.

4.7 Buffer Planting / Preservation of Existing Trees

- Significant importance is placed on the preservation of the existing trees on Site C as these are carefully integrated into the proposed development to create a renewed landscape amenity that is a win-win situation for the adjacent neighbours and the proposed development.

- New additional tree plantings are selected to beef up the landscape setting and designed to reinforce the rural character of Site C.

- Both evergreen and ornamental trees are utilized to achieve the landscape integration objective.

- Buffer plantings are designed to screen out adverse visual elements that have a negative impact on the proposed development and to mitigate any visual impact that the proposed development may have on its surrounding neighbours.

5.0 Hard Landscape (Paving Materials / Finishes) for Site C

This section provides a description of the hardscape design together with the general information on hardscape related aspects of the design which relate to all phases, including lighting, levels and technical standards. Hardscape elements of the landscape include: paving; walls; site structures; water features; site furniture; signage and lighting.

5.1 Hard Landscape Materials

- Hardscape materials and design are chosen to compliment the building finishes, add character to the development and provide variety to the circulation areas.

- Natural stone materials and/ or artificial granite tiles, all suitable for outdoor uses are proposed for outdoor paving materials and wall finishes.

- Varied finishes with granite and/ or artificial granite tiles provide for safe application through varied textures in the paving pattern design, including ripple texture, brush and hammered finishes.

- Natural material textures exhibit a natural variation in material colour, adding interest to the patterns and helping to highlight entrances to different functional zones.

- A summary of the hardscape materials is listed in the Preliminary Hardscape Finishes Schedule for Site C. Refer to **Table 3** below:

Table 3: Preliminary Hardscape Finishes Schedule for Site C

Preliminary Hardscape Finishes Schedule for Site C	
Footpaths / paved areas	Concrete pavers/ Natural stone materials and/ or artificial granite tiles with various finishes (except polished finish to avoid slippery)
Planter walls	Natural granite stones/ artificial granite tiles/ homogenous tiles/ wash
Railing	Glass or/and galvanised metal
Tennis Court	Synthetic rubber and floor paint
Eco-Trail	Concrete pavers/ natural granite stones or/and paving blocks or/and wooden deck

5.2 Landscape Lighting

- The landscape lighting design for all areas will follow an aesthetic and functional approach. Generally, lighting will be provided for the safety and security of pedestrian circulation as well as highlighting specific landscape features. Lighting will be designed in accordance to the intended use of an area, such as seating areas or play areas.

- The desired effect for general landscape lighting in amenity areas is indirect, non-glaring and subtle, with occasional accent lighting to highlight points of interest.

- Accent landscape lighting will be soil-recessed up-lights for trees. Signage and feature walls will be spot lit to give prominence. Surface mounted fixtures and burial up-lighters will be employed to highlight the entrance areas.

- Bollard lighting will be used to provide character and additional illumination alongside pavement areas.

- Pole lighting will be used to provide illumination for vehicular access.

- Sufficient lighting will be provided for the outdoor recreational facilities for the use of sports field/ ball courts/ pool/ driving range.

5.3 Design Codes, Technical Standards & Safety Provision

- Hard landscape design works shall be in compliance with government ordinances, codes and regulations, and relevant international standards. Criteria for the selection of hard landscape materials include: durability, sustainability, low maintenance, reasonable cost, contemporary theme and specific criteria for themed areas as necessary.

- Design of the outdoor recreational facilities for the use of sports field/ ball courts/ pool/ driving range shall be in compliance with relevant safety standard and guidelines.

- All paved areas will have adequate gradient falls for proper drainage and positive fall to drain inlets, gullies or covered channels, in accordance with the accepted surface water run-off drainage practices.

6.0 Soft Landscape (Planting Design / Materials) for Site C (North Plain)

This section provides a description of the soft landscape design and softscape elements together with general information on softscape related aspects of design, including covered planting, irrigation and maintenance. Softscape elements of the landscape include plantings, planting soil and sub-surface drainage materials.

6.1 Plant Material Tables

- It is proposed to merge or blend / integrate harmoniously with its immediate surrounding neighbours. The planting design on the periphery is similar to the existing context while the planting design within the development is befitting its residential character. It takes into account the proposed nature of community and the various facilities with the year round use of the open landscape spaces. The design incorporates a varied planting palette to yield changing variety and seasonal interest. Evergreen trees, flowering trees and shrubs, variegated foliage plants and groundcover are selected.

- In general, shrubs and groundcovers will be mass planted in specific colour groupings, and designed to provide an engaging flowering under-storey layer beneath the trees. Integral to any good landscape planting design, colour, texture and contrast of foliage will be articulated to best showcase the planting design. Flowers and fragrance are important elements to enhance the planting design for this area. Fragrant species will be utilized alongside pathways and adjacent to the seating areas to enhance sensory experience.

- Carefully selected species will ensure maximum greening effect with minimum maintenance requirements. Over half of the tree species are native tree species to ensure they will be beneficial to the existing ecology. Specimen trees of various sizes will be used in combination with ornamental shrub planting to create a year-round display.

- A summary of softscape materials (categories of planting, species list, and size) is listed in **Table 4A, 4B** and **4C** below.

Table 4A: Proposed Tree Planting Schedule (Site C)

Proposed Species	Chinese Name	Quantity/ Size
Aphananthe cuspidata*	滇糙葉樹	1700 nos. Size: Heavy Standard Size 4m High; 3m Spread; DBH 0.1m; 4m Spacing
Aporosa dioica*	銀柴	
*Choerospondias axillaris**	南酸棗	
*Endospermum chinense**	黃桐	
*Ficus variegata**	青果榕	
Ficus benjamina	垂葉榕	
*Machilus breviflora**	短序潤楠	
Mallotus paniculatus*	白楸	
Callistemon hybridus ‘golden ball’	黃金串錢柳	
Delonix regia	鳳凰木	
Michelia x alba	白蘭	
Juniperus chinensis	圓柏	
Podocarpus macrophyllus*	羅漢松	
Bischofia javanica*Δ	秋楓	
Cinnamomum burmanii*Δ	陰香	
Alangium chinense*	八角楓	
Liquidambar formosana*	楓香	
Livistona chinensis	蒲葵	
Lagerstroemia speciosa	大花紫薇	
Osmanthus fragrans	桂花	
Syzygium cumini	海南蒲桃	
*Syzygium levinei**	山蒲桃	
Terminalia mantaly	小葉欖仁	
Cinnamomum camphora*Δ	樟	
Cassia siamea	鐵刀木	

Remarks: * Native Tree Species ΔTree Species Proposed for Areas near the Conserved Woodlands

Table 4B: Proposed Shrub and Groundcover Species (Site C)

Proposed Species	Chinese Name	Height x Spread mm)	Spacing (mm)
Shrub Species			
*Adina pilulifera**	水團花	500 x 400	300
*Alpinia hainanensis**	草豆蔻	600 x 500	400
Aglaia odorata	米仔蘭	600 x 500	400
Bougainvillea spectabilis	簕杜鵑	600 x 600	500
Codiaeum variegatum	灑金榕	400 x 400	300
Cordyline australis	朱蕉	800 x 600	500
*Cyperus haspan**	畦畔莎草	300 x 300	250
Duranta repens ‘golden leaves’	金連翹	300 x 300	250
Ixora coccinea ‘Lutea’	黃花龍船花	400 x 300	200
*Juncus effuses**	燈心草	500 x 400	300
*Melastoma malabathricum**	野牡丹	500 x 400	300
Murraya paniculata	九里香	800 x 600	500
*Psychotria asiatica*Δ*	九節	500 x 400	300
*Rhaphiolepis indica*Δ*	車輪梅	600 x 500	400
Rhododendron mucronatum	白花杜鵑	600 x 500	400
Rhododendron periclymenoides	粉紅杜鵑	600 x 500	400
*Rhododendron simsii**	紅杜鵑	500 x 400	300
Schefflera arboricola ‘variegatum’	花葉八葉	600 x 500	400
Ground Cover Species			
Cuphea hyssopifolia	細葉雪茄花	300 x 300	200
Lantana montevidensis	小葉馬纓丹	300 x 300	200
*Nephrolepis auriculate**	腎蕨	300 x 300	250
Nephrolepsis exaltata “Bostoniensis”	波斯頓腎蕨	350 x 400	300

Ophiopogon japonicus	沿階草	100 x 150	100
Rhoeo discolour dwarf	矮種蚌花	200 x 250	200

Remarks: * Native Species Δ Tree Species Proposed for Areas near the Conserved Woodlands

Table 4C: Proposed Climber Species for Fence Wall/ Retaining Wall (Site C)

Botanical Name	Chinese Name	Height x Spread (mm)
Species		
*Bauhinia glauca**	羊蹄甲藤	2000 x 300
Bougainvillea spectabilis	勒杜鵑	2000 x 300
Combretum indicum	使君子	2000 x 300
Clerodendrum thomsoniae	紅龍吐珠	2000 x 300
*Desmos chinensis**	假鷹爪	2000 x 300
*Gnetum luofuense**	羅浮買麻藤	2000 x 300
*Lonicera japonica**	金銀花	2000 x 300
*Mussaenda pubescens**	玉葉金花	2000 x 300

Remarks: * Native Species

6.2 Soil Depth and Drainage Provision for the Planted Area

- The majority of the planting areas are located on grade and/ or tree pits. The need for adequate soil depths to ensure proper plant growth is taken into account for all planting areas. The appropriate soil depths (approximate and excluding drainage layers) are (**Appendix E**):
  - Trees: 1200mm
  - Shrub : 600mm
  - Groundcover/ lawn: 300mm
- Structural engineers have made sufficient allowances to accommodate the necessary planting components, i.e., plant stock, soil volume and sub-surface drainage materials loading.
- Proper and adequate subsoil drainage system and drain outlets to the storm water drainage system will be provided.
- The landscape works are designed to avoid obstruction of the maintenance of drainage works. Adequate clearance between drainage works and landscape works will be maintained so as to prevent any potential damage to drainage works.

6.3 Irrigation and Proposed Source of Water Supply

- Water points (not more than 40m apart centre to centre) are located throughout the soft landscape area for irrigation.

6.4 Future Maintenance and Management

- Maintenance and establishment works to soft landscape areas shall be undertaken by the softworks contractor for an Establishment Period of a minimum of 12 months following Practical Completion. This will ensure the proper establishment of the planted material. Tree risk assessment will be conducted at appropriate time for appropriate tree as instructed by the owner in accordance with Handbook on Tree Management by DEVB.

Soft Landscape Maintenance Schedule

Watering: Water all plants as necessary, adjusted to rainfall, to ensure adequate water supply for plant consumption during the establishment period.

Pruning: Cut back annuals after flowering period. Healthy cuttings may be used for propagation. Prune shrubs and groundcover in early March to encourage flowering. Prune woody shrubs and trees selectively according to species (annually). Remove dead fronds from palm trees. Utilise established and approved tree surgery techniques as necessary and seal all sharp cut wounds with approved material to resist decease attack.

Fertilizing: Two to three times annually, emphasis shall be in the March application. Test soil in January to analyse quality ameliorates as necessary.

Fungicide / Insecticide: Spray only as necessary with approved chemical.

Weeding: Manually or use selective non-toxic, biodegradable herbicide to keep the weed growth and its establishment under control.

Securing: Adjust tree stakes in spring and as necessary to taut up the staking. Care shall be applied to avoid chaffing of tree bark.

Mulching: Top up the mulching inside all planting beds twice a year and as necessary.

Thinning: Reduce overcrowding and transplant as necessary at selected periods:

- Evergreens: Spring
- Deciduous: Winter
- Palms: June to August

Table 5: Maintenance Schedule

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Watering	●	●	●	●	●	●	●	●	●	●	●	●
Pruning		D	GC									
Fertilizing	soil test		**X**								**X**	
Fungicide / Insecticide			**X**						**X**			**X**
Weeding		**X**	**X**	**X**	**X**	**X**	**X**	**X**		**X**		**X**
Securing			**X**									
Thinning			EG								D	

Remarks: Tree risk assessment will be conducted at appropriate time for appropriate tree as instructed by the owner in accordance with Handbook on Tree Management by DEVB.

Schedule Legend:

GC Groundcover
D Deciduous
X Application
EG Evergreen
● Size proportional to quantity

APPENDIX A

Correspondences

A1 TPB Approval letter (Ref. TPB/A/NE-SSH/120-1) dated 18 March 2021

規劃署

沙田、大埔及北區規劃處
香港新界沙田上禾輋路一號
沙田政府合署
十三樓 1301-1314 室

Planning Department

Sha Tin, Tai Po & North District
Planning Office
Rooms 1301-1314, 13/F.,
Shatin Government Offices,
1 Sheung Wo Che Road, Sha Tin,
N.T., Hong Kong

本函檔號 Your Reference AG/2009201/21069
本署檔號 Our Reference ( ) in TPB/A/NE-SSH/120-1
電話號碼 Tel. No.: 2158 6220
傳真機號碼 Fax No.: 2691 2806 / 2696 2377

By Post and Fax (2893 8997)

18 March 2021

Axxa Group Limited
51/F China Online Centre
333 Lockhart Road,
Wan Chai, Hong Kong
(Attn.: Ms. Camay LAM)

Dear Ms. Lam,

Compliance with Approval Condition (c)

Proposed Comprehensive Residential and Commercial Development with Government, Institution or Community Facilities with Minor Relaxation of Gross Floor Area and Building Height Restrictions in "Comprehensive Development Area", "Country Park", "Government, Institution or Community", "Green Belt", "Open Space", "Village Type Development" Zones and an area shown as 'Road', Tai Po Town Lot 157 and Various Lots in D.D. 165, D.D. 207 and D.D. 218 and Adjoining Government Land, Sai Sha, Shap Sz Heung
(Planning application No. A/NE-SSH/120-1)
[Site C]

I refer to your letter dated 10.3.2021 enclosing five copies of approved Landscape Master Plan (LMP) for Site C delivered to our office by courier on 15.3.2021.

2. The approved LMP is herewith certified and enclosed for your record. The certified copies will be used for future compliance checking. Please note that full compliance with approval condition (c) rests upon the implementation of the LMP for Sites A, B and C including a tree survey, a tree preservation scheme and site boundary treatment to the satisfaction of the Director of Planning or of the Town Planning Board (TPB). For the avoidance of doubt, I would like to point out that approval condition (c) of Application No. A/NE-SSH/120-1 has not been fully complied with for the time being. You are also reminded on the following:

(i) You are reminded to follow JPN3 and PlanD's Practice Note No. 1/2019 for compliance checking of the completed landscape works. You shall appoint a Registered Landscape Architect (RLA) to certify that the landscape works has been implemented in accordance with the approved LMP and submit a self-certificate of compliance (SCC). The involved RLA shall observe and follow the circular letter of 16.6.2015 issued by the Landscape Architects Registration Board (LARB) addressing to all RLAs, in connection with the RLA's Delivery of Professional Standards of Services.

(ii) The approval of the LMP under TPB approval condition does not imply approval of the site coverage of greenery requirements under APP PNAP-152. The site coverage of greenery calculation should be submitted separately to the Buildings Department for approval. Similarly for any proposed tree preservation/removal scheme, the applicant is reminded to approach relevant authority/government department(s) direct to obtain the necessary approval.

3. Should you have any enquiries, please feel free to contact Ms. Sharon Chan (Tel. No: 2158 6043) of this department.

Yours faithfully,

(Ms Jessica CHU)
for and on behalf of
Director of Planning

c.c.
CTP/UD&L, PlanD - 1 copy of LMP
DLO/TP, LandsD - 2 copies of LMP (1 for DLO and 1 for Tree Unit)

File
Site Record

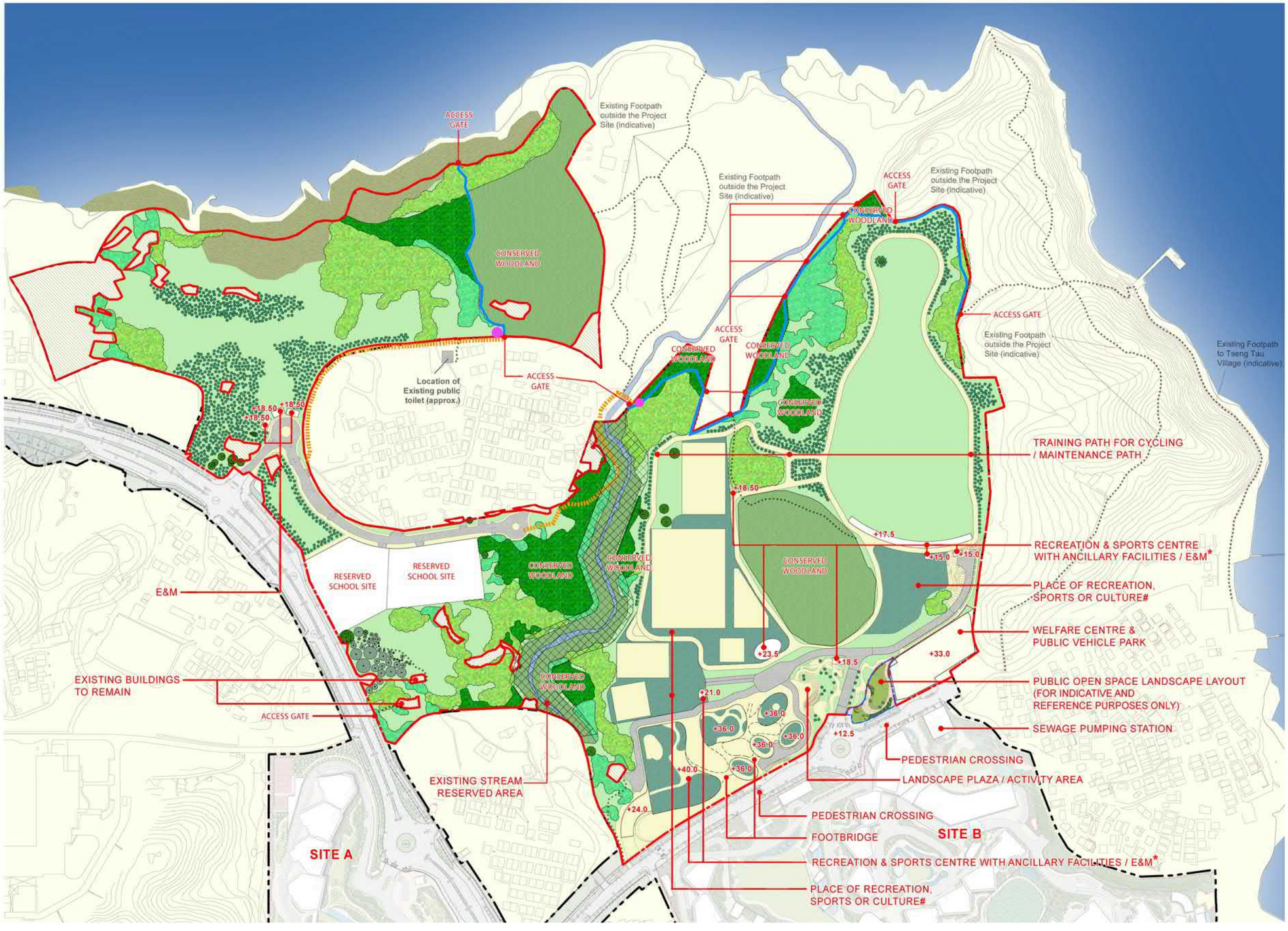
JC/TW/SC/JW/jw

APPENDIX B

Landscape Master Plans

B1 Landscape Master Plan for Site C

B2 Overall Landscape Master Plan for Site A, B, C and Sai Sha Road



LEGEND

- APPLICATION SITE BOUNDARY
- SITE C LOT BOUNDARY
- PUBLIC OPEN SPACE BOUNDARY
- PROPOSED ROUTE OF ECO-TRAILS ALONG THE DEVELOPMENT BOUNDARY (INDICATIVE)
- PROPOSED PEDESTRIAN ACCESS (INDICATIVE)
- LOCATION OF PROPOSED INFORMATION BOARD
- EXISTING RETAINED TREES (27 nos.)
- PROPOSED TRANSPLANTED TREES (43 nos.)
- PROPOSED NEW TREES (1,700 nos.)
- LANDSCAPE AREA (SOFT LANDSCAPE)
- MAN-MADE GRASS
- HARD PAVED AREA
- VEHICULAR ACCESS ROAD
- TYPE A
  NON-CONSERVED WOODLAND TREE GROUP
  PROPOSED TO BE RETAINED (1,628 nos.)
- TYPE B
  ACCESSIBLE CONSERVED WOODLAND
  PROPOSED TO BE RETAINED (1,300 nos.)
- TYPE C
  INACCESSIBLE CONSERVED WOODLAND
  PROPOSED TO BE RETAINED (38,000 m²)
- TYPE D
  PROPOSED RETAINED TREE GROUP
  IN OTHER AREAS (1,481 nos.)
- EXISTING STREAM RESERVED AREA
- LAND TO BE SECURED BY APPLICANT/ LAND OUTSIDE TPTL 157 RP & TPTL 253
- 20m ECOLOGICAL STREAM BUFFER ZONE
- MARSH
- +5.0 PROPOSED LEVEL
- EXISTING FOOTPATH

* INCLUDING 'PLACE OF RECREATION, SPORTS OR CULTURE', 'PLACE OF ENTERTAINMENT', 'EATING PLACE', 'SHOP & SERVICES', AND/OR 'INDOOR PLAYGROUND'

\# PLACE OF RECREATION, SPORTS OR CULTURE (OUTDOOR RECREATIONAL FACILITIES FOR THE USE OF SPORTS FIELD/ BALL COURT/ POOL/ DRIVING RANGE/ TRAINING PATH FOR CYCLING)

0m 20m 40m 60m 120m 200m

SCALE 1:4000 (A3)
1:2000 (A1)

Section 16 Planning Application for Amendments to the Approved Development (Application No. A/NE-SSH/120-1) – Amendments to Recreation and Sports Centre with Ancillary Facilities in Site C

Landscape Master Plan for Site C

Dwg. No. : 2009201-SC-NewS16-2021-LMP-01b

Date : APR 2022
(A1-size)

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\NewS16-2021\Site C\2022-05-04\2009201-SC-NewS16-2021-LMP-01b

Overall Landscape Master Plan for Site A, B, C and Sai Sha Road

Remark: No change to layout of Site A and Site B as approved under Application No. A/NE-SSH/120-1

NAI CHUNG

SAI O

NAI CHUNG

CHE HA

SITE C

KWUN HANG

TSENG TAU

MA KWU LAM

SITE A

TAI TUNG

SITE B

NGA YIU TAU

LEGEND:

- APPLICATION SITE BOUNDARY
- PROPOSED SITE DEVELOPMENT BOUNDARY
- PUBLIC OPEN SPACE BOUNDARY
- LANDSCAPE AREA (SOFT LANDSCAPE)
- MAN-MADE GRASS
- LANDSCAPE AREA (HARD LANDSCAPE)
- EVA / DRIVEWAY (HARD LANDSCAPE)
- EXISTING RETAINED TREES
- PROPOSED TRANSPLANTED TREES
- PROPOSED COMPENSATORY TREES
- PROPOSED NEW TREES
- TYPE A
  NON-CONSERVED WOODLAND TREE GROUP
  PROPOSED TO BE RETAINED
- TYPE B
  ACCESSIBLE CONSERVED WOODLAND
  PROPOSED TO BE RETAINED
- TYPE C
  INACCESSIBLE CONSERVED WOODLAND
  PROPOSED TO BE RETAINED
- TYPE D
  PROPOSED RETAINED TREE GROUP
  IN OTHER AREAS
- MARSH
- EXISTING STREAM RESERVED AREA

0 10 30 50 100 200m

SCALE

1 : 3000 (A1)

1 : 6000 (A3)

APPENDIX C

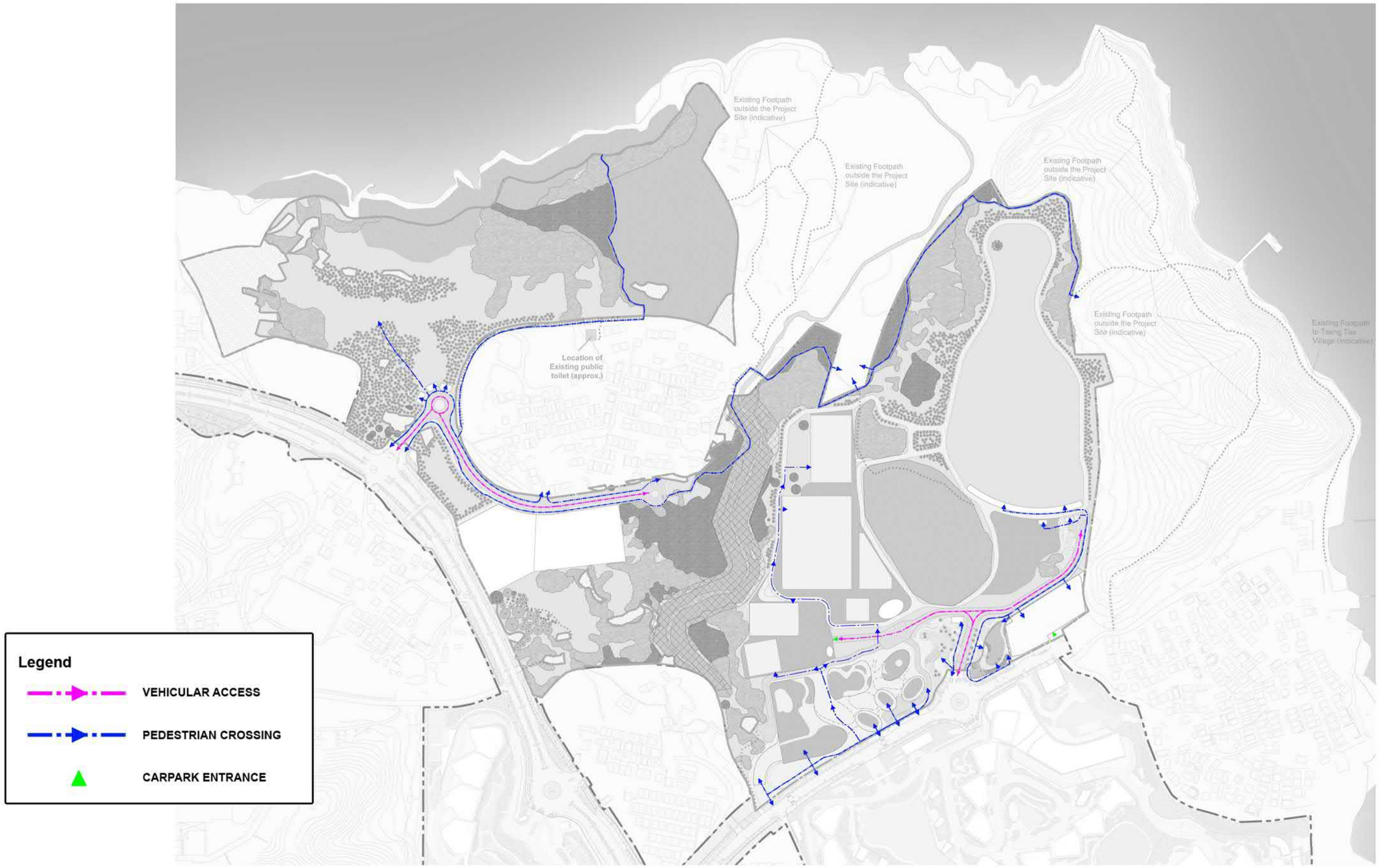
Circulation Diagram for Site C

Section 16 Planning Application for Amendments to the Approved Development (Application No. A/NE-SSH/120-1) – Amendments to Recreation and Sports Centre with Ancillary Facilities in Site C

Circulation Diagram for Site C

Dwg. No. : 2009201-SC-NewS16-2021-CDP-01b

Date : APR 2022
(A3-size)



Section 16 Planning Application for Amendments to the Approved Development (Application No. A/NE-SSH/120-1) – Amendments to Recreation and Sports Centre with Ancillary Facilities in Site C

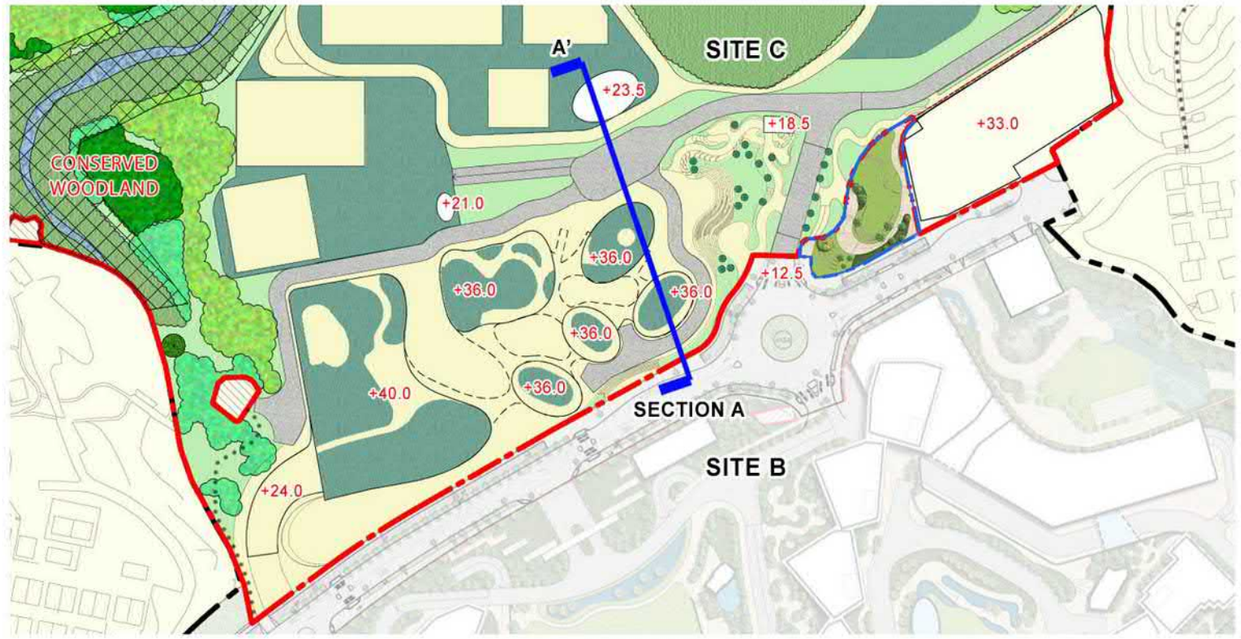
Circulation Diagram for Site C

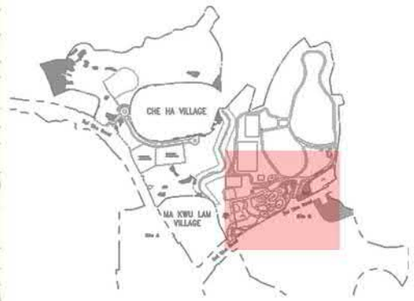
Dwg. No. : 2009201-SC-NewS16-2021-CDP-02b

Date : APR 2022
(A3-size)

APPENDIX D

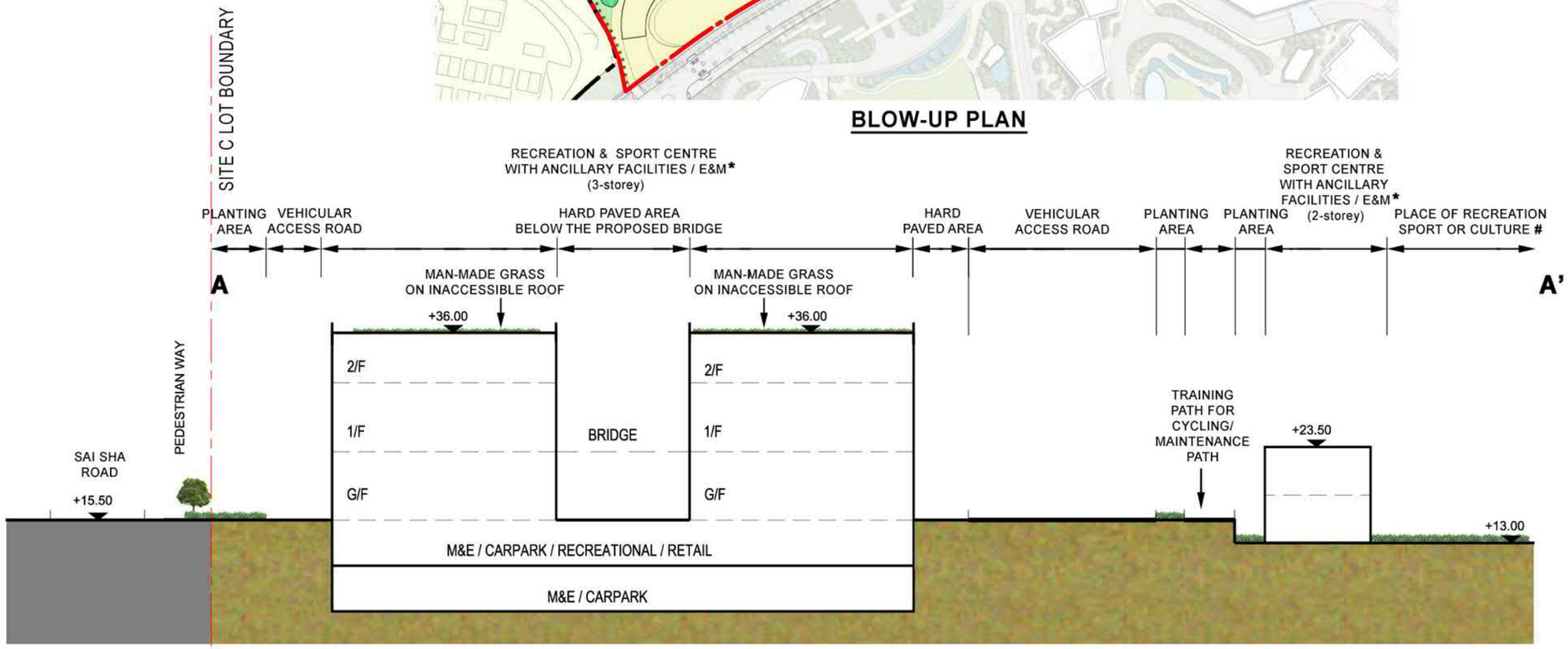
Sections for Site C





KEYPLAN

BLOW-UP PLAN



SECTION A - A'

0m 2m 5m 10m 20m

SCALE : 1:500 (A3)

NOTE:
* INCLUDING 'PLACE OF RECREATION, SPORTS OR CULTURE', 'PLACE OF ENTERTAINMENT', ' EATING PLACE', 'SHOP & SERVICES', AND/OR 'INDOOR PLAYGROUND'
# PLACE OF RECREATION, SPORTS OR CULTURE (OUTDOOR RECREATIONAL FACILITIES FOR THE USE OF SPORTS FIELD / BALL COURT / POOL / DRIVING RANGE / TRAINING PATH FOR CYCLING)

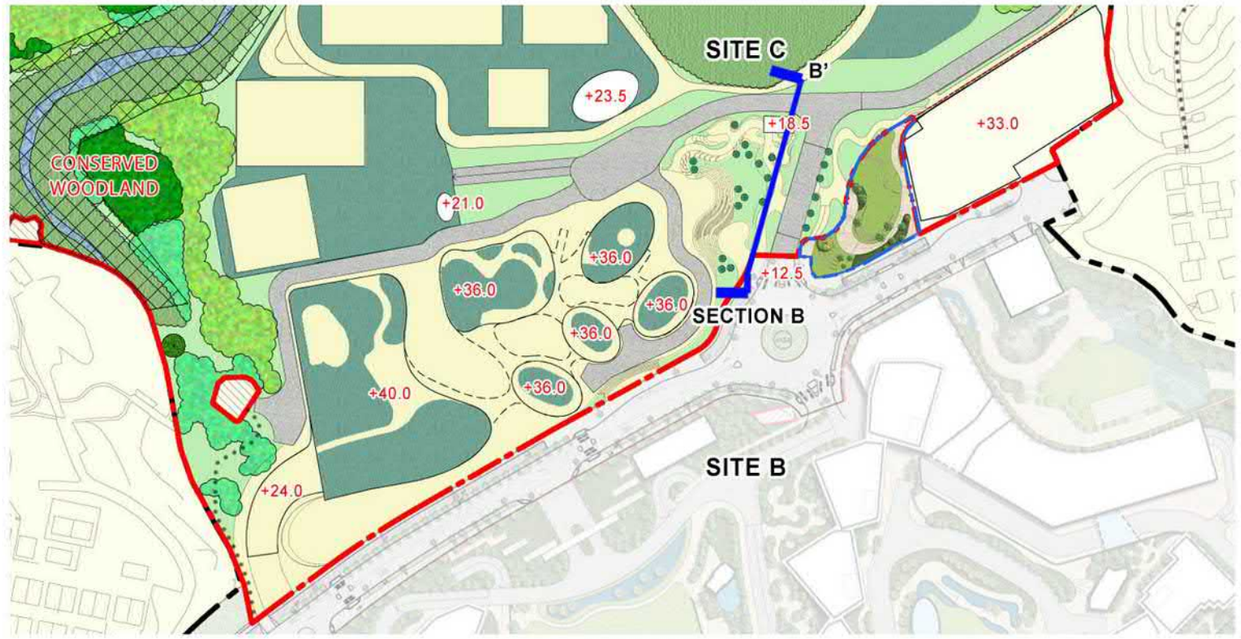
Section 16 Planning Application for Amendments to the Approved Development (Application No. A/NE-SSH/120-1) – Amendments to Recreation and Sports Centre with Ancillary Facilities in Site C

Landscape Section for Site C

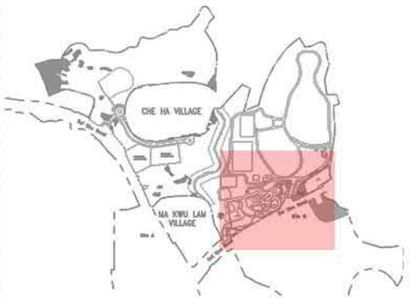
Dwg. No. : 2009201-SC-NewS16-2021-SEC-01b

Date : APR 2022
(A3-size)

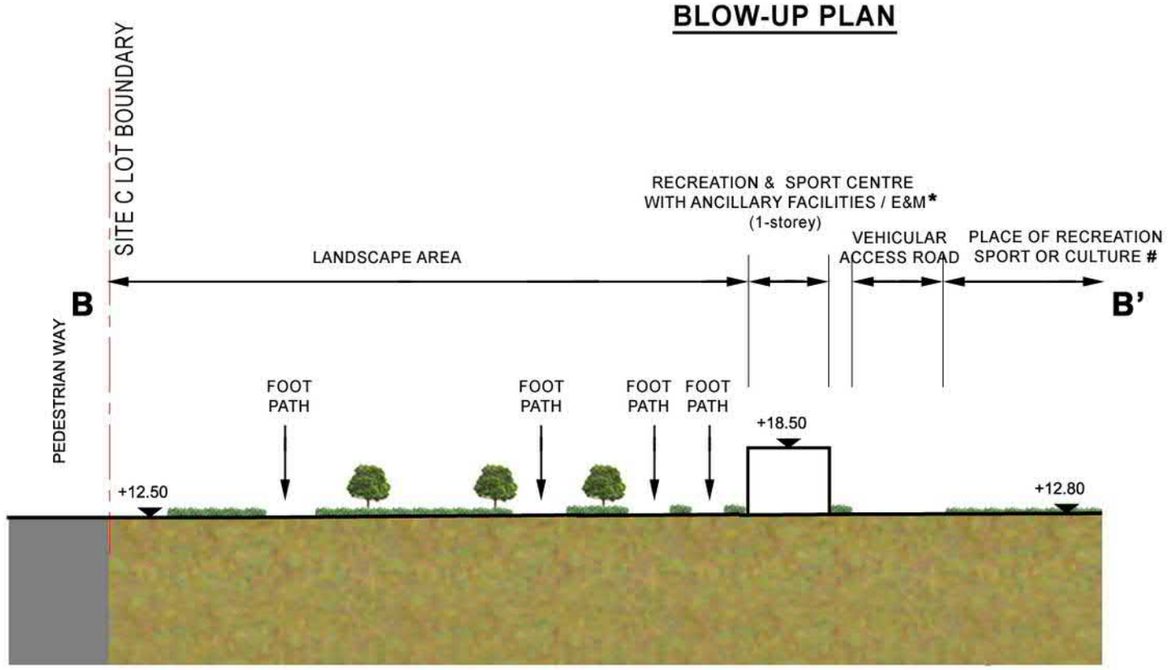
Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\NewS16-2021\Site C\2022-05-04\2009201-SC-NewS16-2021-SEC-01b



BLOW-UP PLAN



KEYPLAN



SECTION B - B'

NOTE:
* INCLUDING 'PLACE OF RECREATION, SPORTS OR CULTURE', 'PLACE OF ENTERTAINMENT', ' EATING PLACE', 'SHOP & SERVICES', AND/OR 'INDOOR PLAYGROUND'
# PLACE OF RECREATION, SPORTS OR CULTURE (OUTDOOR RECREATIONAL FACILITIES FOR THE USE OF SPORTS FIELD / BALL COURT / POOL / DRIVING RANGE / TRAINING PATH FOR CYCLING)

0m 2m 5m 10m 20m

SCALE . 1:500 (A3)

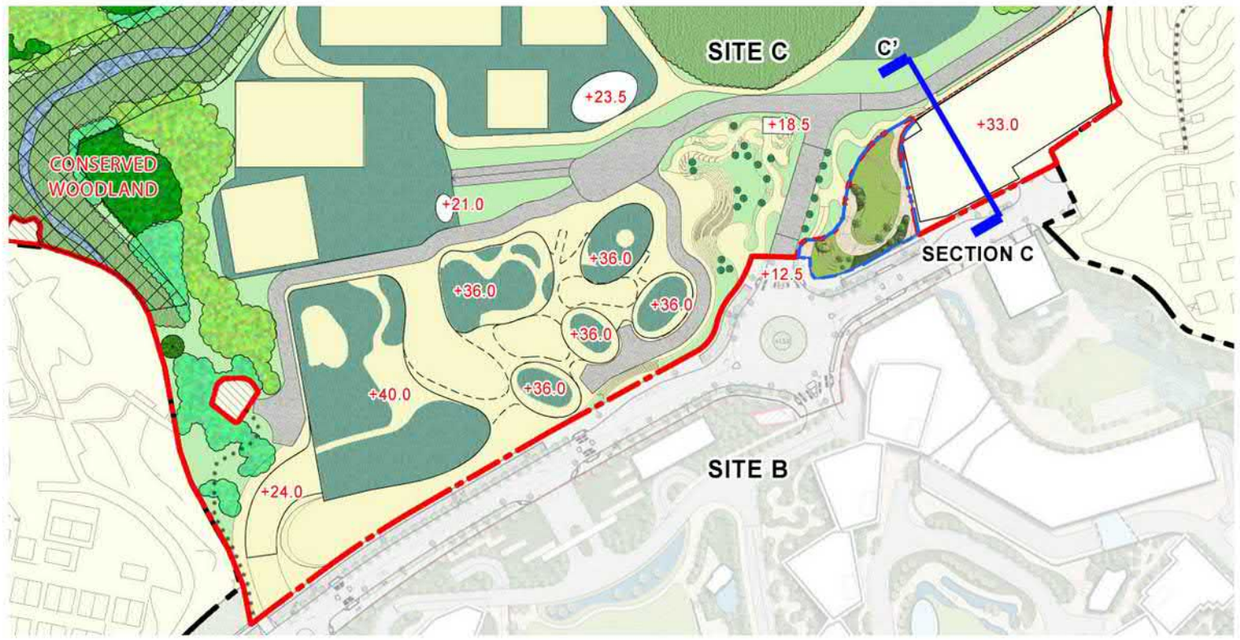
Section 16 Planning Application for Amendments to the Approved Development (Application No. A/NE-SSH/120-1) – Amendments to Recreation and Sports Centre with Ancillary Facilities in Site C

Landscape Section for Site C

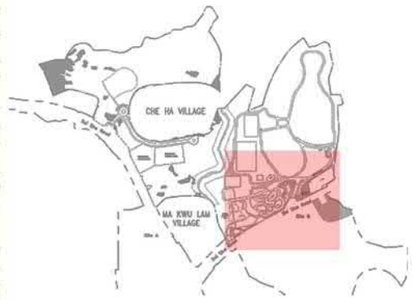
Dwg. No. : 2009201-SC-NewS16-2021-SEC-02b

Date : APR 2022
(A3-size)

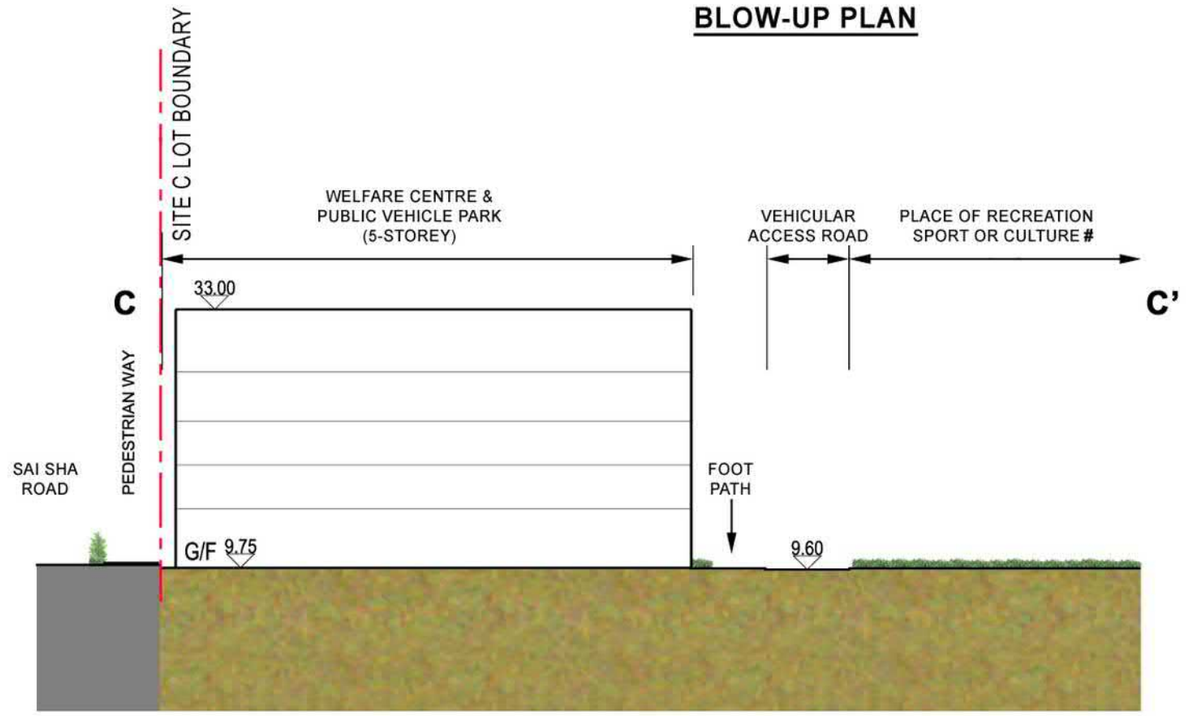
Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\NewS16-2021\Site C\2022-05-04\2009201-SC-NewS16-2021-SEC-02b



BLOW-UP PLAN



KEYPLAN



SECTION C - C'

0m 2m 5m 10m 20m

SCALE . 1:500 (A3)

NOTE:
PLACE OF RECREATION, SPORTS OR CULTURE (OUTDOOR RECREATIONAL FACILITIES FOR THE USE OF SPORTS FIELD / BALL COURT / POOL / DRIVING RANGE / TRAINING PATH FOR CYCLING)

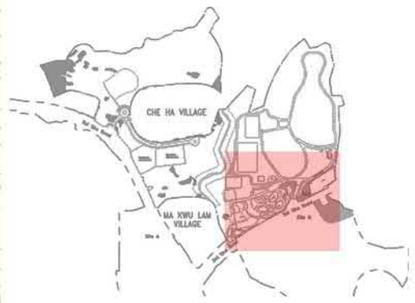
Section 16 Planning Application for Amendments to the Approved Development (Application No. A/NE-SSH/120-1) – Amendments to Recreation and Sports Centre with Ancillary Facilities in Site C

Landscape Section for Site C

Dwg. No. : 2009201-SC-NewS16-2021-SEC-03b

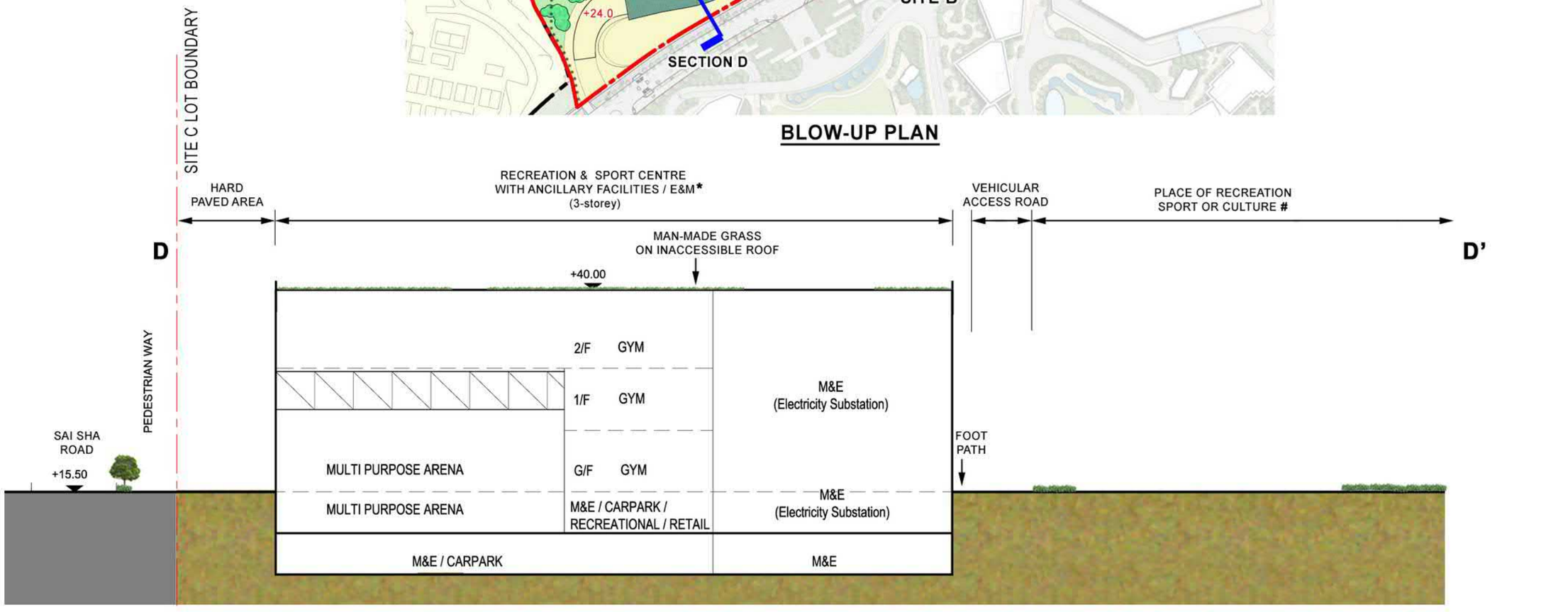
Date : APR 2022
(A3-size)

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\NewS16-2021\Site C\2022-05-04\2009201-SC-NewS16-2021-SEC-03b



KEYPLAN

BLOW-UP PLAN



SECTION D - D'

NOTE:
* INCLUDING 'PLACE OF RECREATION, SPORTS OR CULTURE', 'PLACE OF ENTERTAINMENT', ' EATING PLACE', 'SHOP & SERVICES', AND/OR 'INDOOR PLAYGROUND'
# PLACE OF RECREATION, SPORTS OR CULTURE (OUTDOOR RECREATIONAL FACILITIES FOR THE USE OF SPORTS FIELD / BALL COURT / POOL / DRIVING RANGE / TRAINING PATH FOR CYCLING)

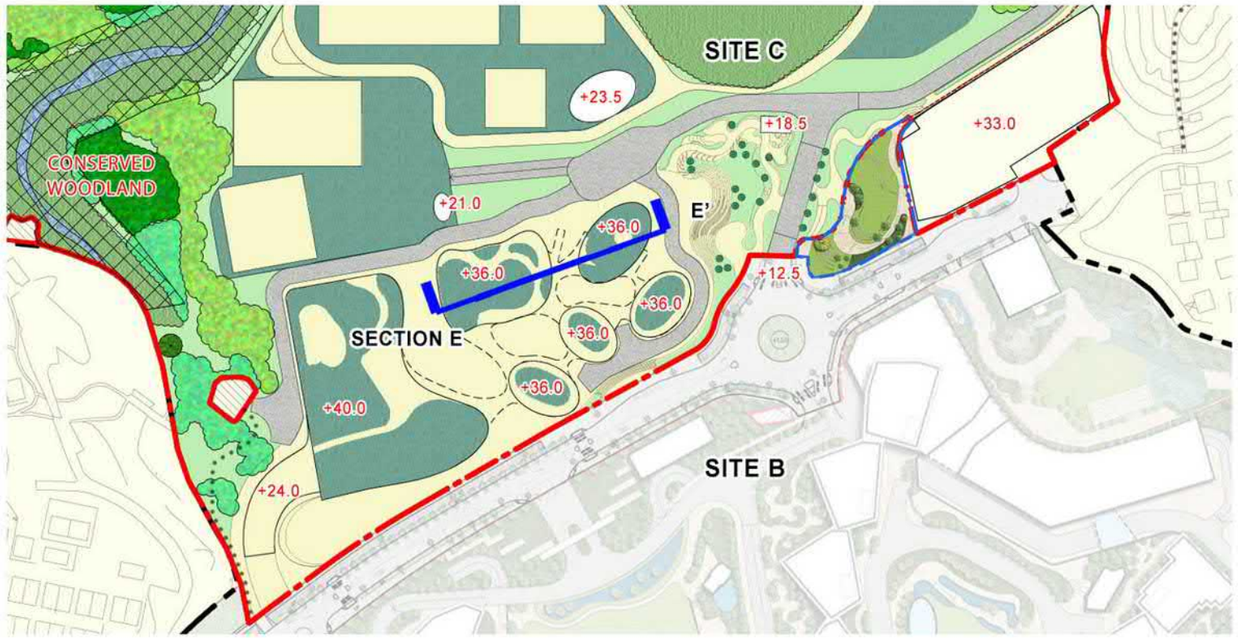
0m 2m 5m 10m 20m
SCALE . 1:500 (A3)

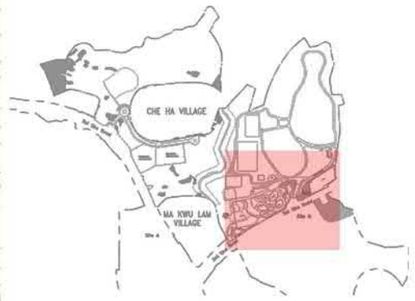
Section 16 Planning Application for Amendments to the Approved Development (Application No. A/NE-SSH/120-1) – Amendments to Recreation and Sports Centre with Ancillary Facilities in Site C

Landscape Section for Site C

Dwg. No. : 2009201-SC-NewS16-2021-SEC-04b

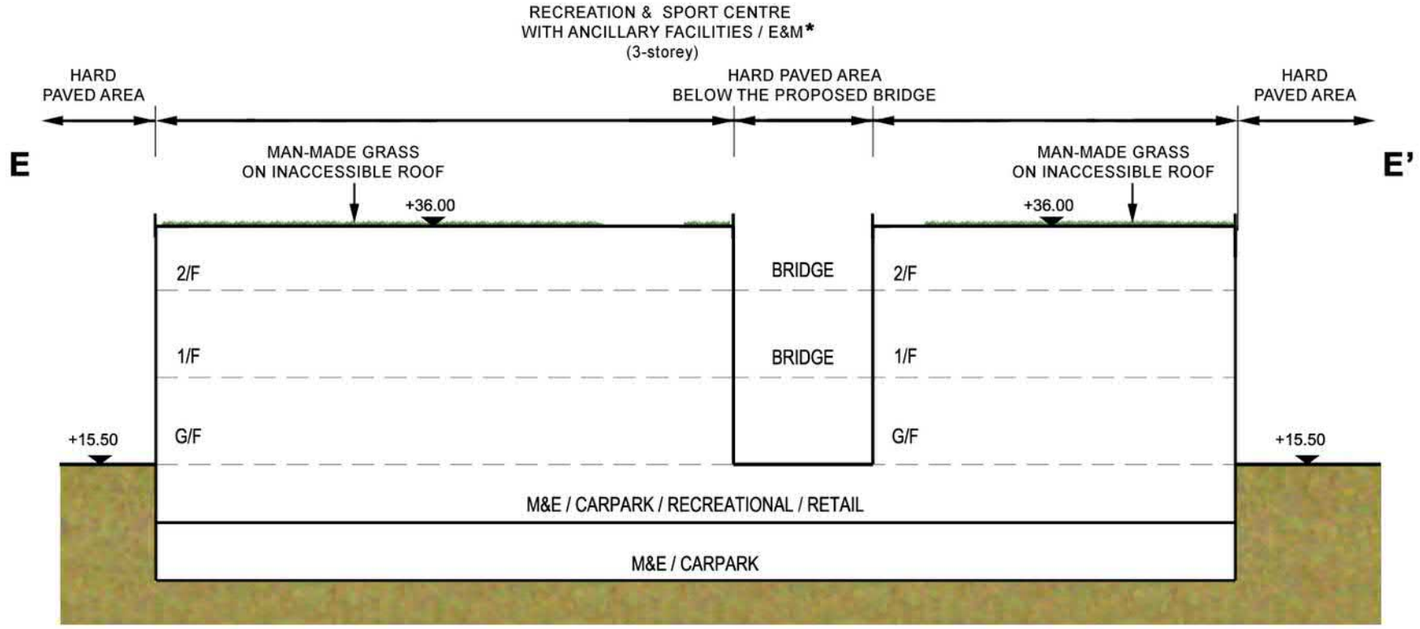
Date : APR 2022
(A3-size)





KEYPLAN

BLOW-UP PLAN



SECTION E - E'

0m 2m 5m 10m 20m

SCALE . 1:500 (A3)

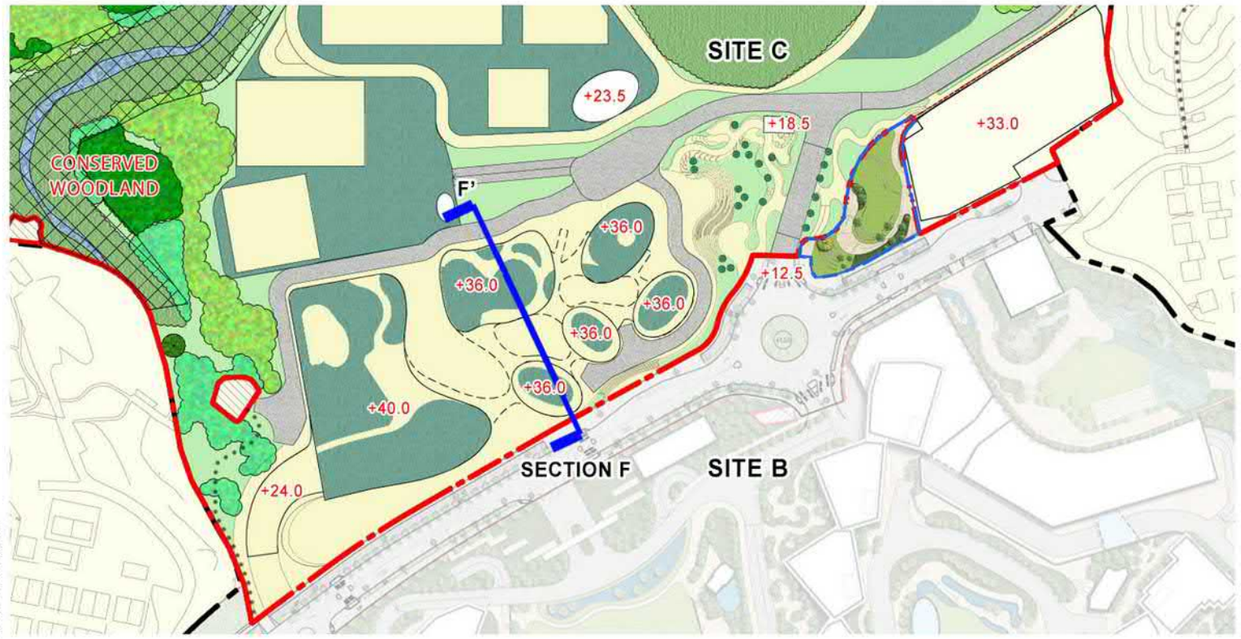
NOTE:
* INCLUDING 'PLACE OF RECREATION, SPORTS OR CULTURE', 'PLACE OF ENTERTAINMENT', ' EATING PLACE', 'SHOP & SERVICES', AND/OR 'INDOOR PLAYGROUND'

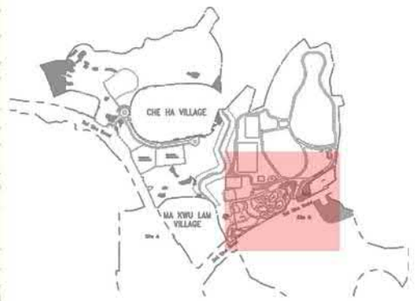
Section 16 Planning Application for Amendments to the Approved Development (Application No. A/NE-SSH/120-1) – Amendments to Recreation and Sports Centre with Ancillary Facilities in Site C

Landscape Section for Site C

Dwg. No. : 2009201-SC-NewS16-2021-SEC-05

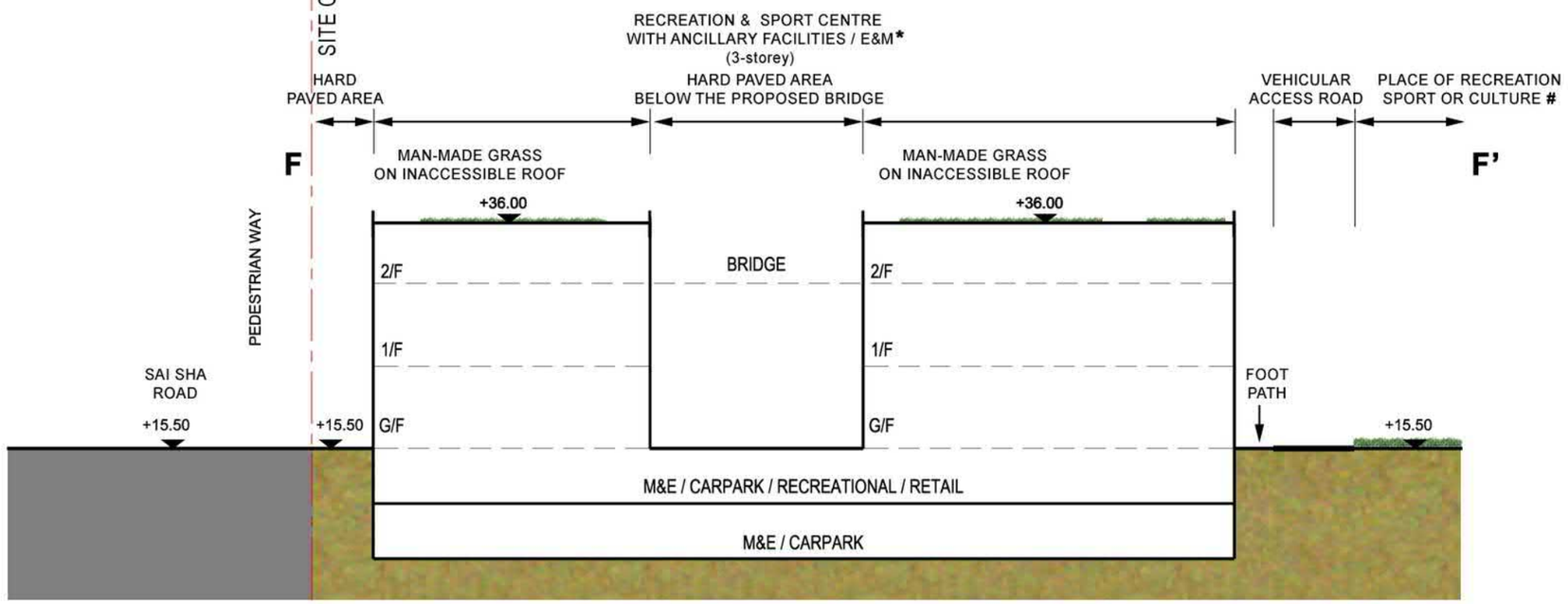
Date : APR 2022
(A3-size)





KEYPLAN

BLOW-UP PLAN



SECTION F - F'

0m 2m 5m 10m 20m

SCALE . 1:500 (A3)

NOTE:

*** INCLUDING 'PLACE OF RECREATION, SPORTS OR CULTURE', 'PLACE OF ENTERTAINMENT', ' EATING PLACE', 'SHOP & SERVICES', AND/OR 'INDOOR PLAYGROUND'**

 # PLACE OF RECREATION, SPORTS OR CULTURE (OUTDOOR RECREATIONAL FACILITIES FOR THE USE OF SPORTS FIELD / BALL COURT / POOL / DRIVING RANGE / TRAINING PATH FOR CYCLING)

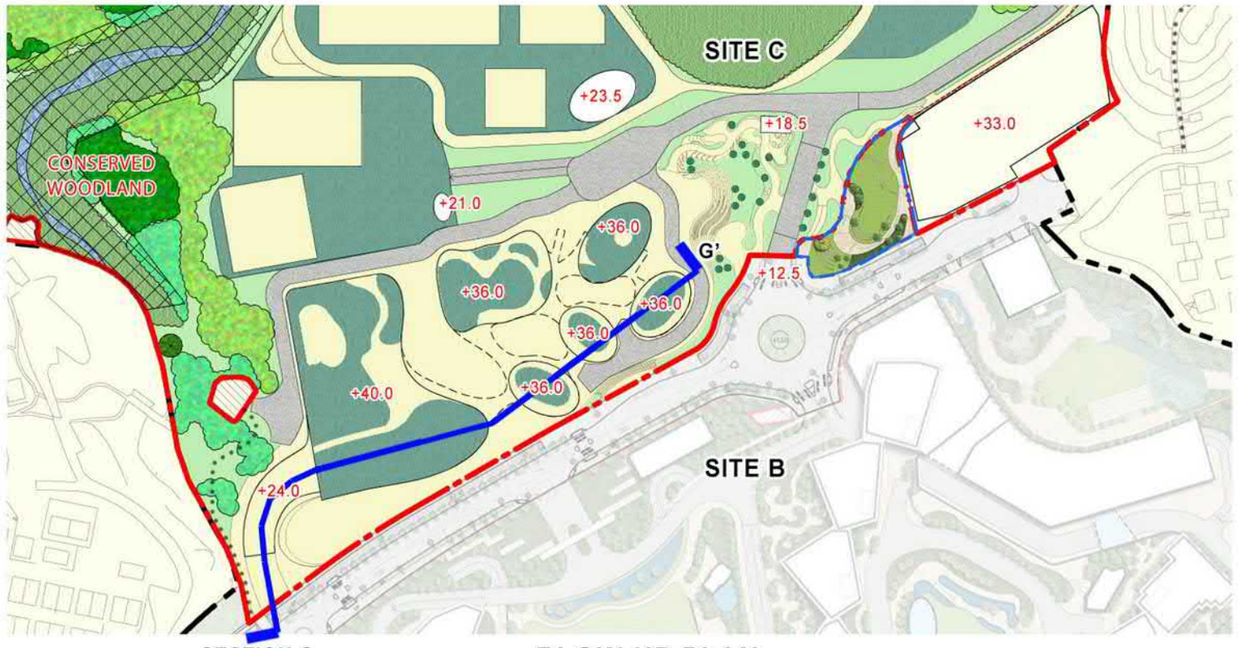
Section 16 Planning Application for Amendments to the Approved Development (Application No. A/NE-SSH/120-1) – Amendments to Recreation and Sports Centre with Ancillary Facilities in Site C

Landscape Section for Site C

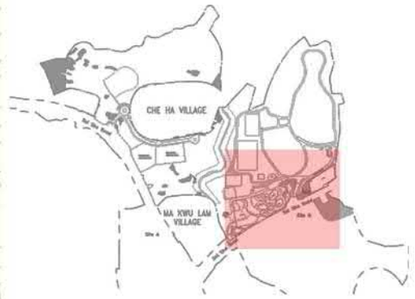
Dwg. No. : 2009201-SC-NewS16-2021-SEC-06

Date : APR 2022
(A3-size)

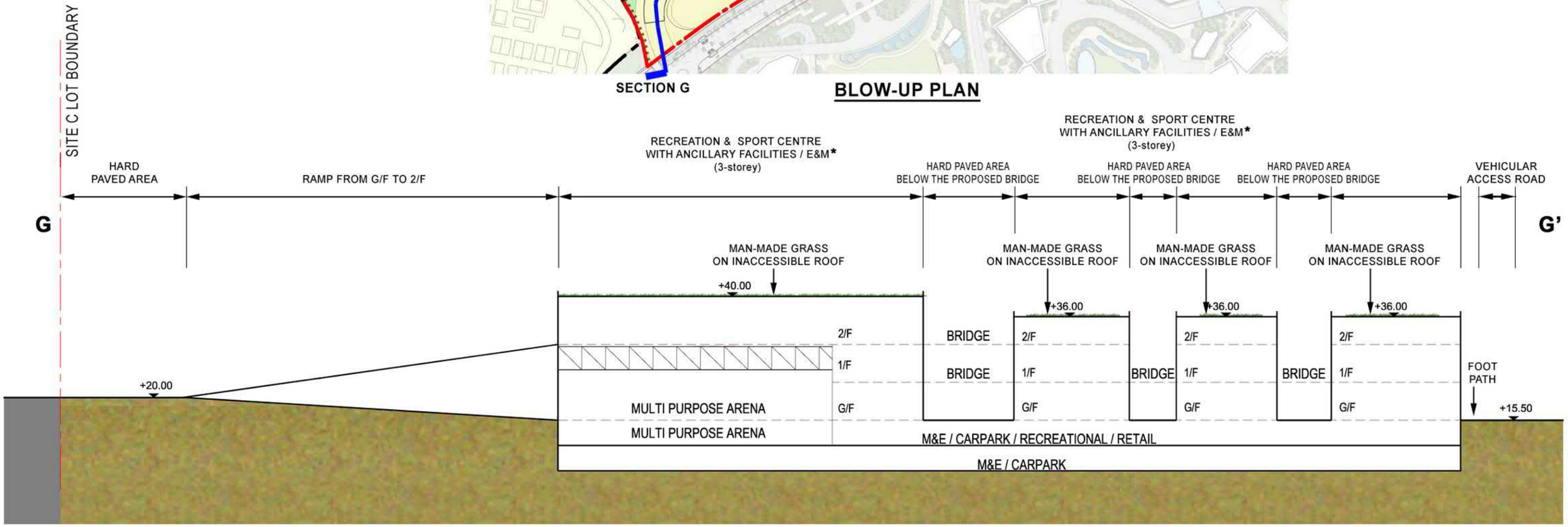
Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\NewS16-2021\Site C\2022-05-04\2009201-SC-NewS16-2021-SEC-06



BLOW-UP PLAN



KEYPLAN



SECTION G - G'

NOTE:
* INCLUDING 'PLACE OF RECREATION, SPORTS OR CULTURE', 'PLACE OF ENTERTAINMENT', ' EATING PLACE', 'SHOP & SERVICES', AND/OR 'INDOOR PLAYGROUND'

0m 5m 10m 15m 30m

SCALE . 1:750 (A3)

Section 16 Planning Application for Amendments to the Approved Development (Application No. A/NE-SSH/120-1) – Amendments to Recreation and Sports Centre with Ancillary Facilities in Site C

Landscape Section for Site C

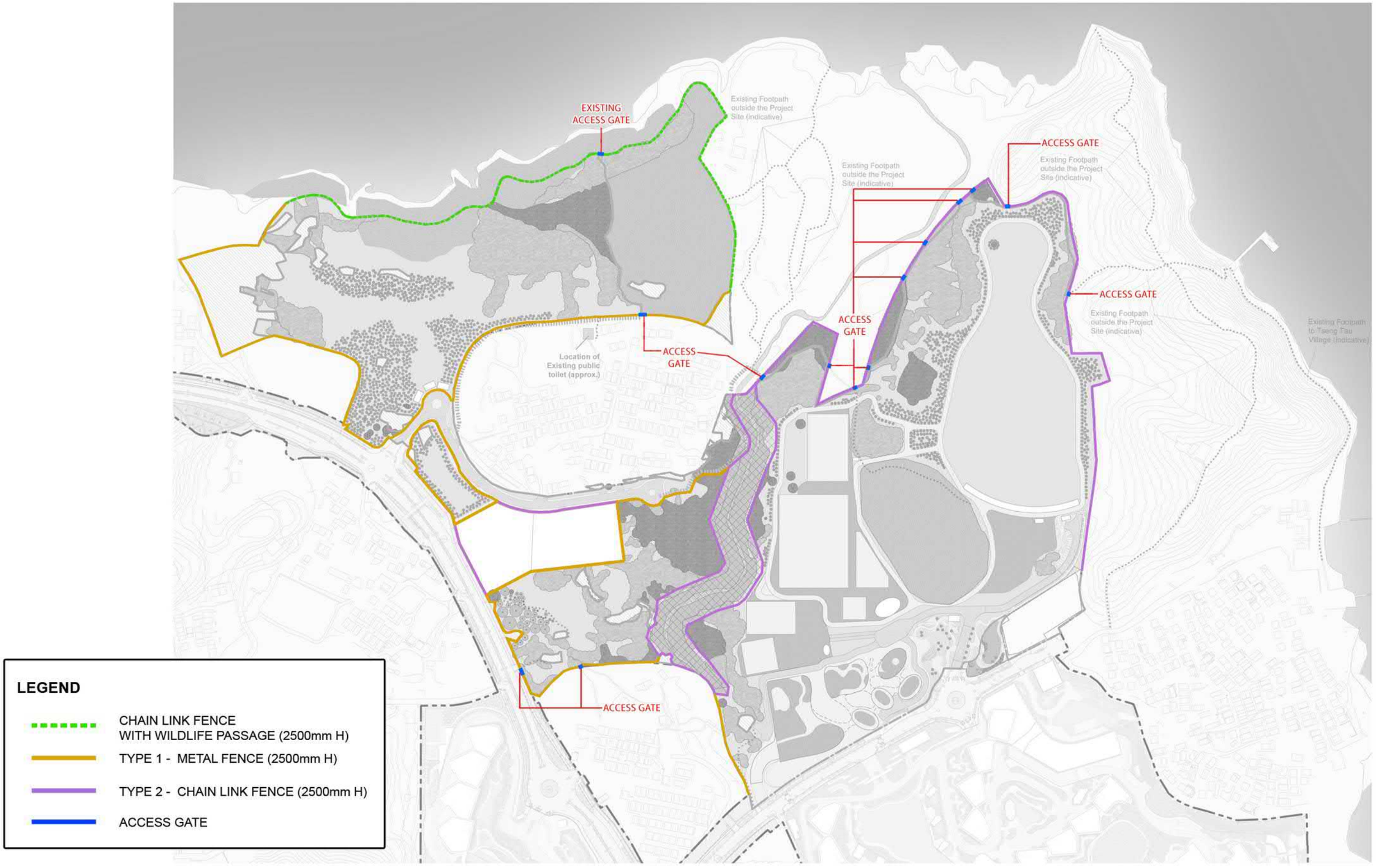
Dwg. No. : 2009201-SC-NewS16-2021-SEC-07

Date : APR 2022
(A3-size)

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\NewS16-2021\Site C\2022-05-04\2009201-SC-NewS16-2021-SEC-07

APPENDIX E

Fence Wall and Access Gate Indication Plan for Site C



Section 16 Planning Application for Amendments to the Approved Development (Application No. A/NE-SSH/120-1) – Amendments to Recreation and Sports Centre with Ancillary Facilities in Site C

Fence Wall and Access Gate Indication Plan for Site C

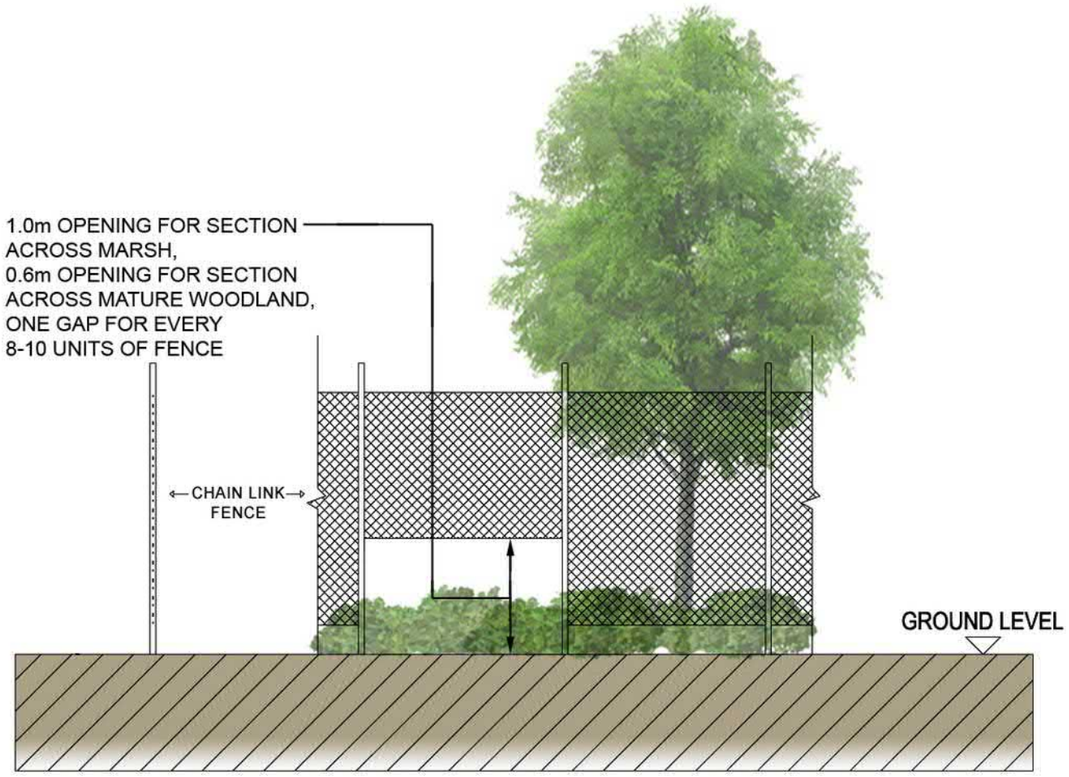
Dwg. No. : 2009201-SC-NewS16-2021-FWP-01b

Date : APR 2022
(A3-size)

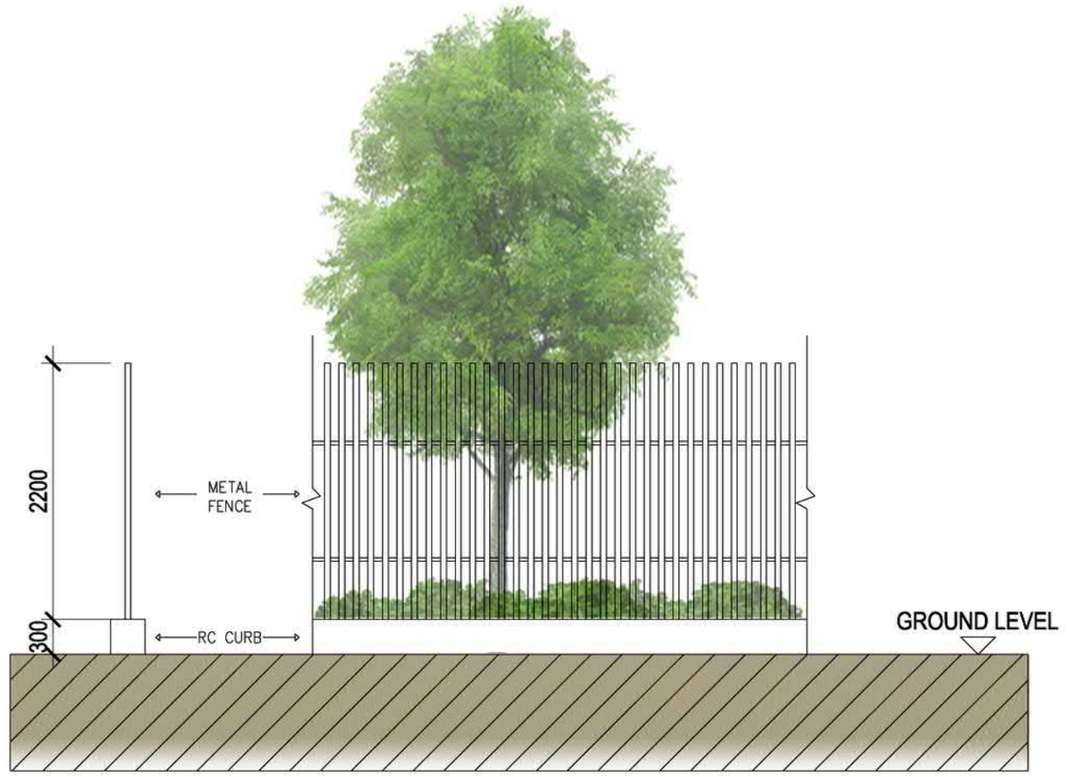
Y:\0-Axiagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\NewS16-2021\Site C\2022-05-04\2009201-SC-NewS16-2021-FWP-01b

APPENDIX F

Fence Wall and Access Gate Sections and Elevations for Site C



CHAIN LINK FENCE
WITH WILDLIFE PASSAGE (2500mm H)



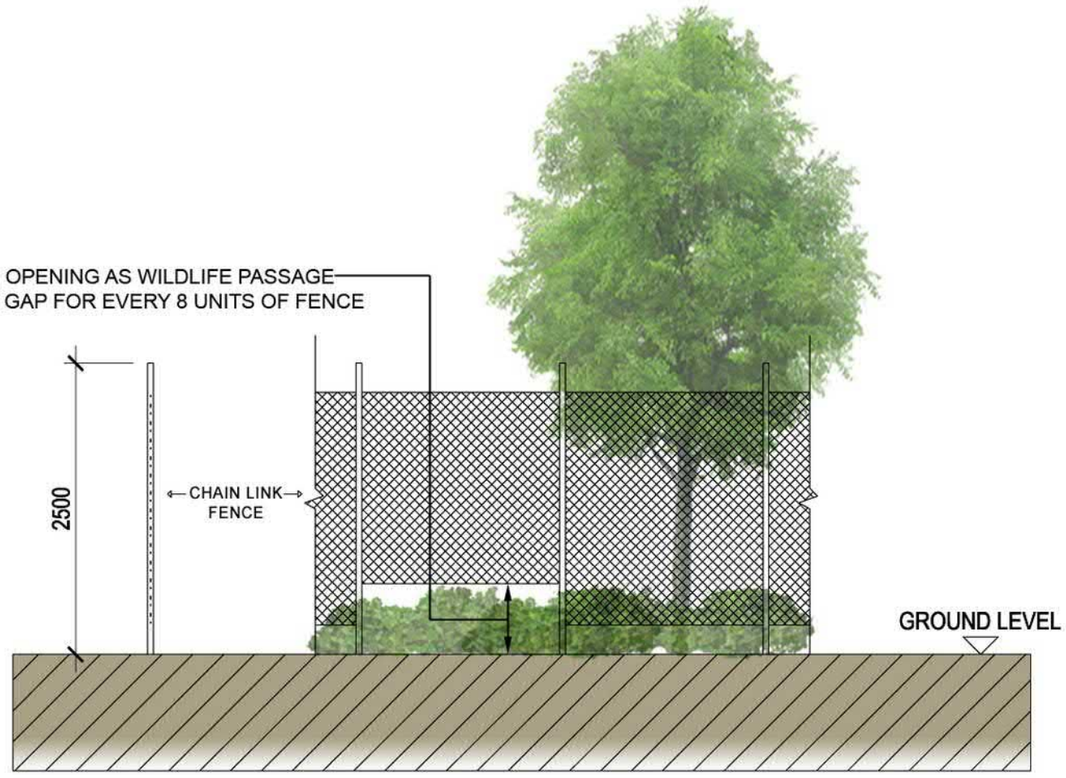
TYPE 1 - METAL FENCE (2500mm H)

Section 16 Planning Application for Amendments to the Approved Development (Application No. A/NE-SSH/120-1)
– Amendments to Recreation and Sports Centre with Ancillary Facilities in Site C

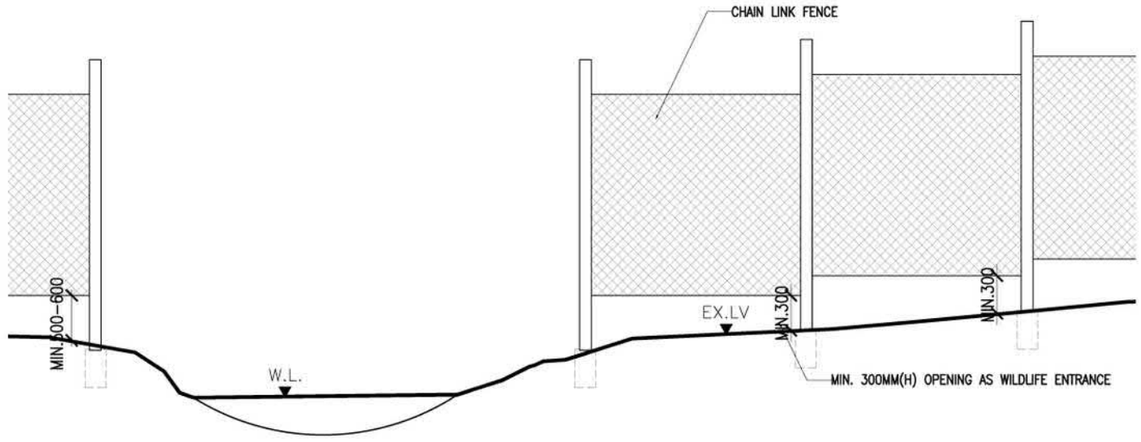
Fence Wall and Access Gate Sections and Elevations for Site C

Dwg. No. : 2009201-SC-NewS16-2021-FWP-02

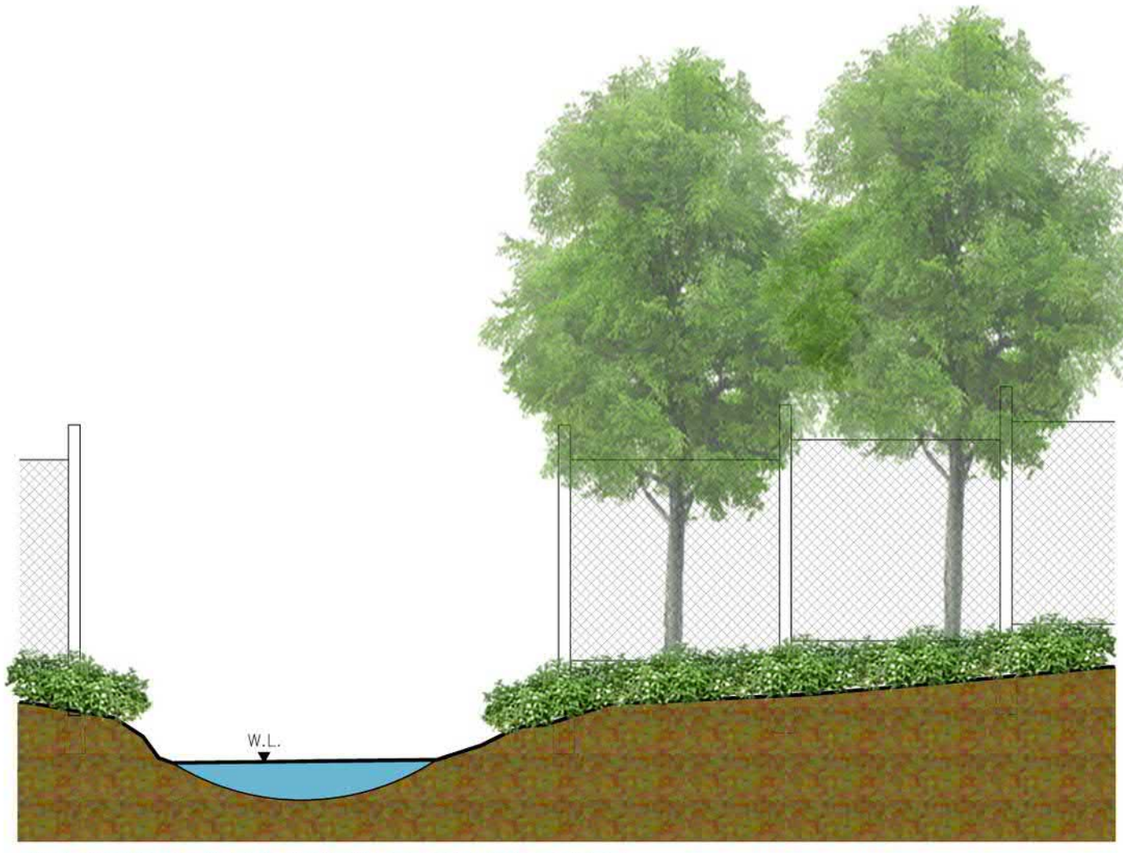
Date : NOV 2021
(A3-size)



TYPE 2 - CHAIN LINK FENCE (2500mm H)



ELEVATION OF PROPOSED CHAIN LINK FENCE AT BOTH ENDS OF THE RIVER



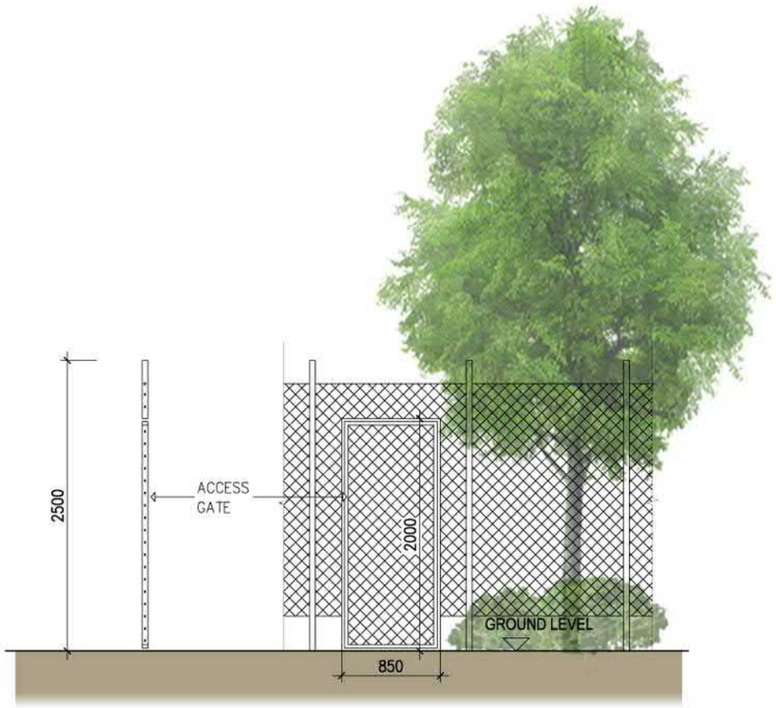
ELEVATION AT BOTH ENDS OF THE RIVER

Section 16 Planning Application for Amendments to the Approved Development (Application No. A/NE-SSH/120-1)
– Amendments to Recreation and Sports Centre with Ancillary Facilities in Site C

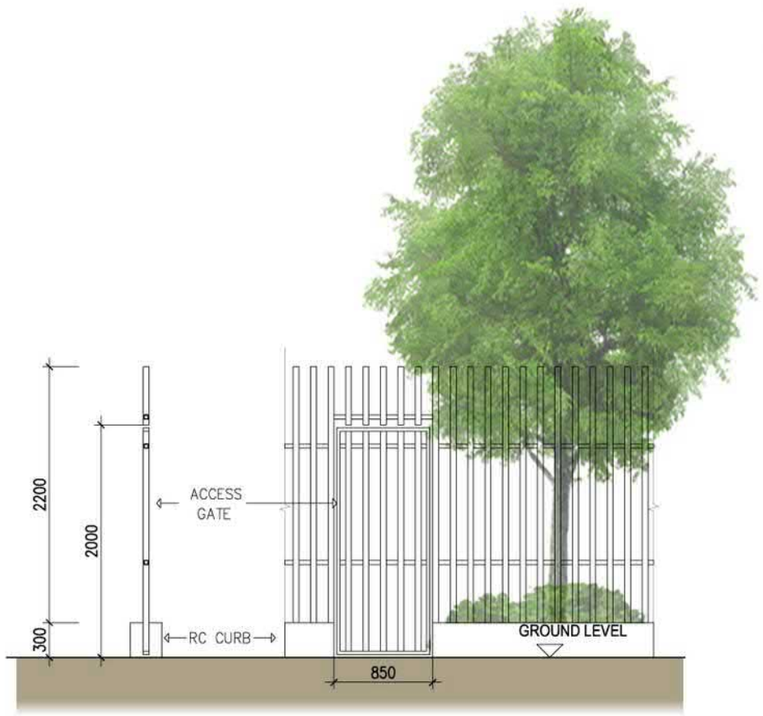
Fence Wall and Access Gate Sections and Elevations for Site C

Dwg. No. : 2009201-SC-NewS16-2021-FWP-03

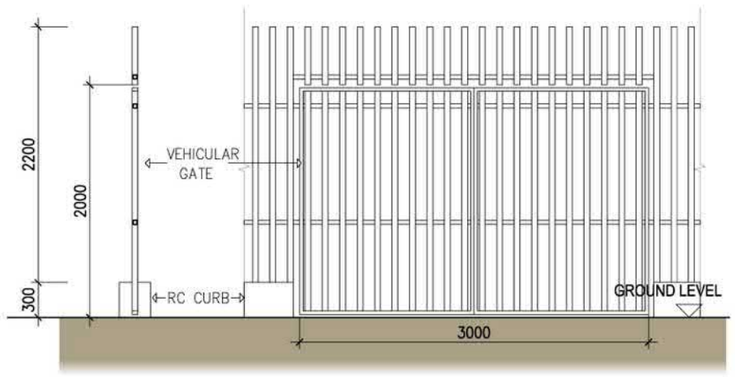
Date : NOV 2021
(A3-size)



CHAIN LINK FENCE / TYPE 2 - CHAIN LINK FENCE ACCESS GATE



METAL FENCE ACCESS GATE



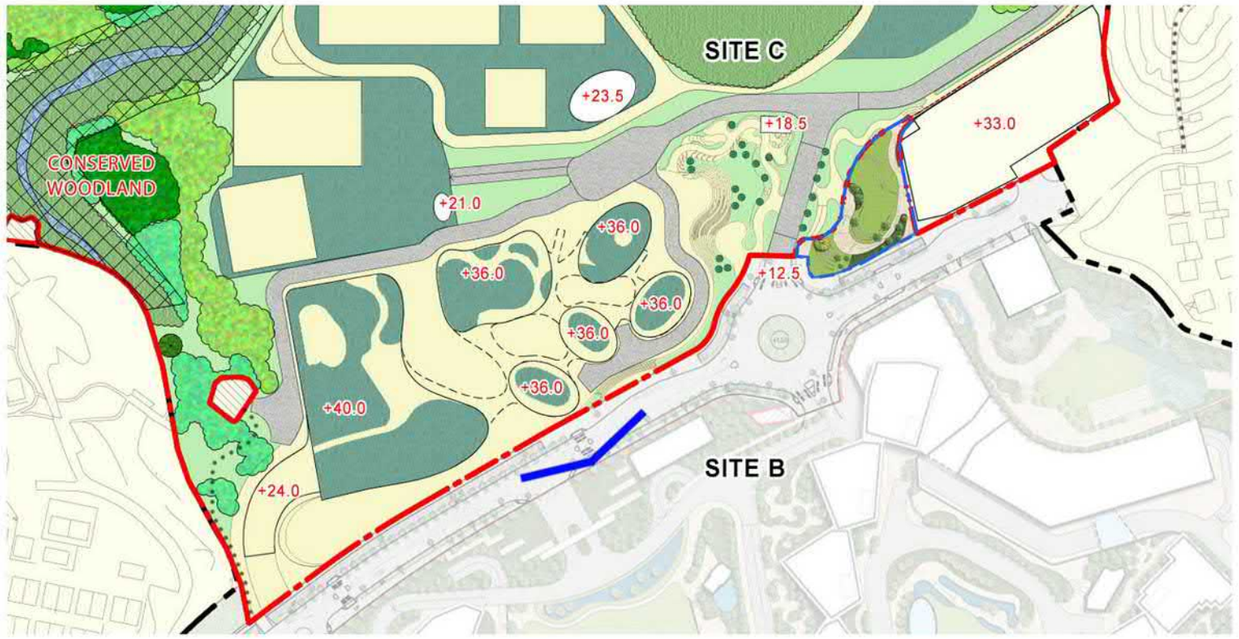
METAL FENCE VEHICULAR GATE

Section 16 Planning Application for Amendments to the Approved Development (Application No. A/NE-SSH/120-1) – Amendments to Recreation and Sports Centre with Ancillary Facilities in Site C

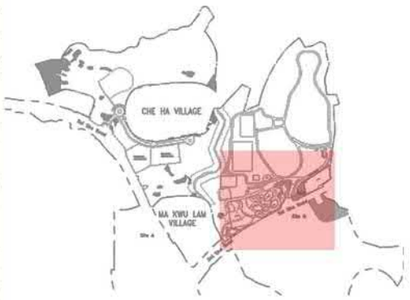
Fence Wall and Access Gate Sections and Elevations for Site C

Dwg. No. : 2009201-SC-NewS16-2021-FWP-04

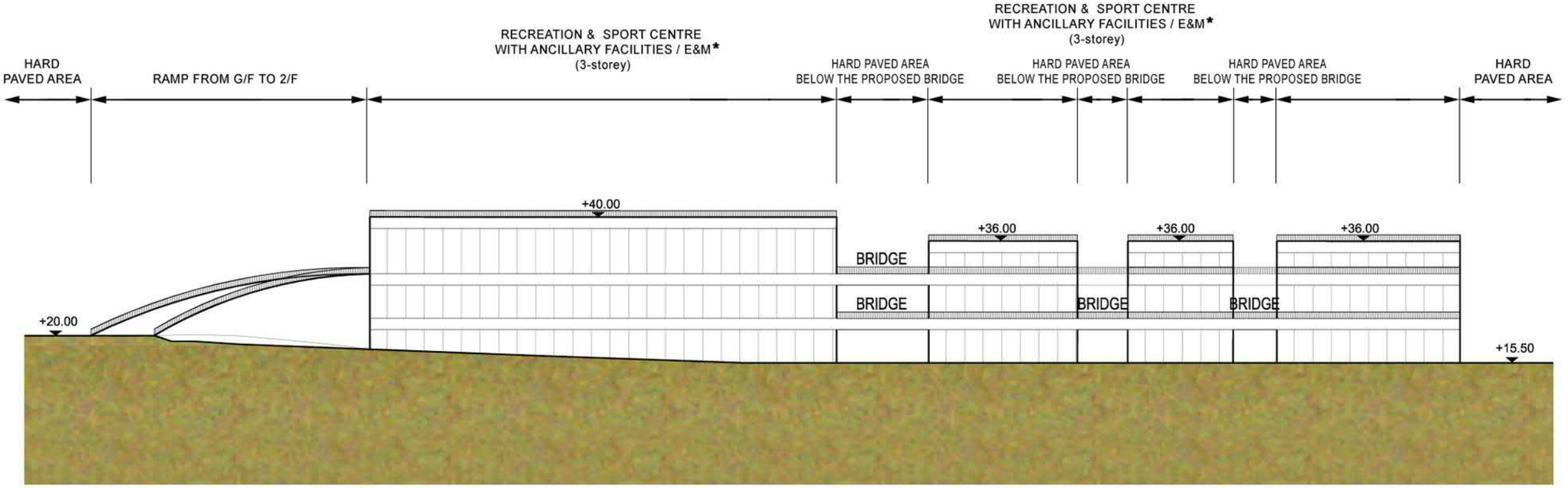
Date : NOV 2021
(A3-size)



BLOW-UP PLAN



KEYPLAN



ELEVATION A

0m 5m 10m 15m 30m

SCALE . 1:750 (A3)

NOTE:
* INCLUDING 'PLACE OF RECREATION, SPORTS OR CULTURE', 'PLACE OF ENTERTAINMENT', ' EATING PLACE', 'SHOP & SERVICES', AND/OR 'INDOOR PLAYGROUND'

Section 16 Planning Application for Amendments to the Approved Development (Application No. A/NE-SSH/120-1)
– Amendments to Recreation and Sports Centre with Ancillary Facilities in Site C

Landscape Elevation for Site C

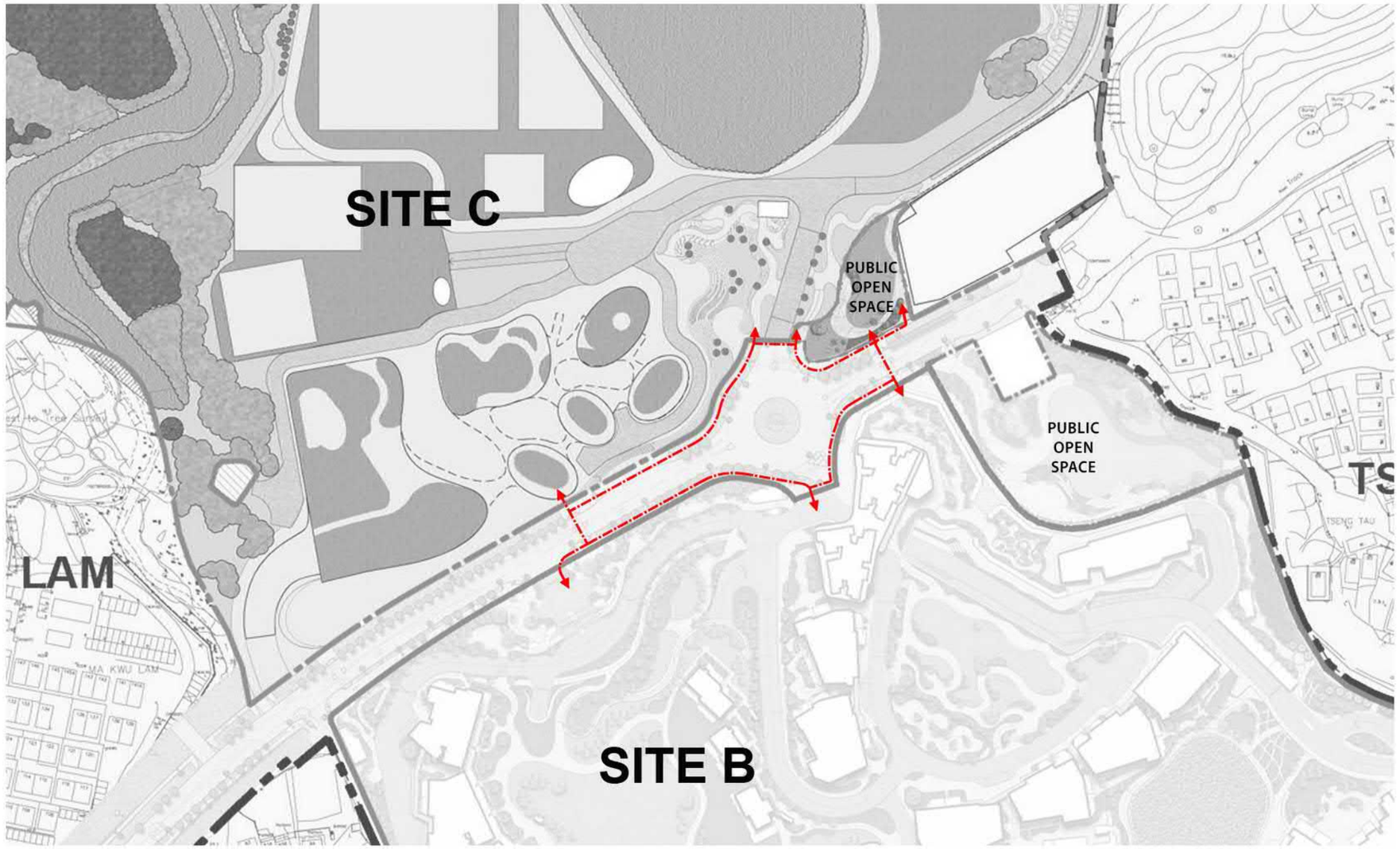
Dwg. No. : 2009201-SC-NewS16-2021-ELE-01

Date : APR 2022
(A3-size)

Y:\0-Axiagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\NewS16-2021\Site C\2022-05-04\2009201-SC-NewS16-2021-ELE-01

APPENDIX G

Blow Up Plan – Pedestrian Access between Site B POS and Site C POS



LEGEND:

PEDESTRIAN CROSSING / PAVEMENT BETWEEN SITE B POS AND SITE C POS

Section 16 Planning Application for Amendments to the Approved Development (Application No. A/NE-SSH/120-1) – Amendments to Recreation and Sports Centre with Ancillary Facilities in Site C

Blow Up Plan - Pedestrian Access Between Site B POS and Site C POS

Dwg. No. : 2009201-SC-NewS16-2021-PED-01a

Date : APR 2022
(A3-size)

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\NewS16-2021\Site C\2022-05-04\2009201-SC-NewS16-2021-PED-01a

ANNEX A

TREE SURVEY AND PRESERVATION PROPOSAL – SITE C

CONSOLIDATED REPORT

SEPTEMBER 2022

TABLE OF CONTENTS

1.0 Introduction

2.0 Tree Treatment Proposal for Site C

2.1 Previous Approved Treatment Proposal

2.2 Current Tree Treatment Proposal

3.0 Tree Planting Proposal for Site C

3.1 Previous Approved Tree Planting Proposal

3.2 Current Tree Planting Proposal

APPENDICES

Appendix A Correspondences
A1 DPO Approval letter (Ref. TPB/A/NE-SSH/120-1) dated 18 March 2021

Appendix B Tree Assessment Schedule

Appendix C Photographic Record of Existing Trees

Appendix D Tree Survey Plans

Appendix E Tree Felling Plans

Appendix F Tree Planting Plans

Appendix G Incident Reports

1.0 INTRODUCTION

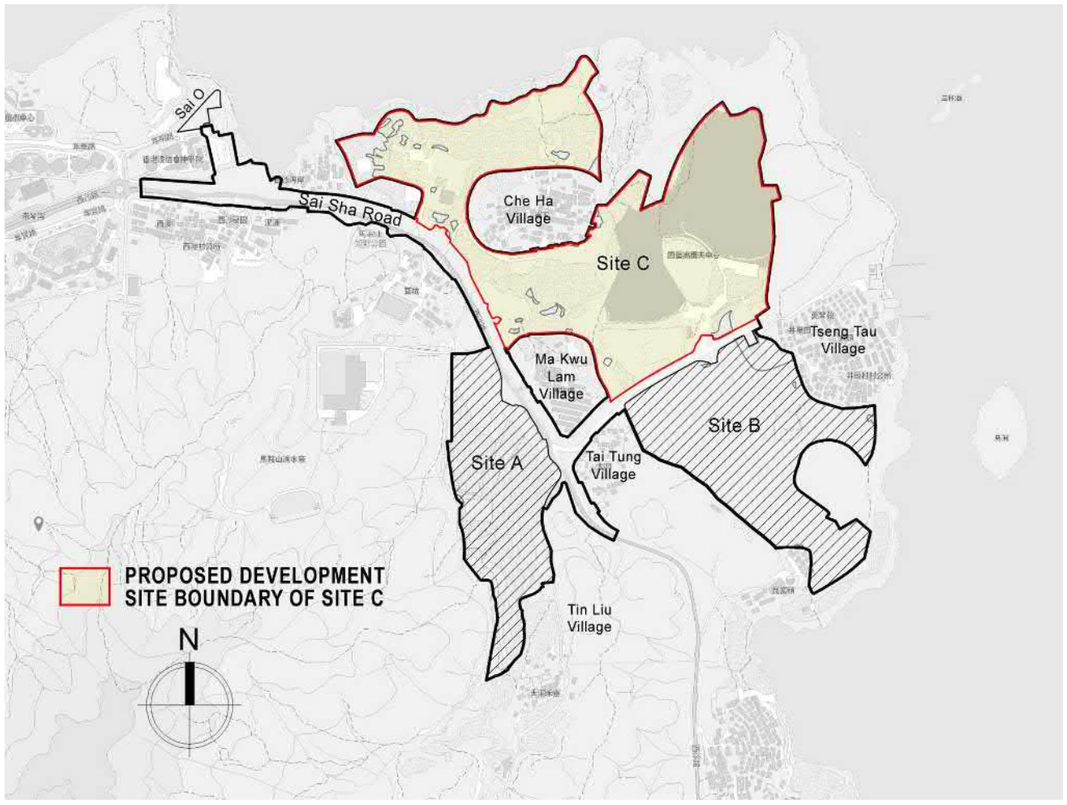
1.1 This Tree Survey and Preservation Report is submitted to support S16 Planning Application for Amendments to the Approved Development (under Application No. A/NE-SSH/120-1). The Application Site is the subject of an approved planning application no. A/NE-SSH/120-1 for proposed comprehensive residential and recreational development including government, institution, or community (G/IC) facilities with minor relaxation of gross floor area and building height restrictions which was approved by the Director of Planning, under the delegated authority of the Town Planning Board (the Board), under Section 16A of the Town Planning Ordinance in October 2020.

1.2 With the commitment to further enhance user experience in Site C, which is intended to be a recreational hub in Sai Sha, the subject Section 16 planning application is submitted to reflect the diversification of recreational facilities to be provided therein by replacing a golf driving range and a mini driving range/ game area/ recreation & sports centre with ancillary facilities with a variety of outdoor sports and recreational facilities.

1.3 It should be noted that, **the subject matter of the current application is Site C only**. The layout and development parameters for Site A and Site B are entirely identical to those approved under planning application no. A/NE-SSH/120-1 on 18 March 2021. This application only involves minor changes to the outdoor recreational facilities. The inclusion of Site A and Site B as part of the Application Site is to comply with the statutory requirement of the subject "Comprehensive Development Area" ("CDA") zone under the Notes of Shap Sz Heung Outline Zoning Plan which requires the submission of a Master Layout Plan covering the entire "CDA" zone for the approval of the Board. Please refer to **Figure 1** for Location Plan.

1.4 This **Annex A** provides the tree survey and preservation proposal for **Site C only**.

Fig. 1 Location of Application Site



2.0 TREE TREATMENT PROPOSAL FOR SITE C

2.1 Previous Approved Treatment Proposal

Based on the previous Tree Survey and Preservation Proposal approved by PlanD for compliance of approval condition (c) under Application No. A/NE-SSH/120-1 on 18 March 2021 (**Appendix A1**), there is a total of 5113 nos. of trees surveyed and identified. Among these 5113 nos. of trees, **4443** nos. of existing trees are approved to be retained in-situ (including 34 nos. of individual trees, 1481 nos. from Type D "Retained Tree Groups in Other Areas", 1628 nos. from Type A "Non-Conserved Woodland Tree Group", 1300 nos. from Type B "Accessible Conserved Woodland"), **49** nos. of existing trees are approved to be transplanted and **621** nos. of existing trees are approved to be felled. In addition, Type C "Inaccessible Conserved Woodland" (total area approx. 38,000m^2) will remain intact and untouched by future development.

2.2 Current Tree Treatment Proposal

Trees Approved to be Retained

A total of **4443** nos. of existing trees are approved to be retained in-situ (including 34 nos. of individual trees, 1481 nos. from Type D "Retained Tree Groups in Other Areas", 1628 nos. from Type A "Non-Conserved Woodland Tree Group", 1300 nos. from Type B "Accessible Conserved Woodland"). Nevertheless, **12** nos. of retained trees were damaged and/ or become deteriorated in health due to torrential rain and strong wind brought by Typhoon Cempaka in July 2021 and Typhoon Kompasu in October 2021 (**Appendix G**):

- **7** no. of approved retained trees (C3787, C3878, C10167, C13250, C13734, C13742 and C13916) were either uprooted or have potential risk of tree failure. They are proposed to be felled.
- **5** nos. of approved retained trees (C1058, C2624, C2625, C12623 and C13862) have broken branches. The broken branches have been pruned, and the trees will be retained in-situ.

As a result of Typhoon Cempaka in July 2021 and Typhoon Kompasu in October 2021, while the total number of trees surveyed remains the same, there are changes in nos. of trees proposed to be retained, transplanted and felled under the Current Scheme. In the Current Scheme, the nos. of trees proposed to be retained in-situ are changed to **4436**, including **27** nos. of approved retained trees, **1481** nos. of trees from Type D "Retained Tree Groups in Other Areas", **1628** nos. of trees from Type A "Non-Conserved Woodland Tree Group", and **1300** nos. of trees from Type B "Accessible Conserved Woodland" can be retained in-situ. In addition, Type C "Inaccessible Conserved Woodland" (total area approx. 38,000m^2) will remain intact and untouched by future development.

Please refer to Tree Treatment Schedule in **Appendix B,** Photographic Record of Existing Trees in **Appendix C** and Tree Felling Plan in **Appendix F**.

Trees Approved to be Transplanted

A total of **49** nos. of existing trees were approved to be transplanted. Nevertheless, **8** nos. of transplanted trees were damaged and/ or become deteriorated in health due to torrential rain and strong wind brought by Typhoon Cempaka in July 2021 and Typhoon Kompasu in October 2021 (**Appendix G**):

- **6** no. of approved transplanted trees (C1047, C1971, C2811, C3681, C3800, C3915) were either uprooted or have potential risk of tree failure. They are proposed to be felled.
- **2** nos. of approved transplanted trees (C3804 and C3901) have broken branches. The broken branches have bene pruned, and the trees will be transplanted.

Please refer to Tree Treatment Schedule in **Appendix B,** Photographic Record of Existing Trees in **Appendix C** and Tree Felling Plan in **Appendix F**.

Trees Approved to be Felled

There is **no change** on **621** nos. of existing trees approved to be felled (including 38 nos. dead trees). For **13** nos. additional trees proposed to be felled, they are:

- **7** no. of approved retained trees (C3787, C3878, C10167, C13250, C13734, C13742 and C13916) and **6** no. of approved transplanted trees (C1047, C1971, C2811, C3681, C3800, C3915) were either uprooted or have potential risk of tree failure. They are proposed to be felled.

Table 1 Comparison between Approved Scheme and Current Scheme on Tree Treatment Proposal

Comparison between Approved Scheme and Current Scheme on Tree Treatment Proposal			
Description	**Approved Scheme (Approval Condition under A/NE-SSH/120-1)** Approved on 18 Mar 2021	**Current Scheme**	**Difference**
Total Nos. of Trees ***Surveyed***	5113	5113	0
Nos. of Trees Proposed to be ***Retained***	4443	4436	-7
Nos. of Trees Proposed to be ***Transplanted***	49	43	-6
Nos. of Trees Proposed to be ***Felled***	621 (incl. 38 dead trees)	634 (incl. 38 dead trees)	+13

*Remarks:
(i) Approx. 14,000m^2 of Tree Group within Ecological Buffer Zone (EBZ) remain untouched;

(ii) Approved Retained Trees (27 nos.);

(iii) **Type A** Non-Conserved Woodland Tree Group (approx. 1628 nos.);

(iv) **Type B** Accessible Conserved Woodland (approx. 1300 nos.);

(v) **Type C** Inaccessible Conserved Woodland (total area approx. 38,000m^2); and

(vi) **Type D** Retained Tree Groups in Other Areas (1481 nos.).

3.0 TREE PLANTING PROPOSAL FOR SITE C

Major objectives of this Tree Planting Proposal are listed below (to be read in conjunction with Tree Planting Plan in **Appendix F**):

- To show the recipient locations of transplanted trees;
- To compensate trees lost due to felling of existing trees;
- To increase the species diversity to enhance greenery within the Application Site.

Table 2 Current Tree Planting Proposal

Total Nos. of Trees Proposed to be Felled under Current Tree Felling	Nos. of New Tree
634 (incl. 38 dead trees)	**1700**

The following list indicates the proposed tree species along with suitable ornamental species to compensate for the loss and to strengthen the greening / conservation. Over half of the tree species are native tree species to ensure they benefit to the existing ecology. The native species selected are similar / relevant to the existing landscape context of the Site C, with an intention of blending / integrating harmoniously with its immediate surrounding. Please refer to **Table 3**.

Table 3 Proposed Tree List for Site C

Proposed Species	Chinese Name	Quantity/ Size
Aphananthe cuspidata*	滇糙葉樹	1700 nos. Size: Heavy Standard Size 4m High; 3m Spread; DBH 0.1m; 4m Spacing
Aporosa dioica*	銀柴	
*Choerospondias axillaris**	南酸棗	
*Endospermum chinense**	黃桐	
*Ficus variegata**	青果榕	
Ficus benjamina	垂葉榕	
*Machilus breviflora**	短序潤楠	
Mallotus paniculatus*	白楸	
Callistemon hybridus ‘golden ball’	黃金串錢柳	
Delonix regia	鳳凰木	
Michelia x alba	白蘭	
Juniperus chinensis	圓柏	
Podocarpus macrophyllus*	羅漢松	
Bischofia javanica*Δ	秋楓	
Cinnamomum burmanii*Δ	陰香	
Alangium chinense*	八角楓	
Liquidambar formosana*	楓香	
Livistona chinensis	蒲葵	
Lagerstroemia speciosa	大花紫薇	
Osmanthus fragrans	桂花	
Syzygium cumini	海南蒲桃	
*Syzygium levinei**	山蒲桃	
Terminalia mantaly	小葉欖仁	
Cinnamomum camphora*Δ	樟	
Cassia siamea	鐵刀木	

Remarks: * Native Tree Species ΔTree Species Proposed for Areas near the Conserved Woodlands

To allow adequate space for trees’ future growth, all of new trees will be planted with not less than 4m spacing. Other considerations on tree planting are also given as follows:

- Trees to be planted / arranged in such a way to permit clear and unobstructed views the site;
- Adequate space is allowed between trees to ensure penetration of sunlight for their viable growth;
- Preservation of existing trees within the site;
- The planting design’s intent is to use different types of specimen trees in various size and form to create a natural

and woodland mix planting style. Flowers and fragrance are important elements to enhance the planting design for this area;

- Fragrant species will be utilized to tease and raise the human sensory awareness;
- Careful species selection will ensure maximum greening effect with minimum maintenance needs.
- Sufficient soil depth of not less than a minimum of 1200mm (excluding drainage layer) will be provided for each in-ground planting pit / bed / area to ensure future growth of transplanted and new trees. Water points will be installed based on the principle of not more than 40mm c/c spacing.

Appendix A

Correspondences

A1 DPO Approval Letter (Ref. TPB/A/NE-SSH/120-1) dated 18 March 2021

規劃署

沙田、大埔及北區規劃處
香港新界沙田上禾輋路一號
沙田政府合署
十三樓 1301-1314 室

Planning Department

Sha Tin, Tai Po & North District
Planning Office
Rooms 1301-1314, 13/F.,
Shatin Government Offices,
1 Sheung Wo Che Road, Sha Tin,
N.T., Hong Kong

本函檔號 Your Reference AG/2009201/21069
本署檔號 Our Reference ( ) in TPB/A/NE-SSH/120-1
電話號碼 Tel. No.: 2158 6220
傳真機號碼 Fax No.: 2691 2806 / 2696 2377

By Post and Fax (2893 8997)

18 March 2021

Axxa Group Limited
51/F China Online Centre
333 Lockhart Road,
Wan Chai, Hong Kong
(Attn.: Ms. Camay LAM)

Dear Ms. Lam,

Compliance with Approval Condition (c)

Proposed Comprehensive Residential and Commercial Development with Government, Institution or Community Facilities with Minor Relaxation of Gross Floor Area and Building Height Restrictions in "Comprehensive Development Area", "Country Park", "Government, Institution or Community", "Green Belt", "Open Space", "Village Type Development" Zones and an area shown as 'Road', Tai Po Town Lot 157 and Various Lots in D.D. 165, D.D. 207 and D.D. 218 and Adjoining Government Land, Sai Sha, Shap Sz Heung
(Planning application No. A/NE-SSH/120-1)
[Site C]

I refer to your letter dated 10.3.2021 enclosing five copies of approved Landscape Master Plan (LMP) for Site C delivered to our office by courier on 15.3.2021.

2. The approved LMP is herewith certified and enclosed for your record. The certified copies will be used for future compliance checking. Please note that full compliance with approval condition (c) rests upon the implementation of the LMP for Sites A, B and C including a tree survey, a tree preservation scheme and site boundary treatment to the satisfaction of the Director of Planning or of the Town Planning Board (TPB). For the avoidance of doubt, I would like to point out that approval condition (c) of Application No. A/NE-SSH/120-1 has not been fully complied with for the time being. You are also reminded on the following:

(i) You are reminded to follow JPN3 and PlanD's Practice Note No. 1/2019 for compliance checking of the completed landscape works. You shall appoint a Registered Landscape Architect (RLA) to certify that the landscape works has been implemented in accordance with the approved LMP and submit a self-certificate of compliance (SCC). The involved RLA shall observe and follow the circular letter of 16.6.2015 issued by the Landscape Architects Registration Board (LARB) addressing to all RLAs, in connection with the RLA's Delivery of Professional Standards of Services.

(ii) The approval of the LMP under TPB approval condition does not imply approval of the site coverage of greenery requirements under APP PNAP-152. The site coverage of greenery calculation should be submitted separately to the Buildings Department for approval. Similarly for any proposed tree preservation/removal scheme, the applicant is reminded to approach relevant authority/government department(s) direct to obtain the necessary approval.

3. Should you have any enquiries, please feel free to contact Ms. Sharon Chan (Tel. No: 2158 6043) of this department.

Yours faithfully,

(Ms Jessica CHU)
for and on behalf of
Director of Planning

c.c.
CTP/UD&L, PlanD - 1 copy of LMP
DLO/TP, LandsD - 2 copies of LMP (1 for DLO and 1 for Tree Unit)

File
Site Record

JC/TW/SC/JW/jw

Appendix B

Tree Treatment Schedule

Tree Treatment Schedule (Site C)
Application No. A/NE-SSH/120-1
To be Read in conjunction with drawing nos. : TFP-SC-01 to TFP-SC-08

Tree No.	Photo No.	Species		Tree Size			Proposed Treatment		Remarks[1] (Old and Valuable Tree (OVT), potentially registrable OVT, rare species, protected species, ecological and historical significance, etc.)
		Scientific Name	Chinese Name	Height (m)	DBH[2] (m)	Crown Spread (m)	Approved Application (Retain/ Transplant/ Fell/ Fell (Dead)) S16 A Approval Condition (c), Approved on 18/3/2021	In This Revision, (Retain/ Transplant/ Fell/ Fell (Dead))	
C1039	C1039	*Juniperus chinensis*	龍柏	4	140	3	T	T	Leaning
C1040	C1040	*Juniperus chinensis*	龍柏	4	110	3	T	T	Leaning
C1043	C1043	*Juniperus chinensis*	龍柏	3	95	2	T	T	Sign of fungal growth near base of trunk
C1047	C1047	*Juniperus chinensis*	龍柏	5	110	3	T	F	(Appendix G) Leaning / poor form and structural defect with the rotten tree collar/ sign of potential falling
C1048	C1048	*Juniperus chinensis*	龍柏	5	110	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1049	C1049	*Melia azedarach*	苦楝	10	290	8	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1051	C1051	*Macaranga tanarius var. tomentosa*	血桐	8	220	8	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1052	C1052	*Macaranga tanarius var. tomentosa*	血桐	8	150	7	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1053	C1053	*Macaranga tanarius var. tomentosa*	血桐	7	100	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1054	C1054	*Macaranga tanarius var. tomentosa*	血桐	5	100	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1055	C1055	*Leucaena leucocephala*	銀合歡	5	120	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1057	C1057	*Macaranga tanarius var. tomentosa*	血桐	8	200	7	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1058	C1058	*Aleurites moluccana*	石栗	11	850	10	R	R	(Appendix G) Wound / broken branches by Typhoon Kompasu on 12-13 Oct 2021
C1059	C1059	*Michelia x alba*	白蘭	13	840	12	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1060	C1060	*Eriobotrya japonica*	枇杷	10	180	7	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1166	C1166	*Viburnum odoratissimum*	珊瑚樹	5	150	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1563	C1563	*Sapium sebiferum*	烏桕	8	120	6	R	R	Bent trunk
C1564	C1564	*Citrus maxima*	柚	4	125	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1565	C1565	*Juniperus chinensis*	龍柏	6	240	5	T	T	
C1566	C1566	*Juniperus chinensis*	龍柏	7	230	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1567	C1567	*Juniperus chinensis*	龍柏	6	250	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1568	C1568	*Juniperus chinensis*	龍柏	6	230	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1569	C1569	*Juniperus chinensis*	龍柏	6	180	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1571	C1571	*Clausena lansium*	黃皮	5	120	4	T	T	
C1572	C1572	*Psidium guajava*	番石榴	7	220	8	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1573	C1573	*Juniperus chinensis*	龍柏	5	95	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1639	C1639	*Celtis sinensis*	朴樹	8	120	7	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1772	C1772	*Ficus hispida*	對葉榕	6	110	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1773	C1773	*Macaranga tanarius var. tomentosa*	血桐	7	190	6	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1780	C1780	*Mangifera indica*	芒果	9	120	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1781	C1781	*Mangifera indica*	芒果	9	270	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1782	C1782	*Mangifera indica*	芒果	10	280	6	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1783	C1783	*Mangifera indica*	芒果	9	220	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1784	C1784	*Mangifera indica (Dead)*	芒果 (死樹)	-	320	-	F(D)	F(D)	Felled by DLO's Approval dated 15 Nov 2021
C1785	C1785	*Mangifera indica (Dead)*	芒果 (死樹)	-	120	-	F(D)	F(D)	Felled by DLO's Approval dated 15 Nov 2021
C1786	C1786	*Mangifera indica (Dead)*	芒果 (死樹)	-	300	-	F(D)	F(D)	Felled by DLO's Approval dated 15 Nov 2021
C1787	C1787	*Mangifera indica (Dead)*	芒果 (死樹)	-	280	-	F(D)	F(D)	Felled by DLO's Approval dated 15 Nov 2021
C1788	C1788	*Mangifera indica*	芒果	10	260	5	F	F	Felled by DLO's Approval dated 15 Nov 2021

Tree No.	Photo No.	Species		Tree Size			Proposed Treatment		Remarks[1] (Old and Valuable Tree (OVT), potentially registrable OVT, rare species, protected species, ecological and historical significance, etc.)
		Scientific Name	Chinese Name	Height (m)	DBH[2] (m)	Crown Spread (m)	Approved Application (Retain/ Transplant/ Fell/ Fell (Dead)) S16A Approval Condition (c), Approved on 18/3/2021	In This Revision, (Retain/ Transplant/ Fell/ Fell (Dead))	
C1789	C1789	*Mangifera indica*	芒果	9	310	6	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1790	C1790	*Mangifera indica*	芒果	10	290	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1791	C1791	*Mangifera indica*	芒果	9	220	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1792	C1792	*Mangifera indica*	芒果	9	170	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1793	C1793	*Mangifera indica*	芒果	9	160	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1794	C1794	*Mangifera indica*	芒果	6	230	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1795	C1795	*Mangifera indica*	芒果	12	290	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1796	C1796	*Mangifera indica*	芒果	5	220	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1797	C1797	*Mangifera indica*	芒果	6	210	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1798	C1798	*Mangifera indica*	芒果	9	180	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1799	C1799	*Mangifera indica*	芒果	9	190	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1800	C1800	*Mangifera indica*	芒果	10	210	6	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1801	C1801	*Mangifera indica*	芒果	11	200	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1802	C1802	*Mangifera indica*	芒果	10	200	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1803	C1803	*Mangifera indica*	芒果	8	170	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1804	C1804	*Mangifera indica*	芒果	9	260	6	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1805	C1805	*Mangifera indica*	芒果	6	190	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1806	C1806	*Mangifera indica*	芒果	9	230	6	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1807	C1807	*Dimocarpus longan*	龍眼	6	150	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1808	C1808	*Mangifera indica*	芒果	7	230	6	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1810	C1810	*Mangifera indica*	芒果	11	190	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1811	C1811	*Dead tree*	死樹	-	140	-	F(D)	F(D)	Felled by DLO's Approval dated 15 Nov 2021
C1812	C1812	*Mangifera indica*	芒果	8	320	7	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1813	C1813	*Mangifera indica*	芒果	10	210	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1814	C1814	*Mangifera indica*	芒果	8	95	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1815	C1815	*Mangifera indica*	芒果	9	250	7	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1819	C1819	*Mangifera indica*	芒果	10	220	7	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1820	C1820	*Mangifera indica*	芒果	9	260	6	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1821	C1821	*Mangifera indica*	芒果	8	140	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1822	C1822	*Mangifera indica*	芒果	11	170	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1823	C1823	*Mangifera indica*	芒果	6	130	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1824	C1824	*Mangifera indica*	芒果	4	220	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1825	C1825	*Mangifera indica (Dead)*	芒果 (死樹)	-	300	-	F(D)	F(D)	Felled by DLO's Approval dated 15 Nov 2021
C1826	C1826	*Mangifera indica (Dead)*	芒果 (死樹)	-	260	-	F(D)	F(D)	Felled by DLO's Approval dated 15 Nov 2021
C1827	C1827	*Mangifera indica (Dead)*	芒果 (死樹)	-	280	-	F(D)	F(D)	Felled by DLO's Approval dated 15 Nov 2021
C1828	C1828	*Mangifera indica*	芒果	10	190	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1829	C1829	*Mangifera indica*	芒果	10	210	6	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1830	C1830	*Mangifera indica*	芒果	9	150	6	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1831	C1831	*Mangifera indica*	芒果	8	140	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1834	C1834	*Mangifera indica (Dead)*	芒果 (死樹)	-	300	-	F(D)	F(D)	Felled by DLO's Approval dated 15 Nov 2021
C1835	C1835	*Mangifera indica*	芒果	9	280	6	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1836	C1836	*Mangifera indica*	芒果	11	240	8	F	F	Felled by DLO's Approval dated 15 Nov 2021

Tree No.	Photo No.	Species		Tree Size			Proposed Treatment		Remarks[1] (Old and Valuable Tree (OVT), potentially registrable OVT, rare species, protected species, ecological and historical significance, etc.)
		Scientific Name	Chinese Name	Height (m)	DBH[2] (m)	Crown Spread (m)	Approved Application (Retain/ Transplant/ Fell/ Fell (Dead)) S16A Approval Condition (c), Approved on 18/3/2021	In This Revision, (Retain/ Transplant/ Fell/ Fell (Dead))	
C1837	C1837	*Bridelia tomentosa*	土蜜樹	5	95	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1839	C1839	*Dimocarpus longan (Dead)*	龍眼 (死樹)	-	130	-	F(D)	F(D)	Felled by DLO's Approval dated 15 Nov 2021
C1840	C1840	*Dead tree*	死樹	-	100	-	F(D)	F(D)	Felled by DLO's Approval dated 15 Nov 2021
C1841	C1841	*Mangifera indica*	芒果	9	250	7	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1842	C1842	*Mangifera indica*	芒果	4	150	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1843	C1843	*Mangifera indica (Dead)*	芒果 (死樹)	-	220	-	F(D)	F(D)	Felled by DLO's Approval dated 15 Nov 2021
C1844	C1844	*Mangifera indica*	芒果	8	210	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1845	C1845	*Mangifera indica*	芒果	10	270	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1846	C1846	*Mangifera indica*	芒果	10	300	6	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1847	C1847	*Mangifera indica*	芒果	4	200	1	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1848	C1848	*Litchi chinensis*	荔枝	6	290	6	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1849	C1849	*Ficus variegata*	青果榕	12	320	8	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1850	C1850	*Macaranga tanarius var. tomentosa*	血桐	9	330	6	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1851	C1851	*Macaranga tanarius var. tomentosa*	血桐	10	180	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1852	C1852	*Dead tree*	死樹	-	220	-	F(D)	F(D)	Felled by DLO's Approval dated 15 Nov 2021
C1853	C1853	*Litchi chinensis*	荔枝	8	150	6	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1854	C1854	*Dimocarpus longan*	龍眼	8	360	7	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1855	C1855	*Dimocarpus longan*	龍眼	5	280	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1856	C1856	*Mangifera indica*	芒果	7	110	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1859	C1859	*Mangifera indica*	芒果	9	230	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1860	C1860	*Mangifera indica*	芒果	7	180	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1861	C1861	*Mangifera indica*	芒果	6	160	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1862	C1862	*Mangifera indica*	芒果	6	170	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1863	C1863	*Mangifera indica*	芒果	8	210	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1864	C1864	*Mangifera indica*	芒果	10	200	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1865	C1865	*Mangifera indica*	芒果	9	200	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1866	C1866	*Mangifera indica*	芒果	12	240	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1867	C1867	*Mangifera indica*	芒果	9	250	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1868	C1868	*Mangifera indica*	芒果	9	260	6	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1869	C1869	*Dimocarpus longan*	龍眼	6	260	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1870	C1870	*Ficus variegata*	青果榕	9	210	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1871	C1871	*Mangifera indica*	芒果	9	300	8	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1872	C1872	*Mangifera indica*	芒果	9	160	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1873	C1873	*Mangifera indica*	芒果	10	230	8	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1874	C1874	*Mangifera indica*	芒果	9	170	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1875	C1875	*Mangifera indica*	芒果	9	250	6	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1877	C1877	*Mangifera indica*	芒果	9	200	7	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1878	C1878	*Mangifera indica*	芒果	12	240	6	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1879	C1879	*Mangifera indica*	芒果	4	170	11	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1880	C1880	*Mangifera indica (Dead)*	芒果 (死樹)	-	200	-	F(D)	F(D)	Felled by DLO's Approval dated 15 Nov 2021

Tree No.	Photo No.	Species		Tree Size			Proposed Treatment		Remarks[1] (Old and Valuable Tree (OVT), potentially registrable OVT, rare species, protected species, ecological and historical significance, etc.)
		Scientific Name	Chinese Name	Height (m)	DBH[2] (m)	Crown Spread (m)	Approved Application (Retain/ Transplant/ Fell/ Fell (Dead)) S16A Approval Condition (c), Approved on 18/3/2021	In This Revision, (Retain/ Transplant/ Fell/ Fell (Dead))	
C1881	C1881	*Mangifera indica*	芒果	13	270	8	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1882	C1882	*Dimocarpus longan*	龍眼	4	100	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1883	C1883	*Macaranga tanarius var. tomentosa*	血桐	7	110	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1884	C1884	*Dimocarpus longan*	龍眼	8	200	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1885	C1885	*Dimocarpus longan*	龍眼	5	260	6	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1886	C1886	*Litchi chinensis*	荔枝	9	270	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1887	C1887	*Dead tree*	死樹	-	200	-	F(D)	F(D)	Felled by DLO's Approval dated 15 Nov 2021
C1888	C1888	*Dead tree*	死樹	-	170	-	F(D)	F(D)	Felled by DLO's Approval dated 15 Nov 2021
C1889	C1889	*Pyrus spp.*	梨	4	350	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1890	C1890	*Dimocarpus longan*	龍眼	8	360	8	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1891	C1891	*Dead tree*	死樹	-	130	-	F(D)	F(D)	Felled by DLO's Approval dated 15 Nov 2021
C1892	C1892	*Averrhoa carambola*	楊桃	8	120	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1893	C1893	*Mangifera indica*	芒果	8	180	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1894	C1894	*Mangifera indica*	芒果	10	180	6	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1895	C1895	*Mangifera indica*	芒果	7	100	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1896	C1896	*Dead tree*	死樹	-	130	-	F(D)	F(D)	Felled by DLO's Approval dated 15 Nov 2021
C1897	C1897	*Averrhoa carambola*	楊桃	10	260	9	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1898	C1898	*Dead tree*	死樹	-	230	-	F(D)	F(D)	Felled by DLO's Approval dated 15 Nov 2021
C1899	C1899	*Ficus variegata*	青果榕	8	210	6	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1900	C1900	*Dead tree*	死樹	-	220	-	F(D)	F(D)	Felled by DLO's Approval dated 15 Nov 2021
C1901	C1901	*Clausena lansium*	黃皮	7	210	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1902	C1902	*Clausena lansium*	黃皮	10	210	7	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1903	C1903	*Dimocarpus longan*	龍眼	7	170	6	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1904	C1904	*Litchi chinensis*	荔枝	8	360	9	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1905	C1905	*Dracaena fragrans*	巴西鐵樹	5	120	2	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1906	C1906	*Mangifera indica*	芒果	10	160	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1907	C1907	*Clausena lansium*	黃皮	10	170	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1908	C1908	*Clausena lansium*	黃皮	9	140	6	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1909	C1909	*Clausena lansium*	黃皮	7	100	2	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1910	C1910	*Clausena lansium*	黃皮	7	200	6	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1911	C1911	*Clausena lansium*	黃皮	8	110	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1912	C1912	*Litchi chinensis*	荔枝	12	390	9	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1913	C1913	*Dead tree*	死樹	-	310	-	F(D)	F(D)	Felled by DLO's Approval dated 15 Nov 2021
C1914	C1914	*Dead tree*	死樹	-	260	-	F(D)	F(D)	Felled by DLO's Approval dated 15 Nov 2021
C1916	C1916	*Dimocarpus longan*	龍眼	8	300	7	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1917	C1917	*Dimocarpus longan*	龍眼	6	240	7	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1925	C1925	*Dead tree*	死樹	-	290	-	F(D)	F(D)	Felled by DLO's Approval dated 15 Nov 2021
C1926	C1926	*Macaranga tanarius var. tomentosa*	血桐	8	200	8	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1927	C1927	*Celtis sinensis*	朴樹	8	130	6	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1928	C1928	*bridelia insulana*	禾串樹(大葉逼迫仔)	8	260	5	F	F	Felled by DLO's Approval dated 15 Nov 2021

Tree No.	Photo No.	Species		Tree Size			Proposed Treatment		Remarks[1] (Old and Valuable Tree (OVT), potentially registrable OVT, rare species, protected species, ecological and historical significance, etc.)
		Scientific Name	Chinese Name	Height (m)	DBH[2] (m)	Crown Spread (m)	Approved Application (Retain/ Transplant/ Fell/ Fell (Dead)) S16A Approval Condition (c), Approved on 18/3/2021	In This Revision, (Retain/ Transplant/ Fell/ Fell (Dead))	
C1929	C1929	*Ficus variegata*	青果榕	9	160	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1930	C1930	*Ficus variegata*	青果榕	11	270	8	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1932	C1932	*Macaranga tanarius var. tomentosa*	血桐	8	150	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1934	C1934	*Macaranga tanarius var. tomentosa*	血桐	6	140	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1935	C1935	*Macaranga tanarius var. tomentosa*	血桐	8	130	6	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1936	C1936	*Macaranga tanarius var. tomentosa*	血桐	9	160	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1938	C1938	*Litsea monopetala*	假柿樹	11	330	7	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1939	C1939	*Macaranga tanarius var. tomentosa*	血桐	5	200	8	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1940	C1940	*Dimocarpus longan*	龍眼	11	240	9	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1944	C1944	*Macaranga tanarius var. tomentosa*	血桐	7	130	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1945	C1945	*Ficus variegata*	青果榕	12	600	10	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1946	C1946	*Sterculia lanceolata*	假蘋婆	6	140	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1947	C1947	*Sterculia lanceolata*	假蘋婆	6	150	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1948	C1948	*Macaranga tanarius var. tomentosa*	血桐	5	130	6	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1949	C1949	*Macaranga tanarius var. tomentosa*	血桐	6	140	6	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1950	C1950	*Macaranga tanarius var. tomentosa*	血桐	6	130	6	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1951	C1951	*Macaranga tanarius var. tomentosa*	血桐	8	100	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1952	C1952	*Macaranga tanarius var. tomentosa*	血桐	10	120	6	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1953	C1953	*Macaranga tanarius var. tomentosa*	血桐	8	260	9	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1954	C1954	*Macaranga tanarius var. tomentosa*	血桐	11	150	9	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1955	C1955	*Macaranga tanarius var. tomentosa*	血桐	8	100	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1957	C1957	*Macaranga tanarius var. tomentosa*	血桐	11	200	6	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1958	C1958	*Macaranga tanarius var. tomentosa*	血桐	5	180	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1959	C1959	*Clausena lansium*	黃皮	7	140	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1960	C1960	*Ficus variegata*	青果榕	12	360	10	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1961	C1961	*Ficus variegata*	青果榕	6	110	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1962	C1962	*Bridelia tomentosa*	土蜜樹	6	100	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1963	C1963	*Macaranga tanarius var. tomentosa*	血桐	10	150	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1964	C1964	*Ficus variegata*	青果榕	10	150	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1965	C1965	*Macaranga tanarius var. tomentosa*	血桐	10	100	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1966	C1966	*Celtis sinensis*	朴樹	11	140	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1967	C1967	*Macaranga tanarius var. tomentosa*	血桐	10	120	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1968	C1968	*Macaranga tanarius var. tomentosa*	血桐	9	140	8	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1969	C1969	*Ficus variegata*	青果榕	11	190	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1970	C1970	*Macaranga tanarius var. tomentosa*	血桐	9	110	6	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1971	C1971	*Bridelia tomentosa*	土蜜樹	10	220	9	T	F	(Appendix G) Bark crack / cross branches / dead branch / multi-trunks / poor condition
C1972	C1972	*Ficus variegata*	青果榕	10	150	9	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1973	C1973	*Macaranga tanarius var. tomentosa*	血桐	10	110	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1974	C1974	*Macaranga tanarius var. tomentosa*	血桐	10	110	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1975	C1975	*Macaranga tanarius var. tomentosa*	血桐	11	150	5	F	F	Felled by DLO's Approval dated 15 Nov 2021

Tree No.	Photo No.	Species		Tree Size			Proposed Treatment		Remarks[1] (Old and Valuable Tree (OVT), potentially registrable OVT, rare species, protected species, ecological and historical significance, etc.)
		Scientific Name	Chinese Name	Height (m)	DBH[2] (m)	Crown Spread (m)	Approved Application (Retain/ Transplant/ Fell/ Fell (Dead)) S16A Approval Condition (c), Approved on 18/3/2021	In This Revision, (Retain/ Transplant/ Fell/ Fell (Dead))	
C1976	C1976	*Macaranga tanarius var. tomentosa*	血桐	10	140	6	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1977	C1977	*Macaranga tanarius var. tomentosa*	血桐	9	100	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C1978	C1978	*Ficus variegata*	青果榕	10	190	7	F	F	Felled by DLO's Approval dated 15 Nov 2021
C2002	C2002	*Mangifera indica*	芒果	6	160	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C2204	C2204	*Mangifera indica*	芒果	10	340	8	F	F	Felled by DLO's Approval dated 15 Nov 2021
C2206	C2206	*Celtis sinensis*	朴樹	13	260	10	F	F	Felled by DLO's Approval dated 15 Nov 2021
C2208	C2208	*Macaranga tanarius var. tomentosa*	血桐	9	250	8	F	F	Felled by DLO's Approval dated 15 Nov 2021
C2315	C2315	*Mallotus paniculatus*	白楸	10	110	5	T	T	Bark crack / leaning
C2316	C2316	*Bischofia javanica*	秋槭	10	110	5	T	T	Leaning
C2317	C2317	*Litsea monopetala*	假柿樹	10	155	6	T	T	Leaning
C2318	C2318	*Litsea monopetala*	假柿樹	12	120	6	T	T	
C2624	C2624	*Bischofia javanica*	秋槭	13	300	10	R	R	(Appendix G) Broken branches by Typhoon Kompasu on 12-13 Oct 2021 / dieback of twigs
C2625	C2625	*Celtis sinensis*	朴樹	15	280	15	R	R	(Appendix G) Leaning / broken branches by Typhoon Kompasu on 12-13 Oct 2021 / crack of trunk
C2626	C2626	*Litsea monopetala*	假柿樹	12	240	10	T	T	Codominant trunk / dieback of twigs / broken branch
C2627	C2627	*Celtis sinensis*	朴樹	15	330	15	F	F	Felled by DLO's Approval dated 15 Nov 2021
C2628	C2628	*Melia azedarach*	苦楝	15	290	15	F	F	Felled by DLO's Approval dated 15 Nov 2021
C2629	C2629	*Melia azedarach*	苦楝	16	800	17	F	F	Felled by DLO's Approval dated 15 Nov 2021
C2630	C2630	*Celtis sinensis*	朴樹	15	290	15	T	T	
C2631	C2631	*Celtis sinensis*	朴樹	15	450	16	F	F	Felled by DLO's Approval dated 15 Nov 2021
C2632	C2632	*Cordia dichotoma*	破布木	13	300	11	F	F	Felled by DLO's Approval dated 15 Nov 2021
C2633	C2633	*Celtis sinensis*	朴樹	14	300	14	F	F	Felled by DLO's Approval dated 15 Nov 2021
C2634	C2634	*Celtis sinensis*	朴樹	9	300	7	T	T	Covered by climber/ exposed root
C2635	C2635	*Celtis sinensis*	朴樹	16	370	14	T	T	
C2636	C2636	*Celtis sinensis*	朴樹	11	410	10	F	F	Felled by DLO's Approval dated 15 Nov 2021
C2670	C2670	*Celtis sinensis*	朴樹	6	100	3	R	R	
C2684	C2684	*Mangifera indica*	芒果	8	210	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C2685	C2685	*Mangifera indica*	芒果	7	110	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C2724	C2724	*Dead tree*	死樹	-	210	-	F(D)	F(D)	Felled by DLO's Approval dated 15 Nov 2021
C2725	C2725	*Ficus variegata*	青果榕	13	280	6	F	F	Felled by DLO's Approval dated 15 Nov 2021
C2726	C2726	*Macaranga tanarius var. tomentosa*	血桐	4	170	7	F	F	Felled by DLO's Approval dated 15 Nov 2021
C2727	C2727	*Litsea monopetala*	假柿樹	6	120	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C2810	C2810	*Leucaena leucocephala*	銀合歡	6	100	2	F	F	Felled by DLO's Approval dated 15 Nov 2021
C2811	C2811	*Celtis sinensis*	朴樹	5	360	3	T	F	(Appendix G) Poor condition / sign of decay / main branch decayed
C2812	C2812	*Mangifera indica*	芒果	10	210	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C2949	C2949	*Bridelia tomentosa*	土蜜樹	3	120	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C2954	C2954	*Glochidion puberum*	算盤子	4	100	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3223	C3223	*Macaranga tanarius var. tomentosa*	血桐	6	280	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3224	C3224	*Celtis sinensis*	朴樹	12	480	9	T	T	
C3225	C3225	*Bischofia javanica*	秋槭	6	150	3	T	T	

Tree No.	Photo No.	Species		Tree Size			Proposed Treatment		Remarks[1] (Old and Valuable Tree (OVT), potentially registrable OVT, rare species, protected species, ecological and historical significance, etc.)
		Scientific Name	Chinese Name	Height (m)	DBH[2] (m)	Crown Spread (m)	Approved Application (Retain/ Transplant/ Fell/ Fell (Dead)) S16A Approval Condition (c), Approved on 18/3/2021	In This Revision, (Retain/ Transplant/ Fell/ Fell (Dead))	
C3233	C3233	*Glochidion puberum*	算盤子	4	140	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3234	C3234	*Glochidion puberum*	算盤子	4	210	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3235	C3235	*Glochidion puberum*	算盤子	6	200	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3243	C3243	*Archontophoenix alexandrae*	假檳榔	6	140	2	T	T	
C3244	C3244	*Archontophoenix alexandrae*	假檳榔	5	150	2	T	T	Bent trunk / cavity
C3245	C3245	*Archontophoenix alexandrae*	假檳榔	6	200	2	T	T	Cavity
C3246	C3246	*Archontophoenix alexandrae*	假檳榔	7	180	2	T	T	
C3247	C3247	*Juniperus chinensis*	龍柏	4	160	3	T	T	Leaning
C3248	C3248	*Juniperus chinensis*	龍柏	4	95	2	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3249	C3249	*Juniperus chinensis*	龍柏	3	96	2	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3251	C3251	*Psidium guajava*	番石榴	3	110	2	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3252	C3252	*Sapium sebiferum*	烏桕	6	320	6	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3253	C3253	*Sapium sebiferum*	烏桕	7	188	2	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3255	C3255	*Cinnamomum camphora*	樟樹	8	480	14	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3256	C3256	*Microcos nervosa*	破布葉	6	178	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3591	C3591	*Macaranga tanarius var. tomentosa*	血桐	5	130	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3594	C3594	*Ficus hispida*	對葉榕	4	140	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3601	C3601	*Aporusa dioica*	銀柴	6	120	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3602	C3602	*Cordia dichotoma*	破布木	6	130	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3603	C3603	*Erythrina variegata*	刺桐	5	120	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3604	C3604	*Macaranga tanarius var. tomentosa*	血桐	5	135	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3609	C3609	*Sterculia lanceolata*	假蘋婆	7	110	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3610	C3610	*Dimocarpus longan*	龍眼	6	100	2	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3611	C3611	*Murraya paniculata*	九里香	6	130	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3613	C3613	*Sterculia lanceolata*	假蘋婆	8	100	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3623	C3623	*Macaranga tanarius var. tomentosa*	血桐	6	130	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3625	C3625	*Celtis sinensis*	朴樹	5	170	2	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3628	C3628	*Spathodea campanulata (Dead)*	火焰木 (死樹)	-	215	-	F(D)	F(D)	Felled by DLO's Approval dated 15 Nov 2021
C3629	C3629	*Spathodea campanulata (Dead)*	火焰木 (死樹)	-	400	-	F(D)	F(D)	Felled by DLO's Approval dated 15 Nov 2021
C3630	C3630	*Macaranga tanarius var. tomentosa*	血桐	7	155	6	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3633	C3633	*Alangium chinense*	八角楓	8	110	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3637	C3637	*Macaranga tanarius var. tomentosa*	血桐	7	250	6	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3638	C3638	*Ficus hispida*	對葉榕	6	130	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3639	C3639	*Celtis sinensis*	朴樹	11	230	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3646	C3646	*Dimocarpus longan*	龍眼	8	120	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3652	C3652	*Dimocarpus longan*	龍眼	6	110	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3658	C3658	*Macaranga tanarius var. tomentosa*	血桐	8	140	6	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3659	C3659	*Macaranga tanarius var. tomentosa*	血桐	6	160	6	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3661	C3661	*Archidendron clypearia*	猴耳環	12	200	6	F	F	Felled by DLO's Approval dated 15 Nov 2021

Tree No.	Photo No.	Species		Tree Size			Proposed Treatment		Remarks[1] (Old and Valuable Tree (OVT), potentially registrable OVT, rare species, protected species, ecological and historical significance, etc.)
		Scientific Name	Chinese Name	Height (m)	DBH[2] (m)	Crown Spread (m)	Approved Application (Retain/ Transplant/ Fell/ Fell (Dead)) S16A Approval Condition (c), Approved on 18/3/2021	In This Revision, (Retain/ Transplant/ Fell/ Fell (Dead))	
C3662	C3662	*Aidia canthioides*	香楠	7	95	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3665	C3665	*Litsea monopetala*	假柿樹	6	130	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3679	C3679	*Mangifera indica*	芒果	8	260	8	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3680	C3680	*Melia azedarach*	苦楝	10	220	7	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3681	C3681	*Bischofia javanica*	秋楓	16	700	12	T	F	(Appendix G) Dead by natrual detorioration
C3682	C3682	*Celtis sinensis*	朴樹	11	470	8	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3683	C3683	*Bischofia javanica*	秋楓	8	270	7	R	R	Codominant trunks with included bark / broken branch
C3684	C3684	*Bischofia javanica*	秋楓	11	700	12	T	T	
C3685	C3685	*Melia azedarach*	苦楝	13	430	10	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3687	C3687	*Macaranga tanarius var. tomentosa*	血桐	5	100	6	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3688	C3688	*Dead tree*	死樹	-	150	-	F(D)	F(D)	Felled by DLO's Approval dated 15 Nov 2021
C3689	C3689	*Ficsu hispida*	對葉榕	6	160	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3690	C3690	*Sterculia lanceolata*	假蘋婆	5	150	4	T	T	
C3691	C3691	*Ficus hispida*	對葉榕	4	140	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3692	C3692	*Macaranga tanarius var. tomentosa*	血桐	5	130	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3693	C3693	*Macaranga tanarius var. tomentosa*	血桐	7	140	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3694	C3694	*Mallotus paniculatus*	白楸	5	95	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3695	C3695	*Melia azedarach*	苦楝	6	150	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3696	C3696	*Mallotus paniculatus*	白楸	4	155	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3697	C3697	*Melia azedarach*	苦楝	6	120	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3698	C3698	*Dead tree*	死樹	-	230	-	F(D)	F(D)	Felled by DLO's Approval dated 15 Nov 2021
C3699	C3699	*Celtis sinensis*	朴樹	4	95	2	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3700	C3700	*Mallotus paniculatus*	白楸	7	100	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3701	C3701	*Celtis sinensis*	朴樹	5	205	6	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3702	C3702	*Alangium chinense*	八角楓	12	190	6	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3703	C3703	*Ficus hispida*	對葉榕	4	160	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3704	C3704	*Ficus hispida*	對葉榕	6	130	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3705	C3705	*Ficus hispida*	對葉榕	7	150	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3706	C3706	*Mallotus paniculatus*	白楸	7	95	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3707	C3707	*Mallotus paniculatus*	白楸	10	180	8	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3708	C3708	*Aphananthe cuspidata*	糙葉樹	11	150	6	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3709	C3709	*Zanthoxylum avicennae*	簕欓花椒	8	220	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3710	C3710	*Alangium chinense*	八角楓	10	190	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3711	C3711	*Mallotus paniculatus*	白楸	6	100	6	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3712	C3712	*Mallotus paniculatus*	白楸	8	190	7	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3713	C3713	*Cordia dichotoma*	破布木	5	100	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3714	C3714	*Sterculia lanceolata*	假蘋婆	8	120	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3715	C3715	*Alangium chinense*	八角楓	9	120	6	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3716	C3716	*Aporusa dioica*	銀柴	8	110	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3717	C3717	*Mallotus paniculatus*	白楸	9	130	6	F	F	Felled by DLO's Approval dated 15 Nov 2021

Tree No.	Photo No.	Species		Tree Size			Proposed Treatment		Remarks[1] (Old and Valuable Tree (OVT), potentially registrable OVT, rare species, protected species, ecological and historical significance, etc.)
		Scientific Name	Chinese Name	Height (m)	DBH[2] (m)	Crown Spread (m)	Approved Application (Retain/ Transplant/ Fell/ Fell (Dead)) S16A Approval Condition (c), Approved on 18/3/2021	In This Revision, (Retain/ Transplant/ Fell/ Fell (Dead))	
C3718	C3718	*Sterculia lanceolata*	假蘋婆	7	140	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3719	C3719	*Litsea monopetala*	假柿樹	10	150	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3720	C3720	*Macaranga tanarius var. tomentosa*	血桐	6	100	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3721	C3721	*Ficus hispida*	對葉榕	6	130	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3722	C3722	*Sterculia lanceolata*	假蘋婆	10	130	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3723	C3723	*Antidesma bunius*	五月茶	9	270	6	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3724	C3724	*Cinnamomum camphora*	樟	6	130	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3725	C3725	*Alangium chinense*	八角楓	6	150	6	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3726	C3726	*Sterculia lanceolata*	假蘋婆	8	100	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3727	C3727	*Cordia dichotoma*	破布木	9	170	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3728	C3728	*Cordia dichotoma*	破布木	8	140	7	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3729	C3729	*Homalium cochinchinense*	天料木	8	120	6	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3730	C3730	*Alangium chinense*	八角楓	7	120	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3735	C3735	*Alangium chinense*	八角楓	7	220	4	T	T	Covered by climber/ multi-trunks/ exposed root
C3736	C3736	*Mallotus paniculatus*	白楸	9	190	6	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3738	C3738	*Antidesma bunius*	五月茶(五味子)	10	110	7	R	R	
C3742	C3742	*Mallotus paniculatus*	白楸	7	140	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3743	C3743	*Aphananthe cuspidata*	糙葉樹	9	140	6	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3744	C3744	*Mallotus paniculatus*	白楸	6	150	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3745	C3745	*Antidesma bunius*	五月茶	7	190	6	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3746	C3746	*Cordia dichotoma*	破布木	8	170	6	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3747	C3747	*Alangium chinense*	八角楓	6	100	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3748	C3748	*Alangium chinense*	八角楓	6	110	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3749	C3749	*Cordia dichotoma*	破布木	8	240	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3750	C3750	*Ficus hispida*	對葉榕	6	135	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3751	C3751	*Ficus hispida*	對葉榕	6	110	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3752	C3752	*Ficus hispida*	對葉榕	8	200	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3753	C3753	*Alangium chinense*	八角楓	6	110	6	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3754	C3754	*Mallotus paniculatus*	白楸	10	160	6	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3787	C3787	*Melia azedarach*	苦楝	10	190	4	R	F	(Appendix G) Fallen and uprooted by Typhoon Cempaka on 18-20 Jul 2021
C3788	C3788	*Melia azedarach*	苦楝	10	190	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3793	C3793	*Melia azedarach*	苦楝	5	95	2	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3796	C3796	*Melia azedarach*	苦楝	7	120	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3797	C3797	*Melia azedarach*	苦楝	6	95	2	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3798	C3798	*Melia azedarach*	苦楝	5	100	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3799	C3799	*Melia azedarach*	苦楝	9	150	2	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3800	C3800	*Melia azedarach*	苦楝	9	150	5	T	F	(Appendix G) Fallen and uprooted by Typhoon Cempaka on 18-20 Jul 2021
C3801	C3801	*Melia azedarach*	苦楝	7	95	2	T	T	
C3802	C3802	*Melia azedarach*	苦楝	6	115	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3803	C3803	*Sapium sebiferum*	烏桕	7	150	3	F	F	Felled by DLO's Approval dated 15 Nov 2021

Tree No.	Photo No.	Species		Tree Size			Proposed Treatment		Remarks[1] (Old and Valuable Tree (OVT), potentially registrable OVT, rare species, protected species, ecological and historical significance, etc.)
		Scientific Name	Chinese Name	Height (m)	DBH[2] (m)	Crown Spread (m)	Approved Application (Retain/ Transplant/ Fell/ Fell (Dead)) S16A Approval Condition (c), Approved on 18/3/2021	In This Revision, (Retain/ Transplant/ Fell/ Fell (Dead))	
C3804	C3804	*Melia azedarach*	苦楝	7	130	5	T	T	(Appendix G) Bark crack / broken branch by Typhoon Kompasu on 12-13 Oct 2021
C3805	C3805	*Sapium sebiferum*	烏桕	7	130	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3806	C3806	*Sapium sebiferum*	烏桕	7	120	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3807	C3807	*Sapium sebiferum*	烏桕	8	170	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3808	C3808	*Ficus hispida*	對葉榕	4	130	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3809	C3809	*Melia azedarach*	苦楝	10	280	7	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3810	C3810	*Melia azedarach*	苦楝	8	270	7	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3811	C3811	*Melia azedarach*	苦楝	8	130	4	T	T	
C3812	C3812	*Melia azedarach*	苦楝	9	130	4	T	T	
C3813	C3813	*Melia azedarach*	苦楝	9	110	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3814	C3814	*Melia azedarach*	苦楝	6	120	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3815	C3815	*Melia azedarach*	苦楝	8	170	5	T	T	
C3816	C3816	*Sapium sebiferum*	烏桕	9	120	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3817	C3817	*Bischofia javanica*	秋楓	7	230	8	T	T	Bark crack
C3818	C3818	*Melia azedarach*	苦楝	12	240	7	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3819	C3819	*Melia azedarach*	苦楝	12	210	6	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3820	C3820	*Melia azedarach*	苦楝	13	100	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3821	C3821	*Melia azedarach*	苦楝	9	120	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3822	C3822	*Melia azedarach*	苦楝	12	140	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3823	C3823	*Melia azedarach*	苦楝	12	100	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3824	C3824	*Melia azedarach*	苦楝	12	140	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3825	C3825	*Melia azedarach*	苦楝	11	140	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3826	C3826	*Melia azedarach*	苦楝	10	140	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3827	C3827	*Melia azedarach*	苦楝	10	160	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3828	C3828	*Melia azedarach*	苦楝	10	150	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3829	C3829	*Melia azedarach*	苦楝	9	100	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3830	C3830	*Melia azedarach*	苦楝	9	110	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3831	C3831	*Melia azedarach*	苦楝	9	100	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3832	C3832	*Melia azedarach*	苦楝	7	95	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3833	C3833	*Melia azedarach*	苦楝	7	130	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3834	C3834	*Melia azedarach*	苦楝	7	115	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3835	C3835	*Melia azedarach*	苦楝	8	95	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3836	C3836	*Melia azedarach*	苦楝	10	95	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3837	C3837	*Mallotus paniculatus*	白楸	6	130	6	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3838	C3838	*Melia azedarach*	苦楝	8	160	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3839	C3839	*Melia azedarach*	苦楝	8	100	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3840	C3840	*Melia azedarach*	苦楝	8	100	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3841	C3841	*Melia azedarach*	苦楝	12	170	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3842	C3842	*Bischofia javanica*	秋楓	10	195	7	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3843	C3843	*Melia azedarach*	苦楝	9	130	3	F	F	Felled by DLO's Approval dated 15 Nov 2021

Tree No.	Photo No.	Species		Tree Size			Proposed Treatment		Remarks[1] (Old and Valuable Tree (OVT), potentially registrable OVT, rare species, protected species, ecological and historical significance, etc.)
		Scientific Name	Chinese Name	Height (m)	DBH[2] (m)	Crown Spread (m)	Approved Application (Retain/ Transplant/ Fell/ Fell (Dead)) S16A Approval Condition (c), Approved on 18/3/2021	In This Revision, (Retain/ Transplant/ Fell/ Fell (Dead))	
C3844	C3844	*Melia azedarach*	苦楝	9	165	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3845	C3845	*Melia azedarach*	苦楝	9	135	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3846	C3846	*Melia azedarach*	苦楝	9	115	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3847	C3847	*Melia azedarach*	苦楝	9	120	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3848	C3848	*Sapium sebiferum*	烏桕	3	95	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3849	C3849	*Ficus hispida*	對葉榕	3	135	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3850	C3850	*Melia azedarach*	苦楝	12	250	7	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3851	C3851	*Melia azedarach*	苦楝	9	100	2	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3852	C3852	*Melia azedarach*	苦楝	9	230	6	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3853	C3853	*Dead tree*	死樹	-	140	-	F(D)	F(D)	Felled by DLO's Approval dated 15 Nov 2021
C3854	C3854	*Melia azedarach*	苦楝	10	160	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3855	C3855	*Melia azedarach*	苦楝	9	120	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3856	C3856	*Melia azedarach*	苦楝	10	230	6	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3857	C3857	*Melia azedarach*	苦楝	9	150	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3858	C3858	*Melia azedarach*	苦楝	10	150	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3859	C3859	*Dead tree*	死樹	-	165	-	F(D)	F(D)	Felled by DLO's Approval dated 15 Nov 2021
C3860	C3860	*Dead tree*	死樹	-	170	-	F(D)	F(D)	Felled by DLO's Approval dated 15 Nov 2021
C3861	C3861	*Melia azedarach*	苦楝	9	200	4	T	T	
C3862	C3862	*Sapium sebiferum*	烏桕	7	95	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3863	C3863	*Mallotus paniculatus*	白楸	6	150	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3864	C3864	*Mallotus paniculatus*	白楸	5	120	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3865	C3865	*Ficus hispida*	對葉榕	4	95	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3866	C3866	*Ficus hispida*	對葉榕	5	120	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3867	C3867	*Litsea monopetala*	假柿樹	12	200	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3868	C3868	*Ficus hispida*	對葉榕	5	170	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3869	C3869	*Bridelia tomentosa*	土蜜樹	9	155	6	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3870	C3870	*Celtis sinensis*	朴樹	12	220	8	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3871	C3871	*Cordia dichotoma*	破布木	9	200	8	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3872	C3872	*Antidesma bunius*	五月茶(五味子)	9	120	7	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3873	C3873	*Mallotus paniculatus*	白楸	10	130	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3874	C3874	*Sterculia lanceolata*	假蘋婆	5	95	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3875	C3875	*Zanthoxylum avicennae*	筋艣花椒	9	130	6	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3876	C3876	*Cordia dichotoma*	破布木	5	155	7	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3877	C3877	*Cordia dichotoma*	破布木	9	150	6	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3878	C3878	*Sapium sebiferum*	烏桕	6	150	5	R	F	(Appendix G) Bark crack / leaning / dieback crown / natural detorioration
C3879	C3879	*Sapium sebiferum*	烏桕	7	180	5	R	R	
C3880	C3880	*Sapium sebiferum*	烏桕	6	190	6	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3881	C3881	*Ligustrum sinense*	山指甲	6	170	6	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3882	C3882	*Ligustrum sinense*	山指甲	4	180	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3883	C3883	*Sapium sebiferum*	烏桕	12	330	10	F	F	Felled by DLO's Approval dated 15 Nov 2021

Tree No.	Photo No.	Species		Tree Size			Proposed Treatment		Remarks[1] (Old and Valuable Tree (OVT), potentially registrable OVT, rare species, protected species, ecological and historical significance, etc.)
		Scientific Name	Chinese Name	Height (m)	DBH[2] (m)	Crown Spread (m)	Approved Application (Retain/ Transplant/ Fell/ Fell (Dead)) S16A Approval Condition (c), Approved on 18/3/2021	In This Revision, (Retain/ Transplant/ Fell/ Fell (Dead))	
C3884	C3884	*Sapium sebiferum*	烏桕	10	160	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3885	C3885	*Celtis sinensis*	朴樹	10	260	8	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3886	C3886	*Celtis sinensis*	朴樹	14	220	6	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3887	C3887	*Sapium sebiferum*	烏桕	13	400	8	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3888	C3888	*Celtis sinensis*	朴樹	13	230	8	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3889	C3889	*Ligustrum sinense*	山指甲	6	155	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3890	C3890	*Sapium sebiferum*	烏桕	12	160	7	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3891	C3891	*Ligustrum sinense*	山指甲	4	170	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3892	C3892	*Celtis sinensis*	朴樹	13	265	6	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3893	C3893	*Celtis sinensis*	朴樹	13	260	8	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3894	C3894	*Litsea glutinosa*	潺槁樹	6	110	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3895	C3895	*Celtis sinensis*	朴樹	13	260	8	T	T	Wound on trunk
C3896	C3896	*Celtis sinensis*	朴樹	10	160	6	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3897	C3897	*Sapium sebiferum*	烏桕	10	200	8	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3898	C3898	*Scolopia saeva*	廣東刺柊	6	100	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3899	C3899	*Sapium sebiferum*	烏桕	10	190	6	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3900	C3900	*Sapium sebiferum*	烏桕	10	170	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3901	C3901	*Celtis sinensis*	朴樹	11	280	7	T	T	(Appendix G) Broken branch by Typhoon Kompasu on 12-13 Oct 2021
C3902	C3902	*Sapium sebiferum*	烏桕	11	130	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3903	C3903	*Litsea monopetala*	假柿樹	10	170	6	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3904	C3904	*Celtis sinensis*	朴樹	8	130	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3905	C3905	*Litsea monopetala*	假柿樹	12	280	8	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3907	C3907	*Litsea monopetala*	假柿樹	9	270	7	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3908	C3908	*Celtis sinensis*	朴樹	8	250	7	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3909	C3909	*Bischofia javanica*	秋楓	7	300	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3910	C3910	*Celtis sinensis*	朴樹	5	175	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3911	C3911	*Melia azedarach*	苦楝	8	170	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3912	C3912	*Celtis sinensis*	朴樹	9	180	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3913	C3913	*Cinnamomum camphora*	樟	6	140	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3914	C3914	*Celtis sinensis*	朴樹	8	275	8	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3915	C3915	*Litsea monopetala*	假柿樹	7	180	8	T	F	(Appendix G) Fallend and uprooted by Typhoon Cempaka on 18-20 Jul 2021
C3916	C3916	*Celtis sinensis*	朴樹	12	295	7	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3917	C3917	*Celtis sinensis*	朴樹	10	210	7	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3918	C3918	*Celtis sinensis*	朴樹	10	190	7	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3919	C3919	*Sapium sebiferum*	烏桕	10	140	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3920	C3920	*Melia azedarach*	苦楝	8	120	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3921	C3921	*Celtis sinensis*	朴樹	13	200	6	T	T	Wound
C3922	C3922	*Melia azedarach*	苦楝	14	300	8	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3923	C3923	*Celtis sinensis*	朴樹	7	180	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3924	C3924	*Melia azedarach*	苦楝	7	155	5	F	F	Felled by DLO's Approval dated 15 Nov 2021

Tree No.	Photo No.	Species		Tree Size			Proposed Treatment		Remarks[1] (Old and Valuable Tree (OVT), potentially registrable OVT, rare species, protected species, ecological and historical significance, etc.)
		Scientific Name	Chinese Name	Height (m)	DBH[2] (m)	Crown Spread (m)	Approved Application (Retain/ Transplant/ Fell/ Fell (Dead)) S16A Approval Condition (c), Approved on 18/3/2021	In This Revision, (Retain/ Transplant/ Fell/ Fell (Dead))	
C3928	C3928	*Erythrina variegata*	刺桐	4	130	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3929	C3929	*Erythrina variegata*	刺桐	5	180	7	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3930	C3930	*Erythrina variegata*	刺桐	5	100	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3935	C3935	*Glochidion puberum*	算盤子	5	155	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3948	C3948	*Dead tree*	死樹	-	100	-	F(D)	F(D)	Felled by DLO's Approval dated 15 Nov 2021
C3950	C3950	*Macaranga tanarius var. tomentosa*	血桐	4	100	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3951	C3951	*Macaranga tanarius var. tomentosa*	血桐	5	110	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3952	C3952	*Macaranga tanarius var. tomentosa*	血桐	6	100	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3953	C3953	*Trema tomentosa*	山黃麻	3	165	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3954	C3954	*Dimocarpus longan*	龍眼	6	270	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3955	C3955	*Celtis sinensis*	朴樹	5	200	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3956	C3956	*Melia azedarach*	苦楝	8	250	6	T	T	old wound with epicormics growth
C3957	C3957	*Dimocarpus longan*	龍眼	6	120	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3958	C3958	*Citrus maxima*	柚	7	150	6	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3959	C3959	*Averrhoa carambola*	楊桃	5	130	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3960	C3960	*Citrus maxima*	柚	7	120	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3961	C3961	*Artocarpus heterophyllus*	菠蘿蜜	8	150	6	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3962	C3962	*Bauhinia purpurea*	紅花羊蹄甲	3	95	1	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3963	C3963	*Melia azedarach*	苦楝	11	170	7	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3964	C3964	*Mallotus paniculatus*	白楸	10	170	6	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3965	C3965	*Viburnum odoratissimum*	珊瑚樹	8	100	5	R	R	
C3996	C3996	*Celtis sinensis*	朴樹	13	672	9	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3997	C3997	*Viburnum odoratissimum*	珊瑚樹	6	110	2	F	F	Felled by DLO's Approval dated 15 Nov 2021
C3998	C3998	*Dimocarpus longan*	龍眼	6	95	2	F	F	Felled by DLO's Approval dated 15 Nov 2021
C4007	C4007	*Macaranga tanarius var. tomentosa*	血桐	7	280	7	F	F	Felled by DLO's Approval dated 15 Nov 2021
C4008	C4008	*Michelia x alba*	白蘭	8	290	7	F	F	Felled by DLO's Approval dated 15 Nov 2021
C4009	C4009	*Mallotus paniculatus*	白楸	7	100	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C4010	C4010	*Macaranga tanarius var. tomentosa*	血桐	5	100	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C4011	C4011	*Dead tree*	死樹	-	100	-	F(D)	F(D)	Felled by DLO's Approval dated 15 Nov 2021
C4012	C4012	*Macaranga tanarius var. tomentosa*	血桐	5	120	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C4031	C4031	*Macaranga tanarius var. tomentosa*	血桐	12	100	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C4032	C4032	*Leucaena leucocephala*	銀合歡	9	140	6	F	F	Felled by DLO's Approval dated 15 Nov 2021
C4033	C4033	*Leucaena leucocephala*	銀合歡	8	230	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C4034	C4034	*Leucaena leucocephala*	銀合歡	8	110	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C4036	C4036	*Leucaena leucocephala*	銀合歡	6	240	7	F	F	Felled by DLO's Approval dated 15 Nov 2021
C4037	C4037	*Dimocarpus longan*	龍眼	6	260	7	F	F	Felled by DLO's Approval dated 15 Nov 2021
C4250	C4250	*Celtis sinensis*	朴樹	4	100	1	F	F	Felled by DLO's Approval dated 15 Nov 2021
C4251	C4251	*Celtis sinensis*	朴樹	7	170	4	T	T	
C5589	C5589	*Cratoxylum cochinchinense*	黃牛木	4	96	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C5590	C5590	*Averrhoa carambola*	楊桃	4	150	4	F	F	Felled by DLO's Approval dated 15 Nov 2021

Tree No.	Photo No.	Species		Tree Size			Proposed Treatment		Remarks[1] (Old and Valuable Tree (OVT), potentially registrable OVT, rare species, protected species, ecological and historical significance, etc.)
		Scientific Name	Chinese Name	Height (m)	DBH[2] (m)	Crown Spread (m)	Approved Application (Retain/ Transplant/ Fell/ Fell (Dead)) S16A Approval Condition (c), Approved on 18/3/2021	In This Revision, (Retain/ Transplant/ Fell/ Fell (Dead))	
C5591	C5591	*Mangifera indica*	芒果	4	310	6	F	F	Felled by DLO's Approval dated 15 Nov 2021
C8391	C8391	*Macaranga tanarius var. tomentosa*	血桐	5	111	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C8614	C8614	*Leucaena leucocephala*	銀合歡	7	121	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C8616	C8616	*Leucaena leucocephala*	銀合歡	7	111	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C8782	C8782	*Alangium chinense*	八角楓	4	120	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C8783	C8783	*Macaranga tanarius var. tomentosa*	血桐	8	235	10	F	F	Felled by DLO's Approval dated 15 Nov 2021
C10167	C10167	*Litsea monopetala*	假柿木薑子	11	265	9	R	F	(Appendix G) Dieback crown / natural detorioration / old rusted metal fence found near base of trunk
C10554	C10554	*Microcos nervosa*	破布葉	5	95	2	F	F	Felled by DLO's Approval dated 15 Nov 2021
C10555	C10555	*Macaranga tanarius var. tomentosa*	血桐	7	110	2	F	F	Felled by DLO's Approval dated 15 Nov 2021
C10557	C10557	*Microcos nervosa*	破布葉	4	95	2	F	F	Felled by DLO's Approval dated 15 Nov 2021
C12008	C12008	*Glochidion zeylanicum*	香港算盤子	4	120	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C12009	C12009	*Glochidion zeylanicum*	香港算盤子	3	110	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C12010	C12010	*Glochidion zeylanicum*	香港算盤子	4	100	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C12011	C12011	*Glochidion zeylanicum*	香港算盤子	5	180	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C12012	C12012	*Glochidion zeylanicum*	香港算盤子	5	100	2	F	F	Felled by DLO's Approval dated 15 Nov 2021
C12013	C12013	*Glochidion zeylanicum*	香港算盤子	5	100	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C12014	C12014	*Sterculia lanceolata*	假蘋婆	5	100	1	F	F	Felled by DLO's Approval dated 15 Nov 2021
C12015	C12015	*Viburnum odoratissimum*	珊瑚樹	5	96	2	F	F	Felled by DLO's Approval dated 15 Nov 2021
C12016	C12016	*Glochidion zeylanicum*	香港算盤子	4	100	2	F	F	Felled by DLO's Approval dated 15 Nov 2021
C12017	C12017	*Glochidion zeylanicum*	香港算盤子	3	100	2	F	F	Felled by DLO's Approval dated 15 Nov 2021
C12018	C12018	*Glochidion zeylanicum*	香港算盤子	4	150	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C12019	C12019	*Glochidion zeylanicum*	香港算盤子	3	131	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C12020	C12020	*Glochidion zeylanicum*	香港算盤子	3	96	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C12021	C12021	*Glochidion zeylanicum*	香港算盤子	2	100	1	F	F	Felled by DLO's Approval dated 15 Nov 2021
C12022	C12022	*Glochidion zeylanicum*	香港算盤子	3	100	2	F	F	Felled by DLO's Approval dated 15 Nov 2021
C12024	C12024	*Glochidion zeylanicum*	香港算盤子	5	140	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C12028	C12028	*Glochidion zeylanicum*	香港算盤子	5	96	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C12032	C12032	*Glochidion zeylanicum*	香港算盤子	3	100	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C12035	C12035	*Glochidion zeylanicum*	香港算盤子	3	100	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C12037	C12037	*Glochidion zeylanicum*	香港算盤子	2	100	1	F	F	Felled by DLO's Approval dated 15 Nov 2021
C12623	C12623	*Alangium chinense*	八角楓	10	160	4	R	R	(Appendix G) Leaning / broken branches by Typhoon Kompasu on 12-13 Oct 2021 / crack of trunk
C12624	C12624	*Celtis sinensis*	朴樹	13	450	10	R	R	Bark crack / exposed root / wound on trunk base
C12625	C12625	*Microcos nervosa*	破布葉	6	180	5	R	R	Multi-trunks
C12637	C12637	*Dimocarpus longan*	龍眼	12	650	11	R	R	Exposed root / dead branch with fungal / btoken branches
C12638	C12638	*Celtis sinensis*	朴樹	14	600	10	R	R	Crack and decay on trunk / exposed root
C12639	C12639	*Celtis sinensis*	朴樹	13	800	11	R	R	Crack on root / exposed root
C12659	C12659	*Sapium sebiferum*	烏桕	10	210	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C12660	C12660	*Litsea monopetala*	假柿木薑子	9	200	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C12717	C12717	*Psidium guajava*	番石榴	3	96	2	F	F	Felled by DLO's Approval dated 15 Nov 2021

Tree No.	Photo No.	Species		Tree Size			Proposed Treatment		Remarks[1] (Old and Valuable Tree (OVT), potentially registrable OVT, rare species, protected species, ecological and historical significance, etc.)
		Scientific Name	Chinese Name	Height (m)	DBH[2] (m)	Crown Spread (m)	Approved Application (Retain/ Transplant/ Fell/ Fell (Dead)) S16A Approval Condition (c), Approved on 18/3/2021	In This Revision, (Retain/ Transplant/ Fell/ Fell (Dead))	
C12718	C12718	*Psidium guajava*	番石榴	7	300	7	T	T	
C12719	C12719	*Michelia x alba*	白蘭	13	470	11	T	T	Wound / dead branches
C12720	C12720	*Michelia x alba*	白蘭	13	410	10	T	T	Bent trunk / old wound
C12721	C12721	*Litchi chinensis*	荔枝	6	271	6	F	F	Felled by DLO's Approval dated 15 Nov 2021
C12722	C12722	*Litchi chinensis*	荔枝	5	194	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C12723	C12723	*Bischofia javanica*	秋楓	12	720	7	T	T	
C12724	C12724	*Celtis sinensis*	朴樹	10	344	7	F	F	Felled by DLO's Approval dated 15 Nov 2021
C12726	C12726	*Archontophoenix alexandrae*	假檳榔	8	170	2	T	T	Epiphytes found on trunk / overlapped rootzone with other trees
C12727	C12727	*Bischofia javanica*	秋楓	7	270	5	T	T	Dead branches / overlapped rootzone with other trees / root embedded to concrete structure
C12728	C12728	*Archontophoenix alexandrae*	假檳榔	7	160	3	T	T	Overlapped rootzone
C12729	C12729	*Archontophoenix alexandrae*	假檳榔	6	150	2	F	F	Felled by DLO's Approval dated 15 Nov 2021
C12730	C12730	*Archontophoenix alexandrae (Dead)*	假檳榔 (死樹)	-	120	-	F(D)	F(D)	Felled by DLO's Approval dated 15 Nov 2021
C12731	C12731	*Archontophoenix alexandrae*	假檳榔	8	250	2	T	T	
C12732	C12732	*Litchi chinensis*	荔枝	7	295	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C12733	C12733	*Litchi chinensis*	荔枝	5	320	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C12734	C12734	*Mangifera indica*	芒果	13	895	10	F	F	Felled by DLO's Approval dated 15 Nov 2021
C12735	C12735	*Litchi chinensis*	荔枝	5	197	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C12736	C12736	*Litchi chinensis*	荔枝	5	290	6	F	F	Felled by DLO's Approval dated 15 Nov 2021
C12737	C12737	*Celtis sinensis*	朴樹	7	1000	10	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13065	C13065	*Psidium guajava*	番石榴	3	96	2	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13066	C13066	*Psidium guajava*	番石榴	3	102	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13149	C13149	*Crateva unilocularis*	樹頭菜	4	100	2	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13150	C13150	*Viburnum odoratissimum*	珊瑚樹	6	108	2	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13151	C13151	*Viburnum odoratissimum*	珊瑚樹	6	95	2	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13156	C13156	*Viburnum odoratissimum*	珊瑚樹	6	95	2	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13159	C13159	*Litsea monopetala*	假柿木薑子	4	160	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13182	C13182	*Litsea monopetala*	假柿樹	5	170	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13183	C13183	*Litsea monopetala*	假柿樹	5	120	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13207	C13207	*Macaranga tanarius var. tomentosa*	血桐	5	110	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13248	C13248	*Bridelia tomentosa*	土蜜樹	3	95	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13249	C13249	*Litsea monopetala (Dead)*	假柿木薑子 (死樹)	-	140	-	F(D)	F(D)	Felled by DLO's Approval dated 15 Nov 2021
C13250	C13250	*Sapium sebiferum*	烏桕	11	240	5	R	F	(Appendix G) Fallend and uprooted by Typhoon Cempaka on 18-20 Jul 2021
C13251	C13251	*Aporusa dioica*	銀柴	6	130	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13252	C13252	*Litsea monopetala*	假柿木薑子	5	100	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13253	C13253	*Litsea monopetala*	假柿木薑子	4	100	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13254	C13254	*Quercus edithae*	華南青崗	5	100	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13255	C13255	*Quercus edithae*	華南青崗	5	100	2	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13256	C13256	*Quercus edithae*	華南青崗	5	100	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13257	C13257	*Sapium sebiferum*	烏桕	13	290	5	F	F	Felled by DLO's Approval dated 15 Nov 2021

Tree No.	Photo No.	Species		Tree Size			Proposed Treatment		Remarks[1] (Old and Valuable Tree (OVT), potentially registrable OVT, rare species, protected species, ecological and historical significance, etc.)
		Scientific Name	Chinese Name	Height (m)	DBH[2] (m)	Crown Spread (m)	Approved Application (Retain/ Transplant/ Fell/ Fell (Dead)) S16A Approval Condition (c), Approved on 18/3/2021	In This Revision, (Retain/ Transplant/ Fell/ Fell (Dead))	
C13258	C13258	*Alangium chinense*	八角楓	5	100	2	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13259	C13259	*Quercus edithae*	華南青崗	6	100	2	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13260	C13260	*Quercus edithae*	華南青崗	5	100	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13261	C13261	*Quercus edithae*	華南青崗	5	190	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13266	C13266	*Sapium sebiferum*	烏桕	4	100	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13501	C13501	*Glochidion zeylanicum*	香港算盤子	5	100	1	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13587	C13587	*Celtis sinensis*	朴樹	11	380	9	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13588	C13588	*Dead tree*	死樹	6	207	6	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13589	C13589	*Litsea glutinosa*	潺槁樹	7	140	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13590	C13590	*Cleistocalyx operculatus*	水翁	4	100	2	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13591	C13591	*Macaranga tanarius var. tomentosa*	血桐	8	115	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13593	C13593	*Litsea monopetala*	假柿木薑子	4	100	2	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13594	C13594	*Aporusa dioica*	銀柴	4	100	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13595	C13595	*Microcos nervosa*	破布葉	7	160	6	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13597	C13597	*Antidesma bunius*	五月茶	8	140	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13598	C13598	*Dead tree*	死樹	6	169	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13599	C13599	*Litsea monopetala*	假柿木薑子	8	100	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13600	C13600	*Cinnamomum camphora*	樟樹	14	520	10	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13701	C13701	*Dead tree*	死樹	4	96	2	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13702	C13702	*Celtis sinensis*	朴樹	8	250	7	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13703	C13703	*Microcos nervosa*	破布葉	6	170	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13704	C13704	*Litsea monopetala*	假柿木薑子	7	96	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13705	C13705	*Microcos nervosa*	破布葉	6	100	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13706	C13706	*Microcos nervosa*	破布葉	7	205	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13707	C13707	*Dead tree*	死樹	11	258	10	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13708	C13708	*Machilus chekiangensis*	浙江潤楠	5	100	2	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13709	C13709	*Celtis sinensis*	朴樹	13	320	7	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13711	C13711	*Litsea glutinosa*	潺槁樹	5	100	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13712	C13712	*Lophostemon confertus*	紅膠木	6	100	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13713	C13713	*Viburnum odoratissimum*	珊瑚樹	8	100	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13714	C13714	*Syzygium championii*	灶地烏墨木	6	100	2	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13715	C13715	*Viburnum odoratissimum*	珊瑚樹	4	100	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13716	C13716	*Syzygium hancei*	韓氏蒲桃	9	120	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13717	C13717	*Glochidion zeylanicum*	香港算盤子	5	130	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13718	C13718	*Mallotus paniculatus*	白楸	4	100	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13719	C13719	*Microcos nervosa*	破布葉	7	180	6	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13720	C13720	*Dead tree*	死樹	2	197	1	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13721	C13721	*Ilex rotunda (Dead)*	鐵冬青 (死樹)	-	150	-	F(D)	F(D)	Felled by DLO's Approval dated 15 Nov 2021
C13722	C13722	*Cinnamomum camphora*	樟樹	11	520	8	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13724	C13724	*Litsea monopetala*	假柿樹	7	140	4	F	F	Felled by DLO's Approval dated 15 Nov 2021

Tree No.	Photo No.	Species		Tree Size			Proposed Treatment		Remarks[1] (Old and Valuable Tree (OVT), potentially registrable OVT, rare species, protected species, ecological and historical significance, etc.)
		Scientific Name	Chinese Name	Height (m)	DBH[2] (m)	Crown Spread (m)	Approved Application (Retain/ Transplant/ Fell/ Fell (Dead)) S16A Approval Condition (c), Approved on 18/3/2021	In This Revision, (Retain/ Transplant/ Fell/ Fell (Dead))	
C13725	C13725	*Viburnum odoratissimum*	珊瑚樹	11	210	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13726	C13726	*Microcos nervosa*	破布葉	7	102	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13727	C13727	*Heritiera littoralis*	銀葉樹	6	210	6	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13728	C13728	*Mallotus paniculatus (Dead)*	白楸 (死樹)	-	180	-	F(D)	F(D)	Felled by DLO's Approval dated 15 Nov 2021
C13729	C13729	*Litsea glutinosa*	潺槁樹	10	130	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13730	C13730	*Cinnamomum camphora*	樟樹	8	265	6	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13731	C13731	*Viburnum odoratissimum*	珊瑚樹	6	110	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13732	C13732	*Cinnamomum burmani*	陰香	3	210	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13733	C13733	*Sapium sebiferum*	烏桕	7	110	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13734	C13734	*Litsea monopetala*	假柿木薑子	13	310	8	R	F	(Appendix G) Poor health by natural deterioration / dead branches / broken main branch
C13735	C13735	*Viburnum odoratissimum*	珊瑚樹	5	150	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13736	C13736	*Litsea monopetala*	假柿木薑子	5	160	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13737	C13737	*Machilus velutina*	絨毛潤楠	6	100	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13738	C13738	*Alangium chinense*	八角楓	9	140	5	R	R	Leaning / Epiphtyes and climbers found on trunk
C13739	C13739	*Viburnum odoratissimum*	珊瑚樹	6	100	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13740	C13740	*Celtis sinensis*	朴樹	7	210	5	R	R	Leaning / wound / dead branches
C13741	C13741	*Dead tree*	死樹	4	111	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13742	C13742	*Litsea monopetala*	假柿樹	14	340	8	R	F	(Appendix G) Covered by climber / poor health by natural deterioration / dieback crown
C13743	C13743	*Viburnum odoratissimum*	珊瑚樹	7	175	3	R	R	Covered by climber / overlapping crown / overlapped rootzone with other trees
C13744	C13744	*Ficus hispida*	對葉榕	3	180	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13749	C13749	*Litsea monopetala*	假柿木薑子	8	145	2	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13824	C13824	*Mallotus paniculatus*	白楸	7	150	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13835	C13835	*Litsea monopetala*	假柿樹	9	260	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13841	C13841	*Mallotus paniculatus*	白楸	3	100	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13851	C13851	*Mallotus paniculatus*	白楸	8	110	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13852	C13852	*Mallotus paniculatus*	白楸	9	100	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13853	C13853	*Machilus chinensis*	香港楠	8	110	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13855	C13855	*Osmanthus matsumuranus Hayata*	牛矢果	6	350	6	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13856	C13856	*Ligustrum sinense*	山指甲	4	95	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13857	C13857	*Osmanthus matsumuranus Hayata*	牛矢果	8	230	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13859	C13859	*Macaranga tanarius var. tomentosa*	血桐	5	134	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13860	C13860	*Microcos nervosa*	破布葉	7	110	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13861	C13861	*Bischofia javanica*	秋楓	15	530	8	R	R	Dieback twigs
C13862	C13862	*Dimocarpus longan*	龍眼	10	240	6	R	R	(Appendix G) Broken branched by Typhoon Kompasu on 12-13 Oct 2021
C13863	C13863	*Bischofia javanica*	秋楓	14	350	8	R	R	Wound / dieback twigs
C13864	C13864	*Litsea monopetala*	假柿木薑子	14	360	10	R	R	Leaning / dead branches / Epiphytes and climbers / old metal pole tie on trunk
C13865	C13865	*Michelia x alba*	白蘭	13	240	7	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13866	C13866	*Viburnum odoratissimum*	珊瑚樹	4	100	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13868	C13868	*Viburnum odoratissimum*	珊瑚樹	7	95	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13869	C13869	*Leucaena leucocephala*	銀合歡	11	427	6	F	F	Felled by DLO's Approval dated 15 Nov 2021

Tree No.	Photo No.	Species		Tree Size			Proposed Treatment		Remarks[1] (Old and Valuable Tree (OVT), potentially registrable OVT, rare species, protected species, ecological and historical significance, etc.)
		Scientific Name	Chinese Name	Height (m)	DBH[2] (m)	Crown Spread (m)	Approved Application (Retain/ Transplant/ Fell/ Fell (Dead)) S16A Approval Condition (c), Approved on 18/3/2021	In This Revision, (Retain/ Transplant/ Fell/ Fell (Dead))	
C13870	C13870	*Viburnum odoratissimum*	珊瑚樹	8	250	7	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13871	C13871	*Leucaena leucocephala*	銀合歡	9	172	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13872	C13872	*Cinnamomum camphora*	樟樹	6	120	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13873	C13873	*Leucaena leucocephala*	銀合歡	7	95	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13874	C13874	*Leucaena leucocephala*	銀合歡	9	96	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13875	C13875	*Leucaena leucocephala*	銀合歡	7	100	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13876	C13876	*Dead tree*	死樹	4	96	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13879	C13879	*Leucaena leucocephala*	銀合歡	6	150	2	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13886	C13886	*Spathodea campanulata*	火焰木	13	330	10	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13888	C13888	*Spathodea campanulata*	火焰木	7	140	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13889	C13889	*Spathodea campanulata*	火焰木	10	100	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13897	C13897	*Celtis sinensis*	朴樹	6	170	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13899	C13899	*Melia azedarach (Dead)*	楝(苦楝) (死樹)	-	260	-	F(D)	F(D)	Felled by DLO's Approval dated 15 Nov 2021
C13900	C13900	*Litsea monopetala*	假柿木薑子	12	350	8	R	R	Wound / dead branches
C13901	C13901	*Clausena lansium*	黃皮	7	160	7	R	R	
C13902	C13902	*Sterculia lanceolata*	假蘋婆	5	130	5	R	R	Leaning / old wound / overlapping crown with other trees
C13903	C13903	*Melia azedarach*	楝(苦楝)	8	180	1	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13904	C13904	*Litsea monopetala*	假柿木薑子	13	380	8	R	R	Old metal pole tied on trunk / Epiphtes and climbers
C13916	C13916	*Glochidion puberum*	算盤子	7	280	6	R	F	(Appendix G) Fallend and uprooted by Typhoon Cempaka on 18-20 Jul 2021
C13917	C13917	*Glochidion zeylanicum*	香港算盤子	5	185	5	F	F	Felled by DLO's Approval dated 15 Nov 2021
C13918	C13918	*Glochidion zeylanicum*	香港算盤子	5	201	4	F	F	Felled by DLO's Approval dated 15 Nov 2021
C14059	C14059	*Bridelia tomentosa*	土蜜樹	4	110	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C14060	C14060	*Quercus edithae*	華南青崗	4	100	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C14072	C14072	*Alangium chinense*	八角楓	3	111	2	F	F	Felled by DLO's Approval dated 15 Nov 2021
C14103	C14103	*Litchi chinensis*	荔枝	3	95	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C14104	C14104	*Litchi chinensis*	荔枝	3	95	2	F	F	Felled by DLO's Approval dated 15 Nov 2021
C14106	C14106	*Leucaena leucocephala*	銀合歡	10	110	3	F	F	Felled by DLO's Approval dated 15 Nov 2021
C14109	C14109	*Macaranga tanarius var. tomentosa*	血桐	6	120	4	R	R	Leaning / dead branches

Summary Table

	Number of Tree(s)
Tree to be Retained	27
Tree to be Transplated	43
Tree to be Felled	596
Dead Trees	38
Total Number of Existing Tree(s)	704

[1] Please state whether the OVT, potentially registrable OVT, trees of rare or protected species, trees with ecological and historical significance, etc. within and/or adjacent to the site is likely to be affected by the proposed development.

[2] DBH of a tree refers to its diameter at breast height (i.e. measured at 1.3m above ground level).

Appendix C

Photographic Record of Existing Trees

T

C1039

T

C1040

T

C1043

F

C1047

Tree Photographic Record of Existing Trees
(Site C)

R-Retain T-Transplant F-Fell D-Dead Tree

F

C1048

F

C1049

F

C1051

F

C1052

Tree Photographic Record of Existing Trees
(Site C)

R-Retain T-Transplant F-Fell D-Dead Tree

C1053

C1054

C1055

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C01053-1055

C1057

C1058

C1059

C1060

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C01057-1060

C1166

C1563

C1564

C1565

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

C1566

C1567

C1568

C1569

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

C1571

C1572

C1573

C1639

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C01571-1639

C1772

C1773

C1780

C1781

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C01772-1781

C1782

C1783

C1784

C1785

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C01782-1785

C1786

C1787

C1788

C1789

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C01786-1789

C1790

C1791

C1792

C1793

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C01790-1793

C1794

C1795

C1796

C1797

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C01794-1797

C1798

C1799

C1800

C1801

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C01798-1801

C1802

C1803

C1804

C1805

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C01802-1805

C1806

C1807

C1808

C1810

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C01806-1810

C1811

C1812

C1813

C1814

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C01811-1814

C1815

C1819

C1820

C1821

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C01815-1821

C1822

C1823

C1824

C1825

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C01822-1825

C1826

C1827

C1828

C1829

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C01826-1829

C1830

C1831

C1834

C1835

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C01830-1835

C1836

C1837

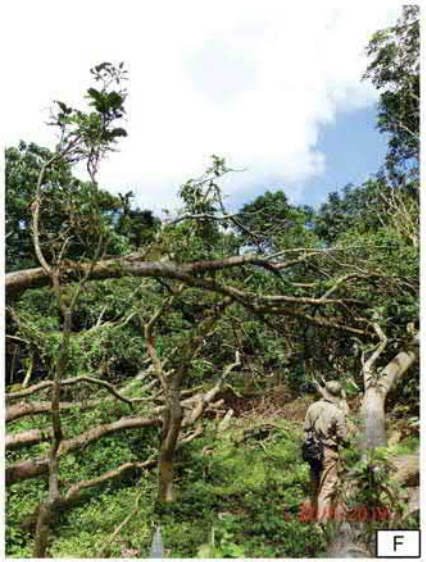
C1839

C1840

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C01836-1840

C1841



C1842

C1843

C1844

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C01841-1844

C1845

C1846

C1847

C1848

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C01845-1848

C1849

C1850

C1851

C1852

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C01849-1852

C1853

C1854

C1855

C1856

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

C1859

C1860

C1861

C1862

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

C1863

C1864

C1865

C1866

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C01863-1866

C1867

C1868

C1869

C1870

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C01867-1870

C1871

C1872

C1873

C1874

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C01871-1874

C1875

C1877

C1878

C1879

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C01875-1879

C1880

C1881

C1882

C1883

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C01880-1883

C1884

C1885

C1886

C1887

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C01884-1887

C1888

C1889

C1890

C1891

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C01888-1891

C1892

C1893

C1894

C1895

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C01892-1895

D

C1896

F

C1897

D

C1898

F

C1899

Tree Photographic Record of Existing Trees
(Site C)

R-Retain T-Transplant F-Fell D-Dead Tree

D

C1900

F

C1901

F

C1902

F

C1903

Tree Photographic Record of Existing Trees
(Site C)

R-Retain T-Transplant F-Fell D-Dead Tree

C1904

C1905

C1906

C1907

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C01904-1907

C1908

C1909

C1910

C1911

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C01908-1911

C1912

C1913

C1914

C1916

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C01912-1916

C1917

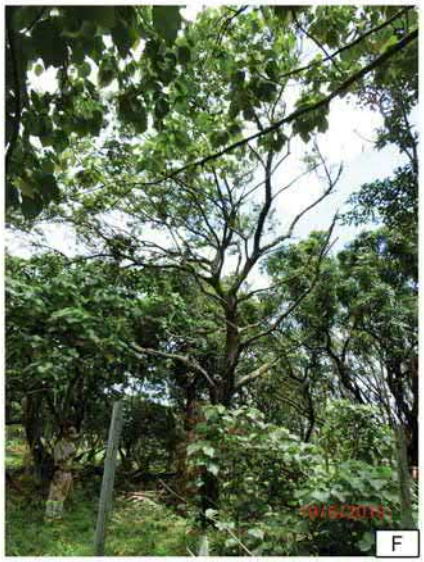
C1925

C1926

C1927

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C01917-1927



C1928

C1929

C1930

C1932

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C01928-1932

C1934

C1935

C1936

C1938

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C01934-1938

C1939

C1940

C1944

C1945

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C01939-1945

C1946

C1947

C1948

C1949

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C01946-1949

C1950

C1951

C1952

C1953

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C01950-1953

C1954

C1955

C1957

C1958

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C01954-1958

C1959

C1960

C1961

C1962

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C01959-1962

C1963

C1964

C1965

C1966

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C01963-1966

C1967

C1968

C1969

C1970

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C01967-1970

C1971

C1972

C1973

C1974

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C01971-1974

C1975

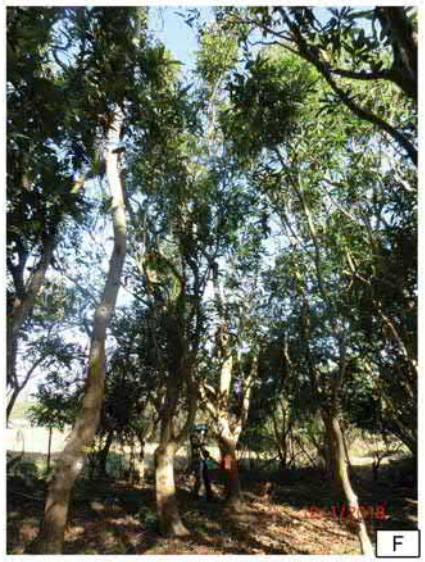
C1976

C1977

C1978

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C01975-1978



C2204

C2206

C2208

C2315

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C02204-2315

C2316

C2317

C2318

C2624

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C02316-2624

C2625

C2626

C2627

C2628

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C02625-2628

C2629

C2630

C2631

C2632

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C02629-2632

C2633

C2634

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C02633-2634

C2635

C2636

C2670

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C02635-2670

C2684

C2685

C2724

C2725

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C02684-2725

C2726

C2727

C2811

C2812

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C02726-2812

C2949

C2954

C3224

C3225

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C02949-3225

C3233

C3234

C3235

C3243

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C03233-3243

C3244

C3245

C3246

C3247

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C03244-3247

C3591

C3594

C3601

C3602

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C03591-3602

C3603

C3604

C3609

C3610

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C03603-3610

C3611

C3613

C3623

C3625

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

C3628

C3629

C3630

C3633

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

C3637

C3638

C3639

C3646

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C03637-3646

C3652

C3658

C3659

C3661

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C03652-3661

C3662

C3665

C3679

C3680

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C03662-3680

C3681

C3682

C3683

C3684

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C03681-3684

C3685

C3687

C3688

C3689

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C03685-3689

C3690

C3691

C3692

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C03690-3692

C3693

C3694

C3695

C3696

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C03693-3696

C3697

C3698

C3699

C3700

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C03697-3700

C3701

C3702

C3703

C3704

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C03701-3704

C3705

C3706

C3707

C3708

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C03705-3708

C3709

C3710

C3711

C3712

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C03709-3712

C3713

C3714

C3715

C3716

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C03713-3716

C3717

C3718

C3719

C3720

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C03717-3720

C3721

C3722

C3723

C3724

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C03721-3724

C3725

C3726

C3727

C3728

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C03725-3728

C3729

C3730

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C03729-3730

T

C3735

F

C3736

R

C3738

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C03735-3738

F

C3742

F

C3743

F

C3744

F

C3745

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C03742-3745

C3746

C3747

C3748

C3749

Tree Photographic Record of Existing Trees
(Site C)

R-Retain T-Transplant F-Fell D-Dead Tree

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C03746-3749

C3750

C3751

C3752

C3753

Tree Photographic Record of Existing Trees
(Site C)

R-Retain T-Transplant F-Fell D-Dead Tree

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C03750-3753

C3754

C3787

C3788

C3793

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C03754-3793

C3796

C3797

C3798

C3799

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C03796-3799

C3800

C3801

C3802

C3803

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C03800-3803

C3804

C3805

C3806

C3807

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C03804-3807

C3808

C3809

C3810

C3811

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C03808-3811

C3812

C3813

C3814

C3815

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C03812-3815

C3816

C3817

C3818

C3819

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C03816-3819

C3820

C3821

C3822

C3823

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C03820-3823

C3824

C3825

C3826

C3827

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C03824-3827

C3828

C3829

C3830

C3831

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C03828-3831

C3832

C3833

C3834

C3835

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C03832-3835

C3836

C3837

C3838

C3839

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C03836-3839

C3840

C3841

C3842

C3843

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C03840-3843

C3844

C3845

C3846

C3847

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C03844-3847

C3848

C3849

C3850

C3851

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

C3852

C3853

C3854

C3855

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

C3856

C3857

C3858

C3859

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C03856-3859

C3860

C3861

C3862

C3863

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C03860-3863

C3864

C3865

C3866

C3867

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C03864-3867

C3868

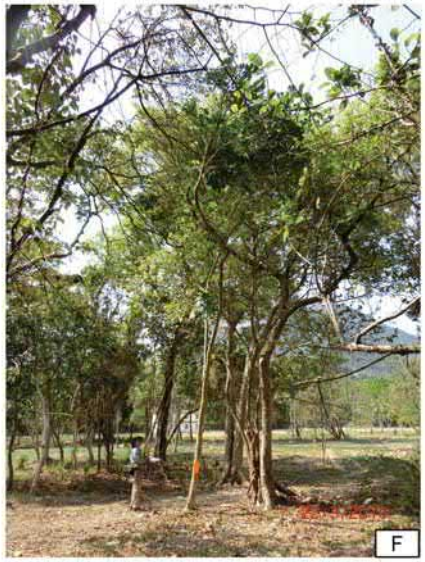
C3869

C3870

C3871

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C03868-3871



C3872

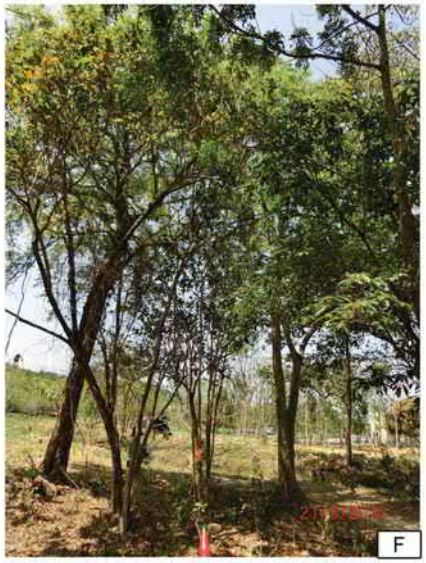
C3873

C3874

C3875

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C03872-3875



C3876

C3877

C3878

C3879

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C03876-3879

C3880

C3881

C3882

C3883

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C03880-3883

C3884

C3885

C3886

C3887

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C03884-3887

C3888

C3889

C3890

C3891

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C03888-3891

C3892

C3893

C3894

C3895

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C03892-3895

C3896

C3897

C3898

C3899

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C03896-3899

C3900

C3901

C3902

C3903

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C03900-3903

C3904

C3905

C3907

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C03904-3907

C3908

C3909

C3910

C3911

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C03908-3911

C3912

C3913

C3914

C3915

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C03912-3915

C3916

C3917

C3918

C3919

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C03916-3919

C3920

C3921

C3922

C3923

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C03920-3923

C3924

C3928

C3929

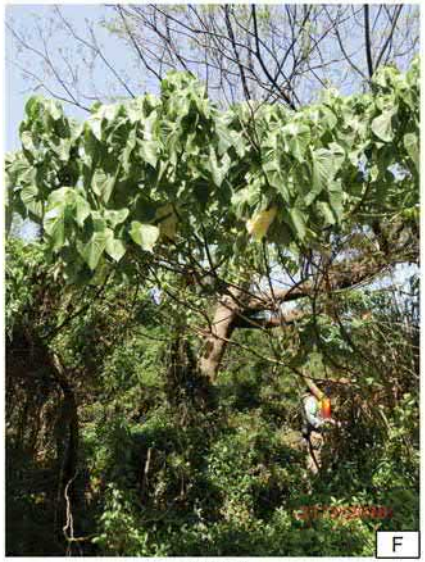
C3930

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C03924-3930

C3935

C3948



C3950

C3951

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C03935-3951

C3952

C3953

C3954

C3955

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C03952-3955

C3956

C3957

C3958

C3959

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C03956-3959

C3960

C3961

C3962

C3963

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C03960-3963

C3964

C3965

C4007

C4008

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C03964-4008

C4009

C4010

C4011

C4012

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C04009-4012

C4031

C4032

C4033

C4034

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

C4036

C4037

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

C4250

C4251

C5590

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

C5591

C8783

C10167

C12623

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

C12624

C12625

C12637

C12638

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C12624-12638

C12639

C12718

C12719

C12720

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C12639-12720

C12723

C12726

C12727

C12728

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C12723-12728

C12729

C12730

C12731

C12732

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C12729-12732

C12733

C12734

C12736

C12737

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

C13149

C13159

C13182

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C12733-12737

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C13149-13182

C13183

C13249

C13250

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C13183-13250

C13251

C13257

C13587

C13589

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C13251-13589

C13591

C13595

C13597

C13600

Tree Photographic Record of Existing Trees
(Site C)

R-Retain T-Transplant F-Fell D-Dead Tree

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C13591-13600

C13702

C13703

C13706

C13709

Tree Photographic Record of Existing Trees
(Site C)

R-Retain T-Transplant F-Fell D-Dead Tree

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C13702-13709

C13713

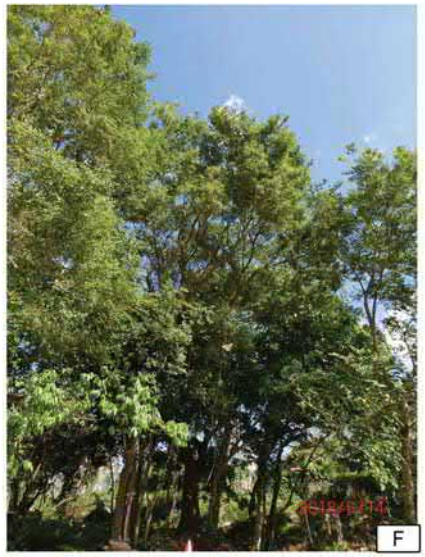
C13716

C13719

C13721

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C13713-13721



C13722

C13724

C13725

C13728

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C13722-13728

C13730

C13731

C13732

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

C13733

C13734

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

C13735

C13737

C13738

C13739

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C13735-13739

C13740

C13742

C13743

C13744

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C13740-13744

C13824

C13835

C13861

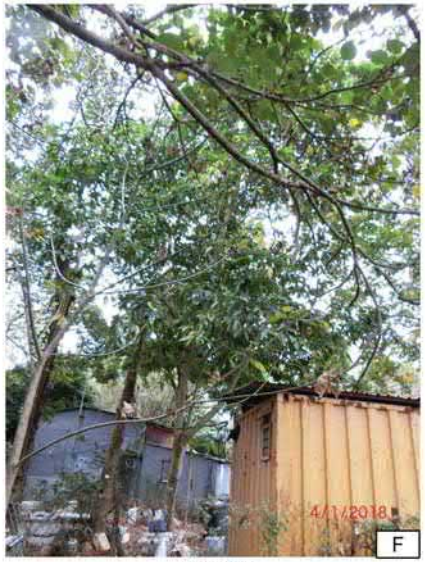
C13862

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C13824-13862

C13863

C13864



C13865

C13866

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C13863-13866

C13868

C13870

C13886

C13897

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C13868-13897

C13899

C13900

C13901

C13902

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Graphic Storage\3. Conceptual Design\TREE\2021-11-15_SC-NewS16-2021\SC-NewS16-2021_C13899-13902

C13904

C13916

C14059

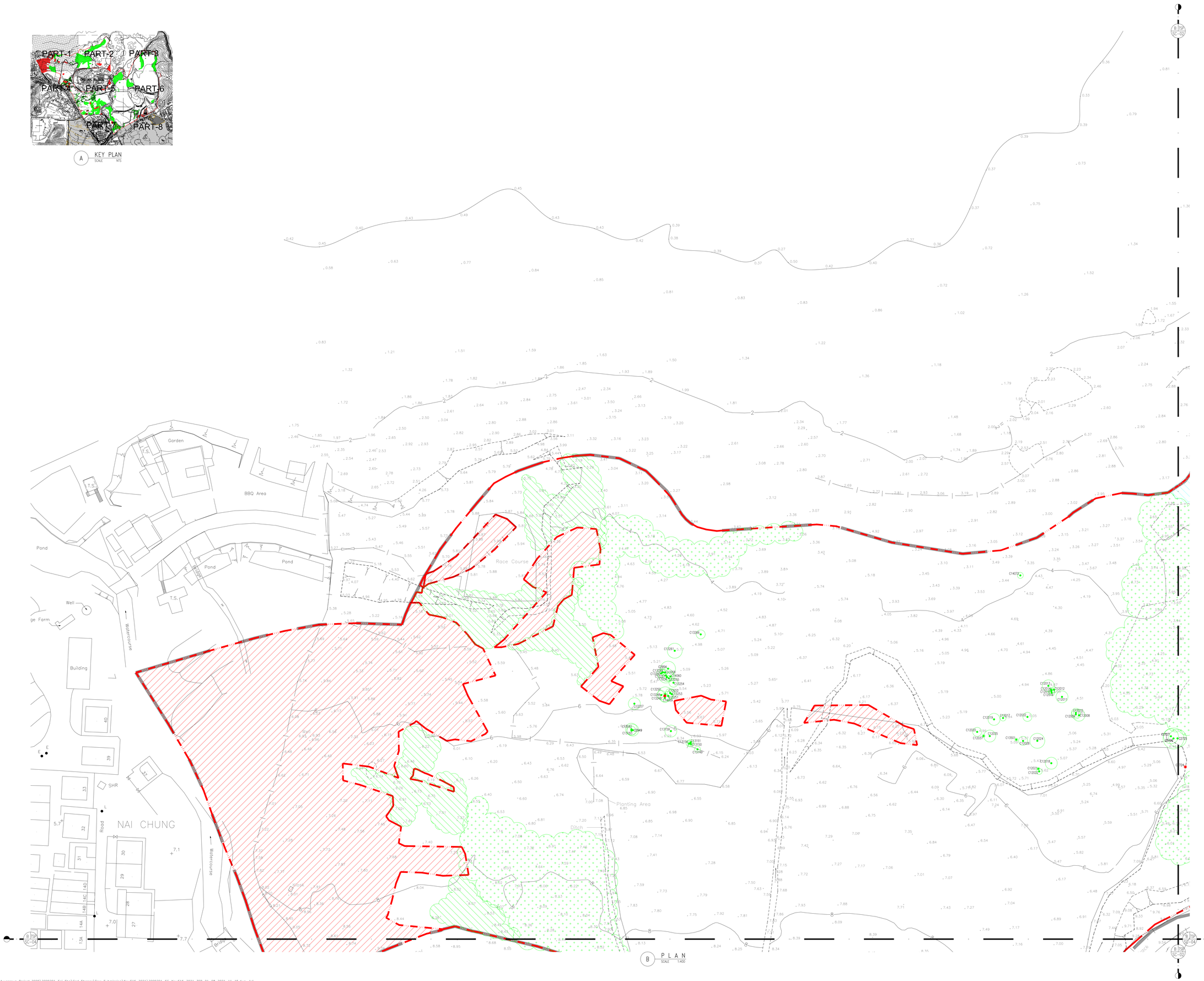
C14109

Tree Photographic Record of Existing Trees (Site C)	R-Retain T-Transplant F-Fell D-Dead Tree	

Appendix D

Tree Survey Plans

A KEY PLAN
SCALE NTS



B PLAN
SCALE 1:400

LEGEND:

- APPLICATION SITE BOUNDARY
- SITE C LOT BOUNDARY
- TYPE A :
  NON-CONSERVED WOODLAND TREE GROUP
  -WITH TREE GROUP SURVEY (APPROX. 1628 NOS.)
- TYPE B :
  ACCESSIBLE CONSERVED WOODLAND
  -WITH TREE GROUP SURVEY (APPROX. 1300 NOS.)
- TYPE C :
  INACCESSIBLE CONSERVED WOODLAND
  -WITHOUT TREE GROUP SURVEY
- TYPE D :
  PROPOSED RETAINED TREE GROUPS IN OTHER AREAS
  (1481 Nos.)
- PUBLIC OPEN SPACE
- LAND TO BE SECURED BY APPLICANT
- +0.88 EXISTING LEVEL
- EXISTING TREES SURVEYED
  (666nos.)
- DEAD TREES
  (38nos.)

no.	description	date
REVISION		

Copyright of this drawing is reserved by AXXA GROUP LIMITED

IT IS THE CONTRACTOR'S RESPONSIBILITY TO

- use figured dimension in preference to scalling
- verify all dimensions at the site
- report all discrepancies to the landscape architect and agree before proceeding
- determine location of all existing services prior to excavation

This drawing shall not be used for construction purposes unless signed by Landscape Architect

Date:

Approval:

axxa group

axxa group limited
51/F CHINA ONLINE CENTRE,
333 LOCKHART ROAD, WANCHAI, HONG KONG
香港灣仔駱克道333號, 中國網絡中心 51樓
Tel (852) 28938586 Fax (852) 28938997
Email: ag@axxagroup.com.hk

PROJECT:

Section 16 Planning Application for Amendments to the Approved Development (Application No. A/NE-SSH/120-1) - Amendments to Recreation and Sports Centre with Ancillary Facilities in Site C

DRAWING TITLE:

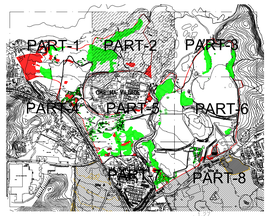
TREE SURVEY PLAN-SITE C (PART-1)

Scale:	1:400	Drawing No.:	TSP-SC-01
Date:	NOV 2021		
Design:	YS/CL		
Drawn:	LS		
Checked:	YS/CL		REV.
Project No:	2009201		

CAD Ref.:2009201-SC-NewS16-2021-TSP-01-08

A0 1189 x 841

Y:\04Axxagroup Project 2009\2009201_Sai Sha\Cad Storage\Tree Submission\NewS16-2021\2009201-SC-NewS16-2021-TSP-01-08_2021-11-15.dwg, 1:1



A KEY PLAN
SCALE NTS

B PLAN
SCALE 1:400

LEGEND:

- APPLICATION SITE BOUNDARY
- SITE C LOT BOUNDARY
- TYPE A :
  NON-CONSERVED WOODLAND TREE GROUP
  -WITH TREE GROUP SURVEY (APPROX. 1628 NOS.)
- TYPE B :
  ACCESSIBLE CONSERVED WOODLAND
  -WITH TREE GROUP SURVEY (APPROX. 1300 NOS.)
- TYPE C :
  INACCESSIBLE CONSERVED WOODLAND
  -WITHOUT TREE GROUP SURVEY
- TYPE D :
  PROPOSED RETAINED TREE GROUPS IN OTHER AREAS
  (1481 Nos.)
- PUBLIC OPEN SPACE
- LAND TO BE SECURED BY APPLICANT
- +0.88 EXISTING LEVEL
- EXISTING TREES SURVEYED
  (666nos.)
- DEAD TREES
  (38nos.)

no.	description	date
REVISION		

Copyright of this drawing is reserved by AXXA GROUP LIMITED

IT IS THE CONTRACTOR'S RESPONSIBILITY TO

- use figured dimension in preference to scalling
- verify all dimensions at the site
- report all discrepancies to the landscape architect and agree before proceeding
- determine location of all existing services prior to excavation

This drawing shall not be used for construction purposes unless signed by Landscape Architect

Date:

Approval:

axxa group

axxa group limited
51/F CHINA ONLINE CENTRE,
333 LOCKHART ROAD, WANCHAI, HONG KONG
香港灣仔駱克道333號,中國網絡中心 51樓
Tel (852) 28938586 Fax (852) 28938997
Email: ag@axxagroup.com.hk

PROJECT:

Section 16 Planning Application for Amendments to the Approved Development (Application No. A/NE-SSH/120-1) - Amendments to Recreation and Sports Centre with Ancillary Facilities in Site C

DRAWING TITLE:

TREE SURVEY PLAN-SITE C (PART-2)

Scale:	1:400
Date:	NOV 2021
Design:	YS/CL
Drawn:	LS
Checked:	YS/CL
Project No:	2009201

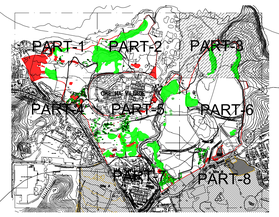
Drawing No.: TSP-SC-02

REV.

CAD Ref.:2009201-SC-NewS16-2021-TSP-01-08

A0 1189 x 841

Y:\04axxagroup Project 2009\2009201_Sai Sha\Cad Storage\Tree Submission\NewS16-2021\2009201-SC-NewS16-2021-TSP-01-08_2021-11-15.dwg, 1:1



A KEY PLAN
SCALE NTS

B TSP SC-02

B TSP SC-05B

B TSP SC-05A

B PLAN
SCALE 1:400

LEGEND:

- APPLICATION SITE BOUNDARY
- SITE C LOT BOUNDARY
- TYPE A :
  NON-CONSERVED WOODLAND TREE GROUP
  -WITH TREE GROUP SURVEY (APPROX. 1628 NOS.)
- TYPE B :
  ACCESSIBLE CONSERVED WOODLAND
  -WITH TREE GROUP SURVEY (APPROX. 1300 NOS.)
- TYPE C :
  INACCESSIBLE CONSERVED WOODLAND
  -WITHOUT TREE GROUP SURVEY
- TYPE D :
  PROPOSED RETAINED TREE GROUPS IN OTHER AREAS
  (1481 Nos.)
- PUBLIC OPEN SPACE
- LAND TO BE SECURED BY APPLICANT
- +0.88 EXISTING LEVEL
- EXISTING TREES SURVEYED
  (666nos.)
- DEAD TREES
  (38nos.)

no.	description	date
REVISION		

Copyright of this drawing is reserved by AXXA GROUP LIMITED

IT IS THE CONTRACTOR'S RESPONSIBILITY TO

- use figured dimension in preference to scalling
- verify all dimensions at the site
- report all discrepancies to the landscape architect and agree before proceeding
- determine location of all existing services prior to excavation

This drawing shall not be used for construction purposes unless signed by Landscape Architect

Date:

Approval:

axxa group

axxa group limited
51/F CHINA ONLINE CENTRE,
333 LOCKHART ROAD, WANCHAI, HONG KONG
香港灣仔駱克道333號,中國網絡中心 51樓
Tel (852) 28938586 Fax (852) 28938997
Email: ag@axxagroup.com.hk

PROJECT:

Section 16 Planning Application for Amendments to the Approved Development (Application No. A/NE-SSH/120-1)
- Amendments to Recreation and Sports Centre with Ancillary Facilities in Site C

DRAWING TITLE:

TREE SURVEY PLAN-SITE C (PART-3)

Scale:	1:400
Date:	NOV 2021
Design:	YS/CL
Drawn:	LS
Checked:	YS/CL
Project No:	2009201

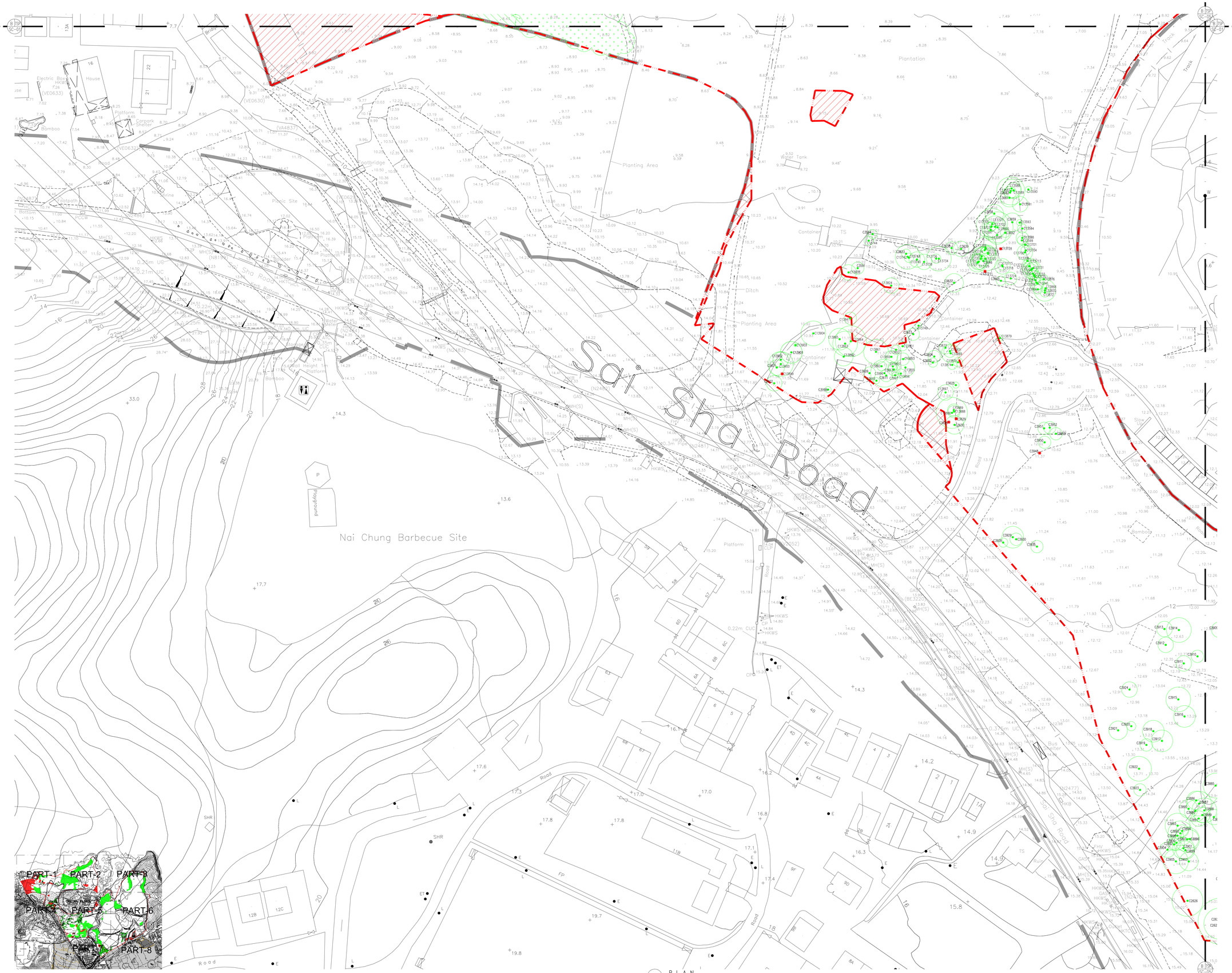
Drawing No.: TSP-SC-03

REV.

CAD Ref.:2009201-SC-NewS16-2021-TSP-01-08

A0 1189 x 841

Y:\O:\Axxagroup Project 2009\2009201_Sai Sha\Cad Storage\Tree Submission\NewS16-2021\2009201-SC-NewS16-2021-TSP-01-08_2021-11-15.dwg, 1:1



A KEY PLAN SCALE NTS

B PLAN SCALE 1:400

LEGEND:

- APPLICATION SITE BOUNDARY
- SITE C LOT BOUNDARY
- TYPE A : NON-CONSERVED WOODLAND TREE GROUP -WITH TREE GROUP SURVEY (APPROX. 1628 NOS.)
- TYPE B : ACCESSIBLE CONSERVED WOODLAND -WITH TREE GROUP SURVEY (APPROX. 1300 NOS.)
- TYPE C : INACCESSIBLE CONSERVED WOODLAND -WITHOUT TREE GROUP SURVEY
- TYPE D : PROPOSED RETAINED TREE GROUPS IN OTHER AREAS (1481 Nos.)
- PUBLIC OPEN SPACE
- LAND TO BE SECURED BY APPLICANT
- +0.88 EXISTING LEVEL
- EXISTING TREES SURVEYED (666nos.)
- DEAD TREES (38nos.)

no.	description	date
REVISION		

Copyright of this drawing is reserved by AXXA GROUP LIMITED

IT IS THE CONTRACTOR'S RESPONSIBILITY TO

- use figured dimension in preference to scalling
- verify all dimensions at the site
- report all discrepancies to the landscape architect and agree before proceeding
- determine location of all existing services prior to excavation

This drawing shall not be used for construction purposes unless signed by Landscape Architect

Date:

Approval:

axxa group

axxa group limited
51/F CHINA ONLINE CENTRE,
333 LOCKHART ROAD, WANCHAI, HONG KONG
香港灣仔駱克道333號,中國網絡中心 51樓
Tel (852) 28938586 Fax (852) 28938997
Email: ag@axxagroup.com.hk

PROJECT:

Section 16 Planning Application for Amendments to the Approved Development (Application No. A/NE-SSH/120-1) - Amendments to Recreation and Sports Centre with Ancillary Facilities in Site C

DRAWING TITLE:

TREE SURVEY PLAN-SITE C (PART-4)

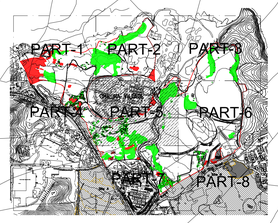
Scale:	1:400
Date:	NOV 2021
Design:	YS/CL
Drawn:	LS
Checked:	YS/CL
Project No:	2009201

Drawing No.: TSP-SC-04 REV.

CAD Ref.:2009201-SC-NewS16-2021-TSP-01-08

A0 1189 x 841

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Cad Storage\Tree Submission\NewS16-2021\2009201-SC-NewS16-2021-TSP-01-08_2021-11-15.dwg, 1:1



A KEY PLAN
SCALE NTS

CHE HA VILLAGE

CHE HA

B PLAN
SCALE 1:400

LEGEND:

- APPLICATION SITE BOUNDARY
- SITE C LOT BOUNDARY
- TYPE A : NON-CONSERVED WOODLAND TREE GROUP -WITH TREE GROUP SURVEY (APPROX. 1628 NOS.)
- TYPE B : ACCESSIBLE CONSERVED WOODLAND -WITH TREE GROUP SURVEY (APPROX. 1300 NOS.)
- TYPE C : INACCESSIBLE CONSERVED WOODLAND -WITHOUT TREE GROUP SURVEY
- TYPE D : PROPOSED RETAINED TREE GROUPS IN OTHER AREAS (1481 Nos.)
- PUBLIC OPEN SPACE
- LAND TO BE SECURED BY APPLICANT
- +0.88 EXISTING LEVEL
- EXISTING TREES SURVEYED (666nos.)
- DEAD TREES (38nos.)

no.	description	date
REVISION		

Copyright of this drawing is reserved by AXXA GROUP LIMITED

IT IS THE CONTRACTOR'S RESPONSIBILITY TO

* use figured dimension in preference to scalling
* verify all dimensions at the site
* report all discrepancies to the landscape architect and agree before proceeding
* determine location of all existing services prior to excavation

This drawing shall not be used for construction purposes unless signed by Landscape Architect

Date:

Approval:

axxa group

axxa group limited
51/F CHINA ONLINE CENTRE,
333 LOCKHART ROAD, WANCHAI, HONG KONG
香港灣仔駱克道333號,中國網絡中心 51 樓
Tel (852) 28938586 Fax (852) 28938997
Email: ag@axxagroup.com.hk

PROJECT:

Section 16 Planning Application for Amendments to the Approved Development (Application No. A/NE-SSH/120-1) - Amendments to Recreation and Sports Centre with Ancillary Facilities in Site C

DRAWING TITLE:

TREE SURVEY PLAN-SITE C (PART-5)

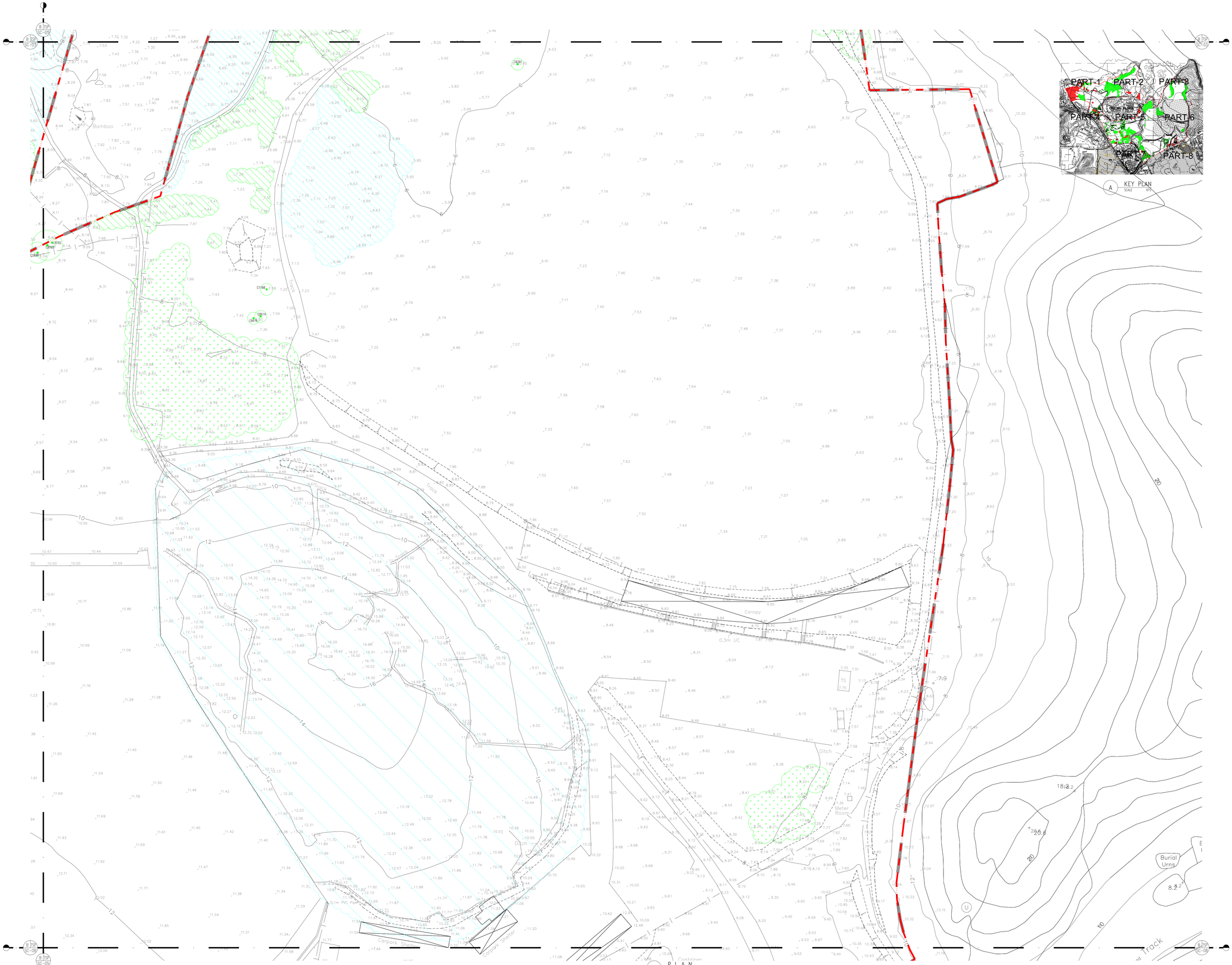
Scale:	1:400
Date:	NOV 2021
Design:	YS/CL
Drawn:	LS
Checked:	YS/CL
Project No:	2009201

Drawing No.: TSP-SC-05 REV.

CAD Ref.:2009201-SC-NewS16-2021-TSP-01-08

A0 1189 x 841

Y:\01axxagroup Project 2009\2009201_Sai Sha\Cad Storage\Tree Submission\NewS16-2021\2009201-SC-NewS16-2021-TSP-01-08_2021-11-15.dwg, 1:1



LEGEND:

- APPLICATION SITE BOUNDARY
- SITE C LOT BOUNDARY
- TYPE A :
  NON-CONSERVED WOODLAND TREE GROUP
  -WITH TREE GROUP SURVEY (APPROX. 1628 NOS.)
- TYPE B :
  ACCESSIBLE CONSERVED WOODLAND
  -WITH TREE GROUP SURVEY (APPROX. 1300 NOS.)
- TYPE C :
  INACCESSIBLE CONSERVED WOODLAND
  -WITHOUT TREE GROUP SURVEY
- TYPE D :
  PROPOSED RETAINED TREE GROUPS IN OTHER AREAS
  (1481 Nos.)
- PUBLIC OPEN SPACE
- LAND TO BE SECURED BY APPLICANT
- +0.88 EXISTING LEVEL
- EXISTING TREES SURVEYED
  (666nos.)
- DEAD TREES
  (38nos.)

no.	description	date
REVISION		

Copyright of this drawing is reserved by AXXA GROUP LIMITED

IT IS THE CONTRACTOR'S RESPONSIBILITY TO

- use figured dimension in preference to scalling
- verify all dimensions at the site
- report all discrepancies to the landscape architect and agree before proceeding
- determine location of all existing services prior to excavation

This drawing shall not be used for construction purposes unless signed by Landscape Architect

Date:

Approval:

axxa group

axxa group limited
51/F CHINA ONLINE CENTRE,
333 LOCKHART ROAD, WANCHAI, HONG KONG
香港灣仔駱克道333號,中國網絡中心 51樓
Tel (852) 28938586 Fax (852) 28938997
Email: ag@axxagroup.com.hk

PROJECT:

Section 16 Planning Application for Amendments to the Approved Development (Application No. A/NE-SSH/120-1) - Amendments to Recreation and Sports Centre with Ancillary Facilities in Site C

DRAWING TITLE:

TREE SURVEY PLAN-SITE C (PART-6)

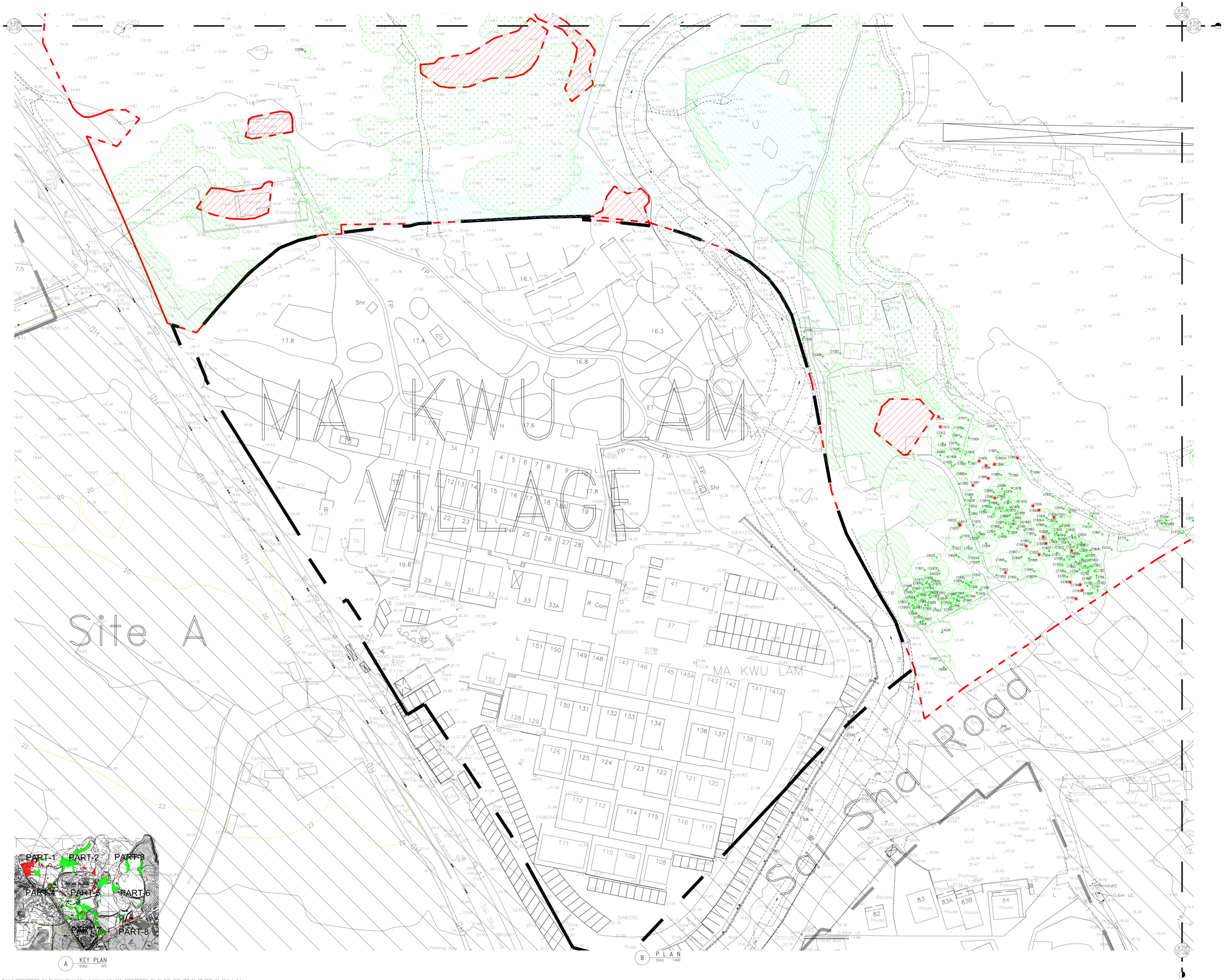
Scale:	1:400
Date:	NOV 2021
Design:	YS/CL
Drawn:	LS
Checked:	YS/CL
Project No:	2009201

Drawing No.: TSP-SC-06 REV.

CAD Ref.:2009201-SC-NewS16-2021-TSP-01-08

A0 1189 x 841

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Cad Storage\Tree Submission\NewS16-2021\2009201-SC-NewS16-2021-TSP-01-08_2021-11-15.dwg, 1:1



A KEY PLAN SCALE NTS

B PLAN SCALE 1:400

LEGEND:

- APPLICATION SITE BOUNDARY
- SITE C LOT BOUNDARY
- TYPE A : NON-CONSERVED WOODLAND TREE GROUP -WITH TREE GROUP SURVEY (APPROX. 1628 NOS.)
- TYPE B : ACCESSIBLE CONSERVED WOODLAND -WITH TREE GROUP SURVEY (APPROX. 1300 NOS.)
- TYPE C : INACCESSIBLE CONSERVED WOODLAND -WITHOUT TREE GROUP SURVEY
- TYPE D : PROPOSED RETAINED TREE GROUPS IN OTHER AREAS (1481 Nos.)
- PUBLIC OPEN SPACE
- LAND TO BE SECURED BY APPLICANT
- +0.88 EXISTING LEVEL
- EXISTING TREES SURVEYED (666nos.)
- DEAD TREES (38nos.)

no.	description	date
REVISION		

Copyright of this drawing is reserved by AXXA GROUP LIMITED

IT IS THE CONTRACTOR'S RESPONSIBILITY TO

- use figured dimension in preference to scalling
- verify all dimensions at the site
- report all discrepancies to the landscape architect and agree before proceeding
- determine location of all existing services prior to excavation

This drawing shall not be used for construction purposes unless signed by Landscape Architect

Date:

Approval:

axxa group

axxa group limited

51/F CHINA ONLINE CENTRE,
333 LOCKHART ROAD, WANCHAI, HONG KONG
香港灣仔駱克道333號,中國網絡中心 51樓
Tel (852) 28938586 Fax (852) 28938997
Email: ag@axxagroup.com.hk

PROJECT:

Section 16 Planning Application for Amendments to the Approved Development (Application No. A/NE-SSH/120-1) - Amendments to Recreation and Sports Centre with Ancillary Facilities in Site C

DRAWING TITLE:

TREE SURVEY PLAN-SITE C (PART-7)

Scale:	1:400
Date:	NOV 2021
Design:	YS/CL
Drawn:	LS
Checked:	YS/CL
Project No:	2009201

Drawing No.: TSP-SC-07 REV.

CAD Ref.:2009201-SC-NewS16-2021-TSP-01-08

A0 1189 x 841

Y:\O-Axxagroup Project 2009\2009201_Sai Sha\Cad Storage\Tree Submission\NewS16-2021\2009201-SC-NewS16-2021-TSP-01-08_2021-11-15.dwg, 1:1

PUBLIC OPEN SPACE TO BE SUBMITTED SEPARATELY

Sai Sha Road

Site B

EXCAVATED AREA NOT ACCESSIBLE

EXCAVATED AREA

Tsam Kok Wai Road

Wong Chuk Shan Road

Ma Wo Road

Ma Wo Road Track

Woodland

Existing Woodland

Water Course

Flower Bed

Corrugated Shelter

Canopy

Ditch

Pond

Footpath

Cultivation

Bund

Container

Platform

Bamboo

Mass

Wall

Fence

House

Electric Box

Watermeter

Manhole

Catchpit

Rubbish Collection Point

Public Toilet

Sewage Pumping Station

Sewage Treatment Plant

Sewage Screening Plant

Sewage Pumping Station Control Kiosk

Sewage Pumping Station Ventilation Shaft

Sewage Pumping Station Access Shaft

Sewage Pumping Station Emergency Generator Room

Sewage Pumping Station Odour Control Unit

Sewage Pumping Station Chemical Storage Room

Sewage Pumping Station Sludge Holding Tank

Sewage Pumping Station Grit Removal Unit

Sewage Pumping Station Screening Unit

Sewage Pumping Station Inlet Works

Sewage Pumping Station Outlet Works

Sewage Pumping Station Flow Meter

Sewage Pumping Station Valve Chamber

Sewage Pumping Station Pump Room

Sewage Pumping Station Transformer Room

Sewage Pumping Station Switchgear Room

Sewage Pumping Station Control Room

Sewage Pumping Station Office

Sewage Pumping Station Workshop

Sewage Pumping Station Store

Sewage Pumping Station Toilet

Sewage Pumping Station Shower

Sewage Pumping Station Changing Room

Sewage Pumping Station Rest Room

Sewage Pumping Station Kitchen

Sewage Pumping Station Dining Room

Sewage Pumping Station Living Room

Sewage Pumping Station Bedroom

Sewage Pumping Station Bathroom

Sewage Pumping Station Laundry

Sewage Pumping Station Drying Room

Sewage Pumping Station Ironing Room

Sewage Pumping Station Sewing Room

Sewage Pumping Station Repair Room

Sewage Pumping Station Maintenance Room

Sewage Pumping Station Cleaning Room

Sewage Pumping Station Waste Room

Sewage Pumping Station Recycling Room

Sewage Pumping Station Composting Room

Sewage Pumping Station Biogas Room

Sewage Pumping Station Solar Panel Room

Sewage Pumping Station Wind Turbine Room

Sewage Pumping Station Rainwater Harvesting Room

Sewage Pumping Station Greywater Recycling Room

Sewage Pumping Station Blackwater Treatment Room

Sewage Pumping Station Sludge Treatment Room

Sewage Pumping Station Effluent Treatment Room

Sewage Pumping Station Disinfection Room

Sewage Pumping Station Chlorination Room

Sewage Pumping Station Ozonation Room

Sewage Pumping Station UV Treatment Room

Sewage Pumping Station Membrane Filtration Room

Sewage Pumping Station Reverse Osmosis Room

Sewage Pumping Station Ion Exchange Room

Sewage Pumping Station Activated Carbon Room

Sewage Pumping Station Sand Filtration Room

Sewage Pumping Station Coagulation Room

Sewage Pumping Station Flocculation Room

Sewage Pumping Station Sedimentation Room

Sewage Pumping Station Clarification Room

Sewage Pumping Station Thickening Room

Sewage Pumping Station Dewatering Room

Sewage Pumping Station Drying Room

Sewage Pumping Station Incineration Room

Sewage Pumping Station Gasification Room

Sewage Pumping Station Pyrolysis Room

Sewage Pumping Station Plasma Arc Room

Sewage Pumping Station Microwave Room

Sewage Pumping Station Radiation Room

Sewage Pumping Station Nuclear Room

Sewage Pumping Station Fusion Room

Sewage Pumping Station Antimatter Room

Sewage Pumping Station Dark Matter Room

Sewage Pumping Station Dark Energy Room

Sewage Pumping Station Quantum Room

Sewage Pumping Station Time Travel Room

Sewage Pumping Station Teleportation Room

Sewage Pumping Station Invisibility Room

Sewage Pumping Station Force Field Room

Sewage Pumping Station Shield Room

Sewage Pumping Station Weapon Room

Sewage Pumping Station Armor Room

Sewage Pumping Station Vehicle Room

Sewage Pumping Station Spaceship Room

Sewage Pumping Station Robot Room

Sewage Pumping Station Android Room

Sewage Pumping Station Cyborg Room

Sewage Pumping Station Alien Room

Sewage Pumping Station Monster Room

Sewage Pumping Station Ghost Room

Sewage Pumping Station Zombie Room

Sewage Pumping Station Vampire Room

Sewage Pumping Station Werewolf Room

Sewage Pumping Station Witch Room

Sewage Pumping Station Wizard Room

Sewage Pumping Station Dragon Room

Sewage Pumping Station Unicorn Room

Sewage Pumping Station Phoenix Room

Sewage Pumping Station Griffin Room

Sewage Pumping Station Mermaid Room

Sewage Pumping Station Centaur Room

Sewage Pumping Station Minotaur Room

Sewage Pumping Station Cyclops Room

Sewage Pumping Station Hydra Room

Sewage Pumping Station Chimera Room

Sewage Pumping Station Sphinx Room

Sewage Pumping Station Medusa Room

Sewage Pumping Station Pegasus Room

Sewage Pumping Station Kraken Room

Sewage Pumping Station Leviathan Room

Sewage Pumping Station Behemoth Room

Sewage Pumping Station Basilisk Room

Sewage Pumping Station Cockatrice Room

Sewage Pumping Station Manticore Room

Sewage Pumping Station Wyvern Room

Sewage Pumping Station Hydra Room

Sewage Pumping Station Chimera Room

Sewage Pumping Station Sphinx Room

Sewage Pumping Station Medusa Room

Sewage Pumping Station Pegasus Room

Sewage Pumping Station Kraken Room

Sewage Pumping Station Leviathan Room

Sewage Pumping Station Behemoth Room

Sewage Pumping Station Basilisk Room

Sewage Pumping Station Cockatrice Room

Sewage Pumping Station Manticore Room

Sewage Pumping Station Wyvern Room

PART-1 PART-2 PART-3 PART-4 PART-5 PART-6 PART-7 PART-8

A KEY PLAN SCALE NTS

B PLAN SCALE 1:400

LEGEND:

- APPLICATION SITE BOUNDARY
- SITE C LOT BOUNDARY
- TYPE A : NON-CONSERVED WOODLAND TREE GROUP -WITH TREE GROUP SURVEY (APPROX. 1628 NOS.)
- TYPE B : ACCESSIBLE CONSERVED WOODLAND -WITH TREE GROUP SURVEY (APPROX. 1300 NOS.)
- TYPE C : INACCESSIBLE CONSERVED WOODLAND -WITHOUT TREE GROUP SURVEY
- TYPE D : PROPOSED RETAINED TREE GROUPS IN OTHER AREAS (1481 Nos.)
- PUBLIC OPEN SPACE
- LAND TO BE SECURED BY APPLICANT
- +0.88 EXISTING LEVEL
- EXISTING TREES SURVEYED (666nos.)
- DEAD TREES (38nos.)

no.	description	date
REVISION		

Copyright of this drawing is reserved by AXXA GROUP LIMITED

IT IS THE CONTRACTOR'S RESPONSIBILITY TO

- use figured dimension in preference to scalling
- verify all dimensions at the site
- report all discrepancies to the landscape architect and agree before proceeding
- determine location of all existing services prior to excavation

This drawing shall not be used for construction purposes unless signed by Landscape Architect

Date:

Approval:

axxa group

axxa group limited

51/F CHINA ONLINE CENTRE,
333 LOCKHART ROAD, WANCHAI, HONG KONG
香港灣仔駱克道333號,中國網絡中心 51樓
Tel (852) 28938586 Fax (852) 28938997
Email: ag@axxagroup.com.hk

PROJECT:

Section 16 Planning Application for Amendments to the Approved Development (Application No. A/NE-SSH/120-1) - Amendments to Recreation and Sports Centre with Ancillary Facilities in Site C

DRAWING TITLE:

TREE SURVEY PLAN-SITE C (PART-8)

Scale:	1:400	Drawing No.:	TSP-SC-08
Date:	NOV 2021		
Design:	YS/CL		
Drawn:	LS		
Checked:	YS/CL		REV.
Project No:	2009201		

CAD Ref.:2009201-SC-NewS16-2021-TSP-01-08

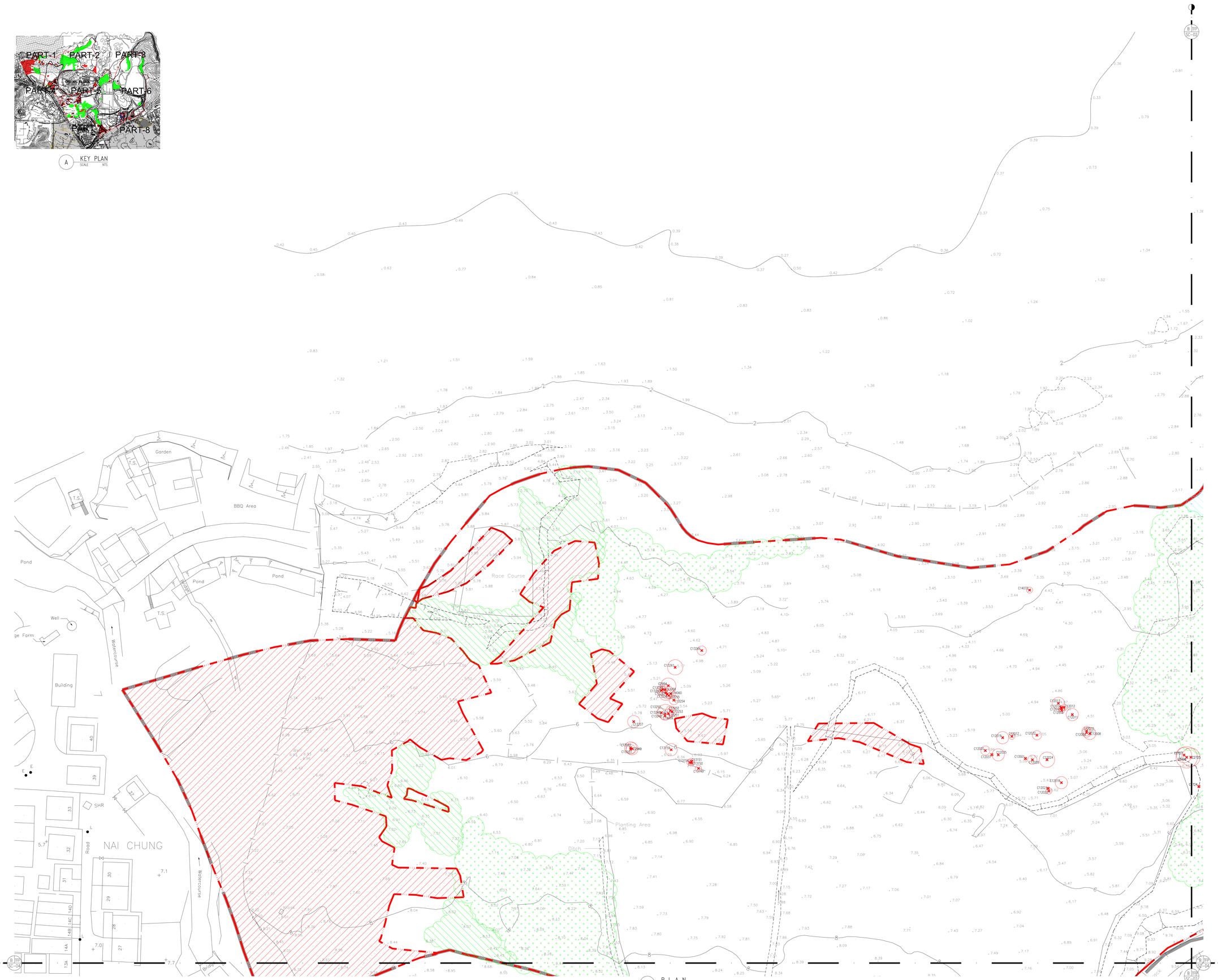
A0 1189 x 841

Y:\O-Axxagroup Project 2009\2009201_Sai Sha\Cad Storage\Tree Submission\NewS16-2021\2009201-SC-NewS16-2021-TSP-01-08_2021-11-15.dwg, 1:1

Appendix E

Tree Felling Plans

A KEY PLAN
SCALE NTS



B PLAN
SCALE 1:400

LEGEND:

- APPLICATION SITE BOUNDARY
- SITE C LOT BOUNDARY
- TYPE A : NON-CONSERVED WOODLAND TREE GROUP -WITH TREE GROUP SURVEY (APPROX. 1628 NOS.)
- TYPE B : ACCESSIBLE CONSERVED WOODLAND -WITH TREE GROUP SURVEY (APPROX. 1300 NOS.)
- TYPE C : INACCESSIBLE CONSERVED WOODLAND -WITHOUT TREE GROUP SURVEY
- TYPE D : PROPOSED RETAINED TREE GROUPS IN OTHER AREAS (1481 Nos.)
- PUBLIC OPEN SPACE
- LAND TO BE SECURED BY APPLICANT
- +0.88 EXISTING LEVEL
- +0.88 PROPOSED LEVEL
- APPROVED RETAINED TREES (27 NOS.)
- TREES APPROVED TO BE TRANSPLANTED (43 NOS.)
- TREES APPROVED TO BE FELLED (621 NOS.) (INCLUDING 38nos. DEAD TREES)
- TREES PROPOSED TO BE FELLED (13 NOS.)

no.	description	date
A	GENERAL REVISION	

REVISION

Copyright of this drawing is reserved by AXXA GROUP LIMITED

IT IS THE CONTRACTOR'S RESPONSIBILITY TO

- use figured dimension in preference to scalling
- verify all dimensions at the site
- report all discrepancies to the landscape architect and agree before proceeding
- determine location of all existing services prior to excavation

This drawing shall not be used for construction purposes unless signed by Landscape Architect

Date:

Approval:

axxa group

axxa group limited
51/F CHINA ONLINE CENTRE,
333 LOCKHART ROAD, WANCHAI, HONG KONG
香港灣仔駱克道333號, 中國網絡中心 51樓
Tel (852) 28938586 Fax (852) 28938997
Email: ag@axxagroup.com.hk

PROJECT:

Section 16 Planning Application for Amendments to the Approved Development (Application No. A/NE-SSH/120-1) - Amendments to Recreation and Sports Centre with Ancillary Facilities in Site C

DRAWING TITLE:

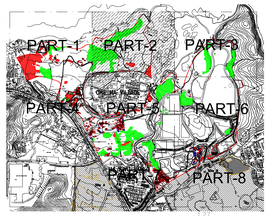
TREE FELLING PLAN-SITE C (PART-1)

Scale:	1:400	Drawing No.:	TFP-SC-01
Date:	NOV 2021		
Design:	YS/CL		
Drawn:	LS		
Checked:	YS/CL		
Project No:	2009201		REV. A

CAD Ref.:2009201-SC-NewS16-2021-TFP-01-08

A0 1189 x 841

Y:\04Axxagroup Project 2009\2009201_Sai Sha\Cad Storage\Tree Submission\NewS16-2021\2009201-SC-NewS16-2021-TFP-01a-08a_2022-09-05.dwg, 1:1



A KEY PLAN
SCALE NTS

B PLAN
SCALE 1:400

LEGEND:

- APPLICATION SITE BOUNDARY
- SITE C LOT BOUNDARY
- TYPE A : NON-CONSERVED WOODLAND TREE GROUP -WITH TREE GROUP SURVEY (APPROX. 1628 NOS.)
- TYPE B : ACCESSIBLE CONSERVED WOODLAND -WITH TREE GROUP SURVEY (APPROX. 1300 NOS.)
- TYPE C : INACCESSIBLE CONSERVED WOODLAND -WITHOUT TREE GROUP SURVEY
- TYPE D : PROPOSED RETAINED TREE GROUPS IN OTHER AREAS (1481 Nos.)
- PUBLIC OPEN SPACE
- LAND TO BE SECURED BY APPLICANT
- +0.88 EXISTING LEVEL
- +0.88 PROPOSED LEVEL
- APPROVED RETAINED TREES (27 NOS.)
- TREES APPROVED TO BE TRANSPLANTED (43 NOS.)
- TREES APPROVED TO BE FELLED (621 NOS.) (INCLUDING 38nos. DEAD TREES)
- TREES PROPOSED TO BE FELLED (13 NOS.)

no.	description	date
A	GENERAL REVISION	

REVISION

Copyright of this drawing is reserved by AXXA GROUP LIMITED

IT IS THE CONTRACTOR'S RESPONSIBILITY TO

- use figured dimension in preference to scalling
- verify all dimensions at the site
- report all discrepancies to the landscape architect and agree before proceeding
- determine location of all existing services prior to excavation

This drawing shall not be used for construction purposes unless signed by Landscape Architect

Date:

Approval:

axxa group

axxa group limited
51/F CHINA ONLINE CENTRE,
333 LOCKHART ROAD, WANCHAI, HONG KONG
香港灣仔駱克道333號,中國網絡中心 51樓
Tel (852) 28938586 Fax (852) 28938997
Email: ag@axxagroup.com.hk

PROJECT:

Section 16 Planning Application for Amendments to the Approved Development (Application No. A/NE-SSH/120-1) - Amendments to Recreation and Sports Centre with Ancillary Facilities in Site C

DRAWING TITLE:

TREE FELLING PLAN-SITE C (PART-2)

Scale:	1:400
Date:	NOV 2021
Design:	YS/CL
Drawn:	LS
Checked:	YS/CL
Project No:	2009201

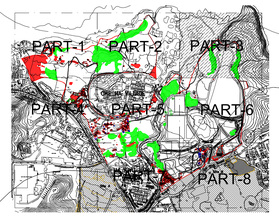
Drawing No.: TFP-SC-02

REV. A

CAD Ref.:2009201-SC-NewS16-2021-TFP-01-08

A0 1189 x 841

Y:\04axxagroup Project 2009\2009201_Sai Sha\Cad Storage\Tree Submission\NewS16-2021\2009201-SC-NewS16-2021-TFP-01a-08a_2022-09-05.dwg, 1:1



A KEY PLAN
SCALE NTS

B PLAN
SCALE 1:400

LEGEND:

- APPLICATION SITE BOUNDARY
- SITE C LOT BOUNDARY
- TYPE A : NON-CONSERVED WOODLAND TREE GROUP -WITH TREE GROUP SURVEY (APPROX. 1628 NOS.)
- TYPE B : ACCESSIBLE CONSERVED WOODLAND -WITH TREE GROUP SURVEY (APPROX. 1300 NOS.)
- TYPE C : INACCESSIBLE CONSERVED WOODLAND -WITHOUT TREE GROUP SURVEY
- TYPE D : PROPOSED RETAINED TREE GROUPS IN OTHER AREAS (1481 Nos.)
- PUBLIC OPEN SPACE
- LAND TO BE SECURED BY APPLICANT
- +0.88 EXISTING LEVEL
- +0.88 PROPOSED LEVEL
- APPROVED RETAINED TREES (27 NOS.)
- TREES APPROVED TO BE TRANSPLANTED (43 NOS.)
- TREES APPROVED TO BE FELLED (621 NOS.) (INCLUDING 38nos. DEAD TREES)
- TREES PROPOSED TO BE FELLED (13 NOS.)

no.	description	date
A	GENERAL REVISION	

REVISION

Copyright of this drawing is reserved by AXXA GROUP LIMITED

IT IS THE CONTRACTOR'S RESPONSIBILITY TO

- use figured dimension in preference to scalling
- verify all dimensions at the site
- report all discrepancies to the landscape architect and agree before proceeding
- determine location of all existing services prior to excavation

This drawing shall not be used for construction purposes unless signed by Landscape Architect

Date:

Approval:

axxa group

axxa group limited
51/F CHINA ONLINE CENTRE,
333 LOCKHART ROAD, WANCHAI, HONG KONG
香港灣仔駱克道333號,中國網絡中心 51樓
Tel (852) 28938586 Fax (852) 28938997
Email: ag@axxagroup.com.hk

PROJECT:

Section 16 Planning Application for Amendments to the Approved Development (Application No. A/NE-SSH/120-1) - Amendments to Recreation and Sports Centre with Ancillary Facilities in Site C

DRAWING TITLE:

TREE FELLING PLAN-SITE C (PART-3)

Scale:	1:400
Date:	NOV 2021
Design:	YS/CL
Drawn:	LS
Checked:	YS/CL
Project No:	2009201

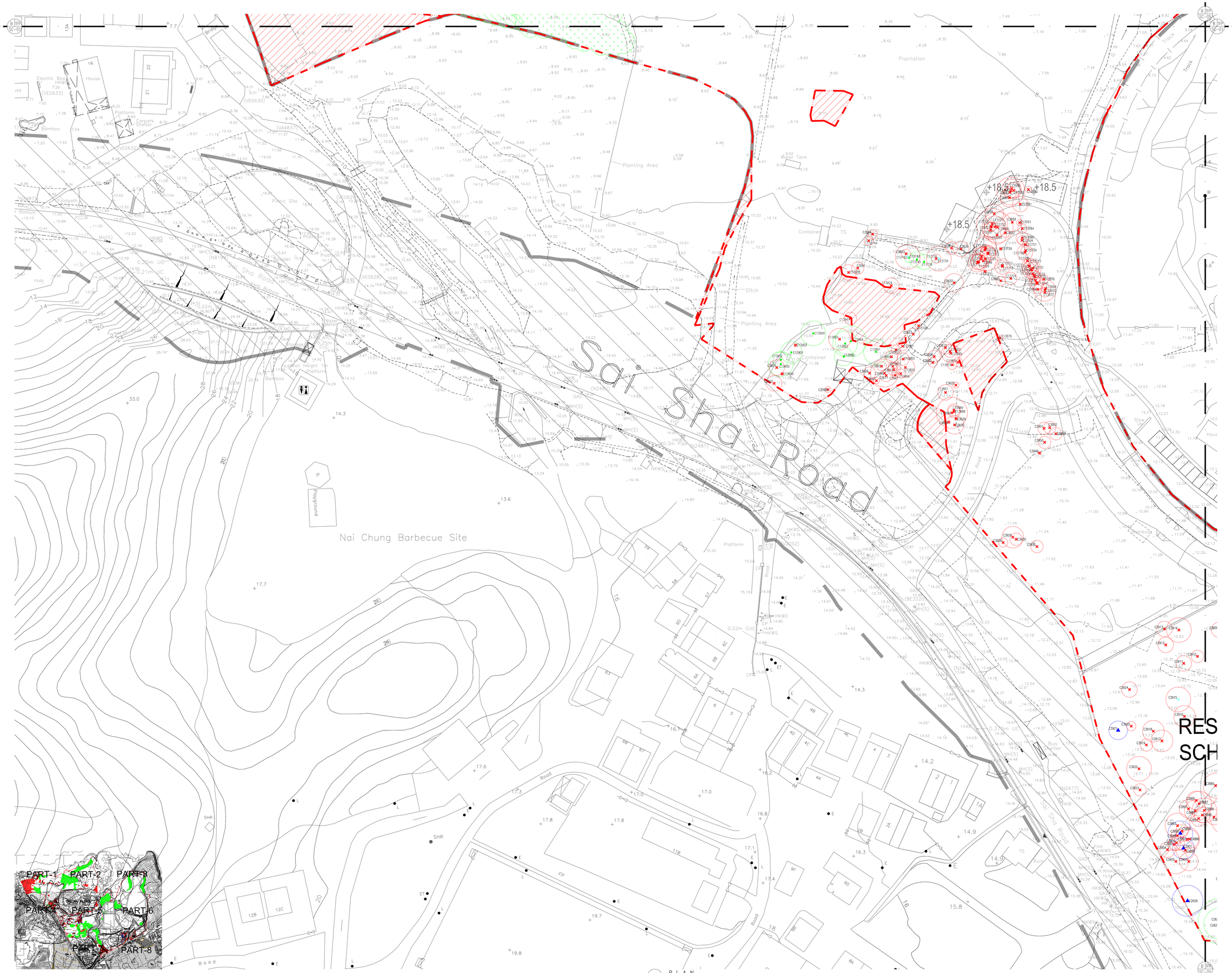
Drawing No.: TFP-SC-03

REV. A

CAD Ref.:2009201-SC-NewS16-2021-TFP-01-08

A0 1189 x 841

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Cad Storage\Tree Submission\NewS16-2021\2009201-SC-NewS16-2021-TFP-01a-08a_2022-09-05.dwg, 1:1



A KEY PLAN SCALE NTS

B PLAN SCALE 1:400

LEGEND:

- APPLICATION SITE BOUNDARY
- SITE C LOT BOUNDARY
- TYPE A : NON-CONSERVED WOODLAND TREE GROUP -WITH TREE GROUP SURVEY (APPROX. 1628 NOS.)
- TYPE B : ACCESSIBLE CONSERVED WOODLAND -WITH TREE GROUP SURVEY (APPROX. 1300 NOS.)
- TYPE C : INACCESSIBLE CONSERVED WOODLAND -WITHOUT TREE GROUP SURVEY
- TYPE D : PROPOSED RETAINED TREE GROUPS IN OTHER AREAS (1481 Nos.)
- PUBLIC OPEN SPACE
- LAND TO BE SECURED BY APPLICANT
- +0.88 EXISTING LEVEL
- +0.88 PROPOSED LEVEL
- APPROVED RETAINED TREES (27 NOS.)
- TREES APPROVED TO BE TRANSPLANTED (43 NOS.)
- TREES APPROVED TO BE FELLED (621 NOS.) (INCLUDING 38nos. DEAD TREES)
- TREES PROPOSED TO BE FELLED (13 NOS.)

no.	description	date
A	GENERAL REVISION	

REVISION

Copyright of this drawing is reserved by AXXA GROUP LIMITED

IT IS THE CONTRACTOR'S RESPONSIBILITY TO

- use figured dimension in preference to scalling
- verify all dimensions at the site
- report all discrepancies to the landscape architect and agree before proceeding
- determine location of all existing services prior to excavation

This drawing shall not be used for construction purposes unless signed by Landscape Architect

Date:

Approval:

axxa group

axxa group limited
51/F CHINA ONLINE CENTRE,
333 LOCKHART ROAD, WANCHAI, HONG KONG
香港灣仔駱克道333號,中國網絡中心 51樓
Tel (852) 28938586 Fax (852) 28938997
Email: ag@axxagroup.com.hk

PROJECT:

Section 16 Planning Application for Amendments to the Approved Development (Application No. A/NE-SSH/120-1) - Amendments to Recreation and Sports Centre with Ancillary Facilities in Site C

DRAWING TITLE:

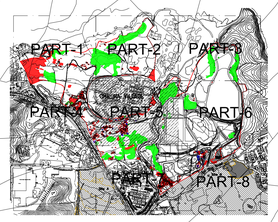
TREE FELLING PLAN-SITE C (PART-4)

Scale:	1:400	Drawing No.:	TFP-SC-04
Date:	NOV 2021		
Design:	YS/CL		
Drawn:	LS		
Checked:	YS/CL		REV. A
Project No:	2009201		

CAD Ref.:2009201-SC-NewS16-2021-TFP-01-08

A0 1189 x 841

Y:\0-Axxagroup Project 2009\2009201_Sai Sha\Cad Storage\Tree Submission\NewS16-2021\2009201-SC-NewS16-2021-TFP-01a-08a_2022-09-05.dwg, 1:1



A KEY PLAN
SCALE NTS

CHE HA VILLAGE

RESERVED SCHOOL SITE

ESERVED CHOOL SITE

B PLAN
SCALE 1:400

LEGEND:

- APPLICATION SITE BOUNDARY
- SITE C LOT BOUNDARY
- TYPE A : NON-CONSERVED WOODLAND TREE GROUP -WITH TREE GROUP SURVEY (APPROX. 1628 NOS.)
- TYPE B : ACCESSIBLE CONSERVED WOODLAND -WITH TREE GROUP SURVEY (APPROX. 1300 NOS.)
- TYPE C : INACCESSIBLE CONSERVED WOODLAND -WITHOUT TREE GROUP SURVEY
- TYPE D : PROPOSED RETAINED TREE GROUPS IN OTHER AREAS (1481 Nos.)
- PUBLIC OPEN SPACE
- LAND TO BE SECURED BY APPLICANT
- +0.88 EXISTING LEVEL
- +0.88 PROPOSED LEVEL
- APPROVED RETAINED TREES (27 NOS.)
- TREES APPROVED TO BE TRANSPLANTED (43 NOS.)
- TREES APPROVED TO BE FELLED (621 NOS.) (INCLUDING 38nos. DEAD TREES)
- TREES PROPOSED TO BE FELLED (13 NOS.)

no.	description	date
A	GENERAL REVISION	

REVISION

Copyright of this drawing is reserved by AXXA GROUP LIMITED

IT IS THE CONTRACTOR'S RESPONSIBILITY TO

* use figured dimension in preference to scalling
* verify all dimensions at the site
* report all discrepancies to the landscape architect and agree before proceeding
* determine location of all existing services prior to excavation

This drawing shall not be used for construction purposes unless signed by Landscape Architect

Date:

Approval:

axxa group

axxa group limited
51/F CHINA ONLINE CENTRE,
333 LOCKHART ROAD, WANCHAI, HONG KONG
香港灣仔駱克道333號,中國網絡中心 51樓
Tel (852) 28938586 Fax (852) 28938997
Email: ag@axxagroup.com.hk

PROJECT:

Section 16 Planning Application for Amendments to the Approved Development (Application No. A/NE-SSH/120-1) - Amendments to Recreation and Sports Centre with Ancillary Facilities in Site C

DRAWING TITLE:

TREE FELLING PLAN-SITE C (PART-5)

Scale:	1:400	Drawing No.: TFP-SC-05
Date:	NOV 2021	
Design:	YS/CL	
Drawn:	LS	
Checked:	YS/CL	REV. A
Project No:	2009201	

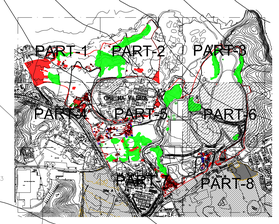
CAD Ref.:2009201-SC-NewS16-2021-TFP-01-08

A0 1189 x 841

Y:\01Axxagroup Project 2009\2009201_Sai Sha\Cad Storage\Tree Submission\NewS16-2021\2009201-SC-NewS16-2021-TFP-01a-08a_2022-09-05.dwg, 1:1

LEGEND:

- APPLICATION SITE BOUNDARY
- SITE C LOT BOUNDARY
- TYPE A :
  NON-CONSERVED WOODLAND TREE GROUP
  -WITH TREE GROUP SURVEY (APPROX. 1628 NOS.)
- TYPE B :
  ACCESSIBLE CONSERVED WOODLAND
  -WITH TREE GROUP SURVEY (APPROX. 1300 NOS.)
- TYPE C :
  INACCESSIBLE CONSERVED WOODLAND
  -WITHOUT TREE GROUP SURVEY
- TYPE D :
  PROPOSED RETAINED TREE GROUPS IN OTHER AREAS
  (1481 Nos.)
- PUBLIC OPEN SPACE
- LAND TO BE SECURED BY APPLICANT
- +0.88 EXISTING LEVEL
- +0.88 PROPOSED LEVEL
- APPROVED RETAINED TREES (27 NOS.)
- TREES APPROVED TO BE TRANSPLANTED (43 NOS.)
- TREES APPROVED TO BE FELLED (621 NOS.)
  (INCLUDING 38nos. DEAD TREES)
- TREES PROPOSED TO BE FELLED (13 NOS.)



A KEY PLAN
SCALE NTS

B PLAN
SCALE 1:400

no.	description	date
A	GENERAL REVISION	

REVISION

Copyright of this drawing is reserved by AXXA GROUP LIMITED

IT IS THE CONTRACTOR'S RESPONSIBILITY TO

- use figured dimension in preference to scalling
- verify all dimensions at the site
- report all discrepancies to the landscape architect and agree before proceeding
- determine location of all existing services prior to excavation

This drawing shall not be used for construction purposes unless signed by Landscape Architect

Date:

Approval:

axxa group

axxa group limited
51/F CHINA ONLINE CENTRE,
333 LOCKHART ROAD, WANCHAI, HONG KONG
香港灣仔駱克道333號,中國網絡中心 51 樓
Tel (852) 28938586 Fax (852) 28938997
Email: ag@axxagroup.com.hk

PROJECT:

Section 16 Planning Application for Amendments to the Approved Development (Application No. A/NE-SSH/120-1) - Amendments to Recreation and Sports Centre with Ancillary Facilities in Site C

DRAWING TITLE:

TREE FELLING PLAN-SITE C (PART-6)

Scale:	1:400
Date:	NOV 2021
Design:	YS/CL
Drawn:	LS
Checked:	YS/CL
Project No:	2009201

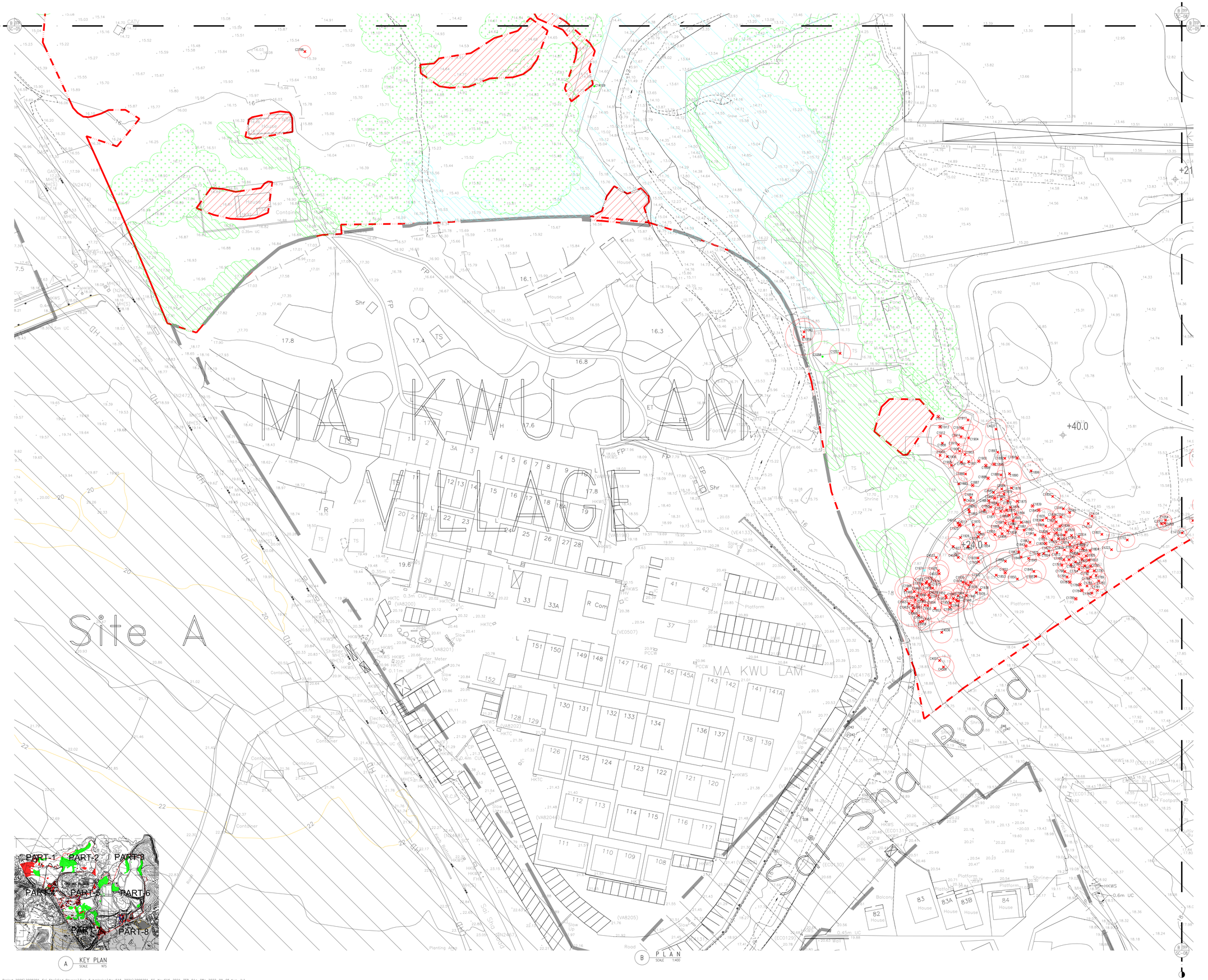
Drawing No.: TFP-SC-06

REV. A

CAD Ref.:2009201-SC-NewS16-2021-TFP-01-08

A0 1189 x 841

Y:\O:\axxagroup_Project_2009\2009201_Sai_Sha\Cad_Storage\Tree_Submission\NewS16-2021\2009201-SC-NewS16-2021-TFP-01a-08a_2022-09-05.dwg, 1:1



A KEY PLAN SCALE NTS

B PLAN SCALE 1:400

LEGEND:

- APPLICATION SITE BOUNDARY
- SITE C LOT BOUNDARY
- TYPE A : NON-CONSERVED WOODLAND TREE GROUP -WITH TREE GROUP SURVEY (APPROX. 1628 NOS.)
- TYPE B : ACCESSIBLE CONSERVED WOODLAND -WITH TREE GROUP SURVEY (APPROX. 1300 NOS.)
- TYPE C : INACCESSIBLE CONSERVED WOODLAND -WITHOUT TREE GROUP SURVEY
- TYPE D : PROPOSED RETAINED TREE GROUPS IN OTHER AREAS (1481 Nos.)
- PUBLIC OPEN SPACE
- LAND TO BE SECURED BY APPLICANT
- +0.88 EXISTING LEVEL
- +0.88 PROPOSED LEVEL
- APPROVED RETAINED TREES (27 NOS.)
- TREES APPROVED TO BE TRANSPLANTED (43 NOS.)
- TREES APPROVED TO BE FELLED (621 NOS.) (INCLUDING 36nos. DEAD TREES)
- TREES PROPOSED TO BE FELLED (13 NOS.)

no.	description	date
A	GENERAL REVISION	

REVISION

Copyright of this drawing is reserved by AXXA GROUP LIMITED

IT IS THE CONTRACTOR'S RESPONSIBILITY TO

- use figured dimension in preference to scalling
- verify all dimensions at the site
- report all discrepancies to the landscape architect and agree before proceeding
- determine location of all existing services prior to excavation

This drawing shall not be used for construction purposes unless signed by Landscape Architect

Date:

Approval:

axxa group

axxa group limited

51/F CHINA ONLINE CENTRE,
333 LOCKHART ROAD, WANCHAI, HONG KONG
香港灣仔駱克道333號,中國網絡中心 51樓
Tel (852) 28938586 Fax (852) 28938997
Email: ag@axxagroup.com.hk

PROJECT:

Section 16 Planning Application for Amendments to the Approved Development (Application No. A/NE-SSH/120-1) - Amendments to Recreation and Sports Centre with Ancillary Facilities in Site C

DRAWING TITLE:

TREE FELLING PLAN-SITE C (PART-7)

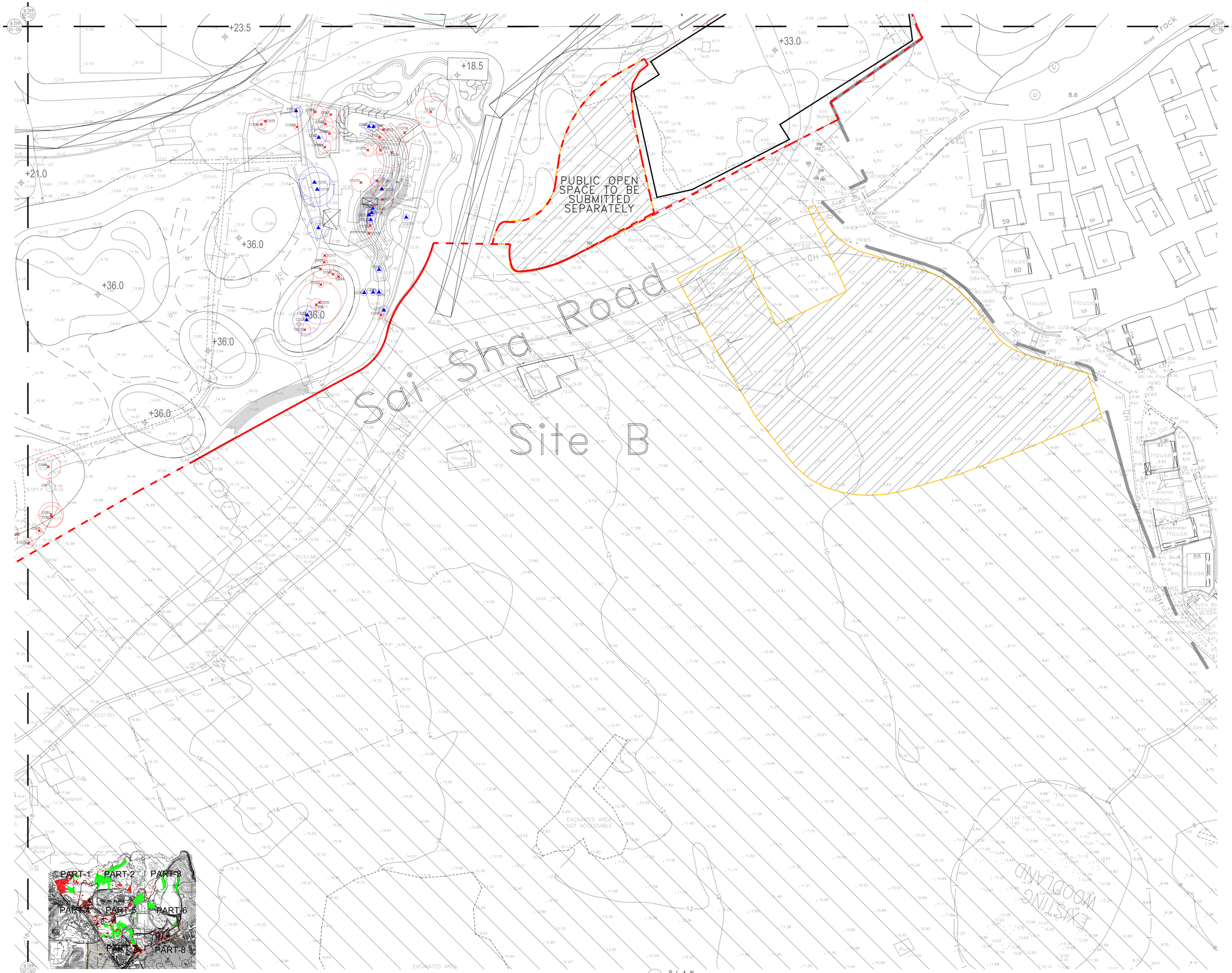
Scale:	1:400
Date:	NOV 2021
Design:	YS/CL
Drawn:	LS
Checked:	YS/CL
Project No:	2009201

Drawing No.: TFP-SC-07 REV. A

CAD Ref.:2009201-SC-NewS16-2021-TFP-01-08

A0 1189 x 841

Y:\O-Axxagroup Project 2009\2009201_Sai Sha\Cad Storage\Tree Submission\NewS16-2021\2009201-SC-NewS16-2021-TFP-01a-08a_2022-09-05.dwg, 1:1



LEGEND:

- APPLICATION SITE BOUNDARY
- SITE C LOT BOUNDARY
- TYPE A : NON-CONSERVED WOODLAND TREE GROUP -WITH TREE GROUP SURVEY (APPROX. 1628 NOS.)
- TYPE B : ACCESSIBLE CONSERVED WOODLAND -WITH TREE GROUP SURVEY (APPROX. 1300 NOS.)
- TYPE C : INACCESSIBLE CONSERVED WOODLAND -WITHOUT TREE GROUP SURVEY
- TYPE D : PROPOSED RETAINED TREE GROUPS IN OTHER AREAS (1481 Nos.)
- PUBLIC OPEN SPACE
- LAND TO BE SECURED BY APPLICANT
- +0.88 EXISTING LEVEL
- +0.88 PROPOSED LEVEL
- APPROVED RETAINED TREES (27 NOS.)
- TREES APPROVED TO BE TRANSPLANTED (43 NOS.)
- TREES APPROVED TO BE FELLED (621 NOS.) (INCLUDING 38nos. DEAD TREES)
- TREES PROPOSED TO BE FELLED (13 NOS.)

no.	description	date
A	GENERAL REVISION	

REVISION

Copyright of this drawing is reserved by AXXA GROUP LIMITED

IT IS THE CONTRACTOR'S RESPONSIBILITY TO

- use figured dimension in preference to scalling
- verify all dimensions at the site
- report all discrepancies to the landscape architect and agree before proceeding
- determine location of all existing services prior to excavation

This drawing shall not be used for construction purposes unless signed by Landscape Architect

Date:

Approval:

axxa group

axxa group limited
51/F CHINA ONLINE CENTRE,
333 LOCKHART ROAD, WANCHAI, HONG KONG
香港灣仔駱克道333號,中國網絡中心 51樓
Tel (852) 28938586 Fax (852) 28938997
Email: ag@axxagroup.com.hk

PROJECT:

Section 16 Planning Application for Amendments to the Approved Development (Application No. A/NE-SSH/120-1) - Amendments to Recreation and Sports Centre with Ancillary Facilities in Site C

DRAWING TITLE:

TREE FELLING PLAN–SITE C (PART–8)

Scale:	1:400
Date:	NOV 2021
Design:	YS/CL
Drawn:	LS
Checked:	YS/CL
Project No:	2009201

Drawing No.: TFP–SC–08 REV. A

CAD Ref.:2009201–SC–NewS16–2021–TFP–01–08

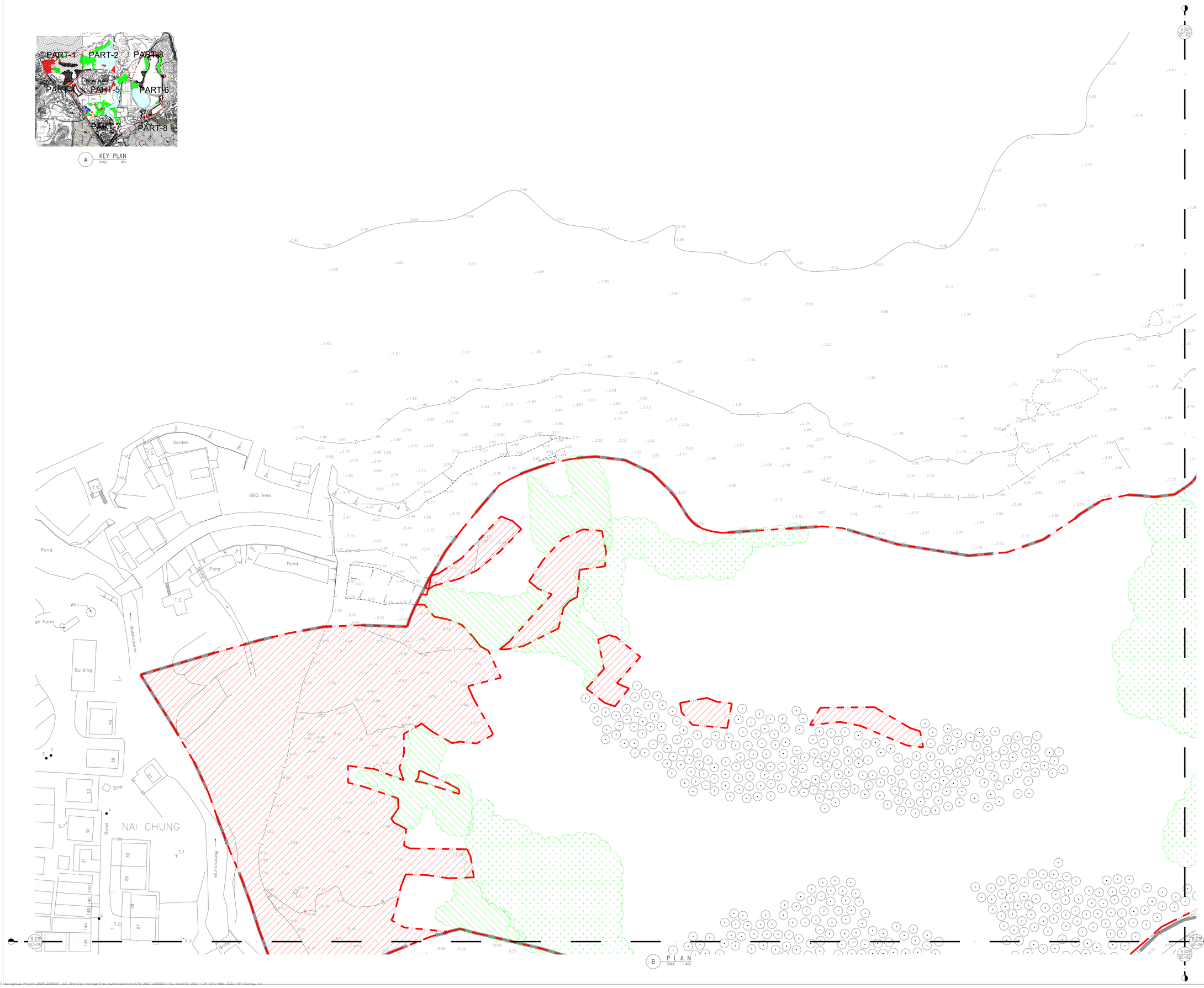
A0 1189 x 841

Y:\01-Axxagroup Project 2009\2009201_Sai Sha\Cad Storage\Tree Submission\NewS16-2021\2009201-SC-NewS16-2021-TFP-01a-08a_2022-09-05.dwg, 1:1

Appendix F

Tree Planting Plans

A KEY PLAN
SCALE NTS



B PLAN
SCALE 1:400

LEGEND:

- APPLICATION SITE BOUNDARY
- SITE C LOT BOUNDARY
- TYPE A :
  NON-CONSERVED WOODLAND TREE GROUP
  -WITH TREE GROUP SURVEY (APPROX. 1628 NOS.)
- TYPE B :
  ACCESSIBLE CONSERVED WOODLAND
  -WITH TREE GROUP SURVEY (APPROX. 1300 NOS.)
- TYPE C :
  INACCESSIBLE CONSERVED WOODLAND
  -WITHOUT TREE GROUP SURVEY
- TYPE D :
  PROPOSED RETAINED TREE GROUPS IN OTHER AREAS
  (1481 Nos.)
- PUBLIC OPEN SPACE
- LAND TO BE SECURED BY APPLICANT
- +0.88 EXISTING LEVEL
- +0.88 PROPOSED LEVEL
- PROPOSED NEW TREES
  (1700 NOS.)
- APPROVED RETAINED TREES (27 NOS.)
- TREES APPROVED TO BE TRANSPLANTED (43 NOS.)

no.	description	date
A	GENERAL REVISION	

REVISION

Copyright of this drawing is reserved by AXXA GROUP LIMITED

IT IS THE CONTRACTOR'S RESPONSIBILITY TO

- use figured dimension in preference to scalling
- verify all dimensions at the site
- report all discrepancies to the landscape architect and agree before proceeding
- determine location of all existing services prior to excavation

This drawing shall not be used for construction purposes unless signed by Landscape Architect

Date:

Approval:

axxa group

axxa group limited
51/F CHINA ONLINE CENTRE,
333 LOCKHART ROAD, WANCHAI, HONG KONG
香港灣仔駱克道333號,中國網絡中心 51 樓
Tel (852) 28938586 Fax (852) 28938997
Email: ag@axxagroup.com.hk

PROJECT:

Section 16 Planning Application for Amendments to the Approved Development (Application No. A/NE-SSH/120-1) - Amendments to Recreation and Sports Centre with Ancillary Facilities in Site C

DRAWING TITLE:

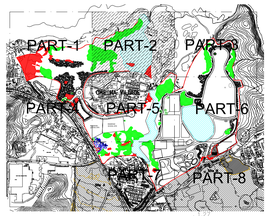
TREE PLANTING PLAN-SITE C (PART-1)

Scale:	1:400	Drawing No.:	CTP-SC-01
Date:	NOV 2021		
Design:	YS/CL		
Drawn:	LS		
Checked:	YS/CL		
Project No:	2009201	REV.	A

CAD Ref.:2009201-SC-NewS16-2021-CTP-01-08

A0 1189 x 841

Y:\C-Axxagroup Project 2009\2009201_Sai Sha\Cad Storage\Tree Submission\NewS16-2021\2009201-SC-NewS16-2021-CTP-01a-08a_2022-09-05.dwg, 1:1



A KEY PLAN
SCALE NTS

B ICIP SC-01

B ICIP SC-03

B ICIP SC-05

B ICIP SC-07

B PLAN
SCALE 1:400

LEGEND:

- APPLICATION SITE BOUNDARY
- SITE C LOT BOUNDARY
- TYPE A : NON-CONSERVED WOODLAND TREE GROUP -WITH TREE GROUP SURVEY (APPROX. 1628 NOS.)
- TYPE B : ACCESSIBLE CONSERVED WOODLAND -WITH TREE GROUP SURVEY (APPROX. 1300 NOS.)
- TYPE C : INACCESSIBLE CONSERVED WOODLAND -WITHOUT TREE GROUP SURVEY
- TYPE D : PROPOSED RETAINED TREE GROUPS IN OTHER AREAS (1481 Nos.)
- PUBLIC OPEN SPACE
- LAND TO BE SECURED BY APPLICANT
- +0.88 EXISTING LEVEL
- +0.88 PROPOSED LEVEL
- PROPOSED NEW TREES (1700 NOS.)
- APPROVED RETAINED TREES (27 NOS.)
- TREES APPROVED TO BE TRANSPLANTED (43 NOS.)

no.	description	date
A	GENERAL REVISION	

REVISION

Copyright of this drawing is reserved by AXXA GROUP LIMITED

IT IS THE CONTRACTOR'S RESPONSIBILITY TO

- use figured dimension in preference to scalling
- verify all dimensions at the site
- report all discrepancies to the landscape architect and agree before proceeding
- determine location of all existing services prior to excavation

This drawing shall not be used for construction purposes unless signed by Landscape Architect

Date:

Approval:

axxa group

axxa group limited
51/F CHINA ONLINE CENTRE,
333 LOCKHART ROAD, WANCHAI, HONG KONG
香港灣仔駱克道333號,中國網絡中心 51樓
Tel (852) 28938586 Fax (852) 28938997
Email: ag@axxagroup.com.hk

PROJECT:

Section 16 Planning Application for Amendments to the Approved Development (Application No. A/NE-SSH/120-1) - Amendments to Recreation and Sports Centre with Ancillary Facilities in Site C

DRAWING TITLE:

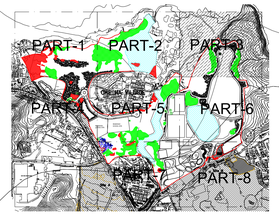
TREE PLANTING PLAN-SITE C (PART-2)

Scale:	1:400	Drawing No.:	CTP-SC-02
Date:	NOV 2021		
Design:	YS/CL		
Drawn:	LS		
Checked:	YS/CL		
Project No:	2009201	REV.	A

CAD Ref.:2009201-SC-NewS16-2021-CTP-01-08

A0 1189 x 841

Y:\C-Axxagroup Project 2009\2009201_Sai Sha\Cad Storage\Tree Submission\NewS16-2021\2009201-SC-NewS16-2021-CTP-01a-08a_2022-09-05.dwg, 1:1



A KEY PLAN
SCALE NTS

B CTP SC-02

B CTP SC-03

B PLAN
SCALE 1:400

LEGEND:

- APPLICATION SITE BOUNDARY
- SITE C LOT BOUNDARY
- TYPE A : NON-CONSERVED WOODLAND TREE GROUP -WITH TREE GROUP SURVEY (APPROX. 1628 NOS.)
- TYPE B : ACCESSIBLE CONSERVED WOODLAND -WITH TREE GROUP SURVEY (APPROX. 1300 NOS.)
- TYPE C : INACCESSIBLE CONSERVED WOODLAND -WITHOUT TREE GROUP SURVEY
- TYPE D : PROPOSED RETAINED TREE GROUPS IN OTHER AREAS (1481 Nos.)
- PUBLIC OPEN SPACE
- LAND TO BE SECURED BY APPLICANT
- +0.88 EXISTING LEVEL
- +0.88 PROPOSED LEVEL
- PROPOSED NEW TREES (1700 NOS.)
- APPROVED RETAINED TREES (27 NOS.)
- TREES APPROVED TO BE TRANSPLANTED (43 NOS.)

no.	description	date
A	GENERAL REVISION	

REVISION

Copyright of this drawing is reserved by AXXA GROUP LIMITED

IT IS THE CONTRACTOR'S RESPONSIBILITY TO

- use figured dimension in preference to scalling
- verify all dimensions at the site
- report all discrepancies to the landscape architect and agree before proceeding
- determine location of all existing services prior to excavation

This drawing shall not be used for construction purposes unless signed by Landscape Architect

Date:

Approval:

axxa group

axxa group limited
51/F CHINA ONLINE CENTRE,
333 LOCKHART ROAD, WANCHAI, HONG KONG
香港灣仔駱克道333號,中國網絡中心 51樓
Tel (852) 28938586 Fax (852) 28938997
Email: ag@axxagroup.com.hk

PROJECT:

Section 16 Planning Application for Amendments to the Approved Development (Application No. A/NE-SSH/120-1) - Amendments to Recreation and Sports Centre with Ancillary Facilities in Site C

DRAWING TITLE:

TREE PLANTING PLAN-SITE C (PART-3)

Scale:	1:400
Date:	NOV 2021
Design:	YS/CL
Drawn:	LS
Checked:	YS/CL
Project No:	2009201

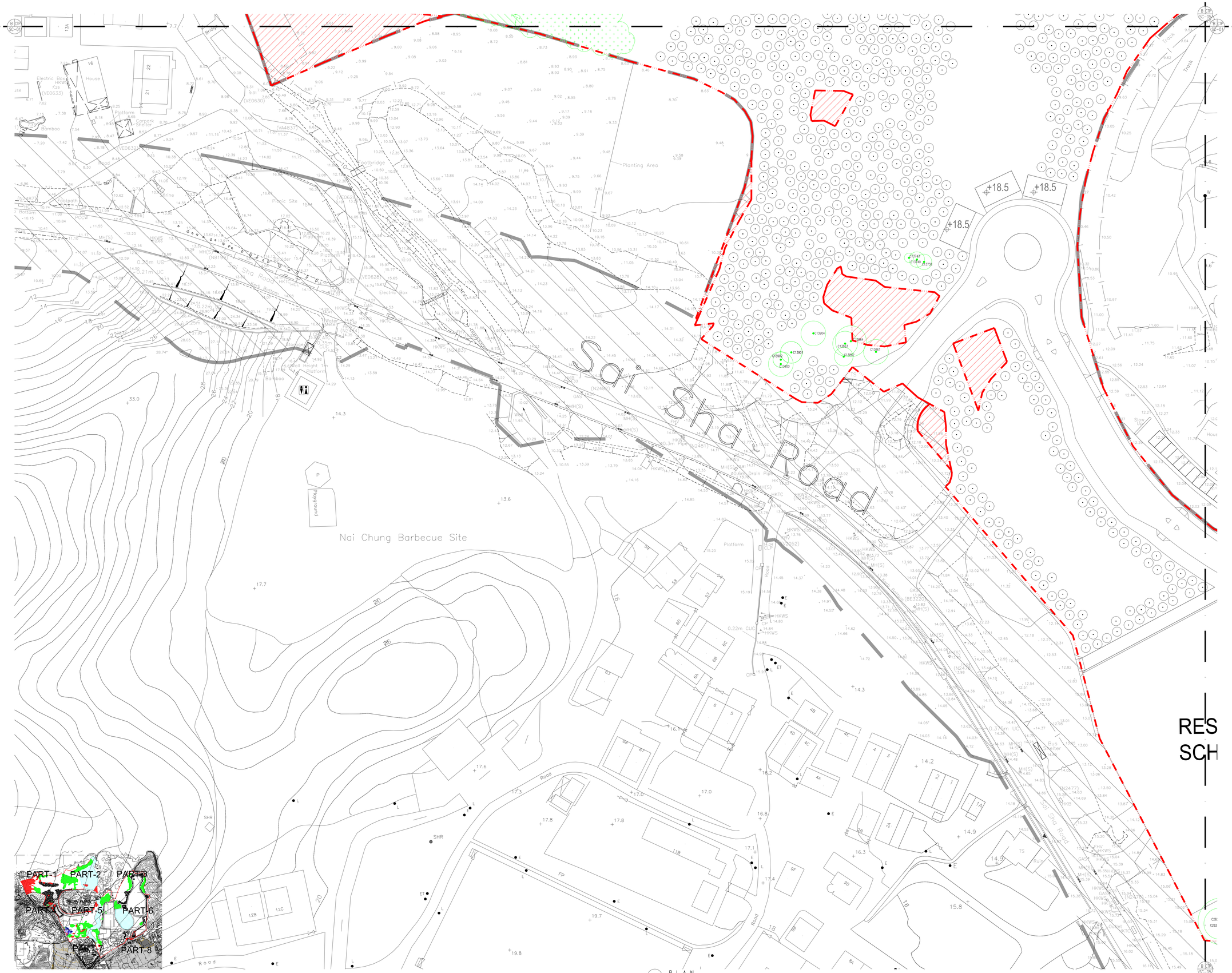
Drawing No.: CTP-SC-03

REV. A

CAD Ref.:2009201-SC-NewS16-2021-CTP-01-08

A0 1189 x 841

Y:\04-Axxagroup Project 2009\2009201_Sai Sha\Cad Storage\Tree Submission\NewS16-2021\2009201-SC-NewS16-2021-CTP-01a-08a, 2022-08-05.dwg, 1:1



A KEY PLAN SCALE NTS

B PLAN SCALE 1:400

LEGEND:

- APPLICATION SITE BOUNDARY
- SITE C LOT BOUNDARY
- TYPE A : NON-CONSERVED WOODLAND TREE GROUP -WITH TREE GROUP SURVEY (APPROX. 1628 NOS.)
- TYPE B : ACCESSIBLE CONSERVED WOODLAND -WITH TREE GROUP SURVEY (APPROX. 1300 NOS.)
- TYPE C : INACCESSIBLE CONSERVED WOODLAND -WITHOUT TREE GROUP SURVEY
- TYPE D : PROPOSED RETAINED TREE GROUPS IN OTHER AREAS (1481 Nos.)
- PUBLIC OPEN SPACE
- LAND TO BE SECURED BY APPLICANT
- +0.88 EXISTING LEVEL
- +0.88 PROPOSED LEVEL
- PROPOSED NEW TREES (1700 NOS.)
- APPROVED RETAINED TREES (27 NOS.)
- TREES APPROVED TO BE TRANSPLANTED (43 NOS.)

no.	description	date
A	GENERAL REVISION	

REVISION

Copyright of this drawing is reserved by AXXA GROUP LIMITED

IT IS THE CONTRACTOR'S RESPONSIBILITY TO

- use figured dimension in preference to scalling
- verify all dimensions at the site
- report all discrepancies to the landscape architect and agree before proceeding
- determine location of all existing services prior to excavation

This drawing shall not be used for construction purposes unless signed by Landscape Architect

Date:

Approval:

axxa group

axxa group limited
51/F CHINA ONLINE CENTRE,
333 LOCKHART ROAD, WANCHAI, HONG KONG
香港灣仔駱克道333號,中國網絡中心 51樓
Tel (852) 28938586 Fax (852) 28938997
Email: ag@axxagroup.com.hk

PROJECT:

Section 16 Planning Application for Amendments to the Approved Development (Application No. A/NE-SSH/120-1) - Amendments to Recreation and Sports Centre with Ancillary Facilities in Site C

DRAWING TITLE:

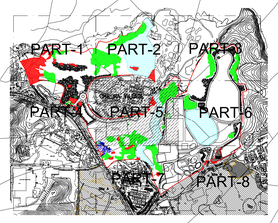
TREE PLANTING PLAN-SITE C (PART-4)

Scale:	1:400	Drawing No.:	CTP-SC-04
Date:	NOV 2021		
Design:	YS/CL		
Drawn:	LS		
Checked:	YS/CL	REV.	A
Project No:	2009201		

CAD Ref.:2009201-SC-NewS16-2021-CTP-01-08

A0 1189 x 841

Y:\04-Axxagroup Project 2009\2009201_Sai Sha\Cad Storage\Tree Submission\NewS16-2021\2009201-SC-NewS16-2021-CTP-01a-08a_2022-08-05.dwg, 1:1



A KEY PLAN
SCALE NTS

CHEUNG HA VILLAGE

RESERVED SCHOOL SITE

ESERVED
CHOOL SITE

CHE HA

B PLAN
SCALE 1:400

LEGEND:

- APPLICATION SITE BOUNDARY
- SITE C LOT BOUNDARY
- TYPE A : NON-CONSERVED WOODLAND TREE GROUP -WITH TREE GROUP SURVEY (APPROX. 1628 NOS.)
- TYPE B : ACCESSIBLE CONSERVED WOODLAND -WITH TREE GROUP SURVEY (APPROX. 1300 NOS.)
- TYPE C : INACCESSIBLE CONSERVED WOODLAND -WITHOUT TREE GROUP SURVEY
- TYPE D : PROPOSED RETAINED TREE GROUPS IN OTHER AREAS (1481 Nos.)
- PUBLIC OPEN SPACE
- LAND TO BE SECURED BY APPLICANT
- +0.88 EXISTING LEVEL
- +0.88 PROPOSED LEVEL
- PROPOSED NEW TREES (1700 NOS.)
- APPROVED RETAINED TREES (27 NOS.)
- TREES APPROVED TO BE TRANSPLANTED (43 NOS.)

no.	description	date
A	GENERAL REVISION	

REVISION

Copyright of this drawing is reserved by AXXA GROUP LIMITED

IT IS THE CONTRACTOR'S RESPONSIBILITY TO

- use figured dimension in preference to scalling
- verify all dimensions at the site
- report all discrepancies to the landscape architect and agree before proceeding
- determine location of all existing services prior to excavation

This drawing shall not be used for construction purposes unless signed by Landscape Architect

Date:

Approval:

axxa group

axxa group limited
51/F CHINA ONLINE CENTRE,
333 LOCKHART ROAD, WANCHAI, HONG KONG
香港灣仔駱克道333號,中國網絡中心 51 樓
Tel (852) 28938586 Fax (852) 28938997
Email: ag@axxagroup.com.hk

PROJECT:

Section 16 Planning Application for Amendments to the Approved Development (Application No. A/NE-SSH/120-1) - Amendments to Recreation and Sports Centre with Ancillary Facilities in Site C

DRAWING TITLE:

TREE PLANTING PLAN-SITE C (PART-5)

Scale:	1:400
Date:	NOV 2021
Design:	YS/CL
Drawn:	LS
Checked:	YS/CL
Project No:	2009201

Drawing No.: CTP-SC-05

REV. A

CAD Ref.:2009201-SC-NewS16-2021-CTP-01-08

A0 1189 x 841

Y:\04axxagroup Project 2009\2009201_Sai Sha\Cad Storage\Tree Submission\NewS16-2021\2009201-SC-NewS16-2021-CTP-01a-08a, 2022-08-05.dwg, Li

B PLAN SCALE 1:400

A KEY PLAN SCALE NTS

LEGEND:

- APPLICATION SITE BOUNDARY
- SITE C LOT BOUNDARY
- TYPE A : NON-CONSERVED WOODLAND TREE GROUP -WITH TREE GROUP SURVEY (APPROX. 1628 NOS.)
- TYPE B : ACCESSIBLE CONSERVED WOODLAND -WITH TREE GROUP SURVEY (APPROX. 1300 NOS.)
- TYPE C : INACCESSIBLE CONSERVED WOODLAND -WITHOUT TREE GROUP SURVEY
- TYPE D : PROPOSED RETAINED TREE GROUPS IN OTHER AREAS (1481 Nos.)
- PUBLIC OPEN SPACE
- LAND TO BE SECURED BY APPLICANT
- +0.88 EXISTING LEVEL
- +0.88 PROPOSED LEVEL
- PROPOSED NEW TREES (1700 NOS.)
- APPROVED RETAINED TREES (27 NOS.)
- TREES APPROVED TO BE TRANSPLANTED (43 NOS.)

no.	description	date
A	GENERAL REVISION	

REVISION

Copyright of this drawing is reserved by AXXA GROUP LIMITED

IT IS THE CONTRACTOR'S RESPONSIBILITY TO

- use figured dimension in preference to scalling
- verify all dimensions at the site
- report all discrepancies to the landscape architect and agree before proceeding
- determine location of all existing services prior to excavation

This drawing shall not be used for construction purposes unless signed by Landscape Architect

Date:

Approval:

axxa group

axxa group limited

51/F CHINA ONLINE CENTRE,
333 LOCKHART ROAD, WANCHAI, HONG KONG
香港灣仔駱克道333號,中國網絡中心 51 樓
Tel (852) 28938586 Fax (852) 28938997
Email: ag@axxagroup.com.hk

PROJECT:

Section 16 Planning Application for Amendments to the Approved Development (Application No. A/NE-SSH/120-1) - Amendments to Recreation and Sports Centre with Ancillary Facilities in Site C

DRAWING TITLE:

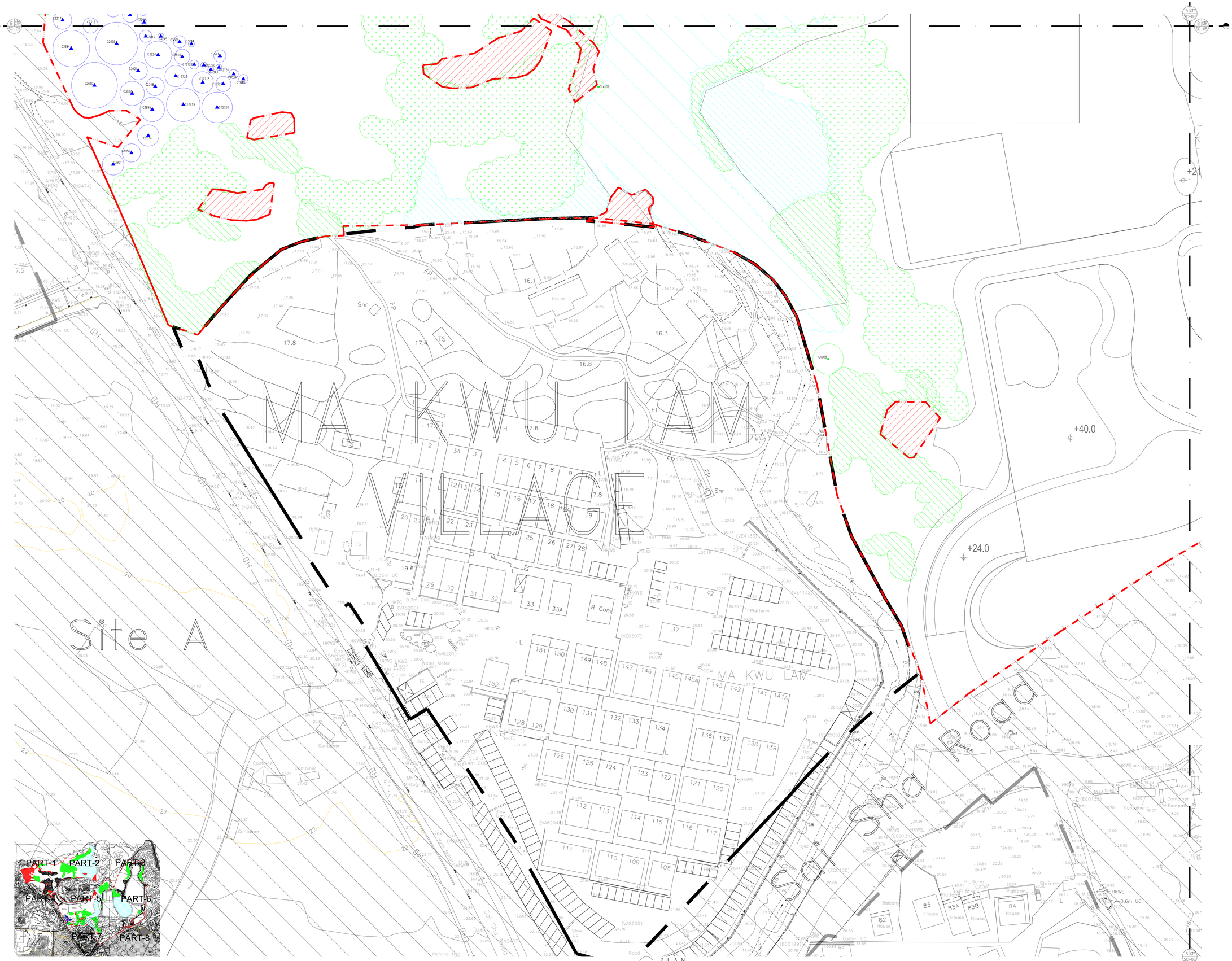
TREE PLANTING PLAN-SITE C (PART-6)

Scale:	1:400	Drawing No.:	CTP-SC-06
Date:	NOV 2021		
Design:	YS/CL		
Drawn:	LS		
Checked:	YS/CL	REV.	A
Project No:	2009201		

CAD Ref.:2009201-SC-NewS16-2021-CTP-01-08

A0 1189 x 841

Y:\01axxagroup Project 2009\2009201_Sai Sha\Cad Storage\Tree Submission\NewS16-2021\2009201-SC-NewS16-2021-CTP-01a-08a_2022-09-05.dwg, 1:1



A KEY PLAN SCALE NTS

B PLAN SCALE 1:400

LEGEND:

- APPLICATION SITE BOUNDARY
- SITE C LOT BOUNDARY
- TYPE A : NON-CONSERVED WOODLAND TREE GROUP -WITH TREE GROUP SURVEY (APPROX. 1628 NOS.)
- TYPE B : ACCESSIBLE CONSERVED WOODLAND -WITH TREE GROUP SURVEY (APPROX. 1300 NOS.)
- TYPE C : INACCESSIBLE CONSERVED WOODLAND -WITHOUT TREE GROUP SURVEY
- TYPE D : PROPOSED RETAINED TREE GROUPS IN OTHER AREAS (1481 Nos.)
- PUBLIC OPEN SPACE
- LAND TO BE SECURED BY APPLICANT
- +0.88 EXISTING LEVEL
- +0.88 PROPOSED LEVEL
- PROPOSED NEW TREES (1700 NOS.)
- APPROVED RETAINED TREES (27 NOS.)
- TREES APPROVED TO BE TRANSPLANTED (43 NOS.)

no.	description	date
A	GENERAL REVISION	

REVISION

Copyright of this drawing is reserved by AXXA GROUP LIMITED

IT IS THE CONTRACTOR'S RESPONSIBILITY TO

- use figured dimension in preference to scalling
- verify all dimensions at the site
- report all discrepancies to the landscape architect and agree before proceeding
- determine location of all existing services prior to excavation

This drawing shall not be used for construction purposes unless signed by Landscape Architect

Date:

Approval:

axxa group

axxa group limited
51/F CHINA ONLINE CENTRE,
333 LOCKHART ROAD, WANCHAI, HONG KONG
香港灣仔駱克道333號,中國網絡中心 51樓
Tel (852) 28938586 Fax (852) 28938997
Email: ag@axxagroup.com.hk

PROJECT:

Section 16 Planning Application for Amendments to the Approved Development (Application No. A/NE-SSH/120-1) - Amendments to Recreation and Sports Centre with Ancillary Facilities in Site C

DRAWING TITLE:

TREE PLANTING PLAN-SITE C (PART-7)

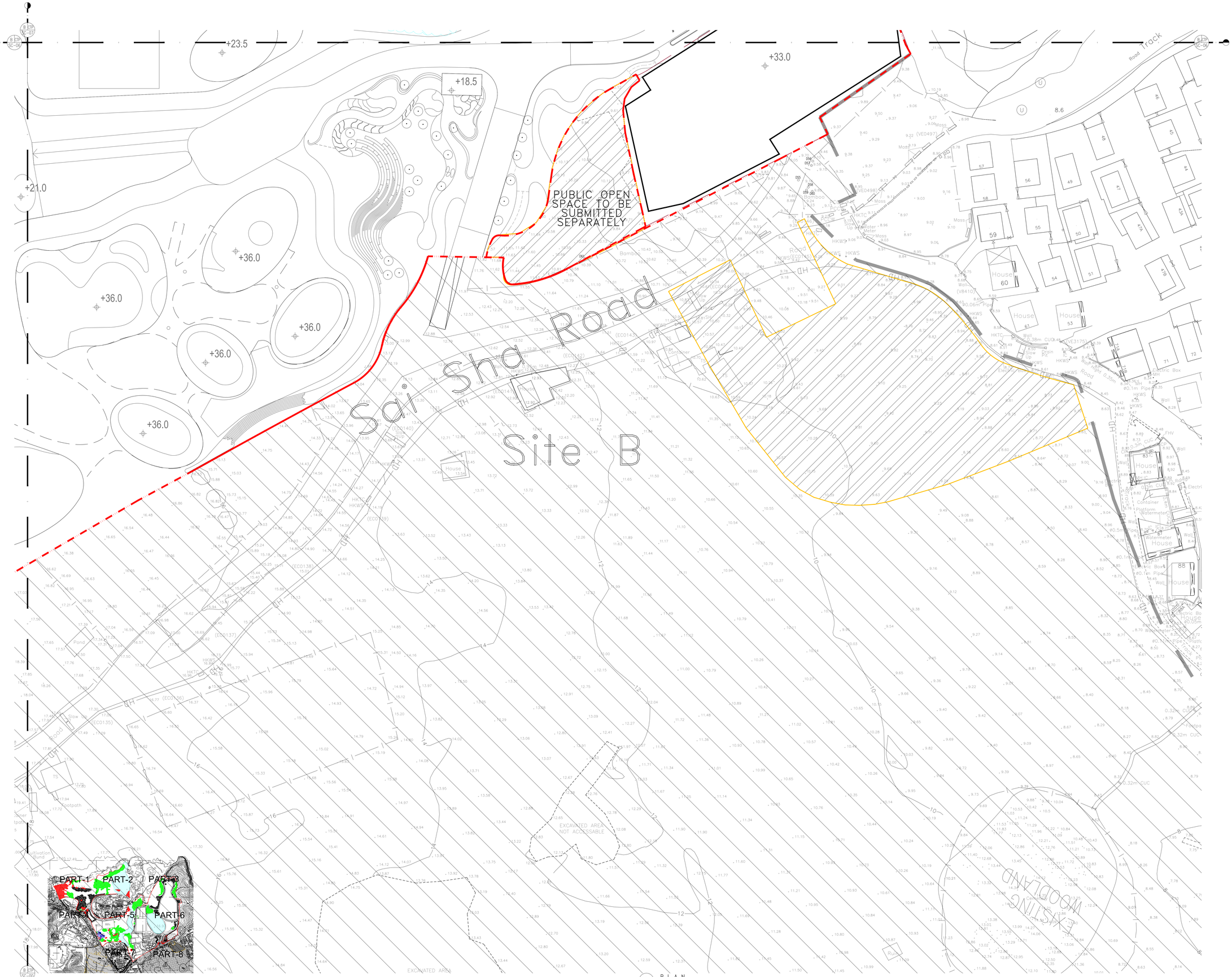
Scale:	1:400
Date:	NOV 2021
Design:	YS/CL
Drawn:	LS
Checked:	YS/CL
Project No:	2009201

Drawing No.: CTP-SC-07 REV. A

CAD Ref.:2009201-SC-NewS16-2021-CTP-01-08

A0 1189 x 841

Y:\04xxagroup Project 2009\2009201_Sai Sha\Cad Storage\Tree Submission\NewS16-2021\2009201-SC-NewS16-2021-CTP-01a-08a_2022-08-05.dwg, 1:1



LEGEND:

- APPLICATION SITE BOUNDARY
- SITE C LOT BOUNDARY
- TYPE A : NON-CONSERVED WOODLAND TREE GROUP -WITH TREE GROUP SURVEY (APPROX. 1628 NOS.)
- TYPE B : ACCESSIBLE CONSERVED WOODLAND -WITH TREE GROUP SURVEY (APPROX. 1300 NOS.)
- TYPE C : INACCESSIBLE CONSERVED WOODLAND -WITHOUT TREE GROUP SURVEY
- TYPE D : PROPOSED RETAINED TREE GROUPS IN OTHER AREAS (1481 Nos.)
- PUBLIC OPEN SPACE
- LAND TO BE SECURED BY APPLICANT
- +0.88 EXISTING LEVEL
- +0.88 PROPOSED LEVEL
- PROPOSED NEW TREES (1700 NOS.)
- APPROVED RETAINED TREES (27 NOS.)
- TREES APPROVED TO BE TRANSPLANTED (43 NOS.)

no.	description	date
A	GENERAL REVISION	

REVISION

Copyright of this drawing is reserved by AXXA GROUP LIMITED

IT IS THE CONTRACTOR'S RESPONSIBILITY TO

- use figured dimension in preference to scalling
- verify all dimensions at the site
- report all discrepancies to the landscape architect and agree before proceeding
- determine location of all existing services prior to excavation

This drawing shall not be used for construction purposes unless signed by Landscape Architect

Date:

Approval:

axxa group

axxa group limited
51/F CHINA ONLINE CENTRE,
333 LOCKHART ROAD, WANCHAI, HONG KONG
香港灣仔駱克道333號,中國網絡中心 51樓
Tel (852) 28938586 Fax (852) 28938997
Email: ag@axxagroup.com.hk

PROJECT:

Section 16 Planning Application for Amendments to the Approved Development (Application No. A/NE-SSH/120-1) - Amendments to Recreation and Sports Centre with Ancillary Facilities in Site C

DRAWING TITLE:

TREE PLANTING PLAN-SITE C (PART-8)

Scale:	1:400	Drawing No.:	CTP-SC-08
Date:	NOV 2021		
Design:	YS/CL		
Drawn:	LS		
Checked:	YS/CL		
Project No:	2009201	REV.	A

CAD Ref.:2009201-SC-NewS16-2021-CTP-01-08

A0 1189 x 841

Y:\C-Axxagroup Project 2009\2009201_Sai Sha\Cad Storage\Tree Submission\NewS16-2021\2009201-SC-NewS16-2021-CTP-01a-08a_2022-09-05.dwg, 1:1

Appendix G

Incident Reports

MEMO. 便箋

From: 由	Mr. Lemon Ling Chung Lam	*To:* 致	Mr. Simon Chan Yun Kan
Department: 部門	Landscape Section	*Department:* 部門	Site Office
Our Reference: 本部門檔案編號	SS/SL/LL/M000028/21	*Copy to:* 副本致	As Listed
Date: 日期	9/7/2021	Total Page:	

Sai Sha Site C – Incident Report for C3681 (Proposed to be Transplanted)

Regarding surveyed trees of the captioned project, it is observed that ONE of the trees proposed to be transplanted located near Che Ha Village was found dead during initial tree inspection. No construction activity has been commenced nearby as observed on the date of inspection. Detail of the concerned tree is as follow:

C3681 *Bischovia javanica* 秋堰 16mH x 12mS, 700mm DBH

Attached please find the incident report for your reference and further pursuit.

If you have any queries, please contact our Mr. Raymond Chan Wai Man at 3766-8997 / 9667-0432.

Thank you for your kind attention.

Regards,

Lemon Ling Chung Lam
LL/RC/ew

Encl. as stated
c.c.

SHKP (42/F)	- Mr. Spencer Lu Chee Yuen/ Mr. Sunny Cheung Chin Hung/ Mr. Grant Yuen Hok Lun	(w/o)
AXXA	- Ms. Camay Lam	(w/e)
Accounts	- Ms. Phoebe Lai Wai Ching	(w/o)

Incident Report for C3681 (Tree Proposed to be Transplanted)

Site : Sai Sha Site C (Che Ha Road)

Date of Inspection : 5 July 2021

Summary : During initial tree inspection for surveyed trees of the captioned site, ONE tree proposed to be transplanted was found dead on site as follow:

C3681 *Bischofia javanica* 秋楓 16mH x 12mS, 700mm DBH

As observed on the date of inspection, no construction activity has been commenced nearby.

Memo Ref : SS/SL/LL/M00028/21
Prepared by : Sanfield Landscape Co. Ltd.

Photo 1 – Condition of C3681 during initial tree survey. (2018)

Photo 2 – Current condition of C3681 (Jul 2021)

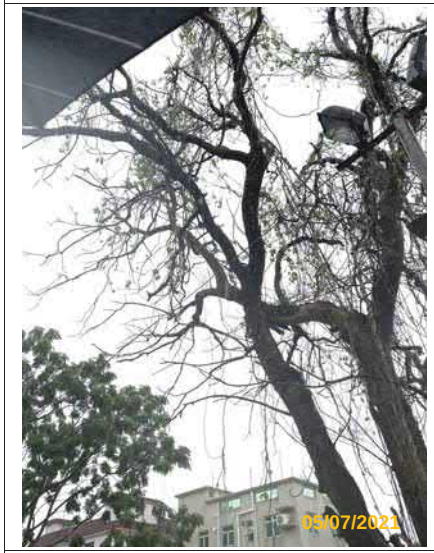


Photo 3 & 4 – Loss of all foliage and dieback of branches were observed. Climbers found on branches. (Jul 2021)

Sai Sha Site C (Che Ha Road)
Incident Report for C3681 (Proposed to be Transplanted)

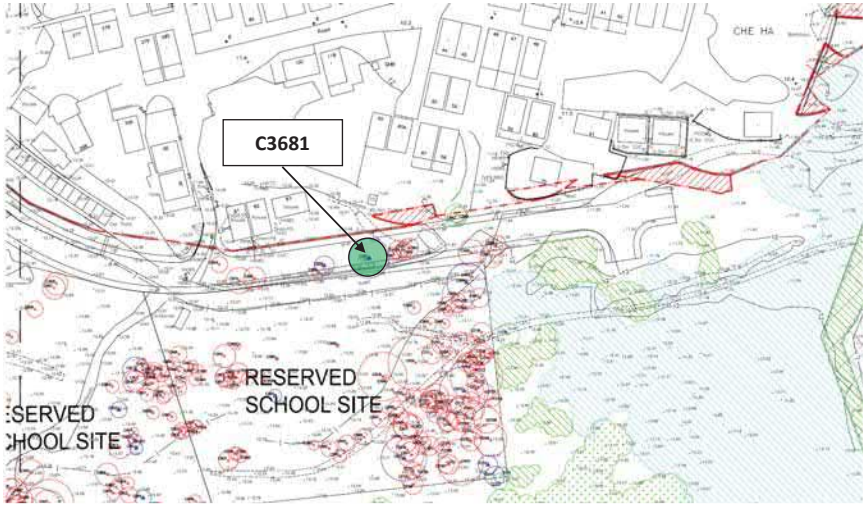
Photo 5 & 6 – Cracks and shedding of bark found on C3681. (Jul 2021)

Photo 7 – Root condition of C3681 (Jul 2021). Debris and materials from third parties were dumped near rooting zone.

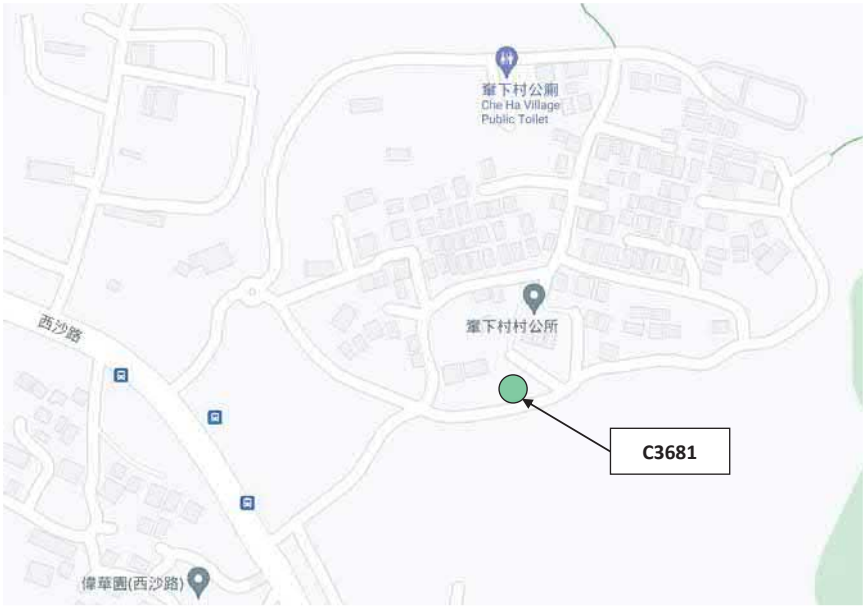
Photo 8 & 9 – No construction activity has been commenced nearby of C3681. (Jul 2021)

Sai Sha Site C (Che Ha Road)
Incident Report for C3681 (Proposed to be Transplanted)

Location of C3681



(Captured from Part 5 of Tree Felling Plan of Site C (*TFP-SC-05*))



(Captured from Google Map)

MEMO. 便箋

From: 由	Lemon Ling	*To:* 致	Mr. Simon Chan Yun Kan
Department: 部門	Landscape Section	*Department:* 部門	Site Office
Our Reference: 本部門檔案編號	SS/SL/LL/M000037/21 (Rev)	*Copy to:* 副本致	As Listed
Date: 日期	20/9/2021	Total Page:	

Sai Sha (Site C)
Incident Report for Status of Surveyed Trees (Jul 21) (Rev)

Concerning surveyed trees of Site C, inspection for status of trees proposed to be retained/ transplanted was conducted in July 2021 and after Typhoon Cempaka (18- 20 July 2021). 12 nos of the trees were found with status changes. Below is a summary of findings:

Trees Proposed to be Retained	:	**7 nos**
Trees Proposed to be Transplanted	:	**5 nos**
Total	:	**12 nos**

Attached please find the incident report for your reference and further pursuit.

If you have any queries, please contact our Mr. Raymond Chan Wai Man at 3766-6997.

Thank you for your kind attention.

Regards,

Lemon Ling
LL/RC/sw

Encl. as stated
c.c.

SHKP (42/F)	-	Mr. Spencer Lu Chee Yuen/ Mr. Sunny Cheung Chin Hung/ Mr. Grant Yuen Hok Lun	(w/o)
AXXA	-	Ms. Camay Lam	(w/o)
Accounts	-	Ms. Phoebe Lai Wai Ching	(w/o)

Incident Report for Status of Surveyed Trees (Jul 21) (Rev)

Site : Sai Sha Site C

Date of Inspection : July 2021

Summary : For initial tree inspection of surveyed trees (Tree Proposed to be Retained/ Transplanted in latest submission) and inspection after Typhoon Cempaka (18- 20 July 2021) in July 2021, the following trees were found with status changes.

Tree Proposed to be Retained	:	7 nos
Tree Proposed to be Transplanted	:	5 nos
Total	:	**12 nos**

Tree ID No.	Botanical Name	Chinese Name	Dia (mm)	Height (m)	Spread (m)	Proposed Action	Remarks
C1047	*Juniperus chinensis*	龍柏	110	5	3	T	Poor form and structural defect with the rotten tree collar. Showing sign of potential falling. No construction activity commenced nearby.
C1971	*Bridelia tomentosa*	土蜜樹	220	10	9	T	Was found to be in poor condition. Cracks found on bark of several main branches. Dead branches observed on top of crown. Showing sign of potential falling. No construction activity commenced nearby.
C2811	*Celtis sinensis*	朴樹	360	5	3	T	Was found to be in poor condition, showing sign of decay. Two main branches were found dead and decayed. No construction activity commenced nearby.
C3787	*Melia azedarach*	苦楝	190	10	4	R	Found dead on site. Tree was found uprooted and fallen after Typhoon Cempaka (18- 20 July 2021). No construction activity commenced nearby.
C3800	*Melia azedarach*	苦楝	150	9	5	T	Found dead on site. Tree was found uprooted and fallen down after Typhoon Cempaka (18- 20 July 2021). No construction activity commenced nearby.
C3878	*Sapium sebiferum*	烏桕	150	6	5	R	Tree was found leaning. Dieback crown observed with potential natural decline. Trunk of C3878 was found in conflict with trunk of one young 銀合歡. Old wound observed near base of trunk. No construction activity commenced nearby.
C3915	*Litsea monopetala*	假柿樹	180	7	8	T	Found dead on site. Tree was found uprooted and fallen down after Typhoon Cempaka (18- 20 July 2021). No construction activity commenced nearby.
C10167	*Litsea monopetala*	假柿木薑子	265	11	9	R	Dieback crown (~50%) observed, showing sign of natural decline. Old rusted metal fence found near base of trunk. No construction activity commenced nearby.
C13250	*Sapium sebiferum*	烏桕	240	11	5	R	Found dead on site. Tree was found uprooted and fallen after Typhoon Cempaka (18- 20 July 2021). No construction activity commenced nearby.
C13734	*Litsea monopetala*	假柿木薑子	310	13	8	R	Found to be in poor health with potential risk of falling. Dead branches and broken main branch found. Epiphytes and climbers found on trunk. No construction activity commenced nearby.
C13742	*Litsea monopetala*	假柿樹	340	14	8	R	Found to be in poor health. Dieback crown (~50%) observed. Tree is in proximity to C13743 (to be retained) with overlapping crown and root zone. No construction activity commenced nearby.
C13916	*Glochidion puberum*	算盤子	280	7	6	R	Found dead on site. Tree was found uprooted and fallen after Typhoon Cempaka (18- 20 July 2021). No construction activity commenced nearby.

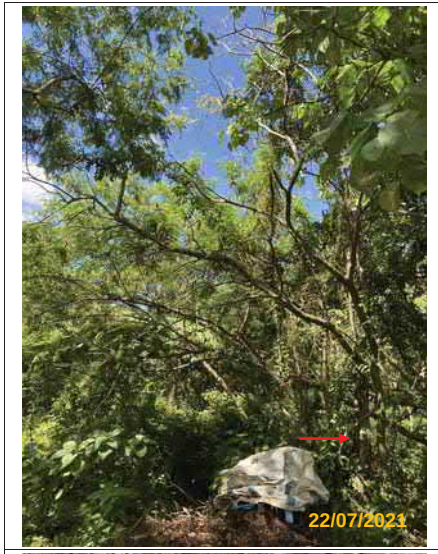
No construction work was observed during inspection for tree status.
Trees within areas with upcoming preparation of construction work have been installed with tree protection zone as specified.

Memo Ref : SS/SL/LL/M00037/21(Rev)
Prepared by : Sanfield Landscape Co. Ltd.

C1047

Condition of C1047. Poor form and structural defect with the rotten tree collar. Showing sign of potential falling. No construction activity commenced nearby.

C1971



C1971 was found to be in poor health. Cracks found on bark of several main branches. Dead branches observed on top of crown. Showing sign of potential falling. No construction activity commenced nearby.

C2811

Condition of C2811 was found to be poor, showing sign of decay. Two main branches were found dead and decayed. No construction activity commenced nearby.

C3787

C3787 was found dead on site. Tree was found uprooted and fallen down after Typhoon Cempaka (18- 20 July 2021). No construction activity commenced nearby.

C3800

C3800 was found dead on site. Tree was found uprooted and fallen down after Typhoon Cempaka (18- 20 July 2021). No construction activity commenced nearby.

C3878

Condition of C3878. Tree was found leaning. Dieback crown observed with potential natural decline. Trunk of C3878 was found in conflict with trunk of one young 銀合歡. Old wound observed near base of trunk. No construction activity commenced nearby.

C3915

C3915 was found dead on site. The tree was found uprooted and fallen down after Typhoon Cempaka (18- 20 July 2021). No construction activity commenced nearby.

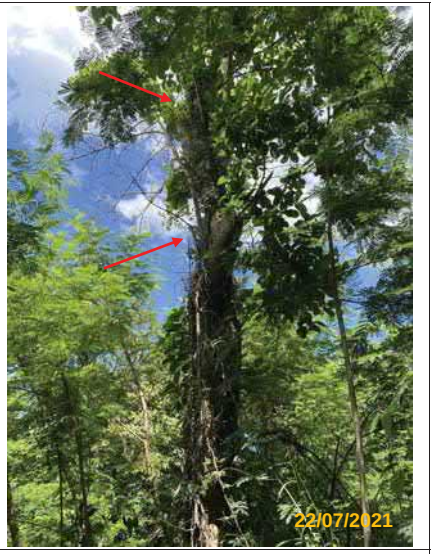
C10167

Condition of C10167 with dieback crown (~50%) observed, showing sign of natural decline. Old rusted metal fence found near base of trunk. No construction activity commenced nearby.

C13250

C13250 was found dead on site. Tree was found uprooted and fallen after Typhoon Cempaka (18- 20 July 2021). No construction activity commenced nearby.

C13734



C13734 was found to be in poor health with potential risk of falling. Dead branches and broken main branch found. Epiphytes and climbers found on trunk. No construction activity commenced nearby.

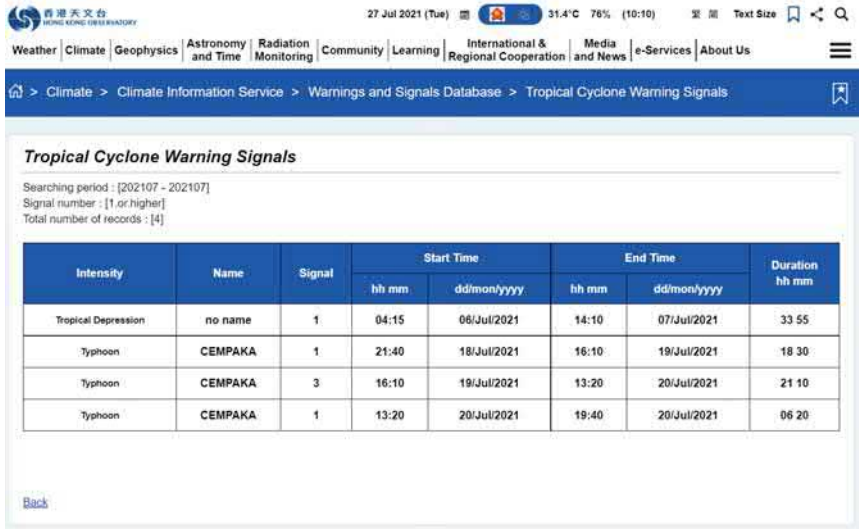
C13742

C13742 was found to be in poor health. Dieback crown (~50%) observed. Tree is in proximity to C13743 (to be retained) with overlapping crown and root zone. No construction activity commenced nearby.

C13916

C13916 was found dead on site. Tree was found uprooted and fallen after Typhoon Cempaka (18- 20 July 2021). No construction activity commenced nearby.

Record of Typhoon Cempaka (18-20 July 2021)



香港天文台 HONG KONG OBSERVATORY

27 Jul 2021 (Tue) 31.4°C 76% (10:10) Text Size

Weather | Climate | Geophysics | Astronomy and Time | Radiation Monitoring | Community | Learning | International & Regional Cooperation | Media and News | e-Services | About Us

> Climate > Climate Information Service > Warnings and Signals Database > Tropical Cyclone Warning Signals

Tropical Cyclone Warning Signals

Searching period : [202107 - 202107]
Signal number : [1 or higher]
Total number of records : [4]

Intensity	Name	Signal	Start Time		End Time		Duration hh mm
			hh mm	dd/mon/yyyy	hh mm	dd/mon/yyyy	
Tropical Depression	no name	1	04:15	06/Jul/2021	14:10	07/Jul/2021	33 55
Typhoon	CEMPAKA	1	21:40	18/Jul/2021	16:10	19/Jul/2021	18 30
Typhoon	CEMPAKA	3	16:10	19/Jul/2021	13:20	20/Jul/2021	21 10
Typhoon	CEMPAKA	1	13:20	20/Jul/2021	19:40	20/Jul/2021	06 20

Back

MEMO. 便箋

From: 由	Lemon Ling	*To:* 致	Mr. Simon Chan Yun Kan
Department: 部 門	Landscape Section	*Department:* 部 門	Site Office
Our Reference: 本部門檔案編號	SS/SL/LL/M000040/21 (Rev)	*Copy to:* 副本致	As Listed
Date: 日 期	5/11/2021	Total Page:	

Sai Sha Site C – Incident Report for Surveyed Trees after Typhoon Kompasu (Rev)

After recent incident of Typhoon Kompasu (12-13 October 2021), trees proposed to be retained/ transplanted were inspected on 18 October 2021 for status changes:

Trees Proposed to be Retained	:	5 nos
Trees Proposed to be Transplanted	:	2 nos
Total	:	**7 nos**

Attached please find the incident report (revised to include trees proposed to be retained/ transplanted only) for your reference and further pursuit.

If you have any queries, please contact our Mr. Raymond Chan Wai Man at 3766-6997.

Thank you for your kind attention.

Regards,

Lemon Ling
LL/RC/sw
Encl. as stated
c.c.

SHKP (42/F)	-	Mr. Spencer Lu Chee Yuen/ Mr. Sunny Cheung Chin Hung/ Mr. Grant Yuen Hok Lun	(w/o)
AXXA	-	Ms. Camay Lam	(w/o)
Accounts	-	Ms. Phoebe Lai Wai Ching	(w/o)

Incident Report for Surveyed Trees after Typhoon Kompasu (Rev)

Site : Sai Sha Site C

Date of Inspection : 18 October 2021

Summary : Status of trees proposed to be retained/ transplanted were inspected after Typhoon Kompasu on 12-13 October 2021. The following is a summary of tree found with status changes:

"***Tree Proposed to be Retained/ Transplanted***" as in Tree Survey Plan

Tree ID No.	Botanical Name	Chinese Name	Dia (mm)	Height (m)	Spread (m)	Proposed Action	Remarks
C1058	*Aleurites moluccana*	石栗	850	11	10	R	Broken branch found.
C2624	*Bischofia javanica*	秋楓	300	13	10	R	Broken branches found.
C2625	*Celtis sinensis*	朴樹	280	15	15	R	Broken branches found.
C3804	*Melia azedarach*	苦楝	130	7	5	T	Broken branch found.
C3901	*Celtis sinensis*	朴樹	280	11	7	T	Broken branch found.
C12623	*Alangium chinense*	八角楓	160	10	4	R	Broken branch found.
C13862	*Dimocarpus longan*	龍眼	240	10	6	R	Broken branches found.

Memo Ref : SS/SL/LL/M00040/21(Rev)

Prepared by : Sanfield Landscape Co. Ltd.

C1058

Broken branch was found on C1058.

C2624

Broken branches were found on C2624.

Sai Sha Site C
Incident Report for Surveyed Trees after Typhoon Kompasu

C2625

Broken branches were found on C2625.

C3804

Broken branch was found on C3804.

Sai Sha Site C
Incident Report for Surveyed Trees after Typhoon Kompasu

C3901

Broken branch was found on C3901.

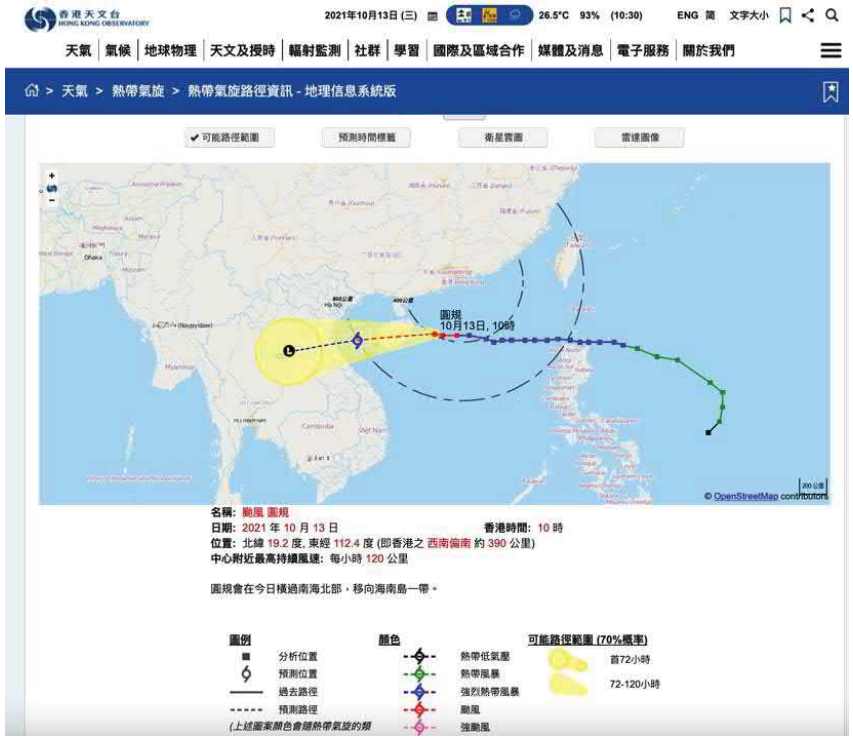
C12623

Broken branch was found on C12623.

C13862

Broken branches were found on C13862.

Record for Typhoon Kompasu (12-13 Oct 2021)



Appendix F

Traffic Impact Assessment (Site C)

(Consolidated Report based on Further Information submitted on 13 June 2022 & 27 July 2022)

(No adverse comments from traffic engineering perspective from Transport Department received in September 2022)

Section 16 Planning Application for Amendments to the Approved Development (Application No. A/NE-SSH/120-1) – Amendments to Recreation and Sports Centre with Ancillary Facilities in Site C

Traffic Impact Assessment

September 2022

AECOM

Table of Contents

Page

1 INTRODUCTION 1
1.1 Background 1
1.2 Objectives 1

2 PROPOSED DEVELOPMENT 1
2.1 Development Schedule (Same as the Approved Scheme) 1
2.2 Master Layout Plan (MLP) for Site C 2
2.3 Vehicular Access Arrangement 2
2.4 Internal Transport Facilities 2

3 EXISTING TRAFFIC CONDITION 7
3.1 Existing Road Network 7
3.2 Area of Influence 7
3.3 Traffic Survey 7
3.4 Existing Junction and Road Link Assessment 8

4 TRAFFIC FORECASTING 10
4.1 Design Year 10
4.2 Traffic Growth 10
4.3 Other Planned Developments 11
4.4 Trip Generation of the Proposed Development 12
4.5 2028 Reference and Design Traffic Flows 13
4.6 Sensitivity Test – Potential School at Sai Keng 13

5 TRAFFIC IMPACT ASSESSMENT 14
5.1 Junction and Road Links Assessment (Reference and Design Cases) 14

6 PUBLIC TRANSPORT ASSESSMENT 17
6.1 Public Transport Demand Assessment 17
6.2 Proposed Public Transport Facilities and Potential Services 17

7 PEDESTRIAN ASSESSMENT 18
7.1 Pedestrian Link Assessment 18
7.2 Pedestrian Crossing Assessment 19

8 SUMMARY AND CONCLUSION 21
8.1 Summary 21
8.2 Conclusion 22

List of Tables

Page

Table 2.1 Overall Development Schedule of the Comprehensive Development (Same as Approved Scheme) . 1
Table 2.2 Proposed Change of Outdoor Sports and Recreational Facilities in Site C 2
Table 2.3 Proposed Dimensional Requirement for Internal Transport Facilities 2
Table 2.4 Residential Car Parking Provision in Sites A and B 3
Table 2.5 Other Parking and Servicing Facilities Provision for Residential use in Sites A and B 3
Table 2.6 Non-residential Parking and Servicing Facilities Provision in Sites A and B 3
Table 2.7 Non-residential Parking and Servicing Facilities Provision in Site C 4
Table 2.8 Transport Facilities Provisions in Public Vehicle Park..... 4
Table 2.9 Transport Mode for Sports Facility Users (Tennis & Football) 5
Table 2.10 Transport Mode for Sports Facility Uses (Lacrosse)..... 5
Table 2.11 Transport Mode for Sports Facility Users (Cycling) 5
Table 2.12 Demand of Car Parking Provision for the Current Scheme in Site C 6
Table 3.1 Key Junction..... 7
Table 3.2 Key Road Link..... 7
Table 3.3 Comparison at Traffic flows at Sai Sha Road between Weekday and Saturday..... 8
Table 3.4 Existing Junction Performances 8
Table 3.5 Existing Road Link Performances 9
Table 4.1 Annual Traffic Census..... 10
Table 4.2 2019-based TPEDM Planning Data 10
Table 4.3 Future Committed / Planned Development in vicinity 11
Table 4.4 Development Trip Rates & Trip End Summary (Approved TIA)..... 12
Table 4.5 Development Traffic Flow (Exclude Sports & Recreation Centres)..... 12
Table 4.6 Proposed Change of Facilities in Sports & Recreation Centres 12
Table 4.7 Trip Generation Rates of Golf Driving Range..... 12
Table 4.8 Development Traffic Flows (Sports & Recreation Centres) 13
Table 4.9 Overall Development Traffic Flows..... 13
Table 5.1 2028 Junction Performance..... 14
Table 5.2 2028 Road Link Performance 15
Table 6.1 Forecasted Public Transport Demand and Required Transport Facilities at Site A and Site B 17
Table 7.1 Pedestrian Trip Generation Rate 18
Table 7.2 Assumed Modal Split 18
Table 7.3 Pedestrian trip Generation (pph) for Proposed Development..... 18
Table 7.4 Summary of Pedestrian Flows at Footbridges / Critical Footpaths 19
Table 7.5 Description of Level-of-Service (LOS)..... 19
Table 7.6 Summary of Pedestrian Flows at Crossing 19

List of Figures

1.1 SITE LOCATION PLAN
2.1 PROPOSED MASTER LAYOUT PLAN OF SITE C
2.2 ACCESS ARRANGEMENT FOR THE PROPOSED DEVELOPMENT
3.1 KEY JUNCTIONS AND ROAD LINKS
3.2 2021 OBSERVED TRAFFIC FLOWS (SHEET 1 OF 2)
3.3 2021 OBSERVED TRAFFIC FLOWS (SHEET 2 OF 2)
3.4 EXISTING JUNCTION LAYOUT OF SAI SHA ROAD / HANG FAI STREET (J1)
3.5 EXISTING JUNCTION LAYOUT OF SAI SHA ROAD / HANG HONG STREET (J2)
3.6 EXISTING JUNCTION LAYOUT OF SAI SHA ROAD / ON YUEN STREET / ON LUK STREET (J3)
3.7 EXISTING JUNCTION LAYOUT OF SAI SHA ROAD / ON CHIU ROAD / MA ON SHAN ROAD (J4)
3.8 EXISTING JUNCTION LAYOUT OF SAI SHA ROAD / KAM YING ROAD (J5)
3.9 EXISTING JUNCTION LAYOUT OF SAI SHA ROAD / SHA ON STREET / WU KAI SHA ROAD (J6)
3.10 EXISTING JUNCTION LAYOUT OF SAI SHA ROAD / NIN FUNG ROAD / NIN WAH ROAD (J7)
3.11 EXISTING JUNCTION LAYOUT OF SAI SHA ROAD / ACCESS ROAD TO SAI O (J8)
3.12 EXISTING LAYOUT FOR JUNCTION OF SAI SHA ROAD / ACCESS ROAD TO KWUN HANG (J9/J9A) AND SAI SHA ROAD / ACCESS ROAD TO CHE HA (J9B)
3.13 EXISTING JUNCTION LAYOUT OF SAI SHA ROAD / ACCESS ROAD TO MA KWU LAM (J10)
3.14 EXISTING JUNCTION LAYOUT OF SAI SHA ROAD / ACCESS ROAD TO TSENG TAU (J11)
3.15 EXISTING JUNCTION LAYOUT OF SAI SHA ROAD / TAI MONG TSAI ROAD (J14)
4.1 FUTURE OTHER DEVELOPMENTS
4.2 VEHICULAR ROUTE FOR DEVELOPMENT TRAFFIC
4.3 2028 REFERENCE TRAFFIC FLOWS (APPROVED SCHEME) (SHEET 1 OF 2)
4.4 2028 REFERENCE TRAFFIC FLOWS (APPROVED SCHEME) (SHEET 2 OF 2)
4.5 2028 DESIGN TRAFFIC FLOWS (WITH CURRENT PROPOSED DEVELOPMENT SCHEME) (SHEET 1 OF 2)
4.6 2028 DESIGN TRAFFIC FLOWS (WITH CURRENT PROPOSED DEVELOPMENT SCHEME) (SHEET 2 OF 2)
5.1 FUTURE JUNCTION LAYOUT OF SAI SHA ROAD / NIN FUNG ROAD / NIN WAH ROAD (J7)
5.2 FUTURE JUNCTION LAYOUT OF SAI SHA ROAD / ACCESS ROAD TO SAI O (J8)
5.3 FUTURE JUNCTION LAYOUT OF SAI SHA ROAD / ACCESS ROAD TO KWUN HANG / ACCESS ROAD TO CHE HA (J9)
5.4 FUTURE JUNCTION LAYOUT OF SAI SHA ROAD / ACCESS ROAD TO MA KWU LAM / ACCESS ROAD TO APPLICATION SITE A (J10)
5.5 FUTURE JUNCTION LAYOUT OF SAI SHA ROAD / ACCESS ROAD TO TSENG TAU (ROAD L1) (J11)
5.6 FUTURE JUNCTION LAYOUT OF ACCESS ROAD TO TSENG TAU (ROAD L1) / ACCESS ROAD TO APPLICATION SITE B (J12)
5.7 FUTURE JUNCTION LAYOUT OF ACCESS ROAD TO TSENG TAU (ROAD L1) / ACCESS ROAD TO APPLICATION SITE B / ACCESS ROAD TO APPLICATION SITE C (J13)
7.1 LOCATION PLAN FOR KEY PEDESTRIAN LINKS
7.2 SURVEY LOCATIONS FOR KEY PEDESTRIAN LINKS
7.3 PEDESTRIAN TRIPS ROUTINGS FOR PROPOSED PRIMARY SCHOOLS IN APPLICATION SITE C
7.4 PEDESTRIAN TRIPS ROUTINGS FOR RESIDENTIAL DEVELOPMENTS IN APPLICATION SITE A AND SITE B

ANNEXES

ANNEX A JUNCTION CAPACITY CALCULATION SHEETS
ANNEX B LOCATIONS OF EXISTING SPORTS FACILITIES
ANNEX C LOCATION OF SELECTED ATC STATIONS
ANNEX D LOCATION / INFORMATION OF COMMITTED / PLANNED DEVELOPMENTS & BOUNDARY OF MA ON SHAN PLANNING DATA DISTRICT
ANNEX E DEVELOPMENT FLOW OF COMMITTED / PLANNED DEVELOPMENTS

1 INTRODUCTION

1.1 Background

1.1.1 The Application Site is the subject of an approved planning application No. A/NE-SSH/120-1 ("Approved Scheme") for proposed comprehensive residential and recreational development including government, institution or community (G/IC) facilities with minor relaxation of gross floor area and building height restrictions which was approved by the Director of Planning, under the delegated authority of the Town Planning Board (the Board), under Section 16A of the Town Planning Ordinance in October 2020. The site location is shown in **Figure 1.1**.

1.1.2 With the commitment to further enhance user experience in Site C, which is intended to be a recreational hub in Sai Sha, the subject Section 16 planning application is submitted to reflect the proposed diversification of recreational facilities to be provided therein by replacing a golf driving range and a mini driving range/ game area/ recreation & sports centre with other outdoor sports and recreational facilities to better serve the community in the Sai Sha area.

1.1.3 It should be noted that, **the subject matter of the current application is Site C only**. The layout and development parameters for Site A and Site B are entirely identical to those approved under planning application No. A/NE-SSH/120-1. The inclusion of Site A and Site B as part of the Application Site is to comply with the statutory requirement of the subject "Comprehensive Development Area" ("CDA") zone under the Notes of Shap Sz Heung Outline Zoning Plan which requires the submission of a Master Layout Plan covering the entire "CDA" zone for the approval of the Board.

1.1.4 AECOM Asia Company Limited was commissioned by the Applicant to conduct a Traffic Impact Assessment (TIA) Report in support of Section 16 Planning Application for the proposed change of recreational facilities in Site C.

1.2 Objectives

1.2.1 With no change to the development parameters and layout to the Approved Scheme for Site A and Site B under A/NE-SSH/120-1, the purpose of this TIA Report is to compare the Current Scheme with the Approved Scheme for Site C only to examine the potential traffic impacts due to the proposed replacement of a large outdoor sports & recreational use (i.e. a golf driving range) with some other smaller outdoor sports & recreational uses (e.g. sports field, ball court, leisure pool, training path for cycling etc.), and advise on parking provisions in Site C with the Current Scheme as stated in **Table 2.2**.

2 PROPOSED DEVELOPMENT

2.1 Development Schedule (Same as the Approved Scheme)

2.1.1 As in the Approved Scheme, the comprehensive development is divided into three parts, Site A and Site B are planned for residential development, while Site C is planned for recreational and Government, Institution or Community (G/IC) facilities. The overall development schedule of the Current Scheme would be the same as the Approved Scheme as presented in **Table 2.1**.

Table 2.1 Overall Development Schedule of the Comprehensive Development (Same as Approved Scheme)

Items/ Site	Overall Development Schedule (Same as Application No. A/NE-SSH/120-1)			
	Site A	Site B	Site C	Total
Development Site Area	115,559 m^2	164,366 m^2	366,983 m^2	646,908 m^2
Domestic GFA	240,250 m^2	297,573 m^2	-	538,213 $m^{2(1)}$
No. of Blocks	17 Blocks	29 Blocks	-	46 Blocks
No. of Flats	4,300	5,400	-	9,700
Average Flat Size	55.87 m^2	55.11 m^2	-	55.49m^2
Population	12,900	16,200	-	29,100
Recreation facilities	6,006 m^2	7,440 m^2		13,446 m^2
Sports & Recreation Centres with Ancillary Facilities	-	-	17,500m^2 including	17,500 m^2 including
Sports Centre & Ancillary Facilities			5,500 m^2	5,500 m^2
Recreation Centre & Ancillary Facilities			8,500 m^2	8,500 m^2
Retail & F&B Facilities			3,500 m^2	3,500 m^2
Commercial	6,788 m^2 including	5,289 m^2 including	-	12,077m^2 including
Kindergarten/ nursery	One	One	-	Two(2)
Church	1,500 m^2	-	-	1,500 m^2
Transport Interchange	4,500 m^2	4,500 m^2	-	9,000 m^2
Primary School(4)	-	-	Two	Two
Social Welfare Centre	-	-	One (3)	One (3)
Public Vehicle Park			9,000 m^2	9,000 m^2

Notes:

(1) Including 390m^2 for two existing houses in Site C to be retained
(2) kindergarten / nursery of not less than 6-classroom each
(3) Including Neighbourhood Elderly Centre (NEC); 100-place Residential Care Home for the Elderly (RCHE); 30-place Day Care Unit (DCU); 60-p Special Child Care Centre (SCCC); District Support Centre for Persons with Disabilities (DSC)
(4) There is no intention to provide non-local programme at the subject primary school at the current stage and in this planning submission.

2.2 Master Layout Plan (MLP) for Site C

2.2.1 The proposed Master Layout Plan (MLP) for Site C is illustrated in **Figure 2.1**. As mentioned in **paragraph 1.1.2**, a golf driving range and a mini driving range / game area / recreation & sports centre with ancillary facilities in Site C are proposed to be replaced with a variety of outdoor sports, recreational and leisure facilities to better serve the future community in the Sai Sha area. The proposed change in outdoor sports and recreational facilities and the corresponding number of visitors for the Sports and Recreation facilities in Site C are presented in **Table 2.2**.

Table 2.2 Proposed Change of Outdoor Sports and Recreational Facilities in Site C

Indicative Outdoor Sports and Recreational Facilities (Subject to Detailed Design)	Approved Scheme (A/NE-SSH/120-1) (a)		Current Scheme (b)		Difference (b)-(a)
	No. of Facilities Provided	Assumed No. of Visitors (a)	No. of Facilities Provided	Assumed No. of Visitors (b)	
Golf Driving Range(5)	86 bays	172	70 bays	140	-32
Tennis Court(1)(5)	3 Courts	15	5 Courts (around 669 m^2 each)	25	+10
Football Court(2)(5)	-	-	One (around 8,160m^2)	50	+50
Lacrosse(3)(5)	-	-	One (around 3,471m^2)	15	+15
Surfing Pool(5)	-	-	One (around 320m^2)	2 (1 person surfing and 1 coach)	+2
Training Path for Cycling(4)(5)	-	-	One (around 2km Long)	30	+30
Total	**-**	**187**	**-**	**262**	**+75**

Remark (1) Based on the observations at Yuen Wo Playground Tennis Court
(2) Based on the observations at Yuen Wo Playground Football Court & Jockey Club HKFA Football Training Centre at Tseng Kwan O, the number of participants and visitors is about 30. For a typical footpath match, there are 11 players, 5 substitutes and 3 coaches per each team. On top of two teams (i.e. 38 people), there are 3 referees. In view that some participants may bring their family members or friends, an additional of 20% buffer is included. Hence, a total of 50 visitors (i.e. 41 x 1.2 = 50) is adopted for assessment.
(3) Based on the Observations for Lacrosse Activities at Boundary Steet Recreation Ground and Club de Recreio.
(4) From on-site observation, there were 30 and 20 visitors at Po Kong Village Road Park Cycling and The Hong Kong Velodrome respectively. For conservative approach, 30 nos. of visitors is adopted for assessment purpose.
(5) No audience is allowed.

2.3 Vehicular Access Arrangement

2.3.1 Separated vehicular accesses would be provided for Site A, Site B and Site C respectively as illustrated in **Figure 2.2**. There is no amendment proposed in the Current Scheme for the vehicular access. Thus, there will be no change to the vehicular access under the Approved Scheme.

2.3.2 Owner of Site C will commence to operate the Sports and Recreation Centres[1] after opening of widened Sai Sha Road between Nin Wah Road and Tseng Tau Road[2].

2.4 Internal Transport Facilities

2.4.1 The internal transport facilities provision for Site A, B and C will follow the requirements as given in the Lease.

2.4.2 The dimensional provision requirements of the internal transport facilities are referred to the Lease requirement and are listed as follows.

Table 2.3 Proposed Dimensional Requirement for Internal Transport Facilities

Facilities	Size (Length x Width x Height) (minimum)
General*:	
Private Car Parking	5m x 2.5m x 2.4m
Private Car Parking (Disabled)	5m x 3.5m x 2.4m
Motorcycle Parking Spaces	2.4m x 1m x 2.4m
Loading and Unloading Bays (HGV)	11m x 3.5m x 4.7m
Loading and Unloading Bays (LGV)	7m x 3.5m x 4.7m
Bicycle Parking Spaces	1.8m x 0.5m x 2.0m
Primary School Sites:	
Private Car Parking	5m x 2.5m x 2.4m
Lay-by for taxis and private cars	5m x 2.5m x 2.4m
Lay-by for school buses	12m x 3.5m x 3.8m

[1] Site C should be opened after the completion of the proposed improvement works identified in TIA for the proposed comprehensive residential and recreational development including G/IC facilities with minor relaxation of gross floor area and building height restrictions under S16A planning application (A/NE-SSH/120-1). The proposed improvement works means completion of carriageway widening of Sai Sha Road from single 2-lane to dual 2-lane, road junctions, associated traffic aids and footbridge instead of completion of all other works such as noise barriers.

Facilities	Size (Length x Width x Height) (minimum)
Kindergarten / Nursery:	
Private Car Parking	5m x 2.5m x 2.4m
Lay-by for school buses	12m x 3.5m x 3.8m
Lay-by for taxis and private cars	5m x 2.5m x 2.4m
Social Welfare Centre:	
Parking for Private Light bus	8m x 3.0m x 3.3m(1)
Parking for 14-seater van	8m x 3.0m x 3.3m (1)
Shared lay-by for Private Light Bus and Ambulance	12m x 3.5m x 3.8m (1)
Parking for 48-seat coach	12m x 3.5m x 3.8m(1)
Public Vehicle Park	
Private Car Parking	5m x 2.5m x 2.4m
Private Car Parking (Disabled)	5m x 3.5m x 2.4m
Light Bus Layby	17m x 3.5m x 3.8m
Bus Parking	12m x 3.5m x 3.8m

Notes:
* applicable to residential (Site A & B), recreation facilities (Site A & B), commercial facilities, recreation centre and sports centre (Site C)
(1) As required by Social Welfare Department;

Residential Parking Provision

2.4.3 **Table 2.4** summarizes the required residential parking provision based on flat mix as given in the Approved Scheme (A/NE-SSH/120-1) for the purpose of this planning application.

Table 2.4 Residential Car Parking Provision in Sites A and B

Flat size (FS)	Site A No. of Flats(1)	Site B No. of Flats(1)	Residential Carpark Ratio Under Lease Requirement 1 space per	Provision in Site A(2)	Provision in Site B(2)
FS ≤ 40m²	1,038	724	7.80 flats	**134**	**93**
40m² < FS ≤ 70m²	2,485	3,773	4.45 flats	**559**	**848**
70m² < FS ≤ 100m²	516	535	1.65 flats	**313**	**325**
100m² < FS ≤ 130m²	176	298	0.78 flats	**226**	**383**
130m² < FS ≤ 160m²	73	58	0.57 flats	**129**	**102**
FS > 160m²	12	12	0.45 flats	**27**	**27**
Total	**4,300**	**5,400**		**1,388(3)**	**1,778 (3)**
Site A & Site B Total	***9,700***				***3,166(3)***

Notes:
(1) Flat mix is not for approval in this submission and subject to change in later detailed design stage
(2) Figures are rounded up to nearest number
(3) The allowable design flexibility (i.e. ± not more than 5% of required provision but not more than 50 spaces) and demand flexibility (i.e. ± not more than 5% of required provision) for car parking spaces provision under lease is not yet included but to be considered in later detailed design stage.

Other Parking and Servicing Facilities Provision for Residential Use

2.4.4 **Table 2.5** summarizes the requirements (under lease document for TPTL 253 executed on 21 October 2021) and provision for residential visitors' parking, motorcycle parking, bicycle parking and loading/unloading.

Table 2.5 Other Parking and Servicing Facilities Provision for Residential use in Sites A and B

Transport Facilities	Lease Requirements(1)	Site A Parameter	Site A Provision	Site B Parameter	Site B Provision
Visitors' Private Car Parking Spaces	5 spaces per block of more than 75 residential units	16 blocks with more than 75 residential units	80	24 blocks with more than 75 residential units	120
Motorcycle Parking Spaces	1 space per 100 residential units	4,300 units	43 (3)	5,400 units	54(3)
Bicycle Parking Spaces	1 space for every 8 flats of size less than 70m²	3,523 flats	441(2)	4,497flats	563(2)
Loading and Unloading Bays	1 space for every 800 flats subject to min. 1 bay per block	17 blocks	17	29 blocks	29

Notes:
1) Based on the current lease required (lease document for TPTL 253 executed on 21 October 2021).
2) Figures are rounded up to nearest number
3) The allowable demand flexibility (i.e. ± not more than 5% of required provision) for residential motorcycle parking spaces provision under lease is not yet included but to be considered in later detailed design stage.

Non-residential Parking and Servicing Facilities in Sites A and B

2.4.5 Apart from residential use, the Proposed Development will also provide retail, kindergarten / Nursery, recreation facilities, etc, the corresponding requirement and provision of parking and servicing facilities are summarised in **Table 2.6** (based on lease document for TPTL 253 executed on 21 October 2021).

Table 2.6 Non-residential Parking and Servicing Facilities Provision in Sites A and B

Transport Facilities	Lease Requirements(1)	Parameter Site A	Parameter Site B	Provision Site A	Provision Site B
Commercial					
Private Car Parking Spaces	First 2,000m² GFA: 1 space per 40 m² GFA Remaining GFA: 1 space per 150 m² GFA	5,788m² GFA(3)	4,289m² GFA(3)	76(2)	66(2)
Motorcycle Parking Spaces	10% of total number of car parking spaces	76 car spaces	66 car spaces	8	7

Transport Facilities	Lease Requirements[1]	Parameter		Provision	
		Site A	Site B	Site A	Site B
Loading/ Unloading Bays[4]	1 loading/ unloading bay for goods vehicles for every 800m² GFA	5,788m² GFA[3]	4,289m² GFA[3]	8[2]	6[2]
Kindergarten / Nursery					
Private Car Parking Spaces	0.4/classroom (CR)	6-CR		3[2]	
Private Car / Taxi Pick Up / Drop Off	1.8/classroom	6-CR		11[2]	
School Bus Layby	2 school bus	6-CR		2 school bus	
Recreation Facilities					
Private Car Parking Spaces	20 spaces for Site A 20 spaces for Site B	-	-	20	20
Loading/ Unloading Bays	2 spaces for Site A 1 space for Site B	-	-	2	1

Notes:

(1) Based on the current lease required (lease document for TPTL 253 executed on 21 October 2021).
(2) Figures are rounded up to nearest number.
(3) Non domestic GFA, excluding Kindergarten use
(4) 65% for the use of LGV and 35% for the use of HGV

Non-residential Parking and Servicing Facilities Provision in Site C

2.4.6 The Site C will provide retail, primary school sites, sports centre, social welfare centre etc, the corresponding requirement and provision of parking and serving facilities are summarized in **Table 2.7** (based on lease document for TPTL 157 RP executed on 21 October 2021)

Table 2.7 Non-residential Parking and Servicing Facilities Provision in Site C

Transport Facilities	Lease Requirements[1]	Parameter	Provision
Sports & Recreation Centre with Ancillary Facilities			
Private Car Parking Spaces	1 space per 100 m² GFA	14,000m² GFA	140
Loading/ Unloading Bays (HGV)	2 bays minimum	-	2
Ancillary Retail & F&B Facilities (Commercial)			
Private Car Parking Spaces	First 2,000m² GFA: 1 space per 40m² GFA Remaining GFA: 1 space per 150m² GFA	3,500m² GFA	60[2]
Motorcycle Parking Spaces	10% of total number of car parking spaces	60	6
Loading/ Unloading Bays[3]	1 loading/ unloading bay for goods vehicles for every 800m² GFA	3,500m² GFA	5[2]
2 nos. of Primary School Sites[4]			
Private Car Parking Spaces	1 space per 4 classrooms (CR)	30-CR	8 / school
Lay-by for taxis and private cars	1 lay-by for every 2 classrooms	30-CR	15 / school
Lay-by for school buses	3 lay-bys minimum	-	3 / school
Social Welfare Centre[5][6]			
Parking for Private Light bus	2 (RCHE cum DCU)[7]	-	2
Parking for 14-seater van	1 (DSC) [7]	-	1
Shared lay-by for Private Light Bus and Ambulance	1 (DSC, RCHE cum DCU, SCCC) [7]	-	1
Parking for 48-seat coach	1 (SCCC)[7]	-	1

Notes:

(1) Based on the current lease required (lease document for TPTL 157 RP executed on 21 October 2021).
(2) Figures are rounded up to nearest number.
(3) 65% for the use of LGV and 35% for the use of HGV
(4) Provisions are listed for reference only and subject to the further study from the responsible departments/ parties who would build the schools.
(5) Neighbourhood Elderly Centre (NEC); 100-place Residential Care Home for the Elderly cum 30-place Day Care Unit (RCHE cum DCU); 60-p Special Child Care Centre (SCCC); District Support Centre for Persons with Disabilities (DSC)
(6) General layby (10m long) will be provided at Tseng Tau Road in vicinity to the Social Welfare Centre to facilitate the possible pick up/ drop off demand to be generated from the visitors from public and occasional need of the Social Welfare Centre
(7) Requirement as required by Social Welfare Department

Public Vehicle Park in Site C

2.4.7 Under the Lease Condition of TPTL 157 RP executed on 21 October 2021, a public vehicle park would be provided in Site C, which shall be opened for the public use at all time. The public vehicle park would be privately managed and to serve the public.

2.4.8 According to the lease condition, the required provisions of the public vehicle park are 165 car parking spaces (including 5 spaces serving the Social Welfare Centre), 20 bus parking spaces and 2 single-width light bus lay-bys in size of 17m x 3.5m each, which are provided for picking up and setting down of passengers. It is summarised in **Table 2.8**

Table 2.8 Transport Facilities Provisions in Public Vehicle Park

Item	Lease Requirement	Social Welfare Centre Demand to be served	Total Provision
Light Bus Layby (17m x 3.5m x 3.8m)	2	-	2
Private Car Parking (5m x 2.5m x 2.4m)	160	5	165
Bus Parking (12m x 3.5m x 3.8m)	20	-	20

Evaluation on the Adequacy of the Current Car Parking Provision for the Proposed Amendment to the Recreational and Leisure Facilities in Site C

2.4.9 In view that there is a replacement of a large golf driving range with other smaller size outdoor sports and recreational facilities in Site C to better meet the local need of the future community in the Sai Sha area, the corresponding internal transport facilities provision was reviewed. The breakdown of current provision for the Recreation & Sports Centre with Ancillary Facilities according to the executed Lease is listed in **Table 2.7**. A total of 200 carparking spaces (excluding public vehicle park) would be provided in Site C in the Current Scheme to comply with Lease requirements.

2.4.10 To evaluate the adequacy of the current car parking provision for the proposed amendment to the recreational and leisure facilities in Site C, interview surveys were carried out at existing sports facilities with similar nature to study the transport modes. The locations of those existing sports, facilities are shown in **Annex B**.

2.4.11 The Sports & Recreation Centre would be well served by public transport as a transport interchange will be provided in Site B which is located in close vicinity. In addition, there are about 29,100 residents living in Sites A/B in the vicinity of the Sports & Recreation Centre. It is anticipated that the target users of the Sports & Recreation Centre would be mainly the residents in Sites A/B for most of the sports facilities. Taking into consideration the subject site is (1) distant from the railway; (2) close to residential buildings; and (3) located in Ma On Shan (New Territories East), interview survey was carried out on sports facility with similar nature in New Territories East, i.e. Yuen Wo Playground with Wo Che Estate / Lek Yuen Estate. For a more conservative approach, interview survey was also carried out at Jockey Club HKFA Football Training Centre at Tseung Kwan O which was less convenient to access, and more remote from residential developments. The survey results are summarised in **Table 2.9**. Furthermore, an occupancy of 2 passengers per private car/taxi is also identified from the interview survey results.

Table 2.9 Transport Mode for Sports Facility Users (Tennis & Football)

Survey Location	Type of Facilities	Transport Mode		
		Public Transport / Walk	Taxi	Private Car
Yuen Wo Playground (1)	Tennis & Football	83%	6%	11%
Jockey Club HKFA Football Training Centre (2)	Football	60%	20%	20%
Adopted		**60%**	**20%**	**20%**

Notes:

(1) The survey was carried out on a typical weekday during PM peak hours in October 2021.
(2) The survey was carried out on a typical weekday during PM peak hours in May 2022.

2.4.12 For Lacrosse activities, it is found that the existing facilities available for Lacrosse are limited in Hong Kong. Two popular locations for the said activities are identified for conducting interview surveys – one is Boundary Street Recreation Ground while another location is Club de Recreio at Jordan. The survey results are summarised in **Table 2.10**. Furthermore, an occupancy of 1.5 passengers per private car / 1 passenger per taxi are also identified from the interview survey results.

Table 2.10 Transport Mode for Sports Facility Uses (Lacrosse)

Survey Location	Type of Facilities	Transport Mode		
		Public Transport / Walk	Taxi	Private Car
Boundary Street Recreation Ground (1)	Lacrosse	64%	9%	27%
Club de Recreio (2)	Lacrosse	27%	26%	47%
Adopted		**27%**	**26%**	**47%**

Notes:

(1) The survey was carried out on a typical weekday during PM peak hours in April 2022.
(2) The survey was carried out on a typical weekend in June 2022.

2.4.13 For cycling facility users, interview surveys were carried out Po Kong Village Road Park Cycling and The Hong Kong Velodrome at Tseung Kwan O. The Po Kong Village Road Park Cycling are open for public use; while The Hong Kong Velodrome at Tseung Kwan O is mainly for training purpose. Interview survey was carried out at the above locations and the results are summarised in **Table 2.11**. Furthermore, an occupancy of 3.5 passengers per private car / 2.5 passengers per taxi are also identified from the interview survey results of Po Kong Village Road Park Cycling. For The Hong Kong Velodrome, all visitors travelled by private car and an occupancy of 4 passengers per private car is also identified from the interview survey.

Table 2.11 Transport Mode for Sports Facility Users (Cycling)

Survey Location	Type of Facilities	Transport Mode		
		Public Transport / Walk	Taxi	Private Car
Po Kong Village Road Park Cycling(1)	Cycling	51%	2%	47%
Hong Kong Velodrome(2)	Cycling	0%	0%	100%(3)
Adopted		**0%**	**0%**	**100%**

(1) The survey was carried out on a typical weekend in May 2022.
(2) The survey was carried out a typical weekday during PM peak hours in June 2022.
(3) All come from Hong Kong Sports Institute by private cars.

2.4.14 The demand of car parking provision for the Current Scheme are reviewed based on the proposed change and diversification of outdoor recreational facilities as presented in **Table 2.12**.

Table 2.12 Demand of Car Parking Provision for the Current Scheme in Site C

Indicative Type of Facilities	Current Scheme	
	Indicative Parameters	Required Provision
Car Parking Spaces		
Golf Driving Range	70 driving bays (2,000m^2 GFA)	50 spaces(1)
Ball Court (Indoor)	886 seats (3,500m^2 GFA)	36 spaces(2)
Cinema	320 seats (1,500m^2 GFA)	16 spaces(3)
Tennis Courts / Football Court	75 population	8 spaces(4)
Lacrosse	15 population	5 spaces(5)
Surfing	2 population	2 spaces(6)
Training Path for Cycling (outdoor)	30 population	8 spaces(7)
Ancillary Facilities for Sports & Recreation Centre(8)	7,000 m^2 GFA(8)	47 spaces(9)(10)
Retail & F&B Facilities	3,500 m^2 GFA	24 spaces(10)
Total	**-**	**196**

Notes:

(1) The provision is made referenced to the approved planning application of a Temporary Golf Driving Range (Application No. A/NE-SSH/132), of which 77 nos. of car parking spaces are provided for 108 driving bays (i.e. 1 parking space per 1.4 driving bay).
(2) The provision is made referenced to the result of car parking demand survey at the existing Lai King Sports Centre (with 250 seats) of which 9 out of 10 car parking spaces were occupied during event. (ie 1 parking space per 28 seats). As a conservative approach, 10 car parking spaces per 250 seats is adopted for assessment.
(3) According to the Hong Kong Planning Standard and Guidelines (HKPSG), the parking requirement of cinema is 0-1 parking space per 20 seats. Upper end requirement (i.e. 1 space per 20 seats) is adopted.
(4) The car parking provision is calculated based on the interview survey (i.e. 75 x 20% / 2 = 8).
(5) The car parking provision is calculated based on the interview survey (i.e. 15 x 47% / 1.5 = 5).
(6) Assume 100% use private car.
(7) The car parking provision is calculated based on the interview survey (i.e. 30 x 100% / 4.5 = 8).
(8) The overall GFA for Sports & Recreation Centre is 17,500 m^2. By excluding gold driving range, ball court (indoor), cinema and Retail & F&B Facilities, the remaining GFA is 7,000 m^2 (i.e. 17,500 – 2,000 – 3,500 – 1,500 – 3,500).
(9) The GFA are mainly changing rooms, activities rooms, ticket office and shops. High end car parking requirements for retail use according to the prevailing parking standards of HKPSG (amendment / version updated in Aug 2021) is adopted to represent worse scenario of traffic terms.
(10) According to the prevailing parking standards of HKPSG (amendment / version updated in Aug 2021), the requirements for retail use is 1 space per 150-300m^2 GFA. Upper end requirement (i.e. 1 space per 150m^2) is adopted.

2.4.15 With the proposed change in outdoor sports and recreational facilities, there would be increase in car parking demand for the sports and recreational facilities by 32 spaces; while the car parking demand for the commercial portion would decrease by 36 due to the differences of the parking demand for commercial portion under 1) the prevailing parking standard of HKPSG and 2) the executed lease which was based on an older edition with a rate as specified in **Table 2.7**.

2.4.16 Since the required car parking provision of the approved scheme under planning application no. A/NE-SSH/120-1 is 200 spaces, whereas the parking demand of the current scheme is 196 spaces. Hence, the proposed change would not induce additional parking demand to the development.

3 EXISTING TRAFFIC CONDITION

3.1 Existing Road Network

3.1.1 The Application Site is currently served by Sai Sha Road, which is a two-way single 2-lane carriageway for its eastern section to the east of Cheung Muk Tau Roundabout (Nin Fung Road / Nin Wah Road). For the remaining western section of Sai Sha Road, it is a dual 2-lane carriageway heading towards Ma On Shan town centre and connects with Ma On Shan Road at its western end.

3.1.2 Ma On Shan Bypass is a dual 2-lane carriageway at the outskirt of Ma On Shan New Town connecting Ma On Shan Road near Heng On Estate at its western end, and to Sai Sha Road in Cheung Muk Tau at its eastern end. The bypass provides fast and direct access linking the western and eastern parts of Ma On Shan New Town without passing through the town centre.

3.1.3 Sai Sha Road (between Nin Wah Road and Access Road to Tseng Tau) is now under construction and would be widen from single 2 lane into dual 2 lane.The existing road network together with the future road layout under Sai Sha Road widening projects is diagrammatically shown in **Figure 3.1**.

3.2 Area of Influence

3.2.1 Key junction and road link in the vicinity of the Application Site and Ma On Shan area have been identified for the purpose of this TIA taking into account Sai Sha Road Widening scheme, they are listed in **Table 3.1**and **Table 3.2** respectively.

Table 3.1 Key Junction

Junction No.	Location		
		Existing (Before Sai Sha Road Widening Project)	Future (under Sha Sai Road Widening Project)
J1	Sai Sha Road / Hang Fai Street	RA	No change
J2	Sai Sha Road / Hang Hong Street	S	No change
J3	Sai Sha Road / On Yuen Street / On Luk Street	S	No change
J4	Sai Sha Road / Ma On Shan Road/On Chiu Street	S	No change
J5	Sai Sha Road / Kam Ying Road	S	No change
J6	Sai Sha Road / Wu Kai Sha Road / Sha On Street	RA	No change
J7	Sai Sha Road / Nin Wah Road / Nin Fung Road	RA	No change
J8*	Sai Sha Road / Access Road to Sai O	P	S
J9*	Sai Sha Road / Access Road to Kwun Hang (J9a) & Sai Sha Road / Access Road to Che Ha (J9b)	P	S
J10*	Sai Sha Road / Access Road to Ma Kwu Lam/ Access Road to Site A*	P	RA
J11*	Sai Sha Road / Road L1*	P	RA
J12*	Road L1* / Access (Residential) Road to Site B *	–	P
J13*	Road L1* / Access Road to Site C / Access Road to Site B *	–	RA
J14	Sai Sha Road / Tai Mong Tsai Road	RA	No change

Notes:
* New road / junction to be formed in Sai Sha Road Widening scheme
\+ RA = Roundabout; P = Priority Junction; S = Signalized Junction;
(1) J9a is the existing priority junction at Sai Sha Road / Access Road to Kwun Hang. J9b is the existing junction at Sai Sha Road / Access Road to Che Ha. With the Sai Sha Road widening works, J9a and J9b would be combined, forming a new signalized junction J9 – Sai Sha Road / Access Road to Kwun Hang / Access Road to Che Ha.

Table 3.2 Key Road Link

Link No.	Road Section	Config.+
Sai Sha Road		
L1	Between Hang Fai Street and Hang Hong Street	D3
L2	Between Hang Hong Street and On Yuen Street	D3
L3	Between On Yuen Street and On Chiu Street	D3
L4	Between On Chiu Street and Kam Ying Road	D3
L5	Between Kam Ying Road and Wu Kai Sha Road	D2
L6	Between Ma On Shan Bypass and Nin Wah Road	D2
L7*	Between Nin Wah Road and Access Road to Sai O	S2 (D2)
L8*	Between Access Road to Sai O and Access Road to Che Ha	S2 (D2)
L9*	Between Access Road to Che Ha and Access Road to Site A	S2 (D2)
L10*	South of Access Road to Tseng Tau	S2 (D2)
L11	North of Tai Mong Tsai Road	S2
Ma On Shan Bypass		
L12	Between Sai Sha Road and Ma On Shan Road	D3 / D2

Notes:
* Section of Sai Sha Road to be modified in Sai Sha Road Widening scheme
\+ S2 = Single 2-lane carriageway; D2 = Dual 2-lane carriageway; D3 = Dual 3-lane carriageway
( ) denotes future road configuration after Sai Sha Road Widening

3.3 Traffic Survey

3.3.1 Manual classified traffic count surveys were conducted at the key junctions (J7-J14) on normal weekday during commuting peaks (7:00am–9:00am and 5:00pm–7:00pm) in November 2021. For the overall two-way traffic flows along Sai Sha Road, the AM peak and the PM peak periods occur from 07:30-08:30 and 17:15-18:15 respectively. For the AM peak period, the one-way traffic flow along Sai Sha Road (Ma On Shan Direction) during AM peak from 07:00- 08:00 is higher than the period 07:30 -08:30, hence the traffic flows in Ma On Shan Direction in this period would be adopted as the peak hour flows for conservative approach.

3.3.2 For the key junctions (J1-J6), reference was made to historical traffic data of the nearby station at Sai Sha Road (Station No. 5683) as published in the Annual Traffic Census (ATC) report. For the Station No. 5638, the annual average daily traffic (AADT) of Sai Sha Road increased from 23,210 vehs/ day to 24,950 vehs/ day from years 2016 to 2020. This represents an annual growth rate of about 1.8% per annum. In view of current COVID-19 situation, a conservative growth rate of 2% per annum was applied to the 2018 observed traffic flows on junctions J1-J6 to produce the 2021 observed traffic flows on these junctions.

3.3.3 The 2021 observed AM and PM peak hour traffic flows are shown in **Figure 3.2 & 3.3**.

3.3.4 With reference to the traffic impact assessment as given in **Section 5**, the most critical junction is Sai Sha Road / Nin Wah Road / Nin Fung Road Roundabout with critical traffic arm along Sai Sha Road westbound. As extracted from the vehicle traffic survey report prepared under Sai Sha Road Widening, **Table 3.3** compares the traffic flow at this road section on Weekday and Saturday.

Table 3.3 Comparison at Traffic flows at Sai Sha Road between Weekday and Saturday

Road Section	Period	Peak Hour Traffic Flow (pcu/hr)	Traffic Generation of the Proposed Development (pcu/hr)(1)	Resultant Traffic Flows (pcu/hr)
Sai Sha Road Westbound (Just east of Sai Sha Road / Nin Wah Road / Nin Fung Road Roundabout)	2021 Weekday AM	1145	883	2028
	2021 Weekday PM	940	664	1604
	2021 Saturday PM	1210	664(2)	1874

Notes:
(1) The traffic generation of the proposed development is 981pcu/hr and 738pcu/hr for the AM and PM peak hour as presented in **Table 4.9**. As stated in **Section 4.2.7**, a split of 90% to / from Ma On Shan bound and 10% to / from Sai Kung bound is adopted for the proposed development. Thus, the development traffic travelling via the critical road section of Sai Sha Road is 883 pcu/hr (i.e. 981 x 0.9) and 664 pcu/hr (i.e. 738 x 0.9) during weekday AM and PM peak period respectively.
(2) As a conservative approach, same traffic flows would travel through the said section during Saturday PM peak (i.e. 664 pcu/hr) is assumed.

3.3.5 As shown in **Table 3.3**, the weekday AM peak traffic flow at the critical section of Sai Sha Road are slightly lower than that of Saturday PM peak (i.e. 65pcu/hr difference).

3.3.6 However, the future residential development of 9700 units would generate / attract more traffic in the weekday AM/PM peak periods (see **Table 4.9**) than Saturday PM peak period. As stated in **Section 4.2.7**, a split of 90% to / from Ma On Shan bound and 10% to / from Sai Kung bound is adopted for the proposed development. Thus, there will be 883 pcu/hr (i.e. 981 x 0.9) and 664 pcu/hr (i.e. 738 x 0.9) of the development traffic will travel through the above critical section of Sai Sha Road during weekday AM and PM peak period respectively. By assuming same traffic flows would travel through the said section during Saturday PM peak (i.e. 664 pcu/hr) as a conservative approach, it is found that the traffic flows at the critical section of Sai Sha Road with the proposed development would become 2028 pcu/hr (i.e. 1145 + 883) for Weekday AM peak and would be higher than 1874 pcu/hr (i.e. 1210 + 664) for Saturday PM peak.

3.3.7 Also, there is no school traffic generated by the future planned Nai Chung School Development at Nin Ming Road (see **Table 4.3** site ID 15) on Saturday. As such, the weekday AM peak period was identified as the critical peak for the purpose of this traffic impact assessment.

3.4 Existing Junction and Road Link Assessment

3.4.1 Junction capacity and road link analysis were carried out for the key surveyed junctions and road links as listed in **Section 3.2** to appraise the existing traffic condition based on the 2021 observed peak hour traffic flows. The locations of these critical junctions and road links are given in **Figure** 3.1.

3.4.2 Based on the observed traffic flows, junction capacity assessments were carried out in accordance with the methodology documented in the appendices of TPDM Volume 2 Chapter 4 for priority junction / roundabout and Volume 4 for signal junction. For road link capacity assessment, link capacities as adopted for the comprehensive traffic models are referred.

3.4.3 The junction layout of J1 **–** J8, J9a, J9b, J10 **–** J11 and J14 adopted in junction assessment are shown in **Figures 3.4** to **3.15**. The corresponding junction performances in 2021 are summarized in **Table 3.4**.

Table 3.4 Existing Junction Performances

No.	Junction	2021 DFC/RC(1)	
		AM Peak	PM Peak
J1	Sai Sha Road / Hang Fai Street	0.55	0.36
J2	Sai Sha Road / Hang Hong Street	34%	52%
J3	Sai Sha Road / On Yuen Street / On Luk Street	49%	69%
J4	Sai Sha Road / Ma On Shan Road / On Chiu Street	68%	63%
J5	Sai Sha Road / Kam Ying Road	70%	78%
J6	Sai Sha Road / Wu Kai Sha Road / Sha On Street	0.33	0.25
J7	Sai Sha Road / Nin Wah Road / Nin Fung Road	0.74	0.62
J8	Sai Sha Road / Access Road to Sai O	0.11	0.10
J9A	Sai Sha Road / Access Road to Kwun Hang	0.49	0.48
J9B	Sai Sha Road / Access Road to Che Ha	0.60	0.48
J10	Sai Sha Road / Access Road to Ma Kwu Lam	0.34	0.09
J11	Sai Sha Road / Access Road to Tseng Tau	0.82	0.70
J14	Sai Sha Road / Tai Mong Tsai Road	0.39	0.40

Notes:
(1) DFC (in decimal number) = Design Flow / Capacity ratio for priority junction or roundabout;
RC (in percentage) = Reserved Capacity for signalized junction

3.4.4 Junctions no. J12 **–** J13 are new junctions to be formed under Sai Sha Road Widening scheme, junction capacity assessment will be carried out with their corresponding improved layout in **Chapter 5**.

3.4.5 The existing road links performance in Volume to Capacity (V/C) ratio are summarized in **Table 3.5.**

Table 3.5 Existing Road Link Performances

Ref.	Road Section	Direction	Minimum Width (m)	Link Capacity (pcu/hr)	2021 Observed Traffic Flows		2021 Volume/ Capacity Ratio	
					AM Peak	PM Peak	AM Peak	PM Peak
Sai Sha Road								
L1	Between Hang Fai Street and Hang Hong Street	WB	11	5170(1)	835	1125	0.16	0.22
		EB	11	5170(1)	1460	1080	0.28	0.21
L2	Between Hang Hong Street and On Yuen Street	WB	11	5170(1)	1635	1215	0.32	0.24
		EB	11	5170(1)	895	1185	0.17	0.23
L3	Between On Yuen Street and On Chiu Street	WB	11	5,170(1)	865	655	0.17	0.13
		EB	11	5,170(1)	630	790	0.12	0.15
L4	Between On Chiu Street and Kam Ying Road	WB	11	5,170(1)	835	620	0.16	0.12
		EB	11	5,170(1)	595	785	0.12	0.15
L5	Between Kam Ying Road and Wu Kai Sha Road	WB	7.3	3,440(2)	850	575	0.25	0.17
		EB	7.3	3,440(2)	555	635	0.16	0.18
L6	Between Ma On Shan Bypass and Nin Wah Road	WB	7.1	3,690(3)	1440	1170	0.39	0.32
		EB	7.1	3,690(3)	945	965	0.26	0.26
L7	Between Nin Wah Road and Access Road to Sai O	WB	3.5	1,230(4)	1145	940	0.93	0.76
		EB	3.5	1,230(4)	950	840	0.77	0.68
L8	Between Access Road to Sai O and Access Road to Che Ha	WB	3	1,230(4)	1065	915	0.87	0.74
		EB	3	1,230(4)	865	830	0.70	0.67
L9	Between Access Road to Che Ha and Access Road to Site A	NB	3	1,230(4)	915	860	0.74	0.70
		SB	3	1,230(4)	805	750	0.65	0.61
L10	South of Access Road to Tseng Tau	NB	3	1,230(4)	705	685	0.57	0.56
		SB	3	1,230(4)	650	580	0.53	0.47
L11	North of Tai Mong Tsai Road	NB	3.3	1,230(4)	610	630	0.50	0.51
		SB	3.3	1,230(4)	640	500	0.52	0.41
Ma On Shan Bypass								
L12	Between Sai Sha Road and Ma On Shan Road	NB	7.3	3,690(3)	1090	1150	0.30	0.31
		SB	11	5,780(5)	1590	1235	0.28	0.21

Notes:

(1) According to TPDM Volume 2 Table 2.4.1.1, road capacity for Dual 3 (11m) – Primary Distributor is 4,200 vehs/hr (one-way) with proportion of heavy vehicles equal to 15%. Based on 15%. heavy vehicle proportion, the pcu factor is calculated as 1.23 (i.e. 0.85+0.15(2.5)). Hence the road capacity is 5170 pcu/hr (ie 4,200 x 1.23)

(2) According to TPDM Volume 2 Table 2.4.1.1, road capacity for Dual 2 (7.3m) – Primary Distributor is 2,800 vehs/hr (one-way) with proportion of heavy vehicles equal to 15%. Based on 15%, heavy vehicle proportion, the pcu factor is calculated as 1.23 (i.e. 0.85+0.15(2.5)). Hence the road capacity is 3440 pcu/hr (ie 2,800 x 1.23)

(3) According to TPDM Volume 2 Table 2.4.1.1, road capacity for Dual 2 (7.3m) – Trunk Road is 3,000 vehs/hr (one-way) with proportion of heavy vehicles equal to 15%. Based on 15%, heavy vehicle proportion, the pcu factor is calculated as 1.23 (i.e. 0.85+0.15(2.5)). Hence the road capacity is 3,690 pcu/hr (ie 3,000 x 1.23)

(4) According to TPDM Volume 2 Table 2.4.1.1, road capacity for Single 2 (7.3m)- Primary Distributor Road is 2000 vehs/hr (two-way) with proportion of heavy vehicles equal to 15%. Hence the road capacity is 2460 pcu/hr (two-way)(ie 2000 X 1.23) or 1230 pcu/hr (one-way). As also mentioned in TPDM, the capacity of single 2 lane carriageway is significantly affected the amount of kerb activities, pedestrian traffic and crossing, distance between side road and junctions etc, careful consideration on the actual site condition should be made before adopting these figures. Based on TPDM Volume 4 Signal Design, the theoretical saturated flow of a 3m wide nearside traffic lane is about 1915 pcu/hr. Based on site observation, there is no kerb activities on the section of Sai Sha Road between Tseng Tau Road and the Proposed Access Road. Bus laybys are also provided. In addition, there are only limited number of junctions along this section of Sai Sha Road. Based on the on-site measurement at Sai Sha Road (near the bus layby in the vicinity of Proposed Access Road), the capacity is about 1400 pcu/hr(one-way). In view of above, a capacity of 1230 pcu/hr is adopted for conservative approach.

(5) According to TPDM Volume 2 Table 2.4.1.1, road capacity for Dual 3 (11m) – Trunk Road is 4,700 vehs/hr (one-way) with proportion of heavy vehicles equal to 15%. Based on 15% heavy vehicle proportion, the pcu factor is calculated as 1.23 (ie 0.85+0.15(2.5)). Hence the road capacity is 5,780 pcu/hr (ie 4,700 x 1.23)

3.4.6 At present, all assessed junctions and road links are operating without capacity problem according to **Table 3.4** and **Table 3.5.** except with section of Sai Sha Road between Nin Wah Road and Access Road to Che Ha (L7 & L8). For Sections L7 & L8 westbound direction, it is operated close to its capacity.

4 TRAFFIC FORECASTING

Assumption adopted from the Approved TIA

4.1 Design Year

4.1.1 According to the Lease conditions of the Application Site, the Proposed Development shall be completed by year 2025. Year 2028 is therefore selected as a design year in this TIA for assessment purpose (i.e. 3 years after the planned completion of the Proposed Development according to Transport Department's "*Guidelines and Requirements of Traffic Impact Assessment Studies*"), as in the approved application.

4.2 Traffic Growth

4.2.1 In order to forecast the traffic flow and examine traffic impact due to the Proposed Development in year 2028, annual growth rate method is applied to derive the base traffic flow for further developing traffic flow for assessment. In addition, the traffic generated by other planned / committed developments in the vicinity of the Application site would then be added to the base traffic flow to estimate the 2028 background traffic flows (without the Proposed Development).

4.2.2 In determining the annual traffic growth rate, the historical traffic data of the ATC reports published annually by the Transport Department was referred. The AADT of the nearby counting stations in Ma On Shan area from years 2015 to 2020 are summarized in below **Table 4.1.** The location of the ATC stations are as shown in **Annex C**.

Table 4.1 Annual Traffic Census

Station No.	Road	AADT (Vehs / day)					
		2015	2016	2017	2018	2019	2020
5005	Ma On Shan Road	26,220	26,500	26,270	26,020	26,020	24,340
5275	On Chiu St	8,670	8,770	8,720	9,070	10,280	9,890
5281	Sai Sha Rd	15,520	15,690	15,590	11,250	12,560	12,080
5467	Ma On Shan Rd	17,340	17,530	17,420	17,700	17,150	15,990
5662	Sai Sha Road	17,660	18,260	18,140	18,430	18,300	22,480
5683	Sai Sha Road	25,750	23,210	23,060	23,440	23,270	24,950
5692	Ma On Shan Rd	42,640	42,710	42,830	42,980	42,940	47,540
5708	Ma On Shan Bypass	22,740	21,790	21,850	21,930	21,900	23,160
5877	Hang Hong St	15,390	14,820	15,040	15,280	15,180	14,600
5883	On Yuen St	9,950	10,530	11,410	11,590	11,510	11,070
6056	Sai Sha Rd	10,660	10,780	10,990	11,880	11,800	11,350
6072	On Chun St	6,760	6,830	7,290	6,990	6,940	6,680
6078	On Luk St	11,870	12,010	12,090	12,870	12,780	12,290
	Total	**231,170**	**229,430**	**230,700**	**229,430**	**230,630**	**236,420**
	Traffic Growth Rate of total traffic flows from 2015 to 2020 = **0.45% per annum, i.e. ((236,420/231,170) $^{1/5}$)-1) x 100%**						

4.2.3 As shown in **Table 4.1**, the average annual traffic growth is 0.45% per annum from years 2015 to 2020. Based on the Station No 5662, the AADT (vehs/day) increase from 17660 to 22480 from years 2015 to 2020. The increase in traffic flows was partially due to the growth in population in Ma On Shan area and partially due to the increase in construction traffic due to the Sai Sha Development and the Sai Sha Road widening. For the station No. 6056 (close to the roundabout at Sai Sha Road / Tai Mong Tsai Road and more related to the traffic flow pattern from Sai Kung bound), the AADT (vehs/day) increased from 10,660 to 11,350 from during years 2015 to 2020. This represent an annual growth rate of 1.3% per annum. Out of this 1.3% annual growth rate, it is anticipated that 0.45% is related to the population / employment growth at Ma On Shan Area, the remaining 0.85% growth would be related to the change in traffic flow pattern to / from Sai Kung Area.

4.2.4 As mentioned in **Section 4.2.1**, the additional traffic generated from planned / committed developments would be separately estimated and added to the future traffic flow (by growth method). The direct usage of this growth rate extracted from ATC would not be applicable.

4.2.5 Another traffic growth rate was hence estimated with reference to 2019-based Territorial Population and Employment Data Matrix (TPEDM) data which is available in Planning Department's website**. Table 4.2** shows the planning data in Ma On Shan area in years 2019 and 2031. The annual growth rate of population and employment in Ma On Shan area from years 2019 to 2031 identified is 0.06% per annum.

Table 4.2 2019-based TPEDM Planning Data

Planning Data District	Year 2019			Year 2031			Annual Growth Rate (from 2019 to 2031)
	Population	Employment	Total	Population	Employment	Total	
Ma On Shan[(1)]	219,950	34,100	254,050	229,800	35,100	264,900	0.35%
South East New Territories (other area)^	68,900	27,250	96,150	59,750	28,100	87,850	-0.75%
Total	288,850	61,350	350,200	289,550	63,200	352,750	**0.06%**

Note:

^ South East New Territories (other area): includes Sai Kung

4.2.6 As discussed in **Section 4.2.3**, the change in traffic flow pattern to / from Sai Kung Area would be about 0.85% per annum. As shown in **Table 4.2**, the overall population and employment at Sai Kung Area would be reduced by about -0.75% annually from Year 2019 to 2031. Based on the above, the overall annual growth rate to / from Sai Kung Area would be about 0.1% (i.e. 0.85% - 0.75%).

4.2.7 By consideration the above findings on the traffic growth rates from TPEDM, a conservative annual growth rate of 0.5% per annum is adopted for projecting the peak hour traffic flows from year 2021 (existing) to year 2028. The traffic generated by the committed / planned development as listed in **Table 4.3** were added to produce the 2028 background traffic flow (i.e. 2021 existing traffic flow x $(1+0.5\%)^{7}$ + traffic generated by committed / planned development = 2028 background traffic flow). Based on the observed traffic pattern, a split of 90% to / from Ma On Shan bound and 10% to / from Sai Kung bound is adopted for the committed / planned developments. The traffic routings to / from the developments are indicated in **Annex E**.

4.3 Other Planned Developments

4.3.1 Apart from the Proposed Development, other committed / planned major developments in the vicinity and Ma On Shan area, some of which were recently rezoned and gazetted under Ma On Shan OZP, have been taken into account in the traffic forecast. Also, for a conservative approach, current Short Term Tenancy (STT) sites in Ma On Shan Area are identified and added as their planned developments according to their land use in the approved Ma On Shan OZP. They are listed in **Table 4.3** and their locations are shown in **Figure 4.1.** The planned / committed Nai Chung School Development and Public Housing Developments at Cheung Muk Tau site & Ma On Shan Tsuen Road site were also included. The locations and information of the committed / planned development are shown in **Annex D**.

Table 4.3 Future Committed / Planned Development in vicinity

Site ID	Development	Development Type	No. of Flats	Assumed Average Flat Size (m^2)	Other	Trip Rates				Trip Ends			
						AM Peak		PM Peak		AM Peak		PM Peak	
						Generation (pcu/hr/flat)	Attraction (pcu/hr/flat)	Generation (pcu/hr/flat)	Attraction (pcu/hr/flat)	Generation (pcu/hr)	Attraction (pcu/hr)	Generation (pcu/hr)	Attraction (pcu/hr)
1	STTL 600 – CDA(1)	Student Hostel	-	-	2,168 beds	-	-	-	-	10(1)	10(1)	10(1)	10(1)
2	STTL 601 – CDA(2)	Private Housing	547	66	-	0.0888(2)	0.0515(2)	0.0356(2)	0.048(2)	49	29	20	27
3	STTL 611 – R(C)3	Private Housing	111	100*	-	0.2452(3)	0.1209(3)	0.0835(3)	0.1274(3)	28	14	10	15
4	STTL 605 – R(B)5	Private Housing	148	142	-	0.2604(4)	0.1372(4)	0.1275(4)	0.1722(4)	39	21	19	26
5	Yan On Estate Phase 2 – R(A)8	PRH	1,600	32	-	0.0242(5)	0.0226(5)	0.0177(5)	0.0201(5)	39	37	29	33
6	Area 81A Development – R(A)9	HOS	2,079	51	-	0.0622(6)	0.0426(6)	0.0297(6)	0.0401(6)	130	89	62	84
7	Hang Kin Street Development – R(A)10#	HOS	735	42	-	0.0622(6)	0.0426(6)	0.0297(6)	0.0401(6)	46	32	22	30
8	On Chun Street Development – Area 100#	G/IC (Site Area: 0.48 hectare)	-	-	Social Welfare facilities	-	-	-	-	50(7)	50(7)	50(7)	50(7)
9	Ma On Shan Road Development – Area 103#	G/IC (Site Area: 0.79 hectare)	-	-	Sports Centre	-	-	-	-	0	0	50(8)	50(8)
10	Hang Kin Street Development	G/IC (Site Area: 0.21 hectare)	-	-	Social Welfare Facilities	-	-	-	-	50(7)	50(7)	50(7)	50(7)
11	On Chun Street School Development	G/IC (Site Area: 0.66 hectare)	-	-	Assumed 30 classrooms	0.567(9)	1(9)	0.333(9)	0.167(9)	18	30	10	6
12	Lok Wo sha Lane Development	G/IC (Site Area: 0.7 hectare)	-	-	Sports Centre	-	-	-	-	0	0	50(8)	50(8)
13	DD 191 , Ma On Shan - GB	Private Housing	180	180	-	0.2772(10)	0.1769(10)	0.1635(10)	0.2394(10)	50	32	30	44
14	Tseng Tau Water Sports Centre	G/IC	-	-	Sports Centre	-	-	-	-	0	0	17(11)	17(11)
15	Nai Chung School Development - OU	School Development	-	-	722 students	-	-	-	-	131(12)	141(12)	97(12)	92(12)
16	Cheung Muk Tau Site – R(A)11	Public Housing	3,480	55	-	0.0622(13)	0.0426(13)	0.0297(13)	0.0401(13)	216	148	103	140
17	Ma On Shan Tsuen Road Site – R(A)11	Public Housing	2,700	55	-	0.0622(13)	0.0426(13)	0.0297(13)	0.0401(13)	168	115	80	108

Notes:

* Assumed average flat size of STTL 611 is $100m^2$

\# Current STT Sites

(1) Based on in-house survey data at Student Residence of the City University of Hong Kong (Tat Hong Avenue) and Student Halls of Hong Kong Polytechnic University (Fat Kwong Street)

(2) Based on mean trip rates of private housing R(A) (flat size of $70m^2$ GFA) as stated in TPDM

(3) Interpolation based on trip rates of private housing R(C) (flat size of $180m^2$ and $240m^2$ GFA by) as stated in TPDM

(4) Based on mean trip rates of private housing R(B) – Accessibility level A (flat size of $140m^2$ GFA) as stated in TPDM

(5) Based on mean trip rates of PRH (flat size of $30m^2$ GFA) as stated in TPDM

(6) Based on mean trip rates of HOS as stated in TPDM

(7) In-house survey data at Pok Oi Hospital Tin Ka Ping Centre located at Au Tau Yuen Long (with site area of 0.22 hectare) generate / attract a two-way flow of about 20 pcu/hr during AM peak / PM peak. A conservative approach of 100 pcu/hr two-way flow is adopted.
(8) In-house survey data at Lai King Sports Centre (with site area of 0.52 hectare) generate / attract a two-way flow of about 20 pcu/hr during PM peak. A conservative approach of 100 pcu/hr two-way flow is adopted.
(9) Based on in-house survey data at SKH Ma On Shan Holy Spirit Primary School (with 30 classrooms)
(10) Based on mean trip rates of private housing R(C) (flat size of 180 m^2 GFA) as stated in TPDM
(11) Based on number of provided car parking space (i.e. 17 spaces)
(12) Based on TIA under recently approved planning application no. A/MOS/125
(13) Information extracted from RNTPC Paper No. 4/20 and RNTPC Paper No. 6/20 and based on trip rates of HOS as stated in TPDM

4.4 Trip Generation of the Proposed Development

4.4.1 The trip rates and the specific trip ends adopted in the approved TIA under planning application (A/NE-SSH/120-1) are summarised as follow:

Table 4.4 Development Trip Rates & Trip End Summary (Approved TIA)

Land Use	Trip Rates				
	Unit	AM Peak		PM Peak	
		Generation	Attraction	Generation	Attraction
Private Residential (FS=56.65m^2)	pcu/hr/flat	0.0832	0.0489	0.0493	0.06
Retail	pcu/hr/100 sqm GFA	0.2296	0.2434	0.31	0.3563
Kindergarten/ Nursery	pcu/hr/CR	5.14	5.57	3.14	3.14
Primary School	pcu/hr/CR	0.5670	1.0000	0.3330	0.1670
	Trip End				
Social Welfare Centre	-	25	25	25	25

4.4.2 With applying the adopted trip generation rates, as given in **Table 4.4**, to the proposed development schedule as listed in **Table 2.1**. The development traffic flows (exclude Sports & Recreation Centres) for both the approved scheme and the current scheme are the same and summarised as in **Table 4.5**

Table 4.5 Development Traffic Flow (Exclude Sports & Recreation Centres)

Current Proposed Scheme	Trip Ends (pcu/hr)				
	Development	AM Peak		PM Peak	
		Generation	Attraction	Generation	Attraction
Private Residential (FS=55.49m^2)	9,700 flats	807	474	478	582
Retail	8,577 $m^{2(1)}$	20	21	27	31
Kindergarten/ Nursery	6 CR x 2	62	67	38	38
Primary School Site	30 CR x 2	34	60	20	10
Social Welfare Centre		25(2)	25(2)	25(2)	25(2)
Total	**-**	**948**	**647**	**588**	**686**

Notes:
(1) Retail = Commercial GFA (12,077 m^2 in Site A & B) with kindergarten (1000m^2 x2) and church (1500m^2) GFA excluded
(2) Assumed trip ends for Social Welfare Centre

Change in Trip Generation of the Current Scheme

4.4.3 Based on **Table 2.2**, the proposed change of facilities in the Sports & Recreation Centres are summarised as in **Table 4.6** below.

Table 4.6 Proposed Change of Facilities in Sports & Recreation Centres

Facilities	Approved Scheme (A/NE-SSH/120-1)	Current Scheme
Golf Driving Range	86 bays	70 bays
Tennis Court	3 Courts (15 visitors)	5 Courts (25 visitors)
Football Court	-	1 Court (50 visitors)
Lacrosse	-	1 Court (15 visitors)
Surfing Pool	-	One (2 persons)
Training Path for Cycling (outdoor)	-	One (30 visitors)
Ball Count (Indoor)	886 seats	886 seats
Cinema	320 seats	320 seats
Ancillary Facilities for Sports & Recreation Centre	7,000m^2 GFA	7,000m^2 GFA
Retail & F&B Facilities	3,500m^2 GFA	3,500m^2 GFA

4.4.4 To review the trip generation rates for golf driving range, trip generation survey was carried out at the existing Temporary Golf Driving Range and Golf Driving Range in Whitehead on a typical weekday in October 2021 / May 2022 during 07:00-09:00 (AM Peak) and 17:00-19:00 (PM Peak). The survey results and the derived trip rates are shown in **Table 4.7**

Table 4.7 Trip Generation Rates of Golf Driving Range

Survey Location		Unit	Trip Ends			
			AM Peak		PM Peak	
			Gen.	Att.	Gen.	Att.
Existing Temping Golf Driving Range (108 driving bays)	Observed Trip Ends	pcu/hr	1	30	55	10
	Derived Trip Rates	pcu/hr/bay	0.009	0.278	0.509	0.093
Golf Driving Range in Whitehead (65 driving bays)	Observed Trip Ends	pcu/hr	8	32	50	26
	Derived Trip Rates	pcu/hr/bay	0.123	0.492	0.769	0.400
	Adopted Trip Rates	**pcu/hr/bay**	**0.123**	**0.492**	**0.769**	**0.400**

4.4.5 Based on the observed model split for various facilities as mentioned on **Section 2.4.10 - 2.4.13** together with the development schedule as given in **Table 4.6**, the development traffic generations under the Approved Scheme and the Current Scheme are calculated and summarised as in **Table 4.8**.

Table 4.8 Development Traffic Flows (Sports & Recreation Centres)

Facilities	Approved Scheme				Current Scheme			
	AM Peak		PM Peak		AM Peak		PM Peak	
	Gen. (pcu/hr)	Att. (pcu/hr)	Gen. (pcu/hr)	Att. (pcu/hr)	Gen. (pcu/hr)	Att. (pcu/hr)	Gen. (pcu/hr)	Att. (pcu/hr)
Golf Driving(1) Range	11	42	66	34	9	34	54	28
Tennis Court(2)	-	-	3	3	-	-	5	5
Football Court(3)	-	-	-	-	-	-	10	10
Lacrosse(4)	-	-	-	-	-	-	8	8
Surfing Pool(5)	-	-	-	-	-	-	2	2
Training Path(6) for cycling	-	-	-	-	-	-	8	8
Ball Court(7)	-	-	14	46	-	-	14	46
Cinema(8)	-	-	16	16	-	-	16	16
Ancillary Facilities for Sports & Recreation Centre	16	17	22	25	16	17	22	25
Retail & F&B Facilities	8	9	11	12	8	9	11	12
Total	**35**	**68**	**132**	**136**	**33**	**60**	**150**	**160**
Change (Current Scheme – Approved Scheme)					***-2***	***-8***	***+18***	***+24***

Notes :
(1) Based on the adopted trip rates as given in **Table 4.7**.
(2) Referring to **Table 2.2**, the tennis court are anticipated to attract 15 persons/hr (in approved scheme) and 25 persons/hr (current scheme) during PM peak. Based on the observed modal split in **Table 2.9** (40% for private car / taxi) and the occupancy of 2 passenger per car / taxi, the tennis court would induce a traffic generation / attraction of 3 pcu/hr (i.e. 15 x 40% / 2) in the approved scheme and 5 pcu/hr (i.e. 25 x 40% / 2) in the current scheme.
(3) Referring to **Table 2.2**, the football court are anticipated to attract 30 persons/hr (current scheme) during PM peak. Based on the observed modal split in **Table 2.9** (40% for private car / taxi) and the occupancy of 2 passenger per car / taxi, the football court would induce a traffic generation / attraction of 10 pcu/hr (i.e. 50 x 40% / 2) in the current scheme.
(4) Referring to **Table 2.2**, the Lacrosse court are anticipated to attract 15 persons/hr (current scheme) during PM peak. Based on the observed model split in **Table 2.9** (73% for private car / taxi) and the occupancy of 1.5 passenger per car / taxi, the Lacrosse court would induce a traffic generation of 8 pcu/hr (i.e. 15 x 40% / 1.5)
(5) Assumed all use private cars.
(6) Referring to **Table 2.2**, the cycling path are anticipated to attract 30 persons/hr (current scheme) during PM peak. Based on the observed model split in **Table 2.9** (100% for private car / taxi) and the occupancy of 4 passenger per car / taxi, the cycling path would induce a traffic generation of 8 pcu/hr (ie 30 x 100% / 4)
(7) Based on the observed trip rates at Lai King Sports Centre (i.e. PM in = 5.2 pcu/100 seats and PM out = 1.6 pcu/100 seats)
(8) Based on number of provided car parking spaces (i.e. 16 spaces).
(9) Based on trip rates of Retail as stated in TPDM.

4.4.6 As shown in **Table 4.8**, the analysis reveals that the change in trip ends due to the proposed amendment to the Approved Scheme is minimal.

4.4.7 Based on the development traffic generation as given **Table 4.5** and **Table 4.8**, the overall traffic generation of the proposed development in the Approved Scheme and Current Scheme are summarised and listed in **Table 4.9**.

Table 4.9 Overall Development Traffic Flows

	Approved Scheme				Current Scheme			
	AM Peak		PM Peak		AM Peak		PM Peak	
	Gen. (pcu/hr)	Att. (pcu/hr)	Gen. (pcu/hr)	Att. (pcu/hr)	Gen. (pcu/hr)	Att. (pcu/hr)	Gen. (pcu/hr)	Att. (pcu/hr)
Development Traffic Flow (Exclude Sports & Recreation Centres)	948	647	588	686	948	647	588	686
Development Traffic Flow (Sports & Recreation Centres)	35	68	132	136	33	60	150	160
Total	**983**	**715**	**720**	**822**	**981**	**707**	**738**	**846**

4.5 2028 Reference and Design Traffic Flows

4.5.1 The 2028 reference traffic flows were produced by adding the additional trips to be generated by the Proposed Development in the approved scheme in **Table 4.9** to the 2028 background traffic flows. The directional distribution of the development traffic of the Application Site is illustrated in **Figure 4.2**. The resultant 2028 reference traffic flows (approved scheme) are shown in **Figures 4.3 - 4.4**.

4.5.2 The 2028 design traffic flows were produced by adding the additional trips to be generated by the Proposed Development in current scheme in **Table 4.9** to the 2028 background traffic flows. The resultant 2028 design traffic flows (current scheme) are shown in **Figures 4.5 - 4.6**.

4.6 Sensitivity Test – Potential School at Sai Keng

4.6.1 A recent submission was made to Town Planning Board for a proposed private school at Sai Keng (Application A/NE-SSH/139). Its location is indicated in **Figure 4.1.** The potential school will be operated as a private school with a total of 1,226 students ranging from early year learning, primary to secondary education.

4.6.2 It is anticipated that the AM peak traffic generation of the potential school in Sai Keng would be critical as it would overlap with the commuting AM peak. However, its PM peak traffic generation should occur earlier than the commuting PM peak which shall not be critical. The current scheme would generate less traffic than the approved scheme during AM peak as demonstrated in **Table 4.9.** In view of the above, the TIA of Potential School in Sai Keng in design year 2031 (under the Application A/NE-SSH/139) would be more critical. In conclusion, the current proposal in Site C would not affect the TIA findings under the Application A/NE-SSH/139.

[This is a Blank Page.]

5 TRAFFIC IMPACT ASSESSMENT

5.1 Junction and Road Links Assessment (Reference and Design Cases)

5.1.1 The main criteria for assessing the traffic impact of critical junctions is whether the addition of generated traffic by proposing amendments to the development content from the previous approved scheme to current proposed scheme would significantly worsen the capacities of affected junctions in the vicinity of the Application Site or not. The locations of the assessed key junctions and links are illustrated in **Figure 3.1**

5.1.2 Future layout for junctions no. J7 – J13 adopted for junction assessment taking into account Sai Sha Road Widening scheme are shown in **Figures 5.1** to **5.7**. The junction improvement scheme as recommended for the public housing sites at Sai Sha Road / Nin Wan Road / Nin Fung Road is also included in **Figure 5.1**

5.1.3 The operational performances of the key junctions and road links were assessed according to the traffic forecast for the reference case and design case. The results are summarized in **Table 5.1** and **Table 5.2**.

Table 5.1 2028 Junction Performance

Ref	Junction	2028 RC/DFC(1)			
		Reference Case (Approved Scheme)		Design Case (Current Scheme)	
		AM Peak	PM Peak	AM Peak	PM Peak
J1	Sai Sha Road/Hang Fai Street	0.64	0.42	0.64	0.42
J2	Sai Sha Road/Hang Hong Street	24%	41%	24%	41%
J3	Sai Sha Road/On Yuen Street / On Luk Street	38%	38%	38%	38%
J4	Sai Sha Road/Ma On Shan Road/On Chiu Street	42%	42%	42%	42%
J5	Sai Sha Road/Kam Ying Road	35%	43%	35%	43%
J6	Sai Sha Road/Wu Kai Sha Road/Sha On Street	0.42	0.36	0.42	0.36
J7*	Sai Sha Road / Nin Wah Road / Nin Fung Road	0.81	0.77	0.81	0.78
J8*	Sai Sha Road / Access Road to Sai O	26%	54%	26%	53%
J9*	Sai Sha Road / Access Road to Kwun Hang / Access Road to Che Ha	24%	33%	24%	31%
J10*	Sai Sha Road / Access Road to Ma Kwu Lam/ Access Road to Site A	0.76	0.78	0.75	0.79
J11*	Sai Sha Road / Road L1	0.61	0.61	0.60	0.61
J12*	Road L1 / Access (Residential) Road to Site B	0.71	0.54	0.71	0.55
J13*	Road L1 / Access Road to Site C / Access Road to Site B	0.20	0.23	0.20	0.24
J14	Sai Sha Road / Tai Mong Tsai Road	0.53	0.51	0.53	0.51

Notes:

* With Sai Sha Road Widening Scheme Layout

(1) DFC (in decimal number) = Design Flow / Capacity ratio for priority junction or roundabout;
RC (in percentage) = Reserved Capacity for signalized junction

Table 5.2 2028 Road Link Performance

Ref.	Road Section	Direction	Link Capacity (pcu/hr)	Reference Case (Approved Scheme)				Design Case (Current Scheme)			
				2028 Traffic Flows (pcu/hr) (V)		2028 V/C Ratio		2028 Traffic Flows (pcu/hr) (V)		2028 V/C Ratio	
				AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
Sai Sha Road											
L1	Between Hang Fai Street and Hang Hong Street	WB	5170(1)	990	1300	0.19	0.25	990	1300	0.19	0.25
		EB	5170(1)	1615	1205	0.31	0.23	1615	1205	0.31	0.23
L2	Between Hang Hong Street and On Yuen Street	WB	5170(1)	1815	1370	0.35	0.26	1815	1370	0.35	0.26
		EB	5170(1)	1075	1400	0.21	0.27	1075	1400	0.21	0.27
L3	Between On Yuen Street and On Chiu Street	WB	5,170(1)	1020	775	0.20	0.15	1020	780	0.20	0.15
		EB	5,170(1)	800	1015	0.15	0.20	800	1020	0.15	0.20
L4	Between On Chiu Street and Kam Ying Road	WB	5,170(1)	1045	795	0.20	0.15	1045	795	0.20	0.15
		EB	5,170(1)	785	980	0.15	0.19	785	980	0.15	0.19
L5	Between Kam Ying Road and Wu Kai Sha Road	WB	3,440(2)	1090	765	0.32	0.22	1090	770	0.32	0.22
		EB	3,440(2)	760	845	0.22	0.25	760	845	0.22	0.25
L6	Between Ma On Shan Bypass and Nin Wah Road	WB	3,690 (3)	3020	2300	0.82	0.62	3020	2315	0.82	0.63
		EB	3,690(3)	2245	2205	0.61	0.60	2240	2225	0.61	0.60
L7	Between Nin Wah Road and Access Road to Sai O	WB	3,440 (2)	2300	1855	0.67	0.54	2300	1870	0.67	0.54
		EB	3,440 (2)	1875	1835	0.55	0.53	1870	1855	0.54	0.54
L8	Between Access Road to Sai O and Access Road to Che Ha	WB	3,440 (2)	2225	1835	0.65	0.53	2225	1855	0.65	0.54
		EB	3,440 (2)	1800	1825	0.52	0.53	1790	1850	0.52	0.54
L9	Between Access Road to Che Ha and Access Road to Site A	NB	3,440 (2)	2030	1750	0.59	0.51	2030	1770	0.59	0.51
		SB	3,440 (2)	1675	1730	0.49	0.50	1670	1750	0.49	0.51
L10	South of Access Road to Tseng Tau	NB	1,230(4)	895	875	0.73	0.71	895	880	0.73	0.72
		SB	1,230(4)	890	745	0.72	0.61	890	745	0.72	0.61
L11	North of Tai Mong Tsai Road	NB	1,230(4)	800	820	0.65	0.67	800	820	0.65	0.67
		SB	1,230(4)	880	665	0.72	0.54	880	665	0.72	0.54
Ma On Shan Bypass											
L12	Between Sai Sha Road and Ma On Shan Road	NB	3,690(3)	2120	2155	0.57	0.58	2115	2170	0.57	0.59
		SB	5,780(5)	2940	2130	0.51	0.37	2940	2145	0.51	0.37

Notes:

(1) According to TPDM Volume 2 Table 2.4.1.1, road capacity for Dual 3 (11m) – Primary Distributor is 4,200 vehs/hr (one-way) with proportion of heavy vehicles equal to 15%. Based on 15%. heavy vehicle proportion, the pcu factor is calculated as 1.23 (i.e. 0.85+0.15(2.5)). Hence the road capacity is 5170 pcu/hr (ie 4,200 x 1.23)

(2) According to TPDM Volume 2 Table 2.4.1.1, road capacity for Dual 2 (7.3m) – Primary Distributor is 2,800 vehs/hr (one-way) with proportion of heavy vehicles equal to 15%. Based on 15%, heavy vehicle proportion, the pcu factor is calculated as 1.23 (i.e. 0.85+0.15(2.5)). Hence the road capacity is 3440 pcu/hr (ie 2,800 x 1.23)

(3) According to TPDM Volume 2 Table 2.4.1.1, road capacity for Dual 2 (7.3m) – Trunk Road is 3,000 vehs/hr (one-way) with proportion of heavy vehicles equal to 15%. Based on 15%, heavy vehicle proportion, the pcu factor is calculated as 1.23 (i.e. 0.85+0.15(2.5)). Hence the road capacity is 3,690 pcu/hr (ie 3,000 x 1.23)

(4) According to TPDM Volume 2 Table 2.4.1.1, road capacity for Single 2 (7.3m)- Primary Distributor Road is 2000 vehs/hr (two-way) with proportion of heavy vehicles equal to 15%. Hence the road capacity is 2460 pcu/hr (two-way)(ie 2000 X 1.23) or 1230 pcu/hr (one-way). As also mentioned in TPDM, the capacity of single 2 lane carriageway is significantly affected the amount of kerb activities, pedestrian traffic and crossing, distance between side road and junctions etc, careful consideration on the actual site condition should be made before adopting these figures. Based on TPDM Volume 4 Signal Design, the theoretical saturated flow of a 3m wide nearside traffic lane is about 1915 pcu/hr. Based on site observation, there is no kerb activities on the section of Sai Sha Road between Tseng Tau Road and the Proposed Access Road. Bus laybys are also provided. In addition, there are only limited number of junctions along this section of Sai Sha Road. Based on the on-site measurement at Sai Sha Road (near the bus layby in the vicinity of Proposed Access Road), the capacity is about 1400 pcu/hr(one-way). In view of above, a capacity of 1230 pcu/hr is adopted for conservative approach.

(5) According to TPDM Volume 2 Table 2.4.1.1, road capacity for Dual 3 (11m) – Trunk Road is 4,700 vehs/hr (one-way) with proportion of heavy vehicles equal to 15%. Based on 15% heavy vehicle proportion, the pcu factor is calculated as 1.23 (ie 0.85+0.15(2.5)). Hence the road capacity is 5,780 pcu/hr (ie 4,700 x 1.23)

5.1.4 Comparing the junction and road link performance between the "Reference Case" and "Design Case" as shown in **Table 5.1** and **Table 5.2**, the Current Scheme would not cause any insurmountable impact on the key junctions and road links. In fact, the traffic impact for the key junctions and road links are minimal. All the assessed junctions and road links would be able to handle the future traffic demand with the current design of Sai Sha Road Widening Scheme.

[This is a Blank Page.]

[This is a Blank Page.]

6 PUBLIC TRANSPORT ASSESSMENT

6.1 Public Transport Demand Assessment

6.1.1 For residential developments, the AM peak outbound direction is the critical for the public transport demand. According to the HKPSG, bus termini are usually provided in large residential developments. In view of the size and location of the Application Site, together with the existing limited public transport services along Sai Sa Road, a Transport Interchange is recommended at each Site A and Site B to serve the demand, as in the Approved TIA.

6.1.2 In order to determine the public transport demand generated by the Proposed Development, the "Travel Characteristic Survey (TCS) 2011 Final Report" published by Transport Department was referred. According to the TCS, the overall daily mechanized trips for each population is **1.83 trips/day** and the morning peak hour accounted for about **12% of the daily trip**. The percentage of using public transport is about **73% of total trips**. Taken into the above considerations, the estimated public transport demand in the AM Peak outbound direction is about 0.16 trips/population (i.e. 1.83 x 0.12 x 0.73) for the Territory, which have taken into account of all types of trips including home-based work, home-based school, home-based others etc.

6.1.3 Reference was also made to the 2016 Population By-census published by the Census and Statistics Department to identify for the difference of the potential public demand in Ma On Shan area than the one for the Territory. The workers / population in the whole Territory was found to be about 0.51 workers / population, while for Ma On Shan area, the workers / population is about 0.53, which is slightly higher than the one for the Territory. The students/ population in the whole territory was found to be about 0.15 students/ population, while for Ma On Shan area, the student/ population is about 0.17. Also as indicated in the "*Travel Characteristics Survey (TCS) 2011 Final Report*", the proportion of trips related to home-based work is about 4 times to the trips related to home-based school. Taken into consideration of the above ratios, the public transport demand at Ma On Shan Area is about 5.8% (i.e. {[(4x(0.53/0.51)+(0.17/0.15))/5]-1}x100%) higher than the whole territory. By adopting this percentage, **the estimated public transport demand in the AM peak hour is proposed as 0.17 trip/ population (i.e. 0.16 x 1.058) and adopted in the previous approved TIA**.

6.1.4 **Table 6.1** summaries the forecasted AM peak outbound direction public transport demand together with the required bus trips to serve the demand for Sites A and Site B. For Site C, the AM peak outbound direction public transport demand for both the Approved Scheme are the Current Scheme would be minimal.

Table 6.1 Forecasted Public Transport Demand and Required Transport Facilities at Site A and Site B

Site	Scenario	Population(1)	AM Peak Outbound Direction Public Transport Demand(2) (Pax/hr)	Required Bus Trips(3) (Bus/hr)
A	Approved & Current Scheme	4,300units x 3= 12,900	2,193	22-32
B	Approved & Current Scheme	5,400units x 3= 16,200	2,754	28-39

Notes:

(1) Based on 3 persons/flat
(2) Based on 0.17 public transport trips / person
(3) Based on an occupancy of 70-100 passengers per double decker bus

6.2 Proposed Public Transport Facilities and Potential Services

6.2.1 According to the latest Master Layout Plan (MLP) and TIA in the approved application (A/NE-SSH/120), TI is proposed at each Site A and Site B with the provision of hardware facilities at each TI as follows, with supporting operation facilities, e.g. passenger waiting lounge, bus regulator's kiosk:

- 3 bus bays (each 43m long to accommodate 3 buses) (for bus services such as a feeder route to MTR station and long haul routes to urban area (Kowloon and Hong Kong Island) and NT West area.
- 1 minibus bay (35m-long to accommodate 4 minibus) (for short haul intra-district services)
- 1 taxi lay-by (30m-long to accommodate 6 taxis) (for point-to-point services)

6.2.2 With reviewing the latest anticipated public transport demand in Site A with the proposed scheme, the provision of 3 bus bays (each 43m long to accommodate 3 buses) at each site proposed in the approved application, will still be adequate to serve the demand (i.e. Site A = 2193 pax/hr; Site B = 2754 pax/hr) and required bus trip (i.e. Site A = 22 bus/hr; Site B = 28 bus/hr) assuming 100 passengers/ bus (85% occupancy). This is equivalent to about 6-8 minutes headway service for each bus route. Hence, the provision of 3 bus bays at TI in each site is still adequate to meet the public transport demand arising from the Proposed Development and practical for planning of bus services at detailed design and implementation stage.

6.2.3 In addition, the TI and public transport services will not only serve the Proposed Development but also the nearby community along Sai Sha Road (e.g. Tseng Tau, Kwun Hang, Nai Chung, etc.)

6.2.4 The area of each TI will be about 4,500m^2 and the TI facilities will take up about 9,000m^2 GFA in total.

7 PEDESTRIAN ASSESSMENT

7.1 Pedestrian Link Assessment

7.1.1 With considering the component and their sizes in the Application Site (i.e. residential, retail, kindergarten, sports centre, recreation centre, primary school, social welfare centre etc), the pedestrians to be induced by the residential, the primary schools and social welfare centre should be the dominate source for the pedestrian flow. Also, the AM peak, when there is a combined impact of residents / workers are commuting to work and students are commuting to school, is the critical for the pedestrian demand. As such, in order to establish the future pedestrian demand at various critical footpaths and proposed footbridges, pedestrian count survey was conducted at the critical footpaths / crossings along Sai Sha Road. The survey period was conducted during the peak hour from 07:00 to 09:00 on a typical weekday in September 2018 as stated in the Approved TIA.

7.1.2 In order to determine the pedestrian generation of the proposed development, the adopted pedestrian trip rates for the proposed development are shown in **Table 7.1**. Since the design of the 2 proposed primary school sites is at preliminary stage and the detailed development parameters are not available at this stage, it is confirmed with Education Bureau (EDB) that the development parameters of the 2 school sites are making reference with a 30-classroom primary school in HKPSG. As stated in HKPSG Chapter 3, a 30-classroom primary school would have 765 students.

Table 7.1 Pedestrian Trip Generation Rate

Land Use	AM Peak	
	Generation	Attraction
Private Residential (pph/ unit)(1)	0.77	0.12
Primary School (pph/ school)(2)	379	854
Social Welfare Facilities(3) (pph)	25	163

Notes:
(1) Based on data record for Bayshore Towers in Ma On Shan
(2) Referring to adopted modal splits in **Table 7.2**, 62% of students would go to school on foot or by public transport. For conservative approach, about 80% of the students (on foot and taking public transport) will be accompanied by an adult (i.e. 100% of the students from P1-P4 and 50% of students from P5-P6).(3) Based on the latest information from SWD, the number of employees is 138 persons and the number of visitors is 200 persons per day during 9am – 5pm. Assuming all employees arrive at Social Welfare Facilities during AM Peak and the visitors' arrivals are evenly distributed over 8 hours (i.e. 200 persons / 8 hours = 25 persons/hour)

7.1.3 Reference was also made to the 2016 Population By-census published by the Census and Statistics Department, the assumed modal split of these pedestrian generations / attractions to/from residential for New Territories area and primary school developments in Shatin District are summarized in **Table 7.2** below.

Table 7.2 Assumed Modal Split

Assumed Modal Split	To / From		
	Residential	Primary School	Social Welfare Facilities(1)
Walk	7%	34%	7%
Public Transport	67%	28%	67%
Private Car / Taxi / Special Purpose Bus	26%	38%	26%

Note:
(1) Assume employees follow the same patterns as residential

Pedestrian Trip Generation for Proposed Development

7.1.4 Based on the development parameters for residential, primary schools and the social welfare centre for the proposed scheme and other components that may generate pedestrian flows to the road network, the pedestrian generation and attraction in the morning peak has been derived and shown in **Table 7.3.**

Table 7.3 Pedestrian trip Generation (pph) for Proposed Development

Site	AM Peak	
	Generation	Attraction
Site A (4,300 flats)	3,311	516
Site B (5,400 flats)	4,158	648
Site C (2 Primary Schools)	758	1708
Social Welfare Facilities	25	163
Public vehicle park	10(2)	Private Car Parking: 160 x 50% / 2 hour (1) = 40 Other: 10(2)
Sports Centre (Site C)	10(2)	10(2)
Recreation Centre (Site C)	10(2)	10(2)
Retails & F&B facilities (Site C)	10(2)	Worker: 3500m^2 / 20 m^2 (3) = 175
Proposed International School at Nai Chung	68(4)	348(4)

Source:
(1) Assuming 50% of the drivers would collect their cars within 2 hours of the AM peak
(2) Nominal figure of 10 pedestrian adopted
(3) Worker Density assumed as 20 m^2 per worker
(4) Approved TIA for Proposed international school at Nai Chung
(5) For conservative approach, about 80% of the students (on foot and taking public transport) will be accompanied by an adult (i.e. 100% of the students from P1-P4 and 50% of students from P5-P6).

7.1.5 A "bottom-up" approach was adopted in the determination of forecasted pedestrian flows in the design year 2028. A nominal growth of 1% per annum is applied to the 2018 observed pedestrian flows to produce the 2028 future pedestrian flows (without proposed development). Based on the pedestrian trip generation as given in **Table 7.3** and the assumed modal split as given in **Table 7.2**, the public transport trips and walk trips for various facilities were derived. For the public transport trips related to Sites A&B, 90% is assumed to use the new transport services in the provided Transport Interchange and 10% is assumed to walk to/from the nearest bus bays along Sai Sha Road (near Tseng Tau Road). For the walk trips related to Sites A&B, it is assumed 100% people would walk between Sites A & B. For the public transport trips related to the two primary schools in Site C, it is assumed 100% would walk to/from the nearest bus bays along Sai Sha Road (near Che Ha Road). For the walk trips related to two primary schools, it is assumed 50% people would come from Site A and 50% people would come from Site B. The pedestrian routings for primary schools and residential developments are illustrated in **Figure 7.3** and **Figure 7.4** respectively. The said additional pedestrian trip generations would be superimposed into the 2028 future pedestrian flows to produce 2028 design pedestrian flows as given in **Table 7.4**. The locations of proposed footbridge and various critical footpath sections along Sai Sha Road as shown in **Figure 7.1.** Based on the forecasted pedestrian flows, the various footbridges / footpaths have been assessed and the result are summarized in **Table 7.4**.

Table 7.4 Summary of Pedestrian Flows at Footbridges / Critical Footpaths

Footbridge/ Critical Footpath	2018 AM Peak Observed Pedestrian Flows (ped/hr)(4)	2028 Footpath Design Pedestrian Flows (ped/hr)	Effective Minimum Width (m)	Flow Rate (ped/m/min)	Level of Service (LOS)
A	34(1)	38	2.5	0.3	A
B	89(1)	1116	2.5	7.4	A
C	88(1)	1034	3.5	4.9	A
D	140	1173	1.5	13.0	A
E	112	259	1.5	2.9	A
F	88	1245	1.5	13.8	A
G	92	400	1.5	4.4	A
H	22	290	1.5	3.2	A
I	22	1382	1.5	15.4	A
J	20	1379	2.5	9.2	A
K	20(2)	337	1.5	3.7	A
L	116	2522	3	28(3)	C
M	90	2494	3	27.8(3)	C

Notes:
(1) Anticipated pedestrian flow on future footbridges estimated based on observed pedestrian demand walking across Sai Sha Road at the foresaid locations.
(2) Nominal figures of 10 pph per direction is adopted.
(3) Assume the pedestrian flow associated to proposed school would take place within 30 minutes.
(4) The location of the observed pedestrian flows refers to **Figure 7.2**.

7.1.6 As shown in **Table 7.4**, all the footbridge / critical footpath sections have a level of service A-C with the anticipated pedestrian flows, which are better than the preferred upper end of LOS C as stated in TPDM. and is acceptable in traffic term. The description pf LOS from TPDM Volume 6 Chapter 10 is extracted as follows for reference.

Table 7.5 Description of Level-of-Service (LOS)

LOS	Flow Rate (ped/min/m)	Description
A	≤ 16	Pedestrians basically move in desired paths without altering their movements in response to other pedestrians. Walking speeds are freely selected, and conflicts between pedestrians are unlikely.
B	16 - 23	Sufficient space is provided for pedestrians to freely select their walking speeds, to bypass other pedestrians and to avoid crossing conflicts with others. At this level, pedestrians begin to be aware of other pedestrians and to respond to their presence in the selection of walking paths.
C	23 - 33	Sufficient space is available to select normal walking speeds and to bypass other pedestrians primarily in unidirectional stream. Where reverse direction or crossing movement exist, minor conflicts will occur, and speed and volume will be somewhat lower.
D	33 - 49	Freedom to select individual walking speeds and bypass other pedestrians is restricted. Where crossing or reverse-flow movements exist, the probability of conflicts is high and its avoidance requires changes of speeds and position. The LOS provides reasonable fluid flow; however considerable friction and interactions between pedestrians are likely to occur.
E	49 - 75	Virtually, all pedestrians would have their normal walking speeds restricted. At the lower range of this LOS, forward movement is possible only by shuffling. Space is insufficient to pass over slower pedestrians. Cross- and reverse-movement are possible only with extreme difficulties. Design volumes approach the limit of walking capacity with resulting stoppages and interruptions to flow.
F	> 75	Walking speeds are severely restricted. Forward progress is made only by shuffling. There are frequent and unavoidable conflicts with other pedestrians. Cross- and reverse-movements are virtually impossible. Flow is sporadic and unstable. Space is more characteristics of queued pedestrians than of moving pedestrian streams.

7.2 Pedestrian Crossing Assessment

7.2.1 In order to evaluate the appropriateness on the use of cautionary crossing at various locations, the quantitative criteria of PV^2 is adopted, which considered the pedestrian flow volume (P) and the conflicting vehicular traffic flows(V) in the factor. The details are presented in the following.

Table 7.6 Summary of Pedestrian Flows at Crossing

	2018 AM Peak Observed Pedestrian Flows (pph) (P)	2028 Footpath Design Pedestrian Flows (pph) (P)	Conflicting Traffic Flows (pcu/hr) (V)	PV^2 ($x10^8$)
L-a	0	416	30	0.0037
L-b	14	15	30	0.0001
L-c	20	23	45	0.0005
L-d	62	269	45	0.0054

	2018 AM Peak Observed Pedestrian Flows (pph)	2028 Footpath Design Pedestrian Flows (pph) (P)	Conflicting Traffic Flows (pcu/hr) (V)	PV^2 ($x10^8$)
L-e	46	193	85	0.0139
L-f	14	58	755	0.3306
L-g	20(1)	85	1040	0.9194
L-h	20(1)	198	695	0.9564
L-i	20(1)	154	130	0.0260
L-j	20(1)	301	215	0.1391
L-k	20(1)	296	350	0.3626

(1) Nominal figures of 10 pph per direction is adopted.

7.2.2 As stated in TPDM Volume 2 Section 3.7, signal control crossing or grade separated crossing would be more appropriate with vehicular flow (averaged over the 6 hours) exceed 1000 v.p.h. As listed in **Table 7.6**, the anticipated vehicular flow is significantly below 1000 v.p.h., adopting non-signalised at grade crossing is hence appropriate.

7.2.3 Also, stated in TPDM Volume 2 Section 3.7, zebra crossing is appropriate for adopting in criteria with the benchmark value of PV^2 is greater than 1×10^8 (without central refuge) and PV^2 is greater than 2×10^8 (with central refuge). In our case, all the benchmark value of PV^2 are less than $1x\ 10^8$. Therefore, the use of cautionary crossings are considered appropriate.

8 SUMMARY AND CONCLUSION

8.1 Summary

8.1.1 The Application Site is the subject of an approved planning application No. A/NE-SSH/120-1 ("Approved Scheme") for proposed comprehensive residential and recreational development including government, institution or community (G/IC) facilities with minor relaxation of gross floor area and building height restrictions which was approved by the Director of Planning, under the delegated authority of the Town Planning Board (the Board), under Section 16A of the Town Planning Ordinance in October 2020. The site location is shown in **Figure 1.1**.

8.1.2 With the commitment to further enhance user experience in Site C, which is intended to be a recreational hub in Sai Sha, the subject Section 16 planning application is submitted to reflect the proposed diversification of recreational facilities to be provided therein by replacing a golf driving range and a mini driving range/ game area/ recreation & sports centre with other outdoor sports and recreational facilities to better serve the community in the Sai Sha area.

8.1.3 It should be noted that, **the subject matter of the current application is Site C only**. The layout and development parameters for Site A and Site B are entirely identical to those approved under planning application No. A/NE-SSH/120-1. The inclusion of Site A and Site B as part of the Application Site is to comply with the statutory requirement of the subject "Comprehensive Development Area" ("CDA") zone under the Notes of Shap Sz Heung Outline Zoning Plan which requires the submission of a Master Layout Plan covering the entire "CDA" zone for the approval of the Board.

8.1.4 AECOM Asia Company Limited was commissioned by the Applicant to conduct a Traffic Impact Assessment (TIA) Report in support of Section 16 Planning Application for the proposed change of recreational facilities in Site C.

8.1.5 The overall development schedule of the Current Scheme would be the same as the Approved Scheme. There is no amendment proposed in the Current Scheme for the vehicular access.

8.1.6 Car parking provision and servicing facilities for Site A, B and C will follow the requirements as given in the Lease. The dimensional provision requirements of the internal transport facilities are referred to the lease requirement and current HKPSG requirement.

8.1.7 As required under the Land Lease requirement, a public vehicle park would be provided in Site C. The proposed provision is listed in **Table 2.8**.

8.1.8 In view that there is a replacement of a large golf driving range with other smaller size outdoor sports and recreational facilities in Site C to better meet the local need of the future community in the Sai Sha area, the corresponding internal transport facilities provision was reviewed. A total of 200 carparking spaces (excluding public vehicle park) would be provided in Site C in the Current Scheme to comply with Lease requirements.

8.1.9 To evaluate the adequacy of the current car parking provision for the proposed amendment to the recreational and leisure facilities in Site C, interview surveys were carried out at existing sports facilities with similar nature to study the transport modes. The required car parking provision for the Current Scheme in Site C were then calculated based on the observed modal split and occupancy. Result shows that 196 parking spaces would be required for the various components under the Current Scheme; and the current provision of 200 parking spaces would be adequate to cater the car parking demand.

8.1.10 In order to review the existing traffic condition, traffic count surveys were conducted at the key junctions (J7-J14) on normal weekday during commuting peaks (7:00am–9:00am and 5:00pm–7:00pm) in November 2021. For the overall two-way traffic flows along Sai Sha Road, the AM peak and the PM peak periods occur from 07:30-08:30 and 17:15-18:15 respectively. For the AM peak period, the one-way traffic flow along Sai Sha Road (Ma On Shan Direction) during AM peak from 07:00- 08:00 is higher than the period 07:30 -08:30, hence the traffic flows in Ma On Shan Direction in this period would be adopted as the peak hour flows for conservative approach.

8.1.11 For the key junctions (J1-J6), reference was made to historical traffic data of the nearby station at Sai Sha Road (Station No. 5683) as published in the Annual Traffic Census (ATC) report. For the Station No. 5638, the annual average daily traffic (AADT) of Sai Sha Road increased from 23,210 vehs/ day to 24,950 vehs/ day from years 2016 to 2020. This represents an annual growth rate of about 1.8% per annum. In view of current COVID-19 situation, a conservative growth rate of 2% per annum was applied to the 2018 observed traffic flows on junctions J1-J6 to produce the 2021 observed traffic flows on these junctions.

8.1.12 At present, all assessed junctions and road links are operating without capacity problem according to **Table 3.4** and **Table 3.5** except with section of Sai Sha Road between Nin Wah Road and Access Road to Che Ha (L7 & L8). For Sections L7 & L8 westbound direction, it is operated close to its capacity.

8.1.13 According to the Lease conditions of the Application Site, the Proposed Development shall be completed by year 2025. Year 2028 is therefore selected as a design year in this TIA for assessment purpose (i.e. 3 years after the planned completion of the Proposed Development according to Transport Department's "*Guidelines and Requirements of Traffic Impact Assessment Studies*"), as in the approved application.

8.1.14 In order to forecast the traffic flow and examine traffic impact due to the Proposed Development in year 2028, annual growth rate method is applied to derive the base traffic flow for further developing traffic flow for assessment. In addition, the traffic generated by other planned / committed developments in the vicinity of the Application site would then be added to the base traffic flow to estimate the 2028 background traffic flows (without the Proposed Development).

8.1.15 A conservative annual growth rate of 0.5% per annum is adopted for projecting the peak hour traffic flows from year 2021 (existing) to year 2028. The traffic generated by the committed / planned development as listed in **Table 4.3** were added to produce the 2028 background traffic flow (i.e. 2021 existing traffic flow x $(1+0.5\%)^7$ + traffic generated by committed / planned development = 2028 background traffic flow).

8.1.16 Apart from the Proposed Development, other committed / planned major developments in the vicinity and Ma On Shan area, some of which were recently rezoned and gazetted under Ma On Shan OZP, have been taken into account in the traffic forecast. Also, for a conservative approach, current STT sites in Ma On Shan Area are identified and added as their planned developments according to their land use in the approved Ma On Shan OZP. The traffic flows of the above development are listed in **Table 4.3**.

8.1.17 The overall development traffic flow for Sites A, B and C (includes Sports & Recreation Centres) are summarised in **Table 4.9**.

8.1.18 A recent submission was made to Town Planning Board for a proposed private school at Sai Keng (Application A/NE-SSH/139). The potential school will be operated as a private school with a total of 1,226 students ranging from early year learning, primary to secondary education. Due to the close vicinity of the potential school with the Application Site, sensitivity test is carried to take into account the potential traffic volume to be induced by the potential school as shown in **Table 4.10**.

8.1.19 The 2028 reference traffic flows were produced by adding the additional trips to be generated by the Proposed Development in the approved scheme in **Table 4.9** to the 2028 background traffic flows. The directional distribution of the development traffic of the Application Site is illustrated in **Figure 4.2**. The resultant 2028 reference traffic flows (approved scheme) are shown in **Figures 4.3 - 4.4**.

8.1.20 The 2028 design traffic flows were produced by adding the additional trips to be generated by the Proposed Development in current scheme in **Table 4.9** to the 2028 background traffic flows. The resultant 2028 design traffic flows (current scheme) are shown in **Figures 4.5 - 4.6**.

8.1.21 It is anticipated that the AM peak traffic generation of the potential school in Sai Keng would be critical as it would overlap with the commuting AM peak. However, its PM peak traffic generation should occur earlier than the commuting PM peak which shall not be critical. The current scheme would generate less traffic than the approved scheme during AM peak as demonstrated in **Table 4.9.** In view of the above, the TIA of Potential School in Sai Keng in design year 2031 (under the Application A/NE-SSH/139) would be more critical. In conclusion, the current proposal in Site C would not affect the TIA findings under the Application A/NE-SSH/139.

8.1.22 As shown in **Table 5.1** and **Table 5.2**, comparing the key junction and road link performance between the “Reference Case” and “Design Case”, the current scheme would not cause any insurmountable impact on the critical junctions.

8.1.23 The key junctions and road links are assessed with 2028 design traffic flow for sensitivity test with potential school site in Sai Keng. All the assessed junctions and road links will operate with ample capacity in the sensitivity test under the proposed Sai Sha Road Widening Scheme Layout.

8.1.24 No impact is anticipated at Sai Sha Road with the minimal increase of pedestrian flow induced by the proposed change of recreational facilities in Site C.

8.2 Conclusion

8.2.1 In light of the findings of this TIA, it is concluded that the traffic impact imposed onto the local road network due to the current scheme is minimal, comparing with the approved scheme. All the assessed junctions and road links would be able to handle the future traffic demand to be induced by the current scheme with the proposed change of recreational facilities in Site C upon the completion of Sai Sha Road Widening Scheme.

FIGURE

ISO A1 594mm x 841mm

Project Management Initials:
Designer:
Checked:
Approved:

841000 E
842600 E
844200 E
833600 N
832000 N
830400 N

LEGEND:
DEVELOPMENT SITE BOUNDARY

N

WHITEHEAD
WU KAU SHA
SAI SHA ROAD
NAI CHUNG
SITE C
SITE B
SITE A
馬鞍山
MA ON SHAN
MA ON SHAN BYPASS
MA ON SHAN
SAI SHA ROAD
SHAP SZE HEUNG
SAM PUI CHAU

AECOM

PROJECT
項目

SAI SHA
COMPREHENSIVE
DEVELOPMENT
SHAP SZE HEUNG,
SAI KUNG NORTH, N.T.

CLIENT
客戶

CONSULTANT
工程顧問公司

AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS
分包工程顧問公司

ISSUE/REVISION
修訂

I/R 修訂	DATE 日期	DESCRIPTION 內容說明	CHK. 核對
-	JUN. 18	FIRST ISSUE	JL

STATUS
階段

SCALE
比例
A3 1 : 16000

DIMENSION UNIT
尺寸單位
METRES

KEY PLAN
索引圖

PROJECT NO.
項目編號
60547289

CONTRACT NO.
合約編號

SHEET TITLE
圖紙名稱
SITE LOCATION PLAN

SHEET NUMBER
圖紙編號
60547289\TIA1\FIGURE 1.1

This drawing has been prepared for the uses of AECOM's client, it may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimensions.

Plot File by: ZHANGMRS 19/06/2018
PATH: P:\PROJECTS\60547289\DRAWING\Report\TIA1\TIA1_511.dwg

ISO A1 594mm x 841mm

Approved:

Checked:

Designer:

Project Management Initials:

1ST +18.5

CHE HA VILLAGE

ACCESS ROAD

RESERVED SCHOOL SITE

RESERVED SCHOOL SITE

EXISTING BUILDINGS TO REMAIN

MA KWU LAM VILLAGE

SITE A

TAI TUNG VILLAGE

SITE B

TSENG TAU VILLAGE

1ST +24.0

FOOTBRIDGE

FOOTBRIDGE

1ST SITE C +18.5

TRAINING PATH FOR CYCLING / MAINTENANCE PATH

PLACE OF RECREATION, SPORTS OR CULTURE #

TRAINING PATH FOR CYCLING / MAINTENANCE PATH

PLACE OF RECREATION, SPORTS OR CULTURE #

2ST +17.5

+15.0 1ST

+15.0 1ST

PLACE OF RECREATION, SPORTS OR CULTURE #

ACCESS ROAD

2ST +23.5

PLACE OF RECREATION, SPORTS OR CULTURE #

1ST +21.0

3ST +36.0

+18.5 1ST

5ST +33.0

3ST +40.0

+12.5

3ST +36.0

+15.5

RECREATION & SPORTS CENTRE WITH ANCILLARY FACILITIES / E&M *

RECREATION & SPORTS CENTRE WITH ANCILLARY FACILITIES / E&M *

WELFARE CENTRE & PUBLIC VEHICLE PARK

PUBLIC OPEN SPACE

SEWAGE PUMPING STATION

PEDESTRIAN CROSSING

RECREATION & SPORTS CENTRE WITH ANCILLARY FACILITIES / E&M *

NOTE : 1. ALL LEVELS DENOTE MAXIMUM MAIN ROOF LEVELS
2. ALL NUMBERS OF STOREYS DENOTED ON PLAN REFER TO TOTAL NO. OF STOREYS ABOVE GROUND.

LEGEND

- LAND TO BE SECURED BY APPLICANT / LAND OUTSIDE TPTL 157 RP AND TPTL 253
- 20m ECOLOGICAL STREAM BUFFER ZONE
- NON-BUILDING AREA
- PROPOSED DEVELOPMENT SITE BOUNDARY
- APPLICATION SITE BOUNDARY
- +37.0 HEIGHT IN mPD
- 1ST HEIGHT IN NO. OF STOREY

* INCLUDING 'PLACE OF RECREATION, SPORTS OR CULTURE', 'PLACE OF ENTERTAINMENT', 'EATING PLACE', 'SHOP & SERVICES', AND/OR 'INDOOR PLAYGROUND'

\# PLACE OF RECREATION, SPORTS OR CULTURE (OUTDOOR RECREATIONAL FACILITIES FOR THE USE OF SPORTS FIELD/ BALL COURT/ POOL/ DRIVING RANGE/ TRAINING PATH FOR CYCLING)

Plot file by: ZHAOHO2 26/07/2022 (TM)
PATH: P:\PROJECTS\60547289\DRAWING\Report\TIA2\TIA2_503.dwg

This drawing has been prepared for the use of AECOM's client & may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, & will deny any liability whatsoever, to any party that does so or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimension.

AECOM

PROJECT

SAI SHA ROAD WIDENING - SAI SHA COMPREHENSIVE DEVELOPMENT SHAP SZ HEUNG, SAI KUNG NORTH, N.T.

CLIENT

CONSULTANT

AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS

ISSUE/REVISION

I/R	DATE	DESCRIPTION	CHK.
-	OCT. 19	FIRST ISSUE	JL

STATUS

SCALE A3 NTS

DIMENSION UNIT METRES

KEY PLAN

PROJECT NO. 60547289

CONTRACT NO.

SHEET TITLE

INDICATIVE MASTER LAYOUT PLAN OF SITE C

SHEET NUMBER

60547289/TIA2/2.1

ISO A1 594mm x 841mm

Project Management Initials: Designer: Checked: Approved:

844600 E

845200 E

845800 E

832600 N

832000 N

831400 N

LEGEND:

DEVELOPMENT SITE BOUNDARY

PROPOSED SITE ACCESS

N

NAI CHUNG

CHE HA

KWUN HANG

SITE C

TSENG TAU

MA ON SHAN WATER TREATMENT WORKS

MA KWU LAM

TAI TUNG

SITE A

SITE B

SAI SHA ROAD

ACCESS TO SITE C

ACCESS TO PUBLIC CARPARK

ACCESS TO SITE C

ROAD L1

ACCESS TO SITE B

ACCESS TO SITE A

Plot File by: ZHANGWRS 19/06/2018
PATH P:\PROJECTS\60547289\DRAWING\Report\TIA1\TIA1_524.dwg

This drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimensions.

AECOM

PROJECT
項目

SAI SHA
COMPREHENSIVE
DEVELOPMENT
SHAP SZ HEUNG,
SAI KUNG NORTH, N.T.

CLIENT
業主

CONSULTANT
工程顧問公司

AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS
分判工程顧問公司

ISSUE/REVISION
發佈

I/R 發佈	DATE 日期	DESCRIPTION 內容摘要	CHK. 核查
-	JUN. 18	FIRST ISSUE	JL

STATUS
狀態

SCALE 比例
A3 1 : 6000

DIMENSION UNIT 尺寸單位
METRES

KEY PLAN
索引圖

PROJECT NO. 項目編號
60547289

CONTRACT NO. 合約編號

SHEET TITLE
圖紙名稱
ACCESS ARRANGEMENT FOR
THE PROPOSED DEVELOPMENT

SHEET NUMBER
圖紙編號
60547289/TIA2/2.2

ISO A1 594mm x 841mm

Project Management Initials: Designer: Checked: Approved:

842200 E

843800 E

833500 N

831900 N

830300 N

828700 N

847000 E

NOTE:

1. J8 – J13 ARE NEW JUNCTIONS TO BE FORMED IN CONJUNCTION WITH SAI SHA ROAD WIDENING.

LEGEND:

- DEVELOPMENT SITE BOUNDARY
- GAZETTED SAI SHA ROAD WIDENING SCHEME
- J1 — KEY JUNCTION TO BE ASSESSED
- L1 — KEY ROAD LINK TO BE ASSESSED
- AREA OF INFLUENCE

WHITEHEAD

馬鞍山
MA ON SHAN

MA ON SHAN

NAI CHUNG

SITE A

SITE B

SITE C

SAI SHA ROAD

MA ON SHAN BYPASS

TAI MONG TSAI ROAD

J1 J2 J3 J4 J5 J6 J7 J8 J9/J9A J9B J10 J11 J12 J13 J14

L1 L2 L3 L4 L5 L6 L7 L8 L9 L10 L11 L12

Existing Junction of Sai Sha Road and Access Road to Kwun Hang

Existing Junction of Sai Sha Road and Access Road to Che Ha

*Note: With the Sai Sha Road widening works, J9a and J9b would be combined, forming a new signalized junction J9 - Sai Sha Road / Access Road to Kwun Hang / Access Road to Che Ha

N

AECOM

PROJECT

SAI SHA
COMPREHENSIVE
DEVELOPMENT
SHAP SZ HEUNG,
SAI KUNG NORTH, N.T.

CLIENT

CONSULTANT

AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS

ISSUE/REVISION

I/R	DATE	DESCRIPTION	CHK.
-	JUN. 18	FIRST ISSUE	JL

STATUS

SCALE A3 1 : 16000

DIMENSION UNIT METRES

KEY PLAN

PROJECT NO. 60547289

CONTRACT NO.

SHEET TITLE

KEY JUNCTIONS AND
ROAD LINKS

SHEET NUMBER

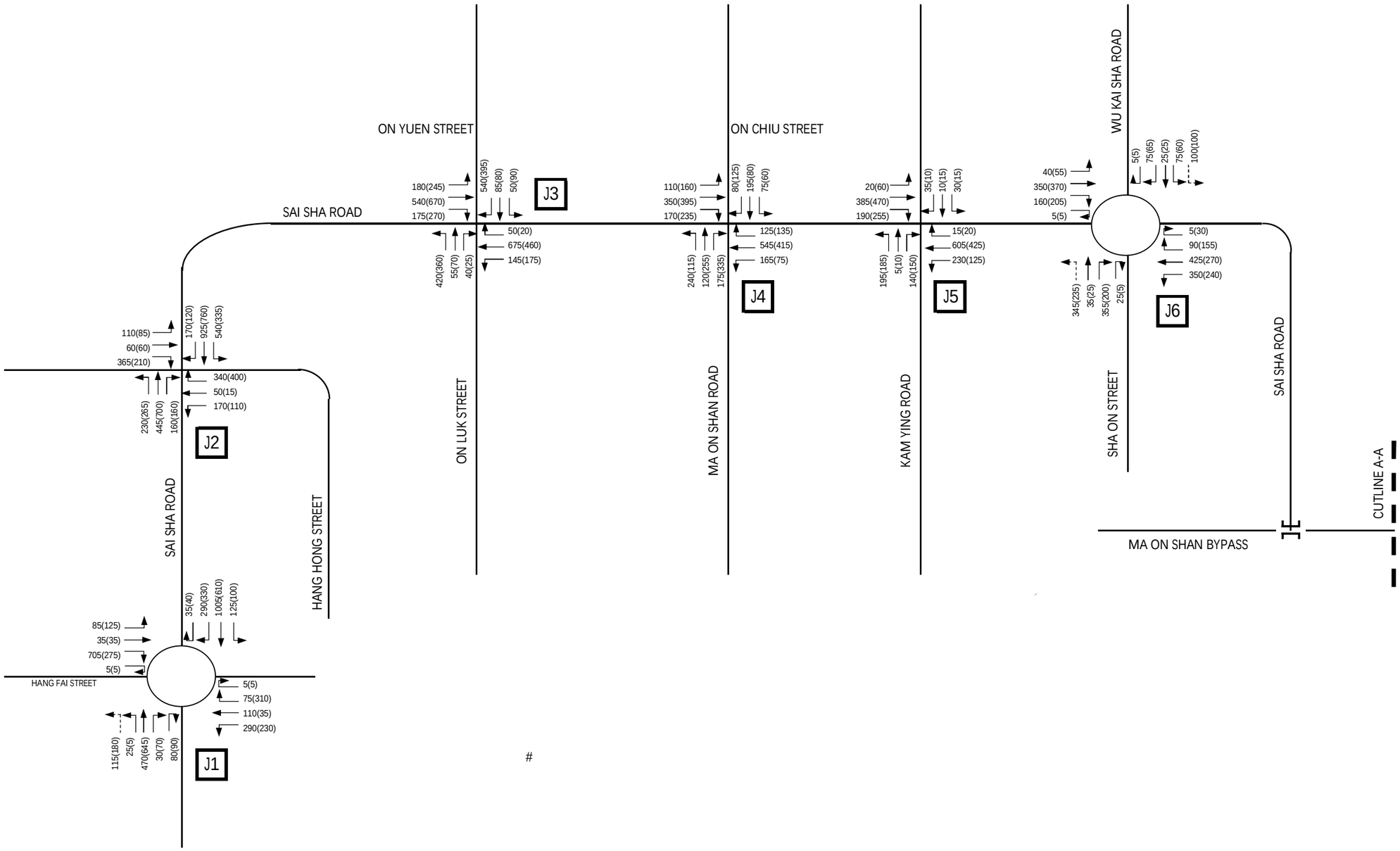
60547289\TIA1\FIGURE 3.1

This drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimensions.

Plot File by: ZHANGWRS
19/06/2018
PATH P:\PROJECTS\60547289\DRAWING\Report\TIA1\TIA1_581.dwg

LEGEND:

50(50) AM(PM) PEAK HOUR FLOWS (PCU/HR)



#

This drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimensions.

AECOM

PROJECT

SAI SHA
COMPREHENSIVE
DEVELOPMENT
SHAP SZ HEUNG,
SAI KUNG NORTH, N.T.

CLIENT

CONSULTANT

AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS

ISSUE/REVISION

STATUS

SCALE **DIMENSION UNIT**

NOT TO SCALE

KEY PLAN

PROJECT NO. **CONTRACT NO.**

60547289

SHEET TITLE

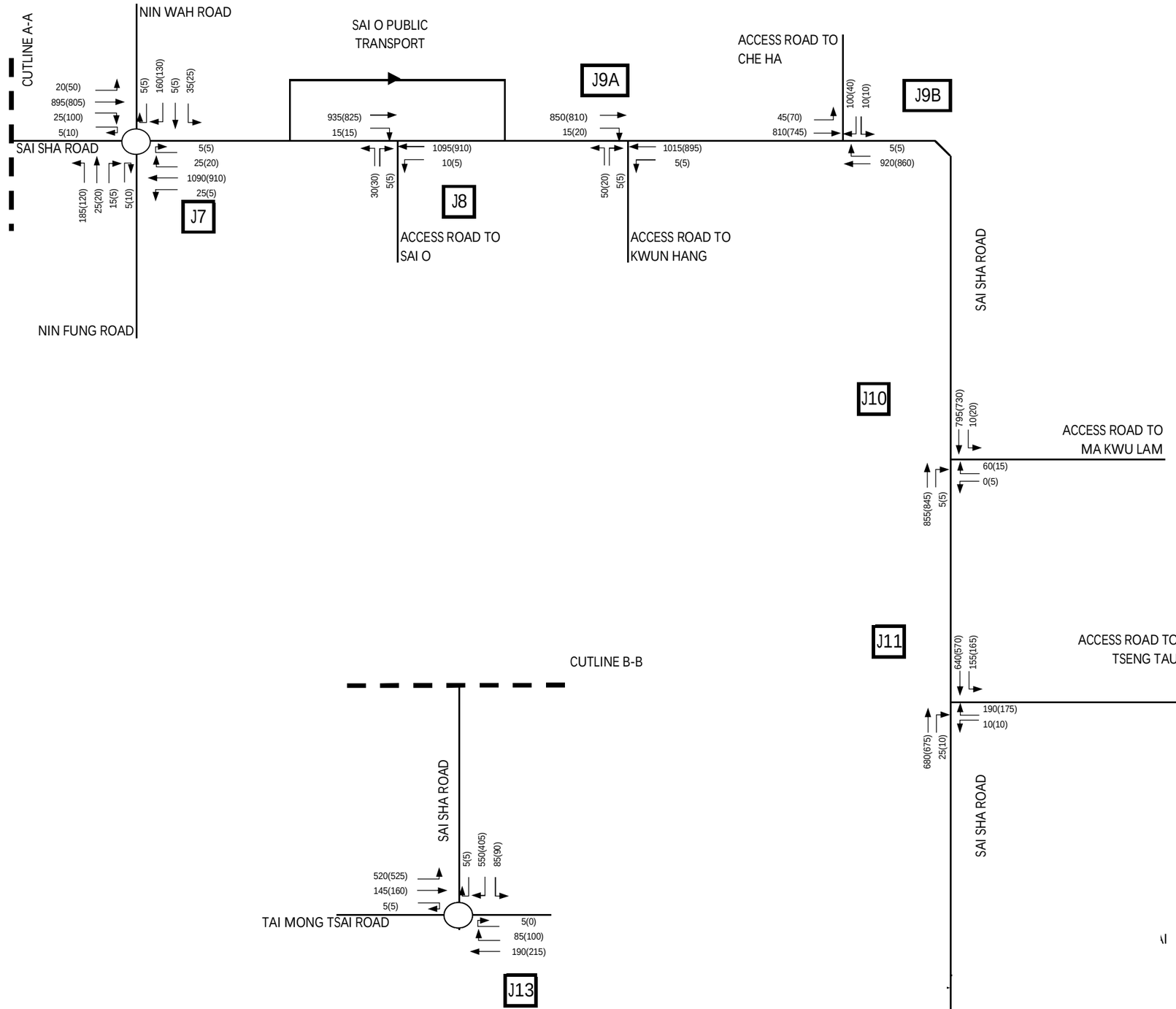
2021 OBSERVED TRAFFIC FLOWS
(SHEET 1 OF 2)

SHEET NUMBER

6054728\TIA2\FIGURE 3.2

LEGEND:

50(50) AM(PM) PEAK HOUR FLOWS (PCU/HR)



This drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimensions.

AECOM

PROJECT

SAI SHA COMPREHENSIVE DEVELOPMENT
SHAP SZ HEUNG,
SAI KUNG NORTH, N.T.

CLIENT

CONSULTANT

AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS

ISSUE/REVISION

STATUS

SCALE **DIMENSION UNIT**

NOT TO SCALE

KEY PLAN

PROJECT NO. **CONTRACT NO.**

60547289

SHEET TITLE

2021 OBSERVED TRAFFIC FLOWS
(SHEET 2 OF 2)

SHEET NUMBER

6054728\TIA2\FIGURE 3.3

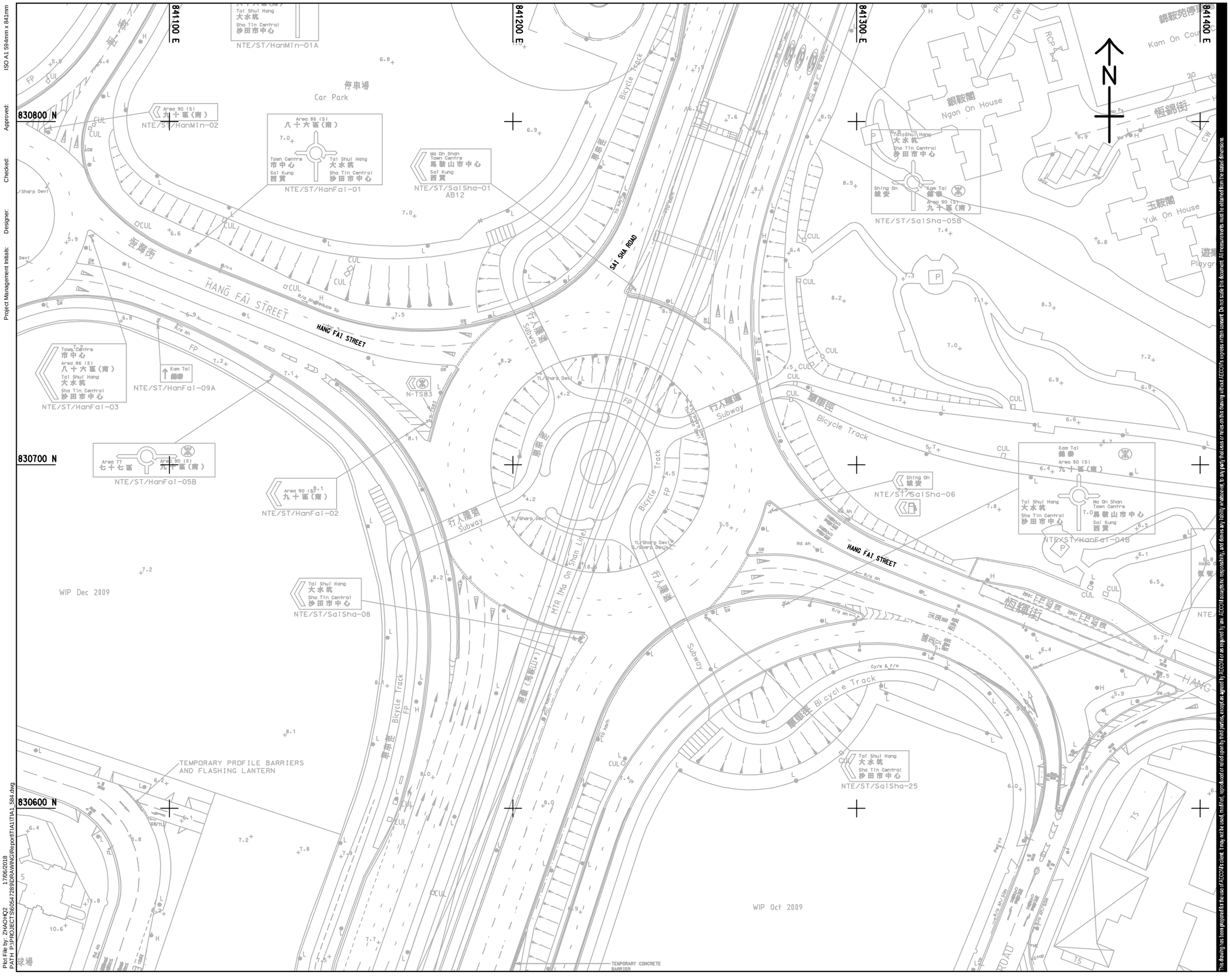
ISO A1 594mm x 841mm

Approved:

Checked:

Designer:

Project Management Initials:



This drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimensions.

AECOM

PROJECT
項目

SAI SHA
COMPREHENSIVE
DEVELOPMENT
SHAP SZ HEUNG,
SAI KUNG NORTH, N.T.

CLIENT
業主

CONSULTANT
工程顧問公司

AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS
分判工程顧問公司

ISSUE/REVISION
發行

I/R 發行	DATE 日期	DESCRIPTION 內容簡要	CHK. 核證
-	JUN. 18	FIRST ISSUE	JL

STATUS
階段

SCALE
比例

A3 1 : 1000

DIMENSION UNIT
尺寸單位

METRES

KEY PLAN
索引圖

PROJECT NO.
項目編號

60547289

CONTRACT NO.
合約編號

SHEET TITLE
圖紙名稱

EXISTING JUNCTION LAYOUT OF
SAI SHA ROAD /
HANG FAI STREET (J1)

SHEET NUMBER
圖紙編號

6054728\TIA2\FIGURE 3.4

Plot File by: ZHAOHQ2 17/06/2018
PATH P:\PROJECTS\60547289\DRAWINGS\Report\TIA\1TIA1_584.dwg

ISO A1 594mm x 841mm

Approved:

Checked:

Designer:

Project Management Initials:

841400 E

841450 E

841500 E

841550 E

831500 N

831450 N

SAI SHA ROAD

HANG HONG STREET

Chung On Estate
頌安邨

Ma On West
馬鞍西

Tai Shui Hang
大水坑

Sha Tin Central
沙田市中心

NTE/ST/HanHon-05B

NTE/ST/SaiSha-14B

NTE/ST/SaiSha-27

EXISTING METHOD OF CONTROL

1.

2.

3.

4.

This drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimensions.

AECOM

PROJECT
項目

SAI SHA
COMPREHENSIVE
DEVELOPMENT
SHAP SZ HEUNG,
SAI KUNG NORTH, N.T.

CLIENT
業主

CONSULTANT
工程顧問公司

AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS
分判工程顧問公司

ISSUE/REVISION
發行

I/R 發行	DATE 日期	DESCRIPTION 內容摘要	CHK. 核對
-	JUN. 18	FIRST ISSUE	JL

STATUS
狀況

SCALE
比例
A3 1 : 500

DIMENSION UNIT
尺寸單位
METRES

KEY PLAN
索引圖

PROJECT NO.
項目編號
60547289

CONTRACT NO.
合約編號

SHEET TITLE
圖紙名稱
EXISTING JUNCTION LAYOUT OF
SAI SHA ROAD /
HANG HONG STREET (J2)

SHEET NUMBER
圖紙編號
6054728\TIA2\FIGURE 3.5

Plot File by: ZHAOHQ2 17/06/2018
PATH P:\PROJECTS\60547289\DRAWING\Report\TIA1\TIA1_585.dwg

ISO A1 594mm x 841mm

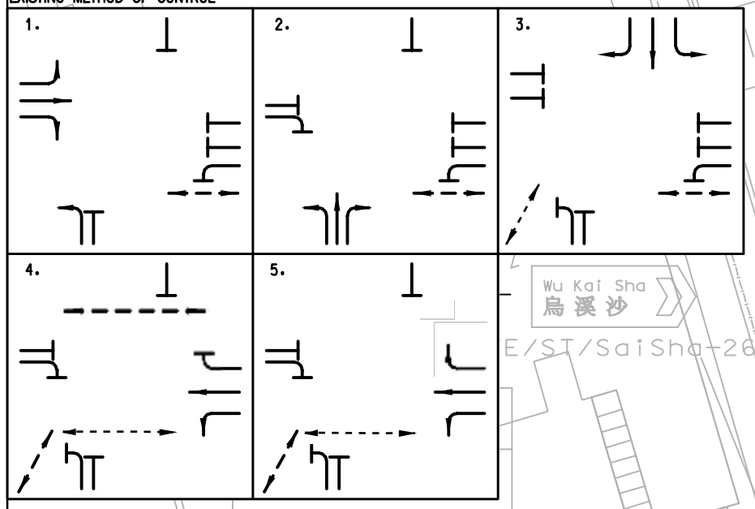
Approved:

Checked:

Designer:

Project Management Initials:

EXISTING METHOD OF CONTROL



841700 E

841750 E

831650 N

831600 N

N

Wu Kai Sha
烏溪沙

NTE/ST/SaiSha-26

Ma On Shan
Town Centre
馬鞍山市中心

NTE/ST/SaiSha-17

N-TS84

Ma On Shan
Town Centre
馬鞍山市中心

NTE/ST/SaiSha-23

Sha Tin Central
沙田市中心

NTE/ST/SaiSha-43

Ma On Shan
Town Centre
馬鞍山市中心

NTE/ST/OnLuk-01

N-TS84

ON YUEN STREET

ON LUK STREET

SAI SHA ROAD

Rickshaws & Handcarts Prohibited

第4座
Block 4

平台
Podium

西沙路

Cycling Track

Stepp Rd

CUL

EW

NUT

PTF

Cy/w & F/w

F/w & Cy/w

F/B

NE

L座

單車徑

Cycling

+7.8
+5.6
+8.5
+22.0
+20.8
+20.2
+8.9
+22.3
+7.6
+23.0
+6.2
+23.1
+6.1
+22.7

628

AECOM

PROJECT
項目

SAI SHA
COMPREHENSIVE
DEVELOPMENT
SHAP SZ HEUNG,
SAI KUNG NORTH, N.T.

CLIENT
客戶

CONSULTANT
顧問

AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS
分包顧問公司

This drawing has been prepared for the use of AECOM's client. It may not be used, modified, digitized or re-distributed by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and defends any liability whatsoever, to any party that does or re-use this drawing without AECOM's express consent. Do not scale this document. All measurements must be obtained from the stated dimensions.

ISSUE/REVISION
發出

I/R 發出	DATE 日期	DESCRIPTION 內容摘要	CHK. 核對
-	JUN. 18	FIRST ISSUE	JL

STATUS
狀況

SCALE
比例

A3 1 : 500

DIMENSION UNIT
尺寸單位

METRES

KEY PLAN
索引圖

PROJECT NO.
項目編號

60547289

CONTRACT NO.
合約編號

SHEET TITLE
圖紙名稱

EXISTING JUNCTION LAYOUT OF SAI SHA ROAD / ON YUEN STREET / ON LUK STREET (J3)

SHEET NUMBER
圖紙編號

6054728\TIA2\FIGURE 3.6

Plot File by: ZHAOHQ2 19/06/2018
PATH P:\PROJECTS\60547289\DRAWING\Report\TIA1\TIA1_586.dwg

ISO A1 594mm x 841mm

Project Management Initials: Designer: Checked: Approved:

842100 E | 842150 E | 842200 E

831850 N | 831800 N | 831750 N

Sha Tin Central 沙田市中心
Wu Kai Sha 烏溪沙
Sai Kung 西貢
Ma On Shan Town Centre 馬鞍山市中心
Ma On West 馬鞍西

NTE/ST/OnChi-01

ON CHIU STREET
SAI SHA ROAD
MA ON SHAN ROAD
西沙路
Cycling Track Ramp
Subway
港鐵（馬鞍山*）
Block 1
Podium
Ma On Shan Centre
Ma On Shan Town Central 馬鞍山市中心
On Chiu Street 鞍超街
Ma On Shan Health Centre 馬鞍山健康中心

NTE/ST/SaiSha-P05
NTE/ST/SaiSha-P06
NTE/ST/SaiSha-P04

WIP Jan 2016

EXISTING METHOD OF CONTROL

1. 2. 3. 4.

Plot File by: ULH9 19/06/2018
PATH: P:\PROJECTS\60547289\DRAWINGS\Report\TIA\11TIA1_587.dwg

AECOM

PROJECT

SAI SHA
COMPREHENSIVE
DEVELOPMENT
SHAP SZ HEUNG,
SAI KUNG NORTH, N.T.

CLIENT

CONSULTANT

AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS

ISSUE/REVISION

I/R	DATE	DESCRIPTION	CHK.
-	JUN. 18	FIRST ISSUE	JL

STATUS

SCALE A3 1 : 500

DIMENSION UNIT METRES

KEY PLAN

PROJECT NO. 60547289

CONTRACT NO.

SHEET TITLE

EXISTING JUNCTION LAYOUT OF
SAI SHA ROAD / ON CHIU ROAD /
MA ON SHAN ROAD (J4)

SHEET NUMBER

6054728\TIA2\FIGURE 3.7

This drawing has been prepared for the use of AECOM's client, it may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimensions.

ISO A1 594mm x 841mm

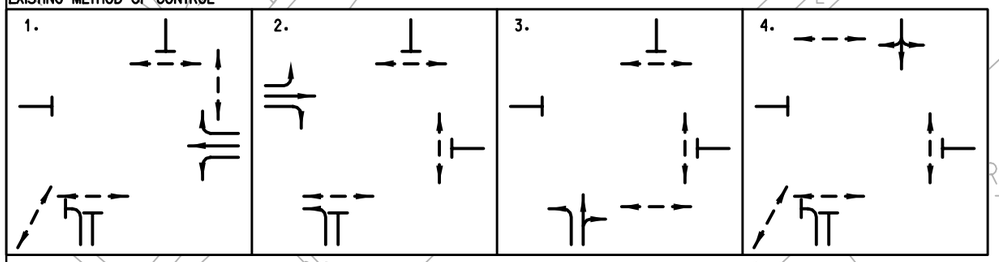
Approved:

Checked:

Designer:

Project Management Initials:

EXISTING METHOD OF CONTROL



842700 E

842750 E

831950 N

831900 N

831850 N

Sai Kung 西貢

Wu Kai Sha Village 烏溪沙村

Lee On 利安

Wu Kai Sha New Village 烏溪沙新村

NTE/ST/SaiSha-11

SAI SHA ROAD

KAM YING ROAD

西沙路

Subway

Lung Yiu House 龍耀閣

籃球場

N

This drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimensions.

AECOM

PROJECT
項目

SAI SHA
COMPREHENSIVE
DEVELOPMENT
SHAP SZ HEUNG,
SAI KUNG NORTH, N.T.

CLIENT
業主

CONSULTANT
顧問

AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS
分顧問

ISSUE/REVISION
發行

I/R 發行	DATE 日期	DESCRIPTION 內容摘要	CHK. 核對
-	JUN. 18	FIRST ISSUE	JL

STATUS
狀況

SCALE
比例

A3 1 : 500

DIMENSION UNIT
尺寸單位

METRES

KEY PLAN
索引圖

PROJECT NO.
項目編號

60547289

CONTRACT NO.
合約編號

SHEET TITLE
圖紙名稱

EXISTING JUNCTION LAYOUT OF
SAI SHA ROAD /
KAM YING ROAD (J5)

SHEET NUMBER
圖紙編號

6054728\TIA2\FIGURE 3.8

Plot File by: ZHAOHO2 17/06/2018
PATH P:\PROJECTS\60547289\DRAWING\Report\TIA1\TIA1_588.dwg

ISO A1 594mm x 841mm

Approved:

Checked:

Designer:

Project Management Initials:

842900 E

843000 E

843100 E

832300 N

832200 N

832100 N

N

WU KAI SHA ROAD 烏溪沙路

SAI SHA ROAD

SHA ON STREET

西沙路

Wu Kai Sha Station 烏溪沙站

Cycling Track

Subway

Sitting-out Area 休憩處

Lee On Substation 利安變電站

Podium (Bus Terminus under) 平台（下層巴士總站）

Tower 1 第一座

Tower 2 第二座

Tower 第三座

599 SAI SHA ROAD 西沙路599號

Black 1 第一座

THIRD LANE

SIXTH LANE

SEVENTH LANE

EIGHTH LANE

Plot File by: ZHAOHQ2 17/06/2018
PATH P:\PROJECTS\60547289\DRAWING\Report\TIA\LTIA1_589.dwg

The drawing has been prepared for the use of AECOM's client, it may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimensions.

AECOM

PROJECT
項目

SAI SHA
COMPREHENSIVE
DEVELOPMENT
SHAP SZ HEUNG,
SAI KUNG NORTH, N.T.

CLIENT
業主

CONSULTANT
工程顧問公司

AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS
分判工程顧問公司

ISSUE/REVISION
發出

I/R 發出	DATE 日期	DESCRIPTION 內容說明	CHK. 核證
-	JUN. 18	FIRST ISSUE	JL

STATUS
階段

SCALE
比例
A3 1 : 1000

DIMENSION UNIT
尺寸單位
METRES

KEY PLAN
索引圖

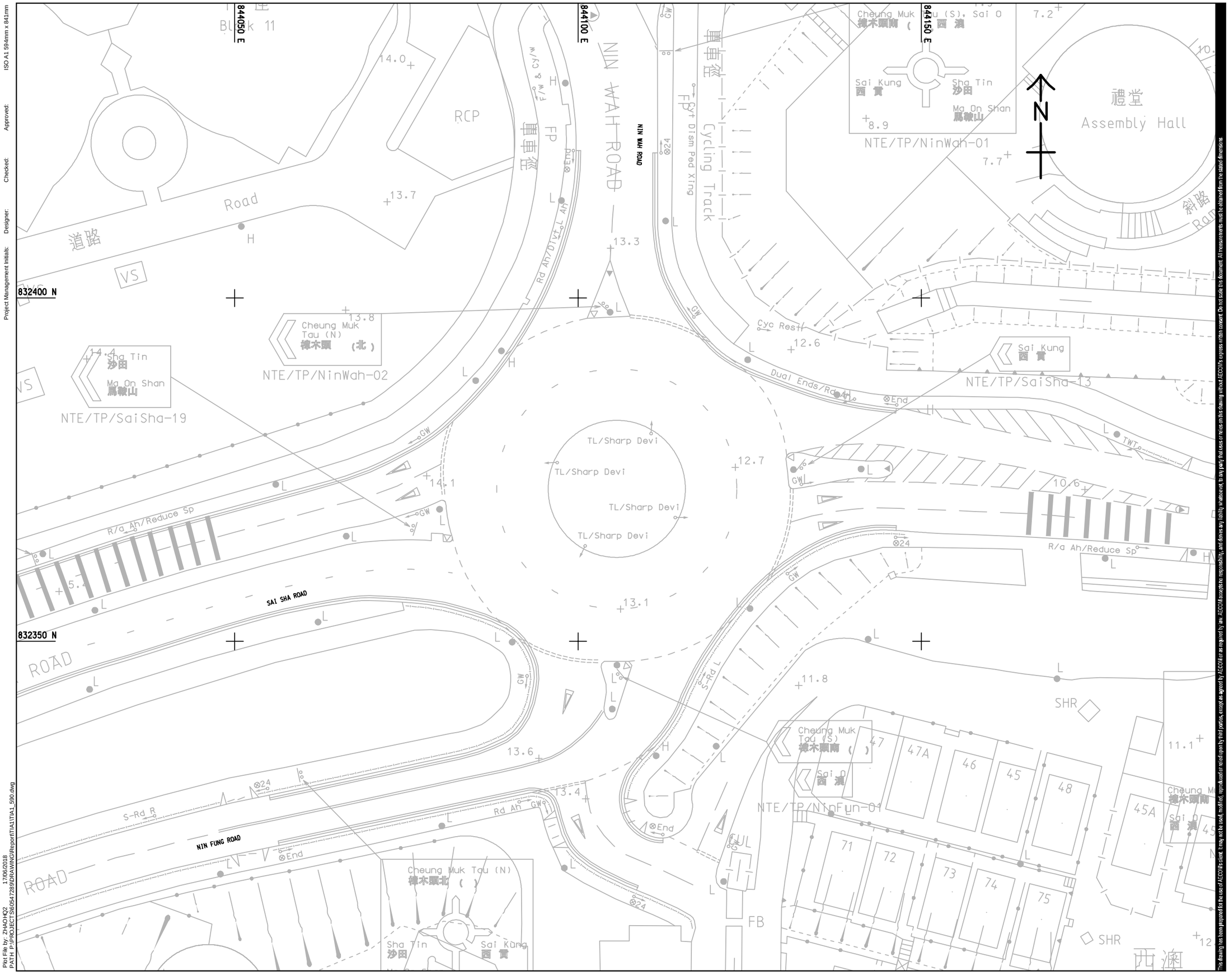
PROJECT NO.
項目編號
60547289

CONTRACT NO.
合約編號

SHEET TITLE
圖紙名稱
EXISTING JUNCTION LAYOUT OF SAI SHA ROAD / SHA ON STREET / WU KAI SHA ROAD (J6)

SHEET NUMBER
圖紙編號
6054728\TIA2\FIGURE 3.9

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



Plot File by: ZHAOHQ2 17/06/2018
PATH: P:\PROJECTS\6054728\9DRAWING\Report\TIA1\TIA1_590.dwg

This drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without that AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimensions.

AECOM

PROJECT
項目

SAI SHA
COMPREHENSIVE
DEVELOPMENT
SHAP SZ HEUNG,
SAI KUNG NORTH, N.T.

CLIENT
業主

CONSULTANT
顧問

AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS
分顧問

ISSUE/REVISION
發行

I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 核准
-	JUN. 18	FIRST ISSUE	JL

STATUS
階段

SCALE 比例
A3 1 : 500

DIMENSION UNIT 尺寸單位
METRES

KEY PLAN
索引圖

PROJECT NO. 項目編號
60547289

CONTRACT NO. 合約編號

SHEET TITLE
圖紙名稱
EXISTING JUNCTION LAYOUT OF SAI SHA ROAD / NIN FUNG ROAD / NIN WAH ROAD (J7)

SHEET NUMBER
圖紙編號
6054728\TIA2\FIGURE 3.10

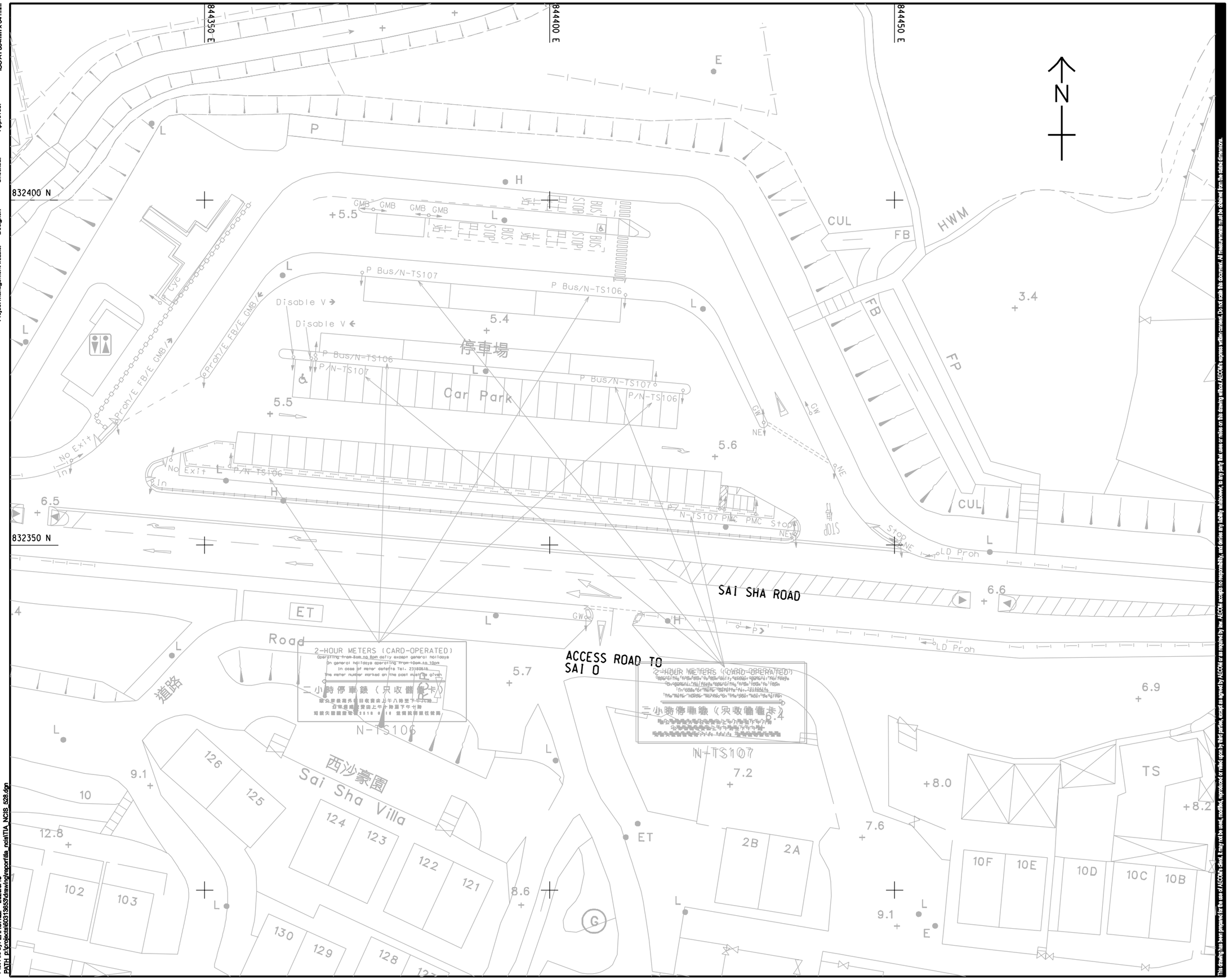
ISO A1 594mm x 841mm

Approved:

Checked:

Designer:

Project Management Initials:



AECOM

PROJECT
項目

SAI SHA
COMPREHENSIVE
DEVELOPMENT
SHAP SZ HEUNG,
SAI KUNG NORTH, N.T.

CLIENT
業主

CONSULTANT
工程顧問公司

AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS
分判工程顧問公司

This drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimensions.

ISSUE/REVISION
發行

I/R 發行	DATE 日期	DESCRIPTION 內容摘要	CHK. 核查
-	MAR. 20	FIRST ISSUE	SHSN

STATUS
狀態

SCALE 比例
A3 1 : 500

DIMENSION UNIT 尺寸單位
METRES

KEY PLAN
索引圖

PROJECT NO. 項目編號
60313653

CONTRACT NO. 合約編號

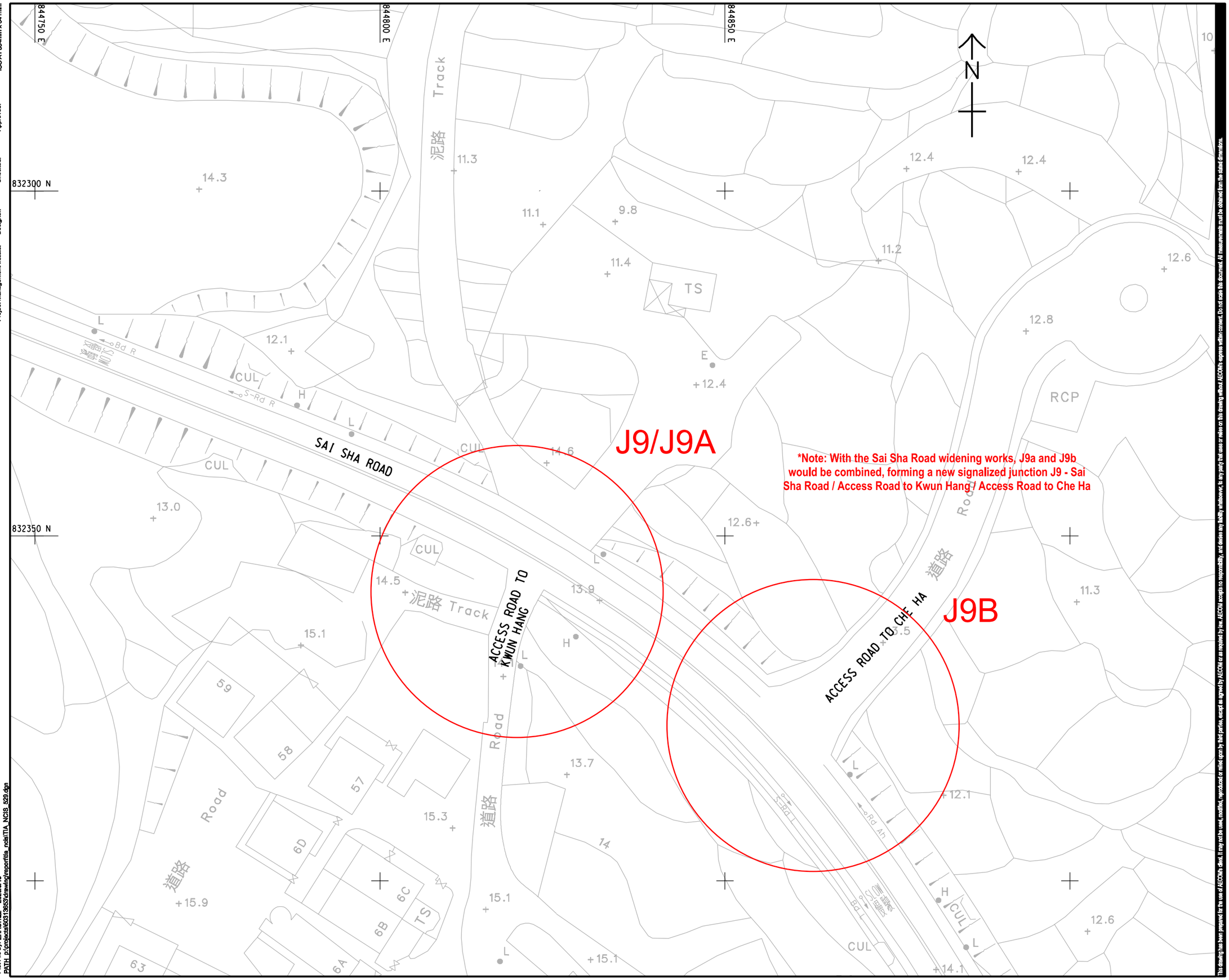
SHEET TITLE
圖紙名稱

EXISTING LAYOUT FOR JUNCTION OF SAI SHA ROAD / ACCESS ROAD TO SAI O (J8)

SHEET NUMBER
圖紙編號

6054728\TIA2\FIGURE 3.11

Plot File by: ZHAOHG2 2020/3/13
PATH: P:\projects\60313653\drawing\report\tia_rpt\TIA_NCIS_528.dgn



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

Plot File by: ZHAOHQ2 2020/9/13
PATH: p:\projects\60537365\drawing\report\tia_ncls\TIA_NCIS_529.dgn

AECOM

PROJECT 項目

SAI SHA COMPREHENSIVE DEVELOPMENT SHAP SZ HEUNG, SAI KUNG NORTH, N.T.

CLIENT 業主

CONSULTANT 工程顧問公司

AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS 分判工程顧問公司

ISSUE/REVISION 修訂

I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 核對
-	MAR. 20	FIRST ISSUE	SHSN

STATUS 狀態

SCALE 比例
A3 1 : 500

DIMENSION UNIT 尺寸單位
METRES

KEY PLAN 索引圖

PROJECT NO. 項目編號
60313653

CONTRACT NO. 合約編號

SHEET TITLE 圖紙名稱
EXISTING LAYOUT FOR JUNCTION OF SAI SHA ROAD / ACCESS ROAD TO KWUN HANG (J9/J9A) AND SAI SHA ROAD / ACCESS ROAD TO CHE HA (J9B)

SHEET NUMBER 圖紙編號
6054728\TIA2\FIGURE 3.12

This drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimensions.

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

Plot File by: ZHAOHO2 2020/3/13
PATH: p:\projects\60313653\drawing\report\tia_nota\TIA_NCIS_S30.dgn

This drawing has been prepared for the sole use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimensions.

AECOM

PROJECT 項目

SAI SHA
COMPREHENSIVE
DEVELOPMENT
SHAP SZ HEUNG,
SAI KUNG NORTH, N.T.

CLIENT 業主

CONSULTANT 工程顧問公司

AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS 分判工程顧問公司

ISSUE/REVISION 發行

I/R 發行	DATE 日期	DESCRIPTION 內容摘要	CHK. 核對
-	MAR. 20	FIRST ISSUE	SHSN

STATUS 狀態

SCALE 比例
A3 1 : 500

DIMENSION UNIT 尺寸單位
METRES

KEY PLAN 索引圖

PROJECT NO. 項目編號
60313653

CONTRACT NO. 合約編號

SHEET TITLE 圖紙名稱

EXISTING LAYOUT FOR JUNCTION OF SAI SHA ROAD / ACCESS ROAD TO MA KWU LAM (J10)

SHEET NUMBER 圖紙編號

6054728\TIA2\FIGURE 3.13

ISO A1 594mm x 841mm

Approved:

Checked:

Designer:

Project Management Initials:

Plot File by: ZHAOHC2 2020/3/13
PATH: p:\projects\60313653\drawing\hydroprofile_note\TIA_NCIS_631.dgn

This drawing has been prepared for the sole use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimensions.

AECOM

PROJECT
項目

SAI SHA
COMPREHENSIVE
DEVELOPMENT
SHAP SZ HEUNG,
SAI KUNG NORTH, N.T.

CLIENT
業主

CONSULTANT
工程顧問公司

AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS
分判工程顧問公司

ISSUE/REVISION
修訂

I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 核對
-	MAR. 20	FIRST ISSUE	SHSN

STATUS
狀況

SCALE 比例
A3 1 : 500

DIMENSION UNIT 尺寸單位
METRES

KEY PLAN
索引圖

PROJECT NO. 項目編號
60313653

CONTRACT NO. 合約編號

SHEET TITLE
圖紙名稱

EXISTING LAYOUT FOR JUNCTION OF SAI SHA ROAD / ACCESS ROAD TO TSENG TAU (J11)

SHEET NUMBER
圖紙編號

{6054728\TIA2\FIGURE 3.14

ISO A1 594mm x 841mm

Project Management Initials: Designer: Checked: Approved:

847200 E 847250 E 847300 E 847350 E

828550 N 828500 N 828450 N

Ma On Shan 馬鞍山

NTE/SK/TaiMonT-05

麗苑

竹灣變電站
WONG CHUK WAN SUBSTATION

(MOUNTED BELOW EXISTING D. S.)

SAI SHA ROAD

大網仔燒烤區四號場
TAI MONG TSAI BBQ Area Site 4

TAI MONG TSAI ROAD

大網仔燒烤區三號場
TAI MONG TSAI BBQ Area Site 3

NT 2515
Sai Kung 西貢

NTE/SK/TaiMonT-03

NT 2515
Pak Tam Chung 北潭涌

NTE/SK/TaiMonT-04

HWM

N

AECOM

PROJECT

SAI SHA
COMPREHENSIVE
DEVELOPMENT
SHAP SZ HEUNG,
SAI KUNG NORTH, N.T.

CLIENT

CONSULTANT

AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS

This drawing has been prepared for the use of AECOM's client, it may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM's responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimensions.

ISSUE/REVISION

I/R	DATE	DESCRIPTION	CHK.
-	JUN. 18	FIRST ISSUE	JL

STATUS

SCALE A3 1 : 500

DIMENSION UNIT METRES

KEY PLAN

PROJECT NO. 60547289

CONTRACT NO.

SHEET TITLE

EXISTING JUNCTION LAYOUT OF
SAI SHA ROAD /
TAI MONG TSAI ROAD (J14)

SHEET NUMBER

6054728\TIA2\FIGURE 3.15

Plot File by: ZHAOHQ2 17/06/2018
PATH: P:\PROJECTS\60547289\DRAWING\Report\TIA1\TIA1_591.dwg

ISO A1 594mm x 841mm

Approved:

Checked:

Designer:

Project Management Initials:

PLANNED/COMMITTED DEVELOPMENT

1. CDA(1) - STTL 600
2. CDA(3) - STTL601
3. R(C)3 - STTL611
4. R(B)5 - STTL605
5. R(A)8
6. R(A)9
7. R(A)10
8. AREA 100
9. AREA 103
10. HANG KIN STREET
11. ON CHUN STREET
12. LOK WO SHA LANE
13. DD191
14. TSENG TAU SPORTS CENTRE
15. NAI CHUNG SCHOOL DEVELOPMENT
16. CHEUNG MUK TAU SITE A &B1 (RNTPC PAPER NO. 4/20)
17. MA ON SHAN TSUEN ROAD SITE D (RNTPC PAPER NO. 4/20)

843200 E

844800 E

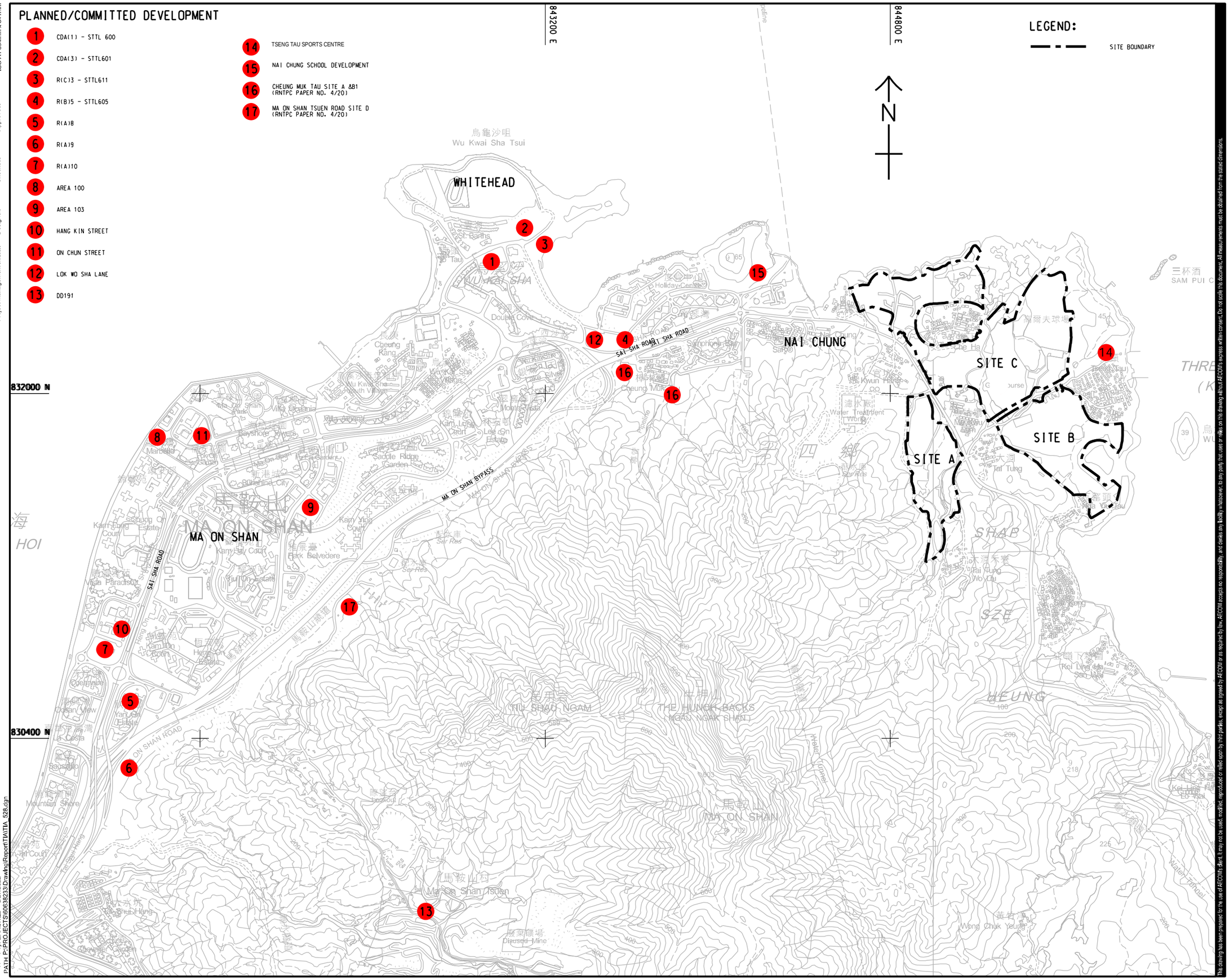
832000 N

830400 N

LEGEND:

SITE BOUNDARY

N



This drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability, whatsoever to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimensions.

AECOM

PROJECT
SAI SHA ROAD WIDENING - SAI SHA COMPREHENSIVE DEVELOPMENT SHAP SZ HEUNG, SAI KUNG NORTH, N.T.

CLIENT

CONSULTANT
AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS

ISSUE/REVISION

I/R	DATE	DESCRIPTION	CHK.
-	SEP. 22	FIRST ISSUE	SHSN

STATUS

SCALE A3 1 : 16000

DIMENSION UNIT METRES

KEY PLAN

PROJECT NO. 60638233

CONTRACT NO.

SHEET TITLE
FUTURE OTHER DEVELOPMENTS

SHEET NUMBER
6054728\TIA2\FIGURE 4.1

Plot File by: ZHAOHQ2 6/27/2022
PATH: P:\PROJECTS\60638233\Drawing\Report\TIA\TIA_528.dgn

ISO A1 594mm x 841mm

Project Management Initials:
Designer:
Checked:
Approved:

841000 E
842600 E
844200 E
833600 N
832000 N
830400 N

LEGEND:

DEVELOPMENT SITE BOUNDARY

DEVELOPMENT GENERATION ROUTE

DEVELOPMENT ATTRACTION ROUTE

N

WHITEHEAD

馬鞍山
MA ON SHAN

NAI CHUNG

SITE C

SITE B

SITE A

SHAP SZE HEUNG

MA ON SHAN BYPASS

SAI SHA ROAD

MA ON SHAN

5%

5%

7.5%

7.5%

2.5%

2.5%

75%

75%

10%

10%

AECOM

PROJECT
項目

SAI SHA
COMPREHENSIVE
DEVELOPMENT
SHAP SZ HEUNG,
SAI KUNG NORTH, N.T.

CLIENT
客戶

CONSULTANT
工程顧問公司

AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS
分判工程顧問公司

ISSUE/REVISION
發行

I/R 發行	DATE 日期	DESCRIPTION 內容說明	CHK. 核對
-	JUN. 18	FIRST ISSUE	JL

STATUS
階段

SCALE
比例

A3 1 : 16000

DIMENSION UNIT
尺寸單位

METRES

KEY PLAN
索引圖

PROJECT NO.
項目編號

60547289

CONTRACT NO.
合約編號

SHEET TITLE
圖紙名稱

VEHICULAR ROUTE FOR
DEVELOPMENT TRAFFIC

SHEET NUMBER
圖紙編號

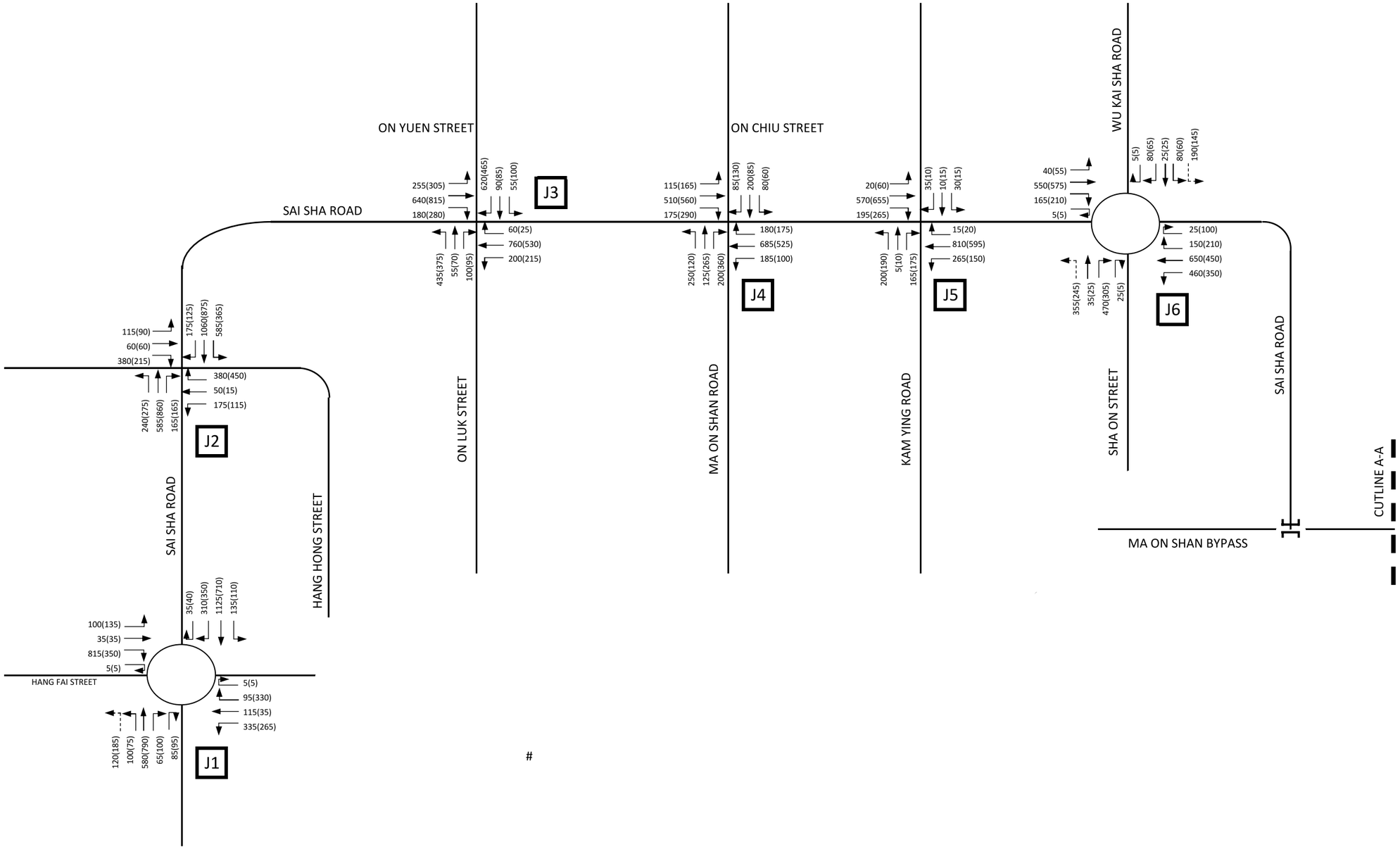
60547289\TIA1\FIGURE 4.2

This drawing has been prepared for the uses of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimensions.

Plot File by: ZHANGMRS 19/06/2018
PATH: P:\PROJECTS\60547289\DRAWING\Report\TIA1\TIA1_511.dwg

LEGEND:

50(50) AM(PM) PEAK HOUR FLOWS (PCU/HR)



#

This drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimensions.

AECOM

PROJECT

SAI SHA
COMPREHENSIVE
DEVELOPMENT
SHAP SZ HEUNG,
SAI KUNG NORTH, N.T.

CLIENT

CONSULTANT

AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS

ISSUE/REVISION

STATUS

SCALE **DIMENSION UNIT**

NOT TO SCALE

KEY PLAN

PROJECT NO. **CONTRACT NO.**

60547289

SHEET TITLE

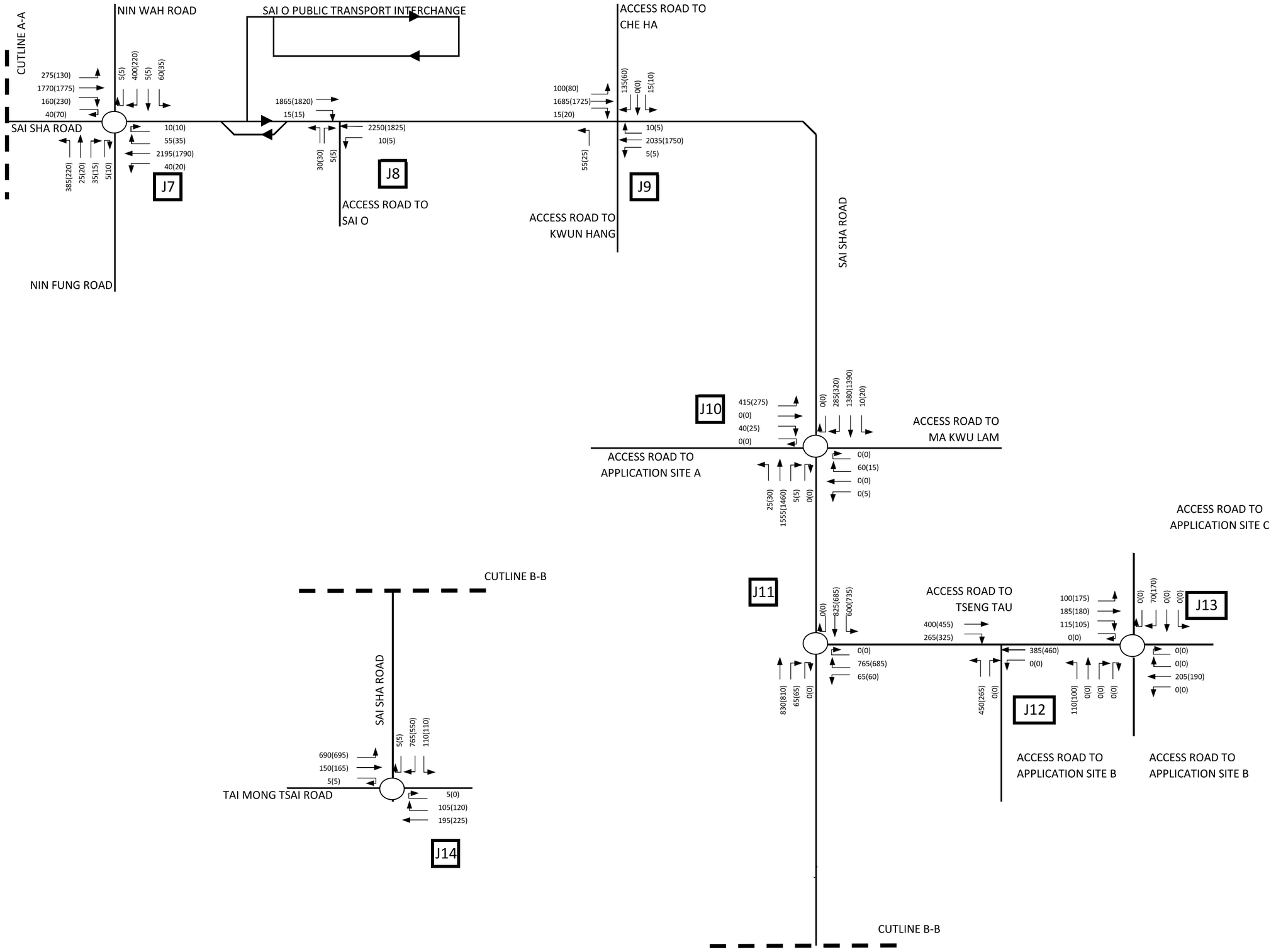
2028 REFERENCE TRAFFIC FLOWS
(SHEET 1 OF 2)

SHEET NUMBER

6054728\TIA2\FIGURE 4.3

LEGEND:

50(50) AM(PM) PEAK HOUR FLOWS (PCU/HR)



This drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimensions.

AECOM

PROJECT

SAI SHA COMPREHENSIVE DEVELOPMENT
SHAP SZ HEUNG,
SAI KUNG NORTH, N.T.

CLIENT

CONSULTANT

AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS

ISSUE/REVISION

STATUS

SCALE **DIMENSION UNIT**

NOT TO SCALE

KEY PLAN

PROJECT NO. **CONTRACT NO.**

60547289

SHEET TITLE

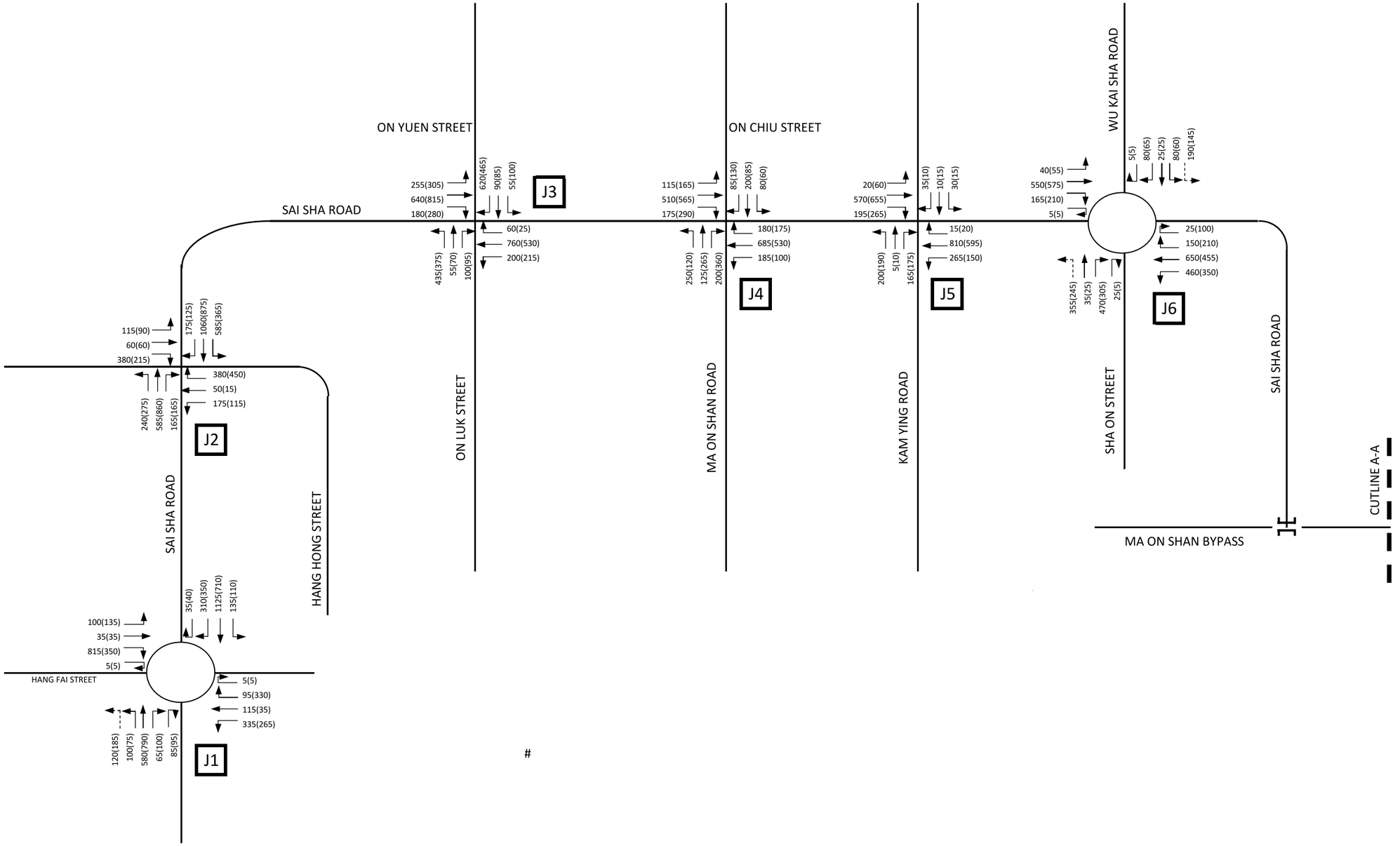
2028 REFERENCE TRAFFIC FLOWS
(SHEET 2 OF 2)

SHEET NUMBER

6054728\TIA2\FIGURE 4.4

LEGEND:

50(50) AM(PM) PEAK HOUR FLOWS (PCU/HR)



#

This drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimensions.

AECOM

PROJECT

SAI SHA
COMPREHENSIVE
DEVELOPMENT
SHAP SZ HEUNG,
SAI KUNG NORTH, N.T.

CLIENT

CONSULTANT

AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS

ISSUE/REVISION

STATUS

SCALE **DIMENSION UNIT**

NOT TO SCALE

KEY PLAN

PROJECT NO. **CONTRACT NO.**

60547289

SHEET TITLE

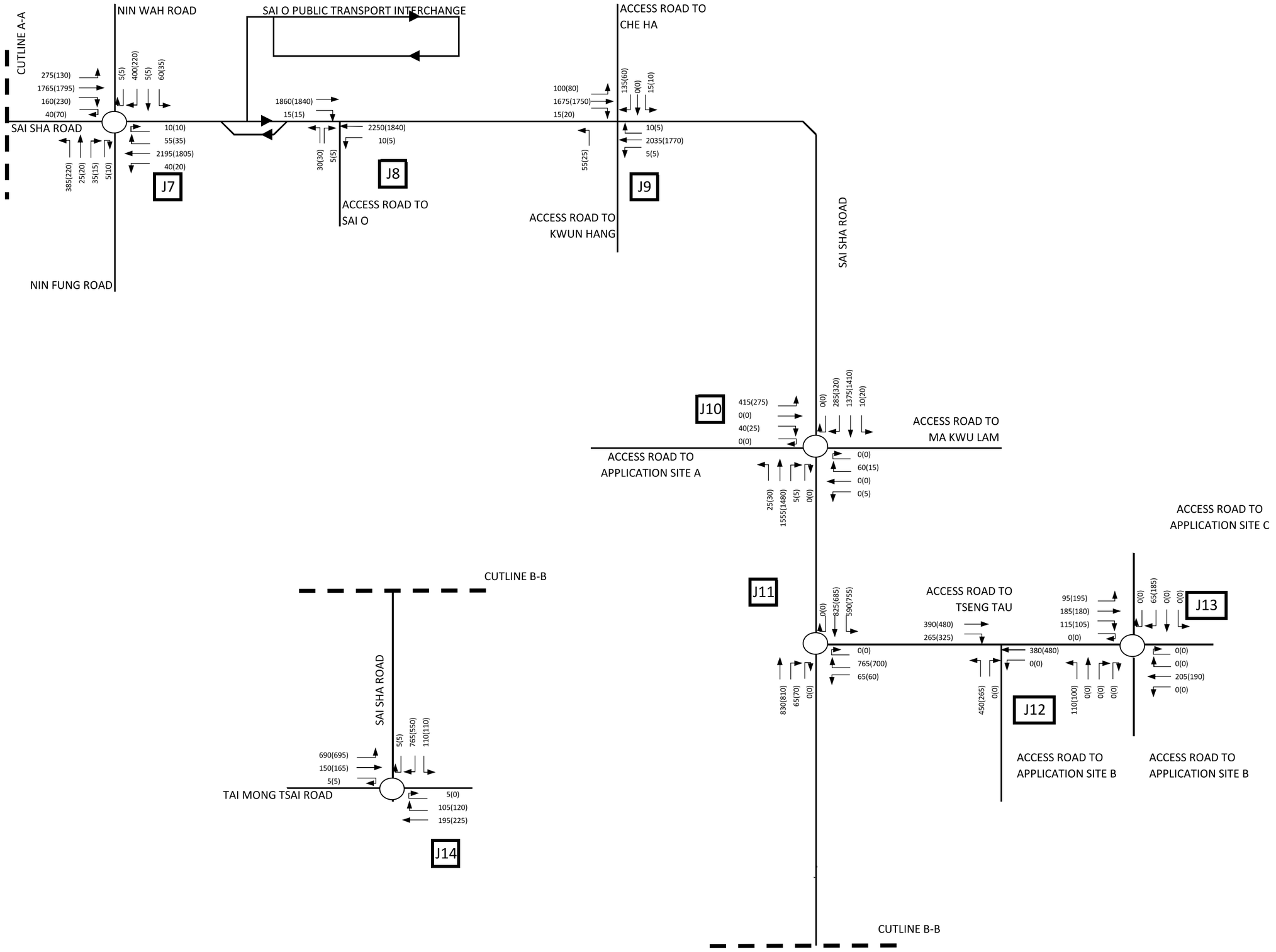
2028 DESIGN TRAFFIC FLOWS
(SHEET 1 OF 2)

SHEET NUMBER

6054728\TIA2\FIGURE 4.5

LEGEND:

50(50) AM(PM) PEAK HOUR FLOWS (PCU/HR)



AECOM

PROJECT

SAI SHA COMPREHENSIVE DEVELOPMENT
SHAP SZ HEUNG,
SAI KUNG NORTH, N.T.

CLIENT

CONSULTANT

AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS

ISSUE/REVISION

STATUS

SCALE **DIMENSION UNIT**

NOT TO SCALE

KEY PLAN

PROJECT NO. **CONTRACT NO.**

60547289

SHEET TITLE

2028 DESIGN TRAFFIC FLOWS
(SHEET 2 OF 2)

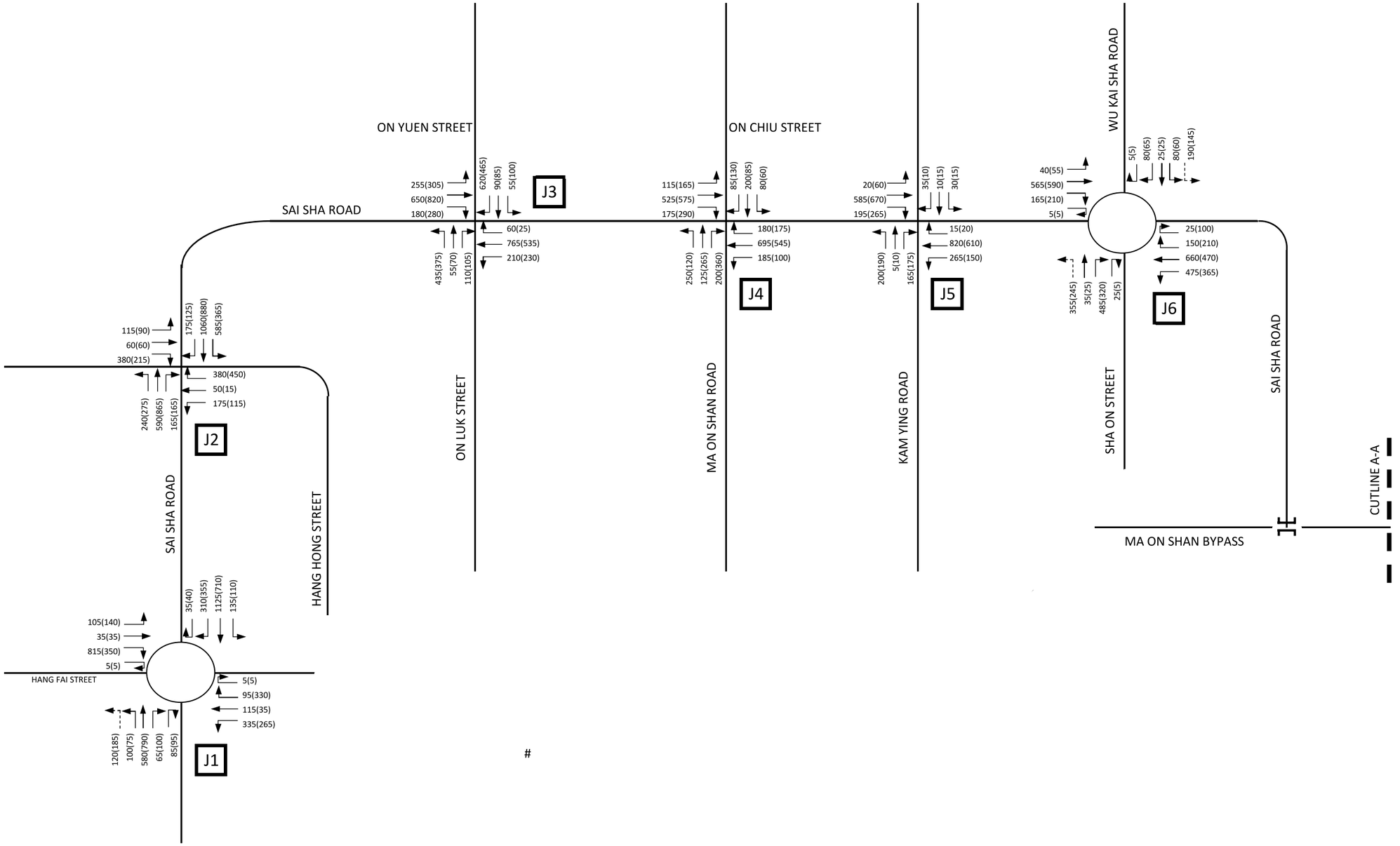
SHEET NUMBER

6054728\TIA2\FIGURE 4.6

This drawing has been prepared for the use of AECOM's client, it may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimensions.

LEGEND:

50(50) AM(PM) PEAK HOUR FLOWS (PCU/HR)



#

This drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimensions.

AECOM

PROJECT

SAI SHA
COMPREHENSIVE
DEVELOPMENT
SHAP SZ HEUNG,
SAI KUNG NORTH, N.T.

CLIENT

CONSULTANT

AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS

ISSUE/REVISION

STATUS

SCALE **DIMENSION UNIT**

NOT TO SCALE

KEY PLAN

PROJECT NO. **CONTRACT NO.**

60547289

SHEET TITLE

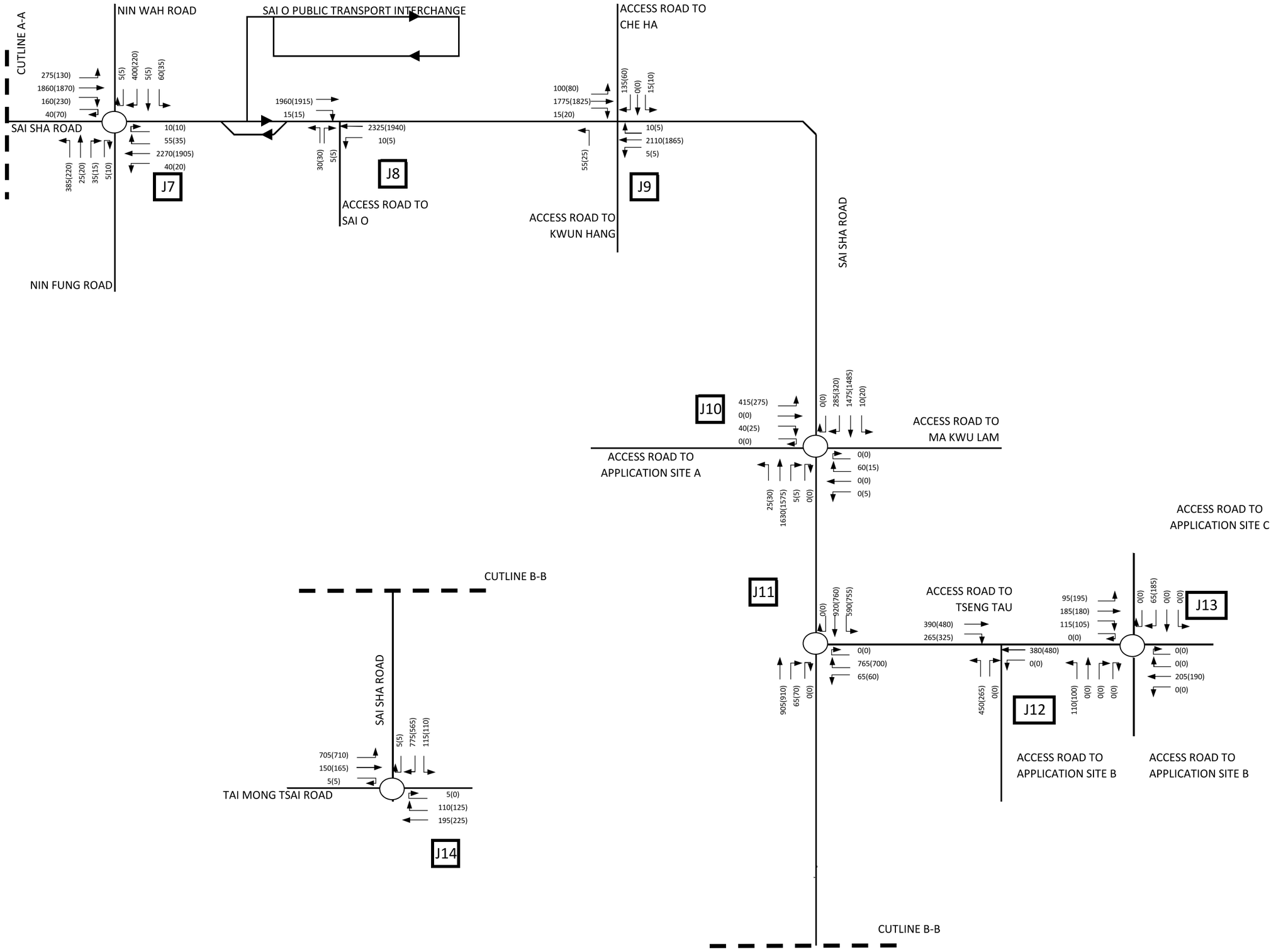
2028 DESIGN TRAFFIC FLOWS
(SENSITIVITY TEST SCENARIO) (WITH
ADJACENT SCHOOL DEVELOPMENT)
(SHEET 1 OF 2)

SHEET NUMBER

6054728\TIA2\FIGURE 4.7

LEGEND:

50(50) AM(PM) PEAK HOUR FLOWS (PCU/HR)



This drawing has been prepared for the use of AECOM's client. It may not be saved, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimensions.

AECOM

PROJECT

SAI SHA COMPREHENSIVE DEVELOPMENT
SHAP SZ HEUNG,
SAI KUNG NORTH, N.T.

CLIENT

CONSULTANT

AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS

ISSUE/REVISION

STATUS

SCALE **DIMENSION UNIT**

NOT TO SCALE

KEY PLAN

PROJECT NO. **CONTRACT NO.**

60547289

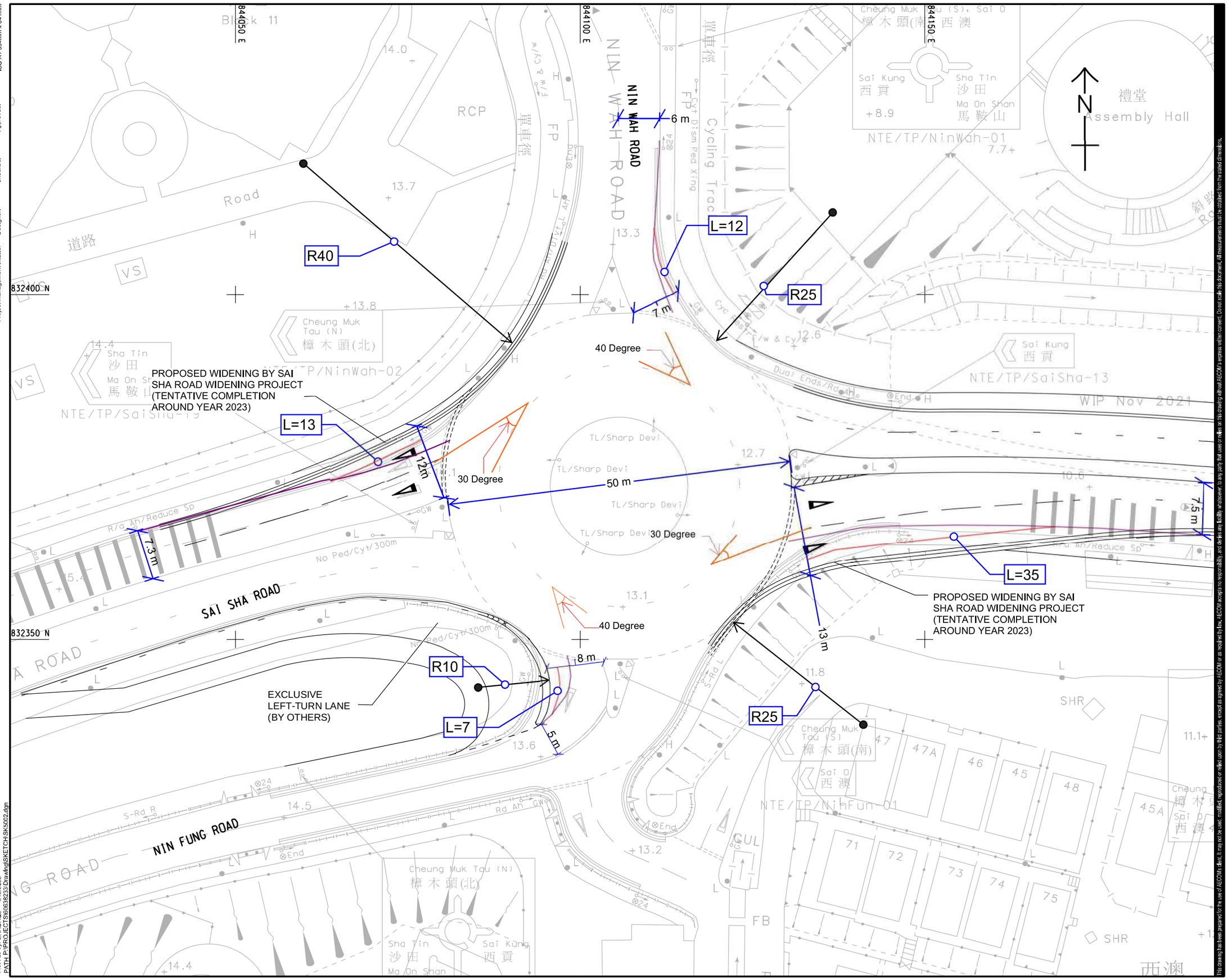
SHEET TITLE

2028 DESIGN TRAFFIC FLOWS (SENSITIVITY TEST SCENARIO) (WITH ADJACENT SCHOOL DEVELOPMENT) (SHEET 2 OF 2)

SHEET NUMBER

6054728\TIA2\FIGURE 4.8

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



Plot File by: ZHAOHQ2 4/12/2022
PATH: P:\PROJECTS\60638233\Drawing\SKETCH\SK5002.dgn

This drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimensions.

AECOM

PROJECT
項目
SAI SHA ROAD WIDENING - SAI SHA COMPREHENSIVE DEVELOPMENT SHAP SZ HEUNG, SAI KUNG NORTH, N.T.

CLIENT
客戶

CONSULTANT
顧問公司
AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS
分判工程顧問公司

ISSUE/REVISION
修訂

I/R 修訂	DATE 日期	DESCRIPTION 修訂說明	CHK. 核對
	MAR20	FIRST ISSUE	SHSN

STATUS
狀況

SCALE 比例
A3 1 : 500

DIMENSION UNIT 尺寸單位
MILLIMETRES

KEY PLAN A1 1 : XXXXX
索引圖

PROJECT NO. 項目編號

CONTRACT NO. 合約編號

SHEET TITLE
圖紙名稱
FUTURE JUNCTION LAYOUT OF SAI SHA ROAD/ NIN FUNG ROAD/ NIN WAH ROAD (J7)

SHEET NUMBER
圖紙編號
60547289\TIA1\FIGURE 5.1

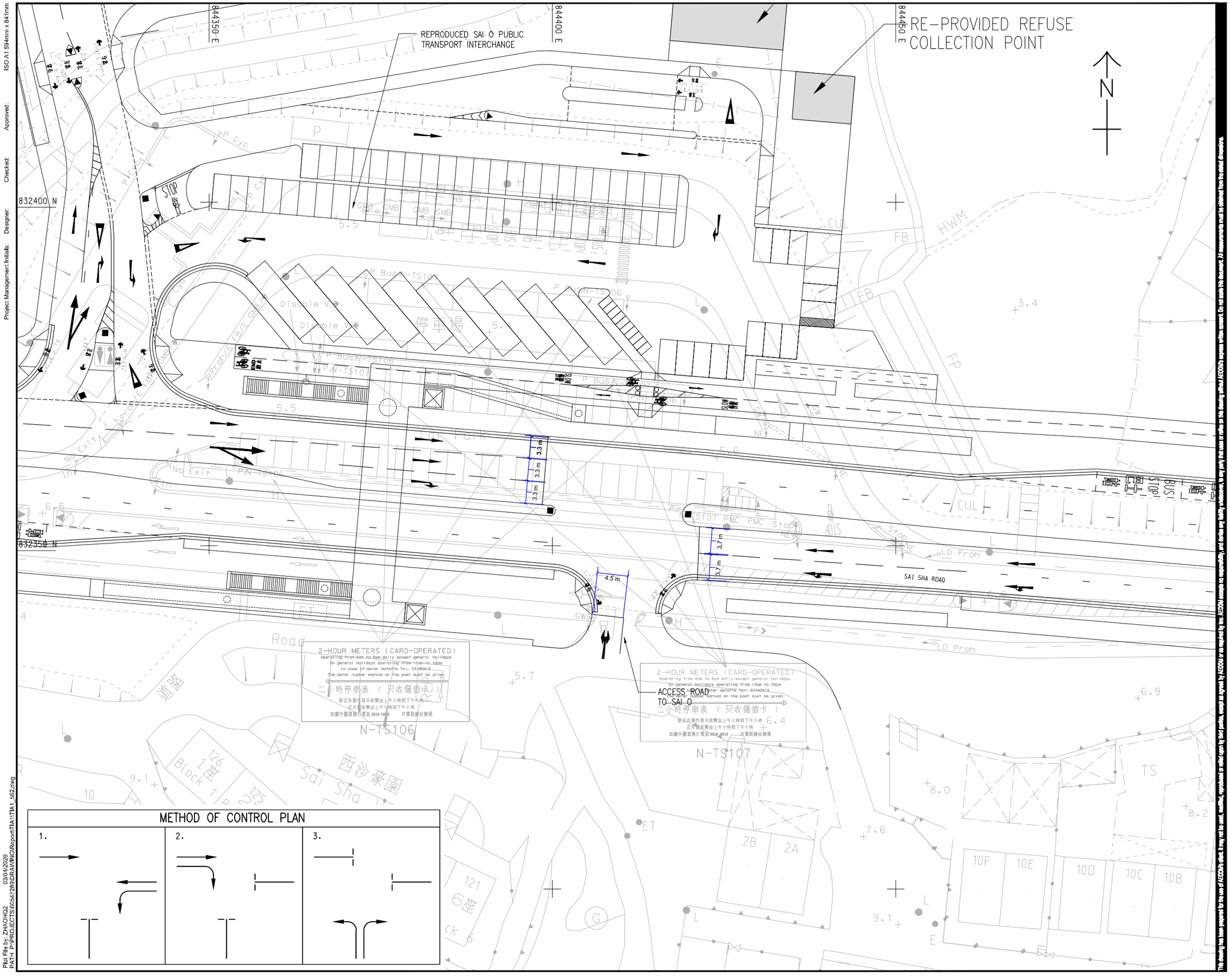
ISO A1 594mm x 841mm

Approved:

Checked:

Designer:

Project Management Initials:



Plot File by: ZHAOHO2 03/04/2020
PATH: P:\PROJECTS\60547289\DRAWING\Report\TIA1\TIA1_5.2.dwg

This drawing has been prepared for the use of AECOM's clients. Any use by third parties, reproduced or relied upon by third parties, shall be at such parties' own risk and without liability to AECOM's clients. Any use by third parties, reproduced or relied upon by third parties, shall be at such parties' own risk and without liability to AECOM. AECOM assumes no responsibility, and denies any liability whatsoever, to any party that makes use of or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be checked from the stated dimensions.

AECOM

PROJECT

SAI SHA ROAD WIDENING - SAI SHA COMPREHENSIVE DEVELOPMENT SHAP SZ HEUNG, SAI KUNG NORTH, N.T.

CLIENT

CONSULTANT

AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS

ISSUE/REVISION

I/R	DATE	DESCRIPTION	CHK.
B	APR. 20	ROAD LAYOUT UPDATED	JL
A	JUL. 19	ROAD LAYOUT UPDATED	JL
-	JUN. 18	FIRST ISSUE	JL

STATUS

SCALE A3 1 : 500

DIMENSION UNIT METRES

KEY PLAN

PROJECT NO. 60547289

CONTRACT NO.

SHEET TITLE

FUTURE JUNCTION LAYOUT OF SAI SHA ROAD / ACCESS ROAD TO SAI O (J8)

SHEET NUMBER

60547289\TIA1\FIGURE 5.2

ISO A1 594mm x 841mm

Approved:

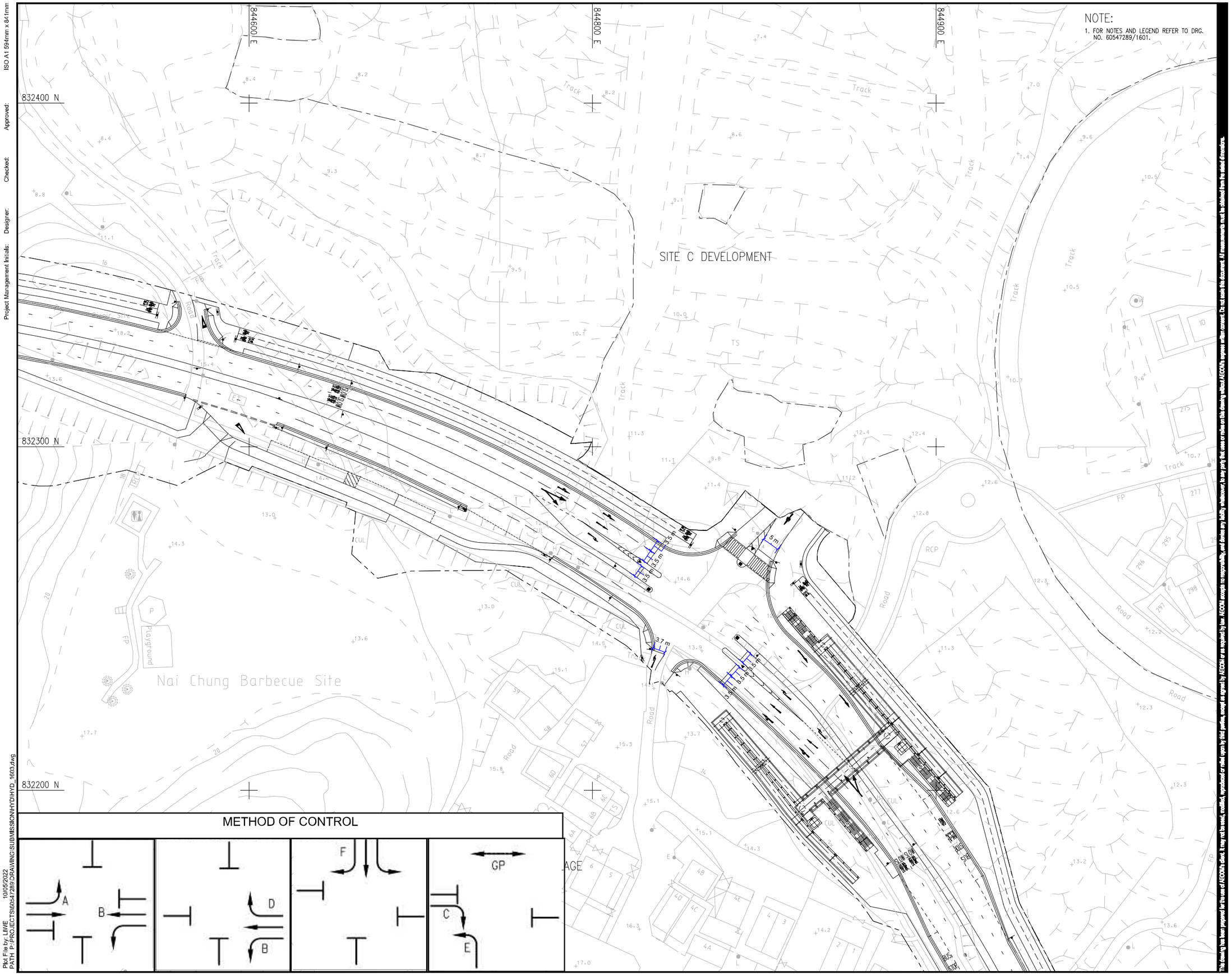
Checked:

Designer:

Project Management Initials:

NOTE:

1. FOR NOTES AND LEGEND REFER TO DRG. NO. 60547289/1601.


844600 E
844800 E
845000 E
832400 N
832300 N
832200 N
SITE C DEVELOPMENT
Nai Chung Barbecue Site
Track
Road
RCP
CUL
FP
Playground
3.5 m
5.5 m
5.5 m
3.7 m
5 m
5.5 m
5.5 m
5.

ISO A1 594mm x 841mm

Project Management Initials: Designer: Checked: Approved:

LEGEND:

DEVELOPMENT SITE BOUNDARY

APPLICATION SITE

831950 N

831900 N

831850 N

845000 E

845050 E

SITE A

ACCESS ROAD TO MA KWU LAM

MA KWU LAM

SAI SHA ROAD

7.3 m

L=5

10 m

R25

45 Degree

4 m

L=6.5

6 m

50 m

50 Degree

R20

R25

45 Degree

8 m

ACCESS ROA APPLICATION

L=4

50 Degree

13.5 m

L=12.5

7 m

R45

7.3 m

AECOM

PROJECT

SAI SHA ROAD WIDENING - SAI SHA COMPREHENSIVE DEVELOPMENT SHAP SZ HEUNG, SAI KUNG NORTH, N.T.

CLIENT

CONSULTANT

AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS

ISSUE/REVISION

I/R	DATE	DESCRIPTION	CHK.
B	APR. 20	ROAD LAYOUT UPDATED	JL
A	JUL. 19	ROAD LAYOUT UPDATED	JL
-	JUN. 18	FIRST ISSUE	JL

STATUS

SCALE

A3 1 : 500

DIMENSION UNIT

METRES

KEY PLAN

PROJECT NO.

60547289

CONTRACT NO.

SHEET TITLE

FUTURE JUNCTION LAYOUT OF SAI SHA ROAD / ACCESS ROAD TO MA KWU LAM / ACCESS ROAD TO APPLICATION SITE A (J10)

SHEET NUMBER

60547289\TIA1\FIGURE 5.4

This drawing has been prepared by the use of AECOM's duties. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility and disclaims all liability for any loss or damage arising from any unauthorised use of this drawing without AECOM's express written consent. Do not scale this drawing. All dimensions must be checked on site.

Plot File by: ZHAOHQ2 03/04/2020
PATH: P:\PROJECTS\60547289\DRAWING\Report\TIA1\TIA1_564.dwg

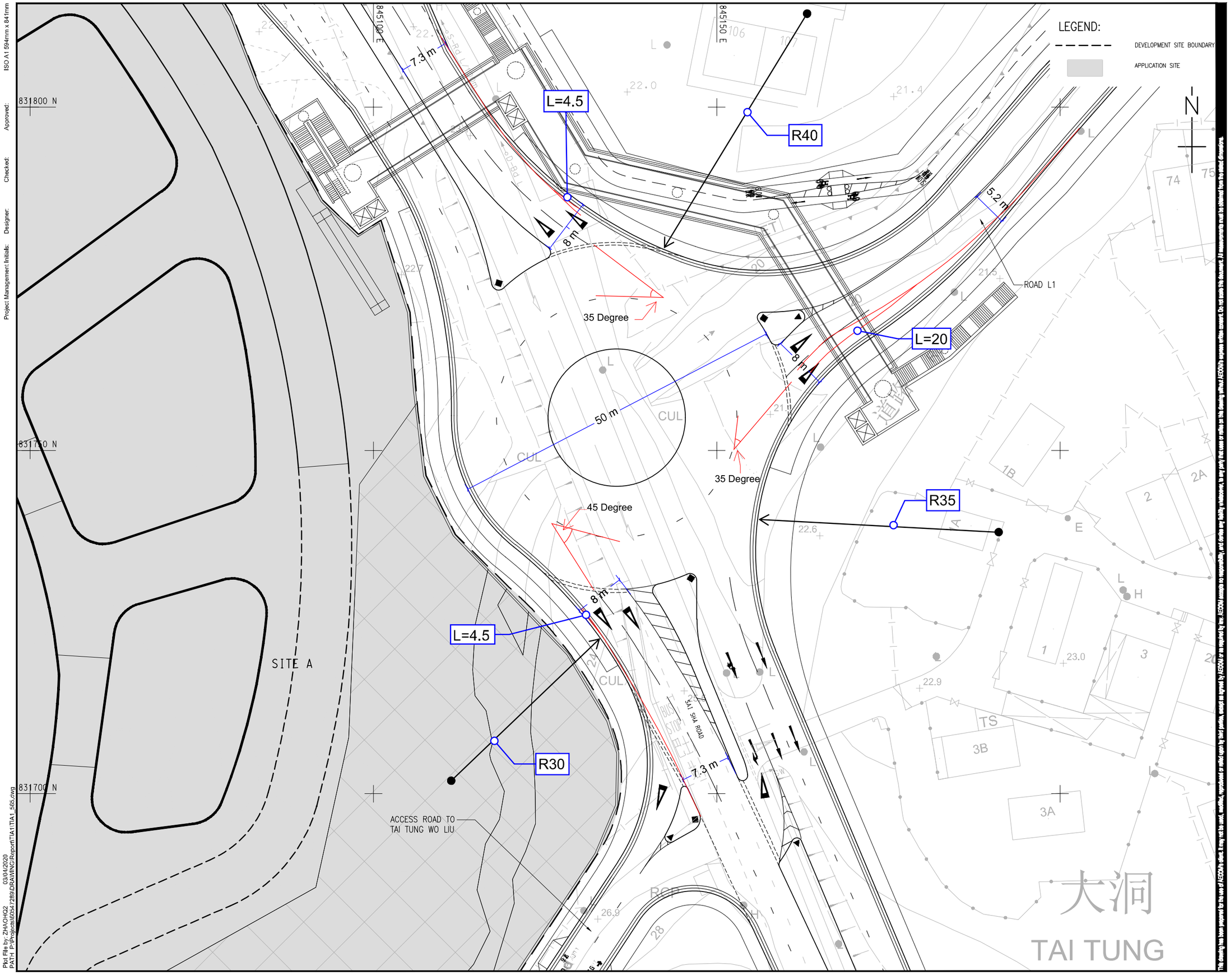
ISO A1 594mm x 841mm

Approved:

Checked:

Designer:

Project Management Initials:



Plot File by: ZHAOHQ2 03/04/2020
PATH: I:\Projects\60547289\DRAWING\Report\TIA1\TIA1_565.dwg

This drawing has been prepared for the use of AECOM's client, and may not be used, modified, reproduced or copied in any form or manner by any third party without the prior written permission of AECOM. AECOM accepts no responsibility for any use of or reliance upon this drawing by any third party.

AECOM

PROJECT

SAI SHA ROAD WIDENING - SAI SHA COMPREHENSIVE DEVELOPMENT SHAP SZ HEUNG, SAI KUNG NORTH, N.T.

CLIENT

CONSULTANT

AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS

ISSUE/REVISION

I/R	DATE	DESCRIPTION	CHK
B	APR. 20	ROAD LAYOUT UPDATED	JL
A	JUL. 19	ROAD LAYOUT UPDATED	JL
-	JUN. 18	FIRST ISSUE	JL

STATUS

SCALE A3 1 : 500

DIMENSION UNIT METRES

KEY PLAN

PROJECT NO. 60547289

CONTRACT NO.

SHEET TITLE

FUTURE JUNCTION LAYOUT OF SAI SHA ROAD / ACCESS ROAD TO TSENG TAU (ROAD L1) (J11)

SHEET NUMBER

60547289\TIA1\FIGURE 5.5

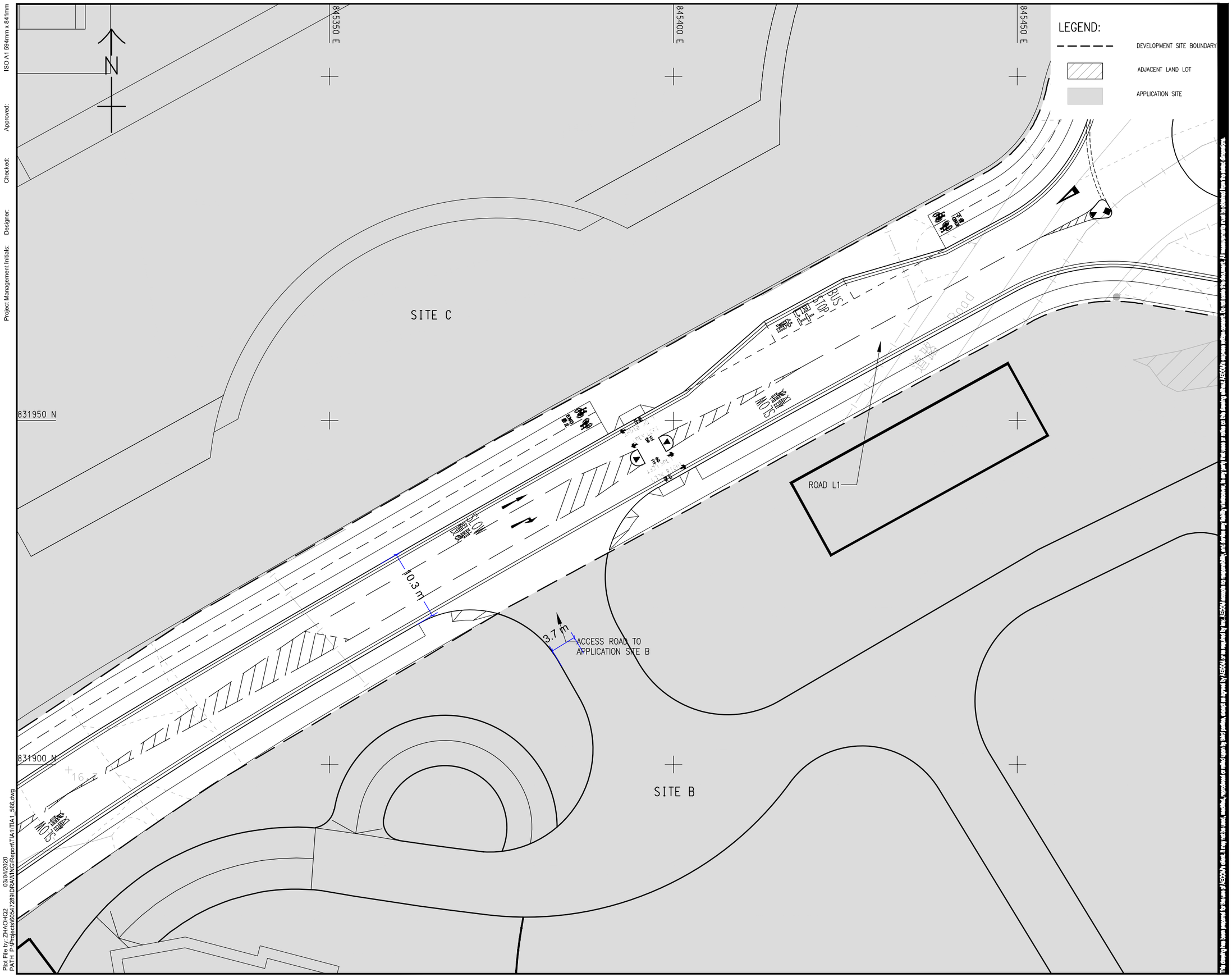
ISO A1 594mm x 841mm

Approved:

Checked:

Designer:

Project Management Initials:



Plot File by: ZHAOHO2 03/04/2020
PATH: P:\Projects\60547289\DRAWING Report\TIA1\TIA1_566.dwg

This drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM assumes no responsibility, and disclaims any liability, for any unauthorized use of this drawing. Any unauthorized use, modification, reproduction or reliance is at the recipient's own risk and shall indemnify AECOM against all claims, costs, losses and damages arising out of such activities.

AECOM

PROJECT

SAI SHA ROAD WIDENING - SAI SHA COMPREHENSIVE DEVELOPMENT SHAP SZ HEUNG, SAI KUNG NORTH, N.T.

CLIENT

CONSULTANT

AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS

ISSUE/REVISION

I/R	DATE	DESCRIPTION	CHK.
B	APR. 20	ROAD LAYOUT UPDATED	JL
A	JUL. 19	ROAD LAYOUT UPDATED	JL
-	JUN. 18	FIRST ISSUE	JL

STATUS

SCALE A3 1 : 500

DIMENSION UNIT METRES

KEY PLAN

PROJECT NO. 60547289

CONTRACT NO.

SHEET TITLE

FUTURE JUNCTION LAYOUT OF ACCESS ROAD TO TSENG TAU (ROAD L1) / ACCESS ROAD TO APPLICATION SITE B (J12)

SHEET NUMBER

60547289\TIA1\FIGURE 5.6

ISO A1 594mm x 841mm

Approved:

Checked:

Designer:

Project Management Initials:

845400 E

845450 E

845500 E

832080 N

832000 N

831950 N

LEGEND:

DEVELOPMENT SITE BOUNDARY

ADJACENT LAND LOT

APPLICATION SITE

N

ACCESS ROAD TO APPLICATION SITE C

5.2 m

SITE C

L=3

R11

5.5 m

59 Degree

34 Degree

R25

L=13

6.9 m

44 m

12.9

R18

54 Degree

L=25

6.8 m

5.2 m

42 Degree

ROAD L1

BUS STOP

POSSIBLE ACCESS TO APPLICATION SITE B TRANSPORT INTERCHANGE

SITE B

L=25

R18

5.4 m

5.2 m

Plot File by: ZHAOHO2 03/04/2020
PATH: P:\Projects\60547289\DRAWING\Report\TIA1\TIA1_567.dwg

This drawing has been prepared for the use of AECOM's client, and may contain proprietary and confidential information. If you are not the client or its designated agent, you should not rely upon this drawing without the express written consent of AECOM. AECOM assumes no responsibility for any reliance on or decisions made based on this drawing by any party other than the client or its designated agent, and accepts no liability for any loss or damage suffered by any such party. Any such party relies on this drawing entirely at its own risk. Do not scale this drawing. All dimensions must be checked on site. Any discrepancies must be reported to AECOM immediately.

AECOM

PROJECT

SAI SHA ROAD WIDENING - SAI SHA COMPREHENSIVE DEVELOPMENT SHAP SZ HEUNG, SAI KUNG NORTH, N.T.

CLIENT

CONSULTANT

AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS

ISSUE/REVISION

I/R	DATE	DESCRIPTION	CHK
B	APR. 20	ROAD LAYOUT UPDATED	JL
A	JUL. 19	ROAD LAYOUT UPDATED	JL
-	JUN. 18	FIRST ISSUE	JL

STATUS

SCALE

A3 1 : 500

DIMENSION UNIT

METRES

KEY PLAN

PROJECT NO.

60547289

CONTRACT NO.

SHEET TITLE

FUTURE JUNCTION LAYOUT OF ACCESS ROAD TO TSENG TAU (ROAD L1) / ACCESS ROAD TO APPLICATION SITE B / ACCESS ROAD TO APPLICATION SITE C (J13)

SHEET NUMBER

60547289\TIA1\FIGURE 5.7

ISO A1 594mm x 841mm

Approved:

Checked:

Designer:

Project Management Initials:

844600 E

845200 E

845800 E

832600 N

832000 N

831400 N

LEGEND:

DEVELOPMENT SITE BOUNDARY

PROPOSED SITE ACCESS

A LINK INDEX

PEDESTRIAN LINK

CAUTIONARY CROSSING

N

La

Lb

A

Lc

NAI CHUNG

ACCESS TO SITE C

CHE HA

Ld

E

D

B

Refer to Inset A for location of Link L and M

KWUN HANG

SITE C

ACCESS TO PUBLIC CARPARK

ACCESS TO SITE C

K

Li

TSENG TAU

Lk

ROAD L1

Lj

Lh

Le

MA KWU LAM

Lf

G

H

Lg

ACCESS TO SITE B

F

I

ACCESS TO SITE A

C

J

SITE B

SITE A

TAI TUNG

SAI SHA ROAD

MA ON SHAN WATER TREATMENT WORKS

Inset A

CUT LINE B-B

DISCHARGE OF PLANNING CONDITION (E) UNDER SEPARATE SUBMISSION

L

M

RESERVED SCHOOL SITE

6200 sq.m (about)

ACTUAL: 6200.08 sq.m

AECOM

PROJECT

SAI SHA ROAD WIDENING - SAI SHA COMPREHENSIVE DEVELOPMENT SHAP SZ HEUNG, SAI KUNG NORTH, N.T.

CLIENT

CONSULTANT

AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS

ISSUE/REVISION

I/R	DATE	DESCRIPTION	CHK.
A	JUL. 19	ROAD LAYOUT UPDATED	JL
-	SEP. 18	FIRST ISSUE	JL

STATUS

SCALE

A3 1 : 6000

DIMENSION UNIT

METRES

KEY PLAN

PROJECT NO.

60547289

CONTRACT NO.

SHEET TITLE

LOCATION PLAN FOR KEY PEDESTRIAN LINKS

SHEET NUMBER

60547289\TIA1\FIGURE 7.1

This drawing has been prepared for the benefit of AECOM's client. It may not be reused, modified, reproduced or relied upon by third parties except as agreed by the AECOM or as required by law. AECOM accepts no responsibility, and denies any liability howsoever, for any party that enters into any contract or other arrangement with any third party in reliance upon this drawing or the information contained on it. Do not scale this drawing. Refer only to stated dimensions.

Plot File by: ZHAO HQ2 18/06/2020
PATH: P:\PROJECTS\60547289\DRAWING\Report\TIA1\TIA1_571.dwg

ISO A1 594mm x 841mm

Approved:

Checked:

Designer:

Project Management Initials:

844600 E

845200 E

845800 E

832600 N

832000 N

831400 N

LEGEND:

DEVELOPMENT SITE BOUNDARY

PROPOSED SITE ACCESS

A LINK INDEX

PEDESTRIAN LINK

CAUTIONARY CROSSING

N

NAI CHUNG

CHE HA

KWUN HANG

SITE C

TSENG TAU

MA ON SHAN WATER TREATMENT WORKS

MA KWU LAM

SITE A

SITE B

TAI TUNG

ACCESS TO SITE C

ACCESS TO PUBLIC CARPARK

ACCESS TO SITE C

ROAD L1

ACCESS TO SITE B

ACCESS TO SITE A

Lb A Lc

B Ld D E L M

Le Lf G F H I C J K

THREE FATHOMS COVE (KEI LING HA HOI)

Plot File by: ZHAOHQ2
PATH: P:\PROJECTS\60547289\DRAWING\TIA\Report\TIA1\TIA1_571.dwg
19/09/2018

This drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and declines any liability whatsoever, to any party that uses or relies on this drawing without AECOM's consent. Do not scale this document. All measurements must be obtained from the stated dimensions.

AECOM

PROJECT

SAI SHA ROAD WIDENING - SAI SHA COMPREHENSIVE DEVELOPMENT SHAP SZ HEUNG, SAI KUNG NORTH, N.T.

CLIENT

CONSULTANT

AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS

ISSUE/REVISION

IR.	DATE	DESCRIPTION	CHK.
-	SEP. 18	FIRST ISSUE	JL

STATUS

SCALE A3 1 : 6000

DIMENSION UNIT METRES

KEY PLAN

PROJECT NO. 60547289

CONTRACT NO.

SHEET TITLE

SURVEY LOCATIONS FOR KEY PEDESTRIAN LINKS

SHEET NUMBER

60547289\TIA1\FIGURE 7.2

ISO A1 594mm x 841mm

Approved:

Checked:

Designer:

Project Management Initials:

844600 E

845200 E

845800 E

832600 N

832000 N

831400 N

NAI CHUNG

CHE HA

KWUN HANG

MA ON SHAN WATER TREATMENT WORKS

MA KWU LAM

TAI TUNG

TSENG TAU

SITE A

SITE B

SITE C

SAI SHA ROAD

ROAD L1

ACCESS TO SITE A

ACCESS TO SITE B

ACCESS TO SITE C

ACCESS TO PUBLIC CARPARK

Refer to Inset A for location of Link L and M

Inset A

CUT LINE B-B

DISCHARGE OF PLANNING CONDITION (E) UNDER SEPARATE SUBMISSION

RESERVED SCHOOL SITE
6200 sq.m (about)
ACTUAL: 6200.08 sq.m

LEGEND:

- DEVELOPMENT SITE BOUNDARY
- PROPOSED SITE ACCESS
- LINK INDEX
- PEDESTRIAN LINK
- CAUTIONARY CROSSING
- ROUTINGS FOR SCHOOL PUBLIC TRANSPORT TRIPS
- ROUTINGS FOR SCHOOL WALK TRIPS

N

AECOM

PROJECT

SAI SHA ROAD WIDENING - SAI SHA COMPREHENSIVE DEVELOPMENT SHAP SZ HEUNG, SAI KUNG NORTH, N.T.

CLIENT

CONSULTANT

AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS

ISSUE/REVISION

I/R	DATE	DESCRIPTION	CHK.
A	JUL. 19	ROAD LAYOUT UPDATED	JL
-	SEP. 18	FIRST ISSUE	JL

STATUS

SCALE A3 1 : 6000

DIMENSION UNIT METRES

KEY PLAN

PROJECT NO. 60547289

CONTRACT NO.

SHEET TITLE

PEDESTRIAN TRIPS ROUTINGS FOR PROPOSED PRIMARY SCHOOLS IN APPLICATION SITE C

SHEET NUMBER

60547289\TIA1\FIGURE 7.3

This drawing has been prepared for the benefit of AECOM's client, & may not be used, modified, reproduced or circulated without the prior written consent of AECOM. AECOM accepts no responsibility, & will not be liable for any loss or damage, to any party other than its client, arising from any use of this drawing or reliance on the data included in it. Do not scale this drawing. Verify all dimensions on site before commencing work. Any discrepancies must be reported immediately to the Project Manager.

Plot File by: ZHAO HQ2
PATH P:\PROJECTS\60547289\DRAWING\Report\TIA1\TIA1_571.dwg
18/06/2020

ISO A1 594mm x 841mm

Approved:

Checked:

Designer:

Project Management Initials:

844600 E

845200 E

845800 E

832600 N

832000 N

831400 N

LEGEND:

- DEVELOPMENT SITE BOUNDARY
- PROPOSED SITE ACCESS
- A — LINK INDEX
- PEDESTRIAN LINK
- CAUTIONARY CROSSING
- ROUTINGS FOR RESIDENTIAL DEVELOPMENT PUBLIC TRANSPORT TRIPS
- ROUTINGS FOR RESIDENTIAL DEVELOPMENT WALK TRIPS

N

NAI CHUNG

CHE HA

KWUN HANG

MA ON SHAN WATER TREATMENT WORKS

MA KWU LAM

TAI TUNG

TSENG TAU

SITE A

SITE B

SITE C

ACCESS TO SITE A

ACCESS TO SITE B

ACCESS TO SITE C

ACCESS TO PUBLIC CARPARK

ROAD L1

SAI SHA ROAD

Refer to Inset A for location of Link L and M

Inset A

CUT LINE B-B

DISCHARGE OF PLANNING CONDITION (E) UNDER SEPARATE SUBMISSION

RESERVED SCHOOL SITE
6200 sq.m (about)
ACTUAL: 6200.08 sq.m

Plot File by: ZHAO HQ2
PATH: P:\PROJECTS\60547289\DRAWING\Report\TIA\1\TIA1_571.dwg
18/06/2020

This drawing has been prepared for the benefit of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by the AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, for any party that uses or relies on this drawing that has not been agreed by AECOM in writing.

AECOM

PROJECT

SAI SHA ROAD WIDENING - SAI SHA COMPREHENSIVE DEVELOPMENT SHAP SZ HEUNG, SAI KUNG NORTH, N.T.

CLIENT

CONSULTANT

AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS

ISSUE/REVISION

I/R	DATE	DESCRIPTION	CHK.
A	JUL. 19	ROAD LAYOUT UPDATED	JL
-	SEP. 18	FIRST ISSUE	JL

STATUS

SCALE A3 1 : 6000

DIMENSION UNIT METRES

KEY PLAN

PROJECT NO. 60547289

CONTRACT NO.

SHEET TITLE

PEDESTRIAN TRIPS ROUTINGS FOR RESIDENTIAL DEVELOPMENTS IN APPLICATION SITE A AND SITE B

SHEET NUMBER

60547289\TIA1\FIGURE 7.4

ANNEX A

JUNCTION CALCULATIONS

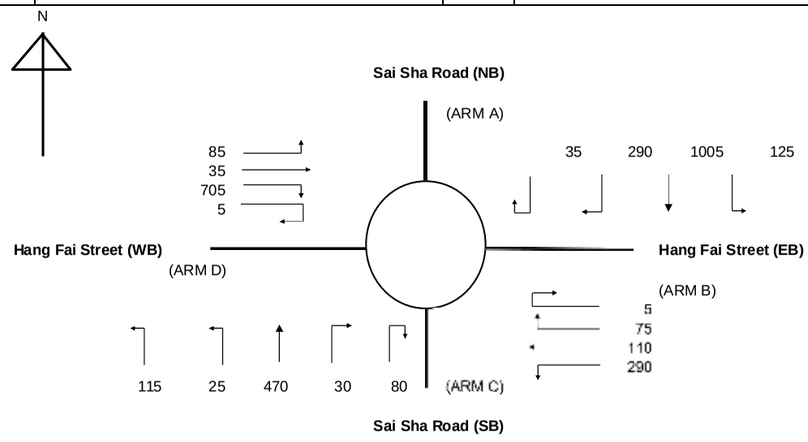
ANNEX A1

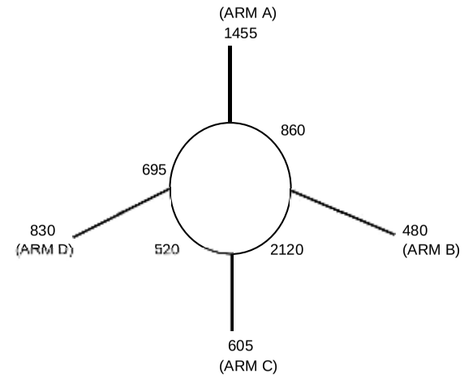
CALCULATION SHEETS
OBSERVED TRAFFIC FLOWS

ROUNDABOUT CAPACITY CALCULATIO

AECOM

Junction	J1 - Sai Sha Road / Hang Fai Street	Scenario	2021 Observed Traffic Flows AM	Project No.	Prepared By	Checked By	Date
				60547289			12-Jul-22





ARM	A	B	C	D
INPUT PARAMETERS:				
V = Approach half width (m)	11.00	7.50	11.00	7.00
E = Entry width (m)	13.00	12.00	13.00	13.00
L = Effective length of flare (m)	0.01	15.00	0.01	30.00
R = Entry radius (m)	80.00	60.00	60.00	50.00
D = Inscribed circle diameter (m)	50.00	50.00	50.00	50.00
A = Entry angle (degree)	30.00	30.00	30.00	25.00
Q = Entry flow (pcu/h)	1455	480	605	830
Qc= Circulating flow across entry (pcu/h)	860	2120	520	695
OUTPUT PARAMETERS:				
S = Sharpness of flare = 1.6(E-V)/L	320.00	0.48	320.00	0.32
K = 1-0.00347(A-30)-0.978(1/R-0.05)	1.04	1.03	1.03	1.05
X2= V + ((E-V)/(1+2S))	11.00	9.80	11.00	10.66
M = EXP((D-60)/10)	0.37	0.37	0.37	0.37
F = 303*X2	3334	2968	3334	3230
Td= 1+(0.5/(1+M))	1.37	1.37	1.37	1.37
Fc= 0.21*Td(1+0.2*X2)	0.92	0.85	0.92	0.90
Qe= K(F-Fc*Qc)	2638	1207	2950	2727
DFC = Design flow/Capacity = Q/Qe	0.55	0.40	0.21	0.30

TOTAL ENTRY FLOWS 3370 PCU

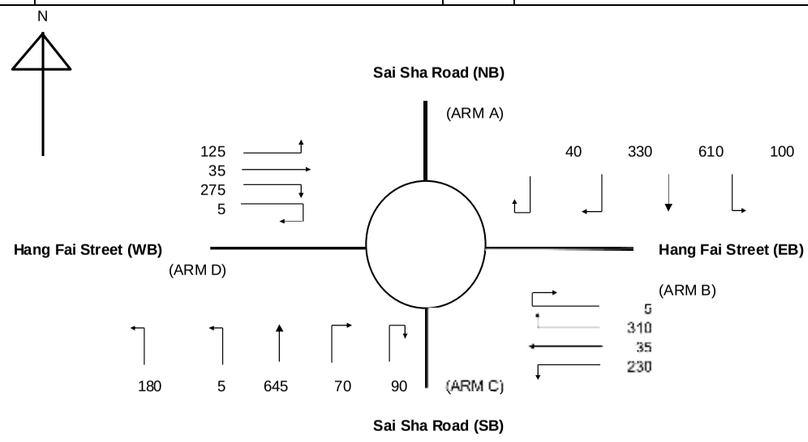
CRITICAL DFC 0.55

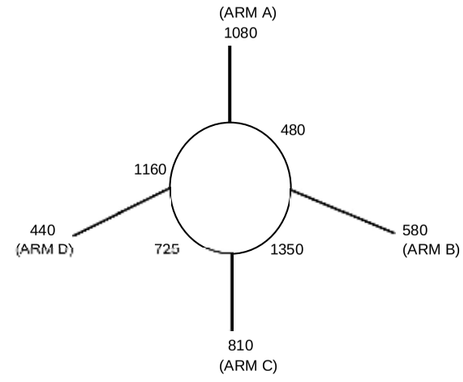
Filename : https://aecom-my.sharepoint.com/personal/magdalene_ku_aecom_com

ROUNDABOUT CAPACITY CALCULATIO

AECOM

Junction	J1 - Sai Sha Road / Hang Fai Street	Scenario	2021 Observed Traffic Flows PM	Project No.	Prepared By	Checked By	Date
				60547289			12-Jul-22





ARM	A	B	C	D
INPUT PARAMETERS:				
V = Approach half width (m)	11.00	7.50	11.00	7.00
E = Entry width (m)	13.00	12.00	13.00	13.00
L = Effective length of flare (m)	0.01	15.00	0.01	30.00
R = Entry radius (m)	80.00	60.00	60.00	50.00
D = Inscribed circle diameter (m)	50.00	50.00	50.00	50.00
A = Entry angle (degree)	30.00	30.00	30.00	25.00
Q = Entry flow (pcu/h)	1080	580	810	440
Qc= Circulating flow across entry (pcu/h)	480	1350	725	1160
OUTPUT PARAMETERS:				
S = Sharpness of flare = 1.6(E-V)/L	320.00	0.48	320.00	0.32
K = 1-0.00347(A-30)-0.978(1/R-0.05)	1.04	1.03	1.03	1.05
X2= V + ((E-V)/(1+2S))	11.00	9.80	11.00	10.66
M = EXP((D-60)/10)	0.37	0.37	0.37	0.37
F = 303*X2	3334	2968	3334	3230
Td= 1+(0.5/(1+M))	1.37	1.37	1.37	1.37
Fc= 0.21*Td(1+0.2*X2)	0.92	0.85	0.92	0.90
Qe= K(F-Fc*Qc)	3000	1882	2756	2290
DFC = Design flow/Capacity = Q/Qe	0.36	0.31	0.29	0.19

TOTAL ENTRY FLOWS 2910 PCU

CRITICAL DFC 0.36

Filename : https://aecom-my.sharepoint.com/personal/magdalene_ku_aecom_com

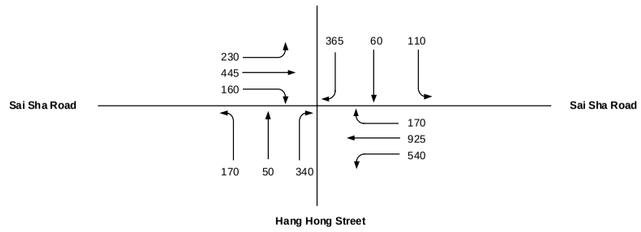
JUNCTION CAPACITY CALCULATION

AECOM

Junction J2 - Sai Sha Road / Hang Hong Street	2021 Observed Traffic Flows AM	DESIGN:	CHECK:	JOB NO: 60280227	DATE: Oct 20

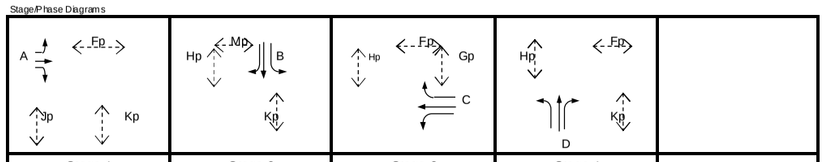
J2

Traffic Flow Diagram (pcu/hr)



No. of stages per cycle	N =	4	
Cycle time	C =	115	sec
Sum(y)	Y =	0.526	
Lost time	L =	25	sec
Total Flow	=	35,045	pcu
Optimum Cycle C_o = (1.5 × L+5)/(1-Y)	=	90	sec
Min. Cycle Time C_m = L/(1-Y)	=	53	sec
Y_{ult} = 0.9-0.0075 × L	=	0.713	
$R.C._{ult}$ = $(Y_{ult}-Y)/Y$x100%	=	35.5	%
Practical Cycle Time C_p = 0.9 × L/(0.9-Y)	=	60	sec
Y_{max} = 1-L/C	=	0.783	

Stage/Phase Diagrams



Stage 1	Stage 2	Stage 3	Stage 4	
I/G = 5	I/G = 9	I/G = 7	I/G = 8	

Critical Case : A,B,C,D

R.C.(C) = $(0.9xY_{max}-Y)/Yx100\%$ = 34%

1

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR y	CRITICAL y
	C	3	3.500	1	10			1		0		1965	317			317	100%		1709	0.185	0.185
	C	3	3.500	1	15					0		2105	223	145		368	61%		1985	0.185	
	C	3	3.500	2				0		0		4210		780		780			4210	0.185	
	C	3	5.500	1		25	0	1		0		2165			170	170		100%	2042	0.083	
	A	1	3.300	1	15			1		0		1945	230			230	100%		1768	0.130	0.130
	A	1	3.300	3				0		0		6255		445		445			6255	0.071	
	A	1	4.000	2		25	0	1		0		4170			160	160		100%	3934	0.041	
	B	2	3.300	1	15			1		0		1945	110			110	100%		1768	0.062	
	B	2	3.300	1	20	20	0			0		2085	0	60	157	217	0%	72%	1978	0.110	0.110
	B	2	3.300	1		15	0	0		0		2085			208	208		100%	1895	0.110	
	D	4	3.300	1	10			1		0		1945	170			170	100%		1691	0.101	0.101
	D	4	3.300	1		25	0	0		0		2085		50	148	198		75%	1996	0.099	
	D	4	3.300	1		20	0	0		0		2085			192	192		100%	1940	0.099	
	Jp	1	min.	7	+	14	=	21	sec												
	Hp	2,3,4	min.	7	+	14	=	21	sec												
	Kp	1,2,4	min.	7	+	15	=	22	sec												
	Fp	1,34	min.	5	+	9	=	14	sec												
	Gp	3	min.	5	+	12	=	17	sec												
	Mp	2	min.	5	+	8	=	13	sec												

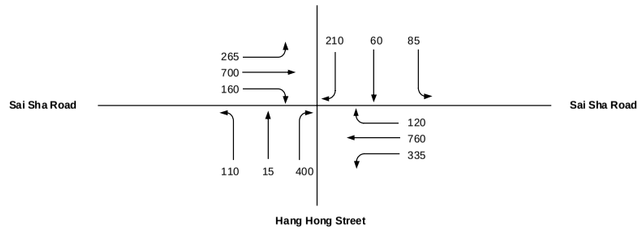
JUNCTION CAPACITY CALCULATION

AECOM

Junction J2 - Sai Sha Road / Hang Hong Street	2021 Observed Traffic Flows PM	DESIGN:	CHECK:	JOB NO: 60280227	DATE: Oct 20

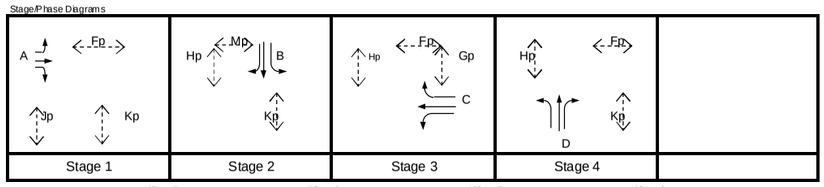
J2

Traffic Flow Diagram (pcu/hr)



No. of stages per cycle	N =	4	
Cycle time	C =	115	sec
Sum(y)	Y =	0.463	
Lost time	L =	25	sec
Total Flow	=	35,045	pcu
Optimum Cycle C_o = (1.5 × L+5)/(1-Y)	=	79	sec
Min. Cycle Time C_m = L/(1-Y)	=	47	sec
Y_{ult} = 0.9-0.0075 × L	=	0.713	
$R.C._{ult}$ = $(Y_{ult}-Y)/Y$x100%	=	53.9	%
Practical Cycle Time C_p = 0.9 × L/(0.9-Y)	=	51	sec
Y_{max} = 1-L/C	=	0.783	

Stage/Phase Diagrams



Stage 1	Stage 2	Stage 3	Stage 4	
I/G = 5	I/G = 9	I/G = 7	I/G = 8	

Critical Case : A,B,C,D

R.C.(C) = $(0.9xY_{max}-Y)/Yx100\%$ = 52%

1

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR y	CRITICAL y
	C	3	3.500	1	10			1		0		1965	235			235	100%		1709	0.138	0.138
	C	3	3.500	1	15					0		2105	100	180		280	36%		2033	0.138	
	C	3	3.500	2				0		0		4210		580		580			4210	0.138	
	C	3	5.500	1		25	0	1		0		2165			120	120		100%	2042	0.059	
	A	1	3.300	1	15			1		0		1945	265			265	100%		1768	0.150	0.150
	A	1	3.300	3				0		0		6255		700		700			6255	0.112	
	A	1	4.000	2		25	0	1		0		4170			160	160		100%	3934	0.041	
	B	2	3.300	1	15			1		0		1945	85			85	100%		1768	0.048	
	B	2	3.300	1	20	20	0			0		2085	0	60	79	139	0%	57%	2000	0.069	
	B	2	3.300	1		15	0	0		0		2085			131	131		100%	1895	0.069	0.069
	D	4	3.300	1	10			1		0		1945	110			110	100%		1691	0.065	
	D	4	3.300	1		25	0	0		0		2085		15	194	209		93%	1975	0.106	0.106
	D	4	3.300	1		20	0	0		0		2085			206	206		100%	1940	0.106	
	Jp	1	min.	7	+	14	=	21	sec												
	Hp	2,3,4	min.	7	+	14	=	21	sec												
	Kp	1,2,4	min.	7	+	15	=	22	sec												
	Fp	1,34	min.	5	+	9	=	14	sec												
	Gp	3	min.	5	+	12	=	17	sec												
	Mp	2	min.	5	+	8	=	13	sec												

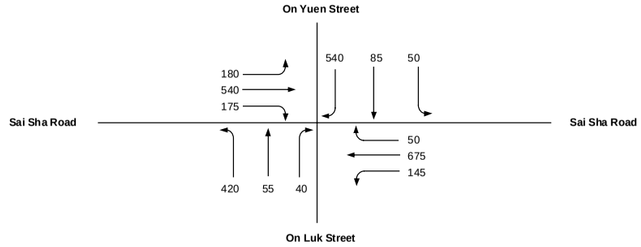
JUNCTION CAPACITY CALCULATION

AECOM

Junction J3 - Sai Sha Road / On Yuen Street / On Luk Street	2021 Observed Traffic Flows AM	DESIGN:	CHECK:	JOB NO: 60280227	DATE: Oct 20

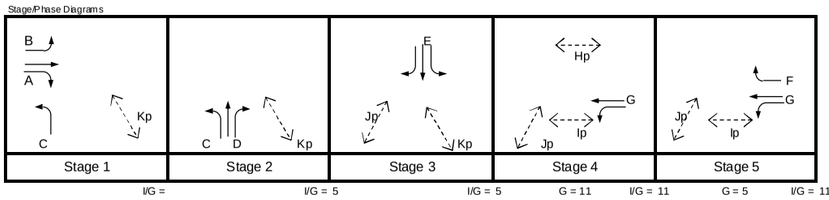
J3

Traffic Flow Diagram (pcu/hr)



No. of stages per cycle	N =	5	
Cycle time	C =	115	sec
Sum(y)	Y =	0.362	
Lost time	L =	46	sec
Total Flow	=	33,360	pcu
Optimum Cycle C_o = (1.5 × L+5)/(1-Y)	=	116	sec
Min. Cycle Time C_m = L/(1-Y)	=	72	sec
Y_{ult} = 0.9-0.0075 × L	=	0.555	
$R.C._{ult}$ = $(Y_{ult}-Y)/Y$x100%	=	53.2	%
Practical Cycle Time C_p = 0.9 × L/(0.9-Y)	=	77	sec
Y_{max} = 1-L/C	=	0.600	

Stage/Phase Diagrams



I/G = | I/G = 5 | I/G = 5 | G = 11 | I/G = 11 | G = 5 | I/G = 11

Critical Case : C,E,Hp,F

R.C.(C) = $(0.9xY_{max}-Y)/Yx100\%$ = 49%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR y	CRITICAL y
↰	B	1	3.600	1	15			1		0		1975	180			180	100%		1795	0.100	
↑	A	1	3.600	2				0		0		4230		540		540			4230	0.128	
↱	A	1	3.600	2		20	0	0		0		4230			175	175		100%	3935	0.044	
↰	C	1,2	3.400	1	30			1		0		1955	420			420	100%		1862	0.226	0.226
↑	D	2	3.400	1				0		0		2095		55		55			2095	0.026	
↱	D	2	3.400	1		30	0	0		0		2095			40	40		100%	1995	0.020	
↰	E	3	3.300	1	15			1		0		1945	50	85		135	37%		1876	0.072	
↑	E	3	3.300	1		30	0			0		2085		0	271	271		100%	1986	0.137	
↱	E	3	3.300	1		25	0	0		0		2085			269	269		100%	1967	0.137	0.137
↰	G	4,5	4.000	1	35			1		0		2015	145			145	100%		1932	0.075	
↑	G	4,5	3.600	3				0		0		6345		675		675			6345	0.106	
↱	F	5	5.500	1		35	0	0		0		2305			50	50		100%	2210	0.023	

Pedestrian Crossing				GM		FGM			
Hp	4	min.	11	+	9	=	20	sec
Ip	4,5	min.	10	+	8	=	18	sec
Jp	3,4,5	min.	5	+	5	=	10	sec
Kp	1,2,3	min.	5	+	5	=	10	sec

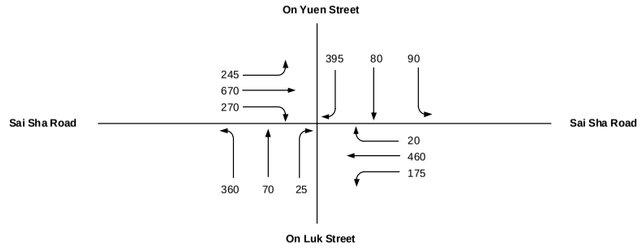
JUNCTION CAPACITY CALCULATION

AECOM

Junction J3 - Sai Sha Road / On Yuen Street / On Luk Street	2021 Observed Traffic Flows PM	DESIGN:	CHECK:	JOB NO: 60280227	DATE: Oct 20

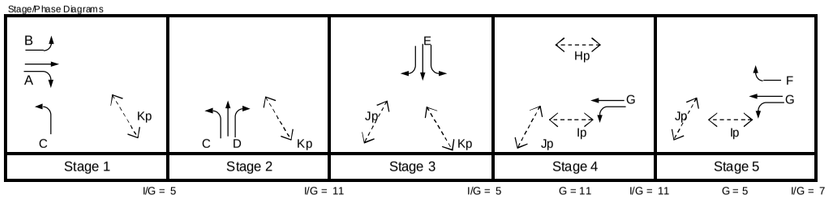
J3

Traffic Flow Diagram (pcu/hr)



No. of stages per cycle	N =	5	
Cycle time	C =	115	sec
Sum(y)	Y =	0.292	
Lost time	L =	52	sec
Total Flow	=	33,360	pcu
Optimum Cycle C_o = (1.5 × L+5)/(1-Y)	=	117	sec
Min. Cycle Time C_m = L/(1-Y)	=	73	sec
Y_{ult} = 0.9-0.0075 × L	=	0.510	
$R.C._{ult}$ = $(Y_{ult}-Y)/Y$x100%	=	74.8	%
Practical Cycle Time C_p = 0.9 × L/(0.9-Y)	=	77	sec
Y_{max} = 1-L/C	=	0.548	

Stage/Phase Diagrams



I/G = 5 | I/G = 11 | I/G = 5 | G = 11 | I/G = 11 | G = 5 | I/G = 7

Critical Case : A,D,E,Hp,F

R.C.(C) = $(0.9xY_{max}-Y)/Yx100\%$ = 69%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR y	CRITICAL y
↰	B	1	3.600	1	15			1		0		1975	245			245	100%		1795	0.136	
↑	A	1	3.600	2				0		0		4230		670		670			4230	0.158	0.158
↱	A	1	3.600	2		20	0	0		0		4230			270	270		100%	3935	0.069	
↰	C	1,2	3.400	1	30			1		0		1955	360			360	100%		1862	0.193	
↑	D	2	3.400	1				0		0		2095		70		70			2095	0.033	0.033
↱	D	2	3.400	1		30	0	0		0		2095			25	25		100%	1995	0.013	
↰	E	3	3.300	1	15			1		0		1945	90	80		170	53%		1847	0.092	
↑	E	3	3.300	1		30	0			0		2085		0	198	198		100%	1986	0.100	
↱	E	3	3.300	1		25	0	0		0		2085			197	197		100%	1967	0.100	0.100
↰	G	4,5	4.000	1	35			1		0		2015	175			175	100%		1932	0.091	
↑	G	4,5	3.600	3				0		0		6345		460		460			6345	0.072	
↱	F	5	5.500	1		35	0	0		0		2305			20	20		100%	2210	0.009	

Pedestrian Crossing				GM		FGM			
Hp	4	min.	11	+	9	=	20	sec
Ip	4,5	min.	10	+	8	=	18	sec
Jp	3,4,5	min.	5	+	5	=	10	sec
Kp	1,2,3	min.	5	+	5	=	10	sec

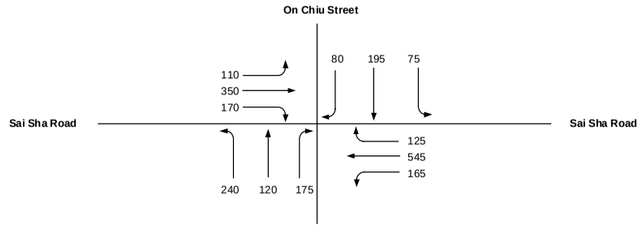
JUNCTION CAPACITY CALCULATION

AECOM

Junction J4 - Sai Sha Road / On Chiu Street / Ma On Shan Road	2021 Observed Traffic Flows AM	DESIGN:	CHECK:	JOB NO: -	DATE: Oct 20

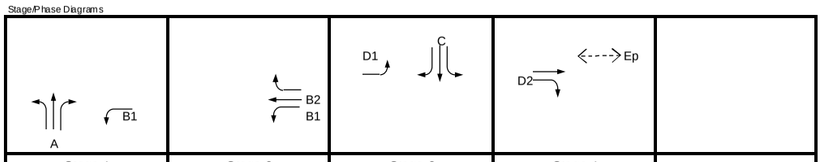
J4

Traffic Flow Diagram
(pcu/hr)



No. of stages per cycle	N =	4	
Cycle time	C =	110	sec
Sum(y)	Y =	0.418	
Lost time	L =	24	sec
Total Flow	=	28,940	pcu
Optimum Cycle C_o = (1.5 × L+5)/(1-Y)	=	71	sec
Min. Cycle Time C_m = L/(1-Y)	=	41	sec
Y_{ult} = 0.9-0.0075 × L	=	0.720	
$R.C._{ult}$ = $(Y_{ult}-Y)/Yx100\%$	=	72.1	%
Practical Cycle Time C_p = 0.9 × L/(0.9-Y)	=	45	sec
Y_{max} = 1-L/C	=	0.782	

Stage/Phase Diagrams



Stage 1	Stage 2	Stage 3	Stage 4	
I/G = 8	I/G = 10	I/G = 5	I/G = 5	

Critical Case : A,B2,D1,D2

R.C.(C) = $(0.9xY_{max}-Y)/Yx100\%$ = 68%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR y	CRITICAL y
	A	1	3.700	1	10			1		0		1985	240	0		240	100%		1726	0.139	0.139
	A	1	3.700	1		30	0			0		2125		120	31	151		21%	2103	0.072	
	A	1	3.700	1		25	0	0		0		2125			144	144		100%	2005	0.072	
	B1	1,2	3.750	1	15			1		0		1990	165			165	100%		1809	0.091	
	B2	2	3.750	2				0		0		4260		545		545			4260	0.128	0.128
	B2	2	3.750	1		25	0	0		0		2130			125	125		100%	2009	0.062	
	C	3	3.500	1	15			1		0		1965	75	51		126	59%		1855	0.068	
	C	3	3.500	1		30	0			0		2105		144	0	144		0%	2105	0.068	
	C	3	3.000	1		25	0	0		0		2055			80	80		100%	1939	0.041	
	D1	3	3.300	1	10			1		0		1945	110			110	100%		1691	0.065	0.065
	D2	4	3.300	2				0		0		4170		350		350			4170	0.084	
	D2	4	3.300	1		25	0	0		0		2085			170	170		100%	1967	0.086	0.086
Pedestrian Crossing				GM		FGM															
	Ep	4	min.	11	+	9	=	20	sec												

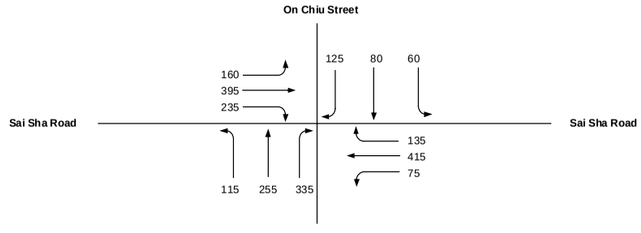
JUNCTION CAPACITY CALCULATION

AECOM

Junction J4 - Sai Sha Road / On Chiu Street / Ma On Shan Road	2021 Observed Traffic Flows PM	DESIGN:	CHECK:	JOB NO: -	DATE: Oct 20

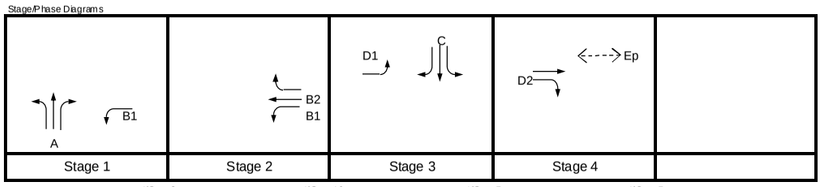
J4

Traffic Flow Diagram
(pcu/hr)



No. of stages per cycle	N =	4	
Cycle time	C =	110	sec
Sum(y)	Y =	0.430	
Lost time	L =	24	sec
Total Flow	=	28,940	pcu
Optimum Cycle C_o = (1.5 × L+5)/(1-Y)	=	72	sec
Min. Cycle Time C_m = L/(1-Y)	=	42	sec
Y_{ult} = 0.9-0.0075 × L	=	0.720	
$R.C._{ult}$ = $(Y_{ult}-Y)/Yx100\%$	=	67.3	%
Practical Cycle Time C_p = 0.9 × L/(0.9-Y)	=	46	sec
Y_{max} = 1-L/C	=	0.782	

Stage/Phase Diagrams



Stage 1	Stage 2	Stage 3	Stage 4	
I/G = 8	I/G = 10	I/G = 5	I/G = 5	

Critical Case : A,B2,D1,D2

R.C.(C) = $(0.9xY_{max}-Y)/Yx100\%$ = 63%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR y	CRITICAL y
	A	1	3.700	1	10			1		0		1985	115	104		219	53%		1840	0.119	
	A	1	3.700	1		30	0			0		2125		151	97	248		39%	2084	0.119	
	A	1	3.700	1		25	0	0		0		2125			238	238		100%	2005	0.119	0.119
	B1	1,2	3.750	1	15			1		0		1990	75			75	100%		1809	0.041	
	B2	2	3.750	2				0		0		4260		415		415			4260	0.097	0.097
	B2	2	3.750	1		25	0	0		0		2130			135	135		100%	2009	0.067	
	C	3	3.500	1	15			1		0		1965	60	23		83	72%		1833	0.045	
	C	3	3.500	1		30	0			0		2105		57	37	94		39%	2064	0.045	
	C	3	3.000	1		25	0	0		0		2055			88	88		100%	1939	0.045	
	D1	3	3.300	1	10			1		0		1945	160			160	100%		1691	0.095	0.095
	D2	4	3.300	2				0		0		4170		395		395			4170	0.095	
	D2	4	3.300	1		25	0	0		0		2085			235	235		100%	1967	0.119	0.119
Pedestrian Crossing				GM		FGM															
	Ep	4	min.	11	+	9	=	20	sec												

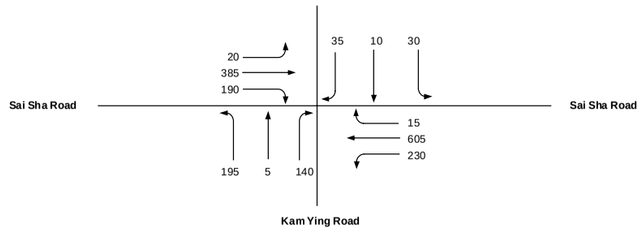
JUNCTION CAPACITY CALCULATION

AECOM

Junction J5 - Sai Sha Road / Kam Ying Road	2021 Observed Traffic Flows AM	DESIGN:	CHECK:	JOB NO: -	DATE: Oct 20

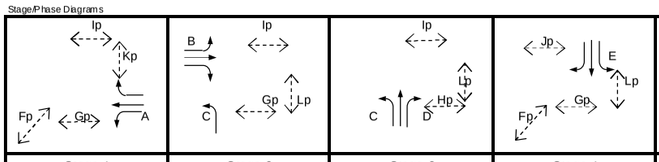
J4

Traffic Flow Diagram
(pcu/hr)



No. of stages per cycle	N =	4	
Cycle time	C =	110	sec
Sum(y)	Y =	0.241	
Lost time	L =	60	sec
Total Flow	=	20,890	pcu
Optimum Cycle C_o = (1.5 × L+5)/(1-Y)	=	125	sec
Min. Cycle Time C_m = L/(1-Y)	=	79	sec
Y_{ult} = 0.9-0.0075 × L	=	0.450	
$R.C._{ult}$ = (Y_{ult}-Y)/Yx100%	=	86.5	%
Practical Cycle Time C_p = 0.9 × L/(0.9-Y)	=	82	sec
Y_{max} = 1-L/C	=	0.455	

Stage/Phase Diagrams



Stage 1	Stage 2	Stage 3	Stage 4	
I/G = 11	I/G = 14	G = 5	I/G = 14	G = 5 I/G = 13

Critical Case : A,B,Hp,Jp

R.C.(C) = (0.9xY_{max}-Y)/Yx100% = 70%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR y	CRITICAL y
↰	A	1	3.500	1	15			1		0		1965	230			230	100%		1786	0.129	
↑	A	1	3.500	2				0		0		4210		605		605			4210	0.144	0.144
↱	A	1	3.500	1		25	0	0		0		2105			15	15		100%	1986	0.008	
↰	B	2	4.000	1	15			1		0		2015	20	175		195	10%		1995	0.098	0.098
↑	B	2	4.000	1				0		0		2155		210		210			2155	0.098	
↱	B	2	3.500	1		25	0	0		0		2105			190	190		100%	1986	0.096	
↰	C	2,3	4.500	1	25			1		0		2065	195			195	100%		1948	0.100	
↱	D	3	3.500	1		25	0	0		0		2105		5	140	145		97%	1990	0.073	
↰↑↱	E	4	5.500	1	15	25	0	1		0		2165	30	10	35	75	40%	47%	2027	0.037	

Pedestrian Crossing				GM		FGM			
Fp	4,1	min.	5	+	6	=	11	sec
Gp	4,1,2	min.	5	+	5	=	10	sec
Hp	3	min.	5	+	8	=	13	sec
Ip	1,2,3	min.	5	+	5	=	10	sec
Jp	4	min.	5	+	6	=	11	sec
Lp	2,3,4	min.	5	+	12	=	17	sec
Kp	1	min.	5	+	7	=	12	sec

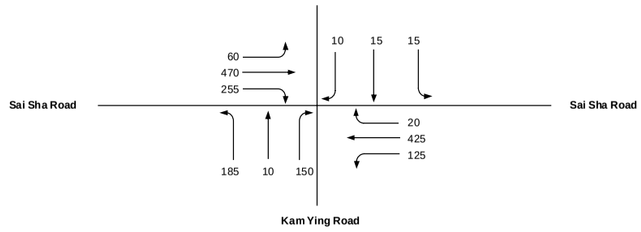
JUNCTION CAPACITY CALCULATION

AECOM

Junction J5 - Sai Sha Road / Kam Ying Road	2021 Observed Traffic Flows PM	DESIGN:	CHECK:	JOB NO: -	DATE: Oct 20

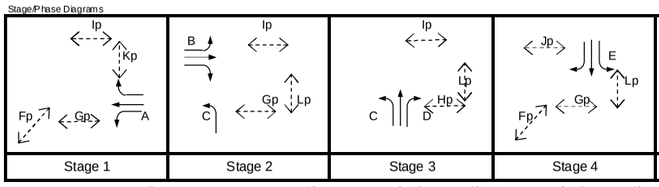
J4

Traffic Flow Diagram
(pcu/hr)



No. of stages per cycle	N =	4	
Cycle time	C =	110	sec
Sum(y)	Y =	0.229	
Lost time	L =	60	sec
Total Flow	=	20,890	pcu
Optimum Cycle C_o = (1.5 × L+5)/(1-Y)	=	123	sec
Min. Cycle Time C_m = L/(1-Y)	=	78	sec
Y_{ult} = 0.9-0.0075 × L	=	0.450	
$R.C._{ult}$ = (Y_{ult}-Y)/Yx100%	=	96.1	%
Practical Cycle Time C_p = 0.9 × L/(0.9-Y)	=	81	sec
Y_{max} = 1-L/C	=	0.455	

Stage/Phase Diagrams



Stage 1	Stage 2	Stage 3	Stage 4	
I/G = 11	I/G = 14	G = 5	I/G = 14	G = 5 I/G = 13

Critical Case : A,B,Hp,Jp

R.C.(C) = (0.9xY_{max}-Y)/Yx100% = 78%

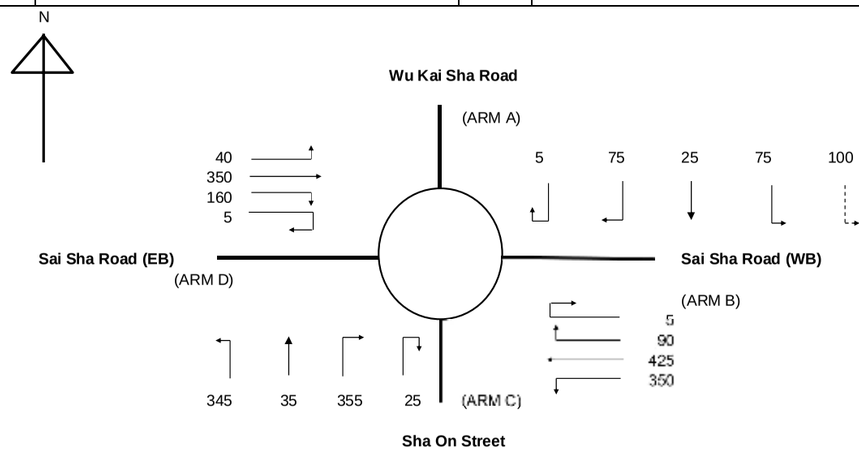
MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR y	CRITICAL y
↰	A	1	3.500	1	15			1		0		1965	125			125	100%		1786	0.070	
↑	A	1	3.500	2				0		0		4210		425		425			4210	0.101	0.101
↱	A	1	3.500	1		25	0	0		0		2105			20	20		100%	1986	0.010	
↰	B	2	4.000	1	15			1		0		2015	60	193		253	24%		1968	0.129	0.129
↑	B	2	4.000	1				0		0		2155		277		277			2155	0.129	
↱	B	2	3.500	1		25	0	0		0		2105			255	255		100%	1986	0.128	
↰	C	2,3	4.500	1	25			1		0		2065	185			185	100%		1948	0.095	
↱	D	3	3.500	1		25	0	0		0		2105		10	150	160		94%	1993	0.080	
↰↑↱	E	4	5.500	1	15	25	0	1		0		2165	15	15	10	40	38%	25%	2057	0.019	

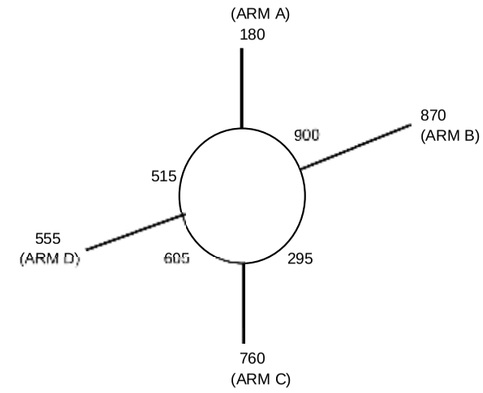
Pedestrian Crossing				GM		FGM			
Fp	4,1	min.	5	+	6	=	11	sec
Gp	4,1,2	min.	5	+	5	=	10	sec
Hp	3	min.	5	+	8	=	13	sec
Ip	1,2,3	min.	5	+	5	=	10	sec
Jp	4	min.	5	+	6	=	11	sec
Lp	2,3,4	min.	5	+	12	=	17	sec
Kp	1	min.	5	+	7	=	12	sec

ROUNDABOUT CAPACITY CALCULATIO

AECOM

Junction	J6 - Sai Sha Road / Wu Kai Sha Road / Sha On Street	Scenario	2021 Observed Traffic Flows AM	Project No.	Prepared By	Checked By	Date
				-	MKCN	SHSN	12-Jul-22





ARM	A	B	C	D	
INPUT PARAMETERS:					
V = Approach half width (m)	7.50	8.50	3.20	7.00	
E = Entry width (m)	8.00	10.50	12.00	9.00	
L = Effective length of flare (m)	5.00	40.00	50.00	35.00	
R = Entry radius (m)	40.00	160.00	35.00	100.00	
D = Inscribed circle diameter (m)	90.00	90.00	90.00	90.00	
A = Entry angle (degree)	30.00	25.00	40.00	25.00	
Q = Entry flow (pcu/h)	180	870	760	555	*
Qc= Circulating flow across entry (pcu/h)	900	295	605	515	*
OUTPUT PARAMETERS:					
S = Sharpness of flare = 1.6(E-V)/L	0.16	0.08	0.28	0.09	
K = 1-0.00347(A-30)-0.978(1/R-0.05)	1.02	1.06	0.99	1.06	
X2= V + ((E-V)/(1+2S))	7.88	10.22	8.83	8.69	
M = EXP((D-60)/10)	20.09	20.09	20.09	20.09	
F = 303*X2	2387	3098	2675	2633	
Td= 1+(0.5/(1+M))	1.02	1.02	1.02	1.02	
Fc= 0.21*Td(1+0.2*X2)	0.55	0.65	0.59	0.59	
Qe= K(F-Fc*Qc)	1935	3080	2284	2462	
DFC = Design flow/Capacity = Q/Qe	0.09	0.28	0.33	0.23	

TOTAL ENTRY FLOWS 2365 PCU

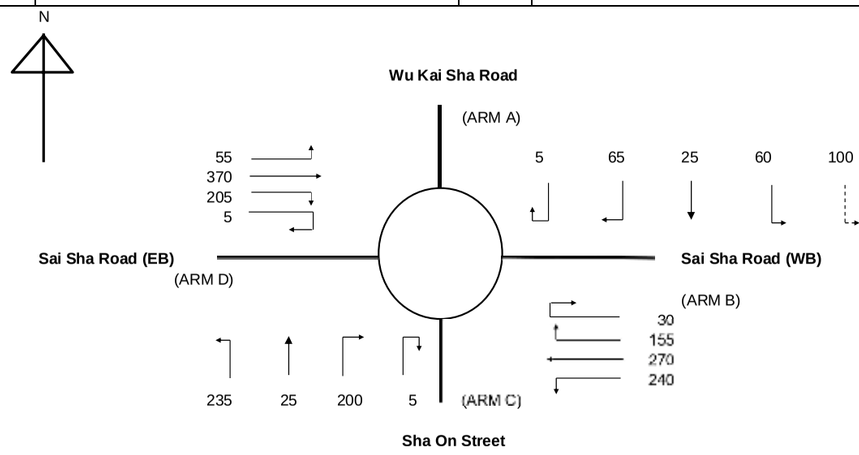
CRITICAL DF(0.33

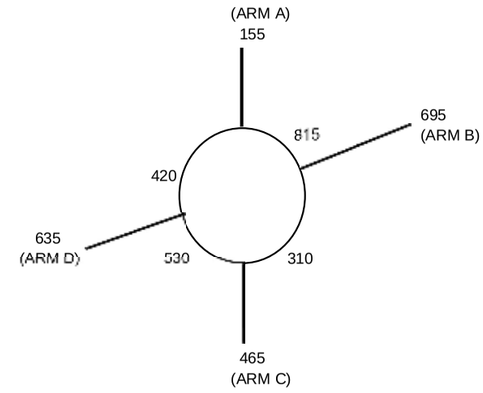
Filename : https://aecom-my.sharepoint.com/personal/magdalene_ku_aecom_com/D

ROUNDABOUT CAPACITY CALCULATIO

AECOM

Junction	J6 - Sai Sha Road / Wu Kai Sha Road / Sha On Street	Scenario	2021 Observed Traffic Flows PM	Project No.	Prepared By	Checked By	Date
				-	MKCN	SHSN	12-Jul-22





ARM	A	B	C	D	
INPUT PARAMETERS:					
V = Approach half width (m)	7.50	8.50	3.20	7.00	
E = Entry width (m)	8.00	10.50	12.00	9.00	
L = Effective length of flare (m)	5.00	40.00	50.00	35.00	
R = Entry radius (m)	40.00	160.00	35.00	100.00	
D = Inscribed circle diameter (m)	90.00	90.00	90.00	90.00	
A = Entry angle (degree)	30.00	25.00	40.00	25.00	
Q = Entry flow (pcu/h)	155	695	465	635	*
Qc= Circulating flow across entry (pcu/h)	815	310	530	420	*
OUTPUT PARAMETERS:					
S = Sharpness of flare = 1.6(E-V)/L	0.16	0.08	0.28	0.09	
K = 1-0.00347(A-30)-0.978(1/R-0.05)	1.02	1.06	0.99	1.06	
X2= V + ((E-V)/(1+2S))	7.88	10.22	8.83	8.69	
M = EXP((D-60)/10)	20.09	20.09	20.09	20.09	
F = 303*X2	2387	3098	2675	2633	
Td= 1+(0.5/(1+M))	1.02	1.02	1.02	1.02	
Fc= 0.21*Td(1+0.2*X2)	0.55	0.65	0.59	0.59	
Qe= K(F-Fc*Qc)	1983	3069	2328	2521	
DFC = Design flow/Capacity = Q/Qe	0.08	0.23	0.20	0.25	

TOTAL ENTRY FLOWS 1950 PCU

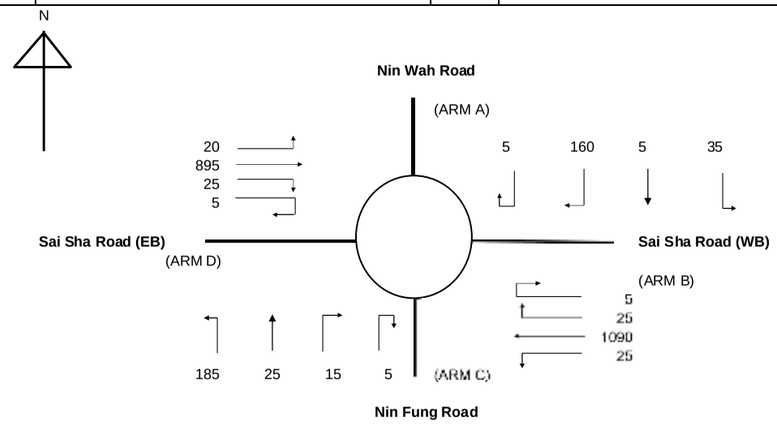
CRITICAL DF(0.25

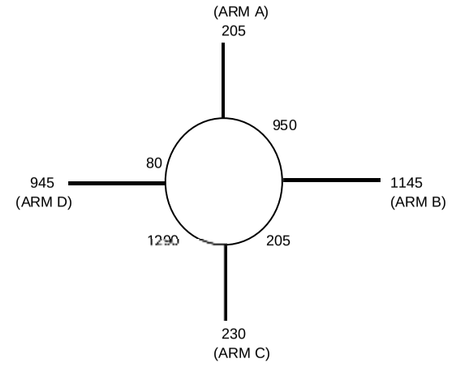
Filename : https://aecom-my.sharepoint.com/personal/magdalene_ku_aecom_com/D

ROUNDABOUT CAPACITY CALCULATIC

AECOM

Junction	J7 - Sai Sha Road / Nin Wah Road / Nin Fung Road	Scenario	2021 Observed Traffic Flows AM	Project No.	Prepared By	Checked By	Date
				-	MKCN	SHSN	12-Jul-22





ARM	A	B	C	D	
INPUT PARAMETERS:					
V = Approach half width (m)	6.00	3.50	5.00	7.00	
E = Entry width (m)	7.00	8.00	10.00	9.00	
L = Effective length of flare (m)	20.00	20.00	11.00	20.00	
R = Entry radius (m)	25.00	20.00	10.00	45.00	
D = Inscribed circle diameter (m)	50.00	50.00	50.00	50.00	
A = Entry angle (degree)	40.00	60.00	20.00	30.00	
Q = Entry flow (pcu/h)	205	1145	230	945	*
Qc= Circulating flow across entry (pcu/h)	950	205	1290	80	*
OUTPUT PARAMETERS:					
S = Sharpness of flare = 1.6(E-V)/L	0.08	0.36	0.73	0.16	
K = 1-0.00347(A-30)-0.978(1/R-0.05)	0.98	0.90	0.99	1.03	
X2= V + ((E-V)/(1+2S))	6.86	6.12	7.04	8.52	
M = EXP((D-60)/10)	0.37	0.37	0.37	0.37	
F = 303*X2	2079	1853	2132	2580	
Td= 1+(0.5/(1+M))	1.37	1.37	1.37	1.37	
Fc= 0.21*Td(1+0.2*X2)	0.68	0.64	0.69	0.78	
Qe= K(F-Fc*Qc)	1397	1543	1224	2586	
DFC = Design flow/Capacity = Q/Qe	0.15	0.74	0.19	0.37	

TOTAL ENTRY FLOWS 2525 PCU

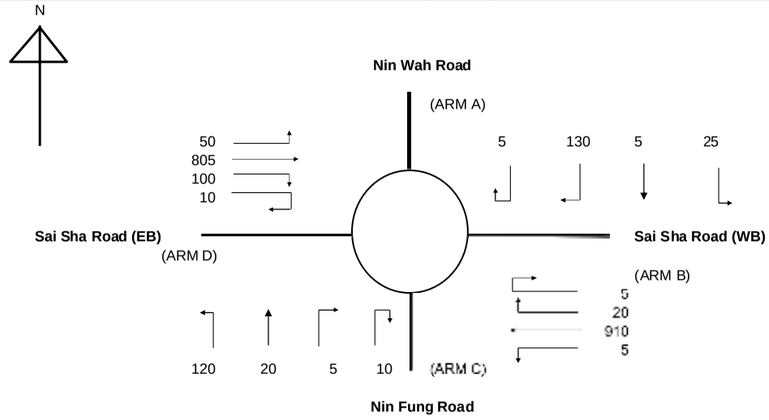
CRITICAL DF(0.74

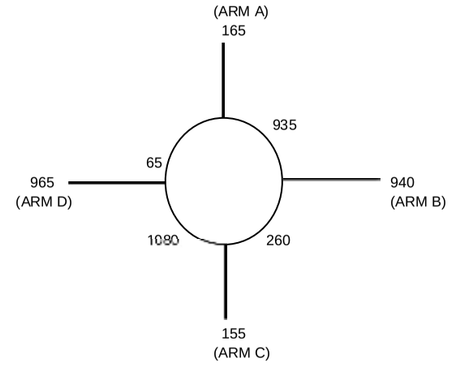
Filename : https://aecom-my.sharepoint.com/personal/magdalene_ku_aecom_com

ROUNDABOUT CAPACITY CALCULATIC

AECOM

Junction	J7 - Sai Sha Road / Nin Wah Road / Nin Fung Road	Scenario	2021 Observed Traffic Flows PM	Project No.	Prepared By	Checked By	Date
				-	MKCN	SHSN	12-Jul-22





ARM	A	B	C	D	
INPUT PARAMETERS:					
V = Approach half width (m)	6.00	3.50	5.00	7.00	
E = Entry width (m)	7.00	8.00	10.00	9.00	
L = Effective length of flare (m)	20.00	20.00	11.00	20.00	
R = Entry radius (m)	25.00	20.00	10.00	45.00	
D = Inscribed circle diameter (m)	50.00	50.00	50.00	50.00	
A = Entry angle (degree)	40.00	60.00	20.00	30.00	
Q = Entry flow (pcu/h)	165	940	155	965	*
Qc= Circulating flow across entry (pcu/h)	935	260	1080	65	*
OUTPUT PARAMETERS:					
S = Sharpness of flare = 1.6(E-V)/L	0.08	0.36	0.73	0.16	
K = 1-0.00347(A-30)-0.978(1/R-0.05)	0.98	0.90	0.99	1.03	
X2= V + ((E-V)/(1+2S))	6.86	6.12	7.04	8.52	
M = EXP((D-60)/10)	0.37	0.37	0.37	0.37	
F = 303*X2	2079	1853	2132	2580	
Td= 1+(0.5/(1+M))	1.37	1.37	1.37	1.37	
Fc= 0.21*Td(1+0.2*X2)	0.68	0.64	0.69	0.78	
Qe= K(F-Fc*Qc)	1407	1512	1367	2598	
DFC = Design flow/Capacity = Q/Qe	0.12	0.62	0.11	0.37	

TOTAL ENTRY FLOWS 2225 PCU

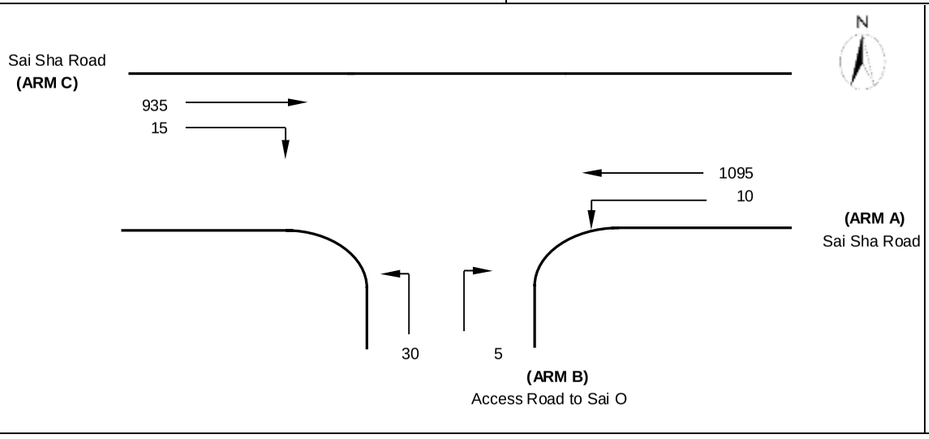
CRITICAL DF(0.62

Filename : https://aecom-my.sharepoint.com/personal/magdalene_ku_aecom_com

PRIORITY JUNCTION CAPACITY CALCULATION

AECOM

Junction J8 - Sai Sha Road / Access Road to Sai O	2021 Observed Traffic Flows AM	Designed By : MKCN	Checked By : SHSN	Job No. : -	Date : Jul 22



NOTES : (GEOMETRIC INPUT DATA) J8

W	= Major Road Width (6.4 - 20.0)
W cr	= Central Reserve width (1.2 - 9.0, kerbed central reserve only)
W b-a	= Lane width available to vehicle waiting in stream b-a (2.05 - 4.07)
W b-c	= Lane width available to vehicle waiting in stream b-c (2.05 - 4.07)
W c-b	= Lane width available to vehicle waiting in stream c-b (2.05 - 4.07)
Vl b-a	= Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0)
Vr b-a	= Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0)
Vr b-c	= Visibilitu to the right for vehicles waiting in stream b-c (17.0 - 250.0)
Vr c-b	= Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0)
D	= Stream-specific B-A
E	= Stream-specific B-C
F	= Stream-specific C-B
Y	= (1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.4	(metres)
W cr	=	3	(metres)
q a-b	=	10	(pcu/hr)
q a-c	=	1095	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	1.5	(metres)
Vr c-b	=	50	(metres)
q c-a	=	935	(pcu/hr)
q c-b	=	15	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	1.6	(metres)
W b-c	=	1.6	(metres)
Vl b-a	=	80	(metres)
Vr b-a	=	170	(metres)
Vr b-c	=	120	(metres)
q b-a	=	5	(pcu/hr)
q b-c	=	30	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.808196
E	=	0.807300
F	=	0.747632
Y	=	0.744700

THE CAPACITY OF MOVEMENT :

Q b-a	=	166
Q b-c	=	361
Q c-b	=	333
Q b-ac	=	309

CRITICAL DFC = 0.11

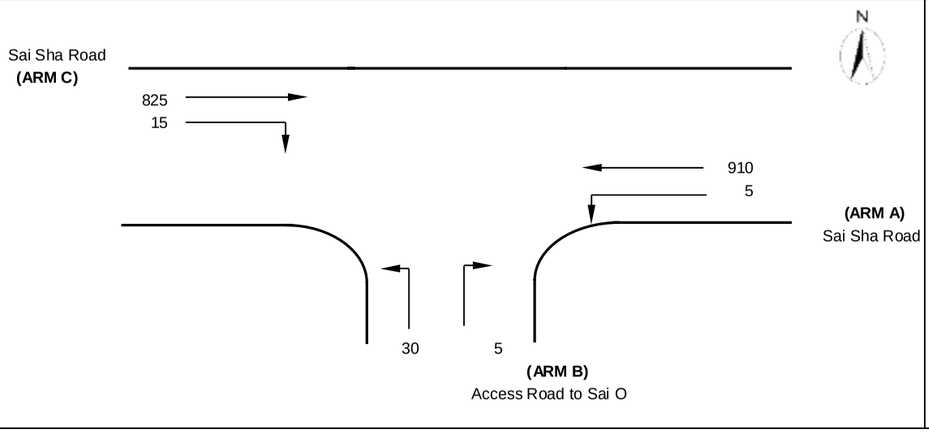
COMPARISION OF DESIGN FLOW TO CAPACITY :

DFC b-a	=	0.03
DFC b-c	=	0.08
DFC c-b	=	0.05
DFC b-ac	=	0.11

PRIORITY JUNCTION CAPACITY CALCULATION

AECOM

Junction J8 - Sai Sha Road / Access Road to Sai O	2021 Observed Traffic Flows PM	Designed By : MKCN	Checked By : SHSN	Job No. : -	Date : Jul 22



NOTES : (GEOMETRIC INPUT DATA) J8

W	= Major Road Width (6.4 - 20.0)
W cr	= Central Reserve width (1.2 - 9.0, kerbed central reserve only)
W b-a	= Lane width available to vehicle waiting in stream b-a (2.05 - 4.07)
W b-c	= Lane width available to vehicle waiting in stream b-c (2.05 - 4.07)
W c-b	= Lane width available to vehicle waiting in stream c-b (2.05 - 4.07)
Vl b-a	= Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0)
Vr b-a	= Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0)
Vr b-c	= Visibilitu to the right for vehicles waiting in stream b-c (17.0 - 250.0)
Vr c-b	= Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0)
D	= Stream-specific B-A
E	= Stream-specific B-C
F	= Stream-specific C-B
Y	= (1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.4	(metres)
W cr	=	3	(metres)
q a-b	=	5	(pcu/hr)
q a-c	=	910	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	1.5	(metres)
Vr c-b	=	50	(metres)
q c-a	=	825	(pcu/hr)
q c-b	=	15	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	1.6	(metres)
W b-c	=	1.6	(metres)
Vl b-a	=	80	(metres)
Vr b-a	=	170	(metres)
Vr b-c	=	120	(metres)
q b-a	=	5	(pcu/hr)
q b-c	=	30	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.808196
E	=	0.807300
F	=	0.747632
Y	=	0.744700

THE CAPACITY OF MOVEMENT :

Q b-a	=	222
Q b-c	=	402
Q c-b	=	372
Q b-ac	=	360

CRITICAL DFC = 0.10

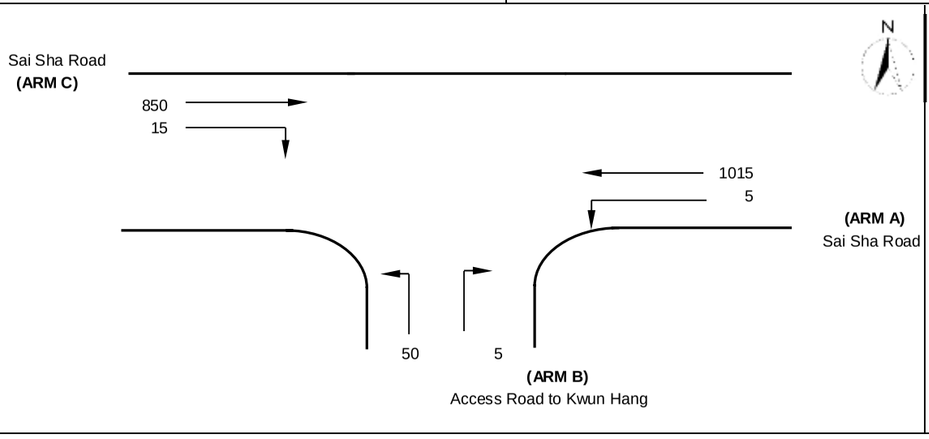
COMPARISION OF DESIGN FLOW TO CAPACITY :

DFC b-a	=	0.02
DFC b-c	=	0.07
DFC c-b	=	0.04
DFC b-ac	=	0.10

PRIORITY JUNCTION CAPACITY CALCULATION

AECOM

Junction J9a - Sai Sha Road / Access Road to Kwun Hang	2021 Observed Traffic Flows AM	Designed By : MKCN	Checked By : SHSN	Job No. : -	Date : Jul 22



NOTES : (GEOMETRIC INPUT DATA) J9a

W	= Major Road Width (6.4 - 20.0)
W cr	= Central Reserve width (1.2 - 9.0, kerbed central reserve only)
W b-a	= Lane width available to vehicle waiting in stream b-a (2.05 - 4.07)
W b-c	= Lane width available to vehicle waiting in stream b-c (2.05 - 4.07)
W c-b	= Lane width available to vehicle waiting in stream c-b (2.05 - 4.07)
Vl b-a	= Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0)
Vr b-a	= Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0)
Vr b-c	= Visibilitu to the right for vehicles waiting in stream b-c (17.0 - 250.0)
Vr c-b	= Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0)
D	= Stream-specific B-A
E	= Stream-specific B-C
F	= Stream-specific C-B
Y	= (1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	6	(metres)
W cr	=	0	(metres)
q a-b	=	5	(pcu/hr)
q a-c	=	1015	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	1.5	(metres)
Vr c-b	=	60	(metres)
q c-a	=	850	(pcu/hr)
q c-b	=	15	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	2.5	(metres)
W b-c	=	2.5	(metres)
Vl b-a	=	60	(metres)
Vr b-a	=	40	(metres)
Vr b-c	=	70	(metres)
q b-a	=	5	(pcu/hr)
q b-c	=	50	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.782988
E	=	0.851765
F	=	0.754813
Y	=	0.793000

THE CAPACITY OF MOVEMENT :

Q b-a	=	135
Q b-c	=	385
Q c-b	=	340
Q b-ac	=	329
Q c-a		1721

COMPARISION OF DESIGN FLOW TO CAPACITY :

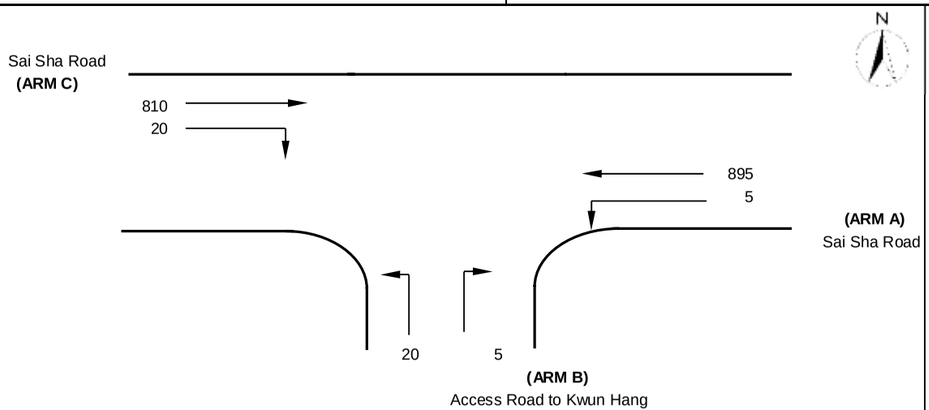
DFC b-a	=	0.04
DFC b-c	=	0.13
DFC c-b	=	0.04
DFC b-ac	=	0.17
DFC c-a	=	0.49

CRITICAL DFC = 0.49

PRIORITY JUNCTION CAPACITY CALCULATION

AECOM

Junction J9a - Sai Sha Road / Access Road to Kwun Hang	2021 Observed Traffic Flows PM	Designed By : MKCN	Checked By : SHSN	Job No. : -	Date : Jul 22



NOTES : (GEOMETRIC INPUT DATA) J9a

W	= Major Road Width (6.4 - 20.0)
W cr	= Central Reserve width (1.2 - 9.0, kerbed central reserve only)
W b-a	= Lane width available to vehicle waiting in stream b-a (2.05 - 4.07)
W b-c	= Lane width available to vehicle waiting in stream b-c (2.05 - 4.07)
W c-b	= Lane width available to vehicle waiting in stream c-b (2.05 - 4.07)
Vl b-a	= Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0)
Vr b-a	= Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0)
Vr b-c	= Visibilitu to the right for vehicles waiting in stream b-c (17.0 - 250.0)
Vr c-b	= Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0)
D	= Stream-specific B-A
E	= Stream-specific B-C
F	= Stream-specific C-B
Y	= (1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	6	(metres)
W cr	=	0	(metres)
q a-b	=	5	(pcu/hr)
q a-c	=	895	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	1.5	(metres)
Vr c-b	=	60	(metres)
q c-a	=	810	(pcu/hr)
q c-b	=	20	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	2.5	(metres)
W b-c	=	2.5	(metres)
Vl b-a	=	60	(metres)
Vr b-a	=	40	(metres)
Vr b-c	=	70	(metres)
q b-a	=	5	(pcu/hr)
q b-c	=	20	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.782988
E	=	0.851765
F	=	0.754813
Y	=	0.793000

THE CAPACITY OF MOVEMENT :

Q b-a	=	167
Q b-c	=	414
Q c-b	=	366
Q b-ac	=	319
Q c-a		1702

COMPARISION OF DESIGN FLOW TO CAPACITY :

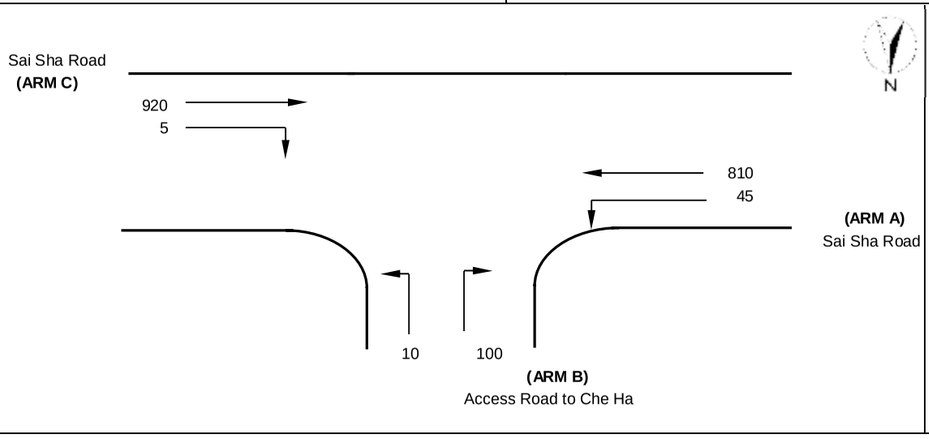
DFC b-a	=	0.03
DFC b-c	=	0.05
DFC c-b	=	0.05
DFC b-ac	=	0.08
DFC c-a	=	0.48

CRITICAL DFC = 0.48

PRIORITY JUNCTION CAPACITY CALCULATION

AECOM

Junction J9b - Sai Sha Road / Access Road to Che Ha	2021 Observed Traffic Flows AM	Designed By : MKCN	Checked By : SHSN	Job No. : -	Date : Jul 22



NOTES : (GEOMETRIC INPUT DATA) J9b

W	= Major Road Width (6.4 - 20.0)
W cr	= Central Reserve width (1.2 - 9.0, kerbed central reserve only)
W b-a	= Lane width available to vehicle waiting in stream b-a (2.05 - 4.07)
W b-c	= Lane width available to vehicle waiting in stream b-c (2.05 - 4.07)
W c-b	= Lane width available to vehicle waiting in stream c-b (2.05 - 4.07)
Vl b-a	= Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0)
Vr b-a	= Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0)
Vr b-c	= Visibilitu to the right for vehicles waiting in stream b-c (17.0 - 250.0)
Vr c-b	= Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0)
D	= Stream-specific B-A
E	= Stream-specific B-C
F	= Stream-specific C-B
Y	= (1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	6 (metres)
W cr	=	0 (metres)
q a-b	=	45 (pcu/hr)
q a-c	=	810 (pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	1.5 (metres)
Vr c-b	=	45 (metres)
q c-a	=	920 (pcu/hr)
q c-b	=	5 (pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	2.5 (metres)
W b-c	=	2.5 (metres)
Vl b-a	=	60 (metres)
Vr b-a	=	60 (metres)
Vr b-c	=	60 (metres)
q b-a	=	100 (pcu/hr)
q b-c	=	10 (pcu/hr)

GEOMETRIC FACTORS :

D	=	0.798176
E	=	0.843737
F	=	0.744042
Y	=	0.793000

THE CAPACITY OF MOVEMENT :

Q b-a	=	175
Q b-c	=	427
Q c-b	=	371
Q b-ac	=	185
Q c-a		1776

CRITICAL DFC = 0.60

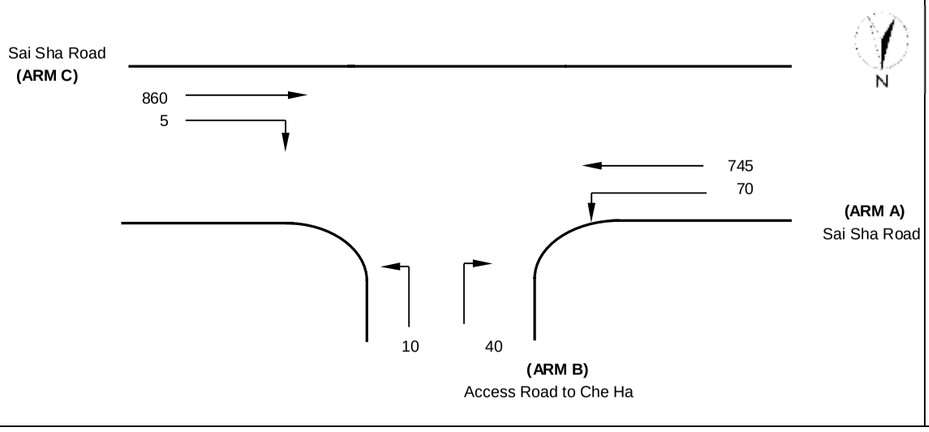
COMPARISION OF DESIGN FLOW TO CAPACITY :

DFC b-a	=	0.57
DFC b-c	=	0.02
DFC c-b	=	0.01
DFC b-ac	=	0.60
DFC c-a	=	0.52

PRIORITY JUNCTION CAPACITY CALCULATION

AECOM

Junction J9b - Sai Sha Road / Access Road to Che Ha	2021 Observed Traffic Flows PM	Designed By : MKCN	Checked By : SHSN	Job No. : -	Date : Jul 22



NOTES : (GEOMETRIC INPUT DATA) J9b

W	= Major Road Width (6.4 - 20.0)
W cr	= Central Reserve width (1.2 - 9.0, kerbed central reserve only)
W b-a	= Lane width available to vehicle waiting in stream b-a (2.05 - 4.07)
W b-c	= Lane width available to vehicle waiting in stream b-c (2.05 - 4.07)
W c-b	= Lane width available to vehicle waiting in stream c-b (2.05 - 4.07)
Vl b-a	= Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0)
Vr b-a	= Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0)
Vr b-c	= Visibilitu to the right for vehicles waiting in stream b-c (17.0 - 250.0)
Vr c-b	= Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0)
D	= Stream-specific B-A
E	= Stream-specific B-C
F	= Stream-specific C-B
Y	= (1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	6 (metres)
W cr	=	0 (metres)
q a-b	=	70 (pcu/hr)
q a-c	=	745 (pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	1.5 (metres)
Vr c-b	=	45 (metres)
q c-a	=	860 (pcu/hr)
q c-b	=	5 (pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	2.5 (metres)
W b-c	=	2.5 (metres)
Vl b-a	=	60 (metres)
Vr b-a	=	60 (metres)
Vr b-c	=	60 (metres)
q b-a	=	40 (pcu/hr)
q b-c	=	10 (pcu/hr)

GEOMETRIC FACTORS :

D	=	0.798176
E	=	0.843737
F	=	0.744042
Y	=	0.793000

THE CAPACITY OF MOVEMENT :

Q b-a	=	196
Q b-c	=	440
Q c-b	=	379
Q b-ac	=	221
Q c-a		1776

CRITICAL DFC = 0.48

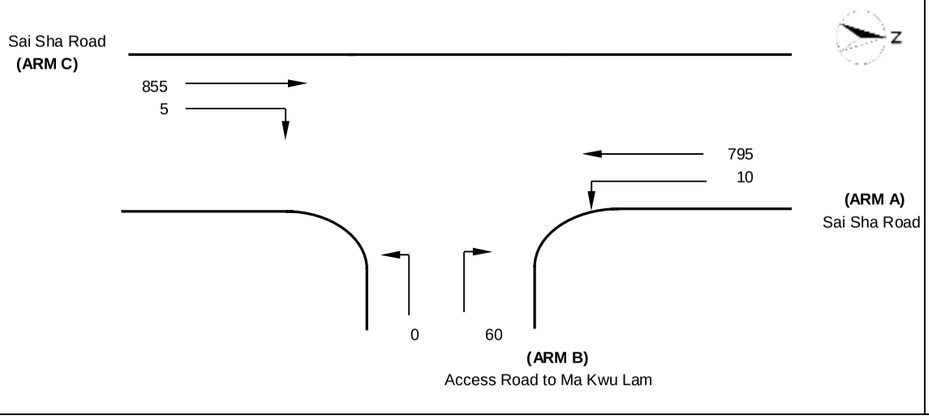
COMPARISION OF DESIGN FLOW TO CAPACITY :

DFC b-a	=	0.20
DFC b-c	=	0.02
DFC c-b	=	0.01
DFC b-ac	=	0.23
DFC c-a	=	0.48

PRIORITY JUNCTION CAPACITY CALCULATION

AECOM

Junction J10 - Sai Sha Road / Access Road to Ma Kwu Lam	2021 Observed Traffic Flows AM	Designed By : MKCN	Checked By : SHSN	Job No. : -	Date : Jul 22



NOTES : (GEOMETRIC INPUT DATA) J10

W	= Major Road Width (6.4 - 20.0)
W cr	= Central Reserve width (1.2 - 9.0, kerbed central reserve only)
W b-a	= Lane width available to vehicle waiting in stream b-a (2.05 - 4.07)
W b-c	= Lane width available to vehicle waiting in stream b-c (2.05 - 4.07)
W c-b	= Lane width available to vehicle waiting in stream c-b (2.05 - 4.07)
Vl b-a	= Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0)
Vr b-a	= Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0)
Vr b-c	= Visibilitu to the right for vehicles waiting in stream b-c (17.0 - 250.0)
Vr c-b	= Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0)
D	= Stream-specific B-A
E	= Stream-specific B-C
F	= Stream-specific C-B
Y	= (1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	6	(metres)
W cr	=	0	(metres)
q a-b	=	10	(pcu/hr)
q a-c	=	795	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	1.5	(metres)
Vr c-b	=	100	(metres)
q c-a	=	855	(pcu/hr)
q c-b	=	5	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	1.25	(metres)
W b-c	=	1.25	(metres)
Vl b-a	=	100	(metres)
Vr b-a	=	100	(metres)
Vr b-c	=	100	(metres)
q b-a	=	60	(pcu/hr)
q b-c	=	0	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.737647
E	=	0.760461
F	=	0.783538
Y	=	0.793000

THE CAPACITY OF MOVEMENT :

Q b-a	=	176
Q b-c	=	391
Q c-b	=	402
Q b-ac	=	176

CRITICAL DFC = 0.34

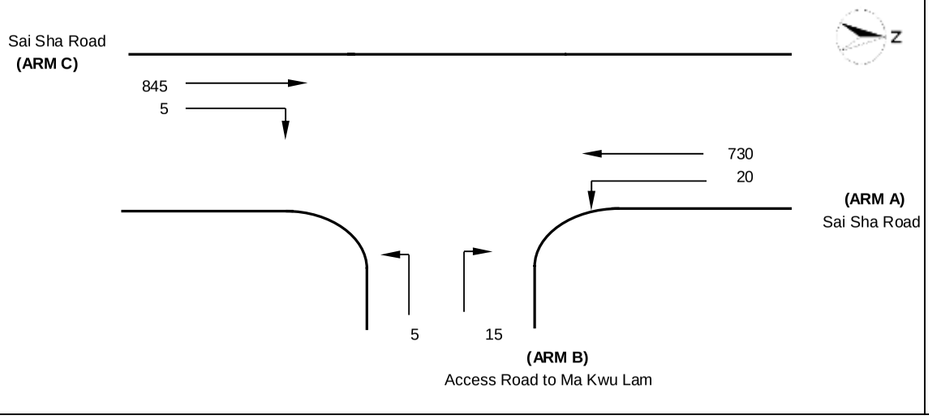
COMPARISION OF DESIGN FLOW TO CAPACITY :

DFC b-a	=	0.34
DFC b-c	=	0.00
DFC c-b	=	0.01
DFC b-ac	=	0.34

PRIORITY JUNCTION CAPACITY CALCULATION

AECOM

Junction J10 - Sai Sha Road / Access Road to Ma Kwu Lam	2021 Observed Traffic Flows PM	Designed By : MKCN	Checked By : SHSN	Job No. : -	Date : Jul 22



NOTES : (GEOMETRIC INPUT DATA) J10

W	= Major Road Width (6.4 - 20.0)
W cr	= Central Reserve width (1.2 - 9.0, kerbed central reserve only)
W b-a	= Lane width available to vehicle waiting in stream b-a (2.05 - 4.07)
W b-c	= Lane width available to vehicle waiting in stream b-c (2.05 - 4.07)
W c-b	= Lane width available to vehicle waiting in stream c-b (2.05 - 4.07)
Vl b-a	= Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0)
Vr b-a	= Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0)
Vr b-c	= Visibilitu to the right for vehicles waiting in stream b-c (17.0 - 250.0)
Vr c-b	= Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0)
D	= Stream-specific B-A
E	= Stream-specific B-C
F	= Stream-specific C-B
Y	= (1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	6	(metres)
W cr	=	0	(metres)
q a-b	=	20	(pcu/hr)
q a-c	=	730	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	1.5	(metres)
Vr c-b	=	100	(metres)
q c-a	=	845	(pcu/hr)
q c-b	=	5	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	1.25	(metres)
W b-c	=	1.25	(metres)
Vl b-a	=	100	(metres)
Vr b-a	=	100	(metres)
Vr b-c	=	100	(metres)
q b-a	=	15	(pcu/hr)
q b-c	=	5	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.737647
E	=	0.760461
F	=	0.783538
Y	=	0.793000

THE CAPACITY OF MOVEMENT :

Q b-a	=	191
Q b-c	=	405
Q c-b	=	414
Q b-ac	=	220

CRITICAL DFC = 0.09

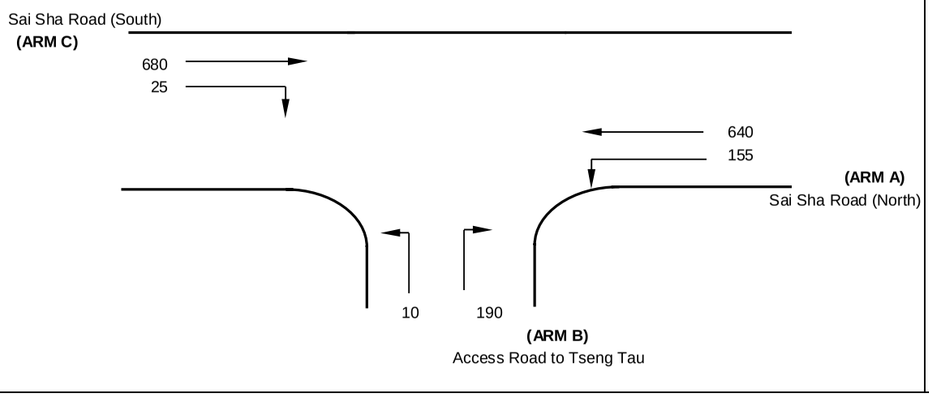
COMPARISION OF DESIGN FLOW TO CAPACITY :

DFC b-a	=	0.08
DFC b-c	=	0.01
DFC c-b	=	0.01
DFC b-ac	=	0.09

PRIORITY JUNCTION CAPACITY CALCULATION

AECOM

Junction J11· Sai Sha Road / Access Road to Tseng Tau	2021 AM Observed Traffic Flows	Designed By : MKCN	Checked By : SHSN	Job No. : -	Date : Jul 22



NOTES : (GEOMETRIC INPUT DATA)

J5

- W = Major Road Width (6.4 - 20.0)
- W cr = Central Reserve width (1.2 - 9.0, kerbed central reserve only)
- W b-a = Lane width available to vehicle waiting in stream b-a (2.05 - 4.07)
- W b-c = Lane width available to vehicle waiting in stream b-c (2.05 - 4.07)
- W c-b = Lane width available to vehicle waiting in stream c-b (2.05 - 4.07)
- Vl b-a = Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0)
- Vr b-a = Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0)
- Vr b-c = Visibilitu to the right for vehicles waiting in stream b-c (17.0 - 250.0)
- Vr c-b = Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0)

- D = Stream-specific B-A
- E = Stream-specific B-C
- F = Stream-specific C-B
- Y = (1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	6.5	(metres)
W cr	=	0	(metres)
q a-b	=	155	(pcu/hr)
q a-c	=	640	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	1.7	(metres)
Vr c-b	=	45	(metres)
q c-a	=	680	(pcu/hr)
q c-b	=	25	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	2.5	(metres)
W b-c	=	2.5	(metres)
Vl b-a	=	60	(metres)
Vr b-a	=	60	(metres)
Vr b-c	=	60	(metres)
q b-a	=	190	(pcu/hr)
q b-c	=	10	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.798176
E	=	0.843737
F	=	0.761573
Y	=	0.775750

THE CAPACITY OF MOVEMENT :

Q b-a	=	238
Q b-c	=	461
Q c-b	=	396
Q b-ac	=	244
Q c-a		1686

COMPARISION OF DESIGN FLOW TO CAPACITY :

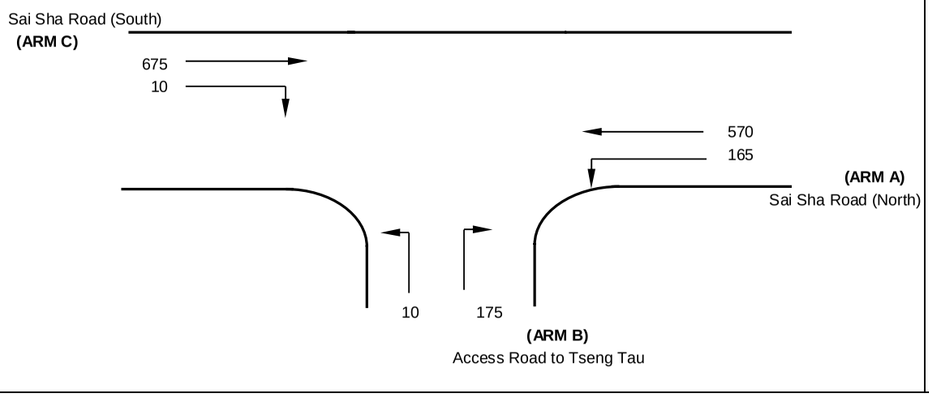
DFC b-a	=	0.80
DFC b-c	=	0.02
DFC c-b	=	0.06
DFC b-ac	=	0.82
DFC c-a	=	0.40

CRITICAL DFC = 0.82

PRIORITY JUNCTION CAPACITY CALCULATION

AECOM

Junction J5 - Sai Sha Road / Access Road to Tseng Tau	2021 PM Observed Traffic Flows	Designed By : MKCN	Checked By : SHSN	Job No. : -	Date : Jul 22



NOTES : (GEOMETRIC INPUT DATA)

J5

- W = Major Road Width (6.4 - 20.0)
- W cr = Central Reserve width (1.2 - 9.0, kerbed central reserve only)
- W b-a = Lane width available to vehicle waiting in stream b-a (2.05 - 4.07)
- W b-c = Lane width available to vehicle waiting in stream b-c (2.05 - 4.07)
- W c-b = Lane width available to vehicle waiting in stream c-b (2.05 - 4.07)
- Vl b-a = Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0)
- Vr b-a = Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0)
- Vr b-c = Visibilitu to the right for vehicles waiting in stream b-c (17.0 - 250.0)
- Vr c-b = Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0)

- D = Stream-specific B-A
- E = Stream-specific B-C
- F = Stream-specific C-B
- Y = (1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	6.5	(metres)
W cr	=	0	(metres)
q a-b	=	165	(pcu/hr)
q a-c	=	570	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	1.7	(metres)
Vr c-b	=	45	(metres)
q c-a	=	675	(pcu/hr)
q c-b	=	10	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	2.5	(metres)
W b-c	=	2.5	(metres)
Vl b-a	=	60	(metres)
Vr b-a	=	60	(metres)
Vr b-c	=	60	(metres)
q b-a	=	175	(pcu/hr)
q b-c	=	10	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.798176
E	=	0.843737
F	=	0.761573
Y	=	0.775750

THE CAPACITY OF MOVEMENT :

Q b-a	=	258
Q b-c	=	477
Q c-b	=	409
Q b-ac	=	265
Q c-a		1756

COMPARISION OF DESIGN FLOW TO CAPACITY :

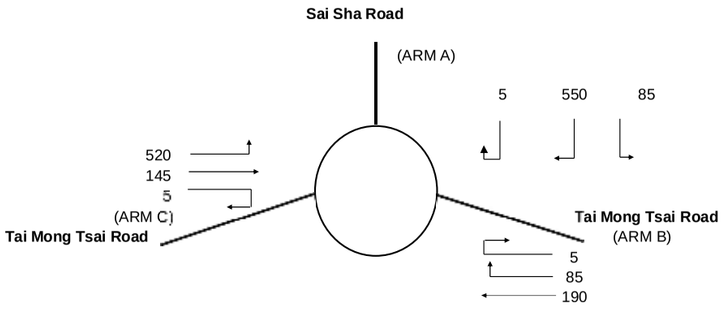
DFC b-a	=	0.68
DFC b-c	=	0.02
DFC c-b	=	0.02
DFC b-ac	=	0.70
DFC c-a	=	0.38

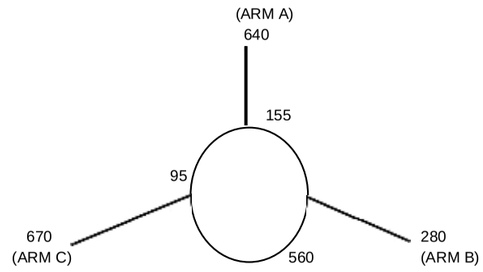
CRITICAL DFC = 0.70

ROUNDABOUT CAPACITY CALCULATION

AECOM

Junction	J14 - Sai Sha Road / Tai Mong Tsai Road	Scenario	2021 Observed Traffic Flows AM	Project No.	Prepared By	Checked By	Date
				-	mkcn	shsn	12-Jul-22





ARM	A	B	C
INPUT PARAMETERS:			
V = Approach half width (m)	4.30	3.00	3.30
E = Entry width (m)	7.50	8.00	8.00
L = Effective length of flare (m)	15.00	20.00	20.00
R = Entry radius (m)	16.00	80.00	100.00
D = Inscribed circle diameter (m)	32.00	32.00	32.00
A = Entry angle (degree)	45.00	30.00	45.00
Q = Entry flow (pcu/h)	640	280	670
Qc= Circulating flow across entry (pcu/h)	155	560	95
OUTPUT PARAMETERS:			
S = Sharpness of flare = 1.6(E-V)/L	0.34	0.40	0.38
K = 1-0.00347(A-30)-0.978(1/R-0.05)	0.94	1.04	0.99
X2= V + ((E-V)/(1+2S))	6.20	5.78	5.98
M = EXP((D-60)/10)	0.06	0.06	0.06
F = 303*X2	1879	1751	1813
Td= 1+(0.5/(1+M))	1.47	1.47	1.47
Fc= 0.21*Td(1+0.2*X2)	0.69	0.67	0.68
Qe= K(F-Fc*Qc)	1658	1428	1726
DFC = Design flow/Capacity = Q/Qe	0.39	0.20	0.39

TOTAL ENTRY FLOWS = 1590 PCU

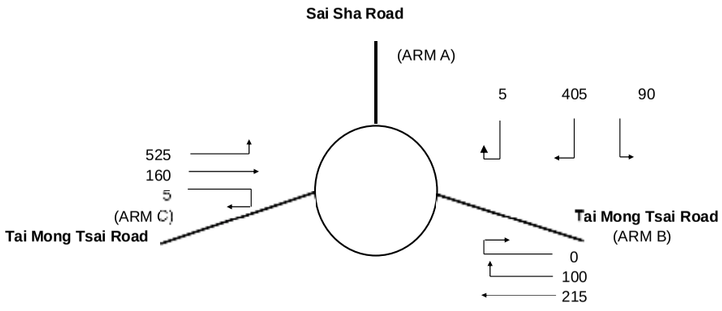
CRITICAL DFC = 0.39

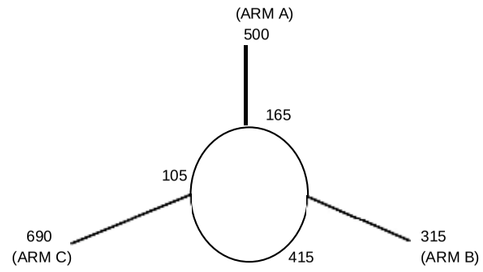
Filename: https://aecom-my.sharepoint.com/personal/magdalene_ku_aecom_co

ROUNDABOUT CAPACITY CALCULATION

AECOM

Junction	J14 - Sai Sha Road / Tai Mong Tsai Road	Scenario	2021 Observed Traffic Flows PM	Project No.	Prepared By	Checked By	Date
				-	mkcn	shsn	12-Jul-22





ARM	A	B	C
INPUT PARAMETERS:			
V = Approach half width (m)	4.30	3.00	3.30
E = Entry width (m)	7.50	8.00	8.00
L = Effective length of flare (m)	15.00	20.00	20.00
R = Entry radius (m)	16.00	80.00	100.00
D = Inscribed circle diameter (m)	32.00	32.00	32.00
A = Entry angle (degree)	45.00	30.00	45.00
Q = Entry flow (pcu/h)	500	315	690
Qc= Circulating flow across entry (pcu/h)	165	415	105
OUTPUT PARAMETERS:			
S = Sharpness of flare = 1.6(E-V)/L	0.34	0.40	0.38
K = 1-0.00347(A-30)-0.978(1/R-0.05)	0.94	1.04	0.99
X2= V + ((E-V)/(1+2S))	6.20	5.78	5.98
M = EXP((D-60)/10)	0.06	0.06	0.06
F = 303*X2	1879	1751	1813
Td= 1+(0.5/(1+M))	1.47	1.47	1.47
Fc= 0.21*Td(1+0.2*X2)	0.69	0.67	0.68
Qe= K(F-Fc*Qc)	1651	1528	1719
DFC = Design flow/Capacity = Q/Qe	0.30	0.21	0.40

TOTAL ENTRY FLOWS = 1505 PCU

CRITICAL DFC = 0.40

Filename: https://aecom-my.sharepoint.com/personal/magdalene_ku_aecom_co

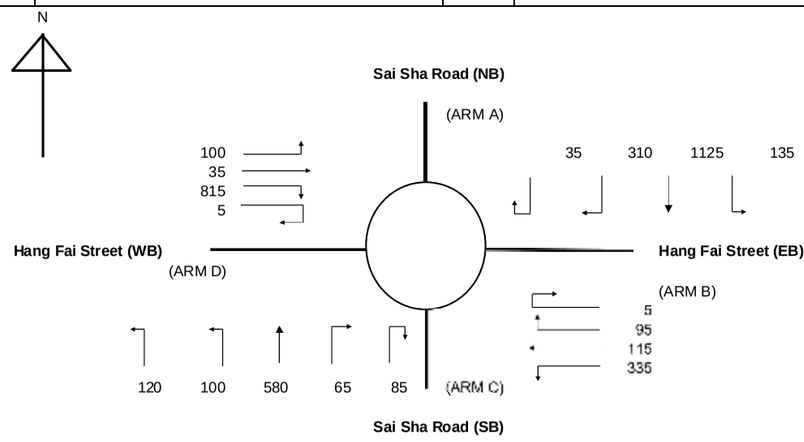
ANNEX A2

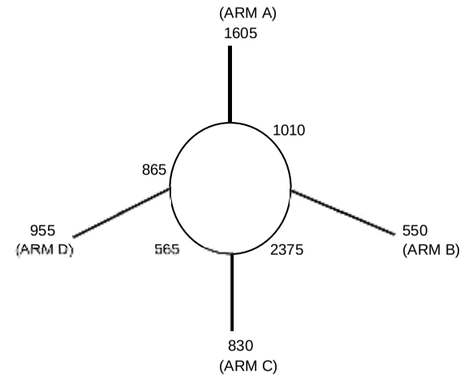
CALCULATION SHEETS
REFERENCE TRAFFIC FLOWS

ROUNDABOUT CAPACITY CALCULATIO

AECOM

Junction	J1 - Sai Sha Road / Hang Fai Street	Scenario	2028 Reference Traffic Flows AM	Project No.	Prepared By	Checked By	Date
				60547289			12-Jul-22





ARM	A	B	C	D
INPUT PARAMETERS:				
V = Approach half width (m)	11.00	7.50	11.00	7.00
E = Entry width (m)	13.00	12.00	13.00	13.00
L = Effective length of flare (m)	0.01	15.00	0.01	30.00
R = Entry radius (m)	80.00	60.00	60.00	50.00
D = Inscribed circle diameter (m)	50.00	50.00	50.00	50.00
A = Entry angle (degree)	30.00	30.00	30.00	25.00
Q = Entry flow (pcu/h)	1605	550	830	955
Qc= Circulating flow across entry (pcu/h)	1010	2375	565	865
OUTPUT PARAMETERS:				
S = Sharpness of flare = 1.6(E-V)/L	320.00	0.48	320.00	0.32
K = 1-0.00347(A-30)-0.978(1/R-0.05)	1.04	1.03	1.03	1.05
X2= V + ((E-V)/(1+2S))	11.00	9.80	11.00	10.66
M = EXP((D-60)/10)	0.37	0.37	0.37	0.37
F = 303*X2	3334	2968	3334	3230
Td= 1+(0.5/(1+M))	1.37	1.37	1.37	1.37
Fc= 0.21*Td(1+0.2*X2)	0.92	0.85	0.92	0.90
Qe= K(F-Fc*Qc)	2495	984	2907	2567
DFC = Design flow/Capacity = Q/Qe	0.64	0.56	0.29	0.37

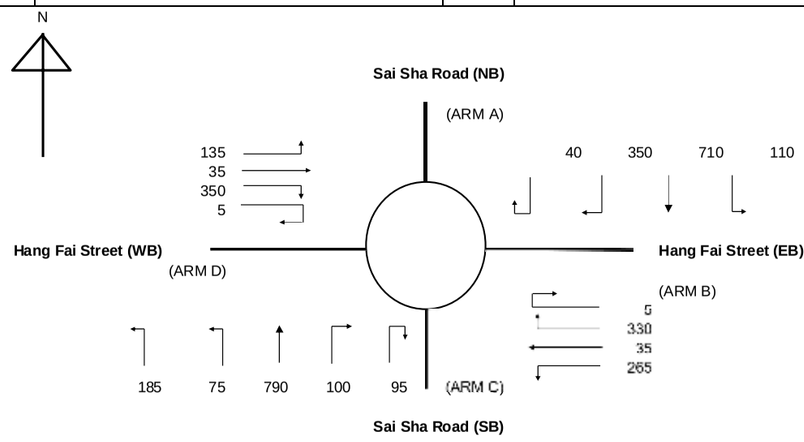
TOTAL ENTRY FLOWS 3940 PCU

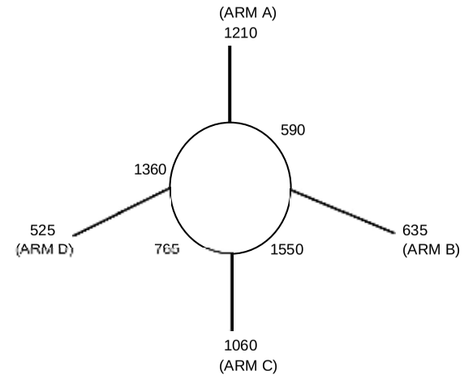
CRITICAL DFC 0.64

ROUNDABOUT CAPACITY CALCULATIO

AECOM

Junction	J1 - Sai Sha Road / Hang Fai Street	Scenario	2028 Reference Traffic Flows PM	Project No.	Prepared By	Checked By	Date
				60547289			12-Jul-22





ARM	A	B	C	D
INPUT PARAMETERS:				
V = Approach half width (m)	11.00	7.50	11.00	7.00
E = Entry width (m)	13.00	12.00	13.00	13.00
L = Effective length of flare (m)	0.01	15.00	0.01	30.00
R = Entry radius (m)	80.00	60.00	60.00	50.00
D = Inscribed circle diameter (m)	50.00	50.00	50.00	50.00
A = Entry angle (degree)	30.00	30.00	30.00	25.00
Q = Entry flow (pcu/h)	1210	635	1060	525
Qc= Circulating flow across entry (pcu/h)	590	1550	765	1360
OUTPUT PARAMETERS:				
S = Sharpness of flare = 1.6(E-V)/L	320.00	0.48	320.00	0.32
K = 1-0.00347(A-30)-0.978(1/R-0.05)	1.04	1.03	1.03	1.05
X2= V + ((E-V)/(1+2S))	11.00	9.80	11.00	10.66
M = EXP((D-60)/10)	0.37	0.37	0.37	0.37
F = 303*X2	3334	2968	3334	3230
Td= 1+(0.5/(1+M))	1.37	1.37	1.37	1.37
Fc= 0.21*Td(1+0.2*X2)	0.92	0.85	0.92	0.90
Qe= K(F-Fc*Qc)	2895	1707	2718	2102
DFC = Design flow/Capacity = Q/Qe	0.42	0.37	0.39	0.25

TOTAL ENTRY FLOWS 3430 PCU

CRITICAL DFC 0.42

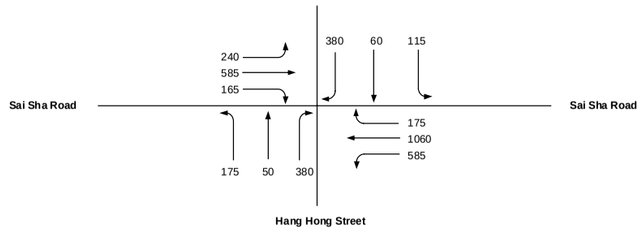
JUNCTION CAPACITY CALCULATION

AECOM

Junction J2 - Sai Sha Road / Hang Hong Street	2028 Reference Traffic Flows AM	DESIGN:	CHECK:	JOB NO: 60280227	DATE: Oct 20

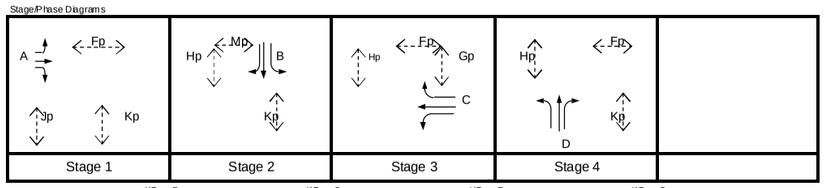
J2

Traffic Flow Diagram (pcu/hr)



No. of stages per cycle	N =	4	
Cycle time	C =	115	sec
Sum(y)	Y =	0.567	
Lost time	L =	25	sec
Total Flow	=	35,045	pcu
Optimum Cycle C_o = (1.5 × L+5)/(1-Y)	=	98	sec
Min. Cycle Time C_m = L/(1-Y)	=	58	sec
Y_{ult} = 0.9-0.0075 × L	=	0.713	
$R.C._{ult}$ = $(Y_{ult}-Y)/Y$x100%	=	25.7	%
Practical Cycle Time C_p = 0.9 × L/(0.9-Y)	=	67	sec
Y_{max} = 1-L/C	=	0.783	

Stage/Phase Diagrams



Critical Case : A,B,C,D

R.C.(C) = $(0.9xY_{max}-Y)/Yx100\%$ = 24%

1

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR y	CRITICAL y
	C	3	3.500	1	10			1		0		1965	355			355	100%		1709	0.208	0.208
	C	3	3.500	1	15					0		2105	230	185		415	55%		1994	0.208	
	C	3	3.500	2				0		0		4210		875		875			4210	0.208	
	C	3	5.500	1		25	0	1		0		2165			175	175		100%	2042	0.086	
	A	1	3.300	1	15			1		0		1945	240			240	100%		1768	0.136	0.136
	A	1	3.300	3				0		0		6255		585		585			6255	0.094	
	A	1	4.000	2		25	0	1		0		4170			165	165		100%	3934	0.042	
	B	2	3.300	1	15			1		0		1945	115			115	100%		1768	0.065	
	B	2	3.300	1	20	20	0			0		2085	0	60	165	225	0%	73%	1976	0.114	
	B	2	3.300	1		15	0	0		0		2085			215	215		100%	1895	0.114	0.114
	D	4	3.300	1	10			1		0		1945	175			175	100%		1691	0.103	
	D	4	3.300	1		25	0	0		0		2085		50	168	218		77%	1993	0.109	
	D	4	3.300	1		20	0	0		0		2085			212	212		100%	1940	0.109	0.109
	Jp	1	min.	7	+	14	=	21	sec												
	Hp	2,3,4	min.	7	+	14	=	21	sec												
	Kp	1,2,4	min.	7	+	15	=	22	sec												
	Fp	1,34	min.	5	+	9	=	14	sec												
	Gp	3	min.	5	+	12	=	17	sec												
	Mp	2	min.	5	+	8	=	13	sec												

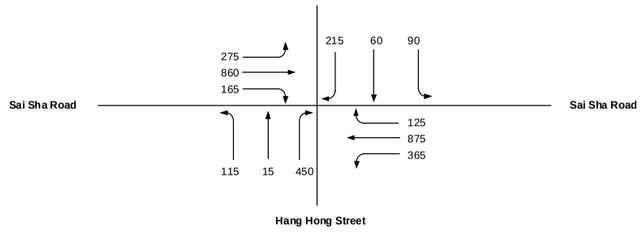
JUNCTION CAPACITY CALCULATION

AECOM

Junction J2 - Sai Sha Road / Hang Hong Street	2028 Reference Traffic Flows PM	DESIGN:	CHECK:	JOB NO: 60280227	DATE: Oct 20

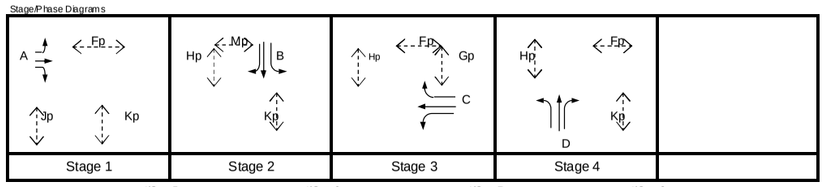
J2

Traffic Flow Diagram (pcu/hr)



No. of stages per cycle	N =	4	
Cycle time	C =	115	sec
Sum(y)	Y =	0.501	
Lost time	L =	25	sec
Total Flow	=	35,045	pcu
Optimum Cycle C_o = (1.5 × L+5)/(1-Y)	=	85	sec
Min. Cycle Time C_m = L/(1-Y)	=	50	sec
Y_{ult} = 0.9-0.0075 × L	=	0.713	
$R.C._{ult}$ = $(Y_{ult}-Y)/Y$x100%	=	42.3	%
Practical Cycle Time C_p = 0.9 × L/(0.9-Y)	=	56	sec
Y_{max} = 1-L/C	=	0.783	

Stage/Phase Diagrams



Critical Case : A,B,C,D

R.C.(C) = $(0.9xY_{max}-Y)/Yx100\%$ = 41%

1

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR y	CRITICAL y
	C	3	3.500	1	10			1		0		1965	266			266	100%		1709	0.156	0.156
	C	3	3.500	1	15					0		2105	99	219		318	31%		2042	0.156	
	C	3	3.500	2				0		0		4210		656		656			4210	0.156	
	C	3	5.500	1		25	0	1		0		2165			125	125		100%	2042	0.061	
	A	1	3.300	1	15			1		0		1945	275			275	100%		1768	0.156	0.156
	A	1	3.300	3				0		0		6255		860		860			6255	0.137	
	A	1	4.000	2		25	0	1		0		4170			165	165		100%	3934	0.042	
	B	2	3.300	1	15			1		0		1945	90			90	100%		1768	0.051	
	B	2	3.300	1	20	20	0			0		2085	0	60	81	141	0%	57%	1999	0.071	0.071
	B	2	3.300	1		15	0	0		0		2085			134	134		100%	1895	0.071	
	D	4	3.300	1	10			1		0		1945	115			115	100%		1691	0.068	
	D	4	3.300	1		25	0	0		0		2085		15	220	235		94%	1974	0.119	0.119
	D	4	3.300	1		20	0	0		0		2085			230	230		100%	1940	0.119	
	Jp	1	min.	7	+	14	=	21	sec												
	Hp	2,3,4	min.	7	+	14	=	21	sec												
	Kp	1,2,4	min.	7	+	15	=	22	sec												
	Fp	1,34	min.	5	+	9	=	14	sec												
	Gp	3	min.	5	+	12	=	17	sec												
	Mp	2	min.	5	+	8	=	13	sec												

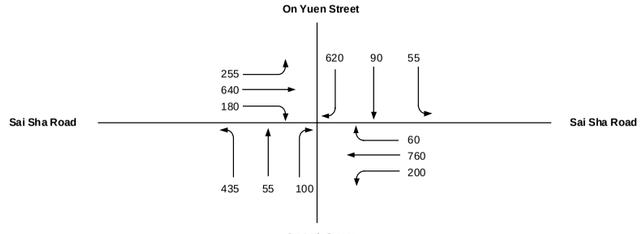
JUNCTION CAPACITY CALCULATION

AECOM

Junction J3 - Sai Sha Road / On Yuen Street / On Luk Street	2028 Reference Traffic Flows AM	DESIGN:	CHECK:	JOB NO: 60280227	DATE: Oct 20

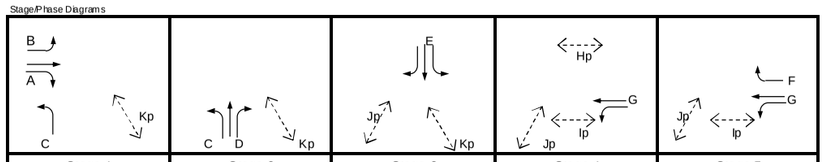
J3

Traffic Flow Diagram
(pcu/hr)



No. of stages per cycle	N =	5	
Cycle time	C =	115	sec
Sum(y)	Y =	0.358	
Lost time	L =	52	sec
Total Flow	=	33,360	pcu
Optimum Cycle C_o = (1.5 × L+5)/(1-Y)	=	129	sec
Min. Cycle Time C_m = L/(1-Y)	=	81	sec
Y_{ult} = 0.9-0.0075 × L	=	0.510	
$R.C._{ult}$ = $(Y_{ult}-Y)/Y$x100%	=	42.3	%
Practical Cycle Time C_p = 0.9 × L/(0.9-Y)	=	86	sec
Y_{max} = 1-L/C	=	0.548	

Stage/Phase Diagrams



Critical Case : A,D,E,Hp,F

R.C.(C) = $(0.9xY_{max}-Y)/Yx100\%$ = 38%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR y	CRITICAL y
↰	B	1	3.600	1	15			1		0		1975	255			255	100%		1795	0.142	
↑	A	1	3.600	2				0		0		4230		640		640			4230	0.151	0.151
↱	A	1	3.600	2		20	0	0		0		4230			180	180		100%	3935	0.046	
↰	C	1,2	3.400	1	30			1		0		1955	435			435	100%		1862	0.234	
↑	D	2	3.400	1				0		0		2095		55		55			2095	0.026	
↱	D	2	3.400	1		30	0	0		0		2095			100	100		100%	1995	0.050	0.050
↰	E	3	3.300	1	15			1		0		1945	55	90		145	38%		1874	0.077	
↑	E	3	3.300	1		30	0			0		2085		0	311	311		100%	1986	0.157	0.157
↱	E	3	3.300	1		25	0	0		0		2085			309	309		100%	1967	0.157	
↰	G	4,5	4.000	1	35			1		0		2015	200			200	100%		1932	0.104	
↑	G	4,5	3.600	3				0		0		6345		760		760			6345	0.120	
↱	F	5	5.500	1		35	0	0		0		2305			60	60		100%	2210	0.027	

Pedestrian Crossing				GM		FGM			
Hp	4	min.	11	+	9	=	20	sec
Ip	4,5	min.	10	+	8	=	18	sec
Jp	3,4,5	min.	5	+	5	=	10	sec
Kp	1,2,3	min.	5	+	5	=	10	sec

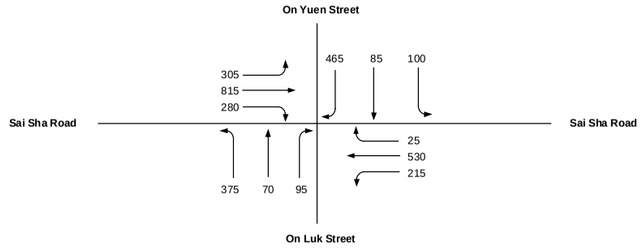
JUNCTION CAPACITY CALCULATION

AECOM

Junction J3 - Sai Sha Road / On Yuen Street / On Luk Street	2028 Reference Traffic Flows PM	DESIGN:	CHECK:	JOB NO: 60280227	DATE: Oct 20

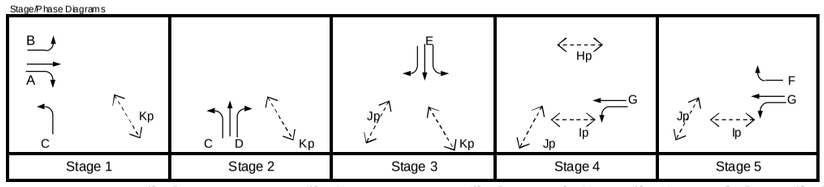
J3

Traffic Flow Diagram
(pcu/hr)



No. of stages per cycle	N =	5	
Cycle time	C =	115	sec
Sum(y)	Y =	0.358	
Lost time	L =	52	sec
Total Flow	=	33,360	pcu
Optimum Cycle C_o = (1.5 × L+5)/(1-Y)	=	129	sec
Min. Cycle Time C_m = L/(1-Y)	=	81	sec
Y_{ult} = 0.9-0.0075 × L	=	0.510	
$R.C._{ult}$ = $(Y_{ult}-Y)/Y$x100%	=	42.5	%
Practical Cycle Time C_p = 0.9 × L/(0.9-Y)	=	86	sec
Y_{max} = 1-L/C	=	0.548	

Stage/Phase Diagrams



Critical Case : A,D,E,Hp,F

R.C.(C) = $(0.9xY_{max}-Y)/Yx100\%$ = 38%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR y	CRITICAL y
↰	B	1	3.600	1	15			1		0		1975	305			305	100%		1795	0.170	
↑	A	1	3.600	2				0		0		4230		815		815			4230	0.193	0.193
↱	A	1	3.600	2		20	0	0		0		4230			280	280		100%	3935	0.071	
↰	C	1,2	3.400	1	30			1		0		1955	375			375	100%		1862	0.201	
↑	D	2	3.400	1				0		0		2095		70		70			2095	0.033	
↱	D	2	3.400	1		30	0	0		0		2095			95	95		100%	1995	0.048	0.048
↰	E	3	3.300	1	15			1		0		1945	100	85		185	54%		1845	0.100	
↑	E	3	3.300	1		30	0			0		2085		0	234	234		100%	1986	0.118	
↱	E	3	3.300	1		25	0	0		0		2085			231	231		100%	1967	0.118	0.118
↰	G	4,5	4.000	1	35			1		0		2015	215			215	100%		1932	0.111	
↑	G	4,5	3.600	3				0		0		6345		530		530			6345	0.084	
↱	F	5	5.500	1		35	0	0		0		2305			25	25		100%	2210	0.011	

Pedestrian Crossing				GM		FGM			
Hp	4	min.	11	+	9	=	20	sec
Ip	4,5	min.	10	+	8	=	18	sec
Jp	3,4,5	min.	5	+	5	=	10	sec
Kp	1,2,3	min.	5	+	5	=	10	sec

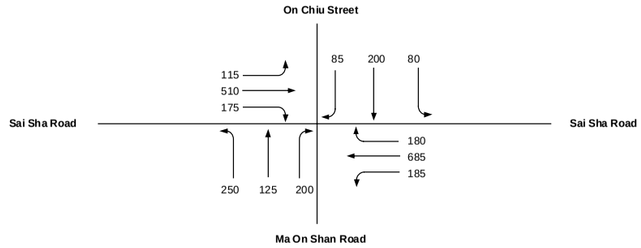
JUNCTION CAPACITY CALCULATION

AECOM

Junction J4 - Sai Sha Road / On Chiu Street / Ma On Shan Road	2028 Reference Traffic Flows AM	DESIGN:	CHECK:	JOB NO: -	DATE: Oct 20

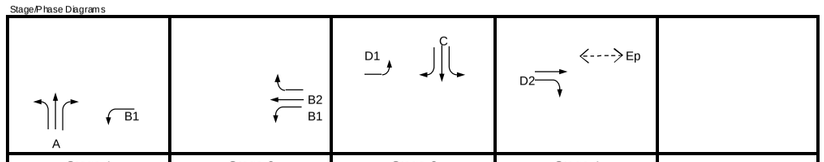
J4

Traffic Flow Diagram
(pcu/hr)



No. of stages per cycle	N =	4	
Cycle time	C =	110	sec
Sum(y)	Y =	0.496	
Lost time	L =	24	sec
Total Flow	=	28,940	pcu
Optimum Cycle C_o = (1.5 × L+5)/(1-Y)	=	81	sec
Min. Cycle Time C_m = L/(1-Y)	=	48	sec
Y_{ult} = 0.9-0.0075 × L	=	0.720	
$R.C._{ult}$ = (Y_{ult}-Y)/Yx100%	=	45.2	%
Practical Cycle Time C_p = 0.9 × L/(0.9-Y)	=	53	sec
Y_{max} = 1-L/C	=	0.782	

Stage/Phase Diagrams



Stage 1	Stage 2	Stage 3	Stage 4	
I/G = 8	I/G = 10	I/G = 5	I/G = 5	

Critical Case : A,B2,D1,D2

R.C.(C) = (0.9xY_{max}-Y)/Yx100% = 42%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR y	CRITICAL y
	A	1	3.700	1	10			1		0		1985	250	0		250	100%		1726	0.145	0.145
	A	1	3.700	1		30	0			0		2125		125	41	166		25%	2099	0.079	
	A	1	3.700	1		25	0	0		0		2125			159	159		100%	2005	0.079	
	B1	1,2	3.750	1	15			1		0		1990	185			185	100%		1809	0.102	
	B2	2	3.750	2				0		0		4260		685		685			4260	0.161	0.161
	B2	2	3.750	1		25	0	0		0		2130			180	180		100%	2009	0.090	
	C	3	3.500	1	15			1		0		1965	80	51		131	61%		1852	0.071	
	C	3	3.500	1		30	0			0		2105		149	0	149		0%	2105	0.071	
	C	3	3.000	1		25	0	0		0		2055			85	85		100%	1939	0.044	
	D1	3	3.300	1	10			1		0		1945	115			115	100%		1691	0.068	0.068
	D2	4	3.300	2				0		0		4170		510		510			4170	0.122	0.122
	D2	4	3.300	1		25	0	0		0		2085			175	175		100%	1967	0.089	
Pedestrian Crossing				GM		FGM															
	Ep	4	min.	11	+	9	=	20	sec												

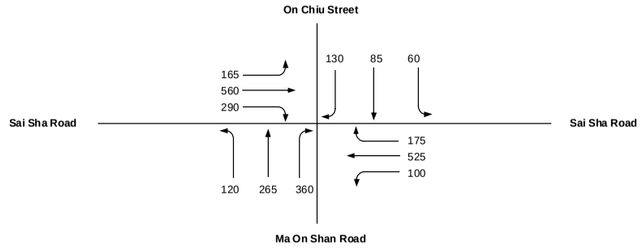
JUNCTION CAPACITY CALCULATION

AECOM

Junction J4 - Sai Sha Road / On Chiu Street / Ma On Shan Road	2028 Reference Traffic Flows PM	DESIGN:	CHECK:	JOB NO: -	DATE: Oct 20

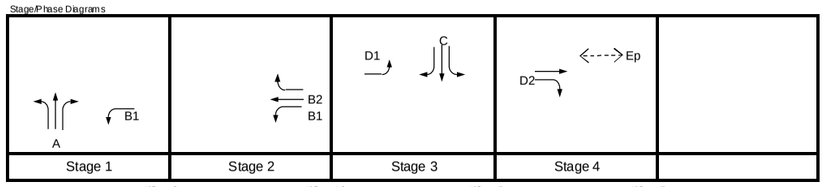
J4

Traffic Flow Diagram
(pcu/hr)



No. of stages per cycle	N =	4	
Cycle time	C =	110	sec
Sum(y)	Y =	0.494	
Lost time	L =	24	sec
Total Flow	=	28,940	pcu
Optimum Cycle C_o = (1.5 × L+5)/(1-Y)	=	81	sec
Min. Cycle Time C_m = L/(1-Y)	=	47	sec
Y_{ult} = 0.9-0.0075 × L	=	0.720	
$R.C._{ult}$ = (Y_{ult}-Y)/Yx100%	=	45.8	%
Practical Cycle Time C_p = 0.9 × L/(0.9-Y)	=	53	sec
Y_{max} = 1-L/C	=	0.782	

Stage/Phase Diagrams



Stage 1	Stage 2	Stage 3	Stage 4	
I/G = 8	I/G = 10	I/G = 5	I/G = 5	

Critical Case : A,B2,D1,D2

R.C.(C) = (0.9xY_{max}-Y)/Yx100% = 42%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR y	CRITICAL y
	A	1	3.700	1	10			1		0		1985	120	111		231	52%		1842	0.126	0.126
	A	1	3.700	1		30	0			0		2125		154	108	262		41%	2082	0.126	
	A	1	3.700	1		25	0	0		0		2125			252	252		100%	2005	0.126	
	B1	1,2	3.750	1	15			1		0		1990	100			100	100%		1809	0.055	
	B2	2	3.750	2				0		0		4260		525		525			4260	0.123	0.123
	B2	2	3.750	1		25	0	0		0		2130			175	175		100%	2009	0.087	
	C	3	3.500	1	15			1		0		1965	60	27		87	69%		1838	0.047	
	C	3	3.500	1		30	0			0		2105		58	39	97		40%	2064	0.047	
	C	3	3.000	1		25	0	0		0		2055			91	91		100%	1939	0.047	
	D1	3	3.300	1	10			1		0		1945	165			165	100%		1691	0.098	0.098
	D2	4	3.300	2				0		0		4170		560		560			4170	0.134	
	D2	4	3.300	1		25	0	0		0		2085			290	290		100%	1967	0.147	0.147
Pedestrian Crossing				GM		FGM															
	Ep	4	min.	11	+	9	=	20	sec												

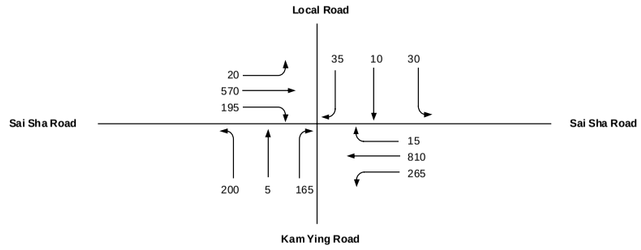
JUNCTION CAPACITY CALCULATION

AECOM

Junction J5 - Sai Sha Road / Kam Ying Road	2028 Reference Traffic Flows AM	DESIGN:	CHECK:	JOB NO: -	DATE: Oct 20

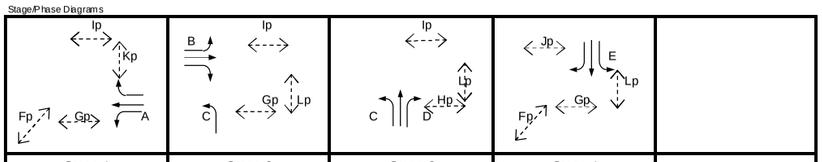
J4

Traffic Flow Diagram
(pcu/hr)



No. of stages per cycle	N =	4	
Cycle time	C =	120	sec
Sum(y)	Y =	0.334	
Lost time	L =	60	sec
Total Flow	=	20,890	pcu
Optimum Cycle C_o	$= (1.5 \times L+5)/(1-Y)$ =	143	sec
Min. Cycle Time C_m	$= L/(1-Y)$ =	90	sec
Y_{ult}	$= 0.9-0.0075 \times L$ =	0.450	
$R.C._{ult}$	$= (Y_{ult}-Y)/Yx100\%$ =	34.6	%
Practical Cycle Time C_p	$= 0.9 \times L/(0.9-Y)$ =	95	sec
Y_{max}	= 1-L/C =	0.500	

Stage/Phase Diagrams



Stage 1	Stage 2	Stage 3	Stage 4	
I/G = 11	I/G = 14	G = 5	I/G = 14	G = 5 I/G = 13

Critical Case : A,B,Hp,Jp

R.C.(C) $= (0.9xY_{max}-Y)/Yx100\%$ = 35%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR y	CRITICAL y
	A	1	3.500	1	15			1		0		1965	265			265	100%		1786	0.148	
	A	1	3.500	2				0		0		4210		810		810			4210	0.192	0.192
	A	1	3.500	1		25	0	0		0		2105			15	15		100%	1986	0.008	
	B	2	4.000	1	15			1		0		2015	20	264		284	7%		2001	0.142	0.142
	B	2	4.000	1				0		0		2155		306		306			2155	0.142	
	B	2	3.500	1		25	0	0		0		2105			195	195		100%	1986	0.098	
	C	2,3	4.500	1	25			1		0		2065	200			200	100%		1948	0.103	
	D	3	3.500	1		25	0	0		0		2105		5	165	170		97%	1989	0.085	
	E	4	5.500	1	15	25	0	1		0		2165	30	10	35	75	40%	47%	2027	0.037	

Pedestrian Crossing				GM		FGM			
Fp	4,1	min.	5	+	6	=	11	sec	
Gp	4,1,2	min.	5	+	5	=	10	sec	
Hp	3	min.	5	+	8	=	13	sec	
Ip	1,2,3	min.	5	+	5	=	10	sec	
Jp	4	min.	5	+	6	=	11	sec	
Lp	2,3,4	min.	5	+	12	=	17	sec	
Kp	1	min.	5	+	7	=	12	sec	

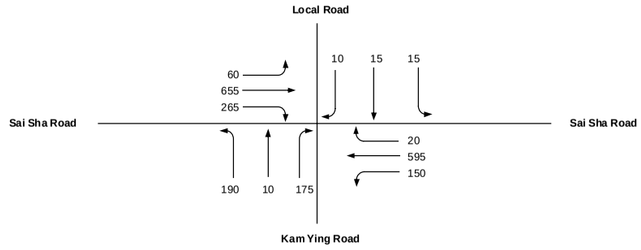
JUNCTION CAPACITY CALCULATION

AECOM

Junction J5 - Sai Sha Road / Kam Ying Road	2028 Reference Traffic Flows PM	DESIGN:	CHECK:	JOB NO: -	DATE: Oct 20

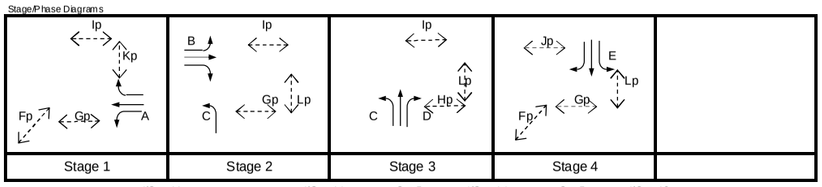
J4

Traffic Flow Diagram
(pcu/hr)



No. of stages per cycle	N =	4	
Cycle time	C =	120	sec
Sum(y)	Y =	0.314	
Lost time	L =	60	sec
Total Flow	=	20,890	pcu
Optimum Cycle C_o	$= (1.5 \times L+5)/(1-Y)$ =	139	sec
Min. Cycle Time C_m	$= L/(1-Y)$ =	87	sec
Y_{ult}	$= 0.9-0.0075 \times L$ =	0.450	
$R.C._{ult}$	$= (Y_{ult}-Y)/Yx100\%$ =	43.2	%
Practical Cycle Time C_p	$= 0.9 \times L/(0.9-Y)$ =	92	sec
Y_{max}	= 1-L/C =	0.500	

Stage/Phase Diagrams



Stage 1	Stage 2	Stage 3	Stage 4	
I/G = 11	I/G = 14	G = 5	I/G = 14	G = 5 I/G = 13

Critical Case : A,B,Hp,Jp

R.C.(C) $= (0.9xY_{max}-Y)/Yx100\%$ = 43%

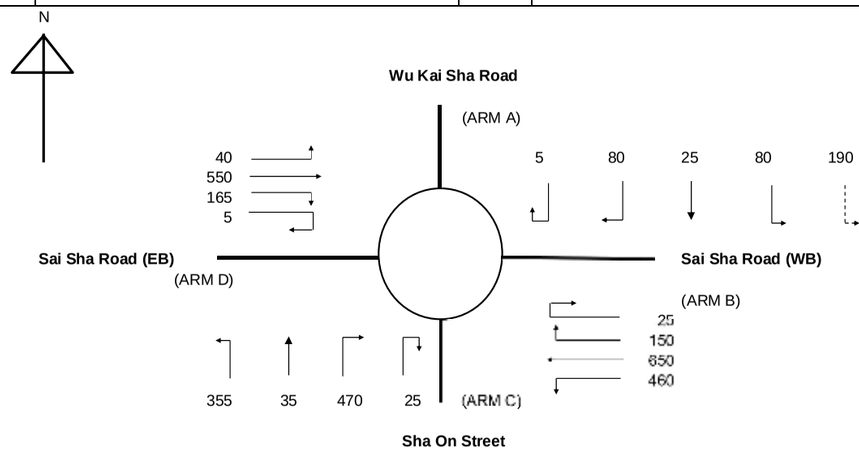
MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR y	CRITICAL y
	A	1	3.500	1	15			1		0		1965	150			150	100%		1786	0.084	
	A	1	3.500	2				0		0		4210		595		595			4210	0.141	0.141
	A	1	3.500	1		25	0	0		0		2105			20	20		100%	1986	0.010	
	B	2	4.000	1	15			1		0		2015	60	282		342	18%		1980	0.173	0.173
	B	2	4.000	1				0		0		2155		373		373			2155	0.173	
	B	2	3.500	1		25	0	0		0		2105			265	265		100%	1986	0.133	
	C	2,3	4.500	1	25			1		0		2065	190			190	100%		1948	0.098	
	D	3	3.500	1		25	0	0		0		2105		10	175	185		95%	1992	0.093	
	E	4	5.500	1	15	25	0	1		0		2165	15	15	10	40	38%	25%	2057	0.019	

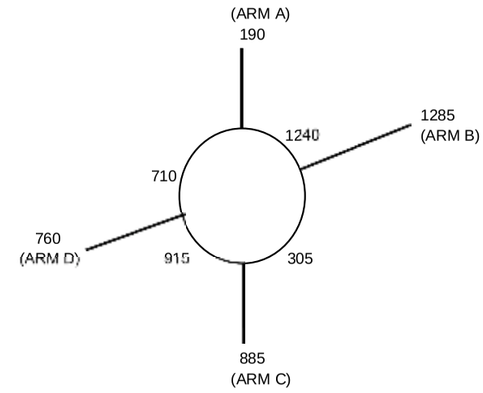
Pedestrian Crossing				GM		FGM			
Fp	4,1	min.	5	+	6	=	11	sec	
Gp	4,1,2	min.	5	+	5	=	10	sec	
Hp	3	min.	5	+	8	=	13	sec	
Ip	1,2,3	min.	5	+	5	=	10	sec	
Jp	4	min.	5	+	6	=	11	sec	
Lp	2,3,4	min.	5	+	12	=	17	sec	
Kp	1	min.	5	+	7	=	12	sec	

ROUNDABOUT CAPACITY CALCULATIO

AECOM

Junction	J6 - Sai Sha Road / Wu Kai Sha Road / Sha On Street	Scenario	2028 Reference Traffic Flows AM	Project No.	Prepared By	Checked By	Date
				-	MKCN	SHSN	12-Jul-22





ARM	A	B	C	D	
INPUT PARAMETERS:					
V = Approach half width (m)	7.50	8.50	3.20	7.00	
E = Entry width (m)	8.00	10.50	12.00	9.00	
L = Effective length of flare (m)	5.00	40.00	50.00	35.00	
R = Entry radius (m)	40.00	160.00	35.00	100.00	
D = Inscribed circle diameter (m)	90.00	90.00	90.00	90.00	
A = Entry angle (degree)	30.00	25.00	40.00	25.00	
Q = Entry flow (pcu/h)	190	1285	885	760	*
Qc= Circulating flow across entry (pcu/h)	1240	305	915	710	*
OUTPUT PARAMETERS:					
S = Sharpness of flare = 1.6(E-V)/L	0.16	0.08	0.28	0.09	
K = 1-0.00347(A-30)-0.978(1/R-0.05)	1.02	1.06	0.99	1.06	
X2= V + ((E-V)/(1+2S))	7.88	10.22	8.83	8.69	
M = EXP((D-60)/10)	20.09	20.09	20.09	20.09	
F = 303*X2	2387	3098	2675	2633	
Td= 1+(0.5/(1+M))	1.02	1.02	1.02	1.02	
Fc= 0.21*Td(1+0.2*X2)	0.55	0.65	0.59	0.59	
Qe= K(F-Fc*Qc)	1742	3073	2102	2340	
DFC = Design flow/Capacity = Q/Qe	0.11	0.42	0.42	0.32	

TOTAL ENTRY FLOWS 3120 PCU

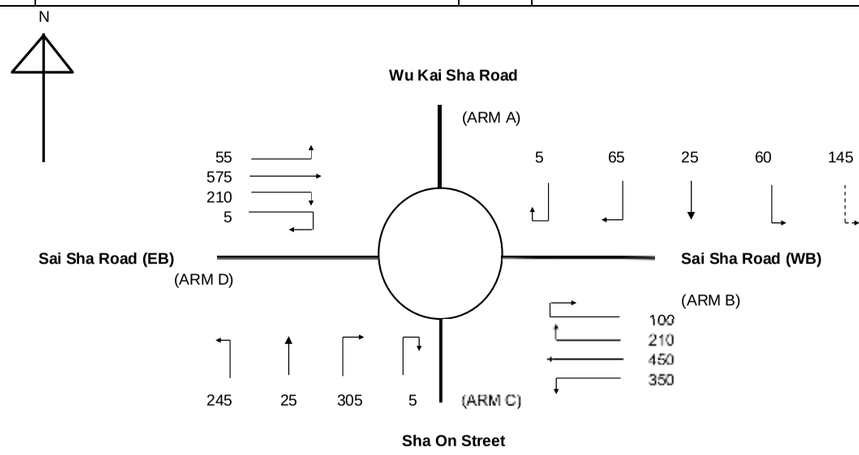
CRITICAL DF(0.42

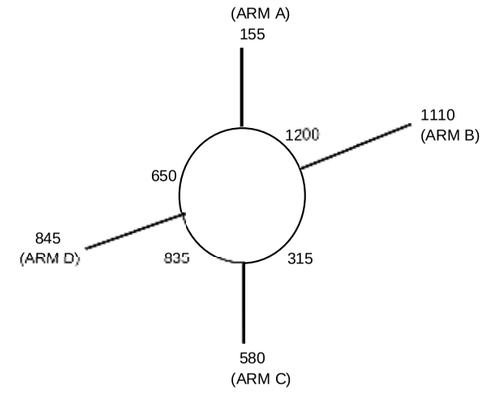
Filename : https://aecom-my.sharepoint.com/personal/magdalene_ku_aecom_com/D

ROUNDABOUT CAPACITY CALCULATIO

AECOM

Junction	J6 - Sai Sha Road / Wu Kai Sha Road / Sha On Street	Scenario	2028 Reference Traffic Flows PM	Project No.	Prepared By	Checked By	Date
				-	MKCN	SHSN	12-Jul-22





ARM	A	B	C	D	
INPUT PARAMETERS:					
V = Approach half width (m)	7.50	8.50	3.20	7.00	
E = Entry width (m)	8.00	10.50	12.00	9.00	
L = Effective length of flare (m)	5.00	40.00	50.00	35.00	
R = Entry radius (m)	40.00	160.00	35.00	100.00	
D = Inscribed circle diameter (m)	90.00	90.00	90.00	90.00	
A = Entry angle (degree)	30.00	25.00	40.00	25.00	
Q = Entry flow (pcu/h)	155	1110	580	845	*
Qc= Circulating flow across entry (pcu/h)	1200	315	835	650	*
OUTPUT PARAMETERS:					
S = Sharpness of flare = 1.6(E-V)/L	0.16	0.08	0.28	0.09	
K = 1-0.00347(A-30)-0.978(1/R-0.05)	1.02	1.06	0.99	1.06	
X2= V + ((E-V)/(1+2S))	7.88	10.22	8.83	8.69	
M = EXP((D-60)/10)	20.09	20.09	20.09	20.09	
F = 303*X2	2387	3098	2675	2633	
Td= 1+(0.5/(1+M))	1.02	1.02	1.02	1.02	
Fc= 0.21*Td(1+0.2*X2)	0.55	0.65	0.59	0.59	
Qe= K(F-Fc*Qc)	1765	3066	2149	2378	
DFC = Design flow/Capacity = Q/Qe	0.09	0.36	0.27	0.36	

TOTAL ENTRY FLOWS 2690 PCU

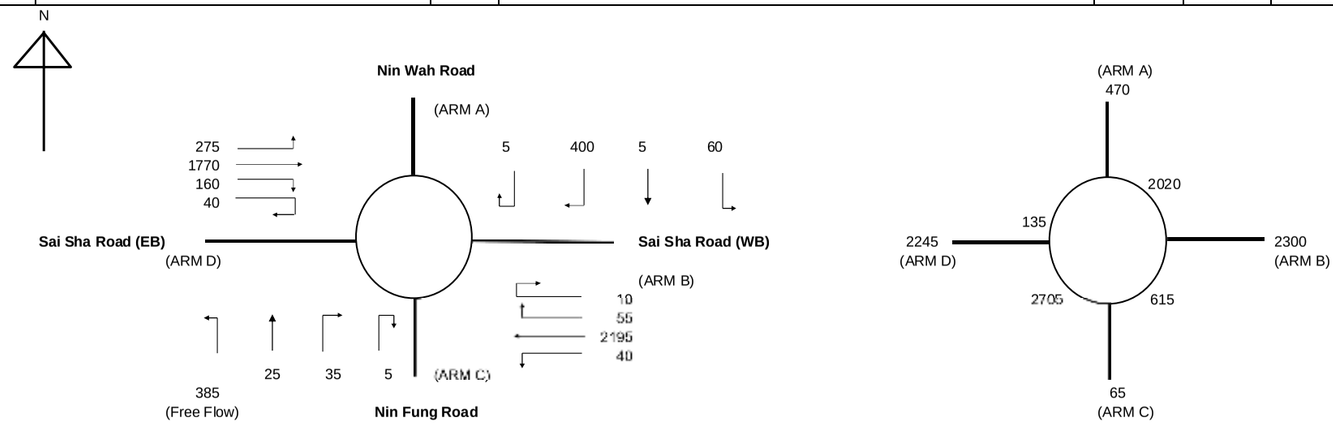
CRITICAL DF(0.36

Filename : https://aecom-my.sharepoint.com/personal/magdalene_ku_aecom_com/D

ROUNDABOUT CAPACITY CALCULATIC

AECOM

Junction	J7 - Sai Sha Road / Nin Wah Road / Nin Fung Road	Scenario	2028 Reference Traffic Flows AM	Project No.	Prepared By	Checked By	Date
				-	MKCN	SHSN	12-Jul-22



ARM	A	B	C	D	
INPUT PARAMETERS:					
V = Approach half width (m)	6.00	7.50	5.00	7.30	
E = Entry width (m)	7.00	13.00	8.00	12.00	
L = Effective length of flare (m)	12.00	35.00	7.00	13.00	
R = Entry radius (m)	25.00	25.00	10.00	40.00	
D = Inscribed circle diameter (m)	50.00	50.00	50.00	50.00	
A = Entry angle (degree)	40.00	30.00	40.00	30.00	
Q = Entry flow (pcu/h)	470	2300	65	2245	*
Qc= Circulating flow across entry (pcu/h)	2020	615	2705	135	*
OUTPUT PARAMETERS:					
S = Sharpness of flare = 1.6(E-V)/L	0.13	0.25	0.69	0.58	
K = 1-0.00347(A-30)-0.978(1/R-0.05)	0.98	1.01	0.92	1.02	
X2= V + ((E-V)/(1+2S))	6.79	11.16	6.27	9.48	
M = EXP((D-60)/10)	0.37	0.37	0.37	0.37	
F = 303*X2	2057	3381	1898	2872	
Td= 1+(0.5/(1+M))	1.37	1.37	1.37	1.37	
Fc= 0.21*Td(1+0.2*X2)	0.68	0.93	0.65	0.83	
Qe= K(F-Fc*Qc)	674	2839	138	2828	
DFC = Design flow/Capacity = Q/Qe	0.70	0.81	0.47	0.79	

TOTAL ENTRY FLOWS 5080 PCU

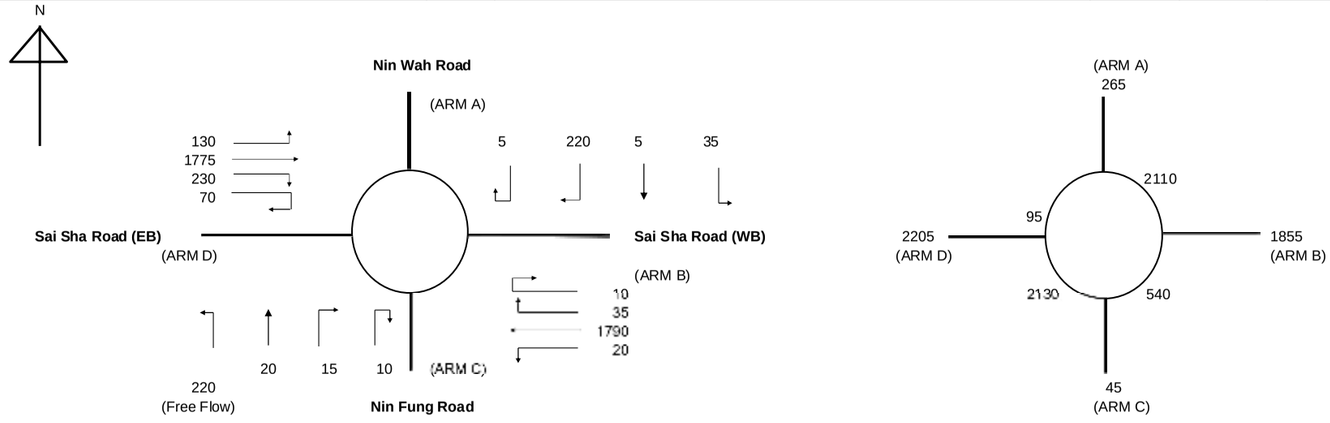
CRITICAL DF(0.81

Filename : https://aecom-my.sharepoint.com/personal/magdalene_ku_aecom_com

ROUNDABOUT CAPACITY CALCULATIC

AECOM

Junction	J7 - Sai Sha Road / Nin Wah Road / Nin Fung Road	Scenario	2028 Reference Traffic Flows PM	Project No.	Prepared By	Checked By	Date
				-	MKCN	SHSN	12-Jul-22



ARM	A	B	C	D	
INPUT PARAMETERS:					
V = Approach half width (m)	6.00	7.50	5.00	7.30	
E = Entry width (m)	7.00	13.00	8.00	12.00	
L = Effective length of flare (m)	12.00	35.00	7.00	13.00	
R = Entry radius (m)	25.00	25.00	10.00	40.00	
D = Inscribed circle diameter (m)	50.00	50.00	50.00	50.00	
A = Entry angle (degree)	40.00	30.00	40.00	30.00	
Q = Entry flow (pcu/h)	265	1855	45	2205	*
Qc= Circulating flow across entry (pcu/h)	2110	540	2130	95	*
OUTPUT PARAMETERS:					
S = Sharpness of flare = 1.6(E-V)/L	0.13	0.25	0.69	0.58	
K = 1-0.00347(A-30)-0.978(1/R-0.05)	0.98	1.01	0.92	1.02	
X2= V + ((E-V)/(1+2S))	6.79	11.16	6.27	9.48	
M = EXP((D-60)/10)	0.37	0.37	0.37	0.37	
F = 303*X2	2057	3381	1898	2872	
Td= 1+(0.5/(1+M))	1.37	1.37	1.37	1.37	
Fc= 0.21*Td(1+0.2*X2)	0.68	0.93	0.65	0.83	
Qe= K(F-Fc*Qc)	615	2909	479	2862	
DFC = Design flow/Capacity = Q/Qe	0.43	0.64	0.09	0.77	

TOTAL ENTRY FLOWS 4370 PCU

CRITICAL DF(0.77

Filename : https://aecom-my.sharepoint.com/personal/magdalene_ku_aecom_com

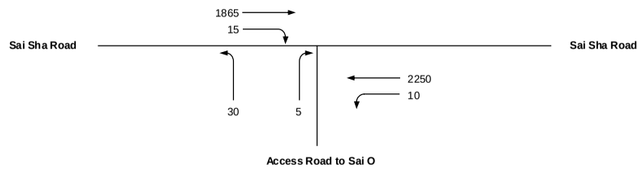
JUNCTION CAPACITY CALCULATION

AECOM

Junction J8 - Sai Sha Road / Access Road to Sai O	2028 Reference Traffic Flows AM	DESIGN:	CHECK:	JOB NO: -	DATE: Oct 20

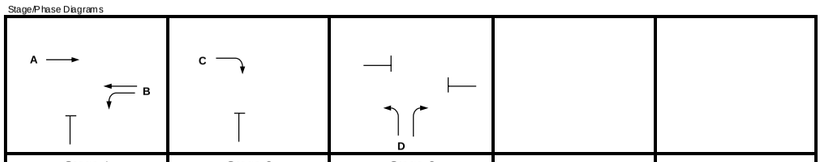
J8

Traffic Flow Diagram
(pcu/hr)



No. of stages per cycle		N =	3	
Cycle time		C =	120	sec
Sum(y)		Y =	0.556	
Lost time		L =	27	sec
Total Flow		=	12,250	pcu
Optimum Cycle C_o	$=(1.5\times L+5)/(1-Y)$ =		102	sec
Min. Cycle Time C_m	$=L/(1-Y)$ =		61	sec
Y_{ult}	$=0.9-0.0075\times L$ =		0.698	
$R.C._{ult}$	$=(Y_{ult}-Y)/Yx100\%$ =		25.5	%
Practical Cycle Time C_p	$=0.9\times L/(0.9-Y)$ =		71	sec
Y_{max}	$=1-L/C$ =		0.775	

Stage/Phase Diagrams



I/G = 5 G = 5 I/G = 8 G = 5 I/G = 5

Critical Case : B,C,D

R.C.(C) $= (0.9xY_{max}-Y)/Yx100\%$ = 26%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR *y*	CRITICAL *y*
→	A	1	3.300	2				1		0		4030		1865		1865			4030	0.463	
↓	C	2	3.300	1		25	0	0		0		2085			15	15		100%	1967	0.008	
↰	B	1	3.500	1	10			1		0		1965	10	1080		1090	1%		1962	0.556	
↑	B	1	3.500	1				0		0		2105		1170		1170			2105	0.556	0.556
↱	D	3	4.500	1	10	20	0	1		0		2065	30		5	35	86%	14%	1813	0.019	

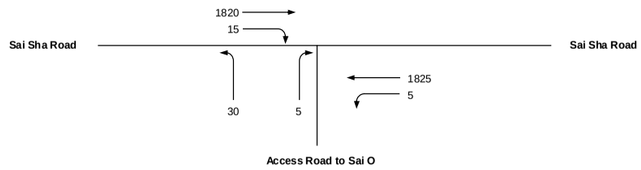
JUNCTION CAPACITY CALCULATION

AECOM

Junction J8 - Sai Sha Road / Access Road to Sai O	2028 Reference Traffic Flows PM	DESIGN:	CHECK:	JOB NO: -	DATE: Oct 20

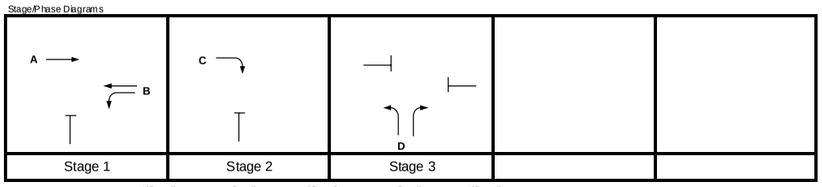
J8

Traffic Flow Diagram
(pcu/hr)



No. of stages per cycle		N =	3	
Cycle time		C =	120	sec
Sum(y)		Y =	0.452	
Lost time		L =	27	sec
Total Flow		=	12,250	pcu
Optimum Cycle C_o	$=(1.5\times L+5)/(1-Y)$ =		83	sec
Min. Cycle Time C_m	$=L/(1-Y)$ =		49	sec
Y_{ult}	$=0.9-0.0075\times L$ =		0.698	
$R.C._{ult}$	$=(Y_{ult}-Y)/Yx100\%$ =		54.4	%
Practical Cycle Time C_p	$=0.9\times L/(0.9-Y)$ =		54	sec
Y_{max}	$=1-L/C$ =		0.775	

Stage/Phase Diagrams



I/G = 5 G = 5 I/G = 8 G = 5 I/G = 5

Critical Case : A,C,D

R.C.(C) $= (0.9xY_{max}-Y)/Yx100\%$ = 54%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR *y*	CRITICAL *y*
→	A	1	3.300	2				1		0		4030		1820		1820			4030	0.452	0.452
↓	C	2	3.300	1		25	0	0		0		2085			15	15		100%	1967	0.008	
↰	B	1	3.500	1	10			1		0		1965	5	878		883	1%		1963	0.450	
↑	B	1	3.500	1				0		0		2105		947		947			2105	0.450	
↱	D	3	4.500	1	10	20	0	1		0		2065	30		5	35	86%	14%	1813	0.019	

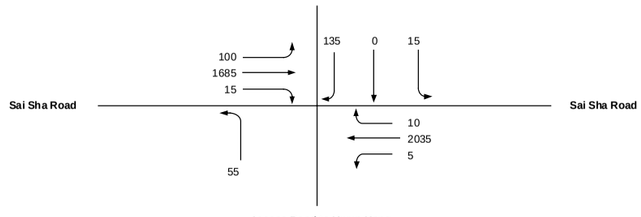
JUNCTION CAPACITY CALCULATION

AECOM

Junction J9 - Sai Sha Road / Access Road to Kwun Hang / Access Road to Che Ha	2028 Reference Traffic Flows AM	DESIGN:	CHECK:	JOB NO:	DATE: Oct 20

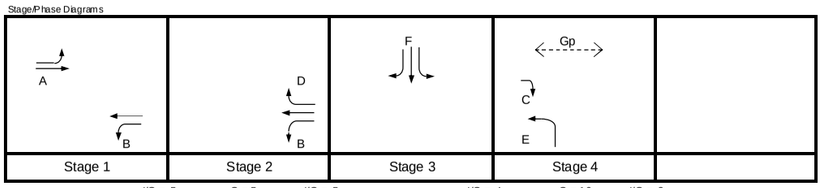
J9

Traffic Flow Diagram (pcu/hr)



No. of stages per cycle	N =	4	
Cycle time	C =	120	sec
Sum(y)	Y =	0.516	
Lost time	L =	35	sec
Total Flow	=	16,450	pcu
Optimum Cycle C_o = (1.5 × L+5)/(1-Y)	=	119	sec
Min. Cycle Time C_m = L/(1-Y)	=	72	sec
Y_{ult} = 0.9-0.0075 × L	=	0.638	
$R.C._{ult}$ = $(Y_{ult}-Y)/Yx100\%$	=	23.5	%
Practical Cycle Time C_p = 0.9 × L/(0.9-Y)	=	82	sec
Y_{max} = 1-L/C	=	0.708	

Stage/Phase Diagrams



I/G = 5 G = 5 I/G = 5 I/G = 4 G = 16 I/G = 2

1

Critical Case : A,D,F,Gp

R.C.(C) = $(0.9xY_{max}-Y)/Yx100\%$ = 24%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR y	CRITICAL y
	A	1	3.500	1	15			1		0		1965	100	757		857	12%		1942	0.441	0.441
	A	1	3.500	1				0		0		2105		928		928			2105	0.441	
	C	4	3.500	1		25	1	0		0		2105			15	15		100%	1769	0.008	
	B	1,2	3.500	1	10			1		0		1965	5	980		985	1%		1964	0.501	
	B	1,2	3.500	1				0		0		2105		1055		1055			2105	0.501	
	D	2	3.500	1		20	1	0		0		2105			10	10		100%	1744	0.006	
	E	2	3.700	1	10			1		0		1985	55			55	100%		1726	0.032	
	F	3	5.000	1	30	25	0	1		0		2115	15	0	135	150	10%	90%	1997	0.075	0.075
Ped.	Gp	4	min.	16	=	9	+	7	sec												

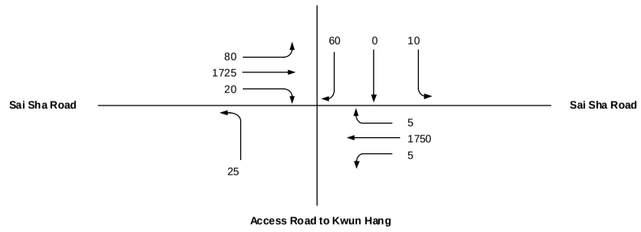
JUNCTION CAPACITY CALCULATION

AECOM

Junction J9 - Sai Sha Road / Access Road to Kwun Hang / Access Road to Che Ha	2028 Reference Traffic Flows PM	DESIGN:	CHECK:	JOB NO:	DATE: Oct 20

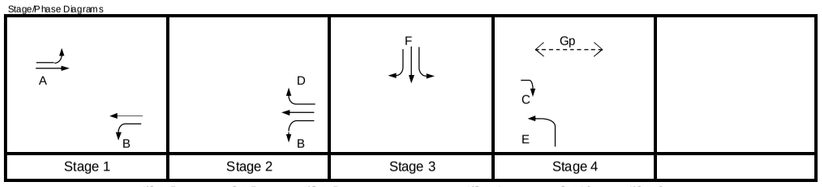
J9

Traffic Flow Diagram (pcu/hr)



No. of stages per cycle	N =	4	
Cycle time	C =	120	sec
Sum(y)	Y =	0.480	
Lost time	L =	35	sec
Total Flow	=	16,450	pcu
Optimum Cycle C_o = (1.5 × L+5)/(1-Y)	=	111	sec
Min. Cycle Time C_m = L/(1-Y)	=	67	sec
Y_{ult} = 0.9-0.0075 × L	=	0.638	
$R.C._{ult}$ = $(Y_{ult}-Y)/Yx100\%$	=	32.7	%
Practical Cycle Time C_p = 0.9 × L/(0.9-Y)	=	75	sec
Y_{max} = 1-L/C	=	0.708	

Stage/Phase Diagrams



I/G = 5 G = 5 I/G = 5 I/G = 4 G = 16 I/G = 2

1

Critical Case : A,D,F,Gp

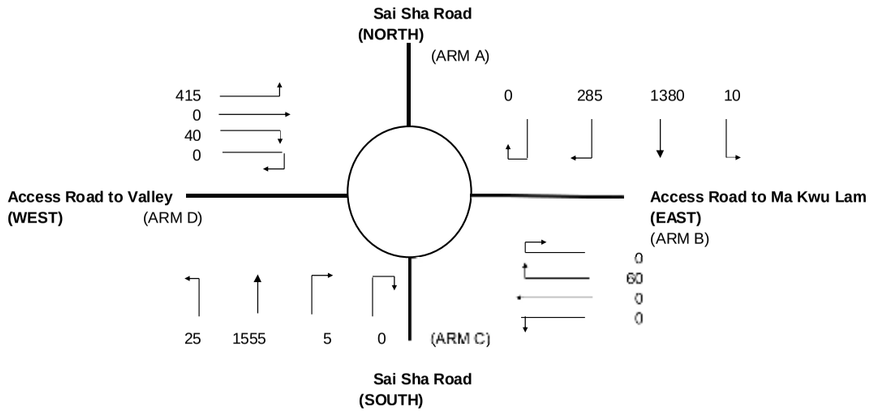
R.C.(C) = $(0.9xY_{max}-Y)/Yx100\%$ = 33%

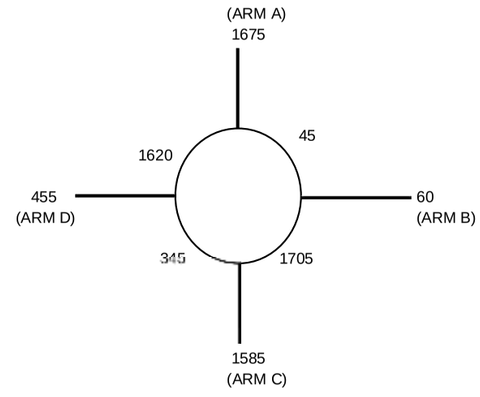
MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR y	CRITICAL y
	A	1	3.500	1	15			1		0		1965	80	787		867	9%		1947	0.445	0.445
	A	1	3.500	1				0		0		2105		938		938			2105	0.445	
	C	4	3.500	1		25	1	0		0		2105			20	20		100%	1769	0.011	
	B	1,2	3.500	1	10			1		0		1965	5	842		847	1%		1963	0.431	
	B	1,2	3.500	1				0		0		2105		908		908			2105	0.431	
	D	2	3.500	1		20	1	0		0		2105			5	5		100%	1744	0.003	
	E	2	3.700	1	10			1		0		1985	25			25	100%		1726	0.014	
	F	3	5.000	1	30	25	0	1		0		2115	10	0	60	70	14%	86%	1998	0.035	0.035
Ped.	Gp	4	min.	16	=	9	+	7	sec												

ROUNDABOUT CAPACITY CALCULATIO

MAUNSELL CONSULTANTS ASIA LTD.

Junction	J10- Sai Sha Road / Access Road to Ma Kwu Lam / Access Road to Sai Sha Development (Site A)	Scenario	2028 Reference Traffic Flows AM	Project No.	Prepared By	Checked By	Date
				-	MKCN	SHSN	Jul 2022





ARM	A	B	C	D
INPUT PARAMETERS:				
V = Approach half width (m)	7.30	4.00	7.30	7.00
E = Entry width (m)	10.00	6.00	13.00	8.00
L = Effective length of flare (m)	5.00	12.00	15.00	4.00
R = Entry radius (m)	25.00	20.00	45.00	25.00
D = Inscribed circle diameter (m)	50.00	50.00	50.00	50.00
A = Entry angle (degree)	63.00	60.00	69.00	64.00
Q = Entry flow (pcu/h)	1675	60	1585	455
Qc= Circulating flow across entry (pcu/h)	45	1705	345	1620
OUTPUT PARAMETERS:				
S = Sharpness of flare = 1.6(E-V)/L	0.86	0.27	0.61	0.40
K = 1-0.00347(A-30)-0.978(1/R-0.05)	0.90	0.90	0.89	0.89
X2= V + ((E-V)/(1+2S))	8.29	5.30	9.87	7.56
M = EXP((D-60)/10)	0.37	0.37	0.37	0.37
F = 303*X2	2512	1607	2991	2289
Td= 1+(0.5/(1+M))	1.37	1.37	1.37	1.37
Fc= 0.21*Td(1+0.2*X2)	0.76	0.59	0.85	0.72
Qe= K(F-Fc*Qc)	2218	537	2405	1001
DFC = Design flow/Capacity = Q/Qe	0.76	0.11	0.66	0.45

TOTAL ENTRY FLOWS 3775 PCU

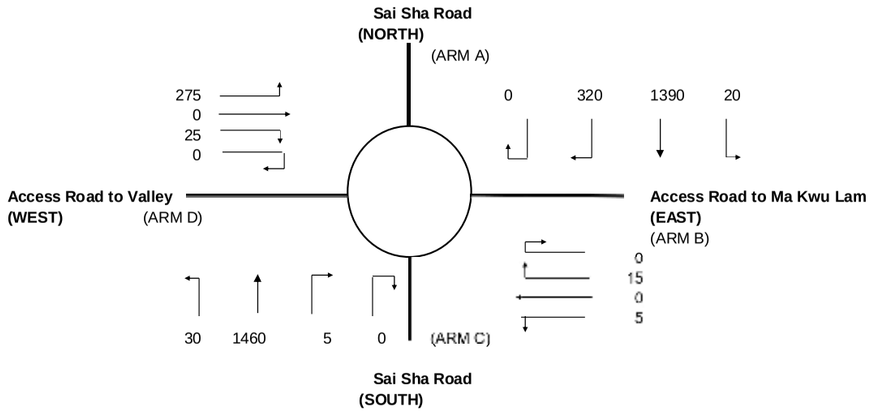
CRITICAL DFC 0.76

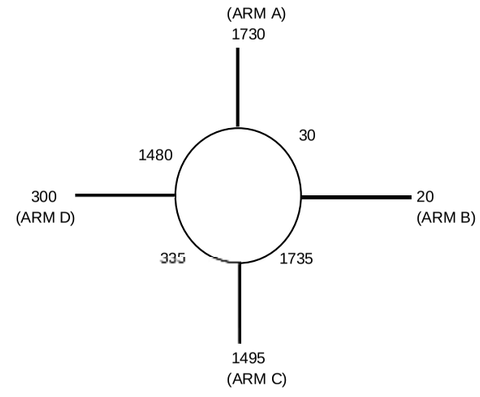
Filename :

ROUNDABOUT CAPACITY CALCULATIO

MAUNSELL CONSULTANTS ASIA LTD.

Junction	J10- Sai Sha Road / Access Road to Ma Kwu Lam / Access Road to Sai Sha Development (Site A)	Scenario	2028 Reference Traffic Flows PM	Project No.	Prepared By	Checked By	Date
				-	MKCN	SHSN	Jul 2022





ARM	A	B	C	D
INPUT PARAMETERS:				
V = Approach half width (m)	7.30	4.00	7.30	7.00
E = Entry width (m)	10.00	6.00	13.00	8.00
L = Effective length of flare (m)	5.00	12.00	15.00	4.00
R = Entry radius (m)	25.00	20.00	45.00	25.00
D = Inscribed circle diameter (m)	50.00	50.00	50.00	50.00
A = Entry angle (degree)	63.00	60.00	69.00	64.00
Q = Entry flow (pcu/h)	1730	20	1495	300
Qc= Circulating flow across entry (pcu/h)	30	1735	335	1480
OUTPUT PARAMETERS:				
S = Sharpness of flare = 1.6(E-V)/L	0.86	0.27	0.61	0.40
K = 1-0.00347(A-30)-0.978(1/R-0.05)	0.90	0.90	0.89	0.89
X2= V + ((E-V)/(1+2S))	8.29	5.30	9.87	7.56
M = EXP((D-60)/10)	0.37	0.37	0.37	0.37
F = 303*X2	2512	1607	2991	2289
Td= 1+(0.5/(1+M))	1.37	1.37	1.37	1.37
Fc= 0.21*Td(1+0.2*X2)	0.76	0.59	0.85	0.72
Qe= K(F-Fc*Qc)	2228	521	2413	1091
DFC = Design flow/Capacity = Q/Qe	0.78	0.04	0.62	0.27

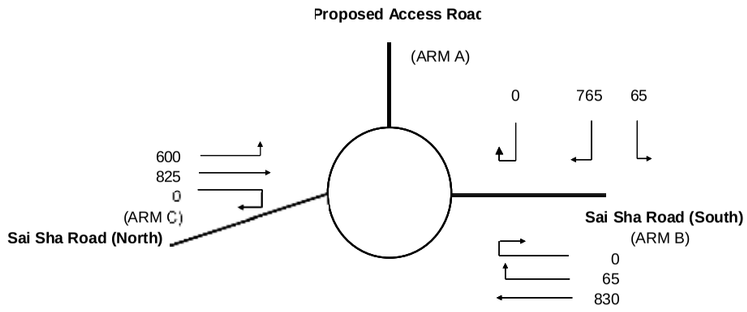
TOTAL ENTRY FLOWS 3545 PCU

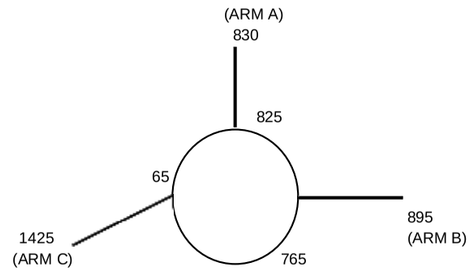
CRITICAL DFC 0.78

Filename :

JUNCTION CAPACITY CALCULATION

J11 - Sai Sha Road / Access Road to Tseng Tau	2028 Reference Traffic Flows AM	FILENAME :





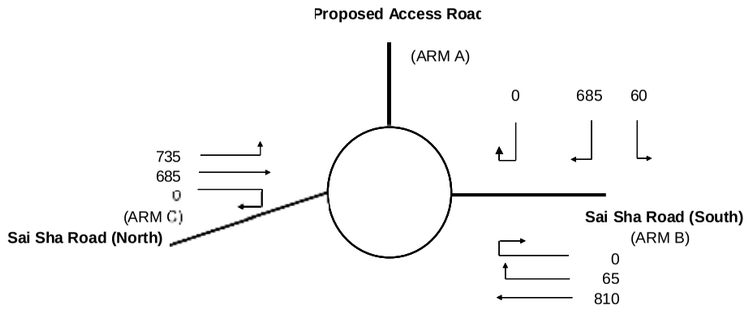
ARM	A	B	C
INPUT PARAMETERS:			
V = Approach half width (m)	5.15	7.30	7.30
E = Entry width (m)	9.00	9.00	9.00
L = Effective length of flare (m)	20.00	4.50	4.50
R = Entry radius (m)	35.00	30.00	40.00
D = Inscribed circle diameter (m)	50.00	50.00	50.00
A = Entry angle (degree)	43.00	61.00	43.00
Q = Entry flow (pcu/h)	830	895	1425
Qc= Circulating flow across entry (pcu/h)	825	765	65
OUTPUT PARAMETERS:			
S = Sharpness of flare = 1.6(E-V)/L	0.31	0.60	0.60
K = 1-0.00347(A-30)-0.978(1/R-0.05)	0.98	0.91	0.98
X2= V + ((E-V)/(1+2S))	7.53	8.07	8.07
M = EXP((D-60)/10)	0.37	0.37	0.37
F = 303*X2	2282	2445	2445
Td= 1+(0.5/(1+M))	1.37	1.37	1.37
Fc= 0.21*Td(1+0.2*X2)	0.72	0.75	0.75
Qe= K(F-Fc*Qc)	1649	1701	2347
DFC = Design flow/Capacity = Q/Qe	0.50	0.53	0.61

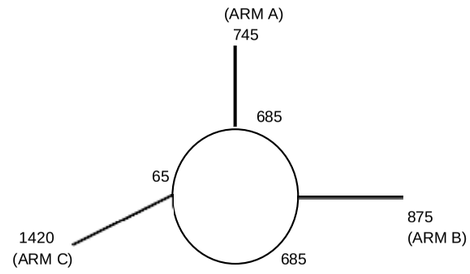
TOTAL ENTRY FLOWS = 3150 PCU

CRITICAL DFC = 0.61

JUNCTION CAPACITY CALCULATION

J11 - Sai Sha Road / Access Road to Tseng Tau	2028 Reference Traffic Flows PM	FILENAME :





ARM	A	B	C
INPUT PARAMETERS:			
V = Approach half width (m)	5.15	7.30	7.30
E = Entry width (m)	9.00	9.00	9.00
L = Effective length of flare (m)	20.00	4.50	4.50
R = Entry radius (m)	35.00	30.00	40.00
D = Inscribed circle diameter (m)	50.00	50.00	50.00
A = Entry angle (degree)	43.00	61.00	43.00
Q = Entry flow (pcu/h)	745	875	1420
Qc= Circulating flow across entry (pcu/h)	685	685	65
OUTPUT PARAMETERS:			
S = Sharpness of flare = 1.6(E-V)/L	0.31	0.60	0.60
K = 1-0.00347(A-30)-0.978(1/R-0.05)	0.98	0.91	0.98
X2= V + ((E-V)/(1+2S))	7.53	8.07	8.07
M = EXP((D-60)/10)	0.37	0.37	0.37
F = 303*X2	2282	2445	2445
Td= 1+(0.5/(1+M))	1.37	1.37	1.37
Fc= 0.21*Td(1+0.2*X2)	0.72	0.75	0.75
Qe= K(F-Fc*Qc)	1747	1755	2347
DFC = Design flow/Capacity = Q/Qe	0.43	0.50	0.61

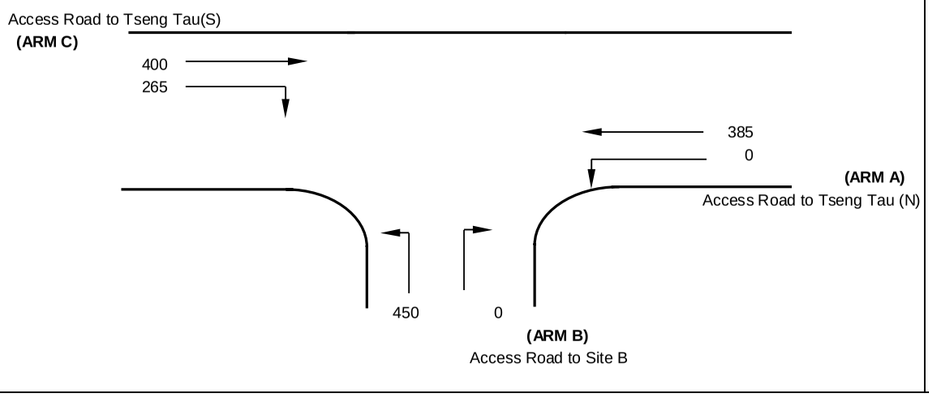
TOTAL ENTRY FLOWS = 3040 PCU

CRITICAL DFC = 0.61

PRIORITY JUNCTION CAPACITY CALCULATION

AECOM

Junction J12a - Access Road to Tseng Tau / Access Road to Site B	2028 Reference Traffic Flows AM	Designed By : DL	Checked By : DL	Job No. :	Date : Jul 22



NOTES : (GEOMETRIC INPUT DATA) J12a

W	= Major Road Width (6.4 - 20.0)
W cr	= Central Reserve width (1.2 - 9.0, kerbed central reserve only)
W b-a	= Lane width available to vehicle waiting in stream b-a (2.05 - 4.07)
W b-c	= Lane width available to vehicle waiting in stream b-c (2.05 - 4.07)
W c-b	= Lane width available to vehicle waiting in stream c-b (2.05 - 4.07)
Vl b-a	= Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0)
Vr b-a	= Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0)
Vr b-c	= Visibilitu to the right for vehicles waiting in stream b-c (17.0 - 250.0)
Vr c-b	= Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0)
D	= Stream-specific B-A
E	= Stream-specific B-C
F	= Stream-specific C-B
Y	= (1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.3	(metres)
W cr	=	0	(metres)
q a-b	=	0	(pcu/hr)
q a-c	=	385	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	3.5	(metres)
Vr c-b	=	100	(metres)
q c-a	=	400	(pcu/hr)
q c-b	=	265	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.7	(metres)
W b-c	=	3.7	(metres)
Vl b-a	=	100	(metres)
Vr b-a	=	100	(metres)
Vr b-c	=	100	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	450	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.957017
E	=	0.986615
F	=	0.968154
Y	=	0.748150

THE CAPACITY OF MOVEMENT :

Q b-a	=	335
Q b-c	=	632
Q c-b	=	620
Q b-ac	=	632

CRITICAL DFC = 0.71

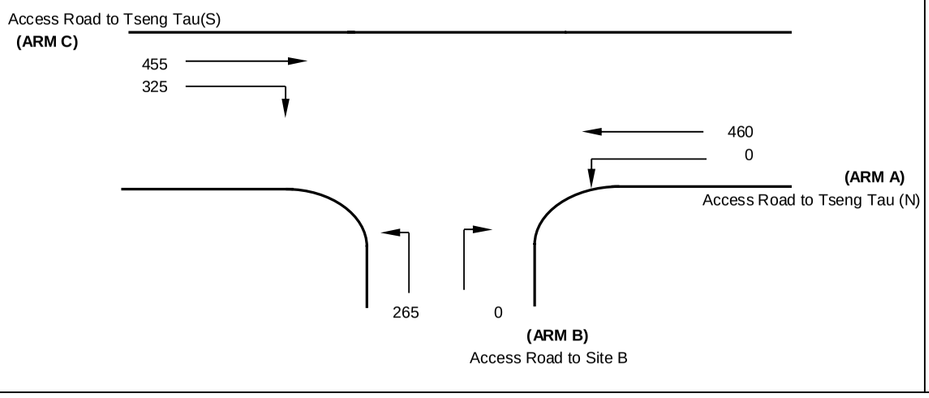
COMPARISION OF DESIGN FLOW TO CAPACITY :

DFC b-a	=	0.00
DFC b-c	=	0.71
DFC c-b	=	0.43
DFC b-ac	=	0.71

PRIORITY JUNCTION CAPACITY CALCULATION

AECOM

Junction J12a - Access Road to Tseng Tau / Access Road to Site B	2028 Reference Traffic Flows PM	Designed By : DL	Checked By : DL	Job No. :	Date : Jul 22



NOTES : (GEOMETRIC INPUT DATA) J12a

W	= Major Road Width (6.4 - 20.0)
W cr	= Central Reserve width (1.2 - 9.0, kerbed central reserve only)
W b-a	= Lane width available to vehicle waiting in stream b-a (2.05 - 4.07)
W b-c	= Lane width available to vehicle waiting in stream b-c (2.05 - 4.07)
W c-b	= Lane width available to vehicle waiting in stream c-b (2.05 - 4.07)
Vl b-a	= Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0)
Vr b-a	= Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0)
Vr b-c	= Visibilitu to the right for vehicles waiting in stream b-c (17.0 - 250.0)
Vr c-b	= Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0)
D	= Stream-specific B-A
E	= Stream-specific B-C
F	= Stream-specific C-B
Y	= (1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.3	(metres)
W cr	=	0	(metres)
q a-b	=	0	(pcu/hr)
q a-c	=	460	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	3.5	(metres)
Vr c-b	=	100	(metres)
q c-a	=	455	(pcu/hr)
q c-b	=	325	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.7	(metres)
W b-c	=	3.7	(metres)
Vl b-a	=	100	(metres)
Vr b-a	=	100	(metres)
Vr b-c	=	100	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	265	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.957017
E	=	0.986615
F	=	0.968154
Y	=	0.748150

THE CAPACITY OF MOVEMENT :

Q b-a	=	285
Q b-c	=	611
Q c-b	=	600
Q b-ac	=	611

CRITICAL DFC = 0.54

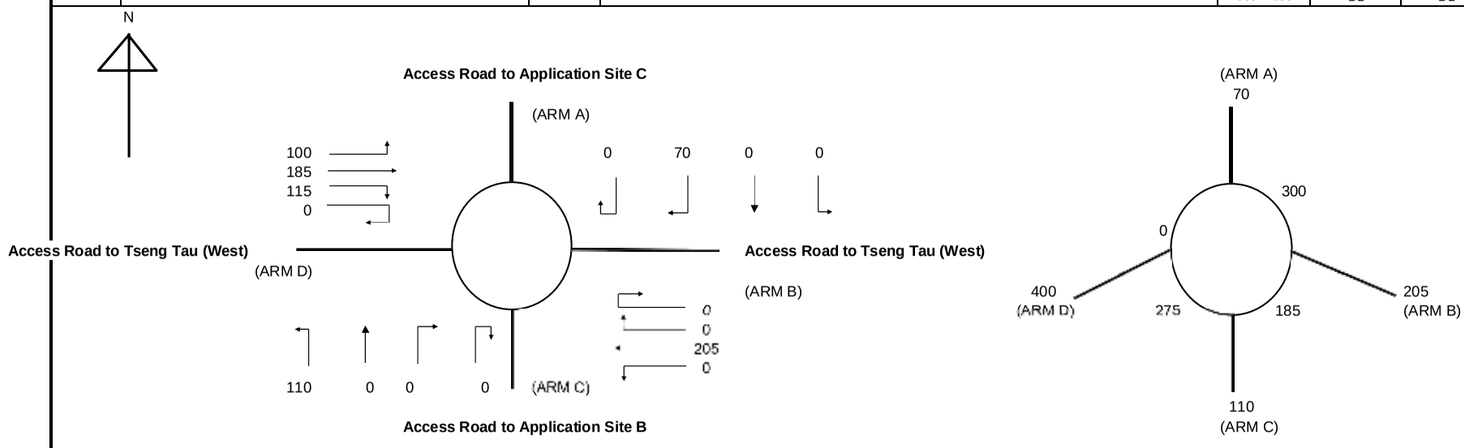
COMPARISION OF DESIGN FLOW TO CAPACITY :

DFC b-a	=	0.00
DFC b-c	=	0.43
DFC c-b	=	0.54
DFC b-ac	=	0.43

ROUNDABOUT CAPACITY CALCULATIO

AECOM

Junction	J13 - Access Road to Tseng Tau / Access Road to Application Site C	Scenario	2028 Reference Traffic Flows AM	Project No.	Prepared By	Checked By	Date
				60547289	DL	DL	12-Jul-22



ARM	A	B	C	D
INPUT PARAMETERS:				
V = Approach half width (m)	5.20	5.20	5.40	5.20
E = Entry width (m)	5.50	6.30	7.00	6.80
L = Effective length of flare (m)	3.00	13.00	25.00	25.00
R = Entry radius (m)	11.00	18.00	18.00	25.00
D = Inscribed circle diameter (m)	44.00	44.00	44.00	44.00
A = Entry angle (degree)	59.00	54.00	42.00	34.00
Q = Entry flow (pcu/h)	70	205	110	400
Qc= Circulating flow across entry (pcu/h)	300	185	275	0
OUTPUT PARAMETERS:				
S = Sharpness of flare = 1.6(E-V)/L	0.16	0.14	0.10	0.10
K = 1-0.00347(A-30)-0.978(1/R-0.05)	0.86	0.91	0.95	1.00
X2= V + ((E-V)/(1+2S))	5.43	6.07	6.73	6.53
M = EXP((D-60)/10)	0.20	0.20	0.20	0.20
F = 303*X2	1644	1838	2039	1978
Td= 1+(0.5/(1+M))	1.42	1.42	1.42	1.42
Fc= 0.21*Td(1+0.2*X2)	0.62	0.66	0.70	0.69
Qe= K(F-Fc*Qc)	1253	1564	1760	1970
DFC = Design flow/Capacity = Q/Qe	0.06	0.13	0.06	0.20

TOTAL ENTRY FLOWS 785 PCU

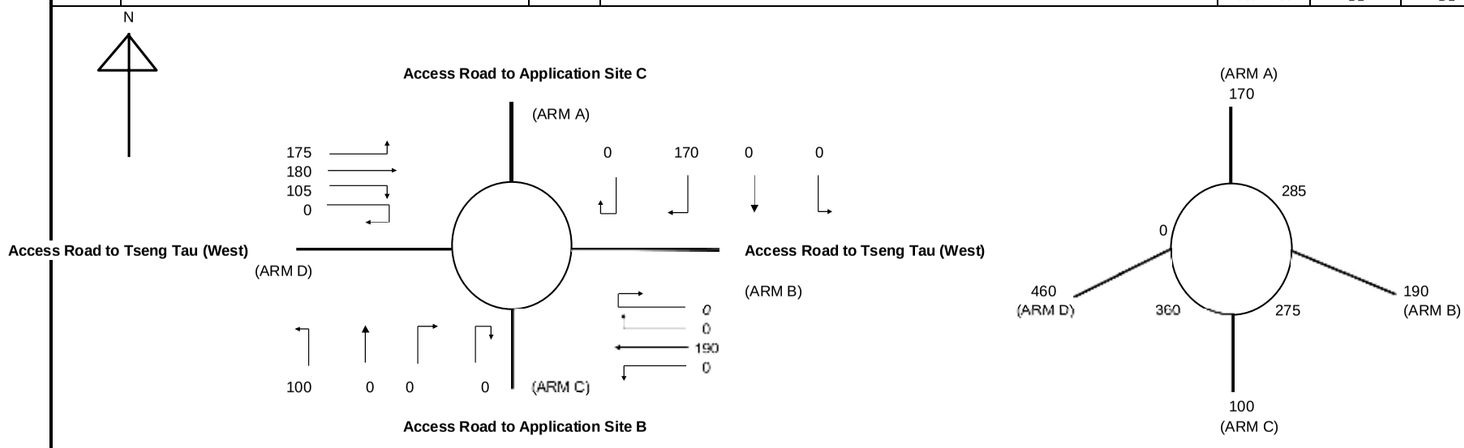
CRITICAL DFC 0.20

Filename : https://aecom-my.sharepoint.com/personal/magdalene_ku_aecom_com

ROUNDABOUT CAPACITY CALCULATIO

AECOM

Junction	J13 - Access Road to Tseng Tau / Access Road to Application Site C	Scenario	2028 Reference Traffic Flows PM	Project No.	Prepared By	Checked By	Date
				60547289	DL	DL	12-Jul-22



ARM	A	B	C	D
INPUT PARAMETERS:				
V = Approach half width (m)	5.20	5.20	5.40	5.20
E = Entry width (m)	5.50	6.30	7.00	6.80
L = Effective length of flare (m)	3.00	13.00	25.00	25.00
R = Entry radius (m)	11.00	18.00	18.00	25.00
D = Inscribed circle diameter (m)	44.00	44.00	44.00	44.00
A = Entry angle (degree)	59.00	54.00	42.00	34.00
Q = Entry flow (pcu/h)	170	190	100	460
Qc= Circulating flow across entry (pcu/h)	285	275	360	0
OUTPUT PARAMETERS:				
S = Sharpness of flare = 1.6(E-V)/L	0.16	0.14	0.10	0.10
K = 1-0.00347(A-30)-0.978(1/R-0.05)	0.86	0.91	0.95	1.00
X2= V + ((E-V)/(1+2S))	5.43	6.07	6.73	6.53
M = EXP((D-60)/10)	0.20	0.20	0.20	0.20
F = 303*X2	1644	1838	2039	1978
Td= 1+(0.5/(1+M))	1.42	1.42	1.42	1.42
Fc= 0.21*Td(1+0.2*X2)	0.62	0.66	0.70	0.69
Qe= K(F-Fc*Qc)	1261	1510	1703	1970
DFC = Design flow/Capacity = Q/Qe	0.13	0.13	0.06	0.23

TOTAL ENTRY FLOWS 920 PCU

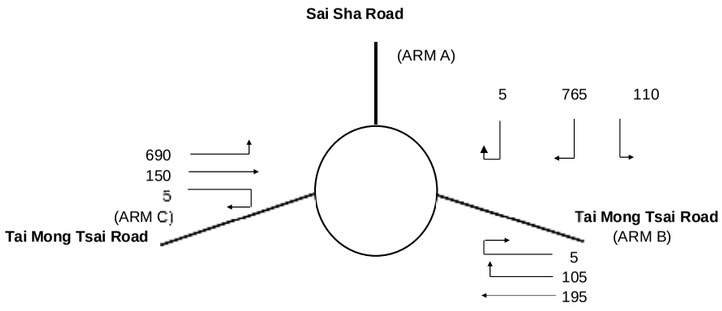
CRITICAL DFC 0.23

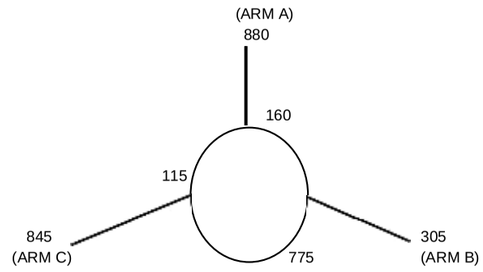
Filename : https://aecom-my.sharepoint.com/personal/magdalene_ku_aecom_com

ROUNDABOUT CAPACITY CALCULATION

AECOM

Junction	J14 - Sai Sha Road / Tai Mong Tsai Road	Scenario	2028 Reference Traffic Flows AM	Project No.	Prepared By	Checked By	Date
				-	mkcn	shsn	12-Jul-22





ARM	A	B	C
INPUT PARAMETERS:			
V = Approach half width (m)	4.30	3.00	3.30
E = Entry width (m)	7.50	8.00	8.00
L = Effective length of flare (m)	15.00	20.00	20.00
R = Entry radius (m)	16.00	80.00	100.00
D = Inscribed circle diameter (m)	32.00	32.00	32.00
A = Entry angle (degree)	45.00	30.00	45.00
Q = Entry flow (pcu/h)	880	305	845
Qc= Circulating flow across entry (pcu/h)	160	775	115
OUTPUT PARAMETERS:			
S = Sharpness of flare = 1.6(E-V)/L	0.34	0.40	0.38
K = 1-0.00347(A-30)-0.978(1/R-0.05)	0.94	1.04	0.99
X2= V + ((E-V)/(1+2S))	6.20	5.78	5.98
M = EXP((D-60)/10)	0.06	0.06	0.06
F = 303*X2	1879	1751	1813
Td= 1+(0.5/(1+M))	1.47	1.47	1.47
Fc= 0.21*Td(1+0.2*X2)	0.69	0.67	0.68
Qe= K(F-Fc*Qc)	1655	1280	1712
DFC = Design flow/Capacity = Q/Qe	0.53	0.24	0.49

TOTAL ENTRY FLOWS = 2030 PCU

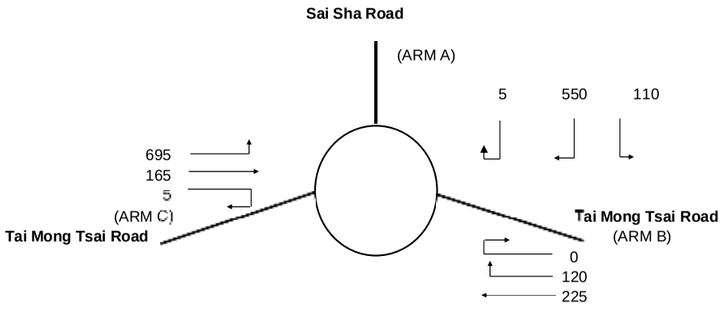
CRITICAL DFC = 0.53

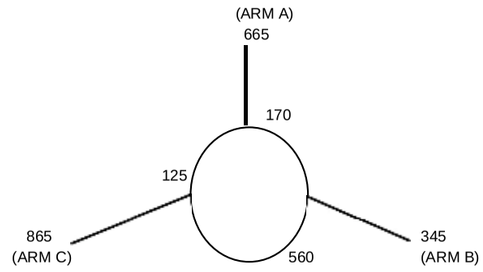
Filename: https://aecom-my.sharepoint.com/personal/magdalene_ku_aecom_co

ROUNDABOUT CAPACITY CALCULATION

AECOM

Junction	J14 - Sai Sha Road / Tai Mong Tsai Road	Scenario	2028 Reference Traffic Flows PM	Project No.	Prepared By	Checked By	Date
				-	mkcn	shsn	12-Jul-22





ARM	A	B	C
INPUT PARAMETERS:			
V = Approach half width (m)	4.30	3.00	3.30
E = Entry width (m)	7.50	8.00	8.00
L = Effective length of flare (m)	15.00	20.00	20.00
R = Entry radius (m)	16.00	80.00	100.00
D = Inscribed circle diameter (m)	32.00	32.00	32.00
A = Entry angle (degree)	45.00	30.00	45.00
Q = Entry flow (pcu/h)	665	345	865
Qc= Circulating flow across entry (pcu/h)	170	560	125
OUTPUT PARAMETERS:			
S = Sharpness of flare = 1.6(E-V)/L	0.34	0.40	0.38
K = 1-0.00347(A-30)-0.978(1/R-0.05)	0.94	1.04	0.99
X2= V + ((E-V)/(1+2S))	6.20	5.78	5.98
M = EXP((D-60)/10)	0.06	0.06	0.06
F = 303*X2	1879	1751	1813
Td= 1+(0.5/(1+M))	1.47	1.47	1.47
Fc= 0.21*Td(1+0.2*X2)	0.69	0.67	0.68
Qe= K(F-Fc*Qc)	1648	1428	1706
DFC = Design flow/Capacity = Q/Qe	0.40	0.24	0.51

TOTAL ENTRY FLOWS = 1875 PCU

CRITICAL DFC = 0.51

Filename: https://aecom-my.sharepoint.com/personal/magdalene_ku_aecom_co

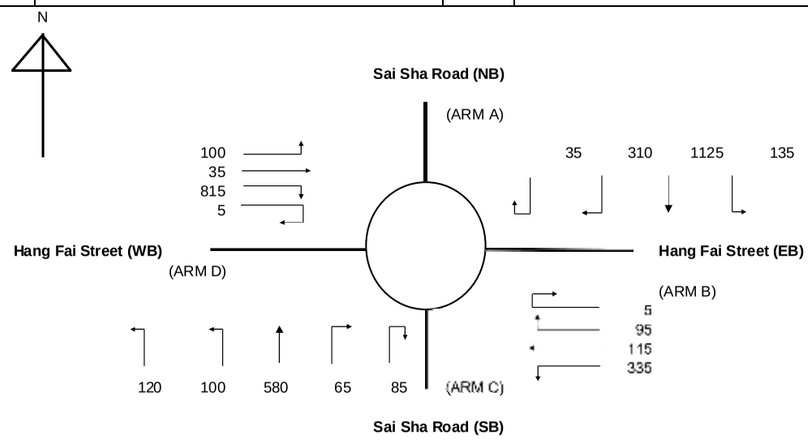
ANNEX A3

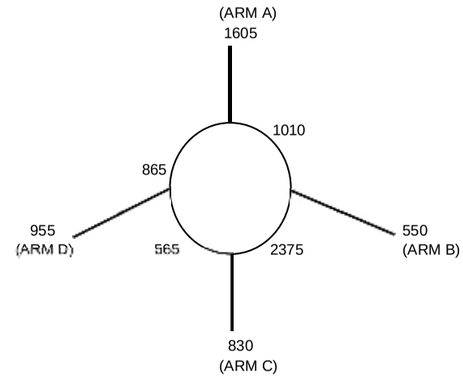
CALCULATION SHEETS
DESIGN TRAFFIC FLOWS

ROUNDABOUT CAPACITY CALCULATIO

AECOM

Junction	J1 - Sai Sha Road / Hang Fai Street	Scenario	2028 Design Traffic Flows AM	Project No.	Prepared By	Checked By	Date
				60547289			12-Jul-22





ARM	A	B	C	D
INPUT PARAMETERS:				
V = Approach half width (m)	11.00	7.50	11.00	7.00
E = Entry width (m)	13.00	12.00	13.00	13.00
L = Effective length of flare (m)	0.01	15.00	0.01	30.00
R = Entry radius (m)	80.00	60.00	60.00	50.00
D = Inscribed circle diameter (m)	50.00	50.00	50.00	50.00
A = Entry angle (degree)	30.00	30.00	30.00	25.00
Q = Entry flow (pcu/h)	1605	550	830	955
Qc= Circulating flow across entry (pcu/h)	1010	2375	565	865
OUTPUT PARAMETERS:				
S = Sharpness of flare = 1.6(E-V)/L	320.00	0.48	320.00	0.32
K = 1-0.00347(A-30)-0.978(1/R-0.05)	1.04	1.03	1.03	1.05
X2= V + ((E-V)/(1+2S))	11.00	9.80	11.00	10.66
M = EXP((D-60)/10)	0.37	0.37	0.37	0.37
F = 303*X2	3334	2968	3334	3230
Td= 1+(0.5/(1+M))	1.37	1.37	1.37	1.37
Fc= 0.21*Td(1+0.2*X2)	0.92	0.85	0.92	0.90
Qe= K(F-Fc*Qc)	2495	984	2907	2567
DFC = Design flow/Capacity = Q/Qe	0.64	0.56	0.29	0.37

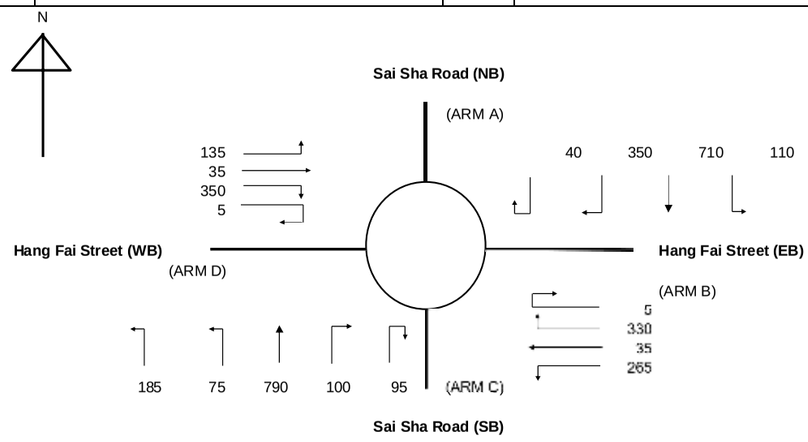
TOTAL ENTRY FLOWS 3940 PCU

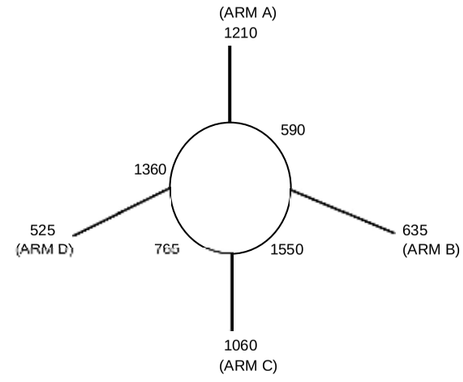
CRITICAL DFC 0.64

ROUNDABOUT CAPACITY CALCULATIO

AECOM

Junction	J1 - Sai Sha Road / Hang Fai Street	Scenario	2028 Design Traffic Flows PM	Project No.	Prepared By	Checked By	Date
				60547289			12-Jul-22





ARM	A	B	C	D
INPUT PARAMETERS:				
V = Approach half width (m)	11.00	7.50	11.00	7.00
E = Entry width (m)	13.00	12.00	13.00	13.00
L = Effective length of flare (m)	0.01	15.00	0.01	30.00
R = Entry radius (m)	80.00	60.00	60.00	50.00
D = Inscribed circle diameter (m)	50.00	50.00	50.00	50.00
A = Entry angle (degree)	30.00	30.00	30.00	25.00
Q = Entry flow (pcu/h)	1210	635	1060	525
Qc= Circulating flow across entry (pcu/h)	590	1550	765	1360
OUTPUT PARAMETERS:				
S = Sharpness of flare = 1.6(E-V)/L	320.00	0.48	320.00	0.32
K = 1-0.00347(A-30)-0.978(1/R-0.05)	1.04	1.03	1.03	1.05
X2= V + ((E-V)/(1+2S))	11.00	9.80	11.00	10.66
M = EXP((D-60)/10)	0.37	0.37	0.37	0.37
F = 303*X2	3334	2968	3334	3230
Td= 1+(0.5/(1+M))	1.37	1.37	1.37	1.37
Fc= 0.21*Td(1+0.2*X2)	0.92	0.85	0.92	0.90
Qe= K(F-Fc*Qc)	2895	1707	2718	2102
DFC = Design flow/Capacity = Q/Qe	0.42	0.37	0.39	0.25

TOTAL ENTRY FLOWS 3430 PCU

CRITICAL DFC 0.42

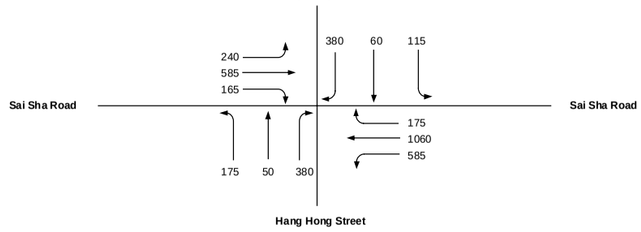
JUNCTION CAPACITY CALCULATION

AECOM

Junction J2 - Sai Sha Road / Hang Hong Street	2028 Design Traffic Flows AM	DESIGN:	CHECK:	JOB NO: 60280227	DATE: Oct 20

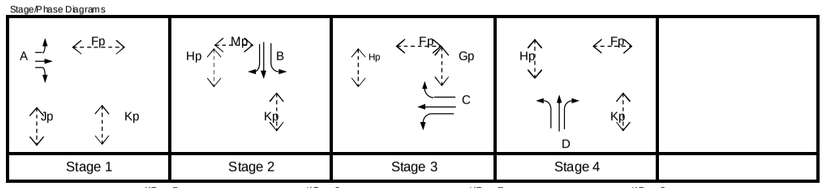
J2

Traffic Flow Diagram (pcu/hr)



No. of stages per cycle	N =	4	
Cycle time	C =	115	sec
Sum(y)	Y =	0.567	
Lost time	L =	25	sec
Total Flow	=	35,045	pcu
Optimum Cycle C_o = (1.5 × L+5)/(1-Y)	=	98	sec
Min. Cycle Time C_m = L/(1-Y)	=	58	sec
Y_{ult} = 0.9-0.0075 × L	=	0.713	
$R.C._{ult}$ = (Y_{ult}-Y)/Yx100%	=	25.7	%
Practical Cycle Time C_p = 0.9 × L/(0.9-Y)	=	67	sec
Y_{max} = 1-L/C	=	0.783	

Stage/Phase Diagrams



Critical Case : A,B,C,D

R.C.(C) = (0.9xY_{max}-Y)/Yx100% = 24%

1

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR y	CRITICAL y
	C	3	3.500	1	10			1		0		1965	355			355	100%		1709	0.208	0.208
	C	3	3.500	1	15					0		2105	230	185		415	55%		1994	0.208	
	C	3	3.500	2				0		0		4210		875		875			4210	0.208	
	C	3	5.500	1		25	0	1		0		2165			175	175		100%	2042	0.086	
	A	1	3.300	1	15			1		0		1945	240			240	100%		1768	0.136	0.136
	A	1	3.300	3				0		0		6255		585		585			6255	0.094	
	A	1	4.000	2		25	0	1		0		4170			165	165		100%	3934	0.042	
	B	2	3.300	1	15			1		0		1945	115			115	100%		1768	0.065	
	B	2	3.300	1	20	20	0			0		2085	0	60	165	225	0%	73%	1976	0.114	
	B	2	3.300	1		15	0	0		0		2085			215	215		100%	1895	0.114	0.114
	D	4	3.300	1	10			1		0		1945	175			175	100%		1691	0.103	
	D	4	3.300	1		25	0	0		0		2085		50	168	218		77%	1993	0.109	
	D	4	3.300	1		20	0	0		0		2085			212	212		100%	1940	0.109	0.109
	Jp	1	min.	7	+	14	=	21	sec												
	Hp	2,3,4	min.	7	+	14	=	21	sec												
	Kp	1,2,4	min.	7	+	15	=	22	sec												
	Fp	1,34	min.	5	+	9	=	14	sec												
	Gp	3	min.	5	+	12	=	17	sec												
	Mp	2	min.	5	+	8	=	13	sec												

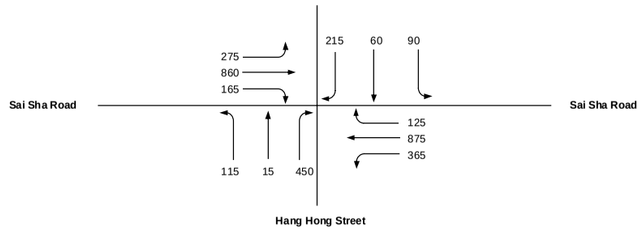
JUNCTION CAPACITY CALCULATION

AECOM

Junction J2 - Sai Sha Road / Hang Hong Street	2028 Design Traffic Flows PM	DESIGN:	CHECK:	JOB NO: 60280227	DATE: Oct 20

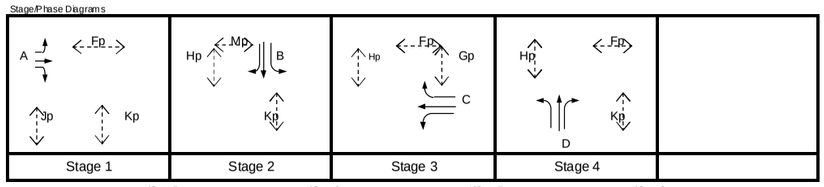
J2

Traffic Flow Diagram (pcu/hr)



No. of stages per cycle	N =	4	
Cycle time	C =	115	sec
Sum(y)	Y =	0.501	
Lost time	L =	25	sec
Total Flow	=	35,045	pcu
Optimum Cycle C_o = (1.5 × L+5)/(1-Y)	=	85	sec
Min. Cycle Time C_m = L/(1-Y)	=	50	sec
Y_{ult} = 0.9-0.0075 × L	=	0.713	
$R.C._{ult}$ = (Y_{ult}-Y)/Yx100%	=	42.3	%
Practical Cycle Time C_p = 0.9 × L/(0.9-Y)	=	56	sec
Y_{max} = 1-L/C	=	0.783	

Stage/Phase Diagrams



Critical Case : A,B,C,D

R.C.(C) = (0.9xY_{max}-Y)/Yx100% = 41%

1

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR y	CRITICAL y
	C	3	3.500	1	10			1		0		1965	266			266	100%		1709	0.156	0.156
	C	3	3.500	1	15					0		2105	99	219		318	31%		2042	0.156	
	C	3	3.500	2				0		0		4210		656		656			4210	0.156	
	C	3	5.500	1		25	0	1		0		2165			125	125		100%	2042	0.061	
	A	1	3.300	1	15			1		0		1945	275			275	100%		1768	0.156	0.156
	A	1	3.300	3				0		0		6255		860		860			6255	0.137	
	A	1	4.000	2		25	0	1		0		4170			165	165		100%	3934	0.042	
	B	2	3.300	1	15			1		0		1945	90			90	100%		1768	0.051	
	B	2	3.300	1	20	20	0			0		2085	0	60	81	141	0%	57%	1999	0.071	0.071
	B	2	3.300	1		15	0	0		0		2085			134	134		100%	1895	0.071	
	D	4	3.300	1	10			1		0		1945	115			115	100%		1691	0.068	
	D	4	3.300	1		25	0	0		0		2085		15	220	235		94%	1974	0.119	0.119
	D	4	3.300	1		20	0	0		0		2085			230	230		100%	1940	0.119	
	Jp	1	min.	7	+	14	=	21	sec												
	Hp	2,3,4	min.	7	+	14	=	21	sec												
	Kp	1,2,4	min.	7	+	15	=	22	sec												
	Fp	1,34	min.	5	+	9	=	14	sec												
	Gp	3	min.	5	+	12	=	17	sec												
	Mp	2	min.	5	+	8	=	13	sec												

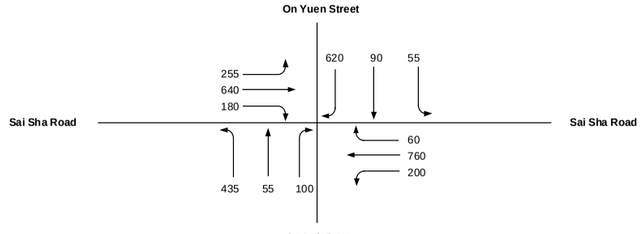
JUNCTION CAPACITY CALCULATION

AECOM

Junction J3 - Sai Sha Road / On Yuen Street / On Luk Street	2028 Design Traffic Flows AM	DESIGN:	CHECK:	JOB NO: 60280227	DATE: Oct 20

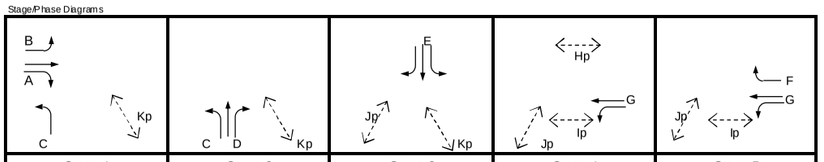
J3

Traffic Flow Diagram
(pcu/hr)



No. of stages per cycle	N =	5	
Cycle time	C =	115	sec
Sum(y)	Y =	0.358	
Lost time	L =	52	sec
Total Flow	=	33,360	pcu
Optimum Cycle C_o = (1.5 × L+5)/(1-Y)	=	129	sec
Min. Cycle Time C_m = L/(1-Y)	=	81	sec
Y_{ult} = 0.9-0.0075 × L	=	0.510	
$R.C._{ult}$ = $(Y_{ult}-Y)/Y$x100%	=	42.3	%
Practical Cycle Time C_p = 0.9 × L/(0.9-Y)	=	86	sec
Y_{max} = 1-L/C	=	0.548	

Stage/Phase Diagrams



Critical Case : A,D,E,Hp,F

R.C.(C) = $(0.9xY_{max}-Y)/Yx100\%$ = 38%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR y	CRITICAL y
↰	B	1	3.600	1	15			1		0		1975	255			255	100%		1795	0.142	
↑	A	1	3.600	2				0		0		4230		640		640			4230	0.151	0.151
↱	A	1	3.600	2		20	0	0		0		4230			180	180		100%	3935	0.046	
↰	C	1,2	3.400	1	30			1		0		1955	435			435	100%		1862	0.234	
↑	D	2	3.400	1				0		0		2095		55		55			2095	0.026	
↱	D	2	3.400	1		30	0	0		0		2095			100	100		100%	1995	0.050	0.050
↰	E	3	3.300	1	15			1		0		1945	55	90		145	38%		1874	0.077	
↑	E	3	3.300	1		30	0			0		2085		0	311	311		100%	1986	0.157	0.157
↱	E	3	3.300	1		25	0	0		0		2085			309	309		100%	1967	0.157	
↰	G	4,5	4.000	1	35			1		0		2015	200			200	100%		1932	0.104	
↑	G	4,5	3.600	3				0		0		6345		760		760			6345	0.120	
↱	F	5	5.500	1		35	0	0		0		2305			60	60		100%	2210	0.027	

Pedestrian Crossing			GM		FGM				
Hp	4	min.	11	+	9	=	20	sec	
Ip	4,5	min.	10	+	8	=	18	sec	
Jp	3,4,5	min.	5	+	5	=	10	sec	
Kp	1,2,3	min.	5	+	5	=	10	sec	

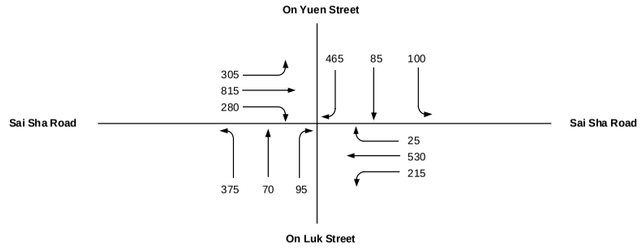
JUNCTION CAPACITY CALCULATION

AECOM

Junction J3 - Sai Sha Road / On Yuen Street / On Luk Street	2028 Design Traffic Flows PM	DESIGN:	CHECK:	JOB NO: 60280227	DATE: Oct 20

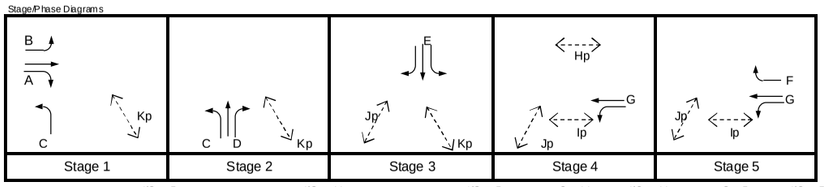
J3

Traffic Flow Diagram
(pcu/hr)



No. of stages per cycle	N =	5	
Cycle time	C =	115	sec
Sum(y)	Y =	0.358	
Lost time	L =	52	sec
Total Flow	=	33,360	pcu
Optimum Cycle C_o = (1.5 × L+5)/(1-Y)	=	129	sec
Min. Cycle Time C_m = L/(1-Y)	=	81	sec
Y_{ult} = 0.9-0.0075 × L	=	0.510	
$R.C._{ult}$ = $(Y_{ult}-Y)/Y$x100%	=	42.5	%
Practical Cycle Time C_p = 0.9 × L/(0.9-Y)	=	86	sec
Y_{max} = 1-L/C	=	0.548	

Stage/Phase Diagrams



Critical Case : A,D,E,Hp,F

R.C.(C) = $(0.9xY_{max}-Y)/Yx100\%$ = 38%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR y	CRITICAL y
↰	B	1	3.600	1	15			1		0		1975	305			305	100%		1795	0.170	
↑	A	1	3.600	2				0		0		4230		815		815			4230	0.193	0.193
↱	A	1	3.600	2		20	0	0		0		4230			280	280		100%	3935	0.071	
↰	C	1,2	3.400	1	30			1		0		1955	375			375	100%		1862	0.201	
↑	D	2	3.400	1				0		0		2095		70		70			2095	0.033	
↱	D	2	3.400	1		30	0	0		0		2095			95	95		100%	1995	0.048	0.048
↰	E	3	3.300	1	15			1		0		1945	100	85		185	54%		1845	0.100	
↑	E	3	3.300	1		30	0			0		2085		0	234	234		100%	1986	0.118	
↱	E	3	3.300	1		25	0	0		0		2085			231	231		100%	1967	0.118	0.118
↰	G	4,5	4.000	1	35			1		0		2015	215			215	100%		1932	0.111	
↑	G	4,5	3.600	3				0		0		6345		530		530			6345	0.084	
↱	F	5	5.500	1		35	0	0		0		2305			25	25		100%	2210	0.011	

Pedestrian Crossing			GM		FGM				
Hp	4	min.	11	+	9	=	20	sec	
Ip	4,5	min.	10	+	8	=	18	sec	
Jp	3,4,5	min.	5	+	5	=	10	sec	
Kp	1,2,3	min.	5	+	5	=	10	sec	

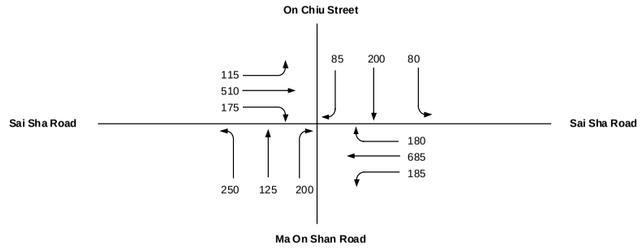
JUNCTION CAPACITY CALCULATION

AECOM

Junction J4 - Sai Sha Road / On Chiu Street / Ma On Shan Road	2028 Design Traffic Flows AM	DESIGN:	CHECK:	JOB NO: -	DATE: Oct 20

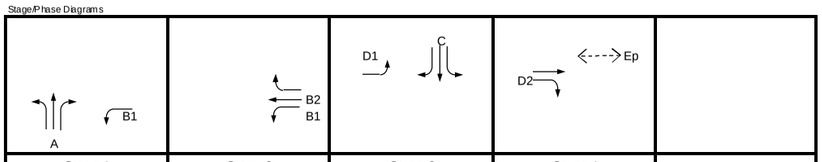
J4

Traffic Flow Diagram (pcu/hr)



No. of stages per cycle	N =	4	
Cycle time	C =	110	sec
Sum(y)	Y =	0.496	
Lost time	L =	24	sec
Total Flow	=	28,940	pcu
Optimum Cycle C_o	$= (1.5 \times L+5)/(1-Y)$ =	81	sec
Min. Cycle Time C_m	$= L/(1-Y)$ =	48	sec
Y_{ult}	$= 0.9-0.0075 \times L$ =	0.720	
$R.C._{ult}$	$= (Y_{ult}-Y)/Yx100\%$ =	45.2	%
Practical Cycle Time C_p	$= 0.9 \times L/(0.9-Y)$ =	53	sec
Y_{max}	= 1-L/C =	0.782	

Stage/Phase Diagrams



Stage 1	Stage 2	Stage 3	Stage 4	
I/G = 8	I/G = 10	I/G = 5	I/G = 5	

Critical Case : A,B2,D1,D2

R.C.(C) = $(0.9xY_{max}-Y)/Yx100\%$ = 42%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR y	CRITICAL y
	A	1	3.700	1	10			1		0		1985	250	0		250	100%		1726	0.145	0.145
	A	1	3.700	1		30	0			0		2125		125	41	166		25%	2099	0.079	
	A	1	3.700	1		25	0	0		0		2125			159	159		100%	2005	0.079	
	B1	1,2	3.750	1	15			1		0		1990	185			185	100%		1809	0.102	
	B2	2	3.750	2				0		0		4260		685		685			4260	0.161	0.161
	B2	2	3.750	1		25	0	0		0		2130			180	180		100%	2009	0.090	
	C	3	3.500	1	15			1		0		1965	80	51		131	61%		1852	0.071	
	C	3	3.500	1		30	0			0		2105		149	0	149		0%	2105	0.071	
	C	3	3.000	1		25	0	0		0		2055			85	85		100%	1939	0.044	
	D1	3	3.300	1	10			1		0		1945	115			115	100%		1691	0.068	0.068
	D2	4	3.300	2				0		0		4170		510		510			4170	0.122	0.122
	D2	4	3.300	1		25	0	0		0		2085			175	175		100%	1967	0.089	
Pedestrian Crossing				GM		FGM															
	Ep	4	min.	11	+	9	=	20	sec												

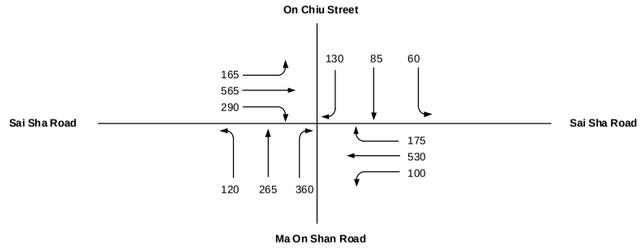
JUNCTION CAPACITY CALCULATION

AECOM

Junction J4 - Sai Sha Road / On Chiu Street / Ma On Shan Road	2028 Design Traffic Flows PM	DESIGN:	CHECK:	JOB NO: -	DATE: Oct 20

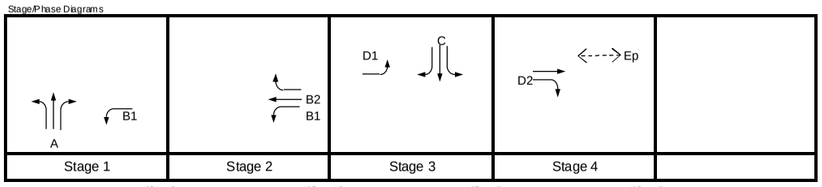
J4

Traffic Flow Diagram (pcu/hr)



No. of stages per cycle	N =	4	
Cycle time	C =	110	sec
Sum(y)	Y =	0.495	
Lost time	L =	24	sec
Total Flow	=	28,940	pcu
Optimum Cycle C_o	$= (1.5 \times L+5)/(1-Y)$ =	81	sec
Min. Cycle Time C_m	$= L/(1-Y)$ =	48	sec
Y_{ult}	$= 0.9-0.0075 \times L$ =	0.720	
$R.C._{ult}$	$= (Y_{ult}-Y)/Yx100\%$ =	45.4	%
Practical Cycle Time C_p	$= 0.9 \times L/(0.9-Y)$ =	53	sec
Y_{max}	= 1-L/C =	0.782	

Stage/Phase Diagrams



Stage 1	Stage 2	Stage 3	Stage 4	
I/G = 8	I/G = 10	I/G = 5	I/G = 5	

Critical Case : A,B2,D1,D2

R.C.(C) = $(0.9xY_{max}-Y)/Yx100\%$ = 42%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR y	CRITICAL y
	A	1	3.700	1	10			1		0		1985	120	111		231	52%		1842	0.126	0.126
	A	1	3.700	1		30	0			0		2125		154	108	262		41%	2082	0.126	
	A	1	3.700	1		25	0	0		0		2125			252	252		100%	2005	0.126	
	B1	1,2	3.750	1	15			1		0		1990	100			100	100%		1809	0.055	
	B2	2	3.750	2				0		0		4260		530		530			4260	0.124	0.124
	B2	2	3.750	1		25	0	0		0		2130			175	175		100%	2009	0.087	
	C	3	3.500	1	15			1		0		1965	60	27		87	69%		1838	0.047	
	C	3	3.500	1		30	0			0		2105		58	39	97		40%	2064	0.047	
	C	3	3.000	1		25	0	0		0		2055			91	91		100%	1939	0.047	
	D1	3	3.300	1	10			1		0		1945	165			165	100%		1691	0.098	0.098
	D2	4	3.300	2				0		0		4170		565		565			4170	0.135	
	D2	4	3.300	1		25	0	0		0		2085			290	290		100%	1967	0.147	0.147
Pedestrian Crossing				GM		FGM															
	Ep	4	min.	11	+	9	=	20	sec												

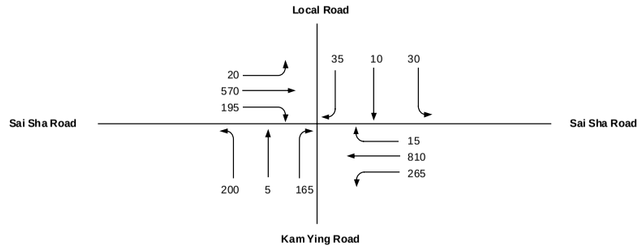
JUNCTION CAPACITY CALCULATION

AECOM

Junction J5 - Sai Sha Road / Kam Ying Road	2028 Design Traffic Flows AM	DESIGN:	CHECK:	JOB NO: -	DATE: Oct 20

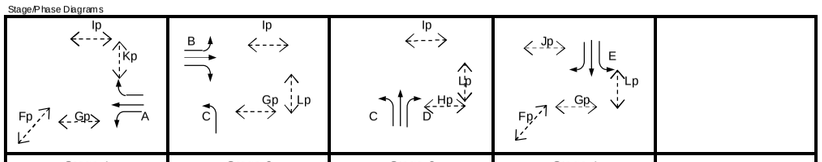
J4

Traffic Flow Diagram
(pcu/hr)



No. of stages per cycle	N =	4	
Cycle time	C =	120	sec
Sum(y)	Y =	0.334	
Lost time	L =	60	sec
Total Flow	=	20,890	pcu
Optimum Cycle C_o	$= (1.5 \times L+5)/(1-Y)$ =	143	sec
Min. Cycle Time C_m	$= L/(1-Y)$ =	90	sec
Y_{ult}	$= 0.9-0.0075 \times L$ =	0.450	
$R.C._{ult}$	$= (Y_{ult}-Y)/Yx100\%$ =	34.6	%
Practical Cycle Time C_p	$= 0.9 \times L/(0.9-Y)$ =	95	sec
Y_{max}	= 1-L/C =	0.500	

Stage/Phase Diagrams



Stage 1	Stage 2	Stage 3	Stage 4	
I/G = 11	I/G = 14	G = 5	I/G = 14	G = 5 I/G = 13

Critical Case : A,B,Hp,Jp

R.C.(C) = $(0.9xY_{max}-Y)/Yx100\%$ = 35%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR y	CRITICAL y
	A	1	3.500	1	15			1		0		1965	265			265	100%		1786	0.148	
	A	1	3.500	2				0		0		4210		810		810			4210	0.192	0.192
	A	1	3.500	1		25	0	0		0		2105			15	15		100%	1986	0.008	
	B	2	4.000	1	15			1		0		2015	20	264		284	7%		2001	0.142	0.142
	B	2	4.000	1				0		0		2155		306		306			2155	0.142	
	B	2	3.500	1		25	0	0		0		2105			195	195		100%	1986	0.098	
	C	2,3	4.500	1	25			1		0		2065	200			200	100%		1948	0.103	
	D	3	3.500	1		25	0	0		0		2105		5	165	170		97%	1989	0.085	
	E	4	5.500	1	15	25	0	1		0		2165	30	10	35	75	40%	47%	2027	0.037	

Pedestrian Crossing				GM		FGM			
Fp	4,1	min.	5	+	6	=	11	sec	
Gp	4,1,2	min.	5	+	5	=	10	sec	
Hp	3	min.	5	+	8	=	13	sec	
Ip	1,2,3	min.	5	+	5	=	10	sec	
Jp	4	min.	5	+	6	=	11	sec	
Lp	2,3,4	min.	5	+	12	=	17	sec	
Kp	1	min.	5	+	7	=	12	sec	

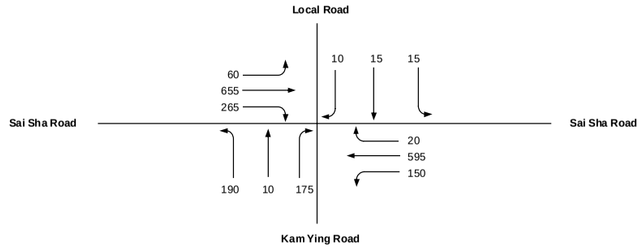
JUNCTION CAPACITY CALCULATION

AECOM

Junction J5 - Sai Sha Road / Kam Ying Road	2028 Design Traffic Flows PM	DESIGN:	CHECK:	JOB NO: -	DATE: Oct 20

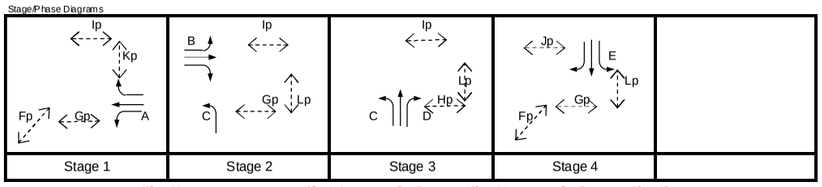
J4

Traffic Flow Diagram
(pcu/hr)



No. of stages per cycle	N =	4	
Cycle time	C =	120	sec
Sum(y)	Y =	0.314	
Lost time	L =	60	sec
Total Flow	=	20,890	pcu
Optimum Cycle C_o	$= (1.5 \times L+5)/(1-Y)$ =	139	sec
Min. Cycle Time C_m	$= L/(1-Y)$ =	87	sec
Y_{ult}	$= 0.9-0.0075 \times L$ =	0.450	
$R.C._{ult}$	$= (Y_{ult}-Y)/Yx100\%$ =	43.2	%
Practical Cycle Time C_p	$= 0.9 \times L/(0.9-Y)$ =	92	sec
Y_{max}	= 1-L/C =	0.500	

Stage/Phase Diagrams



Stage 1	Stage 2	Stage 3	Stage 4	
I/G = 11	I/G = 14	G = 5	I/G = 14	G = 5 I/G = 13

Critical Case : A,B,Hp,Jp

R.C.(C) = $(0.9xY_{max}-Y)/Yx100\%$ = 43%

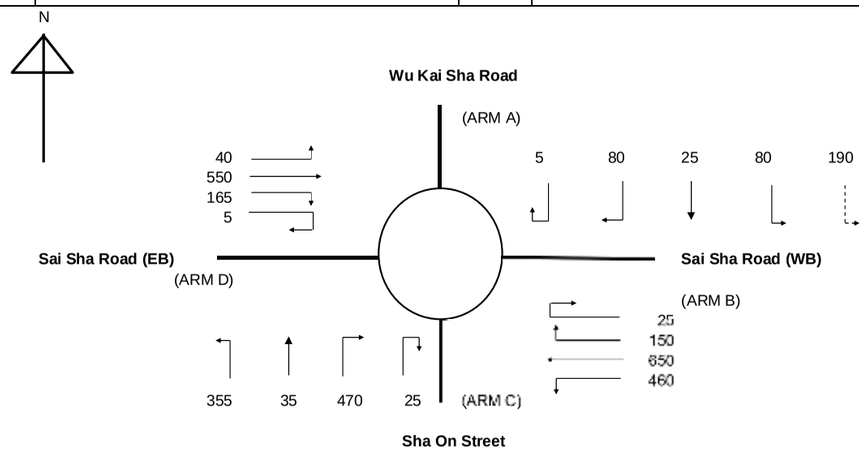
MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR y	CRITICAL y
	A	1	3.500	1	15			1		0		1965	150			150	100%		1786	0.084	
	A	1	3.500	2				0		0		4210		595		595			4210	0.141	0.141
	A	1	3.500	1		25	0	0		0		2105			20	20		100%	1986	0.010	
	B	2	4.000	1	15			1		0		2015	60	282		342	18%		1980	0.173	0.173
	B	2	4.000	1				0		0		2155		373		373			2155	0.173	
	B	2	3.500	1		25	0	0		0		2105			265	265		100%	1986	0.133	
	C	2,3	4.500	1	25			1		0		2065	190			190	100%		1948	0.098	
	D	3	3.500	1		25	0	0		0		2105		10	175	185		95%	1992	0.093	
	E	4	5.500	1	15	25	0	1		0		2165	15	15	10	40	38%	25%	2057	0.019	

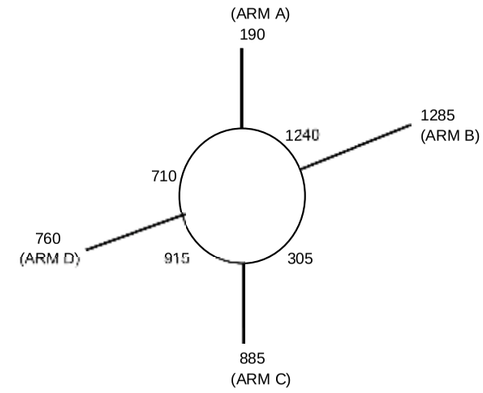
Pedestrian Crossing				GM		FGM			
Fp	4,1	min.	5	+	6	=	11	sec	
Gp	4,1,2	min.	5	+	5	=	10	sec	
Hp	3	min.	5	+	8	=	13	sec	
Ip	1,2,3	min.	5	+	5	=	10	sec	
Jp	4	min.	5	+	6	=	11	sec	
Lp	2,3,4	min.	5	+	12	=	17	sec	
Kp	1	min.	5	+	7	=	12	sec	

ROUNDABOUT CAPACITY CALCULATIO

AECOM

Junction	J6 - Sai Sha Road / Wu Kai Sha Road / Sha On Street	Scenario	2028 Design Traffic Flows AM	Project No.	Prepared By	Checked By	Date
				-	MKCN	SHSN	12-Jul-22





ARM	A	B	C	D	
INPUT PARAMETERS:					
V = Approach half width (m)	7.50	8.50	3.20	7.00	
E = Entry width (m)	8.00	10.50	12.00	9.00	
L = Effective length of flare (m)	5.00	40.00	50.00	35.00	
R = Entry radius (m)	40.00	160.00	35.00	100.00	
D = Inscribed circle diameter (m)	90.00	90.00	90.00	90.00	
A = Entry angle (degree)	30.00	25.00	40.00	25.00	
Q = Entry flow (pcu/h)	190	1285	885	760	*
Qc= Circulating flow across entry (pcu/h)	1240	305	915	710	*
OUTPUT PARAMETERS:					
S = Sharpness of flare = 1.6(E-V)/L	0.16	0.08	0.28	0.09	
K = 1-0.00347(A-30)-0.978(1/R-0.05)	1.02	1.06	0.99	1.06	
X2= V + ((E-V)/(1+2S))	7.88	10.22	8.83	8.69	
M = EXP((D-60)/10)	20.09	20.09	20.09	20.09	
F = 303*X2	2387	3098	2675	2633	
Td= 1+(0.5/(1+M))	1.02	1.02	1.02	1.02	
Fc= 0.21*Td(1+0.2*X2)	0.55	0.65	0.59	0.59	
Qe= K(F-Fc*Qc)	1742	3073	2102	2340	
DFC = Design flow/Capacity = Q/Qe	0.11	0.42	0.42	0.32	

TOTAL ENTRY FLOWS 3120 PCU

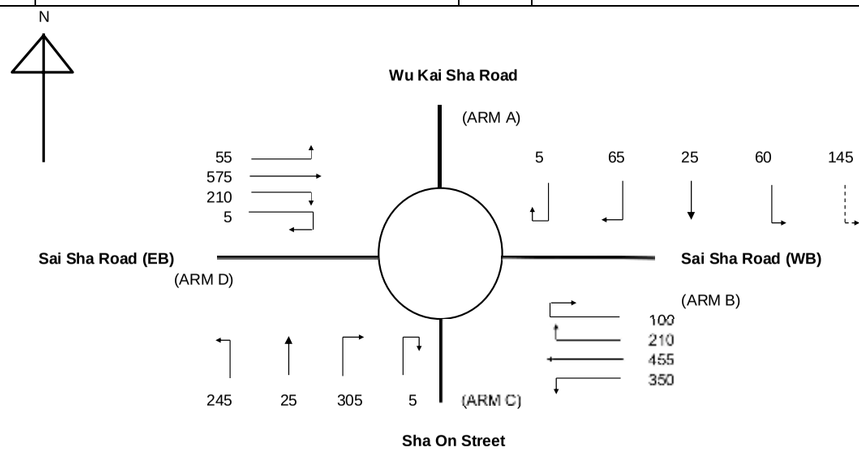
CRITICAL DF(0.42

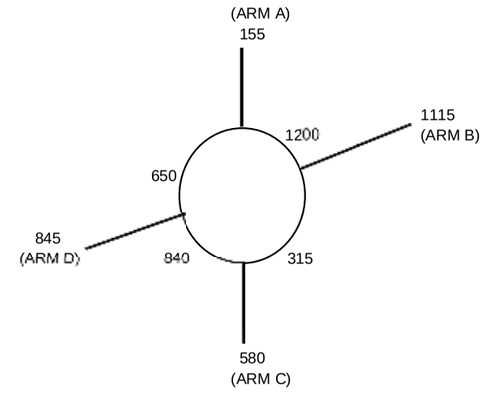
Filename : https://aecom-my.sharepoint.com/personal/magdalene_ku_aecom_com/D

ROUNDABOUT CAPACITY CALCULATIO

AECOM

Junction	J6 - Sai Sha Road / Wu Kai Sha Road / Sha On Street	Scenario	2028 Design Traffic Flows PM	Project No.	Prepared By	Checked By	Date
				-	MKCN	SHSN	12-Jul-22





ARM	A	B	C	D	
INPUT PARAMETERS:					
V = Approach half width (m)	7.50	8.50	3.20	7.00	
E = Entry width (m)	8.00	10.50	12.00	9.00	
L = Effective length of flare (m)	5.00	40.00	50.00	35.00	
R = Entry radius (m)	40.00	160.00	35.00	100.00	
D = Inscribed circle diameter (m)	90.00	90.00	90.00	90.00	
A = Entry angle (degree)	30.00	25.00	40.00	25.00	
Q = Entry flow (pcu/h)	155	1115	580	845	*
Qc= Circulating flow across entry (pcu/h)	1200	315	840	650	*
OUTPUT PARAMETERS:					
S = Sharpness of flare = 1.6(E-V)/L	0.16	0.08	0.28	0.09	
K = 1-0.00347(A-30)-0.978(1/R-0.05)	1.02	1.06	0.99	1.06	
X2= V + ((E-V)/(1+2S))	7.88	10.22	8.83	8.69	
M = EXP((D-60)/10)	20.09	20.09	20.09	20.09	
F = 303*X2	2387	3098	2675	2633	
Td= 1+(0.5/(1+M))	1.02	1.02	1.02	1.02	
Fc= 0.21*Td(1+0.2*X2)	0.55	0.65	0.59	0.59	
Qe= K(F-Fc*Qc)	1765	3066	2146	2378	
DFC = Design flow/Capacity = Q/Qe	0.09	0.36	0.27	0.36	

TOTAL ENTRY FLOWS 2695 PCU

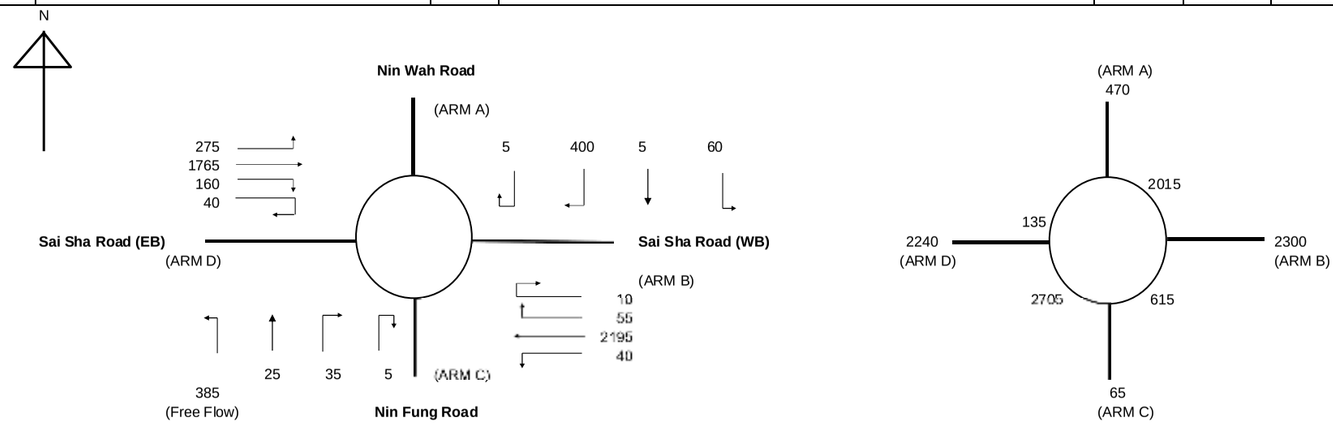
CRITICAL DF(0.36

Filename : https://aecom-my.sharepoint.com/personal/magdalene_ku_aecom_com/D

ROUNDABOUT CAPACITY CALCULATIC

AECOM

Junction	J7 - Sai Sha Road / Nin Wah Road / Nin Fung Road	Scenario	2028 Design Traffic Flows AM	Project No.	Prepared By	Checked By	Date
				-	MKCN	SHSN	12-Jul-22



ARM	A	B	C	D	
INPUT PARAMETERS:					
V = Approach half width (m)	6.00	7.50	5.00	7.30	
E = Entry width (m)	7.00	13.00	8.00	12.00	
L = Effective length of flare (m)	12.00	35.00	7.00	13.00	
R = Entry radius (m)	25.00	25.00	10.00	40.00	
D = Inscribed circle diameter (m)	50.00	50.00	50.00	50.00	
A = Entry angle (degree)	40.00	30.00	40.00	30.00	
Q = Entry flow (pcu/h)	470	2300	65	2240	*
Qc= Circulating flow across entry (pcu/h)	2015	615	2705	135	*
OUTPUT PARAMETERS:					
S = Sharpness of flare = 1.6(E-V)/L	0.13	0.25	0.69	0.58	
K = 1-0.00347(A-30)-0.978(1/R-0.05)	0.98	1.01	0.92	1.02	
X2= V + ((E-V)/(1+2S))	6.79	11.16	6.27	9.48	
M = EXP((D-60)/10)	0.37	0.37	0.37	0.37	
F = 303*X2	2057	3381	1898	2872	
Td= 1+(0.5/(1+M))	1.37	1.37	1.37	1.37	
Fc= 0.21*Td(1+0.2*X2)	0.68	0.93	0.65	0.83	
Qe= K(F-Fc*Qc)	677	2839	138	2828	
DFC = Design flow/Capacity = Q/Qe	0.69	0.81	0.47	0.79	

TOTAL ENTRY FLOWS 5075 PCU

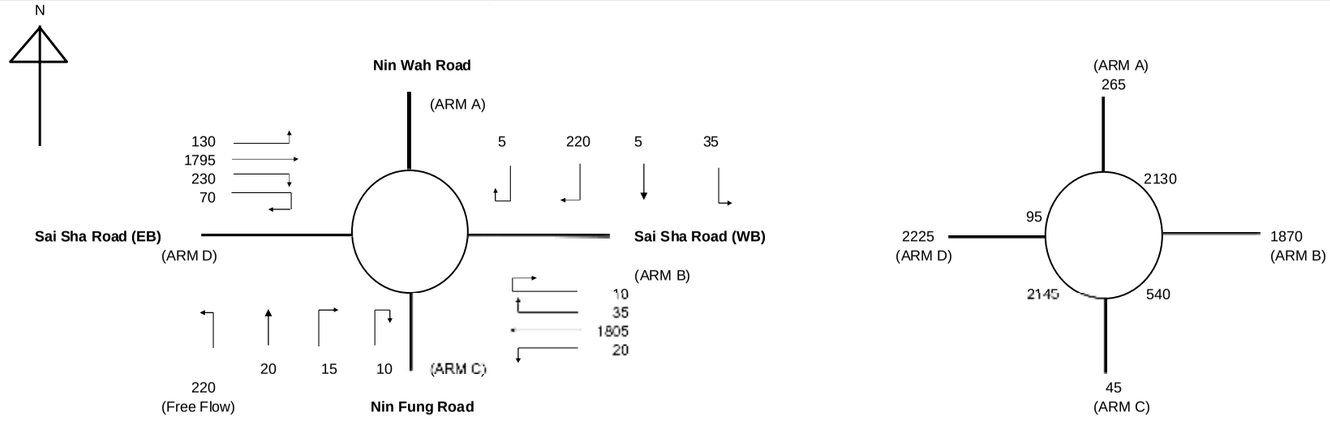
CRITICAL DF(0.81

Filename : https://aecom-my.sharepoint.com/personal/magdalene_ku_aecom_com

ROUNDABOUT CAPACITY CALCULATIC

AECOM

Junction	J7 - Sai Sha Road / Nin Wah Road / Nin Fung Road	Scenario	2028 Design Traffic Flows PM	Project No.	Prepared By	Checked By	Date
				-	MKCN	SHSN	12-Jul-22



ARM	A	B	C	D	
INPUT PARAMETERS:					
V = Approach half width (m)	6.00	7.50	5.00	7.30	
E = Entry width (m)	7.00	13.00	8.00	12.00	
L = Effective length of flare (m)	12.00	35.00	7.00	13.00	
R = Entry radius (m)	25.00	25.00	10.00	40.00	
D = Inscribed circle diameter (m)	50.00	50.00	50.00	50.00	
A = Entry angle (degree)	40.00	30.00	40.00	30.00	
Q = Entry flow (pcu/h)	265	1870	45	2225	*
Qc= Circulating flow across entry (pcu/h)	2130	540	2145	95	*
OUTPUT PARAMETERS:					
S = Sharpness of flare = 1.6(E-V)/L	0.13	0.25	0.69	0.58	
K = 1-0.00347(A-30)-0.978(1/R-0.05)	0.98	1.01	0.92	1.02	
X2= V + ((E-V)/(1+2S))	6.79	11.16	6.27	9.48	
M = EXP((D-60)/10)	0.37	0.37	0.37	0.37	
F = 303*X2	2057	3381	1898	2872	
Td= 1+(0.5/(1+M))	1.37	1.37	1.37	1.37	
Fc= 0.21*Td(1+0.2*X2)	0.68	0.93	0.65	0.83	
Qe= K(F-Fc*Qc)	602	2909	470	2862	
DFC = Design flow/Capacity = Q/Qe	0.44	0.64	0.10	0.78	

TOTAL ENTRY FLOWS 4405 PCU

CRITICAL DF(0.78

Filename : https://aecom-my.sharepoint.com/personal/magdalene_ku_aecom_com

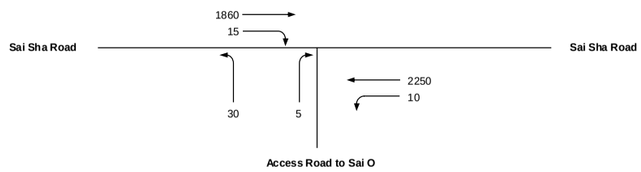
JUNCTION CAPACITY CALCULATION

AECOM

Junction J8 - Sai Sha Road / Access Road to Sai O	2028 Design Traffic Flows AM	DESIGN:	CHECK:	JOB NO: -	DATE: Oct 20

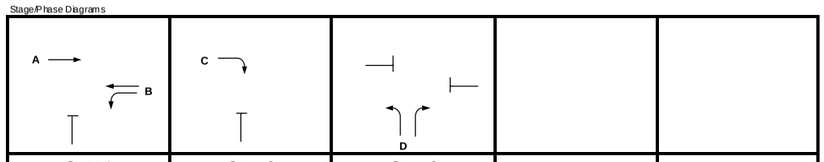
J8

Traffic Flow Diagram
(pcu/hr)



No. of stages per cycle		N =	3	
Cycle time		C =	120	sec
Sum(y)		Y =	0.556	
Lost time		L =	27	sec
Total Flow		=	12,250	pcu
Optimum Cycle C_o	$=(1.5\times L+5)/(1-Y)$ =		102	sec
Min. Cycle Time C_m	$=L/(1-Y)$ =		61	sec
Y_{ult}	$=0.9-0.0075\times L$ =		0.698	
$R.C._{ult}$	$=(Y_{ult}-Y)/Yx100\%$ =		25.5	%
Practical Cycle Time C_p	$=0.9\times L/(0.9-Y)$ =		71	sec
Y_{max}	$=1-L/C$ =		0.775	

Stage/Phase Diagrams



I/G = 5 G = 5 I/G = 8 G = 5 I/G = 5

Critical Case : B,C,D

R.C.(C) $= (0.9xY_{max}-Y)/Yx100\%$ = 26%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR y	CRITICAL y
↑	A	1	3.300	2				1		0		4030		1860		1860			4030	0.462	
↱	C	2	3.300	1		25	0	0		0		2085			15	15		100%	1967	0.008	
↰↑	B	1	3.500	1	10			1		0		1965	10	1080		1090	1%		1962	0.556	
↑	B	1	3.500	1				0		0		2105		1170		1170			2105	0.556	0.556
↰↑↱	D	3	4.500	1	10	20	0	1		0		2065	30		5	35	86%	14%	1813	0.019	

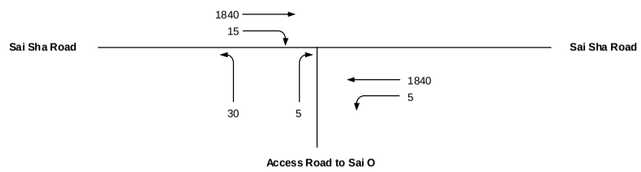
JUNCTION CAPACITY CALCULATION

AECOM

Junction J8 - Sai Sha Road / Access Road to Sai O	2028 Design Traffic Flows PM	DESIGN:	CHECK:	JOB NO: -	DATE: Oct 20

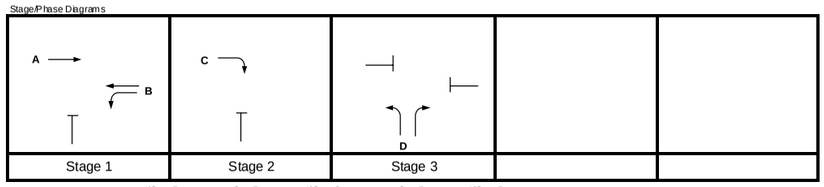
J8

Traffic Flow Diagram
(pcu/hr)



No. of stages per cycle		N =	3	
Cycle time		C =	120	sec
Sum(y)		Y =	0.457	
Lost time		L =	27	sec
Total Flow		=	12,250	pcu
Optimum Cycle C_o	$=(1.5\times L+5)/(1-Y)$ =		84	sec
Min. Cycle Time C_m	$=L/(1-Y)$ =		50	sec
Y_{ult}	$=0.9-0.0075\times L$ =		0.698	
$R.C._{ult}$	$=(Y_{ult}-Y)/Yx100\%$ =		52.8	%
Practical Cycle Time C_p	$=0.9\times L/(0.9-Y)$ =		55	sec
Y_{max}	$=1-L/C$ =		0.775	

Stage/Phase Diagrams



I/G = 5 G = 5 I/G = 8 G = 5 I/G = 5

Critical Case : A,C,D

R.C.(C) $= (0.9xY_{max}-Y)/Yx100\%$ = 53%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR y	CRITICAL y
↑	A	1	3.300	2				1		0		4030		1840		1840			4030	0.457	0.457
↱	C	2	3.300	1		25	0	0		0		2085			15	15		100%	1967	0.008	
↰↑	B	1	3.500	1	10			1		0		1965	5	885		890	1%		1963	0.454	
↑	B	1	3.500	1				0		0		2105		955		955			2105	0.454	
↰↑↱	D	3	4.500	1	10	20	0	1		0		2065	30		5	35	86%	14%	1813	0.019	

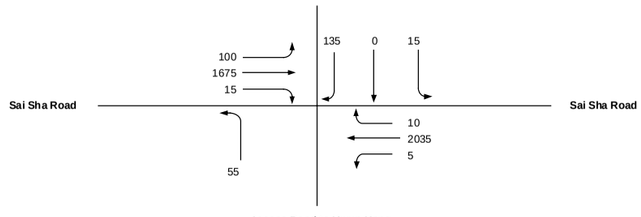
JUNCTION CAPACITY CALCULATION

AECOM

Junction J9 - Sai Sha Road / Access Road to Kwun Hang / Access Road to Che Ha	2028 Design Traffic Flows AM	DESIGN:	CHECK:	JOB NO:	DATE: Oct 20

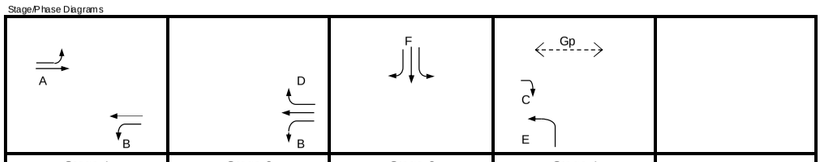
J9

Traffic Flow Diagram (pcu/hr)



No. of stages per cycle	N =	4	
Cycle time	C =	120	sec
Sum(y)	Y =	0.577	
Lost time	L =	25	sec
Total Flow	=	16,450	pcu
Optimum Cycle C_o = (1.5 × L+5)/(1-Y)	=	100	sec
Min. Cycle Time C_m = L/(1-Y)	=	59	sec
Y_{ult} = 0.9-0.0075 × L	=	0.713	
$R.C._{ult}$ = $(Y_{ult}-Y)/Y$x100%	=	23.6	%
Practical Cycle Time C_p = 0.9 × L/(0.9-Y)	=	70	sec
Y_{max} = 1-L/C	=	0.792	

Stage/Phase Diagrams



Stage 1	Stage 2	Stage 3	Stage 4	
I/G =	I/G = 5	I/G = 4	G = 16	I/G = 2

Critical Case : B,F,Gp

R.C.(C) = $(0.9xY_{max}-Y)/Yx100\%$ = 24%

1

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR *y*	CRITICAL *y*
↓	A	1	3.500	1	15			1		0		1965	100	752		852	12%		1942	0.439	
↓	A	1	3.500	1				0		0		2105		923		923			2105	0.439	
↓	C	4	3.500	1		25	1	0		0		2105			15	15		100%	1769	0.008	
↑	B	1,2	3.500	1	10			1		0		1965	5	980		985	1%		1964	0.501	0.501
↑	B	1,2	3.500	1				0		0		2105		1055		1055			2105	0.501	
↑	D	2	3.500	1		20	1	0		0		2105			10	10		100%	1744	0.006	
↰	E	2	3.700	1	10			1		0		1985	55			55	100%		1726	0.032	
↰	F	3	5.000	1	30	25	0	1		0		2115	15	0	135	150	10%	90%	1997	0.075	0.075
Ped.	Gp	4	min.	16	=	9	+	7	sec												

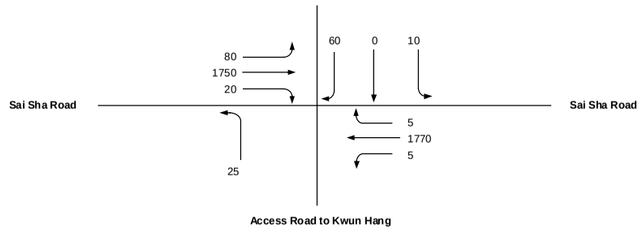
JUNCTION CAPACITY CALCULATION

AECOM

Junction J9 - Sai Sha Road / Access Road to Kwun Hang / Access Road to Che Ha	2028 Design Traffic Flows PM	DESIGN:	CHECK:	JOB NO:	DATE: Oct 20

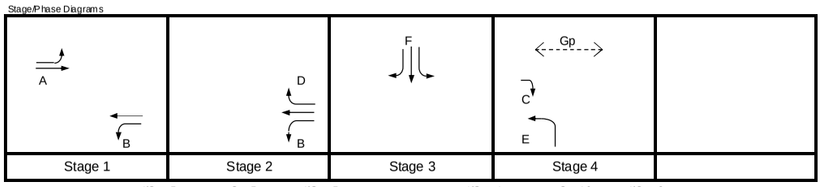
J9

Traffic Flow Diagram (pcu/hr)



No. of stages per cycle	N =	4	
Cycle time	C =	120	sec
Sum(y)	Y =	0.487	
Lost time	L =	35	sec
Total Flow	=	16,450	pcu
Optimum Cycle C_o = (1.5 × L+5)/(1-Y)	=	112	sec
Min. Cycle Time C_m = L/(1-Y)	=	68	sec
Y_{ult} = 0.9-0.0075 × L	=	0.638	
$R.C._{ult}$ = $(Y_{ult}-Y)/Y$x100%	=	31.0	%
Practical Cycle Time C_p = 0.9 × L/(0.9-Y)	=	76	sec
Y_{max} = 1-L/C	=	0.708	

Stage/Phase Diagrams



Stage 1	Stage 2	Stage 3	Stage 4	
I/G = 5	G = 5	I/G = 5	I/G = 4	G = 16 I/G = 2

Critical Case : A,D,F,Gp

R.C.(C) = $(0.9xY_{max}-Y)/Yx100\%$ = 31%

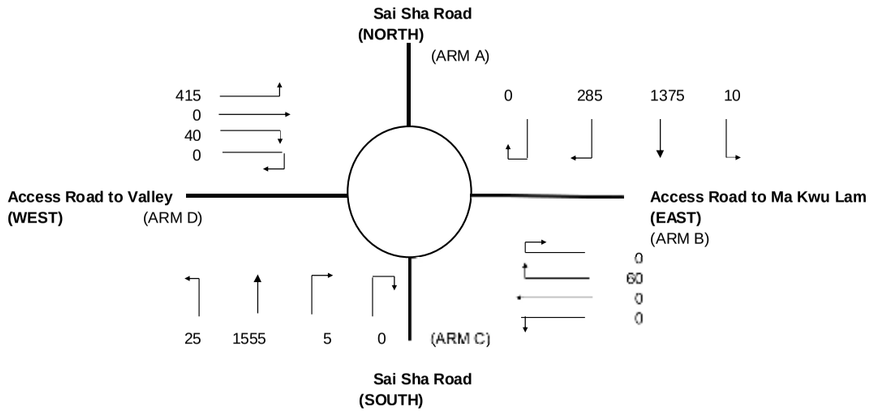
1

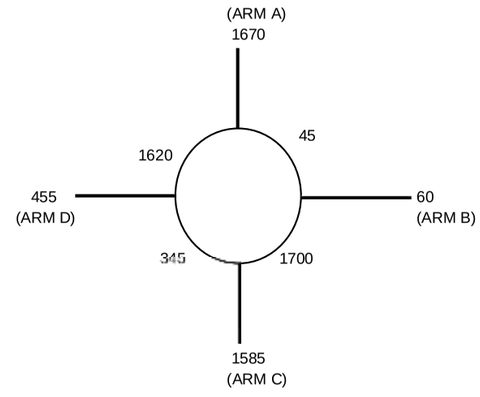
MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR *y*	CRITICAL *y*
↓	A	1	3.500	1	15			1		0		1965	80	799		879	9%		1947	0.452	0.452
↓	A	1	3.500	1				0		0		2105		951		951			2105	0.452	
↓	C	4	3.500	1		25	1	0		0		2105			20	20		100%	1769	0.011	
↑	B	1,2	3.500	1	10			1		0		1965	5	852		857	1%		1963	0.436	
↑	B	1,2	3.500	1				0		0		2105		918		918			2105	0.436	
↑	D	2	3.500	1		20	1	0		0		2105			5	5		100%	1744	0.003	
↰	E	2	3.700	1	10			1		0		1985	25			25	100%		1726	0.014	
↰	F	3	5.000	1	30	25	0	1		0		2115	10	0	60	70	14%	86%	1998	0.035	0.035
Ped.	Gp	4	min.	16	=	9	+	7	sec												

ROUNDABOUT CAPACITY CALCULATIO

MAUNSELL CONSULTANTS ASIA LTD.

Junction	J10- Sai Sha Road / Access Road to Ma Kwu Lam / Access Road to Sai Sha Development (Site A)	Scenario	2028 Design Traffic Flows AM	Project No.	Prepared By	Checked By	Date
				-	MKCN	SHSN	Jul 2022





ARM	A	B	C	D
INPUT PARAMETERS:				
V = Approach half width (m)	7.30	4.00	7.30	7.00
E = Entry width (m)	10.00	6.00	13.00	8.00
L = Effective length of flare (m)	5.00	12.00	15.00	4.00
R = Entry radius (m)	25.00	20.00	45.00	25.00
D = Inscribed circle diameter (m)	50.00	50.00	50.00	50.00
A = Entry angle (degree)	63.00	60.00	69.00	64.00
Q = Entry flow (pcu/h)	1670	60	1585	455
Qc= Circulating flow across entry (pcu/h)	45	1700	345	1620
OUTPUT PARAMETERS:				
S = Sharpness of flare = 1.6(E-V)/L	0.86	0.27	0.61	0.40
K = 1-0.00347(A-30)-0.978(1/R-0.05)	0.90	0.90	0.89	0.89
X2= V + ((E-V)/(1+2S))	8.29	5.30	9.87	7.56
M = EXP((D-60)/10)	0.37	0.37	0.37	0.37
F = 303*X2	2512	1607	2991	2289
Td= 1+(0.5/(1+M))	1.37	1.37	1.37	1.37
Fc= 0.21*Td(1+0.2*X2)	0.76	0.59	0.85	0.72
Qe= K(F-Fc*Qc)	2218	540	2405	1001
DFC = Design flow/Capacity = Q/Qe	0.75	0.11	0.66	0.45

TOTAL ENTRY FLOWS 3770 PCU

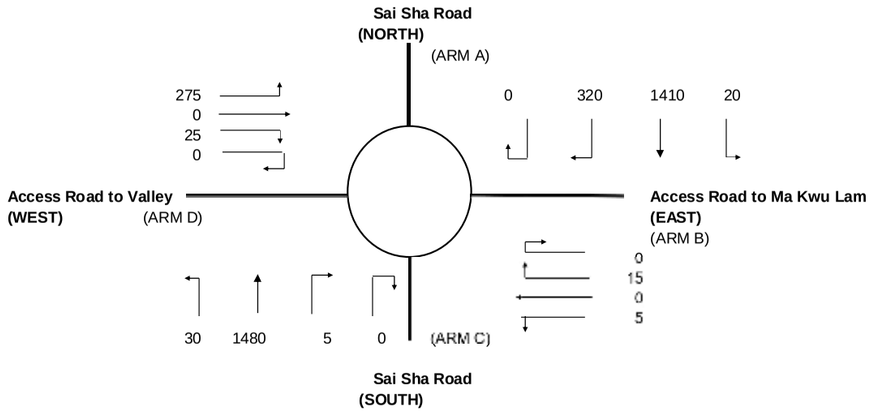
CRITICAL DFC 0.75

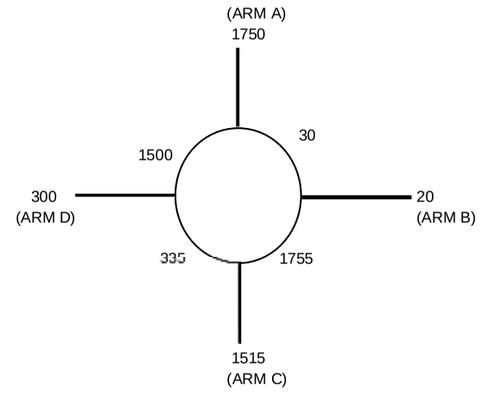
Filename :

ROUNDABOUT CAPACITY CALCULATIO

MAUNSELL CONSULTANTS ASIA LTD.

Junction	J10- Sai Sha Road / Access Road to Ma Kwu Lam / Access Road to Sai Sha Development (Site A)	Scenario	2028 Design Traffic Flows PM	Project No.	Prepared By	Checked By	Date
				-	MKCN	SHSN	Jul 2022





ARM	A	B	C	D
INPUT PARAMETERS:				
V = Approach half width (m)	7.30	4.00	7.30	7.00
E = Entry width (m)	10.00	6.00	13.00	8.00
L = Effective length of flare (m)	5.00	12.00	15.00	4.00
R = Entry radius (m)	25.00	20.00	45.00	25.00
D = Inscribed circle diameter (m)	50.00	50.00	50.00	50.00
A = Entry angle (degree)	63.00	60.00	69.00	64.00
Q = Entry flow (pcu/h)	1750	20	1515	300
Qc= Circulating flow across entry (pcu/h)	30	1755	335	1500
OUTPUT PARAMETERS:				
S = Sharpness of flare = 1.6(E-V)/L	0.86	0.27	0.61	0.40
K = 1-0.00347(A-30)-0.978(1/R-0.05)	0.90	0.90	0.89	0.89
X2= V + ((E-V)/(1+2S))	8.29	5.30	9.87	7.56
M = EXP((D-60)/10)	0.37	0.37	0.37	0.37
F = 303*X2	2512	1607	2991	2289
Td= 1+(0.5/(1+M))	1.37	1.37	1.37	1.37
Fc= 0.21*Td(1+0.2*X2)	0.76	0.59	0.85	0.72
Qe= K(F-Fc*Qc)	2228	511	2413	1078
DFC = Design flow/Capacity = Q/Qe	0.79	0.04	0.63	0.28

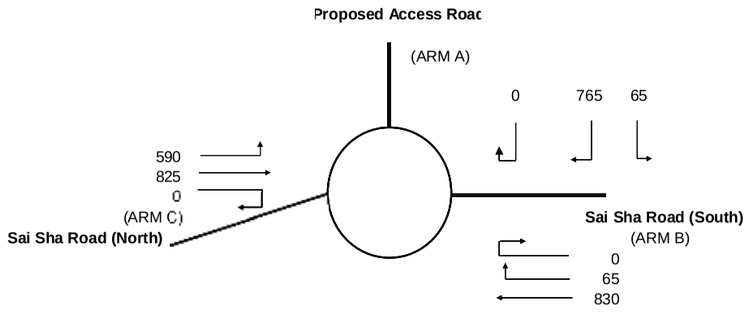
TOTAL ENTRY FLOWS 3585 PCU

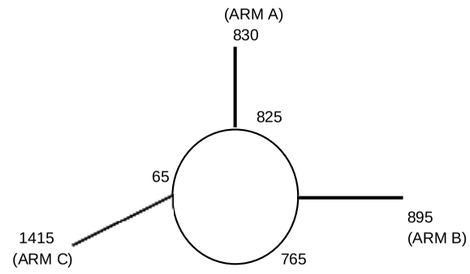
CRITICAL DFC 0.79

Filename :

JUNCTION CAPACITY CALCULATION

J11 - Sai Sha Road / Access Road to Tseng Tau	2028 Design Traffic Flows AM	FILENAME :





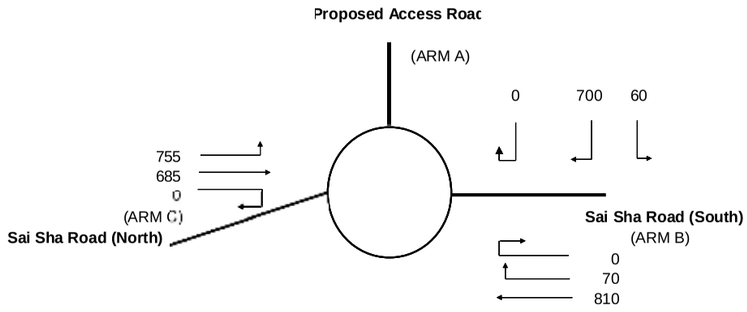
ARM	A	B	C
INPUT PARAMETERS:			
V = Approach half width (m)	5.15	7.30	7.30
E = Entry width (m)	9.00	9.00	9.00
L = Effective length of flare (m)	20.00	4.50	4.50
R = Entry radius (m)	35.00	30.00	40.00
D = Inscribed circle diameter (m)	50.00	50.00	50.00
A = Entry angle (degree)	43.00	61.00	43.00
Q = Entry flow (pcu/h)	830	895	1415
Qc= Circulating flow across entry (pcu/h)	825	765	65
OUTPUT PARAMETERS:			
S = Sharpness of flare = 1.6(E-V)/L	0.31	0.60	0.60
K = 1-0.00347(A-30)-0.978(1/R-0.05)	0.98	0.91	0.98
X2= V + ((E-V)/(1+2S))	7.53	8.07	8.07
M = EXP((D-60)/10)	0.37	0.37	0.37
F = 303*X2	2282	2445	2445
Td= 1+(0.5/(1+M))	1.37	1.37	1.37
Fc= 0.21*Td(1+0.2*X2)	0.72	0.75	0.75
Qe= K(F-Fc*Qc)	1649	1701	2347
DFC = Design flow/Capacity = Q/Qe	0.50	0.53	0.60

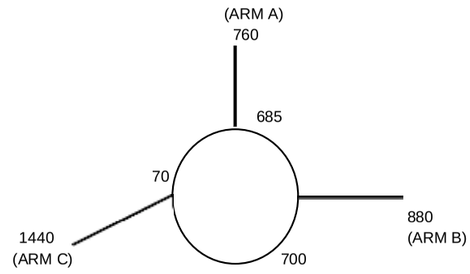
TOTAL ENTRY FLOWS = 3140 PCU

CRITICAL DFC = 0.60

JUNCTION CAPACITY CALCULATION

J11 - Sai Sha Road / Access Road to Tseng Tau	2028 Design Traffic Flows PM	FILENAME :





ARM	A	B	C
INPUT PARAMETERS:			
V = Approach half width (m)	5.15	7.30	7.30
E = Entry width (m)	9.00	9.00	9.00
L = Effective length of flare (m)	20.00	4.50	4.50
R = Entry radius (m)	35.00	30.00	40.00
D = Inscribed circle diameter (m)	50.00	50.00	50.00
A = Entry angle (degree)	43.00	61.00	43.00
Q = Entry flow (pcu/h)	760	880	1440
Qc= Circulating flow across entry (pcu/h)	685	700	70
OUTPUT PARAMETERS:			
S = Sharpness of flare = 1.6(E-V)/L	0.31	0.60	0.60
K = 1-0.00347(A-30)-0.978(1/R-0.05)	0.98	0.91	0.98
X2= V + ((E-V)/(1+2S))	7.53	8.07	8.07
M = EXP((D-60)/10)	0.37	0.37	0.37
F = 303*X2	2282	2445	2445
Td= 1+(0.5/(1+M))	1.37	1.37	1.37
Fc= 0.21*Td(1+0.2*X2)	0.72	0.75	0.75
Qe= K(F-Fc*Qc)	1747	1745	2343
DFC = Design flow/Capacity = Q/Qe	0.44	0.50	0.61

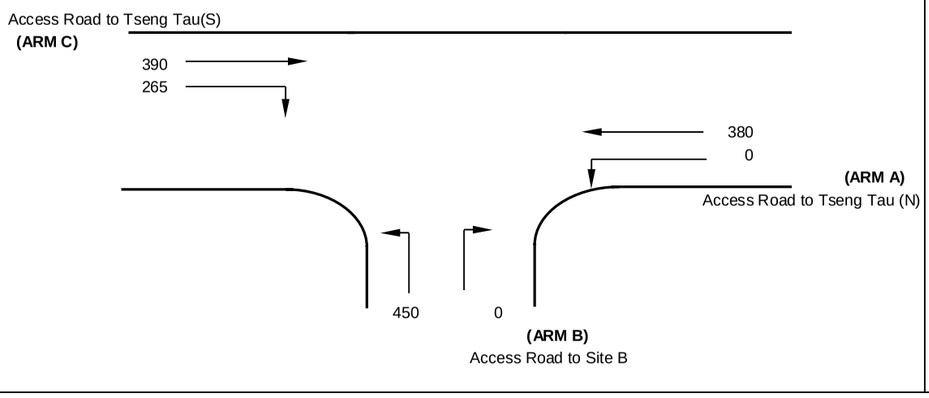
TOTAL ENTRY FLOWS = 3080 PCU

CRITICAL DFC = 0.61

PRIORITY JUNCTION CAPACITY CALCULATION

AECOM

Junction J12a - Access Road to Tseng Tau / Access Road to Site B	2028 Design Traffic Flows AM	Designed By : DL	Checked By : DL	Job No. :	Date : Jul 22



NOTES : (GEOMETRIC INPUT DATA) J12a

W	= Major Road Width (6.4 - 20.0)
W cr	= Central Reserve width (1.2 - 9.0, kerbed central reserve only)
W b-a	= Lane width available to vehicle waiting in stream b-a (2.05 - 4.07)
W b-c	= Lane width available to vehicle waiting in stream b-c (2.05 - 4.07)
W c-b	= Lane width available to vehicle waiting in stream c-b (2.05 - 4.07)
Vl b-a	= Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0)
Vr b-a	= Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0)
Vr b-c	= Visibilitu to the right for vehicles waiting in stream b-c (17.0 - 250.0)
Vr c-b	= Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0)
D	= Stream-specific B-A
E	= Stream-specific B-C
F	= Stream-specific C-B
Y	= (1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.3	(metres)
W cr	=	0	(metres)
q a-b	=	0	(pcu/hr)
q a-c	=	380	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	3.5	(metres)
Vr c-b	=	100	(metres)
q c-a	=	390	(pcu/hr)
q c-b	=	265	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.7	(metres)
W b-c	=	3.7	(metres)
Vl b-a	=	100	(metres)
Vr b-a	=	100	(metres)
Vr b-c	=	100	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	450	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.957017
E	=	0.986615
F	=	0.968154
Y	=	0.748150

THE CAPACITY OF MOVEMENT :

Q b-a	=	338
Q b-c	=	633
Q c-b	=	621
Q b-ac	=	633

CRITICAL DFC = 0.71

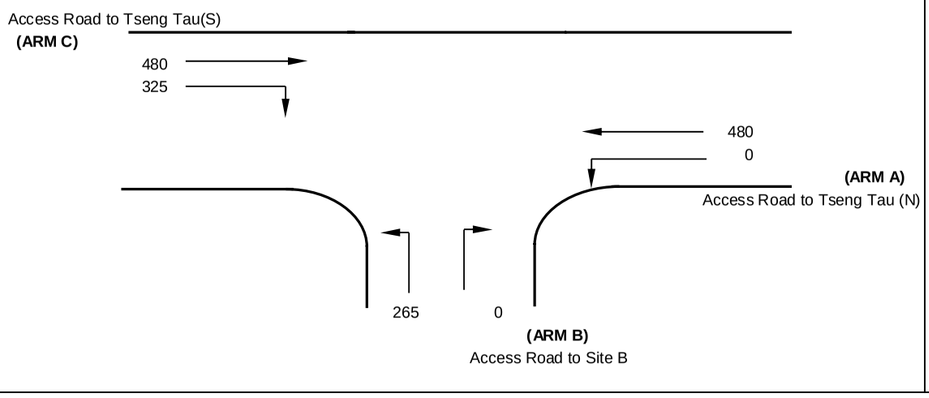
COMPARISION OF DESIGN FLOW TO CAPACITY :

DFC b-a	=	0.00
DFC b-c	=	0.71
DFC c-b	=	0.43
DFC b-ac	=	0.71

PRIORITY JUNCTION CAPACITY CALCULATION

AECOM

Junction J12a - Access Road to Tseng Tau / Access Road to Site B	2028 Design Traffic Flows PM	Designed By : DL	Checked By : DL	Job No. :	Date : Jul 22



NOTES : (GEOMETRIC INPUT DATA) J12a

W	= Major Road Width (6.4 - 20.0)
W cr	= Central Reserve width (1.2 - 9.0, kerbed central reserve only)
W b-a	= Lane width available to vehicle waiting in stream b-a (2.05 - 4.07)
W b-c	= Lane width available to vehicle waiting in stream b-c (2.05 - 4.07)
W c-b	= Lane width available to vehicle waiting in stream c-b (2.05 - 4.07)
Vl b-a	= Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0)
Vr b-a	= Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0)
Vr b-c	= Visibilitu to the right for vehicles waiting in stream b-c (17.0 - 250.0)
Vr c-b	= Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0)
D	= Stream-specific B-A
E	= Stream-specific B-C
F	= Stream-specific C-B
Y	= (1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.3	(metres)
W cr	=	0	(metres)
q a-b	=	0	(pcu/hr)
q a-c	=	480	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	3.5	(metres)
Vr c-b	=	100	(metres)
q c-a	=	480	(pcu/hr)
q c-b	=	325	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.7	(metres)
W b-c	=	3.7	(metres)
Vl b-a	=	100	(metres)
Vr b-a	=	100	(metres)
Vr b-c	=	100	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	265	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.957017
E	=	0.986615
F	=	0.968154
Y	=	0.748150

THE CAPACITY OF MOVEMENT :

Q b-a	=	275
Q b-c	=	606
Q c-b	=	595
Q b-ac	=	606

CRITICAL DFC = 0.55

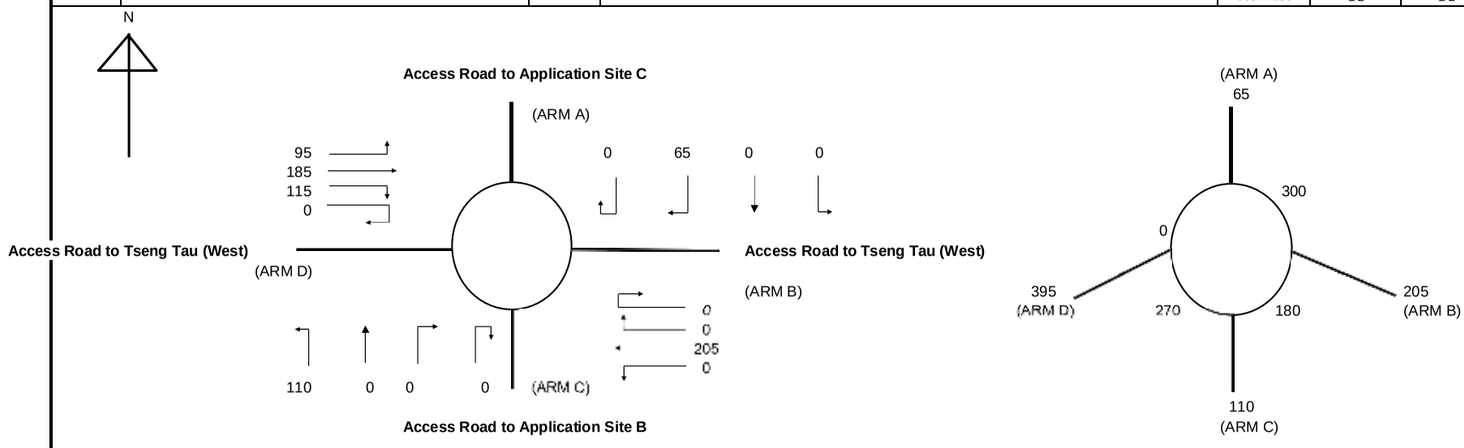
COMPARISION OF DESIGN FLOW TO CAPACITY :

DFC b-a	=	0.00
DFC b-c	=	0.44
DFC c-b	=	0.55
DFC b-ac	=	0.44

ROUNDABOUT CAPACITY CALCULATIO

AECOM

Junction	J13 - Access Road to Tseng Tau / Access Road to Application Site C	Scenario	2028 Design Traffic Flows AM	Project No.	Prepared By	Checked By	Date
				60547289	DL	DL	12-Jul-22



ARM	A	B	C	D
INPUT PARAMETERS:				
V = Approach half width (m)	5.20	5.20	5.40	5.20
E = Entry width (m)	5.50	6.30	7.00	6.80
L = Effective length of flare (m)	3.00	13.00	25.00	25.00
R = Entry radius (m)	11.00	18.00	18.00	25.00
D = Inscribed circle diameter (m)	44.00	44.00	44.00	44.00
A = Entry angle (degree)	59.00	54.00	42.00	34.00
Q = Entry flow (pcu/h)	65	205	110	395
Qc= Circulating flow across entry (pcu/h)	300	180	270	0
OUTPUT PARAMETERS:				
S = Sharpness of flare = 1.6(E-V)/L	0.16	0.14	0.10	0.10
K = 1-0.00347(A-30)-0.978(1/R-0.05)	0.86	0.91	0.95	1.00
X2= V + ((E-V)/(1+2S))	5.43	6.07	6.73	6.53
M = EXP((D-60)/10)	0.20	0.20	0.20	0.20
F = 303*X2	1644	1838	2039	1978
Td= 1+(0.5/(1+M))	1.42	1.42	1.42	1.42
Fc= 0.21*Td(1+0.2*X2)	0.62	0.66	0.70	0.69
Qe= K(F-Fc*Qc)	1253	1567	1763	1970
DFC = Design flow/Capacity = Q/Qe	0.05	0.13	0.06	0.20

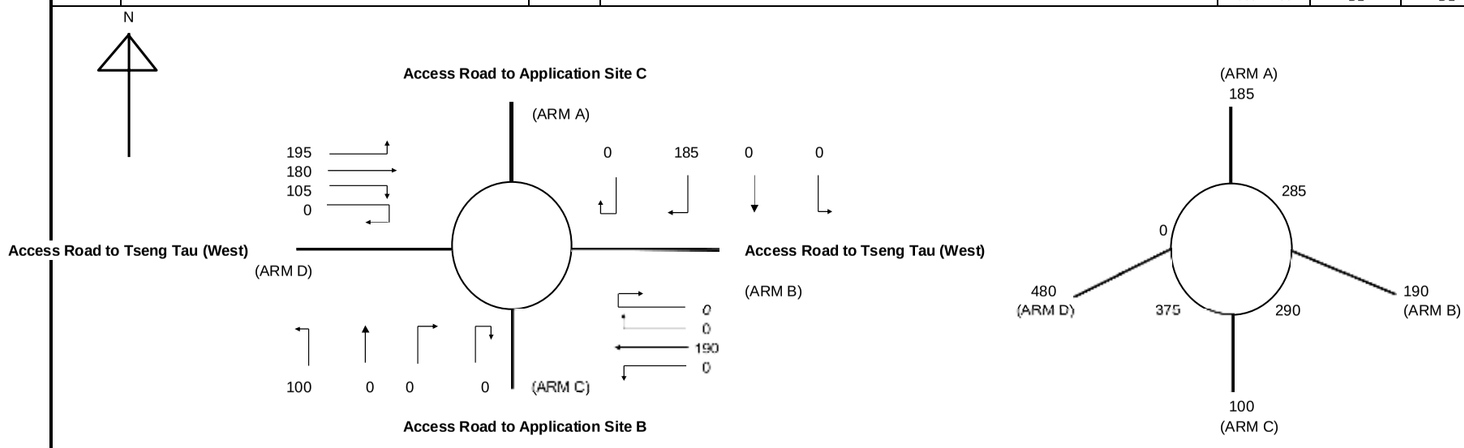
TOTAL ENTRY FLOWS 775 PCU

CRITICAL DFC 0.20

ROUNDABOUT CAPACITY CALCULATIO

AECOM

Junction	J13 - Access Road to Tseng Tau / Access Road to Application Site C	Scenario	2028 Design Traffic Flows PM	Project No.	Prepared By	Checked By	Date
				60547289	DL	DL	12-Jul-22



ARM	A	B	C	D
INPUT PARAMETERS:				
V = Approach half width (m)	5.20	5.20	5.40	5.20
E = Entry width (m)	5.50	6.30	7.00	6.80
L = Effective length of flare (m)	3.00	13.00	25.00	25.00
R = Entry radius (m)	11.00	18.00	18.00	25.00
D = Inscribed circle diameter (m)	44.00	44.00	44.00	44.00
A = Entry angle (degree)	59.00	54.00	42.00	34.00
Q = Entry flow (pcu/h)	185	190	100	480
Qc= Circulating flow across entry (pcu/h)	285	290	375	0
OUTPUT PARAMETERS:				
S = Sharpness of flare = 1.6(E-V)/L	0.16	0.14	0.10	0.10
K = 1-0.00347(A-30)-0.978(1/R-0.05)	0.86	0.91	0.95	1.00
X2= V + ((E-V)/(1+2S))	5.43	6.07	6.73	6.53
M = EXP((D-60)/10)	0.20	0.20	0.20	0.20
F = 303*X2	1644	1838	2039	1978
Td= 1+(0.5/(1+M))	1.42	1.42	1.42	1.42
Fc= 0.21*Td(1+0.2*X2)	0.62	0.66	0.70	0.69
Qe= K(F-Fc*Qc)	1261	1501	1693	1970
DFC = Design flow/Capacity = Q/Qe	0.15	0.13	0.06	0.24

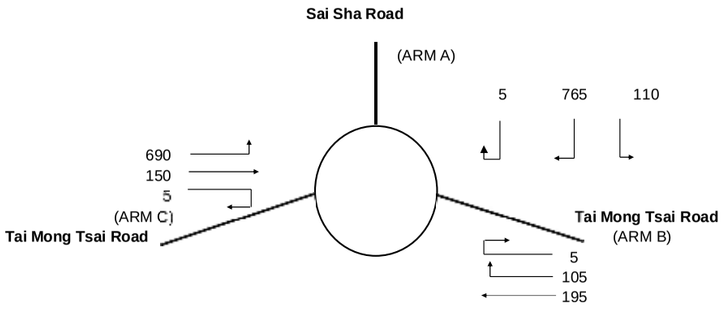
TOTAL ENTRY FLOWS 955 PCU

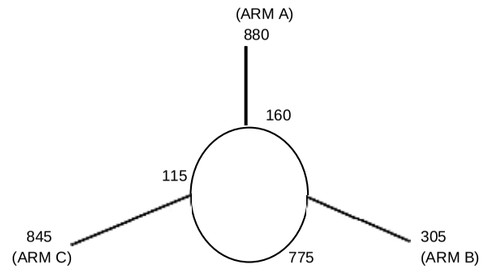
CRITICAL DFC 0.24

ROUNDABOUT CAPACITY CALCULATION

AECOM

Junction	J14 - Sai Sha Road / Tai Mong Tsai Road	Scenario	2028 Design Traffic Flows AM	Project No.	Prepared By	Checked By	Date
				-	mkcn	shsn	12-Jul-22





ARM	A	B	C
INPUT PARAMETERS:			
V = Approach half width (m)	4.30	3.00	3.30
E = Entry width (m)	7.50	8.00	8.00
L = Effective length of flare (m)	15.00	20.00	20.00
R = Entry radius (m)	16.00	80.00	100.00
D = Inscribed circle diameter (m)	32.00	32.00	32.00
A = Entry angle (degree)	45.00	30.00	45.00
Q = Entry flow (pcu/h)	880	305	845
Qc= Circulating flow across entry (pcu/h)	160	775	115
OUTPUT PARAMETERS:			
S = Sharpness of flare = 1.6(E-V)/L	0.34	0.40	0.38
K = 1-0.00347(A-30)-0.978(1/R-0.05)	0.94	1.04	0.99
X2= V + ((E-V)/(1+2S))	6.20	5.78	5.98
M = EXP((D-60)/10)	0.06	0.06	0.06
F = 303*X2	1879	1751	1813
Td= 1+(0.5/(1+M))	1.47	1.47	1.47
Fc= 0.21*Td(1+0.2*X2)	0.69	0.67	0.68
Qe= K(F-Fc*Qc)	1655	1280	1712
DFC = Design flow/Capacity = Q/Qe	0.53	0.24	0.49

TOTAL ENTRY FLOWS = 2030 PCU

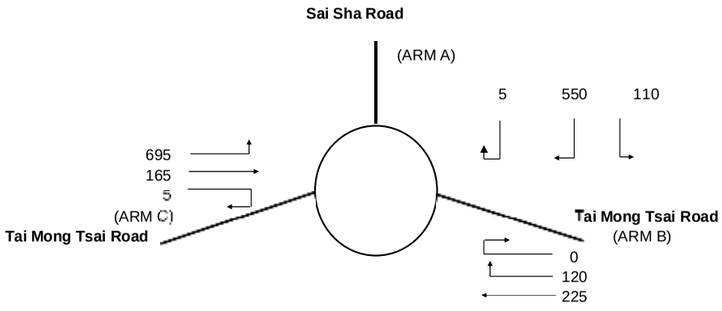
CRITICAL DFC = 0.53

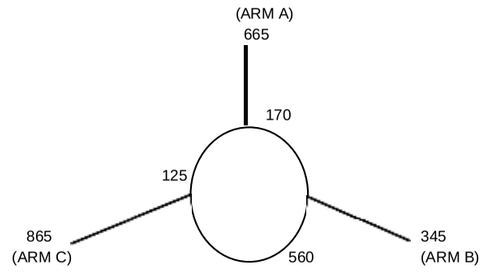
Filename: https://aecom-my.sharepoint.com/personal/magdalene_ku_aecom_co

ROUNDABOUT CAPACITY CALCULATION

AECOM

Junction	J14 - Sai Sha Road / Tai Mong Tsai Road	Scenario	2028 Design Traffic Flows PM	Project No.	Prepared By	Checked By	Date
				-	mkcn	shsn	12-Jul-22





ARM	A	B	C
INPUT PARAMETERS:			
V = Approach half width (m)	4.30	3.00	3.30
E = Entry width (m)	7.50	8.00	8.00
L = Effective length of flare (m)	15.00	20.00	20.00
R = Entry radius (m)	16.00	80.00	100.00
D = Inscribed circle diameter (m)	32.00	32.00	32.00
A = Entry angle (degree)	45.00	30.00	45.00
Q = Entry flow (pcu/h)	665	345	865
Qc= Circulating flow across entry (pcu/h)	170	560	125
OUTPUT PARAMETERS:			
S = Sharpness of flare = 1.6(E-V)/L	0.34	0.40	0.38
K = 1-0.00347(A-30)-0.978(1/R-0.05)	0.94	1.04	0.99
X2= V + ((E-V)/(1+2S))	6.20	5.78	5.98
M = EXP((D-60)/10)	0.06	0.06	0.06
F = 303*X2	1879	1751	1813
Td= 1+(0.5/(1+M))	1.47	1.47	1.47
Fc= 0.21*Td(1+0.2*X2)	0.69	0.67	0.68
Qe= K(F-Fc*Qc)	1648	1428	1706
DFC = Design flow/Capacity = Q/Qe	0.40	0.24	0.51

TOTAL ENTRY FLOWS = 1875 PCU

CRITICAL DFC = 0.51

Filename: https://aecom-my.sharepoint.com/personal/magdalene_ku_aecom_co

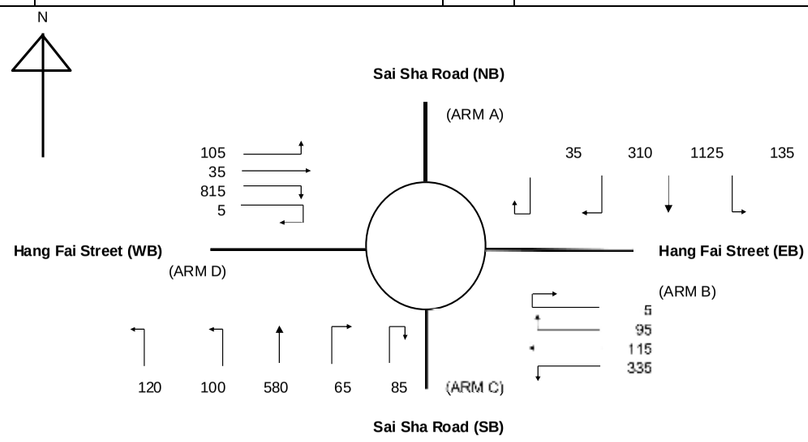
ANNEX A4

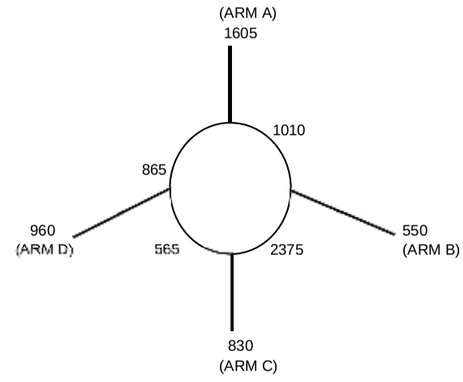
CALCULATION SHEETS
DESIGN TRAFFIC FLOWS
(SENSITIVITY TEST)

ROUNDABOUT CAPACITY CALCULATIO

AECOM

Junction	J1 - Sai Sha Road / Hang Fai Street	Scenario	2028 Design Traffic Flows (Sensitivity Test Scenario) (With Adjacent School Developme	Project No.	Prepared By	Checked By	Date
				60547289			12-Jul-22





ARM	A	B	C	D
INPUT PARAMETERS:				
V = Approach half width (m)	11.00	7.50	11.00	7.00
E = Entry width (m)	13.00	12.00	13.00	13.00
L = Effective length of flare (m)	0.01	15.00	0.01	30.00
R = Entry radius (m)	80.00	60.00	60.00	50.00
D = Inscribed circle diameter (m)	50.00	50.00	50.00	50.00
A = Entry angle (degree)	30.00	30.00	30.00	25.00
Q = Entry flow (pcu/h)	1605	550	830	960
Qc= Circulating flow across entry (pcu/h)	1010	2375	565	865
OUTPUT PARAMETERS:				
S = Sharpness of flare = 1.6(E-V)/L	320.00	0.48	320.00	0.32
K = 1-0.00347(A-30)-0.978(1/R-0.05)	1.04	1.03	1.03	1.05
X2= V + ((E-V)/(1+2S))	11.00	9.80	11.00	10.66
M = EXP((D-60)/10)	0.37	0.37	0.37	0.37
F = 303*X2	3334	2968	3334	3230
Td= 1+(0.5/(1+M))	1.37	1.37	1.37	1.37
Fc= 0.21*Td(1+0.2*X2)	0.92	0.85	0.92	0.90
Qe= K(F-Fc*Qc)	2495	984	2907	2567
DFC = Design flow/Capacity = Q/Qe	0.64	0.56	0.29	0.37

TOTAL ENTRY FLOWS 3945 PCU

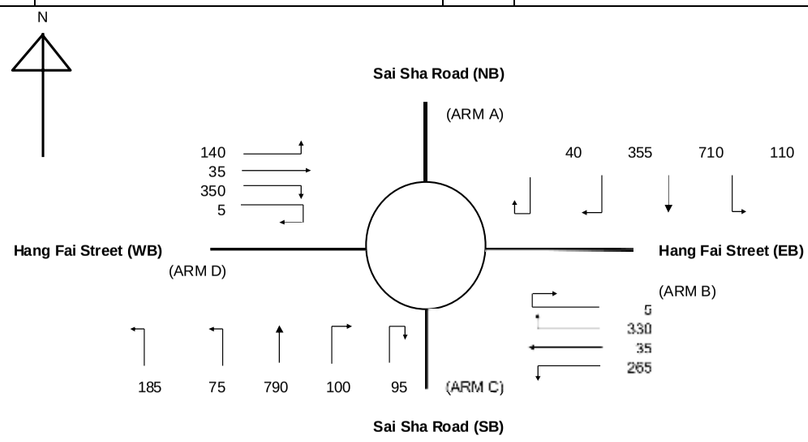
CRITICAL DFC 0.64

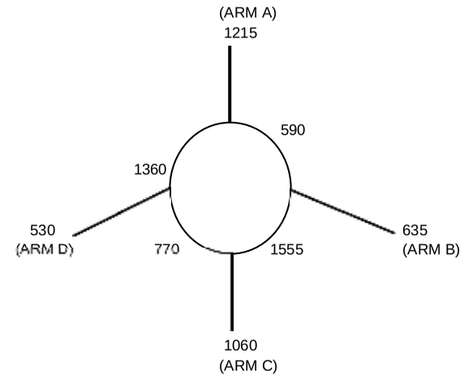
Filename : https://aecom-my.sharepoint.com/personal/magdalene_ku_aecom_com

ROUNDABOUT CAPACITY CALCULATIO

AECOM

Junction	J1 - Sai Sha Road / Hang Fai Street	Scenario	2028 Design Traffic Flows (Sensitivity Test Scenario) (With Adjacent School Developme	Project No.	Prepared By	Checked By	Date
				60547289			12-Jul-22





ARM	A	B	C	D
INPUT PARAMETERS:				
V = Approach half width (m)	11.00	7.50	11.00	7.00
E = Entry width (m)	13.00	12.00	13.00	13.00
L = Effective length of flare (m)	0.01	15.00	0.01	30.00
R = Entry radius (m)	80.00	60.00	60.00	50.00
D = Inscribed circle diameter (m)	50.00	50.00	50.00	50.00
A = Entry angle (degree)	30.00	30.00	30.00	25.00
Q = Entry flow (pcu/h)	1215	635	1060	530
Qc= Circulating flow across entry (pcu/h)	590	1555	770	1360
OUTPUT PARAMETERS:				
S = Sharpness of flare = 1.6(E-V)/L	320.00	0.48	320.00	0.32
K = 1-0.00347(A-30)-0.978(1/R-0.05)	1.04	1.03	1.03	1.05
X2= V + ((E-V)/(1+2S))	11.00	9.80	11.00	10.66
M = EXP((D-60)/10)	0.37	0.37	0.37	0.37
F = 303*X2	3334	2968	3334	3230
Td= 1+(0.5/(1+M))	1.37	1.37	1.37	1.37
Fc= 0.21*Td(1+0.2*X2)	0.92	0.85	0.92	0.90
Qe= K(F-Fc*Qc)	2895	1702	2713	2102
DFC = Design flow/Capacity = Q/Qe	0.42	0.37	0.39	0.25

TOTAL ENTRY FLOWS 3440 PCU

CRITICAL DFC 0.42

Filename : https://aecom-my.sharepoint.com/personal/magdalene_ku_aecom_com

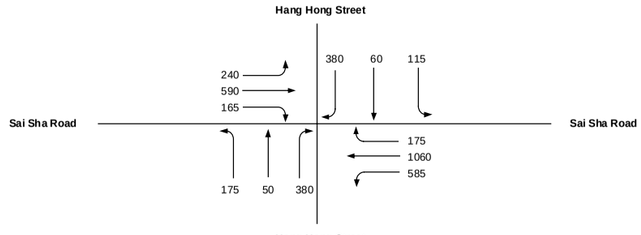
JUNCTION CAPACITY CALCULATION

AECOM

Junction J2 - Sai Sha Road / Hang Hong Street	2028 Design Traffic Flows (Sensitivity Test Scenario) (With Adjacent School Dev	DESIGN:	CHECK:	JOB NO: 60280227	DATE: Oct 20

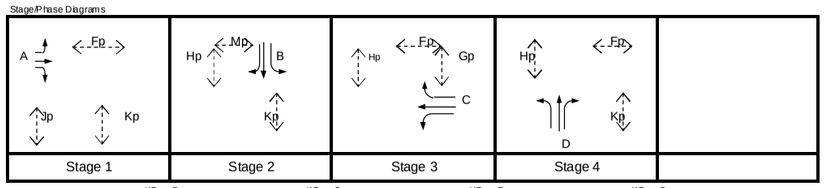
J2

Traffic Flow Diagram
(pcu/hr)



No. of stages per cycle	N =	4	
Cycle time	C =	115	sec
Sum(y)	Y =	0.567	
Lost time	L =	25	sec
Total Flow	=	35,045	pcu
Optimum Cycle C_o = (1.5 × L+5)/(1-Y)	=	98	sec
Min. Cycle Time C_m = L/(1-Y)	=	58	sec
Y_{ult} = 0.9-0.0075 × L	=	0.713	
$R.C._{ult}$ = (Y_{ult}-Y)/Yx100%	=	25.7	%
Practical Cycle Time C_p = 0.9 × L/(0.9-Y)	=	67	sec
Y_{max} = 1-L/C	=	0.783	

Stage/Phase Diagrams



Critical Case : A,B,C,D

R.C.(C) = (0.9xY_{max}-Y)/Yx100% = 24%

1

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR y	CRITICAL y
	C	3	3.500	1	10			1		0		1965	355			355	100%		1709	0.208	0.208
	C	3	3.500	1	15					0		2105	230	185		415	55%		1994	0.208	
	C	3	3.500	2				0		0		4210		875		875			4210	0.208	
	C	3	5.500	1		25	0	1		0		2165			175	175		100%	2042	0.086	
	A	1	3.300	1	15			1		0		1945	240			240	100%		1768	0.136	0.136
	A	1	3.300	3				0		0		6255		590		590			6255	0.094	
	A	1	4.000	2		25	0	1		0		4170			165	165		100%	3934	0.042	
	B	2	3.300	1	15			1		0		1945	115			115	100%		1768	0.065	
	B	2	3.300	1	20	20	0			0		2085	0	60	165	225	0%	73%	1976	0.114	
	B	2	3.300	1		15	0	0		0		2085			215	215		100%	1895	0.114	0.114
	D	4	3.300	1	10			1		0		1945	175			175	100%		1691	0.103	
	D	4	3.300	1		25	0	0		0		2085		50	168	218		77%	1993	0.109	
	D	4	3.300	1		20	0	0		0		2085			212	212		100%	1940	0.109	0.109
	Jp	1	min.	7	+	14	=	21	sec												
	Hp	2,3,4	min.	7	+	14	=	21	sec												
	Kp	1,2,4	min.	7	+	15	=	22	sec												
	Fp	1,34	min.	5	+	9	=	14	sec												
	Gp	3	min.	5	+	12	=	17	sec												
	Mp	2	min.	5	+	8	=	13	sec												

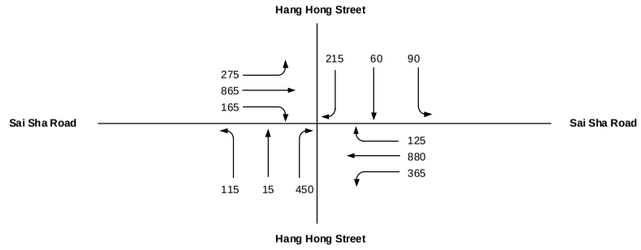
JUNCTION CAPACITY CALCULATION

AECOM

Junction J2 - Sai Sha Road / Hang Hong Street	2028 Design Traffic Flows (Sensitivity Test Scenario) (With Adjacent School Dev	DESIGN:	CHECK:	JOB NO: 60280227	DATE: Oct 20

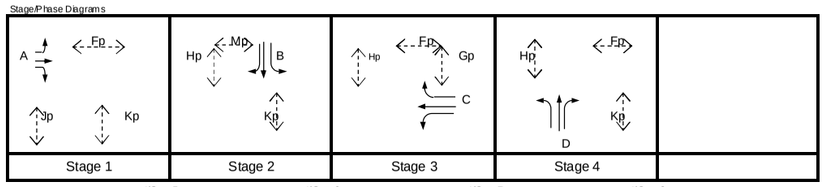
J2

Traffic Flow Diagram
(pcu/hr)



No. of stages per cycle	N =	4	
Cycle time	C =	115	sec
Sum(y)	Y =	0.501	
Lost time	L =	25	sec
Total Flow	=	35,045	pcu
Optimum Cycle C_o = (1.5 × L+5)/(1-Y)	=	85	sec
Min. Cycle Time C_m = L/(1-Y)	=	50	sec
Y_{ult} = 0.9-0.0075 × L	=	0.713	
$R.C._{ult}$ = (Y_{ult}-Y)/Yx100%	=	42.1	%
Practical Cycle Time C_p = 0.9 × L/(0.9-Y)	=	56	sec
Y_{max} = 1-L/C	=	0.783	

Stage/Phase Diagrams



Critical Case : A,B,C,D

R.C.(C) = (0.9xY_{max}-Y)/Yx100% = 40%

1

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR y	CRITICAL y
	C	3	3.500	1	10			1		0		1965	267			267	100%		1709	0.156	0.156
	C	3	3.500	1	15					0		2105	98	222		319	31%		2042	0.156	
	C	3	3.500	2				0		0		4210		658		658			4210	0.156	
	C	3	5.500	1		25	0	1		0		2165			125	125		100%	2042	0.061	
	A	1	3.300	1	15			1		0		1945	275			275	100%		1768	0.156	0.156
	A	1	3.300	3				0		0		6255		865		865			6255	0.138	
	A	1	4.000	2		25	0	1		0		4170			165	165		100%	3934	0.042	
	B	2	3.300	1	15			1		0		1945	90			90	100%		1768	0.051	
	B	2	3.300	1	20	20	0			0		2085	0	60	81	141	0%	57%	1999	0.071	0.071
	B	2	3.300	1		15	0	0		0		2085			134	134		100%	1895	0.071	
	D	4	3.300	1	10			1		0		1945	115			115	100%		1691	0.068	
	D	4	3.300	1		25	0	0		0		2085		15	220	235		94%	1974	0.119	0.119
	D	4	3.300	1		20	0	0		0		2085			230	230		100%	1940	0.119	
	Jp	1	min.	7	+	14	=	21	sec												
	Hp	2,3,4	min.	7	+	14	=	21	sec												
	Kp	1,2,4	min.	7	+	15	=	22	sec												
	Fp	1,34	min.	5	+	9	=	14	sec												
	Gp	3	min.	5	+	12	=	17	sec												
	Mp	2	min.	5	+	8	=	13	sec												

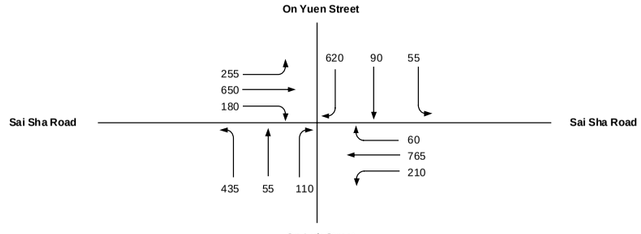
JUNCTION CAPACITY CALCULATION

AECOM

Junction J3 - Sai Sha Road / On Yuen Street / On Luk Street	2028 Design Traffic Flows (Sensitivity Test Scenario) (With Adjacent School Dev	DESIGN:	CHECK:	JOB NO: 60280227	DATE: Oct 20

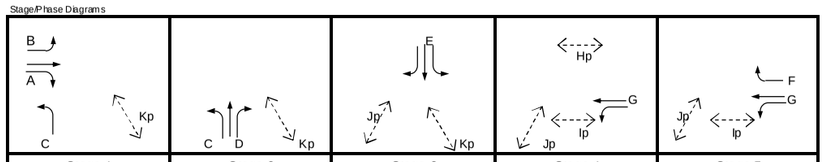
J3

Traffic Flow Diagram
(pcu/hr)



No. of stages per cycle	N =	5	
Cycle time	C =	115	sec
Sum(y)	Y =	0.366	
Lost time	L =	52	sec
Total Flow	=	33,360	pcu
Optimum Cycle C_o = (1.5 × L+5)/(1-Y)	=	131	sec
Min. Cycle Time C_m = L/(1-Y)	=	82	sec
Y_{ult} = 0.9-0.0075 × L	=	0.510	
$R.C._{ult}$ = (Y_{ult}-Y)/Yx100%	=	39.5	%
Practical Cycle Time C_p = 0.9 × L/(0.9-Y)	=	88	sec
Y_{max} = 1-L/C	=	0.548	

Stage/Phase Diagrams



Critical Case : A,D,E,Hp,F

R.C.(C) = (0.9xY_{max}-Y)/Yx100% = 35%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR y	CRITICAL y
↰	B	1	3.600	1	15			1		0		1975	255			255	100%		1795	0.142	
↑	A	1	3.600	2				0		0		4230		650		650			4230	0.154	0.154
↱	A	1	3.600	2		20	0	0		0		4230			180	180		100%	3935	0.046	
↰	C	1,2	3.400	1	30			1		0		1955	435			435	100%		1862	0.234	
↑	D	2	3.400	1				0		0		2095		55		55			2095	0.026	
↱	D	2	3.400	1		30	0	0		0		2095			110	110		100%	1995	0.055	0.055
↰	E	3	3.300	1	15			1		0		1945	55	90		145	38%		1874	0.077	
↑	E	3	3.300	1		30	0			0		2085		0	311	311		100%	1986	0.157	0.157
↱	E	3	3.300	1		25	0	0		0		2085			309	309		100%	1967	0.157	
↰	G	4,5	4.000	1	35			1		0		2015	210			210	100%		1932	0.109	
↑	G	4,5	3.600	3				0		0		6345		765		765			6345	0.121	
↱	F	5	5.500	1		35	0	0		0		2305			60	60		100%	2210	0.027	

Pedestrian Crossing				GM		FGM			
Hp	4	min.	11	+	9	=	20	sec
Ip	4,5	min.	10	+	8	=	18	sec
Jp	3,4,5	min.	5	+	5	=	10	sec
Kp	1,2,3	min.	5	+	5	=	10	sec

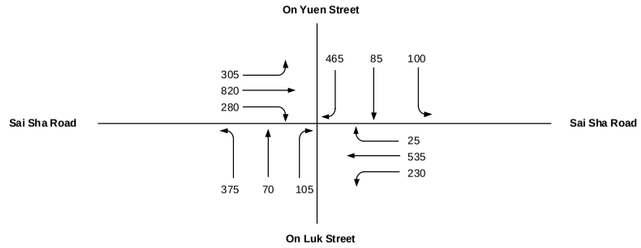
JUNCTION CAPACITY CALCULATION

AECOM

Junction J3 - Sai Sha Road / On Yuen Street / On Luk Street	2028 Design Traffic Flows (Sensitivity Test Scenario) (With Adjacent School Dev	DESIGN:	CHECK:	JOB NO: 60280227	DATE: Oct 20

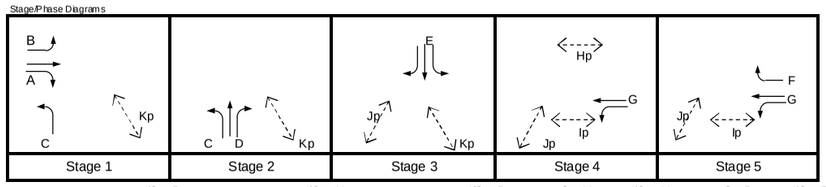
J3

Traffic Flow Diagram
(pcu/hr)



No. of stages per cycle	N =	5	
Cycle time	C =	115	sec
Sum(y)	Y =	0.364	
Lost time	L =	52	sec
Total Flow	=	33,360	pcu
Optimum Cycle C_o = (1.5 × L+5)/(1-Y)	=	131	sec
Min. Cycle Time C_m = L/(1-Y)	=	82	sec
Y_{ult} = 0.9-0.0075 × L	=	0.510	
$R.C._{ult}$ = (Y_{ult}-Y)/Yx100%	=	40.1	%
Practical Cycle Time C_p = 0.9 × L/(0.9-Y)	=	87	sec
Y_{max} = 1-L/C	=	0.548	

Stage/Phase Diagrams



Critical Case : A,D,E,Hp,F

R.C.(C) = (0.9xY_{max}-Y)/Yx100% = 35%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR y	CRITICAL y
↰	B	1	3.600	1	15			1		0		1975	305			305	100%		1795	0.170	
↑	A	1	3.600	2				0		0		4230		820		820			4230	0.194	0.194
↱	A	1	3.600	2		20	0	0		0		4230			280	280		100%	3935	0.071	
↰	C	1,2	3.400	1	30			1		0		1955	375			375	100%		1862	0.201	
↑	D	2	3.400	1				0		0		2095		70		70			2095	0.033	
↱	D	2	3.400	1		30	0	0		0		2095			105	105		100%	1995	0.053	0.053
↰	E	3	3.300	1	15			1		0		1945	100	85		185	54%		1845	0.100	
↑	E	3	3.300	1		30	0			0		2085		0	234	234		100%	1986	0.118	
↱	E	3	3.300	1		25	0	0		0		2085			231	231		100%	1967	0.118	0.118
↰	G	4,5	4.000	1	35			1		0		2015	230			230	100%		1932	0.119	
↑	G	4,5	3.600	3				0		0		6345		535		535			6345	0.084	
↱	F	5	5.500	1		35	0	0		0		2305			25	25		100%	2210	0.011	

Pedestrian Crossing				GM		FGM			
Hp	4	min.	11	+	9	=	20	sec
Ip	4,5	min.	10	+	8	=	18	sec
Jp	3,4,5	min.	5	+	5	=	10	sec
Kp	1,2,3	min.	5	+	5	=	10	sec

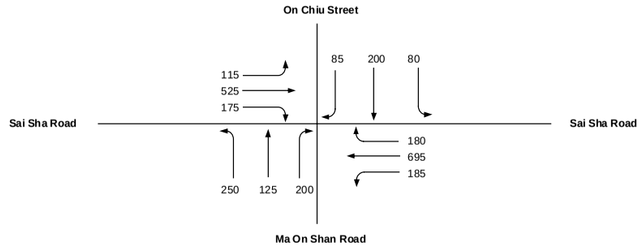
JUNCTION CAPACITY CALCULATION

AECOM

Junction J4 - Sai Sha Road / On Chiu Street / Ma On Shan Road	2028 Design Traffic Flows (Sensitivity Test Scenario) (With Adjacent School Dev	DESIGN:	CHECK:	JOB NO: -	DATE: Oct 20

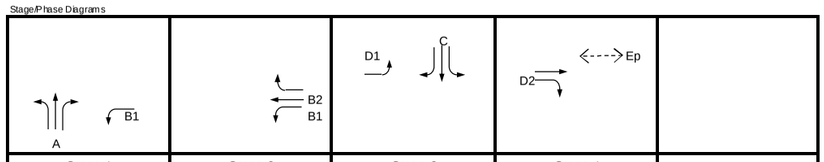
J4

Traffic Flow Diagram
(pcu/hr)



No. of stages per cycle	N =	4	
Cycle time	C =	110	sec
Sum(y)	Y =	0.502	
Lost time	L =	24	sec
Total Flow	=	28,940	pcu
Optimum Cycle C_o	$= (1.5 \times L+5)/(1-Y)$ =	82	sec
Min. Cycle Time C_m	$= L/(1-Y)$ =	48	sec
Y_{ult}	$= 0.9-0.0075 \times L$ =	0.720	
$R.C._{ult}$	$= (Y_{ult}-Y)/Yx100\%$ =	43.5	%
Practical Cycle Time C_p	$= 0.9 \times L/(0.9-Y)$ =	54	sec
Y_{max}	= 1-L/C =	0.782	

Stage/Phase Diagrams



Stage 1	Stage 2	Stage 3	Stage 4	
I/G = 8	I/G = 10	I/G = 5	I/G = 5	

Critical Case : A,B2,D1,D2

R.C.(C) = $(0.9xY_{max}-Y)/Yx100\%$ = 40%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR y	CRITICAL y
	A	1	3.700	1	10			1		0		1985	250	0		250	100%		1726	0.145	0.145
	A	1	3.700	1		30	0			0		2125		125	41	166		25%	2099	0.079	
	A	1	3.700	1		25	0	0		0		2125			159	159		100%	2005	0.079	
	B1	1,2	3.750	1	15			1		0		1990	185			185	100%		1809	0.102	
	B2	2	3.750	2				0		0		4260		695		695			4260	0.163	0.163
	B2	2	3.750	1		25	0	0		0		2130			180	180		100%	2009	0.090	
	C	3	3.500	1	15			1		0		1965	80	51		131	61%		1852	0.071	
	C	3	3.500	1		30	0			0		2105		149	0	149		0%	2105	0.071	
	C	3	3.000	1		25	0	0		0		2055			85	85		100%	1939	0.044	
	D1	3	3.300	1	10			1		0		1945	115			115	100%		1691	0.068	0.068
	D2	4	3.300	2				0		0		4170		525		525			4170	0.126	0.126
	D2	4	3.300	1		25	0	0		0		2085			175	175		100%	1967	0.089	
Pedestrian Crossing				GM		FGM															
	Ep	4	min.	11	+	9	=	20	sec												

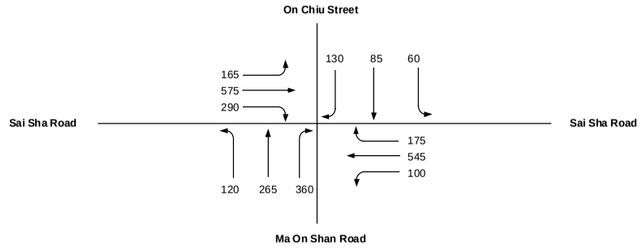
JUNCTION CAPACITY CALCULATION

AECOM

Junction J4 - Sai Sha Road / On Chiu Street / Ma On Shan Road	2028 Design Traffic Flows (Sensitivity Test Scenario) (With Adjacent School Dev	DESIGN:	CHECK:	JOB NO: -	DATE: Oct 20

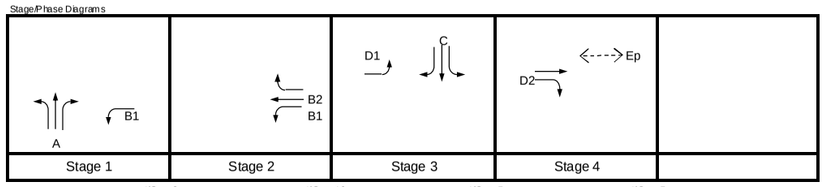
J4

Traffic Flow Diagram
(pcu/hr)



No. of stages per cycle	N =	4	
Cycle time	C =	110	sec
Sum(y)	Y =	0.499	
Lost time	L =	24	sec
Total Flow	=	28,940	pcu
Optimum Cycle C_o	$= (1.5 \times L+5)/(1-Y)$ =	82	sec
Min. Cycle Time C_m	$= L/(1-Y)$ =	48	sec
Y_{ult}	$= 0.9-0.0075 \times L$ =	0.720	
$R.C._{ult}$	$= (Y_{ult}-Y)/Yx100\%$ =	44.4	%
Practical Cycle Time C_p	$= 0.9 \times L/(0.9-Y)$ =	54	sec
Y_{max}	= 1-L/C =	0.782	

Stage/Phase Diagrams



Stage 1	Stage 2	Stage 3	Stage 4	
I/G = 8	I/G = 10	I/G = 5	I/G = 5	

Critical Case : A,B2,D1,D2

R.C.(C) = $(0.9xY_{max}-Y)/Yx100\%$ = 41%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR y	CRITICAL y
	A	1	3.700	1	10			1		0		1985	120	111		231	52%		1842	0.126	0.126
	A	1	3.700	1		30	0			0		2125		154	108	262		41%	2082	0.126	
	A	1	3.700	1		25	0	0		0		2125			252	252		100%	2005	0.126	
	B1	1,2	3.750	1	15			1		0		1990	100			100	100%		1809	0.055	
	B2	2	3.750	2				0		0		4260		545		545			4260	0.128	0.128
	B2	2	3.750	1		25	0	0		0		2130			175	175		100%	2009	0.087	
	C	3	3.500	1	15			1		0		1965	60	27		87	69%		1838	0.047	
	C	3	3.500	1		30	0			0		2105		58	39	97		40%	2064	0.047	
	C	3	3.000	1		25	0	0		0		2055			91	91		100%	1939	0.047	
	D1	3	3.300	1	10			1		0		1945	165			165	100%		1691	0.098	0.098
	D2	4	3.300	2				0		0		4170		575		575			4170	0.138	
	D2	4	3.300	1		25	0	0		0		2085			290	290		100%	1967	0.147	0.147
Pedestrian Crossing				GM		FGM															
	Ep	4	min.	11	+	9	=	20	sec												

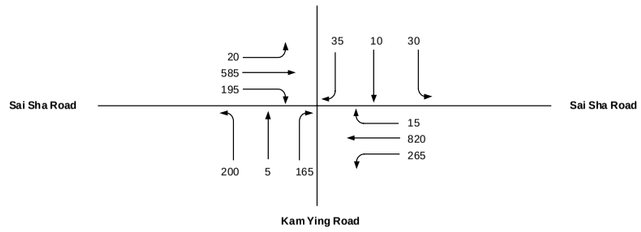
JUNCTION CAPACITY CALCULATION

AECOM

Junction J5 - Sai Sha Road / Kam Ying Road	2028 Design Traffic Flows (Sensitivity Test Scenario) (With Adjacent School Dev	DESIGN:	CHECK:	JOB NO: -	DATE: Oct 20

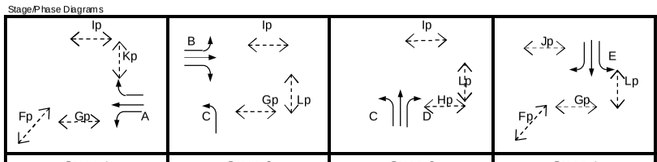
J4

Traffic Flow Diagram
(pcu/hr)



No. of stages per cycle	N =	4	
Cycle time	C =	120	sec
Sum(y)	Y =	0.340	
Lost time	L =	60	sec
Total Flow	=	20,890	pcu
Optimum Cycle C_o	$= (1.5 \times L+5)/(1-Y)$ =	144	sec
Min. Cycle Time C_m	$= L/(1-Y)$ =	91	sec
Y_{ult}	$= 0.9-0.0075 \times L$ =	0.450	
$R.C._{ult}$	$= (Y_{ult}-Y)/Yx100\%$ =	32.2	%
Practical Cycle Time C_p	$= 0.9 \times L/(0.9-Y)$ =	96	sec
Y_{max}	= 1-L/C =	0.500	

Stage/Phase Diagrams



Stage 1	Stage 2	Stage 3	Stage 4	
I/G = 11	I/G = 14	G = 5	I/G = 14	G = 5 I/G = 13

Critical Case : A,B,Hp,Jp

R.C.(C) $= (0.9xY_{max}-Y)/Yx100\%$ = 32%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR y	CRITICAL y
	A	1	3.500	1	15			1		0		1965	265			265	100%		1786	0.148	
	A	1	3.500	2				0		0		4210		820		820			4210	0.195	0.195
	A	1	3.500	1		25	0	0		0		2105			15	15		100%	1986	0.008	
	B	2	4.000	1	15			1		0		2015	20	271		291	7%		2001	0.146	0.146
	B	2	4.000	1				0		0		2155		314		314			2155	0.146	
	B	2	3.500	1		25	0	0		0		2105			195	195		100%	1986	0.098	
	C	2,3	4.500	1	25			1		0		2065	200			200	100%		1948	0.103	
	D	3	3.500	1		25	0	0		0		2105		5	165	170		97%	1989	0.085	
	E	4	5.500	1	15	25	0	1		0		2165	30	10	35	75	40%	47%	2027	0.037	

Pedestrian Crossing				GM		FGM			
Fp	4,1	min.	5	+	6	=	11	sec
Gp	4,1,2	min.	5	+	5	=	10	sec
Hp	3	min.	5	+	8	=	13	sec
Ip	1,2,3	min.	5	+	5	=	10	sec
Jp	4	min.	5	+	6	=	11	sec
Lp	2,3,4	min.	5	+	12	=	17	sec
Kp	1	min.	5	+	7	=	12	sec

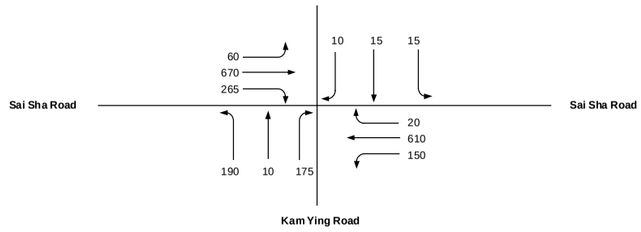
JUNCTION CAPACITY CALCULATION

AECOM

Junction J5 - Sai Sha Road / Kam Ying Road | 2028 Design Traffic Flows (Sensitivity Test Scenario) (With Adjacent School Dev | DESIGN: | CHECK: | JOB NO: - | DATE: Oct 20

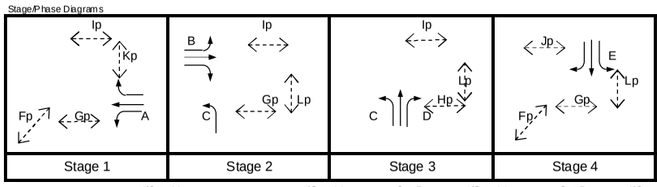
J4

Traffic Flow Diagram
(pcu/hr)



No. of stages per cycle	N =	4	
Cycle time	C =	120	sec
Sum(y)	Y =	0.321	
Lost time	L =	60	sec
Total Flow	=	20,890	pcu
Optimum Cycle C_o	$= (1.5 \times L+5)/(1-Y)$ =	140	sec
Min. Cycle Time C_m	$= L/(1-Y)$ =	88	sec
Y_{ult}	$= 0.9-0.0075 \times L$ =	0.450	
$R.C._{ult}$	$= (Y_{ult}-Y)/Yx100\%$ =	40.0	%
Practical Cycle Time C_p	$= 0.9 \times L/(0.9-Y)$ =	93	sec
Y_{max}	= 1-L/C =	0.500	

Stage/Phase Diagrams



Stage 1	Stage 2	Stage 3	Stage 4	
I/G = 11	I/G = 14	G = 5	I/G = 14	G = 5 I/G = 13

Critical Case : A,B,Hp,Jp

R.C.(C) $= (0.9xY_{max}-Y)/Yx100\%$ = 40%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR y	CRITICAL y
	A	1	3.500	1	15			1		0		1965	150			150	100%		1786	0.084	
	A	1	3.500	2				0		0		4210		610		610			4210	0.145	0.145
	A	1	3.500	1		25	0	0		0		2105			20	20		100%	1986	0.010	
	B	2	4.000	1	15			1		0		2015	60	290		350	17%		1981	0.176	0.176
	B	2	4.000	1				0		0		2155		380		380			2155	0.176	
	B	2	3.500	1		25	0	0		0		2105			265	265		100%	1986	0.133	
	C	2,3	4.500	1	25			1		0		2065	190			190	100%		1948	0.098	
	D	3	3.500	1		25	0	0		0		2105		10	175	185		95%	1992	0.093	
	E	4	5.500	1	15	25	0	1		0		2165	15	15	10	40	38%	25%	2057	0.019	

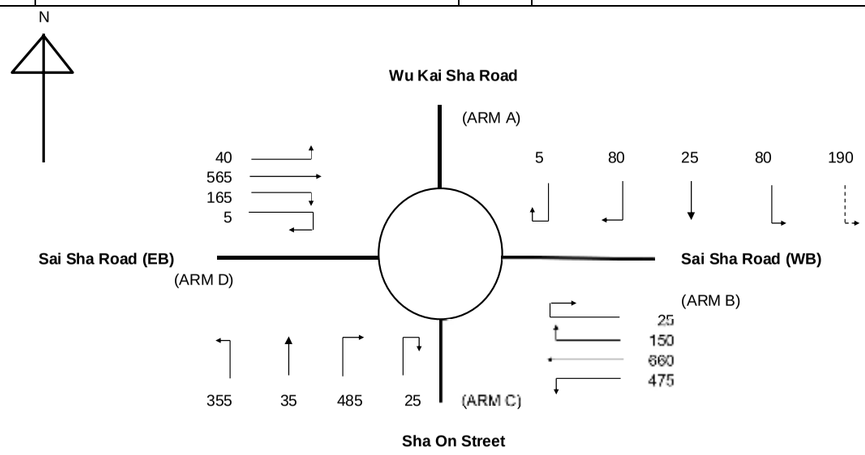
Pedestrian Crossing				GM		FGM			
Fp	4,1	min.	5	+	6	=	11	sec
Gp	4,1,2	min.	5	+	5	=	10	sec
Hp	3	min.	5	+	8	=	13	sec
Ip	1,2,3	min.	5	+	5	=	10	sec
Jp	4	min.	5	+	6	=	11	sec
Lp	2,3,4	min.	5	+	12	=	17	sec
Kp	1	min.	5	+	7	=	12	sec

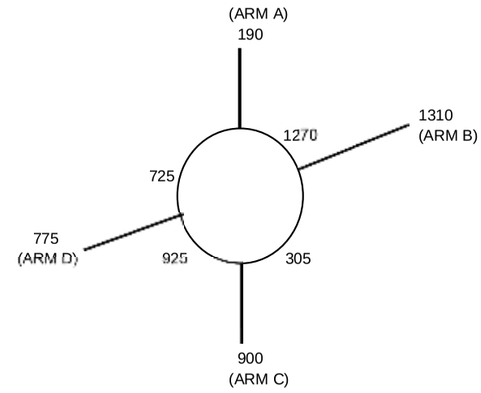
27627712_Sai Sha Road - 2028 Design Traffic Flows (Sensitivity Test Scenario) (With Adjacent School Development).xls

ROUNDABOUT CAPACITY CALCULATIO

AECOM

Junction	J6 - Sai Sha Road / Wu Kai Sha Road / Sha On Street	Scenario	2028 Design Traffic Flows (Sensitivity Test Scenario) (With Adjacent School Developm	Project No.	Prepared By	Checked By	Date
				-	MKCN	SHSN	12-Jul-22





ARM	A	B	C	D	
INPUT PARAMETERS:					
V = Approach half width (m)	7.50	8.50	3.20	7.00	
E = Entry width (m)	8.00	10.50	12.00	9.00	
L = Effective length of flare (m)	5.00	40.00	50.00	35.00	
R = Entry radius (m)	40.00	160.00	35.00	100.00	
D = Inscribed circle diameter (m)	90.00	90.00	90.00	90.00	
A = Entry angle (degree)	30.00	25.00	40.00	25.00	
Q = Entry flow (pcu/h)	190	1310	900	775	*
Qc= Circulating flow across entry (pcu/h)	1270	305	925	725	*
OUTPUT PARAMETERS:					
S = Sharpness of flare = 1.6(E-V)/L	0.16	0.08	0.28	0.09	
K = 1-0.00347(A-30)-0.978(1/R-0.05)	1.02	1.06	0.99	1.06	
X2= V + ((E-V)/(1+2S))	7.88	10.22	8.83	8.69	
M = EXP((D-60)/10)	20.09	20.09	20.09	20.09	
F = 303*X2	2387	3098	2675	2633	
Td= 1+(0.5/(1+M))	1.02	1.02	1.02	1.02	
Fc= 0.21*Td(1+0.2*X2)	0.55	0.65	0.59	0.59	
Qe= K(F-Fc*Qc)	1725	3073	2096	2331	
DFC = Design flow/Capacity = Q/Qe	0.11	0.43	0.43	0.33	

TOTAL ENTRY FLOWS 3175 PCU

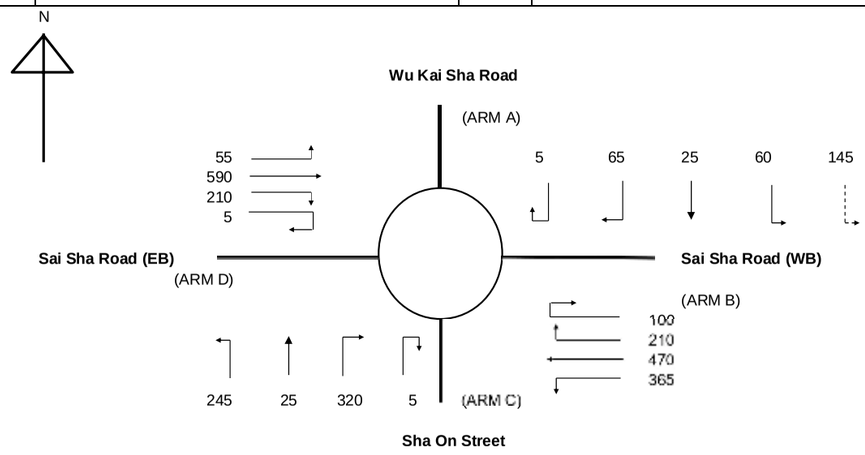
CRITICAL DF(0.43

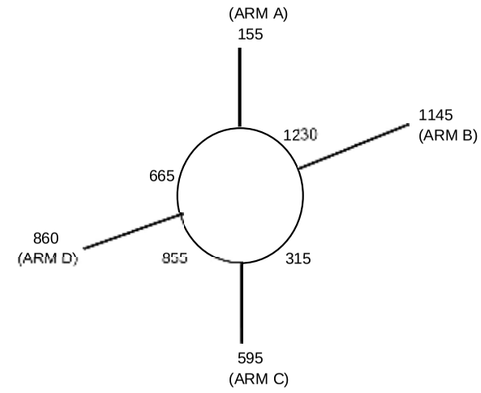
Filename : https://aecom-my.sharepoint.com/personal/magdalene_ku_aecom_com/D

ROUNDABOUT CAPACITY CALCULATIO

AECOM

Junction	J6 - Sai Sha Road / Wu Kai Sha Road / Sha On Street	Scenario	2028 Design Traffic Flows (Sensitivity Test Scenario) (With Adjacent School Developm	Project No.	Prepared By	Checked By	Date
				-	MKCN	SHSN	12-Jul-22





ARM	A	B	C	D	
INPUT PARAMETERS:					
V = Approach half width (m)	7.50	8.50	3.20	7.00	
E = Entry width (m)	8.00	10.50	12.00	9.00	
L = Effective length of flare (m)	5.00	40.00	50.00	35.00	
R = Entry radius (m)	40.00	160.00	35.00	100.00	
D = Inscribed circle diameter (m)	90.00	90.00	90.00	90.00	
A = Entry angle (degree)	30.00	25.00	40.00	25.00	
Q = Entry flow (pcu/h)	155	1145	595	860	*
Qc= Circulating flow across entry (pcu/h)	1230	315	855	665	*
OUTPUT PARAMETERS:					
S = Sharpness of flare = 1.6(E-V)/L	0.16	0.08	0.28	0.09	
K = 1-0.00347(A-30)-0.978(1/R-0.05)	1.02	1.06	0.99	1.06	
X2= V + ((E-V)/(1+2S))	7.88	10.22	8.83	8.69	
M = EXP((D-60)/10)	20.09	20.09	20.09	20.09	
F = 303*X2	2387	3098	2675	2633	
Td= 1+(0.5/(1+M))	1.02	1.02	1.02	1.02	
Fc= 0.21*Td(1+0.2*X2)	0.55	0.65	0.59	0.59	
Qe= K(F-Fc*Qc)	1748	3066	2137	2368	
DFC = Design flow/Capacity = Q/Qe	0.09	0.37	0.28	0.36	

TOTAL ENTRY FLOWS 2755 PCU

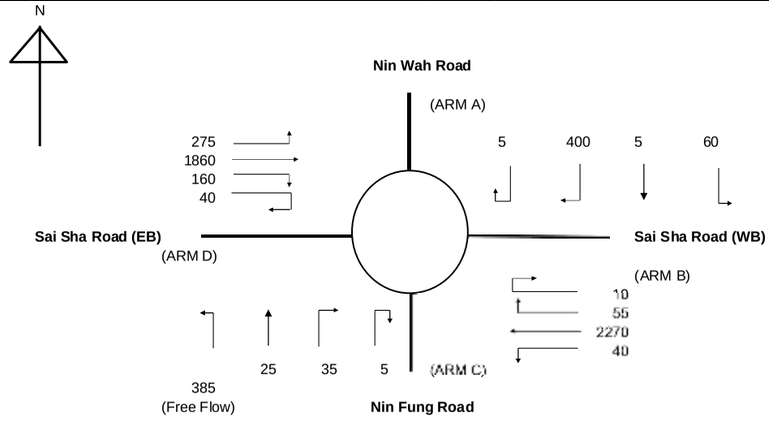
CRITICAL DF(0.37

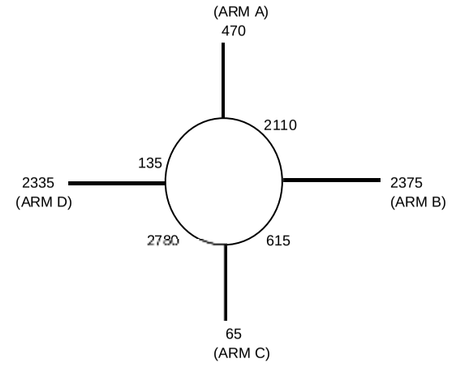
Filename : https://aecom-my.sharepoint.com/personal/magdalene_ku_aecom_com/D

ROUNDABOUT CAPACITY CALCULATIC

AECOM

Junction	J7 - Sai Sha Road / Nin Wah Road / Nin Fung Road	Scenario	2028 Design Traffic Flows (Sensitivity Test Scenario) (With Adjacent School Developn	Project No.	Prepared By	Checked By	Date
				-	MKCN	SHSN	12-Jul-22





ARM	A	B	C	D	
INPUT PARAMETERS:					
V = Approach half width (m)	6.00	7.50	5.00	7.30	
E = Entry width (m)	7.00	13.00	8.00	12.00	
L = Effective length of flare (m)	12.00	35.00	7.00	13.00	
R = Entry radius (m)	25.00	25.00	10.00	40.00	
D = Inscribed circle diameter (m)	50.00	50.00	50.00	50.00	
A = Entry angle (degree)	40.00	30.00	40.00	30.00	
Q = Entry flow (pcu/h)	470	2375	65	2335	*
Qc= Circulating flow across entry (pcu/h)	2110	615	2780	135	*
OUTPUT PARAMETERS:					
S = Sharpness of flare = 1.6(E-V)/L	0.13	0.25	0.69	0.58	
K = 1-0.00347(A-30)-0.978(1/R-0.05)	0.98	1.01	0.92	1.02	
X2= V + ((E-V)/(1+2S))	6.79	11.16	6.27	9.48	
M = EXP((D-60)/10)	0.37	0.37	0.37	0.37	
F = 303*X2	2057	3381	1898	2872	
Td= 1+(0.5/(1+M))	1.37	1.37	1.37	1.37	
Fc= 0.21*Td(1+0.2*X2)	0.68	0.93	0.65	0.83	
Qe= K(F-Fc*Qc)	615	2839	94	2828	
DFC = Design flow/Capacity = Q/Qe	0.76	0.84	0.69	0.83	

TOTAL ENTRY FLOWS 5245 PCU

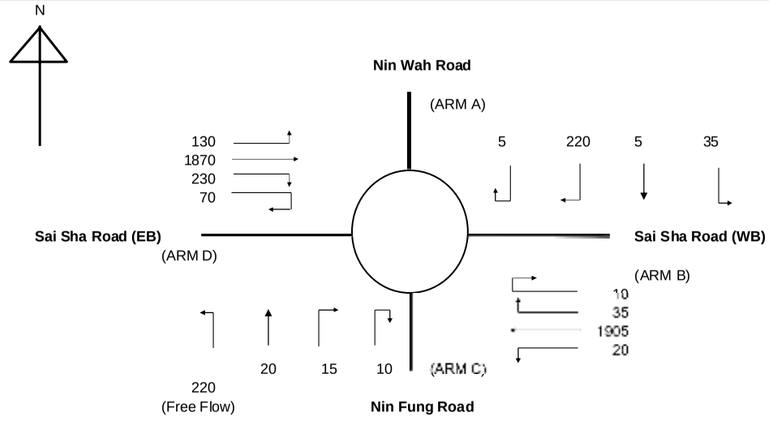
CRITICAL DF(0.84

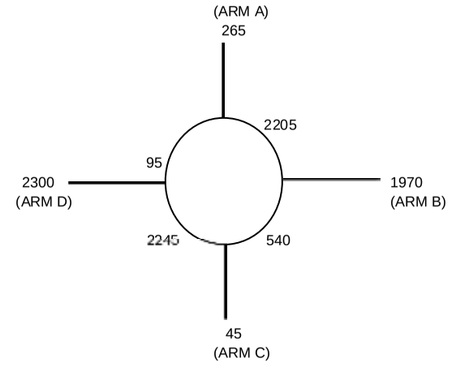
Filename : https://aecom-my.sharepoint.com/personal/magdalene_ku_aecom_com

ROUNDABOUT CAPACITY CALCULATIC

AECOM

Junction	J7 - Sai Sha Road / Nin Wah Road / Nin Fung Road	Scenario	2028 Design Traffic Flows (Sensitivity Test Scenario) (With Adjacent School Developn	Project No.	Prepared By	Checked By	Date
				-	MKCN	SHSN	12-Jul-22





ARM	A	B	C	D	
INPUT PARAMETERS:					
V = Approach half width (m)	6.00	7.50	5.00	7.30	
E = Entry width (m)	7.00	13.00	8.00	12.00	
L = Effective length of flare (m)	12.00	35.00	7.00	13.00	
R = Entry radius (m)	25.00	25.00	10.00	40.00	
D = Inscribed circle diameter (m)	50.00	50.00	50.00	50.00	
A = Entry angle (degree)	40.00	30.00	40.00	30.00	
Q = Entry flow (pcu/h)	265	1970	45	2300	*
Qc= Circulating flow across entry (pcu/h)	2205	540	2245	95	*
OUTPUT PARAMETERS:					
S = Sharpness of flare = 1.6(E-V)/L	0.13	0.25	0.69	0.58	
K = 1-0.00347(A-30)-0.978(1/R-0.05)	0.98	1.01	0.92	1.02	
X2= V + ((E-V)/(1+2S))	6.79	11.16	6.27	9.48	
M = EXP((D-60)/10)	0.37	0.37	0.37	0.37	
F = 303*X2	2057	3381	1898	2872	
Td= 1+(0.5/(1+M))	1.37	1.37	1.37	1.37	
Fc= 0.21*Td(1+0.2*X2)	0.68	0.93	0.65	0.83	
Qe= K(F-Fc*Qc)	552	2909	410	2862	
DFC = Design flow/Capacity = Q/Qe	0.48	0.68	0.11	0.80	

TOTAL ENTRY FLOWS 4580 PCU

CRITICAL DF(0.80

Filename : https://aecom-my.sharepoint.com/personal/magdalene_ku_aecom_com

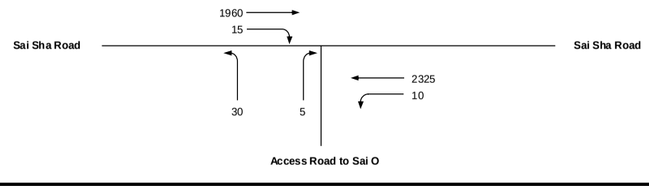
JUNCTION CAPACITY CALCULATION

AECOM

Junction J8 - Sai Sha Road / Access Road to Sai O	2028 Design Traffic Flows (Sensitivity Test Scenario) (With Adjacent School Dev	DESIGN:	CHECK:	JOB NO: -	DATE: Oct 20

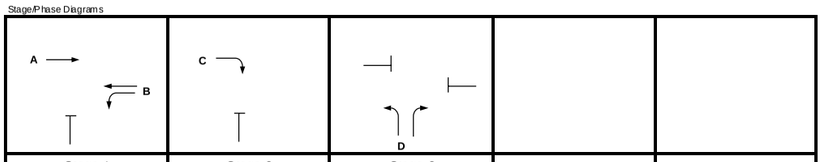
J8

Traffic Flow Diagram
(pcu/hr)



No. of stages per cycle		N =	3	
Cycle time		C =	120	sec
Sum(y)		Y =	0.574	
Lost time		L =	27	sec
Total Flow		=	12,250	pcu
Optimum Cycle C_o	$=(1.5\times L+5)/(1-Y)$ =		107	sec
Min. Cycle Time C_m	$=L/(1-Y)$ =		63	sec
Y_{ult}	$=0.9-0.0075\times L$ =		0.698	
$R.C._{ult}$	$=(Y_{ult}-Y)/Yx100\%$ =		21.5	%
Practical Cycle Time C_p	$=0.9\times L/(0.9-Y)$ =		75	sec
Y_{max}	$=1-L/C$ =		0.775	

Stage/Phase Diagrams



I/G = 5 G = 5 I/G = 8 G = 5 I/G = 5

Critical Case : B,C,D

R.C.(C) $= (0.9xY_{max}-Y)/Yx100\%$ = 21%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR *y*	CRITICAL *y*
→	A	1	3.300	2				1		0		4030		1960		1960			4030	0.486	
↘	C	2	3.300	1		25	0	0		0		2085			15	15		100%	1967	0.008	
↰↑	B	1	3.500	1	10			1		0		1965	10	1117		1127	1%		1962	0.574	0.574
↑	B	1	3.500	1				0		0		2105		1208		1208			2105	0.574	
↰↑↗	D	3	4.500	1	10	20	0	1		0		2065	30		5	35	86%	14%	1813	0.019	

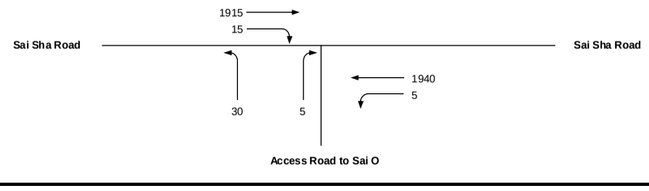
JUNCTION CAPACITY CALCULATION

AECOM

Junction J8 - Sai Sha Road / Access Road to Sai O	2028 Design Traffic Flows (Sensitivity Test Scenario) (With Adjacent School Dev	DESIGN:	CHECK:	JOB NO: -	DATE: Oct 20

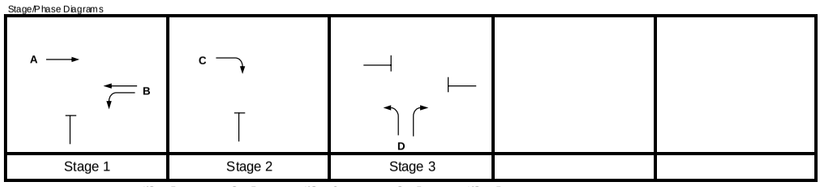
J8

Traffic Flow Diagram
(pcu/hr)



No. of stages per cycle		N =	3	
Cycle time		C =	120	sec
Sum(y)		Y =	0.478	
Lost time		L =	27	sec
Total Flow		=	12,250	pcu
Optimum Cycle C_o	$=(1.5\times L+5)/(1-Y)$ =		87	sec
Min. Cycle Time C_m	$=L/(1-Y)$ =		52	sec
Y_{ult}	$=0.9-0.0075\times L$ =		0.698	
$R.C._{ult}$	$=(Y_{ult}-Y)/Yx100\%$ =		45.9	%
Practical Cycle Time C_p	$=0.9\times L/(0.9-Y)$ =		58	sec
Y_{max}	$=1-L/C$ =		0.775	

Stage/Phase Diagrams



I/G = 5 G = 5 I/G = 8 G = 5 I/G = 5

Critical Case : B,C,D

R.C.(C) $= (0.9xY_{max}-Y)/Yx100\%$ = 46%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR *y*	CRITICAL *y*
→	A	1	3.300	2				1		0		4030		1915		1915			4030	0.475	
↘	C	2	3.300	1		25	0	0		0		2085			15	15		100%	1967	0.008	
↰↑	B	1	3.500	1	10			1		0		1965	5	934		939	1%		1963	0.478	
↑	B	1	3.500	1				0		0		2105		1006		1006			2105	0.478	0.478
↰↑↗	D	3	4.500	1	10	20	0	1		0		2065	30		5	35	86%	14%	1813	0.019	

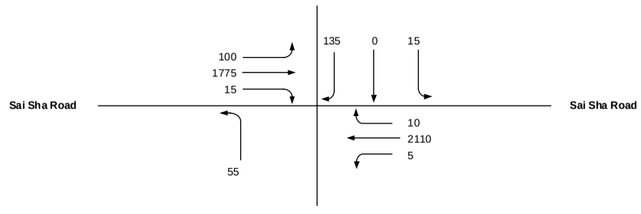
JUNCTION CAPACITY CALCULATION

AECOM

Junction J9 - Sai Sha Road / Access Road to Kwun Hang / Access Road to Che Ha	2028 Design Traffic Flows (Sensitivity Test Scenario) (With Adjacent School Dev	DESIGN:	CHECK:	JOB NO:	DATE: Oct 20

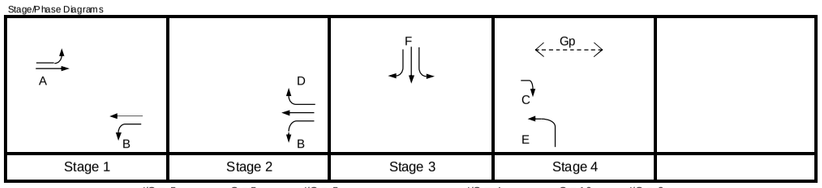
J9

Traffic Flow Diagram
(pcu/hr)



No. of stages per cycle	N =	4	
Cycle time	C =	120	sec
Sum(y)	Y =	0.538	
Lost time	L =	35	sec
Total Flow	=	16,450	pcu
Optimum Cycle C_o	$=(1.5\times L+5)/(1-Y)$ =	125	sec
Min. Cycle Time C_m	$=L/(1-Y)$ =	76	sec
Y_{ult}	$=0.9-0.0075\times L$ =	0.638	
$R.C._{ult}$	$=(Y_{ult}-Y)/Yx100\%$ =	18.4	%
Practical Cycle Time C_p	$=0.9\times L/(0.9-Y)$ =	87	sec
Y_{max}	$=1-L/C$ =	0.708	

Stage/Phase Diagrams



I/G = 5 G = 5 I/G = 5 I/G = 4 G = 16 I/G = 2

1

Critical Case : A,D,F,Gp

R.C.(C) $= (0.9xY_{max}-Y)/Yx100\%$ = 18%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR *y*	CRITICAL *y*
	A	1	3.500	1	15			1		0		1965	100	800		900	11%		1943	0.463	0.463
	A	1	3.500	1				0		0		2105		975		975			2105	0.463	
	C	4	3.500	1		25	1	0		0		2105			15	15		100%	1769	0.008	
	B	1,2	3.500	1	10			1		0		1965	5	1016		1021	0%		1964	0.520	
	B	1,2	3.500	1				0		0		2105		1094		1094			2105	0.520	
	D	2	3.500	1		20	1	0		0		2105			10	10		100%	1744	0.006	
	E	2	3.700	1	10			1		0		1985	55			55	100%		1726	0.032	
	F	3	5.000	1	30	25	0	1		0		2115	15	0	135	150	10%	90%	1997	0.075	0.075
Ped.	Gp	4	min.	16	=	9	+	7	sec												

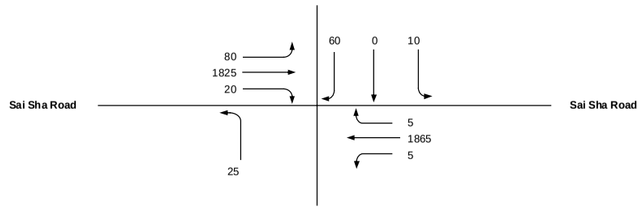
JUNCTION CAPACITY CALCULATION

AECOM

Junction J9 - Sai Sha Road / Access Road to Kwun Hang / Access Road to Che Ha	2028 Design Traffic Flows (Sensitivity Test Scenario) (With Adjacent School Dev	DESIGN:	CHECK:	JOB NO:	DATE: Oct 20

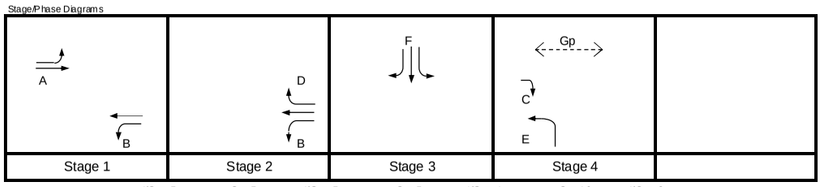
J9

Traffic Flow Diagram
(pcu/hr)



No. of stages per cycle	N =	4	
Cycle time	C =	120	sec
Sum(y)	Y =	0.470	
Lost time	L =	41	sec
Total Flow	=	16,450	pcu
Optimum Cycle C_o	$=(1.5\times L+5)/(1-Y)$ =	125	sec
Min. Cycle Time C_m	$=L/(1-Y)$ =	77	sec
Y_{ult}	$=0.9-0.0075\times L$ =	0.593	
$R.C._{ult}$	$=(Y_{ult}-Y)/Yx100\%$ =	26.1	%
Practical Cycle Time C_p	$=0.9\times L/(0.9-Y)$ =	86	sec
Y_{max}	$=1-L/C$ =	0.658	

Stage/Phase Diagrams



I/G = 5 G = 5 I/G = 5 G = 5 I/G = 4 G = 16 I/G = 2

1

Critical Case : A,D,F,Gp

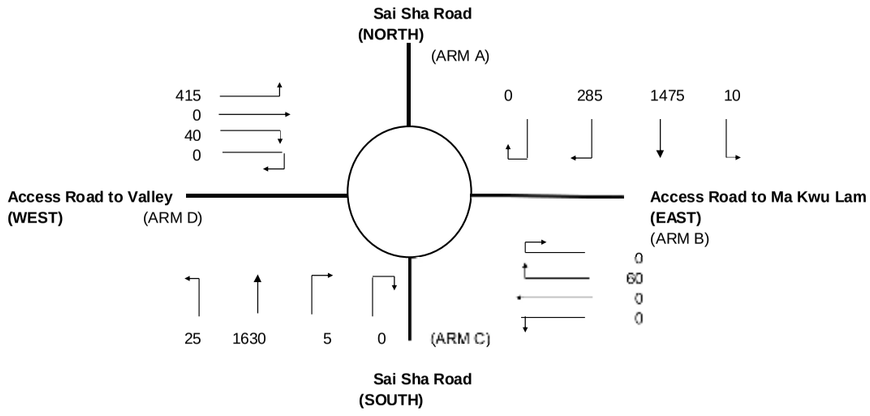
R.C.(C) $= (0.9xY_{max}-Y)/Yx100\%$ = 26%

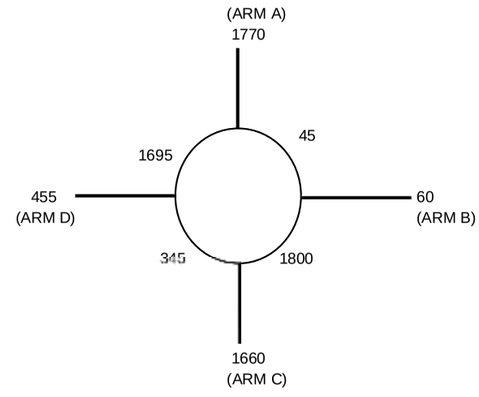
MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR *y*	CRITICAL *y*
	A	1	3.500	1	15			1		0		1965	80	836		916	9%		1948	0.470	0.470
	A	1	3.500	1				0		0		2105		989		989			2105	0.470	
	C	4	3.500	1		25	1	0		0		2105			20	20		100%	1769	0.011	
	B	1,2	3.500	1	10			1		0		1965	5	897		902	1%		1963	0.460	
	B	1,2	3.500	1				0		0		2105		968		968			2105	0.460	
	D	2	3.500	1		20	1	0		0		2105			5	5		100%	1744	0.003	
	E	2	3.700	1	10			1		0		1985	25			25	100%		1726	0.014	
	F	3	5.000	1	30	25	0	1		0		2115	10	0	60	70	14%	86%	1998	0.035	
Ped.	Gp	4	min.	16	=	9	+	7	sec												

ROUNDABOUT CAPACITY CALCULATIO

MAUNSELL CONSULTANTS ASIA LTD.

Junction	J10- Sai Sha Road / Access Road to Ma Kwu Lam / Access Road to Sai Sha Development (Site A)	Scenario	2028 Design Traffic Flows (Sensitivity Test Scenario) (With Adjacent School Developm	Project No.	Prepared By	Checked By	Date
				-	MKCN	SHSN	Jul 2022





ARM	A	B	C	D
INPUT PARAMETERS:				
V = Approach half width (m)	7.30	4.00	7.30	7.00
E = Entry width (m)	10.00	6.00	13.00	8.00
L = Effective length of flare (m)	5.00	12.00	15.00	4.00
R = Entry radius (m)	25.00	20.00	45.00	25.00
D = Inscribed circle diameter (m)	50.00	50.00	50.00	50.00
A = Entry angle (degree)	63.00	60.00	69.00	64.00
Q = Entry flow (pcu/h)	1770	60	1660	455
Qc= Circulating flow across entry (pcu/h)	45	1800	345	1695
OUTPUT PARAMETERS:				
S = Sharpness of flare = 1.6(E-V)/L	0.86	0.27	0.61	0.40
K = 1-0.00347(A-30)-0.978(1/R-0.05)	0.90	0.90	0.89	0.89
X2= V + ((E-V)/(1+2S))	8.29	5.30	9.87	7.56
M = EXP((D-60)/10)	0.37	0.37	0.37	0.37
F = 303*X2	2512	1607	2991	2289
Td= 1+(0.5/(1+M))	1.37	1.37	1.37	1.37
Fc= 0.21*Td(1+0.2*X2)	0.76	0.59	0.85	0.72
Qe= K(F-Fc*Qc)	2218	487	2405	953
DFC = Design flow/Capacity = Q/Qe	0.80	0.12	0.69	0.48

TOTAL ENTRY FLOWS 3945 PCU

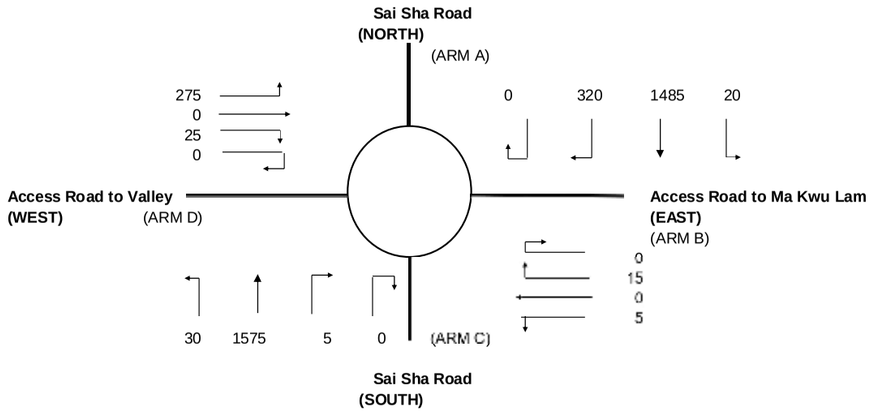
CRITICAL DF(0.80

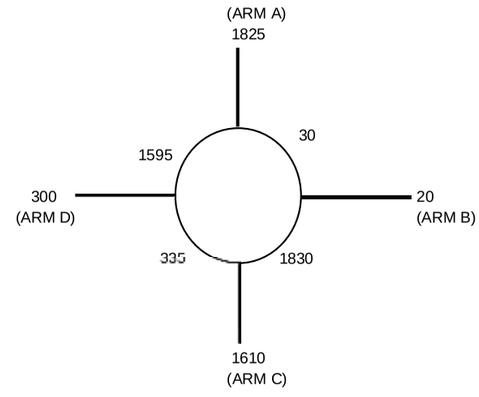
Filename :

ROUNDABOUT CAPACITY CALCULATIO

MAUNSELL CONSULTANTS ASIA LTD.

Junction	J10- Sai Sha Road / Access Road to Ma Kwu Lam / Access Road to Sai Sha Development (Site A)	Scenario	2028 Design Traffic Flows (Sensitivity Test Scenario) (With Adjacent School Developm	Project No.	Prepared By	Checked By	Date
				-	MKCN	SHSN	Jul 2022





ARM	A	B	C	D
INPUT PARAMETERS:				
V = Approach half width (m)	7.30	4.00	7.30	7.00
E = Entry width (m)	10.00	6.00	13.00	8.00
L = Effective length of flare (m)	5.00	12.00	15.00	4.00
R = Entry radius (m)	25.00	20.00	45.00	25.00
D = Inscribed circle diameter (m)	50.00	50.00	50.00	50.00
A = Entry angle (degree)	63.00	60.00	69.00	64.00
Q = Entry flow (pcu/h)	1825	20	1610	300
Qc= Circulating flow across entry (pcu/h)	30	1830	335	1595
OUTPUT PARAMETERS:				
S = Sharpness of flare = 1.6(E-V)/L	0.86	0.27	0.61	0.40
K = 1-0.00347(A-30)-0.978(1/R-0.05)	0.90	0.90	0.89	0.89
X2= V + ((E-V)/(1+2S))	8.29	5.30	9.87	7.56
M = EXP((D-60)/10)	0.37	0.37	0.37	0.37
F = 303*X2	2512	1607	2991	2289
Td= 1+(0.5/(1+M))	1.37	1.37	1.37	1.37
Fc= 0.21*Td(1+0.2*X2)	0.76	0.59	0.85	0.72
Qe= K(F-Fc*Qc)	2228	471	2413	1017
DFC = Design flow/Capacity = Q/Qe	0.82	0.04	0.67	0.29

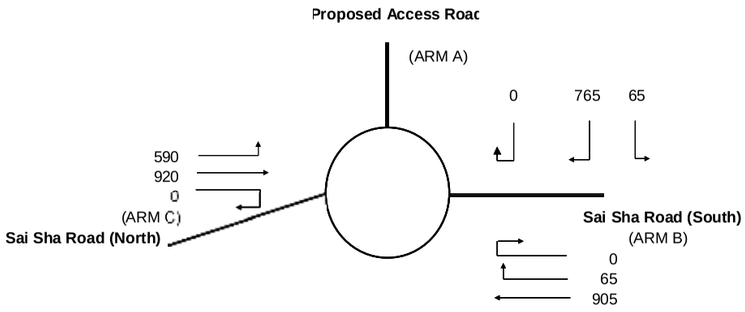
TOTAL ENTRY FLOWS 3755 PCU

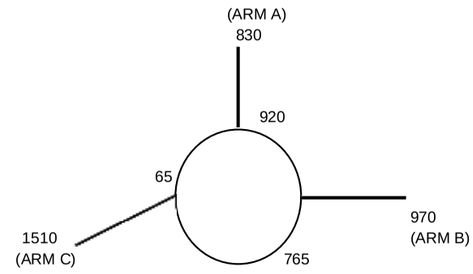
CRITICAL DF(0.82

Filename :

JUNCTION CAPACITY CALCULATION

J11 - Sai Sha Road / Access Road to Tseng Tau | 2028 Design Traffic Flows (Sensitivity Test Scenario) | FILENAME :





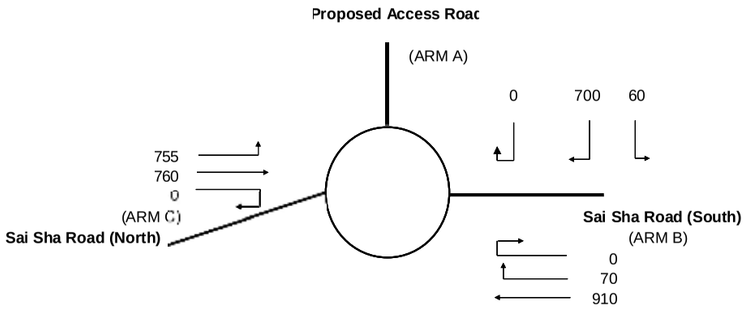
ARM	A	B	C
INPUT PARAMETERS:			
V = Approach half width (m)	5.15	7.30	7.30
E = Entry width (m)	9.00	9.00	9.00
L = Effective length of flare (m)	20.00	4.50	4.50
R = Entry radius (m)	35.00	30.00	40.00
D = Inscribed circle diameter (m)	50.00	50.00	50.00
A = Entry angle (degree)	43.00	61.00	43.00
Q = Entry flow (pcu/h)	830	970	1510
Qc= Circulating flow across entry (pcu/h)	920	765	65
OUTPUT PARAMETERS:			
S = Sharpness of flare = 1.6(E-V)/L	0.31	0.60	0.60
K = 1-0.00347(A-30)-0.978(1/R-0.05)	0.98	0.91	0.98
X2= V + ((E-V)/(1+2S))	7.53	8.07	8.07
M = EXP((D-60)/10)	0.37	0.37	0.37
F = 303*X2	2282	2445	2445
Td= 1+(0.5/(1+M))	1.37	1.37	1.37
Fc= 0.21*Td(1+0.2*X2)	0.72	0.75	0.75
Qe= K(F-Fc*Qc)	1582	1701	2347
DFC = Design flow/Capacity = Q/Qe	0.52	0.57	0.64

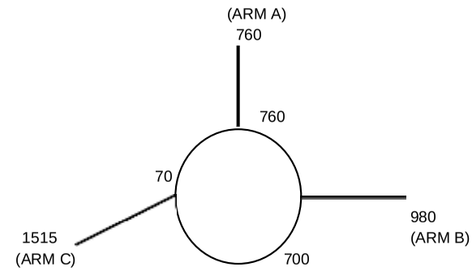
TOTAL ENTRY FLOWS = 3310 PCU

CRITICAL DFC = 0.64

JUNCTION CAPACITY CALCULATION

J11 - Sai Sha Road / Access Road to Tseng Tau | 2028 Design Traffic Flows (Sensitivity Test Scenario) | FILENAME :





ARM	A	B	C
INPUT PARAMETERS:			
V = Approach half width (m)	5.15	7.30	7.30
E = Entry width (m)	9.00	9.00	9.00
L = Effective length of flare (m)	20.00	4.50	4.50
R = Entry radius (m)	35.00	30.00	40.00
D = Inscribed circle diameter (m)	50.00	50.00	50.00
A = Entry angle (degree)	43.00	61.00	43.00
Q = Entry flow (pcu/h)	760	980	1515
Qc= Circulating flow across entry (pcu/h)	760	700	70
OUTPUT PARAMETERS:			
S = Sharpness of flare = 1.6(E-V)/L	0.31	0.60	0.60
K = 1-0.00347(A-30)-0.978(1/R-0.05)	0.98	0.91	0.98
X2= V + ((E-V)/(1+2S))	7.53	8.07	8.07
M = EXP((D-60)/10)	0.37	0.37	0.37
F = 303*X2	2282	2445	2445
Td= 1+(0.5/(1+M))	1.37	1.37	1.37
Fc= 0.21*Td(1+0.2*X2)	0.72	0.75	0.75
Qe= K(F-Fc*Qc)	1694	1745	2343
DFC = Design flow/Capacity = Q/Qe	0.45	0.56	0.65

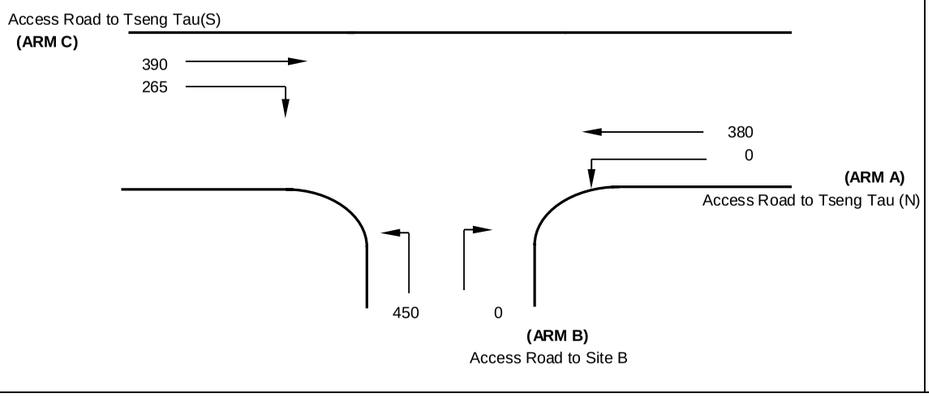
TOTAL ENTRY FLOWS = 3255 PCU

CRITICAL DFC = 0.65

PRIORITY JUNCTION CAPACITY CALCULATION

AECOM

Junction J12a - Access Road to Tseng Tau / Access Road to Site B	2028 Design Traffic Flows (Sensitivity Test Scenario) (W	Designed By : DL	Checked By : DL	Job No. :	Date : Jul 22



NOTES : (GEOMETRIC INPUT DATA) J12a

- W = Major Road Width (6.4 - 20.0)
- W cr = Central Reserve width (1.2 - 9.0, kerbed central reserve only)
- W b-a = Lane width available to vehicle waiting in stream b-a (2.05 - 4.07)
- W b-c = Lane width available to vehicle waiting in stream b-c (2.05 - 4.07)
- W c-b = Lane width available to vehicle waiting in stream c-b (2.05 - 4.07)
- Vl b-a = Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0)
- Vr b-a = Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0)
- Vr b-c = Visibilitu to the right for vehicles waiting in stream b-c (17.0 - 250.0)
- Vr c-b = Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0)

- D = Stream-specific B-A
- E = Stream-specific B-C
- F = Stream-specific C-B
- Y = (1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.3	(metres)
W cr	=	0	(metres)
q a-b	=	0	(pcu/hr)
q a-c	=	380	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	3.5	(metres)
Vr c-b	=	100	(metres)
q c-a	=	390	(pcu/hr)
q c-b	=	265	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.7	(metres)
W b-c	=	3.7	(metres)
Vl b-a	=	100	(metres)
Vr b-a	=	100	(metres)
Vr b-c	=	100	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	450	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.957017
E	=	0.986615
F	=	0.968154
Y	=	0.748150

THE CAPACITY OF MOVEMENT :

Q b-a	=	338
Q b-c	=	633
Q c-b	=	621
Q b-ac	=	633

CRITICAL DFC = 0.71

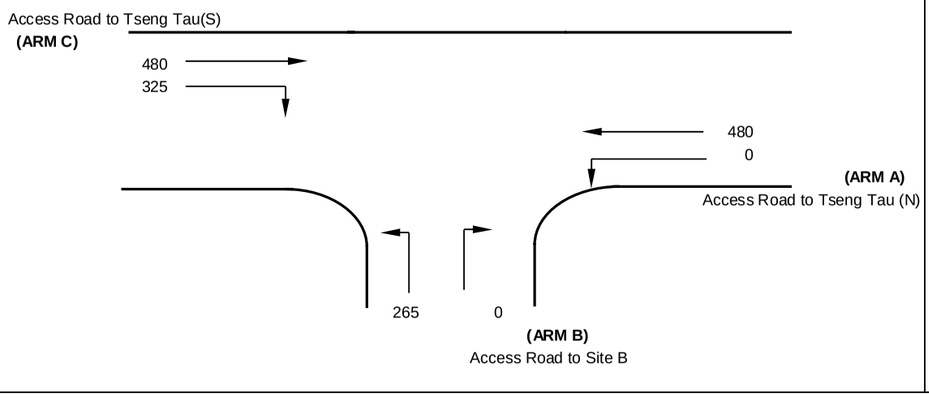
COMPARISION OF DESIGN FLOW TO CAPACITY :

DFC b-a	=	0.00
DFC b-c	=	0.71
DFC c-b	=	0.43
DFC b-ac	=	0.71

PRIORITY JUNCTION CAPACITY CALCULATION

AECOM

Junction J12a - Access Road to Tseng Tau / Access Road to Site B	2028 Design Traffic Flows (Sensitivity Test Scenario) (W	Designed By : DL	Checked By : DL	Job No. :	Date : Jul 22



NOTES : (GEOMETRIC INPUT DATA) J12a

- W = Major Road Width (6.4 - 20.0)
- W cr = Central Reserve width (1.2 - 9.0, kerbed central reserve only)
- W b-a = Lane width available to vehicle waiting in stream b-a (2.05 - 4.07)
- W b-c = Lane width available to vehicle waiting in stream b-c (2.05 - 4.07)
- W c-b = Lane width available to vehicle waiting in stream c-b (2.05 - 4.07)
- Vl b-a = Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0)
- Vr b-a = Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0)
- Vr b-c = Visibilitu to the right for vehicles waiting in stream b-c (17.0 - 250.0)
- Vr c-b = Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0)

- D = Stream-specific B-A
- E = Stream-specific B-C
- F = Stream-specific C-B
- Y = (1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.3	(metres)
W cr	=	0	(metres)
q a-b	=	0	(pcu/hr)
q a-c	=	480	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	3.5	(metres)
Vr c-b	=	100	(metres)
q c-a	=	480	(pcu/hr)
q c-b	=	325	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.7	(metres)
W b-c	=	3.7	(metres)
Vl b-a	=	100	(metres)
Vr b-a	=	100	(metres)
Vr b-c	=	100	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	265	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.957017
E	=	0.986615
F	=	0.968154
Y	=	0.748150

THE CAPACITY OF MOVEMENT :

Q b-a	=	275
Q b-c	=	606
Q c-b	=	595
Q b-ac	=	606

CRITICAL DFC = 0.55

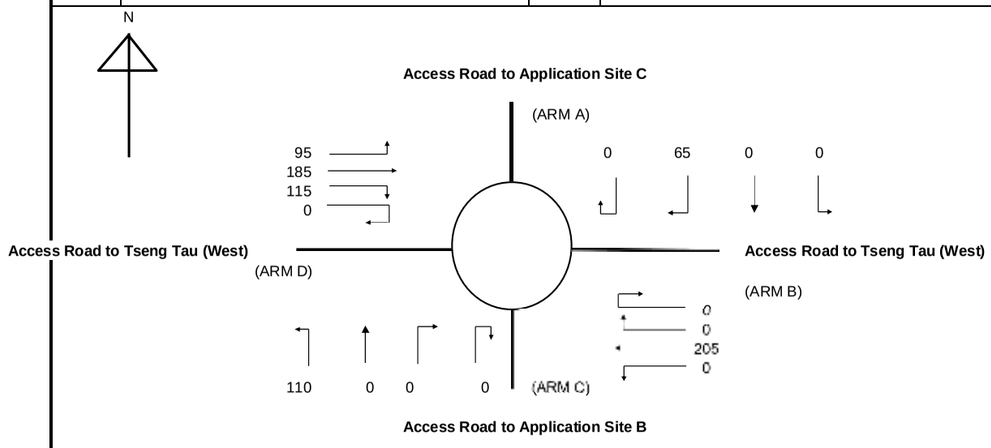
COMPARISION OF DESIGN FLOW TO CAPACITY :

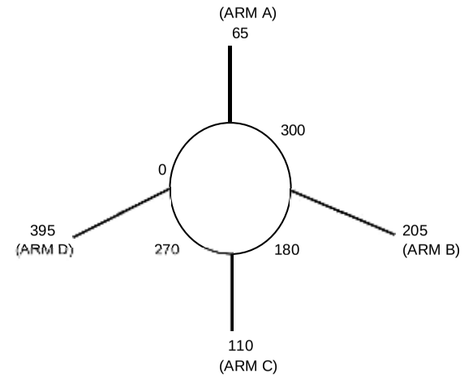
DFC b-a	=	0.00
DFC b-c	=	0.44
DFC c-b	=	0.55
DFC b-ac	=	0.44

ROUNDABOUT CAPACITY CALCULATIO

AECOM

Junction	J13 - Access Road to Tseng Tau / Access Road to Application Site C	Scenario	2028 Design Traffic Flows (Sensitivity Test Scenario) (With Adjacent School Developme	Project No.	Prepared By	Checked By	Date
				60547289	DL	DL	12-Jul-22





ARM	A	B	C	D
INPUT PARAMETERS:				
V = Approach half width (m)	5.20	5.20	5.40	5.20
E = Entry width (m)	5.50	6.30	7.00	6.80
L = Effective length of flare (m)	3.00	13.00	25.00	25.00
R = Entry radius (m)	11.00	18.00	18.00	25.00
D = Inscribed circle diameter (m)	44.00	44.00	44.00	44.00
A = Entry angle (degree)	59.00	54.00	42.00	34.00
Q = Entry flow (pcu/h)	65	205	110	395
Qc= Circulating flow across entry (pcu/h)	300	180	270	0
OUTPUT PARAMETERS:				
S = Sharpness of flare = 1.6(E-V)/L	0.16	0.14	0.10	0.10
K = 1-0.00347(A-30)-0.978(1/R-0.05)	0.86	0.91	0.95	1.00
X2= V + ((E-V)/(1+2S))	5.43	6.07	6.73	6.53
M = EXP((D-60)/10)	0.20	0.20	0.20	0.20
F = 303*X2	1644	1838	2039	1978
Td= 1+(0.5/(1+M))	1.42	1.42	1.42	1.42
Fc= 0.21*Td(1+0.2*X2)	0.62	0.66	0.70	0.69
Qe= K(F-Fc*Qc)	1253	1567	1763	1970
DFC = Design flow/Capacity = Q/Qe	0.05	0.13	0.06	0.20

TOTAL ENTRY FLOWS 775 PCU

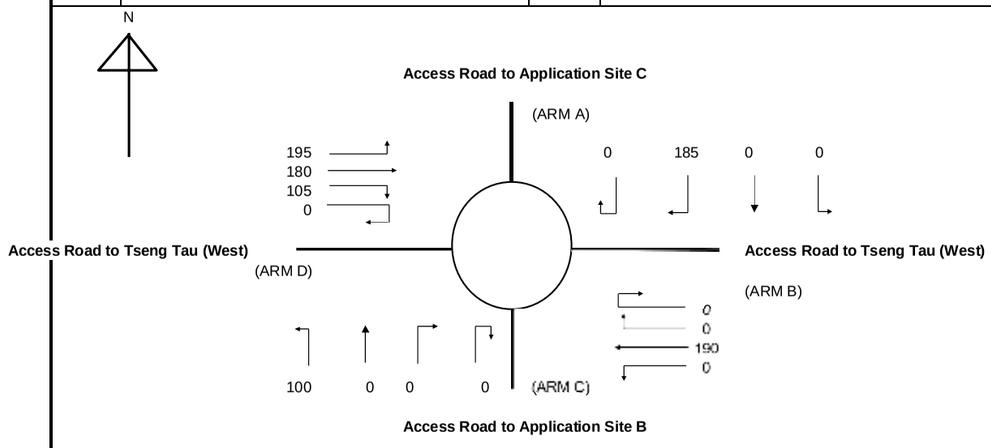
CRITICAL DFC 0.20

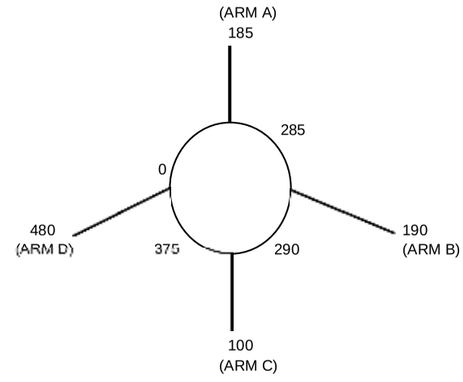
Filename : https://aecom-my.sharepoint.com/personal/magdalene_ku_aecom_com

ROUNDABOUT CAPACITY CALCULATIO

AECOM

Junction	J13 - Access Road to Tseng Tau / Access Road to Application Site C	Scenario	2028 Design Traffic Flows (Sensitivity Test Scenario) (With Adjacent School Developme	Project No.	Prepared By	Checked By	Date
				60547289	DL	DL	12-Jul-22





ARM	A	B	C	D
INPUT PARAMETERS:				
V = Approach half width (m)	5.20	5.20	5.40	5.20
E = Entry width (m)	5.50	6.30	7.00	6.80
L = Effective length of flare (m)	3.00	13.00	25.00	25.00
R = Entry radius (m)	11.00	18.00	18.00	25.00
D = Inscribed circle diameter (m)	44.00	44.00	44.00	44.00
A = Entry angle (degree)	59.00	54.00	42.00	34.00
Q = Entry flow (pcu/h)	185	190	100	480
Qc= Circulating flow across entry (pcu/h)	285	290	375	0
OUTPUT PARAMETERS:				
S = Sharpness of flare = 1.6(E-V)/L	0.16	0.14	0.10	0.10
K = 1-0.00347(A-30)-0.978(1/R-0.05)	0.86	0.91	0.95	1.00
X2= V + ((E-V)/(1+2S))	5.43	6.07	6.73	6.53
M = EXP((D-60)/10)	0.20	0.20	0.20	0.20
F = 303*X2	1644	1838	2039	1978
Td= 1+(0.5/(1+M))	1.42	1.42	1.42	1.42
Fc= 0.21*Td(1+0.2*X2)	0.62	0.66	0.70	0.69
Qe= K(F-Fc*Qc)	1261	1501	1693	1970
DFC = Design flow/Capacity = Q/Qe	0.15	0.13	0.06	0.24

TOTAL ENTRY FLOWS 955 PCU

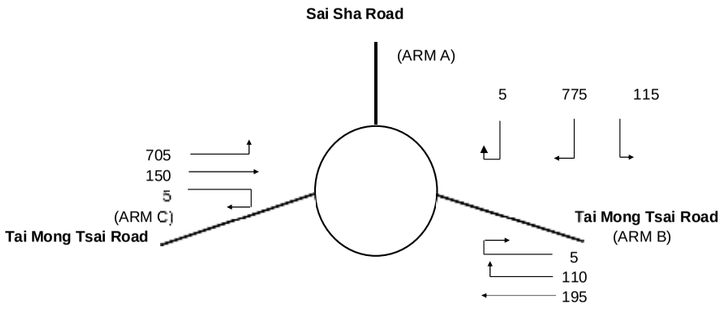
CRITICAL DFC 0.24

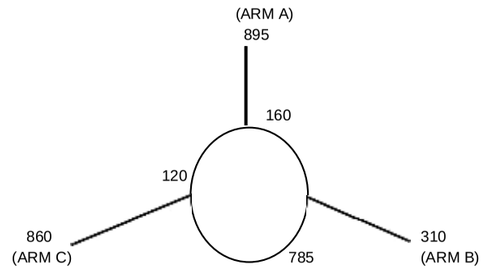
Filename : https://aecom-my.sharepoint.com/personal/magdalene_ku_aecom_com

ROUNDABOUT CAPACITY CALCULATION

AECOM

Junction	J14 - Sai Sha Road / Tai Mong Tsai Road	Scenario	2028 Design Traffic Flows (Sensitivity Test Scenario) (With Adjacent School Developm	Project No.	Prepared By	Checked By	Date
				-	mkcn	shsn	12-Jul-22





ARM	A	B	C
INPUT PARAMETERS:			
V = Approach half width (m)	4.30	3.00	3.30
E = Entry width (m)	7.50	8.00	8.00
L = Effective length of flare (m)	15.00	20.00	20.00
R = Entry radius (m)	16.00	80.00	100.00
D = Inscribed circle diameter (m)	32.00	32.00	32.00
A = Entry angle (degree)	45.00	30.00	45.00
Q = Entry flow (pcu/h)	895	310	860
Qc= Circulating flow across entry (pcu/h)	160	785	120
OUTPUT PARAMETERS:			
S = Sharpness of flare = 1.6(E-V)/L	0.34	0.40	0.38
K = 1-0.00347(A-30)-0.978(1/R-0.05)	0.94	1.04	0.99
X2= V + ((E-V)/(1+2S))	6.20	5.78	5.98
M = EXP((D-60)/10)	0.06	0.06	0.06
F = 303*X2	1879	1751	1813
Td= 1+(0.5/(1+M))	1.47	1.47	1.47
Fc= 0.21*Td(1+0.2*X2)	0.69	0.67	0.68
Qe= K(F-Fc*Qc)	1655	1273	1709
DFC = Design flow/Capacity = Q/Qe	0.54	0.24	0.50

TOTAL ENTRY FLOWS = 2065 PCU

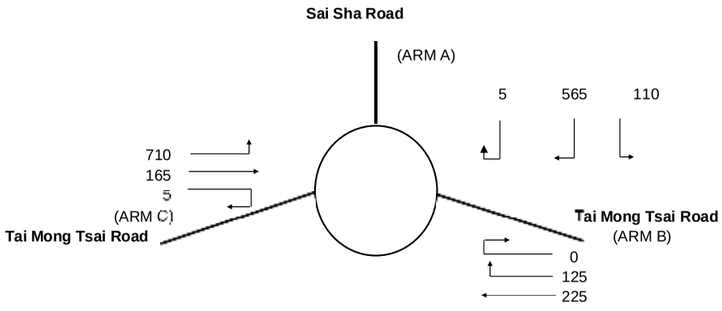
CRITICAL DFC = 0.54

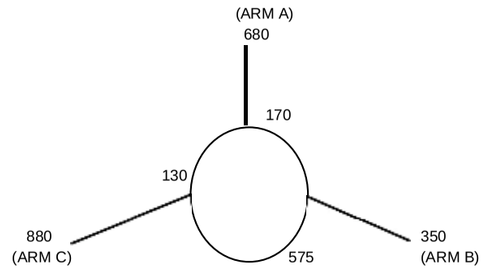
Filename: https://aecom-my.sharepoint.com/personal/magdalene_ku_aecom_co

ROUNDABOUT CAPACITY CALCULATION

AECOM

Junction	J14 - Sai Sha Road / Tai Mong Tsai Road	Scenario	2028 Design Traffic Flows (Sensitivity Test Scenario) (With Adjacent School Developm	Project No.	Prepared By	Checked By	Date
				-	mkcn	shsn	12-Jul-22





ARM	A	B	C
INPUT PARAMETERS:			
V = Approach half width (m)	4.30	3.00	3.30
E = Entry width (m)	7.50	8.00	8.00
L = Effective length of flare (m)	15.00	20.00	20.00
R = Entry radius (m)	16.00	80.00	100.00
D = Inscribed circle diameter (m)	32.00	32.00	32.00
A = Entry angle (degree)	45.00	30.00	45.00
Q = Entry flow (pcu/h)	680	350	880
Qc= Circulating flow across entry (pcu/h)	170	575	130
OUTPUT PARAMETERS:			
S = Sharpness of flare = 1.6(E-V)/L	0.34	0.40	0.38
K = 1-0.00347(A-30)-0.978(1/R-0.05)	0.94	1.04	0.99
X2= V + ((E-V)/(1+2S))	6.20	5.78	5.98
M = EXP((D-60)/10)	0.06	0.06	0.06
F = 303*X2	1879	1751	1813
Td= 1+(0.5/(1+M))	1.47	1.47	1.47
Fc= 0.21*Td(1+0.2*X2)	0.69	0.67	0.68
Qe= K(F-Fc*Qc)	1648	1418	1702
DFC = Design flow/Capacity = Q/Qe	0.41	0.25	0.52

TOTAL ENTRY FLOWS = 1910 PCU

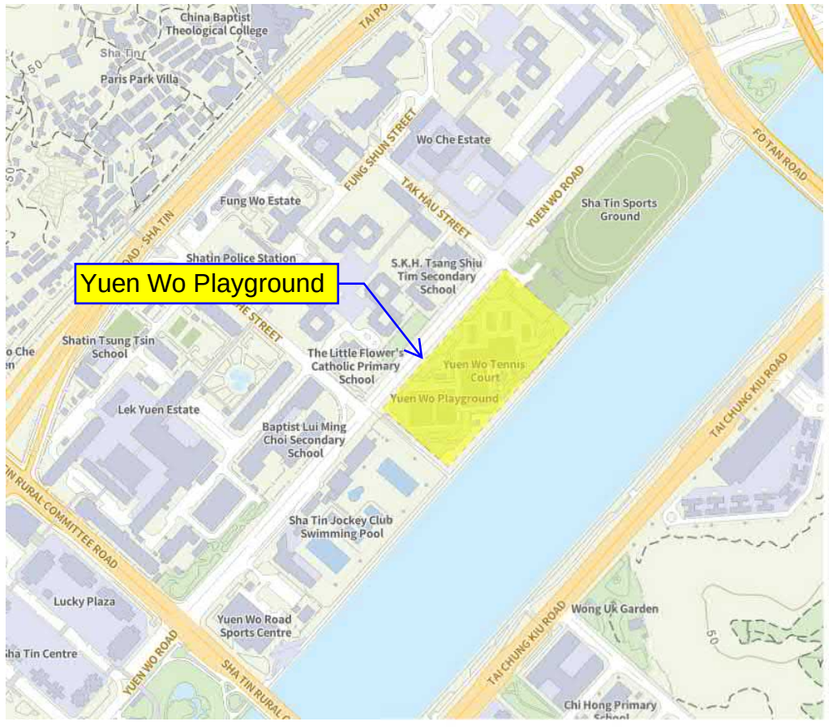
CRITICAL DFC = 0.52

Filename: https://aecom-my.sharepoint.com/personal/magdalene_ku_aecom_co

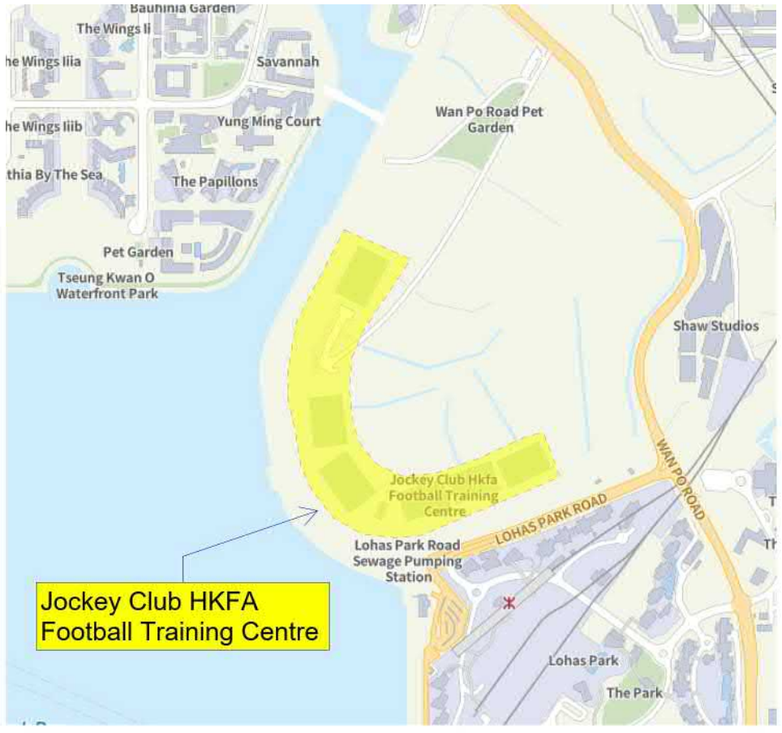
ANNEX B

LOCATION OF EXISTING SPORTS FACILITIES

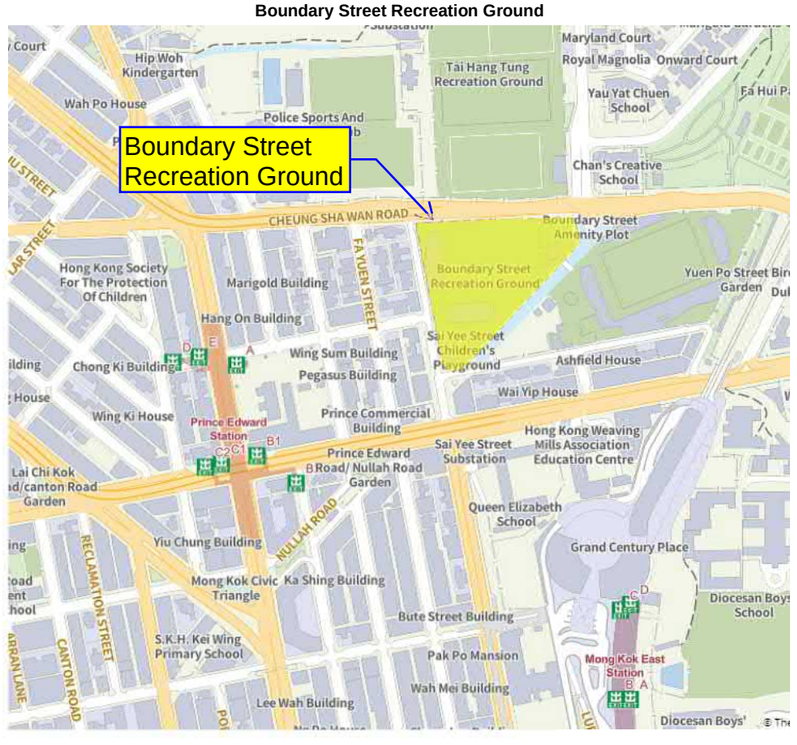
Yuen Wo Playground



Jockey Club HKFA Football Training Centre



Boundary Street Recreation Ground



Club De Recreio

Po Kong Village Road Park Cycling

Hong Kong Velodrome

Location of existing sports facilities
Annex B

ANNEX C

LOCATION OF SELECTED ATC STATIONS

ISO A1 594mm x 841mm

Approved:

Checked:

Designer:

Project Management Initials:

LEGEND:

SITE BOUNDARY

843200 E

844800 E

832000 N

830400 N

N

WHITEHEAD

NAI CHUNG

SITE A

SITE B

SITE C

MA ON SHAN

SAI SHA ROAD

MA ON SHAN BYPASS

MA ON SHAN ROAD

5662

6072

5275

5883

5281

5683

6078

5708

5467

5877

5005

5692

847000 E

828700 N

6035

N

Plot File by: ZHAOHQ2 7/12/2022
PATH: P:\PROJECTS\60638233\Drawing\Report\TIA\Timothy.dgn

AECOM

PROJECT
項目
SAI SHA ROAD WIDENING - SAI SHA COMPREHENSIVE DEVELOPMENT SHAP SZ HEUNG, SAI KUNG NORTH, N.T.

CLIENT
客戶

CONSULTANT
顧問公司
AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS
分判工程顧問公司

ISSUE/REVISION
修訂

I/R 修訂	DATE 日期	DESCRIPTION 內容簡要	CHK. 查核
-	SEP. 22	FIRST ISSUE	SHSN

STATUS
狀況

SCALE
比例
A3 1 : 16000

DIMENSION UNIT
尺寸單位
METRES

KEY PLAN
索引圖

PROJECT NO.
項目編號
60638233

CONTRACT NO.
合約編號

SHEET TITLE
圖紙名稱
LOCATION OF SELECTED ATC STATIONS

SHEET NUMBER
圖紙編號
60638233/TIA/ANNEX C

This drawing has been prepared for the use of AECOM's client, it may not be used, modified, reproduced or detailed upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimensions.

ANNEX D

LOCATION / INFORMATION OF COMMITTED / PLANNED DEVELOPMENTS & BOUNDARY OF MA ON SHAN PLANNING DATA DISTRICT

PLANNED/COMMITTED DEVELOPMENT

1. CDA(1) - STTL 600
2. CDA(3) - STTL601
3. R(C)3 - STTL611
4. R(B)5 - STTL605
5. R(A)8
6. R(A)9
7. R(A)10
8. AREA 100
9. AREA 103
10. HANG KIN STREET
11. ON CHUN STREET
12. LOK WO SHA LANE
13. DD191
14. TSENG TAU SPORTS CENTRE
15. NAI CHUNG SCHOOL DEVELOPMENT
16. CHEUNG MUK TAU SITE A &B1 (RNTPC PAPER NO. 4/20)
17. MA ON SHAN TSUEN ROAD SITE D (RNTPC PAPER NO. 4/20)

843200 E

844800 E

832000 N

830400 N

LEGEND:

SITE BOUNDARY

N

WHITEHEAD

WU KAU SHA

NAI CHUNG

SITE A

SITE B

SITE C

MA ON SHAN

SHAP SZ HEUNG

SAI SHA ROAD

MA ON SHAN BYPASS

ON SHAN ROAD

THE HUNCHBACKS (NGAU NGAK SHAN)

TIU SHAU NGAM

MA ON SHAN

HOI

Wu Kwai Sha Tsui

Ma On Shan Tsuen

Tai Tung

Wong Chuk Yeung

Kei Ling Ha Tsuen

Kei Ling Ha Lo Wai

Water Tunnel

Hatch Tunnel

Disused Mine

Lookout

Ser Res

Golf Course

Water Treatment Works

Holiday Centre

Symphony Bay

Douglas Cove

Cheung Muk Tau

Wu Kwai Sha Village

Wu Kwai Sha Youth Village

Lee On Estate

Saddle Ridge Garden

Park Belvedere

Kam Ying Court

Kam Tai Court

Kam Hong Estate

Kam Ho Court

Kam Ho Estate

Kam Ying Estate

Kam Yuen Court

Heng On Estate

Heng Fai Court

Shan Tsui Court

Shan Tsui Estate

Sunshine City

Bayshore Towers

Villa Marbella

Villa Oceania

Villa Allegro

Ocean View

Yan On Estate

Sausalito

La Costa

Mountain Shore

Yat Court

Chevalier Garden

Yau Shui Hang

Tsui Hang Village

Cheung Shan Wan Village

Cheung Shan Wan Estate

Cheung Kang

Kwun Hang Sai Po

Tseng Tau

Tai Tung Shan

Tai Tung Wo Ku

Kei Ling Ha Tsuen

Kei Ling Ha Lo Wai

三杯酒

SAM PUI C

THRE

(K

Plot File by: ZHAOHQ2 6/27/2022
PATH: P:\PROJECTS\60638233\Drawing\Report\TIA\TIA_528.dgn

This drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimensions.

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

AECOM

PROJECT
SAI SHA ROAD WIDENING - SAI SHA COMPREHENSIVE DEVELOPMENT SHAP SZ HEUNG, SAI KUNG NORTH, N.T.

CLIENT

CONSULTANT
AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS

ISSUE/REVISION

I/R	DATE	DESCRIPTION	CHK.
-	SEP. 22	FIRST ISSUE	SHSN

STATUS

SCALE A3 1 : 16000

DIMENSION UNIT METRES

KEY PLAN

PROJECT NO. 60638233

CONTRACT NO.

SHEET TITLE
OTHER FUTURE DEVELOPMENTS IN MA ON SHAN

SHEET NUMBER
60638233/TIA/ANNEX D

關乎申請編號 A/MOS/96 的擬議用途/發展的概括發展規範
Broad Development Parameters of the Applied Use/Development in respect of Application No. A/MOS/96

1. STTL 600

因應於 2014 年 5 月 2 日接獲的進一步資料而修訂的概括發展規範
Revised broad development parameters in view of the further information received on 02.05.2014

(a)	申請編號 Application no.	A/MOS/96	
(b)	位置／地址 Location/Address	新界馬鞍山沙田市地段第 502 號及 574 號及毗連政府土地 (近落禾沙) STTL 502, STTL574 and adjoining Government Land, near Lok Wo Sha, Ma On Shan, N.T.	
(c)	地盤面積 Site area	127,400.00 平方米 m^2 （包括政府土地約 Includes Government Land of about 16,159.00 平方米 m^2）	
(d)	圖則 Plan	第 16 條申請 Section 16 application 馬鞍山分區計劃大綱核准圖編號 S/MOS/18 Approved Ma On Shan Outline Zoning Plan No. S/MOS/18	
		接獲進一步資料 Further information received 馬鞍山分區計劃大綱草圖編號 S/MOS/19 Draft Ma On Shan Outline Zoning Plan No. S/MOS/19	
(e)	地帶 Zoning	第 16 條申請 Section 16 application 「綜合發展區(1)」 "Comprehensive Development Area (1)"	
		接獲進一步資料 Further information received 「綜合發展區(1)」 "Comprehensive Development Area (1)"	
(f)	申請用途／發展 Applied Use/ Development	擬議住宿機構（校外學生宿舍）及略為放寬非住用總樓面面積限制以作學生宿舍的輔助設施 Proposed Residential Institution (Off-campus Student Hostel) with Minor Relaxation of Non-domestic Gross Floor Area Restriction for Ancillary Facilities Serving the Student Hostel	
(g)	總樓面面積及／或地積比率 Total floor area and/or plot ratio		平方米 m^2 / 地積比率 Plot ratio
		住用 Domestic	356,250.00 / 約 About 3.08
		非住用 Non-domestic	15,890.00 / -
(h)	幢數 No. of block	住用 Domestic	27
		非住用 Non-domestic	-
		綜合用途 Composite	-
(i)	建築物高度／層數 Building height/ No. of storeys	住用 Domestic	- 米 m 50.65 - 127.5 米（主水平基準以上）mPD 12 - 35 層 storey(s)
		非住用 Non-domestic	- 米 m - 米（主水平基準以上）mPD - 層 storey(s)
		綜合用途 Composite	- 米 m - 米（主水平基準以上）mPD - 層 storey(s)

(j)	上蓋面積 Site coverage	-	
(k)	單位數目 No. of units	4,000 住宅單位 Flats 2,168 床位 Bed Spaces 68 留宿員工住宿單位 Overnight Staff Accommodation Unit	
(l)	休憩用地 Open Space	- 私人 Private	- 平方米 m^2
		- 公眾 Public	- 平方米 m^2
(m)	停車位及上落客貨車位數目 No. of parking spaces and loading/ unloading spaces	- 私家車車位 Private Car Parking Spaces	1,393
		- 上落客貨車位 Loading/Unloading Spaces	35
		- 停車處 Lay-bys	6
		- 電單車車位 Motorcycle Parking Spaces	156
		- 單車車位 Bicycle Parking Spaces	326

* 有關資料是為方便市民大眾參考而提供。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。
The information is provided 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.

A/MOS/96

申請編號 Application No. : A/MOS/96

備註 Remarks

The applicant submitted further information of a revised development scheme mainly with reduction in building height from 14-25 storeys to 12-17 storeys in response to the public and departmental comments about deviation from the scheme in terms of building height presented to and supported by Sha Tin District Council in July 2010.

申請人呈交進一步資料修改發展計劃，主要修改是把建築物高度由 14 至 25 層減至 12 至 17 層，以回應政府部門及公眾的意見對有關發展計劃與 2010 年 7 月向沙田區議會簡介並獲得支持的發展計劃有所不同。

有關資料是爲方便市民大眾參考而提供，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。
The information is provided 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.

2. STTL 601

Compliance with Town Planning Ordinance

(b) no building or buildings may be erected on the lot or any part thereof or upon any area or areas outside the lot specified in these Conditions, nor may any development or use of the lot or any part thereof, or of any area or areas outside the lot specified in these Conditions take place, which does not in all respects comply with the requirements of the Town Planning Ordinance, any regulations made thereunder and any amending legislation;

Total gross floor area

(c) the total gross floor area of any building or buildings erected or to be erected on the lot shall not be less than 21,600 square metres and shall not exceed 36,000 square metres;

Height

(d) no part of any building or other structure erected or to be erected on the lot together with any addition or fitting (if any) to such building or structure may in the aggregate exceed a height of 58 metres above the Hong Kong Principal Datum, or such other height limit as the Director at his sole discretion may, subject to the payment by the Purchaser of any premium and administrative fee as shall be determined by the Director, approve, provided that:

(i) machine rooms, air-conditioning units, water tanks, stairhoods and similar roof-top structures may be erected or placed on the roof of the building so as to exceed the above height limit on condition that the design, size and disposition of the said roof-top structures are to the satisfaction of the Director; and

(ii) the Director at his sole discretion may in calculating the height of a building or structure exclude any structure or floor space referred to in Special Condition No. (37)(b)(i)(II) hereof;

Building separation

(e) (i) except with the prior written approval of the Director, any building or group of buildings erected or to be erected on the lot shall not have any projected façade length of 60 metres or more; and

(ii) for the purposes of sub-clause (e)(i) of this Special Condition:

(I) the decision of the Director as to what constitutes a building shall be final and binding on the Purchaser;

(II) any two or more buildings shall be treated as a group of buildings if the shortest horizontal distance between any two buildings erected or to be erected on the lot is less than 15 metres;

2. STTL 601

泓碧

< 返回物業發展

泓碧

街道名稱及門牌號數
耀沙路11號 (臨時門牌)

區域
馬鞍山

由碧桂園集團、宏安地產及中國建築國際集團攜手合作，精心策劃的馬鞍山低密度尊尚臨海豪宅項目，正式命名為「Altissimo 泓碧」。項目先天條件優越，傲據馬鞍山白石半島(Whitehead Peninsula)之上，盡享遼闊無邊的吐露港及海星灣動人景觀，同時背靠馬鞍山郊野公園，遠眺無際連綿翠綠山巒，全方位環抱盎然綠意，尊貴氣派渾然天成。

「Altissimo 泓碧」為低密度住宅發展項目，合共提供547伙，為實踐集團理念，發展項目提供多元化戶型，切合不同家庭需要。同時，項目集多項優勢於一身，前臨自然保育區之生態寶庫—海星灣，背靠馬鞍山郊野公園，遠眺八仙嶺翠巒景致，白石高爾夫球練習場亦是咫尺之遙，天然優勢不言而喻，再配以頂級建築用料及精心設計，勢必成為區內全新尊貴住宅項目之新指標。

瀏覽網頁

區域：馬鞍山 | 街道名稱及門牌號數：耀沙路11號 (註：此臨時門牌號數有待發展項目建成時確認。) | 賣方為施行《一手住宅物業銷售條例》第二部而就本發展項目指定的互聯網網站的網址*：www.altissimo.hk
#*載有售樓說明書、模型、銷售安排及成交記錄冊電子版本的互聯網網址。

本廣告/宣傳資料內載列的相片、圖像、繪圖或素描顯示純屬畫家對有關發展項目之想像。有關相片、圖像、繪圖或素描並非按照比例繪畫及/或可能經過電腦修飾處理。準買家如欲了解發展項目的詳情，請參閱售樓說明書#。賣方亦建議準買家到有關發展地盤作實地考察，以對該發展地盤、其周邊地區環境及附近的公共設施有較佳了解。

賣方：鋒尚有限公司 | 賣方之控權公司：Ease Mind Investments Limited及國意國際有限公司 | 發展項目的認可人士：黎紹堅先生 | 發展項目的認可人士以其專業身分擔任經營人、董事或僱員的法團：呂鄧黎建築師有限公司 | 發展項目的承建商：中國海外房屋工程有限公司 | 就發展項目中的住宅物業的出售而代表擁有人行事的律師事務所：的近律師行及姚黎李律師行 | 已為發展項目的建造提供貸款或已承諾為該項建造提供融資的認可機構：香港上海滙豐銀行有限公司、渣打銀行(香港)有限公司、東亞銀行有限公司、大華銀行有限公司及DBS Bank Ltd., Hong Kong Branch | 已為發展項目的建造提供貸款的任何其他人：大豐銀行有限公司 | 盡賣方所知的發展項目的預計關鍵日期: 2021年1月29日 (「關鍵日期」指批地

3. STTL 611

Total gross floor area

(c) the total gross floor area of any building or buildings erected or to be erected on the lot shall not be less than 6,653 square metres and shall not exceed 11,088 square metres;

Height

(d) no part of any building or other structure erected or to be erected on the lot together with any addition or fitting (if any) to such building or structure may in the aggregate exceed a height of 40 metres above the Hong Kong Principal Datum, or such other height limit as the Director at his sole discretion may, subject to the payment by the Purchaser of any premium and administrative fee as shall be determined by the Director, approve, provided that:

(i) machine rooms, air-conditioning units, water tanks, stairhoods and similar roof-top structures may be erected or placed on the roof of the building so as to exceed the above height limit on condition that the design, size and disposition of the said roof-top structures are to the satisfaction of the Director; and

(ii) the Director at his sole discretion may in calculating the height of a building or structure exclude any structure or floor space referred to in Special Condition No. (40) (b)(i)(II) hereof;

Building separation

(e) (i) except with the prior written approval of the Director, any building or group of buildings erected or to be erected on the lot shall not have any projected façade length of 60 metres or more; and

(ii) for the purposes of sub-clause (e)(i) of this Special Condition:

(I) the decision of the Director as to what constitutes a building shall be final and binding on the Purchaser;

(II) any two or more buildings shall be treated as a group of buildings if the shortest horizontal distance between any two buildings erected or to be erected on the lot is less than 15 metres;

(III) the decision of the Director as to what constitutes the projected façade length of a building or a group of buildings erected or to be erected on the lot shall be final and binding on the Purchaser; and

(IV) in calculating the projected façade length referred to in sub-clause (e)(i) of this Special Condition, gap between any two buildings shall be taken into account and the Director's decision as to the calculation shall be final and binding on the Purchaser; and

Design and

(f) the design and disposition of any building or buildings erected or

4. STTL 605

Tenders awarded for commercial site and residential site

****

The Lands Department today (May 13) announced that the tenders for a commercial site and a residential site have been awarded on 50-year land grants at a total premium of $4,507,768,888.

The commercial site, New Kowloon Inland Lot No. 6313 at the junction of Cheung Yip Street, Sheung Yee Road and Wai Yip Street, Kowloon Bay, Kowloon, was awarded to Great Maker Limited at $3,038.88 million. The residential site, Sha Tin Town Lot No. 605 at Lok Wo Sha Lane, Ma On Shan, Sha Tin, New Territories, was awarded to Jumbo Vision Holdings Limited (parent company: CITIC Pacific Limited) at $1,468,888,888.

"Authority from the Central Tender Board was given to the Lands Department to award the two sites to the highest tenderers," a Lands Department spokesman said.

The tenderers, other than the successful tenderer, in respect of each lot in alphabetical order, with the name of the parent company where provided by the tenderer in brackets, were:

(a) New Kowloon Inland Lot No. 6313
(1) Best King Limited (Chinese Estates Holdings Limited)
(2) Bright Vision International Limited (CITIC Pacific Limited)
(3) Conford Investments Limited (CK Hutchison Holdings Limited)
(4) Conventional Wisdom Limited (Sunny Autumn Limited)
(5) Ever Merits Investments Limited (Wheelock Properties Limited)
(6) Juliyam Limited (Henderson Land Development Company Limited)
(7) Luck Huge Limited
(8) Newly Development Limited (New World Development Company Limited)
(9) Silver Grace Company Limited (K. Wah Properties (Holdings) Limited)
(10) Sunrise Treasure Limited (Great Eagle Holdings Limited)
(11) Super Great Limited (Sun Hung Kai Properties Limited)
(12) Time Fort Limited (K&K Property Holdings Limited)

(b) Sha Tin Town Lot No. 605
(1) Adventure Success Limited (Emperor International Holdings Limited and Shimao Property Holdings Limited)
(2) Asia Bright Development Limited (Sino Land Company Limited)
(3) Century Link Investments Limited (Wang On Group Limited)
(4) Ease Success Limited (Great Eagle Holdings Limited)
(5) Fortune Choice Development Limited (Henderson Land Development Company Limited)
(6) Gainwick Limited (HKR International Limited)
(7) Golden Centurion Limited (Wheelock Properties Limited)
(8) Hanforth Limited
(9) K Wise Limited (K&K Property Holdings Limited)
(10) Kingright International Limited (Lai Sun Garment (International) Limited and Pine Billion Enterprises Limited)
(11) Kong Smart Investment Limited (Sun Hung Kai Properties Limited)
(12) Manful Global Development Limited (K. Wah International Holdings Limited)
(13) Master Green Limited (Soundwill Holdings Limited)
(14) Rich View Investments Limited (CK Hutchison Holdings Limited)
(15) Sanon Limited (Far East Consortium International Limited)
(16) Smart Base Holdings Limited (Paliburg Holdings Limited and Regal Hotels International Holdings Limited)
(17) Super Record Limited (New World Development Company Limited)
(18) Victory Asset Inc Limited (Angel Stars International Limited and Wealthy Sino Limited)

New Kowloon Inland Lot No. 6313 has a site area of about 3,795 square metres and is designated for non-industrial

(excluding residential, hotel, godown, petrol filling station and residential care home) purposes. The minimum gross floor area and the maximum gross floor area are 27,324 sq m and 45,540 sq m respectively.

Sha Tin Town Lot No. 605 has a site area of about 5,830 sq m and is designated for private residential purposes. The minimum gross floor area and the maximum gross floor area are 12,593 sq m and 20,988 sq m respectively.

Ends/Wednesday, May 13, 2015
Issued at HKT 17:07

NNNN

Print this page

News Archives | Yesterday's News

4. STTL 605

登入 註冊 | 訂閱 / 續訂

熱門: 預算案 武漢肺炎

搜尋

主頁 即時新聞 今日信報 港股360 地產投資 財富管理 信博 專題 信報視頻

地產投資 地產即時 新盤情報 二手市場 工商舖市道 專家評論 睇樓速遞 屋苑樓價 物業報告 置業工具

« 返回前頁

Like 0

2018年10月18日 新盤情報

峻源148伙部署登場

放大圖片

中信股份(00267)旗下中信泰富發展的馬鞍山落禾沙項目，今天正式命名為峻源。中信泰富物業代理董事關潔瑩表示，峻意指項目翠巒環抱，可享翠綠茂林之景，源則意味項目同時享寬闊海景，兩者併合彰顯項目前臨壯闊海灣，後靠崇山峻嶺之自然環境。

關潔瑩補充，項目由3座住宅大樓組成，提供148伙單位，實用面積879至1656方呎，間隔包括3房1套及4房雙套，另有8伙超過2000方呎的特色單位切合不同家庭需要。

標籤： 峻源

下一篇：朗城滙加推144伙 折實512萬起
上一篇：弦海首批75伙 折實最平288萬

編輯推介

港股炒救市漲352 夜期續高水
今日信報

歐洲港人詳述居住地疫情
林艷虹 | 今日信報

股市如過山車 短線炒波幅有路捉
陸文 | 今日信報

【信報月刊】「低醣」莫走極端 飯太少短命...

愈理性死得愈慘
畢老林 | 今日信報

十大零食損兒童健康
李思齊教授 | 信健康

4港青全球搶材料本土產口罩 盼惠弱勢社群
StartupBeat

印度消費升級 借鑑中國尋機會
譚家駿 | 財富管理

熱門文章

OCEAN MARINI周六208伙首輪銷售
新盤情報 | 昨日 19:09

OCEAN MARINI加推60伙 折實661萬起
新盤情報 | 昨日 16:17

恆大．睿峰增優惠助去貨
新盤情報 | 昨日 17:14

迎海兩房海景減價142萬承接
二手市場 | 昨日 17:59

杏花邨低層三房劈價238萬沽
二手市場 | 昨日 15:43

傲雲峰兩房劈價210萬成交
二手市場 | 昨日 19:00

2月私樓呎租連跌7個月
| 昨日 15:59

信置旗下兩盤今沽3伙
新盤情報 | 昨日 19:06

日出康城三房東南降價80萬沽
二手市場 | 昨日 15:27

投資者489.5萬購嘉湖山莊兩房
二手市場 | 昨日 19:34

5. YAN ON ESTATE PHASE 2 - R(A)8

附件二

欣安邨第二期公共房屋發展項目及
馬鞍山路(南段及北段)居者有其屋發展項目方案

1. 目的

1.1 本文件旨在向沙田區議會發展及房屋事務委員會介紹欣安邨第二期公共房屋(公屋) 發展項目及馬鞍山路(南段及北段)居者有其屋(居屋)發展項目的方案。歡迎各委員就有關項目提出意見。

2. 背景

2.1 根據《馬鞍山分區計劃大綱核准圖編號 S/MOS/18》，公屋、居屋地盤現分別規劃作「道路」、「政府、機構或社區」及「綠化地帶」用地。爲配合公營房屋發展項目，規劃署擬於稍後建議把用地更改規劃爲「住宅(甲類)」地帶。請參閱於**附錄一**的位置圖。

欣安邨第二期公屋發展項目

2.2 公屋地盤位處馬鞍山 86B 區恆泰路，毗鄰公共房屋欣安邨。擬議發展包括恆泰路改道，地盤總面積約爲 3.26 公頃 (包括現時欣安邨約 2.22 公頃、第二期發展用地約 0.85 公頃及毗鄰休憩區用地約 0.19 公頃)。現時撥作渠務署及路政署作工務工程臨時工地、地盤辦公室及存放場。

馬鞍山路(南段及北段)居屋發展項目

2.3 居屋地盤位處馬鞍山路及西沙路的東面，地盤面積約爲 1.85 公頃。現時大部分的地盤範圍以短期租約形式出租作單車公園、社區農圃、臨時射箭場及撥作路政署作沙中線有關的工務工程臨時工地。

3. 發展項目及初步建議

3.1 香港房屋委員會(下稱「房委會」) 現提交有關發展項目的初步規劃大綱供區議會討論，請參閱**附錄二(甲)** 和**附錄三(甲)**。

3.2 本發展項目設計概念如下：

- 建議把分隔現有欣安邨一期及二期的部份恆泰路路段改道，使新公屋發展項目與現有欣安邨有更佳的融合。
- 優化現時欣安邨小社區，增加零售和社區配套設施，進一步發展成爲成熟小社區，確保有關發展項目在提供公營房屋單位的同時，亦能配合社區的需要。
- 興建一座行人天橋連接居屋發展項目與設於欣安邨二期發展項目的零售和社區配套設施，改善行人流。
- 進行空氣流通評估及微氣候研究，提升樓宇和整體綠化設計、景觀及空氣流通。
- 住宅樓宇的高度佈局亦會參照山脊線，與周邊環境協調。

項目的概念設計圖，請參閱**附錄二(乙)**和**附錄三(乙)**。

3.3 房委會已就擬建的公屋及居屋發展項目進行相關的技術評估，以確保項目符合交通、環境等方面的要求。

3.4 房委會亦已與運輸署聯繫，爲現有道路設施、擬議的恆泰路改道及新建的馬鞍山路支路作交通評估，初步評估顯示擬建的公屋及居屋發展項目將不會對道路網絡造成不良的影響。同時，運輸署亦會積極配合發展項目，會適時爲擬建的公屋及居屋發展項目所帶來對公共交通服務的新增需求制定具體公共交通計劃。

4. 預計項目發展時間表

4.1 欣安邨第二期公屋預計項目發展時間表如下：

零售設施

開工日期	約 2016 年
完工日期	約 2020 年

住宅項目

開工日期	約 2019 年
完工日期	約 2024 年

4.2 馬鞍山路(南段及北段)居屋預計項目發展時間表如下：

開工日期	約 2016 年
完工日期	約 2020 年

5. 徵詢意見

5.1 歡迎各委員就上述發展項目提出寶貴意見。

房屋署
2013 年 8 月

附錄

附錄一	欣安邨第二期公屋及馬鞍山路(南段及北段)居屋發展項目位置圖
附錄二(甲)	欣安邨第二期公屋發展項目規劃大綱
附錄二(乙)	欣安邨第二期公屋發展項目概念設計圖
附錄三(甲)	馬鞍山路(南段及北段)居屋發展項目規劃大綱
附錄三(乙)	馬鞍山路(南段及北段)居屋發展項目概念設計圖

5. YAN ON ESTATE PHASE 2 - R(A)8

附件二
(附錄二(甲))

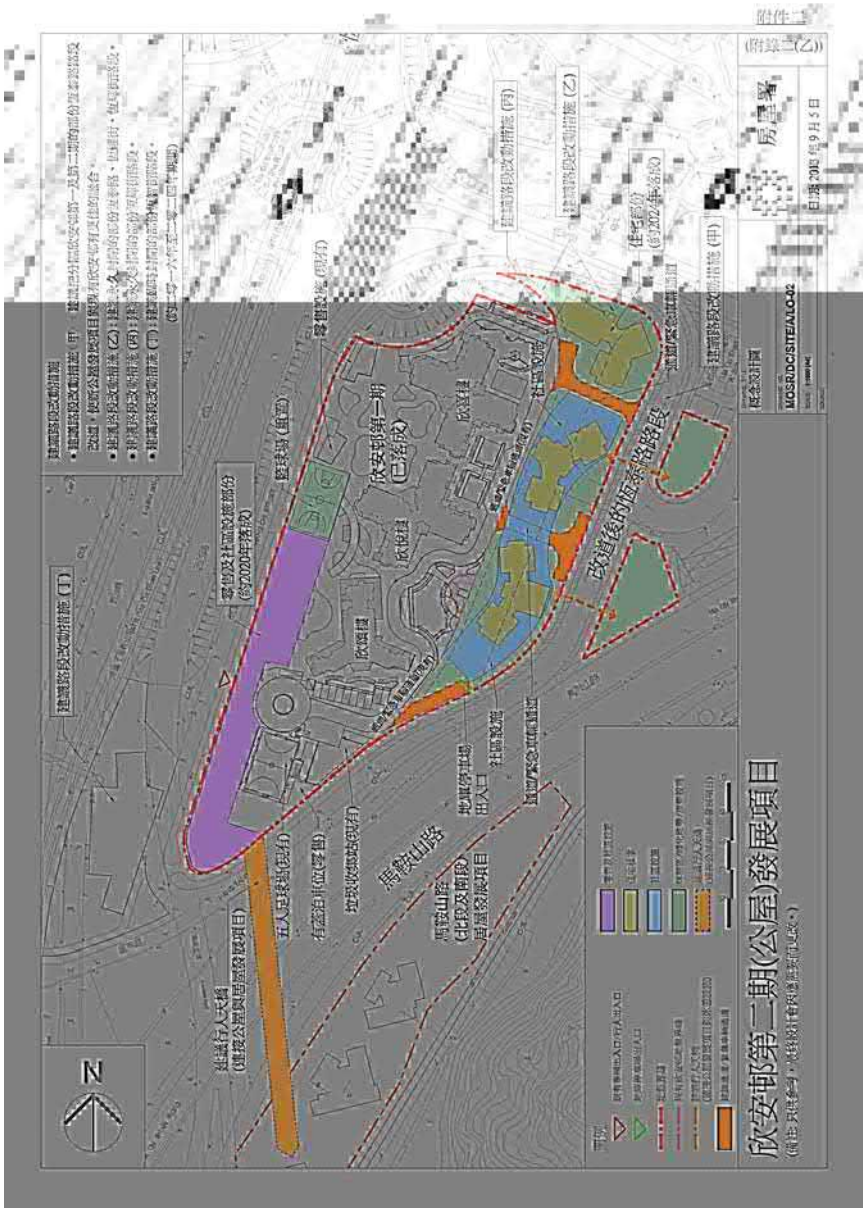
欣安邨第二期公屋發展項目
規劃大綱

1. 擬建的公屋發展項目及主要發展參數。詳情如下：

地盤面積	約 3.26 公頃 (包括現時欣安邨約 2.22 公頃、 第二期發展用地約 0.85 公頃及 毗鄰休憩區用地約 0.19 公頃)
欣安邨整體發展地積比率	住用約 6 倍 非住用約 0.3 倍
第二期發展的主要發展參數	
樓宇數目	3
樓宇高度	約 42 至 44 層 不高於主水平基準上 135 至 140 米
單位數目	約 1,600 個
預計人口	約 4,900 人
地盤綠化率	約 20-30%
零售設施	約 4,500 平方米 (建築樓面面積) (有待有關零售設施研究)
康樂設施	休憩用地、兒童遊樂場及球場等
社會福利設施	• 特殊幼兒中心 • 早期教育及訓練中心 • 弱智人士輔助宿舍 (有待與社會福利署進一步商討)
其他設施	• 幼稚園 • 私家車、電單車、輕型貨車泊車位及單車停放處 • 屋苑管理設施等

2. 有關此公屋發展項目的概念設計圖，請參閱**附錄二(乙)**。

3. 公屋地盤現位於恆泰路。爲配合發展，現有恆泰路將進行改道工程，使公屋發展項目與現有欣安邨有更佳的融合。



6. AREA 81A DEVELOPMENT - R(A)9

關乎申請編號 A/MOS/122 的擬議用途/發展的概括發展規範
Broad Development Parameters of the Applied Use/Development in respect of Application No. A/MOS/122

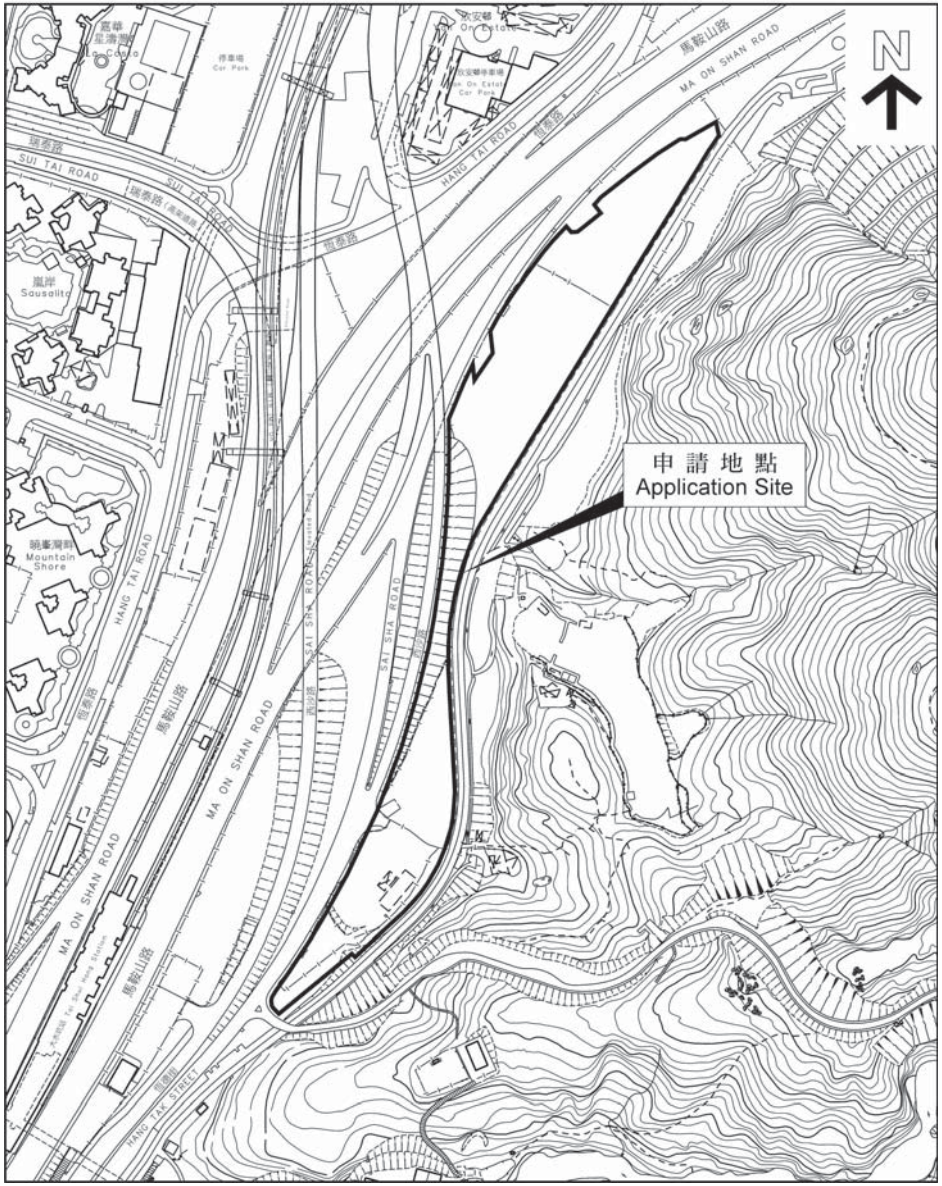
(a)	申請編號 Application no.	A/MOS/122		
(b)	位置／地址 Location/Address	馬鞍山第 81A 區馬鞍山路的政府土地 Government Land at Ma On Shan Road, Ma On Shan Area 81A		
(c)	地盤面積 Site area	約 About 19,000 平方米 m^2(包括政府土地約 Includes Government Land of about 19,000 平方米 m^2)		
(d)	圖則 Plan	馬鞍山分區計劃大綱核准圖編號 S/MOS/22 Approved Ma On Shan Outline Zoning Plan No. S/MOS/22		
(e)	地帶 Zoning	「住宅(甲類)9」、「綠化地帶」及「道路」 "Residential (Group A) 9", "Green Belt" and "Road"		
(f)	申請用途／發展 Applied Use/ Development	擬議資助出售房屋發展 Proposed Subsidized Sale Flats Development		
(g)	總樓面面積及／或地積比率 Total floor area and/or plot ratio		平方米 m^2	地積比率 Plot ratio
		住用 Domestic	不多於 Not more than 105,070	不多於 Not more than 5.53
		非住用 Non-domestic	不多於 Not more than 5,700	不多於 Not more than 0.3
(h)	幢數 No. of block	住用 Domestic	5	
		非住用 Non-domestic	2	
		綜合用途 Composite	-	
(i)	建築物高度／層數 Building height/ No. of storeys	住用 Domestic	- 米 m 不超過 Not Exceeding 140 米（主水平基準以上）mPD 41 層 storey(s)	
		非住用 Non-domestic	- 米 m 不超過 Not Exceeding 31 米（主水平基準以上）mPD 不超過 Not Exceeding 3 層 storey(s) 包括 including 1 敞開式停車間 Carport	
		綜合用途 Composite	- 米 m - 米（主水平基準以上）mPD - 層 storey(s)	
(j)	上蓋面積 Site coverage	15 米以下的非住用部分 Non-domestic under 15m 不多於 Not more than 100% 15 米以上的非住用部分 Non-domestic above 15m 不多於 Not more than 65% 住用部分 Domestic 不多於 Not more than 40%		
(k)	單位數目 No. of units	2,079 單位 Units		

(l)	休憩用地 Open Space	- 私人 Private	不少於 Not less than 6,403 平方米 m^2
		- 公眾 Public	- 平方米 m^2
(m)	停車位及上落客貨車位數目 No. of parking spaces and loading/ unloading spaces	- 私家車車位 Private Car Parking Spaces	116
		- 電單車車位 Motorcycle Parking Spaces	21
		- 單車車位 Bicycle Parking Spaces	174
		- 上落客貨車位 Loading/Unloading Spaces	6

* 有關資料是為方便市民大眾參考而提供。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。
The information is provided 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.

申請編號 Application No.： A/MOS/122
此頁摘自申請人提交的文件。
This page is extracted from applicant's submitted documents.

A/MOS/122



行政摘要

（聲明：本中文譯本僅供參考。若與英文原文有歧義，一概以英文原文為準。）

是項規劃申請是由香港房屋委員會（下稱房委會）向城市規劃委員會（下稱城規會）提出，旨在根據《城市規劃條例》第 16 條，向城規會申請規劃許可，放寬位於馬鞍山路資助出售房屋發展計劃（下稱申請地點）的住宅地積比率限制。

城規會曾批准就此發展地盤包括四小片土地作住宅用途的規劃許可（編號：A/MOS/120）。申請地點主要座落於馬鞍山分區計劃大綱核准圖編號 S/MOS/22（下稱分區計劃大綱圖）上的「住宅（甲類）9」地帶上，三小片現時顯示為「道路」及一小片「綠化地帶」的土地亦納入申請範圍內。擬議發展項目的住宅地積比率限制為最高 5.5 倍，非住宅地積比率為 0.3 倍，及最高建築物高度限制為主水平基準上 140 米。

有見公營房屋用地短缺，政府一直採取多管齊下的措施以增加公營房屋土地供應， 包括適當地優化個別地盤的發展潛力。為配合 2018 年 12 月政府公布的“提升公營房屋用地的發展密度”政策，房委會進行了一項檢討，以確立增加項目單位數量的條件。由於房屋發展項目已進入打樁後期階段，重大修改規劃和設計將導致項目計劃大幅延誤；因此，房委會建議略為放寬申請地點的住宅地積比率限制，由 5.5 倍增加至 5.53 倍，以充分運用現時尚餘下的地基設計負載能力，為項目提供額外 10 個單位。這個建議令資助出售房屋項目可提供的單位，由 2 069 個上調至 2 079 個，設計人口由容納 6 373 人上調至 6 403 人。這個建議可在不影響項目計劃的前提下，更有效地運用珍貴的土地資源。

擬議發展符合「住宅（甲類）」地帶的規劃意向，並與周邊土地用途配合。擬議增加的房屋單位並不會對附近的交通、環境、空氣流通、量化風險、排水和排污及視覺環境方面構成不良影響。

申請人基於以上所列論據，懇請城市規劃委員會批准是次規劃申請，於擬議發展略為放寬住宅地積比率限制。

申請編號 Application No. : A/MOS/122
此頁摘自申請人提交的文件。
This page is extracted from applicant's submitted documents.

Executive Summary

The Hong Kong Housing Authority (HKHA) submits this application to seek permission from the Town Planning Board (TPB) for minor relaxation of domestic plot ratio under section 16 of the Town Planning Ordinance for the proposed Subsidised Sale Flats (SSF) development at Ma On Shan Road.

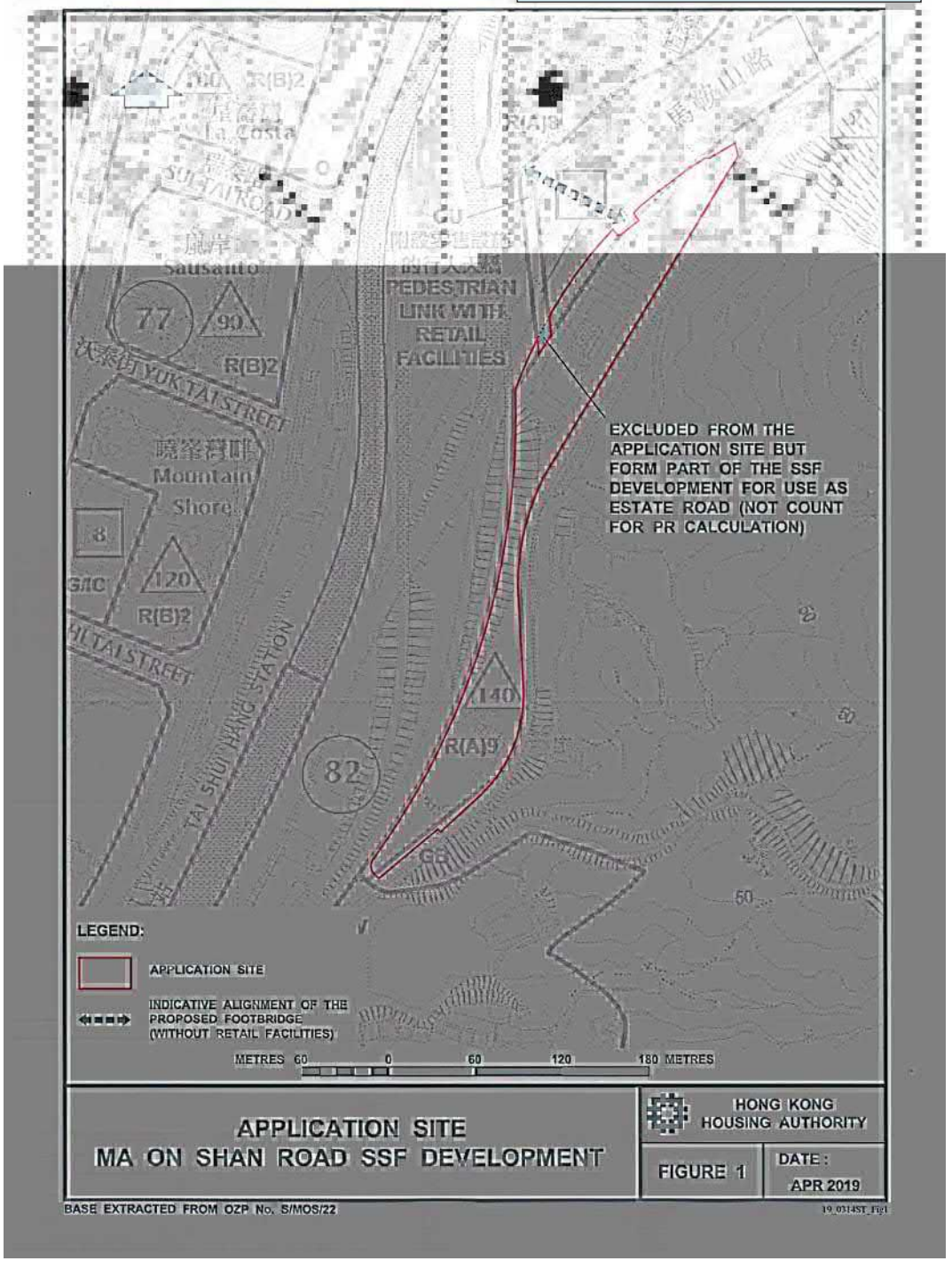
A s16 planning approval (no. A/MOS/120) was previously obtained from the TPB on inclusion of four small strips of land as part of the development site. The application site boundary of the proposed development mainly falls within "Residential (Group A)9" ("R(A)9") zone with three areas shown as "Road" and a strip of land zoned "Green Belt" ("GB") on the Approved Ma On Shan Outline Zoning Plan No. S/MOS/22. The proposed development is subject to a maximum domestic PR of 5.5, a maximum non-domestic PR of 0.3, and a maximum building height ("BH") of 140mPD.

In view of the shortage of land for public housing development, the Government has been adopting a multi-pronged approach in increasing public housing land supply, including optimization of development potential of sites where appropriate. In line with Government's initiative announced in Dec 2018 on "Enhanced Development Intensity of Public Housing Sites", a review was conducted to ascertain if there is scope to increase the flat production of the project. Bearing in mind that the project is at advanced piling stage and any significant change to planning parameters and detail design of the project will result in a significant delay in project programme, the HKHA proposes minor relaxation of domestic plot ratio restriction for the Application Site from 5.5 to 5.53 to fully utilize the existing capacity of the foundation design for an additional of 10 flats. The resulting flat production and design population will be adjusted from 2 069 to 2 079 and 6 373 to 6 403 respectively. The proposal will better utilize the scarce land resources without affecting the project programme.

The proposed development is in line with the planning intention of the "R(A)" zone and is compatible with surrounding uses. The traffic, environmental, air ventilation, quantitative risk, drainage and sewerage and visual impacts arising from the minor increase in flat production to the surrounding areas would be insignificant.

In view of the above, the Town Planning Board is sincerely requested to give favourable consideration to the proposed minor relaxation of domestic plot ratio restriction for the proposed development under this application.

申請編號 Application No. : A/MOS/122
此頁摘自申請人提交的文件。
This page is extracted from applicant's submitted documents.



N

VEHICLE INRESS

BLOCK A
40 DOMESTIC STOREYS

BLOCK B
37 DOMESTIC STOREYS

BLOCK C
39 DOMESTIC STOREYS

BLOCK D
40 DOMESTIC STOREYS

BLOCK E
40 DOMESTIC STOREYS

SINGLE STOREY CARPORT

CARPORT

COMMERCIAL AND RECREATIONAL BUILDING

COMMERCIAL AND RECREATIONAL BUILDING
3 STOREYS
(G/F - CARPORT,
1/F & 2/F - COMMERCIAL USE,
ROOFTOP - RECREATIONAL FACILITIES)

VEHICLE EGRESS

VEHICLE INRESS

EXISTING YAN ON ESTATE

SAI SHA ROAD

MA ON SHAN ROAD

HANG TAI ROAD

Cycling Track

Elevated Road

LEGEND

- SITE BOUNDARY
- EVA / DRIVEWAY
- DOMESTIC BLOCK
- SINGLE STOREY CARPORT
- COMMERCIAL AND RECREATIONAL BUILDING
- CANOPY / FLAT ROOF
- COVERED WALKWAY

申請編號 Application No. : A/MOS/122
此頁摘自申請人提交的文件。
This page is extracted from applicant's submitted documents.

PROJECT TITLE

SUBSIDISED SALE FLATS DEVELOPMENT AT MA ON SHAN ROAD

DRAWING TITLE

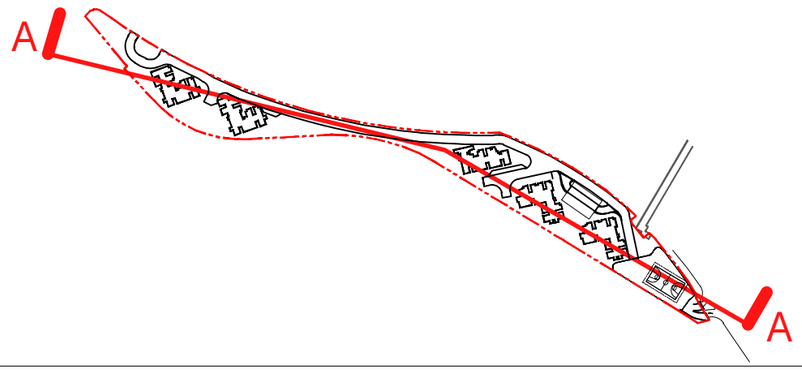
INDICATIVE MASTER LAYOUT PLAN OF PROPOSED SCHEME

SCALE 1:1500 (A3)

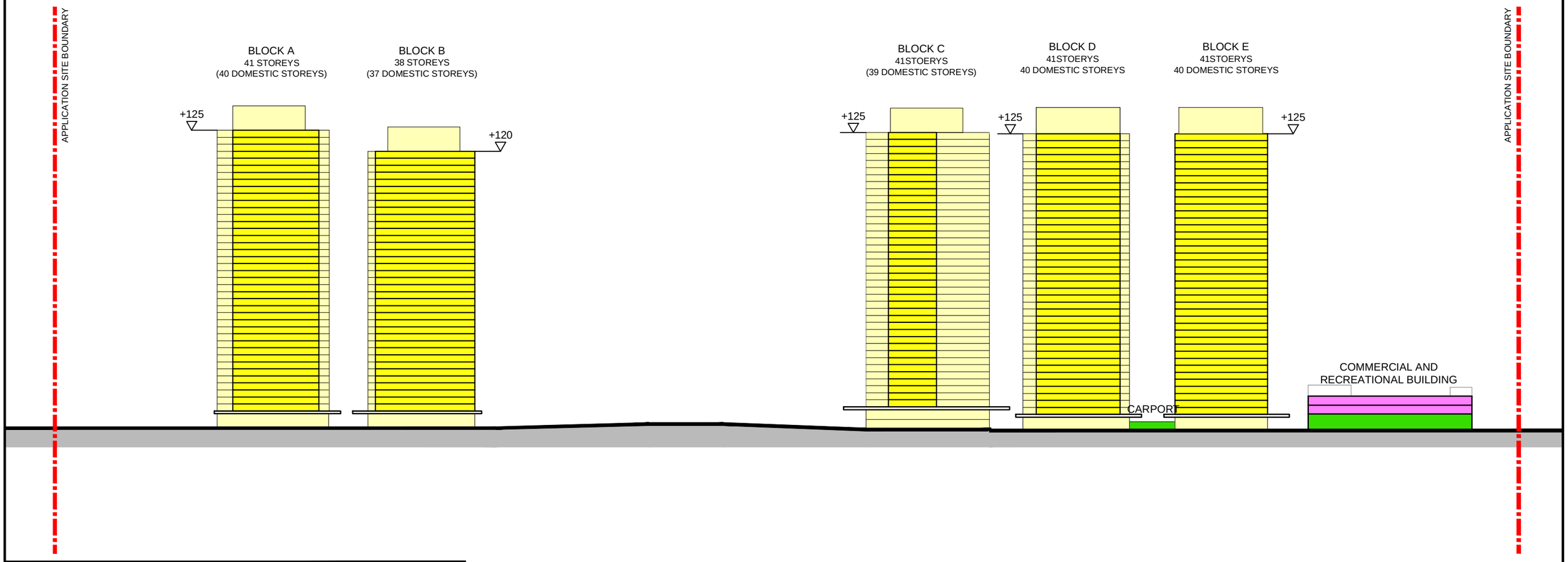
房 屋 署
HOUSING DEPARTMENT

Appendix 1

DATE
MAR 2019



KEY PLAN SCALE 1:5000



LEGEND

- SITE BOUNDARY
- RESIDENTIAL
- CARPORT
- COMMERCIAL AND RECREATIONAL BUILDING

申請編號 Application No. : A/MOS/122
此頁摘自申請人提交的文件。
This page is extracted from applicant's submitted documents.

PROJECT TITLE

SUBSIDISED SALE FLATS DEVELOPMENT AT MA ON SHAN ROAD

DRAWING TITLE

SECTION A-A

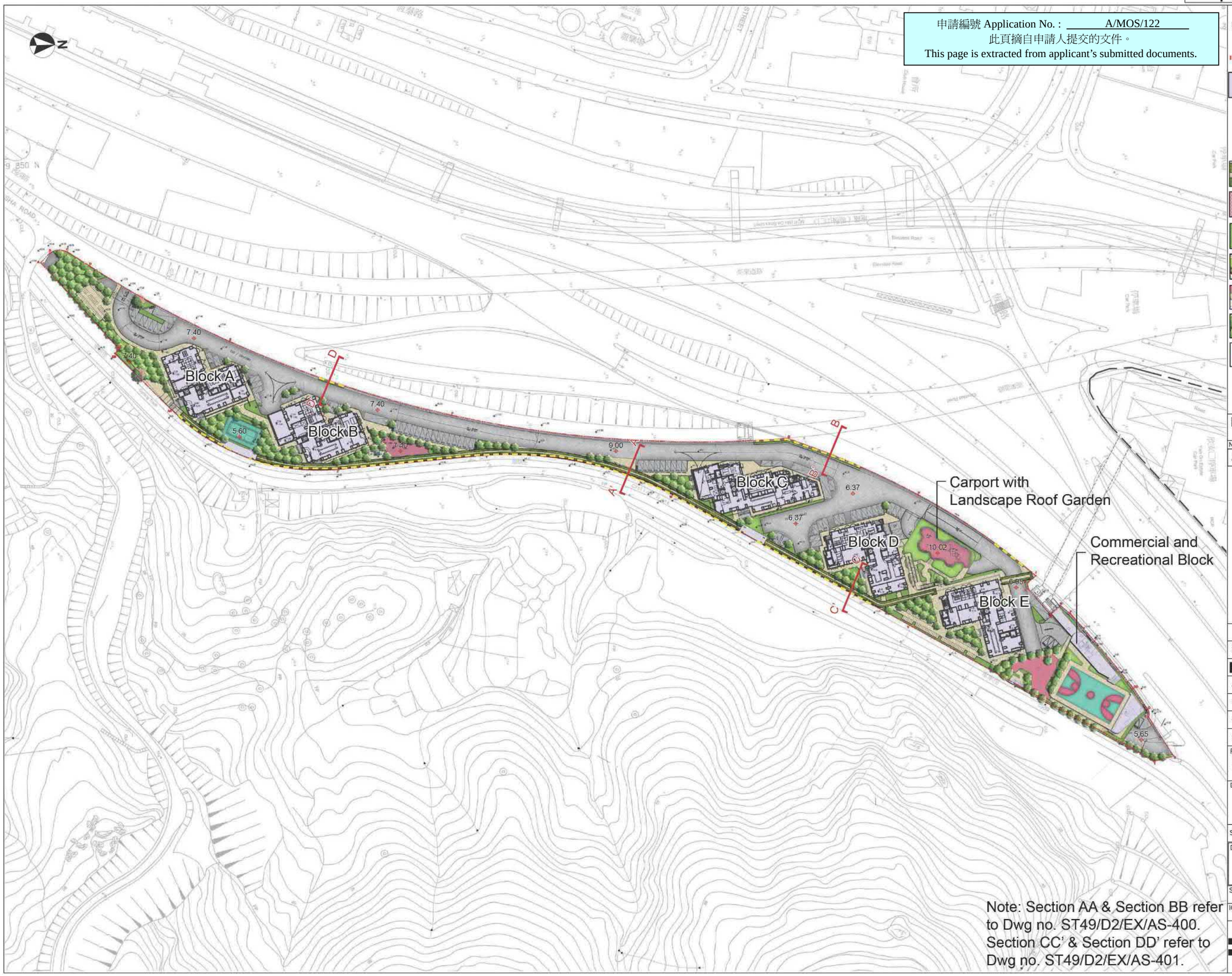
SCALE 1:1500 (A3)

房 屋 署
HOUSING DEPARTMENT

Appendix 2

DATE
MAR 2019

申請編號 Application No. : A/MOS/122
此頁摘自申請人提交的文件。
This page is extracted from applicant's submitted documents.



LEGEND

- DEVELOPMENT BOUNDARY
- SSF BUILDING BLOCKS
- FEATURE TREE
- COMPENSATORY TREES PLANTING
- IN-ACCESSIBLE GREEN ROOF ON COVERED WALKWAY
- CHILDREN'S PLAY AREA
- PROPOSED SHRUBS/ GROUND COVER PLANTING
- PROPOSED BADMINTON COURT
- PROPOSED BASKETBALL COURT
- PROPOSED TABLE TENNIS
- VERTICAL GREEN

REVISIONS		INITIAL AND DESIGNATION		
NO	DESCRIPTION AND DATE	DWN	CKD	AUTH
A	GENERAL REVISION	TEAM	JYX	ALL

	NAME AND DESIGNATION	INITIAL	DATE
AUTHORISED FOR ISSUE BY HD			
AUTHORISED	CHRIS CHUNG		
ENDORSED	ALISON LEE		
CHECKED	XU JIAYUE		
DRAWN	TEAM		

Dennis Lau & Ng Chun Man Architects & Engineers (HK) Ltd 劉榮廣伍振民建築師事務有限公司 T: (852) 2826 6888 F: (852) 2576 4074

PROJECT
PROPOSED SUBSIDISED SALE FLATS DEVELOPMENT AT MA ON SHAN ROAD

DRAWING TITLE
LANDSCAPE MASTER PLAN (COMBINED)

SCALE 1:800@A1 1:1600@A3

DRAWING NO.
ST49/D2/EX/L/LO-000(S16)/A

SOURCE

ICU NO.

AutoCAD 2000 A1 594 x 841

HOUSING DEPARTMENT

DATE OF ISSUE : C.E. OTHERS: S.E. S.E. DIVISION FULL OFFICE R.E. S.S. Contractor Architect COPY FOR

COUNTERCHECKED

Note: Section AA & Section BB refer to Dwg no. ST49/D2/EX/AS-400. Section CC' & Section DD' refer to Dwg no. ST49/D2/EX/AS-401.

申請編號 Application No. :A/MOS/122

與申請地點／處所有關的先前申請
Previous Applications Covering the Application Site/Premises

申請編號 Application No.	擬議用途／發展 Proposed Uses/Development	城市規劃委員會的決定 (日期) Decision of Town Planning Board (Date)
A/MOS/120	擬議資助出售房屋發展 Proposed Subsidized Sale Flats Development	在有附帶條件下批給的許可 Approved with conditions (7.12.2018)

有關資料是為方便市民大眾參考而提供。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。
The information is provided 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.

申請編號 Application No. : A/MOS/122

申請人提交的圖則、繪圖及報告書
Plans, Drawings and Reports Submitted by Applicant

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

有關資料是為方便市民大眾參考而提供。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。
The information is provided 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.

7. HANG KIN STREET DEVELOPMENT - R(A)10

期	地區	屋苑名稱	單位數目	面積@ (平方米)	售價 ($)
出售居者有其屋計劃單位 2018	二零一八年三月 (二零一八年十月重啟申請)	長沙灣	凱樂苑	2,522	35.6 – 58.6	2,168,000 – 4,679,800
		啟德	啟朗苑	683	26.6 – 43.8	1,688,500 – 3,627,800
		東涌	裕泰苑	1,226	25.8 – 53.1	1,181,000 – 3,179,500
出售居者有其屋計劃單位 2019	二零一九年五月	何文田	冠德苑	603	41.3 – 52.8	3,245,100 – 5,289,900
		西南九龍	凱德苑	814	25.9 – 48.5	1,949,600 – 4,352,000
		葵涌	尚文苑	494	26.6 – 42.6	1,770,900 – 3,539,000
		將軍澳	雍明苑	1,395	26.2 – 52.8	1,827,900 – 4,550,900
		馬鞍山	錦暉苑	735	25.6 – 42.3	1,555,100 – 3,476,200
		沙田	旭禾苑	830	27.3 – 43.0	1,726,300 – 3,364,200
		沙田	嘉順苑	1	41.3	2,756,600
		洪水橋及厦村	屏欣苑	9	34.9 – 53.0	1,801,000 – 2,818,000
		大欖山梅窩	銀河苑	2	41.8	2,029,600 – 2,058,500
			銀蔚苑	2	35.1 – 41.3	1,600,700 – 1,904,500
		觀塘	彩興苑	19	34.4 – 41.2	2,570,300 – 3,577,000

@ 單位面積在居者有其屋計劃第 1 至 24A 期以建築面積計算，而其後銷售計劃則以實用面積計算
* 包括一個前裝修承辦商示範單位
** 包括二個前裝修承辦商示範單位
\# 一個單位因維修而不出售

8. ON CHUN STREET DEVELOPMENT - AREA 100
9. MA ON SHAN ROAD DEVELOPMENT - AREA 103
10. HANG KIN STREET DEVELOPMENT
11. ON CHUN STREET SCHOOL DEVELOPMENT
12. LOK WO SHA LANE DEVELOPMENT

二零一七年三月二日
資料文件

沙田區議會
發展及房屋委員會

政府部門及有關機構就上次會議所議事項的回覆

1. 有關沙田土地及經濟發展工作小組“推廣及發展沙田區旅遊事業研究計劃”研究結果報告初稿的補充資料**(會議記錄第 63 段)**：

香港可持續發展研究中心的回覆：

1.1 就二零一七年一月五日沙田區議會發展及房屋委員會委員在會上提出有關“推廣及發展沙田區旅遊事業研究計劃”研究報告的提問，香港可持續發展研究中心有以下回覆：

1.2 “推廣及發展沙田區旅遊事業研究計劃”研究報告的受訪對象，主要是以問卷調查方式訪問一千二百名外地遊客與本港居民。另外，為擴大研究報告的全面性，研究中心接納小組成員會上提出的意見，同時向旅遊業界人士及四個目標區域的相應持份者收集意見。務求透過業內人士和持份者所提供的意見，得出更全面的研究資料，以提出具可行性而且可平衡一般民眾及業界訴求的推廣及發展沙田區旅遊事業建議。業內人士名單由香港旅遊業議會提供，而持份者名單則根據網上搜尋結果及小組成員推薦。當中，持份者名單所挑選的對象必須長期關注四個目標區域之相關議題，名單詳見下表：

目標區域	相關持份者
馬鞍山礦場	馬鞍山民康促進會
	香港聯合國教科文組織協會
城門河畔	中國香港賽艇協會
	沙田居民協會
火炭藝術區	沙田文藝協會
	沙田文化藝術推廣委員會
獅子亭	香港山藝協會
	沙田健青體育會

1.3 按照上述名單，本中心於二零一六年十一月一日始，以電話來電方式直接聯絡上述相關的持份者。由於參加調查屬自願性質，截至二零一六年十一月二十八日，只收到馬鞍山民康促進會的回覆，表示願意應邀出席訪談。而上述列表的其它持份者均因聯絡不果或未能抽空出席而婉拒接受訪問。由於是次研究受時間及其他研究因素所局限，本研究中心再次對未能接觸其它的持份者表示抱歉。

1.4 馬鞍山民康促進會曾出版多項有參考性的研究報告且對於馬鞍山礦場有豐富的認識，有關地理地質、自然環境及保育的書籍包括《香港礦山公園研究計劃及建議書》（2009年）、《倡議香港世界地質公園建議書》（2007年）；有關地方人文、歷史及風物的著作包括一系列的《馬鞍山風物誌》。因此，本研究中心相信，馬鞍山民康促進會所提供的寶貴意見對於是此研究具一定程度的參考作用。

1.5 若對於研究報告及調查方式有任何疑問，歡迎致電2156 3756與香港可持續發展研究中心聯絡。

2. 有關沙田馬場續約提問的臨時動議**(會議記錄第 83 段)：**

民政事務局、地政總署和規劃署的綜合回覆：

2.1 沙田馬場一直以來都是規劃作賽馬及相關用途，主要目的是為公眾提供觀賞賽馬及進行合法博彩的設施。考慮到沙田馬場性質獨特，政府已向香港賽馬會（馬會）批出為期50年的特殊用途契約，繼續現時作為馬場及相關用途，以便馬會就沙田馬場的賽馬及社區設施作長遠規劃及發展。

2.2 至於任何涉及改劃土地用途或建議大幅修改馬場內的設施或興建樓宇的計劃，馬會須根據程序和機制向有關政府部門申請，政府部門會按既定程序處理，包括考慮相關諮詢安排。我們亦已向馬會轉達區議會對沙田馬場發展事宜的關注。馬會承諾會就沙田馬場的發展，繼續與區內相關人士保持緊密溝通。

3. 有關沙田城市規劃的補充資料**(會議記錄第 95 段)：**

規劃署的回覆：

3.1 本署現附上沙田區(包括沙田及馬鞍山規劃區)內各項已預留土地的社區設施的位置、面積及相關實施部門等資料，以供參考(附件一及二)。本署亦已把議員就有關加快落實設施的訴求轉達相關部門跟進。

文化、體育及康樂設施

3.2 隨着沙田規劃區人口的增長，市民對文化、體育及康樂設施的需求亦有所增加。為此，本署已於多石、沙田頭路秦石邨附近及火炭工業區預留三幅土地作體育中心之用。沙田頭路秦石邨體育中心的建造工程已於二零一五年十二月展開，預計可於二零一九年初完工。此外，本署較早前預留了另一幅位於沙田頭路的土地用作興建圓洲角綜合大樓，其中體育中心及學生自修室已於二零一六年十二月啟

用；圖書館預計於三月投入服務；至於社區會堂，預期最早可於二零一七年第一季開放予市民使用。

3.3 鑑於馬鞍山規劃區人口的增長及長遠的文化、體育及康樂設施的需求，本署已在馬鞍山第103區鞍祿街馬鞍山警署旁預留一幅土地作一座綜合體育中心及社區會堂之用，該項目是2017施政報告公布在未來5年增建或重建26個體育及康樂設施的項目之一。康樂及文化事務署(康文署)現正積極籌劃此項目。此外，在港鐵烏溪沙站旁落馬洲里亦已預留土地作體育中心之用。

3.4 康文署會繼續密切留意沙田區的發展、因應區內人口的增長、居民的訴求、現有文康設施及其使用率，以及參考《香港規劃標準與準則》(《規劃標準》)等主要因素，根據沙田區議會對區內各項文康工程訂定的緩急先後次序，為優先進行的工程，開展籌劃工作。

教育設施

3.5 為滿足沙田規劃區內居民對教育設施的需求，本署已於沙田多石預留一幅土地作中學用途，並於港鐵火炭站附近及水泉澳預留兩幅土地作小學用途。

3.6 於馬鞍山規劃區方面，本署正擬議在馬鞍山市中心鞍駿街(保良局雨川小學及道教純陽小學旁)預留一幅土地作小學用途。此外，在烏溪沙年華路的一份規劃申請中，申請人建議把部份申請地點劃作小學之用。同時，本署將會繼續在規劃新發展時預留土地作興建小學之用。

3.7 教育局正積極推展在水泉澳邨興建一所30室小學工程項目的前期工作。其中，建築署已聘請工程顧問公司進行校舍設計、制訂建築費用預算及預備招標文件等工作；教育局亦正按既定機制向沙田地政處申請政府撥地安排，並計劃在年內啟動相關的校舍分配工作。教育局會在適當時候就此建校工程項目諮詢沙田區議會及提交立法會申請撥款，以期校舍可早日落成啟用。

休憩用地設施

3.8 按照《規劃標準》，沙田規劃區內現已有足夠的休憩用地，而已規劃的休憩用地主要包括位於隔田、紅梅谷、隆亨邨及景田苑附近、近車公廟站城門河畔、小瀝源港鐵第一城站附近、水泉澳及石門商貿區的休憩用地，合共約14公頃土地。

3.9 根據《規劃標準》，馬鞍山規劃區已預留足夠土地作休憩用地，主要包括保泰街休憩用地、恆輝街休憩用地、恆明街休憩用地、一塊在“翠擁華庭”旁及一塊近梅子林路的土地，合共約5公頃土地。康文署現正積極籌劃恆明街休憩用地，而西沙路公園的建設工程已經完成。

3.10 據本署理解，康文署及相關部門現正積極籌劃其餘休憩用地設施，並會適時諮詢區議會。

醫療及社會福利設施

3.11 為滿足沙田規劃區對醫療及社福設施的需要，本署已於顯耀邨及文林路附近預留兩幅土地作診所之用，而早期計劃於港鐵大圍站附近提供的綜合青少年服務中心、長者鄰舍中心及安老院舍，現已投入服務。

3.12 鑑於馬鞍山規劃區內醫療及社福設施的需要，本署已在馬鞍山市中心鞍駿街(海澄軒酒店旁)預留一幅土地作社福設施之用。此外，在港鐵恒安站旁恒健街亦預留土地作診所及社福設施之用。

3.13 政府在規劃和發展公營基層醫療服務時，會考慮一系列因素，包括基層醫療服務提供模式、區內人口結構變化及服務對象分布、區內基層醫療服務的供應，以及對公營基層醫療服務的需要等。考慮到區內服務對象分布及未來人口增長，政府已如上所述在沙田區預留用地作基層醫療服務長遠發展之用。待有進一步計劃，政府會諮詢區議會意見。

3.14 沙田及馬鞍山規劃區均屬新界東醫院聯網的一部份，為滿足新界東的長遠醫療服務需求，威爾斯親王醫院將展開第二期重建計劃(第一階段)，工程竣工後將增加約 450 張病床，以拓展住院及醫療服務。此外，位於大圍仁安醫院的擴建工程，以及位於港鐵大學站附近現正興建中的香港中文大學醫院，初步預計將為新增約 700 張病床。

總結

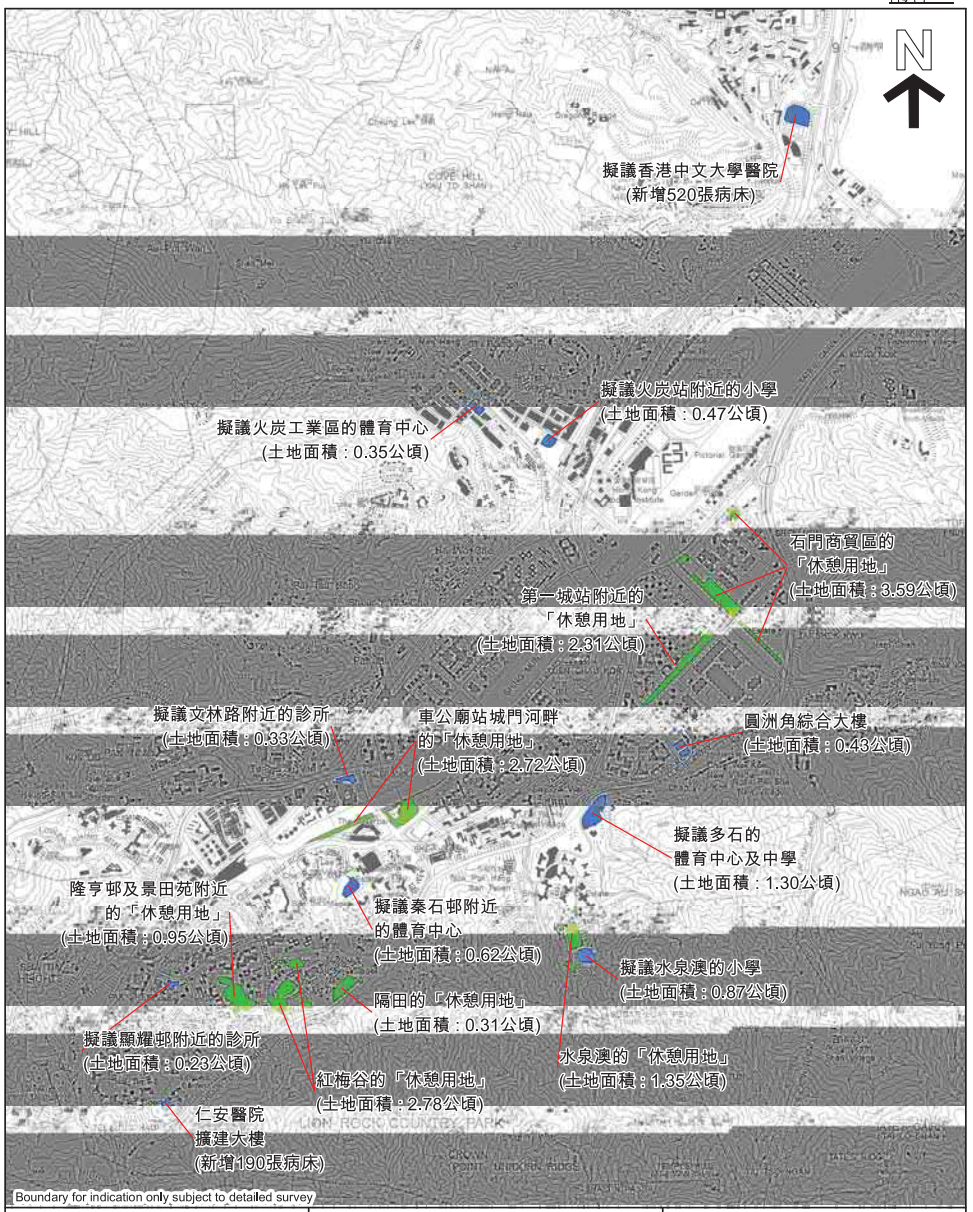
3.15 沙田是一個發展成熟的新市鎮，有完善的社區和休憩設施。隨着沙田區人口的增長，市民對社區設施的需求亦有所增加。一般而言，政府在土地規劃及發展上，會預留足夠土地供房屋、經濟及社會發展之用，並提供適切的社區或其他所需配套設施和服務，以配合市民需要。具體而言，規劃署在進行地區規劃時，會參考《規劃標準》，並依循各相關政策局和政府部門建議，以及考慮其他相關因素（包括土地用途需求、地區情況、發展限制等），於整體地區範圍內為各類政府、機構或社區用途及設施預留及提供所需用地。至於個別社區設施和服務的實施計劃及推展時間表，須視乎相關政策局／部門的資源運用優次，以及個別項目在政府工務工程計劃內的優先次序。一般而言，政府會考慮當區入住的人口、現有設施的供應狀況和使用率等因素，訂立實施項目的優次。

3.16 本署會繼續密切留意沙田區內實際情況（如現有設施的供應和使用狀況、人口實際增長的速度以及有關政府部門的政策及資源分配等因素），積極與相關部門配合，預留土地提供所需的配套設施，並會適時諮詢區議會。

沙田區議會秘書處
STDC 13/20/30

二零一七年二月

附件一



Extracted from
1:20,000 Map Sheet No(s).:
T11 and T7

Date: 7 February 2017

沙田規劃區
已規劃的休憩用地
及擬議社區設施的位置

Scale 1:30,000

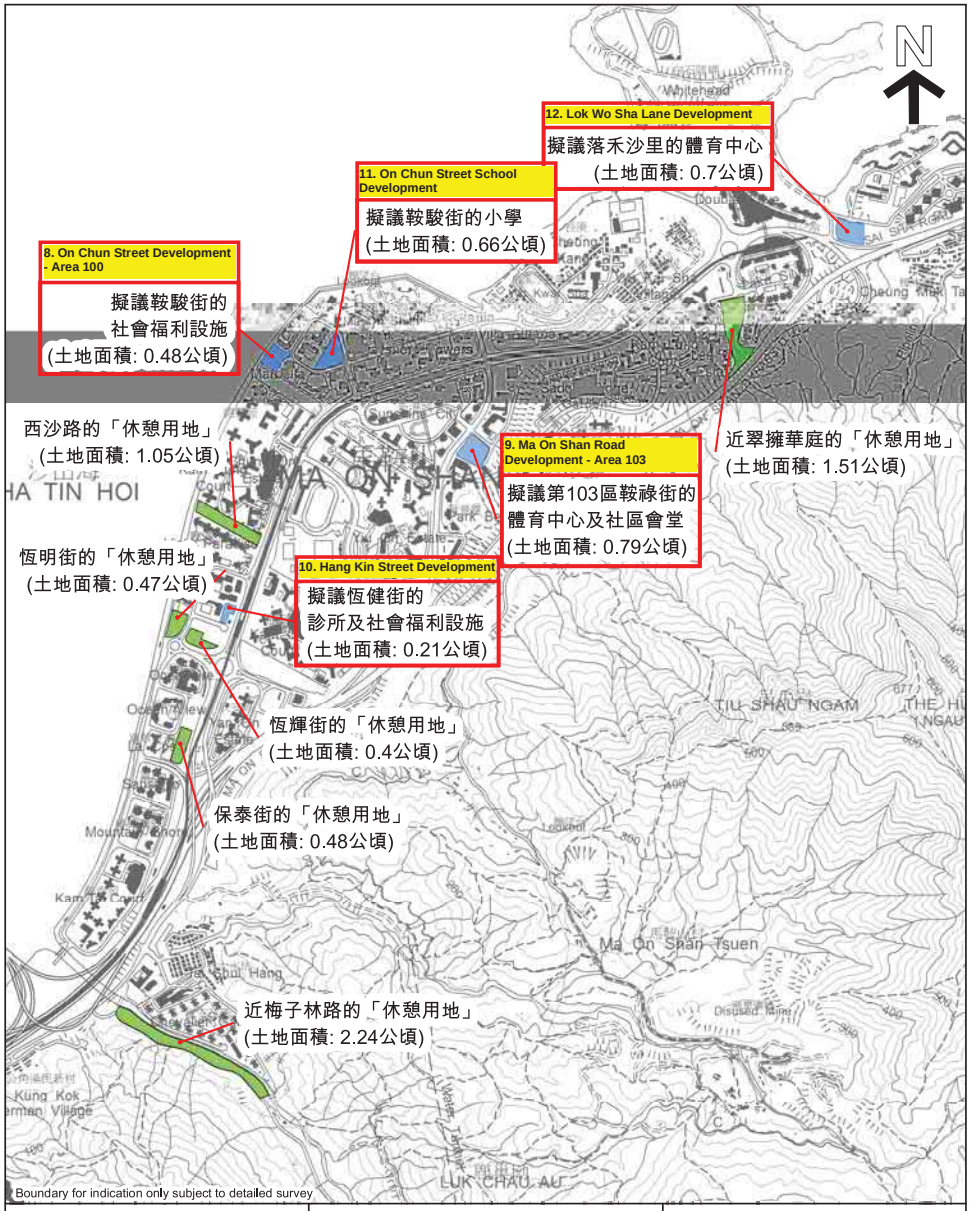
METRES 300 0 300 600 900 1,200 METRES

SHATIN, TAI PO AND
NORTH DISTRICT
PLANNING OFFICE
PLANNING DEPARTMENT

Reference No.

PLAN
1

附件二



Extracted from
1:20,000 Map Sheet No(s).:
T7

馬鞍山規劃區
已規劃的休憩用地
及擬議社區設施的位置

Scale 1:18,000

METRES 180 0 180 360 540 720 METRES

Date: 7 February 2017

SHATIN, TAI PO AND NORTH DISTRICT PLANNING OFFICE
PLANNING DEPARTMENT

Reference No. PLAN 2

13. D.D.191

Detail information of Planning Application Case	
General Information:	
Case Number:	A/MOS/65-1
Use Applied for:	Residential Development cum Public Car Park/Visitor Centre and Associated Landscaped Areas and Children Playground (Proposed Amendments to Approved Scheme)
Location:	
Address:	Ma On Shan, New Territories
Lot Number:	VARIOUS LOTS IN DD 191
Statutory Plan:	S/MOS/13 (Ma On Shan OZP)
Detailed Information:	
Site Area (sq.m):	118,000.00
Proposed Number of Unit:	180.00
Number of Storeys:	2 - 3
GFA Applied for (sq.m):	34191
Zoning:	Green Belt

14. TSENG TAU SPORTS CENTRE

5 Traffic Management Measures

5.1 The Proposed Water Sports Programme Centre would promote and encourage participants to use public transport for access. All participants will be informed of transportation details during registration.

5.2 A pre-booking car park system will also be introduced. Participants will need to make reservation of parking space before entering to the car park.

6 Summary

6.1 This traffic management plan outlines the accommodation schedule of the Proposed Water Sports Programme Centre , presents the parking demand assessment with reference to existing comparable water sports centres, internal transport provisions, access arrangement and traffic management measures.

6.2 The Proposed Water Sports Programme Centre having a maximum 1,000m^2 GFA would attract not more than 30 participants for joining Water Sports Programme at any one time. However, 48 participants is used to determine the parking demand as to represent the worst scenario with reference to the operating mode of other privately-owned water sports centres running water sports programme (equivalent to safety factor of 1.6). For social function/ event related to water sports programme held occasionally, the maximum number of participants would be limited to 48 participants.

6.3 Modal split of existing water sports centre with similar accessibility are referenced, it is found that maximum 36% participants would commute by car among the five selected centres. With reference to TCS-2011, the percentage of mode choice by private car for home-based others trip purpose (including recreational places) is 16% only. As a conservation approach, 36% car modal spit is used to estimate the parking demand.

6.4 Furthermore, despite an average occupancy of 2 passengers per private car is identified from the interview survey, a more conservative occupancy of 1.5 passengers per private car has been adopted for estimating the parking demand.

6.5 In addition, a contingency factor 1.3 is proposed to apply on the provision of car parking space to cope with any uncertainty of user characteristic and travel characteristic. As a result, 15 car parking spaces for participants is proposed. Taking into account two staff parking spaces, a total of 17 car parking spaces will be provided.

6.6 According to the results of parking demand assessment, the internal transport provisions are summarized in **Table 5.1**.

Table 6.1 Summary of Internal Transport Facilities

	Size (L x W x H)	Provision
Car Parking Space	5m x 2.5m x 2.4m	(equivalent to 1 space for every 60m^2 GFA)
Loading/ unloading Space for Goods Vehicle	11m x 3.5m x 4.7m	1
Lay-by for car /taxi/ coach	20m x 3m x 3.3m	1

6.7 The Proposed Water Sports Programme Centre will also introduce a reservation system for the car park and encourage participants to use public transport in lieu of private car for reaching the Centre.

15. NAI CHUNG SCHOOL DEVELOPMENT

4.5.2 Based on the staff parking and pick up / drop off demand as shown in **Table D 4.4**, the trip generation and attraction rates of various school sites during the AM peak hour and mid-afternoon peak hour are derived and summarised as given in **Table D 4.5** and the corresponding estimated modal split are summarised in **Table D 4.6**.

Table D 4.5 Trip Generation Rates of Surveyed Schools / Kindergarten

	Trip Rates (pcu / 100 students/hr)			
	AM Peak (7am – 9am)		Mid-Afternoon Peak (2pm – 5pm)	
	Generation	Attraction	Generation	Attraction
Renaissance College	13.2	14.5	8.8	8.1
Shatin College / Shatin Junior School	14.8	16.9	10.6	9.6
Hong Kong Academy	17.1	18.5	12.1 (1)	11.3 (1)
Anchors Kindergarten & International Nursery	30.5	33.1	30.1 (2)	30.1 (2)
Adopted for Primary / Secondary School	17.1	18.5	12.1	11.3
Adopted for Early Year Planning	30.5	33.1	30.1	30.1

Note: (1) Based on 581 students excluding kindergarten
(2) Based on 73 students in AM class

Table D 4.6 Estimated Transport Mode of Surveyed Schools / Kindergarten

	Transport Mode		
	Car / Taxi	School Bus	Public Transport / Walk
Renaissance College	11%	49%	40%
Shatin College / Shatin Junior School	12%	58%	30%
Hong Kong Academy	15%	60%	25%
Anchors Kindergarten & International Nursery	25%	70%	5%

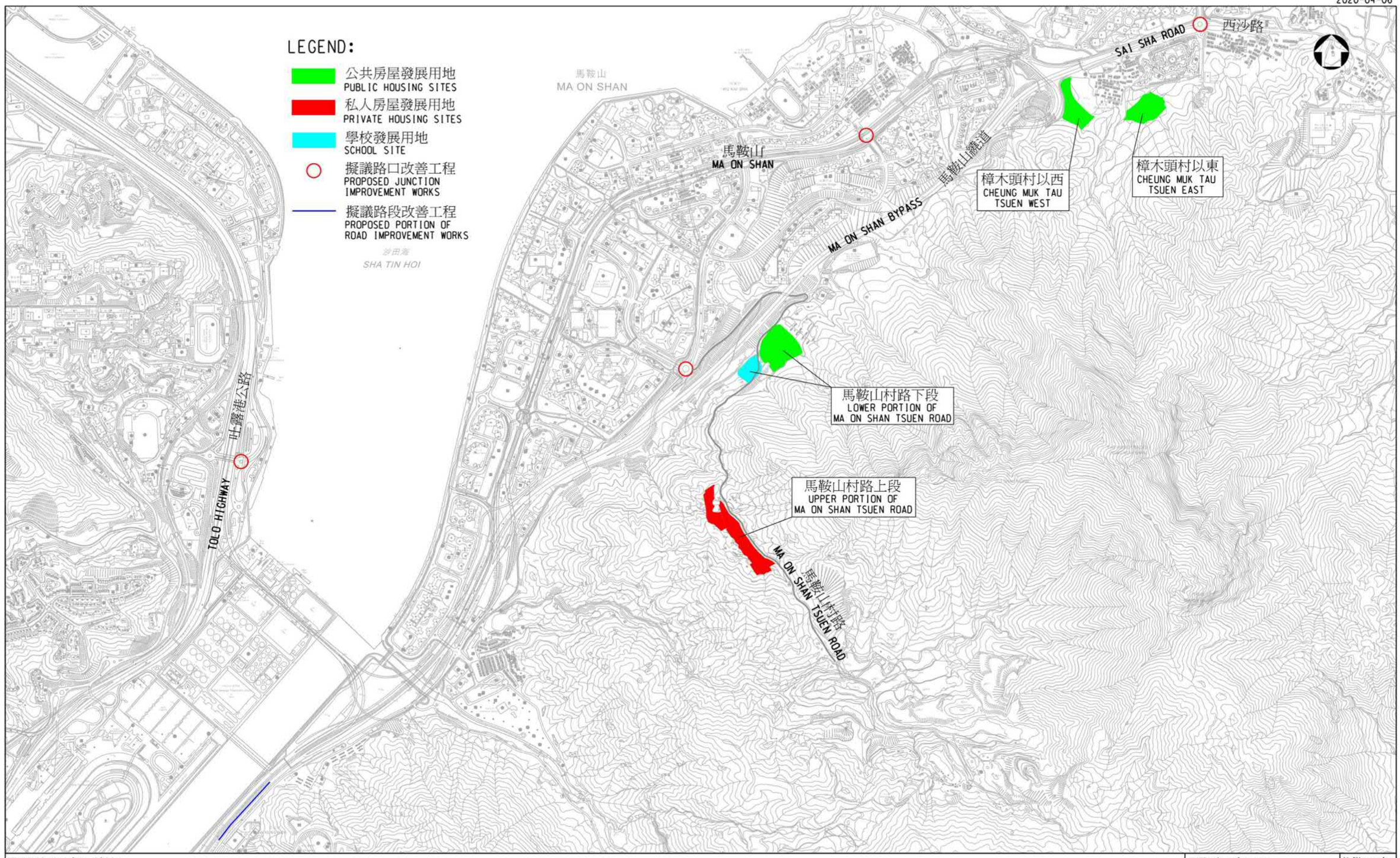
4.5.3 By applying the adopted trip generation rates as given in **Table D 4.5** and the proposed development scheme as listed in **Table D 2.1**, the development traffic of Proposed School was calculated and summarised in **Table D 4.7**. The mid-afternoon peak (i.e. school dismissal period) falls between around 3pm – 4pm and does not coincide with the normal PM peak period (i.e. 6pm-7pm). As a conservative approach, it is assumed that 50% of development traffic at mid-afternoon peak would occur at the normal PM peak period.

Table D 4.7 Traffic Generations of Proposed School

	Trip Ends (pcu/hr)			
	AM Peak (7am – 9am)		Mid-Afternoon Peak (2pm – 5pm)	
	Generation	Attraction	Generation	Attraction
Primary / Secondary School (672 students)	115	124	81	76
Early Year Learning (50 students)	16	17	16	16
Total	131	141	97 (49) (1)	92 (46) (1)

Note: (1) Figure in () represent the 50% of development traffic at mid-afternoon peak occur at normal PM peak

16. CHEUNG MUK TAU SITE
17. MA ON SHAN TSUEN ROAD SITE



圖則名稱 drawing title

建議的房屋和學校發展用地及擬議交通改善工程
PROPOSED SCHOOL SITE AND HOUSING DEVELOPMENT AND ASSOCIATED TRAFFIC IMPROVEMENT WORKS

圖號 drawing no. 附件3 ANNEX 3

比例 scale 1:15 000

版權所有 COPYRIGHT RESERVED

土木工程拓展署
CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

ANNEX3.DGN

A3 297X420

Summary of the Development Parameters of the Amendment Sites

Proposed Amendments	Location	Site Area (ha, about)	Current Zoning	Proposed Zoning	Maximum Plot Ratio	Proposed Building Height Restriction (mPD)	Approximate Flat Number	Approximate Population
Housing Sites								
A	East of the Cheung Muk Tau Village	1.46	GB	R(A)11	6.8	165mPD	1,820	5,100
B1	West of the Cheung Muk Tau Village	1.38	GB	R(A)11	6.8	165mPD	1,660	4,650
D	Lower end of Ma On Shan Tsuen Road	2.26	GB	R(A)11	6.8	225mPD	2,700	7,560
G	Upper end of Ma On Shan Tsuen Road	2.73	GB	R(B)6	3.6	250mPD	1,040	3,120
GIC Sites								
C	Lower end of Ma On Shan Tsuen Road	0.45	GB	G/IC	-	1 storey	-	-
E	Lower end of Ma On Shan Tsuen Road	0.73	GB	G/IC	-	8 storeys	-	-

ANNEX E

DEVELOPMENT FLOW OF COMMITTED / PLANNED DEVELOPMENTS

NOTE:
1. J8 – J13 ARE NEW JUNCTIONS TO BE FORMED IN CONJUNCTION WITH SAI SHA ROAD WIDENING.

LEGEND:
- DEVELOPMENT SITE BOUNDARY
- GAZETTED SAI SHA ROAD WIDENING SCHEME
- AREA OF INFLUENCE
- J1 — KEY JUNCTION TO BE ASSESSED
- L1 — KEY ROAD LINK TO BE ASSESSED
- ROUTINGS FOR TRAFFIC GENERATION
- ROUTINGS FOR TRAFFIC ATTRACTION

842200 E
844800 E
833500 N
832000 N
830400 N
848000 E
828800 N

WHITEHEAD
MA ON SHAN
SAI SHA ROAD
MA ON SHAN BYPASS
SITE A
SITE B
SITE C
10% GENERATION
10% ATTRACTION
90% ATTRACTION
90% GENERATION
10%
J1 J2 J3 J4 J5 J6 J7 J8 J9 J10 J11 J12 J13 J14
L1 L2 L3 L4 L5 L6 L7 L8 L9 L10 L11 L12

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

Plot File by: ZHAOHQ2 7/12/2022
PATH: P:\PROJECTS\60638233\Drawing\Report\TIA_AnnexE\TIA_AnnexB_501.dgn

AECOM

PROJECT
SAI SHA ROAD WIDENING - SAI SHA COMPREHENSIVE DEVELOPMENT SHAP SZ HEUNG, SAI KUNG NORTH, N.T.

CLIENT

CONSULTANT
AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS

ISSUE/REVISION

I/R	DATE	DESCRIPTION	CHK.

STATUS

SCALE: A3 1 : 16000
DIMENSION UNIT: METRES

KEY PLAN

PROJECT NO.: 60638233
CONTRACT NO.:

SHEET TITLE
TRAFFIC ROUTINGS FOR COMMITTED DEVELOPMENT- STTL 600

SHEET NUMBER
60638233/TIA_Annex E /FIGURE 1.1

This drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimensions.

ISO A1 594mm x 841mm

Project Management Initials: Designer: Checked: Approved:

NOTE:
1. J8 – J13 ARE NEW JUNCTIONS TO BE FORMED IN CONJUNCTION WITH SAI SHA ROAD WIDENING.

LEGEND:
- DEVELOPMENT SITE BOUNDARY
- GAZETTED SAI SHA ROAD WIDENING SCHEME
- AREA OF INFLUENCE
- J1 — KEY JUNCTION TO BE ASSESSED
- L1 — KEY ROAD LINK TO BE ASSESSED
- ROUTINGS FOR TRAFFIC GENERATION
- ROUTINGS FOR TRAFFIC ATTRACTION

842200 E
844800 E
833500 N
832000 N
830400 N
828800 N
848000 E

WHITEHEAD
MA ON SHAN
SAI SHA ROAD
MA ON SHAN BYPASS
SITE A
SITE B
SITE C
10% GENERATION
10% ATTRACTION
90% ATTRACTION
90% GENERATION
10%
J1 J2 J3 J4 J5 J6 J7 J8 J9 J10 J11 J12 J13 J14
L1 L2 L3 L4 L5 L6 L7 L8 L9 L10 L11 L12

Plot File by: ZHAOHQ2 7/12/2022
PATH: P:\PROJECTS\60638233\Drawing\Report\TIA_AnnexE\TIA_AnnexB_502.dgn

AECOM

PROJECT
SAI SHA ROAD WIDENING - SAI SHA COMPREHENSIVE DEVELOPMENT SHAP SZ HEUNG, SAI KUNG NORTH, N.T.

CLIENT

CONSULTANT
AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS

ISSUE/REVISION

I/R	DATE	DESCRIPTION	CHK.

STATUS

SCALE: A3 1 : 16000
DIMENSION UNIT: METRES

KEY PLAN

PROJECT NO.: 60638233
CONTRACT NO.:

SHEET TITLE
TRAFFIC ROUTINGS FOR COMMITTED DEVELOPMENT- STTL 601

SHEET NUMBER
60638233/TIA_Annex E /FIGURE 1.2

This drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimensions.

ISO A1 594mm x 841mm

Project Management Initials: Designer: Checked: Approved:

842200 E

844800 E

833500 N

832000 N

830400 N

828800 N

848000 E

NOTE:
1. J8 – J13 ARE NEW JUNCTIONS TO BE FORMED IN CONJUNCTION WITH SAI SHA ROAD WIDENING.

LEGEND:

- DEVELOPMENT SITE BOUNDARY
- GAZETTED SAI SHA ROAD WIDENING SCHEME
- AREA OF INFLUENCE
- J1 — KEY JUNCTION TO BE ASSESSED
- L1 — KEY ROAD LINK TO BE ASSESSED
- ROUTINGS FOR TRAFFIC GENERATION
- ROUTINGS FOR TRAFFIC ATTRACTION

WHITEHEAD

MA ON SHAN

SAI SHA ROAD

MA ON SHAN BYPASS

SITE A

SITE B

SITE C

10% GENERATION

10% ATTRACTION

90% ATTRACTION

90% GENERATION

10%

J1 J2 J3 J4 J5 J6 J7 J8 J9 J10 J11 J12 J13 J14

L1 L2 L3 L4 L5 L6 L7 L8 L9 L10 L11 L12

Plot File by: ZHAOHQ2 7/12/2022
PATH: P:\PROJECTS\60638233\Drawing\Report\TIA_AnnexE\TIA_AnnexB_503.dgn

AECOM

PROJECT
SAI SHA ROAD WIDENING - SAI SHA COMPREHENSIVE DEVELOPMENT SHAP SZ HEUNG, SAI KUNG NORTH, N.T.

CLIENT

CONSULTANT
AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS

ISSUE/REVISION

I/R	DATE	DESCRIPTION	CHK.

STATUS

SCALE A3 1 : 16000

DIMENSION UNIT METRES

KEY PLAN

PROJECT NO. 60638233

CONTRACT NO.

SHEET TITLE
TRAFFIC ROUTINGS FOR COMMITTED DEVELOPMENT- STTL 611

SHEET NUMBER
60638233/TIA_Annex E /FIGURE 1.3

This drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimension.

ISO A1 594mm x 841mm

Project Management Initials: Designer: Checked: Approved:

NOTE:
1. J8 – J13 ARE NEW JUNCTIONS TO BE FORMED IN CONJUNCTION WITH SAI SHA ROAD WIDENING.

LEGEND:
- DEVELOPMENT SITE BOUNDARY
- GAZETTED SAI SHA ROAD WIDENING SCHEME
- AREA OF INFLUENCE
- J1 — KEY JUNCTION TO BE ASSESSED
- L1 — KEY ROAD LINK TO BE ASSESSED
- ROUTINGS FOR TRAFFIC GENERATION
- ROUTINGS FOR TRAFFIC ATTRACTION

842200 E
844800 E
833500 N
832000 N
830400 N
828800 N
848000 E

WHITEHEAD
MA ON SHAN
SAI SHA ROAD
MA ON SHAN BYPASS
SHAP SZ HEUNG
SITE A
SITE B
SITE C
10% GENERATION
10% ATTRACTION
90% ATTRACTION
90% GENERATION
10%
J1 J2 J3 J4 J5 J6 J7 J8 J9 J10 J11 J12 J13 J14
L1 L2 L3 L4 L5 L6 L7 L8 L9 L10 L11 L12

Plot File by: ZHAOHQ2 7/12/2022
PATH: P:\PROJECTS\60638233\Drawing\Report\TIA_AnnexE\TIA_AnnexB_504.dgn

AECOM

PROJECT
SAI SHA ROAD WIDENING - SAI SHA COMPREHENSIVE DEVELOPMENT SHAP SZ HEUNG, SAI KUNG NORTH, N.T.

CLIENT

CONSULTANT
AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS

ISSUE/REVISION

I/R	DATE	DESCRIPTION	CHK.

STATUS

SCALE: A3 1 : 16000
DIMENSION UNIT: METRES

KEY PLAN

PROJECT NO.: 60638233
CONTRACT NO.:

SHEET TITLE
TRAFFIC ROUTINGS FOR COMMITTED DEVELOPMENT- STTL 605

SHEET NUMBER
60638233/TIA_Annex E /FIGURE 1.4

This drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimensions.

NOTE:
1. J8 – J13 ARE NEW JUNCTIONS TO BE FORMED IN CONJUNCTION WITH SAI SHA ROAD WIDENING.

LEGEND:
- DEVELOPMENT SITE BOUNDARY
- GAZETTED SAI SHA ROAD WIDENING SCHEME
- AREA OF INFLUENCE
- J1 — KEY JUNCTION TO BE ASSESSED
- L1 — KEY ROAD LINK TO BE ASSESSED
- ROUTINGS FOR TRAFFIC GENERATION
- ROUTINGS FOR TRAFFIC ATTRACTION

842200 E
844800 E
833500 N
832000 N
830400 N
828800 N
848000 E

WHITEHEAD
MA ON SHAN
SAI SHA ROAD
MA ON SHAN BYPASS
SITE A
SITE B
SITE C
10% GENERATION
10% ATTRACTION
10%
90% ATTRACTION
90% GENERATION
J1 J2 J3 J4 J5 J6 J7 J8 J9 J10 J11 J12 J13 J14
L1 L2 L3 L4 L5 L6 L7 L8 L9 L10 L11 L12

AECOM

PROJECT
SAI SHA ROAD WIDENING - SAI SHA COMPREHENSIVE DEVELOPMENT SHAP SZ HEUNG, SAI KUNG NORTH, N.T.

CLIENT

CONSULTANT
AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS

ISSUE/REVISION

I/R	DATE	DESCRIPTION	CHK.

STATUS

SCALE: A3 1 : 16000
DIMENSION UNIT: METRES

KEY PLAN

PROJECT NO.: 60638233
CONTRACT NO.:

SHEET TITLE
TRAFFIC ROUTINGS FOR COMMITTED DEVELOPMENT- YAN ON ESTATE PHASE 2 - R(A)8

SHEET NUMBER
60638233/TIA_Annex E /FIGURE 1.5

This drawing has been prepared for the use of AECOM's client & may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimensions.

ISO A1 594mm x 841mm
Project Management Initials: Designer: Checked: Approved:
Plot File by: ZHAOHQ2 7/12/2022
PATH: P:\PROJECT\60638233\Drawing\Report\TIA_AnnexB\TIA_AnnexB_505.dgn

NOTE:
1. J8 – J13 ARE NEW JUNCTIONS TO BE FORMED IN CONJUNCTION WITH SAI SHA ROAD WIDENING.

LEGEND:
- DEVELOPMENT SITE BOUNDARY
- GAZETTED SAI SHA ROAD WIDENING SCHEME
- AREA OF INFLUENCE
- J1 — KEY JUNCTION TO BE ASSESSED
- L1 — KEY ROAD LINK TO BE ASSESSED
- ROUTINGS FOR TRAFFIC GENERATION
- ROUTINGS FOR TRAFFIC ATTRACTION

842200 E
844800 E
833500 N
832000 N
830400 N
828800 N
848000 E

WHITEHEAD
MA ON SHAN
SAI SHA ROAD
MA ON SHAN BYPASS
SITE A
SITE B
SITE C
10% GENERATION
10% ATTRACTION
90% ATTRACTION
90% GENERATION
10%

J1 J2 J3 J4 J5 J6 J7 J8 J9 J10 J11 J12 J13 J14
L1 L2 L3 L4 L5 L6 L7 L8 L9 L10 L11 L12

AECOM

PROJECT
SAI SHA ROAD WIDENING - SAI SHA COMPREHENSIVE DEVELOPMENT SHAP SZ HEUNG, SAI KUNG NORTH, N.T.

CLIENT

CONSULTANT
AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS

ISSUE/REVISION

I/R	DATE	DESCRIPTION	CHK.

STATUS

SCALE: A3 1 : 16000
DIMENSION UNIT: METRES

KEY PLAN

PROJECT NO.: 60638233
CONTRACT NO.:

SHEET TITLE
TRAFFIC ROUTINGS FOR COMMITTED DEVELOPMENT- AREA 81A DEVELOPMENT - R(A)9

SHEET NUMBER
60638233/TIA_Annex E /FIGURE 1.6

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

Plot File by: ZHAOHQ2 7/12/2022
PATH: P:\PROJECT\SIE\638233\3D\drawing\Report\TIA_AnnexB\TIA_AnnexB_506.dgn

This drawing has been prepared for the use of AECOM's client & may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimension.

NOTE:
1. J8 – J13 ARE NEW JUNCTIONS TO BE FORMED IN CONJUNCTION WITH SAI SHA ROAD WIDENING.

LEGEND:
- DEVELOPMENT SITE BOUNDARY
- GAZETTED SAI SHA ROAD WIDENING SCHEME
- AREA OF INFLUENCE
- J1 — KEY JUNCTION TO BE ASSESSED
- L1 — KEY ROAD LINK TO BE ASSESSED
- ROUTINGS FOR TRAFFIC GENERATION
- ROUTINGS FOR TRAFFIC ATTRACTION

842200 E
844800 E
833500 N
832000 N
830400 N
828800 N
848000 E

WHITEHEAD
MA ON SHAN
SAI SHA ROAD
MA ON SHAN BYPASS
SITE A
SITE B
SITE C
J1 J2 J3 J4 J5 J6 J7 J8 J9 J10 J11 J12 J13 J14
L1 L2 L3 L4 L5 L6 L7 L8 L9 L10 L11 L12

10% GENERATION
10% ATTRACTION
90% ATTRACTION
90% GENERATION
10%

AECOM

PROJECT
SAI SHA ROAD WIDENING - SAI SHA COMPREHENSIVE DEVELOPMENT SHAP SZ HEUNG, SAI KUNG NORTH, N.T.

CLIENT

CONSULTANT
AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS

ISSUE/REVISION

I/R	DATE	DESCRIPTION	CHK.

STATUS

SCALE: A3 1 : 16000
DIMENSION UNIT: METRES

KEY PLAN

PROJECT NO.: 60638233
CONTRACT NO.:

SHEET TITLE
TRAFFIC ROUTINGS FOR COMMITTED DEVELOPMENT- HANG KIN STREET DEVELOPMENT - R(A)10

SHEET NUMBER
60638233/TIA_Annex E /FIGURE 1.7

This drawing has been prepared for the use of AECOM's client & may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM assumes no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimensions.

ISO A1 594mm x 841mm
Project Management Initials: Designer: Checked: Approved:
Plot File by: ZHAOHQ2 7/12/2022
PATH: P:\PROJECTS\60638233\D\awing\Report\TIA_AnnexB\TIA_AnnexB_507.dgn

NOTE:
1. J8 – J13 ARE NEW JUNCTIONS TO BE FORMED IN CONJUNCTION WITH SAI SHA ROAD WIDENING.

LEGEND:
- DEVELOPMENT SITE BOUNDARY
- GAZETTED SAI SHA ROAD WIDENING SCHEME
- AREA OF INFLUENCE
- J1 — KEY JUNCTION TO BE ASSESSED
- L1 — KEY ROAD LINK TO BE ASSESSED
- ROUTINGS FOR TRAFFIC GENERATION
- ROUTINGS FOR TRAFFIC ATTRACTION

842200 E
844800 E
833500 N
832000 N
830400 N
828800 N
848000 E

WHITEHEAD
MA ON SHAN
SAI SHA ROAD
MA ON SHAN BYPASS
SITE A
SITE B
SITE C
10%

10% GENERATION
10% ATTRACTION
90% ATTRACTION
90% GENERATION

J1 J2 J3 J4 J5 J6 J7 J8 J9 J10 J11 J12 J13 J14
L1 L2 L3 L4 L5 L6 L7 L8 L9 L10 L11 L12

AECOM

PROJECT
SAI SHA ROAD WIDENING - SAI SHA COMPREHENSIVE DEVELOPMENT SHAP SZ HEUNG, SAI KUNG NORTH, N.T.

CLIENT

CONSULTANT
AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS

ISSUE/REVISION

I/R	DATE	DESCRIPTION	CHK.

STATUS

SCALE: A3 1 : 16000
DIMENSION UNIT: METRES

KEY PLAN

PROJECT NO.: 60638233
CONTRACT NO.:

SHEET TITLE
TRAFFIC ROUTINGS FOR COMMITTED DEVELOPMENT- ON CHUNSTREET DEVELOPMENT - AREA 100

SHEET NUMBER
60638233/TIA_Annex E /FIGURE 1.8

This drawing has been prepared for the use of AECOM's client & may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimensions.

ISO A1 594mm x 841mm
Project Management Initials: Designer: Checked: Approved:
Plot File by: ZHAOHQ2 7/12/2022
PATH: P:\PROJECTS\60638233\D\awing\Report\TIA_AnnexB\TIA_AnnexB_508.dgn

ISO A1 594mm x 841mm

Project Management Initials: Designer: Checked: Approved:

842200 E

844800 E

833500 N

832000 N

830400 N

828800 N

848000 E

NOTE:
1. J8 – J13 ARE NEW JUNCTIONS TO BE FORMED IN CONJUNCTION WITH SAI SHA ROAD WIDENING.

LEGEND:

- DEVELOPMENT SITE BOUNDARY
- GAZETTED SAI SHA ROAD WIDENING SCHEME
- AREA OF INFLUENCE
- J1 — KEY JUNCTION TO BE ASSESSED
- L1 — KEY ROAD LINK TO BE ASSESSED
- ROUTINGS FOR TRAFFIC GENERATION
- ROUTINGS FOR TRAFFIC ATTRACTION

WHITEHEAD

10% GENERATION

10% ATTRACTION

90% ATTRACTION

90% GENERATION

MA ON SHAN

SAI SHA ROAD

MA ON SHAN BYPASS

SITE A

SITE B

SITE C

J1 J2 J3 J4 J5 J6 J7 J8 J9 J10 J11 J12 J13 J14

L1 L2 L3 L4 L5 L6 L7 L8 L9 L10 L11 L12

9

N

This drawing has been prepared for the use of AECOM's client & may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimensions.

Plot File by: ZHAOHQ2 7/12/2022
PATH: P:\PROJECTS\60638233\3D\drawing\Report\TIA_AnnexB\TIA_AnnexB_509.dgn

AECOM

PROJECT
SAI SHA ROAD WIDENING - SAI SHA COMPREHENSIVE DEVELOPMENT SHAP SZ HEUNG, SAI KUNG NORTH, N.T.

CLIENT

CONSULTANT
AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS

ISSUE/REVISION

I/R	DATE	DESCRIPTION	CHK.

STATUS

SCALE A3 1 : 16000

DIMENSION UNIT METRES

KEY PLAN

PROJECT NO. 60638233

CONTRACT NO.

SHEET TITLE
TRAFFIC ROUTINGS FOR COMMITTED DEVELOPMENT- MA ON SHAN ROAD DEVELOPMENT - AREA 103

SHEET NUMBER
60638233/TIA_Annex E /FIGURE 1.9

ISO A1 594mm x 841mm

Project Management Initials: Designer: Checked: Approved:

842200 E

844800 E

833500 N

832000 N

830400 N

828800 N

828000 E

NOTE:
1. J8 – J13 ARE NEW JUNCTIONS TO BE FORMED IN CONJUNCTION WITH SAI SHA ROAD WIDENING.

LEGEND:

- DEVELOPMENT SITE BOUNDARY
- GAZETTED SAI SHA ROAD WIDENING SCHEME
- AREA OF INFLUENCE
- J1 — KEY JUNCTION TO BE ASSESSED
- L1 — KEY ROAD LINK TO BE ASSESSED
- ROUTINGS FOR TRAFFIC GENERATION
- ROUTINGS FOR TRAFFIC ATTRACTION

WHITEHEAD

10% GENERATION

10% ATTRACTION

90% ATTRACTION

90% GENERATION

10%

SITE A

SITE B

SITE C

MA ON SHAN

MA ON SHAN BYPASS

SAI SHA ROAD

TAI MOK TSAI ROAD

J1 J2 J3 J4 J5 J6 J7 J8 J9 J10 J11 J12 J13 J14

L1 L2 L3 L4 L5 L6 L7 L8 L9 L10 L11 L12

Plot File by: ZHAOHQ2 7/12/2022
PATH: P:\PROJECTS\60638233\3D raw\g\Report\TIA_AnnexB\TIA_AnnexB_510.dgn

AECOM

PROJECT
SAI SHA ROAD WIDENING - SAI SHA COMPREHENSIVE DEVELOPMENT SHAP SZ HEUNG, SAI KUNG NORTH, N.T.

CLIENT

CONSULTANT
AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS

ISSUE/REVISION

I/R	DATE	DESCRIPTION	CHK.

STATUS

SCALE A3 1 : 16000

DIMENSION UNIT METRES

KEY PLAN

PROJECT NO. 60638233

CONTRACT NO.

SHEET TITLE
TRAFFIC ROUTINGS FOR COMMITTED DEVELOPMENT- HANG KIN STREET DEVELOPMENT

SHEET NUMBER
60638233/TIA_Annex E /FIGURE 1.10

This drawing has been prepared for the use of AECOM's client & may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimension.

NOTE:
1. J8 – J13 ARE NEW JUNCTIONS TO BE FORMED IN CONJUNCTION WITH SAI SHA ROAD WIDENING.

LEGEND:
- DEVELOPMENT SITE BOUNDARY
- GAZETTED SAI SHA ROAD WIDENING SCHEME
- AREA OF INFLUENCE
- J1 — KEY JUNCTION TO BE ASSESSED
- L1 — KEY ROAD LINK TO BE ASSESSED
- ROUTINGS FOR TRAFFIC GENERATION
- ROUTINGS FOR TRAFFIC ATTRACTION

842200 E
844800 E
833500 N
832000 N
830400 N
828800 N
848000 E

WHITEHEAD
MA ON SHAN
SAI SHA ROAD
MA ON SHAN BYPASS
SITE A
SITE B
SITE C
10% GENERATION
10% ATTRACTION
10%
90% ATTRACTION
90% GENERATION
J1 J2 J3 J4 J5 J6 J7 J8 J9 J10 J11 J12 J13 J14
L1 L2 L3 L4 L5 L6 L7 L8 L9 L10 L11 L12

AECOM

PROJECT
SAI SHA ROAD WIDENING - SAI SHA COMPREHENSIVE DEVELOPMENT SHAP SZ HEUNG, SAI KUNG NORTH, N.T.

CLIENT

CONSULTANT
AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS

ISSUE/REVISION

I/R	DATE	DESCRIPTION	CHK.

STATUS

SCALE: A3 1 : 16000
DIMENSION UNIT: METRES

KEY PLAN

PROJECT NO.: 60638233
CONTRACT NO.:

SHEET TITLE
TRAFFIC ROUTINGS FOR COMMITTED DEVELOPMENT- ON CHUN STREET SCHOOL DEVELOPMENT

SHEET NUMBER
60638233/TIA_Annex E /FIGURE 1.11

This drawing has been prepared for the use of AECOM's client & may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimensions.

ISO A1 594mm x 841mm
Project Management Initials: Designer: Checked: Approved:
Plot File by: ZHAOHQ2 7/12/2022
PATH: P:\PROJECTS\60638233\3D\drawing\Report\TIA_AnnexB\TIA_AnnexB_511.dgn

ISO A1 594mm x 841mm

Project Management Initials: Designer: Checked: Approved:

842200 E

844800 E

833500 N

832000 N

830400 N

828800 N

848000 E

NOTE:
1. J8 – J13 ARE NEW JUNCTIONS TO BE FORMED IN CONJUNCTION WITH SAI SHA ROAD WIDENING.

LEGEND:

- DEVELOPMENT SITE BOUNDARY
- GAZETTED SAI SHA ROAD WIDENING SCHEME
- AREA OF INFLUENCE
- J1 — KEY JUNCTION TO BE ASSESSED
- L1 — KEY ROAD LINK TO BE ASSESSED
- ROUTINGS FOR TRAFFIC GENERATION
- ROUTINGS FOR TRAFFIC ATTRACTION

WHITEHEAD

10% GENERATION

10% ATTRACTION

SITE A

SITE B

SITE C

SAI SHA ROAD

MA ON SHAN

MA ON SHAN BYPASS

TAI MOK TSAI ROAD

J1 J2 J3 J4 J5 J6 J7 J8 J9 J10 J11 J12 J13 J14

L1 L2 L3 L4 L5 L6 L7 L8 L9 L10 L11 L12

90% ATTRACTION

90% GENERATION

10%

Plot File by: ZHAOHQ2 7/12/2022
PATH: P:\PROJECTS\60638233\Drawing\Report\TIA_AnnexB\TIA_AnnexB_512.dgn

This drawing has been prepared for the use of AECOM's client & may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimensions.

AECOM

PROJECT
SAI SHA ROAD WIDENING - SAI SHA COMPREHENSIVE DEVELOPMENT SHAP SZ HEUNG, SAI KUNG NORTH, N.T.

CLIENT

CONSULTANT
AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS

ISSUE/REVISION

I/R	DATE	DESCRIPTION	CHK.

STATUS

SCALE A3 1 : 16000

DIMENSION UNIT METRES

KEY PLAN

PROJECT NO. 60638233

CONTRACT NO.

SHEET TITLE
TRAFFIC ROUTINGS FOR COMMITTED DEVELOPMENT- LOK WO SHA LANE

SHEET NUMBER
60638233/TIA_Annex E /FIGURE 1.12

ISO A1 594mm x 841mm

Project Management Initials: Designer: Checked: Approved:

842200 E

844800 E

833500 N

832000 N

830400 N

828800 N

NOTE:
1. J8 – J13 ARE NEW JUNCTIONS TO BE FORMED IN CONJUNCTION WITH SAI SHA ROAD WIDENING.

LEGEND:

- DEVELOPMENT SITE BOUNDARY
- GAZETTED SAI SHA ROAD WIDENING SCHEME
- AREA OF INFLUENCE
- J1 — KEY JUNCTION TO BE ASSESSED
- L1 — KEY ROAD LINK TO BE ASSESSED
- ROUTINGS FOR TRAFFIC GENERATION
- ROUTINGS FOR TRAFFIC ATTRACTION

WHITEHEAD

MA ON SHAN

SAI SHA ROAD

MA ON SHAN BYPASS

MA ON SHAN

10% GENERATION

10% ATTRACTION

10%

90% ATTRACTION

90% GENERATION

SITE A

SITE B

SITE C

J1 J2 J3 J4 J5 J6 J7 J8 J9 J10 J11 J12 J13 J14

L1 L2 L3 L4 L5 L6 L7 L8 L9 L10 L11 L12

13

Plot File by: ZHAOHQ2 7/12/2022
PATH: P:\PROJECTS\60638233\3D raw\g\Report\TIA_AnnexB\TIA_AnnexB_513.dgn

This drawing has been prepared for the use of AECOM's client & may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimensions.

AECOM

PROJECT
SAI SHA ROAD WIDENING - SAI SHA COMPREHENSIVE DEVELOPMENT SHAP SZ HEUNG, SAI KUNG NORTH, N.T.

CLIENT

CONSULTANT
AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS

ISSUE/REVISION

I/R	DATE	DESCRIPTION	CHK.

STATUS

SCALE A3 1 : 16000

DIMENSION UNIT METRES

KEY PLAN

PROJECT NO. 60638233

CONTRACT NO.

SHEET TITLE
TRAFFIC ROUTINGS FOR COMMITTED DEVELOPMENT-DD191

SHEET NUMBER
60638233/TIA_Annex E /FIGURE 1.13

NOTE:
1. J8 – J13 ARE NEW JUNCTIONS TO BE FORMED IN CONJUNCTION WITH SAI SHA ROAD WIDENING.

LEGEND:
- DEVELOPMENT SITE BOUNDARY
- GAZETTED SAI SHA ROAD WIDENING SCHEME
- AREA OF influence
- J1 — KEY JUNCTION TO BE ASSESSED
- L1 — KEY ROAD LINK TO BE ASSESSED
- ROUTINGS FOR TRAFFIC GENERATION
- ROUTINGS FOR TRAFFIC ATTRACTION

842200 E
844800 E
833500 N
832000 N
830400 N
828800 N
848000 E

WHITEHEAD
MA ON SHAN
SAI SHA ROAD
MA ON SHAN BYPASS
SITE A
SITE B
SITE C
J1 J2 J3 J4 J5 J6 J7 J8 J9 J10 J11 J12 J13 J14
L1 L2 L3 L4 L5 L6 L7 L8 L9 L10 L11 L12

90% ATTRACTION
90% GENERATION
10% ATTRACTION
10% GENERATION
10%

AECOM

PROJECT
SAI SHA ROAD WIDENING - SAI SHA COMPREHENSIVE DEVELOPMENT SHAP SZ HEUNG, SAI KUNG NORTH, N.T.

CLIENT

CONSULTANT
AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS

ISSUE/REVISION

I/R	DATE	DESCRIPTION	CHK.

STATUS

SCALE: A3 1 : 16000
DIMENSION UNIT: METRES

KEY PLAN

PROJECT NO.: 60638233
CONTRACT NO.:

SHEET TITLE
TRAFFIC ROUTINGS FOR COMMITTED DEVELOPMENT- TSENG TAU SPORTS CENTRE

SHEET NUMBER
60638233/TIA_Annex E /FIGURE 1.13

This drawing has been prepared for the use of AECOM's client & may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimensions.

ISO A1 594mm x 841mm
Project Management Initials: Designer: Checked: Approved:
Plot File by: ZHAOHQ2 7/12/2022
PATH: P:\PROJECTS\60638233\3D\drawing\Report\TIA_AnnexB\TIA_AnnexB1_514.dgn

ISO A1 594mm x 841mm

Approved:

Checked:

Designer:

Project Management Initials:

842200 E

844800 E

833500 N

832000 N

830400 N

NOTE:
1. J8 – J13 ARE NEW JUNCTIONS TO BE FORMED IN CONJUNCTION WITH SAI SHA ROAD WIDENING.

LEGEND:

- DEVELOPMENT SITE BOUNDARY
- GAZETTED SAI SHA ROAD WIDENING SCHEME
- AREA OF INFLUENCE
- J1 — KEY JUNCTION TO BE ASSESSED
- L1 — KEY ROAD LINK TO BE ASSESSED
- ROUTINGS FOR TRAFFIC GENERATION
- ROUTINGS FOR TRAFFIC ATTRACTION

N

WHITEHEAD

WUPKAI SHA

SAI SHA ROAD

MA ON SHAN

MA ON SHAN BYPASS

SAI SHA ROAD

15 10% GENERATION

10% ATTRACTION

10% ATTRACTION

10% GENERATION

90% ATTRACTION

90% GENERATION

SITE A

SITE B

SITE C

J1 J2 J3 J4 J5 J6 J7 J8 J9 J10 J11 J12 J13

L1 L2 L3 L4 L5 L6 L7 L8 L9 L10 L11 L12

828800 N

848000 E

SAI SHA ROAD

TAI MONG TSAI ROAD

J14

L11

Plot File by: ZHAOHOZ 7/13/2022
PATH: P:\PROJECTS\60638233\Drawing\Report\TIA_AnnexB\TIA_AnnexB_515.dgn

This drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimensions

AECOM

PROJECT
SAI SHA ROAD WIDENING - SAI SHA COMPREHENSIVE DEVELOPMENT SHAP SZ HEUNG, SAI KUNG NORTH, N.T.

CLIENT

CONSULTANT
AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS

ISSUE/REVISION

I/R	DATE	DESCRIPTION	CHK.

STATUS

SCALE: A3 1 : 16000
DIMENSION UNIT: METRES

KEY PLAN

PROJECT NO.: 60638233
CONTRACT NO.:

SHEET TITLE
TRAFFIC ROUTINGS FOR COMMITTED DEVELOPMENT- NAI CHUNG SCHOOL DEVELOPMENT

SHEET NUMBER
60638233/TIA_Annex E /FIGURE 1.15

ISO A1 594mm x 841mm

Project Management Initials: Designer: Checked: Approved:

842200 E

844800 E

833500 N

832000 N

830400 N

828800 N

NOTE:
1. J8 – J13 ARE NEW JUNCTIONS TO BE FORMED IN CONJUNCTION WITH SAI SHA ROAD WIDENING.

LEGEND:

- DEVELOPMENT SITE BOUNDARY
- GAZETTED SAI SHA ROAD WIDENING SCHEME
- AREA OF influence
- J1 — KEY JUNCTION TO BE ASSESSED
- L1 — KEY ROAD LINK TO BE ASSESSED
- ROUTINGS FOR TRAFFIC GENERATION
- ROUTINGS FOR TRAFFIC ATTRACTION

WHITEHEAD

MA ON SHAN

SAI SHA ROAD

MA ON SHAN BYPASS

SITE A

SITE B

SITE C

10% GENERATION

10% ATTRACTION

10% ATTRACTION

10% GENERATION

90% ATTRACTION

90% GENERATION

J1 J2 J3 J4 J5 J6 J7 J8 J9 J10 J11 J12 J13 J14

L1 L2 L3 L4 L5 L6 L7 L8 L9 L10 L11 L12

16

This drawing has been prepared for the use of AECOM's client & may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM assumes no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimensions.

Plot File by: ZHAOHQ2 7/12/2022
PATH: P:\PROJECTS\60638233\3D\drawing\Report\TIA_AnnexB\TIA_AnnexB1_516.dgn

AECOM

PROJECT
SAI SHA ROAD WIDENING - SAI SHA COMPREHENSIVE DEVELOPMENT SHAP SZ HEUNG, SAI KUNG NORTH, N.T.

CLIENT

CONSULTANT
AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS

ISSUE/REVISION

I/R	DATE	DESCRIPTION	CHK.

STATUS

SCALE A3 1 : 16000

DIMENSION UNIT METRES

KEY PLAN

PROJECT NO. 60638233

CONTRACT NO.

SHEET TITLE
TRAFFIC ROUTINGS FOR COMMITTED DEVELOPMENT- POTENTIAL HOUSING SITES - CHEUNG MUK TAU SITES

SHEET NUMBER
60638233/TIA_Annex E /FIGURE 1.16

NOTE:
1. J8 – J13 ARE NEW JUNCTIONS TO BE FORMED IN CONJUNCTION WITH SAI SHA ROAD WIDENING.

LEGEND:
- DEVELOPMENT SITE BOUNDARY
- GAZETTED SAI SHA ROAD WIDENING SCHEME
- AREA OF INFLUENCE
- J1 — KEY JUNCTION TO BE ASSESSED
- L1 — KEY ROAD LINK TO BE ASSESSED
- ROUTINGS FOR TRAFFIC GENERATION
- ROUTINGS FOR TRAFFIC ATTRACTION

842200 E
844800 E
833500 N
832000 N
830400 N
828800 N
848000 E

WHITEHEAD
MA ON SHAN
SAI SHA ROAD
MA ON SHAN BYPASS
SITE A
SITE B
SITE C
J1 J2 J3 J4 J5 J6 J7 J8 J9 J10 J11 J12 J13 J14
L1 L2 L3 L4 L5 L6 L7 L8 L9 L10 L11 L12
10% GENERATION
10% ATTRACTION
90% ATTRACTION
90% GENERATION

AECOM

PROJECT
SAI SHA ROAD WIDENING - SAI SHA COMPREHENSIVE DEVELOPMENT SHAP SZ HEUNG, SAI KUNG NORTH, N.T.

CLIENT

CONSULTANT
AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS

ISSUE/REVISION

I/R	DATE	DESCRIPTION	CHK.

STATUS

SCALE: A3 1 : 16000
DIMENSION UNIT: METRES

KEY PLAN

PROJECT NO.: 60638233
CONTRACT NO.:

SHEET TITLE
TRAFFIC ROUTINGS FOR COMMITTED DEVELOPMENT- POTENTIAL HOUSING SITES - MA ON SHAN TSUEN ROAD SITES

SHEET NUMBER
60638233/TIA_Annex E /FIGURE 1.17

This drawing has been prepared for the use of AECOM's client & may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimensions.

ISO A1 594mm x 841mm
Project Management Initials: Designer: Checked: Approved:
Plot File by: ZHAOHQ2 7/12/2022
PATH: P:\PROJECTS\60638233\3D\drawing\Report\TIA_AnnexB\TIA_AnnexB_517.dgn

Appendix G

Environmental Assessment (Site C)

(Consolidated Report based on Further Information submitted on 13 June 2022 & 19 July 2022)

(No further comments from environmental perspective from Environmental Protection Department received in August 2022)

Prepared by

Ramboll Hong Kong Limited

SECTION 16 PLANNING APPLICATION FOR AMENDMENTS TO THE APPROVED DEVELOPMENT (APPLICATION NO. A/NE-SSH/120-1) – AMENDMENTS TO RECREATION AND SPORTS CENTRE WITH ANCILLARY FACILITIES IN SITE C

ENVIRONMENTAL ASSESSMENT REPORT

EA Report
Section 16 Planning Application for Amendments to the Approved Development (Application No. A/NE-SSH/120-1) AMENDMENTS TO RECREATION AND SPORTS CENTRE WITH ANCILLARY FACILITIES IN SITE C

Date	**8 September 2022**
Prepared by	**Sandy Ma *et. al*** **Assistant Environmental Consultant**
Signed	
Approved by	**Henry Ng** **Principal Consultant**
Signed	
Project Reference	**SHKSAISAEI01**
Document No.	**Site C EA Report_R8329 V1.4.docx**

No part of this document may be reproduced or transmitted, in any form or by any means electronic, mechanical, photographic, recording or otherwise, or stored in a retrieval system of any nature without the written permission of Ramboll Hong Kong Ltd, application for which shall be made to Ramboll Hong Kong Ltd, 21/F, BEA Harbour View Centre, 56 Gloucester Road, Wan Chai, Hong Kong.

Disclaimer: This report is made on behalf of Ramboll Hong Kong Ltd. No individual is personally liable in connection with the preparation of this report. By receiving this report and acting on it, the client or any third party relying on it accepts that no individual is personally liable in contract, tort or breach of statutory duty (including negligence).

Ramboll Hong Kong Limited

21/F, BEA Harbour View Centre
56 Gloucester Road, Wan Chai, Hong Kong

Tel: (852) 3465 2888
Fax: (852) 3465 2899
Email: hkinfo@ramboll.com

\\aphkfps3\Drive Q\Projects\SHKSAISAEI01\04 Deliverables\16 EA Report_Site C sports grounds S16\Site C EA Report_R8329 V1.4.docx

CHAPTERS

Page

1. INTRODUCTION 1-1
1.1 Project Background 1-1
1.2 Objectives 1-2
2. NOISE IMPACT ASSESSMENT 2-1
2.1 Introduction 2-1
2.2 Proposed Amendment Scheme 2-1
2.3 Assessment Criteria 2-1
2.4 Evaluation of Noise Impact and Assessment Results 2-1
3. AIR QUALITY IMPACT ASSESSMENT 3-1
3.1 Introduction 3-1
3.2 Assessment Criteria 3-1
3.3 Baseline Condition 3-2
3.4 Evaluation and Assessment Results 3-2
4. WATER QUALITY IMPACT ASSESSMENT 4-1
4.1 Introduction 4-1
4.2 Relevant Environmental Legislation and Guidelines 4-1
4.3 Description of Environs and Water Sensitive Receivers 4-2
4.4 Evaluation of Water Quality Impacts and Conclusion 4-2
5. CONSTRUCTION PHASE IMPACTS 5-1
5.1 Introduction 5-1
5.2 Fugitive Dust Emission 5-1
5.3 Mitigation Measures for Fugitive Dust Emission 5-1
5.4 Construction Noise Impact 5-2
5.5 Construction Wastewater Impact 5-4
5.6 Construction Waste Disposal 5-6
5.7 Conclusion 5-7
6. CONCLUSION 6-1

TABLES

Table 3.1 Hong Kong Air Quality Objectives 3-2
Table 5.1 Noise Limit for Daytime Construction Activities 5-3

FIGURES

Figure 1-1 Location of Application Site and Its Environs
Figure 1-2 Master Layout Plan for Site C
Figure 3-1 Separation Distance Between Representative ASRs and Road Edge for Vehicular Emission Impact Assessment
Figure 3-2 Separation Distance Between Representative ASRs and Road Edge for Vehicular Emission Impact Assessment
Figure 4-1 Locations of Water Sensitive Receivers

ANNEXES

Annex 2-1 Extracted Road Traffic Noise Assessment Results from Previous Submitted EA Report
Annex 3-1 Background Air Quality

1. INTRODUCTION

1.1 Project Background

1.1.1 Ramboll Hong Kong Ltd. (the Consultant) has been commissioned by Light Time Investments Limited (the Applicant) to conduct an Environmental Assessment (EA) in order to assess the potential environmental impacts associated with proposed amendments to a previous approved development located at Sai Sha, Shap Sz Heung.

1.1.2 The Application Site is the subject of an approved planning application No. A/NE-SSH/120-1 for proposed comprehensive residential and recreational development including government, institution or community (G/IC) facilities with minor relaxation of gross floor area and building height restrictions which was approved by the Director of Planning, under the delegated authority of the Town Planning Board (TPB), under Section 16A of the Town Planning Ordinance in October 2020 (hereafter referred to as the "Approved Scheme").

1.1.3 The Application Site comprises Sai Sha Road and three Development Sites, including Site A, Site B, and Site C. With the commitment to further enhance user experience in Site C, which is intended to be a recreational hub in Sai Sha, the subject Section 16 planning application is submitted to reflect the diversification of recreational facilities to be provided therein by replacing a golf driving range and a mini driving range/ game area / recreation & sports centre with ancillary facilities with a variety of recreational and leisure facilities.

1.1.4 It should be noted that, the subject matter of the current application is Site C only. Only the locations of proposed recreation, sports, or culture facilities with ancillary facilities are changed in the current proposed amendments, while other proposed welfare centre and the planned school sites at Site C are identical to the Approved Scheme. The proposed recreation and sports uses are of similar nature and are common in other developed sites. They are expected to operate during day-time and evening-time only, and lighting facilities will be directed away from nearby sensitive uses which are also be partially screened by existing and planned trees planting. In addition, the overall GFA at Site C will remain unchanged. The layout and development parameters for Site A and Site B are also entirely identical to those approved under planning application No. A/NE-SSH/120-1. Similarly the proposed road widening at Sai Sha Road including its road alignment also remains unchanged. The inclusion of Site A and Site B as part of the Application Site is to comply with the statutory requirement of the subject "Comprehensive Development Area" ("CDA") zone under the Notes of Shap Sz Heung Outline Zoning Plan which requires the submission of a Master Layout Plan covering the entire "CDA" zone for the approval of the TPB. Since Site A, Site B, and Widened Sai Sha Road are identical to those in the Approved Scheme, the previous submitted EA reports under the application No. A/NE-SSH/120-1 are still valid. As such, the following assessments have focused on changes at Site C as a result of current proposed amendments.

1.1.5 As mentioned above, the Application Site was the subject of a few previous approved planning applications. There have been several amendments to the planned development scheme in the past but the extent of development basically follows the previous Approved Scheme. According to the submitted EA report for Site C for discharge of planning approval condition under the application no. A/NE-SSH/120 for the proposed development, the proposed development site was vacant in the past and with the existing driving ranges at Site C emerged in 1997. The grass species at the existing driving range will require no particular maintenance requirements, thus the need of application of pesticide, fungicide or herbicide is not anticipated. Also there was no known equipment maintenance, equipment fueling, or on-site generator used

as part of the driving range operation. There has been no land contamination issue identified during the past approved planning applications, and there has been no relevant planning approval requirement for any land contamination assessment for proposed development sites. There has been no change to land use since the last submitted report, thus findings are still valid. The current proposed development is largely the same as the Approved Scheme. The application boundary line under the current proposed amendments is also the same as that under the Approved Scheme. No particular potential land contamination issue is therefore anticipated with the proposed amendments. During operation phase of the proposed development, relevant requirements under the Waste Disposal Ordinance (WDO) will be followed. Construction phase waste management is provided in Section 5.6.

1.1.6 Please refer to **Figure 1-1** for the location of the Application Site and its environs, and **Figure 1-2** for the Master Layout Plan (MLP) for the current application for Site C.

1.2 Objectives

1.2.1 This assessment has been conducted based on the latest MLP under the current planning application. Architectural drawings and technical information of the Proposed Development are provided by the Project Architect and the Project Consultants team. The project completion year remains unchanged (i.e. 2025 for development site and 2023 for Sai Sha Road Widening Works), thus road traffic flow forecast data endorsed during the above-mentioned planning application, are still valid.

1.2.2 This EA report is conducted to assess the potential noise, air quality, water quality and construction phase impacts arisen from the proposed Site C of the development. Corresponding practical pollution control measures and mitigation measures are proposed with respect to the Hong Kong Planning Standards and Guidelines (HKPSG) and other relevant legislation.

- Noise arising from the proposed scheme;
- Potential air quality issue;
- Water quality issue; and
- Construction phase impact assessment and best practices.

2. NOISE IMPACT ASSESSMENT

2.1 Introduction

2.1.1 The Proposed Development largely falls within the "Comprehensive Development Area" ("CDA") zone under the Approved Shap Sz Heung Outline Zoning Plan No. S/NE-SSH/11. **Figure 1-1** shows the location of the Application Site and its environs.

2.1.2 This section assesses potential noise impact due to the proposed development within the study radius of 300m from site boundary.

2.2 Proposed Amendment Scheme

2.2.1 As discussed in Section 1.1, the Application Site is the subject of a few previous approved planning applications with the recent one approved under the application No. A/NE-SSH/120-1. An Environmental Assessment (EA) report for Site C was previously submitted under the Approved Scheme in A/NE-SSH/120-1 (hereafter referred to as the "Submitted EA Report"). For Site A, Site B, and Widened Sai Sha Road they are identical to that in the Approved Scheme, the previous submitted EA reports under the application No. A/NE-SSH/120-1 are still valid. Subsequently, various construction and preparation works for the proposed development as well as for Sai Sha Road widening have already commenced.

2.2.2 The subject matter of the current application is Site C only. Only the locations of proposed recreation, sports, or culture uses with ancillary facilities are changed in current scheme in order to reflect the diversification of recreational facilities proposed at Site C, while other uses such as welfare centre and the planned school sites at Site C are identical to the Approved Scheme. In addition, the overall GFA will also remain unchanged. The population and traffic flow as a result of current proposed amendments are generally the same as the Approved Scheme. On the other hand, the layout and development parameters for Site A and Site B, and the alignment of widened Sai Sha Road, are also entirely identical to those in the Approved Scheme. The project completion year remains unchanged (i.e. 2025 for development site and 2023 for Sai Sha Road Widening Works) as Approved Scheme.

2.2.3 Thus the following assessment has focused on Site C only.

2.3 Assessment Criteria

2.3.1 According to Chapter 9 of the HKPSG which provides guidance for environmental considerations in the planning of both public and private developments and the noise standards are prescribed, the maximum allowed road traffic noise level, measured in terms of L10(1 hr.), at typical facade of new dwellings is recommended to be 70 dB(A). For educational institutions including kindergartens, nurseries as well as places of public worship, where unaided voice communication is required, the recommended noise criteria is 65 dB(A).

2.4 Evaluation of Noise Impact and Assessment Results

2.4.1 In the Approved Scheme, two existing golf driving ranges at Site C are retained. With the commitment to further enhance user experience in Site C, the current application proposes to replace one of the existing golf driving ranges by other recreation, sports or culture uses, while other proposed uses such as planned welfare centre and the planned school sites at Site C are identical to the Approved Scheme. So the locations of proposed recreation, sports or culture uses at Site C have changed in current application. The concerned uses are also further setback from site boundary and located at the rear of previous approved sports centre which is partially shielded (**Figure 1-2** refers).

2.4.2 The current proposed development is largely the same as the Approved Scheme. As discussed above, there are already existing golf driving range facilities operating on-site at Site C. Recreation and sports activities are already approved under the Approved Scheme. The proposed recreation and sports uses are of similar nature and are common in other developed sites. Various measures have been incorporated into design that the concerned proposed amendments are further setback from site boundary at the rear of previous approved sports centre, which are then partially shielded (**Figure 1-2** refers). No particular noisy equipment is anticipated during normal operation of the proposed amendments. To avoid potential noise problem, use of public address system and loudspeaker during operation will be avoided. Same as the existing golf driving range operating on-site, there may be occasional use of machineries and equipment involved but for maintenance only. No. of visitors under the current proposed amendments will be more or less the same as the Approved Scheme. Similar to the Approved Scheme, there will be no night-time operation at proposed amendments, which will operate during day-time and evening time only and will avoid quiet hours between 2300 and 0700 hours. Lighting facilities will also be directed away from nearby sensitive uses which are also be partially screened by existing and planned trees planting.

2.4.3 As for road traffic noise, the Submitted EA Report has identified the proposed welfare centre and reserved school sites as potential noise sensitive receivers (NSRs). The current proposed amendments are not noise sensitive uses. A road traffic noise impact assessment has already been conducted and reported in the Submitted EA Report. Since there will be no expected increase in traffic flow due to current proposed amendments and the completion year is the same, and that the planned welfare centre and the planned school sites at Site C are identical to the Approved Scheme, the previous assessment results and findings in Submitted EA Report are still valid. Previous assessment results and locations of NSRs are directly extracted from the Submitted EA Report and presented in **Annex 2-1**. According to the Submitted EA Report, there will be no adverse noise impact at the proposed development.

3. AIR QUALITY IMPACT ASSESSMENT

3.1 Introduction

3.1.1 The aims of this assessment are to identify potential environmental concerns and constraints relating to the proposed development based on a study radius of 500m radius; and to recommend likely practical pollution control and mitigation measures required with respect to the Hong Kong Planning Standards and Guidelines (HKPSG) and other relevant legislations.

3.1.2 As discussed in Section 1.1, the Application Site is the subject of a few previous approved planning applications with the recent one approved under the application No. A/NE-SSH/120-1. An Environmental Assessment (EA) report for Site C was previously submitted under the Approved Scheme in A/NE-SSH/120-1 (hereafter referred to as the "Submitted EA Report"). For Site A, Site B, and Widened Sai Sha Road they are identical to that in the Approved Scheme, the previous submitted EA reports under the application No. A/NE-SSH/120-1 are still valid. Subsequently, various construction and preparation works for the proposed development as well as for Sai Sha Road widening have already commenced.

3.1.3 The subject matter of the current application is Site C only. The current proposed development is largely the same as the Approved Scheme. Only the locations of proposed recreation & sports or culture uses with ancillary facilities are changed in current scheme in order to reflect the diversification of recreational facilities proposed at Site C, while other uses such as proposed welfare centre and the planned school sites at Site C are identical to the Approved Scheme. On the other hand, the layout and development parameters for Site A and Site B, and the alignment of widened Sai Sha Road, are also entirely identical to those in the Approved Scheme including the separation distance between road edge of widened road and nearby air sensitive receivers (ASRs).

3.1.4 A desktop review of stacks within 500m radius of the Proposed Development has been carried out based on EPD's register previously obtained. No recorded chimney has been found to be located within the 500m radius. Additional chimney surveys have also conducted in September 2016, September 2017, October 2018, April 2019, December 2019, and August 2021, and there is no change on site condition identified. As no industrial chimney has been identified within the Assessment Area, unacceptable air quality impact due to emission from industrial chimney is not anticipated, and hence is not considered further in this assessment.

3.1.5 Thus potential air quality impact due to proposed amendments under the current scheme will be vehicular emissions from nearby roads upon the current proposed amendments at Site C, which is evaluated in following paragraphs.

3.2 Assessment Criteria

3.2.1 The principal legislation regulating air quality in Hong Kong is the Air Pollution Control Ordinance (APCO) (Cap. 311). Air Quality Objectives (AQOs) are set for the whole of Hong Kong, which specify the statutory limits for various criteria pollutants and the maximum number of exceedance allowed over a specified period of time.

3.2.2 Assessment criteria are based on the prevailing Hong Kong Air Quality Objectives (AQO) for air pollutants provided in Chapter 9 of the Hong Kong Planning Standards and Guidelines (HKPSG) which provide guidance on air pollution control. The prevailing AQOs parameters that are relevant to current proposed development are summarized and presented in Table 3.1 below.

Table 3.1 Hong Kong Air Quality Objectives

		Prevailing AQOs	
Pollutants	**Averaging Period**	**Pollutants Concentration (µg/m3)**	**No. of Exceedances Allowed Per Year**
CO	1 hour	30,000	0
	8 hours	10,000	0
NO_2	1 hour	200	18
	Annual	40	N.A.
SO_2	10-min.	500	3
	Daily (24 hours)	50	3
RSP (PM10)	Daily (24-hours)	100	9
	Annual	50	N.A.
FSP (PM2.5)	Daily (24-hours)	50	35
	Annual	25	N.A.

Remark:

N.B. Concentrations of gaseous air pollutants are measured at 293 K and 101.325 kPa (one atmospheric pressure).

N.A. Not applicable.

FSP means suspended particles in air with a nominal aerodynamic diameter of 2.5 µm or less.

RSP means suspended particles in air with a nominal aerodynamic diameter of 10 µm or less.

3.2.3 Apart from the AQO, the HKPSG has also prescribed the buffer distance requirement for both active and passive recreational uses. According to Table 3.1 of the HKPSG, the buffer distance requirement for Trunk Road and Primary Distributor for both active and passive recreational uses is >20m. While the buffer distances required for District Distributor and Local Distributor are >10m and >5m, respectively.

3.3 Baseline Condition

3.3.1 The recorded air pollutants concentrations between 2016 and 2020 at EPD's Tai Po Air Quality Monitoring Station were referenced to provide an indication on past ambient air pollutants level at the Proposed Development. For the purpose of evaluating the operational phase ambient air quality levels, background contributions based on EPD's PATH v2.1 concentration output file are also extracted and presented. The proposed development under current Application falls within Grids (48, 45), (49, 44), (49, 45), (49, 46), (50, 44), and (50, 45) of the PATH system, thus concentration output data in year 2022, which is available in PATH model, is presented. The extracted information is provided in Annex 3-1.

3.3.2 General speaking, the recorded past ambient air pollutants levels as well as predicted PATH ambient air quality level were below the relevant AQO limit except ozone, which exceeded the AQO limit. However, the nature of current proposed amendments for recreational uses under the current scheme is unlikely to generate any air pollutant and relevant air pollution nuisance.

3.4 Evaluation and Assessment Results

3.4.1 Site C is still primarily proposed for recreational purpose under the current proposed amendments. The current proposed development is largely the same as the Approved Scheme, except change in locations of proposed recreational facilities. The proposed sports centre and welfare centre that are nearest to nearby road, are generally the same as that in the Approved Scheme. Their separation distance from nearby road edge remains unchanged, which can already satisfy the HKPSG buffer distance requirement. While the proposed amendments under current scheme are located at the rear and further away from any public road. Thus they are unlikely to be affected.

3.4.2 Setback has been provided so that separation distances between nearest ASRs at the Proposed Development and the road edge of Access Road to Tseng Tau (i.e. ~9m to ~10m) are shown in **Figure 3-1**. While the separation distance between site boundary of Site C and road edge is already about 7m as shown in **Figure 3-1**, which can already satisfy the relevant HKPSG buffer distance requirement and regardless the building shape and disposition. Therefore, no adverse air quality impact due to vehicular emission is anticipated. The proposed amendments of recreation, sports, cultural facilities under the current scheme are further setback from site boundary line at the rear of other buildings in the front and with a separation distance of about 105m as shown in **Figure 3-1**. There is no change to planned school site under this application, which is shown in **Figure 3-2**. It is noted that the concerned setback distance could already satisfy the above-mentioned HKPSG buffer distance requirement (i.e. >5m) for Access Road to Tseng Tau which is for local access as Rural Feeder. Therefore, no adverse air quality impact due to vehicular emission is anticipated and no further assessment is considered necessary.

3.4.3 During operational phase, the proposed amendments under the current scheme will be connected to planned public sewerage system. No sewage pumping station is proposed in Site C. Since sewage generated will be discharged into public sewer, no particular odour problem is anticipated.

4. WATER QUALITY IMPACT ASSESSMENT

4.1 Introduction

4.1.1 This section addresses the potential water quality impact that may arise from the Proposed Development within a study area of 500m. Practicable mitigation measures/ best practices have been recommended where necessary.

4.1.2 As discussed in Section 1.1, the Application Site is the subject of a few previous approved planning applications with the recent one approved under the application No. A/NE-SSH/120-1. An Environmental Assessment (EA) report for Site C was previously submitted under the Approved Scheme in A/NE-SSH/120-1 (hereafter referred to as the "Submitted EA Report"). For Site A, Site B, and Widened Sai Sha Road they are identical to that in the Approved Scheme, the previous submitted EA reports under the application No. A/NE-SSH/120-1 are still valid. Subsequently, various construction and preparation works for the proposed development as well as for Sai Sha Road widening have already commenced.

4.1.3 The subject matter of the current application is Site C only. The current proposed development is largely the same as the Approved Scheme. Only the locations of proposed recreation, sports, or culture uses with ancillary facilities are changed in current scheme in order to reflect the diversification of recreational facilities proposed at Site C, while other uses such as proposed welfare centre and the planned school sites at Site C are identical to the Approved Scheme. On the other hand, the layout and development parameters for Site A and Site B, and the alignment of widened Sai Sha Road, are also entirely identical to those in the Approved Scheme.

4.1.4 Thus, the following paragraphs focus on evaluation of potential water quality impact arisen from the proposed amendments at Site C. Recommendations and best practices have also been provided where necessary.

4.2 Relevant Environmental Legislation and Guidelines

4.2.1 The relevant legislations, standards and guidelines applicable to the present study for the assessment of water quality impacts include:

- Water Pollution Control Ordinance (WPCO) CAP 358;
- Technical Memorandum on "Standards for Effluent Discharged into Drainage and Sewerage Systems, Inland and Coastal Waters" (TM-Effluents);
- Hong Kong Planning Standards and Guidelines;
- ProPECC PN 1/94 "Construction Site Drainage"; and
- ProPECC PN 5/93 - Drainage Plans Subject to Comment by the Environmental Protection Department.

4.2.2 The Water Pollution Control Ordinance (WPCO) (Cap. 358) enacted in 1980 is the principal legislation controlling water quality in Hong Kong. Under the WPCO, Hong Kong waters are classified into 10 Water Control Zones (WCZ). Site C is situated within the catchment area of the Tolo Harbour and Channel Water Control Zone. The TM-Effluents issued under Section 21 of the WPCO defines acceptable discharge limits of effluent to different types of receiving waters. Under the Ordinance, any discharge into the WCZ requires licensing and must comply with the terms and conditions specified in the licence, except for domestic sewage discharged into public foul sewers, and unpolluted water into storm water drains and river courses.

4.2.3 There is a need to apply to EPD for a discharge license for discharge of effluent from the project site under the WPCO. The discharge quality must meet the requirements specified in the discharge license.

4.3 Description of Environs and Water Sensitive Receivers

4.3.1 The proposed development is within an area largely falls within the Comprehensive Development Area ("CDA") zone under the Approved Shap Sz Heung Outline Zoning Plan No. S/NE-SSH/11.

4.3.2 The following water quality sensitive receivers identified in the Submitted EA Report, are shown in **Figure 4-1**:

- Tai Tung Wo Liu Stream (TTWLS);
- Tolo Harbour - coastal region near the mouth of the TTWLS;
- Coastal Protection Area (CPA) to the north and east of the Application Site;
- Yung Shue O Fish Culture Zone near Wu Chau; and
- Kei Ling Ha Mangal SSSI, Tseng Tau Coast SSSI, and Mangrove/Woodland in Three Fathoms Cove.

4.3.3 The TTWLS and the coastal area near the mouth of TTWLS are the closest water body to Site C. Currently, the stormwater within the Application Site would flow into the nearby stream and coastal area and discharge directly without any treatment. It is noteworthy that the Application Site is outside the boundary of the above-mentioned SSSI and CPA. Other sensitive receivers (e.g. Yung Shue O Fish Culture Zone and Kei Ling Ha Mangal SSSI, Tseng Tau Coast SSSI) are located further away from the Application Site. Proper drainage pipeline and sewerage system will be provided for the proposed development same as the Approved Scheme to avoid any direct discharge without treatment into nearby environs.

4.4 Evaluation of Water Quality Impacts and Conclusion

Construction Phase

4.4.1 Sewage generated by construction workforce during construction stage will be collected by provision of sufficient number of chemical toilets and proper disposal. Please refer to Section 5.5 for details.

4.4.2 The potential water quality impact during construction stage of the proposed development will be the discharge of construction site runoff. If not properly controlled, construction site runoff generated from the proposed development may bring along pollutants (e.g. sediment-laden surface runoff) and pollute the nearby water bodies depending upon the topography. During the course of construction, effluent collected from construction site including those from superstructure works and foundation works, should be properly collected by construction site drainage system and treated before discharge. No canteen facilities are expected for this project. The quality of discharge should also comply with relevant effluent discharge licence to be issued under the WPCO. Various measures proposed in below paragraphs as well as those presented in Section 5.5 should be applied.

4.4.3 During construction, no direct discharge without treatment of construction site runoff from the construction site into the streams and stormwater drains will be allowed. The design of the site drainage system will only be available in later detailed design stage, but the drainage system shall follow the Practice Notes for Professional Persons on "Construction Site Drainage" (ProPECC PN 1/94). Construction site runoff shall be collected and treated through screening facilities before discharge into the nearby storm drains by following the existing flow regime, and the discharge shall comply with

the terms and conditions of the discharge licence to be issued under the WPCO. Details of recommended pollution control measures are provided in Section 5.5 of this report.

4.4.4 With the proposed construction phase drainage system and recommended pollution control measures in place, no adverse water quality impact due to construction site runoff will be expected.

Operational Phase

4.4.5 Site C is proposed mainly for recreation and sports uses with ancillary facilities, welfare centre cum public vehicle park, and reserved school sites. There are existing two driving ranges operating at the eastern portion of Site C which are grown with common lawn grass species. One of the existing driving ranges will be retained on-site. Similar practice to use common lawn grass species will also be adopted during operation of the proposed amendments at Site C as well as at the driving range area. The grass species will require no particular maintenance requirements, thus the need of application of fertiliser, pesticide, fungicide or herbicide is not anticipated. Same as the Approved Scheme and Submitted EA Report, the provision of two school buildings at Site C (**Figure 1-2** refers) is not within the scope of the current proposed development and detailed layout and design of the school buildings will only be available at the detailed design stage. It is expected that sewage from the reserved school sites will be connected and discharged into the planned public sewerage. Thus, during operation stage of the proposed amendments, the potential water quality impacts would be the discharge of wastewater such as from food & beverage activities and domestic wastewater as well as surface runoff during rainfall events which is known as non-point source of pollution.

4.4.6 The proposed development at Site C including all proposed amendments under current scheme, reserved school sites, sports centre, and welfare centre will be connected to the planned public sewerage system during its operation through proposed sewage pipeline and pumping station. A separate sewerage impact assessment has been submitted. Similar to the Approved Scheme, sewage from Site C will be discharged to the proposed Tseng Tau SPS, while planned discharge from the reserved school site will be discharged directly to public sewer by gravity. As such, there should be no particular water pollution concern. The proposed development will follow EPD's Practice Note PN 5/93. Drainage in covered carparks, covered loading and unloading area should be connected to foul sewer via petrol interceptors while drainage serving open space should be connected to stormwater drain via screening facilities in accordance with EPD's Practice Note PN 5/93. As there will be no direct discharge of sewage to nearby area, no adverse water quality impact is expected. Wastewater collected from commercial kitchen should be discharged via grease trap as appropriate.

4.4.7 Currently, stormwater runoff from unpaved Site C will be directly discharged into TTWLS and the coast area without any treatment. During operation of proposed development, proper stormwater drainage system including drainage pipeline will be provided to properly collect stormwater runoff, and discharge through screening facilities following the existing flow regime. Same as Approved Scheme, drainage system will be provided along the site boundary adjacent to nearby CPA zone and adjacent to TTWLS so as to intercept stormwater. As discharge will be through degritting/screening facilities, there will be no direct discharge without treatment into the nearby TTWLS and sensitive areas. As pollutants contributed by non-point source are often bound or adsorbed onto particles, an effective stormwater management system will be the removal of pollution sources prior to rainstorm and the provision of degritting/ screening facilities that collect debris or sediment. It is recommended that regular cleaning and sweeping of road surface/ open areas as well as prior to occurrence of rainstorm should be carried out to minimize exposure of pollutants to stormwater. With the proposed drainage system and recommended pollution control

measures in place, no adverse water quality impact is anticipated. As for landscaping area, the proposed greenery area (~30% of site area) will be similar to that in the Approved Scheme and fertilizer will only be applied when needed e.g. in early Spring and in late summer to avoid major rainy season. Slow release type fertilizer should be selected as far as possible and over dosage should be avoided. Details of the drainage system will only be available in detailed design stage. It is recommended that the drainage system of the development should be designed in such a way that stormwater runoff should be collected and directed towards the site drainage system as far as possible; screening facilities such as standard gully grating and trash grille, with spacing which is capable of screening off large substances such as fallen leaves and rubbish should be provided at the inlet of drainage system/ discharge points. It is expected that most of the large substances in stormwater runoff would be removed with such devices so as to prevent it from entering the drainage system; road gullies with standard design should be incorporated during the detailed design to remove particles and grease present in stormwater runoff; and drainage outlet of any covered car park should be connected to foul sewers via petrol interceptors or similar facilities in accordance with ProPECC PN 5/93.

4.4.8 The drainage system of proposed development will be designed in such a way that direct discharge of stormwater without any treatment into nearby environs such as TTWLS will be avoided during operation. Instead, proper drainage system will also be provided to collect stormwater and to avoid any direct discharge without treatment from the proposed development.

4.4.9 Therefore, with the proposed drainage system and recommended pollution control measures in place, no adverse water quality impact due to stormwater discharge is anticipated.

5. CONSTRUCTION PHASE IMPACTS

5.1 Introduction

5.1.1 During the construction phase of the proposed development, there may be potential dust, noise and water quality impacts upon the nearby sensitive receivers such as villages. Practicable environmental mitigation measures are recommended to reduce these impacts to acceptable ranges.

5.2 Fugitive Dust Emission

During construction phase, the nearest sensitive receivers will be surrounding village houses such as those at Ma Kwu Lam Village, Tseng Tau Village, Kwun Hang Village, and Che Ha Village (**Figure 1-1** refers). The separation distance between site boundary of Site C to the nearest village house at each village will be about 41m, 36m, 43m, and 5m respectively.

Dust Emission Source

5.2.1 The major air quality impact of concern during the construction phase will be the potential fugitive dust emission. The major dust emission sources during the construction phase are expected to arise from construction activities during site formation stage such as.

- Excavation resulting in exposed ground vulnerable to air erosion;
- Earth moving, loading and unloading of excavated material; and
- Vehicle movements on haul roads and over the construction site.

Other Pollutants Sources

5.2.2 It is unlikely that potential impacts from the criteria pollutants (e.g. nitrogen oxides (NO_X), sulphur dioxide (SO_2), and carbon monoxide (CO)) would be unacceptable as significant emissions are not anticipated. Emission from diesel trucks for the haulage of materials and construction plants will contain high percentage of smoke particulate and unburned hydrocarbons in comparison with petrol driven vehicles. However, as the anticipated number of construction plants that result from the construction works will unlikely be high, significant impact on the existing air quality is not envisaged. The Air Pollution Control (Fuel Restriction) Regulation controls the fuel to be used. In particular, liquid fuel with a sulphur content not exceeding 0.005% by weight and a viscosity not more than 6 centistokes at 40°C, such as Ultra Low Sulphur Diesel should be used. In addition, emissions from all the regulated machines within construction site will be controlled under the Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation. Only approved or exempted Non-road Mobile Machinery with a proper label will be allowed to be used at construction site. As such, emissions due to construction equipment will be under control and are unlikely to be significant.

5.3 Mitigation Measures for Fugitive Dust Emission

5.3.1 Fugitive dust emission arising from construction activities can be effectively suppressed by incorporating proper mitigation measures into work procedures through contractual clauses, good site management, and close monitoring by the resident engineers. The contractor shall be required to follow the requirements of the Air Pollution Control (Construction Dust) Regulations. With the adaptation of good practices, it is expected that emission of construction dust can be kept at an acceptable level. The recommended dust mitigation measures are described below.

General Site Management

5.3.2 Appropriate working methods should be devised and arranged to minimise dust emissions and to ensure any installed control system and/or measures are operated and/or implemented in accordance with their design merits. No free falling of construction debris should be allowed, which should be let down by hoist or enclosed tunnel to the ground; immediately before leaving the construction site, all vehicles shall be washed to remove any dust materials from its body and wheels; providing hoarding of not less than 2.4m high from ground level along site boundary which is next to a road or other public area; provide effective dust screens, sheeting, or netting to enclose any scaffolding built around the perimeter of a building; prevent placing dusty material storage piles near ASRs; and minimizing exposed surface and properly cover stockpile as far as possible and apply frequent watering when working close to the ASRs to supress dust emission. In view of close separation distance to ASRs at Che Ha Village, higher hoarding will be erected close to the ASRs; locating the haul road away from this ASR as far as possible; and careful arrangement of construction program to avoid concurrent dusty works as far as practicable. Covering of exposed soil surface and regular watering to suppress any dust emission.

5.3.3 Frequent mist/ water spraying should be applied on dusty areas. The frequency of spraying will depend upon local conditions such as rainfall, temperature, wind speed and humidity. The amount of water spraying should be just enough to dampen the material without over-watering which could result in surface water runoff.

Vehicles and Unpaved Site Roads

5.3.4 Dust emission from unpaved roads comes predominantly from travelling of vehicles. Areas within the site where there are regular vehicle movements should have a hard surface such as crushed stone, gravel or other granular materials. Speed controls at an upper limit of 10 km/hr should be imposed and their movements should be confined to designed roadways within the site. All dusty vehicle loads should have side and tail boards covered by tarpaulin sheeting and tail boards. Wheel-wash troughs and hoses should be provided at exit points of the site.

Material Stockpiling and Handling

5.3.5 The amount of stockpiling should be minimised where possible. Construction material or debris should be covered and stored inside enclosed areas. Other control measures such as enclosed or semi-enclosed windboard should be used, where applicable, to minimise dust emission. Regular watering is needed at areas such as storage piles, where there could be potential dust emission.

Concrete Batching Plant

5.3.6 Should concrete batching plant be required, a specified process licence shall be obtained from the authority, which will give guidelines on dust mitigation measures required as terms and conditions, and its implementation will be controlled through the specified process licence.

5.4 Construction Noise Impact

5.4.1 During the construction phase, major noise impacts would arise from piling works, operation of Powered Mechanical Equipment (PME), and construction-related traffic.

Construction Noise Criteria

5.4.2 Construction noise is controlled under the Noise Control Ordinance (NCO) which prohibits the use of powered mechanical equipment (PME) during the restricted hours (7 p.m. to 7 a.m. on normal weekdays and any time on a public holiday, including Sunday) without a valid Construction Noise Permit (CNP) from the Authority. The

criteria and procedures for issuing such a permit are specified in the "Technical Memorandum on Noise From Construction Works Other than Percussive Piling" (TM1).

5.4.3 With effect from 1 November 96, the use of specified powered mechanical equipment (SPME) for carrying out construction work other than percussive piling and/ or the carrying out of prescribed construction work (PCW) within a designated area are also brought under control. The relevant technical details are provided in the "Technical Memorandum on Noise from Construction Work in Designated Areas" (TM2).

5.4.4 Percussive pilling is controlled similarly by a construction noise permit system and described in the NCO and the "Technical Memorandum On Noise From Percussive Piling" (TM3) which restrict the number of hours during which piling can be conducted. Percussive piling is prohibited between 7 p.m. and 7a.m. and on holidays (including Sundays). Percussive piling during the daytime (i.e. between 7 a.m. and 7 p.m. on any day not being a holiday) may be carried out in accordance with the permitted hours and other conditions under a valid construction noise permit.

5.4.5 For construction works other than percussive piling, although TM1 does not provide control over daytime construction activities, noise limits as shown in below Table are set out in the "Practice Note for Professional Persons Environmental Consultative Committee" (ProPECC) PN2/93 issued in 1993.

Table 5.1 Noise Limit for Daytime Construction Activities

NSR	0700 to 1900 Hours on Any Day Not Being a Sunday or General Holiday $L_{eq(30min.)}$, dB(A)
All domestic premises including temporary housing accommodation	75
Educational institutions including kindergartens, nurseries	70 65 (during examination)

Notes:

(i) the above standards apply to uses which rely on opened windows for ventilation;

(ii) the above standards shall be viewed as the maximum permissible noise levels assessed at 1m from the external façade

Recommended Mitigation Measures for Construction Noise

5.4.6 Sufficient noise mitigation measures should be introduced in the development to alleviate potential noise impacts on nearby NSRs. The Contractor(s) will be required under the contract to ensure regular maintenance of all plant and equipment, and that noise generation at source would be minimized and practicable noise mitigation measures would be in use. The Contractor(s) will be required to adopt quiet type construction plants (e.g. EPD's quality powered mechanical equipment (QPME) inventory), wherever practicable. Movable noise barriers should be erected around noisy plants in order to minimize noise generation at source. With these measures in place noise generation due to construction activities would be minimized.

5.4.7 The following general noise mitigation measures are recommended for implementation:

- Application of properly designed silencers, mufflers, acoustically dampened panels and acoustic sheds or shields, etc.;
- Use of electric-powered equipment where applicable instead of diesel-powered or pneumatic-powered equipment;

- Erecting noise enclosures/ movable noise barriers around noisy plants;
- Only well-maintained plants should be operated on-site;
- Plants should be serviced regularly during the construction programme;
- Noisy activities can be scheduled to minimize exposure of nearby NSRs to high levels of construction noise. For example, noisy activities can be scheduled for midday or at times coinciding with periods of high background noise;
- Noisy equipment such as emergency generators shall always be sited as far away as possible from noise sensitive receivers;
- Location of noise emitting plants at maximum possible distances from sensitive receivers;
- Contractual clauses for construction works; and
- Schedule of noisy operations during non-restricted hours where possible.

The above-mentioned noise mitigation measures will be included in the construction stage. With these measures in place, construction noise due to the Proposed Amendment Scheme can be minimized, and no adverse noise impact is anticipated.

5.5 Construction Wastewater Impact

Source of Construction Wastewater

5.5.1 Construction activities would inevitably have the potential to generate wastewater. Works should be carried out in such a manner as to minimise adverse impacts on local water bodies. Activities that are likely to cause water pollution include:

- Construction runoff and drainage;
- Wastewater from Construction Site and sewage effluent; and
- Liquid spillage, e.g. oil, diesel, solvents etc.

5.5.2 Construction runoff contains increased loads of sediments, other suspended solids and contaminants. Potential sources of pollution include runoff and erosion from the site surfaces, drainage channels; bentonite slurries and other grouting materials, concrete batching plant washout and drainage from dust suppression sprays, fuel, oil and lubricants from construction vehicles and other equipment. Also wastewater generated from construction activities, foundation works, and superstructure works. Various mitigation measures/ best practices have been proposed.

Mitigation Measures

5.5.3 The good practice given in the Practice Notes for Professional Persons on "Construction Site Drainage" (ProPECC PN 1/94) in controlling water pollution at construction site shall be implemented during the construction phase of the Proposed Development. Soil erosion from the construction site can be minimised through good on-site management practices by implementing viable erosion control measures which should be incorporated in contract clauses. The main practices provided in the above-mentioned document (i.e. ProPECC PN 1/94) are also summarized in the following paragraphs which should be enforced to prevent unacceptable construction stage impacts and for compliance with the statutory criteria.

(i) Construction Site Runoff

- Exposed soil surfaces should be protected from rainfall through, for example, by covering temporarily exposed slope surfaces or stockpiles with tarpaulin and protect temporary access roads by crushed stone or gravel;

- Exposed soil areas should be minimised to reduce the potential for increased siltation and contamination of runoff;
- Minimise the time that soil surfaces are exposed;
- Slow down water run-off flowing across exposed soil surfaces;
- Channels, earth bunds or sand bag barriers should be provided on site to properly direct surface runoff through drainage systems;
- Oil interceptors are also recommended to be provided for stormwater drains near plant maintenance/ repair areas, where necessary.
- Manholes (including newly constructed ones) should be adequately covered or temporarily sealed so as to prevent slit, construction materials or debris from getting into the drainage system;
- Construction works should be programmed to minimise soil excavation works where practicable during rainy conditions;
- Drainage facilities must be adequate for the controlled release of storm flows;
- Sedimentation basins and sand traps designed in accordance with the requirements of ProPECC Note PN 1/94 should be installed at the construction site for collecting surface runoff. Perimeter channels at site boundaries should be provided where necessary to intercept surface runoff from outside the site. Silt removal facilities, channels and manholes should be maintained and deposited silt and grit should be removed regularly;
- There should be no direct discharge without treatment of construction site runoff into the nearby streams and public drains;
- The Contractor shall prepare a construction site drainage management plan with details of the construction phase drainage system proposed to be constructed; discharge location(s); and screening facilities; and
- The Contractor(s) shall apply for a discharge licence under the WPCO and the discharge shall comply with the terms and conditions of the licence throughout the construction phase.
- Construction works should be arranged so that there should be no disturbance to water quality at the nearby stream. Construction site runoff should be intercepted by drains so that there will be no direct discharge without treatment into the nearby stream (e.g. Tai Tung Wo Liu Stream) and other sensitive areas.

(ii) Wastewater from Construction Site

- Sewage generated from the construction workforce should be contained by chemical toilets before connection to public foul sewer can be provided. The number of chemical toilets required would be subject to the capacity of the chemical toilets, and contractor's practices/ work programme. The Contractor(s) will be required to provide an estimation on the amount of sewage to be generated and to provide sufficient number of chemical toilets for construction workers. The chemical toilets should be serviced and cleaned by a specialist contractor at regular intervals. No discharge of sewage into nearby environment will be allowed during construction stage. Such requirements will be incorporated into relevant contractual clauses of this Proposed Amendment Scheme for proper implementation;
- No canteen facilities are expected;

- Vehicle wheel washing facilities should be provided at every site exit such that mud, debris, etc. deposited onto the vehicle wheels or body can be washed off before leaving the site area;
- Section of construction road between the wheel washing bay and the public road should be paved with backfill to reduce vehicle tracking of soil and to prevent site run-off from entering public road drains; and
- If bentonite is used, bentonite slurry should be reconditioned and reused as far as practicable. Spent bentonite should be kept in a separate slurry collection system for disposal at a marine spoil grounds subject to obtaining a marine dumping licence from EPD. If used bentonite slurry is to be disposed of through public drainage system, it should be treated to the respective effluent standards applicable to foul sewers, storm drains or the receiving waters as set out in the WPCO Technical Memorandum on Effluent Standards in accordance with ProPECC PN 1/94.

(iii) Oils and Solvents

- Spillage of fuel oils or other polluting fluids should be prevented at source. It is recommended that all stocks should be stored inside proper containers and sited on sealed areas, preferably surrounded by berms;
- Regular site inspections to ensure the proper implementation of the above measures shall be carried out.

5.6 Construction Waste Disposal

Legislation

5.6.1 The principal legislation controlling waste materials in Hong Kong is the Waste Disposal Ordinance (WDO) (Cap. 354) and its subsidiary regulations.

Construction Waste Impact

5.6.2 Construction activities will generate waste materials requiring appropriate management and disposal. Likely range of waste types includes:

- excavated C&D materials and site clearance waste;
- wood from formwork as non-inert C&D materials;
- general refuse generated by the workforce; and
- chemical and oily wastes due to maintenance of equipment.

5.6.3 The general waste management strategy is to avoid waste generation in the first place. If that is unavoidable, source reduction and segregation should be exercised as far as practicable and at the same time, recycling and reuse should be adopted to salvage as much as possible all the recyclable and reusable materials.

Construction Waste Disposal Measures

5.6.4 On-site sorting of construction wastes will be recommended. On-site sorting can be achieved by avoiding the generation of "mixed waste" through good site control.

5.6.5 Waste generated by construction activities should be sorted into inert C&D materials and non-inert C&D materials. The inert C&D materials which comprise soil, rock, concrete, brick, cement plaster/mortar, inert building debris, aggregates and asphalt shall be reused in earth filling, reclamation or site formation works. The non-inert C&D materials which comprises metal, timber, paper, glass, junk and general garbage shall be reused or recycled and, as the last resort, disposal of at landfills.

5.6.6 Construction wastes shall be sorted, with the inert C&D materials broken up into small pieces for disposal at public fill reception facility, and the non-inert C&D materials should be disposed of at landfill.

5.6.7 Chemical and oily wastes generated from the construction activities, vehicle and plant maintenance and oil interceptors should be disposed of as chemical waste in strict compliance with the Waste Disposal (Chemical Waste) (General) Regulations.

5.6.8 Waste disposal from construction site is subject to control under the Waste Disposal Ordinance.

5.7 Conclusion

5.7.1 Potential environmental impacts arising from construction activities, including dust emission, construction wastewater, noise and waste impacts have been qualitatively assessed. Potential environmental impacts are anticipated to be within acceptable bounds with the implementation of effective environmental mitigation measures. In conclusion, it is envisaged that construction phase environmental impacts arising from the proposed development would be surmountable.

6. CONCLUSION

6.1.1 The Application Site is the subject of an approved planning application No. A/NE-SSH/120-1. The subject matter of the current application is Site C only. The potential environmental impacts arise from the proposed have been assessed in this report. Practical pollution control measures and mitigation measures have been recommended to alleviate the potential impacts.

6.1.2 The proposed development has provided adequate buffer distance from the nearby road in accordance with the buffer distance requirement stipulated in the HKPSG and the concerned separation distance can satisfy the buffer distance requirement in the HKPSG. Thus, it is considered that the proposed development would not be subject to unacceptable vehicular emissions impact.

6.1.3 With the proposed precautionary measures, the predicted road traffic noise level would comply with the relevant noise criteria and no adverse road traffic noise impact is anticipated. Environmental conscious designs are also recommended to avoid noise problem.

6.1.4 The proposed development will be served by planned public drainage system and sewerage system. Proper stormwater drainage system and sewerage system will also be provided to collect stormwater and sewage generated from the proposed development then discharge into the planned respective public drainage or sewage system accordingly. No fertilizer and pesticides/ herbicides would be required at the grass land of the proposed driving range and any grass land of recreational facilities. At landscaping area, fertilizer may be applied but only when needed and slow release fertilizer should be selected as far as possible and over dosage should be avoided. There will be no direct discharge of stormwater runoff without treatment from the Proposed Development. As such, no adverse water quality impact is anticipated.

6.1.5 To this end, it can be concluded that the proposed amendments under current proposed scheme are considered sustainable in environmental terms.

EA Report
Section 16 Planning Application for Amendments to the Approved Development (Application No. A/NE-SSH/120-1) AMENDMENTS TO RECREATION AND SPORTS CENTRE WITH ANCILLARY FACILITIES IN SITE C

Figures

RAMBOLL

Figure: 1-1	RAMBOLL
Title: Location of Application Site and Its Environs	Drawn by: YM Checked by: HN
Project: Section 16 Planning Application for Amendments to the Approved Development (Application No. A/NE-SSH/120-1) – Amendments to Recreation and Sports Centre with Ancillary Facilities in Site C	Rev.: 1.2 Date: Dec. 2021

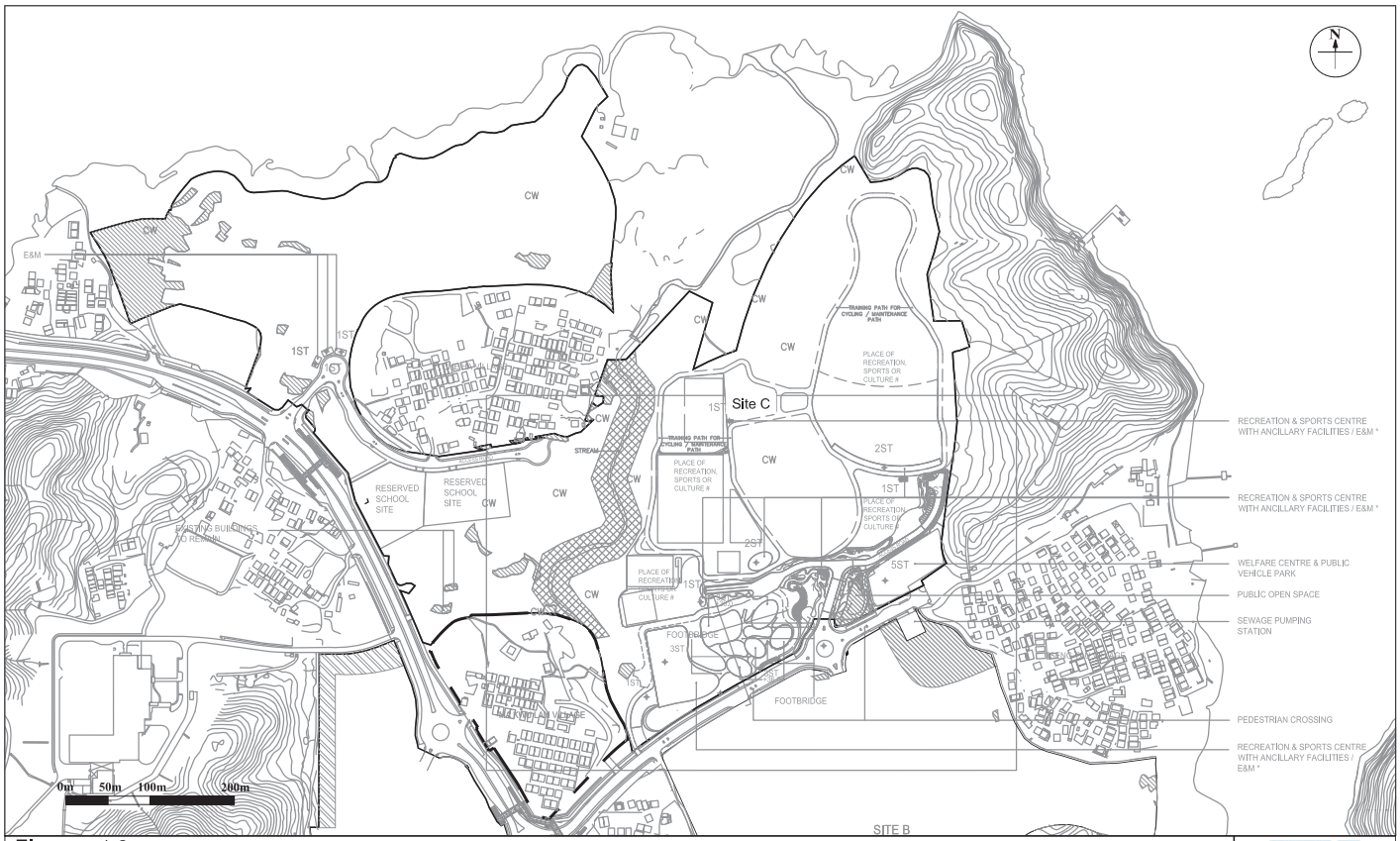


Figure: 1-2	RAMBOLL
Title: Master Layout Plan for Site C	Drawn by: VS Checked by: HN
Project: Proposed Minor Amendments To The Approved Comprehensive Residential And Recreational Development Including Government, Institution Or Community Facilities With Minor Relaxation Of GFA And Building Height Restrictions (Application No. A/NE-SSH/120) Under S16A Of The Town Planning Ordinance At Tai Po Town Lot 157, Various Lots In D.D.165, 207 And 218 and Adjoining Government Land, Sai Sha, Shap Sz Heung, New Territories	Rev.: 1.4 Date: May 2022

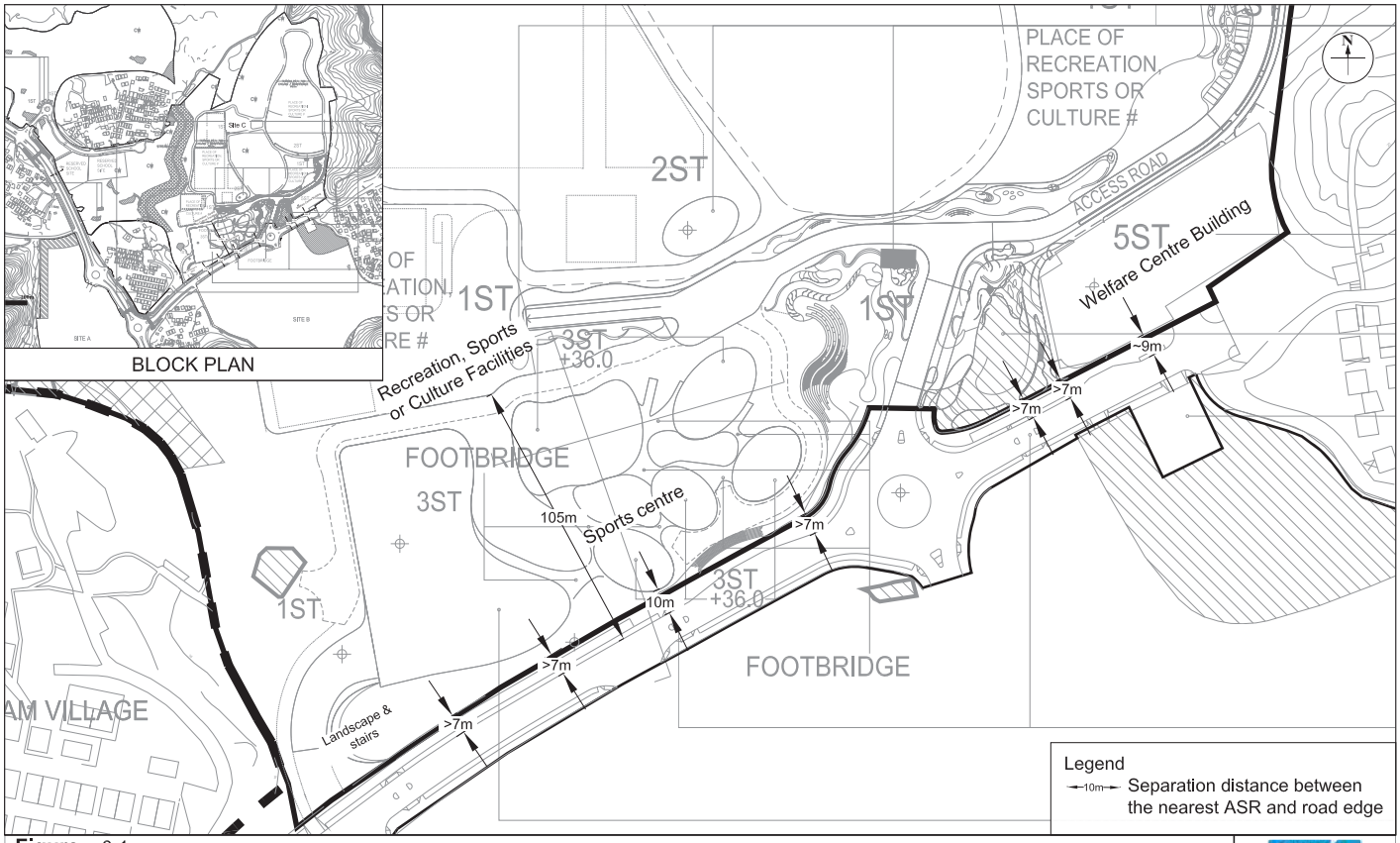


Figure: 3-1	RAMBOLL
Title: Separation Distance Between Representative ASRs and Road Edge for Vehicular Emission Impact Assessment	Drawn by: VS Checked by: HN
Project: Section 16 Planning Application for Amendments to the Approved Development (under Application No. A/NE-SSH/120-1)	Rev.: 1.4 Date: May 2022

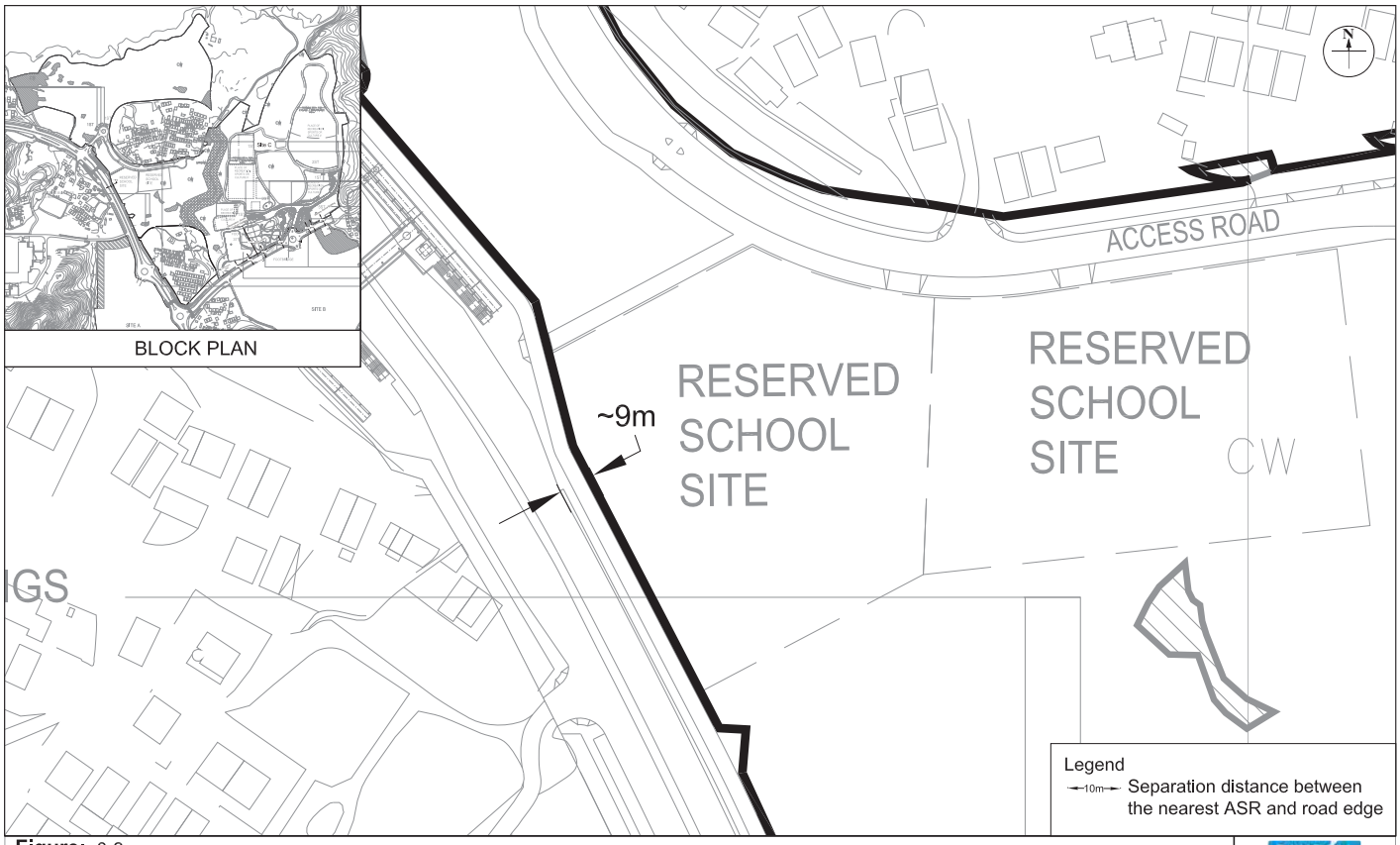


Figure: 3-2	RAMBOLL
Title: Separation Distance Between Representative ASRs and Road Edge for Vehicular Emission Impact Assessment	Drawn by: VS Checked by: HN
Project: Section 16 Planning Application for Amendments to the Approved Development (under Application No. A/NE-SSH/120-1)	Rev.: 1.4 Date: May 2022

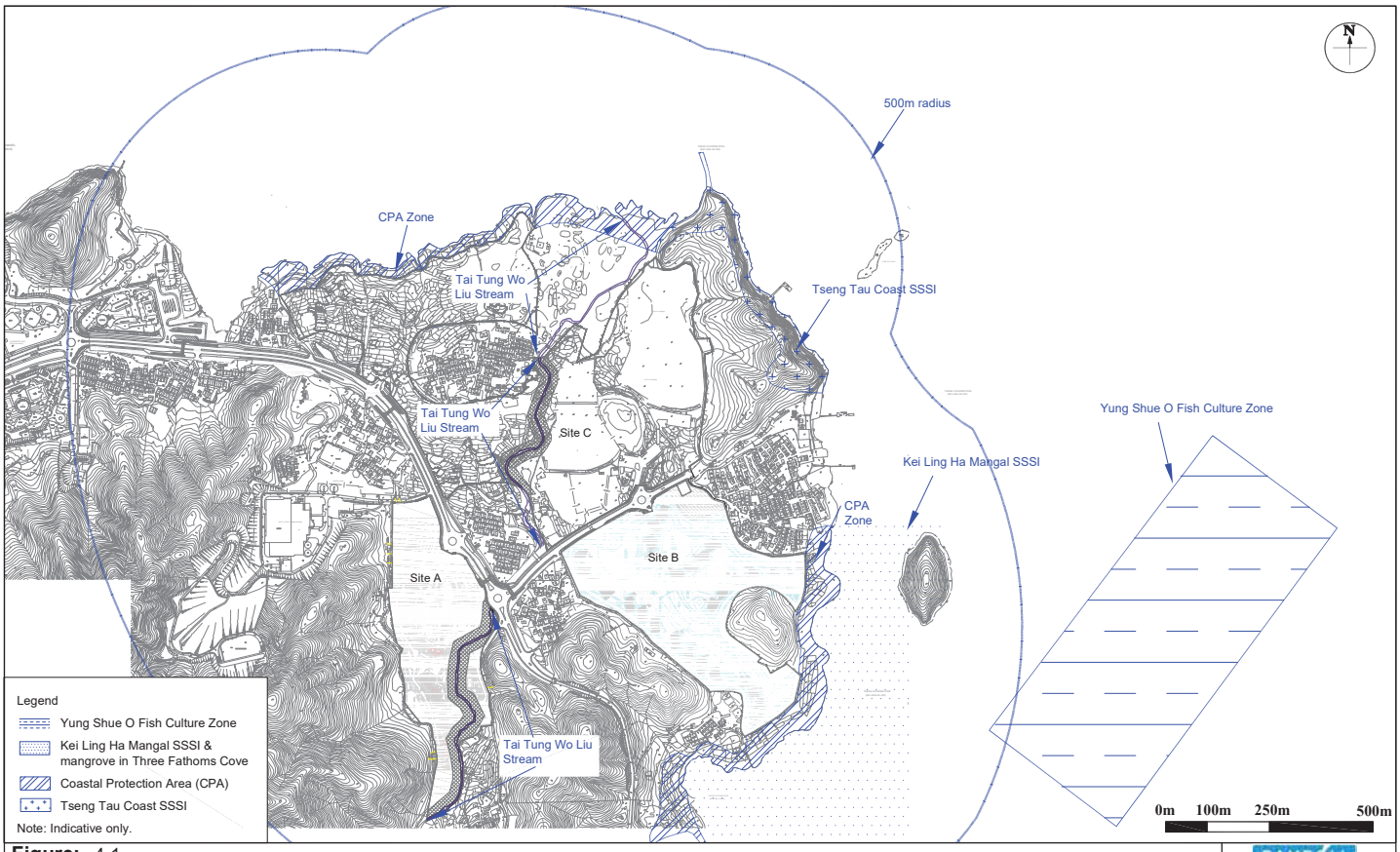


Figure: 4-1	RAMBOLL
Title: Indicative Locations of Water Sensitive Receivers	Drawn by: CL Checked by: HN
Project: Section 16 Planning Application for Amendments to the Approved Development (under Application No. A/NE-SSH/120-1)	Rev.: 1.0 Date: Apr., 2022

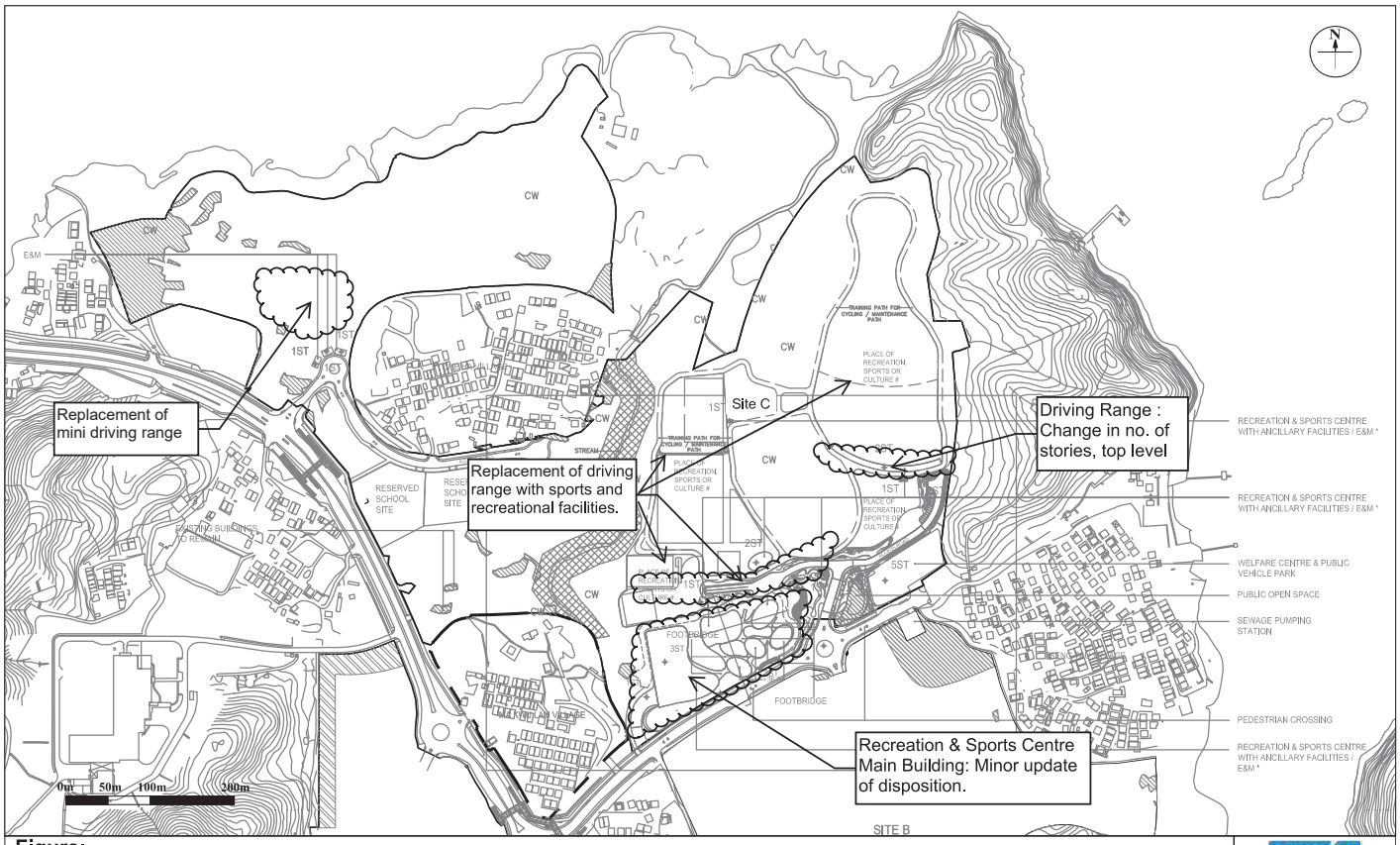


Figure: A1	RAMBOLL
Title: Master Layout Plan - Key Proposed Amendments	Drawn by: VS Checked by: HN
Project: Proposed Minor Amendments To The Approved Comprehensive Residential And Recreational Development Including Government, Institution Or Community Facilities With Minor Relaxation Of GFA And Building Height Restrictions (Application No. A/NE-SSH/120) Under S16A Of The Town Planning Ordinance At Tai Po Town Lot 157, Various Lots In D.D.165, 207 And 218 and Adjoining Government Land, Sai Sha, Shap Sz Heung, New Territories	Rev.: 1.4 Date: May 2022

Annex 2-1

Extracted Road Traffic Noise Assessment Results from

Previous Submitted EA Report

The following information was extracted from Previous Submitted EA Report (R7086 V2.1) under the Approved Planning Application No. A/NE-SSH/120-1

(*Note: The population and traffic flow as a result of current proposed amendments are generally the same as the Approved Scheme, and the project completion year is also the same. Also the NSRs such as the planned welfare centre and the planned school sites at Site C are identical to the Approved Scheme, thus the previous assessment results and findings in Submitted EA Report are still valid, which are reproduced below.*)

1.1 Assessment Methodology

1.1.1 The extent of noise assessment was based on an area within 300m radius from the Site C boundary.

1.1.2 The noise assessment is mainly concerned with the prediction of the maximum hourly L_{10} traffic noise level at the representative noise sensitive receivers (NSRs). The projected peak hours traffic flow data are provided by the Project traffic consultant. The details of the projected traffic flow data are described in the following paragraphs.

1.1.3 The U.K. Department of Transport's procedure "Calculation of Road Traffic Noise" (CRTN) has been applied to predict the hourly L_{10} traffic noise level generated from road traffic at selected representative NSRs. The predicted noise levels are then compared with the HKPSG noise criterion for assessing the impact. The noise prediction was carried out using the *RoadNoise 2000* software, which is a computerized model developed on the basis of the UK Department of Transport's Calculation of Road Traffic Noise procedures, and is acceptable to the EPD.

1.1.4 As mentioned earlier, there are roadside noise barriers proposed along the widened Sai Sha Road (outside the boundary of Site C), which has been extracted and adopted in the noise assessment. The highest proposed noise barriers have been adopted for the noise assessment.

1.2 Road Characteristics

1.2.1 Traffic flow data was predicted by the Project traffic consultant for year 2040, which is considered to be the worst case scenario within 15 years upon completion of the Proposed Development in year 2025.

1.2.2 The projected peak hour traffic flow volume and percentage of heavy vehicle on different roads are shown in Table 2.1, which were then used for the noise assessment. As the completion year remain unchanged, the same set of traffic data is used for current noise assessment. The peak hour traffic flows in the AM Peak hour were used for the noise assessment as it is generally higher than those in the afternoon. Bituminous road surface has been assumed.

Table 2.1 Road Characteristics During Peak Hours in Year 2040

		AM Peak		PM Peak		
Road Name	**Road ID ***	**Traffic Volume, veh./hr**	**% Heavy Vehicle**	**Traffic Volume, veh./hr**	**% Heavy Vehicle**	**Speed, km/hr**
Sai Sha Road (existing)	P	4071	13%	3556	15%	50
Sai Sha Road	I	3063	13%	2663	15%	50
(Widened Sections)	A	2946	13%	2555	15%	50
	B	2890	13%	2555	15%	50
	C	2403	12%	2147	18%	50
	D	1531	12%	1452	18%	50
Sai Sha Road (existing)	E	1530	12%	1451	18%	50
Access Road to Tseng Tau	F	1156	14%	891	17%	50
(Upgraded Sections)	G	1058	15%	833	18%	50
	G1	492	28%	369	36%	50
	H	308	27%	197	40%	50
Access Road to Tseng Tau (existing)	H3 /H4	160	27%	80	48%	50
Nin Ming Road	K	182	33%	106	27%	50
Nin Wah Road	L	306	17%	202	16%	50
Nin Wah Road	M	478	22%	325	20%	50
Nin Fung Road	O	880	16%	767	19%	50
Access road to Che Ha	B1	156	18%	114	14%	50
Access road near Kwun Hang	B2	5	18%	5	18%	50

Remark: * Please refer to **Annex A** for the locations of road sections and details of traffic flow data.

1.3 Noise Sensitive Receivers

1.3.1 Representative NSRs within Site C, which are closest to the road and would be most affected by the road traffic noise, are selected as the noise assessment points to conduct the operational phase road traffic noise assessment. These representative NSRs are shown in Table 2.2 and their locations are presented in **Figures 2-1 to 2-4**.

1.3.2 There are two reserved school sites within Site C (**Figure 1-2** refers) which are considered necessary to support future increased population in the district from planning point of view. It shall be noted that the provision of the school buildings is not within the scope of the current proposed development and detailed layout and design of the school buildings will only be available at the detailed design stage. There is also no programme for implementation of the school developments. For the purpose of noise assessment, typical block plan for primary school building has been adopted as a feasible option (**Figure 2-5** refers). It is also recommended that other option of environmental conscious design such as self-protective measures to avoid openable windows directly facing the road at the façade nearest to the road and use of noise tolerant uses abutting the road should be considered in the detailed design stage.

1.3.3 There will also be a proposed government welfare centre located at Site C, including district support centre for persons with disabilities, special child care centre, elderly centre, and residential care home for the elderly. The location of the proposed welfare centre is shown in **Figure 1-2**. There will be uses such as dormitories at the proposed residential care home for the elderly as well. Since detailed design and layout will only be available at the later detailed design stage, noise assessment has been conducted based on the current indicative layout as shown in **Figures 2-1 to 2-3** and assuming that there exist habitable rooms that rely on opened window for ventilation to demonstrate the proposed welfare centre is acceptable from noise perspective. Based on preliminary discussion with relevant government department, the above-mentioned indicative layout is feasible, while the exact design and details of internal layout will be subject to detailed design stage. It is also recommended that environmental conscious design such as self-protective measures to avoid openable windows directly facing the road at the façade nearest to the road and use of noise tolerant uses abutting the road should be considered in the detailed design stage based on similar design principle. With these recommended measures in place, it is unlikely that the future welfare centre would be subject to unacceptable road traffic noise impact.

1.3.4 All the assessment points are taken at 1.2 m above the floor level of the selected storeys and 1m away from the external facades of openable windows.

Table 2.2 Representative NSRs for Operational Phase Road Traffic Noise Assessment

Noise Assessment Points	**Description**	**Representative mPD (1.2m above floor level)**
Reserved Primary School Site		
Sch1_01 to Sch1_14	school building	~15 - ~36
Sch2_01 to Sch2_14	school building	~15 - ~36
Planned Welfare Centre		
W01 to W24	Welfare centre	~11 to ~29

Remark: Please refer to **Figures 2-1** to **2-4** for the locations of NSRs.

Since there are no detailed designs for the reserved school site and the welfare centre at this stage, the noise assessment has been based on typical block plan for the purpose of this noise assessment.

1.4 Predicted Traffic Noise Levels (Mitigated Scenario)

1.4.1 It shall be noted that at-source noise mitigation measures such as roadside noise barriers at widened Sai Sha Road is proposed and presented in the Sai Sha Road Widening EA report under a separate submission. Information such as proposed higher roadside noise barriers as recommended for the widened Sai Sha Road, have been extracted and incorporated into the noise assessment. Please refer to **Annex E** for details. The results of predicted mitigated noise level at the reserved schools is presented in **Annex D**.

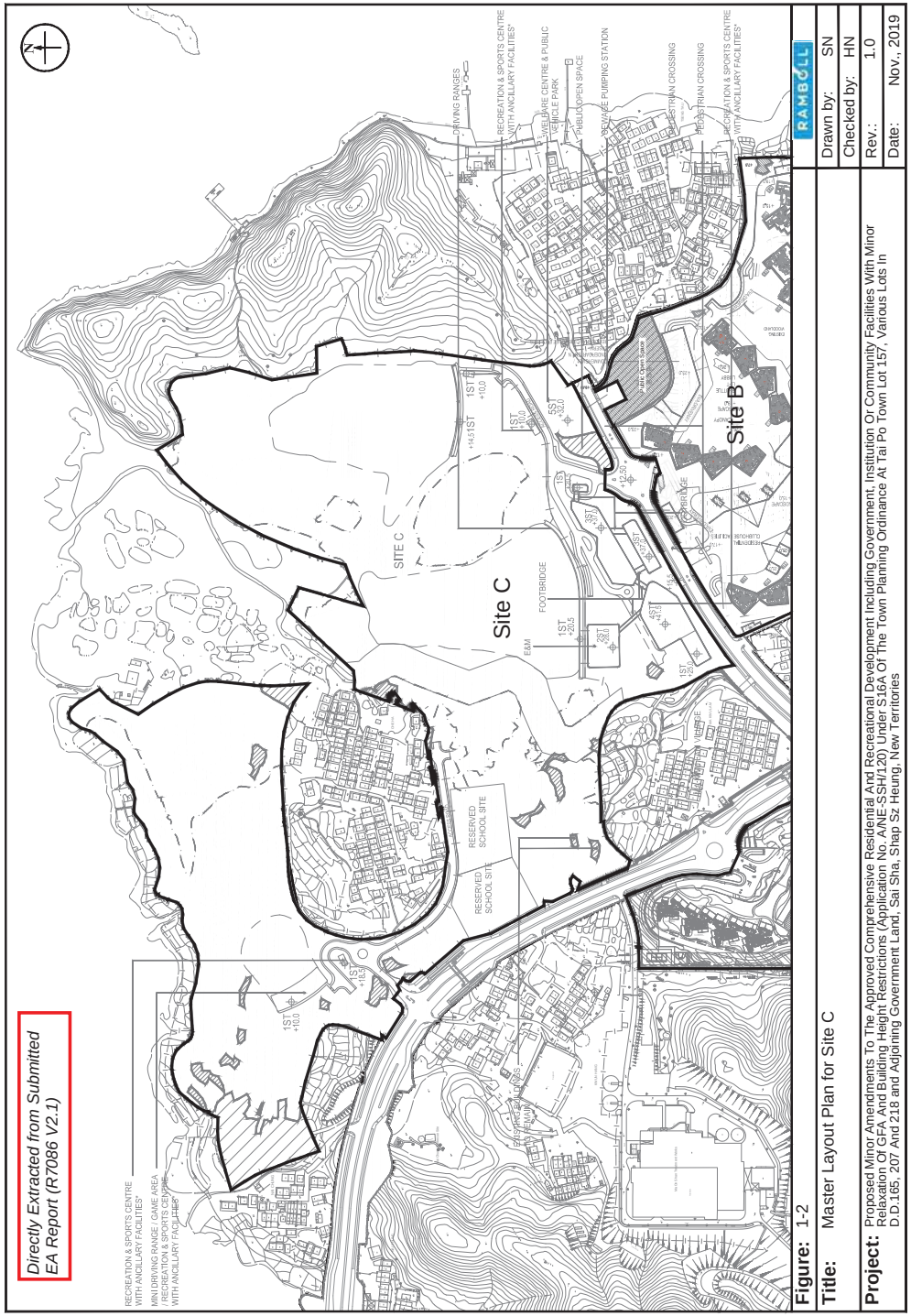
1.4.2 As seen from **Annex D**, with the proposed roadside noise barrier at widened Sai Sha Road, adverse noise impact is not anticipated at the schools. The exact implementation programme of the concerned roadside noise barrier in front of the school site will be further liaised with relevant government authority when a solid development programme for the reserved schools is available.

1.4.3 It is also understood that the reserved school sites, once implemented by the government, will need to go through relevant procedures and public funding process so that road traffic noise will be reviewed when detailed design of the school becomes available. It is also recommended that environmental conscious design could be explored and considered in the school layout such as locating openable windows facing away from the road and use of noise-tolerant uses abutting the road so that to alleviate road traffic noise impact.

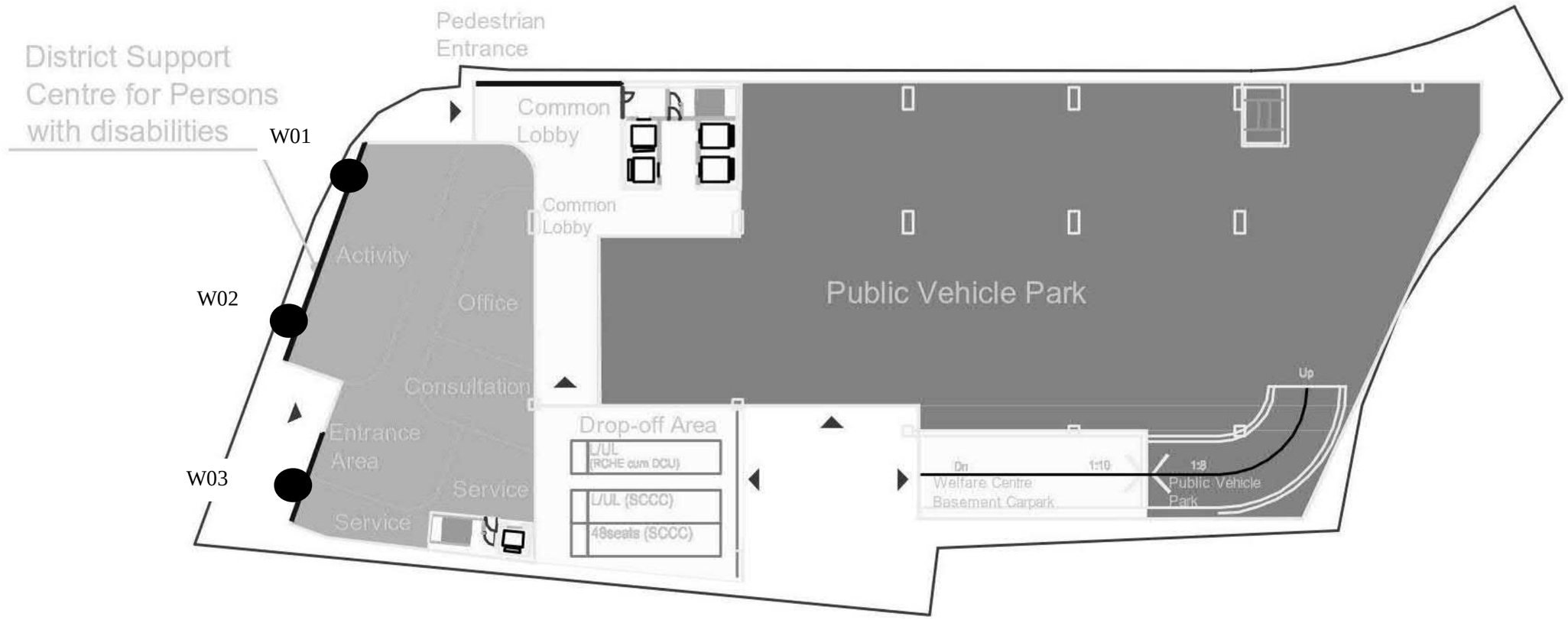
1.5 Conclusion

1.5.1 Road traffic noise assessment has been conducted for the Proposed Amendment Scheme taking into account the widened Sai Sha Road as well as proposed roadside noise barriers along the widened road.

1.5.2 According to the assessment results, there will be no adverse noise impact at the proposed welfare centre. As for the reserved schools, it was found that with the noise mitigation measures in place the predicted road traffic noise levels would be within the relevant noise criteria. In addition, various precautionary noise measures have also been explored which can be incorporated into the design of the current Proposed Development with a view to avoid potential noise problem.



Directly Extracted from Submitted EA Report (R7086 V2.1)



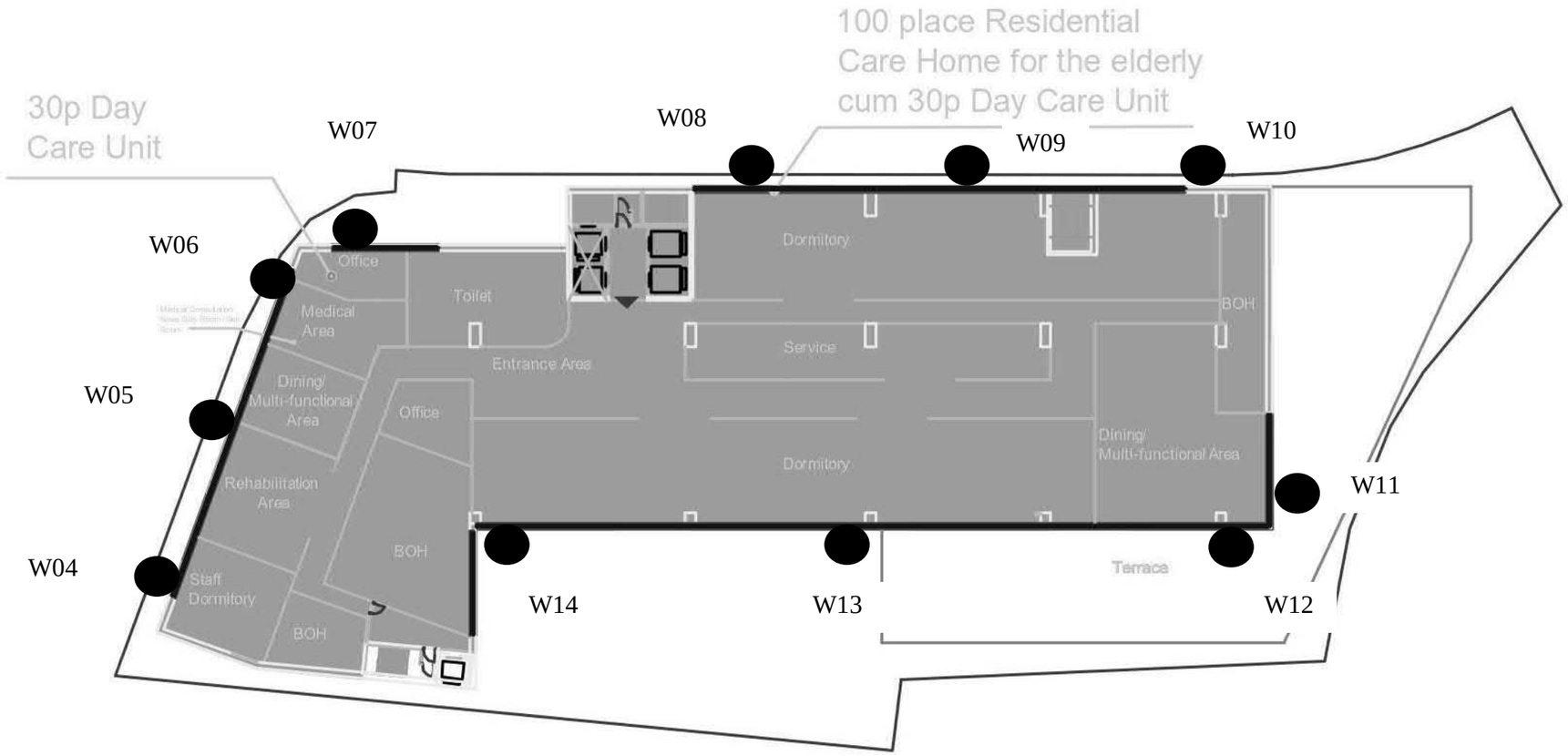
Layout Plan GF

Remark:
Floors L1 and L2 are vehicle park only.
"BOH" - Back of House (e.g. store room, laundry, general store, etc.)

Openable window

Figure: 2-1	RAMBOLL
Title: **Location of Representative NSRs for Road Traffic Noise Assessment**	Drawn by: HN
	Checked by: CC
Project: Environmental Assessment for Section 16 Planning Application for Amendments to the Approved Development (Under Application No. A/NE-SSH/120) for Proposed Comprehensive Residential and Commercial Development With Government, Institution or Community Facilities with Minor Relaxation of GFA and Building Height Restrictions at Tai Po Town Lot 157, various lots in D.D.165, 207 and 218 and Adjoining Government Land, Sai Sha, Shap Sz Heung, New Territories	Rev.: 1.0
	Date: Oct, 2019

Directly Extracted from Submitted EA Report (R7086 V2.1)

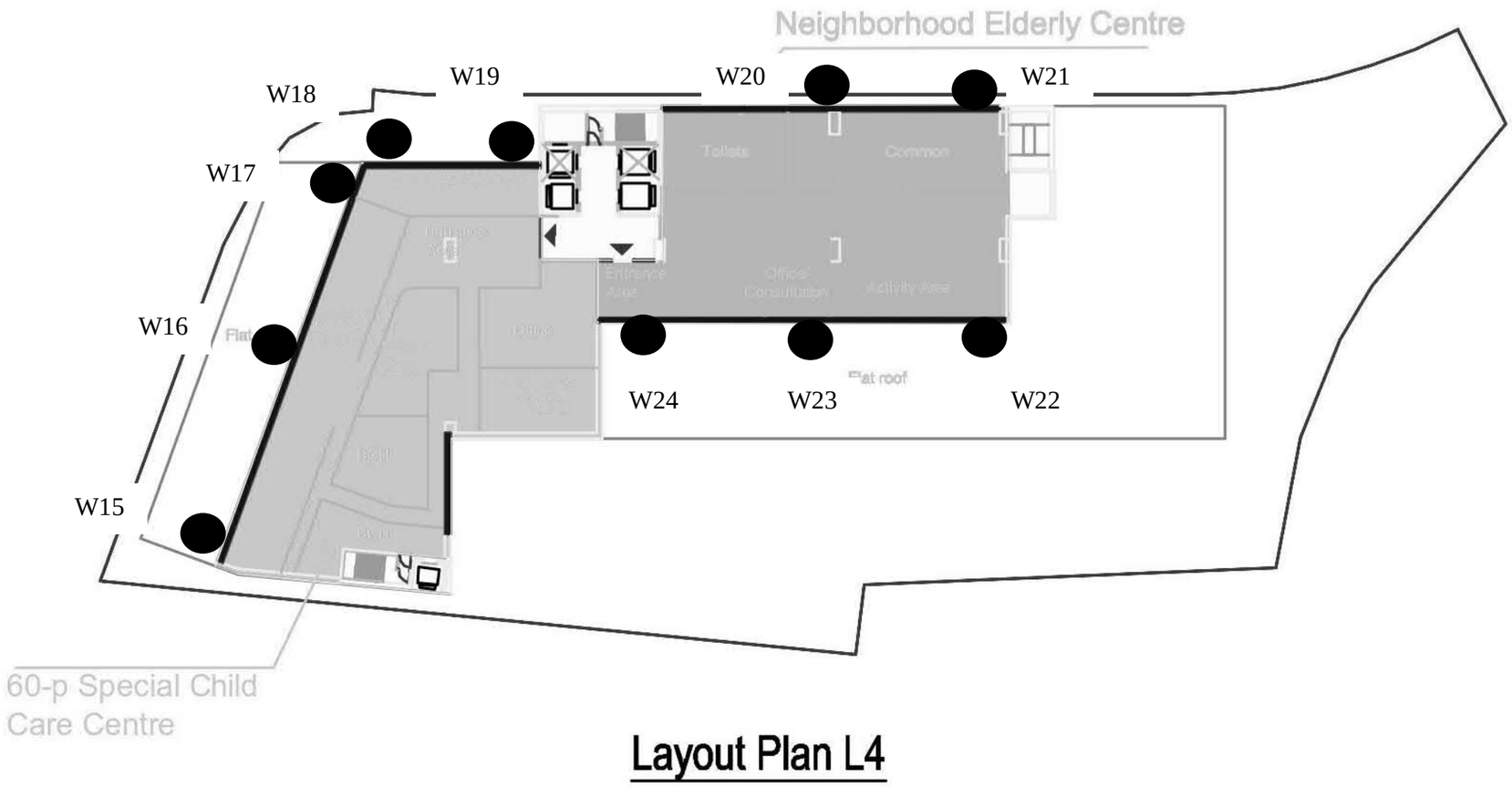


Layout Plan L3

Remark:
Floors L1 and L2 are vehicle park only.
"BOH" - Back of House (e.g. store room, laundry, general store, etc.)
Openable window

Figure: 2-2	RAMBOLL
Title: Location of Representative NSRs for Road Traffic Noise Assessment	Drawn by: HN
	Checked by: CC
Project: Environmental Assessment for Section 16 Planning Application for Amendments to the Approved Development (Under Application No. A/NE-SSH/120) for Proposed Comprehensive Residential and Commercial Development With Government, Institution or Community Facilities with Minor Relaxation of GFA and Building Height Restrictions at Tai Po Town Lot 157, various lots in D.D.165, 207 and 218 and Adjoining Government Land, Sai Sha, Shap Sz Heung, New Territories	Rev.: 1.0
	Date: Oct, 2019

Directly Extracted from Submitted EA Report (R7086 V2.1)



Layout Plan L4

Remark:
Floors L1 and L2 are vehicle park only.
"BOH" - Back of House (e.g. store room, laundry, general store, etc.)
Openable window

Figure: 2-3	RAMBOLL
Title: **Location of Representative NSRs for Road Traffic Noise Assessment**	Drawn by: HN
	Checked by: CC
Project: Environmental Assessment for Section 16 Planning Application for Amendments to the Approved Development (Under Application No. A/NE-SSH/120) for Proposed Comprehensive Residential and Commercial Development With Government, Institution or Community Facilities with Minor Relaxation of GFA and Building Height Restrictions at Tai Po Town Lot 157, various lots in D.D.165, 207 and 218 and Adjoining Government Land, Sai Sha, Shap Sz Heung, New Territories	Rev.: 1.0
	Date: Oct, 2019

Directly Extracted from Submitted EA Report (R7086 V2.1)

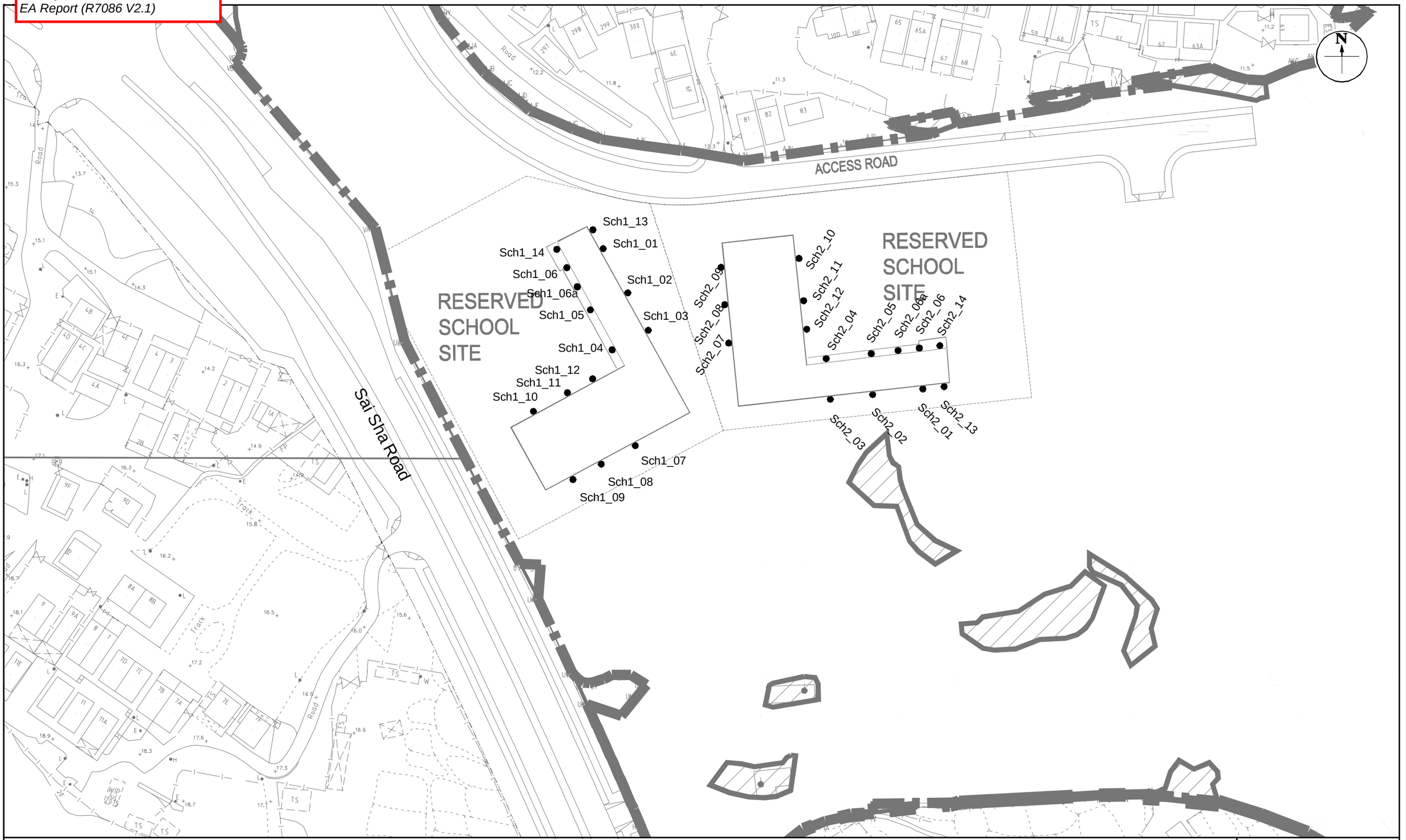
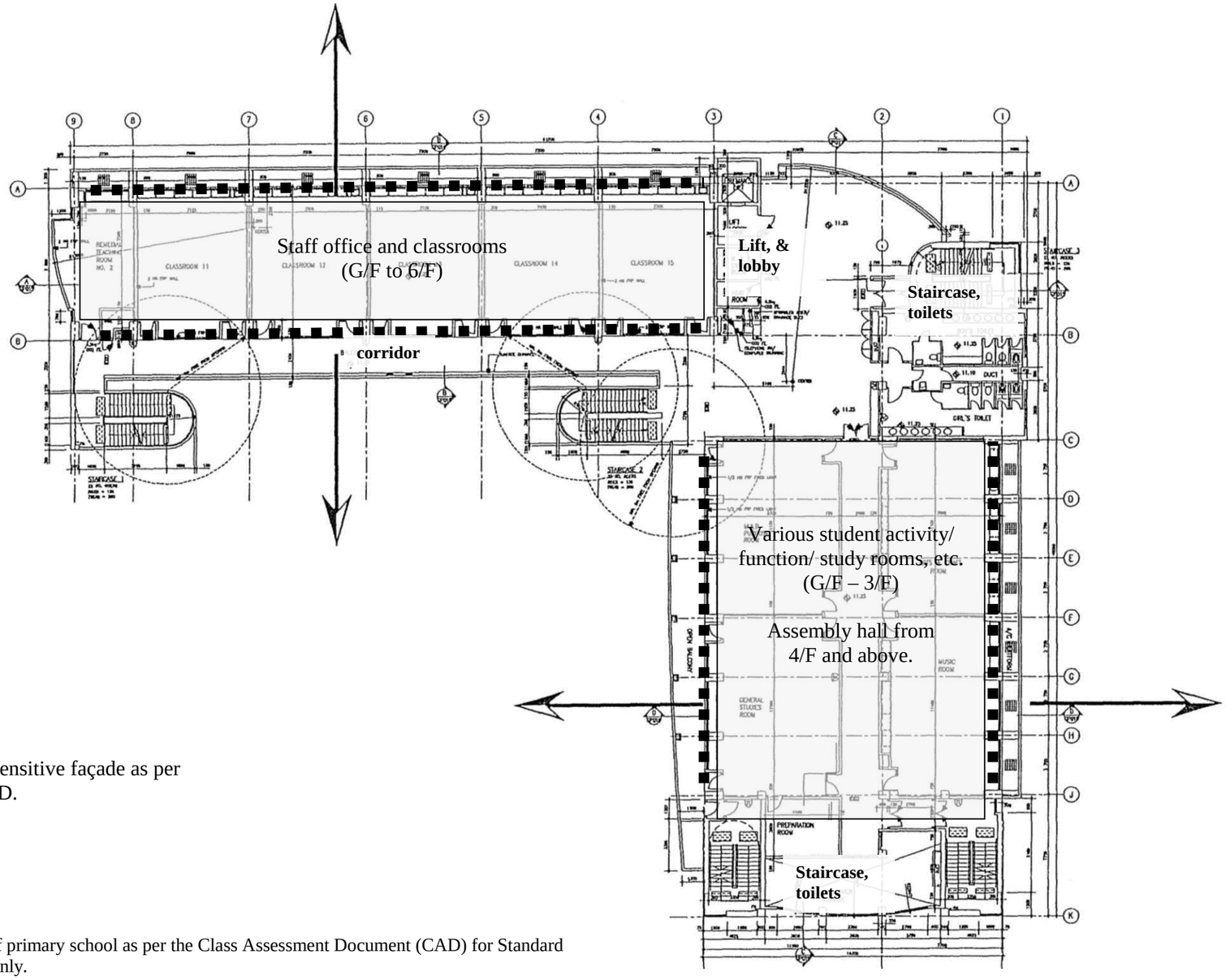


Figure: 2-4	RAMBOLL
Title: Location of Representative NSRs for Road Traffic Noise Assessment	Drawn by: SN Checked by: HN
Project: Environmental Assessment for Section 16 Planning Application for Amendments to the Approved Development (Under Application No. A/NE-SSH/120) for Proposed Comprehensive Residential and Commercial Development With Government, Institution or Community Facilities with Minor Relaxation of GFA and Building Height Restrictions at Tai Po Town Lot 157, various lots in D.D.165, 207 and 218 and Adjoining Government Land, Sai Sha, Shap Sz Heung, New Territories	Rev.: 1.0 Date: Oct 2019

Q:\Projects\SHKSAISAEI01\04 Deliverables\06B EA Report_2019 Class B\Figures\Site C_R7086 V1.0\source\Figure 2-4 Sch NSRss.dwg



Legend :

Noise sensitive façade as per the CAD.

Remark: Typical block plan and sensitive façade locations of primary school as per the Class Assessment Document (CAD) for Standard Schools, by Architectural Services Department. Indicative only.

Figure: **2-5**	RAMBOLL
Title: **Typical Block Plan of Primary School**	Drawn by: HN
	Checked by: CC
Project: Environmental Assessment for Proposed Comprehensive Residential and Commercial Development with Government, Institution or Community Facilities with Minor Relaxation of GFA and Building Height Restrictions at Tai Po Town Lot 157, various lots in D.D.165, 207 and 218 and Adjoining Government Land, Sai Sha, Shap Sz Heung, New Territories	Rev.: 1.0
	Date: Oct, 2019

Directly Extracted from Submitted EA Report (R7086 V2.1)

Annex A

Traffic Flow Forecast Data

Directly Extracted from Submitted EA Report (R7086 V2.1)

Annex A Projected Peak Hours Traffic Flow Forecast Data in Year 2040

Road Index No.		2040 Design Flow			
		AM (Veh/hr)	PM (Veh/hr)	AM (HV %)	PM (HV %)
One-way flows:					
A	A-1	1202	1390	14.0%	13.0%
	A-2	1866	1286	10.0%	17.0%
B	B-1	1144	1390	14.0%	14.0%
	B-2	1867	1285	10.0%	17.0%
B1	B1-1	52	70	19.0%	11.0%
	B1-2	104	44	17.0%	16.0%
B2	B2-1	2	2	0.0%	0.0%
	B2-2	3	3	30.0%	30.0%
C	C-1	925	1128	16.0%	18.0%
	C-2	1554	1101	8.0%	16.0%
D	D-1	593	777	17.0%	19.0%
	D-2	951	688	9.0%	16.0%
E	E-1	573	777	16.0%	19.0%
	E-2	970	688	9.0%	16.0%
F	F-1	510	510	15.0%	17.0%
	F-2	724	467	13.0%	15.0%
G	G-1	461	481	16.0%	18.0%
	G-2	675	438	13.0%	16.0%
G1	G1-1	237	205	27.0%	36.0%
	G1-2	290	213	26.0%	29.0%
H	H-1	125	95	29.0%	47.0%
	H-2	183	102	26.0%	31.0%
H3	H-3	80	40	27.0%	48.0%
H4	H-4	80	40	27.0%	48.0%
I	I-1	1249	1463	15.0%	13.0%
	I-2	1936	1321	11.0%	17.0%
J	J-1	33	19	9.0%	16.0%
	J-2	18	22	5.0%	9.0%
K	K-1	102	45	22.0%	31.0%
	K-2	80	61	49.0%	24.0%
L	L-1	90	89	20.0%	7.0%
	L-2	216	113	16.0%	23.0%
M	M-1	213	158	25.0%	18.0%
	M-2	265	167	20.0%	21.0%
N	N-1	14	15	7.0%	0.0%
	N-2	13	13	0.0%	8.0%
O	O-1	534	340	11.0%	21.0%
	O-2	346	427	23.0%	18.0%
P	P-1	1554	1991	19.0%	15.0%
	P-2	2639	1686	10.0%	15.0%
Q	Q-1	645	423	17.0%	18.0%
	Q-2	564	248	14.0%	27.0%
Two ways flows					
A	A-1 & A-2	3068	2676	11.6	14.9
B	B-1 & B-2	3011	2675	11.5	15.4
B1	B1-1 & B1-2	156	114	17.7	12.9
B2	B2-1 & B2-2	5	5	18.0	18.0
C	C-1 & C-2	2479	2229	11.0	17.0
D	D-1 & D-2	1544	1465	12.1	17.6
E	E-1 & E-2	1543	1465	11.6	17.6
F	F-1 & F-2	1234	977	13.8	16.0
G	G-1 & G-2	1136	919	14.2	17.0
G1	G1-1 & G1-2	527	418	26.4	32.4
H	H-1 & H-2	308	197	27.2	38.7
H3/ H4	H-3 & H-4	160	80	27.0	48.0
I	I-1 & I-2	3185	2784	12.6	14.9
J	J-1 & J-2	51	41	7.6	12.2
K	K-1 & K-2	182	106	33.9	27.0
L	L-1 & L-2	306	202	17.2	16.0
M	M-1 & M-2	478	325	22.2	19.5
N	N-1 & N-2	27	28	3.6	3.7
O	O-1 & O-2	880	767	15.7	19.3
P	P-1 & P-2	4193	3677	13.3	15.0
Q	Q-1 & Q-2	1209	671	15.6	21.3

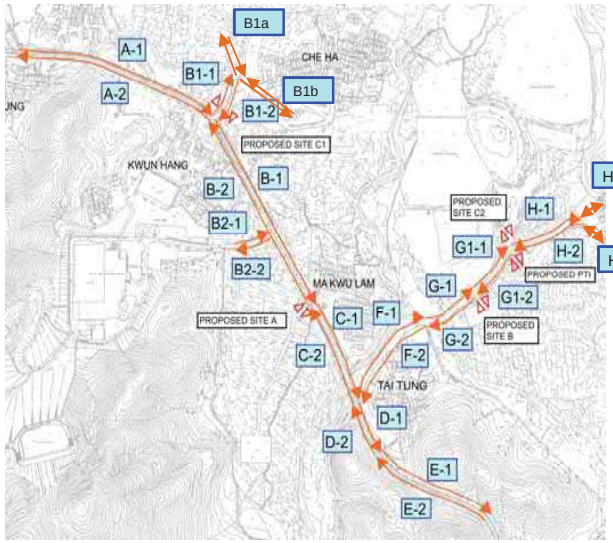
Directly Extracted from Submitted EA Report (R7086 V2.1)

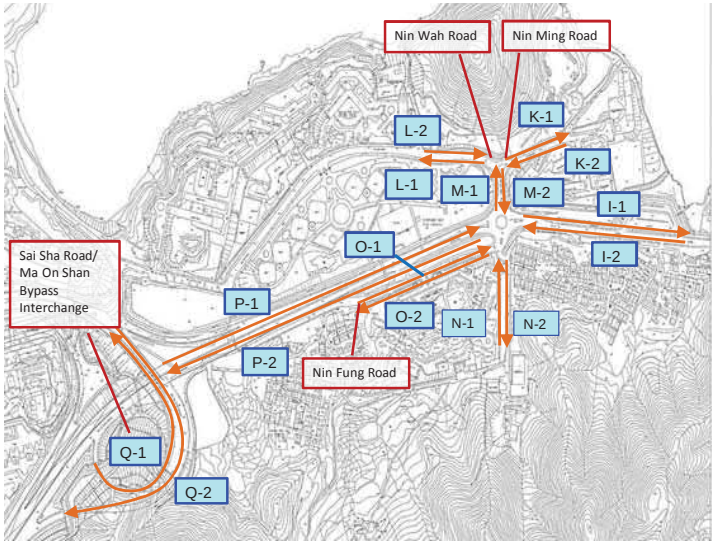
Format for RoadNoise Model

Road ID	Index No.	2040 Design Flow			
		AM (Veh/hr)	PM (Veh/hr)	AM (HV %)	PM (HV %)
SaiShaRd_P_WB	P-2	2639	1686	10.0	15.0
SaiShaRd_P_EB	P-1	1554	1991	19.0	15.0
SaiShaRd_I_NB	I-2	1936	1321	11.0	17.0
SaiShaRd_I_SB	I-1	1249	1463	15.0	13.0
SaiShaRd_A_NB	A-2	1866	1286	10.0	17.0
SaiShaRd_A_SB	A-1	1202	1390	14.0	13.0
SaiShaRd_B_NB	B-2	1867	1285	10.0	17.0
SaiShaRd_B_SB	B-1	1144	1390	14.0	14.0
SaiShaRd_C_NB	C-2	1554	1101	8.0	16.0
SaiShaRd_C_SB	C-1	925	1128	16.0	18.0
SaiShaRd_D_NB	D-2	951	688	9.0	16.0
SaiShaRd_D_SB	D-1	593	777	17.0	19.0
SaiShaRd_E	E-1 & E-2	1543	1465	11.6	17.6
AccessRd_F	F-1 & F-2	1234	977	13.8	16.0
AccessRd_G	G-1 & G-2	1136	919	14.2	17.0
AccessRd_G1	G1-1 & G1-2	527	418	26.4	32.4
AccessRd_H	H-1 & H-2	308	197	27.2	38.7
Rd_B1	B1-1 & B1-2	156	114	17.7	12.9
Rd_B2	B2-1 & B2-2	5	5	18.0	18.0
Rd_M	M-1 & M-2	478	325	22.2	19.5
Rd_L	L-1 & L-2	306	202	17.2	16.0
Rd_K	K-1 & K-2	182	106	33.9	27.0
AccessRd2	H-3	80	40	27	48
AccessRd1	H-4	80	40	27	48
Rd_O	O-1 & O-2	880	767	15.7	19.3
Rd B1a	B1-1 & B1-2	156	114	17.7	12.9
Rd B1b	B1-1 & B1-2	156	114	17.7	12.9
Rd_N	N-1 & N-2	27	28	3.6	3.7

Directly Extracted from Submitted EA Report (R7086 V2.1)

Road Link Index Plan





Directly Extracted from Submitted EA Report (R7086 V2.1)

Annex D

Traffic Noise Assessment Results (Mitigated)

Directly Extracted from Submitted EA Report (R7086 V2.1)

Annex D1-1 Predicted Road Traffic Noise Level (L10, dB(A)) during AM Peak Hour with the Proposed Roadside Noise Barriers along Widened Sai Sha Road as well as Proposed Boundary Fence Walls at Proposed Development Sites - Mitigated Scenario

For Site C:

Predicted Noise Levels at Reserved Primary School Site at Site C @

NSR		Sch1_01	Sch1_02	Sch1_03	Sch1_04	Sch1_05	Sch1_06	Sch1_06a	Sch1_07	Sch1_08	Sch1_09	Sch1_10	Sch1_11	Sch1_12	Sch1_13	Sch1_14	Sch2_01	Sch2_02	Sch2_03	Sch2_04	Sch2_05	Sch2_06	Sch2_06a	Sch2_07	Sch2_08	Sch2_09	Sch2_10	Sch2_11	Sch2_12	Sch2_13	Sch2_14
Floor	mPD	L10 (1 hour), dB(A)																												
G/F	14.7	64	61	59	52	53	49	52	59	60	58	57	56	55	65	43	57	57	58	58	59	56	59	60	61	62	61	60	59	57	39
1/F	19.2	63	61	58	53	54	50	54	60	61	59	57	57	56	65	43	57	58	58	58	58	55	59	60	61	63	61	60	58	57	40
2/F	22.6	63	61	58	55	56	51	56	60	61	60	59	58	57	65	43	57	58	58	58	58	55	59	60	61	64	61	60	58	57	40
3/F	26	63	61	58	58	58	53	59	60	61	61	61	60	59	64	44	58	58	58	58	58	55	58	60	61	64	61	59	58	57	42
4/F	29.4	63	60	58	61	61	54	62	-	-	-	-	-	-	64	46	58	58	59	58	58	55	58	-	-	-	-	-	-	58	44
5/F	32.8	62	60	58	62	63	56	63	-	-	-	-	-	-	63	49	58	59	59	58	58	55	58	-	-	-	-	-	-	58	46
6/F	36.2	62	61	59	64	65	58	65	-	-	-	-	-	-	63	55	59	59	60	58	58	56	59	-	-	-	-	-	-	58	51
Max. Level,dB(A)		64	61	59	61	61	54	62	60	61	61	61	60	59	65	46	58	58	59	58	59	56	59	60	61	64	61	60	59	58	44
Compliance ?		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Remark: - school hall on 4/F and above.

Predicted Noise Levels at Welfare Facility at Site C @

NSR (dormitories)		W01	W02	W03	W04	W05	W06	W07	W08	W09	W10	W11	W12	W13	W14	W15	W16	W17	W18	W19	W20	W21	W22	W23	W24
Floor	mPD	L10 (1 hour), dB(A)																							
G/F	11	64	67	69	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1/F	17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2/F	20.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3/F	24.6	-	-	-	69	66	64	61	56	49	49	59	63	65	65	-	-	-	-	-	-	-	-	-	-
4/F	28.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	69	65	64	61	51	49	49	63	63	62
Max. Level,dB(A)		64	67	69	69	66	64	61	56	49	49	59	63	65	65	69	65	64	61	51	49	49	63	63	62
Compliance ?		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Remark:

* Please refer to Annex B for the floor plan and flat nos.

All mPD levels should refer to 1.2m above respective floor levels.

@ Predicted noise levels at the reserved school sites at Site C and the proposed welfare centre. Details of the school and welfare centre are not available at the moment. For the purpose of this noise assessment, it has been based on indicative typical layout and example of environmental conscious design as shown in Figure 2-10 and 2-11 as an indication that adverse noise impact could be avoided/ alleviated.

- No openable window or not noise sensitive.

Directly Extracted from Submitted EA Report (R7086 V2.1)

Annex E

Proposed Noise Barriers at Widened Sai Sha Road

Directly Extracted from Submitted EA Report (R7086 V2.1)

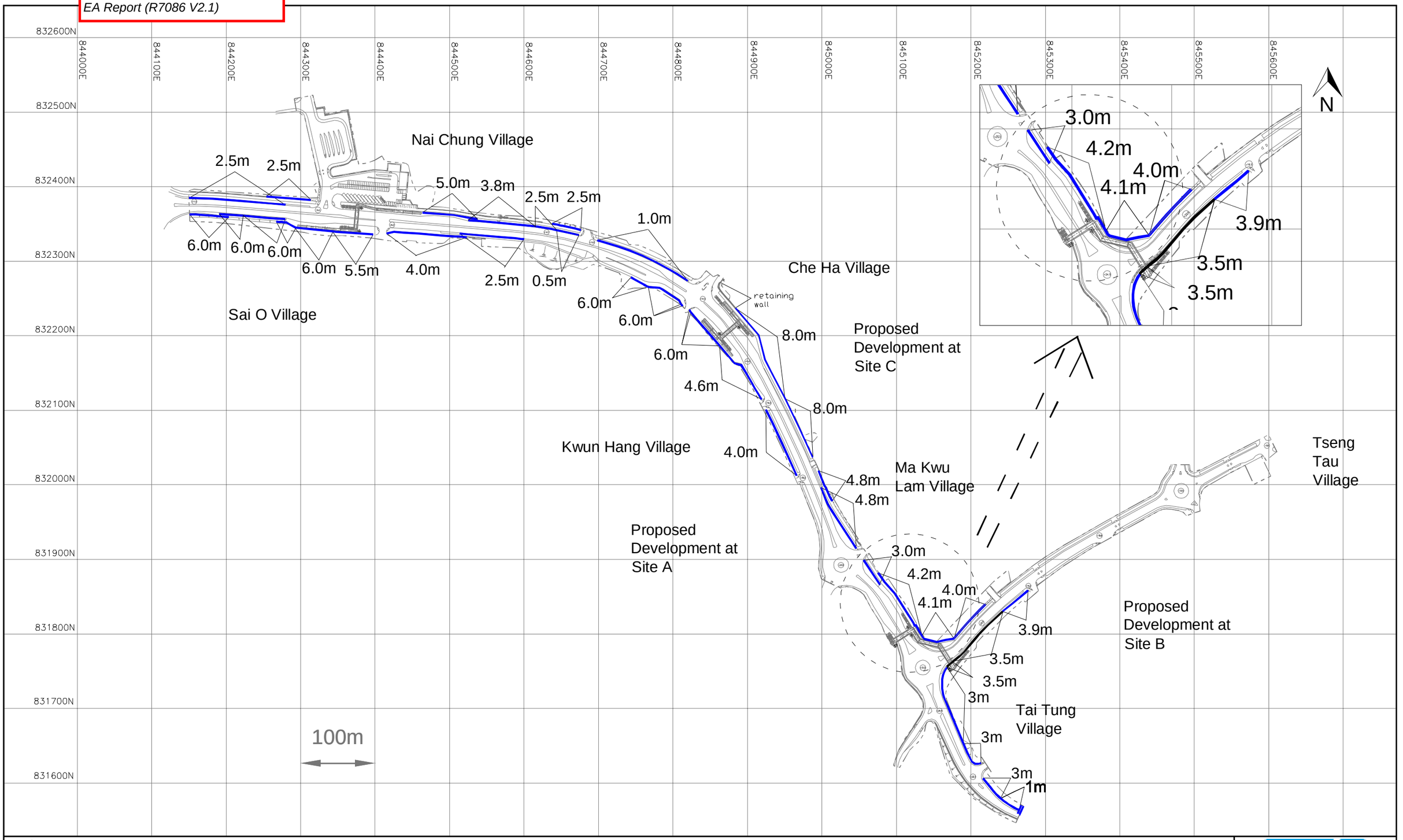


Figure: E1	RAMBOLL
Title: Locations and Heights of Proposed Noise Barriers For Widened Sai Sha Road	Drawn by: HN
	Checked by: CC
Project: Environmental Assessment for Proposed Comprehensive Residential and Commercial Development with Government, Institution or Community Facilities with Minor Relaxation of GFA and Building Height Restrictions at Tai Po Town Lot 157, various lots in D.D.165, 207 and 218 and Adjoining Government Land, Sai Sha, Shap Sz Heung, New Territories	Rev.: 1.0
	Date: Oct., 2019

O:\Projects\SHKSAISAEI01\04 Deliverables\06A EA Report_Discharge\Appendices\Site A R7060 V1.1\Annex E\Figure E1 & Fig 2-8 Rd EA_Barrier Height_colour_rev.dwg

Annex 3-1

Background Air Quality

Statistics of Past Ambient Air Quality at Tai Po Air Quality Monitoring Station

Pollutants	Concentration (µg/m3) [1] Averaging Periods																				
Averagin Periods / Statistics	% of valid data	10 min [2][3]				1 Hour				Daily 8 Hour moving average				24 Hour					1 Year	
		AQO	4th	Max	No. of Ex	AQO	19th	Max	No. of Ex	AQO	10th	Max [4]	No. of Ex	AQO	4th	10th (RSP) / 36th (FSP)	Max	No. of Ex	AQO	Mean [5]
Sulphur Dioxide, SO_2																				
2016	99%	**500**	37	46	-	n.a.				n.a.				**50**	10	n.a.	13	0	n.a.	5
2017	98%	Not to be exceeded more than 3 times per year	39	47	0									Not to be exceeded more than 3 times per year	9		14	0		4
2018	99%		24	38	0										8		9	0		2
2019	99%		20	22	14										10		12	0		4
2020	98%		19	23	0										7		9	0		3
5-year average =	-		28	35	-										9		11	-		4
PATH in Year 2022 (48 45)	100%		36	46	0										10		12	0		2
PATH in Year 2022 (49 44)	100%		35	45	0										10		12	0		2
PATH in Year 2022 (49 45)	100%		35	45	0										10		12	0		2
PATH in Year 2022 (49 46)	100%		34	48	0										10		12	0		2
PATH in Year 2022 (50 44)	100%		33	44	0										10		12	0		2
PATH in Year 2022 (50 45)	100%		35	46	0										10		12	0		2
Respirable Suspended Particulates, RSP																				
2016	99%	n.a.				n.a.				n.a.				**100**	-	74	110	1	**50**	29
2017	99%													Not to be exceeded more than 9 times per year	-	82	101	1		32
2018	99%														-	69	93	0		31
2019	98%														-	65	141	2		31
2020	99%														-	58	81	0		24
5-year average =	-														-	70	105	-		30
PATH in Year 2022 (48 45)	100%														-	65	80	0		26
PATH in Year 2022 (49 44)	100%														-	65	76	0		26
PATH in Year 2022 (49 45)	100%														-	68	83	0		27
PATH in Year 2022 (49 46)	100%														-	63	79	0		26
PATH in Year 2022 (50 44)	100%														-	64	75	0		26
PATH in Year 2022 (50 45)	100%														-	64	77	0		26
Fine Suspended Particulates, FSP																				
2016	99%	n.a.				n.a.				n.a.				**50**	-	37	62	13	**25**	20
2017	99%													Not to be exceeded more than 35 times per year	-	39	75	13		22
2018	99%														-	33	73	5		19
2019	98%														-	35	98	7		20
2020	99%														-	28	66	2		15
5-year average =	-														-	34	75	-		20
PATH in Year 2022 (48 45)	100%														-	23	65	8		15
PATH in Year 2022 (49 44)	100%														-	23	62	9		14
PATH in Year 2022 (49 45)	100%														-	24	68	11		15
PATH in Year 2022 (49 46)	100%														-	22	63	6		14
PATH in Year 2022 (50 44)	100%														-	22	61	6		14
PATH in Year 2022 (50 45)	100%														-	22	62	6		14
Nitrogen Dioxide, NO_2																				
2016	99%	n.a.				**200**	112	142	0	n.a.				n.a.					**40**	33
2017	99%					Not to be exceeded more than 18 times per year	127	148	0											39
2018	99%						125	166	0											36
2019	99%						142	189	0											36
2020	98%						106	167	0											30
5-year average =	-						122	162	-											35
PATH in Year 2022 (48 45)	100%						62	111	0											10
PATH in Year 2022 (49 44)	100%						50	100	0											9
PATH in Year 2022 (49 45)	100%						58	110	0											9
PATH in Year 2022 (49 46)	100%						54	115	0											9
PATH in Year 2022 (50 44)	100%						51	102	0											9
PATH in Year 2022 (50 45)	100%						53	110	0											8

Pollutants	Concentration (µg/m3) [1] Averaging Periods																			
Averagin Periods	% of valid data	10 min[2][3]				1 Hour				Daily 8 Hour moving average				24 Hour					1 Year	
Statistics		AQO	4th	Max	No. of Ex	AQO	19th	Max	No. of Ex	AQO	10th	Max [4]	No. of Ex	AQO	4th	10th (RSP) / 36th (FSP)	Max	No. of Ex	AQO	Mean [5]
Ozone, O_3																				
2016	99%									**160**	147	283	5							43
2017	99%										181	278	15							54
2018	99%										167	230	13							51
2019	99%										197	297	26							61
2020	99%										165	223	14							58
5-year average =	-									Not to be exceeded more than 9 times per year	171	262	-							54
PATH in Year 2022 (48 45)	100%										193	275	42							96
PATH in Year 2022 (49 44)	100%										196	266	42							96
PATH in Year 2022 (49 45)	100%										199	274	44							96
PATH in Year 2022 (49 46)	100%										203	281	49							96
PATH in Year 2022 (50 44)	100%										203	271	42							96
PATH in Year 2022 (50 45)	100%										205	278	48							97
Carbon Monoxide, CO																				
2016	0%							0	0			0	0							
2017	0%							0	0			0	0							
2018	0%							0	0			0	0							
2019	0%							0	0			0	0							
2020	0%							0	0			0	0							
5-year average =	-							0	-			0	-							
PATH in Year 2022 (48 45)	100%							882	0			815	0							
PATH in Year 2022 (49 44)	100%							896	0			821	0							
PATH in Year 2022 (49 45)	100%							893	0			823	0							
PATH in Year 2022 (49 46)	100%							889	0			822	0							
PATH in Year 2022 (50 44)	100%							899	0			824	0							
PATH in Year 2022 (50 45)	100%							899	0			825	0							

		n.a.				n.a.				n.a.				n.a.					n.a.	
						30000	n.a.			**10000**	n.a.			n.a.					n.a.	

Notes:
(1) Measured at 293 K and 101.325 kPa (one atmosphere)
(2) 10-min average SO2 levels were calculated based on stability classes in the corresponding PATH grid(s)
(3) " - " denotes no data available
(4) Max. daily 8h moving average for O_3
(5) Arithmetic mean

Appendix H

Ecological Impact Assessment (Site C)

(Consolidated Report based on Further Information submitted on 13 June 2022 & 19 July 2022)

(No further comments from ecological perspective from Agriculture, Fisheries and Conservation Department received in July 2022)

Section 16 Planning Application for Amendments to the Approved Development (Application No. A/NE-SSH/120-1) – Amendments to Recreation and Sports Centre with Ancillary Facilities in Site C

Ecological Impact Assessment

Issue 2 |

This report takes into account the particular instructions and requirements of our client.

It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

Job number 272008

Ove Arup & Partners Hong Kong Ltd
Level 5 Festival Walk
80 Tat Chee Avenue
Kowloon Tong
Kowloon
Hong Kong
www.arup.com

ARUP

Contents

		Page
1	**Introduction**	**1**
2	**Legislation, Standards and Guidelines**	**1**
3	**Literature Review**	**3**
4	**The Proposed Amendments**	**4**
5	**Summary of Baseline Conditions**	**5**
5.1	Background	5
5.2	Habitat and Vegetation	5
5.3	Fauna	7
6	**Review of Impact Assessment and Mitigation Measures**	**8**
6.1	Proposed Construction Works	8
6.2	Construction Phase Direct Impact	9
6.3	Construction Phase Indirect Impact	10
6.4	Operational Phase Human Disturbance	10
6.5	Operational Phase Water Quality Impact	11
6.6	Impacts to Species of Conservation Importance	11
6.7	Impacts to Recognised Sites of Conservation Importance	12
6.8	Mitigation Measures	12
7	**Conclusion**	**15**

Figures

Figure 1 Approved Scheme Overlaid on Habitat Map
Figure 2 Proposed Amendment Scheme Overlaid on Habitat Map
Figure 3 Comparison of Approved Scheme and Proposed Amendment Scheme

Appendices

Appendix A Overall Indicative Master Layout Plan
Appendix B Proposed MLP (Site C)
Appendix C Plants Recorded within Site C
Appendix D Avifauna Recorded within Site C
Appendix E Butterflies Recorded within Site C

1 Introduction

1.1.1 The Application Site is the subject of an approved planning application No. A/NE-SSH/120-1 ("Approved Scheme") for proposed comprehensive residential and recreational development including government, institution, or community (G/IC) facilities with minor relaxation of gross floor area and building height restrictions which was approved by the Director of Planning, under the delegated authority of the Town Planning Board (the Board), under Section 16A of the Town Planning Ordinance in October 2020. The Approved Scheme includes a total of three sites namely Site A, Site B and Site C (see **Appendix A**). Site A and B would be for residential developments, while Site C was for recreational development with sports, social welfare facilities and schools.

1.1.2 With the commitment to further enhance user experience in Site C, which is intended to be a recreational hub in Sai Sha, the subject Section 16 planning application is submitted to reflect the proposed diversification of recreational facilities to be provided therein by replacing a golf driving range with a variety of outdoor sports, recreational and leisure facilities ("Current Scheme").

1.1.3 It should be noted that the **subject matter of the current application is Site C only**. The layout and development parameters for Site A and Site B are entirely identical to those approved under planning application No. A/NE-SSH/120-1. The inclusion of Site A and Site B as part of the Application Site is only to comply with the statutory requirement of the subject "Comprehensive Development Area" ("CDA") zone under the Notes of Shap Sz Heung Outline Zoning Plan which requires the submission of a Master Layout Plan covering the entire CDA zone for the approval of the Board.

2 Legislation, Standards and Guidelines

2.1.1 The relevant legislation and associated guidelines relating to ecological assessment include:

- Forests and Countryside Ordinance (Cap. 96A) and its subsidiary legislation, the Forestry Regulations.
- Wild Animals Protection Ordinance (Cap. 170).
- Country Parks Ordinance (Cap. 208) and its subsidiary legislation.
- Protection of Endangered Species of Animals and Plants Ordinance (Cap. 586) and its subsidiary legislation.

2.1.2 This assessment also makes reference to the following guidelines and standards:

- Hong Kong Planning Standards and Guidelines (HKPSG) Chapter 10, "Conservation".
- PELB Technical Circular 1/97 / Works Branch Technical Circular 4/97,"Guidelines for Implementing the Policy on Off-site Ecological Mitigation Measures".
- EIAO Guidance Note No. 6/2010 - Some Observations on Ecological Assessment from the Environmental Impact Assessment Ordinance Perspective.
- EIAO Guidance Note No. 7/2010 – Ecological Baseline Survey for Ecological Assessment.
- EIAO Guidance Note No. 10/2010 – Methodologies for Terrestrial and Freshwater Ecological Baseline Surveys.
- EIAO Guidance Note No. 11/2010 – Methodologies for Marine Ecological Baseline Surveys.

2.1.3 Other international conventions and guidelines that are relevant to this study include the following:

- IUCN - The World Conservation Union maintains, through its Species Survival Commission, a "Red List" of globally threatened species of wild plants and animals (see http://www.iucnredlist.org/static/introduction).
- United Nations Convention on Biological Diversity - This convention requires parties to regulate or manage biological resources important for the conservation of biological diversity whether within or outside protected areas, with a view to ensuring their conservation and sustainable use. It also requires parties to promote the protection of ecosystems, natural habitats and the maintenance of viable populations of species in natural surroundings. The People's Republic of China (PRC) ratified the Convention on Biological Diversity on 5th January 1993. The HKSAR Government has stated that it is "committed to meeting the environmental objectives" of the Convention (PELB1996). The Convention and Protocol were extended to Hong Kong on 9 May 2011 (EPD 2011).

3 Literature Review

3.1.1 The Application Site had been covered by various planning applications[1,2,3] and the ecological baseline conditions of the Application Site had been established. A recent six-month ecological survey covering habitats, vegetation and major terrestrial wildlife group had been conducted for the Approved Planning Application A/NE-SSH/120 in 2018 (Jan – Jun). Sites A, B and C and the area within the 500m assessment boundary were included in that survey. The survey results had also been used to support the Class B amendment application i.e. A/NE-SSH/120-1 for the same three sites, which had also been approved. This application seeks approval for proposed amendments to the Approved Scheme with replacement of some golf driving range facilities to other sports and recreational uses in Site C ("Current Scheme"). The site boundary and development density would remain the same as the Approved Scheme.

3.1.2 Since the last ecological survey in 2018, there was no major approved development projects apart from Sai Sha development (A/NE-SSH/120-1), a proposed school in Nai Chung (A/MOS/125) and a proposed sewage pumping station in Sai O (AEIAR-230/2021) within 500m assessment boundary of the current project. Thus, there has been no significant changes on the nearby habitat conditions which were not covered by previous studies. Considering the above, the ecological baseline established in 2018 is considered to be valid and no additional ecological survey for the currently proposed amendment is necessary.

3.1.3 Given that the site boundary of the Current Scheme and the Approved Scheme is identical, the ecological baseline in 2018 Jan – Jun would be used for the ecological impact assessment of the current application.

3.1.4 Site C is part of the "CDA" zone in the Shap Sz Heung OZP (S/NE-SSH/11). The "CDA" zone also covers Site A which is to the west of Sai Sha Road and Site B which is to the south of Site C. Since the subject matter of the current application would be the changes within Site C; and that the proposed development in Site A and Site B would be identical to the Approved Scheme, the current Ecological Impact Assessment would focus on Site C only.

[1] A/NE-SSH/120
[2] A/NE-SSH/120-1
[3] A/NE-SSH/15, A/NE-SSH/16, A/NE-SSH/18, A/NE-SSH/26 and subsequent cases.

4 The Proposed Amendments

4.1.1 Without any change in the Approved Scheme for Site A and Site B, the Current Scheme only involves minor changes for Site C as follows (**Appendix B** refers) and there would be no change on the Application Site boundary.

1) Originally there are two driving ranges in the east and a mini driving range in the west under the Approved Scheme. In the Current Scheme, one of the driving ranges in the east would be replaced by a variety of outdoor recreational facilities for the use of sports field/ball court/pool/driving range. The mini driving range/game area/recreation & sports centre with ancillary facilities in the west would be removed.

2) Minor increase in number of non-domestic blocks – the previous larger building structures for accommodation of golf driving range facilities have been broken up into mostly smaller single-storey structures for ancillary facilities of sports and recreation activities in different parts of Site C.

3) Refinement in building form for Recreation & Sports Centre to enhance pedestrian connectivity between ground level and rooftop garden, and the building form for the remaining golf driving range structure.

4.1.2 The population assumptions for various recreational facilities are summarised in **Table 4.1**. The overall estimated population increase due to the proposed change as compared with the approved A/NE-SSH/120-1 scheme would be +18.

Table 4.1 Population Assumptions for Various Recreational Facilities in Site C

Recreational Facilities (Indicative)	Population Assumptions		
	Approved Scheme (A/NE-SSH/120-1) (a)	Current Scheme (b)	Difference (b)-(a)
Golf Driving Range	172 (86 bays under Approved Scheme)	140 (70 bays under Current Scheme)	-32
Tennis Court	15 (3 courts under Approved Scheme)	25 (5 courts under Current Scheme)	+10
Football Court	-	50	+50
Lacrosse	-	15	+15
Surfing Pool	-	2 (1 person surfing and 1 coach)	+2
Training Path for Cycling	-	30	+30
Total	187	262	+75

4.1.3 It should however be noted that in both the Approved Scheme and the Current Scheme, Site C includes two reserved school sites which would accommodate

about 1,600 people in total including staff and students. With consideration of this, the overall population increase in Site C by about 75 persons is insignificant (i.e., less than 5% of increase in population).

5 Summary of Baseline Conditions

5.1 Background

5.1.1 As discussed in Section 3, the ecological baseline conditions established in 2018 are still considered valid. A summary of the ecological baseline conditions within Site C is given below.

5.2 Habitat and Vegetation

5.2.1 Recorded habitat types within Site C include the following. **Figure 1** shows the Approved Scheme overlaid on habitat map. **Figure 2** shows the Current Scheme overlaid on the habitat map and **Figure 3** shows an overlay of the two schemes on the habitat map.

Table 5.1 Habitat type and size within Site C

Habitat	Size within Site C (ha)	Habitat evaluation
Developed area	2.10 (5.72%)	Low
Village	0.54 (1.47%)	Low
Driving range	11.50 (31.34%)	Low
Ruderal vegetation	2.80 (7.63%)	Low
Nursery	2.64 (7.19%)	Low
Orchard	0.65 (1.77%)	Low
Plantation	0.10 (0.27%)	Low
Secondary woodland	10.05 (27.38%)	Low – Moderate
Mature woodland	5.40 (14.71%)	High
Marsh	0.76 (2.07%)	Moderate
Watercourse	0.16 (0.44%)	Moderate – High
TOTAL	36.70	-

5.2.2 The major habitats within Site C include driving range (~31%) and secondary woodland (~27%). Most of the habitat types within Site C possesses low ecological value except a section of natural Tai Tung Wo Liu Stream (TTWLS), mature woodland and secondary woodland, which were ranked as Moderate-High and Low-Moderate respectively.

5.2.3 Similar to the Approved Scheme, the area within Site C would not be completely developed. A comparison of habitat losses within the development layout between the Approved Scheme and the Current Scheme is given in Table 5.2.

Table 5.2 Comparison of Habitat Losses within Site C

Habitat	Approved Scheme (A/NE-SSH/120-1 Scheme) (ha)	Current Scheme (ha)	Change (ha)	Habitat value
Developed area	0.72	1.41	+0.69	Low
Village	0.13	0.08	-0.05	Low
Driving range	7.86	9.84	+1.98	Low
Ruderal vegetation	1.12	1.23	+0.11	Low
Nursery	0.92	0.06	-0.86	Low
Orchard	0.19	0.28	+0.09	Low
Plantation	-	0.07	+0.07	Low
Secondary woodland	0.45	0.62	+0.17	Low – Moderate
Mature woodland	-	-	-	High
Marsh	-	-	-	Moderate
Watercourse	-	-	-	Moderate – High
TOTAL	11.39	13.58		

5.2.4 It should be noted that the habitat evaluation of mature woodland and watercourse are High and Moderate – High respectively, there would still be no habitat losses as in the Approved Scheme.

5.2.5 For secondary woodland which has a Low – Moderate ecological ranking however, there would be a slight increase in loss by 0.17 ha. The slight increase is attributed to the proposed training paths for cycling and maintenance paths which would be aligned along the edge of the existing golf driving range and in between (**Figure 2** refers). The typical width of the cycling paths and maintenance paths would be approximately 5 – 6m and there would be no solid fence along these paths. Besides, the alignments of these paths would avoid existing trees and hence no tree would need to be fell.

5.2.6 While there would be slight changes for the other habitat types, the changes are insignificant as all the other habitat types are of low ecological value.

5.2.7 A total of 6 flora species of conservation importance were reported within the assessment area of Site C, including *Aquilaria sinensis*, *Ceratopteris thalictroides*,

Erycibe obtusifolia, *Ilex asprella* var. *tapuensis*, *Illigera celebica* and *Pavetta hongkongensis*. Among these, only *Aquilaria sinensis*, *Ilex asprella* var. *tapuensis* and *Illigera celebica* were recorded within the Application Site boundary of Site C. Nevertheless, all of these would be retained and preserved.

Table 5.2 Flora species of conservation importance within Site C

Species of conservation importance	Conservation Status	*Abundance* and habitat(s) within Site C
Aquilaria sinensis	IUCN Red List (2019): Vulnerable; Threatened Species List of China's Higher Plants: Vulnerable in China; China Plant Red Data Book: Vulnerable in China; Listed in Illustrations of Rare & Endangered Plant in Guangdong Province; Listed in Rare and Precious Plants of Hong Kong; Cap. 586; State protection (category II)	*Scarce* within secondary woodland; *occasional* within mature woodland
Ilex asprella var. *tapuensis*	Very rare	*Occasional* within secondary woodland
Illigera celebica	Very rare; listed in Rare and precious plants of Hong Kong; Cap. 96	*Scarce* within watercourse

5.3 Fauna

5.3.1 **Mammal**: The only mammal species recorded within Site C was Japanese Pipistrelle (*Pipistrellus abramus*). This species is locally common and widespread.

5.3.2 **Avifauna**: A total of 53 avifauna species were recorded within Site C, including 19 species of conservation importance, summarised in **Table 5.3** below.

Table 5.3 Avifauna species of conservation importance within Site C

Species of conservation importance	Conservation Status	*Quantity* and habitat(s) within Site C
Chinese Pond Heron	Fellowes *et al*. (2002): PRC, (RC)	<5 in mature woodland, watercourse and driving range.
Eastern Cattle Egret	Fellowes *et al*. (2002): (LC)	Up to 23 in driving range; <10 in other habitats e.g., mature woodland, nursery etc.
Little Egret	Fellowes *et al*. (2005): RC	Max. 2 in mature woodland, single individual recorded in secondary woodland and watercourse.
Black Kite	Fellowes *et al*. (2002): RC; Appendix 2 of CITES	In flight.

Species of conservation importance	Conservation Status	*Quantity* and habitat(s) within Site C
Greater Coucal	Class 2 Protected Animal of China; China Red Data Book Status: (Vulnerable)	1 no. in mature woodland, secondary woodland and nursery.
Common Kestrel	Class 2 Protected Animal of China; Appendix 2 of CITES	1 no. in secondary woodland and driving range.
Grey Treepie	Fellowes *et al*. (2002): LC	Max. 4 in mature woodland, less than 3 in secondary woodland and driving range.
Collared Crow	Fellowes *et al*. (2002): LC; IUCN Red List Status: Near-Threatened	Max. 5 in mature woodland and secondary woodland, 1 – 2 nos. in nursery and developed area.
Red-billed Starling	Fellowes *et al*. (2002): RC	40 nos. in ruderal vegetation.
White-shouldered Starling	Fellowes *et al*. (2002): LC	2 nos. in developed area.
Verditer Flycatcher	Scarce winter visitor	1 no. in mature woodland.

5.3.3 **Herpetofauna**: Two amphibians (Asia Common Toad and Ornate Pigmy Frog); and two reptile species (Chinese Gecko and Bowring's Gecko) were recorded within Site C. No species of conservation importance were recorded within Site C.

5.3.4 **Butterfly and Odonate**: Only one individual of a butterfly species of conservation importance, White Dragontail (*Lamproptera curius*), was recorded within Site C. No dragonfly species of conservation importance were recorded within Site C.

5.3.5 **Freshwater Community**: Two species of conservation importance, *Cryptopotamon anacoluthon* and Predaceous Chub (*Parazacco spilurus*), were recorded in TTWLS section within Site C.

5.3.6 **Intertidal community**: No species of conservation importance were recorded.

6 Review of Impact Assessment and Mitigation Measures

6.1 Proposed Construction Works

6.1.1 With detailed design on-going under the Approved Scheme, adhering to the development intention of creating a Sports & Recreation Hub in Site C, the Applicant reviews the Approved Scheme and Proposes diversification of facilities to meet the needs. The project elements include the below which are largely the same as the Approved Scheme. A comparison is given in **Table 6.1**.

Table 6.1 Comparison of the Project Elements in the Approved Scheme and the Current Scheme

Project Elements	Difference from the Approved Scheme
The two driving ranges in the east	Reduced from 2 in the Approved Scheme to 1 in the Current Scheme
The mini driving range/game area/recreation & sports centre with ancillary facilities in the west	Removed
Various outdoor sports and recreation facilities for use of sports field/ball court/leisure pool/driving range	New items to replace one of the golf driving range in the east
Training paths for cycling/maintenance paths	Newly added item among various outdoor recreational facilities, no tree felling would be required
Recreation & sports centre with ancillary facilities	No change
Associated public car park and open area	No change
Two reserved school sites	No change

6.1.2 Various outdoor sports and recreation facilities for use of sports field/ball court/ leisure pool/driving range; and training path for cycling/maintenance path were new items as compared to the Approved Scheme. The potential ecological impacts between the current proposed amendment and the Approved Scheme are compared in the following sections.

6.2 Construction Phase Direct Impact

6.2.1 An overlay of the Approved Scheme and Current Schemes is shown in **Figure 3**. In Approved Scheme, there were two golf driving ranges in the eastern portion of the Application Site. The eastern most golf driving range would remain no change in the current application, while the other golf driving range would be changed to outdoor recreational facilities (**Appendix B** refers). The mini driving range/game area/recreation & sports centre with ancillary facilities in the west would be removed (**Appendix B** and **Figure 3** refer).

6.2.2 Training paths for cycling and maintenance path are proposed along the edge of the existing/future golf driving range (**Appendix B** refers). As discussed in **Section 5**, there would not be any tree felling for the construction of the training paths and maintenance paths.

6.2.3 There is no change on the recreation & sport centre with ancillary facilities/E&M portion in the south (**Appendix 2** and **Figure 3** refers). There would also be no changes on the site area of the two reserved school sites, and GFA of the welfare centre & public vehicle park in the south east.

6.2.4 The Ecological Buffer Zone (EBZ) along TTWLS, preserved mature woodland and marsh habitats would remain the same in the Current Scheme. No additional loss

of these valuable habitats is necessary for the proposed amendment. Therefore, the potential ecological impact due to habitat and vegetation loss would be same as the Approved Scheme, which is **minor**.

6.2.5 For habitat fragmentation, it should be noted that there are some proposed training cycling path and maintenance paths amongst various outdoor recreational facilities. As discussed in **Section 5.2.5**, these paths would only be approximately 5 – 6m in typical width and there would not be any solid fence along the alignment. Hence, no identified important habitat types i.e., natural watercourse, marsh and mature woodland would be fragmented by the paths. Also, given that the paths are narrow, the fragmentation impact would be **minor**.

6.3 Construction Phase Indirect Impact

6.3.1 The site boundary of Site C remains the same, there is not significant change in the nature of the proposed development. Hence the workforce and the disturbance would be similar to the approved scheme which is **minor to moderate**. Mitigation measures including erection of hoardings and good site practice would be implemented accordingly. Disturbance to other lower valued habitats e.g., developed area, ruderal vegetation etc., would be **minor**.

6.3.2 In the Current Scheme, a golf driving range would be replaced by various outdoor recreational facilities. The mini driving range/game area/recreation & sports centre with ancillary facilities in the west would be removed. The unpaved turf grassland of the golf driving range will be reduced for construction of these facilities. The paved area would be larger compared with the Approved Scheme. The construction site runoff would be collected and discharged properly with standard construction site drainage practices. Discharge license would be applied where necessary. Water quality impact would be **minor to moderate**, which is the same as the Approved Scheme. Standard mitigation measures e.g., good site practice would be implemented.

6.4 Operational Phase Human Disturbance

6.4.1 Same as the Approved Scheme, the Current Scheme would not significantly change the estimated population during the operational phase of Site C. As stated in **Table 4.1**, there would be only negligible increase of estimated population by +18 due to the proposed amendment, in comparison to a base population of the two school sites about 1,600 people and the recreational facilities population of about 200 people. The level of operational phase human disturbance would be similar to the Approved Scheme.

6.4.2 The proposed outdoor sports and recreational facilities include sports field/ball court/leisure pool/driving range. The facilities are mainly for training purposes. Gathering of larger crowd of audience is not anticipated, no new large infrastructures would be built, no significant increase in population, and no additional source of pollution would be created. The venue would also be properly managed. The impact due to operational phase human disturbance would be the same as the Approved Scheme, which is **minor**.

6.5 Operational Phase Water Quality Impact

6.5.1 For potential water quality impact, the proposed outdoor sports and recreational facilities would consist of more paved area as compared with the driving range which is made up of large area of turf grass. Surface runoff for the current proposed amendment would be larger. A standard and proper drainage system e.g., underground stormwater storage tank, would be incorporated into the design, and hence the surface runoff would be collected and discharge properly. The water quality impact due to surface runoff would be **minor**.

6.5.2 It should be noted that the sewerage would be collected into the public sewerage system. There would also be standard drainage system for the proposed place of recreation. Therefore, operational phase water quality impact due to sewage is not anticipated.

6.6 Impacts to Species of Conservation Importance

6.6.1 In general, there would be no significant change between the Approved Scheme and the Current Scheme in terms of impact to species of conservation importance. The change from one driving range into proposed outdoor sports and recreational facilities would not have significant difference on the impacts to these species.

6.6.2 *Aquilaria sinensis*, *Pavetta hongkongensis*, *Illigera celebica* within the Application Site are all located at areas free from construction works. These species are still located outside of the development footprint of the Current Scheme and would be retained. No direct impact to these flora species is expected.

6.6.3 Potential indirect impact to the recorded mammal species of conservation within Site C which is the Japanese Pipistrelle. Potential direct and indirect impacts to this species are not expected since it is a locally common and highly mobile species.

6.6.4 There were nineteen bird species of conservation recorded within Site C, but these species were recorded irregularly in low numbers and therefore the Current Scheme would have **insignificant** impact on these birds.

6.6.5 The only reptile species of conservation importance recorded was Many-banded Krait which was recorded outside of the Application Site. Potential indirect impact to this species would be **minor** as it was recorded further away from the Site.

6.6.6 No significant direct impact to the four recorded butterfly species of conservation important were including White Dragontail, Common Birdwing, Small Grass Yellow and Swallowtail as most were recorded outside Site C except for a very low abundance of White Dragontail which was recorded within Site C. The change from a golf driving range into proposed outdoor sports and recreational facilities would have **insignificant** indirect impact to these species.

6.6.7 Recorded aquatic species of conservation importance i.e., *Parazacco spilurus* and *Cryptopotamon anacoluthon* were recorded within TTWLS. Since the stream course would be preserved by a 20m buffer zone, potential indirect impact to these species would be **minor**.

6.7 Impacts to Recognised Sites of Conservation Importance

6.7.1 Recognised sites of conservation importance in the vicinity of the Application Site include Kei Ling Ha Mangal SSSI, Tseng Tau Coast SSSI, Nai Chung Coast SSSI and Coastal Protection Area ("CPA") zone, and two small areas of Ma On Shan Country Park (CP) along Sai Sha Road. All of these are located away from Site C. The construction works would be restricted within the site boundary. No dedicated access to these sites would be built due to the Current Scheme. Thus, the construction and operational phase disturbance to these sites would be **insignificant**.

6.8 Mitigation Measures

6.8.1 **Avoidance**: TTWLS, mature woodland and marsh habitats are identified as important habitat within Site C site boundary in the Approved Scheme. These areas would be preserved under the current proposed amendment scheme, and hence there would be no change from the Approved Scheme.

6.8.2 **Minimisation of habitat and tree loss**: Secondary woodland habitat which is of low-moderate value would be largely avoided which is also the same principle as in the approved scheme. The change from driving range to place of recreation, sports and culture is located at the existing driving range which is of low ecological value. The proposed training path for cycling and maintenance paths would avoid existing trees.

6.8.3 **Minimisation of construction disturbance**: The same measures listed below as in the Approved Scheme would be implemented to minimise construction disturbance:

- Regular checking should be undertaken to ensure that the work site boundaries are not exceeded and that no damage occurs to surrounding areas.
- Implementation of mitigation measures specified in ProPECC PN 1/94 to control site runoff and drainage at all work sites during construction.
- Implementation of noise control measures at all construction sites to reduce impacts of construction noise to wildlife habitats adjacent works areas.
- Implementation of dust control measures at all construction sites to minimise dust nuisance to adjacent wildlife habitats during construction activities.
- Construction debris and spoil should be covered up and/or properly disposed of as soon as possible to avoid being washed into nearby waterbodies by rain.
- Construction effluent, site run-off and sewage should be properly collected and/or treated. Wastewater from a construction site should be managed with the following approach in descending order.
- Dusty materials remaining after a stockpile is removed should be wetted with water.
- All dusty materials shall be sprayed with water prior to any loading, unloading or transfer operation so as to maintain the dusty material wet.
- No untreated site runoff would be discharged into watercourses/nearby natural environment
- Supervisory staff should be assigned to station on site to closely supervise and monitor the works.

6.8.4 **Minimisation of water quality impact**: The following measures would be implemented under the current amendment which is no change upon the approved scheme.

- Containment of silt runoff within the site boundary.
- Appropriate storage of chemicals and chemical waste away from sensitive ecological areas.
- Provision of sanitary facilities.
- earth-bunding of all areas within the site where soils have been disturbed, where vegetation has been cleared, to ensure that surface runoff will not move soils off-site.
- erection of temporary geotextile silt fences around any earth-moving works to trap.
- prevent sediment from entering into watercourses directly.
- installation of silt traps at points where drainage from the site enters local watercourses.

- covering of any exposed soil or other loose materials with tarpaulins to prevent erosion.
- covering of exposed soil as quickly as possible following formation works, followed by seeding and covering with biodegradable geotextile blanket for erosion control purposes.

7 Conclusion

7.1.1 The Current Scheme involves amending one of the golf driving ranges in the east with ancillary facilities in Site C with a variety of outdoor recreational facilities for the use of sports field/ball court/pool/driving range/training path for cycling. The Application Site boundary remains no change. The EBZ, mature woodland and marsh habitats would be preserved as in the Approved Scheme. The increase of the estimated population for Site C due to this amendment is negligible.

7.1.2 While there would be new training paths for cycling and maintenance paths, these paths are located amongst the outdoor sports and recreational facilities; the place of recreation, sports or culture; and in between these two areas. No tree felling would be required for these paths.

7.1.3 The level of construction and operational phase impacts would be the same as the Approved Scheme. Therefore, the mitigation measures for the Approved Scheme would still be applicable to the Current Scheme. No unacceptable ecological impacts are identified.

FIGURES

Figure 1 - Approved Scheme Overlaid on Habitat Map

Figure 2 - Current Scheme Overlaid on Habitat Map

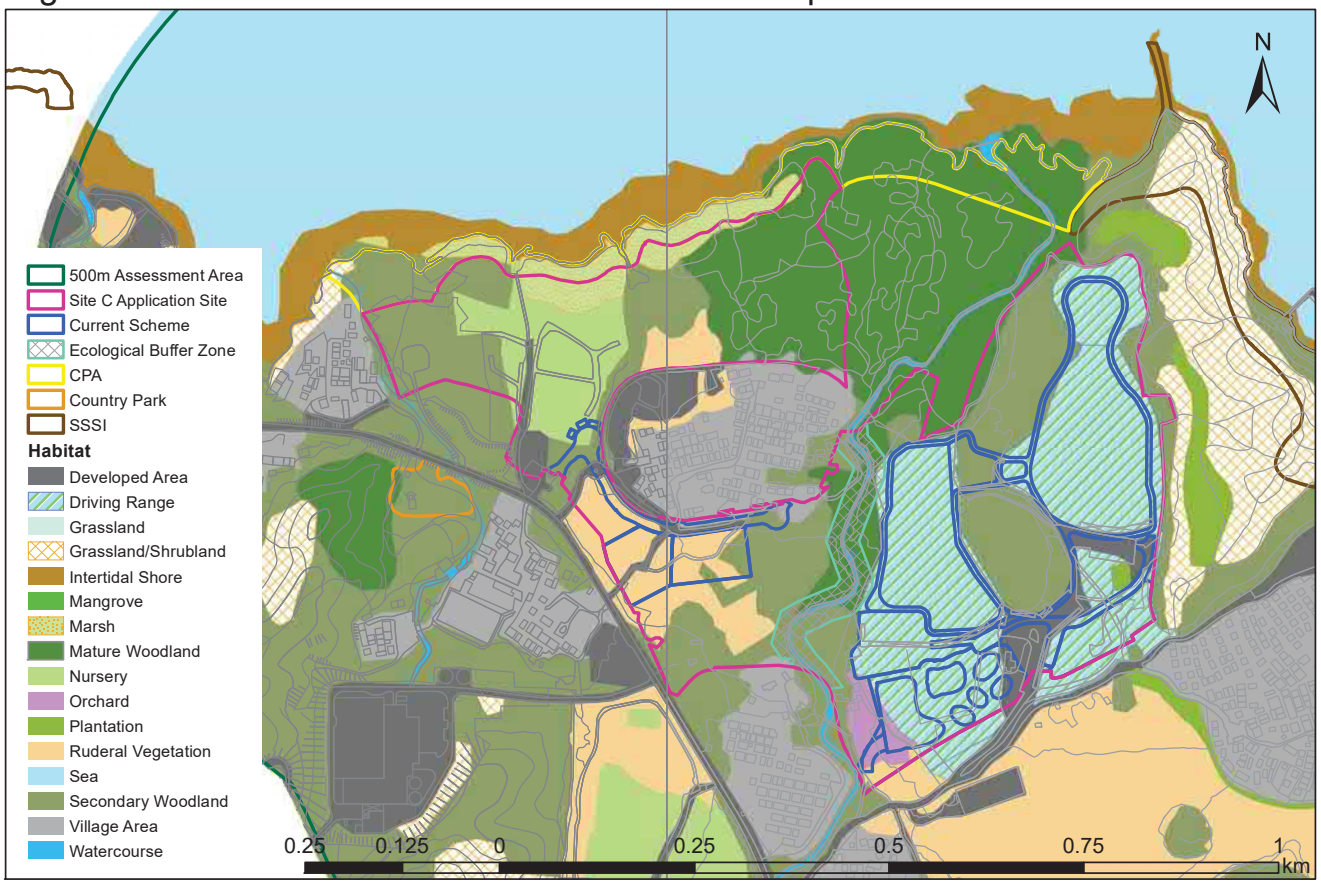
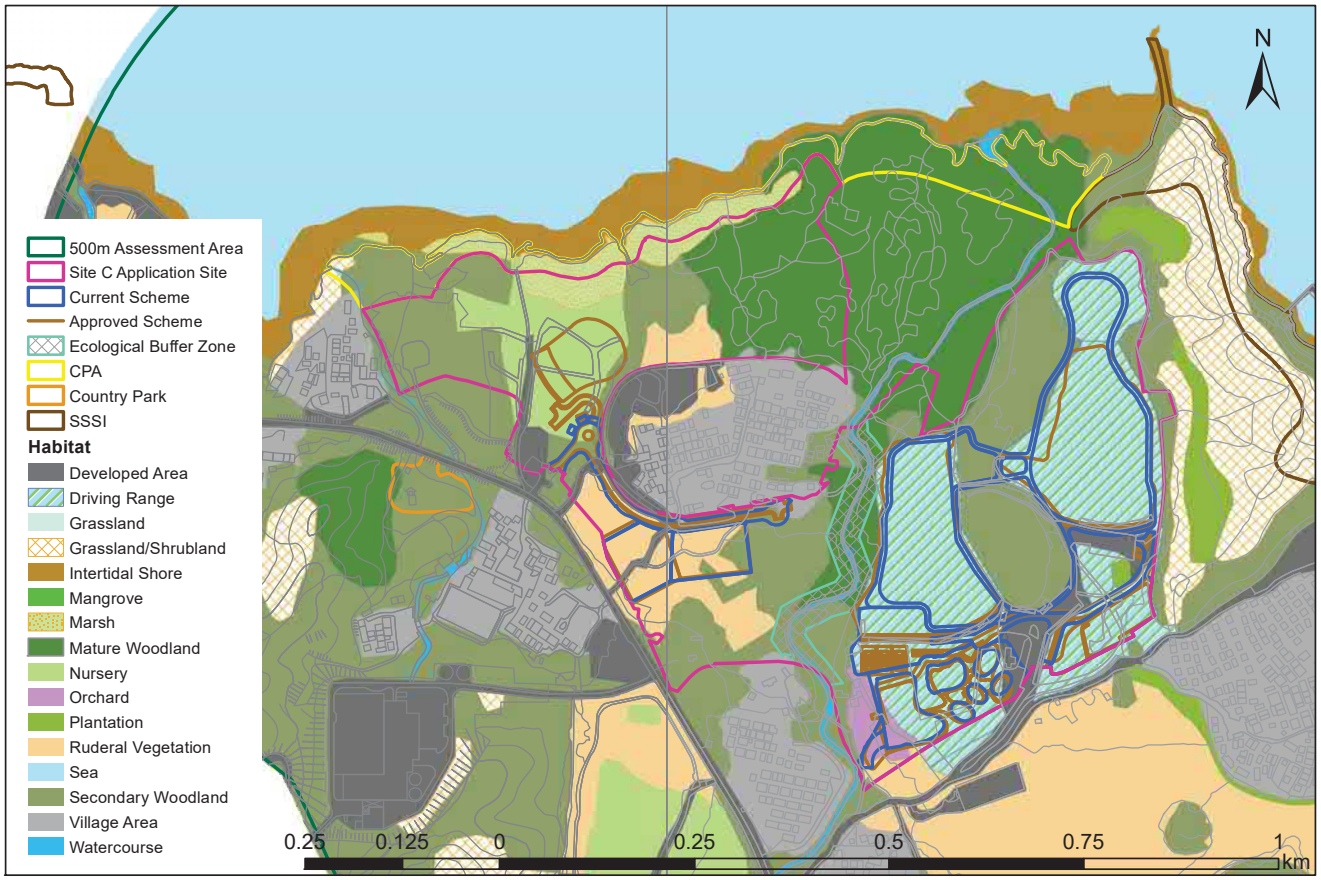


Figure 3 - Comparison Between Approved Scheme and Current Scheme



CHE HA VILLAGE

SITE C

TSENG TAU VILLAGE

PUBLIC OPEN SPACE

MA KWU LAM VILLAGE

SITE B

SITE A

AREA RESERVED FOR PHASE 2 DEVELOPMENT

NGA YIU TAU VILLAGE

NOTE : 1. ALL LEVELS DENOTE MAXIMUM MAIN ROOF LEVELS
2. ALL NUMBERS OF STOREYS DENOTE MAXIMUM NUMBERS OF RESIDENTIAL STOREYS

LEGEND

- LAND TO BE SECURED BY APPLICANT / LAND OUTSIDE TPTL 157 RP AND TPTL 253
- NON-BUILDING AREA
- PROPOSED DEVELOPMENT SITE BOUNDARY
- APPLICATION SITE BOUNDARY

50 100 150 200 250

SCALE 1 : 6000 (A3)

OVERALL INDICATIVE MASTER LAYOUT PLAN

Appendix A

19.11.2021

E&M

EXISTING BUILDINGS TO REMAIN

RESERVED SCHOOL SITE

RESERVED SCHOOL SITE

CHE HA VILLAGE

ACCESS ROAD

1ST +18.5

1ST +18.5

1ST +18.5

SITE C

TRAINING PATH FOR CYCLING / MAINTENANCE PATH

PLACE OF RECREATION, SPORTS OR CULTURE #

TRAINING PATH FOR CYCLING / MAINTENANCE PATH

PLACE OF RECREATION, SPORTS OR CULTURE #

2ST +17.5

+15.0

1ST

+15.0

1ST

PLACE OF RECREATION, SPORTS OR CULTURE #

2ST +23.5

PLACE OF RECREATION, SPORTS OR CULTURE #

1ST +21.0

3ST +36.0

FOOTBRIDGE

3ST +40.0

1ST +24.0

+18.5

1ST

5ST +33.0

+12.5

3ST +36.0

+15.5

FOOTBRIDGE

MA KWU LAM VILLAGE

TSENG TAU VILLAGE

SITE A

SITE B

TAI TUNG VILLAGE

RECREATION & SPORTS CENTRE WITH ANCILLARY FACILITIES / E&M *

RECREATION & SPORTS CENTRE WITH ANCILLARY FACILITIES / E&M *

WELFARE CENTRE & PUBLIC VEHICLE PARK

PUBLIC OPEN SPACE

SEWAGE PUMPING STATION

PEDESTRIAN CROSSING

RECREATION & SPORTS CENTRE WITH ANCILLARY FACILITIES / E&M *

NOTE : 1. ALL LEVELS DENOTE MAXIMUM MAIN ROOF LEVELS
2. ALL NUMBERS OF STOREYS DENOTED ON PLAN REFER TO TOTAL NO. OF STOREYS ABOVE GROUND.

LEGEND

- LAND TO BE SECURED BY APPLICANT / LAND OUTSIDE TPTL 157 RP AND TPTL 253
- 20m ECOLOGICAL STREAM BUFFER ZONE
- NON-BUILDING AREA
- PROPOSED DEVELOPMENT SITE BOUNDARY
- APPLICATION SITE BOUNDARY
- +37.0 HEIGHT IN mPD
- 1ST HEIGHT IN NO. OF STOREY

* INCLUDING 'PLACE OF RECREATION, SPORTS OR CULTURE', 'PLACE OF ENTERTAINMENT', 'EATING PLACE', 'SHOP & SERVICES', AND/OR 'INDOOR PLAYGROUND'

\# PLACE OF RECREATION, SPORTS OR CULTURE (OUTDOOR RECREATIONAL FACILITIES FOR THE USE OF SPORTS FIELD/ BALL COURT/ POOL/ DRIVING RANGE/ TRAINING PATH FOR CYCLING)

0 25 50 75 100 125

SCALE 1 : 5000 (A3)

Proposed MLP (Site C)

Appendix B

LWK +PARTNERS

Appendix C - Plants Recorded within Site C

Scientific Name	Growth Form	Origin	Rarity in Hong Kong [1]	Conservation Status	PL	SW	MW	DR	N	DA	VA	W	Ma	RV
Abrus mollis	Climber	Native	Restricted	-			S							
Acacia confusa	Tree	Exotic	-	-	S	C								
Acacia mangium	Tree	Exotic	-	-	S									
Acorus tatarinowii	Herb	Native	Very common	-								C		
Ageratum conyzoides	Herb	Exotic	Common	-				S						O
Aglaia odorata	Shrub	Exotic	-	-						O				
Alangium chinense	Tree	Native	Common	-		C	C							
Alocasia macrorrhizos	Herb	Native	Very common	-							S	O		S
Alpinia oblongifolia	Herb	Native	Common	-		C						O		
Alternanthera bettzickiana	Herb	Exotic	-	-						S				
Antidesma bunius	Tree	Native	Common	-		S								
Aphananthe cuspidata	Tree	Native	Common	-		S								
Apluda mutica	Herb	Native	Very common	-							S			
Aporusa dioica	Tree	Native	Very common	-		C	C	S				C		
Aquilaria sinensis	**Tree**	**Native**	**Common**	IUCN Red List (2021): Vulnerable in the world[3]; Threatened Species List of China's Higher Plants[4]: Vulnerable in China; China Plant Red Data Book: Vulnerable in China[5]; Listed in Illustrations of Rare & Endangered Plant in Guangdong Province[6]; Listed in Rare and Precious Plants of Hong Kong[7]; Cap. 586[8]; State protection (category II)[9]		**S**	**O**							
Archidendron lucidum	Tree	Native	Common	-		O								
Archontophoenix alexandrae	Tree	Exotic	-	-				C		O				
Ardisia crenata	Shrub	Native	Common	-			O							
Ardisia quinquegona	Shrub	Native	Very common	-		C								
**Artabotrys hexapetalus*	Climber	Exotic	Very rare	-			S							
Artocarpus heterophyllus	Tree	Exotic	-	-							S			
Asparagus cochinchinensis	Herb	Native	Common	-		S								
Axonopus compressus	Herb	Exotic	Common	-				C		O				O
Bambusa spp.	Bamboo	Unknown	-	-		O					O	S		
Bidens alba	Herb	Exotic	Very common	-		C		C	C		O		C	C
Bischofia javanica	Tree	Native	Common	-		C			O	O				S
Blumea lanceolaria	Herb	Native	Restricted	-					S					S
Bombax ceiba	Tree	Exotic	-	-					S					
Bougainvillea spectabilis	Climber	Exotic	-	-						O				
Brachiaria mutica	Herb	Exotic	Common	-					O		S			
Breynia fruticosa	Shrub	Native	Very common	-		O								
Bridelia tomentosa	Shrub	Native	Very common	-		C	C				C			
Broussonetia kaempferi var. *australis*	Climber	Native	Restricted	-							S			
Byttneria grandifolia	Climber	Native	Very common	-		S	O							
Caesalpinia crista	Climber	Native	Very common	-			O							
Calamus tetradactylus	Climber	Native	Common	-			S							
Canarium album	Tree	Exotic	Restricted	-		S								
Carica papaya	Tree	Exotic	-	-							O			

Appendix C - Plants Recorded within Site C

Scientific Name	Growth Form	Origin	Rarity in Hong Kong [1]	Conservation Status	PL	SW	MW	DR	N	DA	VA	W	Ma	RV
Caryota maxima	Tree	Exotic	-	-		S								
Casearia glomerata	Tree	Native	Restricted	-			S							
Cassytha filiformis	Climber	Native	Very common	-				S						
**Casuarina equisetifolia*	Tree	Exotic	Rare	-	S					C				
Celastrus hindsii	Climber	Native	Very common	-		S	O							
Celtis sinensis	Tree	Native	Common	-		C	C	S			C			O
Centella asiatica	Herb	Native	Very common	-				S						
Chloris barbata	Herb	Native	Very common	-							S			
Cinnamomum burmannii	Tree	Native	-	-					O					
Cinnamomum camphora	Tree	Native	Common	-		C	C	S		O				
Cinnamomum parthenoxylon	Tree	Native	Common	-		S								
Citrus maxima	Tree	Exotic	-	-							S			
Clausena lansium	Tree	Exotic	-	-						S	O			
Cleistocalyx nervosum	Tree	Native	Common	-								C		
Clerodendrum inerme	Shrub	Native	Common	-									O	
Codiaeum variegatum	Shrub	Exotic	-	-						O				
Colocasia esculenta	Herb	Exotic	-	-									S	
Commelina sp.	Herb	Unknown	-	-								O	O	S
Cratoxylum cochinchinense	Tree	Native	Very common	-		C								
Cuscuta japonica	Herb	Native	Common	-					S					
Cyclobalanopsis edithiae	Tree	Native	Restricted	-		O								
Cyclosorus interruptus	Herb	Native	Common	-		C							C	
Cyclosorus parasiticus	Herb	Native	Very common	-		C	C					O		
Cyperus spp.	Herb	Unknown	-	-										S
Cyrtococcum patens	Herb	Native	Very common	-		O	C							
Daphniphyllum calycinum	Tree	Native	Common	-		C	C							
Delonix regia	Tree	Exotic	-	-	S									
Dendrotrophe varians	Climber	Native	Very common	-		O								
Desmos chinensis	Shrub	Native	Common	-		C	C							
Dicranopteris pedata	Herb	native	Very common	-		C								C
Dimocarpus longan	Tree	Exotic	Restricted	-		C	C	S	O		O	S		
Dracaena fragrans	Shrub	Exotic	-	-		S								
Duranta erecta	Climber	Exotic	-	-						O				
Dypsis lutescens	Shrub	Exotic	-	-				C		O	O			
Elephantopus scaber	Herb	Native	Common	-										S
Elephantopus tomentosus	Herb	Native	Common	-		O								
Eleusine indica	Herb	Native	Very common	-										O
Eleutherococcus trifoliatus	Climber	Native	Restricted	-		C	O							
Embelia laeta	Climber	Native	Very common	-			O							
Embelia ribes	Climber	Native	Common	-			O							
Emilia sonchifolia	Herb	Native	Very common	-				S						S
Equisetum debile	Herb	Native	Restricted	-									C	
Eragrostis sp.	Herb	Unknown	-	-									S	

Appendix C - Plants Recorded within Site C

Scientific Name	Growth Form	Origin	Rarity in Hong Kong [1]	Conservation Status	PL	SW	MW	DR	N	DA	VA	W	Ma	RV
Euonymus laxiflorus	Shrub	Native	Common	-		S								
Eurya chinensis	Shrub	Native	Very common	-		C								
Ficus altissima	Tree	Native	Very rare	-					O					S
Ficus benjamina	Tree	Exotic	-	-					O	O				
Ficus elastica	Tree	Exotic	-	-		C								
Ficus fistulosa	Tree	Native	Common	-								S		
Ficus hirta	Shrub	Native	Common	-		C								
Ficus hispida	Shrub	Native	Very common	-		C	C	S	O					S
Ficus microcarpa	Tree	Native	Common	-				S			C			S
Ficus pumila	Climber	Native	Very common	-		S		S						
Ficus variegata var. *chlorocarpa*	Tree	Native	Common	-		O	O							
Ficus virens var. *sublanceolata*	Tree	Native	Common	-					S					
Flueggea virosa	Shrub	Native	Common	-		S								
Garcinia oblongifolia	Tree	Native	Very common	-		O								
Glochidion eriocarpum	Shrub	Native	Very common	-		O								
Glochidion hirsutum	Shrub	Native	Common	-		S							O	
Glochidion zeylanicum	Shrub	Native	Common	-		O							O	S
Gnaphalium pensylvanicum	Herb	Native	-	-					S					
Hedyotis auricularia	Herb	Native	Common	-		S								
Hedyotis corymbosa	Herb	Native	Very common	-				S						
Heterosmilax gaudichaudiana	Climber	Native	Common	-		S								
Hibiscus mutabilis	Shrub	Exotic	-	-		S								
Hibiscus rosa -sinensis	Shrub	Exotic	-	-						O				
Hibiscus tiliaceus	Tree	Native	Very common	-		C			O				O	
Hymenocallis littoralis	Herb	Exotic	-	-					S					
Ilex asprella* var. *tapuensis	**Tree**	**Native**	**Very rare**	**-**		**O**								
Ilex rotunda var. *microcarpa*	Tree	Native	Common	-			S							
Illigera celebica	**Climber**	**Native**	**Very rare**	Listed in Rare and precious plants of Hong Kong [7]; Cap. 96								**S**		
Imperata cylindrica	Herb	Native	Very common	-				O						
Ipomoea cairica	Climber	Exotic	Very common	-		C			O				C	O
Itea chinensis	Shrub	Native	Very common	-		C	C							
Ixora chinensis	Shrub	Native	Restricted	-						O				
Juniperus chinensis	Tree	Exotic	-	-					S	O	O			
Kyllinga polyphylla	Herb	Exotic	Common	-				C		O	O		C	C
**Lagerstroemia speciosa*	Tree	Exotic	-	Cap. 96A [10]		S			S					
Lantana camara	Shrub	Exotic	Very common	-	S	O	O	O			S			
Lemmaphyllum microphyllum	Herb	Native	Common	-		S								
Lepidagathis incurva	Herb	Native	Common	-			S							
Leucaena leucocephala	Tree	Exotic	Common	-		C		O						C
Ligustrum lucidum	Tree	Native	-	-					O					
Ligustrum sinense	Tree	Native	Common	-		C								O
Lindsaea orbiculata	Herb	Native	Very common	-		S								
Liriope spicata	Herb	Native	Very common	-			O							

Appendix C - Plants Recorded within Site C

Scientific Name	Growth Form	Origin	Rarity in Hong Kong [1]	Conservation Status	PL	SW	MW	DR	N	DA	VA	W	Ma	RV
Litchi chinensis	Tree	Exotic	Restricted	-						S				
Lithocarpus glaber	Tree	Native	Common	-		S								
Litsea cubeba	Shrub	Native	Common	-				S						
Litsea glutinosa	Tree	Native	Very common	-		C	C			O				
Litsea monopetala	Tree	Native	Restricted	-		C	C	S			S			S
Litsea rotundifolia var. *oblongifolia*	Shrub	Native	Very common	-		C								
Livistona chinensis	Tree	Exotic	-	-					O					
Lophatherum gracile	Herb	Native	Very common	-		O	C							
Ludwigia perennis	Herb	Native	Restricted	-									S	
Lygodium flexuosum	Herb	Native	Very common	-		S								
Lygodium scandens	Herb	Native	Common	-		O							C	
Macaranga tanarius var. *tomentosa*	Tree	Native	Common	-		C	C				O	C		O
Machilus chekiangensis	Tree	Native	Very common	-		O	C							
Machilus velutina	Tree	Native	Common	-		O	O							
Maesa perlarius	Shrub	Native	Common	-		C								
Mallotus apelta	Shrub	Native	Common	-		C								
Mallotus paniculatus	Tree	Native	Very common	-		C	C							
Mangifera indica	Tree	Exotic	-	-							O			
Melaleuca cajuputi subsp. *cumingiana*	Tree	Exotic	-	-					S	C				
Melastoma malabathricum	Shrub	Native	Common	-		O								
Liquidambar formosana	Tree	Native	Common	-		O		S						S
Alpinia stachyodes	Herb	Native	Common	-			C							
Merremia umbellata subsp. *orientalis*	Climber	Native	Common	-									S	
**Metasequoia glyptostroboides*	Tree	Exotic	-	IUCN Red List: Endangered in the world [3]					S					
Microcos nervosa	Shrub	Native	Common	-			C	S		O				
Microstegium ciliatum	Herb	Native	Very common	-		C			O			C		C
Mikania micrantha	Herb	Exotic	Very common	-		C	O	C	O		O	O	C	C
Millettia nitida	Climber	Native	Very common	-		C								
Mimosa pudica	Herb	Exotic	Very common	-				S						S
Miscanthus floridulus	Herb	Native	Common	-		S								
Miscanthus sinensis	Herb	Native	Very common	-		S								
Murraya paniculata	Tree	Exotic	-	-		S								
Musa x *paradisiaca*	Herb	Exotic	-	-						S				
Neyraudia reynaudiana	Herb	Native	Very common	-							S			
Osmanthus fragrans	Tree	Exotic	-	-					O	O				
Oxalis corniculata	Herb	Native	Very common	-				O			S			
Oxalis debilis subsp. *corymbosa*	Herb	Exotic	Common	-			S							S
Paederia scandens	Climber	Native	Very common	-				O						
Pandanus tectorius	Shrub	Native	Very common	-		C							C	
Panicum brevifolium	Herb	Native	Very common	-		S								
Panicum maximum	Herb	Exotic	Common	-		O								
Panicum repens	Herb	Native	Very common	-									C	
Pavetta hongkongensis	**Tree**	**Native**	**Common**	Cap. 96A [10]		**S**	**S**							

Appendix C - Plants Recorded within Site C

Scientific Name	Growth Form	Origin	Rarity in Hong Kong [1]	Conservation Status	PL	SW	MW	DR	N	DA	VA	W	Ma	RV
Persicaria chinensis	Herb	Native	Common	-		O			O	S				
Phoenix roebelenii	Tree	Exotic	-	-					S					
Photinia raupingensis	Tree	Native	Common	-		O								
Phyllanthus reticulatus	Shrub	Native	Common	-		C								
Phyllanthus urinaria	Herb	Native	Common	-										S
Plantago major	Herb	Native	Very common	-						S				
Platycladus orientalis	Tree	Exotic	-	-							S			
Podocarpus macrophyllus	Tree	Native	Restricted	-					S					
Praxelis clematidea	Herb	Exotic	Very common	-					S					C
Prunus persica	Tree	Exotic	-	-						S				
Psidium guajava	Tree	Exotic	Common	-						S				
Psychotria asiatica	Tree	Native	Very common	-		C	C							
Psychotria serpens	Climber	Native	Very common	-		C								
Pteris ensiformis	Herb	Native	Common	-		C	S							
Pteris semipinnata	Herb	Native	Very common	-		C	C							
Pueraria lobata var. *montana*	Climber	Native	Common	-		C	O		O		S			
Rhaphiolepis indica	Shrub	Native	Very common	-		C								
Rhus succedanea	Shrub	Native	Common	-		C								
Ricinus communis	Shrub	Exotic	Restricted	-										O
Rosa laevigata	Climber	Native	Common	-		O							S	
Roystonea regia	Tree	Exotic	-	-					O					
Rubus leucanthus	Climber	Native	Common	-		S								
Rubus parvifolius	Shrub	Native	Common	-		S								
Saccharum arundinaceum	Herb	Native	Common	-									S	
Sageretia thea	Shrub	Native	Very common	-		O	O	S						
Sapium sebiferum	Tree	Native	Common	-			C		S	O				O
Sarcandra glabra	Shrub	Native	Very common	-		C	C							
Schefflera arboricola	Climber	Exotic	-	-						O				
Schefflera heptaphylla	Tree	Native	Very common	-		C								
Scoparia dulcis	Herb	Exotic	Common	-				S						
Senna siamea	Tree	Exotic	-	-					S					
Sida rhombifolia	Shrub	Native	Common	-										S
Solanum nigrum	Herb	Native	-	-					S					

Appendix C - Plants Recorded within Site C

Scientific Name	Growth Form	Origin	Rarity in Hong Kong [1]	Conservation Status	PL	SW	MW	DR	N	DA	VA	W	Ma	RV
Solanum torvum	Shrub	Exotic	Common	-	S		S	S		O				O
Spermacoce stricta	Herb	Native	Restricted	-				S						
Spilanthes paniculata	Herb	Native	Common	-				C	S					O
Sporobolus fertilis	Herb	Native	Very common	-				S						S
Stephania longa	Climber	Native	Common	-		S	S							
Sterculia lanceolata	Tree	Native	Very common	-		C	C					C		S
Strophanthus divaricatus	Climber	Native	Common	-			O							
Symplocos cochinchinensis var. *laurina*	Tree	Native	Common	-		O								
Syngonium auritum	Herb	Exotic	-	-							O			
Syzygium hancei	Tree	Native	Common	-		C	C							
Syzygium jambos	Tree	Exotic	Common	-		C	C					O		
Syzygium levinei	Tree	Native	Common	-		C	C							
Terminalia mantaly	Tree	Exotic	-	-					O					
Tetracera asiatica	Climber	Native	Very common	-		O								
Toxocarpus wightianus	Climber	Native	Very common	-		S								
Tradescantia zebrina	Herb	Exotic	-	-								S		
Trema tomentosa	Shrub	Native	Common	-				S						
Tylophora ovata	Climber	Native	Common	-		S								
Urena lobata	Herb	Native	Common	-		O					S		O	O
Uvaria grandiflora	Climber	Native	Restricted	-			O							
Uvaria macrophylla	Climber	Native	Common	-		C	C			S				
Vernonia cinerea	Herb	Native	Very common	-		S		O						
Viburnum odoratissimum	Shrub	Native	Very common	-		C								
Vitex negundo	Shrub	Native	Common	-			S							
Wedelia trilobata	Herb	Exotic	Common	-		C	C	C	C		C		C	C
Wikstroemia nutans	Shrub	Native	Common	-			S							
Youngia japonica	Herb	Native	Very common	-				S						
Zanthoxylum avicennae	Tree	Native	Common	-		C	O				S			
Zanthoxylum nitidum	Climber	Native	Very common	-		C	C							O
Total number of species				229	6	117	62	38	37	31	31	17	22	40

Notes: Key for abundance: S = Scarce, O = Occasional, C = Common

1. Corlett *et al*. (2000)
2. Yip *et al*. (2010). A Floristic Survey of Marshes in Hong Kong
3. IUCN (2021). IUCN Red List Version 2021-2.
4. Qin *et al*. (2017). Threatened Species List of China's Higher Plants
5. Fu & Chin (1992). China Plant Red Data Book – Rare and Endangered Plants.
6. Wu & Hu (1988). Illustration of Rare & endangered plant in Guangdong Province
7. Hu *et al*. (2003). 100 Rare and Precious Plants of Hong Kong.
8. Cap. 586 Protection of Endangered Species of Animals and Plants Ordinance
9. State Forestry Administration & Ministry of Agriculture (1999). List of Wild Plants under State Protection (Part 1).
10. Cap. 96A Forestry Regulations under Cap. 96 Forests and Countryside Ordinance Cap. 96 Forests and Countryside Ordinance

Habitats: PL = Plantation; SW = Secondary Woodland (including the data of orchard); MW = Mature Woodland; DR = Driving Range; N = Nursery; DA = Developed Area; VA = Village Area; W = Watercourse; Ma = Marsh; RV = Ruderal Vegetation

* Despite being listed with various conservation status, this species is not native to Hong Kong and are not regarded as species of conservation importance.

Appendix D - Avifauna Recorded within Site C

Species	MW	SW	W	VA	Ma	N	RV	G/S	DR	DA	Commonness & Distribution in Hong Kong [1]	Conservation Status [1,2]
Chinese Pond Heron *Ardeola bacchus*	1		4						2		Common resident; Widely distributed in Hong Kong	Fellowes *et al*. (2002): PRC,(RC)
Eastern Cattle Egret *Bubulcus coromandus*	2	1				8	7		23		Resident and common passage migrant; Widely distributed in Hong Kong	Fellowes *et al*. (2002):(LC)
Little Egret *Egretta garzetta*	2	1	1								Common resident; Widely distributed in coastal area throughout Hong Kong	Fellowes *et al*. (2005): RC
Black Kite *Milvus migrans*	1	4							8	1	Common resident and winter visitor; Widely distributed in Hong Kong	Fellowes *et al*. (2002): RC; Appendix 2 of CITES
White-breasted Waterhen *Amaurornis phoenicurus*			6			1					Common resident; Widely distributed in wetland throughout Hong Kon	
Domestic Pigeon *Columba livia*	4			1					11		Common resident; Widely distributed in urban area throughout Hong Kong	
Spotted Dove *Spilopelia chinensis*	3	6		7			24		2	3	Abundant resident; Widely distributed in Hong Kong	
Greater Coucal *Centropus sinensis*	1	1				1					Common resident; Widely distributed in Hong Kong	Class 2 Protected Animal of China; China Red Data Book Status: (Vulnerable)
Asian Koel *Eudynamys scolopaceus*	2	3									Common resident; Widely distributed in Hong Kong	
Indian Cuckoo *Cuculus micropterus*	4										Uncommon summer visitor Widely distributed in open area throughout Hong Kong	
Common Kingfisher *Alcedo atthis*			2								Common passage; migrant and winter visitor. Widely distributed in wetland habitat throughout Hong Kong.	
Common Kestrel *Falco tinnunculus*		1							1		Common autumn migrant and winter visitor; Widely distributed in Hong Kong	Class 2 Protected Animal of China; Appendix 2 of CITES
Scarlet Minivet *Pericrocotus speciosus*	1										Common resident; Found in localities including Tai Po Kau, the Peak, Lam Tsuen, Cape D'Aguilar Road, Peel Rise, Shing Mun	
Long-tailed Shrike *Lanius schach*	1	1						1			Common resident; Widely distributed in open areas throughout Hong Kong	
Black Drongo *Dicrurus macrocercus*	2										Common summer visitor; Widely distributed in open area throughout Hong Kong.	
Hair-crested Drongo *Dicrurus hottentottus*		2									Common passage migrant and summer visitor; Widely distributed in wooded area throughout Hong Kong	
Azure-winged Magpie *Cyanopica cyanus*									2		Introduced resident; Found in Mai Po.	
Grey Treepie *Dendrocitta formosae*	4	3							2		Scarce winter visitor and resident; Found in Sai Kung, Luk Keng, Tai Po Kau, Tai Tam Reservoir, Ho Chung, Hong Kong University, Lam Tsuen, Hok Tau	Fellowes *et al*. (2002): LC
Eurasian Magpie *Pica pica*				1			2		1	1	Common resident; Widely distributed in Hong Kong	
Collared Crow *Corvus torquatus*	5	5				1				2	Uncommon resident; Found in Inner Deep Bay area, Nam Chung, Kei Ling Ha, Tai Mei Tuk, Pok Fu Lam, Chek lap Kok, Shuen Wan, Lam Tsuen	Fellowes *et al*. (2002): LC; IUCN Red List Status: Near-Threatened
Large-billed Crow *Corvus macrorhynchos*		1			2	2					Common resident; Widely distributed in Hong Kong	
Cinereous Tit *Parus cinereus*	5	10					3		1		Common resident; Widely distributed in Hong Kong	

Appendix D - Avifauna Recorded within Site C

Species	MW	SW	W	VA	Ma	N	RV	G/S	DR	DA	Commonness & Distribution in Hong Kong [1]	Conservation Status [1,2]
Red-whiskered Bulbul *Pycnonotus jocosus*	8	55		3		2	17	4	2		Abundant resident; Widely distributed in Hong Kong	
Chinese Bulbul *Pycnonotus sinensis*	7	25		14		2	14	2	1	3	Abundant resident; Widely distributed in Hong Kong	
Sooty-headed Bulbul *Pycnonotus aurigaster*	3	5									Uncommon resident; Widely distributed in open areas thorughout Hong Kong	
Barn Swallow *Hirundo rustica*	7			1		1			10	3	Abundant passage migrant and summer visitor; Widely distributed in Hong Kon	
Dusky Warbler *Phylloscopus fuscatus*		1									Common passage migrant and winter visitor; Widely distributed in shrubland and waterside vegetation throughout Hong Kong	
Pallas's Leaf Warbler *Phylloscopus proregulus*		3									Common winter visitor; Found in woodland throughout Hong Kong	
Yellow-browed Warbler *Phylloscopus inornatus*	3	7				5	1				Common winter visitor; Found in woodland throughout Hong Kong	
Yellow-bellied Prinia *Prinia flaviventris*	1	1									Common resident; Widely distributed in Hong Kon	
Common Tailorbird *Orthotomus sutorius*	8	6				1		1	1		Common resident; Widely distributed in Hong Kong	
Streak-breasted Scimitar Babbler *Pomatorhinus ruficollis*		1									Common resident; Widely distributed in shrubland and woodland throughout Hong Kong	
Rufous-capped Babbler *Stachyridopsis ruficeps*	1					1					Uncommon resident; Found in Shing Mun, Tai Po Kau, Tai Mek Tuk, Ng Tung Chai, Fo Tan, Tai Mo Shan, The Peak and Kadoorie Agricultural Research Centre	Fellowes *et al*. (2002): LC
Masked Laughingthrush *Garrulax perspicillatus*		3									Abundant resident; Widely distributed in shrubland throughout Hong Kong	
Blue-winged Minla *Minla cyanouroptera*		1									Uncommon resident; Found in Shing Mun, Tai Po Kau, Ng Tung Chai, Kowloon Hills, Ho Chung, Tai Lam Country Park, Lam Tsuen Country Park, HK Island	
Japanese White-eye *Zosterops japonicus*	20	33		6			15				Abundant resident; Widely distributed in Hong Kong	
Crested Myna *Acridotheres cristatellus*	17	23		14		6	21	3	15	2	Common resident; Widely distributed in Hong Kong	
Red-billed Starling *Spodiopsar sericeus*							40				Common winter visitor; Widely distributed in Hong Kong	Fellowes *et al.* (2002): RC
Black-collared Starling *Gracupica nigricollis*	9	16		4		13	59	2	13	11	Common resident; Widely distributed in Hong Kong	
White-shouldered Starling *Sturnia sinensis*										2	Common passage migrant; Found in Kam Tin, Deep Bay area, Po Toi Island, Long Valley, Victoria Park, Ho Chung, Ma Tso Lung, Mui Wo, Lam Tsuen Valley	Fellowes *et al*. (2002): LC
Grey-backed Thrush *Turdus hortulorum*	1	1									Common winter visitor; Widely distributed in woodland throughout Hong Kong	
Oriental Magpie Robin *Copsychus saularis*	1	1		2			2	1	1		Abundant resident; Widely distributed in Hong Kong	

Appendix D - Avifauna Recorded within Site C

Species	MW	SW	W	VA	Ma	N	RV	G/S	DR	DA	Commonness & Distribution in Hong Kong [1]	Conservation Status [1,2]
Asian Brown Flycatcher *Muscicapa latirostris*		1									Common passage migrant and winter visitor; Widely distributed in Hong Kong	
Verditer Flycatcher *Eumyias thalassinus*	1										Scarce winter visitor; Found in Shek Kong, Tai Po Kau, Mui Tze Lam, Lai Chi Wo, Wun Yiu	
Daurian Redstart *Phoenicurus auroreus*		1									Common winter visitor; Widely distributed in Hong Kong	
Fork-tailed Sunbird *Aethopyga christinae*	1	3									Common resident; Widely distributed in Hong Kong	
Eurasian Tree Sparrow *Passer montanus*	2	39		14		3	76	0	22	34	Abundant resident; Widely distributed in Hong Kong	
White-rumped Munia *Lonchura striata*		3									Common resident; Widely distributed in Hong Kong	
Scaly-breasted Munia *Lonchura punctulata*				3							Common resident; Widely distributed in Hong Kong	
Grey Wagtail *Motacilla cinerea*			1								Common passage migrant and winter visitor; Widely distributed in hill streams throughout Hong Kong	
White Wagtail *Motacilla alba*						6	3	1	5		Common passage migrant and winter visitor; Widely distributed in Hong Kong	
Richard's Pipit *Anthus richardi*									1		Common passage migrant and winter visitor; Widely distributed in Hong Kong	
Olive-backed Pipit *Anthus hodgsoni*		6									Common passage migrant and winter visitor; Widely distributed in Hong Kon	
Number of species	31	35	5	12	1	15	14	9	20	10	N/A	N/A

MW=Mature woodland; SW=Secondary woodland; W=watercourse; VA=Village area; Ma=Marsh; N=Nursery; RV=Ruderal vegetation; G/S=Grassland/shrubland; DR=Driving range; DA=Developed area

1: AFCD (2017), 2: Zheng and Wang (1998).

Level of concern: LC = local concern, PRC = potential regional concern, RC = regional concern, GC = global concern; Letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence (Fellowes *et al* ,.2002).

Appendix E - Butteflies recorded within Site C

Common Name	Scientific Name	MW	SW	W	VA	Ma	N	RV	G/S	Distribution	Conservation Status
Common Hedge Blue	*Acytolepis puspa*		3							Common; Widely distributed throughout Hong Kong	
Lime Blue	*Chilades lajus*		1							Common; Widely distributed throughout Hong Kong	
Pale Grass Blue	*Pseudozizeeria maha*		1							Very Common; Widely distributed throughout Hong Kong	
Dark Grass Blue	*Zizeeria karsandra*		1							Uncommon; High Junk Peak, Kat O, Po Toi Island, Shek Mun K	
Plum Judy	*Abisara echerius*	1	4							Very Common; Widely distributed throughout Hong Kong	
Common Tiger	*Danaus genutia*							1		Common; Widely distributed throughout Hong Kong	
Ceylon Blue Glassy Tiger	*Ideopsis similis*	5	1							Very Common; Widely distributed throughout Hong Kong	
Blue Tiger	*Tirumala limniace*	6								Common; Widely distributed throughout Hong Kong	
Angled Castor	*Ariadne ariadne*	1								Common; Widely distributed throughout Hong Kong	
Rustic	*Cupha erymanthis*		1							Very Common; Widely distributed throughout Hong Kong.	
Common Mapwing	*Cyrestis thyodamas*	2	1							Common; Widely distributed in woodland area throughout Ho	
Large Faun	*Faunis eumeus*	1	1							Common; Widely distributed in woodland throughout Hong Ko	
Dark Brand Bush Brown	*Mycalesis mineus*	1								Very Common; Widely distributed in woodland throughout Hong Ko	
Common Evening Brown	*Melanitis leda*		1							Common; Widely distributed in woodland throughout Hong Ko	
Straight Five-ring	*Ypthima lisandra*		1							Common; Widely distributed throughout Hong Kong	
Tailed Jay	*Graphium agamemnon*		1							Common; Widely distributed throughout Hong Kong	

Appendix E - Butteflies recorded within Site C

Common Name	Scientific Name	MW	SW	W	VA	Ma	N	RV	G/S	Distribution	Conservation Status
Red Helen	*Papilio helenus*		1						1	Very Common; Widely distributed throughout Hong Kong.	
Great Mormon	*Papilio memnon*		1			1		1		Very Common; Widely distributed throughout Hong Kong	
Paris Peacock	*Papilio paris*		1					1		Very Common; Widely distributed throughout Hong Kong.	
Common Mormon	*Papilio polytes*	2	2		4		3	3	1	Very Common; Widely distributed throughout Hong Kong.	
Spangle	*Papilio protenor*		1							Very Common; Widely distributed throughout Hong Kong.	
Indian Cabbage White	*Pieris canidia*	3	13		1			4		Very Common; Widely distributed throughout Hong Kong.	
Painted Jezebel	*Delias hyparete*	1								Uncommon; Widely distributed in throughout Hong Kong	
White Dragontail	*Lamproptera curius*		1							Rare; Widely distributed in throughout Hong Kong	Fellowes *et al*. (2002): Local Concern
Common Grass Yellow	*Eurema hecabe*	1	2			1	1			Very Common; Widely distributed throughout Hong Kong	
Number of species		11	20	0	2	2	2	5	2	N/A	N/A

Habitats: N = Nursery; RV = Ruderal Vegetation; DA = Developed Area; SW = Secondary Woodland (including Orchard); Dr = Driving Range; G/S = Grassland/Shrubland (including Grassland); Ma = Marsh; MW = Mature Woodland; W = Watercourse; VA = Village Area; PL = Plantation; IS = Intertidal Shore (including Mangrove)

1: AFCD (2017)

Appendix I

Drainage Impact Assessment (Site C)

(Consolidated Report based on Further Information submitted on 13 June 2022, 19 July 2022 & 23 August 2022)

(No further comments from drainage infrastructure perspective from Drainage Services Department received in September 2022)

Section 16 Planning Application for Amendments to the Approved Development (Application No. A/NE-SSH/120-1) – Amendments to Recreation and Sports Centre with Ancillary Facilities in Site C

Drainage Impact Assessment Report

Sept 2022

AECOM

Section 16 Planning Application for Amendments to the Approved Development (Application No. A/NE-SSH/120-1) – Amendments to Recreation and Sports Centre with Ancillary Facilities in Site C

Drainage Impact Assessment Report

Contents

1 INTRODUCTION 1
1.1 Background 1
1.2 The Proposed Development 1
2 OBJECTIVES 4
2.1 General 4
2.2 Objectives 4
3 DESIGN BASIS AND DESIGN CRITERIA 5
3.1 Introduction 5
3.2 Design Standards 5
3.3 Hydraulic Design 7
3.4 Climate Change 7
4 SITE C DEVELOPMENT – SPORTS AND RECREATIONAL 8
4.1 Existing Drainage Conditions 8
4.2 Changes to the Drainage Characteristic 8
4.3 Potential Drainage Impact and Mitigation Measures 9
5 PROPOSED MITIGATION MEASURES AT CONSTRUCTION STAGE 10
5.1 Mitigation measures during construction 10
5.2 Monitoring During Construction 10
5.3 Audit Requirements during Construction 11
6 CONCLUSION 12
6.1 Drainage of Site C 12

Figure List

DIA/102 Site C - Existing Drainage Paths and Network
DIA/103 Site C - Future Drainage Paths, Surface Channel & Sub-catchment Area

Appendix

Appendix 1 Master Layout Plan of Sai Sha Development
Appendix 2 Checking on Amendment Part
Appendix 3 Town Planning Board Conditional Approval Letter
Appendix 4 Checking of Hydraulic Impact to Existing Ditch connected to Tai Tung Wo Liu Stream
Appendix 5 DSD's Conversation record and Site Photos for Existing Ditch and Tai Tung Wo Liu Stream

1 INTRODUCTION

1.1 Background

1.1.1 The Application Site (Tai Po Town Lot 157 (currently known as Tai Po Town Lot 253 for Site A and Site B and Tai Po Town Lot 157 RP for Site C), various lots in D.D.165, 207 and 218 and Adjoining Government Land, Sai Sha, Shap Sz Heung, New Territories) is the subject of an approved planning application No. A/NE-SSH/120-1 ("Approved Scheme") for proposed comprehensive residential and recreational development including government, institution or community (G/IC) facilities with minor relaxation of gross floor area and building height restrictions which was approved by the Director of Planning, under the delegated authority of the Town Planning Board (the Board), under Section 16A of the Town Planning Ordinance in October 2020.

1.1.2 With the commitment to further enhance user experience in Site C, which is intended to be a sports and recreational hub in Sai Sha, the subject Section 16 planning application ("Current Scheme") is submitted to reflect the proposed diversification of recreational facilities to be provided therein by replacing some of the golf driving range facilities to other outdoor sports and recreational uses with associated minor increase in the number of blocks as ancillary structures for sports and recreational facilities in Site C without any increase/change in the total GFA.

1.1.3 It should be noted that, **the subject matter of the current application is to reflect minor changes in Site C only**. The layout and development parameters for Site A and Site B is entirely identical to those in Approved Scheme. The inclusion of Site A and Site B as part of the Application Site is to comply with the statutory requirement of the subject "Comprehensive Development Area" ("CDA") zone under the Notes of Shap Sz Heung Outline Zoning Plan which requires the submission of a Master Layout Plan covering the entire "CDA" zone for the approval of the Board. The proposed minor amendments to the Approved Scheme for Site C (Current Scheme) shall be the only subject matter of this planning application.

1.1.4 This Drainage Impact Assessment (DIA) is prepared to facilitate the review of discharge approval condition due to the proposed minor amendment of sports and recreational facilities provision in Site C. Therefore, Site C shall be the only subject matter of this assessment.

1.1.5 This DIA will adopt the latest requirements from Stormwater Drainage Manual 5th Edition in design, including the updates on rainfall intensity, sea level, tide level and consideration of climate change.

1.2 The Proposed Development

1.2.1 Same as the previously approved scheme, the Application Site comprises four major portions, namely Site A, Site B and Site C (or collectively known as "Development Sites"), and Sai Sha Road together with its widening works area. Site A and Site B are designated mainly for residential purpose supported by some local retail and public transport facilities to serve the future residents, whereas Site C is proposed for recreational use. According to the Approved Scheme, Site C covers about 36.7ha with (i) 10 blocks of recreational and sports centre with ancillary facilities and golf driving range facilities, (ii) 1 block of welfare centre and public vehicle park building and (iii) 2 reserved primary school sites (**Appendix 1**).

1.2.2 **Table 1** below shows the Overall indicative Development Schedule. No change is proposed to the overall parameters as the Approved Scheme. **Table 2** shows the indicative Development Schedule of the Current Scheme at Site C. It should be noted that all of the development parameters for Site C under the Current Scheme are the same as the Approved Scheme except for increase in no. of blocks.

Table 1: Indicative Development Schedule (Overall)

The Overall Development	
Total Application Site Area (1)	About 748,400 m^2
Domestic GFA (2)	Not more than 538,213 m^2
Domestic Plot Ratio (3)	About 0.832
No. of Residential Storeys (4)	16-31 storeys
Site Coverage (above ground level) (3)	Domestic – not more than 33.33% Non-Domestic – not more than 80% (below 15m)
No. of Residential Towers	46
No. of Flats	Not more than 9,700
Average Flat Size	55.49 m^2
Anticipated Population (5)	About 29,100
Residents' Club GFA (6)	Not more than 13,446 m^2
Commercial GFA (7)	Not more than 12,077 m^2
Transport Interchange GFA (8)	Not more than 9,000 m^2
Recreation & Sports Centre with Ancillary Facilities GFA (8)	Not more than 17,500 m^2
Welfare Centre GFA	Not more than 5,560 m^2
Public Vehicle Park GFA (8)	9,000 m^2

Remarks:

(1) Including Development Site Area of 646,908 m^2 (i.e. excluding Sai Sha Road widening works area and areas to be provided as sewage pumping station near Tseng Tau Village).
(2) Including 390m^2 for two existing houses in Site C to be retained.
(3) Calculated based on Development Site Area.
(4) Over 1 to 3 levels of carpark / M&E / residential clubhouse facilities.
(5) Based on a person-per-flat ratio of 3.0.
(6) The clubhouse GFA is about 2.5% of the domestic GFA for Site A and Site B respectively.
(7) Commercial GFA refers to commercial uses ('Eating Place' and 'Shop and Services'), 'School' (kindergarten, nursery, language, computer, commercial and tutorial schools, art school, ballet and other types of schools providing interest / hobby related courses), 'Place of Entertainment' and 'Religious Institution' (church).
(8) Under the approved scheme (Application No. A/NE-SSH/61-2), it also included the provision of Sports Centre and Ancillary Facilities, as well as Public Vehicle Park. GFAs of these facilities are specified in the development schedule.

Table 2: Indicative Development Schedule of the Proposed Amendment at Site C

Site C:	
Development Site Area (2)	About 366,983 m^2
Total no. of Non-domestic Blocks	14 (6)
Recreation & Sports Centre with Ancillary Facilities / E&M (3) (4)	
Non-domestic GFA (1)	Not more than 17,500m^2 • Sports Centre & Ancillary Facilities: Not more than 5,500m^2 • Recreation Centre & Ancillary Facilities: Not more than 8,500m^2 • Retail & F&B Facilities: Not more than 3,500m^2
No. of Blocks	13 (6)
No. of Storeys	3 storeys above 2 levels of basement
Welfare Centre & Public Vehicle Park Building (5)	
Non-domestic GFA	Not more than 14,560m^2 • Welfare Centre: Not more than 5,560m^2 • Public Vehicle Park: Not more than 9,000m^2 (1)
No. of Blocks	1
No. of Storeys	5 storeys above 1 level of basement carpark
Reserved Primary School Sites	
Total Site Area	Not less than 12,400m^2 (i.e. not less than 6,200m^2 each)

Remarks:

(1) Under the approved scheme (Application No. A/NE-SSH/61-2), it also included the provision of Sports Centre and Ancillary Facilities, as well as Public Vehicle Park. GFAs of these facilities are specified in the development schedule.
(2) Excluding Sai Sha Road widening works area and sewage pumping station near Tseng Tau Village within Application Site boundary of the Approved Scheme.
(3) Recreation & Sports Centre with Ancillary Facilities include 'Place of Recreation, Sports or Culture' (Including Golf Driving Range), 'Place of Entertainment', 'Eating Place', 'Shop and Services' and / or 'Indoor Playground'.
(4) Recreation & Sports Centre with Ancillary Facilities include ancillary E&M facilities for the power supply of Sites A to C. As the E&M facilities are ancillary and directly related to the development, the associated GFA of not more than 3,000m^2 shall be disregarded in this planning application in accordance with the provision of the Notes of the OZP.
(5) Light bus layby, car parking, and loading & unloading provisions subject to TD's approval.
(6) Exclude the structures solely for ancillary M&E and shuttle lift uses.

2 OBJECTIVES

2.1 General

2.1.1 The report covers the schematic drainage design of Site C sports and recreational area. The master layout plan (MLP) of the proposed development is shown in **Appendix 1**.

2.2 Objectives

2.2.1 The main objective of this DIA is to assess the drainage impact due to proposed minor changes to the Approved Scheme under A/NE-SSH/120-1 for Site C in the Current Scheme.

2.2.2 Schematic drainage arrangement will be proposed in this DIA report. Detailed drainage design of Site C will be further developed and submitted to relevant government departments for vetting in detailed design stage.

3 DESIGN BASIS AND DESIGN CRITERIA

3.1 Introduction

3.1.1 The drainage impact assessment is carried out based on Stormwater Drainage Manual (SDM) 5th Edition by DSD. The design will be based on SDM rational method, assumptions and adopted parameters will be discussed in the following chapter.

3.2 Design Standards

Design Rainstorm Profile

3.2.1 The design rainstorm profiles will be in accordance with the Intensity-Duration-Frequency (IDF) relationship as stipulated in Section 4.3 of SDM. The profile derived from the Gumbel distribution of recorded annual maximum rainfall described in the Hong Kong Observatory Technical Note No. 86 "Extreme Rainfall Statistics and Design Rainstorm Profiles at Selected Locations in Hong Kong" published in 1994 will be followed.

Design Return Period

3.2.2 Trunk drains (i.e. pipe size ≥ 1.8m dia.) and culverts will be designed for a 1 in 200 year design event and branch drains for a 1 in 50 year design event in accordance with Section 6.2 of the Stormwater Drainage Manual.

3.2.3 In accordance with the requirement in Section 6.4 of the SDM, flood levels will be defined as the highest values for the following cases:

Case A: a T-year sea level in conjunction with a X-year rainfall,
Case B: a X-year sea level in conjunction with a T-year rainfall

Where X=10 when T=50 or 200
and X=2 when T=10

3.2.4 The details of the scenarios are listed in Table 1 below.

Table 1 - Determination of Flood Protection Levels

Flood Level Return Period	Case A	Case B
200 years	200 year rain + 10 year sea level	10 year rain + 200 year sea level
50 years	50 year rain + 10 year sea level	10 year rain + 50 year sea level
10 years	10 year rain + 2 year sea Level	2 year rain + 10 year sea level
2 years	2 year rain + 2 year sea Level	-

3.2.5 The design extreme levels at **Tai Po Kau** are selected in accordance with Table 8 of the SDM 5th Edition for the above flood level return periods. **Table 2** illustrates the design extreme sea level at Tai Po Kau Tide Gauge:

Table 2 – Design Extreme Sea Level at Tai Po Kau

Return Period (Years)	Tai Po Kau Tide Gauge (1962-2017) (in mPD)
2	2.91
5	3.20
10	3.45
20	3.73
50	4.19
100	4.60
200	5.10

Time of Concentration

3.2.6 The time of concentration for various types of catchments shall be calculated and specified for different scenarios in the drainage design.

Road Drainage = 5 mins

Large Flat Paved Areas, Formed Platforms = 5 mins

3.2.7 The time of entry, or time of flow in the rural hinterland has been calculated using the Bransby-William's Equation.

$$t_e = \frac{0.14465\,L}{A^{0.1}H^{0.2}}$$

Where t_e - time of concentration (min)
L - catchment length (m)
A - catchment area (m^2)
H - average catchment slope (m/100m)

Runoff Coefficients

3.2.8 For the purpose of the assessment, runoff coefficients of 0.35 and 0.95 have been adopted for permeable areas and impermeable areas respectively in accordance with the Stormwater Design Manual.

Velocity

3.2.9 A desirable minimum full-bore velocity of 1.0 m/s and a maximum full-bore velocity of 5.0 m/s will be adopted for pipes if the topography allows.

Depth

3.2.10 A minimum pipe cover of 0.9m and 0.45m will be adopted for carriageway and footpath wherever practical. Utilities and sewers should be designed to cross over or below existing and new drainage with sufficient clearance.

Siltation

3.2.11 In accordance with Section 9.3 of the Stormwater Drainage Manual, sediment depth should be allowed in the pipes to take into account the effects to flow capacity due to materials deposited at pipe invert. The percentage reduction should be:

- 5% reduction in the flow area if the pipe gradient is greater than 1 in 25.
- 10% reduction in the flow area in other cases

Freeboard

3.2.12 The freeboard at manhole (minimum 300mm) requires to be checked for the different combined rainfall and tide events in accordance with Section 6.5 of SDM.

3.3 Hydraulic Design

3.3.1 The Colebrook White's Equation has been adopted in the hydraulic analysis for pipes.

$$V = -2\sqrt{2gDS_f}\log\left\{\frac{k_s}{3.7D} + \frac{2.51\nu}{D\sqrt{2gDS_f}}\right\}$$

Where:
V - flow velocity (m/s)
g - acceleration due to gravity (m/s^2)
D - equivalent diameter (m)
S_f - hydraulic gradient
k_s - roughness coefficient (m)
v - kinematic viscosity (m^2/s)

3.3.2 The roughness coefficient (k_s) for stormwater pipe in this assessment has adopted 0.6mm (Classification: Poor under SDM Table 14) for reinforced concrete pipes.

3.3.3 Manning's equation has been used to calculate box culvert and channel flows.

$$V = \frac{R^{2/3}S^{1/2}}{n}$$

Where:
V - flow velocity (m/s)
s - hydraulic gradient
n - Manning's roughness coefficient
R - hydraulic radius (m)

3.3.4 The Manning's roughness coefficient (n) in this assessment has been assumed as 0.015.

3.4 Climate Change

3.4.1 Design considerations on rainfall and sea level due to climate change have been implemented into the 5th Edition of Stormwater Drainage Manual.

3.4.2 With reference to SDM 5th Edition Table 28 – Rainfall Increase and Sea Level Rise due to Climate Change, consider the design life is 50 years from now, the rainfall increase in 2070 will become 12.1%, therefore design flows should be increase by 12.1% to account for climate change. The values in Table 3 extracted from Table 28 of SDM is presented below.

Table 3 – Rainfall Increase and Sea Level Rise due to Climate Change

	Rainfall Increase	Sea Level Rise (m)
Mid 21st Century (2041 – 2060)	10.4%	0.23
End of 21st Century (2081 – 2100)	13.8%	0.49

4 SITE C DEVELOPMENT – SPORTS AND RECREATIONAL

4.1 Existing Drainage Conditions

4.1.1 The existing condition of Site C is low lying and flat, located downstream of Tai Tung Wo Liu catchment. Tai Tung Wo Liu Stream passing through Sai Sha Road, the river reach continues across the middle of Site C and exit towards Tolo Harbour.

4.1.2 Site C is currently utilized for Golf Driving Range, stormwater runoff within the driving range is intercepted by the channels and ditches, directed to Tai Tung Wo Liu Stream towards Tolo Harbour.

4.1.3 Apart from the stream and drains within Garden Farm Golf Driving Range, there is no other well defined drainage system within Site C. The topography falls uniformly to northern direction from the junction of Sai Sha Road and the access road to Tseng Tau (ground level 21 mPD) towards the coastal areas and Three Fathoms Cove (ground level 4 mPD).

4.1.4 There are two villages near the Site C. Che Ha Village lies to the west of Tai Tung Wo Liu Stream near the centre of Site C. This village generally slopes from south to north and its ground level ranges between 11.5 mPD to 8.0 mPD. While Ma Kwu Lam Village lies at the south of Site C bordering Sai Sha Road and Tseng Tau Road and is outside the boundary of the Golf Driving Range. This village slopes from south to north and its ground level ranges between 21.0 mPD and 17.0 mPD.

4.1.5 There is no well-defined drainage system in both villages. The pipes and surface channels do exist, but terminate at the boundary of the villages, uncontrolled runoff spread to the adjacent grassland. Localized ponding and flooding had occurred during heavy rainfall events.

4.1.6 Existing drainage paths and network in Site C is shown on **Figure DIA/102**.

4.2 Changes to the Drainage Characteristic

4.2.1 A 'golf driving range' and a 'mini driving range / game area recreation & sports centre with ancillary facilities' in the southeastern and western portion respectively proposed in Site C under the Approved Scheme are proposed to be replaced by other outdoor sports and recreation facilities under the Current Scheme (e.g. sports field and ball courts). Surface runoff to be intercepted by internal drainage system directing towards Tolo Harbour outfalls as shown on **Figure DIA/103**.

4.2.2 The drainage characteristic of the proposed facilities in Site C will be updated as compared to the Approved Scheme. The replacement of areas annotated "Place of Recreation, Sports or Culture" would introduce additional stormwater runoff and will be discharged to existing Tai Tung Wo Liu Stream and Tolo Harbour as indicated on **Figure DIA/103.**

4.2.3 Site C encapsulate existing Che Ha and Ma Kwu Lam village as shown in **Figure DIA/103**. The proposed interceptor channels at the northern boundary of the Che Ha and Ma Kwu Lam village will intercept and direct runoff from the villages to Tai Tung Wo Liu Stream. This will improve the drainage condition for both villages by introducing a proper flow path to the relatively flat ground and help to release stormwater to natural stream.

4.2.4 The stormwater runoff from the two reserved School Sites, the Welfare Centre and Che Ha Village access road are designed to discharge towards Site C outfalls (refer **Figure DIA/103**), in order to avoid overloading of the drainage system along the Widened Sai Sha Road.

4.3 Potential Drainage Impact and Mitigation Measures

4.3.1 The surface runoff in Site C would be discharged north towards Tolo Harbour water or through the existing Tai Tung Wo Liu Stream to Tolo Harbour.

4.3.2 For drainage assessment purpose, 5 catchment areas annotated "Place of Recreation, Sports or Culture" were divided as shown in **Appendix 2**. Quantities of runoff change are summarized in **Table 4**.

Table 4 – Summary Table of Surface Runoff

Area	m^2	Qexist (m^3/s)	Qprop (m^3/s)	Runoff Change (m^3/s)	Remark
2	7,298	0.174	0.471	+0.297	Hard Landscape Area
3	32,003	0.761	0.761	0	Soft Landscape Area
4A	4,801	0.114	0.310	+0.196	Hard Landscape Area
4B	2,627	0.062	0.170	+0.107	Soft Landscape Area
5A	19,213	0.457	1.240	+0.783	Hard Landscape Area
5B	2,190	0.052	0.141	+0.089	Soft Landscape Area
C/T	10,784	0.256	0.696	+0.44	Hard Landscape Area

*positive represents addition

4.3.3 For Area 2, Area 4A, Area 5A and C/T (cycle training path), it is assumed that the place of recreation, sports or culture would be proposed for hard landscape while for Area 3, Area 4B and Area 5B, it is assumed that the place of recreation, sports or culture would be proposed for soft landscape.

4.3.4 The surface runoff collected within Area 2, Area 3, Area 4A, Area 4B and C/T would be intercepted and discharged to Tolo Harbour via existing ditch to the downsteam of Tai Tung Wo Liu Stream. The hydraulic impact to the existing ditch due to additional runoff (Qprop adopted as conservation) is taking into consideration with calculation in Appendix 4.

4.3.5 The surface runoff collected within Area 2, Area 5A and Area 5B would be intercepted and discharged to Tai Tung Wo Liu Stream. Since Che Ha Village is closed to the outfall of the concerned stream, mitigation measures were reviewed and a detention tank would be proposed to limit the total runoff to Tai Tung Wo Liu Stream after the development would not exceed the runoff before the development. A preliminary hydraulic checking and the catchment area arrangement were presented in **Appendix 2**. The stormwater in the detention tank would cater for a 4hr storm event and would be emptied after each storm event immediately within 24 hours. Detailed design of the detention tank (approx. 8,300m^3 in volume) will be submitted separately for vetting in later stage.

4.3.6 It is also to be advised that the surface runoff will be under screening or degritting before discharge. No discharge would be directly entered to natural stream.

4.3.7 In view of this, no adverse drainage impact is envisaged.

5 PROPOSED MITIGATION MEASURES AT CONSTRUCTION STAGE

5.1 Mitigation measures during construction

5.1.1 During the construction phase, possible impacts would arise from site runoff, which could contain suspended solids, as well as dust and construction waste. Sewage effluent arising from the on-site construction workforce also has the potential to cause water pollution.

5.1.2 All water and other liquid water products arising on the site shall be collected, removed from site via a suitable and properly designed temporary drainage system and disposed of at a location and in a manner that shall not cause either pollution or nuisance.

5.1.3 The guidance issued by EPD in their Practice Note ProPECC PN1/94 (Construction Site Drainage) shall be followed. Careful attention should be paid to work on cuttings, newly formed embankments and other steep areas where vegetation is removed to minimize top-soil and sediment wash-off.

5.1.4 Planning of a site drainage system, which will include wheel washing bays, sand and silt removal facilities (silt traps, sediment basins), oil interceptors (at appropriate locations), drainage channels and earth bunds shall be used on site to direct stormwater and runoff to such sediment removal facilities, and away from the sensitive receivers.

5.1.5 Catchpits and perimeter channels shall be constructed in advance of site formation works and earthworks.

5.1.6 Sand Traps, oil interceptors and other pollution prevention installations shall be regularly cleaned and maintained.

5.1.7 Open stockpiles, slopes and earthworks final surfaces shall be covered with tarpaulin or similar fabric, to prevent erosion from heavy rain.

5.1.8 Any contaminated soil from excavation would require disposal at licensed contaminated mud pits.

5.1.9 Sewage generated from the construction works may be contained by the use of chemical toilets which will be serviced and cleaned by specialist contractor at regular intervals.

5.1.10 Site drainage and runoff will be controlled, after the implementation of necessary mitigation measures, minimal impacts to the surrounding water bodies can be achieved.

5.2 Monitoring During Construction

5.2.1 Monitoring of the drainage system is required during construction to ensure that the drainage mitigation measures are being implemented effectively and there are no adverse drainage impacts which may result in flooding or deterioration in the water quality.

5.2.2 The following monitoring is recommended during construction:

- Design checks and inspection of temporary drainage capacities are maintained
- Inspection of existing drainage system including gullies to ensure there are no blockages resulting from the construction activities.
- Inspection of operation of silt traps to ensure that silt laden water is not conveyed to the existing drainage system.
- Inspection and testing of water quality to ensure that there is no deterioration of water quality resulting from the works.
- Routing checking should be made to ensure that the works are being carried out in accordance with EPD's Practice Note ProPECC PN 1/94 for Construction Site Drainage. This includes guidelines for handling and disposal of construction site discharges.

5.3 Audit Requirements during Construction

5.3.1 An audit of the site monitoring procedures should be undertaken periodically during the construction stage to ensure that the drainage mitigation measures are being implemented effectively.

5.3.2 The audit should include checking of monitoring records to ensure compliance with the required procedures. The audit should also check that remedial works have been undertaken where unsatisfactory works are identified and measures taken to ensure unsatisfactory works do not recur in subsequent monitoring.

6 CONCLUSION

6.1 Drainage of Site C

6.1.1 Minor amendments are only proposed to Site C of the Approved Scheme. The proposed amendments mainly concern replacement of golf driving range facilities with other outdoor sports and recreation facilities (e.g. sports fields / ball courts) to better meet the need of the community in the Sai Sha area.

6.1.2 This revision of Site C proposed to provide places of recreation, sports or culture. The surface runoff from Site C flowing north towards Tolo Harbour water. An existing Tai Tung Wo Liu stream through the middle of Site C will also convey stormwater towards Tolo Harbour. To mitigate the increase in surface runoff due to future change in paved & unpaved ratios of development areas, detention tank would be provided to control the discharge to Tai Tung Wo Liu, such that total runoff after the development would not exceed the runoff before the development. Stormwater in the detention tank would be emptied after each storm event immediately within 24 hours. Therefore, the proposed Site C development would not pose adverse drainage impact.

6.1.3 Che Ha Village situated in the middle of Site C, the eastern portion of Site C discharge surface runoff to Tai Tung Wo Liu Stream and the western portion of Site C discharge to Tolo Harbour though the outfall before the shoreline to the North.

6.1.4 Basically, the surface runoff of Site C follow the land topography, which is falling towards North to Tolo Harbour, the flow regime will be very similar to pre-development scenario but the proposed Site C Development improved drainage condition with managed turf surface and drainage system effectively guide overland flow towards the outfalls, no adverse drainage impact is envisaged.

Figures

Appendix 1 – Master Layout Plan of Sai Sha Development

E&M

1ST +18.5

CHE HA VILLAGE

ACCESS ROAD

RESERVED SCHOOL SITE

RESERVED SCHOOL SITE

EXISTING BUILDINGS TO REMAIN

MA KWU LAM VILLAGE

SITE A

TAI TUNG VILLAGE

SITE B

TSENG TAU VILLAGE

FOOTBRIDGE

FOOTBRIDGE

1ST SITE C +18.5

TRAINING PATH FOR CYCLING / MAINTENANCE PATH

PLACE OF RECREATION, SPORTS OR CULTURE #

2ST +17.5

1ST +15.0

PLACE OF RECREATION, SPORTS OR CULTURE #

2ST +23.5

1ST +21.0

3ST +36.0

5ST +33.0

1ST +18.5

3ST +40.0

3ST +36.0

1ST +24.0

+12.5

+15.5

RECREATION & SPORTS CENTRE WITH ANCILLARY FACILITIES / E&M *

RECREATION & SPORTS CENTRE WITH ANCILLARY FACILITIES / E&M *

WELFARE CENTRE & PUBLIC VEHICLE PARK

PUBLIC OPEN SPACE

SEWAGE PUMPING STATION

PEDESTRIAN CROSSING

RECREATION & SPORTS CENTRE WITH ANCILLARY FACILITIES / E&M *

NOTE : 1. ALL LEVELS DENOTE MAXIMUM MAIN ROOF LEVELS
2. ALL NUMBERS OF STOREYS DENOTED ON PLAN REFER TO TOTAL NO. OF STOREYS ABOVE GROUND.

LEGEND

- LAND TO BE SECURED BY APPLICANT / LAND OUTSIDE TPTL 157 RP AND TPTL 253
- 20m ECOLOGICAL STREAM BUFFER ZONE
- NON-BUILDING AREA
- PROPOSED DEVELOPMENT SITE BOUNDARY
- APPLICATION SITE BOUNDARY
- +37.0 HEIGHT IN mPD
- 1ST HEIGHT IN NO. OF STOREY

* INCLUDING 'PLACE OF RECREATION, SPORTS OR CULTURE', 'PLACE OF ENTERTAINMENT', 'EATING PLACE', 'SHOP & SERVICES', AND/OR 'INDOOR PLAYGROUND'

\# PLACE OF RECREATION, SPORTS OR CULTURE (OUTDOOR RECREATIONAL FACILITIES FOR THE USE OF SPORTS FIELD/ BALL COURT/ POOL/ DRIVING RANGE/ TRAINING PATH FOR CYCLING)

0 25 50 75 100 125

SCALE 1 : 5000 (A3)

Proposed MLP (Site C)

LWK +PARTNERS

Appendix 2 – Checking on Amendment Part

844600 E
845000 E
845400 E
845800 E
N
832500 N
832100 N
DISCHARGE TO TAI TUNG WO LIU STREAM VIA EXISTING DITCH
CATCHMENT AREA (CHE HA)
CHE HA VILLAGE
SITE C
CHE HA ROAD
DRAINAGE
AREA 5B
(SOFT LANDSCAPE AREA)
DISCHARGE TO EXISTING RIVER BRANCH
SITE C VARIETY RECREATIONAL AND LEISURE FACILITIES
AREA 3
(SOFT LANDSCAPE AREA)
AREA 3
TO TAI TUNG WO LIU STREAM Downstream then TOLO HARBOUR
CATCHMENT AREA:
AREA 32,003m2
AREA C/T (Cycle Training Path)
TO TAI TUNG WO LIU STREAM
Downstream then TOLO HARBOUR
CATCHMENT AREA:
AREA 10,784m2
AREA 5
TO TAI TUNG WO LIU STREAM
CATCHMENT AREA:
AREA 5A = 19,213m2
AREA 5B = 2,190m2
AREA 5A
(HARD LANDSCAPE AREA)
SITE C SPORT CENTER
AREA 4A
(HARD LANDSCAPE AREA)
SITE C
OPEN SPACE AREA AND WELFARE CENTER
AREA 4
TO TOLO HARBOUR
CATCHMENT AREA:
AREA 4A = 4,801m2
AREA 4B = 2,627m2
AREA 2
(HARD LANDSCAPE AREA)
AREA 4B
(SOFT LANDSCAPE AREA)
AREA 2
TO TAI TUNG WO LIU STREAM
Downstream then TOLO HARBOUR
CATCHMENT AREA
= 7,298 m2
MA KWU LAM VILLAGE

LEGEND:

- PROPOSED DEVELOPMENT SITE BOUNDARY
- APPLICATION SITE BOUNDARY
- PROPOSED SURFACE CHANNEL
- PROPOSED PIPE WORK
- EXISTING SURFACE CHANNEL
- FLOW DIRECTION
- INDICATIVE HARD LANDSCAPE AREA FOR 'PLACE OF RECREATION, SPORTS OR CULTURE
- INDICATIVE SOFT LANDSCAPE AREA FOR 'PLACE OF RECREATION, SPORTS OR CULTURE

AECOM

SAI SHA ROAD WIDENING – SAI SHA COMPREHENSIVE DEVELOPMENT

SITE C – FUTURE DRAINAGE PATHS & SURFACE CHANNEL

SCALE	A3 1 : 4000	DATE	MAY. 2022
CHECK		DRAWN	BYF
JOB No.	60144097	DRAWING No.	DIA/103
		REV	E

P:\Projects\60144097\drawing\Report\DIA\103.dwg 2022-05-30 14:31 setocf

AECOM ASIA CO. LTD.	Sai Sha Road Widening, Sai Kung North, N.T. Site C Outdoor Sports Ground (1 in 50 Years Return Period)	Project No. 60547289 Date May-22 Sheet By CHKD

*The checking focus solely on the area replacing a driving range to place of recreation, sorts or culture.

Affected Catchment Area: , see figure

Area 5A = **19213** m2
Area 5B = **2190** m2
Total Area = **21403** m2

For **Existing Condition**, without drainage sytem
Assume Time of concentration is 5 mins, the peak occuried at 5 mins duration rainfall.

Rainfall Intensity = 218.00 mm/hr , with reference to DSD Stormwater Drainage Manual (SDM) Table 2a and Return Period 50years.

Revised Rainfall Intensity = **244.38** mm/hr , considered climate change (12.1% increase)

Flow Calculation: Q = 0.278CiA (SDM Chapter 7.5.2, Rational Method)

Existing Q:

$Q_{exist, AREA\ 5A}$ = 0.278 x 0.95 x 244.38 x 19213 / 1000^2 = 1.240 m3/s , for existing condition: golf area (Grassland)
$Q_{exist, AREA\ 5B}$ = 0.278 x 0.35 x 244.38 x 2190 / 1000^2 = 0.052 m3/s , for existing condition: golf area (Grassland)
$Q_{exist, total}$ = 1.292 m3/s

With Place of Recreation Sports or Culture:
Assume Surface Runoff discharge to (i) Detention Tank and (ii) Bypass Tank:

Catchment Area
Area Discharge to Tank: **17403** m2 , to tank
Area of Grassland = 2190 m2 (Runoff Coefficient, C = 0.35)
Area for Hardpaved = 15213 m2 (Runoff Coefficient, C = 0.95)

Area Discharge Bypass Tank: **4000** m2 , bypass tank (Hardpaved)

AECOM ASIA CO. LTD.	Sai Sha Road Widening, Sai Kung North, N.T. Site C Outdoor Sports Ground (1 in 50 Years Return Period)	Project No. 60547289 Date May-22 Sheet By CHKD

(i) Detention Tank
Considering the below Scenario with Mitigation Measures (Detention Tank):

Rainfall Event & Discharge		
Rainfall Event	Stream to Return Normal	
4hr	4hr	16hr
		Discharge to be empty Tank
		6 hr

With Detention Tank, assume rainfall duration 240mins.
Rainfall Intensity = 62.90 mm/hr , with reference to DSD Stormwater Drainage Manual (SDM) Table 2a and Return Period 50years.

Revised Rainfall Intensity = **70.51** mm/hr , considered climate change (12.1% increase)

Flow Discharge to Tank = 0.278 x 70.51 x (2190 x 0.35 + 15213 x 0.95) / 1000^2 = 0.298 m3/s

Clear Tank Volume required for retaining rainfall event under 4hr event = 4296 m3

Approx. Proposed Underground Detention Tank Volume = **5000** m3 , including 0.5m freeboard for a tank area approx. 3600m2

For Tank Discharge, Colebrook-White equation is used:

$$\bar{V} = -\sqrt{32gRS_f}\log\left[\frac{k_s}{14.8R} + \frac{1.255\nu}{R\sqrt{32gRS_f}}\right]$$

Flow limited by 600dia. RC pipe with PVC of gradient 1 in 300,
Qtank = 0.438 m3/s

(ii) Bypass Tank
Assume Time of concentration is 5 mins, the peak occuried at 5 mins duration rainfall.

Rainfall Intensity = 218.00 mm/hr , with reference to DSD Stormwater Drainage Manual (SDM) Table 2a and Return Period 50years.

Revised Rainfall Intensity = **244.38** mm/hr , considered climate change (12.1% increase)

For Discharge bypass Tank, **Qdirect** = 0.278 x 0.95 x 244.38 x 4000 / 1000^2 = **0.258** m3/s

Qdirect = 0.258 m3/s , about 4000m2 catchment area will be discharged directly
Qtank = 0.438 m3/s , limiting discharge by pipe capacity

Qprop = Qdirect + Qtank
= 0.696 m3/s **< Qexist**

AECOM ASIA CO. LTD.	Sai Sha Road Widening, Sai Kung North, N.T. Site C Outdoor Sports Ground (1 in 50 Years Return Period)	Project No. 60547289 Date May-22 Sheet By CHKD

The proposed flow to be discharged contributed part of the flow directly discharge (0.258m3/s, bypass tank) and the limited flow from tank (0.438m3/s).
The total discharge flow is 0.696m3/s which is lesser than the existing flow, 0.778m3/s.

The discharge with proposed facility and mitigation measures have lesser discharge compared to the existing condition.
Therefore, it is considered no adverse impact would be resulted.

AECOM ASIA CO. LTD.	Sai Sha Road Widening, Sai Kung North, N.T. Site C Outdoor Sports Ground (1 in 50 Years Return Period)	Project No. 60547289 Date Jan-22 Sheet By CHKD

Input Data

Roughness Value	ks (conc+uPVC lining)	=	0.003 mm	
Viscosity of Water	v	=	0.000001 m^2/s	
Max Full Bore Velcity	Vmax	=	5 m/s	
Min Full Bore Velcity	Vmin	=	1 m/s	(1 in 2 years)
Runoff Coefficient	C	=	0.95	(Paved Area)
	C	=	0.35	(Grassland)
Manning's Coefficient	n	=	0.013	
Inlet Time for Pipes	t0	=	5 min	
Inlet Time for Channels	t0	=	1 min	
Free broad for Uchannels		=	30 mm	

Appendix 3 – Town Planning Board Conditional Approval Letter

規劃署

沙田、大埔及北區規劃處
香港新界沙田上禾輋路一號
沙田政府合署
十三樓 1301-1314 室

Planning Department

Sha Tin, Tai Po & North District
Planning Office
Rooms 1301-1314, 13/F.,
Shatin Government Offices,
1 Sheung Wo Che Road, Sha Tin,
N.T., Hong Kong

來函檔號	Your Reference	
本署檔號	Our Reference	TPB/A/NE-SSH/120-1
電話號碼	Tel. No.:	2158 6242
傳真機號碼	Fax No.:	2691 2806/2696 2377

By Post & Fax (2526 3281)
(11 pages)
14 October 2020

10/F, Cheung Wah Industrial Building
10-12 Shipyard Lane
Quarry Bay, Hong Kong
(Attn: Ms. Winnie WU)

Dear Madam,

Proposed Comprehensive Residential and Commercial Development with Government, Institution or Community Facilities with Minor Relaxation of Gross Floor Area and Building Height Restrictions in "Comprehensive Development Area", "Country Park", "Government, Institution or Community", "Green Belt", "Open Space", "Village Type Development" Zones and an area shown as 'Road', Tai Po Town Lot 157 and Various Lots in D.D. 165, D.D. 207 and D.D. 218 and Adjoining Government Land, Sai Sha, Shap Sz Heung (Section 16A Application No. A/NE-SSH/120-1)

I refer to your application and the further information which were received by the Town Planning Board (TPB) on 6.1.2020, 17.4.2020, 7.7.2020, 1.9.2020, 25.9.2020, 7.10.2020, 8.10.2020 and 9.10.2020 respectively, seeking planning permission for Class B amendments to the captioned development proposal under Application No. A/NE-SSH/120.

After giving consideration to your application, the Director of Planning, under the delegated authority of the TPB, approved your application for amendments to permission under section 16A of the Town Planning Ordinance on the terms of the application as submitted to the TPB. The amended permission is subject to the following conditions (with amendments to the previous approval conditions under TPB's letter dated 1.2.2019 highlighted) and shall be valid **until 18.1.2023**, and after the said date, the permission shall cease to have effect unless before the said date the development hereby permitted is commenced or the permission is renewed:

(a) the submission and implementation of a revised Master Layout Plan (MLP), taking into account approval conditions (b) to (g) and (j) to (z) below, to the satisfaction of the Director of Planning or of the TPB;

(b) the building heights for the proposed development (in terms of mPD) shall not exceed the maximum building heights as proposed by you;

(c) the submission and implementation of a Landscape Master Plan including a tree survey, a tree preservation scheme and site boundary treatment to the satisfaction of the Director of Planning or of the TPB;

(d) the submission and implementation of the eco-trail proposal to the satisfaction of the Director of Planning or of the TPB;

(e) the design and implementation of improvement works on the vehicular access road network for the proposed development and the adjoining villages, as proposed by you, to the satisfaction of the Commissioner for Transport or of the TPB;

(f) the design and provision of parking spaces and loading/unloading facilities to the satisfaction of the Commissioner for Transport or of the TPB;

(g) the ~~submission and~~ implementation of ~~revised~~ Traffic Impact Assessment (TIA) including the mitigation measures to the satisfaction of the Commissioner for Transport or of the TPB;

(h) the implementation of the modification of the roundabout of Sai Sha Road/Nin Wah Road/Nin Fung Road, as proposed by you, to the satisfaction of the Commissioner for Transport or of the TPB;

(i) no occupation of the residential development~~, except for 600 dwelling units~~ prior to the completion of the Sai Sha Road widening project, subject to the implementation of traffic improvement measures recommended in the TIA to the satisfaction of the Commissioner for Transport or of the TPB;

(j) the design and provision of two public transport interchanges, as proposed by you, to the satisfaction of the Commissioner for Transport or of the TPB;

(k) the submission of an environmental assessment for the proposed development and the implementation of the mitigation measures identified therein to the satisfaction of the Director of Environmental Protection or of the TPB;

(l) the submission of a sewerage impact assessment and the implementation of the mitigation measures identified therein to the satisfaction of the Director of Environmental Protection or of the TPB;

(m) the submission of a hazard review with respect to the risk due to liquid chlorine storage at the Ma On Shan Water Treatment Works, and the implementation of the risk mitigation measures identified therein before any population intake at the proposed development to the satisfaction of the Director of Environmental Protection or of the TPB;

(n) the design (including the submission of detailed tree preservation and planting proposal) and provision of a 20m ecological stream buffer zone along each side of Tai Tung Wo Liu Stream to the satisfaction of the Director of Agriculture, Fisheries and Conservation or of the TPB;

(o) the submission of a revised ecological impact assessment including woodland compensation taking into account the revised MLP and the implementation of the mitigation measures identified therein, to the satisfaction of the Director of Agriculture, Fisheries and Conservation or of the TPB;

(p) the diversion of water mains to be affected by the proposed development, as proposed by you, to the satisfaction of the Director of Water Supplies or of the TPB;

(q) the submission of a water supply impact assessment and the implementation of upgrading works identified therein, as proposed by you, to the satisfaction of the Director of Water Supplies or of the TPB;

(r) the submission of a natural terrain hazard study and the implementation of the mitigation measures identified therein, as proposed by you, to the satisfaction of the Director of Civil Engineering and Development or of the TPB;

(s) the submission of a drainage impact assessment and the implementation of mitigation measures identified therein to the satisfaction of the Director of Drainage Services or of the TPB;

(t) the provision of fire fighting access, water supplies for fire fighting and fire services installations to the satisfaction of the Director of Fire Services or of the TPB;

(u) the submission of the Further Archaeological Impact Assessment and the implementation of mitigation measures identified therein to the satisfaction of the Executive Secretary (Antiquities and Monuments), Antiquities and Monuments Office or of the TPB;

(v) the provision of public car park of not less than ~~160~~ **165** car parking spaces, 20 coach parking spaces and two light bus lay-bys in the adjoining "Government, Institution or Community" zone near Tseng Tau Village to the satisfaction of the Commissioner for Transport or of the TPB;

(w) the provision of no less than 8,000m^2 of public open space facilities in the "Open Space" and "Comprehensive Development Area" zones near Tseng Tau Village, and the management of this open space which should be kept open daily for public use, as proposed by you, to the satisfaction of the Director of Leisure and Cultural Services or of the TPB;

(x) the formation and surrender of two sites adjacent to Che Ha Village, each of about 6,200m^2 with a minimum width of 65m for building two primary schools, upon the demand of the Government, to the satisfaction of the Secretary for Education or of the TPB;

(y) the design and provision of social welfare facilities in the "Government, Institution or Community" zone near Tseng Tau Village to the satisfaction of the Director of Social Welfare or the TPB;

(z) the submission of an implementation programme, with phasing proposals to tie in with the completion of both major infrastructural facilities serving the proposed development and the traffic improvement measures, to the satisfaction of the Director of Planning or of the TPB; and

(aa) the submission of a revised Quantitative Risk Assessment report to reflect the latest risk level imposed by the high pressure underground towngass transmission pipeline running along Sai Sha Road on the proposed development to the satisfaction of the Director of Electrical and Mechanical Services or of the TPB.

You are also advised on the following:

(a) to note the comments of the Chief Estate Surveyor/Land Supply, Lands Department (CES/LS, LandsD) that:

(i) the proposed comprehensive development at the Site is in breach of the respective lease conditions. If the planning application is approved, the applicant is required to apply to LandsD for lease modification/ land exchange to give effect to the proposal. However there is no guarantee at this stage that the lease modification/ land exchange together with the adjoining Government Land would be approved. If it is approved by LandsD acting in its capacity as landlord at its sole discretion, it will be subject to such terms and conditions as proposed by LandsD, including but not limited to payment of premium and administrative fee; and

(ii) the area of the application site and other details submitted by the applicant have not been verified and the applicant is required to demonstrate the dimensions and calculations of the area when the lease modification/ land exchange application is submitted;

(b) to note the comments of the Commissioner for Traffic (C for T) that:

(i) the design of the proposed re-provision of the public transport terminus and the open carpark in Nai Chung, including the access arrangement and provision of disable car parking, shall comply with the TD's requirements;

(ii) the signal design of the proposed signalized junctions shall comply with the TD's requirements;

(iii) a temporary public transport terminus in Tseng Tau for ***Green Mini-bus 807K, 807K (short-working service) and 807S*** should be provided during the construction stage ***to the satisfaction of C for T***;

(iv) the public transport interchanges should be kept open for the use by the public transport as approved by TD and all members of the public 24 hours a day free of charge and without any restriction. The public transport interchanges will be owned, operated, managed and maintained by the owner(s) of the development;

(v) the design of the two transport interchanges at Sites A and B should adopt sawtooth design and comply with the guideline for smart public transport interchanges with electric vehicle charging facilities and facilities for bus operators ***to the satisfaction of C for T***; and

(vi) the detailed public transport services plan shall be submitted for TD's consideration;

(c) to note the comments of the Director of Environmental Protection (DEP) that:

(i) since there might be other future developments within the catchment before and after first population intake of the proposed development (i.e. year 2025 as given in the application), the applicant should closely liaise with DSD and other relevant parties to ensure the Ma On Shan Sewage Pumping Station (MOSSPS) (which will be upgraded by another project), has sufficient capacity to cater for population intake of the proposed development in the ultimate flow scenario;

(ii) if the first population intake at the Site happens before sewerage provisions, then the project would be a designated project under Item P.2 of the Environmental Impact Assessment Ordinance (EIAO) as it would be "A Residential Development of not less than 2,000 flats and not served by public sewerage networks by the time a flat is occupied". In that case, the applicant has to follow and undergo the necessary EIAO procedure for the subject development;

(iii) the ***exact location of the proposed Sai O SPS is still under review and subject to EIA process. Upon the approval of EIA, the applicant shall review the SIA based on the finalised location of the Sai O SPS and the alignment of the associated sewers and rising mains, and resubmit the SIA report for EPD's approval;***

~~(iii)~~ ***(iv)*** the applicant should consider more features to minimize non-point source pollution into drainage system, e.g. water features in non-paved area, grass paver blocks at paved area, etc;

~~(iv)~~ ***(v)*** the noise submissions indicated that the noise impact assessments have been conducted based on the information currently available, for which some are

preliminary/indicative only and would be subject to further details in the subsequent design stage; and

(v) it is noted that the stormwater runoff from the reserved school sites, social welfare facilities, and Che Ha Village access road will be discharged towards site C outfall. The applicant should include facilities (e.g. grease trap, silt trap, etc.) in the stormwater runoff system to remove rubbish or other non-point source pollutant in the surface runoff in order to protect the water quality near the outfall;

(d) to note the comments of the Chief Town Planner/Urban Design and Landscape, Planning Department (CTP/UD&L, PlanD) that the details on the overall connectivity system should be carefully designed and presented at the subsequent detailed design stage;

(e) to note the comments of the Chief Engineer/Mainland North, Drainage Services Department (CE/MN, DSD) that:

(i) whilst the ultimate scope and details of upgrading work for Ma On Shan Sewage Pumping Station (MOSSPS) pertaining to the relocation of Sha Tin Sewage Treatment Works to Caverns and other public/private development projects in the catchment including the proposed development will take time for coordination and reach agreement amongst various project teams of interfacing projects and DSD, the applicant should keep on closely liaising with the concerned interfacing parties including the relocated Shatin Caverns Sewage Treatment System (CSTS), MOS housing sites development, etc, to refine the ultimate flow scenario of the MOSSPS and to ensure that the necessary upgrading work required for implementation at MOSSOS would adequately cater for the ultimate population intake in the catchment. Further comments on the SIA will be offered by DSD when more detailed sewerage information for the above-mentioned projects are available in future; ***and***

(ii) ***there is no guarantee that the proposed upgrading of the MOSSPS will be completed in accordance with the implementation programme, which is based on the best available information for the time being only, and is subject to change (e.g. potential delay due to unforeseen issues) and review by the project team. Interim arrangement should be considered in the SIA in the event that the upgrading works may fall behind the applicant's development programme, otherwise the applicant shall take and properly manage the risk at his own resources where his sewerage proposal and overall development programme may need to be reviewed;***

(f) to note the comments of the Chief Engineer/Construction, Water Supplies Department (CE/C, WSD) that:

(i) existing water mains at the Site are affected. The applicant should either divert or protect the water mains found on Site;

(ii) if diversion is required, existing water mains inside the ~~proposed~~ site are needed to be diverted outside the site boundary of the proposed development to lie in Government land. A strip of land of minimum 1.5 metres in width should be provided for the diversion of the existing water main(s). The cost of diversion of existing water main(s) upon request will have to be borne by the applicant; and the applicant shall submit all the relevant proposal to WSD for consideration and agreement before the works commence; and

(iii) if diversion is not required, the following conditions shall apply:

- existing water main(s) are affected and no development which requires resiting of water main(s) will be allowed;
- details of site formation works shall be submitted to WSD for approval prior to commencement of works;
- no structures shall be built or materials stored within 1.5 metres from the centre line(s) of water main(s). Free access shall be made available at all times for WSD's staff or their contractor to carry out construction, inspection, operation, maintenance and repair works;
- no trees or shrubs with penetrating roots may be planted within the Waterworks Reserve or in the vicinity of the water main(s). No change of existing site condition may be undertaken within the aforesaid area without the prior agreement of WSD. Rigid root barriers may be required if the clear distance between the proposed tree and the pipe is 2.5 metres or less, and the barrier must extend below the invert level of the pipe;
- no planting or obstruction of any kind except turfing shall be permitted within the space of 1.5 metres around the cover of any valve or within a distance of 1 metre from any hydrant outlet; and
- tree planting may be prohibited in the event that the WSD considers that there is any likelihood of damage being caused to water main(s); and

(iv) apart from bearing the cost of upgrading of the fresh water supply system and salt water supply system, the applicant should also undertake to implement the upgrading works.

(g) to note the comments of the Director of Agriculture, Fisheries and Conversation (DAFC) that ***future submission of LMP for fulfillment of approval condition (c) under A/NE-***

SSH/120-1 should be copied to his office for reference;

~~(i) the applicant should further revise the Landscape Master Plan (LMP), compensatory tree planting plan and arrangement of boundary fencing to minimize the adverse impacts of the proposed development and submit revised ecological impact assessment taking into account the revised Master Layout Plan (MLP) for the Agriculture, Fisheries and Conversation Department (AFCD)'s approval in subsequent stage; and~~

~~(ii) the proposed trail and viewing platform within the ecological buffer zone at Site A should be deleted and individual trees assessment within this zone should be reviewed and updated with an aim to preserve additional trees as far as practicable and to avoid excessive tree felling that may undermine the original intention of this zone. The concerned tree felling and planting proposal shall be submitted for AFCD's approval in subsequent stage;~~

(h) to note the comments of the Director of Fire Services (D of FS) that the Emergency Vehicular Access arrangement shall comply with the Code of Practice for Fire Safety in Buildings 2011 administrated by the Buildings Department. Detailed fire safety requirements will be formulated upon receipt of formal submission of general building plan;

(i) to note the comments of the Secretary for Education (S for Education) that:

(i) the actual layout of the school premises will be determined during the design stage;

(ii) subject to the Transport Department's advice, a roundabout instead of a hammer head is preferred at the end of the cul-de-sac serving as the vehicular access to school sites. The road should also be of sufficient width to accommodate school coaches and serve as EVA to the school sites; and

(iii) the applicant shall be responsible for infrastructural works to facilitate school development at the reserved sites, and shall lay and form the school sites on or before a date to be specified by the Government;

(j) to note the comments of the Director of Social Welfare (DSW) that:

(i) the premises for the agreed welfare facilities should be provided as an integral part of the development and will be assigned back as a Government Accommodation (GA) upon construction completion. The construction cost of this premises would be borne by SWD and the service operator would be selected by SWD;

(ii) the developer shall provide detailed design layout for DSW's further comments separately at a later stage;

(iii) upon satisfactory completion of works by the developer, the Government will reimburse the developer the actual cost of construction or the consideration sum as stipulated in the land lease, whichever is the lesser, according to the established practice; and

(iv) the applicant should take into account the parking and lay-by requirements of the welfare facilities. The relevant requirements are provided below:

- ***one parking space measuring (3m (W) x 8m (L) x minimum 3.3m headroom) for the exclusive use by the District Support Centre for Persons with Disabilities (DSC) for the parking of a 14-seater van with tail-lift;***
- ***two parking spaces measuring (3m (W) x 8m (L) x minimum 3.3m headroom) for the exclusive use by the Residential Care Home for the Elderly (RCHE) cum Day Care Unit (DCU) for the parking of private light buses with tail-lift, any regulations made thereunder and any amending legislation, and belonging to the operator of the RCHE cum DCU and their bona fide guests, visitors or invitees;***
- ***one parking space for a 48-seater coach (3.5 m (W) x 12m (L) x minimum 3.8m Headroom) should be provided for the exclusive use by the Special Child Care Centre (SCCC); and***
- ***one lay-by measuring (3.5m (W) x 12.0m (L) x minimum 4.7m Headroom) for the exclusive use by the DSC, RCHE, and SCCC for the picking up and setting down of passengers from ambulances and private light buses.***

(k) to note the comments of the Chief Building Surveyor/New Territories West, Buildings Department (CBS/NTW, BD) that:

(i) presumably the site abuts on a specified street of not less than 4.5m wide, and as such, the development intensity shall not exceed the permissible as stipulated under the First Schedule of the Building (Planning) Regulations (B(P)R). If the Site is not abutting on a specified street prescribed in B(P)R 18A, the development intensity shall be determined by the Building Authority under B(P)R 19(3) at building plan submission stage;

(ii) the applicant should appoint an Authorized Person/ Registered Structural Engineer/ Registered Geotechnical Engineer and submit the required plans to the Building Authority for approval in accordance with the BO. His position under the BO is hereby reserved;

(iii) regarding the proposed changes, fundamental issues of building plans listed in Appendix A of PNAP ADM-19 may be re-assessed completely; and

(iv) the sustainable building design requirements and prerequisites under PNAP APP-151 & 152 would be applicable to the proposed conversion if GFA concessions are claimed for any green/amenity features and/or non-mandatory/ non-essential plant rooms;

(l) to note the comments of the Director of Electrical and Mechanical Services (DEMS) that:

(i) in the interests of public safety and ensuring the continuity of electricity supply, the parties concerned with planning, designing, organizing and supervising any activity near the underground cable or overhead line under the 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 Site. They should also 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;

(ii) there is a high pressure underground town gas transmission pipeline (running along Sai Sha Road) in the vicinity of the Sites A and C. The project proponent/ consultant/ works contractor shall liaise with the Hong Kong and China Gas Company Limited in respect of the exact locations of existing or planned gas pipes/ gas installations in the vicinity of the proposed development and any required minimum set back distance away from them during the design and construction stages of development; and

(iii) the project proponent/ consultant/ works contractor is required to observe the requirements of the Electrical and Mechanical Services Department's "Code of Practice on Avoiding Danger from Gas Pipes ***2nd Edition***" for reference;

(m) to note the comments of the Director of Leisure and Cultural Services (DLCS) that:

(i) LCSD will not take over the future management of the proposed open space in lack of additional resources. As the open space will mainly serve residents of the proposed development, it will be desirable that the applicant shall consider taking over the future management of the open space;

(ii) the grantee should engage an authorized person such as licensed architects or registered golf facilities designers to certify that the proposed golf facilities are safe;

(iii) the grantee should erect and maintain safety measures such as fences and safety nets especially near but not limited to the residential area to a standard acceptable to its insurer; the grantee should maintain a valid insurance policy to cover indemnity against action resulting from damage or injury caused by golf balls;

(iv) a proper maintenance plan of the golf facilities including golf net is required. The management of the proposed driving range should enforce the plan strictly in order to ensure the effectiveness of the safety measures of the driving range including the golf net;

(v) sufficient space of each driving bay is required in order to prevent player of the bay from hitting users nearby; and

(vi) the grantee should require users to observe the safety rules at the driving range including driving in the bay area only; driving on the driving mat only; no standing in front of the tee line; and no retrieving topped ball or dropped clubs without prior consent from the management of the driving range.

Under section 17(1) of the Town Planning Ordinance, an applicant aggrieved by a decision of the TPB may apply to the TPB for a review of the decision. If you wish to seek a review, you should inform the Secretariat of the TPB (15/F, North Point Government Offices, 333 Java Road, North Point, Hong Kong – Tel. No. 2231 4810 or 2231 4835 and Fax No. 2877 0245 or 2522 8426) within 21 days from the date of this letter (on or before 4.11.2020). The Secretariat of the TPB will then contact you to arrange a hearing before the TPB meeting which you and/or your authorized representative will be invited to attend.

If you have any queries regarding this planning permission, please contact Mr. Tony WU at 2158 6372 or Ms. Sharon CHAN at 2158 6043 of the Sha Tin, Tai Po and North District Planning Office.

I should be grateful if you could advise me in due course whether this amended permission or other previous permission granted by the TPB in respect of the development would be implemented.

Yours faithfully,

K. Chan

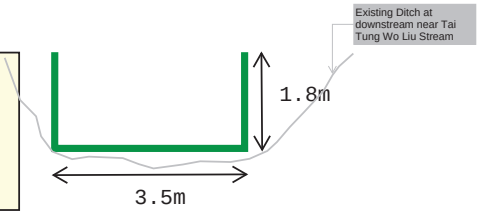
(Ms. Kathy CHAN)
for and on behalf of Director of Planning

Appendix 4 – Checking of Hydraulic Impact to Existing Ditch connected to Tai Tung Wo Liu Stream

APPENDIX B

Effective Ditch 3.5m (W) x 1.8m(H)
Actual width >5m

Consider Area 2, 3, 4A, 4B and C/T:
Checking of Proposed Flow Rate 2.408m/s



3.3.3 Manning's equation has been used to calculate box culvert and channel flows.

$$V = \frac{R^{2/3} s^{1/2}}{n}$$

Where:

V -	flow velocity (m/s)
s -	hydraulic gradient
n -	Manning's roughness coefficient
R -	hydraulic radius (m)

3.3.4 The Manning's roughness coefficient (n) in this assessment has been assumed as 0.015.

R = 6.3/7.1 = 0.887m

S = 0.67%

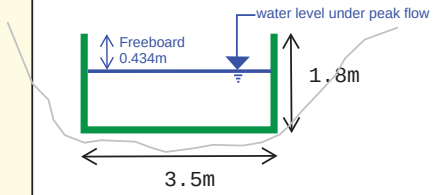
V = 0.5038m/s

By Q= VA

A = 2.408 / 0.5038 = 4.780m

Water Height = 4.780 / 3.5 = 1.366m

Freeboard = 1.8m - 1.366m = 0.434m



Appendix 5 – DSD's Conversation record and Site Photos for Existing Ditch and Tai Tung Wo Liu Stream

Comments from DSD on FI-3

*We have no objection to the **Attachment 8** on the revised SIA.*

*As regards the photo showing the existing conditions of the ditch channel in **Attachment 5**, we consider that the photo provided is insufficient to demonstrate that the ditch is suitable to take up additional flow generated from the development.*

AECOM's Response 2022.08.22

Further to tel-conversation with DSD on 2022.08.18, the photos taken for the existing ditch can refer below **Appendix A**.

In order to demonstrate the capacity check for the existing ditch, the effective dimension is assumed to be 3000mm width x 1.8m depth which the overall width is longer than 5000mm with about 1.8m depth at downstream of the ditch. The calculation can refer to **Appendix B**.

From: ckyip@dsd.gov.hk
Sent: Thursday, August 18, 2022 9:18 AM
To: Leung, Francis
Subject: [EXTERNAL] [Internet] Re: [Internet] RE: Sai Sha Site C S16 (Application No. A/NE-SSH/142) - departmental comments


```
================================================================================
This email was delivered via Internet which may not be trustworthy.
You are advised to pay special attention to any embedded URLs or attachments.
Do not click the URLs or open the attachment unless you know it is safe to do so.
================================================================================
```


Dear Francis

The condition of the ditch is known based on the photos provided

Please substantiate how the ditch can take additional flow Please refer to Appendix 4

從我的iPhone傳送

Leung, Francis <Francis.hp.Leung@aecom.com>於2022年8月18日 上午12:12寫道:


```
================================================================================
This email was delivered via Internet which may not be trustworthy.
You are advised to pay special attention to any embedded URLs or attachments.
Do not click the URLs or open the attachment unless you know it is safe to do so.
================================================================================
```


Dear Michael,

It is critical for us to reply PlanD regarding your comment (or no comment) of the photo showing existing ditch.

Regards,
Francis

From: Leung, Francis
Sent: Friday, August 12, 2022 2:55 PM
To: ckyip@dsd.gov.hk
Subject: RE: Sai Sha Site C S16 (Application No. A/NE-SSH/142) - departmental comments

Dear Michael,

Could you please find attached photos and location plan showing the existing ditch and Tai Tung Wo Liu downstream for your advance reference and consideration.

Let discuss before we formally reply to you.

Regards,
Francis

From: Leung, Francis
Sent: Wednesday, August 10, 2022 9:54 AM
To: ckyip@dsd.gov.hk
Subject: FW: Sai Sha Site C S16 (Application No. A/NE-SSH/142) - departmental comments
Importance: High

Dear Michael,

Further to your comment to the photo showing existing ditch, I would like to further discuss with you about the requirement to settle your comment.

The below aerial view is extracted for your reference. Please note that the existing ditch is indicated aligning inside the tree group on a relative flat land.

APPENDIX A - Site Photos and Location Plan

ISO A1 594mm x 841mm

Approved:

Checked:

Designer:

Project Management Initials:

LEGEND:

TEMPORARY OPEN CUT (MAX. 30°)

A13 A16 A15 A14

To Tai Tung Wo Liu Downsteam

832600 N

A9 A8 A7 A10 A11 A12

Hoarding

Existing Fence

832550 N

A5 A6-1 A6-2

A1

CONNECT TO EXISTING DRAIN

A3 A4 A2

EXISTING STREAM

2x1050φ

M1.7

CUT LINE F-F

SEE DRAWING NO. 60547289/1587

This drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by other parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All meas

AECOM

PROJECT
項目

SAI SHA ROAD WIDENING - SAI SHA COMPREHENSIVE DEVELOPMENT SHAP SZ HEUNG, SAI KUNG NORTH, N.T.

CLIENT
業主

SUN HUNG KAI REAL ESTATE AGENCY LTD. 新鴻基地產代理有限公司

CONSULTANT
工程顧問公司

AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS
分判工程顧問公司

ISSUE/REVISION
修訂

I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 核核
A	JUN.22	1ST AMENDMENT	MCY
-	FEB. 21	1ST SUBMISSION	MCY

STATUS
現況

SUBMISSION

SCALE 比例: A1 1 : 250

DIMENSION UNIT 尺寸單位: METRES

KEY PLAN
索引圖

PROJECT NO. 項目編號: 60547289

CONTRACT NO. 合約編號

SHEET TITLE
圖紙名稱

DRAINAGE LAYOUT PLAN IN PINK AREA (SITE C)

SHEET 7 OF 7

SHEET NUMBER
圖紙編號

60547289/1588A

Plot File by: ZHOUJIE 12/08/2022
PATH P:\PROJECTS\60547289\DRAWING\SUBMISSION\BD\BD_1588.dwg

Photo No: A1
Date: 2022.08.12

Photo No: A2
Date: 2022.08.12

Photo No: A3
Date: 2022.08.12

Photo No: A4
Date: 2022.08.12

Photo No: A5
Date: 2022.08.12

Photo No: A6-1
Date: 2022.08.12

Photo No: A6-2
Date: 2022.08.12

Photo No: A7
Date: 2022.08.12

Photo No: A8
Date: 2022.08.12

Photo No: A9
Date: 2022.08.12

Photo No: A10
Date: 2022.08.12

Photo No: A11
Date: 2022.08.12

Photo No: A12
Date: 2022.08.12

Photo No: A13
Date: 2022.08.12

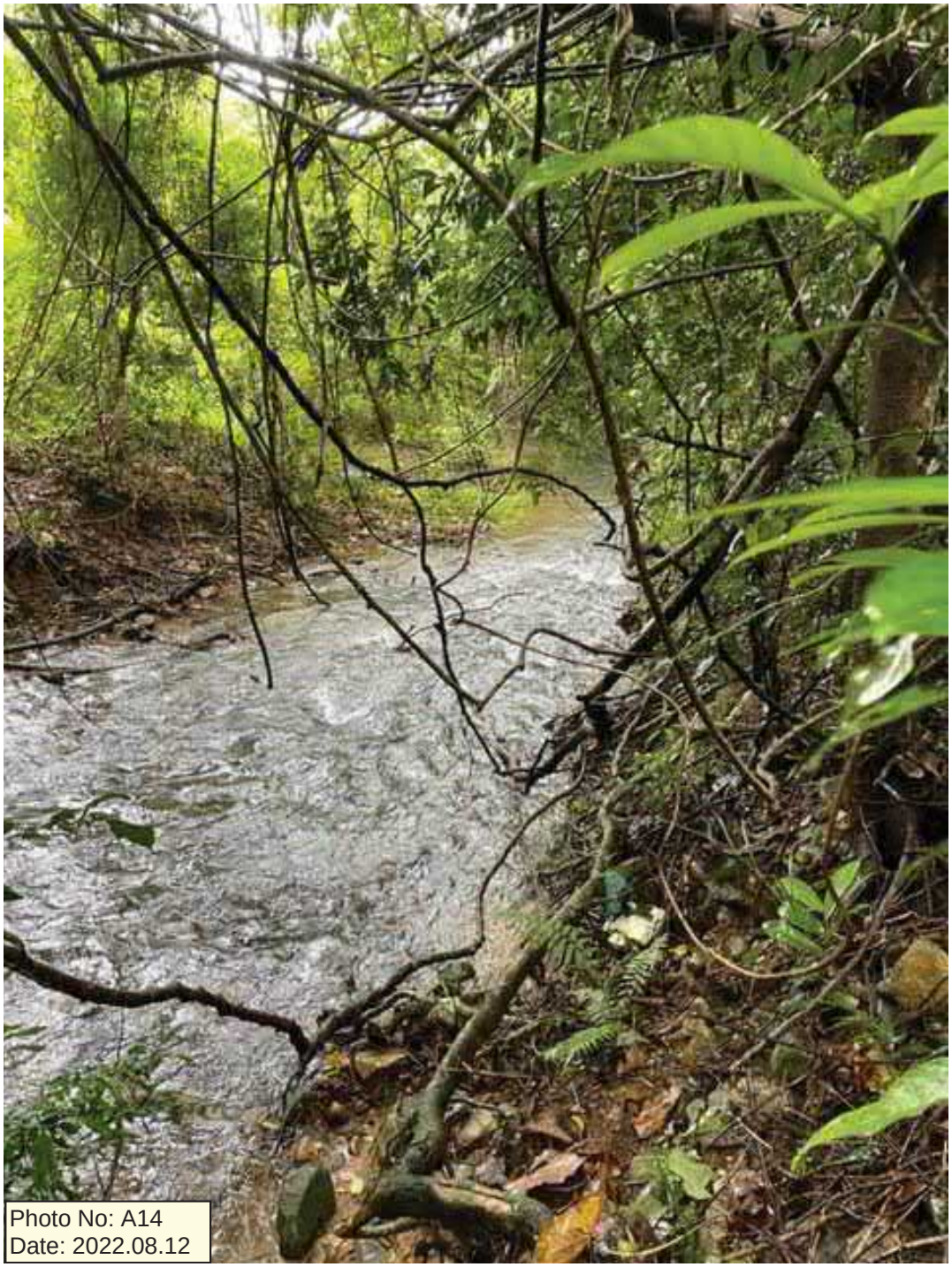


Photo No: A14
Date: 2022.08.12

Photo No: A15
Date: 2022.08.12

Photo No: A16
Date: 2022.08.12

Appendix J

Sewerage Impact Assessment (Site C)

(Consolidated Report based on Further Information submitted on 13 June 2022 & 19 July 2022)

(No further comments from sewerage infrastructure perspective from Environmental Protection Department and Drainage Services Department received in August 2022)

Section 16 Planning Application for Amendments to the Approved Development (Application No. A/NE-SSH/120-1) – Amendments to Recreation and Sports Centre with Ancillary Facilities in Site C

Sewerage Impact Assessment Report

Sept 2022

Section 16 Planning Application for Amendments to the Approved Development (Application No. A/NE-SSH/120-1) – Amendments to Recreation and Sports Centre with Ancillary Facilities in Site C

Sewerage Impact Assessment Report

Contents

1 INTRODUCTION 1
1.1 Background 1
1.2 The Proposed Development 1
2 OBJECTIVES 4
3 DESIGN BASIS AND DESIGN CRITERIA 4
3.1 Introduction 4
3.2 Unit Flow Factors 4
3.3 Peaking Factors 4
4 POPULATION AND FLOW PROJECTIONS 5
4.1 Proposed Development 5
4.2 Existing Village, Planned and On-Going Development 8
5 SITE C DEVELOPMENT – SPORTS AND RECREATIONAL 10
5.1 Existing Sewerage Systems 10
5.2 Sewerage Impact 10
5.3 Interim Sewerage Arrangement 10
5.4 Capacity Checking of the Sewerage System 11
5.5 Mitigation Measures 11
6 CONCLUSION 14

Figure List
SIA/111 Existing Sewerage System
SIA/112 Schematic Diagram of the Sewerage Network Incorporated the Proposed Sewer
SIA/114 Proposed Sewerage Arrangement
60547289/1911F Sewage Layout

Table
Table 1 Proposed Development Schedule for Site C
Table 2 Unit Flow Factors
Table 3 GFA Breakdown and the Estimated No. of Population / Workers / Users
Table 3.1 Estimation of Sewage Flow from Surfacing Pool
Table 4 Sewage from Proposed Development
Table 5 Projected Sewage Flow from Existing Villages to Sai O TSSPS
Table 6 Ultimate Sewage Flow to Sai O TSSPS Included Planned Developments
Table 7 Population Assumptions for Various Recreational Facilities
Table 8 Design Flow for Proposed Sewers, Rising Mains and Pumping Stations
Table 9 Proposed Sewerage System

Appendix
Appendix 1 Master Layout Plan of Sai Sha Development
Appendix 2 Existing and Proposed Sewers Hydraulics
Appendix 3 Correspondence of Interim SIA

1 INTRODUCTION

1.1 Background

1.1.1 The Application Site (Tai Po Town Lot 157 (currently known as Tai Po Town Lot 253 for Site A and Site B and Tai Po Town Lot 157 RP for Site C), various lots in D.D.165, 207 and 218 and Adjoining Government Land, Sai Sha, Shap Sz Heung, New Territories) is the subject of an approved planning application No. A/NE-SSH/120-1 ("Approved Scheme") for proposed comprehensive residential and recreational development including government, institution or community (G/IC) facilities with minor relaxation of gross floor area and building height restrictions which was approved by the Director of Planning, under the delegated authority of the Town Planning Board (the Board), under Section 16A of the Town Planning Ordinance in October 2020.

1.1.2 With the commitment to further enhance user experience in Site C, which is intended to be a sports and recreational hub in Sai Sha, the subject Section 16 planning application ("Current Scheme") is submitted to reflect the proposed diversification of recreational facilities to be provided therein by replacing some of the golf driving range facilities to other outdoor sports and recreational uses with associated minor increase in the number of blocks as ancillary structures for sports and recreational facilities in Site C without any increase/change in the total GFA.

1.1.3 It should be noted that, **the subject matter of the current application is to reflect minor changes in Site C only**. The layout and development parameters for Site A and Site B is entirely identical to those in Approved Scheme. The inclusion of Site A and Site B as part of the Application Site is to comply with the statutory requirement of the subject "Comprehensive Development Area" ("CDA") zone under the Notes of Shap Sz Heung Outline Zoning Plan which requires the submission of a Master Layout Plan covering the entire "CDA" zone for the approval of the Board. The proposed minor amendments to the Approved Scheme for Site C (Current Scheme) shall be the only subject matter of this planning application.

1.1.4 This Sewerage Impact Assessment (SIA) is prepared to facilitate the review of discharge approval condition due to the proposed minor amendment of sports and recreational facilities provision in Site C. Therefore, Site C shall be the only subject matter of this assessment.

1.2 The Proposed Development

1.2.1 Same as the previously approved scheme, the Application Site comprises four major portions, namely Site A, Site B and Site C (or collectively known as "Development Sites"), and Sai Sha Road together with its widening works area. Site A and Site B are designated mainly for residential purpose supported by some local retail and public transport facilities to serve the future residents, whereas Site C is proposed for recreational use. According to the Approved Scheme, Site C covers about 36.7ha with (i) 10 blocks of recreational and sports centre with ancillary facilities and golf driving range facilities, (ii) 1 block of welfare centre and public vehicle park building and (iii) 2 reserved primary school sites (**Appendix 1**).

1.2.2 **Table 1** below shows the Overall indicative Development Schedule. No change is proposed to the overall parameters as the Approved Scheme. **Table 2** shows the indicative Development Schedule of the Current Scheme at Site C. It should be noted that all of the development parameters for Site C under the Current Scheme are the same as the Approved Scheme except for increase in no. of blocks.

Table 1: Indicative Development Schedule (Overall)

The Overall Development	
Total Application Site Area (1)	About 748,400 m^2
Domestic GFA (2)	Not more than 538,213 m^2
Domestic Plot Ratio (3)	About 0.832
No. of Residential Storeys (4)	16-31 storeys
Site Coverage (above ground level) (3)	Domestic – not more than 33.33% Non-Domestic – not more than 80% (below 15m)
No. of Residential Towers	46
No. of Flats	Not more than 9,700
Average Flat Size	55.49 m^2
Anticipated Population (5)	About 29,100
Residents' Club GFA (6)	Not more than 13,446 m^2
Commercial GFA (7)	Not more than 12,077 m^2
Transport Interchange GFA (8)	Not more than 9,000 m^2
Recreation & Sports Centre with Ancillary Facilities GFA (8)	Not more than 17,500 m^2
Welfare Centre GFA	Not more than 5,560 m^2
Public Vehicle Park GFA (8)	9,000 m^2

Remarks:

(1) Including Development Site Area of 646,908 m^2 (i.e. excluding Sai Sha Road widening works area and areas to be provided as sewage pumping station near Tseng Tau Village).
(2) Including 390m^2 for two existing houses in Site C to be retained.
(3) Calculated based on Development Site Area.
(4) Over 1 to 3 levels of carpark / M&E / residential clubhouse facilities.
(5) Based on a person-per-flat ratio of 3.0.
(6) The clubhouse GFA is about 2.5% of the domestic GFA for Site A and Site B respectively.
(7) Commercial GFA refers to commercial uses ('Eating Place' and 'Shop and Services'), 'School' (kindergarten, nursery, language, computer, commercial and tutorial schools, art school, ballet and other types of schools providing interest / hobby related courses), 'Place of Entertainment' and 'Religious Institution' (church).
(8) Under the approved scheme (Application No. A/NE-SSH/61-2), it also included the provision of Sports Centre and Ancillary Facilities, as well as Public Vehicle Park. GFAs of these facilities are specified in the development schedule.

Table 2: Indicative Development Schedule of the Proposed Amendment at Site C

Site C:	
Development Site Area (2)	About 366,983 m^2
Total no. of Non-domestic Blocks	14 (6)
Recreation & Sports Centre with Ancillary Facilities / E&M (3) (4)	
Non-domestic GFA (1)	Not more than 17,500m^2 • Sports Centre & Ancillary Facilities: Not more than 5,500m^2 • Recreation Centre & Ancillary Facilities: Not more than 8,500m^2 • Retail & F&B Facilities: Not more than 3,500m^2
No. of Blocks	13 (6)
No. of Storeys	3 storeys above 2 levels of basement
Welfare Centre & Public Vehicle Park Building (5)	
Non-domestic GFA	Not more than 14,560m^2 • Welfare Centre: Not more than 5,560m^2 • Public Vehicle Park: Not more than 9,000m^2 (1)
No. of Blocks	1
No. of Storeys	5 storeys above 1 level of basement carpark
Reserved Primary School Sites	
Total Site Area	Not less than 12,400m^2 (i.e. not less than 6,200m^2 each)

Remarks:

(1) Under the approved scheme (Application No. A/NE-SSH/61-2), it also included the provision of Sports Centre and Ancillary Facilities, as well as Public Vehicle Park. GFAs of these facilities are specified in the development schedule.
(2) Excluding Sai Sha Road widening works area and sewage pumping station near Tseng Tau Village within Application Site boundary of the Approved Scheme.
(3) Recreation & Sports Centre with Ancillary Facilities include 'Place of Recreation, Sports or Culture' (Including Golf Driving Range), 'Place of Entertainment', 'Eating Place', 'Shop and Services' and / or 'Indoor Playground'.
(4) Recreation & Sports Centre with Ancillary Facilities include ancillary E&M facilities for the power supply of Sites A to C. As the E&M facilities are ancillary and directly related to the development, the associated GFA of not more than 3,000m^2 shall be disregarded in this planning application in accordance with the provision of the Notes of the OZP.
(5) Light bus layby, car parking, and loading & unloading provisions subject to TD's approval.
(6) Exclude the structures solely for ancillary M&E and shuttle lift uses.

2 OBJECTIVES

2.1.1 The main objective of this SIA is to review the potential sewerage impact due to proposed minor changes to the Approved Scheme under A/NE-SSH/120-1 for Site C in the Current Scheme.

3 DESIGN BASIS AND DESIGN CRITERIA

3.1 Introduction

3.1.1 The SIA is carried out based on the following assumptions and criteria set out in the *"EPD/TP1/05 Guidelines for Estimating Sewage Flows for Sewage Infrastructure Planning Version 1.0"* (GESF) published by Environmental Protection Development.

3.2 Unit Flow Factors

3.2.1 The unit flow factors adopted in the SIA are based on the unit flow factors in Table 1 and Table 2 of the GESF. A summary of the flow factors used for different development types is shown in **Table 2**.

Table 2: Unit Flow Factors

Abbreviation	Development Type	Unit Flow Factor (m^3/hd/day)
R2	Residential R2	0.27
R3/4	Residential R3/4	0.37
MV	Modern Village	0.27
TV	Traditional Village	0.15
Non-Dom	Non-Domestic	0.15
IN/S	Institution/School	0.04
C	Commercial	0.28
F&B	Restaurants & Hotels	1.58
LCR	Cheung Muk Tau (Public Housing Site)	0.19
Others	Others (e.g. Club House, Social Welfare, etc.)	0.28

3.3 Peaking Factors

3.3.1 The peaking factors, including / excluding stormwater allowance, are given in Table T-5 of the GESF to be adopted in the SIA.

4 POPULATION AND FLOW PROJECTIONS

4.1 Proposed Development

4.1.1 This submission reviewed the amendment of replacing a golf driving range with a variety of recreational and leisure facilities in Site C while the other part from the development, Site A and Site B, shall remain identical to the Approved Scheme under A/NE-SSH/120-1. There is also no change to the total GFA for Site C as compared with the Approved Scheme under A/NE-SSH/120-1.

4.1.2 The GFA breakdown and the estimation of the relevant population and no. of users/ workers are provided in **Table 3**.

Table 3: GFA Breakdown and the Estimated No. of Population / Workers / Users

Development Type	GFA (m^2)	Population/ Employment
Site C		
Sports Centre & Ancillary Facilities (*F&B*)	3,500	350
Sports Centre & Ancillary Facilities (*non F&B*)	14,000	718
Social Welfare Facilities	-	138
Primary School (Students)	-	2,400
Primary School (Staff)	-	120
Surfacing Pool	13.2	-
Site B [Identical to the Approved Scheme under A/NE-SSH/120-1]		
Residential (R2)	297,573	16,200
Club House (*F&B*)	1,488	100
Club House (non *F&B*)	5,952	397
Commercial (*F&B*)	2,644.5	177
Commercial (non *F&B*)	2,644.5	177
Kindergarten (Students)	-	270
Kindergarten (Staff)	-	18
Public Toilet	-	7 *Note 4*
Site A [Identical to the Approved Scheme under A/NE-SSH/120-1]		
Residential (R2)	240,250	12,900
Club House (F&B)	1,201	81
Club House (non F&B)	4,805	321
Commercial (F&B)	2,644	177
Commercial (non F&B)	2,644	177
Kindergarten (Students)	-	270
Kindergarten (Staff)	-	18
Church	1,500	100

Note and Assumption

1. For Site A and Site B with residential blocks, employee population count calculated by dividing development area by 15, which suggests each employee looks after 15 square meters of area within the structure.
2. According to HKPSG, 1 primary school classroom can accommodate 30 pupils.

3. According to Education Bureau, from 2003/04 school year, all kindergartens are required to attain the teacher-to-pupil ratio at 1:15 or lower.
4. A 4-cubicle public toilet to be provided at the Public Open Space (zoned "Open Space" under OZP) of Site B, designated as a "Yellow" area under Lease.
5. Maintenance buildings are assumed to be normal office with staff working during office hours.
6. Commercial facilities are assumed to be operated for food and beverage purposes.
7. Elderly or disabled persons in social welfare facilities to be classified as non-domestic residents for sewage estimation purpose.
8. Figures in the table are rounded up to the nearest single digit.

4.1.3 **Table 3.1 Estimation of Sewage Flow from Surfacing Pool**

Employees	
Pool Area	6.6 m^2
Pool Depth	2.0 m
Pool Volume	13.2 m^3
Turnover Rate	4 hrs
Surface Loading Rate of Filter	20m^3 / m^2 / hr
Filter Areas Required	0.165 m^2
Backwash Duration	3 min/d
Backwash Flow Rate	30m^3 / m^2 / hr
Design Flow for Surfacing Pool Backwashing	0.2475 m^3/d

4.1.4 **Table 4** summarizes the sewage flow generated from the development.

Table 4: Sewage from Proposed Development

Development	Population/ Employment	Unit Flow Type	Unit Flow Factor (m^3/hd/day)	ADWF (m^3/d)
Site C				
Sports Centre & Ancillary Facilities (F&B)	350	F&B	1.58	553
Sports Centre & Ancillary Facilities (Non F&B)	718	Others	0.28	201
Social Welfare (Employee)	138	C	0.28	39
Primary School (Students)	2,400	IN/S	0.04	96
Primary School (Staff)	120	C	0.28	34
Surfacing Pool	-	-	-	0.2475
Subtotal				923
Site B				
[Identical to the Approved Scheme under A/NE-SSH/120-1]				
Residential (R2)	16,200	R2	0.27	4,374
Club House (F&B)	100	F&B	1.58	158
Club House (Others)	397	Others	0.28	111
Commercial Facilities (F&B)	177	F&B	1.58	280
Commercial Facilities (Others)	177	Others	0.28	49

Public Open Space (Public Toilet)	24	Others	0.28	7
Kindergarten (Students)	270	IN/S	0.04	11
Kindergarten (Staff)	18	C	0.28	5
Subtotal				4,995
Site A				
[Identical to the Approved Scheme under A/NE-SSH/120-1]				
Residential (R2)	12,900	R2	0.27	3,483
Club House (F&B)	81	F&B	1.58	128
Club House (Others)	321	Others	0.28	90
Commercial Facilities (F&B)	177	F&B	1.58	280
Commercial Facilities (Others)	177	Others	0.28	49
Kindergarten (Students)	270	IN/S	0.04	11
Kindergarten (Staff)	18	C	0.28	5
Church	100	Others	0.28	28
Subtotal				4,074
			Total	**9,992**

Note:
1. Figures of Population/ Employment refers **Table 3**.
2. Unit flow factors are referenced from EPD guideline – Guidelines for Estimating Sewage Flows for Sewage Infrastructure Planning Version 1.0 (GESF), Food and Beverage (F&B) type commercial activities is equivalent to "J10" Restaurant & Hotel category under GESF Table T-2.

4.2 Existing Village, Planned and On-Going Development

4.2.1 The projected sewage flows from the existing villages given by DSD are summarized in **Table 5**.

Table 5: Projected Sewage Flow from Existing Villages to Sai O TSSPS (Identical to the Approved Scheme under A/NE-SSH/120-1)

Existing Villages	Projected Flow (m^3/d)									
	MV	TV/TS	LCR	R3/R4	Student	Ind	Com	Emp	Others	Total Flow
Tseng Tau	591	0	0	0	0	0	0	0	0	591
To Proposed Tseng Tau SPS	**591**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**591**
Kei Ling Ha Lo Wai	172	0	0	0	0	0	0	0	5	177
Kei Ling Ha San Wai	198	1	0	0	0	0	0	0	10	209
Sai Keng	592	0	0	0	0	0	0	0	0	592
Nga Yiu Tau	96	0	0	0	0	0	0	0	0	96
Tin Liu (Tai Tung Wo Liu)	204	0	0	0	0	0	0	0	0	204
Tai Tung	174	0	0	0	0	0	0	0	0	174
Ma Kwu Lam	228	1	0	0	0	0	0	0	0	229
Che Ha	556	2	0	0	0	0	0	0	2	560
Kwun Hang	176	1	0	0	0	0	0	1	0	177
Nai Chung	212	0	0	0	0	0	9	0	0	222
Sai O	318	2	0	0	0	0	0	0	14	334
Cheung Muk Tau (Village)	279	0	2,067	0	0	0	0	0	0	2,347
To Proposed Sai O SPS[1]	**3,796**	**7**	**2,067**	**0**	**0**	**0**	**9**	**1**	**31**	**5,912**

[1] Total flow to Sai O TSSPS included flow from Tseng Tau SPS

4.2.2 The ultimate projected flow into Sai O TSSPS is provided in **Table 6.**

Table 6: Ultimate Sewage Flow to Sai O TSSPS Included Planned Developments

Planned Developments	Projected Flow (m^3/d)										
	MV	TV/TS	LCR	R2	R3/R4	Student	Ind	Com	Emp	Others	Total Flow
Cheung Muk Tau (Other Dev.)	0	0	0	0	2962	42	0	75	0	40	3,119
Proposed Development in Application Site	0	0	0	7857	0	162	0	1927	0	7	9,953
Other Private Projects	0	0	0	0	658	220	0	0	20	0	898
Social Welfare Facilities	0	0	0	0	0	0	0	0	0	39	39
To Proposed Sai O SPS	**0**	**0**	**0**	**7,857**	**3,620**	**395**	**0**	**2,002**	**20**	**86**	**14,009**
Existing Villages (From Table 5)	3,796	7	2,067	0	0	0	0	9	1	31	5,912
Total flow to Sai O SPS	**3,796**	**7**	**2,067**	**7,857**	**3,620**	**395**	**0**	**2,011**	**21**	**117**	**19,921**
Design capacity of Sai O TSSPS (with about 3.3% contingency)											**20,600**

Note: Individual projected flows rounded to the nearest m^3/d

5 SITE C DEVELOPMENT – SPORTS AND RECREATIONAL

5.1 Existing Sewerage Systems

5.1.1 Site C is currently undeveloped and occupied by two temporary golf driving ranges. There is nil existing public sewerage system connected in the development area where Site C is considered unsewered at present.

5.1.2 Existing Sewerage System adjacent to development area is shown on **Figure SIA/111**.

5.2 Sewerage Impact

5.2.1 As compared to the Approved Scheme, a golf driving range and a mini-driving range / game area / recreation & sports centre with ancillary facilities in the southeastern and western portion respectively are replaced with diversified open-air sports and recreation facilities. As reflected in **Table 7** below, it is anticipated that there would be an increase of 75 population due to such amendment and an increase of $11m^3/d$ Average Dry Weather Flow (ADWF). The revised information is shown on **Table 3** and **Table 4** respectively.

Table 7 Population Assumptions for Various Recreational Facilities

Recreational Facilities	Assumed Population		Difference (b)-(a)
	Approved Class B Scheme (A/NE-SSH/120-1) (a)	New S16 Scheme (b)	
Golf Driving Range	172 (86 bays under approved GBP)	140 (70 bays under new S16)	-32
Tennis Court	15 (3 courts under approved scheme)	25 (5 courts under new S16)	+10
Football Court	-	50	+50
Lacrosse	-	15	+15
Surfing Pool	-	2 (1 person surfing and 1 coach)	+2
Training Path for Cycling	-	30	+30
Total	187	262	+75

5.2.2 Sewage generated from the Proposed Development (Site C) will be collected and discharged to the planned Tseng Tau SPS or the nearby sewerage system with associated rising mains or gravity sewers connecting to the proposed Sai O TSSPS for discharge. Schematic diagram of the sewerage network and proposed sewerage arrangement can refer to **Figure SIA/112 and 114**.

5.3 Interim Sewerage Arrangement

5.3.1 While Site C Development is proposed to be in operation before the commissioning of Sai O TSSPS, an interim sewerage arrangement was proposed to cater the sewage generated from recreation services. An interim SIA report was submitted to EPD under separate submission with letter ref.: MCY:VPPW:KSWF:wtsk:60547289/10.7-2021011321L on 29 July 2021. No further comment was received from EPD on 20 August 2021. The correspondence and report were enclosed in **Appendix 3**.

5.4 Capacity Checking of the Sewerage System

5.4.1 The impact due to the amendment under this submission would be minimal as compared to the Approved Scheme. An increase of 11m^3/d ADWF was considered in the hydraulic design. It was checked and the estimation is shown in the **Appendix 2**.

5.5 Mitigation Measures

5.5.1 The proposed sewerage system will convey to the planned Sai O SPS to serve all the existing and planned developments within its catchment area as shown in the schematic diagram (**Figure SIA/112**). In previous submission, it was agreed that the design capacity of Sai O SPS would be 20,600m^3/d which could cater for all the existing and planned developments within its catchment area.

5.5.2 The projected flows for existing villages, Site A and Site B development, and other private projects were identical to the previous submission except Site C due to the amendment mentioned in Section 1.2.1.

5.5.3 **Table 8** is a summary of individual flows from the proposed development. The lump sum will be the same as the maximum design capacity of the Sai O SPS, 20,600m^3/d with consideration of 3.3% contingency. Therefore, no adverse impact would be resulted due to such changes.

Table 8: Design Flow for Proposed Sewers, Rising Mains and Pumping Stations

Developments	Ultimate ADWF (m^3/d)	
Site B	613	
Site C	754	
Social Welfare Facilities	39	
Sewer C		**1,406**
Public Toilet	7	
Sewer D		**7**
Sewer D	7	
Collect Sewer C	1,406	
Tseng Tau Village	591	
Rising Main Y from Tseng Tau SPS		**2,004**
Site B	1,900	
Private SPS No.1		**1,900**
Site B	1,850	
Private SPS No.2		**1,850**
Site B	625	
Private SPS No.3		**625**
Site A	4,074	
Sewer B & B2		**4,074**
Kei Ling Ha Lo Wai	177	
Kei Ling Ha San Wai	209	
Sai Keng	592	
Nga Yiu Tau	96	
Tin Liu (Tai Tung Wo Liu)	204	
Tai Tung	174	
Ma Kwu Lam	229	
Che Ha	560	
Kwun Hang	177	
Nai Chung	222	
2 Reserved Primary School (Site C)	101	
Collect Sewer B& B2	4,074	
Collect Rising Main Y	2,004	
Private SPS No.1	1,900	
Private SPS No.2	1,850	
Private SPS No.3	625	
Sewer A		**13,194**
Sai O	334	
Cheung Muk Tau (Village)	2,347	
Cheung Muk Tau (Other Developments)	3,119	
Other Private Projects	898	
Collect Sewer A	13,194	
Rising Main X from Sai O TSSPS		**19,892**

*allowed 3.3% contingency equals to 20,600m^3/d ADWF

5.5.4 **Table 9** shows the proposed sewerage system.

Table 9: Proposed Sewerage System

Gravity Sewer	**Diameter (mm)**	**Approx. Length (m)**
Sewer A	900	1,051
Sewer C	400	115
Sewer B1	250	229
Sewer B2	500	38
Sewer B3	400	41
Sewer D	250	48
Pumping Station	**(ADWF) Design Flow (L/s)**	**Peaking Factor**
Sai O TSSPS	238	2.9
Tseng Tau SPS	23	4
Private Sewage Pumping Station	**(ADWF) Design Flow (L/s)**	**Peaking Factor**
Private SPS No.1	23	2.28
Private SPS No.2	23	2.28
Private SPS No.3	12	2.39
Rising Main	**Diameter (mm)**	**Approx. Length (m)**
Rising Main X	600 (Twin)	2,514
Rising Main Y	315 (Twin)	623
Rising Main Z	250 (9 nos.)	150

6 CONCLUSION

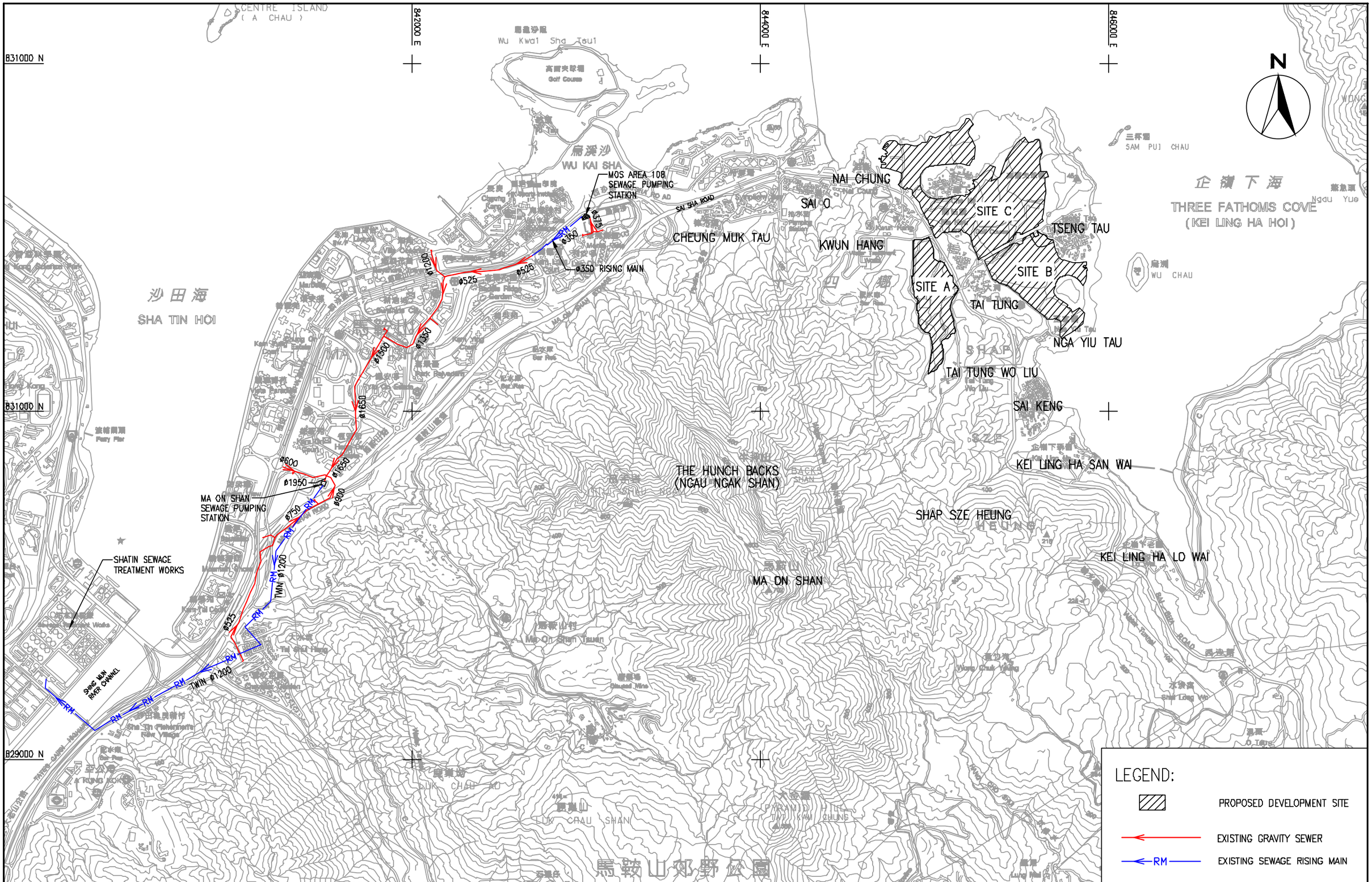
6.1.1 Minor amendments are only proposed to Site C of the Approved Scheme. The proposed amendments mainly concern replacement of golf driving range facilities with other outdoor sports and recreation facilities (e.g. sports fields / ball courts) to better meet the need of the community in the Sai Sha area.

6.1.2 The proposed amendment of Site C would lead to an increase of 75 population or 11m^3/d ADWF. The sewerage impact is minimal compared to the planned sewerage system. Hydraulic checking verified the proposed sewer would be sufficient capacity to cater for the minor change.

6.1.3 As with the previously approved scheme, the sewerage system serving the assessment area will mainly include two public sewage pumping stations (i.e. the Sai O TSSPS and Tseng Tau SPS) and the associated rising mains and gravity sewers. The collected sewage will be conveyed to the planned Sai O TSSPS with design capacity of 20,600m^3/d to serve all the existing and planned developments within its catchment areas. An interim stage is proposed to cater for the Site C recreation services before commissioning of Sai O TSSPS.

6.1.4 Therefore, no adverse sewerage impact would be resulted.

Figures



SAI SHA ROAD WIDENING - SAI SHA COMPREHENSIVE DEVELOPMENT

EXISTING SEWERAGE ARRANGEMENT

SCALE	A3 1 : 20000	DATE	JUN. 2018
CHECK	WWKW	DRAWN	ZFX
JOB No.	60144097	DRAWING No.	SIA/111
		REV	–

P:\PROJECTS\60144097\Drawing\Report\SIA\411.dwg 2018-07-06 17:18 gaoyu

LEGEND:

- EXISTING GRAVITY SEWER
- PROPOSED GRAVITY SEWER
- RM — EXISTING SEWAGE RISING MAIN
- RM — PROPOSED SEWAGE RISING MAIN
- PROPOSED CONVERSION CHAMBER

SHA TIN
SEWAGE TREATMENT
WORKS

SHING MUN RIVER CHANNEL

TWIN ø1200 RM

TWIN ø1400 RISING MAINS

TAI SHUI HANG NULLAH

MOSSPS

ø1950

ø1500 TO ø1650

ø600

ø900

ø1200

ø1350

ø525

MOS108SPS

ø350

EXISTING RESIDENTIAL DISCHARGE

WKSSPS

ø300

PROPOSED TWIN ø600 RISING MAIN 'X'

PROPOSED SAI O SPS

PROPOSED SEWER 'A'

PROPOSED SEWER 'B3'

PROPOSED FLOW FROM SITE A DEVELOPMENT SEWER 'B'

PROPOSED SEWER 'B2'

PROPOSED SEWER 'A'

PROPOSED TWIN ø315 RISING MAIN 'Y'

PROPOSED TSENG TAU SPS

PROPOSED SEWER 'C'

PROPOSED SEWER 'D'

PRIVATE SPS

PROPOSED 6xø250 RISING MAIN (Z)

MA ON SHAN FLOWS

SAI SHA ROAD WIDENING – SAI SHA COMPREHENSIVE DEVELOPMENT

SCHEMATIC DIAGRAM OF THE SEWERAGE NETWORK INCORPORATED THE PROPOSED SEWER

SCALE	A3 1 : 2000	DATE	NOV. 2021
CHECK	WWKW	DRAWN	ZFX
JOB No.	60144097	DRAWING No.	SIA/112
		REV	C

P:\Projects\60144097\drawing\Report\SIA\412.dwg 2021-12-01 09:29 setocf

842500 E
843500 E
844500 E
832000 N
831000 N
N
TENTATIVE SITE FOR SAI O SPS SUBJECT TO DSD'S AGREEMENT OR ANY OTHER ALTERNATIVE LOCATION DESIGNATED BY DSD
SEWAGE FROM PUBLIC TOILET DISCHARGE TO SAI O SPS
WKSSPS
RISING MAIN 'X' (TWIN ø600 PIPE)
SEWER 'A' (ø900 PIPE)
FLOW FROM PUBLIC TOILET SEWER 'D' (ø250 PIPE)
SEWER 'C' (ø400 PIPE)
RISING MAIN 'Y' (TWIN ø315 PIPE)
APPROXIMATE ROUTING FROM WKSSPS TO ø1200 EXISTING GRAVITY SEWER
ø300
ø350
MOS108SPS
ø350 RISING MAIN
ø1200
ø1200
CONNECT TO EXISTING FOULWATER MANHOLE FM4039225 (EXISTING MANHOLE TO BE MODIFIED)
ø525
RISING MAIN (TWIN ø600 PIPE)
DISCHARGE TO EXISTING ø1200 TRUNK SEWER
ø1350
EXISTING ø1350 SEWER
SITE C
FLOW FROM SITE A DEVELOPMENT SEWER 'B3' (ø400 PIPE) (FMTH-A-03)
GRAVITY SEWER CONVERSION CHAMBER (UNDER PRIVATE USE AND MAINTENANCE)
FLOW FROM SITE A DEVELOPMENT SEWER 'B' (ø500 PIPE) (FMTH-A-02)
PROPOSED TSENG TAU SEWAGE PUMPING STATION
SITE B
SITE A
RISING MAIN 'Z' (9xø250 PIPE)
RM

LEGEND:

- DEVELOPMENT SITE BOUNDARY
- EXISTING GRAVITY SEWER
- PROPOSED GRAVITY SEWER
- PROPOSED RISING MAIN
- EXISTING SEWAGE RISING MAIN

AECOM

SAI SHA ROAD WIDENING – SAI SHA COMPREHENSIVE DEVELOPMENT

PROPOSED SEWERAGE ARRANGEMENT

SCALE	A3 1 :10000	DATE	DEC. 2020
CHECK	WWKW	DRAWN	ZFX
JOB No.	60144097	DRAWING No.	SIA/114
		REV	E

P:\Projects\60144097\drawing\Report\SIA\414.dwg 2021-12-02 10:52 setocf

ISO A1 594mm x 841mm

Approved:

Checked:

Designer:

Project Management Initials:

FOR REFERENCE ONLY

Detailed pipe alignment shall refer to the latest set of drainage & sewerage submission package

845400 E

845500 E

845600 E

832100 N

832000 N

NOTE:
1. FOR NOTES AND LEGEND REFER TO DRAWING NOS. 60547289/1303, 1304 AND 1910.

N

TSENG TAU VILLAGE
井頭村

This green highlighted pipe section represent "Sewer C"

PROPOSED 250 DIA. SEWER WITH PLUGGED END FROM FMTH-C-02A CONNECT TO M6.10

PROPOSED 250 DIA. SEWER WITH PLUGGED END FROM FMTH-C-02 CONNECT TO M6.10

SEGMENT BENDS

PROPOSED 250 DIA. SEWER WITH PLUGGED END FROM FMTH-C-01 CONNECT TO M3.20A

M6.10

M3.00B

WASHOUT PIT WO1

TTSPS

PROPOSED TSENG TAU SEWAGE PUMPING STATION

CONNECT FROM TSENG TAU SEWAGE PUMPING STATION

SEGMENT BENDS

PROPOSED PUBLIC SEWERAGE RISING MAIN 'A' 2x315ø

PROPOSED 250 DIA. SEWER WITH PLUGGED END FROM FMTH-B-02 CONNECT TO M3.10A

PROPOSED 250 DIA. SEWER FROM WITH PLUGGED END FROM FMTH-C-03 CONNECT TO M3.50

CUT LINE A-A
SEE DRAWING NO. 60547289/1912

PROPOSED 400 DIA. SEWER WITH PLUGGED END FROM FMTH-B-01 CONNECT TO M3.30

SITE B DEVELOPMENT

Plot File by: Yuwun.He 07/10/2021
PATH P:\PROJECTS\60547289\DRAWING\SUBMISSION\FD\FD_1911.dwg

AECOM

PROJECT
項目

SAI SHA ROAD WIDENING - SAI SHA COMPREHENSIVE DEVELOPMENT SHAP SZ HEUNG, SAI KUNG NORTH, N.T.

CLIENT
業主

SUN HUNG KAI REAL ESTATE AGENCY LTD. 新鴻基地產代理有限公司

CONSULTANT
工程顧問公司

AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS
分判工程顧問公司

ISSUE/REVISION
修訂

I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 核實
F	JUL. 21	MINOR AMENDMENT	MCY
E	JUL. 20	MINOR AMENDMENT	MCY
D	MAY. 20	MINOR AMENDMENT	MCY
C	JAN. 20	MINOR AMENDMENT	MCY
B	JUL. 19	DSD SUBMISSION	MCY
A	JAN. 19	DSD SUBMISSION	MCY
-	MAY. 18	SUBMIT B.D.	MCY

STATUS
狀態

SUBMISSION

SCALE 比例: A1 1 : 500

DIMENSION UNIT 尺寸單位: METRES

KEY PLAN
索引圖

PROJECT NO. 項目編號: 60547289

CONTRACT NO. 合約編號:

SHEET TITLE
圖紙名稱

SEWAGE LAYOUT

SHEET 1 OF 16

SHEET NUMBER
圖紙編號

60547289/1911F

This drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by any third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any parties using, relying upon or interpreting this drawing without AECOM's written consent. Do not scale this document. All measurements must be obtained from the stated dimensions.

Appendix 1 – Master Layout Plan of Sai Sha Development

E&M

1ST +18.5

CHE HA VILLAGE

ACCESS ROAD

RESERVED SCHOOL SITE

RESERVED SCHOOL SITE

EXISTING BUILDINGS TO REMAIN

MA KWU LAM VILLAGE

SITE A

TAI TUNG VILLAGE

SITE B

TSENG TAU VILLAGE

FOOTBRIDGE

FOOTBRIDGE

1ST SITE C +18.5

TRAINING PATH FOR CYCLING / MAINTENANCE PATH

PLACE OF RECREATION, SPORTS OR CULTURE #

2ST +17.5

1ST +15.0

PLACE OF RECREATION, SPORTS OR CULTURE #

2ST +23.5

1ST +21.0

3ST +36.0

5ST +33.0

1ST +18.5

3ST +40.0

3ST +36.0

1ST +24.0

+12.5

+15.5

RECREATION & SPORTS CENTRE WITH ANCILLARY FACILITIES / E&M *

RECREATION & SPORTS CENTRE WITH ANCILLARY FACILITIES / E&M *

WELFARE CENTRE & PUBLIC VEHICLE PARK

PUBLIC OPEN SPACE

SEWAGE PUMPING STATION

PEDESTRIAN CROSSING

RECREATION & SPORTS CENTRE WITH ANCILLARY FACILITIES / E&M *

NOTE : 1. ALL LEVELS DENOTE MAXIMUM MAIN ROOF LEVELS
2. ALL NUMBERS OF STOREYS DENOTED ON PLAN REFER TO TOTAL NO. OF STOREYS ABOVE GROUND.

LEGEND

- LAND TO BE SECURED BY APPLICANT / LAND OUTSIDE TPTL 157 RP AND TPTL 253
- 20m ECOLOGICAL STREAM BUFFER ZONE
- NON-BUILDING AREA
- PROPOSED DEVELOPMENT SITE BOUNDARY
- APPLICATION SITE BOUNDARY
- +37.0 HEIGHT IN mPD
- 1ST HEIGHT IN NO. OF STOREY

* INCLUDING 'PLACE OF RECREATION, SPORTS OR CULTURE', 'PLACE OF ENTERTAINMENT', 'EATING PLACE', 'SHOP & SERVICES', AND/OR 'INDOOR PLAYGROUND'

\# PLACE OF RECREATION, SPORTS OR CULTURE (OUTDOOR RECREATIONAL FACILITIES FOR THE USE OF SPORTS FIELD/ BALL COURT/ POOL/ DRIVING RANGE/ TRAINING PATH FOR CYCLING)

0 25 50 75 100 125

SCALE 1 : 5000 (A3)

Proposed MLP (Site C)

LWK +PARTNERS

Appendix 2 – Existing and Proposed Sewers Hydraulics
Correspondence of Interim SIA

AECOM

Sai Sha Development - Trunk Sewer with Projected Flows

Sewerage Checking (Pre Development)

ks= **3 mm** (Concrete)

v of water= 0.000001 **m^2/s**

Manhle No.		**Pipe**									**Flow**							**Check**	**Remarks**
U/S	D/S	Ground Level U/S	Ground Level D/S	Size	Invert Level U/S	Invert Level D/S	Length	Grad	Velocity	Full Bore Capacity	Accumulated ADWF	Contributing Population	Peak Factor	Peak Flow	Peak Flow	SPS Flows	Total Flow	Pipe Capacity	
Existing Sewer		mPD	mPD	mm	mPD	mPD	m	1 in	m/s	m^3/s	m^3/day	person		m^3/day	m^3/s	m^3/s	m^3/s		
FMH4079680	FMH4039226	7.70	7.65	1200	0.33	0.02	59.5	192	2.22	2.509	4371	16189	4.77	20850	0.241	0.000	0.241	OK	Villa Athena (915 m³/d), Saddle Ridge Garden (3,456 m³/d)
										2.509	4881	18078	4.69	22892	0.265	0.018	0.283	OK	Wu Kai Sha SPS (510 m³/d)
FMH4039226	FMH4039227	7.65	6.90	1350	0.02	-0.03	30	600	1.35	1.934	10329	38256	4.21	41338	0.478	0.018	0.496	OK	Villa Oceania, Bayshore Towers, Tolo Place, Fok On Garden, The Waterside, Marbella, Ma On Shan Centre, Horizon Suite Hotel (5,448 m³/d)
										1.934	22329	82700	3.76	36963	0.428	0.434	0.862	OK	MOS108 SPS (12,000 m³/d)
FMH4039227	FMH4039228	6.90	7.15	1350	-0.03	-0.08	35	700	1.25	1.790	22329	82700	3.76	36963	0.428	0.434	0.862	OK	
FMH4039228	FMH4039229	7.15	7.56	1350	-0.08	-0.16	60	750	1.21	1.729	22329	82700	3.76	36963	0.428	0.434	0.862	OK	
FMH4039229	FMH4039230	7.56	7.90	1350	-0.16	-0.25	59	656	1.29	1.850	22329	82700	3.76	36963	0.428	0.434	0.862	OK	
FMH4039230	FMH4039231	7.90	7.97	1350	-0.25	-0.35	73	730	1.22	1.753	22329	82700	3.76	36963	0.428	0.434	0.862	OK	
FMH4039231	FMH4039232	7.97	8.50	1350	-0.35	-0.45	75	750	1.21	1.729	22329	82700	3.76	36963	0.428	0.434	0.862	OK	
FMH4039232	FMH4039233	8.50	8.91	1350	-0.45	-0.54	60	667	1.28	1.834	22329	82700	3.76	36963	0.428	0.434	0.862	OK	
FMH4039233	FMH4039234	8.91	8.43	1350	-0.54	-0.61	46	657	1.29	1.848	22329	82700	3.76	36963	0.428	0.434	0.862	OK	
FMH4039234	FMH4039277	8.43	8.47	1350	-0.61	-0.66	40	800	1.17	1.674	23097	85544	3.75	39652	0.459	0.434	0.893	OK	Park Belvedere (768 m³/d)
FMH4039277	FMH4039235	8.47	5.40	1350	-0.66	-0.76	62	620	1.33	1.902	23097	85544	3.75	39652	0.459	0.434	0.893	OK	
FMH4039235	FMH4039284	5.40	5.50	1350	-0.76	-1.03	90	333	1.81	2.596	23097	85544	3.75	39652	0.459	0.434	0.893	OK	
FMH4039284	FMH4039286	5.50	6.49	1500	-1.03	-1.17	100	714	1.32	2.339	26507	98174	3.67	51352	0.594	0.434	1.029	OK	Sunshine City (3,410 m³/d)
FMH4039286	FMH4039287	6.49	6.94	1500	-1.17	-1.30	90	692	1.34	2.376	27411	101522	3.65	54394	0.630	0.434	1.064	OK	Kam Hay Court (904 m³/d)
FMH4039287	FMH4039079	6.94	7.04	1500	-1.30	-1.57	90	333	1.94	3.426	27411	101522	3.65	54394	0.630	0.434	1.064	OK	
FMH4039079	FMH4039080	7.04	7.37	1650	-1.57	-1.64	58	829	1.31	2.791	27411	101522	3.65	54394	0.630	0.434	1.064	OK	
FMH4039080	FMH4039081	7.37	8.38	1650	-1.64	-1.75	90	818	1.31	2.809	27411	101522	3.65	54394	0.630	0.434	1.064	OK	
FMH4039081	FMH4039082	8.38	4.50	1650	-1.75	-1.83	70	875	1.27	2.716	27411	101522	3.65	54394	0.630	0.434	1.064	OK	
FMH4039082	FMH4039083	4.50	7.00	1650	-1.83	-1.94	75	682	1.44	3.077	27411	101522	3.65	54394	0.630	0.434	1.064	OK	
FMH4039083	FMH4039084	7.00	5.00	1650	-1.94	-2.05	82	745	1.38	2.943	30834	114200	3.59	65719	0.761	0.434	1.195	OK	Heng On Estate (3,423 m³/d)
FMH4039084	FMH4039085	5.00	5.00	1650	-2.05	-2.15	78	780	1.35	2.877	30834	114200	3.59	65719	0.761	0.434	1.195	OK	
FMH4039085	FMH4039086	5.00	7.00	1650	-2.15	-2.20	43	860	1.28	2.739	30834	114200	3.59	65719	0.761	0.434	1.195	OK	
FMH4039086	FMH4039087	7.00	4.50	1650	-2.20	-2.40	86	430	1.81	3.877	30834	114200	3.59	65719	0.761	0.434	1.195	OK	
FMH4039087	FMH4039088	4.50	4.50	1650	-2.40	-3.66	24	19	8.62	18.440	30834	114200	3.59	65719	0.761	0.434	1.195	OK	
FMH4039088	MOS SPS	4.50	4.50	1950	-3.66	-4.00	25	74	4.88	14.559	33145	122759	3.55	73210	0.847	0.434	1.282	OK	La Costa, Ocean View, Oceanaire (2,311 m³/d)

AECOM

Sai Sha Development - Trunk Sewer with Projected Flows

Sewerage Checking (Post Development)

ks= **3 mm** (Concrete)

v of water= 0.000001 **m^2/s**

Manhle No.		**Pipe**									**Flow**							**Check**	**Remarks**
U/S	D/S	Ground Level U/S	Ground Level D/S	Size	Invert Level U/S	Invert Level D/S	Length	Grad	Velocity	Full Bore Capacity	Accumulated ADWF	Contributing Population	Peak Factor	Peak Flow	Peak Flow	SPS Flows	Total Flow	Pipe Capacity	
		mPD	mPD	mm	mPD	mPD	m	1 in	m/s	m^3/s	m^3/day	person		m^3/day	m^3/s	m^3/s	m^3/s		
Rising Main X																			
Chamber	Chamber										20600					0.72	0.72		Sai O SPS Design Capacity (20,600 m³/d) Max Pump Discharge 720L/s
Existing Sewer																			
FMH4079680	FMH4039226	7.70	7.65	1200	0.33	0.02	59.5	192	2.22	2.509	5448	20178	4.00	21792	0.252		0.252	OK	Villa Oceania, Bayshore Towers, Tolo Place, Fok On Garden, The Waterside, Marbella, Ma On Shan Centre, Horizon Suite Hotel (5,448 m³/d)
										2.509	5958	22067	4.00	21792	0.252	0.018	0.270	OK	Wu Kai Sha SPS (510 m³/d),
										2.509	26558	98363	3.67	19982	0.231	0.738	0.969	OK	Sai O TSSPS (20,600 m³/d)
FMH4039226	FMH4039227	7.65	6.90	1350	0.02	-0.03	30	600	1.35	1.934	30929	114552	3.58	35200	0.407	0.738	1.145	OK	Villa Athena (915 m³/d), Saddle Ridge Garden (3,456 m³/d)
										1.934	45429	168256	3.38	33227	0.385	1.073	1.458	OK	MOS108 SPS (14,500 m³/d)
FMH4039227	FMH4039228	6.90	7.15	1350	-0.03	-0.08	35	700	1.25	1.790	45429	168256	3.38	33227	0.385	1.073	1.458	OK	
FMH4039228	FMH4039229	7.15	7.56	1350	-0.08	-0.16	60	750	1.21	1.729	45429	168256	3.38	33227	0.385	1.073	1.458	OK	
FMH4039229	FMH4039230	7.56	7.90	1350	-0.16	-0.25	59	656	1.29	1.850	45429	168256	3.38	33227	0.385	1.073	1.458	OK	
FMH4039230	FMH4039231	7.90	7.97	1350	-0.25	-0.35	73	730	1.22	1.753	45429	168256	3.38	33227	0.385	1.073	1.458	OK	
FMH4039231	FMH4039232	7.97	8.50	1350	-0.35	-0.45	75	750	1.21	1.729	45429	168256	3.38	33227	0.385	1.073	1.458	OK	
FMH4039232	FMH4039233	8.50	8.91	1350	-0.45	-0.54	60	667	1.28	1.834	45429	168256	3.38	33227	0.385	1.073	1.458	OK	
FMH4039233	FMH4039234	8.91	8.43	1350	-0.54	-0.61	46	657	1.29	1.848	45429	168256	3.38	33227	0.385	1.073	1.458	OK	
FMH4039234	FMH4039277	8.43	8.47	1350	-0.61	-0.66	40	800	1.17	1.674	46197	171100	3.38	35736	0.414	1.073	1.487	OK	
FMH4039277	FMH4039235	8.47	5.40	1350	-0.66	-0.76	62	620	1.33	1.902	46197	171100	3.38	35736	0.414	1.073	1.487	OK	Park Belvedere (768 m³/d)
FMH4039235	FMH4039284	5.40	5.50	1350	-0.76	-1.03	90	333	1.81	2.596	46197	171100	3.38	35736	0.414	1.073	1.487	OK	Sunshine City (3,410 m³/d)
FMH4039284	FMH4039286	5.50	6.49	1500	-1.03	-1.17	100	714	1.32	2.339	49607	183730	3.34	46745	0.541	1.073	1.614	OK	
FMH4039286	FMH4039287	6.49	6.94	1500	-1.17	-1.30	90	692	1.34	2.376	51078	189178	3.33	51431	0.595	1.073	1.669	OK	Kam Hay Court (904 m³/d) Yiu On Estate (567 m³/d)
FMH4039287	FMH4039079	6.94	7.04	1500	-1.30	-1.57	90	333	1.94	3.426	51078	189178	3.33	51431	0.595	1.073	1.669	OK	
FMH4039079	FMH4039080	7.04	7.37	1650	-1.57	-1.64	58	829	1.31	2.791	62354	230941	3.23	86303	0.999	1.073	2.072	OK	Chung on Estate and Kam Fung Court (1669m³/d and 4550m³/d) (P3 + P4 Housing Site 5,057m³/d)
FMH4039080	FMH4039081	7.37	8.38	1650	-1.64	-1.75	90	818	1.31	2.809	62354	230941	3.23	86303	0.999	1.073	2.072	OK	
FMH4039081	FMH4039082	8.38	4.50	1650	-1.75	-1.83	70	875	1.27	2.716	62354	230941	3.23	86303	0.999	1.073	2.072	OK	
FMH4039082	FMH4039083	4.50	7.00	1650	-1.83	-1.94	75	682	1.44	3.077	62354	230941	3.23	86303	0.999	1.073	2.072	OK	
FMH4039083	FMH4039084	7.00	5.00	1650	-1.94	-2.05	82	745	1.38	2.943	69041	255707	3.18	106246	1.230	1.073	2.303	OK	Kam On Court (904 m³/d) Heng On Estate (3,423 m³/d) Vista Paradise (1800m³/d) Baycres(560m³/d)
FMH4039084	FMH4039085	5.00	5.00	1650	-2.05	-2.15	78	780	1.35	2.877	69041	255707	3.18	106246	1.230	1.073	2.303	OK	
FMH4039085	FMH4039086	5.00	7.00	1650	-2.15	-2.20	43	860	1.28	2.739	69041	255707	3.18	106246	1.230	1.073	2.303	OK	
FMH4039086	FMH4039087	7.00	4.50	1650	-2.20	-2.40	86	430	1.81	3.877	69041	255707	3.18	106246	1.230	1.073	2.303	OK	
FMH4039087	FMH4039088	4.50	4.50	1650	-2.40	-3.66	24	19	8.62	18.440	69041	255707	3.18	106246	1.230	1.073	2.303	OK	
FMH4039088	MOS SPS	4.50	4.50	1950	-3.66	-4.00	25	74	4.88	14.559	81620	302296	3.10	142597	1.650	1.073	2.724	OK	La Costa, Ocean View, Oceanaire (2,311 m³/d) Yan On Estate (2,149 m³/d) Sausalito (888m³/d) Moutain Shore (964m³/d) Kam Tai Court (2840m³/d) Chevalier Garden (3427m³/d)

AECOM

Sai Sha Development - Proposed Gravity Sewer

Sewerage Checking

ks= **0.6 mm** (PE100)

v of water= 0.000001 **m^2/s**

20181015

Manhle No.		Pipe									Flow						FOS	Remarks
U/S	D/S	Ground Level U/S	Ground Level D/S	Size	Invert Level U/S	Invert Level D/S	Length	Grad	Velocity	Capacity	ADWF	Accumulated ADWF	Contributing Population	Peak Factor	Peak Flow	Peak Flow		
		mPD	mPD	mm	mPD	mPD	m	1 in	m/s	m^3/s	m^3/day	m^3/day	person		m^3/day	m^3/s		
Sewer A																		
	M1.25										177	177	656	8	1416	0.016		Kei Ling Ha Lo Wai
	M1.25										209	386	1430	6	2316	0.027		Kei Ling Ha San Wai
	M1.25											386	1430	6	2316	0.027		Sai Keng International School
	M1.25										592	978	3622	6	5868	0.068		Sai Keng
	M1.25										96	1074	3978	6	6444	0.075		Nga Yiu Tau
	M1.25										204	1278	4733	6	7668	0.089		Tai Tung Wo Lui
	M1.25										174	1452	5378	5	7260	0.084		Tai Tung
	M1.25										229	1681	6226	5	8405	0.097		Ma Kwu Lam
	M1.25										793	2474	9163	5	12370	0.143		Rising Main Y (Site C)
	M1.25										613	3087	11433	4	12348	0.143		Rising Main Y (Site B)
	M1.25										7	3094	11458	4	12375	0.143		Yellow Area
	M1.25										591	3685	13647	4	14739	0.171		Rising Main Y (Tseng Tau)
	M1.25										1900	5585	20684	4	22339	0.259		Private SPS 1
	M1.25										1850	7435	27536	4				Private SPS 2
	M1.25										625	8060	29851	4	32239	0.373		Private SPS 3
	M1.25										4074	12134	44940	4	48535	0.562		Sewer B (Site A)
M1.25	M1.24	22.20	21.10	900	19.47	18.82	40	61	4.01	2.55		12134	44940	4	48535	0.562	4.55	
M1.24	M1.23	21.10	20.30	900	18.82	18.14	41	60	4.04	2.57		12134	44940	4	48535	0.562	4.58	
M1.23	M1.22	20.30	19.70	900	18.14	17.63	40	78	3.54	2.25		12134	44940	4	48535	0.562	4.01	
M1.22	M1.21	19.70	18.20	900	16.13	15.13	80	80	3.51	2.23		12134	44940	4	48535	0.562	3.97	
M1.21	M1.20	18.20	16.50	900	15.08	14.08	79	79	3.52	2.24		12134	44940	4	48535	0.562	3.98	
M1.20	M1.19	16.50	15.80	900	13.48	12.70	78	100	3.14	2.00		12134	44940	4	48535	0.562	3.55	
M1.19	M1.18	15.80	15.20	900	12.30	12.02	29	105	3.06	1.95		12134	44940	4	48535	0.562	3.47	
M1.18	M1.17	15.20	14.90	900	11.42	10.54	44	50	4.44	2.82	101	12235	45314	4	48939	0.566	4.98	Reserved School Site
M1.17	M1.16	14.90	14.70	900	9.94	9.36	29	50	4.44	2.83	177	12412	45969	4	49647	0.575	4.92	Kwun Hang
M1.16	M1.15	14.70	14.50	900	6.36	5.94	20	48	4.51	2.87	560	12972	48043	4	51887	0.601	4.78	Che Ha
M1.15	M1.14	14.60	14.00	900	2.94	2.78	32	200	2.21	1.41		12972	48043	4	51887	0.601	2.34	
M1.14	M1.13	14.00	13.50	900	2.78	2.60	35	194	2.25	1.43		12972	48043	4	51887	0.601	2.38	
M1.13	M1.12	13.50	14.12	900	2.60	2.34	53	202	2.20	1.40		12972	48043	4	51887	0.601	2.33	
M1.12	M1.11	14.12	14.90	900	2.34	2.10	49	203	2.20	1.40		12972	48043	4	51887	0.601	2.33	
M1.11	M1.10	14.90	13.90	900	2.10	1.84	51	197	2.23	1.42		12972	48043	4	51887	0.601	2.36	
M1.10	M1.9	13.90	12.60	900	1.84	1.68	33	206	2.18	1.39		12972	48043	4	51887	0.601	2.31	
M1.9	M1.8	8.50	11.00	900	1.68	1.48	40	200	2.21	1.41	56	13027	48249	4	52109	0.603	2.33	Nai Chung (North)
M1.8	M1.7	6.80	10.30	900	1.48	1.42	11	183	2.31	1.47	56	13083	48455	4	52331	0.606	2.43	Nai Chung (North)
M1.7	M1.6	10.30	7.40	900	1.42	1.04	76	200	2.21	1.41	56	13138	48660	4	52553	0.608	2.31	Nai Chung (North)
M1.6	M1.5	7.40	6.70	900	0.96	0.79	35	206	2.18	1.39	56	13194	48866	4	52775	0.611	2.27	Nai Chung (South)
M1.5	M1.4	6.70	6.00	900	0.79	0.62	34	200	2.21	1.41		13194	48866	4	52775	0.611	2.30	
M1.4	M1.3	6.00	6.30	900	0.02	-0.29	61	197	2.23	1.42		13194	48866	4	52775	0.611	2.32	
M1.3	M1.2	6.30	6.30	900	-0.89	-1.01	23	191	2.26	1.44		13194	48866	4	52775	0.611	2.36	
M1.2	M1.1	6.30	6.70	900	-1.16	-1.58	84	200	2.21	1.41		13194	48866	4	52775	0.611	2.30	
											334	13528	50103	4	54923	0.636		Sai O
											2347	15875	58795	3.97	63023	0.729		Cheung Muk Tau (Village)
											3119	18994	70347	3.86	73316	0.849		Cheung Muk Tau (Other Dev.)
M1.1	Sai O TSSPS	6.700	6.30	900	-1.58	-1.90	65	203	2.19	1.396	898	19892	73673	3.84	76384	0.884	1.58	Other Private Project
Sewer B3																		
TMA 1	M1.24	18.20	20.30	400	16.70	14.50	40	18	3.54	0.444	6220	6220	23037	5	31100	0.360	1.23	Site A to Sai Sha Road
Sewer B																		
TMA2	M1.26	20.60	20.30	500	18.80	18.21	47	80	1.95	0.383	4074	4074	15089	5	20370	0.236	1.63	Site A
Sewer C																		
	M3.50	13.65	13.50	250				70	1.32	0.065	754	754	2793	6	4524	0.052	1.23	Site C (Others)
M3.50	M3.40	13.50	12.80	250	9.95	9.37	40	70	1.32	0.065		754	2793	6	4524	0.052	1.23	
M3.40	M3.30	12.80	12.45	400	9.10	8.61	34	70	1.80	0.226		754	2793	6	4524	0.052	4.32	
M3.30	M3.20A	12.45	11.55	400	8.37	7.89	33.6	70	1.80	0.226	613	1367	5063	5	6835	0.079	2.86	Site B (Others)
M3.20A	M3.20	11.55	10.30	400	7.89	7.25	44.8	70	1.80	0.226		1367	5063	5	6835	0.079	2.86	
M3.20	M3.10	10.30	10.30	400	7.20	7.09	7.7	70	1.80	0.226		1367	5063	5	6835	0.079	2.86	
M3.10	M3.00A	10.30	9.70	450	6.49	6.30	13.3	70	1.95	0.310	39	1406	5207	5	7030	0.081	3.80	Site C (Others)
M3.00A	TT-SPS	9.70	-	450	6.07	6.00	4.9	70	1.95	0.310		1406	5207	5	7030	0.081	3.80	
Sewer B2																		
	TMA3										373	373						Site A (Commercial)
	TMA3										128	501						Site A (Club House)
	TMA3										90	591						Site A (Club House)
TMA3	M2.60	26.00	25.30	250	24.75	23.83	46	50	1.56	0.076		591	2189	6.0	3546	0.041	1.86	
M2.60	M2.50	25.30	24.70	250	24.05	23.65	20	50	1.56	0.076		591	2189	6.0	3546	0.041	1.86	
M2.50	M2.40	24.70	24.10	250	23.45	23.05	20	50	1.56	0.076		591	2189	6.0	3546	0.041	1.86	
M2.40	M2.30	24.10	23.50	250	22.85	22.35	25	50	1.56	0.076		591	2189	6.0	3546	0.041	1.86	
M2.30	M2.20	23.50	22.90	250	22.25	20.85	70	50	1.56	0.076		591	2189	6.0	3546	0.041	1.86	
M2.20	M2.10	22.90	22.30	250	21.65	20.65	50	50	1.56	0.076		591	2189	6.0	3546	0.041	1.86	
M2.10	M1.24	22.30	23.00	250	21.05	19.65	70	50	1.56	0.076		591	2189	6.0	3546	0.041	1.86	

Appendix 3 – Correspondence of Interim SIA

Tsang, Lennon

From: rebeccaystsui@epd.gov.hk
Sent: Friday, August 20, 2021 2:38 PM
To: Tsang, Lennon
Cc: rickyliu@epd.gov.hk; Pun, Pak Wing Vic
Subject: [EXTERNAL] RE: Re: Sai Sha Road Widening, Shap Sz Heung, Sai Kung North, N.T. - Interim SIA for Site C Recreation and Sports Centre and Driving Range A and B

Dear Lennon,

No further comment please. Please be reminded to insert the last two pages of the "Amended Pages" showing the sewerage holding tank design and capacity calculations for Driving Rang A and Sports Centre and Driving Range B respectively to the combined report in the formal submission to PlanD. Thanks.

Regards,
Rebecca TSUI
E(SI)61
SIG/EPD
Tel: 3107 8248

From: "Tsang, Lennon" <Lennon.Tsang@aecom.com>
To: "rebeccaystsui@epd.gov.hk" <rebeccaystsui@epd.gov.hk>
Cc: "rickyliu@epd.gov.hk" <rickyliu@epd.gov.hk>, "Pun, Pak Wing Vic" <vic.pun@aecom.com>
Date: 18/08/2021 12:24
Subject: RE: [EXTERNAL] Re: Sai Sha Road Widening, Shap Sz Heung, Sai Kung North, N.T. - Interim SIA for Site C Recreation and Sports Centre and Driving Range A and B

Dear Rebecca,

Thank you for providing us comments.

As discussed, there are some minor updates to clarify the quantities in the report. Please find attached amended pages with Response to Comments table for your review and consideration. Grateful if you could accept our proposal at your earliest convenient.

Many Thanks!

Should you have any queries or require further clarification, please feel free to contact us.

Regards,
Lennon Tsang

+852 3922 8360

From: rebeccaystsui@epd.gov.hk <rebeccaystsui@epd.gov.hk>
Sent: Wednesday, August 11, 2021 5:16 PM
To: Tsang, Lennon <Lennon.Tsang@aecom.com>
Cc: rickyliu@epd.gov.hk

Subject: [EXTERNAL] Re: Sai Sha Road Widening, Shap Sz Heung, Sai Kung North, N.T. - Interim SIA for Site C Recreation and Sports Centre and Driving Range A and B

Dear Mr Lennon,

I refer to the letter dated 29 July 2021 for the captioned subject. As discussed over the phone, the captioned report is an enquiry submission for our consideration on whether the interim measure for the recreation and sports centre and the two driving ranges before the commissioning of Sai O SPS and Tseng Tau SPS is considered acceptable, and is not a formal submission for compliance with the approval condition in relation to submission and implementation of SIA.

From sewerage planning perspective, generally we have no objection for the proposed interim sewerage arrangement. However, it is noted from Section 4.1.1 that the maximum capacity of the holding tanks for Driving Range B is 5m3, while the drawings in the last page of Appendix 3 shows that the capacity is only around 4.16m3. Meanwhile from Appendix 2, it is noted that the total daily discharge is round up to 5m3/day, which appears that there is under capacity for the holding tank. Also, it shows there is no buffer for both holding tanks for Driving Range B, and Sports Centre and Driving Range A. Please review and clarify.

Please also consider the emergency measures when the proposed arrangement of "emptying the holding tanks by vacuum pumping vehicles everyday" is interrupted.

Last but not least, you are reminded to check with Planning Department whether a formal submission for compliance with the approval condition in relation to submission and implementation of SIA is required. Thank you.

Regards,
Rebecca TSUI
E(SI)61
SIG/EPD
Tel: 3107 8248 [attachment "RtC on Interim SIA Report_Sai Sha.pdf" deleted by Rebecca YS TSUI/EPD/HKSARG] [attachment "Amended Pages.pdf" deleted by Rebecca YS TSUI/EPD/HKSARG] [attachment "Combine Interim SIA_with amended pages_20210818.pdf" deleted by Rebecca YS TSUI/EPD/HKSARG]

Sai Sha Road Widening, Shap Sz Heung, Sai Kung North, N.T. –
Interim SIA for Site C Recreation and Sports Centre and Driving Range A and B

Responses to Comments (Comments from EPD's email on 11 August 2021)

Item/No.	Comments	Responses
	I refer to the letter dated 29 July 2021 for the captioned subject. As discussed over the phone, the captioned report is an enquiry submission for our consideration on whether the interim measure for the recreation and sports centre and the two driving ranges before the commissioning of Sai O SPS and Tseng Tau SPS is considered acceptable, and is not a formal submission for compliance with the approval condition in relation to submission and implementation of SIA.	-
	From sewerage planning perspective, generally we have no objection for the proposed interim sewerage arrangement. However, it is noted from Section 4.1.1 that the maximum capacity of the holding tanks for Driving Range B is 5m3, while the drawings in the last page of Appendix 3 shows that the capacity is only around 4.16m3. Meanwhile from Appendix 2, it is noted that the total daily discharge is round up to 5m3/day, which appears that there is under capacity for the holding tank. Also, it shows there is no buffer for both holding tanks for Driving Range B, and Sports Centre and Driving Range A. Please review and clarify.	Noted. Please be clarified that the maximum capacity of holding tank for Driving Range B is 4.16m3 and the total discharge shall be 3.5m3/day. In addition, please also be clarified that the maximum capacity of holding tank for Sports Centre and Driving Range A is 409.5m3 and the total discharge shall be 386.5m3/day. After review, there would be about 15% (3.5/4.16) capacity buffer for Driving Range B and 5.5% (386.5/409.5) capacity buffer for Sports Centre and Driving Range A. Both holding tanks have adequate capacity. The amended pages were enclosed for your retention.
	Please also consider the emergency measures when the proposed arrangement of "emptying the holding tanks by vacuum pumping vehicles everyday" is interrupted.	It is considered that the daily cleansing arrangement is adequate for the interim period as there are some capacity buffers for both tanks. In case of the pumping vehicles were interrupted, e.g. traffic jam, the remaining capacity of the tanks could cater for the delay. For emergency cases, e.g. inclement weather, the utilization of the facility as well as sewerage generation will also be reduced at the same time. The arrangement is considered adequate.
	Last but not least, you are reminded to check with Planning Department whether a formal submission for compliance with the approval condition in relation to submission and implementation of SIA is required. Thank you.	Noted. A consolidated SIA would be submitted afterwards to Planning Department for compliance with the approval condition after no comment on the scheme was obtained.

AECOM
AECOM
12/F, Grand Central Plaza, Tower 2
138 Shatin Rural Committee Road
Shatin, Hong Kong
香港新界沙田鄉事會路 138 號
新城市中央廣場第 2 座 12 樓
www.aecom.com
+852 3922 9000 tel
+852 3922 9797 fax

Our Ref : MCY:VPPW:KSWF:wtsk:60547289/10.7-2021011321L

29 July 2021

By Hand

Environmental Protection Department
Water Policy Division
Sewerage Infrastructure Group
Regional Sewerage Infrastructure Planning (HK Island, Tolo Harbour & Port Shelter)
34/F, Hopewell Centre
183 Queen's Road East
Wanchai, Hong Kong

Attn: Ms. TSUI Yin San, Rebecca (Env Protection Offr(Sewerage Infrastructure)61)

Dear Madam,

Sai Sha Road Widening, Shap Sz Heung, Sai Kung North, N.T.

Interim Sewerage Impact Assessment for Site C Recreation and Sports Centre and Driving Range A and B

Approved SIA under planning application No. A/NE-SSH/120 states sewage generated at Site C Recreation and Sports Centre and Driving Range A and B will be discharged to public sewers and Sai O sewage pumping station. To handle the sewage generated from Site C Recreation and Sports Centre before Sai O sewage pumping station and Tseng Tau sewage pumping station commissioning, an interim sewage arrangement with sewage holding tank is proposed.

BD commented that planning approval for proposed interim sewage arrangement has to be obtained prior to sewage holding tank detailed design approval. We are pleased to enclose herewith the proposed Interim Sewerage Impact Assessment for your review.

Should you have any queries, please do not hesitate to contact our Mr. Lennon Tsang at 3922 8360 or the undersigned at 3922 9327.

Yours faithfully,
For and on behalf of
AECOM Asia Co. Ltd.

Ming Yuen
Technical Director
Land Supply / Municipal

Encl.

cc DSD (Mainland North Division) - Mr. YIP Chor Kiu, Michael (Engr/Tai Po 4)] w/e
PlanD (Sha Tin,Tai Po, North District Planning Office) - Ms. CHAN Hiu Yan, Sharon (Town Plnr/CPE 3)] w/e
SHKP - Mr. Sunny CHEUNG / Mr. Grant YUEN] w/e (email only)
LD - Ms. Winnie WU] w/e (email only)
LWK - Mr. Benjamin CHU] w/e (email only)

Sai Sha Development Site C Recreation and Sports Centre and Driving Range A and B

Interim Sewerage Impact Assessment Report

July 2021

AECOM

INTERIM SEWERAGE IMPACT ASSESSMENT REPORT

Contents

1 INTRODUCTION 1

1.1 Background 1

1.2 The Proposed Development 1

1.3 Objectives of this SIA 1

2 DESIGN ASSUMPTIONS AND CRITERIA 2

2.1 General 2

3 SEWERAGE IMPACT 3

3.1 Interim Sewerage Arrangement 3

3.2 Capacity Checking of the Sewerage System 3

4 CONCLUSIONS 3

Table

Table 1 Proposed Development Schedule P.1

Table 2 Sanitary Fitment Summary for Recreation and Sports Centre and Driving Range A & B P.2

Table 3 Frequency of usage of Sanitary Fitments P.2

Appendices

Appendix 1 Proposed Sai Sha Site C MLP

Appendix 2 Estimated daily sewage from Recreation and Sports Centre and Driving Range A & B

Appendix 3 Proposed interim sewer layout

Appendix 4 Proposed Sewage Holding Tank Arrangement

1 INTRODUCTION

1.1 Background

1.1.1 This Interim Sewerage Impact Assessment (Interim SIA) is prepared to cover the sewage generated from Site C Recreation and Sports Centre and Driving Range A and B before the Sai O sewage pumping station (Sai O SPS) and Tseng Tau sewage pumping station commissioning. 2 sewage holding tanks are proposed to collect the sewage by underground pumped sewage pipe. The design capacities for 2 sewage holding tanks is 409.5m^3/day and 4.16m^3/day respectively to meet the sewage demand. The sewage will be discharged to planned public sewers and Sai O sewage pumping station after they are commissioning, follow the approved SIA.

1.1.2 A Sewerage Impact Assessment (SIA) has been submitted for discharge class B approval condition (l) for the approved comprehensive residential and recreational development including government, institution or community facilities with minor relaxation of GFA and building height restrictions (Application No. A/NE-SSH/120-1) under S16A of the Town Planning Ordinance at Tai Po Town Lot 157, various lots in D.D.165, 207 and 218 and Adjoining Government Land, Sai Sha, Shap Sz Heung, New Territories.

1.2 The Proposed Development

1.2.1 As with the previously approved SIA, the SIA comprises four major portions, namely Site A, Site B, Site C, and Sai Sha Road widening works area. Site C is proposed for recreational use with 2 reserved sites for primary schools for Education Bureau, and a Welfare Centre cum Public Vehicle Park as required by Social Welfare Department. The key development parameters of the site are provided in **Table 1**:

Table 1: Indicative Development Schedule

The Site C Development	
Recreation & Sports Centre with Ancillary Facilities	Sports Centre & Ancillary Facilities: 5,500 m^2 Recreation Centre & Ancillary Facilities: 12,000m^2
Welfare Centre GFA	Not more than 5,560 m^2
Public Vehicle Park GFA	Not more than 9,000 m^2

Remarks:
(1) Calculated based on Development Site Area.
(2) Recreation & Sports Centre with Ancillary Facilities include 'Place of Recreation, Sports or Culture', 'Eating Place', 'Shop and Service' and / or 'Indoor Playground'.

1.3 Objectives of this Interim SIA

1.3.1 The objectives of this Interim SIA are as follows:

(i) Review the proposed sewage discharge to cope with the latest sewage system from Site C Recreation and Sports Centre and Driving Range A and B as per information from General Building Plan.

2 DESIGN ASSUMPTIONS AND CRITERIA

2.1 General

2.1.1 This Interim SIA has been carried out following the assumptions and criteria set out in the "*Plumbing Engineering Services Design Guide*" published by The Institute of Plumbing and "*Practice Note for Professional Persons – Drainage Plans subject to Comment by Environmental Protection Department (ProPECC PN 5/93)*" published by Environmental Protection Department.

2.1.2 The amount of sewerage generation from the Recreation and Sports Centre and Driving Ranges follow the sanitary fitment number and Food and Beverage area stated in General Building Plan.

2.1.3 **Table 2** summarizes number of sanitary fitment in Recreation and Sports Centre and Driving Range A & B. The number follows the latest General Building Plan.

Table 2: Sanitary Fitment Summary for Recreation and Sports Centre and Driving Range A & B

Development Type	**Sanitary Fitment**	**Number of Sanitary Fitment**
Recreation and Sports Centre	Basin	33
	Sink	1
	Shower	17
	WC	101
	Urinal	44
Driving Range A	Basin	0
	Sink	0
	Shower	0
	WC	0
	Urinal	0
Driving Range B	Basin	3
	Sink	0
	Shower	1
	WC	4
	Urinal	1

2.1.4 **Table 3** summarizes the frequency of usage of Sanitary Fitments. It follows the Plumbing Engineering Services Design Guide.

Table 3: Frequency of usage of Sanitary Fitments

Type of Appliance	**Flow Rate L/s**	**Demand Seconds**	**Frequency Seconds**
Basin	0.15	33	600
Sink	0.2	60	600
Shower	0.08	300	900
WC	0.1	60	600
Urinal	0.003	1500	1500

3 SEWERAGE IMPACT

3.1 Interim Sewerage Arrangement

3.1.1 The Site C Recreation and Sports Centre and Driving Range A & B will be open before Tseng Tau sewage pumping station commissions. The sewage generated from Recreation and Sports Centre and Driving Range A & B will be collected by 2 sewage holding tanks via pumped sewers. The sewage holding tank will be emptied by vacuum pumping vehicles everyday. The tank-away sewage will be transported to designated Sewage Treatment Works.

3.1.2 The proposed pumped sewers and sewage holding tanks are maintained by the developer.

3.2 Capacity Checking of the Sewerage System

3.2.1 The proposed Sewage Holding Tanks are capable of storing daily sewage from Recreation and Sports Centre and Driving Range A & B. The daily sewage estimation can be referred to **Appendix 2**.

4 CONCLUSIONS

4.1.1 The maximum capacities of the 2 sewage holding tanks are 409.5m^3/d and 4.16m^3/d respectively. It is considered that the design capacities are sufficient to store the daily sewage discharged from Recreation and Sports Centre and Driving Range A & B.

Appendix 1

Proposed Sai Sha Site C MLP

CHE HA VILLAGE

SITE C

SAI SHA ROAD
(16.8m WIDE IN GENERAL)

EXISTING BUILDINGS
TO REMAIN

TSENG TAU VILLAGE

MA KWU LAM
VILLAGE

PUBLIC OPEN SPACE

SITE B

SITE A

ROAD L1

AREA RESERVED
FOR PHASE 2
DEVELOPMENT

NGA YIU TAU VILLAGE

50 100 150 200 250

NOTE : 1. ALL LEVELS DENOTE MAXIMUM MAIN ROOF LEVELS
2. ALL NUMBERS OF STOREYS DENOTE MAXIMUM NUMBERS OF RESIDENTIAL STOREYS

LEGEND

- LAND TO BE SECURED BY APPLICANT / LAND OUTSIDE TPTL 157
- NON-BUILDING AREA
- PROPOSED DEVELOPMENT SITE BOUNDARY
- APPLICATION SITE BOUNDARY

Title

Indicative Master Layout Plan - Overall

Checked	DH	Drawn	PW
Rev	0	Date	Jun 2020
Scale		Figure	C1

RECREATION & SPORTS CENTRE WITH ANCILLARY FACILITIES *

MINI DRIVING RANGE / GAME AREA / RECREATION & SPORTS CENTRE WITH ANCILLARY FACILITIES *

1ST +10.0

1ST +18.5

CHE HA VILLAGE

SITE C

ACCESS ROAD

RESERVED SCHOOL SITE

RESERVED SCHOOL SITE

EXISTING BUILDINGS TO REMAIN

DRIVING RANGES

+14.5 1ST

FOOTBRIDGE

1ST +20.5

3ST +36.0

5ST +32.0

WELFARE CENTRE & PUBLIC VEHICLE PARK

PUBLIC OPEN SPACE

SEWAGE PUMPING STATION

+12.50

3ST +40.0

1ST +23.0

+15.5

3ST +36.0

FOOTBRIDGE

TSENG TAU VILLAGE

MA KWU LAM VILLAGE

PEDESTRIAN CROSSING

RECREATION & SPORTS CENTRE WITH ANCILLARY FACILITIES / E&M *

SITE B

SITE A

TAI TUNG VILLAGE

0 25 50 75 100 125

NOTE : 1. ALL LEVELS DENOTE MAXIMUM MAIN ROOF LEVELS
2. ALL NUMBERS OF STOREYS DENOTED ON PLAN REFER TO TOTAL NO. OF STOREYS ABOVE GROUND.

LEGEND

- LAND TO BE SECURED BY APPLICANT / LAND OUTSIDE TPTL157
- 20m ECOLOGICAL STREAM BUFFER ZONE
- NON-BUILDING AREA
- PROPOSED DEVELOPMENT SITE BOUNDARY
- APPLICATION SITE BOUNDARY
- 3ST NO. OF STOREYS
- +37.0 HEIGHT IN mPD

* INCLUDING 'PLACE OF RECREATION, SPORTS OR CULTURE', 'PLACE OF ENTERTAINMENT', 'EATING PLACE', 'SHOP & SERVICES', AND/OR 'INDOOR PLAYGROUND'

Title

Indicative Master Layout Plan - Site C

Checked	DH	Drawn	PW
Rev	0	Date	Jun 2020
Scale		Figure	C12

Appendix 2

Estimated daily sewage from Recreation and Sports Centre and Driving Range A & B

Sewage Discharge Estimation

A) **For Driving Range B** Remark: Based on GBP dated 30/04/2021

Number of sanitary fitment
For Driving Range B

Type of appliance	No. of Sanitary fitments
Basin	3
Sink	0
Shower	1
WC	4
Urinal	1

Duration of Office hours per day = 10 hours (10:00 -20:00)
Frequency of usage of Sanitary Fitments (Refer to Plumbing Engineering Services Design Guide)

Type of appliance	Flow Rate L/s	Demand Seconds	Capacity per usage Litre	Frequency Seconds	Times of usage per hours	Office hours Hrs	No. of Sanitary fitments	Daily Consumption Litres
Basin	0.15	33	4.95	600	6	10	3	891
Sink	0.2	60	12	600	6	10	0	0
Shower	0.08	300	24	900	4	10	1	960
WC	0.1	60	6	600	6	10	4	1,440
Urinal	0.003	1500	4.5	1500	2.4	10	1	108

Total Daily Consumption (SanFit Only) = 3.4 m3/day
Say 3.50 m^3

Total Daily Discharge (Driving Range B) 3.50 m3/day
(Say) 3.50 m3/day

Sewage Discharge Estimation

A) **For Sport and Recreation Center** Remark: Based on GBP dated 30/04/2021

Number of sanitary fitment

For SPC

Type of appliance	No. of Sanitary fitments
Basin	90
Sink	1
Shower	17
WC	101
Urinal	44

For Driving Range A

Type of appliance	No. of Sanitary fitments
Basin	0
Sink	0
Shower	0
WC	0
Urinal	0

Duration of Office hours per day = 10 hours (10:00 -20:00)

Frequency of usage of Sanitary Fitments (Refer to Plumbing Engineering Services Design Guide)

Type of appliance	Flow Rate L/s	Demand Seconds	Capacity per usage Litre	Frequency Seconds	Times of usage per hours	Office hours Hrs	No. of Sanitary fitments	Daily Consumption Litres
Basin	0.15	33	4.95	600	6	10	90	26,730
Sink	0.2	60	12	600	6	10	1	720
Shower	0.08	300	24	900	4	10	17	16,320
WC	0.1	60	6	600	6	10	101	36,360
Urinal	0.003	1500	4.5	1500	2.4	10	44	4,752

Total Daily Consumption (SanFit Only) = 85.0 m3/day

Say 85.00 m^3

F&B and Café Area = 2368.747 sq.m Remark: Based on GBP dated 30/04/2021

Kitchen Area = 592.1868 sq.m Assume Cooking Area (25%)

F&B Consumption = 0.5 m3/m2/day EPD ProPECC 5/93

Total Daily Foul Water Discharge (Kitchen) 296.1 m3/day

Say 296.10 m^3

No,of cleansing point (Carpark) 30 nos. (Assume)

Flowrate per Point 0.15 L/s (Assume)

Operation period 10 mins. (Assume)

Operation Times 2 Times / Day (Assume)

Total Daily Foul Water Discharge (Cleansing) 5.4 m3/day

Say 5.40 m^3

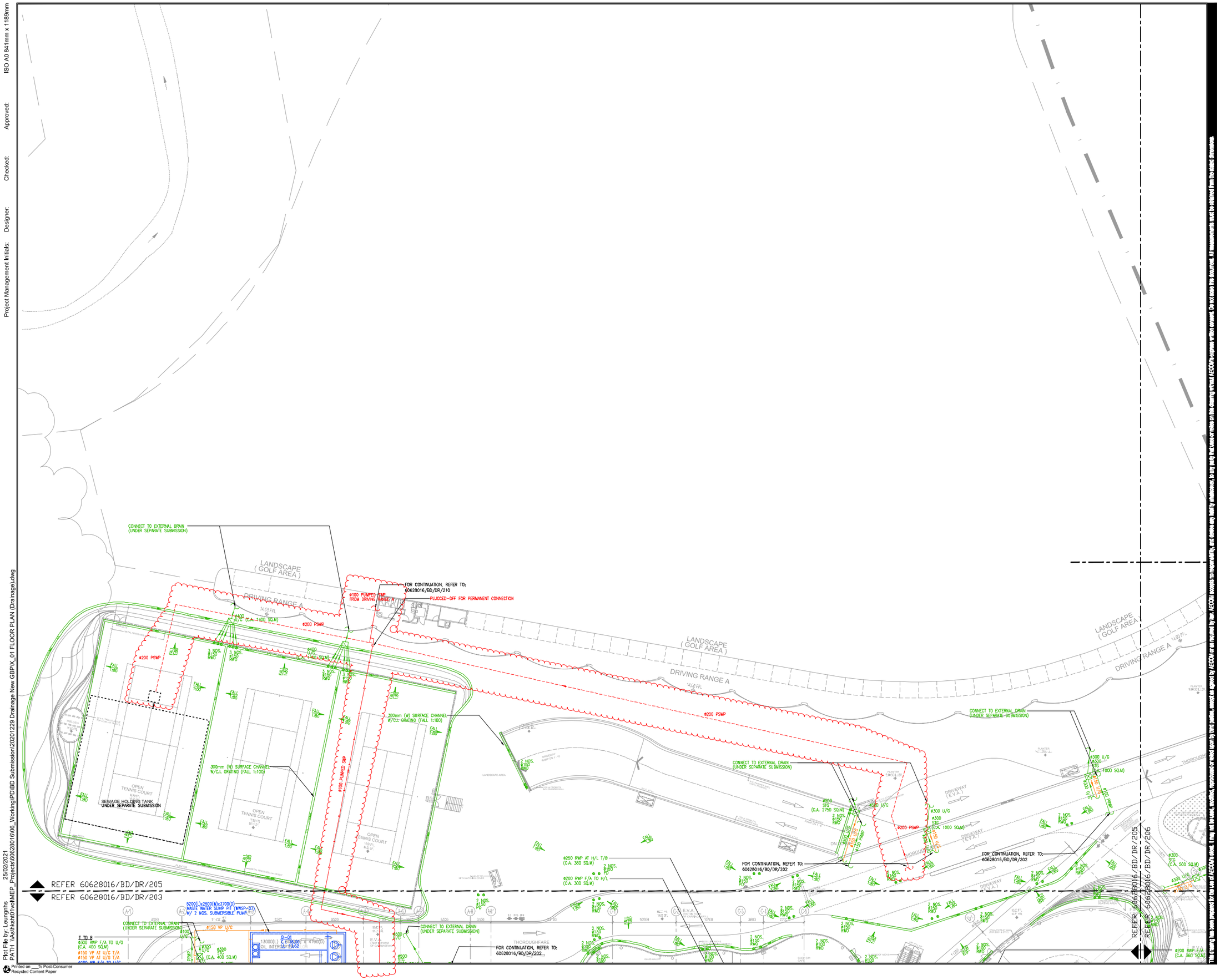
Total Daily Discharge (SPC) 386.50 m3/day

(Say) 386.50 m3/day

Appendix 3

Proposed interim sewer Layout

Project Management Initials: Designer: Checked: Approved: ISO A0 841mm x 1189mm



AECOM

PROJECT

THE PROPOSED RECREATION & SPORTS CENTRE / WELFARE CENTRE & PUBLIC VEHICLE PARK DEVELOPMENT

CLIENT

Light Time Investments Ltd.

CONSULTANT

AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS

B.D. REF

BD 4/9196/19

ISSUE/REVISION

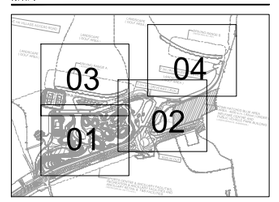
-	FEB 2021	BD SUBMISSION	SL
I/R	DATE	DESCRIPTION	CHK.

STATUS

SCALE A0 1 : 200

DIMENSION UNIT MILLIMETER

KEY PLAN



PROJECT NO. 60628016

CONTRACT NO.

SHEET TITLE

DRAINAGE LAYOUT PLAN FOR G/F FOR RECREATION & SPORTS CENTRE

SHEET 3 OF 4

SHEET NUMBER

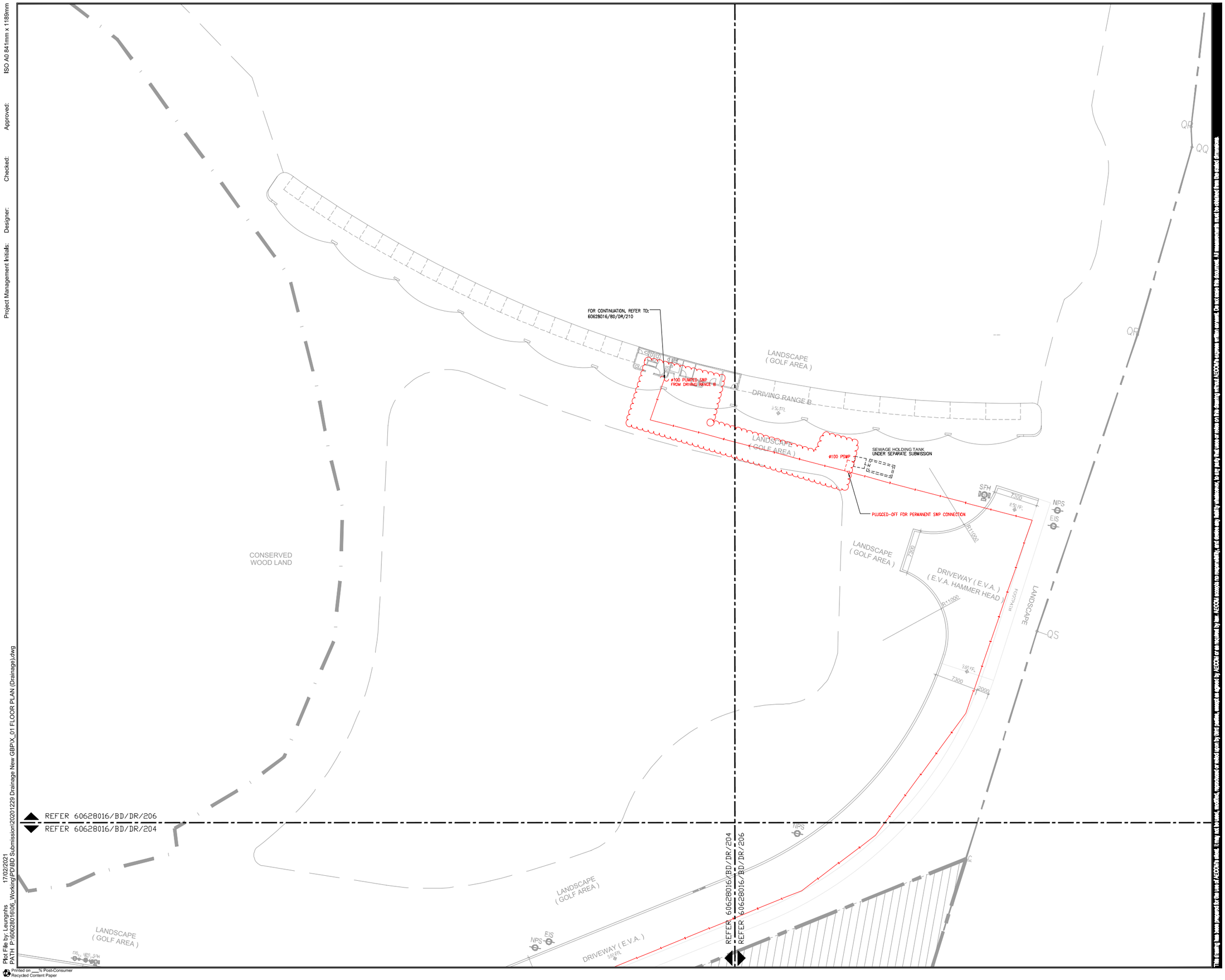
60628016/BD/DR/205

This drawing and design is the property of AECOM and is not to be used for any purpose and/or project except as agreed by AECOM in writing and with its written consent. Do not scale this drawing. All measurements must be obtained from the stated dimensions.

Plot File by: Laurgnhs
PATH: \Admin\01\vol\MEP_Projects\60628016\06_Working\PD\BD Submission\20201229 Drainage New GBPIX_01 FLOOR PLAN (Drainage).dwg
25/02/2021

Printed on ___% Post-Consumer Recycled Content Paper

Project Management Initials: Designer: Checked: Approved: ISO A0 841mm x 1189mm



Plot File by Leungchs 17/02/2021
PATH: P:\60628016\06_Working\PD\BD Submission\20201229 Drainage New GBPIX_01 FLOOR PLAN (Drainage).dwg

Printed on ___% Post-Consumer Recycled Content Paper

This drawing has been prepared for the use of AECOM's client, and it may not be used, modified, reproduced or passed on by third parties, without the prior written permission of AECOM. AECOM accepts no liability for any unauthorized use of this drawing and, to the extent permitted by law, AECOM excludes all liability whatsoever in connection with such unauthorized use. Do not scale from this drawing. Verify all dimensions on site before commencing work. Any discrepancies must be reported immediately to the Architect. All dimensions must be checked from the stated dimensions.

AECOM

PROJECT

THE PROPOSED RECREATION & SPORTS CENTRE / WELFARE CENTRE & PUBLIC VEHICLE PARK DEVELOPMENT

CLIENT

Light Time Investments Ltd.

CONSULTANT

AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS

B.D. REF

BD 4/9196/19

ISSUE/REVISION

VR	DATE	DESCRIPTION	CHK.
-	FEB 2021	BD SUBMISSION	SL

STATUS

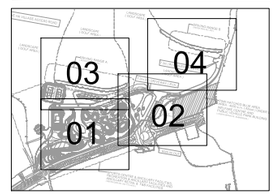
SCALE

A0 1 : 200

DIMENSION UNIT

MILLIMETER

KEY PLAN



PROJECT NO.

60628016

CONTRACT NO.

SHEET TITLE

DRAINAGE LAYOUT PLAN FOR G/F FOR RECREATION & SPORTS CENTRE

SHEET 4 OF 4

SHEET NUMBER

60628016/BD/DR/206

Appendix 4

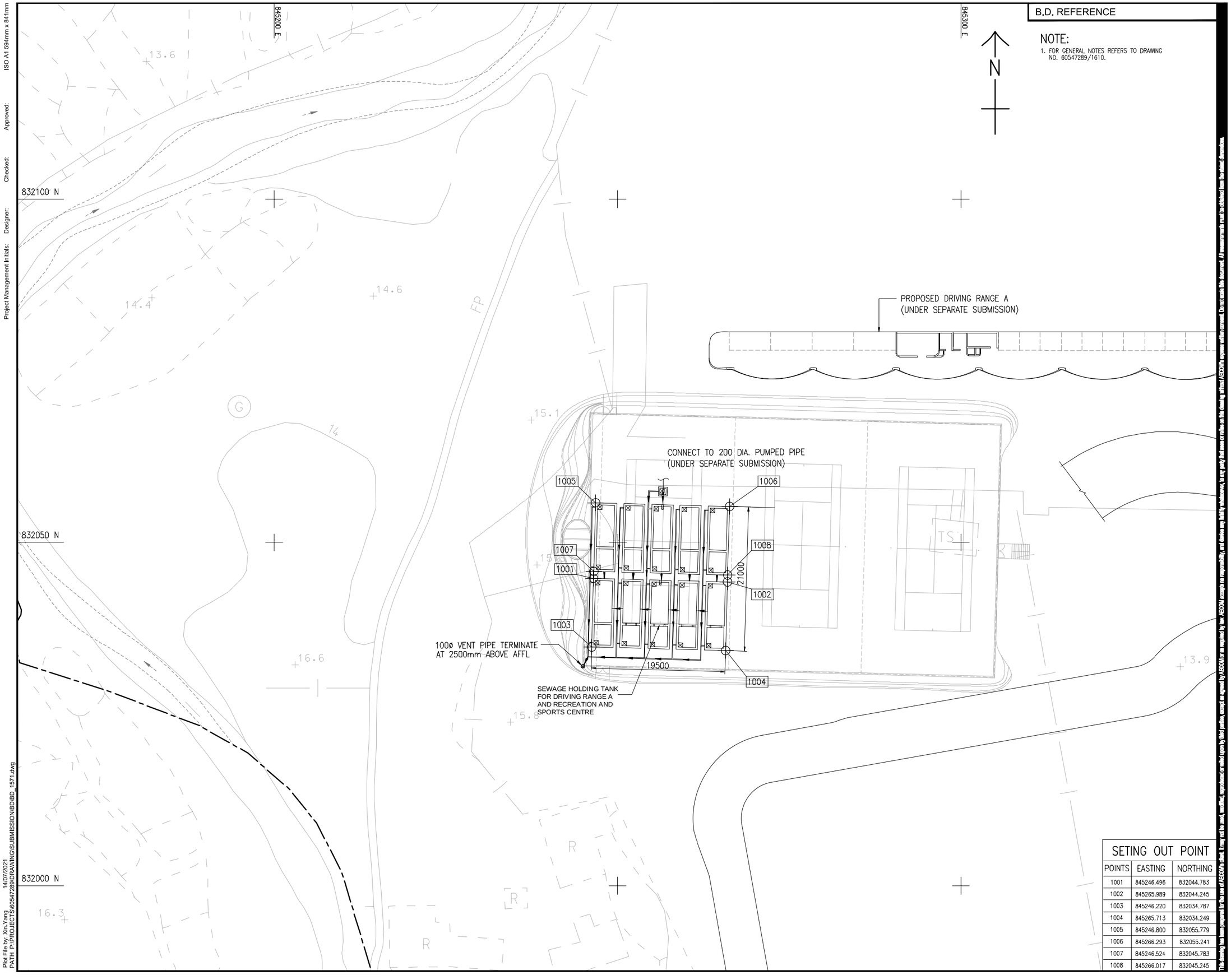
Proposed Sewage Holding Tank Arrangement

ISO A1 594mm x 841mm

Project Management Initials: Designer: Checked: Approved:

B.D. REFERENCE

NOTE:
1. FOR GENERAL NOTES REFERS TO DRAWING NO. 60547289/1610.



SETING OUT POINT		
POINTS	EASTING	NORTHING
1001	845246.496	832044.783
1002	845265.989	832044.245
1003	845246.220	832034.787
1004	845265.713	832034.249
1005	845246.800	832055.779
1006	845266.293	832055.241
1007	845246.524	832045.783
1008	845266.017	832045.245

This drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as required by law, AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be checked from the stated dimensions.

AECOM

PROJECT
SAI SHA ROAD WIDENING - SAI SHA COMPREHENSIVE DEVELOPMENT SHAP SZ HEUNG, SAI KUNG NORTH, N.T.

CLIENT
SUN HUNG KAI REAL ESTATE AGENCY LTD.

CONSULTANT
AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS

ISSUE/REVISION

IR	DATE	DESCRIPTION	CHK.
-	JUN. 21	1ST SUBMISSION	MCY

STATUS
SUBMISSION

SCALE
A1 1 : 250

DIMENSION UNIT
METRES

KEY PLAN

PROJECT NO.
60547289

CONTRACT NO.

SHEET TITLE
SEWAGE HOLDING TANK LOCATION PLAN

SHEET 1 OF 2

SHEET NUMBER
60547289/1571

Plot File by: Xin Yang 14/07/2021
PATH: P:\PROJECTS\60547289\DRAWING\SUBMISSION\BD\BD_1571.dwg

ISO A1 594mm x 841mm

Approved:

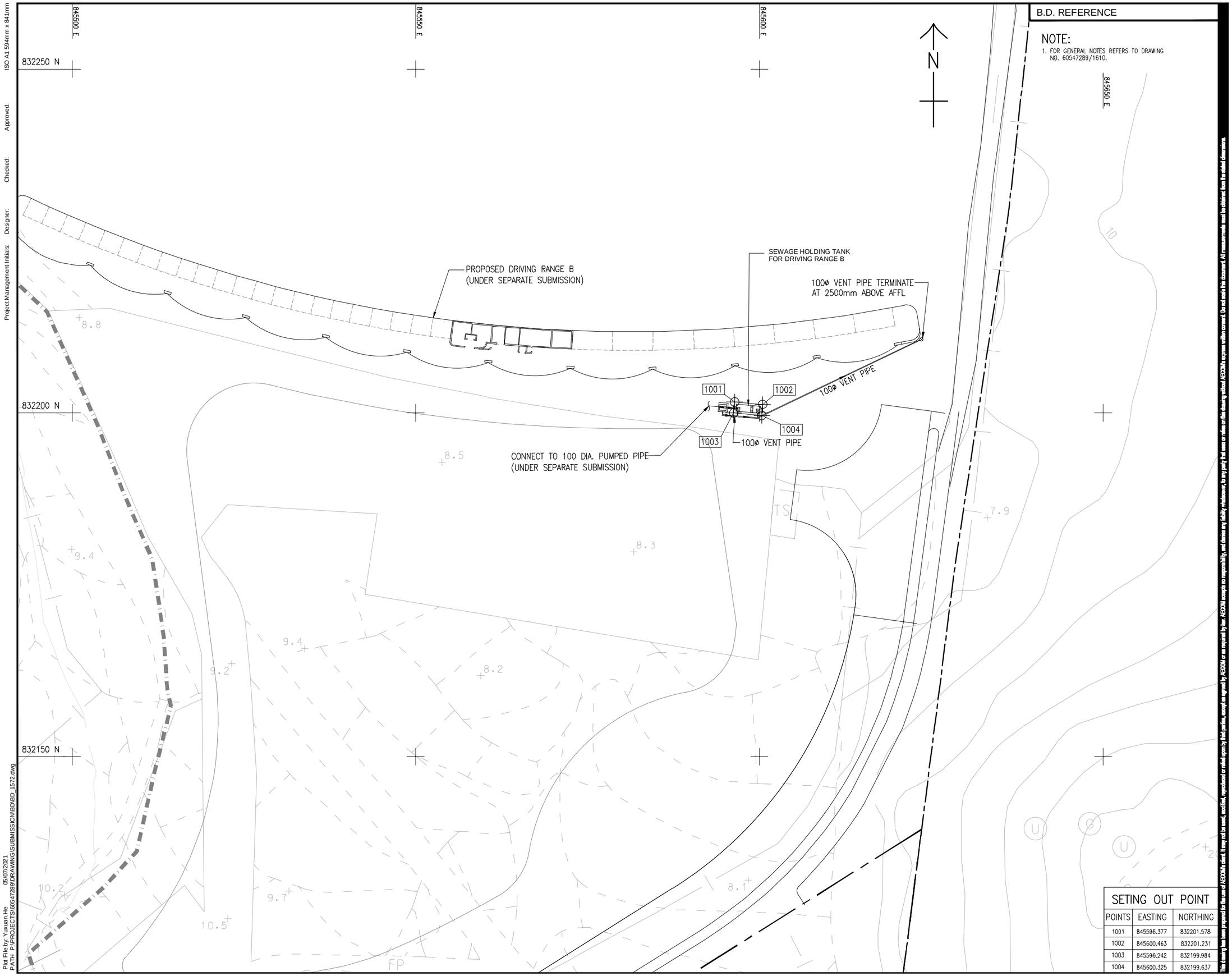
Checked:

Designer:

Project Management Initials:

B.D. REFERENCE

NOTE:
1. FOR GENERAL NOTES REFERS TO DRAWING NO. 60547289/1610.



SETING OUT POINT		
POINTS	EASTING	NORTHING
1001	845596.377	832201.578
1002	845600.463	832201.231
1003	845596.242	832199.984
1004	845600.325	832199.637

AECOM

PROJECT

SAI SHA ROAD
WIDENING - SAI SHA
COMPREHENSIVE
DEVELOPMENT
SHAP SZ HEUNG,
SAI KUNG NORTH, N.T.

CLIENT

SUN HUNG KAI REAL ESTATE AGENCY LTD.

CONSULTANT

AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS

ISSUE/REVISION

I/R	DATE	DESCRIPTION	CHK.
-	JUN. 21	1ST SUBMISSION	MCY

STATUS

SUBMISSION

SCALE A1 1 : 250

DIMENSION UNIT METRES

KEY PLAN

PROJECT NO. 60547289

CONTRACT NO.

SHEET TITLE

SEWAGE HOLDING TANK
LOCATION PLAN

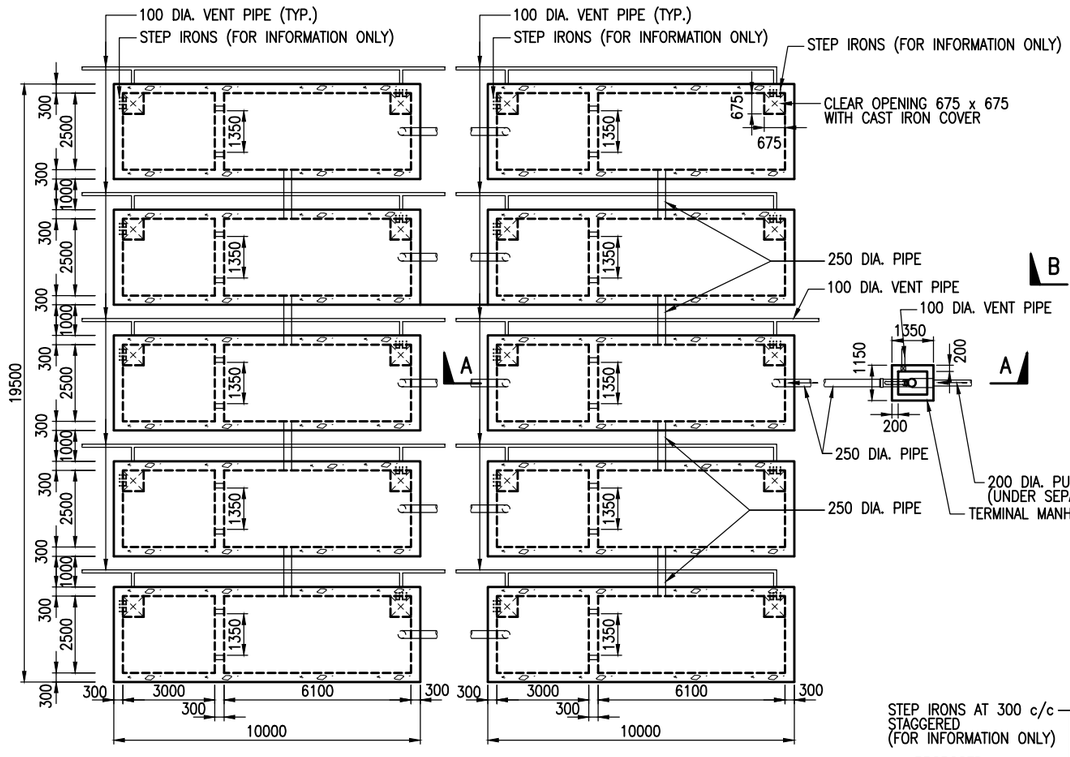
SHEET 2 OF 2

SHEET NUMBER

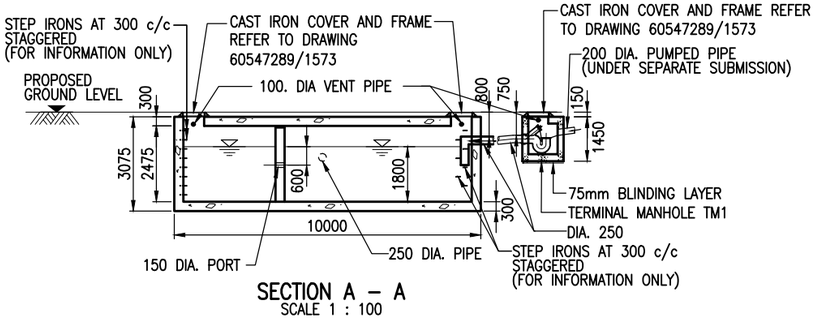
60547289/1572

This drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, for any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimensions.

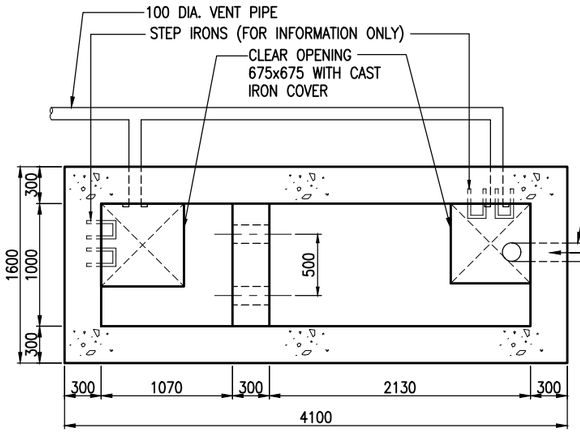
Plot File by Yuxuan.He 05/07/2021
PATH P:\PROJECTS\60547289\DRAWINGS\SUBMISSION\BD\BD_1572.dwg



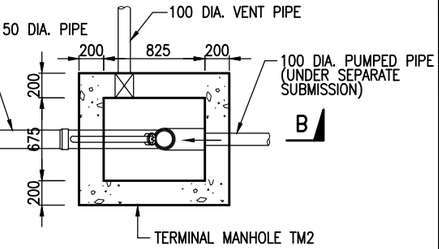
PLAN FOR SEWAGE HOLDING TANK
FOR DRIVING RANGE A
SCALE 1 : 100

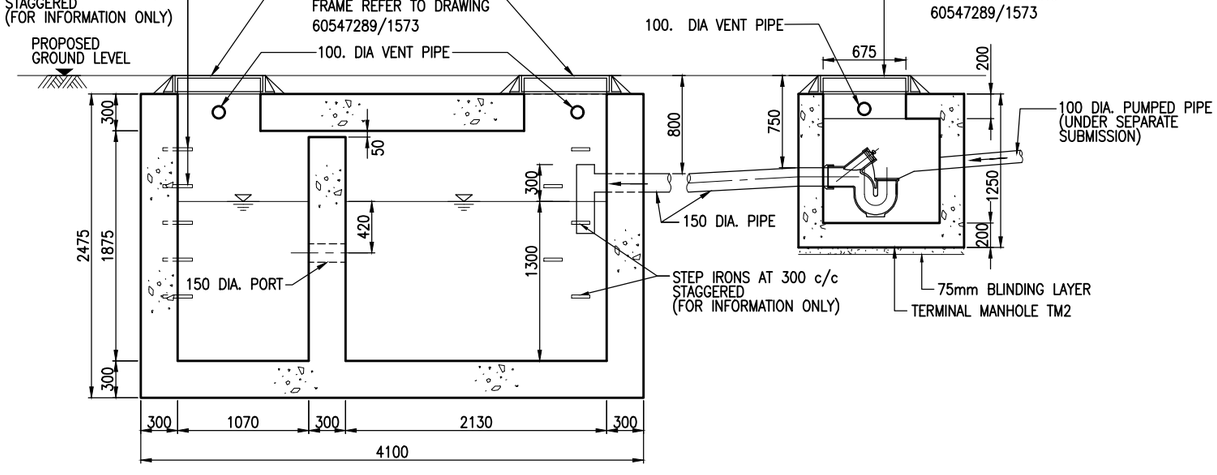


SECTION A – A
SCALE 1 : 100



PLAN FOR SEWAGE HOLDING TANK
FOR DRIVING RANGE B
SCALE 1 : 25





SECTION B – B
SCALE 1 : 25

NOTES FOR SEWAGE HOLDING TANK:

1. SEWAGE HOLDING TANKS WILL BE BACKFILLED WITH COMPACTED FILL AND ABANDONED AFTER TSENG TAU SEWAGE PUMPING STATION FULLY OPERATES. THE PIPEWORK WILL BE TERMINATED AFTER ABANDONED.
2. THE SEWAGE IN SEWAGE HOLDING TANKS WILL BE COLLECTED EVERYDAY.
3. VOLUMES OF EACH SEWAGE HOLDING TANK IS MORE THAN 2.3m^3 AND LESS THAN 41m^3

NOTES:

1. FOR GENERAL NOTES REFERS TO DRAWING NO. 60547289/1610.
2. ALL DIMENSIONS ARE IN MILLIMETERS.

B.D. REFERENCE

AECOM

PROJECT
SAI SHA ROAD WIDENING - SAI SHA COMPREHENSIVE DEVELOPMENT SHAP SZ HEUNG, SAI KUNG NORTH, N.T.

CLIENT
SUN HUNG KAI REAL ESTATE AGENCY LTD.

CONSULTANT
AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS

ISSUE/REVISION

VR	DATE	DESCRIPTION	CHK
-	JUN. 21	1ST SUBMISSION	MCY

STATUS
SUBMISSION

SCALE
A1 AS SHOWN

DIMENSION UNIT
MILLIMETERS

KEY PLAN

PROJECT NO.
60547289

CONTRACT NO.

SHEET TITLE
SEWAGE HOLDING TANK
GENERAL ARRANGEMENT
AND SECTION

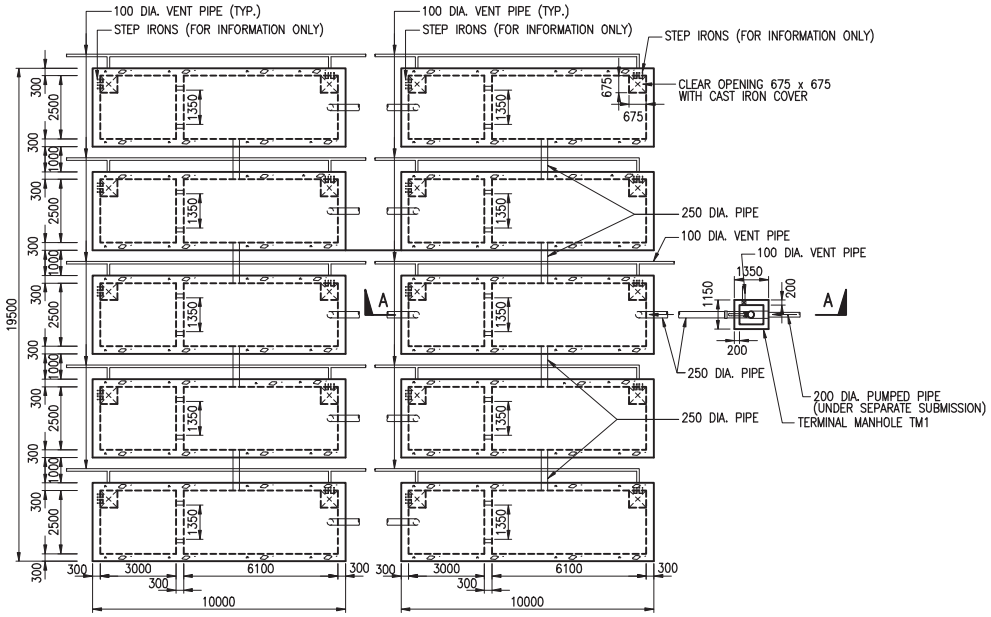
SHEET NUMBER
60547289/1521

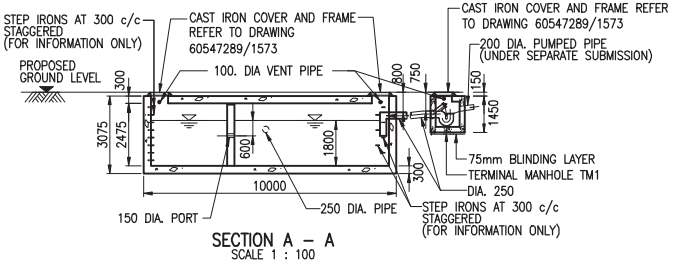
This drawing has been prepared by the use of AECOM's copyright, intellectual property, proprietary and confidential information which may not be used by, disclosed to or duplicated for any other purposes without the prior written consent of AECOM. AECOM will not be liable for any loss or damage howsoever arising from any use by, disclosure to or duplication by any other person for any other purposes. Do not scale this drawing. All dimensions must be checked on site before commencement of any work.

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

Plot File by: HEXY 15/07/2021
PATH: P:\PROJECTS\60547289\DRAWING\SUBMISSION\BD\BD_1521.dwg

Sewerage Holding Tank for Driving Range A and Sports Centre



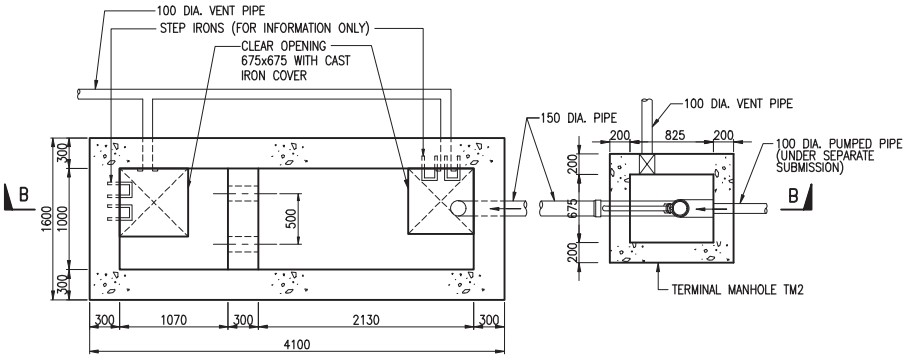


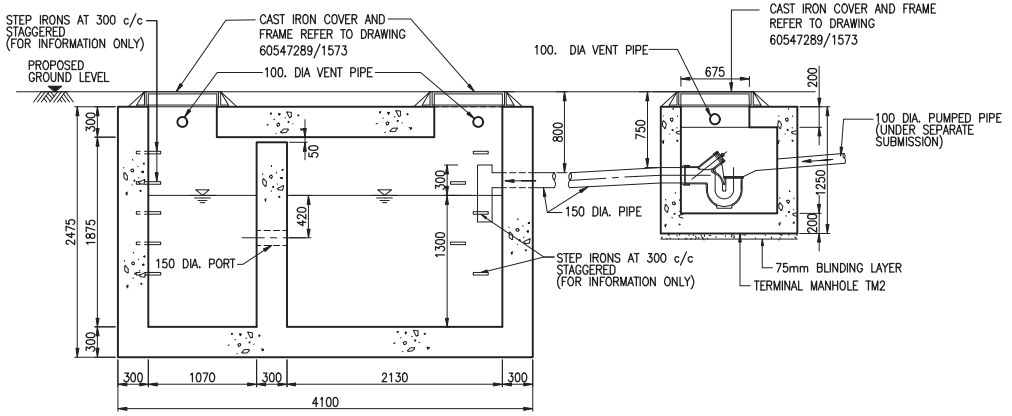
SECTION A – A
SCALE 1 : 100

Capacity of a Tank
=(3000 + 6100) x 2500 x 1800
=40.95m3 < 41m3

Capacity of 10 number of Tanks
=40.95m3 x 10
=409.5m3

Sewerage Holding Tank for Driving Range B





SECTION B – B
SCALE 1 : 25

Capacity of the Tank
=(1070 + 2130) x 1000 x 1300
=4.16m3 < 41m3

Appendix K

Water Supply Impact Assessment (Site C)

(Consolidated Report based on Further Information submitted on 13 June 2022 & 19 July 2022)

(No further comments from water supply perspective from Water Supplies Department received in September 2022)

Section 16 Planning Application for Amendments to the Approved Development (Application No. A/NE-SSH/120-1) – Amendments to Recreation and Sports Centre with Ancillary Facilities in Site C

Water Supply Impact Assessment Report

Sept 2022

Section 16 Planning Application for Amendments to the Approved Development (Application No. A/NE-SSH/120-1) – Amendments to Recreation and Sports Centre with Ancillary Facilities in Site C

Water Supply Impact Assessment Report

Contents

1 INTRODUCTION 1
1.1 Background 1
1.2 The Proposed Development 1
2 OBJECTIVES 4
3 DESIGN BASIS AND DESIGN CRITERIA 4
3.1 Designed Population 4
3.2 Water Demand Assessment 4
4 SITE C DEVELOPMENT – SPORTS AND RECREATIONAL 5
4.1 Water Supply Impact 5
5 CONCLUSION 6

Figure List

WDA/107C Proposed Major Fresh Water
WDA/108C Proposed Major Salt Water

Appendix

Appendix 1 Letter Correspondence showing Partially Discharged
Appendix 2 Master Layout Plan of Sai Sha Development

1 INTRODUCTION

1.1 Background

1.1.1 The Application Site (Tai Po Town Lot 157 (currently known as Tai Po Town Lot 253 for Site A and Site B and Tai Po Town Lot 157 RP for Site C), various lots in D.D.165, 207 and 218 and Adjoining Government Land, Sai Sha, Shap Sz Heung, New Territories) is the subject of an approved planning application No. A/NE-SSH/120-1 ("Approved Scheme") for proposed comprehensive residential and recreational development including government, institution or community (G/IC) facilities with minor relaxation of gross floor area and building height restrictions which was approved by the Director of Planning, under the delegated authority of the Town Planning Board (the Board), under Section 16A of the Town Planning Ordinance in October 2020.

1.1.2 With the commitment to further enhance user experience in Site C, which is intended to be a sports and recreational hub in Sai Sha, the subject Section 16 planning application ("Current Scheme") is submitted to reflect the proposed diversification of recreational facilities to be provided therein by replacing some of the golf driving range facilities to other outdoor sports and recreational uses with associated minor increase in the number of blocks as ancillary structures for sports and recreational facilities in Site C without any increase/change in the total GFA.

1.1.3 It should be noted that, **the subject matter of the current application is to reflect minor changes in Site C only**. The layout and development parameters for Site A and Site B is entirely identical to those in Approved Scheme. The inclusion of Site A and Site B as part of the Application Site is to comply with the statutory requirement of the subject "Comprehensive Development Area" ("CDA") zone under the Notes of Shap Sz Heung Outline Zoning Plan which requires the submission of a Master Layout Plan covering the entire "CDA" zone for the approval of the Board. The proposed minor amendments to the Approved Scheme for Site C (Current Scheme) shall be the only subject matter of this planning application.

1.1.4 This Water Supply Impact Assessment (WSIA) is prepared to facilitate the review of discharge approval condition due to proposed minor amendment of sports and recreational facilities provision in Site C. Therefore, Site C shall be the only subject matter of this assessment.

1.2 The Proposed Development

1.2.1 Same as the previously approved scheme, the Application Site comprises four major portions, namely Site A, Site B and Site C (or collectively known as "Development Sites"), and Sai Sha Road together with its widening works area. Site A and Site B are designated mainly for residential purpose supported by some local retail and public transport facilities to serve the future residents, whereas Site C is proposed for recreational use. According to the Approved Scheme, Site C covers about 36.7ha with (i) 10 blocks of recreational and sports centre with ancillary facilities and golf driving range facilities, (ii) 1 block of welfare centre and public vehicle park building and (iii) 2 reserved primary school sites (**Appendix 1**).

1.2.2 **Table 1** below shows the Overall indicative Development Schedule. No change is proposed to the overall parameters as the Approved Scheme. **Table 2** shows the indicative Development Schedule of the Current Scheme at Site C. It should be noted that all of the development parameters for Site C under the Current Scheme are the same as the Approved Scheme except for increase in no. of blocks.

Table 1: Indicative Development Schedule (Overall)

The Overall Development	
Total Application Site Area (1)	About 748,400 m^2
Domestic GFA (2)	Not more than 538,213 m^2
Domestic Plot Ratio (3)	About 0.832
No. of Residential Storeys (4)	16-31 storeys
Site Coverage (above ground level) (3)	Domestic – not more than 33.33% Non-Domestic – not more than 80% (below 15m)
No. of Residential Towers	46
No. of Flats	Not more than 9,700
Average Flat Size	55.49 m^2
Anticipated Population (5)	About 29,100
Residents' Club GFA (6)	Not more than 13,446 m^2
Commercial GFA (7)	Not more than 12,077 m^2
Transport Interchange GFA (8)	Not more than 9,000 m^2
Recreation & Sports Centre with Ancillary Facilities GFA (8)	Not more than 17,500 m^2
Welfare Centre GFA	Not more than 5,560 m^2
Public Vehicle Park GFA (8)	9,000 m^2

Remarks:

(1) Including Development Site Area of 646,908 m^2 (i.e. excluding Sai Sha Road widening works area and areas to be provided as sewage pumping station near Tseng Tau Village).
(2) Including 390m^2 for two existing houses in Site C to be retained.
(3) Calculated based on Development Site Area.
(4) Over 1 to 3 levels of carpark / M&E / residential clubhouse facilities.
(5) Based on a person-per-flat ratio of 3.0.
(6) The clubhouse GFA is about 2.5% of the domestic GFA for Site A and Site B respectively.
(7) Commercial GFA refers to commercial uses ('Eating Place' and 'Shop and Services'), 'School' (kindergarten, nursery, language, computer, commercial and tutorial schools, art school, ballet and other types of schools providing interest / hobby related courses), 'Place of Entertainment' and 'Religious Institution' (church).
(8) Under the approved scheme (Application No. A/NE-SSH/61-2), it also included the provision of Sports Centre and Ancillary Facilities, as well as Public Vehicle Park. GFAs of these facilities are specified in the development schedule.

Table 2: Indicative Development Schedule of the Proposed Amendment at Site C

Site C:	
Development Site Area (2)	About 366,983 m^2
Total no. of Non-domestic Blocks	14 (6)
Recreation & Sports Centre with Ancillary Facilities / E&M (3) (4)	
Non-domestic GFA (1)	Not more than 17,500m^2 • Sports Centre & Ancillary Facilities: Not more than 5,500m^2 • Recreation Centre & Ancillary Facilities: Not more than 8,500m^2 • Retail & F&B Facilities: Not more than 3,500m^2
No. of Blocks	13 (6)
No. of Storeys	3 storeys above 2 levels of basement
Welfare Centre & Public Vehicle Park Building (5)	
Non-domestic GFA	Not more than 14,560m^2 • Welfare Centre: Not more than 5,560m^2 • Public Vehicle Park: Not more than 9,000m^2 (1)
No. of Blocks	1
No. of Storeys	5 storeys above 1 level of basement carpark
Reserved Primary School Sites	
Total Site Area	Not less than 12,400m^2 (i.e. not less than 6,200m^2 each)

Remarks:

(1) Under the approved scheme (Application No. A/NE-SSH/61-2), it also included the provision of Sports Centre and Ancillary Facilities, as well as Public Vehicle Park. GFAs of these facilities are specified in the development schedule.
(2) Excluding Sai Sha Road widening works area and sewage pumping station near Tseng Tau Village within Application Site boundary of the Approved Scheme.
(3) Recreation & Sports Centre with Ancillary Facilities include 'Place of Recreation, Sports or Culture' (Including Golf Driving Range), 'Place of Entertainment', 'Eating Place', 'Shop and Services' and / or 'Indoor Playground'.
(4) Recreation & Sports Centre with Ancillary Facilities include ancillary E&M facilities for the power supply of Sites A to C. As the E&M facilities are ancillary and directly related to the development, the associated GFA of not more than 3,000m^2 shall be disregarded in this planning application in accordance with the provision of the Notes of the OZP.
(5) Light bus layby, car parking, and loading & unloading provisions subject to TD's approval.
(6) Exclude the structures solely for ancillary M&E and shuttle lift uses.

2 OBJECTIVES

2.1.1 This assessment is to determine the potential impact on the water demand due to proposed minor changes to the Approved Scheme under A/NE-SSH/120-1 for Site C in the Current Scheme.

3 DESIGN BASIS AND DESIGN CRITERIA

3.1 Designed Population

3.1.1 The comprehensive development involves approximately 29,100 residential population from Site A and Site B. The population intake of the development has been tentatively phased as follows (identical to the Approved Scheme):

Populated Area	Designed Population	Estimated Earliest Population Intake Year
Site A	12,900	2025
Site B	16,200	2025
Site C	Nil	-
Total	29,100	2025

Two reserved school sites and a welfare centre are proposed in Site C. The water demand for the users and staff were considered in this WSIA.

3.2 Water Demand Assessment

Unit Water Demand

3.2.1 The water demand is estimated based on residential type R2. The total population is 29,100.

3.2.2 A unit demand of 300 litres per head per day (l/h/d) is adopted for residential fresh water consumption, while service trade demand is estimated based on the total residential population of the developments at a unit demand of 35 l/h/d.

3.2.3 Salt water will be supplied by a separate salt water distribution system. A unit demand of 70 l/h/d is used for flushing water.

3.2.4 The fresh water and salt water demand arising from employees on commercial activities are based on 20 l/m^2/d and 7.5 l/m^2/d respectively.

3.2.5 The unit water demands for the comprehensive development are summarized as follows:

Fresh Water	Mean Daily Unit Demand
i. Residential (type R2)	300 litres/head/day
ii. Service Trade	35 litres/head/day
iii. Employment	20 litres/m^2/day
iv. Irrigation (in Site A and B)	6 litres/m^2/day
v. School	25 litres/head/day
vi. Sports Centre	2 litres/m^2/day
Salt Water	**Mean Daily Unit Demand**
i. Residential (type R2)	114 litres/head/day
ii. Employment	7.5 litres/m^2/day
iii. School	25 litres/head/day
iv. Sports Centre	0.75 litres/m^2/day

3.2.6 In Site C, the school unit flow has been considered and show in the above. However, since there is no available unit flow factor for social welfare facilities, an unit flow similar to employment is adopted. The consideration of the fresh water and salt water demand has been shown in **Table 1**.

Water Demand of the Development

3.2.7 Based on the unit water demand as mentioned in the Section 3.2.5, the fresh and salt water demand of the development is estimated with the detailed breakdown shown in **Table 1**.

3.2.8 The fresh and salt water demand of each development site is summarized below:

	Fresh Water Demand (MLD)	Salt Water Demand (MLD)
Site A	4.81	1.53
Site B	6.01	1.90
Site C	0.91	0.12
Total	11.78	3.55

"MLD" stands for million litres per day.

4 SITE C DEVELOPMENT – SPORTS AND RECREATIONAL

4.1 Water Supply Impact

4.1.1 As compared to the Approved Scheme, a golf driving range and a mini-driving range / game area / recreation & sports centre with ancillary facilities in the southeastern and western portion respectively are replaced with diversified outdoor sports and recreation facilities. No additional GFA and residential development was proposed in Site C.

4.1.2 The approved WSIA estimated Fresh and Flush water demand based on maximum non-domestic Gross Floor Area (17,500 m^2), the change in recreational facilities in Site C would not change the GFA, since maximum non-domestic GFA maintained as 17,500 m^2, the total water demand remains the same and therefore no water supply impact is envisaged.

4.1.3 The proposed major fresh water and salt water system were shown in **Figure WDA/107C** and **WDA/108C**.

5 CONCLUSION

5.1.1 Minor amendments are only proposed to Site C of the Approved Scheme. The proposed amendments mainly concern replacement of golf driving range facilities with other outdoor sports and recreation facilities (e.g. sports fields / ball courts) to better meet the need of the community in the Sai Sha area.

5.1.2 The water demand assessment for Site C was based on non-domestic Gross Floor Area. Since there is no change in Gross Floor Area of Site C. The total water demand remains the same for Site C which is 0.91MLD Fresh Water Demand and 0.12MLD Salt Water Demand.

5.1.3 Therefore, no water supply impact is envisaged.

Tables

Comprehensive Residential and Recreational Development in Various Lots in D.D. 165, 167, 207 and 218 and adjoining government land, Sai Sha, Shap Sz Heung

Table 1
- Estimate on Water Demand

	Code	Population	Area (m2)	Fresh Water: Fresh UD (l/h/d)/(l/m²/d)	Fresh Water: Fresh Water Demand (MLD)	Flushing Water: Flushing UD (l/h/d)/(l/m²/d)	Flushing Water: Flushing Water Demand (MLD)
Site A Residential	*R2*	17,803	-	300	5.373	114	2.427
Services Trade (including residential club, swimming pool, etc.) @ population of 17844	*ST*	12,900	-	35	0.452	-	included in above
Kindergarten	*School*	288		25	0.007	25	0.007
Commercial Facilities	*C/R*	-	6,039	20	0.121	7.5	0.045
Landscape area	*Irrigation*	-	60,000	6	0.360	-	-
Sub-total			(A)		4.809 say 4.81		1.523 say 1.53
Site B Residential	*R2*	16,200	-	500	4.860	114	1.847
Services Trade (including residential club, swimming pool, etc.) @ population of 13157	*ST*	16,200	-	35	0.567	-	included in above
Kindergarten	*School*	288		25	0.007	25	0.007
Commercial Facilities	*C/R*	-	6,039	20	0.121	7.5	0.045
Landscape area	*Irrigation*	-	75,000	6	0.450	-	-
Sub-total			(B)		6.005 say 6.01		1.899 say 1.90
Site C							
Recreation & Sports Centre with Ancillary Facilities	*C*		17,500	2	0.035	0.75	0.013
Primary School Site	*School*	2,520		25	0.063	25	0.063
Social Welfare			5,560	20	0.111	7.5	0.042
Irrigation Need	*Irrigation*		115,970	6	0.696	-	-
Sub-total			(C)		0.905 say 0.91		0.118 say 0.12
Landscape in Green Area	*Irrigation*	-	8,458	6	0.051		
			(D)		say 0.051		
Total			(A) + (B) + (C) + (D)		11.78		3.55

Note
1. The Site C will be developed for recreational use
2. The irrigation water demand for Site C is about 0.696 MLD
3. It is assumed the 20m wide strip of Tai Tung Wo Liu stream within development Site A is ecologically self-sustainable.
4. The unit factor of the social welfare is consider similar to commercial facilities. The factor mentioned in section 3.1.4.
5. The unit factor of the Sha Tin Area is 114 as refer to the actual consumption from WSD

Figures

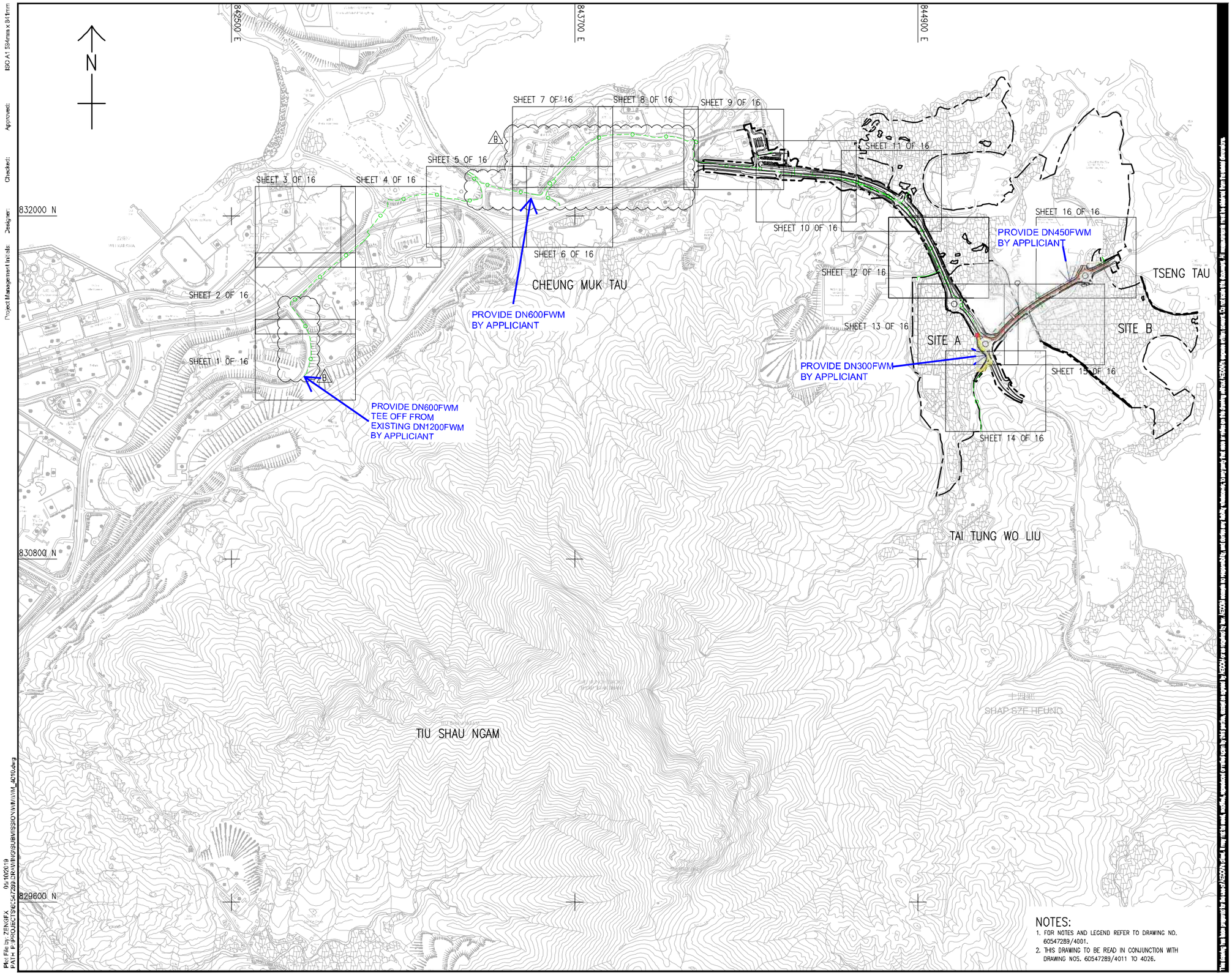
ISO A1 594mm x 841mm

Approved:

Checked:

Designed:

Project Management Initials:



NOTES:

1. FOR NOTES AND LEGEND REFER TO DRAWING NO. 60547289/4001.
2. THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING NOS. 60547289/4011 TO 4026.

Plot File by: ZENGFX 09/10/2019
PATH: P:\PROJECTS\ECS\47289\DRAWING\SUBMISSION\WMW\M_4010.dwg

AECOM

PROJECT

SAI SHA ROAD WIDENING - SAI SHA COMPREHENSIVE DEVELOPMENT SHAP SZ HEUNG, SAI KUNG NORTH, N.T.

CLIENT

SUN HUNG KAI REAL ESTATE AGENCY LTD.

CONSULTANT

AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS

ISSUE/REVISION

B	OCT. 19	THIRD SUBMISSION	MCY
A	AUG. 19	SECOND SUBMISSION	MCY
-	APR. 19	FIRST SUBMISSION	MCY
I/R	DATE	DESCRIPTION	CHK

STATUS

SCALE: A1 1 : 6000

DIMENSION UNIT: METRES

KEY PLAN

PROJECT NO.: 60547289

CONTRACT NO.:

SHEET TITLE

PROPOSED MAJOR FRESH WATER - KEY PLAN

SHEET NUMBER

WDA/107C

This drawing has been prepared for the use of AECOM's client, and others, in accordance with the agreement between AECOM and its client. AECOM accepts no responsibility for any use of or reliance on this drawing by any third party and for any purpose not stated in the agreement between AECOM and its client. All rights reserved. No part of this drawing may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording or storing in any medium in any form without the permission of AECOM.

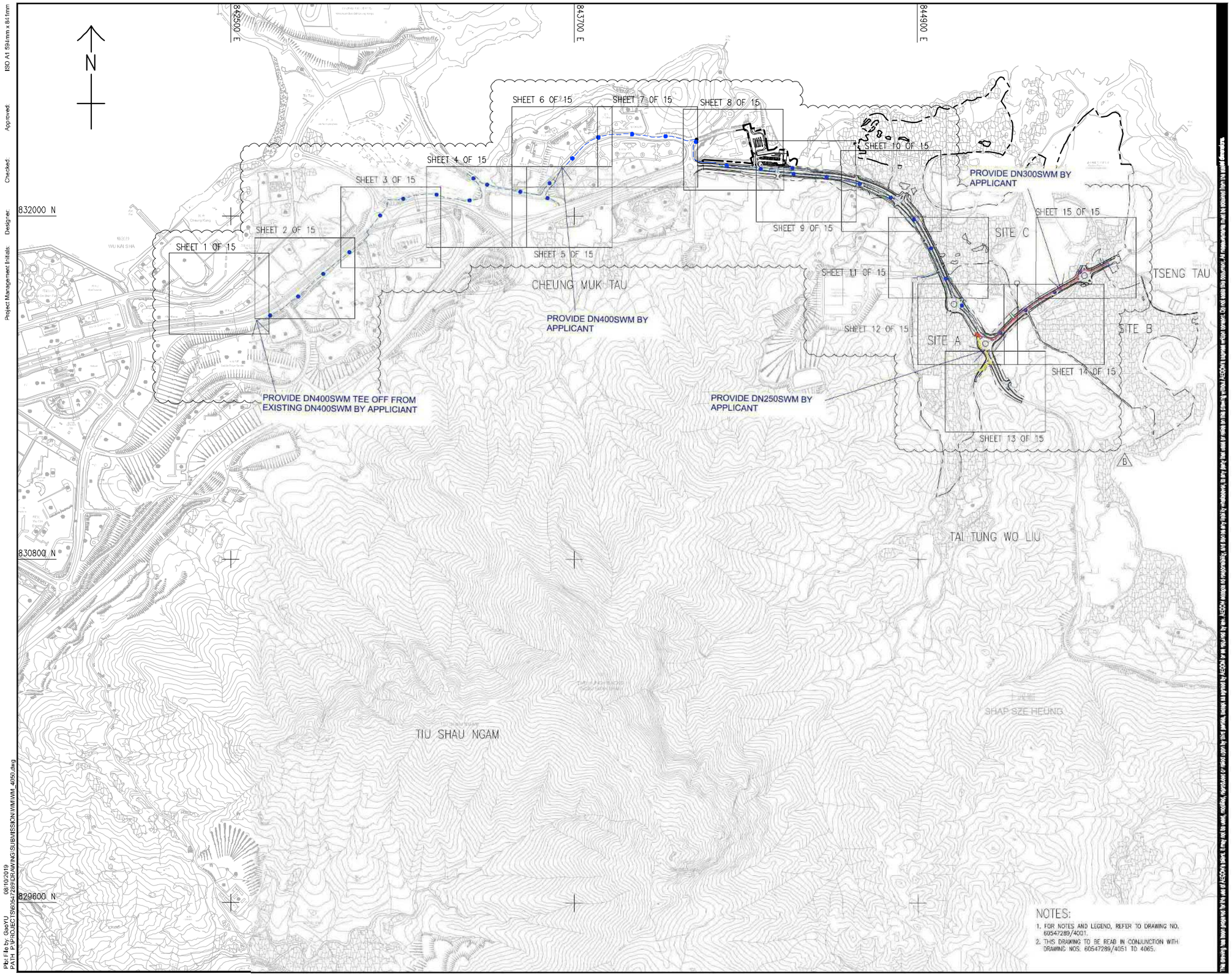
ISO A1 594mm x 841mm

Approved:

Checked:

Designer:

Project Management Initials:



Plot File by: GaoYU
PATH: P:\PROJECTS\60547289\DRAWING\SUBMISSION\WMW\WM_4050.dwg
08/10/2019

AECOM

PROJECT

SAI SHA ROAD WIDENING - SAI SHA COMPREHENSIVE DEVELOPMENT SHAP SZ HEUNG, SAI KUNG NORTH, N.T.

CLIENT

SUN HUNG KAI REAL ESTATE AGENCY LTD.

CONSULTANT

AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS

ISSUE/REVISION

I/R	DATE	DESCRIPTION	CHK
B	OCT. 19	THIRD SUBMISSION	MCY
A	AUG. 19	MINOR AMENDMEN	MCY
-	APR. 19	FIRST SUBMISSION	MCY

STATUS

SCALE: A1 1 : 6000

DIMENSION UNIT: METRES

KEY PLAN

PROJECT NO.: 60547289

CONTRACT NO.:

SHEET TITLE

PROPOSED MAJOR SALT WATER - KEY PLAN

SHEET NUMBER

WDA/108C

Appendix 1 – Letter Correspondence showing Partially Discharged

規 劃 署

沙田、大埔及北區規劃處
香港新界沙田上禾輋路一號
沙田政府合署
十三樓 1301-1314 室

Planning Department

Sha Tin, Tai Po & North District Planning Office
Rooms 1301-1314, 13/F,
Shatin Government Offices,
1 Sheung Wo Che Road, Sha Tin ,
N.T., Hong Kong

來函檔號	Your Reference:	5552/2/039/kc
本署檔號	Our Reference:	TPB/A/NE-SSH/120-1
電話號碼	Tel. No. :	2158 6220
電子郵件	E-mail:	stndpo@pland.gov.hk
傳真機號碼	Fax No. :	2691 2806

By Post & Fax (2891 3834)
(1 page)

11 February 2021

P&T Architects and Engineers Ltd.,
33/F, 633 King's Road,
North Point, Hong Kong
(Attn: Mr. Desmond WU)

Dear Sir,

Compliance with Approval Condition (q)

Proposed Comprehensive Residential and Commercial Development with Government, Institution or Community Facilities with Minor Relaxation of Gloss Floor Area and Building Height Restrictions in "Comprehensive Development Area", "Country Park", "Government, Institution or Community", "Green Belt", "Open Space", "Village Type Development" Zones and an area shown as 'Road', Tai Po Town Lot 157 and Various Lots in D.D. 165, D.D. 207 and D.D. 218 and Adjoining Government Land, Sai Sha, Shap Sz Heung (Planning application No. A/NE-SSH/120-1)

I refer to your submission dated 29.12.2020 and received by our office on 31.12.2020 for compliance with the approval condition (q) on "*the submission of a water supply impact assessment and the implementation of upgrading works identified therein, as proposed by the applicant, to the satisfaction of the Director of Water Supplies or of the TPB*" of the captioned planning application.

The Chief Engineer/ Construction, Water Supplies Department (CE/C, WSD) has been consulted and advised that the WSIA is considered acceptable. As such, approval condition (q) as stated in the approval letter (Ref. TPB/A/NE-SSH/120-1) dated 14.10.2020 is considered partially complied with. Please proceed to implement the upgrading works identified in the WSIA for full compliance with approval condition (q). To facilitate compliance checking, you are required to submit the relevant information showing the completed upgrading works to this office for inspection.

Should you have any queries, please contact Ms. Sharon CHAN (Tel: 2158 6043) of this Office.

Yours faithfully,

(Ms. Jessica CHU)
District Planning Officer/
Sha Tin, Tai Po & North,
Planning Department

c.c.
CE/C, WSD (Attn: Mr. Jason LEE) (Fax: 2351 6949)
Internal
Site Record

JC/TW/SC/JW/jw

Appendix 2 – Master Layout Plan of Sai Sha Development

E&M

1ST +18.5

CHE HA VILLAGE

ACCESS ROAD

RESERVED SCHOOL SITE

RESERVED SCHOOL SITE

EXISTING BUILDINGS TO REMAIN

MA KWU LAM VILLAGE

SITE A

TAI TUNG VILLAGE

SITE B

TSENG TAU VILLAGE

FOOTBRIDGE

FOOTBRIDGE

1ST SITE C +18.5

TRAINING PATH FOR CYCLING / MAINTENANCE PATH

PLACE OF RECREATION, SPORTS OR CULTURE #

2ST +17.5

1ST +15.0

PLACE OF RECREATION, SPORTS OR CULTURE #

2ST +23.5

1ST +21.0

3ST +36.0

5ST +33.0

1ST +18.5

3ST +40.0

3ST +36.0

1ST +24.0

+12.5

+15.5

RECREATION & SPORTS CENTRE WITH ANCILLARY FACILITIES / E&M *

RECREATION & SPORTS CENTRE WITH ANCILLARY FACILITIES / E&M *

WELFARE CENTRE & PUBLIC VEHICLE PARK

PUBLIC OPEN SPACE

SEWAGE PUMPING STATION

PEDESTRIAN CROSSING

RECREATION & SPORTS CENTRE WITH ANCILLARY FACILITIES / E&M *

NOTE : 1. ALL LEVELS DENOTE MAXIMUM MAIN ROOF LEVELS
2. ALL NUMBERS OF STOREYS DENOTED ON PLAN REFER TO TOTAL NO. OF STOREYS ABOVE GROUND.

LEGEND

- LAND TO BE SECURED BY APPLICANT / LAND OUTSIDE TPTL 157 RP AND TPTL 253
- 20m ECOLOGICAL STREAM BUFFER ZONE
- NON-BUILDING AREA
- PROPOSED DEVELOPMENT SITE BOUNDARY
- APPLICATION SITE BOUNDARY
- +37.0 HEIGHT IN mPD
- 1ST HEIGHT IN NO. OF STOREY

* INCLUDING 'PLACE OF RECREATION, SPORTS OR CULTURE', 'PLACE OF ENTERTAINMENT', 'EATING PLACE', 'SHOP & SERVICES', AND/OR 'INDOOR PLAYGROUND'

\# PLACE OF RECREATION, SPORTS OR CULTURE (OUTDOOR RECREATIONAL FACILITIES FOR THE USE OF SPORTS FIELD/ BALL COURT/ POOL/ DRIVING RANGE/ TRAINING PATH FOR CYCLING)

0 25 50 75 100 125

SCALE 1 : 5000 (A3)

Proposed MLP (Site C)

LWK +PARTNERS

Appendix L

Supplementary Drawings on AVA aspects

(Consolidated based on Further Information submitted on 13 June 2022 & 19 July 2022)

(No further comments from air ventilation perspective from Urban Design & Landscape Section, Planning Department received in September 2022)

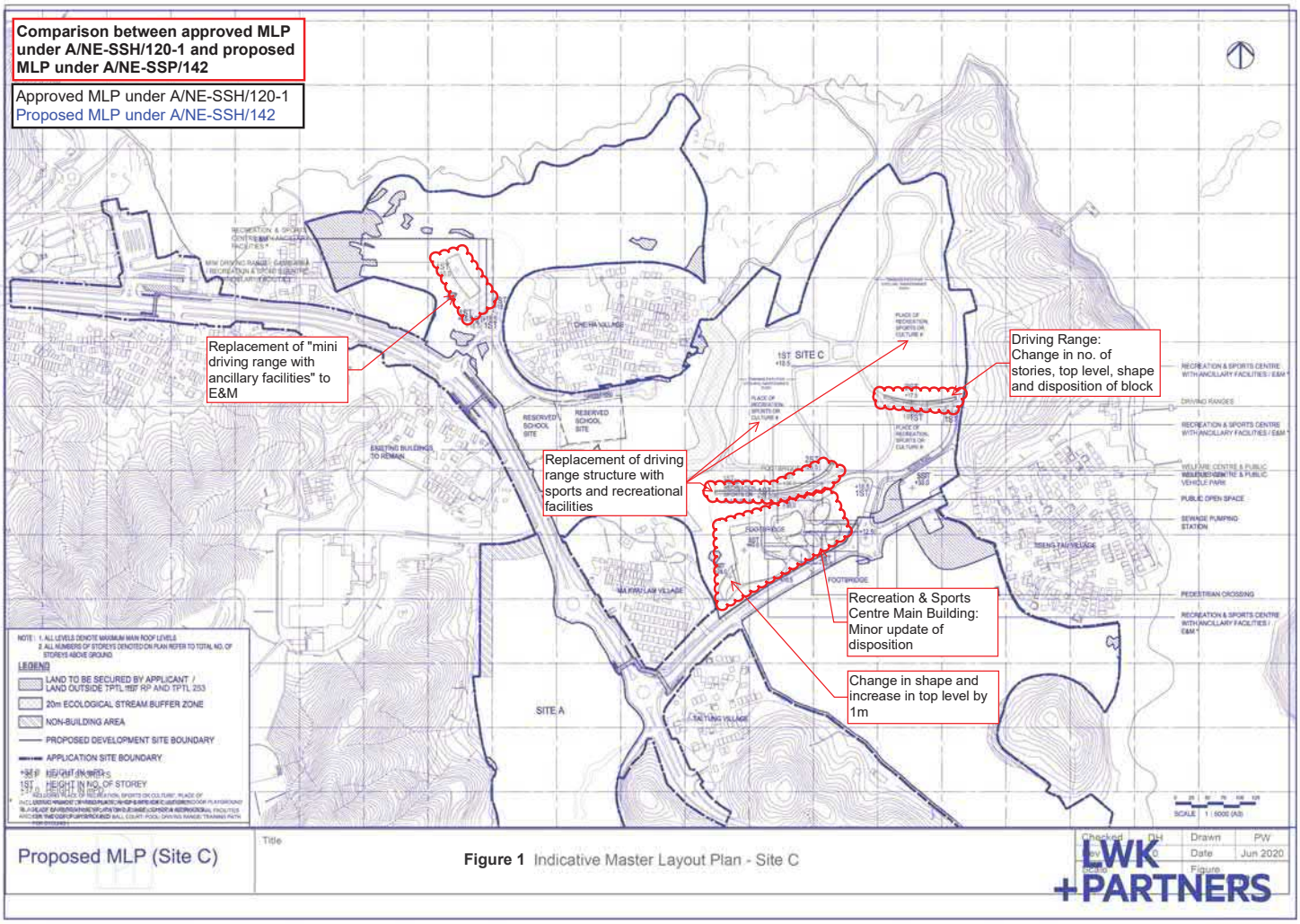


Figure 1 Indicative Master Layout Plan - Site C

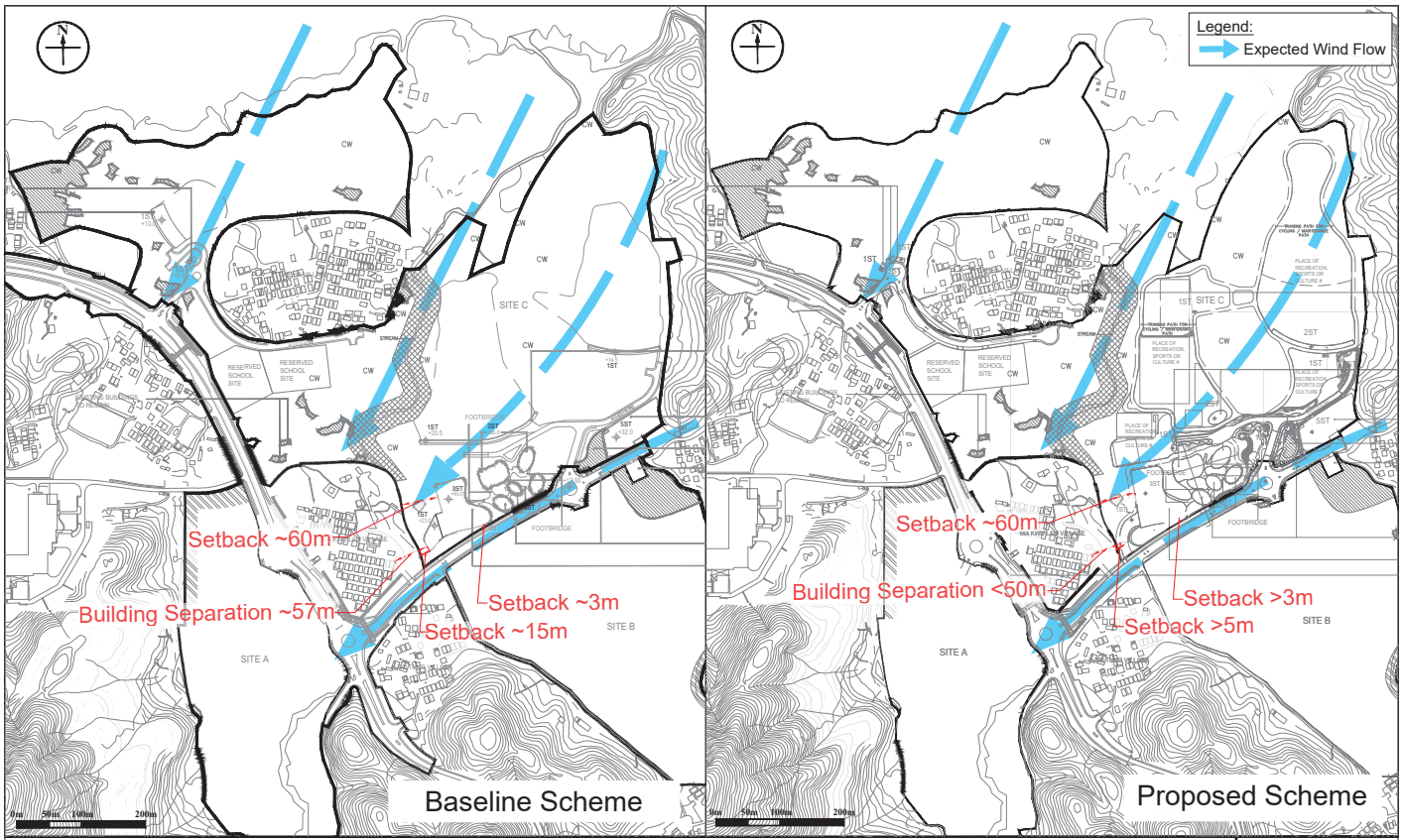


Figure: 2A	RAMBOLL
Title: Illustration of Annual Wind Flow from NNE Wind Direction at Site C	Drawn by: VS Checked by: HN
Project: Proposed Minor Amendments To The Approved Comprehensive Residential And Recreational Development Including Government, Institution Or Community Facilities With Minor Relaxation Of GFA And Building Height Restrictions (Application No. A/NE-SSH/120) Under S16A Of The Town Planning Ordinance At Tai Po Town Lot 157, Various Lots In D.D.165, 207 And 218 and Adjoining Government Land, Sai Sha, Shap Sz Heung, New Territories	Rev.: 2.0 Date: Jul 2022

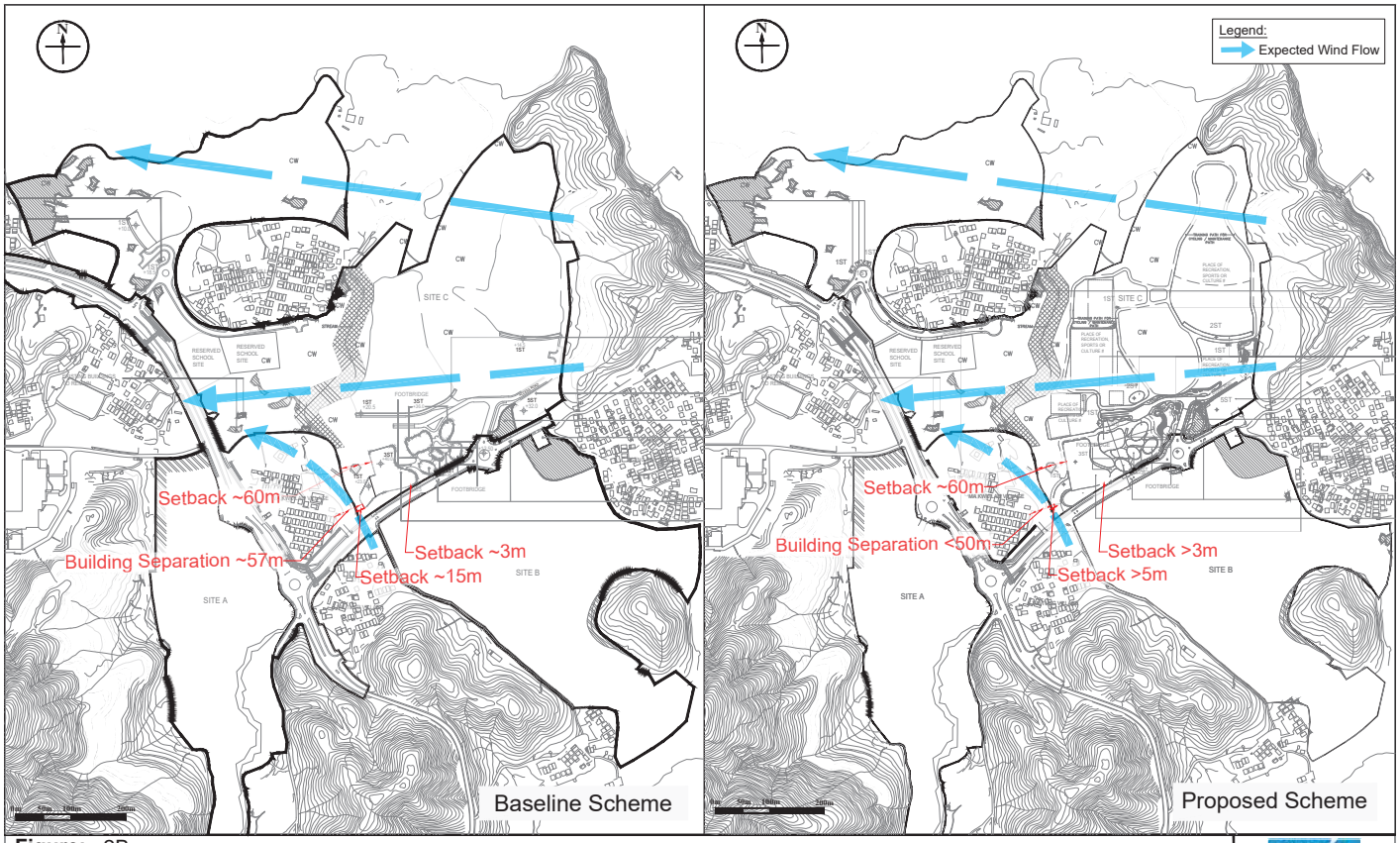


Figure: 2B

Title: Illustration of Annual Wind Flow from ESE Wind Direction at Site C

Project: Proposed Minor Amendments To The Approved Comprehensive Residential And Recreational Development Including Government, Institution Or Community Facilities With Minor Relaxation Of GFA And Building Height Restrictions (Application No. A/NE-SSH/120) Under S16A Of The Town Planning Ordinance At Tai Po Town Lot 157, Various Lots In D.D.165, 207 And 218 and Adjoining Government Land, Sai Sha, Shap Sz Heung, New Territories

RAMBOLL

Drawn by: VS
Checked by: HN
Rev.: 2.0
Date: Jul 2022

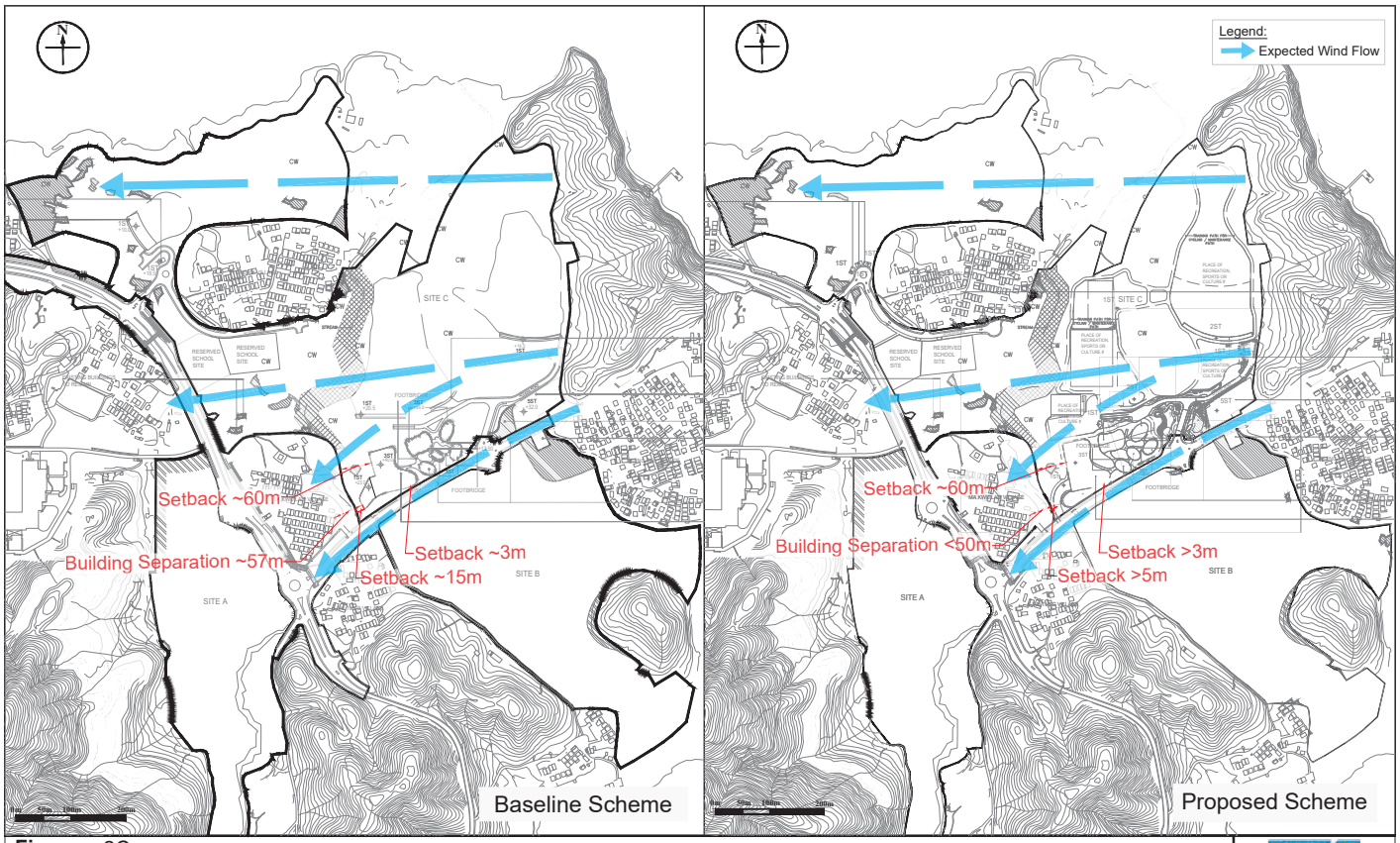


Figure: 2C

Title: Illustration of Annual Wind Flow from E Wind Direction at Site C

Project: Proposed Minor Amendments To The Approved Comprehensive Residential And Recreational Development Including Government, Institution Or Community Facilities With Minor Relaxation Of GFA And Building Height Restrictions (Application No. A/NE-SSH/120) Under S16A Of The Town Planning Ordinance At Tai Po Town Lot 157, Various Lots In D.D.165, 207 And 218 and Adjoining Government Land, Sai Sha, Shap Sz Heung, New Territories

RAMBOLL

Drawn by: VS
Checked by: HN
Rev.: 2.0
Date: Jul 2022

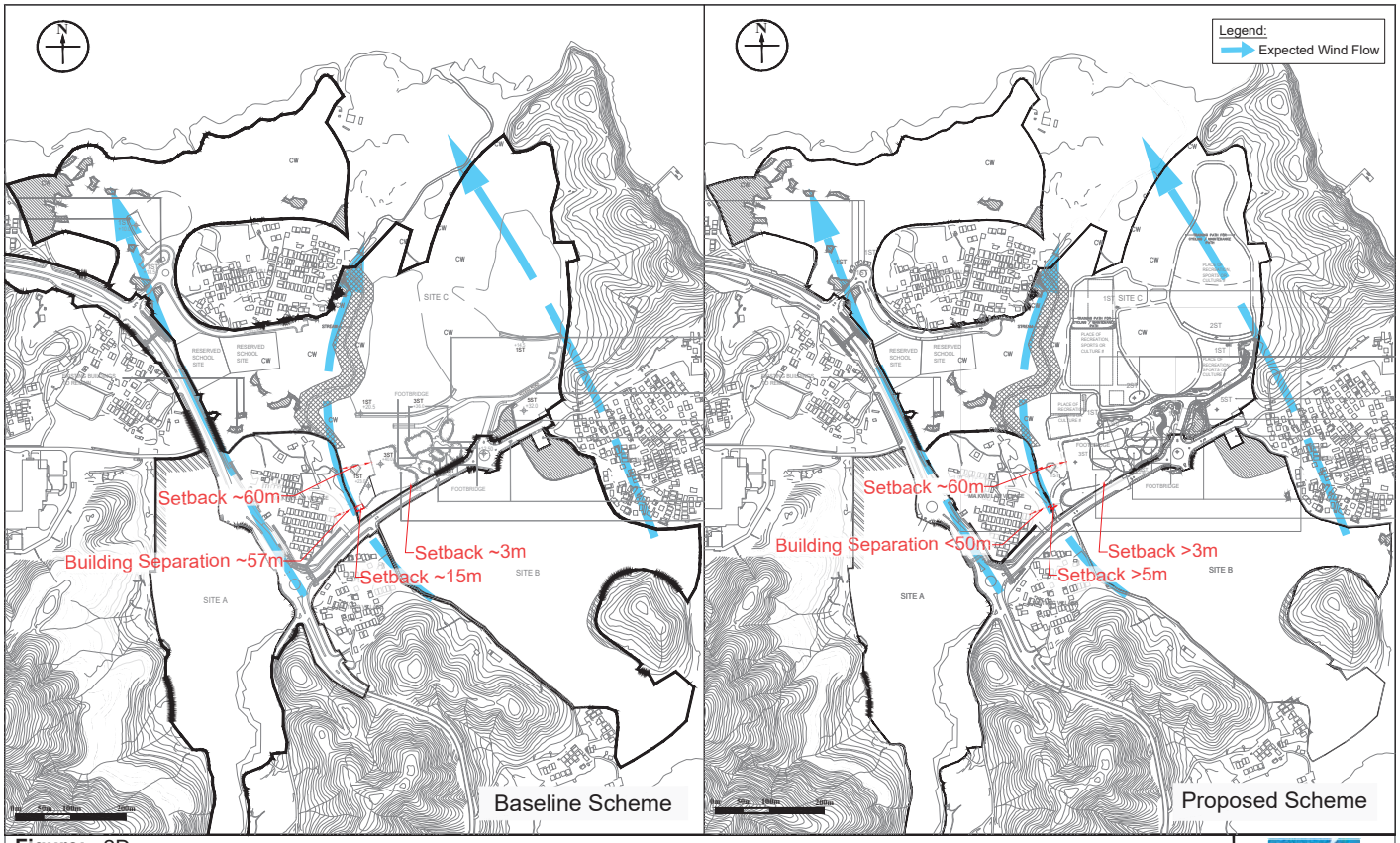


Figure: 2D

Title: Illustration of Summer Wind Flow from S Wind Direction at Site C

Project: Proposed Minor Amendments To The Approved Comprehensive Residential And Recreational Development Including Government, Institution Or Community Facilities With Minor Relaxation Of GFA And Building Height Restrictions (Application No. A/NE-SSH/120) Under S16A Of The Town Planning Ordinance At Tai Po Town Lot 157, Various Lots In D.D.165, 207 And 218 and Adjoining Government Land, Sai Sha, Shap Sz Heung, New Territories

RAMBOLL

Drawn by: VS
Checked by: HN
Rev.: 2.0
Date: Jul 2022

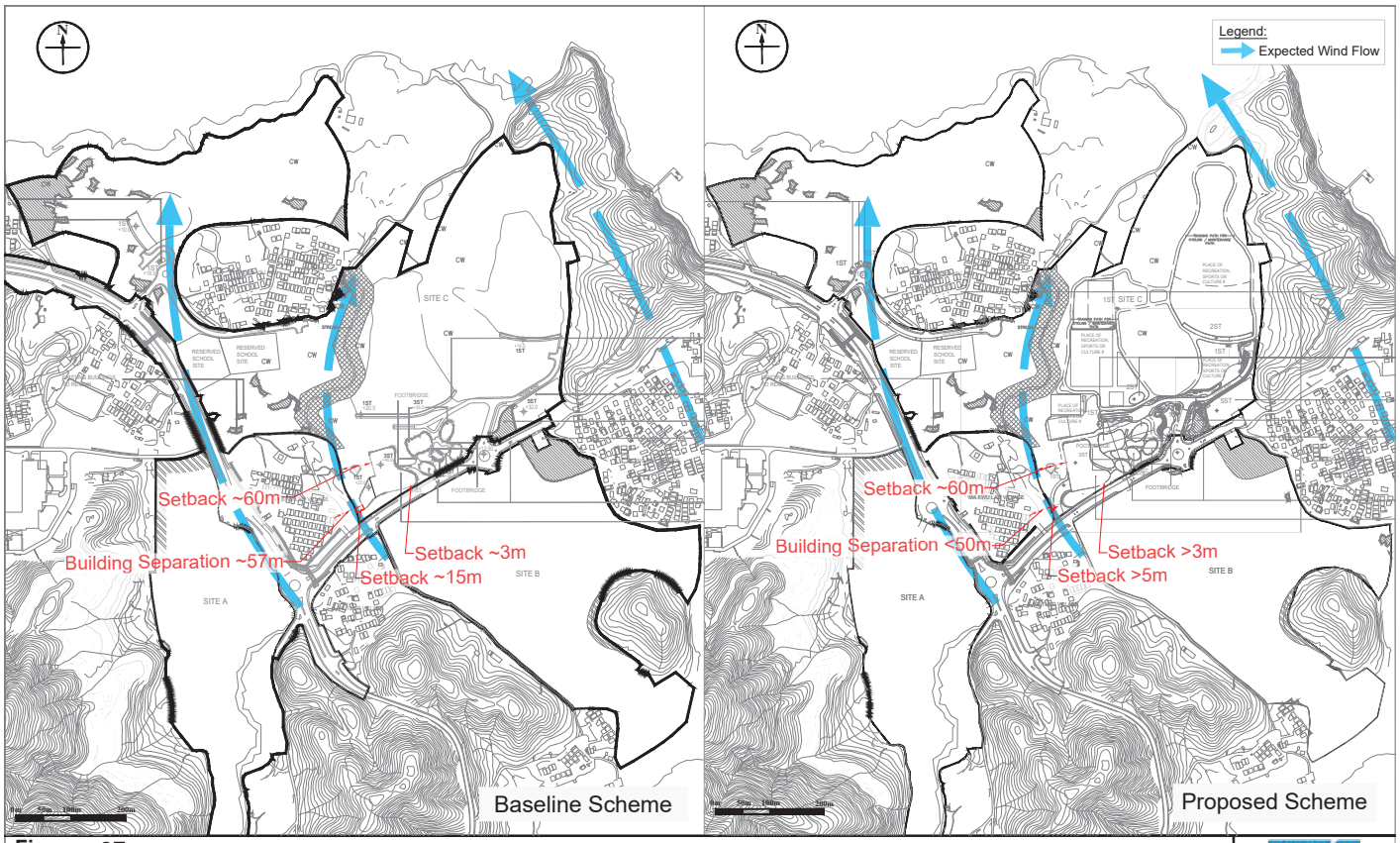


Figure: 2E

Title: Illustration of Summer Wind Flow from SSW Wind Direction at Site C

Project: Proposed Minor Amendments To The Approved Comprehensive Residential And Recreational Development Including Government, Institution Or Community Facilities With Minor Relaxation Of GFA And Building Height Restrictions (Application No. A/NE-SSH/120) Under S16A Of The Town Planning Ordinance At Tai Po Town Lot 157, Various Lots In D.D.165, 207 And 218 and Adjoining Government Land, Sai Sha, Shap Sz Heung, New Territories

RAMBOLL

Drawn by: VS
Checked by: HN
Rev.: 2.0
Date: Jul 2022

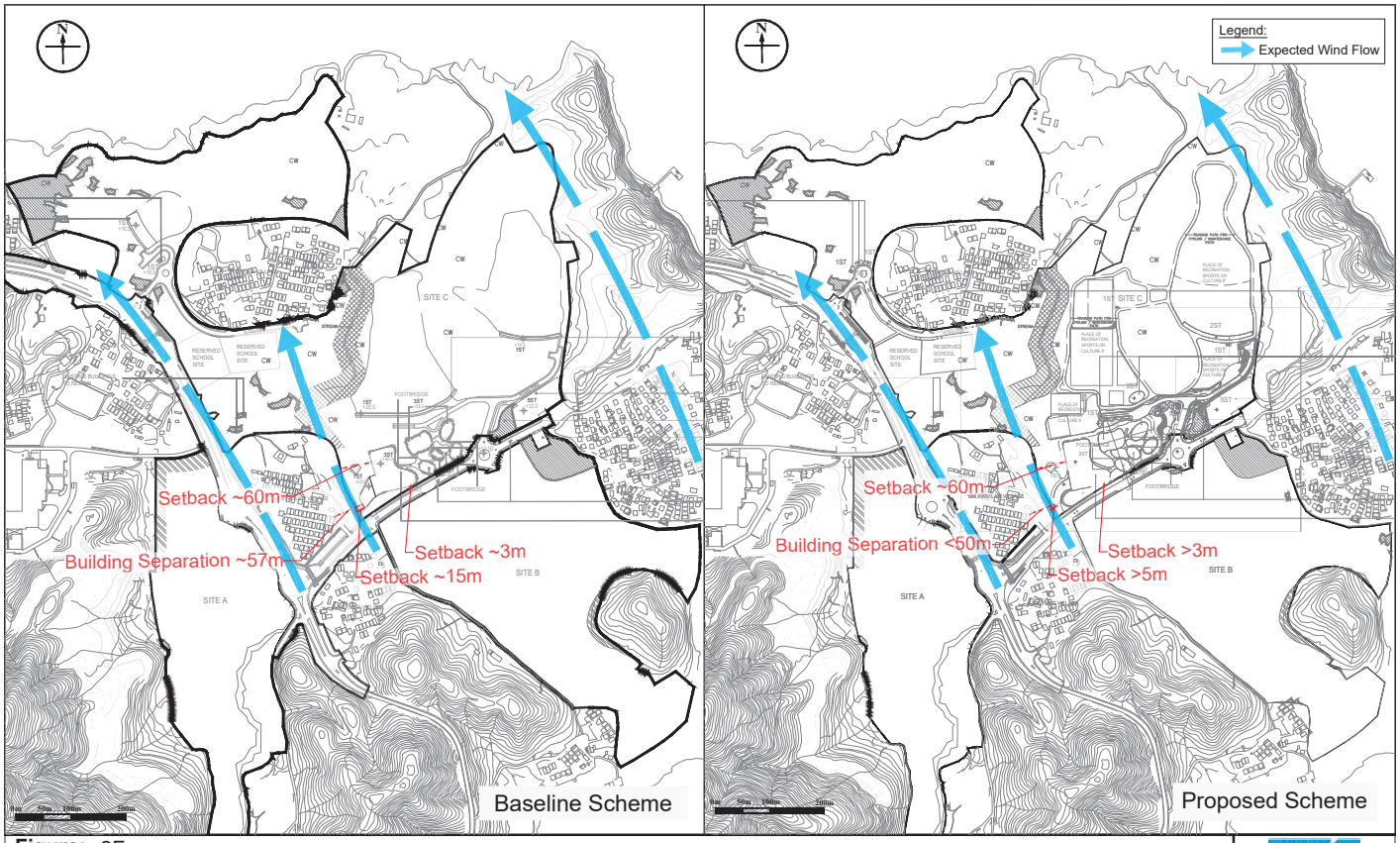


Figure: 2F	RAMBOLL
Title: Illustration of Summer Wind Flow from SSE Wind Direction at Site C	Drawn by: VS Checked by: HN
Project: Proposed Minor Amendments To The Approved Comprehensive Residential And Recreational Development Including Government, Institution Or Community Facilities With Minor Relaxation Of GFA And Building Height Restrictions (Application No. A/NE-SSH/120) Under S16A Of The Town Planning Ordinance At Tai Po Town Lot 157, Various Lots In D.D.165, 207 And 218 and Adjoining Government Land, Sai Sha, Shap Sz Heung, New Territories	Rev.: 2.0 Date: Jul 2022

Attachment 1

Detailed Design Considerations and Extract of Relevant Clauses under Lease for the Proposed Increase of Building Height for Welfare Centre

(Same as that under Original Submission submitted on 28 January 2022)

Explanatory Statement

Our original building height proposal has fulfilled the minimum requirements as stated in the draft Technical Schedule to provide 350mm deep sunken slab for kitchen floor, toilet and shower areas. Some of the drainage pipeworks from the government accommodation were designed to run at H/L of the lower floors, e.g. horizontal drainage pipe for 3/F Residential Care Home for the Elderly and Day Care Unit would run above 2/F carpark area at H/L.

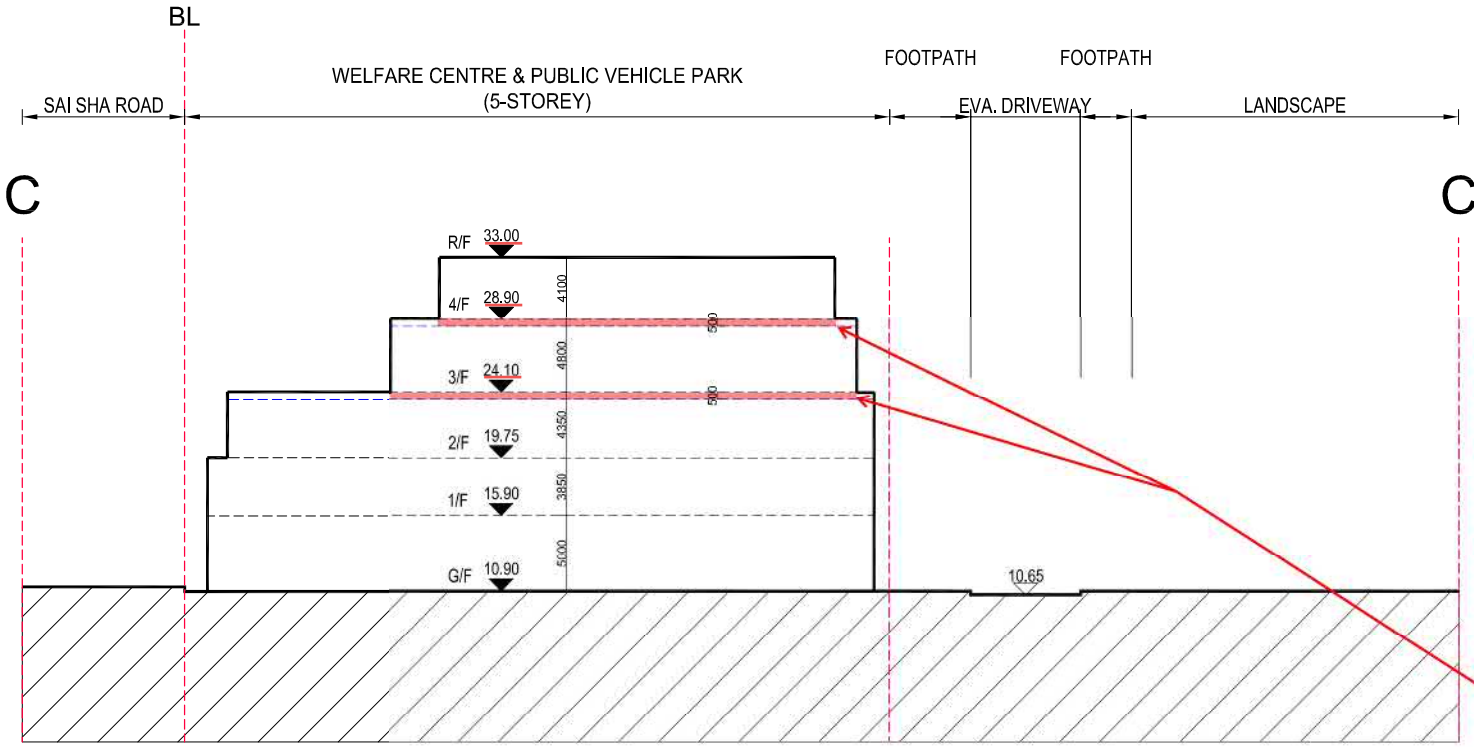
However, **Clause 1.7 of Annex II – Part 2 Plumbing and Drainage Requirements - II. Drainage System of the Technical Schedule under the latest lease modification** stated that no drainage pipeworks of the Government Accommodation shall be running inside private premise which creates difficulties for repair and maintenance works. If the pipeworks have to protrude into the private premises at the floor below, sunken slab for accommodating drainage pipeworks shall be provided. Furthermore, refer to **Clause 1.22 of Annex II – Part 2 Plumbing and Drainage Requirements - II. Drainage System**, all shower rooms shall be installed with top access resealing gully trap set into the floor to enable cleaning of the trap within the room; and refer to **Clause 1.24 of Annex II – Part 2 Plumbing and Drainage Requirements - II. Drainage System,** all floor drains of internal areas shall be provided with water seal trap. As a result, all pipeworks for the Government Accommodations, including the water trap, have to be enclosed with sunken slab, which becomes much deeper than our original proposal.

To fulfill the requirements of the Technical Schedule under the latest lease modification as extracted in the subsequent page, min. 850mm internal depth is required for the sunken slab (refer to Section C-C' in Appendix C). Compared with our previous design of 350mm deep sunken, additional 500mm depth will be required for the 3/F and 4/F Government Accommodations respectively, hence a total 1000mm additional depth is required. An increase of building height of Welfare Centre from 32mPD to 33mPD is proposed to cater for the increase sunken depth.

Extracted Clauses from Technical Schedule

Sunken Slab	1.7	NO drainage pipeworks of the Government Accommodation shall be running inside private premises which creates difficulties for repair and maintenance works. If the Government Accommodation with toilet/ kitchen to be situated immediately above private premises of the development and the fitting pipeworks are unavoidably have to protrude into the private premises at the floor below, sunken slab for accommodating drainage pipeworks (for both vertical and horizontal pipes) with proper maintenance access for these wet floor facilities shall be considered. Each horizontal drainage pipe in sunken slab shall not serve more than 3 WC nor run more than 20m. All turning point and branch off shall be provided with cleaning eyes.
Shower rooms	1.22	All shower rooms shall be installed with top access resealing gully trap set into the floor to enable cleaning of the trap within the room. The top access resealing gully trap shall be proprietary products complying with the following requirements and to be approved by the Government Representatives: (a) Situate and secure the gully body on top of the basic waterproofing surface of concrete slab; (b) Solvent weld the waste pipe to the gully body and protect the gully's opening with a cover prior to the pouring of light concrete into the concrete slab; (c) Fix the additional waterproofing and it shall flush with the gully's flange; (d) Remove the protective cover and adjust the hopper's height by cutting the clamping unit to a pre-determined level and direction. Then, solvent weld the unit onto the hopper body; (e) Construct the screed with an appropriate thickness; (f) Properly lay the floor tiles; (g) Install the resealing tube, strainer and the grating one by one into the hopper body; and
Floor drains	1.24	All floor drains of internal areas shall be specially designed so that the water in the seal trap will be replenished from time to time automatically without routine filling by the occupants in accordance with PNAP ADV -24 issued by Buildings Department.

LWK
+PARTNERS



Refer to Technical Schedule under the latest lease modification:

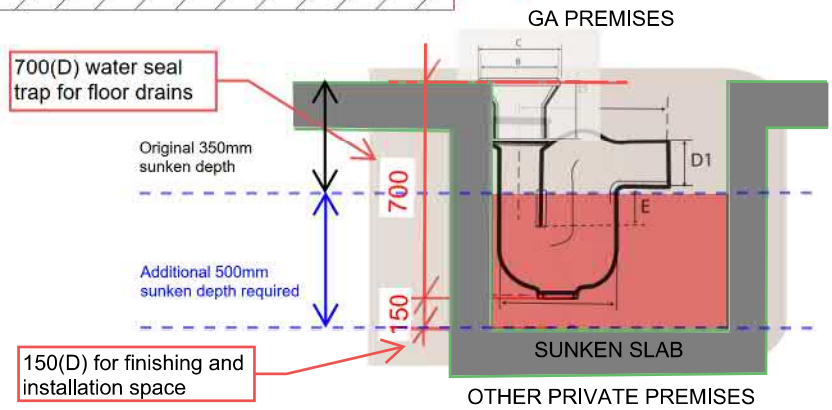
Clause 1.7 of Annex II – Part 2 Plumbing and Drainage Requirements - II. Drainage System, no drainage pipeworks of the Government Accommodation shall be running inside private premise

Clause 1.22 of Annex II – Part 2 Plumbing and Drainage Requirements - II. Drainage System, all shower rooms shall be installed with top access resealing gully trap set for cleaning of the trap within the room;

Clause 1.24 of Annex II – Part 2 Plumbing and Drainage Requirements - II. Drainage System, all floor drains of internal areas shall be provided with water seal trap.

To fulfil the requirements of the Technical Schedule under the latest lease modification as extracted above, compared with our previous design, additional 500mm depth will be required for the 3/F and 4/F Government Accommodations respectively, hence a total 1m increase in building height is proposed to cater for the increase in sunken depth.

SECTION C - C'



Typical sunken slab section

Attachment 2

Previous Responses-to-Comments

(Previously submitted under Further Information dated 13 June 2022, 23 June 2022, 19 July 2022, 27 July 2022, 23 August 2022 & 7 September 2022)

(Please note that the numbering of the attachments mentioned in the R-to-C table has been superseded.)

Under Further Information Submitted on 13 June 2022

Section 16 Planning Application for Amendments to the Approved Development (Application No. A/NE-SSH/120-1) at Tai Po Town Lot 253 and 157 RP, various lots in D.D.165, 207 and 218 and Adjoining Government Land, Sai Sha, Shap Sz Heung, New Territories (Application No.: A/NE-SSH/142)

	Departmental Comments	**Responses to Comments**
1.	**Comments from District Planner Officer/Sha Tin, Tai Po and North, Planning Department (DPO/STN, PlanD)** Information that should be clarified/elaborated:	
1.1	Under the broad land use category, 'place of recreation, sports or culture', it is possible that all land is hard-paved or hard-landscaped. However, the LMP only assumes a ratio of 70:30 for 'hard landscape vs soft landscape'. Please justify how it reflects the 'worst case scenario' in landscape terms. Shall the 70:30 ratio be set as a fixed parameter and forms part of MLP? Please also explain the difference between the 'landscape area (soft landscape)' and 'lawn/man-made grass'?	As detailed design of Site C proceeds, the area of soft landscape and hard landscape for the proposed areas dedicated for 'Place of Recreation, Sports or Culture' use has been refined with soft landscape area further maximized. The 30:70 soft to hard landscape ratio is no longer adopted under the current proposed scheme. Instead, the soft and hard landscape distribution is now revised based on the latest outdoor recreational facilities to be designated thereon at this stage. The areas proposed for soft landscape are mainly for the use of golf driving range in the eastern portion of the site and retained trees with other soft landscape adjoining other outdoor recreational facilities. As for the rest of the areas for outdoor recreational facilities, full hard landscape is assumed to present the worst case scenario. In turn, the soft landscaped area for the proposed outdoor recreational facilities will be increased from 30% to about 47%, whereas those for hard landscape will be reduced from 70% to about 53%. Please refer to **Figure A in Appendix A** for details. The final location shall also be subject to detailed design and shall not form part of the MLP. The Applicant will still endeavor to maximize greening opportunities at detailed design stage "Lawn/mad-made grass" has been revised as "Man-mad grass" in the legend of the Indicative LMP. It should be clarify that the landscape area (soft landscape) includes planting areas for trees, shrubs, groundcover and lawn. Please refer to **Figure 3.1 revised LMP in Appendix A** for consideration.

Under Further Information Submitted on 23 June 2022

	Departmental Comments	**Responses to Comments**
1.2	Confusion in the counting of no. of blocks for 'recreation & sports centre with ancillary facilities' • Remark (4) of PS para. 2.2.2 and Remark (17) of Appendix D are wrong (with ref. to parameter table and Figure D1g submitted under Application No. A/NE-SSH/120-1, the number of non-domestic blocks was counted to be 8 originally, excluding TWO instead of THREE golf driving range facilities as stated)	Please be clarified that the counting of no. of blocks for 'recreation & sports centre with ancillary facilities' was 8 (incl. 1 mini driving range/game area/recreation & sports centre with ancillary facilities), and excluding 2 golf driving ranges under the Approved Scheme (Application No. A/NE-SSH/120-1). Please refer to **Attachment 1** for replacement page of the planning statement for your consideration. For clarity sake, please also find the summary table of the no. of non-domestic blocks in Site C below for your easy reference. **No. of non-domestic blocks in Site C(1)** **Approved Scheme (Application No. A/NE-SSH/120-1)**: **Total: 11** - 7 Recreation & Sports Centre with Ancillary Facilities / E&M - 1 Mini Driving Range/Game Area/Recreation & Sports Centre with Ancillary Facilities - 2 golf driving ranges - 1 Welfare Centre & Public Vehicle Park Building **Current Scheme**: **Total: 14** - 13 Recreation & Sports Centre with Ancillary Facilities / E&M - 1 Welfare Centre & Public Vehicle Park Building Remarks: (1) Exclude the structures solely for ancillary M&E and shuttle lift uses
1.3	Para. 4.5.4 stated that *'no spectator stands will be provided… visitors… will only be the users of facilities without spectator'*, but the illustration shown in Figure 2.4 showed spectator stand at the tennis courts.	It should be clarified that the structures in **Figure 2.4 of the Planning Statement** are not spectator stands but small benches with canopy for resting of users and placing personal belongings. No spectator stands will be provided.

	Departmental Comments	Responses to Comments
1.4	Please elaborate on whether or not and how the proposed outdoor recreation facilities will be opened for public enjoyment? (It was only stated in para. 4.5.4 *'private operated and managed, prior reservation of the use of facilities will be required with stringent control of no. of visitor per session'*)	The proposed recreation facilities will be privately operated, managed and maintained by the future developer/operator. Similar to other recreational facilities in Hong Kong, including those managed by the Government, the proposed recreational facilities will be open for reasonable hours and can be used through prior reservation by the public on a fee paying basis. In order to ensure proper management and to stringently control the no. of visitor/users using the facilities per session, prior reservation for the use of facilities through online booking system is considered necessary.
1.5	Typo in the legends of MLPs and LMPs – 'Land to be secured by Applicant/ land outside TPTL 157' should be 'TPTL157 RP and TPTL 253'.	Noted. The legends have been updated accordingly. Please refer to **Figure 2.1 - Revised MLP** and **Figure 3.1** - **Revised LMP in Appendix A** for your consideration.
1.6	The proposed 'Hard vs Soft landscape ratio – 70:30' should be supplemented with the exact area (in m^2) of the 'original approved' vs 'current proposed' to illustrate the difference	Please note that a set of GBP for Site C under the Approved Scheme (Application No. A/NE-SSH/120-1) has been approved on 20 Jan 2022, in which the layout and location of recreational facilities are highly similar to those proposed under the Current Scheme. In view of its approved status with site coverage of greenery provided, the approved GBP is adopted as the basis of comparing the Hard vs Soft Landscape Ratio with the Current Scheme (**Figure A in Appendix A** refers). Under the approved GBP, a ratio of 52:48 of Hard vs Soft Landscape could be achieved. As for the current scheme, a similar ratio of 53:48 Hard vs Soft Landscape is indicated as the worst case scenario in landscape terms for the Board's information. Adverse landscape impact associated with the proposed additional outdoor recreational facilities is not anticipated. The Applicant will also endeavour to maximise soft landscape coverage for the proposed areas for recreational facilities at the subsequent detailed design stage.

	Departmental Comments	Responses to Comments
2.	**Comments from Director of Fire Services (D of FS)**	
2.1	Please be informed that I have no objection in principle to the captioned work subject to water supplies and fire service installations being provided to the satisfaction of Director of Fire Services.	No objection in principle is well noted.
2.2	Detailed fire safety requirements will be formulated upon receipt of formal submission of general building plans.	Noted.
2.3	Furthermore, the EVA provision in the captioned work shall comply with the standard as stipulated in Section 6, Part D of the Code of Practice for Fire Safety in Buildings 2011 under the Building (Planning) Regulation 41D which is administered by the Buildings Department. Also, the EVA provision of the nearby buildings shall not be affected by the proposed work.	Noted.
2.4	Nevertheless, shall the proposed work affect any licensed premises in the area, such as Petrol filling station or dangerous goods store, the consultant should make separate enquiry to this department to ensure work feasibility.	Noted.
3.	**Comments from Head of Geotechnical Engineering Office, Civil Engineering and Development Department (H(GEO),CEDD)**	
3.1	This Office has no in-principle objection to the captioned Planning Application for the amendments at Site C of the comprehensive development.	No in-principle objection to the captioned planning application is well noted.
3.2	The approval condition (r) imposed for the previously approved application No. A/NE-SSH/120-1 remains valid for Site A and Site B of the comprehensive development.	Noted. The Applicant has no objection to impose similar approval condition for the submission of a natural terrain hazard study and the implementation of the mitigation measures identified therein, should the subject planning application be approved.

	Departmental Comments	Responses to Comments
4.	**Comments from Director of Electrical and Mechanical Services (DEMS)**	
4.1	In the interests of public safety and ensuring the continuity of electricity supply, the parties concerned with planning, designing, organizing and supervising any activity near the underground cable or overhead line under the 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 Site. They should also 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;	Noted.
4.2	There is a high pressure underground town gas transmission pipeline (running along Sai Sha Road) in the vicinity of the Sites A and C. The project proponent/ consultant/ works contractor shall liaise with the Hong Kong and China Gas Company Limited in respect of the exact locations of existing or planned gas pipes/ gas installations in the vicinity of the proposed development and any required minimum set back distance away from them during the design and construction stages of development; and	Noted.
4.3	The project proponent/ consultant/ works contractor is required to observe the requirements of the Electrical and Mechanical Services Department's "Code of Practice on Avoiding Danger from Gas Pipes 2nd Edition" for reference;	Noted.

	Departmental Comments	Responses to Comments
4.4	In addition, referring to the previous submission of quantitative risk assessment (QRA) study for the high pressure town gas pipeline in vicinity of the subject development dated 27 November 2018, the project proponent shall revisit and advise if the QRA study is still valid, having considered that the estimated number of visitors may be increased arising from the proposed amendment. Viewing that the QRA is based on the information and data available at the time of preparing the QRA, should there be any change in the population, structures and facilities of the development, the project proponent shall revise the QRA accordingly.	Noted. The concerned high pressure gas mains are located underneath Sai Sha Road. As mentioned in the submitted Planning Statement that the current Proposed Development is relatively far away from the concerned underground gas mains and the proposed amendments will unlikely worsen the situation. The Applicant has no objection to the imposition of a similar planning approval condition to update the previous QRA report to reflect the latest risk level imposed by the high pressure underground towngas transmission pipeline running along Sai Sha Road on the Proposed Development based on current scheme.
5	**Comments from Chief Town Planner/Urban Design & Landscape (CTP/UD&L)** **Urban Design and Visual Impact Perspectives**	
5.1	Given that the major development parameters including the site area, total GFA and maximum BH in mPD at Site C remain unchanged as the approved scheme, and the overall layout is also largely the same as the approved scheme, the proposed amendment would unlikely induce any significant adverse visual impact on the surrounding townscape as compared to the approved scheme.	Noted.
5.2	Nonetheless, based on the submitted information, there are some areas requiring the applicant to clarify and/or further supplement: *Supplementary Planning Statement*	
5.2.1	Para. 2.2.2, 1st bullet, Footnote 4 – While Footnote 4 indicates that three golf driving ranges are included in counting of the number of blocks for Recreation & Sports Centre, there are only two in Figure 2.3a. Please clarify/rectify.	Noted. The counting of the no. of blocks has been updated. Please refer to Item 1.2 of this RtoC for reference.

	Departmental Comments	Responses to Comments
5.2.2	Para. 2.2.2, 2nd bullet – Please clarify if there is any change in site coverage due to the proposed amendments as compared to the approved scheme.	The amendments in the proposed scheme mainly involve change and diversification of outdoor sports and recreational facilities, and minor increase of no. of blocks as ancillary structures for outdoor sports and recreational facilities. Hence, there is no significant change in the overall site coverage.
5.2.3	Figures 2.3a to 2.3c – Please supplement a blow-up plan to show the comparison of approved scheme and the current scheme on Site C to the west of Che Ha Village for clarity.	Noted. Please refer to **Figure 2.3d in Appendix A** for your consideration.
5.2.4	Section 3.2 – The applicant is advised to incorporate VP7 (Tsat Sing Temple in Kwun Hang Village) in the VA of the approved scheme, as Site C is visible from this VP.	The visual context as viewing from Tsat Sing Temple in Kwun Hang Village has been reviewed. With reference to the enclosed updated photomontage (see **Attachment 2 – Figure 3.9**), the proposed amendments to Site C is not visible and will be blocked by the proposed medium-rise residential development in Site A and Site B of the Approved Scheme. Hence, no visual change is envisaged from this VP.
5.2.5	Para. 3.2.9, line 2 – Please review the distance between Yung Shue O Pier and Site C, which seems to be more than 700m.	Noted. The distance between Yung Shue O Pier and Site C has been revised as "about 1.4km". Please refer to **Para. 3.2.9 in Attachment 2** for your consideration.
5.2.6	Figures 3.3 to 3.8 – Apart from Site C, please also annotate locations of Site A and Site B for easy reference.	Please refer to the **Attachment 2** for your consideration.

	Departmental Comments	Responses to Comments
	Air Ventilation Perspective	
5.3	It is noted that an Air Ventilation Assessment Expert Evaluation (AVA-EE) was submitted in support of the previous approved scheme (No. A/NE-SSH/120-1) in 2020. To facilitate consideration of this application, the applicant may provide a brief analysis/justification on AVA aspects, such as whether the previous AVA would remain valid to demonstrate that no significant air ventilation impact would be induced by the proposed amendment and confirm whether air ventilation measures in the approved scheme are retained under the current scheme.	The overall layout of Site C under the current planning application (Proposed Scheme) is very similar to that of the approved application (Baseline Scheme). Site A and Site B are identical to the Approved Scheme under Application No. A/NE-SSH/120-1, while the amendments at Site C are very minor and without any increase in GFA. According to the planning statement, the key changes include:- - Replacement of a 'golf driving range' in the southeastern part of Site C with outdoor sports and recreational facilities; - Replacement of 'mini driving range with ancillary facilities' in the western portion of Site C with landscaped area and a few small E&M structures; - Breaking down previous larger building structures into mostly smaller structures as a result; - Minor increase in building height of 1m for welfare centre & public vehicle park building due to technical requirements at detailed design stage; and - Increase of one storey at the remaining driving range. However, there is no change in terms of maximum building height for Site C. The above-mentioned amendments are also illustrated in **Attachment 3**. Since the open area of the Proposed Scheme is very similar to the Baseline Scheme, major wind corridors are maintained and the wind flow along the open area within the Site C would be comparable. An AVA-EE was previously submitted as part of the approved application. The current Proposed Scheme is also compared with the Baseline Scheme in terms of AVA performance. Both the annual wind and summer wind have been compared in **Figures 2A and 2B in Attachment 3**. In Site C, annual NNE wind mostly flows along the vast open space within Site C, the north of the recreation & sports centre with ancillary facilities and along the road connecting Sai Sha Road and Tseng Tau Village. The small and low-rise scattered

	Departmental Comments	Responses to Comments
		blocks of the recreation & sports centre with ancillary facilities still retain the permeable design as the Baseline Scheme which will be beneficial to air ventilation (round shape buildings). The increase in height of Driving Range (by one storey) is slight. The wake area downstream would not be significantly larger as the concerned driving range is located in an open ground and is far away from other surrounding uses. On the other hand, the replacement of another driving range structure near the sports centre and the replacement of mini driving range structure in the Proposed Scheme will benefit to AVA performance by allowing wind to flow through the area more smoothly with less obstruction. As illustrated in **Figure 2A in Attachment 3**, the setback distance from access road to Tseng Tau Village and that to nearby village as provided in the Baseline Scheme, are generally maintained in current Proposed Scheme. As for summer wind, wind from S direction mainly flow along the Sai Sha Road, the open area within Site C and along the eastern boundary (**Figure 2B in Attachment 3** refers). The overall building setback to the west of the recreation & sports centre near Ma Kwu Lam Village remain unchanged. The proposed outdoor sports and recreational facilities will not affect further downstream Che Ha Village. The slight increase in building shape and top level at a portion of recreation & sports centre building may increase blockage but such effect is insignificant and is limited to the immediate behind the block. However, the large separation distance (slightly <50m) between the recreation & sports centre building and nearby village, is considered ample for wind penetration. Therefore, the ventilation performance at Ma Kwu Lam and Che Ha Village under the Proposed Scheme would not be worsened. As the changes proposed are minor and major wind corridors are kept in the Proposed Scheme, significant adverse impact on the surrounding pedestrian wind environment is not expected when compared to the Baseline Scheme.

	Departmental Comments	Responses to Comments
	Landscape Planning Perspective	
5.4	With reference to Fig. 2.3a to 2.3c and Fig. 3.1 of the Planning Statement (PS), areas proposed for 'Place of Recreation, Sports or Culture' under this application were mainly designated as golf driving rages with no specific landscape treatments in the last approved LMP for Site C under A/NE-SSH/120-1. Compared Fig. 3.1 with the previously approved LMP for Site C, no change is observed regarding existing Type A to Type D woodlands and tree groups to be preserved within the site.	Noted.
5.5	Based on Table 3.1 of the PS, it is noted that an addition of 13 nos. existing trees are proposed to be removed under the current scheme. The total no. of tree proposed to be removed have increased from 621nos. under A/NE-SSH/120-1 to 634nos. in this application. Approx. 1,700nos. of new trees are proposed to be planted within the site by the applicant as part of landscape mitigation measures.	Noted.
5.6	In view of the above, further impact on existing landscape resources and landscape character of the site arising from the amended scheme in Site C is not anticipated, we have no adverse comment from landscape planning perspective on the application.	Noted.

	Departmental Comments	Responses to Comments
	Detailed Comments	
5.7	Despite 1,700nos. of new tree plantings are proposed under the current scheme for removal of 634nos. existing trees in Site C, the no. of proposed new tree has substantially decreased compared to the last approved LMP for Site C under A/NE-SSH/120-1 with 3,414nos. of new trees being proposed in Site C. The applicant should consider to maximize opportunities for landscape mitigation measures and landscape provisions within the site as far as practicable.	The justifications of adjusted new tree numbers are as follows: 1. Unlike the last approved LMP for Site C under A/NE-SSH/120-1, the purpose of this Section 16 Planning Application is to open up a wider range of opportunities to explore and further enhance recreation functions in Site C. On this basis, spaces that were previously occupied by new trees to form an integral part of golf setting will be released to accommodate more diversified outdoor sports and recreational venues for future use. This is to address the changing needs and growing aspiration of the public on functional use of space, in replace of a more visual and aesthetic tree planting space. 2. The Proposed Scheme does not result in any net loss of greenery, noting that 634 nos. of felled trees are well compensated by 1,700 nos. of new trees. Existing woodlands remain untouched to preserve existing woodland character and to retain landscape amenity components. 3. The adjusted number of 1,700 nos. new trees is therefore considered the most optimal proposal by taking into account the necessary space required for viable growth of trees, as well as meeting the technical and practical needs for future detailed design.
5.8	According to Section A-A', 'landscape plaza' has been indicated below the proposed bridge, however, based on the LMP, that subject area is indicated as 'hard landscape area'. The applicant should review and revise accordingly, and provide more information to differentiate the function and landscape treatment between the two.	The area below the proposed bridge will be hard paved to serve part of the hard landscape elements to facilitate the use of proposed recreation and sports centre. The annotation has been revised for clarity and consistency. Please refer to **Attachment 4 - revised Section A-A'** for details.

	Departmental Comments	Responses to Comments
5.9	The area that intersected with section-line for Section B-B' is not clearly shown (covered by the section-line) in Fig. 3.1, furthermore, tree plantings and grass/lawn are shown in the EVA/driveway area in Section B-B'. The applicant should review and revise accordingly, and be reminded that, opaque colour should be avoided for features/landscape elements that do not intersect with the section-line.	Noted and rectified accordingly. Please refer to **Attachment 4 - revised Section B-B'** for details.
5.10	According to Section D-D', EVA/driveway is located next to the proposed recreation and sports centre, however, the subject area is indicated as hard landscape area in Fig. 3.1. Furthermore, noted that lawn is proposed in the area indicated as 'place of recreation, sport or culture #' in Section D-D', which do no tally with that in Fig. 3.1. The applicant should review and clarify accordingly.	Noted and rectified accordingly. Please refer to **Attachment 4 - revised Section D-D'** for details.
5.11	The applicant should provide more cross-sections illustrating the spatial relationship and accessibly of the proposed roof gardens atop the 'Recreation & Sports Centre' building blocks (para. 2.2.3 of the PS refers), and review if landscape treatment other than 'man-made grass' currently illustrated in Fig. 3.1 could be considered.	Please be clarified that those roofs are inaccessible and not intended to serve as gardens for communal use. Since the Application Site itself has fulfilled the greenery requirement of 30%, those man-made grass on roofs are designed for visual and aesthetic enhancement only, and to achieve minimum maintenance requirements. Please refer to additional sections in **Attachment 4 - Sections E to G**, showing the spatial relationship between 'Recreation & Sports Centre' building blocks.
5.12	It is noted in the LMP that, hill-like features have been proposed within 'hard landscape area' in the southern portion of the site. The applicant should provide cross-sections to demonstrate details of such features.	Please refer to **Attachment 4 - Section G-G'** cutting through the southern portion of the site for details.
5.13	Elevations should be provided to further elaborate spatial relationships between the 'hard landscape area', the hill-like features, 'Recreation & Sports Centre' building blocks, footbridges and roof gardens.	Please refer to **Attachment 4 - Elevation A** illustrating the spatial relationships between the 'hard landscape area', 'Recreation & Sports Centre' building blocks, footbridges and inaccessible roofs for details.

	Departmental Comments	Responses to Comments
	Advisory Comments	
5.14	The applicant is reminded that approval of the application does not imply approval of tree works, if any, such as pruning, transplanting and felling. Tree removal applications should be submitted direct to relevant authority(ies) for approval.	Noted.
6.	**Comments from Director of Agriculture, Fisheries and Conservation (DAFC)**	
6.1	It is noted from the revised EcoIA for Site C that the ecological impact arising from the current scheme is largely the same as that from the approved scheme in the previous application A/NE-SSH/120-1. We have no comment on the revised EcoIA. The previous approval conditions imposed in A/NE-SSH/120-1 should be maintained.	Noted.
6.2	Please take note our minor comment below and rectify the report accordingly: - Tables 5.1 and 5.2: Please clarify if the habitat evaluation and value for "Marsh" should be "moderate" instead of "low".	Noted. Table 5.1 and 5.2 have been revised accordingly. Please refer to **Attachment 5** for your consideration.
7.	**Comments from the Director of Environmental Protection (DEP)**	
7.1	Please be advised that the applicant is required to address our comments below before we could form our view on the application. *General*	
7.2	The versions of the EA carried out previously as quoted in various sections of the current EA does not correspond to the ones in our record, possibly due to the fact that the later versions were only submitted in the form of amendment pages without indication of the version number. Please review and revise the presentation to avoid confusion.	Noted. The presentation of EA has been revised in **Attachment 6**.

	Departmental Comments	Responses to Comments
7.3	For easy reference, please provide figure(s) to illustrate the amendments proposed comparing to the approved scheme under A/NE-SSH/120-1. *Air Quality*	Please refer to **Figure A1 in Attachment 6** for your consideration.
7.4	S.3.1.4: We would like to remind the Applicant that it should be the responsibility of the Applicant and their consultant 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 EA would be invalidated.	Noted.
7.5	S.3.4.2: As there are more than one proposed amendments, please be specific on "the proposed amendment" mentioned in the text. *Water Quality*	Noted. Text in S.3.4.2 in **revised EA in Attachment 6** has been amended accordingly.
7.6	S.4.2.3: Please amend the section to read as "There is a need to apply to EPD for a discharge license for discharge of effluent from the project site under the WPCO. The discharge quality must meet the requirements specified in the discharge license. ~~The discharge from the proposed development shall comply with the Group D standard for effluent discharge into inland waters.~~"	Noted. Text in S.4.2.3 in **revised EA in Attachment 6** has been amended accordingly.
7.7	S.4.3.2 (5th point): should be read as "Three **Fathoms** Cove". Same comment for Figure 4-1 Legend.	Noted. Text in S.4.3.2 and Figure 4-**1 in revised EA in Attachment 6** has been amended accordingly.
7.8	S.4.4: suggest to re-order S4.4 by putting the sections for construction phase (S.4.4.6-S.4.4.9) in front of sections for operational phase (S.4.4.1- S.4.4.5).	Noted. The sections for construction phase and operational phase have been re-ordered. Please refer to S.4.4 in **revised EA in Attachment 6** for your consideration.

	Departmental Comments	Responses to Comments
7.9	S.4.4.7: Please evaluate if the 3rd sentence is necessary: "Superstructure works are typical of many building construction works and would generate insignificant impact on water quality." which is confusing.	Noted. S4.4.7 in **revised EA in Attachment 6** is now read as S.4.4.2. Relevant text has been removed accordingly.
7.10	Figure 4-1: please indicate the Tai Tung Wo Liu Stream by highlighting the whole stream instead of just pointing by arrows.	Noted. Please refer to **Figure 4-1 in revised EA in Attachment 6** for your consideration.
7.11	Figure 4-1: legend for "CPA" & "Kei Ling Ha Mangal SSSI" is the same, please use 2 different legends for distinguishing.	Noted. Please refer to **Figure 4-1 in revised EA in Attachment 6** for your consideration.
7.12	Please clarify if there are any canteen facilities provided during the construction phase. If it is affirmative, please supplement the relevant information in the report, such as the section for "wastewater from construction site". *Land Contamination*	Please be clarified that no canteen facilities will be provided during construction phase. Please refer to S.5.5.3 in **revised EA in Attachment 6** for your consideration.
7.13	S.1.1.5: As there is a change of the proposed development at site C where one of the existing golf driving ranges will be redeveloped under the proposed amendments, please clarify if any application of pesticide and herbicides, and/or any on-site power generation, vehicle, machinery and equipment fueling and maintenance are/were involved for the existing golf driving range. If affirmative, please review if land contamination assessment on the concerned golf driving range shall be required. *SIA*	Please be clarified that there is/was no application of pesticide and herbicides, and/or any on-site power generation, vehicle, machinery and equipment fueling and maintenance involved for the existing golf driving range. Text in S.1.1.5 of **revised EA in Attachment 6** has been revised accordingly.
7.14	S.4.1.2: The Applicant should take into account the comments from EDB and revise the population of primary school students to 2 400 and update the corresponding sewage generation estimation.	Please be advised that the no. of student for two schools is replaced from 1,680 to 2,400, while the no. of teacher is remained the same at 120. The minor change of no. of students would be acceptable in sewerage terms. Please refer to the **replacement pages of SIA in Attachment 8**.

	Departmental Comments	Responses to Comments
7.15	S.5.2: Regarding the replacement of one of the two golf driving ranges with other recreation, sports or culture uses, it is note that there is a surfing pool newly proposed. The Applicant should review and include the possible sewage generation from the backwashing of the surfing pool. The Applicant should also review if additional showering facilities should be included in view of the changes in recreational facilities. If yes, the possible sewage generation should be included.	The estimation of sewerage flow generated from surfing pool has been incorporated into Table 3.1 of the **replacement pages of SIA in Attachment 8**
7.16	S.5.3: Subject to the above mentioned updates in sewage generation estimation, the Applicant should review the feasibility of the proposed Interim Sewerage Arrangement in Appendix 3, i.e. whether the proposed sewage holding tanks and tank-away arrangement are sufficient to cater for the updated sewage generation.	Please be advised that the additional sewerage flow generation is minimal. There will have no significant impact to the conclusion of SIA.
7.17	S.5.4: The capacity checking of the sewerage system should be updated according to the above mentioned updates.	Please be advised that the additional sewerage flow generation is minimal. There will have no significant impact to the sewage holding tank design volume.
8.	**Comments from the Principal Project Coordinator/Special Duty Division, Drainage Services Department (PPC/SDD, DSD)**	
8.1	The planned village sewerage system under project "Tolo Harbour Sewerage of Unsewered Areas Stage 2" is in vicinity of the proposed development at Sai Sha, Shap Sz Heung. The project is currently in design stage and the programme for commencement of construction works is still under review. The Applicant should coordinate with his office for interface issues.	The proposed sewerage system for existing villages to connect to new sewerage system along Sai Sha Road shall be initiated by DSD. The coordination with DSD for the completion of the sewerage system under Sai Sha Road widening is in progress.

	Departmental Comments	Responses to Comments
9.	**Comments from the Chief Engineer/Mainland North, Drainage Services Department (CE/MN, DSD)**	
9.1	No comment on the Sewerage Impact Assessment.	Noted.
9.2	As regard the Drainage Impact Assessment, we note that hard paving in Site C under this Application as well as other development in Site A and Site B may lead to increase of surface runoff leading to the Tai Tung Wo Liu Stream. The Applicant shall demonstrate that the proposed development in Site C under this Application and other development in Site A and Site B would not adversely affect the flow conditions of the Tai Tung Wo Liu Stream. Otherwise, the Applicant shall demonstrate that the Tai Tung Wo Liu Stream can take up any additional flow arisen from the proposed development in Site A and Site B, and the proposed development under this Application. In addition, I have the following comments on the DIA:	Before having the development, the existing peak flow rate (counting all catchment area) is 2.062m/s. After completion of the development and taking into consideration of the retention tank for Area 5A and 5B, the peak flow rate is 2.408m/s (counting catchment area 3, 4A and 4B) to the downstream of Tai Tung Wo Liu and then discharge to Tolo Harbour directly. To conclude, the discharge from retention tank to Tai Tung Wo Liu upstream is 0.872m^3/s which would have no cause adverse impact to upstream of Tai Tung Wo Liu.
9.3	In Paragraph 4.3.4, the flow generated from Site 3A, 3B 4A and 4B should be discharged to Tolo Harbour via Tai Tung Wo Liu Stream rather than direct to Tolo Harbour. As a whole, for the catchments in Table 4 of the DIA under paragraph 4.3.2, all catchment except Area 1 are discharged to Tai Tung Wo Liu Stream.	Noted. Please refer to the **replacement pages of DIA in Attachment 7** for your consideration.
9.4	In Paragraph 4.3.5, please demonstrate if the surface runoff generated from Site 3A, 3B, 4A and 4B is also discharged to Tai Tung Wo Liu Stream, how the retention tank will be affected.	Please be advised that the surface runoff generated from Area 2, 3, 4A, 4B and C/T (cycle training path) will be discharged via the proposed drainage system around the site to existing ditch to downstream of Tai Tung Wo Liu Stream instead of the retention tank. Thus, there is no implication to the retention tank design.

	Departmental Comments	Responses to Comments
9.5	For the existing ditch channel collecting surface runoff generated from Area 3A, 3B, 4A and 4B, please check for its adequacy of hydraulic capacity.	The existing ditch with approximate sectional size 3m(W) x 1.8m(H) connecting to downstream of Tai Tung Wo Liu stream was checked by calculating the water level under the maximum flow rate from Area 2, 3, 4A, 4B and C/T (cycle training path) with 2.408m/s. The remaining freeboard of the ditch is 0.423m. Please refer to **Appendix 4 of DIA report in Attachment 7** for the calculation.
10.	**Comments from Chief Engineer/Construction, Water Supplies Department (CE/C, WSD)**	
10.1	Water mains are in close proximity to the proposed development and are likely to be affected. The Applicant is required to either divert or protect the water mains found on site.	Noted.
10.2	If diversion is required, existing water mains inside the proposed lot are needed to be diverted outside the site boundary of the proposed development to lie in Government land. A strip of land of minimum of existing water mains upon request will have to be borne by the grantee/applicant; and the grantee/applicant shall submit all the relevant proposal to WSD for consideration and agreement before the works commence.	Noted.

	Departmental Comments	Responses to Comments
10.3	If diversion is not required, the following conditions shall apply: (1) Existing water mains are affected as indicated on the site plan and no development which requires resiting of water mains will be allowed. (2) Details of site formation work shall be submitted to the Director of Water Supplies for approval prior to commencement of works. (3) No structures shall be built or materials stores within 1.5m from the centre line(s) of water main(s) shown on the plan. Free access shall be made available at all times for staff of the Director of Water Supplies or their contractor to carry out construction, inspection, operation, maintenance and repair works. (4) No trees or shrubs with penetrating roots may be planted within the Waterworks Reserve or in the vicinity of the water main(s) shown on the plan. No change of existing site condition may be undertaken within the aforesaid area without the prior agreement of the Director of Water Supplies. Rigid root barriers may be required if the clear distance between the proposed tree and the pipe is 2.5m or less, and the barrier must extend below the invert level of the pipe. (5) No planting or obstruction of any kind except turfing shall be permitted within the space of 1.5m around the cover of any valve or within a distance of 1m from any hydrant outlet. (6) Tree planting may be prohibited in the event that the Director of Water Supplies considers that there is any likelihood of damage being caused to water mains.	Noted.

	Departmental Comments	Responses to Comments
10.4	For provision of water supply to the development, the Applicant may need to extend his/her inside services to the nearest suitable government water mains for connection. The applicant shall resolve any land matters (such as private lots) associated with the provision of water supply and shall be responsible for construction, operation and maintenance of the inside services within the private lots to WSD's standards.	Noted.
10.5	Water mains in the vicinity may not be able to support the provision of standard pedestal hydrant.	Noted.
10.6	Previous comments for the subject application shall remain valid:	
	(a) it is recommended that the following approval conditions stated in the previous application be continued to impose in the current application: (i) the diversion of water mains to be affected by the proposed development; and (ii) the submission of a water supply impact assessment and the implementation of upgrading works identified therein, as proposed by the Applicant; and	Noted.
	(b) majority of the Site is within the 1km consultation zone of MOSWTW. Chlorine generation facility will be installed in MOSWTW which can greatly reduce the use and storage of chlorine on site. Upon completion of the above proposed works, MOSWTW will probably be removed from the list of Potentially Hazardous Installations (PHI) by 2022.	Noted. The MOSWTW would be delisted from the PHI register by 2022.

	Departmental Comments	Responses to Comments
11.	**Comments from the Secretary for Education (S for E)**	
11.1	We have no comment on the proposed amendment of submission of S16 by the applicant in particular the revised site boundary of the school sites.	No comment on the subject planning application is well noted.
11.2	Comments on some of the technical issues related to the further development in design stage:	Noted. Comments to be addressed at detailed design stage.
	(i) No objection on and confirmation of provision of the proposed run-in/ out for the two school project sites as indicated in the attachment shall be advised by the applicant.	Noted.
	(ii) Approval of TIA report for the whole development of Site C including Access Road connecting the proposed school sites must be sought from TD. According to EDB's requirement, each classroom shall accommodate 40 students. Hence, the no. of student for two schools shall be 30-classroom x 40-student x 2-school = 2,400 people, while the no. of teacher shall be around 120 for two schools.	Noted. The no. of students and teachers for the two primary schools will be updated and taken into account in technical reports.
	(iii) The applicant shall review the road traffic noise and provision of necessary noise mitigation measures in the development. They shall not wait until the design of school projects being finalized. The worst scenario cases (viz. the school building block located next to the roads) shall be considered.	Noted. The review on road traffic noise and provision of necessary mitigation measures will be considered at detailed design stage.
	(iv) Based on the Drainage Impact Assessment report, the applicant shall review the capacity of stormwater drainage system for each school site as the drainage of Ma Kwu Lam Village may pass through the school sites to the Access Road as proposed in the development.	Noted. The Applicant will review the capacity of stormwater drainage system at detailed design stage.

	Departmental Comments	Responses to Comments
	(v) Based on the Drainage Impact Assessment report, the applicant shall review the capacity of stormwater drainage pipe for each school site and seek ArchSD's acceptance in design stage.	Noted. The Applicant will review the capacity of stormwater drainage system at detailed design stage.
	(vi) Based on the Sewerage Impact Assessment and Water Supply Impact Assessment, the applicant shall review the SIA and WSIA with taking into account the estimated no. of population of schools, which is indicated in item (ii).	Noted. The SIA and WSIA will be updated taking into account the estimated no. of population of schools.
	(vii) The applicant shall provide underground utility connection drawings for schools for ArchSD's information / comments in design stage.	Noted. The Applicant will provide underground utility connection drawings for schools for ArchSD's information / comments at detailed design stage.
12.	**Comments from Commissioner for Transport (C for T), Transport Department (TD)**	
	General	
12.1	A comprehensive TIA is required to accommodate the material change and development intensity and to address the accumulative traffic impacts arising from other proposals in the vicinity.	Noted. A comprehensive TIA (**Attachment 9** refers) has been conducted to assess the traffic impacts arising from the proposed development.
12.2	In view of the current traffic condition and likely increase in construction works due to the proposal, a construction traffic impact assessment should be provided for this development.	Construction traffic impact assessment will be provided under a separate submission at detailed design stage to review and assess the cumulative traffic impact arising from the construction vehicles of the whole development in Sai Sha including Sai Sha Sites A, B and C.
	Specific	
12.3	Tseng Tau Road layout as indicated in the MLP is not consistent with those shown in the previous approved TIA.	Noted. Tseng Tau Road layout based on the previously approved TIA has been incorporated on all MLP drawings (**Appendix A** refers).

	Departmental Comments	Responses to Comments
12.4	The assumed number of visitors should be justified.	According to the on-site observation at the existing facilities with the same nature and similar scale, the number of visitors for the proposed recreational facilities have been reviewed and revised.
12.5	Para. 2.4.2, the applicant should elaborate with a comparison of the facilities on the selected survey site. Additional survey for site with similar facilities may be required.	Details of the surveyed facilities have been included in the comprehensive TIA report (**Attachment 9** refers).
12.6	Table 2.5 –	
12.6.1	Remark 2, please demonstrate that the parking rate adopted is sufficient;	Since Tsuen Wan Sports Centre is currently used as Community Vaccination Centre, another similar site (i.e. Lai King Sports Centre) was surveyed to verify the car parking demand. The survey result and parking rate is demonstrated in the comprehensive TIA report (**Attachment 9** refers).
12.6.2	For cinema, please justify why high end is not adopted;	According to the Hong Kong Planning Standard and Guidelines (HKPSG), the parking requirement of cinema is 0-1 parking space per 20 seats. Please be clarified that high end (i.e. 1 parking space per 20 seats) has already been adopted.
12.6.3	Commercial portion, latest parking standard should be adopted.	The latest parking standard in HKPSG has been adopted and the relevant text in the comprehensive TIA (**Attachment 9** refers) has been revised accordingly.
12.7	It is noticed that the road layout of Che Ha Road is changed and the original mini-driving range cannot be accessed by vehicles under this proposal. Please clarify how the parking and loading / unloading demand could be met.	Please be clarified that the original mini-driving range has been removed as landscaped area and there would only be E&M structures. Hence, no parking and loading/unloading demand is anticipated.
12.8	A direct pedestrian access should be provided from the reserved school sites at Che Ha to Sai Sha Road.	A direct pedestrian access would be provided from the reserved school sites at Che Ha to Sai Sha Road and has been incorporated in the revised Indicative MLP. Please refer to **Appendix A** for your consideration.

	Departmental Comments	Responses to Comments
12.9	LOS of footpath at boundary of Site C, in particular those near bus steps and school sites should be assessed to ascertain the sufficiency of waiting area/ queuing spaces.	LOS at critical footpaths have been assessed and included in the comprehensive TIA report (**Attachment 9** refers).
12.10	Training path for cycling is proposed within the site at both the areas access through Che Ha Road and Tseng Tau Road. Cyclists needs and connectivity should be assessed.	Proper pedestrian route would be provided for pedestrian to access the training path for cycling. Cyclists are required to dismount along the route and traffic bollards would be installed at both ends of the route to ensure pedestrian safety. The indicative pedestrian route to training path for cycling is indicated in **Attachment 10**.
12.11	As the current golf driving range is located in the middle of a construction area which may affect its attractiveness, additional surveys of other driving range of similar setting/scale is considered necessary to justify the trip rates.	A trip generation/attraction survey at another golf driving range in Whitehead with similar scale and location was carried out. The corresponding trip rates are shown in the comprehensive TIA report (**Attachment 9** refers) for justification.
13.	**Comments from District Officer/Sha Tin, Home Affairs Department (DO/ST, HAD)** **Advisory Comments**	
13.1	The subject area is categorised as a part of Tai Po District while it is geographically located in the vicinity of Ma On Shan. It could be foreseen that most of the road users would take the routes via Ma On Shan rather than Sai Kung/Tseung Kwan O in respect that the time required and convenience of public transport, which would add to the already heavy traffic load in Ma On Shan/Sha Tin, not to mention the traffic that would be brought by the residential population at multiple current and future housing development sites in Ma On Shan. Locals and DC members have raised concern on the subject project. It is expected that the subject application would further provoked controversies on the ancillary transport facilities and traffic impact in the vicinity of the subject area, particularly strategic routes connecting Ma On Shan and outside districts. Concerns of the public should be duly addressed in taking forward	The current proposal is to replace a golf driving range with other outdoor sports and recreational facilities. Compared to the Approved Scheme (Application No. A/NE-SSH/120-1), there is no/minimal additional traffic generated in the AM/PM peak hours. In the comprehensive TIA report (**Attachment 9** refers), all the planned developments (including the Ma On Shan Housing Development) have been taken into consideration. All the assessed junctions/road links would be able to handle the future traffic demand.

	Departmental Comments	Responses to Comments
	the subject development. In particular, the concern over the combined effect of the new population as well as the traffic impact on the Ma On Shan area, brought by the captioned development and the Ma On Shan Housing Development, should be addressed.	
14.	**Comments from the District Lands Officer/Tai Po, Lands Department (DLO/TP, LandsD)**	
14.1	The subject lot is restricted to non-industrial (excluding private residential, godown, hotel, office and petrol filling station) uses with Government Accommodation (the District Support Centre for Persons with Disabilities, the Residential Care Home for the Elderly cum Day Care Unit, the Neighbourhood Elderly Centre, the Special Child Care Centre and the Shared Lay-by and related facilities) under lease. Such Government Accommodation shall be provided within the Pink Hatched Blue Area on the lease plan and in accordance with the Technical Schedule annexed thereto. The Grantee shall not alter the Technical Schedule except with DLO/TP, LandsD's prior written approval. The Grantee is also required to lay and form two school sites on the Pink Stippled Black Area on the lease plan with each site not less than 6,200m^2 in terms of site area and surrender the said area to the Government upon demand.	Noted.
14.2	The total GFA permissible under lease is not exceeding 32,060m^2 comprising not exceeding 17,500m^2 for Recreational and Sports Centre (max. 14,000m^2 for recreational and sport purposes and max. 3,500m^2 for others); max. 9,000m^2 for Public Vehicle Park and max. 5,560m^2 for Government Accommodation. There is no height restriction under lease.	Noted.

	Departmental Comments	Responses to Comments
14.3	In addition, the subject lot shall be developed in accordance with the Approved Master Layout Plans (Master Layout Plans under Planning Application Nos. A/NE-SSH/120 and A/NE-SSH/120-1 as approved by the Town Planning Board (TPB) on 18.1.2019 and 14.10.2020 respectively), except with the prior written consent of the Director of Lands who may in granting consent impose such conditions and require payment of such premium.	Noted.
14.4	On the understanding that the total GFA complies with the lease restriction, if the planning submission is approved by the TPB, the applicant shall apply for prior written consent under the Approved Master Layout Plans clause and in case of any alterations of the Technical Schedule under the Amendment of the Technical Schedule clause governing the subject lot. Such consent may be given subject to such conditions and payment of premium at LandsD's absolute discretion.	Noted.
15	**Comments from the Director of Leisure and Cultural Services, Leisure and Cultural Services Department (DLCS, LCSD)**	
15.1	It is noted from Special Condition (14) of lease for Site C of the development that "*The Recreational and Sports Centre shall be open for all members of the public*" and from paragraph 4.5.4 of the planning statement in the current application that the facilities are "*private operated and managed, prior reservation of the use of facilities will be required with stringent control of no. of visitor per session*". In this connection, please advise (i) if Special Condition (14) of the lease will be fulfilled; (ii) whether further information on the operational mode of the proposed facilities is required; and (iii) whether the layout of the facilities concerned are easily accessible by all members of the public. LCSD reserves the right to provide further comment when more information is available.	The concern of your department is well noted. Please rest assured Special Condition (14) of the lease will be duly observed and fulfilled. Similar to other sports and recreational facilities in Hong Kong, as well as provided by LCSD, in order to ensure proper management and pleasant user experience, the proposed sports and recreational facilities will be open to the public through prior reservation system and on a fee paying basis. The facilities will be constructed by the Applicant and privately operated, managed and maintained by the future operator. Under the Current Scheme, various pedestrian access points have been provided to facilitate usage by the public in a convenient manner.

	Departmental Comments	Responses to Comments
15.2	LCSD's comments on the public open space (POS) at Site C in respect of Application No. A/NE-SSH/120-1 remain valid which are recapped as follows: *"According to SC(42) (a) and (43) of the land lease of TPTL 157 RP, the grantee is required to develop the POS at his own expense and carry out works up to satisfaction of the DLCS. The POS may be re-delivered to the Government on demand for management/maintenance in the long term. The applicant is required to provide a detailed landscape proposal with design and layout plan to LCSD for prior comment."*	Noted.
16	**Comments from the Director of Social Welfare, Social Welfare Department (D of SW, SWD)**	
16.1	According to the "Technical Schedule (TS) of the Government Accommodation (GA)": - developer is required to hand over the premises to SWD in bare shell condition (no gully trap within the room is required); - 350mm deep structural sunken slab to allow future construction of recess drainage channel is required; and - provision of plumbing and drainage connection for sanitary fittings to be installed by future operator.	The TS of GA is well noted.
16.2	The design and construction of the GA should comply with the lease including TS and in full compliance with the prevailing statutory requirements and regulation. Any site constraints/restriction that need to be resolved in order to achieve the compliance would be under the applicant's purview and decision.	Noted. The design and construction of the GA will comply with the lease including TS and in full compliance with the prevailing statutory requirements and regulation.
16.3	Our comments at para. 9.1.14 and point (j) of Appendix VI of RNTPC Paper No. A/NE-SSH/120 and advisory clause (j) of approval letter for Application A/NE-SSH/120-1 remain valid and are recapped as follows:	Noted.

	Departmental Comments	Responses to Comments
	<u>D of SW's comments at para. 9.1.14 of RNTPC Paper No. A/NE-SSH/120:</u>	
	(a) in view of the large scale of the proposed development and significant population growth, additional welfare facilities are required;	The welfare facilities of the welfare centre have been agreed with SWD under the previous planning application No. A/NE-SSH/120. No change is proposed for the welfare centre under the Current Scheme.
	(b) the premises for the agreed welfare facilities should be provided as an integral part of the development and will be assigned back as a Government Accommodation (GA) upon construction completion. The construction cost of this premises would be borne by SWD and the service operator would be selected by SWD;	Noted.
	(c) no further comment on the indicative layout for proposed welfare centre and public vehicle park at this stage. The developer shall provide detailed design layout for DSW's further comments separately at a later stage;	Noted.
	(d) upon satisfactory completion of works by the developer, the Government will reimburse the developer the actual cost of construction or the consideration sum as stipulated in the land lease, whichever is the lesser, according to the established practice; and	Noted.
	(e) should the application be approved by the Board, an approval condition on provision of a District Support Centre for Persons with Disabilities, a 60-place Special Child Care Centre, a Neighbourhood Elderly Centre and a 100-place Residential Care Home for the Elderly cum 30-place Day Care unit is recommended.	Noted. The welfare facilities have been retained in the Current Scheme.

	Departmental Comments	Responses to Comments
	Point (j) of Appendix VI of RNTPC Paper No. A/NE-SSH/120:	
	(a) the premises for the agreed welfare facilities should be provided as an integral part of the development and will be assigned back as a Government Accommodation (GA) upon construction completion. The construction cost of this premises would be borne by SWD and the service operator would be selected by SWD;	Noted.
	(b) the developer shall provide detailed design layout for D of SW's further comments separately at a later stage; and	Noted.
	(c) upon satisfactory completion of works by the developer, the Government will reimburse the developer the actual cost of construction or the consideration sum as stipulated in the land lease, whichever is the lesser, according to the established practice.	Noted.

	Departmental Comments	Responses to Comments
	Advisory clause (j) of approval letter for Application A/NE-SSH/120-1:	
	(i) Points (a) to (c) of Appendix VI of RNTPC Paper No. A/NE-SSH/120 recapped above are remain valid; and	Noted.
	(ii) the applicant should take into account the parking and lay-by requirements of the welfare facilities. The relevant requirements are provided below:	Noted. The parking and lay-by requirements will be reflected at the subsequent detailed design stage.
	- one parking space measuring (3m (W) x 8m (L) x minimum 3.3m headroom) for the exclusive use by the District Support Centre for Persons with Disabilities (DSC) for the parking of a 14-seater van with tail-lift;	
	- two parking spaces measuring (3m (W) x 8m (L) x minimum 3.3m headroom) for the exclusive use by the Residential Care Home for the Elderly (RCHE) cum Day Care Unit (DCU) for the parking of private light buses with tail-fit, any regulations made thereunder and any amending legislation, and belonging to the operator of the RCHE cum DCU and their bona fide guests, visitors or invitees;	
	- one parking space for a 48-seater coach (3.5m (W) x 12m (L) x minimum 3.8m headroom) should be provided for the exclusive use by the Special Child Care Centre (SCCC); and	
	one lay-by measuring (3.5m (W) x 12.0m (L) x minimum 4.7m headroom) for the exclusive use by the DSC, RCHE, and SCCC for the picking up and setting down of passengers from ambulances and private light buses.	

	Departmental Comments	Responses to Comments
17.	**The following departments have no objection to/ comment on the application:**	Noted.
17.1	• Commissioner of Police (C of P) • Project Manager (North), Civil Engineering and Development Department (PM(N), CEDD) • District Officer/Tai Po, Home Affairs Department (DO/TP, HAD) • Chief Highway Engineer/New Territories East, Highways Department (CHE/NTE, HyD) • Chief Architect/Central Management Division 2, Architectural Services Department (CA/CMD2,ArchSD)	

Under Further Information Submitted on 19 July 2022

Section 16 Planning Application for Amendments to the Approved Development (Application No. A/NE-SSH/120-1) at Tai Po Town Lot 253 and 157 RP, various lots in D.D.165, 207 and 218 and Adjoining Government Land, Sai Sha, Shap Sz Heung, New Territories (Application No.: A/NE-SSH/142)

	Departmental Comments	Responses to Comments
1.	**Comments from District Planner Officer/Sha Tin, Tai Po and North, Planning Department (DPO/STN, PlanD)**	
1.1	Please ensure that the updated total number of non-domestic blocks within Site C has been adopted throughout the submission (e.g. para.2.2.2 of the planning statement).	Noted. As clarified under the clarification letter submitted to the Town Planning Board (the Board) on 23.6.2022, same as Site A and Site B, the counting of the no. of non-domestic blocks in Site C under the Current Scheme shall also exclude the structures solely for ancillary M&E and shuttle lift uses. The total no. of non-domestic blocks in Site C is 14 (including 13 Recreation & Sports Centre with Ancillary Facilities / E&M and 1 Welfare Centre & Public Vehicle Park Building) under the Current Scheme.
1.2	It is noted that the population assumption stated in table 4.1 of the EcoIA are outdated. Please rectify accordingly.	Noted. Please refer to the replacement page of EcoIA in **Attachment 1** for consideration.
1.3	Please crosscheck and ensure that the latest population assumption and master layout plan have been incorporated in all the technical assessments when applicable.	Noted. Please note that the latest population assumption has been updated. Please refer to the replacement page of Planning Statement in **Attachment 2** for consideration. To reflect the latest population assumption, the replacement pages of EcoIA, SIA and WSIA have been included in the current submission for reference.

	Departmental Comments	Responses to Comments
1.4	The applicant should make comparison with the approved scheme under Planning Application No. A/NE-SSH/120-1 instead of the approved GBP for Figure A showing 'comparison of indicative location and area of hard and soft landscape on various outdoor sports and recreational facilities under the approved scheme (GBP for Site C under No. A/NE-SSH/120-1 approved on 20 Jan 2022 and Current Scheme) as some Class A amendments have been made in the GBP, including the layout and disposition of the recreation and sports centre blocks and layout of the golf driving ranges which are different to the approved scheme under A/NE-SSH/120-1 and not available in the public domain.	Noted. Figure A showing "The comparison of indicative location and area of hard and soft landscape on various outdoor sports and recreational facilities" has been updated by comparing the Approved Scheme (under Planning Application No. A/NE-SSH/120-1) and Current Scheme. Please refer to Figure A in **Attachment 3** for reference. Nonetheless, it should be re-iterated that the Current Scheme is highly similar to the scheme under the approved GBP dated 20.1.2022. In view of the approved status of the GBP with Class A amendments to A/NE-SSH/120-1 (i.e. always permitted amendments) incorporated under the detailed design of Site C, it would be a more practical approach to compare the Current Scheme with the approved GBP scheme of 20.1.2022.

	Departmental Comments	Responses to Comments
2.	**Comments from Chief Town Planner/ Urban Design and Landscape** <u>Urban Design and Visual Impact Perspectives</u>	
2.1	Please be advised that we have no further comments from the urban design and visual impact perspective. <u>Air Ventilation Perspective</u> <u>R-to-C (Item 5.3) and Attachment 3</u>	Noted.
2.2	R-to-C (Item 5.3) – With reference to the Air Ventilation Assessment Expert Evaluation (AVA-EE) submitted in support of the previous approved scheme (No. A/NE-SSH/120-1) in 2020, six prevailing winds (i.e. NNE, E, ESE, SSE, S and SSW) have been identified and assessed. Noting that only two prevailing winds (i.e. NNE and S) are discussed under the current FI, the applicant may consider to include discussions of the other four prevailing winds with support of diagrams.	Noted. The discussion of other 4 prevailing winds is provided below. The relevant supplementary information is included in **Attachment 4** of the current submission. As explained in the Further Information (FI) submitted on 13 June 2022, the overall layout of Site C under the current planning application (Proposed Scheme) is very similar to that of the approved application (Baseline Scheme). The amendments at Site C are very minor and without any increase in GFA. There is also no change in terms of maximum building height for Site C. Since the open area of the Proposed Scheme is very similar to the Baseline Scheme, major wind corridors are maintained and the wind flow along the open area within the Site C would be comparable.

	Departmental Comments	Responses to Comments
	(Con't)	**Annual Condition** <u>ESE Wind</u> Under ESE wind condition, wind would mainly pass through the vast open area within Site C to the north of the recreation & sports centre with ancillary facilities, and between Ma Kwu Lam Village and the recreation & sports centre with ancillary facilities (Figure 2B refers). Since the coverage of open area within Application Site is nearly the same in the Baseline Scheme and Proposed Scheme, the wind flow along the open area within Site C would be similar in both cases. For the area between Ma Kwu Lam Village and the proposed recreation & sports centre, as shown in Figure 2B, although there is reduced setback to the southwestern portion of the recreation & sports centre building (>5 m), adequate building separation is still maintained between the concerned building and nearby Ma Kwu Lam Village (slightly <50 m). The gap between the two areas is still wide enough to offer an effective ESE wind corridor for passage of incoming wind to Kwun Hang Village. The proposed increase in height of the driving range (by one storey) would create a wind shadow in the immediate leeward areas, but wind blockage to the surrounding environment would not be significant due to the limited receivers in the vicinity. Moreover, the replacement of the driving range to the north of the recreation & sports centre with outdoor recreational areas allows for higher permeability for pedestrian level air movements.

	Departmental Comments	Responses to Comments
	(Con't)	<u>E Wind</u> When wind comes from the east, air flow would mainly occur along the large open space within Site C, to the north of the recreation & sports centre with ancillary facilities and along the road connecting Sai Sha Road and Tseung Tau Village (Figure 2C refers). Under the Proposed Scheme, the ample open space within Site C offers free wind flow akin to the Baseline Scheme. As mentioned above, the one storey increase to the concerned driving range would form minimal wind blockage at pedestrian level and a slightly larger wake area immediately behind the concerned structure is expected. However, as it is far away from other surrounding uses, its impact will be negligible. Moreover, improved free flow is expected at the area to the north of the recreation & sports centre due to the replacement of the driving range to the north of the recreation & sports centre for an outdoor recreational area. As illustrated in Figure 2C, since the setback distance from the access road to Tseng Tau Village remains unchanged under the Proposed Scheme as compared to the Baseline Scheme, coupled with the access road to Tseng Tau Village, this path acts as the major air corridor to transfer E wind to downstream areas such as Tai Tung Village and Ma Kwu Lam Village. Despite the wind blockage of the recreation & sports centre with ancillary facilities which would leave a small wake of decreased wind flow behind the open space immediately downstream of the structure in both schemes, the negative impact would be mitigated by the permeable design and relatively low building height of the recreation & sports centre with ancillary facilities which aids wind penetration.

	Departmental Comments	Responses to Comments
	(Con't)	**Summer Condition** <u>SSW Wind</u> As for summer wind, wind from SSW direction would mainly flow along Sai Sha Road, the open area within Site C and along the eastern boundary of the Site (Figure 2E refers). Sai Sha Road, aligning in approximately N-S and NNW-SSE directions, would be a main breezeway for free wind flow. The vast open area to the east of Site C could provide wind entrances to facilitate incoming wind. The building setback to the west of the recreation & sports centre near Ma Kwu Lam Village remain unchanged (60 m wide) which would provide passage for the prevailing wind to further reach the open space in the north. Despite the setback to the southwestern portion of the recreation & sports centre building (>5 m), adequate building separation distance is still maintained between the concerned building and nearby village to slightly less than 50 m, the width of this entrance is still considered ample for wind penetration. It is expected that the proposed outdoor sports and recreational facilities would not affect areas further downstream such as Che Ha Village from the air ventilation perspective. Additionally, the slight increase in building shape and top level at a portion of recreation & sports centre building may increase blockage, but such effect is insignificant as they are minor changes, and any impact is limited to the area immediate downstream of the block. Therefore, the ventilation performance at Ma Kwu Lam and Che Ha Village under the Proposed Scheme would be similar.

	Departmental Comments	Responses to Comments
	(Con't)	<u>SSE Wind</u> SSE is one of the dominant winds in summer mainly flows along Sai Sha Road, the open space within Site C and along the eastern boundary (Figure 2F refers). Sai Sha Road is aligned in parallel to the N-S direction and NNW-SSE prevailing wind directions, and as such high wind availability flowing along Sai Sha Road is expected under SSE wind. Also, the open space to the east of Site C is desirable for all-level wind flow, maintaining wind comfort during the hot summertime. In addition, as indicated in Figure 2F, the setback distance to the west of the recreation & sports centre near Ma Kwu Lam Village stays unchanged in the Proposed Scheme which is effective for wind penetration. As mentioned above, the slight reduction in the setback and the separation to the southwest side of the recreation & sports centre building would not significantly affect wind at all levels flowing along the air pathway and reach the downstream areas such as Che Ha Village. The proposed change in building shape and the increase in building height (by 1 m) at the western portion of the recreation & sports centre with ancillary facilities would not have any significant adverse impact on the wind flow pattern because the incoming wind could still flow atop the low-rise proposed development.

	Departmental Comments	Responses to Comments
	(Con't)	**Summary** As the proposed changes to the development are minor and major wind corridors are kept in the Proposed Scheme, wind flow is predicted to be similar under both schemes. Minor increase to the building height as well as changes in building shape and disposition of the driving range and recreational centre would not impact the wind flow pattern significantly and some improvement to the wind environment may be possible due to the replacement of a golf driving range and a mini driving range with outdoor recreational area and landscape area/small E&M facilities respectively. Hence, no significant adverse impact on the surrounding pedestrian wind environment by the Proposed Scheme is expected when compared to the Baseline Scheme.
2.3	Attachment 3 – Referring to the AVA-EE mentioned in the above, there is a 15m setback to the west of the recreation & sports centre with ancillary facilities, which is missing under Figures 2A and 2B. Please clarify.	The setbacks to the west of the recreation & sports centre with ancillary facilities of about 15m width in Baseline Scheme is indicated in Figure 2A to Figure 2F in **Attachment 4** of the current submission.
	<u>Landscape Planning Perspective</u>	
2.4	As per the RtoC and replacement pages under Attachment 4 of this FI, it is noted that our detailed comments given have been addressed.	Noted.
2.5	Our observations, comments and advisory comments to the applicant (conveyed via email on 20220407) under point (i) to (iv) are still valid.	Noted.

	Departmental Comments	Responses to Comments
3.	**Comments of the Chief Engineer/ Mainland North, Drainage Services Department**	
3.1	No further comment on the revised sewerage impact assessment subject to satisfaction of EPD.	Noted.
3.2	We have the following comments on the revised drainage impact assessment:	
3.2.1	Item 9.2 in the Response-to-Comment: If the peak flow in the Tai Tung Wo Liu Stream will be increased from 2.62m^2/s to 2.408m^3/s due to the proposed development from Site A, Site B and Site C, please assess whether Tai Tung Wo Liu Stream has sufficient capacity to take up the increased flow rate.	Further to clarification by AECOM's email to DSD dated 6 July 2022, the peak flow in the Tai Tung Wo Liu should be <u>decreased</u> from 2.62 m^3/s to 2.408 m^3/s. Therefore, the decreased discharge rate would benefit to the capacity of existing Tai Tung Wo Liu stream.
3.2.2	Appendix 3: Please provide photos showing the conditions of the existing ditch for my consideration.	Please refer to **Attachment 5** for the photo showing the condition of the existing ditch.
4.	**Comments of the Chief Engineer/ Construction, Water Supplies Department**	
4.1	Please be informed that the applicant shall submit revised WSIA based on the revised assumption such as no. of visitor, no. of students, etc. for WSD's consideration.	Please refer to the replacement pages of WSIA in **Attachment 6** for consideration. Please note that the increased nos. of student and teacher from 1,800 to 2,520 will only increase 0.02 MLD in total. The impact on result of the original water supply impact assessment is considered insignificant.

	Departmental Comments	Responses to Comments
5.	**Comments of the Director of Environmental Department**	
5.1	It is noted that the FI01 has included submissions of (i) responses to the departmental comments, (ii) the revised Environmental Assessment (EA), and (iii) the replacement pages of Sewerage Impact Assessment (SIA). Based on our review on the FI01, we consider that our previous comments on the EA and SIA have not been fully addressed and have the following comments for the applicant to address before we could form our view on the application:-	Noted.
5.2	Environmental Assessment	
	General	
5.2.1	(a) Figure A1 as mentioned in the RtoC Item 7.3 is missing in the current submission. Please provide the figure.	Please refer to the revised Figure A1 of EA in **Attachment 7** for consideration.
	Waste Management	
5.2.2	(b) Please clarify whether the relevant requirements under the Waste Disposal Ordinance (WDO) will be followed during the operation phase of the Project.	Relevant requirements under the Waste Disposal Ordinance (WDO) will be followed during the operation phase. Text has been added to S1.1.5. Please refer to the replacement pages of EA in **Attachment 7** for consideration.
5.3	Sewerage Impact Assessment	
5.3.1	(c) Regarding the interim sewerage arrangement, according to the Interim Sewerage Impact Assessment Report submitted in July 2021, the design capacity for the 2 sewage holding tanks is 409.5 m^3/day and 4.16 m^3/day respectively to cover the sewage generated from Site C Recreation and Sports Centre and Driving Range A and B before commissioning of the Sai O sewage pumping station and Tseng Tau sewage pumping station. In view of the updated sewage discharge, please review and demonstrate that these two proposed holding tanks would have sufficient capacity to meet the sewage demand.	Under the previous Interim SIA under separate submission, please note that the proposed sewage holding tanks with capacity of 409.5 m^3/day and 4.16 m^3/day respectively are estimated in accordance with a detailed design basis and the latest General Building Plan. The proposed tanks capacity for interim stage is still covered under the planning stage. Therefore, please be advised that the proposed tanks capacity are sufficient to cater for the generated sewerage flow at interim stage and would not exceed the maximum sewerage flow defined in planning stage.

	Departmental Comments	Responses to Comments
	(Con't)	Besides, to reflect the latest visitor assumption, the replacement page of SIA (Table 7 of the SIA) has been included in **Attachment 8** for information. As the sewage flow under the SIA is estimated on GFA basis, without any increase in GFA, there is no change to the findings of the SIA.
6.	**The following departments have no further comments on the FI Submission** (a) Chief Highway Engineer/ New Territories East, Highways Department (CHE/NTE, HyD) (b) Director of Agriculture, Fisheries and Conservation (c) Head of Geotechnical Engineering Office, Civil Engineering and Development Department (H(GEO), CEDD) (d) Project Manager (North), Civil Engineering and Development Department (PM(N), CEDD) (e) District Lands Officer/ Tai Po, Lands Department (CBS/ NTW, BD) (f) Director of Fire Services (D of FS) (g) Chief Building Surveyor/ New Territories West, Buildings Department (CBS/ NTW, BD) (h) Director of Electrical and Mechanical Services (DEMS); (i) District Officer/ Tai Po, Home Affairs Department (DO/ TP, HAD) (j) Secretary for Education (S for E).	Noted.

Under Further Information Submitted on 27 July 2022

Section 16 Planning Application for Amendments to the Approved Development (Application No. A/NE-SSH/120-1) at Tai Po Town Lot 253 and 157 RP, various lots in D.D.165, 207 and 218 and Adjoining Government Land, Sai Sha, Shap Sz Heung, New Territories (Application No.: A/NE-SSH/142)

	Departmental Comments	**Responses to Comments**
1.	**Comments of the Commissioner for Transport, Transport Department** <u>Amendment Item A – Change and Diversification of Outdoor Sports and Recreational Facilities</u>	
1.1	The TIA report should be self-contained and included all necessary information and data.	All the information has been included in the Annexes of revised TIA in **Attachment 1.**
1.2	The applicant indicated a change of commercial GFA to 10,500 sqm in the TIA compared with last approved planning application. Please clarify.	Please be advised that the overall GFA for Sports & Recreation Centres with Ancillary Facilities is the same as the last approved planning application under Application No. A/NE-SSH/120-1 (i.e. total 17,500m^2). The land use and GFA for the above facilities remain unchanged (i.e. 3,500m^2 GFA for Retail & F&B Facilities and 14,000m^2 GFA for Sports Centre and Recreation Centre with Ancillary Facilities. Out of the above 14,000m^2 GFA, 7,000m^2 GFA consists of golf driving range (2,000m^2), ball court (3,500m^2) and cinema (1,500m^2); the remaining GFA (7,000m^2) is the Ancillary Facilities for Sports & Recreation Centre. Table 2.12 in the revised TIA in **Attachment 1** has been revised to show clearly the 7,000m^2 GFA for the Ancillary Facilities for Sports & Recreation Centre and 3,500m^2 GFA for Retail & F&B Facilities.
1.3	The applicant mentioned in para. 2.3.2 of the TIA report that owner of Site C would operate the Sports and Recreation Centres after opening of widened Sai Sha Road but such is not a prerequisite for the OP. As this is a key assumption in the TIA, such assumption shall be reflected in the planning approval condition.	Noted.
1.4	The assumed visitors attracted to each proposed new facilities seems to be underestimated so as the associated traffic impact.	The number of visitors for the proposed new facilities have been further reviewed and adjusted with justifications provided in the remarks. Please refer to Table 2.2 in revised TIA in **Attachment 1**.

	Departmental Comments	**Responses to Comments**
1.5	In view of the current traffic condition and the nature of the proposed amendment items which are mainly recreational, weekend situation which may be the worst scenario shall be presented in the TIA.	Additional traffic survey has been conducted in order to take into account the weekend situation. It is identified that the traffic flows on weekday AM/PM peak periods are higher than those on Sunday peak period as presented in Section 3.3 in the revised TIA in **Attachment 1**. In addition, the future residential development of 9,700 units would generate / attract more traffic in the weekday AM/PM peak periods than Sunday peak period. As such, the weekday AM/PM peak period has been identified as the critical peak for the purpose of this traffic impact assessment.
	<u>Amendment Item E – Change in Configuration of Reserved Primary Schools</u> <u>Amendment Item F – Change in Alignment of Access Road to Che Ha Village</u>	
1.6	The applicant should provide information on whether EDB / ArchSD has been consulted to ensure sufficient pick up/drop off facilities are provided within the school sites and/or on the access road.	The details would be sorted out in the detailed design of Access Road to Che Ha Village under relevant approval condition to be imposed by the Board.
1.7	A turnaround facility for 12m long coach should be provided on the proposed access road to facilitate the operation of school buses.	The said turnaround facilities have been included in the latest MLP in Figure 2.1 of the revised TIA in **Attachment 1**. The details would be sorted out in the detailed design of Access Road to Che Ha Village under relevant approval condition to be imposed by the Board.
1.8	Approval of the planning application does not imply approval of the access road design. The relevant planning approval condition in A/NE-SSH/120-1 shall remain. <u>Other technical comments:</u>	Noted.
1.9	For clarity, the changes with respect to the approved TIA for planning application no. A/NE-SSH/120-1 approved in Oct 2020 should be highlighted.	The overall development scheme of the Current Scheme is the same as the Approved Scheme (A/NE-SSH/120-1). As compared with the approved TIA, the same trip rates for Sai Sha Development and traffic forecasting methodology have been adopted.

	Departmental Comments	Responses to Comments
1.10	Table 2.2, the key parameters of each proposed facilities, e.g. size with necessary dimensions any spectator or similar facilities affecting the number of users/visitors and the associated traffic impact should be clearly indicated.	Noted. The corresponding tables in the revised TIA have been revised accordingly in **Attachment 1**.
1.11	Para. 2.4.7, please delete the phrase "in the nearby neighbourhood" which is considered unnecessary and irrelevant.	Noted. The relevant text has been amended in revised TIA in **Attachment 1** for consideration.
1.12	The model splits in table 2.9 are considered not applicable to this site. The use of private car will be very high as i) car ownership in the area are high, ii) the centre is privately-operated and iii) the site is remote.	Additional survey has been conducted at some existing privately-owned recreational facilities with similar nature and traffic characteristics to verify the modal splits. The survey locations are presented in Annex B and the corresponding modal splits are presented in Table 2.9 to Table 2.11 in revised TIA in **Attachment 1**. Conservative modal splits are adopted for each recreational facility for assessment purpose.
1.13	Para. 3.1.3, as Sai Sha Road is undergoing active construction, Figure 3.1 is not the existing road networks as suggested. The applicant should replace the term 'existing' in the whole submission with another appropriate term, e.g. before road improvement.	Noted. The relevant text has been amended in the revised TIA in **Attachment 1** for consideration.
1.14	Table 3.1 & 3.2, as the assessment in Section 3 of the TIA is presenting the assessment result before the Sai Sha Road widening project, the associated junction and road links should refer to those before improvement. These two tables and figures should be reviewed and updated for clarity.	Noted. The relevant text has been amended in the revised TIA in **Attachment 1** for consideration.
1.15	Section 3.3, as mentioned above, the applicant should present both weekday and weekend scenarios to justify their application.	Additional traffic survey has been conducted in order to take into account the weekend situation. It is identified that the traffic flows on weekday AM/PM peak periods are higher than those on Sunday peak period as presented in Section 3.3 in the revised TIA in **Attachment 1**. In addition, the future residential development of 9,700 units would generate / attract more traffic in the weekday AM/PM peak periods than Sunday peak period. As such, the weekday AM/PM peak period was identified as the critical peak for the purpose of this traffic impact assessment.

	Departmental Comments	Responses to Comments
1.16	Section 3.4 a layout plan should be included in the TIA report to indicate locations of critical junctions and road links.	The location of critical junctions and road links are shown in Figure 3.1 in the revised TIA in **Attachment 1**.
1.17	We noticed that the capacity adopted in this TIA are higher than the one submitted for planning application A/NE-SSH/120-1. For all relevant tables, e.g. Tables 3.4, 3.5, 5.1 & 5.2 the parameters for determination of the capacity, including road type, width, etc. and how the capacity was derived should be clearly stated in the TIA report. In particular, those key parameters for the proposed road improvement schemes should be clearly presented.	Noted. The relevant information has been included in the revised TIA in **Attachment 1**.
1.18	Table 4.1, the applicant should advise and justify the selection criteria of each ATC stations with a location plan, in particular 5005, 5683, 5877 and 5883 and why other nearby ATC stations were not selected. In addition, please review how the traffic flow pattern from Sai Kung bound would be considered.	All the ATC stations in Ma On Shan area have been included in the Table 4.1 and the locations of those ATC station are given in Annex C of the revised TIA. The traffic flow pattern from Sai Kung bound has been considered. Please refer to Sections 4.2.3 and 4.2.6 in revised TIA in **Attachment 1** for consideration.
1.19	Table 4.3:	
	(a) Zoning of each site should be included.	The zonings of each sites are included in the revised TIA in **Attachment 1** for consideration .
	(b) The derivation of trip rates for each site should be included. It is noticed that lower limit rates were adopted for some sites as the basis for derivation, e.g. site ID 4, which is not a conservative assumption while mean rate was adopted for some others, e.g. site ID 8.	The mean trip rates as stated in TPDM were adopted for all sites. The adopted trip rates are detailed in Table 4.3 in revised TIA in **Attachment 1**.
	(c) There are two sites with same site ID 1.	Noted. Site ID has been amended in revised TIA in **Attachment 1** for consideration.

	Departmental Comments	Responses to Comments
	(d) It seems that sites ID 1-3 are CDA site, the applicant should provide details to justify why only trip rate for one development type is adopted to derive the trip ends.	Please note that while STTL 600 is located in CDA(1) zone of Ma On Shan OZP together with STTL 502 and STTL 574, both STTL 502 and STTL 574 have been completed for residential development while STTL 600 (intended for student hostel use) has yet to be development. For STTL 601, only residential developments are provided within the site.
	(e) The proposed recreation centre at Tseng Tau is found missing.	Noted. It has been amended in revised TIA in **Attachment 1** for consideration.
1.20	Table 4 4, please state clearly in which approved TIA that the trip rates were approved in the report for checking. As the trip rates were adopted from an approved TIA, the remarks deem unnecessary and should be deleted.	Noted. It has been amended in revised TIA in **Attachment 1** for consideration.
1.21	Tables 5.1 a: 5.3, figures 5.8 & 5.9 are mentioned but nor found in the report. In addition, the applicant should explain what is remark (4) for.	Noted. It has been amended in revised TIA in **Attachment 1** for consideration.
1.22	We noticed that remarks of tables are found inconsistent with the table. The applicant has to review all remarks, figures and tables.	Noted. They have been amended in revised TIA in **Attachment 1** for consideration.
1.23	The assessment of Sai Keng Development is included in the TIA, our technical comments on the planning application A/NE-SSH/139 remain valid.	Noted. The TIA has been amended in **Attachment 1** for consideration.
2.	**Comments of the Social Welfare Department (SWD)**	
2.1	We noted that in the Traffic Impact Assessment (**Attachment 9**), the parking requirements for welfare facilities are listed in table 2.3 and 2.7. We have made some amendments in red as shown in the attached PDF.	Noted. Please refer to Table 2.3 and Table 2.7 in revised TIA in **Attachment 1** for consideration.

Under Further Information Submitted on 23 August 2022

Section 16 Planning Application for Amendments to the Approved Development (Application No. A/NE-SSH/120-1) at Tai Po Town Lot 253 and 157 RP, various lots in D.D.165, 207 and 218 and Adjoining Government Land, Sai Sha, Shap Sz Heung, New Territories (Application No.: A/NE-SSH/142)

	Departmental Comments	Responses to Comments
1.	**Comments from the Chief Engineer/Mainland North, Drainage Services Department (CE/MN, DSD)**	
1.1	We have no objection to the **Attachment 8** on the revised SIA.	No objection to the revised SIA is well noted.
1.2	As regards the photo showing the existing conditions of the ditch channel in **Attachment 5**, we consider that the photo provided is insufficient to demonstrate that the ditch is suitable to take up additional flow generated from the development.	Further to tele-conversation with DSD on 18 August 2022, the photos for the existing ditch have been consolidated in Appendix A of **Attachment 1** for consideration. In order to demonstrate the capacity checking for the existing ditch, while the actual overall width at downstream of the ditch is more than 5m with a depth of 1.8m, the effective dimension is assumed to be 3.5m width x 1.8m depth for capacity checking purpose. Please refer to the clarification in Appendix B of **Attachment 1** for consideration.
2.	**Comments from the Director of Environmental Protection (DEP)**	
2.1	Having reviewed the submissions of the application, we have the following comments for the applicant to address before we could form our view on the application:-	
	• S.3.7 of the Planning Statement (Risk Considerations Section) - While it is also noted in the previous applicant's responses to departmental comments that the Man On Shan Water Treatment Works (MOSWTW) will be removed from the Potentially Hazardous Installation (PHI) Register by 2022 based upon completion of installation of the On-site Chlorine Generation (OSCG) plant, the applicant should discuss the de-listing programme of the MOSWTW from the PHI Register and the change of the hazard to life impact due to its removal of liquid chlorine drums and the associated implication to the proposed development in this section.	Noted. Section 3.7 of the Planning Statement has been amended. Please refer to the replacement pages of Planning Statement in **Attachment 2** for consideration.

	Departmental Comments	Responses to Comments
3.	**Comments from the Commissioner for Transport, Transport Department**	
3.1	Please be advised that we have no in-principle objection to the application subject to the following approval and advisory conditions: I) Approval conditions: The following approval conditions as stated in the letter from Planning Department dated 14 October 2020 for Application No. A/NE-SSH/120-1 are still valid and these conditions shall remain: (e) the design and implementation of improvement works of the vehicular access road network for the proposed development and adjoining villages, as proposed by you, to the satisfaction of the Commissioner for Transport or of the TPB; (f) the design and provision of parking spaces and loading/unloading facilities to the satisfaction of the Commissioner for Transport or of the TPB; (g) the implementation of Traffic Impact Assessment (TIA) including the mitigation measures to the satisfaction of the Commissioner for Transport or of the TPB; (h) the implementation of the modification of the roundabout of Sai Sha Road/Nin Wah Road/Nin Fung Road, as proposed by you, to the satisfaction of the Commissioner for Transport or of the TPB; (i) no occupation of the residential development prior to the completion of the Sai Sha Road widening project, subject to the implementation of traffic improvement measures recommended in the TIA to the satisfaction of the Commissioner for Transport or of the TPB;	Noted. The Applicant has no objection for the TPB to impose the same approval conditions and advisory clauses as the previously approved Application No. A/NE-SSH/120-1, should the subject planning application be approved.

	Departmental Comments	Responses to Comments
	(j) the design and provision of two public transport interchanges, as proposed by you, to the satisfaction of the Commissioner for Transport or of the TPB; (v) the provision of public car park of not less than 165 car parking spaces, 20 coach parking spaces and two light bus lay-bys in the adjoining "Government, Institution or Community" zone near Tseng Tau Village to the satisfaction of the Commissioner for Transport or of the TPB II) Advisory Clauses The following approval conditions as stated in the letter from Planning Department dated 14 October 2020 for Application No. A/NE-SSH/120-1 are still valid and these conditions shall remain: (i) the design of the proposed re-provision of the public transport terminus and the open carpark in Nai Chung, including the access arrangement and provision of disable car parking, shall comply with the TD's requirements; (ii) the signal design of the proposed signalized junctions shall comply with the TD's requirements; (iii) a temporary public transport terminus in Tseng Tau for Green Mini-bus 807K, 807K (short-working services) and 807S should be provided during the construction stage to the satisfaction of C for T; (iv) the public transport interchanges should be kept open for the use by the public transport as approved by TD and all members of the public 24 hours a day free of charge and without any restriction. The public transport interchanges will be owned, operated, managed and maintained by the owner(s) of the development;	

	Departmental Comments	Responses to Comments
	(v) the design of the two transport interchanges at Sites A and B should adopt sawtooth design and comply with the guideline for smart public transport interchanges with electric vehicle charging facilities and facilities for bus operator to the satisfaction of C for T; and (vi) the detailed public transport services plan shall be submitted for TD's consideration;	
3.2	The applicant is required to amend and incorporate the changes in the enclosed replacement pages into a consolidated Traffic Impact Assessment for TD and relevant departments' record.	Noted. The consolidated TIA will be provided together with the consolidated Planning Statement for TD and relevant departments' record once available prior to the consideration of the subject planning application by the TPB.

Under Further Information Submitted on 7 September 2022

Section 16 Planning Application for Amendments to the Approved Development (Application No. A/NE-SSH/120-1) at Tai Po Town Lot 253 and 157 RP, various lots in D.D.165, 207 and 218 and Adjoining Government Land, Sai Sha, Shap Sz Heung, New Territories (Application No.: A/NE-SSH/142)

	Departmental Comments	Responses to Comments
1.	**Comments from the Director of Environmental Protection (DEP)**	
1.1	Having reviewed the submissions of the application, we have the following comments for the applicant to address before we could form our view on the application:-	
	• S.3.7.2 of the Planning Statement (Risk Considerations Section) - Besides the 10m high fence walls at Site A, please clarify whether the following two measures, which were recommended in the previous QRA study conducted for this site in year 2003, are still applicable under the current proposed development:- - Multi-storey car parks/ podium development concept will be adopted to raise the residential units from the passage of any leaked chlorine cloud; and - The car park beneath the first 4 blocks (northernmost ones) at the Valley Site will be enclosed for the frontage facing the Ma On Shan WTW, so as to avoid passage of chlorine through it.	Please be clarified that the concerned previously proposed hazard mitigation measures will not be required under the current proposed development. Sections 3.7.2 and 3.7.3 of the Planning Statement have been revised to reflect the above. Please refer to the replacement pages of Planning Statement in **Attachment 1** for consideration.

Overall Indicative Development Schedule of the Proposed Amendment Scheme

- Development parameters as shown in (A) and (B) have already been approved under Application Nos. A/NE-SSH/120 and 120-1 respectively.
- Development parameters as shown in (C) under the Current Scheme follows those approved under (B) except for the no. of non-domestic blocks in Site C.

The Overall Development						
	(A)	(B)	(C)	Comparison		
	Approved Application No. A/NE-SSH/120	**Approved Application No. A/NE-SSH/120-1**	**Current Scheme**	**(B) – (A)**	**(C) – (A)**	**(C) – (B)**
Total Application Site Area (1)	About 748,400 m^2	About 748,400 m^2	About 748,400 m^2	-	-	-
Domestic GFA (2)	Not more than 538,213 m^2	Not more than 538,213 m^2	Not more than 538,213 m^2	-	-	-
Domestic Plot Ratio (3)	About 0.832	About 0.832	About 0.832	-	-	-
No. of Residential Storeys (4)	16-31 storeys	16-31 storeys	16-31 storeys	-	-	-
Site Coverage (above ground level) (3)	Domestic – not more than 33.33% Non-Domestic – not more than 80% (below 15m)	Domestic – not more than 33.33% Non-Domestic – not more than 80% (below 15m)	Domestic – not more than 33.33% Non-Domestic – not more than 80% (below 15m)	-	-	-
No. of Residential Towers	46	46	46	-	-	-
No. of Flats	Not more than 9,500	Not more than 9,700	Not more than 9,700	+200	+200	-
Average Flat Size	About 56.65 m^2	About 55.49 m^2	About 55.49 m^2	-1.16m^2	-1.16m^2	-
Anticipated Population (5)	About 28,500	About 29,100	About 29,100	+600	+600	-
Residents' Club GFA (6)	Not more than 13,446 m^2	Not more than 13,446 m^2	Not more than 13,446 m^2	-	-	-
Commercial GFA (7)	Not more than 12,077 m^2	Not more than 12,077 m^2	Not more than 12,077 m^2	-	-	-
Transport Interchange GFA (8)	Not more than 9,000 m^2	Not more than 9,000 m^2	Not more than 9,000 m^2	-	-	-
Recreation & Sports Centre with Ancillary Facilities GFA (8)	Not more than 17,500 m^2	Not more than 17,500 m^2	Not more than 17,500 m^2	-	-	-
Welfare Centre GFA	Not more than 5,560m^2	Not more than 5,560m^2	Not more than 5,560m^2	-	-	-
Public Vehicle Park GFA (8)	Not more than 9,000 m^2	Not more than 9,000 m^2	Not more than 9,000 m^2	-	-	-

Comparison Table
Section 16 Planning Application for Amendments to the Approved Development (Application No. A/NE-SSH/120-1) – Amendments to Recreation and Sports Centre with Ancillary Facilities in Site C (Application No. A/NE-SSH/142)

Site A						
	(A)	(B)	(C)	Comparison		
	Approved Application No. A/NE-SSH/120	**Approved Application No. A/NE-SSH/120-1**	**Current Scheme**	**(B) – (A)**	**(C) – (A)**	**(C) – (B)**
Development Site Area (9)	About 115,559 m^2	About 115,559 m^2	About 115,559 m^2	-	-	-
Domestic Portion						
Domestic GFA	Phase 1: Not more than 225,080 m^2 Phase 2: Not more than 15,170 m^2	Phase 1: Not more than 225,080 m^2 Phase 2: Not more than 15,170 m^2	Phase 1: Not more than 225,080 m^2 Phase 2: Not more than 15,170 m^2	-	-	-
No. of Blocks	Phase 1: 16 blocks Phase 2: 1 block	Phase 1: 16 blocks Phase 2: 1 block	Phase 1: 16 blocks Phase 2: 1 block	-	-	-
No. of Residential Storeys (4)	21 - 31 storeys	22 - 31 storeys	22 - 31 storeys	+1s	+1s	-
No. of Flats	Not more than 4,100	Not more than 4,300	Not more than 4,300	+200	+200	-
Average Flat Size	About 58.60 m^2	About 55.87 m^2	About 55.87 m^2	-2.73m^2	-2.73m^2	-
Anticipated Population (5)	About 12,300	About 12,900	About 12,900	+600	+600	-
Non-Domestic Portion						
Total Commercial GFA (10)	Not more than 6,788 m^2	Not more than 6,788 m^2	Not more than 6,788 m^2	-	-	-
Transport Interchange GFA (8)	Not more than 4,500 m^2	Not more than 4,500 m^2	Not more than 4,500 m^2	-	-	-
Residents' Club GFA (6)	Not more than 6,006 m^2	Not more than 6,006 m^2	Not more than 6,006 m^2	-	-	-
No. of Blocks (11) (12)	Not more than 15	Not more than 28	Not more than 28	+13	+13	-
No. of Storeys	Not more than 4 (including 1 to 2 levels of basement carpark / M&E)	Not more than 4 (including 1 to 3 levels of basement carpark / M&E)	Not more than 4 (including 1 to 3 levels of basement carpark / M&E)	- (+1 level of basement)	- (+1 level of basement)	-

Site B						
	(A)	(B)	(C)	Comparison		
	Approved Application No. A/NE-SSH/120	**Approved Application No. A/NE-SSH/120-1**	**Current Scheme**	**(B) – (A)**	**(C) – (A)**	**(C) – (B)**
Development Site Area [9]	About 164,366 m^2	About 164,366 m^2	About 164,366 m^2	-	-	-
Domestic Portion						
Domestic GFA	Not more than 297,573 m^2	Not more than 297,573 m^2	Not more than 297,573 m^2	-	-	-
No. of Blocks	29	29	29	-	-	-
No. of Residential Storeys [4]	16 - 31 storeys	16 - 31 storeys	16 - 31 storeys	-	-	-
No. of Flats	Not more than 5,400	Not more than 5,400	Not more than 5,400	-	-	-
Average Flat Size	About 55.11 m^2	About 55.11 m^2	About 55.11 m^2	-	-	-
Anticipated Population [5]	About 16,200	About 16,200	About 16,200	-	-	-
Non-Domestic Portion						
Total Commercial GFA [10]	Not more than 5,289 m^2	Not more than 5,289 m^2	Not more than 5,289 m^2	-	-	-
Transport Interchange GFA [6]	Not more than 4,500 m^2	Not more than 4,500 m^2	Not more than 4,500 m^2	-	-	-
Residents' Club GFA [6]	Not more than 7,440 m^2	Not more than 7,440 m^2	Not more than 7,440 m^2	-	-	-
No. of Blocks [11] [12]	Not more than 19	Not more than 25	Not more than 25	+6	+6	-
No. of Storeys	Not more than 3 (including 2 levels of basement carpark / M&E)	Not more than 3 (including 2 levels of basement carpark / M&E)	Not more than 3 (including 2 levels of basement carpark / M&E)	-	-	-

Site C (Current Proposal)						
	(A)	(B)	(C)	Comparison		
	Approved Application No. A/NE-SSH/120	**Approved Application No. A/NE-SSH/120-1**	**Current Scheme**	**(B) – (A)**	**(C) – (A)**	**(C) – (B)**
Development Site Area [9]	About 366,983 m^2	About 366,983 m^2	About 366,983 m^2	-	-	-
Total No. of Non-domestic Blocks (including golf driving range and welfare centre)	8	11[17]	14 [12]	+3	+6	+3
Recreation & Sports Centre with Ancillary Facilities [13] [14]						
Non-domestic GFA [8]	Not more than 17,500m^2 • Sports Centre & Ancillary Facilities: not more than 12,000m^2 • Recreation Centre & Ancillary Facilities: Not more than 5,500m^2	Not more than 17,500m^2 • Sports Centre & Ancillary Facilities: not more than 5,500m^2 • Recreation Centre & Ancillary Facilities: Not more than 8,500m^2 • Retail & F&B Facilities: Not more than 3,500m^2	Not more than 17,500m^2 • Sports Centre & Ancillary Facilities: not more than 5,500m^2 • Recreation Centre & Ancillary Facilities: Not more than 8,500m^2 • Retail & F&B Facilities: Not more than 3,500m^2	- (Breakdown some of the Sports Centre& Ancillary Facilities to Retail and F&B Facilities)	- (Breakdown some of the Sports Centre& Ancillary Facilities to Retail and F&B Facilities)	-
No. of Blocks (including golf driving range)	7	10[17]	13 [12]	+3	+6	+3
No. of Storeys	3 storeys above 2 levels of basement	3 storeys above 2 levels of basement	3 storeys above 2 levels of basement	-	-	-
Welfare Centre & Public Vehicle Park Building [15]						
Non-domestic GFA	Not more than 14,560m^2 • Welfare Centre: Not more than 5,560m^2 • Public Vehicle Park: Not more than 9,000m^2 [8]	Not more than 14,560m^2 • Welfare Centre: Not more than 5,560m^2 • Public Vehicle Park: Not more than 9,000m^2 [8]	Not more than 14,560m^2 • Welfare Centre: Not more than 5,560m^2 • Public Vehicle Park: Not more than 9,000m^2 [8]	-	-	-
No. of Blocks	1	1	1	-	-	-
No. of Storeys	5 storeys above 1 level of basement	5 storeys above 1 level of basement	5 storeys above 1 level of basement	-	-	-

Site C (Current Proposal)						
	(A)	(B)	(C)	Comparison		
	Approved Application No. A/NE-SSH/120	**Approved Application No. A/NE-SSH/120-1**	**Current Scheme**	**(B) – (A)**	**(C) – (A)**	**(C) – (B)**
Reserved Primary School Sites						
Total Site Area	Not less than 12,400m² (i.e. not less than 6,200m² each)	Not less than 12,400m² (i.e. not less than 6,200m² each)	Not less than 12,400m² (i.e. not less than 6,200m² each)	-	-	-

Remarks:

(1) Including Development Site Area of 646,908 m² (i.e. excluding Sai Sha Road widening works area and areas to be provided as sewage pumping station near Tseng Tau Village).
(2) Including 390m² for two existing houses in Site C to be retained.
(3) Calculated based on Development Site Area.
(4) Over 1 to 3 levels of carpark / M&E / residential clubhouse facilities.
(5) Based on a person-per-flat ratio of 3.0.
(6) The clubhouse GFA is about 2.5% of the domestic GFA for Site A and Site B respectively.
(7) Commercial GFA refers to commercial uses ('Eating Place' and 'Shop and Services'), 'School' (kindergarten, nursery, language, computer, commercial and tutorial schools, art school, ballet and other types of schools providing interest / hobby related courses), 'Place of Entertainment' and 'Religious Institution' (church).
(8) Under the approved scheme (Application No. A/NE-SSH/61-2), it also included the provision of Sports Centre and Ancillary Facilities, as well as Public Vehicle Park. GFAs of these facilities are specified in the development schedule.
(9) Excluding Sai Sha Road widening works area and sewage pumping station near Tseng Tau Village within Application Site boundary.
(10) Further to Remark (7) above, specifically, 2 nos. of kindergarten / nursery of not less than 6 classrooms each (1 each in Site A and Site B) and a church in Site A (commercial GFA of not less than 1,500m²) will be provided.
(11) The main commercial clusters and transport interchanges are located at the entrance of Site A and Site B near Sai Sha Road, while other smaller commercial facilities / clubhouse blocks are scattered around the Development Sites for convenience and avoidance of massive building structures.
(12) Exclude the structures solely for ancillary M&E and shuttle lift uses in Site A, Site B and Site C.
(13) Recreation & Sports Centre with Ancillary Facilities include 'Place of Recreation, Sports or Culture', 'Place of Entertainment', 'Eating Place', 'Shop and Services' and / or 'Indoor Playground'.
(14) Recreation & Sports Centre with Ancillary Facilities include ancillary M&E facilities for the power supply of Sites A to C. As the M&E facilities are ancillary and directly related to the development, the associated GFA of not more than 3000m² shall be disregarded in this planning application in accordance with the provision of the Notes of the OZP.
(15) Light bus layby, car parking, and loading & unloading provisions subject to TD's approval.
(16) Car parking, loading and unloading provisions for the Proposed Development will be provided in accordance with TIA.
(17) Under the Approved Scheme of Application No. A/NE-SSH/120-1, the counting of no. of blocks for recreation & sports centre with ancillary facilities excludes 3 nos. of structures for golf driving range uses. For sake of comparison with the Current Scheme, the 3 nos. of structures for golf driving range uses are included in counting of no. of blocks for recreation & sports centre with ancillary facilities, making up a total of 10 nos. under the Approved Scheme of Application No. A/NE-SSH/120-1. The total no. of non-domestic is 11 nos. including 1 block of welfare centre and public vehicle park.

Previous s.16 Applications for Comprehensive Development at the Site

Approved Applications

Application No.	Proposed Development	Date of Consideration
A/NE-SSH/5	Comprehensive Residential and Recreational Development with Commercial and Government/Institution/Community (GIC) facilities	14/2/1997
A/NE-SSH/7	Comprehensive Residential and Recreational Development with Commercial and G/IC facilities (Amendment to a approved scheme in the North Plain)	3/10/1997
A/NE-SSH/10	Comprehensive Residential, Recreational and Commercial Development; and Minor Relaxation of the Maximum Domestic GFA as stipulated in the Notes of the OZP	18/12/1998 (On Review)
A/NE-SSH/15	Proposed Comprehensive Residential and Recreational Development including Shopping Centre, Church and Kindergarten	3/3/2000
A/NE-SSH/16	Comprehensive Residential and Recreational Development cum Government, Institution and Recreational Facilities	18/1/2002
A/NE-SSH/18	Proposed Comprehensive Residential and Recreational Development including Shopping Centre, Church and Kindergarten (Proposed Amendments to Approved Scheme)	22/9/2000
A/NE-SSH/22	Proposed Comprehensive Residential and Recreational Development including Shopping Centre, Church and Kindergarten (Proposed Amendments to Approved Scheme)	1/6/2001

Application No.	Proposed Development	Date of Consideration
A/NE-SSH/26	Proposed Comprehensive Residential and Recreational Development including GIC Facilities (Proposed Amendments to Approved Scheme)	24/10/2003
A/NE-SSH/28	Proposed Comprehensive Residential and Recreational Development including GIC Facilities (Proposed Amendments to Approved Scheme)	13/6/2003
A/NE-SSH/61	Proposed Comprehensive Residential and Recreational Development Including GIC Facilities	08/5/2009
A/NE-SSH/120	Proposed Comprehensive Residential and Commercial Development with Government, Institution or Community Facilities with Minor Relaxation of Gross Floor Area and Building Height Restrictions	18/1/2019
A/NE-SSH/120-1	Proposed Comprehensive Residential and Commercial Development with Government, Institution or Community Facilities with Minor Relaxation of Gross Floor Area and Building Height Restrictions	14/10/2020

致城市規劃委員會秘書：
專人送遞或郵遞：香港北角渣華道 333 號北角政府合署 15 樓
傳真：2877 0245 或 2522 8426
電郵：tpbpd@pland.gov.hk

To: Secretary, Town Planning Board
By hand or post: 15/F, North Point Government Offices, 333 Java Road, North Point, Hong Kong
By Fax: 2877 0245 or 2522 8426
By e-mail: tpbpd@pland.gov.hk

有關的規劃申請編號 The application no. to which the comment relates A/NE-SSH/142

意見詳情（如有需要，請另頁說明）
Details of the Comment (use separate sheet if necessary)

我是新界居民：
發展工商用途之政府樓、構或社區設施，戶外及體育康樂設施，將原本規劃的高爾夫球練習場改劃為政府推行之體育場地如：有高台跳水游泳池，訓練單車及有頂蓋游泳的運動場地，球場等設施，能更多的居民使用。設單車徑貫穿西沙公路全線行車，方便沙田，馬鞍山近區居民更多使用訓練場地。請支持提議。

「提意見人」姓名／名稱 Name of person/company making this comment 魏伊蕙
簽署 Signature [signature] 日期 Date 27-3-2022

致城市規劃委員會秘書：
專人送遞或郵遞：香港北角渣華道 333 號北角政府合署 15 樓
傳真：2877 0245 或 2522 8426
電郵：tpbpd@pland.gov.hk

To: Secretary, Town Planning Board
By hand or post: 15/F, North Point Government Offices, 333 Java Road, North Point, Hong Kong
By Fax: 2877 0245 or 2522 8426
By e-mail: tpbpd@pland.gov.hk

有關的規劃申請編號 **The application no. to which the comment relates** A/NE-SSH/142

意見詳情（如有需要，請另頁說明）
Details of the Comment (use separate sheet if necessary)

我是新界居民，本人支持將粉嶺球場改建成運動場、球場、游泳池、單車徑等用途。對A/NE-SSH/142此項目能為該區市民帶來更多的娛樂機會，減少該區長者、小朋友、殘疾人士及行動不便人士的不便，所以我同意本項目申請，提高本區的生活質素。

「提意見人」姓名／名稱 Name of person/company making this comment 郭建明
簽署 Signature 郭建明 日期 Date 2022.3.29

致城市規劃委員會秘書：
專人送遞或郵遞：香港北角渣華道 333 號北角政府合署 15 樓
傳真：2877 0245 或 2522 8426
電郵：tpbpd@pland.gov.hk

To: Secretary, Town Planning Board
By hand or post: 15/F, North Point Government Offices, 333 Java Road, North Point, Hong Kong
By Fax: 2877 0245 or 2522 8426
By e-mail: tpbpd@pland.gov.hk

有關的規劃申請編號 The application no. to which the comment relates A/NE-SSH/142

意見詳情（如有需要，請另頁說明）
Details of the Comment (use separate sheet if necessary)

我贊同有關規劃申請編號A/NE-SSH/142項目，擬議作住宅及商業發展及政府、機構或社區設施和略為放寬總樓面面積和建築物高度限制，按原定計劃概覽修改作為其他戶外體育及康樂設施（如運動場/球場/游泳池）多元化為市民帶來更合適性的用度，按如上修訂落前方案輕微，並不影響總樓面面積，基於以上理據，懇請城規會能對是次規劃申請予以贊同。

「提意見人」姓名／名稱 Name of person/company making this comment Ms Ho
簽署 Signature Ho 日期 Date 27-3-22

致城市規劃委員會秘書：
專人送遞或郵遞：香港北角渣華道 333 號北角政府合署 15 樓
傳真：2877 0245 或 2522 8426
電郵：tpbpd@pland.gov.hk

To: Secretary, Town Planning Board
By hand or post: 15/F, North Point Government Offices, 333 Java Road, North Point, Hong Kong
By Fax: 2877 0245 or 2522 8426
By e-mail: tpbpd@pland.gov.hk

有關的規劃申請編號 **The application no. to which the comment relates** A/NE-SSH/142

意見詳情（如有需要，請另頁說明）
Details of the Comment (use separate sheet if necessary)

本人作為運動愛好者，支持以運動場、游泳池或單車徑等設施，替代原來的高爾夫球練習場。高爾夫球雖然亦是體育項目之一，但是較為小眾，普遍入門門檻及裝備費用較高，因此應興建更大眾化的設施。

「提意見人」姓名／名稱 Name of person/company making this comment 錢曜徵
簽署 Signature [signature] 日期 Date 24/3/2022

RECEIVED
- 4 APR 2022
Town Planning Board

致城市規劃委員會秘書：
專人送遞或郵遞：香港北角渣華道 333 號北角政府合署 15 樓
傳真：2877 0245 或 2522 8426
電郵：tpbpd@pland.gov.hk

To: Secretary, Town Planning Board
By hand or post: 15/F, North Point Government Offices, 333 Java Road, North Point, Hong Kong
By Fax: 2877 0245 or 2522 8426
By e-mail: tpbpd@pland.gov.hk

有關的規劃申請編號 The application no. to which the comment relates A/NE-SSH/142

意見詳情（如有需要，請另頁說明）
Details of the Comment (use separate sheet if necessary)

本人支持有关的规划申请编号 A/NE-SSH/142
拟议修订批准数份申请编号 A/NE-SSH/120-1)
拟议综合发展及商业发展及政府机构，或社区设施
和附为设置总楼理细则前提条件高度限制
就有关计划只作略为改动，建筑物的外形
就可包括康乐及体育中心，加强本发展区
地面行人连接天业是单一发展商兩大球场
能为更多人带来效益，可发展多与运动使
多人可以受惠，故助城市规划能接纳此申请。

「提意見人」姓名／名稱 Name of person/company making this comment 林小姐
簽署 Signature 林 日期 Date 28.3.22

致城市規劃委員會秘書：
專人送遞或郵遞：香港北角渣華道 333 號北角政府合署 15 樓
傳真：2877 0245 或 2522 8426
電郵：tpbpd@pland.gov.hk

To: Secretary, Town Planning Board
By hand or post: 15/F, North Point Government Offices, 333 Java Road, North Point, Hong Kong
By Fax: 2877 0245 or 2522 8426
By e-mail: tpbpd@pland.gov.hk

有關的規劃申請編號 The application no. to which the comment relates A/NE-SSH/142

意見詳情（如有需要，請另頁說明）
Details of the Comment (use separate sheet if necessary)

我是居住西沙一帶的村民，這一帶缺乏康樂設施，沒有球場，游泳池等，而高爾夫球是此專立門的運動，對大眾市民來說，所以我們反對在此項目，將高爾夫練習場改成其他康樂設施。

「提意見人」姓名／名稱 Name of person/company making this comment 吳偉伯
簽署 Signature 偉 日期 Date 25/03/2022

RECEIVED
- 4 APR 2022
Town Planning Board

致城市規劃委員會秘書：
專人送遞或郵遞：香港北角渣華道 333 號北角政府合署 15 樓
傳真：2877 0245 或 2522 8426
電郵：tpbpd@pland.gov.hk

To: Secretary, Town Planning Board
By hand or post: 15/F, North Point Government Offices, 333 Java Road, North Point, Hong Kong
By Fax: 2877 0245 or 2522 8426
By e-mail: tpbpd@pland.gov.hk

有關的規劃申請編號 The application no. to which the comment relates A/NE-SSH/142

意見詳情（如有需要，請另頁說明）
Details of the Comment (use separate sheet if necessary)

我在西沙宮坑村居住多年，附近一帶沒有很多康樂設施，得悉 A/NE-SSH/142 將原本的高爾夫練習場事改善作康樂設施，如球場，泳池等，本人十分支持。因高爾夫不是大眾喜歡，佔地又大，現改善作其他更受歡迎的運動，希望盡快落實。

「提意見人」姓名／名稱 Name of person/company making this comment 王申德
簽署 Signature 王申德 日期 Date 28/3/2022

RECEIVED
- 4 APR 2022
Town Planning Board

致城市規劃委員會秘書：
專人送遞或郵遞：香港北角渣華道 333 號北角政府合署 15 樓
傳真：2877 0245 或 2522 8426
電郵：tpbpd@pland.gov.hk

To: Secretary, Town Planning Board
By hand or post: 15/F, North Point Government Offices, 333 Java Road, North Point, Hong Kong
By Fax: 2877 0245 or 2522 8426
By e-mail: tpbpd@pland.gov.hk

有關的規劃申請編號 The application no. to which the comment relates A/NE-SSH/142

意見詳情（如有需要，請另頁說明）
Details of the Comment (use separate sheet if necessary)

我非常支持擬議發展，香港地少人多，可以做大眾作康樂用途的地方卻很缺少，而高爾夫球活動非一般大眾可以參與，預留這麼多地皮很不划算，理應善用大好地皮作公益，多建一些運動場、泳池、單車場時都比做高爾夫球場好。

「提意見人」姓名／名稱 Name of person/company making this comment Keith Choi
簽署 Signature Keith 日期 Date 28/3/2022

RECEIVED
- 4 APR 2022
Town Planning Board

致城市規劃委員會秘書：
專人送遞或郵遞：香港北角渣華道 333 號北角政府合署 15 樓
傳真：2877 0245 或 2522 8426
電郵：tpbpd@pland.gov.hk

To: Secretary, Town Planning Board
By hand or post: 15/F, North Point Government Offices, 333 Java Road, North Point, Hong Kong
By Fax: 2877 0245 or 2522 8426
By e-mail: tpbpd@pland.gov.hk

有關的規劃申請編號 The application no. to which the comment relates A/NE-SSH/142

意見詳情（如有需要，請另頁說明）

Details of the Comment (use separate sheet if necessary)

本人贊成上述規劃申請編號中，原擬定用作高爾夫球練習場改為建設其他戶外體育康樂設施」，原因如下：

(1)高爾夫球是單一運動，參與人數不廣泛，使用率偏低，浪費土地資源。

(2)建設休憩公園，綜合體育館，運動場、不同類型的球場、游泳池及其它不同種類的運動設施，給予廣大市民使用，使用率相對提高，將土地資源充份發揮。

(3)政府和體育團體請遍這些專業正規設施場地，開辦不同類型的運動課程和比賽，使小朋友從小能接觸正規專業的培訓，長遠而言提高香港運動項目的水平。

(4)場地亦可增設近年流行的BMX單車，滑板等場地，讓這些運動愛好者有專門場地使用。

「提意見人」姓名／名稱 Name of person/company making this comment 潘俊昇

簽署 Signature _____ 日期 Date 29-3-2022

RECEIVED
- 4 APR 2022
Town Planning Board

RECEIVED
11 JUL 2022
Town Planning Board

By Fax [redacted]
and by mail

致: 城市規劃委員會
香港北角渣華道 333 號
北角政府合署 15 樓

本村現反對規劃申請，申請編號 A/NE-SSH/142。原因如下:
1.影響村民生活及道路交通
2.影響本村風水
3.該地區四周有墓地
4.影響村民通往石灘
如有查詢, 請致電崙下村村代表李英發先生[redacted]及崙下村居民代表李馬田先生[redacted]

副本交西貢北約鄉事委員會

西貢北約十四鄉崙下村
村務委員會
二零二二年六月二十七日

崙下村村務委員會
CHE HA VILL
VILL COMMITTEE

簡閩文儀
李馬田 簡業良 李家華 簡家兵
簡光勝 李英發 簡九
李世強 吳貴有
李玉英 陳德初 李世榮
李富雄
SL Tsang
李伯強

規劃申請
PLANNING APPLICATION
（進一步資料 FURTHER INFORMATION）

申請編號 Application No.	A/NE-SSH/142
地點 Location （見下圖 See Plan Below）	新界十四鄉西沙大埔市地段第157號餘段及第253號及丈量約份第165約、第207約及第218約毗鄰地段及毗連政府土地 Tai Po Town Lots 157 RP and 253 and Various Lots in D.D. 165, D.D. 207 and D.D. 218 and Adjoining Government Land, Sai Sha, Shap Sz Heung, New Territories
地帶及圖則 Zoning and Plan	「綜合發展區」、「綠化地帶」、「鄉村式發展」、「政府、機構或社區」、「道路」及「郊野公園」 "Comprehensive Development Area", "Green Belt", "Open Space", "Village Type Development", "Government, Institution or Community", "Road" and "Country Park" 已核准西貢大綱核心保護區 S/NE-SSH/11 及核准西貢大綱分區計劃大綱圖 S/M/24 Approved Shap Sz Heung Outline Zoning Plan No. S/NE-SSH/11 and Approved Ma On Shan Outline Zoning Plan No. S/M/24
建議 Proposal	擬議修訂核准發展（申請編號 A/NE-SSH/120-1） 擬議綜合住宅及商業發展及設施、機構或社區設施和臨時房屋區連同建築物高度限制 Proposed Amendments to the Approved Development (under Application No. A/NE-SSH/120-1) - Proposed Comprehensive Residential and Commercial Development with Government, Institution or Community Facilities with Minor Relaxation of Gross Floor Area and Building Height Restrictions

任何人士均可就這宗申請提出意見，有關意見必須於２０２２年７月１５日或之前，以專人送遞或郵遞（香港北角渣華道３３３號北角政府合署１５樓）、傳真（2877 0245或2522 8426）或電郵（tpbpd@pland.gov.hk）方式，向城市規劃委員會提出。

Any person may make comment on this application. The comment must be made to the Town Planning Board by hand or post (15/F, North Point Government Offices, 333 Java Road, North Point, Hong Kong), fax (2877 0245 or 2522 8426) or e-mail (tpbpd@pland.gov.hk) on or before 15 Jul 2022.

詳情 Particulars

1. 這是根據《城市規劃條例》（下稱「條例」）第１６條提出的申請，有關這宗申請的通知於２０２２年３月２２日首次公布。然而，申請人現提交進一步資料，作為申請的補充資料。
This is an application made under section 16 of the Town Planning Ordinance (the Ordinance), a notice of which was first published on 22 Mar 2022. The applicant has submitted further information to supplement the application.

2. 公眾可在城市規劃委員會（下稱「委員會」）就這宗申請作出考慮前，登入委員會的網頁（https://www.info.gov.hk/tpb/tc/plan_application/A_NE-SSH_142.html 或掃描本通告的二維碼）及到下列地點查閱這宗申請。
Until the application has been considered by the Town Planning Board (the Board), the application is available for public inspection on the Board's website (https://www.info.gov.hk/tpb/en/plan_application/A_NE-SSH_142.html or scanning the QR code in this Notice) and at the following locations.

規劃署規劃資料查詢處 **Planning Enquiry Counters, Planning Department**
（熱線 Hotline：2231 5000）
香港北角渣華道３３３號北角政府合署１７樓
17/F, North Point Government Offices, 333 Java Road, North Point, H.K.
新界沙田上禾輋路１號沙田政府合署１４樓
14/F, Sha Tin Government Offices, 1 Sheung Wo Che Road, Sha Tin, N.T.

3. 根據條例，所有向委員會提出的意見，均會供公眾查閱。
All comments made to the Board will be available for public inspection under the Ordinance.

個人資料聲明 **Statement on Personal Data**
委員會就任何意見所收到的個人資料會交給委員會秘書及政府部門，以根據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) 處理這宗申請，包括公布有關意見供公眾查閱，同時公布提出意見人士（下稱「提意見人」）的姓名供公眾查閱；以及
(b) 方便提意見人與委員會秘書及政府部門之間進行聯絡。
The personal data submitted to the Board in any comment will be used by the Secretary of the Board and Government departments for the following purposes:
(a) the processing of this application which includes making available the name of the person making the comment (hereafter known as "commenter") for public inspection when making available the comment for public inspection; and
(b) facilitating communication between the "commenter" and the Secretary of the Board/Government departments
in accordance with the provisions of the Ordinance and the relevant Town Planning Board Guidelines.

重要提示 **Important Notes：**

(1) 委員會考慮申請的暫定會議日期已上載於委員會的網頁（www.info.gov.hk/tpb/），考慮規劃申請而舉行的會議（進行商議的部分除外），會向公眾開放，如欲觀看會議，請最遲在會議日期的一天前以電話（2231 5061）、傳真（2877 0245或2522 8426）或電郵（tpbpd@pland.gov.hk）向委員會秘書處預留席位，席位會按先到先得的原則分配。
The tentative date of the Board to consider the application has been uploaded to the Board's website (www.info.gov.hk/tpb/). The meeting for considering planning applications, except the deliberation parts, will be open to the public. For observation of the meeting, reservation of seat can be made with the Secretariat of the Board by telephone (2231 5061), fax (2877 0245 or 2522 8426) or e-mail (tpbpd@pland.gov.hk) at least one day before the meeting. Seats will be allocated on a first-come-first-served basis.

(2) 供委員會在考慮申請的參閱的文件，會在發送給委員會委員後存放於規劃署的規劃資料查詢處（查詢熱線：2231 5000），以及在會議當日存放於會議舉行處，以供公眾查閱。
The paper for consideration of the Board in relation to the application will be available for public inspection after issue to the Board Members at the Planning Enquiry Counters of the Planning Department (Hotline : 2231 5000) and at the Public Viewing Room on the day of meeting.

(3) 在委員會考慮申請後，可致電2231 4819或2231 4835查詢有關決定，或是在會議結束後，在委員會的網頁上查閱決定摘要。
After the Board has considered the application, enquiry about the decision may be made at tel. no. 2231 4819 or 2231 4835 or the gist of the decision can be viewed at the Board's website after the meeting.

位置圖 Location Plan
（只作識別用 for identification purpose only）

城市規劃委員會
２０２２年６月２４日
Town Planning Board
24 Jun 2022

（任何人在未經委員會許可而擅去、塗改、毀壞或移除本通告，均可能構成刑事罪行。）
(Any person who obliterates, defaces, destroys or removes this notice without the authorization of the Board may commit a criminal offence.)

☐ Urgent ☐ Return Receipt Requested ☐ Sign ☐ Encrypt ☐ Mark Subject Restricted ☐ Expand personal&publi

Fwd: A/NE-SSH/142 Shap Sz Heung CDA SITE C
13/04/2022 20:40

From: [redacted]
To: tpbpd <tpbpd@pland.gov.hk>
File Ref:

Apologies, I had sent the link to application to one of my offices to print out the plans as I do not have a printer here and used the same template in error instead of amending the TO line.

Discovered error when I popped in to office this afternoon.

Mary

From: [redacted]
To: [redacted]
Date: Tuesday, 12 April 2022 9:34 PM CST
Subject: A/NE-SSH/142 Shap Sz Heung CDA SITE C

Dear TPB Members,

While the current application purports to refer only to Site C, members should note that the developer has managed to squeeze in **A FURTHER 200 UNITS**.

But there is no indication as to how this has been achieved as the number of towers and PR have not changed. There has also been a hike in the related parking of around 800 vehicles that is inconsistent with an additional 200 units. Are the additional units on Site A or Site B? How do they impact the integrity of the approved plan? And how could the Private OS increase from 28,500 to 43,500sq.m? Questions please.

According to the blurb:

The **key justifications for and merits of the latest proposal include**:

- Submission of current application is mainly due to technical change of use in planning terms from golf driving range to other outdoor sports and recreational uses (e.g. sports field / ball court / pool / training path for cycling);
- The proposal concerns diversifying outdoor sports and recreational uses in Site C in addition to golf driving range to better serve the future community in the area. There will still be a golf driving range provided on the site;
- The Current Scheme is in line with the development intention of Site C as a sports and recreational hub which has been long established in various previous planning approvals for the subject "CDA" zone;
- The proposed amendments are very minor in nature with no increase in the GFA;

- Previous planning and design merits of the Approved Scheme for Site C remain unchanged; and
- The proposed amendments to the Approved Scheme are technically feasible even under a "worst case scenario" in **traffic** and drainage terms.

SO NO MENTION OF ADDITIONAL UNITS AND A SUBSTANTIAL INCREASE IN PARKING.

Strong objections to the Welfare Facilities that will enjoy a mere 5 parking bays are to be sited above at grade parking for almost 200 vehicles including 20 coach parking in addition to being sited alongside the main road. This is the typical mindset of dumping the negative impact facilities onto the services that are intended for the most vulnerable members of society, the elderly, young children and the disabled. The parking facilities will generate significant air and noise pollution.

The public parking should be under the Golf Driving Range. There is no need for this facility to be at grade, the sport utilizes a static platform, players are not wandering around the links. All that is required is sufficient high and strong netting around the periphery. We can recall the facility that used to be located on Jordan. In addition it is far more likely that the patrons will arrive by private car unlike the recipients of services at the Welfare Centre.

Members must ensure that not only are adequate welfare services provided, but also that they are in the most healthy and well ventilated location possible on what is a large site.

Mary Mulvihill

From: [redacted]
To: tpbpd <tpbpd@pland.gov.hk>
Date: Thursday, 16 August 2018 2:28 AM CST
Subject: A/NE-SSH/120 Shap Sz Heung CDA

A/NE-SSH/120
Tai Po Town Lot 157 and Various Lots in D.D. 165, D.D. 207 and D.D. 218 and Adjoining Government Land, Sai Sha, Shap Sz Heung, New Territories
Site area : About 748,400m² Includes Government Land of about 109,297m²
Zoning : "CDA", "VTD", "GIC", "Open Space", "Green Belt", "Country Park" and „Road"
Applied Development : 9,500 Units, 2,700 Parking plus all the frills

Dear TPB Members,
Looking at the history of this development one can fully understand why there could be a shortage of residential units. The first approval was granted in 1995 and we are now in 2018. Instead of getting on with it, the developers have

procrastinated and continued to seek higher towers and more units.
Government departments have no doubt played their part in the long sad saga.
Every review of CDA sites outlines the progress, or rather lack of:
Review of Sites designated CDA in NT (March 2017)
NTE 5 (Plan 40)
Sai Sha Road, Shap Sz Heung, New Territories
(64.48 ha) (multiple ownership)

22 · The Site is the subject of several planning applications approved in 2003 (A/NE-SSH/28), 2007 (A/NE-SSH/26) and 2009 (A/NE-SSH/61).

An application (under Application No. A/NE-SSH/61-1) for Class B amendments to the approved scheme was approved by D of Plan under the delegated authority of the Board on 2.12.2009. The amendments involved mainly changes to average flat size to an increase of about 200 flats.

Subsequently, an application (No. A/NE-SSH/61-2) for EOT for commencement of approved development was approved by D of Plan under the delegated authority of the Board on 22.4.2013 and the validity for the subject planning permission was extended to 8.5.2017.

Although the applicant has made submissions, some of the approval conditions are yet to be complied with.

According to LandsD, the land exchange application and premium negotiation is at an advanced stage. The premium appeal is being processed by LandsD.

The building plan submissions for Sites A, B and C were approved on 19.12.2016, 13.4.2017 and 25.4.2017 respectively.

The "CDA" designation should be retained as the applicant is actively pursuing the implementation of the approved "CDA" scheme.

But now the developers have come up with another 'Gimme More' plan and the goal posts have been moved again.

At this point TPB should call a halt to the process and advise the developers to curb their ambitions or drop the plan altogether.

Mary Mulvihill

☐ Urgent ☐ Return Receipt Requested ☐ Sign ☐ Encrypt ☐ Mark Subject Restricted ☐ Expand personal&publi

Re: A/NE-SSH/142 Shap Sz Heung CDA SITE C
15/07/2022 02:42

From: [redacted]
To: tpbpd <tpbpd@pland.gov.hk>
File Ref:

Dear TPB Members,

What is not clear is WHY HAS COUNTRY PARK BEEN INCLUDED IN THE PLAN?

If the land is privately owned then there should be a land exchange as the development covers 110,000sq.m of government land.

Residents' Club House 13,446

Commercial Facilities 12,077

Transport Interchange 9,000

Recreation and Sports Centre 17,500 assuming this is for public use

Public Vehicle Park 9,000

Welfare Centre 5,560

Public Open Space 8,000sq.m

So community uses of 49,060sq.m LESS THAN 45% OF GOVT LAND

The residue should cover the the country park zoning.

In addition the allocation for Welfare Centre/community health facilities is totally inadequate in view of the size of the site and the planned number of residents indicating that the development would place a heavy burden on existing srvices.

Mary Mulvihill

From: [redacted]
To: tpbpd <tpbpd@pland.gov.hk>
Date: Wednesday, 13 April 2022 8:40 PM CST
Subject: Fwd: A/NE-SSH/142 Shap Sz Heung CDA SITE C

From: [redacted]
To: [redacted]
Date: Tuesday, 12 April 2022 9:34 PM CST
Subject: A/NE-SSH/142 Shap Sz Heung CDA SITE C

Dear TPB Members,

While the current application purports to refer only to Site C, members should note that the developer has managed to squeeze in **A FURTHER 200 UNITS**.

But there is no indication as to how this has been achieved as the number of towers and PR have not changed. There has also been a hike in the related parking of around 800 vehicles that is inconsistent with an additional 200 units. Are the additional units on Site A or Site B? How do they impact the integrity of the approved plan? And how could the Private OS increase from 28,500 to 43,500sq.m? Questions please.

According to the blurb:

The **key justifications for and merits of the latest proposal include**:

- Submission of current application is mainly due to technical change of use in planning terms from golf driving range to other outdoor sports and recreational uses (e.g. sports field / ball court / pool / training path for cycling);
- The proposal concerns diversifying outdoor sports and recreational uses in Site C in addition to golf driving range to better serve the future community in the area. There will still be a golf driving range provided on the site;
- The Current Scheme is in line with the development intention of Site C as a sports and recreational hub which has been long established in various previous planning approvals for the subject "CDA" zone;
- The proposed amendments are very minor in nature with no increase in the GFA;
- Previous planning and design merits of the Approved Scheme for Site C remain unchanged; and
- The proposed amendments to the Approved Scheme are technically feasible even under a "worst case scenario" in **traffic** and drainage terms.

SO NO MENTION OF ADDITIONAL UNITS AND A SUBSTANTIAL INCREASE IN PARKING.

Strong objections to the Welfare Facilities that will enjoy a mere 5 parking bays are to be sited above at grade parking for almost 200 vehicles including 20 coach parking in addition to being sited alongside the main road. This is the typical mindset of dumping the negative impact facilities onto the services that are intended for the most vulnerable members of society, the elderly, young children and the disabled. The parking facilities will generate significant air and noise pollution.

The public parking should be under the Golf Driving Range. There is no need for this facility to be at grade, the sport utilizes a static platform, players are not wandering around the links. All that is required is sufficient high and strong netting around the periphery. We can recall the facility that used to be located

on Jordan. In addition it is far more likely that the patrons will arrive by private car unlike the recipients of services at the Welfare Centre.

Members must ensure that not only are adequate welfare services provided, but also that they are in the most healthy and well ventilated location possible on what is a large site.

Mary Mulvihill

From: [redacted]
To: tpbpd <tpbpd@pland.gov.hk>
Date: Thursday, 16 August 2018 2:28 AM CST
Subject: A/NE-SSH/120 Shap Sz Heung CDA

A/NE-SSH/120
Tai Po Town Lot 157 and Various Lots in D.D. 165, D.D. 207 and D.D. 218 and Adjoining Government Land, Sai Sha, Shap Sz Heung, New Territories
Site area : About 748,400m² Includes Government Land of about 109,297m²
Zoning : "CDA", "VTD", "GIC", "Open Space", "Green Belt", "Country Park" and „Road"
Applied Development : 9,500 Units, 2,700 Parking plus all the frills

Dear TPB Members,
Looking at the history of this development one can fully understand why there could be a shortage of residential units. The first approval was granted in 1995 and we are now in 2018. Instead of getting on with it, the developers have procrastinated and continued to seek higher towers and more units. Government departments have no doubt played their part in the long sad saga. Every review of CDA sites outlines the progress, or rather lack of:
Review of Sites designated CDA in NT (March 2017)
NTE 5 (Plan 40)
Sai Sha Road, Shap Sz Heung, New Territories
(64.48 ha) (multiple ownership)

22 · The Site is the subject of several planning applications approved in 2003 (A/NE-SSH/28), 2007 (A/NE-SSH/26) and 2009 (A/NE-SSH/61).

An application (under Application No. A/NE-SSH/61-1) for Class B amendments to the approved scheme was approved by D of Plan under the delegated authority of the Board on 2.12.2009. The amendments involved mainly changes to average flat size to an increase of about 200 flats.

Subsequently, an application (No. A/NE-SSH/61-2) for EOT for commencement of approved development was approved by D of Plan under the delegated authority of the Board on 22.4.2013 and the validity for the subject planning permission was extended to 8.5.2017.

Although the applicant has made submissions, some of the approval conditions are yet to be complied with.

According to LandsD, the land exchange application and premium negotiation is at an advanced stage. The premium appeal is being processed by LandsD.

The building plan submissions for Sites A, B and C were approved on 19.12.2016, 13.4.2017 and 25.4.2017 respectively.

The "CDA" designation should be retained as the applicant is actively pursuing the implementation of the approved "CDA" scheme.

But now the developers have come up with another 'Gimme More' plan and the goal posts have been moved again.

At this point TPB should call a halt to the process and advise the developers to curb their ambitions or drop the plan altogether.

Mary Mulvihill

致: 城市規劃委員會
香港北角渣華道 333 號
北角政府合署 15 樓

本村參閱您 2022 年 8 月 5 日的告示, 現反對規劃申請，申請編號 A/NE-SSH/142。原因如下:

1.影響村民現有生活及道路交通
2.影響本村風水
3.該地區四周有墓地
4.影響村民通往石灘小路
5.影響本村綠化地帶及原有面貌

如有查詢, 請致電輋下村村代表李英發先生[redacted]及輋下村居民代表李馬田先生[redacted]

西貢北約十四鄉輋下村
村務委員會
西貢十四鄉輋下村 65 號地下
二零二二年八月七日

輋下村村務委員會
CHE HA VILL
VILL COMMITTEE

**副本交貢北約鄉事委員會

簡北勝 李英發

Mr. Martin Lee
西貢十四鄉輋下村原居民代表(村長)
Sai Sze Heung Che Ha Village Representative
Tel: [redacted]

致城市規劃委員會秘書：
專人送遞或郵遞：香港北角渣華道 333 號北角政府合署 15 樓
傳真：2877 0245 或 2522 8426
電郵：tpbpd@pland.gov.hk

To: Secretary, Town Planning Board
By hand or post: 15/F, North Point Government Offices, 333 Java Road, North Point, Hong Kong
By Fax: 2877 0245 or 2522 8426
By e-mail: tpbpd@pland.gov.hk

有關的規劃申請編號 The application no. to which the comment relates A/NE-SSH/142

意見詳情（如有需要，請另頁說明）
Details of the Comment (use separate sheet if necessary)

我提議將現時 Site C 的高爾夫球場改建做游泳池；訓練單車徑；這樣可以令長到大眾利益，因為比較少人會打高爾夫球場，所以改為這樣更加多人受益。

「提意見人」姓名／名稱 Name of person/company making this comment Master

簽署 Signature Master. 日期 Date 26-3-2022

RECEIVED
28 MAR 2022
Town Planning Board

致城市規劃委員會秘書：
專人送遞或郵遞：香港北角渣華道 333 號北角政府合署 15 樓
傳真：2877 0245 或 2522 8426
電郵：tpbpd@pland.gov.hk

To: Secretary, Town Planning Board
By hand or post: 15/F, North Point Government Offices, 333 Java Road, North Point, Hong Kong
By Fax: 2877 0245 or 2522 8426
By e-mail: tpbpd@pland.gov.hk

有關的規劃申請編號 **The application no. to which the comment relates** A/NE-SSH/142

意見詳情（如有需要，請另頁說明）
Details of the Comment (use separate sheet if necessary)

作為一名新界區的居民，對於此申請，建議於視時港高爾夫球場的位置，興建多種體育及康樂設施，代替現時單一的高爾夫球場，例如臨海的位置可以興建水上活動中心及海濱長廊；亦可建興建單車徑連接連接馬鞍山的單車徑，讓西貢的單車徑可以進一步延伸；也建議興建體育館，包含室內及室外的運動設施等等，讓該位置成為一個運動中心。

「提意見人」姓名／名稱 Name of person/company making this comment D Wan

簽署 Signature D Wan 日期 Date 26 March 2022

RECEIVED
26 MAR 2022
Town Planning Board

就規劃申請/覆核提出意見 **Making Comment on Planning Application / Review**

參考編號 **Reference Number:**	220328-101049-82905
提交限期 **Deadline for submission:**	12/04/2022
提交日期及時間 **Date and time of submission:**	28/03/2022 10:10:49
有關的規劃申請編號 **The application no. to which the comment relates:**	A/NE-SSH/142
「提意見人」姓名/名稱 **Name of person making this comment:**	小姐 Miss Carly

意見詳情
Details of the Comment :

將單一的高爾夫球練習場用途改作多元化的康樂設施，更適合當地居民的生活要求。計劃能夠將土地更有效運用於社區。

致城市規劃委員會秘書：
專人送遞或郵遞：香港北角渣華道 333 號北角政府合署 15 樓
傳真：2877 0245 或 2522 8426
電郵：tpbpd@pland.gov.hk

To: Secretary, Town Planning Board
By hand or post: 15/F, North Point Government Offices, 333 Java Road, North Point, Hong Kong
By Fax: 2877 0245 or 2522 8426
By e-mail: tpbpd@pland.gov.hk

有關的規劃申請編號 The application no. to which the comment relates A/NE-SSH/142

意見詳情（如有需要，請另頁說明）
Details of the Comment (use separate sheet if necessary)

本人覺得香港比較少有大型戶外及康樂設施，本人希望把該計劃可以改變一些總面積，增加地下場地面積供社區居民使用，部份用作高爾夫球練習場。

「提意見人」姓名／名稱 Name of person/company making this comment Jojo
簽署 Signature _____ 日期 Date 19/4/2022

RECEIVED
- 4 APR 2022
Town Planning Board

致城市規劃委員會秘書：
專人送遞或郵遞：香港北角渣華道 333 號北角政府合署 15 樓
傳真：2877 0245 或 2522 8426
電郵：tpbpd@pland.gov.hk

To: Secretary, Town Planning Board
By hand or post: 15/F, North Point Government Offices, 333 Java Road, North Point, Hong Kong
By Fax: 2877 0245 or 2522 8426
By e-mail: tpbpd@pland.gov.hk

有關的規劃申請編號 **The application no. to which the comment relates** A-NE-SSH-142

意見詳情（如有需要，請另頁說明）
Details of the Comment (use separate sheet if necessary)

本人居住在新界，本人希望政府發展各区時，能放寬總樓面面積與建築物高度限制，用來建設多些公共空間，休憩場所，室內運動場，区区都有自己的運動空間。

「提意見人」姓名／名稱 Name of person/company making this comment Cheung Lai Yee
簽署 Signature 張 日期 Date 23/3/22

RECEIVED
- 4 APR 2022
Town Planning Board

致城市規劃委員會秘書：
專人送遞或郵遞：香港北角渣華道 333 號北角政府合署 15 樓
傳真：2877 0245 或 2522 8426
電郵：tpbpd@pland.gov.hk

To: Secretary, Town Planning Board
By hand or post: 15/F, North Point Government Offices, 333 Java Road, North Point, Hong Kong
By Fax: 2877 0245 or 2522 8426
By e-mail: tpbpd@pland.gov.hk

有關的規劃申請編號 The application no. to which the comment relates A/NE-SSH/142

意見詳情（如有需要，請另頁說明）
Details of the Comment (use separate sheet if necessary)

本人希望政府可以實施該計劃的總樓面面積，
可使該地段增加康樂設施供市民享用。

「提意見人」姓名／名稱 Name of person/company making this comment Yip
簽署 Signature _____ 日期 Date 29/3/2022

RECEIVED
- 4 APR 2022
Town Planning Board

致城市規劃委員會秘書：
專人送遞或郵遞：香港北角渣華道 333 號北角政府合署 15 樓
傳真：2877 0245 或 2522 8426
電郵：tpbpd@pland.gov.hk

To: Secretary, Town Planning Board
By hand or post: 15/F, North Point Government Offices, 333 Java Road, North Point, Hong Kong
By Fax: 2877 0245 or 2522 8426
By e-mail: tpbpd@pland.gov.hk

有關的規劃申請編號 The application no. to which the comment relates A/NE-SSH/142

意見詳情（如有需要，請另頁說明）
Details of the Comment (use separate sheet if necessary)

本人希望該計劃可改變樓面面積，建更高的大廈，加建休憩空間，增加更多康樂設施供市民使用。

「提意見人」姓名／名稱 Name of person/company making this comment Roy

簽署 Signature Roy 日期 Date 29/3/2022

RECEIVED
- 4 APR 2022
Town Planning Board

Recommended Advisory Clauses

(a) to note the comments of the District Lands Officer/Tai Po, Lands Department (DLO/TP, LandsD) that on the understanding that the total GFA complies with the lease restriction, should the planning application be approved, the applicant shall apply for prior written consent under the Approved Master Layout Plans clause and in case of any alterations of the Technical Schedule under the Amendment of the Technical Schedule clause governing the subject lot. Such consent may be given subject to such conditions and payment of premium at LandsD's absolute discretion.

(b) to note the comments of the Commissioner for Traffic (C for T) that:

(i) the design of the proposed re-provision of the public transport terminus and the open carpark in Nai Chung, including the access arrangement and provision of disable car parking, shall comply with the Transport Department (TD)'s requirements;

(ii) the signal design of the proposed signalized junctions shall comply with the TD's requirements;

(iii) a temporary public transport terminus in Tseng Tau for Green Mini-bus 807K, 807K short- working and 807S should be provided during the construction stage to the satisfaction of C for T;

(iv) the public transport interchanges should be kept open for the use by the public transport as approved by TD and all members of the public 24 hours a day free of charge and without any restriction. The public transport interchanges will be owned, operated, managed and maintained by the owner(s) of the development;

(v) the design of the two transport interchanges at Sites A and B should adopt sawtooth design and comply with the guideline for smart public transport interchanges with electric vehicle charging facilities and facilities for bus operators to the satisfaction of C for T;

(vi) the detailed public transport services plan shall be submitted for TD's consideration; and

(vii) the applicant should conduct a construction traffic impact assessment in relation to the application.

(c) to note the comments of the Director of Environmental Protection (DEP) that:

(i) as stated in the sewerage impact assessment for the approved planning application No. A/NE-SSH/120-1, the Ma On Shan Sewage Pumping Station

(MOSSPS) will require capacity upgrading if it is to cater for all the projected sewage flow from the subject development and other future developments in the area. The applicant should closely liaise with DSD regarding the implementation programme of the proposed upgrading of MOSSPS to ensure that the MOSSPS has adequate capacity to cater for the proposed developments. If there is any further change in the development parameters, alignment of the associated sewers or rising mains, the applicant should resubmit the SIA report for approval; and

(ii) if the first population intake happens before sewerage provisions, the project would be a designated project under the Environmental Impact Assessment Ordinance (EIAO) as it would be "A residential development of not less than 2,000 flats and not served by public sewerage networks by the time a flat is occupied". In that case, the applicant has to follow and undergo statutory procedures under the EIAO for the proposed development.

(d) to note the comments of the Chief Town Planner/Urban Design and Landscape, Planning Department (CTP/UD&L, PlanD) that approval of the application does not imply approval of tree works, if any, such as pruning, transplanting and felling. Tree removal applications should be submitted direct to relevant authority(ies) for approval.

(e) to note the comments of Chief Engineer/Mainland North, Drainage Services Department (CE/MN, DSD) that:

(i) whilst the ultimate scope and details of upgrading work for Ma On Shan Sewage Pumping Station (MOSSPS) pertaining to the relocation of Sha Tin Sewage Treatment Works to Caverns and other public/private development projects in the catchment including the proposed development will take time for coordination and reach agreement amongst various project teams of interfacing projects and DSD, the applicant should keep on closely liaising with the concerned interfacing parties including the relocated Shatin Caverns Sewage Treatment System (CSTS), MOS housing sites development, etc, to refine the ultimate flow scenario of the MOSSPS and to ensure that the necessary upgrading work required for implementation at MOSSOS would adequately cater for the ultimate population intake in the catchment. Further comments on the SIA will be offered by DSD when more detailed sewerage information for the above-mentioned projects are available in future; and

(ii) there is no guarantee that the proposed upgrading of the MOSSPS will be completed in accordance with the implementation programme, which is based on the best available information for the time being only, and is subject to change (e.g. potential delay due to unforeseen issues) and review by the project team. Interim arrangement should be considered in the SIA in the event that the upgrading works may fall behind the applicant's development programme, otherwise the applicant shall take and properly manage the risk at his own

resources where his sewerage proposal and overall development programme may need to be reviewed.

(f) to note the comments of Principal Project Coordinator/Special Duty Division, Drainage Services Department (PPC/SDD, DSD) that the planned village sewerage system under project "Tolo Harbour Sewerage of Unsewered Areas Stage 2" is in vicinity of the proposed access road. The project is currently in design stage and the programme for commencement of construction works is still under review. The applicant should coordinate with his office for interface issues.

(g) to note the comments of the Chief Engineer/Construction, Water Supplies Department (CE/C, WSD) that:

(i) existing water mains at the Site are affected. The applicant should either divert or protect the water mains found on Site;

(ii) if diversion is required, existing water mains inside the Site are needed to be diverted outside the site boundary of the proposed development to lie in Government land. A strip of land of minimum 1.5 metres in width should be provided for the diversion of the existing water main(s). The cost of diversion of existing water main(s) upon request will have to be borne by the applicant; and the applicant shall submit all the relevant proposal to WSD for consideration and agreement before the works commence; and

(iii) if diversion is not required, the following conditions shall apply:

- existing water main(s) are affected and no development which requires resiting of water main(s) will be allowed;

- details of site formation works shall be submitted to WSD for approval prior to commencement of works;

- no structures shall be built or materials stored within 1.5 metres from the centre line(s) of water main(s). Free access shall be made available at all times for WSD's staff or their contractor to carry out construction, inspection, operation, maintenance and repair works;

- no trees or shrubs with penetrating roots may be planted within the Waterworks Reserve or in the vicinity of the water main(s). No change of existing site condition may be undertaken within the aforesaid area without the prior agreement of WSD. Rigid root barriers may be required if the clear distance between the proposed tree and the pipe is 2.5 metres or less, and the barrier must extend below the invert level of the pipe;

- no planting or obstruction of any kind except turfing shall be permitted within the space of 1.5 metres around the cover of any valve or within a distance of 1 metre from any hydrant outlet; and

- tree planting may be prohibited in the event that the WSD considers that there is any likelihood of damage being caused to water main(s).

(h) to note the comments of the Director of Fire Services (D of FS) that the Emergency Vehicular Access arrangement shall comply with the standard as stipulated in Code of Practice for Fire Safety in Buildings 2011 administrated by the Buildings Department. Detailed fire safety requirements will be formulated upon receipt of formal submission of general building plan. Also, the EVA provision of the nearby buildings shall not be affected by the proposed works. Shall the proposed work affect any licensed premises in the area, such as petrol filling station or dangerous goods store, the applicant should make separate enquiry to his department to ensure work feasibility.

(i) to note the comments of the Secretary for Education (S for Education) that:

(i) approval of Traffic Impact Assessment report for the whole development of Site C including access road connecting to the proposed school sites must be sought from TD. According to EDB's requirement, each classroom shall accommodate 40 students. Hence, the no. of student for two schools shall be 30-classroom x 40- student x 2-school = 2,400 people, while the no. of teach shall be around 120 for two schools;

(ii) the applicant shall review the road traffic noise and provision of necessary noise mitigation measures in the development. They shall not wait until the design of school projects being finalized. The case scenario (viz. the school building block located next to the roads) shall be considered;

(iii) based on the Drainage Impact Assessment (DIA) report the applicant shall review the capacity of stromwater drainage system for each school site as the drainage of Ma Kwu Lam Village may pass through the school sites to the access road as proposed in the development;

(iv) based on the DIA report, the applicant should review the capacity of stormwater drainage pipe for each school site and seek Architectural Services Department (ArchSD)'s acceptance in design stage;

(v) based on the Sewerage Impact Assessment (SIA) and Water Supply Impact Assessment (WSIA), the applicant shall review the SIA and WSIA with taking into account the estimated no. of population of schools; and

(vi) the applicant shall provide underground utility connection drawings for schools for ArchSD's information/ comments in design stage.

(j) to note the comments of the Director of Social Welfare (DSW) that:

(i) the premises for the agreed welfare facilities should be provided as an integral part of the development and will be assigned back as a Government Accommodation (GA) upon construction completion. The construction cost of this premises would be borne by SWD and the service operator would be selected by SWD;

(ii) the developer shall provide detailed design layout for DSW's further comments separately at a later stage;

(iii) upon satisfactory completion of works by the developer, the Government will reimburse the developer the actual cost of construction or the consideration sum as stipulated in the land lease, whichever is the lesser, according to the established practice; and

(iv) the applicant should take into account the parking and lay-by requirements of the welfare facilities. The relevant requirements are provided below:

- one parking space measuring (3m (W) x 8m (L) x minimum 3.3m headroom) for the exclusive use by the District Support Centre for Persons with Disabilities (DSC) for the parking of a 14-seater van with tail-lift;

- two parking spaces measuring (3m (W) x 8m (L) x minimum 3.3m headroom) for the exclusive use by the Residential Care Home for the Elderly (RCHE) cum Day Care Unit (DCU) for the parking of private light buses with tail-lift, any regulations made thereunder and any amending legislation, and belonging to the operator of the RCHE cum DCU and their bona fide guests, visitors or invitees;

- one parking space for a 48-seater coach (3.5 m (W) x 12m (L) x minimum 3.8m Headroom) should be provided for the exclusive use by the Special Child Care Centre (SCCC); and

- one lay-by measuring (3.5m (W) and 12.0m (L) x minimum 4.7m Headroom) for the exclusive use by the DSC, RCHE, and SCCC for the picking up and setting down of passengers from ambulances and private light buses;

(v) according to the "Technical Schedule (TS) of GA":

- the applicant is required to hand over the premises to SWD in bare shell condition (no gully trap within the room is required);

- 350mm deep structural sunken slab to allow future construction of recess drainage channel is required; and

- provision of plumbing and drainage connection for sanitary fittings to be installed by future operator; and

(vi) the design and construction of GA should comply with the lease including TS and in full compliance with the prevailing statutory requirements and regulation. Any site constraints/restriction that need to be resolved in order to achieve the compliance would be under the applicant's purview and decision.

(k) to note the comments of the Director of Electrical and Mechanical Services (DEMS):

(i) in the interests of public safety and ensuring the continuity of electricity supply, the parties concerned with planning, designing, organizing and supervising any activity near the underground cable or overhead line under the 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 Site. They should also 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;

(ii) there is a high pressure underground town gas transmission pipeline (running along Sai Sha Road) in the vicinity of the Sites A and C. The project proponent/ consultant/ works contractor shall liaise with the Hong Kong and China Gas Company Limited in respect of the exact locations of existing or planned gas pipes/ gas installations in the vicinity of the proposed development and any required minimum set back distance away from them during the design and construction stages of development; and

(iii) the project proponent/consultant/works contractor is required to observe the requirements of the Electrical and Mechanical Services Department's "Code of Practice on Avoiding Danger from Gas Pipes 2nd Edition" for reference.

(l) to note the comments of the Chief Building Surveyor/New Territories West, Buildings Department (CBS/NTW, BD) that:

(i) presumably the site abuts on a specified street of not less than 4.5m wide, and as such, the development intensity shall not exceed the permissible as stipulated under the First Schedule of the Building (Planning) Regulations (B(P)R). If the Site is not abutting on a specified street prescribed in B(P)R 18A, the development intensity shall be determined by the Building Authority under B(P)R 19(3) at building plan submission stage;

(ii) the applicant should appoint an Authorized Person/ Registered Structural Engineer/ Registered Geotechnical Engineer and submit the required plans to the Building Authority for approval in accordance with the BO. His position under the BO is hereby reserved;

(iii) regarding the proposed changes, fundamental issues of building plans listed in Appendix A of PNAP ADM-19 may be re-assessed completely; and

(iv) the sustainable building design requirements and prerequisites under PNAP APP-151 & 152 would be applicable to the proposed conversion if GFA concessions are claimed for any green/amenity features and/or non-mandatory/non-essential plant rooms.

(m) to note the comments of the Director of Leisure and Cultural Services (DLCS) that:

(i) as the open space will mainly serve residents of the proposed development, it will be desirable that the applicant shall consider taking over the future management of the open space;

(ii) the grantee should engage an authorized person such as licensed architects or registered golf facilities designers to certify that the proposed golf facilities are safe;

(iii) the grantee should erect and maintain safety measures such as fences and safety nets especially near but not limited to the residential area to a standard acceptable to its insurer; the grantee should maintain a valid insurance policy to cover indemnity against action resulting from damage or injury caused by golf balls;

(iv) a proper maintenance plan of the golf facilities including golf net is required. The management of the proposed driving range should enforce the plan strictly in order to ensure the effectiveness of the safety measures of the driving range including the golf net;

(v) sufficient space of each driving bay is required in order to prevent player of the bay from hitting users nearby; and

(vi) the grantee should require users to observe the safety rules at the driving range including driving in the bay area only; driving on the driving mat only; no standing in front of the tee line; and no retrieving topped ball or dropped clubs without prior consent from the management of the driving range.