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By Hand and Email (tpbpd@pland.gov.hk)
15 May 2026

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

Your ref TPB/Y/SK-HC/8
Our ref 295143/00/WSTY/WLL/TYAL/NC/05785

Dear Sir/Madam,

Application for Amendment of Plan Under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" and Area shown as 'Road' to "Residential (Group C)5" for Proposed Residential Development at Various Lots in D.D. 210 and Adjoining Government Land, Pak Wai, Sai Kung (Planning Application No. Y/SK-HC/8)

Submission of Further Information – Responses to Departmental Comments

We refer to the comments received from various Government departments from 12 February 2026 to 10 March 2026 on the captioned Planning Application.

We are pleased to submit herewith a Responses-to-Comments Table (**Appendix A**) together with the Revised Indicative Architectural Drawings (**Appendix B**), Revised Geotechnical Planning Review Report (**Appendix C**), Revised Landscape Master Plan with Tree Survey Report (**Appendix D**) and Revised Traffic Impact Assessment (**Appendix E**) for your consideration.

Since the Indicative Architectural Drawings have been amended, we hereby also submit the Revised Supporting Planning Statement (**Appendix F**), Revised Drainage Impact Assessment (**Appendix G**), Revised Sewage Treatment and Disposal Proposal Report (**Appendix H**) and Revised Environmental Assessment (**Appendix I**) for your consideration.

Please note that the refinements to Indicative Architectural Drawings only involve the location of the proposed clubhouse and swimming pool to minimise the possible impacts on the landscape character of the Application Site. The refinements to the Indicative Architectural Drawings would not result in any changes in site area, proposed zoning, uses and development restrictions, including plot ratio and building height, under the Planning Application, nor the findings of technical assessments.

We sincerely seek favourable consideration from the Town Planning Board to agree to the captioned s.12A Application.

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Should you have any queries, please contact the undersigned or our Ms. Natalie CHAN at [redacted]

Yours faithfully,

Wai-lam LEE
Director of Planning

d [redacted]
e

Enc - 4 Copies of **Appendices A to I**
cc - Sai Kung & Island District Planning Office – Ms. KONG Sze Nga, Tammy [redacted]
- Sai Kung & Island District Planning Office – Mr. YIP Ho Yeung, Jackin [redacted]
- Client

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Appendix A

Responses-to-Comments Table

Application No. Y/SK-HC/8 - to Rezone the Application Site from "GB" and Area shown as 'Road' to "R(C)5" at Pak Wai, Ho Chung, Sai Kung

Responses to Comments – Departmental Comments

Comments from Related Departments Page No.

COMMENTS FROM RELATED DEPARTMENTS 2
1. Civil Engineering and Development Department, Geotechnical Engineering Office, dated 10 March 2026 . 2
2. Planning Department, District Planning Branch, Special Duties Division, Urban Design & Landscape Section, Landscape Unite dated 13 February 2026 3
3. Transport Department, NT Regional Office, Traffic Engineering (NTE) Division, Housing & Planning Section, dated 09 March 2026 5

COMMENTS FROM RELATED DEPARTMENTS

No.	Comments	Responses
1.	**Civil Engineering and Development Department, Geotechnical Engineering Office, dated 10 March 2026** Please also find the comments from Geotechnical Engineering Office on Geotechnical Planning Review Report (GPRR) in FI(5) below for your follow-up action. Contact Person: Ms. Y H LAM; Tel: 2762 5389	
	1. It is noted that the AOR measured in the screening provided in the this GPRR is based on measurement from the proposed critical structures. Please note that the screening and extent of NTHS will need to be reviewed and updated if there are changes to the development layout.	Noted.
	2. Specific comments on GPRR are given below:	
	a. List 3, 4 & 8 in Section 2.2 – Features nos 7SE-D/C153 & 7SE-D/C154 are located within OH(A2) and OH(A3), while feature no. 7SE-D/C155 is not located within CD(2). Please update lists 3, 4 & 8 accordingly.	Noted. Please refer to the revised **Section 2.2**.
	b. Table in Section 6.3.4 – "OH(A1) (Section B-B)" should read "OH(A2) (Section B-B)"	Noted. Please refer to the revised **Section 6.3.4**.
	c. Table in Section 6.3.4 – Please advise whether OH(A4), CD(1), CD(2) are located within 50m of any ground sloping at > 15° in the table.	Noted. Please refer to the revised **Section 6.3.4**.
	d. Table in Section 6.3.4 – Please advise the facility group of the clubhouse, which is a covered structure intended for use by all residents of development.	The clubhouse with swimming pool is relocated to the south-west area of the Site, which is included in catchment study area OH(A2) and the area is designated to farming area which is Group 4 in the facility grouping system. Please refer to the revised **Section 6.3.4**.
	e. Table in Section 6.3.4 – Please note that OH(A4) meets the alert criteria as shown in the table, which is inconsistent with Figure 13.	Ditto. Please note that the Table in Section 6.3.4 is revised to align with Figure 13. Please refer to the revised **Section 6.3.4**.

Responses to Comments – Departmental Comments

No.	Comments	Responses
	f. Table in Section 6.3.4 – Figure 10 (Section F-F) shows that a locally steep angular elevation of 25°,while the table lists 23°.	Noted. Please refer to the revised **Section 6.3.4**.
	g. Section 6.3.5 – Heading "OH(B3)" should read "OH(B2)".	Noted. Please refer to the revised **Section 6.3.5**.
2.	**Planning Department, District Planning Branch, Special Duties Division, Urban Design & Landscape Section, Landscape Unite dated 13 February 2026** Please also find the comments from Urban Design & Landscape Section, Planning Department (Landscape Unit) below for your follow-up action. Contact person: Mr. HO Chi Kong, George; Tel: 3565 3952 (a) we have reservation on the application from landscape planning perspective.	
	(i) with reference to the aerial photo taken in 2024, the Site is situated in area of miscellaneous rural fringe landscape characterised by dense vegetation to the west, east and north and a residential development to the south;	Noted.
	(ii) based on DPO's site photos taken on 4.2.2026, tree clusters are mainly found in the northern and eastern parts, and some temporary structures are found in the southern part of the Site; and	Noted.
	(iii) as most of Site is covered with tree clusters, which forms an integral part of "Green Belt" ("GB") zone, the proposed rezoning for residential development would have adverse impact on the existing landscape character.	In general, the majority of tree species within the Application Site are commonly found in Hong Kong, and no rare or endangered species have been identified. For the tree clusters along the western site boundary, the species are common in Hong Kong, and undesired species such as Leucaena leucocephala have been observed. Based on the tree survey / photographic record, neither of those are in outstanding form, culturally significant or ecologically important.

No.	Comments	Responses
		That said, in view of the concern, the Applicant has actively explored ways to minimise the possible impacts on the landscape character. In the northern part of the Application Site, in order to retain more existing trees, the MLP has been revised by relocating the clubhouse and swimming pool to the western part, so that 17 more nos. of trees can be retained. The number of trees to be felled is hence reduced from 103 to 85. Besides the additional 17 trees to be retained, one existing tree (T251) is proposed to be transplanted. Meanwhile, in addition to the 85 compensatory trees (based on a 1:1 tree compensation ratio), 15 more new trees would be planted, totaling 100 new trees. As a result, the overall tree quantity has been maintained, and the long-term landscape quality of the Application Site has been enhanced. As the overall design, landscape planting areas are proposed along the site boundaries to provide greening and visual buffering. This design allows better integration with the surrounding environment, including the interface with the remaining "GB" zone and adjacent residential developments. In view of the above, it is considered that the proposed development, with appropriate compensatory planting and landscape design measures as proposed in the Revised Tree Preservation Proposal and demonstrated in the Revised Landscape Master Plan, would not cause significant adverse impact on the existing landscape character.
	(b) our comments on the Supporting Planning Statement are as follows: (i) it is noted in Para. 4.5.3 of Appendix A that "no old valuable, rare or endangered species have been found". However, from the submitted Tree Survey Report, T59 (a tree of particular interest with DBH larger than 1000mm) and T251 (a mature tree with DBH larger than	Noted. Please note that based on the latest updated layout plan, T59 will be preserved in situ and T251 will be transplanted.

No.	Comments	Responses
	750mm), both with fair amenity value, form, health condition and structural condition are proposed to be felled without strong justification; and (ii) the quantity of proposed new tree planting "TM" (9 nos.) shown in the Table does not tally with the quantity (10 nos.) as indicated in the Compensatory Planting Plan.	Noted. Please refer to the revised Dwg OP-01. Based on the latest Compensatory Planting Plan, a total of 11 nos. of "TM" would be proposed.
3.	**Transport Department, NT Regional Office, Traffic Engineering (NTE) Division, Housing & Planning Section, dated 09 March 2026** Please find the comments from TD on FI(5) below for your follow-up action. Contact Person: Mr. KWONG Siu-ming, Kelvin; Tel: 2399 2402: *Comments from Transport Operations (NT) Division:* 1. Noted that no left behind was recorded during the survey periods. Please also add a Note (2) at Table 3.4 and Table 3.5 to record this.	Noted. Please refer to the revised **Table 3.4** and **Table 3.5**.

(Last updated 23 April 2026)

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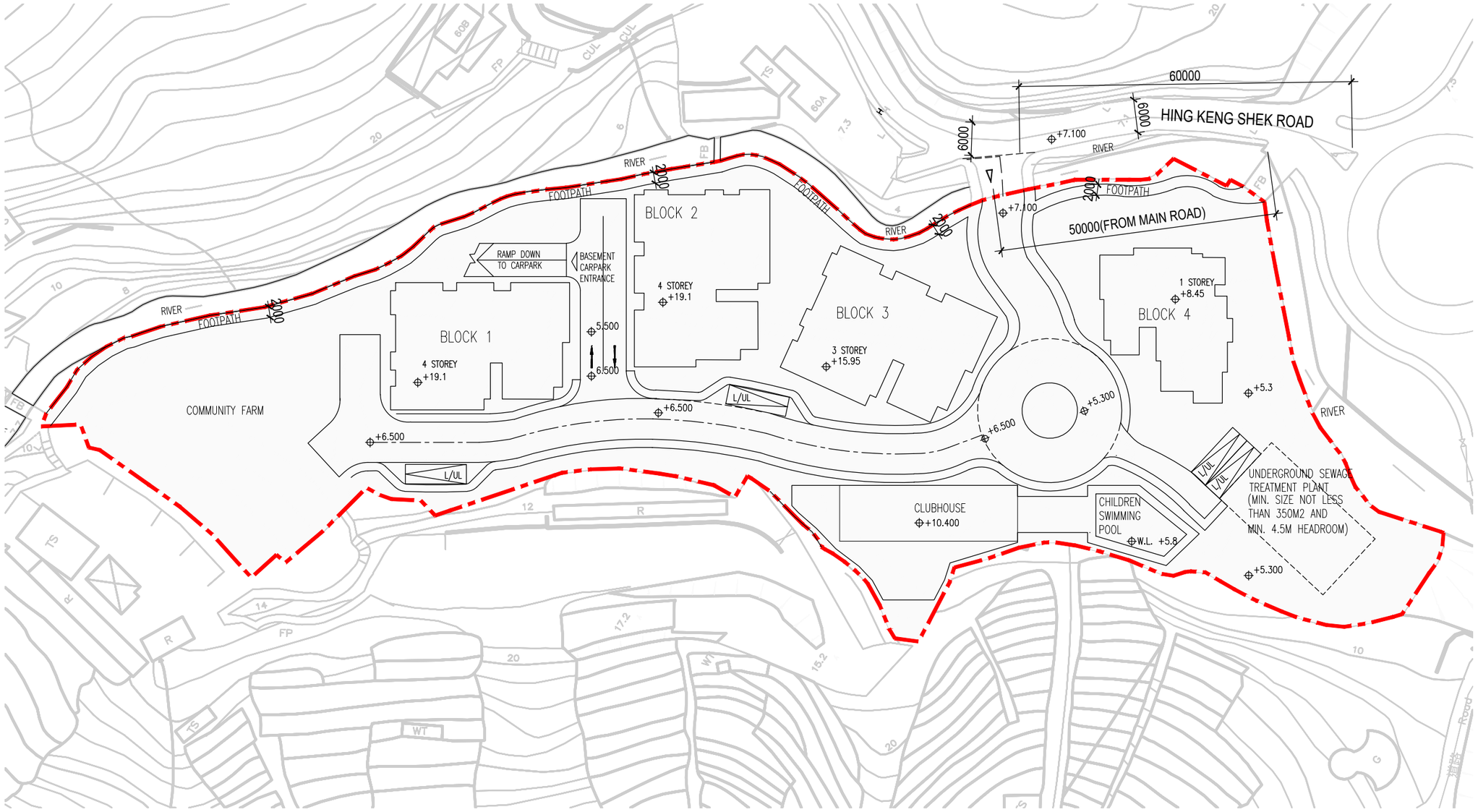
Appendix B

Revised Indicative Architectural Drawings



Rev.	Date	Amendment	Purpose

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Client

Project
APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A OF THEE TOWN PLANNING ORDINANCE (CAP.131) TO REZONE THEE APPLICATION SITE FORM "GREEN" BELT AND AREA SHOWN AS "ROAD" TO " RESIDENTIAL (GROUP C) 5" FOR PROPOSEED RESIDENTIAL DEVELOPMENT AT VARIOUS LOTS IN D.D.210 AND ADJOINING GOVERNMENT LAND, PAK WAI, SAI KUNG

Drawing Title
MASTER LAYOUT PLAN

Job No.	Drawing No.	Revision No.
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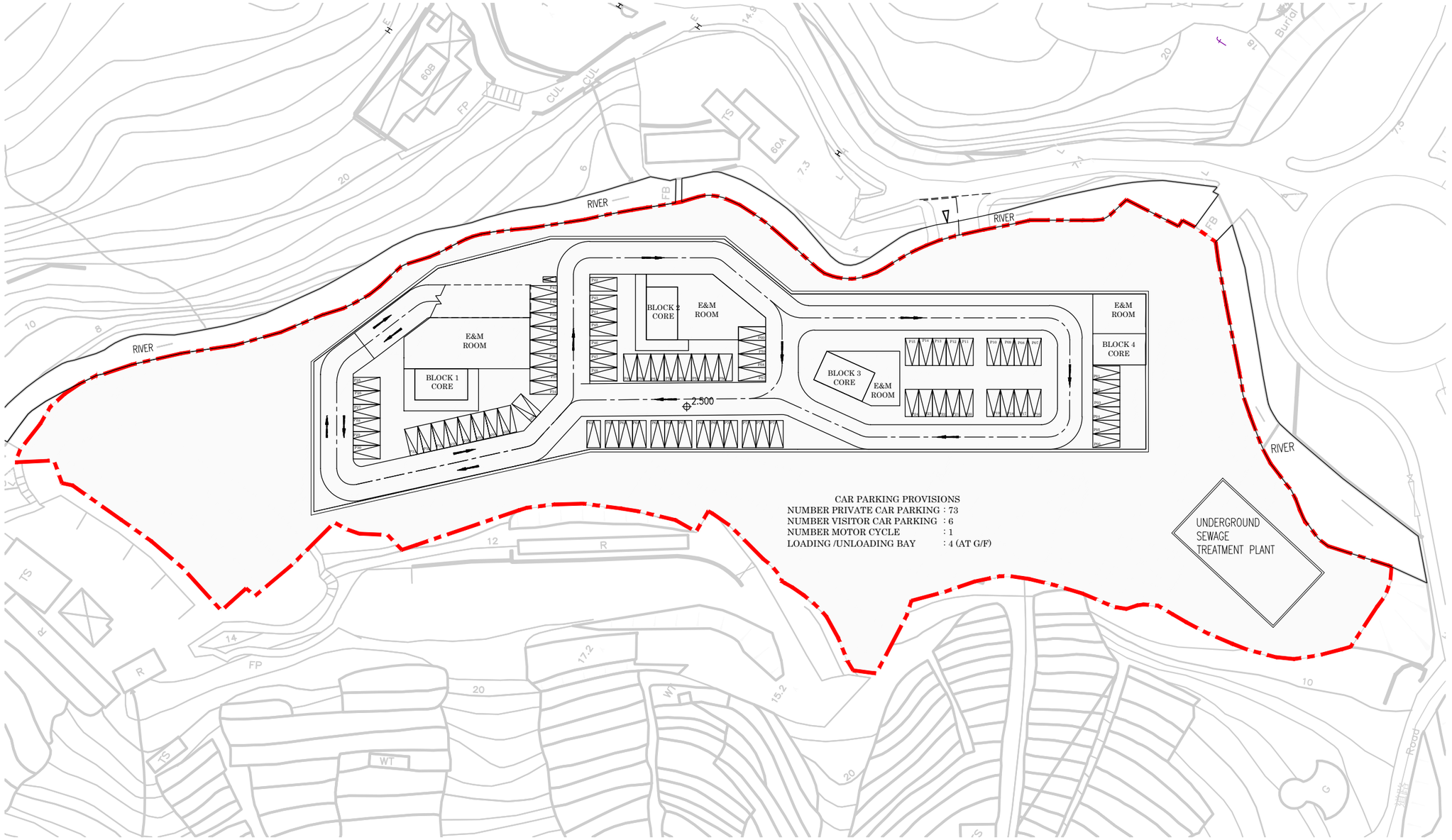
Scale	Date	CAD Ref.
1:800	09/06/2025	
Drawn	Checked	Approved
SF	SF	



CAR PARKING PROVISIONS
NUMBER PRIVATE CAR PARKING : 73
NUMBER VISITOR CAR PARKING : 6
NUMBER MOTOR CYCLE : 1
LOADING /UNLOADING BAY : 4 (AT G/F)

Rev.	Date	Amendment	Purpose

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Drawing Title
BASEMENT PLAN

Job No.	Drawing No.	Revision No.
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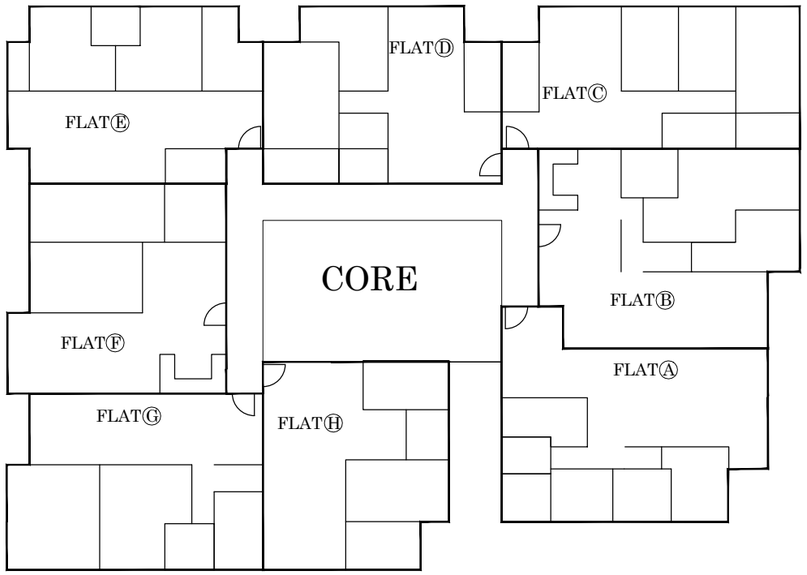
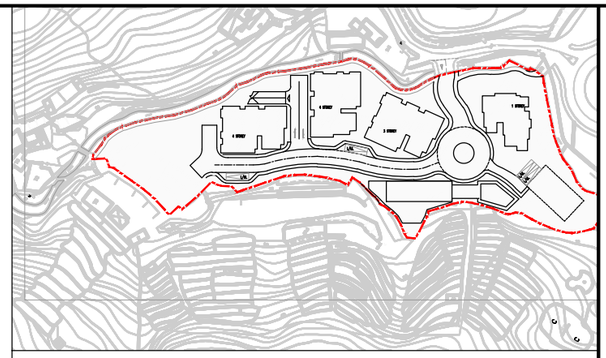
Drawn	**Checked**	**Approved**
PC	PC	



BLOCK 1

Average unit size: 76 sq.m



KEY PLAN 1 : 3000

BLOCK 1

FLOOR	NO. OF UNIT
G/F	8
1/F	8
2/F	8
3/F	8
R/F	
TOTAL	32

BLOCK 2

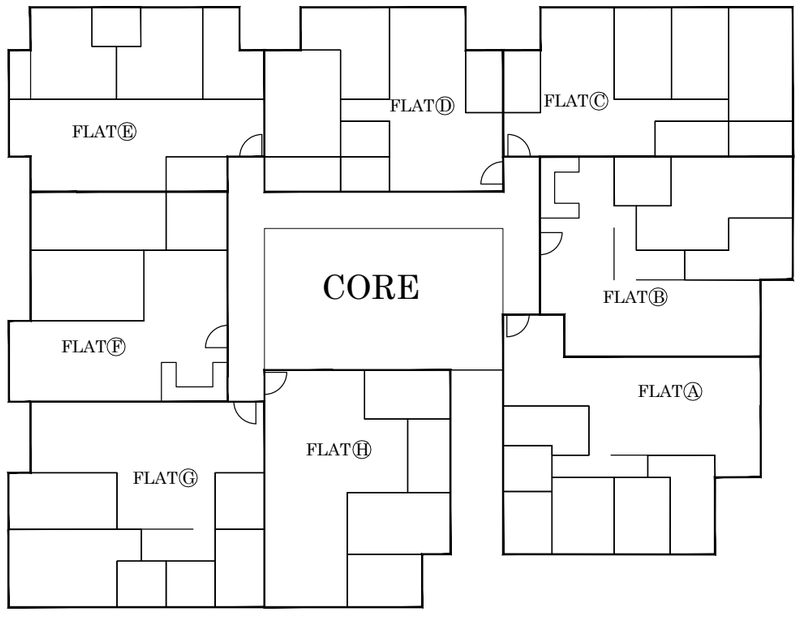
FLOOR	NO. OF UNIT
G/F	8
1/F	8
2/F	8
3/F	8
R/F	
TOTAL	32

BLOCK 3

FLOOR	NO. OF UNIT
G/F	8
1/F	8
2/F	8
R/F	
TOTAL	24

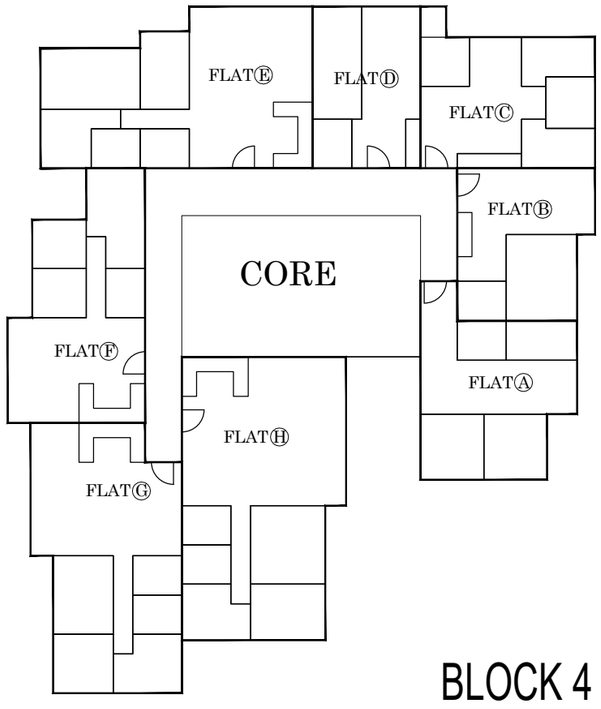
BLOCK 4

FLOOR	NO. OF UNIT
G/F	8
TOTAL	8



BLOCK 2,3

Average unit size: 83.48 sq.m



BLOCK 4

Average unit size: 63.5 sq.m

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Drawing Title
TPYICAL LAYOUT PLAN

Job No.	Drawing No.	Revision No.
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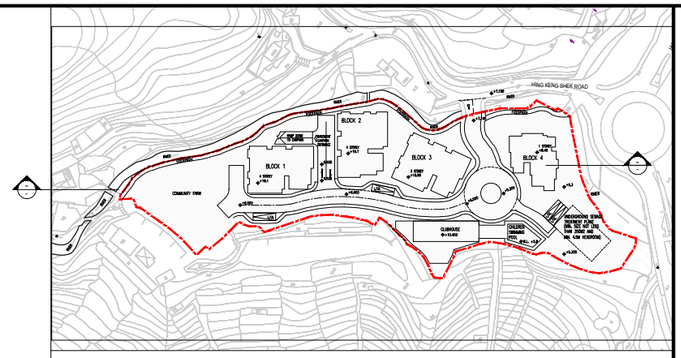
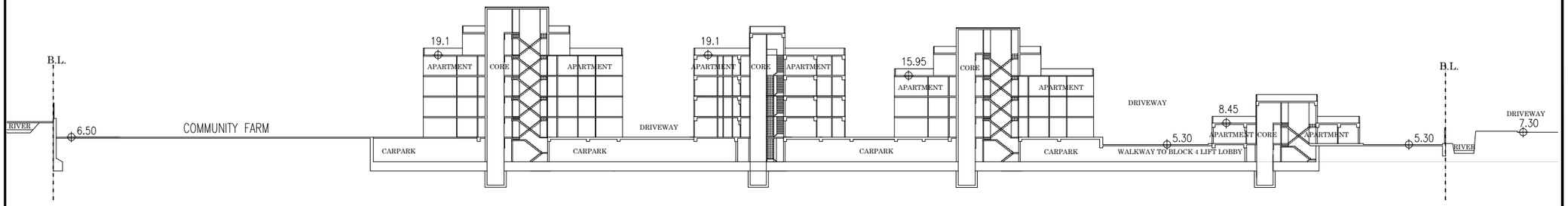
Scale	Date	CAD Ref.
1:300	09/06/2025	
Drawn	Checked	Approved
SF	SF	



KEY PLAN 1 : 3000



DIAGRAMATIC SECTION

Rev.	Date	Amendment	Purpose
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Drawing Title
DIAGRAMATIC SECTION

Job No.	Drawing No.	Revision No.
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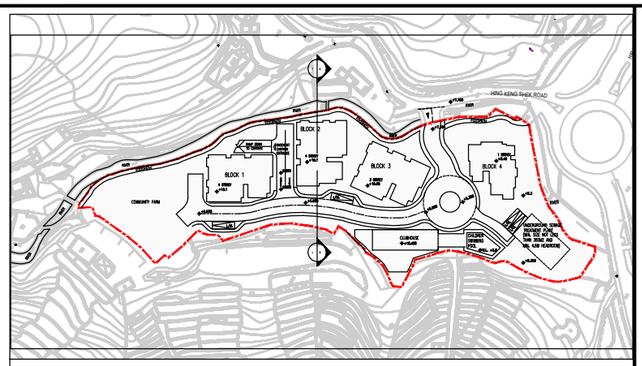
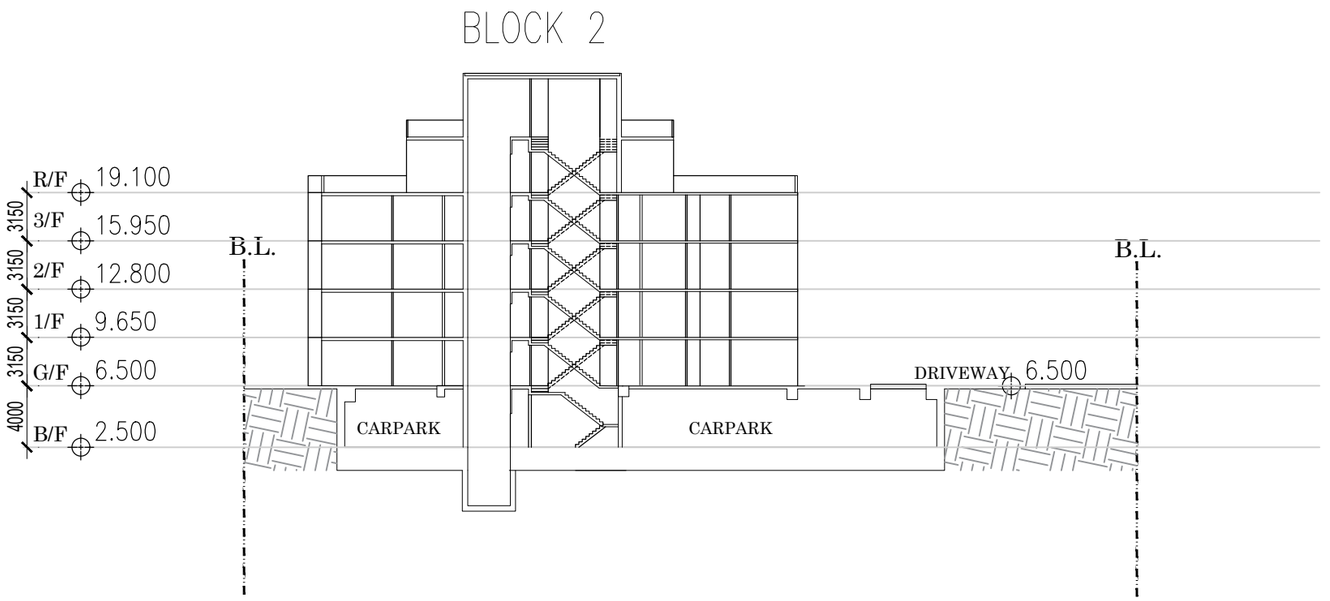
Drawn	Checked	Approved
PC	PC	



KEY PLAN 1 : 3000



DIAGRAMATIC SECTION

0 4 8 12 16 20 m 24 m 28 m 32 m

SCALE BAR

Rev.	Date	Amendment	Purpose
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Drawing Title
DIAGRAMATIC SECTION

Job No.	Drawing No.	Revision No.
D1186	FL-05	L
Scale	Date	CAD Ref.
1:800	30/05/2024	
Drawn	Checked	Approved
PC	PC	

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Appendix C

Revised Geotechnical Planning Review Report

GEOTECHNICAL PLANNING REVIEW REPORT (GPRR)

FOR

APPLICATION FOR AMENDMENT OF PLAN

UNDER SECTION 12A OF THE TOWN PLANNING ORDINANCE (Cap.131)

TO REZONE THE APPLICATION SITE

FROM "GREEN BELT" AND AREA SHOWN AS "ROAD"

TO "RESIDENTIAL (GROUP C) 5"

FOR

PROPOSED RESIDENTIAL DEVELOPMENT AT

VARIOUS LOTS IN D.D. 210 AND ADJOINING GOVERNMENT LAND

PAK WAI, SAI KUNG

CONTENTS

1. Introduction

2. Site Location and Description

2.1 Site Location

2.2 Existing Features

3. The Proposed Development

4. Existing Information

4.1 Ground Investigation Information

4.2 Layout of Existing Utilities

4.3 Layout of Existing Building Structure

5. Ground Conditions

5.1 Topography

5.2 Geology

5.3 Groundwater Condition

6. Proposed Works

6.1 Proposed Ground Investigation Works

6.2 Proposed Works on Existing Features

6.3 Proposed Works on Natural Terrain

6.4 Proposed Foundation Works

6.5 Proposed Site Formation, Excavation and Lateral Support Works

6.6 Construction Method & Sequence

7. Impacts on Adjacent Premises/Geotechnical Features

8. Conclusion

LIST OF FIGURES

Figure 1	Site Location Plan
Figure 2	Master Layout Plan
Figure 3	Diagramatic Section
Figure 4	Layout plan for Hillside Catchments
Figure 5	Section A-A
Figure 6	Section B-B
Figure 7	Section C-C
Figure 8	Section D-D
Figure 9	Section E-E
Figure 10	Section F-F
Figure 11	Section G-G
Figure 12	Section H-H
Figure 13	Demarcation Plan for Proposed NTHS Study Area

APPENDICES

Appendix A	Information of Existing Slopes/Retaining Walls
Appendix B	Existing Boreholes Information
Appendix C	ENTLI and HLC from GInfo
Appendix D	Geology Map from GInfo
Appendix E	Summary of API

1. INTRODUCTION

This report presents the geotechnical planning review for the proposed development based on the available ground information in supplementary to the master layout plans.

The development involved the construction of four blocks of 1 to 4 storey residential building with carparking podium.

The geotechnical review is prepared under the supervision of Registered Geotechnical Engineer, Wong Wai Yi 0151939, in accordance with the requirement set out in PNAP-APP25 (PNAP 78). This report contains the following as listed.

- Impact and proposed investigation to the adjoining premises
- Conclusion and recommendation

2. SITE LOCATION AND DESCRIPTION

2.1 Site Location

The captioned site locates in a valley opposing Pak Wai in Sai Kung, The total area of the site is about 12,692m^2. The elevation of the site is about +4.5 – 7.5mPD. A site location plan is attached in Figure 1.

2.2 Existing Features

According to the Slope Information System, features related to the Site are listed as follow:

1) Features within the Site:

Feature No.	Type	Location	Responsibility	Height	Angle	Length
*7SE-D/C 154	Slope	West	DD210 Lot31 Lands D	4.0 m	40	35 m
*7SE-D/F 46	Slope	West	Lands D	5.0 m	40	35 m
7SE-D/FR 70	(Obsolete feature)					

* Refer to Section 6.2.

2) Features within the scope of 10m from site boundary

Feature No.	Type	Location	Responsibility	Height	Angle	Length
7SE-D/C 153	Slope	West	Lands D	3.5 m	60	75 m
7SE-D/R 54	Wall	East	Lands D	4.4 m	85	30 m
7SE-D/C 171	Slope	East	Lands D	7.1 m	33	52 m

3) Feature attached in the Catchment OH(A2):

Feature No.	Type	Location	Responsibility	Height	Angle	Length
7SE-D/C 163	Slope	West	Lands D	9.0 m	45	45 m
7SE-D/C 153	Slope	West	Lands D	3.5 m	60	75 m

4) Feature attached in the Catchment OH(A3):

Feature No.	Type	Location	Responsibility	Height	Angle	Length
7SE-D/C 163	Slope	West	Lands D	9.0 m	45	45 m
7SE-D/C 154	Slope	West	DD210 Lot31 Lands D	4.0 m	40	35 m

5) Feature attached in the Catchment OH(A4):

Feature No.	Type	Location	Responsibility	Height	Angle	Length
7SE-D/C 370	Slope	West	DD210 Lot 11 Lands D	3.8 m	40	16 m

6) Feature attached in the Catchment OH(B1):

Feature No.	Type	Location	Responsibility	Height	Angle	Length
7SE-D/C 157	Slope	East	Lands D	6.0 m	70	125 m
7SE-D/C 159	Slope	East	Lands D	6.0 m	60	28 m

7) Feature attached in the Catchment OH(B2):

Feature No.	Type	Location	Responsibility	Height	Angle	Length
7SE-D/C 152	Slope	East	Lands D	15.0 m	65	50 m
7SE-D/C 164	Slope	East	Lands D	6.0 m	55	31 m
7SE-D/C 155	Slope	East	Lands D	6.8 m	70	35 m

8) Feature attached in the Catchment CD(2):

Feature No.	Type	Location	Responsibility	Height	Angle	Length
7SE-D/C 152	Slope	East	Lands D	15.0 m	65	50 m
7SE-D/C 164	Slope	East	Lands D	6.0 m	55	31 m

Location plan & basic information of the features are attached in **Appendix A**. The available information indicates that the slope shall be in good condition.
A natural terrain is located at the east, west and north of the site.

3. THE PROPOSED DEVELOPMENT

The development involved the construction of residential development of four blocks of 1 to 4 storey residential building with one-level basement carpark. The schematic master layout plan and diagramatic section of the proposed new building are given in Figure 2 and Figure 3.

4. EXISTING INFORMATION

4.1 Ground Investigation Information

Two boreholes carried out by Enpack (HK) Ltd. In 2001 BH8 and BH9 were found within the site, information is given in Appendix B.

4.2 Layout of Existing Utilities

Enquiries shall be made to various utility companies for the layout of existing utilities adjacent to the site. A waterpipe laid along the existing footpath to be diverted before the site formation work.

4.3 Layout of Existing Building Structure

There is one temporary structure of concrete building in the lot and this will be demolished during the development abandoned.

5. GROUND CONDITIONS

5.1 Topography

The elevation of site is about +4.5 – 7.5mPD. The site can be accessed via Access road from Hiram's Highway. The total area of the site is about 12,692m^2.

5.2 Geology

From the two boreholes information, the site would be covered by a layer of fill/ alluvium/ residual soil of 2m to 6m thick. Underneath the fill/ alluvium/ residual soil there would be a layer of grade V to IV TUFF. Grade III or better grade of Tuff be found at a depth of 3m to 6m below existing ground level.

Soil Properties

FILL
Fill generally consists of light brown, sandy silt.

ALLUVIUM
Alluvium generally consists of firm, greyish brown, silt or clayey sand, locally sandy or silty clay.

TUFF
Tuff was classified as weak to strong, light yellowish brown, highly to slightly decomposed, coarse ash crystal.

5.3 Groundwater Condition

Based on the available ground investigation information, highest water table may be at about 2m below existing ground level.

6. PROPOSED WORKS

6.1 Proposed Ground Investigation Works

The proposed Ground Investigation works for the site area at D.D.210, Sai Kung for the proposed development will include drilling of 7 vertical drillholes with installation of 3 standpipe / piezometer inside the site. Sampling of soil/rock material and testing will be proposed to determine the soil/rock properties.

6.2 Proposed Works on Existing Features

There are 2 existing features within the site and 4 outside site boundary but close to the site.

The stability of existing features within or close to the site (including any unregistered features) to be affected or being affected by the development during site formation works shall be assessed. Monitoring works shall be carried out during the whole construction period. Remedial or upgrading works shall be proposed and carried out if found necessary.

6.3 Proposed Works on Natural Terrain

6.3.1 Description of the Catchment Area

Based on available topographic maps No. 7SE-25A, 7SE-25B, 7SE-25C and 7SE-25D of Hong Kong from the Survey & Mapping Office (SMO) of the Lands Department, the hillside catchment of proposed Redevelopment understudy are described below, and presented as Figure 4, with relevant cross-sections of the catchment presented as Figure 5 to 13.

The Study Area can be sub-divided into 5 major catchments i.e.

(a) Catchment OH(A1), OH(A2), OH(A3) & OH(A4) – They are piece of abandoned cultivated land at toe and undisturbed natural openhill terrain at crest. The majority portion of these areas is characterized by moderately gentle terrains i.e. 20° to 33° .

(b) Catchment OH(B1) – Undisturbed natural openhill terrain. On the NE flank of the hillside, the contour run from +65.5 mPD highest at the burial urns. The majority portion of this catchment is characterized by gentle terrains i.e. 17°＜20°.

(c) Catchment OH(B2) – Undisturbed natural openhill terrain. On

the NE flank of the hillside, the contour run from +40 mPD highest to +16mPD inclined gently at 17° < 20° followed by an incise inclined river embankment. This catchment is separated from the subject site by a river 6m wide.

(d) Catchment CD(1) – the contour within this catchment contain channelized catchment pronounced with a definite flow path running downhill north easterly. The identified runoff angle in this depression zone is gentle i.e. 16° to 20° .

(e) Catchment CD(2) –the contour within this catchment contain channelized catchment pronounced with a definite flow path running downhill southerly. The identified runoff angle in this depression zone is gentle i.e. 10° < 20°

6.3.2 Published Geology

Available geological information for the Catchment Areas have been reviewed. Based on Glnfo Geological May & Solid Geology, the catchment are underlain by course ash crystal TUFF, with overlying colluvium. Part plan of geological mapsheets are attached in Appendix D.

6.3.3 Landslide Inventories

According to the ENTL1 dataset (Appendix C refers), there are three historic relict landside first identified in 1963. These are 07SED0074E, 07SED0075E & 07SED0076E. These locations are marked on Aerial photos 1963 attached in Appendix E, also marked on Figure 4. In which two of them lies totally outside the Catchment Zone. Only 07SED0075E is of relevant to this study, and is further discussed in 6.3.5.

6.3.4 Summary of Catchment Study Areas

Referring to 2.3.4 Alert Criteria Fig 2.5 in GEO Report 138, the summary of Catchment Study Areas as follow:

Catchment Study Area	Angular Elevation of natural terrain from the site	Angular Elevation ≥ 20°	Within 50m of ground slope at > 15°	Alert Criteria met?	Remark
OH(A1) (Section H-H)	19.7°	No	Yes	No	-
OH(A2) (Section B-B)	27°	Yes	Yes	Yes	The clubhouse with swimming pool is relocated to the south-west area of the Site, which is included in this catchment study area.
OH(A3) (Section A-A)	26°	Yes	Yes	Yes	-
OH(A4) (Section D-D)	N/A	N/A	Yes	N/A	The area is designated as farming area, which is Group 4 in the facility grouping system.
CD(1) (Section C-C)	N/A	N/A	Yes	N/A	
CD(2) (Section G-G)	N/A	N/A	Yes	N/A	
OH(B1) (Section F-F)	25°	Yes	Yes	No	A) The existing river at toe will be the buffer zone of facility; B) The height of natural terrain (~16.7m) is relatively low; C) No recent ENTLI records and reported landslide incidents within and in the immediate vicinity of the hillside catchment is found.
OH(B2) (Section E-E)	31°	Yes	Yes	No	A) The existing river at toe will be the buffer zone of facility; B) The height of natural terrain (~16.3m) is relatively low. C) No recent ENTLI records and reported landslide incidents within and in the immediate vicinity of the hillside catchment is found.

6.3.5 Initial Findings to Catchment OH(A2) and OH(A3) to be studied

As revealed from aerial photographs from 1963 to 2024. The catchment understudy has no pass landslide failure. These pre-historic events were identified. Two of these totally lied outside study catchment and direction of landslide is non-critical. Lies within Catchment OH(A2) and OH(A3). No debris flow path can be traced in 1963 aerial photo. Primarily Catchment CD(1) remained undisturbed.

In conclusion, Catchment OH(A2) and OH(A3) contain cultivated land which likely have been progressively abandoned from 1963 onwards. Therefore, this vast piece of farmland and its surrounding natural habitats have been gradually covered up fully by mature dense vegetation. A summary of API is attached in Appendix E.

6.3.6 Screening of Catchment in accordance with GEO Report 138

Refer to 6.3.4. It is proposed the hillside catchment OH(A2) Section B-B and OH(A3) Section A-A shall carry out further study. The extent of natural terrains affecting the Site to be studied is demarcated in Figure 13.

6.4 Proposed Foundation Works

The proposed development comprises four blocks of 1 to 4 storey residential building with one level of basement carpark. The available ground investigation information indicates that the rockhead level, defined as weathering grade III or better rock with total core recovery greater than 85%, or a firm stratum such as grade IV rock, may be encountered on average at a level about 3m to 6m below the existing ground. As the loading from the building is comparatively general, mini pile or pre-boring socket H-piles are considered to be feasible foundation options for the proposed building. In case the rock head level is shallow or the bearing capacity is checked to the adequate, footing foundation shall be an alternative. The proposed foundation scheme of the development shall have minimal effect or impact to the stability of all slopes (man-made & natural terrains), retaining walls and existing

building or structures within or in vicinity to the lot. Detailed foundation design will be submitted separately when the proposed ground investigation works are completed. Stability of all existing slopes (man-made & natural terrains) and retaining wall (including unregistered features) within or in vicinity to the lot affecting or being affected by the development during demolition & construction shall be assessed & remedial works shall be carried out if found necessary.

6.5 Proposed Site Formation, Excavation and Lateral Support Works

Since the proposed building platform is similar to existing ground level of the site, site formation works are considered to be minimal. For the construction of footing / pile cap, open excavation, sheet pile / pipe pile / soldier pile wall with walings and struts are considered to be feasible scheme to retain excavation depth. The choice of scheme of temporary support shall be subject to detail assessment. Stability of all existing slopes (man-made & natural terrains) and retaining walls (including unregistered features) within or in vicinity to the lot affecting or being affected by the development during demolition & construction shall be assessed & remedial works shall be carried out if found necessary. The detailed design of the works will be submitted separately.

6.6 Construction Method & Sequence

Monitoring points shall be installed & initial reading shall be recorded prior commencement of any works. Remedial works on existing slopes & retaining walls being affected shall be carried out prior commencement of site formation, ELS, foundation & superstructure. Pre-boring shall be carried out prior H-pile installation.

Obstruction during pipe pile installation for temporary ELS shall be overcome by pre-boring. Strut of the ELS shall not be dismantled until completion of the permanent screen wall support the level difference. All temporary cut slope and back filling shall be backfilled by proper material with proper compaction. Groundwater shall be controlled during the excavation. Excessive groundwater drawdown at the adjacent ground shall not be allowed.

7. IMPACTS ON ADJACENT PREMISES/GEOTECHNICAL FEATURES

As the existing registered retaining walls & slope is in close proximity to the captioned site, consideration shall be taken in the design of the proposed works. Also, vibration caused by the installation of the pipe piles / socket H-pile and the ground settlement caused by the wall deflection and dewatering in the excavated areas may cause adverse effects to the adjacent utilities and structures. Therefore, it is necessary to limit the amount of vibration and ground settlement by adoption suitable lateral support works design and construction method. Pre-boring shall be carried out prior installation of piling for foundation and ELS. In all case, stability of existing geotechnical features within or in vicinity to the lot affecting or being affected by the development shall be assessed & remedial works shall be carried out if found necessary.

Groundwater control during the excavation is also critical for the design. Excessive groundwater drawdown at the adjacent ground is not allowed because ground settlement will be induced and damage will be caused to the adjacent structures and utilities. Detail assessment and design will be included in the foundation, site formation and ELS submission.

In addition, in order to ensure the adjacent premises will not be damaged by the proposed works, settlement monitoring stations, titling check points and building settlement pins will be proposed to be installed around the site. The movement of the adjacent premises will be monitored at these stations continuously throughout the work period. The noise from proposed works shall be kept within acceptable limit to minimize the disturbance to the environment. The detailed assessment and discussion on these aspects will be presented in the separate submission for ELS works.

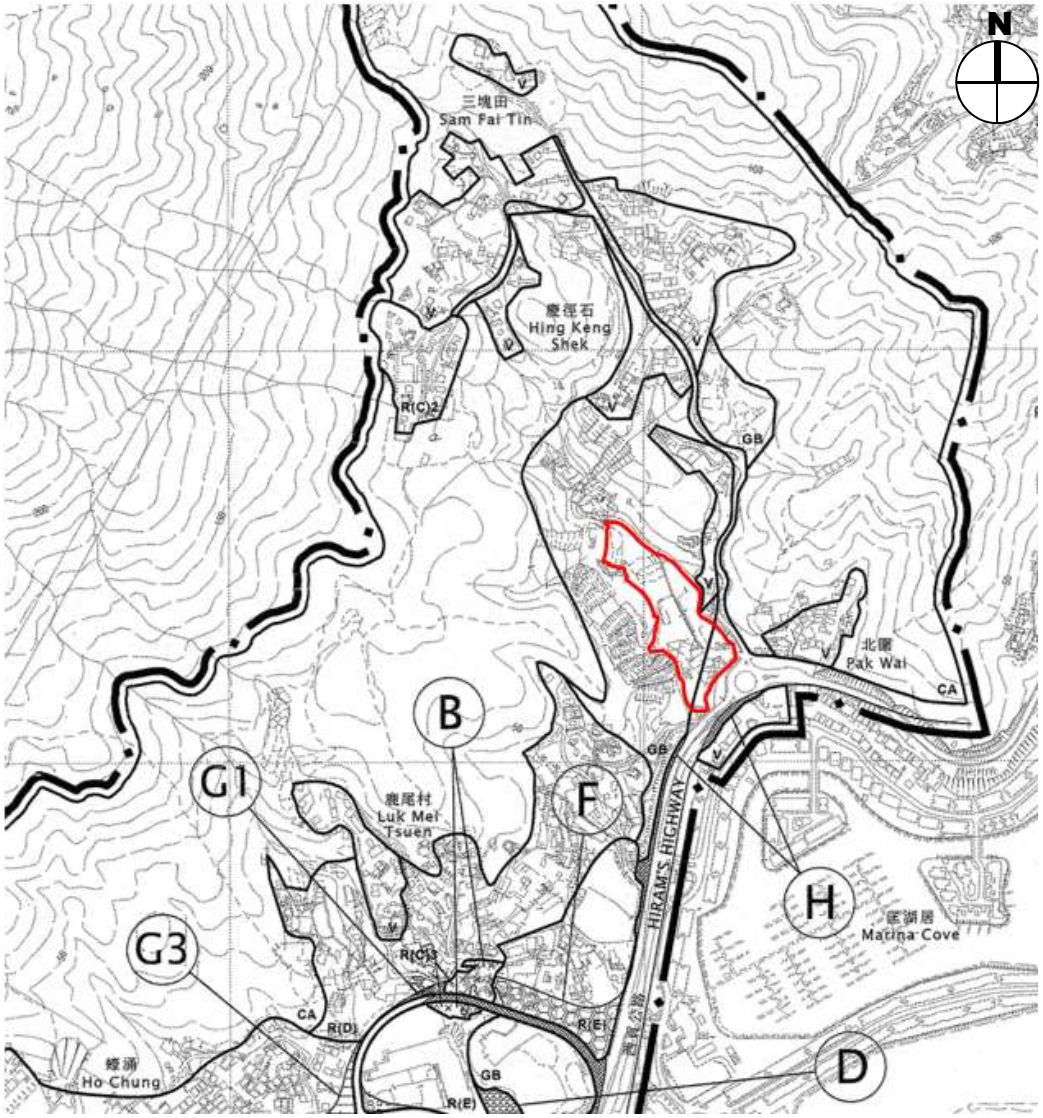
8. CONCLUSION

On the basis of the available geotechnical information, the following conclusions and recommendation are drawn:

- The proposed development as presented in the Master Layout Plan is considered as a geotechnical feasible scheme.

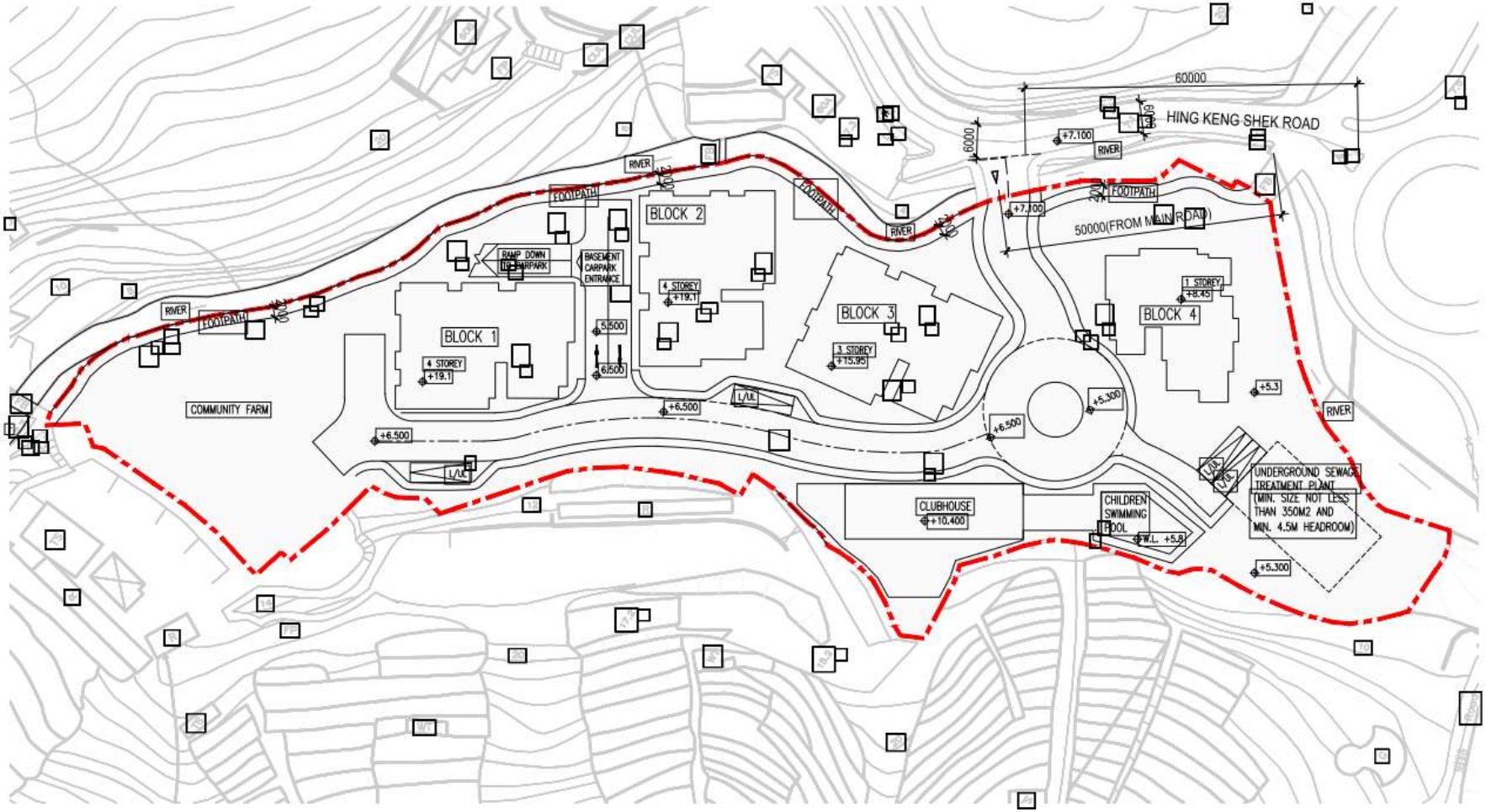
- Ground investigation works will be carried out within the proposed development site.
- Mini pile or socket H pile with pre-boring is considered to be feasible foundation options for the proposed development. Footing may be an alternative if the soil stratum at shallow level provides adequate bearing capacity.
- The site formation works for the proposed development shall be minimal.
- Suitable groundwater control scheme shall be considered in design to avoid excessive groundwater drawdown at the adjacent area.
- Proper excavation and lateral support works design and construction method have to be adopted to minimize the adverse effect on the existing utilities and structures. The detailed discussion will be presented the separate submission for excavation and lateral support works.
- Stability of all slopes (man-made & natural terrains) and retaining walls (including unregistered features) within or in vicinity to the lot affecting or being affected by the development during demolition & construction works shall be assessed & remedial works shall be carried out if found necessary.
- Stability of the natural terrain affecting or being affected by the development permanently or temporarily during demolition & construction works shall be assessed & monitored. Mitigation works shall be proposed and carried out as necessary.

It is noteworthy to note that the works / proposal mentioned in this report are preliminary only at the planning stage and will be subjected to detailed study in the detail design stage under separate cover. Based on the current assessment, the proposed development is considered geotechnical feasible.



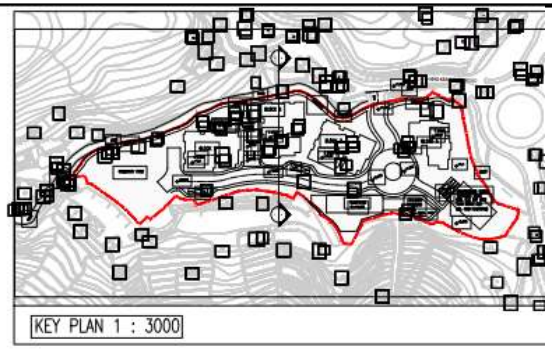
Site Location Plan
(Extracted from Draft Ho Chung Outline Zoning Plan No. S/SK-HC/12)

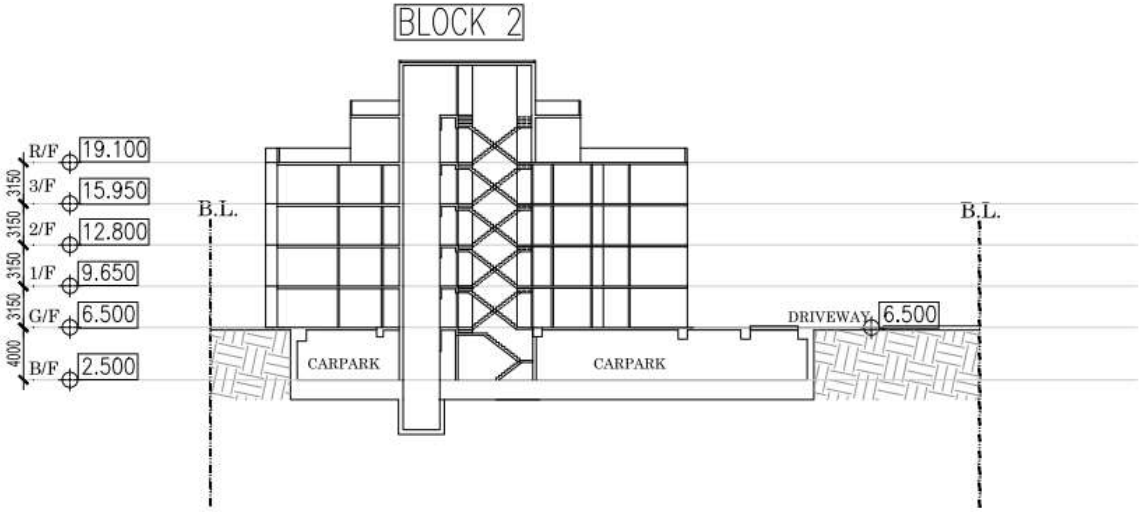
Figure 1



Master Layout Plan

Figure 2





DIAGRAMATIC SECTION

Diagramatic Section

Figure 3

LEGEND:

- LOT BOUNDARY
- REGISTERED SLOPE FEATURES
- (OH) OPEN HILL SIDE
- (TD) TOPOGRAPHY DEPRESSION
- (CD) CHANNELISED CATCHMENT
- A A — SECTIONS
- DH8 — EXISTING DRILLHOLES

OH (A1)

OH (A2)

OH (A3)

OH (A4)

OH (B1)

OH (B2)

CD (1)

CD (2)

7SE-D/C 159

7SE-D/C 163

7SE-D/F 45

7SE-D/C 154

7SE-D/C 153

7SE-D/C 171

7SE-D/CR 338

7SE-D/C 157

7SE-D/C 155

7SE-D/C 152

7SE-D/C 164

7SE-D/C 370

07SED0074E

07SED0075E

07SED0076E

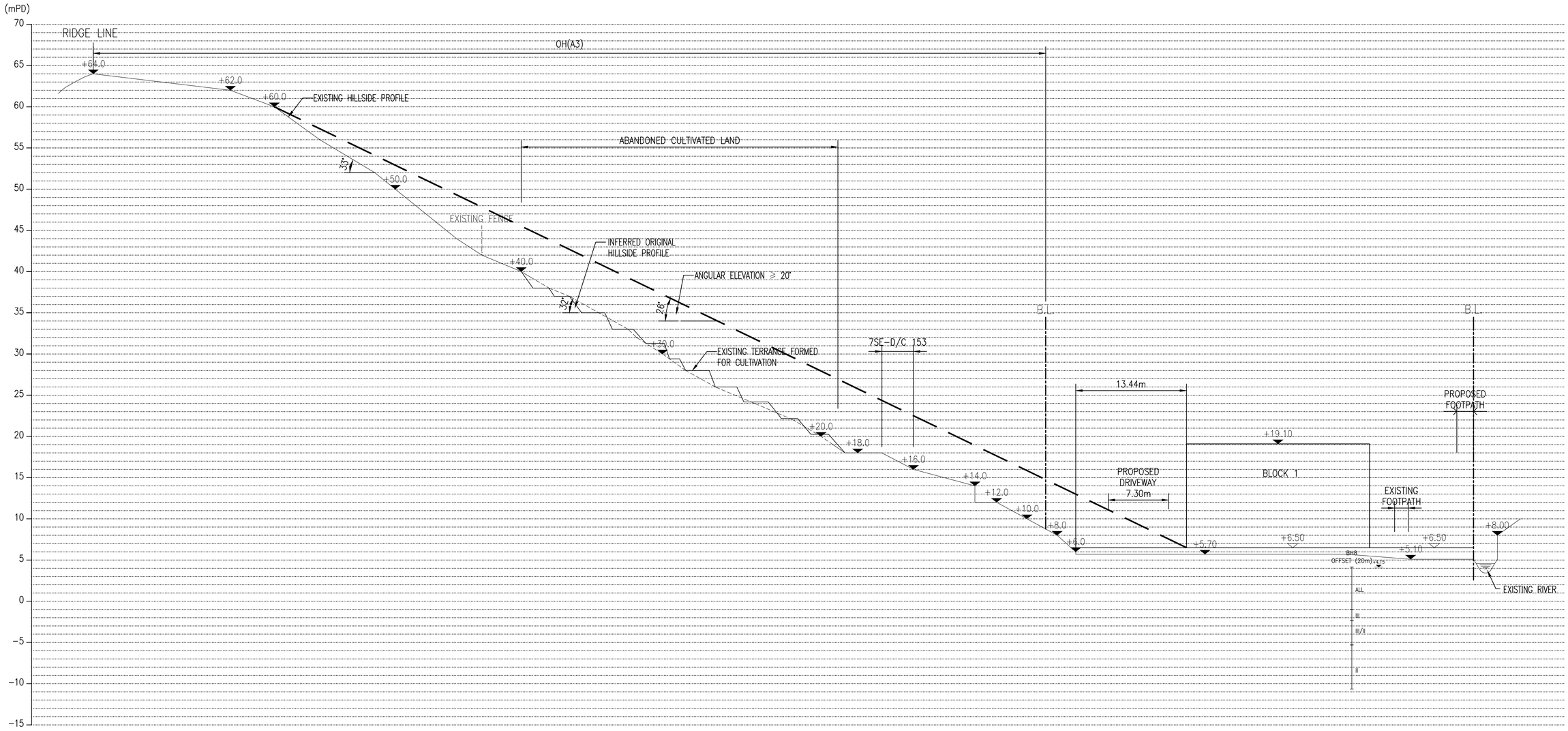
DH9

DH5

RIDGE LINE

SCALE : 1:1500

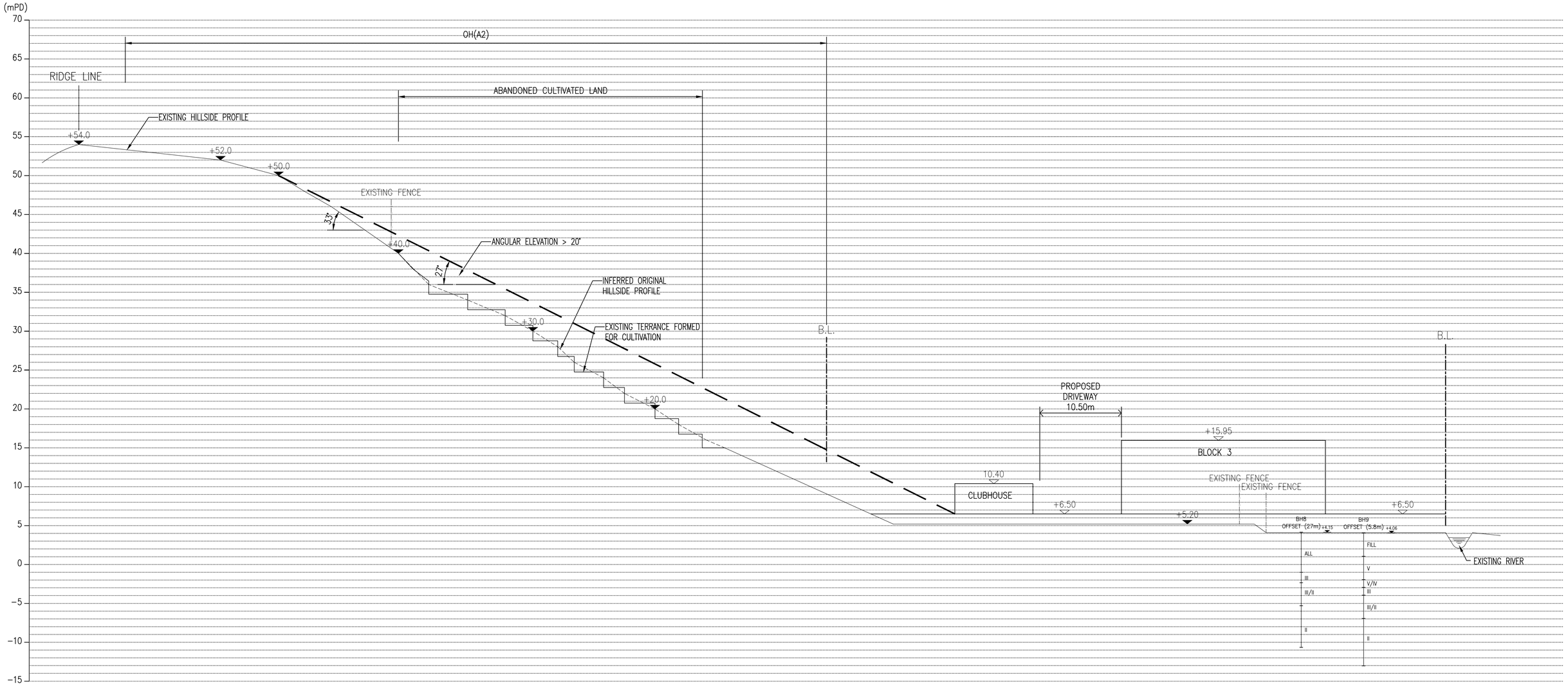
FIGURE 4



SECTION A–A

1 : 500

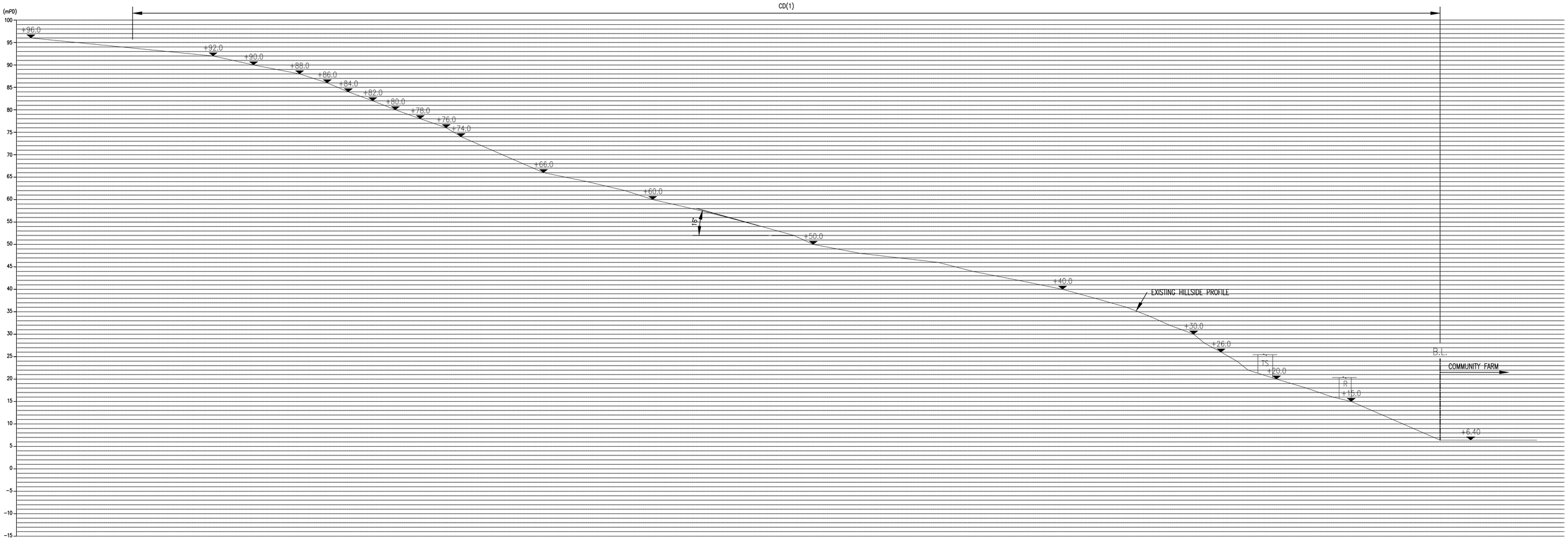
FIGURE 5



SECTION B–B

1 : 500

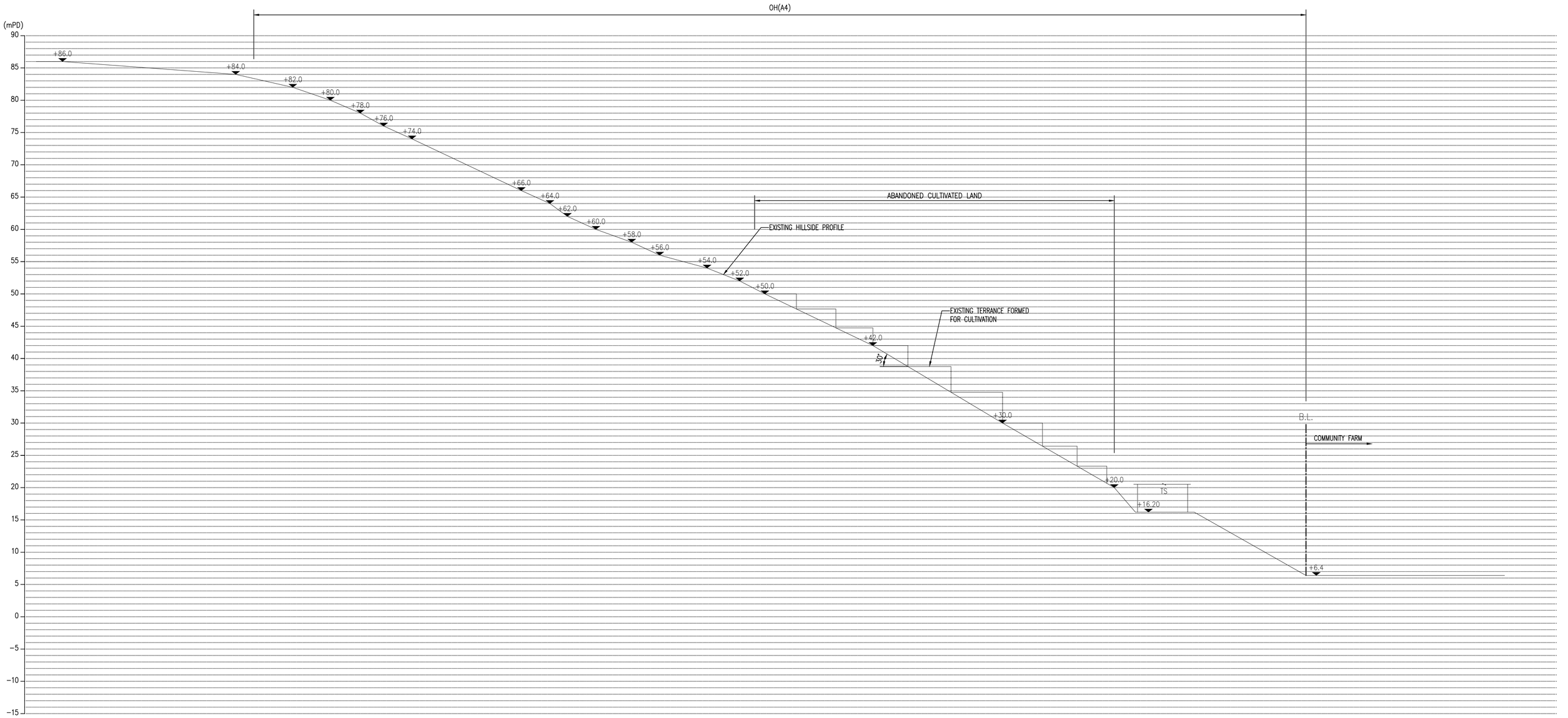
FIGURE 6



SECTION C–C

1 : 600

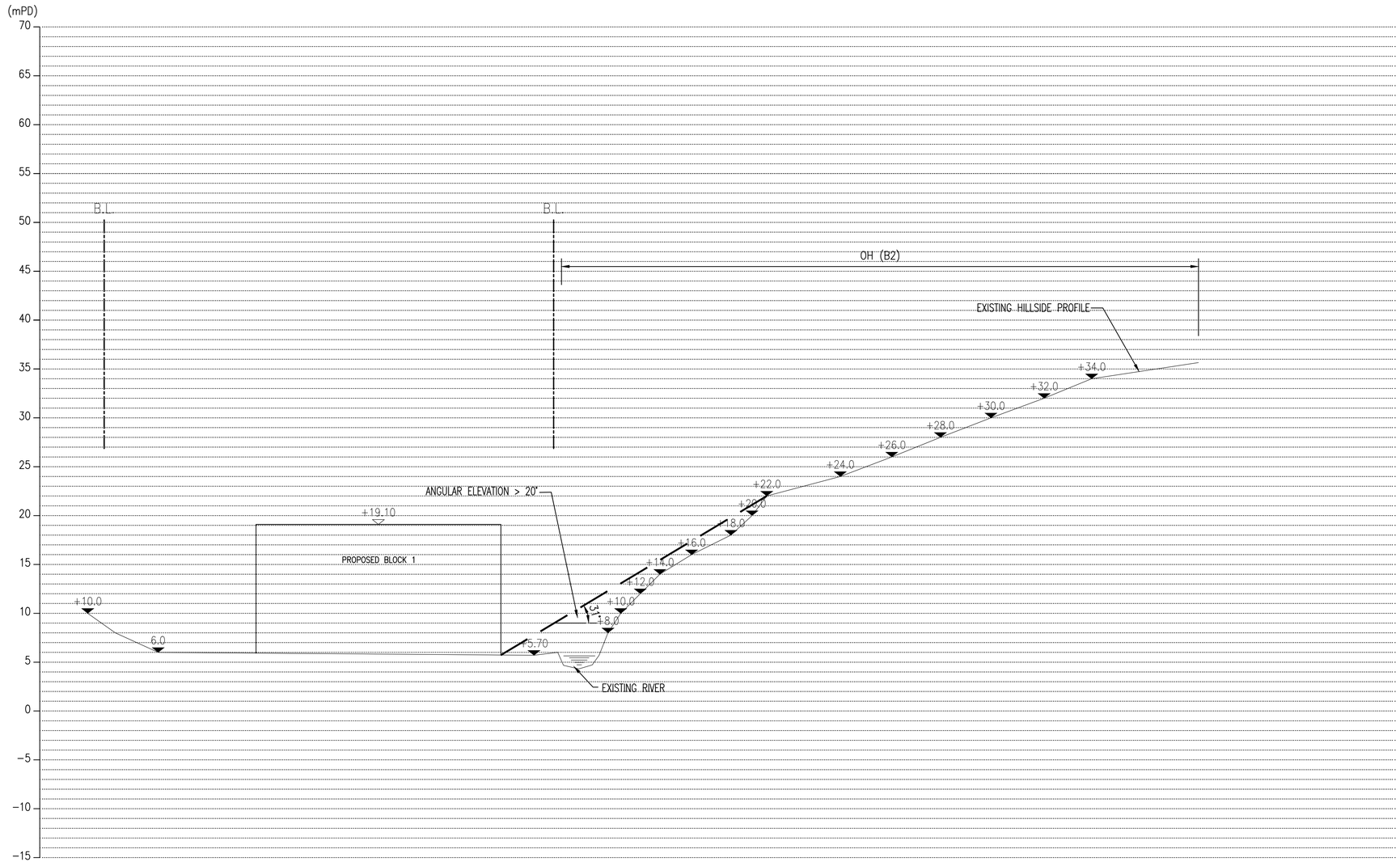
FIGURE 7



SECTION D–D

1 : 500

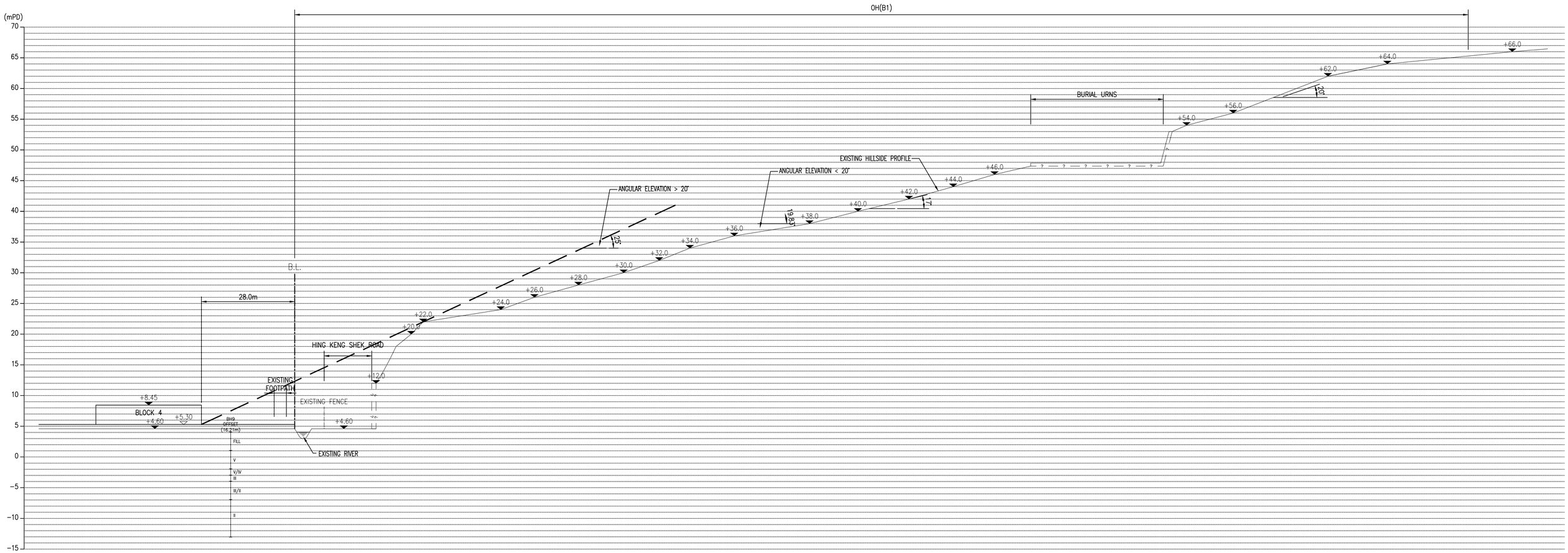
FIGURE 8



SECTION E–E

1 : 500

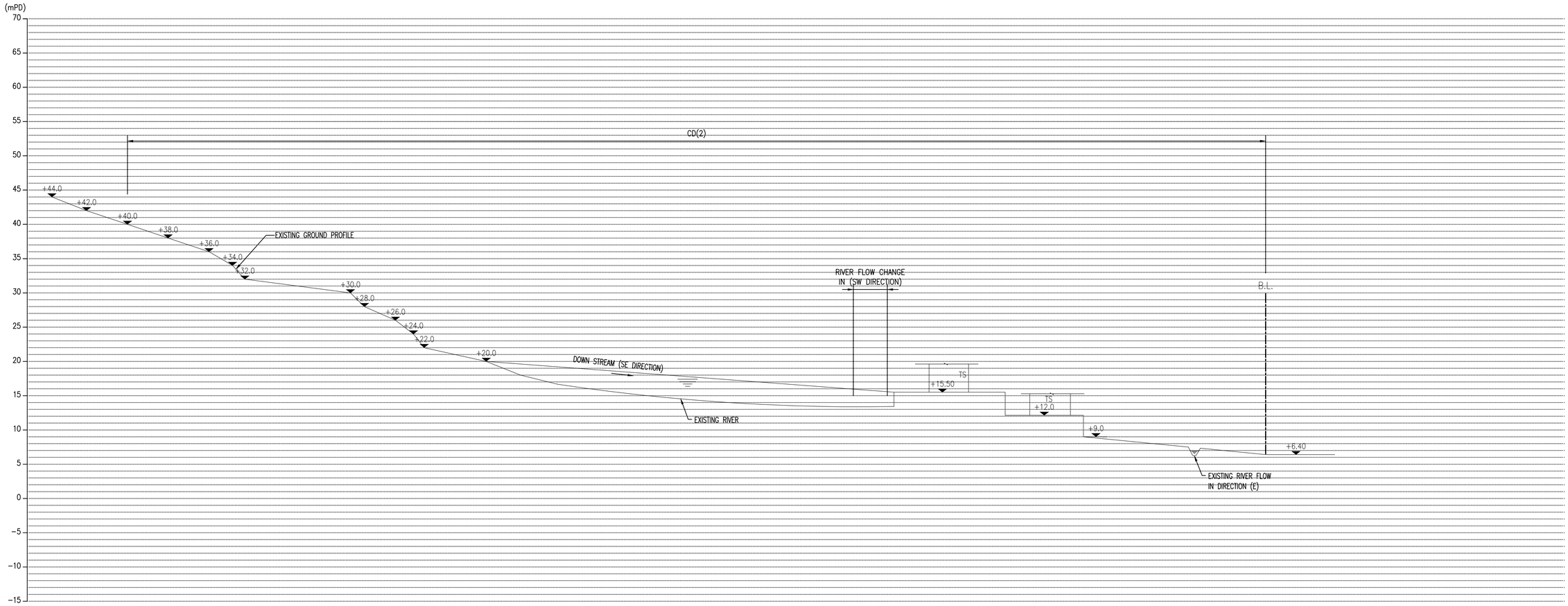
FIGURE 9



SECTION F–F

1 : 600

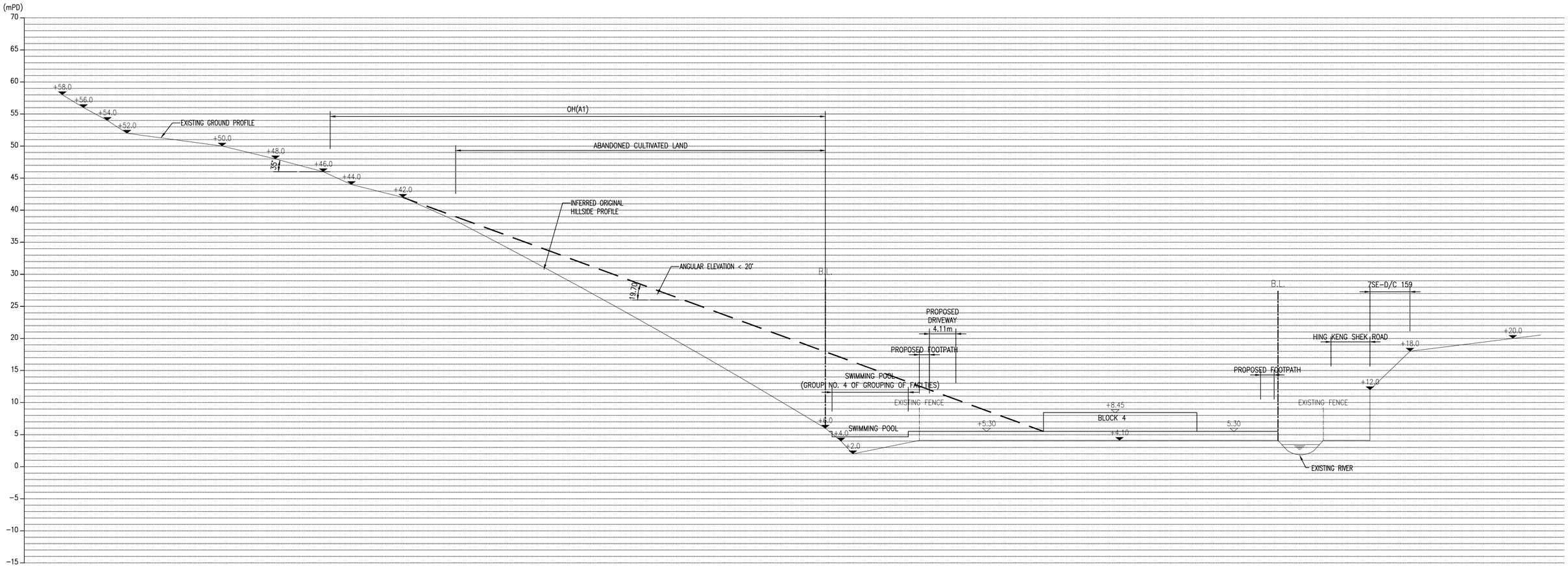
FIGURE 10



SECTION G–G

1 : 600

FIGURE 11



SECTION H–H

1 : 600

FIGURE 12

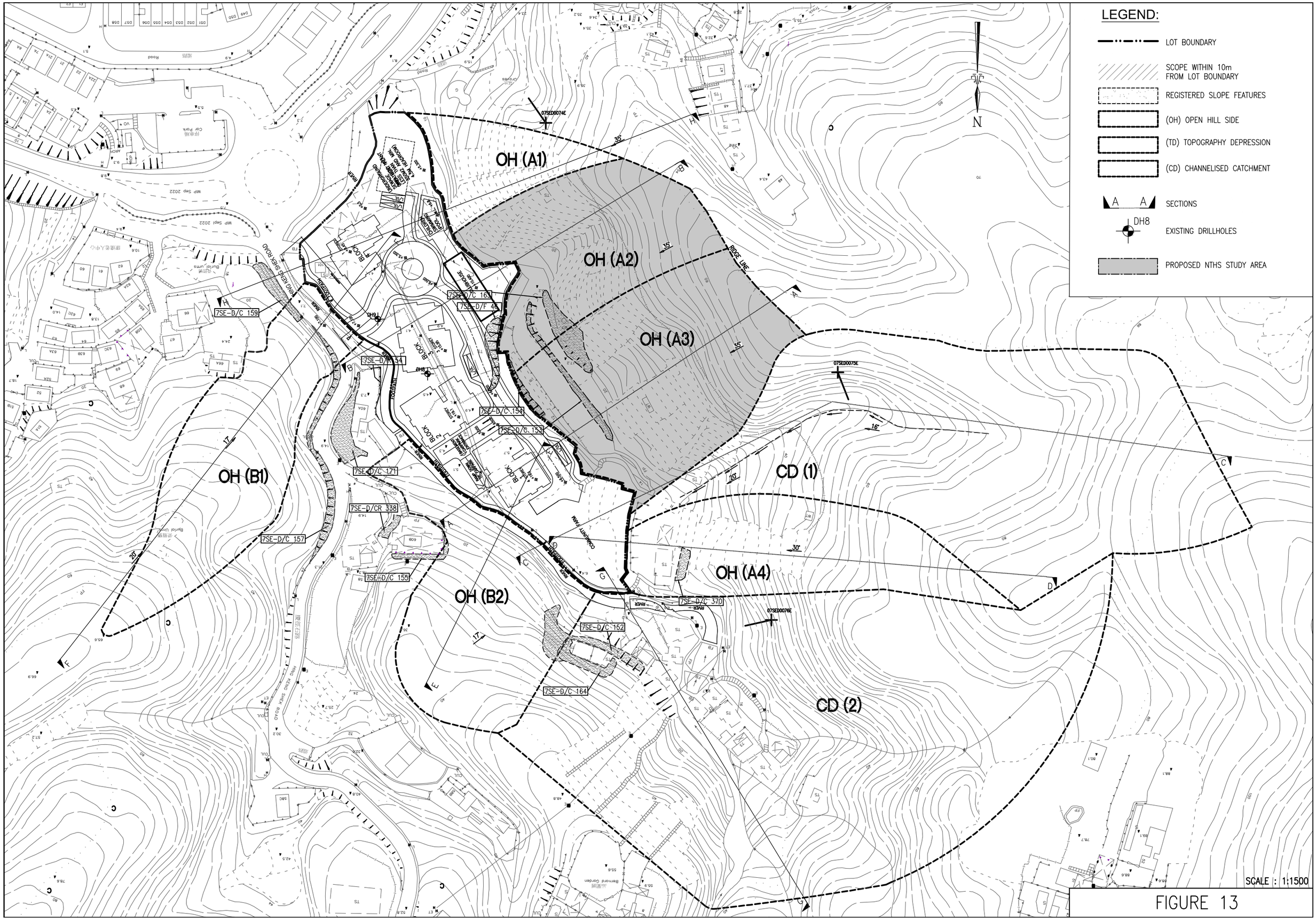
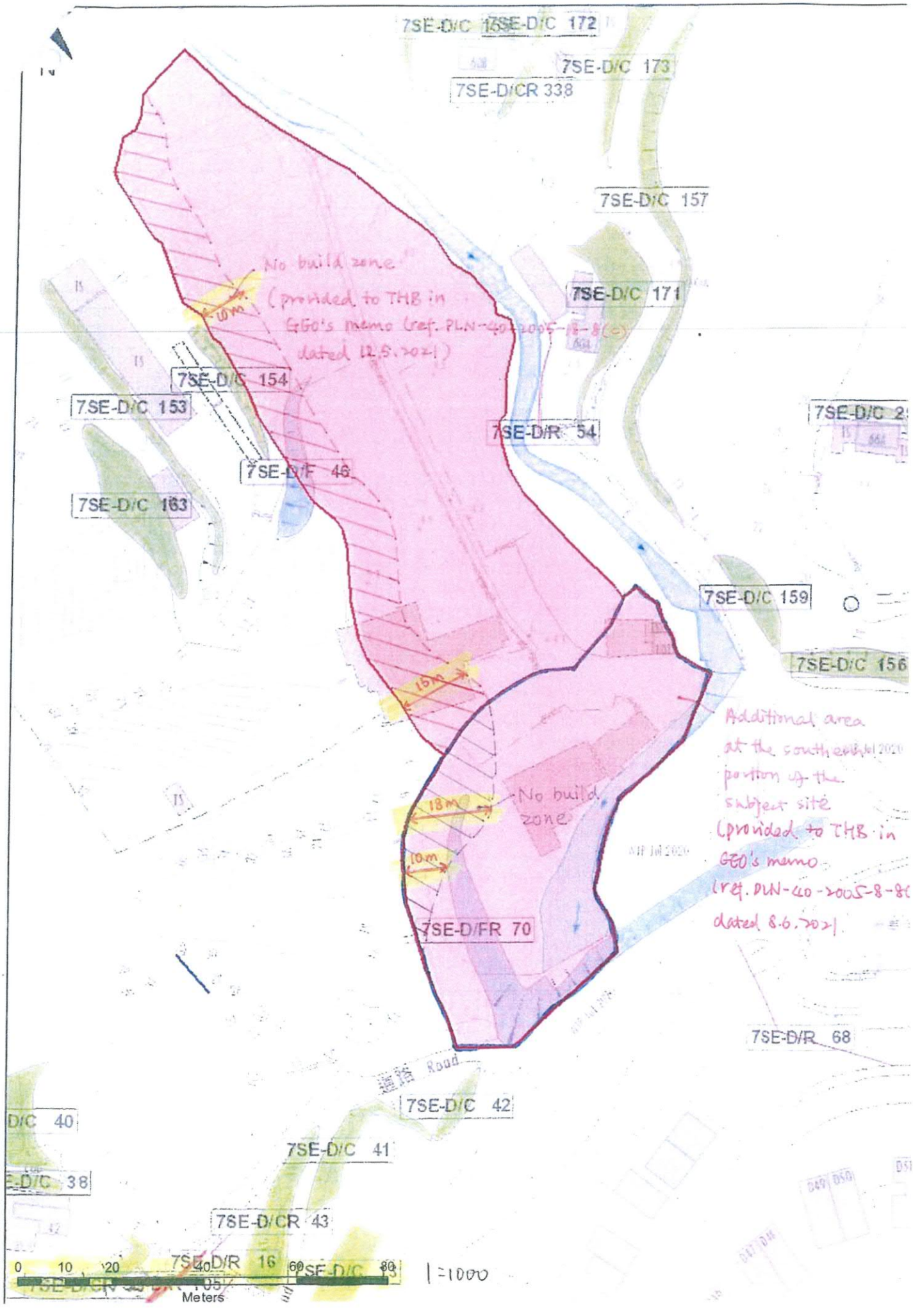

LEGEND:
LOT BOUNDARY
SCOPE WITHIN 10m FROM LOT BOUNDARY
REGISTERED SLOPE FEATURES
(OH) OPEN HILL SIDE
(TD) TOPOGRAPHY DEPRESSION
(CD) CHANNELISED CATCHMENT
A A
SECTIONS
DH8
EXISTING DRILLHOLES
PROPOSED NTHS STUDY AREA
N
OH (A1)
OH (A2)
OH (A3)
OH (A4)
OH (B1)
OH (B2)
CD (1)
CD (2)
RIDGE LINE
07SED0074E
07SED0075E
07SED0076E
7SE-D/C 159
7SE-D/C 161
7SE-D/F 46
7SE-D/C 154
7SE-D/C 154
7SE-D/C 153
7SE-D/C 171
7SE-D/CR 338
7SE-D/C 157
7SE-D/C 155
7SE-D/C 370
7SE-D/C 152
7SE-D/C 164
DH1
DH5
BLOCK 1
BLOCK 2
BLOCK 3
DOUBAN
COMMUNITY FARM
WING KONG SHEK ROAD
SCALE : 1:1500

FIGURE 13


7SE-D/C 172
7SE-D/C 173
7SE-D/CR 338
7SE-D/C 157
7SE-D/C 171
No build zone
(provided to THB in
GEO's memo (ref. PLN-40-2005-8-8(c)
dated 12.5.2021)
10m
7SE-D/C 154
7SE-D/C 153
7SE-D/R 54
7SE-D/F 46
7SE-D/C 163
7SE-D/C 159
7SE-D/C 156
15m
18m
No build zone
10m
7SE-D/FR 70
Additional area
at the southeastern
portion of the
subject site
(provided to THB in
GEO's memo
(ref. PLN-40-2005-8-8(
dated 8.6.2021
7SE-D/R 68
Road
7SE-D/C 42
7SE-D/C 41
7SE-D/CR 43
7SE-D/R 16
0 10 20 40 60 80
Meters
1:1000

BASIC INFORMATION

Location:	Southern part of Hing Keng Shek Village, Sai Kung
Registration Date:	19-12-1997
Ranking Score (NPRS):	0 (EI)
Date of Formation:	pre-1977
Date of Construction/ Modification:	
Data Source:	Project Office
Approximate Coordinates:	Easting : 844005 Northing : 824697

CONSEQUENCE-TO-LIFE CATEGORY

Facility at Crest:	Remote area or abandoned facilities
Distance of Facility from Crest (m):	0
Facility at Toe:	Remote area or abandoned facilities
Distance of Facility from Toe (m):	0
Consequence-to-life Category:	3
Remarks:	N/A

SLOPE PART

(1) Max. Height (m): 4 Length (m): 35 Average Angle (deg): 40

WALL PART

N/A

MAINTENANCE RESPONSIBILITY

(1) Sub Div.: 1 Mixed Feature Party: Lands D Agent: Lands D Land Cat.: 1,5b(vi),7 Reason Code: 62,90 MR Endorsement Date: 05-05-1998
(2) Sub Div.: 2 Mixed Feature Party: DD210 Lot31 Agent: N/A Land Cat.: 1,5b(vi),7 Reason Code: 1 MR Endorsement Date: 05-05-1998

DETAILS OF SLOPE / RETAINING WALL

Date of Inspection:	04-12-2018
Data Source:	Project Office
Slope Part Drainage:	N/A
Wall Part Drainage:	N/A

SLOPE PART

Slope Part (1)
Surface Protection (%): Bare: 0 Vegetated: 100 Chunam: 0 Shotcrete: 0 Other Cover: 0
Material Description: Material type: Soil Geology: N/A
Berm: No. of Berms: N/A Min. Berm Width (m): N/A
Weepholes: Size (mm): N/A Spacing (m): N/A

WALL PART

N/A

SERVICES

N/A

CHECKING STATUS INFORMATION

N/A

BACKGROUND INFORMATION

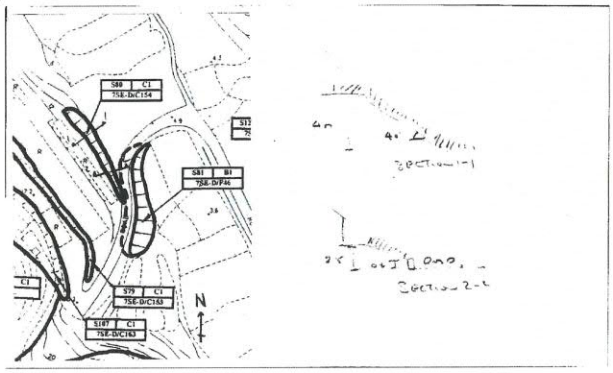
GIU Cell Ref.:	7SE25A9
Map Sheet Reference (1:1000):	7SE-25A
Aerial Photos:	9301 (1974), 9302 (1974)
Nearest Rainguage Station (Station Number):	Pak Kong Tsui Hang Special Area Management Centre(N50)
Data Collected On:	04-12-2018
Date of Construction, Subsequent Modification and Demolition:	Modification: Constructed Before: 1974 After: 1968
Related Reports/Files or Documents:	N/A
Remarks:	N/A
Follow Up Actions:	N/A
DH-Order (To Be Confirmed with Buildings Department):	None
Advisory Letter (To Be Confirmed with Buildings Department):	None
LPMIS:	None

ENHANCED MAINTENANCE INFORMATION

From Maintenance Department: (Last Updated Date: 25/09/2025)

STAGE 1 STUDY REPORT

Inspected On:	13-03-1997
Weather:	Mainly Fine
District:	ME



Section No:	1-1
Height(m):	H1 : 4 , H2 : 0
Type of Toe Facility:	Remote area or abandoned facilities
Distance from Toe(m):	0
Type of Crest Facility:	Remote area or abandoned facilities
Distance from Crest(m):	0
Consequence Category:	3
Engineering Judgement:	U
Section No:	2-2
Type of Toe Facility:	N/A
Distance from Toe(m):	0
Type of Crest Facility:	N/A
Distance from Crest(m):	0
Consequence Category:	3
Engineering Judgement:	U
Sign of Seepage:	Slope : No signs of seepage Wall : N/A
Criterion A satisfied:	N
Sign of Distress:	Slope : Minor (mid-portion) Wall : N/A
Criterion D satisfied:	N
Non-routine maintenance required:	N
Note:	N/A
Masonry wall/Masonry facing:	N
Note:	N/A
Consequence category (for critical section):	3
Observations:	N/A

Emergency Action Required:	N
Action By:	N/A

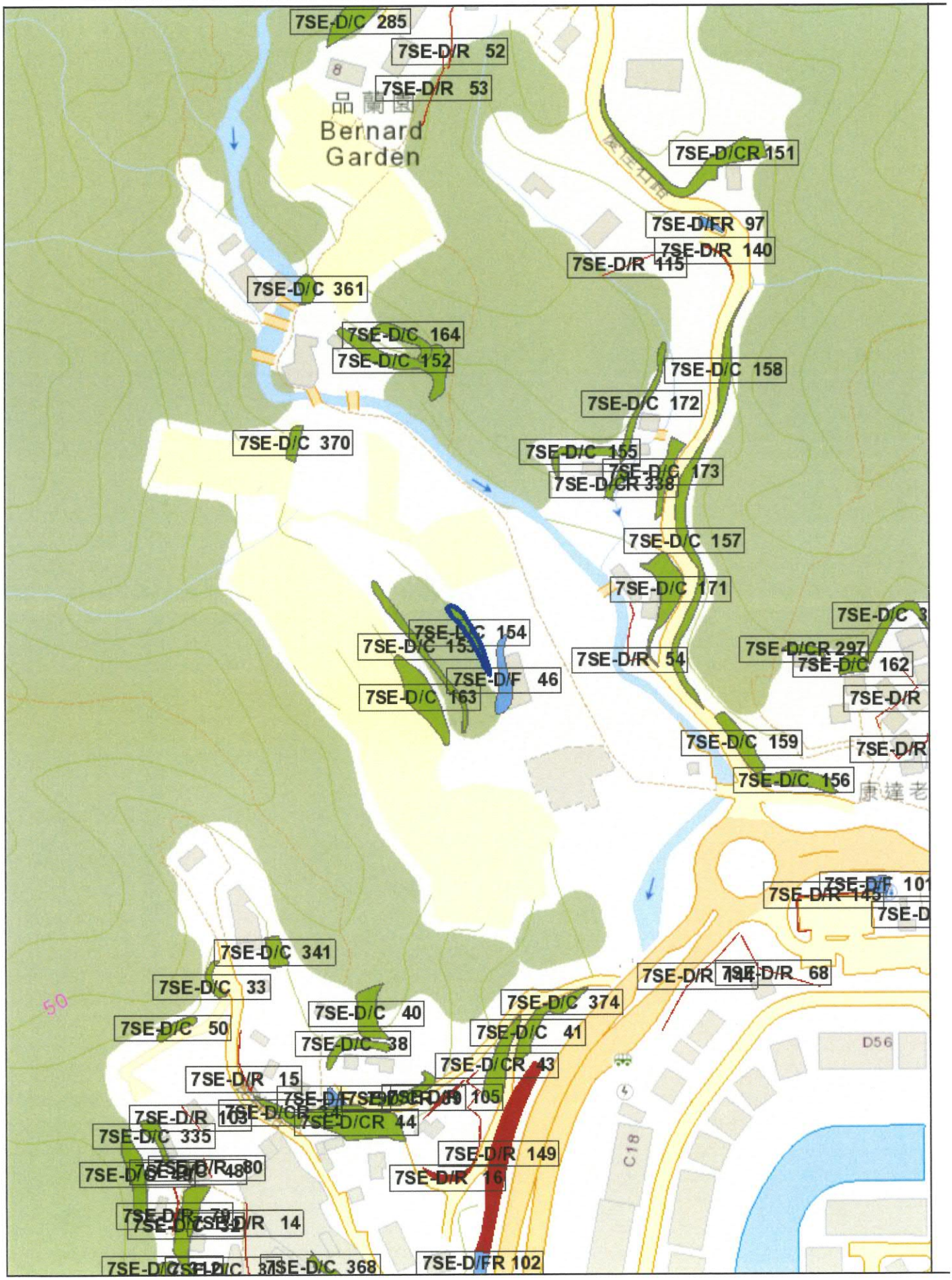
ACTION TO INITIATE PREVENTIVE WORKS

Criterion A/Criterion D:	N/A
Action By:	N/A
Further Study:	N
Action By:	N/A

OTHER EXTERNAL ACTION

Check / repair Services:	N
Action By:	N/A
Non-routine Maintenance:	N
Action By:	N/A

PHOTO


7SE-D/C 285
7SE-D/R 52
7SE-D/R 53
品蘭園
Bernard Garden
7SE-D/CR 151
7SE-D/FR 97
7SE-D/R 140
7SE-D/R 115
7SE-D/C 361
7SE-D/C 164
7SE-D/C 152
7SE-D/C 158
7SE-D/C 172
7SE-D/C 370
7SE-D/C 155
7SE-D/C 173
7SE-D/CR 338
7SE-D/C 157
7SE-D/C 171
7SE-D/C 154
7SE-D/C 153
7SE-D/F 46
7SE-D/C 163
7SE-D/R 54
7SE-D/CR 297
7SE-D/C 162
7SE-D/R
7SE-D/C 159
7SE-D/R
7SE-D/C 156
7SE-D/F 101
7SE-D/R 145
7SE-D/C 341
7SE-D/C 33
7SE-D/R 144
7SE-D/R 68
7SE-D/C 374
7SE-D/C 40
7SE-D/C 50
7SE-D/C 41
7SE-D/C 38
7SE-D/CR 43
7SE-D/R 15
7SE-D/R 105
7SE-D/R 103
7SE-D/CR 44
7SE-D/C 335
7SE-D/R 149
7SE-D/R 16
7SE-D/R 14
7SE-D/C 368
7SE-D/FR 102
D56
C18
50

BASIC INFORMATION

Location:	SOUTHERN PART OF HING KENG SHEK VILLAGE
Registration Date:	19-12-1997
Ranking Score (NPRS):	0 (Notional)
Date of Formation:	pre-1977
Date of Construction/ Modification:	
Data Source:	SIRST
Approximate Coordinates:	Easting : 844019 Northing : 824678

CONSEQUENCE-TO-LIFE CATEGORY

Facility at Crest:	Road/footpath with very low traffic density
Distance of Facility from Crest (m):	0
Facility at Toe:	Remote area or abandoned facilities
Distance of Facility from Toe (m):	0
Consequence-to-life Category:	3
Remarks:	N/A

SLOPE PART

(1) Max. Height (m): 5 Length (m): 35 Average Angle (deg): 40

WALL PART

N/A

MAINTENANCE RESPONSIBILITY

(1) Sub Div.: 1 Mixed Feature Party: DD210 LOT31 Agent: N/A Land Cat.: 1 Reason Code: 1 MR Endorsement Date: 15-03-2001
(2) Sub Div.: 2 Mixed Feature Party: Lands D Agent: Lands D Land Cat.: 5b(vi) Reason Code: 62 MR Endorsement Date: 15-03-2001

DETAILS OF SLOPE / RETAINING WALL

Date of Inspection:	13-03-1997
Data Source:	SIRST
Slope Part Drainage:	N/A
Wall Part Drainage:	N/A

SLOPE PART

Slope Part (1)
Surface Protection (%): Bare: 0 Vegetated: 100 Chunam: 0 Shotcrete: 0 Other Cover: 0
Material Description: Material type: Soil Geology: N/A
Berm: No. of Berms: N/A Min. Berm Width (m): N/A
Weepholes: Size (mm): N/A Spacing (m): N/A

WALL PART

N/A

SERVICES

N/A

CHECKING STATUS INFORMATION

N/A

BACKGROUND INFORMATION

GIU Cell Ref.:	7SE25A9
Map Sheet Reference (1:1000):	7SE-25A
Aerial Photos:	9301 (1974), 9302 (1974)
Nearest Rainguage Station (Station Number):	Pak Kong Tsui Hang Special Area Management Centre(N50)
Data Collected On:	13-03-1997
Date of Construction, Subsequent Modification and Demolition:	Modification: Constructed Before: 1974 After: 1968
Related Reports/Files or Documents:	N/A
Remarks:	N/A
Follow Up Actions:	N/A
DH-Order (To Be Confirmed with Buildings Department):	None
Advisory Letter (To Be Confirmed with Buildings Department):	None
LPMIS:	None

ENHANCED MAINTENANCE INFORMATION

From Maintenance Department: (Last Updated Date: 25/09/2025)

STAGE 1 STUDY REPORT

Inspected On:	
Weather:	
District:	ME
Section No:	1-1
Height(m):	
Type of Toe Facility:	Remote area or abandoned facilities
Distance from Toe(m):	0
Type of Crest Facility:	Road/footpath with very low traffic density
Distance from Crest(m):	0
Consequence Category:	
Engineering Judgement:	
Section No:	2-2
Type of Toe Facility:	
Distance from Toe(m):	
Type of Crest Facility:	
Distance from Crest(m):	
Consequence Category:	
Engineering Judgement:	
Sign of Seepage:	
Criterion A satisfied:	
Sign of Distress:	
Criterion D satisfied:	
Non-routine maintenance required:	
Note:	
Masonry wall/Masonry facing:	
Note:	
Consequence category (for critical section):	
Observations:	N/A
Emergency Action Required:	
Action By:	N/A

ACTION TO INITIATE PREVENTIVE WORKS

Criterion A/Criterion D:	N/A
Action By:	N/A
Further Study:	
Action By:	N/A

OTHER EXTERNAL ACTION

Check / repair Services:	
Action By:	N/A
Non-routine Maintenance:	

Action By: N/A

PHOTO

7SE-D/R 52
7SE-D/R 53
品蘭園
Bernard Garden
7SE-D/CR 151
7SE-D/FR 97
7SE-D/R 140
7SE-D/R 115
7SE-D/C 361
7SE-D/C 164
7SE-D/C 152
7SE-D/C 158
7SE-D/C 172
7SE-D/C 370
7SE-D/C 155
7SE-D/C 173
7SE-D/CR 338
7SE-D/C 157
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7SE-D/C 327
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7SE-D/C 153
7SE-D/CR 297
7SE-D/R 54
7SE-D/C 162
7SE-D/F 46
7SE-D/C 163
7SE-D/R 116
7SE-D/C 159
7SE-D/R 123
7SE-D/C 156
康達老人中
7SE-D/F 101
7SE-D/R 145
7SE-D/C 341
7SE-D/R 144
7SE-D/R 68
7SE-D/C 33
7SE-D/C 374
7SE-D/C 40
7SE-D/C 50
7SE-D/C 41
7SE-D/C 38
D56
7SE-D/CR 43
7SE-D/R 15
7SE-D/R 105
7SE-D/R 103
7SE-D/CR 44
7SE-D/C 335
7SE-D/R 149
7SE-D/R 16
7SE-D/R 79
7SE-D/C 32
7SE-D/R 14
7SE-D/C 368
7SE-D/FR 102
7SE-D/C 31
7SE-D/CR 47
C18

(OBSOLETE FEATURE)

BASIC INFORMATION

Location: Hiram's Highway

Date of Formation: post-1977

Date of Construction/ Modification:

Approximate Coordinates: Easting : 844090 Northing : 824574

CONSEQUENCE-TO-LIFE CATEGORY

Facility at Crest: Road/footpath with heavy traffic density

Distance of Facility from Crest (m): 0

Facility at Toe: Horticulture garden

Distance of Facility from Toe (m): 0

Consequence-to-life Category: 2

Remarks: N/A

SLOPE PART

(1) Max. Height (m): 4 Length (m): 140 Average Angle (deg): 30

WALL PART

(1) Max. Height (m): 2 Length (m): 58 Face Angle (deg): 90

MAINTENANCE RESPONSIBILITY

Government Feature Party: HyD Agent: HyD

DETAILS OF SLOPE / RETAINING WALL

Date of Inspection: 18-06-2010
Data Source: EI(HyD)
Slope Part Drainage: N/A

Wall Part Drainage: N/A

SLOPE PART

Slope Part (1)
Surface Protection (%): Bare: 0 Vegetated: 100 Chunam: 0 Shotcrete: 0 Other Cover: 0
Material Description: Material type: Soil Geology: N/A
Berm: No. of Berms: N/A Min. Berm Width (m): N/A
Weepholes: Size (mm): N/A Spacing (m): N/A

WALL PART

Wall Part (1)
Type of Wall: Wall Material: Concrete Wall Location: Wall at toe
Berm: No. of Berms: N/A Min. Berm Width (m): N/A
Weepholes: Size (mm): N/A Spacing (m): N/A

SERVICES

(1) Utilities Type: Cable Size(mm): 0 Location: On crest Remark: Size cannot be determined
(2) Utilities Type: Electricity Size(mm): 0 Location: On crest Remark: Size cannot be determined
(3) Utilities Type: Gas Size(mm): 0 Location: On crest Remark: Size cannot be determined
(4) Utilities Type: Sewer/Drain Size(mm): 0 Location: On crest Remark: Size cannot be determined
(5) Utilities Type: Water Main Size(mm): 100 Location: On crest Remark: N/A
(6) Utilities Type: Water Main Size(mm): 150 Location: On crest Remark: N/A

STAGE 1 STUDY REPORT

Inspected On:
Weather:
District: ME

Section No: 1-1
Height(m):
Type of Toe Facility: Horticulture garden

Distance from Toe(m): 0
Type of Crest Facility: Road/footpath with heavy traffic density

Distance from Crest(m): 0
Consequence Category:
Engineering Judgement:

Section No: 2-2
Type of Toe Facility:

Distance from Toe(m):
Type of Crest Facility:

Distance from Crest(m):
Consequence Category:
Engineering Judgement:

Sign of Seepage:	
Criterion A satisfied:	
Sign of Distress:	
Criterion D satisfied:	
Non-routine maintenance required:	
Note:	
Masonry wall/Masonry facing:	
Note:	
Consequence category (for critical section):	
Observations:	N/A
Emergency Action Required:	
Action By:	N/A

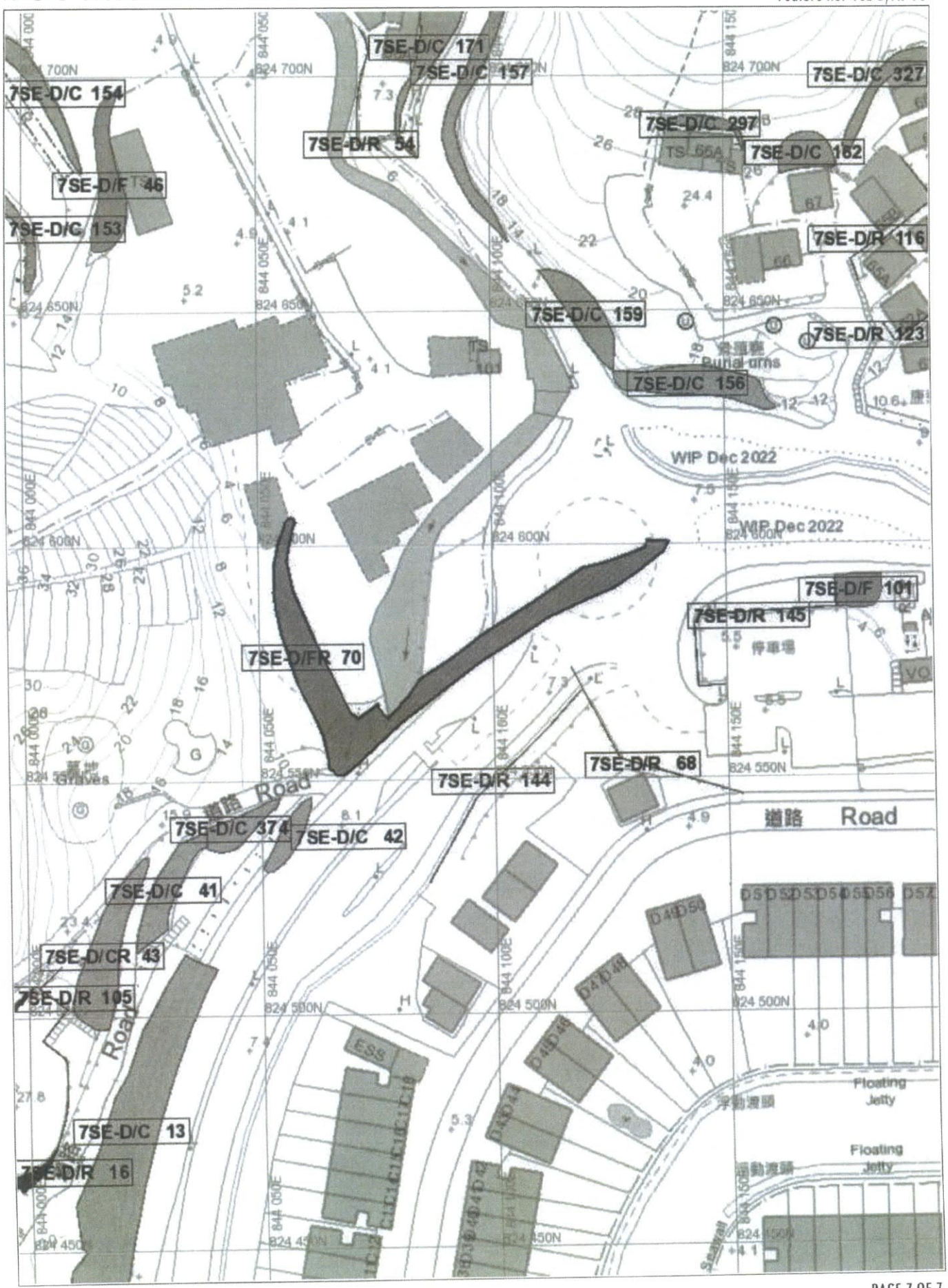
ACTION TO INITIATE PREVENTIVE WORKS

Criterion A/Criterion D:	N/A
Action By:	N/A
Further Study:	
Action By:	N/A

OTHER EXTERNAL ACTION

Check / repair Services:	
Action By:	N/A
Non-routine Maintenance:	
Action By:	N/A

PHOTO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7SE-D/C 157
7SE-D/C 154
7SE-D/C 327
7SE-D/C 297
7SE-D/R 54
7SE-D/C 162
7SE-D/F 46
7SE-D/C 153
7SE-D/R 116
7SE-D/C 159
7SE-D/R 123
7SE-D/C 156
WIP Dec 2022
WIP Dec 2022
7SE-D/F 101
7SE-D/R 145
7SE-D/FR 70
7SE-D/R 68
7SE-D/R 144
7SE-D/C 374
7SE-D/C 42
7SE-D/C 41
7SE-D/CR 43
7SE-D/R 105
7SE-D/C 13
7SE-D/R 16
Road
道路 Road
Floating Jetty
Floating Jetty

BASIC INFORMATION

Location:	Southern part of Hing Keng Shek Village, Pak Sha Wan
Registration Date:	19-12-1997
Ranking Score (NPRS):	0 (EI)
Date of Formation:	pre-1977
Date of Construction/ Modification:	
Data Source:	Project Office
Approximate Coordinates:	Easting : 843982 Northing : 824693

CONSEQUENCE-TO-LIFE CATEGORY

Facility at Crest:	Remote area or abandoned facilities
Distance of Facility from Crest (m):	0
Facility at Toe:	Remote area or abandoned facilities
Distance of Facility from Toe (m):	0
Consequence-to-life Category:	3
Remarks:	N/A

SLOPE PART

(1) Max. Height (m): 3.5 Length (m): 75 Average Angle (deg): 60

WALL PART

N/A

MAINTENANCE RESPONSIBILITY

(1) Sub Div.: 0 Government Feature Party: Lands D Agent: Lands D Land Cat.: 5b(vi) Reason Code: 62 MR Endorsement Date: 01-09-1998

DETAILS OF SLOPE / RETAINING WALL

Date of Inspection:	04-12-2018
Data Source:	Project Office
Slope Part Drainage:	N/A
Wall Part Drainage:	N/A

SLOPE PART

Slope Part (1)
Surface Protection (%): Bare: 0 Vegetated: 100 Chunam: 0 Shotcrete: 0 Other Cover: 0
Material Description: Material type: Soil Geology: N/A
Berm: No. of Berms: N/A Min. Berm Width (m): N/A
Weepholes: Size (mm): N/A Spacing (m): N/A

WALL PART

N/A

SERVICES

N/A

CHECKING STATUS INFORMATION

N/A

BACKGROUND INFORMATION

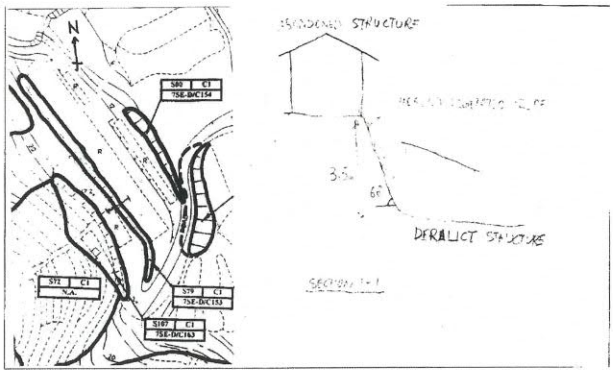
GIU Cell Ref.:	7SE25A8
Map Sheet Reference (1:1000):	7SE-25A
Aerial Photos:	N/A
Nearest Rainguage Station (Station Number):	Pak Kong Tsui Hang Special Area Management Centre(N50)
Data Collected On:	04-12-2018
Date of Construction, Subsequent Modification and Demolition:	N/A
Related Reports/Files or Documents:	N/A
Remarks:	N/A
Follow Up Actions:	N/A
DH-Order (To Be Confirmed with Buildings Department):	None
Advisory Letter (To Be Confirmed with Buildings Department):	None
LPMIS:	None

ENHANCED MAINTENANCE INFORMATION

From Maintenance Department: (Last Updated Date: 25/09/2025)

STAGE 1 STUDY REPORT

Inspected On:	13-03-1997
Weather:	Mainly Fine
District:	ME



Section No:	1-1
Height(m):	H1 : 4 , H2 : 0
Type of Toe Facility:	Remote area or abandoned facilities
Distance from Toe(m):	0
Type of Crest Facility:	Remote area or abandoned facilities
Distance from Crest(m):	0
Consequence Category:	3
Engineering Judgement:	P
Section No:	2-2
Type of Toe Facility:	N/A
Distance from Toe(m):	0
Type of Crest Facility:	N/A
Distance from Crest(m):	0
Consequence Category:	3
Engineering Judgement:	P
Sign of Seepage:	Slope : No signs of seepage Wall : N/A
Criterion A satisfied:	N
Sign of Distress:	Slope : Reasonable (mid-portion) Wall : N/A
Criterion D satisfied:	N
Non-routine maintenance required:	N
Note:	N/A
Masonry wall/Masonry facing:	N
Note:	N/A
Consequence category (for critical section):	3
Observations:	N/A
Emergency Action Required:	N
Action By:	N/A

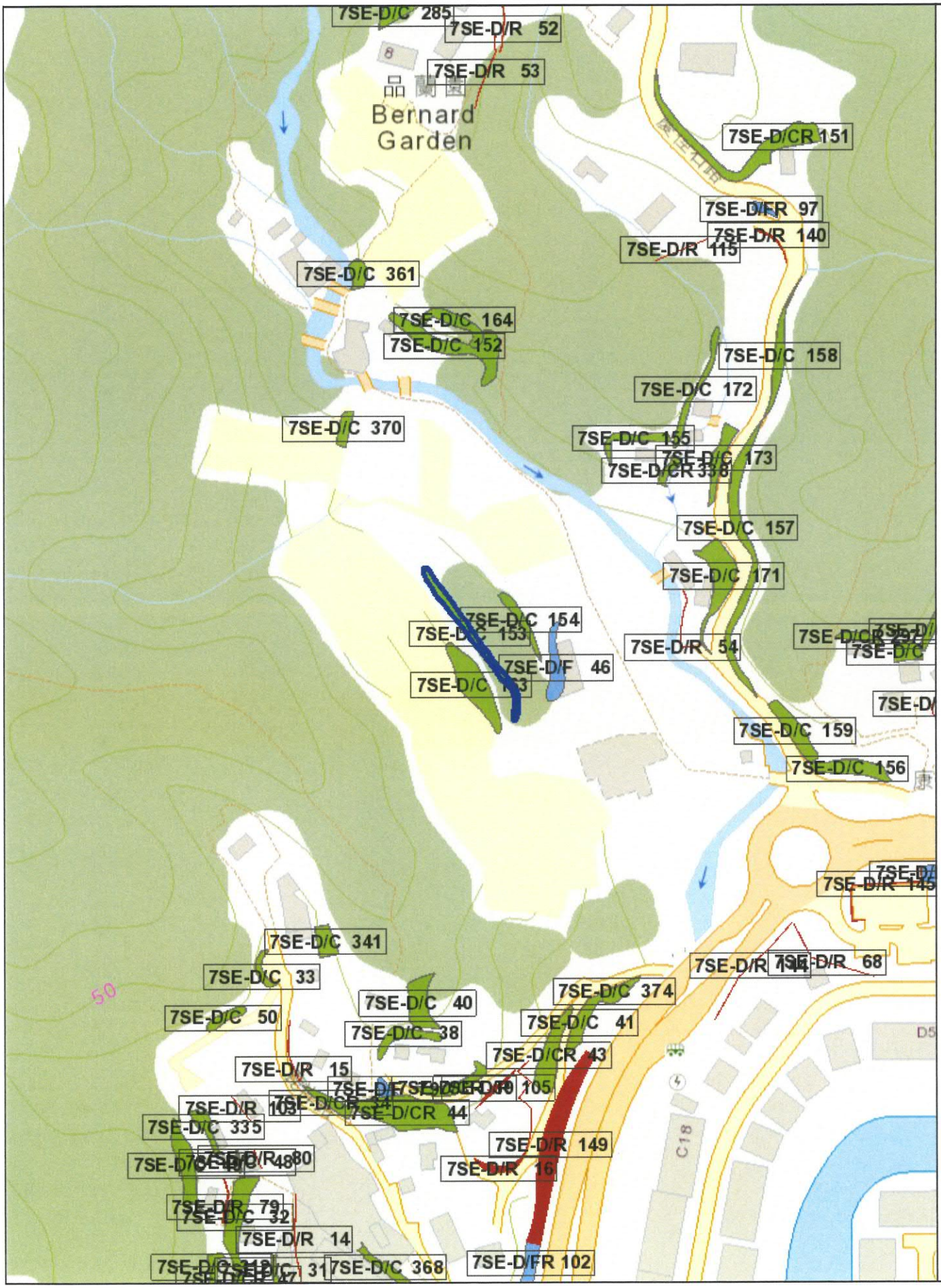
ACTION TO INITIATE PREVENTIVE WORKS

Criterion A/Criterion D:	N/A
Action By:	N/A
Further Study:	Y
Action By:	Mixed

OTHER EXTERNAL ACTION

Check / repair Services:	N
Action By:	N/A
Non-routine Maintenance:	N
Action By:	N/A

PHOTO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7SE-D/R 52
7SE-D/R 53
Bernard Garden
7SE-D/CR 151
7SE-D/FR 97
7SE-D/R 140
7SE-D/R 115
7SE-D/C 361
7SE-D/C 164
7SE-D/C 152
7SE-D/C 158
7SE-D/C 172
7SE-D/C 370
7SE-D/C 155
7SE-D/C 173
7SE-D/CR 338
7SE-D/C 157
7SE-D/C 171
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7SE-D/R 15
7SE-D/R 105
7SE-D/R 103
7SE-D/CR 44
7SE-D/C 335
7SE-D/R 149
7SE-D/R 16
7SE-D/R 79
7SE-D/C 32
7SE-D/R 14
7SE-D/C 31
7SE-D/C 368
7SE-D/FR 102
C18

BASIC INFORMATION

Location:	Hing Keng Shek Road, Sai Kung
Registration Date:	19-12-1997
Ranking Score (NPRS):	0 (EI)
Date of Formation:	pre-1977
Date of Construction/ Modification:	17-03-2010
Data Source:	Project Office
Approximate Coordinates:	Easting : 844072 Northing : 824698

CONSEQUENCE-TO-LIFE CATEGORY

Facility at Crest:	Cottage, licensed and squatter area
Distance of Facility from Crest (m):	3
Facility at Toe:	Catchwater w/consequence on Group 5 facilities
Distance of Facility from Toe (m):	0
Consequence-to-life Category:	1
Remarks:	N/A

SLOPE PART

N/A

WALL PART

(1) Max. Height (m): 4.4 Length (m): 30 Face Angle (deg): 85

MAINTENANCE RESPONSIBILITY

(1) Sub Div.: 0 Government Feature Party: Lands D Agent: Lands D Land Cat.: 5b(vi) Reason Code: 62 MR Endorsement Date: 22-03-2011

DETAILS OF SLOPE / RETAINING WALL

Date of Inspection:	12-02-2019
Data Source:	Project Office
Slope Part Drainage:	N/A
Wall Part Drainage:	N/A

SLOPE PART

N/A

WALL PART

Wall Part (1)
Type of Wall: Wall Material: Concrete Wall Location: Retaining wall with level platform
Berm: No. of Berms: N/A Min. Berm Width (m): N/A
Weepholes: Size (mm): 75 Spacing (m): 1.5

SERVICES

N/A

CHECKING STATUS INFORMATION

Tagmark: SCS_14115 Part: 0 Checking Status: Feature modified/upgraded to current standard Checking Certificate No.: GEO/ME 085/2011

BACKGROUND INFORMATION

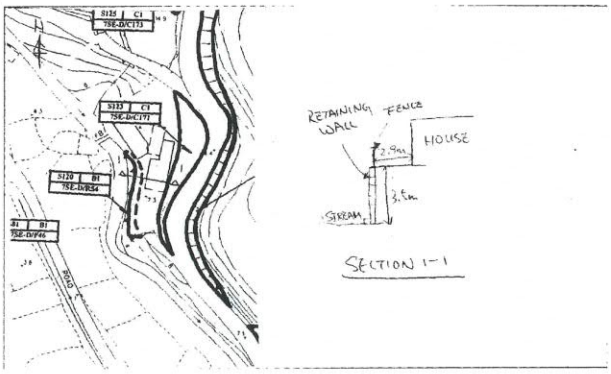
GIU Cell Ref.:	7SE25A9
Map Sheet Reference (1:1000):	7SE-25A
Aerial Photos:	9301 (1974), 9302 (1974)
Nearest Rainguage Station (Station Number):	Pak Kong Tsui Hang Special Area Management Centre(N50)
Data Collected On:	12-02-2019
Date of Construction, Subsequent Modification and Demolition:	Modification: Constructed Before: 1974 After: 1962
Related Reports/Files or Documents:	N/A
Remarks:	N/A
Follow Up Actions:	N/A
DH-Order (To Be Confirmed with Buildings Department):	None
Advisory Letter (To Be Confirmed with Buildings Department):	None
LPMIS:	None

ENHANCED MAINTENANCE INFORMATION

From Maintenance Department: (Last Updated Date: 25/09/2025)

STAGE 1 STUDY REPORT

Inspected On:	13-03-1997
Weather:	Mainly Fine
District:	ME



Section No:	1-1
Height(m):	H1 : 4 , H2 : 4
Type of Toe Facility:	Catchwater w/consequence on Group 5 facilities
Distance from Toe(m):	0
Type of Crest Facility:	Cottage, licensed and squatter area
Distance from Crest(m):	3
Consequence Category:	1
Engineering Judgement:	P
Section No:	2-2
Type of Toe Facility:	
Distance from Toe(m):	
Type of Crest Facility:	
Distance from Crest(m):	
Consequence Category:	1
Engineering Judgement:	P
Sign of Seepage:	Slope : N/A Wall : Signs of seepage
Criterion A satisfied:	N
Sign of Distress:	Slope : N/A Wall : Moderate(mid-portion, at toe)
Criterion D satisfied:	N
Non-routine maintenance required:	N
Note:	N/A
Masonry wall/Masonry facing:	Y
Note:	N/A
Consequence category (for critical section):	1
Observations:	N/A
Emergency Action Required:	N
Action By:	N/A

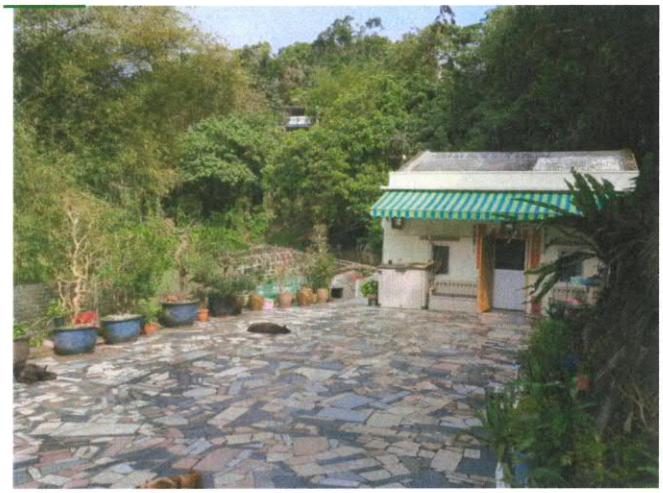
ACTION TO INITIATE PREVENTIVE WORKS

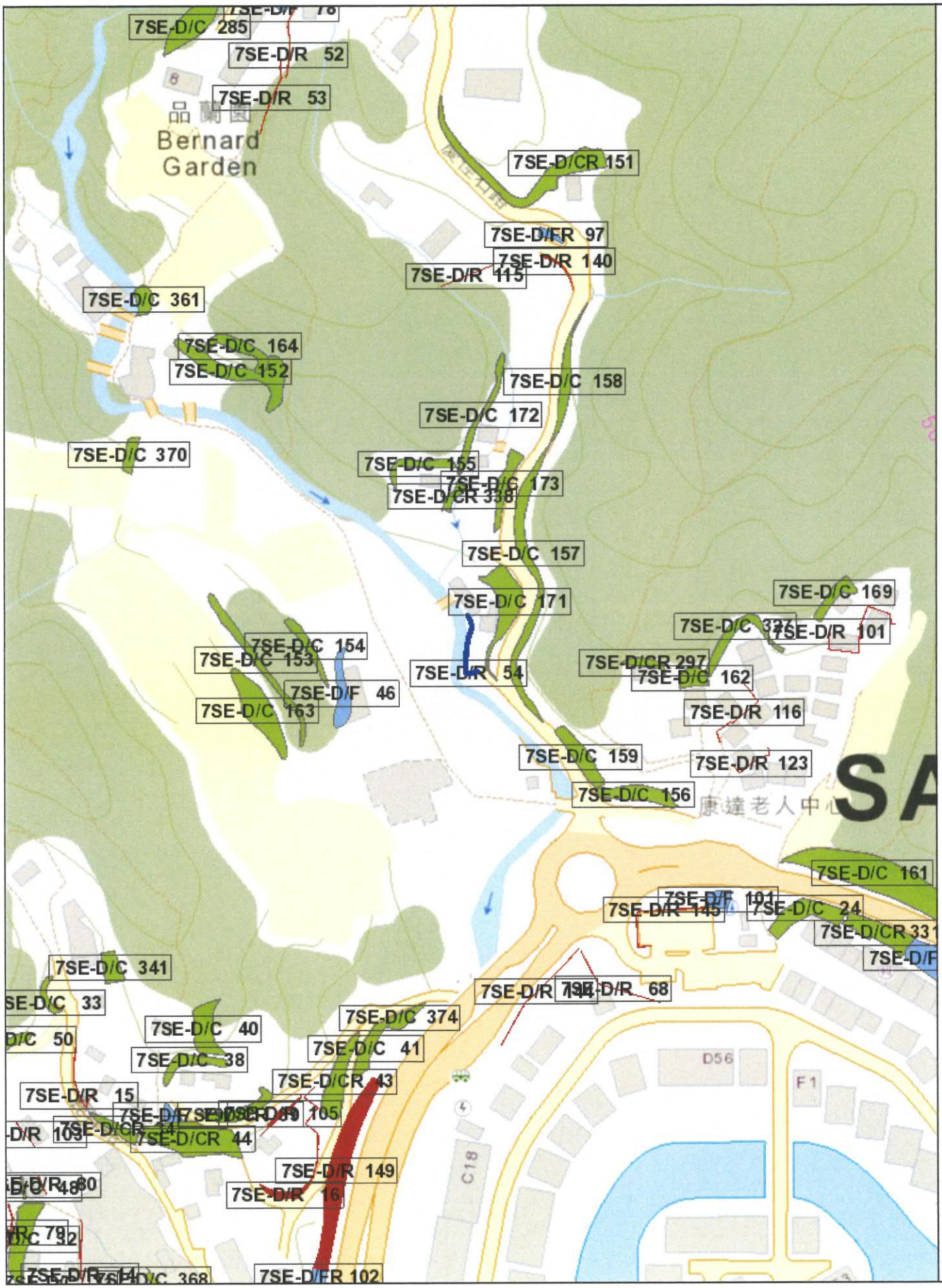
Criterion A/Criterion D:	N/A
Action By:	N/A
Further Study:	Y
Action By:	Mixed

OTHER EXTERNAL ACTION

Check / repair Services:	N
Action By:	N/A
Non-routine Maintenance:	N
Action By:	N/A

PHOTO

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Bernard Garden
7SE-D/CR 151
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康達老人中心
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7SE-D/C 41
7SE-D/C 38
7SE-D/CR 43
7SE-D/R 15
7SE-D/R 149
7SE-D/R 16
7SE-D/FR 102
D56
F1
C18

BASIC INFORMATION

Location:	60A Pak Wai, Sai Kung
Date of Formation:	pre-1977
Date of Construction/ Modification:	20-12-2008
Approximate Coordinates:	Easting : 844088 Northing : 824712

CONSEQUENCE-TO-LIFE CATEGORY

Facility at Crest:	Road/footpath with low traffic density
Distance of Facility from Crest (m):	0
Facility at Toe:	Cottage, licensed and squatter area
Distance of Facility from Toe (m):	0.5
Consequence-to-life Category:	1
Remarks:	N/A

SLOPE PART

(1) Max. Height (m): 7.1 Length (m): 52 Average Angle (deg): 33

WALL PART

N/A

MAINTENANCE RESPONSIBILITY

Maintenance Type: Government Party: Lands D Agent: Lands D

DETAILS OF SLOPE / RETAINING WALL

Date of Inspection:	12-04-2019
Data Source:	Project Office
Slope Part Drainage:	(1) Position: Toe Size(mm): 300
Wall Part Drainage:	(1) Position: Crest Size(mm): 200

SLOPE PART

Slope Part (1)

Surface Protection (%):	Bare: 0 Vegetated: 60 Chunam: 0 Shotcrete: 40 Other Cover: 0
Material Description:	Material type: Soil Geology: N/A
Berm:	No. of Berms: N/A Min. Berm Width (m): N/A
Weepholes:	Size (mm): 75 Spacing (m): 1.5

WALL PART

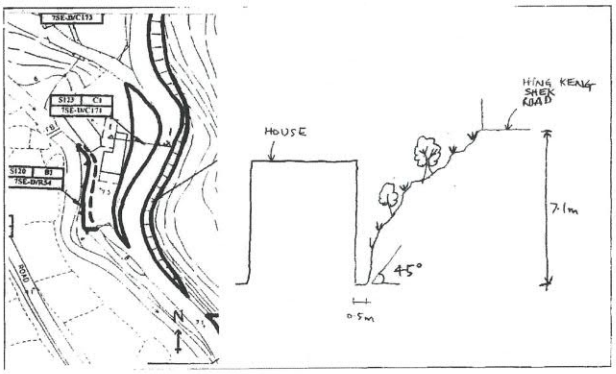
N/A

SERVICES

(1) Utilities Type: Water Main Size (mm): 20 Location: On crest Remark: N/A
(2) Utilities Type: Water Main Size (mm): 20 Location: On slope Remark: N/A

STAGE 1 STUDY REPORT

Inspected On: 13-03-1997
Weather: Mainly Fine
District: ME



Section No: 1-1
Height (m): N/A
Type of Toe Facility: Cottage, licensed and squatter area
Distance from Toe (m): 0.5
Type of Crest Facility: Road/footpath with low traffic density
Distance from Crest (m): 0
Consequence Category: 1
Engineering Judgement: P
Section No: 2-2
Type of Toe Facility: N/A
Distance from Toe (m): 0
Type of Crest Facility: N/A
Distance from Crest (m): 0
Consequence Category: 1
Engineering Judgement: P
Sign of Seepage: Slope : Signs of seepage
Wall : N/A
Criterion A satisfied: N
Sign of Distress: Slope : Reasonable (near crest, mid-portion)
Wall : N/A
Criterion D satisfied: N
Non-routine maintenance required: N
Note: N/A

Masonry wall / Masonry facing:	N
Note:	N/A
Consequence category (for critical section):	1
Observations:	N/A
Emergency Action Required:	N
Action By:	N/A

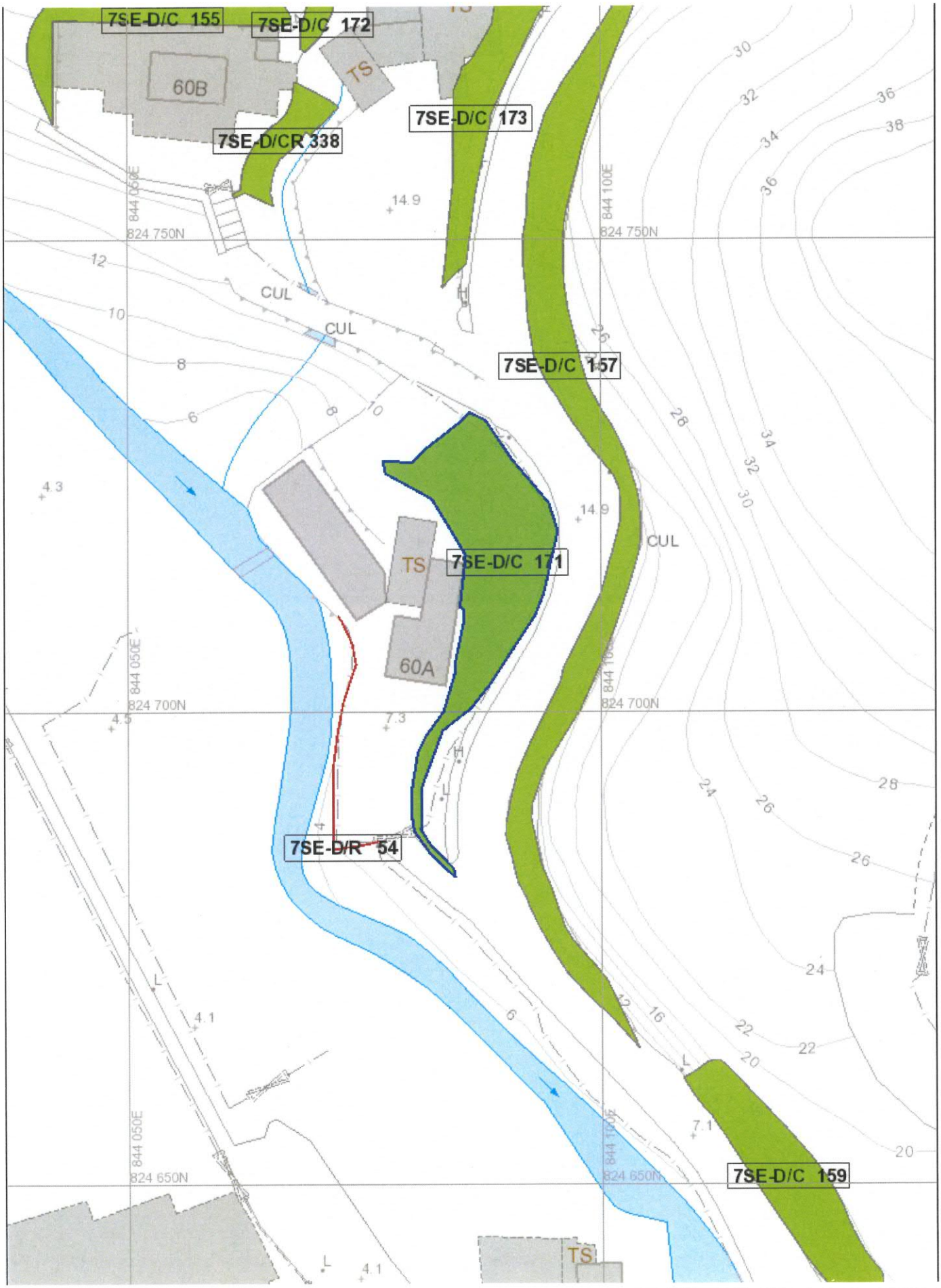
ACTION TO INITIATE PREVENTIVE WORKS

Criterion A / Criterion D:	N/A
Action By:	N/A
Further Study:	Y
Action By:	Mixed

OTHER EXTERNAL ACTION

Check / repair Services:	N
Action By:	N/A
Non-routine Maintenance:	N
Action By:	N/A

PHOTO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7SE-D/C 172
7SE-D/C 173
7SE-D/CR 338
7SE-D/C 157
7SE-D/C 171
7SE-D/R 54
7SE-D/C 159
60B
60A
TS
CUL
844 050E
844 100E
824 750N
824 700N
824 650N

BASIC INFORMATION

Location:	Southern part of Hing Keng Shek Village
Registration Date:	19-12-1997
Ranking Score (NPRS):	0 (EI)
Date of Formation:	pre-1977
Date of Construction/ Modification:	
Data Source:	Project Office
Approximate Coordinates:	Easting : 843985 Northing : 824668

CONSEQUENCE-TO-LIFE CATEGORY

Facility at Crest:	Undeveloped green belt
Distance of Facility from Crest (m):	0
Facility at Toe:	Lightly-used playground
Distance of Facility from Toe (m):	1
Consequence-to-life Category:	3
Remarks:	TGN 15 case - provided by SP Division (31 MAR 2004)

SLOPE PART

(1) Max. Height (m): 9 Length (m): 45 Average Angle (deg): 45

WALL PART

N/A

MAINTENANCE RESPONSIBILITY

(1) Sub Div.: 0 Government Feature Party: Lands D Agent: Lands D Land Cat.: 5b(vi) Reason Code: 62 MR Endorsement Date: 05-05-1998

DETAILS OF SLOPE / RETAINING WALL

Date of Inspection:	13-11-2008
Data Source:	Project Office
Slope Part Drainage:	N/A
Wall Part Drainage:	N/A

SLOPE PART

Slope Part (1)
Surface Protection (%): Bare: 0 Vegetated: 100 Chunam: 0 Shotcrete: 0 Other Cover: 0
Material Description: Material type: Soil Geology: Decomposed volcanic
Berm: No. of Berms: N/A Min. Berm Width (m): N/A
Weepholes: Size (mm): N/A Spacing (m): N/A

WALL PART

N/A

SERVICES

N/A

CHECKING STATUS INFORMATION

N/A

BACKGROUND INFORMATION

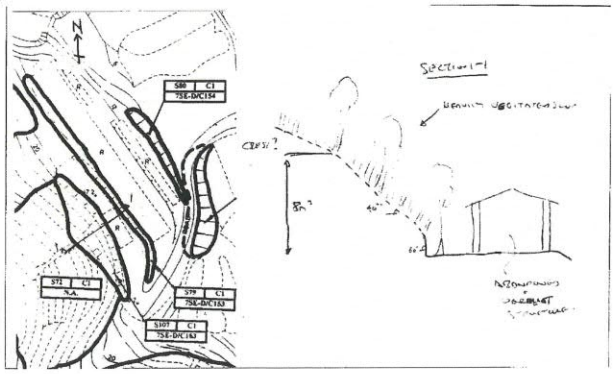
GIU Cell Ref.:	7SE25A8
Map Sheet Reference (1:1000):	7SE-25A
Aerial Photos:	9301 (1974), 9302 (1974)
Nearest Rainguage Station (Station Number):	Pak Kong Tsui Hang Special Area Management Centre(N50)
Data Collected On:	13-11-2008
Date of Construction, Subsequent Modification and Demolition:	Modification: Constructed Before: 1974 After: 1968
Related Reports/Files or Documents:	N/A
Remarks:	N/A
Follow Up Actions:	N/A
DH-Order (To Be Confirmed with Buildings Department):	None
Advisory Letter (To Be Confirmed with Buildings Department):	None
LPMIS:	None

ENHANCED MAINTENANCE INFORMATION

From Maintenance Department: (Last Updated Date: 25/09/2025)

STAGE 1 STUDY REPORT

Inspected On:	13-03-1997
Weather:	Mainly Fine
District:	ME



Section No:	1-1
Height(m):	H1 : 8 , H2 : 0
Type of Toe Facility:	Lightly-used playground
Distance from Toe(m):	1
Type of Crest Facility:	Undeveloped green belt
Distance from Crest(m):	0
Consequence Category:	1
Engineering Judgement:	P
Section No:	2-2
Type of Toe Facility:	N/A
Distance from Toe(m):	0
Type of Crest Facility:	N/A
Distance from Crest(m):	0
Consequence Category:	1
Engineering Judgement:	P
Sign of Seepage:	Slope : No signs of seepage Wall : N/A
Criterion A satisfied:	N
Sign of Distress:	Slope : Minor (mid-portion) Wall : N/A
Criterion D satisfied:	N
Non-routine maintenance required:	N
Note:	N/A
Masonry wall/Masonry facing:	N
Note:	N/A
Consequence category (for critical section):	1
Observations:	TGN 15 case - provided by SP Division (31 MAR 2004)
Emergency Action Required:	N
Action By:	N/A

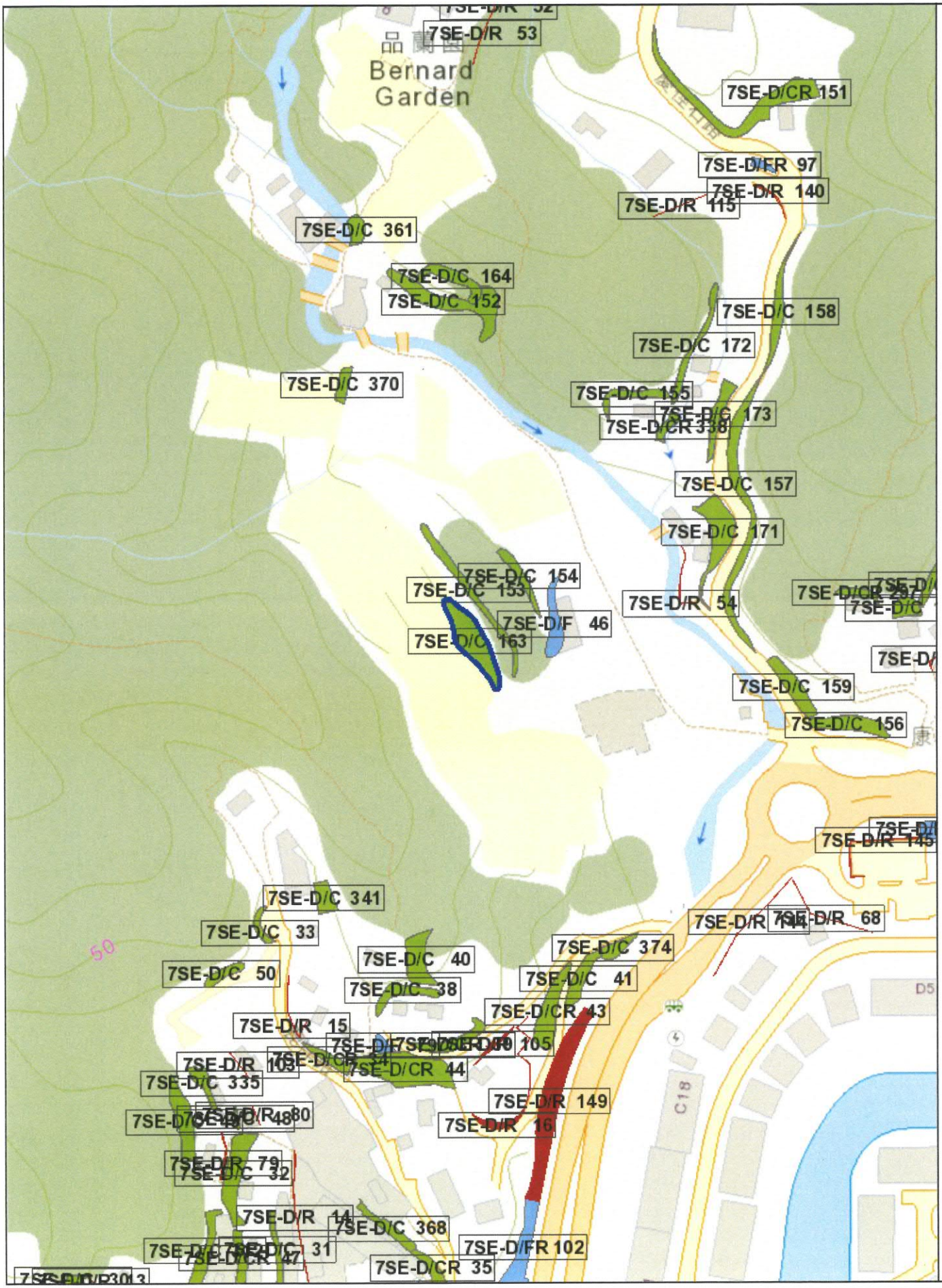
ACTION TO INITIATE PREVENTIVE WORKS

Criterion A/Criterion D:	N/A
Action By:	N/A
Further Study:	Y
Action By:	Mixed

OTHER EXTERNAL ACTION

Check / repair Services:	N
Action By:	N/A
Non-routine Maintenance:	N
Action By:	N/A

PHOTO


Bernard Garden
7SE-D/R 53
7SE-D/CR 151
7SE-D/FR 97
7SE-D/R 140
7SE-D/R 115
7SE-D/C 361
7SE-D/C 164
7SE-D/C 152
7SE-D/C 158
7SE-D/C 172
7SE-D/C 370
7SE-D/C 155
7SE-D/C 173
7SE-D/CR 338
7SE-D/C 157
7SE-D/C 171
7SE-D/C 154
7SE-D/C 153
7SE-D/R 54
7SE-D/F 46
7SE-D/C 163
7SE-D/C 159
7SE-D/C 156
7SE-D/R 145
7SE-D/C 341
7SE-D/C 33
7SE-D/R 114
7SE-D/R 68
7SE-D/C 374
7SE-D/C 40
7SE-D/C 50
7SE-D/C 41
7SE-D/C 38
7SE-D/CR 43
7SE-D/R 15
7SE-D/R 105
7SE-D/R 103
7SE-D/CR 44
7SE-D/C 335
7SE-D/R 149
7SE-D/R 16
7SE-D/C 32
7SE-D/R 44
7SE-D/C 368
7SE-D/C 31
7SE-D/FR 102
7SE-D/CR 47
7SE-D/CR 35
50
C18

BASIC INFORMATION

Location:	Northwest of Marina Cove and West of Hing Keng Shek Road, Southwest Sai Kung
Registration Date:	15-05-2019
Ranking Score (NPRS):	17 (LPMit)
Date of Formation:	post-1977
Date of Construction/ Modification:	
Data Source:	Project Office
Approximate Coordinates:	Easting : 843930 Northing : 824779

CONSEQUENCE-TO-LIFE CATEGORY

Facility at Crest:	Undeveloped green belt
Distance of Facility from Crest (m):	0
Facility at Toe:	Cottage, licensed and squatter area
Distance of Facility from Toe (m):	0.5
Consequence-to-life Category:	1
Remarks:	N/A

SLOPE PART

(1) Max. Height (m): 3.8 Length (m): 16 Average Angle (deg): 40

WALL PART

N/A

MAINTENANCE RESPONSIBILITY

(1) Sub Div.: 1 Mixed Feature Party: DD210 LOT 11 Agent: N/A Land Cat.: 1 Reason Code: 1 MR Endorsement Date: 19-10-2020
(2) Sub Div.: 2 Mixed Feature Party: Lands D Agent: Lands D Land Cat.: 5b(vi) Reason Code: 62 MR Endorsement Date: 19-10-2020

DETAILS OF SLOPE / RETAINING WALL

Date of Inspection:	31-12-2018
Data Source:	Project Office
Slope Part Drainage:	N/A
Wall Part Drainage:	N/A

SLOPE PART

Slope Part (1)
Surface Protection (%): Bare: 0 Vegetated: 100 Chunam: 0 Shotcrete: 0 Other Cover: 0
Material Description: Material type: Soil Geology: N/A
Berm: No. of Berms: 1 Min. Berm Width (m): 0.8
Weepholes: Size (mm): N/A Spacing (m): N/A

WALL PART

N/A

SERVICES

N/A

CHECKING STATUS INFORMATION

N/A

BACKGROUND INFORMATION

GIU Cell Ref.:	N/A
Map Sheet Reference (1:1000):	N/A
Aerial Photos:	N/A
Nearest Rainguage Station (Station Number):	()
Data Collected On:	31-12-2018
Date of Construction, Subsequent Modification and Demolition:	N/A
Related Reports/Files or Documents:	N/A
Remarks:	N/A
Follow Up Actions:	N/A
DH-Order (To Be Confirmed with Buildings Department):	None
Advisory Letter (To Be Confirmed with Buildings Department):	None
LPMIS:	None

ENHANCED MAINTENANCE INFORMATION

From Maintenance Department: (Last Updated Date: 25/09/2025)

STAGE 1 STUDY REPORT

Inspected On:	
Weather:	
District:	N/A
Section No:	1-1
Height(m):	
Type of Toe Facility:	Cottage, licensed and squatter area
Distance from Toe(m):	0.5
Type of Crest Facility:	Undeveloped green belt
Distance from Crest(m):	0
Consequence Category:	
Engineering Judgement:	
Section No:	2-2
Type of Toe Facility:	
Distance from Toe(m):	
Type of Crest Facility:	
Distance from Crest(m):	
Consequence Category:	
Engineering Judgement:	
Sign of Seepage:	
Criterion A satisfied:	
Sign of Distress:	
Criterion D satisfied:	
Non-routine maintenance required:	
Note:	
Masonry wall/Masonry facing:	
Note:	
Consequence category (for critical section):	
Observations:	N/A
Emergency Action Required:	
Action By:	N/A

ACTION TO INITIATE PREVENTIVE WORKS

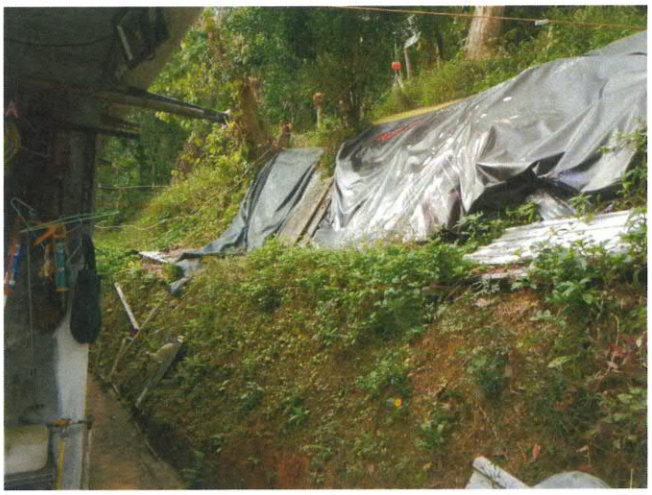
Criterion A/Criterion D:	N/A
Action By:	N/A
Further Study:	
Action By:	N/A

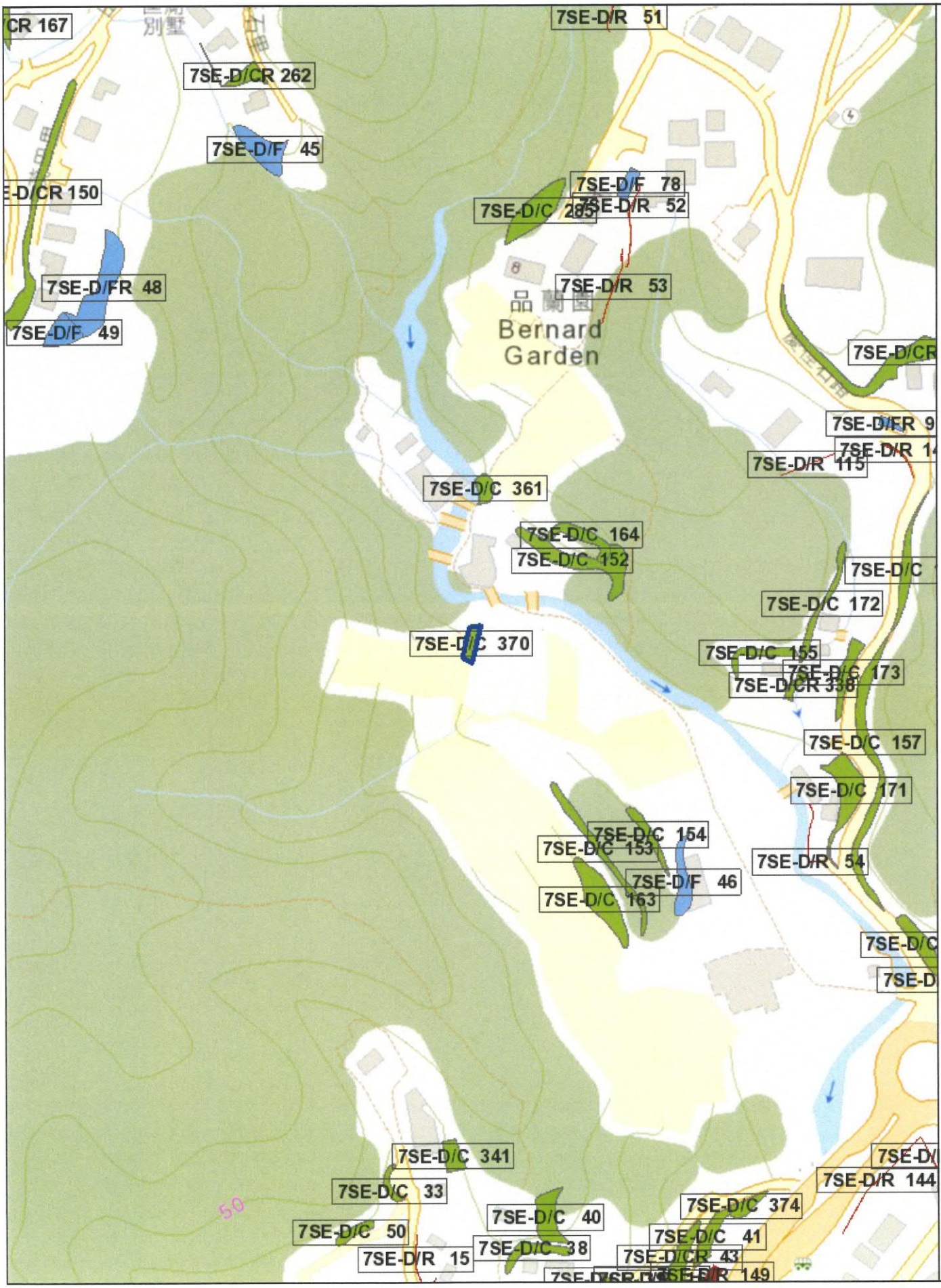
OTHER EXTERNAL ACTION

Check / repair Services:	
Action By:	N/A
Non-routine Maintenance:	

Action By: N/A

PHOTO

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7SE-D/R 51
7SE-D/CR 262
7SE-D/F 45
E-D/CR 150
7SE-D/F 78
7SE-D/C 285
7SE-D/R 52
7SE-D/FR 48
7SE-D/R 53
7SE-D/F 49
Bernard Garden
7SE-D/CR
7SE-D/FR 9
7SE-D/R 14
7SE-D/R 115
7SE-D/C 361
7SE-D/C 164
7SE-D/C 152
7SE-D/C
7SE-D/C 172
7SE-D/C 370
7SE-D/C 155
7SE-D/C 173
7SE-D/CR 338
7SE-D/C 157
7SE-D/C 171
7SE-D/C 154
7SE-D/C 153
7SE-D/R 54
7SE-D/F 46
7SE-D/C 163
7SE-D/C
7SE-D
7SE-D/C 341
7SE-D/C 33
7SE-D/R 144
7SE-D/C 374
7SE-D/C 40
7SE-D/C 50
7SE-D/C 41
7SE-D/C 38
7SE-D/R 15
7SE-D/CR 43
50

BASIC INFORMATION

Location:	HING KENG SHEK ROAD, SAI KUNG
Date of Formation:	pre-1977
Date of Construction/ Modification:	N/A
Approximate Coordinates:	Easting : 844098 Northing : 824731

CONSEQUENCE-TO-LIFE CATEGORY

Facility at Crest:	Undeveloped green belt
Distance of Facility from Crest (m):	0
Facility at Toe:	Road/footpath with low traffic density
Distance of Facility from Toe (m):	0
Consequence-to-life Category:	3
Remarks:	N/A

SLOPE PART

(1) Max. Height (m): 6 Length (m): 125 Average Angle (deg): 70

WALL PART

N/A

MAINTENANCE RESPONSIBILITY

Maintenance Type: Government Party: Lands D Agent: Lands D

DETAILS OF SLOPE / RETAINING WALL

Date of Inspection:	12-03-1997
Data Source:	SIRST
Slope Part Drainage:	(1) Position: Stepped Size(mm): 251
Wall Part Drainage:	N/A

SLOPE PART

Slope Part (1)

Surface Protection (%):	Bare: 20 Vegetated: 75 Chunam: 5 Shotcrete: 0 Other Cover: 0
Material Description:	Material type: Soil & Rock Geology: Decomposed volcanic
Berm:	No. of Berms: N/A Min. Berm Width (m): N/A
Weepholes:	Size (mm): N/A Spacing (m): N/A

WALL PART

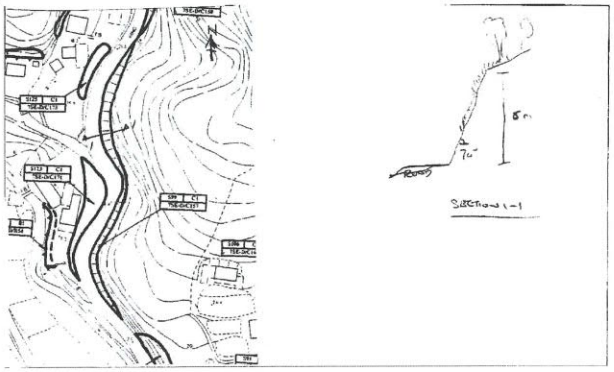
N/A

SERVICES

N/A

STAGE 1 STUDY REPORT

Inspected On:	12-03-1997
Weather:	Mainly Fine
District:	ME



Section No:	1-1
Height (m):	N/A
Type of Toe Facility:	Road/footpath with low traffic density
Distance from Toe (m):	0
Type of Crest Facility:	Undeveloped green belt
Distance from Crest (m):	0
Consequence Category:	3
Engineering Judgement:	P
Section No:	2-2
Type of Toe Facility:	N/A
Distance from Toe (m):	0
Type of Crest Facility:	N/A
Distance from Crest (m):	0
Consequence Category:	3
Engineering Judgement:	P
Sign of Seepage:	Slope : No signs of seepage Wall : N/A
Criterion A satisfied:	N
Sign of Distress:	Slope : Minor (mid-portion, at toe) Wall : N/A
Criterion D satisfied:	N
Non-routine maintenance required:	N
Note:	N/A
Masonry wall / Masonry facing:	N

Note:	N/A
Consequence category (for critical section):	3
Observations:	N/A
Emergency Action Required:	N
Action By:	N/A

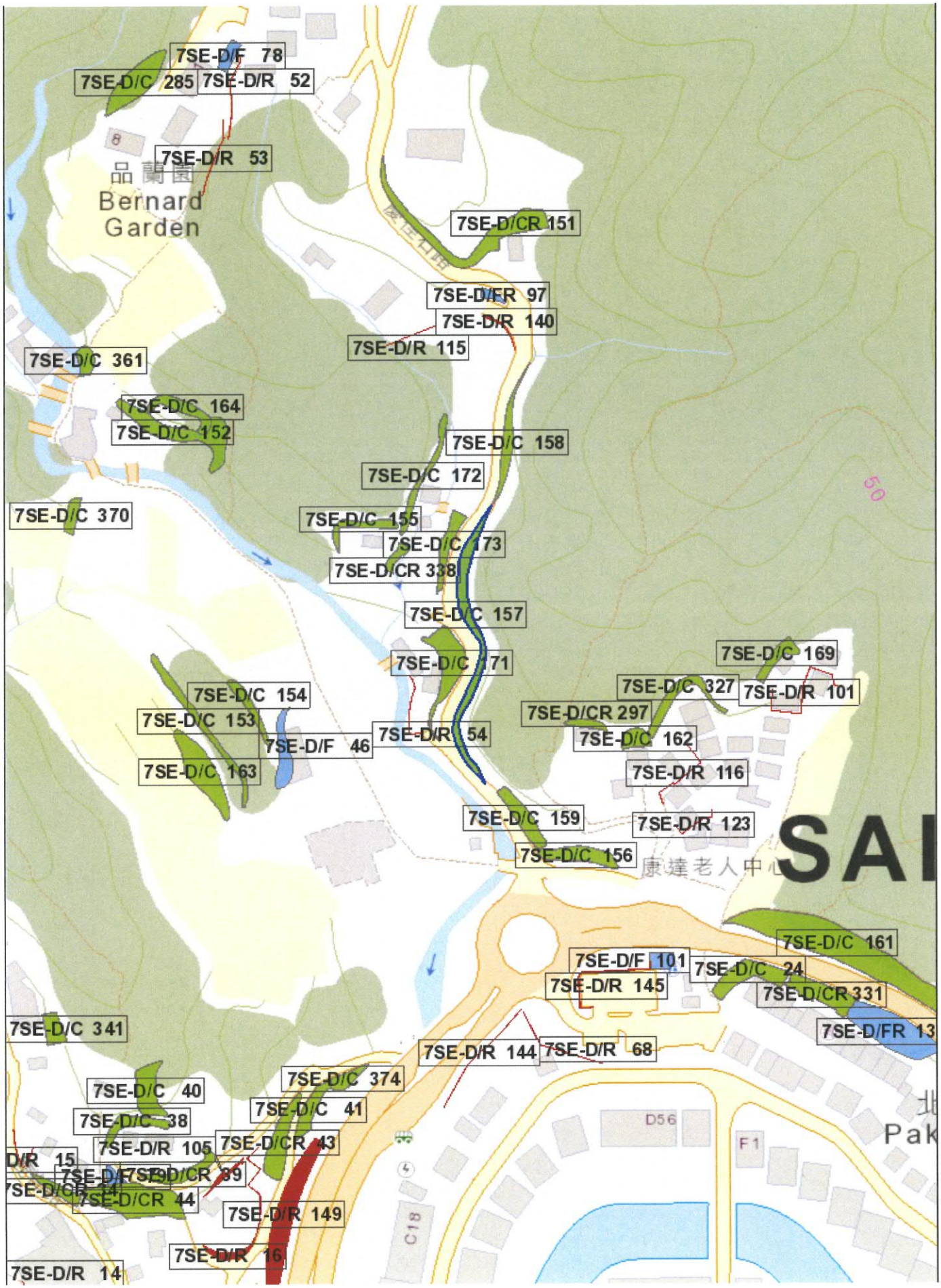
ACTION TO INITIATE PREVENTIVE WORKS

Criterion A / Criterion D:	N/A
Action By:	N/A
Further Study:	Y
Action By:	Mixed

OTHER EXTERNAL ACTION

Check / repair Services:	N
Action By:	N/A
Non-routine Maintenance:	N
Action By:	N/A

PHOTO


7SE-D/F 78
7SE-D/C 285
7SE-D/R 52
7SE-D/R 53
品蘭園
Bernard Garden
7SE-D/CR 151
7SE-D/FR 97
7SE-D/R 140
7SE-D/R 115
7SE-D/C 361
7SE-D/C 164
7SE-D/C 152
7SE-D/C 158
7SE-D/C 172
7SE-D/C 370
7SE-D/C 155
7SE-D/C 173
7SE-D/CR 338
7SE-D/C 157
7SE-D/C 171
7SE-D/C 169
7SE-D/C 327
7SE-D/R 101
7SE-D/C 154
7SE-D/C 153
7SE-D/CR 297
7SE-D/F 46
7SE-D/R 54
7SE-D/C 162
7SE-D/C 163
7SE-D/R 116
7SE-D/C 159
7SE-D/R 123
7SE-D/C 156
康達老人中心
7SE-D/C 161
7SE-D/F 101
7SE-D/C 24
7SE-D/R 145
7SE-D/CR 331
7SE-D/C 341
7SE-D/FR 13
7SE-D/R 144
7SE-D/R 68
7SE-D/C 374
7SE-D/C 40
7SE-D/C 41
7SE-D/C 38
7SE-D/R 105
7SE-D/CR 43
7SE-D/CR 89
7SE-D/CR 44
7SE-D/R 149
7SE-D/R 16
7SE-D/R 14
D56
F1
C18

BASIC INFORMATION

Location:	ADJACENT HING KENG SHEK ROAD, PAK WAI VILLAGE, SAI KUNG.
Date of Formation:	pre-1977
Date of Construction/ Modification:	N/A
Approximate Coordinates:	Easting : 844120 Northing : 824650

CONSEQUENCE-TO-LIFE CATEGORY

Facility at Crest:	Undeveloped green belt
Distance of Facility from Crest (m):	0
Facility at Toe:	Road/footpath with very low traffic density
Distance of Facility from Toe (m):	0
Consequence-to-life Category:	3
Remarks:	N/A

SLOPE PART

(1) Max. Height (m): 6 Length (m): 28 Average Angle (deg): 60

WALL PART

N/A

MAINTENANCE RESPONSIBILITY

Maintenance Type: Government Party: Lands D Agent: Lands D

DETAILS OF SLOPE / RETAINING WALL

Date of Inspection:	14-04-2025
Data Source:	Project Office
Slope Part Drainage:	N/A
Wall Part Drainage:	N/A

SLOPE PART

Slope Part (1)
Surface Protection (%): Bare: 0 Vegetated: 0 Chunam: 0 Shotcrete: 100 Other Cover: 0
Material Description: Material type: Soil & Rock Geology: N/A
Berm: No. of Berms: N/A Min. Berm Width (m): N/A
Weepholes: Size (mm): N/A Spacing (m): N/A

WALL PART

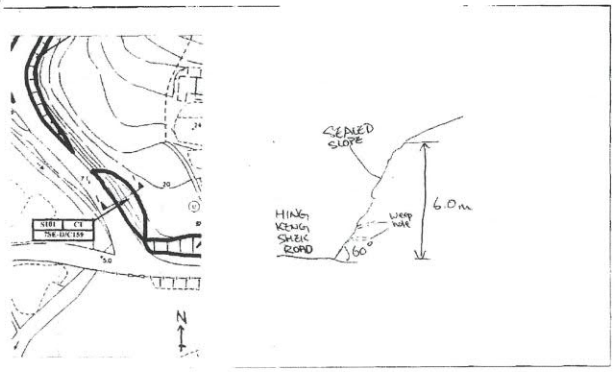
N/A

SERVICES

N/A

STAGE 1 STUDY REPORT

Inspected On:	13-03-1997
Weather:	Mainly Fine
District:	ME



Section No:	1-1
Height (m):	N/A
Type of Toe Facility:	Road/footpath with very low traffic density
Distance from Toe (m):	0
Type of Crest Facility:	Undeveloped green belt
Distance from Crest (m):	0
Consequence Category:	3
Engineering Judgement:	P
Section No:	2-2
Type of Toe Facility:	N/A
Distance from Toe (m):	0
Type of Crest Facility:	N/A
Distance from Crest (m):	0
Consequence Category:	3
Engineering Judgement:	P
Sign of Seepage:	Slope : No signs of seepage Wall : N/A
Criterion A satisfied:	N
Sign of Distress:	Slope : N/A Wall : N/A
Criterion D satisfied:	N
Non-routine maintenance required:	N
Note:	N/A
Masonry wall / Masonry facing:	N

Note:	N/A
Consequence category (for critical section):	3
Observations:	N/A
Emergency Action Required:	N
Action By:	N/A

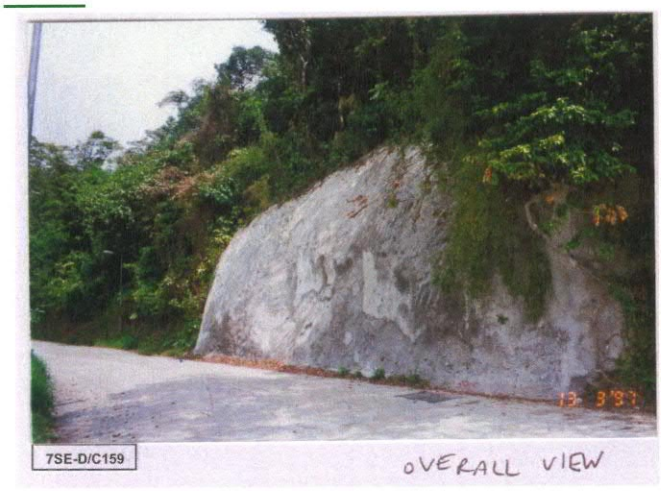
ACTION TO INITIATE PREVENTIVE WORKS

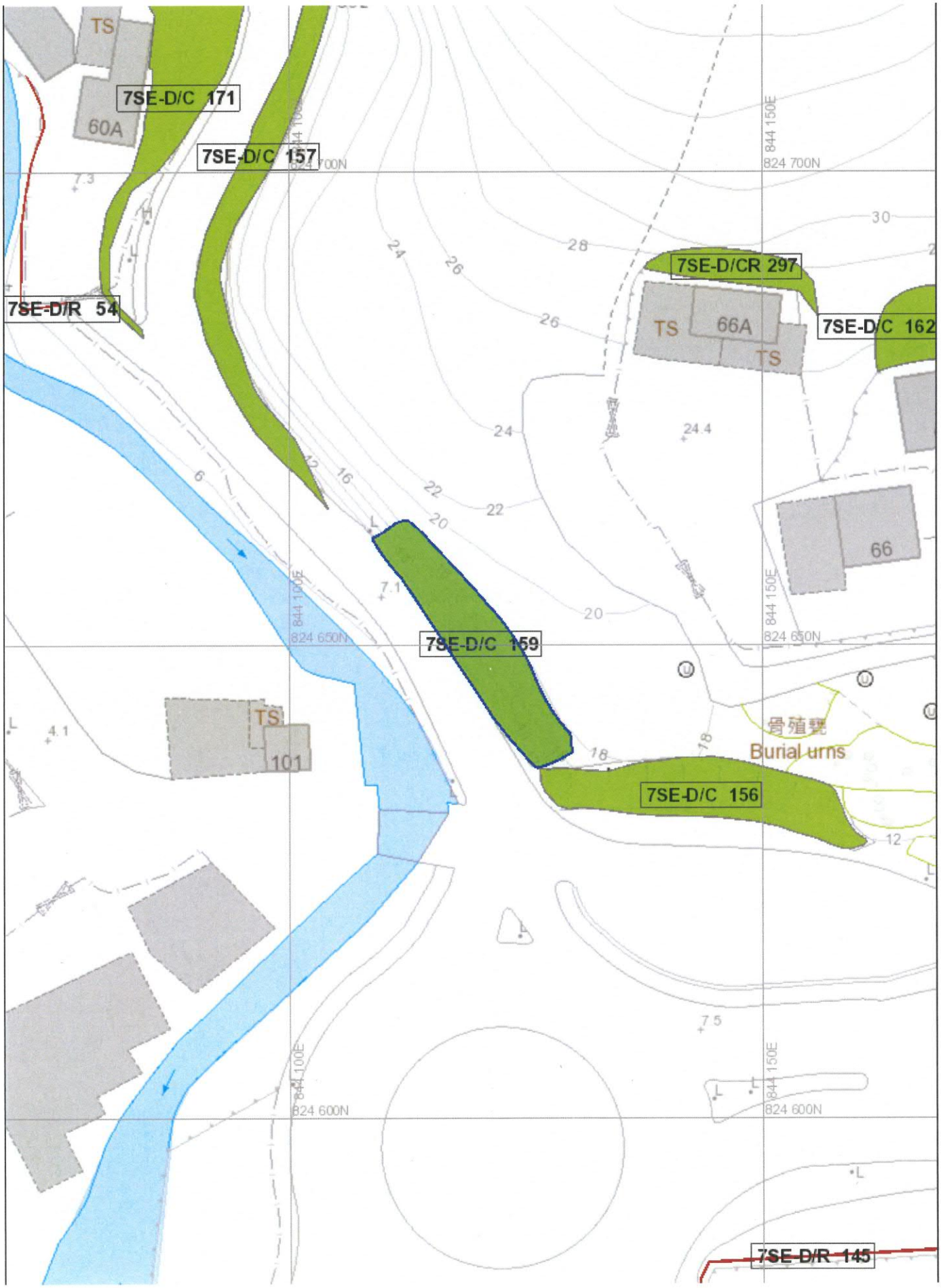
Criterion A / Criterion D:	N/A
Action By:	N/A
Further Study:	Y
Action By:	Mixed

OTHER EXTERNAL ACTION

Check / repair Services:	N
Action By:	N/A
Non-routine Maintenance:	N
Action By:	N/A

PHOTO




7SE-D/C 171
7SE-D/C 157
7SE-D/R 54
7SE-D/CR 297
7SE-D/C 162
7SE-D/C 159
7SE-D/C 156
7SE-D/R 145
TS
60A
66A
66
101
骨殖甕
Burial urns
844 100E
844 150E
824 700N
824 650N
824 600N

BASIC INFORMATION

Location:	West of Hing Keng Shek Road
Date of Formation:	pre-1977
Date of Construction/ Modification:	06-10-2006
Approximate Coordinates:	Easting : 843974 Northing : 824812

CONSEQUENCE-TO-LIFE CATEGORY

Facility at Crest:	Undeveloped green belt
Distance of Facility from Crest (m):	0
Facility at Toe:	Cottage, licensed and squatter area
Distance of Facility from Toe (m):	0.5
Consequence-to-life Category:	1
Remarks:	N/A

SLOPE PART

(1) Max. Height (m): 15 Length (m): 50 Average Angle (deg): 65

WALL PART

N/A

MAINTENANCE RESPONSIBILITY

Maintenance Type: Government Party: Lands D Agent: Lands D

DETAILS OF SLOPE / RETAINING WALL

Date of Inspection:	07-08-2017
Data Source:	EI(Lands D)
Slope Part Drainage:	(1) Position: Crest Size(mm): 225
Wall Part Drainage:	N/A

SLOPE PART

Slope Part (1)

Surface Protection (%):	Bare: 0 Vegetated: 80 Chunam: 0 Shotcrete: 20 Other Cover: 0
Material Description:	Material type: Soil Geology: N/A
Berm:	No. of Berms: N/A Min. Berm Width (m): N/A
Weepholes:	Size (mm): 75 Spacing (m): 1.5

WALL PART

N/A

SERVICES

N/A

PHOTO

7SE-D/C 361
7SE-D/C 164
7SE-D/C 152
7SE-D/C 370
TS
843 850E
844 000E
824 850N
843 950E
824 800N
824 750N
R

BASIC INFORMATION

Location:	Adjacent Hing Keng Shek Road, Sai Kung
Date of Formation:	pre-1977
Date of Construction/ Modification:	N/A
Approximate Coordinates:	Easting : 843975 Northing : 824825

CONSEQUENCE-TO-LIFE CATEGORY

Facility at Crest:	Undeveloped green belt
Distance of Facility from Crest (m):	0
Facility at Toe:	Remote area or abandoned facilities
Distance of Facility from Toe (m):	1
Consequence-to-life Category:	3
Remarks:	N/A

SLOPE PART

(1) Max. Height (m): 6 Length (m): 31 Average Angle (deg): 55

WALL PART

N/A

MAINTENANCE RESPONSIBILITY

Maintenance Type: Government Party: Lands D Agent: Lands D

DETAILS OF SLOPE / RETAINING WALL

Date of Inspection:	13-08-2009
Data Source:	EI(Lands D)
Slope Part Drainage:	N/A
Wall Part Drainage:	N/A

SLOPE PART

Slope Part (1)

Surface Protection (%):	Bare: 0 Vegetated: 100 Chunam: 0 Shotcrete: 0 Other Cover: 0
Material Description:	Material type: Soil & Rock Geology: N/A
Berm:	No. of Berms: N/A Min. Berm Width (m): N/A
Weepholes:	Size (mm): N/A Spacing (m): N/A

WALL PART

N/A

SERVICES

N/A

PHOTO

Powerline
7SE-D/C 361
7SE-D/C 164
7SE-D/C 152
7SE-D/C 370
TS
843 950E
824 850N
844 000E
824 800N

BASIC INFORMATION

Location:	West of Hing Keng Shek Road, Sai Kung
Date of Formation:	post-1977
Date of Construction/ Modification:	06-11-2006
Approximate Coordinates:	Easting : 844050 Northing : 824774

CONSEQUENCE-TO-LIFE CATEGORY

Facility at Crest:	Undeveloped green belt
Distance of Facility from Crest (m):	0
Facility at Toe:	Cottage, licensed and squatter area
Distance of Facility from Toe (m):	0
Consequence-to-life Category:	1
Remarks:	N/A

SLOPE PART

(1) Max. Height (m): 6.8 Length (m): 35 Average Angle (deg): 70

WALL PART

N/A

MAINTENANCE RESPONSIBILITY

Maintenance Type: Government Party: Lands D Agent: Lands D

DETAILS OF SLOPE / RETAINING WALL

Date of Inspection:	19-10-2017
Data Source:	EI(Lands D)
Slope Part Drainage:	(1) Position: Toe Size(mm): 300
Wall Part Drainage:	N/A

SLOPE PART

Slope Part (1)

Surface Protection (%):	Bare: 0 Vegetated: 0 Chunam: 0 Shotcrete: 0 Other Cover: 100
Material Description:	Material type: Soil Geology: N/A
Berm:	No. of Berms: 1 Min. Berm Width (m): 0.4
Weepholes:	Size (mm): 75 Spacing (m): 1.5

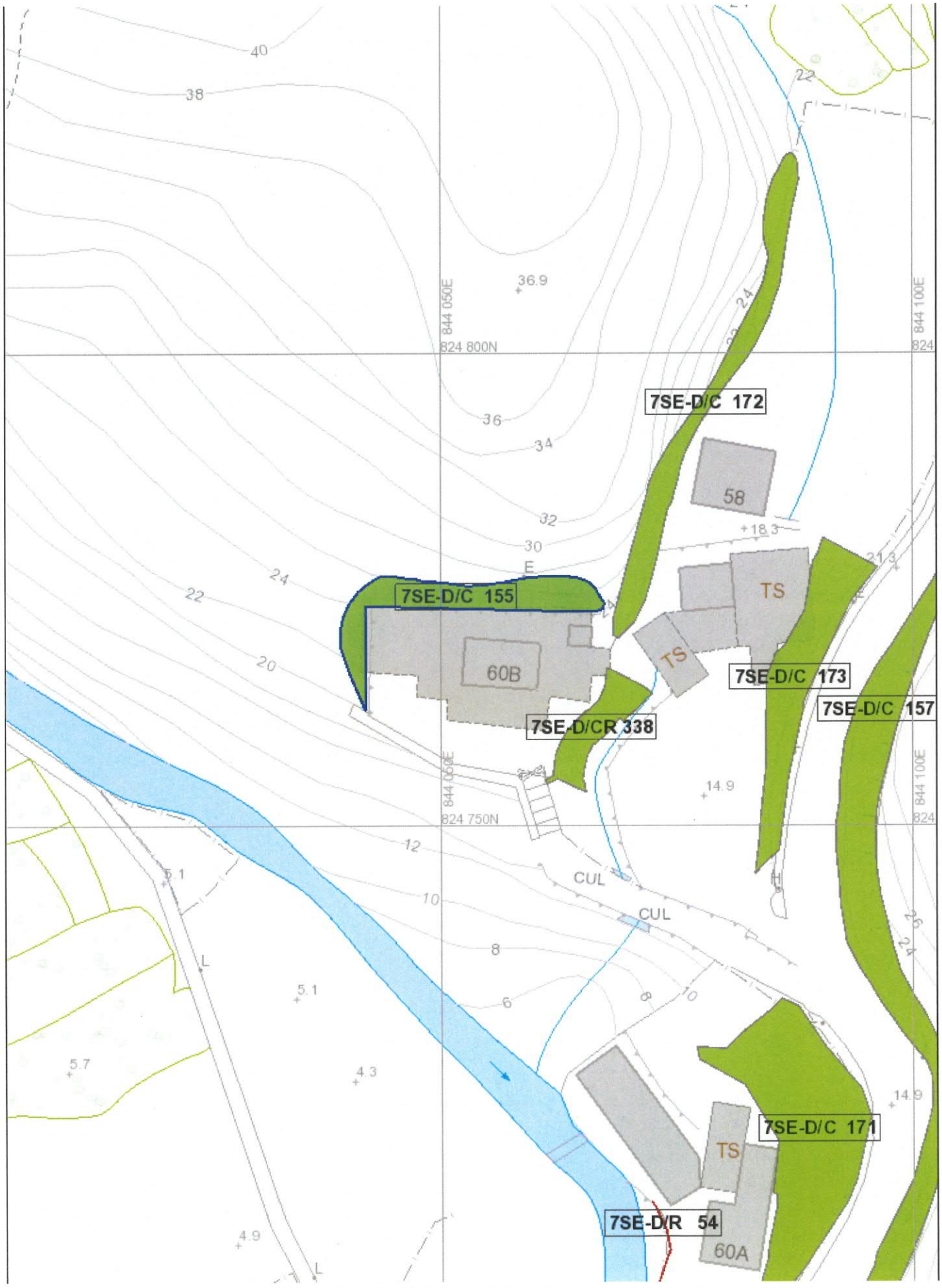
WALL PART

N/A

SERVICES

(1) Utilities Type: Water Main Size (mm): 20 Location: On slope Remark: N/A

PHOTO


7SE-D/C 172
7SE-D/C 155
7SE-D/C 173
7SE-D/C 157
7SE-D/CR 338
7SE-D/C 171
7SE-D/R 54
58
60B
60A
TS
TS
TS
CUL
CUL
844 050E
844 100E
824 800N
824 750N
824
36.9
18.3
14.9
5.1
5.1
5.7
4.3
4.9
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38
36
34
32
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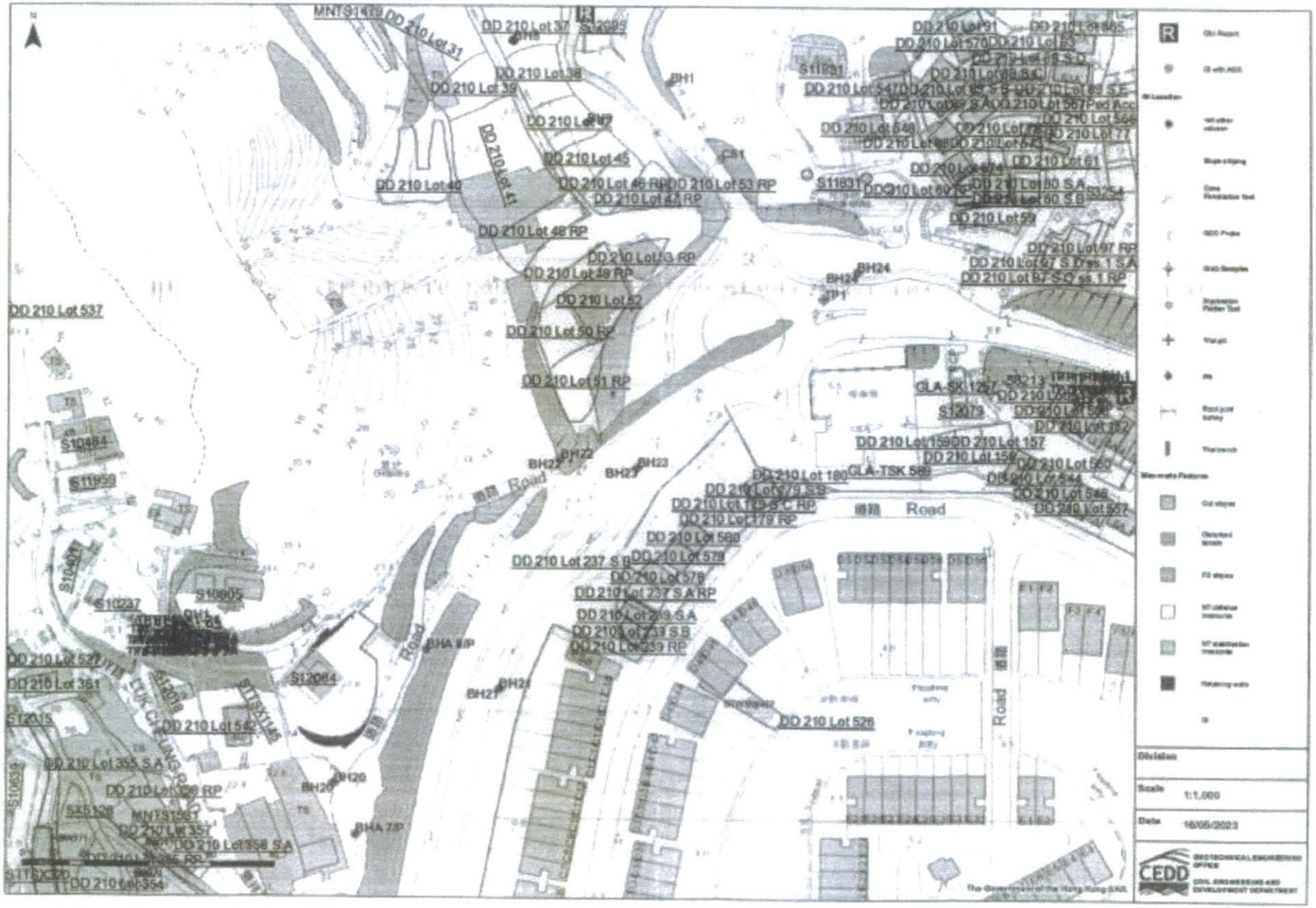
6

Appendix B

Existing Boreholes Information


DD 210 Lot 31
DD 210 Lot 37
DD 210 Lot 38
DD 210 Lot 39
DD 210 Lot 40
DD 210 Lot 41
DD 210 Lot 45
DD 210 Lot 46 RP
DD 210 Lot 47 RP
DD 210 Lot 48 RP
DD 210 Lot 49 RP
DD 210 Lot 50 RP
DD 210 Lot 52
DD 210 Lot 53 RP
DD 210 Lot 537
DD 210 Lot 91 RP
DD 210 Lot 91
DD 210 Lot 570
DD 210 Lot 83
DD 210 Lot 88 S A
DD 210 Lot 88 S B
DD 210 Lot 547
DD 210 Lot 89 S A
DD 210 Lot 89 S B
DD 210 Lot 89 S C
DD 210 Lot 567
DD 210 Lot 566
DD 210 Lot 77
DD 210 Lot 61
DD 210 Lot 60 S A
DD 210 Lot 60 S B
DD 210 Lot 59
DD 210 Lot 97 RP
DD 210 Lot 97 S D ea 1 SA
DD 210 Lot 97 S D ea 1 RP
DD 210 Lot 159
DD 210 Lot 157
DD 210 Lot 158
DD 210 Lot 180
DD 210 Lot 560
DD 210 Lot 544
DD 210 Lot 546
DD 210 Lot 557
DD 210 Lot 179 S B
DD 210 Lot 179 S C RP
DD 210 Lot 179 RP
DD 210 Lot 580
DD 210 Lot 579
DD 210 Lot 578
DD 210 Lot 237 S B
DD 210 Lot 237 S A RP
DD 210 Lot 239 S A
DD 210 Lot 239 S B
DD 210 Lot 239 RP
DD 210 Lot 526
DD 210 Lot 527
DD 210 Lot 381
DD 210 Lot 542
DD 210 Lot 355 S A
DD 210 Lot 356 RP
DD 210 Lot 357
DD 210 Lot 358 S A
DD 210 Lot 354
GLA-SK 1267
GLA-TSK 588
S11831
S12079
S10484
S11959
S10497
S10237
S10905
S12084
S12015
S10639
S11543
S11545
S11546
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S11548
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ISO 9002 : 1994 Certificate No. FQ00321

DRILLHOLE RECORD

HOLE NO. **BH 8**

CONTRACT NO. **GE/99/06**

SHEET 1 of 2

PROJECT **PWP Item 4273DS-Port Shelter Sewerage Stage 3 Phase 3, Ho Chung and Pik Shui Sun Tsuen Sewerage, Ground Investigation**

METHOD **W+RC**	CO-ORDINATES	W.O. No **GE/99/06.59**
MACHINE & No. **DR 77**	**E 844,049.46** **N 824,688.94**	DATE: **17/11/2001** to **19/11/2001**
FLUSHING MEDIUM **WATER**	ORIENTATION **VERTICAL**	GROUND LEVEL **+4.15** mPD

Drilling Progress	Casing size	Water level (m) Shift start/ end	T.C.R.(%)	S.C.R.(%)	R.Q.D.(%)	F.I.	Tests	Samples	Reduced Level	Depth (m)	Legend	Grade	Description
17.11.01	PX							1 I.P. 0.50 / 2 1.00 / 3 1.50 / 4 1.90 2.05	+2.10	2.05			Loose, light yellowish brown (10YR 6/4), silty fine to medium SAND with some angular to subangular fine to medium gravel sized rock fragments. (ALLUVIUM)
			32					T2-101 3.00 T2-101					Light grey (10R 7/1), angular to subangular fine to coarse GRAVEL sized moderately strong tuff fragments. (ALLUVIUM)
			51										
			100				38blows	5 3.50 6 3.95 4.10	+0.65	3.50			Dark grey (5R 4/1), subangular fine to medium GRAVEL sized tuff fragments with a matrix of silty sand. (ALLUVIUM)
	PX HX								+0.05	4.10			Light grey, angular to subangular medium to coarse GRAVEL with much cobble and occasional boulder sized moderately strong to strong tuff fragments. (ALLUVIUM)
			41					T2-101 4.85					
	HX					NA			-1.00	5.15		III	Moderately strong, light grey to light yellowish brown, moderately decomposed coarse ash crystal TUFF. Joints are extremely closely occasionally very closely to closely spaced, rough, undulating and planar, extremely to very narrow, iron and manganese stained and clay infilled (<2-3mm), dipping at 60°-70° and subvertical.
		1.20m at 18:00	98	21	13	>20		T2-101 6.05					
17.11.01 19.11.01		1.10m at 08:00							-2.35	6.50			
			98	32	10	10.0		T2-101 7.35				III/II	Moderately strong to strong, grey, moderately to slightly decomposed coarse ash crystal TUFF. Joints are closely, locally extremely to very closely spaced, rough, undulating and planar, extremely narrow, iron and manganese stained, kaolin infilled (<2mm), dipping at 60°-70° and subvertical.
						>20							
						5.0							
			100	80	47			T2-101 8.10					
			100	67	44			T2-101 9.45					From 8.90-9.45m : Non intact.
						NI			-5.30	9.45			
						7.7		T2-101				II	Strong, grey to dark grey, slightly decomposed coarse ash crystal TUFF.

Small Disturbed Sample
Piston Sample
U76 Undisturbed Sample
U100 Undisturbed Sample
Mazier Sample
SPT Liner Sample
Water Sample

Standard Penetration Test
In-situ Vane Shear Test
Permeability Test
Impression Packer Test
Packer Test
Piezometer Tip
Standpipe Tip

LOGGED **P. Barry**
DATE **20/11/2001**
CHECKED **J. Morrison**
DATE **22/11/2001**

REMARKS
1. Prior to drilling an inspection pit was excavated by hand to 1.50m depth.

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DRILLHOLE RECORD

HOLE NO. **BH 8**

CONTRACT NO. **GE/99/06**

SHEET **2** of **2**

PROJECT **PWP Item 4273DS-Port Shelter Sewerage Stage 3 Phase 3, Ho Chung and Pik Shui Sun Tsuen Sewerage, Ground Investigation**

METHOD **W+RC**	CO-ORDINATES **E 844,049.46 N 824,688.94**	W.O. No **GE/99/06.59**
MACHINE & No. **DR 77**		DATE: **17/11/2001** to **19/11/2001**
FLUSHING MEDIUM **WATER**	ORIENTATION **VERTICAL**	GROUND LEVEL **+4.15** mPD

Drilling Progress	Casing size	Water level (m) Shift start/ end	T.C.R.(%)	S.C.R.(%)	R.Q.D.(%)	F.I.	Tests	Samples	Reduced Level	Depth (m)	Legend	Grade	Description
10			100	100	77	NI 2.1		T2-101 10.95					Joints are closely becoming medium spaced, planar, extremely narrow, kaolin coated and occasionally kaolin infilled (<2mm), dipping at 45°-55°, 60°-70° and subvertical. From 10.15-10.50m : Non intact.
11													
12			100	90	73			T2-101 12.45					
13			100	100	76			T2-101 13.90					
14		1.15m at 18:00	100	100	89			T2-101 14.80	-10.65	14.80			
19.11.01													End of Investigation hole at 14.80m.
15													
16													
17													
18													
19													
20													

Small Disturbed Sample
Piston Sample
U76 Undisturbed Sample
U100 Undisturbed Sample
Mazier Sample
SPT Liner Sample
Water Sample

Standard Penetration Test
In-situ Vane Shear Test
Permeability Test
Impression Packer Test
Packer Test
Piezometer Tip
Standpipe Tip

LOGGED **P. Barry**

DATE **20/11/2001**

CHECKED **J. Morrison**

DATE **22/11/2001**

REMARKS

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DRILLHOLE RECORD

HOLE NO. **BH 9**

CONTRACT NO. **GE/99/06**

SHEET **1** of **2**

PROJECT **PWP Item 4273DS-Port Shelter Sewerage Stage 3 Phase 3, Ho Chung and Pik Shui Sun Tsuen Sewerage, Ground Investigation**

METHOD **W+RC**	CO-ORDINATES	W.O. No **GE/99/06.59**
MACHINE & No. **DR 77**	**E 844,072.77** **N 824,663.34**	DATE: **21/11/2001** to **22/11/2001**
FLUSHING MEDIUM **WATER**	ORIENTATION **VERTICAL**	GROUND LEVEL **+4.06** mPD

Drilling Progress	Casing size	Water level (m) Shift start/ end	T.C.R.(%)	S.C.R.(%)	R.Q.D.(%)	F.I.	Tests	Samples	Reduced Level	Depth (m)	Legend	Grade	Description
21.11.01	PX							1 0.50 I.P. 2 1.00 3 1.50					Soft to firm, yellowish brown (10YR 5/6) and light grey (10R 7/1), sandy SILT with some angular fine to coarse gravel sized weak to moderately strong tuff fragments. (FILL)
			0				20blows 21blows	4 1.90 2.00 5 2.45 6 2.50 7 2.95	+1.06	3.00			
			100				(1, 2, 3, 4, 4, 4) N = 15	8 3.10 9 3.40 10 4.00				V	Extremely weak, red (10R 5/8) mottled yellowish brown, completely decomposed coarse ash crystal TUFF. (Firm to stiff, slightly sandy clayey SILT with occasional angular fine to medium gravel sized rock fragments)
			100					11 5.00					
			100				(2, 2, 3, 5, 5, 6) N = 19	12 5.65 13 5.95 14 6.00	-1.94	6.00		V/IV	Extremely weak to weak, light yellowish brown (2.5Y 6/4), completely to highly decomposed coarse ash crystal TUFF. (Sandy angular fine to coarse GRAVEL sized weak rock fragments)
	PX							15 6.90 7.00	-2.94	7.00			
			95	30	0	>20		T2-101 7.50				III	Moderately strong, light yellowish brown, moderately decomposed highly micro fractured coarse ash crystal TUFF. Joints are extremely very closely spaced, rough, planar, extremely narrow, iron and manganese stained, dipping at 35°-45°, 60°-70° and subvertical.
			100	100	50			T2-101 7.80	-3.94	8.00			
			100	85	38	8.8		T2-101 8.80				III/II	Moderately strong to strong, grey, moderately to slightly decomposed coarse ash crystal TUFF. Joints are very closely to closely spaced, rough, undulating and planar, extremely to very narrow, iron and manganese stained, kaolin infilled (<2-3mm), dipping at 35°-45°, 60°-70° and subvertical. From 8.80-9.10m : Extremely closely spaced joints.
			95	73	37	>20 6.7		T2-101					

Small Disturbed Sample
Piston Sample
U76 Undisturbed Sample
U100 Undisturbed Sample
Mazier Sample
SPT Liner Sample
Water Sample
Standard Penetration Test
In-situ Vane Shear Test
Permeability Test
Impression Packer Test
Packer Test
Piezometer Tip
Standpipe Tip

LOGGED **P. Barry**
DATE **23/11/2001**
CHECKED **J. Morrison**
DATE **01/12/2001**

REMARKS
1. Prior to drilling an inspection pit was excavated by hand to 1.50m depth.

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DRILLHOLE RECORD

HOLE NO. **BH 9**

CONTRACT NO. **GE/99/06**

SHEET **2** of **2**

PROJECT **PWP Item 4273DS-Port Shelter Sewerage Stage 3 Phase 3, Ho Chung and Pik Shui Sun Tsuen Sewerage, Ground Investigation**

METHOD **W+RC**	CO-ORDINATES **E 844,072.77 N 824,663.34**	W.O. No **GE/99/06.59**
MACHINE & No. **DR 77**		DATE: **21/11/2001** to **22/11/2001**
FLUSHING MEDIUM **WATER**	ORIENTATION **VERTICAL**	GROUND LEVEL **+4.06** mPD

Drilling Progress	Casing size	Water level (m) Shift start/ end	T.C.R.(%)	S.C.R.(%)	R.Q.D.(%)	F.I.	Tests	Samples	Reduced Level	Depth (m)	Legend	Grade	Description
10								T2-101 10.30					As sheet 1 of 2. From 10.30-10.40m : Non intact.
11		0.30m at 18:00	100	91	53	NI 1.7		T2-101 11.45	-6.94	11.00		II	Strong, grey to dark grey, slightly decomposed coarse ash crystal TUFF. Joints are closely to medium spaced, rough, planar, extremely narrow, chlorite coated, dipping at 35°-45°, 60°-70° and subvertical.
21.11.01 / 22.11.01 12		1.25m at 08:00	100	100	100			T2-101 12.85					
13			100	100	70			T2-101 14.35					
14						5.5							
15			100	100	59			T2-101 15.80					
16			100	92	54			T2-101 17.19	-13.04	17.10			
17 22.11.01		1.23m at 18:00											End of investigation hole at 17.10m.
18													
19													
20													

Small Disturbed Sample
Piston Sample
U76 Undisturbed Sample
U100 Undisturbed Sample
Mazier Sample
SPT Liner Sample
Water Sample

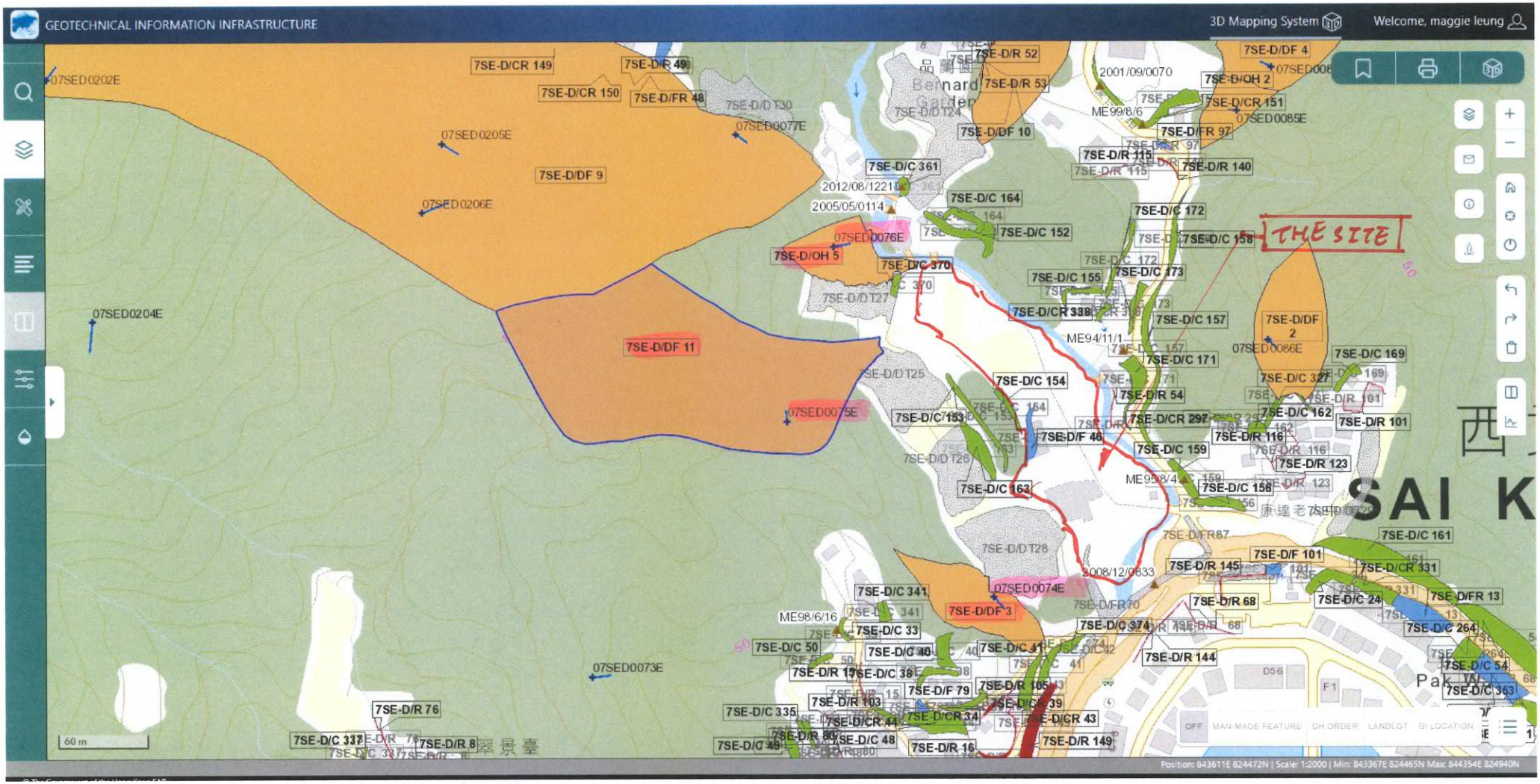
Standard Penetration Test
In-situ Vane Shear Test
Permeability Test
Impression Packer Test
Packer Test
Piezometer Tip
Standpipe Tip

LOGGED **P. Barry**
DATE **23/11/2001**
CHECKED **J. Morrison**
DATE **01/12/2001**

REMARKS

Appendix C

ENTLI and HLC from GInfo


GEOTECHNICAL INFORMATION INFRASTRUCTURE
3D Mapping System
Welcome, maggie leung
THE SITE
7SE-D/DF 11
7SE-D/DF 9
7SE-D/CR 149
7SE-D/CR 150
7SE-D/FR 48
7SE-D/R 49
7SE-D/R 52
7SE-D/R 53
7SE-D/DF 10
7SE-D/C 361
7SE-D/C 164
7SE-D/C 152
7SE-D/OH 5
7SE-D/C 370
7SE-D/C 172
7SE-D/C 158
7SE-D/C 155
7SE-D/C 173
7SE-D/C 338
7SE-D/C 157
7SE-D/C 171
7SE-D/C 154
7SE-D/R 54
7SE-D/C 153
7SE-D/CR 297
7SE-D/F 46
7SE-D/C 159
7SE-D/C 163
7SE-D/C 162
7SE-D/R 101
7SE-D/R 116
7SE-D/R 123
7SE-D/C 169
7SE-D/C 327
7SE-D/DF 2
7SE-D/DF 4
7SE-D/OH 2
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7SE-D/FR 97
7SE-D/R 115
7SE-D/R 140
7SE-D/C 341
7SE-D/DF 3
7SE-D/C 33
7SE-D/C 50
7SE-D/C 40
7SE-D/C 41
7SE-D/R 17
7SE-D/C 38
7SE-D/F 79
7SE-D/R 105
7SE-D/R 103
7SE-D/C 39
7SE-D/C 335
7SE-D/CR 34
7SE-D/CR 43
7SE-D/CR 44
7SE-D/C 48
7SE-D/R 16
7SE-D/R 149
7SE-D/C 337
7SE-D/R 8
7SE-D/R 76
7SE-D/C 374
7SE-D/R 144
7SE-D/R 145
7SE-D/F 101
7SE-D/C 161
7SE-D/CR 331
7SE-D/C 24
7SE-D/FR 13
7SE-D/C 264
7SE-D/C 54
7SE-D/C 363
07SED0202E
07SED0205E
07SED0206E
07SED0204E
07SED0077E
07SED0076E
07SED0075E
07SED0073E
07SED0074E
07SED0086E
07SED0085E
2001/09/0070
2012/08/1221
2005/05/0114
ME99/8/6
ME94/11/1
ME95/8/4
ME98/6/16
2008/12/0833
SAI K
60 m
Position: 843611E 824472N | Scale: 1:2000 | Min: 843367E 824465N Max: 844354E 824940N

ENTLI & MLC

Historical Landslide Catchment

Name	Value
Catchment No.	7SE-D/DF 3
Plan area of the catchment (Sq. m)	2768.70312927
Maximum elevation difference (m)	40
The plan area of the catchment with gradient less than 15 degree (Sq. m)	194.443969406
Site visit for the catchment	Y
Total number of relict ENTLI records within the catchment	1
Total number of recent ENTLI records within the catchment	0
The length of the longest relict ENTLI record within the catchment (m)	11.18
The length of the longest recent ENTLI record within the catchment (m)	0
The length of the longest ENTLI record within the catchment (m)	11.18
The total length of the all ENTLI record within the catchment (m)	11

ENTLI Crown / Trail

Name	Value
ENTLI No.	07SED0074E
Slide ID	07SEDX0013
Type of slides	Relict
Action	A
Width of main scarp	9.5
Length of landslide source	11
Slope	45
Vegetation cover	Completely in grass
Year landslide first observed	1963
Elevation of landslide crown	32
Elevation of landslide toe	26
Elevation difference of landslide trail	6
Gully	N
Relict class	Depression related to drainage line (10% certain)
Easting	843994.155676
Northing	824571.578318

Historical Landslide Catchment

Name	Value
Catchment No.	7SE-D/DF 11
Plan area of the catchment (Sq. m)	19668
Maximum elevation difference (m)	75
The plan area of the catchment with gradient less than 15 degree (Sq. m)	0
Site visit for the catchment	Y
Total number of relict ENTLI records within the catchment	1
Total number of recent ENTLI records within the catchment	0
The length of the longest relict ENTLI record within the catchment (m)	8
The length of the longest recent ENTLI record within the catchment (m)	0
The length of the longest ENTLI record within the catchment (m)	8
The total length of the all ENTLI record within the catchment (m)	8

ENTLI Crown / Trail

Name	Value
ENTLI No.	07SED0075E
Slide ID	07SEDX0014
Type of slides	Relict
Action	A
Width of main scarp	14
Length of landslide source	7.5
Slope	39
Vegetation cover	Shrubs and trees
Year landslide first observed	1963
Elevation of landslide crown	57
Elevation of landslide toe	49
Elevation difference of landslide trail	8
Gully	N
Relict class	Broad depression (10% certain)
Easting	843857.473781
Northing	824688.2476

Historical Landslide Catchment

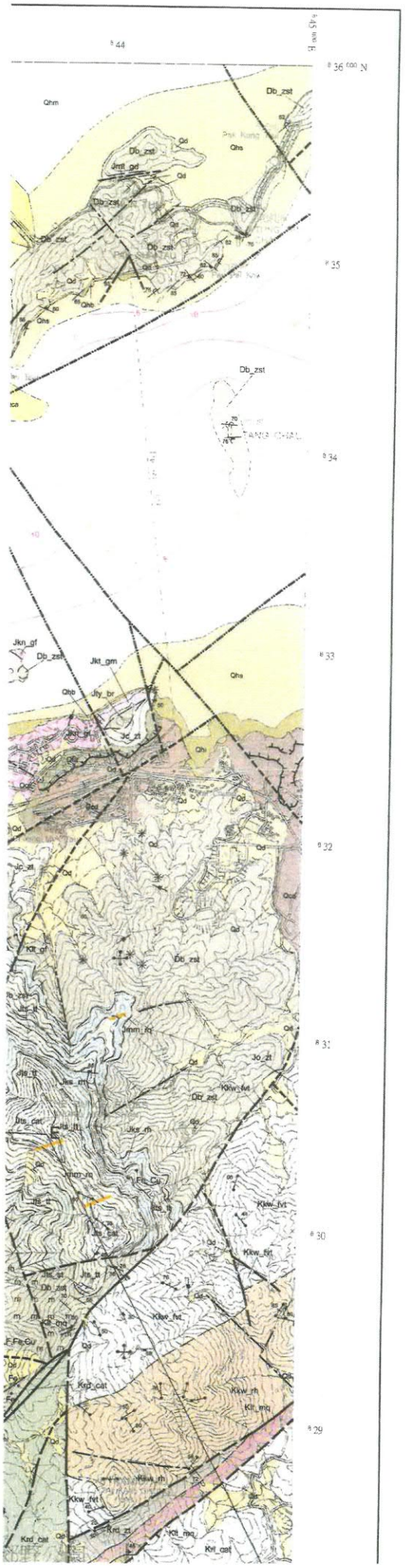
Name	Value
Catchment No.	7SE-D/OH 5
Plan area of the catchment (Sq. m)	2190.91106044
Maximum elevation difference (m)	51
The plan area of the catchment with gradient less than 15 degree (Sq. m)	0
Site visit for the catchment	Y
Total number of relict ENTLI records within the catchment	1
Total number of recent ENTLI records within the catchment	0
The length of the longest relict ENTLI record within the catchment (m)	11.69
The length of the longest recent ENTLI record within the catchment (m)	0
The length of the longest ENTLI record within the catchment (m)	11.69
The total length of the all ENTLI record within the catchment (m)	12

ENTLI Crown / Trail

Name	Value
ENTLI No.	07SED0076E
Slide ID	07SEDX0015
Type of slides	Relict
Action	A
Width of main scarp	16
Length of landslide source	11.5
Slope	47
Vegetation cover	Completely in grass
Year landslide first observed	1963
Elevation of landslide crown	36
Elevation of landslide toe	25
Elevation difference of landslide trail	11
Gully	N
Relict class	Broad depression (10% certain)
Easting	843888.557203
Northing	824804.065281

Appendix D

Geology Map from GInfo



HONG KONG GEOLOGICAL SURVEY

Sheet 7
SOLID AND SUPERFICIAL GEOLOGY

Series HGM20
Scale 1:20 000

SUPERFICIAL DEPOSITS

AGE (Millions of years)			GENETIC CLASSIFICATION OR NAMED DIVISIONS			PRINCIPAL MATERIALS
0	QUATERNARY	HOLOCENE	FANLING FORMATION	Fill; sanitary fill		Natural earth and waste
				Alluvium	Qfa	Clay, silt, sand and gravel; well-sorted to semi-sorted
			HANG HAU FORMATION	Beach deposits	Qhb	Sand
				Intertidal deposits	Qhi	Silt, sand and clay
				Marine mud	Qhm	Soft to very soft mud; some sand
				Marine sand	Qhs	Sand; some gravel and sand
		PLEISTOCENE AND HOLOCENE	UNDIFFERENTIATED	Colluvium	Qd	Silt, sand and gravel with boulders
		PLEISTOCENE	CHEK LAP KOK FORMATION	Alluvium	Qca	Silt, sand, gravel and boulders
				Colluvium	Qcd	Sand, gravel, cobbles and boulders in silt matrix
1.8	JURASSIC TO CRETACEOUS				b	

VOLCANIC ROCKS

AGE (Millions of years)							
140	CRETACEOUS	EARLY	KAU SAI CHAU VOLCANIC GROUP	CLEAR WATER BAY FORMATION	Eutaxitic fine ash vitric tuff	Kkw_fvt	
					Flow-banded porphyritic rhyolite lava	Kkw_rh	
			REPULSE BAY VOLCANIC GROUP	CHE KWU SHAN FORMATION	Eutaxitic fine ash vitric tuff	Krc_fvt	
				MOUNT DAVIS FORMATION	Coarse ash crystal tuff	Krd_cat	
					Tuffaceous siltstone	Krd_zt	
					Feldsparphyric rhyolite, mainly dykes	Krd_rf	
					Quartzphyric rhyolite, mainly dykes	Krd_rq	
144				LONG HARBOUR FORMATION	Coarse ash crystal tuff	Krl_cat	
					Tuffaceous sandstone	Krl_st	

GRANITOID ROCKS

LION ROCK SUITE	TEI TONG TSUI QUARTZ MONZONITE	Klt_lq	Quartz latite	
		Klt_rf	Feldsparphyric rhyolite	
		Klt_gf	Fine-grained granite	
		Klt_mq	Quartz monzonite	
CHEUNG CHAU SUITE	SHUI CHUEN O GRANITE	Kcs_gf	Dominantly porphyritic fine-grained granite	
		Kcs_gm	Dominantly equigranular medium-grained granite with some porphyritic fine-grained granite	
		Kcs_gc	Dominantly coarse-grained granite	
		Kcu_gd	Undifferentiated porphyritic medium-grained granodiorite	
KWAI CHUNG SUITE	SHA TIN GRANITE	Jkt_gf	Fine-grained biotite granite	
		Jkt_gm	Medium-grained biotite granite	
		Jkt_gc	Coarse-grained biotite granite	
	NEEDLE HILL GRANITE	Jkn_gf	Dominantly porphyritic fine-grained granite with some equigranular medium-grained granite	
	EAST LANTAU RHYOLITE	Jko_rq	Quartzphyric rhyolite to porphyritic granite dykes	
	EAST LANTAU RHYODACITE	Jkd_rf	Feldsparphyric rhyodacite to porphyritic granite dykes	
	SHAM CHUNG RHYOLITE	Jks_rh	Flow-banded porphyritic rhyolite sill	
LAMMA SUITE	CHEK MUN RHYOLITE	Jmm_rq	Quartzphyric rhyolite dykes	
	TAI PO GRANODIORITE	Jmt_rf	Feldsparphyric rhyolite dykes	
		Jmt_gd	Porphyritic medium- and fine-grained granodiorite	

MINOR INTRUSIVE ROCKS

Undifferentiated mafic to intermediate dykes, dominantly basaltic andesite and andesite

Textural Modification

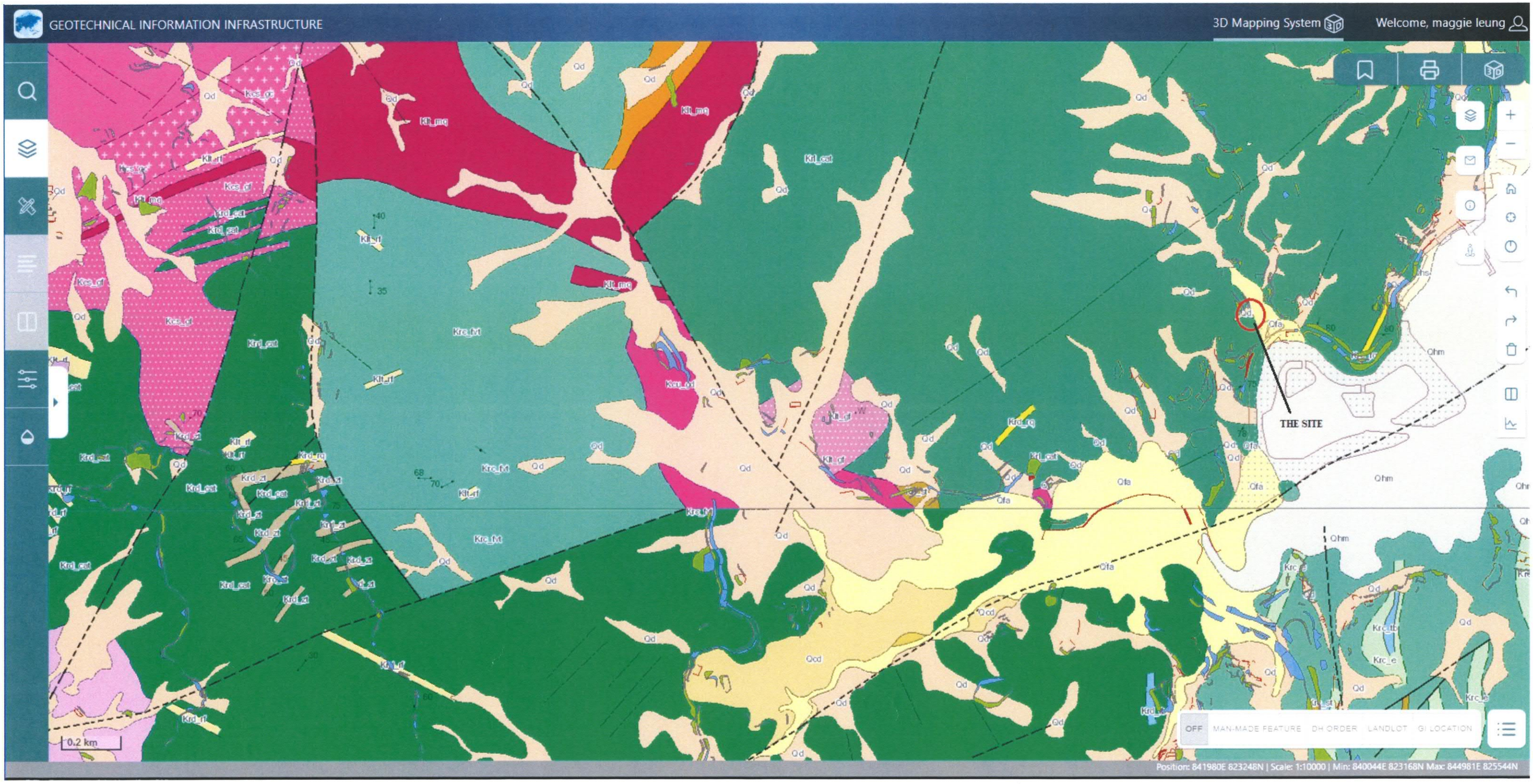
Inequigranular texture

JURASSIC

AGE (Millions of years)							
146	LATE						
148	MIDDLE	TSUEN WAN VOLCANIC GROUP	TAI MO SHAN FORMATION	Fine ash vitric tuff	Jtm_fvt		
				Lapilli lithic-bearing coarse ash crystal tuff	Jtm_cat		
				Tuffaceous siltstone	Jtm_zt		
			SHING MUN FORMATION	Lapilli lithic-bearing coarse ash crystal tuff	Jts_cat		
				Tuff breccia	Jts_bt		
				Tuffite	Jts_tt		
				Tuffaceous sandstone	Jts_st		
				Tuffaceous siltstone	Jts_zt		
164			YIM TIN TSAI FORMATION	Lapilli lithic-bearing coarse ash crystal tuff	Jty_cat		
				Sedimentary breccia	Jty_br	m m m m m m	Contact metamorphism
				Tuffite	Jty_tt		
165				Tuffaceous siltstone	Jty_zt		Thermally altered tuff

SEDIMENTARY ROCKS

AGE (Millions of years)					
	EARLY TO MIDDLE		TAI O FORMATION	Grey to red, fine-grained sandstone and siltstone	Jo_zt
				Grey to black laminated siltstone	



GEOLOGICAL MAP (2nd ED. AFTER 2008)

SOLID GEOLOGY

Appendix E

Summary of API

Summary of API

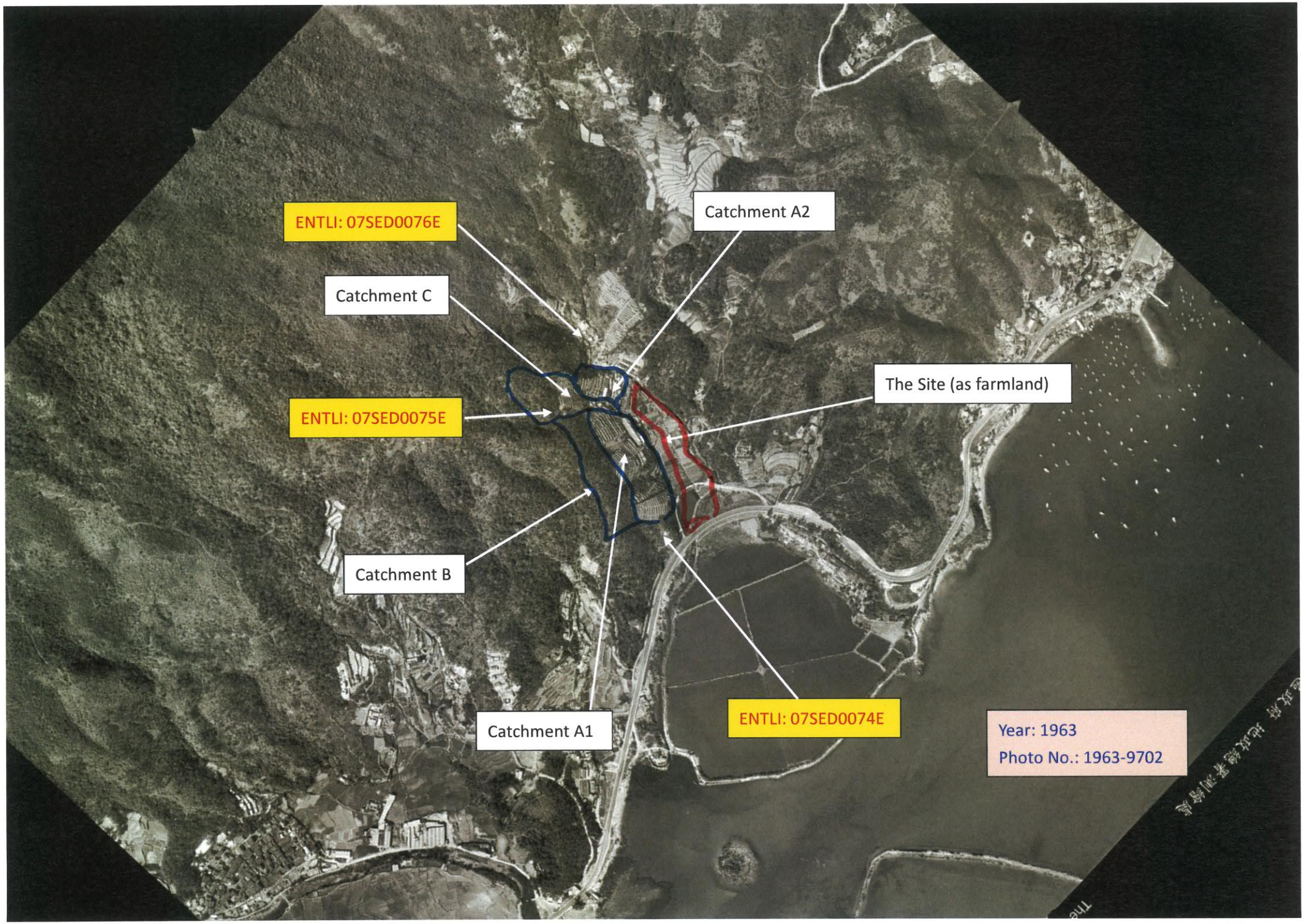
Year	Photographic Reference no.	Activities	Observations
1963	1963-9701 1963-9702	3900	The usage of land in the Site is farmland. Catchment A1 & A2 are also farmland. 3 nos. of Enhanced Natural Terrain Landslide Inventory (ENTLI) with Historical Landslide Catchment (HLC) are found from Ginfo.
1964	1964-4532	1800	The Site, Catchment A1 & A2 are farmland. Catchment B & C were fully covered by vegetation.
1968	1968-0898 1968-0899	2000	The Site, Catchment A2 are farmland. Catchment A1 was started to cover by vegetation/ trees and had been abandoned. Catchment B & C were fully covered by vegetation.
1974	09302	4000	The Site, Catchment A2 are farmland. Catchment A1, B & C were fully covered by vegetation. Catchment A2 was started to cover by vegetation/ trees and had been abandoned
1977	20026	4000	The Site is farmland. Catchments under study were fully covered by vegetation.
1978	23149	4000	The Site is farmland Catchments under study were fully covered by vegetation.
1979	25705	2500	The Site is farmland Catchments under study were fully covered by vegetation.
1980	29666	4000	The Site is farmland Catchments under study were fully covered by vegetation.
1982	43262	4000	The Site is farmland Catchments under study were fully covered by vegetation.

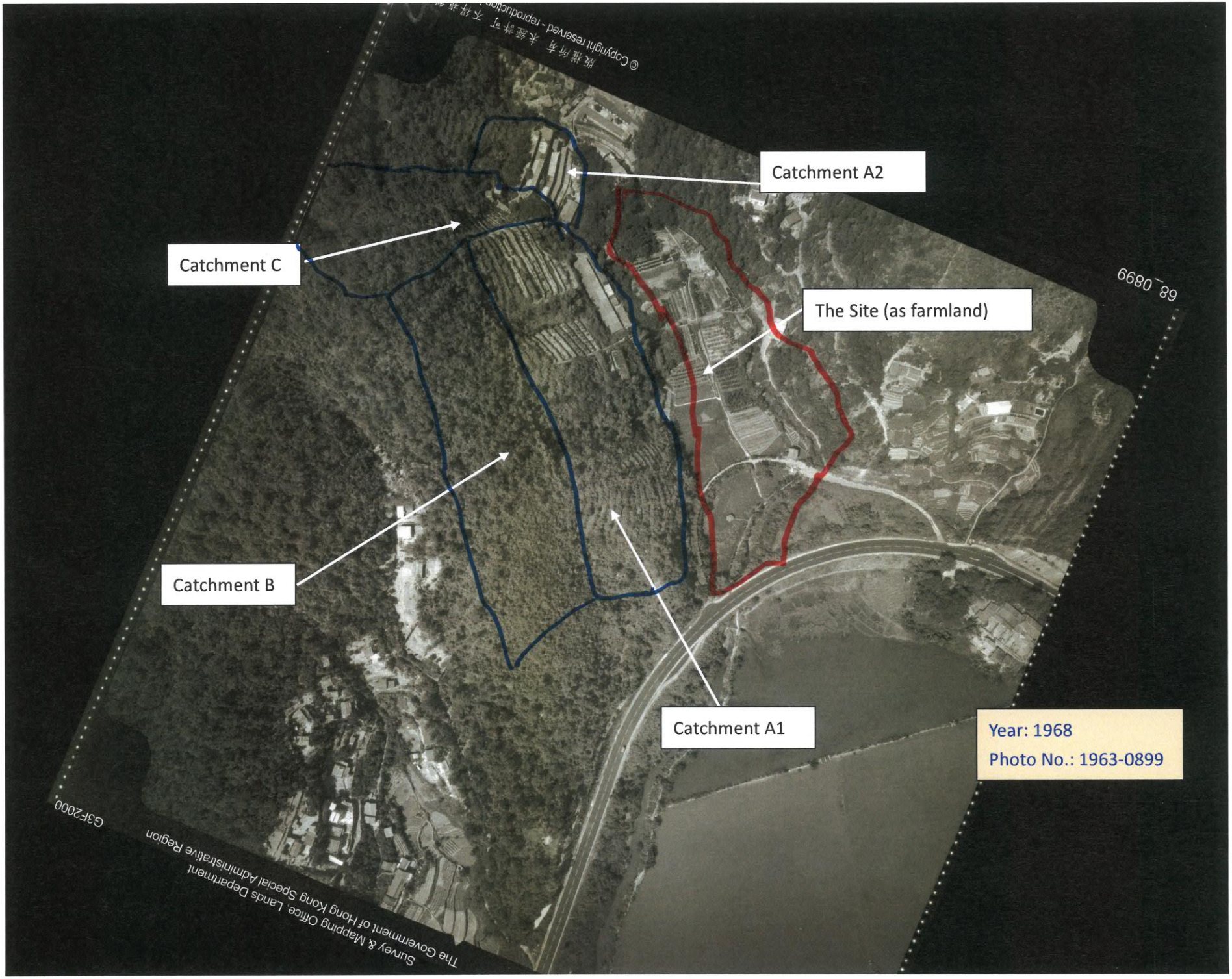
Year	Photographic Reference no.	Activities	Observations
1983	50643	4000	Middle part was farmland and other parts of the Site was started to cover by vegetation/ trees Catchments under study were fully covered by vegetation.
1984	55367	4000	Middle part of the Site was farmland. Other parts of the Site and Catchments under study were fully covered by vegetation.
1986	A05256	4000	Middle part of the Site was farmland. Other parts of the Site and Catchments under study were fully covered by vegetation.
1987	A08855	4000	Middle part of the Site was farmland. Other parts of the Site and Catchments under study were fully covered by vegetation.
1988	A15444	4000	Middle part of the Site was farmland. Other parts of the Site and Catchments under study were fully covered by vegetation.
1989	A17757	4000	Middle part of the Site was farmland. Other parts of the Site and Catchments under study were fully covered by vegetation.
1990	A21734	2000	Middle part of the Site was started to cover by vegetation/ trees. Other parts of the Site and Catchments under study were fully covered by vegetation.
1991	A29309	3000	The Site and Catchments under study were fully covered by vegetation.
1993	CN03209	4000	Some squatters found in the Site. Catchments under study were fully covered by vegetation.
1994	CN06606	3300	Some squatters found in the Site. Catchments under study were fully covered by vegetation.
1995	CN10978	2500	Some squatters found in the Site. Catchments under study were fully covered by vegetation.

Year	Photographic Reference no.	Activities	Observations
1996	CN15116	3500	Some squatters found in the Site. Catchments under study were fully covered by vegetation.
1997	CN16771	4000	Some squatters found in the Site. Catchments under study were fully covered by vegetation.
1998	CN21228	4000	Some squatters found in the Site. Catchments under study were fully covered by vegetation.
1999	CN23114	2500	Some squatters found in the Site. Catchments under study were fully covered by vegetation.
2000	CN26681	4000	Public works (Port Shelter Sewerage Stage 3, Ph. 3 – GE/99/06) was commenced in the middle of the Site. Some squatters found in the Site. Catchments under study were fully covered by vegetation.
2001	CW32429	4000	GI for Public works GE/99/06 was commenced in the middle of the Site Some squatters found in the Site. Catchments under study were fully covered by vegetation.
2002	CW38786	3000	Some squatters found in the Site. Catchments under study were fully covered by vegetation.
2003	CW52903	4000	New Road (Hing Keng Shek Road) beside the Site is formed Some squatters found in the Site. Catchments under study were fully covered by vegetation.
2004	CW52903	4000	Some squatters found in the Site. Catchments under study were fully covered by vegetation.

Year	Photographic Reference no.	Activities	Observations
2005	CW63913 CW64565	2500	Some squatters found in the Site. Catchments under study were fully covered by vegetation.
2006	CW52903	4000	Some squatters found in the Site. Catchments under study were fully covered by vegetation.
2007	CS09320	4000	Some squatters found in the Site. Catchments under study were fully covered by vegetation.
2008	CS22404	6000	Some squatters found in the Site. Catchments under study were fully covered by vegetation.
2009	CS24367	6000	Some squatters found in the Site. Catchments under study were fully covered by vegetation.
2010	CS29288	6000	Some squatters found in the Site. Catchments under study were fully covered by vegetation.
2011	CS35169	6000	Some squatters found in the Site. Catchments under study were fully covered by vegetation.
2012	CS39288	6000	Some squatters found in the Site. Catchments under study were fully covered by vegetation.
2013	CS45139	6000	Some squatters found in the Site. Catchments under study were fully covered by vegetation.
2014	CS48747 CS48748	6000	Some squatters found in the Site. Catchments under study were fully covered by vegetation.
2015	CS57777	6000	Some squatters found in the Site. Catchments under study were fully covered by vegetation.

Year	Photographic Reference no.	Activities	Observations
2016	CS64065	6000	Some squatters found in the Site. Catchments under study were fully covered by vegetation.
2019	E068813C	6900	Some squatters found in the Site. Catchments under study were fully covered by vegetation.
2020	E097551C	6900	Some squatters found in the Site. Catchments under study were fully covered by vegetation.
2021	E129664C	6900	Some squatters found in the Site. Catchments under study were fully covered by vegetation.
2022	E181548C	3000	Some squatters found in the Site. Catchments under study were fully covered by vegetation.
2023	E194258C	6900	Some squatters found in the Site. Catchments under study were fully covered by vegetation.
2024	E233512C E233513C	6900	Latest Aerial Photos Some squatters found in the Site. Catchments under study were fully covered by vegetation. No New ENTLI, HLC & Landslide Incident was found from GInfo in Catchments under study


ENTLI: 07SED0076E
Catchment A2
Catchment C
The Site (as farmland)
ENTLI: 07SED0075E
Catchment B
Catchment A1
ENTLI: 07SED0074E
Year: 1963
Photo No.: 1963-9702


Catchment A2
Catchment C
The Site (as farmland)
Catchment B
Catchment A1
Year: 1968
Photo No.: 1963-0899
68_0899
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Survey & Mapping Office, Lands Department
The Government of Hong Kong Special Administrative Region
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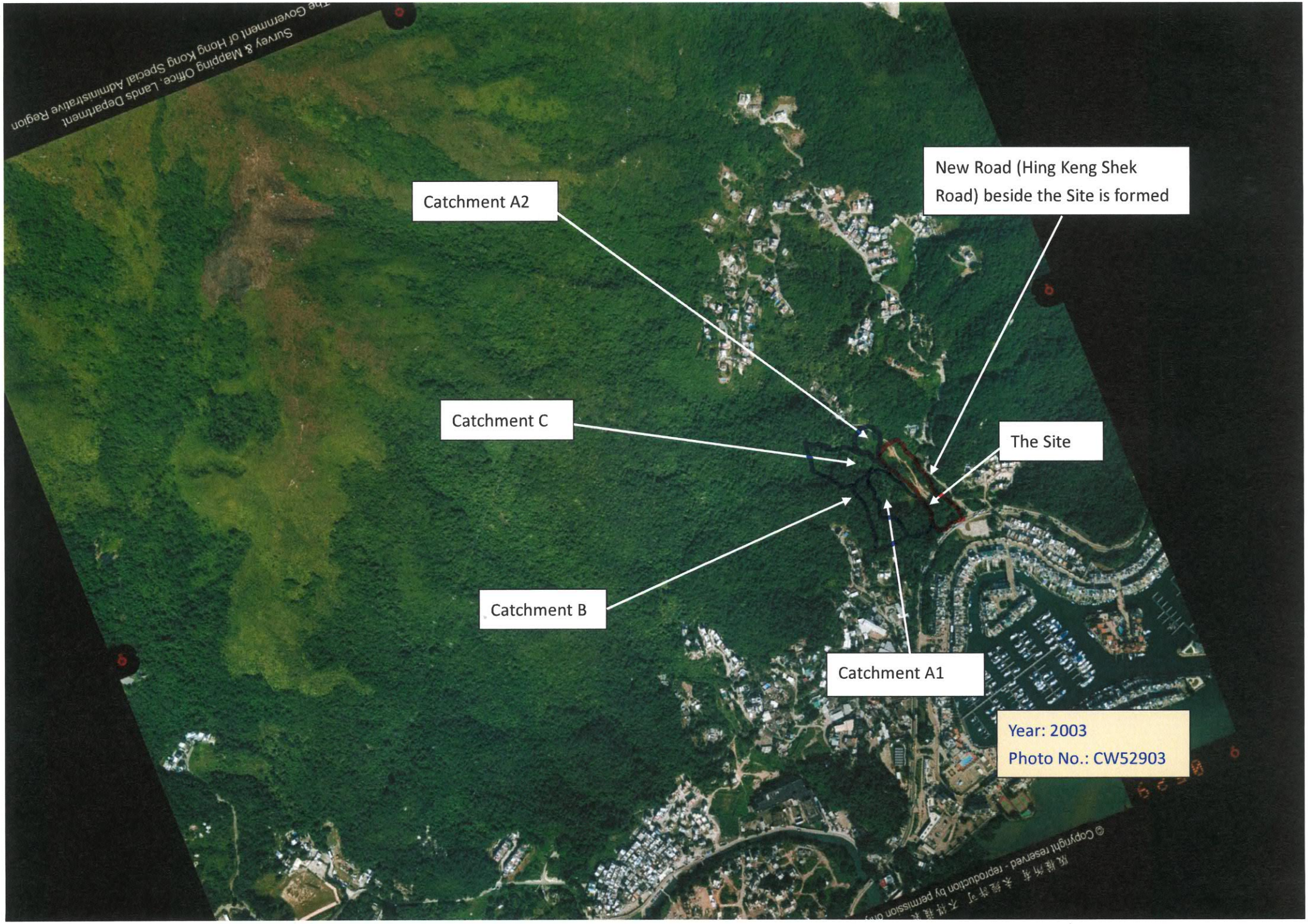
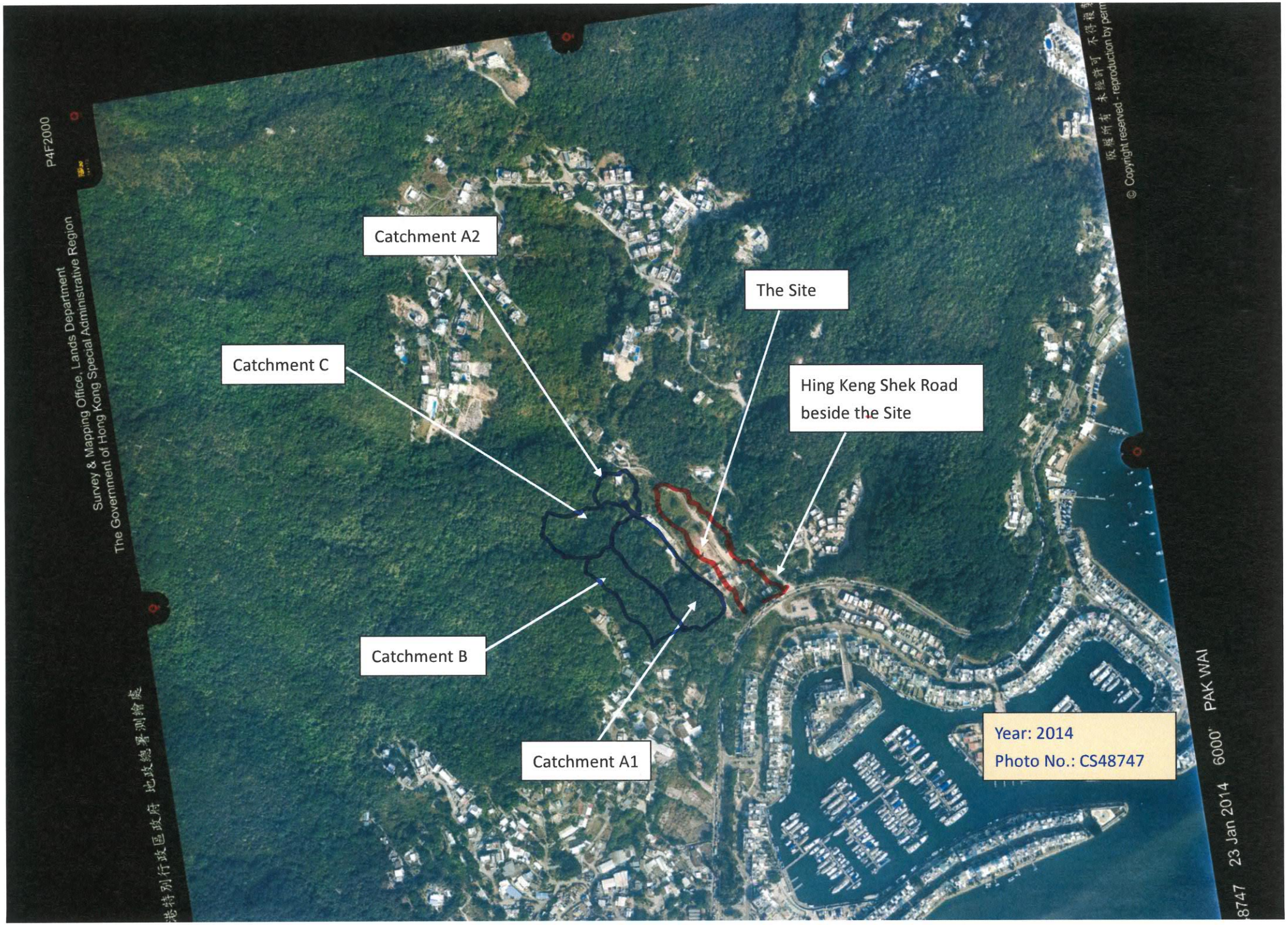
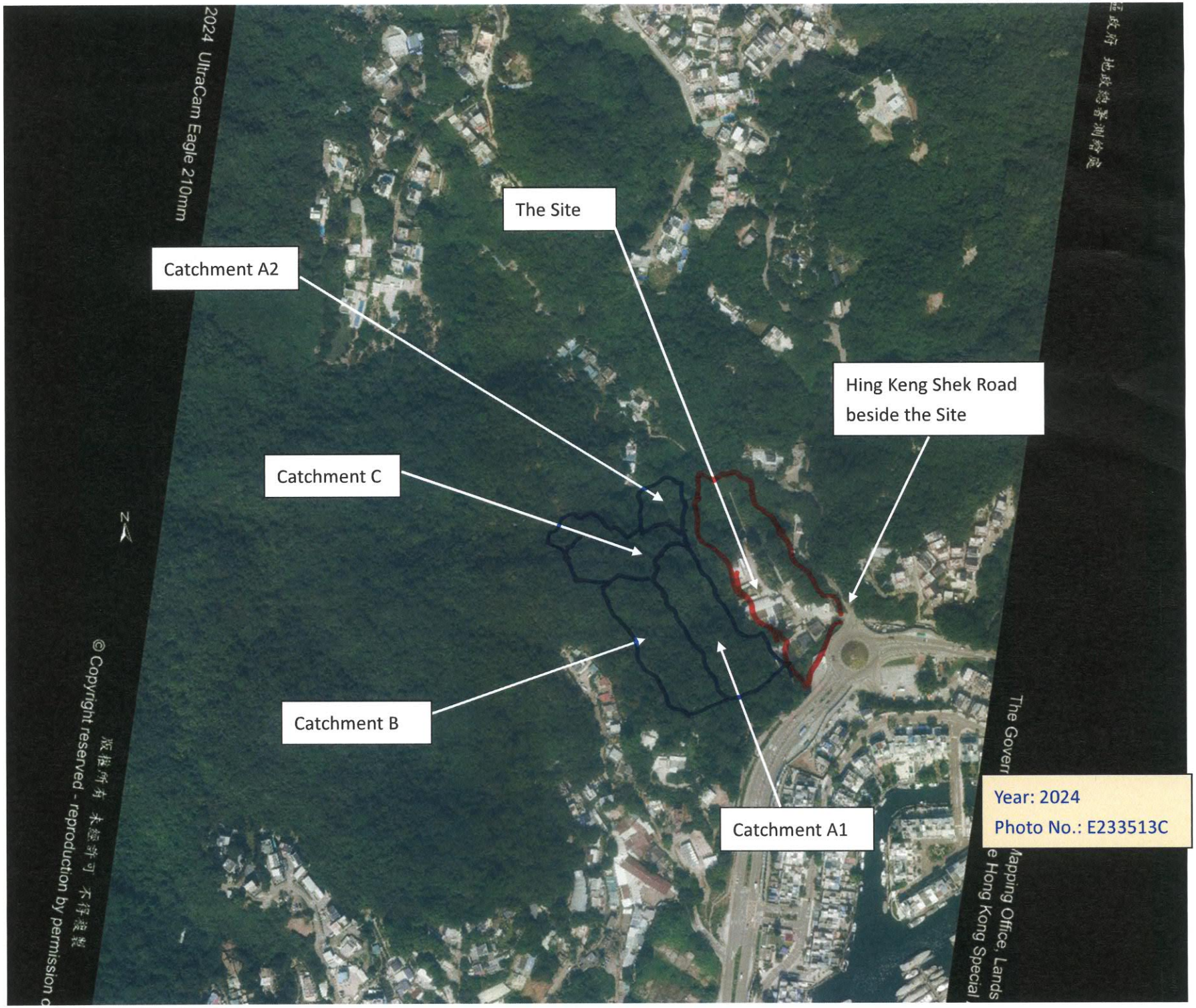

Catchment A2
New Road (Hing Keng Shek Road) beside the Site is formed
Catchment C
The Site
Catchment B
Catchment A1
Year: 2003
Photo No.: CW52903


Catchment A2
The Site
Catchment C
Hing Keng Shek Road
beside the Site
Catchment B
Catchment A1
Year: 2014
Photo No.: CS48747
P4F2000
Survey & Mapping Office, Lands Department
The Government of Hong Kong Special Administrative Region
© Copyright reserved - reproduction by permit
PAK WAI
6000'
23 Jan 2014
8747


2024 UltraCam Eagle 210mm
The Site
Catchment A2
Hing Keng Shek Road
beside the Site
Catchment C
Catchment B
Catchment A1
N
© Copyright reserved - reproduction by permission
Year: 2024
Photo No.: E233513C

ARUP

Appendix D

Revised Landscape Master Plan with Tree Survey Report

Landscape Master Plan &
Tree Survey Report

Project Name: Application for Amendment of Plan Under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" and Area Shown as "Road" to "Residential (Group C)5" for Proposed Residential Development at Various Lots in D.D. 210 and Adjoining Government Land, Pak Wai, Sai Kung

Date: 10 May 2023

Updated: 20 April 2026

1.0 Landscape Design Concept

LANDSCAPE DESIGN

1.1 With the design concept of creating the urban oasis style, the landscape proposal for the Indicative Scheme will focus on quality and interesting landscaping features for the liveable neighbourhood, as well as an emphasis on ecological sustainability and community integration. Having considered the existing conditions of the Subject Site, its surrounding context the following design objectives are derived ;-

- Create a vibrant and attractive place for people with a strong identity and character.
- Provide attractive, barrier free, safe and extensive pedestrian connections which link internal and external facilities, open spaces and activity nodes.
- Use landscape design to build visual and physical linkages to the surroundings.
- Provide a safe, inclusive and shared landscape design which provides a mix of facilities and experiences for a range of people.

LANDSCAPE MASTER PLAN

1.2 The proposed landscape design will bring landscape into the residential development, connect landscape to the district context as well as enliven the local urban space. The landscape framework is fully integrated with the urban design objectives, provides with direction and enhances the environment of the property development (refer to LANDSCAPE MASTER PLAN at **Drawing No. LMP-01**). The landscape design comprises of the following key elements:

- **Community Farm:** A dedicated space in the site will be allocated for a community farm, providing residents with the opportunity to grow their own produce across various species in accordance with the changing seasons. This initiative not only enhances the visual appeal of the landscape with vibrant colors but also fosters a strong sense of community. By engaging residents in agricultural activities, the farm promotes social interaction, educates participants about sustainable practices, and encourages healthy eating habits, thereby creating a cohesive community.

- **Children's Play Area**: The design includes a safe and engaging children's play area equipped with modern play structures and natural elements. This space will be designed to stimulate creativity and physical activity among children, providing a crucial outlet for play that encourages social skills and teamwork. The play area will be surrounded by soft landscaping, ensuring a safe environment while promoting interaction among families and neighbors.

- **Central Plaza**: The central plaza will serve as the heart of the development, providing a multifunctional space for community events, markets, and gatherings. Designed with ample seating, shade structures, and landscaping, the plaza will be a vibrant hub that encourages socialization and community engagement. It will also feature artistic elements, such as sculptures or installations, reflecting the cultural identity of the neighborhood.

- **Tree Row along the Public Footpath**: A row of tree is planted along the public footpath along the eastern boundary providing the much-needed shade for public users, including villagers living nearby and hikers. The lush tree lining will also help create a more comfortable and inviting environment for pedestrians by providing shading and reducing the temperature of the surrounding area, especially during hot summer months.

- **Fence Wall:** A 2m tall fence wall will be installed to separate the public footpath at the eastern part of site and the proposed development to provide privacy and security for people live inside (refer to LANDSCAPE MASTER PLAN at **Drawing No. LMP-01**). Considering the site's context surrounded, the fence will be constructed mainly by perforated mesh with planting area underneath with species that support local biodiversity and blend in harmoniously with the natural surroundings. For the boundary treatment surrounding the site boundary, a 1.2m tall fence wall is proposed to delineate the public area from the development, enhancing security while maintaining visibility and openness.

HARD LANDSCAPE DESIGN

1.3 Hard landscape elements include footpath paving, planters, furniture, and surface finishes. These elements will be designed and/ or selected using the following general criteria:

- Durability – utilizing long lasting or permanent materials and finishes.
- Reasonable cost – highest quality available within a low to medium cost range, ensuring the best return on capital expenditure.
- visual compatibility with existing developments, harmonizing and blending with existing components of the district landscape.
- Low to medium maintenance – easy to look after, clean and repair.

SOFT LANDSCAPE DESIGN

1.4 Soft landscape elements include planting, planting soil, drainage materials, and the various soil amendments. These elements are selected using the following general criteria:

- Shade tolerant plant species– able to grow in certain shaded areas due to the spatial constraint.
- Poisonous plants shall not be planted at areas accessible to public.
- Non-Toxic – relatively safe and non-poisonous materials and/ or biodegradable.
- Ecological Benefit – to enhance ecological value within the site or district.

2.0 Tree Survey Report

2.1 Introduction

Vegetation cover is an important asset that contributes to the aesthetic appeal of the proposed development and provides an essential component to enhance environmental conversation. A detailed tree survey was conducted by an experienced Arborist in January,2022 to incorporate the changing condition of trees and the new development scheme for this submission.

2.2 Methodology of Tree Survey

In accordance with Lands Administration Office (Lands Department) Practice Note Issue No. 2/2020, all existing individual trees with a trunk diameter larger than 95mm (300mm girth) measured 1300mm above ground level are surveyed and identified with the following information recorded:

(a) Drawing.: Drawing where the individual tree can be found.

(b) Tree No.: Individual trees as being number labelled on site and marked on site and denoted correspondingly on the plan.

(c) Photo No.: The photograph reference number of the tree being identified.

(d) Species: Latin and Chinese names of the trees surveyed.

(e) Tree size:

(i) Overall Height: Height measured from ground level to the top branch;

(ii) Trunk Diameter: Diameter of the main trunk measured at 1.3m high above ground level;

(iii) Average Crown Spread: Average diameter of the foliage canopy.

(f) Amenity Value of a tree should be assessed by its functional values for shade, shelter, screening, reduction of pollution and noise and also its fung shui significance, and classified into the following categories:

(i) Good – important trees which should be retained by adjusting the design layout accordingly;

(ii) Fair – trees that are desirable to be retained in order to create a pleasant environment, which includes healthy specimens of lesser importance than “Good” trees;

(iii) Poor – trees that are dead, dying or potentially hazardous and should be removed.

(g) Form:

(i) Good - Well-balanced crown and straight strong trunk(s);
(ii) Fair - Slightly unbalanced crown and non-straight trunk(s);

(iii) Poor - Misshapen or awkwardly-forked trunk and / or unbalanced crown.

(h) Health:

(i) Good - Sound and healthy trees;

(ii) Fair - Trees which are with few or no visible defects or health problem;

(iii) Poor - Rot and / or cavities in the main trunk and / or crown die back, severely infected with disease.

(i) Structural Condition:

(i) Good - Trees with no or little sign of structural defect and would have low risk level of potential failure;

(ii) Fair - Trees with moderate sign of structural defect and would have medium risk level of potential failure;

(iii) Poor - Trees with significant and obvious sign of structural defect and would have high risk level of potential failure.

(j) Suitability for Transplanting: Assess the suitability of affected trees be transplanted taken into account of the following factors: -

- conditions of the tree to be transplanted (including form, health and structure which will affect success of the proposed transplanting);
- size, species, and conservation status of the tree to be transplanted;
- availability and suitability of a permanent receptor site, both within and outside the project site;
- adequate time for preparation of transplanting operation;
- identification of a long-term maintenance party for the transplanted tree(s);
- access to the existing location and transportation to the receptor site (including availability of access to accommodate the tree, topography of the proposed route, engineering limitations, etc.); and
- cost-effectiveness.

Trees with the following features should not be considered suitable for transplanting under normal circumstances:

- low amenity value;
- irrecoverable form after transplanting (e.g. if substantial crown and root pruning are necessary to facilitate the transplanting);
- low survival rate after transplanting;
- very large size (unless the feasibility to transplant has been considered financially reasonable and technically feasible during the feasibility stage);

- with evidence of over-maturity and onset of senescence;
- with poor health, structure or form (e.g. imbalanced form, leaning, with major cavity/cracks/splits); or
- undesirable species (e.g. *Leucaena leucocephala* which is an invasive exotic tree).

Having considered the above factors and features of the trees, trees are assessed as follows: -

(i) High - Trees are highly suitable for transplanting.

(ii) Medium - Trees are moderately suitable for transplanting.

(iii) Low – Trees are not suitable for transplanting.

(k) Conservation Status: State the rarity and protection status of the species under relevant ordinances in Hong Kong. References such as Rare and Precious Plants of Hong Kong, the IUCN Red List of Threatened Species and the Forests and Countryside Ordinance (Cap. 96) are used.

(l) Recommendation: Proposed action for individual species which fall into three categories:

(i) Retain

(ii) Transplant

(iii) Fell

(m) Department to Provide Expert Advice to LandsD: AFCD (Agriculture, Fisheries and Conservation Department) / HyD (Highways Department) / LCSD (Leisure and Cultural Services Department) / Respective Government Department.

(n) Justification: Proposed works which justify the recommendation.

(o) Additional Remarks: Supplementary note towards the assessment.

2.3 Existing Tree Survey Findings

2.3.1 Based on the tree survey and additional tree survey carried out in Jan 2025, a total of 130 Nos. of trees (including 4 dead trees) were surveyed within and adjacent to the Site Boundary. Locations of individual tree surveyed are shown on Tree Survey and Treatment Plan in **Appendix I**.

2.3.2 There is no Old and Valuable trees, trees of particular value, trees of rare species and other trees (stonewall trees, trees of particular interest) found. All the species identified are common landscape species.

2.3.3 Tree identification and condition of individual tree surveyed is tabled in Tree Schedule in **Appendix II**. Photographic record of individual tree is shown in **Appendix III**.

2.3.4 Summary of trees surveyed within the subject site:

Tree Species	Chinese Names	No. of Trees
Aleurites moluccana	石栗	2
Aporosa dioica	銀柴	1
Archontophoenix alexandrae	假檳榔	3
Averrhoa carambola	楊桃	1
Bauhinia variegata	宮粉羊蹄甲	3
Delonix regia	鳳凰木	1
Dimocarpus longan	龍眼	4
Ficus altissima	高山榕	2
Ficus hispida	對葉榕	8
Ficus variegata	青果榕	10
Koelreuteria elegans	台灣欒樹	1
Lagerstroemia speciosa	大花紫薇	1
Leucaena leucocephala	銀合歡	7
Litsea monopetala	假柿樹	6
Livistona chinensis	蒲葵	1
Macaranga tanarius var. tomentosa	血桐	27
Machilus chekiangensis	長序潤楠	1
Mallotus paniculatus	白楸	13
Roystonea regia	王棕	7
Schefflera heptaphylla	鴨腳木	2
Sterculia lanceolata	假蘋婆	3
Syzygium jambos	蒲桃	6
Taxodium distichum	落羽杉	2
Dead tree	死樹	4
	Total:	116

There are 23 species of woodland trees and palm trees identified in the surveyed area with the major tree species of *Macaranga tanarius var. tomentosa , Mallotus paniculatus, Ficus variegate* and *Ficus hispida* etc.

Additional tree surveyed on Jan 2025 for those trees as per requested are listed below;-

Tree Species	Chinese Names	No. of Trees
Plumeria obtusa	雞蛋花	1
Murraya paniculata	九里香	3
Dimocarpus longan	龍眼	3
Syzygium jambos	蒲桃	3
Schefflera heptaphylla	鴨腳木	1
Leucaena leucocephala	銀合歡	1
Litsea monopetala	假柿樹	1
Macaranga tanarius	血桐	1
	Total:	14

2.4 Tree Treatment Recommendations

2.4.1 In order to determine whether or not the existing trees will be affected by the proposed works, the proposed works for the Project have been overlaid on the Tree Survey and Treatment Plan in **Appendix I**.

2.4.2 For the affected trees affected by the proposed project, only trees of high amenity value, high survival rate after transplanting and high cost effectiveness are recommended to be transplanted. The feasibility of tree transplanting has been reviewed. The trees are not suitable to be transplanted due to the following key reasons, please refer to **Appendix II** – Tree Survey Schedule for detail: -

- Low amenity value;
- Irrecoverable form after transplanting (e.g. if substantial crown and root pruning are necessary to facilitate the transplanting);
- Low survival rate after transplanting;
- Very large size (unless the feasibility to transplant has been considered financially reasonable and technically feasible during the feasibility stage);
- With poor health, structure or form (e.g. imbalanced form, leaning, with major cavity/cracks/splits);
- Undesirable species (e.g. Leucaena leucocephala which is an invasive exotic tree); or
- On steep slope

2.4.3 Findings and recommended treatments to existing trees are summarized as follows and as shown on the Tree Survey and Treatment Plan in **Appendix I**: -

	Trees Surveyed	**Retain**	**Transplant**	**Fell**	**Maintenance department to provide comment**
Within Application Site	**92**	17	1	74	**LandsD**
Outside Application Site	**24**	16	0	8	
	14*	11	0	3	
Total nos. of Tree surveyed	**130**	**44**	**1**	**85**	

* *Additional tree surveyed on Jan 2025 for those trees as per requested*

2.5 COMPENSATORY TREE PLANTING PROPOSAL

2.5.1 Tree compensation has been explored within the Site as much as possible. Compensatory Planting Plan is shown in **Appendix IV**.

2.5.2 The implementation of proposed compensatory tree planting has achieved the compensatory planting ratio of 1:1 in terms of quantity as far as possible.

2.5.3 To match with the existing landscaping, the proposed compensatory tree species are consistent with the surrounding existing tree species.

2.5.4 An indicative species list for compensatory planting is tabled below subject to further design development.

Location (Lot/GA/YA/ GHBA etc.)	Local Distribution Status (Native / Exotic)	Species Name	Chinese Name	Minimum Spacing (m)	DBH (mm)	Crown Spread (m)	Overall Height (m)	Nos.
Proposed Compensatory Trees								
Lot (Pink Area)	Native	*Cinnamomum burmannii (Nees & T. Nees) Blume*	陰香	4	95	4	6	9
Lot (Pink Area)	Native	*Cinnamomum burmannii (Nees & T. Nees) Blume*	陰香	6	150	6	8	10
Lot (Pink Area)	Native	*Cinnamomum camphora*	樟樹	6	150	6	8	11
Lot (Pink Area)	Native	*Cleistocalyx nervosum (DC.) Kosterm.*	水翁	4	95	4	6	7
Lot (Pink Area)	Native	*Cinnamomum parthenoxylon (Jack) Meisn.*	黃樟	4	95	4	6	3
Lot (Pink Area)	Exotic	*Crateva unilocularis Buch.-Ham.*	樹頭菜	4	95	4	6	8
Lot (Pink Area)	Native	*Ficus hispida L. f.*	對葉榕	4	95	4	6	4
Lot (Pink Area)	Exotic	*Hyophorbe lagenicaulis (L.H. Bailey) H. E. Moore*	酒瓶椰子	4	95	4	6	4
Lot (Pink Area)	Native	*Liquidambar formosana Hance*	楓香樹	4	95	4	6	18
Lot (Pink Area)	Native	*Litsea monopetala (Roxb.) Pers.*	假柿樹	4	95	4	6	3
Lot (Pink Area)	Exotic	*Michelia x alba DC.*	白蘭	4	95	4	6	3
Lot (Pink Area)	Exotic	*Phoenix canariensis Chabaud*	加那利刺葵	4	95	4	6	5
							Sub Total :	**85**
Proposed New Tree Planting								
Lot (Pink Area)	Exotic	*Plumeria rubra L.*	雞蛋花	4	75	4	6	4
Lot (Pink Area)	Exotic	*Terminalia mantaly H. Perrier*	小葉欖仁	4	75	4	6	11
							Sub Total :	**15**
							TOTAL NOS. OF PROPOSED TREES:	**100**

General Maintenance Operations of tree planting during Establishment Period is tabled below.

Maintenance Operation	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
General inspection	X			X			X			X		
Litter & Debris Removal	X	X	X	X	X	X	X	X	X	X	X	X
Check for insect/fungus	X	X	X	X	X	X	X	X	X	X	X	X
Adjusting Tree Ties	X			X			X			X		
Watering	X	X	X	X	X	X	X	X	X	X	X	X
Weeding	X			X			X			X		
Firming Up	X			X			X			X		
Fertilizing				X						X		
Tree Risk Assessment	As Appropriate											

2.6 CONCLUSION

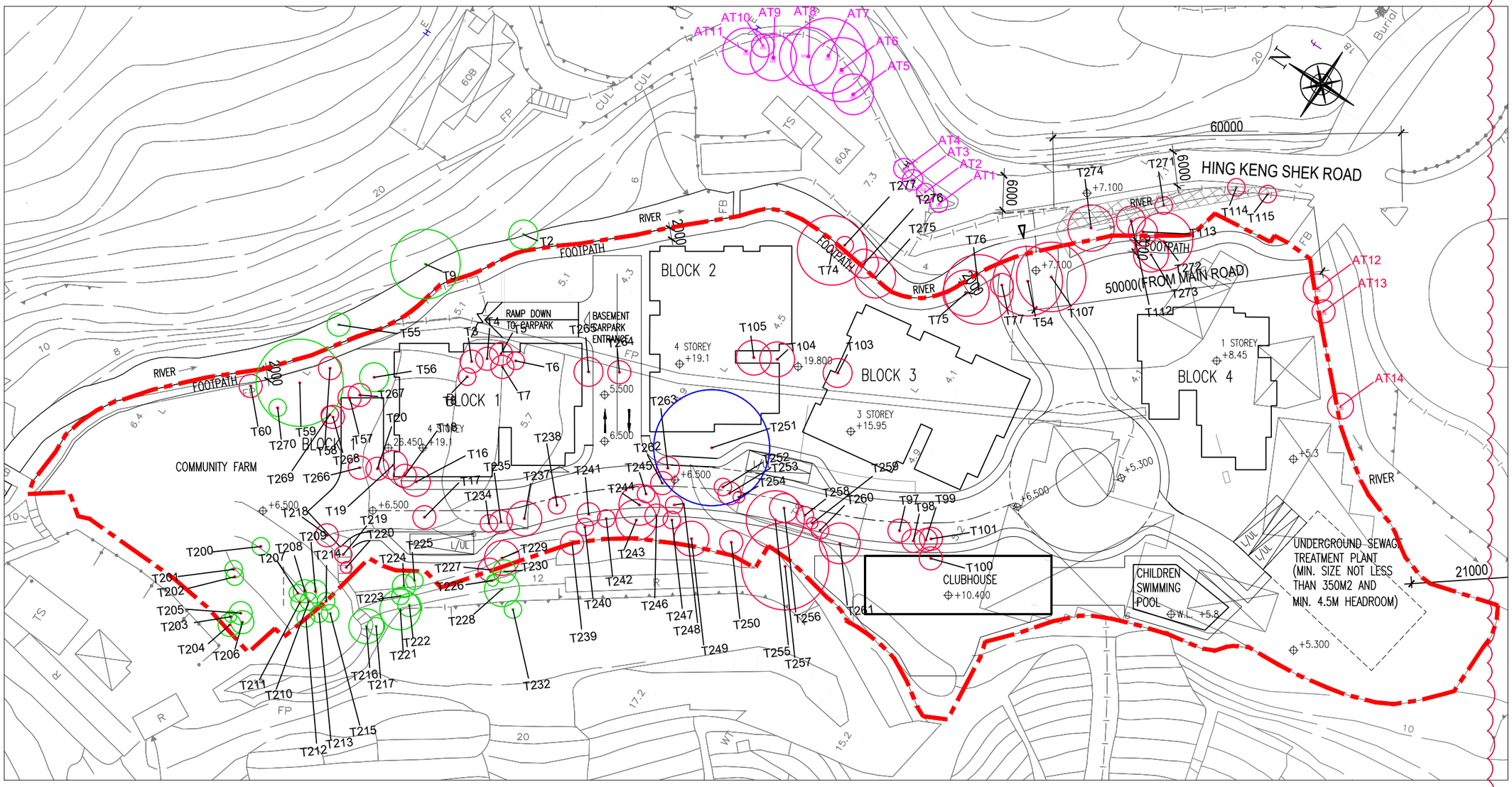
2.6.1 Based on the tree survey and additional tree survey carried out in Jan 2025. Among the 130 nos. of trees, there are no old, valuable, rare or endangered species have been found. There is no Old and Valuable Trees, rare or endangered species found. All the species identified are common landscape species.

2.6.2 **85** nos. of existing trees are proposed to be felled due to poor health condition/conflict with proposed development. Total 18.5m aggregate diameter at breast height (DBH) of tree will be felled.

2.6.3 In compensation for tree to be felled, there is total **85** nos. of compensatory trees and 15 nos. of new trees can be provided within the Site Boundary under this submission. The compensatory planting ratio of 1:1 in terms of quantity has achieved as far as possible.

APPENDIX I

TREE SURVEY AND TREATMENT PLAN



LEGEND

- SITE BOUNDARY
- EXISTING TREES PROPOSED TO BE REMOVED
- EXISTING TREES PROPOSED TO BE RETAINED
- ADDITIONL SURVEYED TREED PROPOSED TO BE RETAINED
- EXISTING TREES PROPOSED TO BE TRANSPLANTED
- SLIGHTLINE AREA (REFER TO TIA REPORT)

NO.	DESCRIPTION	DATE	BY
D	GENERAL UPDATE	03/26	
C	GENERAL UPDATE	12/25	
B	GENERAL UPDATE	10/25	
A	SCHEME UPDATED	07/25	

REVISIONS

LANSCAPE ARCHITECT
地利環境 TEAM 73
T (852) 2865 - 5713
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UNIT A, 16/F, WINBASE CENTRE, NO. 208 QUEEN'S ROAD CENTRAL, HONG KONG

ARCHITECT
K & W Architects Ltd.
關黃建築師有限公司
K&W

DRAWN:	
CHECKED:	
APPROVED:	

All measurements must be checked on the work by contractor.

This drawing not to be used for construction purposes until countersigned.

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PROJECT

Application for Amendment of Plan Under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" and Area Shown as "Road" to "Residential (Group C)5" for Proposed Residential Development at Various Lots in D.D. 210 and Adjoining Government Land, Pak Wai, Sai Kung

TITLE

TREE SURVEY AND TREATMENT PLAN

SCALE	PAPER SIZE	ISSUE DATE
1:750	A3	

PROJECT NUMBER
T73-23003

COMPUTER DWG. NUMBER
L:\2023's\23003-DD210 Sai Kung (WK So)\OFFICE\CAD_20230504

DRAWING NUMBER	REV
TS-01	D

APPENDIX II

TREE SURVEY SCHEDULE

Tree Survey Schedule

Project: Lam Tei Quarry Restoration Programme Phase 3C
Project no.: T73-204-033
Inspection date: 17& 19 January 2022

Surveyed by: Ho Kun Chung (ISA Certified Arborist no. HK-0452A)

Tree No.[1]	Species[2]		Measurements			Amenity value[4]	Form	Health Condition	Structural condition	Suitability for transplanting[5]		Conservation status[7]	Recommendation tree treatment	Maintenance department to provide comments on TPRP		Additional Remarks[8]
	Scientific name	Chinese name	Height (m)	DBH[3] (mm)	Crown Spread (m)	(Good/Fair/Poor)				(High/ Medium/ Low)	Remarks[6]		(Retain/ Transplant/ Remove/ Pruning/ Form 2/ Others)	Before	After	
T2	*Macaranga tanarius* var. *tomentosa*	血桐	8	261	5	P	F	F	F	-	-	-	Retain	LandsD	LandsD	Climbers on trunk /Outside application Site boundary
T3	*Leucaena leucocephala*	銀合歡	9	158	4	P	P	P	P	L	a,f,g,k	-	Remove	LandsD	-	Bark crack / covered by climber / leaning / Conflicted with the proposed development
T4	*Macaranga tanarius* var. *tomentosa*	血桐	7	198	4	P	P	F	F	L	a,b,c,f,k	-	Remove	LandsD	-	Broken branch / dead branch / leaning / Conflicted with the proposed development
T5	*Leucaena leucocephala*	銀合歡	9	182	4	P	P	F	F	L	a,g,f,k	-	Remove	LandsD	-	Leaning / Conflicted with the proposed development
T6	*Leucaena leucocephala*	銀合歡	7	120	3	P	P	P	P	L	a,g,f,k	-	Remove	LandsD	-	Leaning / broken branch / Conflicted with the proposed development
T7	*Macaranga tanarius* var. *tomentosa*	血桐	7	230	4	P	P	F	P	L	a,b,c,f,k	-	Remove	LandsD	-	Dead branch / leaning / Conflicted with the proposed development
T8	*Leucaena leucocephala*	銀合歡	7	122	3	P	P	P	P	L	a,g,f,k	-	Remove	LandsD	-	Leaning / Conflicted with the proposed development
T9	*Delonix regia*	鳳凰木	14	547	12	F	F	F	F	-	-	-	Retain	LandsD	LandsD	Climbers on trunk/ Outside application Site boundary
T16	*Macaranga tanarius* var. *tomentosa*	血桐	9	260	5	P	P	P	P	L	a,b,c,f,k	-	Remove	LandsD	-	Leaning / climbers on trunk / Conflicted with the proposed development
T17	*Archontophoenix alexandrae*	假檳榔	19	252	4	F	F	F	F	L	b,c,d,k	-	Remove	LandsD	-	Climbers on trunk / Conflicted with the proposed development
T18	*Archontophoenix alexandrae*	假檳榔	19	279	4	F	F	F	F	L	b,c,d,k	-	Remove	LandsD	-	Climbers on trunk / Conflicted with the proposed development
T19	*Macaranga tanarius* var. *tomentosa*	血桐	9	244	5	P	P	F	F	L	a,b,c,d,f,k	-	Remove	LandsD	-	Leaning / climbers on trunk / Conflicted with the proposed development
T20	*Livistona chinensis*	蒲葵	13	198	4	F	F	F	F	L	b,c,d,k	-	Remove	LandsD	-	Climbers on trunk, direct conflicts with proposed work
T54	*Syzygium jambos*	蒲桃	12	700	12	F	F	F	F	-	b,c,k	-	Remove	LandsD	-	Climbers on trunk / Conflicted with the proposed development
T55	*Dimocarpus longan*	龍眼	8	330	4	P	F	P	P	L	-	-	Retain	LandsD	LandsD	Wound with decay on trunk /Outside application Site boundary
T56	*Macaranga tanarius* var. *tomentosa*	血桐	9	260	5	P	P	F	F	L	a,b,c,f,k	-	Retain	LandsD	-	Leaning / broken branch
T57	*Archontophoenix alexandrae*	假檳榔	19	233	4	F	F	F	F	L	b,c,d,k	-	Remove	LandsD	-	Conflicted with the proposed development
T58	*Macaranga tanarius* var. *tomentosa*	血桐	7	204	4	P	P	F	F	L	a,b,c,f,k	-	Remove	LandsD	-	Leaning / climbers on trunk / Conflicted with the proposed development
T59	*Ficus altissima*	高山榕	15	1100	15	F	F	F	F	L	b,c,d,k	-	Retain	LandsD	-	Climbers on trunk
T60	*Macaranga tanarius* var. *tomentosa*	血桐	8	274	4	P	F	F	F	L	a,b,c,f,k	-	Remove	LandsD	-	Leaning / Conflicted with the proposed development
T73	Dead tree	死樹	6	400	3	-	-	-	-	-	b,c,k	-	Remove	LandsD	-	Conflicted with the proposed development
T74	*Lagerstroemia speciosa*	大花紫薇	16	480	12	F	F	F	F	L	b,c,d,k	-	Remove	LandsD	-	Conflicted with the proposed development
T75	*Syzygium jambos*	蒲桃	12	600	8	F	P	F	F	L	b,f,k	-	Remove	LandsD	-	Leaning / climbers on trunk / Conflicted with the proposed development
T76	*Syzygium jambos*	蒲桃	12	683	12	F	P	F	P	L	b,c,f,k	-	Remove	LandsD	-	Dead branch / leaning / climbers on trunk / Conflicted with the proposed development
T77	*Syzygium jambos*	蒲桃	8	480	4	P	P	P	P	L	a,b,c,f,k	-	Remove	LandsD	-	Broken main trunk / leaning / Conflicted with the proposed development
T97	*Roystonea regia*	王棕	13	303	4	F	F	F	F	L	b,c,d,k		Remove	LandsD	-	Conflicted with the proposed development
T98	*Roystonea regia*	王棕	13	347	4	F	F	F	F	L	b,c,d,k		Remove	LandsD	-	Conflicted with the proposed development
T99	*Roystonea regia*	王棕	10	250	4	F	F	F	F	L	b,k		Remove	LandsD	-	Conflicted with the proposed development
T100	*Roystonea regia*	王棕	13	301	4	F	F	F	F	L	b,c,d,k		Remove	LandsD	-	Conflicted with the proposed development
T101	*Roystonea regia*	王棕	13	245	4	F	F	F	F	L	b,c,d,k		Remove	LandsD	-	Conflicted with the proposed development
T103	*Roystonea regia*	王棕	13	317	5	F	F	F	F	L	b,c,d,k	-	Remove	LandsD	-	conflict with proposed building footprint
T104	*Taxodium distichum*	落羽杉	14	522	6	F	F	F	F	L	b,c,d,k	-	Remove	LandsD	-	conflict with proposed building footprint
T105	*Taxodium distichum*	落羽杉	14	490	6	F	F	F	F	L	b,c,d,k	-	Remove	LandsD	-	Conflicted with the proposed development
T107	*Syzygium jambos*	蒲桃	12	700	12	F	P	F	F	L	b,c,f,k	-	Remove	LandsD	-	Dead branch / multi-trunks / leaning / Conflicted with the proposed development
T112	*Ficus variegata*	青果榕	10	300	5	F	F	F	F	L	b,c,k	-	Remove	LandsD	-	Exposed root / climbers on trunk /Outside application Site boundary/ conflict with proposed wall/ Within sightline area (under TIA)
T113	*Roystonea regia*	王棕	14	598	5	F	F	F	F	L	b,c,d,k	-	Remove	LandsD	-	Climbers on trunk/ Outside application Site boundary / Conflicted with the proposed development
T114	*Averrhoa carambola*	楊桃	7	170	3	F	P	F	F	L	f,k	-	Remove	LandsD	-	Crack on trunk / leaning / Within sightline area (under TIA) / Outside application Site boundary
T115	*Macaranga tanarius* var. *tomentosa*	血桐	6	153	3	P	F	F	F	L	a,k	-	Remove	LandsD	-	Outside application Site boundary / Within sightline area (under TIA)
T200	*Mallotus paniculatus*	白楸	7	159	3	P	P	F	F	L	a,b,c,f,k	-	Retain	LandsD	-	Leaning / climbers on trunk
T201	*Mallotus paniculatus*	白楸	7	203	3	P	P	P	P	L	a,b,c,f,k	-	Retain	LandsD	-	Leaning / climbers on trunk
T202	*Litsea monopetala*	假柿樹	8	105	3	F	F	F	F	L	b,c,k	-	Retain	LandsD	-	Conflicted with the proposed development
T203	*Mallotus paniculatus*	白楸	6	131	2	P	P	P	P	L	a,b,c,f,k	-	Retain	LandsD	-	Covered by climber / leaning
T204	*Ficus variegata*	青果榕	8	162	4	P	P	P	P	L	a,b,c,k	-	Retain	LandsD	-	Covered by climber / leaning
T205	*Mallotus paniculatus*	白楸	9	162	4	P	F	F	F	L	a,b,c,k	-	Retain	LandsD	-	
T206	*Ficus variegata*	青果榕	8	160	4	P	P	P	P	L	a,b,c,f,k	-	Retain	LandsD	-	Covered by climber / leaning
T207	*Mallotus paniculatus*	白楸	4	150	3	P	P	P	P	L	a,b,c,f,k	-	Retain	LandsD	-	Covered by climber / leaning
T208	*Mallotus paniculatus*	白楸	8	153	4	P	P	P	P	L	a,b,c,f,k	-	Retain	LandsD	-	Covered by climber / leaning
T209	*Mallotus paniculatus*	白楸	8	160	4	P	P	P	P	L	a,b,c,f,k	-	Retain	LandsD	-	Covered by climber / leaning
T210	*Mallotus paniculatus*	白楸	7	100	3	P	P	P	P	L	a,b,c,f,k	-	Retain	LandsD	-	Covered by climber / leaning
T211	*Mallotus paniculatus*	白楸	8	100	3	P	P	P	P	L	a,b,c,f,k	-	Retain	LandsD	-	Covered by climber / leaning
T212	*Mallotus paniculatus*	白楸	7	153	3	P	P	P	P	L	a,b,c,f,k	-	Retain	LandsD	-	Covered by climber / leaning
T213	*Mallotus paniculatus*	白楸	8	108	3	P	P	P	P	L	-	-	Retain	LandsD	LandsD	Covered by climber / leaning / Outside application Site boundary
T214	*Mallotus paniculatus*	白楸	8	138	3	P	P	P	P	L	a,b,c,f,k	-	Retain	LandsD	-	Covered by climber / leaning
T215	*Litsea monopetala*	假柿樹	8	110	3	F	F	F	F	L	-	-	Retain	LandsD	LandsD	Outside application Site boundary
T216	*Ficus hispida*	對葉榕	6	250	6	F	P	P	P	L	-	-	Retain	LandsD	LandsD	Covered by climber / leaning / Outside application Site boundary

Tree Survey Schedule

Project: Lam Tei Quarry Restoration Programme Phase 3C

Project no.: T73-204-033

Inspection date: 17& 19 January 2022

Surveyed by: Ho Kun Chung (ISA Certified Arborist no. HK-0452A)

Tree No.[1]	Species[2]		Measurements			Amenity value[4]	Form	Health Condition	Structural condition	Suitability for transplanting[5]		Conservation status[7]	Recommendation tree treatment	Maintenance department to provide comments on TPRP		Additional Remarks[8]
	Scientific name	Chinese name	Height (m)	DBH[3] (mm)	Crown Spread (m)	(Good/Fair/Poor)				(High/ Medium/ Low)	Remarks[6]		(Retain/ Transplant/ Remove/ Pruning/ Form 2/ Others)	Before	After	
T217	*Ficus hispida*	對葉榕	4	112	3	F	P	P	P	L	-	-	Retain	LandsD	LandsD	Covered by climber / leaning / Outside application Site boundary
T218	*Ficus variegata*	青果榕	9	203	4	F	F	F	F	L	b,c,k	-	Remove	LandsD	-	Climbers on trunk / Conflicted with the proposed development
T219	*Ficus variegata*	青果榕	5	108	3	F	P	P	P	L	b,c,f,k	-	Remove	LandsD	-	Covered by climber / leaning / Conflicted with the proposed development
T220	*Ficus variegata*	青果榕	4	100	2	F	P	P	P	L	b,c,f,k	-	Remove	LandsD	-	Covered by climber / leaning / Conflicted with the proposed development
T221	*Macaranga tanarius* var. *tomentosa*	血桐	7	220	7	P	P	F	F	L	-	-	Retain	LandsD	LandsD	Exposed root / leaning /Outside application Site boundary
T222	*Macaranga tanarius* var. *tomentosa*	血桐	7	129	4	P	F	F	F	L	-	-	Retain	LandsD	LandsD	Outside application Site boundary
T223	*Ficus variegata*	青果榕	8	150	3	F	F	F	F	L	-	-	Retain	LandsD	LandsD	Outside application Site boundary
T224	*Macaranga tanarius* var. *tomentosa*	血桐	10	170	4	P	F	P	F	L	-	-	Retain	LandsD	LandsD	Leaning /Outside application Site boundary
T225	*Mallotus paniculatus*	白楸	8	149	3	P	P	P	P	L	-	-	Retain	LandsD	LandsD	Covered by climber / leaning/Outside application Site boundary
T226	*Bauhinia variegata*	宮粉羊蹄甲	6	95	2	F	P	F	F	L	-	-	Retain	LandsD	LandsD	Leaning/Outside application Site boundary
T227	*Macaranga tanarius* var. *tomentosa*	血桐	9	174	4	P	F	F	F	L	a,b,c,k	-	Remove	LandsD	-	Conflicted with the proposed development
T228	*Macaranga tanarius* var. *tomentosa*	血桐	11	350	6	P	F	F	F	L	a,b,c,k	-	Retain	LandsD	LandsD	Exposed root / leaning / codominant stem / on slope / Outside application Site boundary
T229	*Litsea monopetala*	假柿樹	13	247	6	F	F	F	F	L	b,c,d,k	-	Remove	LandsD	-	Climbers on trunk / Conflicted with the proposed development
T230	*Macaranga tanarius* var. *tomentosa*	血桐	8	150	4	P	P	F	F	L	-	-	Retain	LandsD	LandsD	Leaning /Outside application Site boundary
T231	Dead tree	死樹	4	130	3	-	-	-	-	-	-	-	Remove	LandsD	-	Conflicted with the proposed development
T232	*Ficus hispida*	對葉榕	4	100	3	F	P	F	F	L	-	-	Retain	LandsD	LandsD	Leaning /Outside application Site boundary
T233	Dead tree	死樹	4	249	0	-	-	-	-	-	b,c,k	-	Remove	LandsD	-	Conflicted with the proposed development
T234	*Sterculia lanceolata*	假蘋婆	9	100	3	F	F	F	F	L	b,c,k	-	Remove	LandsD	-	Conflicted with the proposed development
T235	*Sterculia lanceolata*	假蘋婆	9	144	4	F	F	F	F	L	b,c,k	-	Remove	LandsD	-	Covered by climber/ Conflicted with the proposed development
T236	Dead tree	死樹	4	184	0	-	-	-	-	-	-	-	Remove	LandsD	-	Conflicted with the proposed development
T237	*Dimocarpus longan*	龍眼	13	504	6	F	F	F	F	L	b,c,d,k	-	Remove	LandsD	-	Covered by climber / crack / codominant trunks/ Conflicted with the proposed development
T238	*Ficus hispida*	對葉榕	9	100	3	P	P	P	P	L	a,b,c,f,k	-	Remove	LandsD	-	Covered by climber / leaning/ Conflicted with the proposed development
T239	*Litsea monopetala*	假柿樹	8	120	4	F	F	F	F	L	b,c,k	-	Remove	LandsD	-	Conflicted with the proposed development
T240	*Ficus hispida*	對葉榕	7	118	3	F	P	F	F	L	b,c,f,k	-	Remove	LandsD	-	Leaning/ Conflicted with the proposed development
T241	*Macaranga tanarius* var. *tomentosa*	血桐	8	205	4	P	F	F	F	L	a,b,c,k	-	Remove	LandsD	-	Dead branch/ Conflicted with the proposed development
T242	*Bauhinia variegata*	宮粉羊蹄甲	5	113	3	P	P	P	P	L	a,b,c,f,k	-	Remove	LandsD	-	Leaning/ Conflicted with the proposed development
T243	*Ficus variegata*	青果榕	13	265	7	F	F	F	F	L	b,c,d,k	-	Remove	LandsD	-	Covered by climber / Leaning/ Conflicted with the proposed development
T244	*Ficus variegata*	青果榕	13	280	7	F	F	F	F	L	b,c,d,k	-	Remove	LandsD	-	Climbers on trunk/ Conflicted with the proposed development
T245	*Macaranga tanarius* var. *tomentosa*	血桐	6	160	3	P	F	F	F	L	a,b,c,k	-	Remove	LandsD	-	Climbers on trunk/ Conflicted with the proposed development
T246	*Macaranga tanarius* var. *tomentosa*	血桐	9	250	4	P	F	F	F	L	a,b,c,k	-	Remove	LandsD	-	Covered by climber / Leaning/ Conflicted with the proposed development
T247	*Schefflera heptaphylla*	鴨腳木	8	162	3	F	F	F	F	L	b,c,k	-	Remove	LandsD	-	Covered by climber / Leaning/ Conflicted with the proposed development
T248	*Ficus hispida*	對葉榕	8	171	3	F	F	F	F	L	b,c,k	-	Remove	LandsD	-	Covered by climber / Leaning/ Conflicted with the proposed development
T249	*Ficus variegata*	青果榕	13	254	6	F	F	F	F	L	b,c,d,k	-	Remove	LandsD	-	Covered by climber/ Conflicted with the proposed development
T250	*Macaranga tanarius* var. *tomentosa*	血桐	10	104	4	P	F	F	F	L	a,b,c,k	-	Remove	LandsD	-	Climbers on trunk/ Conflicted with the proposed development
T251	*Ficus altissima*	高山榕	15	985	20	F	F	F	F	L	b,c,d,k	-	Transplant	LandsD	-	Covered by climber / climbers on trunk / multi-trunks
T252	*Macaranga tanarius* var. *tomentosa*	血桐	8	149	3	P	P	F	F	L	a,b,c,f,k	-	Remove	LandsD	-	Leaning/ Conflicted with the proposed development
T253	*Machilus chekiangensis*	長序潤楠	9	135	4	F	F	F	F	L	b,c,k	-	Remove	LandsD	-	Conflicted with the proposed development
T254	*Sterculia lanceolata*	假蘋婆	6	202	2	F	P	F	F	L	b,c,f,k	-	Remove	LandsD	-	Covered by climber / Leaning/ Conflicted with the proposed development
T255	*Macaranga tanarius* var. *tomentosa*	血桐	13	300	10	P	P	F	F	L	a,b,c,d,f,k	-	Remove	LandsD	-	Covered by climber / Leaning/ Conflicted with the proposed development
T256	*Macaranga tanarius* var. *tomentosa*	血桐	9	260	5	P	P	P	P	L	a,b,c,f,k	-	Remove	LandsD	-	Covered by climber / Leaning / Conflicted with the proposed development

Tree Survey Schedule

Project: Lam Tei Quarry Restoration Programme Phase 3C
Project no.: T73-204-033
Inspection date: 17& 19 January 2022 Surveyed by: Ho Kun Chung (ISA Certified Arborist no. HK-0452A)

Tree No.[1]	Species[2]		Measurements			Amenity value[4]	Form	Health Condition	Structural condition	Suitability for transplanting[5]		Conservation status[7]	Recommendation tree treatment	Maintenance department to provide comments on TPRP		Additional Remarks[8]
	Scientific name	Chinese name	Height (m)	DBH[3] (mm)	Crown Spread (m)	(Good/Fair/Poor)				(High/ Medium/ Low)	Remarks[6]		(Retain/ Transplant/ Remove/ Pruning/ Form 2/ Others)	Before	After	
T257	*Koelreuteria elegans*	台灣欒樹	13	420	15	F	F	F	F	L	b,c,d,k	-	Remove	LandsD	-	Exposed root / multi-trunks / climbers on trunk / direct conflict with proposed fence wall / Outside application Site boundary
T258	*Schefflera heptaphylla*	鴨腳木	7	104	3	F	P	F	F	L	b,c,f,k	-	Remove	LandsD	-	Leaning / Conflicted with the proposed development
T259	*Aporosa dioica*	銀柴	6	104	2	F	F	F	F	L	b,c,k	-	Remove	LandsD	-	Conflicted with the proposed development
T260	*Dimocarpus longan*	龍眼	8	145	3	F	F	F	F	L	b,c,k	-	Remove	LandsD	-	Covered by climber / Conflicted with the proposed development
T261	*Dimocarpus longan*	龍眼	14	500	7	F	F	F	F	L	b,c,d,k	-	Remove	LandsD	-	Covered by climber /Conflicted with the proposed development
T262	*Litsea monopetala*	假柿樹	9	123	4	F	F	F	F	L	b,c,k	-	Remove	LandsD	-	Conflicted with the proposed development
T263	*Litsea monopetala*	假柿樹	8	100	4	F	F	F	F	L	b,c,k	-	Remove	LandsD	-	Conflicted with the proposed development
T264	*Leucaena leucocephala*	銀合歡	11	100	4	P	F	F	F	L	a,g,k	-	Remove	LandsD	-	Conflicted with the proposed development
T265	*Leucaena leucocephala*	銀合歡	11	128	5	P	F	F	F	L	a,g,k	-	Remove	LandsD	-	Conflicted with the proposed development
T266	*Ficus hispida*	對葉榕	9	179	4	F	P	F	F	L	b,c,f,k	-	Remove	LandsD	-	Covered by climber / Leaning / Conflicted with the proposed development
T267	*Macaranga tanarius* var. *tomentosa*	血桐	8	135	4	P	P	F	F	L	a,b,c,f,k	-	Remove	LandsD	-	Covered by climber / Leaning / Conflicted with the proposed development
T268	*Macaranga tanarius* var. *tomentosa*	血桐	8	129	4	P	P	F	F	L	a,b,c,f,k	-	Remove	LandsD	-	Conflicted with the proposed development
T269	*Leucaena leucocephala*	銀合歡	7	111	3	P	P	F	F	L	a,g,f,k	-	Remove	LandsD	-	Covered by climber / Leaning / Conflicted with the proposed development
T270	*Macaranga tanarius* var. *tomentosa*	血桐	6	145	3	P	P	P	P	L	a,b,c,f,k	-	Retain	LandsD	-	Covered by climber / Leaning
T271	*Ficus hispida*	對葉榕	7	163	3	P	P	P	P	L	a,b,c,f,k	-	Remove	LandsD	-	Dead branch / leaning /Outside application Site boundary / Within sightline area (under TIA)
T272	*Bauhinia variegata*	宮粉羊蹄甲	10	315	10	P	P	P	P	L	a,b,c,f,k	-	Remove	LandsD	-	Broken branch / multi-trunks / Conflicted with the proposed development
T273	*Macaranga tanarius* var. *tomentosa*	血桐	12	305	6	P	P	P	P	L	a,b,c,d,f,k	-	Remove	LandsD	-	Codominant trunks / leaning / climbers on trunk / Conflicted with the proposed development
T274	*Macaranga tanarius* var. *tomentosa*	血桐	13	311	8	P	F	F	F	L	a,b,c,d,k	-	Remove	LandsD	-	Outside application Site boundary/Within sightline area (under TIA)
T275	*Aleurites moluccana*	石栗	13	363	7	F	F	F	F	L	b,c,k	-	Remove	LandsD	-	Climbers on trunk / Conflicted with the proposed development
T276	*Aleurites moluccana*	石栗	10	400	5	F	F	F	F	L	b,c,k	-	Remove	LandsD	-	Dead branch / leaning / Conflicted with the proposed development
T277	*Syzygium jambos*	蒲桃	7	151	3	F	P	F	F	L	b,c,f,k	-	Remove	LandsD	-	Dead branch/ direct conflict with proposed fence wall/ Outside application Site boundary/ Conflicted with the proposed development
END																

[1] Tree(s) in the Register of Old and Valuable Trees should be Goodlighted with OVT number.

[2] Guidance on propoer use of scientific name of plants is givrn in the Agriculture, Fisheries and Conservation Department's Nature Conservation Practice Note No. 3, which can be viewed at AFCD's web page http://www.afcd.gov.hk/english/conservation/con_tech/files/common/NCPC_No.03_The_use_of_plant_mame_rev_2008_2.pdf

[3] DBH of a tree refers to its diamenter at breast height (i.e. measured at 1.3 m above ground level). Guidance on DBH measurement is given in the Agriculture, Fisheries and Conservation Department's Batre Conservation Practice Note No. 2, which can be viewed at AFCD's web page http://www.afcd.oav.hk/enalish/conservation/con tech/files/common/NCPN no.02 measurement of DBH ver.2006.pdf

[4] Amenity value of a tree should be assessed by its functional values for shade, sgelter, screening, reduction of pollution and noise and also its fung sghui significance, and classified into the folPooring categories.

Good: important trees which should be retained by adjusting the design layout accordingly.

Fair: trees that are desirable to be retained in order to create a pleasant environemnt, which includes healthy specimens of lesser importance than "Good" trees.

Poor: trees that are dead, dying or potentially hazardous and should be removed.

[5] Assessment shall take into account conditions of an individual tree at the time of survey (including health, structure, age and root conditions), site conditions (including topography and accessibility), and intrinsic characters of tree species (survival rate after transplanting).

[6] Major determining factors for the rating on suitability for transplanting should be included if necessary.

[7] State the rarity and protection status of the species. Appendix A.III.(i) g. provies more details.

[8] Any additional information deemed necessary for consideration of the proposed management recommendation.

Remarks for Suitability for Transplanting

(a) Low amenity value;
(b) Irrecoverable form after transplanting (e.g. transplanting requires substantial crown and root pruning);
(c) Low chance of survival upon transplanting;
(d) Very large / tall size (unless the feasibility to transplant has been considered financially reasonable and technically feasible during the feasibility stage);
(e) With evidence of over-maturity and onset of senescence;
(f) With poor health, structure or form (e.g. imbalanced form, leaning, with major cavity/cracks/splits);
(g) Undesirable species (e.g. Leucaena leucocephala which is an invasive exotic and self-seeding tree); or
(h) Trees grown under poor conditions which have limited the formation of proper root ball necessary for transplanting (e.g. on slope).
(k) Not cost -effectiveness

Conservation status

(A) The Protection of Endangered Species of Animals and Plants Ordinance (Cap.586)
(B) Forests and Countryside Ordinance (Cap. 96)
(C) Rare and Precious Plants of Hong Kong
(D) IUCN Red List of Threatened Species

APPENDIX II

TREE SURVEY SCHEDULE

(ADDITIONAL TREES)

Tree Assessment Schedule

Project Title: Proposed Residential Development at DD210 Pak Wai, Sai Kung

Date of Tree Survey: 07/01/2025 , updated on 20/10/2025
Surveyed by: Cheng Pui Lim (Qualified Arborist)
Professional qualification : Technician Member of the Arboricultural Association of the United Kingdom (AAUK), No.: TE 2534
Location : DD210, Pak Wai, Sai Kung

Item No.	Tree ID Number(Tree ID labelling on site)	Species		Measurements			Amenity Value	Form	Health condition	Structural Condition	Suitability for transplanting		Conservation Status	Recommendation	Maintenance department to provde comments on TPRP		Remarks/ Observable defects
		Scientific Nme	Chinese Name	Height (m)	Crown Spread (m)	DBH (mm)	(High/ Med /Low)	(Good /Average /Poor)	(Good /Average /Poor)	(Good /Average /Poor)	(High/ Medium /Low)	Remark*	(Y /N) Remark**	(Retain/ Transplant/ Remove)	Before	After	
1	AT 1	*Plumeria obtusa*	雞蛋花	4.5	3	124	L	A	A	A	L	-	N	Retain	LandsD	LandsD	forked tree, imbalanced form, bending trunk, leaning, rooting area restricted, on slope , outside application site
2	AT 2	*Murraya paniculata*	九里香	5.5	3	153	L	A	A	A	L	-	N	Retain	LandsD	LandsD	forked tree, imbalanced form, bending trunk, exposed root, rooting area restricted, on slope , outside application site
3	AT 3	*Murraya paniculata*	九里香	5.5	3.5	224	L	A	A	A	L	-	N	Retain	LandsD	LandsD	forked tree, imbalanced form, bending trunk, rooting area restricted, on slope , outside application site
4	AT 4	*Murraya paniculata*	九里香	5.5	3.5	163	L	A	A	A	L	-	N	Retain	LandsD	LandsD	forked tree, imbalanced form, bending trunk, rooting area restricted, on slope , outside application site
5	AT 5	*Dimocarpus longan*	龍眼	12	7	402	L	A	A	A	L	-	N	Retain	LandsD	LandsD	imbalanced form, codominant trunks, included bark, bending trunk, leaning, rooting area restricted, on slope , outside application site
6	AT 6	*Dimocarpus longan*	龍眼	15	11	451	L	A	A	A	L	-	N	Retain	LandsD	LandsD	imbalanced form, codominant trunks, included bark, bending trunk, leaning, rooting area restricted, on slope , outside application site
7	AT 7	*Syzygium jambos*	蒲桃	14	13	400	L	A	A	A	L	-	N	Retain	LandsD	LandsD	imbalanced form, bending trunk, leaning, rooting area restricted, on slope , outside application site
8	AT 8	*Syzygium jambos*	蒲桃	13	10	400	L	A	A	A	L	-	N	Retain	LandsD	LandsD	imbalanced form, codominant trunks, included bark, leaning, rooting area restricted, on slope , outside application site
9	AT 9	*Syzygium jambos*	蒲桃	11	8	500	L	A	A	A	L	-	N	Retain	LandsD	LandsD	imbalanced form, bending trunk, leaning, rooting area restricted, on slope , outside application site
10	AT 10	*Schefflera heptaphylla*	鴨腳木	9	4	123	L	A	A	A	L	-	N	Retain	LandsD	LandsD	imbalanced form, bending trunk, leaning, rooting area restricted, on slope , outside application site
11	AT 11	*Dimocarpus longan*	龍眼	12	8	246	L	A	A	A	L	-	N	Retain	LandsD	LandsD	forked tree, imbalanced form, bending trunk, leaning, rooting area restricted, on slope , outside application site
12	AT 12	*Leucaena leucocephala*	銀合歡	9	5	202	L	A	A	A	L	a,b,g,h	N	Remove	LandsD	-	imbalanced form, bending trunk, leaning, rooting area restricted, on slope, direct conflict with proposed work, outside application site
13	AT 13	*Litsea monopetala*	假柿樹	8	4	139	L	A	A	A	L	a,b,h	N	Remove	LandsD	-	imbalanced form, leaning, rooting area restricted, on slope ,direct conflict with proposed work, outside application site
14	AT 14	*Macaranga tanarius*	血桐	6.5	4.5	154	L	A	A	A	L	a,b,h	N	Remove	LandsD	-	imbalanced form, bending trunk, leaning, rooting area restricted, on slope , direct conflict with proposed work, outside application site

Remarks for Suitability for Transplanting
(a) Low amenity value;
(b) Irrecoverable form after transplanting (e.g. transplanting requires substantial crown and root pruning);
(c) Low chance of survival upon transplanting;
(d) Very large size (unless the feasibility to transplant has been considered financially reasonable and technically feasible during the feasibility stage);
(e) With evidence of over-maturity and onset of senescence;
(f) With poor health, structure or form (e.g. imbalanced form, leaning, with major cavity/cracks/splits);
(g) Undesirable species (e.g. Leucaena leucocephala which is an invasive exotic and self-seeding tree); or
(h) Trees grown under poor conditions which have limited the formation of proper root ball necessary for transplanting (e.g. on slope).
(k) Not cost -effectiveness

Conservation status
(A) The Protection of Endangered Species of Animals and Plants Ordinance (Cap.586)
(B) Forests and Countryside Ordinance (Cap. 96)
(C) Rare and Precious Plants of Hong Kong
(D) IUCN Red List of Threatened Species

APPENDIX III

TREE SURVEY PHOTOGRAPHIC RECORD

T2 (Retain)	T2-1
T2-2	T2-3
T3 (Fell)	T3-1

T3-2	T3-3
T4 (Fell)	T4-1
T4-2	T4-3

T5 (Fell)	T5-1
T5-2	T5-3
T6 (Fell)	T6-1

 T6-2	 T6-3
 T7 (Fell)	 T7-1
 T7-2	 T7-3

T8 (Fell)	T8-1
T8-2	T8-3
T9 (Retain)	T9-1

 T9-2	 T9-3
 T16 (Fell)	 T16-1
 T16-1	----------

T17 (Fell)	T17-1
T17-2	T17-3
T18 (Fell)	T18-1

 T18-2	 T18-3
 T19 (Fell)	 T19-1
 T19-2	 T19-3

 T20 (Fell)	 T20-1
 T20-2	 T20-3
 T54 (Fell)	 T54-1

 T54-2	 T44-3
 T55 (Retain)	 T55-1
 T55-2	 T55-3

T56 (Retain)	T56-1
T56-2	T56-3
T57 (Fell)	T57-1

T57-2	T57-3
T58 (Fell)	T58-1
T58-2	T58-3

 T59 (Retain)	 T59-1
 T59-2	----------
 T60 (Fell)	 T60-1

T60-2	T60-3
T73 (Fell)	T73-1
T73-2	T73-3

T74 (Fell)	T74-1
T74-2	T74-3
T75 (Fell)	T75-1

T75-2	T75-3
T76 (Fell)	T76-1
T76-2	T76-3

<table>
<tr>
<td>

T77
(Fell)</td>
<td>
T77-1</td>
</tr>
<tr>
<td>
T77-2</td>
<td>
T77-3</td>
</tr>
<tr>
<td>T97
(Fell)</td>
<td>
T97-1</td>
</tr>
</table>

T98 (Fell)	 T98-1
T99 (Fell)	 T99-1
T100 (Fell)	 T100-1

T101 (Fell)	 T101-1
----------	----------
 T103 (Fell)	 T103-1

T103-2

T103-3

T104
(Fell)

T104-1

T104-2

T104-3

 T105 (Fell)	 T105-1
 T105-2	 T105-3
 T107 (Fell)	 T107-1

T107-2

T107-3

T112
(Fell)

T112-1

T112-2

T112-3

T113 (Fell)	T113-1
T113-2	T113-3
T114 (Remove)	T114-1

T114-2

T114-3

T115
(Remove)

T115-1

T115-2

T115-3

T200 (Retain)	T200-1
T200-2	T200-3
T201 (Retain)	T201-1

T201-2

T201-3

T202
(Retain)

T202-1

T202-2

T202-3

 T203 (Retain)	 T203-1
 T203-2	 T203-3
 T204 (Retain)	 T204-1

 T204-2	----------
 T205 (Retain)	 T205-1
 T205-2	 T205-3

 T206 (Retain)	 T206-1
 T206-2	
 T207 (Retain)	 T207-1

T207-2	T207-3
T208 (Retain)	T208-1
T208-2	T208-3

 T209 (Retain)	 T209-1
 T209-2	----------
 T210 (Retain)	 T210-1

 T210-2	----------
 T211 (Retain)	 T211-1
 T211-2	 T211-3

 T212 (Retain)	 T212-1
 T212-2	----------
 T213 (Retain)	 T213-1

T213-2	T213-3
T214 (Retain)	T214-1
T214-2	T214-3

 T215 (Retain)	 T215-1
 T215-2	 T215-3
 T216 (Retain)	 T216-1

T216-2	T216-3
T217 (Retain)	T217-1
T217-2	T217-3

 T218 (Fell)	 T218-1
 T218-2	 T218-3
 T219 (Fell)	 T219-1

T219-2	T219-3
T220 (Fell)	T220-1
T220-2	T220-3

 T221 (Retain)	 T221-1
 T221-2	 T221-3
 T222 (Retain)	 T222-1

 T222-2	 T222-3
 T223 (Retain)	 T223-1
 T223-2	----------

 T224 (Retain)	 T224-1
 T224-2	----------
 T225 (Retain)	 T225-1

T225-2

T226
(Retain)

T226-1

T226-2

T226-3

T227 (Fell)	T227-1
T227-2	T227-3
T228 (Retain)	T228-1

T228-2	T228-3
T229 (Fell)	T229-1
T229-2	T229-3

 T230 (Retain)	 T230-1
 T230-2	 T230-3
 T231 (Fell)	 T231-1

 T231-2	 T231-3
 T232 (Retain)	 T232-1
 T232-2	 T232-3

T233 (Fell)	T233-1
T233-2	T233-3
T234 (Fell)	T234-1

T234-2	T234-3
T235 (Fell)	T235-1
T235-2	T235-3

T236
(Fell)

T236-1

T236-2

T237
(Fell)

T237-1

T237-2	T237-3
T238 (Fell)	T238-1
T238-2	T238-3

 T239 (Fell)	 T239-1
 T239-2	 T239-3
 T240 (Fell)	 T240-1

T240-2	T240-3
T241 (Fell)	T241-1
T241-2	T241-3

T242
(Fell)

T242-1

T242-3

T243
(Fell)

T243-1

T243-2	T243-3
T244 (Fell)	T244-1
T244-2	T244-3

 T245 (Fell)	 T245-1
 T245-2	 T245-3
 T246 (Fell)	 T246-1

T246-2	T246-3
T247 (Fell)	T247-1
T247-2	T247-3

 T248 (Fell)	 T248-1
 T248-2	 T248-3
 T249 (Fell)	 T249-1

T249-2	T249-3
T250 (Fell)	T250-1
T250-2	T250-3

T251 (Transplant)	T251-1
T251-2	T251-3
T252 (Fell)	T252-1

T252-2	T252-3
T253 (Fell)	T253-1
T253-2	T253-3

 T254 (Fell)	 T254-1
 T254-2	 T254-3
 T255 (Fell)	 T255-1

T255-2	T255-3
T256 (Fell)	T256-1
T256-2	T256-3

 T257 (Fell)	 T257-1
 T257-2	 T257-3
 T258 (Fell)	 T258-1

 T258-2	 T258-3
 T259 (Fell)	 T259-1
 T259-2	 T259-3

T260 (Fell)	T260-1
T260-2	T260-3
T261 (Fell)	T261-1

T261-2	T261-3
T262 (Fell)	T262-1
T262-2	T262-3

 T263 (Fell)	 T263-1
 T263-2	 T263-3
 T264 (Fell)	 T264-1

T264-2	T264-3
T265 (Fell)	T265-1
T265-2	T265-3

T266 (Fell)	T266-1
T266-2	T266-3
T267 (Fell)	T267-1

 T267-2	 T267-3
 T268 (Fell)	 T268-1
 T268-2	 T268-3

T269 (Fell)	T269-1
T269-2	T269-3
T270 (Retain)	T270-1

T270-2	T270-3
T271 (Fell)	T271-1
T271-2	———

 T272 (Fell)	 T272-1
 T272-2	 T272-3
 T273 (Fell)	 T273-1

T273-2	T273-3
T274 (Fell)	T274-1
T274-2	T274-3

 T275 (Fell)	 T275-1
 T275-2	 T275-3
 T276 (Fell)	 T276-1

T276-2	T276-3
T277 (Fell)	T277-1
T277-2	T277-3

APPENDIX III

TREE SURVEY PHOTOGRAPHIC RECORD

(ADDITIONAL TREES)

Photographic Record

(ADDITIONAL)

地利環境
TEAM 73

Tree No. AT 1

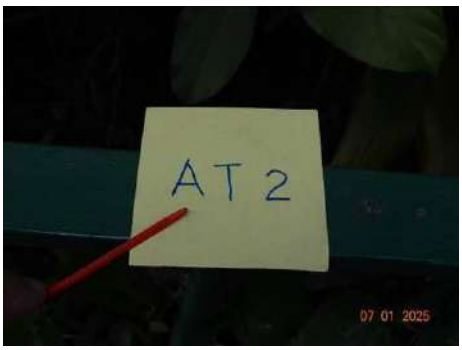
Plumeria obtusa 雞蛋花

07/01/2025

Tree No. AT 2

Murraya paniculata 九里香

07/01/2025



Tree No. AT 3

Murraya paniculata 九里香

07/01/2025

Tree No. AT 4

Murraya paniculata 九里香

07/01/2025

Tree No. AT 5

Dimocarpus longan 龍眼

07/01/2025

Tree No. AT 6

Dimocarpus longan 龍眼

07/01/2025

Tree No. AT 7

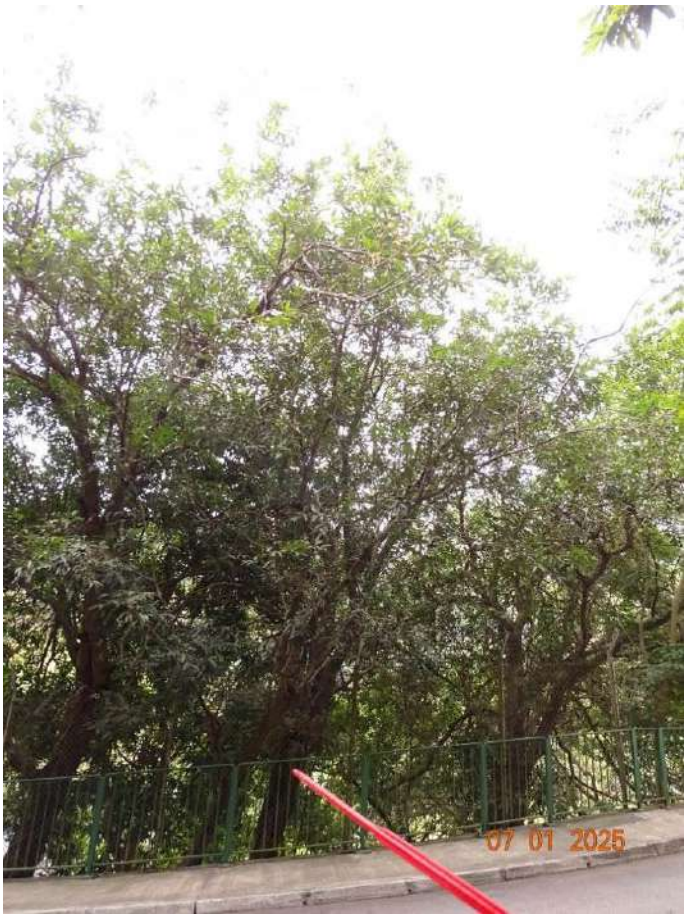
Syzygium jambos 蒲桃

07/01/2025

Tree No. AT 8

Syzygium jambos 蒲桃

07/01/2025



Tree No. AT 9

Syzygium jambos 蒲桃

07/01/2025

Tree No. AT 10

Schefflera heptaphylla 鴨腳木

07/01/2025

Tree No. AT 11

Dimocarpus longan 龍眼

07/01/2025

Tree No. AT 12

Leucaena leucocephala 銀合歡

07/01/2025

Tree No. AT 13

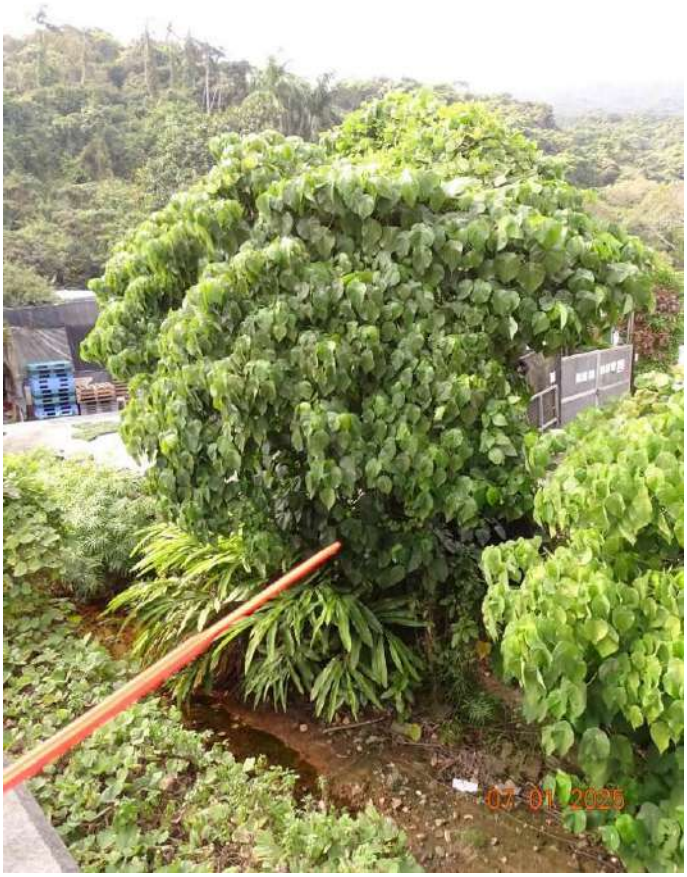
Litsea monopetala 假柿樹

07/01/2025

Tree No. AT 14

Macaranga tanarius 血桐

07/01/2025



End

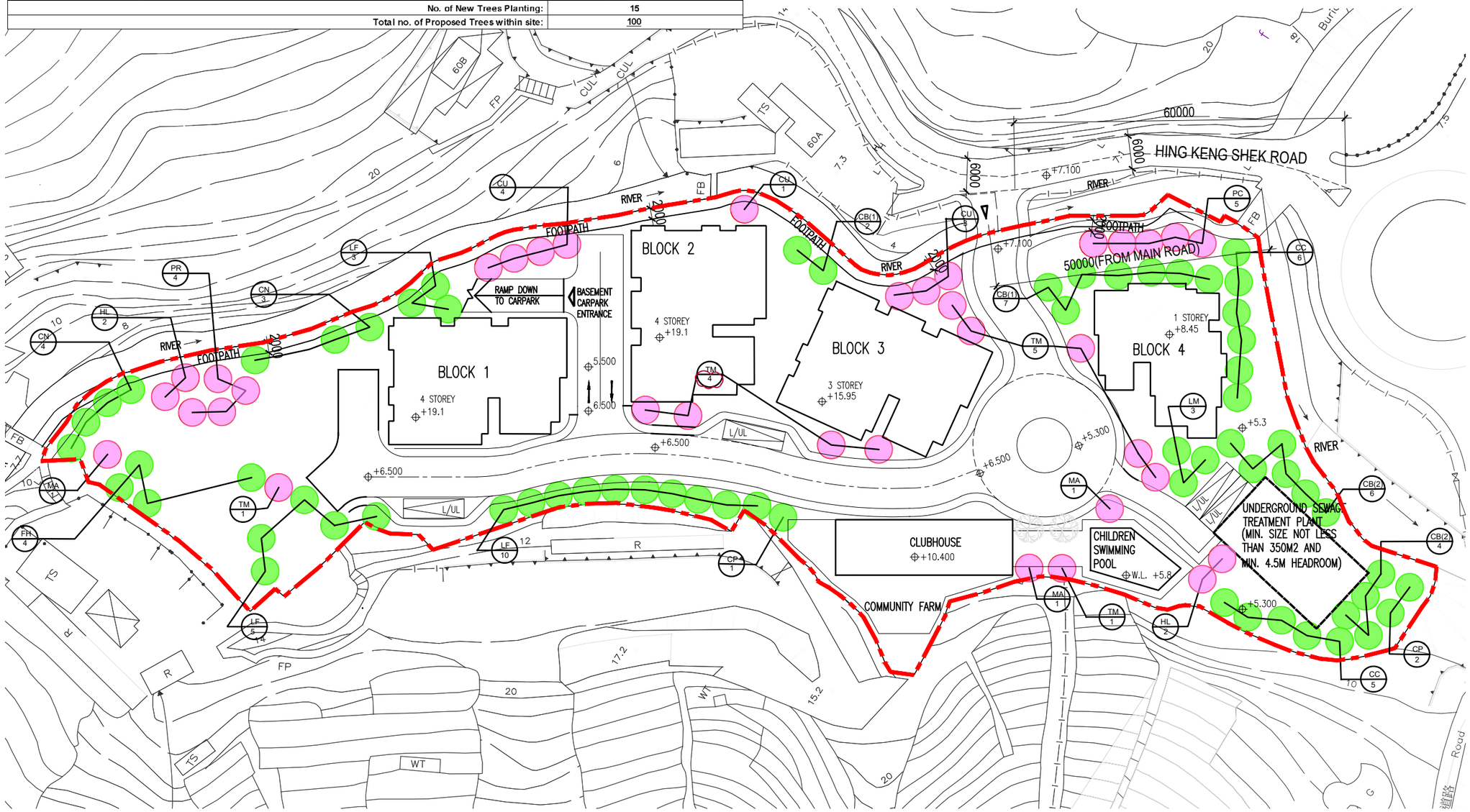
APPENDIX IV

TREE COMPENSATION PLAN

Plant Schedule for Compensatory Trees							
CODE	LOCAL DISTRIBUTION STATUS	BOTANICAL NAME	CHINESE NAME	STANDARD	SPACING	QUANTITY	REMARKS
CB(1)	Native	*Cinnamomum burmannii (Nees & T. Nees) Blume*	陰香	6000(H) x 4000(S) x 95mm DBH	As Shown	9	
CB(2)	Native	*Cinnamomum burmannii (Nees & T. Nees) Blume*	陰香	8000(H) x 6000(S) x 150mm DBH	As Shown	10	Semi-mature size
CC	Native	*Cinnamomum camphora*	樟樹	8000(H) x 6000(S) x 150mm DBH	As Shown	11	Semi-mature size
CN	Native	*Cleistocalyx nervosum (DC.) Kosterm.*	水翁	6000(H) x 4000(S) x 95mm DBH	As Shown	7	
CP	Native	*Cinnamomum parthenoxylon (Jack) Meisn.*	黃樟	6000(H) x 4000(S) x 95mm DBH	As Shown	3	
CU	Exotic	*Crateva unilocularis Buch.-Ham.*	樹頭菜	6000(H) x 4000(S) x 95mm DBH	As Shown	8	
FH	Native	*Ficus hispida L. f.*	對葉榕	6000(H) x 4000(S) x 95mm DBH	As Shown	**4**	
HL	Exotic	*Hyophorbe lagenicaulis (L.H. Bailey) H. E. Moore*	酒瓶椰子	6000(H) x 4000(S) x 95mm DBH	As Shown	**4**	
LF	Native	*Liquidambar formosana Hance*	楓香樹	6000(H) x 4000(S) x 95mm DBH	As Shown	18	
LM	Native	*Litsea monopetala (Roxb.) Pers.*	假柿樹	6000(H) x 4000(S) x 95mm DBH	As Shown	3	
MA	Exotic	*Michelia x alba DC.*	白蘭	6000(H) x 4000(S) x 95mm DBH	As Shown	3	
PC	Exotic	*Phoenix canariensis Chabaud*	加那利海棗	6000(H) x 4000(S) x 95mm DBH	As Shown	5	
				Total no. of Compensatory Trees:		**85**	
Proposed New Tree Planting							
PR	Exotic	*Plumeria rubra L.*	雞蛋花	6000(H) x 4000(S) x 75mm DBH	As Shown	**4**	
TM	Exotic	*Terminalia mantaly H. Perrier*	小葉欖仁	6000(H) x 4000(S) x 75mm DBH	As Shown	11	
				No. of New Trees Planting:		**15**	
				Total no. of Proposed Trees within site:		**100**	

LEGEND

- PROPOSED NATIVE TREE
- PROPOSED EXOTIC TREE
- FEATURE TREE



NO.	DESCRIPTION	DATE	BY
D	MINOR UPDATE	02/26	
C	MINOR UPDATE	12/25	
B	MINOR UPDATE	10/25	
A	SCHEME UPDATE	07/25	

REVISIONS

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PROJECT

Application for Amendment of Plan Under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" and Area Shown as "Road" to "Residential (Group C)5" for Proposed Residential Development at Various Lots in D.D. 210 and Adjoining Government Land, Pak Wai, Sai Kung

TITLE

COMPENSATORY PLANTING PLAN

SCALE	PAPER SIZE	ISSUE DATE
1:800	A3	

PROJECT NUMBER

T73-23003

COMPUTER DWG. NUMBER

L:\2023's\23003-DD210 Sai Kung (WK So)\OFFICE\CAD_20230504

DRAWING NUMBER	REV
OP-01	D

LEGEND

SITE BOUNDARY

GREENERY COVERAGE AREA — Not less than 20% of site area

PRIVATE OPEN SPACE (Assessible for the resident only) — Not less than $1m^2$ per person

NO.	DESCRIPTION	DATE	BY

REVISIONS

LANSCAPE ARCHITECT

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PROJECT

PROPOSED RESIDENTIAL DEVELOPMENT AT DD210 PARK WAI SAI KUNG

TITLE

OPEN SPACE DEMARCATION PLAN

SCALE	PAPER SIZE	ISSUE DATE
1:750	A3	

PROJECT NUMBER
T73-23003

COMPUTER DWG. NUMBER
L:\2023's\23003-DD210 Sai Kung (MK So)\OFFICE\CAD_20230504

DRAWING NUMBER	REV
OP-01	

LEGEND

SITE BOUNDARY

1	SWIMMING POOL	6	CENTRAL PLAZA	PLANTING AREA	STONE GRANITE	KEY VEHICULAR ENTRANCE / EXIT	COMPENSATORY NEW TREES (NATIVE)
2	COMMUNITY FARM	7	OUTDOOR ACTIVITIY AREA	GRASSCRETE	STONE GRANITE	KEY PEDESTRIAN ENTRANCE / EXIT	COMPENSATORY NEW TREES (EXOTIC)
3	CHILDREN PLAY AREA	8	EVA	ARTIFICAL GRANITE TILE	WOOD DECK	2m PROPOSED FENCE WALL (WITH VERTICAL GREENING)	PROPOSED NEW TREE PLANTING (EXOTIC)
4	FOOTPATH	9	L/UL AREA	HOMOGENOUS TILE	WOOD TILE		FEATURE TREES
5	BBQ AREA	10	DROP-OFF AREA	STONE GRANITE	IN-SITU EPDM		Transplanted Tree / Existing Tree

0 8 16 24 32 40 m 48 m 56 m 64 m

SCALE BAR

NO.	DESCRIPTION	DATE	BY
C	SCHEME UODATED	12/25	
B	MINOR REVISION	10/25	
A	SCHEME UPDATED	07/25	

REVISIONS

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PROJECT

PROPOSED RESIDENTIAL DEVELOPMENT AT DD210 PARK WAI SAI KUNG

TITLE

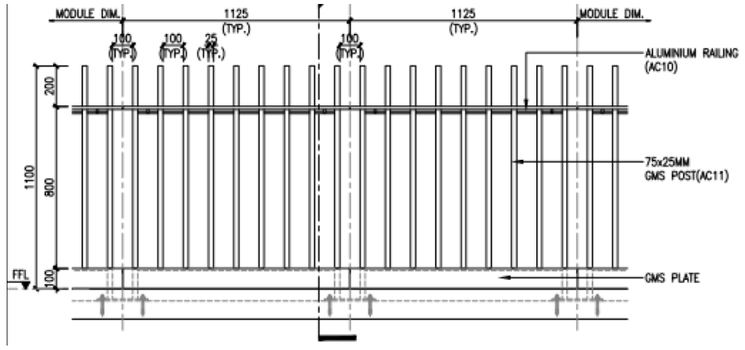
LANDSCAPE MASTER PLAN

SCALE	PAPER SIZE	ISSUE DATE
1:800	A3	10/10/2023

PROJECT NUMBER
T73-23003

COMPUTER DWG. NUMBER
L:\2023\a\23003-00210 Sai Kung (WK So)\OFFICE\CAD...20230504

DRAWING NUMBER	REV
LMP-01	D



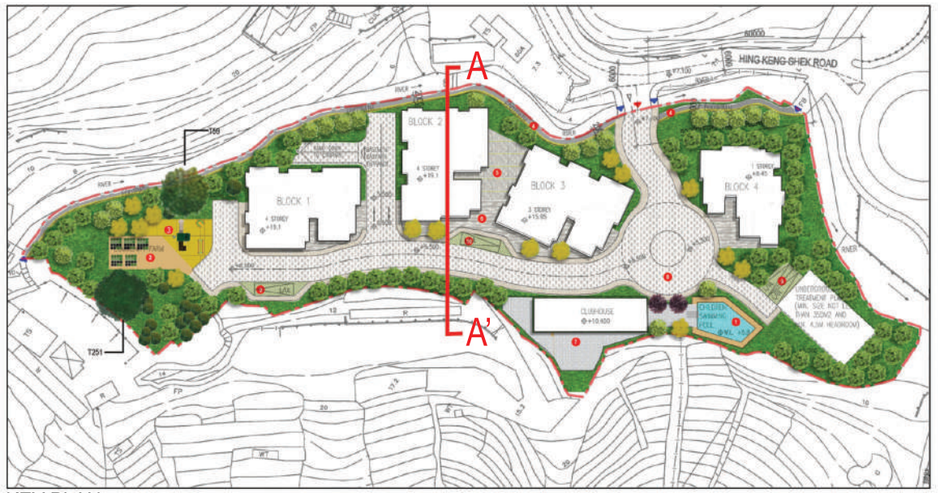
Proposed 2m fence wall along site boundary

"Fence Wall A"

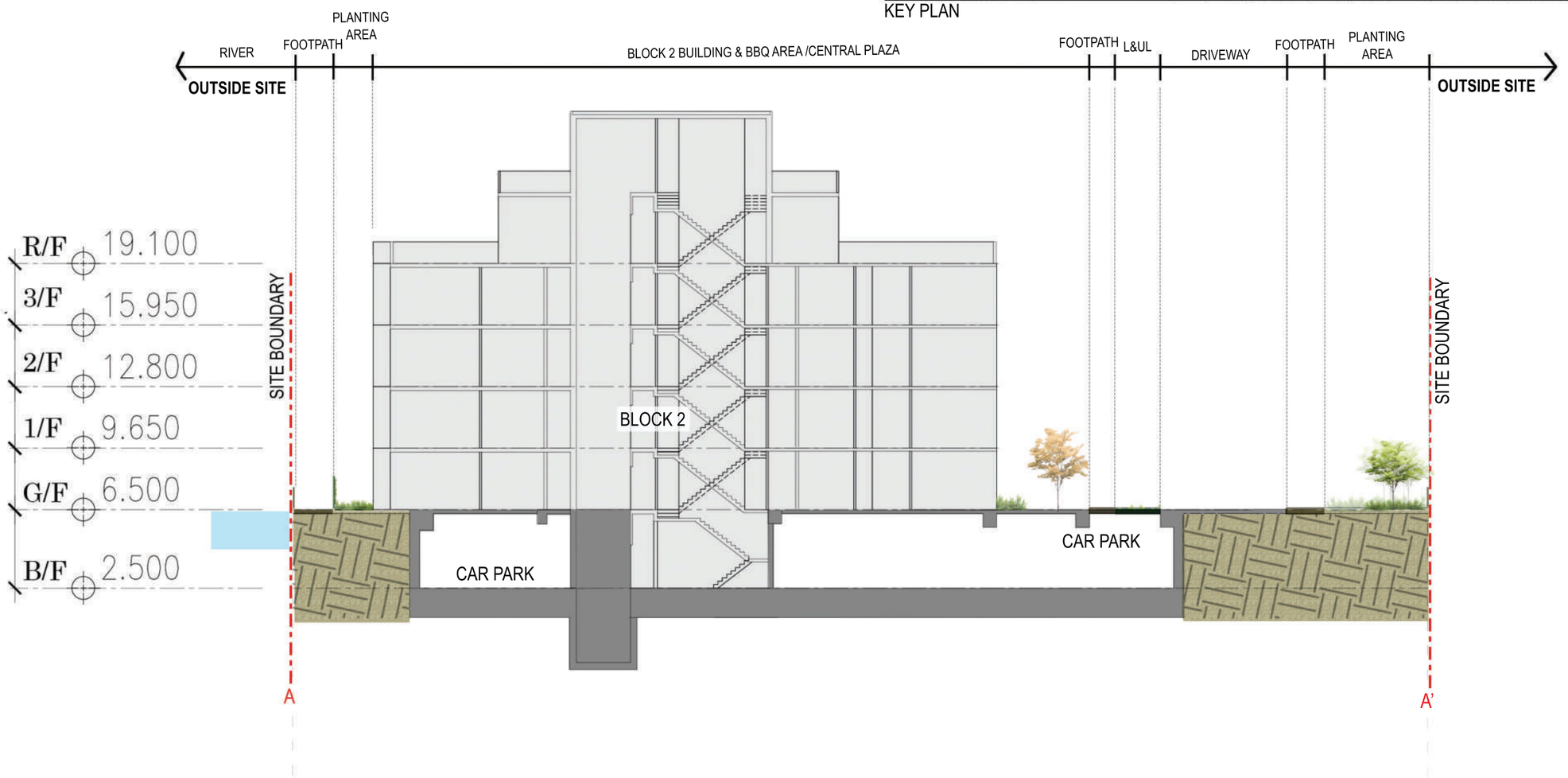
Reference Image

Proposed 2m fence wall along eastern boundary

"Fence Wall B"



KEY PLAN



SCALE 1:800 @ A3

NO.	DESCRIPTION	DATE	BY
B	SCHEME UPDATED	04/26	
A	SCHEME UPDATED	12/25	

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PROJECT

PROPOSED RESIDENTIAL DEVELOPMENT AT DD210 PARK WAI SAI KUNG

TITLE

SECTION A–A'

SCALE	PAPER SIZE	ISSUE DATE
AS SHOWN	A3	

PROJECT NUMBER
T73–23003

COMPUTER DWG. NUMBER
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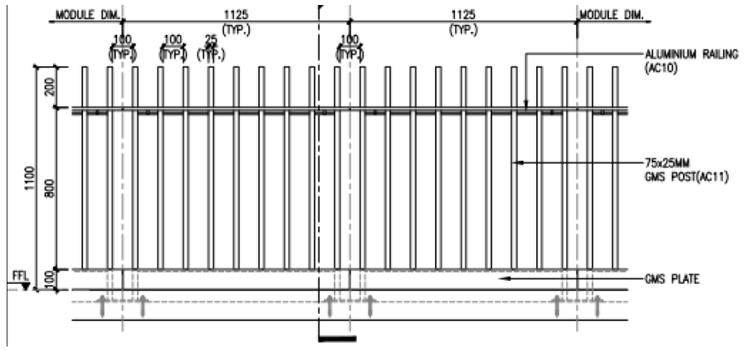
DRAWING NUMBER	REV
SS-02	B



Proposed 2m fence wall along site boundary

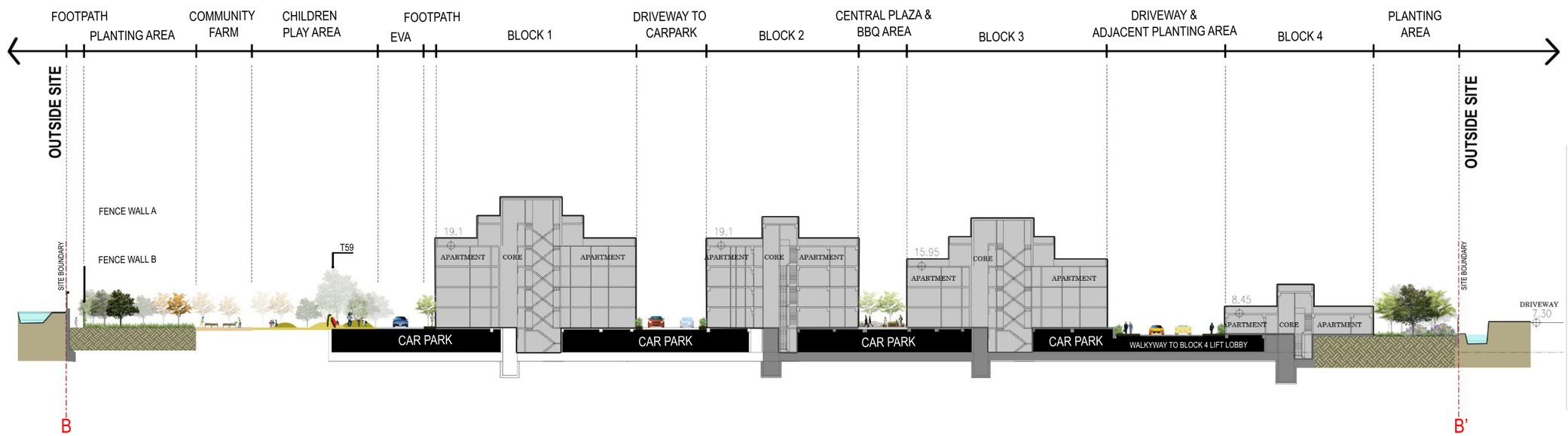
"Fence Wall A"

Reference Image

Proposed 2m fence wall at pedestrian footpath

"Fence Wall B"

KEY PLAN



SCALE 1:800 @ A3

NO.	DESCRIPTION	DATE	BY
B	SCHEME UPDATED	04/26	
A	SCHEME UPDATED	12/25	

REVISIONS

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PROJECT

PROPOSED RESIDENTIAL DEVELOPMENT AT DD210 PARK WAI SAI KUNG

TITLE

SECTION B-B'

SCALE	PAPER SIZE	ISSUE DATE
AS SHOWN	A3	

PROJECT NUMBER

T73-23003

COMPUTER DWG. NUMBER

L:\2023's\23003-00210 Sai Kung (WK So)\OFFICE\CAD_20230504

DRAWING NUMBER	REV
SS-02	B

End

ARUP

Appendix E

Revised Traffic Impact Assessment

DOCUMENT STATUS CONTROL RECORD

Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" and Area Shown as "Road" to "Residential (Group C)5" for Proposed Residential Development at Various Lots in D.D. 210 and Adjoining Government Land, Pak Wai, Sai Kung

Traffic Impact Assessment Report

Originating Organisation : LLA Consultancy Limited Unit 610, 6/F, Island Place Tower, 510 King's Road, North Point, Hong Kong	Prepared by: SKL	SKL	Date: 10 March 2026
	Approved by: SLN		Date: 10 March 2026
	Revision No.: -		Date of Issue: 10 March 2026

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1 INTRODUCTION

1.1 Background

1.1.1 The Applicant intends to develop the Site into a residential development at various lots in D.D.210, Pak Wai, Sai Kung ("the Site").

1.1.2 The Site is currently zoned as "Green Belt" ("GB") and "Road" under the Approved Ho Chung Outline Zoning Plan (OZP) No. S/SK-HC/13. The Applicant proposes amendments to the Approved Ho Chung Outline Zoning Plan (OZP) No. S/SK-HC/13 by rezoning the Application Site from "Green Belt" ("GB") and area shown as "Road" to "Residential (Group C)5" ("R(C)5"), with a maximum plot ratio of 0.6 and maximum building heights (BH) of 4 storeys (excluding basements) to facilitate the proposed residential development.

1.1.3 LLA Consultancy Limited was commissioned to carry out a traffic impact assessment study for the proposal to assess the potential traffic impact on its adjacent road network, in support of the planning application. This report presents the finding of the study.

1.2 Objectives

1.2.1 The objectives of the traffic impact assessment study are as follows:

- to review the existing traffic conditions in the surrounding road network;
- to estimate the potential traffic generation due to the proposed development;
- to assess the future traffic situation in the surrounding road network;
- to appraise the potential traffic impact of the proposed development; and
- to recommend the transport facilities provisions for the proposed development.

2 THE PROPOSED DEVELOPMENT

2.1 The Site

2.1.1 As shown in **Figure 2.1**, the Site is located near the J/O Hiram's Highway/Hing Keng Shek Road. The Site area is about 12,692 m^2.

2.2 Development Schedule

2.2.1 The Site will comprise of 4 residential towers with 96 residential units. The development parameters are summarized in **Table 2.1**.

Table 2.1 Proposed Development Schedule

Item	Parameter
Site Area	About 12,692 m^2
Plot Ratio	About 0.6
Total GFA	About 7,615.2 m^2
Domestic GFA	About 7,615.2 m^2
Number of Residential Blocks	4 blocks
Number of Residential Units	96 units
Estimated Residential Population	288

3 EXISTING TRAFFIC SITUATION

3.1 Existing Traffic Conditions

3.1.1 Hing Keng Shek Road serves as a local road connecting to Hiram's Highway. It is a single carriageway with few accesses for the low-density developments and villages nearby.

3.1.2 Hiram's Highway is a major road in the eastern part of New Territories connecting Sai Kung with Clear Water Bay Road. The section of Hiram's Highway between Clear Water Bay Road and Po Tung Road carried an AADT of 22,860 vehicles in 2023.

3.2 Existing Junction Capacity Assessment

3.2.1 In order to assess the existing traffic conditions, a traffic count survey was carried out at the following locations in the vicinity of the Site on 13 October 2025 (Monday) during 07:30 – 09:30 and 17:30 – 19:30 and 11 October 2025 (Saturday) form 12:00 to 19:00. The locations of the surveyed junctions are presented in **Figure 3.1**.

- Hiram's Highway/Hing Keng Shek Road Roundabout
- Hiram's Highway/Ho Chung Road
- Hiram's Highway/ New Hiram's Highway/ Nam Pin Wai Road

3.2.2 The identified weekday AM, weekday PM and weekend peak hours were 08:00 – 09:00, 17:45 – 18:45 and 16:45 – 17:45, respectively and the surveyed traffic flows are presented in **Figure 3.2**.

3.3 Existing Junction Capacity Assessment

3.3.1 Based on the existing traffic flows, the performances of the key junctions during the peak hour were assessed. The results are summarized and presented in **Table 3.1** and the detailed junction capacity calculation sheets are attached in **Appendix A**.

Table 3.1 Existing Junction Performance

No.	Junction Location	Type/ Capacity Index(1)	Junction Performance		
			Weekday AM Peak	Weekday PM Peak	Weekend Peak
J1	Hiram's Highway/Hing Keng Shek Road Roundabout	Roundabout /DFC	0.51	0.43	0.50
J2	Hiram's Highway/Ho Chung Road	Signalized/RC	106%	78%	97%
J3	Hiram's Highway/ New Hiram's Highway/ Nam Pin Wai Road	Roundabout/ DFC	0.58	0.57	0.50

Note: (1) RC = Reserve Capacity; DFC = Design Flow to Capacity ratio

3.4 Existing Link Capacity Assessment

3.4.1 The Volume to Capacity (V/C) Ratios of Hiram's Highway were assessed and the results are presented in **Table 3.2**.

Table 3.2 Link Capacity Assessment

Direction	Bound	Capacity (pcu/hr) (1)	Traffic Flow (pcu/hr)			V/C Ratio		
			AM	PM	WN	AM	PM	WN
Hiram's Highway(2)	EB	1,020	761	1,005	974	0.75	0.99	0.95
	WB	1,020	1,031	785	1,008	1.01	0.77	0.99
Hiram's Highway(3)	NB	3,120	750	1,019	1,005	0.24	0.33	0.32
	SB	3,120	1,083	799	1,039	0.35	0.26	0.33
Hiram's Highway(4)	NB	3,120	786	1,121	1,066	0.25	0.36	0.34
	SB	3,120	1,177	850	1,065	0.38	0.27	0.34
Hiram's Highway(5)	NB	3,120	878	1,256	1,149	0.28	0.40	0.37
	SB	3,120	1,282	932	1,133	0.41	0.30	0.36
Hing Keng Shek Road	2-way	120	51	38	69	0.43	0.32	0.58

Notes: AM – Weekday AM Peak Hour; PM – Weekday PM Peak Hour; WN – Weekend Peak Hour
(1) Capacity refers to TPDM Vol.2 Ch. 2.4. A factor of 1.2 (based on the traffic count survey result) is adopted to convert the capacity from veh/hr to pcu/hr.
(2) The section between Hing Keng Shek Road and Pak Sha Wan Street.
(3) The section between access of Luk Cheung Road and Hing Keng Shek Road.
(4) The section between Ho Chung Road and Luk Mei Tsuen Road.
(5) The section between Nam Pin Wai Road and Ho Chung Road.

3.4.2 As shown in **Table 3.2**, the concerned road sections are operating with spare capacity during weekday AM, weekday PM and weekend peak hours, except the section of Hiram's Highway between Hing Keng Shek Road and Pak Sha Wan Street which is operating at its capacity.

3.5 Public Transport Services

3.5.1 At present, there are few franchised bus and green minibus routes travelling along Hiram's Highway and the details of these routes. The nearby bus stops of the Site are listed out in **Table 3.3** and shown in **Figure 3.3**, respectively.

Table 3.3 Existing Public Transport Services

Mode	Route No.	Terminating Points	Frequency (min)
Bus	92	Sai Kung – Diamond Hill Station	15 – 30
	96R(1)	Wong Shek Pier – Diamond Hill Station	25 – 30
	292P	Sai Kung – Kwun Tong (Yue Man Square)	07:30
	792M	Sai Kung – Tseung Kwan O Station	15 – 30
GMB	1	Sai Kung – Kowloon Bay (Telford Gardens)	8 – 20
	1A	Sai Kung – Diamond Hill (Choi Hung Road) Public Transport Interchange	4
	1S(2)	Sai Kung – Diamond Hill (Choi Hung Road) Public Transport Interchange	10 – 15
	2	Sai Kung – Ho Chung	15 – 30
	12	Sai Kung – Po Lam	10 – 15

Mode	Route No.	Terminating Points	Frequency (min)
	101M	Sai Kung – Hang Hau Station (via Sai Kung North Public Transport Interchange)	3 – 30

Note: (1) Service on Saturdays, Sundays and Holidays.
(2) Overnight Service.

3.5.2 An on-site observation was carried out at the nearest bus stops, "Pak Wai (SK144)" and "Pak Wai (SK458)" on 13 October 2025 (Monday) during the peak period of 07:30 – 09:30 and 17:30 – 19:30, to identify the occupancy of the franchised bus and green minibus services in the AM and PM peak. The identified weekday AM and weekday PM peak hours were 08:00 – 09:00 and 17:30 – 18:30, respectively and the results are summarized in **Tables 3.4 – 3.5**.

Table 3.4 Occupancy of Existing Franchised Bus and Green Minibus Services during AM Peak Hour

Route No.	Observed Vehicular Trips	Passenger Capacity (1)	Passengers on Bus upon Arrival	Total No. of passengers (2)		Passengers on Bus upon Leave	Occupancy
				Boarding	Alighting		
		[a]	[b]	[c]	[d]	[e] = [b]+[c]-[d]	[f] = [e] / [a]
Sai Kung Bound (at Bus Stop "Pak Wai SK144")							
Bus 92	3	360	85	1	5	81	23%
Bus 792M	3	360	60	0	0	60	17%
GMB 1	7	112	58	3	1	60	54%
GMB 1A	22	352	227	4	7	224	64%
GMB 2	3	48	26	0	0	26	54%
GMB 12	4	64	25	0	1	24	38%
GMB 101M	20	320	180	0	3	177	55%
Total	**62**	**1,616**	**661**	**8**	**17**	**652**	**40%**
Kowloon Bound (at Bus Stop "Pak Wai SK458")							
Bus 92	2	240	95	4	2	97	40%
Bus 792M	2	240	85	7	0	92	38%
GMB 1	4	64	64	0	0	64	100%
GMB 1A	23	368	359	3	0	362	98%
GMB 2	2	32	18	0	0	18	56%
GMB 12	2	32	32	0	0	32	100%
GMB 101M	17	272	272	0	0	272	100%
Total	**52**	**1248**	**925**	**14**	**2**	**937**	**75%**

Notes: (1) Assume the capacity of each franchised bus and green minibus is 120 pax and 16 pax, respectively.
(2) No left behind was recorded during the survey periods.

Table 3.5 Occupancy of Existing Franchised Bus and Green Minibus Services during PM Peak Hour

Route No.	Observed Vehicular Trips	Passenger Capacity (1)	Passengers on Bus upon Arrival	Total No. of passengers (2)		Passengers on Bus upon Leave	Occupancy
				Boarding	Alighting		
		[a]	[b]	[c]	[d]	[e] = [b]+[c]-[d]	[f] = [e] / [a]
Sai Kung Bound (at Bus Stop "Pak Wai SK144")							
Bus 92	2	240	90	0	3	87	36%
Bus 792M	3	360	150	0	2	148	41%
GMB 1	1	16	15	0	0	15	94%
GMB 1A	29	464	464	0	7	457	98%
GMB 2	2	32	15	1	0	16	50%
GMB 12	1	16	10	0	0	10	63%
GMB 101M	21	336	328	0	8	320	95%
Total	**59**	**1,464**	**1,072**	**1**	**20**	**1,053**	**72%**
Kowloon Bound (at Bus Stop "Pak Wai SK458")							
Bus 92	4	480	350	7	0	357	74%
Bus 792M	2	240	150	0	0	150	63%
GMB 1	1	16	16	0	0	16	100%
GMB 1A	25	400	400	1	1	400	100%
GMB 2	2	32	32	0	0	32	100%
GMB 12	0	0	0	0	0	0	0%
GMB 101M	26	416	400	2	0	402	97%
Total	**60**	**1,584**	**1,348**	**10**	**1**	**1,357**	**86%**

Notes: (1) Assume the capacity of each franchised bus and green minibus is 120 pax and 16 pax, respectively.
(2) No left behind was recorded during the survey periods.

4 FUTURE TRAFFIC SITUATION

4.1 Design Year

4.1.1 The completion year of the proposed development is expected to be 2031. As a result, the design year of the traffic impact assessment should be three years after the completion year, i.e., 2034.

4.2 Traffic Forecast

ATC Historical Data

4.2.1 Reference was made to the 2019 to 2023 Annual Traffic Census Reports, published by the Transport Department, to determine the traffic growth. The traffic data recorded at the counting stations in the vicinity of the Development Site is shown in **Table 4.1**.

Table 4.1 Annual Traffic Census Data

Stn. No.	Road Section			AADT(1)					Average Growth%
	Road	From	To	2019	2020	2021	2022	2023	
5017	Clear Water Bay Rd	On Sau Rd	Hiram's Highway	28,980	28,900 (-0.3%)	29,100 (0.7%)	27,720 (-4.7%)	29,080 (4.9%)	0.1%
5466	Clear Water Bay Rd	Hang Hau Rd	Hiram's Highway	20,240	19,110 (-5.6%)	20,020 (4.8%)	19,140 (-4.4%)	19,160 (0.1%)	-1.4%
6055	Hiram's Highway	Clear Water Bay Rd	Po Tung Rd	24,280	23,360 (-3.8%)	24,460 (4.7%)	23,480 (-4%)	22,860 (-2.6%)	-1.5%
Total				**73,500**	**71,370 (-2.9%)**	**73,580 (3.1%)**	**70,340 (-4.4%)**	**71,100 (1.1%)**	**-0.8%**

Note: (1) Figures in bracket indicated the % increase between two years.

4.2.2 **Table 4.1** shows that the AADT at the concerned ATC stations has an overall annual growth of negative 0.8% in between the years 2019 to 2023.

Territorial Population and Employment Data Matrix (TPEDM) Projection Data

4.2.3 Reference was also made to the 2019–based TPEDM published by the Planning Department. The population and employment data of year 2019 and 2031 in the Southeast New Territories (Other Area) are summarized in **Table 4.2**.

Table 4.2 Population and Employment Data in Southeast New Territories (Other Area)

Year	2019	2026	2031
Population	68,900	65,800	59,750
Employment	27,250	27,750	28,100
Total	96,150	93,550	87,850
Average Annual Growth %		**-0.4% (2019 to 2026)**	**-1.2% (2026 to 2031)**

4.2.4 As shown in **Table 4.2**, the projected average annual growth rates of the population and employment total number under the TPEDM in Southeast New Territories (Other Area) are negative 0.4% and negative 1.2% between the years 2019 – 2026 and 2026 – 2031, respectively. Having considered the rates derived from ATC and TPEDM data, to be conservative, a nominal growth rate of +1.0% will be adopted for the subsequent traffic forecast.

4.3 Traffic Generation of the Proposed Development

4.3.1 Reference was also made to the latest set of traffic generation and attraction rates documented in Chapter 3 "Transport Considerations of Town Plans" of the TPDM, for the estimation of the traffic generated by the proposed development. The traffic generation and attraction numbers were shown in **Table 4.3**

Table 4.3 Development Traffic Generation

Proposed Use	Unit / Content	Weekday AM Peak Hour			Weekday PM Peak Hour			Weekend Peak Hour (1)		
		Gen.	Att.	Total	Gen.	Att.	Total	Gen.	Att.	Total
Mean Trip rates from TPDM										
Residential – 80m^2	pcu/hr/flat	0.1058	0.0605	-	0.0426	0.0590	-	0.0426	0.0590	-
Traffic Generation/Attraction										
Proposed Development	96 flats	11	6	17	5	6	11	5	6	11

Note: Gen. – Generation; Att. – Attraction.
(1) The trip rates for PM peak hour are adopted for the weekend peak hour.

4.3.2 In view of the above, the proposed development would generate two-way traffic flows of 17 pcu/hr in the weekday AM peak hour, 11 pcu/hr in the weekday PM peak hour and 11 pcu/hr in the weekend peak hour. The traffic distribution is shown diagrammatically in **Figure 4.1**.

4.4 Planned and Approved Developments

4.4.1 To estimate the future traffic flows generated and attracted by the nearby planned and approved developments, updated information has been obtained from available information regarding the planned and approved developments in the vicinity of the proposed development site, the details of these developments are listed in **Table 4.4**.

Table 4.4 Planned and Approved Developments

Ref.	Location	Use	Development Parameters
A	Various Lot in D.D. 210, Ho Chung	Residential	2,422 m^2 GFA (15 flats)
B	Lot 1003 in D.D. 214, Ho Chung	Residential	5,344 m^2 GFA (90 flats)
C	Lot 2189 in D.D. 244, Nam Pin Wai	Residential	8,320 m^2 GFA (139 flats)
D	Various Lots in D.D. 244 and Adjoining Government Land, Ho Chung, Sai Kung	Residential	13,719 m^2 GFA (58 flats)
E	Various Lots in D.D. 210 and 244 and Adjoining Government Land, Ho Chung, Sai Kung	Residential	2,393 m^2 GFA (8 flats)

4.4.2 Reference is made to Volume 1 of the TPDM published by the TD on the trip rates of the foregoing developments to estimate their traffic generation and attraction. The total traffic generation and attraction by these adjacent planned/committed developments are summarized in **Table 4.5**.

Table 4.5 Traffic Generation of the Planned and Approved Developments

Use	Use / Content	AM Peak Hour			PM Peak Hour			Weekend Peak Hour (1)		
		Gen.	Att.	Total	Gen.	Att.	Total	Gen.	Att.	Total
Adopted TPDM Mean Trip Rates										
Residential – 60m^2	pcu/hr/flat	0.0718	0.0425	-	0.0286	0.0370	-	0.0286	0.0370	-
Residential – 180m^2	pcu/hr/flat	0.2772	0.1769	-	0.1635	0.2394	-	0.1635	0.2394	-
Residential – 240m^2	pcu/hr/flat	0.3012	0.2189	-	0.2235	0.3234	-	0.2235	0.3234	-
Residential – 300m^2	pcu/hr/flat	0.3252	0.2609	-	0.2835	0.4074	-	0.2835	0.4074	-
Traffic Generation										
Site A	15 flats	5	3	8	3	4	7	3	4	7
Site B	90 flats	7	4	11	3	4	7	3	4	7
Site C	139 flats	10	6	16	4	6	10	4	6	10
Site D	58 flats	18	13	31	13	19	32	13	19	32
Site E	8 flats	3	3	6	3	4	7	3	4	7
Total		**43**	**29**	**72**	**26**	**37**	**63**	**26**	**37**	**63**

Note: Gen. – Generation; Att. – Attraction.
(1) The trip rates for PM peak hour are adopted for weekend peak hour.

4.4.3 As shown in **Table 4.5**, the planned/committed developments will generate a total two-way traffic of 72, 63 and 63 pcu/hr during weekday AM, weekday PM peak hour and weekend peak hour respectively. The estimated traffic generation will be assumed to be travelling in the local road network in the same proportions as the existing traffic demands when traffic forecast is prepared in this Study.

4.5 Reference and Design Flows

4.5.1 The 2034 Reference Flows, i.e. the traffic flows in the vicinity without the proposed development, were estimated based on the following equation.

2034 Reference Flows = 2025 Existing Traffic Flows x $(1 + 1.0\%)^9$

4.5.2 The 2034 Design Flows, i.e. the traffic flows in the local road network with the traffic generated by the proposed residential development, were estimated based on the following equation:

2034 Design Flows = 2034 Reference Flows + Traffic Flows Generated by the Proposed Development

4.5.3 The 2034 Reference and Design Flows are shown in **Figures 4.2** and **4.3**, respectively.

4.6 Junction Capacity Assessment

4.6.1 Junction capacity analysis was carried out for the assessment year 2034. The assessment results are shown in **Table 4.6** and the detailed calculation sheets are attached in **Appendix B**.

Table 4.6 2034 Junction Capacity Assessments

No.	Junction Location	Type/ Index(1)	Reference			Design		
			AM	PM	WN	AM	PM	WN
J1	Hiram's Highway/Hing Keng Shek Road Roundabout	Roundabout /DFC	0.56	0.47	0.55	0.56	0.47	0.55
J2	Hiram's Highway/Ho Chung Road	Signalized /RC	86%	69%	80%	85%	67%	80%
J3	Hiram's Highway/ New Hiram's Highway/ Nam Pin Wai Road	Roundabout/ DFC	0.65	0.63	0.56	0.65	0.64	0.56

Notes: AM – Weekday AM Peak Hour; PM – Weekday PM Peak Hour; WN – Weekend Peak Hour.
(1) RC = Reserved Capacity; DFC = Design Flow to Capacity Ratio.

4.6.2 As shown in **Table 4.6**, all the concerned junctions will perform with spare capacity for both the Reference and Design Scenarios in 2034. Therefore, the adjacent road network will be able to cope with the traffic generated by the proposed development.

4.7 Link Capacity Assessment

4.7.1 The V/C Ratios of Hiram's Highway were assessed and the results are presented in **Table 4.7**.

Table 4.7 Year 2034 Link Capacity Assessments

Direction	Bound	Capacity (pcu/hr) (1)	Traffic Flow (pcu/hr)			V/C Ratio		
			AM	PM	WN	AM	PM	WN
2034 Reference Scenario								
Hiram's Highway(2)(3)	EB	3,120	835	1,102	1,067	0.27	0.35	0.34
	WB	3,120	1,130	862	1,105	0.36	0.28	0.35
Hiram's Highway(4)	NB	3,120	823	1,116	1,101	0.26	0.36	0.35
	SB	3,120	1,186	877	1,139	0.38	0.28	0.37
Hiram's Highway(5)	NB	3,120	869	1,236	1,176	0.28	0.40	0.38
	SB	3,120	1,294	936	1,171	0.41	0.30	0.38
Hiram's Highway(6)	NB	3,120	987	1,331	1,253	0.32	0.43	0.40
	SB	3,120	1,412	1,028	1,248	0.45	0.33	0.40
Hing Keng Shek Road	2-way	120	56	41	75	0.47	0.34	0.63
2034 Design Scenario								
Hiram's Highway(2)(3)	EB	3,120 (3)	836	1,102	1,067	0.27	0.35	0.34
	WB	3,120 (3)	1,131	863	1,106	0.36	0.28	0.35

Direction	Bound	Capacity (pcu/hr) (1)	Traffic Flow (pcu/hr)			V/C Ratio		
			AM	PM	WN	AM	PM	WN
Hiram's Highway(4)	NB	3,120	828	1,121	1,106	0.27	0.36	0.35
	SB	3,120	1,196	882	1,144	0.38	0.28	0.37
Hiram's Highway(5)	NB	3,120	874	1,241	1,181	0.28	0.40	0.38
	SB	3,120	1,304	941	1,176	0.42	0.30	0.38
Hiram's Highway(6)	NB	3,120	992	1,336	1,258	0.32	0.43	0.40
	SB	3,120	1,422	1,033	1,253	0.46	0.33	0.40
Hing Keng Shek Road	2-way	960(7)	73	52	86	0.08	0.05	0.09

Notes: AM – Weekday AM Peak Hour; PM – Weekday PM Peak Hour; WN – Weekend Peak Hour
(1) Capacity refers to TPDM Vol.2 Ch. 2.4. A factor of 1.2 (based on the traffic count survey result) is adopted to convert the capacity from veh/hr to pcu/hr.
(2) The section between Hing Keng Shek Road and Pak Sha Wan Street.
(3) The section of Hiram's Highway will be widened to dual two-lane carriageway under Hiram's Highway Improvement Stage 2.
(4) The section between access of Luk Cheung Road and Hing Keng Shek Road.
(5) The section between Ho Chung Road and Luk Mei Tsuen Road.
(6) The section between Nam Pin Wai Road and Ho Chung Road.
(7) The section between proposed vehicular access and Hiram's Highway will be widened (discussed in **Section 5.1** below).

4.7.2 As shown in **Table 4.6**, all the concerned road sections will operate with capacity during weekday AM, weekday PM and weekend peak hours in both reference and design scenarios.

4.8 Review of Public Transport Facilities

4.8.1 Based on the tentative flat mix, the overall population of the proposed development is about 288. Reference has been made to the published "Travel Characteristics Survey (TCS) 2011 Final Report". According to the Report, the daily mechanized trip rate per population is 1.83 trips (two-way) and the morning peak hour accounted for about 12% of the daily trips for the two-way trips. It is assumed that 90% of the trips are outbound direction in the AM peak hour, while in the PM peak hour, it is anticipated that most of the trips would be inbound direction, 10% of the trips is assumed to be outbound direction. Based on the above and most of residents would use public transport services, the estimated public transport demand of the proposed development in outbound direction in AM and PM peak hour is about 57 pax/hr (i.e. 288 x 1.83 x 0.12 x 0.9) and 7 pax/hr (i.e. 288 x 1.83 x 0.12 x 0.1), respectively.

4.8.2 The public transport demand induced by the planned developments mentioned in **Section 4.4** is also considered. According to "Hong Kong Annual Digest of Statistics" published by the Census and Statistic Department, the average household size for the territory in year 2022 is 2.7, this figure is adopted for estimating the population of these developments. By following the methodology described in the aforesaid paragraph, the estimated public transport demand of the planned developments in outbound direction in AM and PM peak hour is about 166 pax/hr (i.e. (15+90+139+58+8) x 2.7 x 1.83 x 0.12 x 0.9) and 19 pax/hr (i.e. (15+90+139+58+8) x 2.7 x 1.83 x 0.12 x 0.1), respectively.

4.8.3 Based on the existing public transport vacancy (as estimated in **Tables 3.4 and 3.5**) and the above projected demand, the existing bus/green minibus services will still operate with capacity after accommodating the future demand induced by the proposed development and the planned developments.

5 PROVISION OF TRANSPORT FACILITIES

5.1 Vehicular Access Arrangement

5.1.1 The vehicular access of the proposed development will be located at Hing Keng Shek Road. It is proposed to widen the existing section of Hing Keng Shek Road between the proposed vehicular access and Hiram's Highway to 6.0m for a 2-lane single carriageway. A 2.0m wide footpath will be also provided within the Site connecting the proposed development and Hiram's Highway and the footpath will also be opened for public use. The proposed traffic arrangement is shown in **Figure 5.1**. The project proponent will be responsible for implementing the improvement works and will undertake the management and maintenance responsibility for the footpath within the Site.

5.1.2 Swept path analysis is conducted to demonstrate the manoevruing of vehicles entering and leaving the Site via the proposed vehicular access and shown in **Figures 5.2 – 5.3**. To ensure sufficient sightline is provided for the proposed run-out, a sightline analysis is conducted and presented in **Figure 5.4**.

5.2 Internal Transport Facilities

5.2.1 The internal transport facilities for the proposed development will be provided in accordance with the Hong Kong Planning Standards and Guidelines (HKPSG). The required and the proposed provisions for the proposed development are shown in **Table 5.1**.

Table 5.1 Proposed Car Parking and Loading/Unloading Facilities

<table>
<tr><th>Type</th><th colspan="7">HKPSG's Requirements</th><th>Required Provision</th><th>Proposed Provision</th></tr>
<tr><td colspan="10">Proposed Residential Development (96 flats)</td></tr>
<tr><td rowspan="5">Car Parking Space</td><td colspan="7"><u>For Residents</u>
Parking Requirements = GPS x R1 x R2 x R3 where</td><td rowspan="3">2 – 4

40 – 69</td><td rowspan="3">4

69</td></tr>
<tr><td>Unit Size</td><td>No. of Unit</td><td>GPS</td><td>R1</td><td>R2</td><td>R3</td></tr>
<tr><td>40 m^2 <FS ≤ 70 m^2</td><td>8</td><td rowspan="2">1 space per 4 – 7 units</td><td>1.2</td><td>1</td><td>1.3</td></tr>
<tr><td>70 m^2 < FS ≤ 100 m^2</td><td>88</td><td>2.4</td><td>1</td><td>1.3</td></tr>
<tr><td colspan="7"><u>For Visitors</u>
Visitor car parking for private residential developments with more than 75 units per block should be provided at 5 visitor spaces per block in addition to the requirements, or as determined by the Authority. For private residential developments with 75 units or less per block, the visitor car parking provision will be determined by TD on a case-by-case basis.</td><td>6</td><td>6</td></tr>
<tr><td colspan="7">TOTAL CAR PARKING</td><td>48 – 79</td><td>79</td></tr>
<tr><td>Motorcycle Parking Space</td><td colspan="7">1 space per 100 - 150 flats</td><td>1</td><td>1</td></tr>
<tr><td>Loading / Unloading Bay</td><td colspan="7">1 bay per residential block or as determined by the Authority.</td><td>4</td><td>4</td></tr>
</table>

5.2.2 **Table 5.2** lists out a summary of the numbers and the dimensions required for each type of spaces in the proposed development. The proposed car park layout plan is enclosed in **Appendix C**.

Table 5.2 Summary of Overall Transport Facilities Provision

Facilities	Dimensions	Proposed Provision
Car Parking Space	2.5m (W) x 5.0m (L) x 2.4 (H)	77
Disable Car Parking Space	3.5m (W) x 5.0m (L) x 2.4 (H)	2
Goods Vehicle Loading and Unloading Bay	3.5m (W) x 11.0m (L) x 4.7m(H)	4
Motorcycle Parking Space	1.0m (W) x 2.4m (L) x 2.4 (H)	1

5.3 Pedestrian Access Arrangement

5.3.1 At present, there is a cautionary crossing for pedestrians to walk across Hiram's Highway to reach the bus layby for Kowloon/TKO-bound buses. For the pedestrians to walk to the bus layby for Sai Kung-bound buses, it is proposed to improve the pedestrian connectivity by providing a cautionary crossing to walk across Hing Keng Shek Road as shown in **Figure 5.5**.

6 SUMMARY AND CONCLUSION

6.1 Summary

6.1.1 The Applicant intends to develop the Site into a residential development at various lots in D.D.210, Pak Wai, Sai Kung. The proposal will have about 96 residential units.

6.1.2 Traffic count surveys were carried out on 13 October 2025 (Monday) during 07:30 – 09:30 and 17:30 – 19:30 and 11 October 2025 (Saturday) from 12:00 to 19:00. The identified weekday AM, weekday PM and weekend peak hours were 08:00 – 09:00, 17:45 – 18:45 and 16:45 – 17:45, respectively. Junction and link capacity assessment based on the observed flows shows that all concerned junctions and road links are performing satisfactorily during weekday AM, weekday PM and weekend peak hours, except the section of Hiram's Highway between Hing Keng Shek Road and Pak Sha Wan Street which is operating at its capacity.

6.1.3 The proposed development would generate two-way traffic flows of 17 pcu/hr in the weekday AM peak hour, 11 pcu/hr in the weekday PM peak hour and 11 pcu/hr in the weekend peak hour. By assigning the additional development traffic to the 2034 Reference Flows, the 2034 Design Flows were obtained.

6.1.4 Junction and link capacity assessments were carried out for the key junctions and road links in the vicinity for the year 2034. The results indicated that all junctions and road links will operate satisfactorily for both reference and design scenarios. Therefore, it is anticipated that the proposed development will not induce significant traffic impact to the surrounding road network.

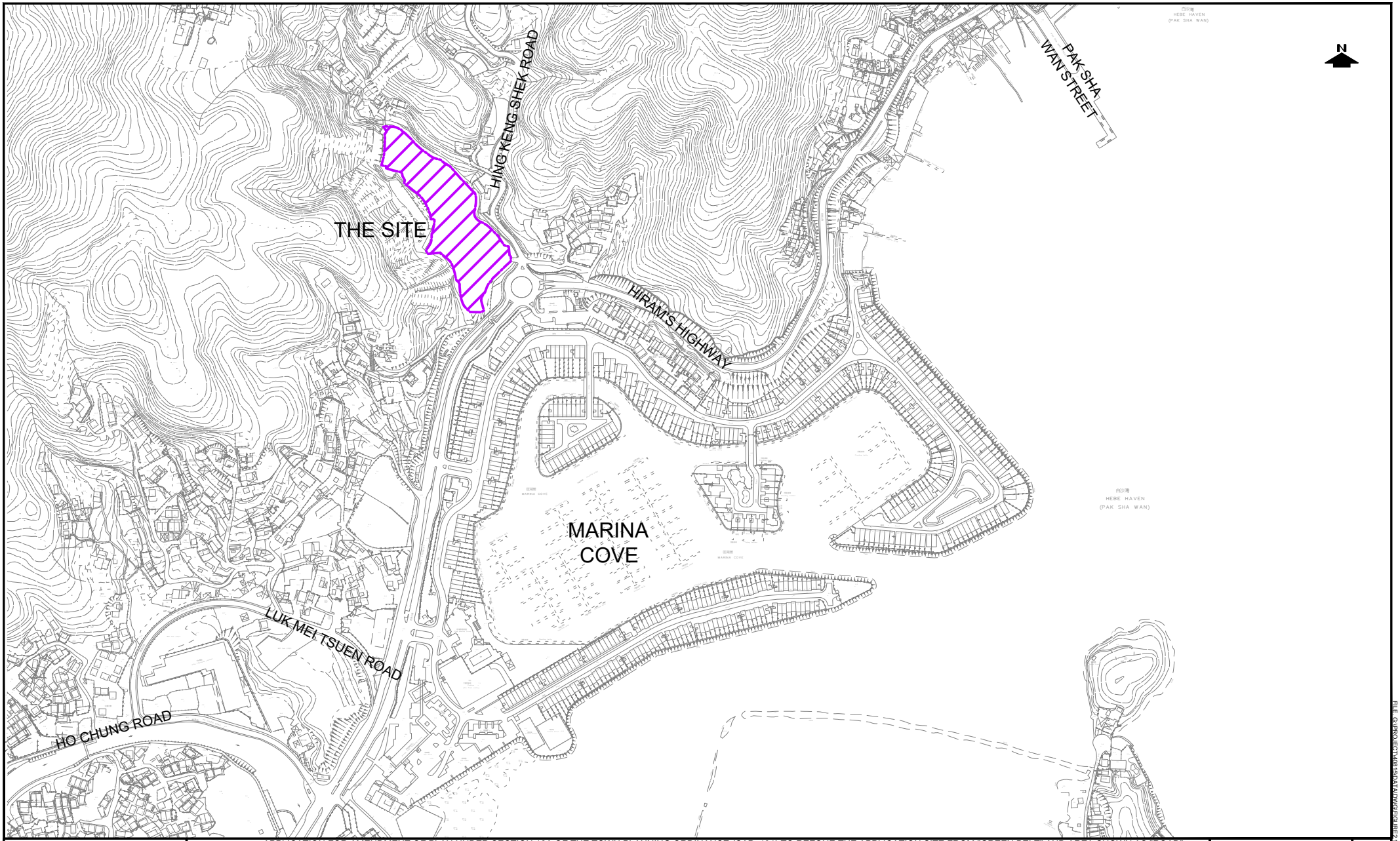
6.1.5 Public transport facilities has also been reviewed, the existing bus/green minibus services will still operate with capacity after accommodating the future demand induced by the proposed development and the planned developments.

6.1.6 The vehicular access of the proposed development will be located at Hing Keng Shek Road. It is proposed to widen the existing section of Hing Keng Shek Road between the proposed vehicular access and Hiram's Highway to 6.0m for a 2-lane single carriageway. A 2.0m wide footpath will be also provided within the Site connecting the proposed development and Hiram's Highway and the footpath will also be opened for public use. The project proponent will be responsible for implementing the improvement works and will undertake the management and maintenance responsibility for the footpath within the Site. In order to improve the pedestrian connectivity, the project proponent will also be responsible for the construction of a cautionary crossing to walk across Hing Keng Shek Road under the proposed development.

6.1.7 The internal transport facilities of the proposed development will be provided in accordance with the recommendations in the HKPSG. The proposed development will provide a total of 79 private car parking spaces (including 2 nos. of parking space for disabled users), 1 motorcycle parking space and 4 goods vehicle loading / unloading bays.

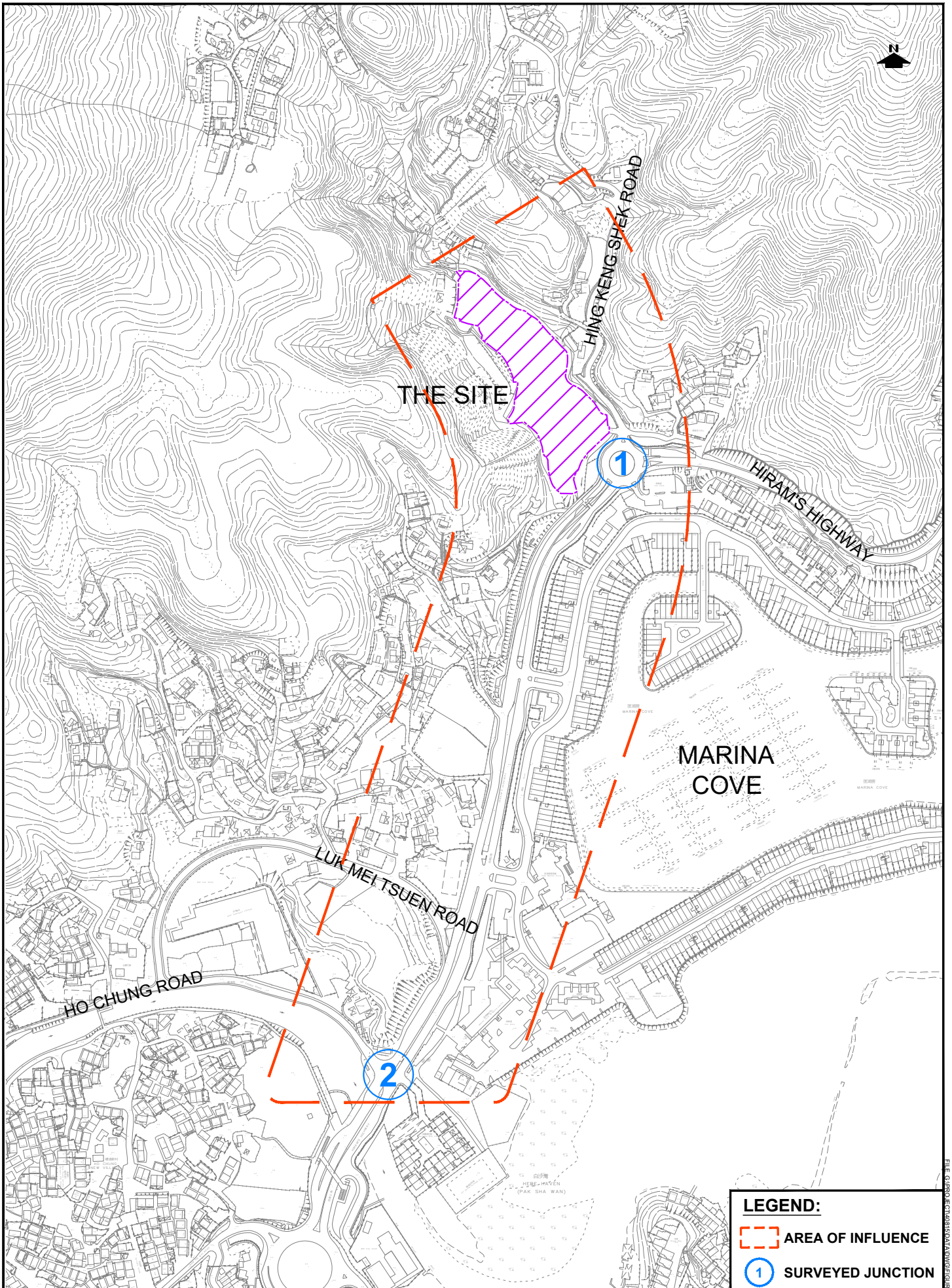
6.2 Conclusion

6.2.1 The findings of the traffic impact assessment impact assessment indicated that the road network in the vicinity of the Site would be able to cope with the proposed development and the project is considered acceptable in traffic viewpoint.



PROJECT NO. 40815	PROJECT TITLE: APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A OF THE TOWN PLANNING ORDINANCE (CAP. 131) TO REZONE THE APPLICATION SITE FROM "GREEN BELT" AND AREA SHOWN AS "ROAD" TO "RESIDENTIAL (GROUP C)5" FOR PROPOSED RESIDENTIAL DEVELOPMENT AT VARIOUS LOTS IN D.D. 210 AND ADJOINING GOVERNMENT LAND, PAK WAI, SAI KUNG	DRAWING NO. FIGURE 2.1	REV. B
DESIGNED SLN / DRAWN CLL / CHECKED SLN; DATE JUL 2025; SCALE 1:6000	DRAWING TITLE: LOCATION PLAN	LLA 顧問有限公司 Consultancy Limited	

FILE: G:\PROJECT\40815\DATA\DWG\FIGURE2.1B.DWG PLOT SCALE : 1 = 1



PROJECT NO. 40815	PROJECT TITLE: APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A OF THE TOWN PLANNING ORDINANCE (CAP. 131) TO REZONE THE APPLICATION SITE FROM "GREEN BELT" AND AREA SHOWN AS "ROAD" TO "RESIDENTIAL (GROUP C)5" FOR PROPOSED RESIDENTIAL DEVELOPMENT AT VARIOUS LOTS IN D.D. 210 AND ADJOINING GOVERNMENT LAND, PAK WAI, SAI KUNG	DRAWING NO. FIGURE 3.1	REV. B
DESIGNED SLN / DATE JUL 2025	DRAWING TITLE: LOCATION OF SURVEYED JUNCTIONS		
DRAWN CLL / SCALE 1:5000			
CHECKED SLN		LLA 顧問有限公司 Consultancy Limited	

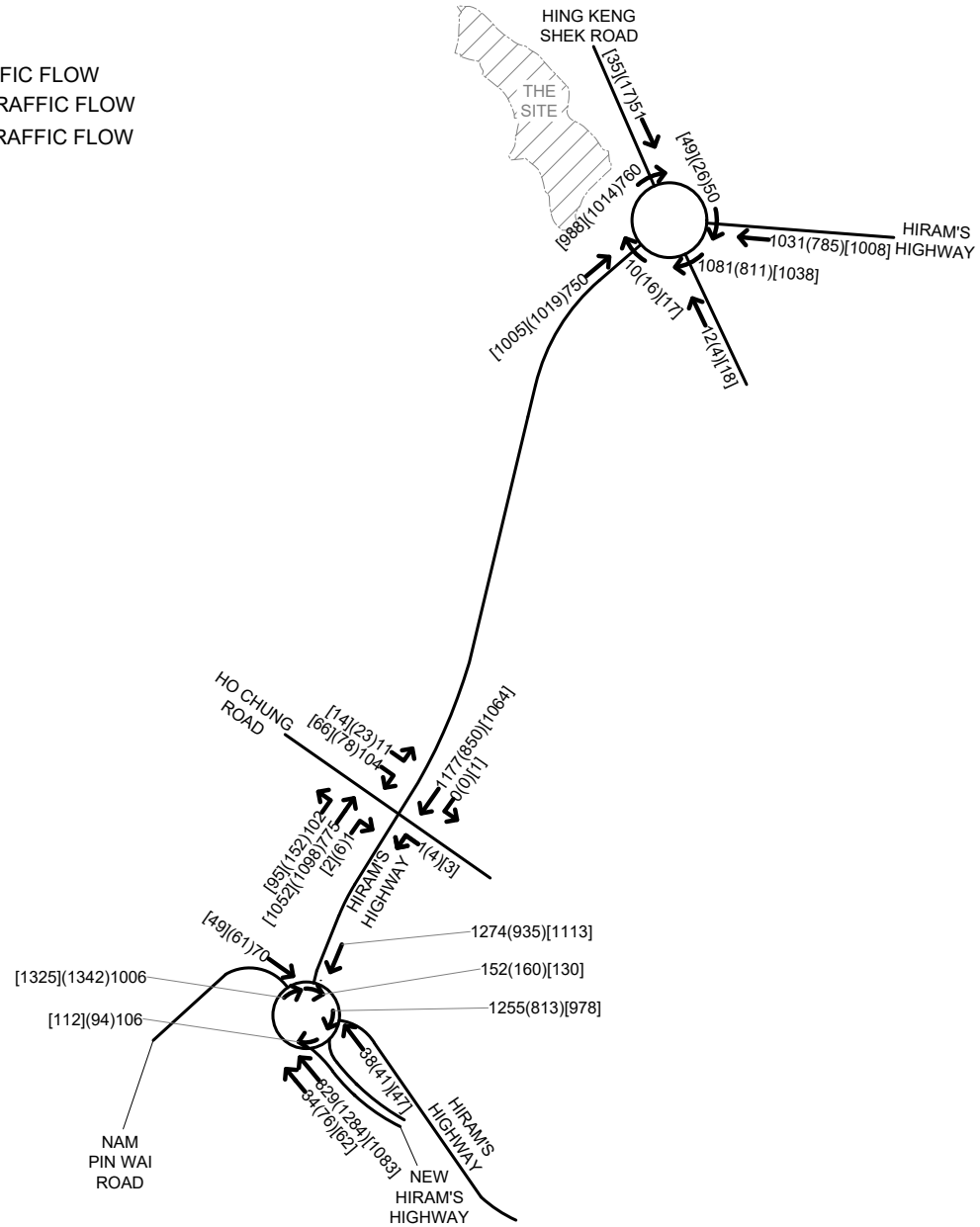
FILE: G:\PROJECT\40815\DATA\DWG\FIGURE3.1B.DWG PLOT SCALE : 1 = 1

LEGEND:

312(158)[361] ← WEEKEND PEAK HOUR TRAFFIC FLOW
WEEKDAY PM PEAK HOUR TRAFFIC FLOW
WEEKDAY AM PEAK HOUR TRAFFIC FLOW

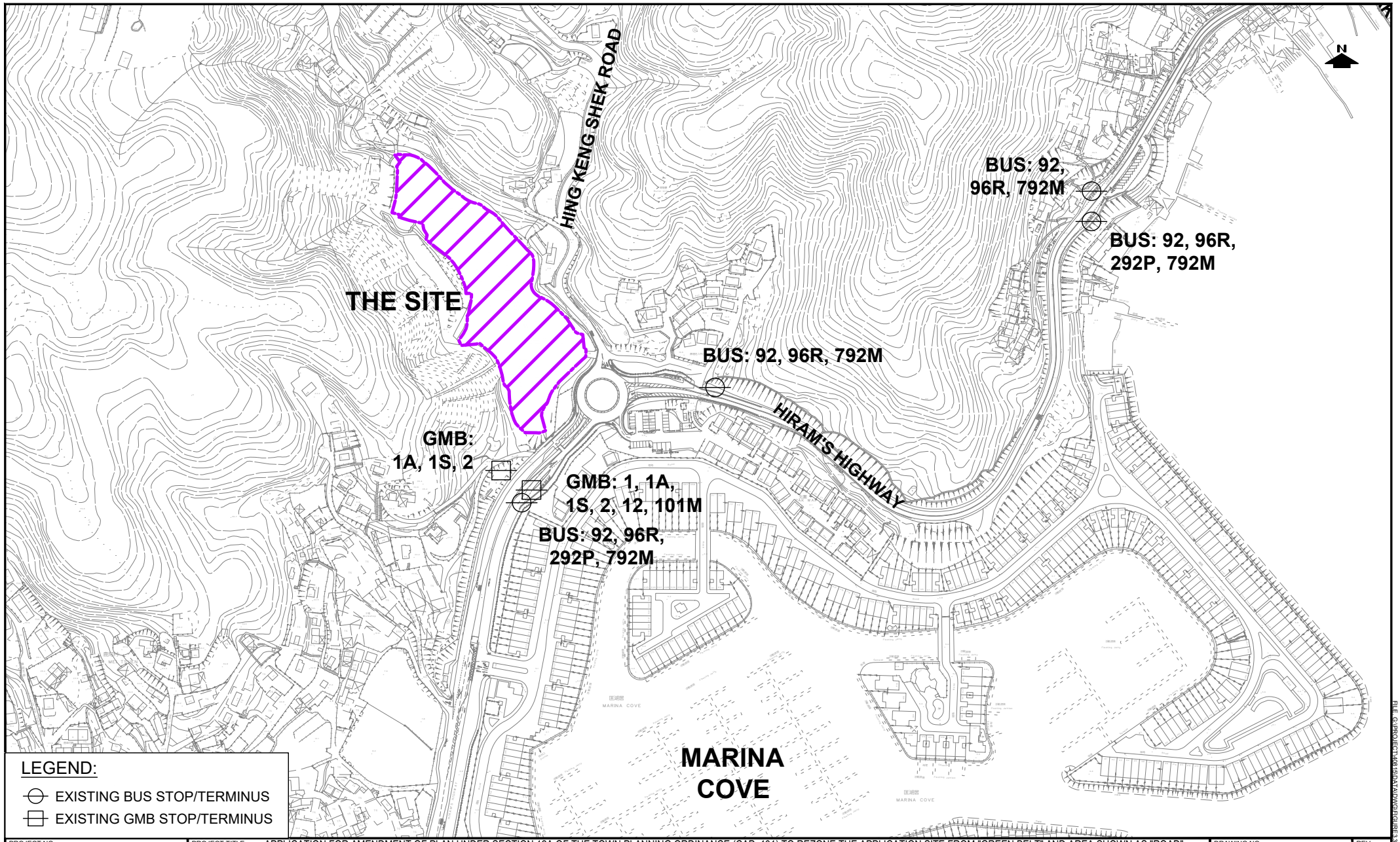
NOTE:

1. ALL TRAFFIC FLOWS ARE IN PCU/HOUR
2. MINOR ROADS ARE NOT SHOWN FOR CLARITY



PROJECT NO. 40815	PROJECT TITLE: APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A OF THE TOWN PLANNING ORDINANCE (CAP. 131) TO REZONE THE APPLICATION SITE FROM "GREEN BELT" AND AREA SHOWN AS "ROAD" TO "RESIDENTIAL (GROUP C)5" FOR PROPOSED RESIDENTIAL DEVELOPMENT AT VARIOUS LOTS IN D.D. 210 AND ADJOINING GOVERNMENT LAND, PAK WAI, SAI KUNG	DRAWING NO. FIGURE 3.2	REV. D
DESIGNED SLN / DRAWN CLL / CHECKED SLN; DATE OCT 2025; SCALE N.T.S.	DRAWING TITLE: 2025 EXISTING TRAFFIC FLOWS	LLA 顧問有限公司 Consultancy Limited	

FILE: G:\PROJECT\40815\DATA\DWG\FIGURE3.2D.DWG PLOT SCALE : 1 = 1



PROJECT NO. 40815	PROJECT TITLE: APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A OF THE TOWN PLANNING ORDINANCE (CAP. 131) TO REZONE THE APPLICATION SITE FROM "GREEN BELT" AND AREA SHOWN AS "ROAD" TO "RESIDENTIAL (GROUP C)5" FOR PROPOSED RESIDENTIAL DEVELOPMENT AT VARIOUS LOTS IN D.D. 210 AND ADJOINING GOVERNMENT LAND, PAK WAI, SAI KUNG	DRAWING NO. FIGURE 3.3	REV. B
DESIGNED SLN / DRAWN CLL / CHECKED SLN; DATE JUL 2025; SCALE 1:4000	DRAWING TITLE: PUBLIC TRANSPORT FACILITIES IN THE VICINITY	LLA 顧問有限公司 Consultancy Limited	

FILE: G:\PROJECT\40815\DATA\DWG\FIGURE3.3B.DWG PLOT SCALE : 1 = 1

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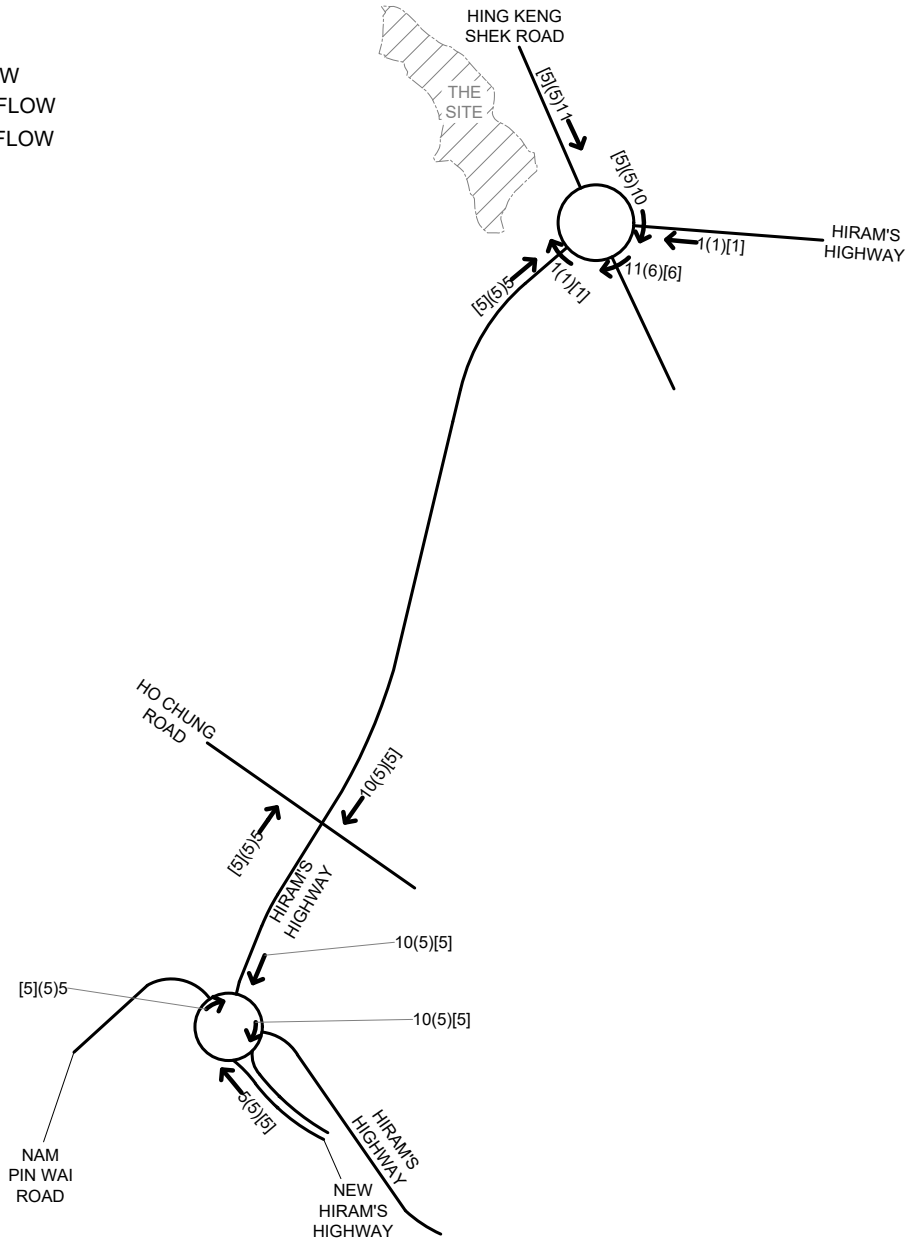
LEGEND:

312(158)[361] ← WEEKEND PEAK HOUR TRAFFIC FLOW
WEEKDAY PM PEAK HOUR TRAFFIC FLOW
WEEKDAY AM PEAK HOUR TRAFFIC FLOW

NOTE:

1. ALL TRAFFIC FLOWS ARE IN PCU/HOUR
2. MINOR ROADS ARE NOT SHOWN FOR CLARITY



PROJECT NO. 40815	PROJECT TITLE: APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A OF THE TOWN PLANNING ORDINANCE (CAP. 131) TO REZONE THE APPLICATION SITE FROM "GREEN BELT" AND AREA SHOWN AS "ROAD" TO "RESIDENTIAL (GROUP C)5" FOR PROPOSED RESIDENTIAL DEVELOPMENT AT VARIOUS LOTS IN D.D. 210 AND ADJOINING GOVERNMENT LAND, PAK WAI, SAI KUNG	DRAWING NO. FIGURE 4.1	REV. F
DESIGNED SLN / DRAWN CLL / CHECKED SLN; DATE DEC 2025; SCALE N.T.S.	DRAWING TITLE: DEVELOPMENT TRAFFIC FLOWS	LLA 顧問有限公司 Consultancy Limited	

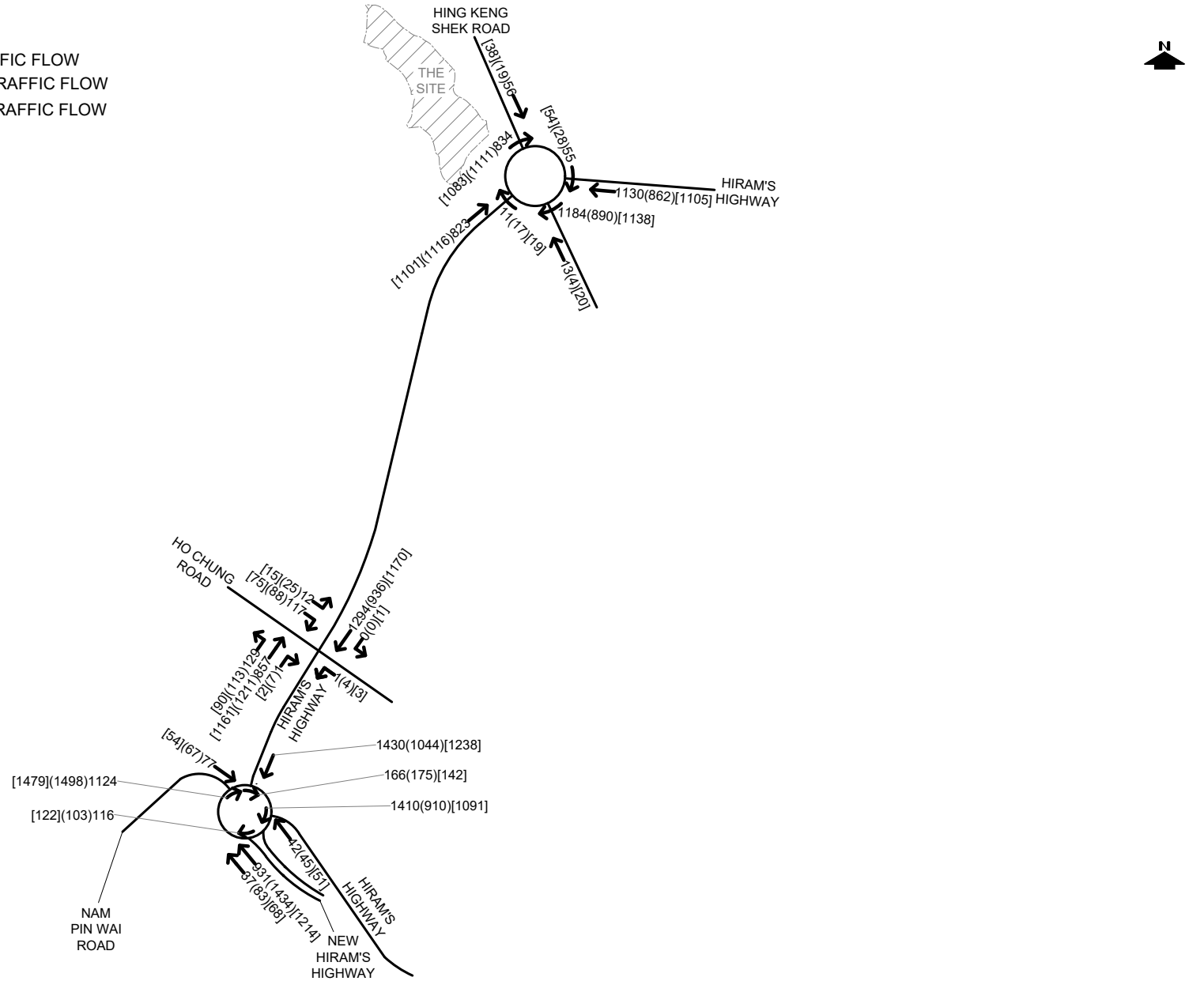
FILE: G:\PROJECT\40815\DATA\DWG\FIGURE4.1F.DWG PLOT SCALE : 1 = 1

LEGEND:

312(158)[361] ← WEEKEND PEAK HOUR TRAFFIC FLOW
WEEKDAY PM PEAK HOUR TRAFFIC FLOW
WEEKDAY AM PEAK HOUR TRAFFIC FLOW

NOTE:

1. ALL TRAFFIC FLOWS ARE IN PCU/HOUR
2. MINOR ROADS ARE NOT SHOWN FOR CLARITY



PROJECT NO. 40815	PROJECT TITLE: APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A OF THE TOWN PLANNING ORDINANCE (CAP. 131) TO REZONE THE APPLICATION SITE FROM "GREEN BELT" AND AREA SHOWN AS "ROAD" TO "RESIDENTIAL (GROUP C)5" FOR PROPOSED RESIDENTIAL DEVELOPMENT AT VARIOUS LOTS IN D.D. 210 AND ADJOINING GOVERNMENT LAND, PAK WAI, SAI KUNG	DRAWING NO. FIGURE 4.2	REV. E
DESIGNED SLN / DRAWN CLL / CHECKED SLN	DATE OCT 2025 / SCALE N.T.S.	DRAWING TITLE: 2034 REFERENCE TRAFFIC FLOWS	LLA 顧問有限公司 Consultancy Limited

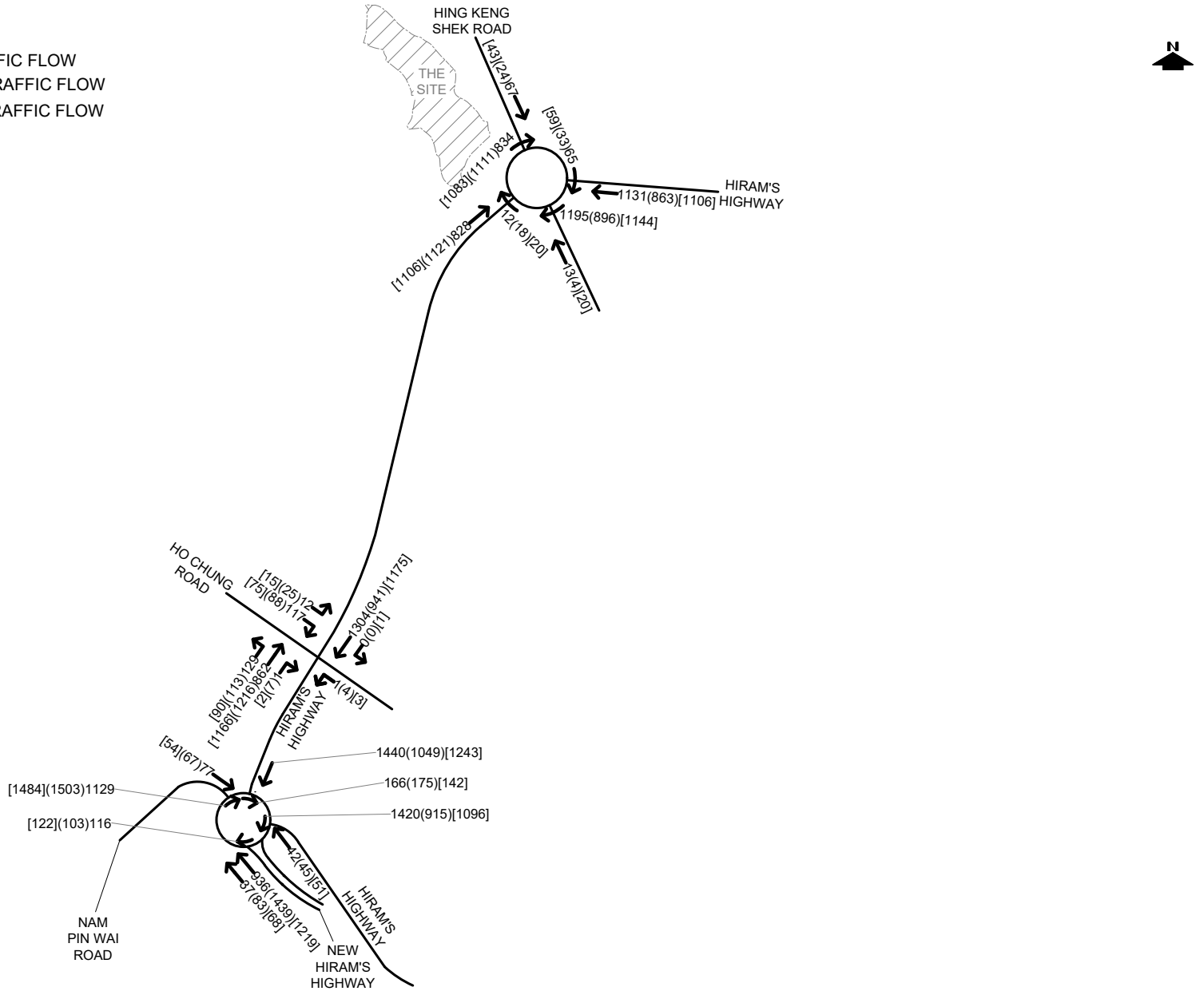
FILE: G:\PROJECT\40815\DATA\DWG\FIGURE4.2E.DWG PLOT SCALE : 1 = 1

LEGEND:

312(158)[361] ← WEEKEND PEAK HOUR TRAFFIC FLOW
WEEKDAY PM PEAK HOUR TRAFFIC FLOW
WEEKDAY AM PEAK HOUR TRAFFIC FLOW

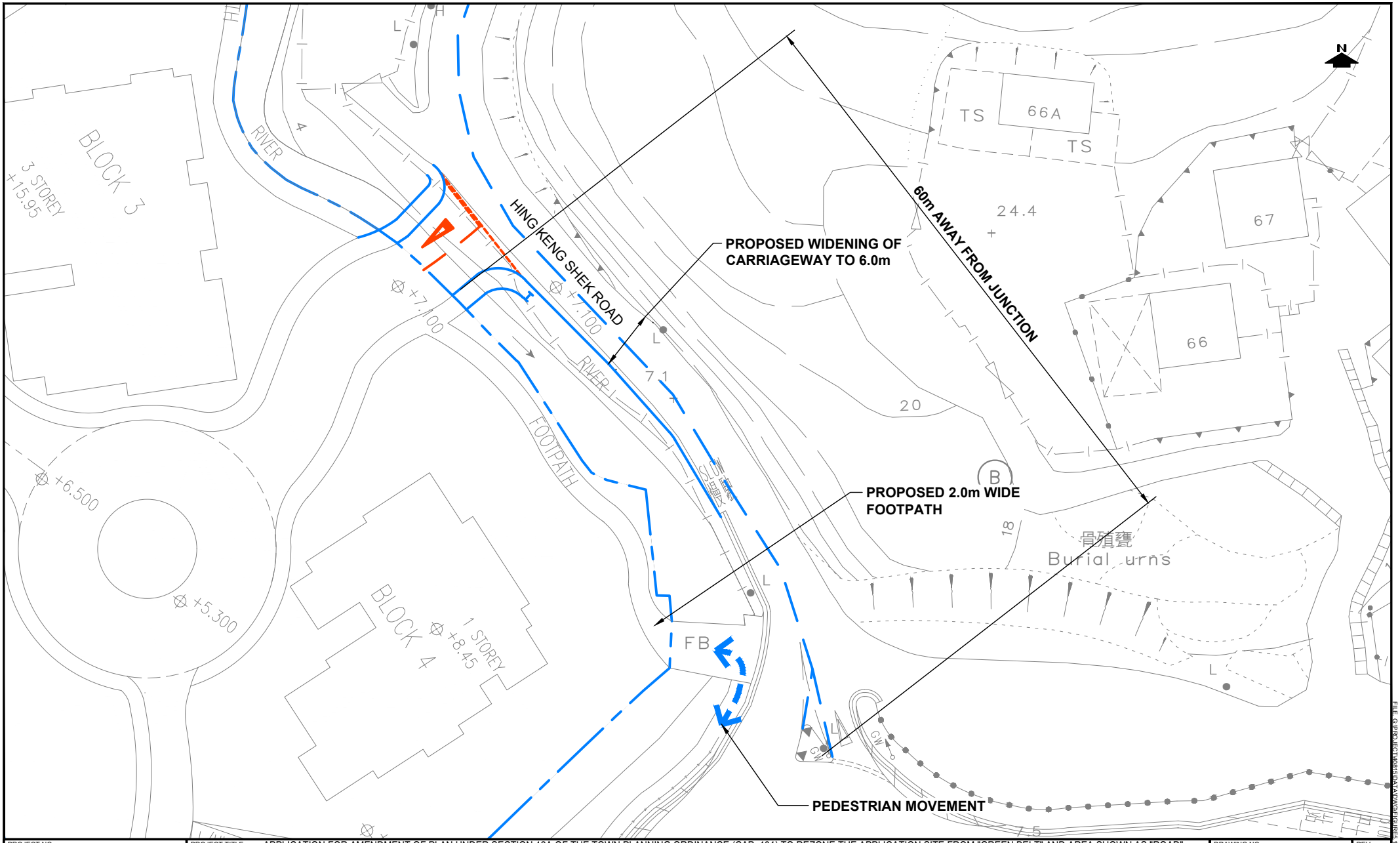
NOTE:

1. ALL TRAFFIC FLOWS ARE IN PCU/HOUR
2. MINOR ROADS ARE NOT SHOWN FOR CLARITY



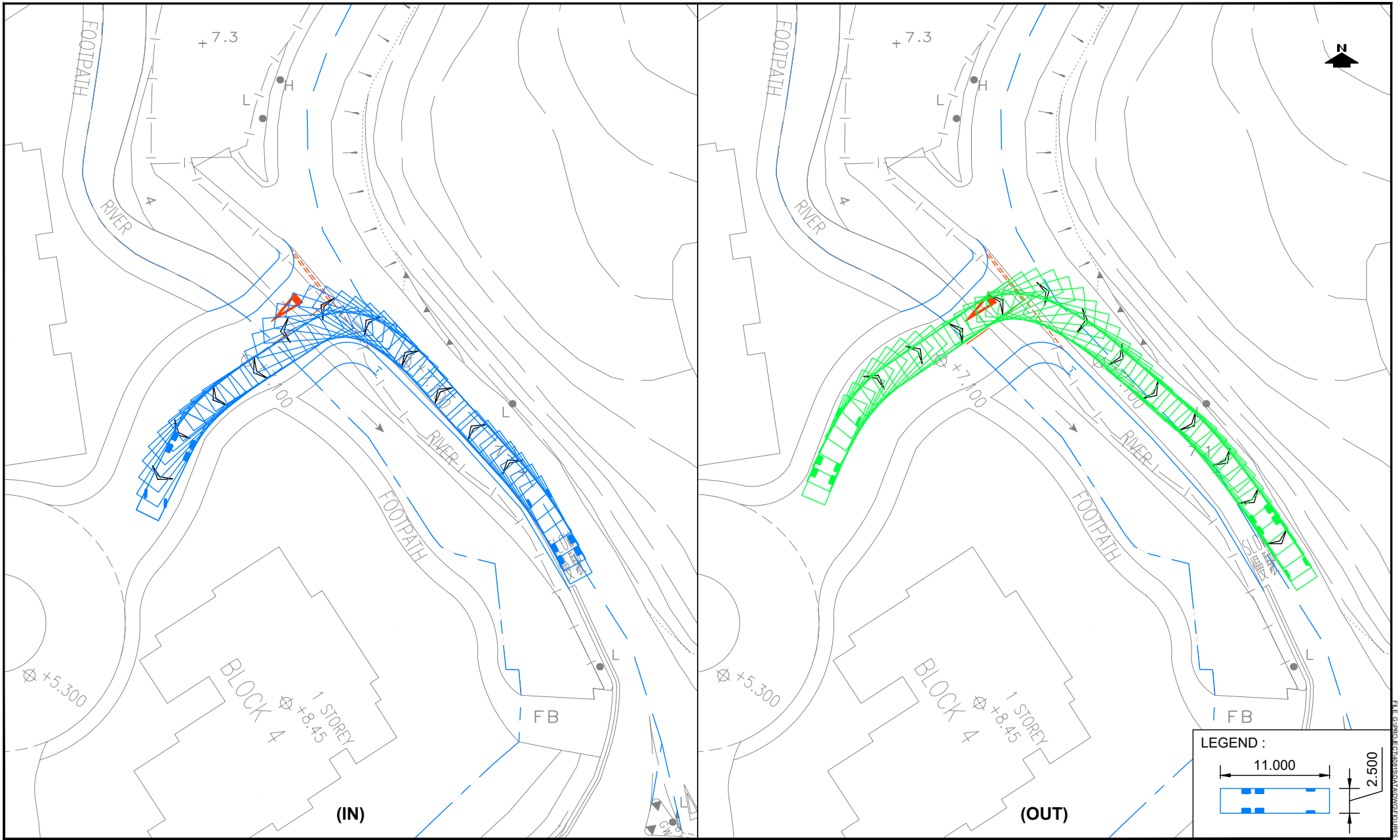
PROJECT NO. 40815	PROJECT TITLE: APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A OF THE TOWN PLANNING ORDINANCE (CAP. 131) TO REZONE THE APPLICATION SITE FROM "GREEN BELT" AND AREA SHOWN AS "ROAD" TO "RESIDENTIAL (GROUP C)5" FOR PROPOSED RESIDENTIAL DEVELOPMENT AT VARIOUS LOTS IN D.D. 210 AND ADJOINING GOVERNMENT LAND, PAK WAI, SAI KUNG	DRAWING NO. FIGURE 4.3	REV. G
DESIGNED SLN / DATE DEC 2025	DRAWING TITLE: 2034 DESIGN TRAFFIC FLOWS	LLA 顧問有限公司 Consultancy Limited	
DRAWN CLL / SCALE N.T.S.			
CHECKED SLN			

FILE: G:\PROJECT\40815\DATA\DWG\FIGURE4.3G.DWG PLOT SCALE : 1 = 1



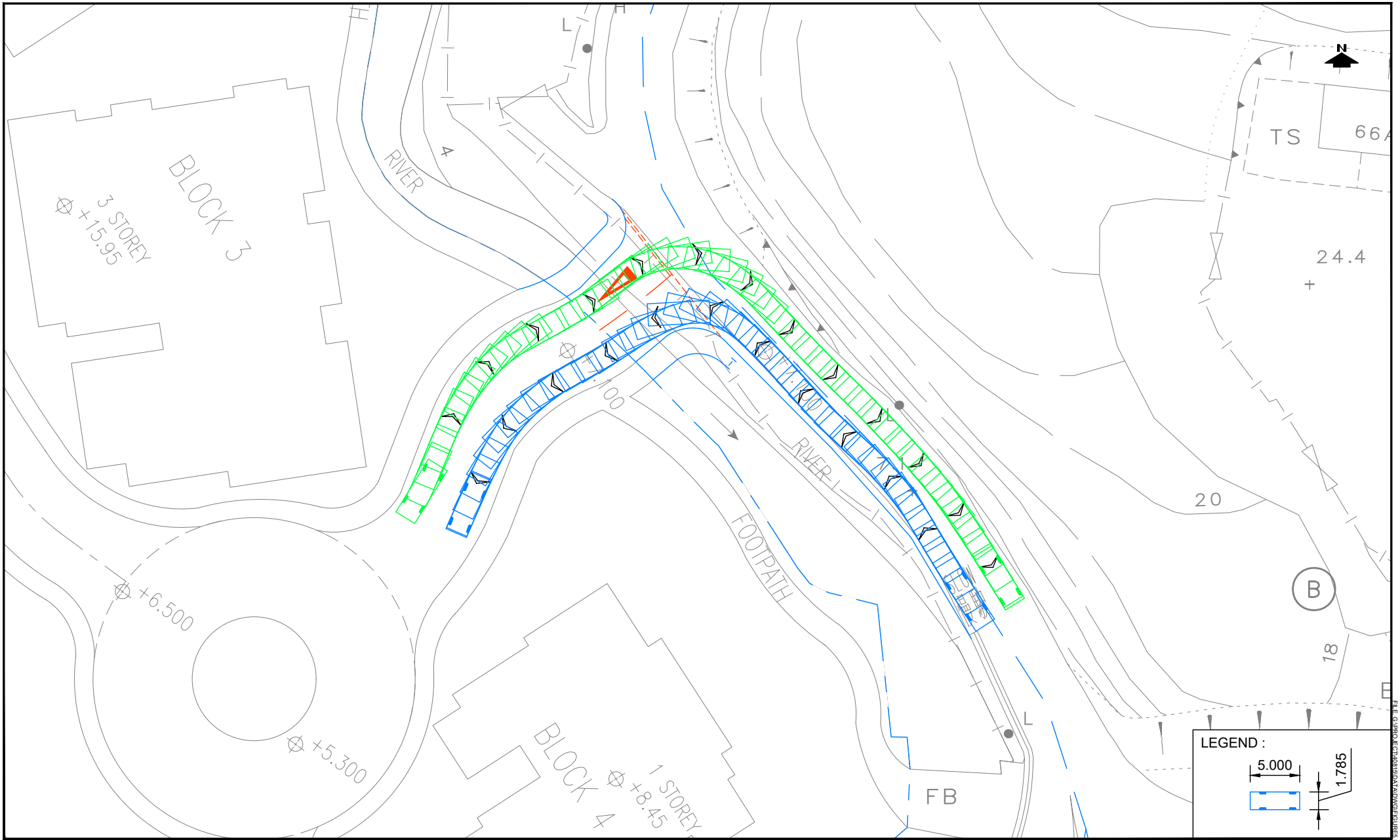
PROJECT NO. 40815	PROJECT TITLE APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A OF THE TOWN PLANNING ORDINANCE (CAP. 131) TO REZONE THE APPLICATION SITE FROM "GREEN BELT" AND AREA SHOWN AS "ROAD" TO "RESIDENTIAL (GROUP C)5" FOR PROPOSED RESIDENTIAL DEVELOPMENT AT VARIOUS LOTS IN D.D. 210 AND ADJOINING GOVERNMENT LAND, PAK WAI, SAI KUNG	DRAWING NO. FIGURE 5.1	REV. F
DESIGNED SLN / DATE AUG 2024 DRAWN CLL / SCALE 1:500 CHECKED SLN	DRAWING TITLE **PROPOSED TRAFFIC ARRANGEMENT**	LLA 顧問有限公司 Consultancy Limited	

FILE: G:\PROJECT\40815\DATA\DWG\FIGURE5.1F.DWG PLOT SCALE : 1 = 1



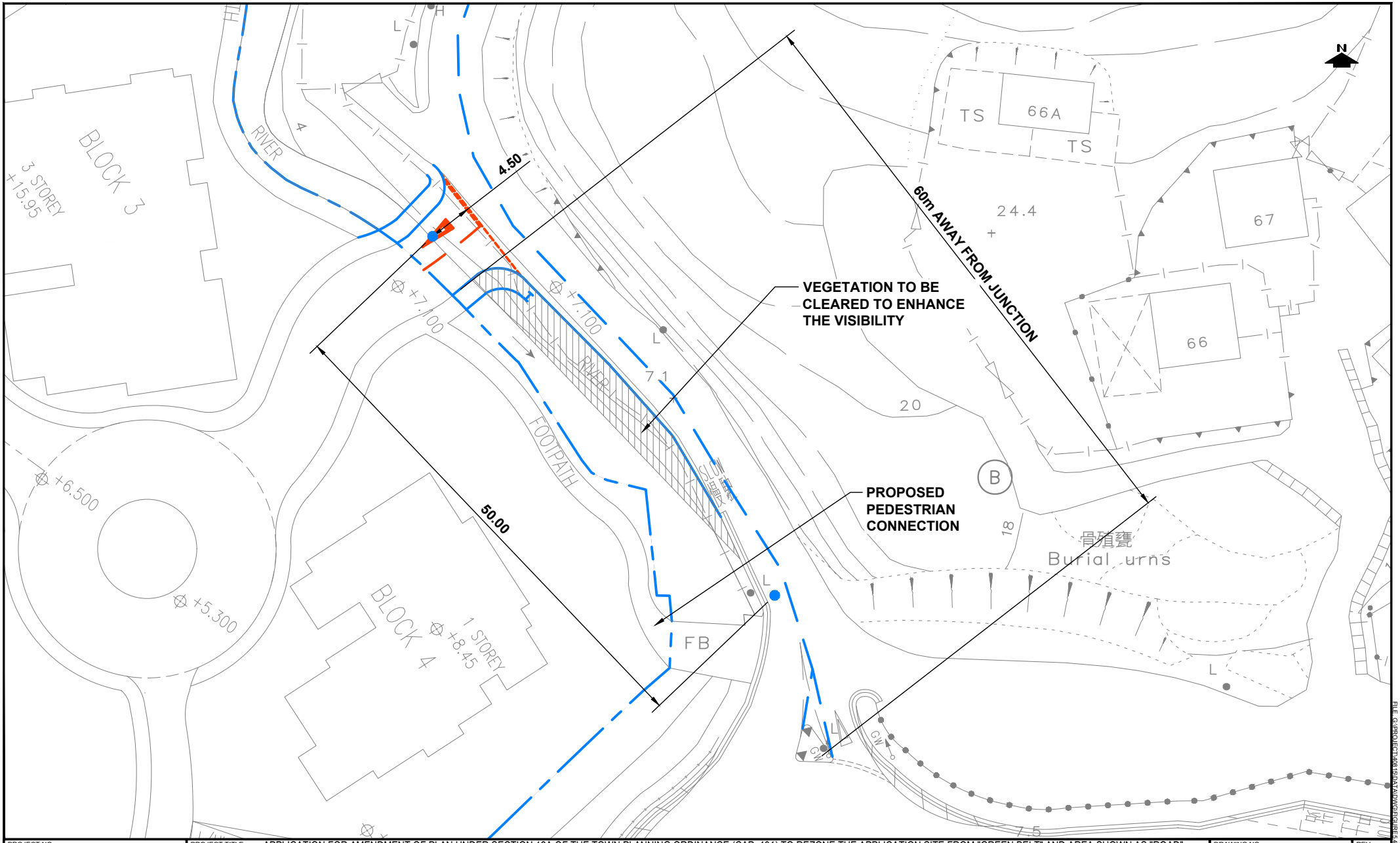
PROJECT NO. 40815	PROJECT TITLE APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A OF THE TOWN PLANNING ORDINANCE (CAP. 131) TO REZONE THE APPLICATION SITE FROM "GREEN BELT" AND AREA SHOWN AS "ROAD" TO "RESIDENTIAL (GROUP C)5" FOR PROPOSED RESIDENTIAL DEVELOPMENT AT VARIOUS LOTS IN D.D. 210 AND ADJOINING GOVERNMENT LAND, PAK WAI, SAI KUNG	DRAWING NO. FIGURE 5.2	REV. C
DESIGNED SLN / DRAWN CLL / CHECKED SLN; DATE JUL 2025; SCALE 1:500	DRAWING TITLE SWEPT PATH ANALYSIS - HGV	LLA 顧問有限公司 Consultancy Limited	

FILE: G:\PROJECT\40815\DATA\DWG\FIGURE5.2C.DWG PLOT SCALE : 1 = 1



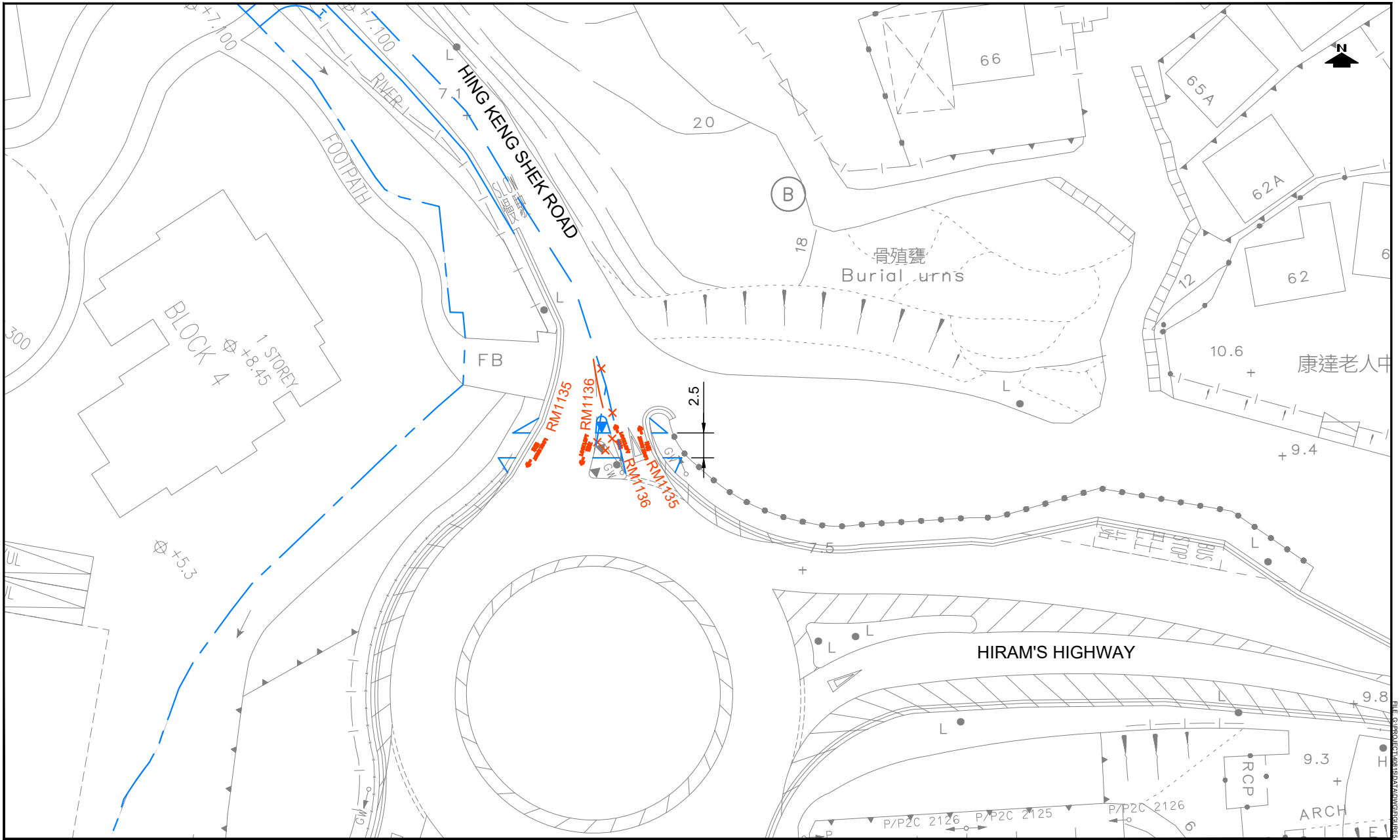
PROJECT NO. 40815	PROJECT TITLE: APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A OF THE TOWN PLANNING ORDINANCE (CAP. 131) TO REZONE THE APPLICATION SITE FROM "GREEN BELT" AND AREA SHOWN AS "ROAD" TO "RESIDENTIAL (GROUP C)5" FOR PROPOSED RESIDENTIAL DEVELOPMENT AT VARIOUS LOTS IN D.D. 210 AND ADJOINING GOVERNMENT LAND, PAK WAI, SAI KUNG	DRAWING NO. FIGURE 5.3	REV. D
DESIGNED SLN / DRAWN CLL / CHECKED SLN; DATE AUG 2025; SCALE 1:500	DRAWING TITLE: SWEPT PATH ANALYSIS - PRIVATE CARS TRAVEL SIMULTANEOUSLY	LLA 顧問有限公司 Consultancy Limited	

FILE: G:\PROJECT\40815\DATA\DWG\FIGURE5.3D.DWG PLOT SCALE : 1 = 1



PROJECT NO. 40815	PROJECT TITLE APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A OF THE TOWN PLANNING ORDINANCE (CAP. 131) TO REZONE THE APPLICATION SITE FROM "GREEN BELT" AND AREA SHOWN AS "ROAD" TO "RESIDENTIAL (GROUP C)5" FOR PROPOSED RESIDENTIAL DEVELOPMENT AT VARIOUS LOTS IN D.D. 210 AND ADJOINING GOVERNMENT LAND, PAK WAI, SAI KUNG	DRAWING NO. FIGURE 5.4	REV. A
DESIGNED SLN / DATE AUG 2025 DRAWN CLL / SCALE 1:500 CHECKED SLN	DRAWING TITLE **SIGHTLINE ANALYSIS OF PROPOSED VEHICULAR ACCESS**	LLA 顧問有限公司 Consultancy Limited	

FILE: G:\PROJECT\40815\DATA\DWG\FIGURE5.4A.DWG PLOT SCALE : 1 = 1



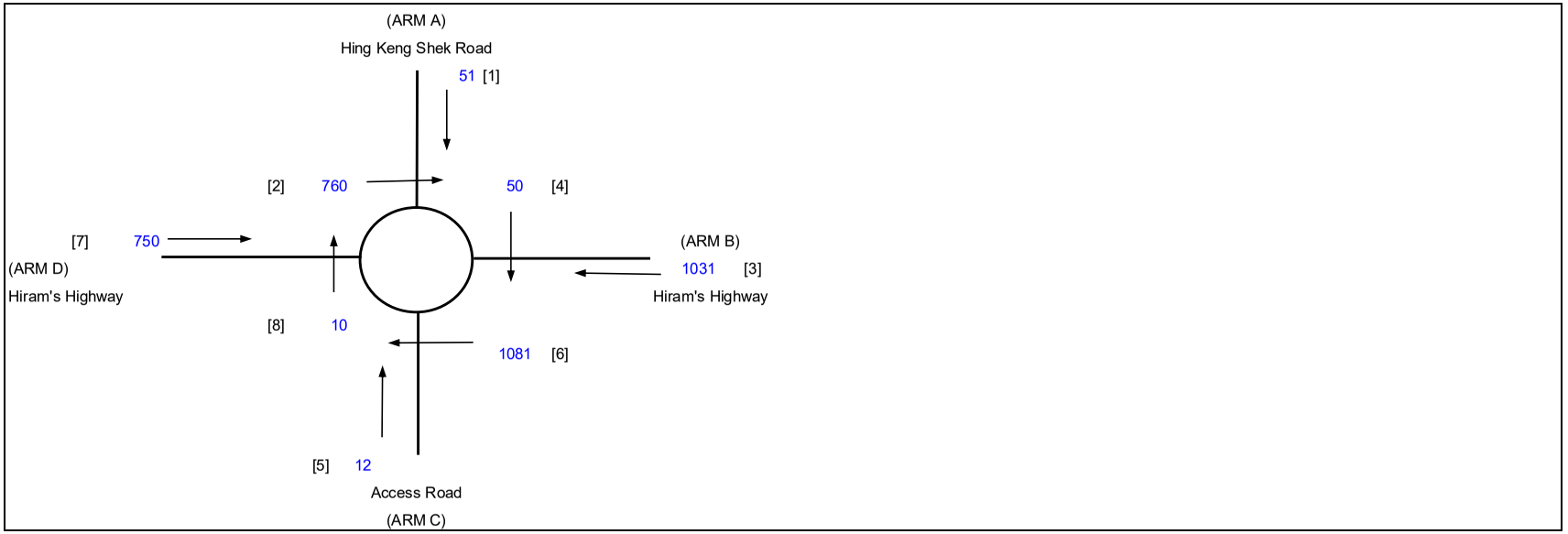
PROJECT NO. 40815	PROJECT TITLE APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A OF THE TOWN PLANNING ORDINANCE (CAP. 131) TO REZONE THE APPLICATION SITE FROM "GREEN BELT" AND AREA SHOWN AS "ROAD" TO "RESIDENTIAL (GROUP C)5" FOR PROPOSED RESIDENTIAL DEVELOPMENT AT VARIOUS LOTS IN D.D. 210 AND ADJOINING GOVERNMENT LAND, PAK WAI, SAI KUNG	DRAWING NO. FIGURE 5.5	REV. A
DESIGNED SLN / DRAWN CLL / CHECKED SLN; DATE OCT 2025; SCALE 1:500	DRAWING TITLE **PROPOSED CAUTIONARY CROSSING AT HING KENG SHEK ROAD**	LLA 顧問有限公司 Consultancy Limited	

FILE: G:\PROJECT\40815\DATA\DWG\FIGURE5.5A.DWG PLOT SCALE : 1 = 1

Appendix A

Junction Capacity Assessment – Existing Scenario

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" and Area Shown as "Road" to "Residential (Group C)5" for Proposed Residential Development at Various Lots in D.D. 210 and Adjoining Government Land, Pak Wai, Sai Kung	**2025 Existing AM**	PROJECT NO.: 40815	PREPARED BY:	SKL	Oct-25
		FILENAME : J1_HH_HKSR.xlsx	CHECKED BY:	SLN	Oct-25
J1 Hiram's Highway/Hing Keng Shek Road Roundabout		REFERENCE NO.:	REVIEWED BY:	SLN	Oct-25

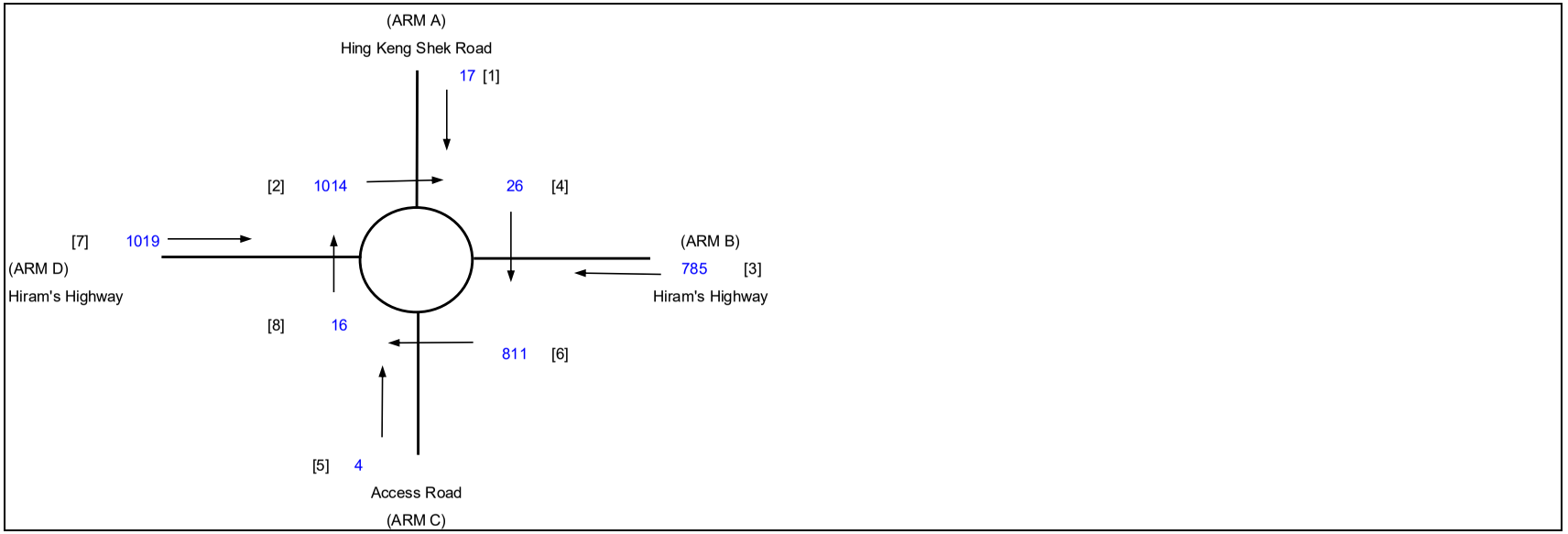


ARM			A	B	C	D
INPUT PARAMETERS:						
V	=	Approach half width (m)	2.50	3.65	3.50	8.00
E	=	Entry width (m)	4.50	8.00	3.50	8.00
L	=	Effective length of flare (m)	9.00	50.00	1.00	1.00
R	=	Entry radius (m)	24.00	20.00	12.50	21.00
D	=	Inscribed circle diameter (m)	46.00	46.00	46.00	46.00
A	=	Entry angle (degree)	27.00	41.00	40.00	35.00
Q	=	Entry flow (pcu/h)	51	1031	12	750
Qc	=	Circulating flow across entry (pcu/h)	760	50	1081	10
OUTPUT PARAMETERS:						
S	=	Sharpness of flare = 1.6(E-V)/L	0.36	0.14	0.00	0.00
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	1.02	0.96	0.94	0.98
X2	=	V + ((E-V)/(1+2S))	3.67	7.05	3.50	8.00
M	=	EXP((D-60)/10)	0.25	0.25	0.25	0.25
F	=	303*X2	1112	2137	1061	2424
Td	=	1+(0.5/(1+M))	1.40	1.40	1.40	1.40
Fc	=	0.21*Td(1+0.2*X2)	0.51	0.71	0.50	0.76
Qe	=	K(F-Fc*Qc) *	737	2021	487	2380
DFC	=	Design flow/Capacity = Q/Qe	0.07	0.51	0.02	0.32

Total In Sum = 1844 PCU

DFC of Critical Approach = 0.51

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" and Area Shown as "Road" to "Residential (Group C)5" for Proposed Residential Development at Various Lots in D.D. 210 and Adjoining Government Land, Pak Wai, Sai Kung	**2025 Existing PM**	PROJECT NO.: 40815	PREPARED BY:	SKL	Oct-25
		FILENAME : J1_HH_HKSR.xlsx	CHECKED BY:	SLN	Oct-25
J1 Hiram's Highway/Hing Keng Shek Road Roundabout		REFERENCE NO.:	REVIEWED BY:	SLN	Oct-25

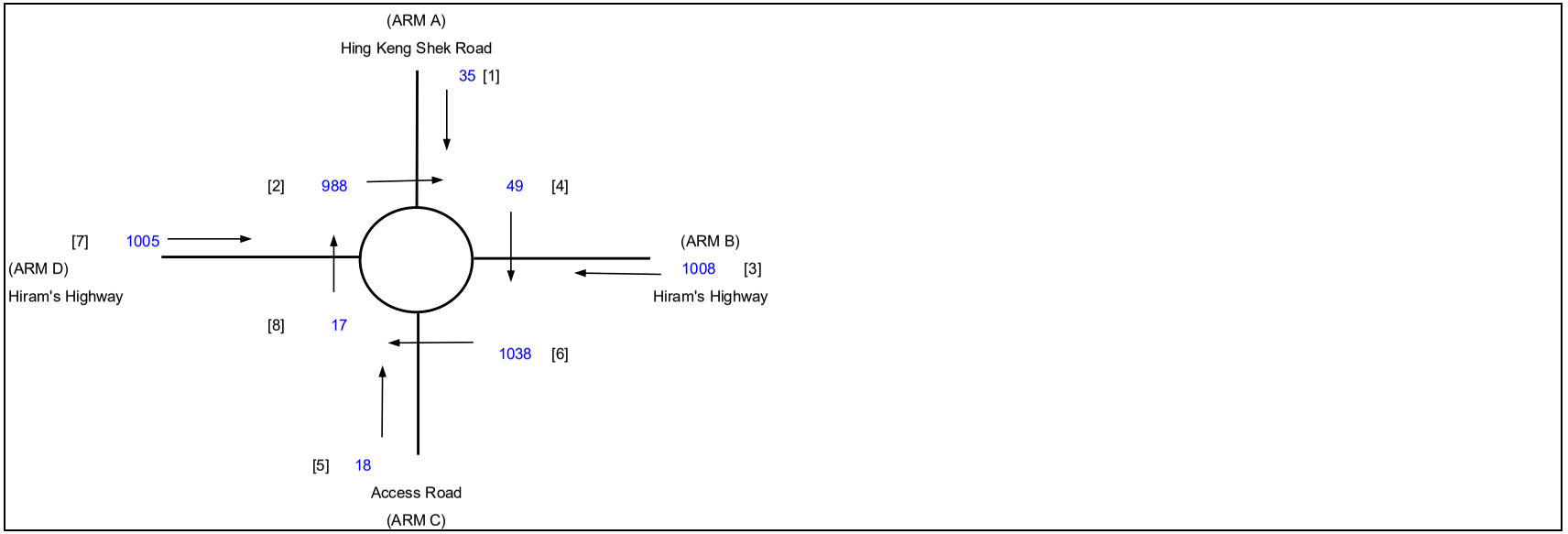


ARM			A	B	C	D
INPUT PARAMETERS:						
V	=	Approach half width (m)	2.50	3.65	3.50	8.00
E	=	Entry width (m)	4.50	8.00	3.50	8.00
L	=	Effective length of flare (m)	9.00	50.00	1.00	1.00
R	=	Entry radius (m)	24.00	20.00	12.50	21.00
D	=	Inscribed circle diameter (m)	46.00	46.00	46.00	46.00
A	=	Entry angle (degree)	27.00	41.00	40.00	35.00
Q	=	Entry flow (pcu/h)	17	785	4	1019
Qc	=	Circulating flow across entry (pcu/h)	1014	26	811	16
OUTPUT PARAMETERS:						
S	=	Sharpness of flare = 1.6(E-V)/L	0.36	0.14	0.00	0.00
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	1.02	0.96	0.94	0.98
X2	=	V + ((E-V)/(1+2S))	3.67	7.05	3.50	8.00
M	=	EXP((D-60)/10)	0.25	0.25	0.25	0.25
F	=	303*X2	1112	2137	1061	2424
Td	=	1+(0.5/(1+M))	1.40	1.40	1.40	1.40
Fc	=	0.21*Td(1+0.2*X2)	0.51	0.71	0.50	0.76
Qe	=	K(F-Fc*Qc) *	605	2038	613	2376
DFC	=	Design flow/Capacity = Q/Qe	0.03	0.39	0.01	0.43

Total In Sum = 1825 PCU

DFC of Critical Approach = 0.43

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" and Area Shown as "Road" to "Residential (Group C)5" for Proposed Residential Development at Various Lots in D.D. 210 and Adjoining Government Land, Pak Wai, Sai Kung	**2025 Existing WN**	PROJECT NO.: 40815	PREPARED BY:	SKL	Oct-25
		FILENAME : J1_HH_HKSR.xlsx	CHECKED BY:	SLN	Oct-25
J1 Hiram's Highway/Hing Keng Shek Road Roundabout		REFERENCE NO.:	REVIEWED BY:	SLN	Oct-25



ARM			A	B	C	D
INPUT PARAMETERS:						
V	=	Approach half width (m)	2.50	3.65	3.50	8.00
E	=	Entry width (m)	4.50	8.00	3.50	8.00
L	=	Effective length of flare (m)	9.00	50.00	1.00	1.00
R	=	Entry radius (m)	24.00	20.00	12.50	21.00
D	=	Inscribed circle diameter (m)	46.00	46.00	46.00	46.00
A	=	Entry angle (degree)	27.00	41.00	40.00	35.00
Q	=	Entry flow (pcu/h)	35	1008	18	1005
Qc	=	Circulating flow across entry (pcu/h)	988	49	1038	17
OUTPUT PARAMETERS:						
S	=	Sharpness of flare = 1.6(E-V)/L	0.36	0.14	0.00	0.00
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	1.02	0.96	0.94	0.98
X2	=	V + ((E-V)/(1+2S))	3.67	7.05	3.50	8.00
M	=	EXP((D-60)/10)	0.25	0.25	0.25	0.25
F	=	303*X2	1112	2137	1061	2424
Td	=	1+(0.5/(1+M))	1.40	1.40	1.40	1.40
Fc	=	0.21*Td(1+0.2*X2)	0.51	0.71	0.50	0.76
Qe	=	K(F-Fc*Qc) *	619	2022	507	2375
DFC	=	Design flow/Capacity = Q/Qe	0.06	0.50	0.04	0.42

Total In Sum = 2066 PCU

DFC of Critical Approach = 0.50

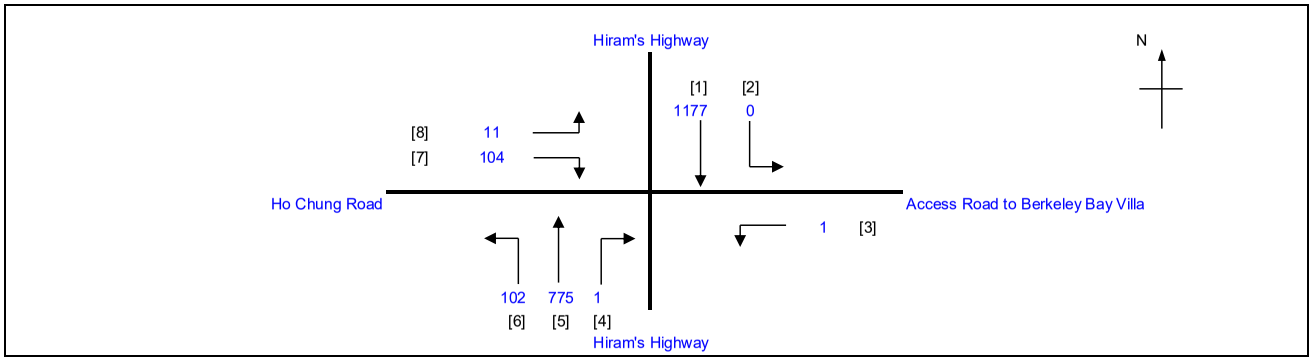
LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

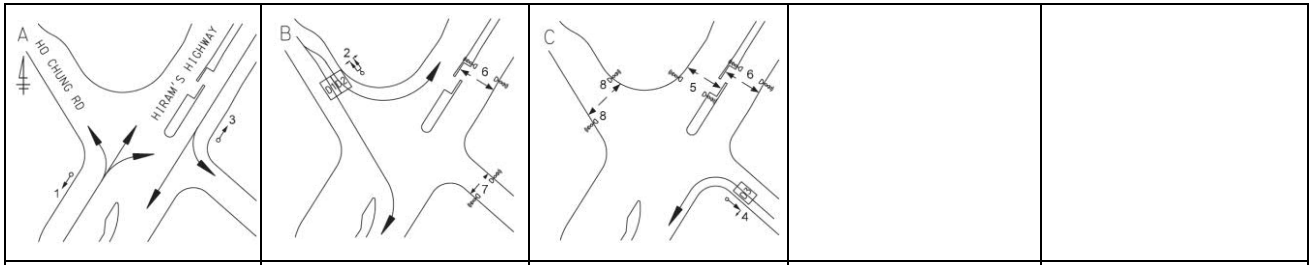
	INITIALS	DATE
Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" and Area Shown as "Road" to "Residential (Group C)5" for Proposed Residential Development at Various Lots in D.D. 210 and Adjoining Government Land, Pak Wai, Sai Kung		
J2 Hiram's Highway/Ho Chung Road		

2025 Existing AM

PROJECT NO.:	40815	Prepared By:	SKL	Oct-25
FILENAME :	J2_HH_HCR.xlsx	Checked By:	SLN	Oct-25
		Reviewed By:	SLN	Oct-25



No. of stages per cycle	N =	3
Cycle time	C =	135 sec
Sum(y)	Y =	0.344
Loss time	L =	29 sec
Total Flow	=	2171 pcu
Co = (1.5*L+5)/(1-Y)	=	73.9 sec
Cm = L/(1-Y)	=	44.2 sec
Yult	=	0.683
R.C.ult = (Yult-Y)/Y*100%	=	98.6 %
Cp = 0.9*L/(0.9-Y)	=	46.9 sec
Ymax = 1-L/C	=	0.785
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**106 %**



Stage 1	G=	90	Stage 2	G=	16	Stage 3	G=	19
	Int =	5		Int =	3		Int =	2

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	3		10	8	0	13	8
P2	2,3		13	12	8	20	12
P3	2		8	7	4	8	7
P4	3		8	7	4	10	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							8					
1,2	1	3.20	1	15		N	1935	0	568		568	0.00	1935							1935	0.294	0.294		91	91	0.438	42	10
1	1	3.20	1				2075		609		609	0.00	2075							2075	0.293			91	91	0.438	42	10
5,6	1	3.50	1	12		N	1965	102	372		474	0.22	1914	18	119					2032	0.233			72	91	0.438	48	18
4,5	1	3.50	1	12	O	N	1965		403	1	404	0.00	1734							1734	0.233			72	91	0.438	42	19
7,8	2	3.50	1	12			2105	11		104	115	1.00	1871	12	424					2295	0.050	0.050	2	15	17	0.438	18	55
3	3	3.30	1	15		N	1945	1			1	1.00	1768							1768	0.001			0	19	0.438	0	612
PED	3																						19					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
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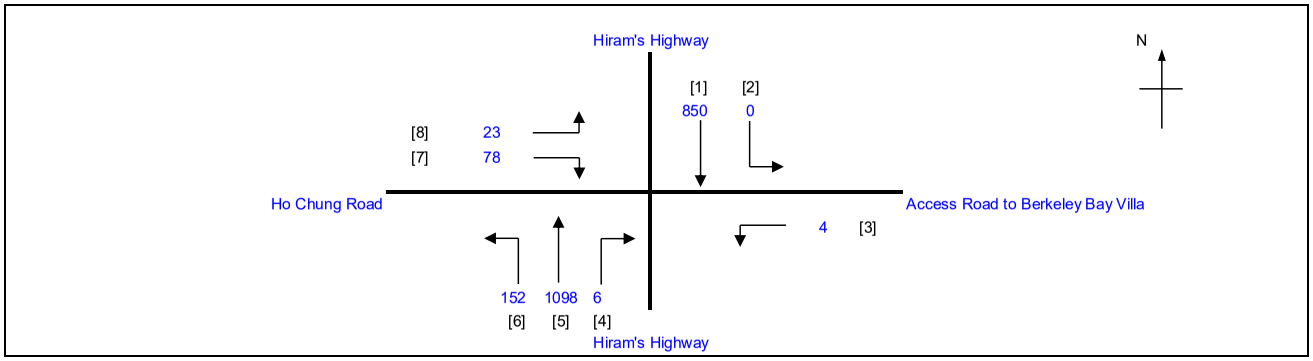
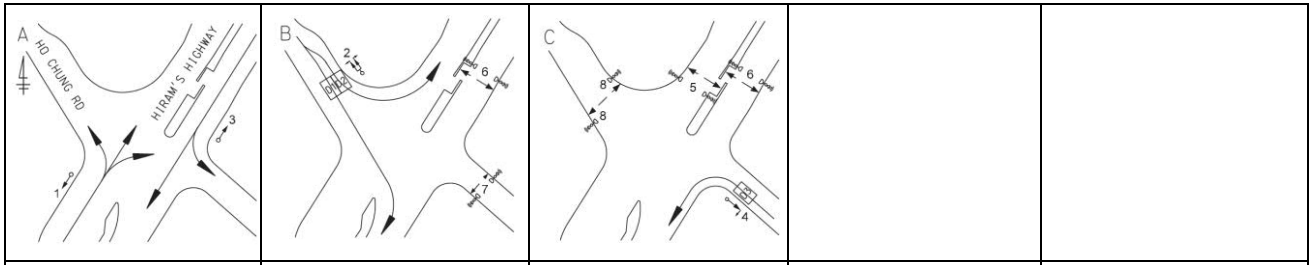
J2 Hiram's Highway/Ho Chung Road		

2025 Existing PM

PROJECT NO.:	40815	Prepared By:	SKL	Oct-25
FILENAME :	J2_HH_HCR.xlsx	Checked By:	SLN	Oct-25
		Reviewed By:	SLN	Oct-25



No. of stages per cycle	N =	3
Cycle time	C =	130 sec
Sum(y)	Y =	0.377
Loss time	L =	33 sec
Total Flow	=	2211 pcu
Co = (1.5*L+5)/(1-Y)	=	87.5 sec
Cm = L/(1-Y)	=	53.0 sec
Yult	=	0.653
R.C.ult = (Yult-Y)/Y*100%	=	72.9 %
Cp = 0.9*L/(0.9-Y)	=	56.8 sec
Ymax = 1-L/C	=	0.746
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**78 %**



Stage 1	G=	85	Stage 2	G=	16
	Int =	5		Int =	3
Stage 3	G=	19			
	Int =	2			

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	3		10	8	0	13	8
P2	2,3		13	12	8	20	12
P3	2		8	7	4	8	7
P4	3		8	7	4	10	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							8					
1,2	1	3.20	1	15		N	1935	0	410		410	0.00	1935							1935	0.212			54	86	0.506	48	27
1	1	3.20	1				2075		440		440	0.00	2075							2075	0.212			55	86	0.506	54	27
5,6	1	3.50	1	12		N	1965	152	527		679	0.22	1912	18	126					2037	0.333	0.333		86	86	0.506	48	11
4,5	1	3.50	1	12	O	N	1965		571	6	577	0.01	1733							1733	0.333			86	86	0.506	42	12
7,8	2	3.50	1	12			2105	23		78	101	1.00	1871	12	424					2295	0.044	0.044	6	11	17	0.506	18	59
3	3	3.30	1	15		N	1945	4			4	1.00	1768							1768	0.002			1	19	0.506	0	268
PED	3																						19					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
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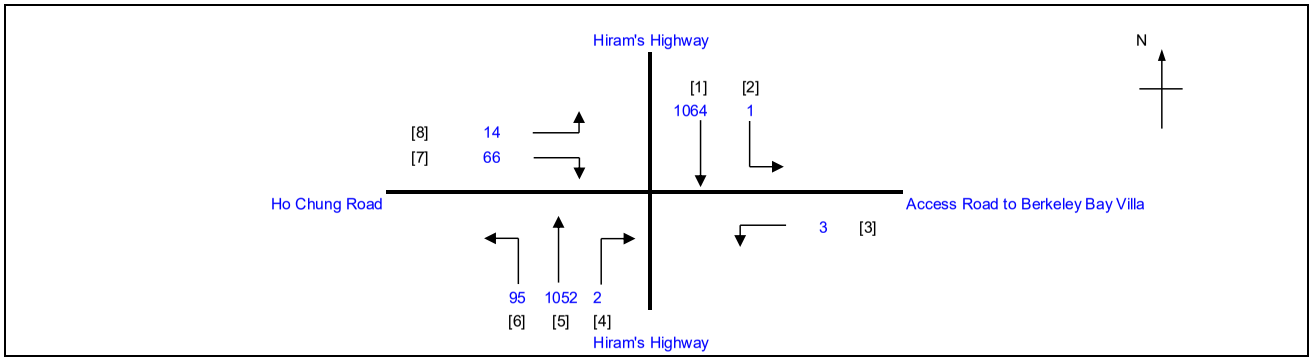
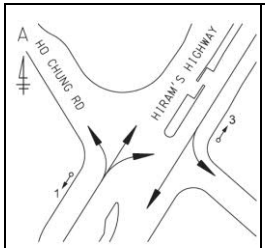
J2 Hiram's Highway/Ho Chung Road		

2025 Existing WN

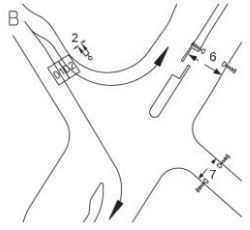
PROJECT NO.:	40815	Prepared By:	SKL	Oct-25
FILENAME :	J2_HH_HCR.xlsx	Checked By:	SLN	Oct-25
		Reviewed By:	SLN	Oct-25



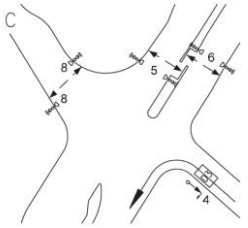
No. of stages per cycle	N =	3
Cycle time	C =	130 sec
Sum(y)	Y =	0.338
Loss time	L =	34 sec
Total Flow	=	2297 pcu
Co = (1.5*L+5)/(1-Y)	=	84.6 sec
Cm = L/(1-Y)	=	51.4 sec
Yult	=	0.645
R.C.ult = (Yult-Y)/Y*100%	=	90.7 %
Cp = 0.9*L/(0.9-Y)	=	54.5 sec
Ymax = 1-L/C	=	0.738
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**97 %**



Stage 1 G= 85 Int = 5



Stage 2 G= 16 Int = 3



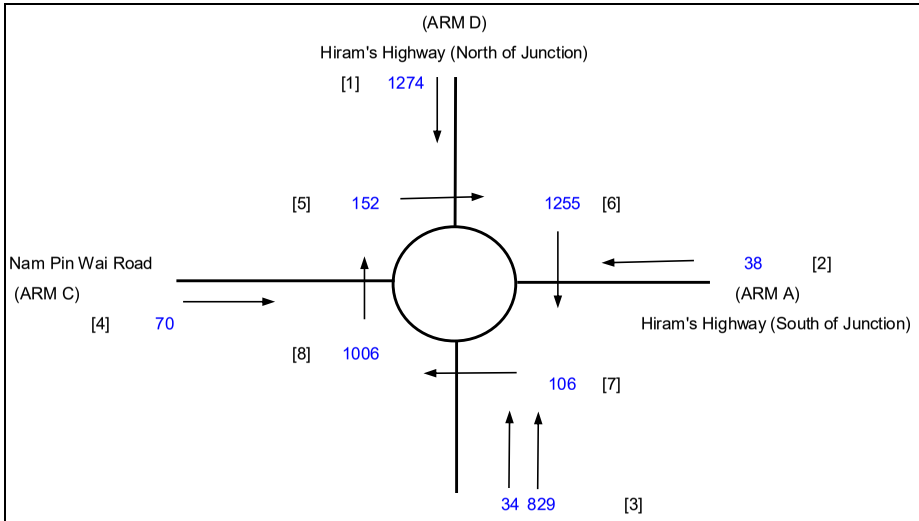
Stage 3 G= 19 Int = 2

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	3		10	8	0	13	8
P2	2,3		13	12	8	20	12
P3	2		8	7	4	8	7
P4	3		8	7	4	10	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							8					
1,2	1	3.20	1	15		N	1935	1	513		514	0.00	1935							1935	0.266			75	86	0.458	42	15
1	1	3.20	1				2075		551		551	0.00	2075							2075	0.266			75	86	0.458	48	15
5,6	1	3.50	1	12		N	1965	95	528		623	0.15	1928	18	126					2054	0.303	0.303		86	86	0.458	42	11
4,5	1	3.50	1	12	O	N	1965		524	2	526	0.00	1734							1734	0.303			86	86	0.458	36	11
7,8	2	3.50	1	12			2105	14		66	80	1.00	1871	12	424					2295	0.035	0.035	7	10	17	0.458	12	60
3	3	3.30	1	15		N	1945	3			3	1.00	1768							1768	0.002			0	19	0.458	0	267
PED	3																						19					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED	ROUNDABOUT CALCULATION			INITIALS	DATE
Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" and Area Shown as "Road" to "Residential (Group C)5" for Proposed Residential Development at Various Lots in D.D. 210 and Adjoining Government Land, Pak Wai, Sai Kung	**2025 Existing AM**	PROJECT NO.: 40815	PREPARED BY:	SKL	Oct-25
		FILENAME : J3_HH_NHH.xlsx	CHECKED BY:	SLN	Oct-25
J3 Hiram's Highway/ New Hiram's Highway/ Nam Pin Wai Road		REFERENCE NO.:	REVIEWED BY:	SLN	Oct-25



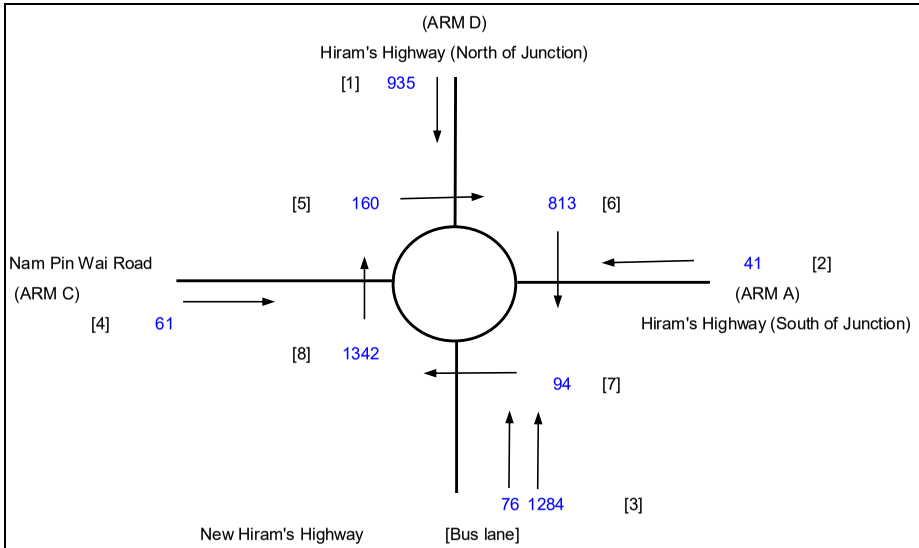
* Schematic diagram only

ARM			A	B	C	D
INPUT PARAMETERS:						
V	=	Approach half width (m)	3.70	7.40	4.30	7.70
E	=	Entry width (m)	7.30	11.00	7.30	7.80
L	=	Effective length of flare (m)	11.00	1.00	20.00	1.00
R	=	Entry radius (m)	15.00	55.00	23.00	18.00
D	=	Inscribed circle diameter (m)	78.00	78.00	78.00	78.00
A	=	Entry angle (degree)	32.00	40.00	50.00	36.00
Q	=	Entry flow (pcu/h)	38	829	70	1274
Qc	=	Circulating flow across entry (pcu/h)	1255	106	1006	152
OUTPUT PARAMETERS:						
S	=	Sharpness of flare = 1.6(E-V)/L	0.52	5.76	0.24	0.16
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	0.98	1.00	0.94	0.97
X2	=	V + ((E-V)/(1+2S))	5.46	7.69	6.33	7.78
M	=	EXP((D-60)/10)	6.05	6.05	6.05	6.05
F	=	303*X2	1654	2329	1917	2356
Td	=	1+(0.5/(1+M))	1.07	1.07	1.07	1.07
Fc	=	0.21*Td(1+0.2*X2)	0.47	0.57	0.51	0.57
Qe	=	K(F-Fc*Qc)	1039	2261	1316	2209
DFC	=	Design flow/Capacity = Q/Qe	0.04	0.37	0.05	0.58

Total In Sum = 2211 PCU

DFC of Critical Approach = 0.58

LLA CONSULTANCY LIMITED	ROUNDABOUT CALCULATION			INITIALS	DATE
Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" and Area Shown as "Road" to "Residential (Group C)5" for Proposed Residential Development at Various Lots in D.D. 210 and Adjoining Government Land, Pak Wai, Sai Kung	**2025 Existing PM**	PROJECT NO.: 40815	PREPARED BY:	SKL	Oct-25
		FILENAME : J3_HH_NHH.xlsx	CHECKED BY:	SLN	Oct-25
J3 Hiram's Highway/ New Hiram's Highway/ Nam Pin Wai Road		REFERENCE NO.:	REVIEWED BY:	SLN	Oct-25



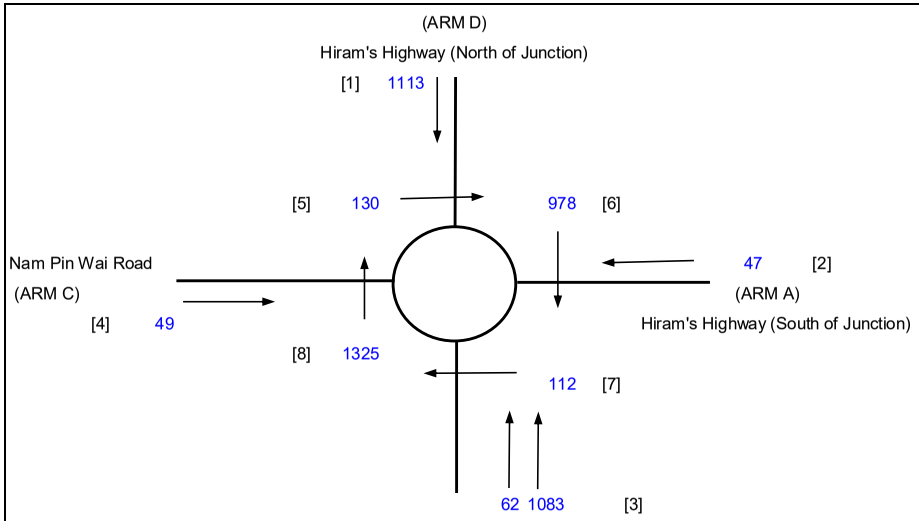
* Schematic diagram only

ARM			A	B	C	D
INPUT PARAMETERS:						
V	=	Approach half width (m)	3.70	7.40	4.30	7.70
E	=	Entry width (m)	7.30	11.00	7.30	7.80
L	=	Effective length of flare (m)	11.00	1.00	20.00	1.00
R	=	Entry radius (m)	15.00	55.00	23.00	18.00
D	=	Inscribed circle diameter (m)	78.00	78.00	78.00	78.00
A	=	Entry angle (degree)	32.00	40.00	50.00	36.00
Q	=	Entry flow (pcu/h)	41	1284	61	935
Qc	=	Circulating flow across entry (pcu/h)	813	94	1342	160
OUTPUT PARAMETERS:						
S	=	Sharpness of flare = 1.6(E-V)/L	0.52	5.76	0.24	0.16
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	0.98	1.00	0.94	0.97
X2	=	V + ((E-V)/(1+2S))	5.46	7.69	6.33	7.78
M	=	EXP((D-60)/10)	6.05	6.05	6.05	6.05
F	=	303*X2	1654	2329	1917	2356
Td	=	1+(0.5/(1+M))	1.07	1.07	1.07	1.07
Fc	=	0.21*Td(1+0.2*X2)	0.47	0.57	0.51	0.57
Qe	=	K(F-Fc*Qc)	1242	2268	1156	2205
DFC	=	Design flow/Capacity = Q/Qe	0.03	0.57	0.05	0.42

Total In Sum = 2321 PCU

DFC of Critical Approach = 0.57

LLA CONSULTANCY LIMITED	ROUNDABOUT CALCULATION			INITIALS	DATE
Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" and Area Shown as "Road" to "Residential (Group C)5" for Proposed Residential Development at Various Lots in D.D. 210 and Adjoining Government Land, Pak Wai, Sai Kung	**2025 Existing WN**	PROJECT NO.: 40815	PREPARED BY:	SKL	Oct-25
		FILENAME : J3_HH_NHH.xlsx	CHECKED BY:	SLN	Oct-25
J3 Hiram's Highway/ New Hiram's Highway/ Nam Pin Wai Road		REFERENCE NO.:	REVIEWED BY:	SLN	Oct-25



* Schematic diagram only

ARM			A	B	C	D
INPUT PARAMETERS:						
V	=	Approach half width (m)	3.70	7.40	4.30	7.70
E	=	Entry width (m)	7.30	11.00	7.30	7.80
L	=	Effective length of flare (m)	11.00	1.00	20.00	1.00
R	=	Entry radius (m)	15.00	55.00	23.00	18.00
D	=	Inscribed circle diameter (m)	78.00	78.00	78.00	78.00
A	=	Entry angle (degree)	32.00	40.00	50.00	36.00
Q	=	Entry flow (pcu/h)	47	1083	49	1113
Qc	=	Circulating flow across entry (pcu/h)	978	112	1325	130
OUTPUT PARAMETERS:						
S	=	Sharpness of flare = 1.6(E-V)/L	0.52	5.76	0.24	0.16
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	0.98	1.00	0.94	0.97
X2	=	V + ((E-V)/(1+2S))	5.46	7.69	6.33	7.78
M	=	EXP((D-60)/10)	6.05	6.05	6.05	6.05
F	=	303*X2	1654	2329	1917	2356
Td	=	1+(0.5/(1+M))	1.07	1.07	1.07	1.07
Fc	=	0.21*Td(1+0.2*X2)	0.47	0.57	0.51	0.57
Qe	=	K(F-Fc*Qc)	1166	2257	1164	2221
DFC	=	Design flow/Capacity = Q/Qe	0.04	0.48	0.04	0.50

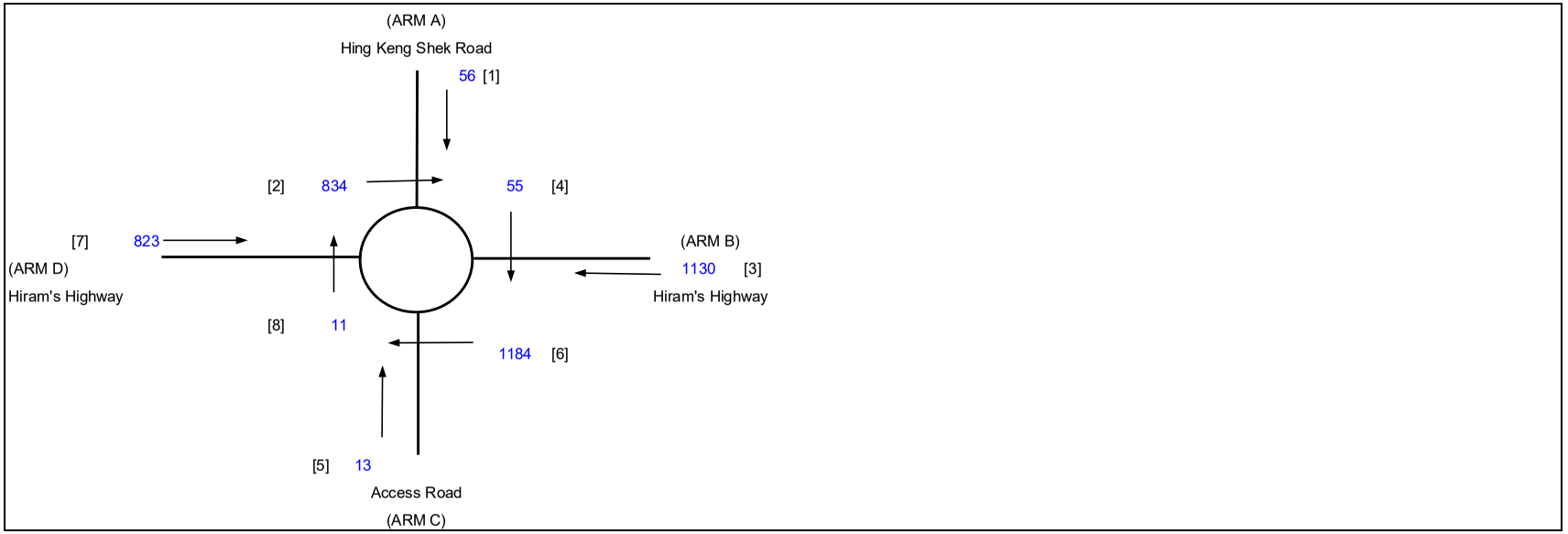
Total In Sum = 2292 PCU

DFC of Critical Approach = 0.50

Appendix B

Junction Capacity Assessment – Reference & Design Scenarios

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" and Area Shown as "Road" to "Residential (Group C)5" for Proposed Residential Development at Various Lots in D.D. 210 and Adjoining Government Land, Pak Wai, Sai Kung	**2034 Reference AM**	PROJECT NO.: 40815	PREPARED BY:	SKL	Dec-25
		FILENAME : J1_HH_HKSR.xlsx	CHECKED BY:	SLN	Dec-25
J1 Hiram's Highway/Hing Keng Shek Road Roundabout		REFERENCE NO.:	REVIEWED BY:	SLN	Dec-25

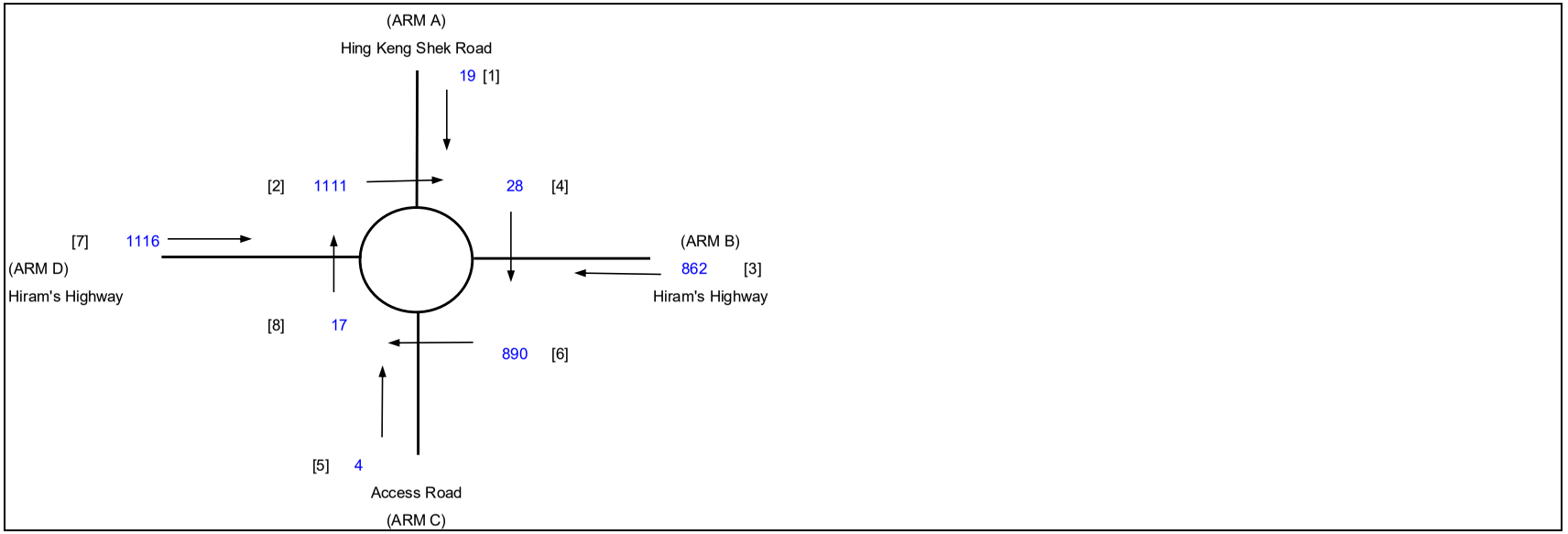


ARM			A	B	C	D
INPUT PARAMETERS:						
V	=	Approach half width (m)	2.50	3.65	3.50	8.00
E	=	Entry width (m)	4.50	8.00	3.50	8.00
L	=	Effective length of flare (m)	9.00	50.00	1.00	1.00
R	=	Entry radius (m)	24.00	20.00	12.50	21.00
D	=	Inscribed circle diameter (m)	46.00	46.00	46.00	46.00
A	=	Entry angle (degree)	27.00	41.00	40.00	35.00
Q	=	Entry flow (pcu/h)	56	1130	13	823
Qc	=	Circulating flow across entry (pcu/h)	834	55	1184	11
OUTPUT PARAMETERS:						
S	=	Sharpness of flare = 1.6(E-V)/L	0.36	0.14	0.00	0.00
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	1.02	0.96	0.94	0.98
X2	=	V + ((E-V)/(1+2S))	3.67	7.05	3.50	8.00
M	=	EXP((D-60)/10)	0.25	0.25	0.25	0.25
F	=	303*X2	1112	2137	1061	2424
Td	=	1+(0.5/(1+M))	1.40	1.40	1.40	1.40
Fc	=	0.21*Td(1+0.2*X2)	0.51	0.71	0.50	0.76
Qe	=	K(F-Fc*Qc) *	699	2018	438	2379
DFC	=	Design flow/Capacity = Q/Qe	0.08	0.56	0.03	0.35

Total In Sum = 2022 PCU

DFC of Critical Approach = 0.56

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" and Area Shown as "Road" to "Residential (Group C)5" for Proposed Residential Development at Various Lots in D.D. 210 and Adjoining Government Land, Pak Wai, Sai Kung	**2034 Reference PM**	PROJECT NO.: 40815	PREPARED BY:	SKL	Dec-25
		FILENAME : J1_HH_HKSR.xlsx	CHECKED BY:	SLN	Dec-25
J1 Hiram's Highway/Hing Keng Shek Road Roundabout		REFERENCE NO.:	REVIEWED BY:	SLN	Dec-25

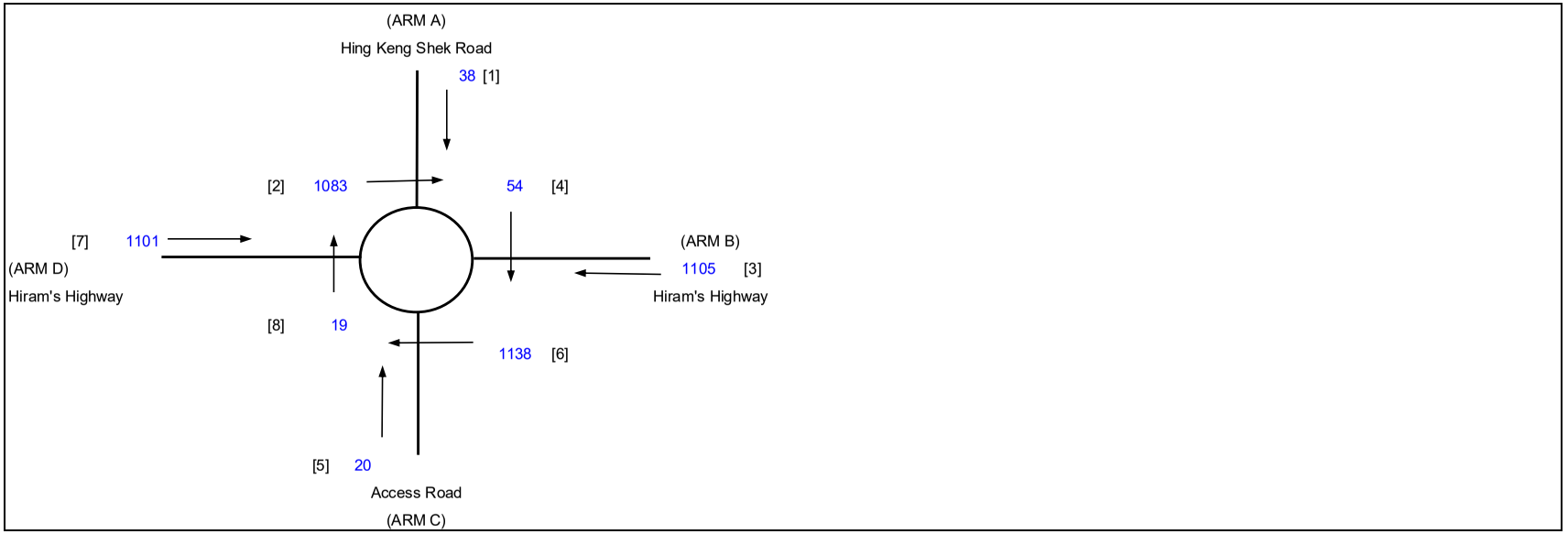


ARM			A	B	C	D
INPUT PARAMETERS:						
V	=	Approach half width (m)	2.50	3.65	3.50	8.00
E	=	Entry width (m)	4.50	8.00	3.50	8.00
L	=	Effective length of flare (m)	9.00	50.00	1.00	1.00
R	=	Entry radius (m)	24.00	20.00	12.50	21.00
D	=	Inscribed circle diameter (m)	46.00	46.00	46.00	46.00
A	=	Entry angle (degree)	27.00	41.00	40.00	35.00
Q	=	Entry flow (pcu/h)	19	862	4	1116
Qc	=	Circulating flow across entry (pcu/h)	1111	28	890	17
OUTPUT PARAMETERS:						
S	=	Sharpness of flare = 1.6(E-V)/L	0.36	0.14	0.00	0.00
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	1.02	0.96	0.94	0.98
X2	=	V + ((E-V)/(1+2S))	3.67	7.05	3.50	8.00
M	=	EXP((D-60)/10)	0.25	0.25	0.25	0.25
F	=	303*X2	1112	2137	1061	2424
Td	=	1+(0.5/(1+M))	1.40	1.40	1.40	1.40
Fc	=	0.21*Td(1+0.2*X2)	0.51	0.71	0.50	0.76
Qe	=	K(F-Fc*Qc) *	555	2036	576	2375
DFC	=	Design flow/Capacity = Q/Qe	0.03	0.42	0.01	0.47

Total In Sum = 2001 PCU

DFC of Critical Approach = 0.47

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" and Area Shown as "Road" to "Residential (Group C)5" for Proposed Residential Development at Various Lots in D.D. 210 and Adjoining Government Land, Pak Wai, Sai Kung	**2034 Reference WN**	PROJECT NO.: 40815	PREPARED BY:	SKL	Dec-25
		FILENAME : J1_HH_HKSR.xlsx	CHECKED BY:	SLN	Dec-25
J1 Hiram's Highway/Hing Keng Shek Road Roundabout		REFERENCE NO.:	REVIEWED BY:	SLN	Dec-25

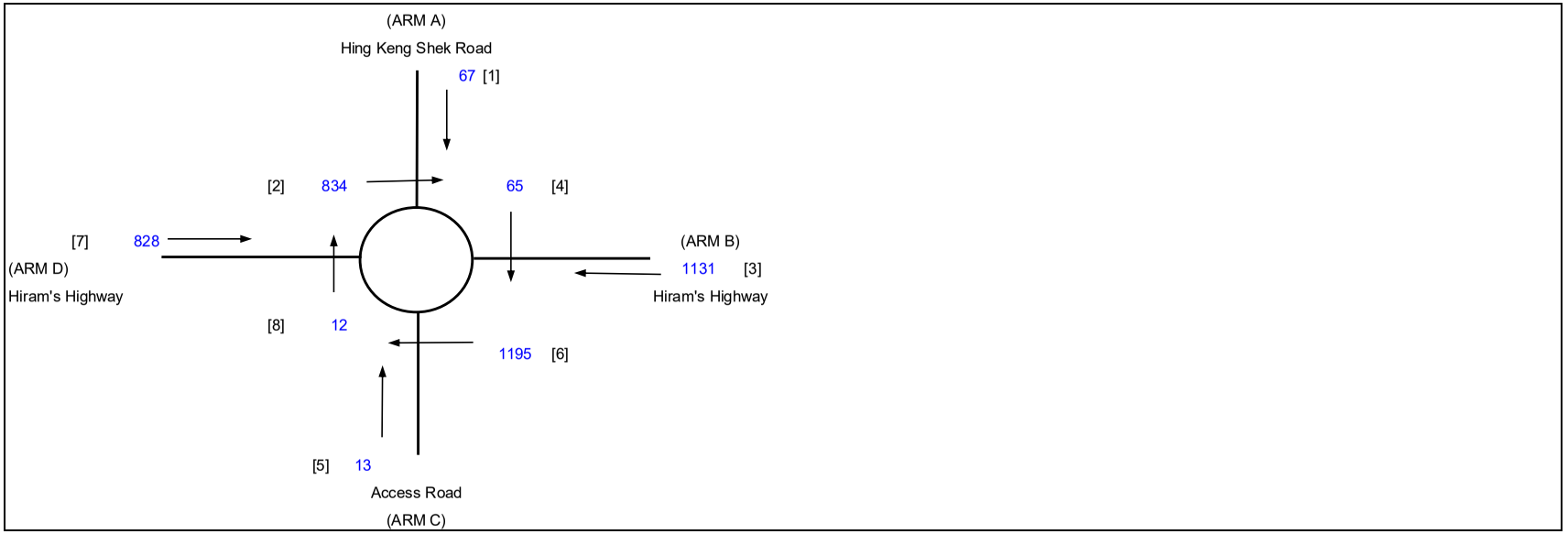


ARM			A	B	C	D
INPUT PARAMETERS:						
V	=	Approach half width (m)	2.50	3.65	3.50	8.00
E	=	Entry width (m)	4.50	8.00	3.50	8.00
L	=	Effective length of flare (m)	9.00	50.00	1.00	1.00
R	=	Entry radius (m)	24.00	20.00	12.50	21.00
D	=	Inscribed circle diameter (m)	46.00	46.00	46.00	46.00
A	=	Entry angle (degree)	27.00	41.00	40.00	35.00
Q	=	Entry flow (pcu/h)	38	1105	20	1101
Qc	=	Circulating flow across entry (pcu/h)	1083	54	1138	19
OUTPUT PARAMETERS:						
S	=	Sharpness of flare = 1.6(E-V)/L	0.36	0.14	0.00	0.00
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	1.02	0.96	0.94	0.98
X2	=	V + ((E-V)/(1+2S))	3.67	7.05	3.50	8.00
M	=	EXP((D-60)/10)	0.25	0.25	0.25	0.25
F	=	303*X2	1112	2137	1061	2424
Td	=	1+(0.5/(1+M))	1.40	1.40	1.40	1.40
Fc	=	0.21*Td(1+0.2*X2)	0.51	0.71	0.50	0.76
Qe	=	K(F-Fc*Qc) *	570	2019	460	2373
DFC	=	Design flow/Capacity = Q/Qe	0.07	0.55	0.04	0.46

Total In Sum = 2264 PCU

DFC of Critical Approach = 0.55

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" and Area Shown as "Road" to "Residential (Group C)5" for Proposed Residential Development at Various Lots in D.D. 210 and Adjoining Government Land, Pak Wai, Sai Kung	**2034 Design AM**	PROJECT NO.: 40815	PREPARED BY:	SKL	Dec-25
		FILENAME : J1_HH_HKSR.xlsx	CHECKED BY:	SLN	Dec-25
J1 Hiram's Highway/Hing Keng Shek Road Roundabout		REFERENCE NO.:	REVIEWED BY:	SLN	Dec-25

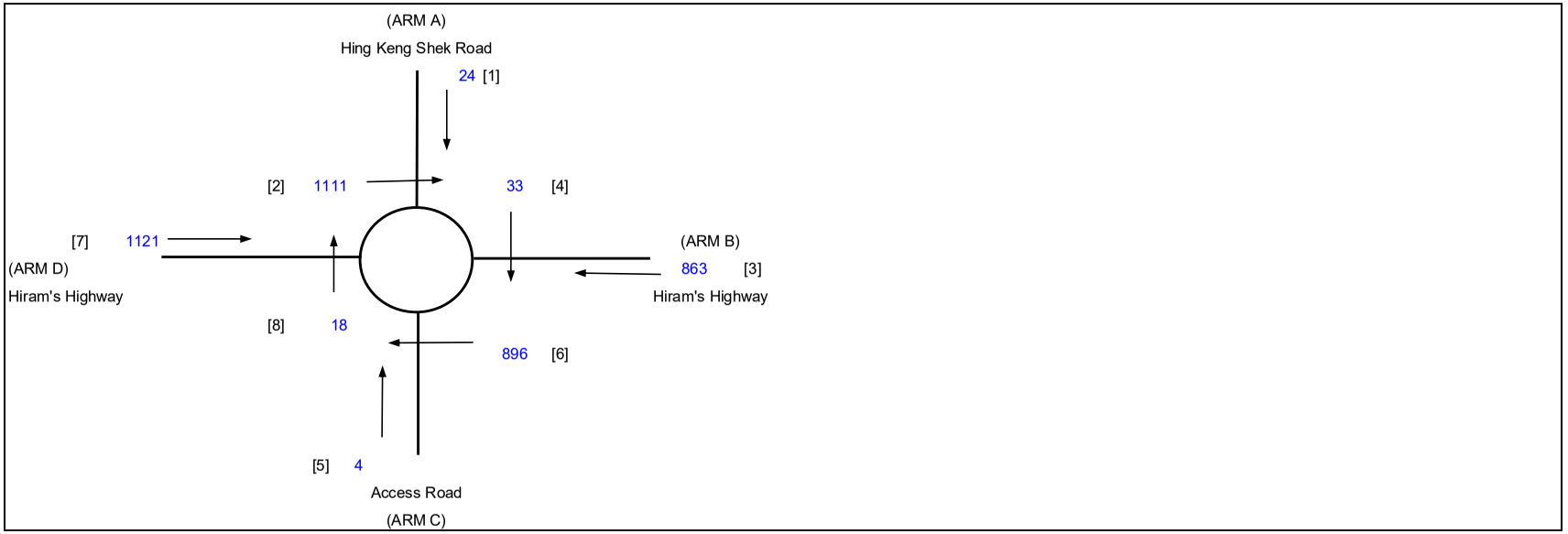


ARM			A	B	C	D
INPUT PARAMETERS:						
V	=	Approach half width (m)	2.50	3.65	3.50	8.00
E	=	Entry width (m)	4.50	8.00	3.50	8.00
L	=	Effective length of flare (m)	9.00	50.00	1.00	1.00
R	=	Entry radius (m)	24.00	20.00	12.50	21.00
D	=	Inscribed circle diameter (m)	46.00	46.00	46.00	46.00
A	=	Entry angle (degree)	27.00	41.00	40.00	35.00
Q	=	Entry flow (pcu/h)	67	1131	13	828
Qc	=	Circulating flow across entry (pcu/h)	834	65	1195	12
OUTPUT PARAMETERS:						
S	=	Sharpness of flare = 1.6(E-V)/L	0.36	0.14	0.00	0.00
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	1.02	0.96	0.94	0.98
X2	=	V + ((E-V)/(1+2S))	3.67	7.05	3.50	8.00
M	=	EXP((D-60)/10)	0.25	0.25	0.25	0.25
F	=	303*X2	1112	2137	1061	2424
Td	=	1+(0.5/(1+M))	1.40	1.40	1.40	1.40
Fc	=	0.21*Td(1+0.2*X2)	0.51	0.71	0.50	0.76
Qe	=	K(F-Fc*Qc) *	699	2011	433	2379
DFC	=	Design flow/Capacity = Q/Qe	0.10	0.56	0.03	0.35

Total In Sum = 2039 PCU

DFC of Critical Approach = 0.56

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" and Area Shown as "Road" to "Residential (Group C)5" for Proposed Residential Development at Various Lots in D.D. 210 and Adjoining Government Land, Pak Wai, Sai Kung	**2034 Design PM**	PROJECT NO.: 40815	PREPARED BY:	SKL	Dec-25
		FILENAME : J1_HH_HKSR.xlsx	CHECKED BY:	SLN	Dec-25
J1 Hiram's Highway/Hing Keng Shek Road Roundabout		REFERENCE NO.:	REVIEWED BY:	SLN	Dec-25

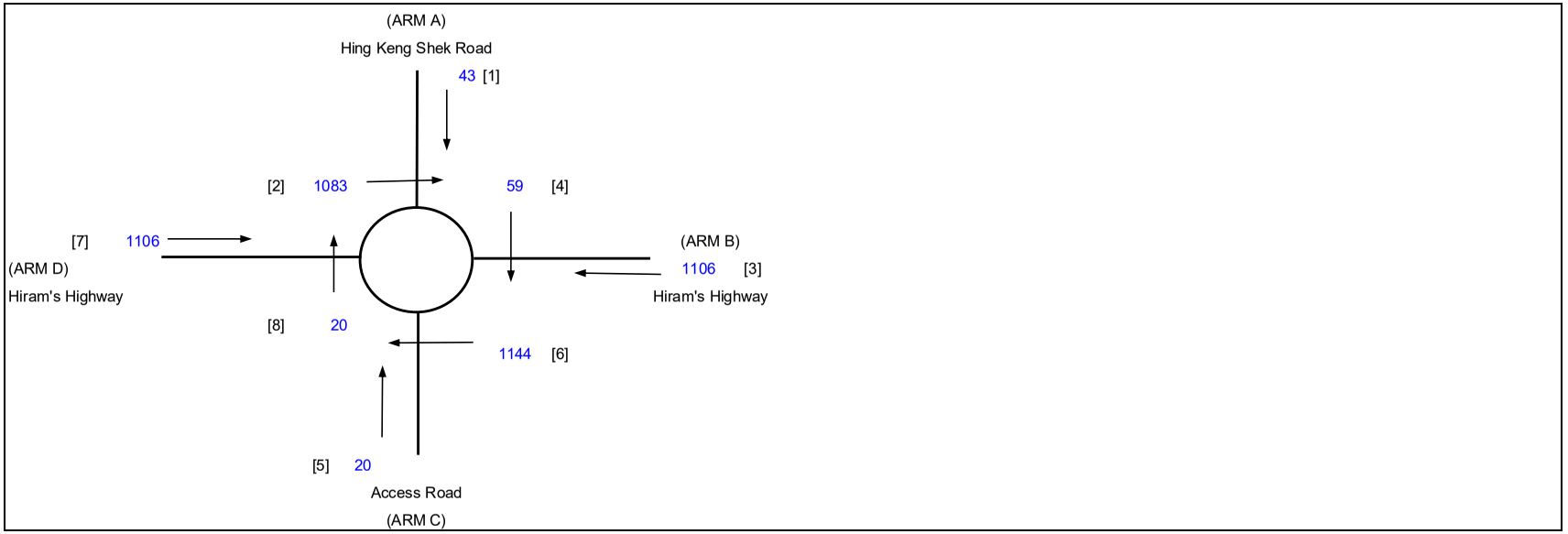


ARM			A	B	C	D
INPUT PARAMETERS:						
V	=	Approach half width (m)	2.50	3.65	3.50	8.00
E	=	Entry width (m)	4.50	8.00	3.50	8.00
L	=	Effective length of flare (m)	9.00	50.00	1.00	1.00
R	=	Entry radius (m)	24.00	20.00	12.50	21.00
D	=	Inscribed circle diameter (m)	46.00	46.00	46.00	46.00
A	=	Entry angle (degree)	27.00	41.00	40.00	35.00
Q	=	Entry flow (pcu/h)	24	863	4	1121
Qc	=	Circulating flow across entry (pcu/h)	1111	33	896	18
OUTPUT PARAMETERS:						
S	=	Sharpness of flare = 1.6(E-V)/L	0.36	0.14	0.00	0.00
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	1.02	0.96	0.94	0.98
X2	=	V + ((E-V)/(1+2S))	3.67	7.05	3.50	8.00
M	=	EXP((D-60)/10)	0.25	0.25	0.25	0.25
F	=	303*X2	1112	2137	1061	2424
Td	=	1+(0.5/(1+M))	1.40	1.40	1.40	1.40
Fc	=	0.21*Td(1+0.2*X2)	0.51	0.71	0.50	0.76
Qe	=	K(F-Fc*Qc) *	555	2033	573	2374
DFC	=	Design flow/Capacity = Q/Qe	0.04	0.42	0.01	0.47

Total In Sum = 2012 PCU

DFC of Critical Approach = 0.47

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" and Area Shown as "Road" to "Residential (Group C)5" for Proposed Residential Development at Various Lots in D.D. 210 and Adjoining Government Land, Pak Wai, Sai Kung	**2034 Design WN**	PROJECT NO.: 40815	PREPARED BY:	SKL	Dec-25
		FILENAME : J1_HH_HKSR.xlsx	CHECKED BY:	SLN	Dec-25
J1 Hiram's Highway/Hing Keng Shek Road Roundabout		REFERENCE NO.:	REVIEWED BY:	SLN	Dec-25



ARM			A	B	C	D
INPUT PARAMETERS:						
V	=	Approach half width (m)	2.50	3.65	3.50	8.00
E	=	Entry width (m)	4.50	8.00	3.50	8.00
L	=	Effective length of flare (m)	9.00	50.00	1.00	1.00
R	=	Entry radius (m)	24.00	20.00	12.50	21.00
D	=	Inscribed circle diameter (m)	46.00	46.00	46.00	46.00
A	=	Entry angle (degree)	27.00	41.00	40.00	35.00
Q	=	Entry flow (pcu/h)	43	1106	20	1106
Qc	=	Circulating flow across entry (pcu/h)	1083	59	1144	20
OUTPUT PARAMETERS:						
S	=	Sharpness of flare = 1.6(E-V)/L	0.36	0.14	0.00	0.00
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	1.02	0.96	0.94	0.98
X2	=	V + ((E-V)/(1+2S))	3.67	7.05	3.50	8.00
M	=	EXP((D-60)/10)	0.25	0.25	0.25	0.25
F	=	303*X2	1112	2137	1061	2424
Td	=	1+(0.5/(1+M))	1.40	1.40	1.40	1.40
Fc	=	0.21*Td(1+0.2*X2)	0.51	0.71	0.50	0.76
Qe	=	K(F-Fc*Qc) *	570	2015	457	2373
DFC	=	Design flow/Capacity = Q/Qe	0.08	0.55	0.04	0.47

Total In Sum = 2275 PCU

DFC of Critical Approach = 0.55

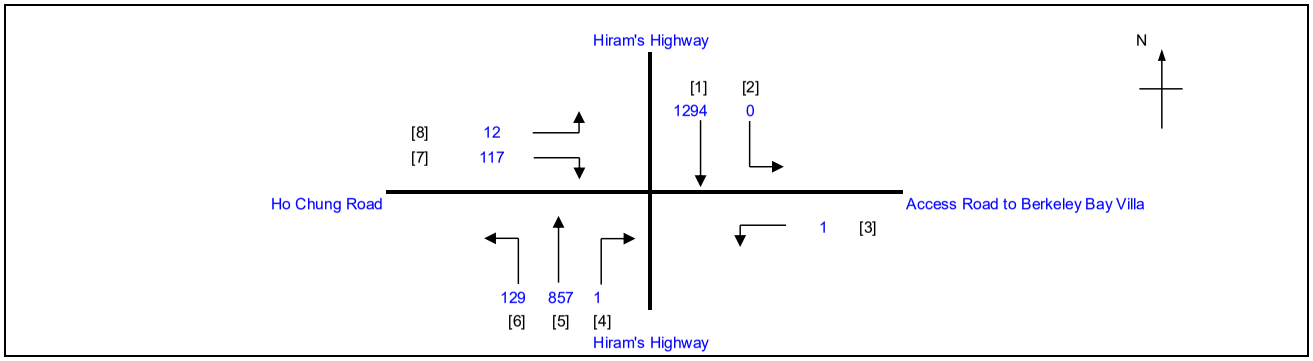
LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

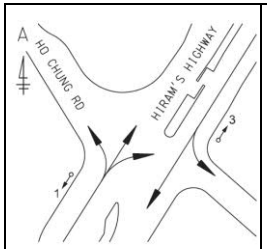
	INITIALS	DATE
Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" and Area Shown as "Road" to "Residential (Group C)5" for Proposed Residential Development at Various Lots in D.D. 210 and Adjoining Government Land, Pak Wai, Sai Kung		
J2 Hiram's Highway/Ho Chung Road		

2034 Reference AM

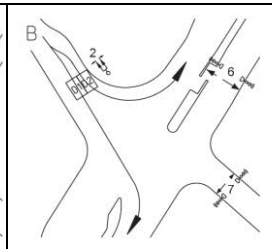
PROJECT NO.:	40815	Prepared By:	SKL	Dec-25
FILENAME :	J2_HH_HCR.xlsx	Checked By:	SLN	Dec-25
		Reviewed By:	SLN	Dec-25



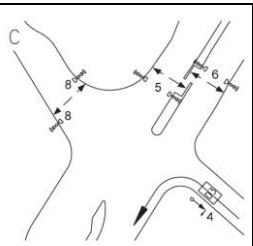
No. of stages per cycle	N =	3
Cycle time	C =	135 sec
Sum(y)	Y =	0.380
Loss time	L =	29 sec
Total Flow	=	2411 pcu
Co = (1.5*L+5)/(1-Y)	=	78.2 sec
Cm = L/(1-Y)	=	46.8 sec
Yult	=	0.683
R.C.ult = (Yult-Y)/Y*100%	=	79.7 %
Cp = 0.9*L/(0.9-Y)	=	50.2 sec
Ymax = 1-L/C	=	0.785
R.C.(C) = (0.9*Ymax-Y)/Y*100%	=	**86 %**



Stage 1 G= 89 Int = 5



Stage 2 G= 17 Int = 3



Stage 3 G= 19 Int = 2

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	3		10	8	0	13	8
P2	2,3		13	12	8	21	12
P3	2		8	7	4	9	7
P4	3		8	7	4	10	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							8					
1,2	1	3.20	1	15		N	1935	0	625		625	0.00	1935							1935	0.323	0.323		90	90	0.484	42	11
1	1	3.20	1				2075		669		669	0.00	2075							2075	0.322			90	90	0.484	48	11
5,6	1	3.50	1	12		N	1965	129	403		532	0.24	1907	18	120					2027	0.262			73	90	0.484	54	19
4,5	1	3.50	1	12	O	N	1965		454	1	455	0.00	1735							1735	0.262			73	90	0.484	42	19
7,8	2	3.50	1	12			2105	12		117	129	1.00	1871	12	400					2271	0.057	0.057	2	16	18	0.484	24	56
3	3	3.30	1	15		N	1945	1			1	1.00	1768							1768	0.001			0	19	0.484	0	795
PED	3																						19					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

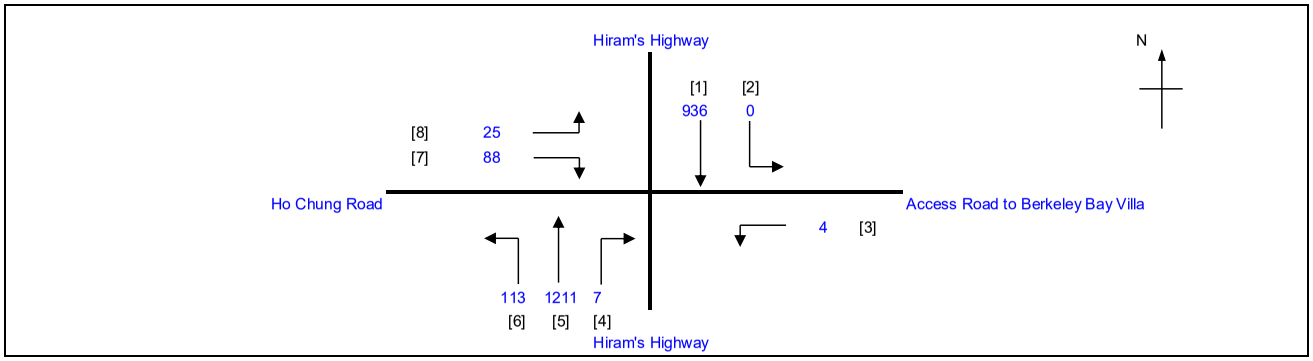
LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

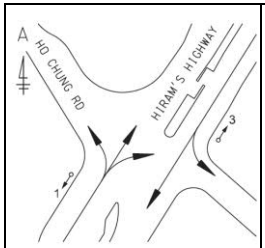
	INITIALS	DATE
Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" and Area Shown as "Road" to "Residential (Group C)5" for Proposed Residential Development at Various Lots in D.D. 210 and Adjoining Government Land, Pak Wai, Sai Kung		
J2 Hiram's Highway/Ho Chung Road		

2034 Reference PM

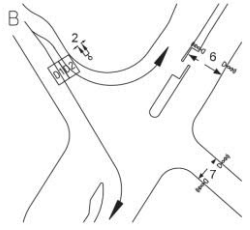
PROJECT NO.:	40815	Prepared By:	SKL	Dec-25
FILENAME :	J2_HH_HCR.xlsx	Checked By:	SLN	Dec-25
		Reviewed By:	SLN	Dec-25



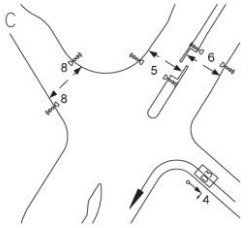
No. of stages per cycle	N =	3
Cycle time	C =	130 sec
Sum(y)	Y =	0.401
Loss time	L =	32 sec
Total Flow	=	2384 pcu
Co = (1.5*L+5)/(1-Y)	=	88.5 sec
Cm = L/(1-Y)	=	53.4 sec
Yult	=	0.660
R.C.ult = (Yult-Y)/Y*100%	=	64.6 %
Cp = 0.9*L/(0.9-Y)	=	57.7 sec
Ymax = 1-L/C	=	0.754
R.C.(C) = (0.9*Ymax-Y)/Y*100%	=	**69 %**



Stage 1 G= 85 Int = 5



Stage 2 G= 16 Int = 3



Stage 3 G= 19 Int = 2

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	3		10	8	0	13	8
P2	2,3		13	12	8	20	12
P3	2		8	7	4	8	7
P4	3		8	7	4	10	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							8					
1,2	1	3.20	1	15		N	1935	0	452		452	0.00	1935							1935	0.234			57	86	0.532	54	26
1	1	3.20	1				2075		484		484	0.00	2075							2075	0.233			57	86	0.532	54	26
5,6	1	3.50	1	12		N	1965	113	609		722	0.16	1927	18	126					2053	0.352	0.352		86	86	0.532	48	12
4,5	1	3.50	1	12	O	N	1965		602	7	609	0.01	1733							1733	0.352			86	86	0.532	42	12
7,8	2	3.50	1	12			2105	25		88	113	1.00	1871	12	424					2295	0.049	0.049	5	12	17	0.532	18	59
3	3	3.30	1	15		N	1945	4			4	1.00	1768							1768	0.002			1	19	0.532	0	303
PED	3																						19					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

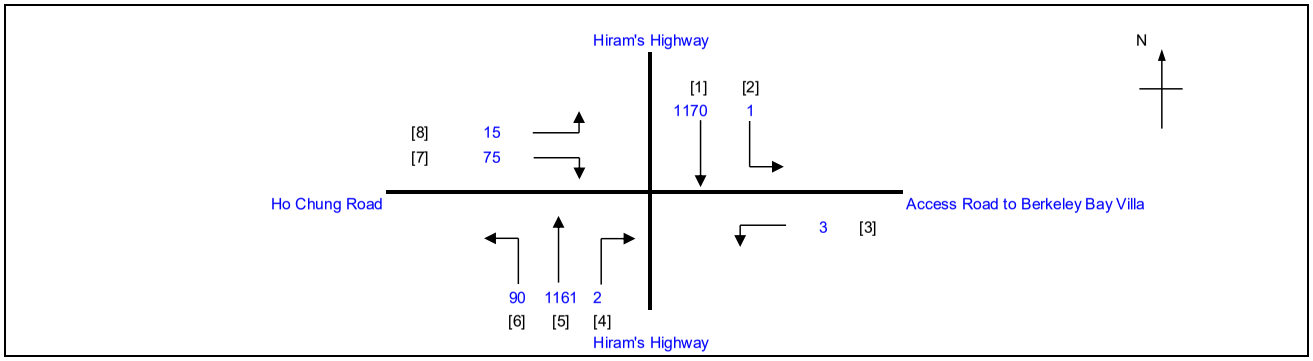
LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

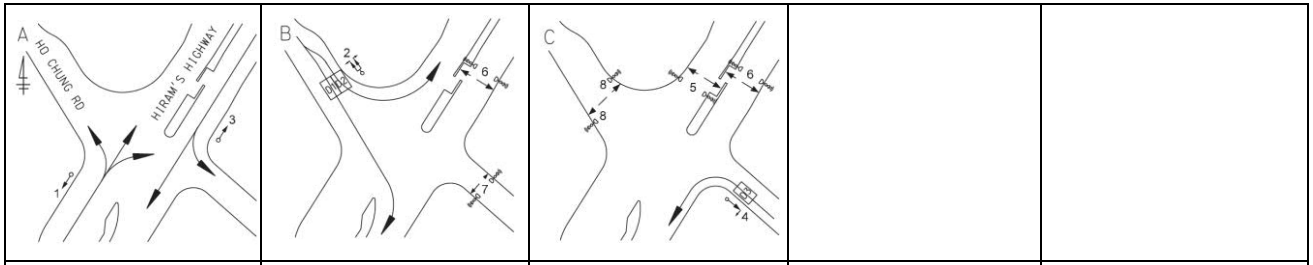
	INITIALS	DATE
Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" and Area Shown as "Road" to "Residential (Group C)5" for Proposed Residential Development at Various Lots in D.D. 210 and Adjoining Government Land, Pak Wai, Sai Kung		
J2 Hiram's Highway/Ho Chung Road		

2034 Reference WN

PROJECT NO.:	40815	Prepared By:	SKL	Dec-25
FILENAME :	J2_HH_HCR.xlsx	Checked By:	SLN	Dec-25
		Reviewed By:	SLN	Dec-25



No. of stages per cycle	N =	3
Cycle time	C =	130 sec
Sum(y)	Y =	0.370
Loss time	L =	34 sec
Total Flow	=	2517 pcu
Co = (1.5*L+5)/(1-Y)	=	88.8 sec
Cm = L/(1-Y)	=	53.9 sec
Yult	=	0.645
R.C.ult = (Yult-Y)/Y*100%	=	74.5 %
Cp = 0.9*L/(0.9-Y)	=	57.7 sec
Ymax = 1-L/C	=	0.738
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**80 %**



Stage 1	G=	85	Stage 2	G=	16	Stage 3	G= 19
	Int =	5		Int =	3		Int = 2

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	3		10	8	0	13	8
P2	2,3		13	12	8	20	12
P3	2		8	7	4	8	7
P4	3		8	7	4	10	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							8					
1,2	1	3.20	1	15		N	1935	1	564		565	0.00	1935							1935	0.292			76	86	0.501	48	16
1	1	3.20	1				2075		606		606	0.00	2075							2075	0.292			76	86	0.501	54	16
5,6	1	3.50	1	12		N	1965	90	590		680	0.13	1933	18	126					2059	0.330			86	86	0.501	48	11
4,5	1	3.50	1	12	O	N	1965		571	2	573	0.00	1734							1734	0.330	0.330		86	86	0.501	42	12
7,8	2	3.50	1	12			2105	15		75	90	1.00	1871	12	424					2295	0.039	0.039	7	10	17	0.501	18	61
3	3	3.30	1	15		N	1945	3			3	1.00	1768							1768	0.002			0	19	0.501	0	329
PED	3																						19					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

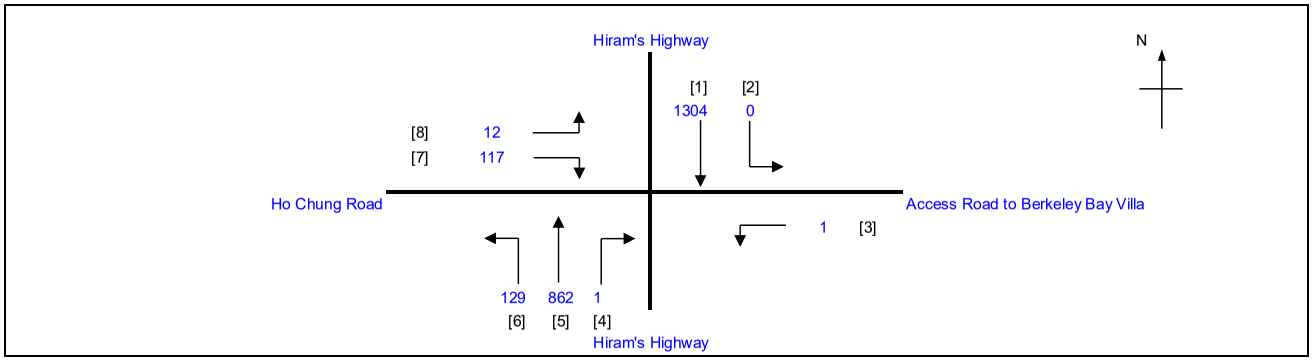
LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

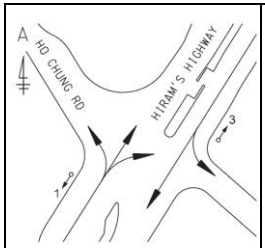
	INITIALS	DATE
Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" and Area Shown as "Road" to "Residential (Group C)5" for Proposed Residential Development at Various Lots in D.D. 210 and Adjoining Government Land, Pak Wai, Sai Kung		
J2 Hiram's Highway/Ho Chung Road		

2034 Design AM

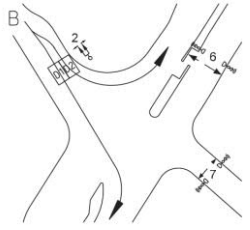
PROJECT NO.:	40815	Prepared By:	SKL	Dec-25
FILENAME :	J2_HH_HCR.xlsx	Checked By:	SLN	Dec-25
		Reviewed By:	SLN	Dec-25



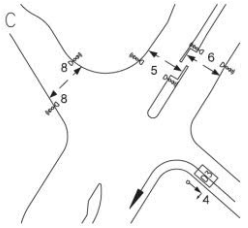
No. of stages per cycle	N =	3
Cycle time	C =	135 sec
Sum(y)	Y =	0.382
Loss time	L =	29 sec
Total Flow	=	2426 pcu
Co = (1.5*L+5)/(1-Y)	=	78.5 sec
Cm = L/(1-Y)	=	46.9 sec
Yult	=	0.683
R.C.ult = (Yult-Y)/Y*100%	=	78.6 %
Cp = 0.9*L/(0.9-Y)	=	50.4 sec
Ymax = 1-L/C	=	0.785
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**85 %**



Stage 1 G= 89 Int = 5



Stage 2 G= 17 Int = 3



Stage 3 G= 19 Int = 2

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	3		10	8	0	13	8
P2	2,3		13	12	8	21	12
P3	2		8	7	4	9	7
P4	3		8	7	4	10	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							8					
1,2	1	3.20	1	15		N	1935	0	629		629	0.00	1935							1935	0.325			90	90	0.487	42	11
1	1	3.20	1				2075		675		675	0.00	2075							2075	0.325	0.325		90	90	0.487	48	11
5,6	1	3.50	1	12		N	1965	129	406		535	0.24	1908	18	120					2028	0.264			73	90	0.487	54	19
4,5	1	3.50	1	12	O	N	1965		456	1	457	0.00	1735							1735	0.263			73	90	0.487	42	19
7,8	2	3.50	1	12			2105	12		117	129	1.00	1871	12	400					2271	0.057	0.057	2	16	18	0.487	24	56
3	3	3.30	1	15		N	1945	1			1	1.00	1768							1768	0.001			0	19	0.487	0	808
PED	3																						19					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

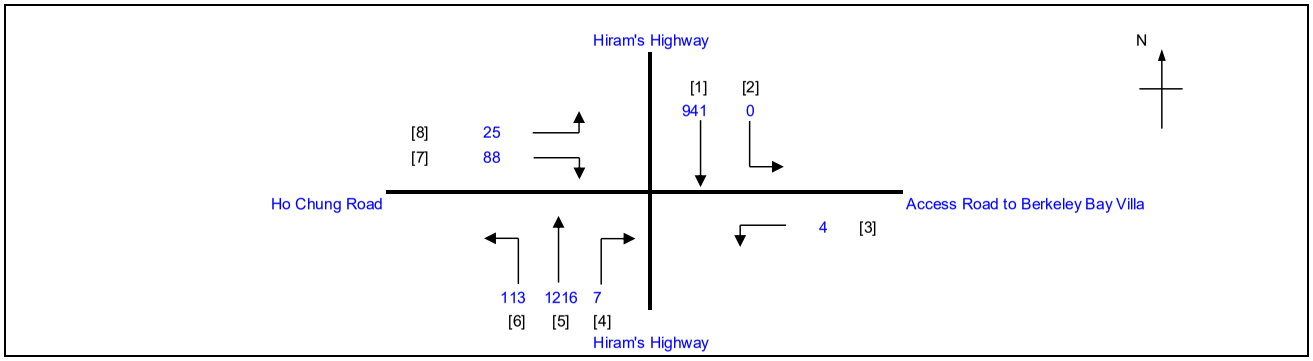
LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

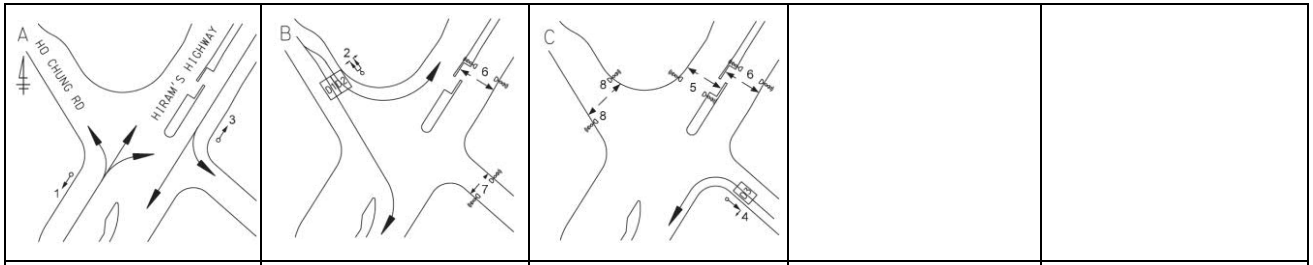
	INITIALS	DATE
Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" and Area Shown as "Road" to "Residential (Group C)5" for Proposed Residential Development at Various Lots in D.D. 210 and Adjoining Government Land, Pak Wai, Sai Kung		
J2 Hiram's Highway/Ho Chung Road		

2034 Design PM

PROJECT NO.:	40815	Prepared By:	SKL	Dec-25
FILENAME :	J2_HH_HCR.xlsx	Checked By:	SLN	Dec-25
		Reviewed By:	SLN	Dec-25



No. of stages per cycle	N =	3
Cycle time	C =	130 sec
Sum(y)	Y =	0.403
Loss time	L =	33 sec
Total Flow	=	2394 pcu
Co = (1.5*L+5)/(1-Y)	=	91.2 sec
Cm = L/(1-Y)	=	55.2 sec
Yult	=	0.653
R.C.ult = (Yult-Y)/Y*100%	=	62.1 %
Cp = 0.9*L/(0.9-Y)	=	59.7 sec
Ymax = 1-L/C	=	0.746
R.C.(C) = (0.9*Ymax-Y)/Y*100%	=	**67 %**



Stage 1	G=	84	Stage 2	G=	17	Stage 3	G= 19
	Int =	5		Int =	3		Int = 2

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	3		10	8	0	13	8
P2	2,3		13	12	8	21	12
P3	2		8	7	4	9	7
P4	3		8	7	4	10	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							8					
1,2	1	3.20	1	15		N	1935	0	454		454	0.00	1935							1935	0.235			57	85	0.540	54	27
1	1	3.20	1				2075		487		487	0.00	2075							2075	0.235			57	85	0.540	54	27
5,6	1	3.50	1	12		N	1965	113	612		725	0.16	1927	18	127					2055	0.353	0.353		85	85	0.540	54	12
4,5	1	3.50	1	12	O	N	1965		604	7	611	0.01	1733							1733	0.353			85	85	0.540	42	13
7,8	2	3.50	1	12			2105	25		88	113	1.00	1871	12	400					2271	0.050	0.050	6	12	18	0.540	18	60
3	3	3.30	1	15		N	1945	4			4	1.00	1768							1768	0.002			1	19	0.540	0	314
PED	3																						19					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

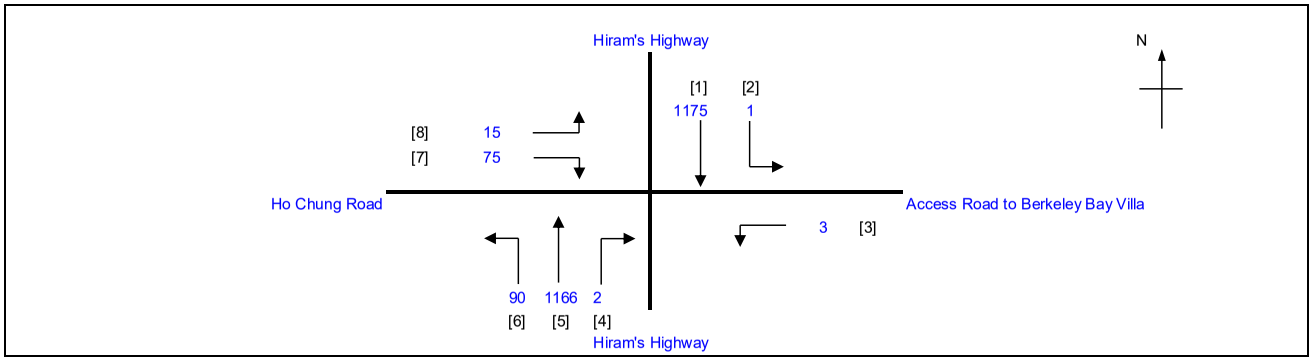
LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

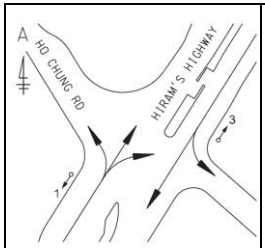
	INITIALS	DATE
Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" and Area Shown as "Road" to "Residential (Group C)5" for Proposed Residential Development at Various Lots in D.D. 210 and Adjoining Government Land, Pak Wai, Sai Kung		
J2 Hiram's Highway/Ho Chung Road		

2034 Design WN

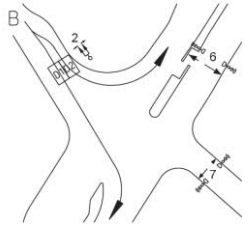
PROJECT NO.:	40815	Prepared By:	SKL	Dec-25
FILENAME :	J2_HH_HCR.xlsx	Checked By:	SLN	Dec-25
		Reviewed By:	SLN	Dec-25



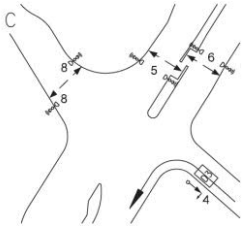
No. of stages per cycle	N =	3
Cycle time	C =	130 sec
Sum(y)	Y =	0.371
Loss time	L =	34 sec
Total Flow	=	2527 pcu
Co = (1.5*L+5)/(1-Y)	=	89.0 sec
Cm = L/(1-Y)	=	54.1 sec
Yult	=	0.645
R.C.ult = (Yult-Y)/Y*100%	=	73.9 %
Cp = 0.9*L/(0.9-Y)	=	57.8 sec
Ymax = 1-L/C	=	0.738
R.C.(C) = (0.9*Ymax-Y)/Y*100%	=	**79 %**



Stage 1 G= 85 Int = 5



Stage 2 G= 16 Int = 3



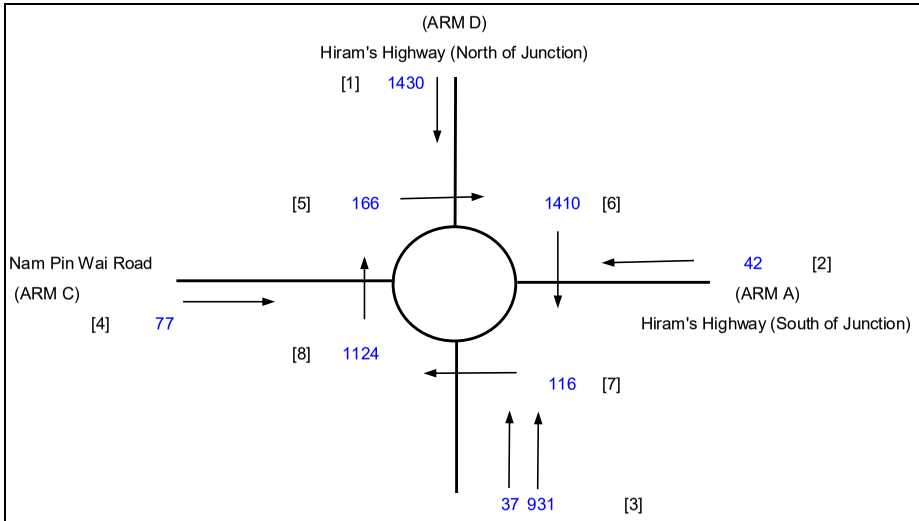
Stage 3 G= 19 Int = 2

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	3		10	8	0	13	8
P2	2,3		13	12	8	20	12
P3	2		8	7	4	8	7
P4	3		8	7	4	10	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							8					
1,2	1	3.20	1	15		N	1935	1	566		567	0.00	1935							1935	0.293			76	86	0.502	48	16
1	1	3.20	1				2075		609		609	0.00	2075							2075	0.293			76	86	0.502	54	16
5,6	1	3.50	1	12		N	1965	90	593		683	0.13	1933	18	126					2059	0.332	0.332		86	86	0.502	48	11
4,5	1	3.50	1	12	O	N	1965		573	2	575	0.00	1734							1734	0.332			86	86	0.502	42	12
7,8	2	3.50	1	12			2105	15		75	90	1.00	1871	12	424					2295	0.039	0.039	7	10	17	0.502	18	61
3	3	3.30	1	15		N	1945	3			3	1.00	1768							1768	0.002			0	19	0.502	0	332
PED	3																						19					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED	ROUNDABOUT CALCULATION			INITIALS	DATE
Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" and Area Shown as "Road" to "Residential (Group C)5" for Proposed Residential Development at Various Lots in D.D. 210 and Adjoining Government Land, Pak Wai, Sai Kung	**2034 Reference AM**	PROJECT NO.: 40815	PREPARED BY:	SKL	Dec-25
		FILENAME : J3_HH_NHH.xlsx	CHECKED BY:	SLN	Dec-25
J3 Hiram's Highway/ New Hiram's Highway/ Nam Pin Wai Road		REFERENCE NO.:	REVIEWED BY:	SLN	Dec-25



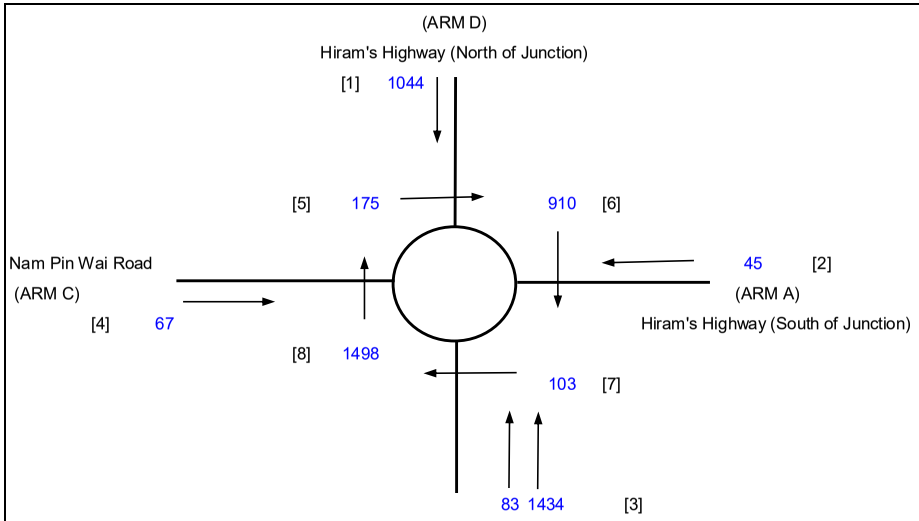
* Schematic diagram only

ARM			A	B	C	D
INPUT PARAMETERS:						
V	=	Approach half width (m)	3.70	7.40	4.30	7.70
E	=	Entry width (m)	7.30	11.00	7.30	7.80
L	=	Effective length of flare (m)	11.00	1.00	20.00	1.00
R	=	Entry radius (m)	15.00	55.00	23.00	18.00
D	=	Inscribed circle diameter (m)	78.00	78.00	78.00	78.00
A	=	Entry angle (degree)	32.00	40.00	50.00	36.00
Q	=	Entry flow (pcu/h)	42	931	77	1430
Qc	=	Circulating flow across entry (pcu/h)	1410	116	1124	166
OUTPUT PARAMETERS:						
S	=	Sharpness of flare = 1.6(E-V)/L	0.52	5.76	0.24	0.16
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	0.98	1.00	0.94	0.97
X2	=	V + ((E-V)/(1+2S))	5.46	7.69	6.33	7.78
M	=	EXP((D-60)/10)	6.05	6.05	6.05	6.05
F	=	303*X2	1654	2329	1917	2356
Td	=	1+(0.5/(1+M))	1.07	1.07	1.07	1.07
Fc	=	0.21*Td(1+0.2*X2)	0.47	0.57	0.51	0.57
Qe	=	K(F-Fc*Qc)	968	2255	1260	2201
DFC	=	Design flow/Capacity = Q/Qe	0.04	0.41	0.06	0.65

Total In Sum = 2480 PCU

DFC of Critical Approach = 0.65

LLA CONSULTANCY LIMITED	ROUNDABOUT CALCULATION			INITIALS	DATE
Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" and Area Shown as "Road" to "Residential (Group C)5" for Proposed Residential Development at Various Lots in D.D. 210 and Adjoining Government Land, Pak Wai, Sai Kung	**2034 Reference PM**	PROJECT NO.: 40815	PREPARED BY:	SKL	Dec-25
		FILENAME : J3_HH_NHH.xlsx	CHECKED BY:	SLN	Dec-25
J3 Hiram's Highway/ New Hiram's Highway/ Nam Pin Wai Road		REFERENCE NO.:	REVIEWED BY:	SLN	Dec-25



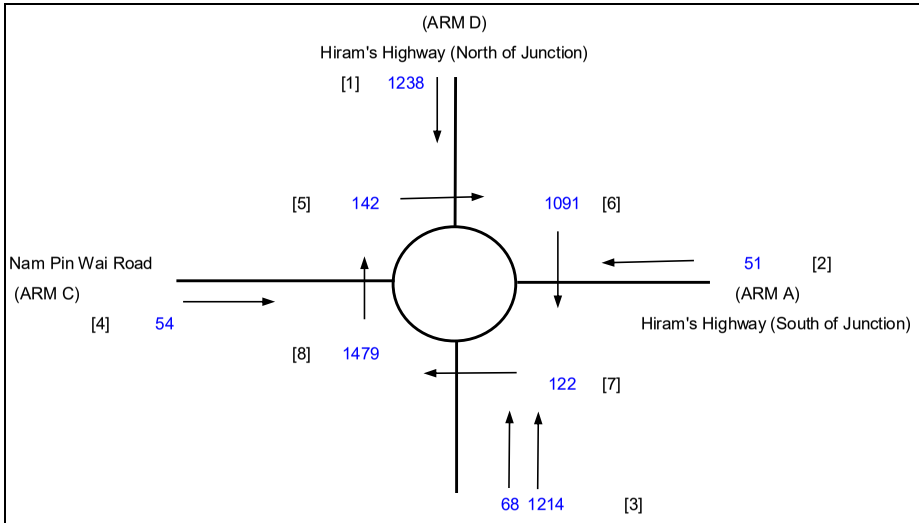
* Schematic diagram only

ARM			A	B	C	D
INPUT PARAMETERS:						
V	=	Approach half width (m)	3.70	7.40	4.30	7.70
E	=	Entry width (m)	7.30	11.00	7.30	7.80
L	=	Effective length of flare (m)	11.00	1.00	20.00	1.00
R	=	Entry radius (m)	15.00	55.00	23.00	18.00
D	=	Inscribed circle diameter (m)	78.00	78.00	78.00	78.00
A	=	Entry angle (degree)	32.00	40.00	50.00	36.00
Q	=	Entry flow (pcu/h)	45	1434	67	1044
Qc	=	Circulating flow across entry (pcu/h)	910	103	1498	175
OUTPUT PARAMETERS:						
S	=	Sharpness of flare = 1.6(E-V)/L	0.52	5.76	0.24	0.16
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	0.98	1.00	0.94	0.97
X2	=	V + ((E-V)/(1+2S))	5.46	7.69	6.33	7.78
M	=	EXP((D-60)/10)	6.05	6.05	6.05	6.05
F	=	303*X2	1654	2329	1917	2356
Td	=	1+(0.5/(1+M))	1.07	1.07	1.07	1.07
Fc	=	0.21*Td(1+0.2*X2)	0.47	0.57	0.51	0.57
Qe	=	K(F-Fc*Qc)	1197	2262	1081	2196
DFC	=	Design flow/Capacity = Q/Qe	0.04	0.63	0.06	0.48

Total In Sum = 2590 PCU

DFC of Critical Approach = 0.63

LLA CONSULTANCY LIMITED	ROUNDABOUT CALCULATION			INITIALS	DATE
Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" and Area Shown as "Road" to "Residential (Group C)5" for Proposed Residential Development at Various Lots in D.D. 210 and Adjoining Government Land, Pak Wai, Sai Kung	**2034 Reference WN**	PROJECT NO.: 40815	PREPARED BY:	SKL	Dec-25
		FILENAME : J3_HH_NHH.xlsx	CHECKED BY:	SLN	Dec-25
J3 Hiram's Highway/ New Hiram's Highway/ Nam Pin Wai Road		REFERENCE NO.:	REVIEWED BY:	SLN	Dec-25



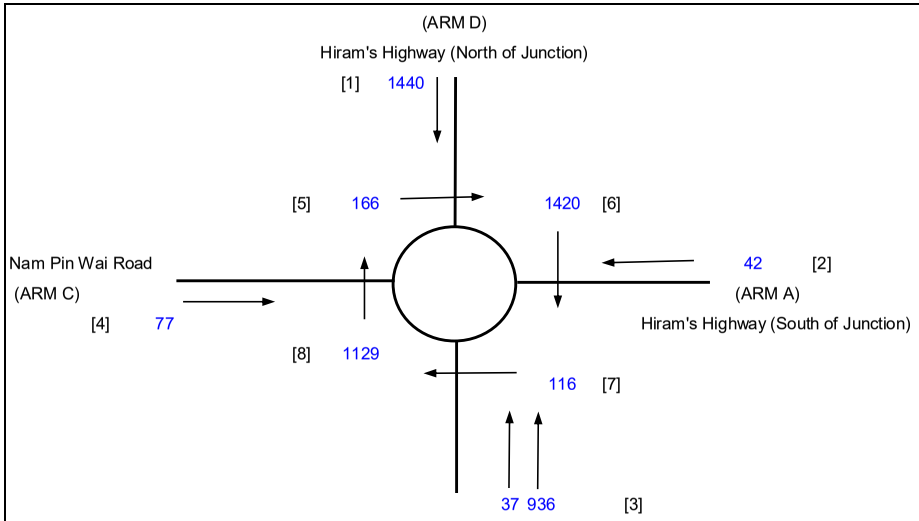
* Schematic diagram only

ARM			A	B	C	D
INPUT PARAMETERS:						
V	=	Approach half width (m)	3.70	7.40	4.30	7.70
E	=	Entry width (m)	7.30	11.00	7.30	7.80
L	=	Effective length of flare (m)	11.00	1.00	20.00	1.00
R	=	Entry radius (m)	15.00	55.00	23.00	18.00
D	=	Inscribed circle diameter (m)	78.00	78.00	78.00	78.00
A	=	Entry angle (degree)	32.00	40.00	50.00	36.00
Q	=	Entry flow (pcu/h)	51	1214	54	1238
Qc	=	Circulating flow across entry (pcu/h)	1091	122	1479	142
OUTPUT PARAMETERS:						
S	=	Sharpness of flare = 1.6(E-V)/L	0.52	5.76	0.24	0.16
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	0.98	1.00	0.94	0.97
X2	=	V + ((E-V)/(1+2S))	5.46	7.69	6.33	7.78
M	=	EXP((D-60)/10)	6.05	6.05	6.05	6.05
F	=	303*X2	1654	2329	1917	2356
Td	=	1+(0.5/(1+M))	1.07	1.07	1.07	1.07
Fc	=	0.21*Td(1+0.2*X2)	0.47	0.57	0.51	0.57
Qe	=	K(F-Fc*Qc)	1114	2252	1090	2215
DFC	=	Design flow/Capacity = Q/Qe	0.05	0.54	0.05	0.56

Total In Sum = 2557 PCU

DFC of Critical Approach = 0.56

LLA CONSULTANCY LIMITED	ROUNDABOUT CALCULATION			INITIALS	DATE
Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" and Area Shown as "Road" to "Residential (Group C)5" for Proposed Residential Development at Various Lots in D.D. 210 and Adjoining Government Land, Pak Wai, Sai Kung	**2034 Design AM**	PROJECT NO.: 40815	PREPARED BY:	SKL	Dec-25
		FILENAME : J3_HH_NHH.xlsx	CHECKED BY:	SLN	Dec-25
J3 Hiram's Highway/ New Hiram's Highway/ Nam Pin Wai Road		REFERENCE NO.:	REVIEWED BY:	SLN	Dec-25



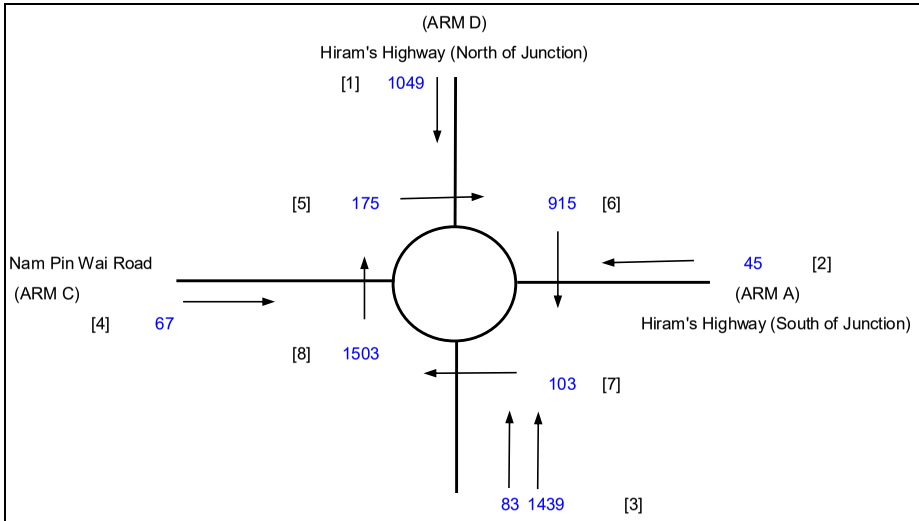
* Schematic diagram only

ARM			A	B	C	D
INPUT PARAMETERS:						
V	=	Approach half width (m)	3.70	7.40	4.30	7.70
E	=	Entry width (m)	7.30	11.00	7.30	7.80
L	=	Effective length of flare (m)	11.00	1.00	20.00	1.00
R	=	Entry radius (m)	15.00	55.00	23.00	18.00
D	=	Inscribed circle diameter (m)	78.00	78.00	78.00	78.00
A	=	Entry angle (degree)	32.00	40.00	50.00	36.00
Q	=	Entry flow (pcu/h)	42	936	77	1440
Qc	=	Circulating flow across entry (pcu/h)	1420	116	1129	166
OUTPUT PARAMETERS:						
S	=	Sharpness of flare = 1.6(E-V)/L	0.52	5.76	0.24	0.16
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	0.98	1.00	0.94	0.97
X2	=	V + ((E-V)/(1+2S))	5.46	7.69	6.33	7.78
M	=	EXP((D-60)/10)	6.05	6.05	6.05	6.05
F	=	303*X2	1654	2329	1917	2356
Td	=	1+(0.5/(1+M))	1.07	1.07	1.07	1.07
Fc	=	0.21*Td(1+0.2*X2)	0.47	0.57	0.51	0.57
Qe	=	K(F-Fc*Qc)	963	2255	1257	2201
DFC	=	Design flow/Capacity = Q/Qe	0.04	0.42	0.06	0.65

Total In Sum = 2495 PCU

DFC of Critical Approach = 0.65

LLA CONSULTANCY LIMITED	ROUNDABOUT CALCULATION			INITIALS	DATE
Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" and Area Shown as "Road" to "Residential (Group C)5" for Proposed Residential Development at Various Lots in D.D. 210 and Adjoining Government Land, Pak Wai, Sai Kung	**2034 Design PM**	PROJECT NO.: 40815	PREPARED BY:	SKL	Dec-25
		FILENAME : J3_HH_NHH.xlsx	CHECKED BY:	SLN	Dec-25
J3 Hiram's Highway/ New Hiram's Highway/ Nam Pin Wai Road		REFERENCE NO.:	REVIEWED BY:	SLN	Dec-25



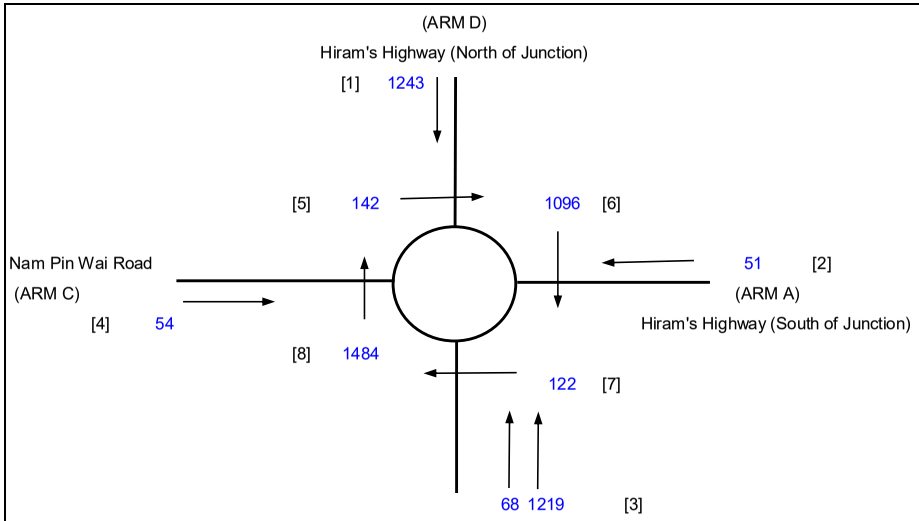
* Schematic diagram only

ARM			A	B	C	D
INPUT PARAMETERS:						
V	=	Approach half width (m)	3.70	7.40	4.30	7.70
E	=	Entry width (m)	7.30	11.00	7.30	7.80
L	=	Effective length of flare (m)	11.00	1.00	20.00	1.00
R	=	Entry radius (m)	15.00	55.00	23.00	18.00
D	=	Inscribed circle diameter (m)	78.00	78.00	78.00	78.00
A	=	Entry angle (degree)	32.00	40.00	50.00	36.00
Q	=	Entry flow (pcu/h)	45	1439	67	1049
Qc	=	Circulating flow across entry (pcu/h)	915	103	1503	175
OUTPUT PARAMETERS:						
S	=	Sharpness of flare = 1.6(E-V)/L	0.52	5.76	0.24	0.16
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	0.98	1.00	0.94	0.97
X2	=	V + ((E-V)/(1+2S))	5.46	7.69	6.33	7.78
M	=	EXP((D-60)/10)	6.05	6.05	6.05	6.05
F	=	303*X2	1654	2329	1917	2356
Td	=	1+(0.5/(1+M))	1.07	1.07	1.07	1.07
Fc	=	0.21*Td(1+0.2*X2)	0.47	0.57	0.51	0.57
Qe	=	K(F-Fc*Qc)	1195	2262	1079	2196
DFC	=	Design flow/Capacity = Q/Qe	0.04	0.64	0.06	0.48

Total In Sum = 2600 PCU

DFC of Critical Approach = 0.64

LLA CONSULTANCY LIMITED	ROUNDABOUT CALCULATION			INITIALS	DATE
Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" and Area Shown as "Road" to "Residential (Group C)5" for Proposed Residential Development at Various Lots in D.D. 210 and Adjoining Government Land, Pak Wai, Sai Kung	**2034 Design WN**	PROJECT NO.: 40815	PREPARED BY:	SKL	Dec-25
		FILENAME : J3_HH_NHH.xlsx	CHECKED BY:	SLN	Dec-25
J3 Hiram's Highway/ New Hiram's Highway/ Nam Pin Wai Road		REFERENCE NO.:	REVIEWED BY:	SLN	Dec-25



* Schematic diagram only

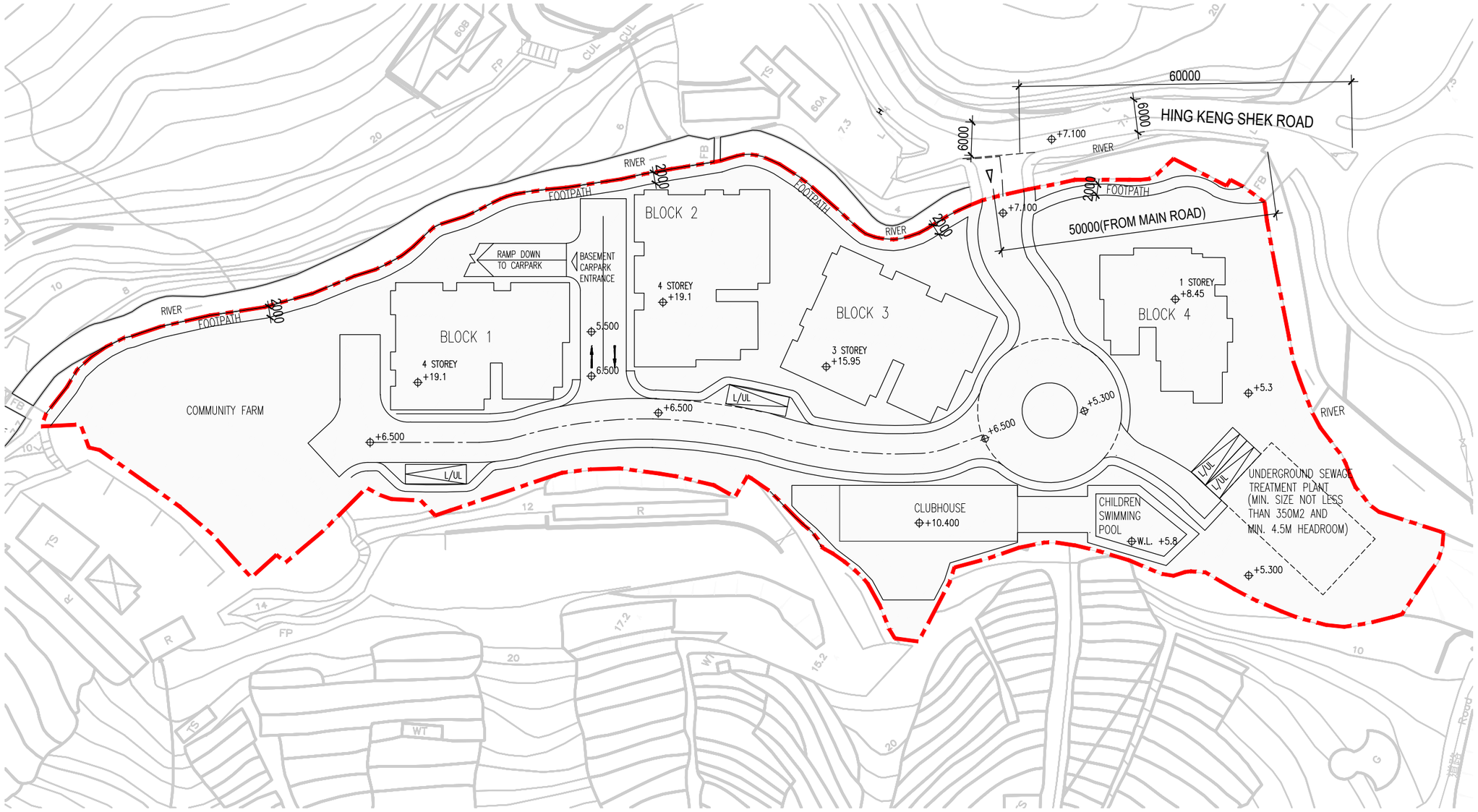
ARM			A	B	C	D
INPUT PARAMETERS:						
V	=	Approach half width (m)	3.70	7.40	4.30	7.70
E	=	Entry width (m)	7.30	11.00	7.30	7.80
L	=	Effective length of flare (m)	11.00	1.00	20.00	1.00
R	=	Entry radius (m)	15.00	55.00	23.00	18.00
D	=	Inscribed circle diameter (m)	78.00	78.00	78.00	78.00
A	=	Entry angle (degree)	32.00	40.00	50.00	36.00
Q	=	Entry flow (pcu/h)	51	1219	54	1243
Qc	=	Circulating flow across entry (pcu/h)	1096	122	1484	142
OUTPUT PARAMETERS:						
S	=	Sharpness of flare = 1.6(E-V)/L	0.52	5.76	0.24	0.16
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	0.98	1.00	0.94	0.97
X2	=	V + ((E-V)/(1+2S))	5.46	7.69	6.33	7.78
M	=	EXP((D-60)/10)	6.05	6.05	6.05	6.05
F	=	303*X2	1654	2329	1917	2356
Td	=	1+(0.5/(1+M))	1.07	1.07	1.07	1.07
Fc	=	0.21*Td(1+0.2*X2)	0.47	0.57	0.51	0.57
Qe	=	K(F-Fc*Qc)	1112	2252	1088	2215
DFC	=	Design flow/Capacity = Q/Qe	0.05	0.54	0.05	0.56

Total In Sum = 2567 PCU

DFC of Critical Approach = 0.56

Appendix C

Proposed Layout Plan



Rev.	Date	Amendment	Purpose

K & W Architects Ltd.
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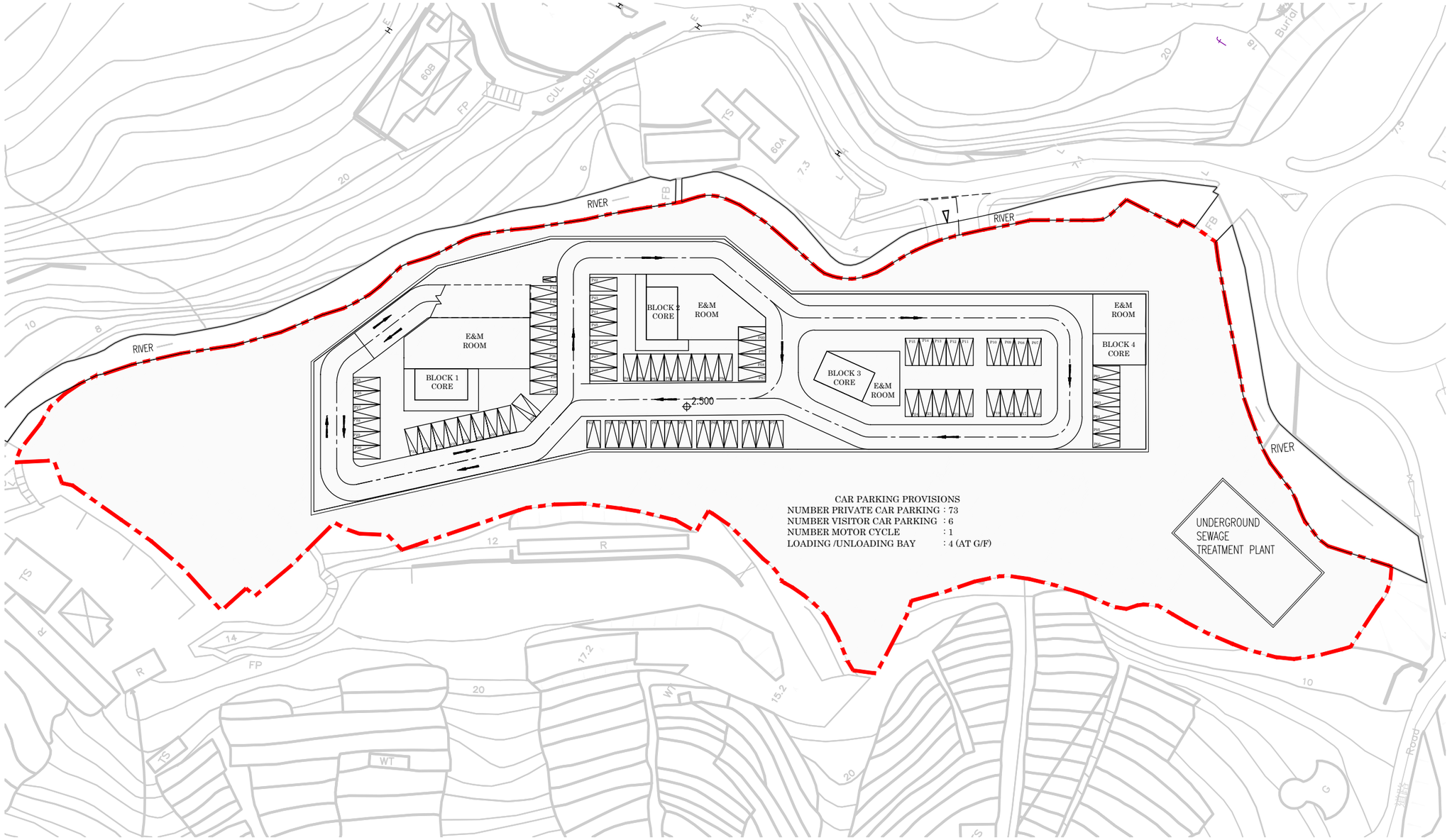
Client

Project
APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A OF THEE TOWN PLANNING ORDINANCE (CAP.131) TO REZONE THEE APPLICATION SITE FORM "GREEN" BELT AND AREA SHOWN AS "ROAD" TO " RESIDENTIAL (GROUP C) 5" FOR PROPOSEED RESIDENTIAL DEVELOPMENT AT VARIOUS LOTS IN D.D.210 AND ADJOINING GOVERNMENT LAND, PAK WAI, SAI KUNG

Drawing Title
MASTER LAYOUT PLAN

Job No.	Drawing No.	Revision No.
D1186	MLP-01	Q
Scale	Date	CAD Ref.
1:800	09/06/2025	
Drawn	Checked	Approved
SF	SF	



CAR PARKING PROVISIONS
NUMBER PRIVATE CAR PARKING : 73
NUMBER VISITOR CAR PARKING : 6
NUMBER MOTOR CYCLE : 1
LOADING /UNLOADING BAY : 4 (AT G/F)

Rev.	Date	Amendment	Purpose

K & W Architects Ltd.
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Client

Project
APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A OF THEE TOWN PLANNING ORDINANCE (CAP.131) TO REZONE THEE APPLICATION SITE FORM "GREEN" BELT AND AREA SHOWN AS "ROAD" TO " RESIDENTIAL (GROUP C) 5" FOR PROPOSEED RESIDENTIAL DEVELOPMENT AT VARIOUS LOTS IN D.D.210 AND ADJOINING GOVERNMENT LAND, PAK WAI, SAI KUNG

Drawing Title
BASEMENT PLAN

Job No.	Drawing No.	Revision No.
D1186	FL-02	P
Scale	**Date**	**CAD Ref.**
1:500	23/08/2023	
Drawn	**Checked**	**Approved**
PC	PC	

ARUP

Appendix F

Revised Supporting Planning Statement

ARUP

Application for Amendment of Plan Under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" and Area Shown as "Road" to "Residential (Group C)5" for Proposed Residential Development at Various Lots in D.D. 210 and Adjoining Government Land, Pak Wai, Sai Kung

Supporting Planning Statement

May 2026

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 295143

Arup Hong Kong Limited
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Contents

Executive Summary		**i**
行政摘要		**iii**
1.	**INTRODUCTION**	**1**
2.	**SITE CONTEXT**	**3**
2.1	Location	3
2.2	Land status	3
2.3	Existing Land Use	3
2.4	Surrounding Land Use	4
2.5	Accessibility	4
3.	**PLANNING CONTEXT**	**6**
3.1	Land Use Zoning	6
3.2	Government's Multi-Pronged Approach to Increasing Housing Supply	6
3.3	Policy Initiatives for Rezoning of "Green Belt" Zone for Housing Sites	7
3.4	Changing Planning Circumstances in the Immediate Surrounding	10
4.	**THE INDICATIVE SCHEME**	**11**
4.1	Echoing the Government's Effort to Identify Suitable "GB" Sites in Private Land for Residential Redevelopment	11
4.2	Key Planning and Design Principles	11
4.3	Proposed Development Parameters	12
4.4	Building Design of the Indicative Scheme	13
4.5	Landscape Design Concept	15
4.6	Traffic Arrangement, Pedestrian Connections, and Internal Transport Facilities	17
5.	**AMENDMENT PROPOSAL**	**18**
5.1	Considerations for An Appropriate Zoning	18
5.2	Clear Planning Intension	18
5.3	Appropriate Zoning Control	18
5.4	Appropriate Zoning Flexibility	18
5.5	The Proposed Amendment	18
6.	**PLANNING JUSTIFICATIONS**	**20**
6.1	Echoing the Government's Prevailing Policy to Increase Housing Supply	20
6.2	Tapping into Private Resources to Shouldering the Burden of Housing Supply by Rationalising Lands Not Serving "GB" Function	20
6.3	In Line with the Government's Initiatives and Criteria of Reviewing Suitable "GB" Zone for Housing Development	21
6.4	Not Compromising the Integrity and Function of the Wider "GB" Zone	23
6.5	Fully Compatible with the Surrounding Neighbourhood	23
6.6	Providing Merits and Enhancing the Landscape Amenity to the Locality	24
6.7	Resulting in NO Adverse Impacts to Surrounding Environment	24
6.8	Setting a Desirable Precedent for Optimising Private Land Resources in "GB" Zone for Housing Supply	25
7.	**CONCLUSION**	**26**

Tables

Table 3.3.1	Key Assessment Criteria of "Green Belt" Reviews Initiated by the Government	7
Table 3.3.2	Rezoning of "GB" Sites initiated by the Government in Sai Kung District for Housing Development	8
Table 4.3.1	Key Development Parameters of the Indicative Scheme	12
Table 6.3.1	Fulfilment of the Government's Assessment Criteria in Reviewing "GB" Sites	21

Figures

Figure 2.1	Location Plan
Figure 2.2	Lot Index Plan
Figure 2.3	Existing Condition of the Application Site
Figure 2.4a-b	Surrounding Condition of the Application Site
Figures 3.1a-b	Draft Ho Chung Outline Zoning Plan (No. S/SK-HC/12) – Schedule of Uses of "GB" Zone
Figures 3.1c	Draft Ho Chung Outline Zoning Plan (No. S/SK-HC/12) – Explanatory Statement of "GB" Zone
Figures 3.1d-g	Draft Ho Chung Outline Zoning Plan (No. S/SK-HC/12) – Notes
Figure 3.4a	Hiram's Highway Improvement Stage 1 (Completed in 2021)
Figure 3.4b	Hiram's Highway Improvement Stage 2
Figure 5.5a	Proposed Amendment to the Draft Ho Chung Outline Zoning Plan (No. S/SK-HC/12)
Figures 5.5b-d	Proposed Amendment to the Draft Ho Chung Outline Zoning Plan (No. S/SK-HC/12) – Notes of the "R(C)" Zone
Figures 5.5e-f	Proposed Amendments to the Draft Ho Chung Outline Zoning Plan (No. S/SK-HC/12) – Explanatory Statement of the "R(C)" Zone
Figures 5.5g	Proposed Amendments to the Draft Ho Chung Outline Zoning Plan (No. S/SK-HC/12) – Explanatory Statement of the "GB" Zone

Appendices

Appendix A	Indicative Architectural Drawings
Appendix B	Landscape Master Plan with Tree Survey Report
Appendix C	Traffic Impact Assessment
Appendix D	Visual Impact Assessment
Appendix E	Environmental Assessment
Appendix F	Drainage Impact Assessment
Appendix G	Sewage Treatment and Disposal Proposal Report
Appendix H	Geotechnical Planning Review Report
Appendix I	Water Demand Assessment

Executive Summary

This Supporting Planning Statement is submitted to the Town Planning Board for the Proposed Amendment to the Approved Ho Chung Outline Zoning Plan No. S/SK-HC/13 (the "OZP") under Section 12A of the Town Planning Ordinance (Cap. 131), in support of the rezoning from "Green Belt" ("GB") zone and Area Shown as "Road" to "Residential (Group C)5" ("R(C)5") zone at various lots in D.D. 210 and adjoining Government Land, Pak Wai, Sai Kung (the "Application Site") to facilitate a low-density residential development (the "Proposed Amendment").

The Application Site, with a site area of about 12,692m^2, is located in a low-density residential neighbourhood, with existing development in Marine Cove and low-rise houses in Pak Wai Village and Hing Keng Shek Village in its immediate surrounding. It is accessible from Hiram's Highway, and the section has already completed the Phase 1 Improvement Work in 2021. Currently, the Application Site is occupied by a commercial horticulture workshop and temporary structures. Majority land area of the Application Site has been paved, and barely serves the planning intention of "GB" zone which "*is primarily for defining the limits of urban and sub-urban development areas by natural features, and to contain urban sprawl as well as to provide passive recreational outlets*" (extracted from the Notes of the Approved Ho Chung Outline Zoning Plan No. S/SK-HC/13).

Boosting housing production and building up land reserve have been one of the priority objectives of the Government. A steady supply of private housing, alongside public housing, has been equally important to meet the projected demand as laid out in the Long-Term Housing Strategy. In recent years, rounds of systematic review of "GB" zones have been initiated by the Government to identify appropriate sites for housing through rezoning. Since 2021, in the Sai Kung district, a total of 6 sites in "GB" zone have been rezoned for housing development. Echoing with the Government's ongoing efforts to increase land supply to address territorial housing demand, the Proposed Amendment at the Application Site is a timely response to unleash the potential of a sizeable developable land at a scale compatible with the surroundings.

An Indicative Scheme has been formulated to demonstrate the feasibility of the Proposed Amendment to rezone the Application Site from "GB" and area shown as "Road" to "R(C)5" with a maximum plot ratio ("PR") of 0.6 and a maximum building height ("BH") of 4 storeys. In the Indicative Scheme, a total of 96 private residential units will be provided in four residential towers incorporated with environmentally sensitive design. Relevant technical assessments have been carried out to ascertain that there will be no insurmountable impacts on the surrounding environment.

The Proposed Amendment at the Application Site is fully justified based on the following grounds:

- Echoing with the Government's Prevailing Policy to Increase Housing Supply;
- Tapping into Private Resources to Shouldering the Burden of Housing Supply by Rationalising Lands Not Serving "GB" Function
- Not Compromising the Integrity and Function of the Wider "GB" Zone;

- Fully Compatible with the Surrounding Neighbourhood;
- Providing Merits and Enhancing the Landscape Amenity to the Locality;
- Resulting in NO Adverse Impacts on Surrounding Environment; and
- Setting a Desirable Precedent for Optimising Private Land Resources in "GB" Zone for Housing Supply

This Application has demonstrated Applicants' genuine intention and commitment in taking forward the Proposed Amendment contributing to the much-needed housing supply in a suitable location and a compatible scale with the nearby existing development, without comprising the integrity of the wider "GB" zone. In light of the planning merits and justifications put forward in this Supporting Planning Statement, we sincerely seek the favourable consideration from the Town Planning Board to give support to this Section 12A Application.

行政摘要

(內文如與英文版本有任何差異，應以英文版本為準)

本規劃綱領根據《城市規劃條例》（第 131 章）第 12A 條，就位於西貢北圍丈量約份第 210 約內多個地段和毗連政府土地（「申請地點」），擬議修訂蠔涌分區計劃大綱核准圖編號 S/SK-HC/13（「分區計劃大綱圖」），將申請地點由「綠化地帶」及顯示為「道路」的地方改劃為「住宅（丙類）5」地帶，以作擬議低密度住宅發展（「擬議修訂」）。

申請地點的總地盤面積為約 12,692 平方米，位於低密度住宅社區，鄰近有匡湖居以及北圍村和慶徑石村內的低矮屋宇。申請地點可從西貢公路到達，該路段已在 2021 年完成第一階段的西貢公路改善工程。申請地點現時主要用作為園景公司及臨時建築物，現時大部分的土地範圍沒有植被及已平整，難以體現現時「綠化地帶」的規劃意向，「*利用天然地理環境作為市區和近郊的發展區的界限，以抑制市區範圍的擴展，並提供土地作靜態康樂場地*」（摘錄於蠔涌分區計劃大綱核准圖編號 S/SK-HC/13 的註釋）。

近年政府積極增加房屋供應及土地儲備。私人房屋及公營房屋的供應需持續平穩來滿足在長遠房屋策略中的房屋需求。近年政府亦進行了多輪「綠化地帶」用地檢討，並以透過改劃合適用地以作房屋發展。由 2021 年起，西貢區共有六塊劃作「綠化地帶」用地的改劃以促進房屋發展。為回應政府現時增加土地供應的政策以滿足殷切的住屋需求，擬議修訂善用土地及釋放這位於西貢北圍低密度住宅社區的發展土地潛力。

申請人已制定一個指示性方案以證明擬議修訂的可行性。擬議修訂建議於申請地點由「綠化地帶」及顯示為「道路」的地方改劃為「住宅（丙類）5」地帶，最高地積比率為 0.6 及最高建築物高度為 4 層。指示性方案的四棟有環保設計的住宅大廈將提供合共 96 個單位。申請人亦已進行相關技術評估來確定指示性方案不會對周圍環境造成不可克服的影響。

擬議修訂具有以下合理改劃理由：

- 呼應政府的現行政策以增加房屋供應；
- 善用私人土地資源，理順荒廢多年未能體現「綠化地帶」規劃意向的土地，以減輕房屋需求的壓力；
- 不影響廣大範圍內「綠化地帶」的完整性及作用；
- 符合政府檢視合適「綠化地帶」發展潛力的政策方針及評估標準；
- 確保與周邊的發展互相協調；
- 提升景觀美化價值及改善地區環境；

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- 不會對周邊環境造成負面影響； 及
- 建立良好的先例，善用在「綠化地帶」的土地以作房屋發展。

申請人對推進這個有助於在合適的地點提供急需的住房供應，與附近現有發展規模相容，並不影響廣大範圍內「綠化地帶」完整性的擬議修訂，持有誠懇和積極的態度。基於本規劃綱領所闡述的規劃增益和理據，我們懇請城市規劃委員會支持是次第 12A 條規劃申請。

1. INTRODUCTION

1.1.1 This Supporting Planning Statement is submitted to the Town Planning Board ("TPB") in support of a Planning Application under Section 12A of the Town Planning Ordinance (Cap. 131) for Proposed Residential Development ("the Proposed Amendment") at various lots in D.D. 210 and adjoining Government Land, Pak Wai, Sai Kung ("the Application Site").

1.1.2 The Applicant proposes amendments to the Approved Ho Chung Outline Zoning Plan No. S/SK-HC/13 ("the OZP") by rezoning the Application Site from "Green Belt" ("GB") and Area shown as "Road" to the "Residential (Group C)5" ("R(C)5") zone ("the Proposed Amendment") with a maximum plot ratio ("PR") of 0.6 and a maximum building height ("BH") of 4 storeys, to facilitate a proposed low-density residential development.

1.1.3 The Application Site is bounded by Hing Keng Shek Road in its east, the Hiram's Highway in its south and situated in a predominantly low-density residential neighbourhood. Currently, the Application Site has been occupied by a commercial horticulture workshop and temporary structures. Majority part of the Application Site has been paved. The Application Site also covers a portion of a footpath connecting to the existing temporary structures and village settlements to the north and northwest of the Application Site from Hing Keng Shek Road and Hiram's Highway.

1.1.4 Following the completion of the first two rounds of "Green Belt" (GB) reviews in 2012 and 2013 respectively, the Chief Executive's 2021 Policy Address reaffirmed that the Government would continue to review various land uses by conducting the third round of "GB" review to identify suitable sites to meet the pressing need for housing supply. Among the 77 GB sites identified with potential for housing development in the first two rounds of review, 45 sites have already been rezoned for housing development (as of January 2023). As the third round of "GB" review was completed in the end of 2022, the 255 hectares of "GB" clusters (30% of which is private land) identified will be proceeded with technical studies, with the target of initiating the rezoning for the second batch of sites in 2025-26, following completion of the rezoning for the first batch in 2024[1].

1.1.5 In line with Government's initiative, the Applicant sees the opportunity to rationalise the long-wasted land that barely serves the function of "GB" for residential development at a scale which is compatible with the surrounding and proven to be technically feasible. The proposed development will be compatible with the existing developments in the surrounding and serves an opportunity to unleash lands in "GB" zone under private ownership, as suggested in the third round of "GB" review, to increase housing supply through private sector participation to alleviate Hong Kong's acute housing demand.

1.1.6 An Indicative Scheme has been formulated to demonstrate the feasibility of the Proposed Amendment. The Indicative Scheme is for a low-density residential development and serves an opportunity to enhance the landscape amenity and living environment for the Ho Chung Neighbourhood. The Indicative Scheme will provide about 96 private residential units with an anticipated population of about 288. The thoughtful building

[1] Source: https://www.legco.gov.hk/yr2024/english/panels/dev/papers/dev20241022cb1-1346-3-e.pdf

layout and disposition have ensured an environmentally acceptable design with local open spaces not less than 1m^2 per capita. Technical assessments conducted have also confirmed that the Proposed Amendment will not generate, nor be suspectable to adverse impacts on the surrounding area.

1.1.7 This Supporting Planning Statement is organised into the following sections in support of the suitability and feasibility of the Planning Application for the Proposed Amendment:

- **Section 2** describes the context of the Application Site and its surrounding areas;
- **Section 3** explains the planning context of the Application Site;
- **Section 4** presents the Indicative Scheme at the Application Site;
- **Section 5** summarises the amendment proposal to be incorporated into the Plan and Notes of the OZP;
- **Section 6** highlights the planning justifications and planning merits in support of the Proposed Amendment; and
- **Section 7** concludes the highlights and justifications of this Supporting Planning Statement.

2. SITE CONTEXT

2.1 Location

2.1.1 The Application Site is located at various lots in D.D. 210 and adjoining Government Land in Pak Wai, Sai Kung. It is bounded by Hing Keng Shek Road at its east, the Hiram's Highway at its south and situated in a predominantly low-density residential neighbourhood. With a site area of about 12,692 m², the Application Site falls within an area mainly zoned as "GB" and partly in area shown as "Road" in the Approved Ho Chung OZP No. S/SK-HC/13.

2.1.2 Please refer to **Figure 2.1** for the location plan of the Application Site.

2.2 Land status

2.2.1 The Application Site area is about 12,692m², which comprises of about 9,406m² (about 74% of the Application Site) of private lots held under Lots 13 (part), 14 (part),15 (part), 16 (part), 17, 19 (part), 20, 21, 23, 25, 26, 27, 28, 29, 30, 31 (part), 32, 33, 34, 35, 36, 37, 38, 39, 40 (part), 41, 42, 45, 46 RP, 47 RP, 48 RP, 49 RP, 50 RP, 51 RP (part), 52 (part) and 53 RP in D.D. 210, and about 3,286m² (about 26%) of Government Land. The Applicants are the current sole land owners of the private lots.

2.2.2 Please refer to **Figure 2.2** for the lot index plan of the Application Site.

2.3 Existing Land Use

2.3.1 The Application Site's site level ranges from about 4.1mPD to 5.7mPD which is at elevations comparatively lower than Pak Wai Village in the east (with a site level up to about 24.4mPD) and Hing Keng Shek Village in the north (with a site level up to about 55.7mPD). It also abuts an existing stream course along its eastern boundary.

2.3.2 Currently, the majority of the Application Site has been paved. The southern and western part of the Application Site is occupied by a commercial horticulture workshop and temporary structures. Some temporary structures which used for storage and vehicle parking are also found in the middle of the Application Site.

2.3.3 Vegetations with low amenity value are grown along the two sides of the Application Site. An existing stream is running along the eastern boundary of the Application Site. There is also an existing pedestrian footpath connecting Hing Keng Road and Hing Keng Village across the Application Site, providing pedestrian access from Hiram's Highway in the south to the village settlements and temporary structures in the north of the Application Site.

2.3.4 Please refer to **Figure 2.3** for the existing condition of the Application Site.

2.4 Surrounding Land Use

2.4.1 The Application Site is situated in the Ho Chung neighbourhood mainly characterised by low-rise residential buildings and village settlements, with scattered brownfields operations.

2.4.2 To the **immediate west** of the Application Site is a large piece of unmanaged vegetation cover and slope zoned "GB" and "Conservation Area" ("CA"). To the **further west** across the "GB" zone are the village houses within Luk Mei Tsuen under "Residential (Group D)" ("R(D)") zone, which "*is intended primarily for improvement and upgrading of existing temporary structures within the rural areas through redevelopment of existing temporary structures into permanent buildings*" (extracted from the Notes of the Approved Ho Chung OZP No. S/SK-HC/13).

2.4.3 To the **immediate south** of the Application Site is the Hiram's Highway which is a strategic road connecting Sai Kung Town Centre, Kowloon East and Tseung Kwan O. Across the Hiram's Highway, there is a public car park and a cluster of village houses in Pak Wai Village, which is a recognized village in the "Village Type Development" ("V") zone with 3-storey village houses. To the **further south** of the Application Site has been fully developed with low-rise residential development cum marina development, namely Marina Cove (with existing buildings up to 6 storeys), which is zoned as "Other Specified Uses (Residential cum Marina Development)" in the Approved Hebe Haven OZP No. S/SK-HH/8.

2.4.4 To the **east** of the Application Site across Hing Keng Shek Road is a cluster of low-rise village settlements of Pak Wai Village in "V" zone and slope areas in the "CA" zone with dense vegetation.

2.4.5 To the **immediate north** of the Application Site is the slope in the same "GB" zone as the Application Site and some scattered village houses within Hing Keng Shek Village in "V" zone. **Further north** across the "GB" zone is a cluster of low-rise residential houses in "V" zone, including Hillview Lodge and Bernard Garden, as well as other village houses of recognized villages, including Hing Keng Shek and Sam Fai Tin.

2.4.6 Please refer to **Figures 2.4a to 2.4b** for the surrounding uses of the Application Site.

2.5 Accessibility

2.5.1 The Application Site has access to/from the Hiram's Highway, which is a strage road connecting to other areas in Sai Kung, Kowloon East and Tseung Kwan O. Following the completion of the Stage 1 improvement project of the Hiram's Highway in 2021[2], the accessibility of the Application Site has been enhanced through road widening of sections between Clear Water Bay Road and Ta Ku Ling, and between Nam Pin Wai Roundabout and Marina Cove to dual carriageway. The traffic conditions in Sai Kung will be further enhanced with strengthened connectivity with Kowloon area upon the completion of the Stage 2 improvement project (ongoing) which will widen the sections of Hiram's

[2] Source: https://www.hyd.gov.hk/en/our_projects/road_projects/703th_Hirams/index.html

Highway between Marina Cove and Sai Kung Town. The accessibility of the Application Site is anticipated to be further improved in the future.

2.5.2 Apart from anticipated connectivity improvement discussed above, the Application Site is currently well-served by public transport services, including franchised bus, red and green minibus with stops within 100m walking distance. Public transport services (with bus routes 92, 96R, 292P and 792M; minibus routes 1, 1A,1S, 2, 12 and 101M) at Pak Wai provide convenient connection to Sai Kung town centre and other urban areas, such as Kwun Tong, Diamond Hill, Causeway Bay and Mong Kok etc.

3. PLANNING CONTEXT

3.1 Land Use Zoning

3.1.1 The Application Site falls within the "GB" zone and area shown as "Road" under the Approved Ho Chung OZP No. S/SK-HC/13. It has been designated as "GB" for over 30 years since the gazettal of the draft Ho Chung Development Permission Area (DPA) Plan No. DPA/SK-HC/1 in 1991.

3.1.2 According to the Notes of the OZP, the planning intention of the "GB" zone is "*primarily for defining the limits of urban and sub-urban development areas by natural features, and to contain urban sprawl as well as to provide passive recreational outlets. There is a general presumption against development within this zone*".

3.1.3 The Explanatory Statement ("ES") further elaborates the planning intention of the subject "GB" zone "*primarily for defining the limits of urban and sub-urban development areas by natural features, including foothills, lower hillslopes, spurs, isolated knolls, woodland, vegetated land and amenity areas at urban fringe, and to contain urban sprawl as well as to provide passive recreational outlet and delineating roadside amenity areas*".

3.1.4 While it is noted from the ES that "*part of the area under this zoning falls within the Ho Chung Site of Archaeological Interest. Relics dated to Neolithic, Bronze Age and historic periods were unearthed in the area… Prior consultation with the AMO of Development Bureau should be made if any development, redevelopment or rezoning proposals might affect the above historic building or sites of archaeological interest and their immediate environs*", it is confirmed that no parts of the Application Site fall within the Ho Chung Site of Archaeological Interest (SAI).

3.1.5 In any area shown as 'Road', it is specified in the covering Notes that "*all uses or developments… require permission from the Town Planning Board*".

3.1.6 Please refer to **Figures 3.1a to 3.1g** for the extracts of the Notes, Schedule of Uses, and ES of the Approved Ho Chung OZP No. S/SK-HC/13.

3.2 Government's Multi-Pronged Approach to Increasing Housing Supply

3.2.1 In view of the pressing housing issue in Hong Kong, the Government has been adopting a multi-pronged approach to expediting land supply for housing via various land creation strategies[3]. It was stressed in the 2020 Policy Address that privately-owned land has always been an important source of housing supply[4]. Various policies have been introduced to unleash the development potential of private land and alleviate the shortage of land for housing development[5].

[3] Paragraph 96 of the 2020 Policy Address. Source: https://www.policyaddress.gov.hk/2020/eng/p96.html
[4] Paragraph 101 of the 2020 Policy Address. Source: https://www.policyaddress.gov.hk/2020/eng/p99.html
[5] Development Projects Facilitation Office, Development Bureau. Source: https://www.devb.gov.hk/en/issues_in_focus/development_projects_facilitation_office/index.html

3.2.2 The Government has been determined to sustain steady land supply for both public and private housing in the recent years to meet the keen housing demands in Hong Kong. To speed up land supply in the short-to-medium term, various measures, including the review of "GB" zone, have been adopted. Meanwhile, the Government is committed to streamlining the development-related processes in response to the society's expectations for speedier land supply.

3.2.3 In 2022, the Government continued its efforts in identifying more land to meet the housing demand and increase land reserve, such as a new round of study on "GB" zone, review of vacant school premises sites and the consultancy study on Agricultural Priority Areas. It also strived to gradually redevelop brownfield sites in the New Territories for housing and other uses to ease the housing problems. According to the Long-Term Housing Strategy in 2025, a supply target of 126,000 units of private housing in the next 10 years has been set, accounting for about 30% of the overall housing supply target[6].

3.2.4 In view of the pressing need for housing supply, there is genuine opportunity for the Applicant, as an owner of a piece of disturbed and underutilised land locating in immediate proximity to the main road, to review the development potential of the Application Site to shoulder the Government's burden through private initiatives in a timely manner.

3.3 Policy Initiatives for Rezoning of "Green Belt" Zone for Housing Sites

3.3.1 As mentioned in **Paragraph 3.3.2**, reviewing and rezoning "GB" sites for housing development has been one of the major measures of the Government to increase land for housing supply. Following the completion of the two rounds of "GB" review (Stage 1 in 2012 and Stage 2 in 2013 respectively), the Government has recognised rezoning of "GB" zones as a vital source of housing land supply due to their relatively low ecological value and committed to a new round of review of land zoned "GB" (Stage 3 "GB" Review)[7]. The Stage 3 "GB" Review which commenced in 2021 targeted at "*sites with higher gradient and farther away from the built-up area but still with road in the vicinity, including private land*". **Table 3.3.1** below summarises the key assessment criteria of different rounds of "GB" Reviews initiated by the Government:

Table 3.3.1 Key Assessment Criteria of "Green Belt" Reviews Initiated by the Government

Rounds of "GB" Review	Assessment Criteria
Stage 1 "GB" Review[8]	- Devegetated, deserted and formed, and those that are closer to existing urban areas and new towns
Stage 2 "GB" Review[9]	- In the fringe of built-up areas close to existing urban areas and new towns, and those

[6] Long Term Housing Strategy Annual Progress Report 2025. Source: https://www.hb.gov.hk:8443/eng/policy/housing/policy/lths/LTHS_Annual_Progress_Report_2025.pdf

[7] LC Paper No. CB(1)1395/20-21(01) Source: https://www.legco.gov.hk/yr20-21/english/panels/dev/papers/dev20211025cb1-1395-1-e.pdf

[8] LCQ10: Statistics on and rezoning of Green Belt sites. Source: https://www.info.gov.hk/gia/general/201801/24/P2018012400288p.htm

[9] LCQ10: Statistics on and rezoning of Green Belt sites. Source: https://www.info.gov.hk/gia/general/201801/24/P2018012400288p.htm

	vegetated areas with relatively less buffering effect and lower conservation value
Stage 3 "GB" Review[10]	- Sites with higher gradient and farther away from the built-up area but still with roads in the vicinity, covering even private land

3.3.2 In the first two stages of the "GB" review, a total of 77 sites with potentials for residential use have been shortlisted, and 45 of them have been rezoned from "GB" to housing sites. Stage 3 of the "GB" review, completed in the end of 2022, has further identified about 255 ha of "GB" clusters (about 30% being private land), with the completion of the rezoning of the first batch of these clusters in 2024 and the target of initiating rezoning for the second batch of sites in 2025-26[11].

3.3.3 Locally, a total of 6 "GB" sites in Sai Kung District, where the Application Site is located, have already been rezoned for private/public housing development during the previous rounds of land use reviews. Summary of the rezoning sites is shown in **Table 3.3.2** below.

Table 3.3.2 Rezoning of "GB" Sites initiated by the Government in Sai Kung District for Housing Development[12] [13]

No.	Location	Site Area (in ha)	Rezoning Proposal and Development Restriction	No. of Flats	Status
1	The junction of Pik Sha and Clear Water Bay Road[14]	0.13	- To "R(C)10" - Maximum PR of 0.6 - Maximum SC of 30% - Maximum BH of 3 storeys (including carport)	4 (Private)	Rezoning Completed
2	South of Chiu Shun Road, Tseung Kwan O[15]	0.46	- To "R(A)8" - Maximum PR of 6.5 - Maximum BH of 130mPD	600 (Public)	Rezoning Completed
3	East of Movie City, Tseung Kwan O	2.26	- To "R(A)7" - Maximum PR of 6.5 - Maximum BH of 210mPD	2,900 (Public)	Rezoning Completed

[10] 2021 Policy Address. Source: https://www.devb.gov.hk/en/about_us/policy/2021-policy-address-supplement/policy-address-and-pasupplement-initiatives/index.html

[11] LC Paper No. CB(1)1346/2024(03). Source: https://www.info.gov.hk/gia/general/202301/18/P2023011800376.htm?fontSize=1

[12] Task Force on Land Supply Paper No. 10/2017. Retrieved from: https://www.devb.gov.hk/filemanager/en/content_1054/Paper_10_2017.pdf

[13] 9 Replies to initial written questions raised by Finance Committee Members in examining the Estimates of Expenditure 2021-22. Retrieved from: https://www.devb.gov.hk/filemanager/en/content_1251/devb-pl-e.pdf

[14] RNTPC Paper No. 7/13. Retrieved from: https://www.info.gov.hk/tpb/en/papers/RNTPC/486-rntpc_7-13.pdf

[15] RNTPC Paper No. 6/17. Retrieved from: https://www.info.gov.hk/tpb/en/papers/papers.html

No.	Location	Site Area (in ha)	Rezoning Proposal and Development Restriction	No. of Flats	Status
4	Northwest of Ying Yip Road, Tseung Kwan O	1.59	- To "R(A)7" - Maximum PR of 6.5 - Maximum BH of 170mPD	1,600 (Public)	Rezoning Completed
5	West of Yau Yue Wan Village, Tseung Kwan O	2.95	- To "R(A)7" - Maximum PR of 6.5 - Maximum BH of 140mPD	2,700 (Public)	Rezoning Completed
6	Ta Ku Ling, Tseung Lan Shue area[16]	2.55	- To "R(C)7" - Maximum GFA of 23,466m² (PR of about 1.3) [17] - Maximum BH of 7 storeys (24m)	330 (Private)	Rezoning Completed

3.3.4 It is highlighted that the site in Ta Ku Ling was recently rezoned from "GB" to "R(C)7" for private housing development as one of the amendment items on the Draft Tseng Lan Shue OZP No. S/SK-TLS/9 and agreed by the TPB for submission to the CE in C for approval on 2 September 2022[18]. The rezoned "GB" site has a site area of about 2.55ha and is intended for private housing development providing about 330 flats in 14 nos. of 7-storey towers with a PR of about 1.3. In terms of land use and development intensity, the site was considered not incompatible with the surrounding areas given that there are existing low-density residential developments and village houses nearby. The Application Site shares similar context with this rezoned "GB" site by locating within a low-density neighbourhood.

3.3.5 In addition, the Application Site is mostly paved with some peripheral vegetation of low conservation value and locates near to an existing residential area with existing and future's convenient transport infrastructure connecting to Sai Kung town centre and other urban cores, meeting the criteria under the stages of "GB" Reviews with potential for housing development. Hence, the potential of the Application Site to serve as an immediate and effective contribution to housing supply in short-to-medium term through private sector involvement is worth a careful evaluation.

3.3.6 Besides government-initiated rezoning of "GB" zones for housing development, a private rezoning application (No. Y/SK-HC/7) under the same OZP as the Application Site has also been agreed in 2024. Subsequently, the subject site under the aforesaid application

[16] RNTPC Paper No. 1/22. Retrieved from: https://www.info.gov.hk/tpb/en/papers/papers.html

[17] Of the site area of 2.55ha, about 0.76 ha is designated as non-building area (NBA) for associated access road and pedestrian facilities. The PR of the proposed residential development (with a total GFA of 23,466m^2) on the development site (1.79 ha) is equivalent to about 1.3. (Source: RNTPC Paper No. 1/22. Retrieved from: https://www.info.gov.hk/tpb/en/papers/papers.html)

[18] Minutes of 1280th Meeting of the Town Planning Board held on 2.9.2022. Retrieved from: https://www.info.gov.hk/tpb/en/meetings/TPB/Minutes/m1280tpb_e.pdf

has been rezoned from "GB" to "R(C)4" in 2025, subject to a maximum PR of 0.75 and a maximum BH of 12m with 3 storeys over one storey of carport. Similar to the Application Site, the subject site under the aforesaid application is partly paved with tree groups found at its fringe.

3.4 Changing Planning Circumstances in the Immediate Surrounding

3.4.1 To accommodate the anticipated traffic growth and cope with unexpected incidents along the sections of Hiram's Highway, the Government has completed the Stage 1 improvement project in 2021 and commenced the stage 2 improvement project in 2024. The project scope is to widen the sections of Hiram's Highway between Marina Cove and Sai Kung Town, Po Tung Road and section of Tai Mong Tsai Road to the south of Sha Ha (**Figures 3.4a-b**).

3.4.2 First stage of the improvement project between Clear Water Bay Road and Marina Cove as well as the enhancement work on local access to Ho Chung was completed in February 2021. The widening of two sections of Hiram's Highway between Clear Water Bay Road and Ta Ku Ling and between Nam Pin Wai Roundabout and Marina Cove into dual carriageway helps relieve the traffic congestion, enhance the road safety, and improve the local access to Ho Chung and Luk Mei Tsuen. The improvement project has brought convenience to the future residents of the proposed residential development at the Application Site.

3.4.3 The Hiram's Highway Stage 2 improvement project, which focuses improving connections between Marina Cove to Sai Kung Town, has commenced in 2024[19]. The completion of two stages improvement works is anticipated to enhance the overall accessibility of the Application Site with more convenient connections to other parts of Sai Kung, Kowloon East and Tseung Kwan O areas. This would help shorten the commuting time and enhance travelling experience of both nearby residents and visitors.

[19] Hiram's Highway Improvement Stage 2. Source: https://www.hyd.gov.hk/en/our_projects/road_projects/6806th/index.html

4. THE INDICATIVE SCHEME

4.1 Echoing the Government's Effort to Identify Suitable "GB" Sites in Private Land for Residential Redevelopment

4.1.1 The Application Site, located on the fringe of the "GB" zone, is directly accessible from the Hiram's Highway. The Hiram's Highway has undergone road widening works in the Stage 1 improvement project (completed in 2021) and is expected to be further enhanced with the ongoing Stage 2 improvement project (commenced in 2024). Notwithstanding the planning intention of the "GB" zone which is "*primarily for defining the limits of urban and sub-urban development areas by natural features, and to contain urban sprawl as well as to provide passive recreational outlet*", the Application Site has been largely paved and is currently occupied by a commercial horticulture workshop as well as temporary structures, which does not necessarily serving the function of a "GB". Given the Application Site is located within an established residential neighbourhood of Ho Chung and its highly accessible location, it is considered suitable to review its future use, as a response to Government's policy to identify suitable "GB" sites for housing development.

4.1.2 In response to the Chief Executive's target to continuously enhance "speed, quantity, quality and efficiency" in land production (2024 Policy Address), the Application Site, which has met the criteria adopted in the three rounds of "GB" review initiated by the Government, will provide an efficient solution to shouldering the Government's burden on catching housing supply target through private initiatives of residential development at an appropriate location.

4.2 Key Planning and Design Principles

4.2.1 **To Utilise Precious Private Land Resources Without Compromising on the Quality of Landscape and Environment** – The Application Site is located on the fringe of the "GB" zone adjoining established residential developments (adjoining "V", "R(D)" and "R(E)" zones) with direct connection with the Hiram's Highway. It has been occupied with land uses that hinder it from serving the intended "GB" function. Taking into consideration the profile of natural terrain, development intensity of existing residential development in the surrounding, including village houses in Pak Wai Village and Marina Cove (with existing residential towers up to 6 storeys) to the immediate south, an Indicative Scheme with compatible development intensity is proposed. The Indicative Scheme intends to be a low-density residential development subject to a maximum PR0.6 with a BH ranging from 1 to 4 storeys descending from the hillside in the north towards the main road in the south.

4.2.2 **To Adopt Sensitive Design to Ensure Compatibility to the Surroundings** – To respect the surrounding environment, the Indicative Scheme will adopt a sensitive design with urban oasis style that ensures compatibility and minimal disturbance. Specifically, no erection of residential and recreational structures would be proposed in the northern portion of the Application Site to minimise the possible impacts on the landscape character, ensuring a green buffer between the residential development with the adjacent "GB" zone. Attention has also been paid to the boundary of the Application Site through careful boundary treatment to avoid encroachment and minimise the potential impacts on the

existing river course running along the eastern boundary. Following the profile of the natural terrain, the BH of the four residential towers are designed to descend from 4 storeys located closer to the hillside in the north to 3 storeys in the south to 1 storey in the furthest south. To better integrate with the surrounding environment, tree buffer will be proposed at the entrance connecting to the Hiram's Highway and along the boundary of the Application Site to provide a smooth transition and screen off any visual impact.

4.2.3 **To Maintain the Existing Pedestrian Access across the Application Site by Reprovisioning Footpath with Enhanced Design along the River** – Currently there is a public footpath running across the Application Site in a north-south direction connecting villages to the north to Hiram's Highway to the south. To ensure undisturbed pedestrian access, the affected footpath will be reprovisioned for public use along the eastern boundary of the Application Site next to the river, with enhanced design, including tree shading offered by a continuous tree row.

4.2.4 **To Phase out Visual Eye Sores and Improve the Local Landscape Amenity** – Based on the tree survey, all species identified in the Application Site are common landscape species and of low amenity value, with a few being undesirable tree species. Moreover, the current uses in the Application Site, including the temporary uses and structures, have hindered it from fulfilling the intended "GB" functions and is considered incompatible with the surrounding residential environment. Quality landscape designs and tree planting with species suitable for the locality as far as possible will be proposed with dedicated management and maintenance schedule as part of the proposed residential development. This will in turn enhance the local amenity and improve compatibility with surrounding neighbourhood environment.

4.2.5 **To Provide Rich Open Space and Recreational Offerings to Create a Liveable and Inclusive Neighbourhood –** Within the Application Site, abundant leisure and recreational opportunities have been provided to shape a quality neighbourhood for all residents. Quality landscape design, rich open space and diverse recreational facilities have been designated under the Indicative Scheme to complement the residential development and cater for the needs of the residents, including the children and young people. With an aim to create an inclusive neighbourhood, the Indicative Scheme would facilitate the enjoyment of all future residents and users.

4.2.6 Please refer to **Appendix A** for the architectural scheme of the Indicative Scheme.

4.3 Key Development Parameters

4.3.1 The key development parameters of the Indicative Scheme are summarised in **Table 4.3.1** below.

Table 4.3.1 Key Development Parameters of the Indicative Scheme

Development Parameters	Indicative Scheme
Site Area	About 12,692m^2
Plot Ratio (PR)	0.6
Total Domestic GFA	About 7,615.2m^2
No. of Residential Blocks	4

Development Parameters	Indicative Scheme
Building Height of Residential Blocks (No. of Storeys)	Block 1 – 4 storeys Block 2 – 4 storeys Block 3 – 3 storeys Block 4 – 1 storey (excluding a 1-level basement)
Site Coverage	Not more than 20%
No. of Units	About 96
Average Unit Size	About 79.3 m^2
Design Population(1)	About 288
Greenery Coverage	Not less than 20%
Local Open Space	Not less than 288m^2
Residents' Clubhouse	One 1-storey block with GFA of not more than 380.76m^2 (2)
Internal Transport Provision (3)	
No. of Car Parking Spaces	79
• Resident Car Parking Space	73
• Visitor Car Parking Space	6
No. of Motorcycle Parking Space	1
No. of Loading/Unloading (L/UL) Bay Provision	HGV: 4
Tentative Completion Year	About 2031

Remarks:

(1) A person per flat (PPF) ratio of 3 is assumed, according to the average household size of District Council Constituency Area (Q02) Pak Sha Wan in 2021 Population Census.

(2) According to APP-104, a maximum 5% of total domestic GFA could be applied for GFA concession for use as a clubhouse in a development with domestic GFA of up to 25,000m^2. The clubhouse GFA is proposed to be exempted from GFA calculation.

(3) The car parking spaces to be provided at basement levels are not included in the GFA calculation.

4.4 Building Design of the Indicative Scheme

Building Layout of the Indicative Scheme

4.4.1 The Application Site is situated at convenient location directly connected to Hiram's Highway, a strategic road connecting Sai Keung with Kowloon and Tseung Kwan O, overlooking Marina Cove and Sai Kung Bay beyond, with rolling hills behind and a stream running along the eastern boundary. The Application Site is in the Ho Chung neighbourhood with existing low-rise residential development. The building layout and building heights of the proposed residential towers above a basement carpark have been designed to aptly fit into the surrounding environment of the Application Site.

4.4.2 The Indicative Scheme is comprised of 4 Residential Blocks with an ancillary clubhouse block opposite to Residential Block 3. The building height of the four Residential Blocks are designed to descend from 4 storeys (Blocks 1 and 2 located closer to the hillside in the north) to 3 storeys (Block 3 which is located to the south of Block 2) to 1 storey (Block 4 nearer to the main road), creating a stepped building height profile that is compatible with the surrounding topography. All of them are in a compatible scale with the existing

residential development nearby, such as the 3-storey village houses in the nearby "V" zones and Marina Cove with BH up to 6 storeys. In the northern portion of the Application Site, no blocks or structures would be proposed to minimise the possible impacts on the landscape characters, maximising the separation between the residential developments and the wider "GB" zone to the north of the Application Site, and minimising the impacts of the development on the integrity and functions of the "GB" zone.

4.4.3 The Indicative Scheme will provide about 96 nos. of residential unit with an anticipated population of about 288. An on-site sewage treatment plant will be provided at the southern portion of the Application Site to handle the sewage generated by the proposed development, in view that there are no existing public sewers in the vicinity of the Application Site for connection. A 2m-wide public footpath open for 24-hour access is proposed along the eastern boundary next to the river to re-provide the pedestrian connection between the Hiram's Highway and the villages to the north of the Application Site, with an enhanced pedestrian comfort by continuous tree shading. All car parks will be provided in the basement level to minimise the BH, with the run in/out located between Residential Blocks 1 and 2.

4.4.4 Please refer to **Appendix A** for the Architectural Plan of the Indicative Scheme.

Building Design

4.4.5 The Indicative Scheme has given due consideration to development intensity, in terms of the PR and BH, of the adjoining existing residential developments. Taking into account the lower site formation level of the Application Site, the Indicative Scheme with 3 to 4-storey residential blocks near the hillside and a 1-storey residential block nearer to the main road, will be compatible with the immediate residential neighbourhood, such as the village houses in Pak Wai and Marina Cove with existing residential towers up to 6 storeys.

4.4.6 Considering that the Application Site is adjoining the Hiram's Highway, the building orientation has been designed to minimise potential noise nuisance. All Residential Blocks have at least 15m buffer with the Hiram's Highway to ensure future residents will not be affected by traffic-related air pollution.

4.4.7 Moreover, the landscape design of the Indicative Scheme aims to create pleasant environment for the enjoyment of the residents. The proposed landscape elements will provide private open space with style in harmony with the architectural scheme.

Maximised Greening Opportunity and Provision of Local Open Space

4.4.8 The Indicative Scheme has optimised the provision of greenery and fulfilled the requirement for local open space. At the northern portion of the Application Site where no building structures have been proposed to preserve a greening buffer between the residential development and the wider "GB" zone outside the Application Site, greening opportunities have been optimised by both retaining existing trees and introducing more

tree planting to enhance compatibility of the proposed development with the surrounding rural settings.

4.4.9 Besides greenery, the Indicative Scheme is also proposed with local open space of not less than 288m^2. A Central Plaza and BBQ Area have been proposed between Residential Blocks 2 and 3 to facilitate social interaction and integration among residents. To create a child-friendly, inclusive residential community, a children play area and a children swimming pool have also been proposed to provide convenient access for residents to enjoy.

4.4.10 To further complement the tree planting and create an urban oasis within a countryside setting, interesting landscape features and local open spaces, such as the community farm, have also been introduced as community areas for residents to enjoy, appreciate and gather, promoting community interaction and integration among residents. Installations for fostering a sustainable ecology with zero-carbon features will also be explored at the detailed design stage.

4.5 Landscape Design Concept

Landscape Design

4.5.1 With the design concept of creating the urban oasis style, the landscape proposal for the Indicative Scheme will focus on quality and interesting landscaping features for the liveable neighbourhood, as well as an emphasis on ecological sustainability and community integration. For further details and elaboration of the landscape design, including the design objectives and hard and soft landscape design, please refer to **Appendix B**.

4.5.2 The proposed landscape design will bring landscape into the residential development, connect landscape to the district context as well as enliven the local urban space. The landscape framework is fully integrated with the urban design objectives, provides with direction and enhances the environment of the property development. The landscape design comprises of the following key elements:

- **Community Farm:** A dedicated space in the Application Site will be allocated for a community farm, providing residents with the opportunity to grow their own produces of different species in accordance with the change of seasons in a year. This initiative not only enhances the visual appeal of the landscape with vibrant colours but also fosters a strong sense of community. By engaging residents in agricultural activities, the farm promotes social interaction, educates participants about sustainable practices, and encourages healthy eating habits, thereby creating a cohesive community.

- **Children's Play Area**: The design includes a safe and engaging children's play area equipped with modern play structures and natural elements. This space will be designed to stimulate creativity and physical activity among children, providing a crucial outlet for play that encourages social skills and teamwork. The play area will

be surrounded by soft landscaping, ensuring a safe environment while promoting interaction among families and neighbours.

- **Central Plaza:** The central plaza will serve as the heart of the development, providing a multifunctional space for community events, markets, and gatherings. Designed with ample seating, shade structures and landscaping, the plaza will be a vibrant hub that encourages socialization and community engagement. It will also feature artistic elements, such as sculptures or installations, reflecting the cultural identity of the neighbourhood.

- **Tree Row along the Public Footpath:** A row of trees is planted along the public footpath along the eastern boundary providing shading for public users, including villagers living nearby and hikers. The lush tree lining will also help create a more comfortable and inviting environment for pedestrians by providing shading and reducing the temperature of the surrounding area, especially during hot summer months.

- **Fence Wall**: A fence wall is proposed between the public footpath at the eastern part of the Application Site and the proposed development to provide privacy and security for the residents. The fence wall would be constructed mainly by perforated mesh with planting area underneath with species that support local biodiversity and blend in harmoniously with the surrounding natural setting.

Tree Preservation Proposal

4.5.3 Based on the updated tree survey, among the 130 nos. of trees surveyed, no old, valuable, rare or endangered species have been found. All the trees identified are common landscape species. A total of 85 existing trees is proposed to be felled due to poor health condition/conflict with proposed development. Specifically, mature tree T251 is proposed for transplantation to an area near the Children's Play Area and the Community Farm Area. In compensation for trees to be felled, a total of 85 nos. of compensatory trees and 15 no. of new trees (not including the feature trees) are proposed in the Indicative Scheme. The implementation of proposed compensatory tree planting has achieved the compensatory planting ratio of 1:1 in terms of quantity as far as possible. Specifically, to enhance the compatibility of the residential development with the surrounding "GB" zone, landscape planting areas are proposed along the boundary of the Application Site to provide greenery and visual buffer.

Local Open Space Provision

4.5.4 The Indicative Scheme is in accordance with the open space requirement in the Hong Kong Planning Standards and Guidelines (HKPSG), which requires at least 1m^2 local open space per person. With an anticipated population of about 288 persons, not less than 288m^2 of local open space will be provided in the Indicative Scheme.

Greenery Provision

4.5.5 The Indicative Scheme is also in full compliance with the requirement of PNAP APP-152 that an area of not less than 20% of the total greenery will be provided. The Landscape Master Plan including Tree Survey Report and Tree Compensatory Plan is provided in **Appendix B.**

4.6 Traffic Arrangement, Pedestrian Connections, and Internal Transport Facilities

Vehicular Access

4.6.1 The vehicular access for the Indicative Scheme is located at Hing Keng Shek Road. The existing section of Hing Keng Shek Road between the proposed vehicular access and Hiram's Highway is proposed to be widened as a 6m-wide 2-lane single carriageway. The vehicular access to the basement car park is located between Residential Blocks 1 and 2.

4.6.2 Within the internal road network, a roundabout is proposed near the entrance location for vehicles entering the residential portions of the Site or the on-site sewage treatment plant for maintenance purpose.

Pedestrian Connections

4.6.3 There is an existing pedestrian footpath which provides access from Hiram's Highway to the village settlements and temporary structures to the north of the Application Site. Under the Indicative Scheme, a 2m-wide public footpath is proposed along the eastern portion of the Application Site to provide public users with an unrestricted 24-hour access between the Hiram's Highway to the south and the village settlements and temporary structures to the north of the Application Site. The public footpath will be aligned with a tree row to provide shading and pleasant pedestrian environment.

Internal Transport Facilities

4.6.4 All internal transport facilities within the Application Site are provided in accordance with the high-end requirements of the HKPSG. Parking spaces for the residential towers would be provided on basement level to reduce the building height and bulk, while the loading/unloading bays will be provided on ground level.

4.6.5 Please refer to the **Appendix C** Traffic Impact Assessment for the details on the traffic and transport arrangement for the Indicative Scheme.

5. AMENDMENT PROPOSAL

5.1 Considerations for An Appropriate Zoning

5.1.1 In response to the Government's ongoing initiative to identify suitable sites for housing development, and with the fact that the existing condition of the Application Site may not be serving the planning intention of "GB", an appropriate zoning to realise the development potential of the Application Site should be in place to realise the Indicative Scheme discussed in **Section 4**. The key factors contributing to an appropriate and successful zoning is listed out in the following sub-sections.

5.2 Clear Planning Intention

5.2.1 The proposed zoning should carry a clear planning intention and development direction for the type of uses and development intensity on the Application Site. In the case of this Application Site, the zoning should clearly specify that the Application Site shall predominately be used for low-density residential development.

5.3 Appropriate Zoning Control

5.3.1 The proposed zoning should have appropriate zoning control over the proposed use, scale and intensity by designating restrictions on the PR and BH to guide the direction of the development towards the intended planning intention and to achieve optimisation of the development potential of the Application Site. Appropriate zoning control would also ensure that the Indicative Scheme will be compatible with the surroundings in the Sai Kung context.

5.4 Appropriate Zoning Flexibility

5.4.1 Some kind of flexibility has to be allowed in the zoning to allow flexibility in creative and innovative design and proposals, which can tie in more closely to community aspirations and market demands in the Sai Kung Area.

5.5 The Proposed Amendment

5.5.1 In relation to the overall policy direction of increasing land supply for housing development through rezoning "GB" sites, the Application Site which is close to existing built-up area, has low buffering effect and conservation value, and is well-served by existing road infrastructure in the vicinity, has met suitable criteria in Stages 2 and 3 of the "GB" reviews. In light of the discussion in the above Sections, this Planning Application proposes amendment to the Plan and Notes of the Approved Ho Chung OZP No. S/SK-HC/13 by rezoning the Application Site from "Green Belt" (GB) and Area shown as "Road" to a sub-area, "Residential(Group C)5" ("R(C)5"), under the original "R(C)" zone with the same set of schedule of uses and a development intensity compatible with the surrounding context for private residential use.

5.5.2 As illustrated in the Indicative Scheme for the proposed low-density residential development, the "R(C)5" sub-zone will adopt the planning intention and schedule of uses of the original "R(C)" zone, while it will be subject to a maximum PR of 0.6 and a

maximum BH with 4 storeys (excluding basements) proposed in the Notes of the OZP covering the entire Application Site. In addition to the Proposed Amendments to the Plan and the Notes of the OZP, this Application proposes the below clause to the Explanatory Statement of the proposed "R(C)5" zone to maintain effective planning control over committed public planning gain:

- For "R(C)5" zone, should the public footpath be affected by any development or redevelopment proposals, it shall be reprovisioned.

5.5.3 The Proposed Amendment on the Plan is shown in **Figure 5.5a**. The Proposed Amendments to the Notes and ES of the OZP are illustrated in **Figures 5.5b to 5.5g** respectively.

6. PLANNING JUSTIFICATIONS

6.1 Echoing the Government's Prevailing Policy to Increase Housing Supply

6.1.1 The Proposed Amendment for facilitating private residential development at the Application Site is in line with the Government's ongoing policy to boost the much-needed housing supply. According to the 2024 Policy Address, the Government restated its commitment in expediting up land supply for housing development by implementing various measures, such as streamlining the land development processes.

6.1.2 Moreover, according to the Long-Term Housing Strategy Annual Progress Report 2025, the total housing supply for the next 10-year period will be 420,000 units (in which the private housing supply target accounts for 30% of the total target, which is 126,000 units)[20]. As mentioned above, there are six "GB" sites that have been rezoned for residential development as initiated by the Government in Sai Kung District since 2021, and one "GB" site under the same OZP that has been rezoned for residential development in 2025 after a private planning application is agreed, which shares a similar site context and proposed development parameters as the Application Site. This demonstrates that the changing planning circumstances that favours the release of development potential of suitable "GB" sites in Sai Kung for housing development.

6.1.3 The Application Site is in proximity to the built-up residential developments in Ho Chung and is conveniently connected to the Hiram's Highway. With the completed Hiram's Highway Improvement Stage 1 and the ongoing Stage 2 improvement work, the traffic conditions in Sai Kung and accessibility of the Application Site will be further enhanced. In view of the enhancement in the capacity of the road traffic infrastructure in Sai Kung area and the Government's initiative to rezone suitable "GB" zones for residential use, the Proposed Amendment is regarded as a proactive response to the Government's policy and the changing planning context by tapping into private land resources. The Proposed Amendment will make optimal use of the land that does not serve the intended functions of "GB" zone and provide 96 residential units by 2031.

6.2 Tapping into Private Resources to Shouldering the Burden of Housing Supply by Rationalising Lands Not Serving "GB" Function

6.2.1 Despite being zoned as part of "GB" zone on the OZP for almost 30 years, the Application Site does not perform the function of "GB" which is "*for defining limits of urban and sub-urban development, contain urban sprawl and provide passive recreational outlets*." As shown in **Figure 2.3**, majority of the Application Site is occupied by a commercial horticulture workshop and temporary structures. The vegetation found at the Application Site are common species in Hong Kong with generally low conservation or ecological value.

6.2.2 Adjoining the existing built-up area in the surrounding, the Hiram's Highway, being well-served by public transport, the Application Site has yet to fully utilise its development

[20] Long Term Housing Strategy Annual Progress Report 2022 (for the 10-year period from 2023-24 to 2032-33). Retrieved from: https://www.hb.gov.hk/eng/policy/housing/policy/lths/LTHS_Annual_Progress_Report_2024.pdf

potential, which warrants a comprehensive review of the land uses for development compatible with the developments in its surroundings.

6.2.3 About 74% of the Application Site is occupied by private lot and the Applicant is keen to put forward the proposed residential development with a compatible scale with the surrounding. By making more efficient use of private land resources, it will help shoulder part of the burden of the Government's housing supply.

6.3 In Line with the Government's Initiatives and Criteria of Reviewing Suitable "GB" Zone for Housing Development

6.3.1 As outlined in **Section 3**, the Government conducted 3 stages of reviewing sites that fall within "GB" zones and exploring their development potential of sites to increase the land supply. The first two rounds of "GB" review have identified 77 sites in "GB" zones with potential for housing development, while the rezoning of the first batch of "GB" clusters identified in the third round of review has been completed in 2024.

6.3.2 Based on the criteria used in three rounds of "GB" review by the Government, **Table 6.3.1** below summarises the applicability of the Application Site, as a suitable "GB" site that warrants review for suitable land uses for housing purpose.

Table 6.3.1 Fulfilment of the Government's Assessment Criteria in Reviewing "GB" Sites

Assessment Criteria adopted in Three Rounds of "GB" Review	Fulfilment of the Application Site
Stage 1 "GB" Review devegetated, deserted or formed, and those that are closer to existing urban areas and new towns	✓ The Application Site is mostly occupied by a commercial horticulture workshop and temporary structures. Trees with generally low amenity value can be found at the Application Site. ✓ The Application Site is conveniently connected to Hiram's Highway.

Assessment Criteria adopted in Three Rounds of "GB" Review	Fulfilment of the Application Site
Stage 2 "GB" Review in the fringe of built-up areas close to existing urban areas and new towns, and those vegetated areas with relatively less buffering effect and lower conservation value	✓ The Application Site is located in the fringe of built-up area, adjoining Pak Wai Village and Marina Cove, which is an established low to medium density residential neighborhood in Ho Chung. ✓ The Application Site is conveniently connected to Hiram's Highway, conveniently connected to Kowloon and Sai Kung area. ✓ Based on the tree survey, existing trees at and near the Application Site possess low conservation value. All of them are in fair to poor condition and possess defects such as imbalanced form, leaning, major cavities, cracks, and splits.
Stage 3 "GB" Review sites with higher gradient and farther away from the built-up area but still with roads in the vicinity, covering even private land	✓ The "GB" zone in which the Application Site is located on a slopping topography. The Indicative Scheme demonstrates a sensitive and technically feasible design for a low-density residential development. ✓ The Application Site is bound by Hing Keng Shek Road and Hiram's Highway and is well-served by public transport services, including franchised buses, red and green minibuses with stops within 100m walking distance. The Improvement Projects of Hiram's Highway have enhanced the connectivity of the Application Site with Sai Kung Town Centre, Kowloon East and Tseung Kwan O. ✓ About 74% of the Application Site is private lot. Agreement to the Proposed Amendment will facilitate an early and certainty of implementation of residential development at the Application Site, bringing landscape and environmental upgrading to the area while providing about 96 flats at this convenient location to serve housing need.

6.3.3 As shown in **Table 3.3.2,** a total of 6 "GB" zones have been rezoned for residential development in the Sai Kung District as initiated by the government, ranging from 0.13 to 2.95 ha, providing a total of 7,800 public housing units and 334 private housing units in the past 10 years. Among the 6 rezoned sites, the one in Tseng Lan Shue (2.55ha) with a PR 1.3 and BHR of 7 storeys shares similar context with the Application Site proposed for low-density residential development (rezoned as "R(C)7" the Approved Tseng Lan Shue OZP No. S/SK-TLS/10 gazetted in April 2023).

6.4 Not Compromising the Integrity and Function of the Wider "GB" Zone

6.4.1 Despite the rezoning of the Application Site from "GB" zone to "R(C)5" zone will inevitably reduce the total area of "GB" zone at the local area of Pak Wai, the overall planning intention *"primarily for defining the limits of urban and sub-urban development areas by natural features and to contain urban sprawl as well as to provide passive recreational outlets. There is a general presumption against development within this zone"* for the wider area will not be compromised due to the Proposed Amendment.

6.4.2 The Application Site is largely paved and is located at the periphery of the "GB" zone immediately adjoining the Hiram's Highway and existing residential developments. The remaining "GB" area outside the Application Site which is currently covered by dense trees will be retained on the OZP. The wider "GB" zone will continue to serve as a landscape/visual buffer between the Application Site and the conservation area of Ho Chung. For the northern portion of the Application Site with existing trees and greenery, no building structures are proposed to provide a greenery buffer between the proposed residential development and the wider "GB" zone and ensure compatibility with the wider "GB" area.

6.4.3 To further fit in the surrounding environment, a thoughtful landscape plan with careful selection of plant species, including native ones, and a tree compensatory proposal have been prepared to enhance visual amenity and establish pleasant landscape areas in the Application Site. Specifically, landscape planting areas are proposed along the boundaries of the Application Site to facilitate a smoother transition with the wider "GB" area and the conservation area and safeguard the wider "GB" area from encroachment by uncontrolled urban sprawl.

6.4.4 As such, rezoning the Application Site from "GB" zone to "R(C)5" zone will not jeopardise the planning intention and integrity of the wider "GB" zone. In turn, the Proposed Amendment will improve the local environment by replacing the existing under-managed land with a high-quality residential development with proper management and thoughtfully designed landscape. The Proposed Amendment will bring about an uplift of the landscape and visual amenity of the local area while ensuring compatibility with the surrounding developments by proposing quality and sensible design, reaching a win-win situation.

6.5 Fully Compatible with the Surrounding Neighbourhood

6.5.1 The proposed development intensity at the Application Site, i.e. a maximum domestic PR of 0.6 and a BHR of 4 storeys (excluding basements), is compatible with the surrounding neighbourhood. Existing residential developments near the Application Site include 3

storey village houses in Pak Wai Village, Bernard Garden, Luk Mei Tsuen, and Marine Cove with existing residential towers up to 6 storeys.

6.5.2 The Application Site is a low-lying area with elevations between 4.1mPD and 5.7mPD which is are much lower than Pak Wai Village in the east (with a site level up to about 24.4mPD) and Hing Keng Shek Village in the north (with a site level up to about 55.7mPD). The proposed 1 to 4-storeys residential blocks at the Application Site (ranging from 8.45mPD to 19.1mPD) will be lower than the site formation of these existing villages.

6.5.3 To blend in with the locality, enhance visual amenity and establish pleasant landscape areas, lush greenery has been proposed at both sides of the Application Site. Moreover, the proposed 1 to 4-storey residential blocks in the Indicative Scheme would create a stepped building height profile which enhances the visual permeability and compatibility to the surrounding neighbourhood.

6.6 Providing Merits and Enhancing the Landscape Amenity to the Locality

6.6.1 The Proposed Amendment helps phase out the existing temporary structures and replace with quality modern residential development with careful traffic management. The Proposed Amendment also helps to alleviate the pressing housing need and provides alternative housing options with a total of about 96 residential units.

6.6.2 Under the Proposed Amendment, the landscape amenity of the Application Site will be enhanced with quality landscape design and greeneries with higher aesthetic value. In particular, the existing mature trees within the Application Site are appropriately retained or transplanted, while only trees of low amenity value, common species, and a limited number of undesirable species would be removed. With a compensatory planting ratio of over 1:1, a greater number of trees, including native species, would be planted to replace the felled trees. The landscape design demonstrates an overall enhancement of the landscape value of the Application Site.

6.6.3 The currently environment within the Application Site will also be replaced by modern and contemporary well-designed residential development with long-term management. Hence, the Proposed Amendment is anticipated to enhance the landscape amenity and upgrade the living environment, thus benefitting the wider local community of Pak Wai. Moreover, the affected footpath is proposed to be reprovisioned for public use along the eastern boundary of the Application Site next to the river with an enhanced design, including tree shading offered by a continuous tree row that creates a pleasant pedestrian environment.

6.6.4 The Proposed Amendment has transformed the Application Site which is occupied by visual "eyesores" that are not serving the "GB" function to a win-win development that helps to address housing need while providing considerable public planning gains.

6.7 Resulting in NO Adverse Impacts to Surrounding Environment

6.7.1 Various technical assessments on different aspects, including visual, landscape, traffic, environmental, drainage, sewerage, geotechnical and water demand, have been conducted and included in **Appendices B to I**. Findings of the technical assessments confirmed that

the Proposed Amendment is technically feasible and will not generate adverse impact on the future users on the Application Site and on the surrounding environment with appropriate mitigation measures and improvement works.

6.8 Setting a Desirable Precedent for Optimising Private Land Resources in "GB" Zone for Housing Supply

6.8.1 The Proposed Amendment unleashes development potential of a readily available and long-wasted site for a quality residential development compatible with the surrounding context. The Proposed Amendment strikes a balance in optimising the underutilised and valuable land resources while providing sufficient greenery to blend in with the surrounding environment.

6.8.2 It is anticipated that the Proposed Amendment would enhance the living environment and living quality by enhancing the landscape amenity. It is also demonstrated that the Indicative Scheme formulated in support of the Proposed Amendment is technically feasible and no adverse impacts will be generated on the surrounding environment.

6.8.3 As such, it can be concluded that the Proposed Amendment would serve as a desirable precedent for reviewing suitable "GB" areas with underutilised private land to optimise their development potential and contribute to providing much needed housing supply in Hong Kong.

7. CONCLUSION

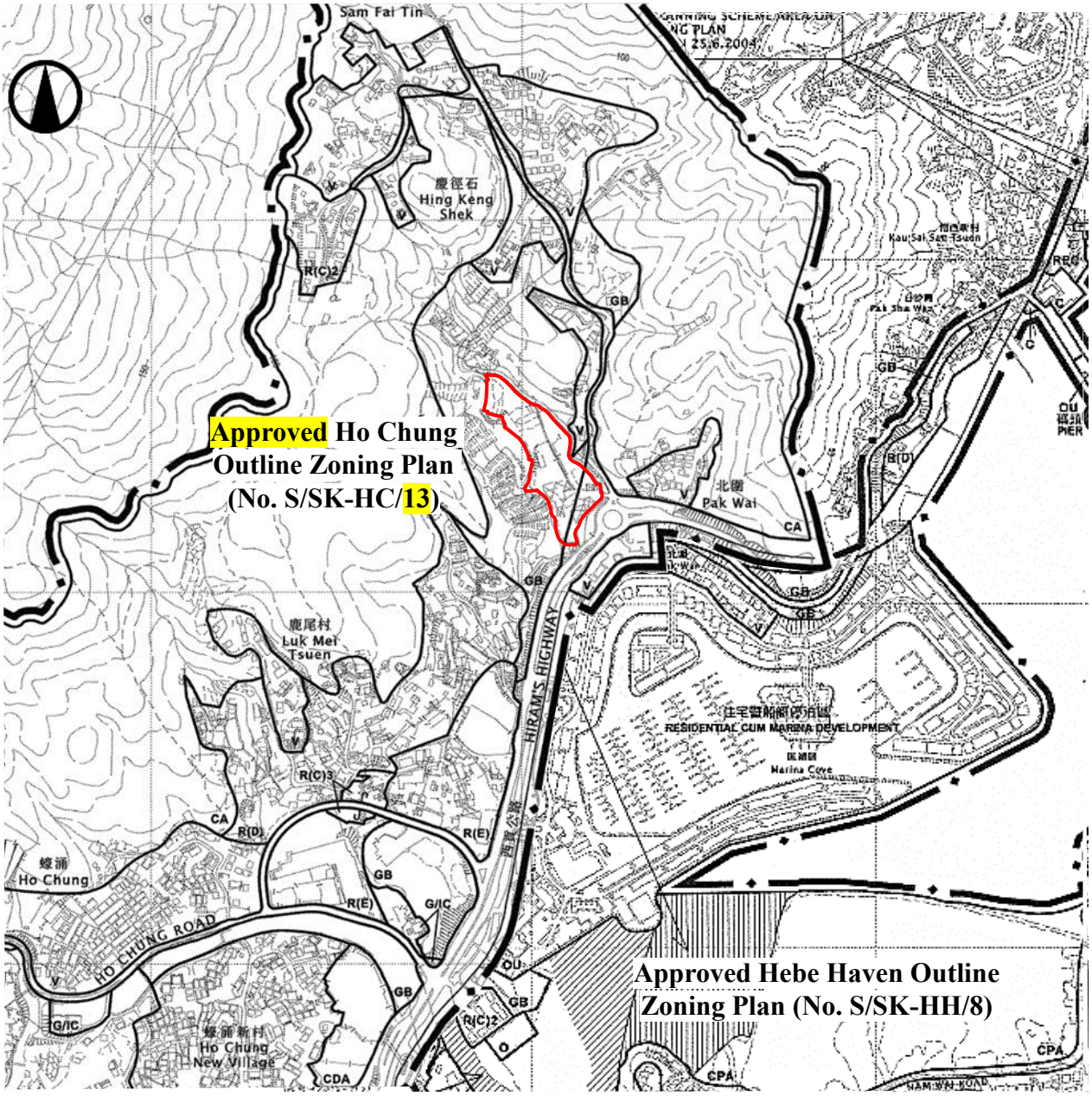
7.1.1 This S12A Planning Application is submitted for Proposed Amendment to the Approved Ho Chung OZP No. S/SK-HC/13 to rezone the Application Site from "Green Belt" and Area Shown as "Road" to "Residential (Group C)5" to facilitate a Proposed Residential Development at Various Lots in D.D. 210 and adjoining Government Land, Pak Wai, Sai Kung.

7.1.2 This Supporting Planning Statement has demonstrated the suitability and technical feasibility of the Proposed Amendment at the Application Site. Strong planning grounds have been provided to justify the rezoning proposal at the Application Site for the provision of about 96 residential units in a compatible scale with surrounding environment. The Proposed Amendment echoes the Government's initiative to increase housing supply by optimising the usage of appropriate "GB" zones, including private lands which have also been examined in the third round of "GB" review. The Proposed Amendment is a win-win development as it allows the realisation of housing provision at a suitable location without compromising the integrity and function of the wider "GB" zone on the same OZP. Existing eyesores such as the temporary structures at the Application Site will be phased out and replaced by quality residential development with properly managed landscaping. Moreover, the affected footpath will be reprovisioned with enhanced design, including tree shading for public. Furthermore, the development scale and intensity of the Indicative Scheme have paid full respect to the surrounding developments and local planning context to ensure compatibility.

7.1.3 It has been also demonstrated in the technical assessments that the Proposed Amendment at the Application Site will not generate adverse impact on the surroundings in terms of landscape, traffic, visual, environmental, drainage, sewerage, geotechnical and water demand perspectives.

7.1.4 In view of the planning merits and justifications put forward in this Supporting Planning Statement, we sincerely seek the favourable consideration from the TPB to give support to this S12A Planning Application.

Figures



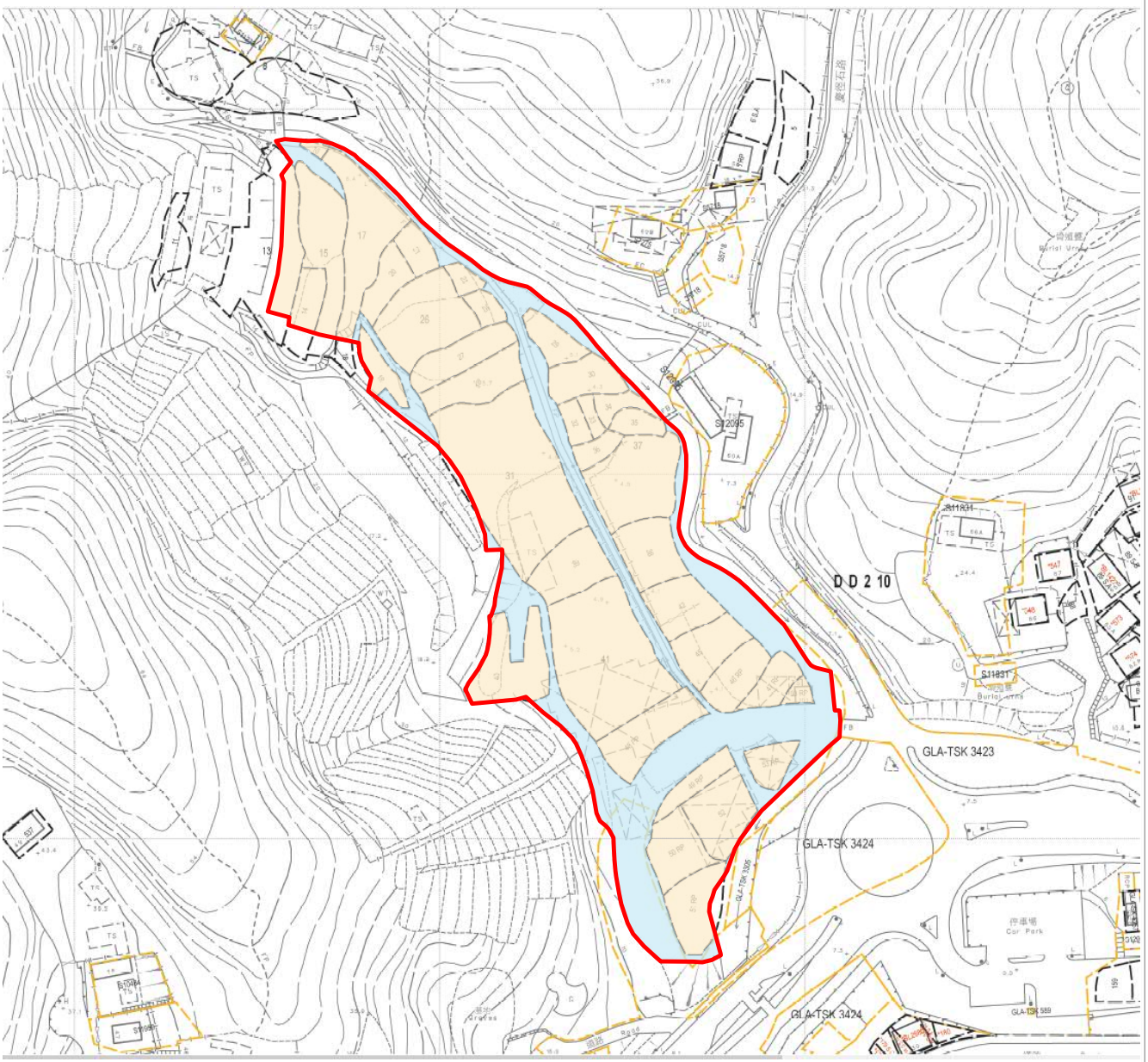
LEGEND

Application Site

ZONING

C	Commercial
CDA	Comprehensive Development Area
R(C)	Residential (Group C)
R(D)	Residential (Group D)
R(E)	Residential (Group E)
CDA	Comprehensive Development Area
G/IC	Government, Institution or Community
GB	Green Belt
V	Village Type Development
CA	Conservation Area
CPA	Coastal Protection Area
OU	Other Specified Uses
O	Open Space

Figure No.	*Scale*	*Figure Title*
2.1	-	**Location Plan**
ARUP	*Date* May 2026	*Source* Extracted from the Approved Ho Chung Outline Zoning Plan(No. S/SK-HC/13) and Approved Hebe Haven Outline Zoning Plan (No. S/SK-HH/8)



LEGEND

Application Site

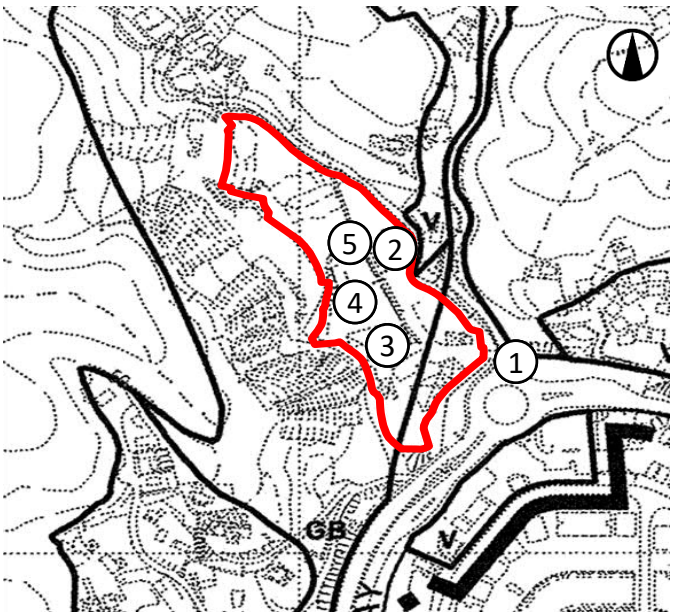
Private Lot

Government Land

Figure No.	*Scale*	*Figure Title*
2.2	-	**Lot Index Plan**
ARUP	*Date* August 2023	*Source* Extracted from Lot index Plan No. ags_S00000116034_0001

LEGEND

Application Site

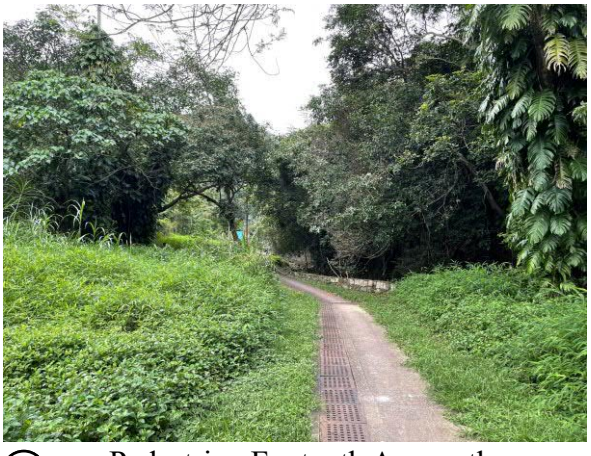


1 Existing Access to the Application Site

2 Commercial Horticulture Workshop

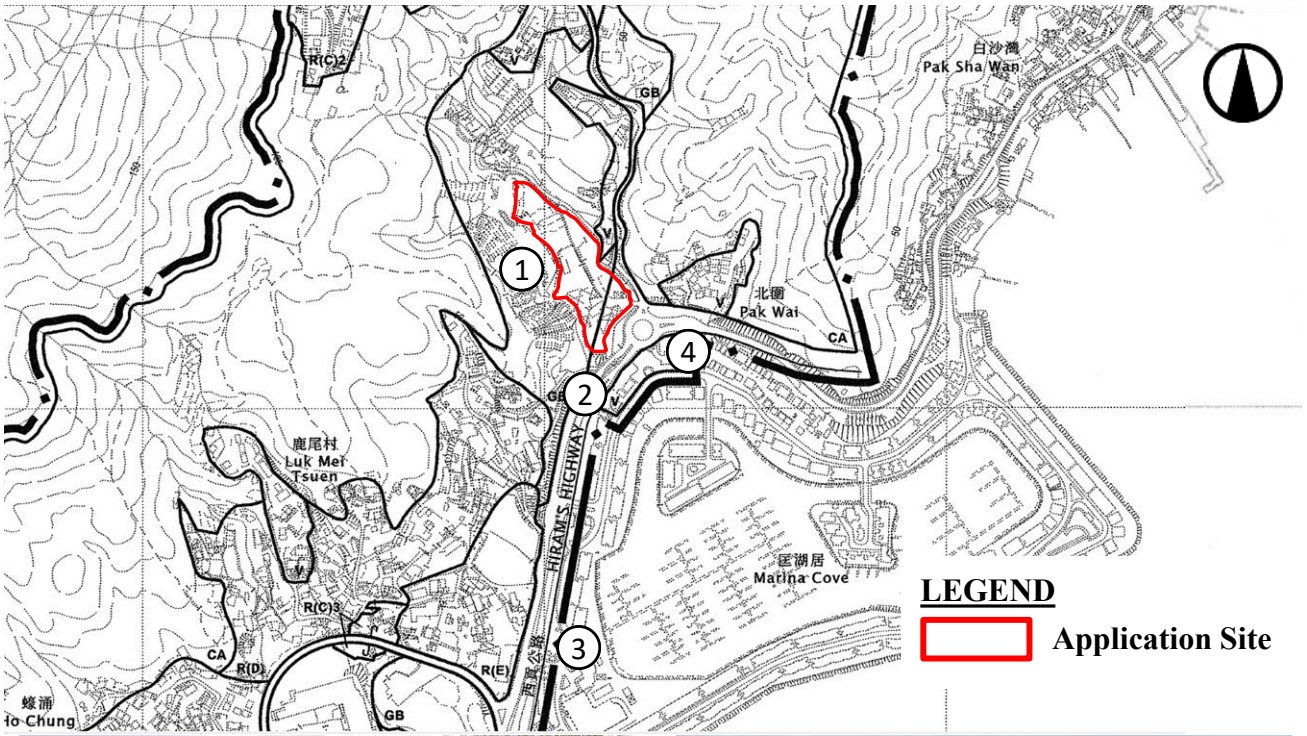
3 Temporary uses

4 Temporary structures



5 Pedestrian Footpath Across the Application Site

Figure No.	*Scale*	*Figure Title*
2.3	-	**Existing Condition of the Application Site**
ARUP	*Date* October 2025	*Source* Photo taken in May 2023 and October 2025



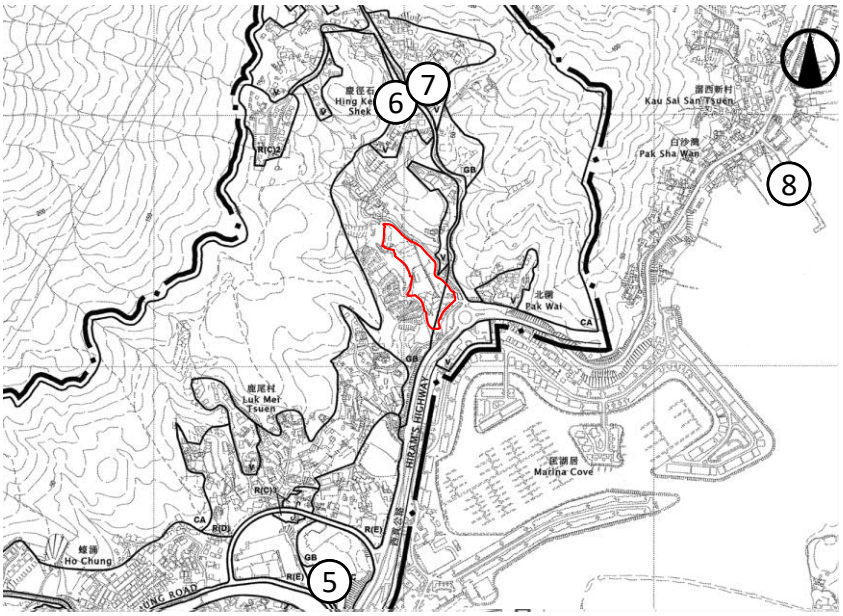
1 Unmanaged Vegetation Cover

2 Hiram's Highway

3 Marina Cove
(existing buildings up to 6 storeys)

4 Pak Wai Village

Figure No.	Scale	Figure Title	
2.4a	-		**Surrounding Condition of the Application Site (1 of 2)**
ARUP	Date: August 2023	Source:	Photo taken in May 2023



LEGEND

Application Site

5 Che Kung Temple (Sai Kung)
(Grade 1 Historic Building)

6 Bernard Garden

7 Hing Keng Shek Village Office

8 Pak Sha Wan Pier

Figure No.	Scale	Figure Title	Surrounding Condition of the Application Site (2 of 2)
2.4b	-		
ARUP	Date: August 2023	Source: Photo taken in May 2023	

GREEN BELT

Column 1 Uses always permitted	Column 2 Uses that may be permitted with or without conditions on application to the Town Planning Board
Agricultural Use Barbecue Spot Government Use (Police Reporting Centre only) Nature Reserve Nature Trail On-Farm Domestic Structure Picnic Area Public Convenience Tent Camping Ground Wild Animals Protection Area	Animal Boarding Establishment Broadcasting, Television and/or Film Studio Burial Ground Cable Car Route and Terminal Building Columbarium (within a Religious Institution or extension of existing Columbarium only) Crematorium (within a Religious Institution or extension of existing Crematorium only) Field Study/Education/Visitor Centre Government Refuse Collection Point Government Use (not elsewhere specified) Helicopter Landing Pad Holiday Camp House (other than rebuilding of New Territories Exempted House or replacement of existing domestic building by New Territories Exempted House permitted under the covering Notes) Petrol Filling Station Place of Recreation, Sports or Culture Public Transport Terminus or Station Public Utility Installation Public Vehicle Park (excluding container vehicle) Radar, Telecommunications Electronic Microwave Repeater, Television and/or Radio Transmitter Installation Religious Institution Residential Institution Rural Committee/Village Office School Service Reservoir Social Welfare Facility Utility Installation for Private Project

(Please see next page)

Figure No.	*Scale*	*Figure Title*	**Approved Ho Chung Outline Zoning Plan (No. S/SK-HC/13) – Schedule of Uses of "GB" Zone (1 of 2)**
3.1a	-		
ARUP	*Date* April 2026	*Source*	Extracted from the Approved Ho Chung Outline Zoning Plan (No. S/SK-HC/13)

GREEN BELT (Cont'd)

Planning Intention

The planning intention of this zone is primarily for defining the limits of urban and sub-urban development areas by natural features and to contain urban sprawl as well as to provide passive recreational outlets. There is a general presumption against development within this zone.

Remarks

Any filling of land/pond or excavation of land, including that to effect a change of use to any of those specified in Columns 1 and 2 above or the uses or developments always permitted under the covering Notes (except public works co-ordinated or implemented by Government, and maintenance, repair or rebuilding works), shall not be undertaken or continued on or after the date of the first publication in the Gazette of the notice of the interim development permission area plan without the permission from the Town Planning Board under section 16 of the Town Planning Ordinance.

Figure No.	*Scale*	*Figure Title*	**Approved Ho Chung Outline Zoning Plan (No. S/SK-HC/13) – Schedule of Uses of "GB" Zone (2 of 2)**
3.1b	-		
ARUP	*Date* April 2026	*Source*	Extracted from the Approved Ho Chung Outline Zoning Plan (No. S/SK-HC/13)

9.8.2 Being well served by irrigation and servicing facilities, the agricultural land in Ho Chung Valley is of "good" quality as classified by the Agriculture, Fisheries and Conservation Department.

9.8.3 The main farming activities in the area are the growing of vegetables, flowers and fruit trees. Rivers and streams provide the main source of water supply for irrigation. The area is only served by limited vehicular access via the sub-standard Ho Chung Road but it is largely accessible via footpaths. Part of the area under this zoning falls within the Ho Chung SAI and a portion of Ho Chung Trackway SAI is located within the area under this zoning.

9.8.4 As filling of land/pond may cause adverse drainage and environmental impacts on the adjacent areas, permission from the Board is required for such activities. However, filling of land specifically required under prior written instructions of Government department(s), or for the purposes of genuine agricultural practice including laying of soil not exceeding 1.2m in thickness for cultivation, and construction of agricultural structure with prior written approval from the Lands Department is exempted from the control.

9.9 Green Belt ("GB") : Total Area 53.61 ha

9.9.1 The planning intention of this zone is primarily for defining the limits of urban and sub-urban development areas by natural features, including foothills, lower hillslopes, spurs, isolated knolls, woodland, vegetated land and amenity areas at the urban fringe, and to contain urban sprawl as well as to provide passive recreational outlet and delineating roadside amenity areas.

9.9.2 There is a general presumption against development within this zone. Development within this zone will be strictly controlled. Development proposals will be considered on individual merits taking into account the relevant Town Planning Board Guidelines.

9.9.3 As filling of land/pond and excavation of land may cause adverse drainage impacts on the adjacent areas and adverse impacts on the natural environment, permission from the Board is required for such activities.

9.9.4 Part of the area under this zoning falls within the Ho Chung SAI and a portion of Ho Chung Trackway SAI is located within the area under this zoning.

9.10 Conservation Area ("CA") : Total area 138.30 ha

9.10.1 The planning intention of this zone is to protect and retain the existing natural landscape, ecological or topographical features of the area for

Figure No.	*Scale*	*Figure Title*	**Approved Ho Chung Outline Zoning Plan (No. S/SK-HC/13) – Explanatory Statement of "GB" Zone**
3.1c	-		
ARUP	*Date* April 2026	*Source*	Extracted from the Approved Ho Chung Outline Zoning Plan (No. S/SK-HC/13)

APPROVED HO CHUNG OUTLINE ZONING PLAN NO. S/SK-HC/13

(Being an Approved Plan for the Purposes of the Town Planning Ordinance)

NOTES

(N.B. This forms part of the Plan)

(1) These Notes show the uses or developments on land falling within the boundaries of the Plan which are always permitted and which may be permitted by the Town Planning Board, with or without conditions, on application. Where permission from the Town Planning Board for a use or development is required, the application for such permission should be made in a prescribed form. The application shall be addressed to the Secretary of the Town Planning Board, from whom the prescribed application form may be obtained.

(2) Any use or development which is always permitted or may be permitted in accordance with these Notes must also conform to any other relevant legislation, the conditions of the Government lease concerned, and any other Government requirements, as may be applicable.

(3) No action is required to make the use of any land or building which was in existence immediately before the first publication in the Gazette of the notice of the interim development permission area plan conform to this Plan, provided such use has continued since it came into existence. Any material change of such use or any other development (except minor alteration and/or modification to the development of the land or building in respect of such use which is always permitted) must be always permitted in terms of the Plan or in accordance with a permission granted by the Town Planning Board.

(4) A use or development of any land or building permitted under an earlier draft or approved plan including interim development permission area plan for the area and effected or undertaken during the effective period of that plan is always permitted under this Plan. Any material change of such use or any other development (except minor alteration and/or modification to the completed development of the land or building which is always permitted) must be always permitted in terms of the Plan or in accordance with a permission granted by the Town Planning Board.

(5) Except to the extent that paragraph (3) or (4) applies, any use or development falling within the boundaries of the Plan and also within the boundaries of the interim development permission area plan, unless always permitted in terms of the Plan, shall not be undertaken or continued on or after the date of the first publication in the Gazette of the notice of the interim development permission area plan without permission from the Town Planning Board.

(6) Except as otherwise specified by the Town Planning Board, when a use or material change of use is effected or a development or redevelopment is undertaken, as always permitted in terms of the Plan or in accordance with a permission granted by the Town Planning Board, all permissions granted by the Town Planning Board in respect of the site of the use or material change of use or development or redevelopment shall lapse.

Figure No.	*Scale*	*Figure Title*	**Approved Ho Chung Outline Zoning Plan (No. S/SK-HC/13) – Covering Notes (1 of 4)**
3.1d	-		
ARUP	*Date* April 2026	*Source*	Extracted from the Approved Ho Chung Outline Zoning Plan (No. S/SK-HC/13)

(7) Road junctions, alignment of roads, and boundaries between zones may be subject to minor adjustments as detailed planning proceeds.

(8) The following uses or developments are always permitted on land falling within the boundaries of the Plan except (a) where the uses or developments are specified in Column 2 of the Notes of individual zones or (b) as provided in paragraph (9) in relation to areas zoned "Site of Special Scientific Interest", "Conservation Area" or "Coastal Protection Area":

(a) maintenance, repair or demolition of a building;

(b) provision, maintenance or repair of plant nursery, amenity planting, open space, rain shelter, refreshment kiosk, footpath, bus/public light bus stop or lay-by, cycle track, taxi rank, public utility pipeline, electricity mast, lamp pole, telephone booth, telecommunications radio base station, automatic teller machine and shrine;

(c) maintenance or repair of road, watercourses, nullahs, sewer and drain;

(d) geotechnical works, local public works, road works, sewerage works, drainage works, environmental improvement works, marine related facilities and waterworks (excluding works on service reservoir) and such other public works co-ordinated or implemented by Government;

(e) rebuilding of New Territories Exempted House;

(f) replacement of an existing domestic building i.e. a domestic building which was in existence on the date of the first publication in the Gazette of the notice of the interim development permission area plan, by a New Territories Exempted House; and

(g) provision, maintenance or repair of a grave of an indigenous New Territories villager or a locally based fisherman and his family members for which permission has been obtained from Government.

(9) In areas zoned "Site of Special Scientific Interest", "Conservation Area" or "Coastal Protection Area",

(a) the following uses or developments are always permitted:

(i) maintenance or repair of plant nursery, amenity planting, sitting out area, rain shelter, refreshment kiosk, road, watercourse, nullah, public utility pipeline, electricity mast, lamp pole, telephone booth, shrine and grave;

(ii) geotechnical works, local public works, road works, sewerage works, drainage works, environmental improvement works, marine related facilities, waterworks (excluding works on service reservoir) and such other public works co-ordinated or implemented by Government; and

(iii) provision of amenity planting by Government; and

Figure No.	*Scale*	*Figure Title*	**Approved Ho Chung Outline Zoning Plan (No. S/SK-HC/13) – Covering Notes (2 of 4)**
3.1e	-		
ARUP	*Date* April 2026	*Source*	Extracted from the Approved Ho Chung Outline Zoning Plan (No. S/SK-HC/13)

(b) the following uses or developments require permission from the Town Planning Board:

provision of plant nursery, amenity planting (other than by Government), sitting out area, rain shelter, refreshment kiosk, footpath, public utility pipeline, electricity mast, lamp pole, telephone booth and shrine.

(10) In any area shown as 'Road', all uses or developments except those specified in paragraphs (8)(a) to (8)(d) and (8)(g) above and those specified below require permission from the Town Planning Board:

road and on-street vehicle park.

(11) (a) Except in areas zoned "Site of Special Scientific Interest", "Conservation Area" or "Coastal Protection Area", temporary use or development of any land or building not exceeding a period of two months is always permitted provided that no site formation (filling or excavation) is carried out and that the use or development is a use or development specified below:

structures for carnivals, fairs, film shooting on locations, festival celebrations, religious functions or sports events.

(b) Except as otherwise provided in paragraph (11)(a), and subject to temporary uses for open storage and port back-up purposes which are prohibited in areas zoned "Site of Special Scientific Interest", "Conservation Area" or "Coastal Protection Area", temporary use or development of any land or building not exceeding a period of three years requires permission from the Town Planning Board. Notwithstanding that the use or development is not provided for in terms of the Plan, the Town Planning Board may grant permission, with or without conditions, for a maximum period of three years, or refuse to grant permission.

(c) Temporary use or development of land or building exceeding three years requires permission from the Town Planning Board in accordance with the terms of the Plan.

(12) Unless otherwise specified, all building, engineering and other operations incidental to and all uses directly related and ancillary to the permitted uses and developments within the same zone are always permitted and no separate permission is required.

(13) In these Notes, unless the context otherwise requires or unless as expressly provided below, terms used in the Notes shall have the meanings as assigned under section 1A of the Town Planning Ordinance.

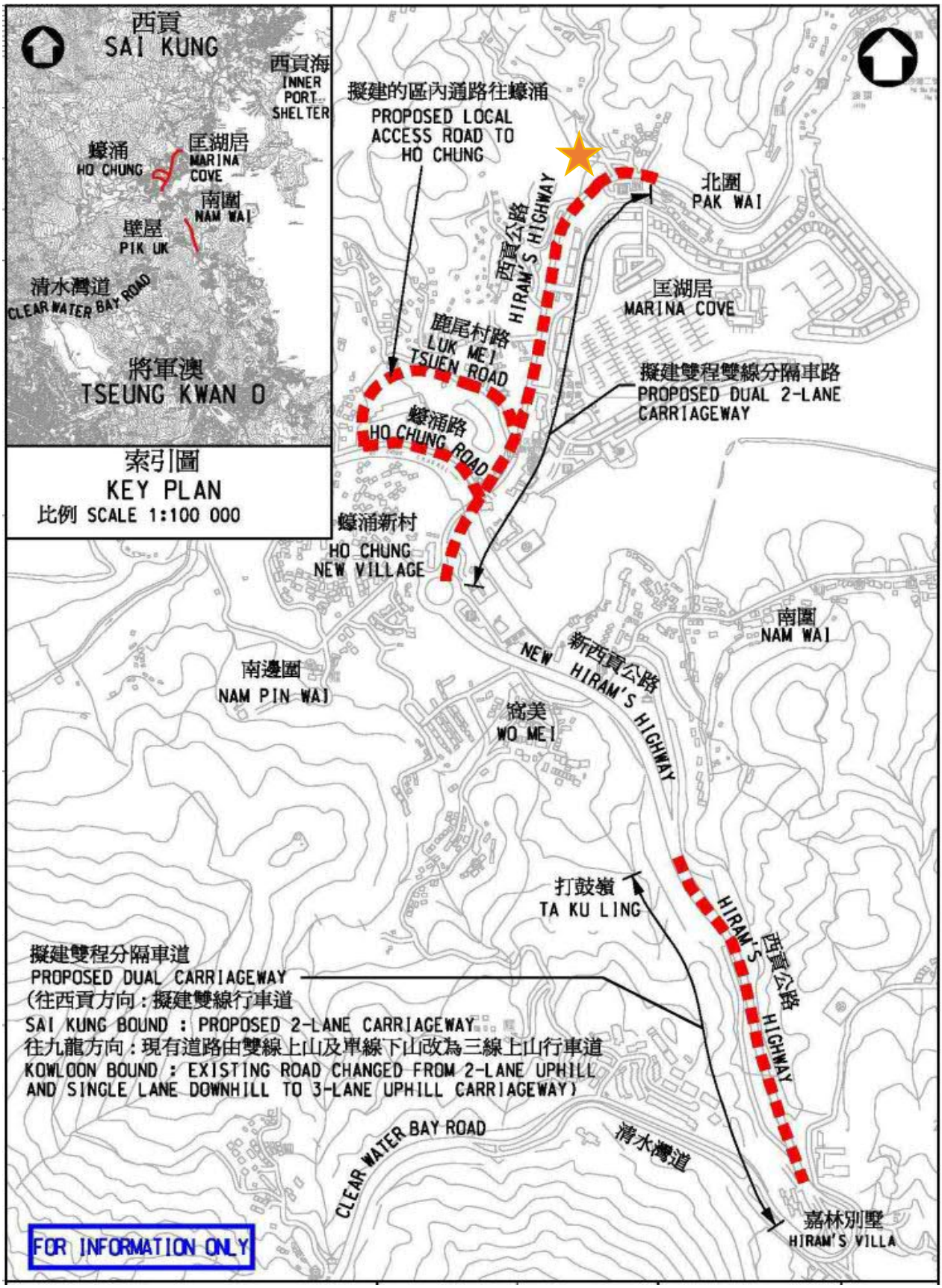
"Existing building" means a building, including a structure, which is physically existing and is in compliance with any relevant legislation and the conditions of the Government lease concerned.

"New Territories Exempted House" means a domestic building other than a guesthouse or a hotel; or a building primarily used for habitation, other than a guesthouse or a hotel, the ground floor of which may be used as 'Shop and Services' or 'Eating Place', the building

Figure No.	*Scale*	*Figure Title*	**Approved Ho Chung Outline Zoning Plan (No. S/SK-HC/13) – Covering Notes (3 of 4)**
3.1f	-		
ARUP	*Date* April 2026	*Source*	Extracted from the Approved Ho Chung Outline Zoning Plan (No. S/SK-HC/13)

works in respect of which are exempted by a certificate of exemption under Part III of the Buildings Ordinance (Application to the New Territories) Ordinance (Cap. 121).

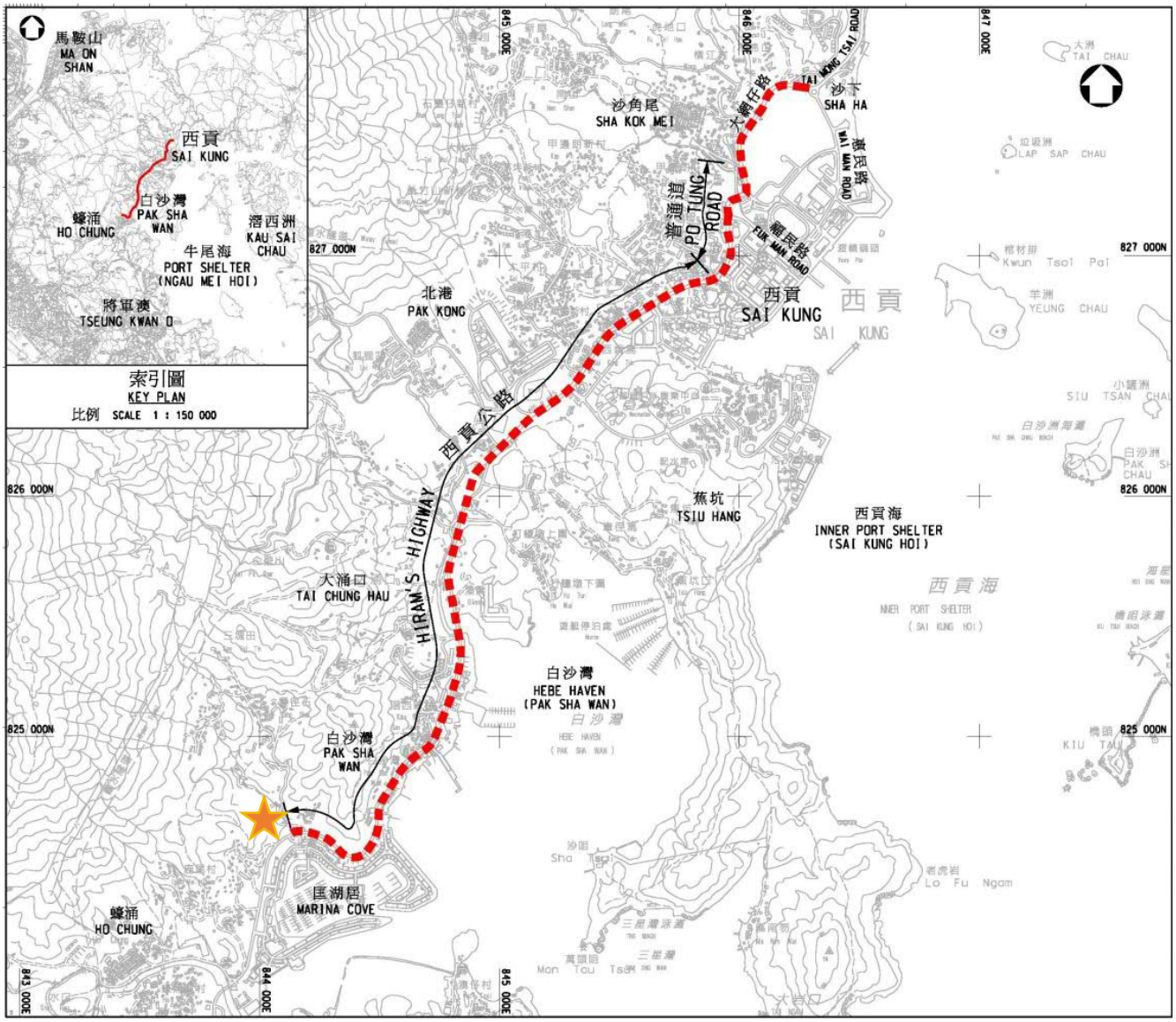
Figure No.	*Scale*	*Figure Title*	**Approved Ho Chung Outline Zoning Plan (No. S/SK-HC/13) – Covering Notes (4 of 4)**
3.1g	-		
ARUP	*Date* April 2026	*Source*	Extracted from the Approved Ho Chung Outline Zoning Plan (No. S/SK-HC/13)



LEGEND

★ **Application Site**

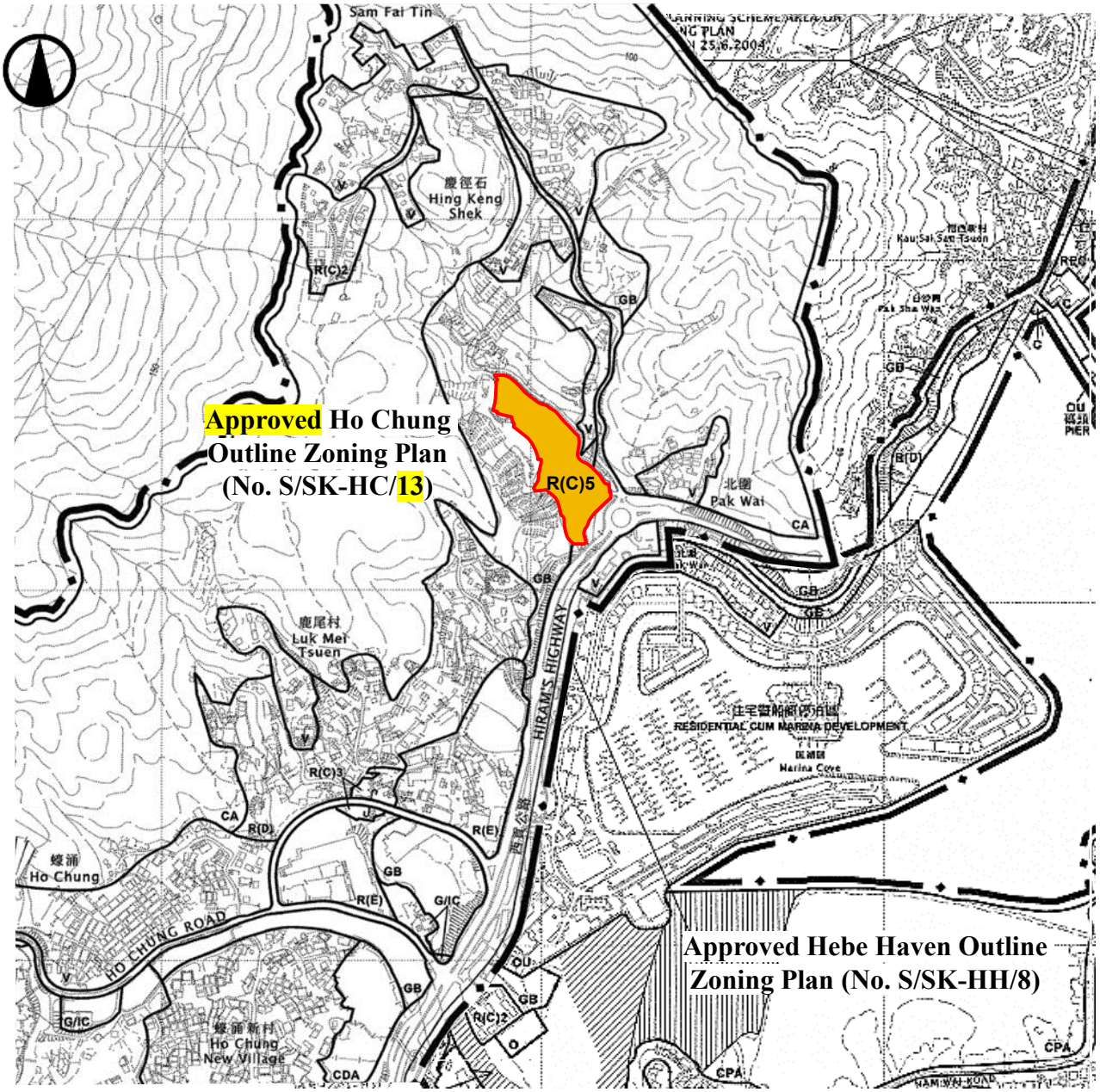
Figure No.	*Scale*	*Figure Title*	**Hiram's Highway Improvement Stage 1 (Completed in 2021)**
3.4a	-		
ARUP	*Date* October 2023	*Source*	Hong Kong Highways Department (https://www.hyd.gov.hk/tc/our_projects/road_projects/703th_Hirams/703TH-PD0001-TC.pdf)



LEGEND

★ **Application Site**

Figure No.	*Scale*	*Figure Title*	**Hiram's Highway Improvement Stage 2**
3.4b	-		
ARUP	*Date* October 2023	*Source*	Hong Kong Highways Department (https://www.hyd.gov.hk/tc/our_projects/road_projects/6806th/HMW6806TH-SK0161.pdf)



LEGEND

- **Application Site**
- **Outline Zoning Plan Boundary**
- **Proposed "Residential (Group C)5" ("R(C)5") Zone on Ho Chung OZP**

ZONING

C	Commercial
R(C)2	Residential (Group C)2
R(C)3	Residential (Group C)3
R(C)4	Residential (Group C)4
R(C)5	Residential (Group C)5
R(D)	Residential (Group D)
R(E)	Residential (Group E)
CDA	Comprehensive Development Area
G/IC	Government, Institution or Community
O	Open Space
OU	Other Specified Uses
GB	Green Belt
V	Village Type Development
CA	Conservation Area
CPA	Coastal Protection Area

Figure No.	*Scale*	*Figure Title*
5.5a	-	**Proposed Amendments to the Approved Ho Chung Outline Zoning Plan (No. S/SK-HC/13)**
ARUP	*Date* April 2026	*Source* Extracted from the Approved Ho Chung Outline Zoning Plan (No. S/SK-HC/13) and Approved Hebe Haven Outline Zoning Plan (No. S/SK-HH/8)

RESIDENTIAL (GROUP C)

Column 1 Uses always permitted	Column 2 Uses that may be permitted with or without conditions on application to the Town Planning Board
Flat Government Use (Police Reporting Centre, Post Office only) House Utility Installation for Private Project	Ambulance Depot Eating Place Educational Institution Government Refuse Collection Point Government Use (not elsewhere specified) Institutional Use (not elsewhere specified) Library Place of Recreation, Sports or Culture Private Club Public Clinic Public Convenience Public Transport Terminus or Station Public Utility Installation Public Vehicle Park (excluding container vehicle) Recyclable Collection Centre Religious Institution Residential Institution Rural Committee/Village Office School Shop and Services Social Welfare Facility Training Centre

Planning Intention

This zone is intended primarily for low-rise, low-density residential developments where commercial uses serving the residential neighbourhood may be permitted on application to the Town Planning Board.

(Please see next page)

Figure No.	*Scale*	*Figure Title*	**Proposed Amendments to the Approved Ho Chung Outline Zoning Plan (No. S/SK-HC/13) - Notes of the "R(C)" Zone (1 of 3)**
5.5b	-		
ARUP	*Date* April 2026	*Source*	Extracted from the Approved Ho Chung Outline Zoning Plan (No. S/SK-HC/13)

RESIDENTIAL (GROUP C) (Cont'd)

Remarks

(a) On land designated "Residential (Group C) 1", no new development, or addition, alteration and/or modification to or redevelopment of an existing building shall result in a total development and/or redevelopment in excess of a maximum plot ratio of 0.75, a maximum site coverage of 37.5% and a maximum building height of 9m with 2 storeys over one storey of carport or of a maximum plot ratio of 0.75, a maximum site coverage of 25% and a maximum building height of 12m with 3 storeys over one storey of carport, or the plot ratio, site coverage and height of the building which was in existence on the date of the first publication in the Gazette of the notice of the interim development permission area plan, whichever is the greater.

(b) On land designated "Residential (Group C) 2", no new development, or addition, alteration and/or modification to or redevelopment of an existing building shall result in a total development and/or redevelopment in excess of a maximum plot ratio of 0.4, a maximum site coverage of 20% and a maximum building height of 9m with 2 storeys over one storey of carport, or the plot ratio, site coverage and height of the building which was in existence on the date of the first publication in the Gazette of the notice of the interim development permission area plan, whichever is the greater.

(c) On land designated "Residential (Group C) 3", no new development, or addition, alteration and/or modification to or redevelopment of an existing building shall result in a total development and/or redevelopment in excess of a maximum gross floor area (GFA) of 2,393m^2 and a maximum building height of 12m with 3 storeys over one storey of carport, or the GFA and height of the building, which was in existence on the date of the first publication in the Gazette of the notice of the interim development permission area plan, whichever is the greater.

(d) On land designated "Residential (Group C) 4", no new development, or addition, alteration and/or modification to or redevelopment of an existing building shall result in a total development and/or redevelopment in excess of a maximum plot ratio of 0.75 and a maximum building height of 12m with 3 storeys over one storey of carport, or the plot ratio and height of the building, which was in existence on the date of the first publication in the Gazette of the notice of the interim development permission area plan, whichever is the greater. A non-building area (NBA) is designated and shall not be accountable for plot ratio calculation.

(e) ***On land designated "Residential (Group C) 5", no new development, or addition, alteration and/or modification to or redevelopment of an existing building shall result in a total development and/or redevelopment in excess of a maximum plot ratio of 0.6 and a maximum building height of 4 storeys (excluding basements), or the plot ratio and height of the building which was in existence on the date of the first publication in the Gazette of the notice of the interim development permission area plan, whichever is the greater.***

Figure No.	*Scale*	*Figure Title*	**Proposed Amendments to the Approved Ho Chung Outline Zoning Plan (No. S/SK-HC/13) - Notes of the "R(C)" Zone (2 of 3)**
5.5c	-		
ARUP	*Date* April 2026	*Source*	Extracted from the Approved Ho Chung Outline Zoning Plan (No. S/SK-HC/13)

RESIDENTIAL (GROUP C) (Cont'd)

Remarks (Cont'd)

(f) Based on the individual merits of a development or redevelopment proposal, minor relaxation of the plot ratio/GFA/site coverage/building height restrictions stated in paragraphs (a) to (d) above may be considered by the Town Planning Board on application under section 16 of the Town Planning Ordinance.

(g) In determining the maximum plot ratio/GFA/site coverage for the purposes of paragraphs (a) to (d) above, any floor space that is constructed or intended for use solely as car park, loading/unloading bay, plant room and caretaker's office, or caretaker's quarters and recreational facilities for the use and benefit of all the owners or occupiers of the domestic building or domestic part of the building, provided such uses and facilities are ancillary and directly related to the development or redevelopment, may be disregarded.

(h) Under exceptional circumstances, for developments and/or redevelopments, minor relaxation of the NBA restriction as stated in paragraph (d) may be considered by the Town Planning Board on application under section 16 of the Town planning Ordinance.

Figure No.	*Scale*	*Figure Title*	**Proposed Amendments to the Approved Ho Chung Outline Zoning Plan (No. S/SK-HC/13) - Notes of the "R(C)" Zone (3 of 3)**
5.5d	-		
ARUP	*Date* April 2026	*Source*	Extracted from the Approved Ho Chung Outline Zoning Plan (No. S/SK-HC/13)

carport as stipulated in the Notes of the Plan. The implementation of the "CDA" zone largely depends on private initiatives for land assembly. However, in view of the sizeable area of the site, phased development could be carried out provided that the intention for comprehensive redevelopment of the whole site would not be prejudiced.

9.1.4 Pursuant to section 4A(1) of the Ordinance, any development/ redevelopment proposal within this zone is subject to the approval of the Board by way of a planning application under section 16 of the Ordinance. A Master Layout Plan (MLP) should be submitted together with the relevant assessment reports and a landscape master plan as well as other materials as specified in the Notes of the Plan for the approval of the Board under section 4A(2) of the Ordinance. Development/redevelopment will be in accordance with an approved MLP and it should be ensured that the nature and scale of new development will be in keeping with the surrounding natural landscape and land-uses and will not exert pressure on the limited road and other infrastructural provisions in the Area. A copy of the approved MLP shall be made available for public inspection in the Land Registry pursuant to section 4A(3) of the Ordinance.

9.2 Residential (Group C) ("R(C)") ***Total Area 5.67 ha***

9.2.1 The planning intention of this zone is primarily for low-rise, low-density residential developments where commercial uses serving the residential neighbourhood may be permitted on application to the Board, and to restrict the future developments within the prescribed development parameters.

9.2.2 This zone can be divided into four sub-areas:

(a) "R(C)1" – The residential development in this sub-area is subject to a maximum PR of 0.75, either with a maximum SC of 37.5% and a height not exceeding 9m with 2 storeys over one storey of carport, or with a maximum SC of 25% and a height not exceeding 12m with 3 storeys over one storey of carport.

This sub-area covers only one site which is located in the area sandwiched between Hiram's Highway and Nam Pin Wai Village and it falls within the Ho Chung Site of Archaeological Interest (SAI).

(b) "R(C)2" – The residential development in this sub-area is subject to a maximum PR of 0.4, a maximum SC of 20% and a height not exceeding 9m with 2 storeys over one storey of carport.

This sub-area covers the area to the south-west of Hing Keng Shek which has mostly been developed into low-density

Figure No.	*Scale*	*Figure Title*	**Proposed Amendments to the Approved Ho Chung Outline Zoning Plan (No. S/SK-HC/13) – Explanatory Statement of the "R(C)" Zone (1 of 2)**
5.5e	-		
ARUP	*Date* April 2026	*Source*	Extracted from the Approved Ho Chung Outline Zoning Plan (No. S/SK-HC/13)

residential houses. The site is only accessible via the sub-standard Hing Keng Shek Road.

(c) "R(C)3" – The residential development in this sub-area is subject to a maximum gross floor area (GFA) of 2,393m^2 and a height not exceeding 12m with 3 storeys over one storey of carport.

This sub-area covers two linked land parcels at Ho Chung North Road which are located close to Hiram's Highway. This sub-area is intended for low-rise and low-density residential development.

(d) "R(C)4" – The residential development in this sub-area is subject to a maximum PR of 0.75 and a height not exceeding 12m with 3 storeys over one storey of carport. A non-building area (NBA) is designated for an access road purpose where no development is permitted except road, footpath and other related facilities. This NBA shall not be accountable for PR calculation. A clause has been incorporated in the Notes of the "R(C)" zone to allow minor relaxation of the stated NBA restriction under exceptional circumstances based on individual merits.

This sub-area covers a site at Wo Mei Hung Min Road where part of the area under this zoning falls within the Ho Chung SAI.

(e) ***"R(C)5" – The residential development in this sub-area is subject to a maximum PR of 0.6 and a height not exceeding 4 storeys (excluding basements). This sub-area covers the area to the north-east of Luk Mei Tsuen and north-west of Marina Cove which have mostly been developed into low-density residential houses. The site is accessible from Hing Keng Shek Road and Hiram's Highway.***

9.2.3 ***For "R(C)5" zone, should the public footpath be affected by any development or redevelopment proposals, it shall be reprovisioned.***

9.2.4 The GFA control under the "R(C)3" zone and the PR control under "R(C)4" zone are regarded as being stipulated in a "new or amended statutory plan" according to the Joint Practice Note No. 4 "Development Control Parameters Plot Ratio/Gross Floor Area", and shall be subject to the streamlining arrangements stated therein.

9.2.5 The above sub-areas mainly reflect the existing character and development intensity. The development restrictions are mainly to conserve the existing character and intensity of the developments so as to blend in well with the surrounding natural environment and rural character as well as not to overload the limited infrastructural facilities, particularly the transport network in the Area.

Figure No.	*Scale*	*Figure Title*	**Proposed Amendments to the Approved Ho Chung Outline Zoning Plan (No. S/SK-HC/13) – Explanatory Statement of the "R(C)" Zone (2 of 2)**
5.5f	-		
ARUP	*Date* April 2026	*Source*	Extracted from the Approved Ho Chung Outline Zoning Plan (No. S/SK-HC/13)

9.8.2 Being well served by irrigation and servicing facilities, the agricultural land in Ho Chung Valley is of "good" quality as classified by the Agriculture, Fisheries and Conservation Department.

9.8.3 The main farming activities in the area are the growing of vegetables, flowers and fruit trees. Rivers and streams provide the main source of water supply for irrigation. The area is only served by limited vehicular access via the sub-standard Ho Chung Road but it is largely accessible via footpaths. Part of the area under this zoning falls within the Ho Chung SAI and a portion of Ho Chung Trackway SAI is located within the area under this zoning.

9.8.4 As filling of land/pond may cause adverse drainage and environmental impacts on the adjacent areas, permission from the Board is re ies. However, filling of land specifically required under prior written instructions of Government department(s), or for the purposes of genuine agricultural practice including laying of soil not exceeding 1.2m in thickness for cultivation, and construction of agricultural structure with prior written approval from the Lands Department is exempted from the control.

9.9 Green Belt ("GB") : ***Total Area 52.54 ha***

9.9.1 The planning intention of this zone is primarily for defining the limits of urban and sub-urban development areas by natural features, including foothills, lower hillslopes, spurs, isolated knolls, woodland, vegetated land and amenity areas at the urban fringe, and to contain urban sprawl as well as to provide passive recreational outlet and delineating roadside amenity areas.

9.9.2 There is a general presumption against development within this zone. Development within this zone will be strictly controlled. Development proposals will be considered on individual merits taking into account the relevant Town Planning Board Guidelines.

9.9.3 As filling of land/pond and excavation of land may cause adverse drainage impacts on the adjacent areas and adverse impacts on the natural environment, permission from the Board is required for such activities.

9.9.4 Part of the area under this zoning falls within the Ho Chung SAI and a portion of Ho Chung Trackway SAI is located within the area under this zoning.

9.10 Conservation Area ("CA") : Total area 138.30 ha

9.10.1 The planning intention of this zone is to protect and retain the existing natural landscape, ecological or topographical features of the area for

Figure No.	*Scale*	*Figure Title*	**Proposed Amendments to the Approved Ho Chung Outline Zoning Plan (No. S/SK-HC/13) – Explanatory Statement of the "GB" Zone**
5.5g	-		
ARUP	*Date* April 2026	*Source*	Extracted from the Approved Ho Chung Outline Zoning Plan (No. S/SK-HC/13)

ARUP

Appendix G

Revised Drainage Impact Assessment

Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" and Area Shown as "Road" to "Residential (Group C)5" for Proposed Residential Development at Various Lots in D.D. 210 and Adjoining Government Land, Pak Wai, Sai Kung

(HT21130)

Drainage Impact Assessment

May 2026

Drainage Consultant:

何田顧問工程師有限公司
HO TIN & ASSOCIATES
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Tel : 2895 2238 Fax : 2890 8872 E-mail : admin@hotin.com.hk

1. Background

1.1 Ho Tin & Associates Consulting Engineers Limited (HTA) has been appointed by the client to prepare a Drainage Impact Assessment (DIA) Report in support of an Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" and Area Shown as "Road" to "Residential (Group C)5" for Proposed Residential Development at Various Lots in D.D. 210 and Adjoining Government Land, Pak Wai, Sai Kung.

2. The Subject Site and Proposed Development

2.1 The subject site is currently zoned "Green Belt" and shown as "Road" on the Approved Ho Chung Outline Zoning Plan No. S/SK-HC/13 (the OZP). It is located in the northwest side of Marina Cove on the opposite side of Hiram's Highway at Pak Wai, Sai Kung. To its east is Hing Keng Shek Road at the uphill area. It is currently occupied by botanical gardens, temporary structures and an access road. A site location plan is shown in **Figure D1**.

2.2 It is proposed to change the land use of the subject site to "Residential (Group C)5" with a plot ratio of 0.6 and maximum building heights of 4 storey (excluding basements). The proposed rezoning development covers a site area of about 12,692m^2 with a total GFA of about 7,615.2m^2. The designed total population is about 288 persons, and a total of 10 nos. of management staff is presumed in the sewage estimation.

3. Existing Drainage Conditions of the Site

3.1 The subject site is in elongated shape in general and is located within a valley having a principle major axis between the northwest and the southeast. There is an existing stream course running along its boundary from the northern end to the southern end. Surface runoff in the existing stream course is collected into an existing twin 2500 x 2500 box culvert with a gradient of 1 in 200 which conveys the flow and discharges into the Marina Cove on the opposite side of Hiram's Highway. A copy of as-built plan showing existence of the afore-mentioned box culvert is reproduced as **Figure D2** in this report.

3.2 The subject site is currently occupied by botanical gardens, temporary structures and an access road. It is generally hard paved (refer to **Plate No. 1** and **2**). The existing site levels slope gently downward from about +6.5mPD at the north to about +4.1mPD at the south. The level of the section of Hiram's Highway in front of the subject site is at about +7.3mPD.

3.3 The subject site is at elevations relatively lower than its surroundings and abuts on an existing stream course along its boundary from the northern end to the southern end. Surface runoff from the area to its east is intercepted by the existing stream course without entering into the subject site. Surface runoff from the area to its west would flow toward the subject site before flowing into the existing stream course. The existing drainage flow paths and catchment areas of the concerned area are shown in **Figure D3**.

3.4 Colour photos (locations of the photo taken shown in **Figure D1**) showing the existing drainage conditions in the vicinity are shown in the following:

Plate No. 1 – Existing conditions of the subject site (1)	Plate No. 2 – Existing conditions of the subject site (2)

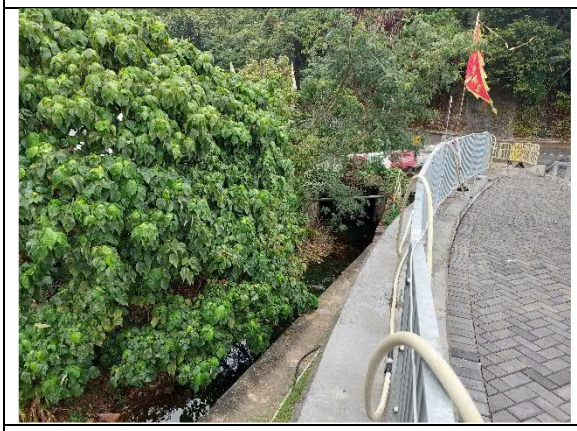



Plate No. 3 – Existing watercourse running underpassing the subject site entrance	Plate No. 4 – Existing watercourse running along the southeastern site boundary

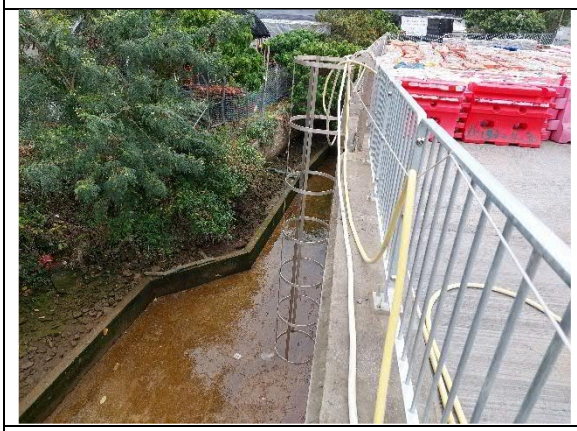



Plate No. 5 – Enlarged width of the existing watercourse outside the southern tip of the subject site	Plate No. 6 – Existing twin 2500x2500mm box culvert receiving flows of the existing watercourse at the downstream area of the subject site

4. Proposed Drainage Works

4.1 Peripheral channels with catchpits will be constructed to intercept all surface runoff running across the subject site boundary. Surface runoff of the subject proposed development will be collected by the proposed channel system. Underground drainage will be used within the subject site boundary only when necessary. The flows inside the channels/drainage will be discharged via a terminal manhole with desilting trap (details refer to DSD Standard Drawing No. DS 1091) into the existing watercourse near the southeastern boundary of the subject site (refer to the above **Plate No. 4**), and from which the water is conveyed to the further downstream into an existing twin 2500x2500mm box culvert running underpassing Hiram's Highway into the Marina Cove (refer to the above **Plate No. 6**).

4.2 Having taken into account of the existing baseflow along the natural stream channel, the narrowest section of the existing watercourse into which the subject site would discharge its flow is about 5.0m (wide) x 2m (deep) in size (refer to the above **Plate No. 4**).

4.3 Assessment criteria is based on the recommendation set out in the Stormwater Drainage Manual (Fifth edition, Jan 2018) (SDM) and its Corrigendum Nos. 1/2022, 1/2024 and 2/2024 issued by DSD. Design Return Period of 200 years is being adopted.

Design Assumptions

Design return period = 200 years (suitable of 'Urban Drainage Trunk Systems')

It is assumed that building platforms of the existing village houses occupy 10% of the remaining area of the catchment, i.e. excluding the area of the subject site, such that,

runoff coefficient = 0.95 (for concrete/asphalt – the subject site area and 10% of the remaining area of the catchment)
0.35 (for grassland (heavy soil), steep – 90% of the remaining area of the catchment)

Catchment Area

The subject site is located near the outlet of a catchment below Sam Fai Tin to the northwest side of Marina Cove at Sai Kung. The catchment consists of heavily vegetated valleys with village houses scattering on the plateaus near the lower portion of the catchment. There would be no change in the existing catchment boundary and area after the proposed development. Since the subject site is currently generally hard paved (refer to the above paragraph 3.2), the overall paved and unpaved areas and drainage conditions of the catchment before and after the subject development are basically the same.

At present, the concerned catchment consists of a main discharge route of which its lower reach runs along the northeast boundary of the subject site. The main discharge route would be undisturbed after the subject development. The major change in the drainage path within the concerned catchment area is that the flow from the subject site would be conveyed to the downstream via engineered channels instead of overland flows.

Catchment area of the narrowest section of the existing watercourse (including the subject site area) (refer to **Figure D3**) = (12,692 + 43,736 + 854,721)m^2 = 911,149m^2

Time of Concentration

Brandy-Williams method is used in calculation of the time of concentration. The surface runoff will flow into the existing watercourse and be conveyed to the existing twin 2500x2500mm box culvert.

H = (389 – 2)/1800 x 100 = 21.50,

then, time of concentration $t_d = 0.14465L/ (H^{0.2}A^{0.1})$
$= 0.14465 \times 1800 / (21.50^{0.2} \times 911{,}149^{0.1}) = 35.74$ min.

Design Rainfall Intensity

The corresponding runoffs under rainfall intensity for various return period are worked out with reference to Rational Method. Brandy-Williams method is used in calculation of the time of concentration. A uniformly distributed rainfall with an intensity is determined by the Intensity-Duration-Frequency. With referenced to Table 3a - Storm Constants for different return periods of HKO Headquarters in the Corrigendum No. 1/2024 of SDM, the rainfall profiles are derived based on the following equation:

$$i = a / (t_d + b)^c$$

where i = extreme mean intensity in mm/hr
t_d = duration in minutes ($t_d \leq 240$)
a, b, c = storm constants given in the table below

Table 2 : Storm Constants

Return Period (years)	200
a	508.8
b	3.46
c	0.322

the rainfall intensity for 1 in 200 years return period $i = 156.14$ mm/hr

A 16.0% rainfall increase has to be adopted in the hydraulic calculation to cater for effects due to climate change and further 12.1% rainfall increase due to design allowance anticipated in end 21st Century as suggested in the item (e), (k) and (n) in the Corrigendum No. 1/2022 of SDM.

Hence, the revised rainfall intensity for 1 in 200 years return period $i = 156.14 \times 1.16 \times 1.121 = 203.04$ mm/hr

Estimated Increase in Surface Runoff

The runoff is estimated by Rational Method.

The runoff coefficient of the subject site area is conservatively taken as 0.95 and that of the remaining area of the same catchment is collectively taken as 0.35 with reference to the recommended values given in "Stormwater Drainage Manual" published by DSD. The areas of paved and grass land are adopted as those shown in **Figure D5**.

Estimated runoff for 1 in 200 years $Q = C \times i \times A / (3600 \times 1000)$
$= (0.95 \times (12{,}692 + 42{,}143) + 0.35 \times (43{,}736 + (854{,}721 - 42{,}143))) \times 203.04 / (3600 \times 1000)$
$= 19.84\ m^3/s$

In addition, peak dry weather flow of the proposed sewage treatment plant is estimated to be 0.051111 m^3/s (the estimation is illustrated in the Sewage Treatment and Disposal Proposal Report submitted under this same Application for Amendment of Plan). In this assessment of stormwater flow, the figure of the peak dry weather flow is conservatively adopted in spite of the fact that discharge of the sewage treatment plant would be regulated by the pumping system.

Therefore, the adopted total peak runoff would be $(19.84 + 0.051111)\ m^3/s = 19.90\ m^3/s$.

Assessment of Adequacy of the 5m (wide) x 2m (deep) Section (adopted conservatively) of the Existing Watercourse (in front of the inlet of the Existing Twin 2500x2500mm Box Culvert)

Manning Equation is adopted in evaluating capacity of the existing watercourse, such that $Q = A \times R^{2/3} \times S_f^{1/2} / n$

Adopting n = 0.050 (natural stream channel, winding some pools and shoals, clean, some weeds and stones under bad condition), and $S_f = 1/1000$, then $Q = (5 \times 2) \times (2+5+2)^{2/3} \times (0.001)^{1/2} / 0.050 = 27.36\ m^3/s$

Capacity of the 5m x 2m section of the existing watercourse = $27.36\ m^3/s > 19.90\ m^3/s$, therefore acceptable. The existing watercourse is capable to convey the estimated flow and will not flood.

4.4 It is envisaged to have no insurmountable technical problems in the detailed drainage design which will be submitted to relevant government departments for approval at the later stage. Subject to the detailed design at the later stage, required sizes of the peripheral channel and the discharge drain pipe of the subject proposed development are estimated as shown in the **Appendix** for reference.

4.5 The applicant is committed to obtain all necessary consents from the relevant government departments and lot owners, where necessary, in constructing the proposed drainage provisions outside the subject site boundary after this application is approved.

4.6 The subject proposed development would not alter the existing drainage conditions of the area and the surface runoff of the subject proposed development would be properly collected and conveyed to an appropriate discharge point. No blockage of any existing flow paths would occur. The proposed stormwater drainage management plan is shown in **Figure D4**.

5. Blue-green Concept Provisions

5.1 Aiming at improvement of the sustainability and resilience of Hong Kong's drainage system, application of blue-green drainage infrastructure which facilitates the infiltration of rainfall and the process of natural filtering to reduce the quantity and improve the quality of runoff, will be considered under the subject proposed development. Tentatively, green roofs, porous pavements and rainwater harvesting facilities will be recommended for consideration. The harvested water, if appropriate or after treatment, will be used for toilet flushing, drip irrigation, sprayed irrigation, water features, car washing and street cleansing, etc.

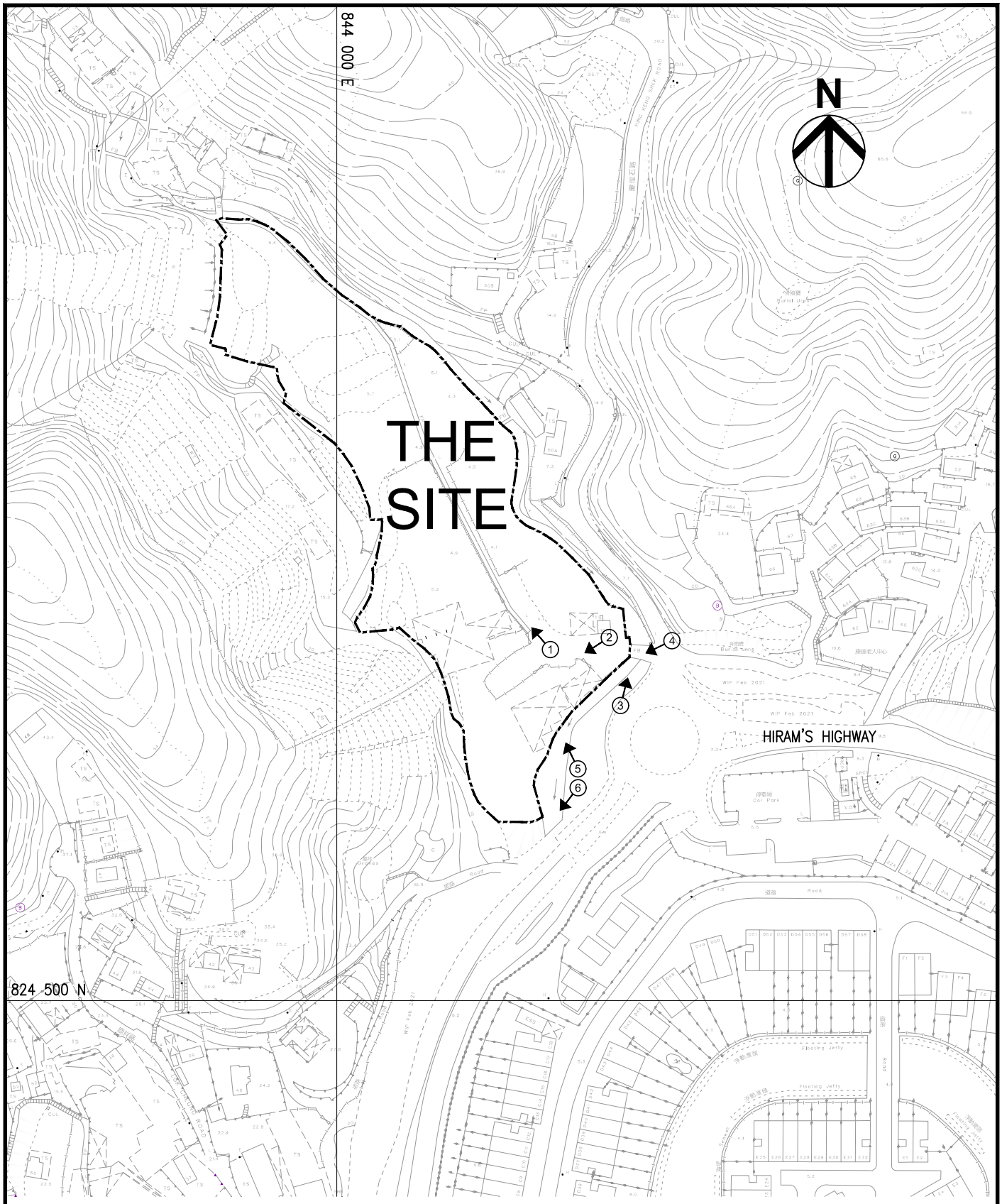
6. Conclusion and Recommendations

6.1 The subject development will be for a proposed residential development. The subject site area is now occupied by botanical gardens, temporary structures and an access road with an existing watercourse running from the northwest to the southeast along the eastern boundary of the subject site. The existing watercourse collects surface runoff from the subject site at present and will be maintained after the proposed development. Stability of the banks of the watercourses will be assessed and upgrading works will be proposed if necessary at the later detailed design stage to ensure safety of the public.

6.2 Peripheral channels with catchpits will be constructed to intercept all surface runoff running across the subject site boundary. A comprehensive channel system will be constructed within the subject proposed development and to convey the collected flows via a terminal manhole with desilting trap to the existing watercourse to the south of the subject site. The existing watercourse will convey its flow into a twin 2500x2500mm box culvert running underpassing Hiram's Highway into the Marina Cove. The additional flow incurred by the subject development would not overload the existing watercourse. Detailed drainage design, including blue-green drainage facilities, will be submitted to relevant government departments for approval at the later stage. No insurmountable technical problems is envisaged.

6.3 The subject proposed development will not alter the existing drainage conditions of the area.

6.4 Besides, the applicant will obtain all necessary consents from the relevant government departments and lot owners, where necessary, for constructing the proposed drainage provisions outside the subject site boundary after this application is approved. In conclusion, the subject development with implementation of the proposed drainage works will not cause any adverse drainage impacts onto the area.



LEGEND:

SUBJECT SITE BOUNDARY

LOCATION OF PHOTO TAKEN (N-PLATE No.)

PROJECT	APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A OF THE TOWN PLANNING ORDINANCE (CAP.131) TO REZONE THE APPLICATION SITE FROM "GREEN BELT" AND AREA SHOWN AS "ROAD" TO "RESIDENTIAL (GROUP C)5" FOR PROPOSED RESIDENTIAL DEVELOPMENT AT VARIOUS LOTS IN D.D.210 AND ADJOINING GOVERNMENT LAND, PAK WAI, SAI KUNG	何田顧問工程師有限公司 HO TIN & ASSOCIATES CONSULTING ENGINEERS LIMITED
TITLE SITE LOCATION PLAN	SCALE 1 : 2000 – A4	DRAWING No. FIGURE D1

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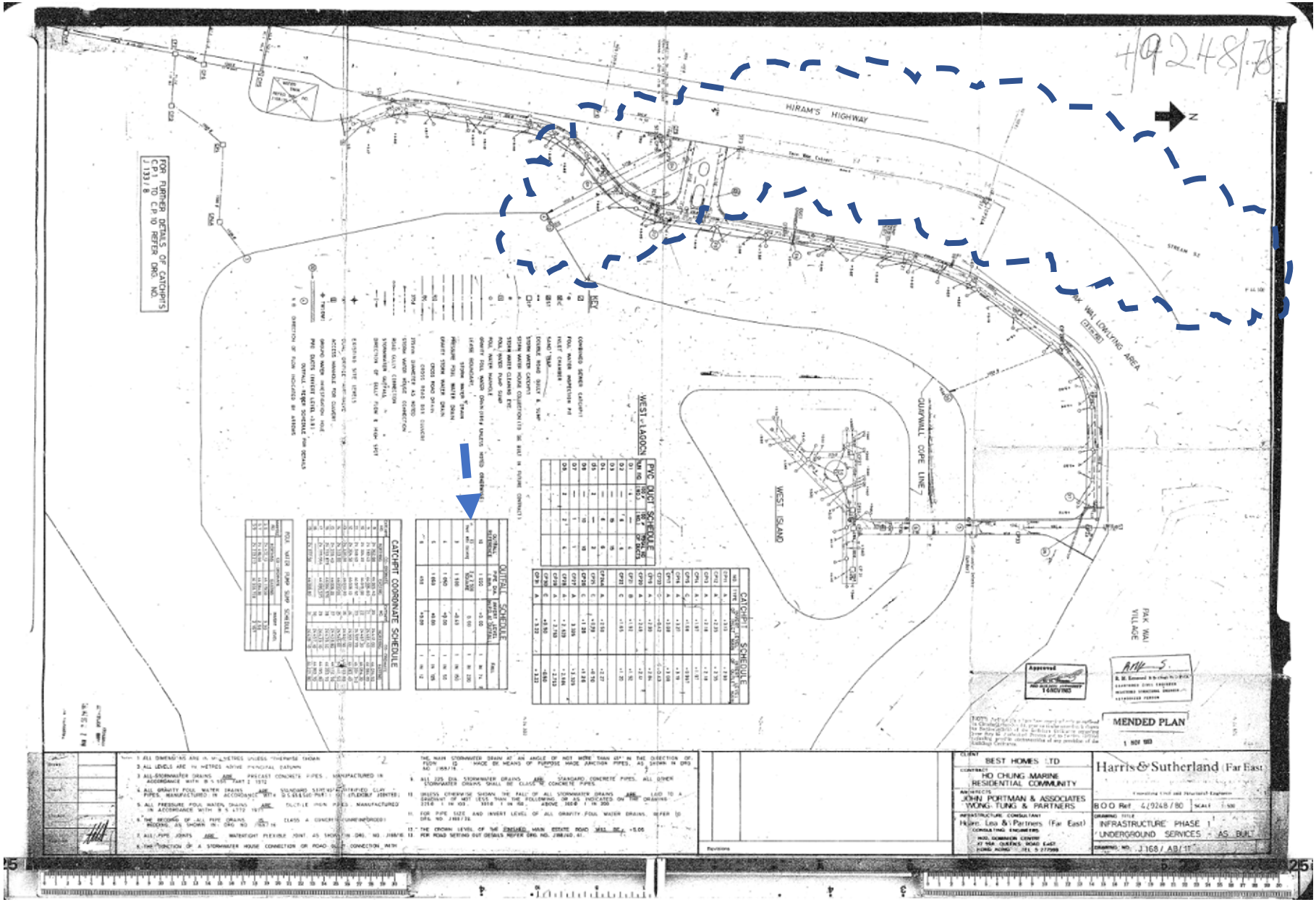

FIGURE D2 - Copy of As-built Plan showing Existence of Box Culvert receiving Surface Runoff from the Site

843 000 E
843 500 E
844 000 E
844 500 E
825 500 N
825 000 N
824 500 N
N
854,721m²
30,946m²
43,736m²
THE SITE
12,692m²
6,752m²
3,883m²
1,932m²
223m²
FALL

LEGEND:

- SUBJECT SITE BOUNDARY
- CATCHMENT BOUNDARY
- SUB-CATCHMENT BOUNDARY
- DRAINAGE PATH (BEFORE AND AFTER THE SUBJECT DEVELOPMENT)
- PROPOSED INTERNAL DRAINAGE OF THE SUBJECT DEVELOPMENT

PROJECT	APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A OF THE TOWN PLANNING ORDINANCE (CAP.131) TO REZONE THE APPLICATION SITE FROM "GREEN BELT" AND AREA SHOWN AS "ROAD" TO "RESIDENTIAL (GROUP C)5" FOR PROPOSED RESIDENTIAL DEVELOPMENT AT VARIOUS LOTS IN D.D.210 AND ADJOINING GOVERNMENT LAND, PAK WAI, SAI KUNG
TITLE	EXISTING DRAINAGE FLOW PATHS AND CATCHMENT AREAS
SCALE	1 : 5000 – A3
DRAWING No.	FIGURE D3

何田顧問工程師有限公司
HO TIN & ASSOCIATES
CONSULTING ENGINEERS LIMITED

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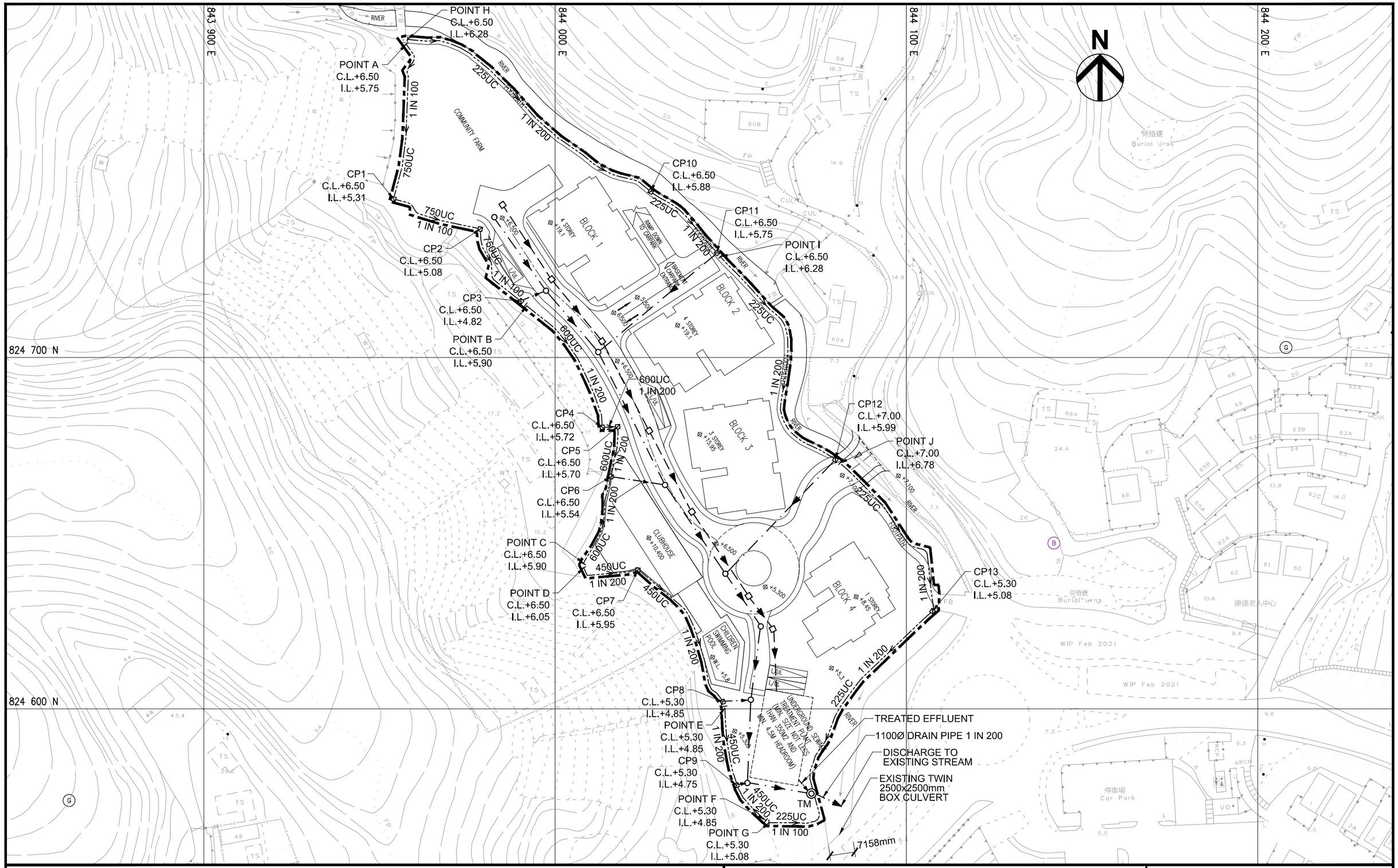

LEGEND:

- SUBJECT SITE BOUNDARY
- 4.100 PROPOSED GROUND LEVEL
- PROPOSED STORMWATER TERMINAL MANHOLE
- PROPOSED STORMWATER DRAIN & MANHOLE
- PROPOSED U-CHANNEL & CATCH PIT
- PROPOSED SEWER & MANHOLE

PROJECT: APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A OF THE TOWN PLANNING ORDINANCE (CAP.131) TO REZONE THE APPLICATION SITE FROM "GREEN BELT" AND AREA SHOWN AS "ROAD" TO "RESIDENTIAL (GROUP C)5" FOR PROPOSED RESIDENTIAL DEVELOPMENT AT VARIOUS LOTS IN D.D.210 AND ADJOINING GOVERNMENT LAND, PAK WAI, SAI KUNG

何田顧問工程師有限公司
HO TIN & ASSOCIATES
CONSULTING ENGINEERS LIMITED

TITLE: STORMWATER DRAINAGE MANAGEMENT PLAN

SCALE: 1 : 1000 – A3

DRAWING No.: FIGURE D4

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843 000 E

843 500 E

844 000 E

844 500 E

825 500 N

825 000 N

824 500 N

N

854,721m²

43,736m²

FALL

THE SITE
12,692m²

PAVED AREA (TOTAL = 42,143m²)

LEGEND:

SUBJECT SITE BOUNDARY

CATCHMENT BOUNDARY

DRAINAGE PATH (BEFORE AND AFTER THE SUBJECT DEVELOPMENT)

PROPOSED INTERNAL DRAINAGE OF THE SUBJECT DEVELOPMENT

PROJECT APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A OF THE TOWN PLANNING ORDINANCE (CAP.131) TO REZONE THE APPLICATION SITE FROM "GREEN BELT" AND AREA SHOWN AS "ROAD" TO "RESIDENTIAL (GROUP C)5" FOR PROPOSED RESIDENTIAL DEVELOPMENT AT VARIOUS LOTS IN D.D.210 AND ADJOINING GOVERNMENT LAND, PAK WAI, SAI KUNG

何田顧問工程師有限公司
HO TIN & ASSOCIATES
CONSULTING ENGINEERS LIMITED

TITLE

EXISTING PAVED AREAS

SCALE 1 : 5000 – A3

DRAWING No. FIGURE D5

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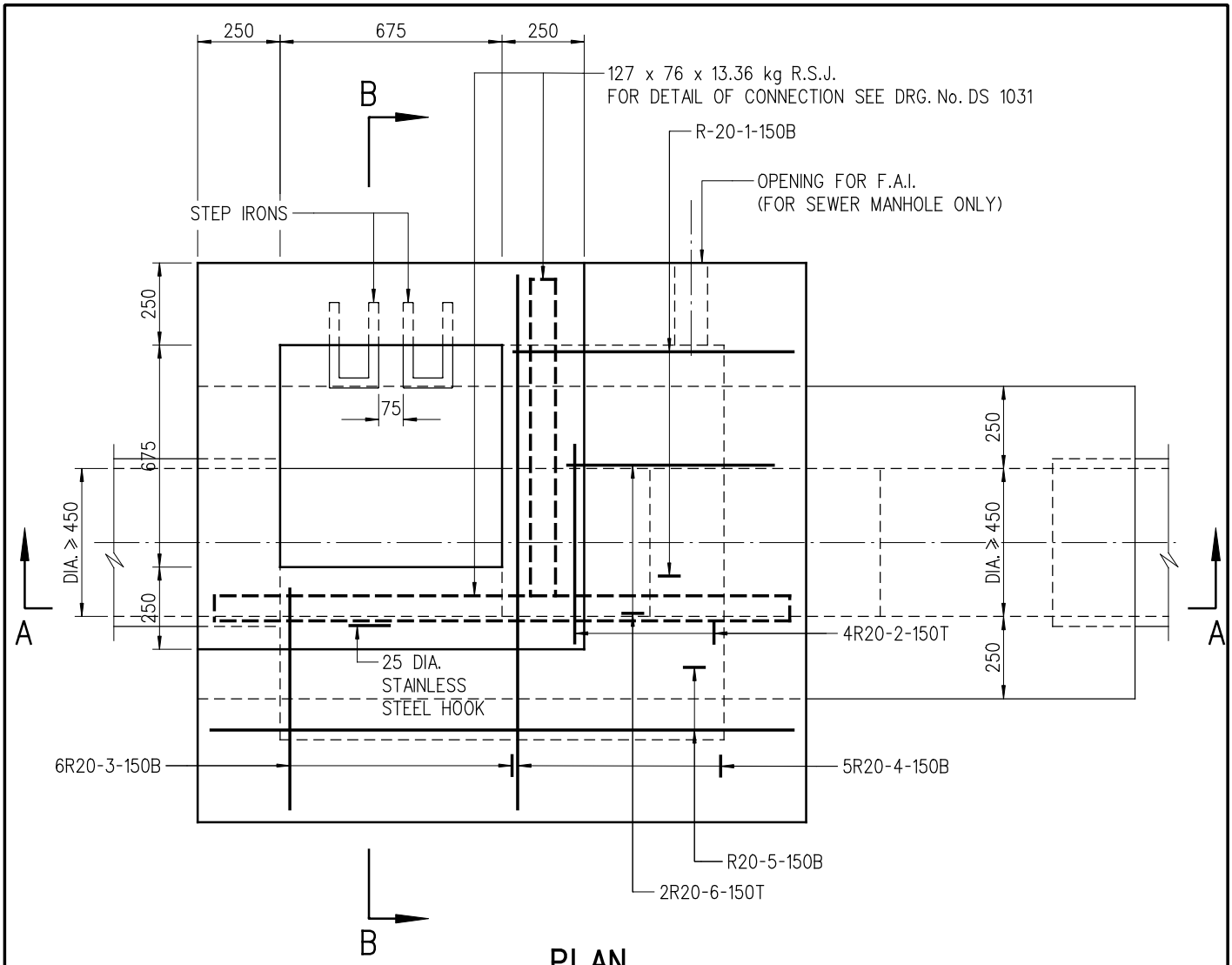


PLAN

NOTES:

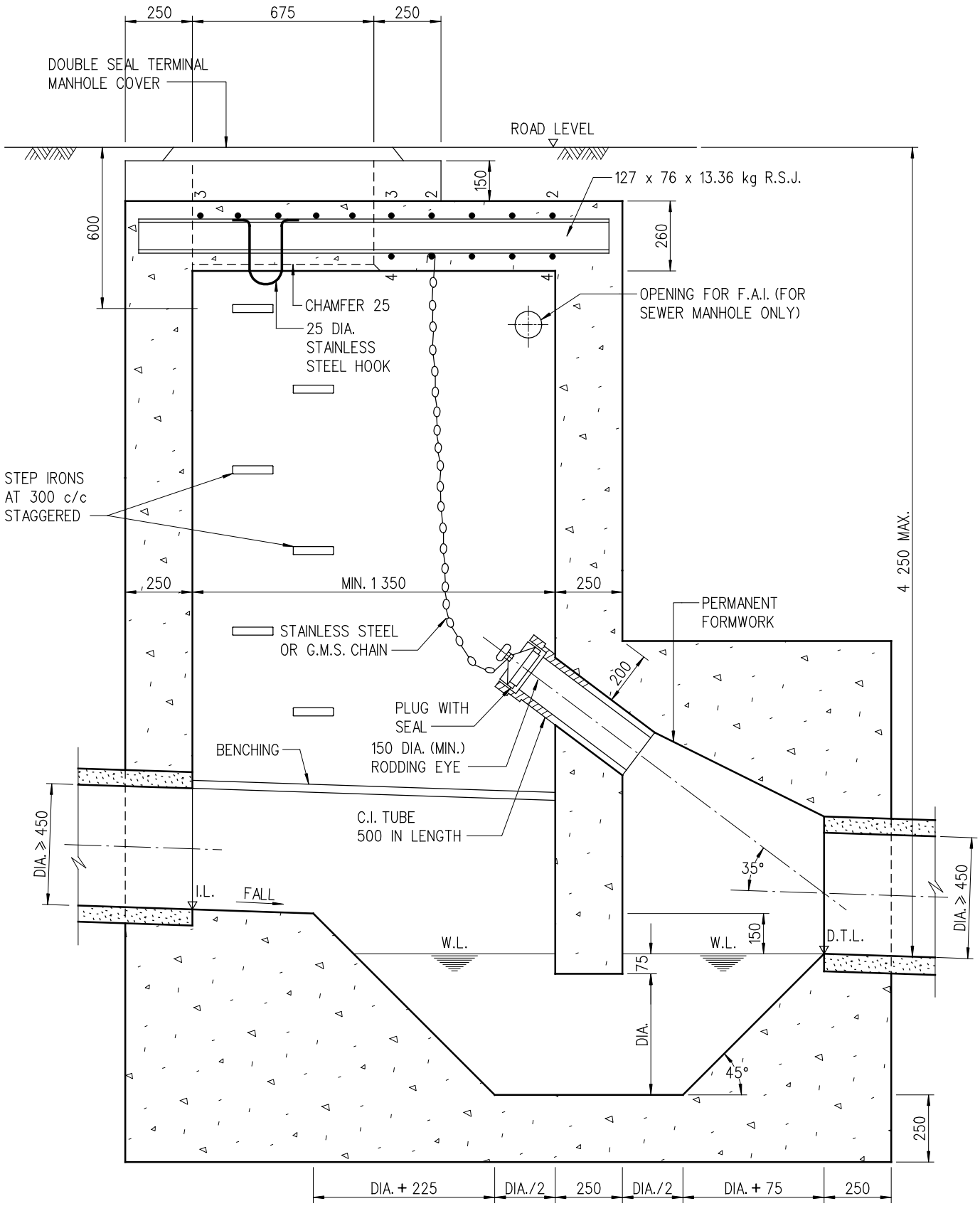
1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. NOTATION OF REINFORCEMENT : THE SEQUENCE OF DESCRIPTION OF IDENTIFICATION MARKS ON DRAWINGS FOR STEEL REINFORCING BARS FOR CONCRETE WORK IS AS FOLLOWS (NUMBER, TYPE, SIZE, MARK, SPACING, LOCATION OR COMMENT)
3. B DENOTES GRADE 500B RIBBED REINFORCEMENT.
4. R DENOTES GRADE 250 PLAIN REINFORCEMENT.
5. PIPE DIAMETER : EQUAL OR GREATER THAN 450 mm
6. NORMAL RANGE OF DEPTH : 1 750 TO 4 250 mm (MEASURED FROM ROAD LEVEL TO LOWEST INVERT)
7. USED IN : STORMWATER DRAIN AND SEWER
8. JUNCTION : POSITION OF JUNCTION TO BE DETERMINED IN EACH INDIVIDUAL CASE. CHANNELS IMMEDIATELY UNDER ACCESS TO MANHOLE SHOULD BE AVOIDED.
9. TOP TREATMENT : SEE DRAWING No. DS 1032
10. STEP IRON : SEE DRAWING No. DS 1043
11. FOUNDATION : FOUNDATION OF MANHOLE VARIES WITH SITE CONDITION. THEREFORE, IT SHOULD BE DETERMINED ON SITE BY THE ENGINEER.
12. CONCRETE MIX : GRADE 30/20
13. DIAMETER OF F.A.I. NORMALLY 100 mm
14. MINIMUM COVER AT END OF BARS 40 mm
15. COVER AND FRAME NOT SHOWN ON PLAN FOR CLARITY.

	NEW ISSUE	ORIGINAL SIGNED	13.1.2016
REV.	DESCRIPTION	SIGNATURE	DATE

TERMINAL MANHOLE TYPE T2_1

DRAINAGE SERVICES DEPARTMENT

REFERENCE	DRAWING No.
SCALE 1 : 20	DS 1091 (SHEET 1 OF 3)



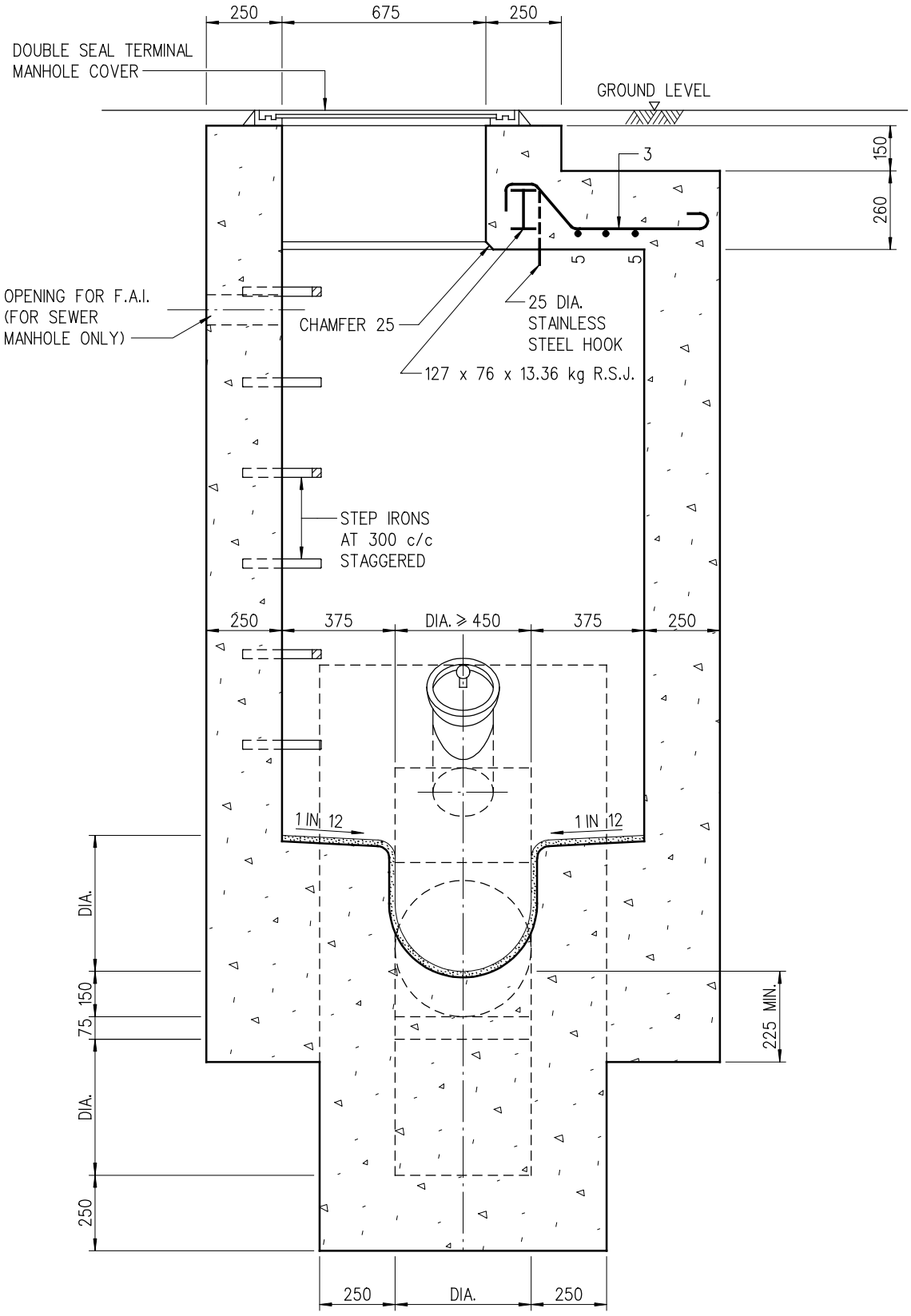
SECTION A-A

REV.	DESCRIPTION	SIGNATURE	DATE
	NEW ISSUE	ORIGINAL SIGNED	13.1.2016

TERMINAL MANHOLE TYPE T2_1

DRAINAGE SERVICES DEPARTMENT

REFERENCE	DRAWING No.
SCALE 1 : 20	DS 1091 (SHEET 2 OF 3)



SECTION B-B

REV.	DESCRIPTION	SIGNATURE	DATE
	NEW ISSUE	ORIGINAL SIGNED	13.1.2016

TERMINAL MANHOLE TYPE T2_1

DRAINAGE SERVICES DEPARTMENT

REFERENCE

SCALE 1 : 20

DRAWING No. DS 1091 (SHEET 3 OF 3)

Assessment of Hydraulic Capacities of the Proposed Peripheral Channels for 1 in 50 year design return period

Using Rational Method

Design Flow = 0.278CiA m^3/s for grassland (heavy soil) - steep, C = 0.35 for grassland (heavy soil) - flat, C = 0.25
for concrete surface, C = 0.95

Using Manning Equation (for channel flow)

Design Mean Velocity = $R^{1/6}/n(RS_f)^{1/2}$ where n = 0.016 for concrete-lined open channel with fair surface
0.045 for natural stream channels, winding some pools and shoals with some weeds and stones with fair surface
(ref. Table13 in SDM)

Using GEV distribution model in frequency analysis

Rainfall intensity = $a / (t_d+b)^c$ where a = 505.5 , b= 3.29 and c= 0.355 in 50 year design return period (for 'Main Rural Catchment Drainage Channel' in SDM is adopted)
referenced from Table 3a in SDM Corrigendum No. 1/2022 - Storm Constants for Different Return Periods of HKO Headquarters

Using Bransby William's Equation

Inlet time t_0 = $0.14465L/ (H^{0.2}A^{0.1})$ or 2 when the distance is too short

Using Colebrook's White Equation (for pipe flow)

V = - Sqt (8gDs) x log [(k_s / 3.7D) + (2.51v / D x Sqt (2gDs))]
For precast concrete pipes with 'O' ring joints with poor condition,
k_s (mm) = 0.6 k_s (m) = 0.0006
v (m^2/s) = 1.00E-06
g (m^2/s) = 9.81

(1) USCP/USMH	(2) DSCP/DSMH	(3) Collected Runoff from Catchment (refer to Figure D3 and D4)	(4) USGL (mPD)	(5) DSGL (mPD)	(6) USIL (mPD)	(7) DSIL (mPD)	(8) INVERT DIFF. (m)	(9) LENGTH OF CHANNEL / DRAIN l (m)	(10) SLOPE s	(11) SLOPE 1 IN	(12) LENGTH FOR CALCULATION OF INLET TIME L (m)	(13) AVERAGE SLOPE OF GROUND FOR CALCULATION OF INLET TIME H (m per 100m)	(14) INLET TIME t_0 (min) = 0.14465 x [L/($H^{0.2}$ x $A^{0.1}$)]	(15) TIME OF FLOW INSIDE CHANNEL/ DRAIN t_f (min) = l/V (i.e. Column (9) ÷ Column (26) ÷ 60)	(16) TIME OF CONCENTRATION t_c (min) = t_0 + t_f	(17) RAINFALL INTENSITY i (mm/hr)	(18) RAINFALL INTENSITY INCLUDING EFFECT OF CLIMATE CHANGE (+16.0%*) (mm/hr) [refer to item (e) and (k) in SDM Corrigendum No. 1/2022]	(19) ADOPTED RAINFALL INTENSITY INCLUDING EFFECT OF CLIMATE CHANGE (+16.0%) & DESIGN ALLOWANCE (12.1%) (mm/hr) [refer to item (e), (k) and (n) in SDM Corrigendum No. 1/2022]	(20) RUNOFF COEF. C	(21) SUB-CATCHMENT AREA A (m^2)	(22) EFFECTIVE CATCHMENT AREA (m^2)	(23) CUM. EFFECTIVE CATCHMENT AREA (m^2)	(24) DESIGN FLOW (m^3/s)	(25) SIZE (mm)	(26) CHANNEL TYPE	(27) VELOCITY (m/s)	(28) FLOW CAPACITY (m^3/s)	(29) 90% FLOW CAPACITY (m^3/s) (to cater for potential deposition of sediment)	(30) SPARE CAPACITY (m^3/s)	(31) Occupancy of the Proposed Pipe / Channel	
Point A	CP1	30,946m^2	6.50	6.50	5.75	5.31	0.44	44.00	0.010	100	290.00	29.48	7.58	0.29	7.87	214.69	249.04	279.17	0.35	30,946	10,831	10,831	0.841	750	UC	2.55	1.28	1.15	0.311	73.0%	OK!
CP1	CP2	ditto	6.50	6.50	5.31	5.08	0.23	23.00	0.010	100	-	-	7.87	0.15	8.02	213.67	247.86	277.85	0.35	0	0	10,831	0.837	750	UC	2.55	1.28	1.15	0.315	72.6%	OK!
CP2	CP3	ditto	6.50	6.50	5.08	4.82	0.26	26.00	0.010	100	-	-	8.02	0.17	8.19	212.54	246.55	276.38	0.35	0	0	10,831	0.832	750	UC	2.55	1.28	1.15	0.320	72.2%	OK!
Point B	CP4	6,752m^2	6.50	6.50	5.90	5.72	0.19	37.00	0.005	200	140.00	38.93	4.03	0.40	4.43	244.71	283.86	318.21	0.35	6,752	2,363	2,363	0.209	600	UC	1.55	0.50	0.45	0.240	46.5%	OK!
CP4	CP5	ditto	6.50	6.50	5.72	5.70	0.02	3.00	0.005	200	-	-	4.43	0.03	4.46	244.35	283.44	317.74	0.35	0	0	2,363	0.209	600	UC	1.55	0.50	0.45	0.240	46.5%	OK!
CP5	CP6	ditto	6.50	6.50	5.70	5.64	0.06	12.00	0.005	200	-	-	4.46	0.13	4.59	242.92	281.79	315.89	0.35	0	0	2,363	0.208	600	UC	1.55	0.50	0.45	0.242	46.2%	OK!
Point C	CP6	ditto	6.50	6.50	5.90	5.77	0.13	26.00	0.005	200	-	-	4.59	0.28	4.87	239.94	278.33	312.01	0.35	0	0	2,363	0.205	600	UC	1.55	0.50	0.45	0.244	45.6%	OK!
Point D	CP7	3,883m^2	6.50	6.50	6.05	5.95	0.11	21.00	0.005	200	100.00	58.50	2.81	0.27	3.08	262.00	303.92	340.69	0.35	3,883	1,359	1,359	0.129	450	UC	1.28	0.23	0.21	0.080	61.7%	OK!
CP7	CP8	ditto	6.50	5.30	5.95	4.85	0.19	38.00	0.005	200	-	-	3.08	0.49	3.57	255.14	295.96	331.77	0.35	0	0	1,359	0.125	450	UC	1.28	0.23	0.21	0.083	60.1%	OK!
Point E	CP9	1,932m^2	5.30	5.30	4.85	4.75	0.11	21.00	0.005	200	63.00	58.25	1.90	0.27	2.17	276.71	320.98	359.82	0.35	1,932	676	676	0.068	450	UC	1.28	0.23	0.21	0.141	32.4%	OK!
Point F	CP9	ditto	5.30	5.30	4.85	4.78	0.07	14.00	0.005	200	82.00	47.20	2.57	0.18	2.76	266.86	309.56	347.01	0.35	1,932	676	676	0.065	450	UC	1.28	0.23	0.21	0.143	31.3%	OK!
Point G	TM	223m^2	5.30	5.30	5.08	4.88	0.20	20.00	0.010	100	10.00	1.00	0.84	0.29	1.13	298.16	345.87	387.72	0.35	223	78	78	0.008	225	UC	1.14	0.05	0.05	0.038	18.1%	OK!
Point H	CP10	nominal	6.50	6.50	6.28	5.88	0.40	79.00	0.005	200	-	-	2.00	1.63	3.63	254.38	295.08	330.78	0.95	0	0	0	0.000	225	UC	0.81	0.04	0.03	0.033	0.0%	OK!
CP10	CP11	nominal	6.50	6.50	5.88	5.75	0.14	27.00	0.005	200	-	-	3.63	0.56	4.19	247.48	287.08	321.81	0.95	0	0	0	0.000	225	UC	0.81	0.04	0.03	0.033	0.0%	OK!
Point I	CP12	nominal	6.50	7.00	6.28	5.99	0.29	57.00	0.005	200	-	-	2.00	1.18	3.18	260.58	302.27	338.85	0.95	0	0	0	0.000	225	UC	0.81	0.04	0.03	0.033	0.0%	OK!
Point J	CP13	nominal	7.00	5.30	6.78	5.08	0.23	46.00	0.005	200	-	-	2.00	0.95	2.95	263.91	306.13	343.17	0.95	0	0	0	0.000	225	UC	0.81	0.04	0.03	0.033	0.0%	OK!
CP13	TM	nominal	5.30	5.30	5.08	4.77	0.31	61.00	0.005	200	-	-	2.95	1.26	4.21	247.24	286.80	321.50	0.95	0	0	0	0.000	225	UC	0.81	0.04	0.03	0.033	0.0%	OK!
TM	Proposed outfall	43736 m^2 + Application Site area	5.30	5.30	3.30	3.29	0.01	2.00	0.005	200	-	-	8.19	0.01	8.20	212.46	246.45	276.27	0.95	12,692	12,057	27,365	1.875	1100	pipe	2.50	2.38	2.14	0.267	87.5%	OK!

catchment	m^2	
A1	30,946	grassland (heavy soil) - steep
A2	6,752	grassland (heavy soil) - steep
A3	3,883	grassland (heavy soil) - steep
A4	1,932	grassland (heavy soil) - steep
A5	223	grassland (heavy soil) - steep
The Site	12,692	hardpaved
total	56,428	

ARUP

Appendix H

Revised Sewage Treatment and Disposal Proposal Report

Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" and Area Shown as "Road" to "Residential (Group C)5" for Proposed Residential Development at Various Lots in D.D. 210 and Adjoining Government Land, Pak Wai, Sai Kung

(HT21130)

Sewage Treatment and Disposal Proposal (STDP) Report

(rev. 4)

May 2026

Sewerage & Sewage Treatment Consultant:

何田顧問工程師有限公司
HO TIN & ASSOCIATES
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Content

1. Introduction
2. General Site Description and the Subject Proposed Development
3. Existing Sewerage System
4. Proposed Sewage Disposal Arrangement
5. Design Sewage Flows and Criteria
6. Estimated Peak Sewage Flows
7. Proposed Sewage Treatment
8. Conclusion

FIGURES

Figure S1 Site Location Plan
Figure S2 Proposed Sewerage Management Plan

TABLES

Table 1 Unit Flow Factors for Domestic Flows
Table 2 Unit Flow Factors of Commercial Flows from General Operation
Table 3 Peaking Factors, P (Extracted from GESF)
Table 4 Estimated Sewage Flow from Swimming Pool
Table 5 Summary of Estimated Sewage from the Subject Proposed Development

List of Abbreviations

EPD	Environmental Protection Department
GESF	EPD's Report No. EPD/TP 1/05 - Guidelines for Estimating Sewage Flows for Sewage Infrastructure Planning
GDSSTP	EPD's Guidelines for the Design of Small Sewage Treatment Plants (Dec 2024)
HTA	Ho Tin & Associates Consulting Engineers Limited
OZP	Outline Zoning Plan
ADWF	Average Dry Weather Flow
PDWF	Peak Dry Weather Flow

1. Introduction

1.1 Ho Tin & Associates Consulting Engineers Limited (HTA) has been appointed by the client to prepare a Sewage Treatment and Disposal Proposal (STDP) Report in support of an application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" and Area Shown as "Road" to "Residential (Group C)5" for Proposed Residential Development at Various Lots in D.D. 210 and Adjoining Government Land, Pak Wai, Sai Kung.

1.2 This report presents a technically feasible STDP for the subject proposed residential development under application.

1.3 The objectives of this STDP are to:-

- indicate any changes/increase in the sewage flow due to the subject proposed development scheme under application;
- assess any potential sewage impacts of the subject proposed development on the existing sewerage facilities; and
- propose mitigation measures and sewage treatment and disposal proposal to avoid any potential adverse environmental impact.

1.4 The scope of this STDP includes:-

- general site description;
- identification of existing sewerage facilities for the concerned area;
- estimation of sewage flow of the subject proposed development;
- feasibility of connection with existing public sewerage facilities; and
- proposal of sewage treatment and disposal to cater for sewage flow generated by the subject proposed development if found necessary.

2. General Site Description and the Subject Proposed Development

2.1 The subject site is currently zoned "Green Belt" and area shown as "Road" on the Approved Ho Chung Outline Zoning Plan No. S/SK-HC/13 (the OZP). It is located in the northwest side of Marina Cove on the opposite side of Hiram's Highway at Pak Wai, Sai Kung. It is currently occupied by botanical gardens, temporary structures and an access road. A site location plan is shown in **Figure S1**.

2.2 It is proposed to change the land use of the subject site to "Residential (Group C)5" with a plot ratio of 0.6 and maximum building heights of 4 storey (excluding basements). The proposed rezoning development covers a site area of about 12,692m^2 with a total GFA of about 7,615.2m^2. The designed total population is about 288 persons, and a total of 10 nos. of management staff is presumed in the sewage estimation. [Remark: The designed total population of about 288 persons is explained in the Planning Statement. In estimating the numbers of management staff, 1 staff is allowed for each residential block (total 4 blocks) with 6 staff are allowed for the rest of the area. Hence, a total of 10 staff is presumed.]

2.3 The proposed vehicular ingress/egress point of the subject site abuts on the west side of Hing Keng Shek Road after exit from the roundabout of Hiram's Highway at Pak Wai.

3. Existing Sewerage System

3.1 At present, there is no existing public sewers in the subject area or its vicinity.

4. Proposed Sewage Disposal Arrangement

4.1 Since there is no existing public sewers in the concerned area for connection, discharging sewage generated by the subject proposed development into public sewers in not feasible at least by the time of anticipated occupation of the subject proposed development, i.e. Year 2031. Therefore, an on-site sewage treatment plant is required until connection to public sewers can be carried out.

4.2 The subject site falls within Port Shelter catchment area where tidal flow is restricted. The subject proposed development shall be equipped with suitable on-site sewage treatment facility with treatment standards to handle the sewage generated from the proposal.

4.3 Sewage from the residential flats will be collected and carried down to the ground level via downpipes. Branch sewerage will be laid close to the blocks to receive sewage flows from the downpipes directly. The branch sewerage will then discharge into the trunk sewerage which will be laid running underneath the main access road. The trunk sewerage will collect and convey all sewage generated by the subject proposed development to an on-site sewage treatment plant located at the west of the subject site.

A proposed sewerage management plan is shown in **Figure S2**.

4.4 All future treated effluent discharge shall comply with the Water Pollution Control Ordinance (Cap. 358). A licence granted under the Water Pollution Control Ordinance should be obtained before a new discharge is commenced.

4.5 All collected sewage will be treated in the proposed sewage treatment plant. The treated effluent shall comply with the mandatory standards and requirements in the TM-DSS, and will be discharged into the proposed stormwater drainage system of the subject proposed development and from which be discharged to the existing watercourse outside the subject site.

5. Design Sewage Flows and Criteria

5.1 General Criteria

5.1.1 The sewage flow generated from the subject proposed development for assessing sewers is estimated in accordance with the EPD's report No. EPD/TP 1/05 – "Guidelines for Estimating Sewage Flows for Sewage Infrastructure Planning" (GESF) and the Sewerage Manual Part 1 published by DSD (SM). For proposed on-site sewage treatment plant (STP), EPD's Guidelines for the Design of Small Sewage Treatment Plants (GDSSTP) is adopted.

5.2 Design Population

5.2.1 It is explicitly stated in the subject planning application statement that the design population will be about 288 persons plus 10 management staff. These design parameters are adopted in this STDP.

5.3 Unit Flow Factors

5.3.1 Unit flow factors as recommended in the Table T-1 and T-2 in GESF are adopted to estimate the total sewage flow generated from the subject proposed development.

5.3.2 The unit flow factors for domestic flows adopted for this study are summarized in **Table 1** below.

Table 1 : Unit Flow Factors for Domestic Flows

Development Type	Unit	Unit Flow Factor (m^3/day)
Private R3	Person	0.370

5.3.3 The unit flow factors for commercial flows, i.e. from the management staff, adopted in this study are summarized in **Table 2** below.

Table 2 : Unit Flow Factors (UFF) of Commercial Flow from General Operation (referenced to GESF's Table T-2)

Description	Specific Trades	Unit (per)	Unit Flow Factors (m^3/day)
Commercial Employee	Not applicable	Employee	0.080
Commercial Activities	J11 (Community, Social and Personal Services)	Employee	0.200

5.4 Peaking Factors

5.4.1 In this assessment, contributing population is calculated as follows:

Contributing Population = (Calculated total average flow/ 0.27) persons
= 109.30/0.27 = 405 persons

5.4.2 The contributing population is <1,000, and the proposed sewers of the subject development would be newly constructed hence infiltration and inflow in the sewerage system would be negligible. Therefore, a peaking factor of 6 as given in Table T-5 in the GESF and listed in below **Table 3** is applicable for the design of internal sewers of the subject development.

Table 3 : Peaking Factors, P (Extracted from GESF)

Population Range for sewers	Peaking Factor (including stormwater allowance) for facility with existing upstream sewerage	Peaking Factor (excluding stormwater allowance) for facility with new upstream sewerage
<1,000	8	6

5.4.3 For STP, with reference to GDSSTP, the design peaking factor would be

- 6 for population equal to or under 1,000
- 4 for population over 1000 but not less than that based on 1000 population.

6. Estimated Peak Sewage Flows

6.1 The design population of the proposed development is about 288 persons plus 10 employee. Tentatively, a 15m x 25m x 1.2m (average water depth) swimming pool is proposed. A daily design flow of sewage generated from the backwashing is estimated to be approximately 17.5 m^3/day in accordance with the general operation of backwashing as shown in **Table 4** below.

Table 4 : Estimated Sewage Flow from Swimming Pool

Description	
Pool Area	15m x 25m = 375 m^2
Pool Depth	1.2 m
Pool Volume	375 x 1.2 = 450.0 m^3
Turnover Rate	6 hrs
Surface Loading Rate of Filter	25 $m^3/m^2/hr$
Filter Areas Required	450.0 / 6 / 25 = 3.0 m^2
Backwash Flow Rate	50 $m^3/m^2/hr$
Backwash Duration	7 min/day
Instantaneous Backwash Flow Rate	50 x 3.0 = 150.0 m^3/hr (or 0.041667 m^3/s)
Daily Design Flow of Swimming Pool	50 x 3.0 x 7 / 60 = 17.5 m^3/day

6.2 The estimated total sewage flow generated from the proposed development are summarized in **Table 5** below.

Table 5 : Summary of Estimated Sewage from the Subject Proposed Development

Development Type	Population (number of people)	Unit Flow Factors (m^3/day)	Catchment Inflow Factors	Peaking Factor	ADWF(1) (m^3/s)	PDWF(2) (m^3/s)
Domestic	288	0.370	Referenced to para. 10.1 of the GESF – 'not applicable to new catchments which are deemed to be free from misconnect-ions and pipe defects'	6	0.001233	0.007400
J11 (Community, Social and Personal Services)	10	0.280		6	0.000032	0.000192
Swimming Pool	/	/		/	/	0.041667
				Total	0.001265 (109.30 m^3/day, excluding swimming pool)	0.049259

Notes:

(1) ADWF – Average dry weather flow, which is equivalent to population x unit flow factor x catchment inflow factor / (60 x 60 x 24)

(2) PDWF – Peak dry weather flow, which is equivalent to ADWF x Peaking Factor

6.3 The peak total dry weather flow generated from the subject proposed development is estimated to be 0.049259 m^3/s and the daily total sewage generated (including the swimming pool) is about (109.30 + 17.50) m^3/day = 126.80 m^3/day.

7. Proposed Sewage Treatment

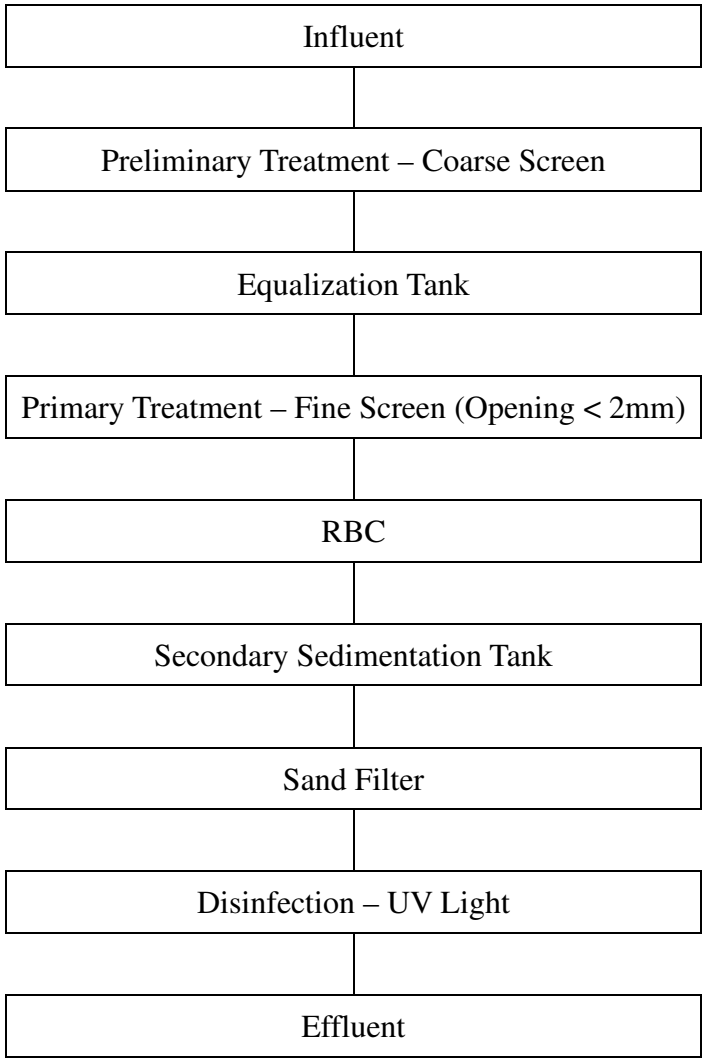
7.1 It is proposed to construct an on-site secondary sewage treatment plant (STP) as an interim measure to cater for the sewage generated from the subject proposed development. The plant will be abandoned after connection to public sewer is possible and acceptable to the authority. The STP will only be decommissioned after the sewer connection is satisfactorily completed.

7.2 The treated effluent will be discharged into the existing watercourse via the proposed stormwater system of the subject development. Effluent discharge will comply with the

standards stipulated in the TM-DSS and be discharged into proposed stormwater drainage system.

7.3 Incoming sewage will pass through a coarse screen before discharging into the equalization tank. The sewage will be pumped to the fine screen chamber to prevent any sizeable solid and minimize the organic solid content into the RBC system. The mixed liquor will then be discharged to the final sedimentation tank. Sludge from the sedimentation tanks will be dewatered by mechanical dewatering unit such as filter press. The dewatering sludge will then be disposed off by land burial to the designated site by a licensed contractor. The secondary treated sewage will pass the sand filter before disinfection process is carried out.

7.4 A flow chart of the proposed sewage treatment system is given below:



7.5 It is realized that on-site sewage treatment plants shall only be the last resort for any sewage treatment and disposal proposal, i.e. whenever sewer connection is not practicable. The pumping station within STP shall be capable of delivering the sewage from the development to the public sewer, when available, and the STP can then be abandoned when public sewer is available. It is envisaged to have no technical problem on sewage treatment process design.

7.6 The communal treatment plant serving the whole development is proposed to be located at the southern end near the entrance of the subject site. Sewage after treatment will be discharged into the stormwater drainage of the subject site and from with the flow will be discharged via a stormwater terminal manhole into the existing watercourse running along the southern boundary of the subject site. The location of the STP has been selected with due consideration given to minimization of potential sewer, odour, noise and safety problems to the residents. The design standards and criteria will comply with the latest version of "Guidelines for the Design of Small Sewage Treatment Plants" (December 2024) published by EPD.

7.7 If on-site STP is to be constructed, the following action will be taken in order to avoid possible nuisance:

(a) The STP shall be fully enclosed by a concrete structure and equipped with deodorizing units at the ventilation and exhaust system.

(b) Ventilation exhaust pipes will be taken to suitable height and locations above the roof of the building at which the STP is located or else odour treatment or masking facilities may be provided (e.g. activated carbon, peat filters etc.) and away from neighbouring premises. It is recognized that odour from sewage treatment plants mainly originates form bad management. Fresh sewage is odourless and it is important that sewage should not be allowed to be accumulated in the inlet works which must be hosed down as frequent as possible to prevent any accumulation of sewage solids that will eventually become septic.

(c) The other source of odour in treatment plants is the sludge dewatering house. Odour will result from the exposed storage of sludge and the accumulation of sludge particles on floors which turn septic. Hence, the sludge dewatering house must be kept clean at all times and sludge storage bags be tied up as soon as they are full or drums be covered.

(d) All openable windows for ventilation, fresh air intake, and other planned outdoor locations for air sensitive uses of the proposed development should be located outside of the buffer regions to avoid potential air quality impact.

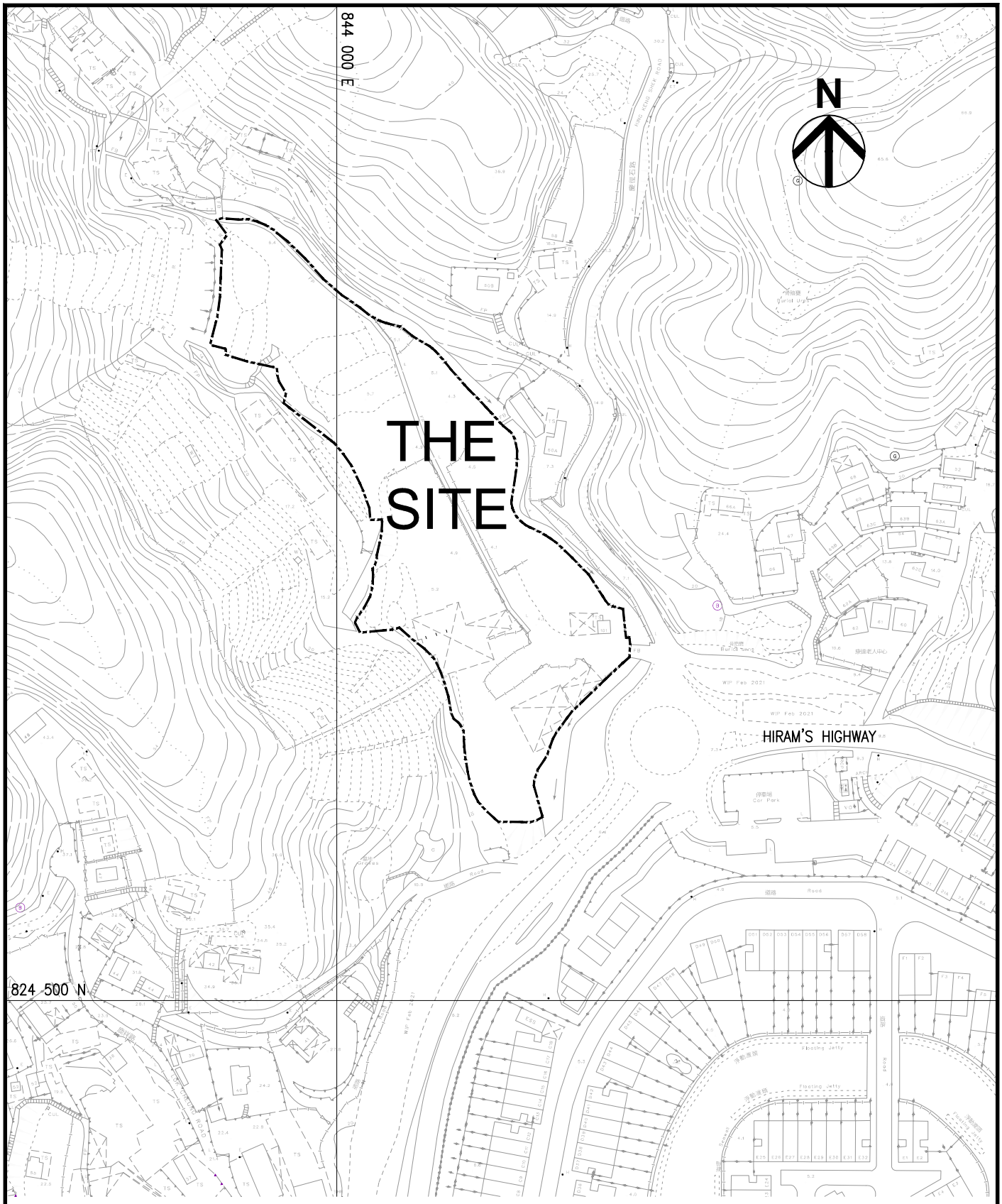
(e) Noise should not be problem since the selection of units will avoid the use of motors of high revolution. Air blowers too, will not be used. Instead, quiet machines such as submersible pumps and ejectors will be favoured. Particular attention shall be paid to the selection of exhaust fans and the design of intake and exhaust grills to prevent whistling noises.

8. Conclusion

8.1 Sewage generated from the proposed development will be properly treated by an on-site sewage treatment plant. The treated effluent will be discharged to nearby watercourse.

8.2 All future treated effluent discharge shall comply with the Water Pollution Control Ordinance (Cap. 358). A licence granted under the Water Pollution Control Ordinance should be obtained before a new discharge is commenced.

8.3 In conclusion, the subject proposed development would not impose any adverse sewerage impact.



LEGEND:

SUBJECT SITE BOUNDARY

PROJECT: APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A OF THE TOWN PLANNING ORDINANCE (CAP.131) TO REZONE THE APPLICATION SITE FROM "GREEN BELT" AND AREA SHOWN AS "ROAD" TO "RESIDENTIAL (GROUP C)5" FOR PROPOSED RESIDENTIAL DEVELOPMENT AT VARIOUS LOTS IN D.D.210 AND ADJOINING GOVERNMENT LAND, PAK WAI, SAI KUNG	何田顧問工程師有限公司 HO TIN & ASSOCIATES CONSULTING ENGINEERS LIMITED	
TITLE: SITE LOCATION PLAN	SCALE: 1 : 2000 – A4	DRAWING No.: FIGURE S1

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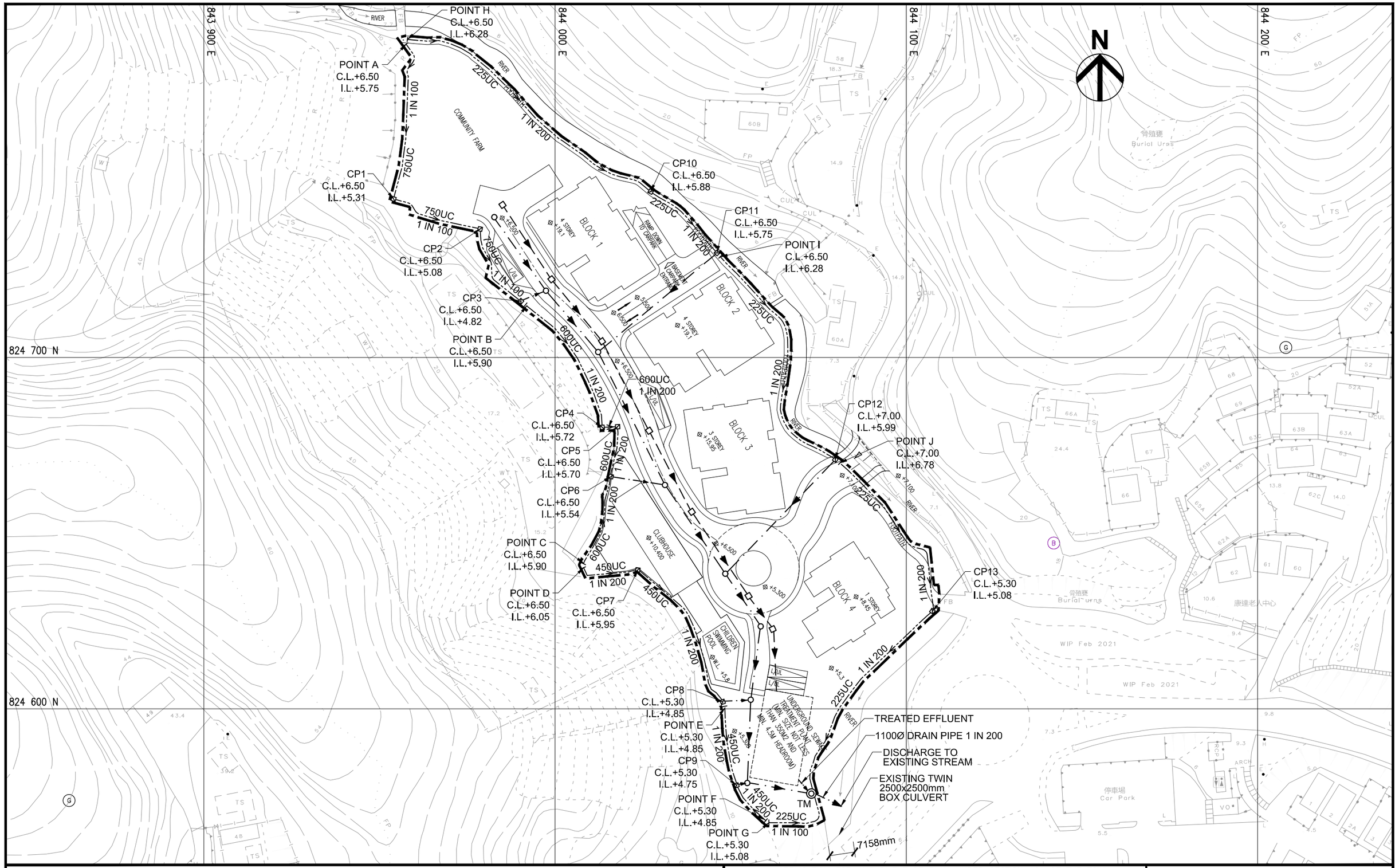

LEGEND:

- SUBJECT SITE BOUNDARY
- 4.100 PROPOSED GROUND LEVEL
- PROPOSED STORMWATER TERMINAL MANHOLE
- PROPOSED STORMWATER DRAIN & MANHOLE
- PROPOSED U-CHANNEL & CATCH PIT
- PROPOSED SEWER & MANHOLE

PROJECT	APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A OF THE TOWN PLANNING ORDINANCE (CAP.131) TO REZONE THE APPLICATION SITE FROM "GREEN BELT" AND AREA SHOWN AS "ROAD" TO "RESIDENTIAL (GROUP C)5" FOR PROPOSED RESIDENTIAL DEVELOPMENT AT VARIOUS LOTS IN D.D.210 AND ADJOINING GOVERNMENT LAND, PAK WAI, SAI KUNG
TITLE	SEWERAGE MANAGEMENT PLAN
SCALE	1 : 1000 – A3
DRAWING No.	FIGURE S2

何田顧問工程師有限公司
HO TIN & ASSOCIATES
CONSULTING ENGINEERS LIMITED

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ARUP

Appendix I

Revised Environmental Assessment

Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" and Area Shown as "Road" to "Residential (Group C)5" for Proposed Residential Development at Various Lots in D.D. 210 and Adjoining Government Land, Pak Wai, Sai Kung

Environmental Assessment

(v4.2)

April 2026

Approved By _____

(Project Manager: Mr. KS Lee)

REMARKS:

The information supplied and contained within this report is, to the best of our knowledge, correct at the time of printing.

CINOTECH accepts no responsibility for changes made to this report by third parties.

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TABLE OF CONTENTS

1. INTRODUCTION 1

1.1 PROJECT BACKGROUND 1

2. PROJECT DESCRIPTION 1

2.1 DESCRIPTION OF THE EXISTING SITE & ITS ENVIRONS 1
2.2 PROPOSED DEVELOPMENT 1
2.3 SCOPE OF STUDY 1

3. AIR QUALITY IMPACT 3

3.1 INTRODUCTION 3
3.2 LEGISLATIONS, STANDARDS AND GUIDELINES 3
3.3 BACKGROUND AIR QUALITY 6
3.4 STUDY AREA & AIR SENSITIVE RECEIVERS 9
3.5 CONSTRUCTION PHASE AIR QUALITY IMPACT IDENTIFICATION & EVALUATION 10
3.6 OPERATION PHASE AIR QUALITY IMPACT IDENTIFICATION & EVALUATION 13
3.7 MITIGATION MEASURES 14
3.8 CONCLUSION 14

4. NOISE IMPACT ASSESSMENT 16

4.1 INTRODUCTION 16
4.2 LEGISLATIONS, STANDARDS AND GUIDELINES 16
4.3 NOISE SENSITIVE RECEIVERS & REPRESENTATIVE NOISE ASSESSMENT POINTS 17
4.4 CONSTRUCTION NOISE IMPACT ASSESSMENT 18
4.5 FIXED NOISE IMPACT IDENTIFICATION & EVALUATION 19
4.6 TRAFFIC NOISE IMPACT IDENTIFICATION & EVALUATION 21
4.7 CONCLUSION 22

5. WATER QUALITY IMPACT 23

5.1 LEGISLATIONS, GUIDELINES AND REQUIREMENTS 23
5.2 WATER QUALITY SENSITIVE RECEIVERS 26
5.3 IMPACT IDENTIFICATION & EVALUATION 27
5.4 MITIGATION MEASURES 28
5.5 CONCLUSION 31

6. WASTE MANAGEMENT CONSIDERATION 32

6.1 LEGISLATIONS AND REQUIREMENTS 32
6.2 WASTE MANAGEMENT FOR CONSTRUCTION PHASE 33
6.3 WASTE MANAGEMENT FOR OPERATION PHASE 36
6.4 CONCLUSION 37

7. LAND CONTAMINATION ASSESSMENT 38

7.2 REVIEW OF HISTORICAL LAND USES 38
7.3 EPD AND FSD ON LAND CONTAMINATION RELATED RECORDS 38
7.4 SITE VISIT 38
7.5 CONCLUSION 39

8. CONCLUSION 40

LIST OF TABLES

Table 3-1 Guidelines on Usage of Open Space Site 4
Table 3-2 Hong Kong Air Quality Objectives (2025) 5
Table 3-3 Average Concentrations of Pollutants in the Recent Five Years (Year 2020 - 2024) at Tseung Kwan O Air Quality Monitoring Station 7
Table 3-4 Predicted Background Ground Level Air Quality of PATH Grid [47,38], [48,38], [47,37], and [48,37] in Year 2030 8
Table 3-5 Predicted Background Air Quality of Grid [48, 38] of PATH on Year 2030 9
Table 3-6 Nearby Representative Air Sensitive Receivers for Construction Phase 10
Table 3-7 Planned Air Sensitive Receivers of Proposed Development 10
Table 3-8 Summary of Construction Works 11
Table 3-9 List of Planned Development in the Vicinity 11
Table 4-1 Acceptable Noise Levels for different Area Sensitivity Ratings (ASRs) 17
Table 4-2 HKPSG Road Traffic Noise Planning Criteria 17
Table 4-3 List of Representative Noise Sensitive Receivers in the Vicinity 17
Table 4-4 Representative Noise Sensitive Receivers at nearby development for Fixed Plant Noise Assessment 20
Table 4-5 Allowable Sound Power Level for the Building Service Equipment of the Proposed Development 21
Table 4-6 Summary of Traffic Noise Level (Base Scenario) 22
Table 5-1 Water Quality Objectives 23
Table 5-2 Standard for effluent discharged into the inland water (Group D) 25
Table 5-3 List of Representative Water Quality Sensitive Receivers 27
Table 6-1 Estimated Quantities of C&D materials to be Generated, Reused and Disposed of 34
Table 7-1 Summary of Response from Government Department 38

LIST OF FIGURES

Figure 2-1 Site Location Plan
Figure 3-1 500m Assessment Area for AQIA
Figure 3-2 Representative Air Sensitive Receivers for Construction Phase
Figure 3-3 Location of Planned ASRs of the Proposed Development
Figure 3-4 Planned Development in the Vicinity
Figure 3-5 Buffer Region for Road Traffic Emission
Figure 3-6 200m Buffer Region from Planned ASRs
Figure 4-1 Location of the Representative NSRs in the Vicinity
Figure 4-2a Location of the Assessment Points for Traffic Noise Impact Assessment (Overview)
Figure 4-2b Location of the Assessment Points for Traffic Noise Impact Assessment (Block 1)
Figure 4-2c Location of the Assessment Points for Traffic Noise Impact Assessment (Block 2)
Figure 4-2d Location of the Assessment Points for Traffic Noise Impact Assessment (Block 3)
Figure 4-2e Location of the Assessment Points for Traffic Noise Impact Assessment (Block 4)
Figure 5-1 Location of Representative WSRs

LIST OF APPENDICES

Appendix 2-1 Layout of Proposed Development
Appendix 3-1 TD's Confirmation on Road Type
Appendix 4-1 Allowable Sound Power Level for the Building Service Equipment of the Proposed Development
Appendix 4-2 Traffic Forecast for Traffic Noise Impact Assessment (Year 2046)
Appendix 4-3 Predicted Traffic Noise Level (Base Scenario)
Appendix 7-1 Aerial Photos
Appendix 7-2 Correspondences from EPD on Land Contamination Related Records
Appendix 7-3 Site Walkover Checklist
Appendix 7-4 Photo Record for Site Walkover

1. INTRODUCTION

1.1 Project Background

1.1.1 A residential development with clubhouse (the Proposed Development) is planned to be develop at various Lots in D.D. 210 Pak Wai, Sai Kung. The Applicant proposes to amend the *Approved Ho Chung Outline Zoning Plan* (OZP) No. S/SK-HC/13 by rezoning the Application Site from "Green Belt" ("GB") and area shown as "Road" to "Residential (Group C)5" ("R(C)5"), with a maximum plot ratio of 0.6 and maximum building heights of 4 storeys (excluding basements) to facilitate the Proposed Development.

1.1.2 The rezoning requires planning permission from Town Planning Board (TPB). The applicant seeks planning permission for the proposed use at the Application Site under Section 12A Planning Application ("the Application").

1.1.3 Cinotech Consultants Limited has been commissioned by the Project Proponent to prepare an Environmental Assessment (EA) report in supporting of the Application.

2. PROJECT DESCRIPTION

2.1 Description of the Existing Site & its Environs

2.1.1 The Proposed Development is located at the west side of the junction of Hiram's Highway and Hing Keng Shek Road. The Application Site is occupied by botanical gardens and temporary structures. It covers a portion of the footpath from Hiram Highway leading to the existing village to the north of the site. The Site location is illustrated in **Figure 2-1**.

2.1.2 The Proposed Development is located within an area dominated by residential development, while no commercial and industrial buildings are identified in the vicinity. The Site is surrounded by natural terrain to its north, east and west side, while low-rise residential development is identified between natural terrain at north and east side and the project site. To the south is low-rise residential buildings separated by Hiram's Highway.

2.2 Proposed Development

2.2.1 The Proposed Development, with site area of about 12,692m^2, provides total 96 residential units and 288 population, which consists of (1) basement carpark with 79 spaces; (2) a Swimming Pool; (3) four residential buildings with 4 storeys (Blocks 1 - 2), 3 storeys (Block 3) and 1 storey (Block 4) respectively. A tentative layout plan for the Proposed Development is illustrated in **Appendix 2-1.**

2.3 Scope of Study

2.3.1 This EA is prepared to assess the potential environmental impact associated with the implementation of the Proposed Development in support of the submission of the planning application. The assessment has been undertaken with reference to the guidance for environmental considerations provided in Chapter 9 "Environment" of the Hong Kong Planning Standards and Guidelines (HKPSG).

2.3.2 The key environmental issues with potential environmental impacts arising from the Proposed

Development are air quality, noise, water and waste management during construction phase and operational phase and land contamination.

2.3.3 The assessment has covered the following major aspects:

- Air Quality Impact Assessment
    - Construction Dust
    - Traffic Emission
- Noise Impact Assessment
    - Construction Noise
    - Fixed Noise Sources during Operation Phase
    - Traffic Noise Impact during Operation Phase
- Water Quality Impact during Construction Phase and Operational Phase
- Waste Management Implication
- Land Contamination Assessment

2.3.4 Drainage impact assessment and sewerage impact assessment shall be addressed in separated reports and thus not included in this EA report.

3. AIR QUALITY IMPACT

3.1 Introduction

3.1.1 This chapter identifies and evaluates potential air quality impact due to the Project during construction and operation phases, and recommends appropriate mitigation measures for the potential impact.

3.2 Legislations, Standards and Guidelines

3.2.1 The air quality impact assessment was carried out with reference to the Hong Kong Planning Standards and Guidelines (HKPSG) and the Air Pollution Control Ordinance (Cap.311) (APCO).

Minimum Buffer Distance

3.2.2 The minimum buffer distance from the emission sources (i.e. Roads and Highways, and Industrial Area) are recommended in the Hong Kong Planning Standards and Guidelines (HKPSG) and are summarized in **Table 3-1**.

Table 3-1 Guidelines on Usage of Open Space Site

Pollution Source	Parameter	Buffer Distance	Permitted Uses
Road and Highways	*Type of Road*		
	Trunk Road and Primary Distributor	>20m	Active and passive recreation uses
		3-20m	Passive recreational uses
	District Distributor	>10m	Active and passive recreation uses
		<10m	Passive recreational uses
	Local Distributor	>5m	Active and passive recreation uses
		<5m	Passive recreational uses
Industrial Area	*Difference in Height between Industrial Chimney Exit and the Site*		
	<20m	>200m	Active and passive recreation uses
		5-200m	Passive recreational uses
	20-30m (*)	>100m	Active and passive recreation uses
		5-100m	Passive recreational uses
	30-40m	>50m	Active and passive recreation uses
		5-50m	Passive recreational uses
	>40m	>10m	Active and passive recreation uses

Note:
1. In situations where the height of chimneys is not known, use the set of guidelines marked with an asterisk for preliminary planning purpose and refine as and when more information is available.
2. The buffer distance is the horizontal, shortest distance from the boundary of the industrial lot, the position of existing chimneys or the edge of road kerb, to the boundary of open space sites.
3. The guidelines are generally applicable to major industrial areas but NOT individual large industrial establishments which are likely to be significant air pollution sources. Consult EPD when planning open space sites close to such establishments.

Odour Source

3.2.3 According to HKPSG Chapter 9, small-scale community forms use, such as crematoria, livestock yards, stock wash areas, and wholesale fish and poultry markets, can cause significant odour impacts on the surrounding areas. Therefore, these uses should be situated away from urban centers. It is suggested that the buffer distance of at least 200 m should be generally provided for nearby sensitive uses.

Air Quality Objectives (AQO)

3.2.4 The Air Pollution Control Ordinance (APCO) provides the statutory authority for controlling air pollutants from a variety of sources. The Hong Kong Air Quality Objectives (AQO) stipulate the maximum allowable concentrations over specific periods for the criteria pollutants (**Table 3-2**).

Table 3-2 Hong Kong Air Quality Objectives (2025)

Pollutant	Averaging time	Concentration limit [1] (µg/m3)	Number of exceedances allowed per calendar year
Sulphur Dioxide (SO2)	10-minute	500	3
	24-hour	40[4]	3
Respirable suspended Particulates (RSP) [2]	24-hour	75[4]	9
	Annual	30[4]	Not applicable
Fine Suspended Particulates (FSP) [3]	24-hour	37.5[4]	18[4]
	Annual	15[4]	Not applicable
Nitrogen Dioxide (NO2)	1-hour	200	18
	24-hours [4]	120[4]	9 [4]
	Annual	40	Not applicable
Ozone (O3)	8-hour	160	9
	Peak season [4]	100[4]	Not applicable [4]
Carbon Monoxide (CO)	1-hour	30,000	0
	8-hour	10,000	0
	24-hours [4]	4,000[4]	0 [4]
Lead (Pb)	Annual	0.5	Not applicable

Note:
1. All measurements of the concentration of gaseous air pollutants, i.e., sulphur dioxide, nitrogen dioxide, ozone and carbon monoxide, are to be adjusted to a reference temperature of 293Kelvin and a reference pressure of 101.325 kilopascal.
2. Respirable suspended particulates mean suspended particles in air with a nominal aerodynamic diameter of 10 µm or less.
3. Fine suspended particulates mean suspended particles in air with a nominal aerodynamic diameter of 2.5 µm or less.
4. Amended/New criteria in the new AQO (AQO-2025).

Air Pollution Control (Construction Dust) Regulation

3.2.5 The regulation defines notifiable and regulatory works activities that are subject to construction dust control.

The Air Pollution Control (Fuel Restriction) Regulations

3.2.6 The regulation provides a statutory minimum requirement to restrict commercial and industrial processes to use ULSD (Ultra Low Sulphur Diesel) with a sulphur content of only 0.001%.

Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation

3.2.7 According to the regulation, Non-road Mobile Machinery (NRMMs) must adhere to the prescribed emission standards. Only NRMMs that have been approved or exempted and bear the appropriate label are permitted for use in specified activities and locations. These include construction sites, container terminals and backup facilities, restricted areas of the airport, designated waste disposal facilities, and specified processes.

Recommended Pollution Control Clauses for Construction Contracts

3.2.8 This guideline provides a list of relevant regulations/guidelines for contractors and general engineering practices aimed at minimizing inconvenience and environmental nuisance to nearby residents and other sensitive receivers.

ProPECC PN 2/96 - Control of Air Pollution in Car Parks

3.2.9 The practice note provides guidance on the control of air pollution in car parks including air quality guidelines required for the protection of public health; and factors that should be considered in the design and operation of car parks in order to achieve the required air quality.

Guidelines for the Design of Small Sewage Treatment Plants

3.2.10 This guideline provides general advice for practical design & installation and environmental considerations on the design of small sewage treatment plants for private development with up to 2,000 population, to minimize the potential odour impact.

3.3 Background Air Quality

Background Air Quality

3.3.1 EPD has been closely monitoring the air quality in Hong Kong through their air quality monitoring stations (AQMS). The Tseung Kwan O Air Quality Monitoring Station is the closest AQMS to the Proposed Development.

3.3.2 The monitoring results of Tseung Kwan O AQMS during year 2020-2024 are summarized in **Table 3-3**. The measured pollutant concentrations generally show no significant changes from 2020 - 2024.The concentration of reported pollutants in past five recent year have complied the criteria stipulated in AQO, besides annual FSP in Year 2023 and Ozone.

3.3.3 It should be noted that Tseung Kwan O AQMS is located within high density residential area which is about 4.5km from the Proposed Development. On the other hand, the Proposed Development is surrounded by natural terrain to its north, east and west side, and only low-rise residential developments are in the vicinity of the project site.

Table 3-3 Average Concentrations of Pollutants in the Recent Five Years (Year 2020 - 2024) at Tseung Kwan O Air Quality Monitoring Station

Pollutant	Averaging Time	AQO [1]	Pollutant Concentration (µg/m3) [2]				
			2020	2021	2022	2023	2024
Respirable Suspended Particulates (RSP)	24-hour (10th Max)	75 (9)	52	50	46	50	59
	Annual	30	24	24	22	24	27
Fine Suspended Particulates (FSP)	24-hour (19th Max)	37.5 (18)	26	26	28	27	31
	Annual	15	12	13	13	15	14
Nitrogen Dioxide (NO2)	1-hour (19th Max)	200 (18)	136	132	110	116	105
	24-hour (10th Max)	120 (9)	51	60	48	50	46
	Annual	40	23	26	21	22	22
Sulphur Dioxide (SO2)	10-minute (4th Max)	500 (3)	18	18	12	32	12
	24-hour (4th Max)	40 (3)	7	9	7	6	8
Ozone (O3)	8-hour (10th Max)	160 (9)	158	158	167	160	168
	Peak Season	100	112	109	105	111	113
Carbon Monoxide (CO)	1-hour (1st Max)	30000	1670	1750	1210	1300	1500
	8-hour (1st Max)	10000	1411	1375	1105	996	1209
	24-hour (1st Max)	4000	1152	1113	834	824	760

Note:
[1] The numbers in brackets () refer to number of exceedance allowed per year.
[2] The pollution concentrations are obtained from the Smart Air Modelling Platform (v2.1).
[3] Exceedances has been highlighted in orange.

PATH Background

3.3.4 PATH is a regional scale air quality model developed by EPD to predict future air quality over the whole Pearl River Delta region including Hong Kong. The PATH v3.0 grids corresponding to the 500m assessment area of the Proposed Development is [47,38], [48,38], [47,37], and [48,37], as illustrated in **Figure 3-1**. **Table 3-4** gives the predicted background air quality on 2030 of the Grids [47,38], [48,38], [47,37], and [48,37] where the Proposed Development is located.

3.3.5 The predicted background concentration within 500m of the Site in years 2030 meets the relevant Air Quality Objectives (AQOs) with a significant margin, except for Ozone concentration.

3.3.6 Considering the population intake year of the Project is planned to be 2031, the PATH background concentrations at nearby PATH grids [47,38], [48,38], [47,37], and [48,37] on year 2030 are representative to reflect the background air quality.

3.3.7 The PATH background concentrations at Grid [48,38], where the proposed development is located, from 0 to 55m (L1 to L3) on Year 2030 are listed in **Table 3-5**. The PATH prediction show that the vertical variation of the pollutant concentrations is not significant for the first

50m from the ground.

Table 3-4 Predicted Background Ground Level Air Quality of PATH Grid [47,38], [48,38], [47,37], and [48,37] in Year 2030

Pollutant	Averaging Time	AQOs [µg/m^3] [1]	PATH Model Concentration [µg/m^3] in Year 2030			
			Grid [47,38] L1 (0-17m)	Grid [48,38] L1 (0-17m)	Grid [47,37] L1 (0-17m)	Grid [48,37] L1 (0-17m)
Respirable Suspended Particulates (RSP)	24-hour (10th Max)	75 (9)	49.53	49.63	53.51	50.85
	Annual	30	18.72	18.92	20.44	19.46
Fine Suspended Particulates (FSP)	24-hour (19th Max)	37.5 (18)	28.4	28.25	31.45	29.19
	Annual	15	11.22	11.38	12.67	11.83
Nitrogen Dioxide (NO2)	1-hour (19th Max)	200 (18)	41.83	44.2	47.34	48.79
	24-hour (10th Max)	120 (9)	18.94	20.12	21.78	22.27
	Annual	40	8.29	9.6	9.88	10.69
Sulphur Dioxide (SO2)	10-minute (4th Max)	500 (3)	20.35	20.91	20.52	20.67
	24-hour (4th Max)	40 (3)	6.52	6.62	6.55	6.67
Ozone (O3)	8-hour (10th Max)	160 (9)	166.61	167.28	166.1	164.42
	Peak Season	100	121.6	121.6	119.63	119.28
Carbon Monoxide (CO)	1-hour (1st Max)	30000	512.88	515.72	512.83	515.53
	8-hour (1st Max)	10000	475.62	480.53	478.73	480.81
	24-hour (1st Max)	4000	434.04	440.44	438.71	445.04

Note:
[1] The numbers in brackets () refer to number of exceedance allowed per year.
[2] The pollution concentrations are obtained from the Smart Air Modelling Platform (v2.1).
[3] Exceedances has been highlighted in orange.

Table 3-5 Predicted Background Air Quality of Grid [48, 38] of PATH on Year 2030

Pollutant	Averaging Time	AQOs [µg/m³] [1]	PATH Model Concentration [µg/m³]		
			Year 2030 L1 (0-17m)	Year 2030 L2 (17-35m)	Year 2030 L3 (35-55m)
Respirable Suspended Particulates (RSP)	24-hour (10th Max)	75 (9)	49.63	49.41	49.35
	Annual	30	18.92	18.7	18.57
Fine Suspended Particulates (FSP)	24-hour (19th Max)	37.5 (18)	28.25	27.92	27.91
	Annual	15	11.38	11.17	11.05
Nitrogen Dioxide (NO2)	1-hour (19th Max)	200 (18)	44.2	43.72	42.73
	24-hour (10th Max)	120 (9)	20.12	19.57	19.11
	Annual	40	9.6	8.91	8.44
Sulphur Dioxide (SO2)	10-minute (4th Max)	500 (3)	20.91	21.24	21.33
	24-hour (4th Max)	40 (3)	6.62	6.74	6.79
Ozone (O3)	8-hour (10th Max)	160 (9)	167.28	171.12	172.43
	Peak Season	100	121.6	124.33	125.63
Carbon Monoxide (CO)	1-hour (1st Max)	30000	515.72	516.32	516.9
	8-hour (1st Max)	10000	480.53	481.66	482.34
	24-hour (1st Max)	4000	440.44	440.87	441.43

Note:
[1] The numbers in brackets () refer to number of exceedances allowed per year.
[2] The pollution concentrations are obtained from the Smart Air Modelling Platform (v2.1).
[3] Exceedance has been highlighted in orange.

3.4 Study Area & Air Sensitive Receivers

3.4.1 The Study Area for this air quality impact assessment covers the area within 500 m from the Project boundary.

3.4.2 During construction phase, residential development in the vicinity of the Site is considered as the air sensitive receivers (ASRs). The representative ASRs for construction phase are listed in **Table 3-6** and illustrated in **Figure 3-2**.

Table 3-6 Nearby Representative Air Sensitive Receivers for Construction Phase

ID	Location	Type	Building Height (mAG)	Horizontal Distance from Project Boundary
ASR-01	60B Pak Wai	Residential	6	30m
ASR-02	60A Pak Wai	Residential	6	11m
ASR-03	Residential Building in Pak Wai Village	Residential	9	44m
ASR-04	48 Luk Mei Tsuen	Residential	6	119m
ASR-05	73 Hing Keng Shek	Residential	6	87m
ASR-06	66A Pak Wai	Residential	6	55m
ASR-07	66 Pak Wai	Residential	10	54m

3.4.3 During operation phase, the Proposed Development itself is considered as ASRs. The planned ASRs are illustrated in **Figure 3-3** and summarized in **Table 3-7**. Apart from the Proposed Development, a basement carpark and an on-site sewage treatment plant are proposed within the Proposed Development.

Table 3-7 Planned Air Sensitive Receivers of Proposed Development

ID	Location	Type	Building / Facility Height (mPD)
PASR-01	Residential Tower (Block 1)	Residential	19.1
PASR-02	Residential Tower (Block 2)	Residential	19.1
PASR-03	Residential Tower (Block 3)	Residential	15.95
PASR-04	Residential Tower (Block 4)	Residential	8.45
PASR-05	Community Farm	Recreational facilities	6.5 [1]
PASR-06	Swimming Pool and Clubhouse	Recreational facilities	5.8 for Swimming Pool 10.4 for Clubhouse

Note:
[1] Community farm is at-grade recreational facility.

3.5 Construction Phase Air Quality Impact Identification & Evaluation

3.5.1 Major dust emitting construction activities will be the demolition works, excavation works, foundation works and the construction works of the superstructure. Fugitive dust would be generated during the aforementioned construction activities The concerned air pollutants during the construction phase are the Respirable Suspended Particulates (RSP) and Fine Suspended Particulates (FSP) arising from the construction work of the Proposed Development.

3.5.2 As the Project only proposes developments of 1 to 4 storeys, the scale of construction works is considered small. Nevertheless, demolition work will be required to remove the existing temporary structures including the commercial horticulture workshop, while excavation will be necessary for the construction of a single-storey basement car park. Based on confirmation from the project team, the site formation and/or excavation works for an area of approximately 5,668 m² to depths of 4–6m is expected to generate approximately 28,455 m³ of excavation material. During construction period, maximum of 14 vehicles per day is expected to be

required for the off-site transportation of C&D materials during the excavation works. Provided that the mitigation measures are fully implemented and the volume of induced traffic remains low as expected, no significant air quality impact from waste transport vehicles is expected. The summary of the construction works is provided in **Table 3-8**.

Table 3-8 Summary of Construction Works

Demolition (Size)	Excavation /Site formation (Size)	Maximum of Dump Truck per Day	Number of Concurrent PME
Temporary structures (~50m^3)	Single-storey basement car park (Area~5,668 m² & Volume~ 28,455m^3)	14	~10

Note:
[1] Excluding small plants such as water pump and fan. Estimated numbers based on projects in similar scales.

Planned Development in Vicinity

3.5.3 Two (2) planned developments within 500m from the site boundary are identified and summarized in **Table 3-9.** Locations of the planned developments are illustrated in **Figure 3-4**.

Table 3-9 List of Planned Development in the Vicinity

Location	Planned Development / Construction Works	Completion Date	Nearest Horizontal Distance to the Site Boundary	Reference
A	Residential Houses (Planning Application No: A/SK-HC/316-2)	Unknown (Planning Application is approved on 11 April 2025)	~200m	[1]
B	Hiram's Highway Improvement Stage 2	Year 2032	~33m	[2]

Reference
[1] https://www.ozp.tpb.gov.hk/api/Perm/Gist?caseNo=A%2fSK-HC%2f316&lang=EN&ext=pdf&dType=in
[2] https://www.hyd.gov.hk/en/our_projects/road_projects/6806th/index.html

3.5.4 The planned residential development (Planning Application: A/SK-HC/316-2) comprises 15 houses is identified located 200m away from the proposed development. Given the considerable distance and the scale of the project, which involves only 15 houses, adverse air quality impact on the proposed development is expected to be limited.

3.5.5 Another development identified within the 500m assessment area is the Hiram's Highway Improvement Stage 2, which involves road widening works of approximately 4km. According to LC Paper No. CB(4)571/2023(04), an Environmental Review for the Hiram's Highway Improvement has been submitted to the EPD to provide suitable mitigation measures to minimize dust generation during construction. With proper implementation of these dust control measures, adverse air quality impacts from Hirma's Highway are not anticipated.

3.5.6 As the construction timeline for the Project and the planned developments have not been confirmed, potential overlaps with the proposed developments' construction period should be carefully monitored and addressed. With strictly following the mitigation measures in **Section**

3.5.7, adverse cumulative air quality impact is not anticipated.

Mitigation Measures

3.5.7 Dust control measures under the Air Pollution Control (Construction Dust) Regulation (Cap. 311R) and good site practice shall be implemented to mitigate dust impact arising from demolition work by preventing dust generation and/or by screening, suppressing and removing dust generated:

- Hoarding of not less than 2.4 m high from ground level, except for a site entrance or exit, shall be provided along the entire portion of project boundary adjoins a road, street, service lane or other area accessible to the public
- Existing structures are proposed to be demolished by non-percussive equipment such as hydraulic crusher to reduce dust emission
- Water or a dust suppression chemical shall be sprayed immediately prior to, during and immediately after excavation works
- Cover stockpile or dusty materials with tarpaulin to prevent wind erosion
- Any dusty materials remaining after a stockpile is removed shall be wetted with water and cleared from the surface of roads or streets
- Every vehicle shall be washed to remove any dusty materials from its body and wheels before leaving the construction site
- Where a vehicle leaving construction site is carrying a load of dusty materials, the load shall be covered entirely by clean impervious sheeting to ensure that the dusty materials do not leak from the vehicle
- Store cement bags in shelter with 3 sides and the top covered by impervious materials if the stack exceeds 20 bags
- Maintain a reasonable height when dropping excavated materials to limit dust generation
- Limit vehicle speed within site to 10 km/h and confine vehicle movement in haul road
- Minimize exposed earth after completion of work in a certain area by hydroseeding, vegetating or soil compacting
- Cover materials on trucks before leaving the site to prevent dropping or being blown away by wind
- Regular maintenance of plant equipment to prevent black smoke emission
- Throttle down or switch off unused machines or machine in intermittent use

3.5.8 With the implementation of dust suppression measures stipulated under the Air Pollution Control (Construction Dust) Regulation, good site practice, adverse air quality impact associated with the construction works is not anticipated. Quantitative construction dust assessment is considered not necessary.

3.5.9 Operation of Powered Mechanical Equipment (PME) during demolition/construction works would emit gaseous air pollutants such as nitrogen dioxide (NO_2) via fuel burning. According to Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation, only approved or exempted Non-Road Mobile Machinery (NRMM) with a proper label are allowed to be

used in specified activities and locations including construction sites. Supportive information and documents (e.g. third-party emission certificates, model and serial numbers of machines and engines, etc.) for each NRMM would be provided to EPD to prove that the concerned NRMM is in line with the prescribed emission standards. No significant air quality impact arising from the PME of the Project is anticipated.

3.6 Operation Phase Air Quality Impact Identification & Evaluation

3.6.1 A small sewage treatment plant (STP) capable of handling 126.8 m^3/day of sewage (estimated from the Sewerage Impact Assessment), is proposed to be located at the southeast corner of the project. To prevent potential adverse odour impact on the Proposed Development and nearby sensitive receivers, the proposed sewage treatment plant shall be fully enclosed by a concrete structure and equipped with deodorizing units with odour removal efficiency of at least 99.5% at the ventilation and exhaust system. The sewage treatment plant shall be designed in accordance with the recommendation from the "Guidelines for the Design of Small Sewage Treatment Plants" to minimize the potential odour impact. No other odour sources within 200m of the site boundary were identified during the desktop study and site survey conducted on 19 December 2024. With careful design of the location of the exhaust pipes for the STP away from the proposed development, the distance between the exhaust pipe and the nearest ASR (Block 4) is ~ 37m. Considering the scale of the sewage treatment plant and the proposed mitigation measures, no adverse odour impact is anticipated during the operation of the Proposed Development.

3.6.2 The exhaust air from the proposed indoor car park in the Project is considered as a potential source of impact. The proposed car park should be located and built-in accordance to the requirements stipulated in ProPECC PN2/96 for the design, maintenance and operation of the ventilation systems to ensure the compliance of the air quality inside car parks with the concentration limits. The exhaust air should be discharged to the atmosphere in such a manner and at such a location as not to cause a nuisance to occupants in the building or of neighbouring buildings, or to the public. Hence, no insurmountable impact on the nearby sensitive receivers is expected. The impact from nearby emission sources on the project is assessed in the following sections.

3.6.3 The residential floors of the Proposed Development rely on openable windows for ventilation, while the remaining area of the Proposed Development rely on mechanical ventilated system. The openable windows for ventilation and the fresh air intake for air sensitive uses of the Proposed Development shall be located outside of the buffer zone of the nearby emission sources (e.g. road and industrial chimney).

3.6.4 The Site is located at the north-west side of the junction of Hiram's Highway and Hing Keng Shek Road. With reference to The Annual Traffic Census - 2024, Hiram's Highway is classified as "Rural Road", while no classification is identified for Hing Keng Shek Road. However, with confirmed with Transport Department (TD), regarding the road type of Hing Keng Shek Road, TD has no objection on adopting "Rural Road" as the road type. Reply from TD is presented in **Appendix 3-1**. Despite road classification recommended by HKPSG for determining buffer distance as shown in **Table 3-1** do not cover "Rural Road", considering the traffic flow of nearby roads, buffer distance of 10m for "District Distributor" has been adopted for Hiram's Highway and Hing Keng Shek Road as a conservative approach.

3.6.5 The building footprint of the Proposed Development and the buffer regions for road traffic

emission are indicated in **Figure 3-5**. Although the layouts are tentative and subject to change, no significant change in building footprint is anticipated. As the building footprint are clearly outside of the required buffer regions, no adverse air quality impact arising from the nearby traffic emission is anticipated.

3.6.6 Based on the on-site survey on 19 December 2024, no industrial chimney was identified within 200m from the planned ASRs. Also, no chimney is provided by the proposed residential development. However, marine vessels are identified at the bay area of Marina Cove, where located at the south-east of the Proposed Development. It should be noted that there are moorings within the bay area of Marina Cove. The hoteling process of marine vessels at mooring area shall be considered as stationary industrial emission and 200m of buffer region shall be provided according to HKPSG.

3.6.7 The 200m buffer region from residential buildings, recreational facilities and site boundary of the Proposed Development are illustrated in **Figure 3-6**. Since there is no industrial chimney and mooring within 200m of the planned ASRs of the Proposed Development, and the PATH background at Year 2030 meets the relevant AQOs with a significant margin, except for Ozone concentration. No adverse impact from marine vessels is anticipated during operation phase.

3.7 Mitigation Measures

3.7.1 All openable windows for ventilation, fresh air intake, and other planned outdoor locations for air sensitive uses of the Proposed Development should be located outside of the buffer regions to avoid potential air quality impact.

3.7.2 The ventilation for the car park should be designed according to the requirements in ProPECC PN 2/96.

3.7.3 To strengthen the odour control measures of the sewage treatment plant, the following measures are recommended:

- The STP shall be fully enclosed by a concrete structure.
- The STP shall be equipped with deodorizing units with at least 99.5% odour removal efficiency at the ventilation and exhaust system.
- Ventilation exhaust pipes will be taken to roof level and away from the Proposed Development and neighbouring premises.
- Ensuring good housekeeping in the sewerage collection systems to prevent the development of anaerobic conditions, etc

3.8 Conclusion

3.8.1 During construction phase, major dust emitting construction activities will be the demolition of existing structures, excavation works, foundation works and construction works of the superstructures. With the implementation of dust suppression measures stipulated under the Air Pollution Control (Construction Dust) Regulation and the adoption of good site practice, adverse air quality impact associated with the construction works is not anticipated.

3.8.2 During operation phase, the Proposed Development itself is considered as ASRs. The minimum buffer distance requirement recommended in Chapter 9 of HKPSG has been fulfilled. Taken into consideration of the large margin in the PATH background, no adverse

air quality impact to the Proposed Development during operation phase is anticipated.

3.8.3 Although the proposed sewage treatment plant of the Proposed Development is considered an air pollution source, however, with a fully enclosed concrete structure and deodorizing units installed at the ventilation and exhaust system, no adverse odour impact to the surroundings is anticipated.

3.8.4 The exhaust air from the proposed indoor car park in the Project is considered as a potential source of impact. The proposed car park should be located and built-in accordance to the requirements stipulated in ProPECC PN2/96 for the design, maintenance and operation of the ventilation systems to ensure the compliance of the air quality inside car parks with the concentration limits. The exhaust air should be discharged to the atmosphere in such a manner and at such a location as not to cause a nuisance to occupants in the building or of neighbouring buildings, or to the public. Hence, no insurmountable impact on the nearby sensitive receivers is expected.

4. NOISE IMPACT ASSESSMENT

4.1 Introduction

4.1.1 This chapter identifies and evaluates potential noise impact associated with the Proposed Development and nearby noise sources, and to provide appropriate suggestions and mitigations for minimizing potential noise impact if necessary.

4.2 Legislations, Standards and Guidelines

Construction Noise

4.2.1 Construction noise is governed by the Noise Control Ordinance (NCO) (Cap. 400) which prohibits the use of PME during the restricted hours (7 p.m. to 7 a.m. on Monday to Saturday and any time on a general holiday, including Sunday) without a valid Construction Noise Permit (CNP) issued by the Authority. The criteria and procedures for issuing the permit are specified in the "Technical Memorandum on Noise from Construction Works Other than Percussive Piling" - (TM1).

4.2.2 For construction works other than percussive piling, although TM1 does not provide control over daytime construction activities, the noise limits are set out in the "Practice Note for Professional Persons Environmental Consultative Committee" (ProPECC) "Minimizing Noise from Construction Activities" (PN1/24).

Fixed Plant Noise

4.2.3 Fixed noise sources, such as the building services system, ventilation system, and the operation of the Project is controlled under the NCO and "Technical Memorandum for the Assessment of Noise from Places Other Than Domestic Premises, Public Places or Construction Sites" (IND-TM). According to the IND-TM, the Acceptable Noise Level (ANL) for a Noise Sensitive Receiver (NSR) is determined by the Area Sensitive Ratings (ASR); which classify a NSR based on the type of the area within, and the degree of the effect on the NSR of particular Influencing Factors (IFs). The different types of area containing the NSR are categorised into the rural area, low density residential area, urban area and other areas, with reference to Table 1 of the IND-TM. While the IFs, defined as industrial areas or area containing a number of factories or major road with an annual average daily traffic flow (AADT) in excess of 30,000, should be assessed for their influence on the NSR according to the degree of influence ("not affected", "indirectly affected" and "directly affected").

4.2.4 The HKPSG states that all planned fixed noise sources should be located and designed so that when assessed in accordance with the IND-TM, the level of the intruding noise at the facade of the nearest sensitive use should be at least 5 dB(A) below the appropriate ANL shown in Table 2 of the IND-TM or the background noise level, whichever is lower. When the prevailing background noise levels would be adopted as the assessment criteria, the prevailing background noise levels, L_{90}(1-hour), at the relevant NSRs shall be measured during the typical operation hours of the fixed plant within daytime, evening and night times. The Acceptable Noise Levels (ANLs) for different Area Sensitivity Ratings (ASRs) are given in **Table 4-1**.

Table 4-1 Acceptable Noise Levels for different Area Sensitivity Ratings (ASRs)

Time Period	Area Sensitivity Rating A	Area Sensitivity Rating B	Area Sensitivity Rating C
	dB(A)	dB(A)	dB(A)
Day (0700 to 1900 hours)	60 (55)*	65 (60)*	70 (65)*
Evening (1900 to 2300 hours)			
Night (2300 to 0700 hours)	50 (45)*	55 (50)*	60 (55)*

* Numbers in ( ) limit indicates the ANL-5dB(A) limit for planned fixed plant.

Traffic Noise

4.2.5 *HKPSG* provides guidance on acceptable road traffic noise levels at the openable windows of various types of noise sensitive buildings. The relevant criteria are shown in **Table 4-2**. For domestic premises, road traffic noise criteria [$L_{10\ (1hr)}$] of 70 dB(A) shall be adopted.

Table 4-2 HKPSG Road Traffic Noise Planning Criteria

Uses	Road Traffic Noise Criteria $L_{10,\ (1hr)}$ dB(A)
Domestic Premises	**70**
Hotel and Hostels	70
Offices	70
Educational institutions	65
Hospital & Clinics	55
Places of public worship and courts of law	65

Note: The above criteria apply to noise sensitive uses which rely on openable window / balcony for ventilation.

4.3 Noise Sensitive Receivers & Representative Noise Assessment Points

Existing Representative Noise Receiver in the Vicinity

4.3.1 The existing land uses in the vicinity of the Site are mainly residential uses, while no commercial and industrial buildings are identified within 300m from site boundary. Residential development located at the south-west is blocked by the natural terrain and therefore, no direct line-of-sight between the Proposed Development and the residential development located at the south-west. The representative noise sensitive receivers within the 300m assessment area that having direct line-of-sight to the Proposed Development in different directions, except for residential development located at west of the site, and rely on opened windows for ventilation are illustrated in **Figure 4-1** and listed in **Table 4-3**.

Table 4-3 List of Representative Noise Sensitive Receivers in the Vicinity

ID	Description	Type	Nearest Distance to Project Boundary
NSR-01	60A Pak Wai	Residential	11m
NSR-02	Residential Building in Pak Wai Village	Residential	44m
NSR-03	73 Hing Keng Shek	Residential	87m

Planned Noise Assessment Points of the Proposed Development

4.3.2 All openable window for ventilation for the bedrooms/living rooms of the residential flats of the Proposed Development are considered as Noise Sensitive Receivers (NSRs). Although the

Proposed Development is still in early stage and locations of openable window for ventilation are not yet decided, possible locations of openable window are carefully designed to avoid adverse traffic noise impact. The locations of possible openable window are illustrated in **Figures 4-2a** to **4-2c**. Noise assessment points for traffic noise impact assessment have been selected at all building facade for representing the possible openable window locations.

4.3.3 The possible locations of openable window for ventilation and representative noise assessment points have been illustrated in **Figures 4-2a** to **4-2c**. Representative noise assessment points have been assigned to each building façade of the residential flat, at 1.2m above the slab level and 1m away from the façade.

4.4 Construction Noise Impact Assessment

4.4.1 Four major works will be conducted in the construction phase of the redevelopment, including: demolition, site formation, foundation and superstructure works.

4.4.2 Construction noise generated by the powered mechanical equipment (PME) during construction phase can be minimised with implementation of the following mitigation measures. The Proposed Development consists of four residential blocks with basement car park. Considering the scale of the Proposed Development is small, no significant construction impact is anticipated with proper implementation of the mitigation measures. "Recommended Pollution Control Clauses for Construction Contracts" which is available on EPD website, will be incorporated into the tender document of this project. The following construction noise mitigation measures that can be applied but not limited to:

- Use non-percussive equipment such as hydraulic crusher, sawing, coring machines for demolishing existing building and structure
- Use non-percussive piling diving method such as hydraulic press-in method, vibration or jacking method for foundation work
- Use Quality Powered Mechanical Equipment (QPME) recognized by the Environmental Protection Department (EPD). The QPME shall be registered with EPD, and valid label issued by EPD shall be affixed on the QPME all times.
- Use Quieter Construction Methods as far as practicable
- Schedule work to minimize concurrent activity and duration of impact
- Regular maintenance of equipment to prevent noise emission due to impairment
- Adopt good site practice, such as throttle down or switch off equipment unused or intermittently used between works
- Position mobile noisy equipment in locations away from nearby NSRs and point the noise sources to directions away from NSRs
- Make good use of other structures for noise screening
- Use of mobile noise barriers/enclosures along the path of noise propagation

4.4.3 Construction activities under the Proposed Development involves concrete removal works, demolition works, site formation/excavation works and superstructure works. Subject to detailed site works arrangement, the contractor shall consider the following mitigation measures, if necessary and applicable:

Concrete Removal Works / Demolition Works:

- Use of high pressure water jetting instead of traditional jackhammers and drill hammers;
- Use of quieter type wire saws or diamond wire saws for cutting large areas and heavily reinforced concrete;
- Use of quieter type blade saws utilizing diamond blades with higher speeds and smoother blades reduces excitation of vibration;
- Use of hydraulic crushers for concrete breaking instead of traditional excavator-mounted breakers;
- Use of handheld concrete crushers instead of traditional jackhammers;
- Use of hydraulic splitters instead of traditional jackhammers and breakers.

Site Formation / Excavation Works:

- Use of silent piling by press-in method instead of traditional massive augering and piling machines or drop hammer for sheet piling / channel planking installation work;
- Use of a sheet piling noise reducer such as a suitable shock absorber to reduce collisions between sheet pile / channel planking and holding parts;
- Use of pile driving impact cushions to reduce noise generated by piling impact;
- Pre-augering/pre-trench/boring pile holes to remove underground obstruction for avoiding hard driving / soften the ground;
- Use of crack inducers instead of traditional percussive breakers.

Superstructure Works:

- Use of prefabricated structure / sections to replace in-situ construction to reduce the amount of mechanical equipment used on site;
- Use of self-compacting concrete (without the aid of a vibrator e.g. poker for compaction) for in-situ concreting;
- Use of crack inducers instead of traditional percussive breakers.

4.4.4 With proper noise mitigation measures implemented during the construction phase, no adverse noise impact arising from the construction activities is expected.

4.5 Fixed Noise Impact Identification & Evaluation

External Fixed Noise Source

4.5.1 The Proposed Development shall be used primarily and mainly for residential purposes. The dwellings would rely on openable windows and single split air conditioning units. Fixed noise source in the vicinity within 300m should be reviewed.

4.5.2 No industrial activities and commercial buildings were identified in the environs as the Proposed Development is located within an area dominated by residential development. Major existing fixed plants within 300m from the project boundary have been reviewed, while no major fixed noisy plant is identified. Considering the land use in the vicinity, the quantity and scale of existing noisy fixed source shall be limited.

4.5.3 No adverse noise impact arising from fixed plants to the Proposed Development is anticipated.

Planned Fixed Noise Source in the Proposed Development

4.5.4 The potential noise issue arising from the operation of the noisy building service equipment, e.g.: HVAC & sewage treatment facilities, has been reviewed in early stage of the Proposed Development. The major potential fixed noise sources are located indoor in the plant room & E&M room. As the noise from the plants may transmit to the outdoor area via louvres/exhausts at the building facades, the NSRs with direct line-of-sight to the Proposed Development have also been assessed.

4.5.5 The Site is located at area dominated by low-rise residential buildings, where characterised as "Low Density Residential Area" with reference to the definition of the type of area containing the NSR as described in the IDM-TM. Hiram's road (Stn no. 6055) has a traffic flow of 22,470 according to the Traffic Department's Annual Traffic Census 2024, which is not considered as a "IF". In view of the traffic impact on the Proposed Development, the representative NSRs shall be considered "not affected by IF" and classified as "ASR A". The criteria for planned fixed noise sources would be 55 dB(A) for day and evening time and 45 dB(A) for night time, as tabulated in **Table 4-1**. Representative NSRs (as shown in **Figure 4-1**) for fixed noise assessment are listed in **Table 4-4**.

Table 4-4 Representative Noise Sensitive Receivers at nearby development for Fixed Plant Noise Assessment

ID	Description	Horizontal Distance from Nearest Site Boundary to NSRs	Area Sensitivity Ratings for ANL[1]
NSR-01	60A Pak Wai	11m	A
NSR-02	Residential Building in Pak Wai Village	44m	A
NSR-03	73 Hing Keng Shek	87m	A

Note:
[1] The NSRs located within a Low-Density Residential Area without affected by IF directly, and thus, ASR of A is adopted.

4.5.6 Chiller and ventilation fan shall be provided for the proposed clubhouse. However, since the project is still in early design stage with no detailed information of the specification of the planned fixed noisy plants, maximum allowable sound power level in different direction will be determined so as to ensure the compliance of the planned fixed noise sources. Horizontal distance between project boundary and the NSRs at nearby residential buildings has been measured (as shown in **Figure 4-1**) to calculate the maximum allowable sound power level (SWL) at the building façades of Proposed Development which is detailed in **Appendix 4-1** and summarised in **Table 4-5**.

Table 4-5 Allowable Sound Power Level for the Building Service Equipment of the Proposed Development

Location	Maximum Allowable Sound Power Level at Source, dB(A)	
	Day and Evening (07:00 – 23:00)	Night (23:00 – 07:00)
NE façade	75	65
SE façade / Sewage Treatment Plant	87	77
NW facade	93	83

[1] For assessment purpose, a 6dB(A) of Tonality/ Intermittency/ Impulsiveness correction has been adopted.
[2] Since noise sensitive receivers located at south-west is completely blocked by natural terrain and slope, no fixed noise impact is anticipated at nearby NSR at south-west side.

4.5.7 According to **Table 4-5**, lowest maximum allowable power level among three directions is identified at the north-east of the Site, with maximum SWL of ~75 dB(A) at day & evening time and ~65 dB(A) at night. To minimise the fixed noise impact on the surrounding residential buildings, planned fixed noisy plants and exhausts should be designed to avoid direct line-of-sight to the nearest residential buildings (60A Pak Wai) at north-east side.

4.5.8 With allowable sound power level implemented properly, the criteria of the planned fixed noisy plant as shown in **Table 4-1** should be complied thus no adverse noise impact arising from the fixed noise sources is anticipated. The planned fixed plant at the Proposed Development should be designed and reviewed during detailed design stage with reference to the standard stipulated in the HKPSG to ensure compliance.

4.6 Traffic Noise Impact Identification & Evaluation

Assessment Methodology

4.6.1 An in-house noise model (MARC) was used to predict the traffic noise levels arising from the road network. It adopts the methodology provided in the UK Department of Transport's Calculation of Road Traffic Noise (CRTN) 1988, which is stipulated in Chapter 9, Section 4.2.7 of the HKPSG for assessing road traffic noise impact. Road traffic noise levels are presented in terms of noise levels exceeded for 10% of the one-hour period for the hour having the peak traffic flow [$L_{10\ (1\text{-hour})}$ dB(A)].

4.6.2 The assessment was based on the projected peak hour flows for the worst year within 15 years after completion of the Project in Year 2031. Based on the traffic forecast provided by the traffic consultant, the maximum traffic projections within 15 years upon occupation of the proposed development, that is between Year 2031 (year of population intake) and Year 2046 would occur in AM peak of Year 2046, were adopted for road traffic model. The major roads within 300m from the Site boundary have been included in the assessment. The adopted traffic forecast and corresponding endorsement of the methodology from TD are shown in **Appendix 4-2**.

4.6.3 Base Scenario which only considered architectural design, including buildings orientation, setback, solid fence wall and location of the openable windows, has been assessed.

Architectural Design in Base Scenario

4.6.4 In the Base scenario, the architectural design has been optimised to reduce the potential traffic noise impact from the surrounding roads. Building setback, orientation of the building has been designed in a way such that most of the NSRs will not be severely affected by the major traffic noise sources. A 2m solid fence wall (2 + 5.3 = 7.3mPD) above the ground level of the site (5.3mPD), as shown in **Appendix 2-1**, has been proposed at the site boundary between Block 4 and Hiram's Highway, as shown in **Figure 4-2a**.

Predicted Traffic Noise Level in Base Scenario

4.6.5 The summaries of the predicted traffic noise level are listed in **Table 4-6**. The detailed results of the Base Scenario are presented in **Appendix 4-3**.

Table 4-6 Summary of Traffic Noise Level (Base Scenario)

Floor		Range of Predicted Traffic Noise Level, dB(A)			
		Block 1	Block 2	Block 3	Block 4
4/F		54 - 61	56 - 68	--	--
3/F		54 - 60	56 – 67	53 – 70	--
2/F		54 - 60	53 - 66	52 - 68	--
1/F		54 - 60	51 - 64	51 - 65	55 - 69
Compliance Rate	By Block	100%	100%	100%	100%
	Total	100%			

4.6.6 The maximum traffic noise level is 70dB(A) identified at 3/F of Block 3, facing Hiram's Highway. All predicted noise level at Block 1 to Block 4 has complied the relevant noise criteria. Therefore, adverse traffic noise impact is not anticipated.

4.7 Conclusion

4.7.1 Considering the scale of the Proposed Development is small, no significant construction impact is anticipated with proper implementation of the mitigation measures. External noisy fixed plants within 300m from project boundary have been reviewed. No adverse fixed noise impact on the Proposed Development is anticipated.

4.7.2 Limitation of Sound Power Level for building service equipment will be incorporated into the tender document to ensure the fixed noise sources at the Proposed Development will be designed with appropriate mitigation for complying with the relevant criterion. The planned fixed plants should be reviewed during the detailed design stage to ensure compliance with the standard stipulated in the HKPSG.

4.7.3 Traffic noise impact assessment has been conducted based on predicted peak traffic flow (15 years upon the commencement of Project, Year 2046). Under the Base Scenario without mitigation measure, the maximum predicted traffic noise is 70dB(A) and compliance rate is ~100%. Therefore, no adverse traffic noise impact is anticipated.

5. WATER QUALITY IMPACT

5.1 Legislations, Guidelines and Requirements

5.1.1 The Water Pollution Control Ordinance (Cap. 358) (WPCO), in existence since 1980, is the major legislation relating to the protection and control of water quality in Hong Kong. According to the WPCO and its subsidiary legislation, Hong Kong waters are divided into ten Water Control Zones (WCZs). Water Quality Objectives (WQOs) provide the limits for different parameter for each WCZ to minimize the impact on water quality. With reference to the WCZs map, the study area, i.e. the area within 500m from the Site boundary, is located within the Port Shelter WCZ. **Table 5-1** has summarized the WQO for Port Shelter WCZ.

Table 5-1 Water Quality Objectives

WQO	Port Shelter WCZ
AESTHETIC APPEARANCE	
Waste discharges shall cause no objectionable odours or discolouration of the water.	Whole Zone
Tarry residues, floating wood, articles made of glass, plastic, rubber or of any other substance should be absent.	Whole Zone
Mineral oil should not be visible on the surface. Surfactants should not give rise to a lasting foam.	Whole Zone
There should be no recognisable sewage-derived debris.	Whole Zone
Floating, submerged and semi-submerged objects of a size likely to interfere with the free movement of vessels, or cause damage to vessels, should be absent.	Whole Zone
Waste discharges shall not cause the water to contain substances which settle to form objectionable deposits.	Whole Zone
BACTERIA	
The level of Escherichia coli should not exceed 610 per 100 mL, calculated as the geometric mean of all samples collected in one calendar year.	Secondary Contact Recreation Subzones and Fish Culture Subzones
The level of Escherichia coli should not exceed 180 per 100 mL, calculated as the geometric mean of all samples collected from March to October inclusive in one calendar year. Samples should be taken at least 3 times in a calendar month at intervals of between 3 and 14 days.	Bathing Beach Subzones
COLOUR	
Waste discharges shall not cause the colour of water to exceed 50 Hazen units.	Inland Waters
DISSOLVED OXYGEN	
Waste discharges shall not cause the level of dissolved oxygen to fall below 4 mg per litre for 90% of the sampling occasions during the year; values should be calculated as the water column average (arithmetic mean of at least 3 measurements at 1 m below surface, mid-depth and 1 m above seabed). In addition, the concentration of dissolved oxygen should not be less than 2 mg per litre within 2 m of the seabed for 90% of the sampling occasions during the	Marine waters excepting Fish Culture Subzones

year.	
The dissolved oxygen level should not be less than 5 mg per litre for 90% of the sampling occasions during the year; values should be calculated as water column average (arithmetic mean of at least 3 measurements at 1 m below surface, mid-depth and 1 m above seabed). In addition, the concentration of dissolved oxygen should not be less than 2 mg per litre within 2 m of the seabed for 90% of the sampling occasions during the year.	Fish Culture Subzones
Waste discharges shall not cause the level of dissolved oxygen to be less than 4 mg per litre.	Inland waters
pH	
The pH of the water should be within the range of 6.5–8.5 units. In addition, waste discharges shall not cause the natural pH range to be extended by more than 0.2 units.	Marine waters excepting Bathing Beach Subzones
The pH of the water should be within the range of 6.0–9.0 units for 95% of samples. In addition, waste discharges shall not cause the natural pH range to be extended by more than 0.5 units.	Bathing Beach Subzones
Waste discharges shall not cause the pH of the water to exceed the range of 6.5–8.5 units.	Ho Chung (A) Subzone
The pH of the water should be within the range of 6.0–9.0 units.	Other inland waters
TEMPERATURE	
Waste discharges shall not cause the natural daily temperature range to change by more than 2.0℃.	Whole Zone
SALINITY	
Waste discharges shall not cause the natural ambient salinity level to change by more than 10%.	Whole Zone
SUSPENDED SOLIDS	
Waste discharges shall neither cause the natural ambient level to be raised by 30% nor give rise to accumulation of suspended solids which may adversely affect aquatic communities.	Marine waters
Waste discharges shall not cause the annual median of suspended solids to exceed 25 mg per litre.	Inland waters
AMMONIA	
The ammonia nitrogen level should not be more than 0.021 mg per litre, calculated as the annual average (arithmetic mean), as unionised form.	Whole Zone
NUTRIENTS	
Nutrients shall not be present in quantities sufficient to cause excessive or nuisance growth of algae or other aquatic plants.	Marine waters
Without limiting the generality of objective (a) above, the level of inorganic nitrogen should not exceed 0.1 mg per litre, expressed as annual water column average (arithmetic mean of at least 3 measurements at 1 m below surface, mid-depth and 1 m above seabed).	Marine waters
5-DAY BIOCHEMICAL OXYGEN DEMAND	
Waste discharges shall not cause the 5-day biochemical oxygen demand to	Inland waters

exceed 5 mg per litre.	
CHEMICAL OXYGEN DEMAND	
Waste discharges shall not cause the chemical oxygen demand to exceed 30 mg per litre.	Inland waters
DANGEROUS SUBSTANCES	
Waste discharges shall not cause the concentration of dangerous substances in the water to attain such levels as to produce significant toxic effects in humans, fish or any other aquatic organisms, with due regard to biologically cumulative effects in food chains and to toxicant interactions with each other.	Whole Zone
Waste discharges of dangerous substances shall not put a risk to any designated beneficial uses of the aquatic environment.	Whole Zone
PHENOL	
Phenols shall not be present in such quantities as to produce a specific odour, or in concentrations greater than 0.05 mg per litre as C_6H_5OH.	Bathing Beach Subzones
TURBIDITY	
No changes in turbidity or other factors arising from waste discharges shall reduce light transmission substantially from the normal level.	Bathing Beach Subzones

5.1.2 A Technical Memorandum on Standards for Effluents Discharged into Drainage and Sewerage Systems, Inland and Coastal Waters (TM-DSS) was issued under the WPCO which gives guidance on the permissible effluent discharges based on the type of receiving waters (foul sewers, inland waters, marine waters, inshore waters and coastal waters) and the flow rate. TM-DSS set limits to control the physical, chemical and microbial quality of effluents. The effluents generated from the Proposed Development will be treated properly by the on-site sewage treatment plant (STP) and discharged to the inland water (Group D), which classified as "general amenity and secondary contact recreation". The standard for effluent discharged into the inland water (Group D) has been presented in **Table 5-2**.

Table 5-2 Standard for effluent discharged into the inland water (Group D)

Flow rate (m3/day) / Determinand	≤200	>200 and ≤400	>400 and ≤600	>600 and ≤800	>800 and ≤1000	>1000 and ≤1500	>1500 and ≤2000	>2000 and ≤3000
pH (pH units)	6-10	6-10	6-10	6-10	6-10	6-10	6-10	6-10
Temperature (°C)	30	30	30	30	30	30	30	30
Colour (lovibond units)	1	1	1	1	1	1	1	1
Suspended solids	30	30	30	30	30	30	30	30
BOD	20	20	20	20	20	20	20	20
COD	80	80	80	80	80	80	80	80
Oil & Grease	10	10	10	10	10	10	10	10
Iron	10	8	7	5	4	2.7	2	1.3
Boron	5	4	3.5	2.5	2	1.5	1	0.7
Barium	5	4	3.5	2.5	2	1.5	1	0.7
Mercury	0.1	0.05	0.001	0.001	0.001	0.001	0.001	0.001
Cadmium	0.1	0.05	0.001	0.001	0.001	0.001	0.001	0.001
Other toxic metals individually	1	1	0.8	0.8	0.5	0.5	0.2	0.2
Total Toxic metals	2	2	1.6	1.6	1	1	0.5	0.4
Cyanide	0.4	0.4	0.3	0.3	0.2	0.1	0.1	0.05
Phenols	0.4	0.3	0.2	0.1	0.1	0.1	0.1	0.1

Flow rate (m3/day) / Determinand	≤200	>200 and ≤400	>400 and ≤600	>600 and ≤800	>800 and ≤1000	>1000 and ≤1500	>1500 and ≤2000	>2000 and ≤3000
Sulphide	1	1	1	1	1	1	1	1
Sulphate	800	600	600	600	600	400	400	400
Chloride	1000	800	800	800	600	600	400	400
Fluoride	10	8	8	8	5	5	3	3
Total phosphorus	10	10	10	8	8	8	5	5
Ammonia nitrogen	20	20	20	20	20	20	20	10
Nitrate + nitrite nitrogen	50	50	50	30	30	30	30	20
Surfactants (total)	15	15	15	15	15	15	15	15
E. coli	1000	1000	1000	1000	1000	1000	1000	1000

Note:
[1] All units are in mg/L unless otherwise stated.

5.1.3 A practice note (PN) for professional persons was issued by the Environmental Protection Department (EPD) to provide environmental guidelines for handling and disposal of construction site discharges. The (ProPECC) "Construction Site Drainage" PN (2/24) provides good practice guidelines for dealing with various types of discharge from a construction site. Practices outlined in the PN should be followed as far as possible during construction to minimize the water quality impact due to construction site drainage.

5.1.4 The ProPECC PN 1/23 on Drainage Plans Subject to Comment by the EPD provides guidelines and practices for handling, treatment and disposal of various effluent discharges to stormwater drains and foul sewers. The design of site drainage and disposal of various site effluents generated within the new development area should follow the relevant guidelines and practices as given in the ProPECC PN 1/23. As there is a carpark in the proposed development, the relevant practice and mitigation measures during operational phase are recommended with reference to Section 5 of ProPECC PN 1/23.

5.2 Water Quality Sensitive Receivers

5.2.1 Water Quality sensitive receivers (WSRs) within 500m from project boundary has been identified and the representative water quality sensitive receivers are illustrated in **Figure 5-1**. The representative water sensitive receivers are summarized in **Table 5-3**. Modification or removal works on any watercourse and WSR is not anticipated.

Table 5-3 List of Representative Water Quality Sensitive Receivers

WSR ID	Status	Distance to Project Boundary (m)
Natural Watercourse		
WSR01a	Active	290
WSR01c	Active	130
WSR02a	Active	420
Modified Watercourse		
WSR01b	Active	0
WSR02b	Active	390
WSR03a	Active	480
Channelized Watercourse		
WSR01d	Active	0
Conservation Zone		
CZ01	Active	20
Secondary Contact Recreation Subzone		
SC01	Active	110

5.2.2 All identified natural watercourses and conservation zones are located on the hill at a higher elevation compared to the Proposed Development. Considering the topographic location of the Proposed Development, water generated from the site cannot reach the natural watercourses and conservation zones during both construction and operation phases. Additional attention should be paid for the modified channel that is identified at close proximity to the Site. On the other hand, Secondary Contact Recreation Subzone is located approximately 100 meters from the site with Hiram's Highway and residential houses in between. Since the Proposed Development dose not involves any modification or removal works on the watercourse and WSR, with properly implementation of the mitigation measures as stated in **Section 5.4**, no adverse water quality impact on the nearby WSR is anticipated during construction and operation phases.

5.3 Impact Identification & Evaluation

Construction Phase

5.3.1 Potential sources of water quality impact associated with the Proposed Development have been identified. They are construction site runoff, sewage generated from construction workforce and accidental spillage of chemicals.

5.3.2 Construction site surface runoff may carry pollutants into nearby water drainage system, which may lead to increased suspended solids and other pollutants' (e.g. metals and organics) concentrations in receiving waters, and may cause blockage of storm water drains. Nevertheless, the impact is anticipated to be insignificant if mitigations proposed in **Section 5.4** are implemented properly.

5.3.3 Sewage will be generated by the sanitary facilities that serving the on-site construction workforce. Considering the scale of the construction site, the number of on-site construction workforce is limited. With the mitigation measures as described in **Section 5.4**, like provision

of adequate chemical toilets, no adverse water quality impact is anticipated.

5.3.4 Chemicals, such as fuel and lubricating oil for powered mechanical equipment (PME), may be stored and used onsite for the construction work. Accidental spillage of these chemicals may be carried down by construction site runoff and deteriorate water quality in receiving waters. Nevertheless, since there should be no immerse need for chemical or oil in this proposed development, the quantity stored or used onsite should be limited. With proper implementation of mitigations proposed in **Section 5.4**, the impact is anticipated to be insignificant.

Operation Phase

5.3.5 The Proposed Development is used mainly for residential purpose. The treated effluent generated from the Proposed Development will be discharged to the existing watercourse after treated by the on-site sewage treatment plant, that will be addressed in separated reports (Sewerage Impact Assessment). Stormwater generated from the Proposed Development will be discharged to the existing watercourse and addressed in separated report (Drainage Impact Assessment).

5.3.6 Pollutants such as vehicle dust, debris and grease within the Proposed Development will accumulate on the surface of the paved area of the Proposed Development. The surface runoff may carry the pollutants to the nearby drainage system during rainfall event. However, with provision of appropriate mitigation measures, such as adequate silt traps and oil interceptors, no water quality impact is anticipated during operation phase.

5.4 Mitigation Measures

Construction Phase

5.4.1 Construction surface runoff should be prevented or minimized in accordance with the guidelines stipulated in the ProPECC PN 2/24, which includes but not limited to the followings:

- Provide sufficient chemical toilets with regular maintenance by licensed chemical waste collector where necessary.
- Channels, earth bunds or sand bag barriers should be provided on site to direct storm-water to sand/silt removal facilities. Where necessary, perimeter channels should be provided at the project boundary to intercept storm-runoff from outside the site. These shall be implemented in advance of construction work.
- Sand/silt removal facilities such as sand traps, silt traps and sediment basins shall be provided to remove sand/silt particles from runoff to meet the requirements of the Technical Memorandum standard under the WPCO. These facilities shall be properly and regularly maintained.
- Construction works should be programmed to minimize soil excavation works in rainy seasons (April to September). If excavation in soil could not be avoided in these months or at any time of year when rainstorms are likely, for the purpose of preventing soil erosion, temporarily exposed slope surfaces should be covered e.g. by tarpaulin, and temporary access roads should be protected by crushed stone or gravel, as excavation proceeds. Intercepting channels should be provided (e.g. along the crest/edge of excavation) to prevent storm runoff from washing across exposed soil surfaces

- Earthworks final surfaces should be well compacted and the subsequent permanent work or surface protection should be carried out immediately after the final surfaces are formed to prevent erosion caused by rainstorms. Appropriate drainage like intercepting channels should be provided where necessary.
- The Contractor should implement the Precautions/Actions relating to rainstorms as summarized in Appendix A2 of ProPECC PN 2/24.
- If there is excess effluent, it shall be treated by sedimentation up to the standard stipulated in the water discharge licence issued by EPD. Only that effluent can be discharged into the designated discharge point to safeguard the water quality in the receiving water. If discharge to stormwater system is not permitted under the WPCO, the treated water is proposed to be removed from the Site by tankers. The effluent will then be delivered to public sewage treatment plant.
- Open stockpiles of materials on site shall be covered with tarpaulin or similar fabric during rainstorms.
- Manholes (including newly constructed ones) should always be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris from getting into the drainage system, and to prevent storm run-off from getting into foul sewers.
- Final surfaces of earthworks shall be well compacted and sequential work shall be executed after the final surfaces are completed to minimize erosion arose from rainstorm.
- Wheel washing facilities shall be provided in the construction site and all vehicles and plant shall be cleaned before they leave the site. The wastewater shall be treated by silt removal facilities and sedimentation before discharging into storm drains. The section between the wheel washing facilities and public road shall be paved to avoid site run-off from intruding public drainage system.
- Wastewater from building construction works like cleaning of works, concreting and similar activities shall not be discharged into the storm drains. The wastewater shall be treated by the silt removal facilities to remove settleable solids and pH adjustment before discharging into foul sewers.

5.4.2 Since a modified watercourse is identified in close proximity of the Proposed Development, the following measures should also be taken:

- The use of less or smaller construction plant may be specified to reduce disturbance to the riverbed where aquatic inhabitants are located.
- Proper locations well away from rivers/streams for temporary storage of materials (e.g. equipment, filling materials, chemicals and fuel) and temporary stockpile of construction debris and spoil should be identified before commencement of the works.
- Stockpiling of construction materials, if necessary, should be properly covered and located away from any stream/river.
- Construction debris and spoil should be covered up and/or properly disposed of as soon as possible to avoid being washed into nearby rivers/streams by rain.
- Adequate lateral support may need to be erected in order to prevent soil/mud from slipping into the stream/river, but without unduly impeding the flow during heavy rain.

5.4.3 Adequate portable chemical toilets will be provided to cater for the sewage generated from

the construction workforce. Any effluent discharge from the construction site should comply with the standards stipulated in the TM-DSS. A licensed contractor shall be employed to collect, dispose of, and provide maintenance for the chemical toilets.

5.4.4 It is recommended that the contractor should prepare an emergency plan associated with the accidental spillage of chemical. Any chemical spillage should be immediately contained and cleaned up. Disposal of chemical waste should be complied with the Watse Disposal Ordinance (Cap. 354). Mitigation measures as per the Code of Practice of the Packaging, Labelling and Storage of Chemical Wastes under Watse Disposal Ordinance is suggested as follows:

- All chemicals shall be stored in suitable containers which are sealable, robust and in good condition.
- Chemical storage areas shall have impermeable floor and bund-wall. The bund shall at least have a capacity of 110% of the volume of the largest container or 20% by volume of the chemical stored in the area, whichever is largest. All liquid collected within the bund shall be treated as chemical waste. Where possible, storage areas should be sheltered to prevent rainfall entering.
- All chemical should be labelled accurately to enable proper use, handling and storage by the construction workforce.

5.4.5 Above mitigation will be incorporated into the tender of the Proposed Development. With the proper implementation of the above mitigation, water quality impact from different sources during construction stage is not anticipated.

Operation Phase

5.4.6 During operation phase, recommendations from ProPECC PN 1/23 should be followed as far as possible to minimise the potential water quality impacts.

5.4.7 Surface runoff in the open areas Proposed Development should be collected by the drainage system with adequate silt traps and oil interceptors. For the basement carpark that may generate wastewater, drainage in basement carpark should be connected to foul sewer via petrol inceptors as per the recommendation form ProPECC PN 1/23. The typical design of the petrol interceptor can refer to Appendix A of the ProPECC PN 1/23.

5.4.8 All sewage or waste water generated from the Proposed Development will be treated properly, in accordance with the standard stipulated in TM-DSS, by the on-site treatment plant prior to the discharge to the existing watercourse. To facilitate proper flow during emergency conditions, mitigation measures such as standby power supply, standby pump and twin mains shall be incorporated into the design of the STP.

5.4.9 Given that the provision of swimming pool in the Proposed Development, recommendations from ProPECC PN 1/23 regarding the discharge of swimming pool shall be followed. Backwash water from the swimming pool will be connected to the sewage treatment plant and discharge to the existing watercourse via the sewers within the Proposed Development.

5.4.10 With proper implementation of the mitigation measures during operation phase, no adverse water quality impact is anticipated.

5.5 Conclusion

5.5.1 Potential water quality impact associated with the Proposed Development during construction phase would be construction site runoff, sewage generated from construction workforce and accidental spillage of chemicals. However, with proper implementation of mitigation measures, no adverse water quality impact is anticipated.

5.5.2 For operation phase, all sewage and wastewater generated from the Proposed Development will be properly treated by the on-site treatment plant prior to the discharge to the existing watercourse. All discharges to the public drainage and sewerage system will be addressed in separated reports (Drainage Impact Assessment and Sewerage Impact Assessment).

6. WASTE MANAGEMENT CONSIDERATION

6.1 Legislations and Requirements

6.1.1 In general, sustainable approaches to waste management should be adopted to produce less waste and reuse or recover value from waste. The consideration on waste management for the Project will take into account of the below Ordinances/Guidelines/Practice Notes adopted in Hong Kong.

6.1.2 The following legislations/guidelines related to the handling, treatment and disposal of waste in Hong Kong are listed:

- Waste Disposal Ordinance (Cap. 354) (WDO)
- Waste Disposal (Chemical Waste) (General) Regulation (Cap. 354C)
- Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap. 354N)
- Land (Miscellaneous Provisions) Ordinance (Cap. 28)
- Code of Practice on the Packaging, Labelling and Storage of Chemical Waste
- Air Pollution Control Ordinance (Control of Asbestos (sections 51 to 84))
- ProPECC PN2/97 Handling of Asbestos Containing Materials in Buildings
- ADV-19 – Practice Note for Authorized Persons, Registered Structural Engineers and Registered Geotechnical Engineers – Construction and Demolition Waste
- Code of Practice on the Handling, Transportation and Disposal of Asbestos Wastes

6.1.3 Waste collection and disposal is covered by the Waste Disposal Ordinance (Cap. 354) (WDO). This provides a licensing system for the disposal of certain wastes and for the control of certain wastes by regulation. All wastes should be properly stored and disposed in accordance with relevant waste management regulations and guidelines.

6.1.4 Waste Disposal (Chemical Waste) (General) Regulation (Cap. 354C) outlines the requirement for chemical waste handling and disposal.

6.1.5 Under the Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap. 354N), construction waste delivered to a landfill for disposal must not contain more than 50% by weight of inert materials. Construction waste delivered to a sorting facility for disposal must contain more than 50% by weight of inert materials, and construction waste delivered to a public fill reception facility for disposal must consist entirely of inert materials.

6.1.6 Land (Miscellaneous Provisions) Ordinance (Cap. 28) provides control over placing and maintaining of C&D materials on unleased land. If the occupier does not hold the relevant license, the Department of Lands will take action accordingly.

6.1.7 Practice Note for Authorized Persons, Registered Structural Engineers and Registered Geotechnical Engineers (ADV-19) provides mitigation measures on waste generation and management during the planning stage of a building development to minimise waste disposals at landfills.

6.2 Waste Management for Construction Phase

Waste Types

6.2.1 The site clearance, demolition of existing structure, excavation, and superstructure construction activities to be carried out for the proposed development would generate a variety of waste that can be divided into distinct categories based on their composition and ultimate method of disposal. The identified waste types include:

- Construction and demolition (C&D) materials, comprising inert and non-inert materials, from the demolition and construction works;
- Potential asbestos containing materials;
- Chemical waste from any maintenance of construction plant and equipment; and
- General refuse from the workforce

Inert and non-inert C&D Materials

6.2.2 Inert C&D Material (or public fills) includes construction debris, soil, rock and concrete, should be re-used on-site as filling materials or off-site as public fill at public fills reception facilities. Non-inert C&D Material (or C&D waste) includes metal from the existing structures, wood from formwork, equipment parts, and materials and equipment wrappings, etc. should be re-used or recycled as far as possible.

6.2.3 As the Proposed Development involves demolition of existing structure and construction of 1 floor of basement, it is estimated that about 28,455 m^3 excavated materials would be generated and about 4,100 m^3 would be suitable for backfilling during site formation stage. It is also estimated that about 50 m^3 C&D materials will be generated during the demolition work.

6.2.4 In order to account for the quantity of C&D materials to be generated from construction of the new building, C&D materials generation rate of 0.1 m^3 per m^2 of GFA constructed is adopted in accordance with the "Reduction of Construction Waste Final Report, Hong Kong Polytechnic University (March 1993)". The total GFA of the proposed development from the Proposed Development will be around 10,000m^2. The C&D materials generated from superstructure construction is approximately 1,000m^3. Hence, the total amount of inert C&D materials generated by the Project is projected at ~29,400 m^3.

6.2.5 The volume of non-inert C&D material, such as building materials, maintenance and packaging waste; generated during site clearance, demolition of existing buildings, and construction of superstructure works is projected at 105 m^3, which will be subject to specific construction procedures and site practices. The estimated amount of non-inert C&D material generated would be minimal with careful design, planning, good site management and control of ordering procedures etc.

6.2.6 The estimated quantities of inert and non-inert C&D material generated from the construction of the Proposed Development are presented in **Table 6-1**.

Table 6-1 Estimated Quantities of C&D materials to be Generated, Reused and Disposed of

Construction Activities	Sum (m^3)	Wastes to be Reused/Recycled/disposed of (m^3)					
		Inert C&D material			Non-inert C&D material		
		Reused/Recycled On-Site	Reused/Recycled Off-Site(a)	Disposed Off-Site	Reused/Recycled On-Site	Reused/Recycled Off-Site(a)	Disposed Off-Site
Excavation & Site Formation	28,455	4,100	0	24,355	0	0	0
Demolition of Existing Buildings	50	0	0	45	0	0	5
Superstructure Construction	1,000	0	0	900	0	10	90
All	**29,505**	4,100	0	25,300	0	10	95
		29,400			105		

Note
[1] The inert C&D materials not reused on-site shall be disposed off-site and delivered to the Tseung Kwan O Area 137 Fill Bank.
[2] Non-inert C&D materials should be reused or recycled as much as possible before disposed off-site, estimated to be 10% of the total generated.

6.2.7 It is estimated that about 14% of inert C&D material to be reused on-site. It is proposed to deliver the rest of inert C&D materials to the Tseung Kwan O Area 137 Fill Bank. The remaining non-recyclable C&D materials are not suitable for public fill reception facilities and requires disposal to licensed landfill facilities (the closest landfill is the South East New Territories (SENT) Landfill).

Chemical Waste

6.2.8 Chemical waste, such as cleaning fluids, solvents, spent lubricants and fuel for equipment or waste battery, may be generated. As far as the scale of the works is small, the quantity of chemical waste generated would be minimal. It is expected that the approximate quantity of the lubrication oil is about 100L/month and hence approximately 3.6 m^3 of chemical waste will be generated during construction period of 36 months. The chemicals should be collected and handled by a licensed collector and further dispose of at a licensed chemical treatment and disposal facility (Chemical Waste Treatment Centre - CWTC). Furthermore, the chemical waste should be handled in accordance with the Waste Disposal (Chemical Waste)(General) Regulation. The Works Contractor should register as a Chemical Waste Producer under the WDO.

6.2.9 In addition, other chemical waste, if any, to be generated during the demolition works will be handled and disposed of in accordance with the Waste Disposal (Chemical Waste) (General) Regulation (Cap. 354C). For asbestos wastes, if any, will be handled and disposed of in accordance with the Code of Practice on the Handling, Transportation and Disposal of Asbestos Wastes.

6.2.10 With the implementation of proper chemical waste management measures listed in **Section 6.2.22**, the impact is anticipated to be insignificant.

6.2.11 No hazardous materials or hazardous wastes are expected to be generated during the construction of the Site.

General Refuse

6.2.12 General refuse such as food scraps, waste paper, empty containers, etc., would be generated from construction workforce during construction phase.

6.2.13 The maximum number of construction workers to be employed will be approximately 15 workers per day. The daily arising of general refuse from the construction workforce can be estimated based on a generation rate of 0.65 kg per worker per day, the estimated quantity of the general refuse is 9.75 kg/day (= 15 workers x 0.65 kg/worker/day). Considering the construction period is around 2 years, the total quantity of general refuse is ~7,118 kg (9.75 kg/day x 2 years)

6.2.14 Such refuse should be properly managed so intentional or accidental release to the surrounding environment does not occur. If the general refuse is recyclable, such as paper, plastics and aluminium materials, the reuse and recycling of such waste is encouraged. Effective collection of site wastes such as providing enclosed bins or compaction units would be required to prevent waste materials being blown around by wind, flushed or leached into nearby waters, or creating an odour nuisance or pest and vermin problem. Waste storage areas should be well maintained and cleaned regularly. General refuse will be collected daily and disposed of at SENT landfill.

6.2.15 With the implementation of good waste management practices as suggested in **Section 6.2.21** at the site, adverse environmental impacts are not expected to arise from the storage, handling and transportation of general refuse generated by construction workers.

Mitigation Measures

6.2.16 Prior to the commencement of the construction works, the contractor will identify the types and amount of waste generated, and handle, store, collect and dispose waste in accordance with Waste Disposal Ordinance (Cap. 354). The associated mitigation measures and good site practice should be implemented as follows:

C&D Materials

6.2.17 In general, minimization/reuse/recycling of C&D materials (i.e. both inert and non-inert C&D materials) should be considered prior to disposal. Waste minimization measures should be adopted during construction phase, measures may include:

- On-site sorting of C&D materials;
- Recycling of construction materials for on-site use;
- Avoidance and minimization to reduce the potential quantity of C&D materials generated;
- Reuse of materials as practical as possible;
- Recovery and Recycling as practical as possible;
- Provide training to workers on the importance of appropriate waste management procedures, including waste reduction, reuse and recycling.

6.2.18 The Contractor should submit a waste management Plan (the Plan) to the project proponent for agreement, covering the types of waste and their estimated quantities, timing of waste arising; measures for reducing waste generation etc. as recommended in Section 3 of ADV-19. If the project will produce more than 300,000 m^3 of construction and demolition material,

advice from the Director of Environmental Protection should be sought prior to the acceptance of the Plan.

6.2.19 The Contractor should adopt good housekeeping practices such as waste segregation prior to disposal. Stockpiling and segregating areas should be provided at site. Effective collection of site wastes would be required to prevent waste materials being blown around by wind, flushed or leached into nearby waters, or creating an odour nuisance or pest and vermin problems. Waste storage areas should be well maintained and cleaned regularly.

6.2.20 During inclement weather (e.g. heavy rainstorm), the stockpile should be covered by tarpaulin or other water-resistant fabric. This can prevent dust and waste from being blown away by wind or washed into watercourses/drainage system.

General Refuse

6.2.21 General refuse should be stored in enclosed bins or compaction units separate from C&D materials. 3-color recycle bins for the collection of recyclable municipal waste should also be provided. A reputable waste collector should be employed by the Contractor to remove or recycle general refuse from the Site, separately from C&D materials. Preferably an enclosed and covered area should be provided to reduce the occurrence of "wind-blown" light materials.

Chemical Waste

6.2.22 If chemical waste is produced at the construction site, the Contractor will be required to register with the EPD as a chemical waste producer and to follow the guidelines stated in the Waste Disposal (Chemical Waste) (General) Regulation (Cap. 354C). Chemical waste should be stored in appropriate containers and collected by a licensed chemical waste collector. The chemical waste management measures should include, but not limited to the following:

- Minimize the production of Chemical Waste
- Registration of Chemical Waste Producers with EPD should be carried out for any person who produces chemical waste
- Give notification of certain Chemical Waste for Disposal to EPD as required in Section 4 of the Regulation & Section 17 of the Ordinance
- Carry out Packaging, Labelling and Storage of Chemical Wastes as per Sections 9 to 19 of the Regulation
- Collection of Chemical Waste and the "Trip Ticket" System as per Sections 20 to 29 of the Regulation
- Precautions Against Dangers from Spillages, Leakages or Accidents involving Chemical Waste as per Sections 30 to 32 of the Regulation

6.2.23 Provided that good site practices are strictly followed, there would be no adverse impacts related to waste management during construction phase.

6.3 Waste Management for Operation Phase

6.3.1 Domestic wastes will be expected as the major type of waste from the redevelopment, including food residues, plastic, metal products, paper, etc.. No chemical or hazardous waste

is anticipated, including waste generated during the operation and maintenance of the equipment and facilities. Wastes generated will be collected and disposed of on a regular basis. Building management will be arranged by the future owners to manage the development including waste disposal.

6.3.2 The domestic waste will be collected (at the refuse collection point) and disposed of daily at SENT landfill or regularly collected by recyclers, waste recycling would be carried out during operation phase. To minimize waste generation and promote recycling, it is recommended to implement source separation of domestic waste in the proposed development.

6.3.3 Based on the anticipated population intake for the Proposed Development, which is projected to be about 288 and will be further refined during the detailed design stage, it is estimated that approximately 268 kg per day (= 288 persons x 0.93kg/person/day) of general refuse will be generated during the operation phase. With the proper implementation of the control measures, adverse impacts due to waste management will not be anticipated.

6.4 Conclusion

6.4.1 A variety of wastes including inert C&D material, C&D waste, chemical waste and general refuse would be generated during the construction phase and domestic waste would be generated during operation phase. Provided that the wastes generated would be managed with appropriate measures, no adverse environmental impacts arising from the handling, storage, transportation or disposal of the wastes generated during the construction and operation stage of the Proposed Development would be envisaged.

7. LAND CONTAMINATION ASSESSMENT

7.1.1 According to the desktop study and planning statement for the Application, the Site is currently occupied by a commercial horticulture workshop and temporary structures with some vehicle repair activities. According to **Table 2.3** of "Practice Guide for Investigation and Remediation of Contaminated Land (EPD, revised in April 2023)" (PG), a commercial horticulture workshop and temporary structures do not belong to any potential contaminated land use types, while a vehicle repair workshop is classified as a potentially contaminated land use type. As the Project is still at a planning stage and the operations at the Site are ongoing, a preliminary site appraisal for the Application shall be conducted accordingly. This appraisal shall include a review of historical land uses, an inquiry into land contamination-related records and a site visit for the site appraisal in relation to the land contamination assessment.

7.2 Review of Historical Land Uses

7.2.1 A review of aerial photographs was undertaken to evaluate the likelihood of potential contamination associated with past land uses within the Site from 1990 – 2023. The reviewed aerial photos for the Site are attached in **Appendix 7-1**. Findings indicate that the site was primarily covered in flora before 2011, with horticultural activities first recorded in 2011 near the site and later within the site from 2015 onward. Suspected vehicle parking or maintenance activities in the centre area of the Site have been noted since 2017, concentrated in two areas with a total area of approximately 1610 m^2, as illustrated in **Appendix 7-1**.

7.3 EPD and FSD on Land Contamination Related Records

7.3.1 Information was requested from FSD and EPD's Regional Office (East) on the history of operation and land use of Assessment Area, i.e. the Site and its vicinity area, on 14th October 2025. The EPD was consulted with regard to any records of chemical waste producer (CWP). The FSD was consulted with regard to any records of dangerous goods license(s). Both departments were also inquired on any reported accidents or spillage/leakage incidents within the Site. The correspondences from EPD and FSD are documented in **Appendix 7-2.**

Table 7-1 Summary of Response from Government Department

Government Department	Response
Environmental Protection Department Regional Office (East)	- No chemical waste producer nor spillage/leakage incidents were recorded in the site.
Fire Services Department	- No dangerous goods license, fire incidents nor spillage/leakage incidents were recorded in the site.

7.4 Site Visit

7.4.1 A site visit was carried out on 19th December 2024 to verify the information obtained from the desktop study and to evaluate potential land contamination issues. Site walkover checklist and photos record from the site visit are presented in **Appendix 7-3** and **Appendix 7-4** respectively. The Site was operating as commercial horticulture workshop where the ground

mostly paved. Although a vehicle repair workshop was noted in the desktop study, only vehicle parking on the Site was found in well-maintained paved area. According to the site representative, vehicles were primarily parked or abandoned, with only minor maintenance activities, such as car detailing, being performed occasionally. Temporary storage areas for the horticultural workshop and construction materials were also found within the Site. Additionally, no observable cracks/fissures or signs of oil stain were observed. Hence, the potential for the land contamination at the Site is not anticipated. However, as the site remains operational, a further site re-appraisal will be conducted prior to the commencement of construction works.

7.5 Conclusion

7.5.1 Based on the findings of this preliminary site appraisal, the Site had primarily been used for commercial horticulture workshops. Although minor vehicle maintenance activities were noted in the desktop study, only vehicle parking was found on the Site during the visit, and it was located in a well-maintained paved area. Therefore, the potential for land contamination at the site is not anticipated. However, as the site remains operational, a further site re-appraisal will be conducted prior to the commencement of construction works.

8. CONCLUSION

8.1.1 The Project Proponent has proposed to develop a residential development with clubhouse (Proposed Development) at various Lots in D.D. 210 Pak Wai, Sai Kung.

8.1.2 This EA is prepared to assess the potential environmental impact associated with the implementation of the Project in support of the submission of the Application. The assessment has been undertaken with reference to the guidance for environmental considerations provided in Chapter 9 "Environment" of the Hong Kong Planning Standards and Guidelines.

8.1.3 The key environmental issues with potential environmental impacts arising from the Project are identified, based on the environment of the Project, as air quality, noise, water, waste management and land contamination. The Sewerage Impact Assessment and Drainage Impact Assessment are provided in separated reports under this Application.

Air

8.1.4 During construction phase, major dust emitting construction activities will be the demolition of existing structures, excavation works, foundation works and construction works of the superstructures. With the implementation of dust suppression measures stipulated under the Air Pollution Control (Construction Dust) Regulation and the adoption of good site practice, adverse air quality impact associated with the construction works is not anticipated.

8.1.5 During operation phase, the Proposed Development itself is considered as ASRs. The minimum buffer distance requirement recommended in Chapter 9 of HKPSG has been fulfilled. Taken into consideration of the large margin in the PATH background, no adverse air quality impact to the Proposed Development during operation phase is anticipated.

8.1.6 The proposed sewage treatment plant of the Proposed Development is considered an air pollution source. However, with proper implementation of the mitigation measures, no adverse odour impact to the surroundings is anticipated.

8.1.7 The exhaust air from the proposed indoor car park in the Project is considered as a potential source of impact. The proposed car park should be located and built-in accordance to the requirements stipulated in ProPECC PN2/96 for the design, maintenance and operation of the ventilation systems to ensure the compliance of the air quality inside car parks with the concentration limits. The exhaust air should be discharged to the atmosphere in such a manner and at such a location as not to cause a nuisance to occupants in the building or of neighbouring buildings, or to the public. Hence, no insurmountable impact on the nearby sensitive receivers is expected.

Noise

8.1.8 Considering the scale of the Proposed Development is small, no significant construction impact is anticipated with proper implementation of the mitigation measures. External noisy fixed plants within 300m from project boundary have been reviewed. No adverse fixed noise impact on the Proposed Development is anticipated.

8.1.9 Limitation of Sound Power Level for building service equipment will be incorporated into the tender document to ensure the fixed noise sources at the Proposed Development will be designed with appropriate mitigation for complying with the relevant criterion. The planned fixed plants should be reviewed during the detailed design stage to ensure compliance with the standard stipulated in the HKPSG.

8.1.10 Traffic noise impact assessment has been conducted based on predicted peak traffic flow (15 years upon the commencement of Project, Year 2046). Under the Base Scenario without mitigation measure, the predicted traffic noise levels for the residential flats of the proposed redevelopment fully comply with the HKPSG traffic noise criteria. As the compliance rate is 100%, no adverse traffic noise impact is anticipated and no further mitigation measures are required.

Water

8.1.11 Potential water quality impact associated with the Proposed Development would be construction site runoff, sewage generated from construction workforce and accidental spillage of chemicals. However, with proper implementation of mitigation measures, the impact on water quality is anticipated to be insignificant.

8.1.12 For operation phase, all sewage and wastewater generated from the Proposed Development will be properly treated by the on-site treatment plant prior to the discharge to the existing stream. All water should be discharged through the public drainage and sewerage system that will be addressed in separated reports (Drainage Impact Assessment and Sewerage Impact Assessment).

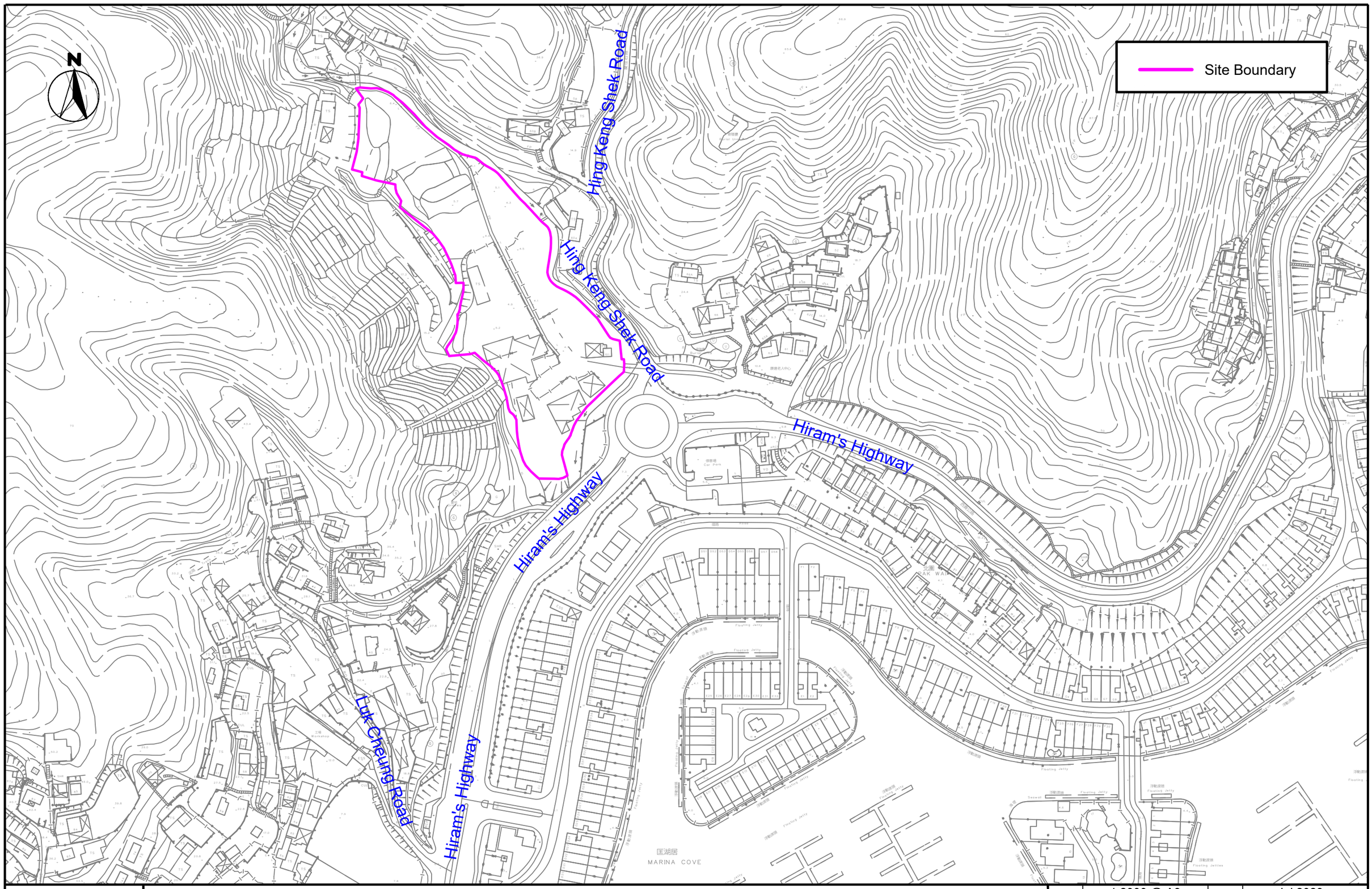
Waste Management

8.1.13 A variety of wastes including inert C&D material, C&D waste, chemical waste and general refuse would be generated during the construction phase and domestic &commercial waste would be generated during operation phase. Provided that the wastes generated would be managed with appropriate measures, no adverse environmental impacts arising from the handling, storage, transportation or disposal of the wastes generated during the construction and operation stage of the Proposed Development would be envisaged.

Land Contamination

8.1.14 Based on the findings of this preliminary site appraisal, the site had primarily been used for commercial horticulture workshops. Although minor vehicle maintenance activities were noted in the desktop study, only vehicle parking was found on the site, and it was located in a well-maintained paved area. Therefore, the potential for land contamination at the site is not anticipated. The need for further studies will be determined at a later stage.

FIGURES



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Site Location Plan

SCALE	1:2000 @ A3	DATE	Jul 2023
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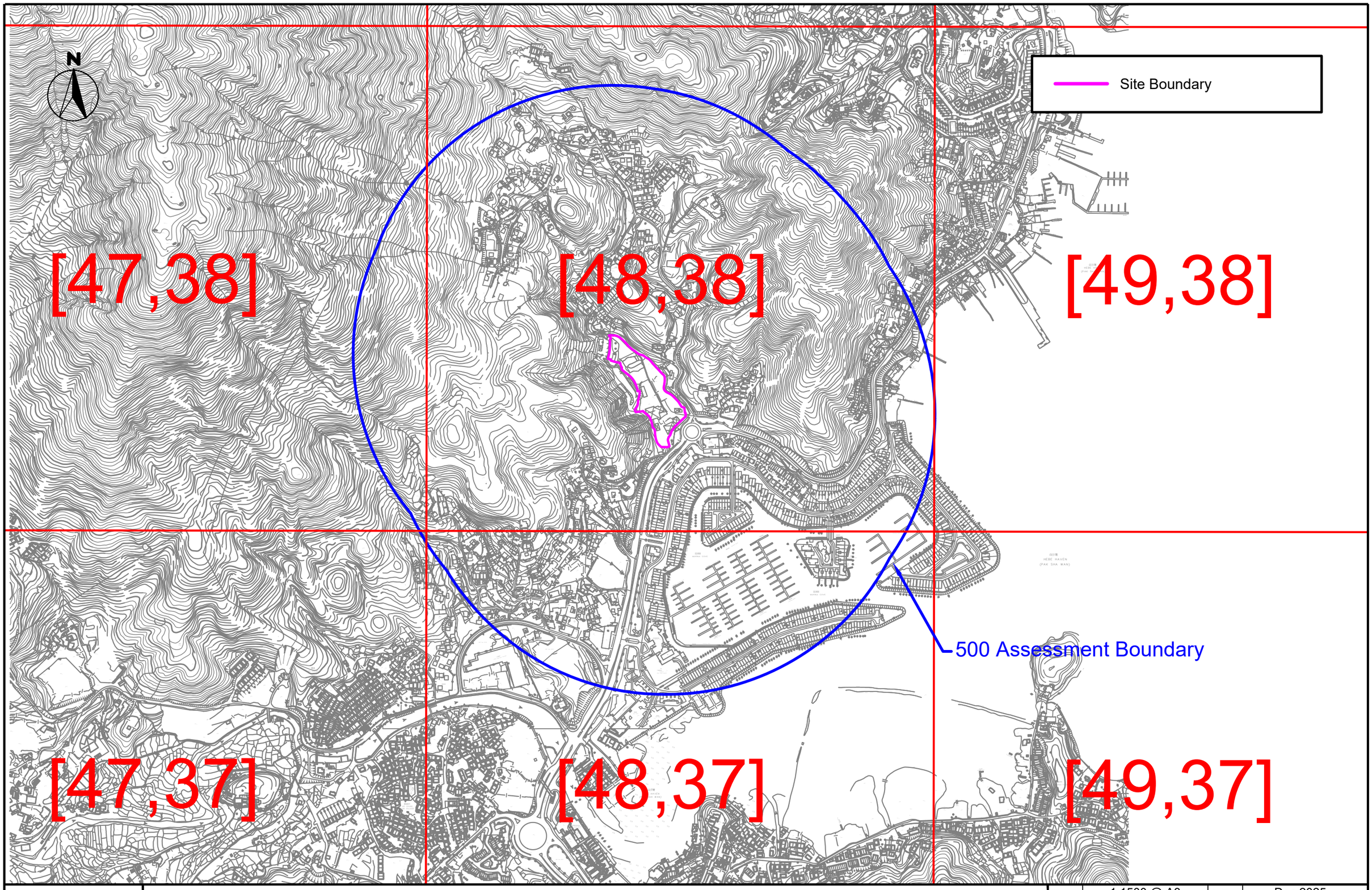
JOB No.	--	DRAWING No. 2-1	REV -



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500m Assessment Area for AQIA

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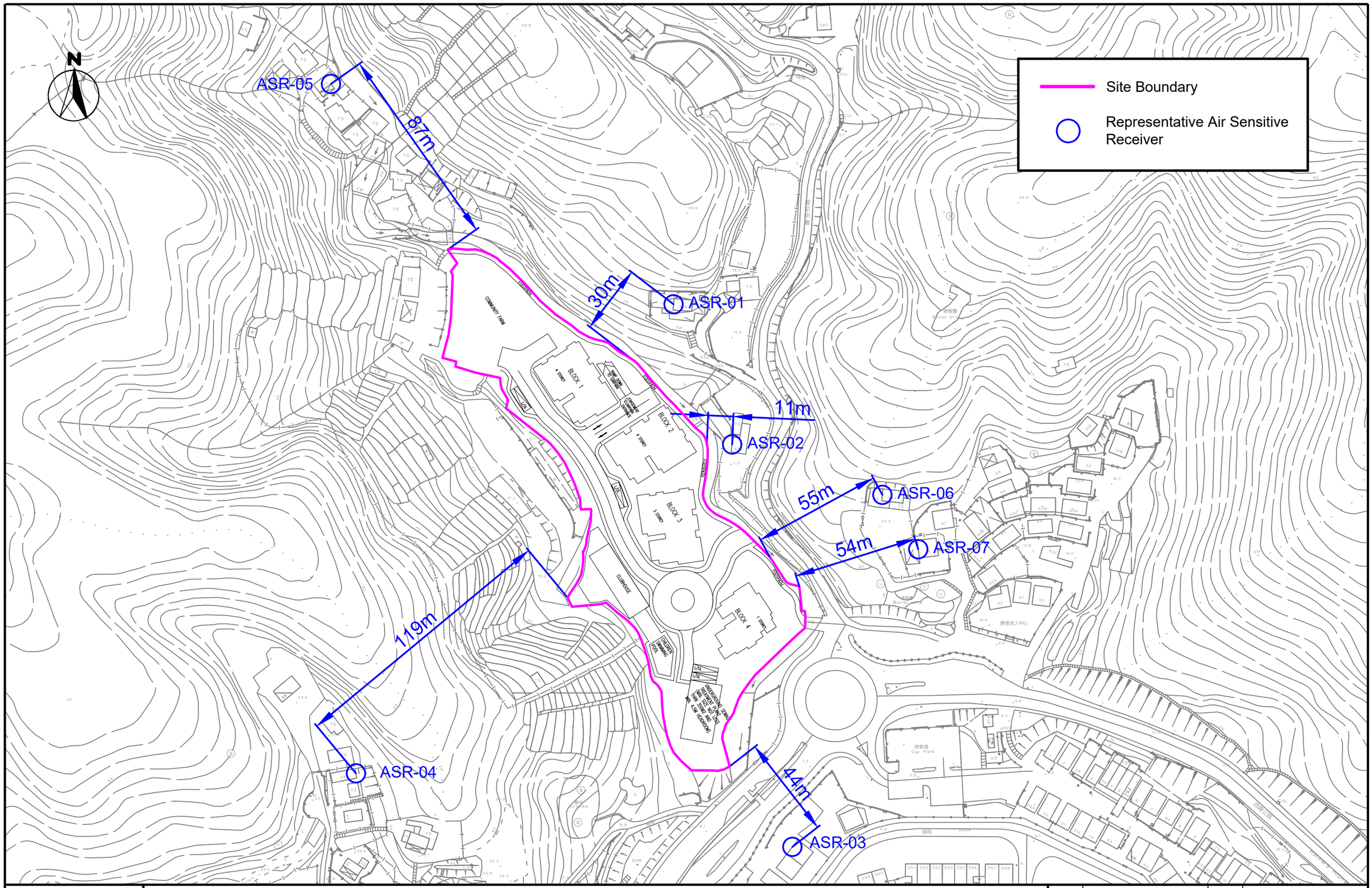
JOB No.	--	DRAWING No. 3-1	REV -



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Representative Air Sensitive Receivers for Construction Phase

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JOB No.	--	DRAWING No.	3-2
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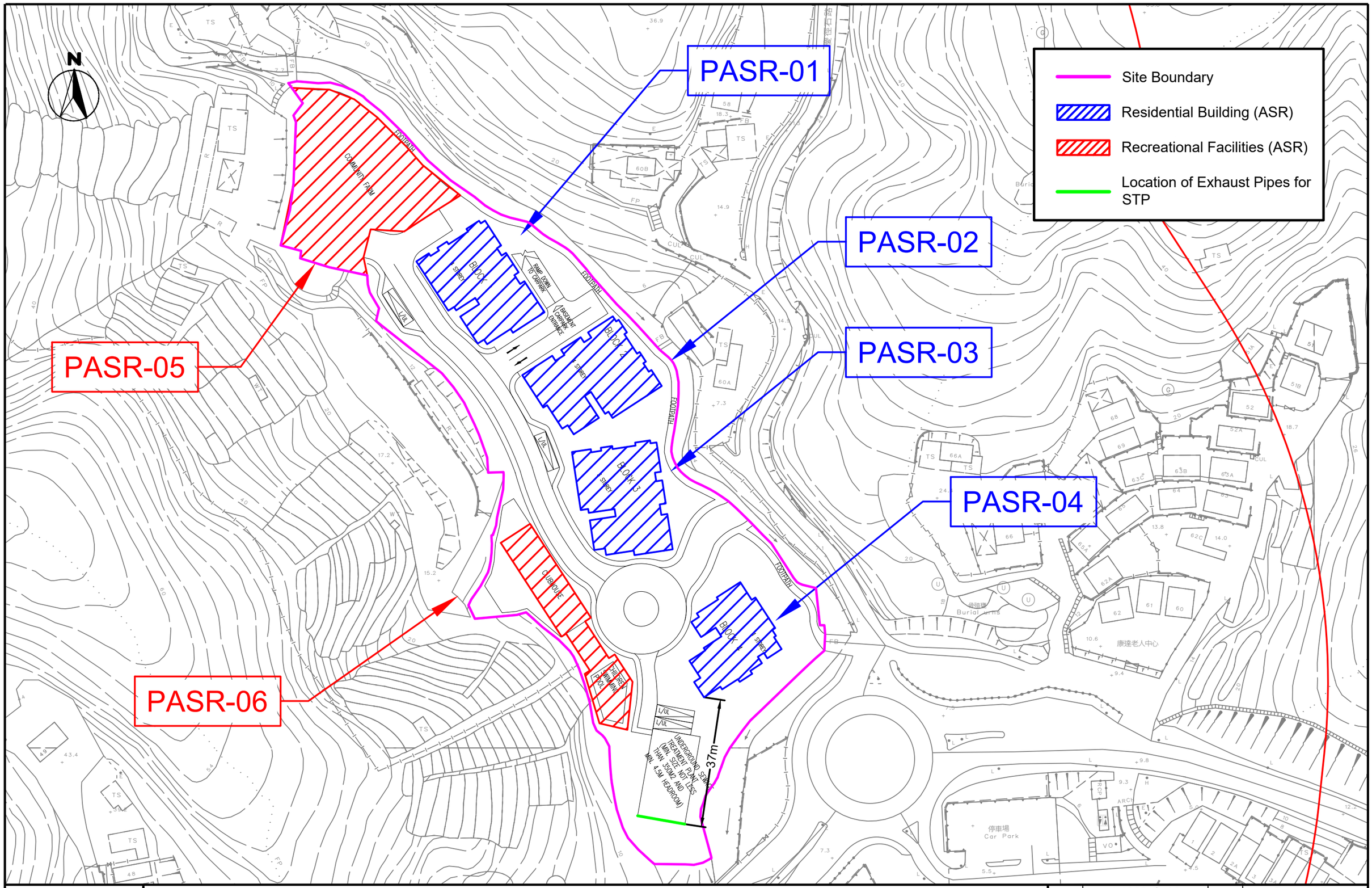

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Location of Planned ASRs of the Proposed Development

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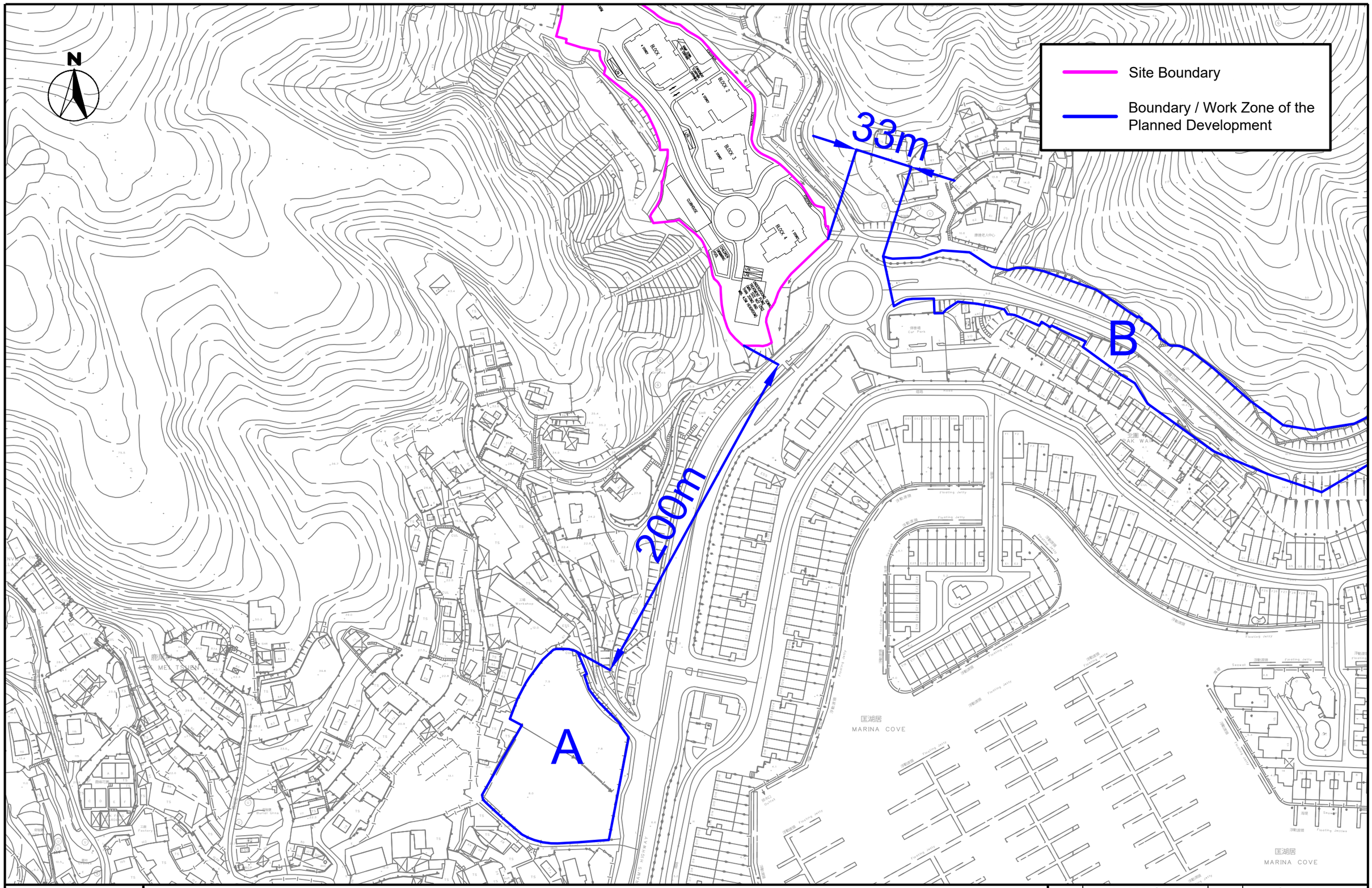
JOB No.	--	DRAWING No.	3-3
		REV	-



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Planned Development in the Vicinity

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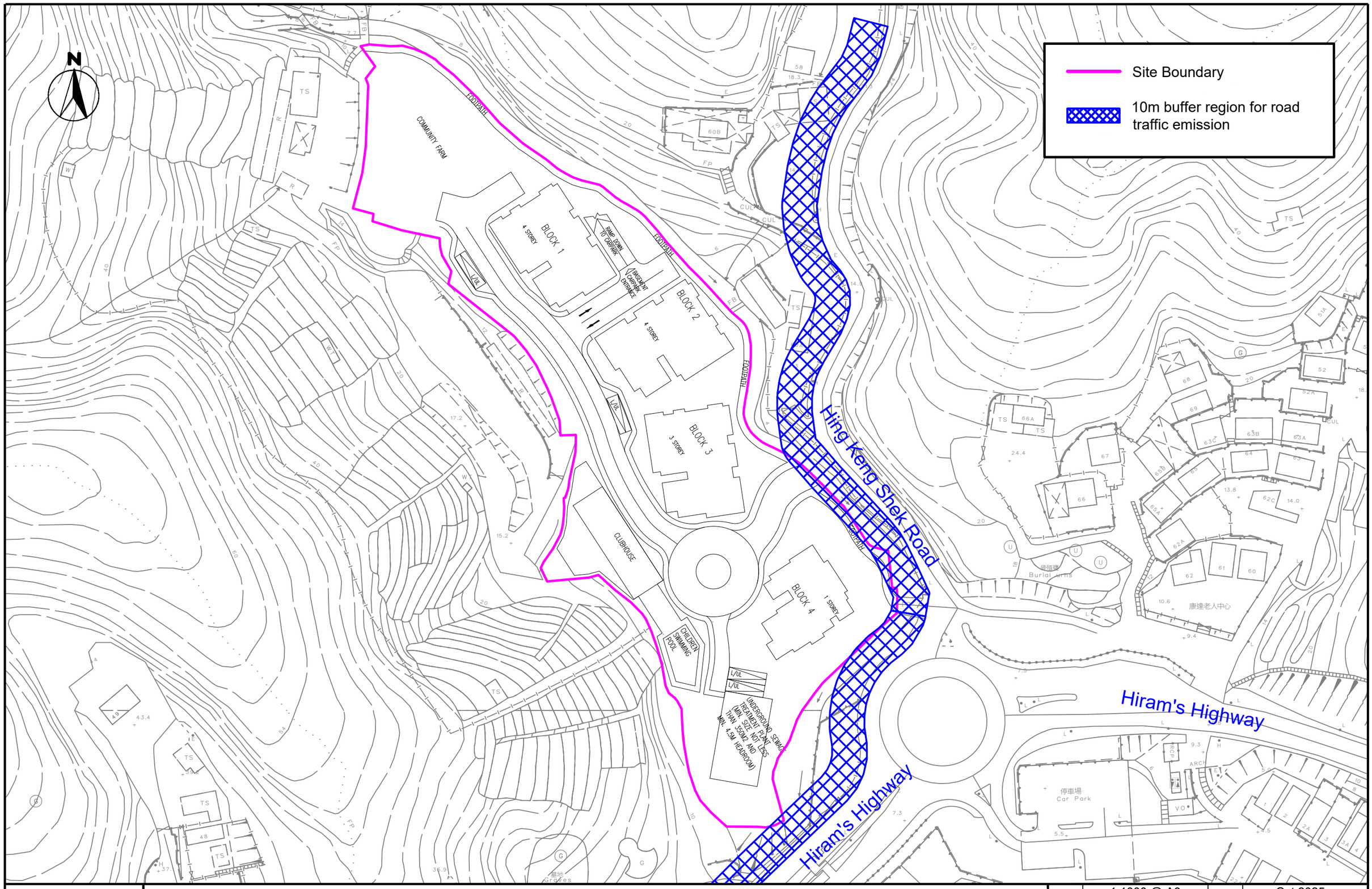
JOB No.	--	DRAWING No.	3-4
		REV	-



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Buffer Region for Road Traffic Emission

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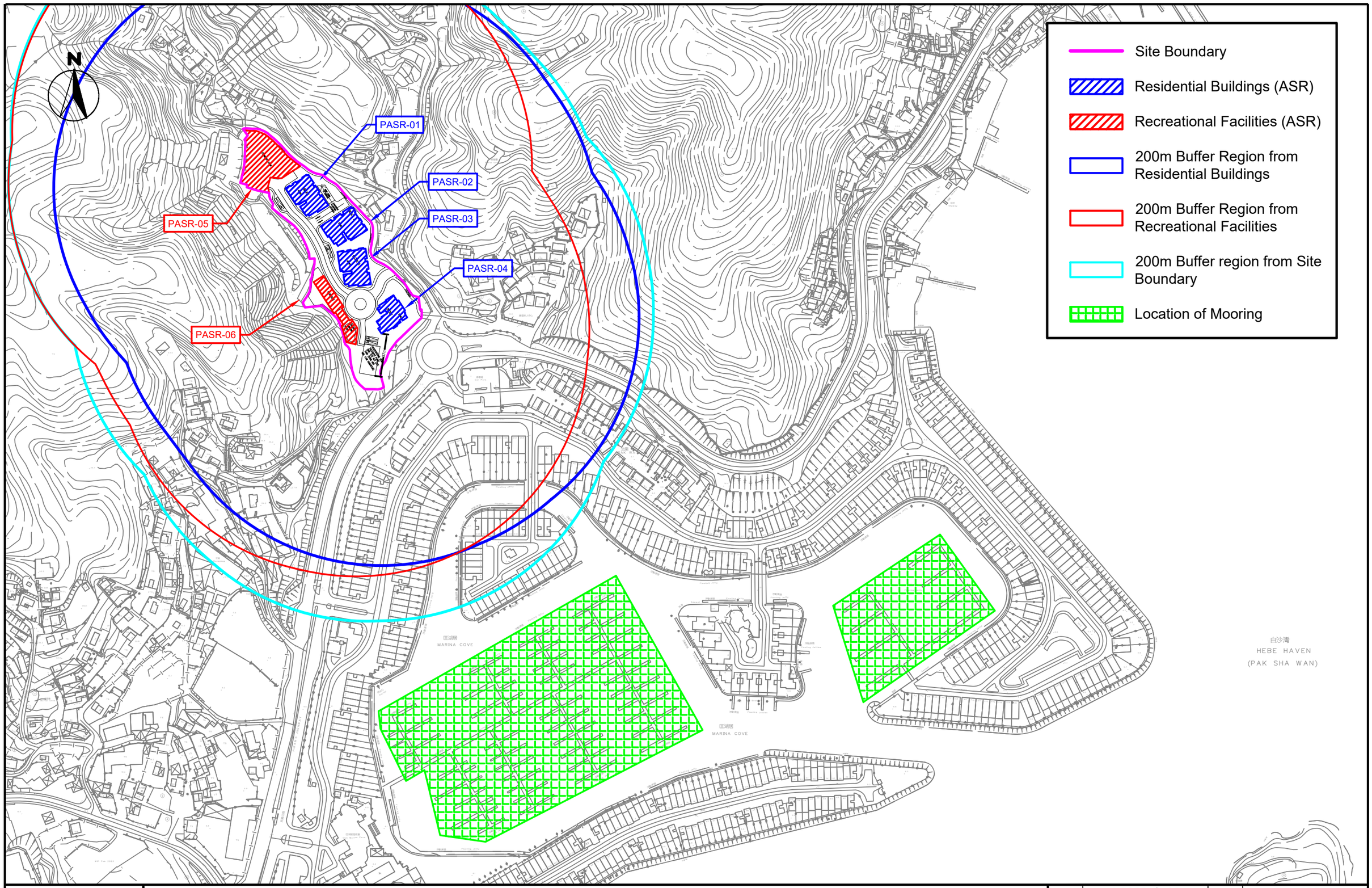
JOB No.	--	DRAWING No.	3-5
		REV	-



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200m Buffer Region from Planned ASRs

SCALE	1:2000 @ A3	DATE	Dec 2025
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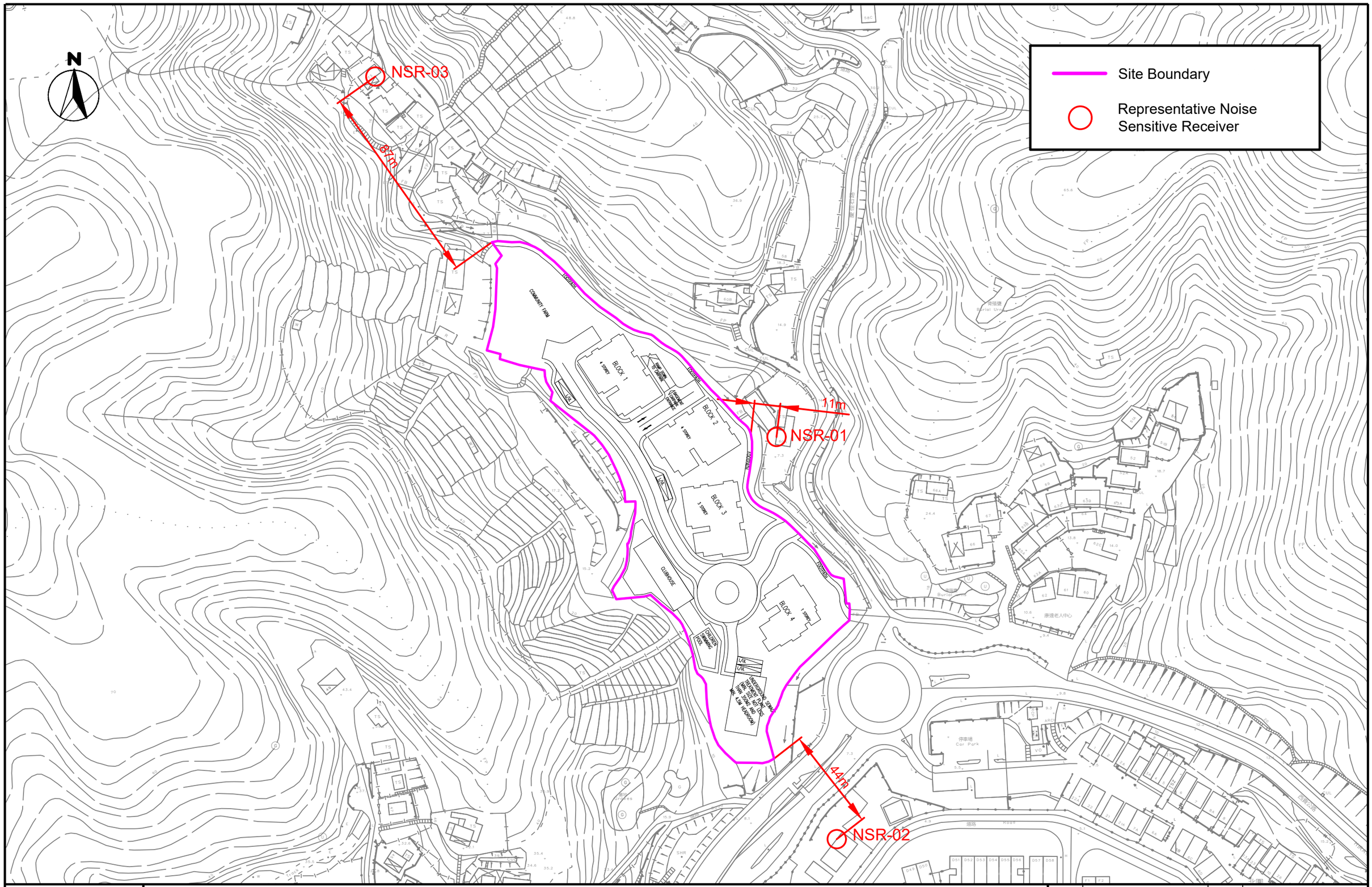
JOB No.	--	DRAWING No.	3-6
		REV	-



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Location of the Representative NSRs in the Vicinity

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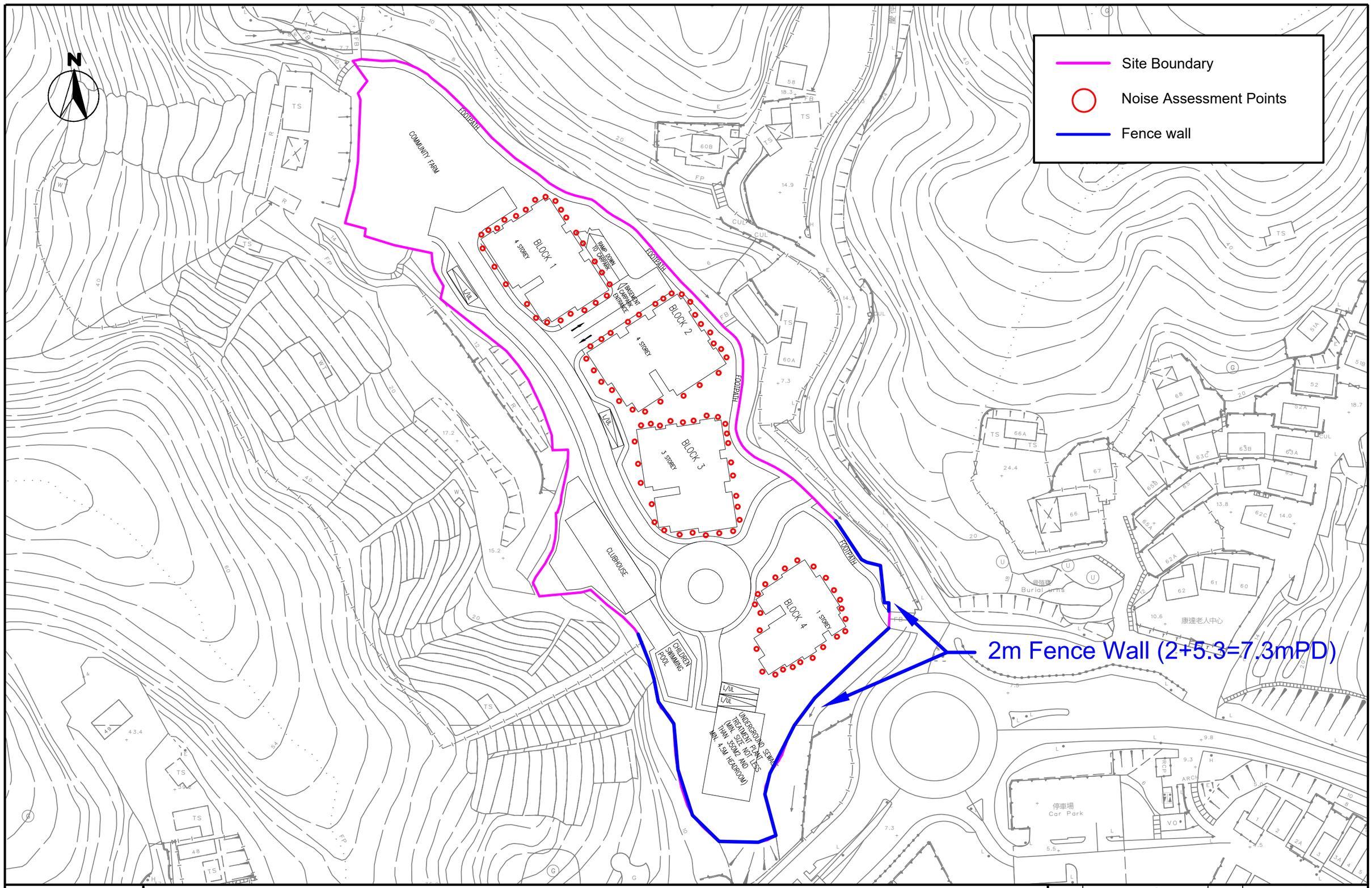
JOB No.	--	DRAWING No.	4-1
		REV	-



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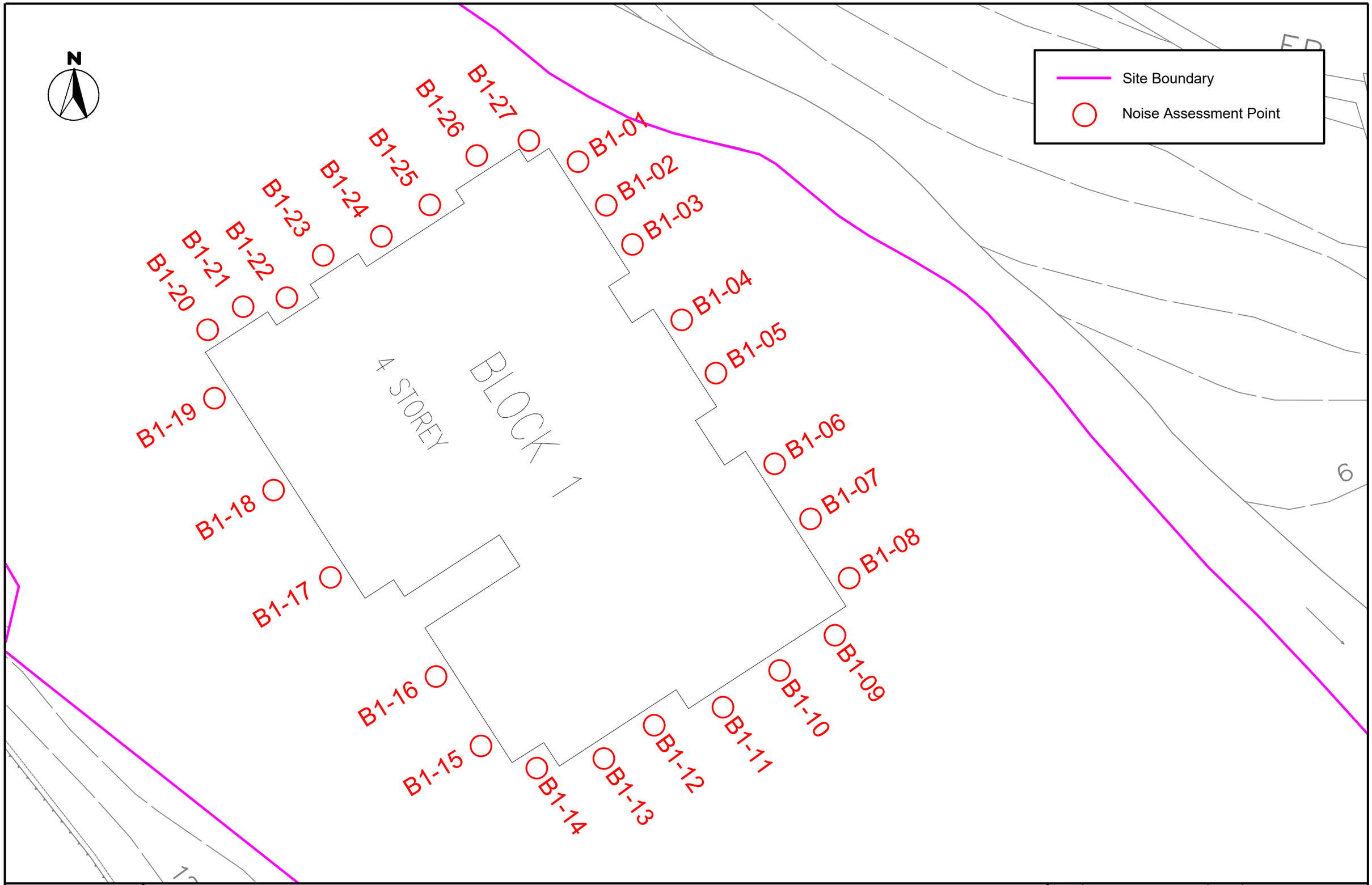
Location of the Assessment Points for Traffic Noise Impact Assessment (Overview)

SCALE	1:1000 @ A3	DATE	Jul 2025
CHECK	CC	DRAWN	LL
JOB No.	--	DRAWING No.	4-2a
		REV	-



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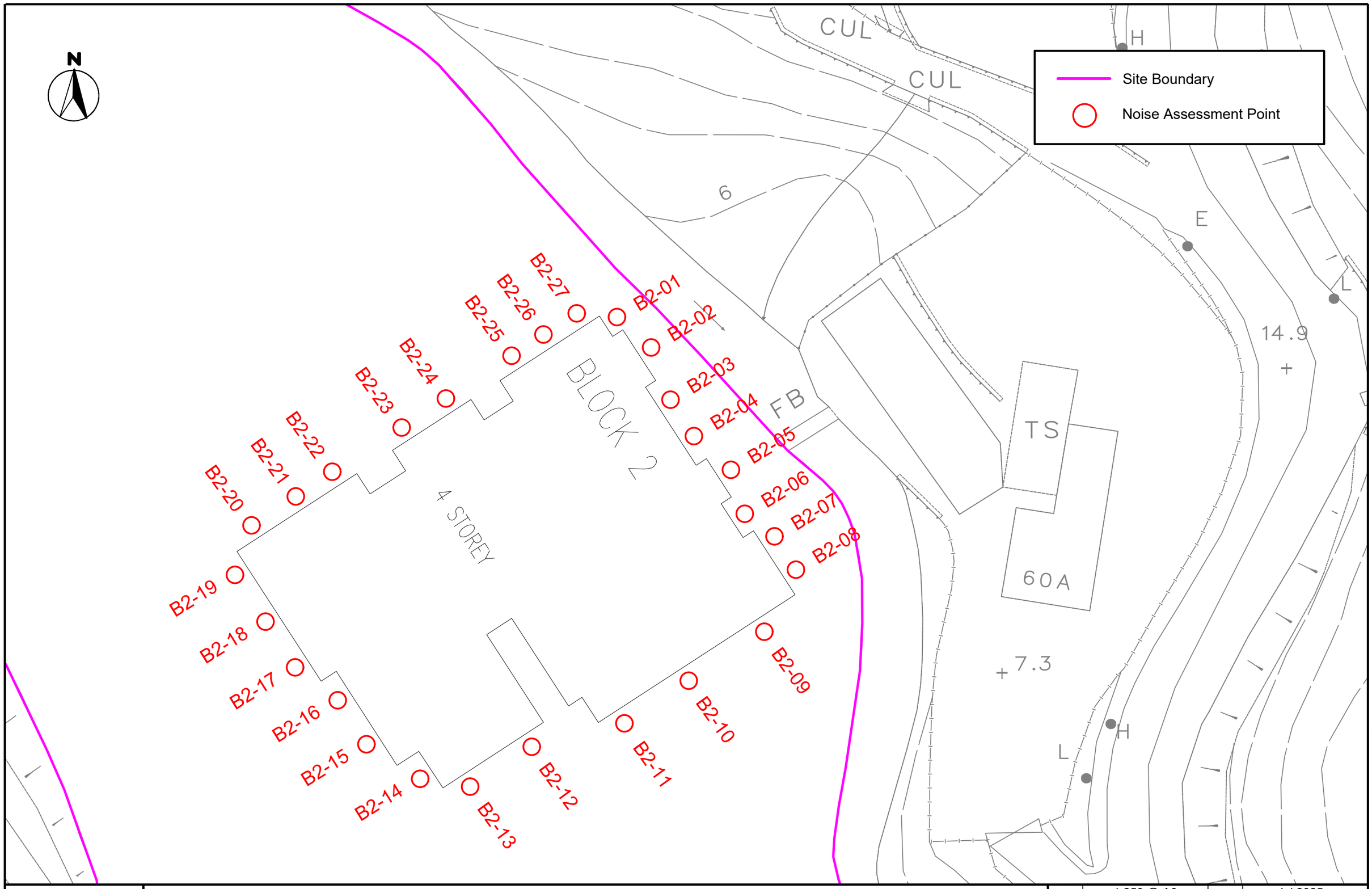
Location of the Assessment Points for Traffic Noise Impact Assessment (Block 1)

SCALE	1:200 @ A3	DATE	Dec 2025
CHECK	CC	DRAWN	LL
JOB No.	--	DRAWING No.	4-2b
		REV	-

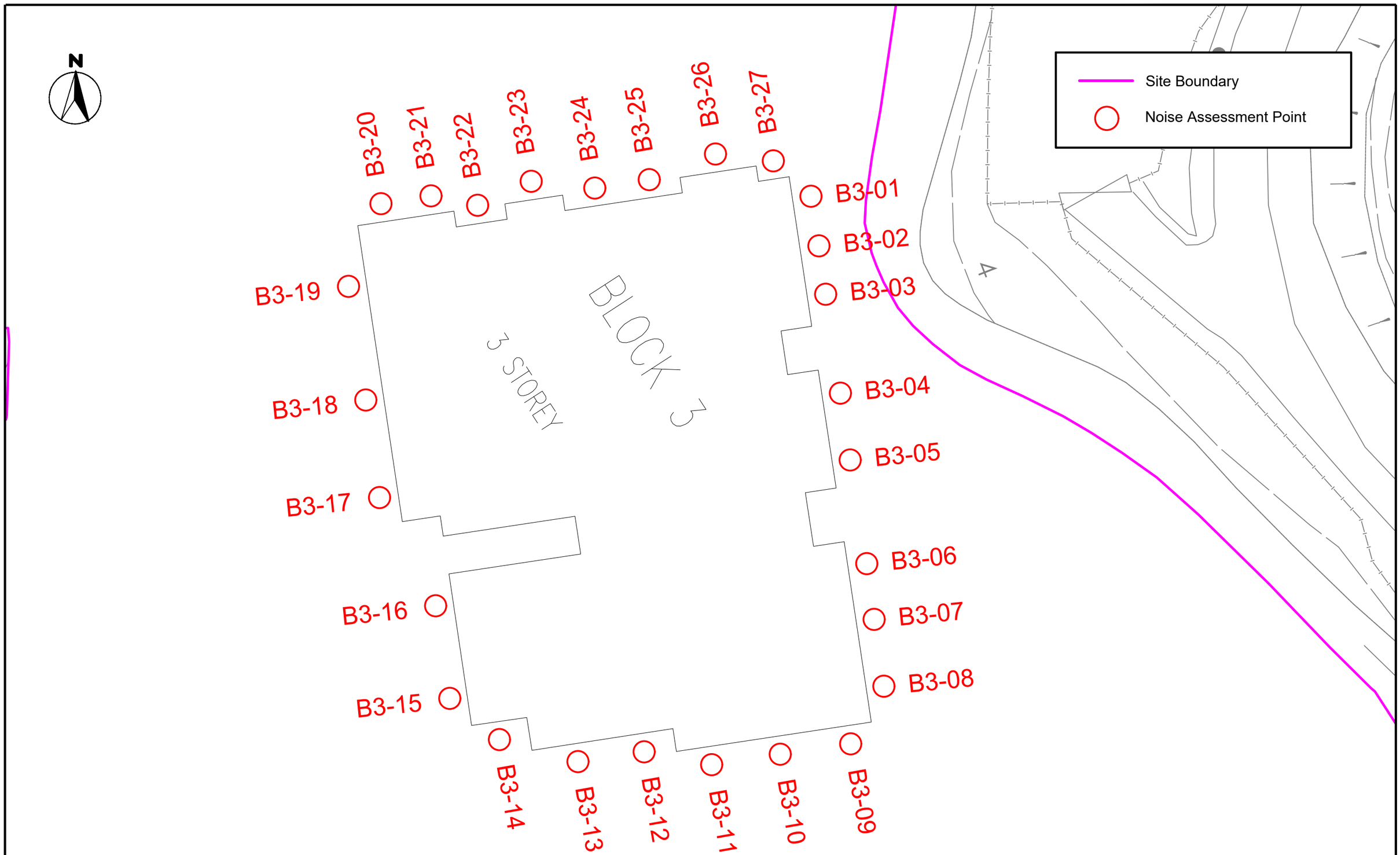


CINOTECH
Cinotech Consultants Limited

Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" and Area Shown as "Road" to "Residential (Group C)5" for Proposed Residential Development at Various Lots in D.D. 210 and Adjoining Government Land, Pak Wai, Sai Kung

Location of the Assessment Points for Traffic Noise Impact Assessment (Block 2)

SCALE	1:250 @ A3	DATE	Jul 2025
CHECK	CC	DRAWN	LL
JOB No.	--	DRAWING No.	4-2c
		REV	-



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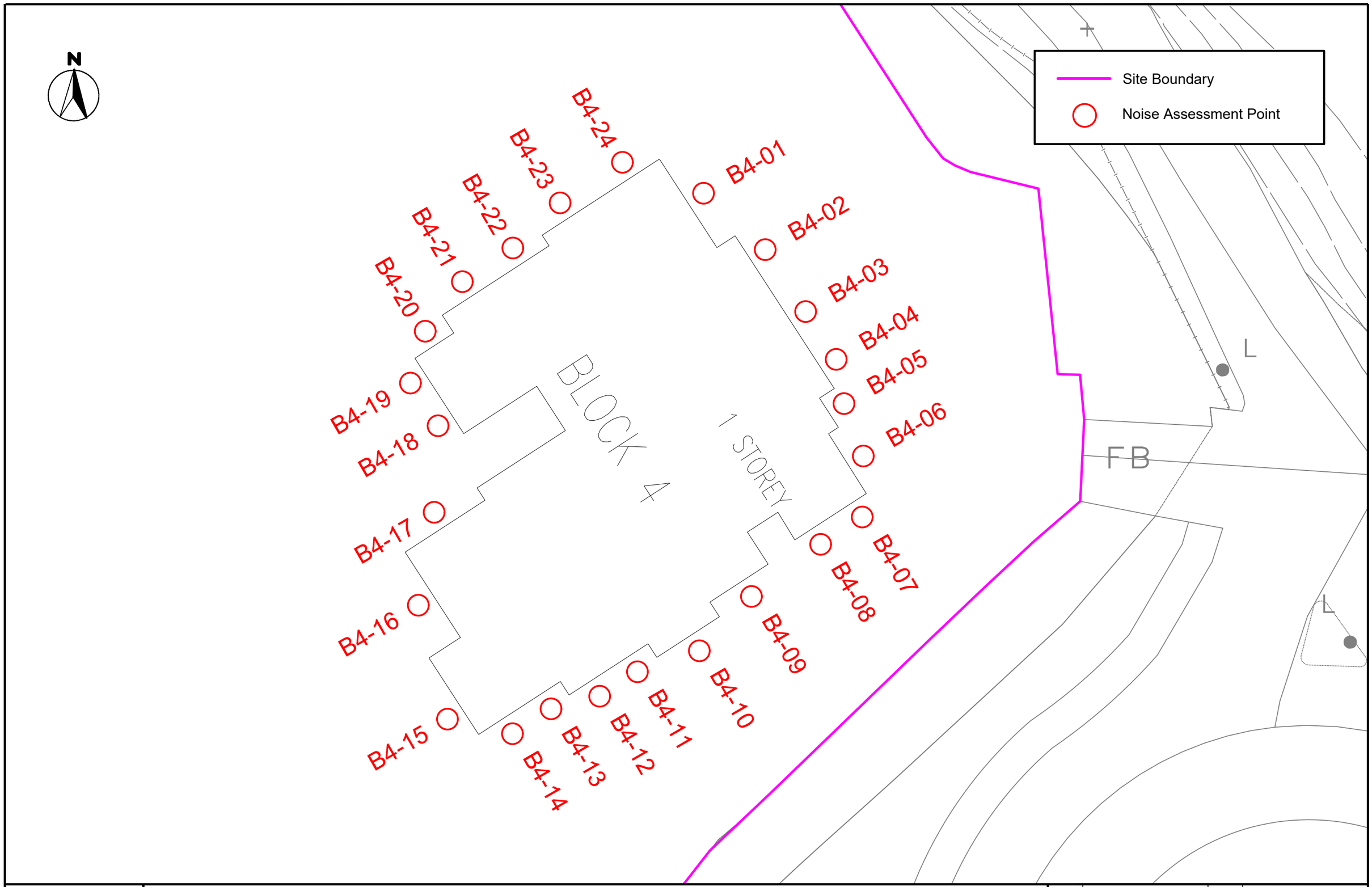
Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" and Area Shown as "Road" to "Residential (Group C)5" for Proposed Residential Development at Various Lots in D.D. 210 and Adjoining Government Land, Pak Wai, Sai Kung

Location of the Assessment Points for Traffic Noise Impact Assessment (Block 3)

SCALE	1:200 @ A3	DATE	Dec 2025
CHECK	CC	DRAWN	LL
JOB No.	--	DRAWING No.	4-2d
		REV	-



CINOTECH
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Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" and Area Shown as "Road" to "Residential (Group C)5" for Proposed Residential Development at Various Lots in D.D. 210 and Adjoining Government Land, Pak Wai, Sai Kung

Location of the Assessment Points for Traffic Noise Impact Assessment (Block 4)

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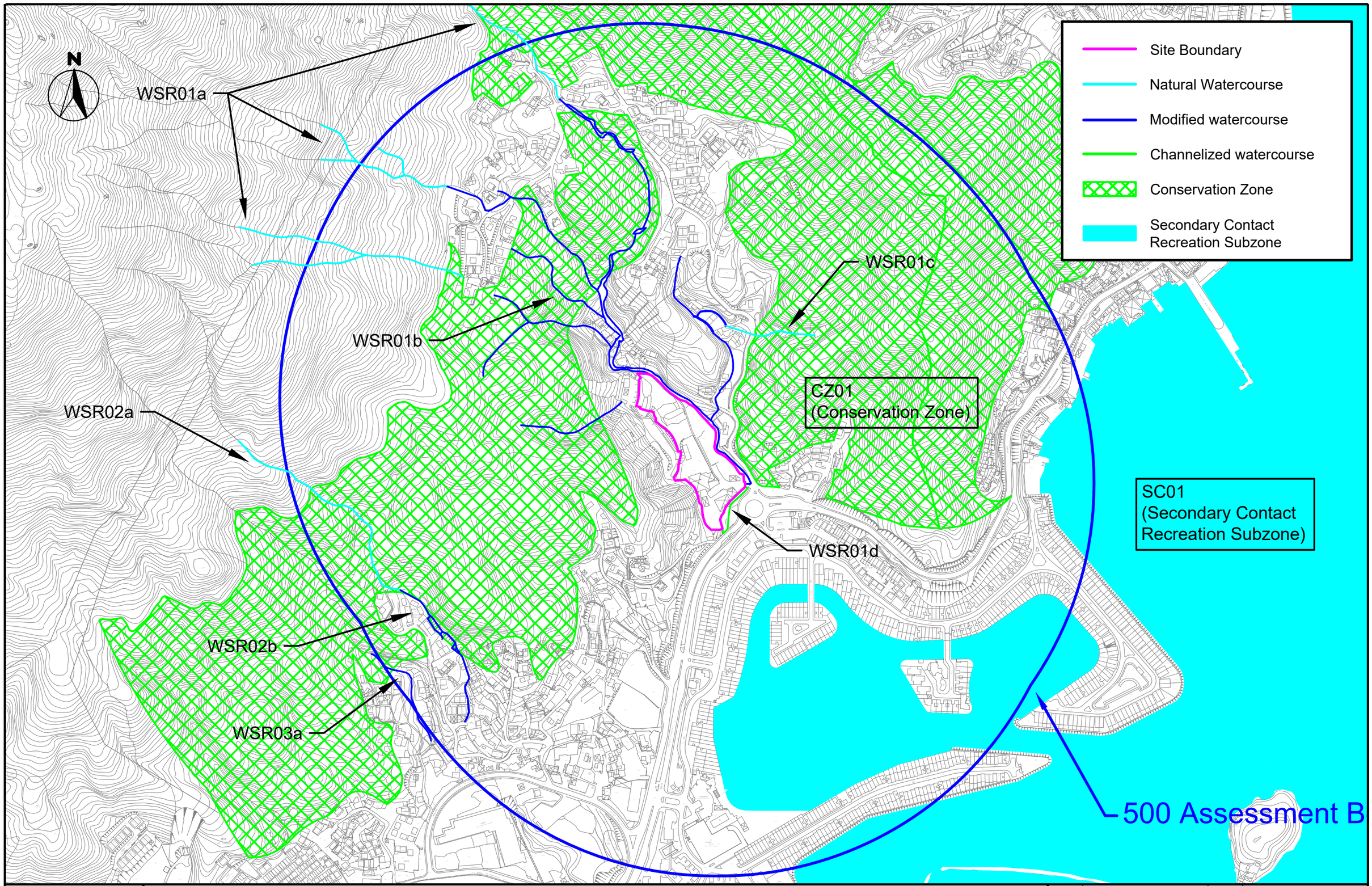
CHECK	CC	DRAWN	LL
JOB No.	--	DRAWING No.	4-2e
		REV	-



CINOTECH
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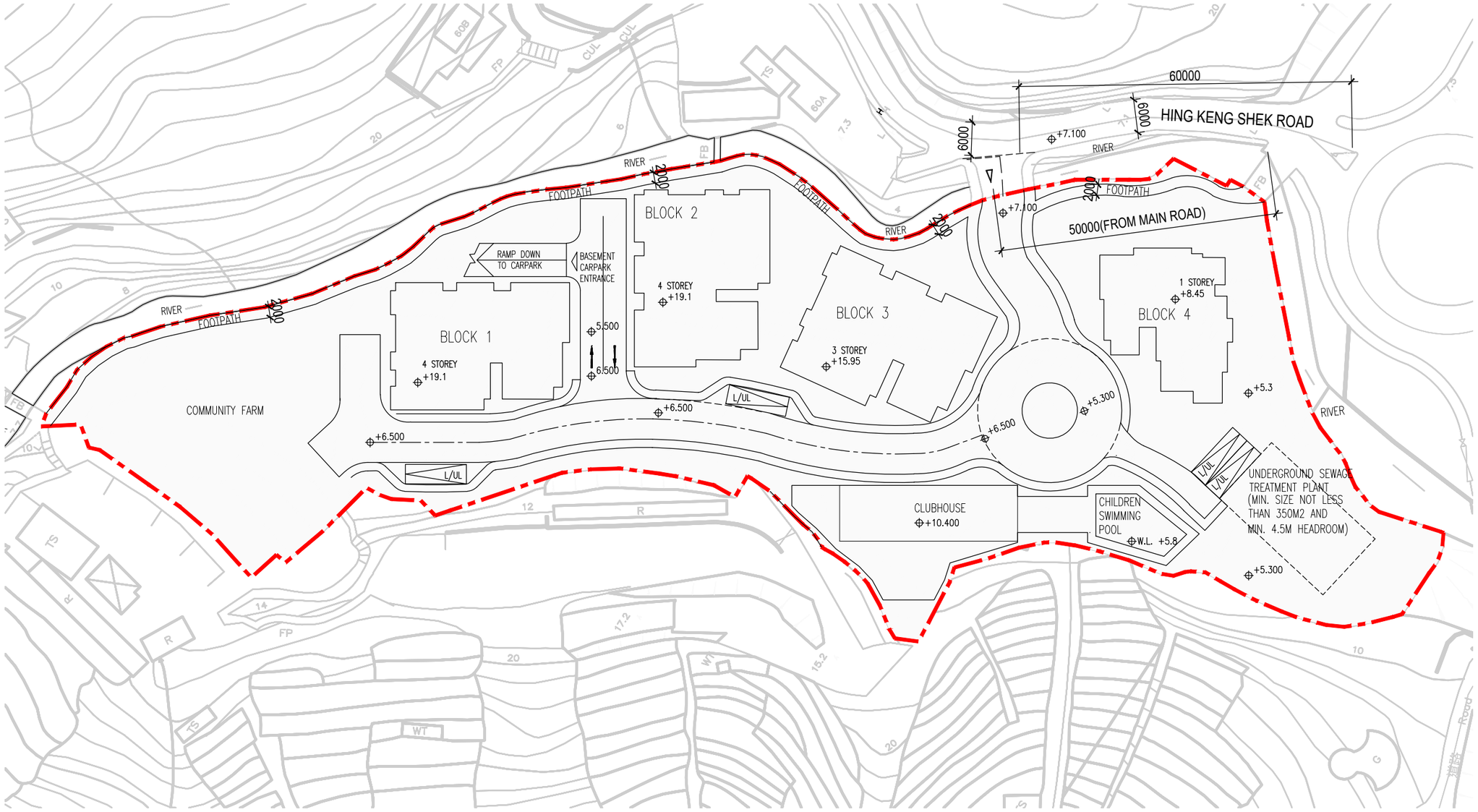
Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" and Area Shown as "Road" to "Residential (Group C)5" for Proposed Residential Development at Various Lots in D.D. 210 and Adjoining Government Land, Pak Wai, Sai Kung

Location of Representative WSRs

SCALE	1:5000 @ A3	DATE	Jul 2025
CHECK	CC	DRAWN	LL
JOB No.	--	DRAWING No. 5-1	REV -

APPENDIX 2-1
LAYOUT OF PROPOSED DEVELOPMENT



Rev.	Date	Amendment	Purpose

K & W Architects Ltd.
關黃建築師有限公司

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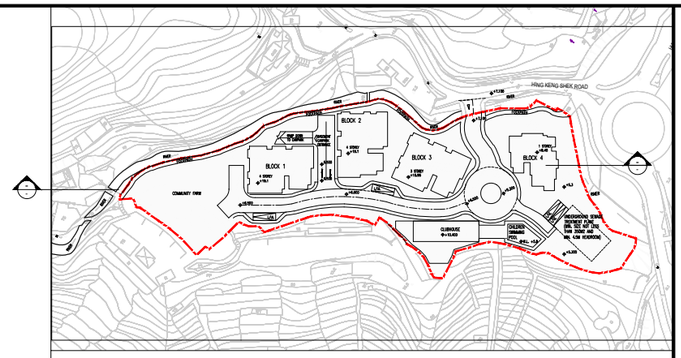
Client

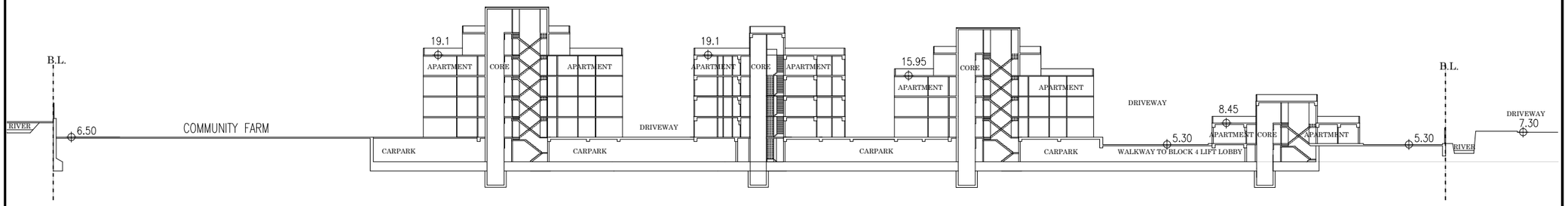
Project
APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A OF THEE TOWN PLANNING ORDINANCE (CAP.131) TO REZONE THEE APPLICATION SITE FORM "GREEN" BELT AND AREA SHOWN AS "ROAD" TO " RESIDENTIAL (GROUP C) 5" FOR PROPOSEED RESIDENTIAL DEVELOPMENT AT VARIOUS LOTS IN D.D.210 AND ADJOINING GOVERNMENT LAND, PAK WAI, SAI KUNG

Drawing Title
MASTER LAYOUT PLAN

Job No.	Drawing No.	Revision No.
D1186	MLP-01	Q
Scale	Date	CAD Ref.
1:800	09/06/2025	
Drawn	Checked	Approved
SF	SF	



KEY PLAN 1 : 3000



DIAGRAMATIC SECTION

Rev.	Date	Amendment	Purpose
3	06/06/2023		

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- Notify the Architect immediately of any discrepancy found herein.

Client

Project
APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A OF THEE TOWN PLANNING ORDINANCE (CAP.131) TO REZONE THEE APPLICATION SITE FORM "GREEN" BELT AND AREA SHOWN AS "ROAD" TO " RESIDENTIAL (GROUP C) 5" FOR PROPOSEED RESIDENTIAL DEVELOPMENT AT VARIOUS LOTS IN D.D.210 AND ADJOINING GOVERNMENT LAND, PAK WAI, SAI KUNG

Drawing Title
DIAGRAMATIC SECTION

Job No.	Drawing No.	Revision No.
D1186	FL-04	L
Scale	Date	CAD Ref.
1:800	30/05/2024	
Drawn	Checked	Approved
PC	PC	

APPENDIX 3-1
TD'S CONFIRMATION ON ROAD TYPE

Alex Cheng (CH)

From: Johnathan Ding Chian BOEDIHARDJO <j_boedihardjo@td.gov.hk>
Sent: Wednesday, December 4, 2024 12:09 PM
To: Steven Lui
Cc: S L Ng; Siu Ming KWONG
Subject: Re: Section 12A Application for Proposed Residential Development at Various Lots in D.D. 210 and Adjoining Government Land, Pak Wai, Sai Kung // Road Classification

Dear Steven,

I refer to your email dated 29.11.2024.

Please note that Hing Keng Shek Road is not under TD's management. Comments from relevant authorities / parties should be sought. Notwithstanding, we have no objection to the proposed road type of Hing Keng Shek Road.

Regards,
Johnathan BOEDIHARDJO
E/SK, TE/NTE, TD
Tel: 2399 2224

From: Steven Lui <[redacted]>
To: Johnathan Din Chian BOEDIHARDJO <J_boedihardjo@td.gov.hk>
Cc: S L Ng <[redacted]>
Date: 29/11/2024 03:02 PM
Subject: Section 12A Application for Proposed Residential Development at Various Lots in D.D. 210 and Adjoining Government Land, Pak Wai, Sai Kung // Road Classification

---

Dear Johnathan,

We are the traffic consultant of the captioned project.

Regarding the current submission of the Environmental Assessment to the EPD, EPD's comment was received regarding the road type of Hing Keng Shek Road as follow:

EPD's Comment: Please provide the confirmation from Transport Department for the road type of Hing Keng Shek Road.

There is no road classification in Annual Traffic Census Reports for the above road. Meanwhile, Hing Keng Shek Road is connecting to Hiram's Highway. So, we consider that Hing Keng Shek Road shall only have the same classification as Hiram's Highway, which is a "Rural Road", but not a higher hierarchy.

In view of the above, we would like to seek your confirmation on the road type of Hing Keng Shek Road as "Rural Road" and the confirmation will be solely for environmental assessment use.

Should you have any query or require any additional information, please feel free to contact the undersigned or our Mr. S L Ng at [redacted].

Thanks & Regards
Steven Lui

LLA Consultancy Ltd.

[redacted]

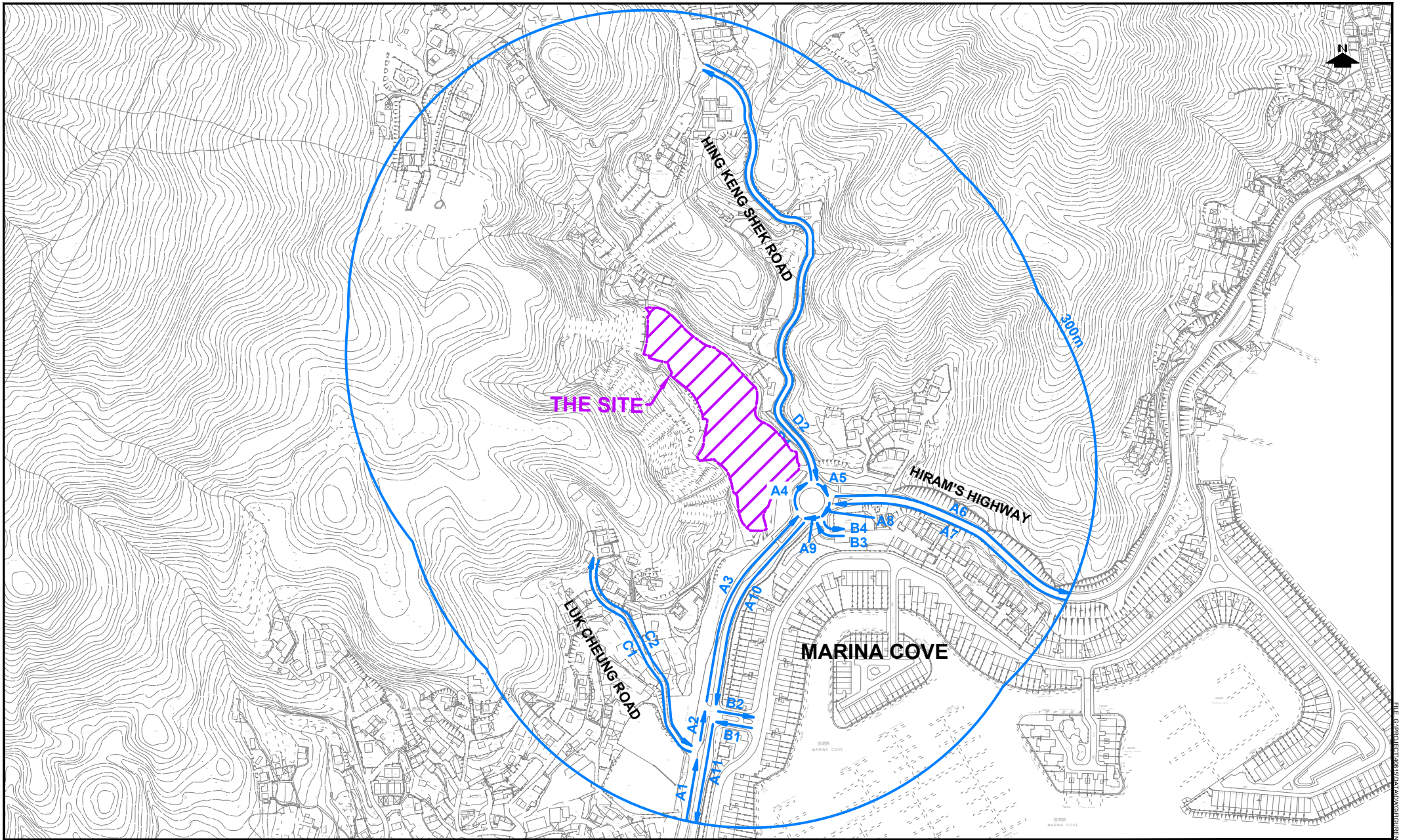
APPENDIX 4-1
ALLOWABLE SOUND POWER LEVEL FOR THE BUILDING SERVICE EQUIPMENT OF THE PROPOSED DEVELOPMENT

Allowable Sound Power Level for the Building Service Equipment of the Proposed Development

Represenative NSR	Time period	Maximum Allowable Sound Pressure Level at NSR, dB(A)	Horizontal Distance (m)	Correction, dB(A)			Maximum Allowable Sound Power Level at Source, dB(A)
				Distance	Façade	Tonality/ Intermittency/ Impulsiveness	
NE façade							
NSR-01	Day and Evening	55	11	29	-3	-6	**75**
	Night	45					**65**
SE façade / Sewage Treatment Plant							
NSR-02	Day and Evening	55	44	41	-3	-6	**87**
	Night	45					**77**
NW façade							
NSR-03	Day and Evening	55	87	47	-3	-6	**93**
	Night	45					**83**

[1] For assessment purpose, a 6dB(A) of Tonality/ Intermittency/ Impulsiveness correction has been adopted.

APPENDIX 4-2
TRAFFIC FORECAST FOR TRAFFIC NOISE IMPACT ASSESSMENT (YEAR 2046)



PROJECT NO. 40815	PROJECT TITLE APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A OF THE TOWN PLANNING ORDINANCE (CAP. 131) TO REZONE THE APPLICATION SITE FROM "GREEN BELT" AND AREA SHOWN AS "ROAD" TO "RESIDENTIAL (GROUP C)3" FOR PROPOSED RESIDENTIAL DEVELOPMENT AT VARIOUS LOTS IN D.D. 210 AND ADJOINING GOVERNMENT LAND, PAK WAI, SAI KUNG	DRAWING NO. FIGURE N1	REV. B
DESIGNED SLN / DATE SEP 2023	DRAWING TITLE ROAD SECTIONS WITHIN 300m OF THE SITE	LLA 顧問有限公司 Consultancy Limited	
DRAWN CLL / SCALE 1:5000			
CHECKED SLN			

FILE: G:\PROJECT\40815\DATA\DWG\FIGUREN1B.DWG PLOT SCALE : 1 = 1

Predicted Traffic Flow at Peak Hours of Year 2046

Road ID	Road	Direction	Speed Limit (km/hr)	AM Peak		PM Peak	
				Traffic	% Heavy	Traffic	% Heavy
A1	Hiram's Highway	NB	50	1,100	30%	1,350	21%
A2	Hiram's Highway	NB	50	1,100	30%	1,350	21%
A3	Hiram's Highway	NB	50	1,100	29%	1,400	21%
A4	Hiram's Highway	NB	50	1,150	29%	1,400	21%
A5	Hiram's Highway	NB	50	1,200	31%	1,350	22%
A6	Hiram's Highway	NB	50	1,100	31%	1,300	22%
A7	Hiram's Highway	SB	50	1,350	28%	1,300	22%
A8	Hiram's Highway	SB	50	1,450	28%	1,350	22%
A9	Hiram's Highway	SB	50	1,450	29%	1,300	21%
A10	Hiram's Highway	SB	50	2,500	29%	2,200	21%
A11	Hiram's Highway	SB	50	2,500	29%	2,200	21%
B1	Access to Marina Cove	WB	50	50	12%	50	21%
B2	Access to Marina Cove	EB	50	50	9%	50	20%
B3	Access to Marina Cove	WB	50	100	11%	100	22%
B4	Access to Marina Cove	EB	50	100	9%	100	19%
C1	Luk Cheung Road	NB	50	50	23%	50	19%
C2	Luk Cheung Road	SB	50	50	15%	50	20%
D1	Hing Keng Shek Road	NB	50	100	8%	150	8%
D2	Hing Keng Shek Road	SB	50	100	25%	50	23%

Steven Lui

寄件者: Johnathan Ding Chian BOEDIHARDJO <j_boedihardjo@td.gov.hk>
寄件日期: 2024年9月23日星期一 11:24
收件者: S L Ng
副本: LLA Consultancy Ltd.; Steven Lui
主旨: Re: S12A for Proposed Residential Development at Various Lots in DD210 and Adjoining Government Land, Pak Wai, Sai Kung

郵件標幟: 待處理
標幟狀態: 已標幟

類別: Departmental Comment

Dear SL,

I refer to your email dated 17.9.2024.

Please note that the Noise Impact Assessment is not under our purview. We are not in a position to provide comments on the traffic figures tailor-made for the environmental assessment study. Notwithstanding the above, we have no objection in principle to the methodology of traffic forecast provided that the methodology is consistent with the TIA Report submitted in the project.

Regards,
Johnathan BOEDIHARDJO
E/SK, TE/NTE, TD
Tel: 2399 2224

From: S L Ng <[redacted]>
To: "J_boedihardjo@td.gov.hk" <j_boedihardjo@td.gov.hk>
Cc: LLA Consultancy Ltd. <[redacted]>, Steven Lui <[redacted]>
Date: 17/09/2024 03:03 PM
Subject: S12A for Proposed Residential Development at Various Lots in DD210 and Adjoining Government Land, Pak Wai, Sai Kung

---

Dear Johnathan,

Thank you for your attached letter on 16 September 2024 indicating that you have no adverse comment on the 2046 traffic forecast for Environmental Assessment.

Based on your suggestion, we reviewed the 2022 annual traffic census data and we would be pleased to provide the following updated Table 4 for your reference.

Table 4 Annual Traffic Census Data

Stn. No.	Road Section			AADT(1)					Average Growth%
	Road	From	To	2018	2019	2020	2021	2022	
5017	Clear Water Bay Rd	On Sau Rd	Hiram's Highway	28,450	28,980↓ (1.9%)	28,900↓ (-0.3%)	29,100↓ (0.7%)	27,720↓ (-4.7%)	-0.6%
5466	Clear Water Bay Rd	Hang Hau Rd	Hiram's Highway	18,950	20,240↓ (6.8%)	19,110↓ (-5.6%)	20,020↓ (4.8%)	19,140↓ (-4.4%)	0.2%
6055	Hiram's Highway	Clear Water Bay Rd	Po Tung Rd	24,450	24,280↓ (-0.7%)	23,360↓ (-3.8%)	24,460↓ (4.7%)	23,480↓ (-4%)	-1.0%
Total				**71,850**	**73,500↓ (2.3%)**	**71,370↓ (-2.9%)**	**73,580↓ (3.1%)**	**70,340↓ (-4.4%)**	**-0.5%**

Note: (1) Figures in bracket indicated the % increase between two years.

The average annual growth rate derived between 2018 to 2022 is **-0.5%** while the rate derived between 2017 to 2021 is **+1.4%**. Therefore, the growth rate of +1.4% adopted in the submitted traffic forecast is considered conservative and acceptable for the exercise.

Based on the above, we would be pleased to have your further comment, if any. Should you have any further query, please feel free to call me at [redacted].
Thanks & Regards
S L Ng

LLA Consultancy Ltd.

[redacted]"F43608_TD.pdf" deleted by Johnathan Ding Chian BOEDIHARDJO/TD/HKSARG]

APPENDIX 4-3
PREDICTED TRAFFIC NOISE LEVEL
(BASE SCENARIO)

Predicted Traffic Noise Level for Base Scenario (by Noise Assessment Points)

Block 1																												
NSR ID		B1-01	B1-02	B1-03	B1-04	B1-05	B1-06	B1-07	B1-08	B1-09	B1-10	B1-11	B1-12	B1-13	B1-14	B1-15	B1-16	B1-17	B1-18	B1-19	B1-20	B1-21	B1-22	B1-23	B1-24	B1-25	B1-26	B1-27
Floor	mPD	L10,1hr (dB(A))																										
4	17.15	60.1	60.0	59.9	60.1	60.1	60.3	60.5	61.0	60.3	58.9	58.3	59.6	60.3	59.9	59.9	59.3	59.1	58.7	58.3	54.2	54.4	54.2	54.8	54.6	54.8	57.0	59.0
3	14.00	59.8	59.7	59.7	59.8	59.8	59.9	60.0	60.2	59.2	57.5	56.7	58.5	59.3	59.0	59.1	58.6	58.5	58.1	57.8	54.2	54.3	54.2	54.7	54.6	54.8	57.0	59.0
2	10.85	59.5	59.5	59.5	59.6	59.7	59.7	59.8	59.9	58.9	57.0	56.1	57.8	58.6	58.1	58.3	58.0	57.9	57.5	57.2	54.2	54.3	54.2	54.7	54.6	54.7	57.0	59.0
1	7.70	59.4	59.4	59.4	59.5	59.6	59.6	59.7	59.7	58.7	56.8	55.8	57.2	58.0	57.2	57.4	57.1	57.0	56.7	56.4	54.2	54.3	54.1	54.7	54.5	54.7	57.0	58.9

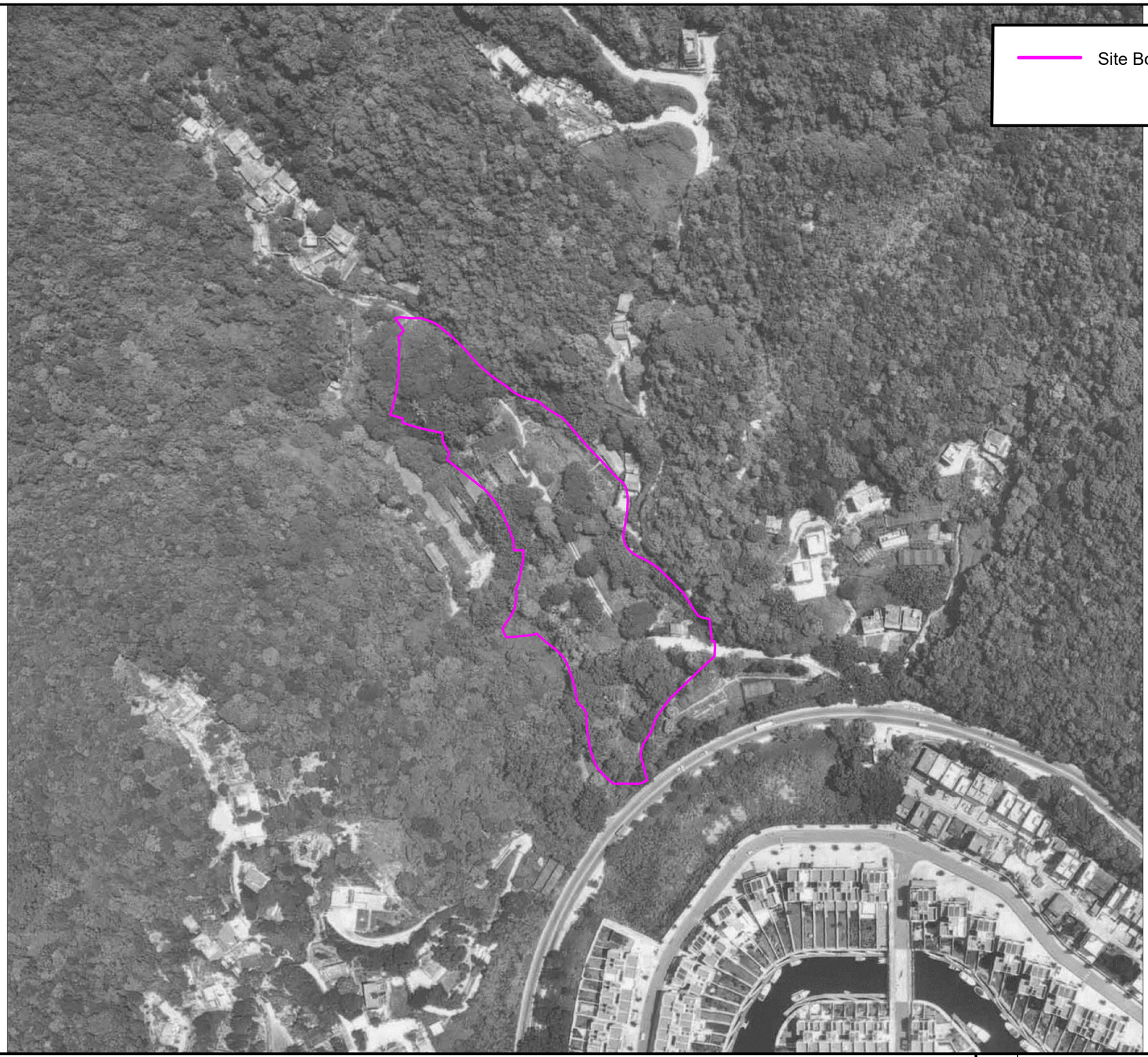
Block 2																												
NSR ID		B2-01	B2-02	B2-03	B2-04	B2-05	B2-06	B2-07	B2-08	B2-09	B2-10	B2-11	B2-12	B2-13	B2-14	B2-15	B2-16	B2-17	B2-18	B2-19	B2-20	B2-21	B2-22	B2-23	B2-24	B2-25	B2-26	B2-27
Floor	mPD	L10,1hr (dB(A))																										
4	17.15	64.6	64.9	65.1	64.9	65.5	65.4	66.5	67.9	67.7	66.1	64.0	62.5	62.1	61.0	60.6	59.7	60.0	59.7	59.5	56.1	56.7	57.0	57.5	57.9	58.7	59.4	61.0
3	14.00	64.1	64.4	64.7	64.5	65.1	64.9	65.9	67.0	66.5	64.6	61.0	59.0	58.0	56.7	58.4	58.3	58.8	58.7	58.5	55.9	56.7	57.0	57.5	57.9	58.7	59.4	61.0
2	10.85	63.5	63.7	63.6	63.6	64.1	63.8	64.7	65.5	64.7	62.9	58.4	56.1	54.9	53.3	56.5	56.9	57.7	57.7	57.6	55.9	56.7	57.0	57.5	57.9	58.7	59.4	61.0
1	7.70	63.0	63.1	63.0	62.9	63.3	62.9	63.6	64.2	62.7	60.6	55.9	53.8	52.7	51.4	55.2	55.9	56.7	56.7	56.7	55.9	56.6	57.0	57.5	57.8	58.6	59.3	60.9

Block 3																												
NSR ID		B3-01	B3-02	B3-03	B3-04	B3-05	B3-06	B3-07	B3-08	B3-09	B3-10	B3-11	B3-12	B3-13	B3-14	B3-15	B3-16	B3-17	B3-18	B3-19	B3-20	B3-21	B3-22	B3-23	B3-24	B3-25	B3-26	B3-27
Floor	mPD	L10,1hr (dB(A))																										
3	14.00	67.9	68.1	68.3	68.6	68.8	69.5	69.8	70.2	70.0	69.4	69.1	68.7	68.5	68.0	64.5	58.6	60.2	57.6	54.5	53.3	54.0	54.6	55.8	56.6	58.0	60.9	63.9
2	10.85	66.4	66.5	66.7	66.9	67.1	67.7	67.6	67.5	67.2	66.8	66.6	66.4	66.4	66.0	63.7	57.6	59.3	56.7	53.3	52.3	53.1	53.7	54.9	55.8	57.2	59.8	62.4
1	7.70	64.1	64.1	64.3	64.5	64.6	65.2	64.9	64.2	63.8	63.7	63.9	63.8	63.9	63.7	62.2	56.5	58.3	55.7	52.2	50.9	51.6	52.3	53.5	54.6	56.1	58.4	60.5

Block 4																								
NSR ID		B4-01	B4-02	B4-03	B4-04	B4-05	B4-06	B4-07	B4-08	B4-09	B4-10	B4-11	B4-12	B4-13	B4-14	B4-15	B4-16	B4-17	B4-18	B4-19	B4-20	B4-21	B4-22	B4-23	B4-24
Floor	mPD	L10,1hr (dB(A))																							
1	6.50	66.2	67.0	67.2	68.0	67.9	68.6	69.2	69.2	69.2	69.2	69.2	69.2	69.3	69.3	67.4	61.7	<40	<40	54.9	56.4	57.4	57.6	58.1	59.0

APPENDIX 7-1
AERIAL PHOTOS

N



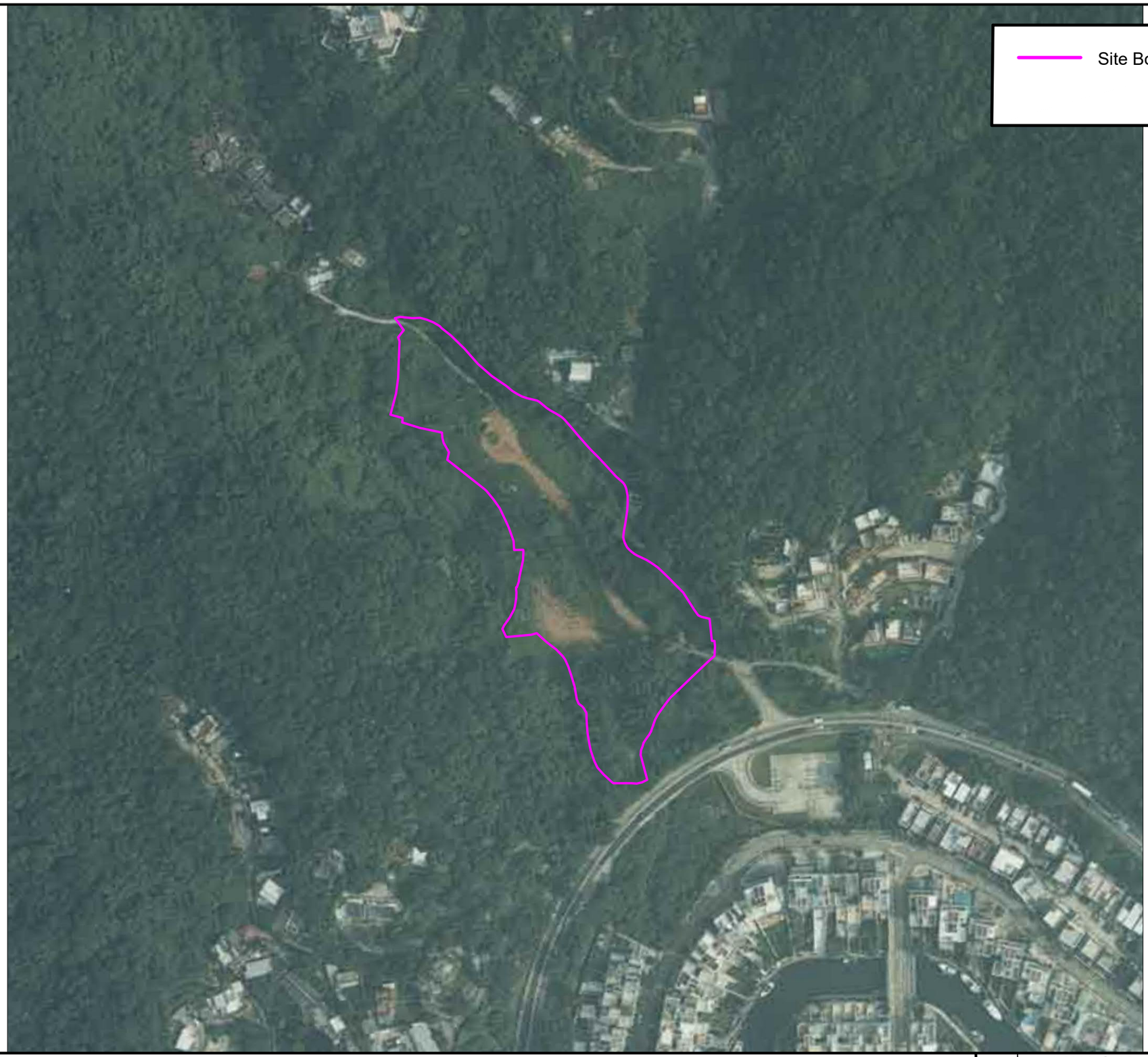
CINOTECH
Cinotech Consultants Limited

Year: 1990 **Photo no.:** 1990_A21733

Description: The site was mainly covered by flora

SCALE	1:2000 @ A3	DATE	17 December 2024
CHECK	KC	DRAWN	TC
JOB No.	IA24143	DRAWING No.	Appendix 7-1
		REV	-

N

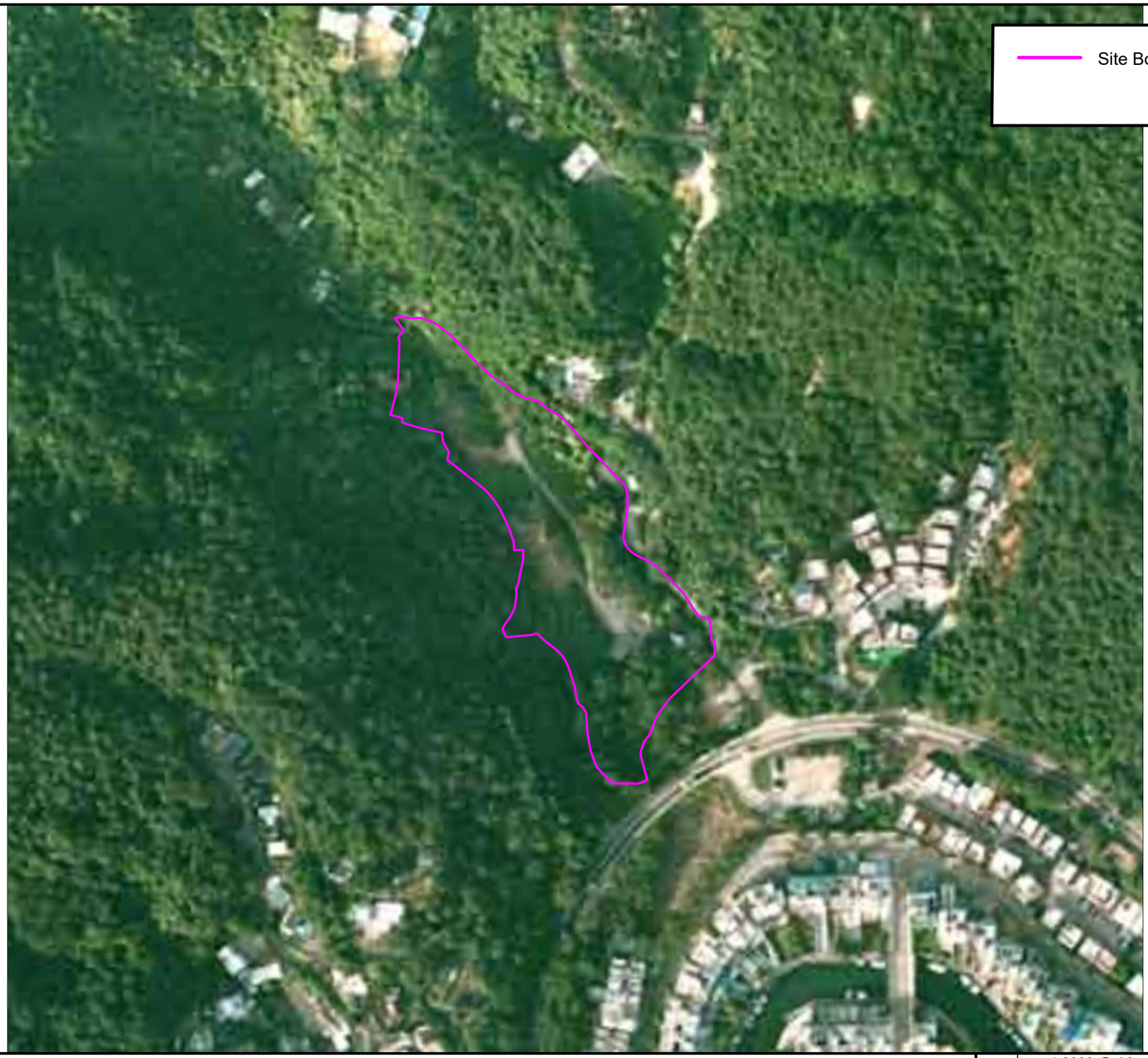


CINOTECH
Cinotech Consultants Limited

Year: 2001 **Photo no.:** 2001_CW32439
Description: The site was primarily covered by flora, with clearances observed in certain areas for pathway development.

SCALE	1:2000 @ A3	DATE	17 December 2024
CHECK	KC	DRAWN	TC
JOB No.	IA24143	DRAWING No.	Appendix 7-1
		REV	-

N



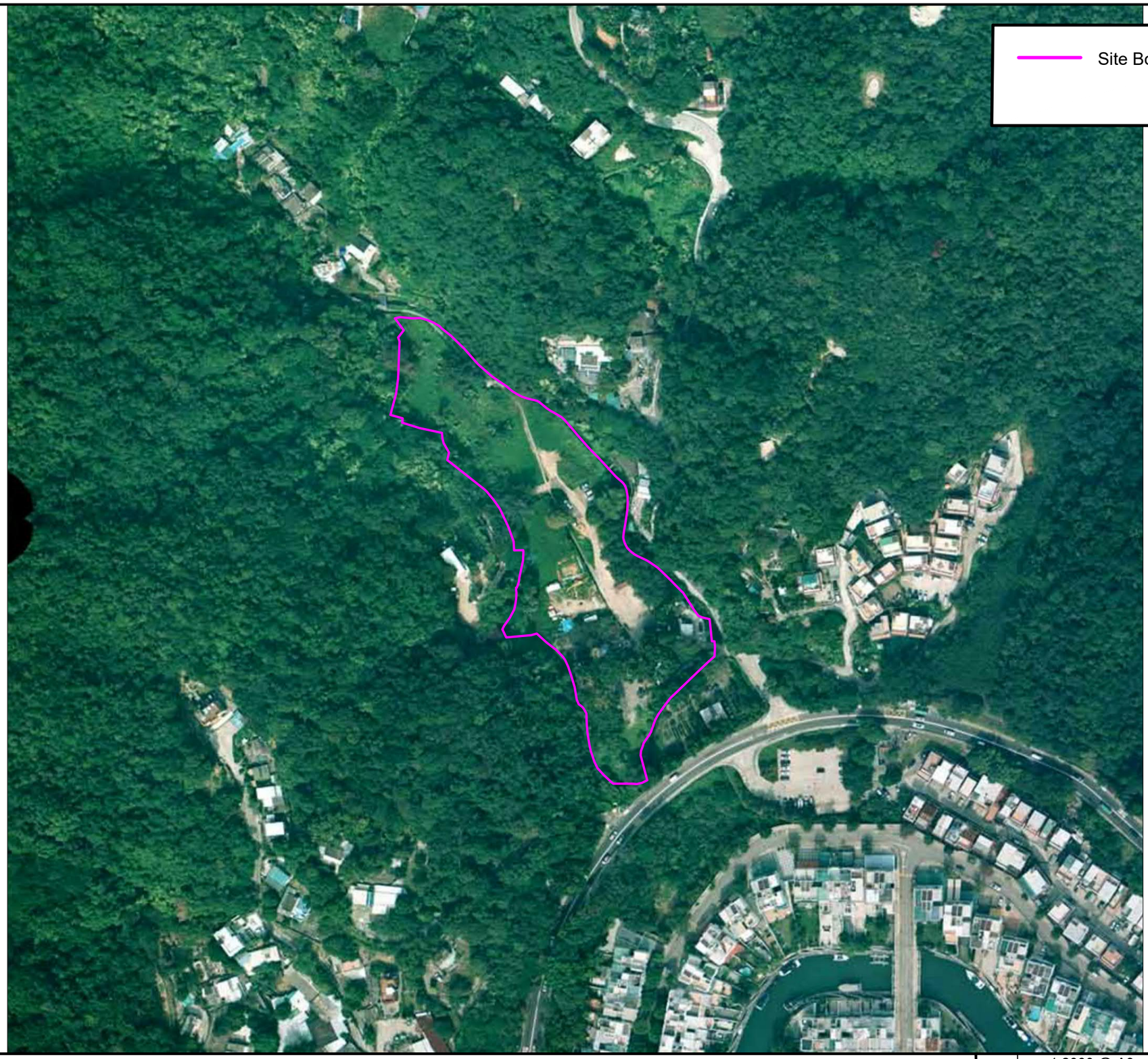
CINOTECH
Cinotech Consultants Limited

Year: 2007 **Photo no.:** 2007_CW79322

Description: The site was mainly covered by flora and the road development was still ongoing

SCALE	1:2000 @ A3	DATE	17 December 2024
CHECK	KC	DRAWN	TC
JOB No.	IA24143	DRAWING No. Appendix 7-1	REV -

N



Year: 2011 **Photo no.:** 2011_CS35170

Description: More vegetation was removed from the site compared to 2007, and the cleared areas were paved. Some gardening was found just outside the southern boundary of the Site.

Cinotech Consultants Limited

SCALE	1:2000 @ A3	DATE	17 December 2024
CHECK	KC	DRAWN	TC
JOB No.	IA24143	DRAWING No.	Appendix 7-1
		REV	-

N

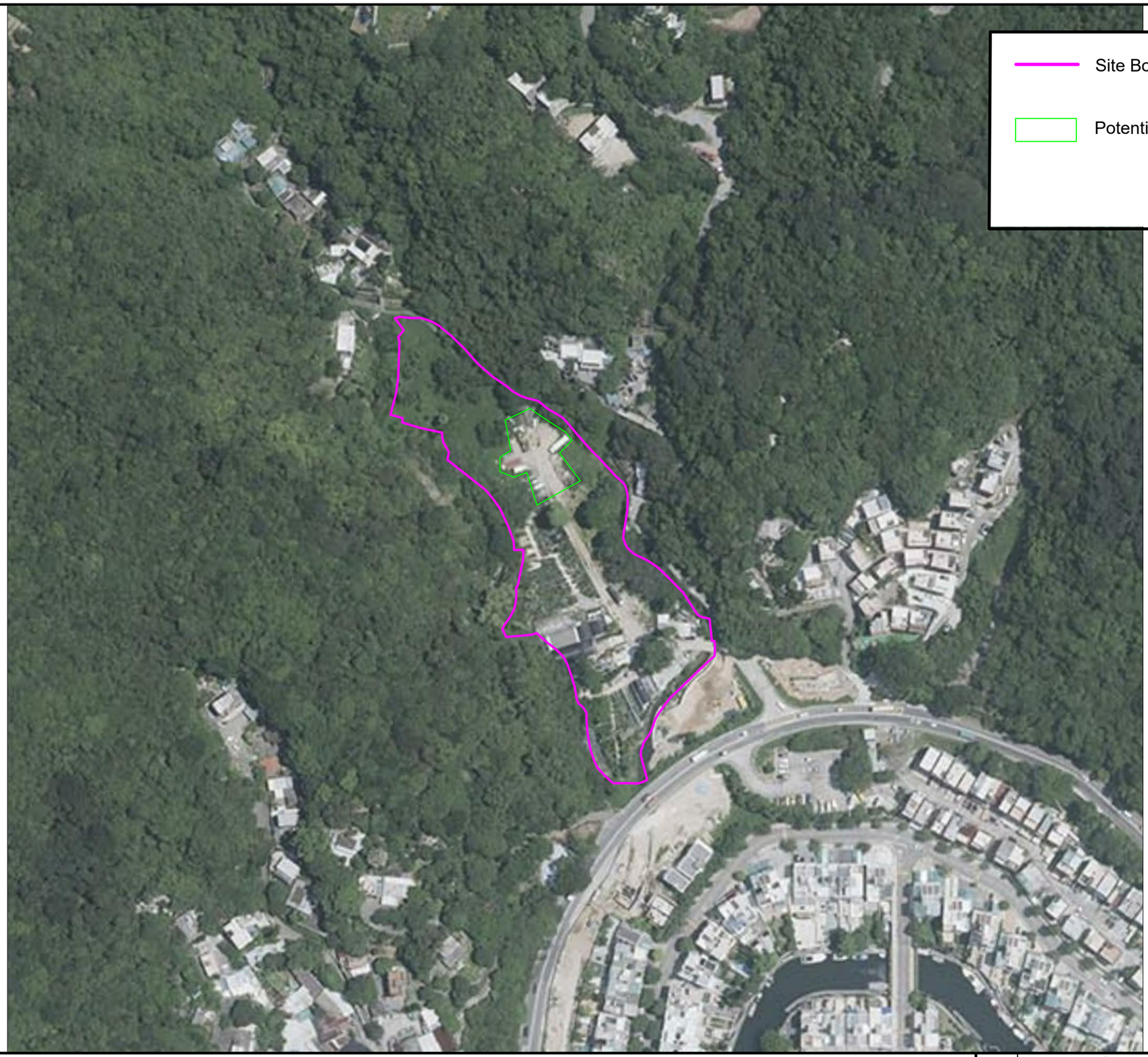
Year: 2015 **Photo no.:** 2015_CS57777

Description: Horticultural activities were recorded, as some greenhouses were observed in the southern part of the Site.

CINOTECH
Cinotech Consultants Limited

SCALE	1:2000 @ A3	DATE	17 December 2024
CHECK	KC	DRAWN	TC
JOB No.	IA24143	DRAWING No.	Appendix 7-1
		REV	-

N



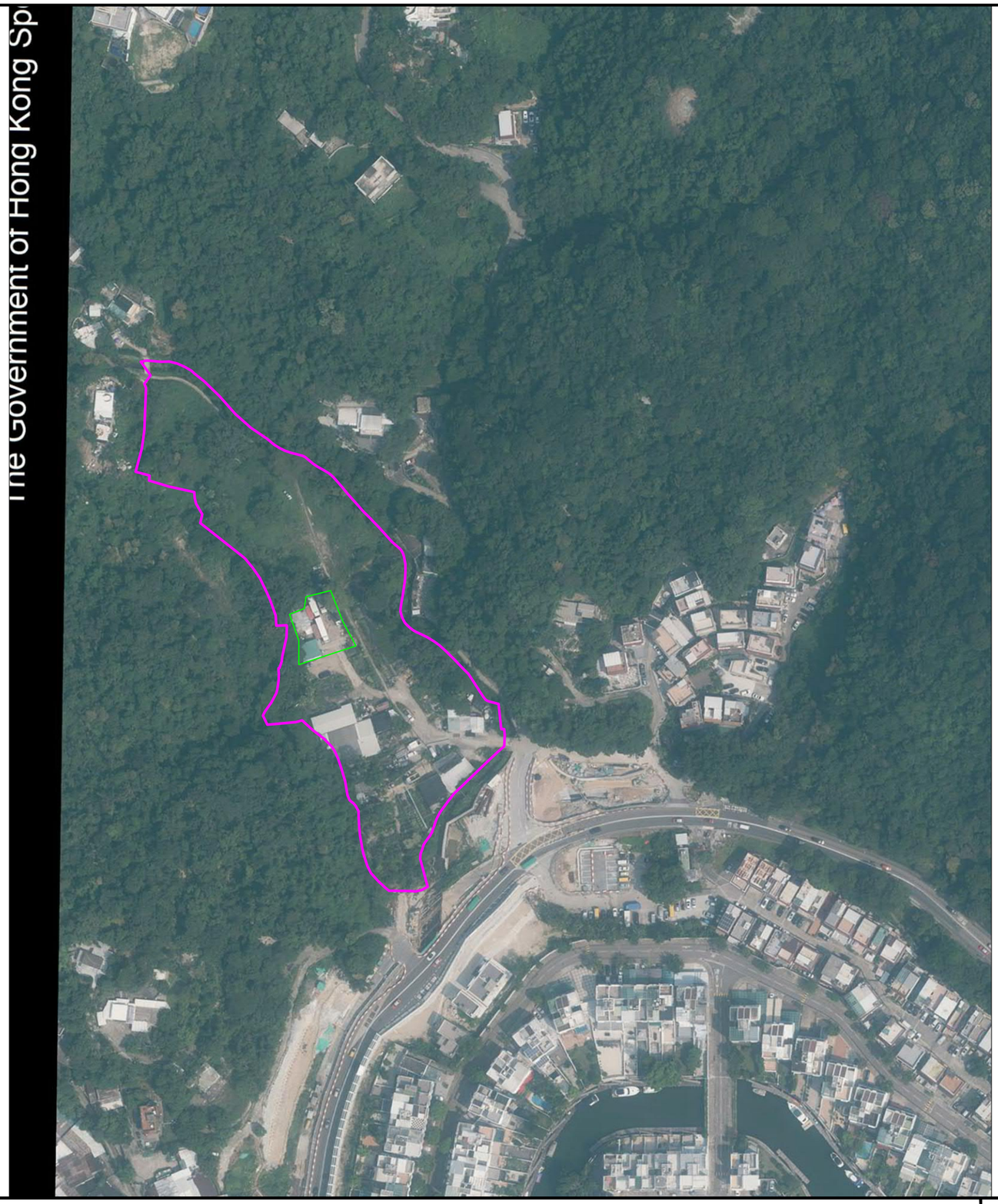
Year: 2017 **Photo no.:** 2017_E027214C

Description: Horticultural activities were recorded, as some greenhouses were observed in the southern part of the Site. Some vehicles were also parked in the northern part (Circled in green) of the Site.

Cinotech Consultants Limited

SCALE	1:2000 @ A3	DATE	17 December 2024
CHECK	KC	DRAWN	TC
JOB No.	IA24143	DRAWING No.	Appendix 7-1
		REV	-

N



Site Boundary

Potentially contaminated area

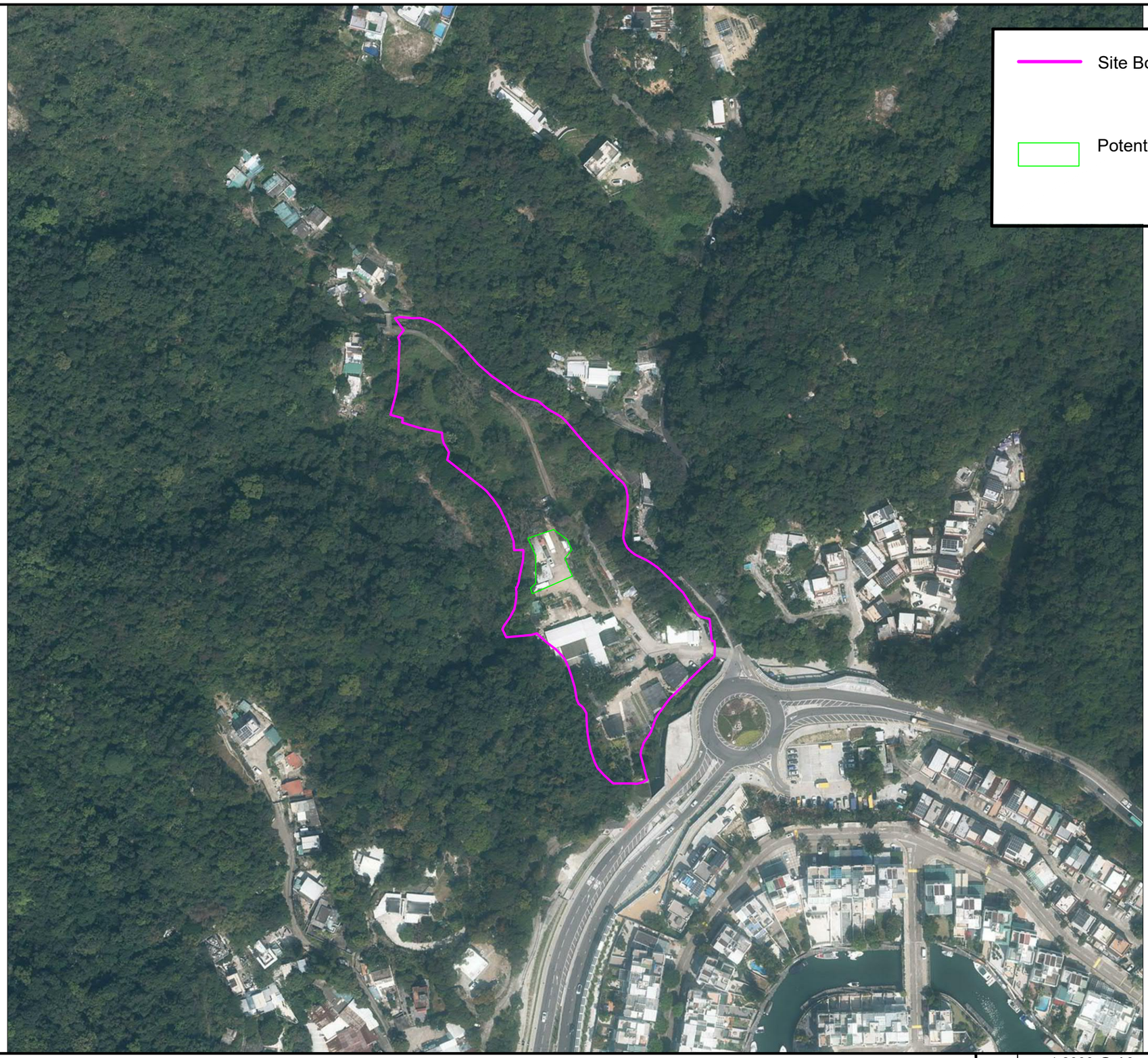
CINOTECH
Cinotech Consultants Limited

Year: 2019 **Photo no.:** 2019_E068815C

Description: No major changes were observed. Road development works in the south of the Site were in progress.

SCALE	1:2000 @ A3	DATE	17 December 2024
CHECK	KC	DRAWN	TC
JOB No.	IA24143	DRAWING No. Appendix 7-1	REV -

N



CINOTECH
Cinotech Consultants Limited

Year: 2023 **Photo no.:** 2023_E194257C

Description: No major change was observed on the Site, while the construction of the roundabout next to the it was completed.

SCALE	1:2000 @ A3	DATE	17 December 2024
CHECK	KC	DRAWN	TC
JOB No.	IA24143	DRAWING No.	Appendix 7-1
		REV	-

APPENDIX 7-2
CORRESPONDENCES FROM EPD ON LAND CONTAMINATION RELATED RECORDS

CINOTECH 漢臻
consultants limited

Room 1710, 17/F., Technology Park
18 On Lai Street, Shatin, Hong Kong
Tel: 852-2151 2083 Fax: 852-3107 1388
Website: http://www.cinotech.com.hk
General E-mail: info@cinotech.com.hk

Our Ref: CCL/IA24143/corr/out/EPD/my251014

Environmental Protection Department
Environmental Compliance Division
Regional Office (East)

5th floor, Nan Fung Commercial Centre,
19 Lam Lok Street, Kowloon Bay, Kowloon

By E-mail
14th Oct 2025

Attn.: Ms. SIU Hoi Ying, Tina

Dear Ms. Siu,

Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" and Area Shown as "Road" to "Residential (Group C)5" for Proposed Residential Development at Various Lots in D.D. 210 and Adjoining Government Land, Pak Wai, Sai Kung

- **Enquiry on Record of Land Contamination**

We, Cinotech Consultants Ltd., have been commissioned by Shine Path Limited and Hin Yiu Limited, to conduct a Land Contamination Assessment to fulfill the planning approval conditions under Section 12A of the Town Planning Ordinance (Cap. 131) at various lots in D.D. 210 and Adjoining Government Land, Pak Wai, Sai Kung. The appointment letter is attached herewith for your reference.

According to the brief of this contract, land contamination assessment shall be carried for a Contamination Assessment Plan (CAP) and Contamination Assessment Report (CAR); and subsequently Remediation Assessment Plan (RAP) if any contaminations were found. I am writing to enquire if there are any past record of registered chemical waste producers and reported accidents of chemical leakage or spillage within or in the vicinity of the project site. The concerned assessment area is shown in the attachment.

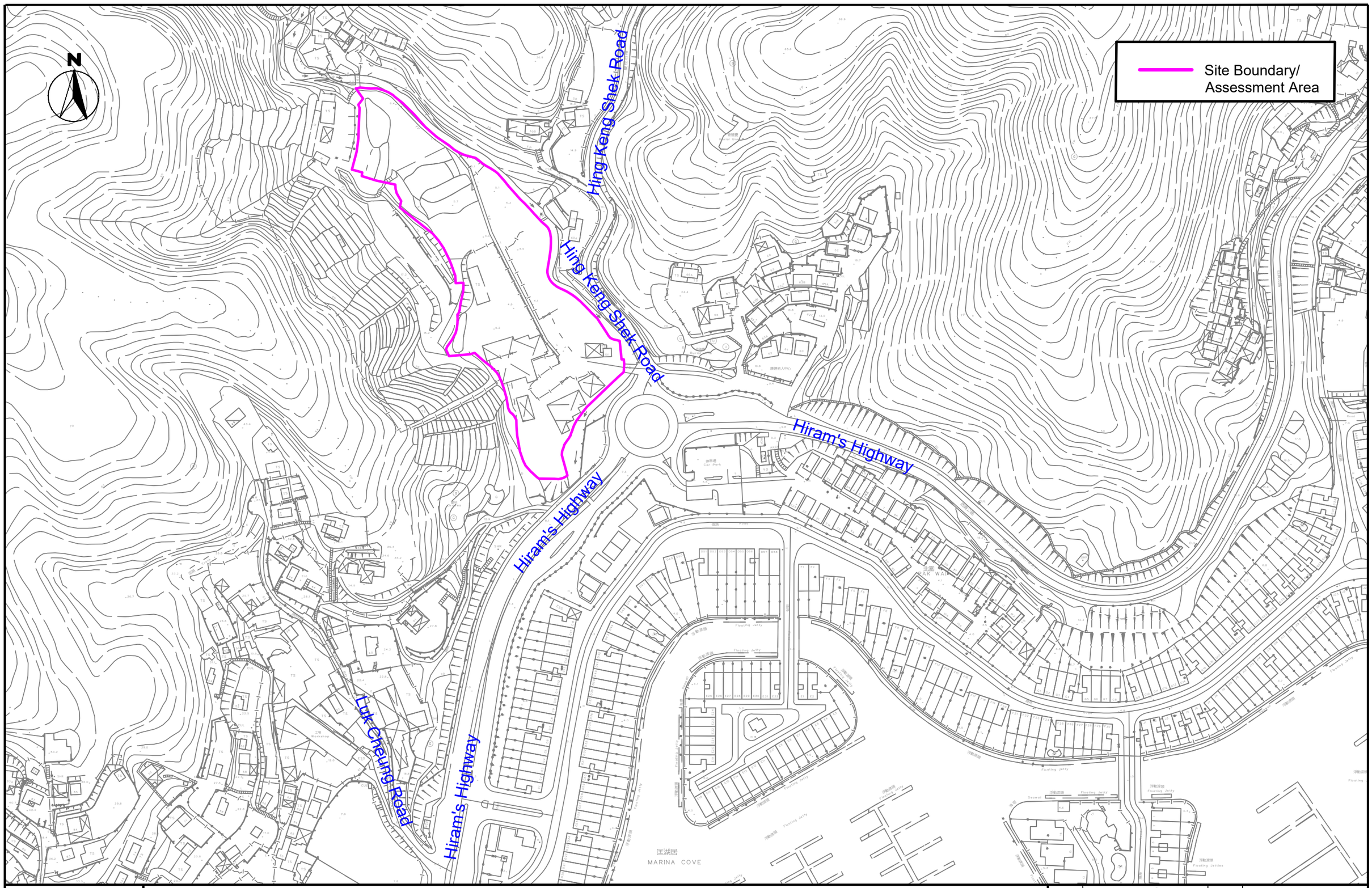
If you need any further clarification, please contact our Ms. Karina Chan at [redacted] or the undersigned at [redacted].

Yours sincerely,

Mr. K S Lee
Technical Director

Encl. Appointment letter, Location Plan of the Project Site

c.c. Arup Mr. Alex Cheng (by e-mail)



CINOTECH
Cinotech Consultants Limited

Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" and Area Shown as "Road" to "Residential (Group C)5" for Proposed Residential Development at Various Lots in D.D. 210 and Adjoining Government Land, Pak Wai, Sai Kung

Site Location Plan

SCALE	1:2000 @ A3	DATE	Jul 2023
CHECK	CC	DRAWN	LL
JOB No.	--	DRAWING No.	2-1
		REV	-

Fw: Environment Assessment for 12A Planning Application at Various Lots in DD210, Sai Kung_Fee Proposal

From: **Karina Chan**<[redacted]> Mon, Dec 9, 2024, 12:29 PM
To: cinotech-info<[redacted]>
Cc: Pamela Ho<[redacted]>

Dear Isabella,

Please find the fee acceptance from Client for IA24143.

Thanks & Regards,
Karina

Karina Chan
Cinotech Consultants Limited
Direct line: [redacted]

▼ Hide email thread

---------- Forwarded message ---------

From: Gladlink <[redacted]>
Date: Mon, Dec 9, 2024, 11:35 AM
Subject: FW: Environment Assessment for 12A Planning Application at Various Lots in DD210, Sai Kung_Fee Proposal
To: "'HF CHAN'"<[redacted]>
Cc: "'Karina Chan'"<[redacted]>

Dear Mr. Chan,

We would like to reconfirm your fee proposal on April 2023 and the total professional fee is
, The payment term should be as follows:

1st Payment Upon Commencement (50%)

2nd Payment Upon Formal Submission of Report to Planning Department (30%)

3rd Payment Upon Approval from Planning Department (20%)

If you have any query, please feel free to contact us.

Best regards,

Happy Hue

Assistant to Mr. W.K. So

Tel. No.: [redacted]

From: gladlink [redacted]

Sent: Thursday, December 5, 2024 6:39 PM

To: Karina Chan <[redacted]>; HF CHAN <[redacted]>

Cc: gladlink <[redacted]>; cinotech-info <[redacted]>; ks.lee <[redacted]>

Subject: Re: Environment Assessment for 12A Planning Application at Various Lots in DD210, Sai Kung_Fee Proposal

Get it, thanks.

WK So

> 開啟 2024年12月4日 於 14:51, HF CHAN <[redacted]> 已撰寫:
> Dear WK,
>
> Further to Karina's fee proposal to you, I wish to confirm that we have conducted the quantitative traffic noise assessment as part of the S12 planning appliction. However, no quantitative air quality assessment is required as the current layout of the development is outside the buffer distance for quantitative air quality assessment. The land contamination assesement is required by EPD and therefore will need to be carried to satisfy EPD.
>
> I hope this is clear to you. Let me know if otherwise.
>
> Regards.
> Ir Dr HF Chan, BBS
>
> ---
> Managing Director
> CINOTECH Consultants Limited
> From: "Karina Chan"<[redacted]>
> Date: Tue, Dec 3, 2024, 5:22 PM
> Subject: Re: Environment Assessment for 12A Planning Application at Various Lots in DD210, Sai Kung_Fee Proposal

To: "[redacted]
Cc: "HF CHAN"<[redacted]>, "cinotech-info"<[redacted]>,
"[redacted]>

Dear WK and Sara,

I apologise for the confusion. Please find below the fee proposal with reference to the one dated 6 Apr 2023. We proposed a lump sum fee of for the preparation of an environmental assessment (EA) report for submission to which we will address air, noise, and water quality (sewage and drainage) issues qualitatively.

Subject to the requirements of the Planning Department, the following optional services (in addition to the above) are also proposed:

1. Quantitative traffic noise impact assessment - (the highest traffic flow data in 15 days after occupation to be provided by others)
2. Quantitative Air Quality Impact Assessment - (traffic data to be provided by others). Please note that sufficient buffer distance for air sensitive uses (tennis court, fresh air intake locations, sitting area, etc.) to surrounding roads should comply with the HKPSG guidelines, otherwise quantitative vehicular impact assessment is required. The quantitative air quality impact assessment requires traffic data to support the modelling input. The implication is not only the cost issue but also the time issue.
3. Land Contamination Assessment -

Should you accept our fee proposal as above, please kindly revert by email.

Thanks & Regards,
Karina

Karina Chan
Cinotech Consultants Limited
Direct line: [redacted]

From: "Karina Chan"<[redacted]
Date: Tue, Dec 3, 2024, 12:30 PM
Subject: Environment Assessment for 12A Planning Application at Various Lots in DD210, Sai Kung_Fee Proposal
To: "[redacted]>
Cc: "HF CHAN"<[redacted]>, "cinotech-info"<[redacted]>,
[redacted]

Dear Sara,

Subject to the requirements of the Planning Department, please find below our proposed scope of works and corresponding fees for your consideration:

1. Quantitative traffic noise impact assessment - (the highest traffic flow data in 15 days after occupation to be provided by Traffic Consultant)

2. Qualitative Air Quality Impact Assessment -
3. Water Quality Impact Assessment & Waste Management Implication-
4. Preliminary Land Contamination Assessment -

Should you accept our fee proposal as above, please kindly revert by email.

Thanks & Regards,
Karina

Karina Chan
Cinotech Consultants Limited
Direct line: [redacted]

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Re: Enquiry on Records of Land Contamination at Various Lots in D.D. 210 and Adjoining Government Land, Pak Wai, Sai Kung

From: **CH HUNG/EPD**<[redacted]> Tue, Oct 14, 2025, 2:19 PM
To: [redacted]
Cc: [redacted]

Dear Megan YAN (Cinotech),

I refer to your below email on 14 October 2025 requesting captioned information for the subject site ("the Site").

2. Please be advised that according to our office record, there is no relevant record within the Site. You are reminded that this information is not exhaustive and you are advised to check with other concerned parties/ authorities responsible for handling chemical leakage/ spillage incidents. You may also consider taking samples for your study of land contamination, if necessary.

3. If you have any enquiry, please contact the undersigned.

HUNG Chi-ho, Jack
Environmental Protection Officer (Regional East) 44
Environmental Protection Department
Tel. : 2117 7531

CINOTECH 漢臻
consultants limited

Room 1710, 17/F., Technology Park
18 On Lai Street, Shatin, Hong Kong
Tel: 852-2151 2083 Fax: 852-3107 1388
Website: http://www.cinotech.com.hk
General E-mail: info@cinotech.com.hk

Our Ref: CCL/IA24143/corr/out/FSD/ my251014

Fire Services Department
Fire Services Headquarters Command
Management Group (MG)

9th Floor, Fire Services Headquarters Building
1 Hong Chong Road, Tsim Sha Tsui East, Kowloon

By Mail
14th Oct 2025

Attn.: To whom it may concern

Dear Sir/Madam,

Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" and Area Shown as "Road" to "Residential (Group C)5" for Proposed Residential Development at Various Lots in D.D. 210 and Adjoining Government Land, Pak Wai, Sai Kung

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According to the brief of this contract, land contamination assessment shall be carried for a Contamination Assessment Plan (CAP) and Contamination Assessment Report (CAR); and subsequently Remediation Assessment Plan (RAP) if any contaminations were found. I am writing to enquire if there are any past record of dangerous goods license and reported accidents of dangerous goods leakage or spillage or related incidents within or in the vicinity of the project site. The concerned assessment area is shown in the attachment.

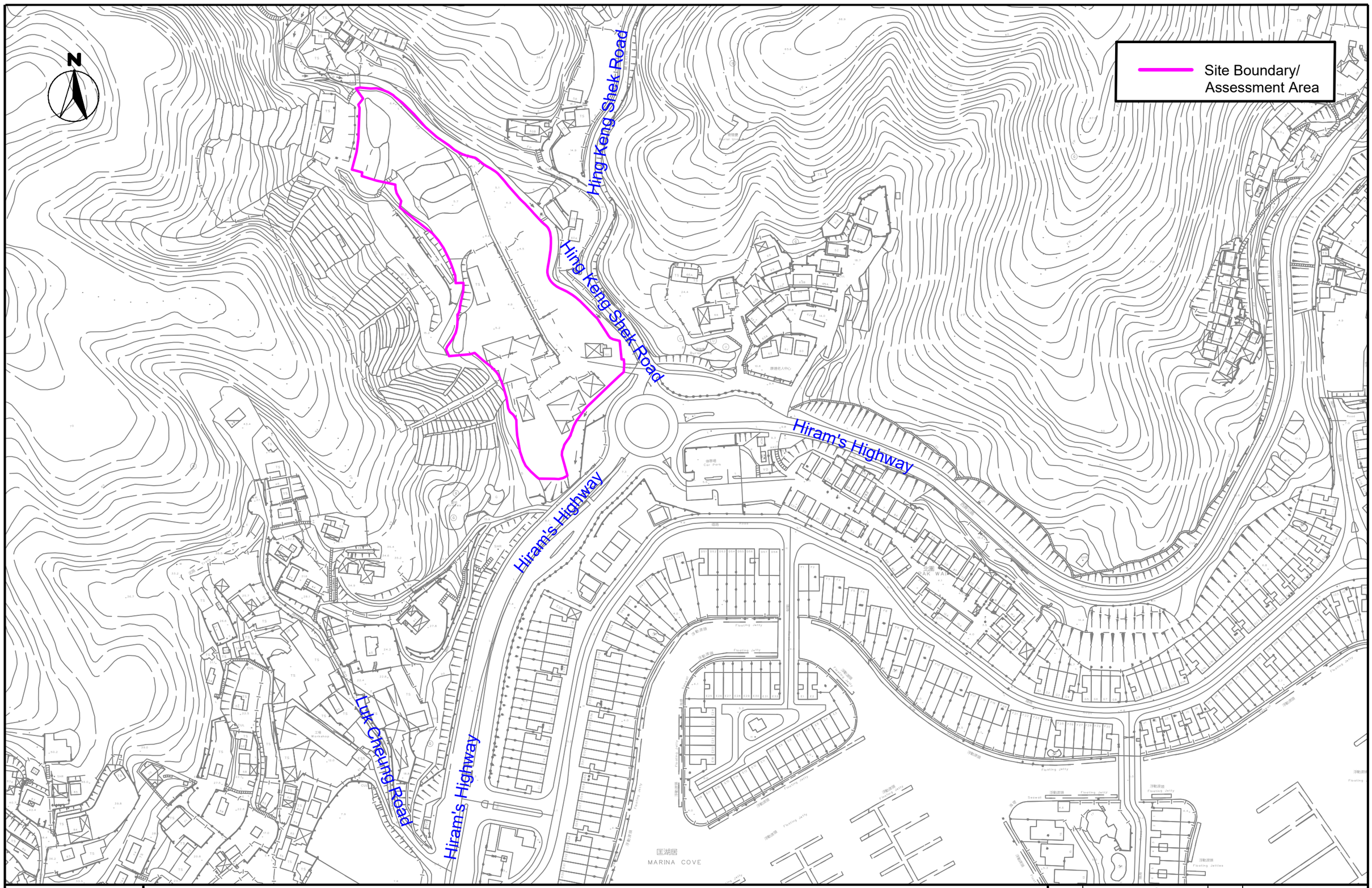
If you need any further clarification, please contact our Ms. Karina Chan at [redacted] or the undersigned at [redacted].

Yours faithfully,

Mr. K S Lee
Technical Director

Encl. Appointment letter, Location Plan of the Project Site

c.c. Arup Mr. Alex Cheng (by e-mail)



CINOTECH
Cinotech Consultants Limited

Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" and Area Shown as "Road" to "Residential (Group C)5" for Proposed Residential Development at Various Lots in D.D. 210 and Adjoining Government Land, Pak Wai, Sai Kung

Site Location Plan

SCALE	1:2000 @ A3	DATE	Jul 2023
CHECK	CC	DRAWN	LL
JOB No.	--	DRAWING No.	2-1
		REV	-

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Karina Chan
Cinotech Consultants Limited
Direct line:[redacted]

▼ Hide email thread

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To: "'HF CHAN'"<[redacted]>
Cc: "'Karina Chan'"<[redacted]>

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Assistant to Mr. W.K. So

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Subject: Re: Environment Assessment for 12A Planning Application at Various Lots in DD210, Sai Kung_Fee Proposal

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> Ir Dr HF Chan, BBS
>
> ---
> Managing Director
> CINOTECH Consultants Limited
> From: "Karina Chan"<[redacted]>
> Date: Tue, Dec 3, 2024, 5:22 PM
> Subject: Re: Environment Assessment for 12A Planning Application at Various Lots in DD210, Sai Kung_Fee Proposal

To: [redacted]
Cc: "HF CHAN"<[redacted]>, "cinotech-info"<[redacted]>,
'[redacted]>
Dear WK and Sara,

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Karina

Karina Chan
Cinotech Consultants Limited
Direct line: [redacted]
From: "Karina Chan"<[redacted]>
Date: Tue, Dec 3, 2024, 12:30 PM
Subject: Environment Assessment for 12A Planning Application at Various Lots in DD210, Sai Kung_Fee Proposal
To: [redacted]
Cc: "HF CHAN"<[redacted]>, "cinotech-info"<[redacted]>,
'[redacted]>
Dear Sara,

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2. Qualitative Air Quality Impact Assessment -
3. Water Quality Impact Assessment & Waste Management Implication-
4. Preliminary Land Contamination Assessment -

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Thanks & Regards,
Karina

Karina Chan
Cinotech Consultants Limited
Direct line: [redacted]

无病毒。www.avast.com

Fw: Enquiry on Records of Land Contamination at Various Lots in D.D. 210 and Adjoining Government Land, Pak Wai, Sai Kung

From: **Megan Yan<[redacted]>** Thu, Nov 27, 2025, 12:18 PM
To: Megan Yan<[redacted]>

Hide email thread

From: ado_lea_cs@hkfsd.gov.hk

Date: Thu, Nov 6, 2025, 2:55 PM
Subject: Re: Fw: Fw: Enquiry on Records of Land Contamination at Various Lots in D.D. 210 and Adjoining Government Land, Pak Wai, Sai Kung
To: <[redacted]>
Cc: "OE8 CS/FSD"<oe_cs_8@hkfsd.gov.hk>

Our reference: (3) in FSD GR 6-5/4 R Pt. 61

Your reference: CCL/IA24143/corr/out/FSD/my251014

Dear Ms. YAN,

Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" and Area Shown as "Road" to "Residential (Group C)5" for Proposed Residential Development at Various Lots in D.D. 210 and Adjoining Government Land Pak Wai, Sai Kung

Request for Information – Dangerous Goods Record and Records of accidents of spillage/leakage

I refer to your email of 14.10.2025 regarding the captioned request and reply below in response to your questions:-

Please be advised that neither records of dangerous goods license, fire incidents nor incidents of spillage / leakage of dangerous goods were found in connection with the given conditions of your request at the subject location.

If you have further questions, please feel free to contact the undersigned.

Best regards,

LEE Yeung, Darwin

Assistant Divisional Officer (Legal Affairs)(Acting)

Corporate Services Division

Fire Services Department

Tel.: 2733 7896

Disclaimer:

*Fire Services Department uses its best endeavor to ensure the accuracy and reliability of the information provided, but cannot guarantee its accuracy and reliability and accepts no liability of any nature for any loss or damage arising from any inaccuracies or omissions that may from the information provided.

1attachment (2.7 MB)

FSD_Enquiry on DG records_All_251014

PDF - 2.7 MB

APPENDIX 7-3
SITE WALKOVER CHECKLIST

Site Walkover Checklist (Questionnaire)

GENERAL SITE DETAILS

Site Owner: Shine Path Limited, Hin Yiu Limited

Property Address: Pak Wai, Sai Kung

Person Conducting the Questionnaire

Name: Karina Chan

Position: Senior Environmental Consultant

Authorized Owner/Client Representative (If Applicable)

Name: N/A

Position: N/A

Telephone: N/A

SITE ACTIVITIES

Briefly describe activities carried out on site, including types of products/chemicals/materials handled.
Obtain a flow schematic if possible.*

Number of employees:

Full-time: N/A

Part-time: N/A

Temporary/Seasonal: N/A

Maximum no. of people on site at any time: N/A

Typical hours of operation: N/A

Number of shifts: N/A

Days per week: N/A

Weeks per year: N/A

Scheduled plant shut-down: N/A

*Information was not available

Detail the main sources of energy at the site:

Gas	No
Electricity	No
Coal	No
Oil	No
Other	No

SITE DESCRIPTION

This section is intended to gather information on site setting and environmental receptors on, adjacent or close to the site.

What is the total site area: About 12,700m^2

What area of the site is covered by buildings (%): N/A

Please list all current and previous owners/occupiers if possible.

N/A

Is a site plan (with indication of the site boundary) available? If yes, please attach.

Are there any other parties on site as tenants or sub-tenants? ~~**Yes**~~**/No**

If yes, identify those parties:

Describe surrounding land use (residential, industrial, rural, etc.) and identify neighbouring facilities and types of industry.

North: Hillview Lodge

South: Hiram's Highway

East: Hing Keng Shek Road

West: N/Aa

QUESTIONNAIRE WITH EXISTING/PREVIOUS SITE OWNER OR OCCUPIER

		Yes/No	Notes
1	What are the main activities/operations at the above address?	N/A	Commercial Horticulture Workshop, Vehicle parking
2	How long have you been occupying the site?	N/A	N/A
3	Were you the first occupant on site? (If yes, what was the usage of the site prior to occupancy.)	N/A	N/A
4	Prior to your occupancy, who occupied the site?	N/A	N/A
5	What were the main activities/operations during their occupancy?	N/A	N/A
6	Have there been any major changes in operations carried out at the site in the last 10 years?	N/A	N/A
7	Have any polluting activities been carried out in the vicinity of the site in the past?	N/A	N/A
8	To the best of your knowledge, has the site ever been used as a petrol filling station/car service garage?	No	N/A
9	Are there any boreholes/wells or natural springs either on the site or in the surrounding area?	No	N/A
10	Do you have any registered hazardous installations as defined under relevant ordinances? (If yes, please provide details.)	No	N/A
11	Are any chemicals used in your daily operations? (If yes, please provide details.)	Yes	Cleaning solvent, lubrication oil
	• Where do you store these chemicals?	N/A	In well-paved temporary storage.
12	Material inventory lists, including quantities and locations available? (If yes, how often are these inventories updated?)	No	N/A
13	Has the facility produced a separate hazardous substance inventory?	No	N/A
14	Have there ever been any incidents or accidents (e.g. spills, fires, injuries, etc.) involving any of these materials? (If yes, please provide details.)	N/A	Enquiries of chemical waste and dangerous goods spillage have been sent to EPD and FSD.
15	How are materials received (e.g. rail, truck, etc.) and stored on site (e.g. drums, tanks, carboys, bags, silos, cisterns, vaults and cylinders)?	N/A	N/A

		Yes/No	Notes
16	Do you have any underground storage tanks? (If yes, please provide details.)	No	N/A
	• How many underground storage tanks do you have on site?	N/A	N/A
	• What are the tanks constructed of?	N/A	N/A
	• What are the contents of these tanks?	N/A	N/A
	• Are the pipelines above or below ground?	N/A	N/A
	• If the pipelines are below ground, has any leak and integrity testing been performed?	N/A	N/A
	• Have there been any spills associated with these tanks?	N/A	N/A
17	Are there any disused underground storage tanks?	No	N/A
18	Do you have regular check for any spillage and monitoring of chemicals handled? (If yes, please provide details.)	N/A	N/A
19	How are the wastes disposed of?	N/A	N/A
20	Have you ever received any notices of violation of environmental regulations or received public complaints? (If yes, please provide details.)	N/A	N/A
21	Have any spills occurred on site? (If yes, please provide details.)	No	N/A
	• When did the spill occur?	N/A	N/A
	• What were the substances spilled?	N/A	N/A
	• What was the quantity of material spilled?	N/A	N/A
	• Did you notify the relevant departments of the spill?	N/A	N/A
	• What were the actions taken to clean up the spill?	N/A	N/A
	• What were the areas affected?	N/A	N/A
22	Do you have any records of major renovation of your site or rearrangement of underground utilities, pipe work/underground tanks (If yes, please provide details.)	No	N/A
23	Have disused underground tanks been removed or otherwise secured (e.g. concrete, sand, etc.)?	N/A	N/A
24	Are there any known contaminations on site? (If yes, please provide details.)	No	N/A
25	Has the site ever been remediated? (If yes, please provide details.)	No	N/A

OBSERVATIONS / OTHERS

1.	Are chemical storage areas provided with secondary containment (i.e. bund walls and floors)?	No	N/A
2.	What are the conditions of the bund walls and floors?	N/A	N/A
3.	Are any surface water drains located near to drum storage and unloading areas?	N/A	N/A
4.	Are any solid or liquid waste (other than wastewater) generated at the site? (If yes, please provide details.)	Yes	Spent Lubrication oil
5.	Is there a storage site for the wastes?	N/A	N/A
6.	Is there an on-site landfill?	No	N/A
7.	Were any stressed vegetation noted on site during the site reconnaissance? (If yes, please indicate location and approximate size.)	No	N/A
8.	Were any stained surfaces noted on-site during the site reconnaissance? (If yes, please provide details.)	No	N/A
9.	Are there any potential off-site sources of contamination?	No	N/A
10.	Does the site have any equipment (e.g. Transformers) which might contain polychlorinated biphenyls (PCBs)?	No	N/A
11.	Are there any sumps, effluent pits, interceptors or lagoons on site?	No	N/A
12.	Any noticeable odours during site walkover?	No	N/A
13.	Are any of the following chemicals used on site: fuels, lubricating oils, hydraulic fluids, cleaning solvents, used chemical solutions, acids, anti-corrosive paints, thinners, coal, ash, oily tanks and bilge sludge, metal wastes, wood preservatives and polyurethane foam?	Yes	Cleaning solvent and lubrication oil has been used.

APPENDIX 7-4
PHOTO RECORD FOR SITE WALKOVER

N

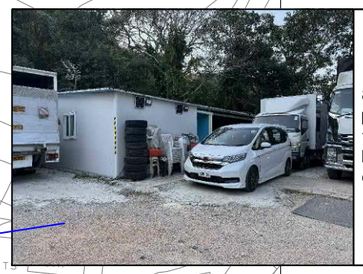
Site Boundary

Potentially contaminated area

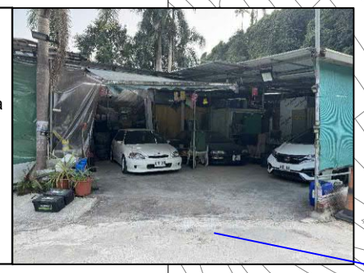
7. Temporary structure for storage use.

9. Temporary storage area of construction materials inside the assessment site.

6. Plant products for commercial use.



8. Another parking area of the landscaping company.



5. Parking area of the landscaping company

2. Forklift was used by the landscaping company.

4. Substrates which were used and stored.

3. Potted plants which were grown by the landscaping company.

1. Nullah at the entrance of the site

CINOTECH
Cinotech Consultants Limited

Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" and Area Shown as "Road" to "Residential (Group C)5" for Proposed Residential Development at Various Lots in D.D. 210 and Adjoining Government Land, Pak Wai, Sai Kung

Photo record for site-walkover

SCALE	1:1000 @ A3	DATE	31 December 2024
CHECK	KC	DRAWN	TC
JOB No.	IA24143	DRAWING No.	Appendix 7-4
		REV	-