Form No. S16-I
表格第 S16-I 號

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

根據《城市規劃條例》(第131章)第16條遞交的許可申請

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

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

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

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

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

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

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

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

& Please attach documentary proof 請夾附證明文件

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

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

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

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

25024/4 31/10 By Hand

Form No. S16-I表格第 S16-I號

For Official Use Only 請勿填寫此欄	Application No. 申請編號	A/I-DB/11
	Date Received 收到日期	2025 -11- 0 3

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

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

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

---

1. Name of Applicant 申請人姓名/名稱

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

CLP Power Hong Kong Limited

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

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

KTA Planning Limited

3. Application Site 申請地點

(a) Full address / location / demarcation district and lot number (if applicable) 詳細地址／地點／丈量約份及地段號碼（如適用）	Areas Adjacent to Discovery Bay Tunnel within Chok Ko Wan Lot No. 2 and the Remaining Portion of Lot No. 385 in D.D. 352 and the Extensions thereto and Adjoining Government Land, Discovery Bay, Lantau Island
(b) Site area and/or gross floor area involved 涉及的地盤面積及／或總樓面面積	☑Site area 地盤面積 1,830 sq.m 平方米 ☑About 約 ☐Gross floor area 總樓面面積 ..... sq.m 平方米 ☐About 約
(c) Area of Government land included (if any) 所包括的政府土地面積（倘有）	450 sq.m 平方米 ☑About 約

(d)	Name and number of the related statutory plan(s) 有關法定圖則的名稱及編號	Approved Discovery Bay Outline Zoning Plan No. S/I-DB/6 Approved Siu Ho Wan Outline Zoning Plan No. S/I-SHW/2
(e)	Land use zone(s) involved 涉及的土地用途地帶	Conservation Area, Government, Institution or Community, Other Specified Uses annotated Amenity Area, Green Belt, and area shown as Road
(f)	Current use(s) 現時用途	Idled Land with Vegetation and Vehicle Layby of the Discovery Bay Tunnel (If there are any Government, institution or community facilities, please illustrate on plan and specify the use and gross floor area) (如有任何政府、機構或社區設施，請在圖則上顯示，並註明用途及總樓面面積)

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

The applicant 申請人 –

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

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

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

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

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

(a) According to the record(s) of the Land Registry as at 09/10/2025 (DD/MM/YYYY), this application involves a total of 2 "current land owner(s)"#.
根據土地註冊處截至 2025 年 10 月 09 日的記錄，這宗申請共牽涉 2 名「現行土地擁有人」#。

(b) The applicant 申請人 –

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

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

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

☑ has notified .....2..... "current land owner(s)"#
已通知 .....2..... 名「現行土地擁有人」#。

Details of the "current land owner(s)"# notified 已獲通知「現行土地擁有人」#的詳細資料		
No. of 'Current Land Owner(s)' 「現行土地擁有人」數目	Lot number/address of premises as shown in the record of the Land Registry where notification(s) has/have been given 根據土地註冊處記錄已發出通知的地段號碼／處所地址	Date of notification given (DD/MM/YYYY) 通知日期(日/月/年)
1	The Remaining Portion of Lot No. 385 in D.D. 352 and the Extensions thereto	21/10/2025; delivery received on 22/10/2025
1	Chok Ko Wan Lot No. 2	21/10/2025; delivery received on 22/10/2025

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

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

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

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

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

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

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

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

Others 其他

☐ others (please specify)
其他（請指明）

_____

_____

_____

_____

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

6. Type(s) of Application 申請類別

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

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

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

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

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

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

(i) For Type (i) application 供第(i)類申請

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

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

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

(a) Operation involved 涉及工程	☐ Diversion of stream 河道改道 ☐ Filling of pond 填塘 Area of filling 填塘面積 ..... sq.m 平方米 ☐About 約 Depth of filling 填塘深度 ..... m 米 ☐About 約 ☑ Filling of land 填土 Area of filling 填土面積 .....500..... sq.m 平方米 ☑About 約 Depth of filling 填土厚度 .....0.9 to 5.5..... m 米 ☑About 約 ☑ Excavation of land 挖土 Area of excavation 挖土面積 .....500..... sq.m 平方米 ☑About 約 Depth of excavation 挖土深度 .....0.9 to 5.5..... m 米 ☑About 約 (Referring to the proposed micro cable tunnel, launching pit and cable lead-in in "CA" zone only)
(b) Intended use/development 有意進行的用途／發展	Proposed Public Utility Installation (Micro Cable Tunnel) and associated excavation and filling of land

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

(a) Nature and scale 性質及規模

☑ Public utility installation 公用事業設施裝置

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

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

Name/type of installation 裝置名稱／種類	Number of provision 數量	Dimension of each installation /building/structure (m) (LxWxH) 每個裝置／建築物／構築物的尺寸 (米) (長 x 闊 x 高)
Micro Cable Tunnel with cables	1	370m (length) x 0.9m (width/diameter) (Referring to the section in "CA" zone only)

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

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

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

☐	Plot ratio restriction 地積比率限制	From 由 ..... to 至 .....
☐	Gross floor area restriction 總樓面面積限制	From 由 .....sq. m 平方米 to 至 .....sq. m 平方米
☐	Site coverage restriction 上蓋面積限制	From 由 .....% to 至 ..... %
☐	Building height restriction 建築物高度限制	From 由 .....m 米 to 至 ..... m 米 From 由 ..... mPD 米 (主水平基準上) to 至 .....mPD 米 (主水平基準上) From 由 ..... storeys 層 to 至 ..... storeys 層
☐	Non-building area restriction 非建築用地限制	From 由 .....m to 至 ..... m
☐	Others (please specify) 其他（請註明）	....

(v) For Type (v) application 供第(v)類申請

(a) Proposed use(s)/development 擬議用途/發展	(Please illustrate the details of the proposal on a layout plan 請用平面圖說明建議詳情)

(b) Development Schedule 發展細節表

Proposed gross floor area (GFA) 擬議總樓面面積	..... sq.m 平方米	☐About 約
Proposed plot ratio 擬議地積比率	.....	☐About 約
Proposed site coverage 擬議上蓋面積	..... %	☐About 約
Proposed no. of blocks 擬議座數	.....	
Proposed no. of storeys of each block 每座建築物的擬議層數	..... storeys 層	
	☐ include 包括.....storeys of basements 層地庫	
	☐ exclude 不包括.....storeys of basements 層地庫	
Proposed building height of each block 每座建築物的擬議高度	..... mPD 米(主水平基準上)	☐About 約
	..... m 米	☐About 約

☐ Domestic part 住用部分

GFA 總樓面面積 ..... sq. m 平方米 ☐About 約

number of Units 單位數目 .....

average unit size 單位平均面積 .....sq. m 平方米 ☐About 約

estimated number of residents 估計住客數目 .....

☐ Non-domestic part 非住用部分 GFA 總樓面面積

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

☐ hotel 酒店 ..... sq. m 平方米 ☐About 約
(please specify the number of rooms 請註明房間數目) .....

☐ office 辦公室 ..... sq. m 平方米 ☐About 約

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

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

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

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

☐ private open space 私人休憩用地 ..... sq. m 平方米 ☐ Not less than 不少於

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

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

[Block number] [座數]	[Floor(s)] [層數]	[Proposed use(s)] [擬議用途]
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....

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

.....

.....

.....

.....

.....

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

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

March 2027

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

Any vehicular access to the site/subject building? 是否有車路通往地盤／有關建築物？	Yes 是	☑ There is an existing access. (please indicate the street name, where appropriate) 有一條現有車路。(請註明車路名稱(如適用)) Access Road via Discovery Bay Road ☐ There is a proposed access. (please illustrate on plan and specify the width) 有一條擬議車路。（請在圖則顯示，並註明車路的闊度）
	No 否	☐
Any provision of parking space for the proposed use(s)? 是否有為擬議用途提供停車位？	Yes 是	☐ (Please specify type(s) and number(s) and illustrate on plan) 請註明種類及數目並於圖則上顯示) Private Car Parking Spaces 私家車車位 _____ Motorcycle Parking Spaces 電單車車位 _____ Light Goods Vehicle Parking Spaces 輕型貨車泊車位 _____ Medium Goods Vehicle Parking Spaces 中型貨車泊車位 _____ Heavy Goods Vehicle Parking Spaces 重型貨車泊車位 _____ Others (Please Specify) 其他 (請列明) _____ _____ _____ _____ _____
	No 否	☑
Any provision of loading/unloading space for the proposed use(s)? 是否有為擬議用途提供上落客貨車位？	Yes 是	☐ (Please specify type(s) and number(s) and illustrate on plan) 請註明種類及數目並於圖則上顯示) Taxi Spaces 的士車位 _____ Coach Spaces 旅遊巴車位 _____ Light Goods Vehicle Spaces 輕型貨車車位 _____ Medium Goods Vehicle Spaces 中型貨車車位 _____ Heavy Goods Vehicle Spaces 重型貨車車位 _____ Others (Please Specify) 其他 (請列明) _____ _____ _____ _____ _____
	No 否	☑

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

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

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

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

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

Please refer to Appendix 1 of the Supporting Planning Statement for the proposed environmental mitigation measures.
.....
.....
.....
.....

10. Justifications 理由

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

Please refer to Supporting Planning Statement.

11. Declaration 聲明

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

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

Signature 簽署 .....

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

CHAN ELDEN CHUN HEI
Name in Block Letters 姓名（請以正楷填寫）

Town Planner
Position (if applicable) 職位 （如適用）

Professional Qualification(s) 專業資格
☑ Member 會員 / ☐ Fellow of 資深會員
☑ HKIP 香港規劃師學會 / ☐ HKIA 香港建築師學會 /
☐ HKIS 香港測量師學會 / ☐ HKIE 香港工程師學會 /
☐ HKILA 香港園境師學會/ ☐ HKIUD 香港城市設計學會
☑ RPP 註冊專業規劃師 443
Others 其他 ....MRTPI.....

on behalf of 代表 KTA Planning Limited

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

Date 日期 27/10/2025 (DD/MM/YYYY 日/月/年)

Remark 備註

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

Warning 警告

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

Statement on Personal Data 個人資料的聲明

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

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

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

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

Ash interment capacity 骨灰安放容量@

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

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

Total number of niches 龕位總數 _____

Total number of single niches
單人龕位總數 _____

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

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

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

Total number of double niches
雙人龕位總數 _____

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

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

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

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

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

_____

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

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

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

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

Proposed operating hours 擬議營運時間 _____

_____

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

Gist of Application 申請摘要

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

Application No. 申請編號	(For Official Use Only) (請勿填寫此欄)
Location/address 位置／地址	Areas Adjacent to Discovery Bay Tunnel within Chok Ko Wan Lot No. 2 and the Remaining Portion of Lot No. 385 in D.D. 352 and the Extensions thereto and Adjoining Government Land, Discovery Bay, Lantau Island
Site area 地盤面積	1,830 sq. m 平方米 ☑ About 約 (includes Government land of 包括政府土地 450 sq. m 平方米 ☑ About 約)
Plan 圖則	Approved Discovery Bay Outline Zoning Plan No. S/I-DB/6 Approved Siu Ho Wan Outline Zoning Plan No. S/I-SHW/2
Zoning 地帶	Conservation Area, Government, Institution or Community, Other Specified Uses annotated Amenity Area, Green Belt and area shown as Road
Applied use/ development 申請用途/發展	Proposed Public Utility Installation (Micro Cable Tunnel) and associated excavation and filling of land

		sq.m 平方米	Plot Ratio 地積比率
(i) Gross floor area and/or plot ratio 總樓面面積及／或地積比率	Domestic 住用	☐ About 約 ☐ Not more than 不多於	☐About 約 ☐Not more than 不多於
	Non-domestic 非住用	☐ About 約 ☐ Not more than 不多於	☐About 約 ☐Not more than 不多於
(ii) No. of blocks 幢數	Domestic 住用		
	Non-domestic 非住用		
	Composite 綜合用途		

(iii)	Building height/No. of storeys 建築物高度／層數	Domestic 住用	m 米 ☐ (Not more than 不多於)
			mPD 米(主水平基準上) ☐ (Not more than 不多於)
			Storeys(s) 層 ☐ (Not more than 不多於) *(☐Include 包括/☐ Exclude 不包括* ☐ *Carport 停車間* ☐ *Basement 地庫* ☐ *Refuge Floor 防火層* ☐ *Podium 平台)*
		Non-domestic 非住用	m 米 ☐ (Not more than 不多於)
			mPD 米(主水平基準上) ☐ (Not more than 不多於)
			Storeys(s) 層 ☐ (Not more than 不多於) *(☐Include 包括/☐ Exclude 不包括* ☐ *Carport 停車間* ☐ *Basement 地庫* ☐ *Refuge Floor 防火層* ☐ *Podium 平台)*
		Composite 綜合用途	m 米 ☐ (Not more than 不多於)
			mPD 米(主水平基準上) ☐ (Not more than 不多於)
			Storeys(s) 層 ☐ (Not more than 不多於) *(☐Include 包括/☐ Exclude 不包括* ☐ *Carport 停車間* ☐ *Basement 地庫* ☐ *Refuge Floor 防火層* ☐ *Podium 平台)*
(iv)	Site coverage 上蓋面積		% ☐ About 約
(v)	No. of units 單位數目		
(vi)	Open space 休憩用地	Private 私人	sq.m 平方米 ☐ Not less than 不少於
		Public 公眾	sq.m 平方米 ☐ Not less than 不少於

(vii)	No. of parking spaces and loading / unloading spaces 停車位及上落客貨車位數目	Total no. of vehicle parking spaces 停車位總數 Private Car Parking Spaces 私家車車位 Motorcycle Parking Spaces 電單車車位 Light Goods Vehicle Parking Spaces 輕型貨車泊車位 Medium Goods Vehicle Parking Spaces 中型貨車泊車位 Heavy Goods Vehicle Parking Spaces 重型貨車泊車位 Others (Please Specify) 其他 (請列明) _____ _____	
		Total no. of vehicle loading/unloading bays/lay-bys 上落客貨車位／停車處總數 Taxi Spaces 的士車位 Coach Spaces 旅遊巴車位 Light Goods Vehicle Spaces 輕型貨車車位 Medium Goods Vehicle Spaces 中型貨車位 Heavy Goods Vehicle Spaces 重型貨車車位 Others (Please Specify) 其他 (請列明) _____ _____	

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

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

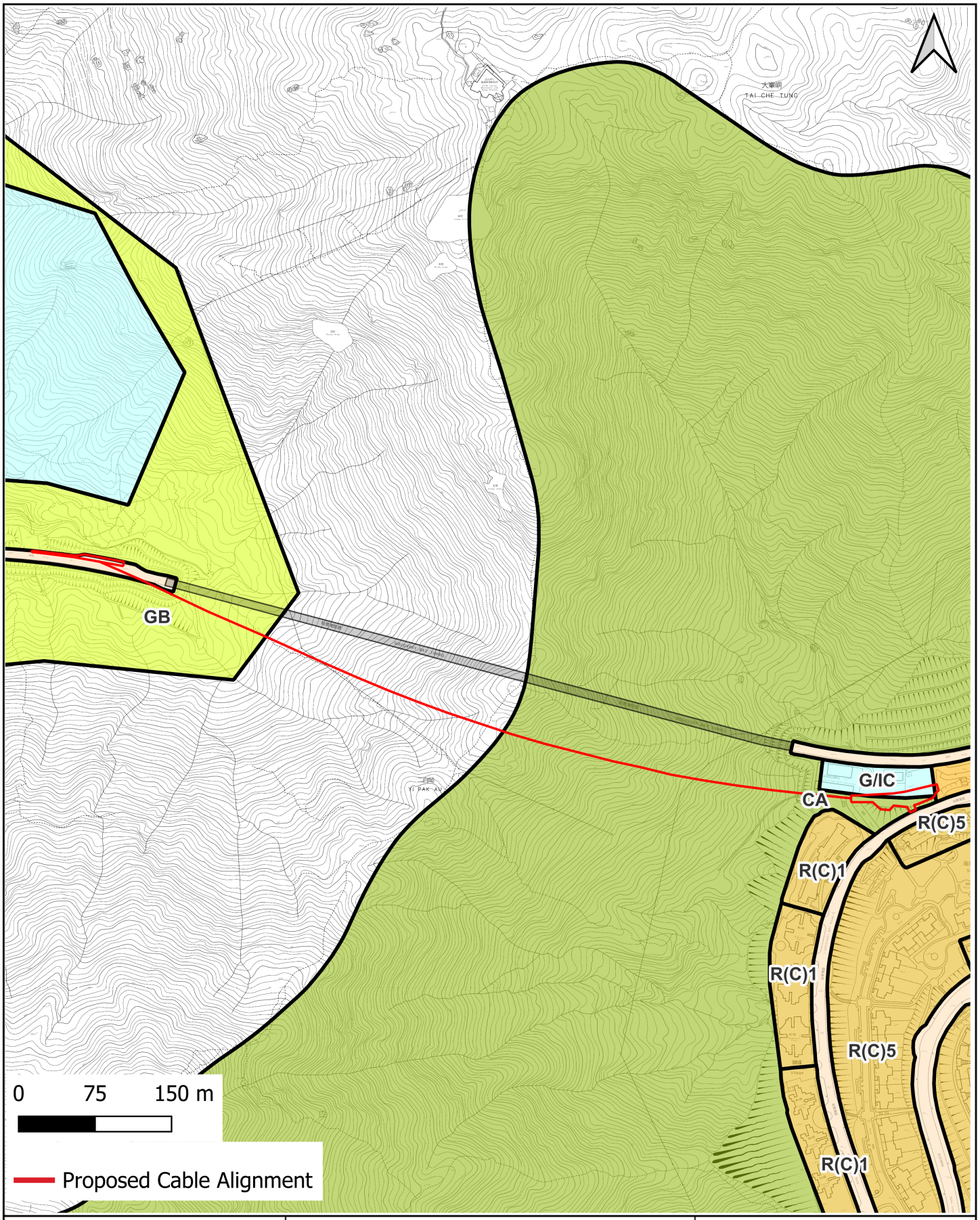
Note: May insert more than one「✔」. 註：可在多於一個方格內加上「✔」號

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

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

此為空白頁。

This is a blank page.



PLANNING LIMITED
規劃顧問有限公司

Site Location Plan

Proposed Public Utility Installation (Micro Cable Tunnel) and Associated Excavation and Filling of Land in the Areas Adjacent to Discovery Bay Tunnel within Chok Ko Wan Lot No. 2, the Remaining Portion of Lot No. 385 in D.D. 352, and the Extensions thereto and Adjoining Government Land, Discovery Bay, Lantau Island

30/10/2025

S.16 PLANNING APPLICATION
APPROVED DISCOVERY BAY OUTLINE ZONING PLAN NO. S/I-DB/6
APPROVED SIU HO WAN OUTLINE ZONING PLAN NO. S/I-SHW/2

Proposed Public Utility Installation (Micro Cable Tunnel) and Associated Excavation and Filling of Land in the Areas Adjacent to Discovery Bay Tunnel within Chok Ko Wan Lot No. 2, the Remaining Portion of Lot No. 385 in D.D. 352, and the Extensions thereto and Adjoining Government Land, Discovery Bay, Lantau Island

Supporting Planning Statement

October 2025

Applicant:
CLP Power Hong Kong Limited

Consultancy Team:
KTA Planning Limited
ERM Hong Kong Limited

S3143_PS_V08

PLANNING LIMITED
規劃顧問有限公司

TABLE OF CONTENTS

Appendix 2: Geotechnical Planning Review Report (GPRR)
Appendix 3: Tree Survey Report

Executive Summary

This Supporting Planning Statement is prepared on behalf of the Applicant, CLP Power Hong Kong Limited (CLP Power), to seek approval from the Town Planning Board ("TPB") under Section 16 of the Town Planning Ordinance for a Proposed Public Utility Installation (Micro Cable Tunnel) with Associated Excavation and Filling of Land in the Areas adjacenet to Discovery Bay Tunnel within Chok Ko Wan Lot No. 2, the Remaining Portion of Lot No. 385 in D.D. 352, and the Extensions thereto and Adjoining Government Land, Discovery Bay ("Proposed Project"). The Proposed Project is one of the approved major projects in the CLP Power 2024-2028 Development Plan, which was approved by the Government on 28 November 2023 to uphold the safety and reliability of CLP Power's territory-wide network.

To uphold the safety and reliability of the power network for the Discovery Bay area, the proposed project is to build a new cable ducting by micro-tunneling adjacent Discovery Bay Vehicular Tunnel for the installation of new 132kV circuits. The proposed project would involve the construction of an 810m long micro cable tunnel, including 3 x 630mm^2 132kV cable and 1 x 48/C optical fibre cable. The proposed project would adopt the Horizontal Directional Drilling (HDD) construction method to minimise the environmental impact, while meeting construction design requirements. Two temporary work areas will be established to accommodate the launching pit and receiving pit, respectively, for the micro cable tunnel construction. The majority of the proposed project's works will be conducted underground, utilising small-scale machinery, equipment, and hand tools.

This S16 Planning Application is fully justified based on the following reasons:

- The Proposed Project forms part of the CLP Power Development Plan for 2024-2028, endorsed by the Government;

- The Proposed Development upholds the safety and reliability of the electricity network of the Discovery Bay area;

- The Proposed Project adopts an efficient, low-impact construction method - HDD for safeguarding and minimising the impact on the surrounding environment;

- There are no alternative alignments for the proposed cable installation not involving "CA" and "GB" zones;

- The proposed project would not jeoparadise the long-term planning intention of the "CA" zone;

- The proposed locations for the launching pit and receiving pit have been thoroughly considered to minimise environmental impact and disturbance to surrounding neighbourhoods after the review of the potential locations of the launching pit and receiving pit;

- Assessments have been conducted and demonstrated that there are no adverse environmental impacts and impacts on the natural terrain or man-made slopes or retaining walls due to the proposed cable; and

- There will be no trees and visual impact due to the proposed project, as the proposed cable will be underground in nature.

In consideration of the above, we sincerely request the TPB to support this Section 16 Planning Application from planning and technical points of view.

行政摘要

申請人中華電力有限公司(中華電力)，擬就城市規劃條例第 16 條向城市規劃委員會（下稱「城規會」）申請批准於第 2 號竹篙灣地段、丈量約份第 352 約地段第 385 號餘段及其擴展部分，以及毗鄰愉景灣隧道範圍進行擬議公用設施裝置（微型電纜隧道）和挖掘及填平土地 (「擬議項目」)。擬議項目是政府於 2023 年 11 月 28 日批准的 2024-2028 年發展計劃中已獲批准的主要項目之一，以確保可靠及安全的電力供應。

為提升愉景灣地區電力網絡的安全及可靠性，擬議項目旨在毗鄰愉景灣隧道的位置，興建一條全新的 132 千伏輸電電纜線路, 並以微型電纜隧道形式建造新的電纜隧道。 擬議項目是一條長 810 米的微型電纜隧道，包括 3 x 630 毫米電纜及 1 x 48/C 光纖電纜。擬議項目將採用水平定向鑽挖的施工方法，以盡量減少對環境的影響，同時符合施工設計要求。 除了在微型電纜隧道的東端及西端設置臨時工作區以設置進口井及接收井外，擬議項目的大部分工程將在地底進行，並只涉及使用小型設備／機械及手動工具。

擬議計劃主要理據如下:

- 擬議項目是中華電力 2024-2028 年發展計劃的一部分，已獲政府批准；
- 擬議項目可維護愉景灣地區輸電網絡的安全和可靠性；
- 擬議項目採用高效率、低影響的水平定向鑽挖施工方法，以減少對周邊環境的影響；
- 擬議的電纜線路方案中沒有其他路線不涉及「自然保育區」及「綠化地帶」；
- 申請人已探討多個進口井及接收井的潛在位置方案後，並無其他更適合的位置；
- 擬議項目不會影響對「自然保育區」地帶的長遠規劃意向;
- 申請人已審慎考慮進口井及接收井潛在的位置，以盡量減低對環境的影響及對附近社區的影響；
- 申請人就擬議項目進行評估並證明擬議項目不會對環境造成不良影響和對天然山坡、人造斜坡或擋土牆構成影響；及
- 由於擬建項目屬地底電纜，因此擬建項目並沒有對樹木及視覺影響。

根據以上各點，申請人懇請城規會從規劃及技術角度支援擬議規劃申請。

S.16 Planning Application
Approved Discovery Bay Outline Zoning Plan No. S/I-DB/6
Approved Siu Ho Wan Outline Zoning Plan No. S/I-SHW/2

Proposed Public Utility Installation (Micro Cable Tunnel) and Associated Excavation and Filling of Land in the Areas Adjacent to Discovery Bay Tunnel within Chok Ko Wan Lot No. 2, the Remaining Portion of Lot No. 385 in D.D. 352, and the Extensions thereto and Adjoining Government Land, Discovery Bay, Lantau Island

Supporting Planning Statement

1. INTRODUCTION

1.1 Purpose

1.1.1 This Planning Statement is prepared and submitted on behalf of CLP Power Hong Kong Limited (the "Applicant") to seek approval from the Town Planning Board ("TPB") under Section 16 of the Town Planning Ordinance for the Proposed Public Utility Installation (Micro Cable Tunnel) and Associated Excavation and Filling of Land in the Areas Adjacent to Discovery Bay Tunnel with Chok Ko Wan Lot No.2, the Remaining Portion of Lot No. 385 in D.D. 352, and with the Extensions thereto and Adjoining Government Land, Discovery Bay. The Proposed Public Utility Installation and the associated excavation and filling of land would fall within an area zoned "Green Belt" ("GB"), "Conservation Area" ("CA"), "Government, Institution or Community" ("G/IC"), "Other Specified Uses" annotated "Amenity Area" and "Road" under both Approved Discovery Bay OZP No. S/I-DB/6 and Approved Siu Ho Wan OZP No. S/I-SHW/2. This Supporting Planning Statement is to provide members of the TPB with information necessary for the consideration of this Application.

1.2 Report Structure

Following this introductory Section, the need for the Proposed Project will be briefly set out in Section 2. The proposed works for the cable installation will be discussed in Section 3, followed by the planning justifications for the Proposed Project in Section 4. Section 5 concludes and summarizes this Supporting Planning Statement.

2. NEED OF THE PROPOSED PROJECT

2.1 The Applicant aims to enhance power reliability. There are 2 series of existing 132kV cable circuits (between Sham Shui Kok and Discovery Bay) passing through Discovery Bay Tunnel for power supply to Discovery Bay. The Common Cable Infrastructures (CCIs) shared by these circuits are currently managed by third parties.

2.2 To enhance the reliability of the power supply for the Discovery Bay area, the Applicant therefore proposes to build a new 132kV transmission cable circuit at the location abutting the Discovery Bay Tunnel, through a proposed micro-tunnel for cable laying. After the works are completed, the existing cable circuits running between Sham Shui Kok and Discovery Bay, and the proposed new cable circuit under the Project would be housed in separate cable corridors, which can further enhance the reliability of the power supply to Discovery Bay (highlighted in red color in **Figure 2.1 and Figure 2.2 refer**). The Proposed Project is one of the major projects in the CLP Power 2024-2028 Development Plan, which was endorsed by the Government on 28 November 2023, to uphold the safety and reliability of CLP Power's territory-wide network[1].

[1] Please refer to CLP's 2024-2028 Development Plan. Link: https://www.legco.gov.hk/yr2023/english/panels/ea/papers/ea20231128cb1-1046-4-e.pdf

Figure 2.1: Existing 132kV Circuits running from Sham Shui Kok Substation to Discovery Bay North Substation via Discovery Bay Tunnel

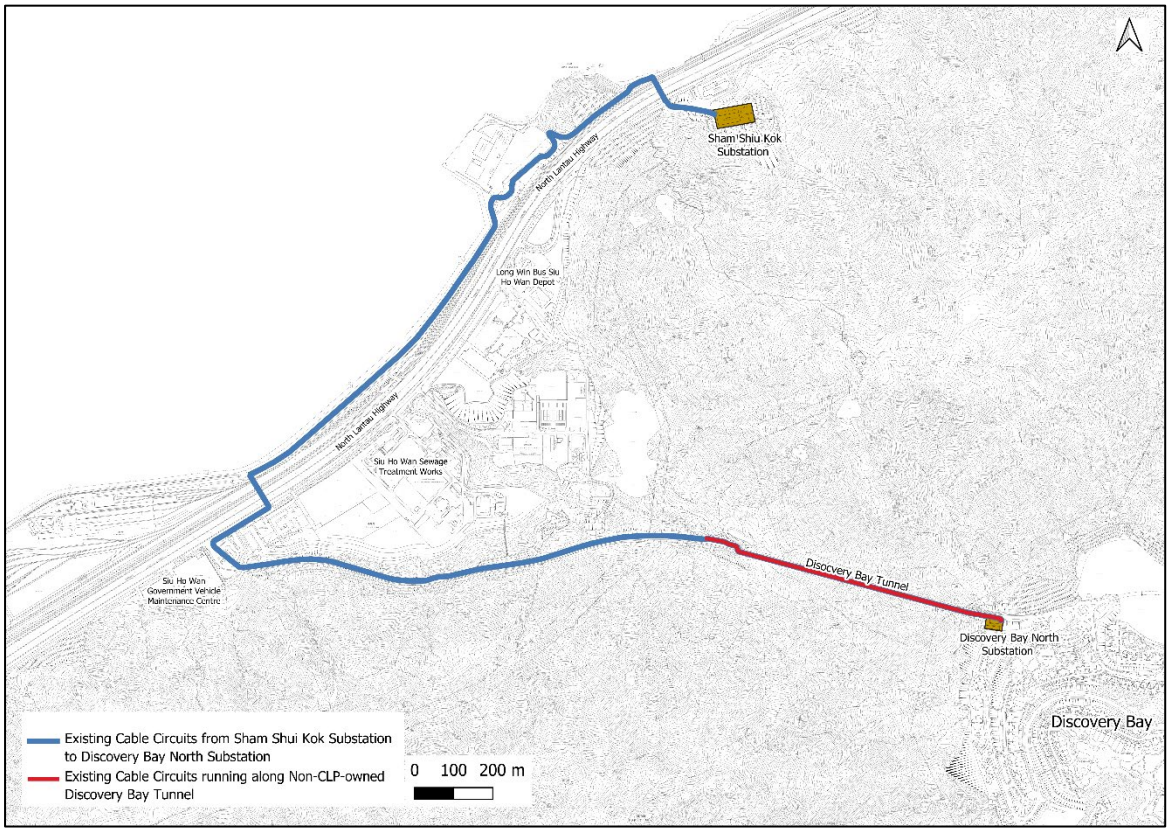
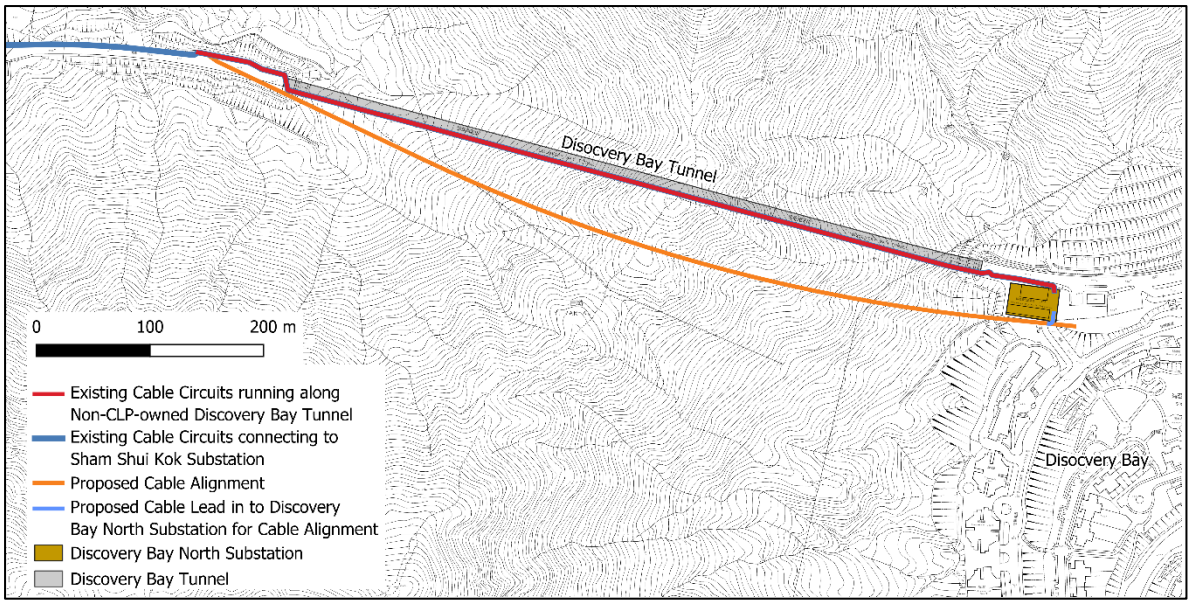


Figure 2.2: Existing Sections and Proposed New Cable Circuits running along Discovery Bay Tunnel



3. PROPOSED WORKS FOR CABLE INSTALLATION

3.1 Introduction

3.1.1 The Applicant has thoroughly considered different design and construction options for constructing the alternative circuit by-passing the Discovery Bay Tunnel connecting to the Discovery Bay North Substation of the Proposed Project.

3.2 Consideration of the construction methods

3.2.1 To minimise the potential environmental impact due to the construction of the new circuit, the Applicant has carefully reviewed 3 different construction methods, including a) Open Trenching or Overhead Line, b) Trenchless Cable laying by Horizontal Directional Drilling (HDD) and c) Trenchless Cable laying by Tunnel Boring Machine (TBM) for the proposed cable installation.

a) Open Trenching or Overhead Line

3.2.2 Traditional cable laying methods, including open trenching or constructing an overhead line, have been considered under this Proposed Project, but both methods present significant environmental and logistical challenges. Open trenching and construction of overhead lines necessitate extensive excavation and construction areas, resulting in land surface disruption with vegetation clearance and tree felling, and loss of habitats, particularly in the Lantau North (Extension) Country Park, and the adjoining “CA” and “GB” areas. The overhead lines would also result in a visual impact, with the overhead line spanning across ecologically sensitive areas. Both methods also demand the construction of temporary or permanent access roads to transport heavy machinery and materials, further exacerbating land disturbance and increasing the risk of soil erosion. These traditional methods cause more ecological impacts, including vegetation and habitat loss and altered landscapes. Thus, traditional cable laying methods are not preferred.

b) Trenchless Cable laying by Horizontal Directional Drilling (HDD)

3.2.3 The Applicant considered Horizontal Directional Drilling (HDD) as the preferred trenchless method for cable installation in view of its significant environmental and construction advantages over traditional cable laying methods. HDD, as a trenchless micro-tunnelling method, requires only launching and receiving pits with shallower excavation depths compared to TBM methods, which could reduce surface disruption. Adopting HDD could allow for the most suitable layout for future cable laying and maintain adequate ground cover, as well as

avoiding adverse landscape and visual impacts during construction. Besides that, this construction method would mainly involve utilising small-scale construction equipment/machinery and hand tools above ground for accommodating the launching pit and receiving pit. Most of the tunnelling works would be underground, thus it will minimise environmental, vegetation, drilling fluid and visual impacts above ground. By adopting HDD, the Proposed Project ensures efficient, low-impact installation while safeguarding the surrounding environment.

c) Trenchless Cable laying by Tunnel Boring Machine (TBM)

3.2.4 The trenchless cable laying by Tunnel Boring Machine (TBM) has also been explored. While TBM significantly reduces surface disruption by conducting excavation underground with only launching and receiving pits, it presents certain limitations compared to HDD. Specifically, the TBM method offers lower flexibility in route planning and alignment selection, which could constrain project design. Preliminary estimates indicate that TBM requires a tunnel size and aboveground work area approximately 40% and 30% larger, respectively, than HDD. Additionally, the construction duration for TBM is considerably longer (around 36 months), compared to HDD's estimated 16 months, resulting in prolonged environmental impacts. Furthermore, TBM necessitates deeper working pits (6-7 meters) compared to HDD's shallower working pits (2-3 meters). Both methods minimise surface disturbance; however, TBM imposes more environmental impact due to its larger-scale construction works and extended timeline. Although TBM is a viable construction method with a trenchless option, HDD emerges as the more efficient and less disruptive alternative for the project.

Summary of the Construction Method

3.2.5 As discussed above, the Applicant has selected HDD as the most preferable construction method for the proposed cable installation. The preferred underground micro-tunnelling would require launching and receiving pits for HDD rig to create a borehole for the proposed cable installation. Considerations of the location of the launching pit and receiving pit are presented in the sections below.

3.3 Consideration of the location of the launching pit

3.3.1 The launching pit serves as the starting point for the HDD construction method by launching the drilling rig. The drilling rig is carefully directed to create a micro

cable tunnel at a controlled angle for the 132kV cable.

3.3.2 The Applicant has formulated a set of site selection criteria covering 1) Proximity to the Discovery Bay North Substation, 2) Size and Construction Requirement of the Site, 3) Minimise impact on the surroundings, and 4) post-construction treatment for the potential locations of the launching and receiving pit. In the proximity of the Discovery Bay North Substation, six potential locations have been explored (**Figure 3.1 and Table 3.1** refer).

- Proximity to the Discovery Bay North Substation:
  - To minimise necessary surface excavation work for connecting the micro cable tunnel to the Substation
- Size and Construction Requirement of the Site
  - Provide sufficient space for setting up the construction work areas, including the launching pit for the HDD construction method
  - Suitable Size/Work Area for hosting construction works, including maneuvering of construction vehicles and setting up within the Site
- Minimise impact on the surroundings
  - Optimise the distance from nearby residential buildings to minimise potential noise disturbances during construction
  - Minimise potential disturbance to local traffic and road users and existing trees
  - Avoid the blockage of emergency access and the footpath of the Discovery Bay Tunnel
  - Avoid land use conflict with the existing and future land uses
- Post-construction treatment
  - Reinstate the Site to the existing condition
  - Avoid having unnecessary permanent structures that may hinder future use

<u>Selection of Potential Launching Pit Location</u>

a) Potential Launching Pit Location 1: Roadside of the Discovery Bay Tunnel (North of the Discovery Bay North Substation)

3.3.3 The Potential Launching Pit Location 1 is a strip of land on the roadside of the Discovery Bay Tunnel, which falls within the Area shown as “Road” under the Approved Discovery Bay OZP. Since the strip of land is long and narrow in size and located next to the carriageway outside the Discovery Bay Tunnel, the work site would block the emergency access footpath of the Discovery Bay Tunnel. This poses safety risks to the tunnel operation. There will not be adequate space

for setting up the launching pit and its temporary work on it. Besides that, according to the utilities survey, it is found that the area has already been occupied by existing underground utilities, including underground cables and drainage pipes. Thus, it is considered not feasible to position the potential launching pit in this location.

b) Potential Launching Pit Location 2: Within Discovery Bay North Substation

3.3.4 The Potential Launching Pit Location 2 is located between the two buildings of the Discovery Bay North Substation, which is zoned "Government, Institution or Community" under the Approved Discovery Bay OZP. However, there are two existing 40m long cable trenches located between the two buildings. The remaining area is not sufficient for setting up a launching pit and the temporary work site. Construction works in the Substation would affect the normal operation and emergency maintenance of the substation. Thus, it is considered not feasible to position the launching pit in this location.

c) Potential Launching Pit Location 3: Idled Land Adjacent to a Pump House (East of Discovery Bay North Substation)

3.3.5 The Potential Launching Pit Location 3 is an area adjacent to a pump house, which is zoned "Government, Institution or Community" under the Approved Discovery Bay OZP. As advised by the Discovery Bay Management Office, the area is reserved for the construction of a future gas station[2], and hence, no permanent utility is allowed at this idled site. Though the launching pit will be temporary, the constructed micro underground cable tunnel may hinder the design and planning of the future gas station. Thus, it is considered not feasible for positioning the launching pit and the future cable.

d) Potential Launching Pit Location 4: Idle Land with vegetation (South of Discovery Bay North Substation)

3.3.6 The Potential Launching Pit Location 4 is an idle land with vegetation located to the south of the Discovery Bay North substation, which is currently zoned "CA" under the Approved Discovery Bay OZP. It is in close proximity (8 m) to Neo Horizon. The construction works may pose adverse air and noise impacts during the construction phase. The Site is also sandwiched between the Discovery Bay North substation and the residential development named Neo Horizon, and the

[2] Please note that the terminology of "Gas Station" refers to "the planned development of the proposed LPG store" for the entire planning submission

remaining area is not adequate to accommodate the micro-tunnelling works and setting up work areas. Besides that, this location is covered with vegetation and trees, and extensive clearance for excavation of the launching pit would be required. Therefore, this location is considered unfeasible.

e) Potential Launching Pit Location 5: Operating Facilities of Discovery Bay Tunnel and Bus Stop (Further East of Discovery Bay North Substation)

3.3.7 The Potential Launching Pit Location 5 currently serves as the operating facilities of the Discovery Bay Tunnel and bus stop, which is zoned "Other Specified Uses" annotated "Amenity Area" under the Approved Discovery Bay OZP. From joint site inspection with the Discovery Bay Management Office, it was observed that Location 5 is part of a traffic control zone of the Discovery Bay Tunnel. The traffic control zone consists of a Permit Return Office (External Vehicles), a re-route zone for vehicles, including taxis, to return Discovery Bay Tunnel without entering the main Discovery Bay area. It is also observed that there is a bus stop serving the Discovery Bay residents. Besides, accommodating the launching pit at this location, the constructed micro cable tunnel will inevitably encroach/span across Location 3, which is planned to be used as a future gas station[3], and any permanent facilities, even underground, are not allowed. Therefore, this location is also not feasible.

f) Potential Launching Pit Location 6: Idle Land (Southeast of Discovery Bay North Substation)

3.3.8 The Potential Launching Pit location 6 for the launching pit itself is currently an idle land zoned "CA" zone. Unlike Location 3, this location has no planned usage, and it is located more distant away (at least 22m) from adjacent developments (i.e., Celestial Mansion). It is also a sizeable location for setting up a launching pit, and the Site is therefore deemed suitable for hosting the launching pit. However, the proposed works and work area shall be carefully adjusted to avoid affecting the existing trees. This will be discussed in 3.3.9.

[3] Please note that the terminology of "Gas Station" refers to "the planned development of the proposed LPG store" for the entire planning submission

Figure 3.1: Site Selection for the Launching Pit

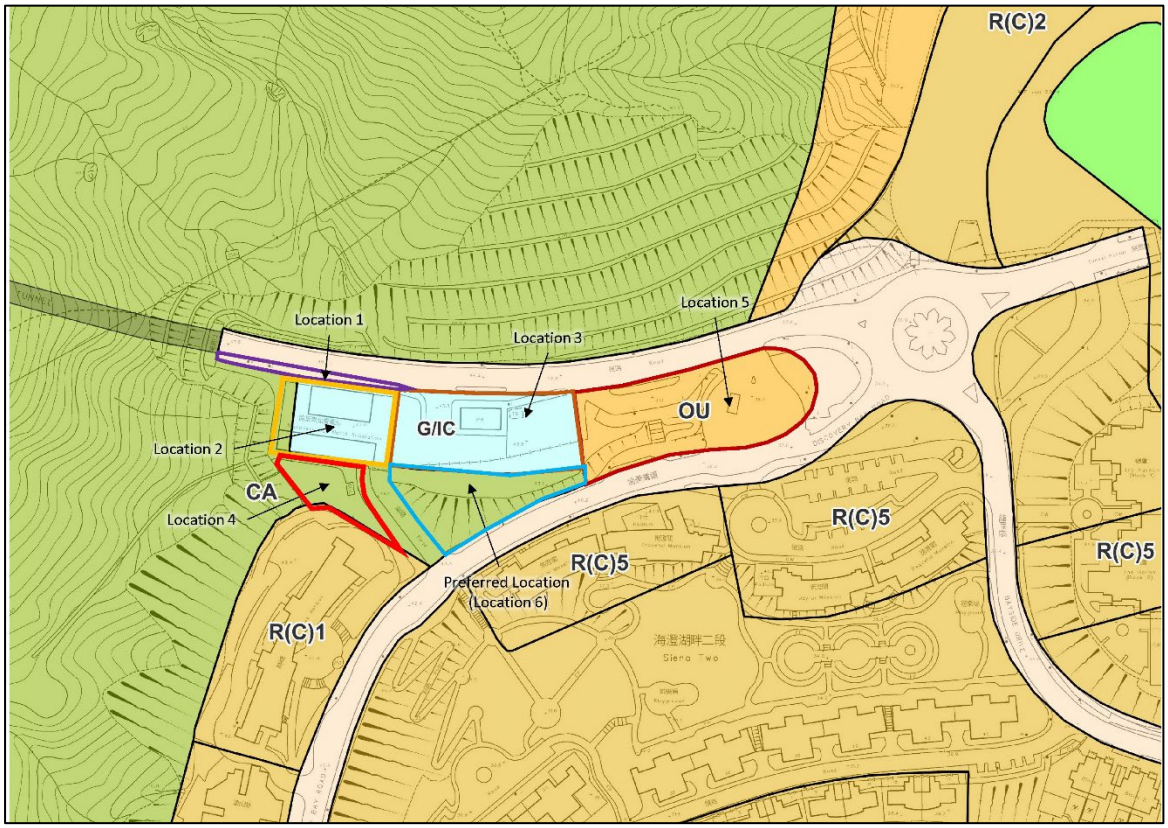


Table 3.1: Comparison Table of the Locations for the launching pits

	Locations	**Zoning**	**Proximity to Discovery Bay North Substation**	**Size and Construction Requirement of the Site**	**Minimise impact on the surroundings**	**Post-construction Treatment**	**Feasibility**
1	Roadside of the Discovery Bay Tunnel	"Road"	Immediate north of the Discovery Bay North Substation	A strip of land is not sufficient space for construction works	- Pose safety risks to the tunnel operation - Block the emergency access and footpath of the Discovery Bay Tunnel	Reinstated with compact filling	❌ Not feasible
2	Within the Discovery Bay North Substation	"Government, Institution or Community"	Within the Discovery Bay North Substation	- No sufficient space for construction works	Affect the normal operation and emergency maintenance of the Discovery Bay North Substation	Reinstated with compact filling	❌ Not feasible
3	Idled Land Adjacent to a Pump House	"Government, Institution or Community"	Immediate east of the Discovery Bay North Substation	No permanent structures allowed due to the future planned gas station	Affect the design and planning of the future gas station	Reinstated with compact filling	❌ Not feasible
4	Idle Land with Vegetation	"Conservation Area"	Immediate south of the Discovery Bay North Substation	No sufficient space for construction works	- Pose the environmental impact on surrounding residential developments	Reinstated with compact filling	❌ Not feasible

					- Extensive clearance of vegetation for excavation of the launching pit		
5	Operating Facility and Bus Stop	"Other Specified Uses" annotated "Amenity Area"	Further east of the Discovery Bay North Substation	- Not an adequate site for construction work	- Affect the operating facilities and bus stop for Discovery Bay residents - No permanent utilities in the underground within the site of the future gas station	Reinstated with compact filling	✗ Not feasible
6	Idle Land	"Conservation Area"	Immediate southeast of the Discovery Bay North Substation	- Adequate size for allowing construction works - Bounded by access road to Discovery Bay North Substation	- Set back with a buffer from the surrounding residential developments - Minimal impact to vegetation	Reinstated with compact filling	✓ Feasible

Summary of the Launching Pit Location

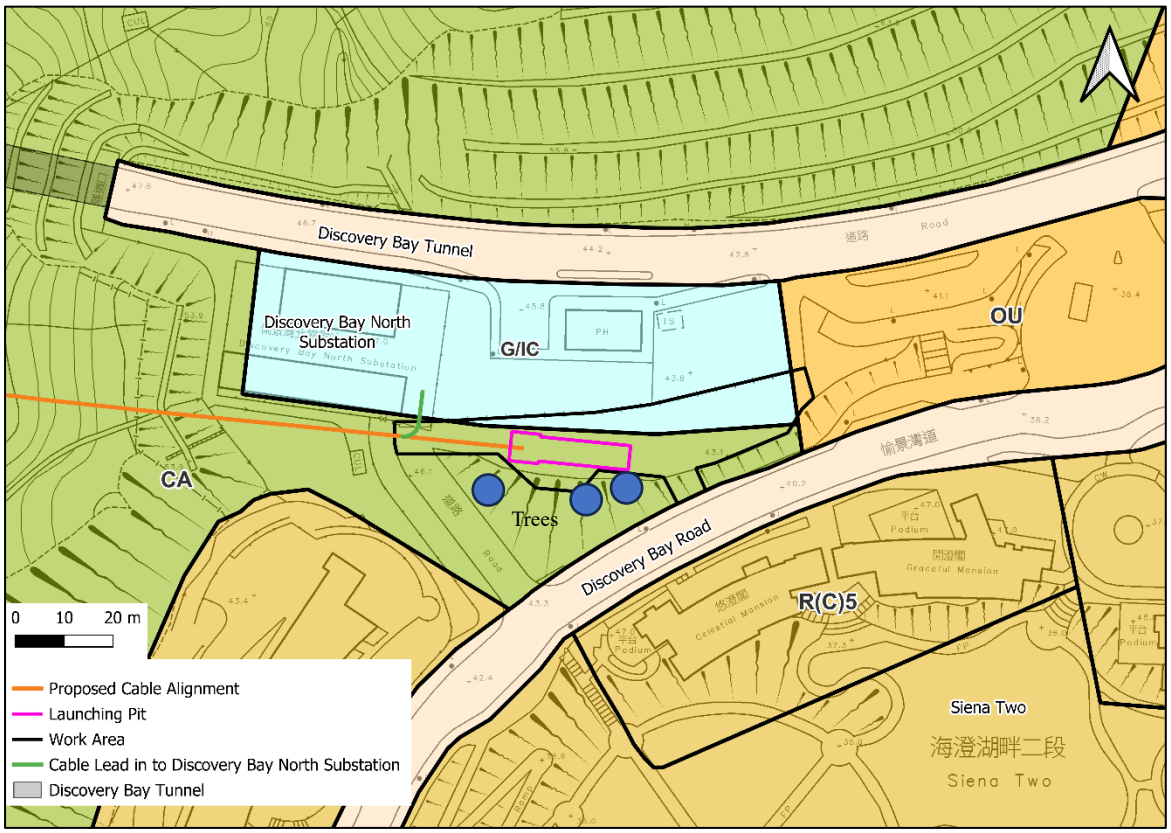
3.3.9 Based on the above evaluation, Location 6 has been selected as the preferred and feasible location for the launching pit.

Consideration of the Work Area

3.3.10 Based on the above sections in selecting the launching pit location, Preferred Location 6 has been selected for setting up launching pit[4]. To set up the launching pit for the proposed cable installation, a work area of about 1,050m^2 is required, including construction vehicles maneuvering and equipment (**Figure 3.2** refers). Thus, the work area for the launching pit has been adjusted. After considering the presence of trees on the southern side, the boundary of the Preferred Location work area is adjusted northwards, with a minor encroachment into the G/IC zone, but with the existing chainage link fence partitioning operating facilities of a pilot project in the gas station. The work area is also adjusted eastwards with a minor encroachment onto the operating facilities of the Discovery Bay Management Office. The relevant area will only be occupied temporarily, and the Applicant has liaised with the Discovery Bay Management Office, and no in-principal objections were received from the Management Office.

[4] Please note that Figure 3.1 is on the selection of the Preferred Location for the Launching Pit, and Location 6 has been selected for setting up launching pit. The work area has been adjusted in the later sections due to the required work requirement for the launching pit.

Figure 3.2: Temporary Work Area for Launching Pit



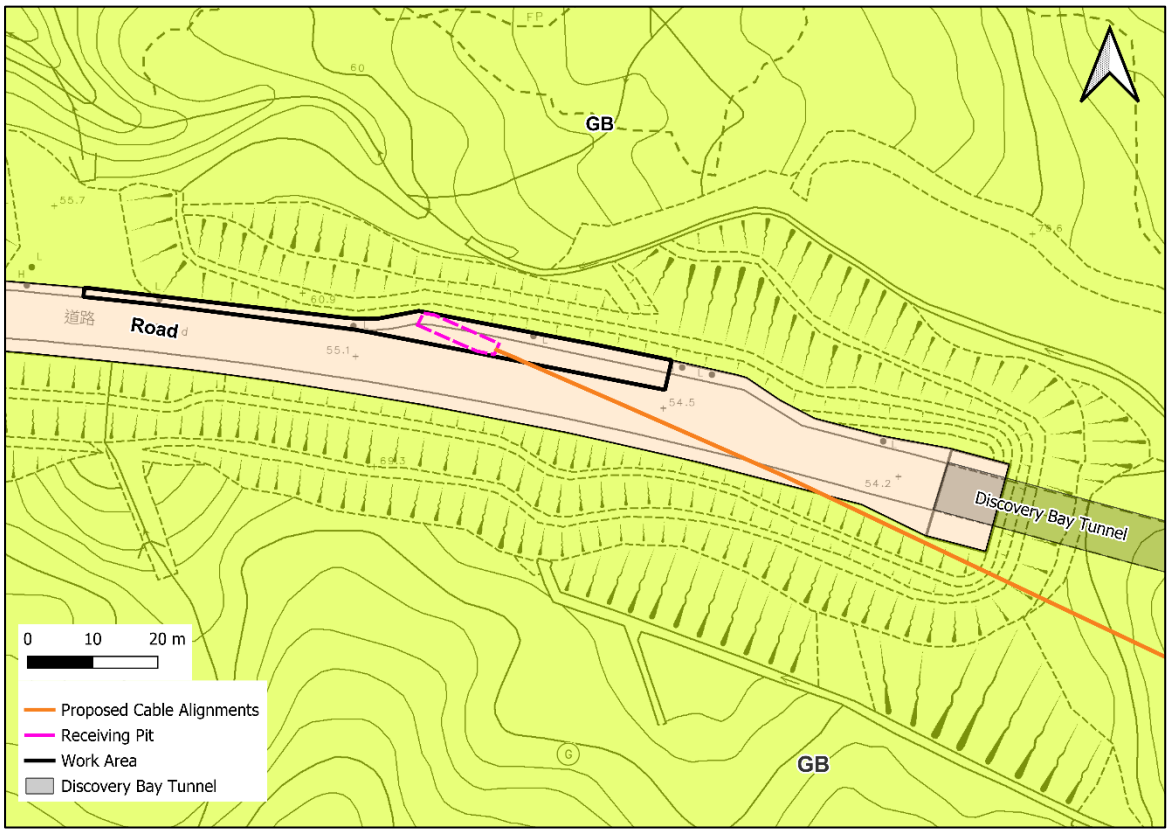
3.4 Consideration of the location of the Receiving Pit

3.4.1 Receiving Pit is located at the opposite end of the proposed micro cable tunnel, which is designed to receive the drilling rig as it completes the underground micro tunnel. This pit is excavated in advance to align precisely with the projected exit point, ensuring a seamless breakthrough. It also allows access for final adjustments to the drilling rig from the process.

a) Potential Receiving Pit Location 1: Vehicle Layby of the Discovery Bay Tunnel (Western end of Discovery Bay Tunnel)

3.4.2 The proposed receiving pit is situated within the vehicle layby at the western end of the Discovery Bay Tunnel, an area designated as 'Road' (**Figure 3.3**. refers). The receiving pit is located beneath the layby of the tunnel and it allows direct connection to the existing underground circuits originating from Sham Shui Kok substation. The receiving pit and its works area will be contained within the layout to minimise potential impacts on adjacent land uses, in particular for the "Green Belt". The proposed location for the receiving pit can fulfil technical requirements for cable laying while minimising environmental and land-use conflicts.

Figure 3.3: Temporary Work Area for the Receiving Pit



3.5 Consideration of the Cable Lead-In

3.5.1 A cable lead-in is located under the access road leading to Discovery Bay North Substation, which is to the south of the Substation. The cable lead-in is to reconnect the proposed cable with the substation after cable laying of the proposed cable. The cable lead-in would be an underground permanent structure.

3.6 Summary of the Proposed Project

3.6.1 The Proposed Project will involve the construction of an 810m long micro cable tunnel running at levels varying from about 15mPD to about 54.5mPD, accommodating 3 x 630mm^2 132 kV power cable and 1 x 48/C optical fibre cable. The development parameters of the Proposed Project are shown in **Table 3.2**. The proposed new 132kV circuits would be connected to the Discovery Bay North Substation, which primarily supplies electricity to users on the Discovery Bay Outline Zoning Plan No. S/I-DB/6 (**Figure 3.4** refers). The indicative alignment of the proposed micro cable tunnel and lead-in, as well as the section of the proposed cable, is shown in **Figures 3.5 and 3.6,** respectively. The Proposed Project is anticipated to be completed by Q1-2027.

Table 3.2: Development Parameters of the Proposed Micro Cable Tunnel and Cable Lead-in

Proposed Micro Cable Tunnel and Cable Lead-in	
Site Area/ Tunnel Size	About 729m^2 [810m (length) x 0.9m (width/diameter)]
Excavation and Filling Extent	About 660m^3 (including Cable lead-in$^{\#}$)
Type of Proposed Cable	3 x 630mm^2 132kV power cable 1 x 48/C optical fibre cable
Proposed Launching Pit for the Construction of the Proposed Mirco Cable Tunnel	
Works Area	About 1,050m^2
Excavation and Filling Extent	About 350m^3 $^@$
Proposed Receiving Pit for the Construction of the Proposed Mirco Cable Tunnel	
Works Area	About 280m^2
Excavation and Filling Extent	About 90m^3 $^\wedge$

Note $^{\#}$: Among the about 660m^3 of excavation / filling, about 520m^3 (π x (0.9m/2)^{2}x 810m) will be from the tunnel drilling and about 140m^3 (5m(L) x 5m(W) x 5.5m(D)) will be the surface excavation / filling for the cable lead-in.

Note $^@$: Launching pit has an area of about 140m^2 x 2.5m(D)

Note $^\wedge$: Receiving pit has an area of about 30m^2 x 3m(D)

Figure 3.4: Service Coverage Area of the Proposed Project

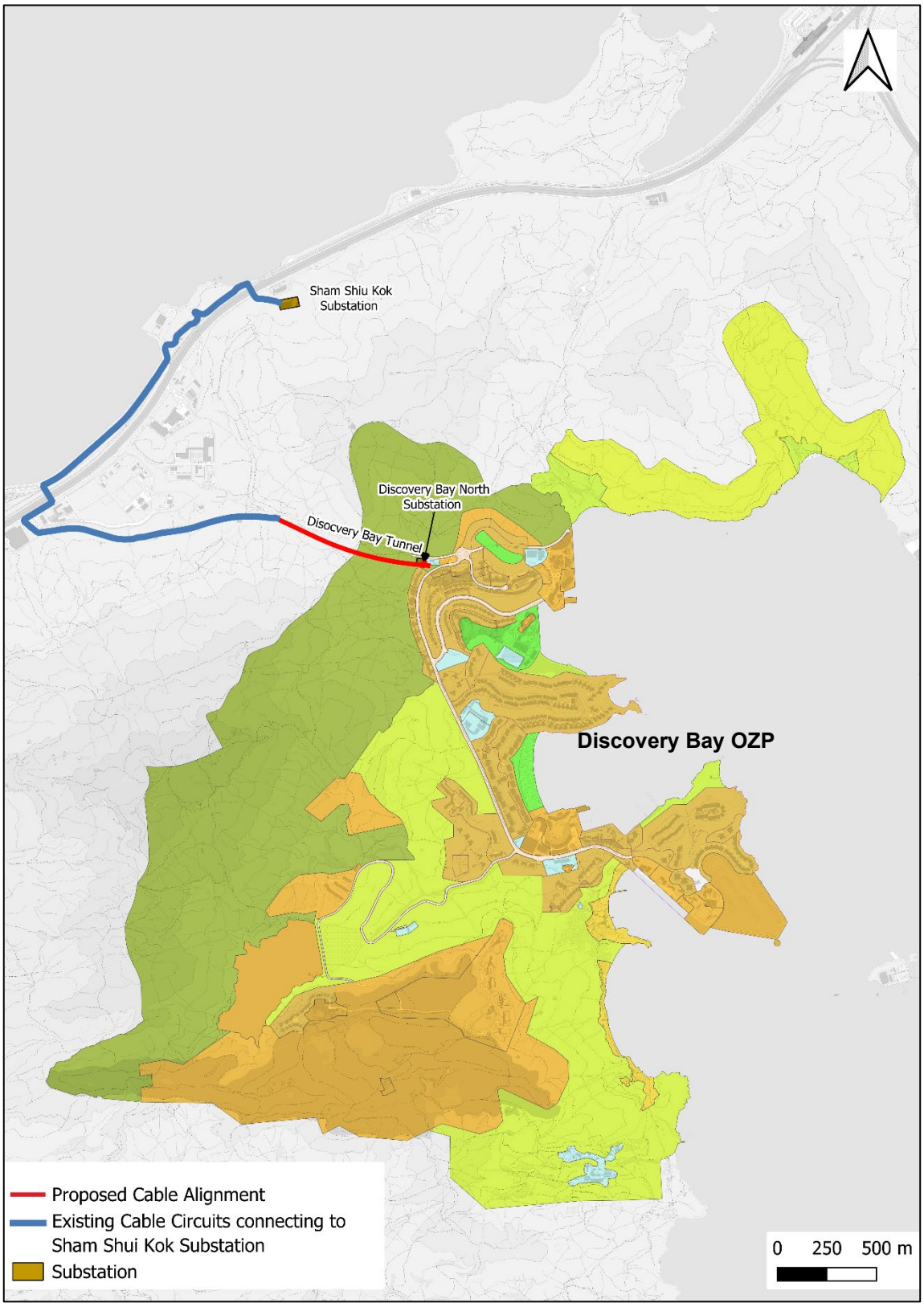


Figure 3.5: Overview of the Proposed Project

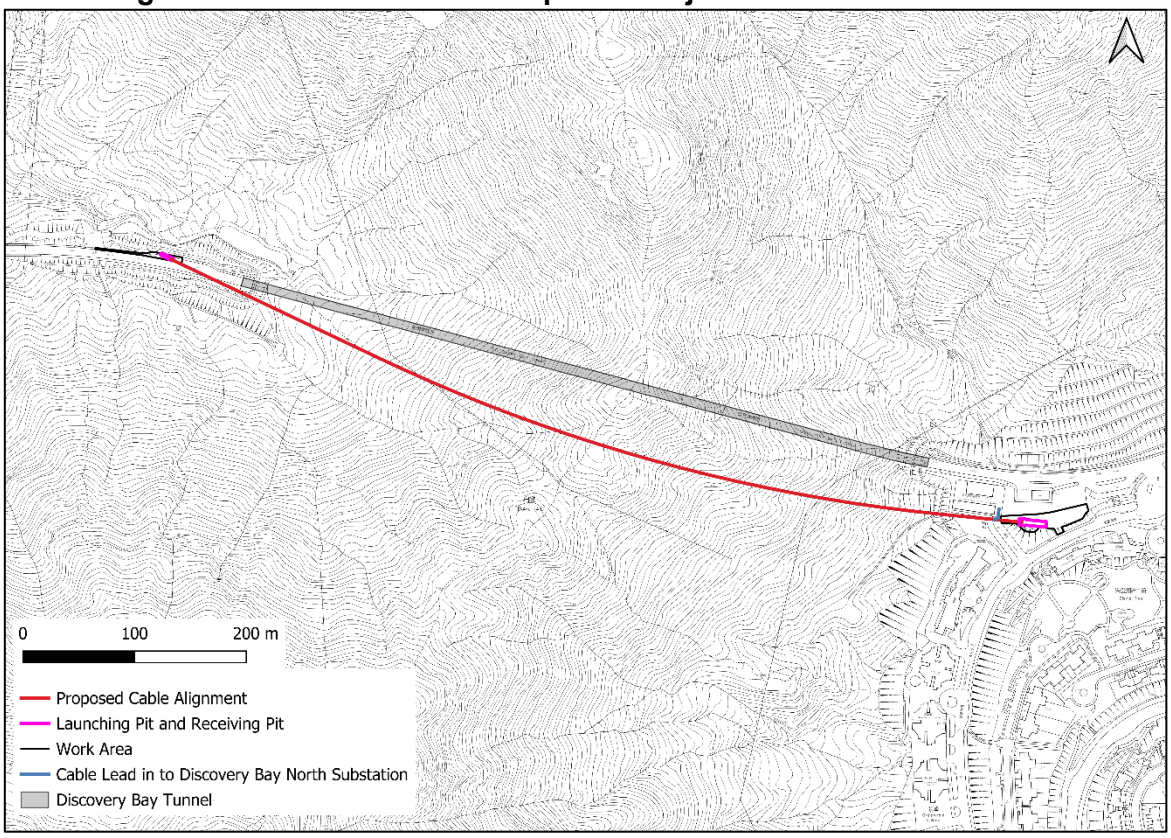


Figure 3.6a: Section Plan of the Proposed Project

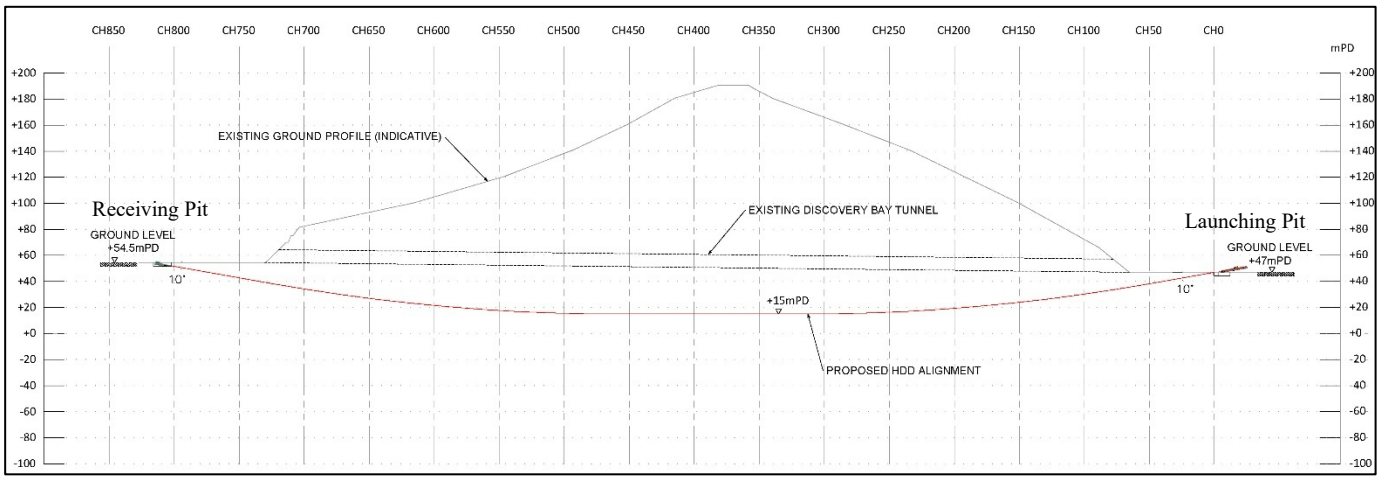


Figure 3.6b: Cross Section of the Proposed Project

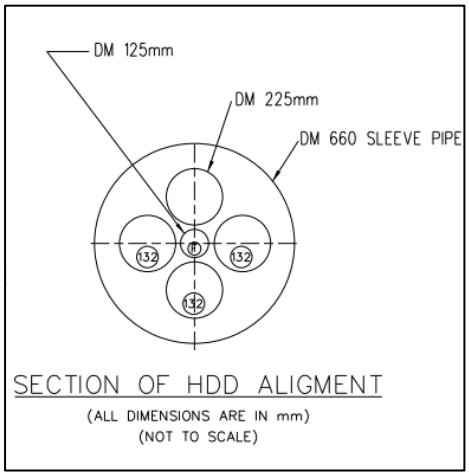


Figure 3.6c and 3.6d: Section Plan of the Launching Pit and Receiving Pit (Please refer to the Back of the Supporting Planning Statement)

3.7 Statutory Planning Context

3.7.1 The Proposed Project spans across two outline zoning plans. The eastern portion is covered by by the Approved Discovery Bay OZP No. S/I-DB/6 and the western portion is covered by Approved Siu Ho Wan OZP No. S/I-SHW/2 (**Figures 3.7, 3.8 and 3.9** refer). The middle part of the Project is not covered by OZP, and it falls within the area of the Lantau North (Extension) Country Park.

Eastern Portion

3.7.2 Under the Approved Discovery Bay OZP No. S/I-DB/6, the eastern portion of the proposed cable comprises the proposed micro cable tunnel, the launching pit, and the associated work area. The micro cable tunnel, the launching pit and cable lead-in are zoned "Conservation Area" ("CA"). While the work area for the launching pit would fall within the "CA" zone, with a minor portion of land zoned "Government, Institution or Community" ("G/IC") and "Other Specified Uses" annotated "Amenity Area".

"Conservation Area" ("CA")

3.7.3 Under the "CA" zone of the Approved Discovery Bay OZP, the planning intention is "*to conserve the existing natural character and intrinsic landscape value by protecting topographical features from encroachment by adjacent developments*" and there is "*a general presumption against development within this zone*". Under the "CA" zone, 'Public Utility Pipeline' (subsumed under 'Public Utility

Installation') is Column 2 use, and the associated excavation and fill of land would **require planning permission** from the TPB.

"Government, Institution or Community" ("G/IC")

3.7.4 While, the "G/IC" zoned under the Approved Discovery Bay OZP, the planning intention is "*for the provision of Government, institution or community facilities serving the needs of local residents and/or a wider district*" and "*to provide land for uses directly related to or in support of the work of the Government, organizations providing social services to meet community needs, and other institutional establishment*". The proposed cable within "G/IC" zone is considered as "Public Utility Pipeline" use, which is always permitted under the Covering Notes (i.e. Paragraph 7) of the Approved OZP. Thus, **no planning permission** will be required for the portion within the "G/IC" zone.

"Other Specified Uses" annotated "Amenity Area"

3.7.5 Under the "Other Specified Uses" annotated "Amenity Area", the planning intention is intended to "designate land for major roadside or hillside amenity areas and landscape buffers". The proposed cable within "Other Specified Uses" annotated "Amenity Area" zone is considered as "Public Utility Pipeline" use, which is always permitted under the Covering Notes (i.e. Paragraph 7) of the Approved OZP and hence **no planning permission** for the portion within the "Other Specified Uses" annotated "Amenity Area" zone.

Western Portion

3.7.6 Under the Approved Siu Ho Wan OZP No. S/I-SHW/2, the western portion of the proposed cable comprises the micro cable tunnel, the receiving pit and the associated work area. The micro cable tunnel is zoned "Green Belt" ("GB") and falls within an area shown as 'Road'. While the receiving pit and the associated work area would only fall within an area shown as 'Road'.

"Green Belt" ("GB")

3.7.7 Under the Approved Siu Ho Wan 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*" and there is "*a general presumption against development within this zone*". Since the proposed cable within "GB" zone is considered as "Public Utility Pipeline" use, which is always permitted under the Covering Notes (i.e. Paragraph 7) of the Approved OZP, and hence **no planning permission**

will be required for the portion within the "GB" zone.

Area shown as 'Road'

3.7.8 Under the Approved Siu Ho Wan OZP, the receiving pit and associated work area would also fall in the area shown as 'Road'. It should be noted that there is no particular control on the excavation and filling of land under the Approved OZP. According to paragraph 7 of the covering notes, the use of "Public Utility Pipeline" is always permitted. Hence, **no planning permission** will be required for the portion falling in the area shown as 'Road'.

Figure 3.7: The Proposed Cable under the Approved Discovery Bay and Approved Siu Ho Wan OZP

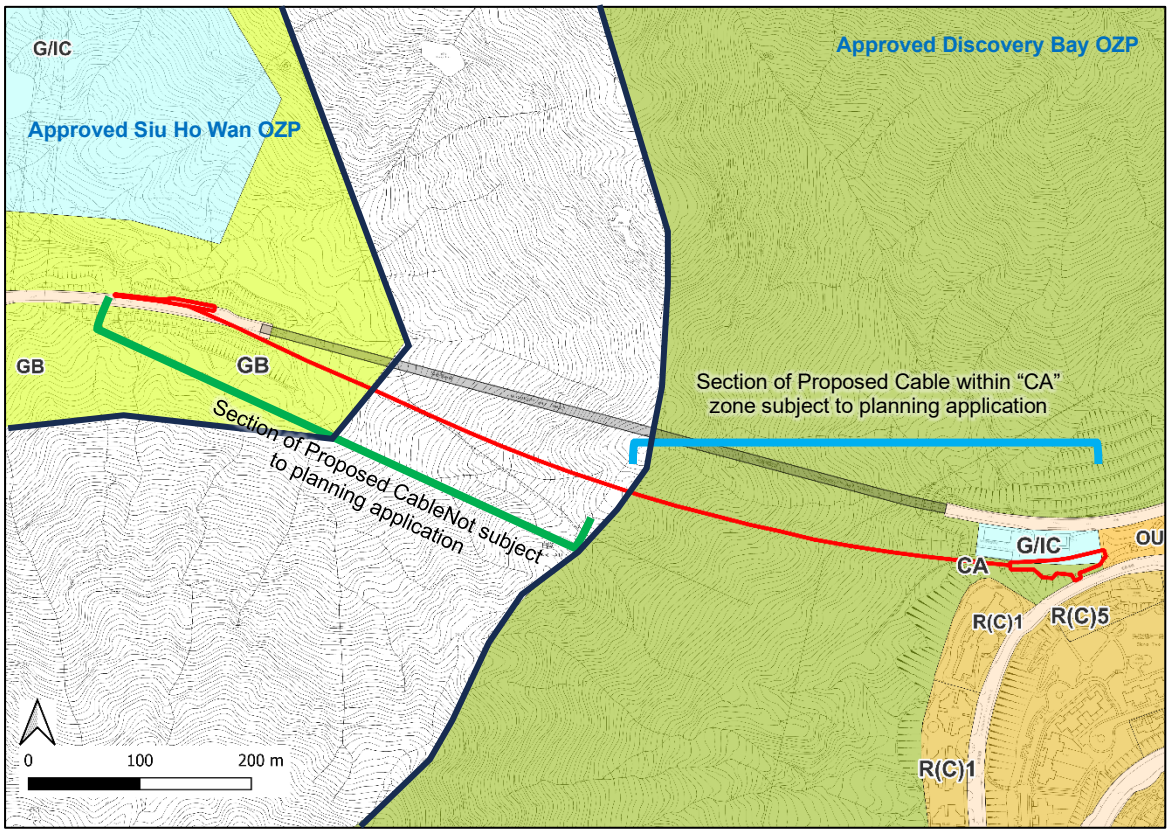


Figure 3.8: Eastern Portion of the Proposed Micro Cable Tunnel under the Approved Discovery Bay OZP No. S/I-DB/6

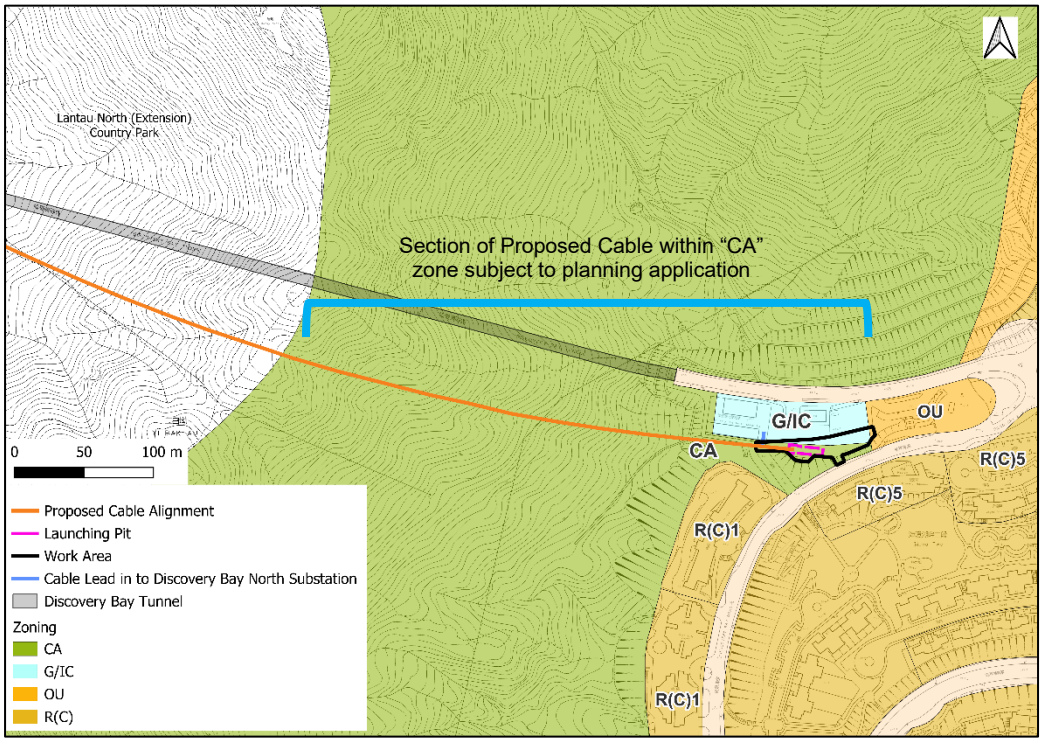
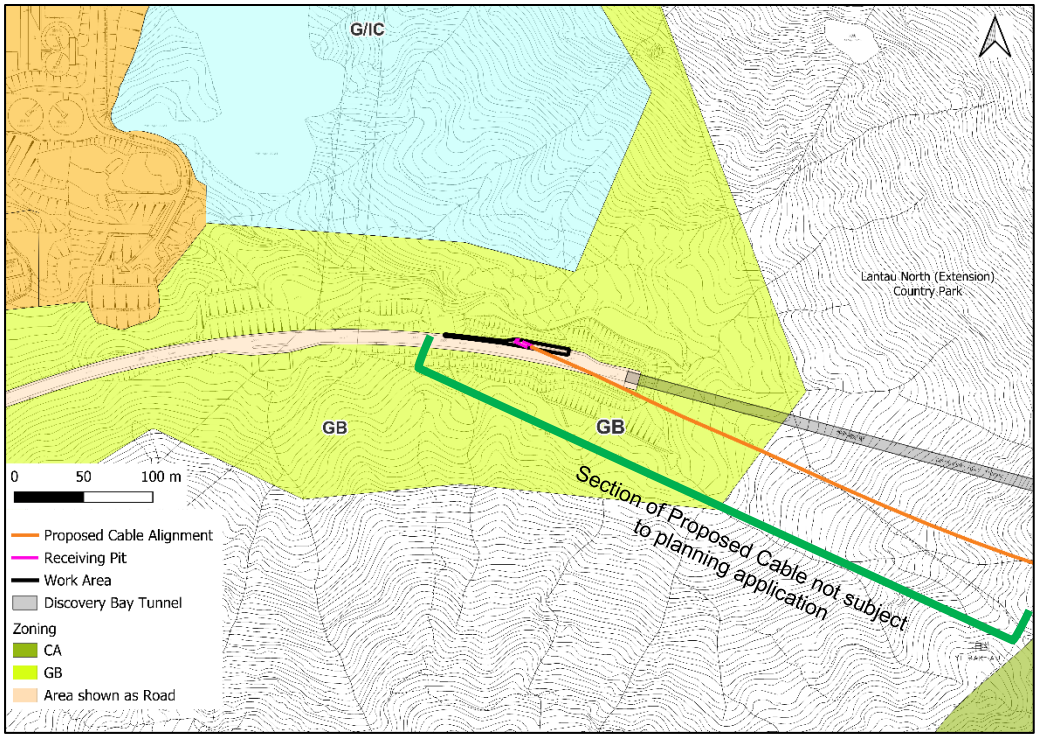


Figure 3.9: Western Portion of the Proposed Micro Cable Tunnel under the Approved Siu Ho Wan OZP No. S/I-SHW/2



Breakdown of the zoning areas

3.7.9 The Application Site involves an area of about 1,830m^2 covered by the two OZPs for the proposed Micro Cable Tunnel and Associated Works. The breakdown of area within each respective zoning area is the following (**Table 3.3** refers):

Table 3.3: Breakdown of the Zoning Areas

Eastern Portion (Cable length of about 380m)	
Zoning	*Area*
"Conservation Area" ("CA")# involving: • *excavation and filling for drilling of micro cable tunnel (about 240m^3) for the installation of cables of about 370m in length* • *works area including the surface excavation and filling for cable lead-in and launching pit (about 140m^3 and 350m^3 respectively*	About 1,110m^2 *About 330m^2* *About 780m^2 (including about 30m^2 for cable lead-in and about 140m^2 for laundhing pit)*
"Government, Institution or Community" ("G/IC")	About 240m^2
"Other Specified Uses" annotated "Amenity Area"	About 30m^2
Middle Portion (Cable length of about 250m)	
Lantau North (Extension) Country Park@	About 230m^2
Western Portion (Cable length of about 180m)	
Zoning	*Area*
"Green Belt" ("GB")	About 120m^2
Area shown as 'Road'	About 330m^2

Note #: Subject to S16 Planning Application and approval from Town Planning Board.
Note @: The area covered by the Lantau North (Extension) Country Park falls outside OZP and therefore does not form part of the Application Site.

4 PLANNING JUSTIFICATIONS

4.1 The Proposed Cable Alignment Upholds the Safety and Reliability of the Electricity Network of the Discovery Bay area

4.1.1 The Applicant aims to build a new 132kV transmission cable circuit at the location abutting Discovery Bay Tunnel, through a proposed cable ducting by the micro tunneling method to enhance power transmission reliability of the Discovery Bay area. The Proposed Project is one of the approved projects in the CLP Power 2024-2028 Development Plan, endorsed by the Government on 28 November 2023, agreeing that it is one of the projects for the Public to uphold the safety and reliability of CLP Power's territory-wide network.

4.2 No Alternative Alignments for the proposed Cable Installation

4.2.1 The Discovery Bay area is separated by the North Lantau (Extension) Country Park and the “CA” and “GB” zones. There are no alternative alignments for the proposed cable route.

4.2.2 Although the alignment of the Proposed Project would run across sensitive areas including “CA”, “GB”, and Lantau North (Extension) Country Park, it is an essential infrastructure project to uphold the safety and reliability of the electricity network for the Discovery Bay area and the least disruptive construction method i.e., HDD has been selected. Apart from this S16 Application, the Applicant will separately liaise with Country Park and Marine Parks Authority for obtaining necessary approvals for the works.

4.3 Adopting Low Impact Construction Method to Minimise Impacts to the Surrounding

4.3.1 The Applicant has carefully considered different construction methods. After reviewing all possible construction methods, it is concluded that the HDD construction method is the most preferable. On the one hand, the HDD construction method offers greater flexibility in route alignment and micro cable tunnelling works. It would only require utilising small-scale construction equipment/machinery and hand tools above ground. On the other hand, the HDD construction method would also be able to minimise the environmental, tree, and visual impact.

4.4 No Alternative Feasible Location for Launching Pit

4.4.1 The Applicant has spent genuine efforts reviewing the potential locations for the launching pit and receiving pit. After reviewing the six potential locations for the

launching pit, it is concluded that only the proposed location for the launching pit at the southeast of the Discovery Bay North Substation could satisfy the target of mimimal surface excavation, minimal disruption to nearby facilities (i.e., planned gas station, operating facilities, bus stop, etc), minimal impacts to nearby residential buildings and providing adequate work area for accomodating the launching pit and assoicated constructional facilities. The applicant has attempted to identify alternative sites, not involving the "CA" zone. However, no feasible sites could be identified.

4.4.2 Despite the location of the launching pit encroaching into the sensitive zone (i.e., "CA" zone), the launching pit would be temporary only. After the construction of the micro cable tunnel, the Site will be reinstated to the existing condition.

4.5 The Proposed Project Would Not Jeopardise the Planning Intention of "CA" zone

4.5.1 Although the preferred location of the launching pit and its work area involves an area zoned "CA", it is in fact a piece of idled land. It is also located at the periphery and edge of the "CA" zone. Reference is made to the Environmental Assessment and Tree Survey Report, the preferred location of the launching pit is considered to be a developed area with low ecological importance of the "CA" zone, and it is anticipated that the launching pit and its work area would have no adverse impact on the environment and trees in the "CA" zone. Besides that, the launching pit and the associated works (with excavation and filling of land) would be temporary only and would be reinstated after the completion of the works.

4.5.2 For the proposed micro cable tunnel, although the proposed micro cable tunnel also involves an area zoned "CA", the construction works for the proposed micro cable tunnel is considered to be small-scale project. The proposed micro-cable tunneling works would primarily be underground within the "CA" zone. It is anticipated that the proposed micro cable tunnel would also have no adverse impact.

4.5.3 Based on the above, the proposed project would not jeoparadise the long-term planning intention of the "CA" zone in conserving the existing natural character and intrinsic landscape value by protecting topographical features.

4.6 No Insurmountable Impacts

Environmental and Ecology

4.6.1 The project is a designated project under the Environmental Impact Assessment Ordinance (EIAO). The applicant has submitted a Project Profile for application for permission to apply directly for an environmental permit on 4 September 2025 (**Appendix 1** refers). The Applicant was granted permission to apply directly for an environmental permit on 10 October 2025, and the Application for the Environmental Permit for the Proposed Project was submitted on 13 October 2025

4.6.2 According to the Project Profile, the scale of the construction works is small, mainly utilising small-scale construction equipment/machinery and hand tools, and most of the construction works will be underground. With the implementation of appropriate mitigation measures and good site practice recommended in the Project Profile, no adverse environmental impacts would be anticipated during the construction phase of the project. No adverse environmental impacts would be anticipated during the operational phase either.

4.6.3 The environmental mitigation measures and good site practices recommended in the environmental assessment will be implemented by the applicant. Examples of mitigation measures and good site practices include, but are not limited to, spraying of water at work areas involving site clearance and excavation works, washing of vehicles before leaving a work site, use of temporary noise barriers, covering of exposed soil and open stockpiles, provision of sufficient waste disposal points and regular disposal of waste, avoidance of the use of direct lighting on adjacent habitats, and maintaining the site in a clean and tidy state etc. Please refer to the Environmental Assessment for detailed mitigation measures and good site practices.

Geotechnical Planning Review Report

4.6.4 The Applicant has conducted a Geotechnical Planning Review Report (GPRR) for the proposed construction of Horizontal Directional Drilling (HDD) works, including the launching pit and receiving pit near the Discovery Bay tunnel, enclosed in **Appendix 2**. The GPRR has reviewed the proposed construction works, including the launching pit and receiving pit may affect or be affected by natural terrain or man-made slopes, and the geotechnical feasibility of the proposed works. Considering the available geotechnical information, it is concluded that the proposed construction of HDD construction works, including

the launching pit and receiving pit, is geotechnically feasible.

Tree Impact

4.6.5 A tree survey has been undertaken, enclosed in **Appendix 3**, to ascertain the existing trees will not be affected by the Proposed Project. A total of 22 trees were found within the tree survey extent, and most of the trees are widely cultivated species. No rare or endangered species and no registered Old and Valuable Tree are found in the survey. It is found that no trees are located within the proposed works areas of either the launching pit or receiving pit, and no trees shall be affected by the proposed works. The survey concluded that there will be no adverse tree impacts and therefore, tree transplanting/ felling is not required.

Visual Impact

4.6.6 Since the proposed cable will be constructed and buried underground, there will be no permanent structures aboveground. Besides, the excavation of land for the temporary launching and receiving pit will be reinstated with compact filling after the construction works. Therefore, no visual impact is anticipated.

5 CONCLUSION

5.1 The Proposed Project will involve the construction of an 810m long micro cable tunnel, including 3 x 630mm^2 power cable and 1 x 48/C optical fibre cable. The Proposed Project would adopt the Horizontal Directional Drilling (HDD) construction method to minimise the environmental impact, while meeting construction design requirements. Two temporary work areas will be established to accommodate the launching pit and receiving pit, respectively, for the micro-tunnel construction. The majority of the Proposed Project's works will be conducted underground, utilising small-scale machinery, equipment, and hand tools.

5.2 The TPB and relevant Government Departments are respectfully requested to give favourable consideration to support the proposed project based on the following:

- The Proposed Project forms part of the CLP Power Development Plan for 2024-2028, endorsed by the Government;

- The Proposed Development upholds the safety and reliability of the electricity network of the Discovery Bay area;

- The Proposed Project adopts an efficient, low-impact construction method- HDD for safeguarding and minimising the impact on the surrounding environment;

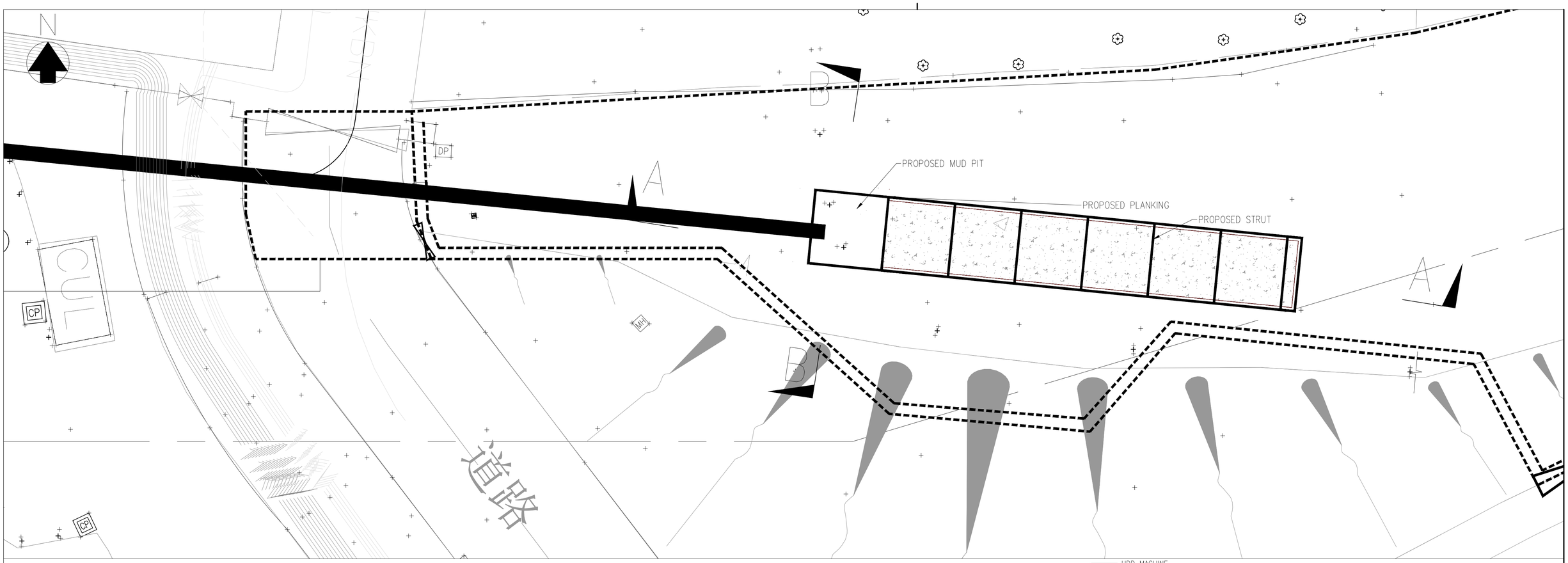
- There are no alternative alignments for the Proposed Cable Installation not involving "CA" and "GB" zones;

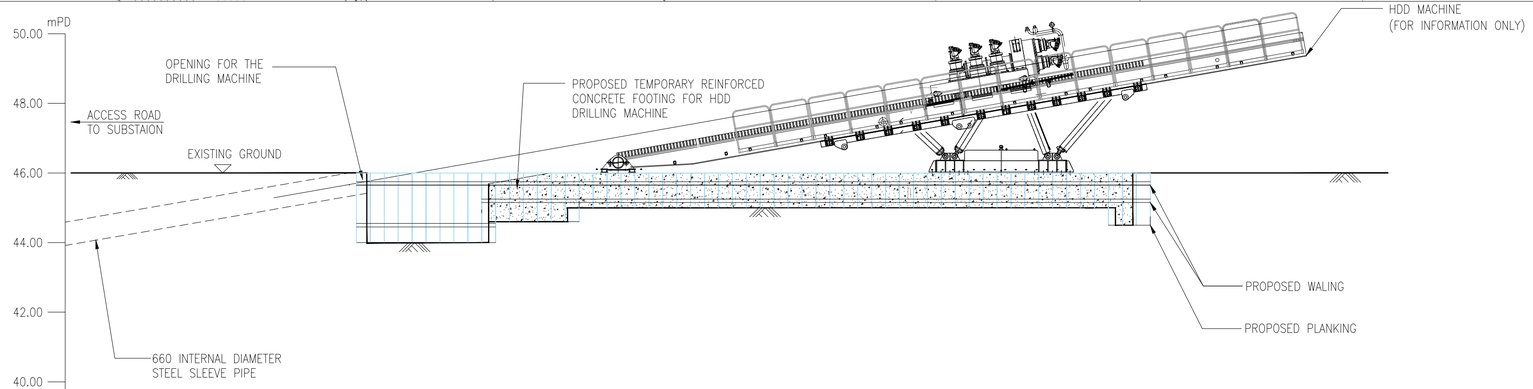
- The proposed project would not jeoparadise the long-term planning intention of the "CA" zone;

- The proposed locations for the launching pit and receiving pit have been thoroughly considered to minimise environmental impact and disturbance to surrounding neighbourhoods after the review of the potential locations of the launching pit and receiving pit;

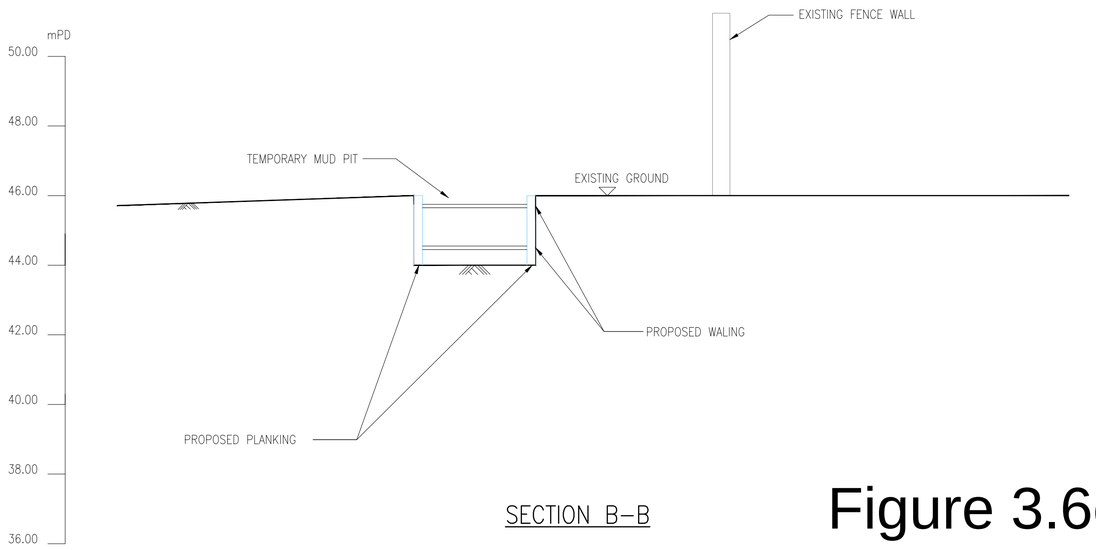
- Assessments have been conducted and demonstrated that there are no adverse environmental impacts and impacts on the natural terrain or man-made slopes or retaining walls due to the proposed cable; and

- There will be no trees and visual impact due to the proposed project, as the proposed cable will be underground in nature.



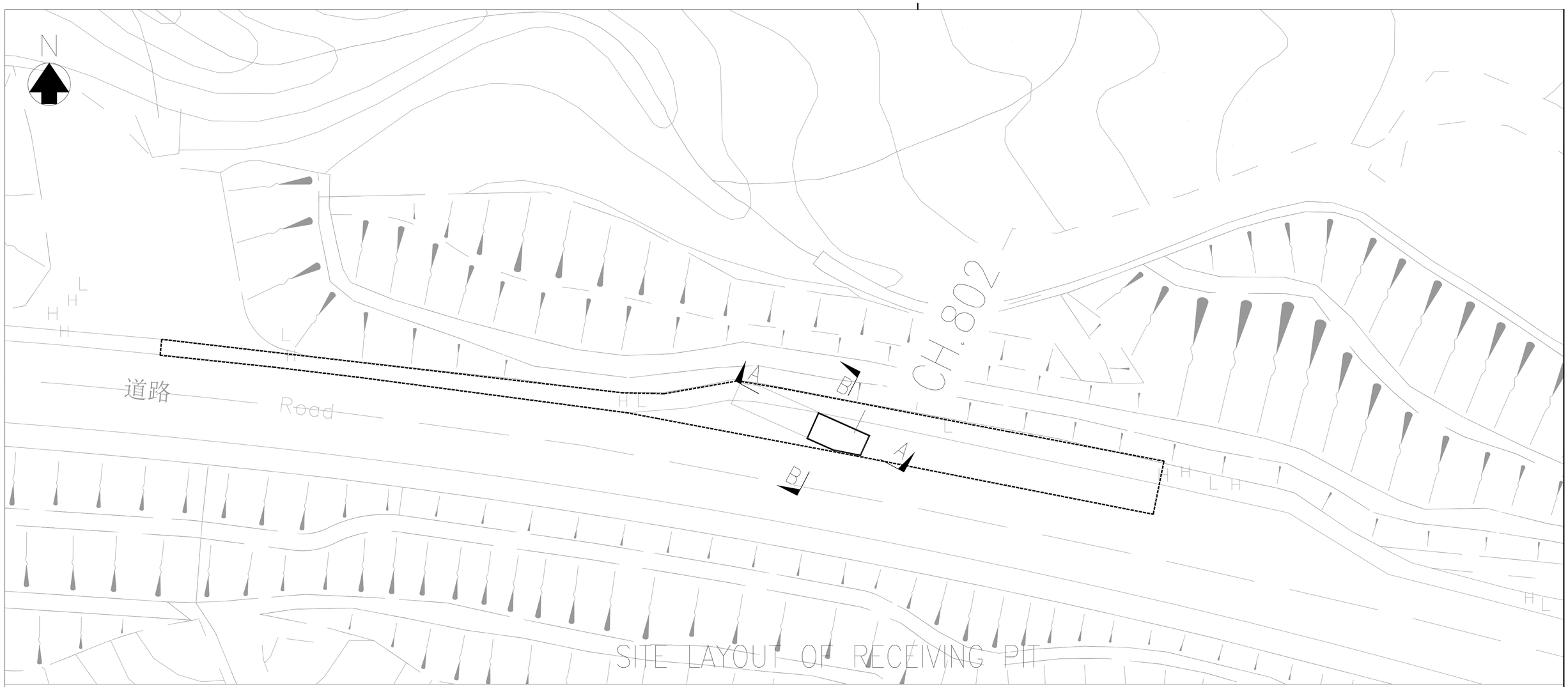


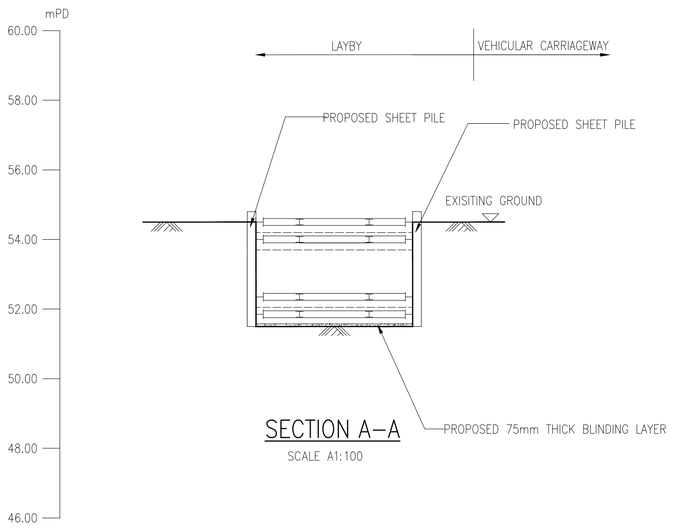
SECTION A–A



SECTION B–B

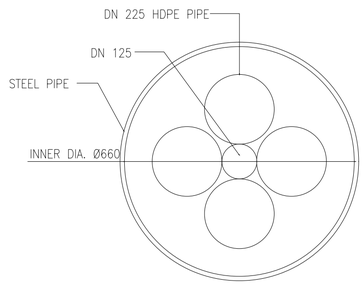
Figure 3.6c: Section Plan of the Launching Pit



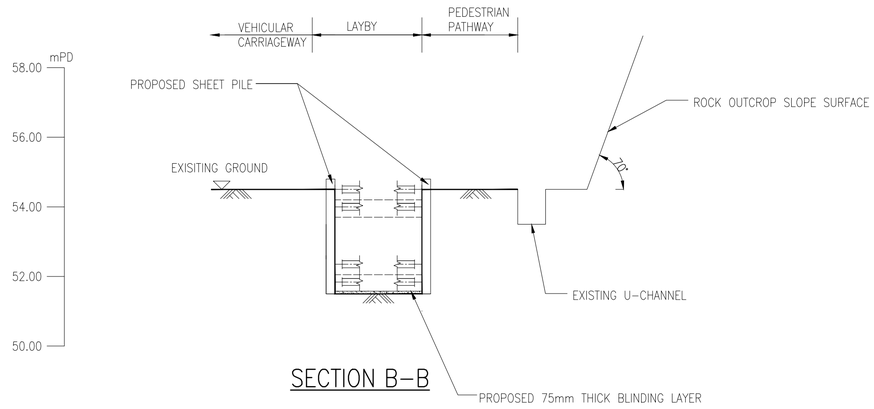


SECTION A–A

SCALE A1:100



TYPICAL SECTION OF HDPE PIPES
IN STEEL SLEEVE PIPE



SECTION B–B

Figure 3.6d: Section Plan of the Receiving Pit

132kV Circuit Reinforcement at Discovery Bay Tunnel

Project Profile

PREPARED FOR

CLP Power Hong Kong Limited

DATE
04 September 2025

REFERENCE
0750437

SIGNATURE PAGE

132kV Circuit Reinforcement at Discovery Bay Tunnel

Project Profile

0750437

Terence Fong
Partner

ERM-Hong Kong, Limited
2507, 25/F One Harbourfront
18 Tak Fung Street
Hunghom, Kowloon
Hong Kong
T +852 2271 3000

CONTENTS

LIST OF TABLES

LIST OF FIGURES

1. BASIC INFORMATION

1.1 PROJECT TITLE

The title of the project is '132kV Circuit Reinforcement at Discovery Bay Tunnel' (hereafter referred to as the 'Project').

1.2 NAME OF PROJECT PROPONENT

CLP Power Hong Kong Limited (CLP Power).

1.3 PURPOSE AND NATURE OF THE PROJECT

There are 2 series of existing 132kV cable circuits (between Sham Shui Kok and Discovery Bay) passing through Discovery Bay Tunnel for power supply to Discovery Bay. The Common Cable Infrastructures (CCIs) shared by these circuits are currently managed by third parties. To further enhance power supply reliability, CLP Power has reviewed and assessed the relevant transmission facilities, confirming that measures are necessary to further enhance their safety and power supply reliability.

CLP Power proposed to build a new 132kV transmission cable circuit at the location abutting Discovery Bay Tunnel, through a proposed micro-tunnel for cable laying. After the works are completed, the existing cable circuits running between Sham Shui Kok and Discovery Bay, and the proposed new cable circuit under the Project would be housed in separate cable corridors, which can further enhance reliability of power supply to Discovery Bay.

The proposed micro-tunnel will run through conservation area, country park and green belt, therefore Horizontal Directional Drilling (HDD) is preferred as a trenchless approach to mitigate potential impacts to the environment. The proposed cable circuit / HDD alignment, location of conservation area and land use of the surrounding environment are shown in **Figure 1.1**. Consideration of alternative construction method and launching pit locations are given in **Section 1.4**.

This Project, as part of the CLP Power 2024-2028 Development Plan, has been approved by the HKSAR Government to uphold the safety and reliability of CLP Power's territory-wide network.

1.4 CONSIDERATION OF CONSTRUCTION METHODS AND LAUNCHING PIT LOCATIONS

1.4.1 CONSIDERATION OF CONSTRUCTION METHODS

The proposed cable circuit runs along the south of Discovery Bay Tunnel. The following possible construction methods have been considered and investigated:

Construction Method 1 – Open trenching

Construction Method 2 – Overhead line

Construction Method 3 – Trenchless cable laying by Tunnel Boring Machine (TBM)

Preferred Construction Method 4 – Trenchless cable laying by Horizontal Directional Drilling (HDD)

Legend

- Proposed Cable Circuit / HDD Alignment within Country Park and Conservation Area (Underground)
- Proposed Cable Circuit / HDD Alignment outside Country Park and Conservation Area (Underground)
- Proposed Works Area within Conservation Area (Aboveground)
- Proposed Works Area outside Conservation Area (Aboveground)
- 500m from Project Area
- 500m from Project Area within Country Park and Conservation Area
- Country Park

Outline Zoning Plan (OZP)

- Coastal Protection Area (CPA)
- Conservation Area (CA)
- Government, Institution or Community (G/IC)
- Government, Institution or Community (1) (G/IC(1))
- Green Belt (GB)
- Major Road and Junction (MRDJ)
- Open Space (O)
- Other Specified Uses (OU)
- Residential (Group C) 1 (R(C)1)
- Residential (Group C) 2 (R(C)2)
- Residential (Group C) 3 (R(C)3)
- Residential (Group C) 5 (R(C)5)
- Residential (Group C) 8 (R(C)8)
- Residential (Group C) 10 (R(C)10)

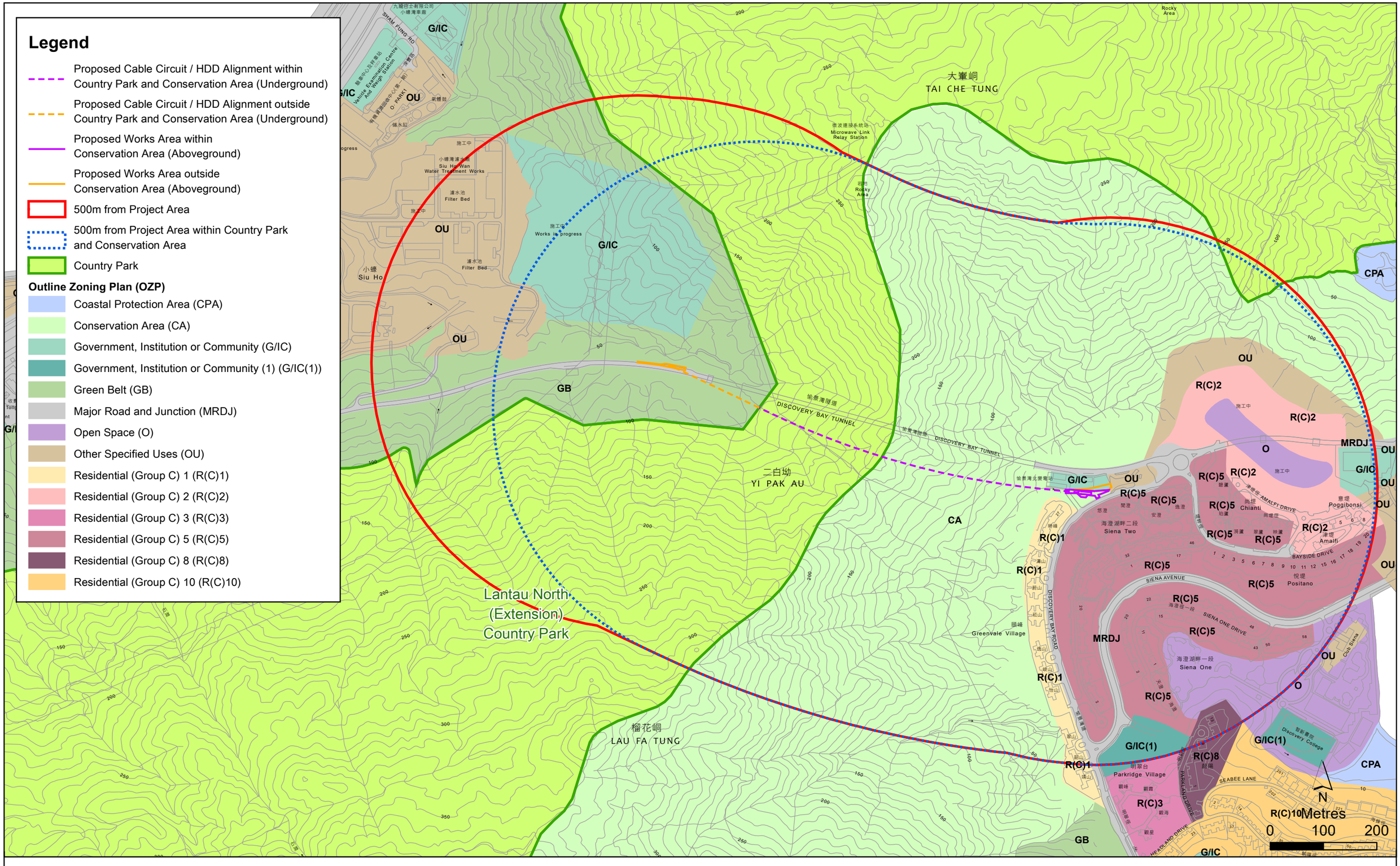


Figure 1.1

132 kV Circuit Reinforcement at Discovery Bay Tunnel

ERM

File: T:\GIS\CONTRACT\0750437\mxd\0750437_Cable_Alignment.mxd
Date: 23/7/2025

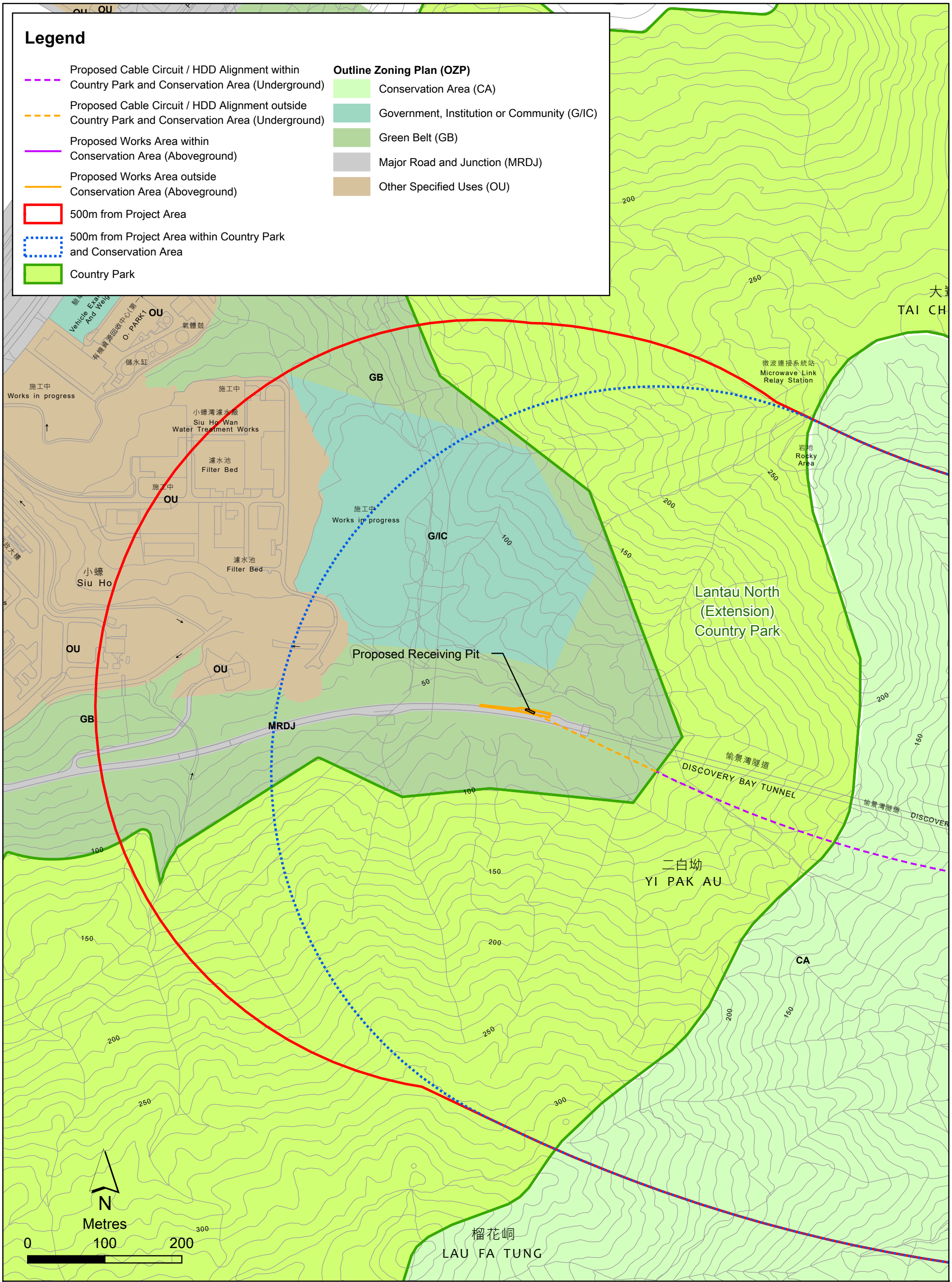


Figure 1.1a

132 kV Circuit Reinforcement at Discovery Bay Tunnel (Sheet 1 of 2)

ERM

File: T:\GIS\CONTRACT\0750437\mxd\0750437_Cable_Alignment_1.mxd
Date: 25/7/2025

Legend

- Proposed Cable Circuit / HDD Alignment within Country Park and Conservation Area (Underground)
- Proposed Cable Circuit / HDD Alignment outside Country Park and Conservation Area (Underground)
- Proposed Works Area within Conservation Area (Aboveground)
- Proposed Works Area outside Conservation Area (Aboveground)
- 500m from Project Area
- 500m from Project Area within Country Park and Conservation Area
- Country Park

Outline Zoning Plan (OZP)

- Coastal Protection Area (CPA)
- Conservation Area (CA)
- Government, Institution or Community (G/IC)
- Government, Institution or Community (1) (G/IC(1))
- Green Belt (GB)
- Major Road and Junction (MRDJ)
- Open Space (O)
- Other Specified Uses (OU)
- Residential (Group C) 1 (R(C)1)
- Residential (Group C) 2 (R(C)2)
- Residential (Group C) 3 (R(C)3)
- Residential (Group C) 5 (R(C)5)
- Residential (Group C) 8 (R(C)8)
- Residential (Group C) 10 (R(C)10)

Lantau North (Extension) Country Park

Proposed Launching Pit

Figure 1.1b

132 kV Circuit Reinforcement at Discovery Bay Tunnel (Sheet 2 of 2)

File: T:\GIS\CONTRACT\0750437\mxd\0750437_Cable_Alignment_2.mxd
Date: 23/7/2025

CONSTRUCTION METHODS 1 & 2

Traditional cable laying methods, such as open trenching or constructing an overhead line, would require the installation of new poles on natural slopes within the Lantau North (Extension) Country Park and Conservative Area (CA) under the Outline Zoning Plan (OZP). Besides, these areas lack paved access, hence, new and/or temporary access road would need to be constructed for transportation of construction equipment and materials, potentially resulting in vegetation removal and tree felling works. This will involve extensive construction areas and could necessitate the clearance of numerous vegetation and natural habitats (e.g. shrubland at Yi Pak Au) and may cause potential soil erosion if not controlled properly. Considering that the adoption of traditional cable laying methods would cause significant environmental impacts with large-scale surface disruptions, hence they would not be appropriate for that site.

CONSTRUCTION METHOD 3

The use of Tunnel Boring Machine (TBM) reduces surface impacts by performing excavation underground, requiring only setting up launching and receiving pits aboveground. However, TBM has lower flexibility when it comes to planning and selecting cable route alignment. Based on preliminary estimation, the tunnel size and aboveground works areas for TBM would be 40% and 30% larger than Horizontal Directional Drilling (HDD) respectively. The construction duration for TBM would be around 36 months, which is 20 months longer than the current expected timeline for HDD of around 16 months. The working pit for TBM would also be deeper, of which TBM would require at least 6-7m depth, while HDD would only require 2-3m depth. Since TBM would create more impacts to the environment as compared to HDD, TBM would not be considered.

CONSTRUCTION METHOD 4 (PREFERRED)

HDD is the most preferred construction method. HDD is a trenchless micro-tunnelling method with the merit of minimising disruption to the environment, public and surface transport. It allows for adjustments in cable route alignment while maintaining adequate ground cover that helps preserve the overall landscape without causing damage to the environment during the construction. Since the entire alignment is at underground rock level, using HDD can minimise disturbance to existing structures, ground, facilities and vegetation. This method conducts the works underground while aboveground works areas only require setting up launching and receiving pits. HDD requires smaller and shallower shafts compared to TBM, which reduces the generation of construction dust, noise and C&D materials, as well as shortens the construction period. Moreover, while drilling fluid will be adopted during HDD, the drilling fluid would be recycled and reconditioned to be reused for further drilling as much as practicable. Residual drilling fluid that cannot be reused further would be collected in appropriate container(s) for subsequent appropriate disposal by licensed contractor, thereby minimising environmental impact. Therefore, HDD is preferred.

1.4.2 CONSIDERATION OF LAUNCHING PIT LOCATIONS

A launching pit for deploying the HDD rig will be constructed at the east of Discovery Bay Tunnel. A total of 6 locations have been reviewed by the Project Team and discussed with Discovery Bay Management Office with details given in the following. These locations have been indicated in **Figure 1.2**.

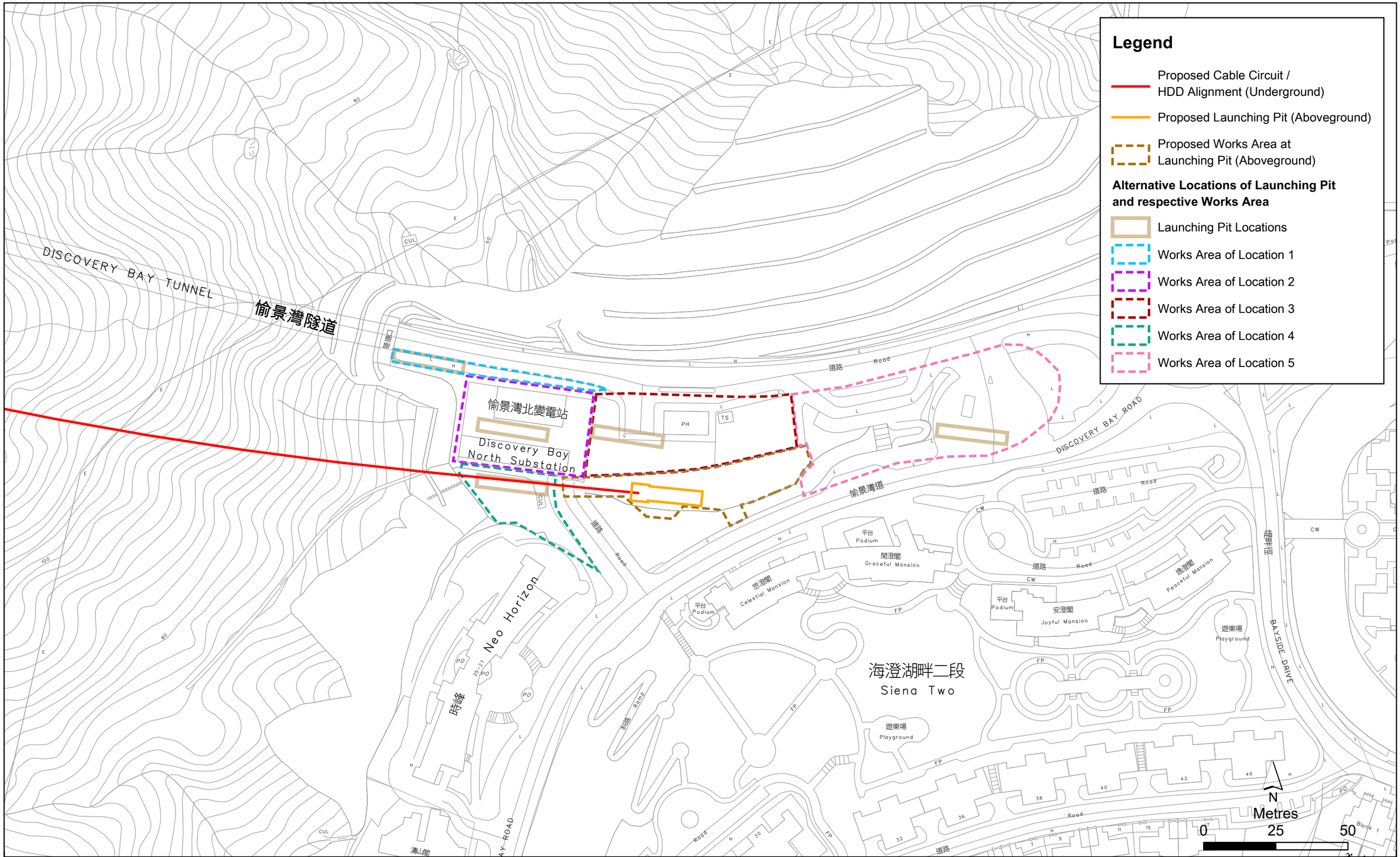


Figure 1.2

Alternative Locations of Proposed Launching Pit

File: T:\GIS\CONTRACT\0750437\mxd\0750437_Alternative_Launching_Pit_v2.mxd
Date: 19/8/2025

Launching pit location 1 – North of Discovery Bay North Substation

Launching pit location 2 – Within Discovery Bay North Substation

Launching pit location 3 – East of Discovery Bay North Substation

Launching pit location 4 – South of Discovery Bay North Substation

Launching pit location 5 – Other Specified Uses (OU) Zone at East of Discovery Bay North Substation

Preferred launching pit location – Southeast of Discovery Bay North Substation

LAUNCHING PIT LOCATION 1

There are numerous existing underground utilities at the launching pit location 1, including underground cable circuits and drainage pipes. There is not enough space for the proposed launching pit and cable circuit. Besides, this location is adjacent to the roadside of Discovery Bay Tunnel, which becomes very crowded during the daytime period and it is the only tunnel through which the Discovery Bay residents travel to other parts of Hong Kong. Conducting construction works near the road would pose safety risks to both road users and workers. Setting up of construction site at this location would affect the emergency access and egress footpath of the Discovery Bay Tunnel, which poses significant impacts to road users and workers during HDD especially during lifting, loading and unloading operations. Therefore, this location is considered not viable for positioning the launching pit.

LAUNCHING PIT LOCATION 2

Launching pit location 2 is located within Discovery Bay North Substation. Two existing cable trenches with 2m width and 1.4m apart from each other are located in the middle between the 2 blocks of Discovery Bay North Substation. These trenches extend approximately 40m from east to west along the buildings. The remaining space is not sufficient for setting up the launching pit. The interior of existing substation would also cause insufficient aboveground space to set up the launching pit, HDD equipment as well as the temporary storage area.

LAUNCHING PIT LOCATION 3

Launching pit location 3 is a reserved area for future development located near a pump house to the east of Discovery Bay North Substation. As per advice from the Discovery Bay Management Office, this location is reserved for future development of a gas station and no permanent utility is allowed, and hence, location 3 is not a feasible launching pit location.

LAUNCHING PIT LOCATION 4

Launching pit location 4 is a fenced off paved area at the south of Discovery Bay North Substation. The small area size however poses technical challenges for construction and may pose unnecessary impacts to existing trees located in the vicinity. The only access to Discovery Bay North Substation may be obstructed in the course of HDD works and the operation of Discovery Bay North Substation may be affected if any emergency event is to be encountered. Furthermore, launching pit location 4 is located at close proximity with existing residential tower of Neo Horizon (i.e. around 8m), there may be adverse air and noise impacts

to residents in that area during construction phase. Therefore, this launching pit location is not preferred.

LAUNCHING PIT LOCATION 5

Launching pit location 5 is the Other Specified Uses (OU) zone to the east of Discovery Bay North Substation, which is currently a paved area with operating facilities currently being run by Discovery Bay Management Office, including a vehicle permit return office to re-route vehicles back to Discovery Bay Tunnel without entering the residential area of Discovery Bay, a traffic control zone for taxi exit and a bus stop. Breaking of the paved area would be required for the construction of launching pit. These breaking works would likely cause noise impact to the adjacent residential buildings of Siena Two and obstruction to the operation of the aforementioned facilities. Also, given that the finish point of the purposed cable circuit at launching pit location 5 is further away from Discovery Bay North Substation, an additional cable trench would be required to connect the cables from the launching pit to the substation, which causes more environmental impacts, especially in terms of the generation of construction dust, noise and C&D materials. Hence, this area is not preferred for positioning the launching pit.

PREFERRED LAUNCHING PIT LOCATION

This location is mostly a grassy area and is currently unoccupied. Positioning the launching pit at this location will not affect any trees. Besides, no public roads and public access will be impacted by the site, thereby minimising disruption to the public. While excavation works would also be required at this location, excavation works will be conducted at grassy surface as compared to the paved surface at the launching pit location 5. Therefore, conducting excavation works at this location is anticipated to generate less noise. This location is located further away from the nearest residential premises as compared to the launching pit location 4 (i.e. around 22m from the preferred location as compared to 8m from launching pit location 4). Hence, potential air and noise impacts can be minimised.

CONCLUSION

After a comprehensive study and assessment of the technical feasibility, site constraints, potential environmental impacts, interfaces with nearby existing and planned developments and other relevant factors, the preferred location is considered the most suitable location for the launching pit.

1.5 LOCATION AND SCALE OF PROJECT AND HISTORY OF THE PROJECT AREA

Figure 1.1 presents the proposed cable circuit / HDD alignment along with the proposed works areas at the launching and receiving pits.

1.5.1 PROPOSED CABLE CIRCUIT AND CONSTRUCTION WORKS

The proposed cable circuit is located along the south of Discovery Bay Tunnel, as shown in **Figure 1.1**. The proposed launching pit is located at the east of Discovery Bay Tunnel, at the southeast of the existing Discovery Bay North Substation, while a proposed receiving pit is located at the west of Discovery Bay Tunnel. The proposed cable circuit is around 810m long and 900mm in diameter. About 250m and 130m of the underground section passes through

Lantau North (Extension) Country Park and Green Belt respectively, and about 370m of the underground and aboveground sections passes through Conservation Area (CA) zone. The remaining sections of the proposed cable circuit passes through existing road. New cables (3 x 630 mm^2 power cable + 1 x 48/C optical fibre cable) will be laid by the HDD and cable jointing will be conducted. Locations of the proposed cable circuit and works areas are shown in **Figure 1.3**.

1.5.2 ADOPTION OF HDD ("MINI NO DIG" METHOD) FOR CONSTRUCTION OF PROPOSED CABLE CIRCUIT

As presented in **Section 1.4.1**, the proposed cable circuit will be constructed by HDD, i.e. micro-tunnelling with 'no-dig' method. Launching pit and receiving pit will be constructed at the ends of the proposed cable circuit, which are approximately 140m^2 x 2.5m (D) and 30m^2 x 3.0m (D) in size respectively. Prior to the excavation of launching and receiving pits, three trial pits will be first excavated to confirm the existing underground piping facilities; one at the launching pit area and two at the receiving pit area. The dimensions of all trial pits are approximately 3m (L) x 3m (W) x 3m (D). Besides, small-scale open cut excavation area of approximately 5m (L) x 5m (W) x 5.5m (D) is also required under the Project for cable lead-in to the Discovery Bay North Substation. The entire HDD and cable laying process is expected to last for 13 months subject to underground conditions. The actual location of working pits may be adjusted due to the site situation, cable-laying routing, and existing utilities.

The construction process is summarised in **Table 1.1**.

TABLE 1.1 SUMMARY OF THE CONSTRUCTION PROCESS

No.	Construction Process	Aboveground or underground	Time Period
1	**Pit Construction at Two Ends** Size of launching pit: ~140m^2 x 2.5m (D) Size of receiving pit: ~30m^2 x 3.0m (D) Details of proposed works areas: see **Figure 1.4**	Aboveground	Approximately 2 months
2	**HDD, Duct Laying, Cable Laying and Jointing** HDD alignment: ~810m (L) x 900mm (diameter) Excavation area for cable lead-in: ~5m (L) x 5m (W) x 5.5m (D) Details of proposed works areas: see **Figure 1.4**	Underground (HDD alignment) Aboveground (Excavation works for cable lead-in)	Approximately 13 months, subject to ground condition
3	**Backfill and Reinstatement** No impact aboveground upon reinstatement	Aboveground	Approximately 1 months

1.5.3 HISTORY OF THE PROJECT AREA

The major portion of the proposed cable circuit passes through Yi Pak Au, an area predominantly covered in shrubland. Discovery Bay Tunnel, a single-tube, two-way private road tunnel constructed for the Discovery Bay residential community, was opened in 2000, linking Discovery Bay Road to Cheung Tung Road. In order to maintain the environment and

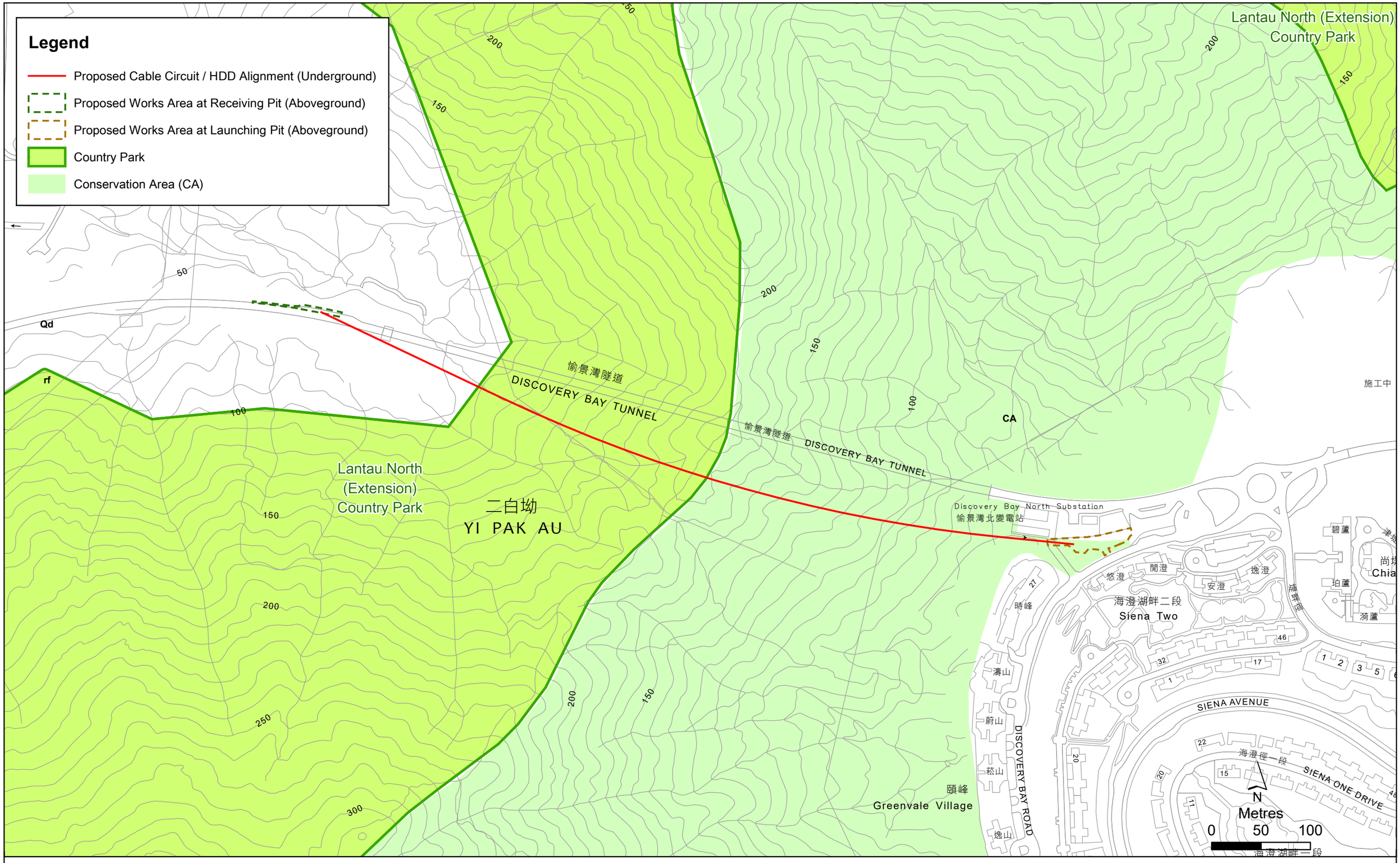


Figure 1.3

Proposed Cable Circuit / HDD Alignment and Works Areas

File: T:\GIS\CONTRACT\0750437\mxd\0750437_Site_Boundaries.mxd
Date: 14/8/2025

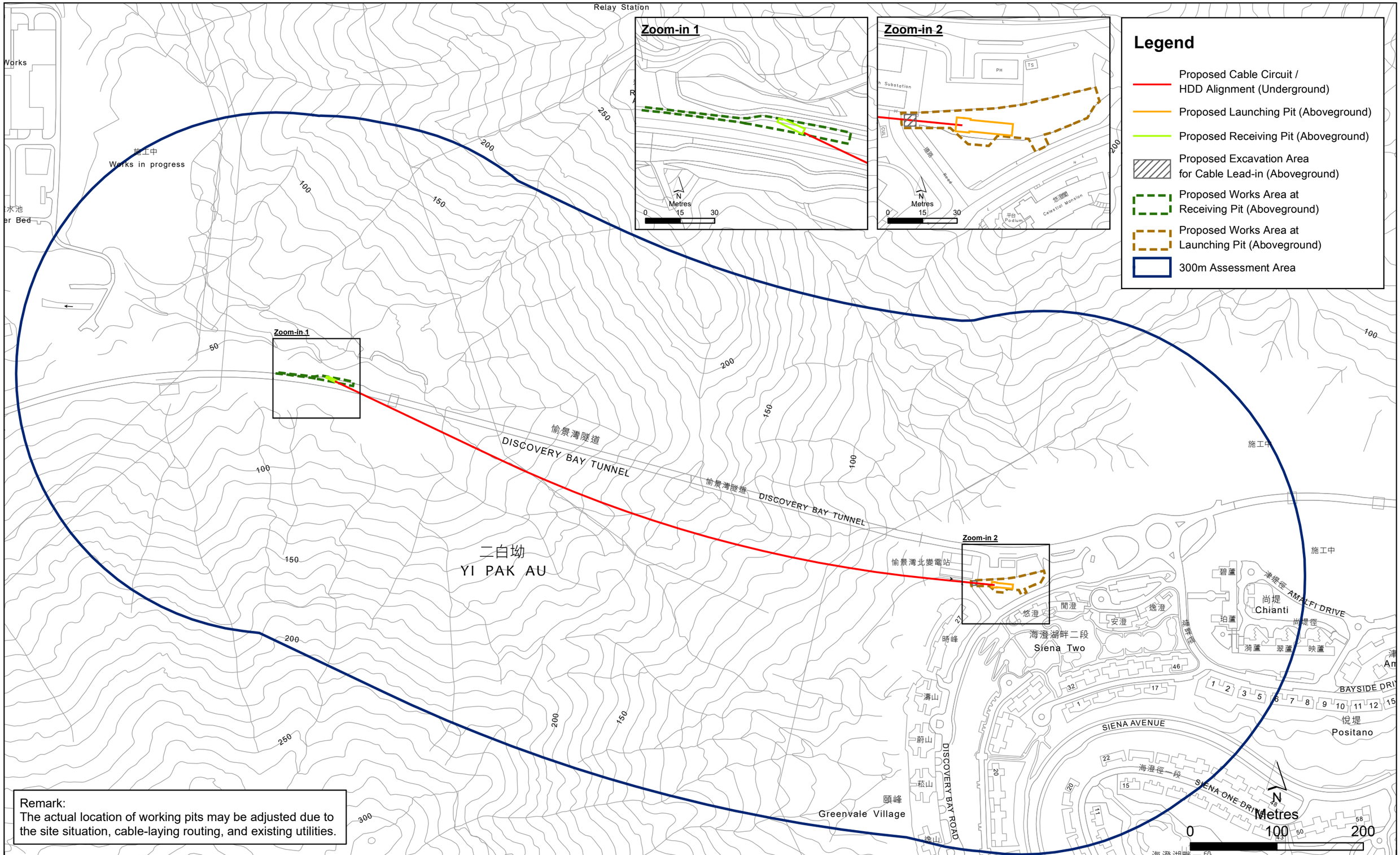


Figure 1.4

Details of Proposed Works Areas

File: T:\GIS\CONTRACT\0750437\mxd\0750437_Proposed_Trial_Pits.mxd
Date: 23/7/2025

minimal traffic flow of that area, only public buses serving authorised resident routes and goods vehicles delivering supplies or providing services are permitted to use the tunnel. Private cars and taxis are prohibited from accessing Discovery Bay via this route.

Prior to the construction of the Discovery Bay Tunnel, the proposed works areas at launching pit and receiving pit were part of the shrubland of Yi Pak Au. Site clearance at these works areas were conducted during the construction of the Discovery Bay Tunnel. The current lay-by area at the proposed works area at receiving pit was constructed to support the operation of Discovery Bay Tunnel. The proposed works area at launching pit is mostly a grassy area and a small paved area at the access road to Discovery Bay North Substation. The concrete paving at the works area of the receiving pit and the small paved area at the works area of the launching pit are in good condition. There are no signs of land contamination at the works areas of launching and receiving pits.

There are 2 series of existing 132kV cable circuits passing through the Discovery Bay Tunnel for power supply to Discovery Bay. These 2 circuits transmit electricity from Sham Shui Kok Substation to Discovery Bay North Substation, which then further distribute electricity to the whole Discovery Bay Development Area. Both existing circuits inside the Discovery Bay Tunnel will be retained after the completion of the proposed cable works while one of the circuits will remain energised and the other one will be kept as spare cable circuits.

1.6 DESIGNATED PROJECTS TO BE COVERED BY THE PROJECT PROFILE

The section of the proposed cable circuit located within the Lantau North (Extension) Country Park and CA zone as well as the unoccupied area for launching pit being located within CA zone are classified as Designated Project under *item Q.1* (All projects involving earthworks partly or wholly in an existing country park and a conservation area) of *Part I, Schedule 2* of *Environmental Impact Assessment Ordinance* (EIAO) (see **Figure 1.1**).

1.7 NAME AND TELEPHONE NUMBER OF CONTACT PERSON

ERM-Hong Kong, Limited (ERM) has been appointed to undertake the environmental permitting for this Project on behalf of the Project proponent. All queries regarding the project can be addressed to:

ERM
Attention: Mr. Terence Fong (Partner)
Telephone: (852) 2271 3000
Fax: (852) 3015 8052

Or the Project Proponent:

CLP Power
Attention: Mr. Chiang, Tung Ho (Principal Project Manager - Special Projects)
Telephone: (852) 2678 6044

2. OUTLINE OF PLANNING AND IMPLEMENTATION PROGRAMME

2.1 PROJECT PLANNING AND IMPLEMENTATION

This Project involves the construction and operation of the proposed cable circuit as described in **Section 1**. The overall construction period of the Project will last for about 16 months, which is tentatively scheduled to start in late 2025 subject to the approval process, and expected to complete in the first quarter of 2027. The proposed cable circuit is tentatively scheduled for operation in Q2 2027. Key implementation schedule of the Project is summarised in **Table 2.1**.

TABLE 2.1 KEY IMPLEMENTATION SCHEDULE

Key Project Planning and Milestones	Tentative Date
Design	Nov 2024 – Q4 2025
Construction	Q4 2025 – Q1 2027
Testing and Commissioning	Q1 2027
Commencement of Operation	Q2 2027

The Project is planned with consideration of land usage constraints, technical feasibility, supply and security, safety and health and environmental aspects. Construction of the Project will be carried out by contractor to be appointed by CLP Power through a tendering process and CLP Power will deploy direct supervision for the Project.

The proposed works areas of the Project are located along existing roads so all necessary equipment and materials can be delivered by truck to the Project Area. As HDD will be used for the construction of the proposed cable circuit, drilling equipment and HDD plant will be used.

It is expected that the proposed cable circuit is maintenance free in normal operation.

2.2 INTERACTIONS WITH OTHER SURROUNDING PROJECTS

Concurrent projects identified near the Project have been indicated in **Figure 2.1**.

One of the potential projects is the Proposed Residential Development at Area N1 North (Excluding Area N1D) Northern Portion (Phase 19), Discovery Bay North, Lantau DD352 Lot385 R.P. and The Extension Thereto (hereinafter referred to as 'Phase 19 of Discovery Bay') by Hong Kong Resort Company Limited, which is located about 145m east from the Project Area. Based on publicly available information, the proposed construction programme of this project is from April 2023 to June 2025. The scope of this project is to construct 1400-unit Residential Development Project in Discovery Bay North. Phase 19 of Discovery Bay is situated within 500m Assessment area of the Project Area. At the time of this assessment, all buildings of the project have been constructed up to roof floor, with only minor superstructure and external landscape works remaining, with the implementation of air quality control measures and good site practices, the associated air pollutant emissions and construction noise are anticipated to be limited, hence no adverse cumulative environmental impacts are anticipated.

Legend

- Proposed Cable Circuit / HDD Alignment
- Proposed Launching Pit
- Proposed Receiving Pit
- Proposed Works Area at Receiving Pit
- Proposed Works Area at Launching Pit
- 500m Assessment Area

Concurrent Project

- Siu Ho Wan Fresh Water Service Reservior and Associated Mainlaying Works
- Phase 19 of Discovery Bay

大輋峒
TAI CHE TUNG

二白坳
YI PAK AU

榴花峒
LAU FA TUNG

三白灣
SAM PAK WAN

二白灣
YI PAK WAN

小蠔
Siu Ho

Vehicle Examination Centre And Weigh Station

小蠔灣濾水廠
Siu Ho Wan Water Treatment Works

濾水池
Filter Bed

施工中
Works in progress

微波連接系統站
Microwave Link Relay Station

岩地
Rocky Area

愉景灣隧道
DISCOVERY BAY TUNNEL

愉景灣北變電站

Greenvale Village

明翠台
Parkridge Village

海澄湖畔二段
Siena Two

海澄湖畔一段
Siena One

尚堤
Chianti

意堤
Poggibonsi

津堤
Amalfi

悅堤
Positano

愉景灣酒店
Auberge Discovery Bay

浮渡頭
Floating Jetty

Club Siena

Discovery College

DISCOVERY BAY ROAD
SIENA AVENUE
SIENA ONE DRIVE
BAYSIDE DRIVE
AMALFI DRIVE
PARKLANDS DRIVE
SEABEE LANE

Seawall

HWM

N

Metres
0 150 300

Figure 2.1

Concurrent Projects within 500m Assessment Area

ERM

File: T:\GIS\CONTRACT\0750437\mxd\0750437_Concurrent_Project.mxd
Date: 24/7/2025

The first occupation permit for Phase 19 of Discovery Bay is expected to be obtained at around Q3-Q4 2025, which coincides with the construction period of the Proposed Project. Hence, Phase 19 of Discovery Bay is considered as planned air and noise sensitive receivers.

Another potential project is the Siu Ho Wan Fresh Water Service Reservoir and Associated Mainlaying Works by Civil Engineering and Development Department (CEDD). The proposed scope of this project is to install fresh watermains and stormwater drainage system, construct Siu Ho Wan Fresh Water Reservoir, an access road from Siu Ho Wan Water Treatment Works to Siu Ho Wan Fresh Water Service Reservoir and associated retaining wall. The construction works is situated approximately 130m northwest of the Receiving Pit and is currently under construction. With implementation of appropriate air quality control measures and good site practices, the associated air pollutant emissions and construction noise are anticipated to be limited. Considering Siu Ho Wan Water Treatment Works Administration Office is 70m west of the aforementioned project but surrounded by the terrain, adverse cumulative environmental impact (e.g. air quality) from the project and this Project is not anticipated.

Close liaison with the contractors of the above projects will be undertaken to minimise concurrent works as far as practicable. Given the small scale of works involved in the Project, adverse cumulative environmental impact (e.g. air quality, noise) is not anticipated during construction of the Project.

3. MAJOR ELEMENTS OF THE SURROUNDING ENVIRONMENT

The existing environment of the Project Area within 500m from the boundary of the Project Area is shown in **Figure 1.1**. The east side of the Project (near launching pit) comprises of residential developments at Discovery Bay, such as Neo Horizon, Siena One and Siena Two, while Siu Ho Wan Fresh Water Service Reservoir is located at the west side of the receiving pit.

A significant underground portion of the proposed cable circuit is located within the Lantau North (Extension) Country Park and CA zone, where the proposed cable circuit runs along the south of Discovery Bay Tunnel. Apart from these areas, the surrounding areas are zoned as Green Belt (GB), Other Specified Uses (OU), Government, Institution or Community (G/IC), and Residential (Group C) 1 to 5.

A review of ecological resources within 500m from the Project Area, supplemented with baseline ecological survey conducted in September and October 2024, was conducted and the details are provided in **Appendix B**. Five (5) major habitat types were identified within 500m from the Project Area, namely Woodland, Shrubland, Plantation, Developed Area and Watercourse. Their ecological importances have been evaluated in accordance with the *Technical Memorandum on Environmental Impact Assessment Process (EIAO-TM) Annex 8* criteria and all of these habitats are of low to moderate ecological importance except for Developed Area which is of low ecological importance.

4. POSSIBLE IMPACTS ON THE ENVIRONMENT

The potential environmental impacts associated with the construction works within the Project Area (i.e. 500m from the Project Area) have been assessed in accordance with the criteria stipulated in *Annex 1* of the *EIAO-TM*.

4.1 MAJOR WORK ACTIVITES

4.1.1 CONSTRUCTION PHASE

The Project is expected to involve construction works, such as micro-tunnel drilling by HDD for no-dig section, cable and duct laying, backfilling and reinstatement works. The proposed construction works is mainly underground during the construction of the micro-tunnelling as well as the cable laying process, while the launching pit and receiving pit will be aboveground (size of launching pit: ~140m^2 x 2.5m (D), size of receiving pit: ~30m^2 x 3.0m (D)). No construction of haul road or temporary access is necessary for the Project.

The construction arrangements will be:

- A limited number of powered mechanical equipment (PME) and hand-tools will be deployed for the relatively small-scaled construction works (please refer to **Section 4.4**);
- The PMEs and equipment will be transported by trucks;
- The excavated materials generated from the duct will be disposed of at an appropriate waste reception facility;
- The erected fences will be remained intact during the construction period and no works will be allowed to take place outside the fenced working area;
- Cable duct and cable installation will be carried out using a winch or by hand; and
- Backfilling and reinstatement.

4.1.2 OPERATION PHASE

Potential operation phase environmental impacts are not anticipated as the proposed cable circuit is expected to be maintenance free in normal operation. The proposed cable circuit will be monitored by automatic signalling system.

4.2 SUMMARY OF POTENTIAL ENVIRONMENTAL IMPACTS

A summary of potential environmental impacts arising from the Project during the construction and operation phases is presented in **Table 4.1**. The key potential construction phase impacts are related to air quality, noise, site runoff and water quality, waste, ecology and landscape and visual. Further details on the consideration of the potential environmental impacts are provided in subsequent sections.

TABLE 4.1 POTENTIAL SOURCES OF ENVIRONMENTAL IMPACTS

Potential Impact	Construction Phase	Operation Phase
Air Quality	✓	✗
Noise	✓	✗
Water Quality	✓	✗
Waste Management	✓	✗
Terrestrial Ecology	✓	✗
Others:		
Landscape and Visual	✗	✗
Cultural Heritage	✗	✗
Hazard to Life	✗	✗

Note:
(a) '✓'= Possible; '✗'= Not Anticipated

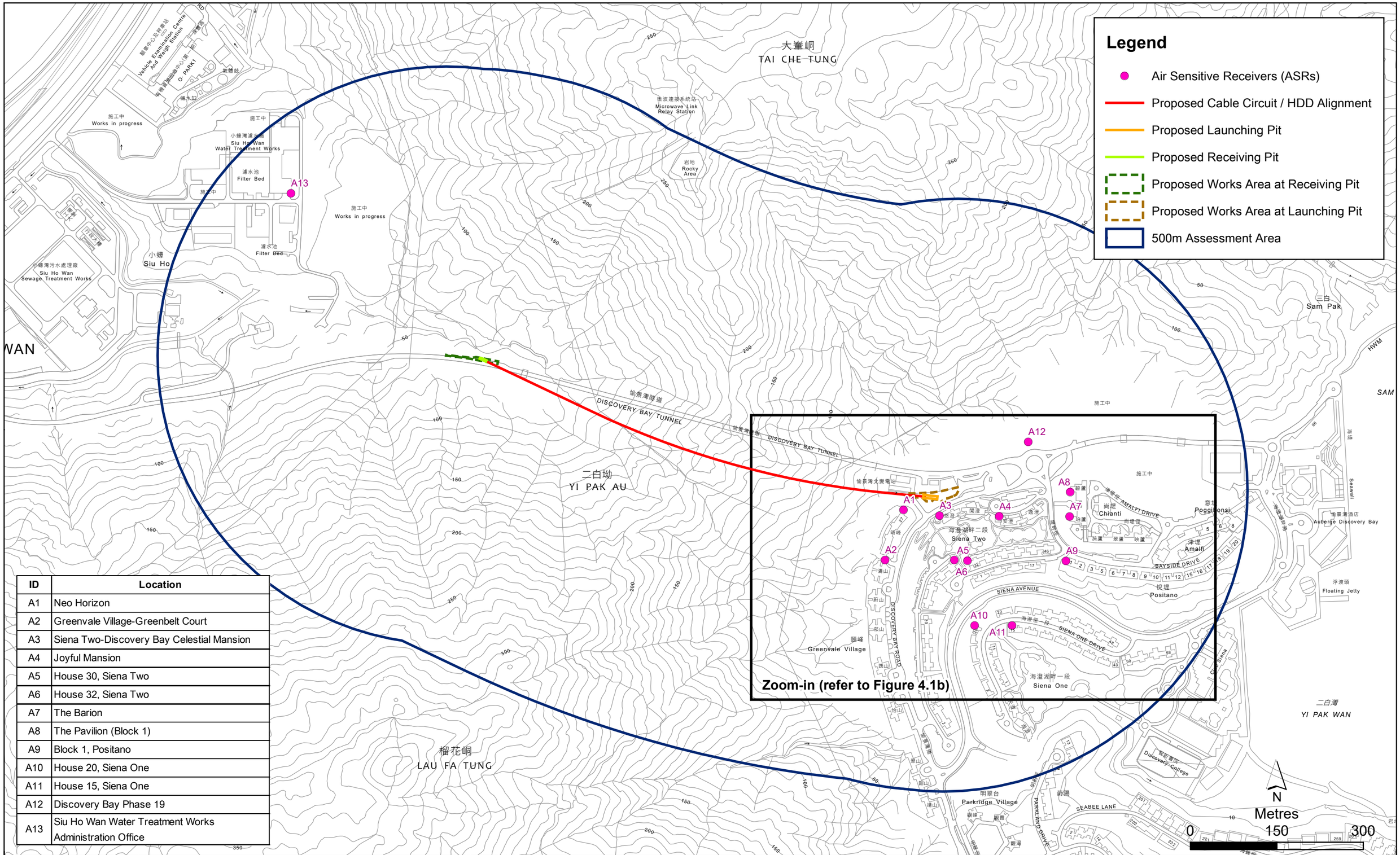
4.3 AIR QUALITY

4.3.1 AIR SENSITIVE RECEIVERS

Representative air sensitive receivers (ASRs) have been identified as shown in **Figure 4.1** and summarised in **Table 4.2**. The closest representative ASR is located at about 22m away from the Project Area.

TABLE 4.2 REPRESENTATIVE AIR SENSITIVE RECEIVERS

ASR ID	Description	Type of Use	Maximum Height of the Building (m)	Approximate Distance from Project Area (m)
A1	Neo Horizon	Residential	119	24
A2	Greenvale Village-Greenbelt Court	Residential	113	116
A3	Siena Two-Discovery Bay Celestial Mansion	Residential	125	22
A4	Joyful Mansion	Residential	120	83
A5	House 30, Siena Two	Residential	51	100
A6	House 32, Siena Two	Residential	56	108
A7	The Barion	Residential	111	197
A8	The Pavilion (Block 1)	Residential	120	193
A9	Block 1, Positano	Residential	57	222
A10	House 20, Siena One	Residential	33	219

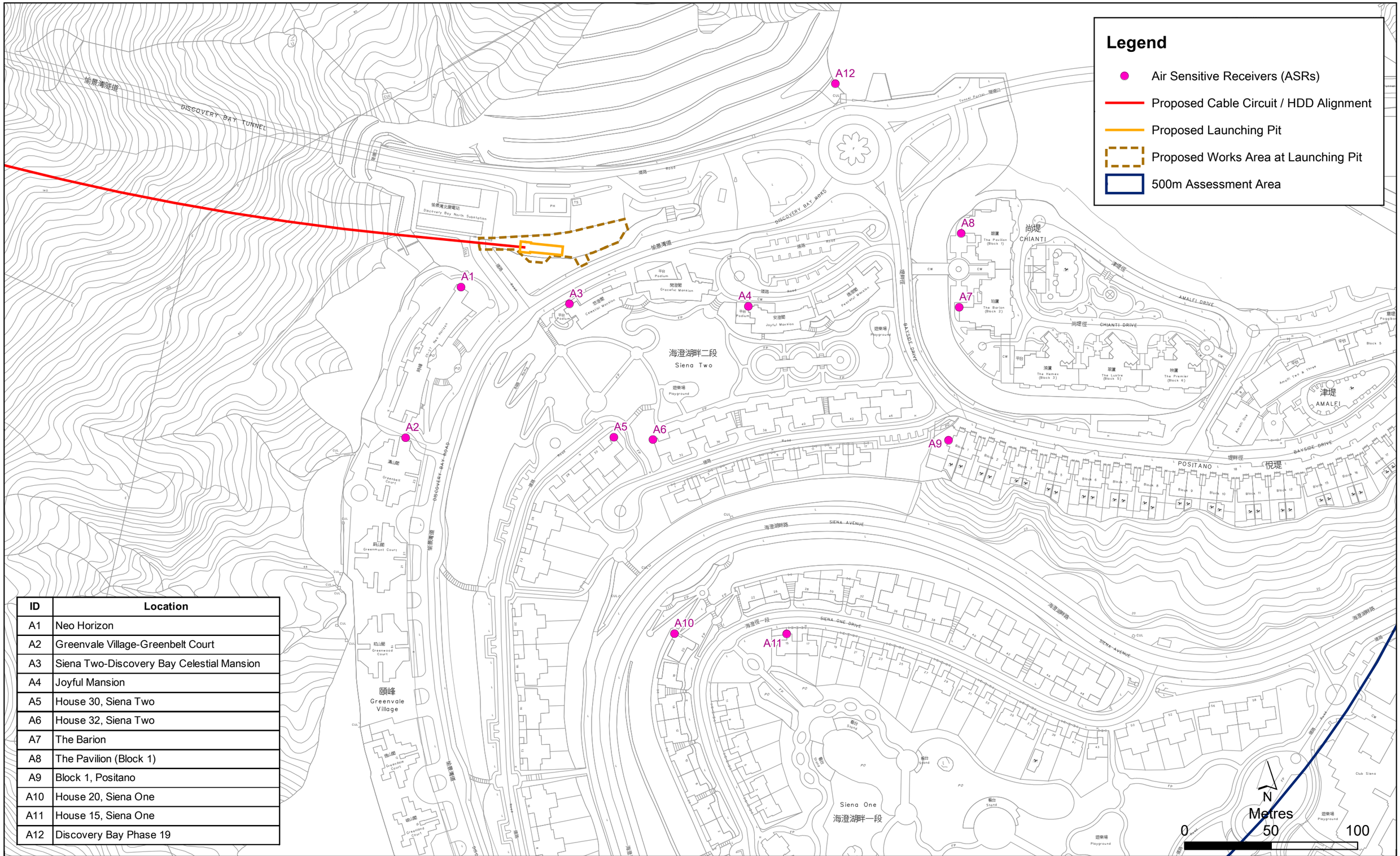


ID	Location
A1	Neo Horizon
A2	Greenvale Village-Greenbelt Court
A3	Siena Two-Discovery Bay Celestial Mansion
A4	Joyful Mansion
A5	House 30, Siena Two
A6	House 32, Siena Two
A7	The Barion
A8	The Pavilion (Block 1)
A9	Block 1, Positano
A10	House 20, Siena One
A11	House 15, Siena One
A12	Discovery Bay Phase 19
A13	Siu Ho Wan Water Treatment Works Administration Office

Figure 4.1a

Locations of Representative Air Sensitive Receivers

File: T:\GIS\CONTRACT\0750437\mxd\0750437_ASR.mxd
Date: 24/7/2025



ID	Location
A1	Neo Horizon
A2	Greenvale Village-Greenbelt Court
A3	Siena Two-Discovery Bay Celestial Mansion
A4	Joyful Mansion
A5	House 30, Siena Two
A6	House 32, Siena Two
A7	The Barion
A8	The Pavilion (Block 1)
A9	Block 1, Positano
A10	House 20, Siena One
A11	House 15, Siena One
A12	Discovery Bay Phase 19

Figure 4.1b

Locations of Representative Air Sensitive Receivers (Zoom-in)

File: T:\GIS\CONTRACT\0750437\mxd\0750437_ASR_zoomin.mxd
Date: 24/7/2025

ASR ID	Description	Type of Use	Maximum Height of the Building (m)	Approximate Distance from Project Area (m)
A11	House 15, Siena One	Residential	17	243
A12	Phase 19 of Discovery Bay	Residential (Planned)	No info	145
A13	Siu Ho Wan Water Treatment Works Administration Office	Office	9	388

4.3.2 EVALUATION OF AIR QUALITY IMPACTS DURING CONSTRUCTION PHASE

Potential sources of air quality impacts during the construction phase include:

- Fugitive dust emissions (key air pollutants including respirable suspended particulates (RSP) and fine suspended particulates (FSP)) are generated from site clearance, drilling works by HDD, backfilling and reinstatement, and other construction activities; and
- Exhaust emissions (i.e. Nitrogen Dioxide (NO_2), Sulphur Dioxide (SO_2) and Carbon Monoxide (CO)) and particulates (including RSP and FSP) will be emitted from the use of powered mechanical equipment (PMEs) and dump trucks during the construction phase.

Evaluation of the air quality impacts during the construction phase is presented below.

No odour impact is anticipated during the construction phase of the Project.

Fugitive Dust Emissions

All construction works will be carried out within the Project Area. The installation of the proposed cable circuit includes pit construction at two ends (i.e. launching pit and receiving pit), cable duct laying and joining, followed by backfilling and reinstatement.

Site clearance and small-scale excavation works for trial pits, launching and receiving pits as well as cable lead-in are anticipated. Given that the total area of the proposed works areas is limited (around 1050m² for works area at launching pit and around 280m² for works area at receiving pit), site clearance activities are anticipated to be minimal, resulting in limited fugitive dust generation. Additionally, minor excavation works will be confined to the proposed launching and receiving pits (including trial pits) as well as cable lead-in with an estimated excavated material quantity of around 660m³. Fugitive dust emissions from minor excavation works are anticipated to be limited and localised within the proposed launching and receiving pits (including trial pits).

The estimated total quantity of excavated materials from drilling works by HDD is approximately 520m³. Once excavated, these materials will be transported away from the Project Area. Potential fugitive dust emissions from the drilling and excavation activities are anticipated to be limited.

For backfilling and reinstatement, the amount of materials for backfilling and reinstatement are limited (approximately not more than 660m³). Potential dust emission impact is not anticipated from such minimal amount of the materials. Furthermore, due to the limited area of the proposed works areas as discussed above, fugitive dust emissions from backfilling and reinstatement are anticipated to be limited and localised within the proposed works areas.

In view of the above and the implementation of good construction site practices and relevant mitigation measures recommended in the *Air Pollution Control (Construction Dust) Regulation* (CAP.311R), adverse fugitive dust impact arising from pit construction, HDD and cable duct laying, and backfilling and reinstatement works during the construction phase is not anticipated. Appropriate mitigation measures for the Project are detailed in **Section 5.1.1**.

Emissions from the On-site Use of PMEs and Dump Trucks

It is estimated that there will be a maximum of 7 on-site PMEs operating within the launching pit and 4 on-site PMEs operating within the receiving pit any one time during the construction phase. In addition, approximately 2 dump trucks are expected to be used for handling excavated materials, transporting equipment and delivering C&D materials off-site. Considering the relatively small size of the proposed works areas (total area of 1,330m²) and the limited number of PMEs and dump trucks operating concurrently, gaseous and particulate matter (PM) emissions from these PMEs and dump trucks are anticipated to be minimal during the construction phase.

With the proper implementation of the requirements stipulated in the *Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation* (CAP.311Z), *Air Pollution Control (Fuel Restriction) Regulations* (CAP.311I) and *Air Pollution Control (Smoke) Regulations* (CAP.311C) to control the emissions from the on-site PMEs and construction trucks, adverse air quality impact from emissions from on-site PMEs and construction trucks to the identified ASRs during the construction phase are not anticipated.

Furthermore, power supply for on-site machinery will be provided, if feasible; and the use of exempted Non-Road Mobile Machinery (NRMMs) on-site will also be avoided, if feasible, which can minimise the use of diesel generators and machinery.

Cumulative Impacts During Construction Phase

The construction period of the Project is tentatively from Q4 2025 to Q1 2027. 2 concurrent projects in the vicinity of the Project Area have been identified and presented in **Table 4.3** and **Figure 2.1**.

TABLE 4.3 SUMMARY OF CONCURRENT PROJECTS IN THE VICINITY OF THE PROJECT AREA DURING CONSTRUCTION PHASE

Project Description	Project Proponent	Construction Period
Proposed Residential Development at Area N1 North (Excluding Area N1D) Northern Portion (Phase 19), Discovery Bay North, Lantau DD352 Lot385 R.P. and The Extension Thereto (hereinafter referred to as 'Phase 19 of Discovery Bay')	Hong Kong Resort Company Limited	April 2023 to June 2025
Siu Ho Wan Fresh Water Service Reservoir and Associated Mainlaying Works	Civil Engineering and Development Department (CEDD)	Since January 2021

The proposed residential development in Phase 19 of Discovery Bay is situated approximately 145m east of the launching pit and is currently under construction. At the time of this study, only minor superstructure and external landscape works are remaining for the project. As no large-scale site formation or excavation works are involved, the associated air pollutant

emissions are anticipated to be limited, provided that appropriate air quality control measures and good site practices are implemented. The cumulative air quality impact resulting from these construction activities is anticipated to be limited. Therefore, adverse cumulative air quality impact from the concurrent project and this Project is not anticipated during the construction phase.

The Siu Ho Wan Fresh Water Service Reservoir and Associated Mainlaying Works is situated approximately 130m northwest of the receiving pit and is currently under construction. Based on the latest public information [1], the superstructure of the reservoir, the installation of fresh watermains and stormwater drainage system, and associated retaining wall construction are in progress. The associated air pollutant emissions from these construction activities are anticipated to be limited, provided that appropriate air quality control measures and good site practices are implemented. Moreover, the air pollutant emissions from the construction of Siu Ho Wan Fresh Water Service Reservoir would not have direct impact to the identified ASRs of this Project due to screening by natural terrain and cut slope. The cumulative air quality impact resulting from these construction activities is anticipated to be limited. Therefore, adverse cumulative air quality impact from the concurrent project and this Project is not anticipated during the construction phase.

4.3.3 EVALUATION OF AIR QUALITY IMPACTS DURING OPERATION PHASE

No machinery or equipment will operate during the operation phase since the proposed cable circuit will be stationary in the micro-tunnel. No air or odour emissions are generated during the operation phase. Hence, air quality and odour impact during the operation phase of the Project is not anticipated.

4.4 NOISE

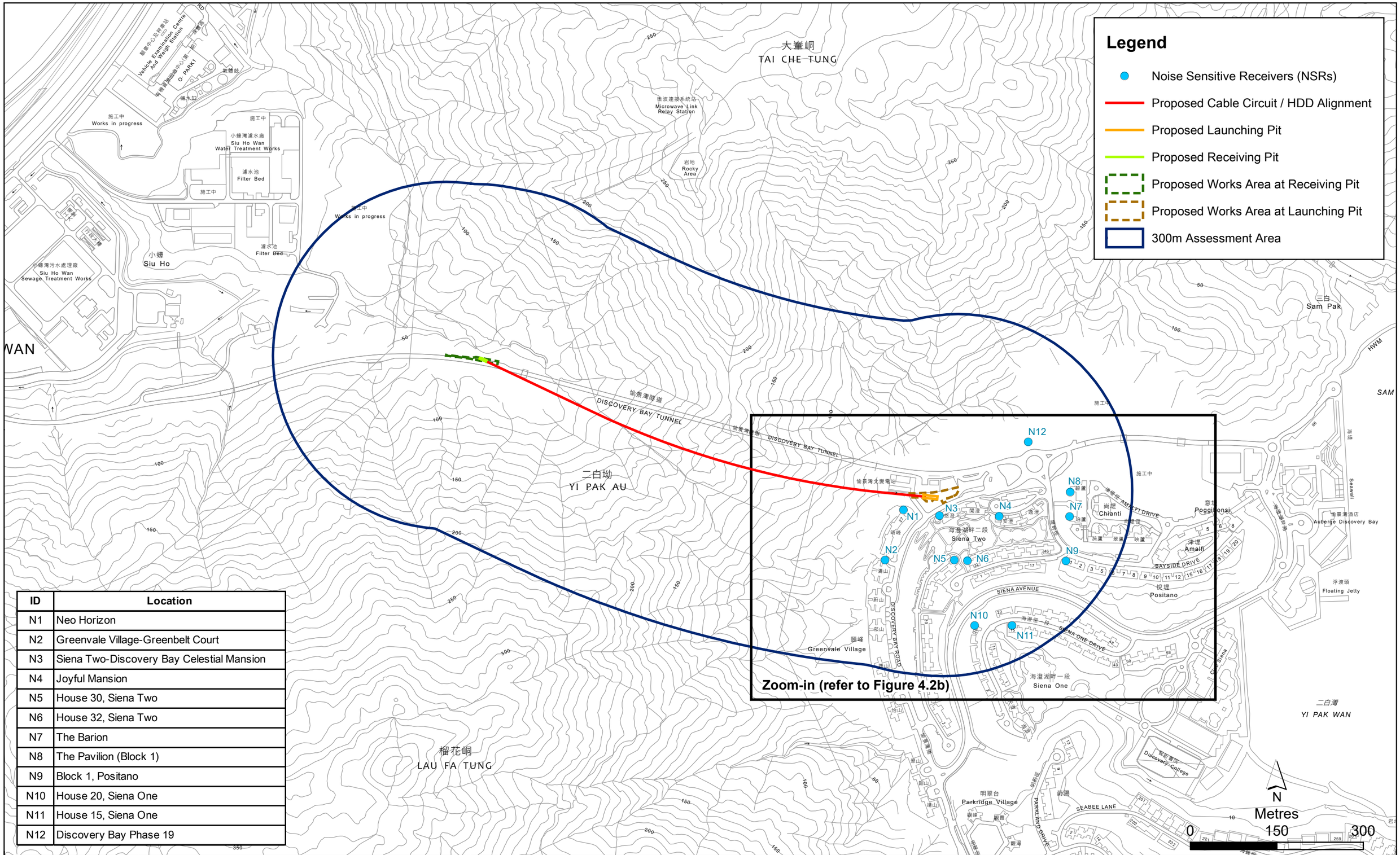
4.4.1 BASELINE CONDITIONS

The area within 300m from proposed cable circuit is rural in nature with prevailing noise from the community and traffic along Discovery Bay Road, Bayside Drive and Siena Avenue.

4.4.2 NOISE SENSITIVE RECEIVERS

Representative Noise Sensitive Receivers (NSRs) have been identified within the assessment area in accordance with the criteria stipulated in *Annex 13* of *the Technical Memorandum on Environmental Impact Assessment Process (EIAO-TM)*. The locations of the NSRs are presented in **Figure 4.2** and listed in **Table 4.4**. The representative NSRs for construction noise impact assessment will be further reviewed in the submission of Construction Noise Management Plan (CNMP), subject to the details of construction activities that will be available in later stage of the Project.

[1] Newsletter Issue No.26 of Tung Chung New Town Extension. Published by Sustainable Lantau Office of CEDD (Link: https://www.tung-chung.hk/files/docs/newsletters/issue_26_20241220.pdf)



ID	Location
N1	Neo Horizon
N2	Greenvale Village-Greenbelt Court
N3	Siena Two-Discovery Bay Celestial Mansion
N4	Joyful Mansion
N5	House 30, Siena Two
N6	House 32, Siena Two
N7	The Barion
N8	The Pavilion (Block 1)
N9	Block 1, Positano
N10	House 20, Siena One
N11	House 15, Siena One
N12	Discovery Bay Phase 19

Figure 4.2a

Location of Representative Noise Sensitive Receivers

File: T:\GIS\CONTRACT\0750437\mxd\0750437_NSR.mxd
Date: 24/7/2025

Legend

- Noise Sensitive Receivers (NSRs)
- Proposed Cable Circuit / HDD Alignment
- Proposed Launching Pit
- Proposed Works Area at Launching Pit
- 300m Assessment Area

ID	Location
N1	Neo Horizon
N2	Greenvale Village-Greenbelt Court
N3	Siena Two-Discovery Bay Celestial Mansion
N4	Joyful Mansion
N5	House 30, Siena Two
N6	House 32, Siena Two
N7	The Barion
N8	The Pavilion (Block 1)
N9	Block 1, Positano
N10	House 20, Siena One
N11	House 15, Siena One
N12	Discovery Bay Phase 19

N
Metres
0 50 100

Figure 4.2b

Location of Representative Noise Sensitive Receivers (Zoom-in)

ERM

File: T:\GIS\CONTRACT\0750437\mxd\0750437_NSR_zoomin.mxd
Date: 24/7/2025

TABLE 4.4 REPRESENTATIVE NOISE SENSITIVE RECEIVERS

NSR No.	Description	Type of Use	Distance from the Nearest Works Area (m)
N1	Neo Horizon	Residential	24
N2	Greenvale Village-Greenbelt Court	Residential	116
N3	Siena Two-Discovery Bay Celestial Mansion	Residential	22
N4	Joyful Mansion	Residential	83
N5	House 30, Siena Two	Residential	100
N6	House 32, Siena Two	Residential	108
N7	The Barion	Residential	197
N8	The Pavilion (Block 1)	Residential	193
N9	Block 1, Positano	Residential	222
N10	House 20, Siena One	Residential	219
N11	House 15, Siena One	Residential	243
N12	Phase 19 of Discovery Bay	Residential	145

4.4.3 EVALUATION OF NOISE IMPACT DURING CONSTRUCTION PHASE

4.4.3.1 ASSESSMENT METHODOLOGY

A construction noise impact assessment has been conducted in accordance with the criteria and guidelines as stipulated in Annexes 5 and 13 of the EIAO-TM. A qualitative construction noise impact assessment has been carried out to assess the potential construction noise impact associated with the Project. A summary of key steps for the qualitative construction noise impact assessment is given below:

- Establish assessment criteria;
- Determine assessment area;
- Identify representative NSRs that may be affected by the proposed construction works;
- Collect information regarding construction programme, plant inventory;
- Identify major noise sources/activities
- Propose quieter construction methods and/or equipment;
- Propose noise mitigation measures, such as noise barriers/noise enclosures; and
- Qualitatively assess the feasibility, practicability, programming and effectiveness of the recommended mitigation measures.

4.4.3.2 CONSTRUCTION NOISE CRITERIA

Under the *EIAO*, potential noise impact arising from general construction works during normal working hours (i.e. 0700hrs to 1900hrs on any day not being a Sunday or public holiday) at noise sensitive receivers is to be assessed in accordance with the noise criteria specified in the *EIAO-TM*. The *EIAO-TM* noise standards are presented in **Table 4.5**.

TABLE 4.5 EIAO-TM NOISE STANDARDS FOR DAYTIME CONSTRUCTION ACTIVITIES

Uses	**0700 to 1900 hours on any day not being a Sunday or general holiday Leq (30mins), dB(A)**
• All Domestic Premises • Temporary Housing Accommodation • Hostels • Convalescent Homes, and • Homes for the Aged	75
• Places of Public Worship • Courts of Law, and • Hospitals and Medical Clinics	70
• Educational Institutions (including Kindergartens and Nurseries)	70 65 (during examinations)

Notes:

(1) The above standards apply to uses which rely on opened windows for ventilation and are assessed at 1m from the external façade.

(2) A Construction Noise Permit shall be required for carrying out relevant construction work during restricted hours under the Noise Control Ordinance. In case the applicant would like to evaluate whether carrying out relevant construction works during restricted hours under the Noise Control Ordinance is feasible or not in the context of programming construction works, reference should be made to relevant technical memoranda issued under the Noise Control Ordinance.

4.4.3.3 IDENTIFICATION OF CONSTRUCTION NOISE IMPACT

The potential sources of noise impact during the construction of the Project would be the use of PME for various construction activities. Key construction activities include excavation, drilling by HDD, cable laying, backfilling and reinstatement works. Most of the drilling works will be conducted underground, while some PMEs will still be located at ground level.

The Project consists of two aboveground proposed works areas, namely the launching pit and the receiving pit. Details of these proposed works areas are indicated in **Figure 1.4**. Works for excavation, drilling and backfilling & reinstatement will not be carried out at the same time within the same works area.

The construction works will be scheduled during daytime hours only, i.e. between 0700hr and 1900hr from Monday to Saturday (except public holidays). It is anticipated that no works are planned during restricted hours (i.e. 1900 to 0700 hrs of the next day and any time on Sundays and public holidays). Should night-time works be required, the Contractor must apply for a Construction Noise Permit (CNP) and ensure full compliance with the requirements of the Noise Control Ordinance (NCO) (Cap 400). The Technical Memorandum on Noise from Construction Work other than Percussive Piling (GW-TM) and Technical Memorandum on Noise

from Construction Work in Designated Areas (DA-TM) details the procedures adopted by the Environmental Protection Department (EPD) for assessing such an application.

The major noise sources of the Project would be the excavation and drilling works required for the construction of the micro-tunnel. In order to alleviate the potential adverse noise impacts due to these works, corresponding quieter construction methods for these works will be proposed in the subsequent sections. The tentative construction programme can be referred to **Table 1.1**. With due consideration of the EPD's list of good practices and state-of-the-art technologies within the industry, the following quieter construction method is applicable in this Project.

- Use of HDD for construction of micro-tunnel for proposed cable circuit instead of open trenching

According to the construction methodology envisaged at this stage, the preliminary plant inventory of this Project has been identified as presented in **Table 4.6**. The plant inventory adopted for the assessment have been confirmed by Project Engineer. It is noted that the Contractor would consider the engineering data available during the construction phase and review/update the tentative construction plant inventory during the preparation of the CNMP.

TABLE 4.6 TENTATIVE PLANT INVENTORY FOR KEY CONSTRUCTION ACTIVITIES

Construction Activities	Possible PMEs Required*
Excavation Works	• Excavator Mounted Breaker • Dump Truck
Drilling and Cable Laying Works	• Drilling Equipment (HDD Machine) • Generator • Wetsep • Water/Mud Pump • Mobile Crane • Mud Processor with Mud Tank • Crane Lorry
Backfill & Reinstatement Works	• Excavator • Generator • Water Pump

* Quiet equipment (e.g. hydraulic crusher / quieter type saw) or Quality powered mechanical equipment (QPME) would be adopted where applicable and practicable

4.4.3.4 EVALUATION OF CONSTRUCTION NOISE IMPACT

The nearest NSRs relying on opened windows for ventilation are the residential units of Neo Horizon and Celestial Mansion (i.e. N1 and N3). These residential units are located approximately 24m and 22m respectively from the launching pit works area, and are considered as the most sensitive and most susceptible to the noise coming from the Project. It is considered that mitigation measures and good site practices including the adoption of QPME, noise barriers etc. would be required to control the associated construction noise impacts, which are discussed in detail in **Section 4.4.3.5**.

There are no NSRs within 300m of the receiving pit works area, adverse construction noise impact due to the works at the receiving pit works area is not anticipated.

Two potential concurrent projects at the vicinity of the Project have been identified, which are the Proposed Residential Development at Area N1 North (Excluding Area N1D) Northern Portion (Phase 19), Discovery Bay North, Lantau DD352 Lot385 R.P. and The Extension Thereto and the Siu Ho Wan Fresh Water Service Reservoir and Associated Mainlaying Works.

Proposed Residential Development at Area N1 North (Excluding Area N1D) Northern Portion (Phase 19), Discovery Bay North, Lantau DD352 Lot385 R.P. and The Extension Thereto by Hong Kong Resort Company Limited is situated around 145m towards the east of the launching pit of Project. At the time of this assessment, only minor superstructure and external landscape works are remaining for the project, while the construction period is expected to end in June 2025. Therefore, no adverse cumulative noise impact is anticipated.

The construction works of Siu Ho Wan Fresh Water Service Reservoir and Associated Mainlaying Works at located at around 130m northwest of the receiving pit of this Project. Since there are no NSRs near the receiving pit, no adverse cumulative noise impact is anticipated.

4.4.3.5 MITIGATION MEASURES FOR NOISE IMPACTS

Recommended noise mitigation measures include, but not limited to, the following:

- Adoption of quieter construction methods and use of QPME;
- Use of temporary noise barriers and noise enclosure to reduce noise from PMEs;
- Good site management practices to limit at-source noise emissions.

The above mitigation measures and the EPD's "Recommended Pollution Control Clauses for Construction Contracts" would need to be implemented in work sites as good practices where appropriate. Detailed descriptions of these mitigation measures are given in the following sections.

Adoption of Quieter Construction Methods and use of QPME

As mentioned in **Section 4.1**, HDD will be adopted for constructing the proposed cable circuit. Compared to conventional open trenching methods, the major drilling works will be conducted underground. Only minor excavation works are required at the launching and receiving pits, such that noise impacts to nearby NSRs can be minimised. Furthermore, by adopting HDD instead of TBM, the construction duration can be shortened by over 50%, hence the duration of construction noise impact to nearby NSRs can also be reduced.

Excavation works is required during site formation for set up of HDD machine. The practicability of adopting hydraulic crusher and quieter type saw to replace excavator mounted breaker will be further reviewed during the preparation of the CNMP. Since the area of surface excavation is small, adverse noise impact is not anticipated.

Other quieter construction methods, such as those mentioned in EIAO Guidance Note No. 9/2023, will be further reviewed in the detailed design and construction stages, and in the CNMP.

The use of QPME is considered to be a practicable means to mitigate the construction noise impact. QPME (e.g. electric mobile crane, enertainer etc.) is defined as a PME having actual SWL lower than the value specified in the GW-TM. The adoption of QPME, such as those listed on the EPD web page, shall be considered whenever applicable and feasible. The use of QPME will be further reviewed in the CNMP.

Use of Temporary Noise Barriers and Enclosures

The use of temporary noise barriers is an effective means to mitigate the noise impact arising from the construction works. The use of noise barrier for large or movable PME could generally provide a 5 dB(A) reduction. The Contractor shall be responsible for the design and actual

position of the temporary noise barriers with due consideration given to the position and size of the PME, and the requirement of intercepting the line-of-sight from the NSRs to the PME, as well as ensuring that the barriers have no gaps nor openings.

Temporary noise barriers are proposed to adopt in screening noise from construction plants. Noise barriers located close to a PME can produce at least 10 dB(A) screening for stationary plant and 5 dB(A) for mobile plant provided that the direct line-of-sight of the PME is blocked, depending on the actual design.

For the use of temporary noise barrier for at-grade construction works, working space would be considered for their manoeuvrability and placement. Generally, sufficient separation between major plants during at-grade construction works is envisaged to cater for the use of temporary noise barriers on-site. Temporary noise barriers should be placed close to noise source locally as far as practicable.

The use of standard enclosure would be adopted to shelter relatively stationary plants, including generators and water/mud pumps. In accordance with GN 9/2023, about 15 dB(A) noise reduction could be achieved by noise enclosures depending on the actual design. Indicative drawings of examples of temporary noise barrier and enclosure can be referred to **Appendix A**.

Upon review by Project Engineer, it is confirmed that the use of HDD, temporary noise barriers and enclosures are feasible, effective and suitable for the current construction programme.

Good Site Practices

Good construction site practice and noise management can considerably reduce the potential noise impact of the construction activities on nearby NSRs. The noise reduction benefits of these practices can vary according to specific site conditions and operations. The following site practices should be followed during the construction of the Project:

- Only well-maintained plant will be operated on-site and plant will be serviced regularly during the construction phase;
- Silencers or mufflers on construction equipment will be utilised and will be properly maintained during the construction phase;
- Mobile plant, if any, will be sited as far away from NSRs as possible;
- Machines and plant (such as trucks) that may be in intermittent use will be shut down between work periods or will be throttled down to a minimum;
- Plants known to emit noise strongly in one direction will, wherever possible, be orientated so that the noise is directed away from the nearby NSRs;
- Material stockpiles and other structures will be effectively utilised, wherever practicable, in screening noise from on-site construction activities; and
- The Contractor should devise, arrange methods of working and carrying out the works in such manner as to minimise noise impacts on the surrounding environment, and should provide experienced personnel with suitable training to ensure that all these measures are implemented properly.

Evaluation of Effectiveness of Proposed Noise Mitigation Measures

By adopting HDD instead of open trenching or TBM, the construction noise to nearby NSRs has been minimised. Considering that there will be limited on-site PMEs operating within the launching pit at any one time during the construction phase and that noise mitigation

measures will be implemented (e.g. use of QPME, temporary noise barrier and enclosure), no adverse construction noise impact is anticipated due to the proposed Project.

A CNMP will be prepared and checked by Certified Noise Modelling Professional recognised by the Hong Kong Institute of Qualified Environmental Professionals (HKIQEP) or equivalent so that both the verification of the plant inventory and the assessment of the effectiveness and practicality of all identified mitigation measures for mitigating the construction noise impact would be performed before the construction of the Project. The CNMP will include a quantitative construction noise impact assessment, propose quieter construction methods and equipment, recommended noise mitigation measures and a proposed construction noise impact monitoring and audit programme of the Project. All the recommended mitigation measures shall be implemented properly.

4.4.4 EVALUATION OF NOISE IMPACT DURING OPERATION PHASE

No machinery or equipment will operate during the operation phase since the proposed cable circuit will be stationary in the micro-tunnel. There will be no noise generation during the operation phase. Hence, noise impact during the operation phase of the Project is not anticipated.

4.5 WATER QUALITY

As discussed under **Section 4.1**, most of the proposed works only involve underground tunnelling with HDD, as well as the installation of pipes and cables. The proposed works areas would only include the launching and receiving pits, and their immediate vicinity, which are relatively small area.

Streams / hydrolines are located within 500m from the proposed cable circuit. They are typically located on the hillsides on both sides of the road, and are relatively higher than the proposed works areas for the launching and receiving pits. As shown in **Figure 1.4**, both of the working pits are located on flat area next to existing road or building. There is also no stream or hydroline crossing or encroaching into the launching pits, and thus no diversion of existing stream is required. The same applies to the Lantau North (Extension) Country Park, which is within 500m from the launching and receiving pits but is much higher in altitude relative to the proposed works areas under this Project. The launching pits will be at +47 mPD and +54.5 mPD level, and the proposed HDD alignment would be below the launching pits and could reach depth of +15 mPD. The hill side streams / hydrolines on top of the HDD alignment would be in the level of +60 to +180 mPD level. As such, even though there are water sensitive receivers within 500m from the Project Area that is susceptible to potential change in water quality, they are unlikely to be affected by works under this Project. These WSRs are shown in **Figure 4.3**.

Excavation will be required for the launching and receiving pits. Impact to the water quality associated with the excavation for the launching and receiving pits is anticipated to be minimal and surface runoff will not directly discharge to the nearby water bodies/existing drainage systems. The area of excavation is small (dimension of launching pit = ~140m^2; dimension of receiving pit = ~30m^2; dimension of excavation for cable lead-in = ~25m^2), and therefore only minimal impact to the surrounding is anticipated. Given the relatively low elevation when compared with the hillsides on both sides of the road, suitable site drainage and/or other measures would be required to divert stormwater from outside of the site from encroaching into the site and result in contamination, minimising site runoff and erosion on the excavated

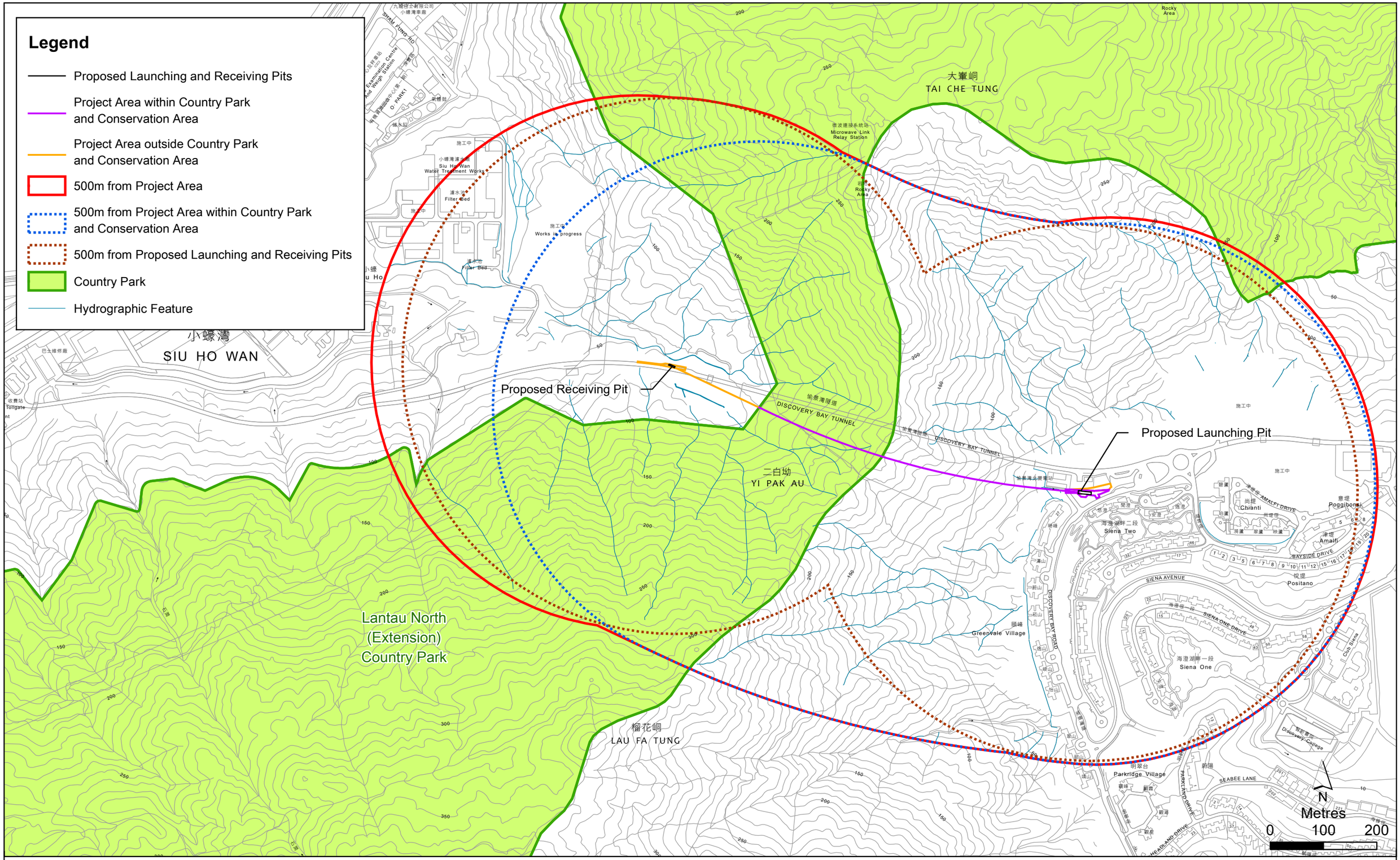


Figure 4.3

Locations of Water Sensitive Receivers

File: T:\GIS\CONTRACT\0750437\mxd\0750437_Water_Sensitive_Receivers.mxd
Date: 25/7/2025

material. Also, proper site control measures will be implemented to avoid run-off of excavated materials into any channel or stream during excavation. Potential water quality impacts on water bodies around the proposed cable circuit are therefore not anticipated.

The risk of potential groundwater infiltration into the HDD micro-tunnel is anticipated to be limited because the HDD tunnel will be pressurised with drilling fluid (to maintain structural integrity of the tunnel and to counteract groundwater infiltration) with drilling fluid so groundwater will not be drawn in. Upon completion of the drilling, the cable installed will fill the void left behind from HDD and thus groundwater infiltration is not anticipated during operation. Therefore, no unacceptable groundwater drawdown is anticipated. Any drilling fluid from HDD would be recycled for reuse for further drilling as much as practicable. Surplus bentonite fluid and drilling fluids would be collected and treated through sedimentation and slurry collection systems to separate solids from liquids. Residual drilling fluid that cannot be reused further would be collected in appropriate container(s), for subsequent appropriate disposal by licensed contractor. Given the use of drilling fluid would be confined to the working pits as well as the drilling fluid recycling system, the risk associated with leak / spill leading to contamination of runoff / nearby watercourse would be very low. And in case of spill, the release would be contained and cleaned up promptly with waste generated collected and stored for disposal by licensed contractor. No unacceptable water quality impact associated with the use of drilling fluid is anticipated.

Temporary storage area with proper covering to avoid erosion by wind or rain will be set up next to the launching pit to allow storage of equipment or stockpile of materials. The temporary storage area is limited in size. Good site practice in terms of minimising storage duration, as well as providing cover is deemed sufficient to avoid loss of materials to nearby surface water. No unacceptable water quality impact from the temporary storage area is anticipated.

Sewage generated from workforce will be properly managed to avoid any impacts to water quality at the nearby drainage and watercourses. Appropriate number of chemical toilets would be provided at both aboveground proposed works areas and these chemical toilets will be cleaned and empties regularly by licensed contractors.

Spillage of chemicals, lube or fuel could also affect water quality at the nearby drainage and watercourses. The number of PMEs are limited and they will not be refuelled or repaired on the workfront, and there will not be storage of chemicals, lube or fuel onsite. Therefore, spillage of chemicals, lube or fuel is not anticipated.

Beyond the tunnelling works, other works under this project (including pipe and ducts installation, cable laying and jointing, as well as testing and commissioning) are not anticipated to result in notably different water quality concern, such as site runoff, sewage from workforce erosion or construction wastewater. These potential sources of water quality impact are anticipated to be properly controlled with the implementation of the mitigation measures above.

With the implementation of proper site runoff control measures (see **Section 5.1.3**) and considering the small scale of works activities and area, water quality impacts associated with the construction of the Project are not anticipated.

No water quality impact will be anticipated during operation phase as the proposed cable circuit is expected to be maintenance free in normal operation.

4.6 WASTE MANAGEMENT

4.6.1 RELEVANT ENVIRONMENTAL LEGISLATION, STANDARDS AND GUIDELINES

The following legislations governing waste management and disposal in Hong Kong are considered in assessing potential waste management implications:

- *Environmental Impact Assessment Ordinance* (CAP.499), Annexes 7 and 15 of *Technical Memorandum on Environmental Impact Assessment Process* (EIAO-TM);
- *Waste Disposal Ordinance* (CAP.354) and its subsidiary legislation such as *Waste Disposal (Chemical Waste) (General) Regulation* (CAP.354C) and *Waste Disposal (Charges for Disposal of Construction Waste) Regulation* (CAP.354N);
- *Public Health and Municipal Service Ordinance* (CAP.132), *Public Cleansing and Prevention of Nuisances Regulation* (CAP.132BK); and
- *Land (Miscellaneous Provisions) Ordinance* (CAP.28).

Other relevant documents and guidelines that are applicable to waste management and disposal in Hong Kong include:

- Chapter 9 of Hong Kong Planning Standards and Guidelines (HKPSG);
- *A Guide to the Chemical Waste Control Scheme*;
- *A Guide to the Registration of Chemical Waste Producers*;
- *Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes*;
- *Public Dumps* (Works Bureau Technical Circular No.2/93);
- *Public Filling Facilities* (Works Bureau Technical Circular No.2/93B);
- *Fill Management* (Works Bureau Technical Circular No.12/2000);
- *Specifications Facilitating the Use of Recycled Aggregates* (Works Bureau Technical Circular No.12/2002);
- *Environmental Management on Construction Sites* (Environmental, Transport and Works Bureau Technical Circular (Works) No.19/2005);
- *Trip Ticket System for Disposal of Construction & Demolition Materials* (Development Bureau Technical Circular (Works) No.6/2010);
- *Enhanced Specification for Site Cleanliness and Tidiness* (Development Bureau TC(W) No. 8/2010);
- *Management of Construction and Demolition Materials* (Civil Engineering and Development Department Technical Circular No.11/2019); and
- *Section 4.1.3* of *Chapter 4 – Management of Construction and Demolition Material Including Rock in Project Administration Handbook (PAH) for Civil Engineering Works (2024 Edition)*.

4.6.2 EVALUATION OF WASTE MANAGEMENT IMPLICATIONS DURING CONSTRUCTION PHASE

During the construction phase, construction activities such as site excavation will result in the generation of waste. The typical waste types associated with these construction activities are summarised below:

- C&D materials, including excavated materials (soil and rock) from excavation works;

- General refuse; and
- Chemical Waste.

No hazardous materials or wastes will be generated during construction phase.

C&D Materials

It is estimated that approximately 520m³ of inert C&D materials (e.g. soil and rock) will be excavated by HDD. There will be no reuse on-site and the excavated soil will be delivered to public fill reception facilities (e.g. Tuen Mun Area 38 Fill Bank) or other public fill reception facilities available at the time of the Project. The designation of inert C&D materials delivery is subject to the designated treatment by the Public Fill Committee according to *DEVB TC(W) No.6/2010*. It is also estimated that approximately 280m^3 of bentonite slurry will be used during HDD. The bentonite slurry will be dewatered in accordance with ProPECC PN 2/24 and disposed to public fill reception facility (e.g. Tseung Kwan O Area 137 Fill Bank or Tuen Mun Area 38 Fill Bank).

Approximately 75m³ of non-inert C&D materials (i.e. construction waste) is anticipated to be generated during the construction phase. These non-inert C&D materials will be sorted in order to segregate the recyclable materials (e.g. metals, plastics and papers) which will be collected by recyclers for reuse and recycling. Non-recyclable waste materials of non-inert C&D materials will be disposed of at designated landfill (e.g. West New Territories Landfill (WENT)) by a waste collector or other landfills available at the time of the Project.

Adverse environmental impact associated with handling, transport and disposal of the C&D materials generated from the construction works of the Project is not anticipated.

General Refuse

The presence of a construction site with workers will result in the generation of general refuse (mainly consisting of food waste, plastic bottles, aluminium cans and wastepaper) which requires off-site disposal. Such refuse should be properly managed, and intentional or accidental release to the surrounding environment must be avoided. Effective collection of site waste will be required to prevent waste materials from being blown around by wind, or creating an odour nuisance or pest & vermin problems.

A maximum of 30 workers is estimated under the Project and a waste generation rate of about 0.65kg/person/day, the amount of general refuse that would be generated is approximately 19.5kg/day. As advised by CLP Power, the construction works will be carried out 6 days per week, thus the amount of general refuse is 117kg/week. Such refuse will be properly managed by suitable waste collectors to prevent intentional or accidental release into the surrounding environment. Recycling bins will be provided on-site to facilitate the recovery of recyclable materials. The contractor shall employ a reliable waste collector to remove the non-recyclable general refuse from the Project Area to WENT Landfill on a regular basis and deliver the recyclables to the local specialised recycling companies. Given the small quantity of general refuse involved and with proper housekeeping measures and refuse collection in place, adverse environmental impact arising from handling, transport and disposal of the general refuse during the construction phase is not anticipated.

Chemical Waste

Chemical waste will be generated from maintenance and servicing activities for construction equipment. Chemical waste such as waste lubricating oil, used solvents and spent chemicals

may be generated. It is anticipated that the total quantity of chemical waste produced would be limited and anticipated to be only a few cubic meters per month.

The chemical wastes produced will be handled and disposed of in an appropriate manner as stipulated in the *Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes* and *Waste Disposal (Chemical Waste) (General) Regulation*. A licensed chemical waste collector should be deployed to special handle, transport and dispose of the chemical wastes at the Chemical Waste Treatment Centre (CWTC) or other licensed facilities, in accordance with the *Waste Disposal (Chemical Waste) (General) Regulation*.

With the incorporation of suitable arrangements for the storage, handling, transportation and disposal of chemical wastes under the requirements stated in the *Waste Disposal (Chemical Waste) (General) Regulation* and the *Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes*, adverse environmental impact arising from the handling, transportation and disposal of chemical waste during construction phase is not anticipated.

4.6.3 EVALUATION OF WASTE MANAGEMENT IMPLICATIONS DURING OPERATION PHASE

No waste is anticipated to be generated during the operation phase of the Project. Waste management issues are not anticipated during operation phase.

4.7 TERRESTRIAL ECOLOGY

4.7.1 ECOLOGICAL BASELINE CONDITIONS

A review of ecological resources within 500m from the Project Area was conducted and supplemented with baseline ecological surveys conducted in September and October 2024. Five (5) major habitat types were identified within 500m from the Project Area, namely Woodland, Shrubland, Plantation, Developed Area and Watercourse. The aboveground project works areas (i.e. proposed works areas around the launching and receiving pits) comprises Developed Area. The underground Project Area (i.e. proposed cable circuit / HDD alignment) covers Shrubland, Plantation, Developed Area and Watercourse. The habitat map and species of conservation importance recorded during the baseline surveys is presented in **Figure 4.4**. The areas of each habitat recorded within the Project Area and in the Study Area are provided in **Table 4.7**.

In general, the habitats within the Study Area supports low, low to moderate flora and fauna species diversity and low abundance or richness of wildlife. 1 flora and 12 fauna species of conservation importance were recorded within the Study Area, but none were recorded within the Project Area. **Table 4.8** summarises the species of conservation importance recorded within the Study Area. No breeding or nesting activities of wildlife were observed during the survey. The overall ecological importance of other habitats is mostly low to moderate, except for Developed Area which is of low ecological importance. Details of the ecological baseline conditions and evaluation are presented in **Appendix B**.

Legend

- Proposed Cable Circuit / HDD Alignment
- Proposed Launching Pit
- Proposed Receiving Pit
- Proposed Works Area at Receiving Pit
- Proposed Works Area at Launching Pit
- Proposed Excavation Area
- 500m Study Area
- Country Park
- Conservation Area

Species of Conservation Importance

Flora

- *Diospyros vaccinioides*

Mammal

- Red Muntjac
- Chinese Pipistrelle
- Japanese Pipistrelle
- Short-nosed Fruit Bat

Avifauna

- Greater Coucal

Reptile

- Many-banded Krait

Amphibian

- Lesser Spiny Frog
- Romer's Tree Frog

Butterfly

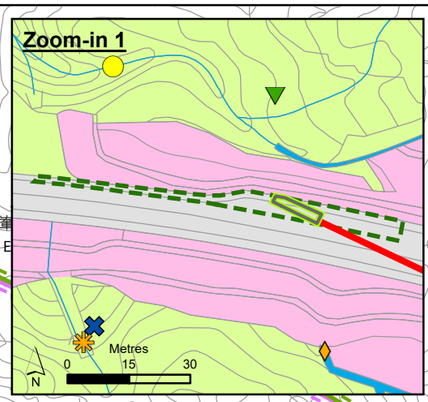
- Forget-me-not

Freshwater Invertebrate

- *Nanhaipotamon hongkongense*

Habitat

- Woodland
- Plantation
- Shrubland
- Developed Area
- Watercourse



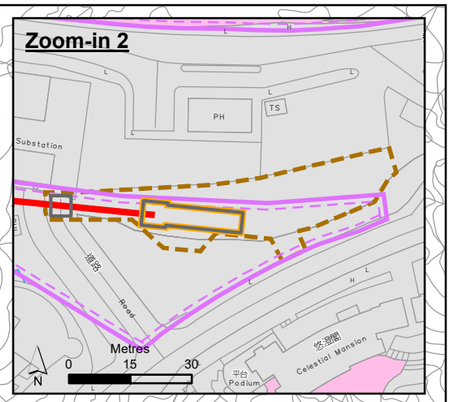


Figure 4.4

Habitat and Species of Conservation Importance Recorded in Baseline Survey

File: T:\GIS\CONTRACT\0750437\mxd\0750437_Habitat_and_Species_with_CP_CPA.mxd
Date: 25/7/2025

TABLE 4.7 AREA OF EACH HABITAT IDENTIFIED IN THE STUDY AREA

Habitat	Area within Project Area (m^2) – Aboveground	Areas within Project Area - Underground Component without Habitat Loss/ Disturbance (m^2)	Total Area within Project Area (m^2)	% of Project Area	Area within Study Area (ha)	% of Study Area
Woodland	-	-	-	-	~6.1	~4%
Shrubland	-	~580	~580	~28%	~115.6	~67%
Plantation	-	~50	~50	~2%	~13.6	~8%
Developed Area	~1,330	~100	~1,430	~70%	~37.5	~22%
Watercourse	-	(length~ <10m)	(length <10m)	-	~0.03 (length ~13.9km	<0.1%
TOTAL	**~1,330**	**~730**	**~2,060**	**100%**	**~172.8**	**100%**

TABLE 4.8 SPECIES OF CONSERVATION IMPORTANCE RECORDED WITHIN THE STUDY AREA

Common Name	Scientific Name	Chinese Name	Conservation Status	Recorded Habitat
Flora				
Small Persimmon	*Diospyros vaccinioides*	小果柿	IUCN: CR; RLCHP: EN	Shrubland
Mammals				
Short-nosed Fruit Bat	*Cynopterus sphinx*	短吻果蝠	Cap.170	Plantation
Japanese Pipistrelle	*Pipistrellus abramus*	東亞家蝠	Cap.170	Shrubland
Chinese Pipistrelle	*Hypsugo pulveratus*	灰伏翼	Cap.170; Fellowes: (LC)	Plantation, Developed Area
Red Muntjac	*Muntiacus vaginalis*	赤麂	Fellowes: PRC	Woodland, Shrubland
Avifauna				
Greater Coucal	*Centropus sinensis*	褐翅鴉鵑	CSMPS(II)	Shrubland

Common Name	Scientific Name	Chinese Name	Conservation Status	Recorded Habitat
Crested Goshawk	*Accipiter trivirgatus*	鳳頭鷹	Cap.586; CSMPS(II); CITES(II)	In-flight
Black Kite	*Milvus migrans*	黑鳶	Cap.586; Fellowes: (RC); CSMPS(II); CITES(II)	In-flight
Amphibians				
Lesser Spiny Frog	*Quasipaa exilispinosa*	小棘蛙	Fellows: PGC; RLCV(VU)	Watercourse
Romer's Tree Frog	*Liuixalus romeri*	盧氏小樹蛙	Cap.170; Fellowes: PGC; RLCV(VU); IUCN(EN)	Woodland, Watercourse
Reptiles				
Many-banded Krait	*Bungarus multicinctus*	銀環蛇	Fellowes: PRC; RLCV(EN)	Plantation

Note:

Conservation Status:

- Cap. 170: Protected under Wild Animals Protection Ordinance. All birds in Hong Kong are protected under Cap. 170.
- Cap. 586: Protection of Endangered Species of Animals and Plants Ordinance
- Fellowes – Fellowes et al. (2002): PGC = Potential Global Concern, PRC = Potential Regional Concern, RC = Regional Concern, LC = Least Concern. Letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence.
- RLCV – Red List of China's Vertebrate (2020): VU = Vulnerable, EN = Endangered.
- RLCHP – Red List of China's Higher Plants (2020). EN = Endangered
- CSMPS– China State Major Protection Status: Appendix (II)
- IUCN – International Union for Conservation of Nature Red List of Threatened Species (2025). EN = Endangered, CR = Critically Endangered
- CITES – Under Appendix (II) of Convention on International Trade in Endangered Species of Wild Flora and Fauna

4.7.2 POTENTIAL ECOLOGICAL IMPACTS

The potential ecological impact assessment was conducted in accordance with the EIAO GN 6/2010. The potential ecological impacts associated with the proposed cable circuit laying in Discovery Bay (including but not limited to micro-tunnel drilling, cable laying and backfilling works) during construction are listed below. The details of the potential ecological impacts are summarised in **Table 4.9**. The proposed cable circuit would be placed underground and avoided direct impacts on the Country Park area. The only aboveground elements of the Project are the works areas around the launching and receiving pits as well as cable lead-in. The concerned areas are located within Development Area in CA zone.

- Temporary habitat loss;
- Direct impact on the flora and fauna species of conservation importance;
- Indirect impacts to the surrounding habitats and associated wildlife;

- Indirect impacts of pollution on adjacent waterbodies; and
- Groundwater drawdown.

The potential impacts would not be resulted after completion of the installation works and reinstatement of the Project Area, therefore, no operational impacts are anticipated.

TABLE 4.9 POTENTIAL ECOLOGICAL IMPACTS

Impact	Descriptions	Evaluations	Impact Significance
Direct Impacts			
Temporary habitat loss	• The entire proposed works areas at the launching and receiving pits of ~1,330m^2 fall within Developed Area. • Among that, ~200m^2 (of which ~160m^2 falls within CA) of Developed Area will be temporarily lost due to excavation for the construction of pits and cable lead-in (**Figure 4.4**).	• The loss of natural habitat was avoided through the adoption of HDD which the proposed cable circuit would go underneath the natural habitats of the entire CP and most of CA without excavation. • No tree felling or pruning would be involved. • The excavated area will be reinstated after construction works. • The directly affected habitat is of low ecological value and subjected to existing disturbances from human activities.	**Low**
Direct impact on the flora and fauna species of conservation importance	• The proposed works may potentially cause the injury/mortality of nearby flora and wildlife.	• No flora and fauna species of conservation importance were recorded within the aboveground Project Area. • Fauna species of conservation importance recorded in the vicinity of the Project Area were highly mobile (i.e. bats and butterflies) and are not subjected to direct impact. • The directly affected habitat (i.e. Developed Area) is subjected to existing disturbances from human activities and not likely to support fauna species of conservation importance during construction phase.	**Low**
Indirect Impacts			
Indirect impacts to the surrounding habitats and associated wildlife	• The main sources of impacts include increased human activities (esp. during the construction phase) and noise, dust, waste generation and lighting accrued from the construction activities. • Surrounding habitats (i.e. Plantation and Watercourse) and different terrestrial fauna, including mammal, avifauna and amphibian species of conservation importance, identified in the vicinity of the Project Area could be indirectly impacted by the proposed construction works.	• Fauna (i.e. avifauna, bats and terrestrial mammals) inhabiting the nearby area are highly mobile and able to move to the other similar habitats which are larger in area and with higher habitat quality. These faunas are also subjected to existing human activity disturbances from adjacent Developed Area and thus considered less susceptible to additional impacts from the Project given its scale is small. • Good site practice will be adopted. • Night-time works will be avoided under the Project. Only minimal lightings will be used toward the Project Area for safety purpose.	**Low**

Impact	Descriptions	Evaluations	Impact Significance
Indirect impacts of pollution on adjacent waterbodies	• Site runoff from the Project Area may contain suspended solids and contaminants (e.g. runoff and erosion of exposed bare soil, earth and stockpiles, sediment released during excavation, fuel, oil, and lubricant from maintenance of construction mechanical equipment) if uncontrolled and may lead to water pollution. • Water pollution could be substantial if construction runoff is allowed to discharge without mitigation, resulting in adverse impacts through physical and biological disruption of the area's ecosystem.	• The scale of the construction works is small. • The Project Area is located on ground level or underground where the watercourses in the vicinity are all existing drainage channels with very limited wildlife. No identified natural watercourse is located at the downstream of the Project Area. • Good site practice will be implemented.	**Negligible**
Groundwater drawdown	• The drilling of underground alignment by HDD may result in groundwater infiltration and potential groundwater table drawdown if uncontrolled. • Groundwater drawdown may lead to settlement and dewatering of surface waterbodies (i.e. watercourses), which may impact freshwater flora and fauna utilizing the waterbodies.	• The scale of the project is small. • The diameter of the HDD alignment is small (900mm). • The risk of potential groundwater infiltration into the HDD tunnel is anticipated to be limited because the HDD tunnel will be pressurised with drilling fluid (to maintain structural integrity of the tunnel and to counteract groundwater infiltration) so groundwater will not be drawn in. Upon completion of the drilling, the cable installed will fill the void left behind from the HDD and thus groundwater infiltration is not anticipated during operation. Therefore, no unacceptable groundwater drawdown is anticipated.	**Negligible**
Cumulative Impacts			
Proposed Residential Development at Area N1 North (Excluding Area N1D) Northern Portion (Phase 19), Discovery Bay North, Lantau DD352 Lot385 R.P. and The Extension Thereto	• The construction work is located about 145m east from the Project Area. • The proposed construction programme of this project is from April 2023 to June 2025. • The proposed scope of this project is to construct 1400-unit Residential Development Project in Discovery Bay North.	• The overlapping timeline is short (i.e. 1 month). • With the mitigation measures recommended in place in both projects, no unacceptable cumulative impacts are anticipated.	**Negligible**
Siu Ho Wan Fresh Water Service Reservoir and Associated Mainlaying Works	• The construction work is situated approximately 130m northwest of the Receiving Pit and is currently under construction.	• With appropriate mitigation measures and good site practices implemented in both projects, the impacts to the surrounding habitats and wildlife are anticipated to be limited. Therefore, unacceptable cumulative impact is not anticipated.	**Negligible**

4.8 OTHERS

4.8.1 LANDSCAPE AND VISUAL

As the proposed cable circuit will be placed underground, its installation will not cause any visual obstruction or inconvenience to the public. Only minimal above ground works are expected at the launching and receiving pits. No tree felling is anticipated. The proposed works areas will be reinstated to their original state immediately after the works are completed, and so the works are not anticipated to cause any long-term adverse impact on existing landscape resources or character. Therefore, adverse landscape, tree or visual impact is not anticipated during both construction and operation phases.

4.8.2 CULTURAL HERITAGE

4.8.2.1 WORKS INVOLVED IN CONSTRUCTION PHASE

The works involved for the proposed cable circuit at south of Discovery Bay Tunnel include construction of a cable corridor (around 810m long and 900mm in diameter) by trenchless approach, i.e. HDD. Proposed ground excavation will involve a launching pit at south of the existing Discovery Bay North Substation at Discovery Bay Tunnel, a receiving pit located at the west, an excavation area for cable lead-in, as well as the trial pits. No excavation works will be required for the construction of the cable corridor since the proposed cable circuit is constructed by trenchless approach. Additionally, no excavation works will be required for temporary storage area.

4.8.2.2 CULTURAL HERITAGE ASSESSMENT AREA

Given the scale of work for the proposed launching and receiving pits, trial pits and excavation area for cable lead-in is not large (size of launching pit: ~140m^2 x 2.5m (D), size of receiving pit: ~30m^2 x 3.0m (D), size of trial pits: ~3m (L) x 3m (W) x 3m (D) each), size of excavation area under small-scale open cut excavation for cable lead-in: ~5m(L) x 5m(W) x 5.5m(D)), a cultural heritage assessment area (CHAA) (see **Figure 4.5**) within 100m from the boundary from where construction works will take place for the Project is considered adequate to access potential cultural heritage impact associated from the Project as shown in **Figure 4.5**. No heritage sites items including declared monuments, proposed monuments, graded historic buildings, sites/buildings/structures in the list of new items pending for grading assessment, SAI or Government historic sites identified by AMO are identified within the CHAA.

4.8.2.3 ARCHAEOLOGICAL POTENTIAL EVALUATION AND IMPACT ASSESSMENT

With regard to unknown archaeological resources, potential archaeological impact due to the proposed works of the Project will mainly cause by soil disturbance that may contain archaeological deposits. Thus, the focus of archaeological impact review is placed on works area that involve soil excavation work (i.e. the proposed launching and receiving pits, the proposed excavation area for cable lead-in, as well as the proposed trial pits).

The proposed launching and receiving pits, the excavation area for cable lead-in, as well as the trial pits, are located in well developed land of existing pavement/ the road surface of current Discovery Bay Road and Discovery Bay Tunnel. Although these areas mostly fall within debris flow deposits (see **Figure 4.5**) which may hold cultural deposits, the works are mainly conducted in an area that had been disturbed by previous road construction works. Additionally, the steep slope also decreases the archaeological potential as it is not favourable to cultural deposits accumulation.

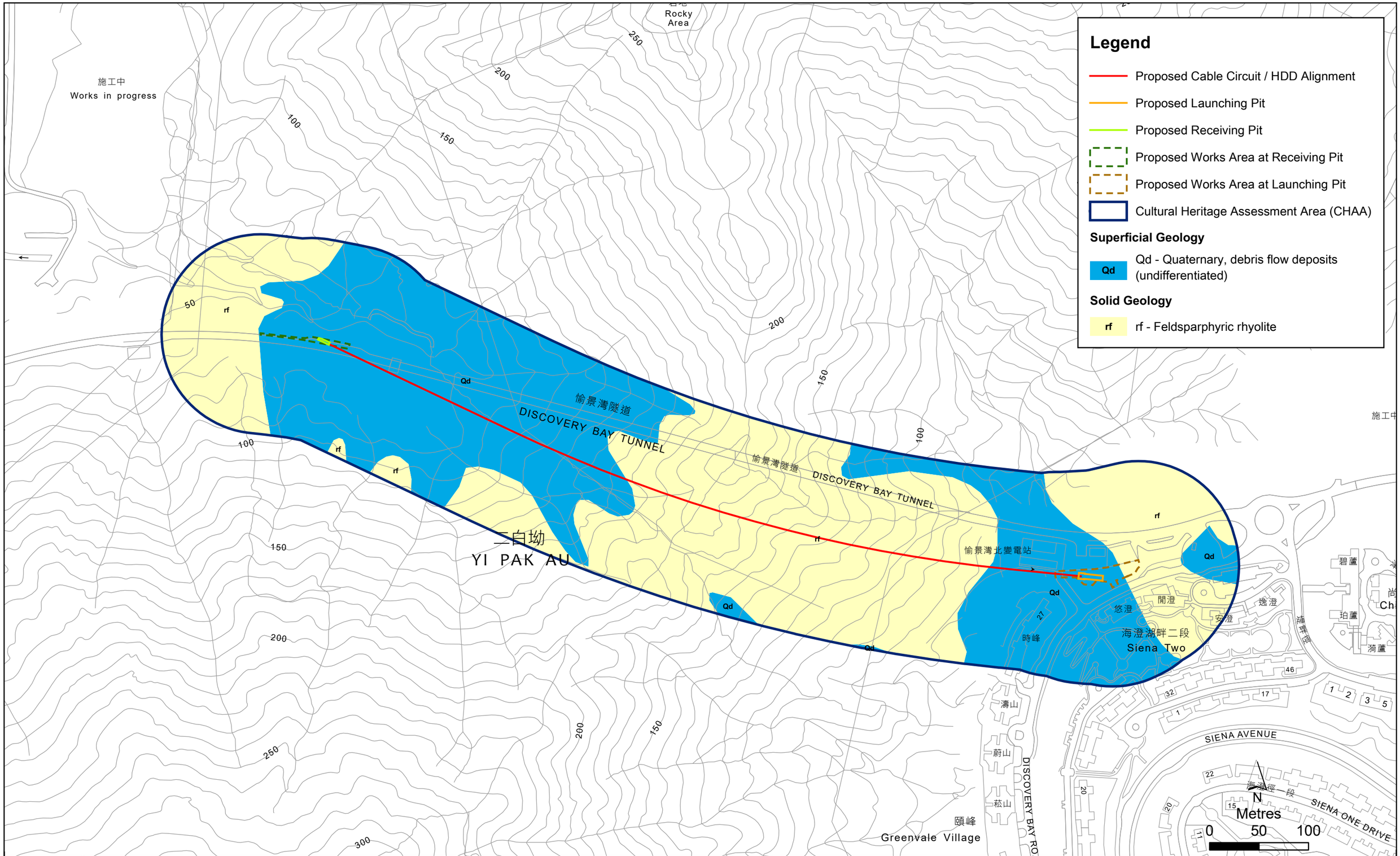


Figure 4.5

Cultural Heritage Assessment Area

ERM

File: T:\GIS\CONTRACT\0750437\mxd\0750437_CH_Resources_Geology.mxd
Date: 24/7/2025

As the proposed launching and receiving pits, the excavation area for cable lead-in, as well as the trial pits are of no archaeological potential, no archaeological impact is anticipated during construction work of the Project.

Furthermore, since no excavation works will be required for the construction of the cable corridor as the proposed cable circuit is constructed by trenchless approach, no cultural heritage impact arising from the construction of the cable corridor is anticipated.

As no heritage sites items are identified in the CHAA, no built heritage impacts arising from the construction work of the Project are anticipated.

4.8.2.4 OPERATION PHASE

No cultural heritage resources identified to be impacted by the operation of the Project.

4.8.3 HAZARD TO LIFE

4.8.3.1 DANGEROUS GOODS

No dangerous goods will be involved in this project in either the construction or operation phases.

4.8.3.2 HAZARDOUS MATERIALS OR WASTES, INCLUDING POTENTIALLY CONTAMINATED MATERIALS

No hazardous materials, including potentially contaminated materials or wastes will be generated by this Project at either construction or operation phases. There are no contaminated mud pits in the vicinity of the proposed cable circuit.

4.8.3.3 RISK OF ACCIDENTS RESULTING IN POLLUTION OR HAZARD

Cable laying via HDD is an established industry process, and there is only a minimal risk of accident. Since the Project does not involve the use or generation of any dangerous goods or hazardous materials, the risk of an accident resulting in pollution or hazard is negligible.

5. PROTECTION MEASURES AND ANY FURTHER IMPLICATIONS

5.1 CONSTRUCTION PHASE

5.1.1 AIR QUALITY

In order to comply with *Air Pollution Control Ordinance*, requirements for dust control stipulated in the *Air Pollution Control (Construction Dust) Regulation* should be incorporated in the contract document in order to minimise any potential dust nuisance arising from the construction activities of the Project. Any potential dust impact and watering mitigation would be subject to the actual site condition.

The following air quality control measures should be implemented to alleviate the fugitive dust impact during construction phase:

- All areas involving site clearance and excavations works will be sprayed with water before, during and after the operations to maintain the entire surface wet;
- Restricting heights from which materials are to be dropped, as far as practicable to minimise the fugitive dust arising from unloading/loading;
- Immediately before leaving a work site, all vehicles shall be washed to remove any dusty materials from the bodies and wheels. However, wetting of materials and surfaces should avoid excessive use of water;
- Where a vehicle leaving a work site is carrying a load of dusty materials, the load shall be covered entirely by clean impervious sheeting to ensure that the dusty materials will not be released from the vehicle;
- Any stockpile of dusty materials on-site will be covered entirely by impervious sheeting; and/or placed in an area sheltered on the top and 3 sides. They should also be sprayed with water immediately prior to any loading, unloading or transfer operation to dampen the dusty materials; and
- Any unpaved haul road shall be sprayed with water so as to maintain the entire road surface wet.

The following mitigation measures will be implemented to minimise air quality impact from emissions of PMEs and construction trucks during the construction phase:

- Exempted NRMMs shall be avoided;
- Deploy electrified NRMMs as far as practicable;
- Provide power supply for on-site machinery if feasible; and
- Travelling route of the construction vehicles on public roads will be planned as far as practicable in a way to minimise the air quality impacts to the nearby ASRs.

5.1.2 NOISE

Proposed construction noise mitigation measures include:

- Adoption of quieter construction methods and use of QPME;
- Use of temporary noise barriers and noise enclosure to screen noise from PMEs; and
- Good site management practices.

The above mitigation measures and the EPD's "Recommended Pollution Control Clauses for Construction Contracts" would need to be implemented in work sites as good practices where appropriate.

A CNMP will be prepared before the construction of the Project. The CNMP will include a quantitative construction noise impact assessment, propose quieter construction methods and equipment, recommended noise mitigation measures and a proposed construction noise impact monitoring and audit programme of the Project. All the recommended mitigation measures shall be implemented properly.

5.1.3 WATER QUALITY

Appropriate measures including the provision of temporary movable toilets and controlled wastewater discharge to the nearby water bodies will be implemented in accordance with the guidelines stipulated in *EPD's Practice Note for Professional Persons on Construction Site Drainage (ProPECC PN2/24)* during the construction works to properly control site run-off and drainage and to minimise potential water quality impacts. The following specific measures should be included:

- Suitable perimeter channels or other measures to to divert stormwater from outside of the site from encroaching into the site and result in contamination;
- Cover exposed soil and open stockpiles;
- Water used in / generated from tunnelling should be reused / recirculated after sedimentation / treatment as far as practicable. When there is a need for final disposal, the wastewater should be discharged into storm drains via silt removal facilities.
- Bentonite slurries used in tunnel boring should be reconditioned and reused wherever practicable. If the disposal of a certain residual quantity cannot be avoided, the used slurry may be disposed of at the marine spoil grounds subjected to obtaining a marine dumping licence in accordance with the Dumping at Sea Ordinance (Cap. 466). If the used bentonite slurry is intended to be disposed of through the public drainage system, it should be treated to the respective effluent standards applicable to foul sewers, storm drains or the receiving waters as set put in the WPCO Technical Memorandum on Effluent Standards.
- Appropriate number of chemical toilets would be provided at both proposed works areas and these chemical toilets will be cleaned and empties regularly by licensed contractors; and
- PMEs should not be refuelled or repaired on the workfront. No storage of chemicals, lube or fuel on-site would be allowed.

Where appropriate, wastewater discharge licence will be applied and conditions/requirements will be complied with in accordance with the Water Pollution Control Ordinance (WPCO) (Chapter 358).

In addition, typical control measures would be adopted by this Project to minimise potential water quality impact associated with HDD. The HDD tunnel will be pressurised with drilling fluid to counteract the potential infiltration of groundwater. Any drilling fluid will be recycled and reconditioned for reuse. Any residual drilling fluid that is no longer suitable for reuse will be stored for appropriate disposal by licensed contractor. Any spill will be contained and promptly cleaned up and the waste generated will be disposed of by licensed contractor.

5.1.4 WASTE MANAGEMENT

The contractors employed for the Project will be required to comply with the *Waste Disposal Ordinance* when handling, collection and disposal of wastes from the construction phase of the Project. In addition, the contractors are required to incorporate recommendations on waste recycling, storage, transportation and disposal measures into a comprehensive on-site waste management plan. Such a waste management plan should incorporate site-specific factors, such as the designation of areas for the segregation and temporary storage of reusable and recyclable materials.

In the waste management plan to be prepared, the hierarchy presented below (in order of preference) will be used to evaluate waste management options, thus allowing maximum waste reduction and often reducing costs:

- Avoidance and minimisation, i.e. not generating waste through changing practices;
- Reuse of materials, thus avoiding disposal (generally with only limited reprocessing);
- Recovery and recycling, thus avoiding disposal (although reprocessing may be required); and
- Treatment and disposal, according to relevant laws, guidelines and good practice.

To further minimise waste arising and keep environmental impacts within acceptable levels, careful design, planning and good site management practice will be adopted, including:

- Approved personnel, such as site manager, will be nominated to be responsible for implementation of good site practices, arrangements for waste collection and effective disposal of all wastes generated at the site to appropriate facilities;
- Training on appropriate waste management procedures, including waste reduction, reuse and recycling and chemical waste handling procedures will be provided to the workers and site personnel;
- Sufficient waste disposal points will be provided and collection of waste for disposal will be arranged regularly;
- Different types of waste will be properly segregated and stored on-site to increase the feasibility of recycling certain components of the waste streams, such as steel; and
- Waste will be transported in enclosed containers or skips to minimise windblown litter and dust/odour nuisance during the transportation of waste.

A trip ticket system will be implemented with reference to the *DEVB TC(W) No.6/2010* for the disposal of C&D materials.

All dump trucks engaged on-site for delivery of inert and non-inert C&D material from the site to the designated disposal location (i.e. landfill) should be equipped with GPS or equivalent system for tracking and monitoring of their travel routings and parking locations by the contractor to prohibit illegal dumping and landfilling of materials. The data collected by GPS or equivalent system should be recorded properly to check and analyse the travel routing and parking locations of dump trucks engaged on-site.

Chemical waste generated during the Project will be properly stored in accordance with EPD's *Code of Practice on the Packaging, Labelling and Storage of Chemical Waste* for subsequent collection and disposal by a licensed Chemical Waste Collector. General refuse generated on-site will be stored in enclosed bins and collected by waste collector on regular basis.

5.1.5 TERRESTRIAL ECOLOGY

Based on the ecological impacts identified in **Section 4.7**, mitigation measures to avoid, minimise or compensate (if necessary) for the potential significant impacts are detailed below.

- During the planning stage, the Project Proponent has conducted site visits with contractors to identify Project Area with minimal area/ impact on vegetation, tree and habitat loss at any stage of the Project. No tree felling or pruning will be caused by the Project.
- The proposed cable circuit will be constructed using HDD, which totally avoids excavating trenches under the natural habitats within CP and mostly within CA, and would minimise disturbance to existing habitats and associated wildlife.
- Night-time works will be avoided under the Project;
- The boundary of the works area will be clearly marked by temporary fence. The works area boundaries will be regularly checked to ensure that they are not breached and that no adverse impacts occur to surrounding habitat and associated wildlife;
- Contractors will check the pits each day, prior to commencing work, to ensure that no mammals, reptiles or amphibians are trapped in the pits;
- Avoid the use of direct lighting on adjacent habitats from the Project Area (i.e. shrubland and plantation) and control night-time lighting to reduce potential ecological impacts.
- Adopt appropriate measures including controlled wastewater discharge to the nearby water bodies, in accordance with the guidelines stipulated in *Environmental Protection Department (EPD)'s Practice Note for Professional Persons on Construction Site Drainage (PN2/24)* during the construction works to properly control site run-off and drainage and to minimise potential water quality impacts;
- Avoid any damage and disturbance, particularly those caused by filling and illegal dumping to the surrounding natural habitats;
- Prohibit and prevent open fires within the works area boundary during construction and provide temporary firefighting equipment in the works areas; and
- Good site practice will be enforced, and effective mitigation measures are required. Works Area will be kept tidy at all times.

5.1.6 LANDSCAPE AND VISUAL

Given the limited extent of any landscape or visual impacts as described in **Section 4**, the standard practice measures assumed to be adopted during construction, are considered adequate. The contractor' s standard site management practice during construction, must include:

- Briefing all workers to avoid impacting the existing vegetation, within the Project Area in-so-far as possible, and strictly outside the Project Area;
- Maintaining the site in a clean and tidy state at all times, including managing stockpiled materials appropriately to alleviate visual intrusion;
- Managing construction waste appropriately (See **Section 5.1.4**);
- Minimising the extent of works and the construction time as far as practicable; and
- Reinstating any temporarily affected works areas to their original condition promptly upon completion of works

5.1.7 CULTURAL HERITAGE

No cultural heritage impacts have been identified to arise from the construction of the cable corridor using HDD and the associated pits, no mitigation measures are therefore required. As a precautionary measure, the project proponent and his/her contractor are required to inform AMO immediately when any antiquities or supposed antiquities under the Antiquities and Monuments Ordinance (Cap. 53) are discovered during the course of works.

5.2 OPERATION PHASE

Since no impacts are anticipated during operation phase, no mitigation measures are required.

5.3 POSSIBLE SEVERITY, DISTRIBUTION, DURATION OF ENVIRONMENTAL EFFECTS AND FURTHER IMPLICATIONS

Since the major portion of the proposed cable works are located underground, and in view of the small proposed works areas at the launching and receiving pits, the associated environmental impacts during construction phase is anticipated to be localised and temporary. With the implementation of proposed mitigation measures, there would be no adverse residual impacts.

As the proposed cable circuit is expected to be maintenance free in normal operation, and that the proposed cable circuit is located underground, no operational impacts nor further implications would be anticipated.

6. CONCLUSION

The Project proposes the installation of the proposed cable circuit which is located within the Lantau North (Extension) Country Park and Conservative Area (CA). The selection of the cable routing, construction method and launching pit location has taken into consideration the nature of the area and mitigation measures have been proposed to further reduce potential environmental disturbances to sensitive receivers arising from the implementation of the Project.

The scale of the construction works is small, mainly utilising small-scale construction equipment/machineries and hand tools, and most of the construction works will be underground. There will be no adverse environmental impacts during operation phase as the proposed cable circuit is expected to be maintenance free in normal operation. Appropriate environmental mitigation measures have been identified and will be implemented. Overall environmental impacts potentially arising from the proposed cable circuit and associated works area are therefore considered to be insignificant. As appropriate environmental mitigation and control measures will be implemented according to the recommendations provided in the Project Profile, no unacceptable adverse residual environmental impacts are anticipated for the Project.

7. USE OF PREVIOUSLY APPROVED PROJECT PROFILES FOR DIRECT APPLICATION FOR ENVIRONMENTAL PERMITS

Reference has been made to the following Project Profiles shown in **Table 7.1** for direct application of Environmental Permits due to the similarity in work nature, purpose and characteristics of the projects.

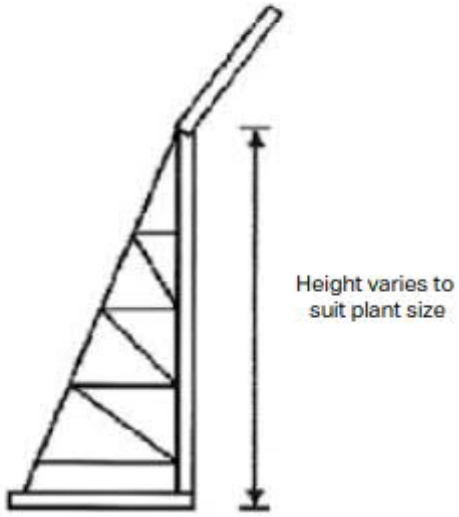
TABLE 7.1 PREVIOUSLY APPROVED PROJECT PROFILES RELEVANT TO THE PROPOSED PROJECT

Project Reference	**Submission Report (Register No.)**	**Structure of Project**	**Aspects of environmental impacts addressed in the Project Profile**	**Measures recommended in the Project Profile**	**Conclusion of Study**	**Date of Approval/ Permission for Direct Application of EP**	**Date of Issuance of EP (EP No.)**
Installation of Proposed Cable Route from Cheung Sha to Tung Chung Town	7 April 2022 (PP-641/2022)	The project involves the installation of an underground 132kV 150MVA cable circuit connecting the Cheung Sha substation to the Tung Chung Town substation.	Air quality, noise, water quality, waste management, terrestrial ecology, landscape and visual, cultural heritage and other impacts.	Implementation of mitigation measures related to air quality, noise, water quality, waste management, terrestrial ecology, landscape and visual and cultural heritage during construction phase.	No unacceptable adverse residual environmental impacts with the implementation of appropriate environmental control measures.	17 May 2022	20 June 2022 (EP-611/2022)
Installation of the Proposed 132kV Cable Circuits Connecting	17 June 2021 (PP-625/2021)	The project involves the installation of two cable circuits (turn in and turn out) linking up the proposed Ho To	Air quality, noise, water quality, waste management, ecology,	Implementation of mitigation measures related to air quality, noise, water quality,	No unacceptable adverse residual environmental impacts with the implementation of	22 July 2021	18 August 2021 (EP-594/2021)

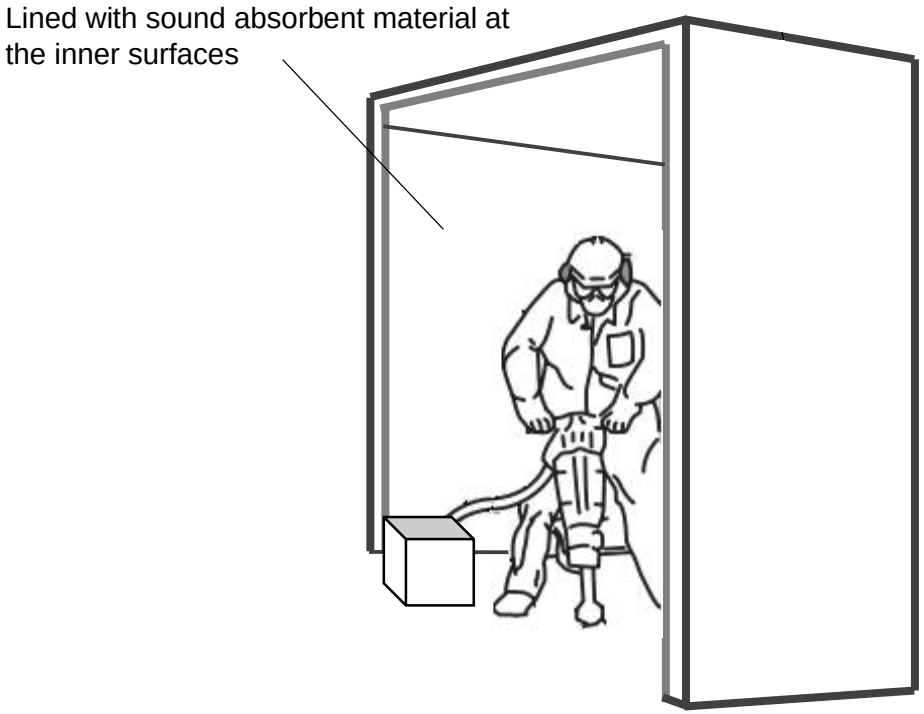
Project Reference	Submission Report (Register No.)	Structure of Project	Aspects of environmental impacts addressed in the Project Profile	Measures recommended in the Project Profile	Conclusion of Study	Date of Approval/ Permission for Direct Application of EP	Date of Issuance of EP (EP No.)
with Ho To West Substation and Existing 132kV Fanling to Mai Po Cable Circuits		West Substation with two existing circuits connected to Fanling and Mai Po Substations	landscape and visual and other impacts.	waste management and ecology during construction phase.	appropriate environmental control measures.		

APPENDIX A INDICATIVE DRAWINGS OF TEMPORARY NOISE BARRIER AND ENCLOSURE

Indicative Drawings of Typical Temporary Noise Barrier and Enclosure



Typical Configuration of Noise Barrier



Typical Configuration of Portable Noise Enclosure

APPENDIX B ECOLOGICAL BASELINE

132kV Circuit Reinforcement at Discovery Bay Tunnel

Appendix B

PREPARED FOR

CLP Power Hong Kong Limited

DATE

04 September 2025

REFERENCE

0750437

SIGNATURE PAGE

132kV Circuit Reinforcement at Discovery Bay Tunnel

Appendix B

0750437

Terence Fong
Partner

ERM-Hong Kong, Limited
2507, 25/F One Harbourfront
18 Tak Fung Street
Hunghom
Kowloon
Hong Kong
T +852 2271 3000

CONTENTS

LIST OF TABLES

LIST OF FIGURES

ANNEXES

B1. LITERATURE REVIEW

A desktop review was conducted to search for relevant scientific papers, reports and previous Environmental Impact Assessment (EIA) reports for the purpose of identifying any available ecological information, including habitats and species of conservation importance in the area. Based on recent aerial photos and relevant previous studies, habitats and species of conservation importance recorded previously were identified. General studies (if any), which may not necessarily focus on the Study Area and Project Site, were also reviewed and relevant information was extracted from the report(s).

B1.1 SITE OF CONSERVATION IMPORTANCE

The Study Area, situated in Discovery Bay, falls within CP and CA (See **Figure B1.1**).

B1.1.1 COUNTRY PARK

The Lantau North (Extension) Country Park within the Study Area is designated under the Country Parks Ordinance (Cap. 208) (**Figure B1.1**). The country park is mainly mountainous and upland valleys covered with natural woodland and unspoiled stream courses. The well-established areas of secondary woodlands, shrubland, grassland and freshwater habitats are of high conservation and landscape value. The proposed Horizontal Directional Drilling (HDD) alignment will be laid underground within this zone.

The designation of CP is intended to provide the services of nature conservation, countryside recreation and outdoor education. Developments within CP are generally discouraged unless it is necessary to protect the vegetation and wildlife inside CP or to encourage the use of CP for the purposes of recreation and tourism. All uses and developments within CP should seek consent from the Country and Marine Parks Authority.

B1.1.2 CONSERVATION AREA

The large areas of upland valley within the Study Area are zoned as CA under the draft Discovery Bay Outline Zoning Plan No. S/I-DB/6 (**Figure B1.1**). Part of the Project Site including the proposed HDD alignment, launching pit and associated works areas, and the cable lead-in fall within this zone.

The planning intention of this zone is to conserve the existing natural character and intrinsic landscape value by protecting topographical features from encroachment by adjacent developments. There is a general presumption against development within this zone. In general, only uses that support education or for public convenience and utility may be approved.

B1.2 PREVIOUSLY RECORDED SPECIES OF CONSERVATION IMPORTANCE

A literature review has been conducted to characterise the existing ecological conditions of the Project Site and Study Area and to identify habitats and species of conservation

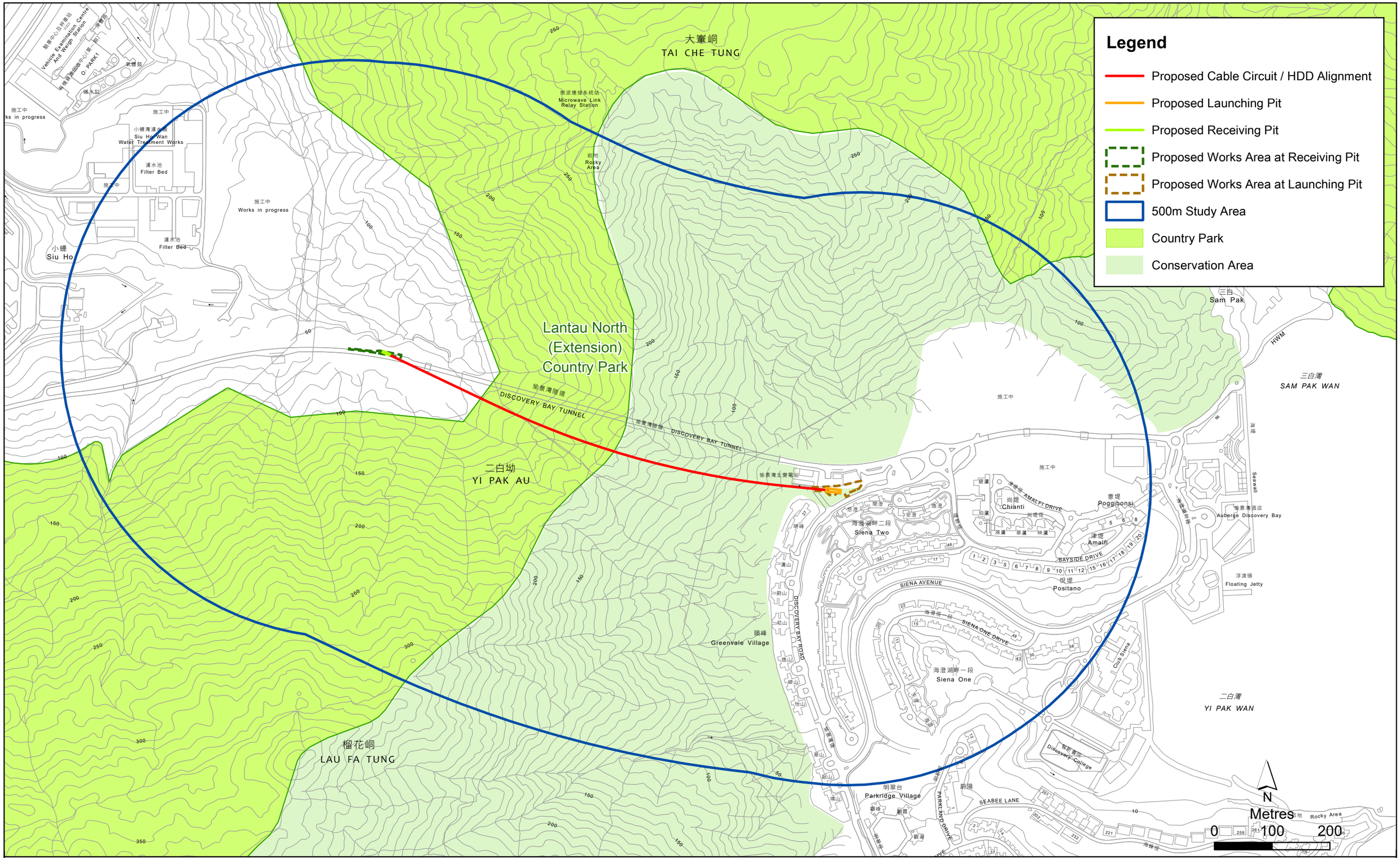


Figure B1.1

Site of Conservation Importance within the Study Area

ERM

File: T:\GIS\CONTRACT\0750437\mxd\0750437_Sites_of_Conservation_Importance.mxd
Date: 24/7/2025

importance in the area. A number of relevant studies including but not limited to the followings were reviewed.

- EIA – 186/2010 – Integration of Siu Ho Wan and Silver Mine Bay Water Treatment Works (Black & Veatch, 2010)(1)
- EIA – 233/2015 – Tung Chung New Town Extension (ARUP, 2015)(2)
- EIA – 252/2017 – Proposed Comprehensive Residential and Commercial Development atop Siu Ho Wan Depot (ARUP, 2017)(3)

The ecological survey periods and surveyed flora/ fauna groups that are presented in the above studies are tabulated in **Table B1-1**; a map showing their study areas, whenever defined, is provided in **Figure B1.2**; a map showing the species of conservation importance recorded in previous studies is provided in **Figure B1.3**.

Special attention was paid to ecologically sensitive areas, and species of conservation importance (i.e. species protected by local legislation, endemic to Hong Kong or South China, listed in international conventions for conservation of habitat/wildlife, listed in IUCN Red Data Book or those of the South China region and considered as rare in the territory or having special conservation importance by scientific studies, etc.). The information gathered from the literature review was evaluated and the information gaps concerning assessment of the potential ecological impacts arising from the Project on the terrestrial environment were identified.

TABLE B1-1: PREVIOUS STUDIES RELEVANT TO THE STUDY AREA

Study	Survey Period	Flora and Fauna Groups Surveyed
EIA – 186/2010	Jan 2007 – May 2007	Fauna & Flora
EIA – 233/2015	May 2012 – Mar 2013, Jun – Aug 2013, Aug 2014 – Feb 2015	Fauna & Flora
EIA – 252/2017	Feb 2016 – Oct 2016, Feb 2017	Fauna & Flora

B1.2.1 FLORA SPECIES OF CONSERVATION IMPORTANCE RECORDED IN PREVIOUS STUDIES

Based on the reviewed literatures, one (1) floral species of conservation importance was recorded within the Study Area. It is reported that one individual of this species was observed under a plantation habitat. Details of the flora species of conservation importance are shown in **Table B1-2**.

(1) Black & Veatch (2010). EIA Report for Integration of Siu Ho Wan and Silver Mine Bay Water Treatment Works.
(2) ARUP (2015). EIA Report for Tung Chung New Town Extension.
(3) ARUP (2017). EIA Report for Proposed Comprehensive Residential and Commercial Development atop Siu Ho Wan Depot.

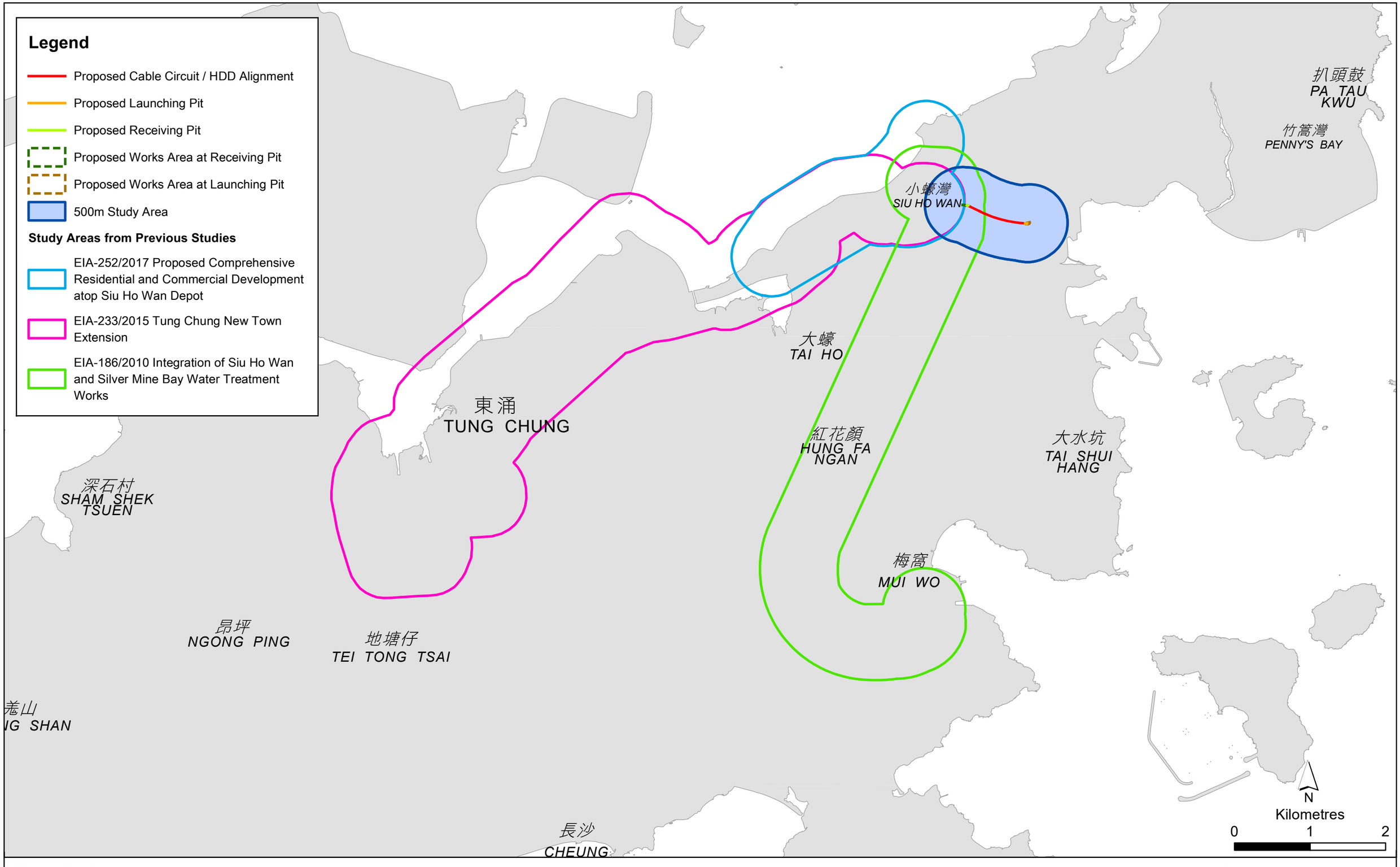


Figure B1.2

Previous Study Areas of Relevant Studies

File: T:\GIS\CONTRACT\0750437\mxd\0750437_Previous_Studies.mxd
Date: 24/7/2025

Legend

- Proposed Cable Circuit / HDD Alignment
- Proposed Launching Pit
- Proposed Receiving Pit
- Proposed Works Area at Receiving Pit
- Proposed Works Area at Launching Pit
- 500m Study Area

Species of Conservation Importance

Flora

- *Cibotium barometz*

Avifauna

- Collared Scops Owl
- Common Kestrel
- Greater Coucal

Freshwater Invertebrate

- *Sinolapotamon anacoluthon*

Figure B1.3

Species of Conservation Importance from Literature Review within the Study Area

ERM

File: T:\GIS\CONTRACT\0750437\mxd\0750437_Species_from_Lit_Review.mxd
Date: 25/7/2025

TABLE B1-2: FLORA OF CONSERVATION IMPORTANCE RECORDED FROM PREVIOUS STUDIES

Scientific Name	Chinese Name	Conservation Status	Previous Study
Flora			
Cibotium barometz	金毛狗	Category 2 (AFCD, 2003); Wild plant under State protection (category II)	EIA – 252/2017

Note:
Conservation Status:
- Category 2 - AFCD (2003). Rare and Precious Plants of Hong Kong (Online Version). Agriculture, Fisheries and Conservation Department, HKSAR, Hong Kong. Available at: https://www.herbarium.gov.hk/en/publications/books/book2/index.html. Accessed on 2 November 2023.
- Wild plant under State protection (category II) - List of Wild plant under State protection (2021): Category I; Category II.

B1.2.2 FAUNA SPECIES OF CONSERVATION IMPORTANCE RECORDED IN PREVIOUS STUDIES

B1.2.2.1 MAMMALS

Based on the reviewed literature, no mammal species of conservation importance were recorded in the Study Area.

B1.2.2.2 AVIFAUNA

Based on the reviewed previous approved EIA studies, three (3) avifauna species of conservation importance were recorded in the shrubland or urbanized area within the Study Area. Details of the avifauna species of conservation importance are shown in **Table B1-3**.

TABLE B1-3: AVIFAUNA OF CONSERVATION IMPORTANCE RECORDED FROM PREVIOUS STUDIES

Common Name	Scientific Name	Chinese Name	Conservation Status	Previous Study
Avifauna				
Greater Coucal	*Centropus sinensis*	褐翅鴉鵑	CSMPS(II)	EIA – 186/2010
Common Kestrel	*Falco tinnunculus*	紅隼	Cap.586; CSMPS(II); CITES(II)	EIA – 186/2010
Collared Scops Owl	*Otus lettia*	領角鴞	Cap.586; CSMPS(II); CITES(II)	EIA – 252/2017

Common Name	Scientific Name	Chinese Name	Conservation Status	Previous Study

Note:
Conservation Status:
- Cap. 170: Protected under Wild Animals Protection Ordinance, all birds in Hong Kong are protected under Cap. 170
- Cap. 586: Protection of Endangered Species of Animals and Plants Ordinance
- CSMPS – China State Major Protection Status: Appendix (II)
- CITES – Under Appendix (II) of Convention on International Trade in Endangered Species of Wild Flora and Fauna

B1.2.2.3 OTHER TERRESTRIAL FAUNA

Based on the reviewed literature, no other terrestrial fauna species of conservation importance were recorded within the Study Area.

B1.2.2.4 AQUATIC FAUNA

Based on reviewed EIA studies, the only aquatic fauna species of conservation importance recorded within the Study Area is Freshwater Crab *Sinolapotamon anacoluthon*. Details of the aquatic fauna species of conservation importance is shown in **Table B1-4**.

TABLE B1-4: AQUATIC FAUNA SPECIES OF CONSERVATION IMPORTANCE RECORDED FROM PREVIOUS STUDIES

Common Name	Scientific Name	Chinese Name	Conservation Status	Previous Study
Aquatic Fauna				
Freshwater Crab	*Sinolapotamon anacoluthon*	鰓刺溪蟹	Fellowes: PGC; IUCN(VU)	EIA – 252/2017

Note:
Conservation Status:
- Fellowes – Fellowes et al. (2002). PGC = Potential Global Concern.
- IUCN – International Union for Conservation of Nature Red List of Threatened Species (2025). VU = Vulnerable

B1.2.3 EVALUATION & IDENTIFICATION OF INFORMATION GAP

The information gathered from the literature review were evaluated to identify any information gaps. While previous studies did not cover the entire Study Area, an ecological survey was conducted to gather more baseline ecological information for further assessment.

B2. ECOLOGOCAL BASELINE SURVEY

The Study Area comprises an area within 500m from the Project Site. In order to gather more ecological information to supplement the data from the literature review and to establish a comprehensive baseline data, ecological survey, including day and night surveys, was conducted between September 2024 and October 2024 with particular focus on habitats and wildlife along and adjacent to the proposed cable circuit. A summary of the ecological baseline survey methodologies is provided in **Table B2-1.** Survey transects mainly followed the existing roads (**Figure B2.1** refers), aiming to cover all types of habitats within the Study Area.

TABLE B2-1: SUMMARY OF THE ECOLOGICAL BASELINE SURVEY METHODOLOGIES

Survey Type	Methodology	Survey Date
Habitat and Vegetation	Habitat mapping and vegetation identification through ground truthing in major habitats, in order to ensure they reflected current conditions and to distinguish between habitats which could not always be reliably distinguished from aerial photos. Representative colour photos were taken for each habitat type (**Annex B1**) and any important ecological features identified.	19 September, 23 September, 17 October 2024
Avifauna	Quantitative (active searching along the survey transect) and Qualitative (recorded within Study Area); including day and night surveys. The presence and abundance of avifauna species at various habitats observed from transects were recorded visually and aurally. Any signs of breeding (e.g. nests, recently fledged juveniles) within the Study Area were also recorded if observed. Observations were made using 8×42 binoculars.	
Mammal	Quantitative (active searching along the survey transect) and qualitative (recorded within Study Area); including day and night surveys. As mammals usually occur at low densities, in addition to direct observation, any observation of signs of mammal activity, such as tracks, scats or burrows were actively sought.	
Herpetofauna	Quantitative (active searching along the survey transect) and qualitative (recorded within Study Area); including day and night surveys. Potential hiding places such as among leaf litter, inside holes and under stones and logs were actively searched within the Study Area. Auditory detection of species-specific calls was also used to survey frogs and toads.	
Butterfly and Odonates	Qualitative (recorded within Study Area) survey; including only day survey.	

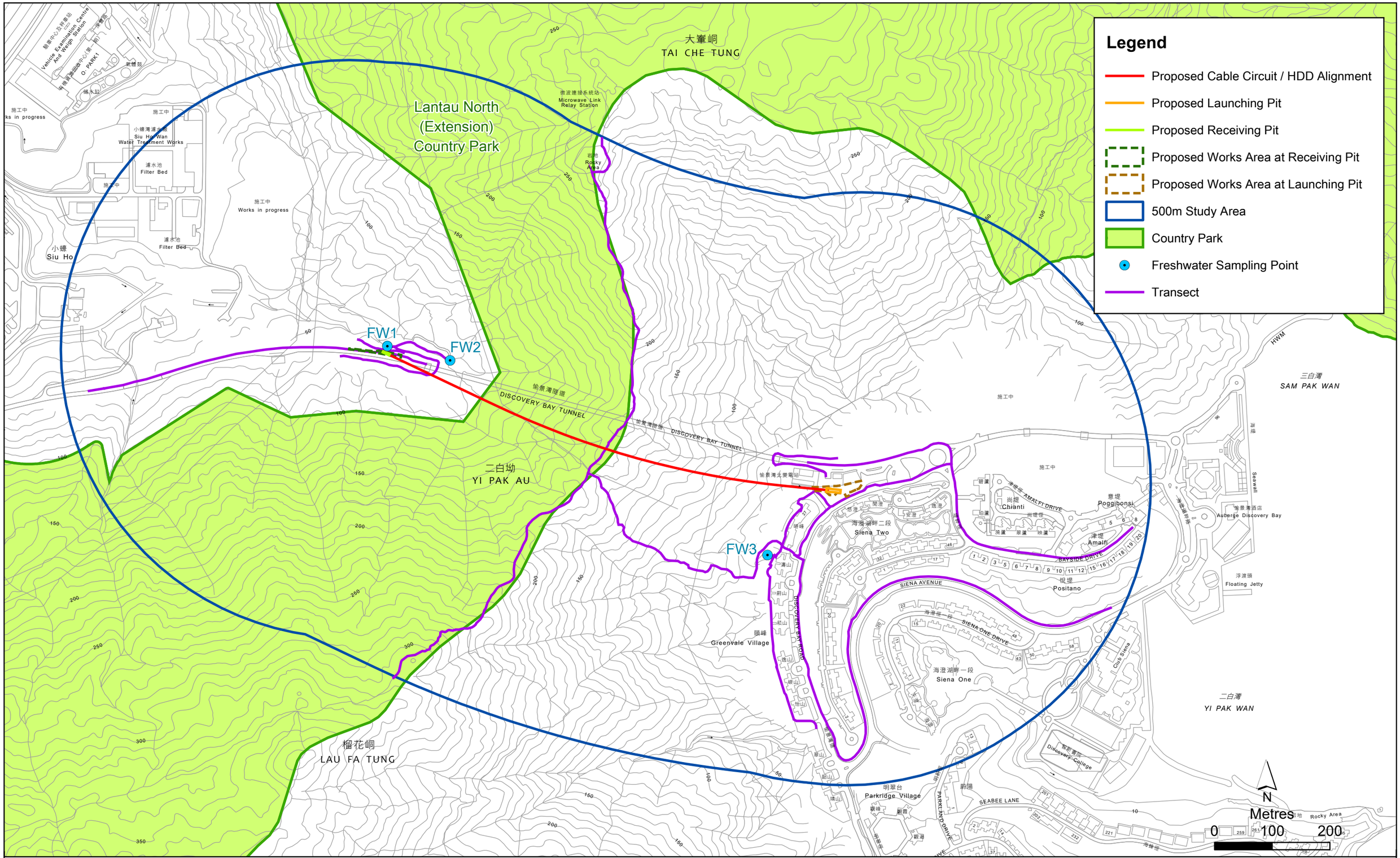


Figure B2.1

Survey Transects Map

File: T:\GIS\CONTRACT\0750437\mxd\0750437_Survey_Transects.mxd
Date: 25/7/2025

Survey Type	Methodology	Survey Date
	Particular attention was given to food/ host plants for butterfly larvae and favoured habitats for both groups, such as shrubland for butterflies and streams for odonates (both adults and larvae).	
Aquatic fauna	Active searching at sizable streams and notable water bodies by direct observation for aquatic fauna, including but not limited to fish, and macroinvertebrates; including day and night surveys.	
Firefly	Qualitative (recorded within Study Area) survey; including only night survey. Surveys commenced immediately after sunset and lasted for approximately 2 hours. Active searching on the potential habitats such as watercourses utilized by fireflies.	

B3. EXISTING ECOLOGICAL BASELINE

The Project Site is located within CA and CP. Five (5) major habitat types have been identified in the Study Area, namely Woodland, Shrubland, Plantation, Developed Area and Watercourse. Habitats present within the Study Area are shown in **Figure B3.1**.

B3.1 HABITAT AND VEGETATION

Error! Reference source not found.Error! Reference source not found. summarises the area of each habitat recorded in the Study Area. For the current ecological impact assessment, only aboveground elements of the Project (i.e. the proposed works areas around the launching and receiving pits, and the cable lead-in) would be considered. The representative habitat photos and representative photos of the Project Site are shown in **Annex B1**. A total of 137 flora species were recorded within the Study Area. Only one (1) flora species of conservation importance were recorded within the Study Area. Its conservation and protection status in Hong Kong are presented in **Table B3-2**. No flora species of conservation importance were recorded within the Project Site. A list of flora species recorded in the survey is provided in **Annex B2**. The following text elaborates the ecological conditions, flora and fauna recorded at each habitat during the ecological baseline survey.

Table B3-1: AREA OF EACH HABITAT IDENTIFIED IN THE STUDY AREA

Habitat	Area within Project Site (m^2) – Aboveground	Areas within Project Area - Underground Component without Habitat Loss/ Disturbance (m^2)	Total Area within Project Area (m^2)	% of Project Area	Area within Study Area (ha)	% of Study Area
Woodland	-	-	-	-	~6.1	~4%
Shrubland	-	~580	~580	~28%	~115.6	~67%
Plantation	-	~50	~50	~2%	~13.6	~8%
Developed Area	~1,330	~100	~1,430	~70%	~37.5	~22%
Watercourse	-	(length <10m)	(length <10m)	-	~0.03 (length ~13.9km)	<0.1%
TOTAL	**~1,330**	**~730**	**~2,060**	**100%**	**~172.8**	**100%**

Legend

- Proposed Cable Circuit / HDD Alignment
- Proposed Launching Pit
- Proposed Receiving Pit
- Proposed Works Area at Receiving Pit
- Proposed Works Area at Launching Pit
- Proposed Excavation Area
- 500m Study Area

Species of Conservation Importance

Flora

- *Diospyros vaccinioides*

Mammal

- Red Muntjac
- Chinese Pipistrelle
- Japanese Pipistrelle
- Short-nosed Fruit Bat

Avifauna

- Greater Coucal

Reptile

- Many-banded Krait

Amphibian

- Lesser Spiny Frog
- Romer's Tree Frog

Butterfly

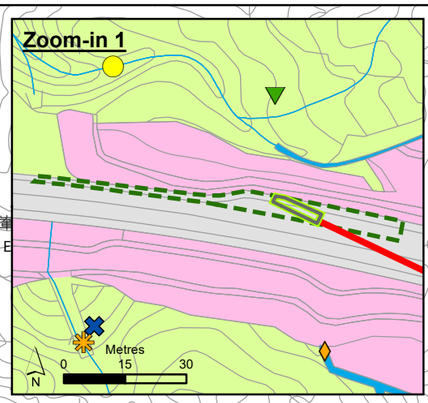
- Forget-me-not

Freshwater Invertebrate

- *Nanhaipotamon hongkongense*

Habitat

- Woodland
- Plantation
- Shrubland
- Developed Area
- Watercourse



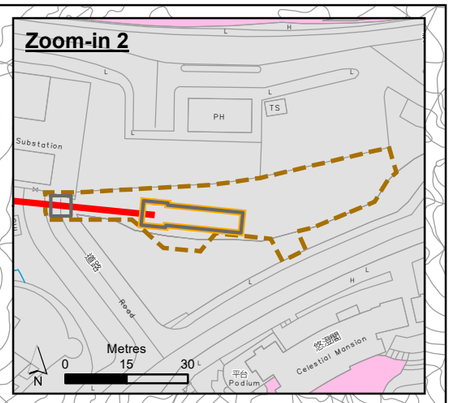


Figure B3.1

Habitat and Species of Conservation Importance Recorded in Baseline Survey

ERM

File: T:\GIS\CONTRACT\0750437\mxd\0750437_Habitat_and_Species.mxd
Date: 25/7/2025

TABLE B3-2: FLORA OF CONSERVATION IMPORTANCE RECORDED WITHIN THE STUDY AREA

Common Name	Scientific Name	Chinese Name	Conservation Status	Recorded Habitat
Flora				
Small Persimmon	*Diospyros vaccinioides*	小果柿	IUCN: CR; RLCHP: EN	Shrubland

Note:
Conservation Status:
- RLCHP – Red List of China's Higher Plants (2020). EN = Endangered
- IUCN – International Union for Conservation of Nature Red List of Threatened Species (2025). CR = Critically Endangered

B3.1.1 HABITATS WITHIN THE STUDY AREA

B3.1.1.1 WOODLAND

A patch of woodland is located along foothills within the south-eastern side of the Study Area. This habitat occupied approximately 6.1ha which is equivalent to ~4% of the Study Area. Due to the vicinity to residential area in Discovery Bay and near the hiking trails, this patch of woodland received a relatively high level of disturbance, especially on their fringes close to the developed area.

This habitat has a semi-closed to closed canopy, with tree heights ranging from 2m to 5m depending on the local topography and the canopy species. It may derive from shrubland under natural succession. A total of 59 plant species were recorded in the woodland habitat. Native tree and shrub species were commonly found in this habitat, including *Aporosa dioica, Litsea rotundifolia var. oblongifolia* and *Melicope pteleifolia*. Self-colonised *Leucaena leucocephala* can also be found at the edge of woodland area. The mid-storey of this habitat is occupied by shrubs and small to medium sized trees (e.g. *Alangium chinense*, *Mallotus paniculatus, Microcos nervosa* and *Sterculia lanceolata*) and the understory occupied by shrubs and climbers including *Alpinia hainanensis, Desmos chinensis* and *Paederia scandens*. No flora species of conservation importance was recorded in woodland habitat.

B3.1.1.2 SHRUBLAND

Shrubland is the major habitat within the Study Area, located mainly on uphill areas. This habitat occupied approximately 115.6ha which is equivalent to ~67% of the Study Area. A total of 83 plant species were recorded in shrubland habitat. Plant species present are mainly common shrub and herb species such as *Aporosa dioica*, *Baeckea frutescens*, *Dicranopteris pedata, Rhodomyrtus tomentosa* and *Melastoma malabathricum*. Tree species commonly recorded included *Litsea glutinosa*, *Rhus succedanea* and *Sterculia lanceolata. Diospyros vaccinioides*, a flora species of conservation importance, was recorded in this habitat. It is listed as "Critically

Endangered" under IUCN Red list of Threatened Species Plantation and "Endangered" under Red List of China's Higher Plants.

B3.1.1.3 PLANTATION

Plantation is mainly located along the openings of Discovery Bay Tunnel and around the Developed Area within the Study Area. This habitat occupies approximately 13.6ha which is equivalent to ~8% of the Study Area.

There are 55 plant species recorded in this habitat. Most of the plant species recorded are commonly grown for ornamental purpose or as orchards such as *Abutilon indicum*, *Acacia confusa*, *Casuarina equisetifolia* and *Livistona chinensis*. No flora species of conservation importance was recorded in plantation habitat.

B3.1.1.4 DEVELOPED AREA

Developed Area refers to degraded area associated with intensive human disturbances. This habitat is present at western and eastern side of Study Area comprising residential area, construction site, road and so on (**Figure B3.1**). This habitat occupied approximately 37.5ha which is equivalent to ~22% of the Study Area. Vegetation recorded in this habitat largely consisted of planted species for amenity purpose, including *Bauhinia variegata, Calliandra haematocephala, Delonix regia, Ficus altissima, Ficus microcarpa, Ficus elastica* and *Ixora chinensis*. Total 39 flora species was recorded in this habitat and none of them is of conservation importance.

B3.1.1.5 WATERCOURSE

The watercourses within the Study Area refer to semi-natural watercourse, they are of similar nature, with lower section reaching urbanized area being channelized and upper section locating within hillside area being more natural. The total length of watercourse is about 13.9km within the Study Area.

As there is no physical boundary between these watercourses and their neighboring habitats (i.e. Plantation, shrubland), the vegetation composition of the riparian zone is similar to adjacent areas. Vegetation commonly recorded in this habitat included *Commelina communis, Commelina diffusa, Leucaena leucocephala, Pteris semipinnata* and *Wedelia trilobata*. No flora species of conservation importance was recorded in this habitat.

B3.1.1.6 THE PROJECT SITE

The aboveground elements of the Project fall only within the Developed Area. The area of the aboveground Project Site is approximately 1,330m^2. The Project Site is located close to the openings of the south of Discovery Bay Tunnel, and near residential areas, which is subjected to human disturbances.

B3.2 TERRESTRIAL WILDLIFE

Wildlife recorded during the ecological surveys are described below in **Section B3.2.1** to **Section B3.2.6**. The photos of the recorded species of conservation importance are presented in **Annex B3**. A full list of fauna species recorded during the verification

surveys for the Project is found in **Annexes B4 – B10**. The locations of species of conservation importance in the Study Area are shown in **Figure B3.1.** No fauna species of conservation importance were recorded within the Project Site.

B3.2.1 MAMMALS

The survey identified five (5) mammal species within the Study Area, of which four (4) are of conservation importance, namely, Short-nosed Fruit Bat, Japanese Pipistrelle, Chinese Pipistrelle and Red Muntjac. Their conservation and protection status in Hong Kong are presented in **Table B3-3** below.

TABLE B3-3: MAMMAL OF CONSERVATION IMPORTANCE RECORDED WITHIN THE STUDY AREA

Common Name	Scientific Name	Chinese Name	Conservation Status	Recorded Habitat
Mammals				
Short-nosed Fruit Bat	*Cynopterus sphinx*	短吻果蝠	Cap.170	Plantation
Japanese Pipistrelle	*Pipistrellus abramus*	東亞家蝠	Cap.170	Shrubland
Chinese Pipistrelle	*Hypsugo pulveratus*	灰伏翼	Cap.170; Fellowes: (LC)	Plantation, Developed Area
Red Muntjac	*Muntiacus vaginalis*	赤麂	Fellowes: PRC	Woodland, Shrubland

Note:
Conservation Status:
- Cap. 170: Protected under Wild Animals Protection Ordinance
- Fellowes – Fellowes et al. (2002): PRC = Potential Regional Concern, LC = Least Concern. Letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence.

B3.2.2 AVIFAUNA

The survey identified nineteen (19) avifauna species. Most of the avifauna species recorded are common and widespread in Hong Kong. A total of three (3) avifauna species of conservation importance, namely Greater Coucal, Crested Goshawk and Black Kite, were recorded within the Study Area. Their protection and/or conservation status are presented in **Table B3-4**. Due to high mobility, avifauna recorded in-flight was not provided in **Figure B3.1**.

TABLE B3-4: AVIFAUNA OF CONSERVATION IMPORTANCE RECORDED WITHIN THE STUDY AREA

Common Name	Scientific Name	Chinese Name	Conservation Status	Recorded Habitat
Avifauna				

Common Name	Scientific Name	Chinese Name	Conservation Status	Recorded Habitat
Greater Coucal	*Centropus sinensis*	褐翅鴉鵑	CSMPS(II)	Shrubland
Crested Goshawk	*Accipiter trivirgatus*	鳳頭鷹	Cap.586; CSMPS(II); CITES(II)	In-flight
Black Kite	*Milvus migrans*	黑鳶	Cap.586; Fellowes: (RC); CSMPS(II); CITES(II)	In-flight

Note:
Conservation Status:
- All birds in Hong Kong are protected under Cap. 170 – Protected under Wild Animals Protection Ordinance
- Cap. 586: Protection of Endangered Species of Animals and Plants Ordinance
- Fellowes – Fellowes et al. (2002): RC = Regional Concern. Letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence.
- CSMPS– China State Major Protection Status: Appendix (II)
- CITES – Under Appendix (II) of Convention on International Trade in Endangered Species of Wild Flora and Fauna

B3.2.3 HERPETOFAUNA

Seven (7) amphibian and three (3) reptile species were recorded during the survey within the Study Area. Among them, two (2) amphibian species, namely Romer's Tree Frog and Lesser Spiny Frog, and one (1) reptile species, namely Many-banded Krait, were of conservation importance. Their protection and/or conservation status are presented in **Table B3-5**.

TABLE B3-5: HERPETOFAUNA OF CONSERVATION IMPORTANCE RECORDED WITHIN THE STUDY AREA

Common Name	Scientific Name	Chinese Name	Conservation Status	Recorded Habitat
Amphibians				
Lesser Spiny Frog	*Quasipaa exilispinosa*	小棘蛙	Fellows: PGC; RLCV(VU)	Watercourse
Romer's Tree Frog	*Liuixalus romeri*	盧氏小樹蛙	Cap.170; Fellowes: PGC; RLCV(VU); IUCN(EN)	Woodland, Watercourse
Reptiles				
Many-banded Krait	*Bungarus multicinctus*	銀環蛇	Fellowes: PRC; RLCV(EN)	Plantation

Note:
Conservation Status:
- Cap. 170: Protected under Wild Animals Protection Ordinance
- Fellowes – Fellowes et al. (2002): PGC = Potential Global Concern, PRC = Potential Regional Concern.

Common Name	Scientific Name	Chinese Name	Conservation Status	Recorded Habitat

- RLCV – Red List of China's Vertebrate (2020): VU = Vulnerable, EN = Endangered.
- IUCN: International Union for Conservation of Nature Red List of Threatened Species (2025). EN = Endangered.

B3.2.4 BUTTERFLIES AND ODONATES

Eighteen (18) butterfly and four (4) odonate species were recorded during the survey within the Study Area. Only one butterfly species is of conservation importance. Its protection and/or conservation status are presented in **Table B3-6**.

TABLE B3-6: BUTTERFLY SPECIES OF CONSERVATION IMPORTANCE RECORDED WITHIN THE STUDY AREA

Common Name	Scientific Name	Chinese Name	Conservation Status / AFCD Assessment	Recorded Habitat
Butterflies				
Forget-me-not	*Catochrysops strabo*	咖灰蝶	AFCD: Very Rare; Species of Conservation Concern	Shrubland, Developed Area

Note:
Conservation Status:
- AFCD refers to Chan et. al. 2011. A Review of the Local Restrictedness of Hong Kong Butterflies. Hong Kong Biodiversity 21: 1-12

B3.2.5 AQUATIC FAUNA

Four (4) freshwater invertebrates within the Study Area during the survey. Only one of them is of conservation importance. Its protection and/or conservation status are presented in **Table B3-7**.

TABLE B3-7: FRESHWATER FAUNA SPECIES OF CONSERVATION IMPORTANCE RECORDED WITHIN THE STUDY AREA

Common Name	Scientific Name	Chinese Name	Conservation Status / AFCD Assessment	Recorded Habitat
Freshwater Invertebrates				
Freshwater Crab	*Nanhaipotamon hongkongense*	香港南海溪蟹	Fellowes: PGC	Watercourse

Note:
Conservation Status:
- Fellowes – Fellowes et al. (2002): PGC = Potential Global Concern.

B3.2.6 FIREFLY

No firefly species were recorded within the Study Area during the survey.

B4. ECOLOGICAL EVALUATION

In this section, the ecological importance of the habitats identified within the Study Area are evaluated in accordance with the *EIAO TM Annex 8* criteria. The evaluation is based upon the information of literature review and the ecological baseline survey presented in the **Sections B1 – B3**.

B4.1 STUDY AREA AND PROJECT SITE

A total of five major terrestrial habitats have been identified within the Study Area, including Woodland, Shrubland, Plantation, Developed Area, and Watercourse. The aboveground Project Site falls within Developed Area only. The underground Project Site (i.e. proposed HDD alignment) covers Shrubland, Plantation, Developed Area and Watercourse. The ecological importance evaluation of each habitat type within the Study Area is presented in **Table B4-1** to **Table B4-5**. The following tables included ecological evaluation on habitats within the Project Site considering habitats' condition within the Project Site is of very similar nature to surrounding area.

TABLE B4-1: ECOLOGICAL EVALUATION OF WOODLAND

Criteria	**Woodland**
Naturalness	Natural habitat, but subjected to human disturbances
Size	Approx. 6.1ha within the Study Area
Diversity	Low to moderate in diversity of plant species and structural complexity Low diversity of fauna species
Rarity	No flora species of conservation importance recorded during surveys Two (2) fauna species of conservation importance recorded during surveys, including Red Muntjac and Romer's Tree Frog
Re-creatability	Re-creatable
Fragmentation	Existed as an isolated patch
Ecological Linkage	Ecologically linked to shrubland, plantation and watercourse
Potential Value	Low to moderate potential value to become a more mature woodland if given sufficient time and protection from disturbances
Nursery/ Breeding Ground	No significant nursery or breeding ground recorded.
Age	Over 15 years
Abundance/ Richness of Wildlife	Low abundance and richness for fauna species
Overall Ecological Importance	**Low to moderate**

TABLE B4-2: ECOLOGICAL EVALUATION OF SHRUBLAND

Criteria	**Shrubland**
	Study Area (including Project Site)
Naturalness	Natural habitats mainly covered by native shrub
Size	Approx. 115.6ha within the Study Area, including approx. 580m^2 within Project Site (underground)
Diversity	Low to moderate in diversity of plant species and structural complexity Low to moderate diversity of fauna species
Rarity	One flora species of conservation importance recorded during surveys, namely *Diospyros vaccinioides* Four (4) fauna species of conservation importance recorded during surveys, including Japanese Pipistrelle, Red Muntjac, Greater coucal and Forget-me-not
Re-creatability	In the absence of disturbance, it would take at least 5 years for the shrubland to be re-created
Fragmentation	Not fragmented
Ecological Linkage	Ecologically linked to woodland, plantation and watercourse
Potential Value	Low to moderate potential value to become mature shrubland and then young woodland if given sufficient time and protection from disturbance
Nursery/ Breeding Ground	No significant nursery or breeding ground recorded
Age	5 – 10 years
Abundance/ Richness of Wildlife	Low abundance and richness for fauna species
Overall Ecological Importance	**Low to moderate**

TABLE B4-3: ECOLOGICAL EVALUATION OF PLANTATION

Criteria	**Plantation**
	Study Area (including Project Site)
Naturalness	Semi-natural habitat subjected to some human disturbance
Size	Approx. 13.6ha, including approx. 50m^2 within Project Site (underground)
Diversity	Low to moderate in diversity of plant species, low structural complexity

Criteria	Plantation
	Study Area (including Project Site)
	Low to moderate diversity of fauna species
Rarity	No flora species of conservation importance recorded during surveys Three (3) fauna species of conservation importance recorded during surveys, including Short-nosed Fruit Bat, Chinese Pipistrelle and Many-banded Krait
Re-creatability	Re-creatable
Fragmentation	Fragmented
Ecological Linkage	Ecologically linked to woodland, shrubland and watercourse
Potential Value	Low to moderate
Nursery/ Breeding Ground	No significant nursery or breeding ground recorded
Age	5 – 15 years
Abundance/ Richness of Wildlife	Low abundance and richness for fauna species
Overall Ecological Importance	**Low to moderate**

TABLE B4-4: ECOLOGICAL EVALUATION OF DEVELOPED AREA

Criteria	Developed Area
	Study Area (including Project Site)
Naturalness	Anthropogenic habitat with a high level of human disturbance
Size	Approx. 37.5ha, including approx. 1,330m^2 (aboveground) and 100m^2 (underground) within Project Site
Diversity	Low in diversity of plant species and structural complexity. Low faunal diversity
Rarity	No flora species of conservation importance recorded during surveys Two (2) fauna species of conservation importance recorded during surveys, including Chinese Pipistrelle and Forget-me-not
Re-creatability	Readily re-creatable
Fragmentation	Fragmented
Ecological Linkage	Weak ecological linkage with adjacent habitats
Potential Value	Low

Criteria	Developed Area
	Study Area (including Project Site)
Nursery/ Breeding Ground	No significant nursery or breeding ground recorded
Age	N/A
Abundance/ Richness of Wildlife	Low abundance and richness for fauna species.
Overall Ecological Importance	**Low**

TABLE B4-5: ECOLOGICAL EVALUATION OF WATERCOURSE

Criteria	Watercourse
	Study Area (including Project Site)
Naturalness	Generally semi-natural
Size	Approx. 13.9km long within the Study Area, including <10m within Project Site (underground)
Diversity	Low in diversity of plant species and structural complexity. Low diversity of fauna species.
Rarity	No flora species of conservation importance was recorded Three (3) fauna species of conservation importance recorded during surveys, including Lesser Spiny Frog, Romer's Tree Frog and *Nanhaipotamon hongkongense*.
Re-creatability	Re-creatable given the hydrological conditions are available for modified watercourse
Fragmentation	N/A
Ecological Linkage	Ecologically linked to woodland, shrubland and plantation
Potential Value	Low to moderate
Nursery/ Breeding Ground	No significant nursery or breeding ground recorded
Age	N/A
Abundance/ Richness of Wildlife	Low
Overall Ecological Importance	**Low to moderate**

ANNEXES

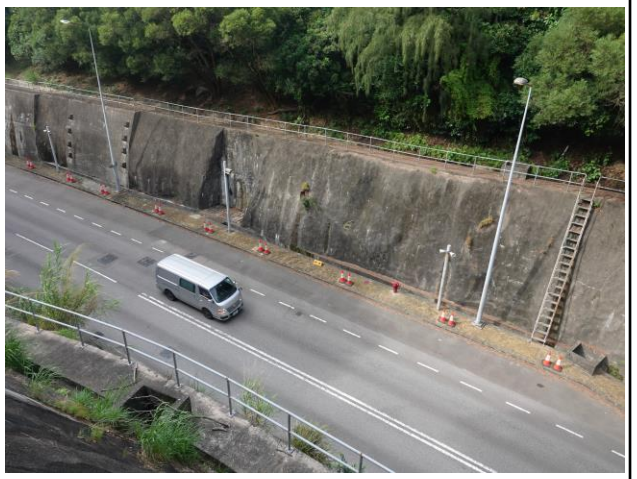
Woodland

Shrubland

Plantation

Developed Area

Watercourse



Project Site

Annex B1

Representative Photos of Habitats within the Study Area

DATE: 25/2/2025

ERM

Annex B2 Presence of Plant Species Recorded Within the Study Area

Species Name	Chinese Name	Origin[1]	Growth Form	Distribution in Hong Kong	Protection Status[3]	Habitat[3]				
						WL	SL	PL	DA	WC
Acacia auriculiformis	耳果相思	E	Tree	common	-	+		++		
Acacia confusa	台灣相思	E	Tree	common	-	++		++++	++++	
Acacia mangium	大葉相思，馬占相思	E	Tree	common	-			++		
Acorus gramineus	石菖蒲	N	Herb	very common	-					++
Acronychia pedunculata	山油柑	N	Tree	very common	-	++	+			
Adiantum capillus-veneris	鐵線蕨	N	Herb	common	-	++				
Alangium chinense	八角楓	N	Shrub/Tree	common	-	++	+++			
Albizia corniculata	天香藤	N	Climber/Shrub	common	-	++	+++			
Aleurites moluccana	石栗	E	Tree	common	-			++	++	
Allamanda schottii	硬枝黃蟬	E	Shrub	common	-				+++	
Alocasia macrorrhizos	海芋	N	Herb	very common	-	++		+		+
Alpinia hainanensis	草豆蔻	N	Herb	common	-	+				
Aporosa dioica	銀柴	N	Tree	very common	-	++++	+++	++		
Archidendron clypearia	猴耳環	N	Tree	common	-	+	+			
Archidendron lucidum	亮葉猴耳環	N	Tree	common	-	+	++			
Ardisia lindleyana	山血丹，腺點紫金牛	N	Shrub	common	-	+++	++			
Ardisia quinquegona	羅傘樹	N	Shrub	common	-	+++				
Asparagus cochinchinensis	天門冬	N	Climber/Shrub	common	-		+			+
Asystasia micrantha	小花十萬錯	E	Herb	cultivated or naturalised	-	++		++	+	++
Baeckea frutescens	崗松	N	Shrub/Tree	common	-		++++			
Bauhinia glauca	粉葉羊蹄甲，羊蹄甲藤	N	Climber	very common	-			++		
Bauhinia variegata	宮粉羊蹄甲	E	Tree	common	-			++	++	+
Berchemia floribunda	多花勾兒茶	N	Climber	common	-	++	+++			
Bidens alba	白花鬼針草	E	Herb	very common	-	+++	+++	+++	++++	
Bischofia javanica	秋楓	N	Tree	common	-		+			
Bombax ceiba	木棉	E	Tree	very common	-			++		
Bougainvillea spectabilis	簕杜鵑	E	Climber/Shrub	cultivated	-			++	++	
Breynia fruticosa	黑面神	N	Shrub	very common	-	+	++	+		
Bridelia tomentosa	土蜜樹, 逼迫仔	N	Shrub/Tree	very common	-	+++	++	++		
Brucea javanica	鴉膽子，苦參子	N	Shrub/Tree	common	-		++		++	
Calliandra haematocephala	朱纓花，紅絨球	E	Shrub	common	-			++	++++	
Calliandra riparia	小朱纓花	E	Shrub	common	-				+	
Callicarpa kochiana	枇杷葉紫珠	N	Shrub	common	-		++			
Carallia brachiata	竹節樹	N	Tree	common	-		++	+		
Carica papaya	番木瓜	E	Tree	common	-				+	
Cassytha filiformis	無根藤	N	Climber	very common	-		+++			
Casuarina equisetifolia	木麻黃，牛尾松	E	Tree	rare; but commonly cultivated	-			+++		
Celtis sinensis	朴樹	N	Tree	common	-	++		++	++	
Centotheca lappacea	假淡竹葉	N	Herb	common	-	++				
Chorisia speciosa	絲木棉	E	Tree	cultivated	-				+	
Chukrasia tabularis	麻楝	E	Tree	common	-				+	
Cinnamomum burmannii	陰香	N	Tree	common	-			+++		
Cinnamomum camphora	樟	N	Tree	common	-	++	+	+	++	
Cinnamomum parthenoxylon	黃樟	N	Tree	common	-	++				
Cocculus orbiculatus	木防己	N	Climber	common	-	++	++			
Commelina communis	鴨跖草	N	Herb	common	-					++
Commelina diffusa	節節草	N	Herb	very common	-					++

Annex B2 Presence of Plant Species Recorded Within the Study Area

Species Name	Chinese Name	Origin[1]	Growth Form	Distribution in Hong Kong	Protection Status[3]	Habitat[3]				
						WL	SL	PL	DA	WC
Conyza japonica	白酒草	N	Herb	common	-				++	
Cratoxylum cochinchinense	黃牛木	N	Shrub/Tree	very common	-		+++			
Cyclea hypoglauca	粉葉輪環藤	N	Climber	common	-		+			
Cyclosorus interruptus	間斷毛蕨	N	Herb	very common	-					++
Cyclosorus parasiticus	華南毛蕨	N	Herb	very common	-	+++	++	++		
Dalbergia benthamii	兩廣黃檀	N	Climber	common	-	+	+	+	+	
Daphniphyllum calycinum	牛耳楓	N	Shrub	very common	-	++				
Delonix regia	鳳凰木	E	Tree	common	-			+	+++	
Dendranthema indicum	野菊	N	Herb	common	-		++			
Dendrotrophe varians	寄生藤	N	Climber	common	-		+			
Desmodium heterocarpon	假地豆	N	Shrub	very common	-			++		
Desmos chinensis	假鷹爪	N	Climber/Shrub	common	-	+++	++			
Dianella ensifolia	山菅蘭	N	Herb	very common	-	+	+++	++		
Dicranopteris pedata	芒萁	N	Herb	very common	-	++	++++	++++		
Diospyros vaccinioides	小果柿	N	Shrub	very common	IUCN Red List (ver. 2022.2): CR RLCHP: EN		+			
Duhaldea cappa	羊耳菊	N	Herb/Shrub	common	-		+++			
Duranta erecta	假連翹	E	Climber/Shrub	common	-				+++	
Dypsis lutescens	散尾葵	E	Shrub	common	-				+++	
Elephantopus scaber	地膽草	N	Herb	common	-		++++	+++		
Embelia laeta	酸藤子	N	Climber/Shrub	very common	-	++	+++	+++		
Embelia ribes	白花酸藤子	N	Climber/Shrub	common	-		++			
Eurya nitida	細齒葉柃	N	Shrub/Tree	very common	-		+++			
Ficus altissima	高山榕	E	Tree	cultivated	-				+	
Ficus elastica	印度榕，印度橡樹	E	Tree	cultivated					+	
Ficus hispida	對葉榕	N	Shrub/Tree	very common	-	++	++	++	++	+
Ficus microcarpa	細葉榕	N	Tree	common	-		+	+	++	+
Ficus pumila	薜荔	N	Climber	very common	-			+		
Ficus variegata	青果榕	N	Tree	common	-	++	++			
Ficus variolosa	變葉榕	N	Shrub/Tree	very common	-	+				
Glochidion eriocarpum	毛果算盤子	N	Shrub/Tree	very common	-	+				
Glochidion hirsutum	厚葉算盤子	N	Shrub/Tree	common	-		+			
Hedyotis acutangula	方骨草	N	Herb	very common	-		+			
Hedyotis hedyotidea	牛白藤	N	Climber/Shrub	common	-		++			
Ilex asprella	梅葉冬青	N	Shrub	very common	-	++	+++	++		
Ipomoea cairica	五爪金龍	E	Herb	very common	-		++			
Ixora chinensis	龍船花	N	Shrub	restricted but widely cultivated	-			+++		
Lagerstroemia speciosa	大花紫薇	E	Tree	common	-				+++	
Lantana camara	馬纓丹	E	Shrub	very common	-	++	++	+++	+++	
Leucaena leucocephala	銀合歡	E	Shrub/Tree	very common	-	+	++	+++	++++	++
Ligustrum sinense	山指甲	E	Shrub/Tree	common	-	+	++	++	++	
Lindsaea ensifolia	劍葉鱗始蕨	N	Herb	common	-		+++			
Liquidambar formosana	楓香	N	Tree	common	-			++		
Litsea glutinosa	潺槁樹	N	Tree	very common	-		++		++	+
Litsea rotundifolia var. oblongifolia	豺皮樟	N	Shrub/Tree	very common	-	+++	++++			
Livistona chinensis	蒲葵	E	Tree	common	RLCHP: VU			+++		

Annex B2 Presence of Plant Species Recorded Within the Study Area

Species Name	Chinese Name	Origin[1]	Growth Form	Distribution in Hong Kong[2]	Protection Status[3]	Habitat[3]				
						WL	SL	PL	DA	WC
Lophostemon confertus	紅膠木	E	Tree	common	-			++		
Lygodium japonicum	海金沙	N	Climber/Herb	common	-					+
Lygodium scandens	小葉海金沙	N	Climber/Herb	common	-		++			+
Macaranga tanarius var. tomentosa	血桐	N	Tree	common	-	+++	++	++	+++	+
Machilus chekiangensis	浙江潤楠	N	Tree	very common	-		++	++		
Mallotus paniculatus	白楸	N	Shrub/Tree	very common	-	++	+	++		
Melaleuca cajuputi subsp. cumingiana	白千層	E	Tree	common	-			+++	++	
Melastoma dodecandrum	地茭	N	Herb/Shrub	common	-		+			
Melastoma malabathricum	野牡丹	N	Shrub	common	-		+++			
Melastoma sanguineum	毛茭	N	Shrub	common	-		+			
Melia azedarach	苦楝	E	Tree	common	-				++	
Melicope pteleifolia	三椏苦	N	Shrub/Tree	common	-		+++			
Microcos nervosa	破布葉 ，布渣葉	N	Shrub/Tree	-	-	+++	++	+++		
Microstegium ciliatum	剛莠竹	N	Herb	very common; common (2)	-		+++			
Mikania micrantha	薇甘菊	E	Climber/Herb	very common	-	+	+++	+++	++++	++
Millettia reticulata	雞血藤	N	Climber	common	-	+				
Millettia speciosa	美麗崖豆藤，牛大力	N	Climber	common	-		++			
Miscanthus floridulus	五節芒	N	Herb	common	-		+++			
Murraya paniculata	九里香	E	Tree	common	-			+	+++	
Paederia scandens	雞矢藤	N	Herb	very common	-	+++	+++		+++	
Palhinhaea cernua	鋪地蜈蚣，燈籠草	N	Herb	very common	-	+	++	++		
Panicum maximum	大黍	E	Herb	very common	-	++		+++	+++	++
Panicum repens	鋪地黍，枯骨草	N	Herb	very common	-	+			++	
Phyllanthus reticulatus	小果葉下珠	N	Shrub	common	-		+++			
Pinus elliottii	濕地松，愛氏松	E	Tree	common	-			+++		
Psychotria asiatica	山大刀，九節	N	Shrub/Tree	very common	-	++++	++	++		
Pteridium aquilinum var. latiusculum	蕨	N	Herb	fairly common	-		++			++
Pteris semipinnata	半邊旗	N	Herb	very common	-			++		+++
Eremochloa ciliaris	蜈蚣草	N	Herb	very common	-		+++			
Pueraria lobata	葛	N	Climber	common	-		+			
Rhodomyrtus tomentosa	桃金娘，崗棯	N	Shrub	very common	-	++	+++			
Rhus succedanea	野漆樹	N	Shrub/Tree	common	-	++	++			
Rubus reflexus	鏽毛莓, 蛇泡簕	N	Climber/Shrub	very common	-	+	++			
Schefflera heptaphylla	鴨腳木	N	Shrub/Tree	common	-	+	+	++		+
Smilax china	菝葜，金剛藤	N	Climber	very common	-		+++			
Stephania tetrandra	粉防己，石蟾蜍	N	Climber	common	-		++			
Sterculia lanceolata	假蘋婆	N	Tree	very common	-	+	++	++		
Strophanthus divaricatus	羊角拗	N	Climber/Shrub	common	-		+			
Syzygium jambos	蒲桃	E	Tree	very common	-	++	+			
Syzygium levinei	山蒲桃，李萬蒲桃	N	Shrub/Tree	common	-	+				
Tetracera asiatica	錫葉藤	N	Climber	very common	-	++	+++			
Tylophora ovata	娃兒藤	N	Climber	common	-		++			
Wedelia chinensis	蟛蜞菊	N	Herb	common	-					++
Wedelia trilobata	三裂葉蟛蜞菊	E	Herb	common; also widely	-			++	++	++
Wikstroemia nutans	細軸荛花	N	Shrub	common	-		++			

Annex B2 Presence of Plant Species Recorded Within the Study Area

Species Name	Chinese Name	Origin[1]	Growth Form	Distribution in Hong Kong	Protection Status[3]	Habitat[3]				
						WL	SL	PL	DA	WC
Zanthoxylum avicennae	簕欓花椒	N	Tree	common	-	++	+++			
Zanthoxylum nitidum	兩面針	N	Climber/Shrub	very common	-	++	++	++	+	
					TOTAL	**59**	**83**	**55**	**39**	**22**

Notes:

1. Origin of plant species refers to AFCD (2012). Check List of Hong Kong Plants 2012. Agriculture, Fisheries and Conservation Department, HKSAR, Hong Kong.

2. Commonness follows:

- Xing, F.W., Ng, S.C., Chau, L.K.C. 2000. Gymnosperms and angiosperms of Hong Kong. Memoirs of the Hong Kong Natural History Society 23: 21-136.
- KFBG (2003) Flora of Hong Kong – Pteridophyta. Kadoorie Farm and Botanic Garden, Hong Kong
- AFCD (2003) Rare and Precious Plants of Hong Kong. Agriculture, Fisheries and Conservation Department, HKSAR, Hong Kong.
- AFCD (2007) Flora of Hong Kong Vol. 1. Edited by Hong Kong Herbarium, Agriculture, Fisheries and Conservation Department & South China Botanical Garden, Chinese Academy of Sciences
- AFCD (2008) Flora of Hong Kong Vol. 2. Edited by Hong Kong Herbarium, Agriculture, Fisheries and Conservation Department & South China Botanical Garden Chinese Academy of Sciences
- AFCD (2009) Flora of Hong Kong Vol. 3. Edited by Hong Kong Herbarium, Agriculture, Fisheries and Conservation Department & South China Botanical Garden Chinese Academy of Sciences
- AFCD (2011) Flora of Hong Kong Vol. 3. Edited by Hong Kong Herbarium, Agriculture, Fisheries and Conservation Department & South China Botanical Garden Chinese Academy of Sciences

Conservation status follows:

- AFCD (2003) Rare and Precious Plants of Hong Kong. Agriculture, Fisheries and Conservation Department, HKSAR, Hong Kong.
- Cap. 96A: Forestry Regulations, the subsidiary legislation of Forests and Countryside Ordinance (Cap. 96).
- Cap. 586: Protection of Endangered Species of Animals and Plants Ordinance
- CPRDB: Fu and Jin (1992) China Plant Red Data Book
- IUCN. (2022). The IUCN Red List of Threatened Species (Version 2022-1). Accessed from <http://www.iucnredlist.org> in Jan 2022. NT = Near threatened, VU = Vulnerable, CR = Critically Endangered.
- Qin et al., 2017. Threatened Species List of China's Higher Plants. Biodiversity Science 2017, Vol. 25, Issue (7): 696-744.
- CITES (II) – Under Appendix II of Convention on International Trade in Endangered Species of Wild Fauna and Flora

3. Habitats: WL = Woodland, SL = Shrubland, PL = Plantation, DA = Developed Area,WC = Watercourse

Diospyros vaccinioides

Many-banded Krait

Annex B3

Representative Photos of Species of Conservation Importance Recorded

DATE: 13/2/2025

Annex B4 Presence of Mammal Species Recorded Within the Study Area

Item No.	Common Name	Scientific Name	Chinese Name	Conservation Status[1]	Commonness[2]	Habitat[3] 500m Study Area				
						WL	SL	PL	DA	WC
1	Short-nosed Fruit Bat	*Cynopterus sphinx*	短吻果蝠	Cap.170	Very widely distributed in urban and countryside areas throughout Hong			✓		
2	Japanese Pipistrelle	*Pipistrellus abramus*	東亞家蝠	Cap.170	Widely distributed throughout Hong Kong.		✓			
3	Chinese Pipistrelle	*Hypsugo pulveratus*	灰伏翼	Cap.170; Fellowes: (LC)	Only several records in the countryside areas at Ting Kau, Ma On			✓	✓	
4	Chestnut Spiny Rat	*Niviventer fulvescens*	針毛鼠	-	Widely distributed in countryside areas throughout Hong Kong.			✓		
5	Red Muntjac	*Muntiacus vaginalis*	赤麂	Fellowes: PRC	Very widely distributed in countryside areas throughout Hong	✓	✓			
					TOTAL	**1**	**2**	**3**	**1**	**0**

Notes:

1. Conservation and Protection Status:
   a. Cap. 170 – Protected under Wild Animals Protection Ordinance
   b. Fellowes – Fellowes *et al.* (2002): PRC = Potential Regional Concern, LC = Local Concern
      Letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence.
2. Commonness as per AFCD database: Available at https://bih.gov.hk/en/home/index.html
3. Habitats: WL = Woodland, SL = Shrubland, PL = Plantation, DA = Developed Area, WC = Watercourse
4. References:

AFCD. 2022. Hong Kong Biodiversity Information Hub. Accessed from <https://bih.gov.hk/en/home/index.html> in Feb 2022.

Fellowes *et al* . 2002. Wild animals to watch: Terrestrial and freshwater fauna of conservation concern in Hong Kong. Memoirs of the Hong Kong Natural History Society 25:123-159.

Annex B5 Maximum Count of Avifauna Species Recorded Within the Study Area

Item No.	Common Name	Scientific Name	Chinese Name	Conservation Status[1]	Distribution in Hong Kong[2]	Habitat[3] 500m Study Area					
						WL	SL	PL	DA	WC	IF
1	House Swift	*Apus nipalensis*	小白腰雨燕	-	Abundant spring migrant and common resident. Widely distributed in Hong Kong.						9
2	Greater coucal	*Centropus sinensis*	褐翅鴉鵑	CSMPS(II)	Common resident. Widely distributed in Hong Kong.		1				
3	Spotted Dove	*Spilopelia chinensis*	珠頸斑鳩	-	Abundant resident. Widely distributed in Hong Kong.				1		
4	Crested Goshawk	*Accipiter trivirgatus*	鳳頭鷹	Cap.586; CSMPS(II); CITES(II)	Common resident. Widely distributed in woodlands and shrublands throughout Hong Kong.						1
5	Black Kite	*Milvus migrans*	黑鳶	Cap.586; Fellowes: (RC); CSMPS(II); CITES(II)	Common resident and winter visitor. Widely distributed in Hong Kong.						1
6	Large-billed Crow	*Corvus macrorhynchos*	大嘴烏鴉	-	Common resident. Widely distributed in Hong Kong.		1				1
7	Cinereous Tit	*Parus cinereus*	蒼背山雀	-	-			1	1		
8	Chinese Bulbul	*Pycnonotus sinensis*	白頭鵐	-	Abundant resident. Widely distributed in Hong Kong			1	10		
9	Red-whiskered Bulbul	*Pycnonotus jocosus*	紅耳鵐	-	Abundant resident. Widely distributed in Hong Kong		4	2	4		
10	Yellow-browed Warbler	*Phylloscopus inornatus*	黃眉柳鶯	-	Abundant winter visitor and migrant. Widely distributed in woodland throughout Hong Kong			1			
11	Common Tailorbird	*Orthotomus sutorius*	長尾縫葉鶯	-	Common resident. Widely distributed in Hong Kong	1			1		
12	Black-throated Laughingthrush	*Pterorhinus chinensis*	黑喉噪鶥	-	Common resident. Widely distributed in woodland and shrubland throughout Hong Kong		1				
13	Crested Myna	*Acridotheres cristatellus*	八哥	-	Abundant resident. Widely distributed in Hong Kong		1				
14	Black-collared Starling	*Gracupica nigricollis*	黑領椋鳥	-	Common resident. Widely distributed in Hong Kong				1		
15	Oriental Magpie Robin	*Copsychus saularis*	鶇鴝	-	Abundant resident. Widely distributed in Hong Kong	1			1		
16	Blue Whistling Thrush	*Myophonus caeruleus*	紫嘯鶇	-	Common resident. Widely distributed in shrubland and woodland throughout Hong Kong	1		1			
17	Eurasian Tree Sparrow	*Passer montanus*	樹麻雀	-	Abundant resident. Widely distributed in Hong Kong				5		
18	Grey Wagtail	*Motacilla cinerea*	灰鶺鴒	-	Common passage migrant and winter visitor. Widely distributed in hill streams throughout Hong Kong					1	
19	White wagtail	*Motacilla alba*	白鶺鴒	-	Resident, common passage migrant and winter visitor. Widely distributed in Hong Kong				1		
					TOTAL	**3**	**5**	**5**	**9**	**1**	**4**

Notes:

1. Conservation and Protection Status:

a. Cap. 170: Protected under Wild Animals Protection Ordinance, all birds in Hong Kong are protected under Cap. 170

b. Cap. 586: Protection of Endangered Species of Animals and Plants Ordinance

c. Fellowes – Fellowes et al. (2002): RC = Regional Concern.
Letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence.

d. CSMPS – China State Major Protection Status: Appendix II

e. CITES – Under Appendix (II) of Convention on International Trade in Endangered Species of Wild Flora and Fauna

2. Distribution as per AFCD database. Available at https://bih.gov.hk/en/home/index.html:

3. Habitats: WL = Woodland, SL = Shrubland, PL = Plantation, DA = Developed Area, WC = Watercourse, IF = In-Flight

4. References:

AFCD. 2022. Hong Kong Biodiversity Information Hub. Accessed from <https://bih.gov.hk/en/home/index.html> in Feb 2022.

Fellowes *et al* . 2002. Wild animals to watch: Terrestrial and freshwater fauna of conservation concern in Hong Kong. Memoirs of the Hong Kong Natural History Society 25:123-159.

IUCN. (2025). The IUCN Red List of Threatened Species (Version 2025-1). Accessed from <http://www.iucnredlist.org> in Jan 2025.

Annex B6 Relative Abundance of Amphibian Species Recorded Within Study Area

Item No.	Common Name	Scientific Name	Chinese Name	Conservation and Protection Status[1]	Rarity in Hong Kong[2]	Distribution in Hong Kong[3]	Habitat[4/5] 500m Study Area				
							WL	SL	PL	DA	WC
1	Asian Common Toad	*Duttaphrynus melanostictus*	黑眶蟾蜍	-	Least Concern	Widely distributed in HK	+				
2	Asiatic Painted Frog	*Kaloula pulchra*	花狹口蛙	-	Least Concern	Widely distributed in HK					+
3	Paddy Frog	*Fejervarya limnocharis*	澤蛙	-	Least Concern	Widely distributed throughout HK					+
4	Lesser Spiny Frog	*Quasipaa exilispinosa*	小棘蛙	Fellows: PGC; RLCV(VU)	Potential Concern	Widely distributed in upland forest streams throughout Hong Kong					+
5	Romer's Tree Frog	*Liuixalus romeri*	盧氏小樹蛙	Cap.170; Fellowes: PGC; RLCV(VU); IUCN(EN)	Immediate Concern	Distributed in woodlands on Lantau Island, Po Toi Island, Lamma Island, Hong Kong Island and New Territories	+				+
6	Brown Tree Frog	*Polypedates megacephalus*	斑腿泛樹蛙	-	Least Concern	Widely distributed throughout Hong Kong		+	++		+
7	Greenhouse Frog	*Eleutherodactylus planirostris*	溫室蟾	-	-	Widely distributed throughout Hong Kong					+
						TOTAL	**2**	**1**	**1**	**0**	**6**

Notes:

1. Conservation and Protection Status:
   a. Cap. 170 – Protected under Wild Animals Protection Ordinance
   b. Fellowes – Fellowes *et al*. (2002): PGC = Potential Global Concern
   c. RLCV – Red List of China's Vertebrate (2020): VU = Vulnerable
   d. IUCN – International Union for Conservation of Nature Red List of Threatened Species (2023). EN = Endangered
2. Rarity as per AFCD. 2009. The Proposed Action Plan for the Conservation of Amphibians in Hong Kong (NCSC 4/09). Annex 1.
3. Distribution as per AFCD database. Available at https://bih.gov.hk/en/home/index.html
4. Habitats: WL = Woodland, SL = Shrubland, PL = Plantation, DA = Developed Area, WC = Watercourse
5. Relative abundance: +: Scarce (1-5), ++: Uncommon (6-20), +++: Common (20 - 50), ++++: Abundant (>50)
6. References:

AFCD. 2009. The Proposed Action Plan for the Conservation of Amphibians in Hong Kong (NCSC 4/09). Annex 1. Accessed from <http://www.epd.gov.hk/epd/textonly/english/boards/advisory_council/files/ncsc_paper04_2009.pdf> in Sep 2014
AFCD. 2022. Hong Kong Biodiversity Information Hub. Accessed from <https://bih.gov.hk/en/home/index.html> in Feb 2022.
Fellowes *et al* . 2002. Wild animals to watch: Terrestrial and freshwater fauna of conservation concern in Hong Kong. Memoirs of the Hong Kong Natural History Society 25:123-159.
IUCN. (2025). The IUCN Red List of Threatened Species (Version 2025-1). Accessed from <http://www.iucnredlist.org> in Jan 2025.
Ministry of Ecology and Environment of the People's Republic of China, and Chinese Academy of Sciences. 2023. Red List of China's Vertebrates.

Annex B7 Maximum Count of Reptile Species Recorded Within Study Area

Item No.	Common Name	Scientific Name	Chinese Name	Conservation and Protection Status[1]	Distribution in Hong Kong[2]	Habitat[3] 500m Study Area				
						WL	SL	PL	DA	WC
1	Chinese Gecko	*Gekko chinensis*	壁虎	-	Widely distributed throughout Hong Kong		1			2
2	Bowring's Gecko	*Hemidactylus bowringii*	原尾蜥虎	-	Distributed throughout Hong Kong					1
3	Many-banded Krait	*Bungarus multicinctus*	銀環蛇	Fellowes: PRC; RLCV(EN)	Common and widely distributed in Hong Kong			1		
					TOTAL	**0**	**1**	**1**	**0**	**2**

Notes:

1. Conservation and Protection Status:
   a. Fellowes – Fellowes et al. (2002): PRC = Potential Regional Concern
   b. RLCV – Red List of China's Vertebrate (2020): EN = Endangered
2. Distribution as per AFCD database. Available at https://bih.gov.hk/en/home/index.html
3. Habitats: WL = Woodland, SL = Shrubland, PL = Plantation, DA = Developed Area, WC = Watercourse
4. References:

AFCD. 2022. Hong Kong Biodiversity Information Hub. Accessed from <https://bih.gov.hk/en/home/index.html> in Feb 2022.

Fellowes *et al* . 2002. Wild animals to watch: Terrestrial and freshwater fauna of conservation concern in Hong Kong. Memoirs of the Hong Kong Natural History Society 25:123-159.

Ministry of Ecology and Environment of the People's Republic of China, and Chinese Academy of Sciences. 2023. Red List of China's Vertebrates.

Annex B8 Maximum Count of Butterfly Species Recorded within the Study Area

Item No.	Common Name	Scientific Name	Chinese Name	Consevation/ Protection Status	Rarity in Hong Kong [1]	Distribution in Hong Kong [2]	Habitat[3] 500m Study Area				
							WL	SL	PL	DA	WC
1	Forget-me-not	*Catochrysops strabo*	咖灰蝶	-	Very Rare; Species of Conservation Concern	Pui O, Tai Po Kau, Fung Yuen, Shing Mun, Sha Lo Wan.		1		1	
2	Pale Grass Blue	*Zizeeria maha*	酢漿灰碟	-	Very Common	Widely distributed throughout Hong Kong.			1	6	
3	Plum Judy	*Abisara echerius*	蛇目褐蜆蝶	-	Very Common	Widely distributed throughout Hong Kong.	2	1	1		
4	Common Indian Crow	*Euploea core*	幻紫斑蝶	-	Common	Widely distributed throughout Hong Kong.			1		
5	Glassy Tiger	*Parantica aglea*	絹斑蝶	-	Common	Widely distributed throughout Hong Kong.			1		
6	Blue Tiger	*Tirumala limniace*	青斑蝶	-	Common	Widely distributed throughout Hong Kong.			1		
7	Indian Fritillary	*Argyreus hyperbius*	斐豹蛺蝶	-	Common	Widely distributed throughout Hong Kong.			1		
8	Colour Sergeant	*Athyma nefte*	相思帶蛺蝶	-	Common	Widely distributed throughout Hong Kong.			1		
9	Rustic	*Cupha erymanthis*	黃襟蛺蝶	-	Very Common	Widely distributed throughout Hong Kong.			1		
10	Red-ring Skirt	*Hestina assimilis*	黑脈蛺蝶	-	Common	Widely distributed throughout Hong Kong.		1	1		
11	Blue Admiral	*Kaniska canace*	琉璃蛺蝶	-	Common	Widely distributed throughout Hong Kong.			1		
12	Common Palmfly	*Elymnias hypermnestra*	翠袖鋸眼蝶	-	Common	Widely distributed throughout Hong Kong.			1		
13	Common Bluebottle	*Graphium sarpedon*	青鳳蝶	-	Very Common	Widely distributed throughout Hong Kong.			1		
14	Great Mormon	*Papilio memnon*	美鳳蝶	-	Very Common	Widely distributed throughout Hong Kong.			1		
15	Paris Peacock	*Papilio paris*	巴黎翠鳳蝶	-	Very Common	Widely distributed throughout Hong Kong.		1			
16	Spangle	*Papilio protenor*	藍鳳蝶	-	Very Common	Widely distributed throughout Hong Kong.			1		
17	Lemon Emigrant	*Catopsilia pomona*	遷粉蝶	-	Common	Widely distributed throughout Hong Kong.		1	3	3	
18	Common Grass Yellow	*Eurema hecabe*	寬邊黃粉蝶	-	Very Common	Widely distributed throughout Hong Kong.			2	1	
						TOTAL	**1**	**5**	**16**	**4**	**0**

Notes:

1. Rarity in Hong Kong refers to AFCD database:
Chan, A., Cheung, J., Sze, P., Wong, A., Wong, E. and Yau, E. 2011. A Review of the Local Restrictedness of Hong Kong Butterflies. Hong Kong Biodiversity 21: 1-12
2. Distribution as per AFCD database. Available at https://bih.gov.hk/en/home/index.html
3. Habitats: WL = Woodland, SL = Shrubland, PL = Plantation, DA = Developed Area, WC = Watercourse
4. References:

AFCD. 2022. Hong Kong Biodiversity Information Hub. Accessed from <https://bih.gov.hk/en/home/index.html> in Feb 2022.
Chan, A., Cheung, J., Sze, P., Wong, A., Wong, E. and Yau, E. 2011. A Review of the Local Restrictedness of Hong Kong Butterflies. Hong Kong Biodiversity 21: 1-12

Annex B9 Maximum Count of Odonate Species Recorded within the Study Area

Item No.	Common Name	Scientific Name	Chinese Name	Consevation/ Protection Status	Rarity in Hong Kong [1]	Distribution in Hong Kong [2]	Habitat[3] 500m Study Area				
							WL	SL	PL	DA	WC
1	Common Blue Skimmer	*Orthetrum glaucum*	黑尾灰蜻	-	Abundant	Widely distributed in streams, conduits, drainage channels, seepages and road gutters throughout					1
2	Green Skimmer	*Orthetrum sabina sabina*	狹腹灰蜻	-	Abundant	Widely distributed in all wetland habitats throughout Hong Kong		1			
3	Wandering Glider	*Pantala flavescens*	黃蜻	-	Abundant	Widely distributed all over Hong Kong		25	1	50	
4	Saddlebag Glider	*Tramea virginia*	華斜痣蜻	-	Abundant	Widely distributed in trees adjacent to ponds and lakes throughout Hong Kong		1			
						TOTAL	**0**	**3**	**1**	**1**	**1**

Notes:

1. Rarity as per AFCD. 2014.: Available at http://www.afcd.gov.hk/english/conservation/hkbiodiversity/database/search.asp?lang=en.
2. Distribution as per AFCD database. Available at https://bih.gov.hk/en/home/index.html
3. Habitats: WL = Woodland, SL = Shrubland, PL = Plantation, DA = Developed Area, WC = Watercourse
4. References: AFCD. 2022. Hong Kong Biodiversity Information Hub. Accessed from <https://bih.gov.hk/en/home/index.html> in Feb 2022.

Annex B10 Relative Abundance of Freshwater Fauna Recorded within the Study Area

Item No.	Common Name	Scientific Name	Chinese Name	Conservation Status[1]	Habitat[2/3] 500m Study Area				
					WL	SL	PL	DA	WC
Freshwater Invertebrates									
1	Backswimmer	*Notonectidae sp.*	仰泳蝽	-					+
2	Freshwater Shrimp	*Caridina cantonensis*	廣東米蝦	-					+
3	Freshwater Crab	*Nanhaipotamon hongkongense*	香港南海溪蟹	Fellowes: PGC					+
4	Mitten Crab	*Eriocheir sp.*	絨螯蟹	-					++
				TOTAL		**0**	**0**	**0**	**4**

Notes:

1. Conservation and Protection Status:
   a. Fellowes – Fellowes et al. (2002): PGC = Potential Global Concern.
2. Habitats: WL = Woodland, SL = Shrubland, PL = Plantation, DA = Developed Area, WC = Watercourse
3. Relative abundance: +: Scarce (1-5), ++: Uncommon (6-20), +++: Common (20 - 50), ++++: Abundant (>50)
4. References:

AFCD. 2022. Hong Kong Biodiversity Information Hub. Accessed from <https://bih.gov.hk/en/home/index.html> in Feb 2022.

Fellowes *et al* . 2002. Wild animals to watch: Terrestrial and freshwater fauna of conservation concern in Hong Kong. Memoirs of the Hong Kong Natural History Society 25:123-159.

Geotechnical Planning Review Report for Construction of Horizontal Directional Drilling (HDD) Works Near Discovery Bay Tunnel

Geotechnical Planning Review | Government Land Near Discovery Bay Tunnel

B220171.023.01 | 15 October 2025

BD Ref.: N/A

CLP Power Hong Kong Limited

Contents

Appendices

1. Introduction

Fugro (Hong Kong) Limited was appointed by CLP Power Hong Kong Limited as the Engineering Consultant for the preparation of a Geotechnical Planning Review Report for proposed construction of horizontal directional drilling (HDD) works near Discovery Bay Tunnel.

The proposed construction of horizontal directional drilling (HDD) works near Discovery Bay Tunnel includes construction of a launching pit and receiving pit. Based on available geotechnical information, the proposed horizontal directional drilling (HDD) works that may affect or be affected by natural terrain or man-made slopes is addressed in this report and geotechnical feasibility of proposed works is also recommended.

The geotechnical reviews is prepared in accordance with the requirement set out in GEO Advice Note for Planning Applications under Town Planning Ordinance and PNAP APP-25 (PNAP 78). This report contains the following as listed.

- Site topography, site location and brief description
- Available ground investigation, site geology and ground water regrime
- Proposed site formation and the layout of any structures
- A review of impact on the slopes, retaining wall and natural terrains
- Assessment on the geotechnical feasibility of the proposed development
- Impact to adjoining premises & necessary precaution measures

2. Description of Site Conditions

2.1 Site location and Topography

The two sites (i.e. launching pit and receiving pit) situated at north of Discovery Bay which are near the Discovery Bay Tunnel. The site of launching pit is located at the southeast of the CLP Electricity Substation at Discovery Bay North. It is situated on a flat ground with a gentle slope at the south and access road to Discovery Bay North Substation with low vehicular traffic density is located at the east. The size of site is approximate 140m^2 x 2.5m(D). The elevation of site of launching pit is about +43.8mPD.

The site of receiving pit is located at the western entrance of Discovery Bay Tunnel. It is situated on a flat ground which is a lay-by area. Manmade and natural slopes are overlooking the site of receiving pit at north. The size of site is approximate 30m^{2}x 3m(D). The elevation of site of receiving pit is about +54.5mPD.

A site location plan is attached in **Appendix A**.

2.2 The Proposed Development

The proposed public utilities installation by horizontal directional drilling (HDD) method includes construction of a launching pit and receiving pit. To facilitate the set up of drilling machine at launching pit, excavation for footing construction is required. Pit excavation at receiving pit is also required.

After completion of the horizontal directional drilling (HDD) works, footing will be demolished, pits will be backfilled and the ground will be reinstated to its original situation.

3. Desk Study

3.1 Geology

In the vicinity of both the launching and receiving pits, Sheet 10 of the Hong Kong Geological Survey (HKGS) 1:20,000-scale map series HGM20 (1991 Edition; geological map shown in **Appendix E**) indicates that the site is underlain by superficial deposits comprising Qd—unsorted sand, gravel, cobbles, and boulders in a clay/silt matrix (debris flow deposits, typically ≤2 m thick). For solid geology, both pits are underlain by feldsparphyric rhyolite (rf) in the working area.

3.2 Man-made Slopes

According to Slope Information System, there are 2 registered man-made slopes at close proximity of the site area affecting / being affected by the proposed construction works. These slope characteristics are summarised in Table **1**. Location plan & detail information of the features are attached in **Appendix B**.

Table 1_ Summary of Registered Man-made Slopes

Feature No.	Type	Location	Responsible Party	Max. Height (m)	Average Angle (deg)	Length (m)
10NW-D/C118	Cut Slope	Launching Pit (East)	DD352L Lot385 RP & Exts Thereto	7	55	110
10NW-C/C53	Cut Slope	Receiving Pit (North)	Discovery Bay Road Tunnel Co. Ltd.	23	70	365

3.3 Available Ground Investigation

Information search has been carried out in GIU of the GEO. No borehole was found within the site. Seven boreholes, namely 11935-9B, 16C, 18B, 48A, 49A & 50A and 46834-DH3, were located at more than 50m from the concerned site. Based on the available ground investigation information and as summarized in Table **2**, the superficial deposits mainly comprise colluvium (1 to 2m thick). The in-situ soil / rock of granite / rhyolite is encountered at 1m to 2m below the existing ground level.

Based on the available groundwater monitoring records from standpipe/piezometer at borehole BH8C which is about 341 m away from site (summarized in **Appendix C**), groundwater levels are at 14.23m below the existing ground.

The relevant GI records are enclosed in **Appendix C** and summarized in Table **2**.

Table 2_Summary of Previous Ground Investigations

Borehole	Ground Level (mPD)	Total Depth (m)	Thickness (m)		
			Colluvium	Grade V/IV	Grade III or better
11935-9B	+56.40	14.05	-	8.80	5.25
11935-16C	+59.49	16.05	-	10.10	5.95
11935-18B	+54.54	9.29	-	4.20	5.09
11935-48A	+49.01	24.50	-	18.00	6.50
11935-49A	+44.49	18.10	0.80	11.05	7.05
11935-50A	+48.48	12.85	-	5.06	7.79
46834-DH3	+60.46	45.19	1.50	0.50	43.19

4. Geotechnical Assessment

4.1 Man-made Slopes

There are 2 registered man-made slopes in the vicinity affecting or being affected by the proposed excavation pits. Feature locations are shown in **Appendix B**. It can be inferred that these 2 registered slopes, for which the maintenance responsibility lies with the Lands Department, are cut slopes formed during previous road construction works. Slope information is shown in **Appendix B**, and slope characteristics are summarized in Table **1**.

At the launching site, an HDD machine sits on a proposed reinforced pad during the wireline drilling and the pit will be supported by channel planking or sheet pile wall for the excavation works. Upon completion of the cable installation, the HDD machine and reinforced pad are removed, and the excavation is reinstated to its original condition. Additionally, since the excavated pits are more than 7.5m away from the man-made slope feature 10NW-D/C118, it has minimal to no impact on the existing slope. Hence, the construction works of the proposed utility installation on the adjacent cut slope are insignificant.

At the receiving pit, the working site is located alongside the man-made slope feature 10NW-D/C53. To minimize the effect on the slope from the excavation, sheet piles are installed to prevent the adjacent man-made slope from collapsing into the excavated pit. Similar to the launching site, the temporary sheet pile walls and struts are removed upon completion, and the excavation is reinstated to its original condition. Hence, the construction effects of the proposed utility installation on the adjacent man-made slope are insignificant.

Nevertheless, stability of existing feature within or close to the works area (including any unregistered features) affecting or being affected by the development during construction works shall be assessed in the detail design stage. Monitoring works shall be carried out during the whole construction period.

4.2 Natural Terrain Hazard

According to GEO Report No. 138 Section 2.3.4, natural terrain hazard studies shall be carried out when Alert Criteria is reached. "When there is a natural terrain outside the site, but within the same catchment, that is at an angular elevation of 20 degrees or more from the site and when there is ground sloping at more than 15 degrees within 50m horizontally upslope of the site boundary, provided that there is a credible debris flow path to the site."

However, the proposed construction site would not comprise any critical facilities (i.e. facilities under Group 1-3 in Table 2.2 of GEO Report No. 138), a Natural Terrain Hazard Study is not necessary. Nevertheless, if any, stability of the natural terrain affecting or being affected by the development permanently or temporarily during construction works shall be monitored thought the whole construction period. Mitigation works shall be proposed and carried out as necessary.

4.3 Site Formation and Excavation Works

The foundations of the proposed launching and receiving wireline cable pits are constructed by the pit excavation method. The launching pit is approximately 140m^2 x 2.5 m (D), while the receiving pit is approximately 30m^2 x 3.0 m (D). Along the launching excavation pit. Excavation information can be found in **Appendix F**.

For the construction works at the launching pit, installation of channel planking or sheet pile wall for pit excavation is considered a feasible option which can also avoid any damage on the existing tree. In the design of excavation and lateral support works at the receiving pit, attention is paid to the excavation and strutting sequence and to standard workmanship to limit loss of ground due to inward movement of the temporary retaining wall. Earth load, water load, and surcharge are taken into consideration. Sheet pile walls are considered a feasible scheme to retain the excavation depth. The choice of scheme for temporary support is subject to detailed assessment.

After excavation and removal of the wireline drilling machine, the reinforced concrete footing is demolished, the pits are backfilled, and the ground is reinstated to its original condition.

4.4 Construction Method & Sequence

All monitoring point 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 works if necessary.

Obstruction during channel planking or sheetpile wall installation for temporary ELS shall be overcome by pre-boring. Strut of the ELS shall not be dismantled until pits are backfilled and the ground is reinstated to its original condition. All temporary cut slope and excavated pit shall be backfilled by proper material with proper compaction. Precautionary measures against heavy rainfall and typhoon shall also be taken during the site formation and excavation works. Surface water flowing into the proposed site formation adjoining ground shall be intercepted and diverted from the site.

5. Impacts on Adjacent Premises / Geotechnical Features

5.1 Registered Retaining Wall and Slopes

The existing registered slopes, 10NW-C/C 53 and 10NW-D/C118, are in close proximity to the launching and receiving pits, shown in **Appendix B.** Vibration caused by the installation of the sheet pile walls, channel-planking, HDD machine and ground settlement due to wall deflection and dewatering in the excavated areas may cause adverse effects to the adjacent geotechnical features utilities and structures. Titling check points and building settlement pins shall be proposed to be installed around the sites. 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 detailed design stage.

5.2 Discovery Bay North Substation

The Discovery Bay North Substation is located in close proximity to the proposed launching pit (approximately 20 m away, as per site layout in **Appendix A**). Potential risks include excavation-induced ground movements from channel planking or sheet plie wall and HDD-related vibrations, which could affect the substation's foundations. Vibration monitoring and continuous settlement pins/inclinometers are recommendated to oversee at the launching pit, ensuring minimum settlements are observed. Given the small scale, shallow depth (≤3.0 m), and controlled nature of the open cut and HDD for cable installation, impacts on adjacent premises and geotechnical features are anticipated to be negligible.

5.3 HDD Works

In addition to excavation impacts, the HDD works may involve potential risks such as minor ground settlement, heave along the drill path and vibration from the drilling equipment. To mitigate these, closely monitoring for ground movements, and selection of the drill path to avoid sensitive structures and utilities will be implemented. Given the small scale, depth, and controlled nature of the HDD for cable installation, impacts on adjacent premises and geotechnical features are anticipated to be negligible.

5.4 Nearby MTR Railway

It is also noted that the site excavation poses minimal to no significant effect on the nearby MTR railway protection area due to the site locations are approximatly 700m away from these premises as well as the small scale of the excavation works shown in **Appendix D**

5.5 Existing Utilities

The proposed works may impact existing underground utilities in the vicinity, including power cables, water pipes, and drainage systems. Potential risks include damage from excavation activities, vibration from HDD operations, and ground settlement. During construction, monitoring of utility integrity will be implemented, utilities diversion will be applied if required. Given the controlled nature and small scale of the works, impacts are expected to be minimal.

5.6 Discovery Bay Tunnel

The Discovery Bay Tunnel is located approximately 50m from the site. The excavation and HDD works could potentially cause minor ground movements or vibrations that might affect the tunnel structure. However, due to the distance, shallow excavation depths (up to 3m), and the use of sheet piling / planking to contain ground movements, the impact is anticipated to be negligible. Vibration monitoring will be carried out during drilling operations to ensure levels remain within safe limits. No direct interference with the tunnel is planned, and the works will not alter the ground profile permanently.

6. Conclusion

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

1. The proposed construction of horizontal directional drilling (HDD) works near discovery bay tunnel includes construction of a launching pit and receiving pit is geotechnically feasible.
2. In the design of excavation and lateral support works for the pits, attention should be paid to the excavation and strutting sequence and earth load, water load and surcharge should be taken into consideration.
3. Proposed pit excavation works for the HDD cable installation of channel planking or sheet pile wall in the launching pit, and sheet pile walls for the receiving pit during the construction stage. Since the pit excavation works involve depths of up to 3.0 m, excavation effects on the adjacent ground/slopes and change of ground profile are monitored during works, though temporary and minimal.

4. The proposed launching pit is located on a flat ground while receiving pit is excavated adjacent to the existing slopes. After pit excavation, installation of wireline drilling equipment and reinforced pad, and completion of cable installation, the pits are reinstated to their original condition. Hence, the construction effect of proposed utilities installation adjacent to the slopes on the adjacent slopes is insignificant.

5. One registered man-made slope near the receiving pit is 23 m in height at 70° slope angle. Stability of the feature shall be assessed during detailed design stage.

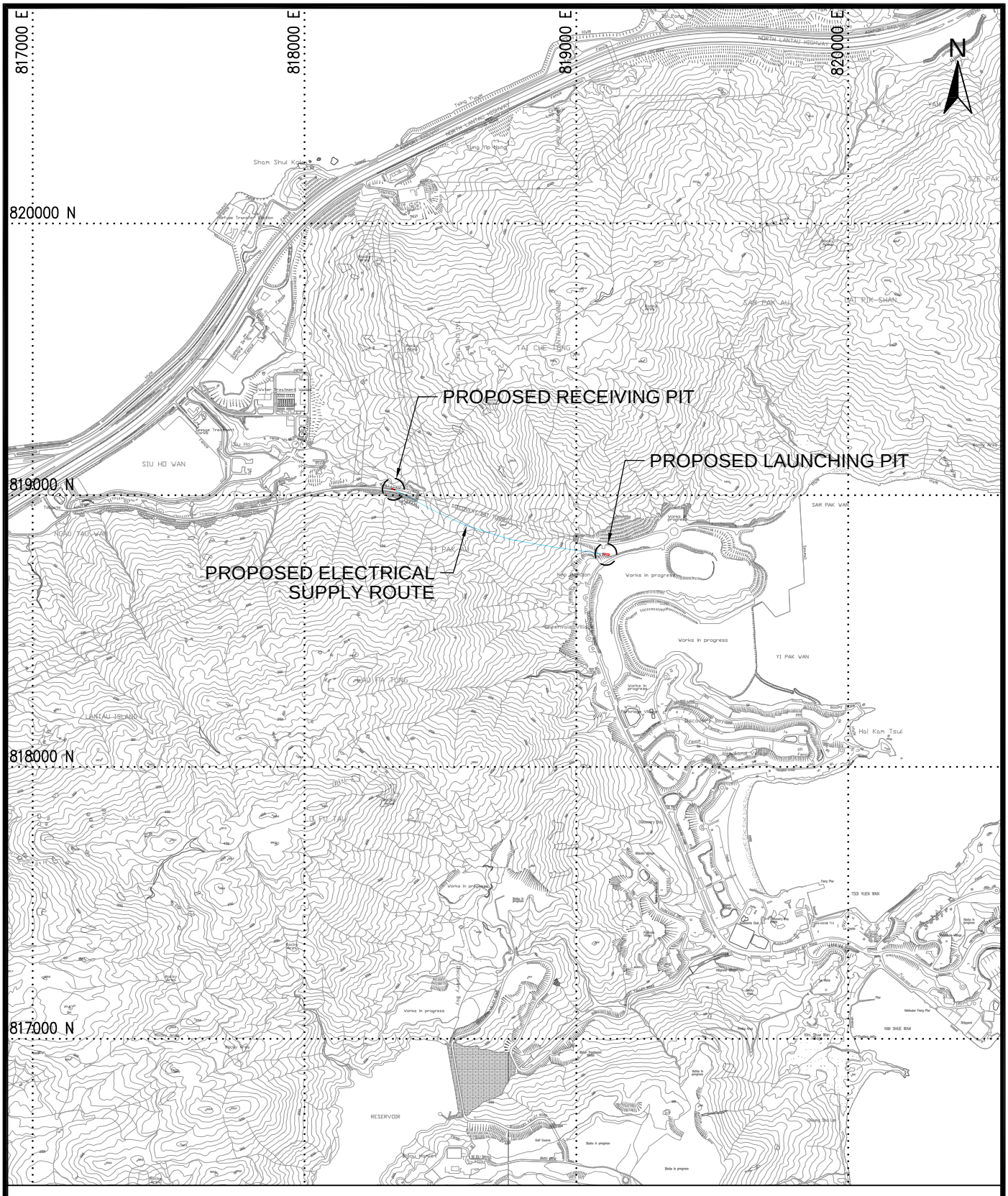
6. There are no records of landslides and boulders within the natural terrain area above the proposed pit locations. The proposed development does not comprise any critical facilities (i.e., facilities under Group 1-3 in Table 2.2 of GEO Report No. 138), a Natural Terrain Hazard Study is not necessary.

7. The location and disposition of the site for the HDD works minimise the filling and excavation of land. The proposed works do not cause adverse impacts on geotechnical features and premises safety.

Appendix A

Site Location Plan

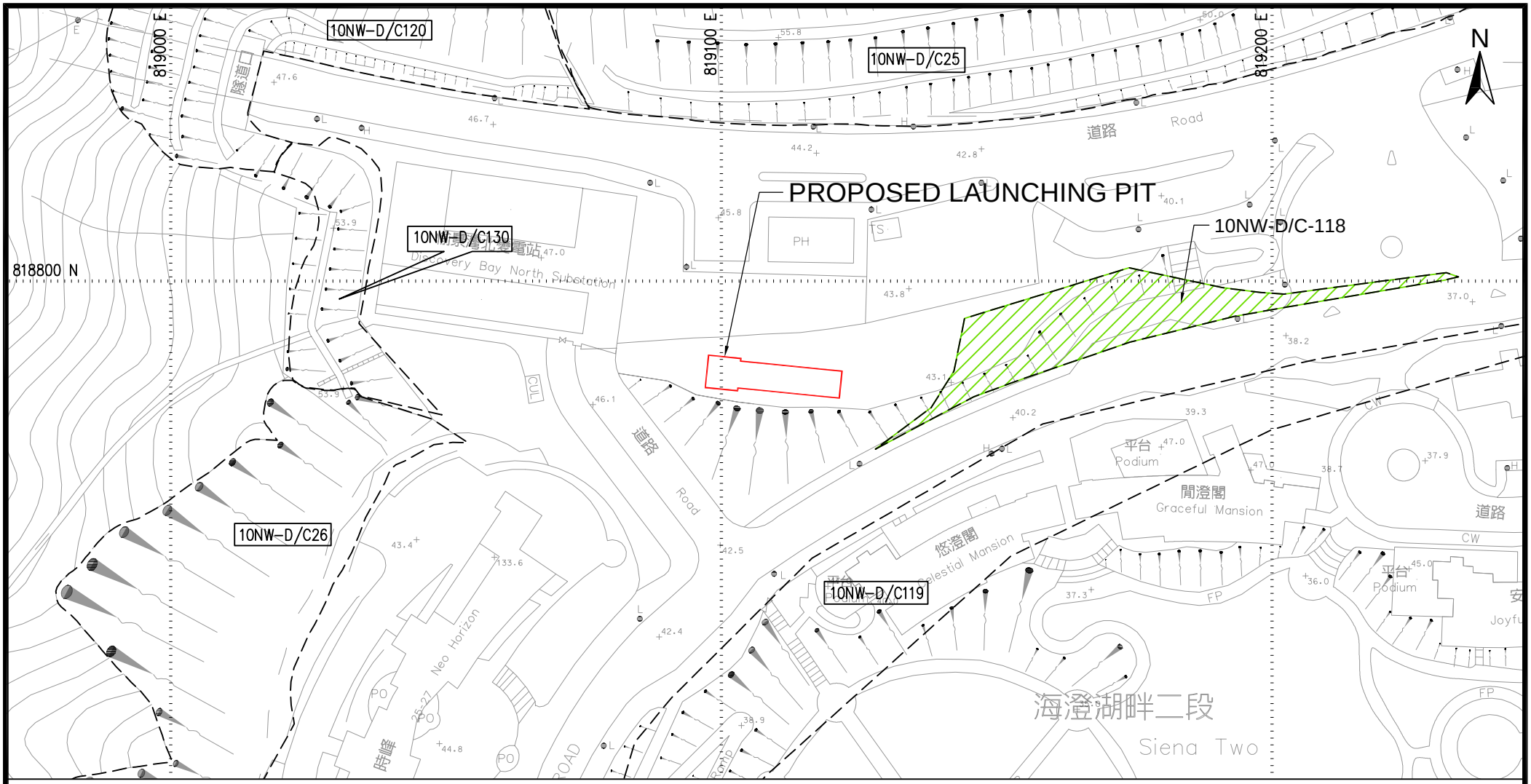
Compiled by : Drawn by : Checked by :



FUGRO	Project GEOTECHNICAL PLANNING REVIEW REPORT FOR CONSTRUCTION OF HORIZONTAL DIRECTIONAL DRILLING (HDD) WORKS NEAR DISCOVERY BAY TUNNEL	Drawing Title LOCATION PLAN		
Job No. 220171.023	Scale 1 : 20000	Date	Figure 1	Rev.

CAD Reference : X:\WORKING\220171_023\STR\GEO PLANNING REVIEW REPORT\220171-023_FIG-01 (P02) (GPRR).DWG Date & Time : 05-09-25 (1:21:12PM) Plotted By : K.MAK

Compiled by : Drawn by : Checked by :



LEGEND :

REGISTERED MAN-MADE FEATURES

PROPOSED LAUNCHING PIT

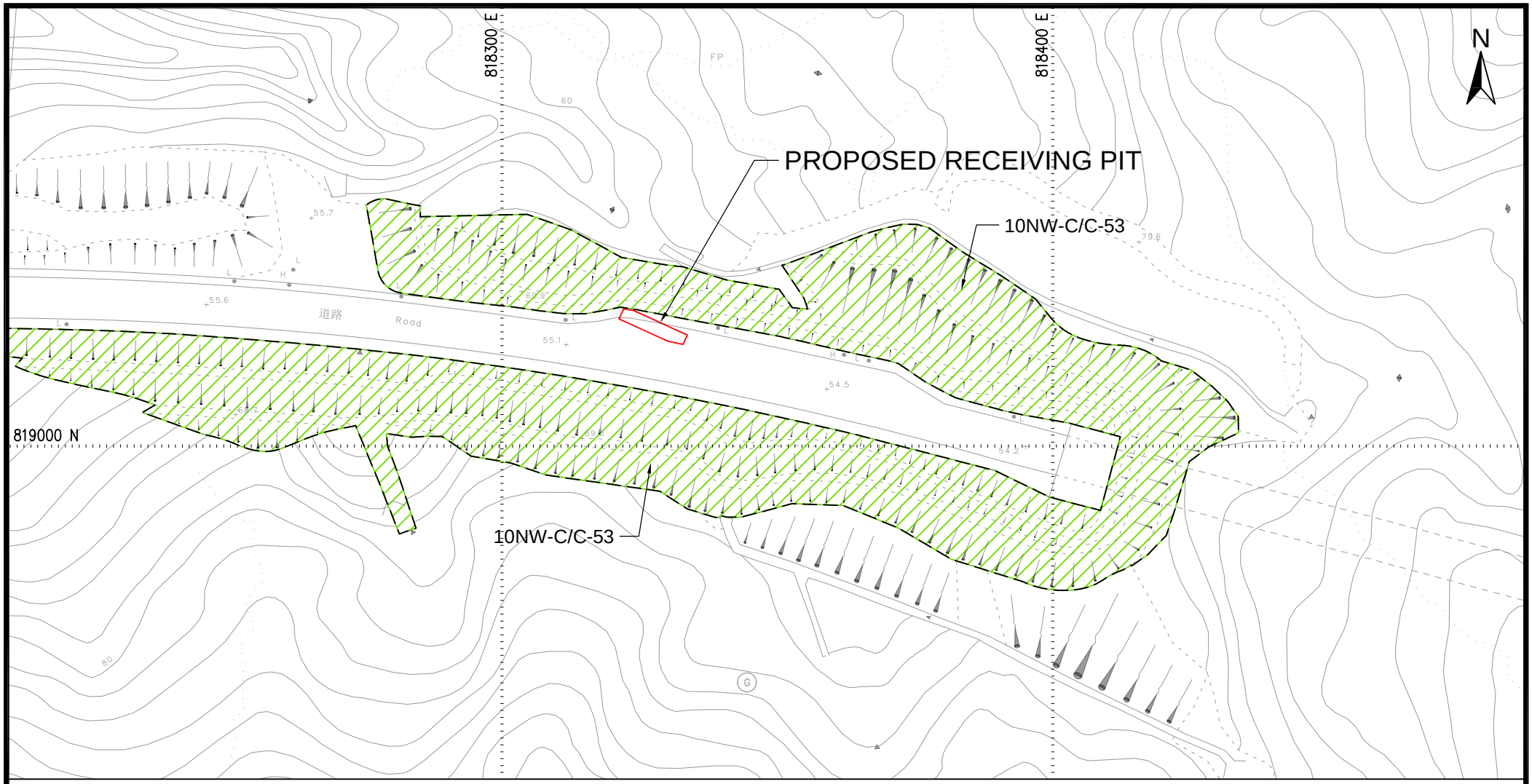
FUGRO	Project: GEOTECHNICAL PLANNING REVIEW REPORT FOR CONSTRUCTION OF HORIZONTAL DIRECTIONAL DRILLING (HDD) WORKS NEAR DISCOVERY BAY TUNNEL	Drawing Title: SITE PLAN OF LAUNCHING PIT	Job No.: 220171.023	Figure: 2
			Scale: 1 : 1000	Date: / Rev.:

CAD Reference : X:\WORKING\220171_023\STR\GEO PLANNING REVIEW REPORT\220171-023_FIG-02 (P02) (GPRR).DWG Date & Time : 05-09-25 (1:21:49PM) Plotted By : K.MAK

Compiled by :

Drawn by :

Checked by :



LEGEND :

REGISTERED MAN-MADE FEATURES

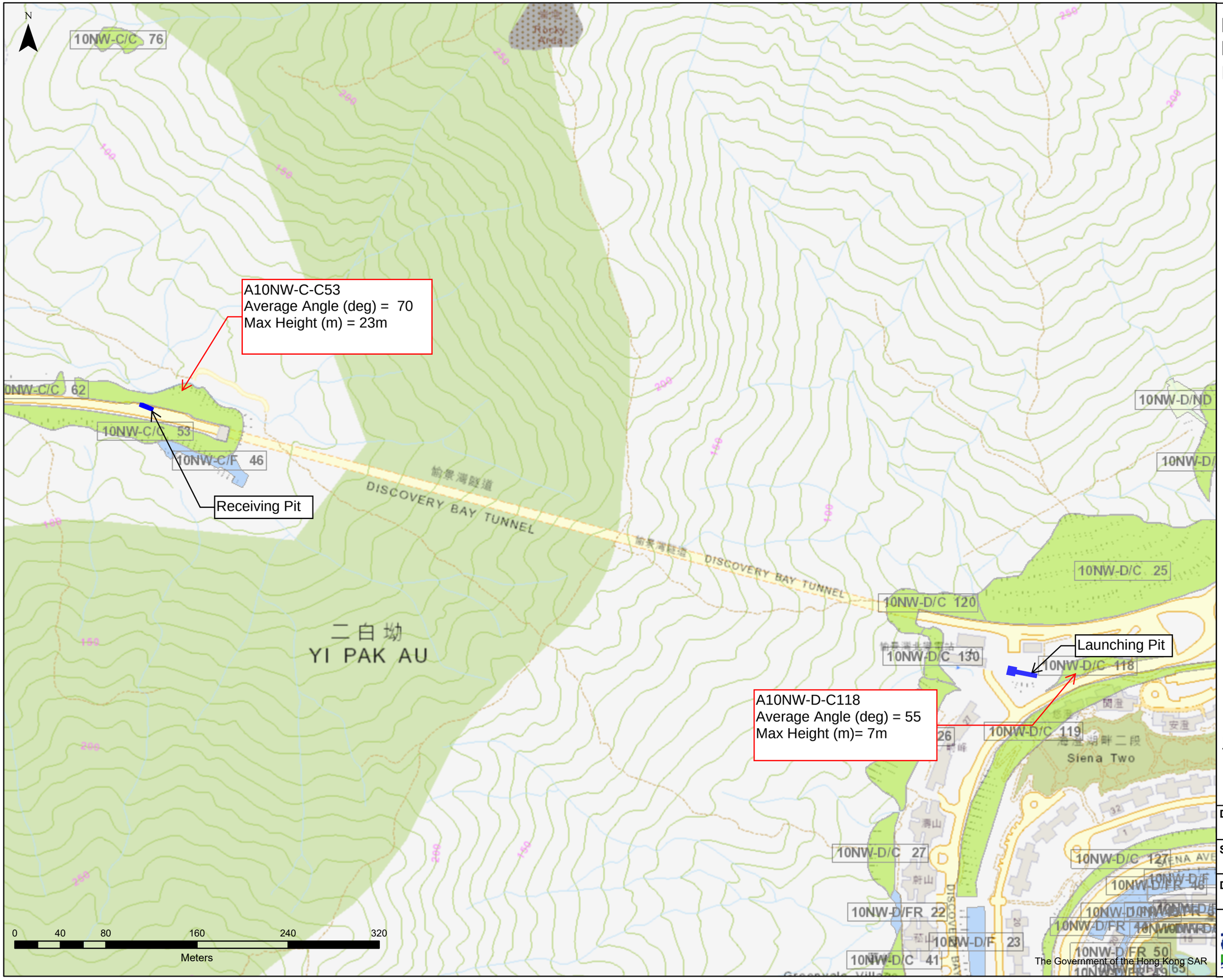
PROPOSED RECEIVING PIT

FUGRO	Project GEOTECHNICAL PLANNING REVIEW REPORT FOR CONSTRUCTION OF HORIZONTAL DIRECTIONAL DRILLING (HDD) WORKS NEAR DISCOVERY BAY TUNNEL	Drawing Title SITE PLAN OF RECEIVING PIT	Job No. 220171.023	Figure 3
			Scale 1 : 1000	Date Rev.

CAD Reference : X:\WORKING\220171_023\STR\GEO PLANNING REVIEW REPORT\220171-023_FIG-03 (P02) (GPRR).DWG Date & Time : 05-09-25 (11:47:35AM) Plotted By : K.MAK

Appendix B

Information of Existing Slopes / Retaining Walls



Man-made Features

- Cut slopes
- Disturbed terrain
- Fill slopes
- NT defence measures
- NT stabilisation measures
- Retaining walls

Slope Features

Legend:

- Pit Locations

Division	
Scale	1:3000
Date	19/08/2025

GEOTECHNICAL ENGINEERING OFFICE
CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

(Print by KYYip)

Appendix B(Cont'd)

General View of the Man-made Slopes

General Views of Registered Man-made Slopes

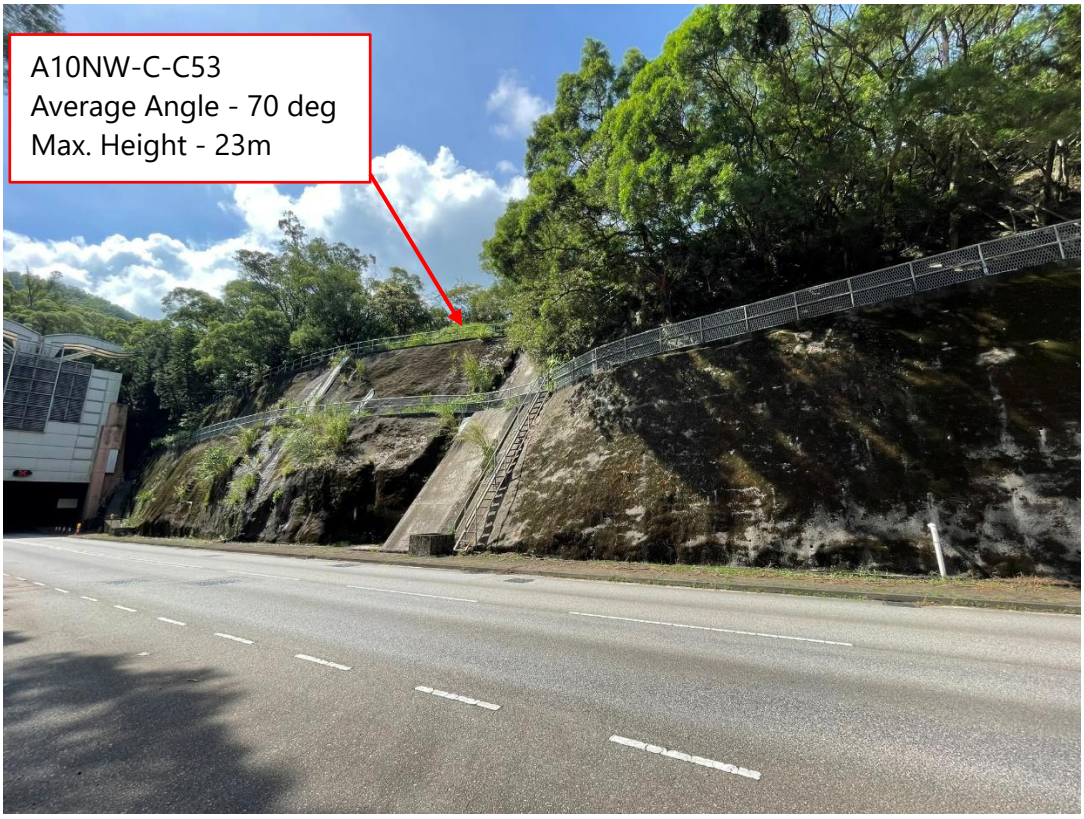


Photo 1: General View of 10NW-C-C53

Photo 2: General View of 10NW-C-C53

Photo 3: General View of 10NW-D-C118

Appendix B(Cont'd)

Basic Data from SIS

BASIC INFORMATION

Location:	NEAR DISCOVERY BAY TUNNEL, LANTAU ISLAND.
Registration Date:	26-01-2000
Ranking Score (NPRS):	22 (LPMit)
Date of Formation:	post-1977
Date of Construction/ Modification:	
Data Source:	SIRST
Approximate Coordinates:	Easting : 818315 Northing : 819028

CONSEQUENCE-TO-LIFE CATEGORY

Facility at Crest:	Undeveloped green belt
Distance of Facility from Crest (m):	0
Facility at Toe:	Tunnel portal
Distance of Facility from Toe (m):	0
Consequence-to-life Category:	2
Remarks:	N/A

SLOPE PART

(1) Max. Height (m): 23 Length (m): 365 Average Angle (deg): 70

WALL PART

N/A

MAINTENANCE RESPONSIBILITY

(1) Sub Div.: 0 Private Feature Party: DISCOVERY BAY ROAD TUNNEL CO. LTD Agent: N/A Land Cat.: 1 Reason Code: 2 MR Endorsement Date: 26-06-2001

DETAILS OF SLOPE / RETAINING WALL

Date of Inspection:	17-04-2000
Data Source:	SIRST
Slope Part Drainage:	(1) Position: Stepped Size(mm): 201
Wall Part Drainage:	N/A

SLOPE PART

Slope Part (1)
Surface Protection (%): Bare: 0 Vegetated: 60 Chunam: 0 Shotcrete: 40 Other Cover: 0
Material Description: Material type: Soil & Rock Geology: Decomposed granite
Berm: No. of Berms: 3 Min. Berm Width (m): 1.5
Weepholes: Size (mm): 40 Spacing (m): 1.2

WALL PART

N/A

SERVICES

(1) Utilities Type: Sewer/Drain Size(mm): 100 Location: On crest Remark: N/A
(2) Utilities Type: Sewer/Drain Size(mm): 100 Location: On slope Remark: N/A
(3) Utilities Type: Water Main Size(mm): 40 Location: On slope Remark: N/A

CHECKING STATUS INFORMATION

N/A

BACKGROUND INFORMATION

GIU Cell Ref.:	10NW23A2
Map Sheet Reference (1:1000):	10NW-23A
Aerial Photos:	20985-6 (1978), CN24219-20 (1999)
Nearest Rainguage Station (Station Number):	Siu Ho Wan Water Treatment Works, Siu Ho Wan(N23)
Data Collected On:	17-04-2000
Date of Construction, Subsequent Modification and Demolition:	Modification: Constructed Before: N/A After: 1999

Related Reports/Files or Documents:	File/Report: DLC/BC Ref. No.: GCMW4/1C/2-1( ) PT.16 F(23,24) File/Report: DLC/BC Ref. No.: GCMW4/1C/2-1( ) PT.16 F(23,24) File/Report: Development Ref. No.: GCMW 9257/96 File/Report: Development Ref. No.: GCMW 9257/96 File/Report: Development Ref. No.: GCMW 9257/96 File/Report: Development Ref. No.: GCMW 9257/96 File/Report: Development Ref. No.: GCMW 9257/96 File/Report: Development Ref. No.: GCMW 9257/96 File/Report: Development Ref. No.: GCMW 9257/96 File/Report: Development Ref. No.: GCMW 9257/96 File/Report: Development Ref. No.: GCMW 9257/96 File/Report: Development Ref. No.: GCMW 9257/96 File/Report: Development Ref. No.: GCMW 9257/96 File/Report: Development Ref. No.: GCMW 9257/96 File/Report: Development Ref. No.: GCMW 9257/96 File/Report: Development Ref. No.: GCMW 9257/96 File/Report: Development Ref. No.: GCMW 9257/96 File/Report: LA Ref. No.: GCMW 5/3/13 PT.20 F(27-2,29) File/Report: LA Ref. No.: GCMW 5/3/13 PT.20 F(27-2,29) File/Report: LA Ref. No.: GCMW 5/3/13 PT.23 F(6,7,6-1,24-1,26,30) File/Report: LA Ref. No.: GCMW 5/3/13 PT.23 F(6,7,6-1,24-1,26,30) File/Report: LA Ref. No.: GCMW 5/3/13 PT.24 F(5-1,7,9,10) File/Report: LA Ref. No.: GCMW 5/3/13 PT.24 F(5-1,7,9,10) File/Report: LA Ref. No.: GCMW 5/6/13 PT.5 F(33,39,63,67) File/Report: LA Ref. No.: GCMW 5/6/13 PT.5 F(33,39,63,67) File/Report: LA Ref. No.: GCMW 5/6/13 PT.7 F(13-1,20) File/Report: LA Ref. No.: GCMW 5/6/13 PT.7 F(13-1,20) File/Report: LA Ref. No.: GCMW 5/6/13 PT.8 F(90-3,90-4,94,95,92-1,97) File/Report: LA Ref. No.: GCMW 5/6/13 PT.8 F(90-3,90-4,94,95,92-1,97) File/Report: LA Ref. No.: GCMW 5/6/13 PT.9 F(2-1,38,42,47,51) File/Report: LA Ref. No.: GCMW 5/6/13 PT.9 F(2-1,38,42,47,51)
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:	Agreement No.: CE55/2022 Report No.: S2R022/2024

ENHANCED MAINTENANCE INFORMATION

From Maintenance Department: (Last Updated Date: 26/06/2025)

STAGE 1 STUDY REPORT

Inspected On:	
Weather:	
District:	MW
Section No:	1-1
Height(m):	

Type of Toe Facility:	Tunnel portal
Distance from Toe(m):	0
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

eLPMIS

LPM/LPMit Details Report

LPM Study Feature No.:	10NW-C/C 53
Location:	NEAR DISCOVERY BAY TUNNEL, LANTAU ISLAND.
District Council:	Islands
Maintenance Responsibility (At the Time of Selection):	Private
Responsible Party for Maintenance of Government Portion:	N/A
Private Lot No.:	DISCOVERY BAY ROAD TUNNEL CO. LTD

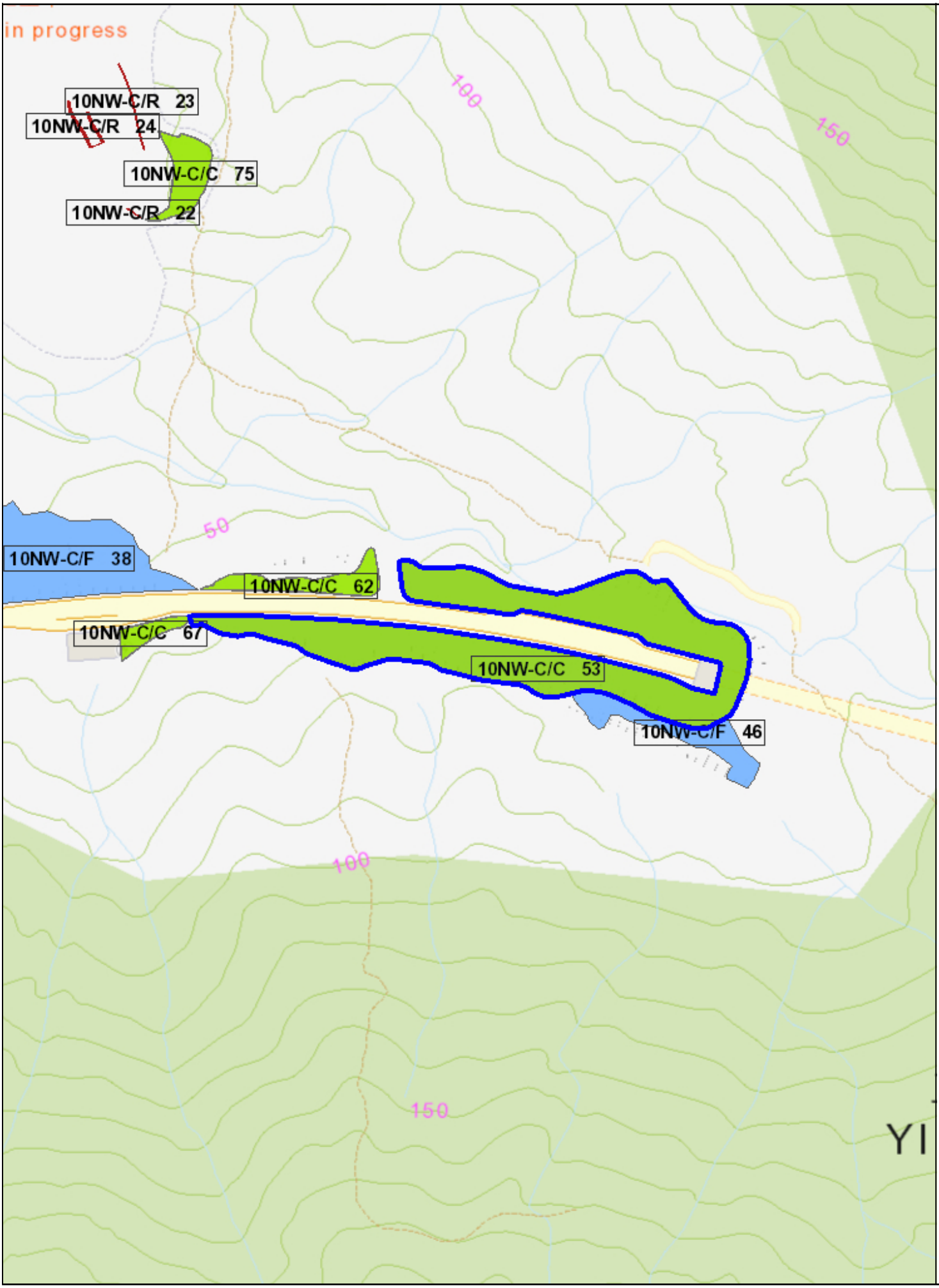
LPM/LPMit Study

Agreement No.:	CE55/2022
Study Type:	Stage 2 Study
Consultant:	Atkins China Ltd.
GEO Managing Section / Engineer:	SS / SS1
Study Status:	Study completed
Design Approach:	N/A
Option Assessment Accepted:	N
Study Report No.:	S2R022/2024
Programme / Actual Commencement:	12-01-2024
Programme / Actual Completion:	12-03-2024
Report Recommendation (For Stage 2 Study):	N/A
District Check Status:	N/A
Checking Certificate No.:	N/A
GEO Engineer's Remarks:	N/A

LPM/LPMit Works

Works Contract No.:	N/A
GEO Managing Section / Engineer:	N/A / N/A
Contractor:	N/A
Progress Status:	N/A
Reason of Study Termination / Works Deletion (If Necessary):	N/A
Forecast Commencement Date:	N/A
Forecast Completion Date:	N/A
Completion Cert. Issued:	N/A
Site Handed Over to Maintenance Department on:	N/A
Estimated Cost for Upgrading (HK$M):	N/A
Maintenance Manual No.:	N/A
Actual Works:	N/A
No. of Tree Felled:	N/A
No. of Tree Planted (Incl. Transplant):	N/A
% Bare of Slope Surfacing:	N/A
% Vegetated of Slope Surfacing:	N/A
% Shotcrete of Slope Surfacing:	N/A
Other Hard Surface of Slope Surfacing:	N/A

PHOTO


in progress
10NW-C/R 23
10NW-C/R 24
10NW-C/C 75
10NW-C/R 22
100
150
50
10NW-C/F 38
10NW-C/C 62
10NW-C/C 67
10NW-C/C 53
10NW-C/F 46
100
150

BASIC INFORMATION

Location:	DISCOVERY BAY NORTH DEVELOPMENT SITE, LANTAU
Registration Date:	24-10-1998
Ranking Score (NPRS):	6 (Notional)
Date of Formation:	post-1977
Date of Construction/ Modification:	
Data Source:	SIRST
Approximate Coordinates:	Easting : 819161 Northing : 818793

CONSEQUENCE-TO-LIFE CATEGORY

Facility at Crest:	Undeveloped green belt
Distance of Facility from Crest (m):	0
Facility at Toe:	Construction sites
Distance of Facility from Toe (m):	0
Consequence-to-life Category:	2
Remarks:	N/A

SLOPE PART

(1) Max. Height (m): 7 Length (m): 110 Average Angle (deg): 55

WALL PART

N/A

MAINTENANCE RESPONSIBILITY

(1) Sub Div.: 0 Private Feature Party: DD352L LOT385 RP &EXTS THERETO Agent: N/A Land Cat.: 1 Reason Code: 1 MR Endorsement Date: 19-10-2016

DETAILS OF SLOPE / RETAINING WALL

Date of Inspection:	21-08-1998
Data Source:	SIRST
Slope Part Drainage:	(1) Position: Stepped Size(mm): 325
Wall Part Drainage:	N/A

SLOPE PART

Slope Part (1)
Surface Protection (%): Bare: 50 Vegetated: 40 Chunam: 10 Shotcrete: 0 Other Cover: 0
Material Description: Material type: Soil & Rock Geology: Decomposed granite
Berm: No. of Berms: N/A Min. Berm Width (m): N/A
Weepholes: Size (mm): 40 Spacing (m): 1.2

WALL PART

N/A

SERVICES

N/A

CHECKING STATUS INFORMATION

Tagmark: SCS_20704 Part: 0 Checking Status: Others (See remarks) Checking Certificate No.: N/A

BACKGROUND INFORMATION

GIU Cell Ref.:	10NW23B8
Map Sheet Reference (1:1000):	10NW-23B
Aerial Photos:	A29024 (1991), A29025 (1991)
Nearest Rainguage Station (Station Number):	Siu Ho Wan Water Treatment Works, Siu Ho Wan(N23)
Data Collected On:	21-08-1998
Date of Construction, Subsequent Modification and Demolition:	Modification: Constructed Before: 1991 After: 1987 Modification: Modified Before: N/A After: 1997
Related Reports/Files or Documents:	File/Report: DLC/BC Ref. No.: GCMW4/1C/2-1 PT16F(8,9),PT17F(6,7) File/Report: DLC/BC Ref. No.: GCMW4/1C/2-1 PT16F(8,9),PT17F(6,7) File/Report: DLC/BC Ref. No.: GCMW4/1C/2-1PT13F(36),PT15F(18,19,21,22) File/Report: DLC/BC Ref. No.: GCMW4/1C/2-1PT13F(36),PT15F(18,19,21,22) File/Report: Development Ref. No.: 9167/96 File/Report: Development Ref. No.: 9167/96 File/Report: Other Ref. No.: PNAP168 File/Report: Other Ref. No.: PNAP168
Remarks:	THE FEATURE WAS FILL ACCRODING TO THE SIFT REPORT
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: 26/06/2025)

STAGE 1 STUDY REPORT

Inspected On:	
Weather:	
District:	MW
Section No:	1-1
Height(m):	
Type of Toe Facility:	Construction sites
Distance from Toe(m):	0
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

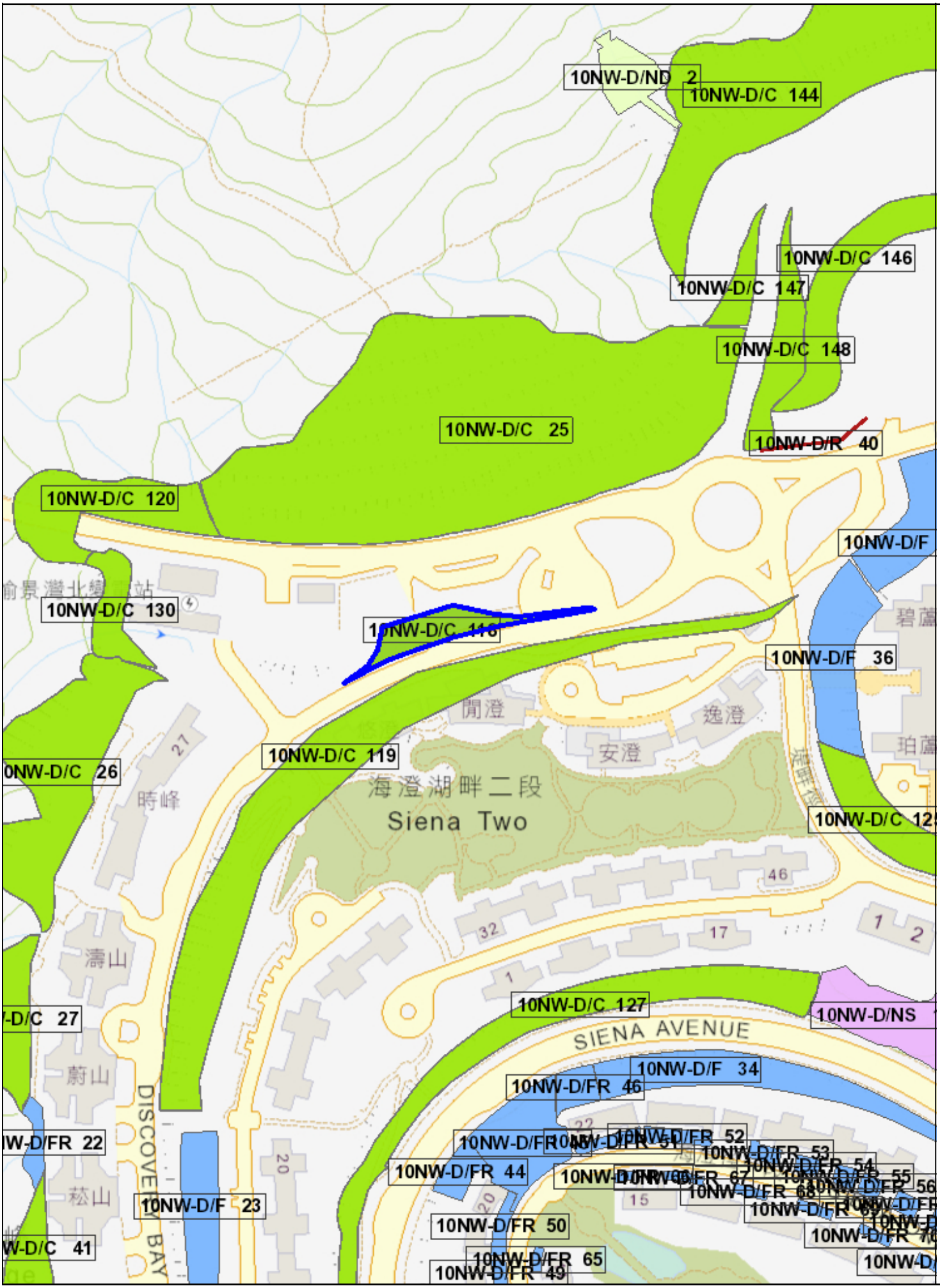
OTHER EXTERNAL ACTION

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

PHOTO


'98 8 21
10NW-D/C118
GENERAL VIEW
F1


10NW-D/C118
GENERAL VIEW.
F2,F3


10NW-D/ND 2
10NW-D/C 144
10NW-D/C 146
10NW-D/C 147
10NW-D/C 148
10NW-D/C 25
10NW-D/R 40
10NW-D/C 120
10NW-D/F
10NW-D/C 130
10NW-D/C 116
10NW-D/F 36
10NW-D/C 119
0NW-D/C 26
海澄湖畔二段
Siena Two
10NW-D/C 12
10NW-D/C 127
10NW-D/NS
SIENA AVENUE
10NW-D/F 34
10NW-D/FR 46
W-D/FR 22
10NW-D/FR 44
10NW-D/F 23
10NW-D/FR 50
W-D/C 41
10NW-D/FR 65
10NW-D/FR 49
DISCOVERY BAY

Appendix B(Cont'd)

Slope Maintenance Responsibility Report

SMRIS

Slope Maintenance Responsibility Report (10NW-C/C53)	**ESTATE MANAGEMENT SECTION** **LANDS DEPARTMENT**

List of Slope Maintenance Responsibility Area(s)

1	**10NW-C/C53**		**Sub-Division**	Not Applicable
	Location	FALLS WITHIN TUNNEL AREA OF DISCOVERY BAY TUNNEL LINK		
	Responsible Lot/Party	DISCOVERY BAY ROAD TUNNEL CO. LTD	**Maintenance Agent**	Not Applicable
	Remarks	Not Applicable		

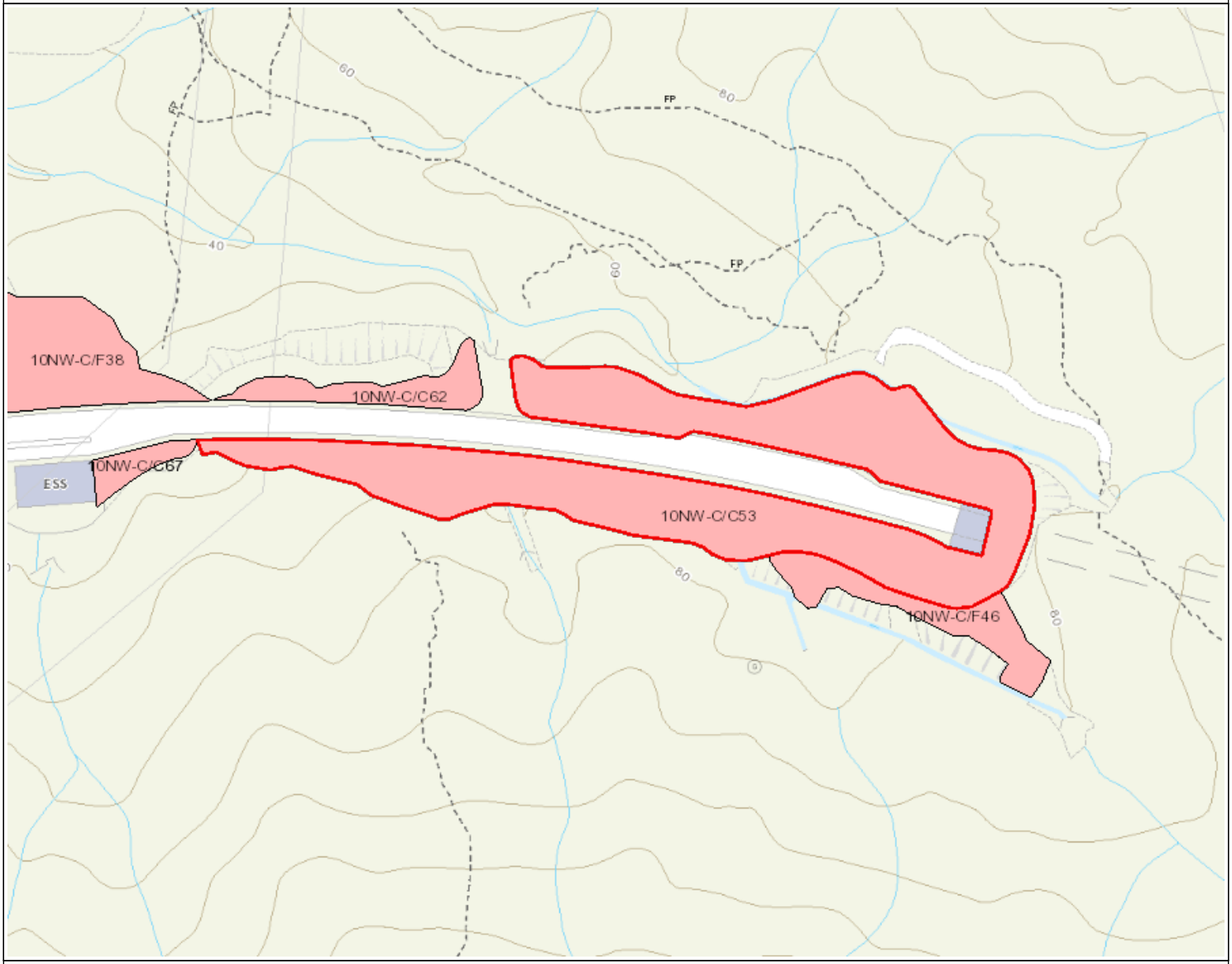
- End of Report -

Notes:

(i) The location plan in Annex is for identification purposes of slope(s) only.

(ii) The slope(s) as listed in the Slope Maintenance Responsibility Report may not be shown on the location plan in Annex.

Location Plan



Legend

- Slope Area(s)
- Search Location
- Slope(s) Maintained by Government
- Slope(s) Maintained by Private Party/Parties
- Slope(s) Maintained by Government and Private Party/Parties

ESTATE MANAGEMENT SECTION
LANDS DEPARTMENT

This Plan is **NOT TO SCALE** and intended for **IDENTIFICATION** only. All information shown on this plan **MUST** be verified by field survey.

Printed on: 15/08/2025

Slope Maintenance Responsibility Report (10NW-D/C118)	**ESTATE MANAGEMENT SECTION** **LANDS DEPARTMENT**

List of Slope Maintenance Responsibility Area(s)

1	**10NW-D/C118**		**Sub-Division**	Not Applicable
	Location	Within DD352L LOT385 RP &EXTS THERETO		
	Responsible Lot/Party	DD352L LOT385 RP &EXTS THERETO	**Maintenance Agent**	Not Applicable
	Remarks	Not Applicable		

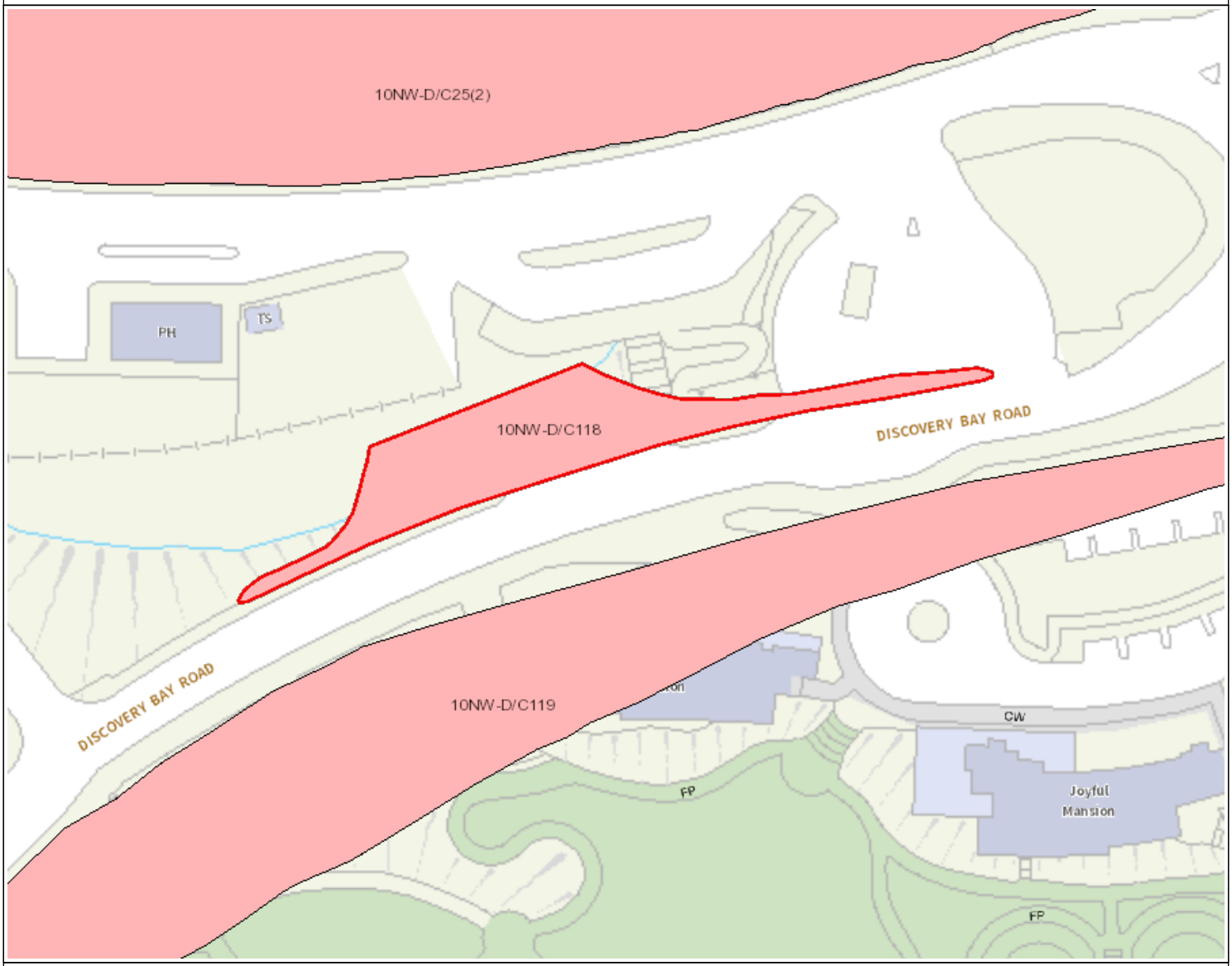
- End of Report -

Notes:

(i) The location plan in Annex is for identification purposes of slope(s) only.

(ii) The slope(s) as listed in the Slope Maintenance Responsibility Report may not be shown on the location plan in Annex.

Location Plan



Legend

- Slope Area(s)
- Search Location
- Slope(s) Maintained by Government
- Slope(s) Maintained by Private Party/Parties
- Slope(s) Maintained by Government and Private Party/Parties

ESTATE MANAGEMENT SECTION
LANDS DEPARTMENT

This Plan is **NOT TO SCALE** and intended for **IDENTIFICATION** only. All information shown on this plan **MUST** be verified by field survey.

Printed on: 15/08/2025

Appendix C

Location Plan of Existing Borehole

46834-DH3
G.L (mPD) = 60.46m
H.G.W.L (mPD) = 59.43m
L.G.W.L (mPD) = 58.35m

11935-9B
G.L. (mPD) = +56.4m

Receiving Pit

11935-50A
G.L (mPD) = 48.48m
H.G.W.L (mPD) = 46.53m
L.G.W.L (mPD) = 42.6m

11935-16C
G.L (mPD) = 59.49m
H.G.W.L (mPD) = 57.74m
L.G.W.L (mPD) = 47.09m

11935-18B
G.L (mPD) = 54.54m
H.G.W.L (mPD) = 51.39m
L.G.W.L (mPD) = 50.34m

11935-48A
G.L (mPD) = 49.01m
H.G.W.L (mPD) = 45.91m
L.G.W.L (mPD) = 41.91m

11935-49A
G.L (mPD) = 44.49m
H.G.W.L (mPD) = 41.69m
L.G.W.L (mPD) = 38.44m

Launching Pit

DISCOVERY BAY TUNNEL

二白坳
YI PAK AU

Siena Two

Greenvale Village

0 40 80 160 240 320
Meters

Location Plan of Existing Boreholes

Man-made Features

- Cut slopes
- Disturbed terrain
- Fill slopes
- NT defence measures
- NT stabilisation measures
- Retaining walls
- Slope Features
- GIU Report
- GI with AGS

GI Location

- <all other values>
- Slope striping
- Cone Penetration Test
- GCO Probe
- Grab Samples
- Impression Packer Test
- Trial pit
- PR
- Rock joint survey
- Trial trench
- GI

Legend:

- Pit Locations

Division	
Scale	1:3000
Date	19/08/2025

GEOTECHNICAL ENGINEERING OFFICE
CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

(Print by KYYip)

Appendix C(Cont'd)

Measured Groundwater Record

Gammon (Hong Kong) Limited
CIVIL ENGINEERS & CONTRACTORS
33rd Floor, Hopewell Centre, 183 Queen's Road, East, Hong Kong.
Tel. 5-282941 Cable: GAMMONCO Telex: HX 73829

PIEZOMETER READINGS ON BH. 8c

Sheet 1 of 1

Client/Consultant Binnie & partners.
Job No. J-338
Location Discovery Bay Phase II.
Ex. Ground Level _____ m PD
Coordinates N _____ E _____

DATE OF INSTALLATION _____
DEPTH OF PIEZOMETER _____

DATE	PIEZOMETER READINGS (M)
26-8-87	14.21m
27-8-87	14.22m
28-8-87	14.20m
29-8-87	14.21m
30-8-87	14.23m
31-8-87	14.22m
1-9-87	14.23m

N

DISCOVERY BAY TUNNEL

Launching Pit

Approx. 341m

DH8C Borehole Location

Greenvale Village

Siena Two

Siena One

Chianti

SIENA AVENUE

AMALFI

DISCOVERY BAY ROAD

0 25 50 100 150 200

Meters

Man-made Features

- Cut slopes
- Disturbed terrain
- Fill slopes
- NT defence measures
- NT stabilisation measures
- Retaining walls
- Slope Features
- R GIU Report

GI Location

- <all other values>
- Slope striping
- Cone Penetration Test
- GCO Probe
- Grab Samples
- Impression Packer Test
- Trial pit
- PR
- Rock joint survey
- Trial trench
- GI

Legend:

- Pit Locations

Division	
Scale	1:2000
Date	22/08/2025

GEOTECHNICAL ENGINEERING OFFICE
CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

(Print by KYYip)

Appendix C(Cont'd)

Existing Ground Investigation Records

Binnie & Partners (Hong Kong)

Consulting Engineers

Location: Discovery Bay Project: Proposed Development at Discovery Bay — Phase V

Equipment & Methods: ROTARY

DRILLHOLE NO. 9B

Sheet 1 of 2

Hong Kong Metric Grid Reference. E 18484.28N 8888.80 Ground level +5640 mPD

Diameters are in mm. Lengths, levels & thickness are in m. Angle to horizontal: 90° Bearing: °E of N

Drilling progress/ core barrel	Casing depth, size	Water level	Sample type, no.	Notes e.g. Colour Water return caving instrumentation, tests	Depth	Reduced level mP.D.	Total core recovery %	RQD	FRACTURE INDEX	Legend	Description	Grade
	HX				0.0	+5640					Medium dense, brown & yellowish brown, silty SAND with trace fine gravel (C.D.G.)	V
			M101 1		1.0							
					1.50							
			2	2.2, 3,4,4.6, N=17	2.0		95					
					2.50							
					2.95 3.0						with some rock fragments below 4.0m	
			M101 3		4.0		95					
			4	2,3, 4,4.6.6, N=20	5.0						Medium dense, brown & dark brown, Clayey silty SAND (C.D.G.)	V
					5.45							
					6.0							
			M101 5		6.50		95					
			6	3.4, 4.6.6.7, N=23	7.0							
					7.50							
					8.0						Moderately strong to strong, pink, light grey, & grey, medium to coarse grained, moderately decomposed PORPHYRITIC GRANITE with highly fractured zone at 10.0–10.85m	
	8.80m				8.80 8.90 9.6	+4760			N.I.			III
20-7-1987			T2101		10.0	+4640	92	59	6.4			

LEGEND (Lengths and positions of symbols are to scale)

Sample: Small disturbed; Large disturbed; U76 Undisturbed type & dia. M = triple tube U = tube; NWX Core & size; Water sample

Tests & instruments: Standard Penetration Test (SPT); Permeability test; Water absorption test

Results & observations: N Standard Penetration Test; m Moisture content; k Permeability; I Water absorption; W Water return; t Coring rate; RQD Rock quality designation

Piezometer Tip Details: A (lower) B (upper) mP.D. – mP.D.

Scale 1:50

Logged by

Checked by

Date:

Gammon (Hong Kong) Limited

CIVIL ENGINEERS & CONTRACTORS

33rd Floor, Hopewell Centre, 183 Queen's Road, East, Hong Kong

Tel 5 8232823 Cables GAMMONCO Telex HX 73828 Fax 5 201824

Binnie & Partners (Hong Kong)

Consulting Engineers

Location: Discovery Bay Project: Proposed Development at Discovery Bay — Phase V
Equipment & Methods: ROTARY

DRILLHOLE NO. DB
Sheet 2 of 2

Hong Kong Metric Grid Reference: E N Ground level: mPD
Diameters are in mm. Lengths, levels & thickness are in m. Angle to horizontal: 90° Bearing: °E of N

Drilling progress/ core barrel	Casing depth, size	Water level	Sample type, no.	Notes e.g. Colour Water return caving instrumentation, tests	Depth	Reduced level mP.D.	Total core recovery %	RQD	FRACTURE INDEX	Legend	Description	Grade
20-7-1987		Nil	T2101 1 TNW		10.0	+46.40						
					10.85		100	47	N.I.		Joints are shallow dipping, extremely closely to medium spaced, very narrow to narrow, smooth to rough undulating, limonite and manganese stained subvertical joint at 10.85 – 11.03m (M.D.G.)	III
					11.0				9.2			
					11.55		100	30	N.I.			
					12.0							III/II
					12.15		88	0	N.I.			
					12.55							
					13.0		100	60	6.0		Strong, pink, light grey & grey, coarse grained feldspar phenocrysts in a fine grained groundmass, moderately to slightly decomposed PORPHYRITIC GRANITE with shallow dipping, closely spaced, very narrow to narrow, rough chlorite filled joints (M/S.D.G.)	
					14.0	+42.35						
					14.05						End of Hole at 14.05m	
					15.0							
					16.0							
					17.0							
					18.0							
					19.0							
					20.0							

LEGEND (Lengths and positions of symbols are to scale)

Sample
- • Small disturbed
- ↕ Large disturbed
- ▮ U76 Undisturbed type & dia. M = triple tube U = tube
- ▯ NWX Core & size
- △ Water sample

Tests & instruments
- Standard Penetration Test (SPT)
- Permeability test
- Water absorption test

Results & observations
- N Standard Penetration Test
- m Moisture content
- k Permeability
- I Water absorption
- W Water return
- t Coring rate
- RQD Rock quality designation

Piezometer Tip Details

	A (lower)	B (upper)
	+48.90 mP.D.	mP.D.
	+48.10 mP.D.	mP.D.
	+47.60 mP.D.	mP.D.

Scale 1:50
Logged by
Checked by
Date:

Gammon (Hong Kong) Limited
CIVIL ENGINEERS & CONTRACTORS
33rd Floor, Hopewell Centre, 183 Queen's Road, East, Hong Kong
Tel 5 8232823 Cables GAMMONCO Telex HX 73826 Fax 5 201824

Binnie & Partners (Hong Kong)

Consulting Engineers

Location: Discovery Bay Project: Proposed Development at Discovery Bay — Phase V

Equipment & Methods: ROTARY

DRILLHOLE NO. 16C

Sheet 1 of 2

Hong Kong Metric Grid Reference: E 190868 N 18787.89 Ground level: +5.949 mPD

Diameters are in mm. Lengths, levels & thickness are in m. Angle to horizontal: 90° Bearing: °E of N

Drilling progress/ core barrel	Casing depth, size	Water level	Sample type, no.	Notes e.g. Colour Water return caving instrumentation, tests	Depth	Reduced level mP.D.	Total core recovery %	RQD	F.I.	Legend	Description	Grade
25-8-87	PX	NIL	M101			+5.949						
					1.50		90					
			•1	.6. .10.11.13								
		1.75	•2	N=43	2.50							
		NIL			2.95						Dense to very dense, yellowish to greyish brown speckled red to white Silty SAND (C.D.G.)	V
			M101									
					4.00		91					
	5.00		•3	167. 0.11.13.14								
	HX		•4	N=48	5.00							
26-8-87					5.45							
			M101									
					6.50		95					
			•5	7.12. 13.14.14.18								
			•6	N=59	7.50							
					7.95							
			M101									
					9.00	+5.049	90				Very dense, Slightly Silty fine gravelly SAND (CC/H.D.G.)	V/IV
			•7	200/0.05								
	10.10	12.40	•8	N=200	9.90	+4.939						

LEGEND (Lengths and positions of symbols are to scale)

Sample
- Small disturbed
- Large disturbed
- U76 Undisturbed type & dia. M = triple tube U = tube
- NWX Core & size
- Water sample

Tests & instruments
- Standard Penetration Test (SPT)
- Permeability test
- Water absorption test

Results & observations
- N Standard Penetration Test
- m Moisture content
- k Permeability
- I Water absorption
- W Water return
- r Coring rate
- RQD Rock quality designation

Piezometer Tip Details

A (lower)	B (upper)
mP.D.	mP.D.
mP.D.	mP.D.
mP.D.	mP.D.

Scale 1:50

Logged by

Checked by

Date:

Gammon (Hong Kong) Limited

CIVIL ENGINEERS & CONTRACTORS

33rd Floor, Hopewell Centre, 183 Queen's Road, East, Hong Kong
Tel 5-8232823 Cables GAMMONCO Telex HX 73828 Fax 5-201824

Binnie & Partners (Hong Kong)

Consulting Engineers

Location: Discovery Bay Project: Proposed Development at Discovery Bay — Phase V

Equipment & Methods:

DRILLHOLE NO. 16C

Sheet 2 of 2

Hong Kong Metric Grid Reference: E N Ground level: mPD

Diameters are in mm. Lengths, levels & thickness are in m. Angle to horizontal: Bearing: °E of N

Drilling progress/ core barrel	Casing depth, size	Water level	Sample type, no.	Notes e.g. Colour Water return caving instrumentation, tests	Depth	Reduced level mP.D.	Total core recovery %	RQD	FRACTURE INDEX	Legend	Description	Grade
26-8-87			T3101		10.10	+4.939	84	0	8.0	+++	Moderately Strong, greenish brown, coarse grained, moderately to slightly decomposed GRANITE, with medium to widely spaced, Shallow & occasional Subvertical dipping, Smooth planar, narrow, Slightly Fe & Mn Stained Joints below 13.90m Slightly decomposed & Strong, Highly decomposed at 10.60-10.80m	III
					10.60		0					
					10.80		89	48	11.6	+++		
					11.75		100	<60	4.0	+++		
					12.50		93	84	6.3	+++		
27-8-87			TNW		13.45		97	<75	3.6	+++		II
					14.55		99	93	3.3	+++		
						+3.44				+++		
					16.05						End of Hole at 16.05m	

LEGEND (Lengths and positions of symbols are to scale)

Sample: Small disturbed; Large disturbed; U76 Undisturbed type & dia. M = triple tube U = tube; NWX Core & size; Water sample

Tests & instruments: Standard Penetration Test (SPT); Permeability test; Water absorption test

Results & observations: N Standard Penetration Test; m Moisture content; k Permeability; I Water absorption; W Water return; t Coring rate; RQD Rock quality designation

Piezometer Tip Details: A (lower) +5.0.9 mP.D.; +4.989 mP.D.; +4.939 mP.D.; B (upper) _____ mP.D.; _____ mP.D.; _____ mP.D.

Scale 1:50

Logged by

Checked by

Date:

Gammon (Hong Kong) Limited
CIVIL ENGINEERS & CONTRACTORS
33rd Floor Hopewell Centre 183 Queen's Road, East Hong Kong
Tel 5 8232823 Cables GAMMONCO Telex HX 73626 Fax 5 201824

Binnie & Partners (Hong Kong)

Consulting Engineers

Location: Discovery Bay Project: Proposed Development at Discovery Bay — Phase V
Equipment & Methods: ROTARY

DRILLHOLE NO. 18B
Sheet 1 of 1

Hong Kong Metric Grid Reference: E 19031.98N 18769.23 Ground level: +54.54 mPD
Diameters are in mm. Lengths, levels & thickness are in m Angle to horizontal: 90° Bearing °E of N

Drilling progress/ core barrel	Casing depth, size	Water level	Sample type, no.	Notes e.g. Colour Water return caving instrumentation, tests	Depth	Reduced level mPD.	Total core recovery %	RQD	FRACTURE INDEX	Legend	Description	Grade
19-8-1987	PX		M1		0.0	+54.54				+++	Dense, light pinkish brown with yellowish brown, silty fine to coarse SAND (C.D.G.)	V
					1.0							
					1.50					+++		
	2.5m HX		1		2.0		98					
				5,6, 8,11,11,10. N=40	2.50					+++	Moderately strong, light pinkish brown, with black & light grey, coarse grained, medium spaced jointing, moderately decomposed GRANITE	
			2		2.95							
					3.0							
					3.50	+51.04				+++		III
							100	21	0			
	4.2m	4.2m			4.0					+++	C. D. G.	V
		Nil	T210		4.20	+50.34	0					
20-8-1987							96	96	1.3		Very strong to strong, light pinkish grey, with white & brown, speckle black, coarse grained, slightly decomposed GRANITE, closely to medium spaced, narrow joints, joints. Surface with limonite stained and infilled with some Calcite, Chlorite & greyish brown silt dip 20° & 80°, slightly rough to rough, moderately to slightly decomposed below 8.5m	
					4.95					+++		
					5.0		100	100	0			
					5.23							
					6.0		99	99	3.6	+++		II
					6.35							
		3.15	TNW		7.0		99	99	1.3	+++		
		Nil			7.10							
21-8-1987					8.0		99	76	1.4	+++		
					8.50							
					8.57					+++		II/III
		3.5m			9.0	+45.25	100	100	0			
					9.29						End of Hole at 9.29 m	
					10.0							

LEGEND (Lengths and positions of symbols are to scale)

Sample: Small disturbed; Large disturbed; U76 Undisturbed type & dia. M = triple tube U = tube; NWX Core & size; Water sample

Tests & instruments: Standard Penetration Test (SPT); Permeability test; Water absorption test

Results & observations: N Standard Penetration Test; m Moisture content; k Permeability; I Water absorption; W Water return; t Coring rate; RQD Rock quality designation

Piezometer Tip Details: A (lower) mP.D. – B (upper) mP.D.; mP.D. – mP.D.; mP.D. – mP.D.

Scale 1:50

Logged by

Checked by

Date:

Gammon (Hong Kong) Limited
CIVIL ENGINEERS & CONTRACTORS
33rd Floor, Hopewell Centre, 183 Queen's Road, East Hong Kong
Tel 5-8232823 Cables GAMMONCO Telex HX 73826 Fax 5 201824

Binnie & Partners (Hong Kong)

Consulting Engineers

Location: Discovery Bay Project: Proposed Development at Discovery Bay - Phase V

Equipment & Methods: ROTARY

DRILLHOLE NO. 48A

Sheet 1 of 3

Hong Kong Metric Grid Reference: E 19045.11 N 18735.06 Ground level: +49.01 mPD

Diameters are in mm. Lengths, levels & thickness are in m. Angle to horizontal: 90° Bearing: °E of N

Drilling progress/ core barrel	Casing depth, size	Water level	Sample type, no.	Notes e.g. Colour Water return, caving instrumentation, tests	Depth	Reduced level mP.D.	Total core recovery %	RQD	Discontinuity spacing (mm) 20 60 200 600 2000	Legend	Description	Grade
HX			M101 1		0.0	+49.01				+++	Loose, yellowish brown, slightly silty fine to coarse SAND with some fine gravel below 10.0m (C.D.G.)	V
			2	1,2, 3,4,6,6, N=9	1.0							
			M101 3		1.50		80			+++		
			4	1,2, 4,5,7,9, N=25	2.0							
			M101 5		2.50					+++		
			6	34,44, 110,200 N=388/360mm	2.95							
		3.22m			3.0					+++		
		3.80m			4.0		80			+++		
4-8-1987					5.0							
					5.45					+++		
					6.0							
			M101 7		6.50					+++		
					7.0		75					
					7.50					+++		
					7.86							
5-8-1987					8.0					+++		
			M101		9.0		95			+++		
	10.0m		7		10.0	39.01				+++		

LEGEND (Lengths and positions of symbols are to scale)

Sample: Small disturbed; Large disturbed; U76 Undisturbed type & dia. M = triple tube U = tube; NWX Core & size; Water sample

Tests & instruments: Standard Penetration Test (SPT); Permeability test; Water absorption test

Results & observations: N Standard Penetration Test; m Moisture content; k Permeability; I Water absorption; W Water return; r Coring rate; RQD Rock quality designation

Piezometer Tip Details: A (lower) mP.D. – B (upper) mP.D.; mP.D. – mP.D.; mP.D. – mP.D.

Scale 1:50

Logged by

Checked by

Date:

Gammon (Hong Kong) Limited
CIVIL ENGINEERS & CONTRACTORS
33rd Floor, Hopewell Centre, 183 Queen's Road East, Hong Kong
Tel: 8 8232823 Cables: GAMMONCO Telex: HX 73826 Fax: 5 201874

Binnie & Partners (Hong Kong)

Consulting Engineers

Location: Discovery Bay Project: Proposed Development at Discovery Bay — Phase V

Equipment & Methods: ROTARY

DRILLHOLE NO. 48A Sheet 2 of 3

Hong Kong Metric Grid Reference: E N Ground level: mPD

Diameters are in mm. Lengths, levels & thickness are in m. Angle to horizontal 90° Bearing: °E of N

Drilling progress/ core barrel	Casing depth, size	Water level	Sample type, no.	Notes e.g. Colour Water return caving instrumentation, tests	Depth	Reduced level mP.D.	Total core recovery %	RQD	FRACTURE INDEX	Legend	Description	Grade
5-8-1987	HX	2.10m	• 8	↓56,78, 200	10.0	+39.01				+++	AS SHEET 1 of 3 Below 11.50m becoming sandy gravel of highly decomposed GRANITE	V
					10.19							
					11.0					+++		
					11.50	+37.51						
					12.0		73	0	N.I.	+++	Weak to moderately weak, brownish yellow & light pink, fine and coarse grained, moderately to highly decomposed FELDSPAR PORPHYRY, with extremely closely spaced joints	IV
					12.70					+++		
					13.0		65	0	N.I.	+++		IV/III
					14.0		89	0	N.II	+++		
		5.70m			14.80							
					15.0		50	0	N.II.	+++		
					15.40							
6-8-1987			TNW		16.0		50	0	N.II.	+++	Highly decomposed between 16.0-16.5m and 17.5-18.0m and Slickensided joints at 12.7-14.0m	IV
					16.50		0					
		7.10m			17.0		75	30	N.I. 60	+++		IV/III
					17.50		0			+++		IV
					18.0	+31.01						
7-8-1987					18.30		95	53	N.II. 50	+++	AS SHEET 3 of 3	III
					19.0							
					19.50	+29.51				+++		

LEGEND (Lengths and positions of symbols are to scale)

Sample: • Small disturbed; ▮ Large disturbed; U76 Undisturbed type & dia. M = triple tube U = tube; NWX Core & size; △ Water sample

Tests & instruments: ↓ Standard Penetration Test (SPT); Permeability test; Water absorption test

Results & observations: N Standard Penetration Test; m Moisture content; k Permeability; I Water absorption; W Water return; t Coring rate; RQD Rock quality designation

Piezometer Tip Details: A (lower) mP.D. – B (upper) mP.D.; mP.D. – mP.D.; mP.D. – mP.D.

Scale 1:50

Logged by

Checked by

Date:

Gammon (Hong Kong) Limited
CIVIL ENGINEERS & CONTRACTORS
33rd Floor, Hopewell Centre, 183 Queen's Road, East, Hong Kong
Tel 5-8232823 Cables GAMMONCO Telex HX 73826 Fax 5 201824

Binnie & Partners (Hong Kong)

Consulting Engineers

Location: Discovery Bay Project: Proposed Development at Discovery Bay — Phase V

Equipment & Methods: ROTARY

DRILLHOLE NO. 48A

Sheet 3 of 3

Hong Kong Metric Grid Reference. E 19045.11 N 18739.06 Ground level: +49.01 mPD

Diameters are in mm. Lengths, levels & thickness are in m. Angle to horizontal. 90° Bearing: °E of N

Drilling progress/ core barrel	Casing depth, size	Water level	Sample type, no.	Notes e.g. Colour Water return caving instrumentation, tests	Depth	Reduced level mP.D.	Total core recovery %	RQD	FRACTURE INDEX	Legend	Description	Grade
7-8-1987	4.10m	TNW			19.50	+29.51	100	67	7.0	+++	Strong to very strong, greenish grey, light pink & grey, fine to coarse grained, moderately (18.0–18.60m) & slightly decomposed to fresh FELDSPAR PORPHYRY, with medium to widely spaced, shallow dipping 5°–20°, extremely narrow, smooth planar, slightly Mn, Fe stained, and clean joints Subvertical joint at 23.23–23.60m	II/I
					20.50							
					21.0		98	98	3.3	+++		
					21.40							
					22.0		97	97	2.9	+++		
					22.45							
					23.0		96	96	3.5	+++		
					23.60					+++		
					24.0	+24.51	100	93	4.4	+++		
					24.50						End of Hole at 24.50m	
					25.0							
					26.0							
					27.0							
					28.0							
					29.0							
					30.0							

LEGEND (Lengths and positions of symbols are to scale)

Sample: Small disturbed; Large disturbed; U76 Undisturbed type & dia. M = triple tube U = tube; NWX Core & size; Water sample

Tests & instruments: Standard Penetration Test (SPT); Permeability test; Water absorption test

Results & observations: N Standard Penetration Test; m Moisture content; k Permeability; I Water absorption; W Water return; r Coring rate; RQD Rock quality designation

Piezometer Tip Details: A (lower) +32.0 mP.D. +31.21 mP.D. +30.71 mP.D.; B (upper) _ mP.D. _ mP.D. _ mP.D.

Scale 1:50

Logged by

Checked by

Date:

Gammon (Hong Kong) Limited

CIVIL ENGINEERS & CONTRACTORS

33rd Floor, Hopewell Centre, 183 Queen's Road, East, Hong Kong. Tel: 5-8232823 Cables: GAMMONCO Telex: HX 73828 Fax: 5-201824

Binnie & Partners (Hong Kong)

Consulting Engineers

Location: Discovery Bay Project: Proposed Development at Discovery Bay — Phase V

Equipment & Methods: ROTARY

DRILLHOLE NO. 49A

Sheet 1 of 2

Hong Kong Metric Grid Reference: E 19056.85N 18728.29 Ground level: +44.49 mPD

Diameters are in mm. Lengths, levels & thickness are in m. Angle to horizontal: 90° Bearing: °E of N

Drilling progress/ core barrel	Casing depth, size	Water level	Sample type, no.	Notes e.g. Colour Water return caving instrumentation, tests	Depth	Reduced level mP.D.	Total core recovery %	RQD	FRACTURE INDEX	Legend	Description	Grade
	PX		T2101		0.0	+44.49						
					0.30	+44.19					COBBLES, GRAVEL with some soil & root fragments (COLLUVIUM)	
					0.80	+43.69	40	0	N.I.			
			M101		1.0						Medium dense, light yellowish brown, with some dark grey, silty fine to coarse SAND (C.D.G.)	
	2.0m				1.50							
	HX			3.4, 5.6, 9.9, N=29	2.0		95					
					2.50							
					2.95							
					3.0						Fracture, strong, light pinkish brown, coarse grained, moderately decomposed CORESTONES	V
					3.90	+40.59						
10-8-1987			T2101		4.0		28	0	N.I.			III
					4.80	+39.69						
					5.0						Light pinkish brown, with dark grey, sandy fine GRAVEL (H.D.G.)	IV
			M101		5.30		95					
					6.0	+38.49						
					6.65		98	72	4.6		Very strong to strong, light pinkish brown, with dark grey & white, coarse grained, moderately decomposed PORPHYRITIC GRANITE closely spaced, narrow joints, joints surface with limonite stains & infilled with some calcite & yellowish brown silt. dip 20°&45° rough, (M.D. – H.D. zone at 6.85–7.80m, H.D. in part)	III
					6.85		0					IV/III
			T2101		7.0		48	0	9.5			
					7.80							III
					8.0		76	61	5.7			
	2.80m				9.0							
	5.12m				9.20	+35.29						
11-8-87					9.70	+34.79					AS SHEET 2 of 2	IV
					10.0							

LEGEND (Lengths and positions of symbols are to scale)

Sample: Small disturbed; Large disturbed; U76 Undisturbed type & dia., M = triple tube, U = tube; NWX Core & size; Water sample

Tests & instruments: Standard Penetration Test (SPT); Permeability test; Water absorption test

Results & observations: N Standard Penetration Test; m Moisture content; k Permeability; I Water absorption; W Water return; t Coring rate; RQD Rock quality designation

Piezometer Tip Details: A (lower) mP.D. – B (upper) mP.D.; mP.D. – mP.D.; mP.D. – mP.D.

Scale 1:50

Logged by

Checked by

Date:

Gammon (Hong Kong) Limited
CIVIL ENGINEERS & CONTRACTORS
33rd Floor, Hopewell Centre, 183 Queen's Road, East, Hong Kong
Tel 5-8232823 Cables GAMMONCO Telex HX 73828 Fax 5-201824

Binnie & Partners (Hong Kong)

Consulting Engineers

Location: Discovery Bay Project: Proposed Development at Discovery Bay — Phase V

Equipment & Methods: ROTARY

DRILLHOLE NO. 49A
Sheet 2 of 2

Hong Kong Metric Grid Reference: E N Ground level: mPD

Diameters are in mm. Lengths, levels & thickness are in m Angle to horizontal 90° Bearing °E of N

Drilling progress/ core barrel	Casing depth, size	Water level	Sample type, no.	Notes e.g. Colour Water return caving instrumentation, tests	Depth	Reduced level mP.D.	Total core recovery %	RQD	FRACTURE INDEX	Legend	Description	Grade
11-8-1987	HX 11.05m	2.26m	4 5 T2101	4.6, 19,53,200 =272/350mm	9.70	+34.79				+++	Very dense, light yellowish brown, with pink & black, fine to coarse sandy fine GRAVEL (H.D.G)	IV
					10.70		65			+++		
					11.0	+33.44						III
					11.05					+++		
					11.70	+32.79	94	88	5.0		Strong, light pinkish brown, & dark greenish grey with pink & white. Coarse grained, moderately decomposed, FELDSPAR PORPHYRY medium spaced narrow joints, with limonite stains, dip 50°, rough, moderately to highly decomposed joints	
					12.0					+++		
					12.25		100	25	15.0	+++		II/I
					13.0							
					13.05		100	100	1.4	+++		
		6.05m			13.75					+++		
					14.0		100	85	8.1	+++		
					15.0							
13-8-1987			TNW		15.10		100	36	12.7	+++	Very strong, dark greenish grey, light pink & white. Coarse grained. Slightly decomposed to fresh FELDSPAR PORPHYRY, Closely to widely spaced, narrow joints, with limonite stains & infilled with calcite 30° & 60°, planar, rough to slightly rough (below 15.65m joints are clean & narrow.)	
					15.65							
					16.0		100	100	1.4	+++		
		5.00m			17.0							
					17.10		100	100	2.0	+++		
					18.0	+26.39				+++		
					18.10						End of Hole at 18.10m	
					19.0							
					20.0							

LEGEND (Lengths and positions of symbols are to scale)

Sample: Small disturbed; Large disturbed; U76 Undisturbed type & dia.; M = triple tube; U = tube; NWX Core & size; Water sample

Tests & instruments: Standard Penetration Test (SPT); Permeability test; Water absorption test

Results & observations: N Standard Penetration Test; m Moisture content; k Permeability; i Water absorption; W Water return; r Coring rate; RQD Rock quality designation

Piezometer Tip Details: A (lower) mP.D. – B (upper) mP.D.; mP.D. – mP.D.; mP.D. – mP.D.

Scale 1:50

Logged by

Checked by

Date:

Gammon (Hong Kong) Limited
CIVIL ENGINEERS & CONTRACTORS
33rd Floor, Hopewell Centre, 183 Queen's Road, East, Hong Kong
Tel 5 8232823 Cables GAMMONCO Telex HX 73828 Fax 5 201824

Binnie & Partners (Hong Kong)

Consulting Engineers

Location: Discovery Bay Project: Proposed Development at Discovery Bay — Phase V

Equipment & Methods: ROTARY

DRILLHOLE NO. 50A

Sheet 1 of 2

Hong Kong Metric Grid Reference: E19053.24N 18749.91 Ground level: +48.48 mPD

Diameters are in mm. Lengths, levels & thickness are in m. Angle to horizontal: 90° Bearing: °E of N

Drilling progress/ core barrel	Casing depth, size	Water level	Sample type, no.	Notes e.g. Colour Water return caving instrumentation, tests	Depth	Reduced level mP.D.	Total core recovery %	RQD	FRACTURE INDEX	Legend	Description	Grade
14-8-1987	HX		M10 T201	200/80mm	0.0	+48.48				+++	Very dense, brownish yellow, silty medium to fine SAND with some rock fragments (CH.RG) (moderately to highly decomposed core stone at 2.46–3.90m	IV
					1.0					+++		
					2.0		90			+++		
					2.30							III/IV
					2.38	+46.10				+++		
					2.46							
					3.0		15	0	3.5	+++		
					3.90					+++		
			Wa		4.0		96			+++		IV
					5.0					+++		
	5.06m	2.8m	3	200/60mm	5.06	+43.42						
15-8-1987		4.66m			5.10		100	63	12.0		Moderately strong to strong, light grey, with pink, white & brown, coarse grained, moderately decomposed PORPHYRITIC GRANITE Closely spaced narrow joints, with limonite stains & infilled with some greyish white silt dip 20°, 45° & 70°, rough, moderately to highly decomposed joints	
					5.50					+++		III
			T201		6.0		100	95	6.2	+++		
		1.95m			6.80					+++		
		5.80m			6.90							
					7.8	+41.58	95	92	6.1	+++		
					7.45							
					7.70		100	97	6.3			
17-8-1987					8.0		100	100	6.5	+++		II
					8.70					+++		
			TNW		9.0					+++		
					9.95	+38.53	100	96	5.6	+++		

AS SHEET 2 of 2

LEGEND (Lengths and positions of symbols are to scale)

Sample: Small disturbed; Large disturbed; U76 Undisturbed type & dia.; M = triple tube; U = tube; NWX Core & size; Water sample

Tests & instruments: Standard Penetration Test (SPT); Permeability test; Water absorption test

Results & observations: N Standard Penetration Test; m Moisture content; k Permeability; I Water absorption; W Water return; r Coring rate; RQD Rock quality designation

Piezometer Tip Details: A (lower) mP.D. / B (upper) mP.D.

Scale 1:50

Logged by

Checked by

Date:

Gammon (Hong Kong) Limited
CIVIL ENGINEERS & CONTRACTORS
33rd Floor, Hopewell Centre, 183 Queen's Road, East, Hong Kong
Tel 5 8232823 Cables GAMMONCO Telex HX 73870 Fax 5-201824

Binnie & Partners (Hong Kong)

Consulting Engineers

Location: Discovery Bay Project: Proposed Development at Discovery Bay — Phase V

Equipment & Methods: ROTARY

DRILLHOLE NO. 50A

Sheet 2 of 2

Hong Kong Metric Grid Reference: E N Ground level: mPD

Diameters are in mm. Lengths, levels & thickness are in m. Angle to horizontal: 90° Bearing: °E of N

Drilling progress/ core barrel	Casing depth, size	Water level	Sample type, no.	Notes e.g. Colour Water return caving instrumentation, tests	Depth	Reduced level mP.D.	Total core recovery %	RQD	FRACTURE INDEX	Legend	Description	Grade
17-8-1987		2.2m			9.95	+38.53	91	70	7.0	+++	Strong to very strong, light whitish grey, with pink, brown & dark grey, coarse grained, moderately to slightly decomposed PORPHYRITIC GRANITE Closely spaced, narrow joints, with limonite stains and infilled with some calcite, dip 40°, 60° & 80° Slightly rough to rough, moderately decomposed joints	III/II
18-8-1987		5.88m	TNWX		11.0					+++		
					11.10		95	86	4.3	+++		
					12.0							
					12.25		91	68	8.3	+++		
		2.5m			12.85	+35.63					End of Hole at 12.85m	
					13.0							
					14.0							
					15.0							
					16.0							
					17.0							
					18.0							
					19.0							
					20.0							

LEGEND (Lengths and positions of symbols are to scale)

Sample: Small disturbed; Large disturbed; U76 Undisturbed type & dia., M = triple tube, U = tube; NWX Core & size; Water sample

Tests & instruments: Standard Penetration Test (SPT); Permeability test; Water absorption test

Results & observations: N Standard Penetration Test; m Moisture content; k Permeability; I Water absorption; W Water return; r Coring rate; RQD Rock quality designation

Piezometer Tip Details: A (lower) B (upper) mP.D. – mP.D.

Scale 1:50

Logged by

Checked by

Date:

Gammon (Hong Kong) Limited

CIVIL ENGINEERS & CONTRACTORS

33rd Floor, Hopewell Centre 183 Queen's Road, East, Hong Kong. Tel 5 8232823 Cables GAMMONCO Telex HX 73826 Fax 5 201824

Gammon

DRILLHOLE RECORD

HOLE No. **DH 3**

CONTRACT No. GE/2006/02

SHEET 1 of 5

PROJECT Agreement No. 54/2005 (WS) Integration of Siu Ho Wan and Silver Mine Bay Water Treatment Works

METHOD Rotary	CO-ORDINATES	WORKS ORDER No. **GE/2006/02.56**
MACHINE & No. BM51	E 818311.38 N 819068.11	DATE from 04/10/2007 to 13/10/2007
FLUSHING MEDIUM WATER	ORIENTATION **Vertical**	GROUND LEVEL + 60.46 mPD

Drilling Progress	Casing depth/size	Water Depth (m)	Water Recovery %	Total core Recovery %	Solid core Recovery %	R.Q.D.	Fracture Index	Tests	Samples No. Type Depth	Reduced Level	Depth (m)	Legend	Grade	Description
04/10/2007	HX	08:00								60.46	0.00			Greyish brown (10YR 5/2), silty fine to medium SAND with some angular fine to coarse gravel sized rock fragments and with occasional rootlets. (COLLUVIUM)
									A 0.45 0.50					
									INSPECTION PIT					
									B 0.95 1.00					
									C 1.45 1.50	58.96	1.50		V	Extremely weak to very weak, light brown (7.5YR 6/4), completely decomposed RHYOLITE. (Clayey silty fine to medium SAND with some angular fine to coarse gravel sized rock fragments)
04/10/2007	HX 2.00	Dry at 18:00							D 1.85 2.00	58.46	2.00		III	
05/10/2007		Dry at 08:00		95	0	0	>20		T2101					Moderately strong, light brownish grey (10YR 6/2) and brown (10YR 5/4), spotted pink, moderately decomposed feldsparphyric RHYOLITE. Joints are closely to very closely spaced, rough planar, extremely to very narrow, iron stained, dipping 30°-40°, 60°-70° and 80°-90°.
				98	52	37	9.8		2.63					
							>20		T2101	57.44	3.02		III	
				100	17	17	14.0		3.50					
							>20		T2101					Moderately strong, light pinkish brown (5YR 6/3) and light greyish brown (10YR 6/3), spotted pink, black and light grey, moderately decomposed feldsparphyric RHYOLITE. Joints are closely, locally medium and very closely spaced, rough planar, extremely to very narrow, iron and manganese stained, dipping 0°-10°, 30°-40°, 60°-70° and 80°-90°.
			50	100	57	51	8.5		4.74					
							>20		T2101	55.13	5.33			
							9.3							5.33 - 5.80m: Calcite vein (20mm) dipping 80°-90°.
										54.66	5.80			
				100	87	80	6.2		6.22					
							9.1		T2101					
				100	91	83			7.23					
							6.0		T2101					
				100	100	100			8.09					
		1.03m at 18:00							T2101	52.07	8.39		II	8.39 - 8.89m: Strong, dark grey, dappled pink and spotted light grey, slightly decomposed.
05/10/2007														
06/10/2007		1.11m at 08:00		100	96	80	4.5		8.69	51.57	8.89		III	
							10.5		T2101					
										50.46	10.00			

- Small disturbed sample
- Large disturbed sample
- SPT liner sample
- U76 undisturbed sample
- U100 undisturbed sample
- Mazier sample
- Piston sample
- Water sample
- Piezometer / standpipe tip
- Standard penetration test
- Pressuremeter test
- Permeability test
- Impression packer test
- In-situ vane shear test

LOGGED W K SIU

DATE 15/10/2007

CHECKED KEN MA

DATE 16/10/2007

REMARKS

1. Inspection pit was dug to 2.00m depth.
2. Televiewer survey was carried out at 15.00m-44.91m depth.
3. Packer (Water Absorption) tests were carried out at 19.50m-24.50m, 34.50m-39.50m and 38.00m-43.00m depths.
4. Standpipe was installed at 13.00m depth.

t:\gintw\library\1may2006.glb\3110 geo drillhole

Gammon

DRILLHOLE RECORD

HOLE No. **DH 3**

CONTRACT No. GE/2006/02

SHEET 2 of 5

PROJECT Agreement No. 54/2005 (WS) Integration of Siu Ho Wan and Silver Mine Bay Water Treatment Works

METHOD Rotary	CO-ORDINATES	WORKS ORDER No. **GE/2006/02.56**
MACHINE & No. BM51	E 818311.38 N 819068.11	DATE from 04/10/2007 to 13/10/2007
FLUSHING MEDIUM WATER	ORIENTATION **Vertical**	GROUND LEVEL + 60.46 mPD

Drilling Progress	Casing depth/size	Water Depth (m)	Water Recovery %	Total core Recovery %	Solid core Recovery %	R.Q.D.	Fracture Index	Tests	Samples No. Type Depth	Reduced Level	Depth (m)	Legend	Grade	Description
				100	96	80	10.5		T2101 10.20	50.46	10.00		III	As sheet 1 of 5.
				100	69	51			T2101 10.69					
				100	100	63			T2101 10.88	49.58	10.88		II	
				100	100	100	6.9			49.38	11.08		III	10.88 - 11.08m: Strong, dark grey, dappled pink and spotted light grey, slightly decomposed.
				100	100	89			T2101 11.45					
				100	100	95			T2101 11.92	48.24	12.22		II	Strong, light pinkish brown (5YR 6/3) and light brownish grey (10YR 6/2), dappled pink, spotted black, light green and light grey, slightly decomposed feldsparphyric RHYOLITE. Joints are medium to closely spaced, slickensided planar, extremely narrow, chlorite coated, dipping 0°-10°, 20°-30°, 60°-70° and 80°-90°.
							3.8							
				100	100	95	5.3		T2101 13.38					
			50	100	98	93	3.5		T2101 14.89					
		1.05m at 18:00								44.76	15.70		III	Moderately strong, light pinkish brown (5YR 6/3) and pinkish grey (5YR 6/2), dappled pink, spotted black, light green and light grey, moderately decomposed feldsparphyric RHYOLITE. Joints are medium to closely, locally widely spaced, slickensided planar, extremely narrow, chlorite coated, dipping 0°-10°, 30°-40°, 60°-70° and 80°-90°.
06/10/2007 08/10/2007		1.62m at 08:00		100	70	48	8.9		T2101 16.40					
				100	96	96	3.9		T2101 17.20					
				100	100	90	7.4		T2101 18.23					
				100	100	89	3.3		T2101 19.72	40.46	20.00			

- Small disturbed sample
- Large disturbed sample
- SPT liner sample
- U76 undisturbed sample
- U100 undisturbed sample
- Mazier sample
- Piston sample
- Water sample
- Piezometer / standpipe tip
- Standard penetration test
- Pressuremeter test
- Permeability test
- Impression packer test
- In-situ vane shear test

LOGGED W K SIU

DATE 15/10/2007

CHECKED KEN MA

DATE 16/10/2007

REMARKS

t:\gintwlibrary\1may2006.glb\3110 geo drillhole

Gammon

DRILLHOLE RECORD

HOLE No. **DH 3**

CONTRACT No. GE/2006/02

SHEET 3 of 5

PROJECT Agreement No. 54/2005 (WS) Integration of Siu Ho Wan and Silver Mine Bay Water Treatment Works

METHOD Rotary	CO-ORDINATES	WORKS ORDER No. **GE/2006/02.56**
MACHINE & No. BM51	E 818311.38 N 819068.11	DATE from 04/10/2007 to 13/10/2007
FLUSHING MEDIUM WATER	ORIENTATION **Vertical**	GROUND LEVEL + 60.46 mPD

Drilling Progress	Casing depth/size	Water Depth (m)	Water Recovery %	Total core Recovery %	Solid core Recovery %	R.Q.D.	Fracture Index	Tests	Samples No. Type Depth	Reduced Level	Depth (m)	Legend	Grade	Description
				100	100	89	3.3			40.46	20.00		III	As sheet 2 of 5.
				100	100	80	6.2		T2IOI 20.62					
				100	94	85	4.8		T2IOI 21.26					
							14.3							
							2.5		T2IOI 22.70					
08/10/2007		1.35m at 18:00												
09/10/2007		1.65m at 08:00		100	97	93								
							7.9							
							15.0							
							3.0		T2IOI 24.17					
			50	100	100	100								
									T2IOI 25.64					
				100	100	97								
							0.8		T2IOI 27.13					
				100	100	100								
									T2IOI 28.65					
				100	100	77	3.5							
									T2IOI					
							8.8			30.46	30.00			

- Small disturbed sample
- Large disturbed sample
- SPT liner sample
- U76 undisturbed sample
- U100 undisturbed sample
- Mazier sample
- Piston sample
- Water sample
- Piezometer / standpipe tip
- Standard penetration test
- Pressuremeter test
- Permeability test
- Impression packer test
- In-situ vane shear test

LOGGED W K SIU

DATE 15/10/2007

CHECKED KEN MA

DATE 16/10/2007

REMARKS

t:\gintw\library\1may2006.glb\3110 geo drillhole

Gammon

DRILLHOLE RECORD

HOLE No. **DH 3**

CONTRACT No. GE/2006/02

SHEET 4 of 5

PROJECT Agreement No. 54/2005 (WS) Integration of Siu Ho Wan and Silver Mine Bay Water Treatment Works

METHOD Rotary	CO-ORDINATES	WORKS ORDER No. **GE/2006/02.56**
MACHINE & No. BM51	E 818311.38 N 819068.11	DATE from 04/10/2007 to 13/10/2007
FLUSHING MEDIUM WATER	ORIENTATION **Vertical**	GROUND LEVEL + 60.46 mPD

Drilling Progress	Casing depth/size	Water Depth (m)	Water Recovery %	Total core Recovery %	Solid core Recovery %	R.Q.D.	Fracture Index	Tests	Samples No. Type Depth	Reduced Level	Depth (m)	Legend	Grade	Description
										30.46	30.00			
									30.13	30.33	30.13			As sheet 2 of 5.
				100	100	100	2.6		T2101				II	Strong, light pinkish brown (5YR 6/3), dappled pink, spotted light green and light grey, slightly decomposed feldsparphyric RHYOLITE. Joints are medium, locally widely and closely spaced, smooth planar, extremely narrow, chlorite coated, dipping 10°-20°, 30°-40° and 60°-70°.
		1.38m at 18:00												
09/10/2007														
10/10/2007		1.64m at 08:00		98	98	92	7.1							
							1.2							
									31.64					
									T2101					
									33.12	27.34	33.12			
				100	100	100			T2101				III	Moderately strong, light pinkish brown (5YR 6/3), dappled pink and spotted light grey, moderately decomposed feldsparphyric RHYOLITE. Joints are widely spaced, rough planar, extremely narrow, clean, dipping 10°-20°.
				100	97	97			33.75					
									T2101					
									34.64	25.82	34.64			
				100	41	41	>20			25.71	34.75		III	Moderately strong, light pink (2.5YR 7/6) and light green (5G 6/2), dappled pink, moderately decomposed chloritized feldsparphyric RHYOLITE. Joints are very closely spaced, smooth planar, very narrow, chlorite coated, dipping 60°-70° and 80°-90°.
			50						T2101					
							8.2			25.17	35.29		II	34.64 - 34.75m: Moderately weak, moderately decomposed.
									35.75					Strong, light pinkish brown (5YR 6/3) and dark grey (N3), dappled pink, spotted black, light green and light grey, slightly decomposed feldsparphyric RHYOLITE. Joints are widely to medium, locally closely spaced, slickensided planar, extremely to very narrow, chlorite coated, dipping 10°-20°, 30°-40°, 60°-70° and 80°-90°.
				100	88	88			T2101					
							1.4							
				100	100	83	5.7		37.01					
									T2101					
				100	98	88	3.0		37.54					
									T2101					
									38.52					
				100	91	91			T2101					
									39.57					
10/10/2007		1.45m at							T2101					
11/10/2007		18:00		100	100	100	1.2							
		2.07m at								20.46	40.00			

- Small disturbed sample
- Large disturbed sample
- SPT liner sample
- U76 undisturbed sample
- U100 undisturbed sample
- Mazier sample
- Piston sample
- Water sample
- Piezometer / standpipe tip
- Standard penetration test
- Pressuremeter test
- Permeability test
- Impression packer test
- In-situ vane shear test

LOGGED W K SIU

DATE 15/10/2007

CHECKED KEN MA

DATE 16/10/2007

REMARKS

t:\gintw\library\1may2006.glb\3110 geo drillhole

DRILLHOLE RECORD

Gammon

HOLE No. **DH 3**

CONTRACT No. GE/2006/02

SHEET 5 of 5

PROJECT Agreement No. 54/2005 (WS) Integration of Siu Ho Wan and Silver Mine Bay Water Treatment Works

METHOD Rotary	CO-ORDINATES E 818311.38 N 819068.11	WORKS ORDER No. **GE/2006/02.56**
MACHINE & No. BM51		DATE from 04/10/2007 to 13/10/2007
FLUSHING MEDIUM WATER	ORIENTATION **Vertical**	GROUND LEVEL + 60.46 mPD

Drilling Progress	Casing depth/size	Water Depth (m)	Water Recovery %	Total core Recovery %	Solid core Recovery %	R.Q.D.	Fracture Index	Tests	Samples No. Type Depth	Reduced Level	Depth (m)	Legend	Grade	Description
		08:00		100	100	100	1.2		T2IO1 40.38				II	As sheet 4 of 5.
				100	100	100			T2IO1 40.93					
				100	100	100				19.17	41.29			
							3.1						II	Strong, dark grey (N3), dappled pink, spotted light green and light grey, slightly decomposed feldsparphyric RHYOLITE. Joints are widely to medium spaced, rough planar, extremely to very narrow, iron stained, dipping 0°-10°, 30°-40° and 80°-90°.
			50	100	86	57			T2IO1 42.14					
									T2IO1 43.24					
				100	100	79	1.0		T2IO1 43.67					
				100	100	100			T2IO1 44.37					
11/10/2007		1.65m at 18:00												
13/10/2007		1.99m at 08:00		100	100	100			T2IO1 45.19	15.27	45.19			
13/10/2007		2.11m at 18:00												End of hole at 45.19m depth.

- Small disturbed sample
- Large disturbed sample
- SPT liner sample
- U76 undisturbed sample
- U100 undisturbed sample
- Mazier sample
- Piston sample
- Water sample
- Piezometer / standpipe tip
- Standard penetration test
- Pressuremeter test
- Permeability test
- Impression packer test
- In-situ vane shear test

LOGGED W K SIU

DATE 15/10/2007

CHECKED KEN MA

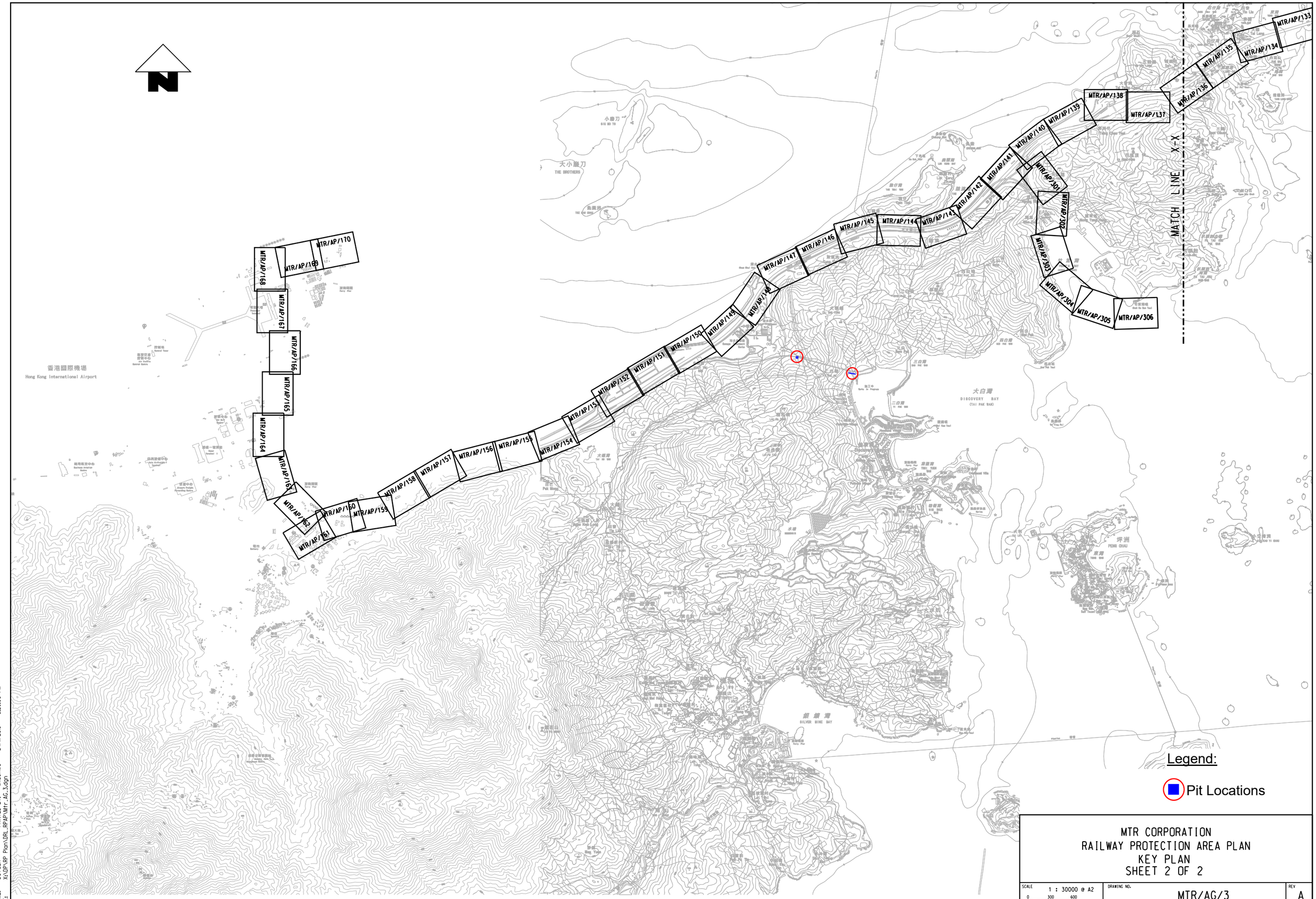
DATE 16/10/2007

REMARKS

t:\gintwlibrary\1may2006.glb\3110 geo drillhole

Appendix D

Schedule Area



Legend:

Pit Locations

MTR CORPORATION
RAILWAY PROTECTION AREA PLAN
KEY PLAN
SHEET 2 OF 2

SCALE 1 : 30000 @ A2 (0 300 600)	DRAWING NO. MTR/AG/3	REV A
DATE SEPT. 2004	MTRC CAD REFERENCE NO. Mtr_AG_3.dgn	

PLOT DRV: X:\CADD_Library\MicroStation\Workspace\plotdrv\PDF_Color_300dpi_080923.plt
MODELNAME: Default PRINTED BY: wilsonwc 24/11/2010 3:29:00 PM
FILENAME: X:\QP\RP Plan\DRL_RPAP\Mtr_AG_3.dgn

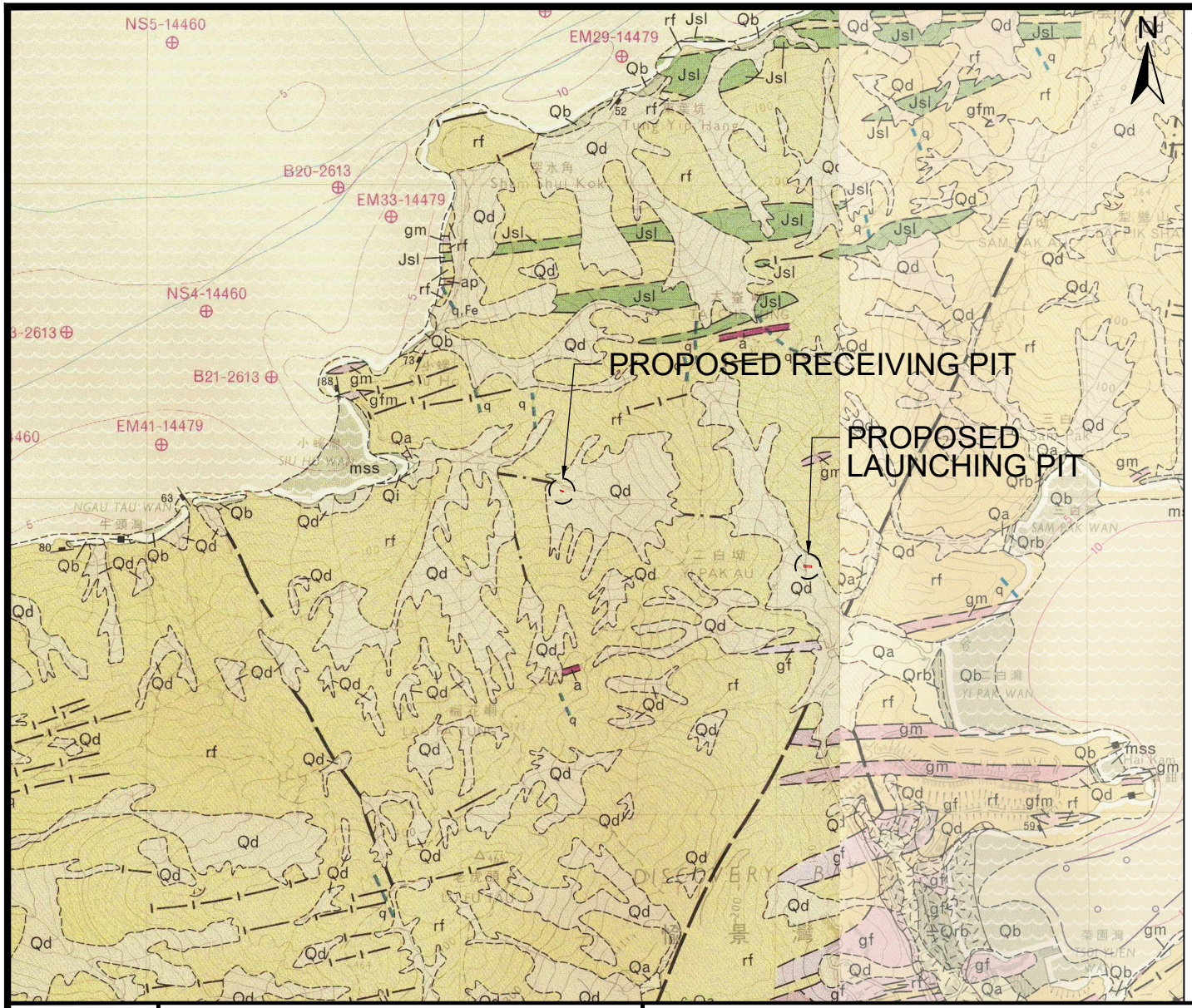
Appendix E

Geological Map

Compiled by :

Drawn by :

Checked by :



LEGEND :

- PROPOSED LAUNCHING PIT / RECEIVING PIT
- GEOLOGICAL BOUNDARY, SUPERFICIAL DEPOSIT
- GEOLOGICAL BOUNDARY, SOLID ROCK
- FAULT (CROSSMARK INDICATES DOWNTHROW SIDE)
- ISOPACH OF HANG HAU FORMATION
- LIMIT OF DUMPED MATERIAL OUTSIDE GAZETTED DUMPING GROUND
- PHOTOGEOLOGICAL LINEAMENT
- JOINTING (INCLINED)
- JOINTING (VERTICAL)
- MINERAL VEIN
- Qb — SAND (BEACH DEPOSITS)
- MUD SHOWING ACOUSTIC TURBIDITY (GAS BLANKING)
- Qd — SAND, GRAVEL, COBBLES AND BOULDERS IN SILT MATRIX (DEBRIS FLOW DEPOSITS)
- gf — FINE-GRAINED GRANITE, <2 MM
- gm — MEDIUM-GRAINED GRANITE, 2-6 MM
- ap — APLITE
- rf — FELDSPARPHYRIC RHYOLITE

NOTE:
BROKEN LINES ON MAP FACE DENOTE UNCERTAINTY

FUGRO

Project
GEOTECHNICAL PLANNING REVIEW REPORT FOR CONSTRUCTION OF HORIZONTAL DIRECTIONAL DRILLING (HDD) WORKS NEAR DISCOVERY BAY TUNNEL

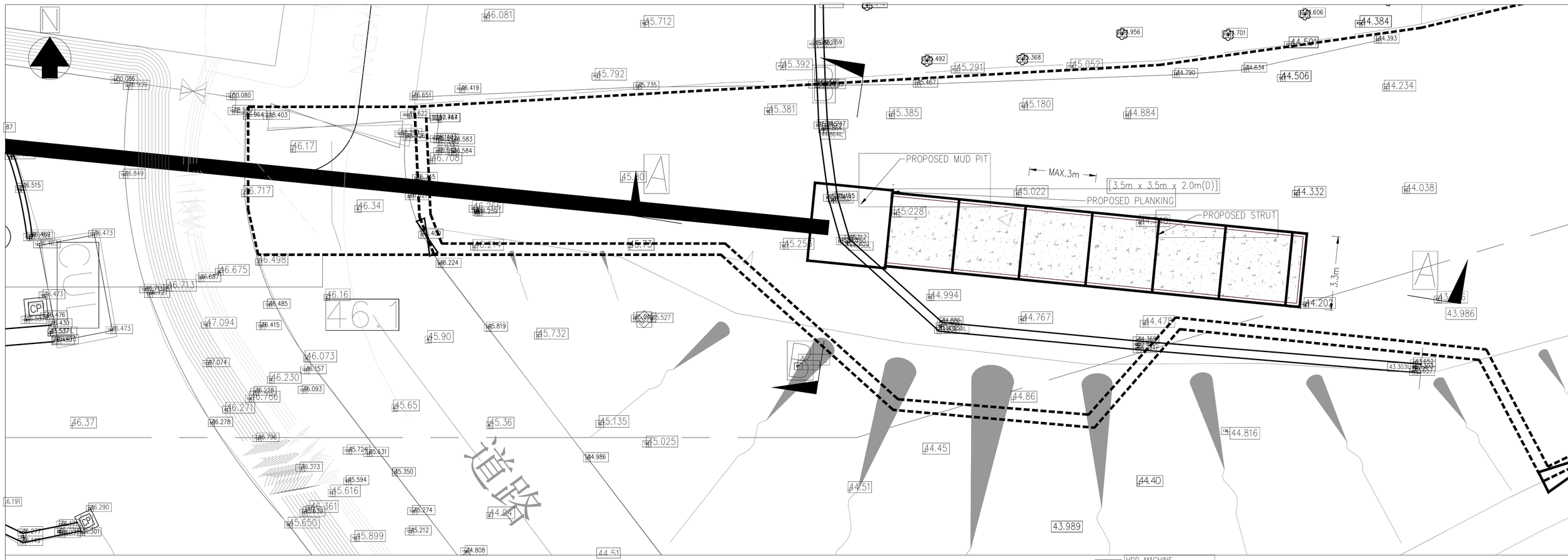
Drawing Title
REGIONAL GEOLOGICAL MAP
(H.K. Geological Survey, Series HGM20, Sheet 10, 1991 Edition)

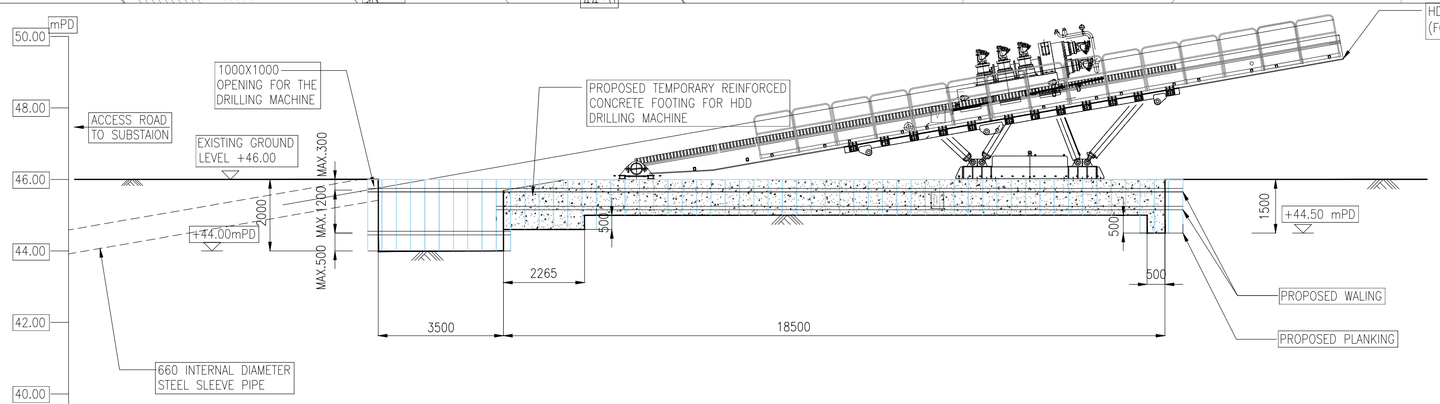
Job No.	Figure	
220171.023	4	
Scale	Date	Rev.
1 : 20000		

CAD Reference : X:\WORKING\220171_023\STR\GEO PLANNING REVIEW REPORT\220171-023_FIG-04 (P02) (GPRR).DWG Date & Time : 05-09-25 (1:21:32PM) Plotted By : K.MAK

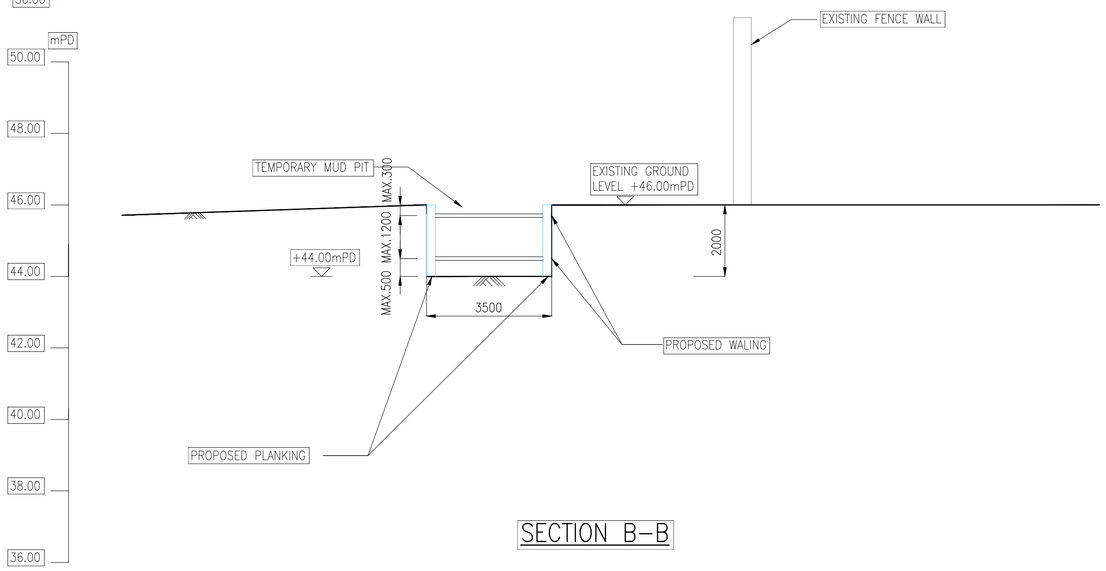
Appendix F

Scheme of Proposed Site Formation Works

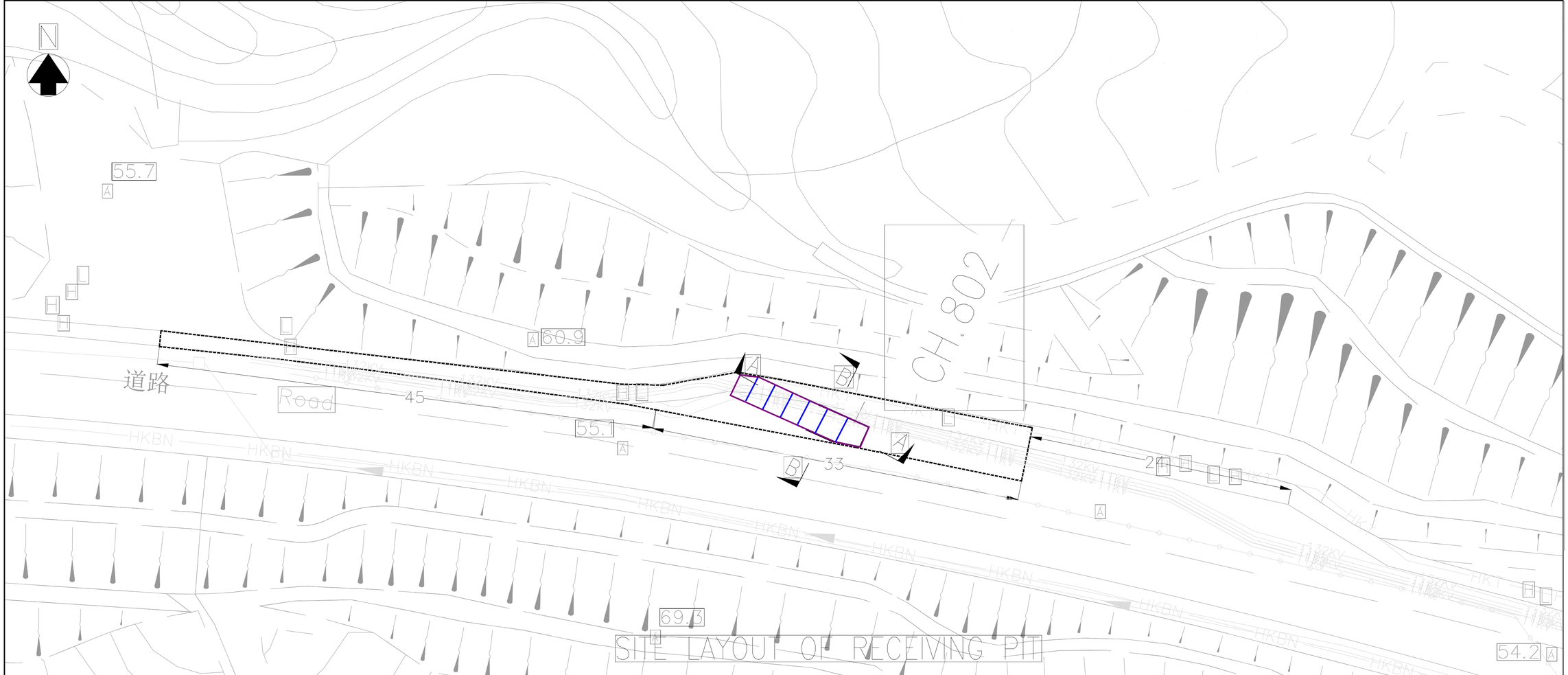


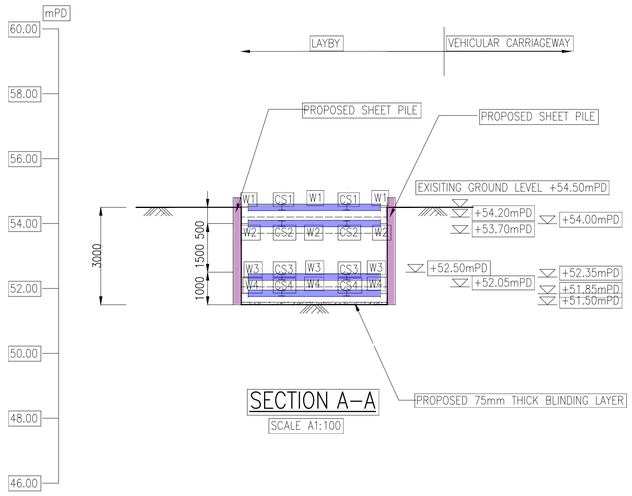


SECTION A–A



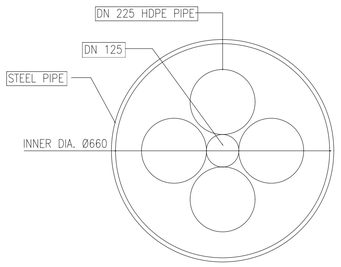
SECTION B–B



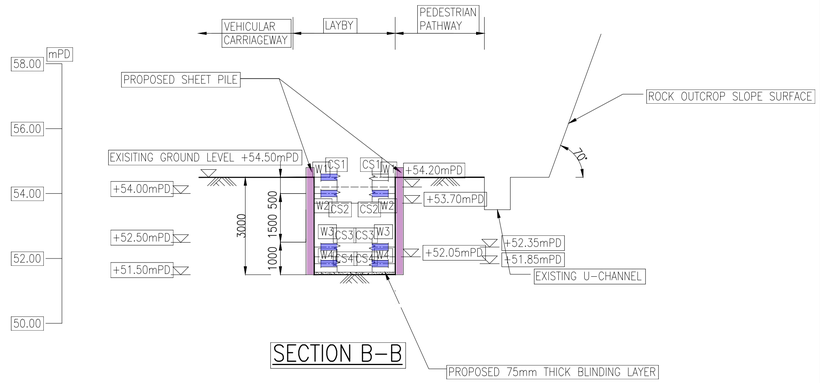


SECTION A–A

SCALE A1:100



TYPICAL SECTION OF HDPE PIPES IN STEEL SLEEVE PIPE



SECTION B–B

132kV Circuit Reinforcement at Discovery Bay Tunnel

Tree Survey Report

PREPARED FOR

CLP Power Hong Kong Limited (CLP)

DATE

26 August 2025

REFERENCE

0750437

DOCUMENT DETAILS

DOCUMENT TITLE	**132kV Circuit Reinforcement at Discovery Bay Tunnel**
DOCUMENT SUBTITLE	Tree Survey Report
PROJECT NUMBER	0750437
Date	26 August 2025
Version	1.0
Author	Various
Client name	CLP Power Hong Kong Limited

DOCUMENT HISTORY

				ERM APPROVAL TO ISSUE		
VERSION	REVISION	AUTHOR	REVIEWED BY	NAME	DATE	COMMENTS
Version	1.0	Various	Mike Pang	Terence Fong	26 August 2025	

SIGNATURE PAGE

132kV Circuit Reinforcement at Discovery Bay Tunnel

Tree Survey Report

0750437

Terence Fong
Partner

ERM-Hong Kong, Limited
2507, 25/F One Harbourfront
18 Tak Fung Street
Hunghom
Kowloon
Hong Kong
T +852 2271 3000

CONTENTS

LIST OF TABLES

APPENDICES

1. INTRODUCTION

The two existing 132kV circuits connecting the Sham Shui Kok Substation and the Discovery Bay North Substation, running along the Discovery Bay Tunnel, are the sole electricity supply connected to the Discovery Bay area. The network within the Discovery Bay Tunnel, which accommodates existing 132kV circuits, has been identified as a non-CLP-owned Common Cable Infrastructures (CCI) under the ownership and maintenance of the tunnel operator. To uphold the safety and reliability of the electricity supply for the Discovery Bay area, CLP therefore proposes to divert one of the existing cable circuits running along the Discovery Bay Tunnel connecting to the Discovery Bay North Substation ("the Proposed Project").

The Proposed Project is to build a new cable ducting by micro-tunneling adjacent Discovery Bay Vehicular Tunnel for diverting existing 132kV circuits. The Proposed Project would adopt the Horizontal Directional Drilling (HDD) construction method to minimise the environmental impact, while meeting construction design requirements. Two temporary work areas will be established to accommodate the Launching pit and Receiving pit, respectively, for the micro-tunnel construction.

Part of the micro cable tunnel and the Launching pit are zoned "Conservation Area" ("CA") under the Approved Discovery Bay OZP No. S/I-DB/6. Under the "CA" zone of the Approved Discovery Bay OZP, the planning intention is "*to conserve the existing natural character and intrinsic landscape value by protecting topographical features from encroachment by adjacent developments*" and there is "*a general presumption against development within this zone*". Under the "CA" zone, 'Public Utility Pipeline' (subsumed under 'Public Utility Installation') is Column 2 use, and the associated excavation and fill of land would require planning permission from the Town Planning Board (TPB).

CLP has commissioned ERM to undertake a tree survey to ascertain the existing trees will not be affected by the Proposed Project in support of the Section 16 Planning Application. This *Tree Survey Report* (this Report) summarizes the details of methodology and the findings during the tree survey.

2. METHODOLOGY

The tree survey was conducted within 5m from the boundary of the proposed works area in both Launching and Receiving pits. Detailed tree survey plans are given in **Appendix A**. All living trees (in some case large tree-form shrubs) with a trunk diameter greater than or equal to 95mm measured at 1.3m above ground were included in the tree survey. The assessment was based on the "Guidelines for Tree Risk Assessment and Management Arrangement" produced by the Development Bureau (10th edition, updated in 2023) and other ordinances and circulars listed in References.

2.1 INDIVIDUAL TREE

All trees within the tree survey extent were tagged with a tree number. Their locations were plotted on plans. Each of them was photographically recorded. The following details are also included in this Report and presented in the Tree Survey Schedule shown in **Appendix B**:

- Tree number (numbers allocated to individual trees & OVT number; if any);
- Tree species (Scientific name and Chinese common name);
- Height (m);
- Trunk diameter at 1.3m above the ground level (mm);
- Crown spread (m);
- Amenity value (High/Medium/Low);
- Form (Good/Fair/Poor);
- Health condition (Good/Fair/Poor);
- Structural condition (Good/Fair/Poor);
- Suitability for transplanting (High/Medium/Low);
- Recommendations (Retain/Transplant/Fell).

2.2 SURVEY METHODOLOGY

Each tree was evaluated in terms of Health Condition, Form, Amenity Value, Suitability for transplanting and Recommendation, with details given in the following:

Health Condition

Each selected tree was evaluated in accordance with the following criteria and considerations:

Foliage

- evidence of "poor leaf colour and small leaf size [which] may indicate damage of roots" (Ref. R. Webb);
- evidence of insect or fungal infections in leaves;
- evidence of leaf damage owing to typhoons (although it is recognized that trees are usually able to recover from this within one growing season).

Twigs

- evidence of "poor shoot growth and die-back of twigs in the crown are often symptoms of root problems caused by a change in the water table level or soil compaction resulting from site development work" (Ref. R. Webb);
- evidence of insect and fungal infections on the twigs and branches;
- evidence of twig damage particularly if the tree had been made unbalanced.

Branches

- dead or crossing branches;
- evidence of "heavy horizontal branches [which] may make the tree unstable" (Ref. R. Webb);
- the presence of broken, damaged or cut branches as a possible site for infections;
- evidence of damaged branches which may make the tree unbalanced or unstable;
- "an edge tree exposed as a result of the removal of adjacent trees often [which] has an unbalanced crown and may be hazardous" (Ref R. Webb).

Trunk

- "tightly forked trunks [which] are a source of weakness in the tree as in high winds the tree can be torn apart" (Ref. R. Webb);
- evidence of "cavities or internal rot [which] can be revealed by discolored bark, moisture seeping through the bark or bracket fungi'' (Ref R. Webb);
- open cavities and bark damage.

Parasitism / Tangling

- occurrence of aggressive climbers, parasitic plants;
- evidence of serious competition between closely located trees – tangling.

The health of each tree was graded in accordance with the following:

- Good (**G**): Trees with a low incidence of the less serious features and a medium chance of recovery can be graded as good;
- Fair (**F**): Trees with a higher incidence of the less serious features and a medium chance of recovery can be graded fair;
- Poor (**P**): Trees with more serious health features and with a low chance of recovery, even with remedial measures, can be graded poor.

Tree form was graded in accordance with the following:

- **G**: Trees with well-balanced form, upright, evenly branching, well-formed head and generally in accordance with the standard form for its species can be graded good;
- **F**: Trees with generally balanced form with natural compensations for loss of branches or leaning trunks for example can be graded fair;
- **P**: Trees with very unbalanced form, leaning, suffering loss of major branches with general damage and growing close to adjacent trees can be graded poor.

Amenity Value

Amenity value of a tree should be accessed 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:

- High (**H**): Important trees which should be retained by adjusting the design layout accordingly;
- Medium (**M**): Trees that are desirable to be retained in order to create a pleasant environment, which includes healthy specimens of lesser importance than "A" trees;
- Low (**L**): Trees that are dead, dying or potentially hazardous and should be removed.

Suitability for Transplanting

In order to be considered successfully transplanted, a tree must maintain good health throughout and after the transplantation process AND must at no time be structurally unstable or present any threat to public safety. The assessment of the suitability after transplanting of a tree is based on the following factors:

- The size of the tree: Generally the larger and older a tree is, the more difficult it is to transplant successfully (Trees with a DBH of over 250mm will incur significantly higher costs, trees with a DBH of over 500mm will incur very high costs and trees with a DBH of over 700mm are rarely considered feasible for transplantation;
- The health of the tree: If the tree is already in poor health it is highly unlikely to withstand the stress of transplantation. By the same token, a tree that has a balanced form and is in good health has a higher feasibility of successful transplantation;
- The survival rate of that particular species: Some species are much more tolerant of the stress of transplantation than others. The assessment of the survival rate of a species after transplantation is based on the observed performance of that species in previous transplantation programmes. Species with insufficient transplantation data are assumed to have a low survival rate;
- Feasibility of root-ball preparation: Site topography, the proximity of above and below ground utilities and whether the tree is crowded by other trees are all major factors determining the feasibility of preparing a sufficiently large root-ball for successful transplantation;
- Root Extent: A tree growing in rocky ground, surrounded by hard paving or which is crowded by other trees is likely to have a distorted root system seriously reducing the feasibility of preparing a sufficiently large root-ball for successful transplantation; and
- Accessibility: Large machinery is required to lift trees so steep slopes and rocky terrain drastically reduce the feasibility of successful transplantation.

3. FINDINGS OF TREE SURVEY

The tree survey was carried out on 13 August 2025. A total of 22 trees were found within the tree survey extent[1], in which 5 trees and 17 trees were recorded near the survey areas at Receiving Pit and Launching Pit respectively. Most of these trees are widely cultivated species, namely *Araucaria columnaris* and *Ficus microcarpa*, which are common in plantations and developed areas. A summary of tree species recorded is provided in **Table 3-1** with details tabulated in **Appendix B**. Photographic records of individual trees are shown in **Appendix C**.

There are no rare nor endangered species found in the survey. Also, no registered Old and Valuable Tree (OVT) was found. However, 4 trees were identified as trees of large size (i.e. DBH ≥ 1,000mm). These trees are T3, T6, T7 and T9, none of them are located within the proposed works area in both Launching and Receiving pits.

No trees are located within the proposed works areas of either pit. However, tree protection zones [2] of two *Ficus microcarpa* individuals slightly encroach upon the boundary of proposed works areas, namely T2 and T3 at Receiving pit. However, no adverse impacts on these trees are anticipated, as the proposed works at the Receiving Pit are confined to a paved road. As a result, the Proposed Project has avoided any impact on existing trees. ***Therefore, tree transplanting/ felling is not required***.

TABLE 3-1 TREE SPECIES SUMMARY

Species	Total no.
Araucaria columnaris	13
Ficus altissima	1
Ficus microcarpa	8
Grand Total	**22**

[1] Tree crown overlapping with the tree survey extent was also surveyed and presented in this report.
[2] Tree protection zone as defined using the dripline method, i.e. the entire area within the dripline of the tree canopy.

4. REFERENCES

Ordinances and Circulars

Legislation of Hong Kong Chapter 96	*Forest and Countryside Ordinance*
Legislation of Hong Kong Chapter 586	*Protection of Endangered Species of Animals and Plants Ordinance*
DEVB TC(W) No. 4/2020	*Tree Preservation*
DEVB TC(W) No. 5/2020	*Registration and Preservation of Old and Valuable Trees*
DEVB TC(W) No. 3/2019	*Village Resite and Expansion Areas Schedule of Maintenance and Repair Responsibilities*
DEVB TC(W) No. 5/2017	*Community involvement in Planting Works*
DEVB TC(W) No. 6/2015	*Maintenance of Vegetation and Hard Landscape Features*
ETWB TCW No. 5/2005	*Protection of Natural Streams / Rivers from Adverse Impacts Arising from Construction Works*
AFCD, Nature Conservation Practice Note No. 02 (Rev. Jun 2006)	*Measurement of Diameter at Breast Height (DBH)*
LAO Practice Note No. 6/2023	*Processing of Tree Preservation and Removal Proposal for Building Development in Private Projects - Compliance of Tree Preservation Clause under Lease*
GLTMS, DevB (10th edition, 2023)	*Guidelines for Tree Risk Assessment and Management Arrangement*
Landscape Unit, Highways Department (2020 version)	*Requirements for Handover of Vegetation to Highways Department (2020 version)*

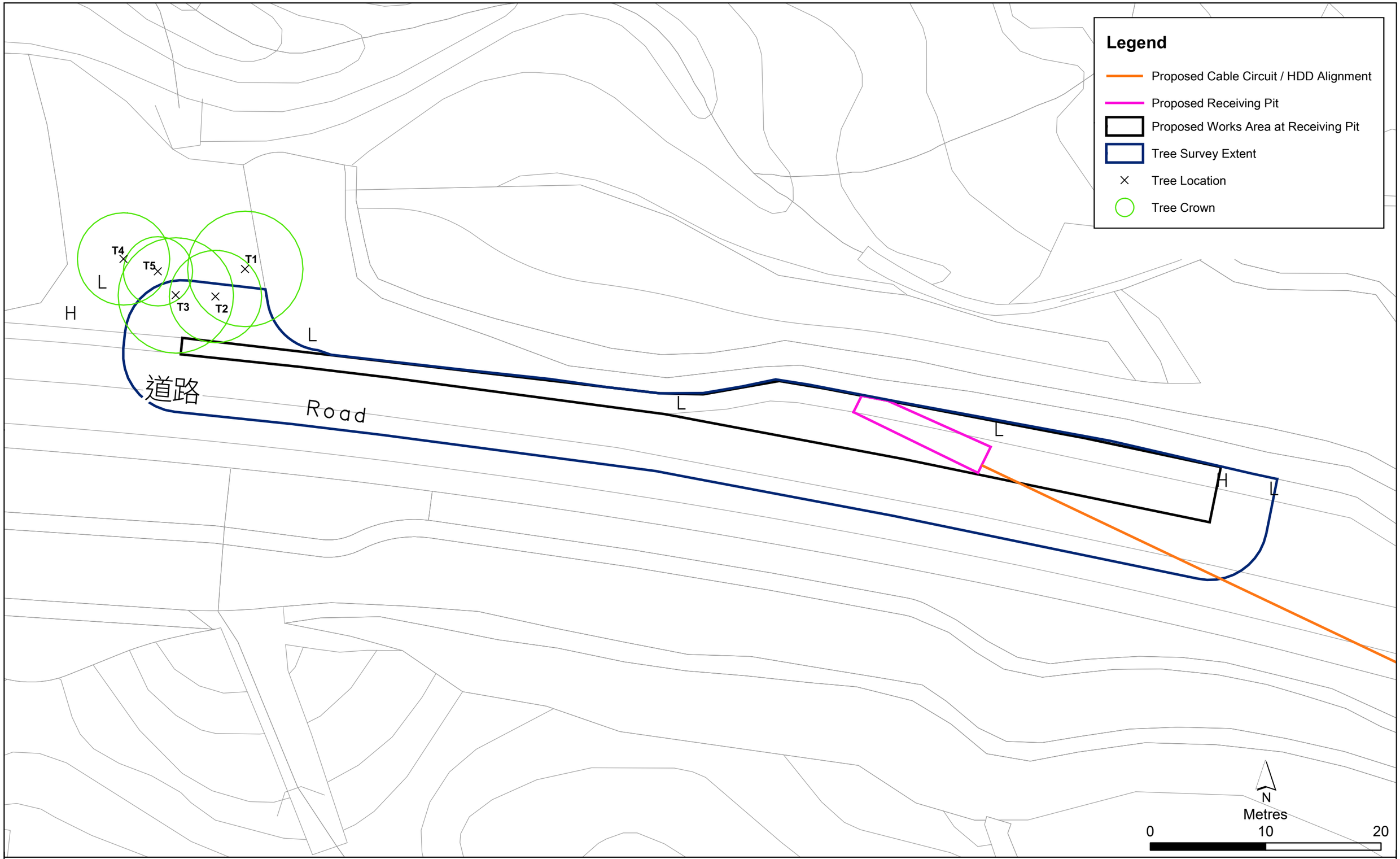
Publications

AFCD (2012)	*Check List of Hong Kong Plants 2012*. AFCD, Hong Kong
HU, Q. et al (2003)	*Rare and Precious Plants of Hong Kong*. AFCD, Hong Kong

Jim, C. Y. (1994) *Champion Trees in Urban Hong Kong*. Urban Council, Hong Kong

Webb, R. (1991) *Tree Planting and Maintenance in Hong Kong*. Standing Interdepartmental Landscape Technical Group, Hong Kong SAR Government, Hong Kong

APPENDIX A TREE SURVEY PLAN

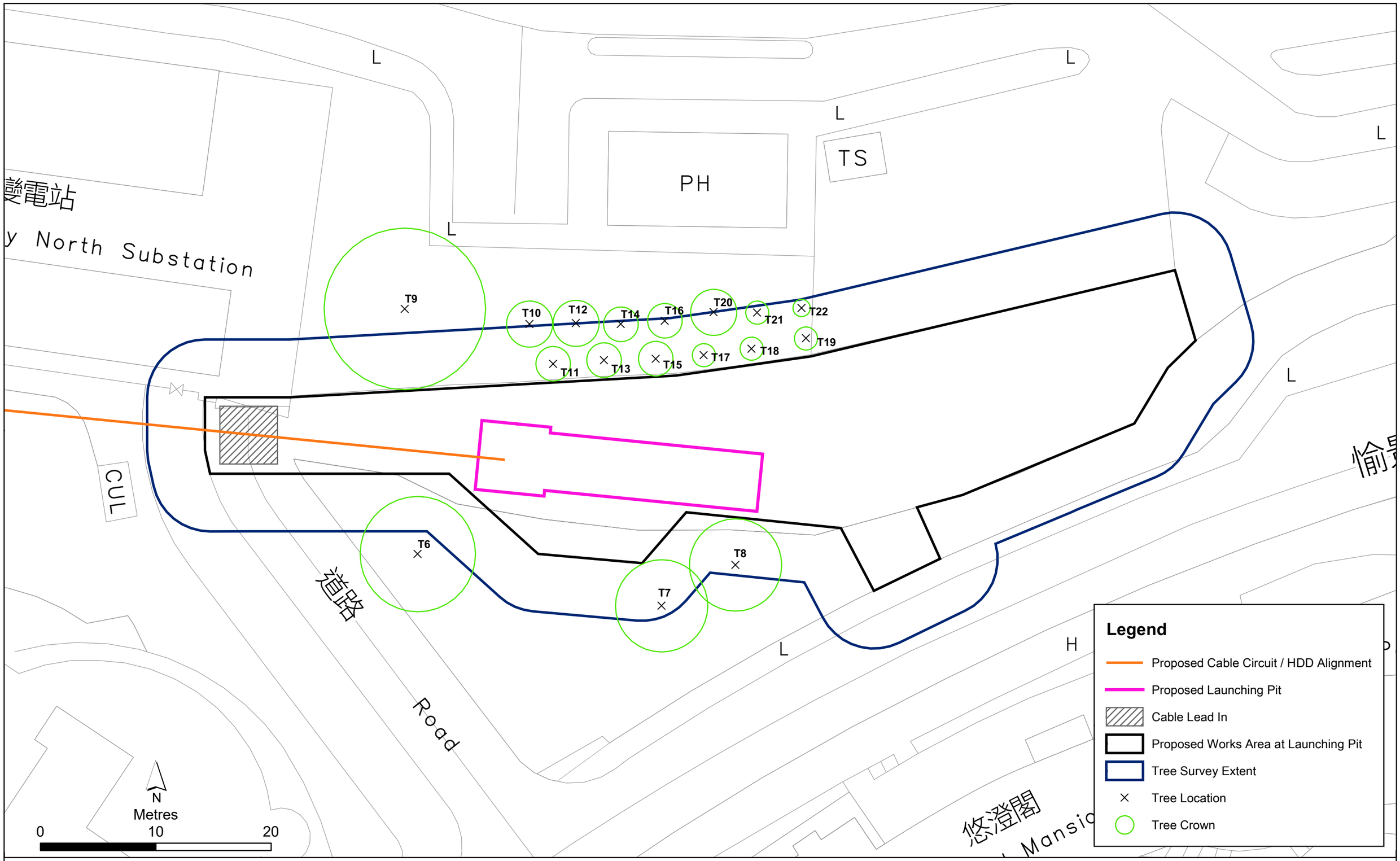


Appendix A1

Project Works and Tree Survey Plan (1 of 2)

ERM

File: T:\GIS\CONTRACT\0750437\mxd\0750437_Tree_Survey_Receiving_Pit.mxd
Date: 26/8/2025



Appendix A2

Project Works and Tree Survey Plan (2 of 2)

ERM

File: T:\GIS\CONTRACT\0750437\mxd\0750437_Tree_Survey_Launching_Pit.mxd
Date: 26/8/2025

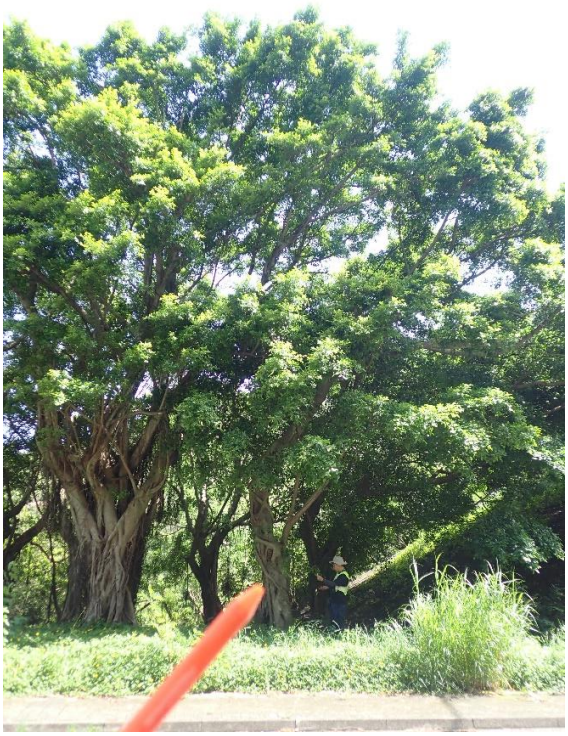
APPENDIX B TREE SURVEY SCHEDULE

132kV Circuit Reinforcement at Discovery Bay Tunnel
Tree Survey Report
Appendix B - Tree Survey Schedule

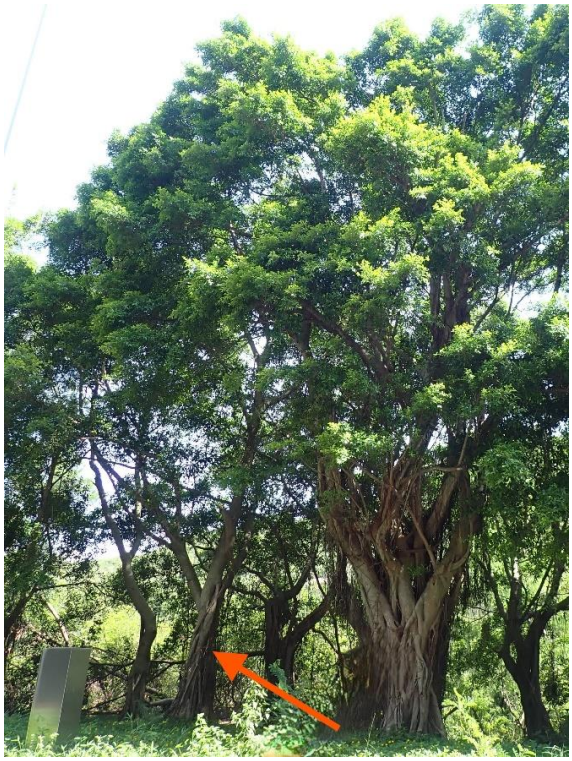
Tree Survey Schedule														
Tree No.	Species		Measurements			Amenity Value	Form	Health Condition	Structural Condition	Suitability for Transplantation	Coordinate		Recommendation	Additional Remarks
	Scientific Name	Chinese Name	Height (m)	DBH (mm)	Crown Spread (m)	(High (H)/Medium (M)/Low (L)	(Good (G)/Fair (F)/Poor (P)			(High (H)/Medium (M)/Low (L)	Easting	Northing	(Retain/Transplant/Remove)	
T1	*Ficus microcarpa*	細葉榕	12	740	10	M	F	F	F	L	818276	819035	Retain	
T2	*Ficus microcarpa*	細葉榕	10	560	8	M	F	F	F	L	818273	819032	Retain	Wound on trunk
T3	*Ficus microcarpa*	細葉榕	14	1270	10	M	F	F	F	L	818270	819033	Retain	Broken branches
T4	*Ficus microcarpa*	細葉榕	12	800	8	M	F	F	F	L	818265	819036	Retain	Broken branches
T5	*Ficus microcarpa*	細葉榕	8	270	6	M	F	F	F	L	818268	819035	Retain	
T6	*Ficus altissima*	高山榕	10	1180	10	M	F	F	F	L	819092	818775	Retain	
T7	*Ficus microcarpa*	細葉榕	8	1050	8	M	F	F	F	L	819113	818771	Retain	
T8	*Ficus microcarpa*	細葉榕	9	640	8	M	F	F	F	L	819120	818774	Retain	
T9	*Ficus microcarpa*	細葉榕	12	2070	14	M	F	F	F	L	819091	818796	Retain	
T10	*Araucaria columnaris*	柱狀南洋杉	11	230	4	M	F	F	F	L	819102	818795	Retain	
T11	*Araucaria columnaris*	柱狀南洋杉	8	240	3	M	F	F	F	L	819104	818791	Retain	
T12	*Araucaria columnaris*	柱狀南洋杉	11	270	4	M	F	F	F	L	819106	818795	Retain	
T13	*Araucaria columnaris*	柱狀南洋杉	9	240	3	M	F	F	F	L	819108	818792	Retain	
T14	*Araucaria columnaris*	柱狀南洋杉	10	210	3	M	F	F	F	L	819110	818795	Retain	
T15	*Araucaria columnaris*	柱狀南洋杉	10	270	3	M	F	F	F	L	819113	818792	Retain	
T16	*Araucaria columnaris*	柱狀南洋杉	8	230	3	M	F	F	F	L	819113	818795	Retain	
T17	*Araucaria columnaris*	柱狀南洋杉	7	190	2	M	F	F	F	L	819117	818792	Retain	
T18	*Araucaria columnaris*	柱狀南洋杉	8	250	2	M	F	F	F	L	819121	818793	Retain	
T19	*Araucaria columnaris*	柱狀南洋杉	6	220	2	M	F	F	F	L	819126	818794	Retain	
T20	*Araucaria columnaris*	柱狀南洋杉	3.5	180	4	M	F	P	P	L	819118	818796	Retain	Wound on trunk
T21	*Araucaria columnaris*	柱狀南洋杉	4.5	110	2	M	F	F	F	L	819121	818796	Retain	
T22	*Araucaria columnaris*	柱狀南洋杉	3.5	100	1.5	M	F	F	F	L	819125	818796	Retain	

APPENDIX C TREE PHOTOS

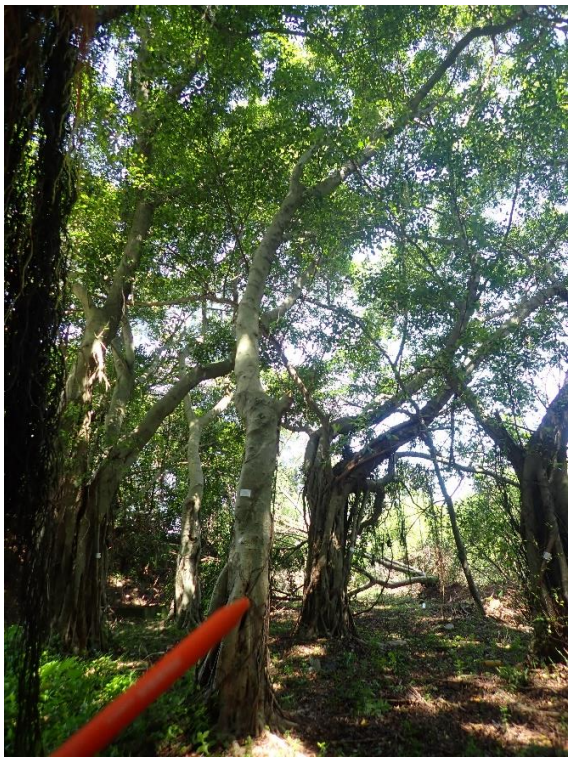
132kV Circuit Reinforcement at Discovery Bay Tunnel
Tree Survey Report
Appendix C – Tree Photos

	
T1 – Overview	T1 – Trunk Base
	
T2 – Overview	T2 – Trunk Base

132kV Circuit Reinforcement at Discovery Bay Tunnel
Tree Survey Report
Appendix C – Tree Photos

	
T3 – Overview	T3 – Trunk Base
	
T4 – Overview	T4 – Trunk Base

132kV Circuit Reinforcement at Discovery Bay Tunnel
Tree Survey Report
Appendix C – Tree Photos

	
T5 – Overview	T5 – Trunk Base
	
T6 – Overview	T6 – Trunk Base

132kV Circuit Reinforcement at Discovery Bay Tunnel
Tree Survey Report
Appendix C – Tree Photos

	
T7 – Overview	T7 – Trunk Base
	
T8 – Overview	T8 – Trunk Base

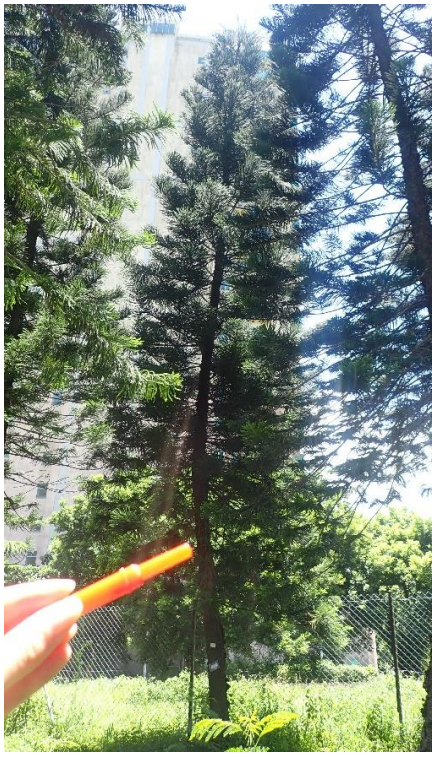
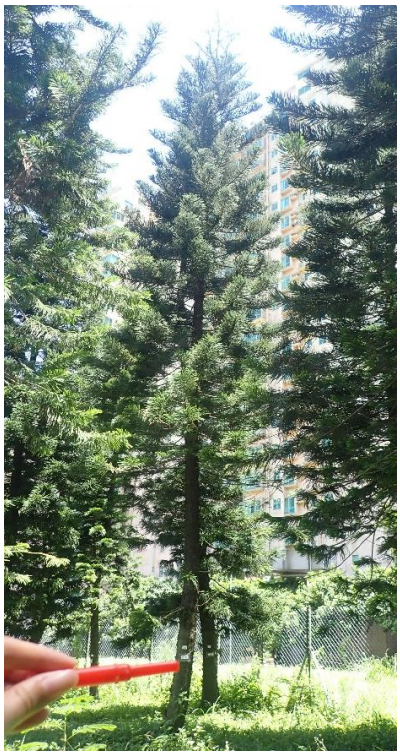
132kV Circuit Reinforcement at Discovery Bay Tunnel
Tree Survey Report
Appendix C – Tree Photos

	
T9 – Overview	T9 – Trunk Base
	
T10 – Overview	T10 – Trunk Base

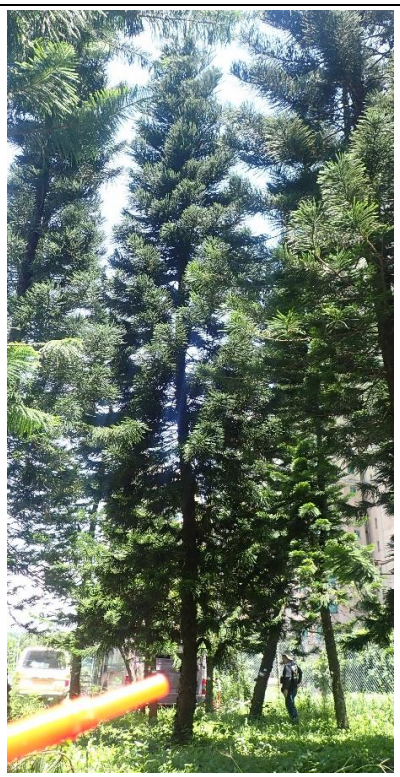
132kV Circuit Reinforcement at Discovery Bay Tunnel
Tree Survey Report
Appendix C – Tree Photos

	
T11 – Overview	T11 – Trunk Base
	
T12 – Overview	T12 – Trunk Base

132kV Circuit Reinforcement at Discovery Bay Tunnel
Tree Survey Report
Appendix C – Tree Photos

	
T13 – Overview	T13 – Trunk Base
	
T14 – Overview	T14 – Trunk Base

132kV Circuit Reinforcement at Discovery Bay Tunnel
Tree Survey Report
Appendix C – Tree Photos

	
T15 – Overview	T15 – Trunk Base
	
T16 – Overview	T16 – Trunk Base

132kV Circuit Reinforcement at Discovery Bay Tunnel
Tree Survey Report
Appendix C – Tree Photos

	
T17 – Overview	T17 – Trunk Base
	
T18 – Overview	T18 – Trunk Base

132kV Circuit Reinforcement at Discovery Bay Tunnel
Tree Survey Report
Appendix C – Tree Photos

	
T19 – Overview	T19 – Trunk Base
	
T20 – Overview	T20 – Trunk Base

132kV Circuit Reinforcement at Discovery Bay Tunnel
Tree Survey Report
Appendix C – Tree Photos

	
T21 – Overview	T21 – Trunk Base
	
T22 – Overview	T22 – Trunk Base

PLANNING LIMITED
規劃顧問有限公司

UNIT K, 16/F, MG TOWER
133 HOI BUN ROAD, KWUN TONG
KOWLOON, HONG KONG
九龍觀塘海濱道133號
萬兆豐中心16樓K室
電話TEL (852) 3426 8451
傳真FAX (852) 3426 9737
電郵EMAIL kta@ktaplanning.com

By Email

Our Ref: S3143/CA_DB/25/003Lg

7 November 2025

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

Dear Sir/Madam,

Proposed Public Utility Installation (Micro Cable Tunnel) and Associated Excavation and Filling of Land in the Areas Adjacent to Discovery Bay Tunnel within Chok Ko Wan Lot No. 2, the Remaining Portion of Lot No. 385 in D.D. 352, and the Extensions thereto and Adjoining Government Land, Discovery Bay, Lantau Island

- Section 16 Planning Application No. A/I-DB/11 -

(this letter shall supersede our letter ref. S3143/CA_DB/25/002Lg dated 5 November 2025)

Reference is made to the captioned application submitted to the Town Planning Board ("TPB") on 31 October 2025.

Further to the tele-conversation with the officer of the Sai Kung & Islands District Planning Office between 4 and 5 October 2025, the Applicant would like to supplement the replacement page(s) of the Supporting Planning Statement and the replacement page of the Application Form. Enclosed please find the replacement page(s) of the Supporting Planning Statement and Application Form for your kind consideration.

Meanwhile, should you have any queries in relation to the above and attached, please do not hesitate to contact the undersigned at 3426 8455 or our Mr. Elden Chan at 3579 5778.

Thank you for your kind attention.

Yours faithfully
For and on behalf of
KTA PLANNING LIMITED

David FOK

Encl.

cc. the Applicant & Team

DF/EC/vy

TABLE OF CONTENTS

Permission to Apply Directly for an Environmental Permit under the Environmental Impact Assessment Ordinance)

Appendix 2: Geotechnical Planning Review Report (GPRR)

Appendix 3: Tree Survey Report

remaining area is not adequate to accommodate the micro-tunnelling works and setting up work areas. Besides that, this location is covered with vegetation and trees, and extensive clearance for excavation of the launching pit would be required. Therefore, this location is considered unfeasible.

e) Potential Launching Pit Location 5: Operating Facilities of Discovery Bay Tunnel and Bus Stop (Further East of Discovery Bay North Substation)

3.3.7 The Potential Launching Pit Location 5 currently serves as the operating facilities of the Discovery Bay Tunnel and bus stop, which is zoned "Other Specified Uses" annotated "Amenity Area" under the Approved Discovery Bay OZP. From joint site inspection with the Discovery Bay Management Office, it was observed that Location 5 is part of a traffic control zone of the Discovery Bay Tunnel. The traffic control zone consists of a Permit Return Office (External Vehicles), a re-route zone for vehicles, including taxis, to return Discovery Bay Tunnel without entering the main Discovery Bay area. It is also observed that there is a bus stop serving the Discovery Bay residents. Launching Pit Location 5 is also currently a paved area. Breaking of the paved area would be required for the construction of the launching pit. These breaking works would likely cause noise impact to the adjacent residential buildings of Siena Two. Besides, accommodating the launching pit at this location, the constructed micro cable tunnel will inevitably encroach/span across Location 3, which is planned to be used as a future gas station[3], and any permanent facilities, even underground, are not allowed. Therefore, this location is also not feasible.

f) Potential Launching Pit Location 6: Idle Land (Southeast of Discovery Bay North Substation)

3.3.8 The Potential Launching Pit location 6 for the launching pit itself is currently an idle land zoned "CA" zone. Unlike Location 3, this location has no planned usage, and it is located more distant away (at least 22m) from adjacent developments (i.e., Celestial Mansion). It is also a sizeable location for setting up a launching pit, and the Site is therefore deemed suitable for hosting the launching pit. However, the proposed works and work area shall be carefully adjusted to avoid affecting the existing trees. This will be discussed in 3.3.9.

[3] Please note that the terminology of "Gas Station" refers to "the planned development of the proposed LPG store" for the entire planning submission

Table 3.1: Comparison Table of the Locations for the launching pits

	Locations	**Zoning**	**Proximity to Discovery Bay North Substation**	**Size and Construction Requirement of the Site**	**Minimise impact on the surroundings**	**Post-construction Treatment**	**Feasibility**
1	Roadside of the Discovery Bay Tunnel	"Road"	Immediate north of the Discovery Bay North Substation	A strip of land is not sufficient space for construction works	- Pose safety risks to the tunnel operation - Block the emergency access and footpath of the Discovery Bay Tunnel	Reinstated with compact filling	❌ Not feasible
2	Within the Discovery Bay North Substation	"Government, Institution or Community"	Within the Discovery Bay North Substation	- No sufficient space for construction works	Affect the normal operation and emergency maintenance of the Discovery Bay North Substation	Reinstated with compact filling	❌ Not feasible
3	Idled Land Adjacent to a Pump House	"Government, Institution or Community"	Immediate east of the Discovery Bay North Substation	No permanent structures allowed due to the future planned gas station	Affect the design and planning of the future gas station	Reinstated with compact filling	❌ Not feasible
4	Idle Land with Vegetation	"Conservation Area"	Immediate south of the Discovery Bay North Substation	No sufficient space for construction works	- Pose the environmental impact on surrounding residential developments - Extensive clearance of vegetation for	Reinstated with compact filling	❌ Not feasible

					excavation of the launching pit		
5	Operating Facility and Bus Stop	"Other Specified Uses" annotated "Amenity Area"	Further east of the Discovery Bay North Substation	- Not an adequate site for construction work	- Affect the operating facilities and bus stop for Discovery Bay residents - Breaking works of the paved area would cause noise impact on the adjacent residential buildings - No permanent utilities in the underground within the site of the future gas station	Reinstated with compact filling	✗ Not feasible
6	Idle Land	"Conservation Area"	Immediate southeast of the Discovery Bay North Substation	- Adequate size for allowing construction works - Bounded by access road to Discovery Bay North Substation	- Set back with a buffer from the surrounding residential developments - Minimal impact to vegetation	Reinstated with compact filling	✓ Feasible

Breakdown of the zoning areas

3.7.9 The Application Site involves an area of about 1,830m^2 covered by the two OZPs for the proposed Micro Cable Tunnel and Associated Works. The breakdown of area within each respective zoning area is the following (**Table 3.3** refers):

Table 3.3: Breakdown of the Zoning Areas

Eastern Portion (Cable length of about 370m)	
Zoning	*Area*
"Conservation Area" ("CA")# involving: • *excavation and filling for drilling of micro cable tunnel (about 240m^3) for the installation of cables of about 370m in length* • *works area including the surface excavation and filling for cable lead-in and launching pit (about 140m^3 and 350m^3 respectively)*	About 980m^2 *About 330m^2* *About 650m^2 (including about 25m^2 for cable lead-in and about 140m^2 for laundhing pit)*
"Government, Institution or Community" ("G/IC")	About 375m^2
"Other Specified Uses" annotated "Amenity Area"	About 25m^2
Middle Portion (Cable length of about 260m)	
Lantau North (Extension) Country Park@	About 234m^2
Western Portion (Cable length of about 180m)	
Zoning	*Area*
"Green Belt" ("GB")	About 120m^2
Area shown as 'Road'	About 330m^2

Note #: Subject to S16 Planning Application and approval from Town Planning Board.
Note @: The area covered by the Lantau North (Extension) Country Park falls outside OZP and therefore does not form part of the Application Site.

4.6 No Insurmountable Impacts

Environmental and Ecology

4.6.1 The project is a designated project under the Environmental Impact Assessment Ordinance (EIAO). The applicant has submitted a Project Profile for application for permission to apply directly for an environmental permit on 4 September 2025 (**Appendix 1** refers). The Applicant was granted permission to apply directly for an environmental permit on 10 October 2025, and the Application for the Environmental Permit for the Proposed Project was submitted on 13 October 2025

4.6.2 According to the Project Profile, the scale of the construction works is small, mainly utilising small-scale construction equipment/machinery and hand tools, and most of the construction works will be underground. With the implementation of appropriate mitigation measures and good site practice recommended in the Project Profile, no adverse environmental impacts would be anticipated during the construction phase of the project. During the operation phase, the proposed cable circuit will be monitored by an automatic signalling system and is expected to be maintenance-free in normal operation. Hence, no adverse environmental impacts would be anticipated during the operation phase.

4.6.3 The environmental mitigation measures and good site practices recommended in the Project Profile will be implemented by the applicant. Examples of mitigation measures and good site practices include, but are not limited to, spraying of water at work areas involving site clearance and excavation works, washing of vehicles before leaving a work site, use of temporary noise barriers, covering of exposed soil and open stockpiles, provision of sufficient waste disposal points and regular disposal of waste, avoidance of the use of direct lighting on adjacent habitats, and maintaining the site in a clean and tidy state etc. Please refer to the Project Profile in Appendix 1 for the detailed mitigation measures and good site practices.

Geotechnical Planning Review Report

4.6.4 The Applicant has conducted a Geotechnical Planning Review Report (GPRR) for the proposed construction of Horizontal Directional Drilling (HDD) works, including the launching pit and receiving pit near the Discovery Bay tunnel, enclosed in **Appendix 2**. The GPRR has reviewed the proposed construction works, including the launching pit and receiving pit may affect or be affected by natural terrain or man-made slopes, and the geotechnical feasibility of the

Appendix 1

Environmental Assessments
(Project Profile submitted for Application
for Permission to Apply Directly for an Environmental Permit
under the Environmental Impact Assessment Ordinance)

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

(a) Operation involved 涉及工程

☐ Diversion of stream 河道改道

☐ Filling of pond 填塘
Area of filling 填塘面積 …… sq.m 平方米 ☐About 約
Depth of filling 填塘深度 …… m 米 ☐About 約

☑ Filling of land 填土
Area of filling 填土面積 ……495…… sq.m 平方米 ☑About 約
Depth of filling 填土厚度 ……0.9 to 5.5…… m 米 ☑About 約

☑ Excavation of land 挖土
Area of excavation 挖土面積 ……495…… sq.m 平方米 ☑About 約
Depth of excavation 挖土深度 ……0.9 to 5.5…… m 米 ☑About 約

(Referring to the proposed micro cable tunnel, launching pit and cable lead-in in "CA" zone only)

(b) Intended use/development 有意進行的用途／發展

Proposed Public Utility Installation (Micro Cable Tunnel) and associated excavation and filling of land

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

(a) Nature and scale 性質及規模

☑ Public utility installation 公用事業設施裝置

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

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

Name/type of installation 裝置名稱／種類	Number of provision 數量	Dimension of each installation /building/structure (m) (LxWxH) 每個裝置／建築物／構築物的尺寸 (米) (長 x 闊 x 高)
Micro Cable Tunnel with cables	1	370m (length) x 0.9m (width/diameter) (Referring to the section in "CA" zone only)

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

PLANNING LIMITED
規劃顧問有限公司

UNIT K, 16/F, MG TOWER
133 HOI BUN ROAD, KWUN TONG
KOWLOON, HONG KONG
九龍觀塘海濱道133號
萬兆豐中心16樓K室
電話TEL (852) 3426 8451
傳真FAX (852) 3426 9737
電郵EMAIL kta@ktaplanning.com

By Email

Our Ref: S3143/CA_DB/25/004Lg

9 December 2025

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

Dear Sir/Madam,

Proposed Public Utility Installation (Micro Cable Tunnel) and Associated Excavation and Filling of Land in the Areas Adjacent to Discovery Bay Tunnel within Chok Ko Wan Lot No. 2, the Remaining Portion of Lot No. 385 in D.D. 352, and the Extensions thereto and Adjoining Government Land, Discovery Bay, Lantau Island
Section 16 Planning Application No. A/I-DB/11

- Further Information No. 1 -

Reference is made to the captioned application submitted to the Town Planning Board ("TPB") on 31 October 2025, the comments from various Government Departments conveyed by Planning Department through email on 5 December 2025 and the public comments received by the TPB during the first three weeks of the public inspection period.

Please find enclosed a summary table containing the responses to the departmental and public comments received for your consideration.

Meanwhile, should you have any queries in relation to the above and attached, please do not hesitate to contact the undersigned at 3426 8455.

Thank you for your kind attention.

Yours faithfully
For and on behalf of
KTA PLANNING LIMITED

David FOK

Encl.

cc. the Applicant & Team

DF/vy

Proposed Public Utility Installation (Micro Cable Tunnel) and Associated Excavation and Filling of Land in the Areas Adjacent to Discovery Bay Tunnel within Chok Ko Wan Lot No. 2, the Remaining Portion of Lot No. 385 in D.D. 352, and the Extensions thereto and Adjoining Government Land, Discovery Bay, Lantau Island

S16 Planning Application No. A/I-DB/11 – Further Information No. 1

Item	Comments	Responses
1	**Comments from Transport Department received on 5 December 2025 (Contact Person: Ms. Suman WONG; Tel: 2399 2730)**	
1.1	The proposed public utility installation and associated filling and excavation works will affect the existing lay-by and carriageways near the western portal of the Discovery Bay Tunnel ("DBT") and require temporary lane closure. The applicant shall consult in advance with the DBT operator, Discovery Bay Road Tunnel Co. Ltd. (DBRTCL), regarding the necessary temporary traffic arrangements and interim measures during the works period.	Noted. The Applicant has consulted and sought consent from Discovery Bay Road Tunnel Company Limited ("DBRTCL") and maintains ongoing dialogue with DBRTCL.
2	**Comments from Electrical and Mechanical Services Department received on 5 December 2025 (Contact Person: Mr. Nic HO; Tel: 3757 6250)**	
2.1	According to our record, construction approval has been granted for an LPG storage installation and its associate underground pipeworks in the vicinity of the "preferred location" of the captioned submission on 1 August 2022 pursuant to regulation 5 of the Gas Safety (Gas Supply) Regulations. There is no restriction imposed by this office on the time frame of completing the construction works of the abovementioned LPG storage installation and its associate underground pipeworks, such that GSB has no comment on the captioned from LPG safety point of view.	Noted with thanks.

Item	Comments	Responses
2.2	In light of the above proposed project, coordination should be made with the project proponent of the abovementioned LPG storage installation and its associate underground pipeworks for confirming the followings: 1. Any conflict on the future underground LPG pipeworks alignment 2. Any conflict on the future route for LPG road tanker accessing the LPG storage installation	The Applicant writes to confirm that the proposed utility pipeline installation (micro cable tunnel) and the associated excavation and filling of land will have no conflict with the future underground LPG pipework alignment and the future route for LPG road tanker accessing the LPG storage installation, based on the following: 1. **No conflict on the construction programme.** According to the latest discussion between the Applicant and HKR International Limited (HKRI) (representative from project proponent of the abovementioned LPG storage installation) in September 2025, there is no works schedule for the construction of LPG station within coming 2 years. The construction works for the proposed utility pipeline installation (micro cable tunnel) are scheduled to commence in early 2026 and to be completed by around Q1-2027. 2. **No permanent structure proposed within the boundary of the proposed LPG store.** The Applicant proposes to make use of the southern portion of the proposed LPG store (the concerned portion) as a works area to facilitate the maneuvering of construction equipment and vehicles for the construction of the proposed utility pipeline installation (micro cable tunnel) only. No permanent structure has been proposed / will be constructed within the concerned portion. All work areas, including the concerned portion, will be reinstated to their existing condition upon completion.
3	**Comments from Sai Kung & Islands District Planning Office, Planning Department received on 5 December 2025 (Contact Person: Mr. Gabriel LAI; Tel: 2158 6197)**	
3.1	It is noted that the proposed cable lead-in is located at the access road of Discovery Bay North Substation. Please confirm with CLP whether the proposed public utility installation will affect the vehicles' access and operation of the Substation, and whether there will be any interim arrangement(s) particularly at the construction stage.	As the operator of the Discovery Bay North Substation, the Applicant will ensure the proposed public utility installation and its construction will not affect the operation of the Discovery Bay North Substation.
3.2	According to the proposal, there are currently two series of existing 132kV cable circuits passing through Discovery Bay Tunnel for power	Both existing circuits inside the Discovery Bay Tunnel will be retained after the completion of the proposed cable works while one of the

Item	Comments	Responses
	supply to Discovery Bay. The proposed installation is to divert one of the two existing 132kV circuits to the new separated micro cable tunnel. Please advise whether, upon completion of the proposed installation, the two existing cable circuits will still be in operation (i.e. three cable circuits in total including the proposed installation) or if one of the existing circuits will be replaced by the proposed installation (i.e. two cable circuits in total).	circuits will remain energised and the other one will be kept as spare cable circuits.
4	**Comments from Lands Department received on 5 December 2025 (Contact Person: Ms. Karen LEUNG; Tel: 2852 3571)**	
	Land Status and Land Grant restrictions	
4.1	The western part of the application site falls within Government land where 3 nos. of STTs, namely STTCX1376, STTCX1377 and STTCX2176, are existed for laying of water/sewage pipes and optic fibre cable. The applicant should verify the ground levels of these STTs to ensure there is no conflicting issue amongst the proposed micro cable tunnel and the existing utilities, or prior consent from the STT holders should be obtained before implementation of the proposed works.	Noted with thanks. The tenants of these STTs have been approached to confirm the depth of existing and planned installations with an aim to avoid conflicting issues.
4.2	The eastern part of the application site falls within private lot known as Lot No. 385 R.P. in D.D. 352 & the Extensions thereto ("the Lot") which is held under New Grant No. 6122 as extended by three Extension Letters in 1979, 1980 and 1981 (collectively referred to as "the New Grant"). The Lot is commonly known as Discovery Bay. The Applicant shall obtain prior consent from the Lot owner before implementation of the proposed works.	Noted with thanks.
	Comments on the application	
4.3	There is no adverse comment on the subject planning application from a land administration point of view.	Noted with thanks.
4.4	Should planning approval be given to the subject planning application, the applicant will need to apply to DLO/Is for Excavation Permit prior to the commencement of works on the Government land concerned. Application for the Excavation Permit will be considered by the Lands Department at its sole discretion and there is no guarantee that such application will be approved. If such application is approved, it will be	Noted with thanks.

Item	Comments	Responses
	subject to such terms and conditions, including among others the payment of fee, as may be imposed by the Lands Department.	
4.5	In the processing of Excavation Permit, prior consent from the Country and Marine Parks Authority shall be obtained as part of the Site is within Lantau North (Extension) Country Park.	Noted. The Applicant will consult and seek consent from the Country and Marine Parks Authority separately.
4.6	Part of the Site is within the deposit area of Discovery Bay Tunnel Link and Tunnel Area under Discovery Bay Tunnel Link Ordinance (Cap.520). The Applicant should consult Discovery Bay Road Tunnel Company Limited and consent from whom shall be obtained before commencement of works.	Noted. The Applicant has ongoing dialogue with Discovery Bay Road Tunnel Company Limited.
5	**Public Comments received by the Town Planning Board during the Public Inspect Period**	
5.1	The rationale and necessity of diverting the existing circuit inside the tunnel. The construction of a separate tunnel would cause considerable expense to the local environment. Resources should be deployed in areas where significant energy demands are anticipated, such as the Northern Metropolis.	CLP Power has conducted a review to identify areas where circuit reinforcement works may further enhance power supply reliability. As both existing 132kV cable circuits serving Discovery Bay area are accommodated in the same Common Cable Infrastructure under the management by third parties, it is recommended to build a new transmission cable circuit through a proposed micro-tunnel to further enhance safety and power supply reliability. In terms of potential environmental impact, the proposed project has undergone the statutory Environmental Impact Assessment process. It is concluded that, with the implementation of appropriate mitigation measures and good site practice recommended in the Project Profile, no adverse environmental impacts would be anticipated during the construction phase of the project. During the operation phase, as the proposed cable circuit is expected to be maintenance-free in normal operation, no adverse environmental impacts would be anticipated either. The proposed project is one of the approved major projects in the CLP Power 2024-2028 Development Plan, which was approved by the HKSAR Government to uphold the safety and reliability of CLP Power's territory-wide network. In addition to the proposed project,

Item	Comments	Responses
		CLP Power will continue to carry out a large number of territory-wide development and infrastructure projects to maintain the highly reliable supply and meet the increasing demand for electricity within its supply area in Hong Kong

Compiled by: KTA Planning Limited
Date: 9 December 2025
File Ref: 20251209_S3143_FI1_V01

Annex II of RNTPC
Paper No. A/I-DB/11

Previous s.16 Application covering the Application Site

Approved Application

Application No.	Proposed Use/ Development	Date of Consideration	Approval Condition
A/I-DB/8	Proposed Dangerous Goods Godown (Liquefied Petroleum Gas Store)	13.1.2023	(a)

Approval Condition

(a) the provision of fire service installations and water supplies for firefighting to the satisfaction of the Director of Fire Services or of the TPB.

Government Bureau/Departments' General Comments

1. Land Administration

Comments of the District Lands Officer/Islands, Lands Department:

(a) no adverse comment on the subject planning application from a land administration point of view;

(b) the western part of the Site falls within Government land where three STTs, namely STTCX1376, STTCX1377 and STTCX2176, are existed for laying of water/sewage pipes and optic fibre cable. The applicant should verify the ground levels of these STTs to ensure there is no conflicting issue amongst the proposed micro cable tunnel and the existing utilities, or prior consent from the STT holders should be obtained before implementation of the proposed works;

(c) the eastern part of the Site falls within private lot known as Lot No. 385 R.P. in D.D. 352 & the Extensions thereto ("the Lot") which is held under New Grant No. 6122 as extended by three Extension Letters in 1979, 1980 and 1981 (collectively referred to as "the New Grant"). The Lot is commonly known as Discovery Bay. The Applicant shall obtain prior consent from the Lot owner before implementation of the proposed works;

(d) should planning approval be given to the subject planning application, the applicant will need to apply to her office for excavation permit prior to the commencement of works on the Government Land concerned. Application for the excavation permit will be considered by the Lands Department at its sole discretion and there is no guarantee that such application will be approved. If such application is approved, it will be subject to such terms and conditions, including among others the payment of fee, as may be imposed by the Lands Department;

(e) in the processing of excavation permit, prior consent from the Country and Marine Parks Authority shall be obtained as part of the Site is within Lantau North (Extension) Country Park;

(f) her office has received an application from CLP for an excavation permit for the purpose of design and construction of horizontal directional drilling works near Discovery Bay Tunnel for receiving pit which is under processing; and

(g) Part of the Site is within the deposit area of Discovery Bay Tunnel Link and Tunnel Area under Discovery Bay Tunnel Link Ordinance (Cap.520). The applicant should consult Discovery Bay Road Tunnel Company Limited and consent from whom shall be obtained before commencement of works.

2. Nature Conservation

Comments of the Director of Agriculture, Fisheries and Conservation:

(a) no comment on the subject planning application; and

(b) prior written consent from the Country and Marine Parks Authority has yet to be sought and shall be required prior to the commencement of works within Lantau North (Extension) Country Park.

3. Environment

Comments of the Director of Environmental Protection:

(a) the proposed public utility installation which falls partly within "Conservation Area" zone and Lantau North (Extension) Country Park is a designated project by virtue of Item Q.1, Part I of Schedule 2 of the Environmental Impact Assessment Ordinance (EIAO). The applicant has submitted a Project Profile for application for permission to apply directly for an Environmental Permit (EP) under Section 5(11) of the EIAO on 4.9.2025 and the permission was granted on 10.10.2025. The applicant submitted an application for EP on 13.10.2025 and the EP (No. EP-677/2025) was issued on 6.11.2025;

(b) it is noted that the information on environmental assessment presented in the supporting statement for the subject planning application aligns with that provided in the Project Profile submitted on 4.9.2025. In this connection, he has no objection to the subject planning application; and

(c) other advisory comments are at **Annex IV**.

4. Landscape

Comments of the Chief Town Planner/Urban Design and Landscape, Planning Department:

(a) no adverse comment on the subject application;

(b) with reference to the aerial photo, the Site is situated in an area of uplands and hillsides

landscape characterized by woodland and existing roads. For the Eastern portion of the Site requiring planning permission, given the proposed cable tunnel will be constructed underground and the proposed excavation area of launching pit will be reinstated after completion of the proposed works, the proposed works are considered not entirely incompatible with the landscape character of the surrounding area;

(c) according to Appendix 3 of Annex I, 17 existing trees of common species are found outside the boundary of the Site but at periphery of the proposed works area of launching pit. The trees are not in direct conflict with the proposed works and no tree felling is required. Significant adverse impact arising from the proposed works is not anticipated; and

(d) other advisory comments are at **Annex IV**.

5. Drainage

Comments of the Chief Engineer/Hong Kong & Islands, Drainage Services Department (DSD):

(a) no comment on the application from a drainage maintenance point of view; and

(b) there are no existing or planned DSD utility facilities in the vicinity of the alignment for the proposed public utility installation.

6. Transport

Comments of the Commissioner for Transport:

(a) no adverse comment on the application; and

(b) other advisory comments are at **Annex IV**.

7. Building Matters

Comments of the Chief Building Surveyor/New Territories East (1) & Licensing, Buildings Department (BD):

(a) no in-principle objection under the Buildings Ordinance (BO) to the application;

(b) if the proposed building works are erected on government land, they do not come under the control of the BO; and

(c) other advisory comments are at **Annex IV**.

8. Geotechnical

Comments of the Head of Geotechnical Engineering Office, Civil Engineering and Development Department:

(a) no adverse comment on the Geotechnical Planning Review Report; and

(b) it is noted that part of the works area of the proposed receiving pit falls within Strategic Cavern Area (SCVA) No. 43 of the Cavern Master Plan (CMP). He has no objection regarding the encroachment of proposed works area into the SCVA provided that the proposed works in the works area within the SCVA are minor in nature with negligible permanent impact on the integrity of the SCVA, which are deemed to satisfy exemption criteria from the vetting mechanism of the CMP as stated in Development Bureau Technical Circular (Works) No. 2/2024.

9. Electricity and Liquefied Petroleum Gas (LPG) Safety

Comments of the Director of Electrical and Mechanical Services:

(a) no comment on the application from electricity supply safety and LPG safety points of view;

(b) according to the record, construction approval has been granted for a LPG storage installation and its associate underground pipeworks in the vicinity of the proposed work site on 1.8.2022 pursuant to regulation 5 of the Gas Safety (Gas Supply) Regulations. There is no restriction imposed by his office on the time frame of completing the construction works of the LPG storage installation and its associate underground pipeworks. Quantitative Risk Assessment is not required in the current stage; and

(c) other advisory comments are at **Annex IV**.

10. Others Bureau/Departments' Comments

The following Government bureau/departments have no objection to or no comment on the application:

(a) Secretary for Environment and Ecology;
(b) Chief Engineer/Construction, Water Supplies Department;
(c) Chief Highway Engineer/New Territories East, Highways Department;
(d) Director of Fire Services; and
(e) District Officer (Islands), Home Affairs Department.

Annex IV of RNTPC
Paper No. A/I-DB/11

Recommended Advisory Clauses

(a) to note the comments of the Director of Environmental Protection that the proposed public utility installation shall be constructed in accordance with the information and recommendations described in the Project Profile (Register No. PP-693/2025), as well as the requirements set out in the EP (No. EP-677/2025).

(b) to note the comments of the Chief Town Planner/Urban Design and Landscape, Planning Department that for any proposed tree preservation/pruning/removal scheme under Lands Department's LAO Practice Notes No. 6/2023, relevant authority should be approached direct to obtain the necessary approval.

(c) to note the comments of the Commissioner for Transport that the proposed public utility installation and associated excavation works will affect the existing lay-by and carriageways near the western portal of the Discovery Bay Tunnel ("DBT") and require temporary lane closure. The DBT operator, Discovery Bay Road Tunnel Company Limited, shall be consulted in advance regarding the necessary temporary traffic arrangements and interim measures during the works period.

(d) to note the comments of the Chief Building Surveyor/New Territories East (1) & Licensing, Buildings Department (BD) that:

- if the existing structures are erected on leased land without approval of BD (not being a New Territories Exempted House), they are unauthorized under the Buildings Ordinance (BO) and should not be designated for any approved use under the application;

- before any new building works (including containers/open sheds as temporary buildings) are to be carried out on the Site, prior approval and consent of the Building Authority should be obtained, otherwise they are Unauthorized Building Works (UBWs) under the BO. An Authorized Person should be appointed as the coordinator for the proposed building works in accordance with the BO;

- for UBW erected on leased land, enforcement action may be taken by the BD to effect their removal in accordance with the prevailing enforcement policy against UBW as and when necessary. The granting of any planning approval should be not be construed as an acceptance of any existing building works or UBW on the Site under the BO;

- if the proposed use is subject to the issue of a licence, any existing structures on the Site intended to be used for such purposes are required to comply with the building safety and other relevant requirements as may be imposed by the licensing authority;

- the Site shall be provided with means of obtaining access thereto from a street and emergency vehicular access in accordance with Regulations 5 and 41D of the Building (Planning) Regulations (B(P)R) respectively; and

- if the Site does not abut on a specified street of not less than 4.5m wide, its permitted development intensity shall be determined under Regulation 19(3) of the B(P)R at building plan submission stage.

(e) to note the comments of the Director of Electrical and Mechanical Services that:

- in the interests of public safety and ensuring the continuity of electricity supply, the parties concerned with planning, designing, organizing and supervising any activity near the underground cable or overhead line under the application should approach the electricity supplier (i.e. CLP) for the requisition of cable plans and overhead line alignment drawings, where applicable, to find out whether there is any underground cable and/or overhead line within and/or in the vicinity of the concerned site. The Electricity Supply Lines (Protection) Regulation and the "Code of Practice on Working near Electricity Supply Lines" established under the Regulation should also be observed when carrying out works in the vicinity of the electricity supply lines; and

- coordination could be made with the project proponent of the LPG storage installation and its associate underground pipeworks, i.e. DSG Energy Limited, for confirming no conflict on the future underground LPG pipeworks alignment and no conflict on the future route for LPG road tanker accessing the LPG storage installation.

□Urgent □Return receipt □Expand Group □Restricted □Prevent Copy

tpbpd/PLAND

寄件者: [redacted]
寄件日期: 2025年12月01日星期一 3:11
收件者: tpbpd/PLAND
主旨: A/I-DB/11 Disco Bay Tunnel CA / GB / CLP

類別: Internet Email

A/I-DB/11 CLP

Areas Adjacent to Discovery Bay Tunnel within Chok Ko Wan Lot No. 2, Lantau Island, Lot No. 385 RP in D.D. 352 & the Extension thereto, Discovery Bay and Adjoining Government Land Site area: About 1,830sq. m (Includes Government Land of about 450sq.m)

Zoning: "Conservation Area", "GIC", "Other Specified Uses" annotated "Amenity Area", "Green Belt" and area shown as 'Road'

Applied development: Mirco Cable Tunnel / **Filling and Excavation of Land / 22 Tree Felling**

Dear TPB Members,

Strong Objections. The only justification for a significant amount of excavation is that the electricity supply is currently routed through the property of a third party.

The network within the Discovery Bay Tunnel, which accommodates existing 132kV circuits, has been identified as a non-CLP-owned Common Cable Infrastructures (CCI) ***under the ownership and maintenance of the tunnel operator.*** *To uphold the safety and reliability of the electricity supply for the Discovery Bay area, CLP therefore proposes to divert one of the existing cable circuits running along the Discovery Bay Tunnel connecting to the Discovery Bay North Substation ("the Proposed Project").*

So, what is the issue, is the tunnel operator unreliable, the agent of a foreign power? No explanation has been provided.

Surely the majority of our power supply is sited on either government land or on private property not owned by CLP?

The construction of the existing tunnel came at considerable expense to the local environment. Why should a parallel amenity be constructed.

The development is not justified. CLP should deploy its resources to Northern Metropolis to ensure that there is adequate infrastructure in place to accommodate the significant demands for energy the planned techno park and data centres will require.

□Urgent □Return receipt □Expand Group □Restricted □Prevent Copy
Mary Mulvihill