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

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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

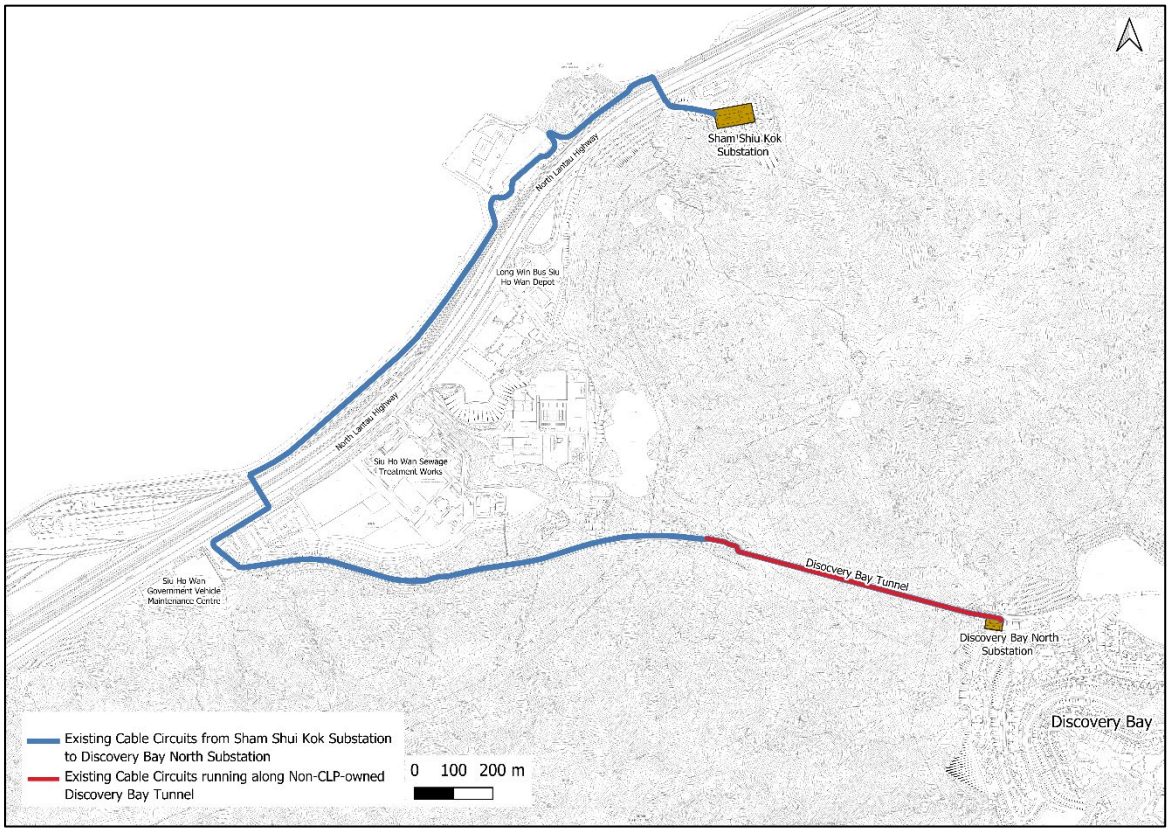
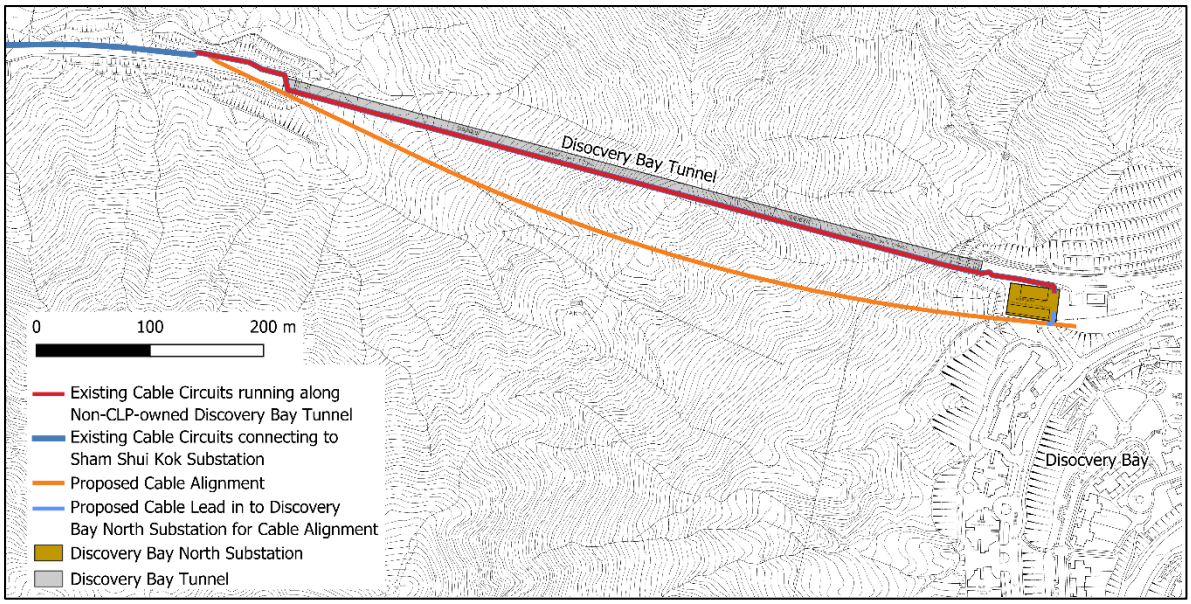


Figure 2.2: Existing Sections and Proposed New Cable Circuits running along Discovery Bay Tunnel



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

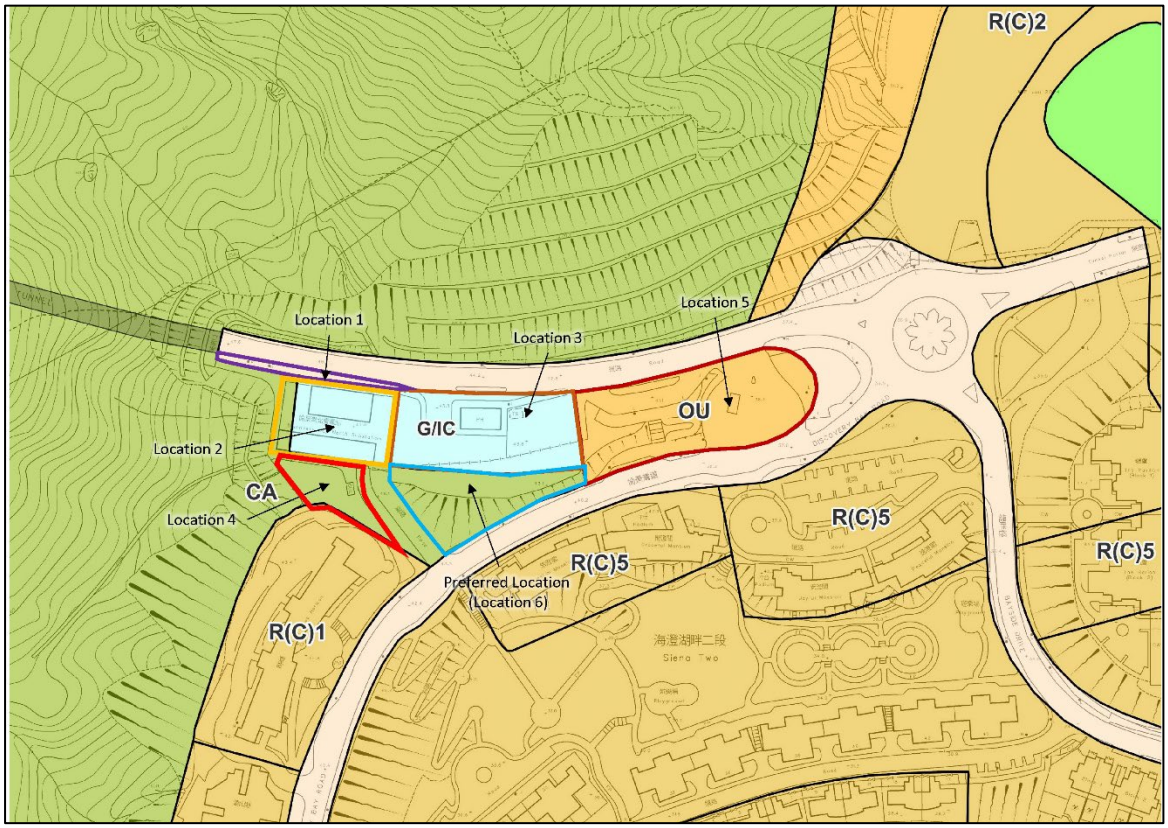


Table 3.1: Comparison Table of the Locations for the launching pits

	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

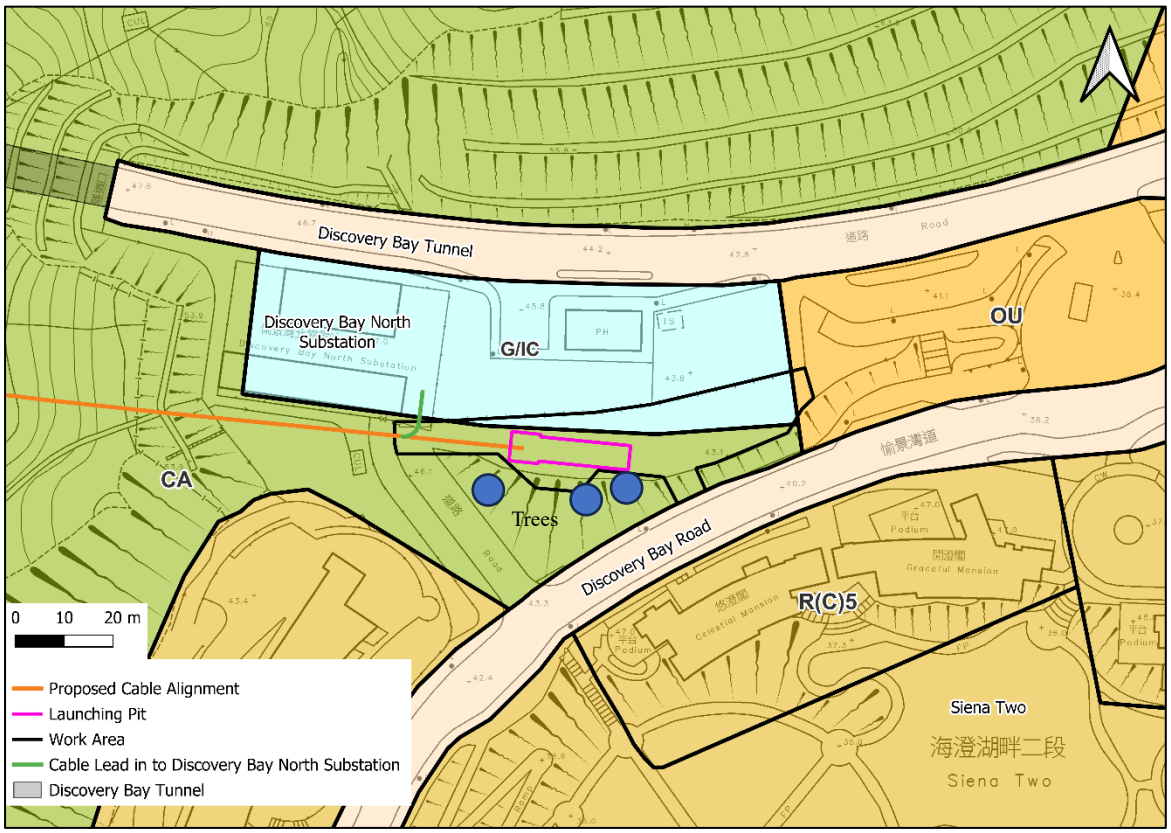
3.3.9 Based on the above evaluation, Location 6 has been selected as the preferred and feasible location for the launching pit.

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



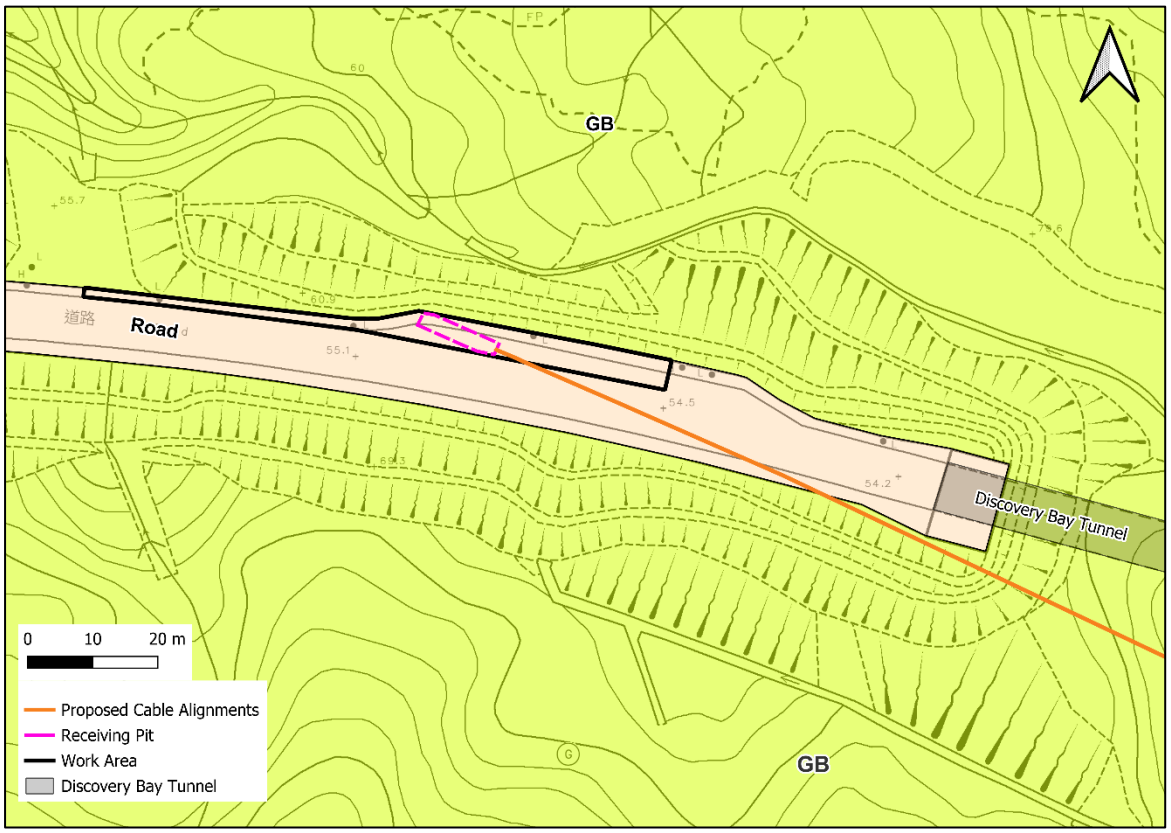
3.4 Consideration of the location of the Receiving Pit

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

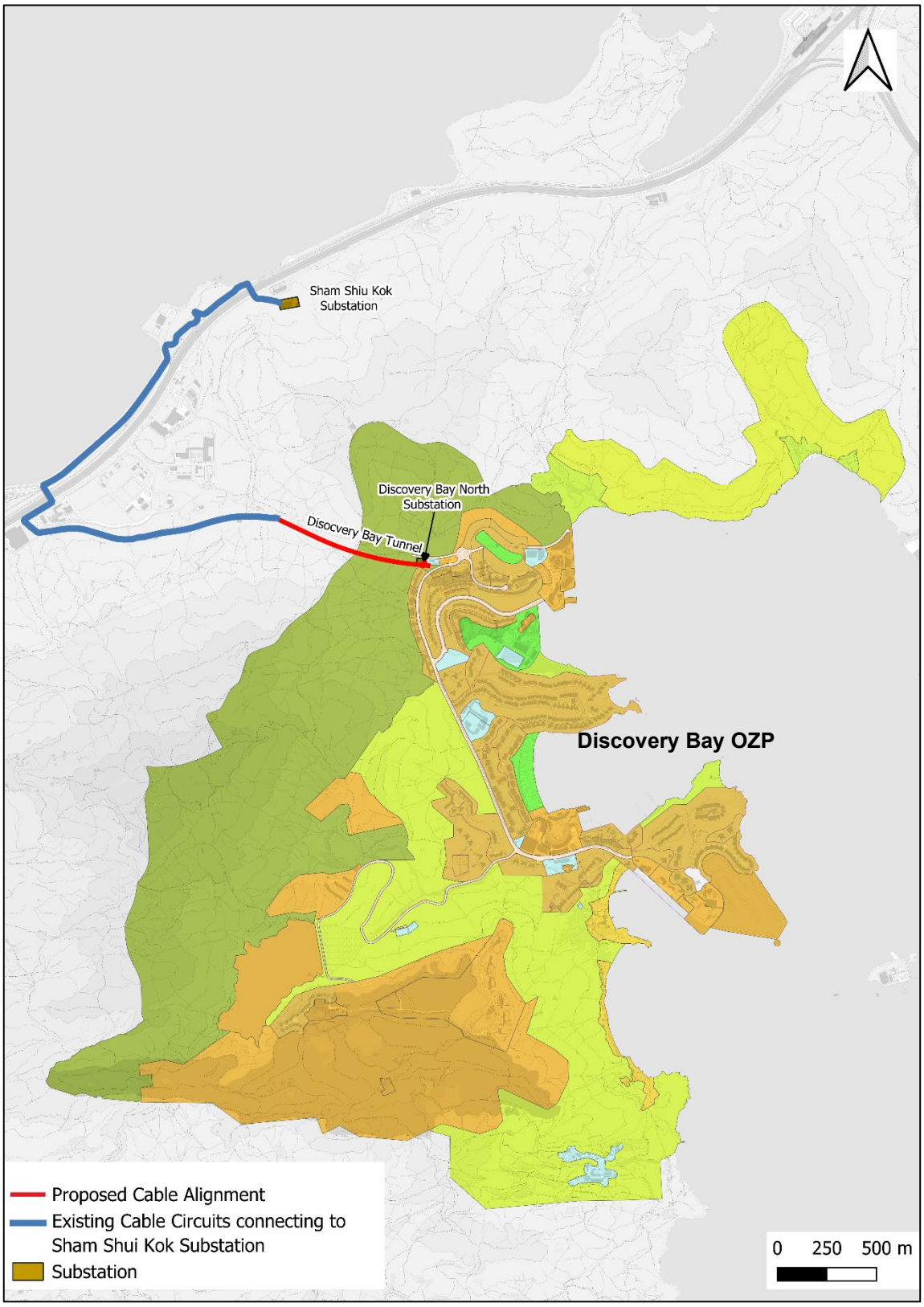


Figure 3.5: Overview of the Proposed Project

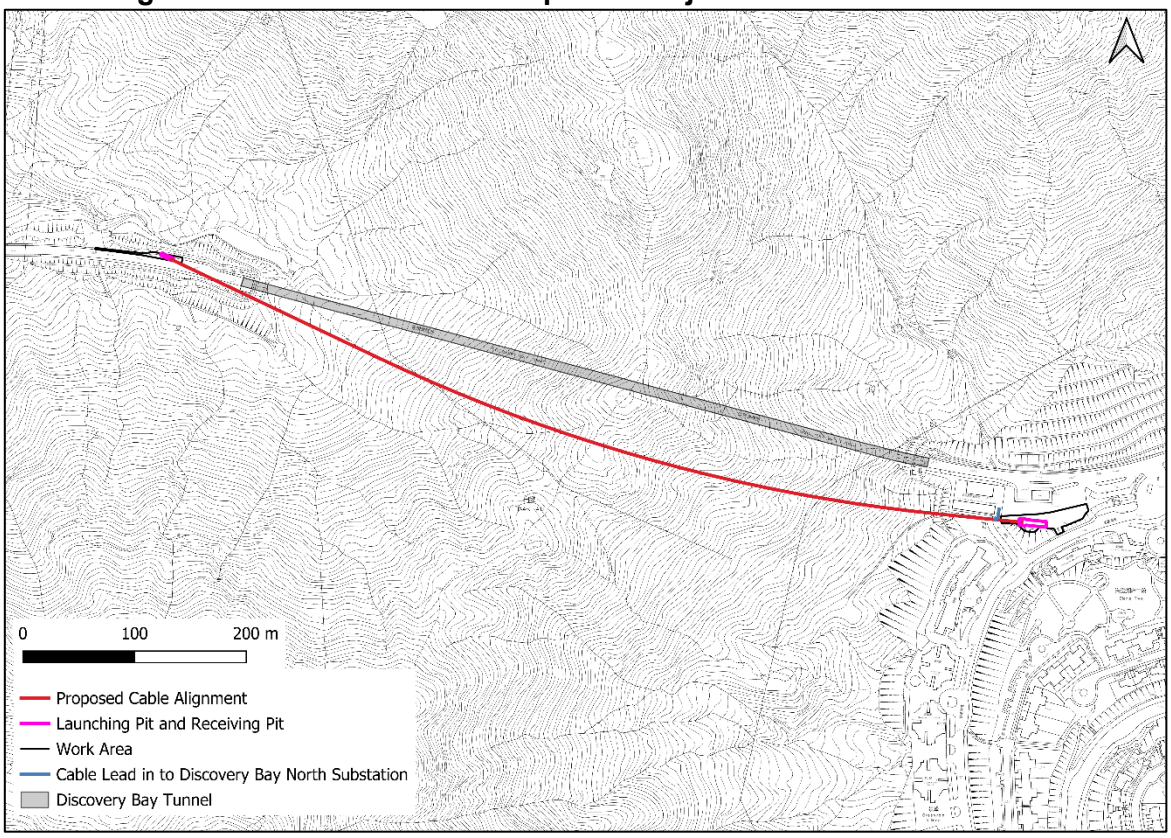


Figure 3.6a: Section Plan of the Proposed Project

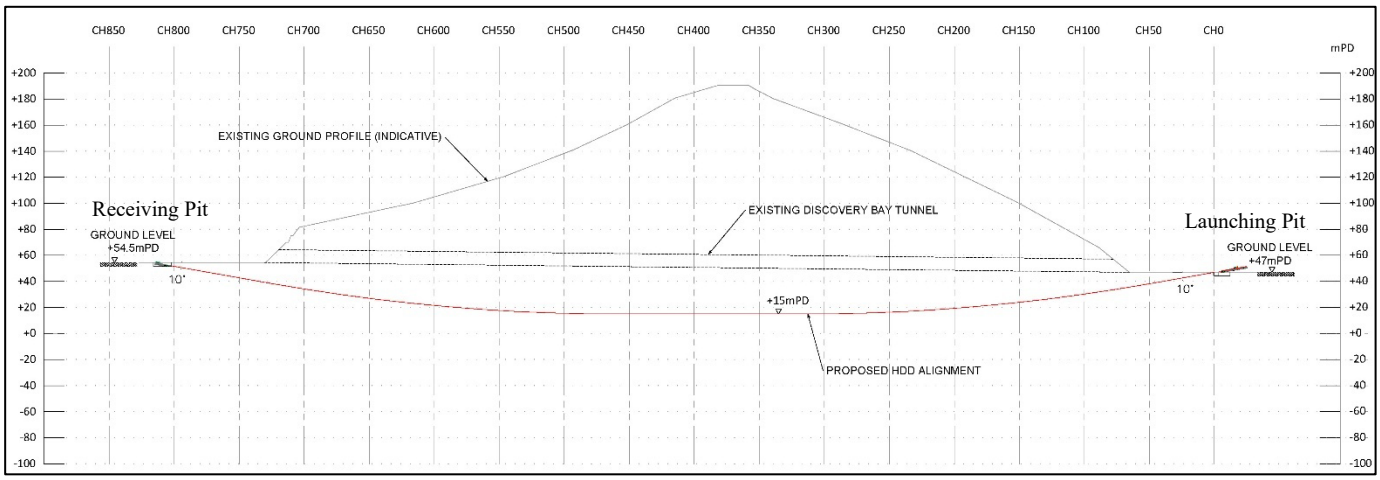


Figure 3.6b: Cross Section of the Proposed Project

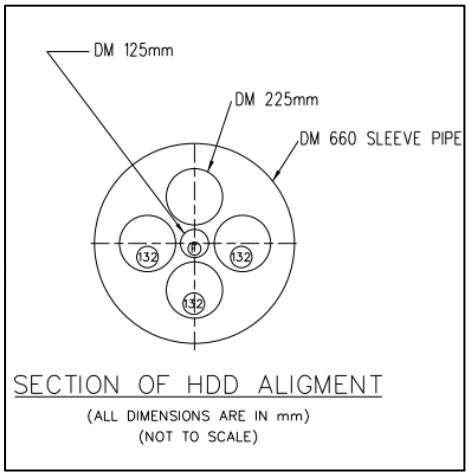


Figure 3.6c and 3.6d: Section Plan of the Launching Pit and Receiving Pit (Please refer to the Back of the Supporting Planning Statement)

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

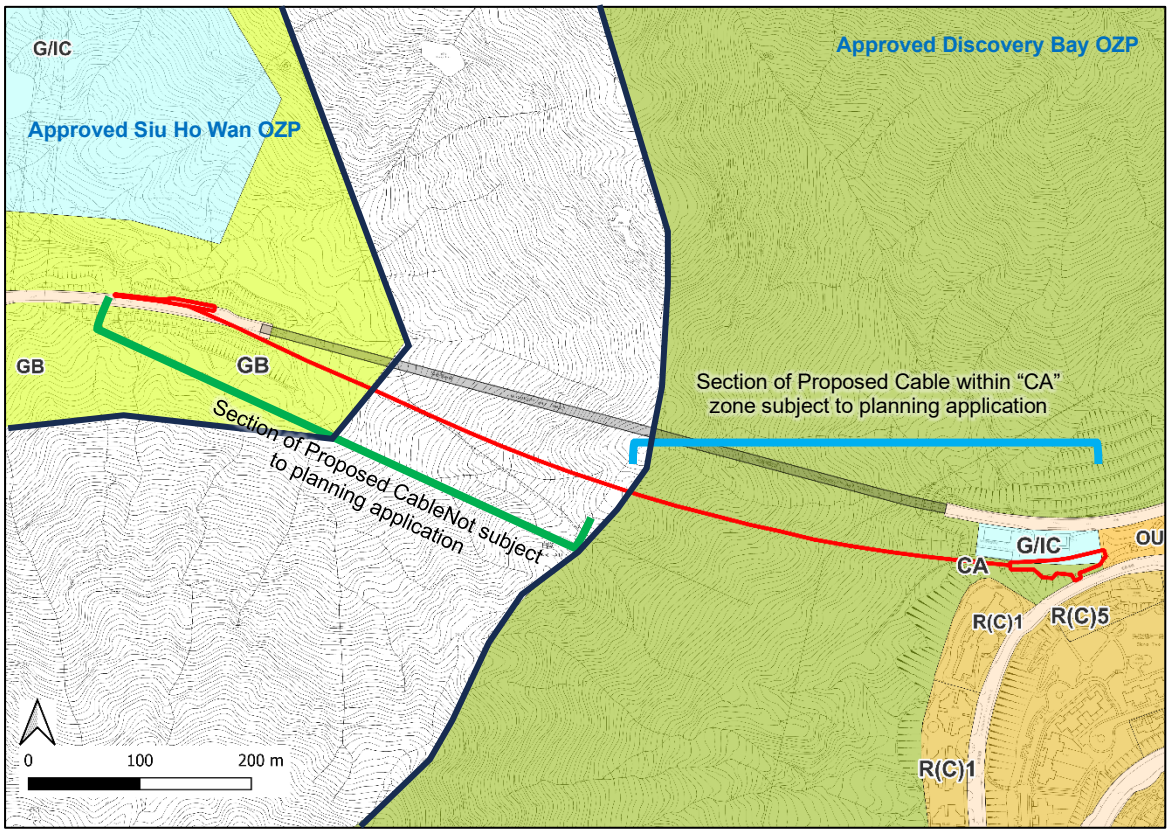


Figure 3.8: Eastern Portion of the Proposed Micro Cable Tunnel under the Approved Discovery Bay OZP No. S/I-DB/6

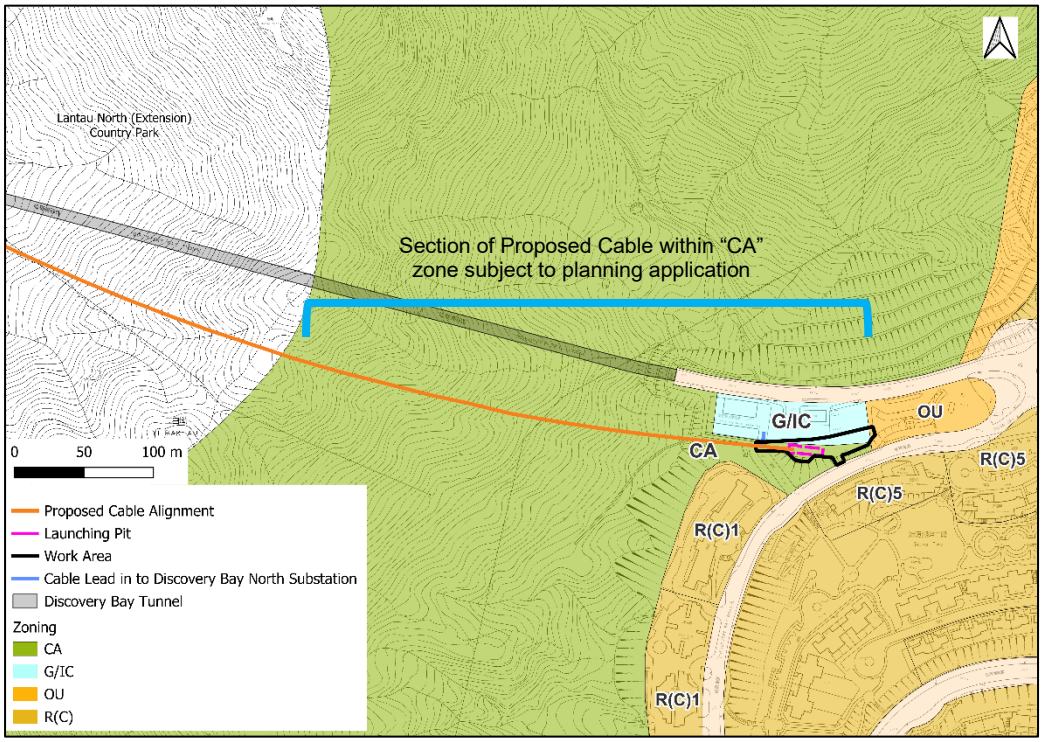
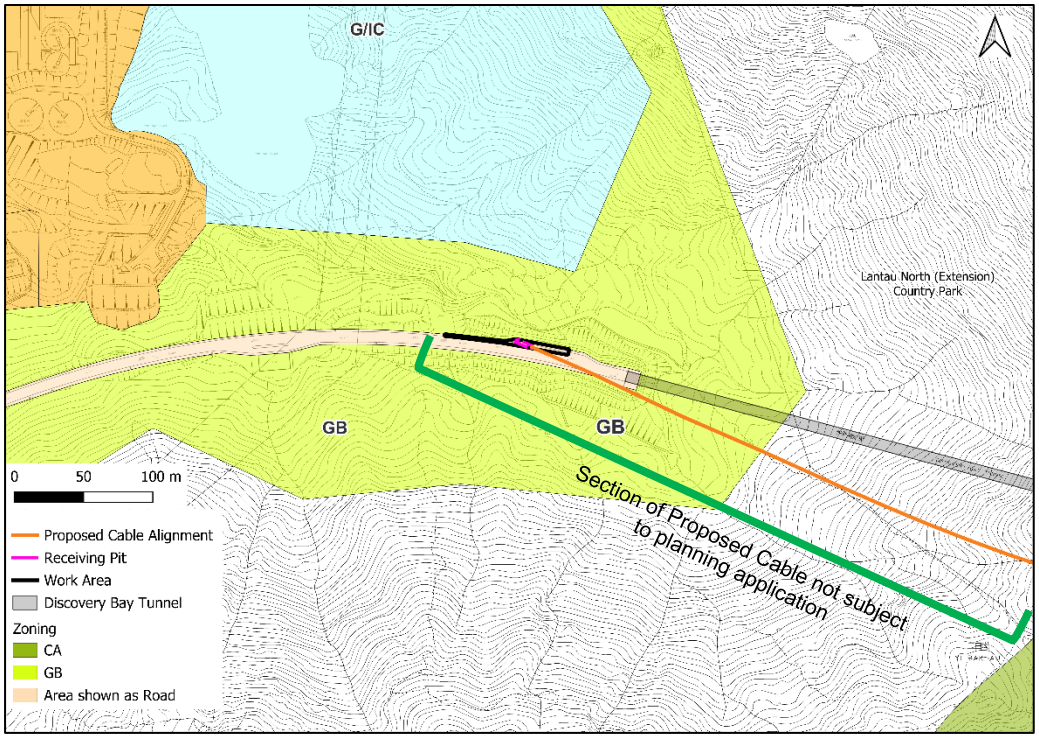


Figure 3.9: Western Portion of the Proposed Micro Cable Tunnel under the Approved Siu Ho Wan OZP No. S/I-SHW/2



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;

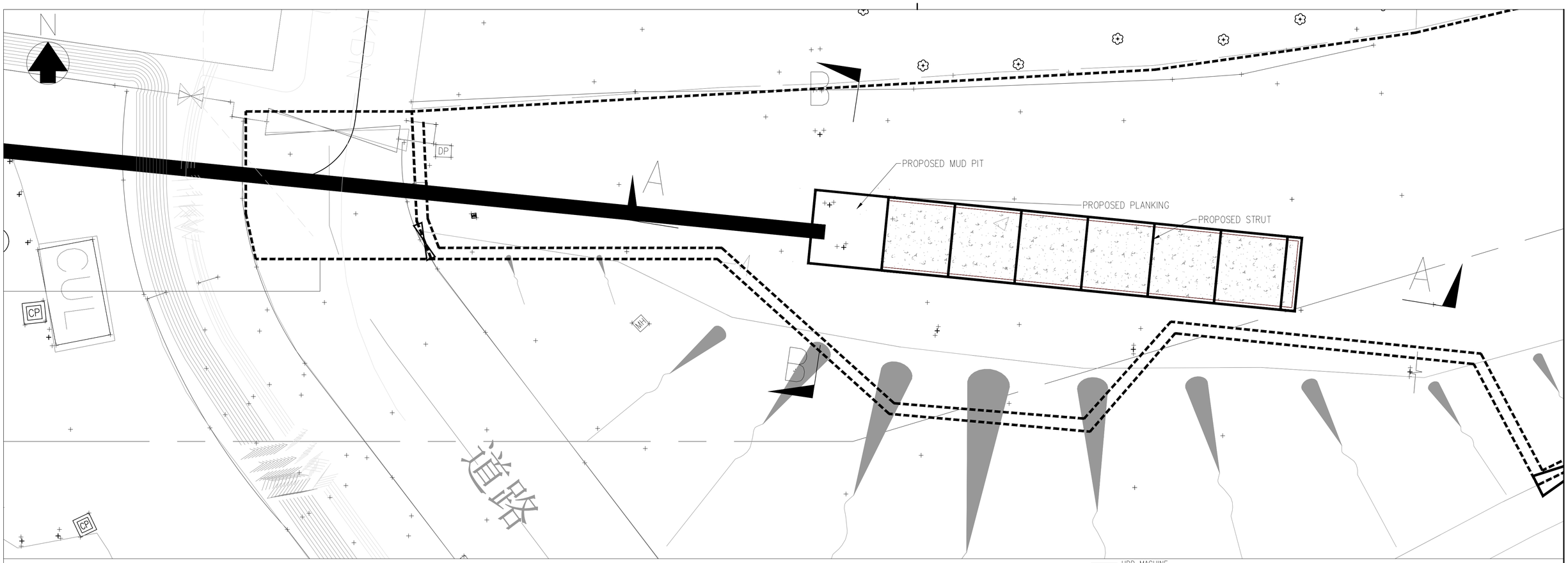
- There are no alternative alignments for the Proposed Cable Installation not involving "CA" and "GB" zones;

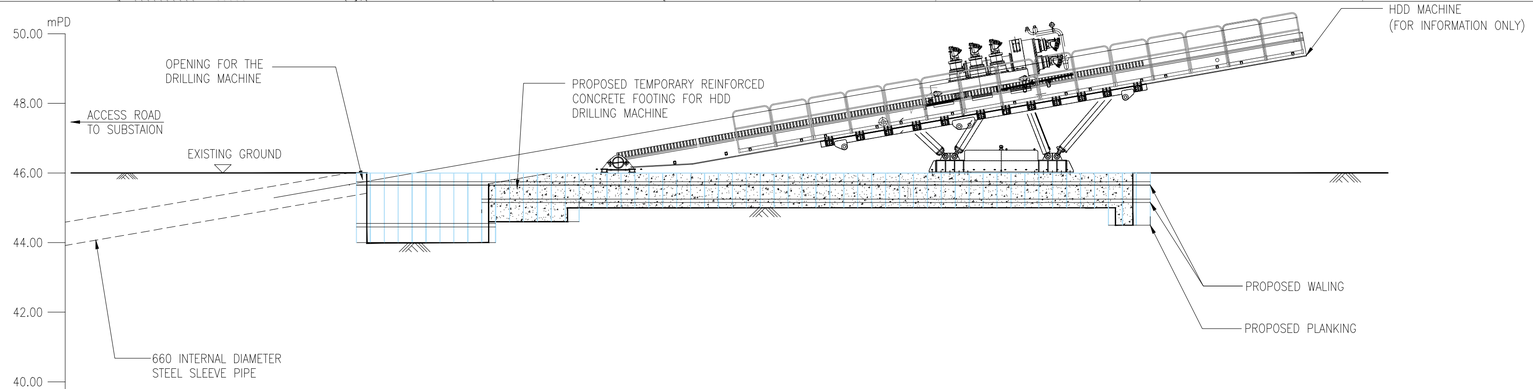
- The proposed project would not jeoparadise the long-term planning intention of the "CA" zone;

- 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;

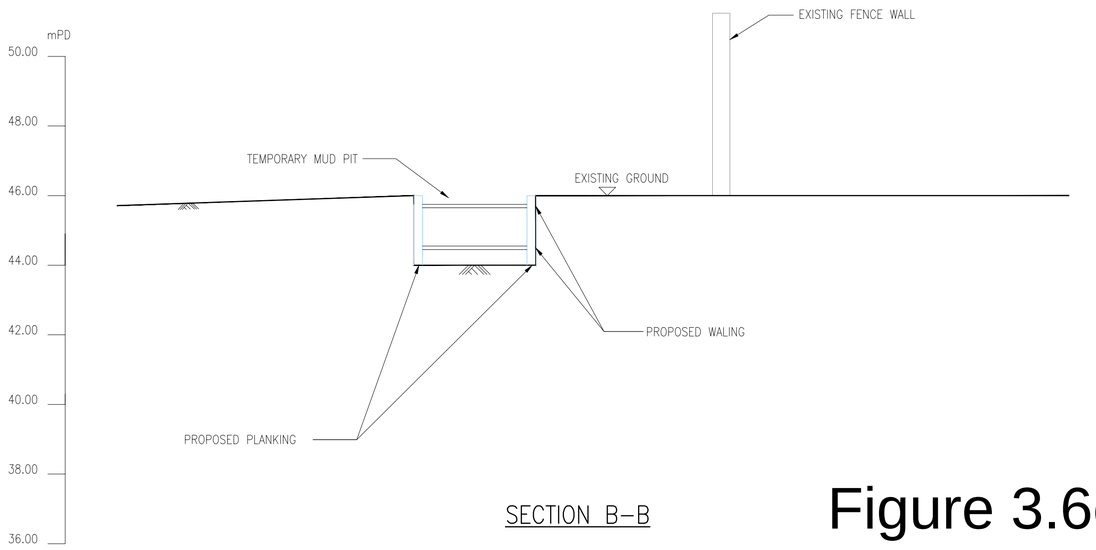
- Assessments have been conducted and demonstrated that there are no adverse environmental impacts and impacts on the natural terrain or man-made slopes or retaining walls due to the proposed cable; and

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



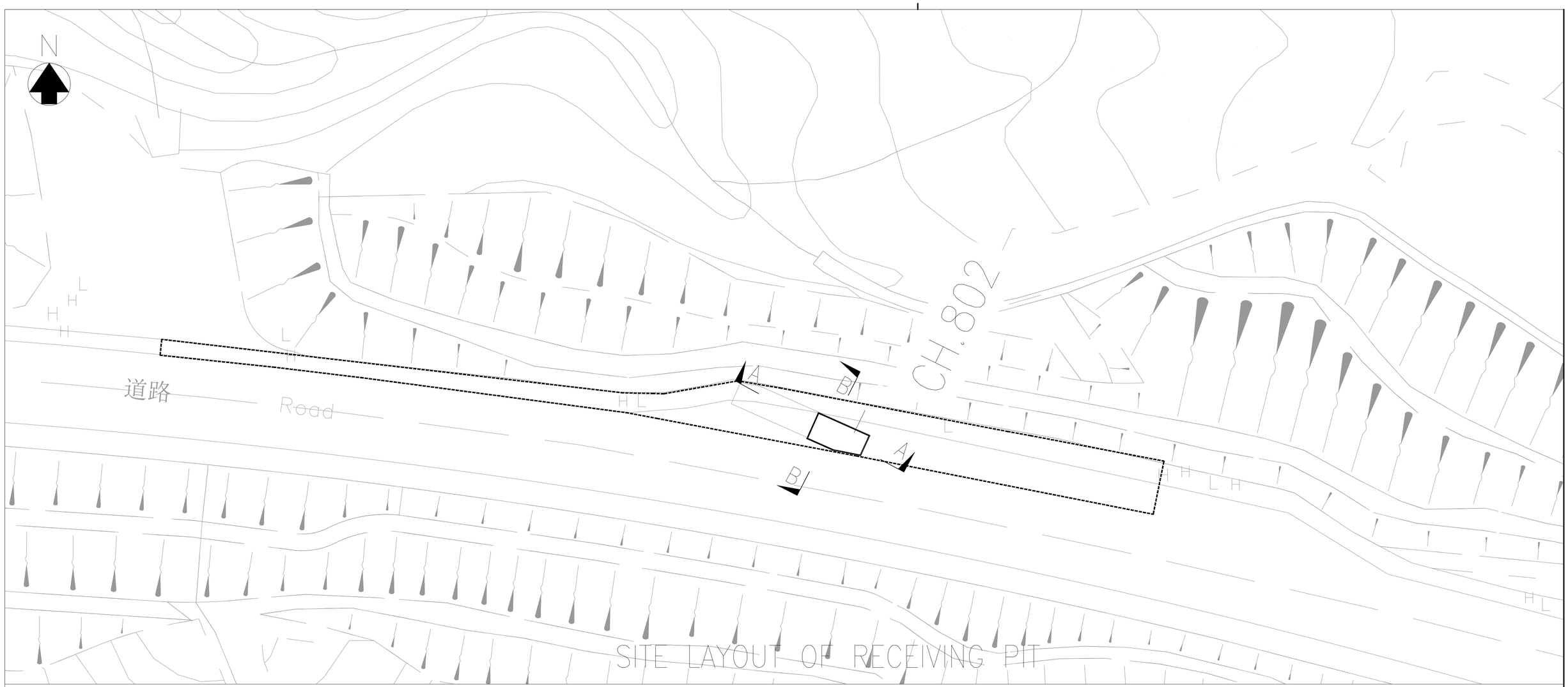


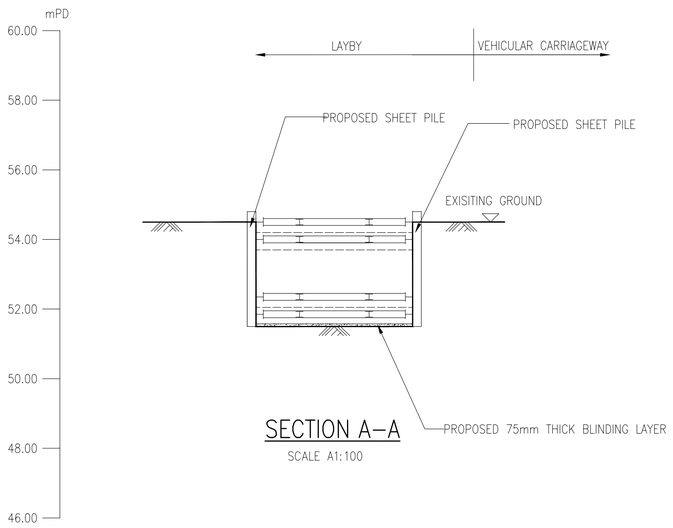
SECTION A–A



SECTION B–B

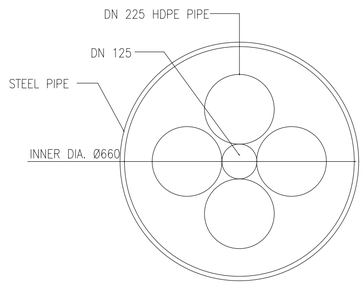
Figure 3.6c: Section Plan of the Launching Pit



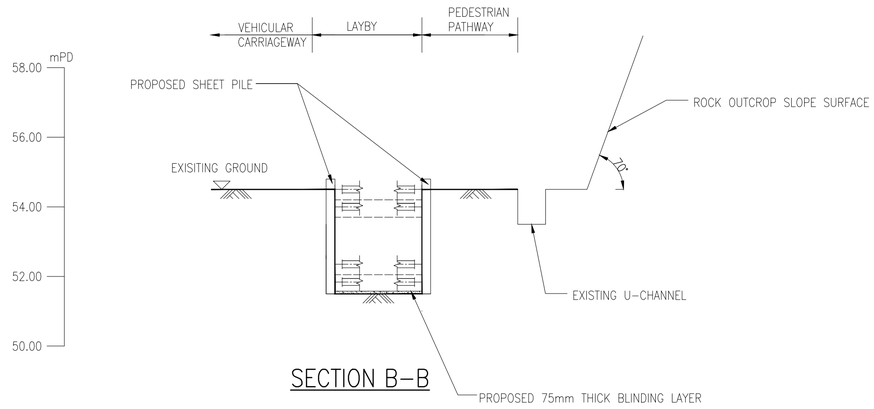


SECTION A–A

SCALE A1:100



TYPICAL SECTION OF HDPE PIPES
IN STEEL SLEEVE PIPE



SECTION B–B

Figure 3.6d: Section Plan of the Receiving Pit