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By Email

Our Ref: S3151/IWMF_Cable/24/002Lg

31 December 2024

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

Dear Sir/Madam,

Public Utility Installation (Public Utility Pipeline) and Associated Filling and Excavation of Land at Government Land at Upper Cheung Sha Beach, South Lantau
S16 Planning Application No. A/SLC/188

We refer to the captioned planning application submitted to the Town Planning Board on 24 December 2024 and the comments from Sai Kung and Islands District Planning Office, Planning Department on 31 December 2024.

Please find enclosed replacement pages to the Application Form and supplementary pages to the Support Note (including a Geotechnical Planning Review) to address relevant department comments received for your consideration.

Meanwhile, should you have any queries in relation to the above, please do not hesitate to contact Mr Otto Kan at 3426 2691 or the undersigned.

Thank you for your attention.

Yours faithfully
For and on behalf of
KTA PLANNING LIMITED

David Fok

Encl.

cc. the Applicant

KT/DF/vy

6. Type(s) of Application 申請類別

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

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

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

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

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

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

(i) For Type (i) application 供第(i)類申請

(a) Total floor area involved 涉及的總樓面面積	sq.m 平方米		
(b) Proposed use(s)/development 擬議用途/發展	(If there are any Government, institution or community facilities, please illustrate on plan and specify the use and gross floor area) (如有任何政府、機構或社區設施，請在圖則上顯示，並註明用途及總樓面面積)		
(c) Number of storeys involved 涉及層數		Number of units involved 涉及單位數目	
(d) Proposed floor area 擬議樓面面積	Domestic part 住用部分 …… sq.m 平方米 ☐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 …149… sq.m 平方米 ☑About 約 Depth of filling 填土厚度 …1.6 - 2.4… m 米 ☑About 約 (backfilling to the existing ground level only) ☑ Excavation of land 挖土 Area of excavation 挖土面積 …149… sq.m 平方米 ☑About 約 Depth of excavation 挖土深度 …2.6 - 3… m 米 ☑About 約 (Please indicate on site plan the boundary of concerned land/pond(s), and particulars of stream diversion, the extent of filling of land/pond(s) and/or excavation of land) (請用圖則顯示有關土地／池塘界線，以及河道改道、填塘、填土及／或挖土的細節及/或範圍))
(b) Intended use/development 有意進行的用途／發展	Public Utility Installation (Public Utility Pipeline) and Associated Filling and Excavation 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)
Please refer to supporting note attached.		

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

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	Government Land at Upper Cheung Sha Beach, South Lantau
Site area 地盤面積	149 sq. m 平方米 ☑ About 約 (includes Government land of 包括政府土地 149 sq. m 平方米 ☑ About 約)
Plan 圖則	Approved South Lantau Coast Outline Zoning Plan No. S/SLC/23
Zoning 地帶	"Coastal Protection Area"
Applied use/ development 申請用途/發展	Public Utility Installation (Public Utility Pipeline) and Associated Filling and Excavation of Land

(i) Gross floor area and/or plot ratio 總樓面面積及／或地積比率		sq.m 平方米	Plot Ratio 地積比率
	Domestic 住用	☐ 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	N/A ☐About 約 ☐Not more than 不多於
(ii) No. of block 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* (CMH only) ☐ *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, Site Photo		
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）	☐	☑
Geotechnical Planning Review		

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

- The new 132kV cable circuits to be laid at South Lantau to connect CLP Cheung Sha Substation and Shek Kwu Chau Artificial Island are required to facilitate the development of the I.Park, which is to be commissioned in 2025.

- The routing and extent of the completed cable installation works had not led to any adverse impact on the adjoining road, slope and trees.

- The subject application site is within the study area of the Ecological Baseline Review Report. With reference to the Ecological Baseline Review Report, the ecological values of the works area at the sandy shore are considered low. No significant nursey or breeding ground and no plant and fauna species of conservation interest in the vicinity of the works area are recorded. The findings from the Ecological Baseline Review Report supporting the Planning Submission which was approved by TPB in Oct 2020 remain valid.

- Fugro (Hong Kong) Limited was commissioned by CLP Power Hong Kong Limited to undertake a geotechnical planning review (**Annex A** refers) for a new cable laying works at Upper Cheung Sha Beach, South Lantau. The review presents the study on the effects of the proposed construction works on the adjoining geotechnical features. Excavation and lateral support (ELS) works to facilitate further cabling works are required at Upper Cheung Sha Beach below a registered slope 13NE-B/FR83 and an unregistered slope. The cable laying works are located below existing slopes and are buried in ground. As the cable laying works are 10m to 15m away from the slope toe, the slope effect on the buried cable laying works is insignificant. The new cable laying works, including construction of a cable duct, cable joint bay, cable trough and cable markers, are considered geotechnically feasible and there is no adverse impact to the nearby features.

- CLP has also considered the option of removing the installation already laid outside the original Application Site area. The removal works and repaving works involved will cause secondary damage to the beach which will lead to more nuisance to beach users for a longer period of time or may trigger delay to the commissioning of I.Park. The option of submission a S16 Planning Application to the TPB is to minimize the disturbance of the use of the beach by the public and the implementation of the I.Park.

Annex A
Geotechnical Planning Review

Geotechnical Planning Review Report for Cable Joint Bay and Cable Trough in Vicinity of Upper Cheung Sha Beach

Geotechnical Planning Review Report | Vicinity of Upper Cheung Sha Beach

B220171.012.GPRR 01 | December 2024

CLP Power Hong Kong Limited

Executive Summary

Fugro (Hong Kong) Limited was commissioned by CLP Power Hong Kong Limited to undertake a review for a cable laying works at Upper Cheung Sha Beach, South Lantau.

To facilitate future development of Southern Lantau and development of Integrated Waste Management Facilities, CLP is required to install 132kV cable circuits at Southern Lantau to connect Artificial Island near Shek Kwu Chau. The cable laying works include the construction of a cable duct, a cable joint bay, a cable trough and cable markers at Upper Cheung Sha Beach.

This Geotechnical Planning Review Report is prepared in support of the Section 16 planning application for cable laying works. The report presents the study on the effects of the construction works on the adjoining geotechnical features.

Excavation and lateral support (ELS) works to facilitate the further works are required at Upper Cheung Sha Beach below a registered slope 13NE-B/FR83 and an unregistered slope.

The cable laying works are located below existing slopes and are buried in ground. As the cable laying works are 10m to 15m away from the slope toe, the slope effect on the buried cable laying works is insignificant.

The cable laying works, including construction of a cable duct, cable joint bay, cable trough and cable markers, are considered geotechnically feasible and there is no adverse impact to the nearby features.

Contents

Plates

Figures

Appendices

1. Introduction

1.1 The Project

Fugro (Hong Kong) Limited was commissioned by CLP Power Hong Kong Limited to undertake a review for a cable laying works at Upper Cheung Sha Beach, South Lantau.

To facilitate future development of Southern Lantau and development of Integrated Waste Management Facilities, CLP is required to install 132kV cable circuits at Southern Lantau to connect Artificial Island near and Shek Kwu Chau. The cable laying works include the construction of a cable duct, a cable joint bay, a cable trough and cable markers at Upper Cheung Sha Beach. The locations of the cable joint bay and cable trough are shown on **Figure 1**.

1.2 The Report

This Geotechnical Planning Review Report (GPRR) is prepared in support of the Section 16 planning application for the cable joint bay and cable trough. The report presents the study on the effects of the construction works on the adjoining structures and geotechnical features.

2. Site Description

2.1 The Site

The site falls within the LCSD's gazetted beach area at Upper Cheung Sha Beach. The cable laying works on the Site are bounded to the north by existing slopes and to the south by the coastline of Upper Cheung Sha Beach. Above the existing slopes is South Lantau Road.

2.2 The Cable Laying Works

The cable laying works are located at Upper Cheung Sha Beach (see **Plate 1** and **Plate 2**). The cable laying works include the construction of a cable duct, a cable joint bay, a cable trough and cable markers (see **Plate 1** and **Plate 2**) and detailed in the following Table:

Name of Installation	No. of Provision	Dimension (m) (Length X Width X Height)	Depth (m)
Underground Cable Duct	1	30 x 1.4 x 0.615	3
Underground Joint Bay	1	20 x 4 x 1	2.6
Underground Cable Trough	1	25 x 1 x 0.75	2.8
Aboveground Cable Markers	2	6.3m high steel post with rhombus steel plate (1.2 x 1.2) and with concrete footing (0.75 x 0.75 x 1.5)	/

2.3 Existing Features / Structures

A registered Feature No. 13NE-B/FR83 and an unregistered slope are located above the cable laying works.

Feature No. 13NE-B/FR83 at the north-east of the Site is a fill slope with retaining wall along the feature's slope toe. The fill slope portion is about 5m high with an overall sloping angle of 25° and the retaining wall portion is about 2m high. The SIS record is shown in **Appendix A**. WSD main is located at the crest of the feature.

The unregistered slope at the north of the Site is about 5m high with an overall sloping angle of 30°. Locations of the features are shown on **Figure 1**.

3. Geotechnical Condition

3.1 Previous Ground Investigation (GI) Works

Previous GI works at the existing Feature No. 13NE-B/FR83 include a vertical drillhole no. DH27 and trial pit no. TP5. The GI plan and record are shown in **Appendix B**.

3.2 Geological Condition and Groundwater Condition

The Hong Kong Geological Survey Map (**Figure 2**) indicates that the Site is generally underlain by a layer of tuff. The GI record revealed that the Site is composed of a layer of sandy to silty fill with cobbles and boulders overlying colluvium.

The slopes are located at Upper Cheung Sha Beach and the groundwater in the slopes are fluctuated between +0.5 mPD to +2.5 mPD affected by tiding effect.

4. The Cable Laying Works

The cable laying works near existing slopes comprise construction of cable duct, cable joint bay and cable trough.

4.1 Excavation Effect to the Adjacent Existing Slope

Considering the shallow excavation depth on the beach, planking supported by strut would be adopted as temporary excavation support depending on the site condition. Minor trenching works would be required for the laying of the further works as shown on **Figure 1**.

With proper installation of ELS, there is no adverse impact on the stability of the feature 13NE-B/FR83 and the unregistered slope, which are located at 10m to 15m away the ELS works.

As the excavation is shallow, the effects of the ELS on the stability of adjacent feature 13NE-B/FR83 and the unregistered slope are considered insignificant.

4.2 Slope Effect on the Cable Laying Works

The cable laying works are located below existing slopes and are buried in ground. As the cable laying works are 10m to 15m away from the slope toe, the slope effect on the buried cable laying works is insignificant.

5. Conclusions and Recommendations

1. Based on the preliminary findings, the cable laying works are considered geotechnically feasible to construct and there is no adverse impact to the nearby features.

2. Excavation and lateral support (ELS) works for the works are required at Upper Cheung Sha Beach.

3. The cable laying works are located below existing slopes and are buried in ground. As the cable laying works are 10m to 15m away from the slope toe, the slope effect on the buried cable duct, cable joint bay and cable trough is insignificant.

6. References

1. Geotechnical Control Office (1991). "Solid and Superficial Geology. Hong Kong Geological Survey, Series HGM20, Sheet No.13, 1995 Edition". Government Press, Hong Kong.

2. Fugro Geotechnical Services Limited (2014). "Final Fieldwork Report for CEDD Contract No. GE/2012/02".

Plates

Plate 1: Site Photo of Cable Joint Bay, Cable Duct, Cable Trough and Cable Marker

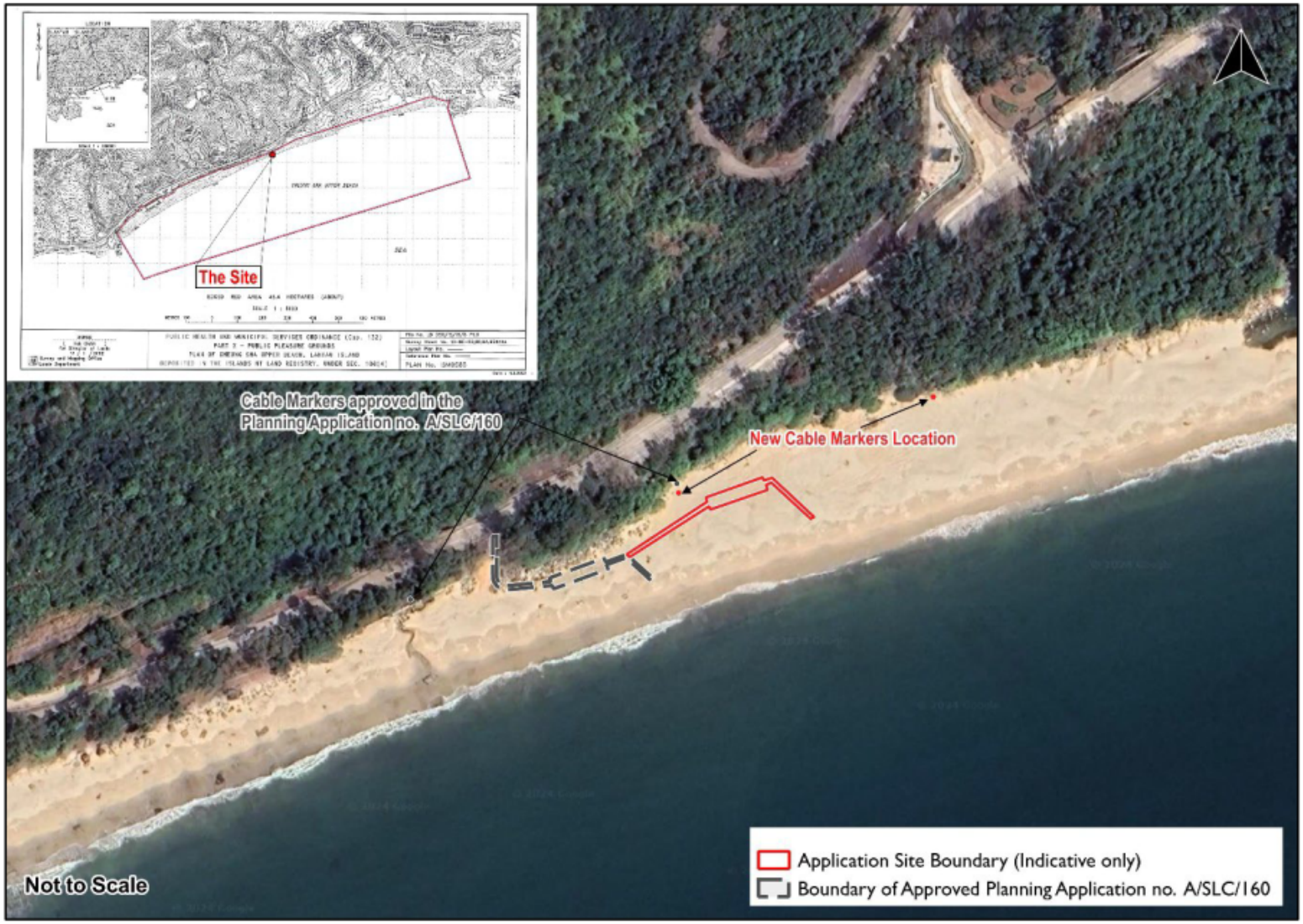
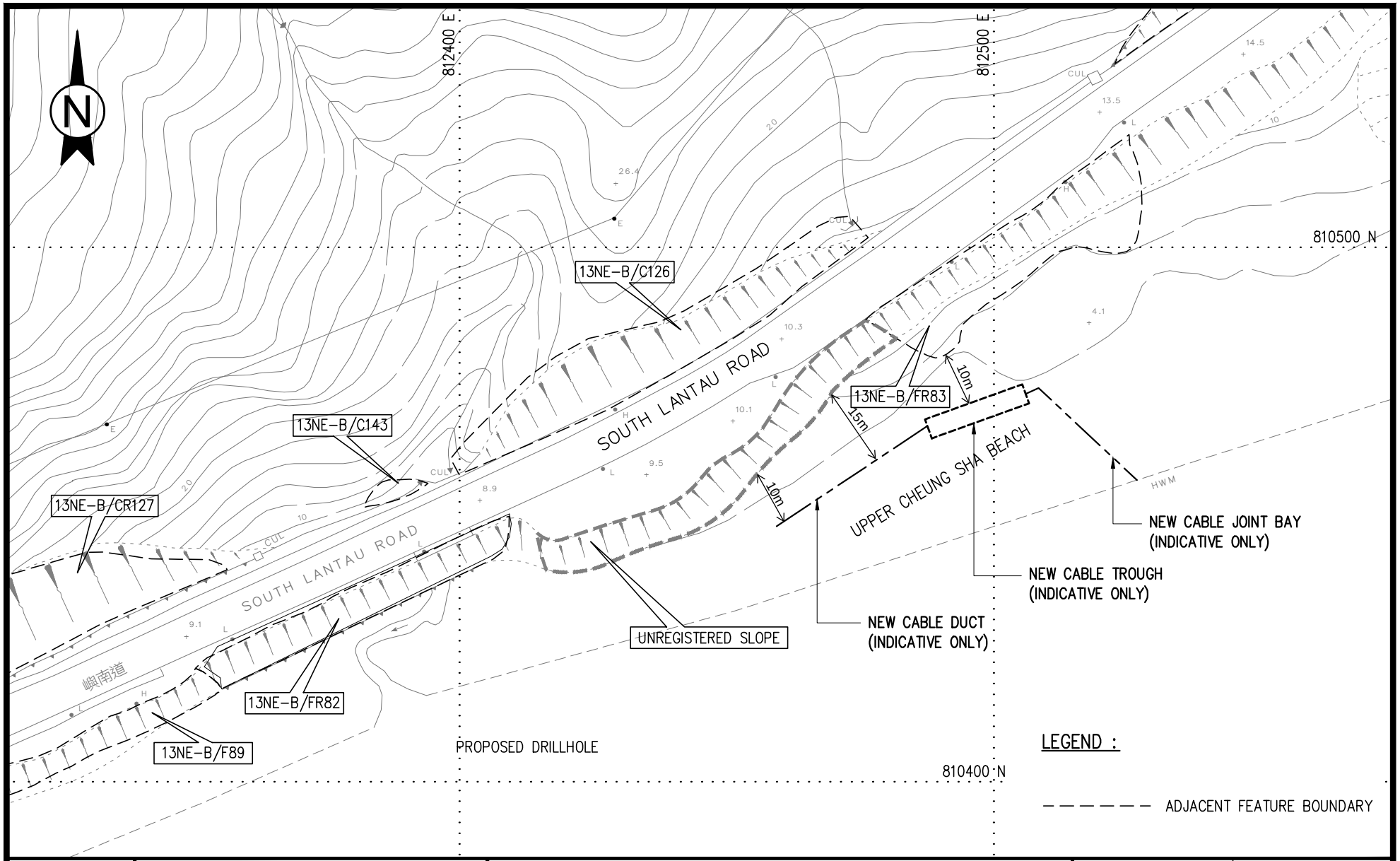


Plate 2: Site Location Plan of Cable Joint Bay, Cable Duct, Cable Trough and Cable Marker

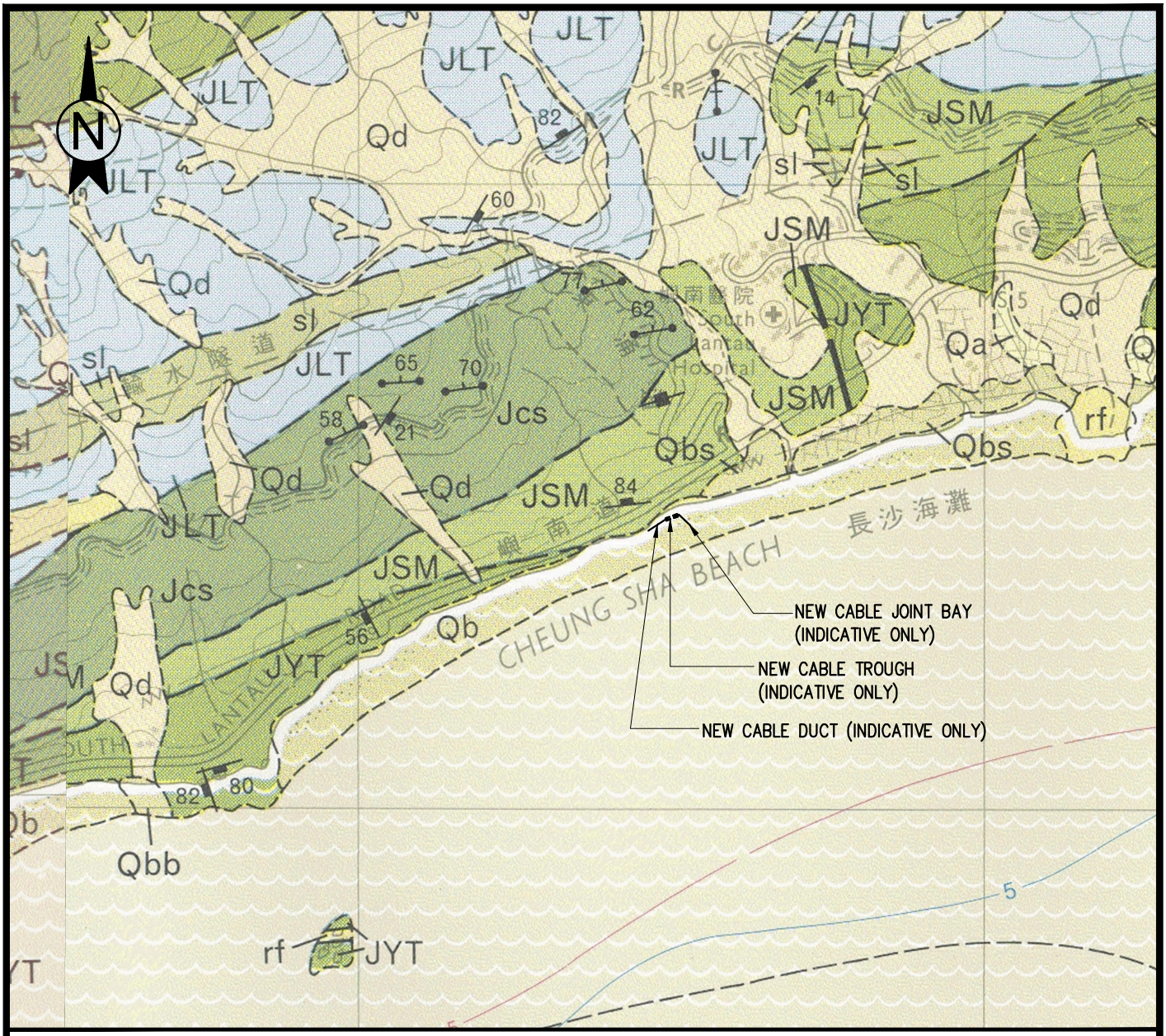
Figures

Compiled by : Drawn by : Checked by :



FUGRO	Project 2-YEAR OUTLINE AGREEMENT NO. 4600006281 FOR PROVISION OF GEOTECHNICAL CONSULTANCY SERVICES FOR SLOPE IMPROVEMENT WORKS AND OTHER GEOTECHNICAL WORKS AT HKSAR & SHENZHEN	Drawing Title LOCATION PLAN FOR NEW CABLE JOINT BAY AND CABLE TROUGH AND CABLE DUCT FOR CABLE LAYING WORKS AT UPPER CHEUNG SHA BEACH	Job No. 220171.012 Scale 1:1000	Figure No. 1 Date DEC-2024

CAD Reference : Z:\DRAFTING\WORKING_HK-DESIGN\160331_029-PL-2024-12-29-HS\160331_029-FIG01 (P02) (PL).DWG Date & Time : 31-12-24 (12:49:52PM) Plotted By : L.NGAN



LEGEND :

GEOLOGICAL BOUNDARY, SUPERFICIAL DEPOSIT	Qa — SILT, SAND AND GRAVEL (ALLUVIUM)
FAULT	Qbb — COBBLES AND BOULDERS (BEACH DEPOSITS)
ISOPACH OF HANG HAU FORMATION	Qbs — SAND (BACK BEACH DEPOSITS)
CONCEALED GEOLOGICAL BOUNDARY	Qd — SAND, GRAVEL, COBBLES AND BOULDERS IN SILT MATRIX (SLOPE DEBRIS)
FLOW FABRIC	JLT — RHYOLITE LAVA AND TUFF
JOINTING (INCLINED)	Jcs — EUTAXITE
JOINTING (VERTICAL)	JSM — ASH LITHIC CRYSTAL TUFF
	JYT — COARSE ASH CRYSTAL TUFF
	sl — SILTSTONE, TUFFITE AND TUFF
	rf — FELDSPARPHYRIC RHYOLITE

NOTE: BROKEN LINES ON MAP FACE DENOTE UNCERTAINTY

Checked by :

Drawn by :

Compiled by :

FUGRO

Project

2-YEAR OUTLINE AGREEMENT NO. 4600006281 FOR PROVISION OF GEOTECHNICAL CONSULTANCY SERVICES FOR SLOPE IMPROVEMENT WORKS AND OTHER GEOTECHNICAL WORKS AT HKSAR & SHENZHEN

Drawing Title

REGIONAL GEOLOGICAL MAP FOR NEW CABLE JOINT BAY AND CABLE TROUGH (H.K. GEOLOGICAL SURVEY, SERIES HGM20, SHEET 13, 1995 EDITION) FOR CABLE LAYING WORKS AT SOUTH LANTAU ROAD

Job No.	Figure No.	Scale	Date
220171.012	2	1 : 10000	DEC-2024

CAD Reference : Z:\DRAFTING\WORKING_HK-DESIGN\160331_029-PL-2024-12-29-HS\160331_029-FIG02 (P02) (PL).DWG Date & Time : 31-12-24 (12:50:06PM) Plotted By : L.NGAN

Appendix A

BASIC INFORMATION

Location:	SOUTH LANTAU ROAD, Is
Registration Date:	25-02-1998
Ranking Score (NPRS):	17 (EI)
Date of Formation:	pre-1977
Date of Construction/ Modification:	
Data Source:	EI(HyD)
Approximate Coordinates:	Easting : 812504 Northing : 810498

CONSEQUENCE-TO-LIFE CATEGORY

Facility at Crest:	Open car park
Distance of Facility from Crest (m):	2.5
Facility at Toe:	Lightly-used open area/facilities
Distance of Facility from Toe (m):	0
Consequence-to-life Category:	2
Remarks:	N/A

SLOPE PART

(1) Max. Height (m): 5 Length (m): 60 Average Angle (deg): 25

WALL PART

(1) Max. Height (m): 2 Length (m): 55 Face Angle (deg): 90

MAINTENANCE RESPONSIBILITY

(1) Sub Div.: 0 Government Feature Party: HyD Agent: HyD Land Cat.: 5b(iii) Reason Code: 56 MR Endorsement Date: 30-06-2006

DETAILS OF SLOPE / RETAINING WALL

Date of Inspection:	10-06-2014
Data Source:	EI(HyD)
Slope Part Drainage:	N/A
Wall Part Drainage:	N/A

SLOPE PART

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

WALL PART

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

SERVICES

(1) Utilities Type: Water Main Size(mm): 400 Location: On crest Remark: N/A

CHECKING STATUS INFORMATION

Tagmark: SCS_17474 Part: 0 Checking Status: Feature to be modified/upgraded to current standard Checking Certificate No.: N/A

BACKGROUND INFORMATION

GIU Cell Ref.:	13NE9A6
Map Sheet Reference (1:1000):	13NE- 9A
Aerial Photos:	22467-8 (1978),
Nearest Rainguage Station (Station Number):	Cheung Sha Upper Beach, South Lantau Road, Cheung Sha(N22)
Data Collected On:	10-06-2014
Date of Construction, Subsequent Modification and Demolition:	Modification: Constructed Before: 1978 After: N/A
Related Reports/Files or Documents:	N/A
Remarks:	N/A
Follow Up Actions:	N/A
DH-Order (To Be Confirmed with Buildings Department):	None
Advisory Letter (To Be Confirmed with Buildings Department):	None
LPMIS:	None

ENHANCED MAINTENANCE INFORMATION

From Maintenance Department: (Last Updated Date: 08/10/2024)

STAGE 1 STUDY REPORT

Inspected On:	
Weather:	
District:	MW
Section No:	1-1
Height(m):	
Type of Toe Facility:	Lightly-used open area/facilities
Distance from Toe(m):	0
Type of Crest Facility:	Open car park
Distance from Crest(m):	2.5
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

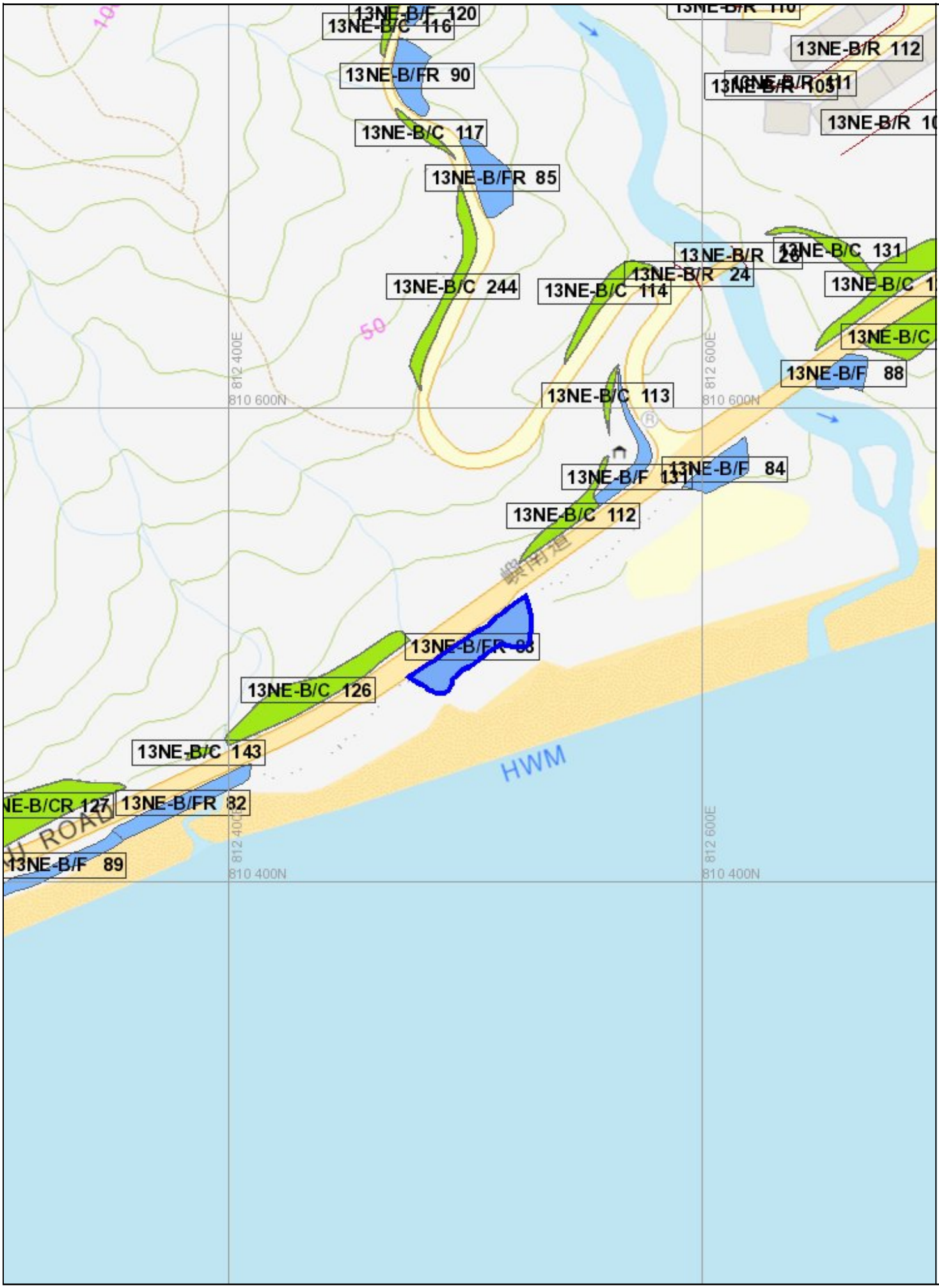
OTHER EXTERNAL ACTION

Check / repair Services:	
Action By:	N/A

Non-routine Maintenance:

Action By: N/A

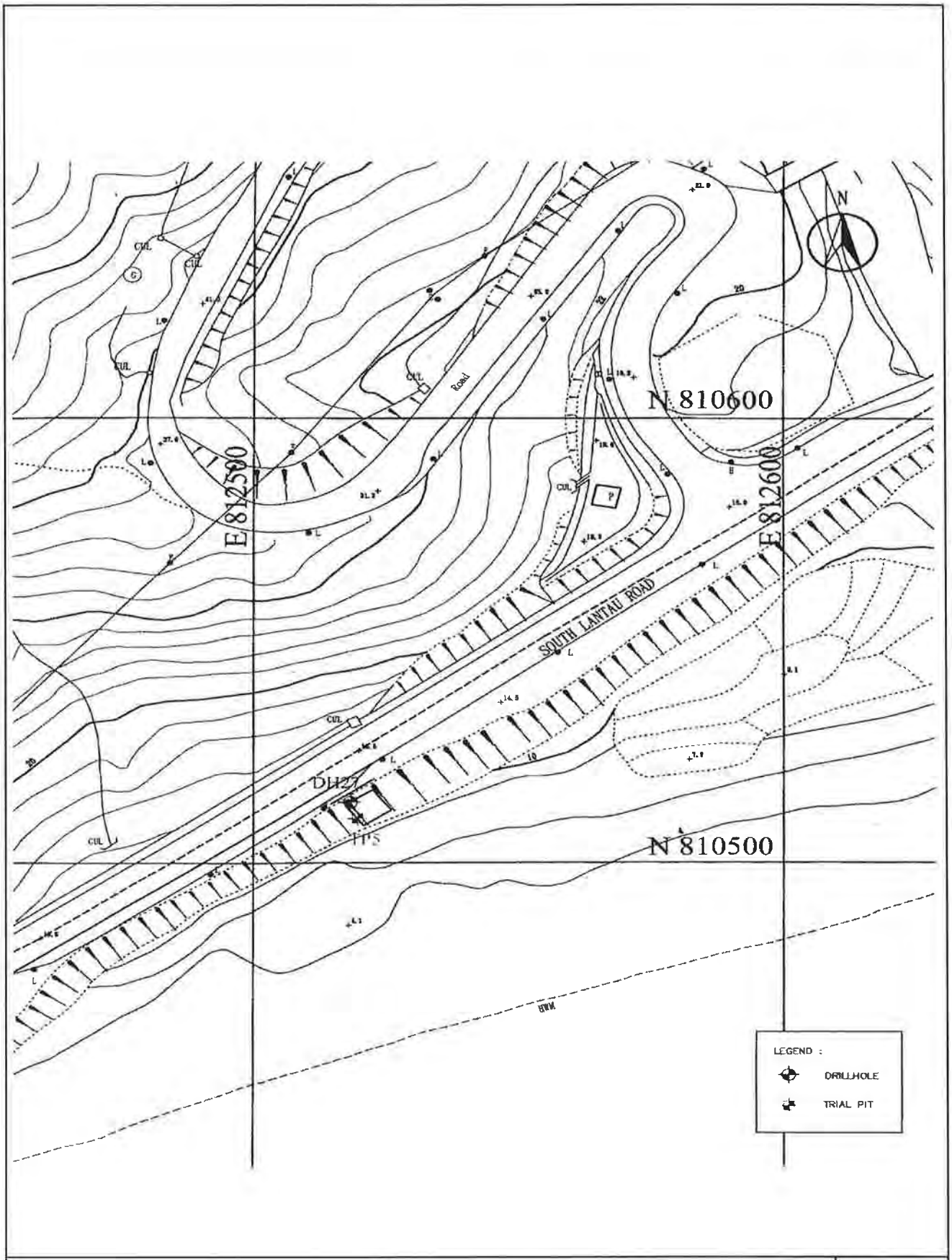
PHOTO


13NE-B/F 120
13NE-B/C 116
13NE-B/FR 90
13NE-B/C 117
13NE-B/FR 85
13NE-B/R 112
13NE-B/R 111
13NE-B/R 105
13NE-B/C 131
13NE-B/R 24
13NE-B/C 244
13NE-B/C 114
13NE-B/C 113
13NE-B/F 88
13NE-B/F 131
13NE-B/F 84
13NE-B/C 112
13NE-B/FR 83
13NE-B/C 126
13NE-B/C 143
13NE-B/FR 82
13NE-B/F 89
812 400E
810 600N
812 600E
810 400N
50
HWM

Appendix B

TEST REPORT

Ground Investigation Plan



Customer : DSD	Report No. :-
Project : Agreement No. CE 17/2012 (DS) Outlying Islands Sewerage Stage 2 – South Lantau Sewerage Works and Other Works – Design and Construction	J3612-11.26
Contract No. : GE/2016/11	
Job No. : J3612 Service Order : GE/2016/11.26	Page 1 of 6

DRiLTECH

DRILLHOLE RECORD

CONTRACT NO. **GE/2014/07**

HOLE NO. **DH27**

SHEET 1 of 2

PROJECT **Ground Investigation - New Territories West (Term Contract), Agreement No. CE 17/2012 (DS), Outlying Islands Sewerage Stage 2 - South Lantau Sewerage Works and Other Works - Design and Construction**

METHOD	**ROTARY**	CO-ORDINATES E **812518.33** N **810513.72**	WORKS ORDER NO. **GE/2014/07.7A**
MACHINE	**SD20**		DATE **18.02.2016** to **22.02.2016**
FLUSHING MEDIUM	**WATER**	ORIENTATION **VERTICAL**	GROUND LEVEL **+12.73** mPD

Drilling Progress	Casing Size	Water Level (m) Shift Start/ End	Water Return%	TCR%	SCR%	RQD%	Fracture Index	Tests	Samples	Reduced Level	Depth (m)	Legend	Grade	Description
18.02.2016	PW								1 0.00 / 0.45	+12.73	0.00			Red (10R 4/6) spotted grey, slightly silty very clayey fine to coarse SAND with some to much angular to subangular fine to coarse gravel of rock fragments. (FILL)
									2 INSPECTION PIT 0.95					
									3 1.45	+11.23	1.50			
			80	82					4 1.50 / 5 2.50					Firm to stiff, red (10R 4/6) spotted yellow, silty sandy CLAY with occasional angular to subangular fine gravel of quartz and rock fragments. (FILL)
								1,1 2,2,2,2 N=8	6 2.60 / 2.70					
									7 3.00					
									3.50	+9.23	3.50			
			80	0					8 4.50	+8.13	4.60			Firm, red (10R 5/8) dappled dark grey, spotted brown, silty sandy CLAY with some angular to subangular fine to coarse gravel and cobble of rock fragments. (COLLUVIUM)
			80	60					9 4.60 / 10 5.10				V	Extremely weak, light yellowish brown (10YR 6/4) mottled red, completely decomposed coarse ash TUFF. (Firm, silty sandy CLAY with occasional angular fine gravel of quartz fragments)
	PW 5.20m								5.20	+7.53	5.20		II	Strong, dark grey, slightly decomposed coarse ash TUFF. (CORESTONE)
18.02.2016	HW	4.80 at 1800	80	98	95	95	5.3		T2-101 5.83					
19.02.2016		Dry at 0800								+6.77	5.96		IV	From 5.96m to 6.18m and 6.63m to 6.83m: Weak to moderately weak and highly decomposed. (Angular, slightly silty sandy fine to coarse GRAVEL and occasional cobble of highly decomposed tuff fragments)
							NI			+6.55	6.18		II	
			80	77	43	35	6.7		T2-101	+6.10	6.63		IV	
							NI			+5.90	6.83		V	From 6.83m to 7.18m: No recovery, assumed to be completely decomposed TUFF.
							NR			+5.55	7.18		III	
							17.6			+5.38	7.35		IV	From 7.18m to 7.35m: Moderately strong and moderately decomposed.
			80	98					11 7.35 / 12 8.35 / 13 8.45					Weak to moderately weak, grey (2.5Y 6/1) mottled yellowish brown, highly decomposed coarse ash TUFF. (Angular, slightly clayey silty sandy fine to coarse GRAVEL of highly decomposed tuff fragments)
								50/10mm 100/25mm 100blS/25mm						
									9.01	+3.72	9.01		III	Moderately strong, greyish brown, moderately decomposed coarse ash TUFF. (CORESTONE)
			80	100	12	0	>20		T2-101					From 9.98m to 10.07m, 10.38m to 10.85m and 11.35m to 11.53m: Weak to moderately weak and
										+2.75	9.98			

SMALL DISTURBED SAMPLE
LARGE DISTURBED SAMPLE
U76 SAMPLE
PISTON SAMPLE (76mm)
MAZIER SAMPLE
SPT LINER SAMPLE
WATER SAMPLE
U100 SAMPLE
STANDARD PENETRATION TEST
IN-SITU VANE SHEAR TEST
PACKER TEST
PERMEABILITY TEST
PRESSUREMETER TEST
BOREHOLE TELEVIEWER
PIEZOMETER TIP
STANDPIPE TIP

LOGGED **S.L. Chiu**
DATE **26.02.2016**
CHECKED **R. Chu**
DATE **29.02.2016**

REMARKS

1. An inspection pit was excavated to 1.50m deep by hand tools.
2. Groundwater sample was taken at 19.49m.
3. A standpipe was installed at 10.00m.
4. A piezometer was installed with tip at 13.90m.

DRiLTECH

DRILLHOLE RECORD

CONTRACT NO. **GE/2014/07**

HOLE NO. **DH27**

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

PROJECT **Ground Investigation - New Territories West (Term Contract), Agreement No. CE 17/2012 (DS), Outlying Islands Sewerage Stage 2 - South Lantau Sewerage Works and Other Works - Design and Construction**

METHOD **ROTARY**	CO-ORDINATES E **812518.33** N **810513.72**	WORKS ORDER NO. **GE/2014/07.7A**
MACHINE **SD20**		DATE **18.02.2016** to **22.02.2016**
FLUSHING MEDIUM **WATER**	ORIENTATION **VERTICAL**	GROUND LEVEL **+12.73** mPD

Drilling Progress	Casing Size	Water Level (m) Shift Start/ End	Water Return%	TCR%	SCR%	RQD%	Fracture Index	Tests	Samples	Reduced Level	Depth (m)	Legend	Grade	Description
							NI		T2-101 10.31	+2.66	10.07		IV	highly decomposed. (Angular, slightly sandy fine to coarse GRAVEL and occasional cobble of highly decomposed tuff fragments)
							>20			+2.35	10.38		III	
			80	100	20	0	NI		T2-101 11.05				IV	
11							>20			+1.88	10.85		III	
			80	100	42	35	NI		T2-101 11.90	+1.38	11.35		IV	
							8.7			+1.20	11.53		II	Moderately strong, greyish brown, moderately decomposed coarse ash TUFF. Joints are very closely to closely spaced, occasionally medium spaced, rough planar and rough undulating, iron and manganese oxide stained, dipping at 0° to 10°, 10° to 20°, 20° to 30°, 65° to 75° and subvertically from 16.34m to 17.38m and 18.97m to 19.49m.
12			80	100	69	24	>20			+0.74	11.99		III	
19.02.2016		7.50 at 1800					5.6		T2-101 12.64	+0.27	12.46		II	
20.02.2016		11.00 at 0800								+0.09	12.64		III	
13			80	100	20	0			T2-101 13.47					From 11.53m to 11.99m, 12.46m to 12.64m and 18.63m to 18.83m: With a dyke of strong and slightly decomposed feldsparphyric RHYODACITE.
20.02.2016	HW 13.47m	10.60 at 1800												
22.02.2016		10.85 at 0800					>20	▲						From 12.67m to 12.79m and 12.89m to 13.00m: Moderately weak to moderately strong.
14			80	100	28	0			T2-101 14.44					
											14.62			
15			80	100	75	53	7.3		T2-101 15.78		15.58			
							>20				15.87			
16			80	100	55	35	9.1		T2-101		16.20			
							>20				16.90			
17			80	100	87	71	10.2		T2-101 17.30		17.78			
							>20				17.88			
18			80	100	59	38	6.7		T2-101 18.39	-5.90	18.63		II	
										-6.10	18.83		III	
19							>20				18.92			
22.02.2016		9.73 at 1800						▲		-6.76	19.49			End of hole at 19.49 m.
20														

- SMALL DISTURBED SAMPLE
- LARGE DISTURBED SAMPLE
- U76 SAMPLE
- PISTON SAMPLE (76mm)
- MAZIER SAMPLE
- SPT LINER SAMPLE
- WATER SAMPLE
- U100 SAMPLE
- STANDARD PENETRATION TEST
- IN-SITU VANE SHEAR TEST
- PACKER TEST
- PERMEABILITY TEST
- PRESSUREMETER TEST
- BOREHOLE TELEVIEWER
- PIEZOMETER TIP
- STANDPIPE TIP

LOGGED **S.L. Chiu**

DATE **26.02.2016**

CHECKED **R. Chu**

DATE **29.02.2016**

REMARKS

PROJECT	Ground Investigation - New Territories West (Term Contract), Agreement No. CE 17/2012 (DS), Outlying Islands Sewerage Stage 2 - South Lantau Sewerage Works and Other Works - Design and Construction		WORKS ORDER NO. GE/2014/07.7A
CO-ORDINATES	E 812519.64 N 810510.00	GROUND LEVEL: +9.73 mPD	LOGGED S.L. Chiu CHECKED R. Chu DATE 26.02.2016 DATE 29.02.2016
			EXCAVATION DATES: 17.02.2016 to 18.02.2016 BACKFILL DATES: 10.03.2016 to 10.03.2016

DRILTECH

TRIAL PIT RECORD

CONTRACT NO. GE/2014/07

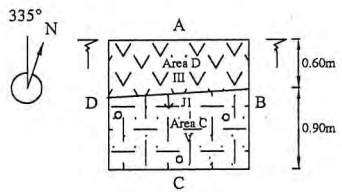
TRIAL PIT NO. TP 5

SHEET 1 of 1

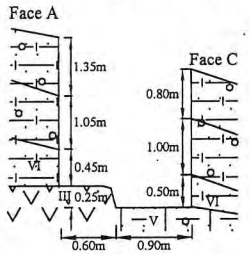
SAMPLES and TESTS	DEPTH (m)	SKETCH: FACE A: 1.50 m / FACE B: 1.50 m / FACE C: 1.50 m / FACE D: 1.50 m	DEPTH (m)	LEGEND	GRADE	DESCRIPTION
1, 2	0.00 0.45 0.50	Area B; Area A; Area B	0.00			Firm, dark red (10R 4/6) mottled grey, slightly sandy silty CLAY with occasional angular to subangular fine to coarse gravel of rock fragments. (FILL) Area A: With some angular to subangular fine to coarse gravel and cobble of rock fragments. Area B: Grey, CONCRETE. (SLOPE PROTECTION)
3, 4	0.95 1.00					
	1.35		1.35			
5, 6	1.45 1.50					Firm, yellowish red (5YR 5/8), slightly sandy silty CLAY with occasional angular to subangular fine to coarse gravel and cobble of rock fragments. (COLLUVIUM)
7, 8	1.95 2.00					
	2.40		2.40			
9, 10	2.45 2.50				VI	Firm, light grey (10YR 7/1) mottled red, silty sandy CLAY. (RESIDUAL SOIL) Area C: Extremely weak to very weak, completely decomposed and slightly altered coarse ash TUFF. (Slightly clayey silty fine SAND with some angular fine to coarse gravel of tuff fragments) Area D: Moderately weak to moderately strong, grey, moderately decomposed coarse ash TUFF with rough undulating, very narrow, iron oxide stained joint dipping at 86°/128°(J1).
	3.10		3.10			End of trial pit at maximum depth of 3.10 m.
	4					
	5					

- SMALL DISTURBED SAMPLE
- LARGE DISTURBED SAMPLE
- U76 SAMPLE (VERTICAL / HORIZONTAL)
- U100 SAMPLE (VERTICAL / HORIZONTAL)
- BLOCK SAMPLE
- IN-SITU DENSITY TEST
- WATER SAMPLE
- WATER SEEPAGE
- N-SCHMIDT HAMMER TEST

PLAN (not to scale)



SECTION (not to scale)



REMARKS

Maximum Depth: 3.10 m Average Depth: 2.70 m
Shoring: YES Stability: STABLE
Water Seepage: NO

1. Small disturbed samples were taken at 0.50m, 1.00m, 1.50m, 2.00m and 2.50m.
2. Large disturbed samples were taken at 0.50m, 1.50m and 2.50m.
3. Block samples were taken at 1.00m and 2.00m.
4. In-situ density tests were carried out at 0.50m and 1.50m.