Appendix 3

Approved Geotechnical Planning Review Report of Last Application
No. A/SK-PK/268

Proposed Temporary

Private Swimming Pool and Garden for

a Period of 3 Years at

Lot 1122 Ext and Adjoining Government Land in D.D. 217,

House 5B, Habitat, Pak Sha Wan,

Sai Kung, New Territories

Philip So & Associates Consulting Civil & Geotechnical Engineers Ltd.

December 2021

CONTENTS

FIGURES

APPENDIX

1. INTRODUCTION

Philip So & Associates Ltd. is appointed by the subject Lot owner to prepare the Geotechnical Planning Review Report (GPRR) for the proposed temporary swimming pool to replace the existing swimming pool with the same dimensions at Lot 1122 Ext and Adjoining Government Land in D.D. 217, House 5B, Habitat, Pak Sha Wan, Sai Kung, New Territories

This GPPR is made based on desk study and review of available documentary information for the proposed "Temporary Private Swimming Pool and Garden" for a period of 3 years.

The geology and site conditions are described. Potential geotechnical constraints are identified in the assessment.

2. THE SITE AND THE FEATURES

The site is at a relatively flat terrace at Pak Sha Wan, New Territories. According to the available SIS records obtained from Geotechnical Engineering Office (GEO), there is a registered geotechnical feature No. 7SE-D/C86 lies in the vicinity of the site (see Photos 1 to 3 given in Appendix A). The general view of the existing swimming pool on site is shown in Photo 4 given in Appendix A.

Based on the SIMAR report, the Highways Department is responsible for the maintenance of the said feature. A copy of the SIMAR report and slope records are enclosed in Appendix B and C respectively. The location of the said feature is presented in Figure 1.

2.1 Existing Geotechnical Feature

Feature No. 7SE-D/C86

The Feature is situated due east of the site. According to SIS records, the Feature is a cut slope of about 115m long. The maximum height of the cut slope is 8.5m with an average angle of 60° inclining to horizontal. With reference to the SIMAR record retrieved from Land Department, Highways Department is responsible for maintenance of this Feature. The "proposed swimming pool and garden" will be situated on the slope crest area. An existing road with heavy traffic density is situated at the slope toe

3. DESK STUDY

Desk study has been carried out to search and review the existing building records, previous ground investigation data and geotechnical study reports kept by the Geotechnical Information Unit (GIU) of Geotechnical Engineering Office (GEO) and the Buildings Department (BD).

Ground investigation was carried out at the toe of Feature No. 7SE-D/C86 for a private project, namely "272DS-Port Shelter Sewerage, Stage 2 Tai Chung Hau and Pak Sha Wan Sewerage", with ground investigation report prepared by Enpack (Hong Kong) Limited in Sep 1997. The borehole records indicated that the Feature toe comprises highly decomposed Tuff (HDT) overlaid by a thin layer of Fill (see Appendix D).

3.1 Geological Maps

The geology of the Study Area is shown on the Hong Kong Geological Survey (HKGS) Map Sheet 7 (Sha Tin), 1:20,000-scale HGM20 series. The local geology of the Study Area is presented in Figure 3 and described below.

3.1.1 Solid Geology

The 1:20,000 scale geological maps indicated that regional area around the Site is underlain by coarse ash crystal tuff, (Krl_cat) of the Long Habour Formation.

4. IMPACTS OF PROPOSED WORKS ON EXISTING SLOPES

A registered slope feature No. 7SE-D/C86 is located due east of the site. According to the SIS record, the maximum height of the feature is about 8.5m with 115m long measured along its toe. The average slope gradient is about 60 degrees to the horizontal. As the feature has stood for a long time without evidence of major distress or instability, it is expected that this feature will continue to be in a stable condition under the present condition. Nevertheless, the stability has to be checked with respect to the "proposed swimming pool and garden", based on the subsurface conditions and shear strength parameters of soil/rock obtained from site specific ground investigation.

4.1 PORTION OF SLOPE FEATURE NO. 7SE-D/C86 AFFECTED BY THE PROPOSED SWIMMING POOL AND GARDEN

4.1.1 General

The slope Feature No. 7SE-D/C86 does not need to be modified in the proposed usage, however it stability condition has to be assessed.

In order to fulfill the above-mentioned objective, a comprehensive investigation programme will be implemented comprising the following:-

a) Detailed ground investigation including in-situ and laboratory soil testing to identify the soil parameters together with the monitoring of groundwater table, by sinking vertical drillholes and/or trial pits on site;

b) Establishment of geological and hydrogeological model based on the findings from topographic survey and the ground investigation works.

4.2 General Approaches for Site Formation, ELS, Superstructure and Foundation Design

Judging from the site conditions and the proposed swimming pool and garden, the following approaches shall be adopted for the future site formations, ELS, and structure design and foundation design:-

a) To assess the effects to the adjacent roads and the subject slope feature due to the proposed swimming pool and garden and to provide adequate upgrading measures as necessary;

b) To design the temporary excavation and lateral support works in order to minimize adverse effects onto the adjacent roads and the feature due to the proposed structural works. Sheetpile wall or other methods are feasible options for ELS works.

c) To provide shallow foundation is considered necessary in order to support the future pool structure.

d) To assess the stability of the existing feature and to provide adequate upgrading measures as necessary.

4.3 Site Formation, Structure and Foundation Approach

The proposed works comprise swimming pool and garden.

Ground investigation works including trial pits and/or vertical boreholes shall be sunk to confirm the thickness of the soil stratum and the groundwater table level. Soil sampling and laboratory testing shall be conducted in order to identify the soil parameters for different types of soil in the subject site.

Stability assessment for the feature, including the ELS shall be checked to ensures the subject feature will not affect the nearby public road. Adequate upgrading measures, such as installation of soil nails in the slope or installation of soldier pipe wall along the slope crest shall be provided as necessary if the feature cannot fulfill the current engineering standards.

5. CONCLUSION

Based on the above discussion, it can be concluded that the proposed development is considered to be feasible from geotechnical point of view. The construction would be straight forward unlikely posting particular problems to the surrounding area under careful planning, proper execution and vigilant supervision.

It is essential to search and review the background information of adjacent building, geotechnical feature and underground services within and in the vicinity of the site. Ground investigation is proposed to reveal/confirm the subsoils and the ground regime within and in the vicinity of the site as well as to determine the engineering properties of subsoils and rock. The ground investigation field works should be preceded under supervision of suitably qualified engineers and technically competent persons conforming the requirements specified in the "Code of Practice for Site Supervision 2009" published by the BD.

For safety and cost effective, the foundation design and slope stability assessment and excavation planning as well as the design of strengthening measures as necessary should be based on geological horizons inferred from the ground investigation results, groundwater table interpreted from the piezometer/standpipe monitoring records and geotechnical parameters determined and adopted by field and laboratory testing.

A comprehensive precautionary monitoring program including settlement markers, tiling, vibration check points as well as groundwater observation wells shall be implemented to ensure demolition of existing substructure and construction of the proposed swimming pool and garden to be carried out in a safe manner.

FIGURES

Figure 1

Site Location Plan

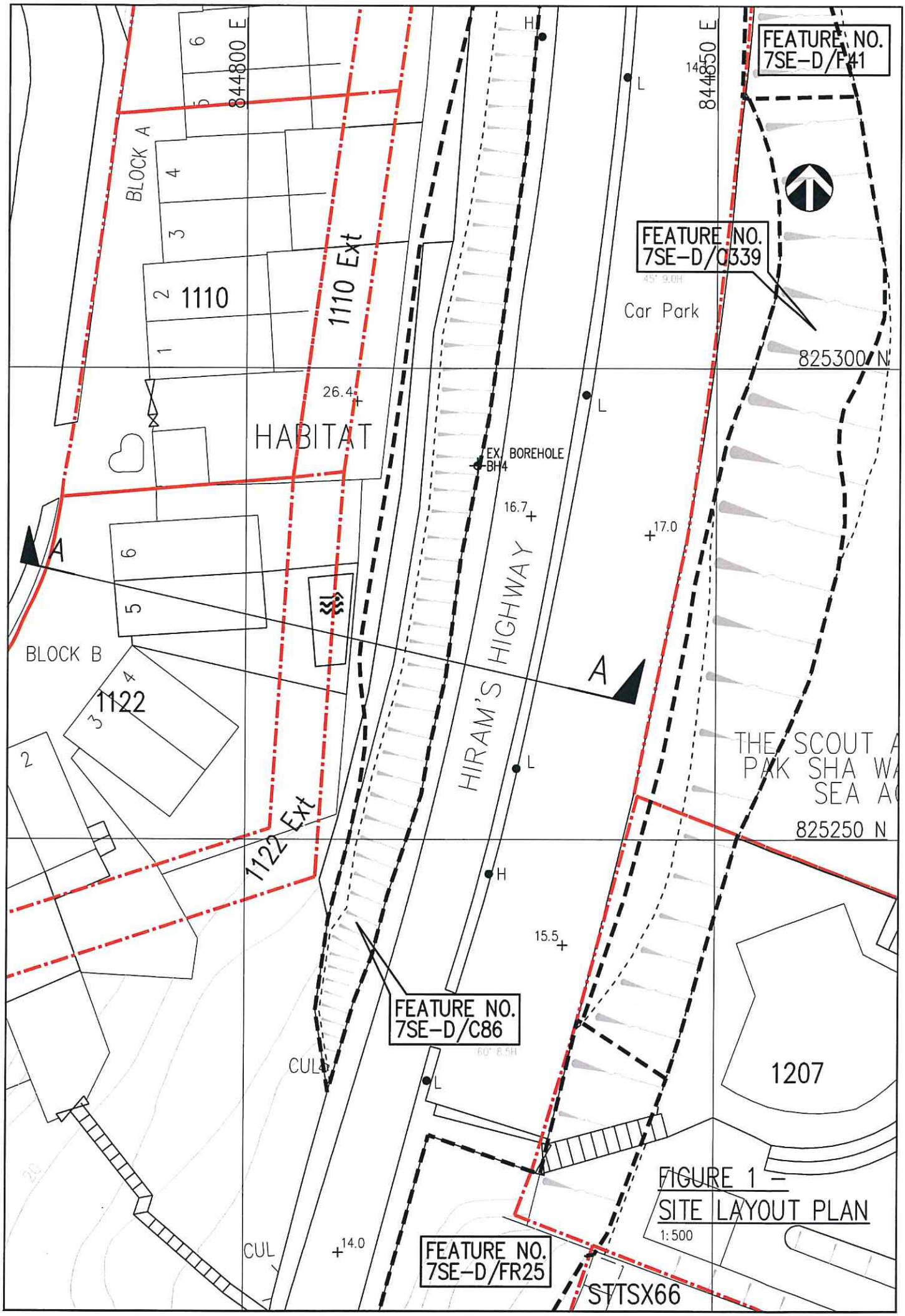
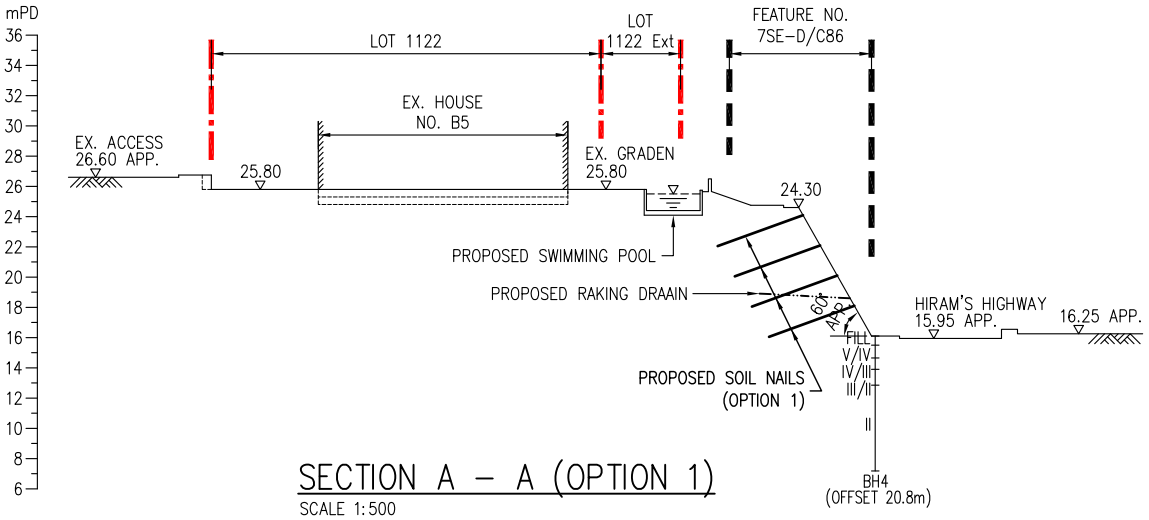

844800 E
844850 E
FEATURE NO. 7SE-D/F41
FEATURE NO. 7SE-D/C339
Car Park
825300 N
BLOCK A
1110
1110 Ext
26.4
HABITAT
EX. BOREHOLE BH4
16.7
17.0
HIRAM'S HIGHWAY
A
BLOCK B
1122
1122 Ext
825250 N
THE SCOUT A
PAK SHA WA
SEA A
15.5
FEATURE NO. 7SE-D/C86
CUL
1207
FIGURE 1 –
SITE LAYOUT PLAN
1:500
14.0
FEATURE NO. 7SE-D/FR25
STTSX66

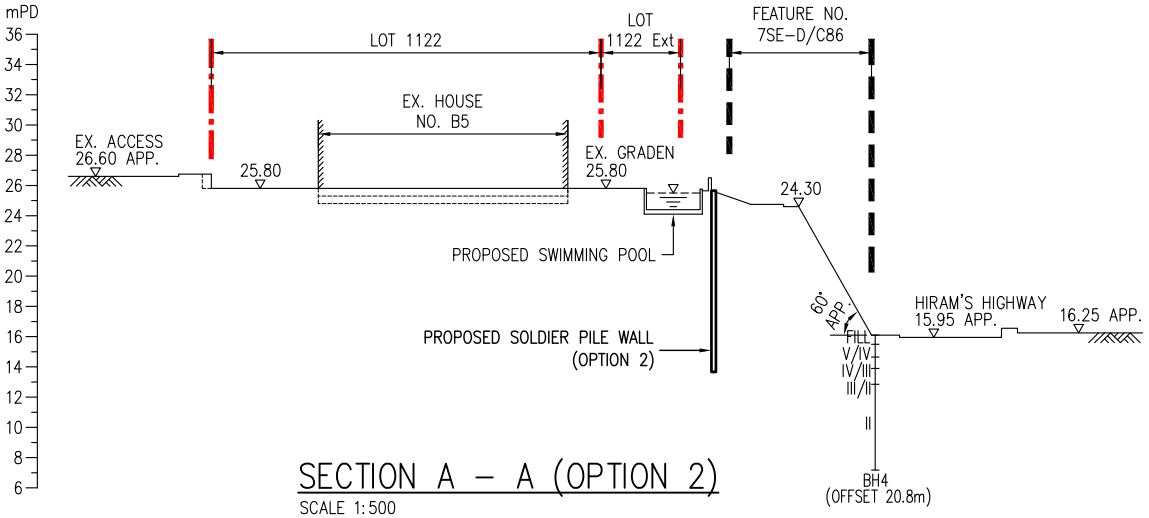
Figure 2

Sections



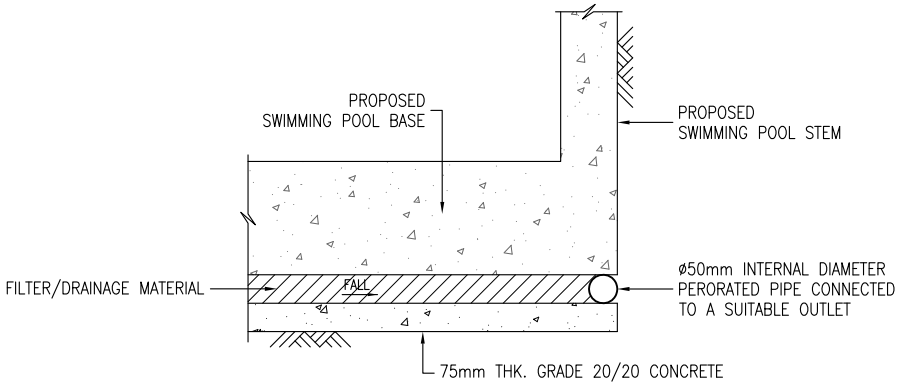
SECTION A – A (OPTION 1)

SCALE 1:500



SECTION A – A (OPTION 2)

SCALE 1:500



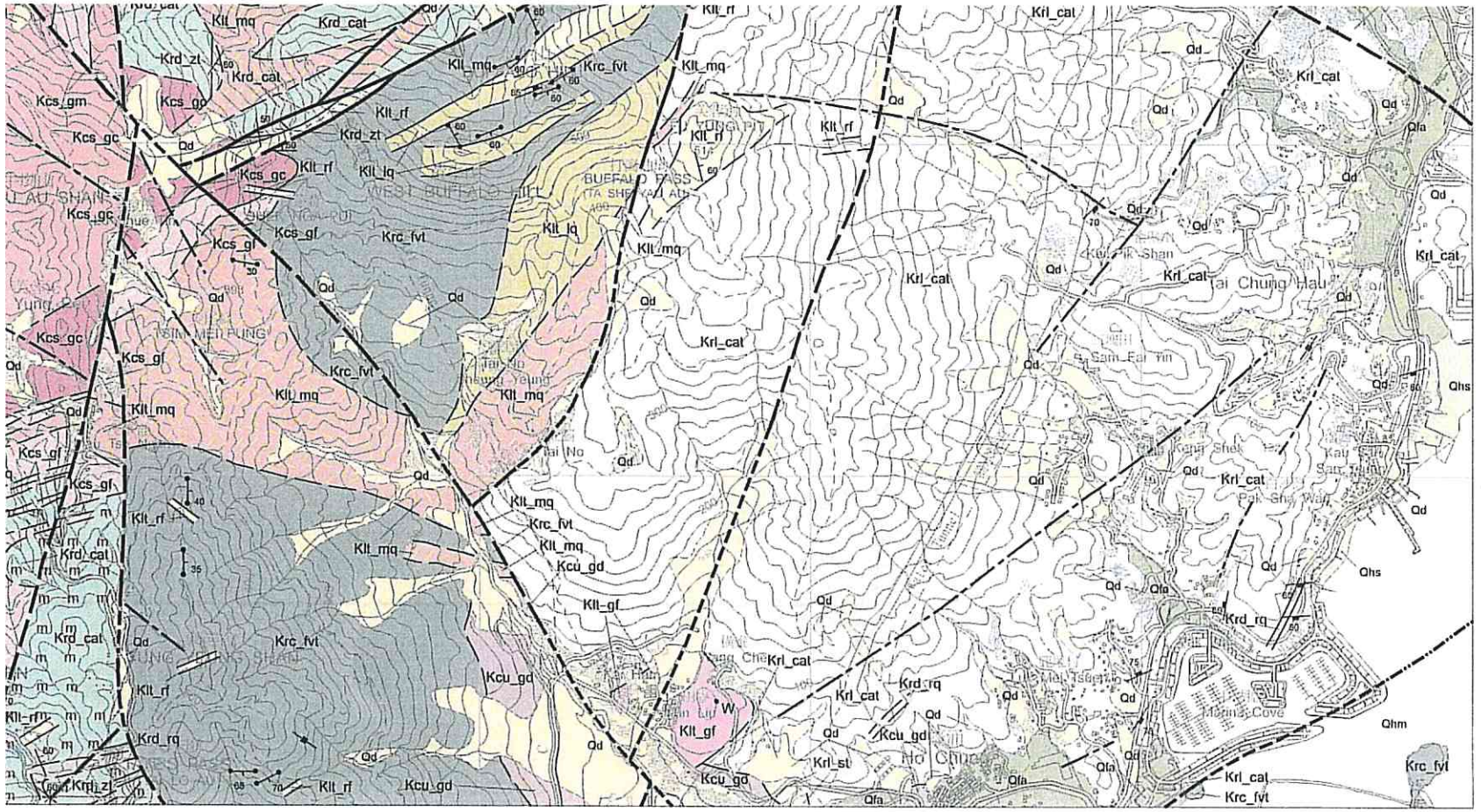
TYPICAL DETAILS OF LEAKAGE COLLECTION SYSTEM

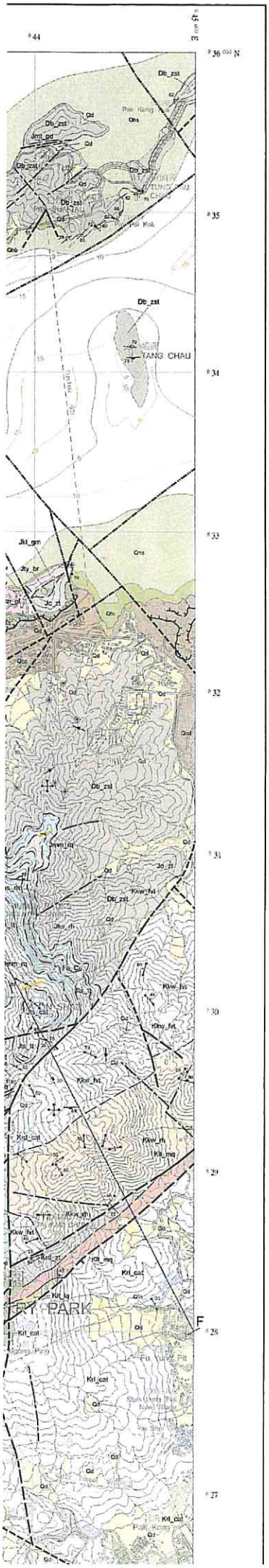
SCALE 1:20

FIGURE 2 – SECTIONS AND TYPICAL DETAILS

Figure 3

Geological Map


Klt_mq
Krd_cat
Krd_zt
Kcs_gm
Kcs_gp
Kcs_gc
Klt_rf
Klt_lq
Kcs_gf
Krc_fvt
Qd
Krl_cat
Klt_gf
Kcu_gd
Krd_rq
Krl_st
Qfa
Qhs
Qhm
Krc_fvt
BUFFALO PASS
WEST BUFFALO HILL
Tai Chung Hau
Sam Fai Tin
Kau Sheung Shek
Kau Sai Wan
Tsam Chuk Wan
Ho Chung
Mirs Cove
B 41
B 42
B 43
B 44
B 45 000 E
B 26
B 25
B 24 000 N



HONG KONG GEOLOGICAL SURVEY

SHA TIN

Sheet 7

SOLID AND SUPERFICIAL GEOLOGY

Series HGM20
Scale 1:20 000

SUPERFICIAL DEPOSITS

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

MINOR INTRUSIVE ROCKS

Undifferentiated mafic to intermediate dykes, dominantly basaltic andesite and andesite — b

VOLCANIC ROCKS

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

GRANITOID ROCKS

Klt_lq	Quartz latite	TEI TONG TSUI GRANITE MONZONITE	LION ROCK SUITE	
Klt_rf	Feldsparphyric rhyolite			
Klt_gf	Fine-grained granite			
Klt_mq	Quartz monzonite			
Kcs_gf	Dominantly porphyritic fine-grained granite	SHEUNG O GRANITE	CHEUNG CHAU SUITE	
Kcs_gm	Dominantly equigranular medium-grained granite with some porphyritic fine-grained granite			
Kcs_gc	Dominantly coarse-grained granite			
Kcu_gd	Undifferentiated porphyritic medium-grained granodiorite			

146	JURASSIC	LATE			Fine-grained biotite granite	SHA TIN GRANITE	KWAI CHUNG SUITE	
					Medium-grained biotite granite			
					Coarse-grained biotite granite			
					Dominantly porphyritic fine-grained granite with some equigranular medium-grained granite	HEEPLE HILL GRANITE		
					Quartzphyric rhyolite to porphyritic granite dykes	EAST LANTAU RHYOLITE		
					Feldsparphyric rhyodacite to porphyritic granite dykes	EAST LANTAU RHYODACITE		
					Flow-banded porphyritic rhyolite sill	SHAM CHUNG RHYOLITE		
140					Quartzphyric rhyolite dykes	CHEK MUN RHYOLITE	LAMMA SUITE	
164		MIDDLE	TSUEN WAN VOLCANIC GROUP	TAI MO SHAN FORMATION	Fine ash vitric tuff	Jtm_fvt		
					Lapilli lithic-bearing coarse ash crystal tuff	Jtm_cat		
					Tuffaceous siltstone	Jtm_zt		
				SHING MUN FORMATION	Lapilli lithic-bearing coarse ash crystal tuff	Jts_cat		
					Tuff breccia	Jts_bt		
					Tuffite	Jts_tt		
					Tuffaceous sandstone	Jts_st		
					Tuffaceous siltstone	Jts_zt		
				YIM TIN TSAI FORMATION	Lapilli lithic-bearing coarse ash crystal tuff	Jty_cat		
					Sedimentary breccia	Jty_br		
					Tuffite	Jty_tt		
165					Tuffaceous siltstone	Jty_zt		
					Feldsparphyric rhyolite dykes	Jmt_rf		
					Porphyritic medium- and fine-grained granodiorite	Jmt_gd		
					Contact metamorphism	m m m m m m		
					Thermally altered tuff			

SEDIMENTARY ROCKS

JURASSIC	EARLY TO MIDDLE	TAI O FORMATION	Grey to red, fine-grained sandstone and siltstone	Jo_zt
		TOLO CHANNEL FORMATION	Grey to black laminated siltstone and black mudstone	Jc_zt
PERMIAN		TOLO HARBOUR FORMATION	Pinkish to pale grey calcareous sandstone	Pl_st
			Pinkish to pale grey calcareous siltstone	Pl_zt
CARBONIFEROUS		MA ON SHAN FORMATION	White to dark grey, finely crystalline marble	Csm_m
DEVONIAN		BLUFF HEAD FORMATION	Reddish brown and purple siltstone	Db_zst
			Pale grey, fine- to coarse-grained quartz sandstone	Db_bl

GEOLOGICAL LINES

	Observed	Approximate	Concealed	Inferred
Contact	———	* — — —	* - - - - -	* ·-·-·-·
Fault (Crossmark indicates downthrow side)	———|———	* — — —	* - - - - -	* ·-·-·-·

* Broken lines on map face denote uncertainty

Mineral vein ——— * — — —

Photogeological lineament — - - - -

Alluvial terrace ·-·-·-·

BASIC INFORMATION

Location: S of J/N B/T HABITAT & HIRAM'S HIGHWAY, SK

Date of Formation: pre-1977

Date of Construction/ Modification:

Approximate Coordinates: Easting : 844820 Northing : 825295

CONSEQUENCE-TO-LIFE CATEGORY

Facility at Crest: Densely-used playground

Distance of Facility from Crest (m): 0

Facility at Toe: Road/footpath with heavy traffic density

Distance of Facility from Toe (m): 0

Consequence-to-life Category: 2

Remarks: N/A

SLOPE PART

(1) Max. Height (m): 8.5 Length (m): 115 Average Angle (deg): 60

WALL PART

N/A

Appendix A

Photographs

Photo 1: Photo showing the southern portion of Feature No. 7SE-D/C86

Photo 2: Photo showing the mid portion of Feature No. 7SE-D/C86

Photo 3: Photo showing the northern portion of Feature No. 7SE-D/C86

Photo 4: General view of existing swimming pool on site

Appendix B

SIMAR Record - Feature No. 7SE-D/C86

Slope Maintenance Responsibility Report (7SE-D/C86)	ESTATE MANAGEMENT SECTION LANDS DEPARTMENT

List of Slope Maintenance Responsibility Area(s)

1	**7SE-D/C86**		**Sub-Division**	Not Applicable
	Location	ADJOINING HIRAM'S HIGHWAY NEAR SPOT LEVEL 16.7		
	Responsible Lot/Party	Highways Department	**Maintenance Agent**	Highways Department
	Remarks	For enquiries about the maintenance of this slope / sub-division of the slope, please contact the Maintenance Agent directly.		

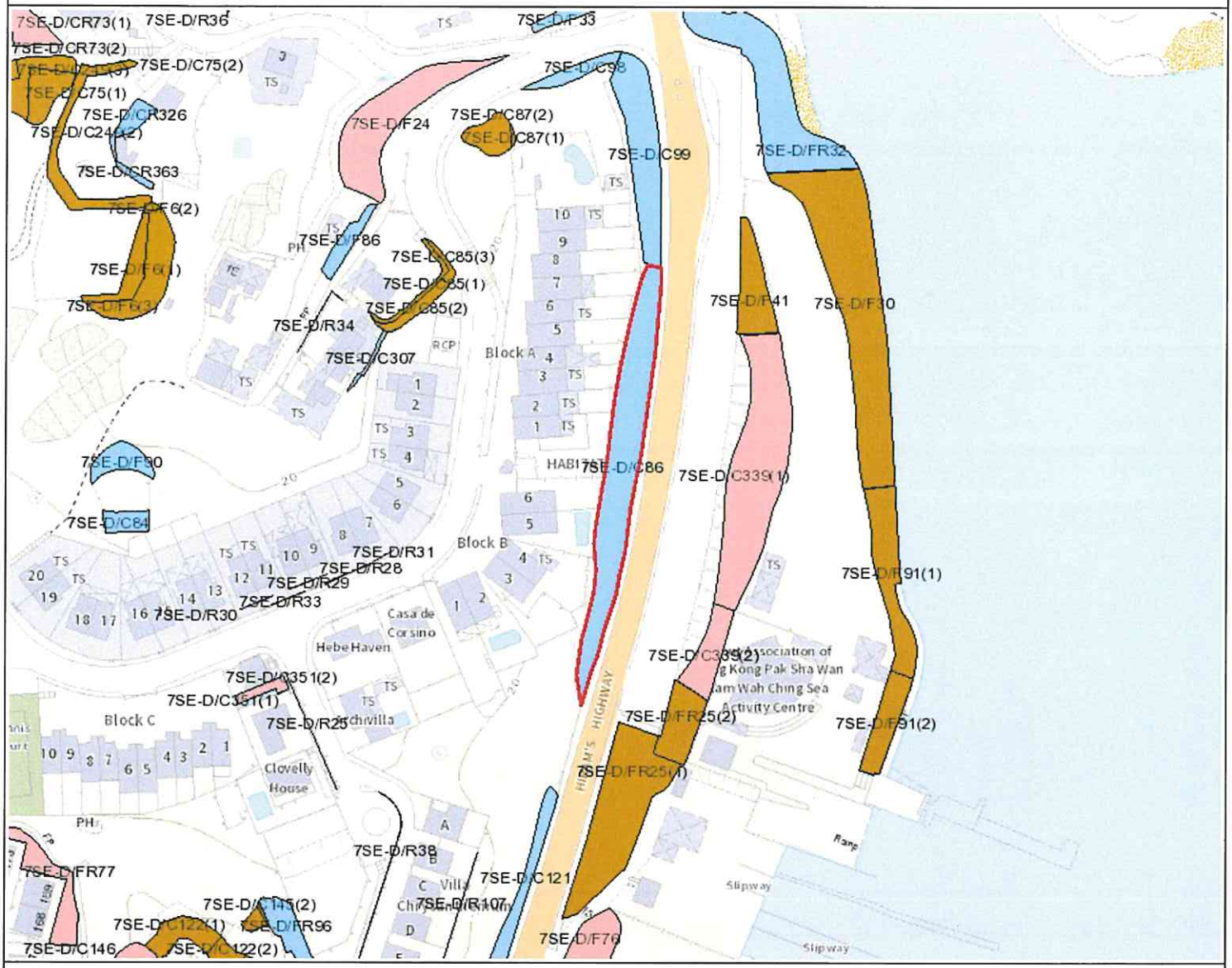
- End of Report -

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: 18/12/2021

Appendix C

Slope Records Retrieved from CEDD - Feature No. 7SE-D/C86

MAINTENANCE RESPONSIBILITY

Government Feature Party: HyD Agent: HyD

DETAILS OF SLOPE / RETAINING WALL

Date of Inspection: 01-02-2011

Data Source: EI(HyD)

Slope Part Drainage:
(1) Position: Berm Size(mm): 225
(2) Position: Crest Size(mm): 225
(3) Position: Stepped Size(mm): 225
(4) Position: Toe Size(mm): 225

Wall Part Drainage: N/A

SLOPE PART

Slope Part (1)
Surface Protection (%): Bare: 0 Vegetated: 60 Chunam: 0 Shotcrete: 0 Other Cover: 40
Material Description: Material type: Soil Geology: N/A
Berm: No. of Berms: 1 Min. Berm Width (m): 0.6
Weepholes: Size (mm): N/A Spacing (m): N/A

WALL PART

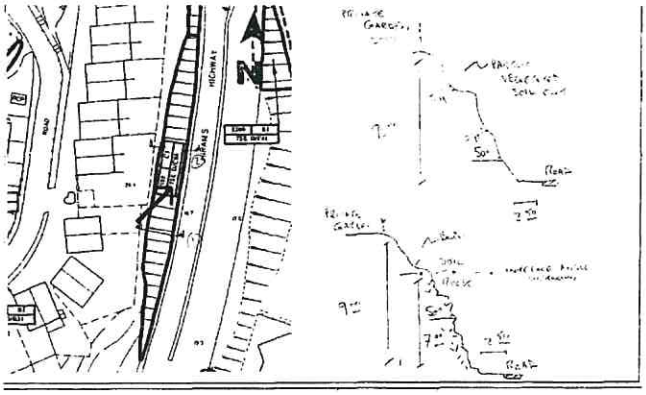
N/A

SERVICES

(1) Utilities Type: Cable Size(mm): 0 Location: Toe Remark: Size cannot be determined
(2) Utilities Type: Electricity Size(mm): 0 Location: Toe Remark: Size cannot be determined
(3) Utilities Type: Water Main Size(mm): 200 Location: Toe Remark: N/A

STAGE 1 STUDY REPORT

Inspected On: 15-04-1997
Weather: Mainly Fine
District: ME



Section No: 1-1
Height(m): H1 : 10 , H2 : 0
Type of Toe Facility: Road/footpath with heavy traffic density

Distance from Toe(m): 0
Type of Crest Facility: Densely-used playground

Distance from Crest(m): 0
Consequence Category: 2
Engineering Judgement: P

Section No: 2-2
Type of Toe Facility: Road with moderate traffic

Distance from Toe(m): 0
Type of Crest Facility: Heavily used playground

Distance from Crest(m): 0
Consequence Category: 2
Engineering Judgement: P

Sign of Seepage:	Slope : No signs of seepage Wall : N/A
Criterion A satisfied:	N
Sign of Distress:	Slope : Reasonable (near crest, mid-portion, at toe) Wall : N/A
Criterion D satisfied:	N
Non-routine maintenance required:	N
Note:	N/A
Masonry wall/Masonry facing:	N
Note:	N/A
Consequence category (for critical section):	2
Observations:	N/A
Emergency Action Required:	N
Action By:	N/A

ACTION TO INITIATE PREVENTIVE WORKS

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

OTHER EXTERNAL ACTION

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

PHOTO


7SE-D/C 330
7SE-D/C 92
7SE-D/R 120
7SE-D/C 74
7SE-D/FR 37
7SE-D/CR 7SE-D/R 26
7SE-D/R 118
7SE-D/FR 27
7SE-D/F 73
7SE-D/FR 29
7SE-D/F 31
7SE-D/C 119
7SE-D/C 72
7SE-D/R 117
7SE-D/R 21
7SE-D/C 17
7SE-D/F 36
7SE-D/R 83
7SE-D/FR 26
7SE-D/F 40
7SE-D/R 23
7SE-D/R 22
7SE-D/R 84
7SE-D/FR 34
7SE-D/CR 73
7SE-D/R 35
7SE-D/R 141
7SE-D/FR 35
7SE-D/R 36
7SE-D/F 33
7SE-D/C 249
7SE-D/C 98
7SE-D/FR 32
7SE-D/CR 326
7SE-D/F 24
7SE-D/C 87
7SE-D/F 38
7SE-D/CR 363
7SE-D/C 99
7SE-D/C 75
7SE-D/F 86
7SE-D/F 6
7SE-D/F 41
7SE-D/F 30
7SE-D/FR 22
7SE-D/CR 85
7SE-D/R 34
7SE-D/C 307
7SE-D/F 90
7SE-D/C 86
7SE-D/F 23
7SE-D/C 339
7SE-D/C 84
7SE-D/R 31
7SE-D/FR 91
7SE-D/C 351
7SE-D/R 25
7SE-D/FR 25
7SE-D/FR 77
7SE-D/R 107
7SE-D/C 145
7SE-D/R 38
7SE-D/FR 96
7SE-D/C 121
7SE-D/C 146
7SE-D/C 122
7SE-D/F 76
7SE-D/FR 75
7SE-D/C 274
7SE-D/CR 123
7SE-D/R 39
7SE-D/CR 272
7SE-D/R 142
7SE-D/FR 64
7SE-D/C 125
7SE-D/C 126
7SE-D/R 102
7SE-D/CR 318
Habita
Ruby Chalet
Seawall
Floating Jetty
Slipway
Floating Jetty
Pier
Tsuen

Appendix D

Extraction of Previous GI Records Prepared by Enpack (Hong Kong) Limited in Sep 1997

ENPACK (HONG KONG) LIMITED Civil Engineers & Contractors Astoria Building, 6th floor, 34 Ashley Road Kowloon, Hong Kong Tel: 2378 2121 Fax: 2378 0252	**DRILLHOLE RECORD**	HOLE NO. **BH 4**
	CONTRACT NO. **GE/95/10**	SHEET 1 of 1

PROJECT **272DS - Port Shelter Sewerage, Stage 2, Ground Investigation.**

METHOD **RC**	CO-ORDINATES E 844824.56 N 825289.67	W.O. No **GE/95/10.58**
MACHINE & No. **DR 61**		DATE: **10/09/97 to 12/09/97**
FLUSHING MEDIUM **WATER**	ORIENTATION **VERTICAL**	GROUND LEVEL **16.57** mPD

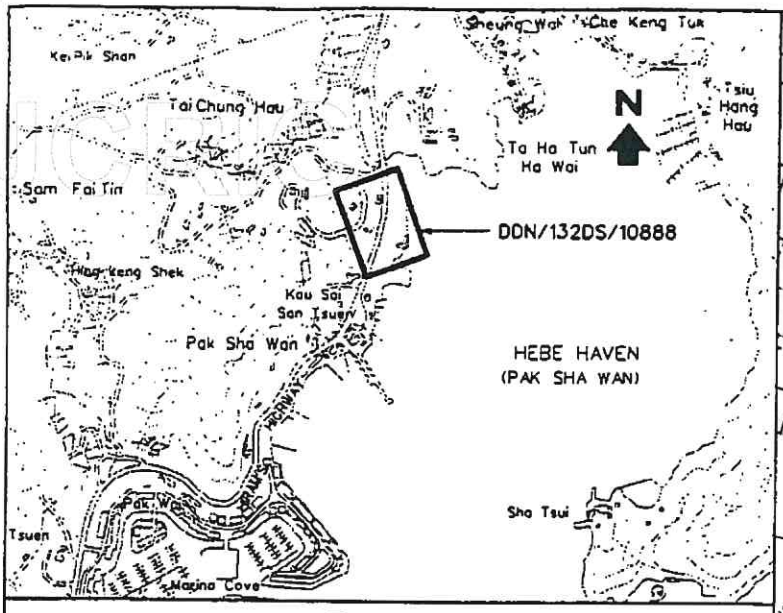
Drilling Progress	Casing size	Water level (m) Shift start/end	T.C.R.(%)	S.C.R.(%)	R.Q.D.(%)	F.I.	Tests	Samples	Reduced Level	Depth (m)	Legend	Grade	Description
10/9	PX							I.P. 1 0.50 0.60	15.97	0.60			Light yellowish brown (7.5YR/6/6), slightly silty fine to coarse SAND with some subangular fine to medium gravel sized concrete brick and rock fragments. (FILL)
			44	0	0	NI		T2-101				IV	Weak, yellowish brown to light grey, highly decomposed fine ash crystal TUFF, highly fractured.
1						NR						V/IV	From 0.95-1.40m : No recovery inferred as completely to highly decomposed tuff.
			96	72	36	15.0		1.40	15.12	1.45		IV III	Moderately strong to locally weak, light grey locally yellowish brown, moderately decomposed fine ash crystal TUFF.
2						>20			14.37	2.20		IV	Joints are closely to locally very closely spaced, rough, planar and undulating very narrow (<6mm), iron and manganese stained, dipping at subhorizontal, 30°-40° and 65°.
		0.80m at 18:00				9.5		2.70				III/II	From 2.00-2.20m : Weak, highly decomposed and highly fractured.
11/9		2.45m at 08:00	100	92	85				13.32	3.25			
3						3.0		3.65				II	Moderately strong to strong, dark grey spotted black and white, moderately to slightly decomposed fine ash crystal TUFF.
			100	100	100								Joints are closely to medium, locally very closely spaced, rough, planar, extremely narrow to very narrow (<2mm), iron stained, locally kaolin infilled (<2mm), dipping at subhorizontal, 30°, 50° and 60°-75°.
4								4.60					
			100	100	100	2.3							Strong to very strong, dark grey spotted, white and black, slightly decomposed fine ash crystal TUFF.
5								5.65					Joints are medium to widely locally closely spaced, rough, planar, extremely narrow (<1mm), locally iron stained, dipping at 25°, 30° and 65°-70°.
			100	100	100								
6													
			100	100	100			7.10					
7													
		0.40m at 18:00						8.02					
8								T2-101					
12/9		3.05m at 08:00	100	100	100	5.6			7.65	8.92			
9													End of investigation hole at 8.92m.
10													

Small Disturbed Sample
Piston Sample
U75 Undisturbed Sample
U100 Undisturbed Sample
Mazier Sample
SPT Liner Sample
Water Sample

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

LOGGED C. Rigby
DATE 13/9/97
CHECKED C.K. Chan
DATE 16/9/97

REMARKS
1) One standpipe piezometer installed at 8.50m depth.
2) Prior to drilling an inspection pit was excavated by hand to 0.50m depth.
3) Core loss in core run from 0.60-1.40m : assumed to be grade V/IV tuff.



KEY PLAN

SCALE 1:20 000

PROVISIONAL
SUBJECT TO AMENDMENT

no.	date	description	initial
A	5-6-97	DRILLHOLE BH5 RELOCATED	

title: PORT SHELTER SEWERAGE, STAGE 2 -TAI CHUNG HAU AND PAK SHA WAN SEWERAGE SITE INVESTIGATION - LOCATION OF DRILLHOLE FOR PIPE JACKING	drawn by: (SIGNED) H.T. TANG	date: 15-4-97	drawing no.: DDN/132DS/10888A
	approved: (SIGNED) S.K. WONG	date: 15-4-97	scale: 1:1000 OR AS SHOWN
	office: SEWERAGE PROJECTS DIVISION		DRAINAGE SERVICES DEPARTMENT HONG KONG