Appendix 7: Geotechnical Planning Review Report

Geotechnical Planning Review Report

for

Section 16 Application – Layout Plan Submission and Proposed Minor Relaxation of Building Height Restriction for Permitted Flat Use

in

131 Pok Fu Lam Road, Hong Kong

This report is for our client and is not intended for the use of any third party.

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CMA

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APPENDICES

1) INTRODUCTION

According to "GEO Advice Note for Planning Applications", a geotechnical planning review report will be required if any of the following criteria apply: -

(i) where the maximum gradient across a site from boundary to boundary, or for a large site across any 50m long strip, is greater than 15°,

(ii) where a slope steeper than 30°, or retaining wall, or combination of the two with a height greater than 6m exists on the site or within 6m of the site, or

(iii) where there is ground outside the site but in the same catchment that is at an angular elevation of more than 20° from the site and there is ground sloping at more than 15° within 50m upslope of the site.

This geotechnical planning review report is in support of a Section 16 application under the Town Planning Ordinance for a site located at 131 Pok Fu Lam Road. The application is submitted on behalf of the applicant, Ebenezer School and Home for the Visually Impaired Limited (subsequently referred to as Ebenezer), who currently owns and occupies the site.

This report provides a review of how the geotechnical features in the vicinity, such as retaining walls and/or slopes, shown on the plan may affect, or be affected by, the proposed development and presents an assessment of the geotechnical feasibility of the proposed development as reflected in the Master Layout Plans submitted together with this report (copies of the submitted Master Layout Plans are attached in Appendix A).

The proposed development scheme contains 4 nos. of blocks with a maximum building height to be +164mPD.

DESCRIPTION OF SITE

The Application Site, covering a total site area of about 6,460m², is located at the eastern of Pok Fu Lam Country Park (site location plan and master layout plan are shown in Figures 1 and Appendix A respectively.), it lies approximately between Hong Kong Grid Co-ordinates N831400, N814000, E831800 and E831400.

The subjected site is bounded on the northeast side by Pok Fu Lam Road. The site is irregular in shape. It is surrounded by natural vegetated slopes and positioned at the crest of slope. To the further southeast side is Ebenezer New Hope School Podium. At the southwest side are downslope and the Victoria Road.

The Section 16 application comprises a proposed residential development. The application site is zoned "Residential (Group C)7" ("R(C)7") on the Approved Pok Fu Lam Outline Zoning Plan No. S/H10/21. In accordance with the Notes of the "R(C)7" zone, the proposed residential Flat use is under Column 1 and is always permitted. However, submission of a layout plan is required for any new development or redevelopment of the existing building. As such, this application is for the submission of a layout plan for the proposed residential development in addition to the submission of a layout plan, a minor relaxation of the building height restriction ("BHR") from 151mPD to 164mPD is also requested under this S16 application.

2.1 Site Topography

The subject site is at level ground from +128.5mPD to +131.0mPD.

2.2 Existing Registered Feature

There are 7 Nos. existing registered features identified within and in the vicinity of the proposed development site respectively namely:

11SW-C/F 443, 11SW-C/C 87, 11SW-C/R 19, 11SW-C/R 474, 11SW-C/FR 319, 11SW-C/C 922 and 11SW-C/C923

The location of the above overlaid with the site and coloured area is shown on **Figure 2**

SIS report and SIMAR report indicating the location of this features and their maintenance responsibility are attached in **Appendix B** for ease reference.

Maintenance responsibility of feature located in vicinity to the proposed development:

Feature No.	Sub-division No.	Maintenance Responsibility
11SW-C/F 443	-	Highways Department
11SW-C/C 87	1	RBL136RP
	2	Highways Department
11SW-C/R 19	-	Highways Department
11SW-C/R 474	-	RBL136RP
11SW-C/FR 319	-	RBL136RP
11SW-C/C 922	-	Highways Department
11SW-C/C 923	-	Highways Department

The description of the above features is summarized below:-

Feature No. 11SW-C/F 443 (Wholly Outside Site boundary)
This feature is located at the northwest of the site. Both crest of the feature is bounded by road/footpath with very heavy traffic density. The toe of the feature is bounded by road/footpath with moderate traffic density. This cut slope is about 36m in height and 107m in length with slope gradient of about 28°. The surface of the feature is wholly covered with vegetation. The maintenance responsibility belongs to **Highways Department.**

Feature No. 11SW-C/C 87 (Wholly Within Site boundary)
This feature is located at the northeast of the site. The crest of this feature is bounded by road/footpath with heavy traffic density and the toe of this feature is bounded by school. This cut slope is about 9m in height and 130m in length with slope gradient of about 55°. The surface of the feature is mainly covered with shotcrete. It consists of 60mm diameter weepholes at 1.2m spacing. 300mm diameter water main and 750mm diameter sewer/drain are located on the crest area. Two drainages are located at toe and on slope with same diameter of 300mm. The maintenance responsibility of sub-division 1 belongs to the **RBL136RP** while that of sub-division 2 belongs to the **Highways Department.**

Feature No. 11SW-C/R 474 (Wholly Within Site boundary)
This feature is located at the south of the site. The crest of this feature is bounded by road/footpath with low traffic density and the toe of this feature is bounded by indoor car park. This wall is about 5m in height and 38m in length with slope gradient of about 85°. Electricity line is located on the wall part with diameter not determined. The drainage is located at toe with diameter of 125mm. The maintenance responsibility belongs to the **RBL136RP.**

Feature No. 11SW-C/R 19 (Wholly Outside Site boundary)
This feature is located at the northwest of the site. The crest of this feature is bounded by road/footpath with heavy traffic density and the toe of this feature is bounded by lightlyused open area/ facilities. This wall is about 6m in height and 148m in length with slope gradient of about 90°. The drainage is located at toe with diameter of 300mm. The maintenance responsibility belongs to **Highways Department.**

Feature No. 11SW-C/FR 319 (Partly Within Site boundary)

This feature is located at the southwest of the site. The crest of this feature is bounded by school and the toe of this feature is bounded by road/footpath with moderate traffic density. The slope part of the feature is about 12m in height and 155m in length with slope gradient of about 40° while the wall part is about 12m in height and 150m in length with slope gradient of about 80°. The surface of the feature is wholly covered with shotcrete. It consists of 50mm diameter weepholes at 2m spacing in wall part. Electricity line is located on slope with diameter not determined. Drainages at crest of both slope and wall are with diameter of 225mm while drainage on slope is with diameter of 900mm. The maintenance responsibility belongs to the **RBL136RP**.

Feature No. 11SW-C/C 922 (Wholly Outside Site boundary)

This feature is located at the southwest of the site. The crest of this feature is bounded by undeveloped green belt and the toe of this feature is bounded by road/footpath with moderate traffic density. This cut slope is about 15.1m in height and 64m in length with slope gradient of about 63°. Berm is located on slope with minimum width of 2.5m. The surface of the feature is covered with vegetation, shotcrete and other protection cover. Four drainages are located at berm, crest, toe and on slope with diameter of 225mm. The maintenance responsibility belongs to the **Highways Department**. It was upgraded by means of soil nails, screen wall, dowel bars, shotcrete, surface drainage system, replacement of existing Fill materials by cement soils, weepholes, etc.

Feature No. 11SW-C/C 923 (Wholly Outside Site boundary)

This feature is located at the southwest of the site. The crest of this feature is bounded by undeveloped green belt and the toe of this feature is bounded by road/footpath with moderate traffic density. This cut slope is about 12m in height and 79m in length with slope gradient of about 63°. The surface of the feature is wholly covered with shotcrete and other protection cover. Four drainages are located at crest, toe and on two slopeparts with diameter of 300mm. The maintenance responsibility belongs to the **Highways Department**.

3) SITE GEOLOGY

With reference to the 1:20,000 geological map published by the Geotechnical Control Office at 2012, Hong Kong Geological Survey Sheet 11 Edition 2, the superficial deposits comprise fine grained Granite from Jurassic – Cretaceous Period of the Mesozoic Era.

This would be confirmed by findings of existing and proposed ground investigation results.

3.1 Existing site investigation

Ground investigation records for the LPMit Programme in 2011 are available in GIU (GIU ref. No. 56988).

One boreholes (DH8) is located in the vicinity of the site.

The geology comprises Fill, Colluvium/Top Soil, Colluvium, Saprolitic Soil and Weathered Rock and Bedrock.

The bedrock is likely feldsparphyric Rhyolite and fine grained Granite at level varying between +83.28mPD and +130.41mPD.

Copies of the drillhole logs are attached in Appendix C. Site investigation works would be proposed so as to obtain information for future design analyses.

3.2 Proposed site investigation

Site-specific site investigation works would be proposed to obtain information for the future design analyses.

The proposed works include:

- Vertical / Inclined Drillholes (with piezometers/standpipes)
- Trial pits
- Slope stripping

3.3 Soils and Rock

According to the Drillhole records from the site investigation, the subsurface typically consist of Fill, Colluvium/Top Soil, Colluvium, Saprolitic Soil and Weathered Rock and Bedrock

Based on the currently available information, general description of each stratum is outlined as below:

- Fill – Dark brown and greyish brown, sandy SILT with some angular to subangular fine to coarse gravel sized highly decomposed and moderately decomposed rock fragments and occasional angular cobble sized moderately decomposed Granite, clayey / silty fine to coarse SAND with angular to subangular fine to coarse gravel sized highly decomposed and moderately decomposed rock fragments and occasional angular to subangular cobble sized moderately decomposed Granite,sandy angular to subangular fine to coarse GRAVEL, COBBLE and BOULDER sized highly decomposed to slightly decomposed Granite and Tuff with some angular to subangular fine to coarse gravel sized highly decomposed and moderately decomposed rock fragments and occasional brick fragments, with thickness varying between 1m and 5.09m.

- Colluvium/Top Soil – Firm, brown and dark brown, sandy SILT with occasional subangular fine gravel sized highly decomposed rock fragments sand some rootlets and silty fine to coarse SAND with some angular to subangular fine to coarse gravel sized highly decomposed to slightly decomposed rock fragments, with thickness varying between 0.5m and 0.7m.

- Colluvium – Firm, pinkish grey, spotted black, angular BOULDER of slightly decomposed fine grained Granite with thickness around 0.69m.

- Saprolitic Soil and Weathered Rock – Moderately strong, pinkish grey, dappled brown and dark brown, sandy angular to subangular COBBLES with some angular fine to coarse gravel (Saprolitic Soil). Moderately strong, grey, dappled dark grey, slightly decomposed and moderately decomposed fine grained Granite and moderately decomposed and slightly decomposed feldsparphyric Rhyolite (Weathered Rock), with thickness varying between 0.45m and 2.53m.

- Bedrock (feldsparphyric Rhyolite and fine grained Granite) – Strong, dark grey and motted light grey and pink. The rockhead level is around +68.99mPD to 115.46mPD.

3.4 Soil Parameters

Without the laboratory test results from the detailed ground investigation, the recommended soil parameters for preliminary design and analysis are summarized below: -

Recommended Soil Parameters for Drained Design			
Soil Type	Bulk Density γ (kN/m^3)	Effective cohesion c' (kPa)	Effective friction angle ϕ' (degree)
Fil / Top soil	19	0	35
Colluvium	19	3	35
Rock	26	10	40

The recommended soil strength parameters are the intermediate values of geotechnical parameters as suggested in Table 8 of the GEOGUIDE I [GEO, 1993).
The geotechnical parameters will be reviewed upon the completion of future ground Investigation and laboratory tests.

3.5 Groundwater

Groundwater monitoring was carried out during the ground investigation works in September, 2012. Based on the available groundwater monitoring record for previous ground investigation works, the measured groundwater level is all dry.

Piezometers and/or standpipes may be installed as part of the future ground investigation works so as to measure and confirm the groundwater table regularly in the vicinity of the proposed development. The design ground water table shall be 1 m above the highest observed ground water table or one-third of the retained height / slope height, whichever is higher.

4) GEOTECHNICAL CONSIDERATIONS

4.1 Proposed Excavation and Lateral Support Work (ELS)

The existing ground level of the site varies from +128.3mPD to +128.6mPD.

Open cut excavation is consider feasible for site area without level difference, given there is enough area within the site. In order to facilitate two levels of basement construction below the existing ground level or other site constraints, it is considered feasible to install pile walls. Based on the master layout plan, approximate 47,000 m3 of soil/rock will be excavated to facilitate the construction of the development. In view of the level difference between the existing ground level and the final excavation level (i.e. approximately 10m), pipe pile wall or the like with struts would be adopted to retain the level difference, Preboring technique will be undertaken for the underground obstruction if necessary.

The ELS works should be designed in a manner that the effect of the proposed works should be minimal and does not cause significant effects on adjacent grounds, structures. The ground movement due to the deflection of the pile wall as well as groundwater drawdown should be determined. The differential settlements of adjoining structures and surrounding utilities caused by the proposed ELS works should also be considered in detailed design.

4.2 Proposed Foundation

The foundation systems for structures will be designed to resist the following loads:-

- Dead and live vertical loads from the superstructure
- Lateral wind loads
- Uplift forces from groundwater

Based on the height and configuration of the proposed building and the available information on the geology of the site, the following foundation types are considered feasible for the building.

In accordance with the Code of Practice for Foundations [BD, 2017], the allowablebearing pressure shall be as follows:

Category	Description of rock or soil	Presumed allowable bearing pressure (kPa, without wind)
1(c)	Slightly to moderately decomposed moderately strong granite or volcanic rock of material weathering grade III or better, and with not less than 85% TCR of the designated grade, which has a minimum UCS of rock material not less than 25 MPa (or an equivalent point load index strength PLI50 not less than 1 MPa)	5000
1(d)	Moderately decomposed, moderately strong to moderately weak granite or volcanic rock of material weathering grade III or better, and with not less than 50% TCR of the designated grade.	3000
2	Meta-Sedimentary rock: Moderately decomposed, moderately strong to moderately weak meta-sedimentary rock of material weathering grade III or better, and with not less than 85% TCR of the designated grade.	3000
3	Intermediate soil (decomposed granite and decomposed volcanic): Highly to completely decomposed, moderately weak to weak rock of material weathering grade V or better, with SPT N-value ≥ 200	1000

The effect of the foundation load to the adjacent slope features will also be checked during the detailed design stage.

Proposed Building

Raft foundation

Raft foundation is considered feasible option for supporting the proposed development. Raft foundation will be founded on rock with high bearing capacity, comparing with the pile foundation. With the raft foundation, settlements will be designed to a tolerable and allowable limit taking the benefit of the high rock contact pressure.

The effect of the foundation load to the adjacent slope features will also be checked during the detailed design stage. Design of the raft foundation and assessment of the loading capacities of the proposed foundation are to be carried out in the detailed design stage.

Socketed H-Pile Foundation

Pile foundation is also considered feasible when rockhead level is relatively deep for construction raft footing. Socketed H-piles socketed into bedrock are considered to be feasible for supporting low-rise and basement structure. Based on the currently available ground investigation records, the rockhead level is located varies from +68.99mPD to 115.46mPD.

The proposed foundation should be designed in a way such that the effect on adjacent buildings, utilities and structures shall be insignificant.

4.3 Proposed Site Formation

No hillside to be found at the horizontal upslope of the site boundary.
For construction of the buildings and formation of the development, portion of the existing slope or platform will be removed and to cater for the level difference between the existing slope profile and the final formation levels and extent for the construction of the proposed building and access road, retaining structures would be constructed if necessary.

Effect of Proposed Development to Features in the Vicinity

Feature No. 11SW-C/F 443 (Wholly Outside Site boundary)
This feature is located at the north-west side of the site along the lot boundary, proposed works area to be away from this feature. The design and construction of the proposed redevelopment is considered in such a way that the effect to this feature is insignificant and vice versa.

Feature No. 11SW-C/C 87 (Wholly Within Site boundary)
The feature part within our site will be partially removed and proposed development is proposed at the toe of this feature. The level difference between the existing ground and proposed ground will be retained by retaining structure. The stability of the feature and effect from the proposed work will be checked against the current standard in the detailed design stage and modified if necessary.

Feature No. 11SW-C/R 19 (Wholly Outside Site boundary)
This feature is located at the north-west side of the site outside the lot boundary, proposed works area to be away from this feature. The design and construction of the proposed redevelopment is considered in such a way that the effect to this feature is insignificant and vice versa.

Feature No. 11SW-C/R 474 (Wholly Within Site boundary)
The feature part is located at the southern side of the site, which is supporting the existing access road connecting Pok Fu Lam Road. Proposed works area to be away from this feature. The design and construction of the proposed redevelopment is considered in such a way that the effect to this feature is insignificant and vice versa.

Feature No. 11SW-C/FR 319 (Partly Within Site boundary)
The feature part within our site will be removed and proposed development is proposed at the crest of this feature. The stability of the feature and effect from the proposed work will be checked against the current standard in the detailed design stage and modified if necessary.

Feature No. 11SW-C/C 922 (Wholly Outside Site boundary)
This feature is located at the south-west side of the site along the lot boundary, proposed works area to be away from this feature. The design and construction of the proposed redevelopment is considered in such a way that the effect to this feature is insignificant and vice versa.

Feature No. 11SW-C/C 923 (Wholly Outside Site boundary)
This feature is located at the south-west side of the site along the lot boundary, proposed works area to be away from this feature. The design and construction of the proposed redevelopment is considered in such a way that the effect to this feature is insignificant and vice versa.

4.4 Effect of Proposed Development to surrounding structures

The effect on adjacent ground / structures due to excavation and lateral support works will be further assessed. Any excavation and lateral support works required will be duly designed at the detailed design stage.

If pile foundation are proposed to support the building, all the foundation would be designed to be socketed into rock / founded on rock and the development will be designed in a way that all loads will be transferred to the rock stratum. Hence, it is considered that effect on adjacent ground due to the foundation work shall be insignificant.

4.5 Existing Utilities

At the current stage, information for existing utilities is not yet available. Prior to the commencement of pile wall / foundation construction, inspection pits would be dug by hand tool to identify the exact location of the surrounding utilities. If necessary, diversion of the utilities would be carried out.

Excavation and Lateral Support

If pile walls are proposed for ELS works, ground movement due to the deflection of the pile wall and groundwater drawdown may cause adverse effect on the surrounding utilities. The ELS works should be designed in a manner that the effect of the proposed works should be minimal and does not impose any adverse effects on adjacent grounds and structures.

Foundation

If pile foundation works are proposed to support the building, the foundation works may cause negligible vibration to the surroundings. It is considered that the proposed foundation works would not render any adverse effects on the surrounding utilities.

Comprehensive monitoring programme on the surrounding utilities is proposed to monitor the effect of the proposed works on the surrounding utilities.

5) MONITORING PROGRAMME

A comprehensive monitoring programme shall be implemented on site in order to safeguard the adjacent utilities, structures and/or slopes & retaining walls. The locations and details of the monitoring works shall be addressed in the detailed design stage.

A comprehensive monitoring programme comprising the following will be implemented on site during the construction of excavation and lateral supports works and foundation works in order to safeguard the adjacent utilities, structures and slopes:

1. Ground settlement check points around the site;
2. Utilities settlement check points on existing utilities;
3. Vibration Check points around the site;
4. Piezometers/standpipes at locations around the site.

The locations and details of the monitoring works shall be addressed in the detailed design stage. The initial readings of all the above monitoring points and piezometers / standpipes will be taken prior to the construction works on site and these devices will be monitored on a daily basis throughout the construction period for excavation and foundation works.

The initial readings of all the above monitoring points and piezometers/standpipes shall be taken prior to the commencement of construction works on site and these devices shall be monitored regularly throughout the construction works.

6) CONCLUSION

This report has provided a review of how the geotechnical features in the vicinity, such as retaining walls and/or slopes shown on the plan may affect, or be affected by the proposed development and has discussed all the relevant issues regarding the geotechnical assessment of the proposed development.

All structures, utilities, slopes and retaining walls affecting or being affected by the proposed development will be assessed, If necessary, upgrading works will be carried out in detailed design to ensure that the slopes and retaining walls will not be adversely affected.

With reference to the preceding discussions, it is considered that the proposed development is **geotechnically feasible.**

7) References

BD (2017). *Code of Practice for Foundations 2017.* The buildings department. Hong Kong, 104p.
GEO (1987). *Geoguide 2. Guide to Site Investigation*. Geotechnical Engineering Office. Civil Engineering and Development Department. Hong Kong, 359p.
GEO (1988). *Geoguide 3. Guide to Soil and Rock Descriptions.* Geotechnical Engineering Office. Civil Engineering and Development Department. Hong Kong. 186p.
GEO (2012). *1:20,000 Solid & Superficial Geology. Sheet 11.* Geotechnical Engineering Office. Civil Engineering and Development Department. Hong Kong.
GEO (2019) *Slope information system*. Geotechnical Engineering Office, Civil Engineering and Development Department.

Figures

Figure 1: Site Location Plan

The Government of the Hong Kong SAR. (Printed by Lai Yun Kit)

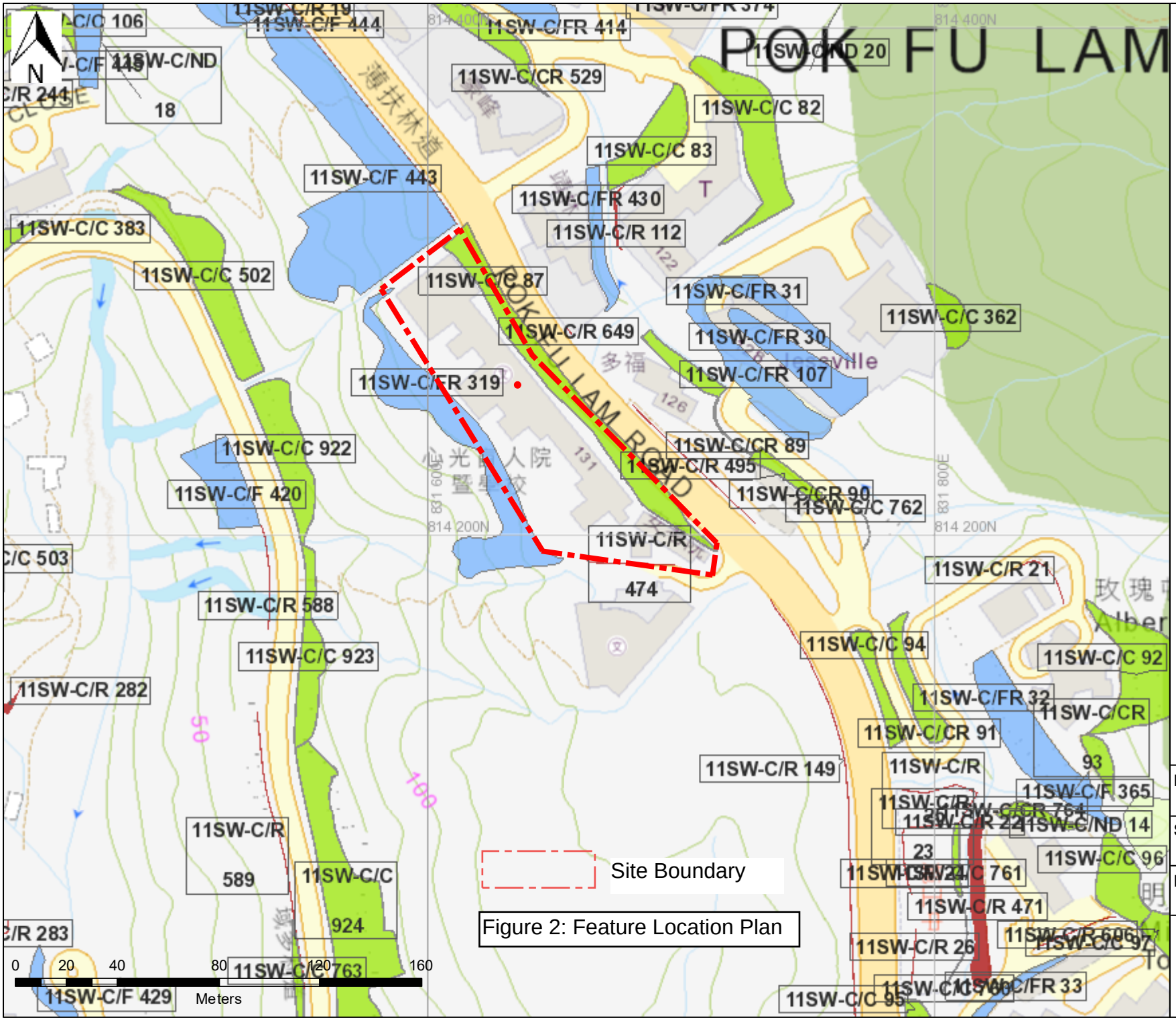

Figure 2: Feature Location Plan

Man-made Features

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

Slope Features

Division	
Scale	1:2,000
Date	19/07/2021

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CEDD
CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

The Government of the Hong Kong SAR. (Printed by Lai Yun Kit)

HONG KONG GEOLOGICAL SURVEY

HONG KONG & KOWLOON

Sheet 11

SOLID AND SUPERFICIAL GEOLOGY

Series HGM20

Scale 1:20 000

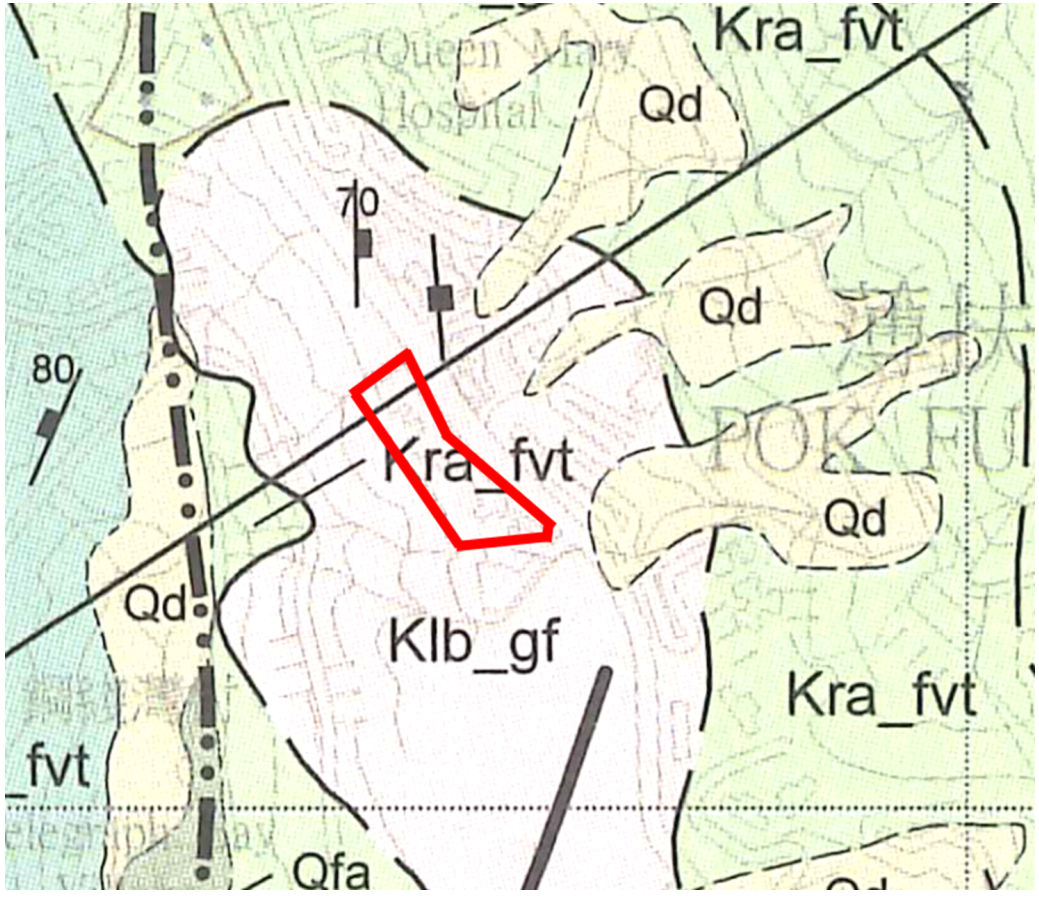
Sheet 11

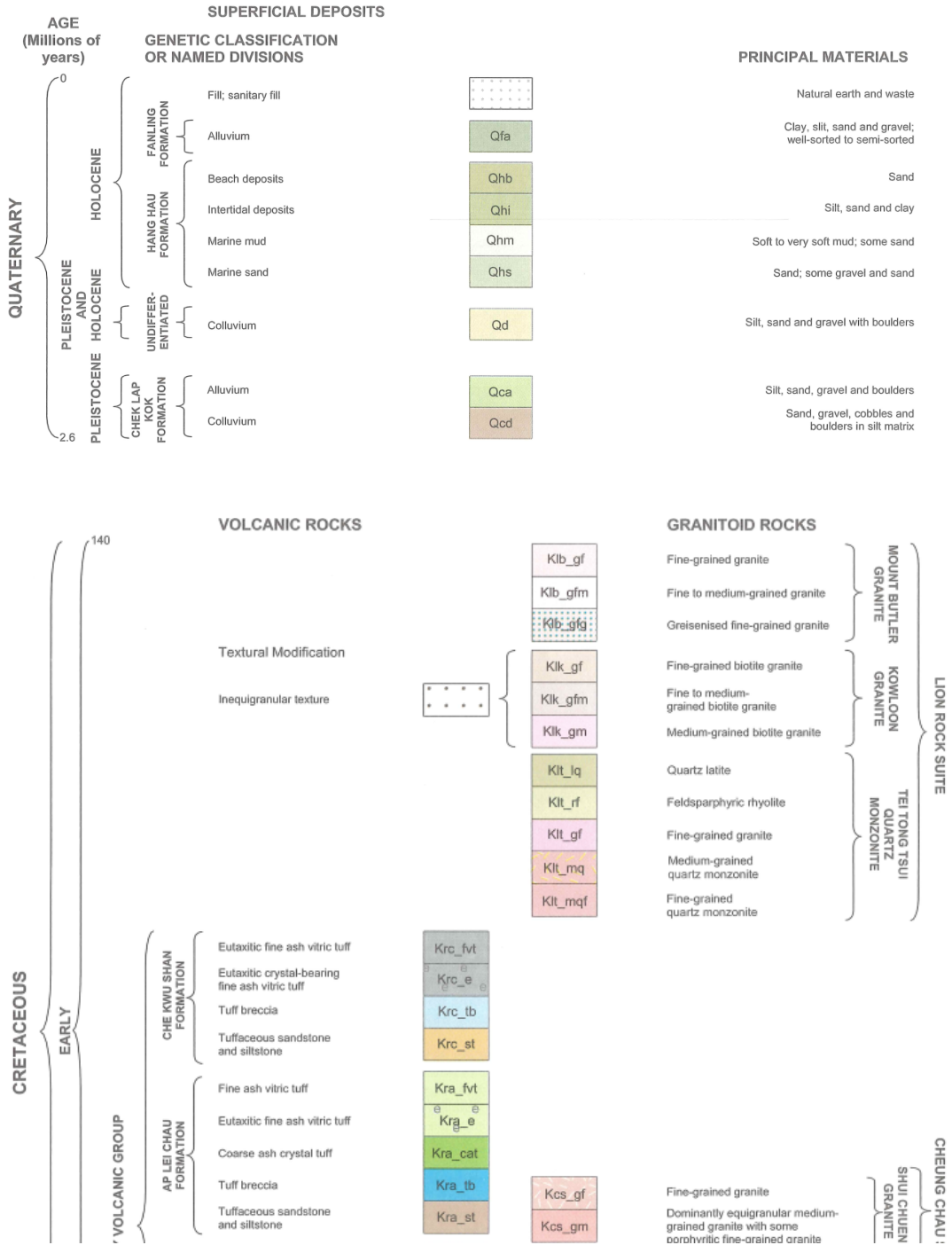
Series HGM20

Edition II - 2012

GEOTECHNICAL ENGINEERING OFFICE

Geological explanatory notes, base map reference and geological cross-sections printed on reverse side



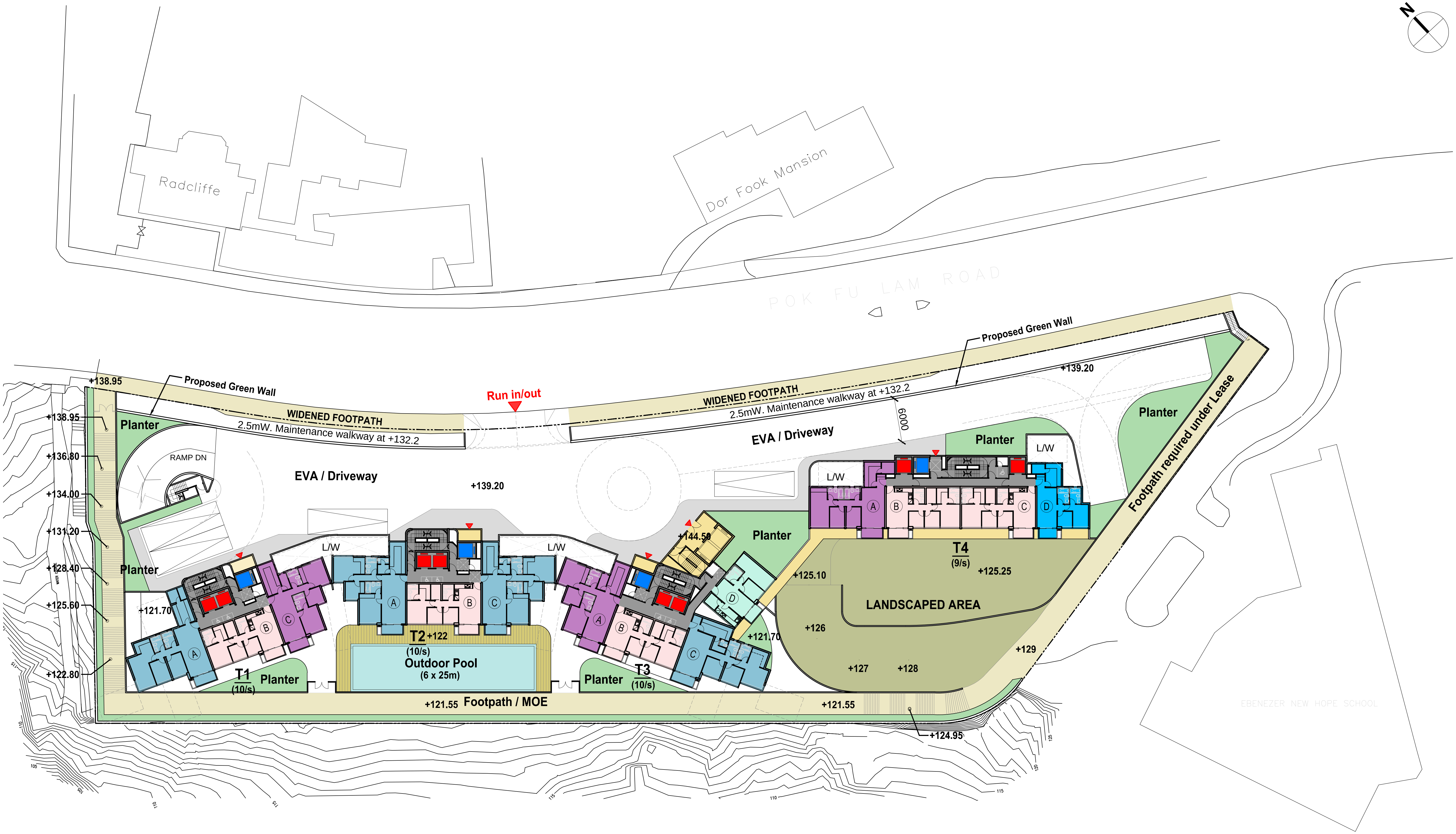


Site Boundary

Figure 3: Hong Kong Geological Map Sheet

Appendix A

Master Layout Plan



N
Radcliffe
Dor Fook Mansion
POK FU LAM ROAD
Proposed Green Wall
WIDENED FOOTPATH
2.5mW. Maintenance walkway at +132.2
Run in/out
EVA / Driveway
+139.20
6000
Planter
L/W
RAMP DN
+138.95
+136.80
+134.00
+131.20
+128.40
+125.60
+122.80
+121.70
T1
(10/s)
T2
+122
(10/s)
Outdoor Pool
(6 x 25m)
T3
(10/s)
T4
(9/s)
+144.50
+125.10
+125.25
LANDSCAPED AREA
+126
+127
+128
+129
+121.55
Footpath / MOE
+124.95
Footpath required under Lease
EBENEZER NEW HOPE SCHOOL

Handi Architects Limited

UNIT 2010, 20/F, TOWER 1, GRAND CENTURY PLACE, 193 PRINCE EDWARD ROAD WEST, KOWLOON T: 2547 1267 F: 2875 1467

PROJECT TITLE	DRAWING TITLE	DRAWING NO.	SCALE	REV. NO.	DATE / REVISION NO.	APPROVAL BY
PROJECT LILY	LAYOUT PLAN - UG/F (SCHEME 4)		1:500	-	25 OCT 2023	DATE OF APPROVAL

Handi Architects Limited
UNIT 2010, 20/F, TOWER 1, GRAND CENTURY PLACE,
193 PRINCE EDWARD ROAD WEST, KOWLOON
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PROJECT TITLE
PROJECT LILY

DRAWING TITLE
LAYOUT PLAN - B1/F
(SCHEME 4)

DRAWING NO.	SCALE	REV. NO.	DATE / REVISION NO.	APPROVAL BY
	1:500	-	25 OCT 2023	DATE OF APPROVAL

N

Radcliffe

Dor Fook Mansion

POK FU LAM ROAD

Run in/out access from
Pokfulam Road above

2.5mW. Maintenance walkway

E/M

RAMP DN

RAMP UP

+131.20

NO. of CP = 31 nos.

+132.20

Driveway

Residential
Shuttle Lift
Lobby

L/W

A

B

C

D

+132.50

T1
(10/s)

T2
(10/s)

T3
(10/s)

EBENEZER NEW HOPE SCHOOL

Handi Architects Limited

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193 PRINCE EDWARD ROAD WEST, KOWLOON

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PROJECT TITLE
PROJECT LILY

DRAWING TITLE
LAYOUT PLAN - B2/F
(SCHEME 4)

DRAWING NO.	SCALE	REV. NO.	DATE / REVISION NO.	APPROVAL BY
	1:500	-	25 OCT 2023	DATE OF APPROVAL

N

Radcliffe

Dor Fook Mansion

POK FU LAM ROAD

E/M

E/M

E/M

1500

NO. of CP = 41 nos.

5500

+128.70

Driveway

Residential
Shuttle Lift
Lobby

Void

Footpath required under Lease

RAMP UP

+128.40

L/W

L/W

E/M

T1
(10/s)

T2
(10/s)

T3
(10/s)

+129

+124.95

EBENEZER NEW HOPE SCHOOL

Handi Architects Limited
UNIT 2010, 20/F, TOWER 1, GRAND CENTURY PLACE, 193 PRINCE EDWARD ROAD WEST, KOWLOON
T: 2547 1267
F: 2875 1467

PROJECT TITLE
PROJECT LILY

DRAWING TITLE
LAYOUT PLAN - B3/F
(SCHEME 4)

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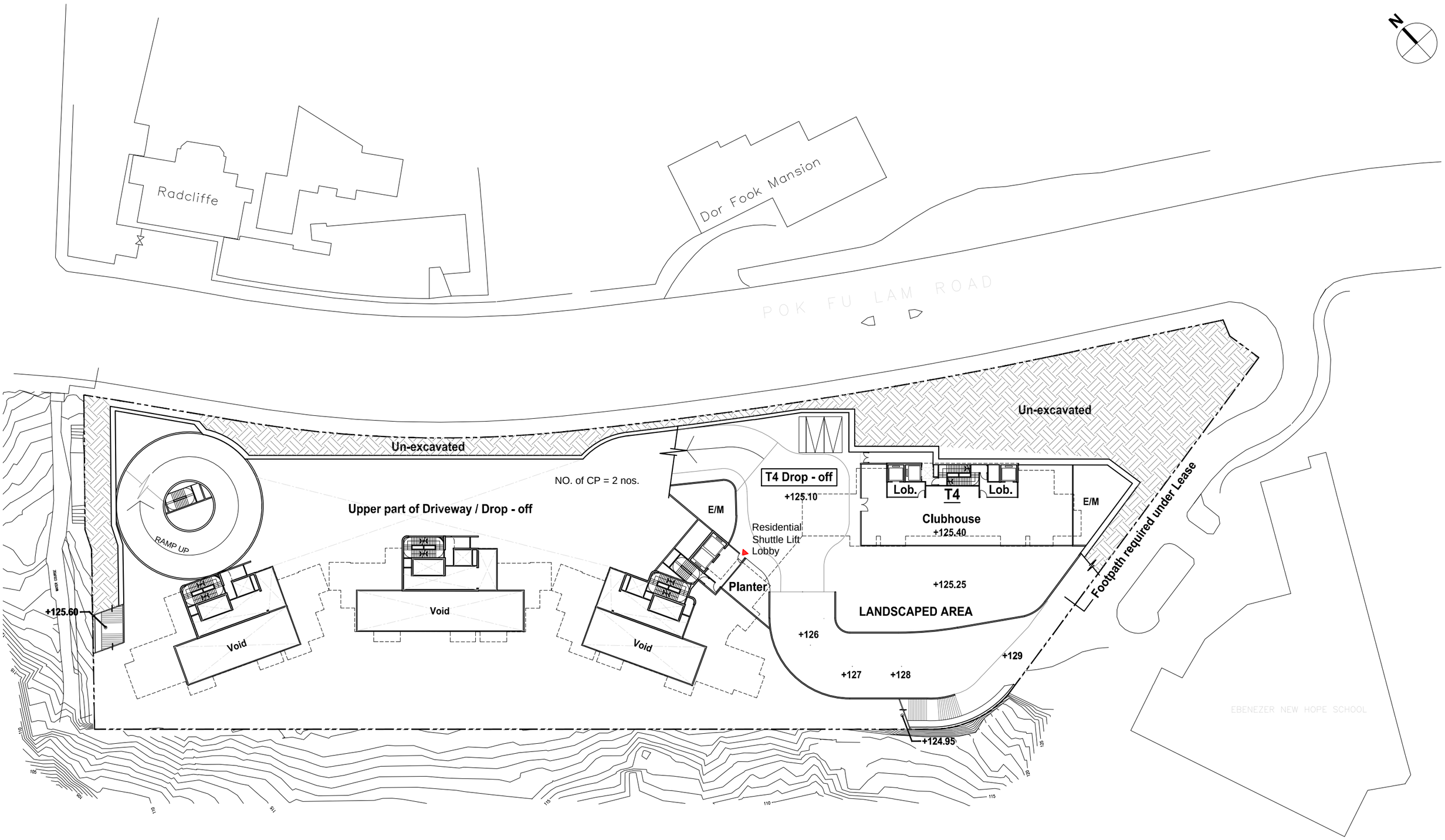

Handi Architects Limited
UNIT 2010, 20/F, TOWER 1, GRAND CENTURY PLACE, 193 PRINCE EDWARD ROAD WEST, KOWLOON
T: 2547 1267
F: 2875 1467

PROJECT TITLE
PROJECT LILY

DRAWING TITLE
LAYOUT PLAN - LG1/F
(SCHEME 4)

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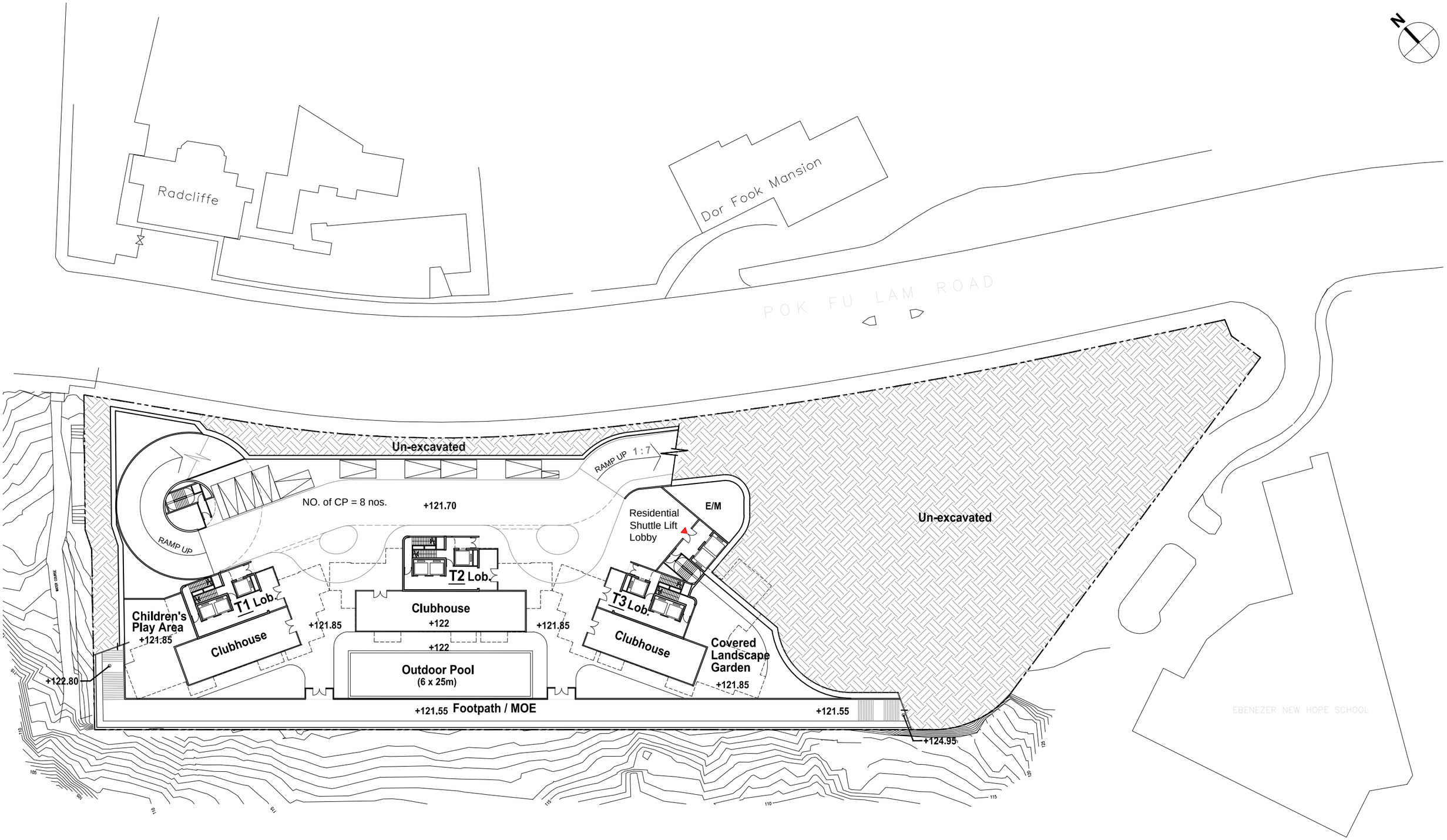
	1:500	-	25 OCT 2023	DATE OF APPROVAL

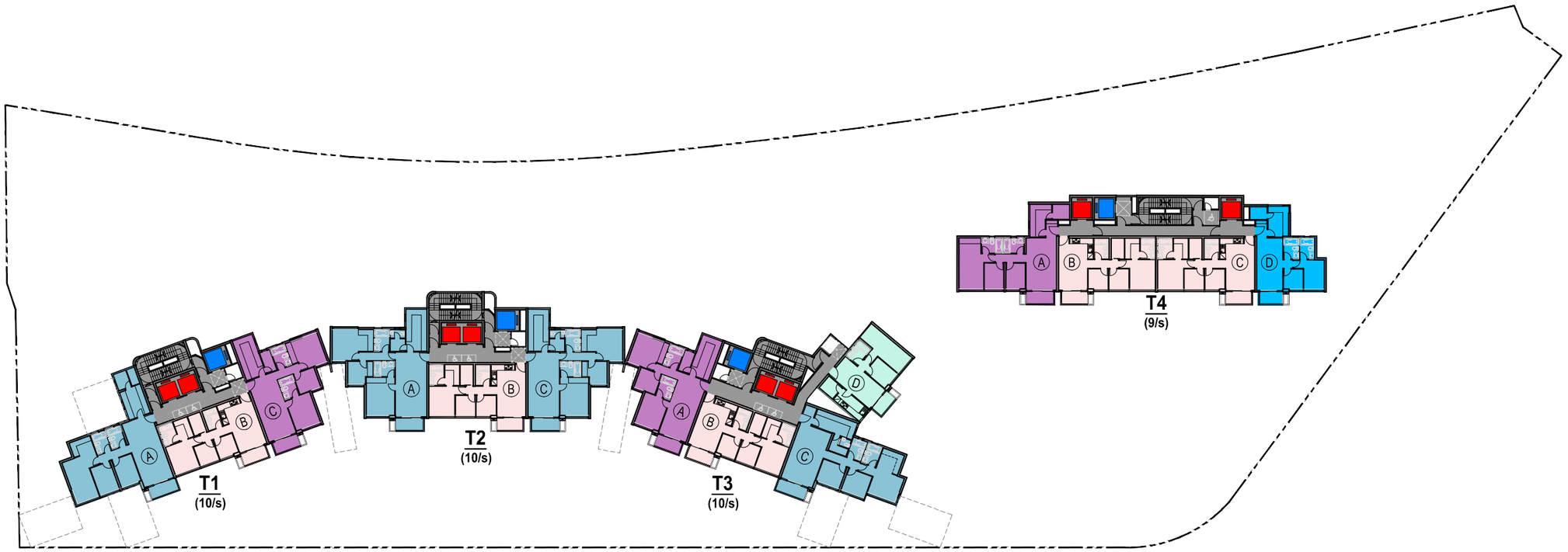


Handi Architects Limited
UNIT 2010, 20/F, TOWER 1, GRAND CENTURY PLACE, 193 PRINCE EDWARD ROAD WEST, KOWLOON
T: 2547 1267
F: 2875 1467

PROJECT TITLE
PROJECT LILY

DRAWING TITLE
LAYOUT PLAN - LG2/F
(SCHEME 4)

DRAWING NO.	SCALE	REV. NO.	DATE / REVISION NO.	APPROVAL BY
	1:500	-	25 OCT 2023	DATE OF APPROVAL

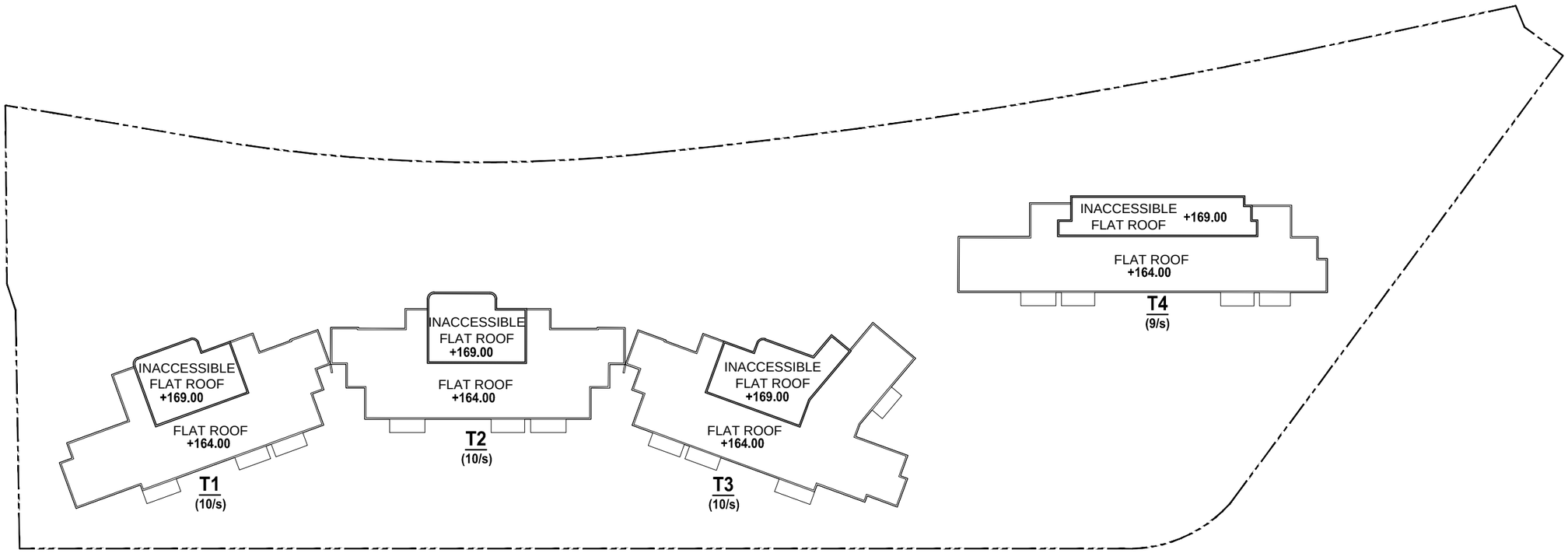


Handi Architects Limited
UNIT 2010, 20/F, TOWER 1, GRAND CENTURY PLACE,
193 PRINCE EDWARD ROAD WEST, KOWLOON
T: 2547 1267
F: 2875 1467

PROJECT TITLE
PROJECT LILY

DRAWING TITLE
LAYOUT PLAN - TYPICAL FLOOR
(SCHEME 4)

DRAWING NO.	SCALE	REV. NO.	DATE / REVISION NO.	APPROVAL BY
	1:500	-	25 OCT 2023	DATE OF APPROVAL

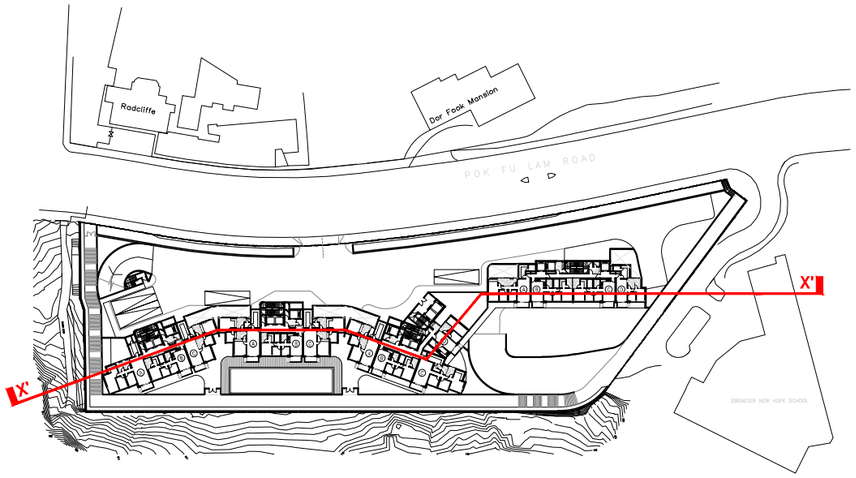


Handi Architects Limited
UNIT 2010, 20/F, TOWER 1, GRAND CENTURY PLACE,
193 PRINCE EDWARD ROAD WEST, KOWLOON
T: 2547 1267
F: 2875 1467

PROJECT TITLE
PROJECT LILY

DRAWING TITLE
LAYOUT PLAN - ROOF FLOOR
(SCHEME 4)

DRAWING NO.	SCALE	REV. NO.	DATE / REVISION NO.	APPROVAL BY
	1:500	-	25 OCT 2023	DATE OF APPROVAL



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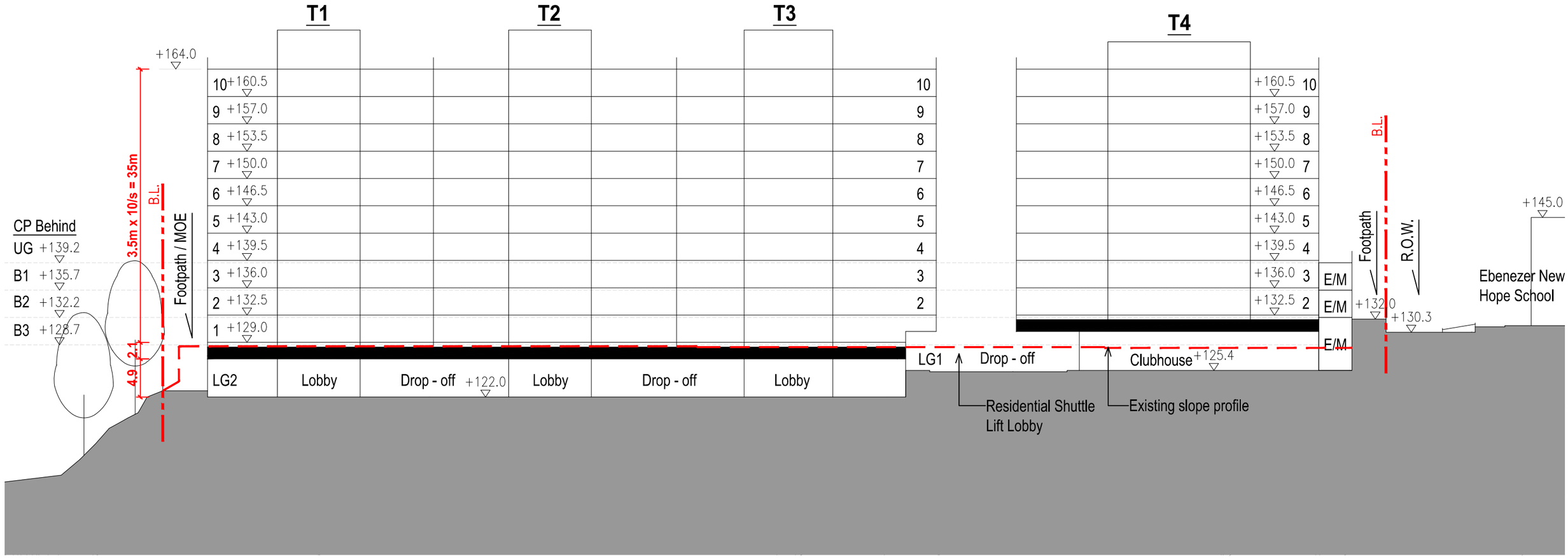


Handi Architects Limited
UNIT 2010, 20/F, TOWER 1, GRAND CENTURY PLACE,
193 PRINCE EDWARD ROAD WEST, KOWLOON
T: 2547 1267
F: 2875 1467

PROJECT TITLE
PROJECT LILY

DRAWING TITLE
SECTION X-X'
(SCHEME 4)

DRAWING NO.	SCALE	REV. NO.	DATE / REVISION NO.	APPROVAL BY
	1:500	-	9 NOV 2023	DATE OF APPROVAL

Residential Portion ⟷ Carpark Portion
(Need to be separated from Residential Portion for GFA exemption)

T1

+223

Radcliffe

+164

10

5

1

Sea View

Sea View

Greenery View

3.5m x 10/s = 35m

B.L.

Footpath / MOE

+129

2.1

4.9

LG2 CH

Lobby

7

UG L/UL

B1

B2

B3

3.5

3.5

3.5

+139.2

2.5

+135.7

+132.2

+128.7

1.5

+121.7

E/M

B.L.

Pok Fu Lam Road

+138.8

+147.9

2.5mW. Maintenance Walkway at +132.2

1.5mW. Retaining structure for Existing Slope under Pokfulam Road

Existing slope profile

Handi Architects Limited

UNIT 2010, 20/F, TOWER 1, GRAND CENTURY PLACE, 193 PRINCE EDWARD ROAD WEST, KOWLOON
T: 2547 1267
F: 2875 1467

PROJECT TITLE
PROJECT LILY

DRAWING TITLE
SECTION W-W'
(SCHEME 1)

DRAWING NO.	SCALE	REV. NO.	DATE / REVISION NO.	APPROVAL BY
	1:500	-	28 JUL 2023	DATE OF APPROVAL

Appendix B

SIS Data Sheets, SIS Plans and SIMAR Reports

BASIC INFORMATION

Location:	Pok Fu Lam Road
Registration Date:	04-10-2013
Ranking Score (NPRS):	0 (LPMit)
Date of Formation:	pre-1977
Date of Construction/ Modification:	
Data Source:	LPM
Approximate Coordinates:	Easting : 831587 Northing : 814339

CONSEQUENCE-TO-LIFE CATEGORY

Facility at Crest:	Road/footpath with very heavy traffic density
Distance of Facility from Crest (m):	0
Facility at Toe:	Road/footpath with moderate traffic density
Distance of Facility from Toe (m):	40
Consequence-to-life Category:	1
Remarks:	N/A

SLOPE PART

(1) Max. Height (m): 36 Length (m): 107 Average Angle (deg): 28

WALL PART

N/A

MAINTENANCE RESPONSIBILITY

(1) Sub Div.: 0 Government Feature Party: HyD Agent: HyD Land Cat.: 5b(iii) Reason Code: 56 MR Endorsement Date: 03-12-2014

DETAILS OF SLOPE / RETAINING WALL

Date of Inspection: 01-08-2016
Data Source: LPM
Slope Part Drainage: N/A

Wall Part Drainage: N/A

SLOPE PART

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

WALL PART

N/A

SERVICES

N/A

CHECKING STATUS INFORMATION

N/A

BACKGROUND INFORMATION

GIU Cell Ref.:	N/A
Map Sheet Reference (1:1000):	N/A
Aerial Photos:	N/A
Nearest Rainguage Station (Station Number):	()
Data Collected On:	01-08-2016
Date of Construction, Subsequent Modification and Demolition:	N/A
Related Reports/Files or Documents:	N/A
Remarks:	N/A
Follow Up Actions:	N/A

DH-Order (To Be Confirmed with Buildings Department): None

Advisory Letter (To Be Confirmed with Buildings Department): None

LPMIS: Agreement No.: CE27/2011 Report No.: S3R 034/2015

ENHANCED MAINTENANCE INFORMATION

From Maintenance Department: (Last Updated Date: 10/03/2021)

STAGE 1 STUDY REPORT

Inspected On:
Weather:
District: N/A

Section No: 1-1
Height(m):
Type of Toe Facility: Road/footpath with moderate traffic density

Distance from Toe(m): 40
Type of Crest Facility: Road/footpath with very heavy traffic density

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

Section No: 2-2
Type of Toe Facility:

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

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

Sign of Seepage:

Criterion A satisfied:

Sign of Distress:

Criterion D satisfied:

Non-routine maintenance required:

Note:

Masonry wall/Masonry facing:

Note:

Consequence category (for critical section):

Observations: N/A

Emergency Action Required:

Action By: N/A

ACTION TO INITIATE PREVENTIVE WORKS

Criterion A/Criterion D: N/A

Action By: N/A

Further Study:

Action By: N/A

OTHER EXTERNAL ACTION

Check / repair Services:

Action By: N/A

Non-routine Maintenance:

Action By: N/A

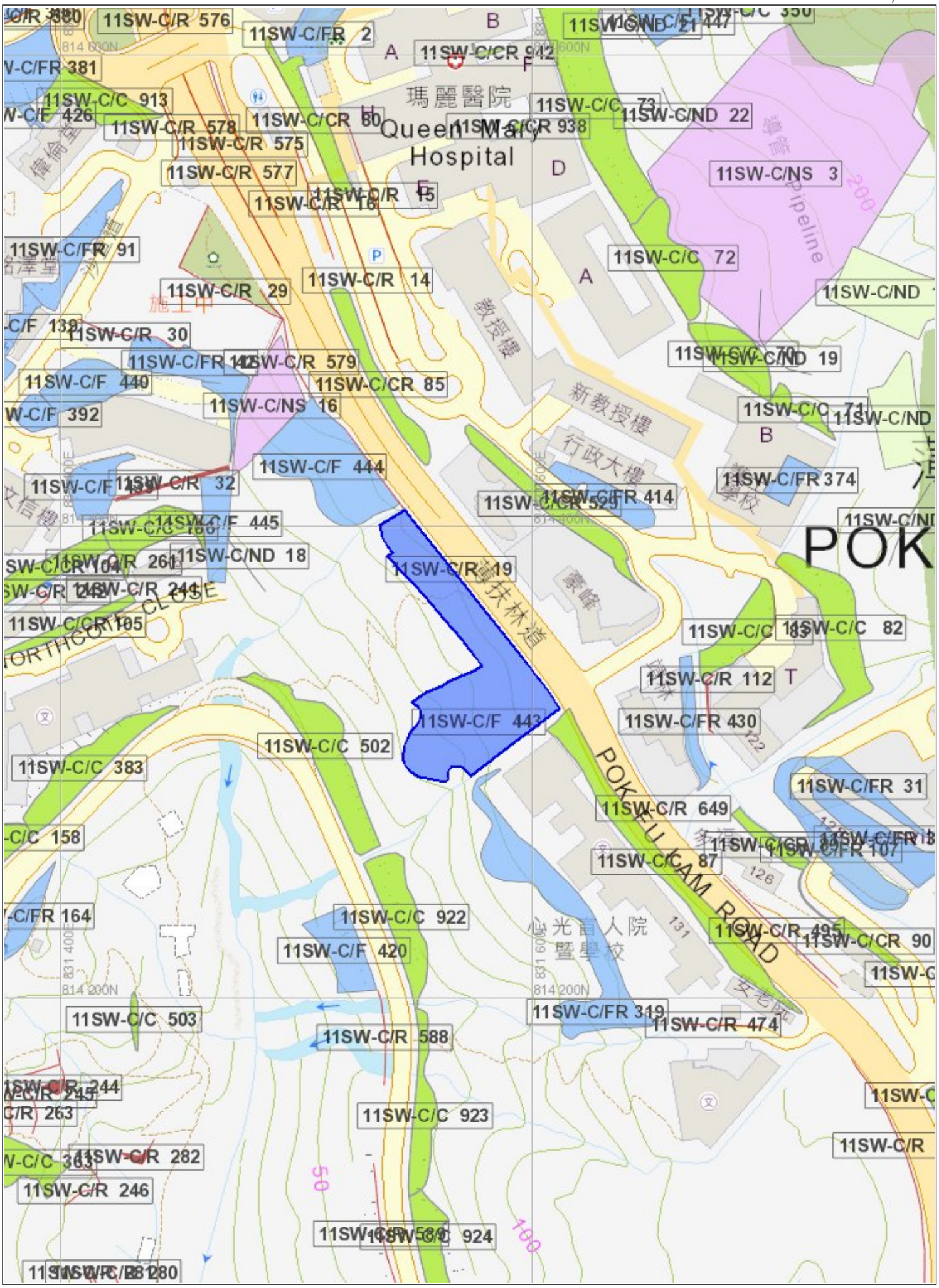
eLPMIS

LPM/LPMit Details Report
- LPM Study Feature No.: 11SW-C/F 443
- Location: Pok Fu Lam Road
- District Council: Southern
- Maintenance Responsibility (At the Time of Selection): Government
- Responsible Party for Maintenance of Government Portion: HyD
- Private Lot No.: N/A

LPM/LPMit Study
- Agreement No.: CE27/2011
- Study Type: Stage 3 Study Under Schedule of Rates Contract
- Consultant: C M Wong & Associates Ltd.
- GEO Managing Section / Engineer: LPM2 / CM42
- Study Status: Study completed
- Design Approach: Conventional (GI + Analysis)
- Option Assessment Accepted: Y
- Study Report No.: S3R 034/2015
- Programme / Actual Commencement: 15-12-2014
- Programme / Actual Completion: 10-03-2015
- Report Recommendation (For Stage 2 Study): N/A
- District Check Status: N/A
- Checking Certificate No.: GEO/LPM224/2015
- GEO Engineer's Remarks: N/A

LPM/LPMit Works
- Works Contract No.: GE/2013/13
- GEO Managing Section / Engineer: LPM2 / CM42
- Contractor: Tai Kam Construction Engineering Co., Ltd
- Progress Status: Maintenance completed
- Reason of Study Termination / Works Deletion (If Necessary): N/A
- Forecast Commencement Date: 23-03-2015
- Forecast Completion Date: 11-12-2015
- Completion Cert. Issued: 08-01-2016
- Site Handed Over to Maintenance Department on: 04-02-2016
- Estimated Cost for Upgrading (HK$M): 4.9358
- Maintenance Manual No.: MM 224/2015
- Actual Works: Other subsurface drainage measures,Others,Raking drain,With double corrosion protection for soil nail
- No. of Tree Felled: N/A
- No. of Tree Planted (Incl. Transplant): N/A
- % Bare of Slope Surfacing: 0
- % Vegetated of Slope Surfacing: 40
- % Shotcrete of Slope Surfacing: 60
- Other Hard Surface of Slope Surfacing: 0

PHOTO


11SW-C/R 576
11SW-C/FR 2
11SW-C/CR 942
11SW-C/ND 21
11SW-C/FR 381
11SW-C/C 913
11SW-C/F 426
11SW-C/R 578
11SW-C/CR 80
11SW-C/CR 938
11SW-C/C 73
11SW-C/ND 22
11SW-C/R 575
11SW-C/R 577
11SW-C/NS 3
11SW-C/R 15
11SW-C/R 16
11SW-C/FR 91
11SW-C/C 72
11SW-C/R 14
11SW-C/R 29
11SW-C/ND
11SW-C/F 139
11SW-C/R 30
11SW-C/FR 142
11SW-C/R 579
11SW-C/ND 19
11SW-C/F 440
11SW-C/CR 85
11SW-C/NS 16
11SW-C/C 71
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11SW-C/R 32
11SW-C/FR 374
11SW-C/CR 529
11SW-C/FR 414
11SW-C/F 445
11SW-C/C 166
11SW-C/ND 18
11SW-C/R 261
11SW-C/CR 104
11SW-C/R 19
11SW-C/R 242
11SW-C/R 244
11SW-C/CR 105
11SW-C/C 83
11SW-C/C 82
11SW-C/R 112
11SW-C/F 443
11SW-C/FR 430
11SW-C/C 502
11SW-C/C 383
11SW-C/FR 31
11SW-C/R 649
11SW-C/C 158
11SW-C/CR 87
11SW-C/FR 107
11SW-C/FR 164
11SW-C/C 922
11SW-C/R 495
11SW-C/CR 90
11SW-C/F 420
11SW-C/C 503
11SW-C/FR 319
11SW-C/R 474
11SW-C/R 588
11SW-C/R 244
11SW-C/R 263
11SW-C/C 923
11SW-C/C 383
11SW-C/R 282
11SW-C/R 246
11SW-C/C 924
Queen Mary Hospital
瑪麗醫院
POK FU LAM ROAD
Pipeline
CLOSE

Slope Maintenance Responsibility Report (11SW-C/F443)	**ESTATE MANAGEMENT SECTION** **LANDS DEPARTMENT**

List of Slope Maintenance Responsibility Area(s)

1	**11SW-C/F443**		**Sub-Division**	Not Applicable
	Location	On Government land adjoining Pok Fu Lam Road and adjacent to RBL 136 RP		
	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.

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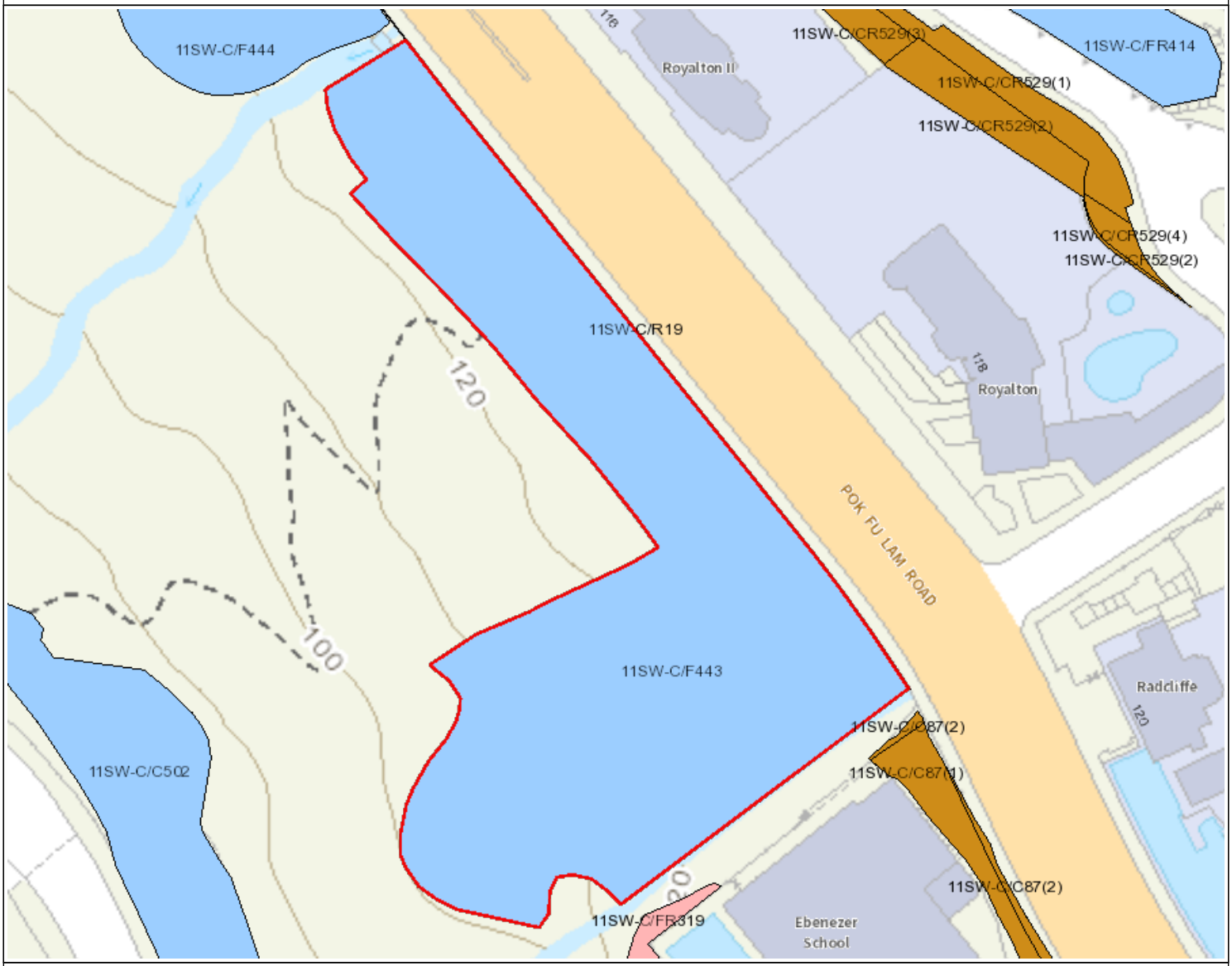
Location Plan



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: 19/07/2021

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BASIC INFORMATION

Location:	POK FU LAM ROAD
Registration Date:	06-11-1997
Ranking Score (NPRS):	0 (EI)
Date of Formation:	pre-1977
Date of Construction/ Modification:	27-09-1999
Data Source:	EI(HyD)
Approximate Coordinates:	Easting : 831633 Northing : 814283

CONSEQUENCE-TO-LIFE CATEGORY

Facility at Crest:	Road/footpath with heavy traffic density
Distance of Facility from Crest (m):	0
Facility at Toe:	School
Distance of Facility from Toe (m):	2.9
Consequence-to-life Category:	1
Remarks:	N/A

SLOPE PART

(1) Max. Height (m): 9 Length (m): 130 Average Angle (deg): 55

WALL PART

N/A

MAINTENANCE RESPONSIBILITY

(1) Sub Div.: 1 Mixed Feature Party: RBL136RP Agent: N/A Land Cat.: 1 Reason Code: 1 MR Endorsement Date: 29-08-2011
(2) Sub Div.: 2 Mixed Feature Party: HyD Agent: HyD Land Cat.: 5b(iii) Reason Code: 56 MR Endorsement Date: 29-08-2011

DETAILS OF SLOPE / RETAINING WALL

Date of Inspection: 13-04-2017

Data Source: EI(HyD)

Slope Part Drainage: (1) Position: On slope Size(mm): 300
(2) Position: Toe Size(mm): 300

Wall Part Drainage: N/A

SLOPE PART

Slope Part (1)
Surface Protection (%): Bare: 0 Vegetated: 0 Chunam: 0 Shotcrete: 100 Other Cover: 0
Material Description: Material type: Rock Geology: N/A
Berm: No. of Berms: N/A Min. Berm Width (m): N/A
Weepholes: Size (mm): 60 Spacing (m): 1.2

WALL PART

N/A

SERVICES

(1) Utilities Type: Sewer/Drain Size(mm): 750 Location: Crest Remark: N/A
(2) Utilities Type: Water Main Size(mm): 300 Location: Crest Remark: N/A

CHECKING STATUS INFORMATION

N/A

BACKGROUND INFORMATION

GIU Cell Ref.:	11SW17A1
Map Sheet Reference (1:1000):	11SW-17A
Aerial Photos:	7372-3 (1963),
Nearest Rainguage Station (Station Number):	Block 44, Baguio Villa(H03)
Data Collected On:	13-04-2017
Date of Construction, Subsequent Modification and Demolition:	Modification: Constructed Before: 1963 After: N/A Modification: Modified Before: 1994 After: 1994
Related Reports/Files or Documents:	File/Report: DLC/BC Ref. No.: GCI 5/3/13C - RBL86 File/Report: DLC/BC Ref. No.: GCI 5/3/13C - RBL86 File/Report: Development Ref. No.: GCI3/4/2084/92 File/Report: Development Ref. No.: GCI3/4/2084/92 File/Report: GCC Ref. No.: GC12/A1/21 File/Report: GCC Ref. No.: GC12/A1/21 File/Report: GEO Ref. No.: S3R 64/99 (26-07-99) File/Report: GEO Ref. No.: S3R 64/99 (26-07-99) File/Report: GEO Ref. No.: Stage 1 study in design4 (18-12-91) File/Report: GEO Ref. No.: Stage 1 study in design4 (18-12-91) File/Report: GEO Ref. No.: Stage 2 study with draft (preliminary) File/Report: GEO Ref. No.: Stage 2 study with draft (preliminary) File/Report: LPM Ref. No.: LPM works completed, as at 10/12/99 File/Report: LPM Ref. No.: LPM works completed, as at 10/12/99
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): Date of Recommendation to BD: 27/10/1999 File Reference: DH584/91/HK
Date Served by BD: 16/03/2000

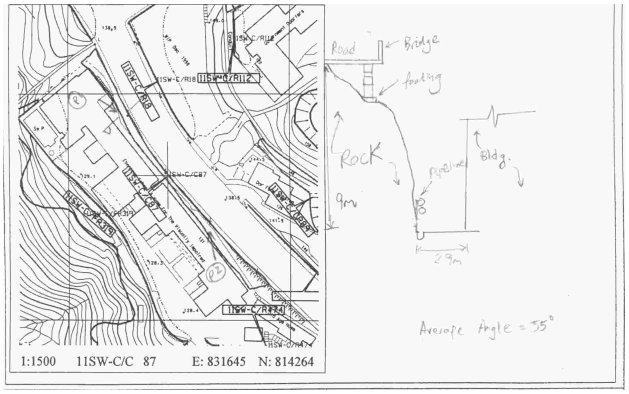
LPMIS: Agreement No.: In-house Design Report No.: S2R 110/97
Agreement No.: In-house Design Report No.: S3R 64/99

ENHANCED MAINTENANCE INFORMATION

From Maintenance Department: (Last Updated Date: 10/03/2021)

STAGE 1 STUDY REPORT

Inspected On: 28-12-1999
Weather: Mainly Fine
District: I



Section No: 1-1
Height(m): H1 : 9 , H2 : 9
Type of Toe Facility: School

Distance from Toe(m): 2.9
Type of Crest Facility: Road/footpath with heavy traffic density

Distance from Crest(m): 0
Consequence Category: 1
Engineering Judgement: P

Section No: 2-2
Type of Toe Facility: N/A

Distance from Toe(m): 0
Type of Crest Facility: N/A

Distance from Crest(m): 0
Consequence Category: 1
Engineering Judgement: P

Sign of Seepage:	Slope : No signs of seepage Wall : N/A
Criterion A satisfied:	N
Sign of Distress:	Slope : Reasonable (near crest, 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):	1
Observations:	N/A
Emergency Action Required:	N
Action By:	N/A

ACTION TO INITIATE PREVENTIVE WORKS

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

OTHER EXTERNAL ACTION

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

eLPMIS

LPM/LPMit Details Report
- LPM Study Feature No.: 11SW-C/C 87
- Location: EBENEZER SCHOOL FOR BLIND CHILDREN, POKFULAM ROAD
- District Council: Southern
- Maintenance Responsibility (At the Time of Selection): Mixed
- Responsible Party for Maintenance of Government Portion: HyD
- Private Lot No.: NA

LPM/LPMit Study
- Agreement No.: In-house Design
- Study Type: Stage 2 Study
- Consultant: N/A
- GEO Managing Section / Engineer: LPM2 / N/A
- Study Status: Study completed
- Design Approach: Otherwise
- Option Assessment Accepted: N/A
- Study Report No.: S2R 110/97
- Programme / Actual Commencement: N/A
- Programme / Actual Completion: N/A
- Report Recommendation (For Stage 2 Study): Further study
- District Check Status: Checked
- Checking Certificate No.: N/A
- GEO Engineer's Remarks: N/A

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

eLPMIS

LPM/LPMit Details Report
- LPM Study Feature No.: 11SW-C/C 87
- Location: EBENEZER SCHOOL FOR BLIND CHILDREN, POKFULAM ROAD
- District Council: Southern
- Maintenance Responsibility (At the Time of Selection): Mixed
- Responsible Party for Maintenance of Government Portion: HyD
- Private Lot No.: NA

LPM/LPMit Study
- Agreement No.: In-house Design
- Study Type: Stage 3 Study Under Schedule of Rates Contract
- Consultant: N/A
- GEO Managing Section / Engineer: LPM2 / N/A
- Study Status: Study completed
- Design Approach: GI (w/o boreholes) + analysis
- Option Assessment Accepted: N/A
- Study Report No.: S3R 64/99
- Programme / Actual Commencement: 01-10-1995
- Programme / Actual Completion: 30-09-1998
- Report Recommendation (For Stage 2 Study): Upgrading Works
- District Check Status: N/A
- Checking Certificate No.: N/A
- GEO Engineer's Remarks: MIXED MAINTENANCE RESPONSIBILITY; STUDY ON PRIVATE PORTION COMPLETED IN 3.97.

LPM/LPMit Works
- Works Contract No.: GE/98/03
- GEO Managing Section / Engineer: Works / E/CA5
- Contractor: Kin Shing Construction Company Limited
- Progress Status: Maintenance completed
- Reason of Study Termination / Works Deletion (If Necessary): N/A
- Forecast Commencement Date: 10-06-1999
- Forecast Completion Date: 09-10-1999
- Completion Cert. Issued: 03-11-1999
- Site Handed Over to Maintenance Department on: N/A
- Estimated Cost for Upgrading (HK$M): 0.8410
- Maintenance Manual No.: MM222/99
- Actual Works: Hard Cover (Sprayed concrete/Stone pitching, etc.),Raking drain,Soil nail,Typical rock slope treatment,Wire mesh
- No. of Tree Felled: N/A
- No. of Tree Planted (Incl. Transplant): N/A
- % Bare of Slope Surfacing: N/A
- % Vegetated of Slope Surfacing: N/A
- % Shotcrete of Slope Surfacing: N/A
- Other Hard Surface of Slope Surfacing: N/A

PHOTO


11SW-C/R 15
11SW-C/C 72
11SW-C/NS 3
11SW-C/ND 17
11SW-C/R 14
11SW-C/R 29
11SW-C/ND 19
11SW-C/R 579
11SW-C/CR 85
11SW-C/NS 16
11SW-C/C 71
11SW-C/ND 24
薄扶林
11SW-C/F 444
11SW-C/FR 374
11SW-C/FR 414
11SW-C/ND 20
POK FU L
C/F 445
W-C/ND 18
11SW-C/R 19
薄扶林道
11SW-C/C 82
11SW-C/R 112
11SW-C/F 443
11SW-C/FR 430
11SW-C/C 502
POK FU LAM ROAD
11SW-C/FR 31
11SW-C/C 362
11SW-C/R 649
11SW-C/FR 107
11SW-C/C 87
11SW-C/C 922
心光盲人院暨學校
11SW-C/F 420
11SW-C/CR 90
11SW-C/C 762
11SW-C/FR 319
11SW-C/R 474
11SW-C/R 588
11SW-C/C 923
11SW-C/FR 3
11SW-C/R 25
11SW-C/C 761
11SW-C/R 471
11SW-C/R 589
11SW-C/C 924
11SW-C/C 760
11SW-C/C 763
11SW-C/C 95
11SW-C/FR 33
814 400N
814 200N
814 000N
831 600E
831 800E

Slope Maintenance Responsibility Report (11SW-C/C87)	ESTATE MANAGEMENT SECTION LANDS DEPARTMENT

List of Slope Maintenance Responsibility Area(s)

1	**11SW-C/C87**		**Sub-Division**	1
	Location	ADJOINING NORTHEAST BOUNDARY OF EBENEZER SCHOOL & HOME FOR THE VISUALLY IMPARIED, POKFULAM ROAD		
	Responsible Lot/Party	RBL136RP	**Maintenance Agent**	Not Applicable
	Remarks	Slope information being reviewed.		

- 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.

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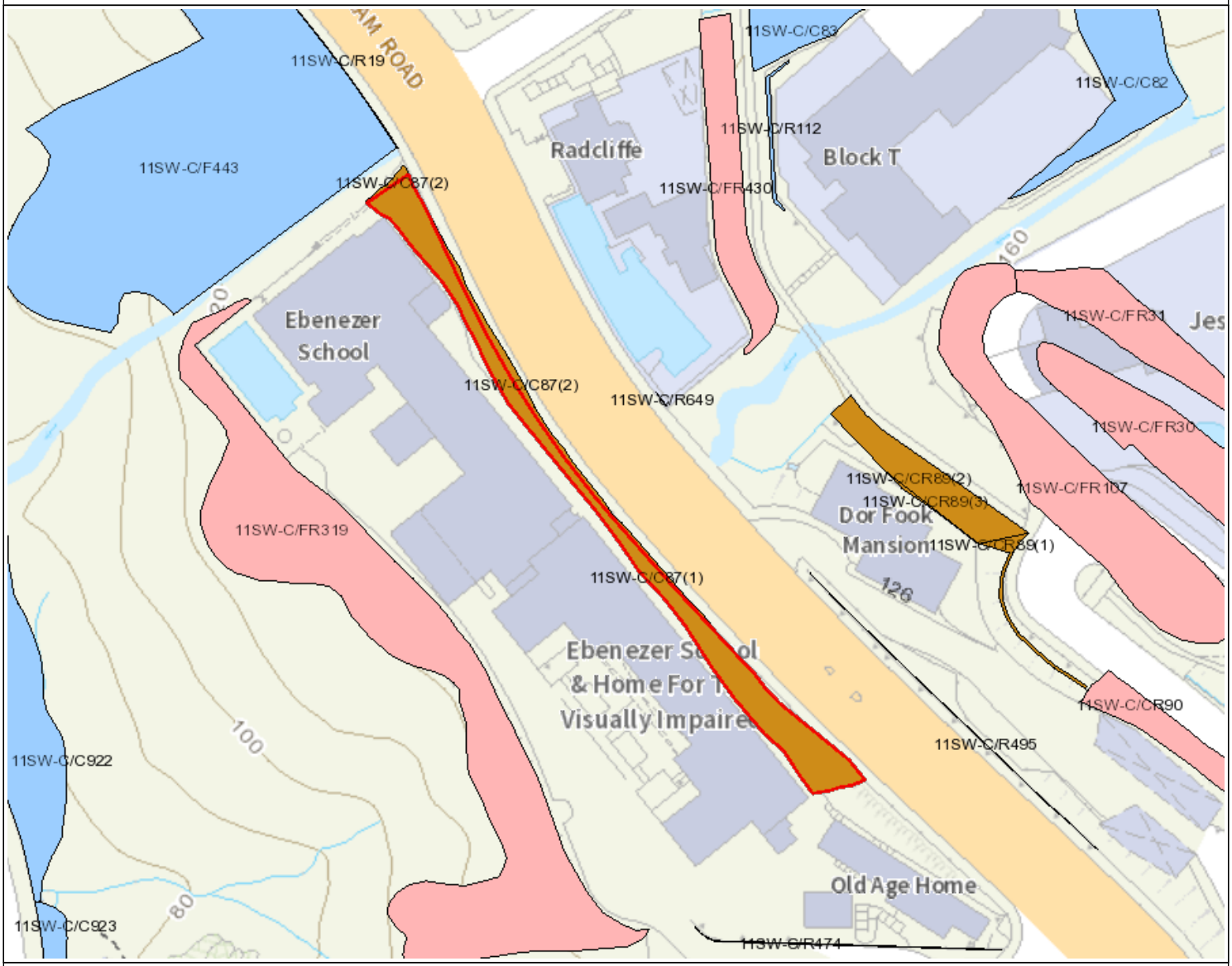
Location Plan



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

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Printed on: 19/07/2021

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BASIC INFORMATION

Location:	POK FU LAM ROAD
Registration Date:	27-09-1997
Ranking Score (NPRS):	1 (EI)
Date of Formation:	pre-1977
Date of Construction/ Modification:	
Data Source:	LPM
Approximate Coordinates:	Easting : 831574 Northing : 814371

CONSEQUENCE-TO-LIFE CATEGORY

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

N/A

WALL PART

(1) Max. Height (m): 6 Length (m): 148 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: 07-11-2012

DETAILS OF SLOPE / RETAINING WALL

Date of Inspection: 03-03-2020
Data Source: LPM
Slope Part Drainage: N/A

Wall Part Drainage: (1) Position: Toe Size(mm): 300

SLOPE PART

N/A

WALL PART

Wall Part (1)
Type of Wall: Wall Material: Concrete Wall Location: Retaining wall with level platform
Berm: No. of Berms: N/A Min. Berm Width (m): N/A
Weepholes: Size (mm): 40 Spacing (m): 1.2

SERVICES

N/A

CHECKING STATUS INFORMATION

N/A

BACKGROUND INFORMATION

GIU Cell Ref.:	11SW17A1
Map Sheet Reference (1:1000):	11SW-17A
Aerial Photos:	27093/4 (1979),
Nearest Rainguage Station (Station Number):	Block 44, Baguio Villa(H03)
Data Collected On:	03-03-2020
Date of Construction, Subsequent Modification and Demolition:	Modification: Constructed Before: 1978 After: N/A
Related Reports/Files or Documents:	File/Report: DLC/BC Ref. No.: Code 1790 File/Report: DLC/BC Ref. No.: Code 1790
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: 10/08/2021)

STAGE 1 STUDY REPORT

Inspected On:
Weather:
District: I

Section No: 1-1
Height(m):
Type of Toe Facility: Lightly-used open area/facilities

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

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

Section No: 2-2
Type of Toe Facility:

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

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

Sign of Seepage:

Criterion A satisfied:

Sign of Distress:

Criterion D satisfied:

Non-routine maintenance required:

Note:

Masonry wall/Masonry facing:

Note:

Consequence category (for critical section):

Observations: N/A

Emergency Action Required:

Action By: N/A

ACTION TO INITIATE PREVENTIVE WORKS

Criterion A/Criterion D: N/A

Action By: N/A

Further Study:

Action By: N/A

OTHER EXTERNAL ACTION

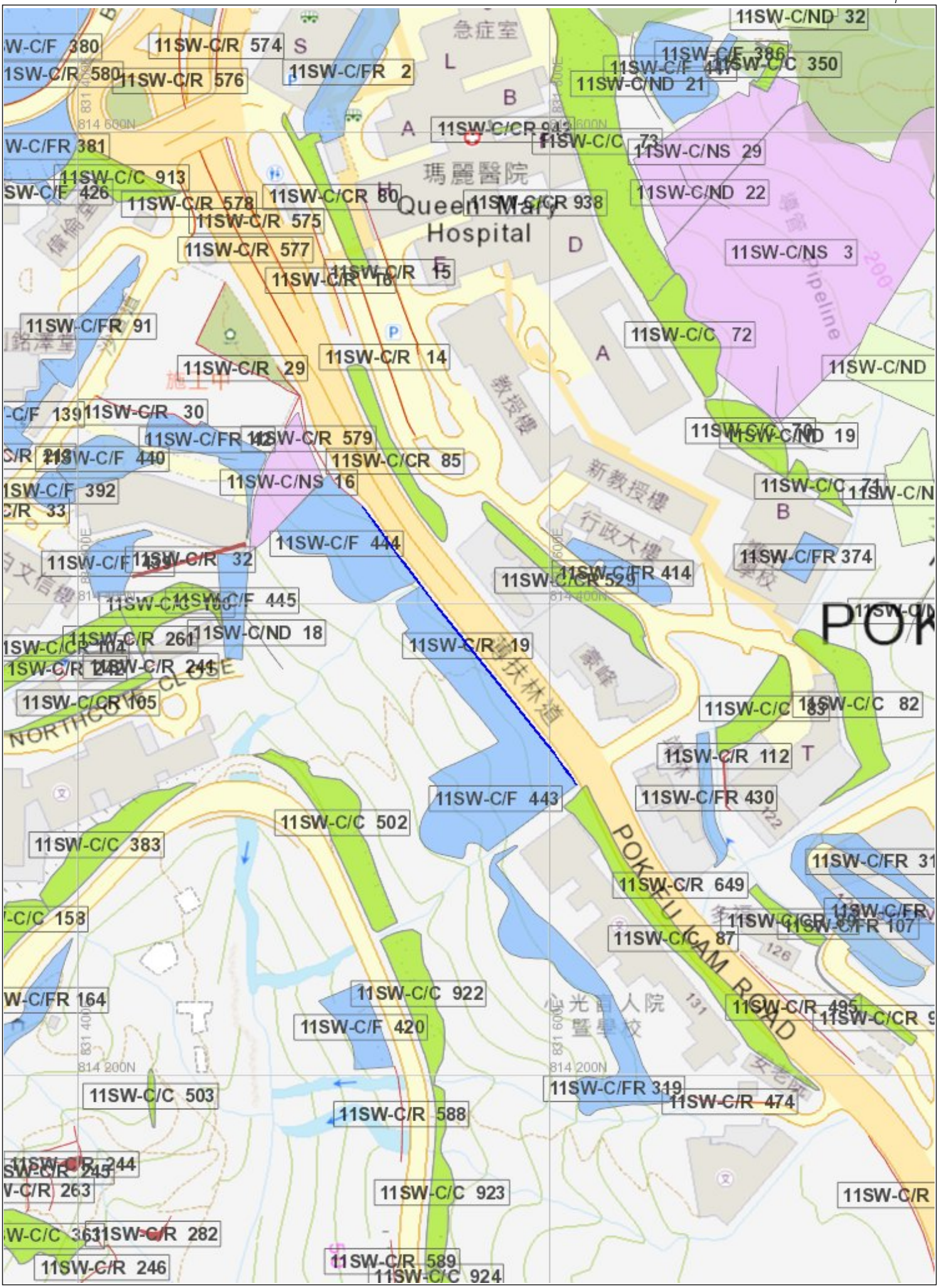
Check / repair Services:

Action By: N/A

Non-routine Maintenance:

Action By: N/A

PHOTO


11SW-C/ND 32
11SW-C/F 380
11SW-C/R 574
11SW-C/R 580
11SW-C/R 576
11SW-C/FR 2
11SW-C/F 386
11SW-C/C 350
11SW-C/ND 21
11SW-C/CR 942
11SW-C/C 73
11SW-C/NS 29
W-C/FR 381
11SW-C/C 913
SW-C/F 426
11SW-C/R 578
11SW-C/CR 80
11SW-C/CR 938
11SW-C/ND 22
11SW-C/R 575
Queen Mary Hospital
11SW-C/R 577
11SW-C/NS 3
11SW-C/R 15
11SW-C/FR 91
11SW-C/C 72
11SW-C/R 14
11SW-C/R 29
11SW-C/ND
-C/F 139
11SW-C/R 30
11SW-C/FR 11
11SW-C/R 579
11SW-C/ND 19
11SW-C/F 440
11SW-C/CR 85
11SW-C/F 392
11SW-C/NS 16
11SW-C/C 74
11SW-C/F 444
11SW-C/R 32
11SW-C/FR 374
11SW-C/CR 529
11SW-C/FR 414
11SW-C/F 445
11SW-C/R 261
11SW-C/ND 18
11SW-C/R 19
11SW-C/R 241
11SW-C/CR 105
11SW-C/C 85
11SW-C/C 82
11SW-C/R 112
11SW-C/F 443
11SW-C/FR 430
11SW-C/C 502
11SW-C/C 383
11SW-C/FR 31
11SW-C/R 649
11SW-C/FR 107
11SW-C/C 87
W-C/FR 164
11SW-C/C 922
11SW-C/R 495
11SW-C/F 420
11SW-C/C 503
11SW-C/FR 319
11SW-C/R 474
11SW-C/R 588
11SW-C/R 244
11SW-C/R 263
11SW-C/C 923
11SW-C/C 363
11SW-C/R 282
11SW-C/R 589
11SW-C/R 246
11SW-C/C 924
POK FU LAM ROAD
NORTHCOTE CLOSE

Slope Maintenance Responsibility Report (11SW-C/R19)	**ESTATE MANAGEMENT SECTION** **LANDS DEPARTMENT**

List of Slope Maintenance Responsibility Area(s)

1	**11SW-C/R19**		**Sub-Division**	Not Applicable
	Location	ON UNALLOCATED GOVERNMENT LAND ADJOINING POK FU LAM ROAD		
	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.

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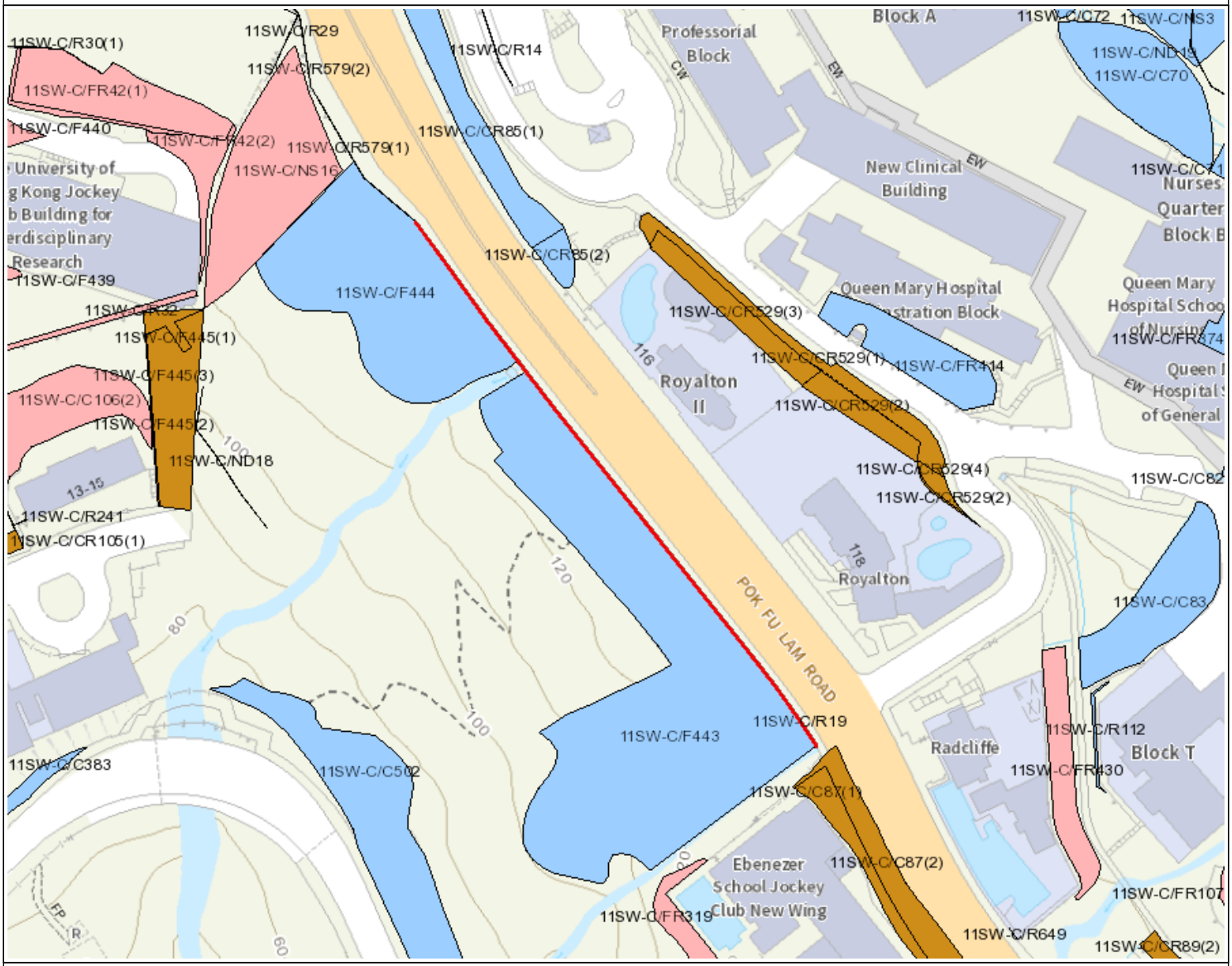
Location Plan



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

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Printed on: 18/01/2022

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BASIC INFORMATION

Location:	131 POFULAM ROAD
Registration Date:	06-11-1997
Ranking Score (NPRS):	18 (LPMit)
Date of Formation:	pre-1977
Date of Construction/ Modification:	
Data Source:	SIRST
Approximate Coordinates:	Easting : 831690 Northing : 814189

CONSEQUENCE-TO-LIFE CATEGORY

Facility at Crest:	Road/footpath with low traffic density
Distance of Facility from Crest (m):	0
Facility at Toe:	Indoor car park
Distance of Facility from Toe (m):	2
Consequence-to-life Category:	1
Remarks:	N/A

SLOPE PART

N/A

WALL PART

(1) Max. Height (m): 5 Length (m): 38 Face Angle (deg): 85

MAINTENANCE RESPONSIBILITY

(1) Sub Div.: 0 Private Feature Party: RBL136RP Agent: N/A Land Cat.: 1 Reason Code: 1 MR Endorsement Date: 03-03-1998

DETAILS OF SLOPE / RETAINING WALL

Date of Inspection: 28-11-1996
Data Source: SIRST
Slope Part Drainage: N/A

Wall Part Drainage: (1) Position: Toe Size(mm): 125

SLOPE PART

N/A

WALL PART

Wall Part (1)
Type of Wall: Wall Material: Others Wall Location: Retaining wall with level platform
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: Electricity Size(mm): 0 Location: On slope Remark: Size cannot be determined

CHECKING STATUS INFORMATION

N/A

BACKGROUND INFORMATION

GIU Cell Ref.:	11SW17A4
Map Sheet Reference (1:1000):	11SW-17A
Aerial Photos:	7371/2 (1963),
Nearest Rainguage Station (Station Number):	Block 44, Baguio Villa(H03)
Data Collected On:	28-11-1996
Date of Construction, Subsequent Modification and Demolition:	Modification: Constructed Before: 1963 After: 1963
Related Reports/Files or Documents:	File/Report: DLC/BC Ref. No.: GCI 5/3/BC-RBL136 File/Report: DLC/BC Ref. No.: GCI 5/3/BC-RBL136
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): Date of Recommendation to BD: N/A File Reference: N/A
Date Served by BD: 09/08/2000

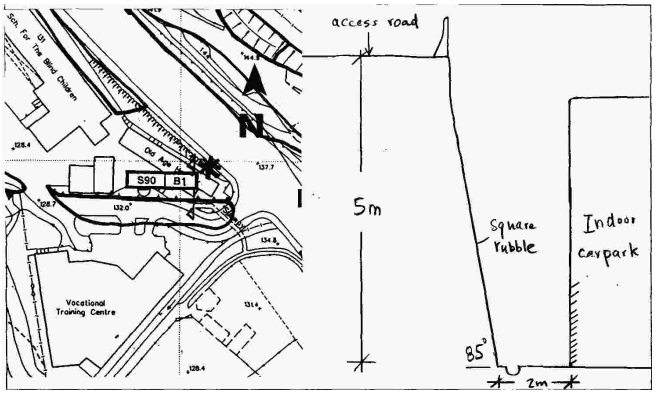
LPMIS: Agreement No.: CE78/97 Report No.: S2R119/99

ENHANCED MAINTENANCE INFORMATION

From Maintenance Department: (Last Updated Date: 10/03/2021)

STAGE 1 STUDY REPORT

Inspected On: 28-11-1996
Weather: Mainly Fine
District: I



Section No: 1-1
Height(m): H1 : 5 , H2 : 5
Type of Toe Facility: Indoor car park

Distance from Toe(m): 2
Type of Crest Facility: Road/footpath with low traffic density

Distance from Crest(m): 0
Consequence Category: 1
Engineering Judgement: P

Section No: 2-2
Type of Toe Facility:

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

Distance from Crest(m):
Consequence Category: 1
Engineering Judgement: P

Sign of Seepage:	Slope : N/A Wall : No sign of seepage
Criterion A satisfied:	N
Sign of Distress:	Slope : N/A Wall : N/A
Criterion D satisfied:	N
Non-routine maintenance required:	N
Note:	N/A
Masonry wall/Masonry facing:	Y
Note:	square rubble with weepholes
Consequence category (for critical section):	1
Observations:	N/A
Emergency Action Required:	N
Action By:	N/A

ACTION TO INITIATE PREVENTIVE WORKS

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

OTHER EXTERNAL ACTION

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

eLPMIS

LPM/LPMit Details Report
- LPM Study Feature No.: 11SW-C/R 474
- Location: 131 POKFULAM ROAD.
- District Council: Southern
- Maintenance Responsibility (At the Time of Selection): Private
- Responsible Party for Maintenance of Government Portion: N/A
- Private Lot No.: RBL136

LPM/LPMit Study
- Agreement No.: CE78/97
- Study Type: Stage 2 Study
- Consultant: Maunsell Geotechnical Services Ltd.
- GEO Managing Section / Engineer: SS / SS3
- Study Status: Study completed
- Design Approach: Otherwise
- Option Assessment Accepted: N/A
- Study Report No.: S2R119/99
- Programme / Actual Commencement: 01-04-1999
- Programme / Actual Completion: 31-01-2001
- Report Recommendation (For Stage 2 Study): Advisory Letter
- District Check Status: Checked
- Checking Certificate No.: N/A
- GEO Engineer's Remarks: # Type 3 Advisory Letter referred to District on 20 July 2000. Type 3 Advisory Letter issued by District on 9 August 2000.

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

PHOTO


11SW-C/CR 89
11SW-C/R 495
11SW-C/C 87
11SW-C/FR 319
11SW-C/R 474
老人院
Old Age Home
心光恩望學校
Ebenezer
New Hope
School
831 650E
814 250N
814 200N
814 150N
831 700E

Slope Maintenance Responsibility Report (11SW-C/R474)	**ESTATE MANAGEMENT SECTION** **LANDS DEPARTMENT**

List of Slope Maintenance Responsibility Area(s)

1	**11SW-C/R474**		**Sub-Division**	Not Applicable
	Location	ALONG THE S BOUNDARY OF RBL136RP ABUTTING RBL1015		
	Responsible Lot/Party	RBL136RP	**Maintenance Agent**	Not Applicable
	Remarks	Not Applicable		

- End of Report -

Notes:

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

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

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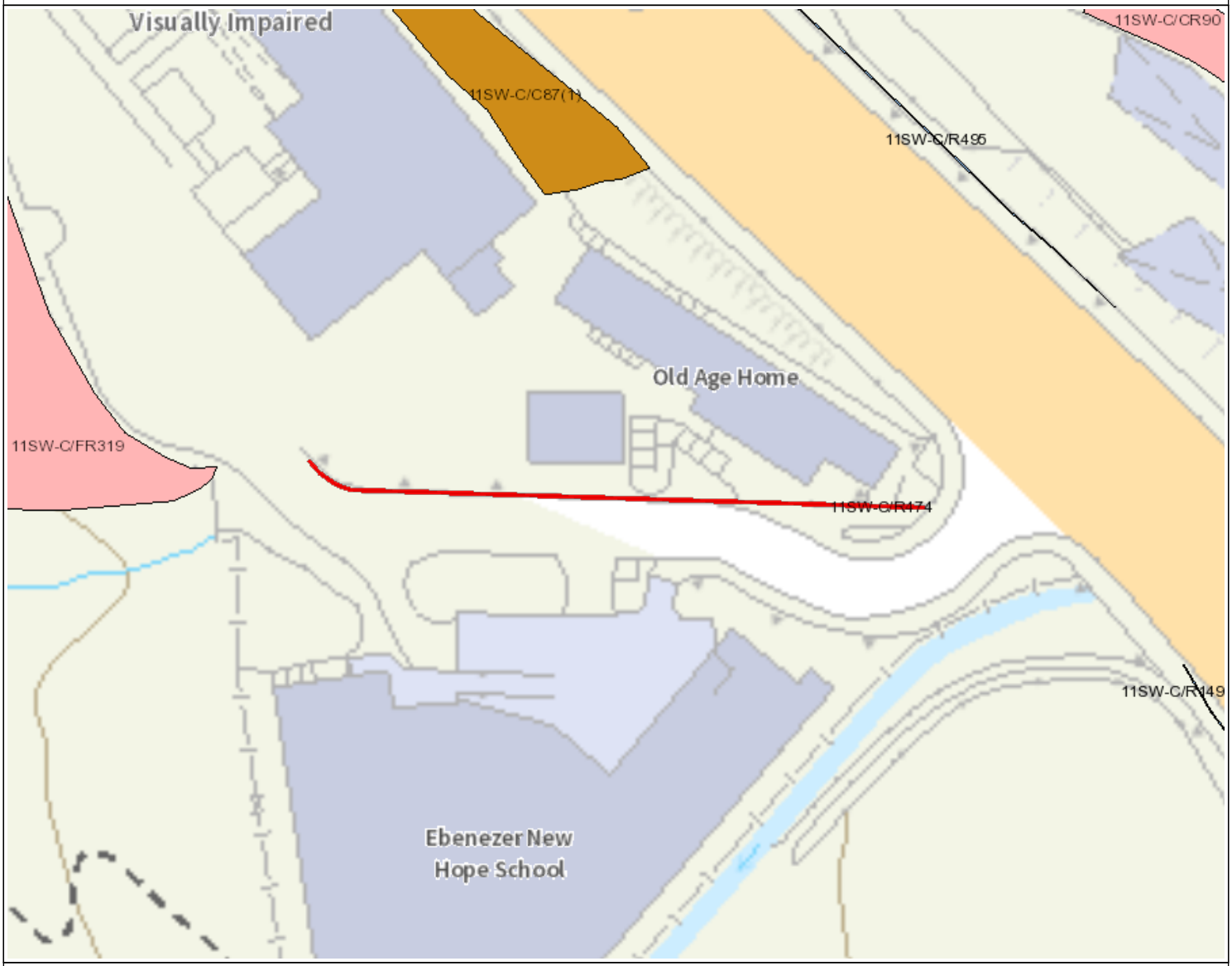
Location Plan



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

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Printed on: 19/07/2021

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BASIC INFORMATION

Location:	WEST OF NO.131 POK FU LAM ROAD (EBENEZER SCHOOL FOR BLIND CHILDREN)
Registration Date:	06-11-1997
Ranking Score (NPRS):	0 (LPMit)
Date of Formation:	post-1977
Date of Construction/ Modification:	
Data Source:	AP
Approximate Coordinates:	Easting : 831608 Northing : 814246

CONSEQUENCE-TO-LIFE CATEGORY

Facility at Crest:	School
Distance of Facility from Crest (m):	7
Facility at Toe:	Road/footpath with moderate traffic density
Distance of Facility from Toe (m):	65
Consequence-to-life Category:	1
Remarks:	N/A

SLOPE PART

(1) Max. Height (m): 12 Length (m): 155 Average Angle (deg): 40

WALL PART

(1) Max. Height (m): 12 Length (m): 150 Face Angle (deg): 80

MAINTENANCE RESPONSIBILITY

(1) Sub Div.: 0 Private Feature Party: RBL136RP Agent: N/A Land Cat.: 1,5a Reason Code: 1,78 MR Endorsement Date: 25-04-2014

DETAILS OF SLOPE / RETAINING WALL

Date of Inspection: 16-06-2018

Data Source: AP

Slope Part Drainage: (1) Position: Crest Size(mm): 225
(2) Position: On slope Size(mm): 900

Wall Part Drainage: (1) Position: Crest Size(mm): 225

SLOPE PART

Slope Part (1)
Surface Protection (%): Bare: 0 Vegetated: 0 Chunam: 0 Shotcrete: 100 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: Others Wall Location: Wall at crest
Berm: No. of Berms: N/A Min. Berm Width (m): N/A
Weepholes: Size (mm): 50 Spacing (m): 2

SERVICES

(1) Utilities Type: Electricity Size(mm): 0 Location: On slope Remark: N/A

CHECKING STATUS INFORMATION

Tagmark: SCS_17921 Part: 0 Checking Status: Feature modified/upgraded to current standard Checking Certificate No.: N/A

BACKGROUND INFORMATION

GIU Cell Ref.:	11SW17A1
Map Sheet Reference (1:1000):	11SW-17A
Aerial Photos:	A35413-4 (1993),
Nearest Rainguage Station (Station Number):	Block 44, Baguio Villa(H03)
Data Collected On:	16-06-2018
Date of Construction, Subsequent Modification and Demolition:	Modification: Constructed Before: 1945 After: N/A
Related Reports/Files or Documents:	File/Report: Previous Instability Ref. No.: 16/2/83 HK1/2/83, (No incident file found) File/Report: Previous Instability Ref. No.: 16/2/83 HK1/2/83, (No incident file found)
Remarks:	N/A
Follow Up Actions:	Check and repair leaking drainage pipe.

DH-Order (To Be Confirmed with Buildings Department): Date of Recommendation to BD: 10/04/2014 File Reference: DH/0584/91/HK
Date Served by BD: 20/06/2014 Notice No.: DH0091/HK/14/C

Advisory Letter (To Be Confirmed with Buildings Department): Date of Recommendation to BD: 17/11/2006 File Reference: DH584/91/HK
Date Served by BD: 07/12/2006

LPMIS: Agreement No.: CE45/94SA2 Report No.: S2R141/98
Agreement No.: CE45/94SA2 Report No.: N/A

ENHANCED MAINTENANCE INFORMATION

From Maintenance Department: (Last Updated Date: 10/03/2021)

STAGE 1 STUDY REPORT

Inspected On:
Weather:
District: I

Section No: 1-1
Height(m):
Type of Toe Facility: Road/footpath with moderate traffic density

Distance from Toe(m): 65
Type of Crest Facility: School

Distance from Crest(m): 7
Consequence Category:
Engineering Judgement:

Section No: 2-2
Type of Toe Facility:

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

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

Sign of Seepage:

Criterion A satisfied:

Sign of Distress:

Criterion D satisfied:

Non-routine maintenance required:

Note:

Masonry wall/Masonry facing:

Note:

Consequence category (for critical section):

Observations: N/A

Emergency Action Required:

Action By: N/A

ACTION TO INITIATE PREVENTIVE WORKS

Criterion A/Criterion D: N/A

Action By: N/A

Further Study:

Action By: N/A

OTHER EXTERNAL ACTION

Check / repair Services:

Action By: N/A

Non-routine Maintenance:

Action By: N/A

eLPMIS

LPM/LPMit Details Report
- LPM Study Feature No.: 11SW-C/FR 319
- Location: EBENEZER SCH. FOR BLIND, 131 POKFULAM RD; HK
- District Council: Southern
- Maintenance Responsibility (At the Time of Selection): Private
- Responsible Party for Maintenance of Government Portion: N/A
- Private Lot No.: NA

LPM/LPMit Study
- Agreement No.: CE45/94SA2
- Study Type: Stage 2 Study
- Consultant: Ove Arup & Partners Hong Kong Ltd.
- GEO Managing Section / Engineer: LPM3 / CM51
- Study Status: Study completed
- Design Approach: Otherwise
- Option Assessment Accepted: N/A
- Study Report No.: S2R141/98
- Programme / Actual Commencement: 01-02-1997
- Programme / Actual Completion: 31-10-1998
- Report Recommendation (For Stage 2 Study): N/A
- District Check Status: N/A
- Checking Certificate No.: N/A
- GEO Engineer's Remarks: N/A

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

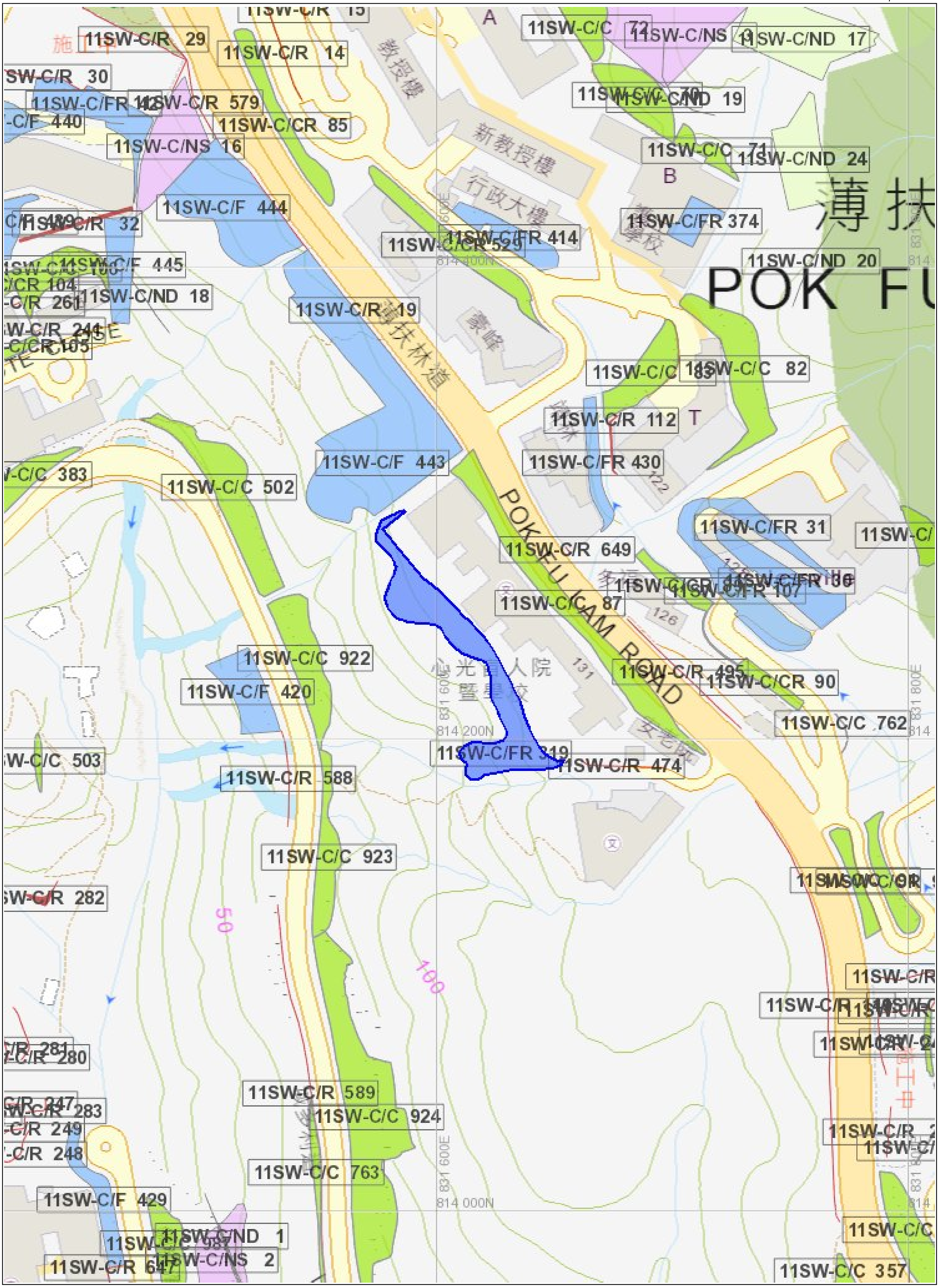
eLPMIS

LPM/LPMit Details Report
- LPM Study Feature No.: 11SW-C/R 20
- Location: EBENEZER SCH. FOR BLIND, 131 POKFULAM RD; HK
- District Council: Southern
- Maintenance Responsibility (At the Time of Selection): Private
- Responsible Party for Maintenance of Government Portion: N/A
- Private Lot No.: NA

LPM/LPMit Study
- Agreement No.: CE45/94SA2
- Study Type: Stage 2 Study
- Consultant: Ove Arup & Partners Hong Kong Ltd.
- GEO Managing Section / Engineer: LPM3 / CM51
- Study Status: Study terminated - Feature formed up to standard / previously upgraded or catchment not meeting react-to-known-hazard principle by previous study accepted by GEO
- Design Approach: N/A
- Option Assessment Accepted: N/A
- Study Report No.: N/A
- Programme / Actual Commencement: N/A
- Programme / Actual Completion: N/A
- Report Recommendation (For Stage 2 Study): N/A
- District Check Status: N/A
- Checking Certificate No.: N/A
- GEO Engineer's Remarks: N/A

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

PHOTO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11SW-C/F 420
11SW-C/R 588
11SW-C/C 923
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11SW-C/C 763
11SW-C/F 429
11SW-C/R 19
11SW-C/F 444
11SW-C/FR 430
11SW-C/R 112
11SW-C/FR 31
11SW-C/CR 90
11SW-C/C 762
11SW-C/R 495
11SW-C/FR 374
11SW-C/ND 20
11SW-C/C 82
11SW-C/C 71
11SW-C/ND 24
11SW-C/ND 17
11SW-C/C 72
11SW-C/R 14
11SW-C/R 29
11SW-C/CR 85
11SW-C/NS 16
11SW-C/R 579
11SW-C/ND 18
11SW-C/C 383
11SW-C/C 503
11SW-C/R 282
11SW-C/C 357
POK FU LAM ROAD
薄扶林道
POK FU
814 200N
814 000N
831 600E
831 800E
50
100

Slope Maintenance Responsibility Report (11SW-C/FR319)	**ESTATE MANAGEMENT SECTION** **LANDS DEPARTMENT**

List of Slope Maintenance Responsibility Area(s)

1	**11SW-C/FR319**		**Sub-Division**	Not Applicable
	Location	TO THE WEST OF RBL136RP		
	Responsible Lot/Party	RBL136RP	**Maintenance Agent**	Not Applicable
	Remarks	Not Applicable		

- End of Report -

Notes:

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

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

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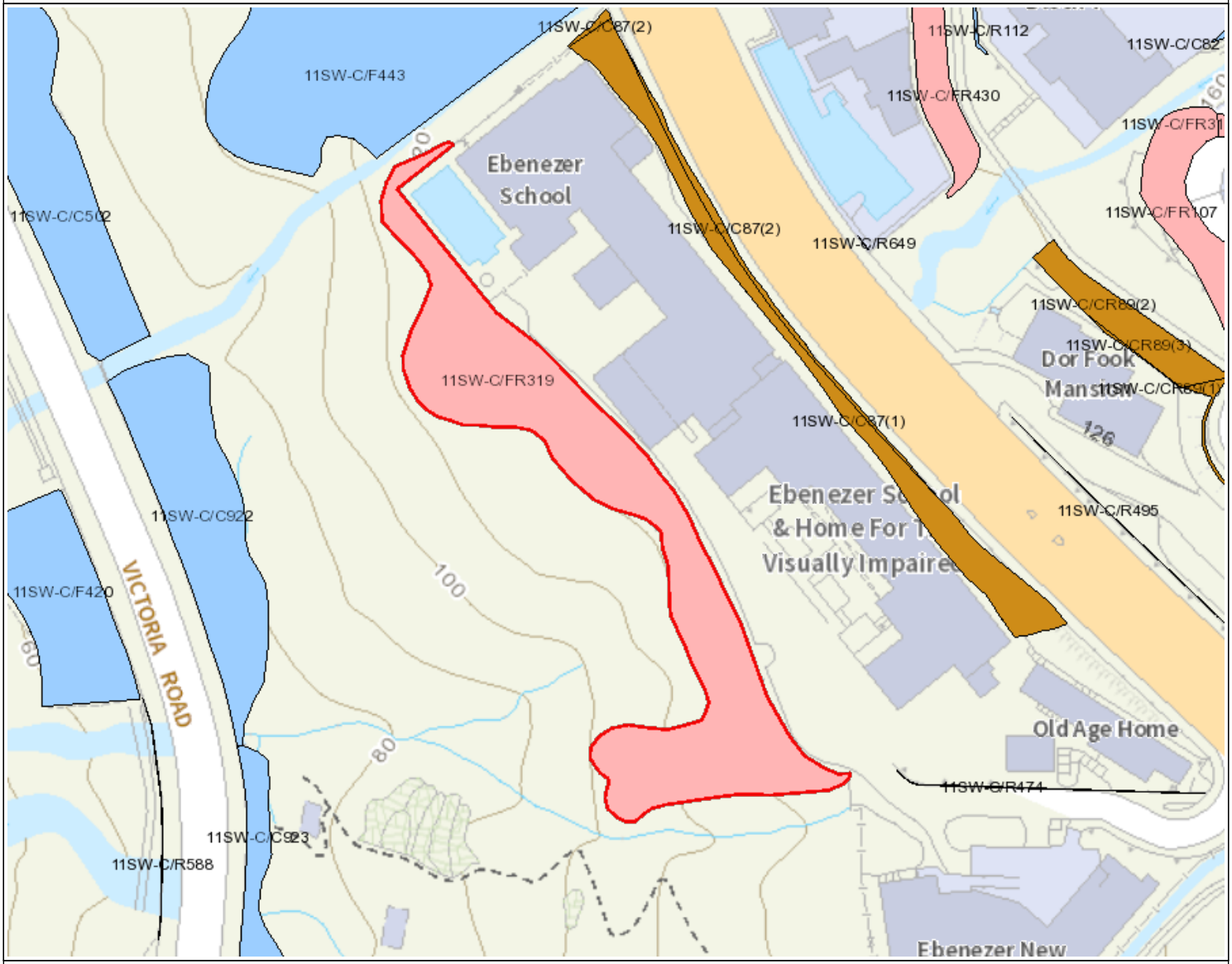
Location Plan



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

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BASIC INFORMATION

Location:	VICTORIA ROAD, SW
Registration Date:	25-06-2003
Ranking Score (NPRS):	0 (EI)
Date of Formation:	post-1977
Date of Construction/ Modification:	
Data Source:	EI(HyD)
Approximate Coordinates:	Easting : 831546 Northing : 814233

CONSEQUENCE-TO-LIFE CATEGORY

Facility at Crest:	Undeveloped green belt
Distance of Facility from Crest (m):	0
Facility at Toe:	Road/footpath with moderate traffic density
Distance of Facility from Toe (m):	0
Consequence-to-life Category:	2
Remarks:	N/A

SLOPE PART

(1) Max. Height (m): 15.1 Length (m): 64 Average Angle (deg): 63

WALL PART

N/A

MAINTENANCE RESPONSIBILITY

(1) Sub Div.: 0 Government Feature Party: HyD Agent: HyD Land Cat.: 5b(iii) Reason Code: 56 MR Endorsement Date: 31-03-2005

DETAILS OF SLOPE / RETAINING WALL

Date of Inspection: 09-02-2010

Data Source: EI(HyD)

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

Wall Part Drainage: N/A

SLOPE PART

Slope Part (1)
Surface Protection (%): Bare: 0 Vegetated: 45 Chunam: 0 Shotcrete: 10 Other Cover: 45
Material Description: Material type: Soil Geology: N/A
Berm: No. of Berms: 1 Min. Berm Width (m): 1.5
Weepholes: Size (mm): N/A Spacing (m): N/A

WALL PART

N/A

SERVICES

N/A

CHECKING STATUS INFORMATION

N/A

BACKGROUND INFORMATION

GIU Cell Ref.:	N/A
Map Sheet Reference (1:1000):	11SW-17A
Aerial Photos:	N/A
Nearest Rainguage Station (Station Number):	()
Data Collected On:	09-02-2010
Date of Construction, Subsequent Modification and Demolition:	N/A
Related Reports/Files or Documents:	N/A
Remarks:	N/A
Follow Up Actions:	N/A

DH-Order (To Be Confirmed with Buildings Department): None

Advisory Letter (To Be Confirmed with Buildings Department): None

LPMIS: None

ENHANCED MAINTENANCE INFORMATION

From Maintenance Department: (Last Updated Date: 10/03/2021)

STAGE 1 STUDY REPORT

Inspected On:
Weather:
District: N/A

Section No: 1-1
Height(m):
Type of Toe Facility: Road/footpath with moderate traffic density

Distance from Toe(m): 0
Type of Crest Facility: Undeveloped green belt

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

Section No: 2-2
Type of Toe Facility:

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

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

Sign of Seepage:

Criterion A satisfied:

Sign of Distress:

Criterion D satisfied:

Non-routine maintenance required:

Note:

Masonry wall/Masonry facing:

Note:

Consequence category (for critical section):

Observations: N/A

Emergency Action Required:

Action By: N/A

ACTION TO INITIATE PREVENTIVE WORKS

Criterion A/Criterion D: N/A

Action By: N/A

Further Study:

Action By: N/A

OTHER EXTERNAL ACTION

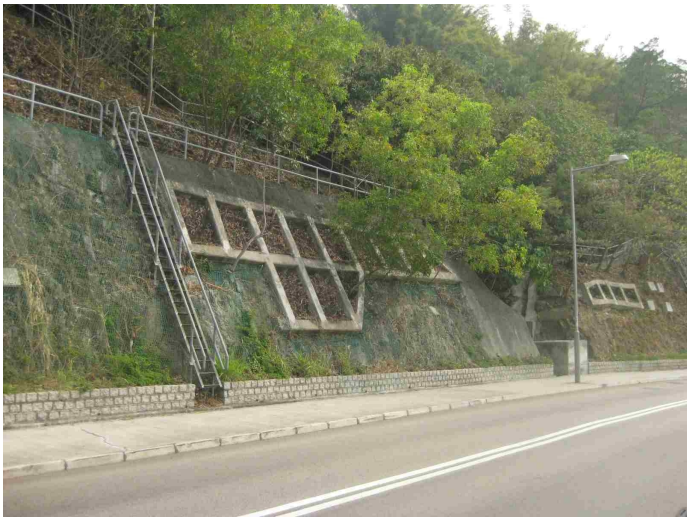
Check / repair Services:

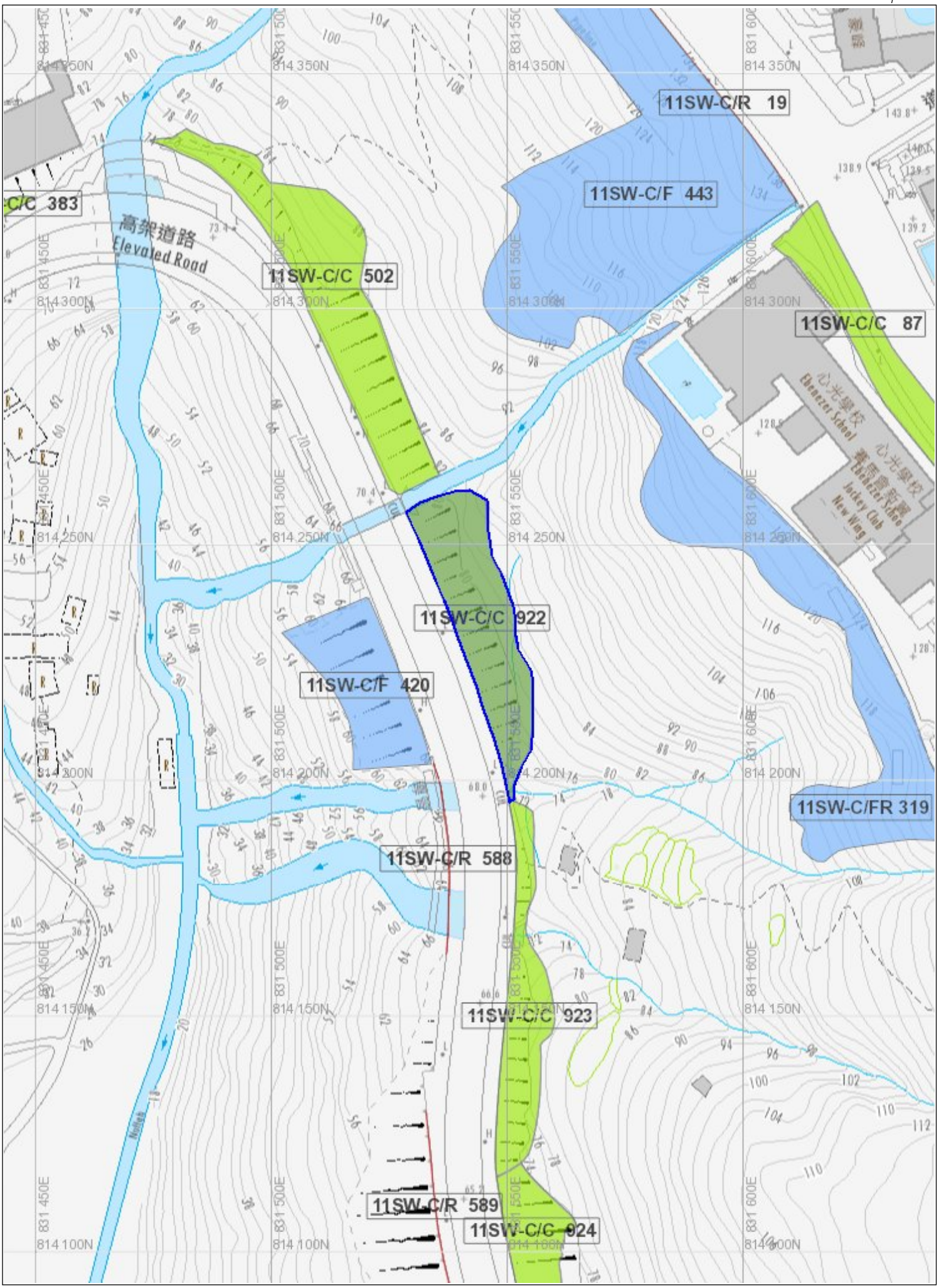
Action By: N/A

Non-routine Maintenance:

Action By: N/A

PHOTO




11SW-C/R 19
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C/C 383
高架道路
Elevated Road
11SW-C/C 502
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11SW-C/F 420
11SW-C/FR 319
11SW-C/R 588
11SW-C/C 923
11SW-C/R 589
11SW-C/C 924

Slope Maintenance Responsibility Report (11SW-C/C922)	**ESTATE MANAGEMENT SECTION** **LANDS DEPARTMENT**

List of Slope Maintenance Responsibility Area(s)

1	**11SW-C/C922**		**Sub-Division**	Not Applicable
	Location	ALONG VICTORIA ROAD NEAR RBL136RP		
	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.

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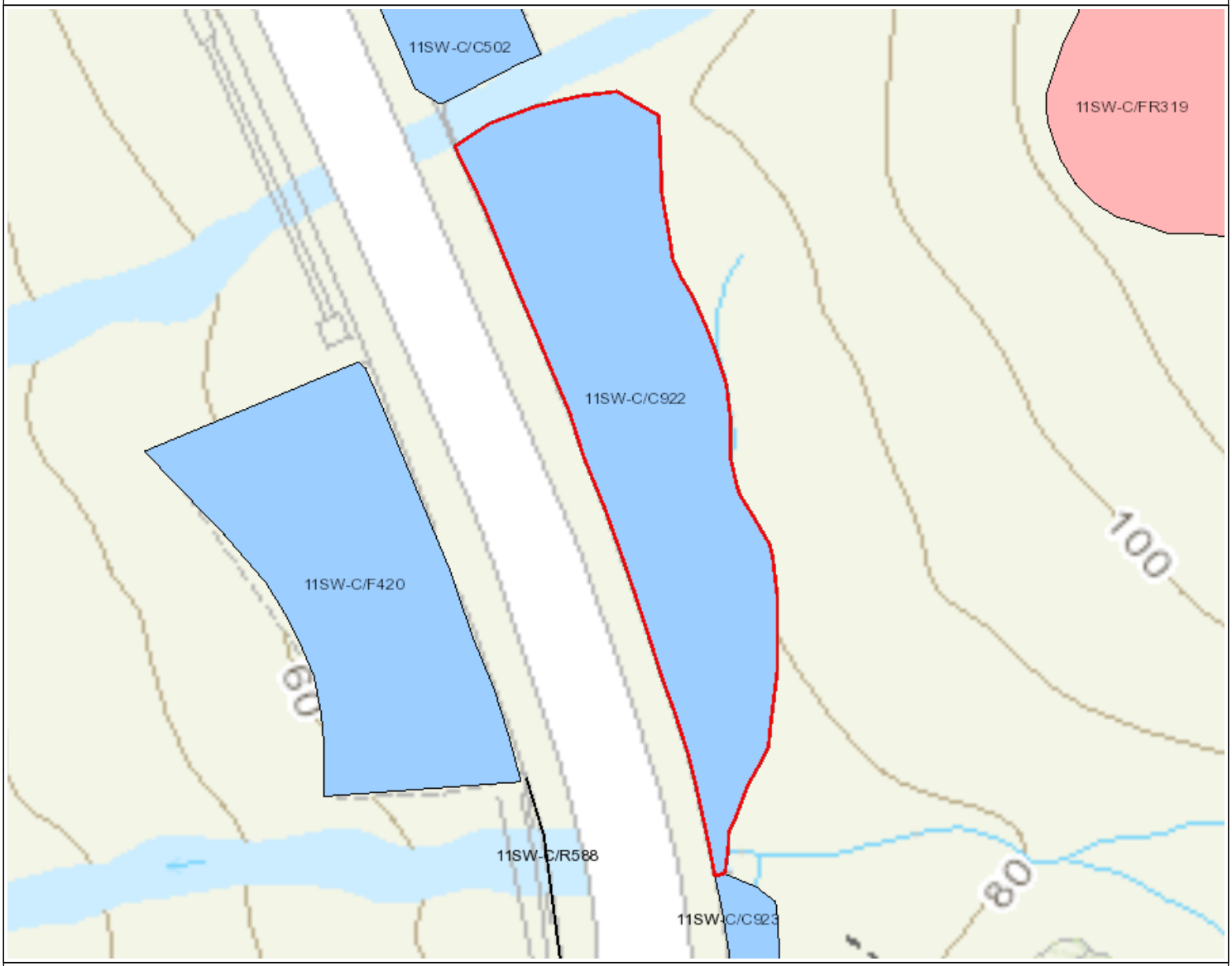
Location Plan



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

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BASIC INFORMATION

Location:	VICTORIA ROAD, SW
Registration Date:	25-06-2003
Ranking Score (NPRS):	0 (EI)
Date of Formation:	post-1977
Date of Construction/ Modification:	
Data Source:	EI(HyD)
Approximate Coordinates:	Easting : 831554 Northing : 814149

CONSEQUENCE-TO-LIFE CATEGORY

Facility at Crest:	Undeveloped green belt
Distance of Facility from Crest (m):	0
Facility at Toe:	Road/footpath with moderate traffic density
Distance of Facility from Toe (m):	0
Consequence-to-life Category:	2
Remarks:	N/A

SLOPE PART

(1) Max. Height (m): 12 Length (m): 79 Average Angle (deg): 63

WALL PART

N/A

MAINTENANCE RESPONSIBILITY

(1) Sub Div.: 0 Government Feature Party: HyD Agent: HyD Land Cat.: 5b(iii) Reason Code: 56 MR Endorsement Date: 31-03-2005

DETAILS OF SLOPE / RETAINING WALL

Date of Inspection: 09-02-2010

Data Source: EI(HyD)

Slope Part Drainage:
(1) Position: Crest Size(mm): 300
(2) Position: On slope Size(mm): 300
(3) Position: On slope Size(mm): 300
(4) Position: Toe Size(mm): 300

Wall Part Drainage: N/A

SLOPE PART

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

WALL PART

N/A

SERVICES

N/A

CHECKING STATUS INFORMATION

N/A

BACKGROUND INFORMATION

GIU Cell Ref.:	N/A
Map Sheet Reference (1:1000):	11SW-17A
Aerial Photos:	N/A
Nearest Rainguage Station (Station Number):	()
Data Collected On:	09-02-2010
Date of Construction, Subsequent Modification and Demolition:	N/A
Related Reports/Files or Documents:	N/A
Remarks:	N/A
Follow Up Actions:	N/A

DH-Order (To Be Confirmed with Buildings Department): None

Advisory Letter (To Be Confirmed with Buildings Department): None

LPMIS: None

ENHANCED MAINTENANCE INFORMATION

From Maintenance Department: (Last Updated Date: 10/03/2021)

STAGE 1 STUDY REPORT

Inspected On:
Weather:
District: N/A

Section No: 1-1
Height(m):
Type of Toe Facility: Road/footpath with moderate traffic density

Distance from Toe(m): 0
Type of Crest Facility: Undeveloped green belt

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

Section No: 2-2
Type of Toe Facility:

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

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

Sign of Seepage:

Criterion A satisfied:

Sign of Distress:

Criterion D satisfied:

Non-routine maintenance required:

Note:

Masonry wall/Masonry facing:

Note:

Consequence category (for critical section):

Observations: N/A

Emergency Action Required:

Action By: N/A

ACTION TO INITIATE PREVENTIVE WORKS

Criterion A/Criterion D: N/A

Action By: N/A

Further Study:

Action By: N/A

OTHER EXTERNAL ACTION

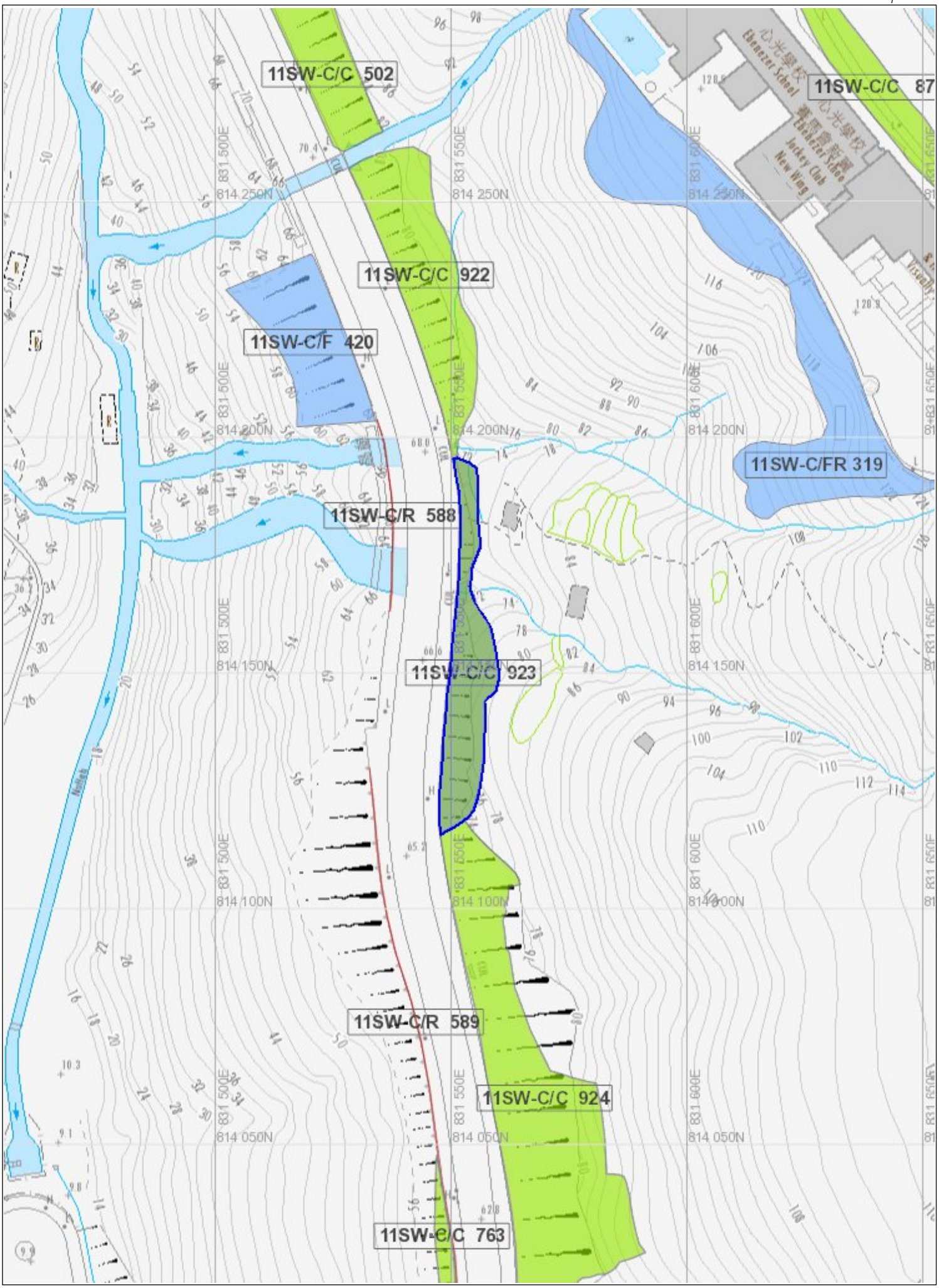
Check / repair Services:

Action By: N/A

Non-routine Maintenance:

Action By: N/A

PHOTO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11SW-C/FR 319
11SW-C/R 588
11SW-C/C 923
11SW-C/R 589
11SW-C/C 924
11SW-C/C 763
831 500E
831 550E
831 600E
831 650E
814 250N
814 200N
814 150N
814 100N
814 050N

Slope Maintenance Responsibility Report (11SW-C/C923)	**ESTATE MANAGEMENT SECTION** **LANDS DEPARTMENT**

List of Slope Maintenance Responsibility Area(s)

1	**11SW-C/C923**		**Sub-Division**	Not Applicable
	Location	ALONG VICTORIA ROAD NEAR RBL136RP		
	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.

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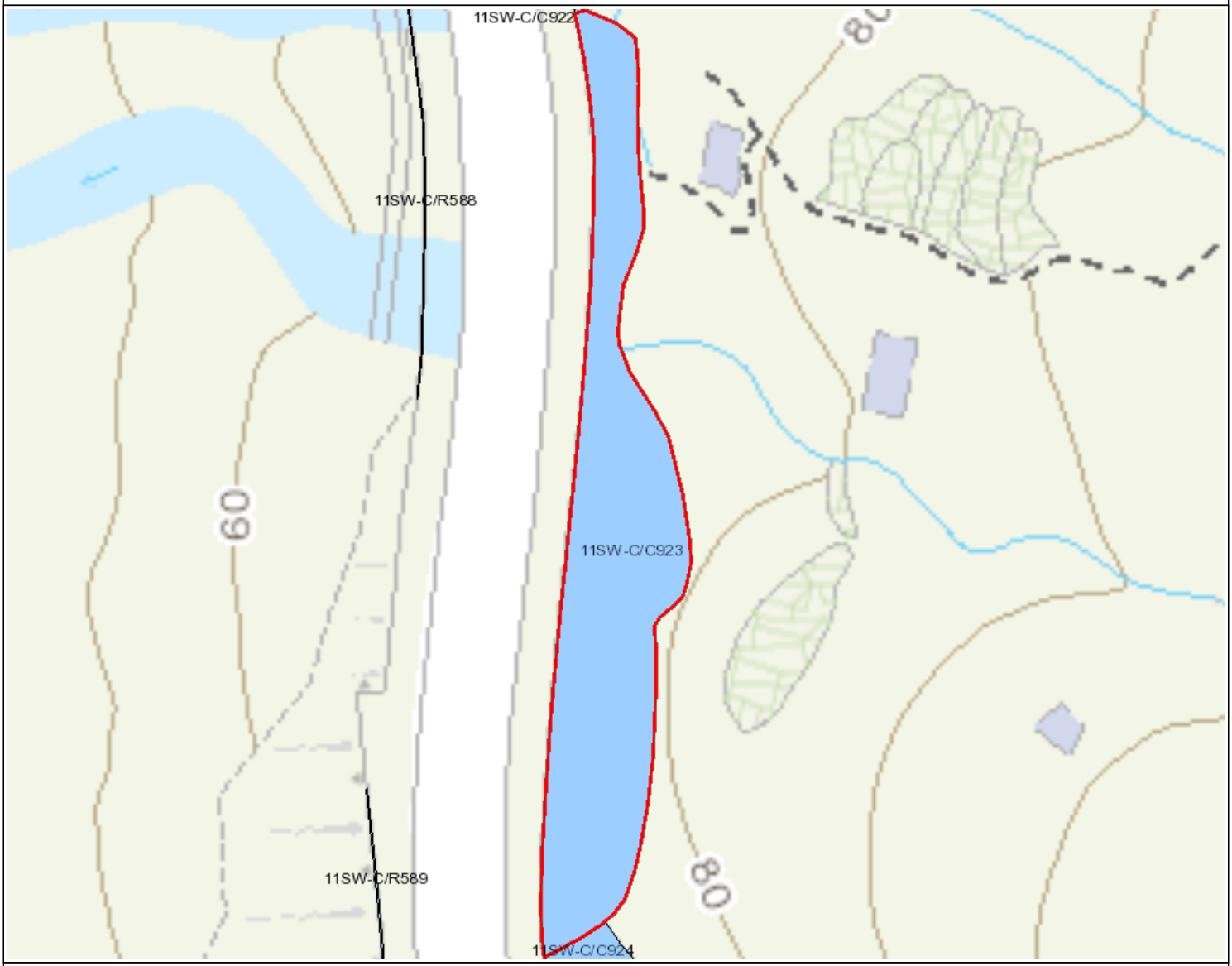
Location Plan



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

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Appendix C

Existing ground investigation Record

CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

GEOTECHNICAL ENGINEERING OFFICE

CONTRACT NO. GE/2011/06

GROUND INVESTIGATION – URBAN

(TERM CONTRACT)

Works Order No. GE/2011/06.264

Agreement No. CE 27/2011 (GE)

LPMit Programme, 2011, Package I

Landslip Prevention and Mitigation Works,

Investigation, Design and Construction,

Hillside Catchments Nos. 11SW-C/DF13, 11SW-C/DF13a, 11SW-C/DF13b – Above Victoria Road

Ground Investigation

Final Fieldwork Report

CONTENTS

Cont.

CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

GEOTECHNICAL ENGINEERING OFFICE

CONTRACT NO. GE/2011/06

GROUND INVESTIGATION – URBAN

(TERM CONTRACT)

Works Order No. GE/2011/06.264

Agreement No. CE 27/2011 (GE)

LPMit Programme, 2011, Package I

Landslip Prevention and Mitigation Works,

Investigation, Design and Construction,

Hillside Catchments Nos. 11SW-C/DF13, 11SW-C/DF13a, 11SW-C/DF13b – Above Victoria Road

Ground Investigation

Final Fieldwork Report

1. INTRODUCTION

The Civil Engineering and Development Department (CEDD) awarded Contract No. GE/2011/06 – Urban (Term Contract), to Vibro (H. K.) Limited in March 2011. This contract lasts for two years.

This report presents the results of the ground investigation works for Agreement No. CE 27/2011 (GE), LPMit Programme, 2011, Package I, Landslip Prevention and Mitigation Works, Investigation, Design and Construction, Hillside Catchments Nos. 11SW-C/DF13, 11SW-C/DF13a, 11SW-C/DF13b – Above Victoria Road. The fieldworks were carried out under Works Order No. GE/2011/06.264.

The fieldworks comprise drillings, manual excavation of trial pits, slope strippings and inspection pits, logging of ground materials, sampling, field testing, instrument installation, groundwater monitoring, vegetation clearances and surveying, were carried out in the period between 19th September 2012 and 23rd November 2012 under the supervision of CM Wong & Associates Limited.

2. THE SITE

Investigation works were carried out at Hillside Catchments Nos. 11SW-C/DF13, 11SW-C/DF13a, 11SW-C/DF13b – Above Victoria Road, Hong Kong. The exploratory stations can be located with the following co-ordinates at Hong Kong Metric Grid (1980).

	Easting(m)	Northing(m)
(1)	831460	814260
(2)	831460	814445
(3)	831605	814260
(4)	831605	814445

All exploratory stations are indicated on the Ground Investigation Plan as shown in Figure 1. Co-ordinates and ground levels of all exploratory stations are presented in Table 1.

3. GEOLOGY

The 1:20 000 Solid and Superficial Geology Map 'Hong Kong & Kowloon' published by the GCO (HGM20 Sheet 11 Edition 1, 1986) indicates that the site is expected to be underlain by fine grained Granite from Jurassic - Cretaceous Period of the Mesozoic Era.

4. FIELDWORK

The fieldworks comprised nine (9) vertical drillholes (Nos. DH1 to DH9), twenty five (25) trial pits (Nos. TP1 to TP22 and TP24 to TP26), four (4) slope stripping (Nos. SS1 to SS4), three (3) inspection pits (Nos. IP1 to IP3) and two (2) vegetation clearances (Nos. VC2 to VC3). The works at these investigation stations were carried out to depths and at locations

as specified in the Works Order or as instructed by the Engineer.

4.1 Drilling

An inspection pit was hand excavated at each drillhole location to the maximum depth of 1.00m, prior to the commencement of drilling works. Small disturbed samples were progressively collected during excavation at 0.5m intervals.

Nine (9) vertical drillholes (Nos. DH1 to DH9) were terminated at depths between 8.08m (at DH3) and 18.22m (at DH5). Rotary drilling techniques, using two sets of portable drilling equipments, were adopted for this Works Order. PW (140mmØ) and HW (115mmØ) casings, equipped with tungsten carbide cutting shoes, were used to advance the drillholes and prevent holes collapses. Arisings from the drilling process were removed from the drillholes using water as the flushing medium.

4.1.1 Mazier (Triple Tube Retractable Core Barrel) Samples

Undisturbed Retractable Triple Tube Core (Mazier) samples were taken at drillhole Nos. DH1, DH7 and DH9, using a triple tube retractable core barrel fitted with a removable 74mm diameter, 1000mm long transparent rigid ABS plastic liner. A retractable cutting shoe projecting from the tungsten carbide drill bit of the "Mazier" sampler was used to penetrate the material being sampled and thus isolate it from the detrimental effects of the flushing medium.

Small disturbed samples were taken in drillholes from the cutting shoe of the undisturbed sampler.

4.1.2 Double Tube Rock Coring

Double Tube, T2-101 swivel-type rotary core barrel with diamond impregnated core bit was used to recover concrete core with nominal size of 84mm at all drillholes.

After completion, drillhole Nos. DH1, DH7 to DH9 were backfilled in accordance with the instrumentation detail. For other drillholes, they were backfilled with cement bentonite grout in accordance with Cl.7.50 of the General Specification for Civil Engineering Works, 2006 Edition, the Government of the Hong Kong Special Administrative Region.

Photographs were taken for all materials recovered from the drillholes. The jar lids were removed prior to photography in order to display their contents. The drillhole records and the relevant corebox photographs are presented in Appendix C and D respectively.

4.2 Trial Pitting

Twenty five (25) trial pits (Nos. TP1 to TP22 and TP24 to TP26) were excavated by hand tools at locations as specified by the Engineer to examine superficial deposits. The dimension of all excavated trial pits were 1.5m x 1.5m on plan at ground level. When the trial pits were excavated beyond 1.2m depths, shoring was installed over the full height of the trial pits. Each of the trial pit faces was logged and photographic records were taken. The trial pit records and photographs are presented in Appendix E and F respectively.

Block samples, undisturbed horizontal U100 samples, large disturbed samples and small disturbed samples were taken at locations as instructed by the Engineer on site.

Upon completion of sampling, logging, photography and approval from the Engineer, the trial pits were backfilled and compacted by a vibrating hammer in 150mm layers and the surfaces of the trial pits were reinstated to the original ground conditions.

4.3 Slope Stripping

Four (4) slope strippings (Nos. SS1 to SS4) were excavated through the slope surface to expose the underlying natural materials. The slope strippings were excavated to 0.50m wide and 0.30m deep to expose the underlying materials. The

axis of each slope stripping was parallel to the dip of the slope. The exposed natural material was logged starting from the top of the slope proceeding downwards. Small disturbed samples were taken from the surface of the finished slope strip at 0.5m intervals. Upon completion of sampling, logging and approval from the Engineer, the slope strippings were appropriately reinstated to its original conditions.

The slope stripping records are presented in Appendix G.

4.4 Inspection Pit

Three (3) inspection pits (Nos. IP1 to IP3) were hand excavated from 0.50m to 1.00m deep, at locations from the datum of slope stripping nos. SS3 and SS4, as instructed by the Engineer. Small disturbed samples were progressively collected during excavation at 0.5m intervals.

A summary of the inspection pit record is presented in Table 4. The daily site records and photographs were submitted separately.

4.5 Vegetation Clearance

Two (2) strips of vegetation clearance (Nos. VC2 to VC3) were carried out for Engineer's inspection with length, wide and area of coverage as determined by the Engineer on site. The site measurement records and photographs have been submitted separately.

4.6 Field Testing

4.6.1 Acoustic Televiewer Survey

Acoustic Televiewer Survey was carried out at drillhole Nos. DH1 to DH6 at depth as instructed by the Engineer.

A Robertson Geologging High Resolution Acoustic Televiewer (HiRAT) fitted with two centralisers, was lowered to the borehole until to the bottom of testing depths as specified by the Engineer. The survey parameters were entered into the data acquisition system computer. The sonde was then raised to the surface and logging

commenced from the bottom at an optimum rate of about 1.5 to 1.6m/minute. A depth encoder provides continuous depth monitoring automatically. The logging stopped once the sonde passed the top of the testing depths and the data was stored for offsite processing and analysis.

The acoustic televiewer survey records are presented in Appendix H.

4.6.2 In-situ Density Test

In-situ density tests were carried out in accordance with GEOSPEC 3 (November 2001) test method 11.1 at trial pit Nos. TP2, TP4, TP8 to TP11, TP13 to TP16, TP18 to TP20, TP22, TP25 and TP26 as specified by the Engineer, by the sand replacement method. The bulk density of sand used for the test was determined in the laboratory before the commencement of the test. The results of the tests are presented in Appendix I and the summary of the results is presented in Table 3.

4.6.3 Dynamic Probing Test

Dynamic probing tests were carried out prior to the excavation of each trial pit to estimate the sub-surface soil strength as instructed by the Engineer.

The probes undertaken prior to the excavation of each trial pit were set out in a triangular pattern around the center of the pit not more than 800mm apart and advanced from ground level down to the proposed depth of the trial pits. If, however, hard strata were encountered before attaining the proposed depth and probing was terminated at a shallow depth due to refusal, a second attempt would be preformed.

The dynamic probing tests were carried out in accordance with Geoguide 2 using a 10kg hammer, dropping in free fall over a distance of 300mm.

The results of the tests carried out prior to excavation of the trial pits are presented in Appendix J and have been included in the AGS digital data presented in Appendix M.

4.7 Installation

A standpipe was installed at drillhole Nos. (DH1 and DH7 to DH9).

The standpipe comprises a 25mm I.D. uPVC riser pipe capped at the lower end, and perforated over the entire length, except for upper 2.00m, with 3mm holes covering approximately 5% of the surface area. The perforated section was surrounded with a granular response zone.

The response zones of the instruments, were sealed with bentonite pellets and backfilling of the drillholes above the bentonite pellets with cement/bentonite grout to the dimension shown in Geoguide 2, Figure 21. Details of the installation and the results of the response tests are presented in Appendix K.

The top of the uPVC tube of each instrument was fitted with a uPVC cap with a vent hole. A concrete surface box fitted with a cast iron hinged cover was constructed at the top of each drillhole to prevent damage to the instruments.

All instruments were monitored daily for a period of seven (7) working days upon completion of response tests. The groundwater monitoring records are presented in Appendix L.

4.8 Surveying Investigation Location

Following the completion of the fieldworks, the as-built co-ordinates and reduced levels were taken for each Investigation Station with reference to the nearest Government Benchmark. The as-built co-ordinates are presented in Hong Kong Metric Grid (1980) and reduced levels are related to the Hong Kong Principal Datum (PD). The co-ordinates and levels of each investigation station are summarized in the Summary Table of Survey Data, Table 1.

5. SOIL AND ROCK DESCRIPTIONS

The soils and rocks encountered in the investigation have generally been described according to Geoguide 3, Guide to Rock and Soil Descriptions. The classification and definitions of the descriptive terms are presented in Appendix A.

The delineation of various strata was primarily based on the examination of the samples

recovered from the drillholes and from the examination of the strata exposed on the faces of the trial pits and on the slope strippings. The results given in the form of drillhole, trial pit and slope stripping records are presented in Appendix C, E and G respectively. The legends used in the records are summarized in Appendix B.

6. GROUND CONDITIONS

6.1 Introduction

The vertical drillholes encountered a combination of the following strata:

FILL
COLLUVIUM/TOP SOIL
COLLUVIUM
SAPROLITIC SOIL AND WEATHERED ROCK
ROCK

A summary of the strata encountered is presented in Table 2.

A brief description of the materials encountered is given in the following sections. In summary, the strata have been grouped together under the headings of Fill, Colluvium / Top Soil, Colluvium, Saprolitic Soil and Weathered Rock, and Rock.

Full descriptions of the strata encountered can be found in the Drillhole Records presented in Appendix C of this report.

6.2 Fill

Fill was encountered at the ground surfaces of drillhole Nos. DH1, DH3 and DH7 to DH9. Fill comprises sandy SILT with some angular to subangular fine to coarse gravel sized highly decomposed and moderately decomposed rock fragments and occasional angular cobble sized moderately decomposed Granite, clayey / silty fine to coarse SAND with angular to subangular fine to coarse gravel sized highly decomposed and moderately decomposed rock fragments and occasional angular to

subangular cobble sized moderately decomposed Granite, sandy angular to subangular fine to coarse GRAVEL, COBBLE and BOULDER sized highly decomposed to slightly decomposed Granite and Tuff with some angular to subangular fine to coarse gravel sized highly decomposed and moderately decomposed rock fragments and occasional brick fragments.

The encountered thickness of the stratum ranged from 1.00m (at DH3) to 5.09m (at DH8) with the base elevations of the stratum vary between +83.28mPD and +130.86mPD at drillhole No. DH3 and DH9 respectively.

6.3 Colluvium / Top Soil

Colluvium / Top Soil was encountered at the ground surfaces of drillhole Nos. DH2 and DH4 to DH6. Colluvium / Top Soil comprises sandy SILT with occasional subangular fine gravel sized highly decomposed rock fragments and some rootlets and silty fine to coarse SAND with some angular to subangular fine to coarse gravel sized highly decomposed to slightly decomposed rock fragments.

The encountered thickness of the stratum ranged from 0.50m (at DH4 to DH6) to 0.70m (at DH2) with the base elevations of the stratum vary between +86.65mPD and +94.29mPD at drillhole No. DH6 and DH5 respectively.

6.4 Colluvium

Colluvium was encountered beneath Colluvium / Top Soil at drillhole Nos. DH6. Colluvium comprises angular BOULDER of slightly decomposed fine grained Granite.

The encountered thickness of the stratum was 0.69m with its base elevations at +85.96mPD.

6.5 Saprolitic Soil and Weathered Rock

Saprolitic Soils and Weathered Rock derived from the in-situ weathering of fine grained Granite were encountered beneath Colluvium at drillhole No. DH6 and beneath Fill at drillhole No. DH9. The Saprolitic Soil generally comprises sandy

angular to subangular COBBLES with some angular fine to coarse gravel.

Weathered rock comprises slightly decomposed and moderately decomposed fine grained Granite was encountered at drillhole No. DH6 and moderately decomposed and slightly decomposed feldsparphric Rhyolite was encountered at DH1.

The encountered thickness of the stratum ranged from 0.45m (at DH9) to 2.53m (at DH6) with the base elevations of the stratum vary between +83.43mPD and +130.41mPD at drillhole No. DH6 and DH9 respectively.

6.6 Bedrock

Bedrock of feldsparphyric Rhyolite and fine grained Granite was encountered at drillhole No. DH1 and fine grained Granite was encountered at all other drillholes with the bedrock levels vary between at +83.28mPD and +130.41mPD at drillhole Nos. DH3 and DH9 respectively.

7. DIGITAL DATA

The investigation log of each exploratory station was produced from gINT® which is a geotechnical and geoenvironmental software product. Details of the drillhole, trial pit and slope stripping records are stored in ASCII digital format.

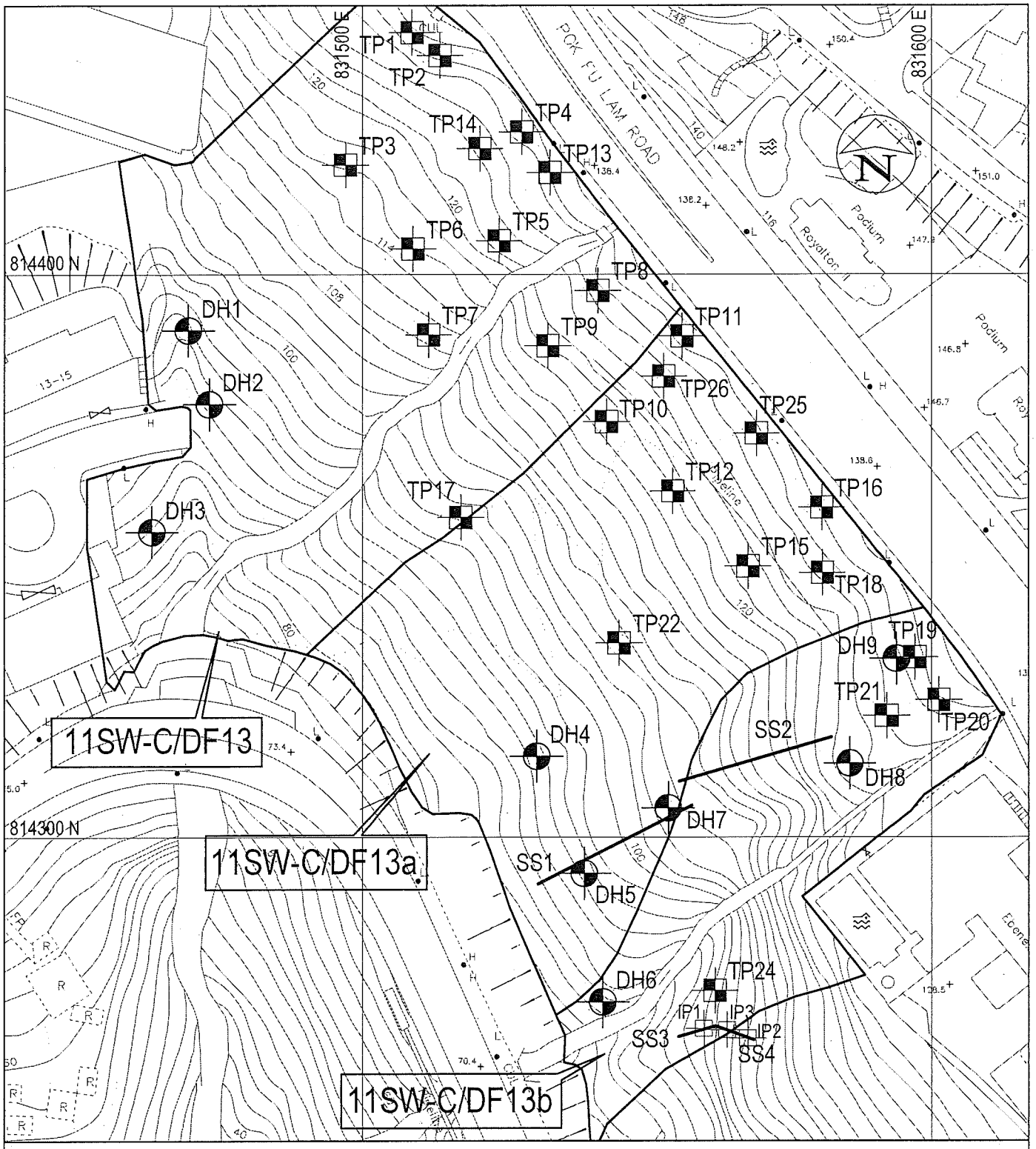
The data have been prepared in accordance with Appendix 1 of the third edition of the Association of Geotechnical and Geoenvironmental Specialists (AGS) publication "Electronic Transfer of Geotechnical and Geoenvironmental Data (AGS 1999)". The data dictionary used for the data field headings is in accordance with that recommended by the AGS with local variations as instructed by the Geotechnical Engineering Office.

All photographs presented in this report were taken with a digital camera, which conform to the JPEG Exchangeable Image File (EXIF) Version 2.2 standard.

The AGS digital data and the digital image of this final fieldwork report, individual station record and photographs are stored on a CD-ROM as attached in Appendix M.

8. REFERENCES

1. GCO HGM20 Sheet 11, Hong Kong & Kowloon, (Edition 1, 1986): Solid and Superficial Geology Edition (1:20 000 map).
2. GEO (1987), Guide to Site Investigation (Geoguide 2), Geotechnical Engineering Office, Hong Kong.
3. GEO (1988), Guide to Rock and Soil Descriptions (Geoguide 3), Geotechnical Engineering Office, Hong Kong.
4. General Specification for Civil Engineering Works, 2006 Edition, the Government of the Hong Kong Special Administrative Region.
5. Macbeth (1994), Munsell Soil Colour Charts. 1994 Revised Edition published by GretagMacbeth.
6. GEO (2001), Model Specification for Soil Testing (Geospec 3), Geotechnical Engineering Office, Hong Kong.
7. AGS (1999), Transfer of Geotechnical and Geoenvironmental Data, Association of Geotechnical and Geoenvironmental Specialists.



LEGEND:

DH1 DRILLHOLE | TP1 TRIAL PIT | SS1 SLOPE STRIPPING | IP1 INSPECTION PIT (APPROX. LOCATION)

DRAWN: PWN	CHECKED: E LEUNG	CEDD CONTRACT NO. GE/2011/06 GROUND INVESTIGATION - URBAN (TERM CONTRACT)	FEATURE NO.: 11SW-C/DF13 11SW-C/DF13a & 11SW-C/DF13b
SCALE: 1 : 1000	DATE: 27-11-2012		LOCATION: Above Victoria Road, Hong Kong
DRAWING NO.: J201115e/GIP/264			WORKS ORDER NO.: GE/2011/06.264
VIBRO (H.K.) LIMITED	CEDD CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT HONG KONG		DRAWING TITLE: GROUND INVESTIGATION LAYOUT PLAN

VIBRO	VIBRO (H.K.) LTD. SITE INVESTIGATION DEPARTMENT TABLE 1 - SURVEY RECORD	CONTRACT NO. GE/2011/06
PROJECT	Ground Investigation - Urban (Term Contract) Agreement No. CE 27/2011 (GE), LPMit Programme, 2011, Package I, Landslip Prevention and Mitigation Works, Investigation, Design and Construction, Hillside Catchments Nos. 11SW-C/DF13, 11SW-C/DF13a, 11SW-C/DF13b - Above Victoria Road	WORKS ORDER NO. GE/2011/06.264 SHEET 1 OF 2

EXPLORATORY STATION	EASTING	NORTHING	GROUND LEVEL (mPD)
DH 1	831469.49	814390.07	+94.28
DH 2	831473.21	814376.93	+90.49
DH 3	831463.06	814354.21	+84.28
DH 4	831530.61	814314.39	+92.04
DH 5	831538.97	814293.58	+94.79
DH 6	831542.20	814270.71	+87.15
DH 7	831553.68	814305.21	+104.61
DH 8	831585.74	814313.13	+126.78
DH 9	831593.88	814331.69	+133.56
SS 1 Crest	831557.91	814305.68	+106.72
SS 1 Toe	831530.83	814291.70	+89.51
SS 2 Crest	831582.43	814317.76	+126.61
SS 2 Toe	831555.64	814309.92	+106.71
SS 3 Crest	831562.10	814266.42	+97.78
SS 3 Toe	831555.53	814264.53	+93.58
SS 4 Crest	831568.71	814263.96	+103.48
SS 4 Toe	831562.08	814266.42	+97.77
TP 1	831508.69	814443.13	+132.13
TP 2	831513.57	814439.02	+132.07
TP 3	831497.01	814419.54	+116.73
TP 4	831528.02	814425.42	+132.98
TP 5	831524.04	814406.02	+123.44
TP 6	831508.84	814404.57	+115.63
TP 7	831511.58	814389.26	+110.36
TP 8	831541.39	814397.14	+128.08
TP 9	831532.60	814387.30	+119.28
TP10	831542.92	814373.82	+119.24
TP11	831556.14	814389.06	+132.23
TP12	831554.49	814361.47	+120.53
TP13	831532.96	814418.16	+132.58
TP14	831520.62	814422.43	+127.60

VIBRO	VIBRO (H.K.) LTD. SITE INVESTIGATION DEPARTMENT TABLE 1 - SURVEY RECORD	CONTRACT NO. GE/2011/06
PROJECT	Ground Investigation - Urban (Term Contract) Agreement No. CE 27/2011 (GE), LPMit Programme, 2011, Package I, Landslip Prevention and Mitigation Works, Investigation, Design and Construction, Hillside Catchments Nos. 11SW-C/DF13, 11SW-C/DF13a, 11SW-C/DF13b - Above Victoria Road	WORKS ORDER NO. GE/2011/06.264 SHEET 2 OF 2

EXPLORATORY STATION	EASTING	NORTHING	GROUND LEVEL (mPD)
TP15	831567.75	814348.13	+123.67
TP16	831580.77	814358.55	+135.06
TP17	831517.24	814356.78	+100.42
TP18	831580.89	814346.95	+130.10
TP19	831597.08	814331.94	+135.49
TP20	831601.29	814324.36	+134.74
TP21	831592.20	814321.56	+131.16
TP22	831545.07	814334.48	+107.58
TP24	831561.94	814272.74	+95.55
TP25	831569.24	814371.75	+133.13
TP26	831552.89	814381.90	+127.01

VIBRO

VIBRO (H.K.) LIMITED

SITE INVESTIGATION DEPARTMENT

CONTRACT NO. GE/2011/06

WORKS ORDER NO. GE/2011/06.264

PROJECT : Ground Investigation - Urban (Term Contract)

LOCATION : Agreement No. CE 27/2011 (GE), LPMit Programme, 2011, Package I, Landslip Prevention and Mitigation Works, Investigation, Design and Construction, Hillside Catchments Nos. 11SW-C/DF13, 11SW-C/DF13a, 11SW-C/DF13b - Above Victoria Road

Table 2 - Summary of Drillhole Result

Stratum	HOLE NO.								
	DH 1	DH 2	DH 3	DH 4	DH 5	DH 6	DH 7	DH 8	DH 9
Ground Level (mPD)	+94.28	+90.49	+84.28	+92.04	+94.79	+87.15	+104.61	+126.78	+133.56
Fill Bottom Level (mPD)	+90.38	-	+83.28	-	-	-	+100.61	+121.69	+130.86
Bottom Depth (m below Ground Level)	3.90	-	1.00	-	-	-	4.00	5.09	2.70
Thickness (m)	3.90	-	1.00	-	-	-	4.00	5.09	2.70
Colluvium/Top Soil Bottom Level (mPD)	-	+89.79	-	+91.54	+94.29	+86.65	-	-	-
Bottom Depth (m below Ground Level)	-	0.70	-	0.50	0.50	0.50	-	-	-
Thickness (m)	-	0.70	-	0.50	0.50	0.50	-	-	-
Colluvium Bottom Level (mPD)	-	-	-	-	-	+85.96	-	-	-
Bottom Depth (m below Ground Level)	-	-	-	-	-	1.19	-	-	-
Thickness (m)	-	-	-	-	-	0.69	-	-	-
Saprolitic Soil and Weathered Rock Bottom Level (mPD)	+89.19	-	-	-	-	+83.43	+99.51	-	+130.41
Bottom Depth (m below Ground Level)	5.09	-	-	-	-	3.72	5.10	-	3.15
Thickness (m)	1.19	-	-	-	-	2.53	1.10	-	0.45
Rock Bottom Level (mPD)	+83.02	+82.33	+76.20	+73.87	+76.57	+68.99	+89.51	+115.46	+124.38
Bottom Depth (m below Ground Level)	11.26	8.16	8.08	18.17	18.22	18.16	15.10	11.32	9.18
Thickness (m)	6.17	7.46	7.08	17.67	17.72	14.44	10.00	6.23	6.03
End of Hole Level (mPD)	+83.02	+82.33	+76.20	+73.87	+76.57	+68.99	+89.51	+115.46	+124.38
End of Hole Depth (m below Ground Level)	11.26	8.16	8.08	18.17	18.22	18.16	15.10	11.32	9.18
Rock Type	Rhyolite / Granite	Granite	Granite	Granite	Granite	Granite	Granite	Granite	Granite
Bedrock Level (mPD)	+89.19	+89.79	+83.28	+91.54	+94.29	+83.43	+99.51	+121.69	+130.41

Note : - : Not encountered in the investigation

DRILLHOLE RECORD

HOLE NO. DH 1

CONTRACT NO. : GE/2011/06

SHEET 1 OF 2

PROJECT Ground Investigation - Urban (Term Contract)
Agreement No. CE 27/2011 (GE), LPMit Programme, 2011, Package I, Landslip Prevention and Mitigation Works, Investigation, Design and Construction, Hillside Catchments Nos. 11SW-C/DF13, 11SW-C/DF13a, 11SW-C/DF13b - Above Victoria Road

METHOD	Rotary	CO-ORDINATES	W.O.NO. GE/2011/06.264
MACHINE & NO.	VBM56	E 831469.49 N 814390.07	DATE : 25/09/2012 to 28/09/2012
FLUSHING MEDIUM	Water	ORIENTATION Vertical	GROUND LEVEL + 94.28 mPD

Drilling Progress	Casing Depth/Size	Water Level (m) Shift start / end	Flush Returns %	T C R %	S C R %	R Q D %	FI	Tests	Samples No. Type Depth	Reduced Level	Depth (m)	Legend	Grade	Description
25/09/2012	HW									+94.28	0.00			Firm, brown (7.5YR 5/4), sandy SILT with some angular to subangular fine to coarse gravel sized moderately decomposed rock fragments and occasional angular cobble sized moderately decomposed Granite. (FILL)
									A INSPECTION PIT 0.50					
1									B 1.00	+93.28	1.00			
			0	80					T2I0I 1.50					Brown (7.5YR 5/4), dappled pinkish brown, angular fine to coarse GRAVEL and COBBLE sized moderately decomposed Granite. (FILL)
25/09/2012														
26/09/2012		1.30m at 08:00	0	84					T2I0I 2.00					
2			0	86					T2I0I 2.50					
			0	78					T2I0I 3.00					
3			0	60					T2I0I 3.50					
			0	0					1 3.90	+90.38	3.90		III	
4			0	86	0	0	>20		4.00					Moderately strong, grey, dappled dark grey, moderately decomposed feldsparphyric RHYOLITE. Joints are very closely spaced, locally closely spaced, extremely narrow to very narrow, rough planar, clean and occasional iron stained, dipping 20° to 30°, 70° to 80° and subvertically. From 4.43m to 4.75m : Strong, slightly decomposed feldsparphyric RHYOLITE.
									T2I0I 4.50	+89.85	4.43		II	
			0	88	14	0	9.4			+89.53	4.75		III	
5	HW 4.96						NI >20		T2I0I 5.09	+89.19	5.09		II	
			60	100	100	87	2.3		T2I0I 6.47					Strong, dark grey, spotted and mottled light grey and pink, slightly decomposed feldsparphyric RHYOLITE. Joints are closely spaced, locally very closely and medium spaced, tight to extremely narrow, rough and slickensided planar, clean and calcite coated, dipping 10° to 20°, 20° to 30° and 70° to 80°.
6		5.30m at 18:00												
26/09/2012														
27/09/2012		Dry at 08:00					7.0							
			60	100	53	26	>20		T2I0I 7.80					From 6.80m to 8.17m : Subvertical joint.
7							7.7							
		Dry at 18:00												
27/09/2012														
28/09/2012		Dry at 08:00												
			60	100	80	46	14.7		T2I0I 8.80					
8							>20			+85.48				
									9.18				II	Strong, greyish pink, slightly decomposed fine grained GRANITE. Joints are closely to medium spaced, locally very closely spaced, rough planar and rough stepped, tight to extremely narrow, clean and occasional chlorite coated, dipping 0° to 10°, 30° to 40° and 50° to 60°. From 8.90m to 9.18m : Subvertical joint.
9			60	100	61	50	8.5		T2I0I					
10														

- Disturbed sample
- Piston sample
- Split spoon sample
- U76 undisturbed sample
- U100 undisturbed sample
- Mazier sample
- SPT liner sample
- Water sample
- En Environmental Sample
- Standard penetration test
- V In-situ vane shear test
- Permeability test
- Pressuremeter test
- Packer Test
- Acoustic or optical televiewer survey
- Piezometer tip
- Standpipe
- Inclinometer access tube
- Vibrating wire piezometer
- Impression packer test

LOGGED T. C. Yip

DATE 03/10/2012

CHECKED E. Leung

DATE 04/10/2012

REMARKS

1. An inspection pit was excavated to 1.00m.
2. A standpipe was installed to 4.50m.
3. An acoustic televiewer survey was carried out from 4.96m to 11.02m.

VIBRO

DRILLHOLE RECORD

HOLE NO. DH 1

CONTRACT NO. : GE/2011/06

SHEET 2 OF 2

PROJECT Ground Investigation - Urban (Term Contract)
Agreement No. CE 27/2011 (GE), LPMit Programme, 2011, Package I, Landslip Prevention and Mitigation Works, Investigation, Design and Construction, Hillside Catchments Nos. 11SW-C/DF13, 11SW-C/DF13a, 11SW-C/DF13b - Above Victoria Road

METHOD	Rotary	CO-ORDINATES	W.O.NO. GE/2011/06.264
MACHINE & NO.	VBM56	E 831469.49 N 814390.07	DATE : 25/09/2012 to 28/09/2012
FLUSHING MEDIUM	Water	ORIENTATION Vertical	GROUND LEVEL + 94.28 mPD

Drilling Progress	Casing Depth/Size	Water Level (m) Shift start / end	Flush Returns %	T C R %	S C R %	R Q D %	FI	Tests	Samples No. Type Depth	Reduced Level	Depth (m)	Legend	Grade	Description
			60	100	61	50	8.5		T2 IOI 10.57				II	See sheet 1 of 2
11 28/09/2012		8.30m at 18:00	60	100	86	73	>20 2.2		T2 IOI 11.26	+84.02	11.26			From 10.60m to 10.85m : With slickensided planar chlorite infilled joints up to 10mm thick, dipping 60° to 70°.
														End of Investigation Hole at 11.26m.

12 13 14 15 16 17 18 19 20

- Disturbed sample
- Piston sample
- Split spoon sample
- U76 undisturbed sample
- U100 undisturbed sample
- Mazier sample
- SPT liner sample
- Water sample
- En Environmental Sample
- Standard penetration test
- V In-situ vane shear test
- Permeability test
- Pressuremeter test
- Packer Test
- Acoustic or optical televiewer survey
- Piezometer tip
- Standpipe
- Inclinometer access tube
- Vibrating wire piezometer
- Impression packer test

LOGGED T. C. Yip

DATE 03/10/2012

CHECKED E. Leung

DATE 04/10/2012

REMARKS

J201115e_264

DRILLHOLE RECORD

HOLE NO. DH 2

CONTRACT NO. : GE/2011/06

SHEET 1 OF 1

PROJECT Ground Investigation - Urban (Term Contract)
Agreement No. CE 27/2011 (GE), LPMit Programme, 2011, Package I, Landslip Prevention and Mitigation Works, Investigation, Design and Construction, Hillside Catchments Nos. 11SW-C/DF13, 11SW-C/DF13a, 11SW-C/DF13b - Above Victoria Road

METHOD	Rotary	CO-ORDINATES	W.O.NO. GE/2011/06.264
MACHINE & NO.	VBM56	E 831473.21 N 814376.93	DATE : 19/09/2012 to 20/09/2012
FLUSHING MEDIUM	Water	ORIENTATION Vertical	GROUND LEVEL + 90.49 mPD

Drilling Progress	Casing Depth/Size	Water Level (m) Shift start / end	Flush Returns %	TCR %	SCR %	RQD %	FI	Tests	Samples No. Type Depth	Reduced Level	Depth (m)	Legend	Grade	Description
19/09/2012	HW								INSPECTION PIT A 0.50 B 0.70	+90.49	0.00			Firm, dark brown (7.5YR 3/4), sandy SILT with occasional subangular fine gravel sized highly decomposed rock fragments and some rootlets. (COLLUVIUM / TOP SOIL)
			60	100	0	0	NI		T2IOI 1.00	+89.79	0.70		III	Moderately strong, pinkish grey, dappled brown and dark brown, moderately decomposed fine grained GRANITE, fractured.
	HW 1.48		60	100	45	19	12.5		T2IOI 1.62	+89.49	1.00		II	Strong, locally moderately strong, pinkish grey, dappled light brown and brown, slightly decomposed fine grained GRANITE. Joints are closely to medium spaced, locally very closely spaced, rough planar and rough stepped, extremely narrow, iron and manganese stained, locally chlorite coated, dipping 0° to 10°, 10° to 20°, 50° to 60° and 60° to 70°.
			60	100	29	23	10.5 >20 16.0		T2IOI 2.24	+88.68	1.81		III	From 1.81m to 2.30m : Moderately strong, moderately decomposed GRANITE with closely spaced joints, dipping subvertically.
			60	100	89	54	7.1		T2IOI 3.04	+88.19	2.30		II	
			60	100	60	48	17.5 8.0		T2IOI 3.95					
19/09/2012		2.30m at 18:00	60	100	67	25	>20 9.1		T2IOI 4.43					
20/09/2012		3.30m at 08:00	60	100	67	49	4.3		T2IOI 4.86					
			60	100	75	15	14.9		T2IOI 5.51	+85.14	5.35		III	At 4.90m : With some voids (<10mm) noted along joint.
			60	100	60	60	6.1		T2IOI 5.76	+84.89	5.60		II	From 5.35m to 5.60m : Moderately strong, moderately decomposed GRANITE. With kaolin coated joints, dipping 60°. From 5.60m to 5.75m : With very closely to closely spaced microfractures, dipping 70° to 80° and subvertically.
			60	100	72	54	>20 6.9 >20		T2IOI 7.19					From 5.98m to 6.95m : With very closely to closely spaced microfractures, dipping 50° to 60°.
			60	100	93	76	5.9		T2IOI 8.16	+82.33	8.16			
20/09/2012		3.10m at 18:00												End of Investigation Hole at 8.16m.

- Disturbed sample
- Piston sample
- Split spoon sample
- U76 undisturbed sample
- U100 undisturbed sample
- Mazier sample
- SPT liner sample
- Water sample
- En Environmental Sample
- Standard penetration test
- V In-situ vane shear test
- Permeability test
- Pressuremeter test
- Packer Test
- Acoustic or optical televiewer survey
- Piezometer tip
- Standpipe
- Inclinometer access tube
- Vibrating wire piezometer
- Impression packer test

LOGGED T. C. Yip

DATE 21/09/2012

CHECKED E. Leung

DATE 25/09/2012

REMARKS
1. An inspection pit was excavated to 0.70m.
2. An acoustic televiewer survey was carried out from 1.48m to 7.97m.

J201115e_264

DRILLHOLE RECORD

VIBRO

CONTRACT NO. : GE/2011/06	HOLE NO. DH 3
	SHEET 1 OF 1

PROJECT Ground Investigation - Urban (Term Contract)
Agreement No. CE 27/2011 (GE), LPMit Programme, 2011, Package I, Landslip Prevention and Mitigation Works, Investigation, Design and Construction, Hillside Catchments Nos. 11SW-C/DF13, 11SW-C/DF13a, 11SW-C/DF13b - Above Victoria Road

METHOD	Rotary	CO-ORDINATES	W.O.NO. GE/2011/06.264
MACHINE & NO.	VBM56	E 831463.06 N 814354.21	DATE : 22/09/2012 to 24/09/2012
FLUSHING MEDIUM	Water	ORIENTATION Vertical	GROUND LEVEL + 84.28 mPD

Drilling Progress	Casing Depth/Size	Water Level (m) Shift start / end	Flush Returns %	T C R %	S C R %	R Q D %	FI	Tests	Samples No. Type Depth	Reduced Level	Depth (m)	Legend	Grade	Description
22/09/2012	HW								INSPECTION PIT A B 0.50 0.60	+84.28	0.00			Dark brown (7.5YR 3/4), silty fine to coarse SAND with some angular to subangular fine to coarse gravel sized highly decomposed and moderately decomposed rock fragments and occasional angular to subangular cobble sized moderately decomposed Granite. (FILL)
			60	68					T2|O|	+83.68	0.60			
1					0	0	13.3			+83.28	1.00		III	Greyish brown (2.5Y 5/2), dappled brown, angular to subangular COBBLE sized moderately decomposed and slightly decomposed Granite with some angular medium to coarse gravel sized moderately decomposed rock fragments. (FILL)
	HW 1.37		60	100	40	0			T2|O| 1.17	+82.98	1.30			
			60	100	67	67			T2|O| 1.37				II	Strong, greyish pink, locally dappled light brown, slightly decomposed fine grained GRANITE.
2			60	100	88	77	4.5		T2|O| 1.86					Joints are medium spaced, locally closely and widely spaced, rough planar and rough stepped, extremely narrow, iron and manganese stained, occasional clean, dipping 10° to 20°, 50° to 60°, 60° to 70° and occasional 70° to 80°.
			60	100	66	66			T2|O| 2.70					From 1.00m to 1.30m : Moderately strong, moderately decomposed.
3			60	100	89	74	2.9		T2|O| 3.20					From 1.00m to 1.50m : Subvertical joint.
									T2|O| 3.55					From 2.00m to 2.40m : Subvertical joint.
4			60	100	100	100			T2|O|					
									4.37					
			60	100	95	95	1.4		T2|O|					From 4.50m to 5.50m : With some sub-parallel closely spaced, quartz infilled joints (<3mm thick), dipping 50° to 80°.
5									5.21					
			60	100	100	100			T2|O|					
							14.3		5.76					
			60	100	68	40	11.1		T2|O| 6.01					
6			60	100	100	93	5.6		T2|O|					
22/09/2012		1.39m at 18:00												
24/09/2012		1.50m at 08:00												
7			60	100	100	100	1.3		T2|O|					
		1.51m at 13:00							7.68					
8 24/09/2012			60	100	100	100			T2|O| 8.08	+76.20	8.08			End of Investigation Hole at 8.08m.
9														
10														

- Disturbed sample
- Piston sample
- Split spoon sample
- U76 undisturbed sample
- U100 undisturbed sample
- Mazier sample
- SPT liner sample
- Water sample
- En Environmental Sample
- Standard penetration test
- V In-situ vane shear test
- Permeability test
- Pressuremeter test
- Packer Test
- Acoustic or optical televiewer survey
- Piezometer tip
- Standpipe
- Inclinometer access tube
- Vibrating wire piezometer
- Impression packer test

LOGGED	T. C. Yip
DATE	25/09/2012
CHECKED	E. Leung
DATE	26/09/2012

REMARKS
1. An inspection pit was excavated to 0.60m.
2. An acoustic televiewer survey was carried out from 1.37m to 7.87m.

J201115e_264

DRILLHOLE RECORD

VIBRO

HOLE NO. DH 4

CONTRACT NO. : GE/2011/06

SHEET 1 OF 2

PROJECT Ground Investigation - Urban (Term Contract)
Agreement No. CE 27/2011 (GE), LPMit Programme, 2011, Package I, Landslip Prevention and Mitigation Works, Investigation, Design and Construction, Hillside Catchments Nos. 11SW-C/DF13, 11SW-C/DF13a, 11SW-C/DF13b - Above Victoria Road

METHOD	Rotary	CO-ORDINATES	W.O.NO. GE/2011/06.264
MACHINE & NO.	VBM56	E 831530.61 N 814314.39	DATE : 12/10/2012 to 15/10/2012
FLUSHING MEDIUM	Water	ORIENTATION Vertical	GROUND LEVEL + 92.04 mPD

Drilling Progress	Casing Depth/Size	Water Level (m) Shift start / end	Flush Returns %	TCR %	SCR %	RQD %	FI	Tests	Samples No. Type Depth	Reduced Level	Depth (m)	Legend	Grade	Description
12/10/2012	HW HW 0.50								A INSPECTION PIT 0.50	+92.04	0.00			Dark brown (7.5YR 3/4), silty fine to coarse SAND with some angular to subangular fine to coarse gravel sized highly decomposed and moderately decomposed rock fragments. (COLLUVIUM / TOP SOIL)
										+91.54	0.50		III	Strong, locally moderately strong, pinkish grey, dappled light brown, slightly decomposed fine grained GRANITE. Joints are closely to medium spaced, rough planar and rough stepped, extremely narrow, iron and manganese stained, dipping 10° to 20°, 20° to 30° and 30° to 40°. From 0.50m to 0.88m : Moderately strong, moderately decomposed.
			60	100	100	87	2.5		T2 IOI 1.80	+91.16	0.88		II	From 2.40m to 2.55m : Subvertical joint.
			60	100	100	89	8.5 3.4 11.8		T2 IOI 2.82	+89.44	2.60		II	Strong, pinkish grey, spotted dark green, slightly decomposed fine grained GRANITE. Joints are medium spaced, locally closely spaced, rough planar and rough stepped, tight to extremely narrow, clean, locally iron and manganese stained, chlorite coated, dipping 10° to 20°, 20° to 30° and 50° to 60°. From 2.75m to 3.33m : Subvertical joint.
			60	100	100	100	2.2		T2 IOI 3.41					
			60	100	100	51	9.4		T2 IOI 3.78					
12/10/2012		3.20m at 18:00	60	100	100	100	2.2		T2 IOI 4.23					
13/10/2012		Dry at 08:00	60	100	100	100			T2 IOI 4.66					
			60	100	100	90	4.3		T2 IOI 5.44					
			60	100	96	82	11.8 2.9		T2 IOI 6.79	+85.64	6.40		II	Strong, locally moderately strong, pinkish grey, dappled light brown and brown, slightly decomposed fine grained GRANITE. Joints are closely to medium spaced, rough planar and rough stepped, extremely narrow, iron and manganese stained, dipping 10° to 20°, 30° to 40° and 50° to 60°. From 6.40m to 6.90m : Subvertical joint. From 7.33m to 7.70m : With some kaoline infilled (<1mm) joints, dipping 70° to 80°.
			60	100	90	90	9.3 2.0		T2 IOI 8.24	+83.94	8.10		II	Strong, pinkish grey, spotted dark green, slightly decomposed fine grained GRANITE. Joints are closely to medium spaced, locally very closely spaced, rough planar and rough stepped, tight to extremely narrow, clean, iron stained, occasional manganese stained and chlorite coated, dipping 10° to 20°, 20° to 30°, 50° to 60° and 60° to 70°.
			60	100	96	75	8.0 4.5 13.8		T2 IOI 9.54					
			60	100	100	98	4.6		T2 IOI					

- Disturbed sample
- Piston sample
- Split spoon sample
- U76 undisturbed sample
- U100 undisturbed sample
- Mazier sample
- SPT liner sample
- Water sample
- En Environmental Sample
- Standard penetration test
- V In-situ vane shear test
- I Permeability test
- Pressuremeter test
- Packer Test
- Acoustic or optical televiewer survey
- Piezometer tip
- Standpipe
- Inclinometer access tube
- Vibrating wire piezometer
- Impression packer test

LOGGED T. C. Yip

DATE 17/10/2012

CHECKED E. Leung

DATE 18/10/2012

REMARKS
1. An inspection pit was excavated to 0.50m.
2. An acoustic televiewer survey was carried out from 0.55m to 17.90m.

VIBRO

DRILLHOLE RECORD

HOLE NO. DH 4

CONTRACT NO. : GE/2011/06

SHEET 2 OF 2

PROJECT Ground Investigation - Urban (Term Contract)
Agreement No. CE 27/2011 (GE), LPMit Programme, 2011, Package I, Landslip Prevention and Mitigation Works, Investigation, Design and Construction, Hillside Catchments Nos. 11SW-C/DF13, 11SW-C/DF13a, 11SW-C/DF13b - Above Victoria Road

METHOD Rotary	CO-ORDINATES	W.O.NO. GE/2011/06.264
MACHINE & NO. VBM56	E 831530.61 N 814314.39	DATE : 12/10/2012 to 15/10/2012
FLUSHING MEDIUM Water	ORIENTATION Vertical	GROUND LEVEL + 92.04 mPD

Drilling Progress	Casing Depth/Size	Water Level (m) Shift start / end	Flush Returns %	TCR %	SCR %	RQD %	FI	Tests	Samples No. Type Depth	Reduced Level +82.04	Depth (m) 10.00	Legend	Grade	Description
13/10/2012		7.50m at 18:00	60	100	100	98	4.6		T2 1				II	See sheet 1 of 2
									10.74					
			60	100	93	70	13.2		T2 1					
							3.8		12.07					
15/10/2012		Dry at 08:00	60	100	98	55			T2 1					
							14.1		13.43					
			60	100	73	56	4.3		T2 1					From 13.89m to 14.34m : Subvertical joint.
							16.0		14.34					
			60	100	96	89	3.6		T2 1					From 14.60m to 14.81m : Subvertical joint.
			60	100	94	85	9.7		14.81 T2 1					
									15.15					
			60	100	100	94	3.3		T2 1					
									16.04					
			60	100	100	100			T2 1					
									16.57					From 16.57m to 17.25m : Subvertical joint.
			60	100	66	66	10.3		T2 1					
									17.25					
15/10/2012		14.20m at 18:00	60	100	100	100	2.2		T2 1					From 17.97m to 18.17m : Subvertical joint.
									18.17	+73.87	18.17			End of Investigation Hole at 18.17m.

- Disturbed sample
- Piston sample
- Split spoon sample
- U76 undisturbed sample
- U100 undisturbed sample
- Mazier sample
- SPT liner sample
- Water sample
- En Environmental Sample
- Standard penetration test
- V In-situ vane shear test
- Permeability test
- Pressuremeter test
- Packer Test
- Acoustic or optical televiewer survey
- Piezometer tip
- Standpipe
- Inclinometer access tube
- Vibrating wire piezometer
- Impression packer test

LOGGED T. C. Yip

DATE 17/10/2012

CHECKED E. Leung

DATE 18/10/2012

REMARKS

J201115e_264

DRILLHOLE RECORD

HOLE NO. DH 5

CONTRACT NO. : GE/2011/06

SHEET 1 OF 2

PROJECT Ground Investigation - Urban (Term Contract)
Agreement No. CE 27/2011 (GE), LPMit Programme, 2011, Package I, Landslip Prevention and Mitigation Works, Investigation, Design and Construction, Hillside Catchments Nos. 11SW-C/DF13, 11SW-C/DF13a, 11SW-C/DF13b - Above Victoria Road

METHOD	Rotary	CO-ORDINATES	W.O.NO. GE/2011/06.264
MACHINE & NO.	VBM56	E 831538.97 N 814293.58	DATE : 19/10/2012 to 22/10/2012
FLUSHING MEDIUM	Water	ORIENTATION Vertical	GROUND LEVEL + 94.79 mPD

Drilling Progress	Casing Depth/Size	Water Level (m) Shift start / end	Flush Returns %	TCR %	SCR %	RQD %	FI	Tests	Samples No. Type Depth	Reduced Level	Depth (m)	Legend	Grade	Description
19/10/2012	HW HW 0.50								A INSPECTION PIT 0.50	+94.79 +94.29	0.00 0.50			Firm, moist, dark brown (7.5YR 3/4), sandy SILT with occasional angular to subangular fine gravel sized highly decomposed rock fragments. (TOP SOIL / COLLUVIUM)
			60	100	93	69	9.4 4.7 16.1		T2 1.01	+93.02	1.77		III	Moderately strong, pinkish grey, dappled light brown, spotted dark green, moderately decomposed fine grained GRANITE. Joints are closely to medium spaced, locally very closely spaced, rough planar and rough stepped, extremely narrow, iron and manganese stained, dipping 10° to 20°, 20° to 30° and 30° to 40°.
			60	100	100	79	6.3 9.3		1.93 T2 1.01				II	Strong to very strong, pinkish grey, spotted dark green, slightly decomposed fine grained GRANITE. Joints are widely spaced, rough planar and rough stepped, extremely narrow, iron and manganese stained, dipping 0° to 10° and occasional 60° to 70°. From 1.77m to 2.68m : Joints are closely to medium spaced, rough planar, extremely narrow, iron and manganese oxide stained, dipping 10° to 20°, 20° to 30° and 30° to 40°.
			60	100	100	100			2.68 T2 1.01					
			60	100	100	100			3.03 T2 1.01					
			60	100	100	100			3.56 T2 1.01					
			60	100	100	100			4.01 T2 1.01					
			60	100	100	100			4.48 T2 1.01					
19/10/2012		3.50m at 18:00	60	100	100	100			4.78					
20/10/2012		Dry at 08:00	60	100	100	100	0.8		T2 1.01					
			0	100	100	100			5.34 T2 1.01					
			0	100	100	100			6.04 T2 1.01					
			0	100	95	95	4.0		7.25 T2 1.01					
			0	100	100	100			8.12 T2 1.01					
			0	100	100	100	0.9		8.60 T2 1.01					

- Disturbed sample
- Piston sample
- Split spoon sample
- U76 undisturbed sample
- U100 undisturbed sample
- Mazier sample
- SPT liner sample
- Water sample
- En Environmental Sample
- Standard penetration test
- V In-situ vane shear test
- Permeability test
- Pressuremeter test
- Packer Test
- Acoustic or optical televiewer survey
- Piezometer tip
- Standpipe
- Inclinometer access tube
- Vibrating wire piezometer
- Impression packer test

LOGGED T. C. Yip

DATE 26/10/2012

CHECKED E. Leung

DATE 27/10/2012

REMARKS
1. An inspection pit was excavated to 0.50m.
2. An acoustic televiewer survey was carried out from 0.92m to 17.02m.

VIBRO

DRILLHOLE RECORD

HOLE NO. DH 5

CONTRACT NO. : GE/2011/06

SHEET 2 OF 2

PROJECT Ground Investigation - Urban (Term Contract)
Agreement No. CE 27/2011 (GE), LPMit Programme, 2011, Package I, Landslip Prevention and Mitigation Works, Investigation, Design and Construction, Hillside Catchments Nos. 11SW-C/DF13, 11SW-C/DF13a, 11SW-C/DF13b - Above Victoria Road

METHOD	Rotary	CO-ORDINATES	W.O.NO. GE/2011/06.264
MACHINE & NO.	VBM56	E 831538.97 N 814293.58	DATE : 19/10/2012 to 22/10/2012
FLUSHING MEDIUM	Water	ORIENTATION Vertical	GROUND LEVEL + 94.79 mPD

Drilling Progress	Casing Depth/Size	Water Level (m) Shift start / end	Flush Returns %	TCR %	SCR %	RQD %	FI	Tests	Samples No. Type Depth	Reduced Level	Depth (m)	Legend	Grade	Description
									+84.79 10.00					
							0.9		10.03				II	See sheet 1 of 2
							20.0			+84.44	10.35		II	Strong, pinkish grey, spotted dark grey, locally dappled light brown and brown, slightly decomposed fine grained GRANITE. Joints are medium spaced, locally very closely to closely spaced, rough planar and rough stepped, extremely narrow, occasional very narrow, iron and manganese stained, occasional chlorite coated, dipping 10° to 20°, 50° to 60°, 60° to 70° and 70° to 80°.
			0	100	100	77			T2IOI					
11									10.90					
			0	100	94	76	3.5		T2IOI					
	20/10/2012	7.80m at 18:00								+83.21	11.58			From 11.30m to 11.80m : Subvertical joint.
	22/10/2012	Dry at 08:00							11.60	+83.09	11.70		III	From 11.58m to 11.70m : Moderately strong, moderately decomposed GRANITE.
12							1.5						II	
			0	100	97	97	7.1		T2IOI					
							2.3							
13							12.0		13.05					
			0	100	89	89	2.1		T2IOI					
									13.67					From 13.65m to 14.70m : Subvertical joint.
14			0	100	79	73	6.3		T2IOI					
							17.1			+80.39	14.40		III	
									14.49	+80.29	14.50		II	From 14.40m to 14.50m : Moderately strong, moderately decomposed GRANITE.
15			0	100	97	87			T2IOI					
							3.0							From 15.40m to 16.30m : Subvertical joint.
16									15.94					
			0	100	99	86	2.5		T2IOI					
17							8.3							
									17.39					
18		11.50m at 18:00	0	100	100	100	1.0		T2IOI					
	22/10/2012								18.22	+76.57	18.22			End of Investigation Hole at 18.22m.
19														
20														

- Disturbed sample
- Piston sample
- Split spoon sample
- U76 undisturbed sample
- U100 undisturbed sample
- Mazier sample
- SPT liner sample
- Water sample
- En Environmental Sample
- Standard penetration test
- V In-situ vane shear test
- Permeability test
- Pressuremeter test
- Packer Test
- Acoustic or optical televiewer survey
- Piezometer tip
- Standpipe
- Inclinometer access tube
- Vibrating wire piezometer
- Impression packer test

LOGGED T. C. Yip

DATE 26/10/2012

CHECKED E. Leung

DATE 27/10/2012

REMARKS

DRILLHOLE RECORD

VIBRO

CONTRACT NO. :	GE/2011/06
HOLE NO.	DH 6
SHEET	1 OF 2

PROJECT Ground Investigation - Urban (Term Contract)
Agreement No. CE 27/2011 (GE), LPMit Programme, 2011, Package I, Landslip Prevention and Mitigation Works, Investigation, Design and Construction, Hillside Catchments Nos. 11SW-C/DF13, 11SW-C/DF13a, 11SW-C/DF13b - Above Victoria Road

METHOD	Rotary	CO-ORDINATES	W.O.NO. GE/2011/06.264
MACHINE & NO.	VBM54	E 831542.20 N 814270.71	DATE : 27/10/2012 to 29/10/2012
FLUSHING MEDIUM	Water	ORIENTATION Vertical	GROUND LEVEL + 87.15 mPD

Drilling Progress	Casing Depth/Size	Water Level (m) Shift start / end	Flush Returns %	TCR %	SCR %	RQD %	FI	Tests	Samples No. Type Depth	Reduced Level	Depth (m)	Legend	Grade	Description
27/10/2012	HW								A 0.40	+87.15	0.00			Brown (7.5YR 5/4), silty fine to coarse SAND with some angular fine to medium gravel sized moderately decomposed and slightly decomposed rock fragments. (COLLUVIUM / TOP SOIL)
			60	100					T2 IOI 0.80	+86.65	0.50			Pinkish grey, spotted black, angular BOULDER of slightly decomposed fine grained Granite. (COLLUVIUM)
1	HW 1.19		60	33					T2 IOI 1.19	+85.96	1.19		II	Strong, greyish pink, locally dappled light brown, slightly decomposed fine grained GRANITE. Joints are medium spaced, locally closely spaced, rough planar and rough stepped, extremely narrow to very narrow, iron and manganese stained, occasional kaolin coated, dipping 0° to 10°, 20° to 30° and 50° to 60°.
2			60	100	99	92	2.9 / 8.1		T2 IOI					
3			60	100	98	98	2.6		T2 IOI 2.56 / T2 IOI 3.06	+83.70	3.45			
			60	73	73	73	NR		T2 IOI	+83.43	3.72		V	From 3.45m to 3.72m : No recovery, inferred to be completely decomposed GRANITE.
4			60	100	100	100	3.3		T2 IOI 4.05 / T2 IOI 4.68				II	Strong, locally moderately strong, pinkish grey, dappled light brown, slightly decomposed fine grained GRANITE. Joints are closely to medium spaced, rough planar and rough stepped, extremely narrow to very narrow, iron and manganese stained, kaolin coated, dipping 20° to 30°, 30° to 40° and 40° to 50°. From 4.00m to 4.25m : Subvertical joint. From 4.43m to 4.70m : Subvertical joint.
5			60	100	100	81	12.0		T2 IOI	+81.80	5.35			
										+81.65	5.50		III	From 5.35m to 5.50m : Moderately strong, moderately decomposed GRANITE.
6			60	100	100	100	3.0 / 10.0		T2 IOI 6.15				II	Strong, pinkish grey, locally dappled light brown, slightly decomposed fine grained GRANITE. Joints are medium to widely spaced, locally closely spaced, rough planar and rough stepped, extremely narrow to very narrow, iron and manganese stained, locally kaoline coated (<1mm), dipping 10° to 20°, 50° to 60° and 60° to 70°.
7			60	100	100	100			T2 IOI 7.13					
		5.80m at 18:00							T2 IOI	+79.33	7.82			
27/10/2012 8 29/10/2012		Dry at 08:00	40	100	92	92	0.9		7.88 T2 IOI 8.39	+79.23	7.92		III II	From 7.82m to 7.92m : Moderately strong, moderately decomposed GRANITE. From 8.20m to 9.42m : Subvertical joint.
9			40	100	79	75			T2 IOI 9.42					
10			40	97	92	79	15.4		T2 IOI	+77.39	9.76		II	Strong, greyish pink, spotted dark grey, slightly decomposed

- Disturbed sample
- Piston sample
- Split spoon sample
- U76 undisturbed sample
- U100 undisturbed sample
- Mazier sample
- SPT liner sample
- Water sample
- En Environmental Sample
- Standard penetration test
- V In-situ vane shear test
- Permeability test
- Pressuremeter test
- Packer Test
- Acoustic or optical televiewer survey
- Piezometer tip
- Standpipe
- Inclinometer access tube
- Vibrating wire piezometer
- Impression packer test

LOGGED	T. C. Yip
DATE	02/11/2012
CHECKED	E. Leung
DATE	03/11/2012

REMARKS
1. An inspection pit was excavated to 0.40m.
2. An acoustic televiewer survey was carried out from 1.30m to 17.80m.

DRILLHOLE RECORD

VIBRO

HOLE NO. DH 6

CONTRACT NO. : GE/2011/06

SHEET 2 OF 2

PROJECT Ground Investigation - Urban (Term Contract)
Agreement No. CE 27/2011 (GE), LPMit Programme, 2011, Package I, Landslip Prevention and Mitigation Works, Investigation, Design and Construction, Hillside Catchments Nos. 11SW-C/DF13, 11SW-C/DF13a, 11SW-C/DF13b - Above Victoria Road

METHOD	Rotary	CO-ORDINATES	W.O.NO. GE/2011/06.264
MACHINE & NO.	VBM54	E 831542.20 N 814270.71	DATE : 27/10/2012 to 29/10/2012
FLUSHING MEDIUM	Water	ORIENTATION Vertical	GROUND LEVEL + 87.15 mPD

Drilling Progress	Casing Depth/Size	Water Level (m) Shift start / end	Flush Returns %	T C R %	S C R %	R Q D %	FI	Tests	Samples No. Type Depth	Reduced Level	Depth (m)	Legend	Grade	Description
										+77.15	10.00			
			40	97	92	79	14.3		T2IOI				II	fine grained GRANITE. Joints are closely to medium spaced, locally very closely spaced, rough planar and rough stepped, extremely narrow to very narrow, iron and manganese stained, occasional clean and chlorite coated, dipping 50° to 60°, 60° to 70°, 70° to 80°, occasional 0° to 10° and 10° to 20°.
									10.87					
11			40	100	100	85	2.9		T2IOI					
									12.34					From 11.70m to 13.20m : Subvertical fault infilled with iron and manganese oxide and occasional angular gravel sized rock fragments (<10mm thick).
12														
			40	100	90	72	7.1		T2IOI					
13									13.84					
							20.0							
			40	100	87	73	2.8		T2IOI					
14							6.8							From 14.70m to 15.34m : Subvertical fault infilled with iron and manganese oxide and occasional angular gravel sized rock fragments (<10mm thick).
									15.34					
							2.6							
15			40	100	100	90	5.9		T2IOI					
									16.25					
			40	100	86	86			T2IOI					
16									16.80					
							>20							From 16.80m to 17.10m : Subvertical joint.
							4.2							
17			40	100	42	32			T2IOI					From 17.25m to 18.16m : Subvertical joint.
							10.3							
18		13.60m at 18:00							18.16	+68.99	18.16			End of Investigation Hole at 18.16m.
29/10/2012														
19														
20														

- Disturbed sample
- Piston sample
- Split spoon sample
- U76 undisturbed sample
- U100 undisturbed sample
- Mazier sample
- SPT liner sample
- Water sample
- En Environmental Sample
- Standard penetration test
- V In-situ vane shear test
- Permeability test
- Pressuremeter test
- Packer Test
- Acoustic or optical televiewer survey
- Piezometer tip
- Standpipe
- Inclinometer access tube
- Vibrating wire piezometer
- Impression packer test

LOGGED T. C. Yip

DATE 02/11/2012

CHECKED E. Leung

DATE 03/11/2012

REMARKS

J201115e_264

DRILLHOLE RECORD

HOLE NO. DH 7

CONTRACT NO. : GE/2011/06

SHEET 1 OF 2

PROJECT Ground Investigation - Urban (Term Contract)
Agreement No. CE 27/2011 (GE), LPMit Programme, 2011, Package I, Landslip Prevention and Mitigation Works, Investigation, Design and Construction, Hillside Catchments Nos. 11SW-C/DF13, 11SW-C/DF13a, 11SW-C/DF13b - Above Victoria Road

METHOD	Rotary	CO-ORDINATES	W.O.NO. GE/2011/06.264
MACHINE & NO.	VBM54	E 831553.68 N 814305.21	DATE : 12/10/2012 to 15/10/2012
FLUSHING MEDIUM	Water	ORIENTATION Vertical	GROUND LEVEL + 104.61 mPD

Drilling Progress	Casing Depth/Size	Water Level (m) Shift start / end	Flush Returns %	TCR %	SCR %	RQD %	FI	Tests	Samples No. Type Depth	Reduced Level	Depth (m)	Legend	Grade	Description
12/10/2012	HW								A 0.50	+104.61	0.00			Firm, brown (7.5YR 5/4), sandy SILT with some angular to subangular fine gravel sized highly decomposed rock fragments. (FILL)
			50	100					T2 1.13	+104.11	0.50			Light brown (7.5YR 6/4), angular COBBLE and BOULDER sized moderately decomposed and slightly decomposed Granite with occasional angular to subangular fine to coarse gravel sized moderately decomposed rock fragments. (FILL)
			10	100					T2 1.57					
			0	100					T2 2.00	+102.61	2.00			
			10	0					1 2.70 2.80					Greyish brown (2.5Y 5/2), dappled light brown and brown, sandy angular to subangular COBBLE sized highly decomposed and moderately decomposed Granite with some angular to subangular fine to coarse gravel sized highly decomposed and moderately decomposed rock fragments. (FILL)
		1.50m at 18:00	30	100					T2					
12/10/2012 13/10/2012		Dry at 08:00	0	72					2 3.40					
	HW 4.00								3 3.90 4.00 T2	+100.61	4.00		III	Moderately strong, light brown, dappled brown and dark brown, moderately decomposed fine grained GRANITE. Joints are very closely to closely spaced, rough planar, extremely narrow to very narrow, iron and manganese stained, occasional kaolin coated, dipping 50° to 60°, 60° to 70° and 70° to 80°. From 4.20m to 4.70m : With slickenside planar kaolin coated joints, dipping subvertically. From 4.70m to 5.20m : With closely spaced, kaolin coated joints, dipping 60° to 70°.
			30	93	10	10	13.3							
							>20		5.10					
			30	100	91	73	8.3		T2					
							1.8		6.00	+98.81	5.80		II	Strong, locally moderately strong, pinkish grey, dappled light brown and brown, slightly decomposed fine grained GRANITE. Joints are medium spaced, locally closely spaced, rough planar and rough stepped, extremely narrow to very narrow, iron and manganese stained, locally kaolin coated, dipping 50° to 60°, 60° to 70°, 70° to 80° and occasional 10° to 20°.
			30	100	59	59	5.7		T2					
							1.5		6.65					
			30	100	71	59	3.5		T2					From 7.35m to 8.35m : With kaolin coated joints, dipping 80° to subvertically.
									8.09					
			30	100	85	62	3.4		T2					
							6.7		9.12	+95.49	9.12		II	Strong, pinkish grey, spotted dark green, slightly decomposed fine grained GRANITE. Joints are closely to medium spaced, rough planar and rough stepped, tight to extremely narrow, clean, locally iron and manganese stained, chlorite coated, dipping 0° to 10°, 30° to
			30	100	98	86	3.0		T2					

- Disturbed sample
- Piston sample
- Split spoon sample
- U76 undisturbed sample
- U100 undisturbed sample
- Mazier sample
- SPT liner sample
- Water sample
- En Environmental Sample
- Standard penetration test
- V In-situ vane shear test
- Permeability test
- Pressuremeter test
- Packer Test
- Acoustic or optical televiewer survey
- Piezometer tip
- Standpipe
- Inclinometer access tube
- Vibrating wire piezometer
- Impression packer test

LOGGED T. C. Yip

DATE 17/10/2012

CHECKED E. Leung

DATE 18/10/2012

REMARKS
1. An inspection pit was excavated to 0.50m.
2. A standpipe was installed to 4.00m.

VIBRO

DRILLHOLE RECORD

HOLE NO. DH 7

CONTRACT NO. : GE/2011/06

SHEET 2 OF 2

PROJECT Ground Investigation - Urban (Term Contract)
Agreement No. CE 27/2011 (GE), LPMit Programme, 2011, Package I, Landslip Prevention and Mitigation Works, Investigation, Design and Construction, Hillside Catchments Nos. 11SW-C/DF13, 11SW-C/DF13a, 11SW-C/DF13b - Above Victoria Road

METHOD	Rotary	CO-ORDINATES	W.O.NO. GE/2011/06.264
MACHINE & NO.	VBM54	E 831553.68 N 814305.21	DATE : 12/10/2012 to 15/10/2012
FLUSHING MEDIUM	Water	ORIENTATION Vertical	GROUND LEVEL + 104.61 mPD

Drilling Progress	Casing Depth/Size	Water Level (m) Shift start / end	Flush Returns %	TCR %	SCR %	RQD %	FI	Tests	Samples No. Type Depth	Reduced Level +94.61	Depth (m) 10.00	Legend	Grade	Description
			30	100	98	86			T2 01 10.32				II	40° and 50° to 60°. From 9.77m to 10.15m : Subvertical joint.
13/10/2012		1.50m at 18:00	30	100	91	91	3.0		T2 01 10.66					
15/10/2012		4.40m at 08:00												
11			20	100	96	82	9.7		T2 01 12.01					From 12.00m to 12.50m : Subvertical joint.
12			20	100	94	91			T2 01 13.40					From 13.90 to 14.23m : An incipient fault (<5mm) infilled with chlorite and rock fragments, dipping 70°.
13			20	100	100	100	2.8		T2 01 14.45					From 14.72m to 14.95m : Subvertical joint.
14			20	100	100	100	4.0		T2 01 15.10	+89.51	15.10			End of Investigation Hole at 15.10m.
15 15/10/2012		7.00m at 18:00												
16														
17														
18														
19														
20														

- Disturbed sample
- Piston sample
- Split spoon sample
- U76 undisturbed sample
- U100 undisturbed sample
- Mazier sample
- SPT liner sample
- Water sample
- En Environmental Sample
- Standard penetration test
- V In-situ vane shear test
- Permeability test
- Pressuremeter test
- Packer Test
- Acoustic or optical televiewer survey
- Piezometer tip
- Standpipe
- Inclinometer access tube
- Vibrating wire piezometer
- Impression packer test

LOGGED T. C. Yip

DATE 17/10/2012

CHECKED E. Leung

DATE 18/10/2012

REMARKS

DRILLHOLE RECORD

HOLE NO. DH 8

CONTRACT NO. : GE/2011/06

SHEET 1 OF 2

PROJECT Ground Investigation - Urban (Term Contract)
Agreement No. CE 27/2011 (GE), LPMit Programme, 2011, Package I, Landslip Prevention and Mitigation Works, Investigation, Design and Construction, Hillside Catchments Nos. 11SW-C/DF13, 11SW-C/DF13a, 11SW-C/DF13b - Above Victoria Road

METHOD	Rotary	CO-ORDINATES	W.O.NO. GE/2011/06.264
MACHINE & NO.	VBM56	E 831585.74 N 814313.13	DATE : 06/10/2012 to 08/10/2012
FLUSHING MEDIUM	Water	ORIENTATION Vertical	GROUND LEVEL + 126.78 mPD

Drilling Progress	Casing Depth/Size	Water Level (m) Shift start / end	Flush Returns %	TCR %	SCR %	RQD %	FI	Tests	Samples No. Type Depth	Reduced Level	Depth (m)	Legend	Grade	Description
06/10/2012	HW								A 0.50	+126.78	0.00			Light brown (7.5YR 6/4), slightly silty fine to coarse SAND with some angular fine to coarse gravel sized highly decomposed and moderately decomposed rock fragments. (FILL)
			0	80					T2|O| 1.00	+126.28	0.50			Brown (7.5YR 5/4), dappled greyish brown, slightly clayey / silty fine to coarse SAND with much angular to subangular fine to coarse gravel sized moderately decomposed rock fragments and some angular to subangular cobble sized moderately decomposed Granite. (FILL)
			0	76					T2|O| 1.50					
			0	84					T2|O| 2.00					
			0	80					T2|O| 2.50					
			0	82					T2|O| 3.00	+123.78	3.00			
			0	84					T2|O| 3.50					Greyish brown (2.5Y 5/2), dappled light brown and brown, angular to subangular COBBLE sized moderately decomposed Granite and Tuff with some angular to subangular fine to coarse gravel sized moderately decomposed rock fragments. (FILL)
			0	68					T2|O| 4.00					
			0	46					T2|O| 4.50					
			0	87					T2|O| 5.19	+121.69	5.09		III	Strong, pinkish grey, dappled light brown, slightly decomposed fine grained GRANITE.
	HW 5.19				50	0								
			0	100	62	62	7.7		T2|O| 5.64	+121.03	5.75		II	Joints are medium spaced, locally very closely to closely spaced, rough planar and rough stepped, extremely narrow, iron and manganese stained, locally chlorite coated and clean, dipping 40° to 50°, 50° to 60°, 60° to 70° and occasional 10° to 20°.
			0	100	97	97			T2|O| 6.80					From 5.09m to 5.75m : Moderately strong, moderately decomposed GRANITE with closely spaced microfractures, dipping 50° to 60° and 70° to 80°.
			0	100	96	96	1.5		T2|O| 8.18					From 7.50m to 8.08m : With closely spaced iron and manganese stained microfractures, dipping 70° to 80° and subvertically.
			0	100	64	64	3.4		T2|O| 9.06					From 8.45m to 9.86m : Subvertical joint.
			0	100	67	61			T2|O| 9.76					
			0	100	66	66	4.0							

- Disturbed sample
- Piston sample
- Split spoon sample
- U76 undisturbed sample
- U100 undisturbed sample
- Mazier sample
- SPT liner sample
- Water sample
- En Environmental Sample
- Standard penetration test
- V In-situ vane shear test
- Permeability test
- Pressuremeter test
- Packer Test
- Acoustic or optical televiewer survey
- Piezometer tip
- Standpipe
- Inclinometer access tube
- Vibrating wire piezometer
- Impression packer test

LOGGED T. C. Yip

DATE 08/10/2012

CHECKED E. Leung

DATE 09/10/2012

REMARKS
1. An inspection pit was excavated to 0.50m.
2. A standpipe was installed to 5.00m.

VIBRO

DRILLHOLE RECORD

HOLE NO. DH 8

CONTRACT NO. : GE/2011/06

SHEET 2 OF 2

PROJECT Ground Investigation - Urban (Term Contract)
Agreement No. CE 27/2011 (GE), LPMit Programme, 2011, Package I, Landslip Prevention and Mitigation Works, Investigation, Design and Construction, Hillside Catchments Nos. 11SW-C/DF13, 11SW-C/DF13a, 11SW-C/DF13b - Above Victoria Road

METHOD Rotary	CO-ORDINATES	W.O.NO. GE/2011/06.264
MACHINE & NO. VBM56	E 831585.74 N 814313.13	DATE : 06/10/2012 to 08/10/2012
FLUSHING MEDIUM Water	ORIENTATION Vertical	GROUND LEVEL + 126.78 mPD

Drilling Progress	Casing Depth/Size	Water Level (m) Shift start / end	Flush Returns %	TCR %	SCR %	RQD %	FI	Tests	Samples No. Type Depth	Reduced Level	Depth (m)	Legend	Grade	Description
06/10/2012		8.60m at 18:00	0	100	66	66	4.0		T2 01 10.37	+116.78	10.00		II	See sheet 1 of 2
08/10/2012		9.50m at 08:00	0	100	68	40	>20		T2 01 11.32	+115.46	11.32			From 10.37m to 11.32m : Subvertical joint.
08/10/2012		9.50m at 12:00												End of Investigation Hole at 11.32m.

- Disturbed sample
- Piston sample
- Split spoon sample
- U76 undisturbed sample
- U100 undisturbed sample
- Mazier sample
- SPT liner sample
- Water sample
- En Environmental Sample
- Standard penetration test
- V In-situ vane shear test
- Permeability test
- Pressuremeter test
- Packer Test
- Acoustic or optical televiewer survey
- Piezometer tip
- Standpipe
- Inclinometer access tube
- Vibrating wire piezometer
- Impression packer test

LOGGED T. C. Yip

DATE 08/10/2012

CHECKED E. Leung

DATE 09/10/2012

REMARKS

DRILLHOLE RECORD

HOLE NO. DH 9

CONTRACT NO. : GE/2011/06

SHEET 1 OF 1

PROJECT Ground Investigation - Urban (Term Contract)
Agreement No. CE 27/2011 (GE), LPMit Programme, 2011, Package I, Landslip Prevention and Mitigation Works, Investigation, Design and Construction, Hillside Catchments Nos. 11SW-C/DF13, 11SW-C/DF13a, 11SW-C/DF13b - Above Victoria Road

METHOD	Rotary	CO-ORDINATES	W.O.NO. GE/2011/06.264
MACHINE & NO.	VBM54	E 831593.88 N 814331.69	DATE : 08/10/2012 to 09/10/2012
FLUSHING MEDIUM	Water	ORIENTATION Vertical	GROUND LEVEL + 133.56 mPD

Drilling Progress	Casing Depth/Size	Water Level (m) Shift start / end	Flush Returns %	TCR %	SCR %	RQD %	FI	Tests	Samples No. Type Depth	Reduced Level	Depth (m)	Legend	Grade	Description
08/10/2012	PW									+133.56	0.00			
									A INSPECTION PIT 0.50					Greyish brown (2.5Y 5/2), silty fine to coarse SAND with some angular to subangular fine to medium gravel sized moderately decomposed rock fragments. (FILL)
									B 0.70	+132.86	0.70			
1	PW 1.20		0	60					T2 I O I 1.20	+132.36	1.20			Light brown (7.5YR 6/4), dappled grey, angular COBBLE sized moderately decomposed and slightly decomposed Granite with occasional angular coarse gravel sized moderately decomposed rock fragments. (FILL)
	HW		0	0					1 1.80					Greyish brown (2.5Y 5/2), silty fine to coarse SAND with much angular to subangular fine to coarse gravel sized moderately decomposed rock fragments and some angular cobble sized moderately decomposed Granite. (FILL)
2			0	60					1.90	+131.66	1.90			
			0	86	0	0			T2 I O I 2.35					Light brown (7.5YR 6/4), slightly sandy angular to subangular COBBLE sized moderately decomposed Granite with some angular to subangular fine to coarse gravel sized moderately decomposed rock fragments and occasional brick fragments. (FILL)
									T2 I O I 2.85	+130.86	2.70			
3			0	89	57	48	NA			+130.41	3.15		IV	Weak to moderately weak, pinkish grey, dappled light brown, highly decomposed fine grained GRANITE. (Sandy angular to subangular COBBLES with some angular fine to coarse gravel)
	HW 3.60						2.9		T2 I O I 3.60				III	Strong, pinkish grey, spotted dark green, slightly decomposed fine grained GRANITE. Joints are medium spaced, locally very closely to closely spaced, rough planar and rough stepped, extremely narrow, iron and manganese stained, locally clean and chlorite coated, dipping 20° to 30°, 50° to 60°, 60° to 70° and occasional 70° to 80°.
4			0	100	100	83	11.1							
									T2 I O I 4.52	+129.16	4.40			From 3.15m to 4.40m : Moderately strong, moderately decomposed GRANITE with kaolin infilled joints up to 2mm thick, dipping subvertically.
5		4.85m at 18:00	0	100	100	100	3.1						II	
08/10/2012									T2 I O I 5.33					
09/10/2012		Dry at 08:00	0	100	95	81	10.0							
6									T2 I O I 6.07					
			0	100	83	57	2.5							From 6.27m to 6.93m : Subvertical joint.
							16.7		T2 I O I 7.03					
7														
			0	100	89	89	3.5		T2 I O I 8.11					
8														From 7.85m to 8.20m : Subvertical joint.
			0	100	88	80	>20		T2 I O I 8.51					
							5.0							
9		8.65m at 18:00	0	100	93	93			T2 I O I 9.18	+124.38	9.18			
09/10/2012														End of Investigation Hole at 9.18m.
10														

- Disturbed sample
- Piston sample
- Split spoon sample
- U76 undisturbed sample
- U100 undisturbed sample
- Mazier sample
- SPT liner sample
- Water sample
- En Environmental Sample
- Standard penetration test
- V In-situ vane shear test
- Permeability test
- Pressuremeter test
- Packer Test
- Acoustic or optical televiewer survey
- Piezometer tip
- Standpipe
- Inclinometer access tube
- Vibrating wire piezometer
- Impression packer test

LOGGED T. C. Yip

DATE 15/10/2012

CHECKED E. Leung

DATE 16/10/2012

REMARKS
1. An inspection pit was excavated to 0.70m.
2. A standpipe was installed to 3.10m.

J201115e_264

GROUNDWATER MONITORING RECORD

Contractor : VIBRO (H.K.) LIMITED	Drillhole No. : DH 1
Contract No. : GE/2011/06	Date of Installation : 29/09/2012
Works Order No. : GE/2011/06.264	Pipe Top Level : +94.46 mPD
Project : Ground Investigation - Urban (Term Contract) Agreement No. CE 27/2011 (GE), LPMit Programme, 2011, Package I, Landslip Prevention and Mitigation Works, Investigation, Design and Construction, Hillside Catchments Nos. 11SW-C/DF13, 11SW-C/DF13a, 11SW-C/DF13b - Above Victoria Road	Co-ordinates : E 831469.49 N 814390.07
	Sheet 1 of 1
	Standpipe Tip Level : + 89.78 mPD
Buckets (If any) Depth :	Checked By : E. Leung

DATE	TIME	REPORTED BY	GROUNDWATER LEVEL (FROM TOP OF PIPE)		HIGHEST BUCKET WITH ENTRAPPED WATER (if any)		REMARKS
			DEPTH (m)	ELEVATION (mPD)	DEPTH (m)	ELEVATION (mPD)	
04/10/2012	08:22	Y. T. Chow	Dry	-			
05/10/2012	09:06	Y. T. Chow	Dry	-			
06/10/2012	08:40	Y. T. Chow	Dry	-			
08/10/2012	09:05	Y. T. Chow	Dry	-			
09/10/2012	09:00	Y. T. Chow	Dry	-			
10/10/2012	10:27	Y. T. Chow	Dry	-			
11/10/2012	14:17	Y. T. Chow	Dry	-			

GROUNDWATER MONITORING RECORD

Contractor : VIBRO (H.K.) LIMITED	Drillhole No. : DH 7
Contract No. : GE/2011/06	Date of Installation : 16/10/2012
Works Order No. : GE/2011/06.264	Pipe Top Level : +104.80 mPD
Project : Ground Investigation - Urban (Term Contract) Agreement No. CE 27/2011 (GE), LPMit Programme, 2011, Package I, Landslip Prevention and Mitigation Works, Investigation, Design and Construction, Hillside Catchments Nos. 11SW-C/DF13, 11SW-C/DF13a, 11SW-C/DF13b - Above Victoria Road	Co-ordinates : E 831553.68 N 814305.21
	Sheet 1 of 1
	Standpipe Tip Level : + 100.61 mPD
Buckets (If any) Depth :	Checked By : E. Leung

DATE	TIME	REPORTED BY	GROUNDWATER LEVEL (FROM TOP OF PIPE)		HIGHEST BUCKET WITH ENTRAPPED WATER (if any)		REMARKS
			DEPTH (m)	ELEVATION (mPD)	DEPTH (m)	ELEVATION (mPD)	
19/10/2012	09:08	Y. T. Chow	Dry	-			
20/10/2012	14:05	Y. T. Chow	Dry	-			
22/10/2012	10:21	Y. T. Chow	Dry	-			
24/10/2012	08:49	Y. T. Chow	Dry	-			
25/10/2012	09:16	Y. T. Chow	Dry	-			
26/10/2012	08:15	Y. T. Chow	Dry	-			
27/10/2012	10:41	Y. T. Chow	Dry	-			

GROUNDWATER MONITORING RECORD

Contractor : VIBRO (H.K.) LIMITED	Drillhole No. : DH 8
Contract No. : GE/2011/06	Date of Installation : 09/10/2012
Works Order No. : GE/2011/06.264	Pipe Top Level : +126.98 mPD
Project : Ground Investigation - Urban (Term Contract) Agreement No. CE 27/2011 (GE), LPMit Programme, 2011, Package I, Landslip Prevention and Mitigation Works, Investigation, Design and Construction, Hillside Catchments Nos. 11SW-C/DF13, 11SW-C/DF13a, 11SW-C/DF13b - Above Victoria Road	Co-ordinates : E 831585.74 N 814313.13
	Sheet 1 of 1
	Standpipe Tip Level : + 121.78 mPD
Buckets (If any) Depth :	Checked By : E. Leung

DATE	TIME	REPORTED BY	GROUNDWATER LEVEL (FROM TOP OF PIPE)		HIGHEST BUCKET WITH ENTRAPPED WATER (if any)		REMARKS
			DEPTH (m)	ELEVATION (mPD)	DEPTH (m)	ELEVATION (mPD)	
13/10/2012	09:41	Y. T. Chow	Dry	-			
15/10/2012	08:36	Y. T. Chow	Dry	-			
16/10/2012	10:58	Y. T. Chow	Dry	-			
17/10/2012	13:08	Y. T. Chow	Dry	-			
18/10/2012	10:04	Y. T. Chow	Dry	-			
19/10/2012	08:50	Y. T. Chow	Dry	-			
20/10/2012	14:31	Y. T. Chow	Dry	-			

GROUNDWATER MONITORING RECORD

Contractor : VIBRO (H.K.) LIMITED	Drillhole No. : DH 9
Contract No. : GE/2011/06	Date of Installation : 10/10/2012
Works Order No. : GE/2011/06.264	Pipe Top Level : +133.75 mPD
Project : Ground Investigation - Urban (Term Contract) Agreement No. CE 27/2011 (GE), LPMit Programme, 2011, Package I, Landslip Prevention and Mitigation Works, Investigation, Design and Construction, Hillside Catchments Nos. 11SW-C/DF13, 11SW-C/DF13a, 11SW-C/DF13b - Above Victoria Road	Co-ordinates : E 831593.88 N 814331.69
	Sheet 1 of 1
	Standpipe Tip Level : + 130.46 mPD
Buckets (If any) Depth :	Checked By : E. Leung

DATE	TIME	REPORTED BY	GROUNDWATER LEVEL (FROM TOP OF PIPE)		HIGHEST BUCKET WITH ENTRAPPED WATER (if any)		REMARKS
			DEPTH (m)	ELEVATION (mPD)	DEPTH (m)	ELEVATION (mPD)	
13/10/2012	09:35	Y. T. Chow	Dry	-			
15/10/2012	08:32	Y. T. Chow	Dry	-			
16/10/2012	10:41	Y. T. Chow	Dry	-			
17/10/2012	11:21	Y. T. Chow	Dry	-			
18/10/2012	09:17	Y. T. Chow	Dry	-			
19/10/2012	08:31	Y. T. Chow	Dry	-			
20/10/2012	14:27	Y. T. Chow	Dry	-			

Appendix D

Preliminary section showing
ELS and Foundation works

Residential Portion ⟷ Carpark Portion
(Need to be separated from Residential Portion for GFA exemption)

T1

+223

Radcliffe

+164

10

5

1

+129

Sea View

Sea View

Greenery View

Approx. Excavated volume = 47,000m3

3.5m x 10/s = 35m

B.L.

Footpath / MOE

Proposed Pipe pile wall

2.1

4.9

UG L/UL

+139.2

2.5

B1 +135.7

B2 +132.2

B3 +128.7

3.5

3.5

3.5

7

LG2 CH

Lobby

+121.7

E/M

B.L.

Pok Fu Lam Road

+147.9

+138.8

2.5mW. Maintenance Walkway at +132.2

1.5mW. Retaining structure for Existing Slope under Pokfulam Road

Existing slope profile

Proposed Raft Footing/ Pile Cap

Proposed Pipe pile wall/ Soldier pile wall

Proposed Open-cut excavation (If possible)

Handi Architects Limited
UNIT 2010, 20/F, TOWER 1, GRAND CENTURY PLACE, 193 PRINCE EDWARD ROAD WEST, KOWLOON
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PROJECT TITLE
PROJECT LILY

DRAWING TITLE

DRAWING NO.	SCALE	REV. NO.	DATE / REVISION NO.	APPROVAL BY
	1:500	-	28 JUL 2023	DATE OF APPROVAL