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Geotechnical Planning Review Report

on

Lot No. 126 (Part) & 128 in D.D. 128

Kai Pak Ling Road

Fung Kong Tsuen

Yuen Long

(Revision B)

Philip So & Associates Consulting Civil & Geotechnical Engineers Ltd. Jun 2025

1.	Section 3.1 to 3.4 and 3.6 of the	Noted.
	GPRR: It is noted that the	
	applicant/consultant has	
	committed to carry out stability	
	assessment on the existing	
	registered man-made slopes	
	(feature no. 6NW-A/C38, 6NW-	
	A/C39, 6NW-A/C75, 6NW-A/F67	
	and 6NW-A/F94). The	
	applicant/consultant is reminded	
	of the requirement of making	
	necessary site formation	
	submission(s), including but not	
	limited to stability assessment of	
	the existing / proposed	
	geotechnical features within or in	
	the vicinity of the subject site, to	
	the Buildings Department (BD) for	
	approval as required under the	
	provision of Buildings Ordinance if	
	found applicable.	
2.	Section 3.5 of the GPRR: As the	Feature No. 6NW-A/F93 would be
	layout of site formation works for	affected by the proposed
	the development is not available	development as discussed in Section
	yet, it remains uncertain whether	3.5.
	Feature No. 6NW-A/F93 would	
	affect or be affected by the	
	proposed development. The	
	applicant/consultant should carry	
	out necessary stability	
	assessments for this feature when	
	the layout of site formation works	
	is available, and make necessary	
	submission(s) to BD for approval.	

3.	Section 4 of the GPRR: It is noted	A map showing the catchment is
	that the applicant/consultant has	given in Figure 3 of this report. NTHS
	concluded that natural terrain	and the necessary mitigation (if any),
	hazard study (NTHS) is required for	shall be carried out for the proposed
	the subject site. However, a map	development.
	showing the catchment extent for	
	NTHS is not included in the GPRR.	
	The applicant/consultant shall	
	also commit to undertake the	
	NTHS and to carry out any	
	necessary mitigation as part of the	
	proposed development. The	
	applicant/consultant should	
	revise accordingly.	

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Appendix

Appendix A – Slope information retrieved from SIS of CEDD

Appendix B – ENTLI data retrieved from SIS of CEDD

Appendix C – Historical Landslide Catchment Inventory retrieved from SIS of CEDD

1.0 Introduction

1.1 Background

Warehouses are proposed at Lot No. 126 (Part) & 128 in D.D. 128, Kai Pak Ling Road, Yuen Long. The proposed development calls for specific geotechnical engineering inputs for the assessment of its engineering effects on the adjacent slope, wall and natural hillside.

This Geotechnical Planning Review Report (GPRR) is made based on desk study and review of available documentary information and proposed development plan. The geology and site conditions are described. Potential geotechnical constraints are identified in the assessment.

To support the development proposal, this assessment is aimed at identifying the geotechnical feasibility of the proposed development and the existing slope, wall and hillside which may be affecting or be affected by the proposed development.

2.0 Site Location, Topography and Surrounding Environment

2.1 Site Description

The site is at a sloping ground with level platform at Yuen Long. The site layout plan of the proposed development site is presented in Figure 1.

According to the available SIMAR reports retrieved from Lands Department and SIS records obtained from Geotechnical Engineering Office (GEO), there are 6 registered geotechnical feature lies within or in the vicinity of the site.

2.1.1 Feature No. 6NW-A/C38

At the mid-portion of the site, there is a cut slope with Feature No. 6NW-A/C38. The slope is max. 3.2m high and 120m long with average angle of 48°. Non-dangerous goods storage site is situated on slope crest and lightly-used open area is situated at slope toe. The owner of Lot No. 126 in D.D. 128 is responsible for the maintenance of sub-division 1 of the Feature and Lands Department is responsible for the maintenance of sub-division 2 of the Feature. The location of the Feature is presented in Drawing No. LP - 01.

2.1.2 Feature No. 6NW-A/C39

At the mid-portion of the site, there is a cut slope with Feature No. 6NW-A/C39. The slope is max. 3m high and 70m long with average angle of 46°. Non-dangerous goods storage site is situated on slope crest and district open space is situated at slope toe. The owner of Lot No. 126 in D.D. 128 is responsible for the maintenance of sub-division 1 of the Feature, owner of Lot No. 127 in D.D. 128 is responsible for the maintenance of sub-division 1 of the maintenance of sub-division 2 of the Feature, and Lands Department is responsible for the maintenance of sub-division 3 of the Feature. The

location of the Feature is presented in Drawing No. LP-01.

2.1.3 Feature No. 6NW-A/C75

At the south-eastern portion of the site, there is a cut slope with Feature No. 6NW-A/C75. The slope is max. 4m high and 150m long with average angle of 65°. Cemetery is situated on slope crest and densely-used open area is situated at slope toe. The owner of Lot No. 130 in D.D. 128 is responsible for the maintenance of sub-division 1 of the Feature, and Lands Department is responsible for the maintenance of sub-division 2 of the Feature. The location of the Feature is presented in Drawing No. LP-01.

2.1.4 Feature No. 6NW-A/F67

Due north-east of the site, there is a fill slope with Feature No. 6NW-A/F67. The slope is max. 5.1m high and 90m long with average angle of 40°. A road with low traffic density is situated on slope crest and other non-crowded built-up facilities are situated at slope toe. The owner of Lot No. 130 in D.D. 128 is responsible for the maintenance of sub-division 1 of the Feature, and Lands Department is responsible for the maintenance of sub-division 2 of the Feature. The location of the Feature is presented in Drawing No, LP-01.

2.1.5 Feature No. 6NW-A/F93

At the north-western portion of the site, there is a fill slope with Feature No. 6NW-A/F93. The slope is max. 6m high and 245m long with average angle of 40°. For portion of the Feature situated within the site, carpark is situated on slope crest and district open space is situated at slope toe. The owner of Lot No. 129 s.B in D.D. 128 is responsible for the maintenance of sub-division 1 of the Feature, owner of Lot No. 126 in D.D. 128 is responsible for the maintenance of sub-division 2 of the Feature Lot No.

127 in D.D. 128 is responsible for the maintenance of sub-division 3 of the Feature, and Lands Department is responsible for the maintenance of sub-division 4 of the Feature. The location of the Feature is presented in Drawing No. LP-01.

2.1.6 Feature No. 6NW-A/F94

At the north-western portion of the site, there is a fill slope with Feature No. 6NW-A/F94. The slope is max. 4m high and 200m long with average angle of 35°. For portion of the Feature situated within the site, district open area is situated on slope crest and warehouses are situated at slope toe. The maintenance responsibility parties are given in the table below:-

Sub-division of Feature No. 6NW-A/F94	Maintenance Responsibility Parties
1	Lot 126 in D.D. 128
2	Lot 128 in D.D. 128
3	Lot 129 s.B in D.D. 128
4	Lot 270 s.A in D.D. 128
5	Lot 270 R.P. in D.D. 128
6	Lands Department

2.2 Proposed Development

The proposed development consists of the construction of a 3 warehouses, 1 open storage, 1 office and 1 lounge & toilet and 1 meter room. A layout plan and typical section of the proposed structure are attached in Dwg No. LP-01 and LP-02.

2.3 Desk Study

Desk study has been carried out, no relevant information could be retrieved from the Geotechnical Information Unit (GIU) of Geotechnical Engineering Office (GEO) Buildings Department (BD).

2.3.1 Geotechnical Map

The geology of the Study Area is shown on the Hong Kong Geological Survey (HKGS) Map Sheet 6 (Yuen Long), 1:20,000 – scale HGM20 Series: Edition II - 1988. The local geology of the Study Area is presented in Figure 1 and 2 and described below.

2.3.2 Solid Geology

The 1:20,000 scale geological maps indicated that regional area around the Site is underlain by Mesozoic Upper Jurassic Repulse Bay Volcanic Group block-bearing tuff and tuffite and andesite with tuff and tuffite, and Quaternary Pleistocene silt/sand, gravelly, clayey with cobbles and boulders.

2.3.3 Superficial Geology

Entire Site are surrounded by Quaternary Pleistocene debris flow deposits (Qpd) and terraced alluvium (Qpa).

2.4 Enhanced Natural Terrain Landslide Inventory

In 1995, the GEO compiled the Natural Terrain Landslide Inventory (NTLI) from an interpretation of high – altitude (8,000ft and above) aerial photographs dated from 1945 to 1994 (King, 1999). In 2007, the GEO produced an Enhanced Natural Terrain Landslide Inventory (ENTLI) using low-altitude (8,000ft and below) aerial photographs to update the NTLI.

In accordance with GEO Report No. 138 (GEO, 2016), landslides are classed as either "Relict" or "Recent", depending on their appearance in aerial photographs. "Relict" landslides are defined as those where the main scarp is well-defined but vegetation has re-established on the scar on the earliest set of available aerial photographs. "Recent" landslides are defined as having occurred within the timespan of the aerial photograph coverage. These are typically identified as having a light tone on the

aerial photographs and are bare of vegetation.

The ENTLI has recorded 14 natural terrain landslides within and study area. ENTLI data retrieved from SIS of CEDD is presented in Appendix B.

2.5 Historical Landslide Catchment (HLC) Inventory

Historical Landslide Catchments (HLCs) have been defined by GEO based on the results of the ENTLI. According to the inventory, there are 3 HLC within the site consist of 2 nos. Open Hillslope Landslide Catchment Nos. 6NW-A/OH28 & 6NW-A/OH29 and 1 No. Channelised Debris Flow Catchment No. 6NW-A/DF4. The Historical Landslide Catchment Inventory is presented in Appendix C.

Open Hillslope Landslide No. 6NW-A/OH28

In according to information retrieved from Slope Information System of CEDD, Open Hillslope Landslide Catchment No. 6NW-A/OH28 is situated at the north-eastern portion of Study Area. The plan area of the catchment is 3953m² with maximum elevation difference of 31m. According to the Enhanced Natural Terrain Landslide Inventory (ENTLI) database 3 natural terrain landslides which were recorded as relict landslide were identified within Catchment No. 6NW-A/OH28. The locations of these ENTLI features are shown on Figure 3.

Open Hillslope Landslide No. 6NW-A/OH29

In according to information retrieved from Slope Information System of CEDD, Open Hillslope Landslide Catchment No. 6NW-A/OH29 is situated at the northern portion of Study Area. The plan area of the catchment is 885m² with maximum elevation difference of 22m. According to the Enhanced Natural Terrain Landslide Inventory (ENTLI) database 1 natural terrain landslide which was recorded as relict landslide

was identified within Catchment No. 6NW-A/OH29. The location of this ENTLI feature is shown on Figure 3.

Channelised Debris Flow No. 6NW-A/DF4

In according to information retrieved from Slope Information System of CEDD, Channelised Debris Catchment No. 6NW-A/DF4 is situated at the southern portion of Study Area. The plan area of the catchment is 18971m² with maximum elevation difference of 90m. According to the Enhanced Natural Terrain Landslide Inventory (ENTLI) database 10 natural terrain landslides were identified within Catchment No. 6NW-A/DF4. 7 of which were recorded as relict landslide and 3 were recorded as recent landslides occurred. The locations of these ENTLI features are shown on Figure 3.

2.6 Reported Landslide Incidents

The GEO landslide incidents database has no record of reported landslide incident within or in the vicinity of the Site.

2.7 Ground Investigation

No Ground Investigation Works within the site has been carried out. No nearby GI Information could be retrieved from GIU of CEDD nor Buildings Department.

3.0 Impacts of proposed works on existing Features and natural hillside

3.1 Feature No. 6NW-A/C38

Feature No. 6NW-A/C38 is located at mid-portion of the site. An open storage area and meter room are situated on slope crest. Warehouse, office and parking space are situated at slope toe. Stability assessment on the existing slope shall be checked to ensure the existing slope will not affect the proposed development or vice versa.

In order to fulfill the above-mentioned objectives for detailed design to be carried out in future, a comprehensive investigation programme will be implement comprising the following:-

- I Detailed ground investigation including in-situ and laboratory soil testing to identify the soil parameters together with the monitoring of groundwater table;
- II Establishment of geological and hydrogeological model based on the findings from topographic survey and the ground investigation works.

3.2 Feature No. 6NW-A/C39

Feature No. 6NW-A/C39 is located at mid-portion of the site. An office and parking space are on slope crest. Access road is situated along at slope toe. Stability assessment on the existing slope shall be checked to ensure the existing slope and toe wall will not affect the proposed development or vice versa. In order to fulfill the above-mentioned objectives for detailed design to be carried out in future, a comprehensive investigation programme will be implement comprising the following:-

- I Detailed ground investigation including in-situ and laboratory soil testing to identify the soil parameters together with the monitoring of groundwater table;
- II Establishment of geological and hydrogeological model based on the findings from topographic survey and the ground investigation works.

3.3 Feature No. 6NW-A/C75

Feature No. 6NW-A/C75 is located at south-east portion of the site. An open storage area and meter room are situated at slope toe. Stability assessment on the existing slope shall be checked to ensure the existing slope and toe wall will not affect the proposed development or vice versa.

In order to fulfill the above-mentioned objectives for detailed design to be carried out in future, a comprehensive investigation programme will be implement comprising the following:-

- I Detailed ground investigation including in-situ and laboratory soil testing to identify the soil parameters together with the monitoring of groundwater table;
- II Establishment of geological and hydrogeological model based on the findings from topographic survey and the ground investigation works.

3.4 Feature No. 6NW-A/F67

Feature No. 6NW-A/F67 is located due north-east of the site. A staff lounge & restroom, warehouses and parking space are situaed near the slope toe. Stability assessment on the existing slope shall be checked to ensure the existing slope and toe wall will not affect the proposed development or vice versa.

In order to fulfill the above-mentioned objectives for detailed design to be carried out in future, a comprehensive investigation programme will be implement comprising the following:-

- I Detailed ground investigation including in-situ and laboratory soil testing to identify the soil parameters together with the monitoring of groundwater table;
- II Establishment of geological and hydrogeological model based on the findings from topographic survey and the ground investigation works.

3.5 Feature No. 6NW-A/F93

Feature No. 6NW-A/F93 is located at north-west portion of the site. An existing slope with Feature No. 6NW-A/F94 is situated at slope toe. For the portion of the Feature situated within the site, it is a sloping ground with maximum slope angle of 14°. It is considered that the Feature is unlikely to affect the proposed development. However, the stability of the existing slope should be checked to determine if it will be affected by the proposed development

I Detailed ground investigation including in-situ and laboratory soil testing to identify the soil parameters together with the monitoring of groundwater table;

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

3.6 Feature No. 6NW-A/F94

Feature No. 6NW-A/F94 is located at north-west portion of the site. Warehouses and parking space are situated at slope toe. A slope with Feature No. 6NW-A/F93 is situated on slope crest. Stability assessment on the existing slope shall be checked to ensure the existing slope and toe wall will not affect the proposed development or vice versa.

In order to fulfill the above-mentioned objectives for detailed design to be carried out in future, a comprehensive investigation programme will be implement comprising the following:-

- I Detailed ground investigation including in-situ and laboratory soil testing to identify the soil parameters together with the monitoring of groundwater table;
- II Establishment of geological and hydrogeological model based on the findings from topographic survey and the ground investigation works.

4.0 Natural Terrain Hazard Assessment

According to Clause 2 and Figure 2.1 – Graphical Presentation of the Alert Criteria of Geo Report No. 337 – Review of Alert Criteria in Respect of Natural Terrain Hazards. The Alert Criteria should be applied if the site fall under category below:-

Where there is natural terrain outside the site, but within the same catchment, that is at an angular elevation of 20° or more from the site and where there is ground sloping at more than 15° within 50m horizontally upslope of the site, provided that there is credible debris flowpath to the site.

The proposed development is situated near toe area of natural hillside is 14m high approx with slope angle range from 26° to 33° which is larger than the 20° as required in the Alert Criteria. As such, the subject site is required for a Natural Terrain Hazard Study (NTHS). The Natural Terrain Hazard Study Area is presented in Figure 3.

NTHS and the necessary mitigation (if any) shall be carried out for the proposed development.

5.0 Conclusions

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

Site investigation is proposed to reveal/confirm the subsoils and the ground regime within and in the vicinity of the site as well as to determine the engineering properties of subsoils and rock. The ground investigation field works should be preceded under supervision of suitably qualified engineers and technically competent persons conforming the requirements specified in the "Code of Practice for Site Supervision 2009" published by the BD.

6.0 References

Geotechnical Engineering Office (2016). Guidelines for Natural Terrain Hazard Studies. Geotechnical Engineering Office, Hong Kong. GEO Report No. 138 2nd Edition.

Geotechnical Engineering Office (2004). Technical Guidance Note 22: Guidelines on Geomorphological Mapping for Natural Terrain Hazard Studies. Geotechnical Engineering Office, Hong Kong.

Geotechnical Engineering Office (2014). Technical Guidance Note No. 36: Guidelines on Enhanced Approach for Natural Terrain Hazard Studies. Geotechnical Engineering Office, Civil Engineering Department, Hong Kong.

King, J.P. (1999). Natural Terrain Landslide Study The Natural Terrain Landslide Inventory. GEO Report No. 74, Geotechnical Engineering Office, Hong Kong.

Landslide data for public retrieved from Location of Landslide Incidents of CEDD.

Geotechnical Engineering Office (2007). Technical Guidance Note No. 15. Guidelines for Classification of Consequence-to-life Category for Slope Feature.

GEO Report No. 337 – Review of Alert Criteria In Respect of Natural Terrain Hazards.

Figures





/\psa2013\cad drawing\PROJECT-2024\Miscellaneous\Lot 126 & 128 in D.D.128 Kai Pak Ling Road, Yuen Long\Lot 126, 127 & 128 in D.D.128_R2.dwg

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Appendix A

Slope Information retrieved from SIS of CEDD



BASIC INFORMATION

Location:	Storage area	near Ngau Hom	Shek, Yuen Long
-----------	--------------	---------------	-----------------

Date of Formation:	pre-1977	
Date of Construction/		
Modification:		
Approximate Coordinates:	Easting : 816212	Northing : 835405

CONSEQUENCE-TO-LIFE CATEGORY

Facility at Crest:	Non-dangerous goods storage site
Distance of Facility from Crest (m): Facility at Toe:	0 Lightly-used open area/facilities
Distance of Facility from Toe (m):	0.3
Consequence-to-life Category:	3
Remarks:	TGN 15 case - provided by SP Division (31 MAR 2004)

SLOPE PART

(1) Max. Height (m): 3.2 Length (m): 120 Average Angle (deg): 48

WALL PART

N/A



MAINTENANCE RESPONSIBILITY

Mixed Feature	Party: DD128 Lot	126	Agent: N/A
Mixed Feature	Party: Lands D	Age	nt: Lands D

DETAILS OF SLOPE / RETAINING WALL

Date of Inspection:	14-06-2001
Data Source:	EI(Lands D)
Slope Part Drainage:	N/A

Wall Part Drainage: N/A

SLOPE PART

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



STAGE 1 STUDY REPORT

Inspected On:	02-09-1997
Weather:	Mainly Fine
District:	MW

Section No:	1-1
Height(m):	H1 : 3 , H2 : 0
Type of Toe Facility:	Lightly-used open area/facilities
Distance from Toe(m):	0.3
Type of Crest Facility:	Non-dangerous goods storage site
Distance from Crest(m):	0
Consequence Category:	1
Engineering Judgement:	U
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: U



Feature	No.	6NW-A	/(38
1041010	110.	onn n	1	00

Sign of Seepage:	Slope : No signs of seepage Wall : N/A		
Criterion A satisfied:	N		
Sign of Distress:	Slope : N/A Wall : N/A		
Criterion D satisfied:	Ν		
Non-routine maintenance required:	Ν		
Note:	N/A		
Masonry wall/Masonry facing:	N		
Note:	N/A		
Consequence category (for critical section):	1		
Observations:	TGN 15 case - provided by SP Division (31 MAR 2004)		
Emergency Action Required:	Ν		
Action By:	N/A		

ACTION TO INITIATE PREVENTIVE WORKS

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

OTHER EXTERNAL ACTION

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

Action By: N/A



<u>PHOTO</u>









BASIC INFORMATION

Location: Storage area near Ngau Hom Shek, Yuen Long

Date of Formation: post-1977 Date of Construction/ Modification: Approximate Coordinates: Easting : 816162 Northing : 835418

CONSEQUENCE-TO-LIFE CATEGORY

Facility at Crest:	Non-dangerous goods storage site
Distance of Facility from Crest (m):	0
Facility at Toe:	District open space
Distance of Facility from Toe (m):	0
Consequence-to-life Category:	3
Remarks:	N/A

SLOPE PART

(1) Max. Height (m): 3 Length (m): 70 Average Angle (deg): 46

WALL PART

N/A



MAINTENANCE RESPONSIBILITY

Mixed Feature	Party: DD128 LOT	126	Agent: N/A
Mixed Feature	Party: DD128 LOT	127	Agent: N/A
Mixed Feature	Party: Lands D	Agent:	Lands D

DETAILS OF SLOPE / RETAINING WALL

Date of Inspection:	14-06-2001
Data Source:	El(Lands D)
Slope Part Drainage:	N/A

Wall Part Drainage: N/A

SLOPE PART

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



WALL PART

N/A

SERVICES

N/A



STAGE 1 STUDY REPORT

Inspected On: Weather: District: MW

Section No:	1-1
Height(m):	
Type of Toe Facility:	District open space
Distance from Toe(m):	0
Type of Crest Facility:	Non-dangerous goods storage site
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

N/A	Criterion A/Criterion D:	122
N/A	Action By:	
	Further Study:	
N/A	Action By:	

OTHER EXTERNAL ACTION

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



<u>PHOTO</u>







SLOPE INFORMATION SYSTEM

CED

GEDTECHNICAL ENGINEERING OFFICE CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

Feature No. 6NW-A/C 39





BASIC INFORMATION

Location:	350m	Westo	f Fung	Kong	Tsuen,	Yuen	Long
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Date of Formation:	post-1977	
Date of Construction/		
modification:		
Approximate Coordinates:	Easting : 816233	Northing : 835370

CONSEQUENCE-TO-LIFE CATEGORY

Facility at Crest:	Cemetery
Distance of Facility from Crest (m):	l
Facility at Toe:	Densely-used open area/facilities
Distance of Facility from Toe (m):	0
Consequence-to-life Category:	2
Remarks:	N/A

SLOPE PART

(1) Max. Height (m): 4 Length (m): 150 Average Angle (deg): 65

WALL PART



MAINTENANCE RESPONSIBILITY

Mixed Feature	Party: Lands D	Agent: Lands D
Mixed Feature	Party: DD128 LOT	126 Agent: N/A

DETAILS OF SLOPE / RETAINING WALL

Date of Inspection:	04-06-2015
Data Source:	EI(Lands D)
Slope Part Drainage:	N/A

Wall Part Drainage: N/A

SLOPE PART

Slope Part (1) Surface Protection (%):	Bare: O Vege	tated: 100	Chunam: O	Shotcrete: O	Other Cover: O
Material Description:	Material type: So	il Geolog	y: N/A		
Berm:	No. of Berms: N/I	Min. Ber	rm Width (m): N	/A	
Weepholes:	Size (mm): N/A	Spacing (m): N/A		



WALL PART

N/A



STAGE 1 STUDY REPORT

inspected On:	25-02-2000
Weather:	Some Rain
District:	WW

Section No:	1-1
Height(m):	H1 : 4 , H2 : 0
Type of Toe Facility:	Densely-used open area/facilities
Distance from Toe(m):	0
Type of Crest Facility:	Cemetery
Distance from Crest(m):	1 -
Cansequence Category:	3
Engineering Judgement:	U
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:	3

Feature No. 6NW-A/C 75

Engineering Judgement: U



Sign of Seepage:	Slope : No signs of seepage Wall : N/A
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
H	
masonry wai/masonry tacing:	N
Note:	N/A
Consequence category (for critical section):	3
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:	Ν
Action By:	N/A

OTHER EXTERNAL ACTION

Check / repair Services:	Ν
Action By:	N/A

Non-routine Maintenance: N

Action By: N/A



<u>PHOTO</u>













BASIC INFORMATION

Location: 300M SOUTH EAST OF TIN HAU TEMPLE, SHA KONG TSUEN, DEEP BAY

Date of Formation:	post-1977	
Date of Construction/ Modification:		
Approximate Coordinates:	Easting : 816155	Northing : 835470

CONSEQUENCE-TO-LIFE CATEGORY

Facility at Crest:	Other non-crowded built-up facilities
Distance of Facility from Crest (m): Facility at Toe:	0 Road/footpath with low traffic density
Distance of Facility from Toe (m):	0
Consequence-to-life Category:	2
Remarks:	N/A

SLOPE PART

(1)	Max. Height (m): 5.1	Length (m): 90	Average Angle (deg): 40
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WALL PART



MAINTENANCE RESPONSIBILITY

Mixed Feature	Party: DD128 LO1	[] 30	Agent: N/A
Mixed Feature	Party: Lands D	Agent	: Lands D

DETAILS OF SLOPE / RETAINING WALL

Date of Inspection:	25-11-2002
Data Source:	Agreement CE 59/2002 (GE)
Slope Part Drainage:	N/A

Wall Part Drainage: N/A

SLOPE PART

Slope Part (1)					
Surface Protection (%):	Bare: 100 V	legetated: 0	Chunam: O	Shotcrete: O	Other Cover: O
Material Description:	Material type: S	ioil Geology	: N/A		
Berm:	No. of Berms: N	A Min. Berr	n Width (m): N/	A	
Weepholes:	Size (mm): N/A	Spacing (m):	N/A		



WALL PART

N/A

SERVICES



STAGE 1 STUDY REPORT

Inspected On:

Weather: District: MW

Section No: Height(m):	1-1
Type of Toe Facility:	Road/footpath with low traffic density
Distance from Toe(m):	0
Type of Crest Facility:	Other non-crowded built-up facilities
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:
N/A	Action By:
	Non-routine Maintenance:
N/A	Action By:



<u>PHOTO</u>



SLOPE INFORMATION SYSTEM



GEOTECRATICAL ENGINEERING DEFICE CIVIL ENGINEERING DAD CEVELOPMENT DEPARTMENT







Feature No. 6NW-A/F 93

BASIC INFORMATION

Location: Lot 129 s.B, 126, 127 in DD128, Sha Kong Tsuen, Yuen Long

Date of Formation:	pre-1977	
Date of Construction/ Modification:		
Approximate Coordinates:	Easting : 816019	Northing : 835478

CONSEQUENCE-TO-LIFE CATEGORY

Facility at Crest:	Open car park
Distance of Facility from Crest (m): Facility at Toe:	0 Cottage, licensed and squatter area
Distance of Facility from Toe (m): Consequence-to-life Category:	0
Remarks:	N/A

SLOPE PART

(1) Max. Height (m): 6 Length (m): 245 Average Angle (deg): 40

WALL PART



MAINTENANCE RESPONSIBILITY

Mixed Feature	Party: DD128 LOT	129 S.B Agent: N//	1
Mixed Feature	Party: DD128 LOT	126 Agent: N/A	
Mixed Feature	Party: DD128 LOT	127 Agent: N/A	
Mixed Feature	Party: Lands D	Agent: Lands D	

DETAILS OF SLOPE / RETAINING WALL

Date of Inspection:	25-05-2016
Data Source:	Districts
Slope Part Drainage:	N/A

Wall Part Drainage: N/A

SLOPE PART

Slope Part (1)					
Surface Protection (%):	Bare: 100 \	legetated: 0	Chunam: O	Shotcrete: O	Other Cover: O
Material Description:	Material type: S	ioil Geology	: N/A		
Berm:	No. of Berms: N	/A Min.Bern	n Width (m): N	/Α	
Weepholes:	Size (mm): N/A	Spacing (m):	N/A		



WALL PART

N/A



STAGE 1 STUDY REPORT

Inspected On:

Weather: District: N/A

Section No: Height(m):	1-1
Type of Tae Facility:	Cottage, licensed and squatter area
Distance from Toe(m): Type of Crest Facility:	0 Open car park
Distance from Crest(m): Consequence Category: Engineering Judgement:	0
Section No: Type of Toe Facility:	2-2
Distance from Toe(m): Type of Crest Facility:	
Distance from Crest(m): Consequence Category: Engineering Judgement:	



N/A
,
N/A
- 1
N/A
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



<u>PHOTO</u>















BASIC INFORMATION

Location: Lot 129 s.B, 126, 127, 270 in DD128, Sha Kong Tsuen, Yuen Long

Date of Formation: pre-1977

Date of Construction/ Modification: Approximate Coordinates: Easting : 816115 Northing : 835449

CONSEQUENCE-TO-LIFE CATEGORY

Facility at Crest:	Construction sites
Distance of Facility from Crest (m): Facility at Toe:	0 Cottage, licensed and squatter area
Distance of Facility from Toe (m):	0
Consequence-to-life Category:	1
Remarks:	N/A

SLOPE PART

(1)	Max. Height (m): 4	Length (m): 200	Average Angle (deg): 35
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WALL PART

MAINTENANCE RESPONSIBILITY

Mixed Feature	Party: DD128 LOT	126 Agent: N/A		
Mixed Feature	Party: DD128 LOT	128 Agent: N/A		
Mixed Feature	Party: DD128 LOT	129 S.B Agent: N/A		
Mixed Feature	Party: DD128 LOT	270 S.A Agent: N/A		
Mixed Feature	Party: DD128 LOT	270 RP Agent: N/A		
Mixed Feature	Party: Lands D	Agent: Lands D		

DETAILS OF SLOPE / RETAINING WALL

Date of Inspection:	25-05-2016
Data Source:	Districts
Slope Part Drainage:	N/A

Wall Part Drainage: N/A

SLOPE PART

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



WALL PART

N/A



STAGE 1 STUDY REPORT

Inspected On:

Weather:

District: N/A

Section No:	1-1
Height(m):	
Type of Toe Facility:	Cottage, licensed and squatter area
Distance from Toe(m):	0
Type of Crest Facility:	Construction sites
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:
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	Action By:	N/A
Non-routine	Maintenance:	

Action By: N/A



PHOTO





Appendix B

ENTLI data retrieved from SIS of CEDD

\langle	Back
ENTLI No.	06NWA0178E
Type of slides	Relict
Width of main scarp	17
Length of landslide source	7
Slope	42
Vegetation cover	Completely in grass
Year landslide first observed	1963
Elevation of landslide crown	52
Elevation of landslide toe	46
Elevation difference of landslide trail	6
Gully	Ν
Relict class	Scarp predominantly sharp (80% certain)
Easting	816250.288965
Northing	835336.017975

	Back
ENTLI No.	06NWA0179E
Type of slides	Relict
Width of main scarp	16
Length of landslide source	7.5
Slope	38.5
Vegetation cover	Completely in grass
Year landslide first observed	1963
Elevation of landslide crown	56
Elevation of landslide toe	49
Elevation difference of landslide trail	7
Gully	Ν
Relict class	Scarp predominantly sharp (80% certain)
Easting	816229.333923
Northing	835328.080459

	Back
ENTLI No.	06NWA0180E
Type of slides	Relict
Width of main scarp	8
Length of landslide source	4.5
Slope	31.5
Vegetation cover	Completely in grass
Year landslide first observed	1963
Elevation of landslide crown	54
Elevation of landslide toe	52
Elevation difference of landslide trail	2
Gully	Ν
Relict class	Scarp predominantly sharp (80% certain)
Easting	816215.998897
Northing	835334.747972

	Back
ENTLI No.	06NWA0181E
Type of slides	Relict
Width of main scarp	17
Length of landslide source	8.5
Slope	29.5
Vegetation cover	Completely in grass
Year landslide first observed	1963
Elevation of landslide crown	44
Elevation of landslide toe	38
Elevation difference of landslide trail	6
Gully	Ν
Relict class	Broad depression (10% certain)
Easting	816187.106339
Northing	835353.48051
	Back
---	--------------------------------
ENTLI No.	06NWA0183E
Type of slides	Relict
Width of main scarp	22
Length of landslide source	9.5
Slope	31
Vegetation cover	Completely in grass
Year landslide first observed	1963
Elevation of landslide crown	58
Elevation of landslide toe	52
Elevation difference of landslide trail	6
Gully	Ν
Relict class	Broad depression (10% certain)
Easting	816203.616372
Northing	835307.125417

	Back
ENTLI No.	06NWA0182E
Type of slides	Relict
Width of main scarp	17
Length of landslide source	8
Slope	28.5
Vegetation cover	Completely in grass
Year landslide first observed	1963
Elevation of landslide crown	59
Elevation of landslide toe	55
Elevation difference of landslide trail	4
Gully	Ν
Relict class	Broad depression (10% certain)
Easting	816197.266359
Northing	835276.327855

$\langle \langle \rangle$	Back
ENTLI No.	06NWA0004E
Type of slides	Relict
Width of main scarp	17
Length of landslide source	11
Slope	38
Vegetation cover	Completely in grass
Year landslide first observed	1963
Elevation of landslide crown	58
Elevation of landslide toe	51
Elevation difference of landslide trail	7
Gully	Ν
Relict class	Scarp predominantly rounded (50% certain)
Easting	816121.701208
Northing	835285.535374

$\langle \langle \rangle$	Back
ENTLI No.	06NWA0539E
Type of slides	Recent open hillside
Width of main scarp	5
Length of landslide source	2.5
Slope	32.5
Vegetation cover	Totally bare
Year landslide first observed	1998
Elevation of landslide crown	77
Elevation of landslide toe	74
Elevation difference of landslide trail	3
Gully	N
Relict class	-
Easting	816105.260165
Northing	835245.53353

$\langle \langle \rangle$	Back
ENTLI No.	06NWA0005E
Type of slides	Relict
Width of main scarp	14
Length of landslide source	6.5
Slope	27
Vegetation cover	Completely in grass
Year landslide first observed	1963
Elevation of landslide crown	80
Elevation of landslide toe	75
Elevation difference of landslide trail	5
Gully	Ν
Relict class	Depression related to drainage line (10% certain)
Easting	816108.683682
Northing	835233.147769

	Back
ENTLI No.	06NWA0184E
Type of slides	Relict
Width of main scarp	19
Length of landslide source	7.5
Slope	45
Vegetation cover	Completely in grass
Year landslide first observed	1963
Elevation of landslide crown	111
Elevation of landslide toe	104
Elevation difference of landslide trail	7
Gully	Ν
Relict class	Depression related to drainage line (10% certain)
Easting	816125.828716
 Northing	835144.565092

$\langle \langle \cdot \rangle$	Back
ENTLI No.	06NWA0516E
Type of slides	Recent debris flow
Width of main scarp	б
Length of landslide source	5
Slope	29
Vegetation cover	Totally bare
Year landslide first observed	1989
Elevation of landslide crown	91
Elevation of landslide toe	66
Elevation difference of landslide trail	25
Gully	Ν
Relict class	-
Easting	816134.848035
Northing	835171.125499

	Back
ENTLI NO.	06NWA0185E
Type of slides	Relict
Width of main scarp	7
Length of landslide source	5.5
Slope	31
Vegetation cover	Completely in grass
Year landslide first observed	1963
Elevation of landslide crown	88
Elevation of landslide toe	85
Elevation difference of landslide trail	3
Gully	Ν
Relict class	Scarp predominantly rounded (50% certain)
Easting	816151.228767
Northing	835177.267657

	Back
ENTLI NO.	06NWA0593E
Type of slides	Recent open hillside
Width of main scarp	6
Length of landslide source	4
Slope	38.5
Vegetation cover	Totally bare
Year landslide first observed	2000
Elevation of landslide crown	84
Elevation of landslide toe	77
Elevation difference of landslide trail	7
Gully	Ν
Relict class	-
Easting	816157.226539
Northing	835184.347454

	Back
ENTLI No.	06NWA0186E
Type of slides	Relict
Width of main scarp	8
Length of landslide source	6.5
Slope	37.5
Vegetation cover	Completely in grass
Year landslide first observed	1963
Elevation of landslide crown	78
Elevation of landslide toe	73
Elevation difference of landslide trail	5
Gully	Ν
Relict class	Scarp predominantly rounded (50% certain)
Easting	816166.151297
Northing	835194.412691

Appendix C

Historical Landslide Catchment Inventory retrieved from SIS of CEDD

Facts and Figures

	Back
Catchment No.	6NW-A/OH 28
Plan area of the catchment (Sq. m)	3953
Maximum elevation difference (m)	31
Total number of relict ENTLI records within the catchment	3
Total number of recent ENTLI records within the catchment	0
The length of the longest relict ENTLI record within the catchment (m)	8
The length of the longest recent ENTLI record within the catchment (m)	0
The length of the longest ENTLI record within the catchment (m)	8
The total length of the all ENTLI record within the catchment (m)	19

Facts and Figures

	Back
Catchment No.	6NW-A/OH 29
Plan area of the catchment (Sq. m)	885
Maximum elevation difference (m)	22
Total number of relict ENTLI records within the catchment	1
Total number of recent ENTLI records within the catchment	0
The length of the longest relict ENTLI record within the catchment (m)	8
The length of the longest recent ENTLI record within the catchment (m)	0
The length of the longest ENTLI record within the catchment (m)	8
The total length of the all ENTLI record within the catchment (m)	8

Facts and Figures

	Back
Catchment No.	6NW-A/DF 4
Plan area of the catchment (Sq. m)	18971
Maximum elevation difference (m)	90
Total number of relict ENTLI records within the catchment	7
Total number of recent ENTLI records within the catchment	3
The length of the longest relict ENTLI record within the catchment (m)	11
The length of the longest recent ENTLI record within the catchment (m)	52
The length of the longest ENTLI record within the catchment (m)	52
The total length of the all ENTLI record within the catchment (m)	123