APPENDICES

Appendix I	Tree Survey
Appendix II	Landscape Proposal
Appendix III	Geotechnical Planning Review Report

Appendix I

Tree Survey

永豪園綠化工程有限公司
WING HO YUEN LANDSCAPING CO., LTD.

Tree Survey Report

Date of Survey: 15th December 2025

Location:
Various Lots In D.D. 135 and Adjoining Government Land, Pak Nai, Yuen Long, New Territories

Prepared by:

Mak Ka Hei
Registered Arborist
Date: 16th December 2025

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Appendix:

I. Tree Survey Plan

II. Tree Survey Schedule

III. Photo Records

Disclaimer:

The tree survey conducted indicates the condition of the surveyed trees at the time of inspection only. The assessments of amenity value, form, health and structural condition of the trees surveyed are based on visual inspection from the ground only. No aerial inspection, root digging or mapping, or diagnostic testing has been conducted as part of this survey. Wing Ho Yuen Landscaping Company Limited cannot accept responsibility for future failure or defects detected after the time of inspection of the trees surveyed in this report.

1. Introduction

The survey conducted is to record all the existing trees in the tree survey boundary. The survey include tree species identification, tree tagging with durable labels, the measurements of overall tree height, Diameter at Breast Height (DBH), average crown spread, the evaluation on amenity value, form, health and structural conditions.

The tree survey was conducted on 15th December 2025. Plants with DBH less than 95mm were not recorded in the survey.

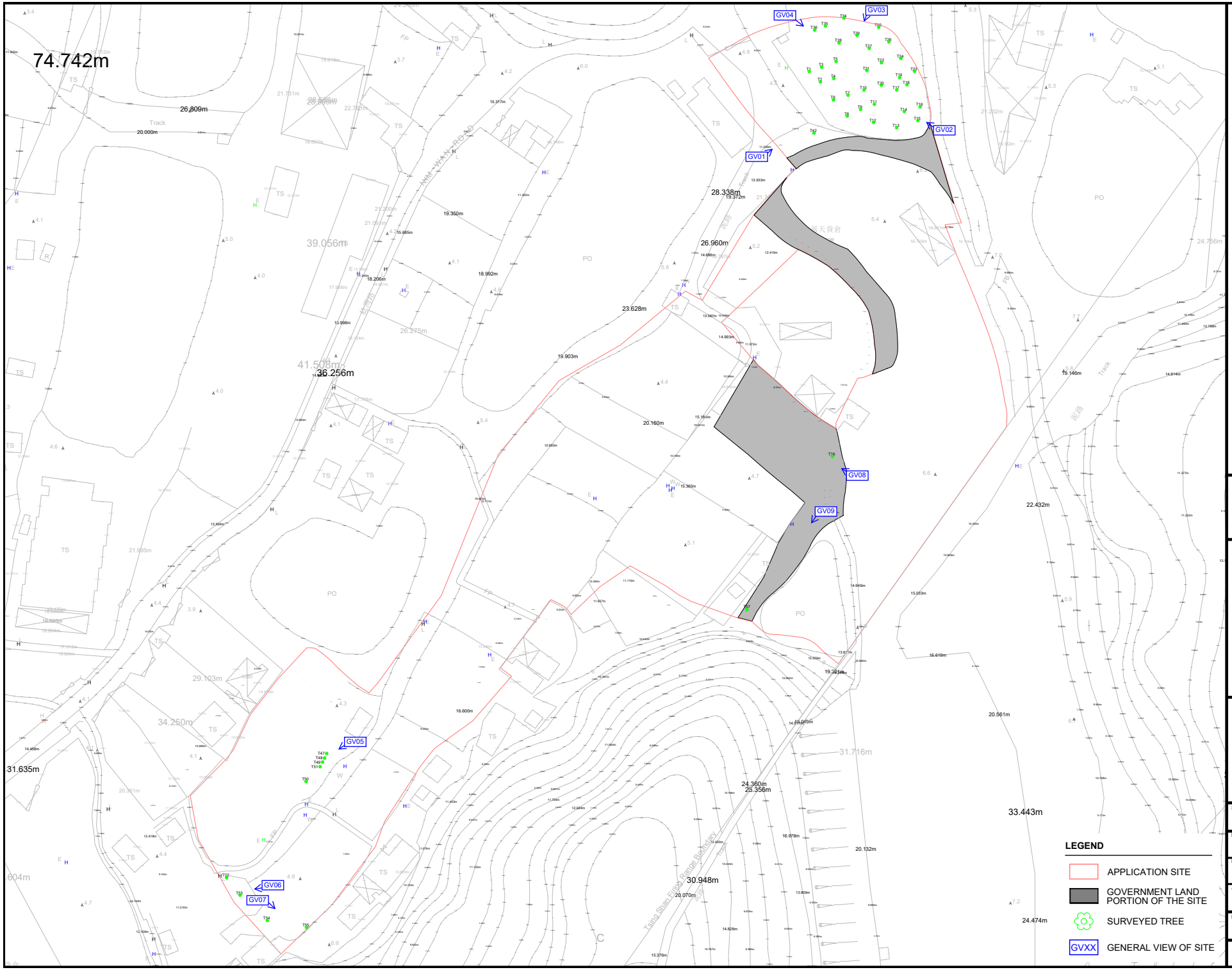
2. Summary of Existing Trees

The surveyed site is located at Lot 136 (Part) And 2149 In D.D. 106 And Adjoining Government Land, Kam Tin, Yuen Long, New Territories.

At the time of inspection on 15th December 2025,**44** tree was found within the Site. **No** dead tree was found within the site boundary. Location of individual tree refers to Appendix I.

Details of tree conditions and photo records for individual tree are recorded in the Appendix II and Appendix III respectively.

Appendix I – Tree Survey Plan



PLANNING CONSULTANT

PROJECT

PROPOSED TEMPORARY PLACE OF RECREATION, SPORTS OR CULTURE (HOBBY FARM AND FISHING GROUND), HOLIDAY CAMP, BARBECUE SITE AND ANIMAL BOARDING ESTABLISHMENT WITH ANCILLARY FACILITIES AND ASSOCIATED FILLING OF LAND FOR A PERIOD OF 3 YEARS

SITE LOCATION

VARIOUS LOTS IN D.D. 135 AND ADJOINING GOVERNMENT LAND, PAK NAI, YUEN LONG, NEW TERRITORIES

SCALE	NOT ON SCALE
DRAWN BY	KYU
DATE	15.12.2025
REVISED BY	
DATE	
APPROVED BY	
DATE	
DWG. TITLE	TREE SURVEY PLAN
DWG NO.	TSP
VER.	0

Appendix II –Tree Survey Schedule

Tree Survey Schedule

Location: Various Lots In D.D. 135 and Adjoining Government Land, Pak Nai, Yuen Long, New Territories
Tree surveyor(s): Mak Ka Hei
Field Survey was conducted on: 15 December 2025

永豪園綠化工程有限公司
WING HO YUEN LANDSCAPING CO., LTD.

Tree No.	Tree Species		Tree Size Measurements			Amenity Value	Form	Health Condition	Structural Condition	Suitability for Transplanting	Remarks
	Botanical Name	Chinese Name	Overall Height (m)	DBH (mm)	Average Crown Spread (m)	High /Med /Low	Good /Fair /Poor	Good /Fair /Poor /Dead	Good /Fair /Poor	High /Med /Low	
T1	*Litchi chinensis*	荔枝	4.0	180	3.0	Med	Fair	Fair	Fair	Low	
T2	*Litchi chinensis*	荔枝	4.0	210	4.0	Med	Fair	Fair	Fair	Low	
T3	*Litchi chinensis*	荔枝	4.0	190	4.0	Med	Fair	Fair	Fair	Low	
T4	*Litchi chinensis*	荔枝	4.0	160	5.0	Med	Fair	Fair	Fair	Low	
T5	*Litchi chinensis*	荔枝	4.0	180	5.0	Med	Fair	Fair	Fair	Low	
T6	*Litchi chinensis*	荔枝	4.0	220	4.0	Med	Fair	Fair	Fair	Low	
T7	*Litchi chinensis*	荔枝	4.0	200	5.0	Med	Fair	Fair	Fair	Low	
T8	*Litchi chinensis*	荔枝	5.0	190	5.0	Med	Fair	Fair	Fair	Low	
T9	*Litchi chinensis*	荔枝	2.0	180	3.0	Med	Fair	Fair	Fair	Low	
T10	*Litchi chinensis*	荔枝	4.0	170	5.0	Med	Fair	Fair	Fair	Low	
T11	*Litchi chinensis*	荔枝	4.0	180	6.0	Med	Fair	Fair	Fair	Low	
T12	*Litchi chinensis*	荔枝	5.0	200	6.0	Med	Fair	Fair	Fair	Low	
T13	*Litchi chinensis*	荔枝	5.0	180	6.0	Med	Fair	Fair	Fair	Low	
T14	*Litchi chinensis*	荔枝	3.5	160	5.0	Med	Fair	Fair	Fair	Low	
T15	*Litchi chinensis*	荔枝	4.0	190	5.0	Med	Fair	Fair	Fair	Low	
T16	*Litchi chinensis*	荔枝	5.0	150	4.0	Med	Fair	Fair	Fair	Low	
T17	*Litchi chinensis*	荔枝	4.0	180	6.0	Med	Fair	Fair	Fair	Low	
T18	*Litchi chinensis*	荔枝	5.0	190	5.0	Med	Fair	Fair	Fair	Low	
T19	*Litchi chinensis*	荔枝	4.0	130	3.0	Med	Fair	Fair	Fair	Low	
T20	*Litchi chinensis*	荔枝	4.0	170	5.0	Med	Fair	Fair	Fair	Low	
T21	*Litchi chinensis*	荔枝	4.0	180	5.0	Med	Fair	Fair	Fair	Low	
T22	*Litchi chinensis*	荔枝	4.0	190	5.0	Med	Fair	Fair	Fair	Low	
T23	*Litchi chinensis*	荔枝	4.0	200	5.0	Med	Fair	Fair	Fair	Low	
T24	*Litchi chinensis*	荔枝	4.0	190	4.0	Med	Fair	Fair	Fair	Low	
T26	*Litchi chinensis*	荔枝	4.0	150	5.0	Med	Fair	Fair	Fair	Low	
T27	*Litchi chinensis*	荔枝	4.0	180	6.0	Med	Fair	Fair	Fair	Low	
T28	*Litchi chinensis*	荔枝	4.0	160	6.0	Med	Fair	Fair	Fair	Low	
T29	*Litchi chinensis*	荔枝	4.0	170	6.0	Med	Fair	Fair	Fair	Low	
T30	*Litchi chinensis*	荔枝	4.0	190	5.0	Med	Fair	Fair	Fair	Low	
T34	*Litchi chinensis*	荔枝	4.0	200	6.0	Med	Fair	Fair	Fair	Low	
T35	*Litchi chinensis*	荔枝	4.0	180	4.0	Med	Fair	Fair	Fair	Low	
T36	*Litchi chinensis*	荔枝	4.0	220	5.0	Med	Fair	Fair	Fair	Low	
T42	*Celtis sinensis*	朴樹	10.0	480	8.0	Low	Fair	Fair	Fair	Low	
T47	*Archontophoenix alexandrae*	假檳榔	8.5	160	1.5	Low	Fair	Fair	Fair	Low	

Tree Survey Schedule

Location: Various Lots In D.D. 135 and Adjoining Government Land, Pak Nai, Yuen Long, New Territories
Tree surveyor(s): Mak Ka Hei
Field Survey was conducted on: 15 December 2025

永豪園綠化工程有限公司
WING HO YUEN LANDSCAPING CO., LTD.

Tree No.	Tree Species		Tree Size Measurements			Amenity Value	Form	Health Condition	Structural Condition	Suitability for Transplanting	Remarks
	Botanical Name	Chinese Name	Overall Height (m)	DBH (mm)	Average Crown Spread (m)	High /Med /Low	Good /Fair /Poor	Good /Fair /Poor /Dead	Good /Fair /Poor	High /Med /Low	
T48	*Archontophoenix alexandrae*	假檳榔	8.5	155	1.5	Low	Fair	Fair	Fair	Low	
T49	*Archontophoenix alexandrae*	假檳榔	7.0	160	1.5	Low	Fair	Fair	Fair	Low	
T50	*Archontophoenix alexandrae*	假檳榔	8.5	155	1.5	Low	Fair	Fair	Fair	Low	
T51	*Archontophoenix alexandrae*	假檳榔	8.5	155	1.5	Low	Fair	Fair	Fair	Low	
T52	*Dimocarpus longan*	龍眼	4.0	160	3.0	Med	Fair	Fair	Fair	Low	
T53	*Litchi chinensis*	荔枝	5.0	300	3.0	Med	Fair	Fair	Fair	Low	
T54	*Dimocarpus longan*	龍眼	7.0	180	6.0	Med	Fair	Fair	Fair	Low	
T55	*Dimocarpus longan*	龍眼	8.0	170	5.0	Med	Fair	Fair	Fair	Low	
T56	*Dimocarpus longan*	龍眼	8.0	410	10.0	Med	Fair	Fair	Fair	Low	
T57	*Celtis sinensis*	朴樹	6.0	220	4.0	Low	Fair	Fair	Fair	Low	

Notes: Amenity Value, Form, Health Condition and Structural Condition of trees were obtained by Visual Assessment Only.

Appendix III – Photo Records

General View



General view 01



General view 02

General View



General view 03



General view 04

General View



General view 05



General view 06

General View



General view 07



General view 08

General View



General view 09

Photo Records



T1 (Overview)



T2 (Overview)



T3 (Overview)



T4 (Overview)

Photo Records



T5 (Overview)



T6 (Overview)



T7 (Overview)



T8 (Overview)

Photo Records



T9 (Overview)



T10 (Overview)



T11 (Overview)



T12 (Overview)

Photo Records



T13 (Overview)



T14 (Overview)



T15 (Overview)



T16 (Overview)

Photo Records



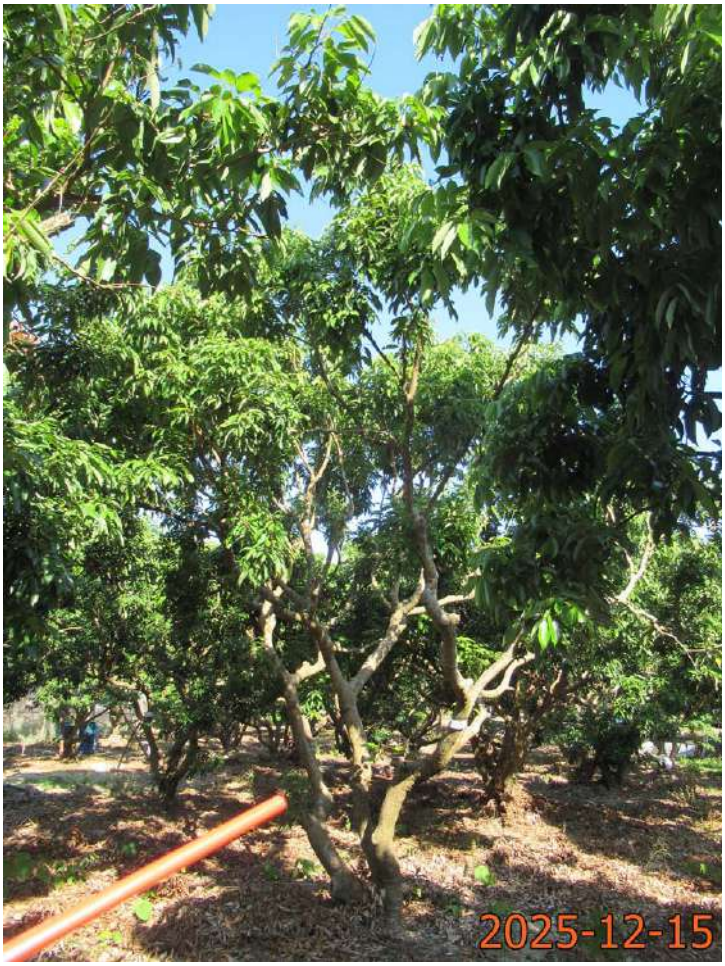
T17 (Overview)



T18 (Overview)

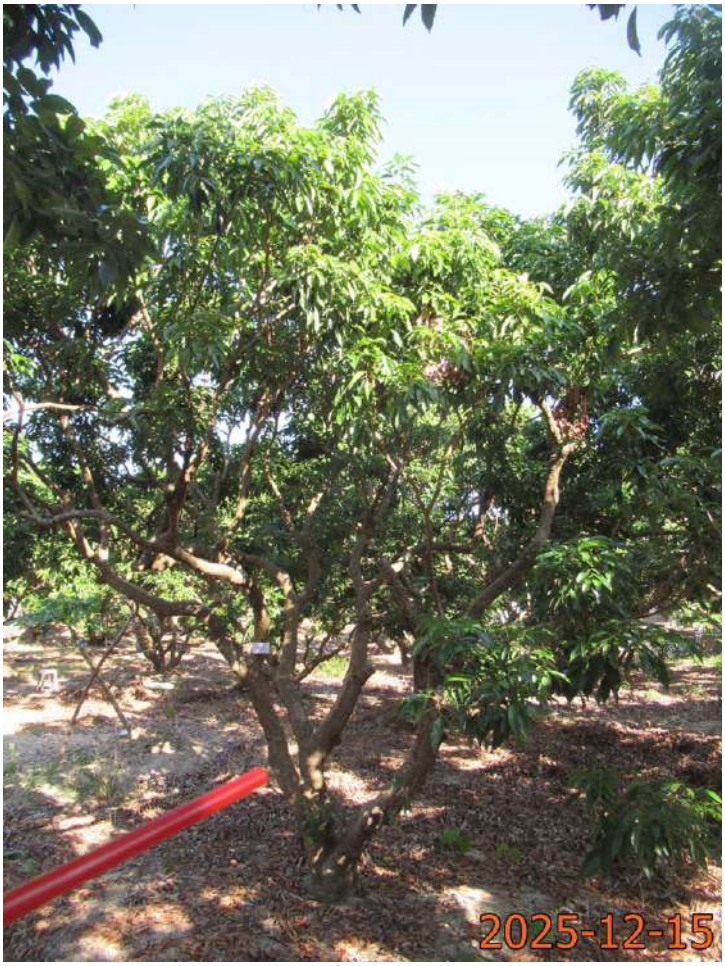


T19 (Overview)

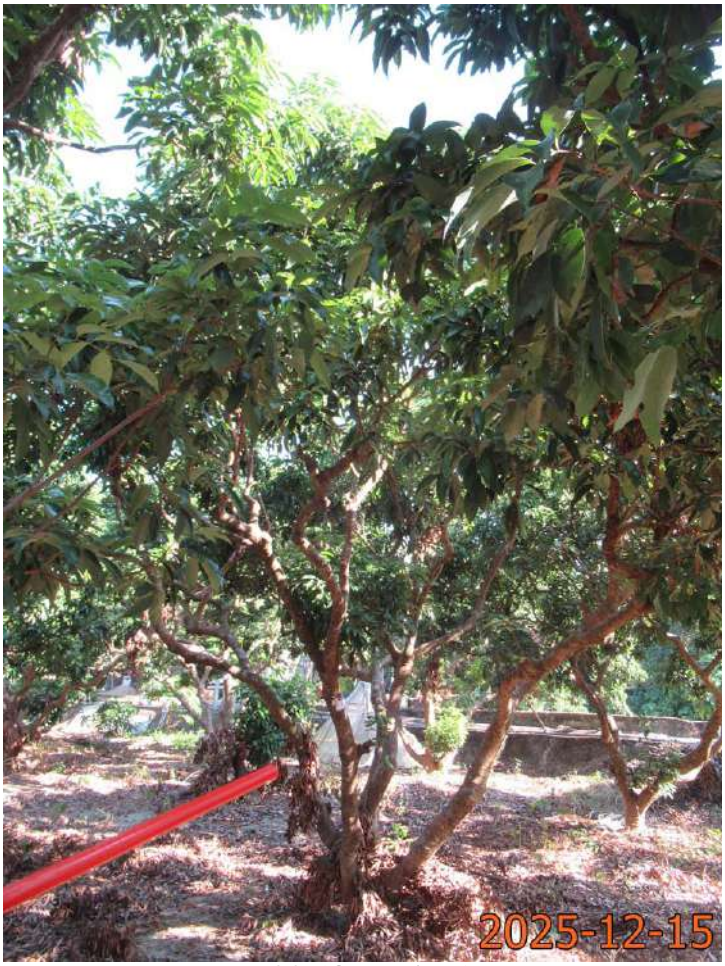


T20 (Overview)

Photo Records



T21 (Overview)



T22 (Overview)



T23 (Overview)



T24 (Overview)

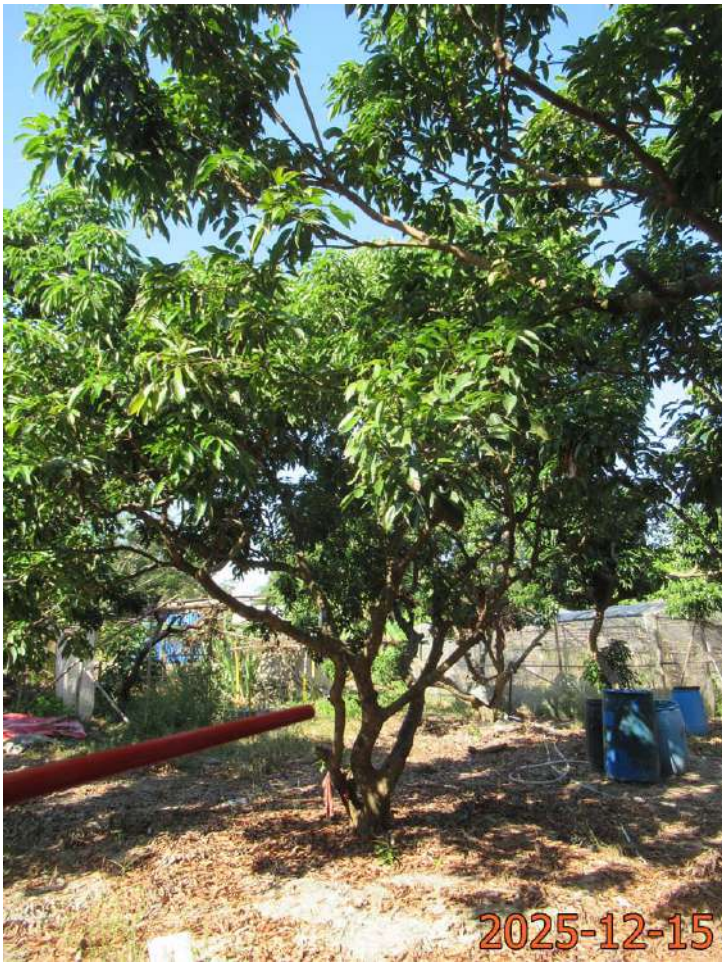
Photo Records



T26 (Overview)



T27 (Overview)



T28 (Overview)

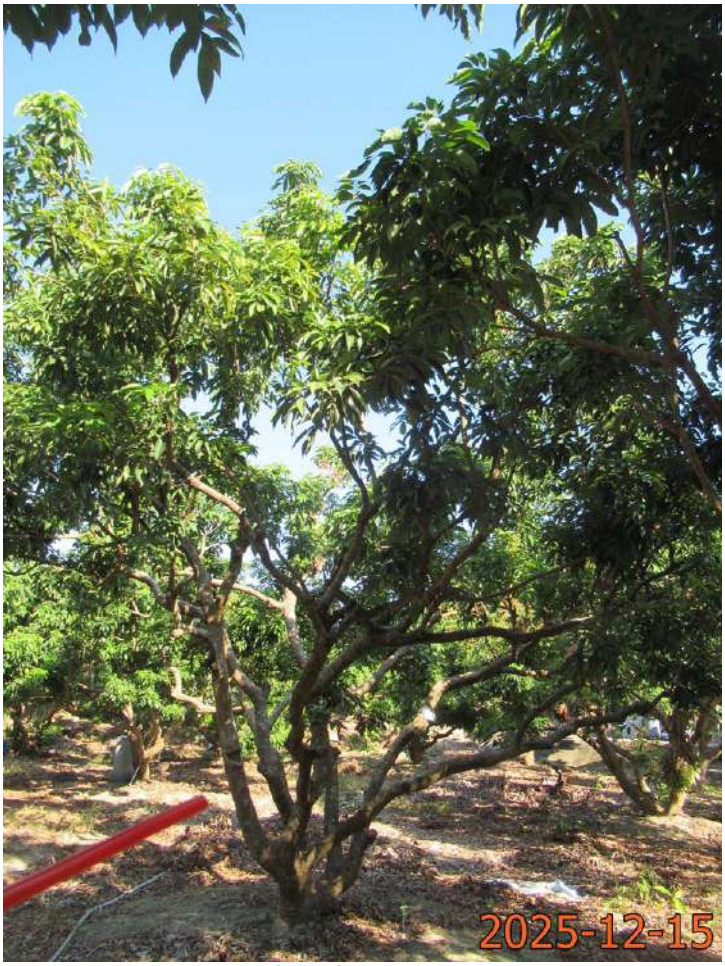


T29 (Overview)

Photo Records



T30 (Overview)



T34 (Overview)



T35 (Overview)



T36 (Overview)

Photo Records



T42 (Overview)



T47 (Overview)



T48 (Overview)



T49 (Overview)

Photo Records



T50 (Overview)



T51 (Overview)



T52 (Overview)



T53 (Overview)

Photo Records



T54 (Overview)



T55 (Overview)



T56 (Overview)



T57 (Overview)

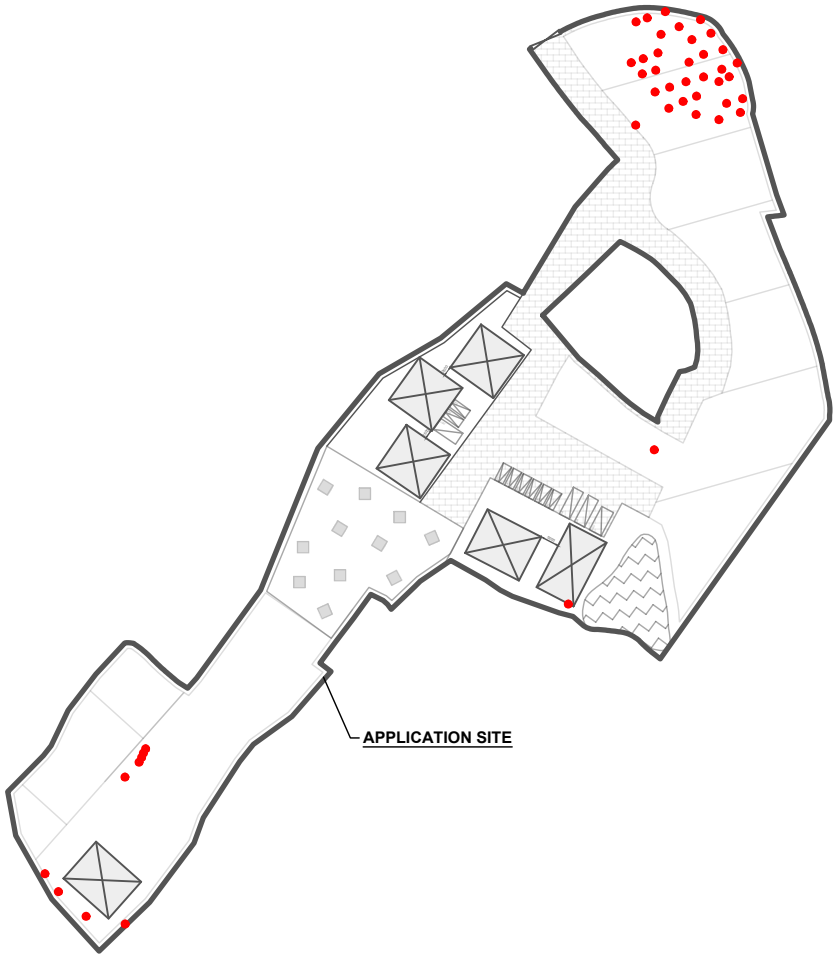
Appendix II

Landscape Proposal

LANDSCAPE PROPOSAL

APPLICATION SITE AREA	: 16,283 m^2 (ABOUT)
NO. OF EXISTING TREES	: 44* (E1 TO E24, E26 TO E30, E34 TO E36, E42, E47 TO E57)
SPECIES OF TREE	: *FICUS MICROCARPA* (E1, E14, E23 TO E24) : *STERCULIA LANCEOLATA* (E2) : *CELTIS SINENSIS* (E3 TO E4) : *CHUKRASIA TABULARIS* (E5) : *MACARANGA TANARIUS VAR. TOMENTOSA* (E6) : *FICUS BENJAMINA* (E7 TO E8, E10 TO E13, E15 TO E17) : *FICUS VARIEGATA* (E9) : *ARCHONTOPHOENIX ALEXANDRAE* (E18) : *LIVISTONA CHINENSIS* (E19 TO E21) : *ROYSTONEA REGIA* (E24 TO E25)
NO. OF TREES TO BE FELLED	: 44* (E1 TO E24, E26 TO E30, E34 TO E36, E42, E47 TO E57)

** PLEASE REFER TO TREE SURVEY REPORT FOR DETAILS.*



LEGEND

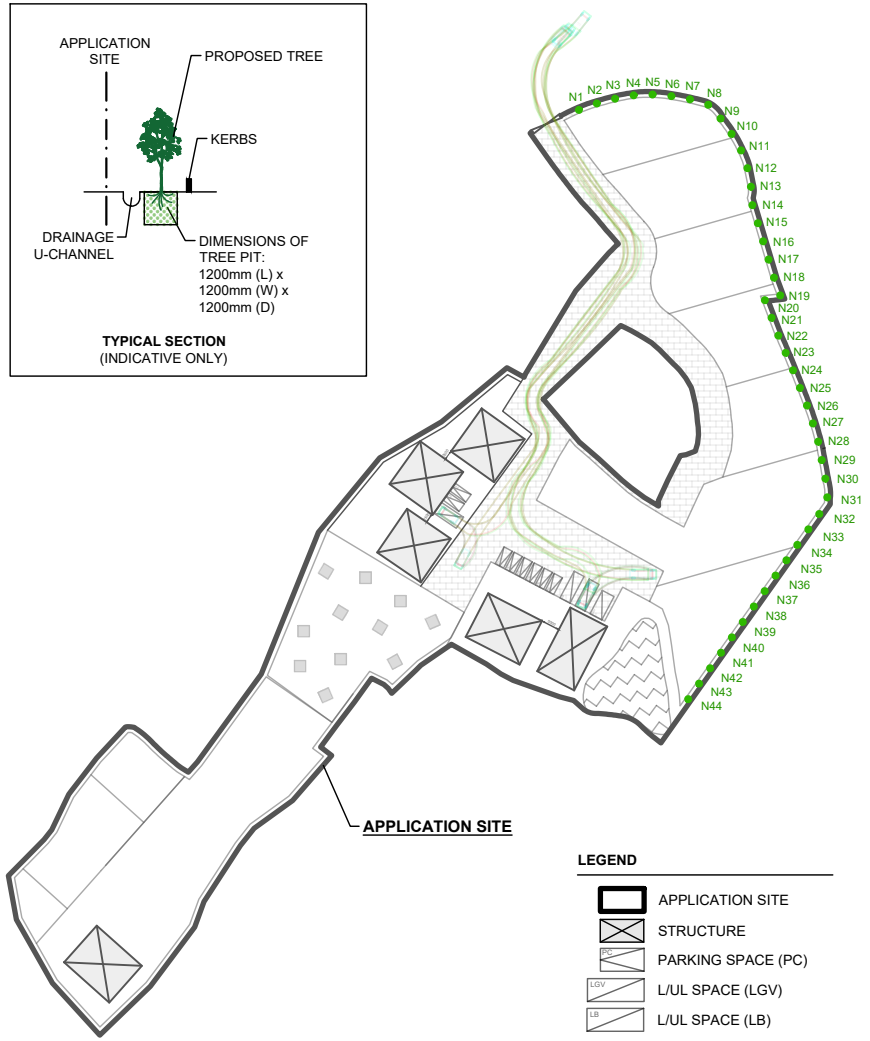
- APPLICATION SITE
- EXISTING TREE

LANDSCAPE PROPOSAL

APPLICATION SITE AREA	: 16,283 m^2	(ABOUT)
COVERED AREA	: 1,213 m^2	(ABOUT)
UNCOVERED AREA	: 15,070 m^2	(ABOUT)

NO. OF NEW TREES WILL BE PLANTED	: 44 (N1 TO N44)
SPECIES OF NEW TREES	: *POLYSPORA AXILLARIS*
HEIGHT OF NEW TREES	: NO LESS THAN 2.75 m
SPACING OF NEW TREES	: NOT LESS THAN 5 m
DIMENSION OF SOIL TRENCH	: 1.2 m (L) X 1.2 m (W) X 1.2 m (D)

TYPICAL SECTION
(INDICATIVE ONLY)

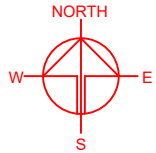


LEGEND

- APPLICATION SITE
- STRUCTURE
- PARKING SPACE (PC)
- L/UL SPACE (LGV)
- L/UL SPACE (LB)
- INGRESS / EGRESS
- LIGHT BUS / LIGHT GOODS VEHICLE
- SWEPT PATH OF VEHICLE
- PROPOSED NEW TREES

NOTES:

1) THE APPLICANT WILL MAINTAIN TREES IN GOOD CONDITION DURING THE PLANNING APPROVAL PERIOD.
2) THE APPLICANT WILL REPLACE TREES WHICH ARE DYING OR DEAD DURING THE PLANNING APPROVAL PERIOD.
3) THE APPLICANT WILL PROVIDE ADEQUATE IRRIGATION FOR TREES.



PLANNING CONSULTANT

R-RICHES PLANNING LIMITED

PROJECT

PROPOSED TEMPORARY WAREHOUSE (EXCLUDING DANGEROUS GOODS GODOWN) WITH ANCILLARY FACILITIES FOR A PERIOD OF 3 YEARS AND ASSOCIATED FILLING OF LAND

SITE LOCATION

VARIOUS LOTS IN D.D. 91 AND D.D.100, LIN TONG MEI, FANLING, NEW TERRITORIES

SCALE	1 : 2000 @ A4
DRAWN BY	LT
DATE	28.4.2026
CHECKED BY	
DATE	
APPROVED BY	
DATE	
DWG. TITLE	LANDSCAPE PROPOSAL
DWG NO.	ANNEX II
VER.	001

Appendix III

Geotechnical Planning Review Report

Proposed Temporary Place of Recreation, Sports or Culture (Hobby Farm and Fishing Ground), Holiday Camp, Barbecue Site and Animal Boarding Establishment

Various Lots in D.D. 135 And Adjoining Government Land, Pak Nai, Yuen Long, New Territories

Geotechnical Planning Review Report (GPRR)

Applicant
Pak Nai Farmhouse Limited

May 2026

AMENDMENT RECORD

REVISION NO.	DESCRIPTION	PREPARED BY (Date)	REVIEWED BY (Date)	APPROVED BY (Date)
1.0	GPRR	4/5/2026	5/5/2026	5/5/2026

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Proposed Development Scheme 5
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4. EXISTING GEOTECHNICAL CONDITION *8*
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Existing Ground Investigation *8*
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5. EXISTING GEOTECHNICAL FEATURES *8*
6. POTENTIAL GEOTECHNICAL IMPACTS *10*
Proposed Works
7. NATURE TERRAIN HAZARD STUDY *10*
8. CONCLUSION **11**

APPENDICES

Appendix A Site Location Plan
Appendix B Proposed Development Plan
Appendix C Information of Existing Slopes/Retaining Walls
Appendix D Part Print of The Geological Survey Map
Appendix E Previous G.I. Information in Vicinity
Appendix F Natural Terrain Landslide Inventory Map
Appendix G Scheduled Area
Appendix H Nature Terrain Hazard Study Plan

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Table 2 Maintenance Responsibility of the 5NE-B/C 64
Table 3 Maintenance Responsibility of the 5NE-B/C 75

1 Project Background

Introduction

1.1 The applicant seeks planning permission from the Town Planning Board (the Board) under Section (S.) 16 of the Town Planning Ordinance (Cap. 131) (the Ordinance) to use Various Lots in D.D. 135 And Adjoining Government Land, Pak Nai, Yuen Long, New Territories (the Site) for 'Proposed Temporary Place of Recreation, Sports or Culture (Hobby Farm And Fishing Ground), Holiday Camp, Barbecue Site and Animal Boarding Establishment With Ancillary Facilities and Associated Filling of Land for a Period of 3 Years.

1.2 According to the Approved Sheung Pak Nai and Ha Pak Nai Outline Zoning Plan ("OZP") No. S/YL-PN/9, the application site currently falls within "Agriculture" ("AGR") zone. A planning permission for the proposed temporary hobby farm, fishing ground, holiday camp, barbecue site and animal boarding establishment, as well as the proposed filling of land, are required on application to the Town Planning Board ("TPB") under Section 16 of the Town Planning Ordinance
Objective of the Assessment

Objective of the Assessment

1.3 The objective of this report is to present the Geotechnical Planning Review Report for Proposed Temporary Warehouse (Excluding Dangerous Godown) with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land on the available ground information.

1.4 The proposed development involved the construction of 7 nos. of one-storey structure with no basement. This geotechnical review is prepared in accordance with the requirements set out in PNAP-APP25 (PNAP 78). The purpose of this review is to demonstrate that the proposed development at the Site will not have any unacceptable geotechnical risks.

1.5 This report contains the following two items.

i. Impact and proposed investigation to the adjoining premises
ii. Conclusion and recommendation

2 Site Description

Description of Existing Environment

2.1 The area of the application site is about 16,283m^2 and it is located at Pak Nai in Yuen Long District. Existing site levels ranging from +4.4 mPD to +5.2 mPD.

2.2 The Site is primarily in an area of rural character, with some vegetation cover. There are several single-storey structures which were for residential and farming use.

2.3 The site is currently a vacant land overgrown with weeds and different tree groups. The location of the Site is shown on Drawing No. PLAN 1 in **Appendix** A.

Proposed Development Scheme

2.3.1 The site is proposed to be a temporary place of recreation, sports or culture (hobby farm and fishing ground), holiday camp, barbecue site and animal boarding establishment with ancillary facilities and associated filling of land for a period of 3 years. A proposed master layout plan with Drawing No. PLAN 9 is enclosed in **Appendix A**.

2.3.2 The following uses or facilities will be provided:

I. Site Office, Reception and Washroom;
II. Animal Boarding Establishment
III. Canteen For Staff and Visitor
IV. Agricultural Education, Office and Store Room
V. Area Reserved for Recreational, Sports or Cultural Activities
VI. Hobby Farming Area
VII. Activity Room
VIII. Tent Camping Area and Barbecue Area

2.4 Seven structures are proposed at the Site for reception, washroom, Animal boarding establishment, canteen for staff and visitor, agricultural education and store room, site office with total GFA of approximately 1,213 m^2. The layout plan of the proposed development on drawing no. PLAN4 **in Appendix B**.

2.5 Part of the site is proposed to be filled wholly with concrete pavement for the access road, formation of structures and circulation space as shown on drawing no. PLAN5 in **Appendix B**. As heavy loading of structures and vehicles would compact the existing soiled ground and weaken the ground surface, concrete site formation is required to meet the operation needs and that has been kept to minimal for the operation of the proposed development.

2.6 The Existing Site falls from south to north, following the natural topography of the area. The proposed site falls from approximately +4.6 mPD to +5.3 mPD (South to North. There will be no substantial changes in levels at the Site as a result of the proposed development.

3 EXISTING PLANNING AND IMPLEMENTATION PROGRAMME

3.1 The Project is being planned and implemented under the supervision of appropriately qualified and experienced professionals. The construction of any works for the Project will be carried out by a Registered General Building Contractor to be appointed following a tendering process prior to the construction phase. If necessary, registered specialist contractors in ground investigation may get involved.

4 EXISTING GEOTECHNICAL CONDITION

Site Geology

4.1 According to the 1:20000 scale geological map published by the Geotechnical control Office (Sheet 3:HGM20 Series: Edition 1 - 1991), the site is underlain by DEBRIS FLOW DEPOSITS (Figure 1). Part print of geological map is enclosed in **Appendix D**.

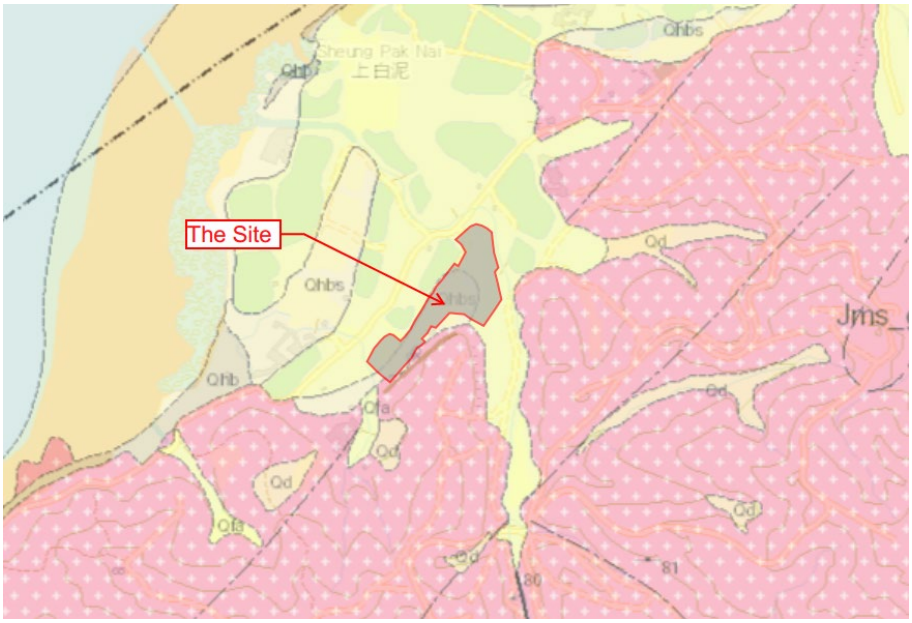


Figure 1 – Solid and Superficial Geology in the vicinity of the Site

Existing Ground Investigation (GI)

4.2 There is no GI information within the site area. The closest GI information is located away approximately 25m from the Site, which is shown (C75-DH1) in the plan of **Appendix E**. It was carried out by Vibro (H.K.) Limited. in January 2005. The hole is terminated at around 9.46m deep below the existing ground. Location and detailed information of boreholes is enclosed in **Appendix E**.

4.3 Based on the closest borehole log, the concerned site is underlain by Saprolitic Soil for around 1m deep below ground level below a 1.4m Residual Soil layer. The rock head level was noted to be found at depth of 4.20m below existing ground level at around +9.65mPD.

4.4 According to the response test and the monitoring records of the piezometers installed in the previous GI, the highest measured groundwater table is located at 3.8mPD.

Soil Properties

Residual Soil
Firm, brown, slight sandy SILT with occasional angular to subangular fine gravel

Saprolitic Soil

Extremely weak, light brown and brown, completely decomposed mylonitic, medium grained granite (Sandy silt with some angular to subangular fine gravel)

Extremely weak to very weak, light brown and greyish brown, completely decomposed mylonitic, medium grained granite (very silty fine to coarse sand with some angular fine to medium gravel)

4.5 Existing Registered Retaining Wall

4.6 There is no existing registered retaining wall observed within or in the vicinity of the Site.

Existing Structure

4.7 There are 4 nos. of 1 storey concrete structures within the site area.

Landslide of Natural Terrain

4.8 According to the Natural Terrain Landslide Inventory Map, no Relict Landslide or Recent Landslide is found in the vicinity of the Site (Figure 2). The map is enclosed in **Appendix F** for easy reference.

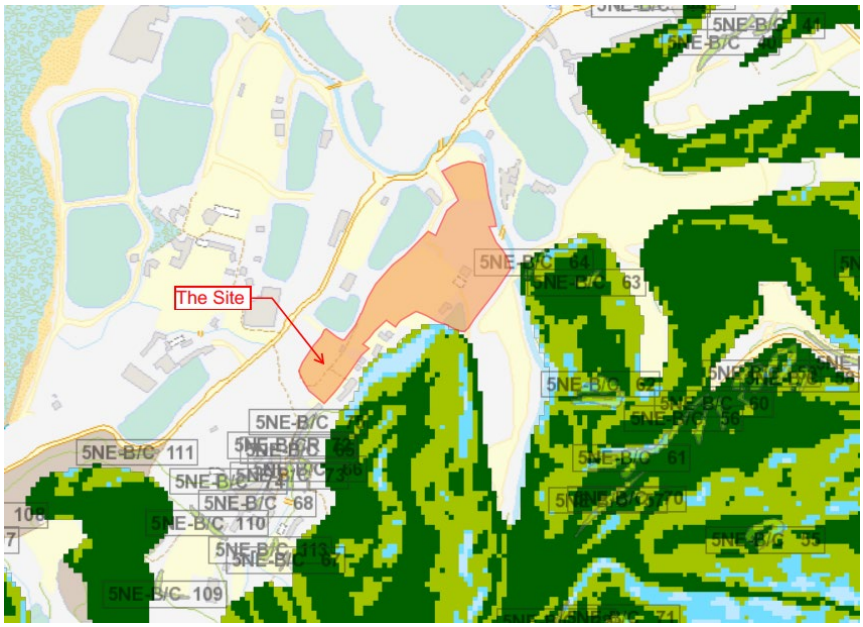


Figure 2 – Extract from Natural Terrain Landslide Inventory Map

Existing Utilities

4.9 No available information of the utilities can be obtained.

Scheduled Area

4.10 The Site is located outside the Schedule Area No. 2 (North-western New Territories) and Schedule Area 3 (The Railway Protection Zone). Plan of the Schedule Areas are enclosed in **Appendix G**.

5 EXISTING GEOTECHNICAL FEATURES

5.1 According to our search in Geotechnical Information Infrastructure (Ginfo) of Geotechnical Engineering Office (GEO) from Civil Engineering and Development Department (CEDD), there is no previous Ground Investigation (GI) record in the vicinity of on the features.

5.2 According to the Slope Information System (HKSIS), there are two existing features in close proximity to the site (Figure 3). The feature is listed as follow:

Table 1: Slope Information of the features

Feature No.	Max. Height (m)	Length (m)	Face Angle (°)
5NE-B/C 64	5	50	40
5NE-B/C 75	6.2	25	60

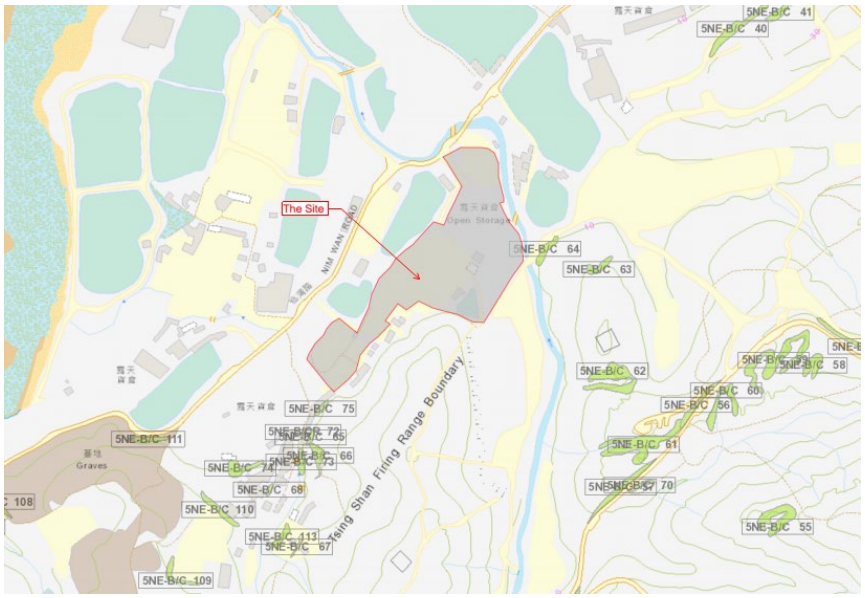


Figure 3 – Extract from Natural Terrain Landslide Inventory Map

5.3 According to the Slope Maintenance Responsibility Information System (SMRIS), there are two existing features in close proximity to the Site. The feature is listed as follow:

Table 2: Maintenance Responsibility of the 5NE-B/C 64

Feature No.	Sub-division No.	Responsible Lot/ Party	Maintenance Agent
5NE-B/C 64	0	People's Liberation Army (PLA)	People's Liberation Army (PLA)

Table 3: Maintenance Responsibility of the 5NE-B/C 75

Feature No.	Sub-division No.	Responsible Lot/ Party	Maintenance Agent
5NE-B/C 75	1	DD135 Lot 59RP (Private)	N/A
	2	LandsD	LandsD

Previous Studies/ Works of Feature No. 5NE-B/C 64

5.4 The feature is located approximately 20m away at the North-East Direction from the proposed site and separated by an existing stream. According to SIS, the area at toe is considered as “Remote area or abandoned facilities” and the “Consequence-to-life Category” is considered as 3, which means the concerned facilities lie beyond the possible extreme travel distance of landslide debris, according to TGN15 and the Geotechnical Manual for Slopes.

5.5 According to SIS records, no checking record in any public project files or private development files under this slope feature.

Previous Studies/ Works Feature No. 5NE-B/C 75

5.6 The feature is also located approximately 20m away at the South-West Direction from the proposed site. Since there are existing structures at toe of the north portion of the slope, the area at toe is considered as “Cottage, licensed and squatter area” according to SIS. The “Consequence-to-life Category” is considered as 1, which means the concerned facilities lie within the expected travel distance of debris according to TGN15 and the Geotechnical Manual for Slopes.

According to SIS records, A stage 2 study was carried out in 2007 by Geotechnical Engineering Office (GEO) under CE24/2004. It was recommended that no action required for the feature.

6 POTENTIAL GEOTECHNICAL IMPACTS

6.1 Based on the preliminary review of the geological conditions including the loading from the proposed buildings, surrounding natural terrain and slopes are considered feasible.

Proposed Works

Temporary Structures

6.2 The proposed scheme comprises 6 nos. of one storey, low rise structure. As the loading from the low structure building is comparatively general, no foundation is proposed for the proposed buildings. The proposed temporary structures shall have no effect or impact to the stability of all slopes (man-made), retaining walls and existing building or structures near the Site.

Surrounding Geotechnical Feature

6.3 The existing 2 registered features, 5NE-B/C 64 and 5NE-B/C 75 are located at least 20m from the site boundary. An existing stream (with approx. 3.5m width) outside the site boundary has separated the site from the feature no. 5NE-B/C 64. No bulk excavation and percussive construction works will be carried out at the feature. The features are unlikely be affected by the development. As these two man-made features are located outside 6m of subject site. Due to their distance and the slope heights, no further studies or remedial actions is recommended. No existing landslides, HLC, incident reports, or other evidence of past instability are recorded. No significant boulders are recorded or observed on site. T

7 CONCLUSION

7.1 A review of the site conditions and the geotechnical works likely to be carried out for the proposed planning application has been carried out and the following conclusion can be made.

7.2 On the basis of the available geotechnical information, the following conclusions and recommendations are drawn:

Suitable groundwater control scheme shall be considered in design to avoid excessive groundwater drawdown at the adjacent area. Permanent drainage system shall also be proposed. Runoff from the surroundings will be collected and discharged to the new / existing channels via catch-pits, manholes, before discharging into the existing public storm water drainage system

The construction of foundation is not required in this application.

The site formation works, deep excavation and lateral support works for the proposed scheme shall not be required.

7.3 In the light of above, we consider that proposed development would not cause any adverse environmental nor geotechnical problems to the surrounding areas. Therefore, the proposed development is considered geotechnically satisfactory from the geotechnical point of view.

May 2026

Appendix A

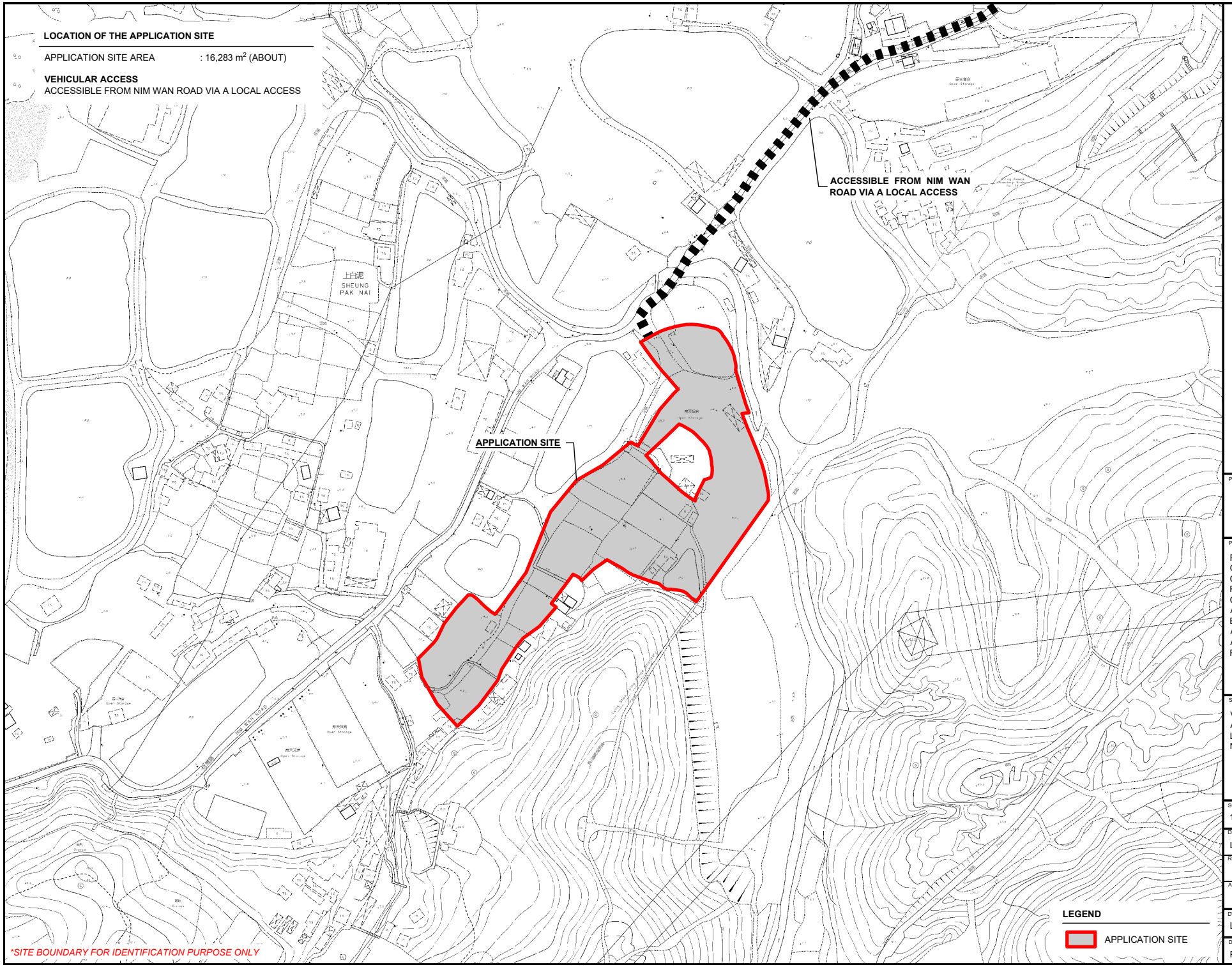
Site Location Plan

LOCATION OF THE APPLICATION SITE

APPLICATION SITE AREA : 16,283 m^2 (ABOUT)

VEHICULAR ACCESS

ACCESSIBLE FROM NIM WAN ROAD VIA A LOCAL ACCESS



*SITE BOUNDARY FOR IDENTIFICATION PURPOSE ONLY

LEGEND

APPLICATION SITE

NORTH

W E

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PLANNING CONSULTANT

R-RICHES PLANNING LIMITED

PROJECT

PROPOSED TEMPORARY PLACE OF RECREATION, SPORTS OR CULTURE (HOBBY FARM AND FISHING GROUND), HOLIDAY CAMP, BARBECUE SITE AND ANIMAL BOARDING ESTABLISHMENT WITH ANCILLARY FACILITIES AND ASSOCIATED FILLING OF LAND FOR A PERIOD OF 3 YEARS

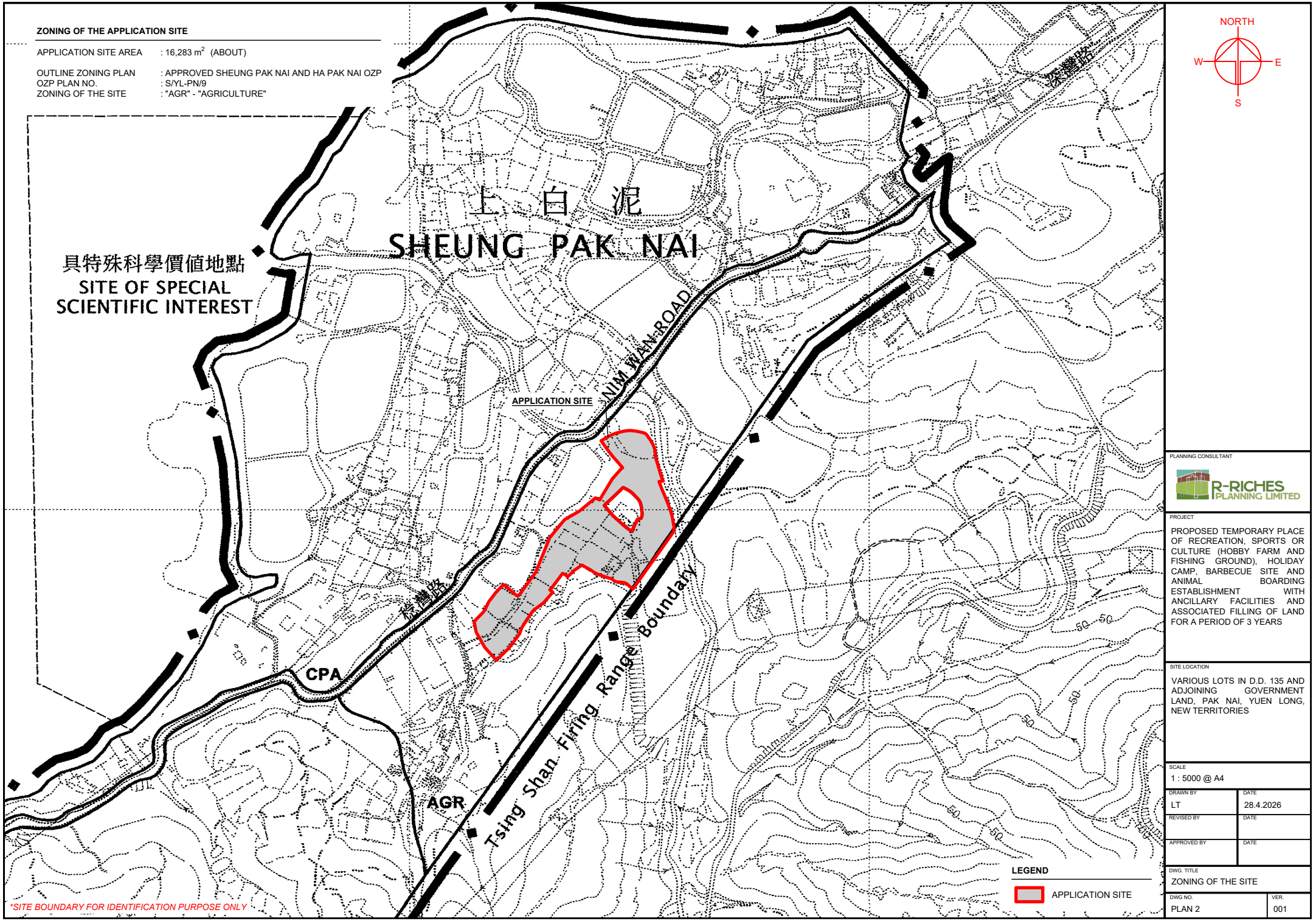
SITE LOCATION

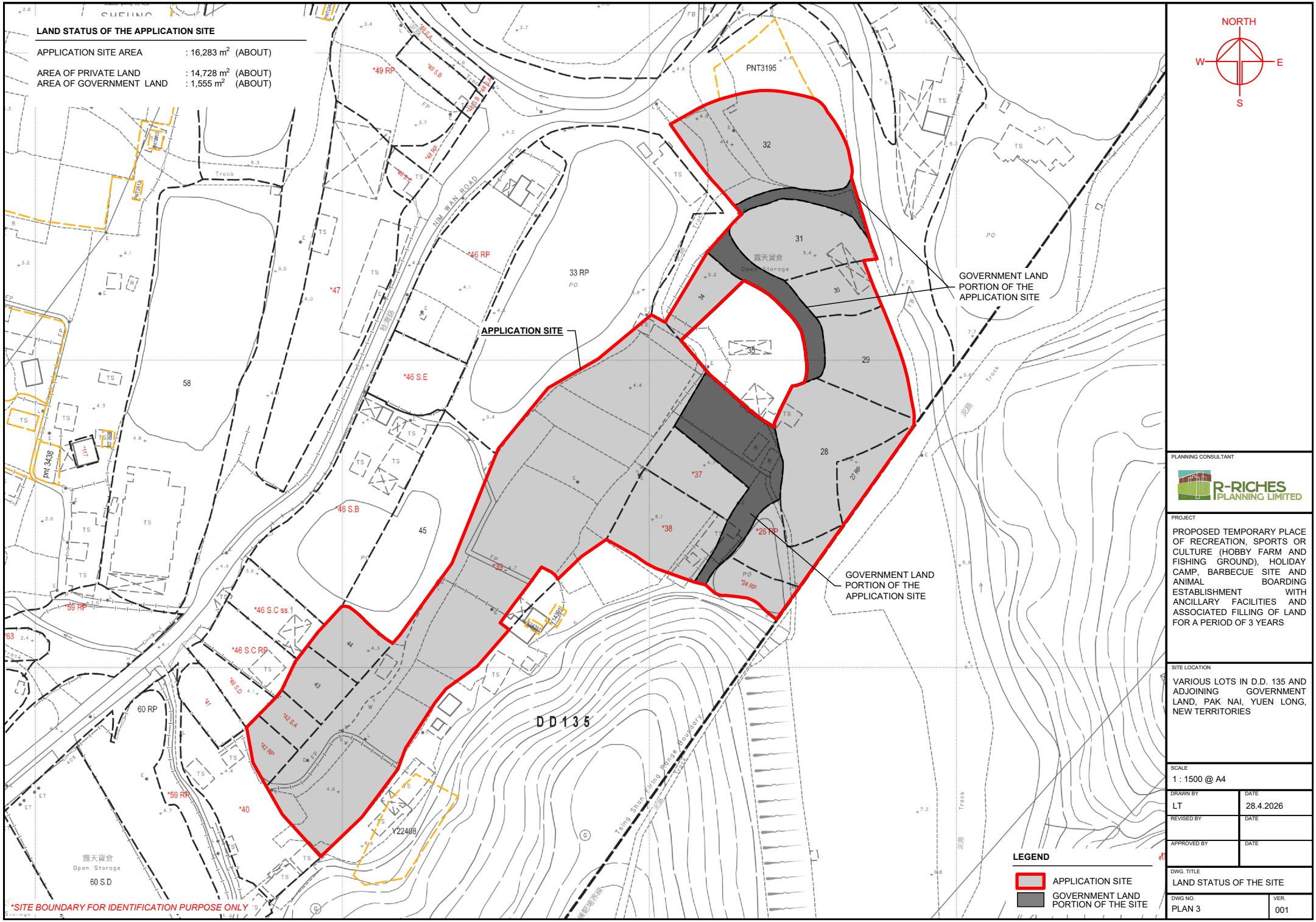
VARIOUS LOTS IN D.D. 135 AND ADJOINING GOVERNMENT LAND, PAK NAI, YUEN LONG, NEW TERRITORIES

SCALE	1 : 3000 @ A4
DRAWN BY	LT
DATE	28.4.2026
REVISED BY	
DATE	
APPROVED BY	
DATE	
DWG. TITLE	LOCATION PLAN
DWG NO.	PLAN 1
VER.	001

Appendix B

Proposed Development Plan


ZONING OF THE APPLICATION SITE
APPLICATION SITE AREA : 16,283 m² (ABOUT)
OUTLINE ZONING PLAN : APPROVED SHEUNG PAK NAI AND HA PAK NAI OZP
OZP PLAN NO. : S/YL-PN/9
ZONING OF THE SITE : "AGR" - "AGRICULTURE"
上白泥
SHEUNG PAK NAI
具特殊科學價值地點
SITE OF SPECIAL SCIENTIFIC INTEREST
APPLICATION SITE
NIM WAN ROAD
CPA
AGR
Tsing Shan Firing Range Boundary
50
LEGEND
APPLICATION SITE
*SITE BOUNDARY FOR IDENTIFICATION PURPOSE ONLY
NORTH
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R-RICHES PLANNING LIMITED
PROJECT
PROPOSED TEMPORARY PLACE OF RECREATION, SPORTS OR CULTURE (HOBBY FARM AND FISHING GROUND), HOLIDAY CAMP, BARBECUE SITE AND ANIMAL BOARDING ESTABLISHMENT WITH ANCILLARY FACILITIES AND ASSOCIATED FILLING OF LAND FOR A PERIOD OF 3 YEARS
SITE LOCATION
VARIOUS LOTS IN D.D. 135 AND ADJOINING GOVERNMENT LAND, PAK NAI, YUEN LONG, NEW TERRITORIES
SCALE
1 : 5000 @ A4
DRAWN BY
LT
DATE
28.4.2026
REVISED BY
DATE
APPROVED BY
DATE
DWG. TITLE
ZONING OF THE SITE
DWG NO.
PLAN 2
VER.
001



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PROPOSED TEMPORARY PLACE OF RECREATION, SPORTS OR CULTURE (HOBBY FARM AND FISHING GROUND), HOLIDAY CAMP, BARBECUE SITE AND ANIMAL BOARDING ESTABLISHMENT WITH ANCILLARY FACILITIES AND ASSOCIATED FILLING OF LAND FOR A PERIOD OF 3 YEARS

SITE LOCATION

VARIOUS LOTS IN D.D. 135 AND ADJOINING GOVERNMENT LAND, PAK NAI, YUEN LONG, NEW TERRITORIES

SCALE	1 : 1500 @ A4
DRAWN BY	LT
DATE	28.4.2026
REVISED BY	
DATE	
APPROVED BY	
DATE	
DWG. TITLE	LAND STATUS OF THE SITE
DWG NO.	PLAN 3
VER.	001

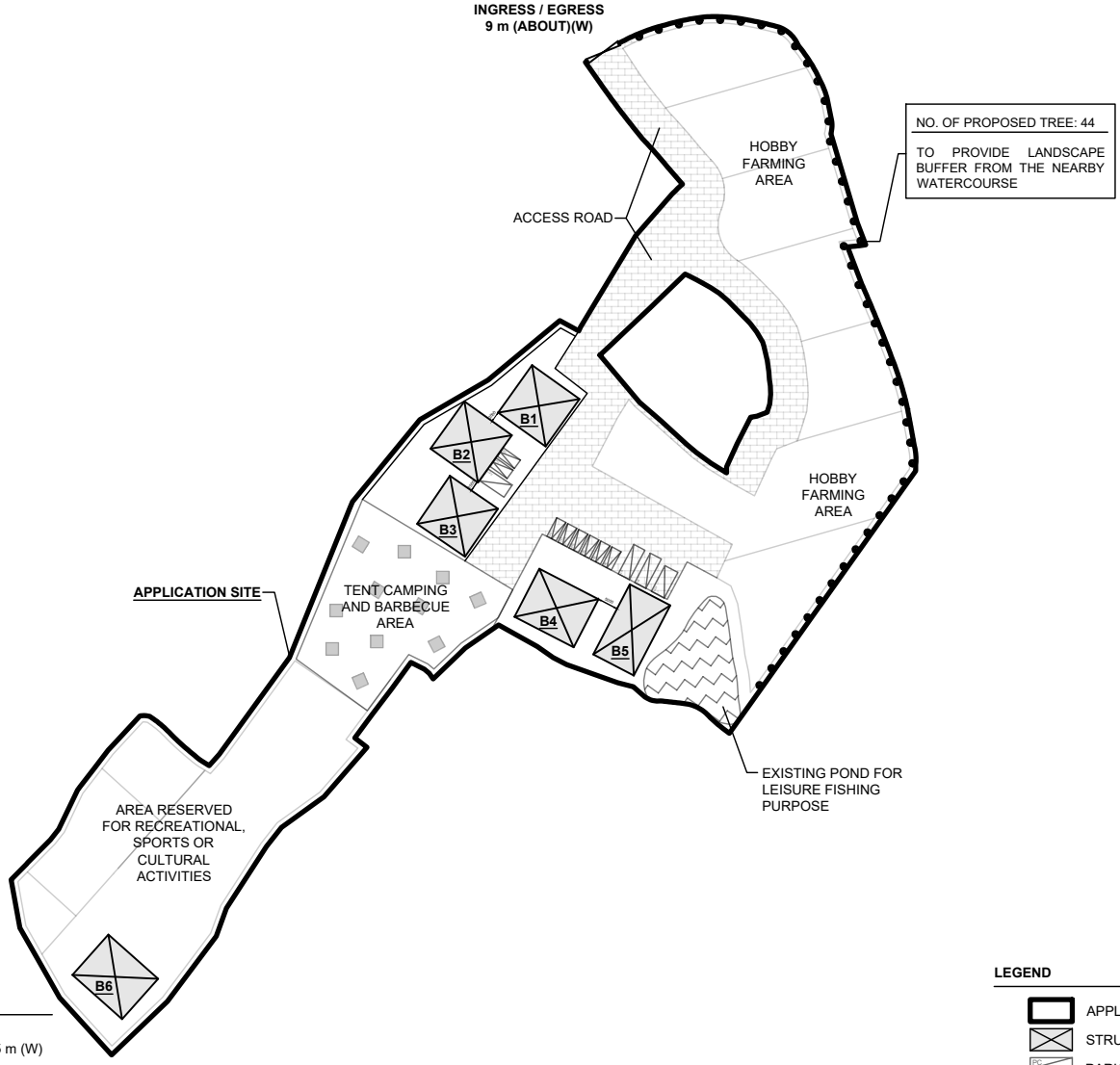
DEVELOPMENT PARAMETERS

APPLICATION SITE AREA	: 16,283 m^2	(ABOUT)
COVERED AREA	: 1,213 m^2	(ABOUT)
UNCOVERED AREA	: 15,070 m^2	(ABOUT)
PLOT RATIO	: 0.07	(ABOUT)
SITE COVERAGE	: 7 %	(ABOUT)
NO. OF STRUCTURE	: 6	
DOMESTIC GFA	: NOT APPLICABLE	
NON-DOMESTIC GFA	: 1,213 m^2	(ABOUT)
TOTAL GFA	: 1,213 m^2	(ABOUT)
BUILDING HEIGHT	: 4 m (ABOUT)	
NO. OF STOREY	: 1	

PROPOSED USES

HOBBY FARM	: 4,705 m^2	(ABOUT)
FISHING GROUND	: 428 m^2	(ABOUT)
HOLIDAY CAMP AND BARBECUE SITE	: 1,353 m^2	(ABOUT)
NO. OF CAMPING TENT	: 11	(ABOUT)
NO. OF BARBECUE PIT	: 11	(ABOUT)

STRUCTURE	USE	COVERED AREA	GROSS FLOOR AREA	BUILDING HEIGHT
B1	ANIMAL BOARDING ESTABLISHMENT	196 m^2 (ABOUT)	196 m^2 (ABOUT)	4 m (ABOUT)(1-STOREY)
B2	ANIMAL BOARDING ESTABLISHMENT	196 m^2 (ABOUT)	196 m^2 (ABOUT)	4 m (ABOUT)(1-STOREY)
B3	AGRICULTURAL EDUCATION, OFFICE AND STORE ROOM	196 m^2 (ABOUT)	196 m^2 (ABOUT)	4 m (ABOUT)(1-STOREY)
B4	RECEPTION AND SITE OFFICE	208 m^2 (ABOUT)	208 m^2 (ABOUT)	4 m (ABOUT)(1-STOREY)
B5	CANTEEN FOR STAFF AND VISITOR	209 m^2 (ABOUT)	209 m^2 (ABOUT)	4 m (ABOUT)(1-STOREY)
B6	ACTIVITY ROOM	208 m^2 (ABOUT)	208 m^2 (ABOUT)	4 m (ABOUT)(1-STOREY)
	TOTAL	**1,213 m^2 (ABOUT)**	**1,213 m^2 (ABOUT)**	



PARKING AND LOADING / UNLOADING PROVISIONS

NO. OF PRIVATE CAR PARKING SPACE	: 8
DIMENSION OF L/UL SPACE	: 5 m (L) x 2.5 m (W)
NO. OF L/UL SPACE FOR LIGHT GOODS VEHICLE	: 2
DIMENSION OF L/UL SPACE	: 7 m (L) x 3.5 m (W)
NO. OF L/UL SPACE FOR LIGHT BUS	: 2
DIMENSION OF L/UL SPACE	: 8 m (L) x 3 m (W)

LEGEND

- APPLICATION SITE
- STRUCTURE
- PARKING SPACE (PC)
- LOADING / UNLOADING SPACE (LGV)
- LOADING / UNLOADING SPACE (LB)
- INGRESS / EGRESS

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PROJECT

PROPOSED TEMPORARY PLACE OF RECREATION, SPORTS OR CULTURE (HOBBY FARM AND FISHING GROUND), HOLIDAY CAMP, BARBECUE SITE AND ANIMAL BOARDING ESTABLISHMENT WITH ANCILLARY FACILITIES AND ASSOCIATED FILLING OF LAND FOR A PERIOD OF 3 YEARS

SITE LOCATION

VARIOUS LOTS IN D.D. 135 AND ADJOINING GOVERNMENT LAND, PAK NAI, YUEN LONG, NEW TERRITORIES

SCALE

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LT	28.4.2026
REVISED BY	DATE
APPROVED BY	DATE

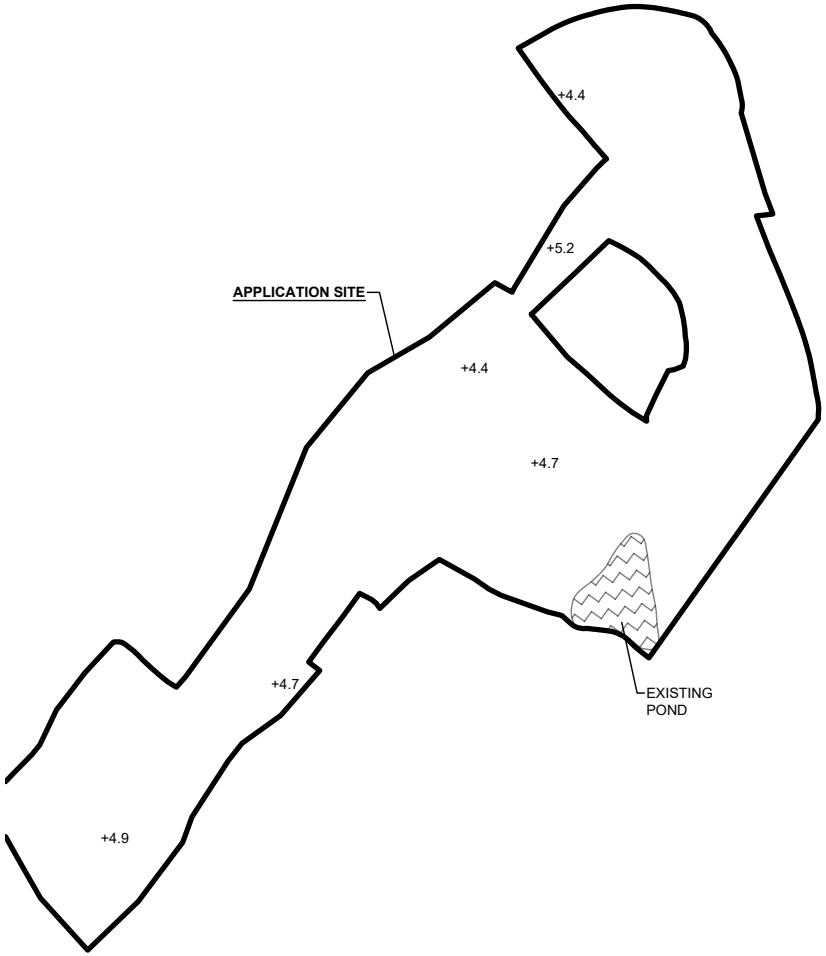
DWG. TITLE

LAYOUT PLAN

DWG NO.	VER.
PLAN 4	001

TING CONDITION OF THE APPLICATION SITE

LICATION SITE AREA	: 16,283 m^2	(ABOUT)
TING SOILED AREA	: 15,855 m^2	(ABOUT)
TING SITE LEVELS	: +4.4 mPD TO +5.2 mPD	(ABOUT)
TING POND AREA	: 428 m^2	(ABOUT)



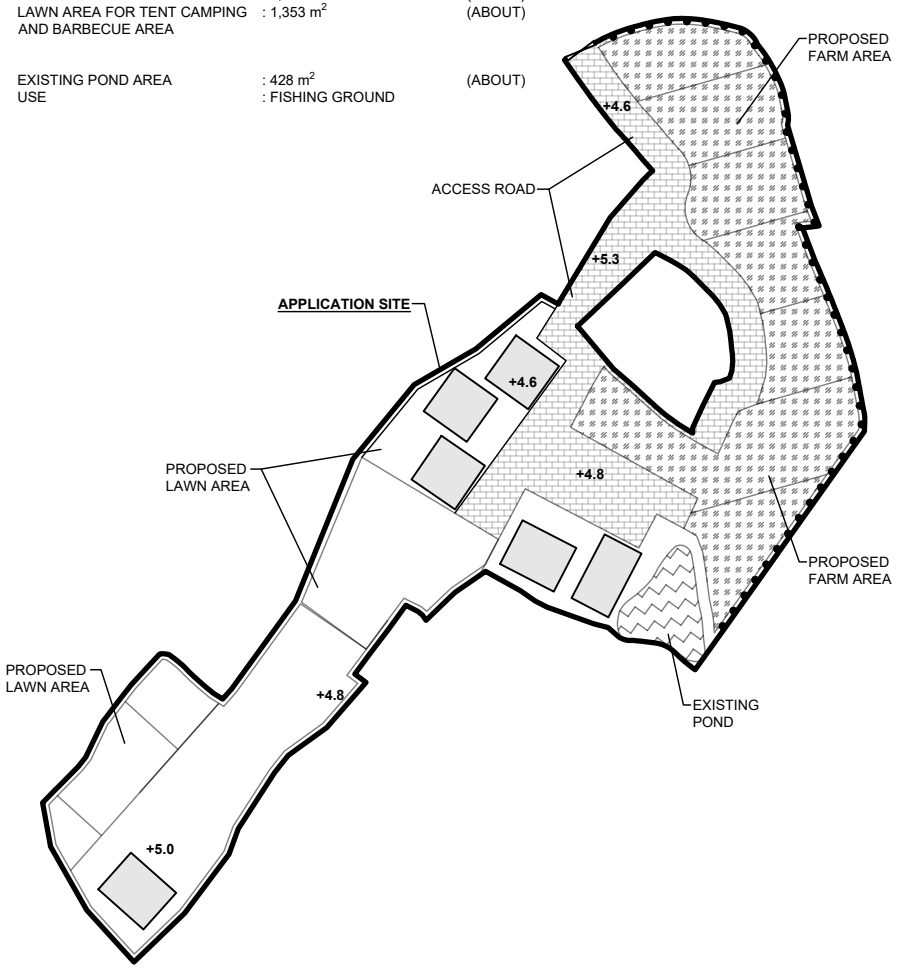
'ELS ARE FOR REFERENCE ONLY.
UNDARY FOR IDENTIFICATION PURPOSE ONLY

LEGEND

APPLICATION SITE
+4.4 EXISTING SITE LEVEL

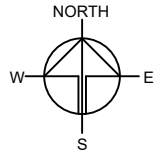
PROPOSED FILLING OF LAND AREA

APPLICATION SITE AREA	: 16,283 m^2	(ABOUT)
COVERED BY STRUCTURE	: 1,213 m^2	(ABOUT)
ACCESS ROAD	: 3,048 m^2	(ABOUT)
PROPOSED FILLING AREA	: 4,261 m^2	(ABOUT)
DEPTH OF LAND FILLING	: NOT MORE THAN 0.2 m	
PROPOSED SITE LEVELS	: +4.6 mPD TO +5.3 mPD	(ABOUT)
MATERIAL OF LAND FILLING	: CONCRETE	
USE	: SITE FORMATION OF STRUCTURES, AND CIRCULATION SPACE	
PROPOSED FARM AREA	: 4,705 m^2	(ABOUT)
USE	: HOBBY FARMING	
PROPOSED LAWN AREA	: 6,889 m^2	(ABOUT)
LAWN AREA FOR TENT CAMPING AND BARBECUE AREA	: 1,353 m^2	(ABOUT)
EXISTING POND AREA	: 428 m^2	(ABOUT)
USE	: FISHING GROUND	



LEGEND

APPLICATION SITE
PROPOSED FILLED AREA
+4.5 PROPOSED SITE LEVEL



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PROPOSED TEMPORARY PLACE OF RECREATION, SPORTS OR CULTURE (HOBBY FARM AND FISHING GROUND), HOLIDAY CAMP, BARBECUE SITE AND ANIMAL BOARDING ESTABLISHMENT WITH ANCILLARY FACILITIES AND ASSOCIATED FILLING OF LAND FOR A PERIOD OF 3 YEARS

SITE LOCATION

VARIOUS LOTS IN D.D. 135 AND ADJOINING GOVERNMENT LAND, PAK NAI, YUEN LONG, NEW TERRITORIES

SCALE: 1 : 2000 @ A4

DRAWN BY	DATE
LT	28.4.2026
CHECKED BY	DATE
APPROVED BY	DATE

DWG. TITLE: FILLING OF LAND

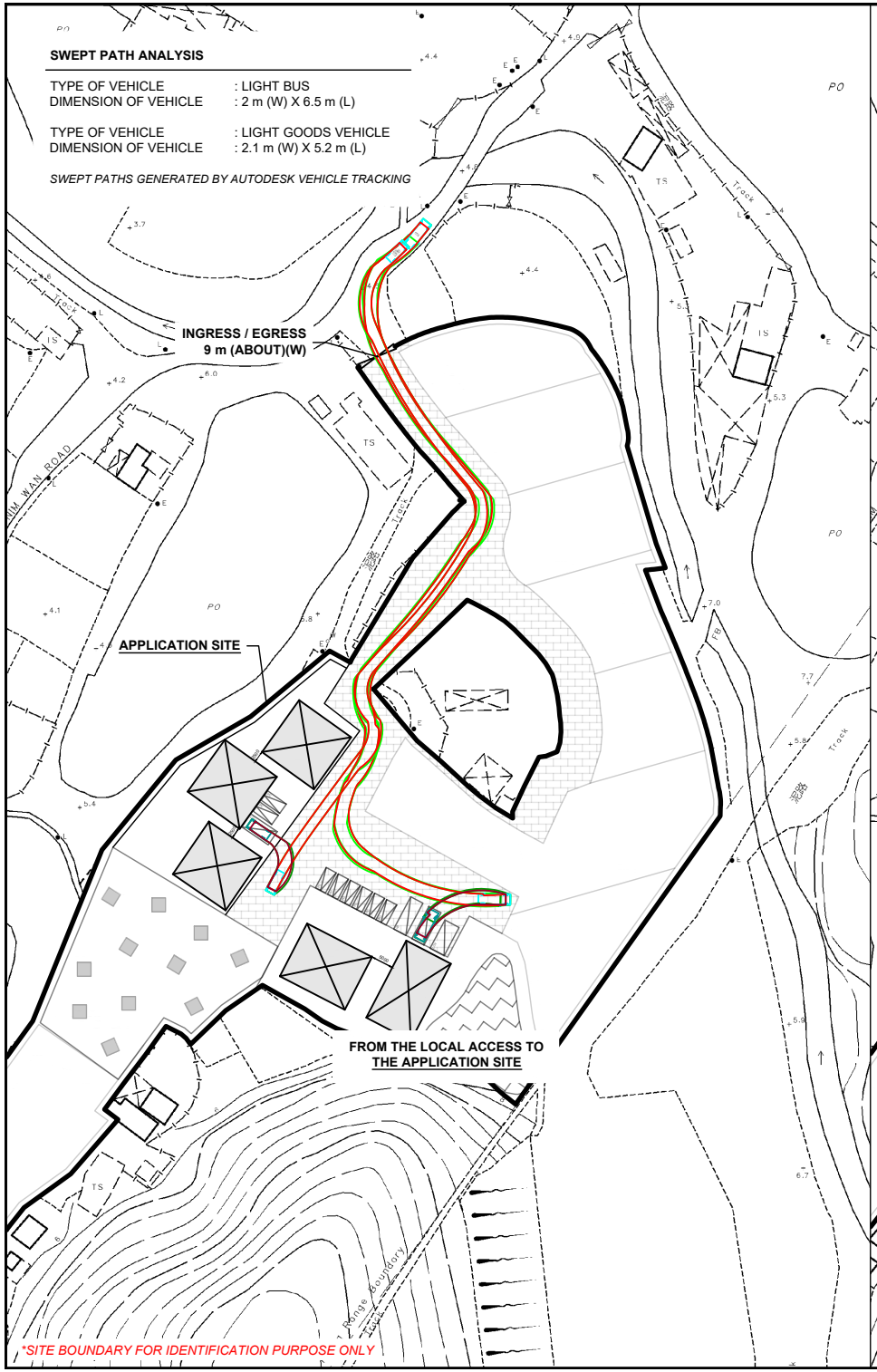
DWG NO.	VER.
PLAN 5	001

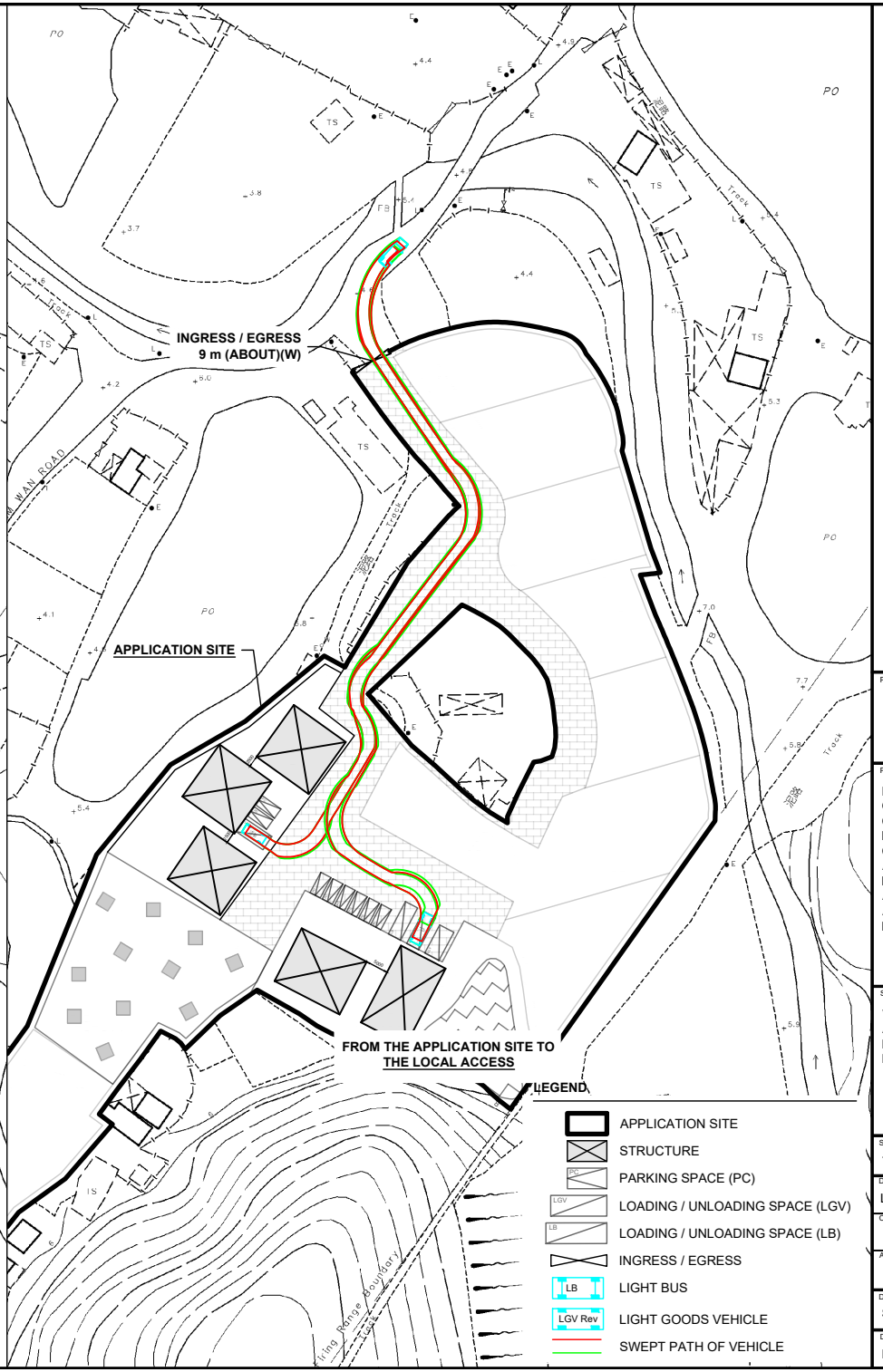
SWEPT PATH ANALYSIS

TYPE OF VEHICLE : LIGHT BUS
DIMENSION OF VEHICLE : 2 m (W) X 6.5 m (L)

TYPE OF VEHICLE : LIGHT GOODS VEHICLE
DIMENSION OF VEHICLE : 2.1 m (W) X 5.2 m (L)

SWEPT PATHS GENERATED BY AUTODESK VEHICLE TRACKING





LEGEND

- APPLICATION SITE
- STRUCTURE
- PARKING SPACE (PC)
- LOADING / UNLOADING SPACE (LGV)
- LOADING / UNLOADING SPACE (LB)
- INGRESS / EGRESS
- LIGHT BUS
- LIGHT GOODS VEHICLE
- SWEPT PATH OF VEHICLE

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PROJECT
PROPOSED TEMPORARY PLACE OF RECREATION, SPORTS OR CULTURE (HOBBY FARM AND FISHING GROUND), HOLIDAY CAMP, BARBECUE SITE AND ANIMAL BOARDING ESTABLISHMENT WITH ANCILLARY FACILITIES AND ASSOCIATED FILLING OF LAND FOR A PERIOD OF 3 YEARS

SITE LOCATION
VARIOUS LOTS IN D.D. 135 AND ADJOINING GOVERNMENT LAND, PAK NAI, YUEN LONG, NEW TERRITORIES

SCALE
1 : 1500 @ A4

DRAWN BY	DATE
LT	28.4.2026
CHECKED BY	DATE
APPROVED BY	DATE

DWG. TITLE
SWEPT PATH ANALYSIS

DWG NO.	VER.
PLAN 6	001

Appendix C

Information of Existing Slopes/Retaining Walls

SIMAR

Slope Maintenance Responsibility Report (5NE-B/C64)	**ESTATE MANAGEMENT SECTION** **LANDS DEPARTMENT**

List of Slope Maintenance Responsibility Area(s)

1	**5NE-B/C64**		**Sub-Division**	Not Applicable
	Location	WITHIN TSING SHAN FIRING RANGE [PROPOSED DEFENCE LOT 16]		
	Responsible Lot/Party	People's Liberation Army	**Maintenance Agent**	People's Liberation Army
	Remarks	For enquiries about the maintenance of this slope / sub-division of the slope, please contact the Maintenance Agent directly.		

- End of Report -

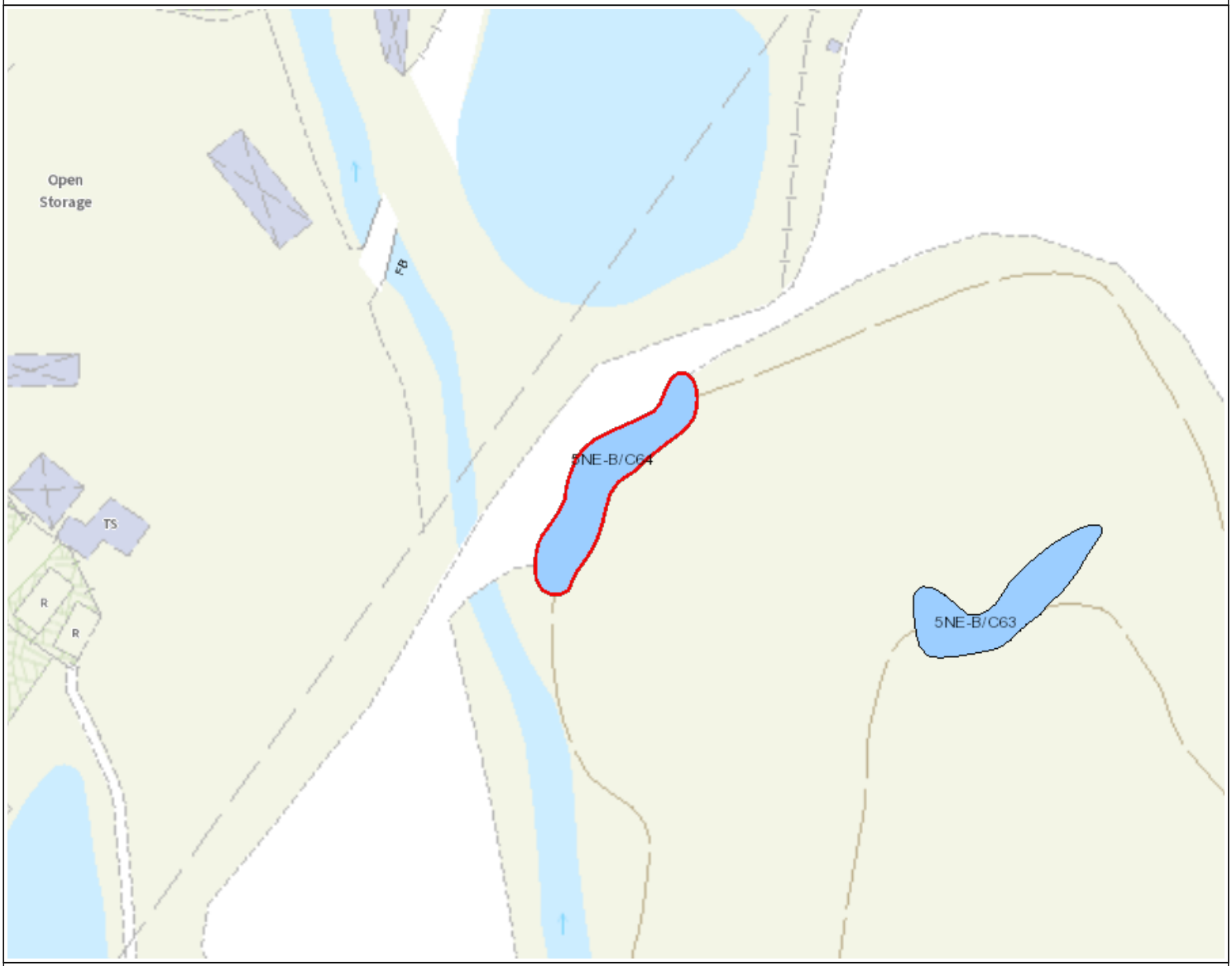
Notes:

(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: 30/01/2026

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Slope Maintenance Responsibility Report (5NE-B/C75)	**ESTATE MANAGEMENT SECTION** **LANDS DEPARTMENT**

List of Slope Maintenance Responsibility Area(s)

1	**5NE-B/C75**		**Sub-Division**	1
	Location	ADJOINING THE S BOUNDARY OF DD135 LOT40 & PARTLY ENCROACHED ONTO DD135 LOT59RP		
	Responsible Lot/Party	DD135 Lot59RP	**Maintenance Agent**	Not Applicable
	Remarks	Slope information being reviewed.		

2	**5NE-B/C75**		**Sub-Division**	2
	Location	ADJOINING THE S BOUNDARY OF DD135 LOT40 & PARTLY ENCROACHED ONTO DD135 LOT59RP		
	Responsible Lot/Party	Lands Department	**Maintenance Agent**	Lands Department
	Remarks	1. Slope information being reviewed. 2. For enquiries about the maintenance of this slope / sub-division of the slope, please contact the Maintenance Agent directly.		

- End of Report -

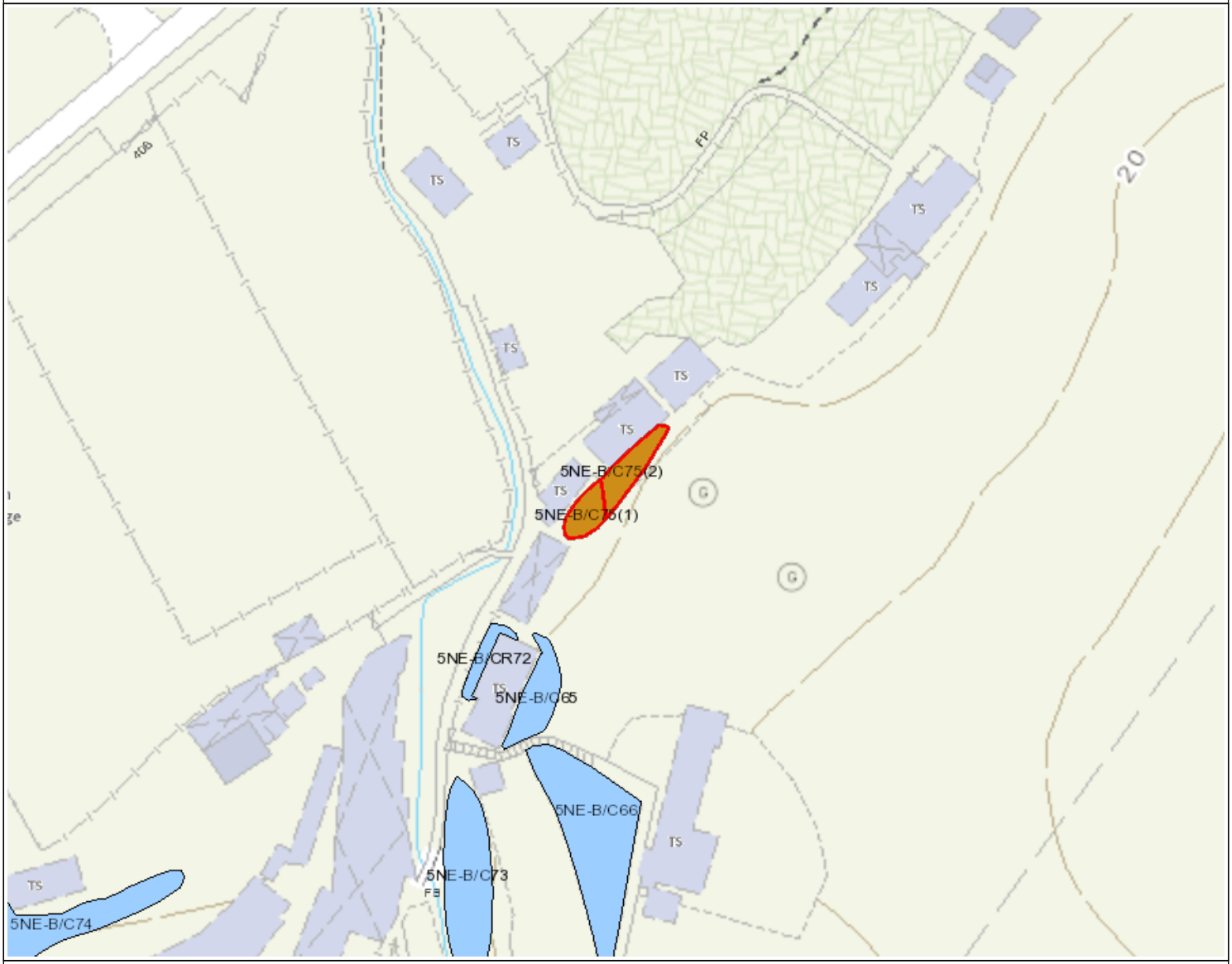
Notes:

(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: 30/01/2026

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SIS

BASIC INFORMATION

Location:	HA PAK NAI, YUEN LONG
Date of Formation:	post-1977
Date of Construction/ Modification:	N/A
Approximate Coordinates:	Easting : 813814 Northing : 833989

CONSEQUENCE-TO-LIFE CATEGORY

Facility at Crest:	Undeveloped green belt
Distance of Facility from Crest (m):	0
Facility at Toe:	Remote area or abandoned facilities
Distance of Facility from Toe (m):	0
Consequence-to-life Category:	3
Remarks:	N/A

SLOPE PART

(1) Max. Height (m): 5 Length (m): 50 Average Angle (deg): 40

WALL PART

N/A

MAINTENANCE RESPONSIBILITY

Maintenance Type: Government Party: PLA Agent: PLA

DETAILS OF SLOPE / RETAINING WALL

Date of Inspection:	27-08-1997
Data Source:	SIRST
Slope Part Drainage:	N/A
Wall Part Drainage:	N/A

SLOPE PART

Slope Part (1)
Surface Protection (%): Bare: 10 Vegetated: 90 Chunam: 0 Shotcrete: 0 Other Cover: 0
Material Description: Material type: Soil Geology: Decomposed granite
Berm: No. of Berms: N/A Min. Berm Width (m): N/A
Weepholes: Size (mm): N/A Spacing (m): N/A

WALL PART

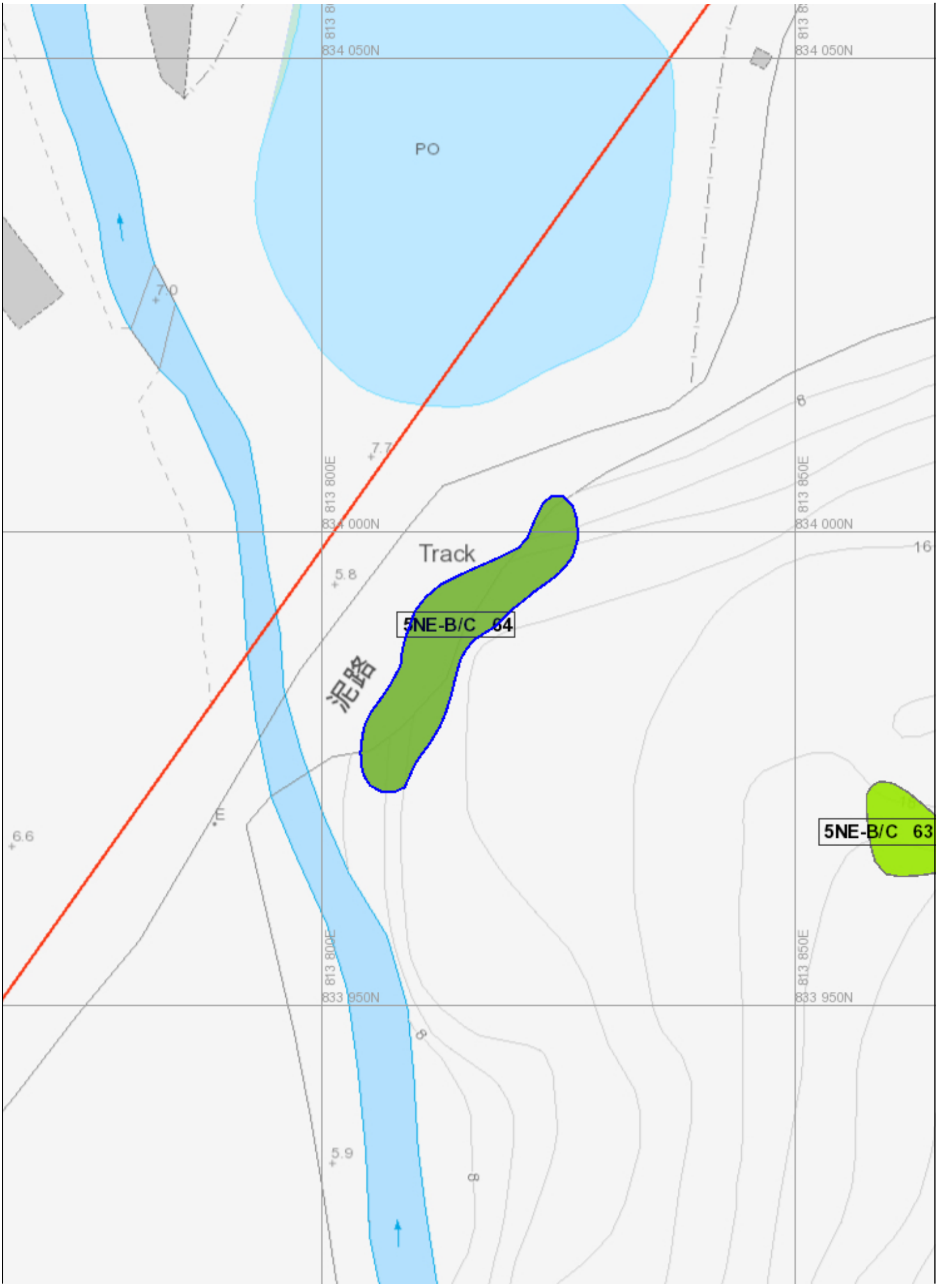
N/A

SERVICES

N/A

PHOTO




813 800E
834 050N
813 850E
834 050N
PO
7.0
7.7
813 800E
834 000N
813 850E
834 000N
Track
5.8
5NE-B/C 64
泥路
16
6.6
5NE-B/C 63
813 800E
833 950N
813 850E
833 950N
5.9

BASIC INFORMATION

Location:	Nim Wan Road, Yuen Long
Date of Formation:	pre-1977
Date of Construction/ Modification:	N/A
Approximate Coordinates:	Easting : 813578 Northing : 833823

CONSEQUENCE-TO-LIFE CATEGORY

Facility at Crest:	Undeveloped green belt
Distance of Facility from Crest (m):	0
Facility at Toe:	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): 6.2 Length (m): 25 Average Angle (deg): 60

WALL PART

N/A

MAINTENANCE RESPONSIBILITY

Maintenance Type: Mixed Party: DD135 Lot59RP Agent: N/A
Maintenance Type: Mixed Party: Lands D Agent: Lands D

DETAILS OF SLOPE / RETAINING WALL

Date of Inspection:	08-07-2014
Data Source:	Project Office
Slope Part Drainage:	(1) Position: Toe Size(mm): 200
Wall Part Drainage:	N/A

SLOPE PART

Slope Part (1)
Surface Protection (%): Bare: 100 Vegetated: 0 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

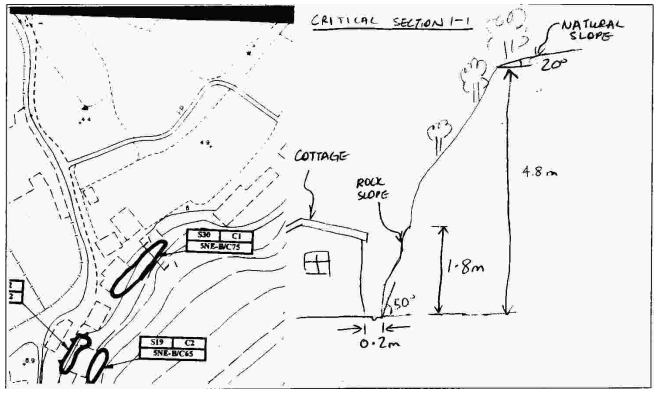
N/A

SERVICES

N/A

STAGE 1 STUDY REPORT

Inspected On: 26-08-1997
Weather: Some Rain
District: MW



Section No: 1-1
Height (m): N/A
Type of Toe Facility: Cottage, licensed and squatter area
Distance from Toe (m): 0
Type of Crest Facility: Undeveloped green belt
Distance from Crest (m): 0
Consequence Category: 1
Engineering Judgement: HP
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: HP
Sign of Seepage: Slope : Slight to moderate seepage below mid-height or from isolated rock joints
Wall : N/A
Criterion A satisfied: N
Sign of Distress: Slope : Minor (mid-portion)
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

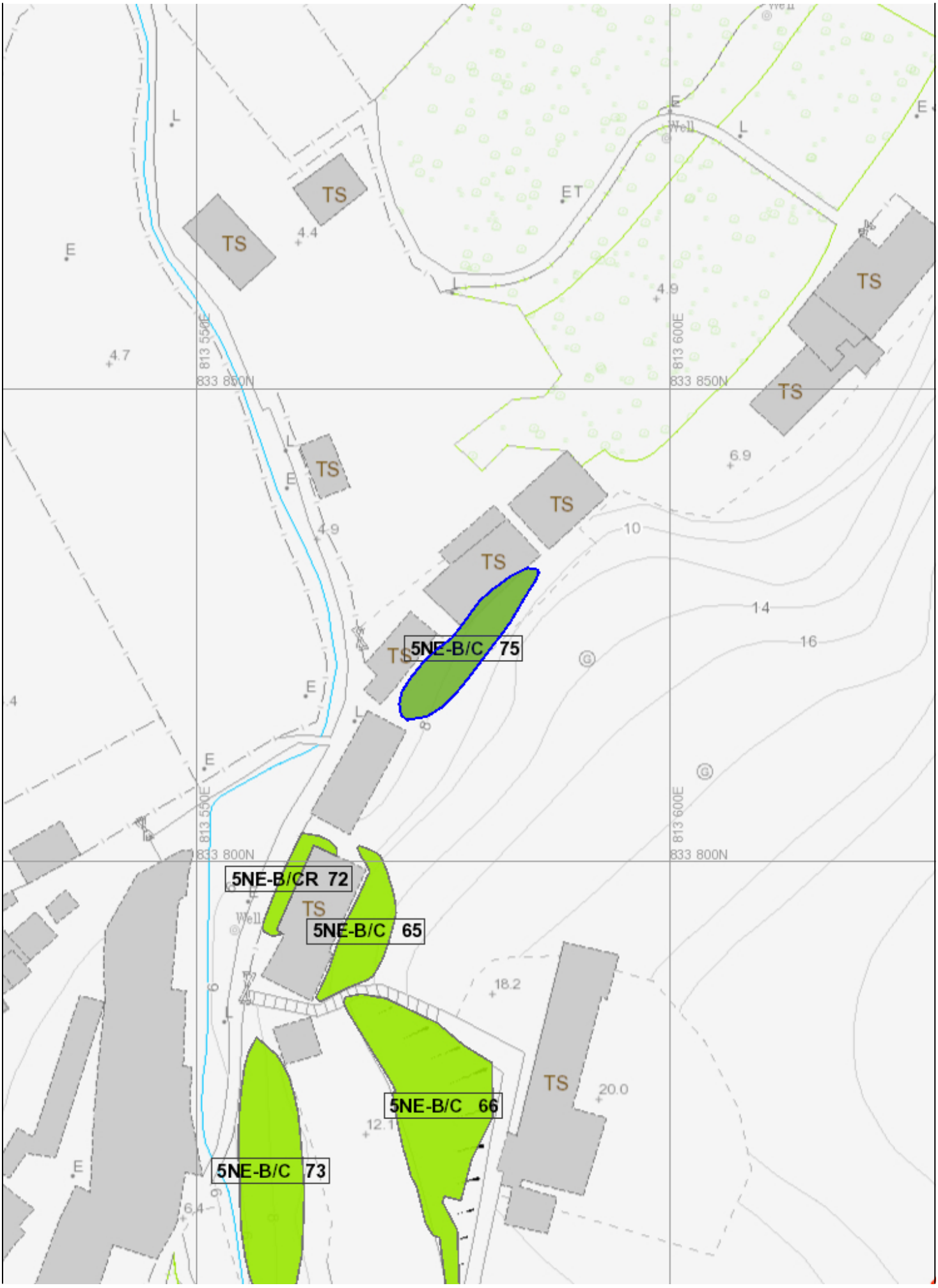
Check / repair Services:	N
Action By:	N/A
Non-routine Maintenance:	N
Action By:	N/A

PHOTO



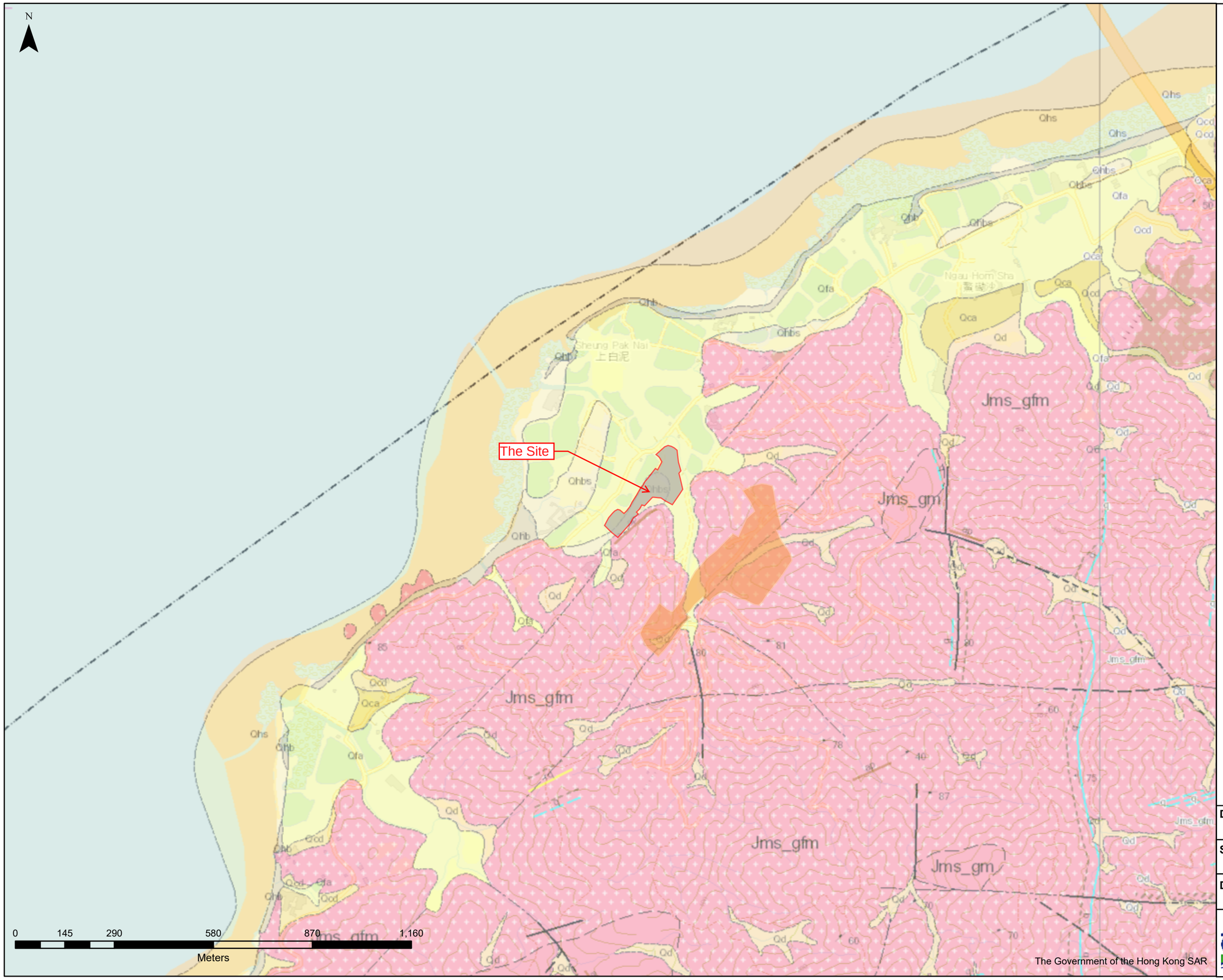





5NE-B/C 75
5NE-B/CR 72
5NE-B/C 65
5NE-B/C 66
5NE-B/C 73
TS
813 550E
833 850N
813 600E
833 800N
Well
ET

Appendix D

Part Print of The Geological Survey Map



SUPERFICIAL_DEPOSITS

- Qca
- Qcd
- Qd
- Qfa
- Qhb
- Qhbs
- Qhi
- Qhm
- Qhs

SOLID_GEOLOGY

- Cslm
- Cslt
- Csyl
- Csym
- Jms_gfm
- Jo
- Jp_gd
- Jtm

Division	
Scale	1:10000
Date	26/01/2026

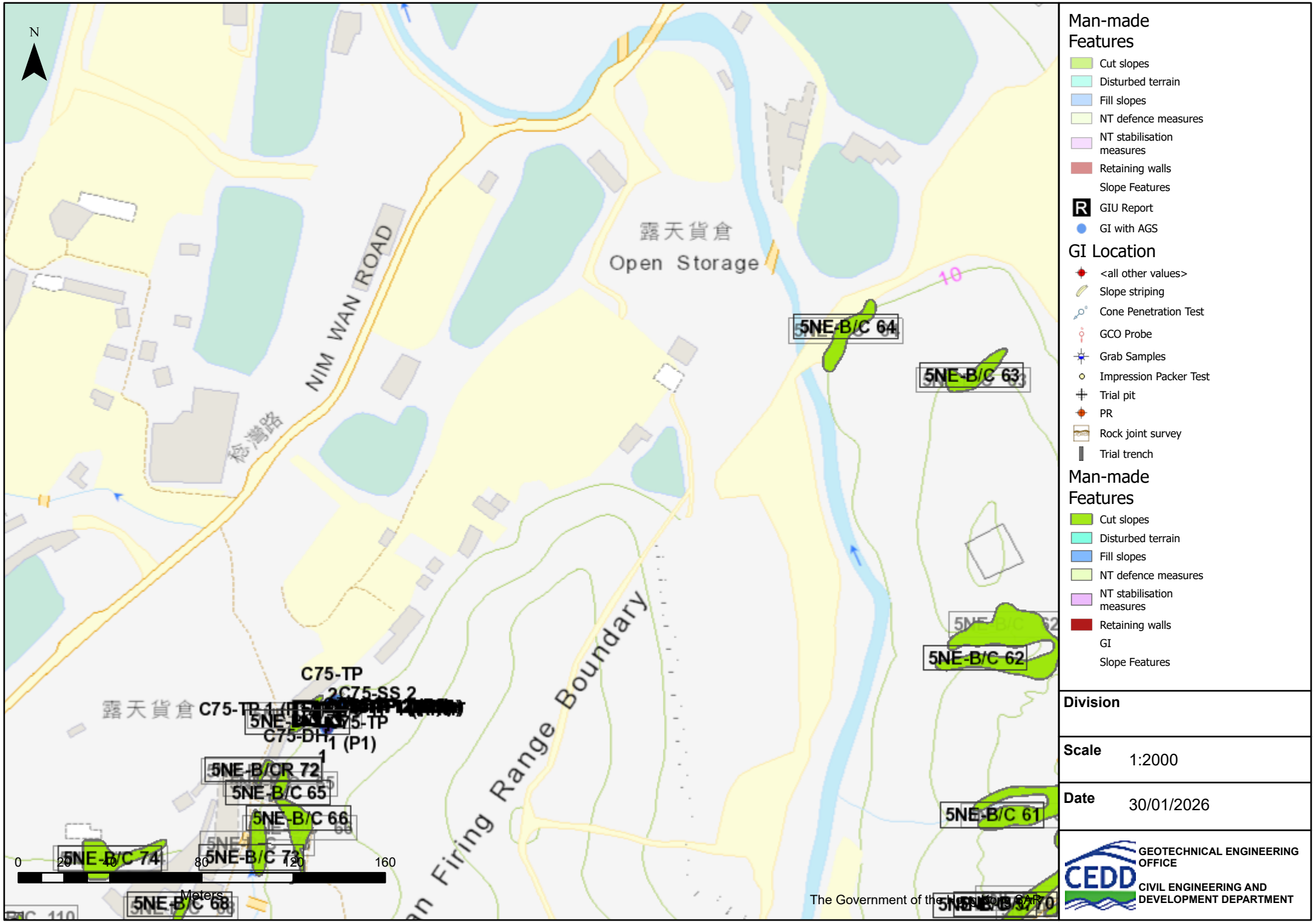
GEOTECHNICAL ENGINEERING OFFICE
CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

The Government of the Hong Kong SAR

(Print by LI Yin Ting)

Appendix E

Previous G.I. Information in Vicinity



(Print by LI Yin Ting)

VIBRO (H.K.) LIMITED

SITE INVESTIGATION DEPARTMENT

FINAL FIELDWORK REPORT

CONTRACT No.	GE/2005/41
WORKS ORDER No.	05/41/A/50/080
PROJECT	Feature No. 5NE-B/C75 Nim Wan Road Yuen Long
CLIENT	Civil Engineering And Development Department
DATE	October 13, 2006

CHECKED BY			13/10/06
	C. M. Sham	Geotechnical Engineer	Date
CERTIFIED BY			13/10/06
	MAN Hon Leung	Contractor's Representative	Date

CONTRACTOR
Head Office: 4th Floor,
38 Sheung On Street, Chai Wan, Hong Kong.
[redacted]

VIBRO (H.K.) LIMITED
SITE INVESTIGATION DEPARTMENT

Contract Data Summary

Project : 10 - Year Extended Landslip Preventive Measures Project, Phase 5, Package L, Ground Investigation Works For Slopes In Yuen Long, Sai Kung, Tai Po, Tsuen Wan and North	Client : Civil Engineering and Development Department	Date : 14/08/2006 to 13/10/2006 Official only
Location : Nim Wan Road Yuen Long		Data Bank No.
Contract No. : GE/2005/41	W.O.No. : 05/41/A/50/080	Feature No. : 5NE-B/C75 / File Ref. :

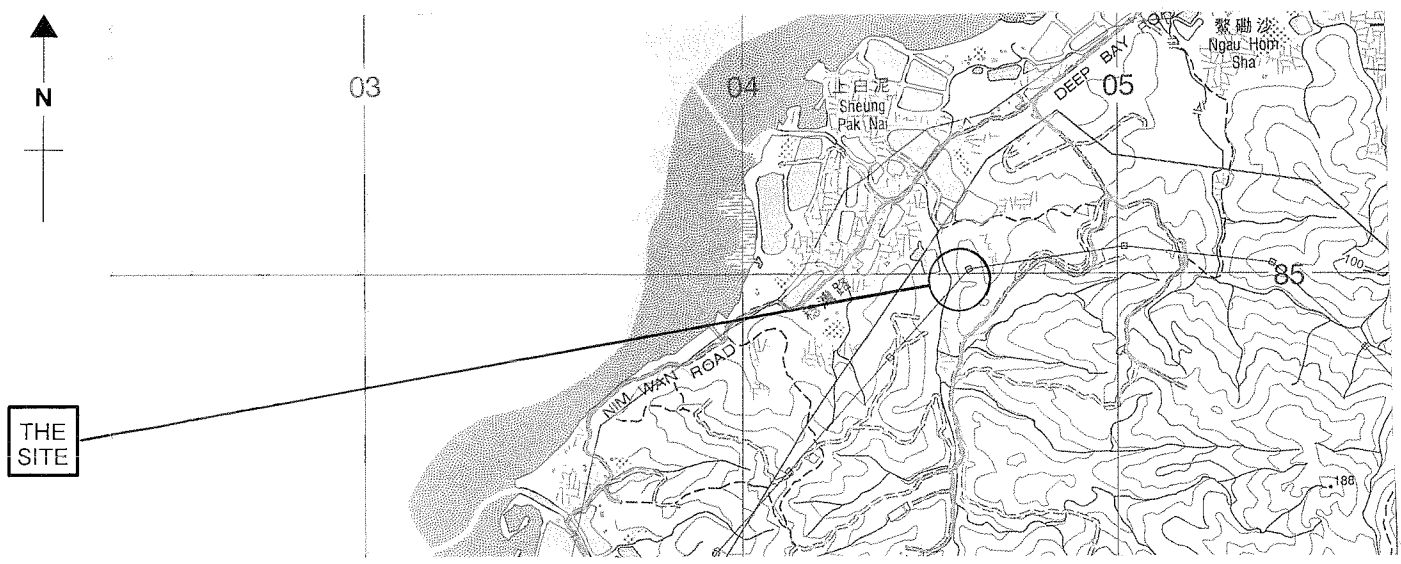
Field Work Summary

Drillholes Total No.:	1	Method : Rotary		Date : 30/08/2006 to 12/10/2006	
Pit / Trench / Caisson Nos. :	Pit (2)		Slope Strip Nos. :	2	
Probe Nos. :	NIL		Corehole Nos. :	NIL	
Piezometer / Standpipe Nos.:	Piezometer (1)		Piezometer Bucket Nos. :	6	
Insitu Test Nos. :	2	Types SPT (2)			
Geophysics :	1	Type Acoustic Televiewer			

Laboratory Testing Summary

Total No. of Tests :			Date :	to	
Soil	Physical Properties	LL	PL	Grading	M/C
		SG	$\gamma m / \gamma d$		
	Strength Tests	CUM	CUS		Shear CD Box
	Compaction & CBR Tests	Standard	Modified		CBR
	Oedometer & Perm. Test	Cv	k	Cc	
	Others	Chemical			
Rock	γ	Pt load	UCS	Shear Box	US Vel.

Location Plan — SCALE 1 : 20 000 — Derived from : HM20C 1 : 20 000 Sheet 5, Edition 10 - 2005



	G.I.	Laboratory	CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT
CONTRACTOR	VIBRO (H.K.) LIMITED		CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT HONG KONG
WORKS ORDER NO.	05/41/A/50/080		

CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

CONTRACT No. GE/2005/41

10-YEAR EXTENDED LANDSLIP PREVENTIVE MEASURES PROJECT, PHASE 5, PACKAGE L – GROUND INVESTIGATION WORKS FOR SLOPES IN YUEN LONG, SAI KUNG, TAI PO, TSUEN WAN AND NORTH

Works Order No.: 05/41/A/50/080

Feature No.: 5NE-B/C75

Location: Nim Wan Road, Yuen Long

Final Fieldwork Report

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3. GEOLOGY 2
4. FIELDWORK 2-5
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6. GROUND CONDITIONS 6-7
7. DIGITAL DATA 7
8. REFERENCES 7-8

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TABLE 2 ..... SUMMARY TABLE OF DRILLHOLE RESULTS

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APPENDIX B ..... LEGENDS FOR USE IN EXPLORATORY HOLE RECORDS
APPENDIX C ..... DRILLHOLE RECORD
APPENDIX D ..... DRILLHOLE CORE PHOTOGRAPHS
APPENDIX E ..... TRIAL PIT RECORDS
APPENDIX F ..... TRIAL PIT PHOTOGRAPHS
APPENDIX G ..... SLOPE STRIPPING RECORDS
APPENDIX H ..... SLOPE STRIPPING PHOTOGRAPHS
APPENDIX I ..... INSTRUMENT INSTALLATON DETAILS
APPENDIX J ..... INSTRUMENT RESPONSE TEST RECORDS
APPENDIX K ..... GROUNDWATER MONITORING RECORDS
APPENDIX L ..... ACOUSTIC TELEVIEWER TRAVEL TIME AND AMPLITUDE LOGS
APPENDIX M ..... INTERPRETED ACOUSTIC TELEVIEWER RECORDS AND TABULATED DATA
APPENDIX N ..... DYNAMIC PROBE TEST RECORDS
APPENDIX O ..... GROUND INVESTIGATION PLAN
APPENDIX P ..... AGS DIGITAL DATA
APPENDIX Q ..... DIGITAL IMAGE OF FINAL FIELDWORK REPORT IN PDF FORMAT
APPENDIX R ..... PHOTOGRAPH NEGATIVES (MASTER COPY ONLY)

CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

CONTRACT No. GE/2005/41

10-YEAR EXTENDED LANDSLIP PREVENTIVE MEASURES PROJECT, PHASE 5, PACKAGE L – GROUND INVESTIGATION WORKS FOR SLOPES IN YUEN LONG, SAI KUNG, TAI PO, TSUEN WAN AND NORTH

Works Order No.: 05/41/A/50/080

Feature No.: 5NE-B/C75

Location: Nim Wan Road, Yuen Long

Final Fieldwork Report

1. INTRODUCTION

A contract for undertaking a ground investigation for 10-Year Extended Landslip Preventive Measures Project, Phase 5, Package L – Ground Investigation Works for Slopes in Yuen Long, Sai Kung, Tai Po, Tsuen Wan and North was awarded by the Civil Engineering and Development Department to Vibro (H. K.) Limited in October 2005. The contract area for the work consists of any location in Yuen Long, Sai Kung, Tai Po, Tsuen Wan and northern region of Hong Kong.

This report presents the results of the ground investigation works carried out at feature no. 5NE-B/C75, located at Nim Wan Road, Yuen Long. The fieldwork was carried out under Works Order Number 05/41/A/50/080.

The fieldworks comprising drilling, the excavation of trial pits and slope stripping, were carried out in the period between the 30th August 2006 and the 12th October 2006 under the supervision of Fugro (Hong Kong) Limited.

2. THE SITE

Investigation works were carried out at slope number 5NE-B/C75, located at Nim Wan Road, Yuen Long.

The exploratory holes can be located between Hong Kong 1980 Grid co-ordinates E813580 and E813595, and N833815 and N833835.

All exploratory hole locations are indicated on the Ground Investigation Plan, presented in Appendix O. Co-ordinates and ground levels of all exploratory hole locations are presented in Table 1.

3. GEOLOGY

The 1:20000 Solid Geology and Superficial Geology Map published by the GEO (HGM20 Sheet 5 Edition 1, 1988) indicates that the site is underlain by megacrystic fine to medium grained GRANITE from the Jurassic to Cretaceous Period of the Mesozoic Era.

4. FIELDWORK

The fieldworks comprised drilling at one drillhole location (C75-DH1), the excavation of two trial pits (C75-TP1 and C75-TP2) and two slope stripping (C75-SS1 and C75-SS2). The works at these investigation stations were carried out to depths and at locations specified in the works order or as instructed by the Engineer.

4.1 Drilling

Rotary drilling technique, using a hydraulic-feed type drilling rig, was adopted for this contract. H (115mmØ) casings equipped with tungsten carbide cutting shoes, was used to advance the drillhole and prevent collapses from occurring. Arisings from the drilling process were removed from the drillhole using air-foam flush.

Undisturbed mazier samples were taken, in boreholes using a mazier triple tube retractable core barrel fitted with a removable 72mm diameter, 1000mm long transparent rigid ABS inner tube. A retractable cutting shoe projecting from the tungsten carbide core bit of the mazier sampler was used to penetrate the material being sampled and thus isolate it from the detrimental effects of the circulatory fluid.

Where competent strata were encountered in common ground, or where rock was encountered, a double tube T2-101 core barrel was used to recover core samples.

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

4.2 Trial Pitting

Trial pits were excavated by hand at locations specified by the Engineer (See ground investigation plan). Each of the trial pit faces was logged and a photographic record was taken. The trial pit records and photographs are presented in Appendices E and F respectively.

Block samples, small disturbed samples and undisturbed U76 samples were taken at depths and locations as instructed by the Engineer's Representative on site.

Upon completion, the trial pits were backfilled with suitable material compacted in 150mm layers and the surface of the trial pits were reinstated to match the original condition.

4.3 Slope Stripping

Where instructed by the engineer 500mm wide sections of slope surface protection were removed to expose the underlying strata. The exposed strata were subsequently logged and the slope surfaces were then reinstated to their original condition.

Undisturbed U76 samples and small disturbed samples were taken at depths and locations as instructed by the Engineer's Representative on site.

The slope strip records and photographs are presented in Appendices G and H respectively.

4.4 Dynamic Probes

Dynamic probing was carried out prior to the excavation of the trial pits.

The probes undertaken prior to the excavation of the 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 pit.

The dynamic probe testing was carried out in accordance with Geoguide 2 using a 10kg hammer, dropping in freefall over a distance of 300mm.

The results of these tests are presented in Appendix N and have been included in the AGS digital data presented in Appendix P.

4.5 Installations

A casagrande type piezometer was installed at drillhole locations C75-DH1.

The piezometer was connected to the surface using 25mm diameter PVC riser pipe. The response zones comprised clean sand, with a grading of between 1200 and 210 microns. The response zone was sealed with bentonite pellets.

The top of the PVC tube of the instruments was fitted with a cap with a ventilation hole and surface boxes were cast to prevent damage to the instruments.

A response test was carried out on the instrument to ensure that it was functioning correctly. Details of the installations and the results of the response tests are presented in Appendices I and J respectively.

The results of the groundwater monitoring are presented in Appendix K.

Piezometer buckets were installed at all drillhole location at depths and spacing as instructed by the Engineer's Representative.

4.6 Acoustic Borehole Televiewer Survey

Acoustic Borehole Televiewer Survey were carried out at drillhole location C75-DH1. A Televiewer sonde, fitted with at least two centralisers, was lowered to the base of the hole. The survey parameters were entered into the data acquisition system computer and the sonde was raised to the surface logging at an optimum rate of about 1.5 to 1.6m/minute. A depth encoder provided continuous depth monitoring automatically. The logging stopped once the sonde entered the casing and the data was stored for off site processing and analysis.

The Acoustic Televiewer Travel Time and Amplitude logs are presented in Appendix L and the Interpreted Digital Acoustic Televiewer Records and Tabulated Data sheets are presented in Appendix M.

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 drillhole and from the examination of the strata exposed in the faces of the trial pits and slope strips. The results are given in the form of Drillhole, Trial Pit and Slope Strip Records and are presented in Appendices C, E and G respectively.

The legends used in the records are summarized in Appendix B.

6. GROUND CONDITIONS

6.1 Introduction

The drillhole encountered a combination of the following strata:

RESIDUAL SOIL
SAPROLITIC SOIL
BEDROCK

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 Residual Soil, Saprolitic Soil and Bedrock.

Saprolitic Soil and Bedrock is defined here in relation to the Bedrock Level. The Bedrock Level is defined as the level below which Grade III or better rock with Total Core Recovery greater than 85%, is first encountered in the drillhole.

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

6.2 Residual Soil

Residual soil was encountered at drillhole location C75-DH1. The residual soil comprised sandy SILT with gravel.

This material was proven to the depth 1.40m (+12.45mPD) with thickness of 1.40m.

6.3 Saprolitic Soil

Saprolitic soil derived from the in situ weathering of rock was encountered at drillhole location C75-DH1.

A thickness of 2.80m of this material was encountered at the drillhole location at which it was proven to a depth of 4.20m (+9.65mPD) below existing ground level.

6.4 Bedrock

Mylonitic medium grained GRANITE was encountered at drillhole location C75-DH1. C75-DH1 was terminated in this stratum, as instructed by the Engineer, at depth of 9.46m (+4.39mPD).

7. DIGITAL DATA

In accordance with the contract specification the information given on the exploratory hole records and in situ test records is also presented in a digital format in Appendix P. The data is provided in ASCII digital format in an uncompressed form on a 3.5" disk formatted to MS-DOS Version 6.0.and in Acrobat format (color image) on a CD-ROM.

The data has 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 are in accordance with that recommended by the AGS with local variations as instructed by the G.E.O.

A data disk and media index record is presented with each copy of the final fieldwork report.

8. REFERENCES

1. GEO Sheet 5, Tsing Shan (Castle Peak), (Edition 1, 1988): Solid and Superficial Geology Edition (1:20000 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. GEO (1996). Methods of Test for Soils in Hong Kong for Civil Engineering Purposes (Phase 1 Tests) (GEO report No.36). Geotechnical Engineering Office, Hong Kong.

5. AGS(1999). Transfer of Geotechnical and Geoenvironmental Data. Association of Geotechnical and Geoenvironmental Specialists.
6. BS 1377: Part 9: (1990) British Standard Methods of test for soils for civil engineering purposes, Part 9: Insitu tests, British Standards Institution, London.

TABLE 1

SUMMARY TABLE OF SURVEY DATA

VIBRO	VIBRO (H.K.) LTD. SITE INVESTIGATION DEPARTMENT	CONTRACT No. GE/2005/41
	TABLE 1 - SURVEY RECORD	WORKS ORDER No. 05/41/A/50/080
PROJECT	Nim Wan Road Yuen Long	SHEET 1 OF 1

EXPLORATORY HOLE	EASTING	NORTHING	GROUND LEVEL (mPD)
C75-DH 1	813588.49	833817.30	+13.85
C75-SS 1 Crest	813585.44	833821.30	+12.25
C75-SS 1 Toe	813580.17	833826.80	+5.84
C75-SS 2 Crest	813592.12	833828.87	+12.29
C75-SS 2 Toe	813587.26	833833.90	+5.76
C75-TP 1	813587.75	833822.90	+12.75
C75-TP 2	813591.01	833827.54	+12.74

TABLE 2

SUMMARY TABLE OF DRILLHOLE RESULTS

VIBRO

VIBRO (H.K.) LIMITED
SITE INVESTIGATION DEPARTMENT

CONTRACT NUMBER GE/2005/41
WORKS ORDER NUMBER 05/41/A/50/080
FEATURE NUMBER 5NE-B/C75

LOCATION : Nim Wan Road Yuen Long

Table 2 - Summary of Drillhole Results

Stratum	HOLE NO.						
	C75-DH 1						
Ground Level (mPD)	+13.85						
Residual Soil Bottom Level (mPD)	+12.45						
Thickness (m)	1.40						
Saprolitic Soil Bottom Level (mPD)	+9.65						
Thickness (m)	2.80						
Rock Bottom Level (mPD)	+4.39						
Thickness (m)	5.26						
End of Hole Level (mPD)	+4.39						
Rock Type	GRANITE						
Bedrock Level (mPD)	+9.65						

Note : - : Not encountered in the investigation

APPENDIX A

CHECKLISTS FOR SOIL & ROCK DESCRIPTIONS

CHECKLIST FOR SOIL DESCRIPTION

GEOTECHNICAL ENGINEERING OFFICE, HONG KONG

1. STRENGTH (Compactness & Consistency)

Soil Type	Term	Identification
Very Coarse (COBBLES & BOULDERS)	Loose	By inspection of voids and particle packing in the field.
	Dense	
Coarse (SANDS & GRAVELS)	Very loose	SPT 'N' value 0-4.
	Loose	SPT 4-10; can be excavated with spade; 50mm peg easily driven.
	Medium dense	SPT 10-30.
	Dense	SPT 30-50; requires pick for excavation; 50mm peg hard to drive.
	Very dense	SPT >50.
Fine (CLAYS & SILTS)	Very soft	Undrained shear strength (USS) <20 kPa; exudes between fingers when squeezed in hand.
	Soft	USS 20-40 kPa; moulded by light finger pressure.
	Firm	USS 40-75 kPa; can be moulded by strong finger pressure.
	Stiff	USS 75-150 kPa; cannot be moulded by fingers; can be indented by thumb.
	Very stiff or hard	USS >150 kPa; can be indented by thumbnail.
Organic (ORGANIC CLAYS, SILTS SANDS & PEATS)	Compact	Fibres already compressed together.
	Spongy	Very compressible and open Structure.
	Plastic	Can be moulded in hand and smears fingers.

Terms applicable only to transported soils. For soils derived from insitu rock weathering, record actual values of quantitative tests (e.g. SPT 'N' value) as part of the description, where appropriate.

2. COLOUR

Parameter	Terms
Value	Light, Dark
Chroma	Pinkish, Reddish, Yellowish, Orangish, Brownish, Greenish, Bluish, Purplish, Greyish
Hue	Pink, Red, Yellow, Orange, Brown, Green, Blue, Purple, White, Grey, Black

For uniform colour distribution, choose a hue, supplemented by a value and/or chroma if necessary.

For non-uniform distribution, repeat this procedure using one of the following descriptors; spotted, mottled, dappled, streaked, striped (e.g. light yellowish brown mottled with red). State whether sample was wet or dry when described.

3. PARTICLE SHAPE & COMPOSITION

Characteristic	Terms
Form	Equidimensional, Flat, Elongate, Flat, & Elongate
Angularity	Angular, Subangular, Subrounded, Rounded
Surface Texture	Smooth, Rough, Glassy, Honeycombed, Pitted, Striated

Describe composition of coarse particles where appropriate. Gravel and larger particles are usually rock fragments (e.g. granite, tuff); and particles are usually individual minerals (e.g. quartz, feldspar).

4. STRUCTURE

Soil Type	Term	Identification
Coarse & Fine	Homogenous	Deposit consists essentially of one type.
	Interstratified (Interbedded or Interlaminated)	Alternating layers of varying types or with bands or lenses of other materials.
Coarse	Heterogenous	A mixture of types.
Fine	Fissured	Breaks into polyhedral fragments Along fissures.
	Intact	No fissures.
Organic	Fibrous	Plant remains recognizable & Retain some strength.
	Amorphous	No recognizable plant remains.

Describe spacing of bedding planes, fissures, shell bands, etc using the spacing terms given in items 6 & 7 for rock description (see next page).

Above terms applicable only to transported soils. For soils derived from insitu rock weathering, describe relict structures in accordance with item 6 of rock description (see next page).

5. WEATHERING

Soils Derived from Insitu Weathering of Rocks

There are two main types ; saprolites (rock texture/structure retained) and residual soils (rock texture/structure completely destroyed). Describe state of weathering in accordance with items 4 & 8 for rock description (see next page).

Sedimentary (Transported) Soils

Coarse soils ; Describe overall discolouration of soil and degree of decomposition of gravel and larger particles (see item 4, next page). Also note any signs of disintegration of large particles where apparent.

Fine Soils : Describe overall discolouration of soil where apparent.

6. SOIL NAME

A. Basic Soil Types

Soil Type	Particle Sizes (mm)		Identification
BOULDERS	--	>200	Only seen complete in pits or exposures.
COBBLES	--	60-200	Often difficult to recover from boreholes.
GRAVELS	Coarse	20-60	Easily visible to naked eye; particle shape and grading can be described. Well-graded : wide range of grain sizes. Poorly-graded : not well-graded (split further into uniform or gap-graded).
	Medium	6-20	
	Fine	2-6	
SANDS	Coarse	0.6-2	Visible to naked eye; very little or no cohesion; grading can be described. May be well-graded or poorly-graded (uniform or gap-graded) as for gravel.
	Medium	0.2-0.6	
	Fine	0.06-0.2	
SILTS	Coarse	0.02-0.06	Only coarse silt barely visible to naked eye; exhibits little plasticity and marked dilatancy; slightly granular or silky to the touch. Disintegrates in water; lumps dry quickly; possesses cohesion but can be powdered easily between fingers.
	Medium	0.006-0.02	
	Fine	0.002-0.006	
CLAYS	--	<0.002	Dry lumps can be broken by hand but not Powdered between the fingers. Disintegrates in water more slowly than silt; smooth to the touch; exhibits plasticity but no dilatancy; sticks to the fingers and dries slowly; shrinks appreciably on drying, usually showing cracks. These properties more noticeable with increasing plasticity.
ORGANIC CLAYS, SILTS OR SANDS	--	varies	Contains much organic vegetable matter; often has a noticeable smell and changes colour on oxidation.
PEATS	--	varies	Predominantly plant remains; usually dark brown or black in colour, often with distinctive smell; low bulk density.

B. Composite Soil Types (Mixtures of Basic Types)

Principal Soil Type	Terminology Sequence	Term for Secondary Constituent	% of Secondary Constituent
Very coarse (BOULDERS & COBBLES) (>50% of soil >60mm)	Secondary constituents (finer material)◆ after principal	With a little	< 5
		With some	5 – 20
		With much	20 - 50
Coarse (GRAVELS & SANDS) (>65% gravel & sand sizes)	Secondary constituents Before principal (excluding cobbles & boulders)+	Slightly (silty, clayey or silty/clayey) *	< 5
		- (silty, clayey or silty/clayey) *	5 – 15
		Very (silty, clayey or silty/clayey) * AND/OR	15 – 35
		Slightly (gravelly or sandy) *	< 5
		- (gravelly or sandy) *	5- - 15
		Very (gravelly or sandy) *	20 – 50
Fine (SILTS & CLAYS) (>35% silt & clay sizes)	Secondary constituents before principal (excluding cobbles & boulders)+	Slightly (gravelly or sandy or both) *	< 35
		- (gravelly or sandy) *	35 – 65

◆ Full name of finer material should be given (see examples below).

* Secondary soil type as appropriate; use 'silty/clayey' when a distinction cannot be made between the two.

\+ If cobbles or boulders are also present in a coarse or fine soil, this can be indicated by using one of the following terms relating to the very coarse fraction after the principal : 'with occasional' (<5), 'with some' (5-20), 'with many' (20-50), where figures in brackets are % very coarse material expressed as a fraction of the whole soil (see examples below).

Examples : Slightly silty/clayey, sandy GRAVEL. Slightly gravelly, sandy SILT. Very gravelly SAND. Sandy GRAVEL with occasional boulders. BOULDERS with much finer material (silty/clayey, very sandy gravel).

For fine soil, plasticity terms should also be described where possible, viz ; 'non-plastic' (generally silts), ;'intermediate plasticity' (lean clays), 'high plasticity' (fat clays).

7. DISCONTINUITIES

Full description of discontinuities, where necessary, should be made using the methods and terms given in item 7 for rock description (see next page).

8. ADDITIONAL GEOLOGICAL INFORMATION

Record geological name which indicates geological origin or soil type (e.g. Alluvium, Coluvium, Marine sand etc.). Refer to HKGS maps & memoirs for further information.

NOTES :

1. Mass characteristics of soils (i.e. structure, weathering, discontinuities) can only be described satisfactorily in undisturbed field exposures or large undisturbed samples.
2. For full descriptions of soils derived from insitu rock weathering :
   (a) saprolites – describe as rocks, supplemented by soil strength and soil name terms in brackets,
   (b) residual soils – describe as soils, supplemented by name of parent rock where apparent from field evidence.

CHECKLIST FOR ROCK DESCRIPTION

GEOTECHNICAL ENGINEERING OFFICE, HONG KONG

1. STRENGTH

Term	Identification
Extremely weak	Easily crumbled by hand; indented deeply by thumbnail.
Very weak	Crumbled with difficulty; scratched easily by thumbnail; peeled easily by pocket knife.
Weak	Broken into pieces by hand; scratched by thumbnail; peeled by pocket knife; deep indentations (to 5mm) by point of geological pick; hand-held specimen easily broken by single light hammer blow.
Moderately weak	Broken with difficulty in two hands; scratched with difficulty by thumbnail; difficult to peel but easily scratched by pocket knife; shallow indentations easily made by point of pick; hand-held specimen usually broken by single light hammer blow.
Moderately strong	Scratched by pocket knife; shallow indentations made by firm blow with point of pick; hand held specimen usually broken by single firm hammer blow. Point load strength (PLS) 0.5 – 2 MPa.
Strong	Firm blows with point of pick cause only superficial surface damage; hand-held specimen requires more than one firm hammer blow to break, PLS 2 – 4 MPa.
Very strong	Many hammer blows required to break specimen. PLS 4 – 8 MPa.
Extremely strong	Specimen only chipped by hammer blows. PLS >8 MPa.

2. COLOUR

Parameter	Terms
Value	Light, Dark
Chroma	Pinkish, Reddish, Yellowish, Orangish, Brownish, Greenish, Bluish, Purplish, Greyish
Hue	Pink, Red, Yellow, Orange, Brown, Green, Blue, Purple, White, Grey, Black

For uniform colour distribution, choose a hue, supplemented by a value and/or chroma if necessary.
For non-uniform distribution, repeat this procedure using one of the following descriptors: spotted, mottled, dappled, streaked, striped (e.g. light pinkish grey spotted with black).
State whether sample was wet or dry described.

3. TEXTURE / FABRIC

Texture Terms (Applicable Mainly to Igneous Rocks)
Equigranular, Inequigranular, Megacrystic, Porphyritic, Crystalline, Cryptocrystalline, Aphanitic

Fabric
Describe preferred orientation of grains/crystals where apparent.
Describe intensity, spacing, continuity and any preferred orientation of microfractures where apparent.

4. MATERIAL WEATHERING / ALTERATION

Decomposition Term	Grade Symbol	Typical Characteristics
Residual Soil	VI	Original rock texture completely destroyed; can be rumbled by hand and finger pressure into constituent grains.
Completely Decomposed	V	Original rock texture preserved; can be crumbled by hand and finger pressure into constituent grains; easily indented by point of geological pick; slakes in water; completely discoloured compared with fresh rock.
Highly Decomposed	IV	Can be broken by hand into smaller pieces; makes a dull sound when struck by hammer; not easily indented by point of pick; does not slake in water; completely discoloured compared with fresh rock.
Moderately Decomposed	III	Cannot usually be broken by hand; easily broken by hammer; makes a dull or slight ringing sound when struck by hammer; completely stained throughout.
Slightly Decomposed	II	Not broken easily by hammer; makes a ringing sound when struck by hammer; fresh rock colours generally retained but stained near joint surfaces.
Fresh Rock	I	Not broken easily by hammer; makes a ringing sound when struck by hammer; no visible signs of decomposition (i.e. no discolouration).

This classification is applicable to igneous and volcanic rocks and other rocks of equivalent strength in fresh state.

Disintegration
Describe small-scale cracking and fracturing caused by mechanical weathering, where apparent.
Alteration
Describe state of alteration (e.g. mineralised, kaolinised) where apparent.

5. ROCK NAME (Including Grain Size)

Igneous	:	Coarse- (6-20mm), Medium- (2-6mm) & Fine- (0.06-2mm) grained GRANITE; GRANODIORITE. Very Fine-grained (<0.06mm) RHYOLITE; BASALT. (Common types only, see Geoguide 3 for others).
Pyroclastic	:	PYROCLASTIC BRECCIA (>60mm), Lapilli TUFF (2-60mm), Coarse ash TUFF (0.06-2mm), Fine ash TUFF (<0.06mm).
Metamorphic	:	Foliated - SCHIST (>0.06mm), PHYLLITE (<0.06mm). Non-foliated - MARBLE, QUARTZITE, FAULT BRECCIA.
Sedimentary	:	CONGLOMERATE, BRECCIA (>2mm), SANDSTONE (0.06-2mm), MUDSTONE (<0.06mm) = SILTSTONE (0.002-0.06mm) + CLAYSTONE (<0.002mm). (Common types only).

If rock name cannot be identified, describe grain size quantitatively, including textural term where appropriate.

6. STRUCTURE

Structural Term	Rock Type
Bedded, Laminated, Massive	Sedimentary
Massive, Flow-banded	Igneous, Pyroclastic
Foliated, Banded, Cleaved	Metamorphic

Spacing of Planar Structures
Very thick (>2m), Thick (0.6-2m), Medium (200-600mm), Thin (60-200mm), Very thin (20-60mm), Thickly-laminated (Sedimentary) (6-20mm) or Narrow (Igneous, Metamorphic) (6-20mm), Thinly-laminated (Sedimentary) (<6mm) or Very narrow (Igneous, Metamorphic) (<6mm).

Examples : Thickly-bedded SANDSTONE. Narrowly flow-banded RHYOLITE.

7. DISCONTINUITIES

Nature (Type of Discontinuity)

Fault zone	Cleavage	Fissure	Bedding
Fault	Schistocity	Tension crack	
Joint	Shear plane	Foliation	

Location and Orientation
Record location as co-ordinates or relative position along datum line, preferably on map or plan.
Record orientation as dip direction/dip in degrees (e.g. 032/55).

Spacing
Extremely widely-spaced (>6m), Very widely-spaced (2-6m), Widely-spaced (0.6-2m), Medium-spaced (200-600mm), Closely-spaced (60-200mm), Very closely-spaced (20-60mm), Extremely closely-spaced (<20mm).

In exposures, supplement spacing with description of rock block shape were possible. Descriptors : Blocky, Tabular, Columnar, Polyhedral.

Roughness
Waviness (large-scale) : Estimate/measure wavelength and amplitude in metres.
Unevenness (small-scale), use one term from the following:

Rough stepped	Smooth stepped	Slickensided stepped
Rough undulating	Smooth undulating	Slickensided undulating
Rough planar	Smooth planar	Slickensided planar

Aperture Size
Wide (>200mm), Moderately wide (60-200mm), Moderately narrow (20-60mm), Narrow (6-20mm), Very narrow (2-6mm), Extremely narrow (>0-2mm), Tight (zero).

Infilling (Nature)

Clean	Surface staining	Decomposed/ disintegrated rock
Non-cohesive soil	Cohesive soil	
Calcite	Manganese	Quartz
Other (Specify)		Kaolin

Give full description of infill materials/minerals where appropriate.

Seepage

Dry	Damp/wet	Seepage present (estimate quantity in l/sec or l/min)

Fracture State
In borehole cores, measure the following : Total Core Recovery (TCR), Solid Core Recovery (SCR), Rock Quality Designation (RQD), Fracture Index (FI). See Geoguide 3 for definitions.

8. MASS WEATHERING

Term	Zone Symbol	Typical Characteristics
Residual Soil	RS	**Residual soil derived from insitu weathering; mass structure and material texture/fabric completely destroyed : 100% soil**
Partially Weathered Rock	PW 0/30	**Less than 30% rock** **Soil retains original mass structure and material texture/fabric (i.e. saprolite)** Rock content does not affect shear behaviour of mass, but relict discontinuities in soil may do so. Rock content may be significant for investigation and construction.
	PW 30/50	**30% to 50% rock** Both rock content and relict discontinuities may affect shear behaviour of mass.
	PW 50/90	**50% to 90% rock** Interlocked structure.
	PW 90/100	**Greater than 90% rock** Small amount of the material converted to soil along discontinuities.
Unweathered Rock	UW	**100% rock** May show slight discolouration along discontinuities.

9. ADDITIONAL GEOLOGICAL INFORMATION

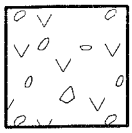
Record geological formation name if known, Avoid conjecture. Refer to HKGS maps & memoirs for further information.

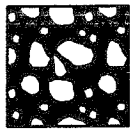
NOTES:
1. Rock material description normally includes : strength, colour, texture/fabric, material weathering/alteration and ROCK NAME.
2. Rock mass description normally includes : strength, colour, structure, mass weathering, ROCK NAME, discontinuities and additional geological information. Can be supplemented with more detailed information on texture/fabric and material weathering / alteration of different materials within the mass where necessary.

APPENDIX B

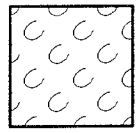
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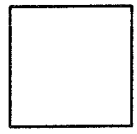
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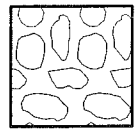
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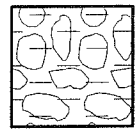
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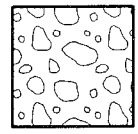
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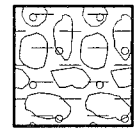

BIOCLAST


BLANK


BLDR


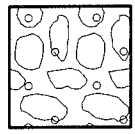
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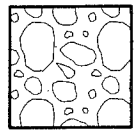
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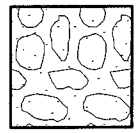
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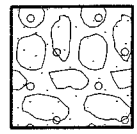

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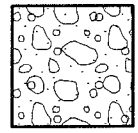

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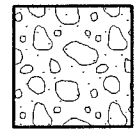
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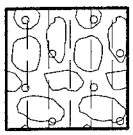

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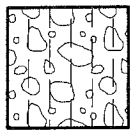
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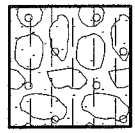
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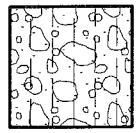
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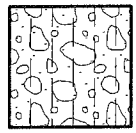
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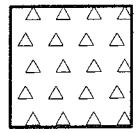
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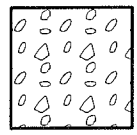
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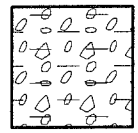
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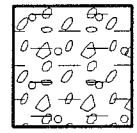
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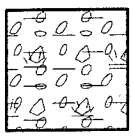
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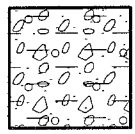
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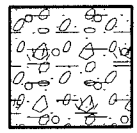
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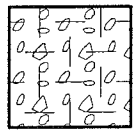
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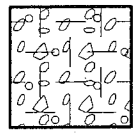
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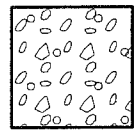

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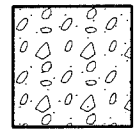
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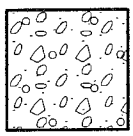
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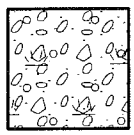
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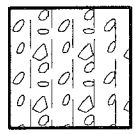
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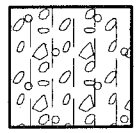

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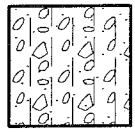
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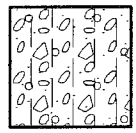
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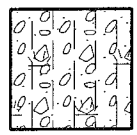
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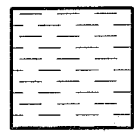
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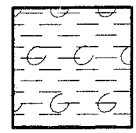
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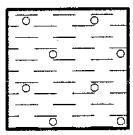
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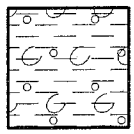
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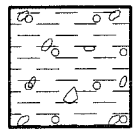
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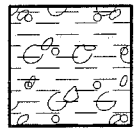
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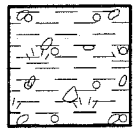
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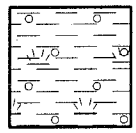
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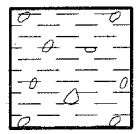
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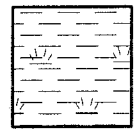
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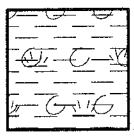
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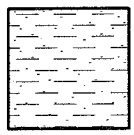
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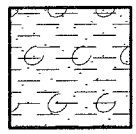
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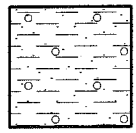
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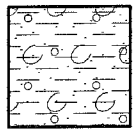

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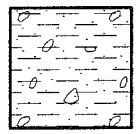
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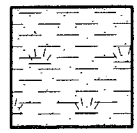
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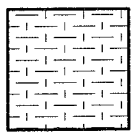
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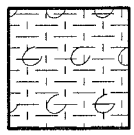
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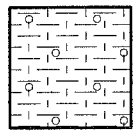

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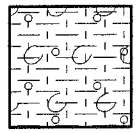
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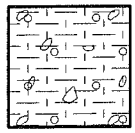
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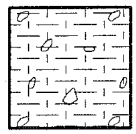

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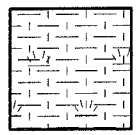
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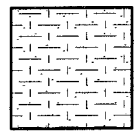
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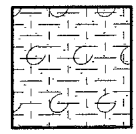
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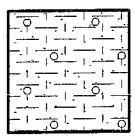
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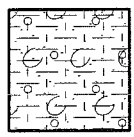
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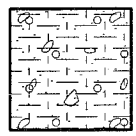
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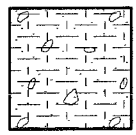
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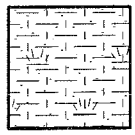
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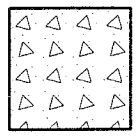
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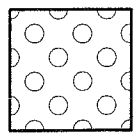
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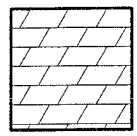
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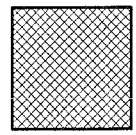
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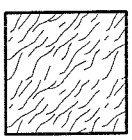
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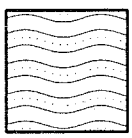
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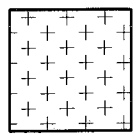
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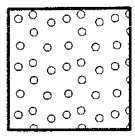
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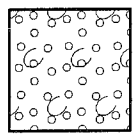
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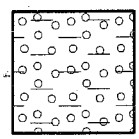
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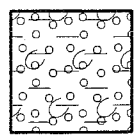

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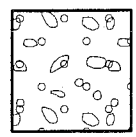
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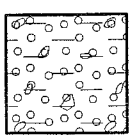
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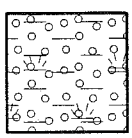
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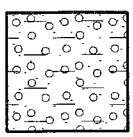
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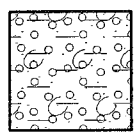
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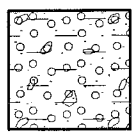
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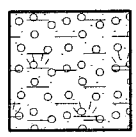
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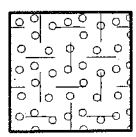
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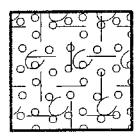
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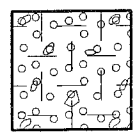
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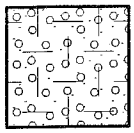
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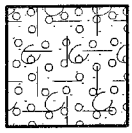
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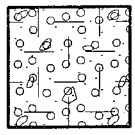
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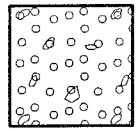
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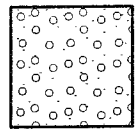
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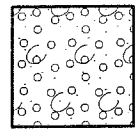
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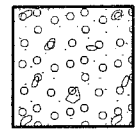
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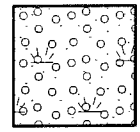
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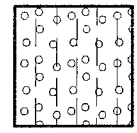
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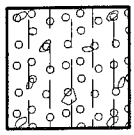
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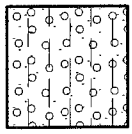
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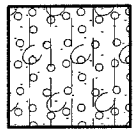
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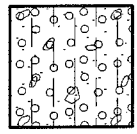
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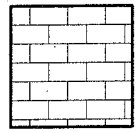
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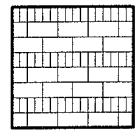
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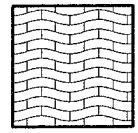
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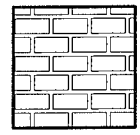
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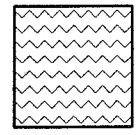
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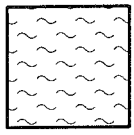
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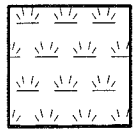
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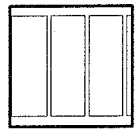
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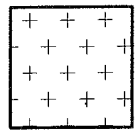
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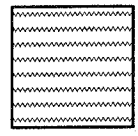
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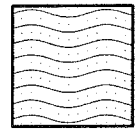
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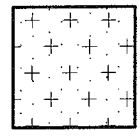

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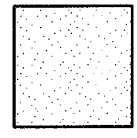
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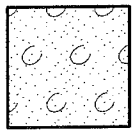
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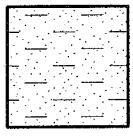
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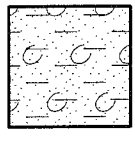
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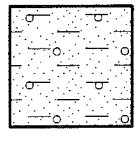
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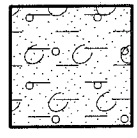
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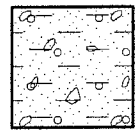
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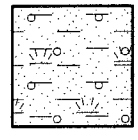
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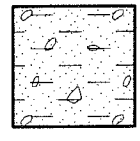
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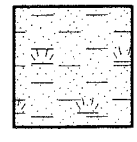
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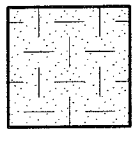
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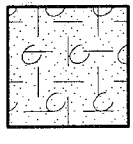
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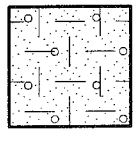
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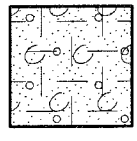
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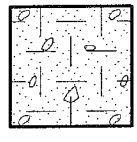
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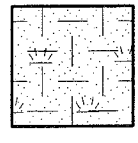
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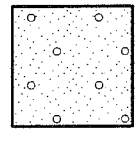
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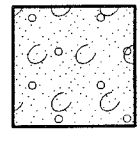
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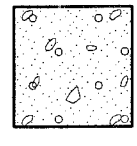
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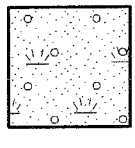
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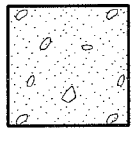
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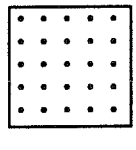
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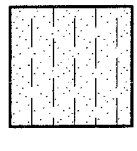
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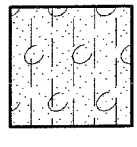
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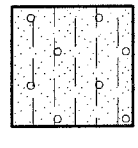
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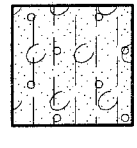
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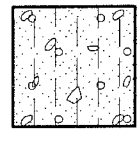
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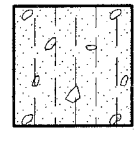
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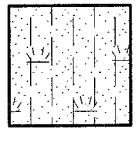
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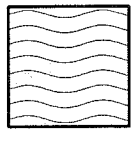
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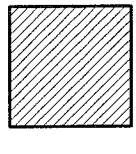
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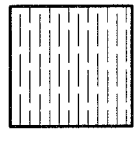
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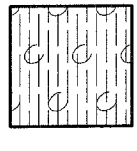
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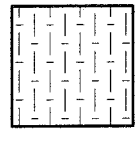
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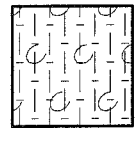
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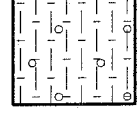
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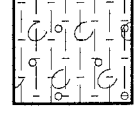
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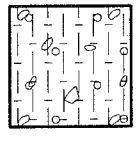
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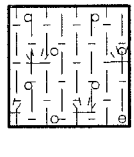
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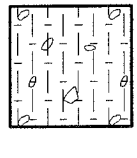
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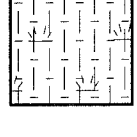
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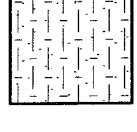
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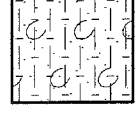
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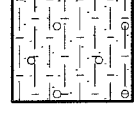
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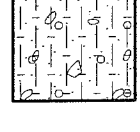
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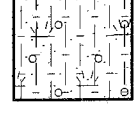
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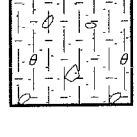
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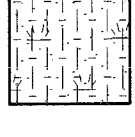
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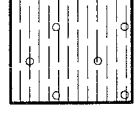
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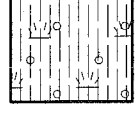
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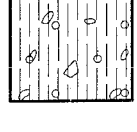
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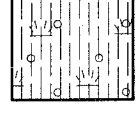
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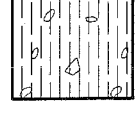
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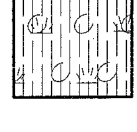
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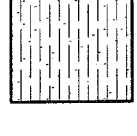
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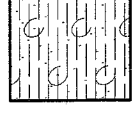
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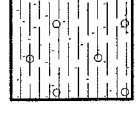
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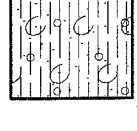
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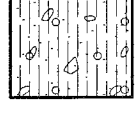

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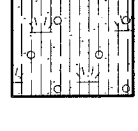
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SILTSB


SILTSG


SILTSGB


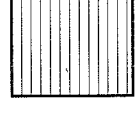
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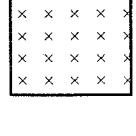
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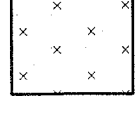
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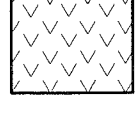

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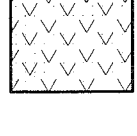

SILTSO


SILTSTON


SYENITE


TRACHYTE


TUFF


TUFFFINE


List of Material Codes for the Log Legend

Material Code	Description
AGGLOM	Agglomerate
ASPHALT	Asphalt
BASALT	Basalt
BIOCLAST	Shells
BLANK	Material not recoered
BLDR	Boulders
BLDRCBBL	Boulders and Cobbles
BRECCIA	Sedimentary Breccia
CBBL	Cobbles
CLAY	Clay
CLAYSTON	Claystone
CONCRETE	Concrete
CONGLOM	Conglomerate
DOLOMITE	Dolomitic Limestone
FILL	Artificial Fill
FISSIN	Fissure Infill
GABBRO	Gabbro, Lamprophyre
GNEISS	Gneiss
GRANITE	Granite
GRAV	Gravel
GRAVCBBL	Gravel and Cobbles
LST	Limestone
LSTSLT	Interbedded Limestone and Silitstone
MARBLE	Marble
MASONRY	Masonry
METACON	Metamorphic Rock - contact
METAREG	Metamorphic Rock - regional
MUDSTONE	Mudstone
ORGANICS	Organic, Peat
PAVIORS	Paviors
PEGMITITE	Pegmatite
PHYLLITE	Phyllite, Mylonite
QUARTZIT	Quartzite
RHYOLITE	Rhyolites
SAND	Sand
SANDSTON	Sandstone
SCHIST	Schist (Medium grained Metamorphic Rock)
SHALE	Shale
SILT	Silt
SILTSTON	Siltstone
SYENITE	Granodiorite, Syenite, Monzonite
TRACHYTE	Trachyte
TUFF	Coarse Ash Tuff, Lapilli Tuff
TUFFFINE	Fine Ash Tuff

Notes: In common ground the following codes are added to the main descriptor in the order stated below to denote secondary constituents:

(i)	C - Clay	(v)	K - Cobbles
(ii)	Z - Silt	(vi)	O - Organic
(iii)	S - Sand	(vii)	B - Shells
(iv)	G - Gravel		

e.g. a silty CLAY with occasional shells and organic material is coded as CLAYZOB

APPENDIX C

DRILLHOLE RECORD

VIBRO (H.K.) LIMITED
SITE INVESTIGATION DEPARTMENT

DRILLHOLE No. **C75-DH 1**

DRILLHOLE RECORD

SHEET 1 OF 1

PROJECT	Nim Wan Road Yuen Long			CONTRACT No.	GE/2005/41
				WORKS ORDER No.	05/41/A/50/080
METHOD	Rotary	CO-ORDINATES	E 813588.49	FEATURE No.	5NE-B/C75
MACHINE & No.	BM22		N 833817.30	DATE	30/08/2006 to 31/08/2006
FLUSHING MEDIUM	Air / Foam	GROUND LEVEL	+ 13.85 mPD	ORIENTATION	Vertical

Drilling Progress	Casing Depth/Size	Water Depth (m)	Water Returns %	Total core Recovery %	Solid core Recovery %	R.Q.D.	Fracture Index	F.I. Depths	Test Depths	Tests	Samples No. Type Depth	Reduced Level (mPD)	Depth (m)	Legend	Grade	Description
30/08/2006	HW											+13.85	0.00		VI	Firm, brown (7.5YR 5/4), slightly sandy SILT with occasional angular to subangular fine gravel. (RESIDUAL SOIL)
											A INSPECTION PIT 0.50					
											B 1 1.00					
				98								+12.45	1.40		V	Extremely weak, light brown and brown, completely decomposed mylonitic, medium grained GRANITE. (Sandy SILT with some angular to subangular fine gravel)
											2 2.00 2.10					
									2.10	1,2 2,2,2,3 N=9	3 2.20					
											4 2.50 2.55					
				98							5 2.60					
											6 3.60 3.70	+10.15	3.70			
		3.80m at 18:00							3.70	3,18 20,27,32,41/70mm (120/295mm)	7 3.80				V	Extremely weak to very weak, light brown and greyish brown, completely decomposed mylonitic, medium grained GRANITE. (Very silty fine to coarse SAND with some angular fine to medium gravel)
30/08/2006											8 4.10 4.15	+9.65	4.20			
31/08/2006		Dry at 08:00						4.20			4.20				II	Strong, locally moderately strong, grey, spotted dark grey, dappled light brown, slightly decomposed mylonitic medium grained GRANITE with foliation dipping 50° to 60° and 60° to 70°.
	HW 4.62			100	100	100	5.3				T2 I O I					
								4.77			4.62	+9.23	4.62		III	
				94	68	52	9.1				T2 I O I					Joints are medium spaced to widely spaced, locally closely spaced rough planar and rough stepped, extremely narrow to very narrow, iron stained and manganese stained, dipping 20° to 30°, 40° to 50°, 50° to 60° and occassionally 60° to 70°.
								5.21				+8.75	5.10			
							5.1				5.39				II	From 4.62m to 5.10m : Moderately strong, moderately decomposed GRANITE with very closely spaced microfractures, dipping 60° to 70°.
								5.60			T2 I O I					
				100	100	100										
							0.6				6.15					
											T2 I O I					
				100	100	100										
								7.14								From 7.15m to 7.54m : With closely spaced microfractures, dipping 60° to 70°.
							1.3				7.54					
								7.94			T2 I O I					From 7.77m to 8.00m : With closely spaced quartz veins 2mm to 3mm thick, dipping 70° to 80°.
				100	91	91	>20	8.04								
											8.53					
							1.4				T2 I O I					
				100	100	100										
		5.50m at 18:00							9.24							
31/08/2006								9.46			9.46	+4.39	9.46			End of Investigation Hole at 9.46m.

- Small disturbed sample
- Large disturbed sample
- SPT liner sample
- U64 undisturbed sample
- U76 undisturbed sample
- U100 undisturbed sample
- Mazier sample
- Piston sample
- E Environmental Sample
- Water sample
- Piezometer tip
- Standpipe tip
- Standard penetration test
- Pressuremeter test
- Water absorption test or Permeability test
- Acoustic or optical televiewer survey
- Impression packer test
- V In-situ vane shear test

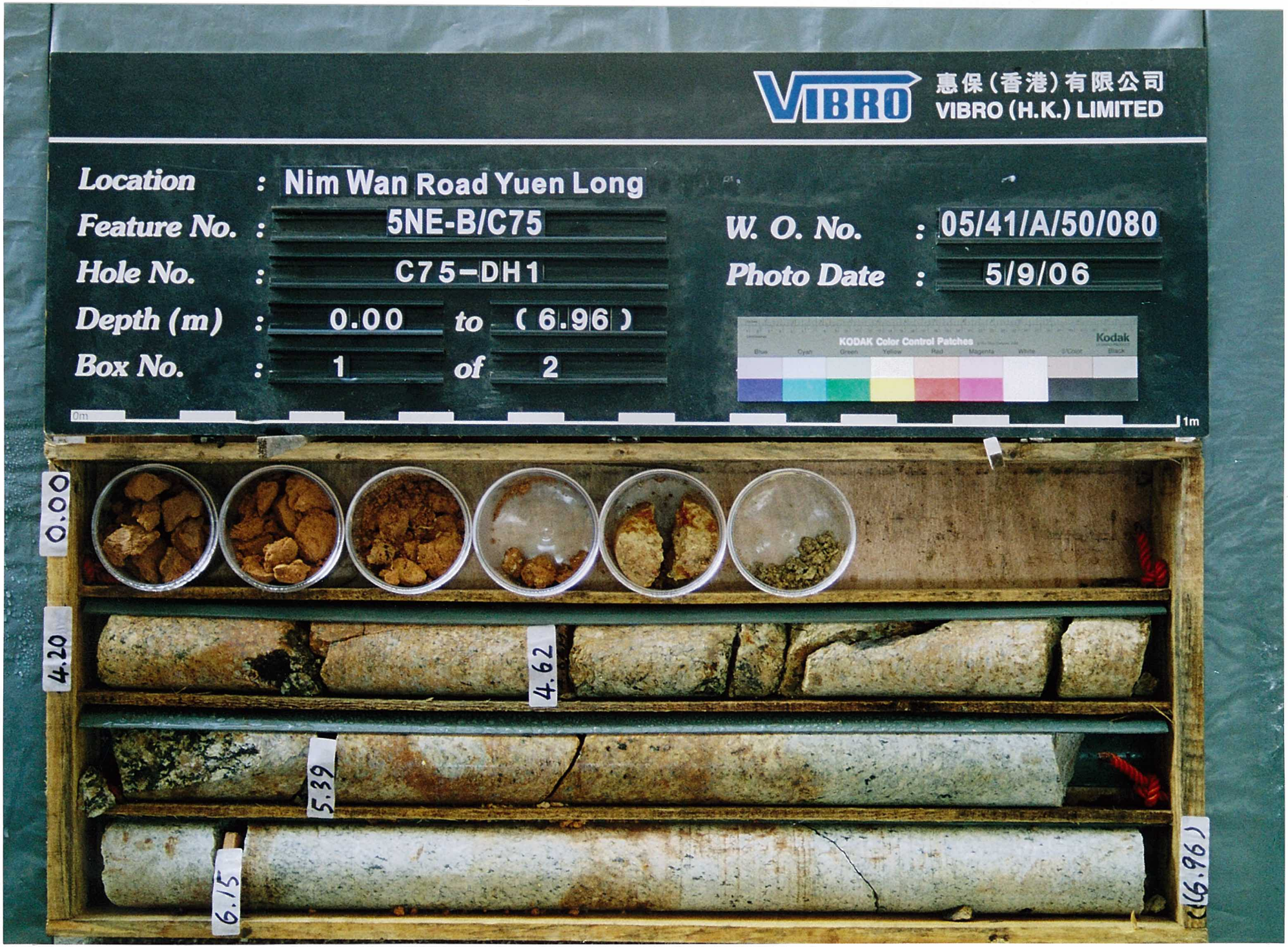
LOGGED	W. Y. Mok
DATE	04/09/2006
CHECKED	C. M. Sham
DATE	04/09/2006

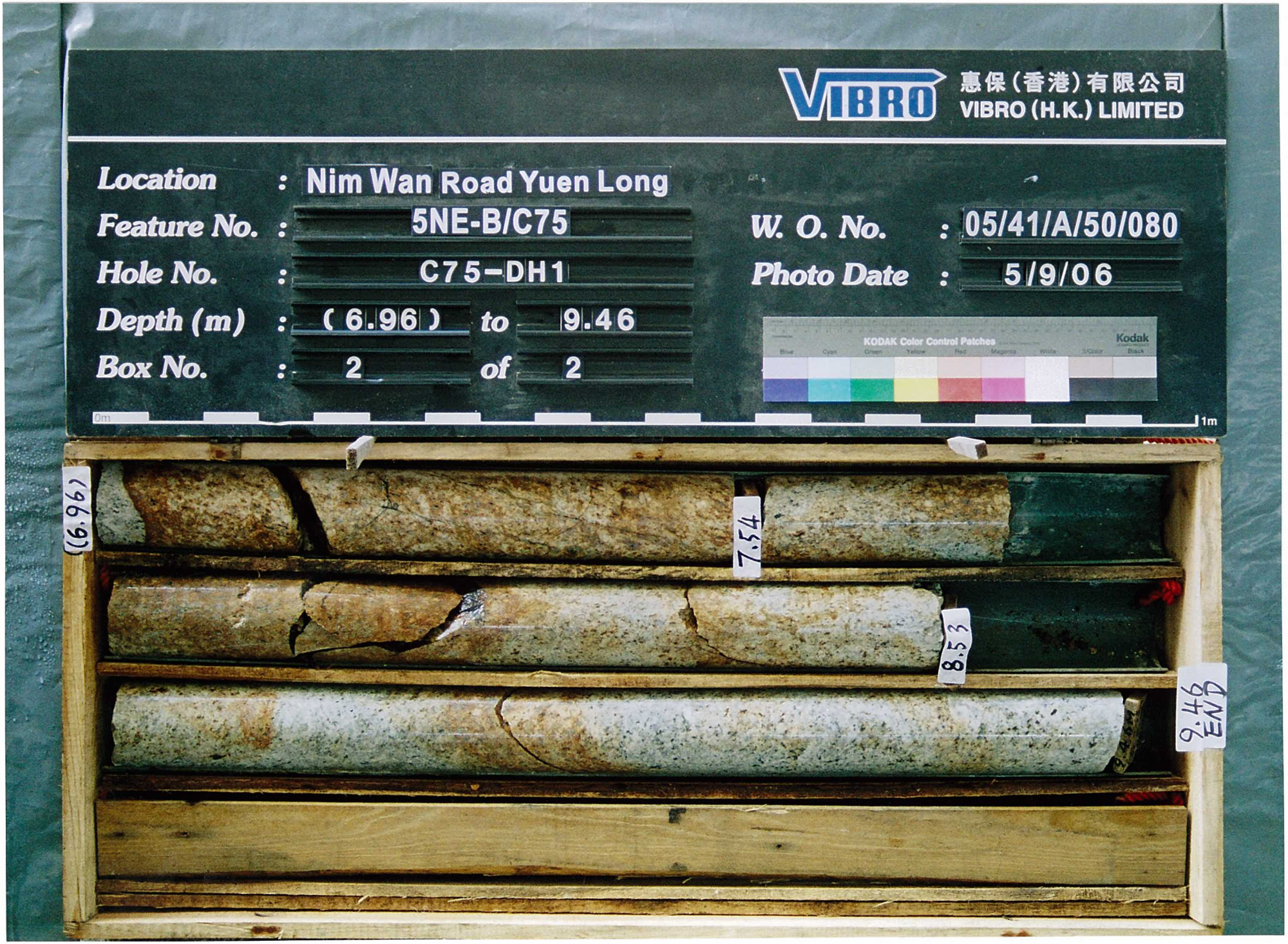
REMARKS

1. An inspection pit was excavated by hand to 1.00m.
2. An acoustic televiewer survey was carried out from 4.20m to 9.24m.
3. A piezometer was installed at 4.20m.

APPENDIX D

DRILLHOLE CORE PHOTOGRAPHS


VIBRO
惠保(香港)有限公司
VIBRO (H.K.) LIMITED
Location : Nim Wan Road Yuen Long
Feature No. : 5NE-B/C75
Hole No. : C75-DH1
Depth (m) : 0.00 to (6.96)
Box No. : 1 of 2
W. O. No. : 05/41/A/50/080
Photo Date : 5/9/06
KODAK Color Control Patches
Kodak
0m
1m
0.00
4.20
4.62
5.39
6.15
(6.96)


VIBRO
惠保(香港)有限公司
VIBRO (H.K.) LIMITED
Location : Nim Wan Road Yuen Long
Feature No. : 5NE-B/C75
Hole No. : C75-DH1
Depth (m) : (6.96) to 9.46
Box No. : 2 of 2
W. O. No. : 05/41/A/50/080
Photo Date : 5/9/06
KODAK Color Control Patches
Kodak
0m
1m
(6.96)
7.54
8.53
9.46 END

APPENDIX E

TRIAL PIT RECORDS

VIBRO (H.K.) LIMITED

SITE INVESTIGATION DEPARTMENT

TRIAL PIT RECORD

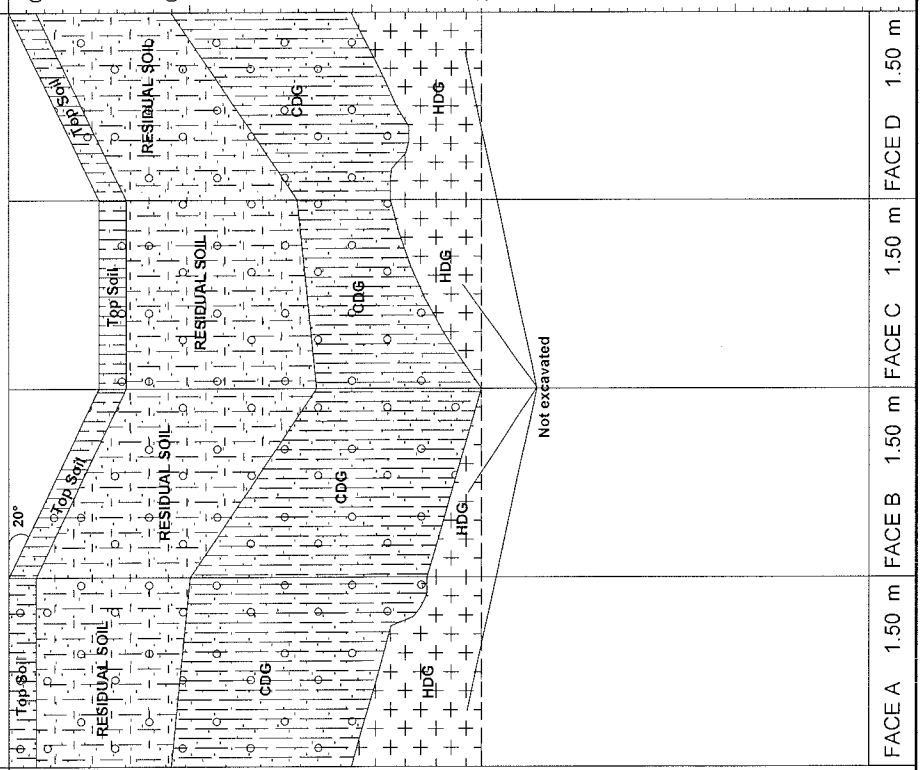
TRIAL PIT No.: **C75-TP 1**

SHEET 1 OF 1

PROJECT	Nim Wan Road Yuen Long			CONTRACT No.	GE/2005/41
				WORKS ORDER No.	05/41/A/50/080
EXCAVATION STARTED ON	16/09/2006	CO-ORDINATES	E 813587.75	FEATURE No.	5NE-B/C75
EXCAVATION COMPLETED ON	18/09/2006		N 833822.90	LOGGED BY	W. Y, Mok
				DATE	19/09/2006
BACKFILLED ON	09/10/2006	GROUND LEVEL	+ 12.75 mPD	CHECKED BY	C. M. Sham
				DATE	20/09/2006

GRADE	DESCRIPTION	LEGEND	DEPTH (m)
VI	Soft to firm, moist, dark brown (7.5YR 3/4), slightly sandy clayey SILT. (TOP SOIL)		0.15
	Firm to stiff, moist, brown and pinkish brown, slightly sandy clayey SILT with some angular to subangular fine quartz gravel. (RESIDUAL SOIL)		0.90
V	Extremely weak, light brown, dappled reddish brown, completely medium grained GRANITE. (Sandy SILT with some angular fine gravel)		1.90
IV	Very weak to weak, pinkish grey, dappled light brown, highly decomposed medium grained GRANITE. Joints are medium spaced, rough planar, extremely narrow, iron stained, dipping 194°/70° and 352°/65°.		2.60
	End of Trial Pit at 2.60m.		

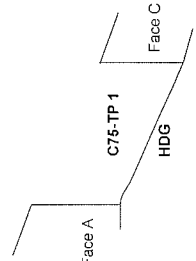
SKETCH



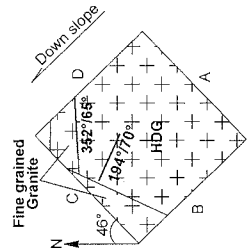
DEPTH (m): 0.50, 0.70, 1.00, 1.50, 1.70, 2.00, 2.50, 3.00, 4.00

SAMPLES & TESTS

CROSS SECTION



PLAN



REMARKS

1. Trial pit was dry during excavation.
2. Trial pit was stable during excavation.
3. Timber shoring over the full height.
4. Small disturbed samples were taken from 0.50m to 2.50m at 0.50m intervals.
5. Block samples were taken at 0.70m and 1.70m.
6. Undisturbed U76 samples were taken horizontally at 0.50m and 1.50m at Face A.
7. An undisturbed U76 sample was taken horizontally at 2.00m at Face B.
8. 2 nos. of undisturbed U76 samples were taken horizontally at 2.50m at Faces A and D.
9. CDG = Completely decomposed GRANITE.
10. HDG = Highly decomposed GRANITE.

SYMBOLS

- Small disturbed sample
- Large disturbed sample
- Undisturbed horizontal sample
- Undisturbed vertical sample
- Block sample
- In situ density test
- Water seepage
- Water sample
- Standpipe tip
- Vane shear test
- Percolation test
- Environmental Sample

J200544_A50-080

VIBRO (H.K.) LIMITED

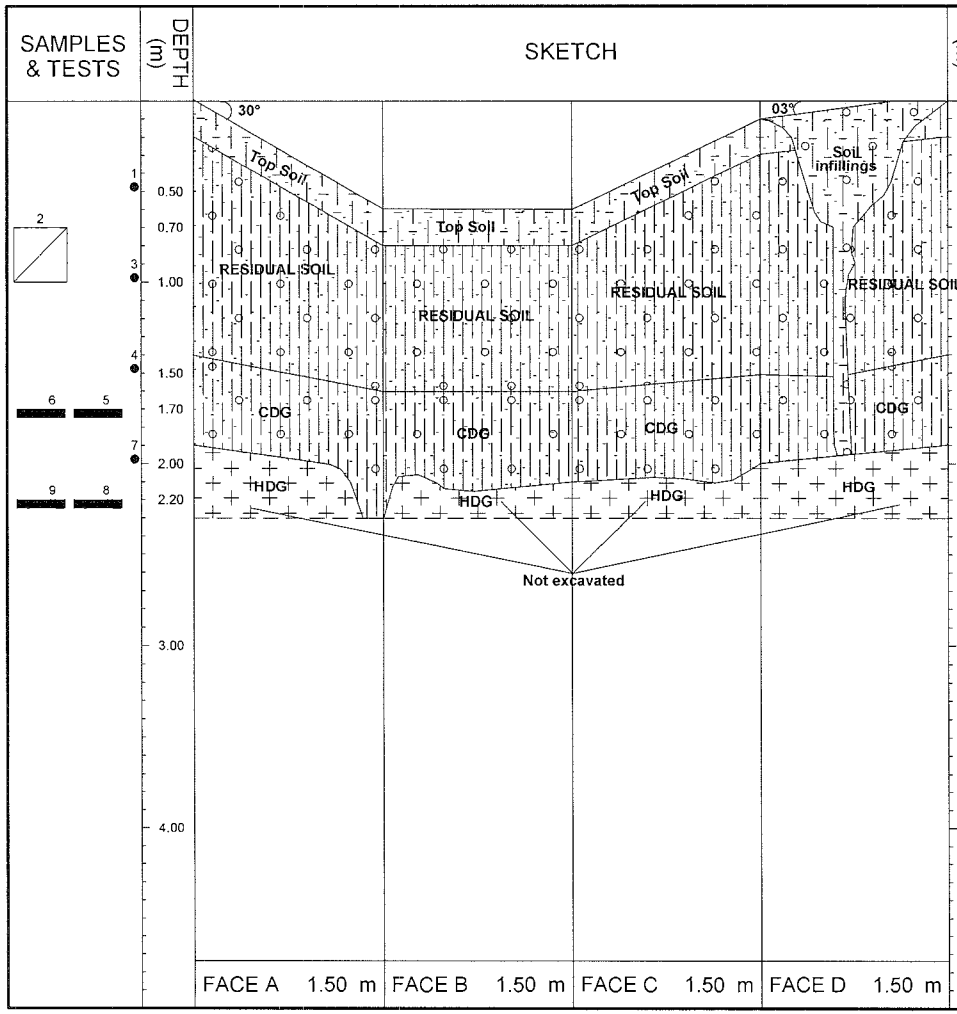
SITE INVESTIGATION DEPARTMENT

TRIAL PIT RECORD

TRIAL PIT No.: C75-TP 2

SHEET 1 OF 1

PROJECT	Nim Wan Road Yuen Long	CONTRACT No.	GE/2005/41
		WORKS ORDER No.	05/41/A/50/080
EXCAVATION STARTED ON	16/09/2006	CO-ORDINATES	E 813591.01
EXCAVATION COMPLETED ON	18/09/2006		N 83827.54
BACKFILLED ON	09/10/2006	GROUND LEVEL	+ 12.74 mPD
		FEATURE No.	5NE-B/C75
		LOGGED BY	W. Y. Mok
		DATE	19/09/2006
		CHECKED BY	C. M. Sham
		DATE	20/09/2006



Soft to firm, moist, dark brown (7.5YR 3/4), slightly sandy clayey SILT. (TOP SOIL)
From 0.00m to 2.00m (Face D) : Soft to firm, moist, dark brown (7.5YR 3/4), slightly sandy clayey SILT with occasional subangular fine gravel (30mm to 40mm) (Soil infillings). — VI

Firm to stiff, moist, brown and light brown, slightly sandy clayey SILT with some angular to subangular fine quartz gravel. (RESIDUAL SOIL) — VI

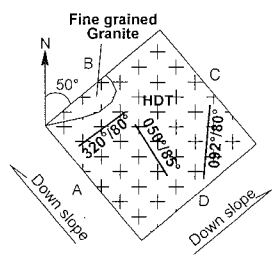
Extremely weak, light brown, dappled reddish brown, completely medium grained GRANITE. (Sandy SILT with some angular fine gravel) — V

Very weak to weak, pinkish grey, dappled light brown, highly decomposed medium grained GRANITE. — IV
Joints are medium spaced, rough planar, extremely narrow, iron stained, dipping 320°/80°, 050°/85° and 092°/80°.

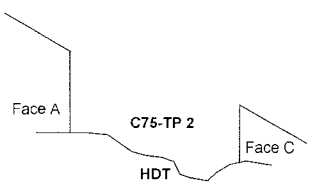
End of Trial Pit at 2.30m.

SYMBOLS	REMARKS
Small disturbed sample	1. Trial pit was dry during excavation.
Large disturbed sample	2. Trial pit was stable during excavation.
Undisturbed horizontal sample	3. Timber shoring over the full height.
Undisturbed vertical sample	4. Small disturbed samples were taken from 0.50m to 2.00m at 0.50m intervals.
Block sample	5. A block sample was taken at 0.70m.
In situ density test	6. 2 nos. of undisturbed U76 samples were taken horizontally at 1.70m at Faces A and C.
Water seepage	7. 2 nos. of undisturbed U76 samples were taken horizontally at 2.20m at Faces A and D.
Water sample	8. CDG = Completely decomposed GRANITE.
Standpipe tip	9. HDG = Highly decomposed GRANITE.
V Vane shear test	
P Percolation test	
E Environmental Sample	

PLAN



CROSS SECTION



J200544_A50-080

APPENDIX F

TRIAL PIT PHOTOGRAPHS


VIBRO
惠保(香港)有限公司
VIBRO (H.K.) LIMITED
CONTRACT NO.:
GE 2005/41
W.O. NO: 05/41/A/50/080
STRIP/ T.P.No: C75-TP1
FACE: A
Feature No: SNE-B/C75
DATE OF PHOTO: 19-9-06


VIBRO
惠保(香港)有限公司
VIBRO (H.K.) LIMITED
CONTRACT NO.:
GE 2005/41
W.O. NO: 05/41/A/50/080
STRIP/ T.P.No: C75-TP1
FACE: A1
Feature No: SNE-B/C75
DATE OF PHOTO: 19-9-06


VIBRO
CONTRACT NO.:
GE 2005/41
W.O. NO 05/41/A/50/080
STRIP / T.P.No C75-TP1
FACE B
Feature No. SNE-B/C75
DATE OF PHOTO 19-9-06


VIBRO
CONTRACT NO.:
GE 2005/41
W.O. NO 05/41/A/50/080
STRIP / T.P.No C75-TP1
FACE B1
Feature No. SNE-B/C75
DATE OF PHOTO 19-9-06


VIBRO
惠保(香港)有限公司
VIBRO (H.K.) LIMITED
CONTRACT NO.:
GE/2005/41
W.O. NO: 05/41/A/50/080
STRIP/T.P.No: C75-TP1
FACE: C
Feature No: SNE-B/C75
DATE OF PHOTO: 19-9-06
0.0 0.1 0.2 0.3 0.4m


VIBRO
惠保(香港)有限公司
VIBRO (H.K.) LIMITED
CONTRACT NO.:
GE/2005/41
W.O. NO: 05/41/A/50/080
STRIP/T.P.No: C75-TP1
FACE: C1
Feature No: SNE-B/C75
DATE OF PHOTO: 19-9-06
0.0 0.1 0.2 0.3 0.4m


VIBRO
VIBRO (H.K.) LIMITED
CONTRACT NO.:
GE 2005/41
W.O. NO 05/41/A/50/080
STRIP / T.P.No C75-TP1 FACE D
Feature No. SNE-B/C75
DATE OF PHOTO 19-9-06


VIBRO
VIBRO (H.K.) LIMITED
CONTRACT NO.:
GE 2005/41
W.O. NO 05/41/A/50/080
STRIP / T.P.No C75-TP1 FACE D1
Feature No. SNE-B/C75
DATE OF PHOTO 19-9-06


VIBRO
VIBRO (H.K.) LIMITED
CONTRACT NO.:
GE 2005/41
W.O. NO 05/41/A/50/080
STRIP / TP No. C75-TP1
FACE BOTTOM
Feature No. SNE-B/C75
DATE OF PHOTO 19-9-06


VIBRO
CONTRACT NO.
GE 2005/41
W.O. NO 05/41/A/50/080
STRIP / T.P.No. C75-TP2
FACE A
Trial Pile No. SNE-B/C75
DATE OF PHOTO 19-9-06


VIBRO
CONTRACT NO.
GE 2005/41
W.O. NO 05/41/A/50/080
STRIP / T.P.No. C75-TP2
FACE B
Trial Pile No. SNE-B/C75
DATE OF PHOTO 19-9-06


VIBRO
CONTRACT NO
W.O. NO 05/41/A/50/080
C75-TP2
5NE-B/C75
19-9-06


VIBRO
CONTRACT NO
W.O. NO 05/41/A/50/080
C75-TP2
5NE-B/C75
19-9-06


VIBRO
CONTRACT NO.:
GE/2005/41
W.O. NO 05/41/A/50/08Q
STRIP/ T.P No. C75-TP2
FACE BOTTOM
Testing No. SNE-B/C75
DATE OF PHOTO 19-9-06

APPENDIX G

SLOPE STRIPPING RECORDS

VIBRO (H.K.) LTD.

SITE INVESTIGATION DEPARTMENT

SLOPE STRIPPING RECORD

STRIPPING No. **C75-SS 1**

SHEET 1 OF 1

LOCATION	Nim Wan Road Yuen Long			CONTRACT NO.	GE/2005/41
				WORKS ORDER NO.	05/41/A/50/080
EXCAVATED ON	09/10/2006	CO-ORDINATES AND LEVELS	CREST: E 813585.44	LOGGED BY	W. Y. Mok
			CREST: N 833821.30		
BACKFILLED ON	12/10/2006		CREST: + 12.25 mPD	DATE	10/10/2006
			TOE: E 813580.17	CHECKED BY	C. M. Sham
FEATURE NO.	5NE-B/C75		TOE: N 833826.80		
			TOE: + 5.84 mPD	DATE	11/10/2006

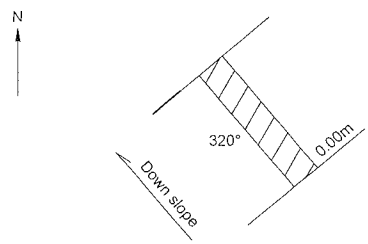
SAMPLES AND TESTS No.	SAMPLES AND TESTS DEPTH	SLOPE ANGLE (°)	REDUCED LEVEL (mPD) +12.25	DISTANCE FROM DATUM (m)	LEGEND	DESCRIPTION	GRADE	DISCONTINUITIES DIRECTION /DIP	DISCONTINUITIES NATURE AND INFILLING
1	0.00	30		1		Firm to stiff, moist, brown (7.5YR 5/4) and greyish brown (2.5Y 5/2), sandy SILT with some angular to subangular fine gravel and rootlets. (RESIDUAL SOIL)	VI		
2	0.50								
3	1.00								
4	1.50								
5	2.00			2					
6	2.50								
7	2.70								
8	3.00			3					
9	3.50								
10	4.00			4					
11	4.50								
			+ 9.73	4.70 5		Weak to moderately weak, light grey, mottled light brown, highly decomposed fine grained GRANITE. Joints are closely to medium spaced, rough planar, extremely narrow to very narrow.	IV	050°/68° 032°/55° 230°/80°	Iron and manganese stained. Iron and manganese stained. Iron and manganese stained.
		60		6				146°/82° 222°/84° 072°/65°	Iron and manganese stained. Iron and manganese stained. Iron and manganese stained.
			+ 7.52	8.00 8		Moderately strong to strong, light grey and pinkish grey, dappled light brown, moderately decomposed fine grained GRANITE. Joints are closely to medium spaced, locally very closely spaced, rough planar, extremely narrow.	III	069°/78° 292°/80° 212°/76° 334°/81°	Iron and manganese stained. Iron and manganese stained. Iron and manganese stained. Iron and manganese stained.
		42		9					
			+ 5.84	10.30 10		End of Stripping at 10.30m.			
				11					
				12					
				13					
				14					

REMARKS :
1. Natural surface.
2. Small disturbed samples were taken from 0.00m to 4.50m at 0.50m intervals.
3. An undisturbed U76 sample was taken perpendicularly to the slope surface at 2.70m.

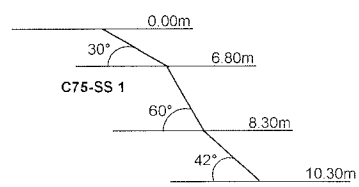
SYMBOLS

- Small Disturbed Sample
- Large Disturbed Sample
- Block Sample
- U100 undisturbed sample
- U76 undisturbed sample
- Water Sample
- Insitu Density Test
- N - Schmidt Hammer Test
- Seepage
- GCO Probe Test
- W Slope Strip Window

SKETCH PLAN



SKETCH SECTION



J200544_A50-080

VIBRO (H.K.) LTD.

SITE INVESTIGATION DEPARTMENT

SLOPE STRIPPING RECORD

STRIPPING No. **C75-SS 2**

SHEET 1 OF 1

LOCATION	Nim Wan Road Yuen Long			CONTRACT NO.	GE/2005/41
				WORKS ORDER NO.	05/41/A/50/080
EXCAVATED ON	09/10/2006	CO-ORDINATES AND LEVELS	CREST	E 813592.12	LOGGED BY	W. Y. Mok
				N 833828.87		
BACKFILLED ON	12/10/2006			+ 12.29 mPD	DATE	10/10/2006
			TOE	E 813587.26	CHECKED BY	C. M. Sham
FEATURE NO.	5NE-B/C75			N 833833.90		
				+ 5.76 mPD	DATE	11/10/2006

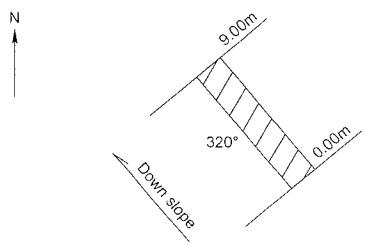
SAMPLES AND TESTS No.	DEPTH	SLOPE ANGLE (°)	REDUCED LEVEL (mPD) +12.29	DISTANCE FROM DATUM (m)	LEGEND	DESCRIPTION	GRADE	DISCONTINUITIES DIRECTION /DIP	DISCONTINUITIES NATURE AND INFILLING
1	0.00					Firm to stiff, moist, brown (7.5YR 5/4), dappled greyish brown, sandy SILT with some angular to subangular fine gravel and rootlets. (RESIDUAL SOIL)	VI		
2	0.50								
3	1.00								
4	1.50								
5	2.00								
6	2.50								
7	3.00								
8	3.50								
9	3.70								
10	4.00	30							
11	4.50								
12	5.00								
13	5.50								
14	6.00								
15	6.50								
			+ 7.70	6.70		Weak to moderately weak, light grey, dappled light brown, highly decomposed fine grained GRANITE. Joints are closely to medium spaced, rough planar, extremely narrow to very narrow.	IV	020°/80° 202°/85° 200°/30°	Iron and manganese stained. Iron and manganese stained. Iron and manganese stained.
		60	+ 6.81	8.00		Moderately weak to moderately strong, light grey, dappled light brown, moderately decomposed fine grained GRANITE. Joints are closely to medium spaced, rough planar, extremely narrow to very narrow.	III	056°/80°	Iron and manganese stained.
			+ 5.76	9.00		End of Investigation Hole at 9.00m.			

REMARKS :
1. Natural surface.
2. Small disturbed samples were taken from 0.00m to 6.50m at 0.50m intervals.
3. An undisturbed U76 sample was taken perpendicularly to the slope surface at 3.70m.

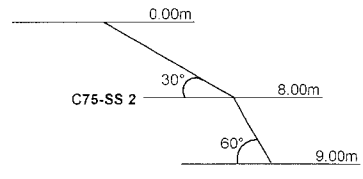
SYMBOLS

- Small Disturbed Sample
- Large Disturbed Sample
- Block Sample
- U100 undisturbed sample
- U76 undisturbed sample
- Water Sample
- Insitu Density Test
- N - Schmidt Hammer Test
- Seepage
- GCO Probe Test
- W Slope Strip Window

SKETCH PLAN



SKETCH SECTION



J200544_A50-080

APPENDIX H

SLOPE STRIPPING PHOTOGRAPHS


VIBRO
惠保(香港)有限公司
VIBRO (H.K.) LIMITED
CONTRACT NO.:
GE/2005/41
W.O. NO: 05/41/A/50/080
STRIP/ T.P No: C75-SS1
FACE: 2
Feature No: SNE-B/C75
DATE OF PHOTO: 10-10-06
0.0 0.1 0.2 0.3 0.4m


VIBRO
惠保(香港)有限公司
VIBRO (H.K.) LIMITED
CONTRACT NO.:
GE/2005/41
W.O. NO: 05/41/A/50/080
STRIP/ T.P No: C75-SS1
FACE: 1
Feature No: SNE-B/C75
DATE OF PHOTO: 10-10-06
0.0 0.1 0.2 0.3 0.4m


VIBRO
惠保(香港)有限公司
VIBRO (H.K.) LIMITED
CONTRACT NO.:
GE/2005/41
W.O. NO 05/41/A/50/080
STRIP/ T P No. C75-SS1 FACE : 4
Feature No: 5NE-B/C75
DATE OF PHOTO : 10-10-06
0.0 0.1 0.2 0.3 0.4m


VIBRO
惠保(香港)有限公司
VIBRO (H.K.) LIMITED
CONTRACT NO.:
GE/2005/41
W.O. NO 05/41/A/50/080
STRIP/ T P No. C75-SS1 FACE : 3
Feature No: 5NE-B/C75
DATE OF PHOTO : 10-10-06
0.0 0.1 0.2 0.3 0.4m


VIBRO
惠保(香港)有限公司
VIBRO (H.K.) LIMITED
CONTRACT NO.:
GE/2005/41
W.O. NO: 05/41/A/50/080
STRIP/T.P No: C75-SS1
FACE: 6
Feature No: SNE-B/C75
DATE OF PHOTO: 10-10-06
0.0
0.1
0.2
0.3
0.4m


VIBRO
惠保(香港)有限公司
VIBRO (H.K.) LIMITED
CONTRACT NO.:
GE/2005/41
W.O. NO: 05/41/A/50/080
STRIP/T.P No: C75-SS1
FACE: 5
Feature No: SNE-B/C75
DATE OF PHOTO: 10-10-06
0.0
0.1
0.2
0.3
0.4m


VIBRO 惠保(香港)有限公司 VIBRO (H.K.) LIMITED
CONTRACT NO.: GE / 2005/41
W.O. NO: 05/41/A/50/080
STRIP / T P No: C75-SS1 FACE: 8
Feature No: 5NE-B/C75
DATE OF PHOTO: 10-10-06
KODAK Color Control Patches
0.0 0.1 0.2 0.3 0.4m


VIBRO 惠保(香港)有限公司 VIBRO (H.K.) LIMITED
CONTRACT NO.: GE / 2005/41
W.O. NO: 05/41/A/50/080
STRIP / T P No: C75-SS1 FACE: 7
Feature No: 5NE-B/C75
DATE OF PHOTO: 10-10-06
KODAK Color Control Patches
0.0 0.1 0.2 0.3 0.4m


VIBRO
惠保(香港)有限公司
VIBRO (H.K.) LIMITED
CONTRACT NO.:
GE/2005/41
W.O. NO 05/41/A/50/080
STRIP/ T.P.No C75-SS1 FACE : 10 END
Feature No: 5NE-B/C75
DATE OF PHOTO : 10-10-06
0.0 0.1 0.2 0.3 0.4m


VIBRO
惠保(香港)有限公司
VIBRO (H.K.) LIMITED
CONTRACT NO.:
GE/2005/41
W.O. NO 05/41/A/50/080
STRIP/ T.P.No C75-SS1 FACE : 9
Feature No: 5NE-B/C75
DATE OF PHOTO : 10-10-06
0.0 0.1 0.2 0.3 0.4m


VIBRO
CONTRACT NO.:
GE/2005/41
W.O. NO 05/41/A/50/080
STRIP/ T.P.No. C75-SS2 FACE 2
Feature No. 5NE-B/C75
DATE OF PHOTO 10-10-06


VIBRO
CONTRACT NO.:
GE/2005/41
W.O. NO 05/41/A/50/080
STRIP/ T.P.No. C75-SS2 FACE 1
Feature No. 5NE-B/C75
DATE OF PHOTO 10-10-06
0.0 0.1 0.2 0.3 0.4m


VIBRO
CONTRACT NO.:
GE/2005/41
W.O. NO 05/41/A/50/080
STRIP/ T.P No C75-SS2
FACE 4
Feature No: SNE-B/C75
DATE OF PHOTO 10-10-06

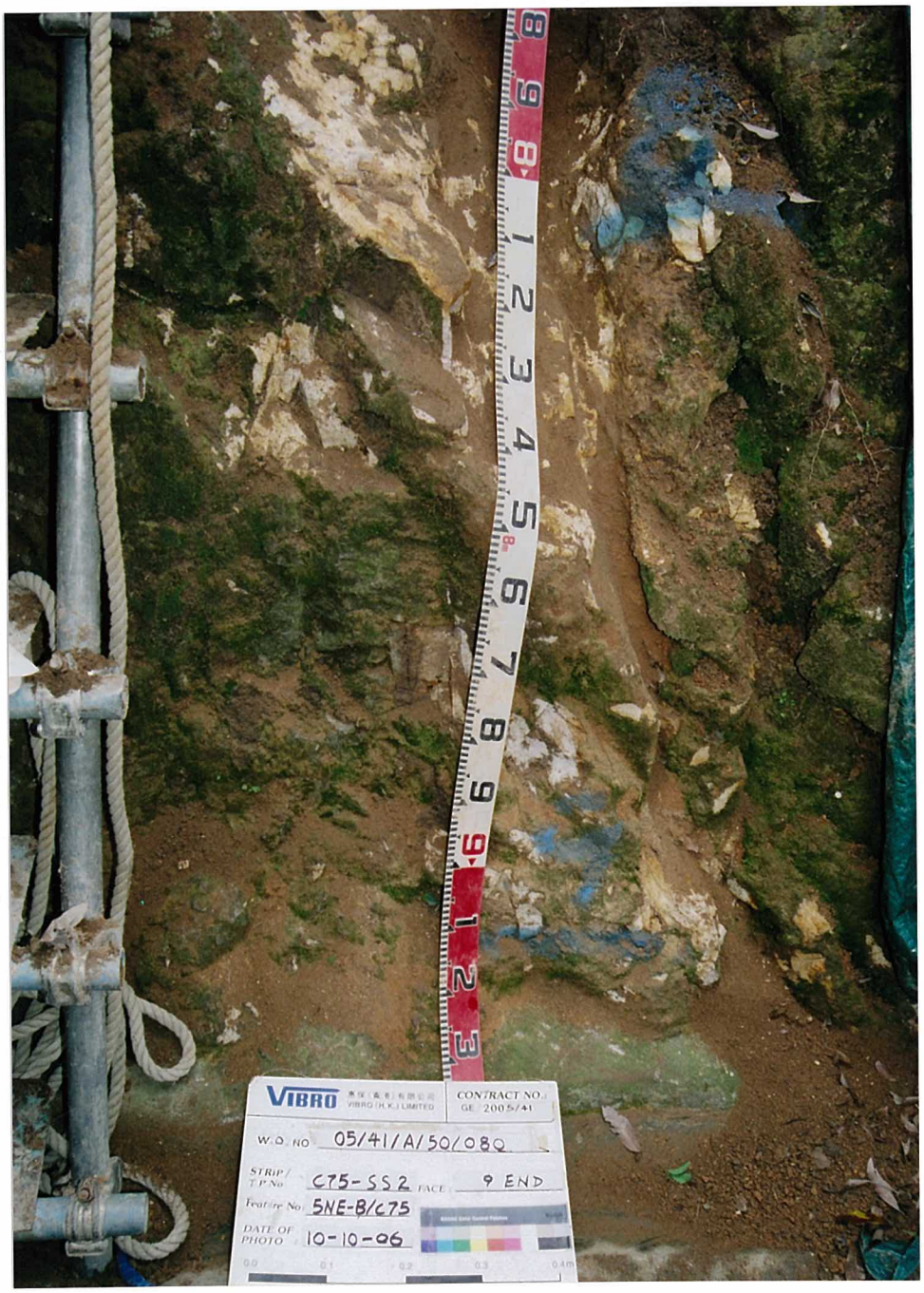

VIBRO
CONTRACT NO.:
GE/2005/41
W.O. NO 05/41/A/50/080
STRIP/ T.P No C75-SS2
FACE 3
Feature No: SNE-B/C75
DATE OF PHOTO 10-10-06


VIBRO
惠保(香港)有限公司
VIBRO (H.K.) LIMITED
CONTRACT NO.:
GE / 2005/41
W.O. NO 05/41/A/50/080
STRIP / T.P No C75-SS2 FACE 6
Feature No: 5NE-B/C75
DATE OF PHOTO 10-10-06
0.0 0.1 0.2 0.3 0.4m


VIBRO
惠保(香港)有限公司
VIBRO (H.K.) LIMITED
CONTRACT NO.:
GE / 2005/41
W.O. NO 05/41/A/50/080
STRIP / T.P No C75-SS2 FACE 5
Feature No: 5NE-B/C75
DATE OF PHOTO 10-10-06
0.0 0.1 0.2 0.3 0.4m


VIBRO
惠保(香港)有限公司
VIBRO (H.K.) LIMITED
CONTRACT NO.:
GE 2005/41
W.O. NO 05/41/A/50/080
STRIP/ T.P No C75-SS2 FACE : 8
Feature No: SNE-B/C75
DATE OF PHOTO : 10-10-06
KODAK Color Control Patches
0.0 0.1 0.2 0.3 0.4m


VIBRO
惠保(香港)有限公司
VIBRO (H.K.) LIMITED
CONTRACT NO.:
GE 2005/41
W.O. NO 05/41/A/50/080
STRIP/ T.P No C75-SS2 FACE : 7
Feature No: SNE-B/C75
DATE OF PHOTO : 10-10-06
KODAK Color Control Patches
0.0 0.1 0.2 0.3 0.4m


VIBRO
CONTRACT NO.
GE 2005/41
W.O. NO 05/41/A/50/080
STRIP / T.P No C75-SS2 FACE 9 END
Feature No 5NE-B/C75
DATE OF PHOTO 10-10-06

APPENDIX I

INSTRUMENT INSTALLATION DETAILS

VIBRO (H.K.) LIMITED

SITE INVESTIGATION DEPARTMENT

PIEZOMETER INSTALLATION DETAILS

DRILLHOLE No. C75-DH 1

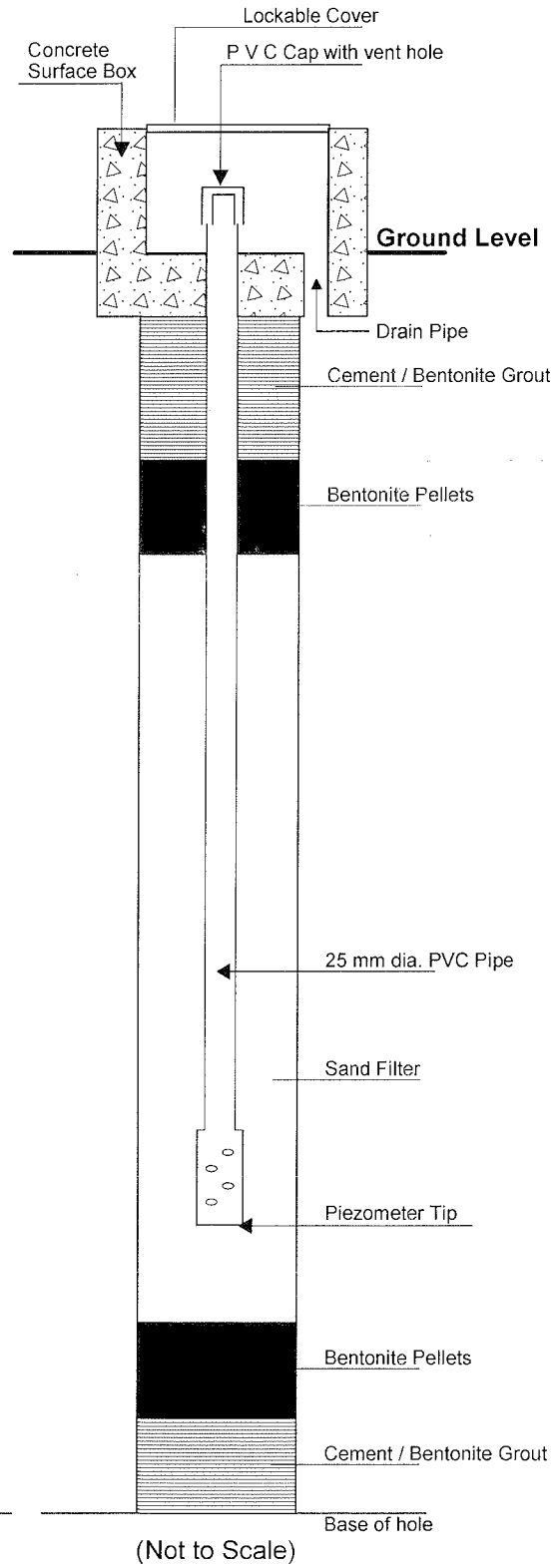
SHEET 1 OF 1

LOCATION	Nim Wan Road Yuen Long			CONTRACT No.	GE/2005/41
				WORKS ORDER No.	05/41/A/50/080
INSTALLED BY	H. Y. Ngan	CO-ORDINATES	E 813588.49	FEATURE No.	5NE-B/C75
DATE	01/09/2006				
TESTED BY	W. K. Wong		N 833817.30	GROUND LEVEL	+ 13.85 mPD
DATE	02/09/2006				
CHECKED BY	C. M. Sham	STOP WATCH ID	SW005	INITIAL WATER LEVEL	Dry
DATE	08/09/2006	DIP METER ID	DM1001		
INSTRUMENT TYPE	PIEZOMETER	INSTRUMENT DEPTH	4.20m bGL	RESPONSE ZONE	3.40m TO 4.70m

INSTALLATION DETAILS OF PIEZOMETER

Reduced Level (mPD)	Depth (m) Above / Below ground level
+14.05	0.20
+13.95	0.10
+13.85	0.00
+13.55	0.30
+11.45	2.40
+10.45	3.40
+9.65	4.20
+9.15	4.70
+8.15	5.70
+4.39	9.46

BUCKETS (IF ANY)	
Depth from (m)	1.50
Depth to (m)	4.00
Spacing (m)	0.50



(Not to Scale)

APPENDIX J

INSTRUMENT RESPONSE TEST RECORDS

VIBRO (H.K.) LIMITED
SITE INVESTIGATION DEPARTMENT
RESPONSE TEST RECORD

DRILLHOLE NO. : C75-DH 1

SHEET 1 OF 1

LOCATION	Nim Wan Road Yuen Long			CONTRACT No.	GE/2005/41
INSTALLED BY	H. Y. Ngan	CO-ORDINATES	E 813588.49	WORKS ORDER No.	05/41/A/50/080
DATE	01/09/2006			FEATURE No.	5NE-B/C75
TESTED BY	W. K. Wong		N 833817.30	GROUND LEVEL	+ 13.85 mPD
DATE	02/09/2006				
CHECKED BY	C. M. Sham	STOP WATCH ID	SW005	INITIAL WATER LEVEL	Dry
DATE	08/09/2006	DIP METER ID	DM1001		
INSTRUMENT TYPE	PIEZOMETER	INSTRUMENT DEPTH	4.20m bGL	RESPONSE ZONE	3.40m TO 4.70m

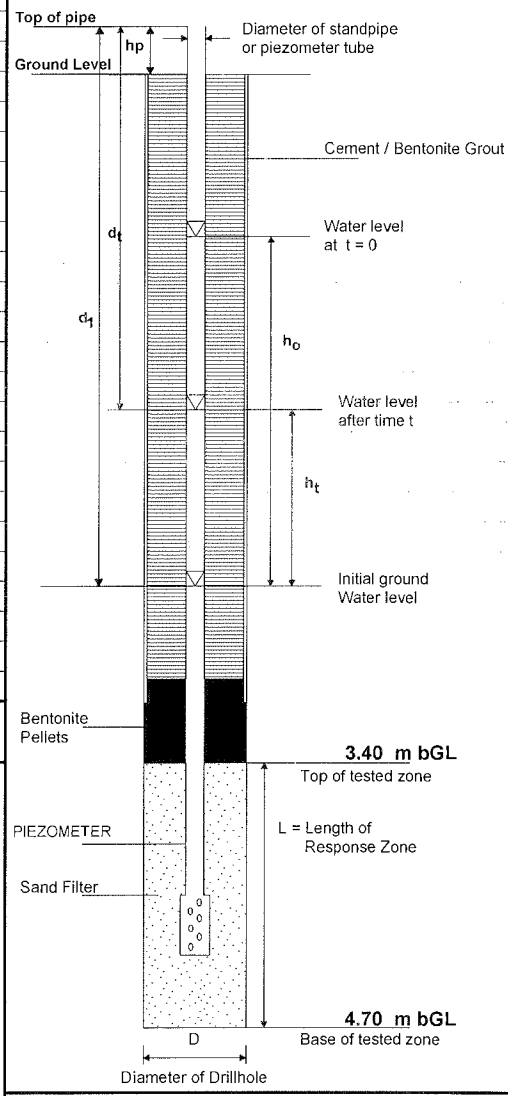
Time Elapsed, t (Minutes)	Water Depth, d_t (m)	h_t	h_t / h_o	Time Elapsed, t (Minutes)	Water Depth, d_t (m)	h_t	h_t / h_o
0	0.00						
0.25	0.84						
0.5	1.52						
0.75	2.05						
1	2.35						
1.5	2.68						
2	2.97						
3	3.21						
4	3.42						
5	3.51						
6	3.59						
7	3.67						
8	3.74						
9	3.80						
10	3.85						
15	4.10						
30	4.20						

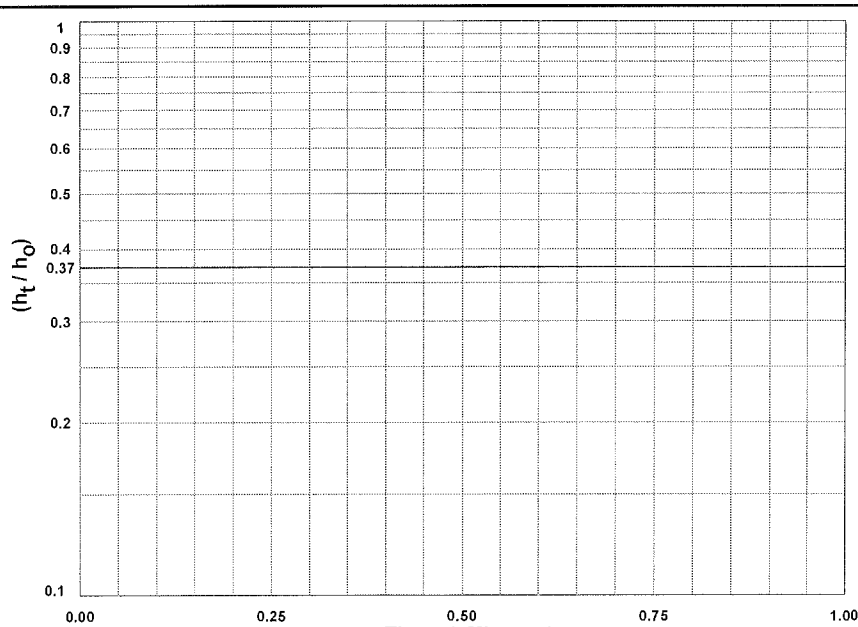
Remarks : **No ambient groundwater level, no calculation possible.**

d = 0.025 m d_1 = - m

D = 0.114 m h_p = 0.10 m

L = 1.30 m





Notes :
ht = d_t - d_t (falling head)
T is time when h_t / h_o = 0.37
A is the cross-sectional area of drillhole, casing or standpipe as appropriate.

T N/A sec

$A = \left(\frac{d}{2}\right)^2 \pi$ = N/A m^2

Shape Factor :

$$F = \frac{2.4\,\pi\,L}{\log_e\left[1.2\,\frac{L}{D} + \sqrt{1 + \left(1.2\,\frac{L}{D}\right)^2}\right]}$$

= N/A m

Permeability :

$k = \frac{A}{FT}$ = N/A m/sec

Material Surrounding Response Zone

Completely decomposed GRANITE.

APPENDIX K

GROUNDWATER MONITORING RECORDS

VIBRO (H.K.) LIMITED
SITE INVESTIGATION DEPARTMENT

DRILLHOLE No. C75-DH 1

GROUNDWATER MONITORING RECORD

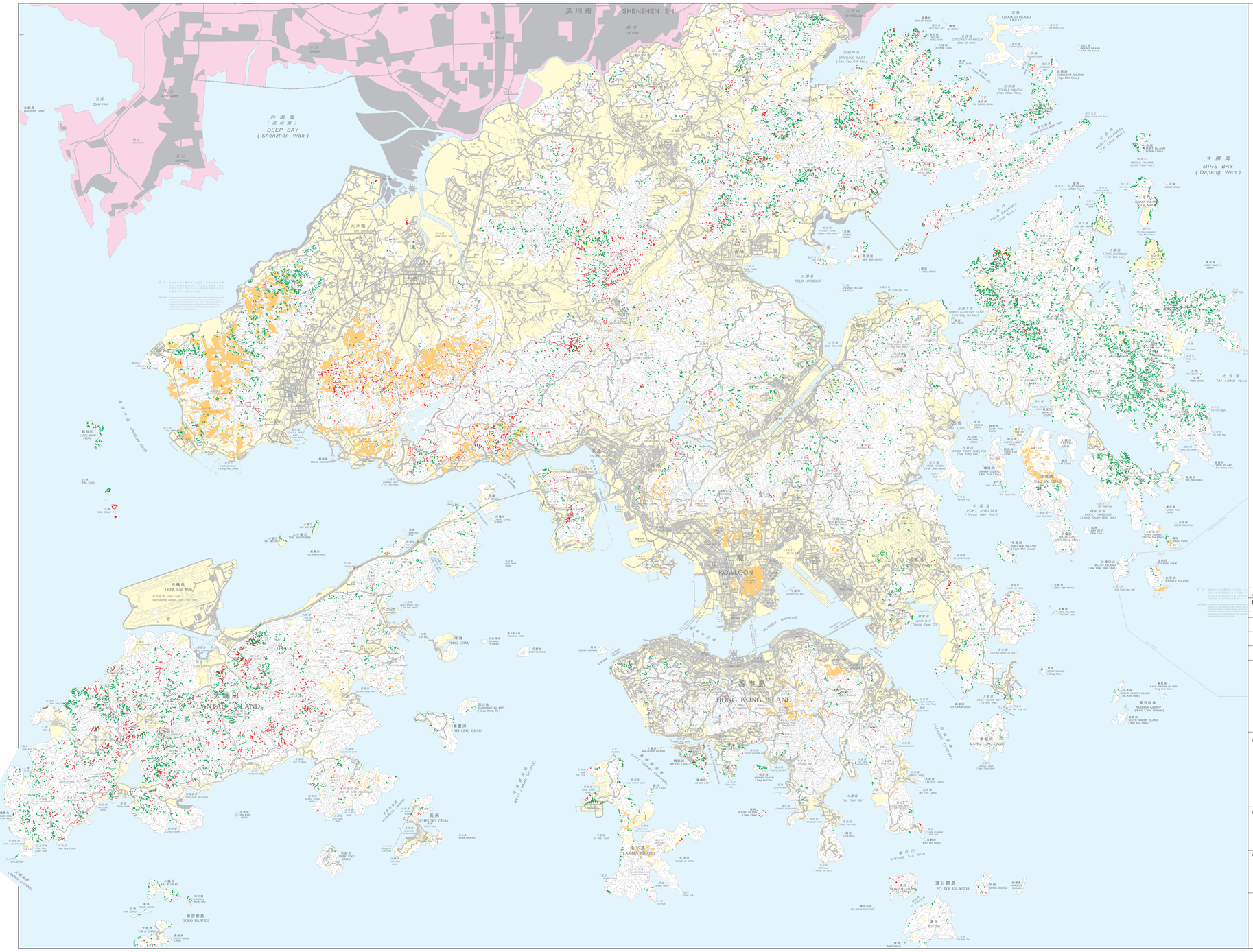
SHEET 1 OF 1

LOCATION	Nim Wan Road Yuen Long			CONTRACT No.	GE/2005/41
				WORKS ORDER No.	05/41/A/50/080
INSTALLED BY	H. Y. Ngan	CO-ORDINATES	E 813588.49	FEATURE No.	5NE-B/C75
DATE	01/09/2006			INSTRUMENT No.	C75-DH 1
CHECKED BY	C. M. Sham		N 833817.30	INSTRUMENT TYPE	PIEZOMETER
DATE	11/09/2006			INSTRUMENT DEPTH	4.20m bGL
BUCKETS (IF ANY) DEPTH	From 1.50m	GROUND LEVEL	+ 13.85 mPD	INSTRUMENT LEVEL	+9.65mPD
	To 4.00m				
SPACING	@ 0.50m	BASE OF BOREHOLE	+4.39 mPD	RESPONSE ZONE	+10.45mPD TO +9.15mPD

DATE	TIME	REPORTED BY	GROUNDWATER LEVEL		HIGHEST BUCKET WITH ENTRAPPED WATER (if any)		REMARKS
			DEPTH (m)	ELEVATION (mPD)	DEPTH (m)	ELEVATION (mPD)	
02/09/2006	09:30	W. K. Wong	Dry	-			
04/09/2006	09:30	W. K. Wong	Dry	-			
05/09/2006	09:30	W. K. Wong	Dry	-			
06/09/2006	09:30	W. K. Wong	Dry	-			
07/09/2006	09:30	W. K. Wong	Dry	-			
08/09/2006	09:30	W. K. Wong	Dry	-			
09/09/2006	09:30	W. K. Wong	Dry	-			

Appendix F

Natural Terrain Landslide Inventory Map



LEGEND

- Undeveloped Area (1994)
- Developed Area (1994)
- Gully
- Recent Landslide
- Relict Landslide
- Site Boundary

no.	date	description	initial
REVISION			

	name	date
prepared	Intergraph Hong Kong Ltd.	
checked	N. W. Woods	

file no. GCP 2/A1/3

project

NATURAL TERRAIN
LANDSLIDE STUDY
PHASES I & 2

drawing title

NATURAL TERRAIN LANDSLIDE
INVENTORY MAP

drawing no. GEO/P/PTE/10

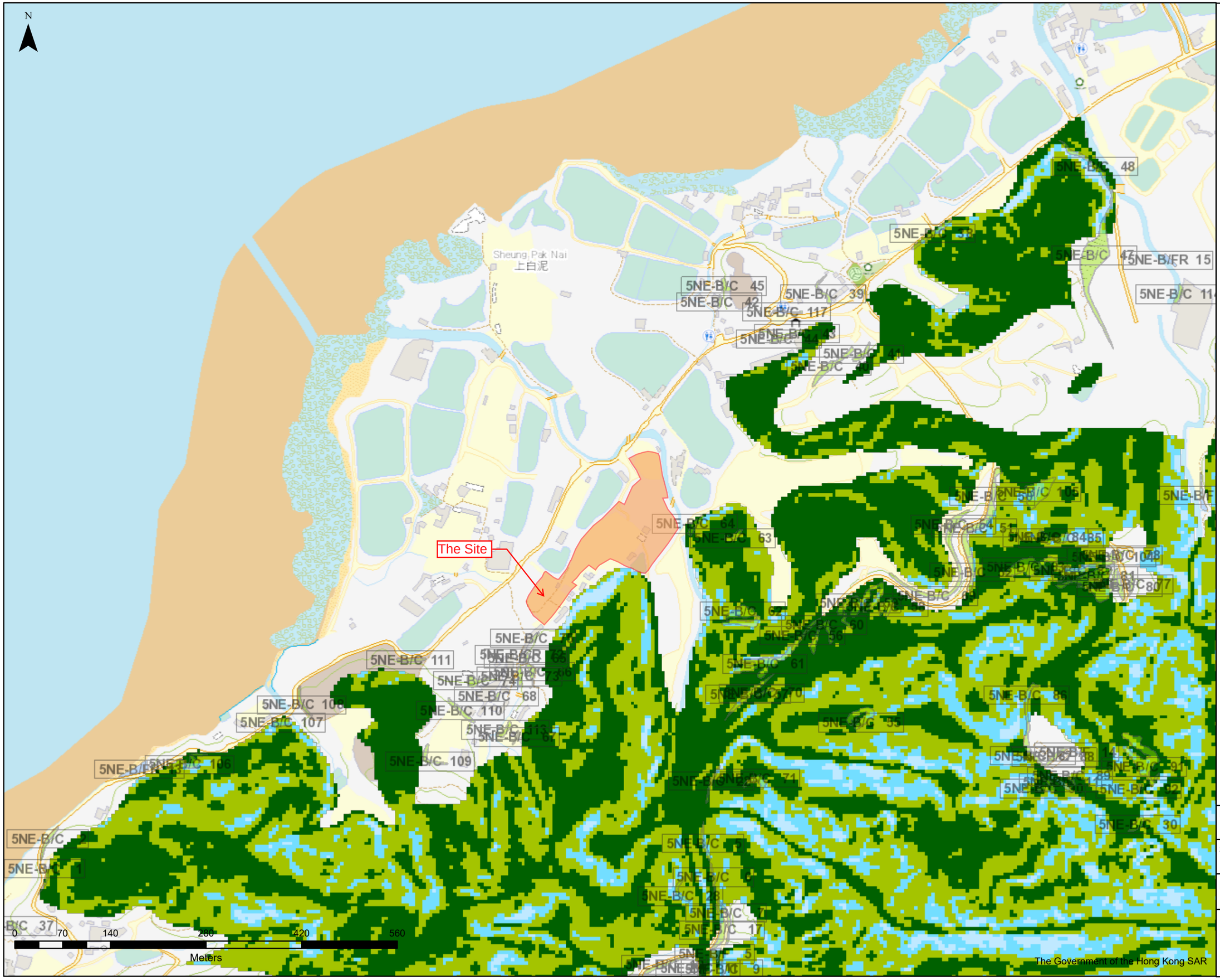
scale 1:70 000

office

PLANNING DIVISION
GEOTECHNICAL ENGINEERING OFFICE

CIVIL
ENGINEERING
DEPARTMENT

LS Freq 2



Man-made Features

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

Overlays Ordered Layers

Ls Frequency Map

Grid-based Annual Theoretical Landslide (No./Year)

- >1.0 x 10(-4)
- >5.0 x 10(-5) - 1.0 x 10(-4)
- >1.0 x 10(-5) - 5.0 x 10(-5)
- >1.0 x 10(-6) - 1.0 x 10(-5)
- <1.0 x 10(-6)

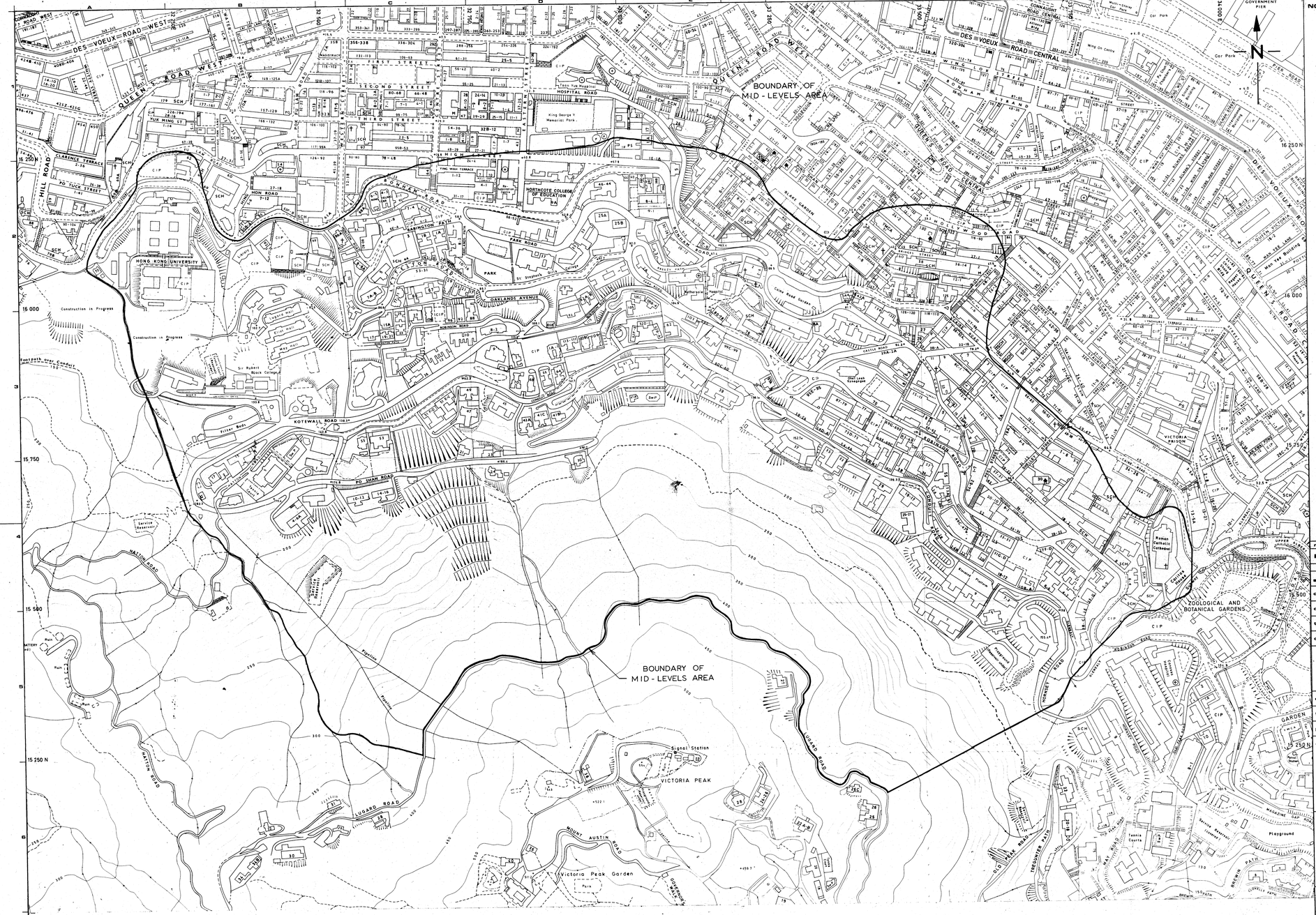
Division	
Scale	1:5000
Date	25/01/2026

GEOTECHNICAL ENGINEERING OFFICE
CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

(Print by LI Yin Ting)

Appendix G

Scheduled Area



NOTES:

no.	date	description	initial
REVISION			

	name	date
surveyed		
designed		
drawn	[illegible]	8/6/82
traced	[illegible]	8/6/82
checked	[illegible]	[illegible]

contract no.

file no.

project no.

contract

drawing title

MID - LEVELS AREA

drawing no. GCB 1

scale 1: 2 500

office

D.W. McDonald

(D. W. McDonald)

Secretary for Lands and Works

Dated the 28th of April 1982.

PWD 127

B1 1000×707

HONG KONG 1:20 000 香港 1:20 000

后 海 灣
HAU HOI WAN
(DEEP BAY)

TSWTL 28

BOUNDARY OF AREA NUMBER 2 OF THE SCHEDULED AREAS

BOUNDARY OF AREA NUMBER 2 OF THE SCHEDULED AREAS

Signed: _____
(G. Barnes)
Secretary for Planning, Environment and Lands

Dated: 8th of June 1990

	initial	name	date
drawn		C. C. MAK	30-10-1989
checked		P. J. STRANGE	30-10-1989

drawing title

AREA NUMBER 2 OF THE SCHEDULED AREAS

drawing no. GS-SP/714-1

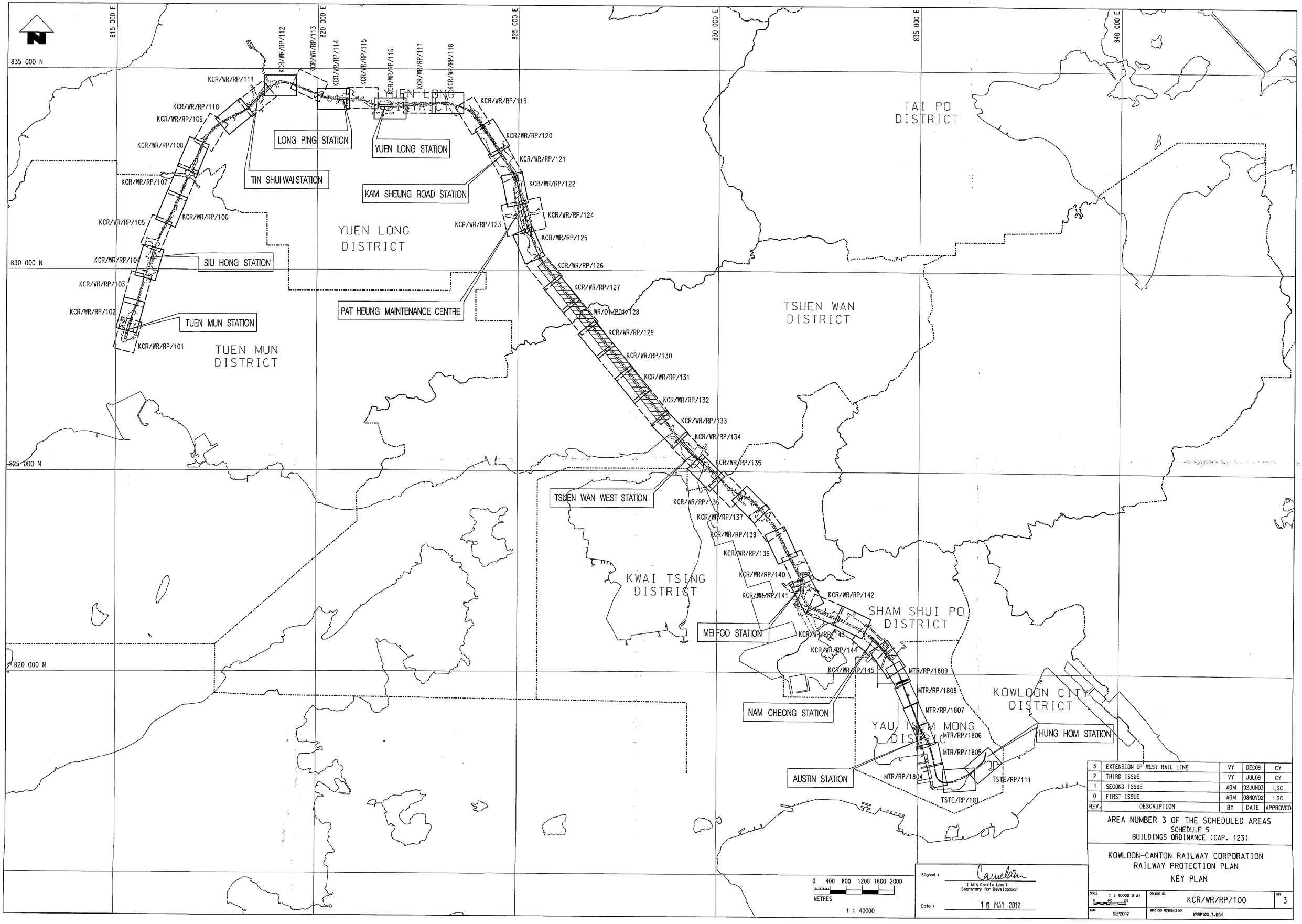
scale 1:20 000

office

PLANNING DIVISION
GEOTECHNICAL CONTROL OFFICE

CIVIL ENGINEERING SERVICES DEPARTMENT
HONG KONG

大帽山郊野公園
TAI MO SHAN COUNTRY PARK



REV.	DESCRIPTION	BY	DATE	APPROVED
3	EXTENSION OF WEST RAIL LINE	VY	DEC09	CY
2	THIRD ISSUE	VY	JUL09	CY
1	SECOND ISSUE	ADM	02JUN03	LSC
0	FIRST ISSUE	ADM	08NOV02	LSC

AREA NUMBER 3 OF THE SCHEDULED AREAS
SCHEDULE 5
BUILDINGS ORDINANCE (CAP. 123)

KOWLOON-CANTON RAILWAY CORPORATION
RAILWAY PROTECTION PLAN
KEY PLAN

Signed : Carrielam
(Mrs Carrie Lam)
Secretary for Development

Date : 16 MAY 2012

SCALE 1 : 40000 @ A1
DRAWING NO. KCR/WR/RP/100
REV 3
DATE SEP2002
MTRC CAD REFERENCE NO. WRRP1CO_3.DGN