

**Section 12A Rezoning Application
From “V” To “G/IC (3)” for
Pre-Cut Off Columbariums at Buddhist Cheung Ha Temple,
Lot Nos. 1087 and 1130 in D.D.6,
and adjoining Government Land,
Tai Po, New Territories**

GEOTECHNICAL PLANNING REVIEW REPORT

JUNE 2024

APPLICANT: BUDDHIST CHEUNG HA TEMPLE LIMITED

Project No.: J1926/B

HUNG CHI CONSULTANTS LIMITED

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1. INTRODUCTION

- 1.1 The Buddhist Cheung Ha Temple (the Temple) is located at D.D. 6, Lot Nos. 1087 and 1130 and adjoining Government Land ("GL"), Kam Shan, Tai Po, New Territories, namely, the "Application Site". The Location Plan of the Application Site is shown in **Figure 1**, and the Master Layout Plan for the Application Site is presented in **Figure 2**.
- 1.2 The Application Site is presently occupied by two (2) elements columbarium uses (since 1970s), compound known as the Temple.
- 1.3 Presently, the Application Site is zoned as "Village Type Development" ("V") on the Approved Tai Po Outline Zoning Plan No. S/TP/30 (OZP). The present application proposes to rezone the Application Site into "Government, Institution or Community (3)" ("G/IC(3)") under Section 12A of the Town Planning Ordinance in the view to clearly defining the existing temple cum columbarium of the Application Site within the "V" zone.
- 1.4 Further to the previous rezoning application was withdrawn by the applicant, the Master Layout Plan (MLP) (i.e. the site boundary is revised) as shown in **Figure 2** is to comply with the requirement of Private Columbaria Ordinance for proper planning control of a Pre-cut Columbarium Uses to the Temple.
- 1.5 Thus, the Hung Chi Consultants Limited is commissioned as the project geotechnical engineer to conduct the Geotechnical Planning Review Report ("GPRR") for the Application Site under Section 12A rezoning application.
- 1.6 Having reviewed the latest MLP, the proposed (existing) development in the Application Site comprises of two 2-storey structures for columbarium uses and the existing stairway from Kam Shan Road. These 2 existing buildings will remain unchanged in the foreseeable future.
- 1.7 Therefore, this Geotechnical Planning Review Report ("GPRR") is prepared to address the potential geotechnical concerns of the Application Site and the existing slopes and retaining walls in vicinity of the Application Site according to the latest MLP.
- 1.8 This GPRR has included the comments from GEO, CEDD on the previous GPRR, which is similar to those submitted in June 2020 and supplementary information in August 2020. The revised texts for this GPRR comparing with the previous GPRR are highlighted for easy reference.

2. SITE RECONNAISSANCE

- 2.1 The Application Site is situated at the upper part of the developed hill skirt of Kam Shan and two structures of the Temple are located at different site levels supported and bound by a number of retaining walls and slopes features registered in the Government departments.
- 2.2 The registered slope and wall features within the Application Site include Feature Nos. 7NW-B/R267, 7NW-B/R90, and Wall Nos. 1 and 3. Feature Nos. 7NW-B/CR529, 7NW-B/CR368, 7NW-B/CR369, 7NW-B/R89, 7NW-B/R94, 7NW-B/R261, 7NW-B/R320 and Wall No. 2 are situated adjacent to the Application Site. The proposed Master Layout Plan with the slope and wall features in the vicinity of the Application Site are shown in Figure 3.
- 2.3 The Application Site is situated with levels ranging from +5.18mPD at Kam Shan Road to +24.57mPD approximately at the Application Site. The Columbarium Buildings (i.e. Columbarium A & B) are situated at level of about +20.8mPD.
- 2.4 The existing stairway at the north-east of the Application Site that will be widened and upgraded to suit for the proposed development is the shape of inverted 7 linking the Kam Shan Road to the Columbarium Buildings. The first straight section of stairway is supported by 2 nos. retaining walls such as the portion of Feature No. 7NW-B/R267 at the east side and the unregistered retaining wall (i.e. Wall No. 1) at the west side.
- 2.5 The second section of the stairway is situated at the crest of Feature No. 7NW-B/CR529 facing the north; and the south of the stairway is the portion of Feature No. 7NW-B/R261 and the unregistered retaining wall (i.e. Wall No. 2) in height of about 3m to support the platform of +16.5mPD approx. for Lot 1943.
- 2.6 To the north of the Columbarium Buildings, a masonry wall (i.e. Wall Feature 7NW-B/R90) is in maximum height of 3.3m at north of Columbarium A and another masonry wall (i.e. Wall No. 3) is in maximum height of 3.3m, which is not registered in the Government department, at north-west of Columbarium B. These two (2) retaining walls are retained a platform at the level of +20.8mPD by the footpath varying from +17mPD to +18.56mPD at the wall toe.
- 2.7 At the east of these buildings, there is bound by the registered wall feature nos. 7NW-B/R90 and 7NW-B/R89 that is below Feature 7NW-B/R90. Therefore, the total height of both Features is 6.8m (i.e. from +14.0mPD to +20.8mPD).
- 2.8 At south, there is a Slope Feature 7NW-B/CR368 in maximum height of 13m running along the southern boundary of the Application Site.

- 2.9 Wall Feature 7NW-B/R320 in maximum height of 3.4m is located at the north-west side of Wall No. 3.
- 2.10 Feature 7NW-B/CR369 is located adjacent to the western boundary of Application Site.
- 2.11 The site visits on the Application Site were carried out on 24 March and 16 April 2024 to inspect the existing wall and slope features in the vicinity of the site boundary.
- 2.12 Based on the site inspections, the condition of the existing walls and slope features were same as those inspected in June 2020 for the previous rezoning application.
- 2.13 No sign of seepage and distress were identified during the site inspections.
- 2.14 The Photo Index Plan and the photo plates of the Application Site and adjacent slopes (the Plate Numbers and the locations used in this GPRR are similar to those adopted in the previous GPRR for easy reference) are presented in **Appendix A**.
- 2.14.1 Plate Nos. 1 & 2 shown the Entrance of Cheung Ha Temple;
- 2.14.2 Plate Nos. 3 & 4 shown the portion of Feature No. 7NW-B/R267 and unregistered retaining wall (Wall No. 1) underneath the stairway to Cheung Ha Temple respectively;
- 2.14.3 Plate Nos. 5 & 6 and 7 & 8 shown the portion of Feature No. 7NW-B/R261 and existing masonry wall for Lot 1943 (House No. 41 & 42) (Wall No. 2);
- 2.14.4 Plate Nos. 9 to 10 shown Feature No. 7NW-B/CR529(1);
- 2.14.5 Plate Nos. 11 & 12 shown Feature No. 7NW-B/CR529 (2);
- 2.14.6 Plate Nos. 13 to 17 shown Feature No. 7NW-B/R90;
- 2.14.7 Plate Nos. 18 to 23 shown Existing Platform behind Feature No. 7NW-B/R90;
- 2.14.8 Plate No. 24 shown Feature No. 7NW-B/R90;
- 2.14.9 Plate Nos. 25 to 28 shown Wall No. 3;
- 2.14.10 Plate Nos. 29 to 32 the existing platform behind Wall No. 3;
- 2.14.11 Plate Nos. 33 to 34 shown existing stairway beside Columbarium B Building;
- 2.14.12 Plate Nos. 35 to 42 shown Feature No. 7NW-B/R368;
- 2.14.13 Plate Nos 43 to 44 shown Feature No. 7NW-B/R320;

3. DESK STUDY AND BACKGROUND INFORMATION SEARCH

3.1 Having searched the information from the web-based Geotechnical Information Infrastructure (GInfo) maintained by the Geotechnical Engineering Office (GEO) of Civil Engineering & Development Department (CEDD) and Slope Maintenance Responsibility Information System (SMRIS) maintained by Lands Department, the registered Feature Nos. 7NW-B/CR529, 7NW-B/R90, 7NW-B/R94, 7NW-B/R320, 7NW-B/CR369, 7NW-B/CR368, 7NW-B/R89, 7NW-B/R261 and 7NW-B/R267 are in the vicinity of the Lot Boundary of the Application Site. The retrieved slope and wall records and slope maintenance responsibility report from both departments are annexed in **Appendix B and C**, respectively.

3.2 Based on the slope records obtained from the GInfo, the characteristics of Features are listed as below:

Feature No.	Max. Slope Height (m)	Ave. Slope Angle (°)	Slope Length (m)	Max. Wall height (m)	Face Angle (°)	Wall Length (m)
7NW-B/R89	-	-	-	3.5	75	15
7NW-B/R90 (1) & (2)	-	-	-	3.3	82	16
7NW-B/R94	-	-	-	6.1	85	18
7NW-B/R320	-	-	-	5.0	90	10
7NW-B/CR368	9.5	55	35	3.5	80	35
7NW-B/CR369	3.3	78	25	2.1	90	12
7NW-B/CR529 (1) & (2)	8.5	70	25	1.5	90	20
7NW-B/R261	-	-	-	3.0	85	5
7NW-B/R267	-	-	-	3.5	85	8

3.3 Based on the slope reports obtained from the SMRIS, the maintenance responsible party of Features are listed as below:

Feature No.	Type	Location	Responsible Party
7NW-B/R89	Wall	West of DD6 Lot 1943	DD6 Lot 1943
7NW-B/R90(1)	Wall	North of DD6 Lot 1087	Lands Dept.
7NW-B/R90(2)	Wall	North of DD6 Lot 1087	DD6 Lot 1087
7NW-B/R94	Wall	At least 4m form the north boundary	Lands Dept.
7NW-B/R320	Wall	At least 2m form the north boundary	Lands Dept.
7NW-B/CR368	Slope/Wall	Adjacent to DD6 Lots 1130 & 1087	Lands Dept.
7NW-B/CR369	Slope/Wall	At least 1.5m form the north boundary	Lands Dept.
7NW-B/CR529(1)	Slope	Adjoining Lot Boundary at North-east	DD6 2163
7NW-B/CR529(2)	Slope	Adjoining Lot Boundary at North-east	Lands Dept.
7NW-B/R261	Wall	Underneath the stairway at North-east	Lands Dept.
7NW-B/R267	Wall	North of DD6 Lot 1943	DD6 Lot 1943

3.4 Stage 3 Study Report for Feature No. 7NW-B/CR368 (Ref.: S3R 115/2013) and Feature No. 7NW-B/CR529 (Sub-division (SD) No. 2) (Ref.: S3R 40/2013) were retrieved from the Geotechnical Information Unit of GEO of CEDD. Parts of the Stage 3 Study Reports are annexed in **Appendix D**.

- 3.5 Moreover, according to the geotechnical report for development of House Nos. 57 and 58 at DD6 2163 under file GCME 3/5/6/9121/93, Feature 7NW-B/CR529 (SD No. 1) was strengthened by 5 and 6 rows of soil nails. The site formation works were completed in October 1994. Parts of this report, which is enclosed in Stage 3 Study Report for Feature 7NW-B/CR529 (SD2), are annexed in **Appendix D**.
- 3.6 The site formation record plans on the existing slopes and walls within the Application Site cannot be found.
- 3.7 According to the site inspections, the following existing (un-registered) retaining walls and slope were found within the boundary of Application Site. They were shown the Photo Index Plan (i.e. Drawing No.: PI-01) annexed in **Appendix A** and tabulated as below:

Existing Features	Location of Slopes and Walls
Wall No. 1 (about 6.5m high and 8m long) with about 85° face angle	Underneath the stairway at north-east side.
Wall No. 2 (about 2m high and 8m long) with about 80° face angle	Adjoining Feature No. 7NW-B/R261 and in front of Lot 1943 (House No. 41 & 42)
Wall No. 3 (about 3.3m high and 25m long) with about 80° face angle	Within Lot Boundary and North-west of DD6 Lot 1130 (Columbarium B)

4. GEOLOGY OF THE APPLICATION SITE

- 4.1 According to Sheet No. 7 (Sha Tin) of 1:20000 scale HGM 20 series Hong Kong Geological Survey Map, the solid geology of the Application Site is underlain by Jurassic to Cretaceous aged granodiorite. Part-plan of the map is enclosed in **Appendix E**.
- 4.2 Having retrieved the available ground investigation records from the Geotechnical Information Unit of, a number of borehole records within Feature No. 7NW-B/CR368 were found. The available ground investigation (GI) records included 2 no. boreholes, 6 no. core holes, and 3 nos. slope stripping. The retrieved GI records are presented in **Appendix F**.
- 4.3 Based on the available GI records, it is inferred that the Application Site likely comprises 3 layers of soil strata, i.e. the Fill, the Colluvium and the Completely Decomposed GRANODIORITE,

5. PROPOSED SITE FORMATION

- 5.1 According to the Master Layout Plan of the proposed scheme, the existing 2 (two) 2-storey columbarium buildings and 3 nos. unregistered retaining walls within and adjoining the Application Site are to remain unchanged in the foreseeable future.
- 5.2 This application is to seek the agreement from the Town Planning Board to rezone the Application Site from its present "V" zone to "G/IC (3)"; and its approval on the subsequent planning application to reflect the existing land use and functions of the entire existing Cheung Ha Temple Compound. As such, no significant site formation works will be proposed.
- 5.3 The stability of unregistered (existing) retaining walls in the vicinity of the Lot boundary should be assessed according to the current safety standards listed out in Geotechnical Manual for Slopes and Geoguide 1 (i.e. Factor of Safety (FOS) for Retaining Wall against Overturning and Sliding to be greater than 2.0 and 1.5 or others accepted by the Building Authority).
- 5.4 Having considered the Application Site situated at a hilly terrain, the overall stability of the existing and proposed site formation for the Application Site should be assessed under the development, which shall be greater than the required FOS of 1.4 or others accepted by the Building Authority.
- 5.5 In view of the slope preventive works for the whole Feature 7NW-B/CR529 were already carried out by the responsible party, the stability of this Feature would not cause adverse effect on the Application Site.
- 5.6 Feature 7NW-B/CR368 where is south of two 2-storey columbarium buildings had been strengthened by 6 to 8 rows of soil nails to improve its stability to the current safety standards.
- 5.7 Based on the site inspections on Feature 7NW-B/R90, R94 and R320, there were not observed improvement works on these three Features when the granite stone facing was found on Feature 7NW-B/R94 and R320; and the concrete facing was found on Feature 7NW-B/R90. All of these three Features are maintained by the Lands Department.
- 5.8 In view of these retaining walls are in the vicinity of the Application Site, the existing columbarium buildings should not affect or be affected by the stability of these walls adjacent to the Application Site. Otherwise, the close liaisons with the responsible party should be carried out to review the stability of these walls whether they are met the current safety standard under the implementation stage of the development.

- 5.9 If they are not met the current safety standard, the preventive measures to strengthen the stability of these Features should be designed and carried out under the implementation stage of the development.
- 5.10 Based on the latest MLP, the 1st straight section of existing stairway at the north-east to the Columbarium Buildings from the Kam Shan Road will be widen and upgraded to suit for the proposed development. A portion of Feature 7NW-B/R267 & Wall No. 1 underneath the existing stairway would be removed and reconstructed. The stability of existing feature and structure should not affect or be affected due to the proposed works for this development.
- 5.11 In view of the width of upper portion stairway can meet the requirements, the widening works for existing stairway would not be required, but the stability of a portion of Feature 7NW-B/R261 and Wall No. 2 and Feature 7NW-B/CR529 adjacent to both side of the stairway should be assessed whether their stability to achieve the current safety standard under the implementation stage of the development. The proposed works for this development should not affect or be affected the stability of existing features and structures.
- 5.12 An existing (unregistered) retaining wall (i.e. Wall No. 3) within the Application Site is situated at north-west of Columbarium B Building and the height and shape of the wall are similar to those of Feature 7NW-B/R90.
- 5.13 In view of this retaining wall is similar to Feature 7NW-B/R90 and within the Application Site, the maintenance responsible party for this Feature may be taken by the Applicant but should be identified under the implementation stage of the development. The close liaisons with the responsible party should be carried out to review the stability of this wall whether it is achieved the current safety standard.
- 5.14 Feature 7NW-B/R89 is situated below Feature 7NW-B/R90 at east of Columbarium A Building, the close liaisons with the owner of DD6 Lot 1943 should be carried out to review the stability of this wall weather it is achieved the current safety standard after the Rezoning Application is accepted and the development is under design stage.

5.15 When the stability of all features within **and adjacent to** Lot Boundary are not complying to the latest safety standards, the following table summarizes the proposed strengthening works for slopes and walls, but not limited to, subject to the later design stage:

Existing Features	Responsible Party	Proposed Strengthening Works
7NW-B/R90 (about 3.3m high)	Lands Dept.	Construction of Soil Nails with Skin Wall
7NW-B/R89 (about 3.5m high)	DD6 Lot 1943	Construction of Soil Nails with Skin Wall
7NW-B/R267 (about 6.5m high)	Lands Dept.	Re-construction of Reinforced Concrete Stairway
7NW-B/R261 (about 3m high)	DD6 Lot 1943	Construction of Soil Nails with Skin Wall
Wall No. 1 (about 6.5m high)	The owner of Cheung Ha Temple Limited	Re-construction of Reinforced Concrete Stairway
Wall No. 2 (about 2m high)	DD6 Lot 1943	Construction of Soil Nails with Skin Wall
Wall No. 3 (about 3.3m high)	To be identified in the implementation stage	Construction of Soil Nails with Skin Wall

5.16 The proposed site formation plan and sections for this development are presented in **Appendix G**.

5.17 Based on the proposed site formation, the stability of all existing retaining walls and slope features within the Lot and adjoining the Lot boundary should be reviewed and identified in later design stage; and their stabilities should be complying with the latest design safety standards.

5.18 Otherwise, the proposed site formation and strengthening works for all of slope and wall features should be submitted to the Building Authority for approval in order to be not affected or affect the stability of the existing structures or features and proposed structures.

5.19 Apart from the proposed site formation, the design of excavation and lateral support works for foundation works would not be required in this stage. If it is required in later stage, the proposed ELS works for any geotechnical content for the design of this development will be submitted to the Building Authority for approval in later design stage.

5.20 All of the proposed site formation works for this development would not affect or be affected by the adjacent existing slopes and structures.

6. PROPOSED FOUNDATION TYPES

- 6.1 In consideration of no additional structural building is proposed in this stage, types of foundation are not recommended.
- 6.2 If any structure is proposed in later stage, the foundation load of the proposed structure should not affect or be affected the stability of the existing slope and wall features within and adjoining to the Lot Boundary.
- 6.3 If and when necessary, the slope/wall improvement works (i.e. soil nailing works, etc.) should be included in the proposed site formation work in future.

7. CONCLUSION AND RECOMMENDATION

- 7.1 No major geotechnical problems are identified during walkover site inspections.
- 7.2 Based on the latest Master Layout Plan, significant site formation works would not be required when the existing buildings and the existing retaining walls with the retained platforms within and adjoining the Application Site remain unchanged in the foreseeable future. The proposed site formation plan and sections annexed in **Appendix G** refer.
- 7.3 The proposed site formation works should include the stability assessments of the existing retaining walls and slopes and the overall stability of the existing and proposed site formation whether their stability to be achieved the current design safety standards, which should not affect and be affected by the proposed development.
- 7.4 Otherwise, the strengthening works for the existing retaining walls and slopes within and adjoining the Application Site should be proposed to improve their stability to be achieved the current design safety standards.
- 7.5 Based on the above considerations and preliminary geotechnical assessment, the proposed development for the Application Site is considered to be geotechnically feasible.
- 7.6 To implement this development, the following geotechnical engineering works are recommended for further studies and detailed designs:
- (a) A detailed site investigation should be carried out at the later design stage to reveal the geological profile, the groundwater table, geotechnical engineering properties and the engineering details of existing retaining walls and slopes within and adjoining the Application Site. The proposed ground investigation works also shown in the proposed site formation plan annexed in **Appendix G** could be taken into consideration.
 - (b) If and when necessary, an additional topographic survey to identify the extent of the existing slopes and walls within and adjacent to the Application Site should be carried out for stability assessment of the existing slopes and walls or geotechnical features.
 - (c) To ensure the proposed site formation for existing features within or adjoining the Lot boundary that should not affect or be affected the proposed development, the further liaison with the maintenance responsible parties and stability studies on following features should be carried out and presented in the following table:

Existing Features	Responsible Party	Further Studies to be required
7NW-B/R90 (about 3.3m high)	Lands Dept.	Stability Review of Existing Masonry Wall against Overturning and Sliding
7NW-B/R89 (about 3.5m high)	DD6 Lot 1943	Stability Review of Existing Masonry Wall against Overturning and Sliding
7NW-B/R267 (about 6.5m high)	Lands Dept.	Stability Review of Existing retaining Wall against Overturning and Sliding
7NW-B/R261 (about 3m high)	DD6 Lot 1943	Stability Review of Existing Masonry Wall against Overturning and Sliding
Wall No. 1 (about 6.5m high)	The owner of Cheung Ha Temple Limited	Stability Review of Existing retaining wall against Overturning and Sliding
Wall No. 2 (about 2m high)	DD6 Lot 1943	Stability Review of Existing Masonry Wall against Overturning and Sliding
Wall No. 3 (about 3.3m high)	To be identified in later stage	Stability Review of Existing Masonry Wall against Overturning and Sliding

- (d) When the results of the stability analyses for the above features are not achieved the current safety standards, the strengthening works for those features should be included in the proposed site formation, which will be submitted to the Building Authority for approval under the implementation stage of the development.
- (e) The following table summarizes the proposed strengthening works for the following existing features but not limited to the followings, subject to the later design stage for details:

Existing Features	Proposed Strengthening Works
7NW-B/R90 (about 3.3m high)	Construction of Soil Nails with Skin Wall
7NW-B/R89 (about 3.5m high)	Construction of Soil Nails with Skin Wall
7NW-B/R267 (about 6.5m high)	Re-construction of Reinforced Concrete Stairway
7NW-B/R261 (about 3m high)	Construction of Soil Nails with Skin Wall
Wall No. 1 (about 6.5m high)	Re-construction of Reinforced Concrete Stairway
Wall No. 2 (about 2m high)	Construction of Soil Nails with Skin Wall
Wall No. 3 (about 3.3m high)	Construction of Soil Nails with Skin Wall

- (f) All the proposed site formation, foundation or geotechnical works for this development should not affect or be affected by the adjacent access road, slopes and structures.
- (g) The proposed stormwater drainage works for this development should comply with Drainage Services Department's requirements.

8. REFERENCES

- 8.1 Slope and Wall Records retrieved from Slope Information System (SIS) operated by Geotechnical Engineering Office, Civil Engineering and Development Department.
- 8.2 Slope and Wall Reports obtained from Slope Maintenance Responsibility Information System (SMRIS) maintained by Lands Department.
- 8.3 Geotechnical Control Office (1986). Hong Kong Geological Survey Sheet 7 – Sha Tin. Scale 1:20,000. First Edition.
- 8.4 Geotechnical Engineering Office (1993). Geoguide 1: Guide to Retaining Wall Design, Second Edition.
- 8.5 Geotechnical Engineering Office (1994). Geotechnical Manual for Slopes, Second edition.
- 8.6 Works Bureau (April 1999). Geotechnical Manual for Slopes – Guidance on Interpretation and Updating. WBTC. 13/99.
- 8.7 GEO (2003). Stage 3 Study Report (S3R 115/2003) Slope 7NW-B/CR368 South of No. 43-45 Kam Shan Village, Tai Po.
- 8.8 GEO (2013). Stage 3 Study Report (S3R 40/2013) Feature No. 7NW-B/CR529 Nos. 43-45 Kam Shan Road, Tai Po.

FIGURES

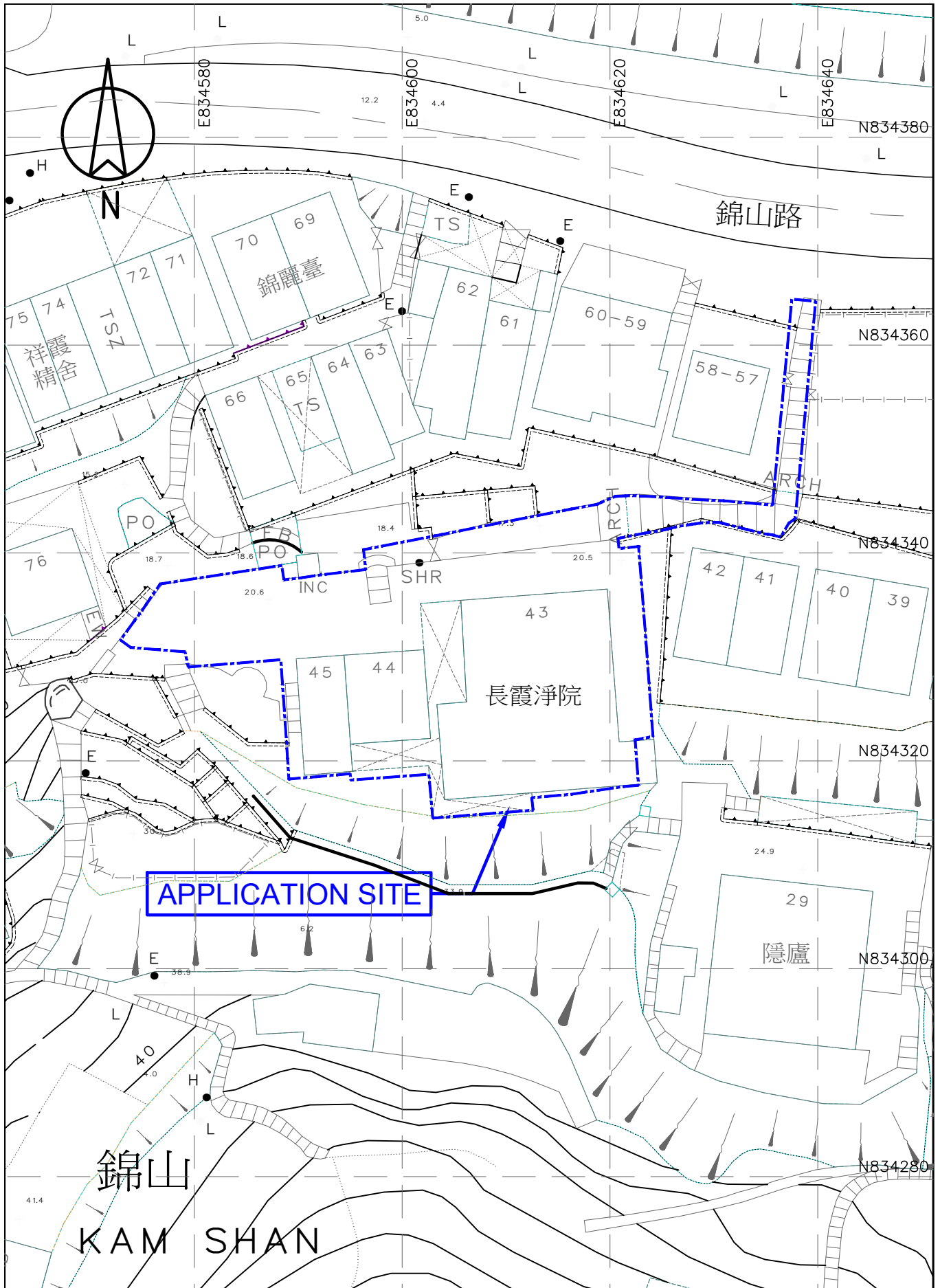
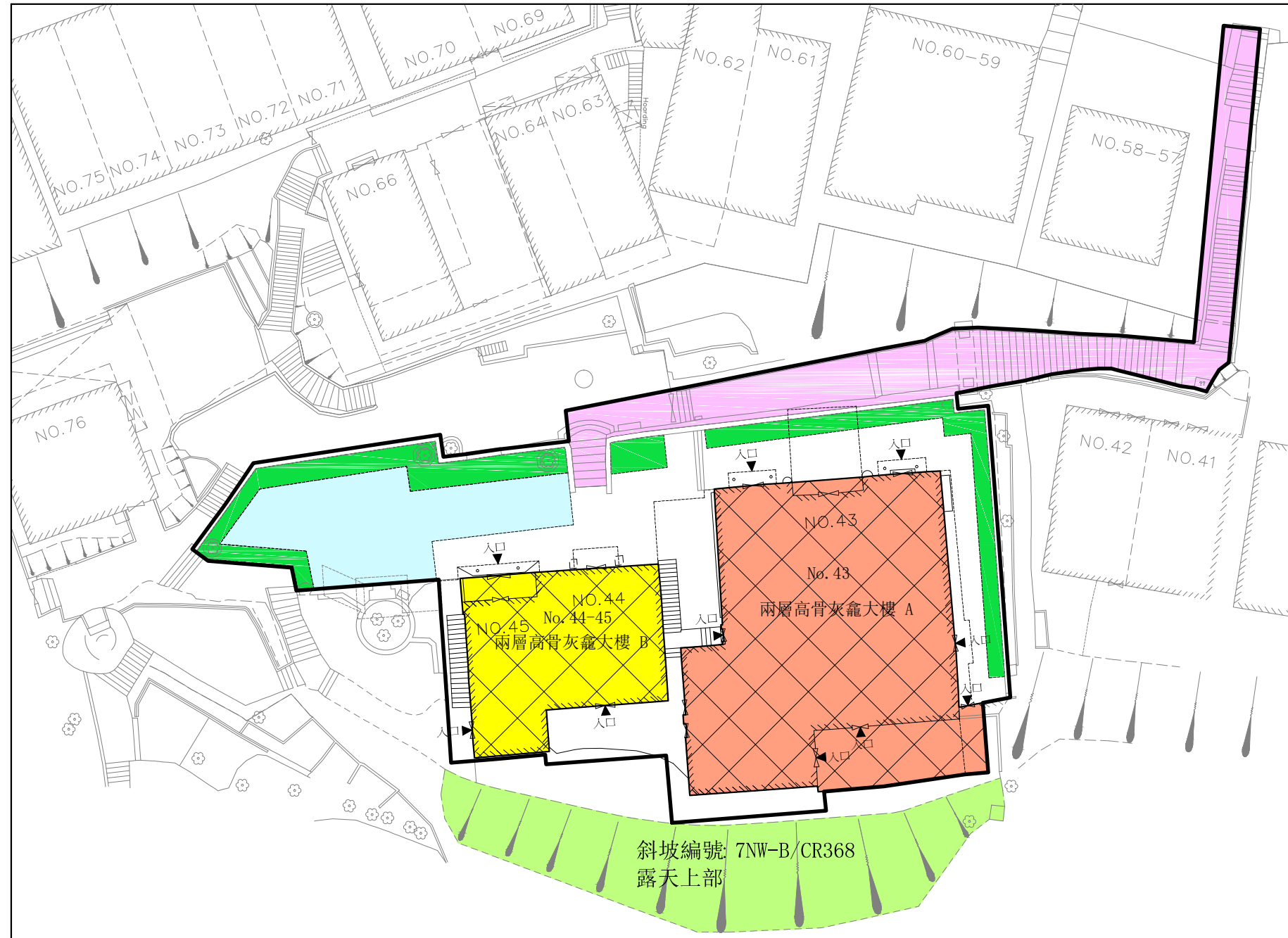


FIGURE 1 LOCATION OF APPLICATION SITE

建議布局圖
就截算前骨灰安置所的牌照申請



圖例：

	場地界線
	可核證建築物 (符合《私營骨灰安置所條例》附表 2 第 3(1)(b) 條規定)
	可就截算前骨灰安置所核證的構築物 (符合《私營骨灰安置所條例》附表 2 第 4(3) 條規定)
	斜坡範圍
必要配套设施	
	行人通道/行人路徑/出入口及樓梯
	種植區
	等候區

(A3 圖紙 1:300 比例)
建議布局圖 (圖則編號: 002)

骨灰安置所名稱：佛教長霞淨院
地址：新界大埔錦山村 43-45號,丈量約份第6約地段第 1087 號及第 1130 號及毗鄰政府土地

27/02/2023
日期 (日/月/年)

潘冠球
獲授權人士 姓名及簽署

27/02/2023
日期 (日/月/年)

邵冠開
認可人士/註冊結構工程師 姓名及簽署
[認可人士/註冊結構工程師指根據《建築物條例》(第 123 章)第 3 條註冊的人士]

C495956(4)
香港身份證號碼

註冊編號#： AP(E) 98/82 RSE 98/82 註冊有效期滿日期#： 31/12/2025

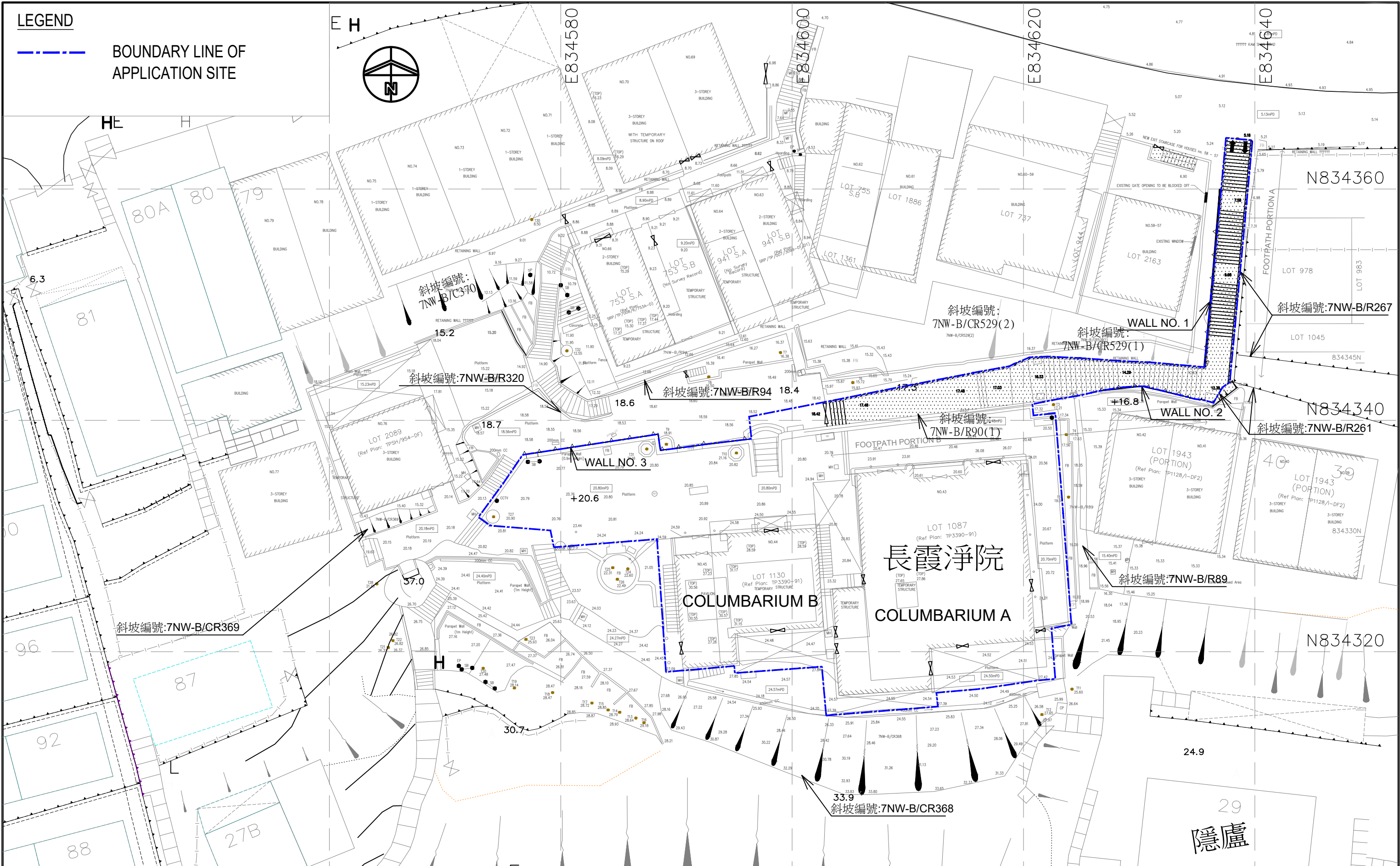
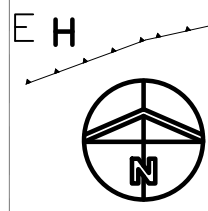
法人團體/合夥* 印章(如適用)

須與《建築物條例》(第123章) 第3條所指的名冊相符
* 刪去不適用者

Figure 2 Latest Master Layout Plan

LEGEND

 **BOUNDARY LINE OF APPLICATION SITE**



PROJECT :
 SECTION 12A REZONING APPLICATION FROM "V" TO "G/IC(3)" FOR PRE-CUT OFF COLUMBARIUMS AT BUDDHIST CHEUNG HA TEMPLE,
 LOT NOS. 1087 AND 1130 IN D.D. 6 AND ADJOINING GOVERNMENT LAND, TAI PO, NEW TERRITORIES

CLIENT : BUDDHIST CHEUNG HA TEMPLE		PROJECT NO. J1926/B	
DRAWING TITLE : MLP WITH FEATURE LOCATIONS		APPROVED BY HC	DATE 29/04/2024
DRAWING NO. : FIGURE 3		REVISION B	SCALE 1 : 300
		DESIGNED BY PH	DRAWN BY AM

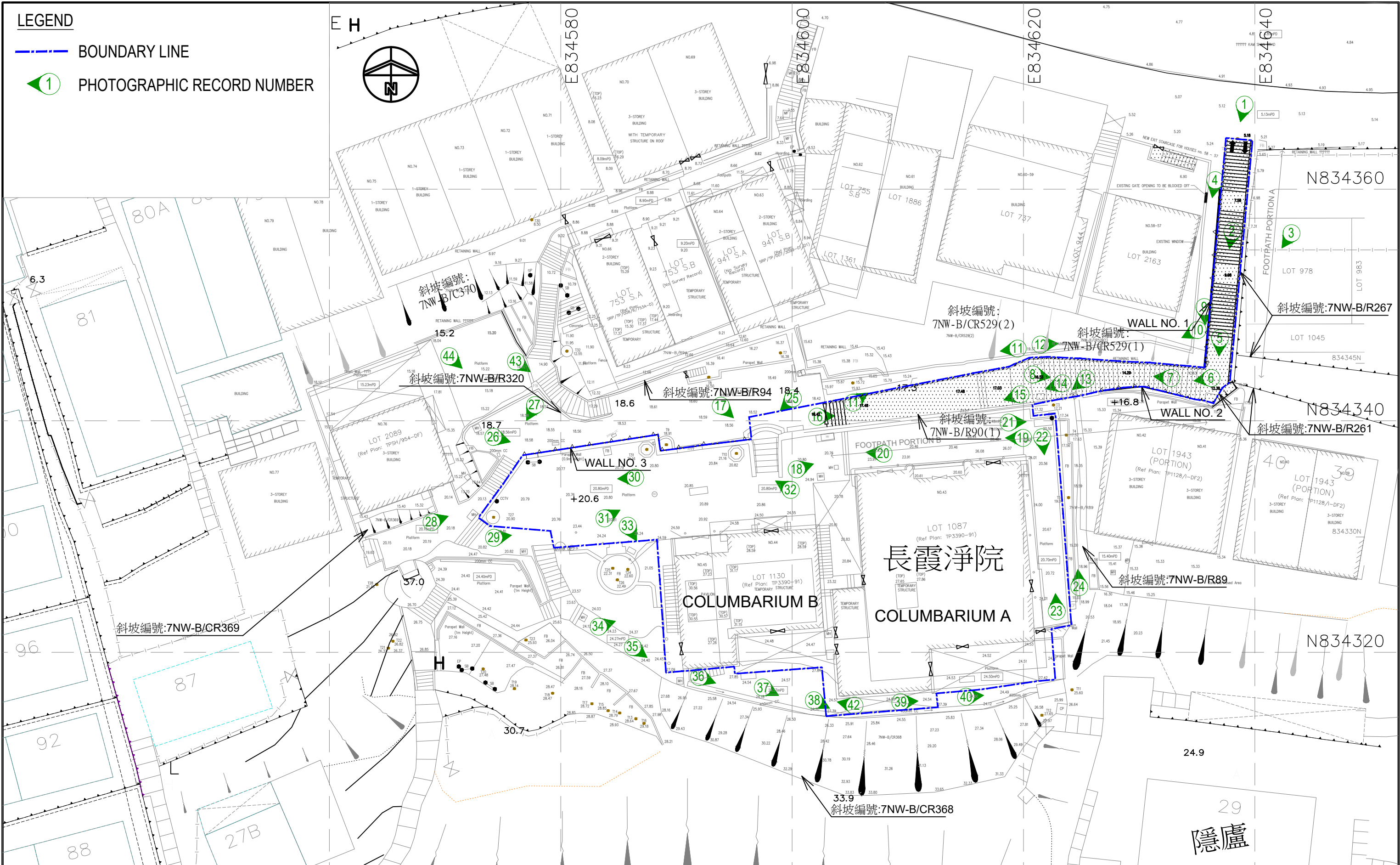
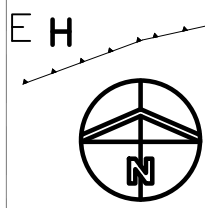
APPENDIX A

PHOTOGRAPHIC RECORDS

LEGEND

 BOUNDARY LINE

 PHOTOGRAPHIC RECORD NUMBER



PROJECT :
 SECTION 12A REZONING APPLICATION FROM "V" TO "G/IC(3)" FOR PRE-CUT OFF COLUMBARIUMS AT BUDDHIST CHEUNG HA TEMPLE,
 LOT NOS. 1087 AND 1130 IN D.D. 6 AND ADJOINING GOVERNMENT LAND, TAI PO, NEW TERRITORIES

CLIENT : BUDDHIST CHEUNG HA TEMPLE		PROJECT NO. J1926/B	
DRAWING TITLE : PHOTO INDEX PLAN		APPROVED BY HC	DATE 29/04/2024
DRAWING NO : PI-01		REVISION B	SCALE 1 : 300
		DESIGNED BY PH	DRAWN BY AM



Plate No. 1

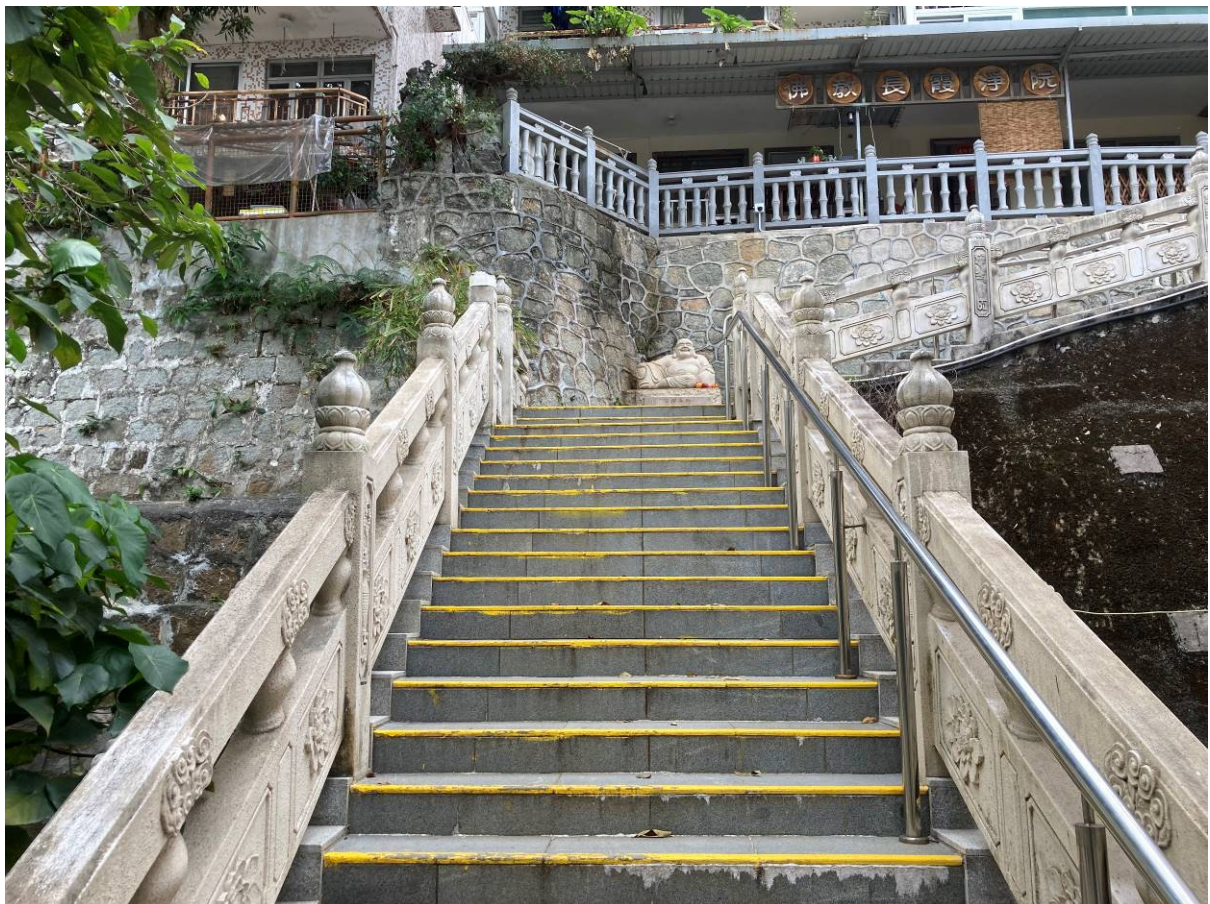


Plate No. 2



Plate No. 3

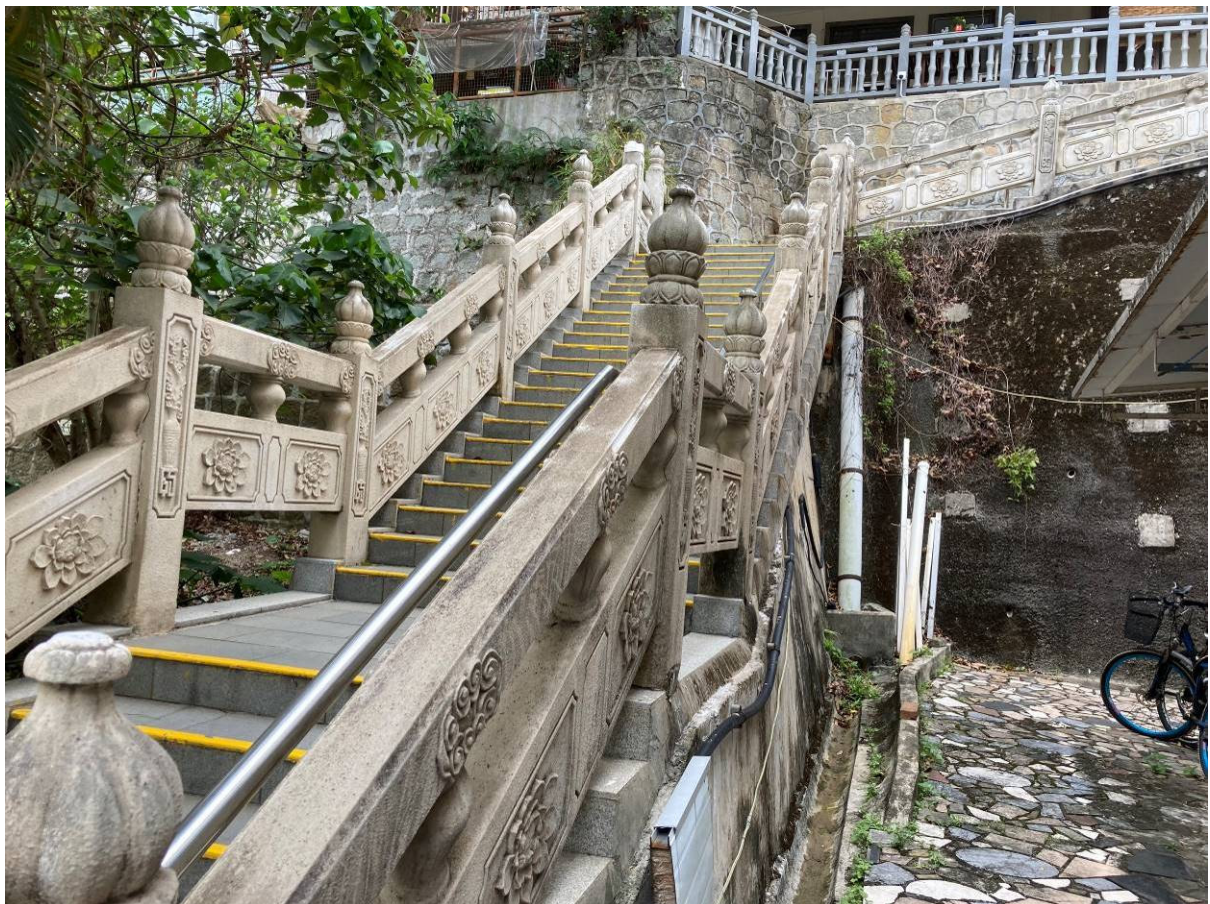


Plate No. 4



Plate No. 5

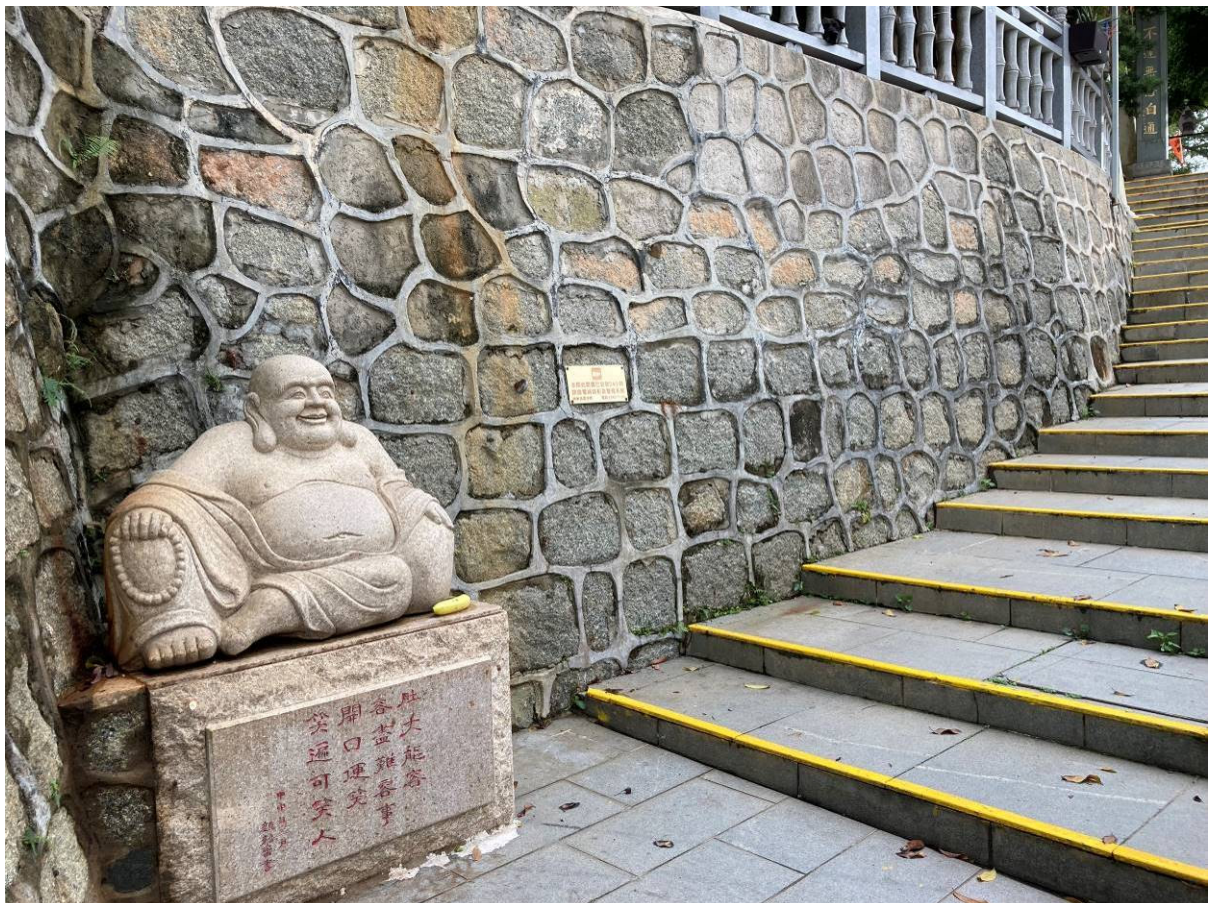


Plate No. 6



Plate No. 7

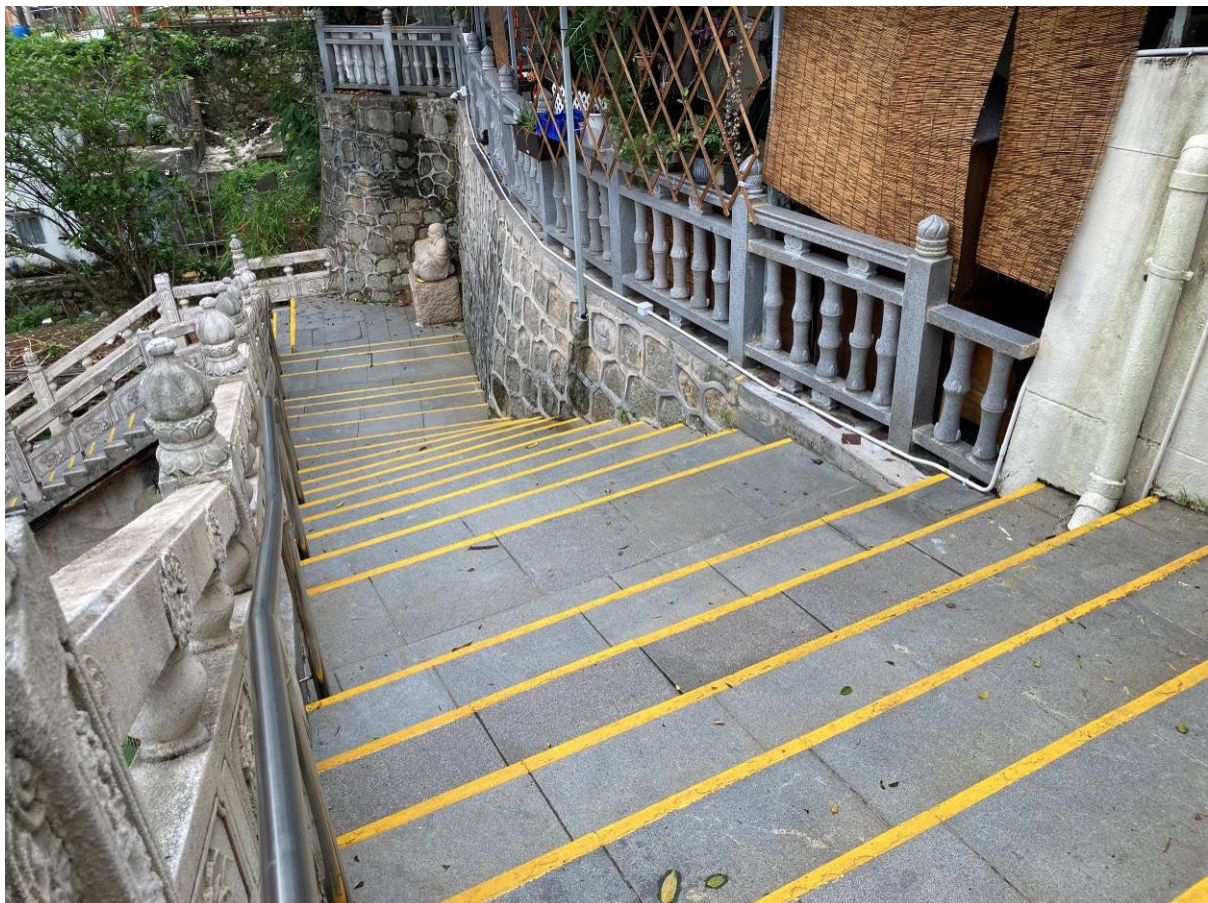


Plate No. 8

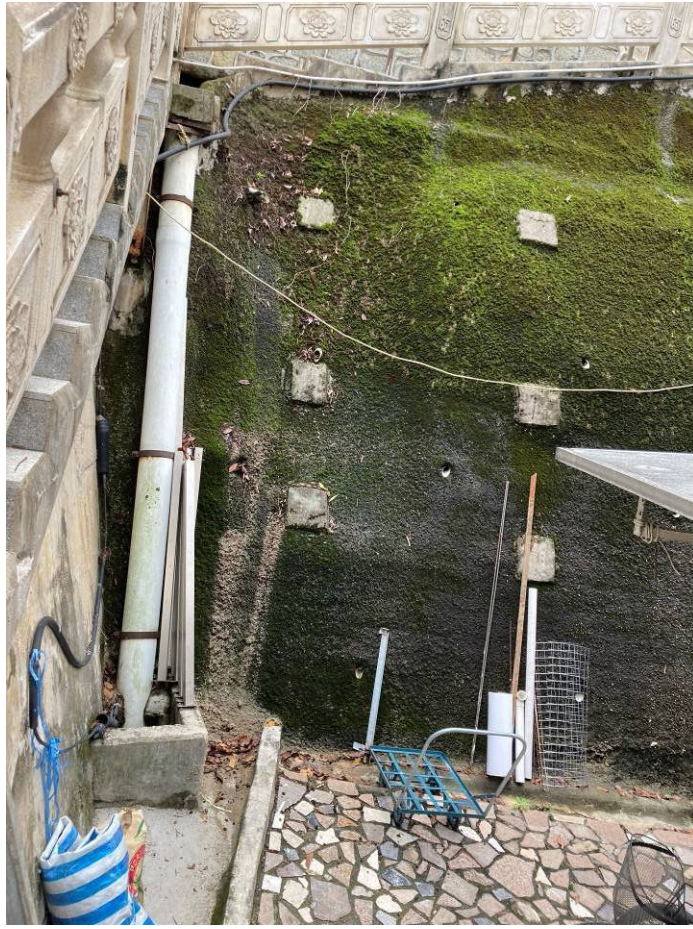


Plate No. 9



Plate No. 10



Plate No. 11

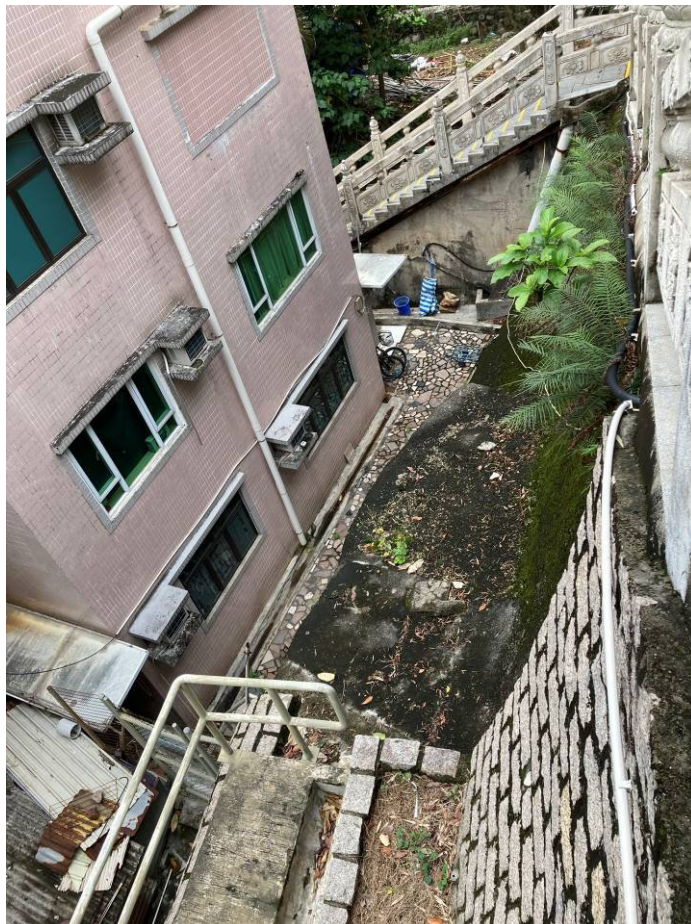


Plate No. 12



Plate No. 13



Plate No. 14



Plate No. 15



Plate No. 16



Plate No. 17



Plate No. 18



Plate No. 19

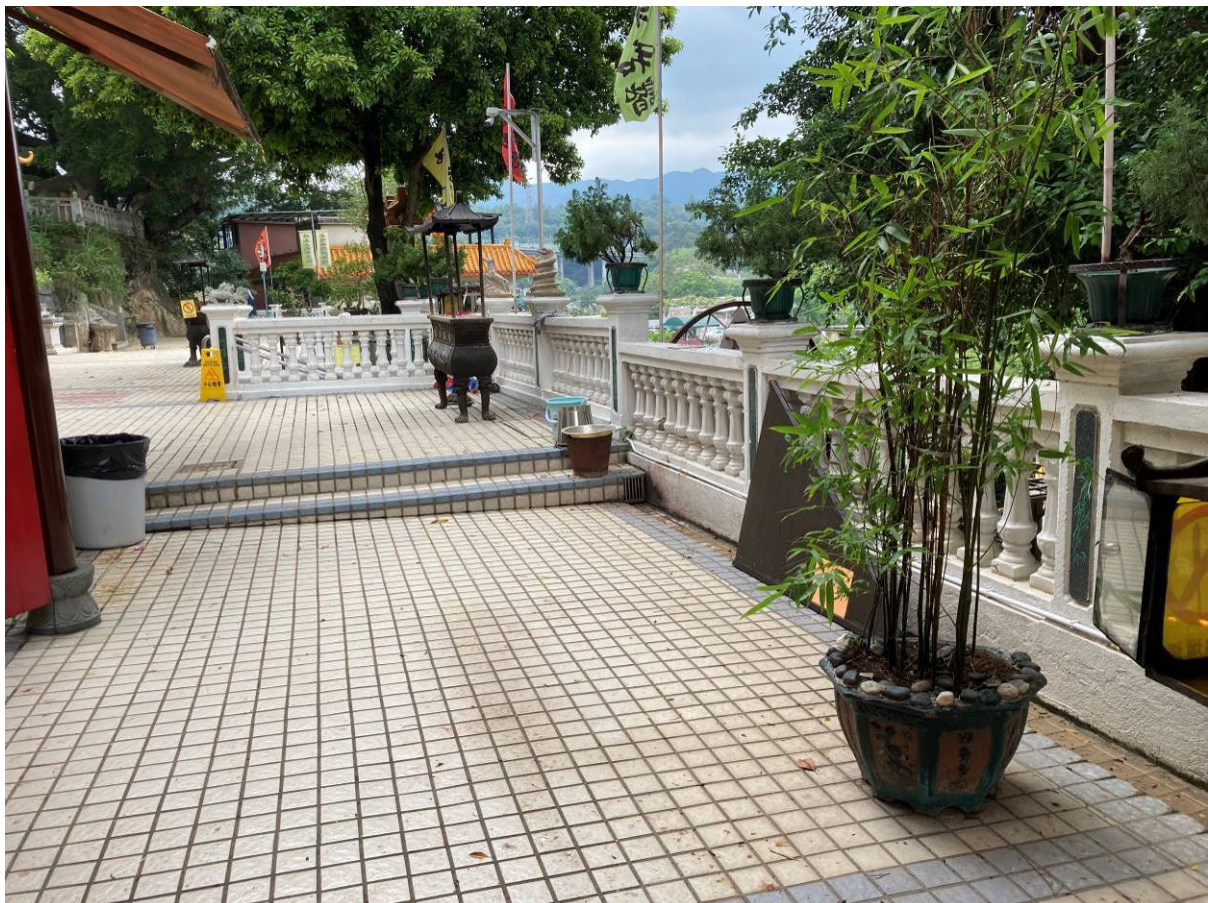


Plate No. 20



Plate No. 21



Plate No. 22



Plate No. 23



Plate No. 24



Plate No. 25



Plate No. 26



Plate No. 27



Plate No. 28



Plate No. 29

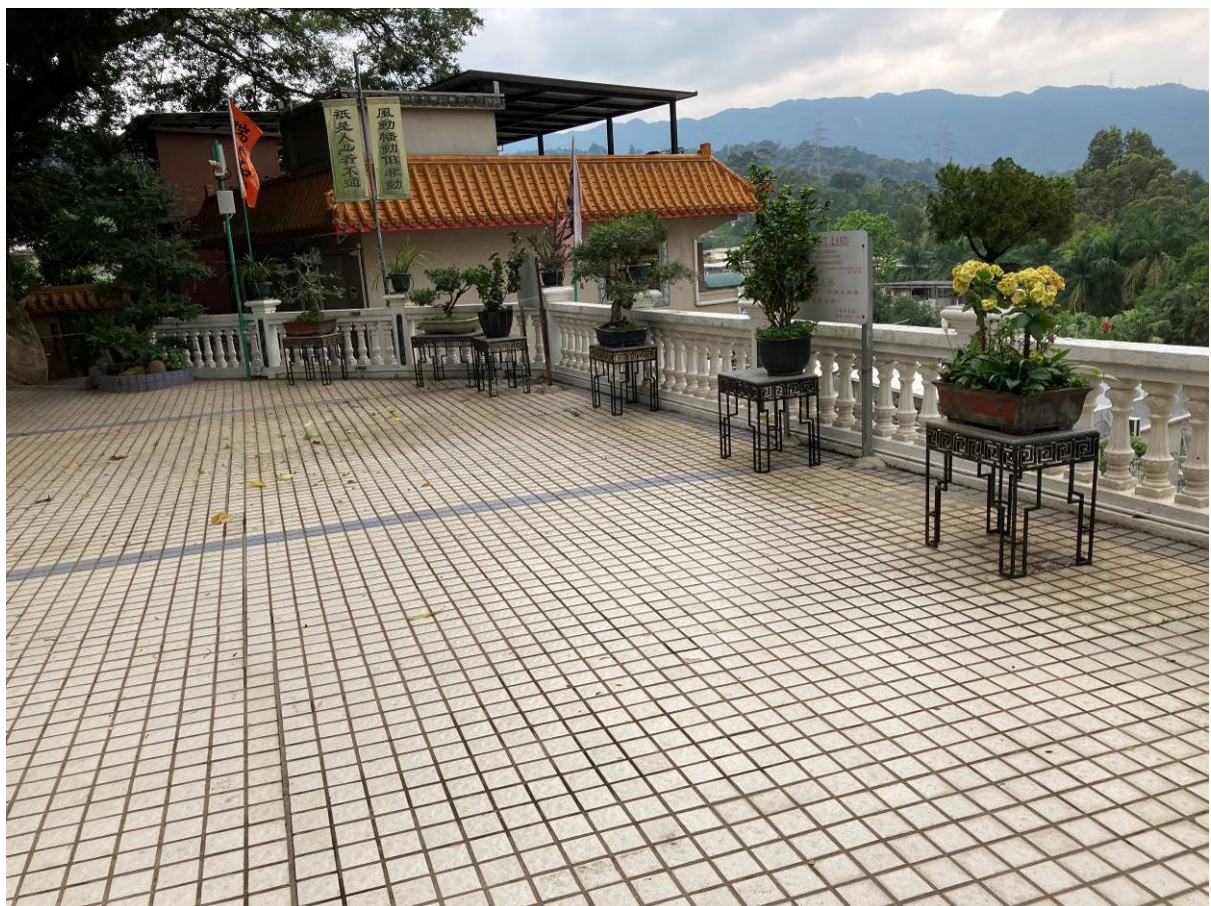


Plate No. 30



Plate No. 31



Plate No. 32



Plate No. 33



Plate No. 34



Plate No. 35



Plate No. 36



Plate No. 37



Plate No. 38



Plate No. 39



Plate No. 40



Plate No. 41



Plate No. 42



Plate No. 43



Plate No. 44

APPENDIX B

SLOPE AND WALL RECORDS

RETRIEVED FROM SIS

BASIC INFORMATION

Location: WEST OF NO. 42 KAM SHAN TSUEN, TAI PO
Registration Date: 19-11-1997
Ranking Score (NPRS): 3708 (Notional)
Date of Formation: post-1977
Date of Construction/ Modification:
Data Source: SIRST
Approximate Coordinates: Easting : 834626 Northing : 834334

CONSEQUENCE-TO-LIFE CATEGORY

Facility at Crest: Densely-used playground
Distance of Facility from Crest (m): 0
Facility at Toe: Residential building
Distance of Facility from Toe (m): 0.5
Consequence-to-life Category: 1
Remarks: N/A

SLOPE PART

N/A

WALL PART

(1) Max. Height (m): 3.5 Length (m): 15 Face Angle (deg): 75

MAINTENANCE RESPONSIBILITY

(1) Sub Div.: 0 Private Feature Party: DD6 Lot1943 Agent: N/A Land Cat.: 5a Reason Code: 43 MR Endorsement Date: 05-01-1998

DETAILS OF SLOPE / RETAINING WALL

Date of Inspection: 14-03-1997
Data Source: SIRST
Slope Part Drainage: N/A
Wall Part Drainage: (1) Position: Toe Size(mm): 225

SLOPE PART

N/A

WALL PART

Wall Part (1)
Type of Wall: Wall Material: Concrete Wall Location: Retaining wall with level platform
Berm: No. of Berms: N/A Min. Berm Width (m): N/A
Weepholes: Size (mm): 65 Spacing (m): 1.2

SERVICES

N/A

CHECKING STATUS INFORMATION

N/A

BACKGROUND INFORMATION

GIU Cell Ref.: 7NW9A7
Map Sheet Reference (1:1000): 7NW- 9A
Aerial Photos: A27202-3 (1991),
Nearest Rainguage Station (Station Number): Booster Pumping Station, Hong Lok Yuen(N35)
Data Collected On: 14-03-1997
Date of Construction, Subsequent Modification and Demolition: Modification: Constructed Before: 1991 After: 1988
Related Reports/Files or Documents: File/Report: LWC Ref. No.: GC 4/1/2-5 (6) f3A, 4/1/2-3 f19, pt VI
File/Report: LWC Ref. No.: GC 4/1/2-5 (6) f3A, 4/1/2-3 f19, pt VI
Remarks: N/A
Follow Up Actions: N/A
DH-Order (To Be Confirmed with Buildings Department): None
Advisory Letter (To Be Confirmed with Buildings Department): None
LPMIS: None

ENHANCED MAINTENANCE INFORMATION

From Maintenance Department: (Last Updated Date: 25/09/2023)

STAGE 1 STUDY REPORT

Inspected On:

Weather:

District: ME

Section No: 1-1

Height(m):

Type of Toe Facility: Residential building

Distance from Toe(m): 0.5

Type of Crest Facility: Densely-used playground

Distance from Crest(m): 0

Consequence Category:

Engineering Judgement:

Section No: 2-2

Type of Toe Facility:

Distance from Toe(m):

Type of Crest Facility:

Distance from Crest(m):

Consequence Category:

Engineering Judgement:

Sign of Seepage:

Criterion A satisfied:

Sign of Distress:

Criterion D satisfied:

Non-routine maintenance required:

Note:

Masonry wall/Masonry facing:

Note:

Consequence category (for critical section):

Observations: N/A

Emergency Action Required:

Action By: N/A

ACTION TO INITIATE PREVENTIVE WORKS

Criterion A/Criterion D: N/A

Action By: N/A

Further Study:

Action By: N/A

OTHER EXTERNAL ACTION

Check / repair Services:

Action By: N/A

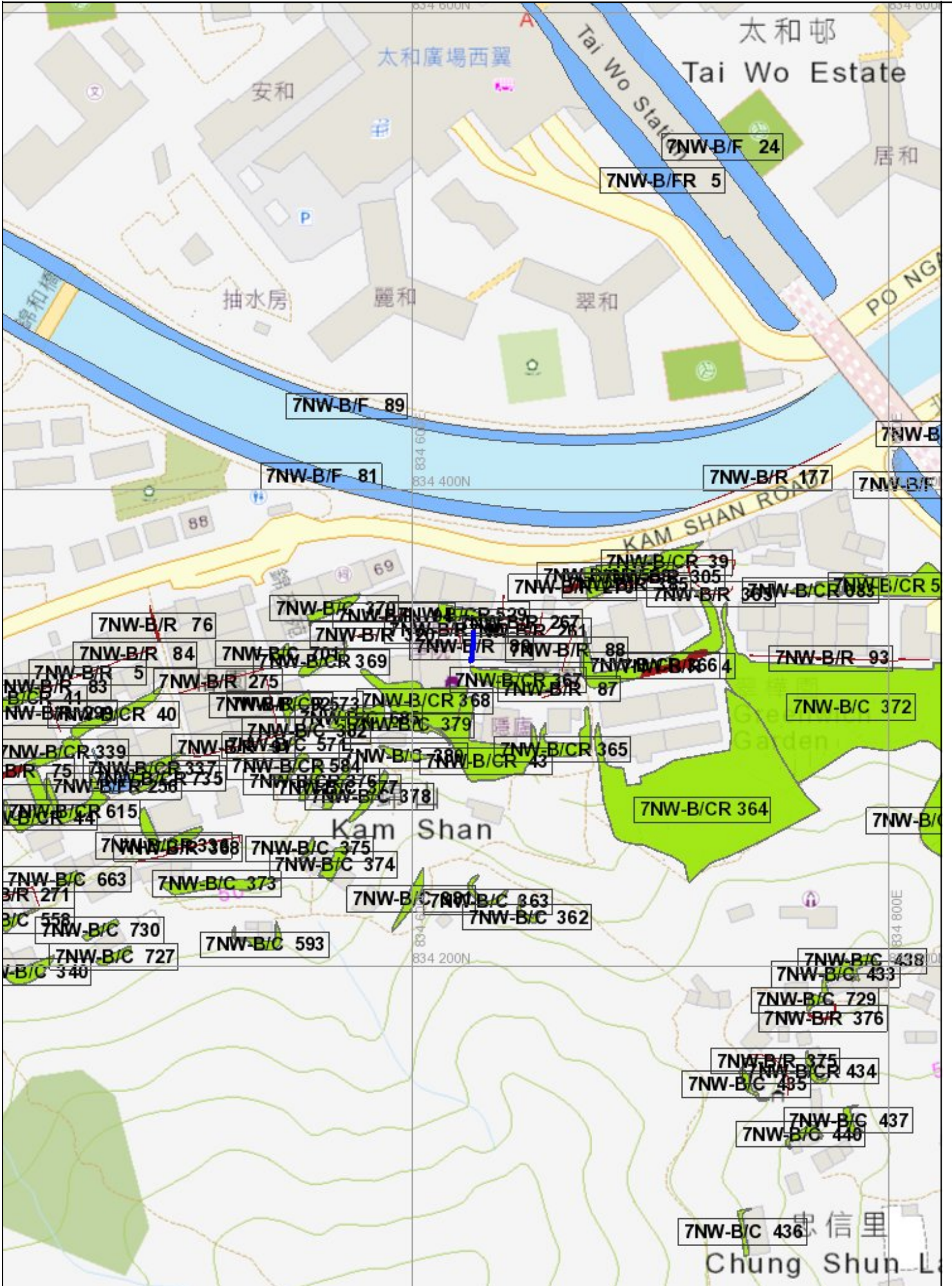


Non-routine Maintenance:

Action By: N/A

PHOTO







BASIC INFORMATION

Location: North of 43-45, Kam Shan Village, Tai Po
 Registration Date: 19-11-1997
 Ranking Score (NPRS): 0 (LPMit)
 Date of Formation: pre-1977
 Date of Construction/ Modification:
 Data Source: EI
 Approximate Coordinates: Easting : 834613 Northing : 834341

CONSEQUENCE-TO-LIFE CATEGORY

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

SLOPE PART

N/A

WALL PART

(1) Max. Height (m): 3.3 Length (m): 16 Face Angle (deg): 82

MAINTENANCE RESPONSIBILITY

(1) Sub Div.: 1 Mixed Feature Party: Lands D Agent: Lands D Land Cat.: 5b(vi) Reason Code: 62,92 MR Endorsement Date: 15-03-2001
 (2) Sub Div.: 2 Mixed Feature Party: DD6 LOT1087 Agent: N/A Land Cat.: 1 Reason Code: 1 MR Endorsement Date: 15-03-2001

DETAILS OF SLOPE / RETAINING WALL

Date of Inspection: 01-02-2001
 Data Source: EI
 Slope Part Drainage: N/A
 Wall Part Drainage: N/A

SLOPE PART

N/A

WALL PART

Wall Part (1)

Type of Wall: Wall Material: Masonry Wall Location: N/A
Berm: No. of Berms: N/A Min. Berm Width (m): N/A
Weepholes: Size (mm): 95 Spacing (m): 2.2

SERVICES

(1) Utilities Type: Water Main Size(mm): 25 Location: On slope Remark: N/A

CHECKING STATUS INFORMATION

N/A

BACKGROUND INFORMATION

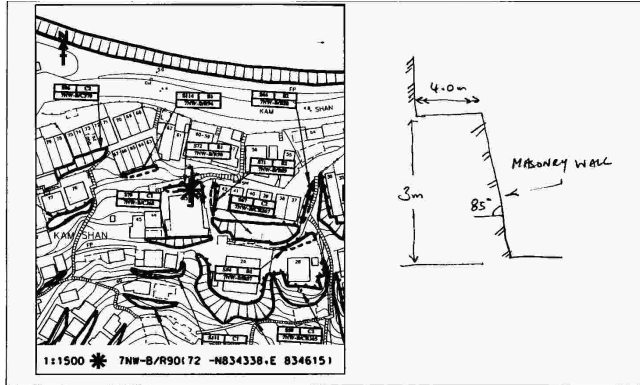
GIU Cell Ref.: 7NW9A7
Map Sheet Reference (1:1000): 7NW- 9A
Aerial Photos: Y01918-9 (1949),
Nearest Rainguage Station (Station Number): Booster Pumping Station, Hong Lok Yuen(N35)
Data Collected On: 01-02-2001
Date of Construction, Subsequent Modification and Demolition: Modification: Constructed Before: 1978 After: N/A
Related Reports/Files or Documents: File/Report: LWC Ref. No.: GC 4/1/2-5 (6) f3A, 4/1/2-3 f19, pt VI
File/Report: LWC Ref. No.: GC 4/1/2-5 (6) f3A, 4/1/2-3 f19, pt VI
Remarks: N/A
Follow Up Actions: N/A
DH-Order (To Be Confirmed with Buildings Department): None
Advisory Letter (To Be Confirmed with Buildings Department): None
LPMIS: None

ENHANCED MAINTENANCE INFORMATION

From Maintenance Department: (Last Updated Date: 25/09/2023)

STAGE 1 STUDY REPORT

Inspected On: 07-03-1997
 Weather: Mainly Fine
 District: ME



Section No: 1-1
 Height(m): H1 : 3 , H2 : 3
 Type of Toe Facility: Road/footpath with low traffic density
 Distance from Toe(m): 0
 Type of Crest Facility: Temple
 Distance from Crest(m): 1
 Consequence Category: 1
 Engineering Judgement: P
 Section No: 2-2
 Type of Toe Facility:
 Distance from Toe(m):
 Type of Crest Facility:
 Distance from Crest(m):
 Consequence Category: 1
 Engineering Judgement: P
 Sign of Seepage: Slope : N/A
 Wall : No sign of seepage
 Criterion A satisfied: N
 Sign of Distress: Slope : N/A
 Wall : N/A
 Criterion D satisfied: N
 Non-routine maintenance required: N
 Note: N/A
 Masonry wall/Masonry facing: Y
 Note: N/A
 Consequence category (for critical section): 1
 Observations: N/A
 Emergency Action Required: N
 Action By: N/A



ACTION TO INITIATE PREVENTIVE WORKS

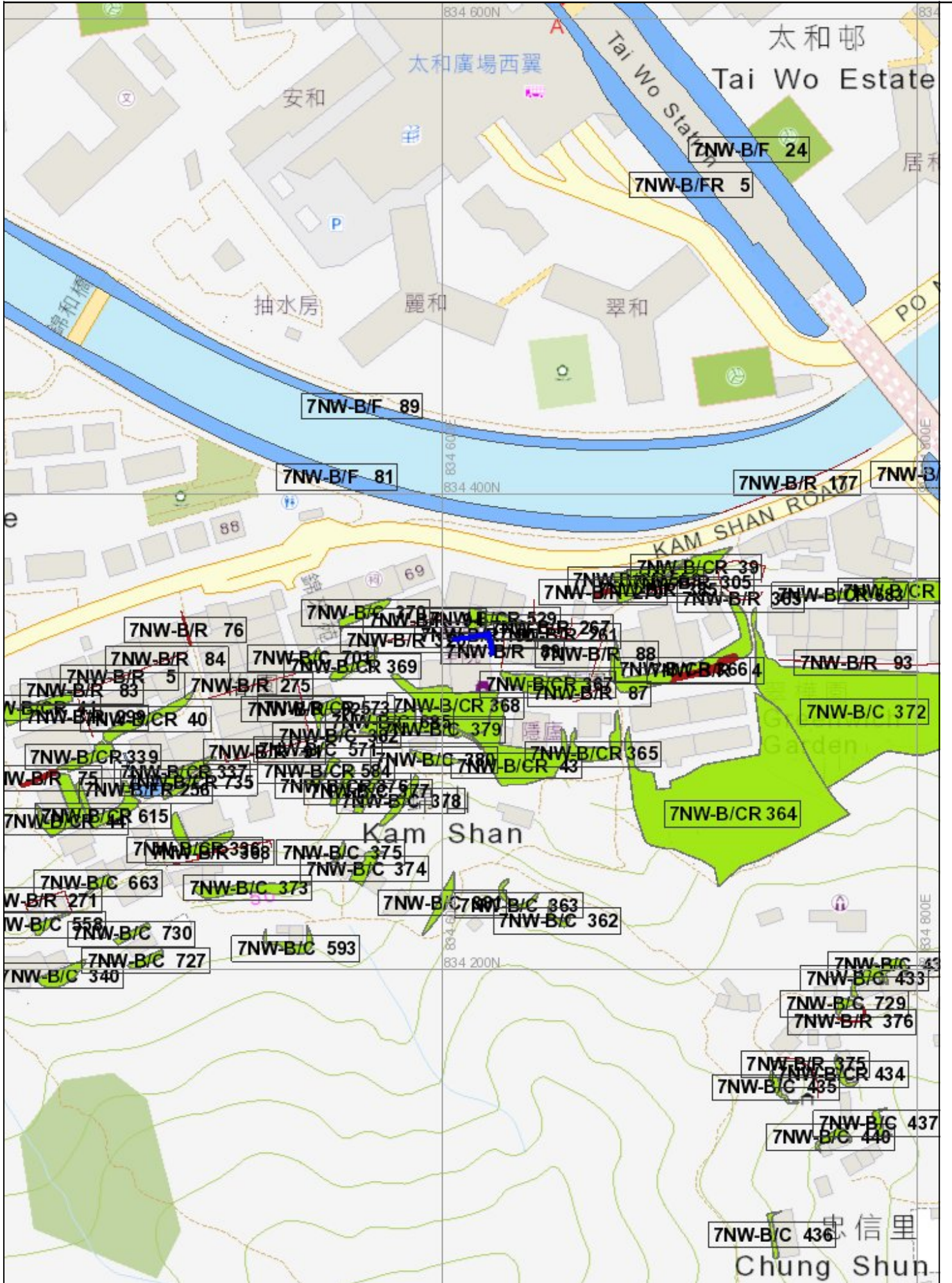
Criterion A/Criterion D:	N/A
Action By:	N/A
Further Study:	Y
Action By:	Mixed

OTHER EXTERNAL ACTION

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

PHOTO







BASIC INFORMATION

Location: South of Kam Bick Villa No. 66, Kam Shan Estate, Tai Po
 Registration Date: 19-11-1997
 Ranking Score (NPRS): 18 (LPMit)
 Date of Formation: pre-1977
 Date of Construction/ Modification:
 Data Source: EI
 Approximate Coordinates: Easting : 834592 Northing : 834347

CONSEQUENCE-TO-LIFE CATEGORY

Facility at Crest: Lightly-used open area/facilities
 Distance of Facility from Crest (m): 0
 Facility at Toe: Residential building
 Distance of Facility from Toe (m): 0
 Consequence-to-life Category: 1
 Remarks: N/A

SLOPE PART

N/A

WALL PART

(1) Max. Height (m): 6.1 Length (m): 18 Face Angle (deg): 85

MAINTENANCE RESPONSIBILITY

(1) Sub Div.: 0 Government Feature Party: Lands D Agent: Lands D Land Cat.: 5b(vi) Reason Code: 62 MR Endorsement Date: 08-05-2001

DETAILS OF SLOPE / RETAINING WALL

Date of Inspection: 01-02-2001
 Data Source: EI
 Slope Part Drainage: N/A
 Wall Part Drainage: (1) Position: Crest Size(mm): 225

SLOPE PART

N/A

WALL PART

Wall Part (1)
Type of Wall: Wall Material: Others Wall Location: N/A
Berm: No. of Berms: 1 Min. Berm Width (m): 0.3
Weepholes: Size (mm): 65 Spacing (m): 1.2

SERVICES

N/A

CHECKING STATUS INFORMATION

N/A

BACKGROUND INFORMATION

GIU Cell Ref.: 7NW9A7
Map Sheet Reference (1:1000): 7NW- 9A
Aerial Photos: Y13573/4 (1967),
Nearest Rainguage Station (Station Number): Booster Pumping Station, Hong Lok Yuen(N35)
Data Collected On: 01-02-2001
Date of Construction, Subsequent Modification and Demolition: Modification: Constructed Before: 1978 After: N/A
Related Reports/Files or Documents: File/Report: LWC Ref. No.: GC 4/1/2-5(6) f(3(A)), GC 4/1/2-3 f(19) pt. VI
File/Report: LWC Ref. No.: GC 4/1/2-5(6) f(3(A)), GC 4/1/2-3 f(19) pt. VI
Remarks: N/A
Follow Up Actions: N/A
DH-Order (To Be Confirmed with Buildings Department): None
Advisory Letter (To Be Confirmed with Buildings Department): None
LPMIS: None

ENHANCED MAINTENANCE INFORMATION

From Maintenance Department: (Last Updated Date: 02/04/2024)

Upgraded by:

Prescriptive Design Using GEO Report No. 56: N/A

Non-prescriptive Design Including Conventional Design: N/A

Improved by:

Type 1 / Type 2 Prescriptive Measures: Yes

Type 3 Prescriptive Measures (not up to upgrading standard): Yes

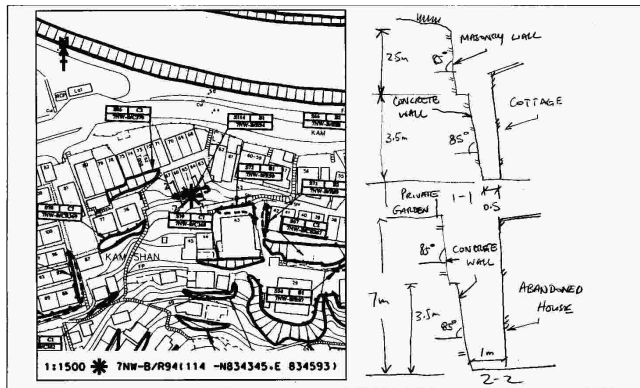
Actual Completion Date: 31-03-2008

STAGE 1 STUDY REPORT

Inspected On: 04-03-1997

Weather: Mainly Fine

District: ME



Section No: 1-1

Height(m): H1 : 6 , H2 : 6

Type of Toe Facility: Residential building

Distance from Toe(m): 0

Type of Crest Facility: Lightly-used open area/facilities

Distance from Crest(m): 0

Consequence Category: 1

Engineering Judgement: P

Section No: 2-2

Type of Toe Facility:

Distance from Toe(m):

Type of Crest Facility:

Distance from Crest(m):

Consequence Category: 1

Engineering Judgement: P

Sign of Seepage: Slope : N/A
Wall : No sign of seepage

Criterion A satisfied: N

Sign of Distress: Slope : N/A
Wall : N/A

Criterion D satisfied: N

Non-routine maintenance required: N



Note: N/A
Masonry wall/Masonry facing: Y
Note: Square rubble with pointing
Consequence category (for critical section): 1
Observations: N/A
Emergency Action Required: N
Action By: N/A

ACTION TO INITIATE PREVENTIVE WORKS

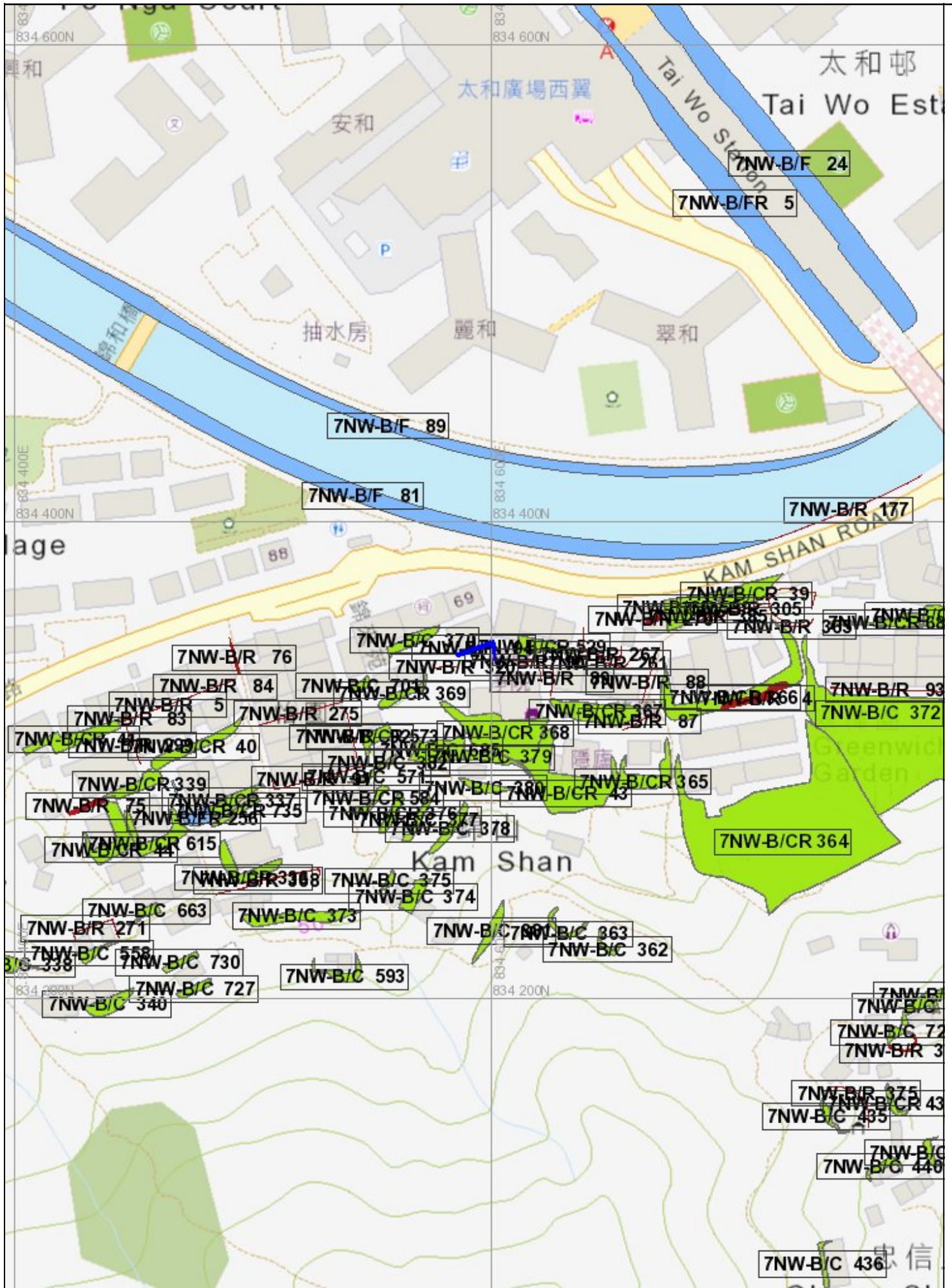
Criterion A/Criterion D: N/A
Action By: N/A
Further Study: Y
Action By: Mixed

OTHER EXTERNAL ACTION

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

PHOTO







BASIC INFORMATION

Location: Behind House 76, Kam Shan, Tai Po, N.T.
Registration Date: 10-08-2006
Ranking Score (NPRS): 778 (LPMit)
Date of Formation: pre-1977
Date of Construction/ Modification:
Data Source: LPM
Approximate Coordinates: Easting : 834579 Northing : 834339

CONSEQUENCE-TO-LIFE CATEGORY

Facility at Crest: Lightly-used open area/facilities
Distance of Facility from Crest (m): 0.1
Facility at Toe: Cottage, licensed and squatter area
Distance of Facility from Toe (m): 5
Consequence-to-life Category: 1
Remarks: N/A

SLOPE PART

N/A

WALL PART

(1) Max. Height (m): 5 Length (m): 10 Face Angle (deg): 90

MAINTENANCE RESPONSIBILITY

(1) Sub Div.: 0 Government Feature Party: Lands D Agent: Lands D Land Cat.: 5b(vi) Reason Code: 62 MR Endorsement Date: 29-12-2006

DETAILS OF SLOPE / RETAINING WALL

Date of Inspection: 28-02-2019
Data Source: LPM
Slope Part Drainage: N/A
Wall Part Drainage: N/A

SLOPE PART

N/A

WALL PART



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

SERVICES

N/A

CHECKING STATUS INFORMATION

N/A

BACKGROUND INFORMATION

GIU Cell Ref.: N/A
Map Sheet Reference (1:1000): N/A
Aerial Photos: N/A
Nearest Rainguage Station (Station Number): ()
Data Collected On: 28-02-2019
Date of Construction, Subsequent Modification and Demolition: N/A
Related Reports/Files or Documents: N/A
Remarks: N/A
Follow Up Actions: N/A
DH-Order (To Be Confirmed with Buildings Department): None
Advisory Letter (To Be Confirmed with Buildings Department): None
LPMIS: None

ENHANCED MAINTENANCE INFORMATION

From Maintenance Department: (Last Updated Date: 25/09/2023)

STAGE 1 STUDY REPORT

Inspected On:

Weather:

District: N/A

Section No: 1-1

Height(m):

Type of Toe Facility: Cottage, licensed and squatter area

Distance from Toe(m): 5

Type of Crest Facility: Lightly-used open area/facilities

Distance from Crest(m): 0.1

Consequence Category:

Engineering Judgement:

Section No: 2-2

Type of Toe Facility:

Distance from Toe(m):

Type of Crest Facility:

Distance from Crest(m):

Consequence Category:

Engineering Judgement:

Sign of Seepage:

Criterion A satisfied:

Sign of Distress:

Criterion D satisfied:

Non-routine maintenance required:

Note:

Masonry wall/Masonry facing:

Note:

Consequence category (for critical section):

Observations: N/A

Emergency Action Required:

Action By: N/A

ACTION TO INITIATE PREVENTIVE WORKS

Criterion A/Criterion D: N/A

Action By: N/A

Further Study:

Action By: N/A

OTHER EXTERNAL ACTION

Check / repair Services:

Action By: N/A

Non-routine Maintenance:

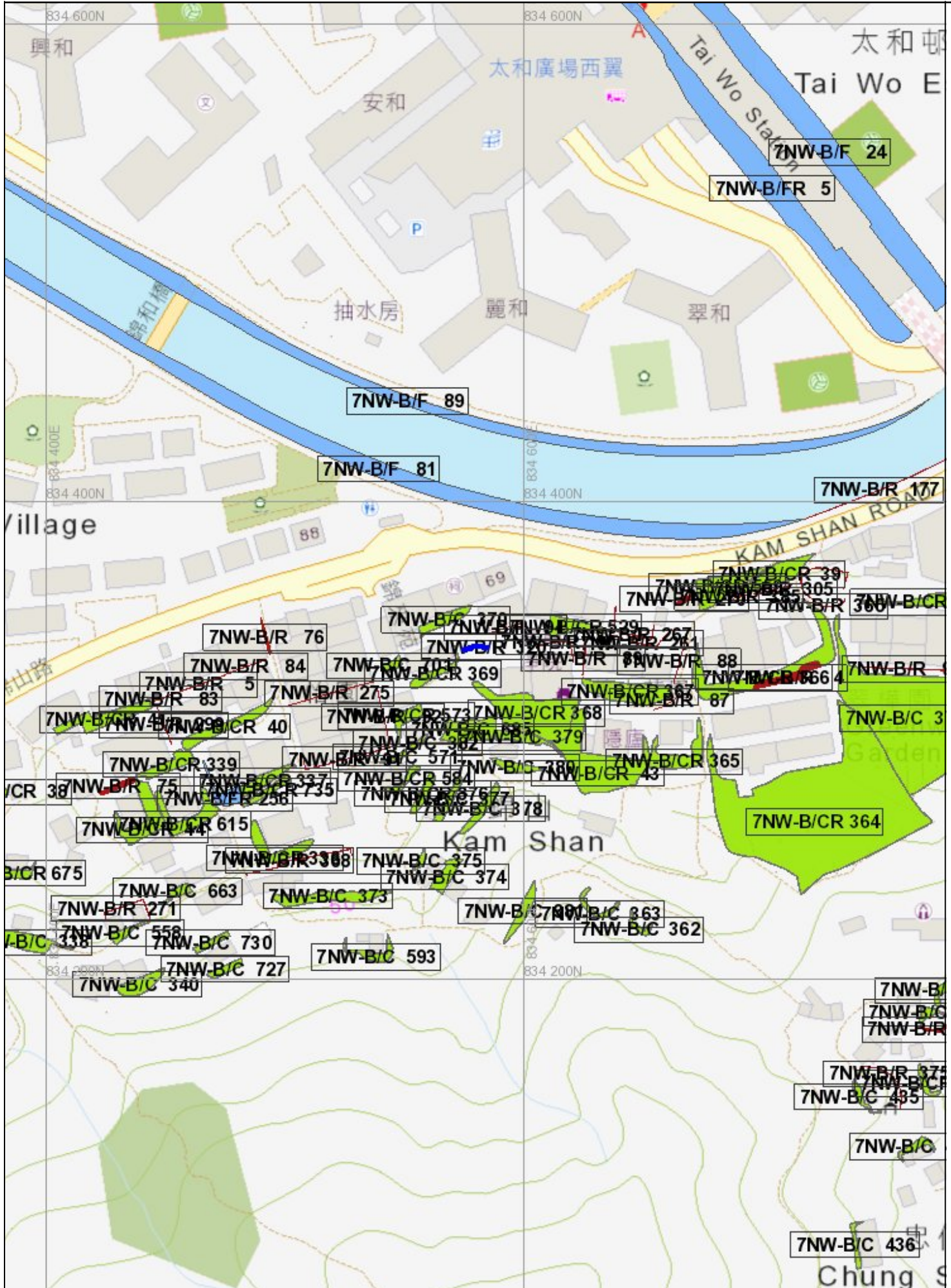


Action By:

N/A

PHOTO







BASIC INFORMATION

Location: South of 43-45, Kam Shan Village
 Registration Date: 19-11-1997
 Ranking Score (NPRS): 0 (LPMit)
 Date of Formation: pre-1977
 Date of Construction/ Modification: 01-11-2004
 Data Source: LPM
 Approximate Coordinates: Easting : 834604 Northing : 834311

CONSEQUENCE-TO-LIFE CATEGORY

Facility at Crest: Residential building
 Distance of Facility from Crest (m): 5
 Facility at Toe: Residential building
 Distance of Facility from Toe (m): 0
 Consequence-to-life Category: 1
 Remarks: N/A

SLOPE PART

(1) Max. Height (m): 9.5 Length (m): 35 Average Angle (deg): 55

WALL PART

(1) Max. Height (m): 3.5 Length (m): 35 Face Angle (deg): 80

MAINTENANCE RESPONSIBILITY

(1) Sub Div.: 0 Government Feature Party: Lands D Agent: Lands D Land Cat.: 5b(vi) Reason Code: 62 MR Endorsement Date: 21-08-2020

DETAILS OF SLOPE / RETAINING WALL

Date of Inspection: 01-02-2019
 Data Source: LPM
 Slope Part Drainage: (1) Position: Berm Size(mm): 300
 (2) Position: Crest Size(mm): 300
 (3) Position: On slope Size(mm): 300
 Wall Part Drainage: (1) Position: Crest Size(mm): 300

SLOPE PART

Slope Part (1)

Surface Protection (%): Bare: 0 Vegetated: 0 Chunam: 100 Shotcrete: 0 Other Cover: 0
Material Description: Material type: Soil Geology: N/A
Berm: No. of Berms: 1 Min. Berm Width (m): 2.5
Weepholes: Size (mm): N/A Spacing (m): N/A

WALL PART

Wall Part (1)

Type of Wall: Wall Material: Masonry Wall Location: Wall at toe
Berm: No. of Berms: N/A Min. Berm Width (m): N/A
Weepholes: Size (mm): N/A Spacing (m): N/A

SERVICES

N/A

CHECKING STATUS INFORMATION

N/A

BACKGROUND INFORMATION

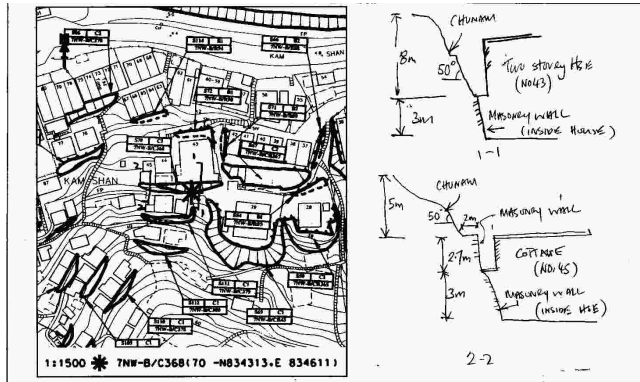
GIU Cell Ref.: 7NW9A7
Map Sheet Reference (1:1000): 7NW- 9A
Aerial Photos: Y09611-2 (1963),
Nearest Rainuage Station (Station Number): Booster Pumping Station, Hong Lok Yuen(N35)
Data Collected On: 01-02-2019
Date of Construction, Subsequent Modification and Demolition: Modification: Constructed Before: 1978 After: N/A
Related Reports/Files or Documents: File/Report: LWC Ref. No.: GC 4/1/2-5 (6) f3A, 4/1/2-3 f19, pt VI
File/Report: LWC Ref. No.: GC 4/1/2-5 (6) f3A, 4/1/2-3 f19, pt VI
Remarks: N/A
Follow Up Actions: N/A
DH-Order (To Be Confirmed with Buildings Department): None
Advisory Letter (To Be Confirmed with Buildings Department): None
LPMIS: Agreement No.: In-house Design Report No.: S3R115/2003

ENHANCED MAINTENANCE INFORMATION

From Maintenance Department: (Last Updated Date: 25/09/2023)

STAGE 1 STUDY REPORT

Inspected On: 07-03-1997
 Weather: Mainly Fine
 District: ME



Section No: 1-1
 Height(m): H1 : 11 , H2 : 3
 Type of Toe Facility: Residential building
 Distance from Toe(m): 0
 Type of Crest Facility: Residential building
 Distance from Crest(m): 5
 Consequence Category: 1
 Engineering Judgement: P
 Section No: 2-2
 Type of Toe Facility: Residential
 Distance from Toe(m): 1
 Type of Crest Facility: District open space
 Distance from Crest(m): 0
 Consequence Category: 1
 Engineering Judgement: P
 Sign of Seepage: Slope : No signs of seepage
 Wall : No sign of seepage
 Criterion A satisfied: N
 Sign of Distress: Slope : N/A
 Wall : N/A
 Criterion D satisfied: N
 Non-routine maintenance required: N
 Note: N/A
 Masonry wall/Masonry facing: Y

Note: N/A
Consequence category (for critical section): 1
Observations: N/A
Emergency Action Required: N
Action By: N/A

ACTION TO INITIATE PREVENTIVE WORKS

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

OTHER EXTERNAL ACTION

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

eLPMIS

LPM/LPMit Details Report

LPM Study Feature No.: 7NW-B/CR 368
Location: SOUTH OF 43 - 45, KAM SHAN VILLAGE, TAI PO
District Council: Tai Po
Maintenance Responsibility (At the Time of Selection): Government
Responsible Party for Maintenance of Government Portion: Lands D
Private Lot No.: N/A

LPM/LPMit Study

Agreement No.: In-house Design
Study Type: Stage 3 Study Under Remeasurement Contract
Consultant: N/A
GEO Managing Section / Engineer: LPM2 / N/A
Study Status: Study completed
Design Approach: Prescriptive
Option Assessment Accepted: N/A
Study Report No.: S3R115/2003
Programme / Actual Commencement: 01-03-2001
Programme / Actual Completion: 20-02-2003



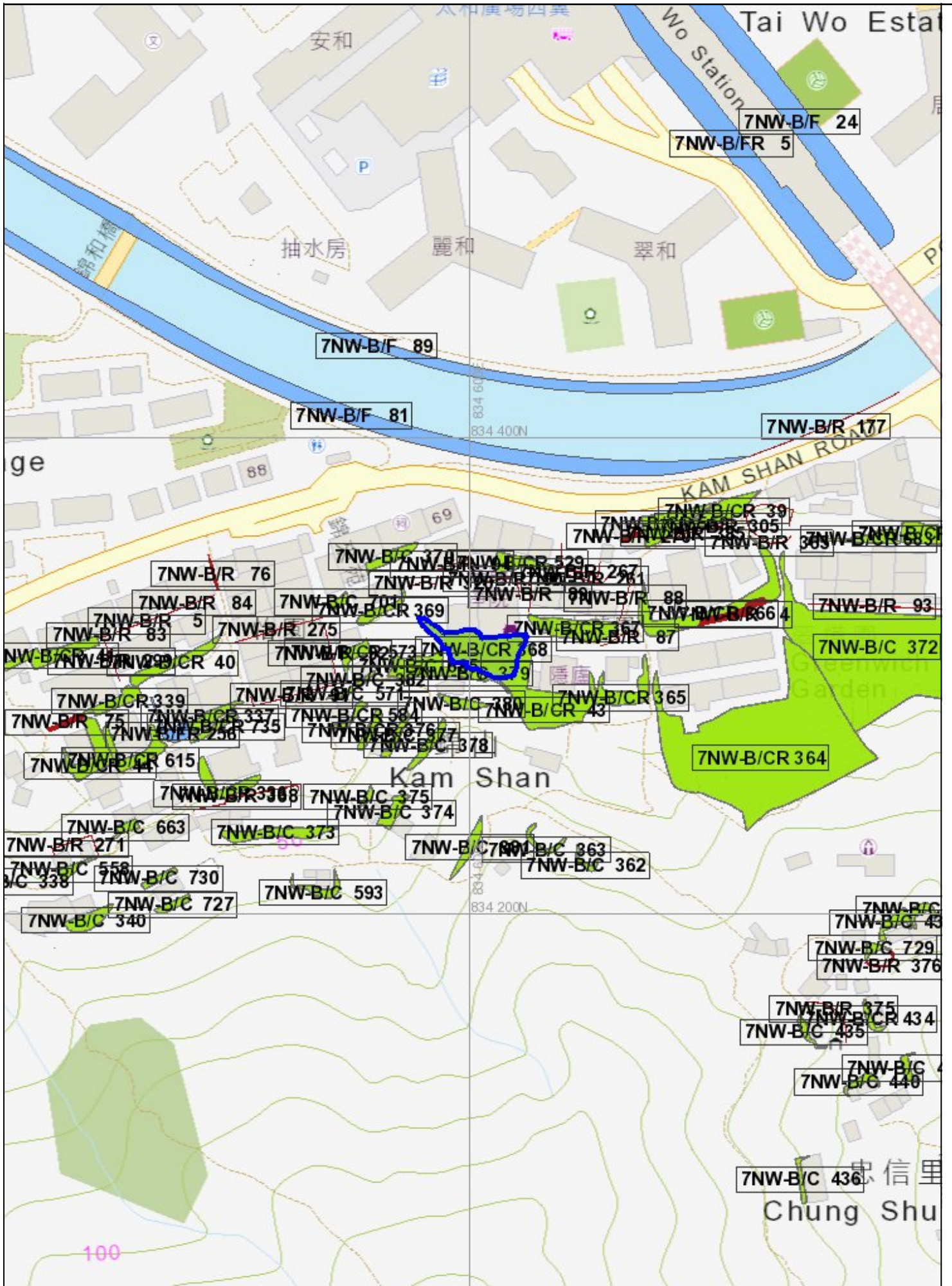
Report Recommendation (For Stage 2 Study): N/A
District Check Status: Exempted from checking
Checking Certificate No.: GEO/LPM336/2006
GEO Engineer's Remarks: N/A

LPM/LPMit Works

Works Contract No.: GE/2003/01
GEO Managing Section / Engineer: LPM3 / W6
Contractor: N/A
Progress Status: Maintenance completed
Reason of Study Termination / Works Deletion (If Necessary): N/A
Forecast Commencement Date: 01-11-2004
Forecast Completion Date: 21-09-2006
Completion Cert. Issued: N/A
Site Handed Over to Maintenance Department on: 16-11-2006
Estimated Cost for Upgrading (HK\$M): 3.30
Maintenance Manual No.: MM301/2006
Actual Works: Hard Cover (Sprayed concrete/Stone pitching, etc.), Raking drain, Soil nail
No. of Tree Felled: N/A
No. of Tree Planted (Incl. Transplant): N/A
% Bare of Slope Surfacing: N/A
% Vegetated of Slope Surfacing: N/A
% Shotcrete of Slope Surfacing: N/A
Other Hard Surface of Slope Surfacing: N/A

PHOTO







BASIC INFORMATION

Location: South of Kam Shan Village, No. 77, Tai Po
 Registration Date: 19-11-1997
 Ranking Score (NPRS): 0 (LPMit)
 Date of Formation: pre-1977
 Date of Construction/ Modification: 27-11-2007
 Data Source: EI(Lands D)
 Approximate Coordinates: Easting : 834562 Northing : 834328

CONSEQUENCE-TO-LIFE CATEGORY

Facility at Crest: Road/footpath with low traffic density
 Distance of Facility from Crest (m): 0
 Facility at Toe: Residential building
 Distance of Facility from Toe (m): 1.2
 Consequence-to-life Category: 1
 Remarks: N/A

SLOPE PART

(1) Max. Height (m): 3.3 Length (m): 25 Average Angle (deg): 78

WALL PART

(1) Max. Height (m): 2.1 Length (m): 12 Face Angle (deg): 90

MAINTENANCE RESPONSIBILITY

(1) Sub Div.: 0 Government Feature Party: Lands D Agent: Lands D Land Cat.: 5b(vi) Reason Code: 62 MR Endorsement Date: 05-05-2011

DETAILS OF SLOPE / RETAINING WALL

Date of Inspection: 12-01-2011
 Data Source: EI(Lands D)
 Slope Part Drainage: N/A
 Wall Part Drainage: N/A

SLOPE PART

Slope Part (1)
 Surface Protection (%): Bare: 0 Vegetated: 0 Chunam: 0 Shotcrete: 100 Other Cover: 0
 Material Description: Material type: Soil Geology: N/A
 Berm: No. of Berms: 1 Min. Berm Width (m): 1.5
 Weepholes: Size (mm): 75 Spacing (m): 1.5

WALL PART

Wall Part (1)

Type of Wall: Wall Material: Concrete Wall Location: Wall at toe
Berm: No. of Berms: N/A Min. Berm Width (m): N/A
Weepholes: Size (mm): 75 Spacing (m): 1.5

SERVICES

(1) Utilities Type: Sewer/Drain Size(mm): 100 Location: On crest Remark: N/A

CHECKING STATUS INFORMATION

N/A

BACKGROUND INFORMATION

GIU Cell Ref.: 7NW9A7
Map Sheet Reference (1:1000): 7NW- 9A
Aerial Photos: 16452-3 (1976),
Nearest Rainguage Station (Station Number): Booster Pumping Station, Hong Lok Yuen(N35)
Data Collected On: 12-01-2011
Date of Construction, Subsequent Modification and Demolition: Modification: Constructed Before: 1976 After: 1973
Related Reports/Files or Documents: File/Report: LWC Ref. No.: GC 4/1/2-5 (6) f3A, 4/1/2-3 f19, pt VI
File/Report: LWC Ref. No.: GC 4/1/2-5 (6) f3A, 4/1/2-3 f19, pt VI
Remarks: N/A
Follow Up Actions: N/A
DH-Order (To Be Confirmed with Buildings Department): None
Advisory Letter (To Be Confirmed with Buildings Department): None
LPMIS: None

ENHANCED MAINTENANCE INFORMATION

From Maintenance Department: (Last Updated Date: 02/04/2024)

Upgraded by:

Prescriptive Design Using GEO Report No. 56: N/A

Non-prescriptive Design Including Conventional Design: N/A

Improved by:

Type 1 / Type 2 Prescriptive Measures: Yes

Type 3 Prescriptive Measures (not up to upgrading standard): Yes

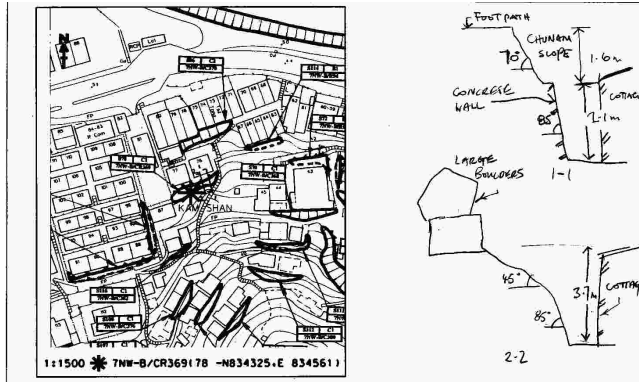
Actual Completion Date: 31-03-2008

STAGE 1 STUDY REPORT

Inspected On: 04-03-1997

Weather: Mainly Fine

District: ME



Section No: 1-1
 Height(m): H1 : 4 , H2 : 0
 Type of Toe Facility: Residential building
 Distance from Toe(m): 1.2
 Type of Crest Facility: Road/footpath with low traffic density
 Distance from Crest(m): 0
 Consequence Category: 1
 Engineering Judgement: P
 Section No: 2-2
 Type of Toe Facility: N/A
 Distance from Toe(m): 0
 Type of Crest Facility: N/A
 Distance from Crest(m): 0
 Consequence Category: 1
 Engineering Judgement: P
 Sign of Seepage: Slope : No signs of seepage
 Wall : No sign of seepage
 Criterion A satisfied: N
 Sign of Distress: Slope : N/A
 Wall : N/A
 Criterion D satisfied: N
 Non-routine maintenance required: N



Note: N/A
Masonry wall/Masonry facing: 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

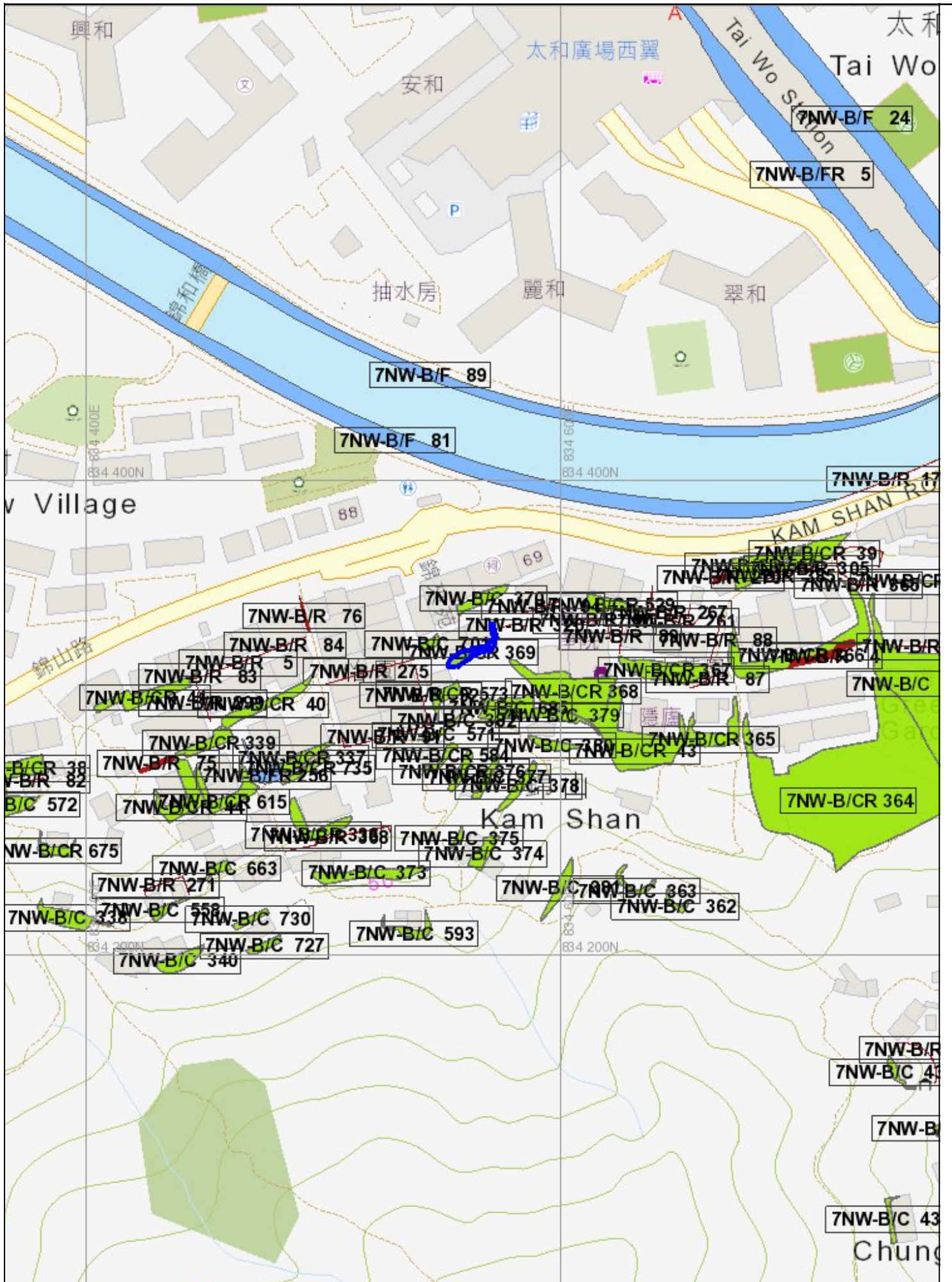
Criterion A/Criterion D: N/A
Action By: N/A
Further Study: Y
Action By: Mixed

OTHER EXTERNAL ACTION

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

PHOTO







BASIC INFORMATION

Location: Nos. 57-58, Kam Shan Road, Tai Po
 Registration Date: 19-11-1997
 Ranking Score (NPRS): 0 (LPMit)
 Date of Formation: post-1977
 Date of Construction/ Modification: 16-02-2014
 Data Source: LPM
 Approximate Coordinates: Easting : 834629 Northing : 834346

CONSEQUENCE-TO-LIFE CATEGORY

Facility at Crest: Residential building
 Distance of Facility from Crest (m): 2
 Facility at Toe: Residential building
 Distance of Facility from Toe (m): 1.5
 Consequence-to-life Category: 1
 Remarks: SIFT Class changed from C1 to C2. Data provided by MW on Apr-2007.

SLOPE PART

(1) Max. Height (m): 8.5 Length (m): 25 Average Angle (deg): 70

WALL PART

(1) Max. Height (m): 1.5 Length (m): 20 Face Angle (deg): 90

MAINTENANCE RESPONSIBILITY

(1) Sub Div.: 1 Mixed Feature Party: DD6 LOT 2163 Agent: N/A Land Cat.: 5a Reason Code: 47 MR Endorsement Date: 10-07-2017
 (2) Sub Div.: 2 Mixed Feature Party: Lands D Agent: Lands D Land Cat.: 5b(vi) Reason Code: 62 MR Endorsement Date: 10-07-2017

DETAILS OF SLOPE / RETAINING WALL

Date of Inspection: 22-10-2014
 Data Source: LPM
 Slope Part Drainage: (1) Position: Berm Size(mm): 225
 (2) Position: Downpipe Size(mm): 225
 Wall Part Drainage: (1) Position: Downpipe Size(mm): 225
 (2) Position: Toe Size(mm): 225

SLOPE PART



Slope Part (1)

Surface Protection (%): Bare: 0 Vegetated: 0 Chunam: 0 Shotcrete: 0 Other Cover: 100
 Material Description: Material type: Soil & Rock Geology: N/A
 Berm: No. of Berms: N/A Min. Berm Width (m): N/A
 Weepholes: Size (mm): 50 Spacing (m): 1.5

WALL PART

Wall Part (1)

Type of Wall: Wall Material: Masonry Wall Location: Wall at toe
 Berm: No. of Berms: N/A Min. Berm Width (m): N/A
 Weepholes: Size (mm): 50 Spacing (m): 1.5

SERVICES

- (1) Utilities Type: Electricity Size(mm): 0 Location: On crest Remark: Size cannot be determined
- (2) Utilities Type: Sewer/Drain Size(mm): 100 Location: On crest Remark: N/A

CHECKING STATUS INFORMATION

Tagmark: 21793_1_4 Part: 1 Checking Status: No checking records Checking Certificate No.: N/A

BACKGROUND INFORMATION

GIU Cell Ref.: 7NW9A7
 Map Sheet Reference (1:1000): 7NW- 9A
 Aerial Photos: N/A
 Nearest Rainuage Station (Station Number): Booster Pumping Station, Hong Lok Yuen(N35)
 Data Collected On: 22-10-2014
 Date of Construction, Subsequent Modification and Demolition: Modification: Modified Before: 0 After: 1978
 Related Reports/Files or Documents: File/Report: Development Ref. No.: GCME 9121/93
 File/Report: Development Ref. No.: GCME 9121/93
 File/Report: Development Ref. No.: GCME 9121/93
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 File/Report: Development Ref. No.: GCME 9121/93
 File/Report: Other Ref. No.: GCME 3/7/6/ Pt 4 Case 10
 File/Report: Other Ref. No.: GCME 3/7/6/ Pt 4 Case 10



Remarks: N/A
 Follow Up Actions: N/A
 DH-Order (To Be Confirmed with Buildings Department): None
 Advisory Letter (To Be Confirmed with Buildings Department): None
 LPMIS: Agreement No.: CE45/2010 Report No.: S3R 40/2013

ENHANCED MAINTENANCE INFORMATION

From Maintenance Department: (Last Updated Date: 25/09/2023)

STAGE 1 STUDY REPORT

Inspected On:
 Weather:
 District: ME
 Section No: 1-1
 Height(m):
 Type of Toe Facility: Residential building
 Distance from Toe(m): 1.5
 Type of Crest Facility: Residential building
 Distance from Crest(m): 2
 Consequence Category:
 Engineering Judgement:
 Section No: 2-2
 Type of Toe Facility:
 Distance from Toe(m):
 Type of Crest Facility:
 Distance from Crest(m):
 Consequence Category:
 Engineering Judgement:
 Sign of Seepage:
 Criterion A satisfied:
 Sign of Distress:
 Criterion D satisfied:
 Non-routine maintenance required:
 Note:
 Masonry wall/Masonry facing:
 Note:
 Consequence category (for critical section):
 Observations: SIFT Class changed from C1 to C2. Data provided by MW on Apr-2007.

Emergency Action Required:

Action By: N/A

ACTION TO INITIATE PREVENTIVE WORKS

Criterion A/Criterion D: N/A

Action By: N/A

Further Study:

Action By: N/A

OTHER EXTERNAL ACTION

Check / repair Services:

Action By: N/A

Non-routine Maintenance:

Action By: N/A

eLPMIS

LPM/LPMit Details Report

LPM Study Feature No.:	7NW-B/CR 529
Location:	No. 57 to 58, Kam Shan Road, Tai Po, N.T.
District Council:	Tai Po
Maintenance Responsibility (At the Time of Selection):	Mixed
Responsible Party for Maintenance of Government Portion:	Lands D
Private Lot No.:	DD6 LOT2163

LPM/LPMit Study

Agreement No.:	CE45/2010
Study Type:	Stage 3 Study Under Schedule of Rates Contract
Consultant:	Fugro (HK) Ltd.
GEO Managing Section / Engineer:	LPM3 / CM63
Study Status:	Study completed
Design Approach:	Prescriptive
Option Assessment Accepted:	Y
Study Report No.:	S3R 40/2013
Programme / Actual Commencement:	09-05-2012
Programme / Actual Completion:	28-03-2013
Report Recommendation (For Stage 2 Study):	N/A
District Check Status:	N/A
Checking Certificate No.:	GEO/LPM146/2014
GEO Engineer's Remarks:	N/A

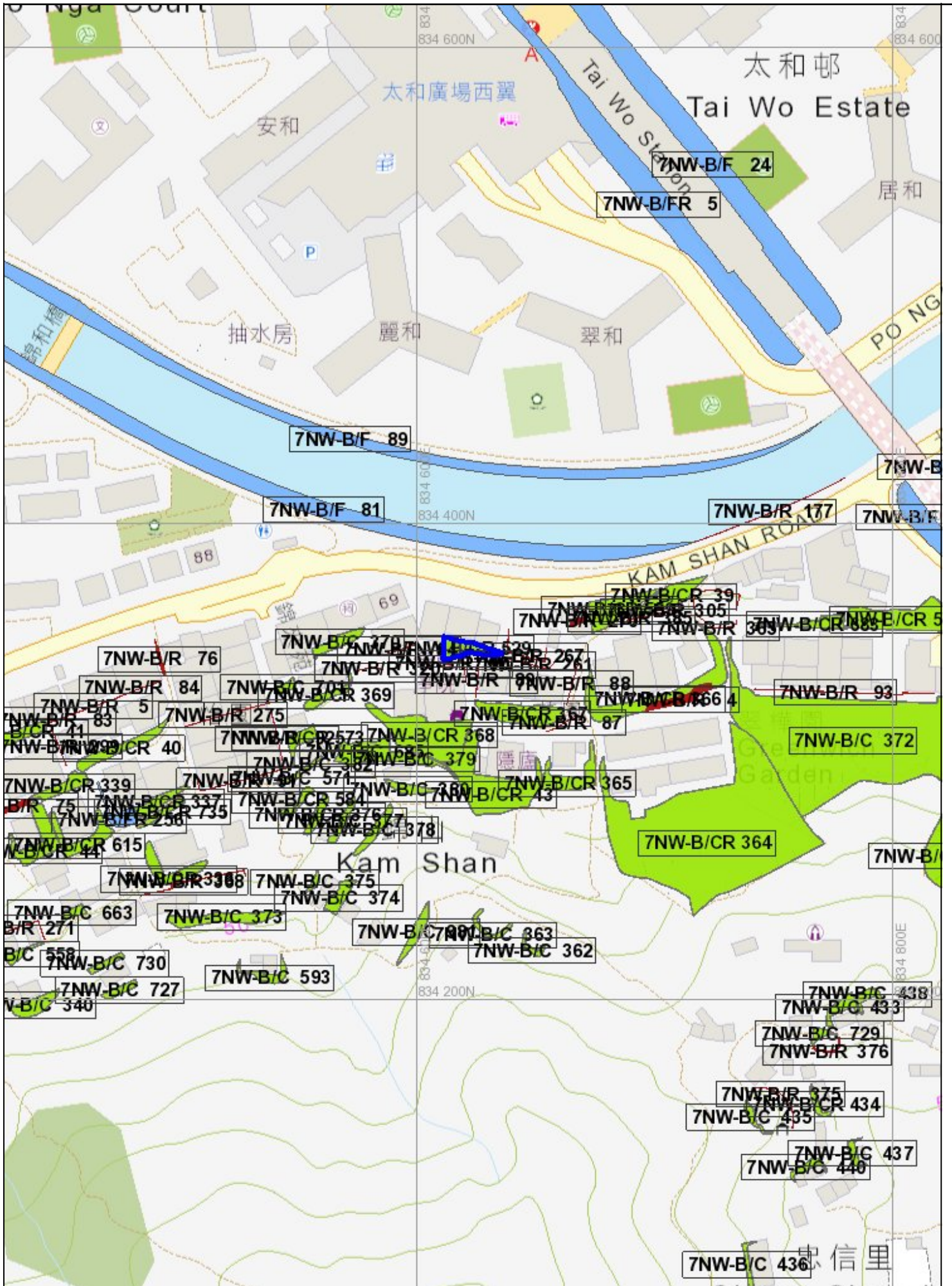


LPM/LPMit Works

Works Contract No.:	GE/2012/28
GEO Managing Section / Engineer:	LPM3 / CM63
Contractor:	Fraser Construction Company Ltd
Progress Status:	Maintenance completed
Reason of Study Termination / Works Deletion (If Necessary):	N/A
Forecast Commencement Date:	02-09-2013
Forecast Completion Date:	16-02-2014
Completion Cert. Issued:	28-02-2014
Site Handed Over to Maintenance Department on:	12-03-2014
Estimated Cost for Upgrading (HK\$M):	0.7491
Maintenance Manual No.:	MM146/2014
Actual Works:	Skin wall,With double corrosion protection for soil nail
No. of Tree Felled:	N/A
No. of Tree Planted (Incl. Transplant):	N/A
% Bare of Slope Surfacing:	N/A
% Vegetated of Slope Surfacing:	N/A
% Shotcrete of Slope Surfacing:	100
Other Hard Surface of Slope Surfacing:	N/A

PHOTO





BASIC INFORMATION

Location: No. 39, Kam Shan Village, Tai Po, N.T.
Registration Date: 25-07-2000
Ranking Score (NPRS): 0 (LPMit)
Date of Formation: pre-1977
Date of Construction/ Modification:
Data Source: SIRST
Approximate Coordinates: Easting : 834648 Northing : 834341

CONSEQUENCE-TO-LIFE CATEGORY

Facility at Crest: Cottage, licensed and squatter area
Distance of Facility from Crest (m): 2
Facility at Toe: Remote area or abandoned facilities
Distance of Facility from Toe (m): 1.8
Consequence-to-life Category: 1
Remarks: N/A

SLOPE PART

N/A

WALL PART

(1) Max. Height (m): 3 Length (m): 2.1 Face Angle (deg): 75

MAINTENANCE RESPONSIBILITY

(1) Sub Div.: 0 Private Feature Party: DD6 LOT1943 Agent: N/A Land Cat.: 5a Reason Code: 48 MR Endorsement Date: 24-04-2001

DETAILS OF SLOPE / RETAINING WALL

Date of Inspection: 26-09-2000
Data Source: SIRST
Slope Part Drainage: N/A
Wall Part Drainage: N/A

SLOPE PART

N/A

WALL PART



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

SERVICES

N/A

CHECKING STATUS INFORMATION

N/A

BACKGROUND INFORMATION

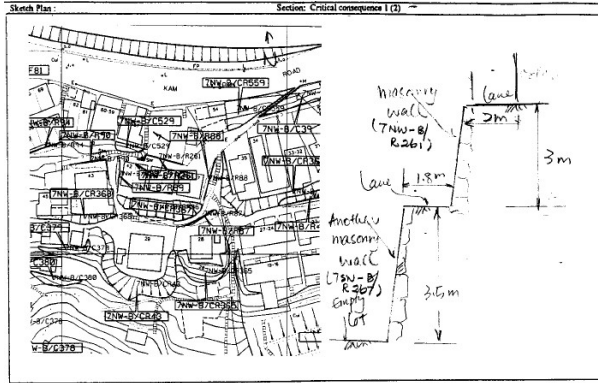
GIU Cell Ref.: 7NW 9A7
 Map Sheet Reference (1:1000): 7NW- 9A
 Aerial Photos: N/A
 Nearest Rainguage Station (Station Number): Booster Pumping Station, Hong Lok Yuen(N35)
 Data Collected On: 26-09-2000
 Date of Construction, Subsequent Modification and Demolition: N/A
 Related Reports/Files or Documents: File/Report: LWC Ref. No.: GC4/1/2-3, f (8) Pt VI; GC4/1/2-5, f (3A).
 File/Report: LWC Ref. No.: GC4/1/2-3, f (8) Pt VI; GC4/1/2-5, f (3A).
 File/Report: Other Ref. No.: Others: GAS 10.
 File/Report: Other Ref. No.: Others: GAS 10.
 Remarks: N/A
 Follow Up Actions: N/A
 DH-Order (To Be Confirmed with Buildings Department): None
 Advisory Letter (To Be Confirmed with Buildings Department): Date of Recommendation to BD: N/A File Reference: N/A
 Date Served by BD: 21/11/2019
 LPMIS: None

ENHANCED MAINTENANCE INFORMATION

From Maintenance Department: (Last Updated Date: 25/09/2023)

STAGE 1 STUDY REPORT

Inspected On: 26-09-2000
 Weather: Mainly Fine
 District: ME



Section No: 1-1
 Height(m): H1 : 3 , H2 : 3
 Type of Toe Facility: Remote area or abandoned facilities
 Distance from Toe(m): 1.8
 Type of Crest Facility: Cottage, licensed and squatter area
 Distance from Crest(m): 2
 Consequence Category: 1
 Engineering Judgement: HP
 Section No: 2-2
 Type of Toe Facility:
 Distance from Toe(m):
 Type of Crest Facility:
 Distance from Crest(m):
 Consequence Category: 1
 Engineering Judgement: HP
 Sign of Seepage: Slope : N/A
 Wall : No sign of seepage
 Criterion A satisfied: N
 Sign of Distress: Slope : N/A
 Wall : N/A
 Criterion D satisfied: N
 Non-routine maintenance required: N
 Note: N/A
 Masonry wall/Masonry facing: Y
 Note: Square masoury.
 Consequence category (for critical section): 1
 Observations: N/A
 Emergency Action Required: N
 Action By: N/A



ACTION TO INITIATE PREVENTIVE WORKS

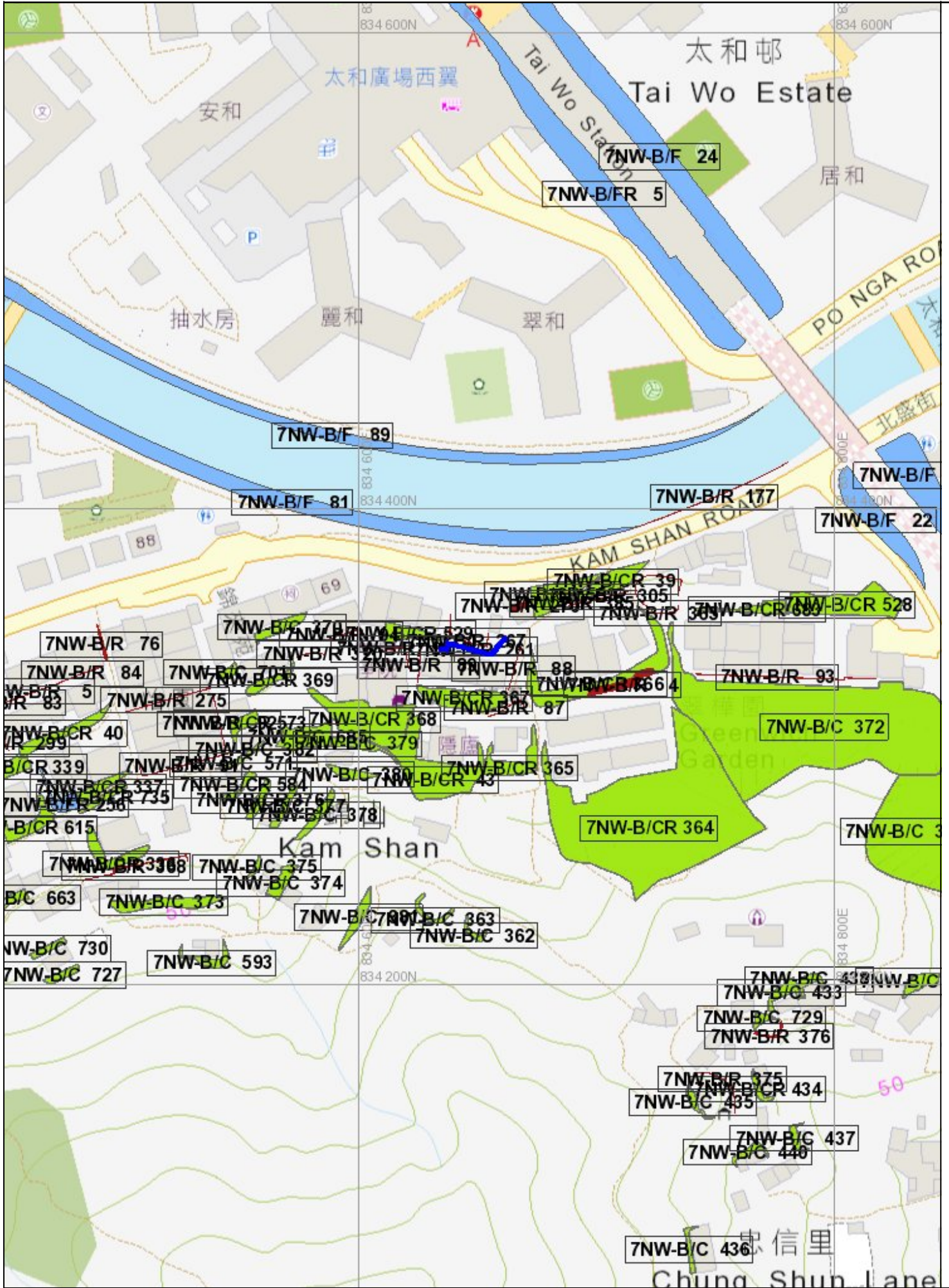
Criterion A/Criterion D:	N/A
Action By:	N/A
Further Study:	N
Action By:	N/A

OTHER EXTERNAL ACTION

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

PHOTO







BASIC INFORMATION

Location: West of No. 55 Kam Shan, Tai Po, N.T.
Registration Date: 09-10-2000
Ranking Score (NPRS): 0 (LPMit)
Date of Formation: pre-1977
Date of Construction/ Modification:
Data Source: LPM
Approximate Coordinates: Easting : 834642 Northing : 834345

CONSEQUENCE-TO-LIFE CATEGORY

Facility at Crest: Cottage, licensed and squatter area
Distance of Facility from Crest (m): 3.8
Facility at Toe: District open space
Distance of Facility from Toe (m): 0
Consequence-to-life Category: 1
Remarks: N/A

SLOPE PART

N/A

WALL PART

(1) Max. Height (m): 3.5 Length (m): 32 Face Angle (deg): 85

MAINTENANCE RESPONSIBILITY

(1) Sub Div.: 0 Government Feature Party: Lands D Agent: Lands D Land Cat.: 5b(vi) Reason Code: 62 MR Endorsement Date: 24-04-2001

DETAILS OF SLOPE / RETAINING WALL

Date of Inspection: 01-06-2012
Data Source: LPM
Slope Part Drainage: N/A
Wall Part Drainage: N/A

SLOPE PART

N/A

WALL PART



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

SERVICES

(1) Utilities Type: Water Main Size(mm): 200 Location: On slope Remark: N/A

CHECKING STATUS INFORMATION

N/A

BACKGROUND INFORMATION

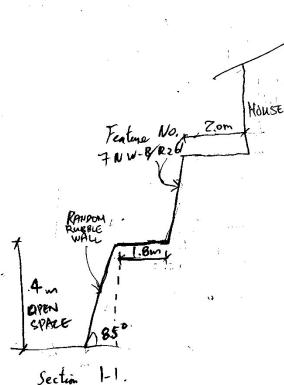
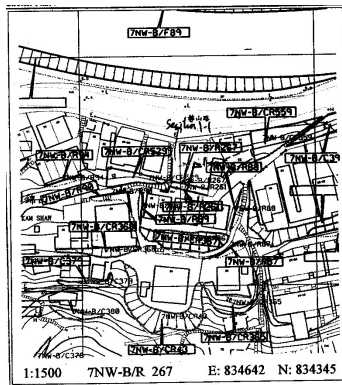
GIU Cell Ref.: 7NW 9A7
 Map Sheet Reference (1:1000): 7NW- 9A
 Aerial Photos: Y09611-12 (1963),
 Nearest Rainguage Station (Station Number): Booster Pumping Station, Hong Lok Yuen(N35)
 Data Collected On: 01-06-2012
 Date of Construction, Subsequent Modification and Demolition: Modification: Constructed Before: 1963 After: 0
 Related Reports/Files or Documents: File/Report: DB or DH Ref. No.: 002: D142/66/K
 File/Report: DB or DH Ref. No.: 002: D142/66/K
 File/Report: DLC/BC Ref. No.: GCME 014
 File/Report: DLC/BC Ref. No.: GCME 014
 File/Report: LA Ref. No.: GCME 5/3/7
 File/Report: LA Ref. No.: GCME 5/3/7
 File/Report: MTR Protection Ref. No.: N
 File/Report: MTR Protection Ref. No.: N
 File/Report: Other Ref. No.: None
 File/Report: Other Ref. No.: None
 Remarks: N/A
 Follow Up Actions: N/A
 DH-Order (To Be Confirmed with Buildings Department): None
 Advisory Letter (To Be Confirmed with Buildings Department): None
 LPMIS: None

ENHANCED MAINTENANCE INFORMATION

From Maintenance Department: (Last Updated Date: 25/09/2023)

STAGE 1 STUDY REPORT

Inspected On: 13-02-2001
 Weather: Mainly Fine
 District: ME



Section No: 1-1
 Height(m): H1 : 4 , H2 : 4
 Type of Toe Facility: District open space
 Distance from Toe(m): 0
 Type of Crest Facility: Cottage, licensed and squatter area
 Distance from Crest(m): 3.8
 Consequence Category: 1
 Engineering Judgement: P
 Section No: 2-2
 Type of Toe Facility:
 Distance from Toe(m):
 Type of Crest Facility:
 Distance from Crest(m):
 Consequence Category: 1
 Engineering Judgement: P
 Sign of Seepage: Slope : N/A
 Wall : Signs of seepage
 Criterion A satisfied: N
 Sign of Distress: Slope : N/A
 Wall : None(mid-portion)
 Criterion D satisfied: N
 Non-routine maintenance required: N
 Note: N/A
 Masonry wall/Masonry facing: Y
 Note: RANDOM RUBBLE



Consequence category (for critical section): 1
Observations: N/A
Emergency Action Required: N
Action By: N/A

ACTION TO INITIATE PREVENTIVE WORKS

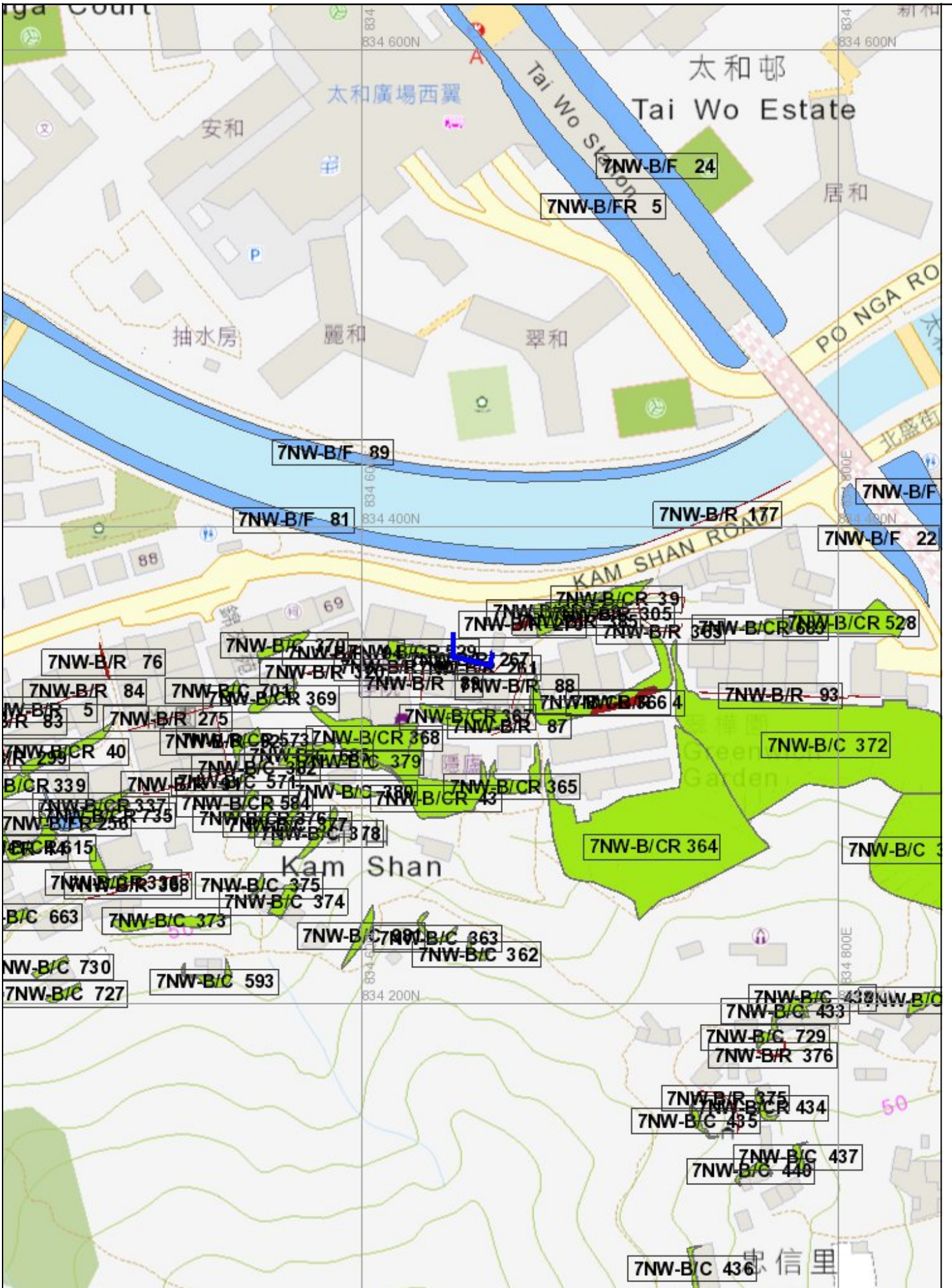
Criterion A/Criterion D: N/A
Action By: N/A
Further Study: N
Action By: N/A

OTHER EXTERNAL ACTION

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

PHOTO





APPENDIX C

SLOPE REPORTS FOR MAINTENANCE RESPONSIBILITY

RETRIEVED FROM SMRIS

Slope Maintenance Responsibility Report

(7NW-B/R89)



ESTATE MANAGEMENT SECTION
LANDS DEPARTMENT

List of Slope Maintenance Responsibility Area(s)

1	7NW-B/R89	Sub-Division	Not Applicable	
	Location	TO THE W OF DD6 LOT1943		
	Responsible Lot/Party	DD6 Lot1943	Maintenance Agent	Not Applicable
	Remarks	Not Applicable		

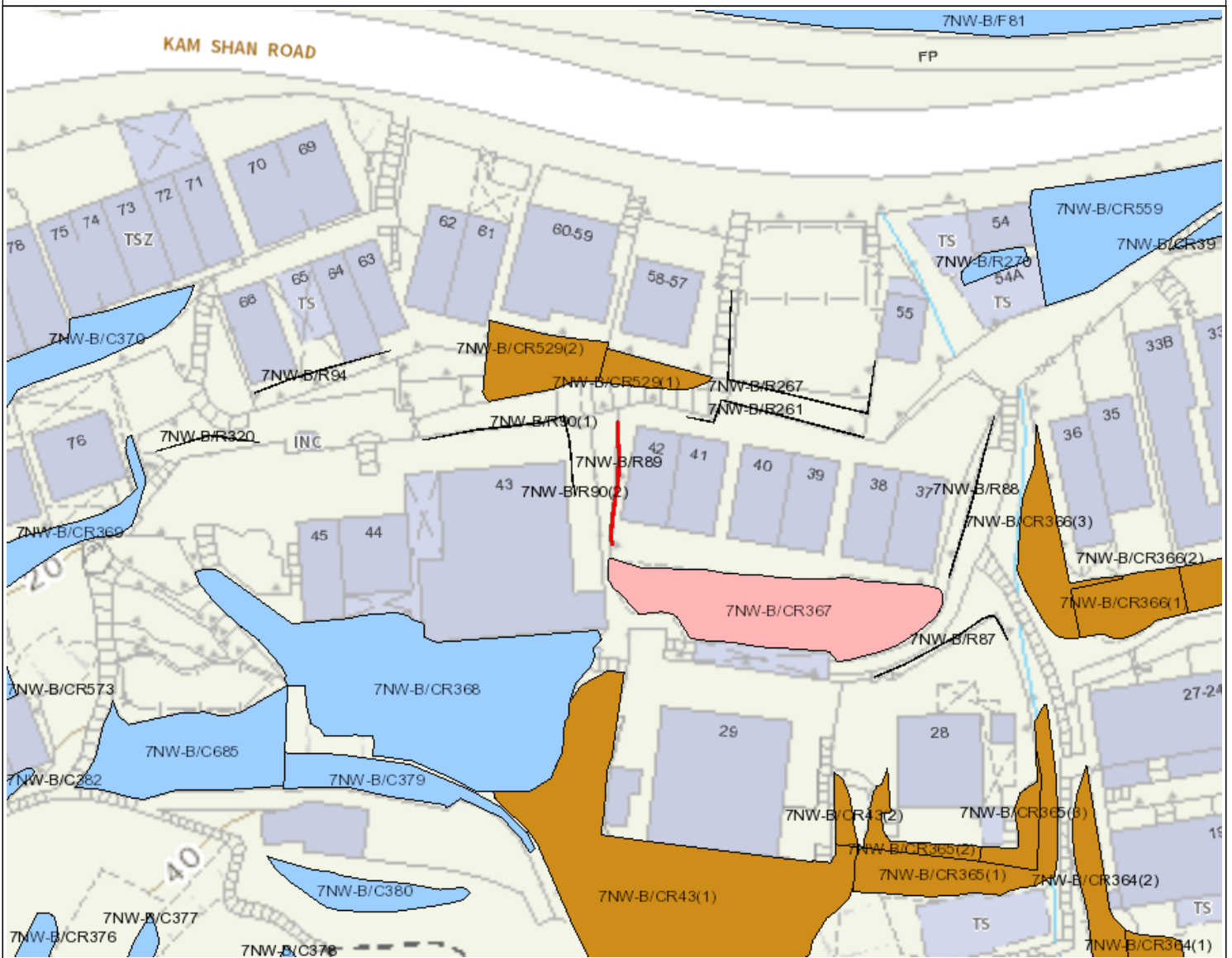
- End of Report -

Notes:

- (i) The location plan in Annex is for identification purposes of slope(s) only.
- (ii) The slope(s) as listed in the Slope Maintenance Responsibility Report may not be shown on the location plan in Annex.

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Location Plan



Legend

- Slope Area(s)
- - - - Search Location
- Slope(s) Maintained by Government
- Slope(s) Maintained by Private Party/Parties
- Slope(s) Maintained by Government and Private Party/Parties



ESTATE MANAGEMENT SECTION
LANDS DEPARTMENT

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: 16/03/2024

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Search Criteria: 7NW-B/R89

Slope Maintenance Responsibility Report

(7NW-B/R90)



ESTATE MANAGEMENT SECTION
LANDS DEPARTMENT

List of Slope Maintenance Responsibility Area(s)

1	7NW-B/R90	Sub-Division		1
	Location	SLOPE FALLS IN GOVERNMENT LAND & DEMARCATION DISTRICT6 LOT1087 NORTH OF THE LOT		
	Responsible Lot/Party	Lands Department	Maintenance Agent	Lands Department
	Remarks	For enquiries about the maintenance of this slope / sub-division of the slope, please contact the Maintenance Agent directly.		
2	7NW-B/R90	Sub-Division		2
	Location	SLOPE FALLS IN GOVERNMENT LAND & DEMARCATION DISTRICT6 LOT1087 NORTH OF THE LOT		
	Responsible Lot/Party	DD6 LOT1087	Maintenance Agent	Not Applicable
	Remarks	Not Applicable		

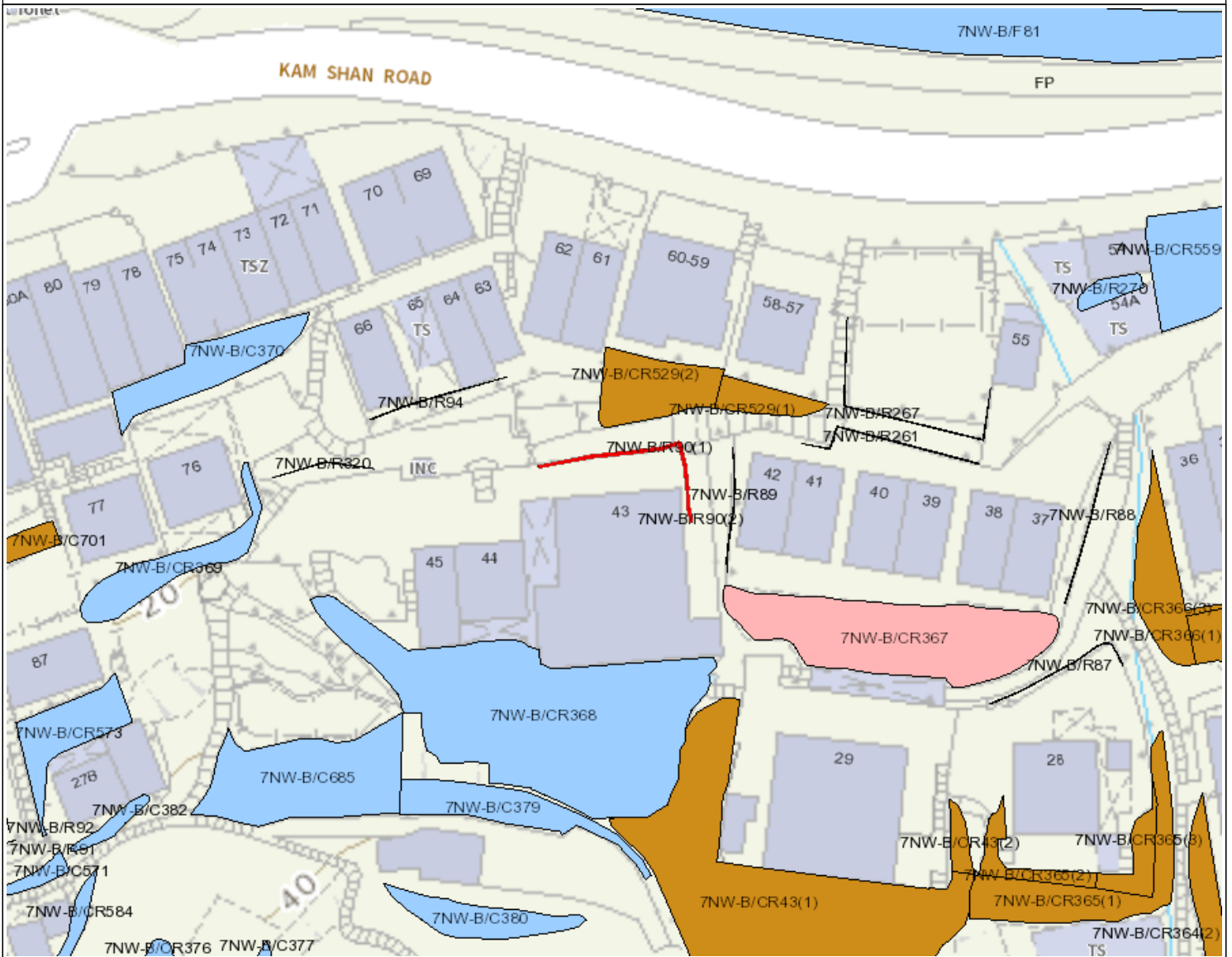
- End of Report -

Notes:

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Location Plan



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Slope Maintenance Responsibility Report

(7NW-B/R94)



ESTATE MANAGEMENT SECTION
LANDS DEPARTMENT

List of Slope Maintenance Responsibility Area(s)

1	7NW-B/R94	Sub-Division	Not Applicable
	Location	TO THE SOUTH OF DD6 LOTS753A&B, AND 941A	
	Responsible Lot/Party	Lands Department	Maintenance Agent Lands Department
	Remarks	For enquiries about the maintenance of this slope / sub-division of the slope, please contact the Maintenance Agent directly.	

- End of Report -

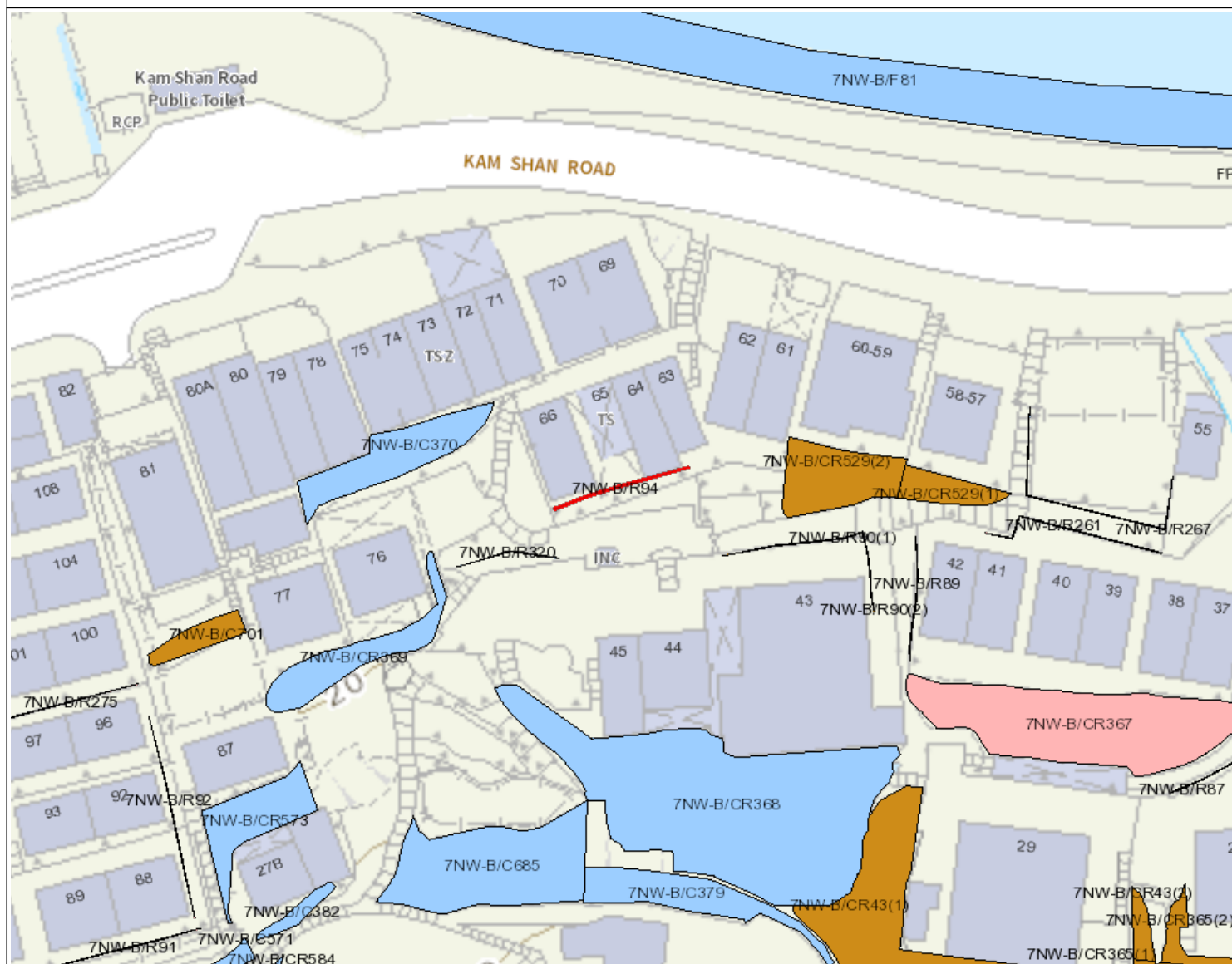
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Search Criteria: 7NW-B/R94

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Slope Maintenance Responsibility Report

(7NW-B/R320)



ESTATE MANAGEMENT SECTION
LANDS DEPARTMENT

List of Slope Maintenance Responsibility Area(s)

1	7NW-B/R320	Sub-Division		Not Applicable
	Location	TO THE EAST OF DD6 LOT2089		
	Responsible Lot/Party	Lands Department	Maintenance Agent	Lands Department
	Remarks	For enquiries about the maintenance of this slope / sub-division of the slope, please contact the Maintenance Agent directly.		

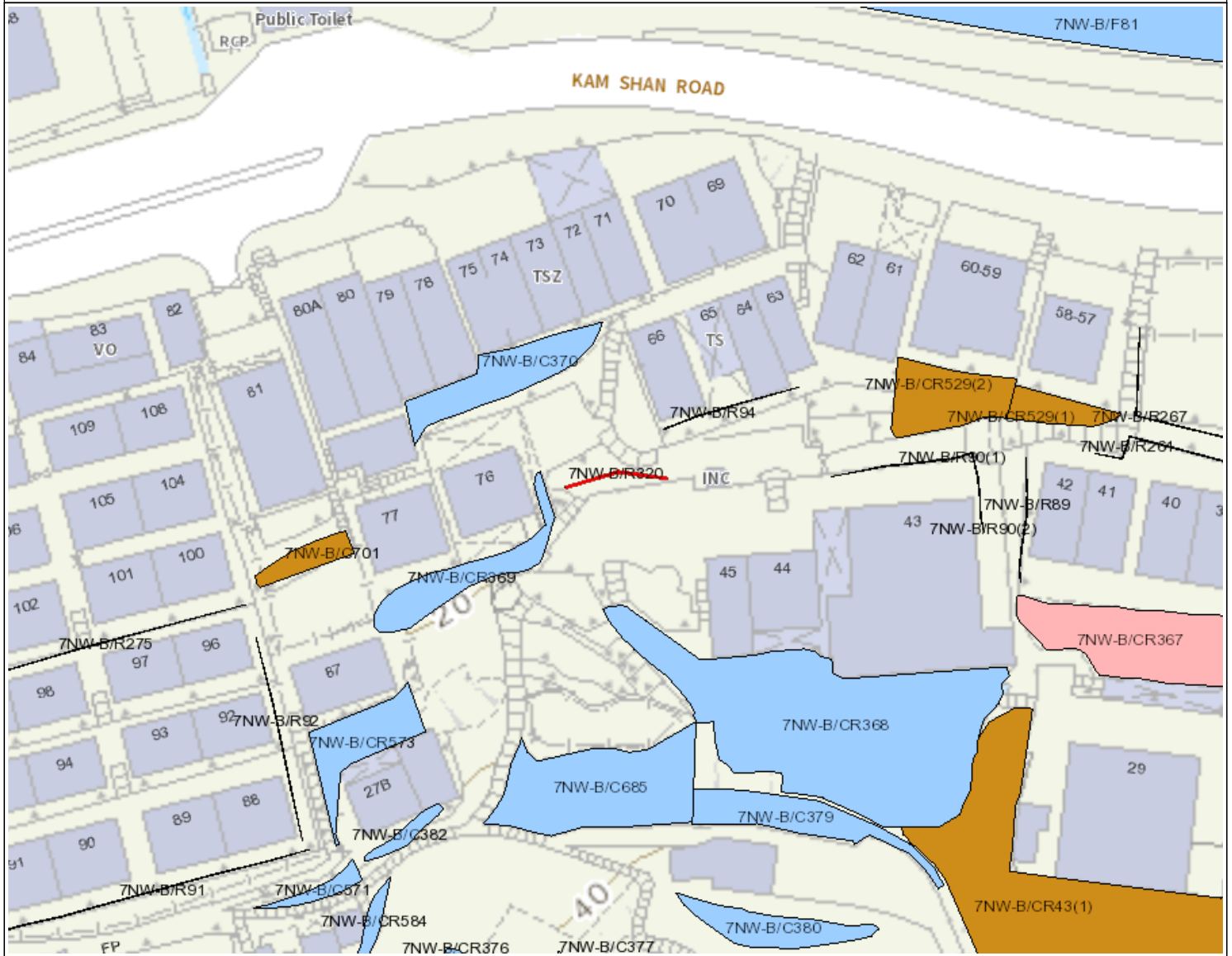
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Search Criteria: 7NW-B/R320

Slope Maintenance Responsibility Report

(7NW-B/CR368)



ESTATE MANAGEMENT SECTION
LANDS DEPARTMENT

List of Slope Maintenance Responsibility Area(s)

1	7NW-B/CR368	Sub-Division	Not Applicable
	Location	On unallocated Government land to the south of DD6 LOT 1130	
	Responsible Lot/Party	Lands Department	Maintenance Agent Lands Department
	Remarks	For enquiries about the maintenance of this slope / sub-division of the slope, please contact the Maintenance Agent directly.	

- End of Report -

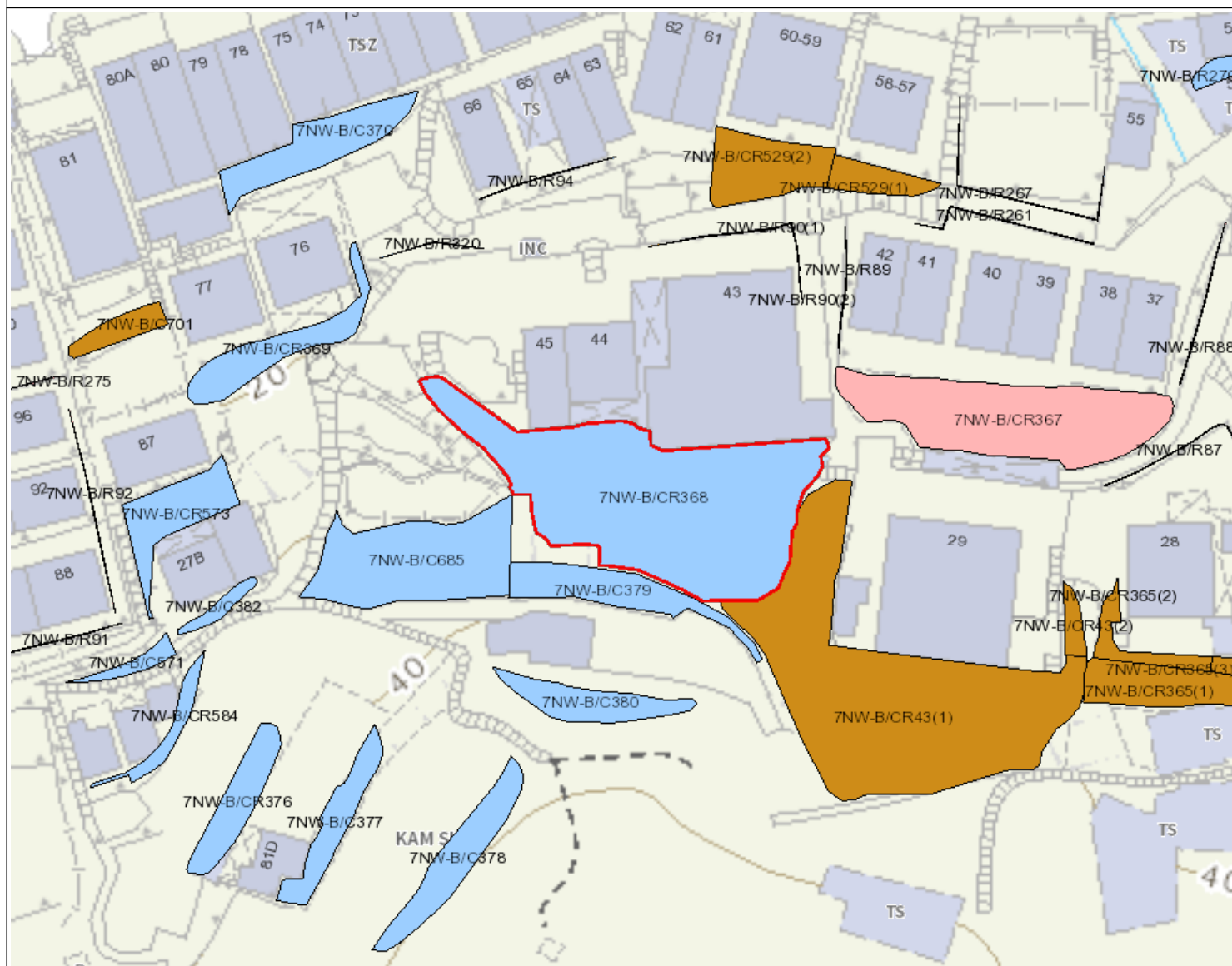
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Search Criteria: 7NW-B/CR368

Location Plan



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Slope Maintenance Responsibility Report

(7NW-B/CR369)



ESTATE MANAGEMENT SECTION
LANDS DEPARTMENT

List of Slope Maintenance Responsibility Area(s)

1	7NW-B/CR369	Sub-Division	Not Applicable
	Location	NEAR DD6 LOT2025 AND 2089, KAM SHAN, TAI PO	
	Responsible Lot/Party	Lands Department	Maintenance Agent Lands Department
	Remarks	For enquiries about the maintenance of this slope / sub-division of the slope, please contact the Maintenance Agent directly.	

- End of Report -

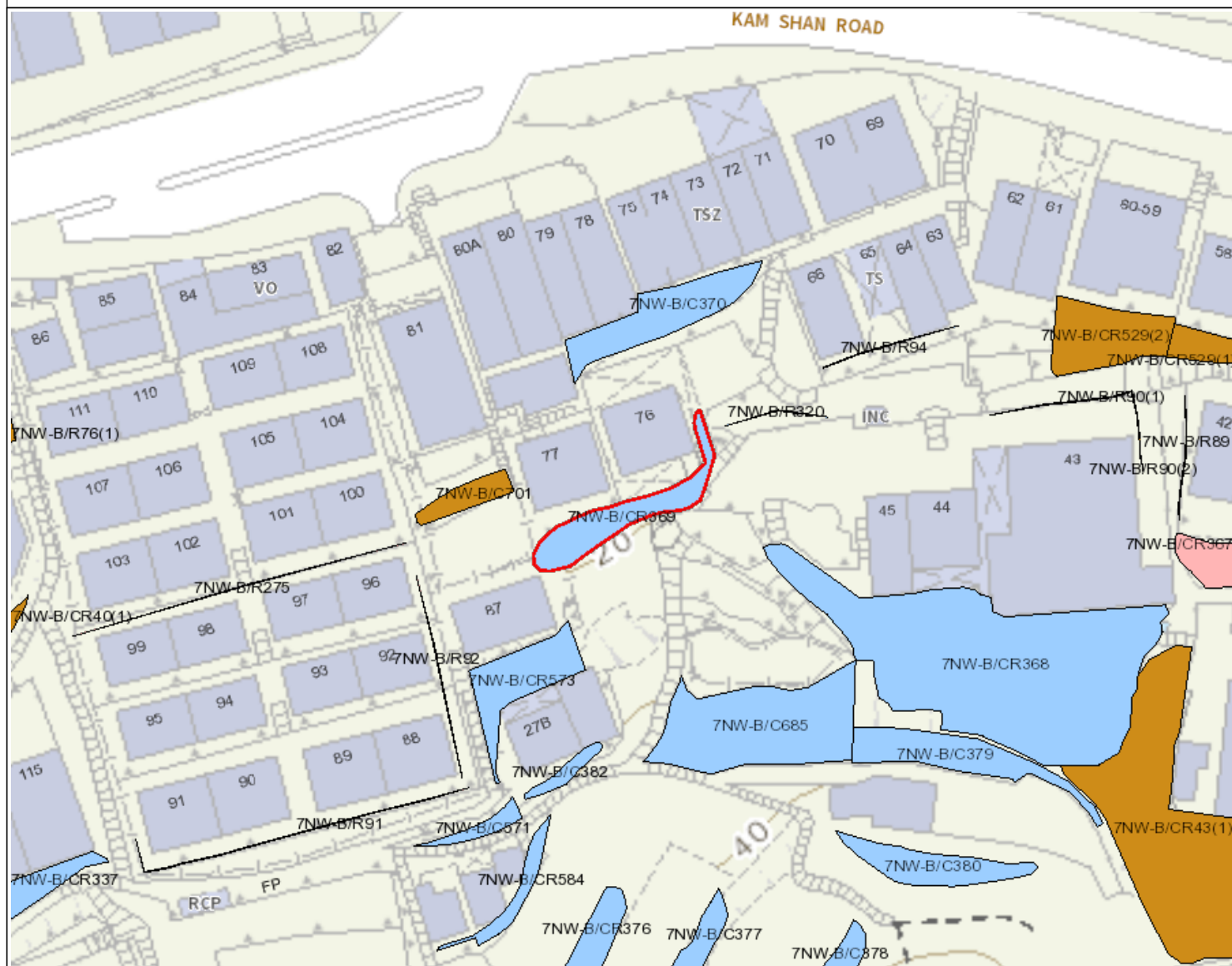
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Search Criteria: 7NW-B/CR369

Location Plan



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Search Criteria: 7NW-B/CR369

Slope Maintenance Responsibility Report

(7NW-B/CR529)



ESTATE MANAGEMENT SECTION
LANDS DEPARTMENT

List of Slope Maintenance Responsibility Area(s)

1	7NW-B/CR529	Sub-Division	1	
	Location	On unallocated Government land near to DD6 LOT 2163		
	Responsible Lot/Party	DD6 LOT 2163	Maintenance Agent	Not Applicable
	Remarks	Not Applicable		
2	7NW-B/CR529	Sub-Division	2	
	Location	On unallocated Government land near to DD6 LOT 2163		
	Responsible Lot/Party	Lands Department	Maintenance Agent	Lands Department
	Remarks	For enquiries about the maintenance of this slope / sub-division of the slope, please contact the Maintenance Agent directly.		

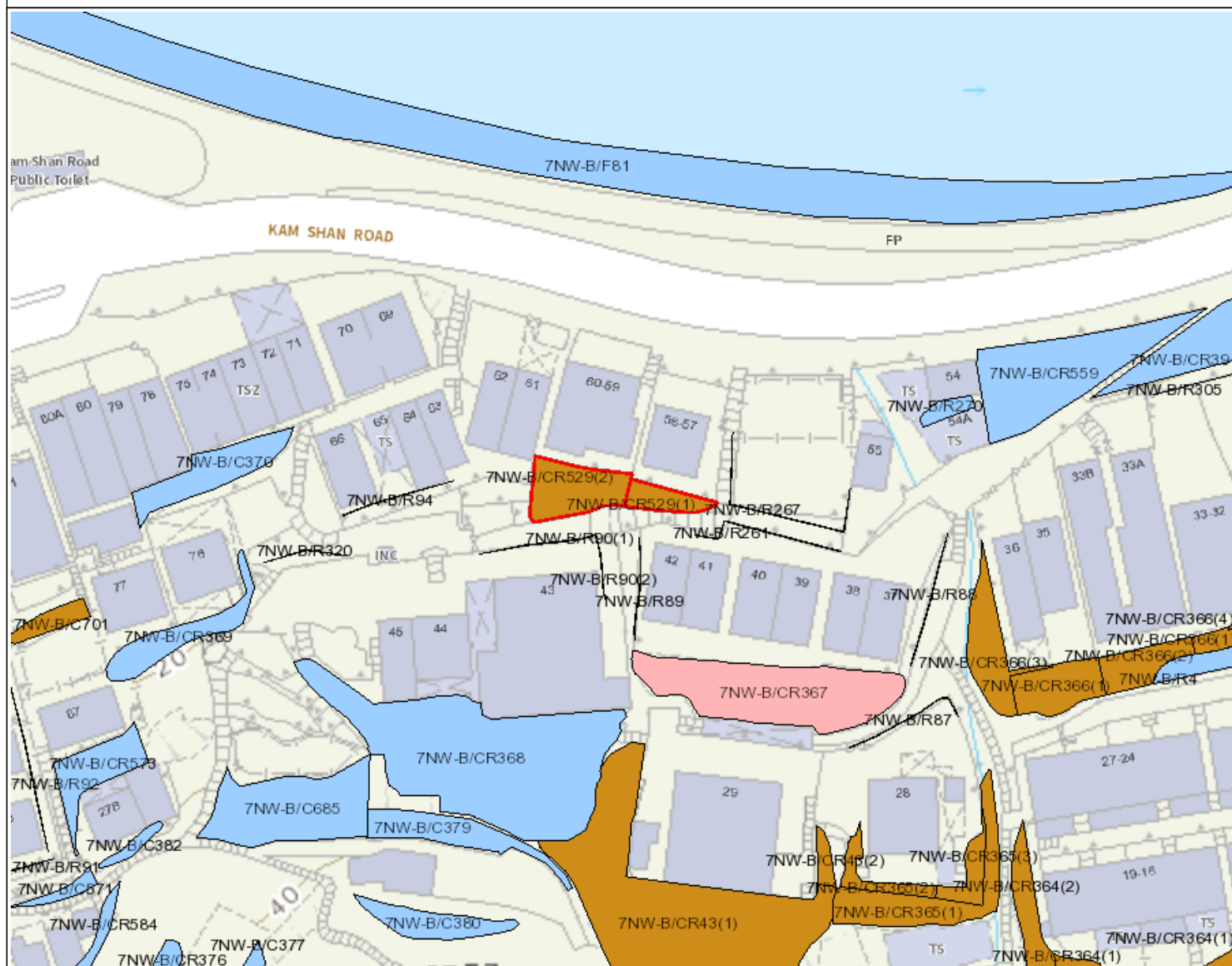
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Slope Maintenance Responsibility Report

(7NW-B/R261)



ESTATE MANAGEMENT SECTION
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List of Slope Maintenance Responsibility Area(s)

1	7NW-B/R261	Sub-Division	Not Applicable	
	Location	TO THE NORTH OF DEMARCATION DISTRICT 6 LOT1943		
	Responsible Lot/Party	DD6 LOT1943	Maintenance Agent	Not Applicable
	Remarks	Not Applicable		

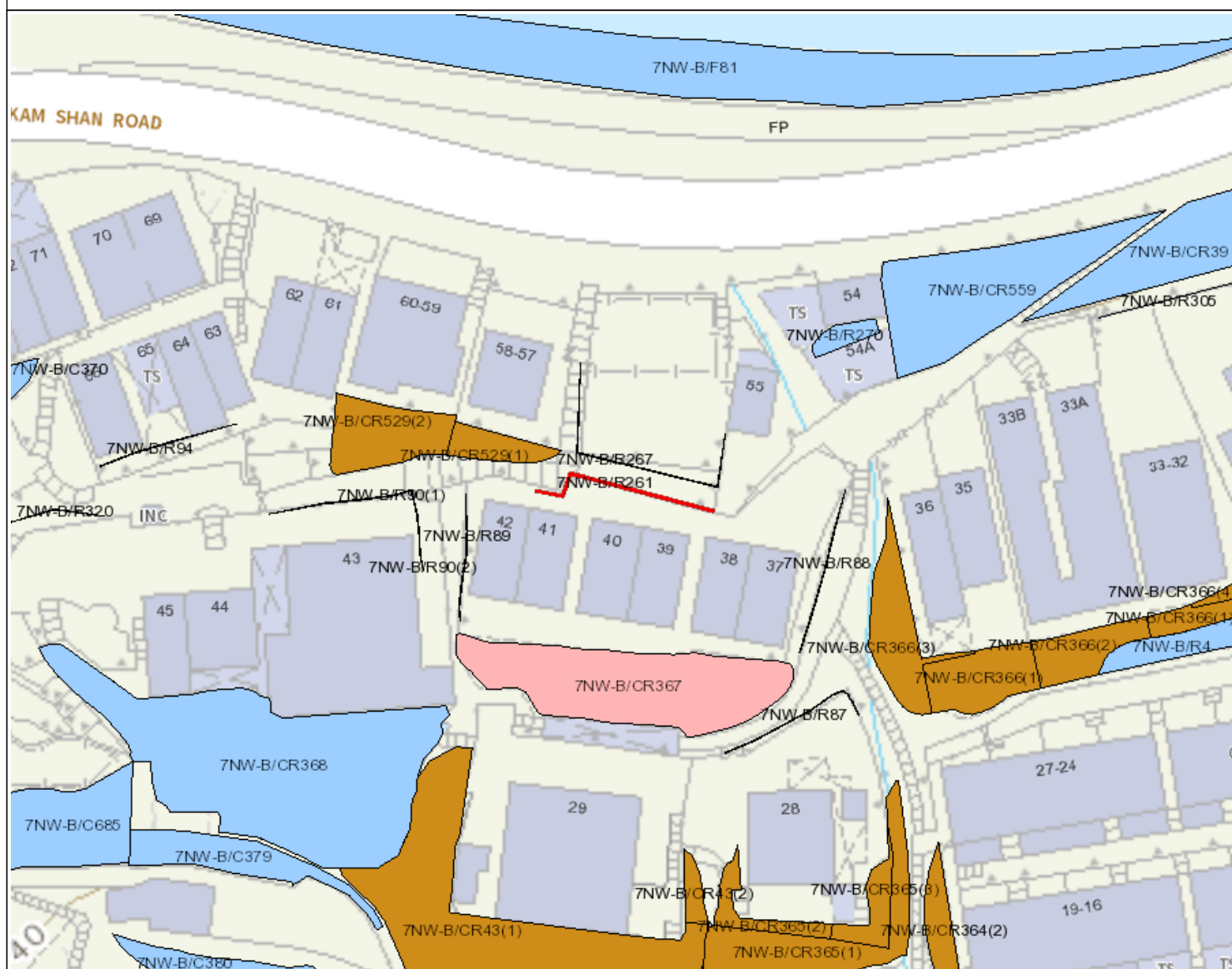
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Location Plan



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Slope Maintenance Responsibility Report

(7NW-B/R267)



ESTATE MANAGEMENT SECTION
LANDS DEPARTMENT

List of Slope Maintenance Responsibility Area(s)

1	7NW-B/R267	Sub-Division	Not Applicable
	Location	ON GL S OF DD6 LOTS978, 973 & 1045, KAM SHAN	
	Responsible Lot/Party	Lands Department	Maintenance Agent Lands Department
	Remarks	For enquiries about the maintenance of this slope / sub-division of the slope, please contact the Maintenance Agent directly.	

- End of Report -

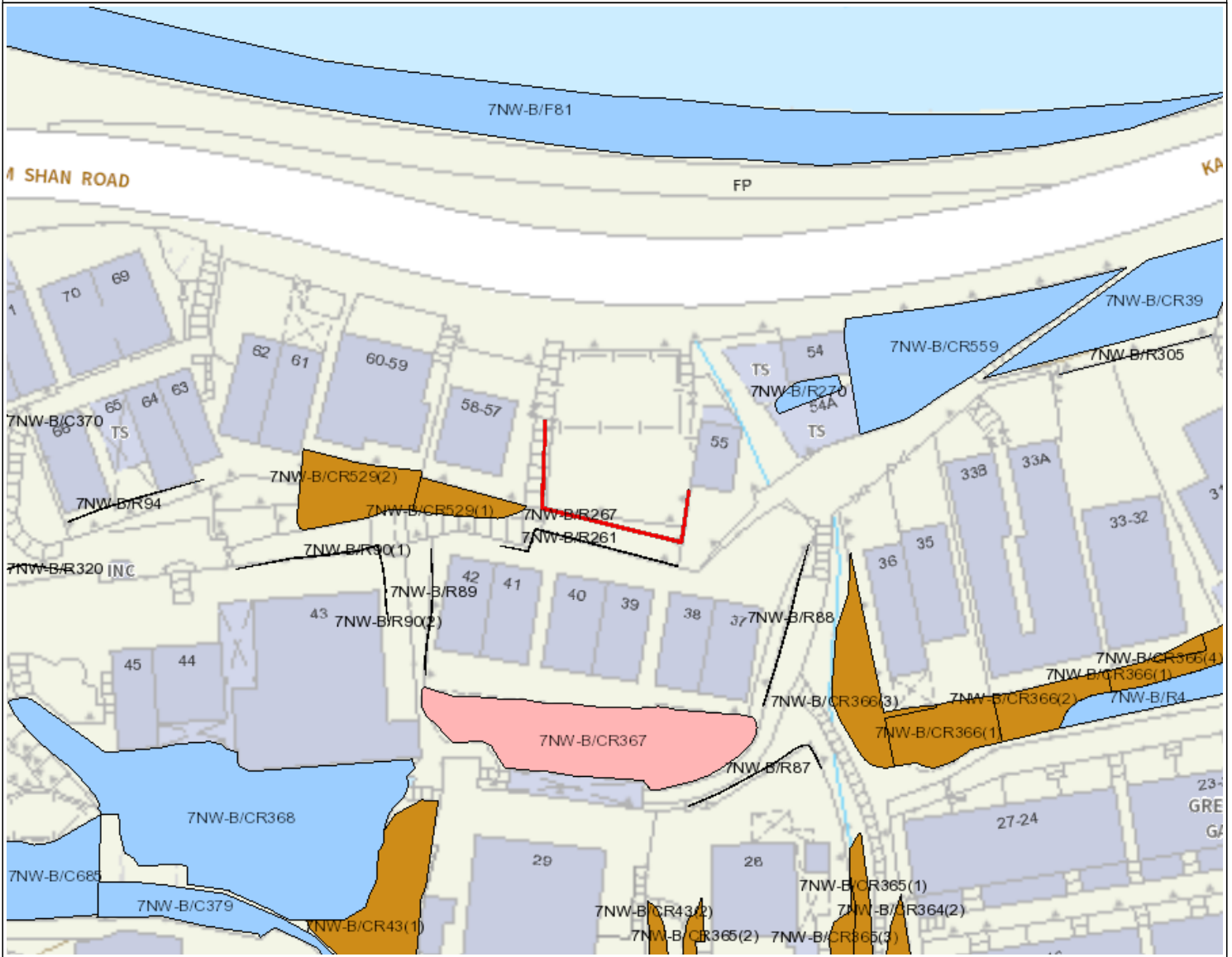
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Search Criteria: 7NW-B/R267

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APPENDIX D

RETRIVED STAGE 3 STUDY REPORTS FOR FEATURE 7NW-B/CR368 & CR529



REF No. 39719
17 SEP 2003

STAGE 3 STUDY REPORT

S3R 115 / 2003

SLOPE 7NW-B/CR368 SOUTH OF NO. 43-45 KAM SHAN VILLAGE TAI PO

Paul C T CHEUNG

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August 2003
Design Division GEO

463

FOREWORD

This report presents the results of a detailed Stage 3 study of feature No. 7NW-B/CR368 located behind No. 43-45 of Kam Shan Village, Tai Po, New Territories, and the design of landslip preventive works required to improve the stability of this feature to current safety standards.

The study included an information search, aerial photograph interpretation, visual inspection, ground investigation, laboratory testing and stability analysis. It concludes that the feature is below the current safety standards. The proposed landslip preventive works comprise installation of soil nail, rock dowels and shotcreting the slope surface.

The study and the design were carried out by Mr P C T CHEUNG with the assistance of Mr K S TSUI under the supervision of Mr K B LING.



(William K W TANG)

Atg. Chief Geotechnical Engineer/Design

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1. INTRODUCTION

1.1 Background

Feature 7NW-B/CR368, located behind No. 43-45 of Kam Shan Village, Tai Po near Hong Kong Metric Grid 834 611E 834 313N, is included in the Landslip Preventive Measures (LPM) Programme by circulation of LPMC Paper No. 1/2000 in May 2001. The LPM works for upgrading the slope will be carried out under Contract No. GE/2003/01 (Figure 1).

1.2 Site Description

1.2.1 Slope Location:

The feature is located behind no. 43-45 of Kam Shan Village, Tai Po (Figure 1 and Plate 1).

1.2.2 Geometry:

It is about 35m long and 12m high including a 3.2m high masonry retaining wall at the slope toe with thickness varies from 0.4m between chainages 20 and 29 to 1.0m at other location.

The masonry retaining wall is a dressed block wall, which is exposed behind the building no. 44 between chainages 20 and 29 (about 9m long and slightly curved on plan, Plate 2) and behind the staircase of the building no. 43 between chainages 7.5 and 11 (about 3m long). Other sections of the retaining wall are abutting by buildings between chainages 0-7.5 and 29-35, and under a building slab between chainages 11 and 20 (Plate 3).

The upper third of the retaining wall between chainages 20 and 27 has been resurfaced with chunam.

A 2.5m high concrete facing was constructed on top of the western end of retaining wall behind the building no. 45 between 29 and 35.

Boulders are exposed on the lower slope surface at about chainages 23 and 29.

The slope above the retaining wall is about 50°.

1.2.3 Surface Protection:

The existing slope surface is protected by shotcrete with some unplanned climbers growing along cracks.

An empty platform above the slope is covered by concrete and vegetation.

1.2.4 Surface Drainage:

There is a 600mm U-channel at about 8 m from the slope crest.

There are 300mm U-channels located at the western slope crest and between chainages 14 and 19.

A section of 225mm U-channel at the mid-slope between chainages 14 and 19 is connecting to a 225mm stepped-channel and then onto a 350mm U-channel at the top of the retaining wall between chainages 0 and 11.

There is also a 225mm U-channel at the crest of the retaining wall between chainages 11 and 24 and the above 350mm U-channel is connected to a downpipe at chainage 11.

1.3 Maintenance Responsibility

According to the SIMAR Report, the Feature is maintained by the Lands Department. A copy of the report is given in Appendix A.

2. GEOTECHNICAL INVESTIGATION

2.1 Desk Study

2.1.1 Previous Studies

The slope was studied in 1997 by GEO (Phase 1 Study) which recommended further study.

2.1.2 Previous Landslip Incidents

There were 2 landslip incidents (No. ME97/8/14 dated 12.8.1997 and No. ME1000/8/11 dated 24.8.1999) located behind the building no. 43.

The 97 incident only caused bulging of chunam with 1m³ of debris.

The second 99 incident damaged the top back portion of building no.43 which was at the slope toe.

Both incident recorded that surface drainage system was inadequate and the possible cause of failure was due to infiltration.

2.2 Aerial Photograph Interpretation

GEO carried out an aerial photograph interpretation (API) of the study area (Appendix B.)

The slope and two buildings (no.43 and 44) had already been formed before 1949 and are located at the north eastern flank of a ridge.

The other building (no. 45) was noted in 1963 photograph, but was a single storey, which was then reconstructed to two stories in 1967.

In 1963, there were two platforms with buildings above the subject slope, but the buildings directly above the subject slope were demolished in 1997.

Minor landslip at the central part of the adjacent slope (7NW-B/CR43) was observed in 1997 photograph.

Another landslip at the central part was noted in 1999 photograph (Figure 2).

The whole subject slope had been resurfaced with shotcrete in 2000.

A photolineament is observed obliquely crossing the eastern end of the slope.

2.3 Visual Inspection

Site inspections were carried out in dry and rainy days in 2002 and 2003 and the followings were noted:

The shotcrete covers on the slope surface are generally in good condition (Plate 1), but there are minor cracks on the western portion of the slope, especially near exposed boulders.

Some vegetations are grown in weepholes, along the edge of berm, over the fence at the crest and around the exposed boulders (Plate 2).

The retaining wall is generally in good condition (Wall Condition Class A, GEO circular 6/96), except between the chainages 20 and 27, the upper part of the retaining wall has been covered with chunam which may be indicated that it had past instability or sign of distress.

2.4 Ground Investigation and Field Testing

In 1999, GEO arranged Enpack (Hong Kong) Limited to carry out ground investigation works. The ground investigation works consisted of two drillholes, 3 chunam strips, 1 inclined and 5 horizontal coreholes and installation of 3 piezometers. The location of the ground investigation is shown in Figure 2.

2.5 Laboratory Testing

2 and 9 samples taken from the colluvial and granodiorite layers respectively for laboratory testing. The following tests were carried out by Soils & Materials Engineering Company Limited in February 2001:

- a. Moisture Content Test
- b. Atterberg Limits Test
- c. Particle Size Distribution Test
- d. Triaxial compression test
- e. Water Soluble Sulphate Content Test
- f. pH of soil Test
- g. Organic Matter Content Test
- h. Carbonate Content Test
- i. Resistivity Test

The laboratory test results are summarized in Table 1

The results of triaxial compression tests of colluvium are plotted in Figure 10.

The results of the triaxial tests for the granodiorite are plotted on a p' - q plot as shown in Figures 11.

The aggressivity of soil is also assessed and summarized in Table 2.

3. GEOTECHNICAL ASSESSMENT

3.1 Ground Conditions

According to the Hong Kong Geological Survey Map Sheet 7, the feature is underlain by the granodiorite. This has been confirmed by the results of the ground investigation and site inspection.

The ground investigations revealed that about 1m thick of fill is found at the crest of old platforms. It consists of angular coarse gravel and cobble sized moderately strong rocks and concrete fragments.

A layer of about 2 m thick colluvium is overlying the completely decomposed granodiorite, which overlies the moderately/slightly decomposed granodiorite. The colluvium in this area is firm, red, slightly sandy silty CLAY with occasional subangular fine quartz gravel.

The completely decomposed granodiorite in drillhole DH1 is only 4.73m thick whereas the completely decomposed granodiorite in drillhole DH2 is over 24m. It is described as

extremely weak, brown silty fine to coarse sand with angular fine to medium gravel sized rock fragments.

The rockhead level in drillhole DH2 is at 7.08mPD (26.03m below ground) which is about 19m below the rockhead level in drillhole DH1 (26.52mPD, 6.83m below ground). These two drillholes are only 19m apart suggesting that rockhead level dips sharply towards DH2 from DH1 which probably lies on the fringe of the photolineament(N-S fault).

The low rockhead level and low rock quality designation values (ranges from 0 to 55) in drillhole DH2 may be due to the influence of N-S fault, which may cut across the eastern (10m) end of the slope.

The inferred geological model of Section 1-1, Section 2-2 and Section 3-3 based on information from ground investigation are shown in Figures 4-6.

3.2 Groundwater Conditions

No seepages were noted on the shotcrete and the retaining wall surfaces during site visits

Piezometer monitoring has begun from May 2001 to present.

Monthly piezometer monitoring of DH1 and DH2 was carried out in dry season and bimonthly between April to September. The highest ground water level recorded from the piezometer of drillhole DH2 is about 2.5m below slope surface which is about 24.3m above rock head during a 1 in 12 years rainfall return in mid-September 2003(about 510mm in 3 days) (Lam & Leung, 1994).

The piezometric level of the lower piezometer of drillhole DH2 is about 4m lower than the upper piezometer. These two piezometers were both installed within the completely decomposed granodiorite.

No groundwater level was recorded in drillhole DH1.

The recorded highest groundwater levels are plotted in Figures 4-6. The rainfall records together with the groundwater monitoring data are attached at Appendix C.

The design groundwater levels are then assumed to be at the highest recorded groundwater level at Section 3-3, 1.0m above estimated rockhead surface at Sections 1-1 and 2-2. A meter of perched water is also assumed above the boundary of colluvium and completely decomposed granodiorite in the analysis.

3.3 Parameter for Analysis

Based on the laboratory testing results, the following parameters are obtained.

Materials	c' (kPa)	Phi (degree)	γ (KN/m ³)
Colluvium (p'-q plot)	4.2	32.6°	18
CDGr (p'-q plot)	5.6	33°	18

The following parameters of the colluvium and CDGr have been adopted in the stability analysis and the design of the landslip preventive works. They are in consistence with the parameters suggested in Table 8.1 of GEOGUIDE 1.

Materials	c' (kPa)	Phi (degree)	γ (KN/m ³)
Colluvium (Design)	4	32°	18
CDGr (Design)	5	33°	18

Soil aggressivity assessment has been carried out and indicated that the soil is aggressive according to the classification scheme used in the United Kingdom (Table 2).

3.4 Stability Assessment of Existing Soil Slope

Stability analysis of the overall slope has been conducted. The calculated minimum factor of safety is 1.149, 0.802 and 0.928 at sections 1-1, 2-2 and 3-3 respectively, hence upgrading works are required. Summary of the stability analysis of the existing slopes are given in Appendix D.

3.5 Stability Assessment of Existing Retaining Wall

Stability analysis of the retaining wall has also been carried out and the results of the analysis are summarized below. Details of the calculation are given in Appendix E.

Section	Sliding	Overturning
1-1	0.77	0.5
2-2	0.93	0.6
3-3	0.47	0.31

4. PROPOSED PREVENTIVE WORKS

4.1 Design Options

Two options have been considered in the option meeting and the details are summarized below:

	Proposed Remedial works	Construction Problems & Requirements
Option 1	<ul style="list-style-type: none"> - Cut back the lower and upper soil slope to 45° and 52° respectively. - Install 8m long soil nails at 2m c/c. - Install 6m long raking drains. - Provide a 500mm thick concrete cap with 100mm diameter vertical grout hole behind the existing retaining wall. - Provide sprayed concrete cover. 	<ul style="list-style-type: none"> - Erect safety fence & scaffolding. - Disposal of the excavated materials off site.
Option 2	<ul style="list-style-type: none"> - Install 8m long soil nail at 1.5m c/c. - Install 6m long raking drains. - Provide a 500mm thick concrete cap with 100mm diameter vertical grout hole behind the existing retaining wall. - Provide sprayed concrete cover. 	<ul style="list-style-type: none"> - Erect safety fence & scaffolding

No conclusion had been made during the option meeting and suggested to have a site visit to check the site limitation and the possible route for disposal of excavated materials.

After the site visit, it was proposed to cut the lower slope to 60° with installation of soil nails at 1.5m c/c and forming a 2m wide platform at about 24mPD above the existing retaining wall with installation of vertical soil nails at 300mm c/c where the existing structure/building is

abutting the retaining wall (sections 1-1 and 3-3). For the retaining wall at section 2-2, it was proposed to install sub-horizontal soil nails with 200mm thick skin wall.

The revised proposal is adopted. Details of the options and the relevant minutes are provided in the Appendix F.

The estimated cost of remedial works for the slope is \$2.8M.

4.2 Proposed Landslip Preventive Works

Based on WBTC No. 13/99, the slope is considered to be within Consequence-to-life Category 1 as there are buildings in front of the slope. Should the slope fail, the building will be affected. Hence, the factor of safety of 1.4 is adopted for the design.

The proposed upgrading works include:

- i) form a 2m wide platform above the existing retaining wall at 24.4mPD.
- ii) cut back the soil slope to 55° from 24.4mPD.
- iii) install 6 to 10m long soil nails (32/40mm in diameter) at 1.5m c/c into the new cut back soil slope.
- iv) provide 150mm thick sprayed concrete with 2 coats of water based subdue color paint (BS10B25) with A353 wire mesh reinforcement on the surface of new cut back soil slope.
- v) provide 6m long raking drains above the interface of colluvium and completely decomposed granodiorite.
- vi) provide subhorizontal soil nails (32mm in diameter) and skin wall (200mm thick) onto the retaining wall where the retaining wall is not abutting by the building.
- vii) provide additional vertical/subvertical soil nails (32mm in diameter) with 300mm concrete cover on top of the retaining wall where the retaining wall is abutting by the building.

The design calculations for the cut slope and the retaining walls are at Appendix G and H respectively.

Details of proposed landslip preventive works are shown in Drawings GED CR368a to GED CR368c at Appendix J.

4.3 Sensitivity Analysis of Ground Water

Sensitivity analysis of ground water to the soil slope has been carried out. Another meter of ground water is added to the design ground water level.

The maximum difference in the calculated factor of safety of all potential slips within the

colluvium layer is only 0.179 in Section 2-2, i.e. factor of safety reduces from 1.413 to 1.234, hence this section is not sensitive to the change of ground water.

For the entire slope, the maximum difference is 0.15 in section 1-1. Hence, factor of safety is not sensitive to the variation of groundwater level. Details of sensitivity analysis are given in Appendix I.

4.4 Justification of Hard Surface

The lot owner requested government to provide hard surface to the slope to avoid close contact with snakes and leaves falling onto their lot.

There is no direct access, except through the private lot, to the feature for carrying out the normal maintenance works.

The retaining wall at the toe of the feature is enclosed/abutted by the buildings.

Part of the feature had failed twice in recent years and the possible cause of these two failures were due to infiltration of water into the empty platform and slope surface and poor drainage system.

CED Vetting Committee endorsed the use of hard surface on the feature on 14.5.2003.

4.5 Landscape

To minimize the visual impact of the hard surface, 2 coats of water based color paint (BS10B25) is applied onto the sprayed concrete surface.

5. CONCLUSION AND RECOMMENDATIONS

A detail Stage 3 Study of the feature has been carried out and landslip preventive works have been designed to upgrade the feature to the current safety standards. Landslip preventive works comprising forming a small platform, cutting back the soil slope, installation of soil nails, raking drains, drainage channels and sprayed concrete. The estimated cost for the proposed LPM works is about \$1.5 million.

6. REFERENCES

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- Soils & Materials (2001). CED Contract No. GE/99/11 Laboratory Testing – New Territories (Term Contract) W.O. No.: GE/99/11.60, Feature No. 7NW-B/CR368, South of 43-45 Kam Shan Village, Laboratory Testing Final Report. Soils & Materials Engineering Company Limited.
- WBTC (1999). Works Bureau Technical Circular No. 13/99, Geotechnical Manual for Slopes - Guidance on Interpretation and Updating. Works Bureau, Hong Kong SAR Government.

**Feature No. 7NW-B/CR529
Nos. 57 to 60, Kam Shan Road,
Tai Po**

Fugro (Hong Kong) Limited

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**March 2013
LPM Division 3
Geotechnical Engineering Office
Civil Engineering and Development Department**

Foreword

This report presents the results of a Stage 3 Study on Feature No. 7NW-B/CR529, which is located behind Nos. 57 to 60, Kam Shan Road, Tai Po.

The desk study, aerial photograph interpretation, site inspection, stability analysis, design of landslip preventive works and compilation of this report were carried out by Fugro (Hong Kong) Limited on behalf of the Geotechnical Engineering Office, Civil Engineering and Development Department under Agreement No. CE 45/2010 (GE) : Landslip Prevention and Mitigation Programme, 2010, Package J, Landslip Prevention and Mitigation Works, Mainland East (North) – Investigation, Design and Construction.

Based on the Slope Report obtained from the web-based Slope Maintenance Responsibility Information System of the Lands Department (Lands D), Sub-division No. 2 of the study feature lies on unallocated government land. The Lands D is responsible for the maintenance of Sub-division No. 2 of the feature.

It is proposed to upgrade the existing feature to meet the current safety standards by application of prescriptive measures. Landslip preventive works comprising the installation of prescriptive soil nails are recommended. To improve the aesthetics of the upgraded slope, subdued colour paint will be applied to the proposed sprayed concrete surface on the slope and final surface of the skin wall.



YC Koo
Project Director

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Appendix B: Previous Studies

Appendix B1: Relevant Information from the GEO, CEDD

Appendix B2: Relevant Information from the Lands D

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Appendix D: Topographical Survey Plan

Appendix E: Extracts of Design Option Report and Option Assessment
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1 Introduction

1.1 Background

The Geotechnical Engineering Office (GEO) of the Civil Engineering and Development Department (CEDD) selected Feature No. 7NW-B/CR529 for Stage 3 Study under Agreement No. CE 45/2010 (GE). This Agreement commenced in July 2011 and involves technical and administrative activities related to the investigation, design and construction of landslip preventive works on sub-standard government man-made slopes and retaining walls and hazard mitigation works for natural hillside catchments.

As the feature satisfies the criteria for application of prescriptive measures given in GEO Publication No. 1/2009 (GEO, 2009), it will be upgraded by using prescriptive design approach. Thus, no feature-specific ground investigation (GI) had been carried out for this study.

1.2 Site Description

Feature No. 7NW-B/CR529 (Hong Kong Metric Grid Ref. 834 629E, 834 346N) is located behind Nos. 57 to 60, Kam Shan Road, Tai Po. The location plan and site plan of the feature are shown in Figures 1.1 and 1.2 respectively.

The feature has a total length of 25 m, a slope height of about 10 m with maximum gradient of 70°. The eastern portion (i.e. Sub-division No. 1) and western portion (i.e. Sub-division No. 2) of the feature is generally covered with sprayed concrete and masonry facing respectively. A concrete wall is located at along the toe of the western portion of the feature, with height of about 1.5 m and a gradient of 90°. Two 3-storey high residential structures are located in front of the feature. Above the crest of feature is a temple. General views of the feature are shown in Figures 1.3 to 1.6 and vantage points of the photos are shown in Figure 1.2.

1.3 Maintenance Responsibility

Based on the Slope Report obtained from the web-based Slope Maintenance Responsibility Information System (SMRIS) of Lands Department (Lands D), the entire feature lies on unallocated government land. The owners of DD6 Lot 2163 and Lands D is responsible for the maintenance of Sub-division Nos. 1 and 2 respectively of the feature. A copy of the Slope Report is presented in Appendix A.

2 Geotechnical Investigation

2.1 Desk Study

A desk study was carried out to retrieve relevant information from the Geotechnical Information Unit (GIU) and various divisions of the GEO, the Lands D and utility undertakers. An aerial photograph interpretation (API) of the feature was also undertaken. Results of the desk study are summarized below. A copy of each of the relevant parts of the collected documents is included in Appendix B.

2.1.1 Geotechnical Engineering Office

A geotechnical report for development of House Nos. 57 and 58 at DD6 Lot 2163 (GCME 3/5/6/9121/93) with proposed upgrading works at the eastern portion of the feature (i.e. Sub-division No. 1) by soil nails was submitted in 1994. The site formation plans were checked with no geotechnical objection by GEO/ME on 22 February 1994 and the site formation works was completed in October 1994.

The SIRST field sheet for the feature 7NW-B/C529 prepared in March 1997 recorded that no sign of seepage and sign of distress were observed. Another SIRST field sheet for feature 7NW-B/CR529 prepared in November 2000 indicated that the toe wall portion was partly in masonry facing and partly with concrete surface with no sign of seepage observed on the toe wall face.

A Feature Registration Form was obtained from the Slope Information System (SIS) of the GEO. It stated that the SIFT class of the feature was changed from "C1" to "C2" as proposed by GEO/MW in April 2007.

A copy of the relevant records is presented in Appendix B1.

2.1.2 Lands Department

The latest Engineer Inspection (EI) record and Maintenance Manual (MM) were prepared by Ove Arup & Partners Hong Kong Limited in April 2010 and are included in Appendix B2. The EI recorded that no stability assessment/upgrading work on the Sub-division No. 2 of the feature had been carried out and no signs of distress and seepage on slope were observed. Routine Maintenance Works (RMW) including removal of undesirable vegetation on slope hard cover was recommended and the works was completed in August 2010.

2.1.3 Utilities Information

The following government departments and utility undertakers were contacted regarding the location of their utilities and plants in relation to the feature:

- Drainage Services Department
- Fire Services Department
- Highways Department, Lighting Division
- Transport Department
- Water Supplies Department
- CLP Power Hong Kong Limited
- Hong Kong Broadband Network Limited
- Hong Kong Cable Television Limited
- Hutchison Global Communications Limited
- New World Telecommunications Limited
- PCCW-HKT Telephone Limited
- The Hong Kong and China Gas Company Limited
- Towngas Telecommunications Fixed Network Limited
- Wharf T & T Limited

Based on the information collected, a 200mm diameter foul sewer of Drainage Services Department is located underneath the existing staircase beyond the crest of the feature. The approximate locations of the observed utilities are shown on Drawing No. LPM1228/24/01.

2.1.4 Previous Ground Investigation Information

An information search at the GIU of CEDD did not reveal any record of previous GI work carried out within or in the vicinity of the feature.

2.1.5 Aerial Photograph Interpretation (API)

An API was carried out to identify the topographic, geomorphological and geological information on the feature, as well as the site development history, past instability and surface hydrology relevant to the feature.

The findings of the API revealed that the feature was formed probably in association with the construction of some cottages at its crest and toe before 1949. By its formation, the feature was in bare surface. Further to the demolition of the pre-existing building at the eastern toe of the Feature with subsequent completion of site formation works in 1994, House Nos. 57-58 was constructed in 1995. Except the change in density of vegetation cover, no significant changes to the Feature can be observed. A copy of the API report is included in Appendix C.

2.1.6 Past Instability

No landslide records relating to the feature were found in the SIS and Enhanced Natural Terrain Landslide Inventory (ENTLI) of the GEO.

2.2 Visual Inspection

Visual inspections to the feature were undertaken by Fugro (Hong Kong) Limited between August 2011 and December 2012.

At the time of inspections, the slope surface of Sub-division No. 2 of the feature was covered by masonry facing with 75mm diameter weepholes at 1.5m spacing. The concrete retaining toe wall was about 1.5m high with 65mm diameter weepholes at 2.2m spacing. A 150mm U-channel was running along the mid-slope of the western portion of the feature with 200mm diameter downpipe located at the western end. A 300mm U-channel is located at the outlet of the downpipe which leads to the road. A temple was situated at a distance 6m from the crest of the feature and residential structures were situated at about 1m from the toe of the feature. A staircase was provided along the crest of the feature leading to the temple.

2.3 Ground Investigation

As it is proposed to upgrade this feature using the prescriptive design approach, no feature-specific GI was carried out for this Study.

3 Geotechnical Assessment

3.1 Topography

A topographic survey for the study feature was carried out by Sea Full Survey Engineering Company in August 2012. A copy of the survey plan is presented in Appendix D. Based on the survey plan, two critical sections of the feature, (namely Sections 1-1 and 2-2) were adopted for stability assessment. Locations of the sections are shown in Figure 1.2.

3.2 Geological Model

The Hong Kong Geological Survey, 1:20,000 scale geological map, Series No. HGM20, Sheet No. 7 – Sha Tin, published by the Geotechnical Control Office (GCO, 1986), indicates that the site comprises granodiorite. No salient geological features were identified in the study area. A copy of the regional geological map is shown in Figure 3.1.

Based on the information from the geological map sheet and site observation, it is inferred that the feature mainly comprises completely decomposed Granodiorite (CDGr). The inferred geological profile at Sections 1-1 and 2-2 are shown in Figures 3.2 and 3.3 respectively.

3.3 Groundwater Conditions

There is no groundwater monitoring record available for this study. No signs of seepage or elevated groundwater table on the slope surface were observed at the time of the site inspections. In this regard, it is considered that the effect of groundwater table on the stability of the feature is not significant.

3.4 Soil Aggressiveness

In accordance with GEO Publication No. 1/2009 (GEO, 2009), the design of corrosion protection measures for the steel reinforcement of prescriptive soil nails should follow the guidance given in Sections 4.3.2 and 5.5 of Geoguide 7 (GEO, 2008) - Guide to Soil Nail Design and Construction. As the site has the potential of being affected by the leakage from the existing foul sewer underneath the existing staircase beyond the crest of the feature, the soil at the feature would be classified as potential-aggressive. Based on Table 5.1 of Geoguide 7 (GEO, 2008), Class 1 corrosion protection measures will be provided, i.e. provision of hot-dip galvanizing with a minimum zinc coating of 610 g/m^2 and corrugated plastic sheathing.

3.5 Stability Assessment

It is considered that the consequence-to-life of the feature in the event of failure would fall into category "1" in accordance with the guidance given in Works Bureau Technical Circular No. 13/99 (WB, 1999) and GEO TGN No. 15 (GEO, 2007). The assessment is based on the residential structures at the toe of the feature, which would possibly be affected if failure occurs. Hence, upgrading work is warranted in order to reduce the risk of failure.

The feature satisfies the criteria for application of prescriptive measures for upgrading works as set out in Table 5.2 of GEO Publication No. 1/2009 (GEO, 2009). Record sheet for prescriptive measures application is given in Appendix F. In addition, the feature is within geometry class "S2" as defined in Figure A2 of GEO Report No. 68 (GEO, 1998). According to the guidance given in GEO Landslip Preventive Measures Division 2 Design Technical Guideline No. 1 (GEO, 2000), stability analyses are not required to justify the need for LPM works.

Based on the above findings, it is proposed to upgrade the existing feature using prescriptive measures to meet the current safety standards.

4 Proposed Upgrading Works

4.1 Design Options

Two design options were proposed for the feature as follows:

- (i) Option 1 – Installation of Soil Nails (Prescriptive Design)
- (ii) Option 2 – Construction of Mini-piles Retaining Wall

These options were discussed in the Option Assessment Meeting No. 2 held at the GEO, CEDD on 30 October 2012 to determine the preferred option. Option 1 was agreed to be the preferred scheme taking into account its ease of construction, higher cost-effectiveness, shorter construction period and lesser environmental impact on the surrounding area when compared with that of Option 2. A copy of the extracts of the Design Option Report and the minutes of the Option Assessment Meeting are given in Appendix E.

4.2 Proposed Upgrading Works

The following upgrading works are recommended for the feature:

- i) Installation of prescriptive soil nails with double corrosion protection and construction of concrete skin wall; and
- ii) Application of subdued colour paint to the surface of sprayed concrete and concrete skin wall.

The design of the prescriptive soil nails was carried out in accordance with GEO Publication No. 1/2009 (GEO, 2009) and is presented in Appendix F. Layouts of the proposed upgrading works are shown in Figures 4.1 and 4.2 and Drawing No. LPM1228/24/02.

4.3 Surface Drainage Measures

It is recommended to provide a drainage channel along the mid-slope and the toe of the feature which connect to existing downpipe and drainage outlet respectively at the western end of the feature. The design of the surface drainage is presented in Appendix G and the layout of the proposed surface drainage system is shown on Drawing No. LPM1228/24/02.

4.4 Future Maintenance

To provide a safe access for inspection and maintenance of the feature, it is recommended to construct a new maintenance access with handrailing along the mid-slope of

the feature. The layout of new maintenance access of the feature is shown in Drawing No. LPM1228/24/02.

4.5 Landscaping Works

In order to ameliorate the visual impact of the proposed upgrading works, it is recommended that subdued colour paint will be provided to the sprayed concrete cover on the slope and the final surface of the skin wall.

5 Conclusions and Recommendations

Based on the information obtained from the desk study and recent site reconnaissance, it is proposed to upgrade the existing feature using prescriptive measures. Landslip preventive works comprising installation of prescriptive soil nails and construction of concrete skin wall are recommended. In order to improve the final appearance of the upgraded feature, subdued colour paint will be provided to the newly applied sprayed concrete cover on the slope and the final surface of the skin wall.

6 References

6.1 Technical References

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6.2 References Identified in the Study

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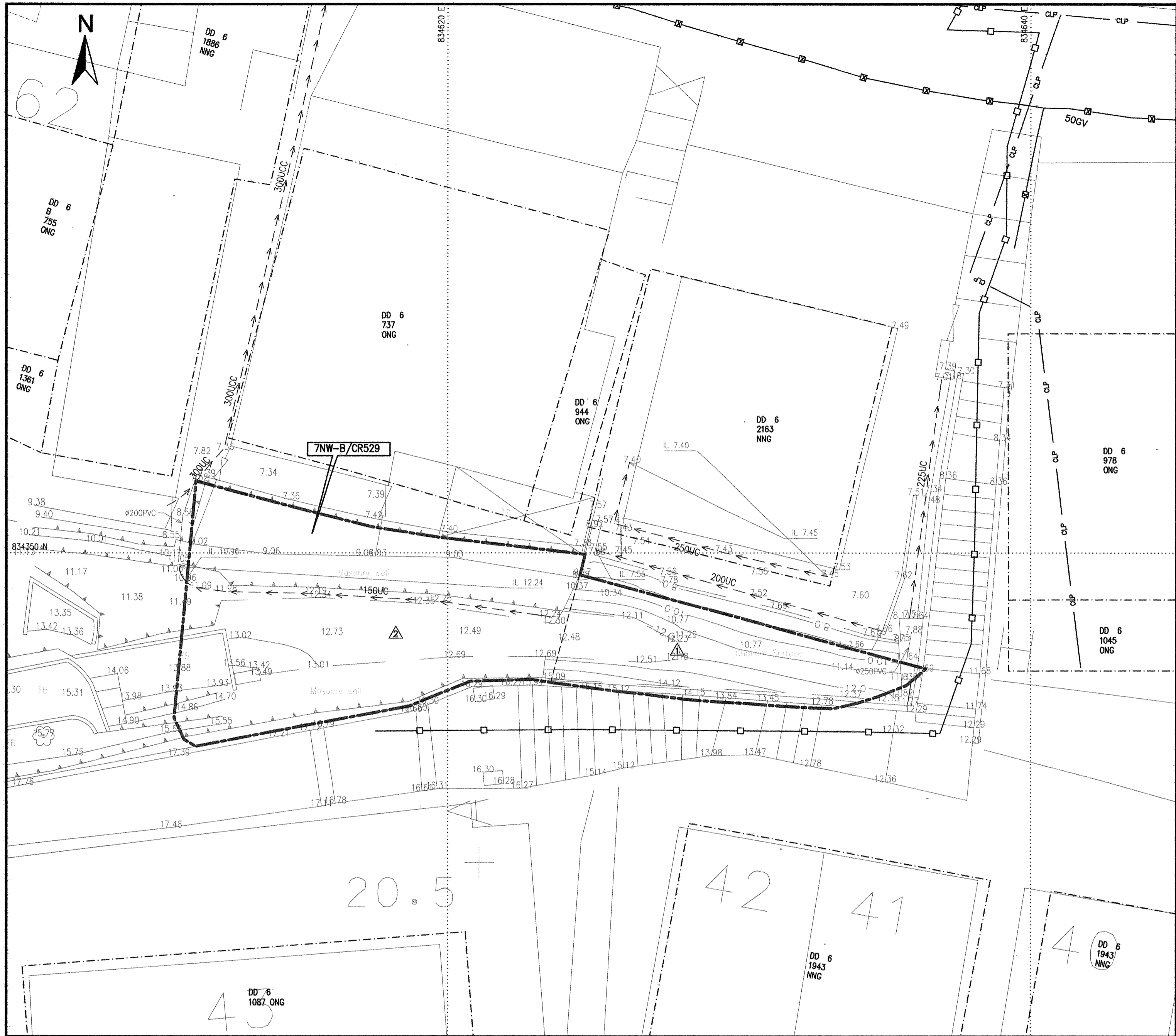
GCME 3/5/6/9121/93. Geotechnical Report for Kam Shan, Tai Po DD6 Lot2163. Geotechnical Engineering Office, Civil Engineering Department, Hong Kong.

List of Drawings

Drawing No.

LPM1228/24/01 Location Plan of Works Site, Plan of Existing Feature and Utilities

LPM1228/24/02 Plan of Works and Sections

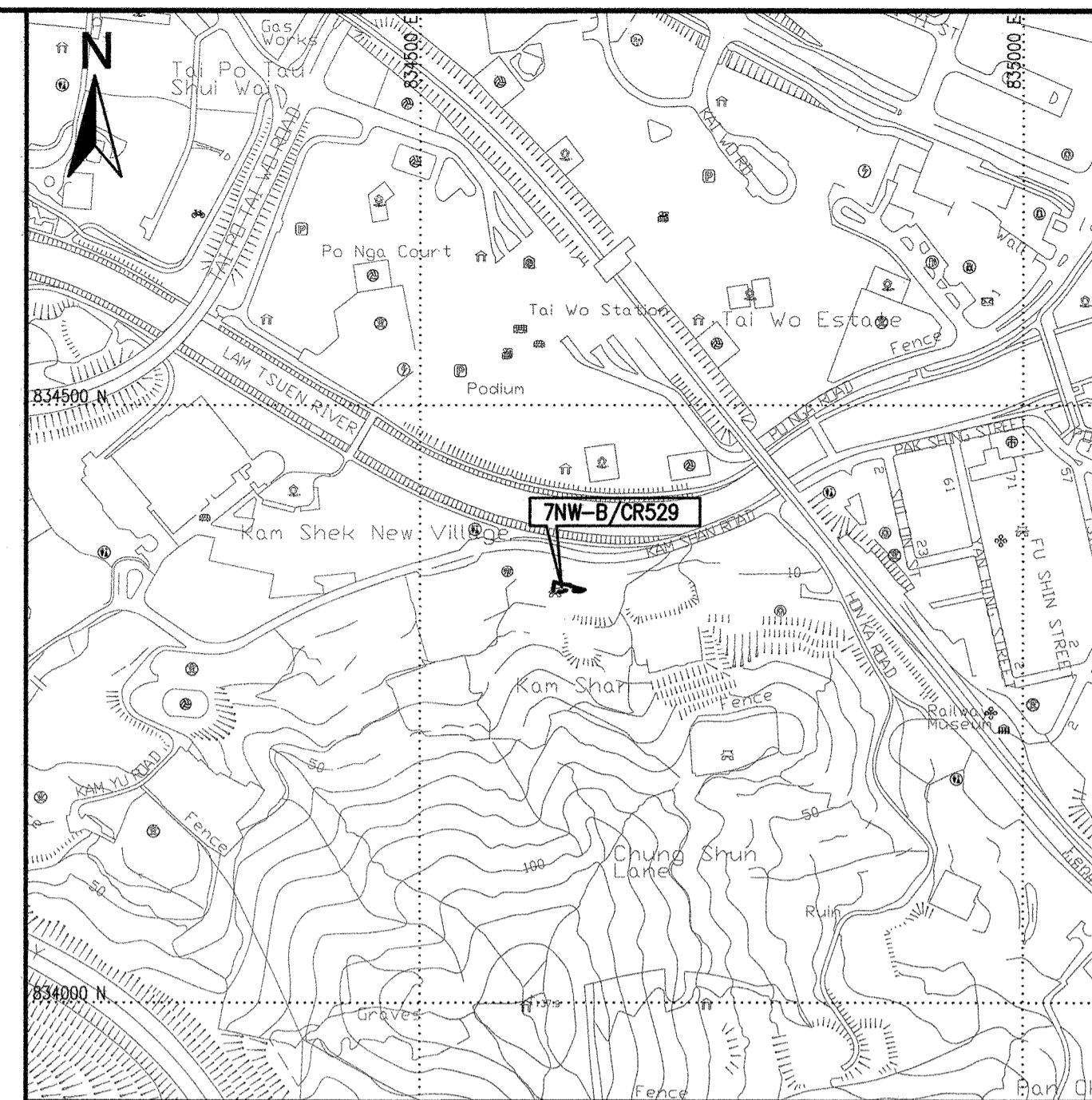


PLAN OF EXISTING FEATURE AND UTILITIES

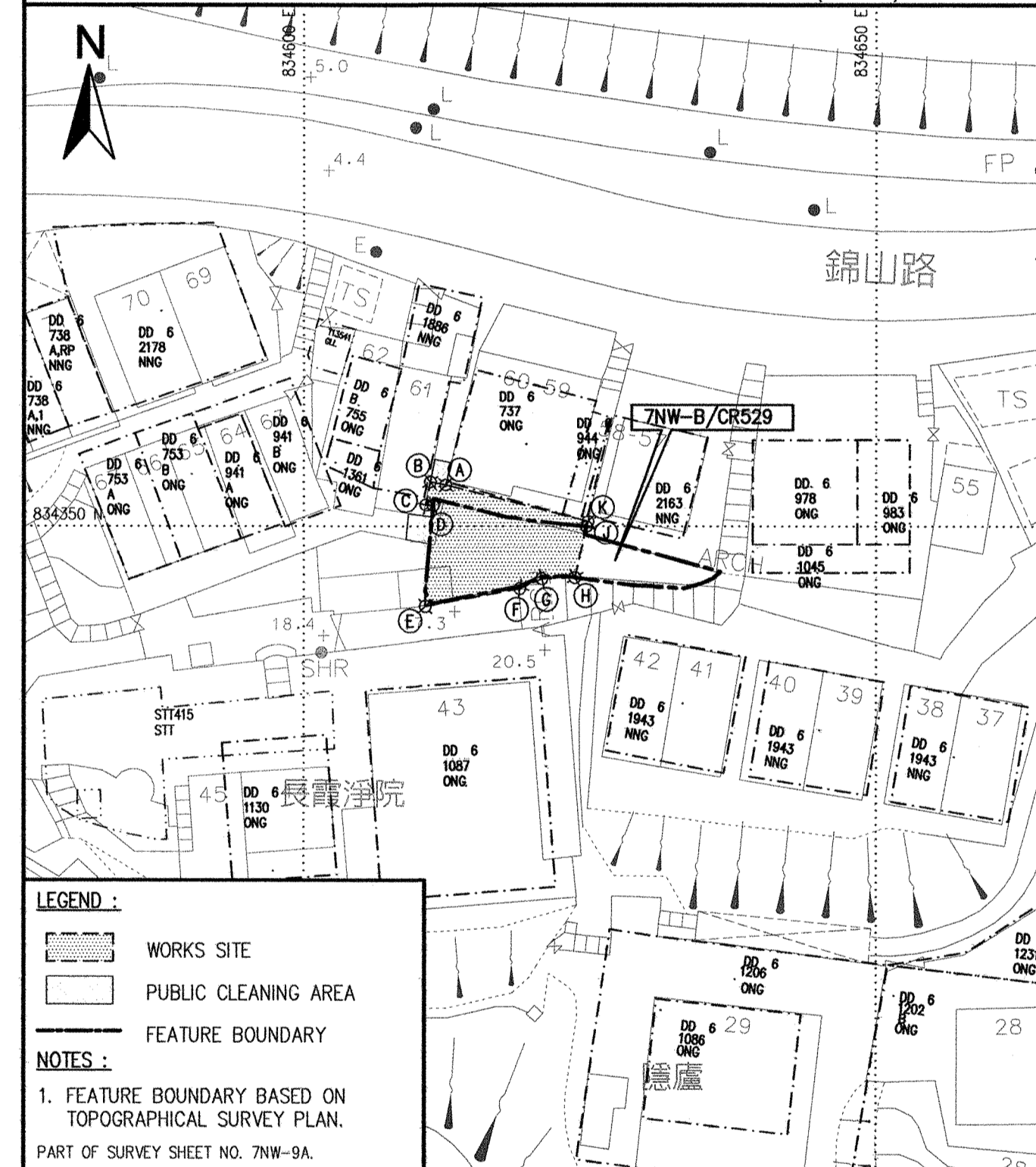
(THE UTILITIES PLAN HAS BEEN PREPARED FROM INFORMATION PROVIDED BY THE UTILITIES UNDERTAKERS. NEITHER THE EMPLOYER NOR HIS AGENTS ACCEPT ANY RESPONSIBILITY WHATSOEVER FOR THE ACCURACY OF THE INFORMATION AND THE CONTRACTOR SHALL MAKE SUCH FURTHER ENQUIRIES AND INVESTIGATION AS ARE REQUIRED FOR HIS OWN INFORMATION.)

SCALE 1 : 100 (A1 SIZE)
1 : 200 (A3 SIZE)

- LEGEND:**
- FEATURE BOUNDARY
 - - - - - LOT BOUNDARY
 - - - - - LICENSE BOUNDARY
 - ▲ SUB-DIVISION 1 MAINTAINED BY DD6 LOT 2163
 - ▲ SUB-DIVISION 2 MAINTAINED BY LANDS D
 - ← UC ← EXISTING U-CHANNEL
 - CLP — APPROX. LOCATION OF CLP SERVICES CABLE
 - FW — APPROX. LOCATION OF FRESH WATER MAINS
 - SD — APPROX. LOCATION OF STORM WATER DRAIN
 - S — APPROX. LOCATION OF SEWER



KEY PLAN SCALE 1 : 5000 (A1 SIZE)
1 : 10000 (A3 SIZE)



- LEGEND:**
- WORKS SITE
 - PUBLIC CLEANING AREA
 - FEATURE BOUNDARY

NOTES:
1. FEATURE BOUNDARY BASED ON TOPOGRAPHICAL SURVEY PLAN.
PART OF SURVEY SHEET NO. 7NW-9A.

LOCATION PLAN OF WORKS SITE SCALE 1 : 500 (A1 SIZE)
1 : 1000 (A3 SIZE)

SETTING OUT INFORMATION FOR WORKS SITE

REFERENCE POINT	EASTING	NORTHING
A	834612.4	834353.7
B	834611.1	834353.9
C	834610.7	834351.9
D	834611.3	834351.8
E	834610.6	834343.1
F	834618.9	834344.6
G	834620.8	834345.4
H	834623.7	834345.5
J	834624.7	834350.0
K	834624.8	834350.4

HOARDING/FENCE DETAILS

REFERENCE POINT	HOARDING / FENCE TYPE
ALONG A TO B TO D TO K	HOARDING TYPE C (STD. DRG. R1052H AND R1053C)
ALONG D TO E TO J	CHAIN LINK FENCE (STD. DRG. C1006A)

- NOTE:**
1. THE DRAWING SHALL BE READ IN CONJUNCTION WITH GENERAL NOTES FOR LPM WORKS (GEO SKETCH NO. R1069E). ALL OTHER RELEVANT DRAWINGS, SKETCHES, SPECIFICATIONS AND INSTRUCTIONS ISSUED BY THE ENGINEER.
 2. THE EXTENT OF PUBLIC CLEANING AREA SHOWN IN THIS DRAWING IS FOR INDICATION ONLY. THE EXACT EXTENT OF PUBLIC CLEANING AREA SHALL REFER TO PS 1.32A1(1) OR AS DETERMINED ON SITE BY THE ENGINEER.
 3. THE CONTRACTOR SHALL PROVIDE DECORATIVE PANELS TO HOARDINGS IN ACCORDANCE WITH THE SPECIFICATION. THE EXTENT OF DECORATIVE PANELS TO BE PROVIDED SHALL BE AGREED WITH THE ENGINEER REPRESENTATIVE ON SITE.

no.	date	description	designed	checked
		name		date
designed		AT		28 MAR 2013
drawn		ON		28 MAR 2013
checked		TR		28 MAR 2013
approved				

PROJECT DIRECTOR: FUGRO (HONG KONG) LIMITED

project no. 110241 / 24

agreement no. CE 45/2010 (GE)

contract **CONTRACT NO. GE/2012/28**
LANDSLIP PREVENTION AND MITIGATION PROGRAMME, 2010, PACKAGE J,
LANDSLIP PREVENTION AND MITIGATION WORKS IN MAINLAND EAST (NORTH)

feature no. & location
7NW-B/CR529
NOS. 57 TO 60, KAM SHAN ROAD, TAI PO

drawing title
LOCATION PLAN OF WORKS SITE, PLAN OF EXISTING FEATURE AND UTILITIES

drawing no.	revision	scale
LPM1228 / 24 / 01	-	AS SHOWN

consulting engineer
FUGRO (HONG KONG) LIMITED

office
LANDSLIP PREVENTIVE MEASURES DIVISION 3 GEOTECHNICAL ENGINEERING OFFICE

CEDD CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT HONG KONG

ORIGINAL PAPER SIZE A1

PLOTTED BY: chng. 03/02/2013 - 11:50am ORIGINAL PAPER SIZE: A1

GCME 3/5/6/9121/93 File for
Feature 7NW-B/CR529 (SD1) Extracted
Stage 3 Study Report for Feature 7NW-B/CR529 (SD2)

Appendix B1

Relevant Information from the GEO, CEDD

H. W. LEUNG

B.Sc., D.I.C., M.Sc., M.I.C.E.
AUTHORISED PERSON & CIVIL ENGINEER
RM. 1601, BELL HOUSE, 15TH FL., 525, NATHAN ROAD,
KOWLOON, HONG KONG
TEL: 385 3348
FAX: 385 5034

九龍彌敦道五二五號十六樓
室
電話：三五八五三三〇一室
四二樓室：三五八五三三〇二室
梁凱威 建築工程師

13

GEOTECHNICAL REPORT

FOR

DEVELOPMENT OF SMALL HOUSE

LOT NO. 2163 IN D.D. 6

KAM SHAN, TAI PO

N.T.

6/9121/93
Set II
f
13

Date 26 - 1 - 1994

The Building Authority,
Buildings Department,
Murray Building,
Hong Kong.

Dear Sir,

Kam Shan, Tai Po, N.T.
D.D.6 Lot 2163

Your letter Ref.:BD 6/9121/93 dated 4. October, 1993
refers.

Herewith I re-submit ^{9 sets} 9 sets of the proposed plans for
the slope stabilisation at the above together with two copies of
geotechnical reports on the site for your further consideration
and shall be grateful if the proposal will now meet with your
favourable approval.

Yours faithfully,

H. W. Leung
(H. W. Leung.)

RECEIVED BY
Jan 28 3 44 PM '94
R & D Section
BUILDINGS DEPARTMENT

28 JAN 1994

RECEIVED BY
Jan 28 3 44 PM '94

H. W. Leung
26 JAN 1994
梁凱威 建築工程師
H. W. LEUNG
B. Sc., D.I.C., M. Sc., M.I.C.E.
CHARTERED CIVIL ENGINEER
AUTHORIZED PERSON
RM. 1601 BELL HOUSE, 15TH FL.
525, NATHAN RD., KOWLOON
TEL: 385 3348

GEO COPY

CONTENT

- 1.0 INTRODUCTION
- 2.0 THE SITE
- 3.0 FIELDWORK AND LABORATORY TESTING
- 4.0 DISCUSSION AND RECOMMENDATION

APPENDIX

- I. SITE PLAN AND TYPICAL SECTION
- II SOIL NAIL DESIGN
- III SITE INVESTIGATION AND TEST REPORT

1.0 INTRODUCTION

At the request of the client, an investigation is carried out to determine the effect of the proposed building work on the existing slope and whether landslip preventive or remedial works are required.

Presented in this report are the results of the present findings and engineering recommendations formulated accordingly.

2.0 THE SITE

The site is located on the southern side of Kam Shan Road. It is situated in a flat area about 1m above Kam Shan Road. At the rear of the site is an existing slope of 60° - 70° with a max. height of 7m.

3.0 FIELDWORK

Two trial pits were excavated by Oriental Boring & Eng. Ltd. in October 1992.

Undisturbed soil samples were extracted and laboratory testing carried out. 2 Nos. consolidated undrained multi-stage triaxial tests were carried out to determine the shear strength of the soils.

The results of fieldworks and laboratory testings were enclosed in Appendix .

4.0


DISCUSSION AND RECOMMENDATION

The present investigations reveal the slope comprise CDG to Highly Decomposed granite using conservative assumptions. It is founded that the Factor of Safety is less than unity.

Therefore it is recommended that soil nails be installed to improve the stability of the captioned slope.

The detailed analyses are included in Appendix

Therefore, it can be concluded that the slope will acquire adequate safety after installation of the soil nails as proposed.

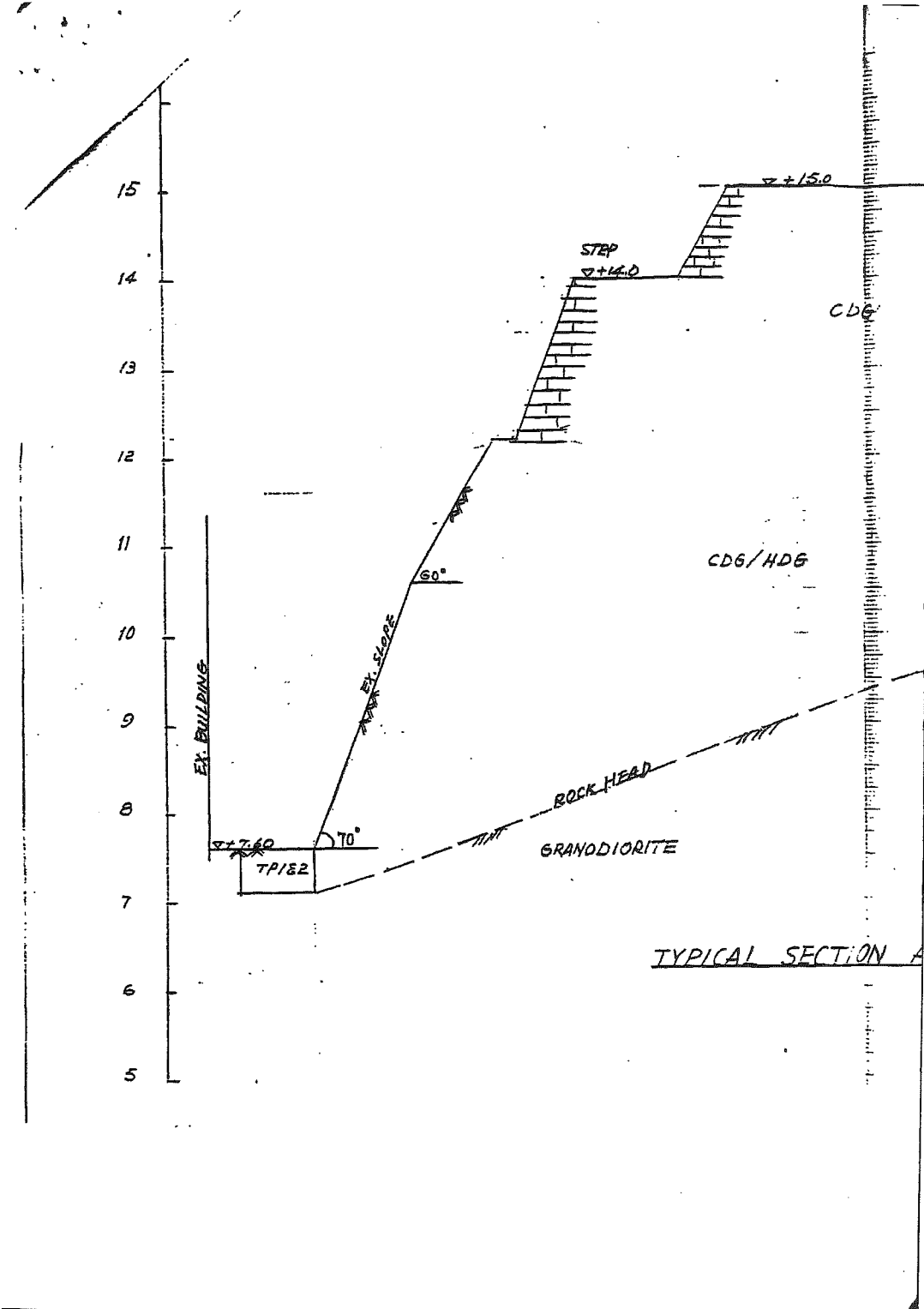
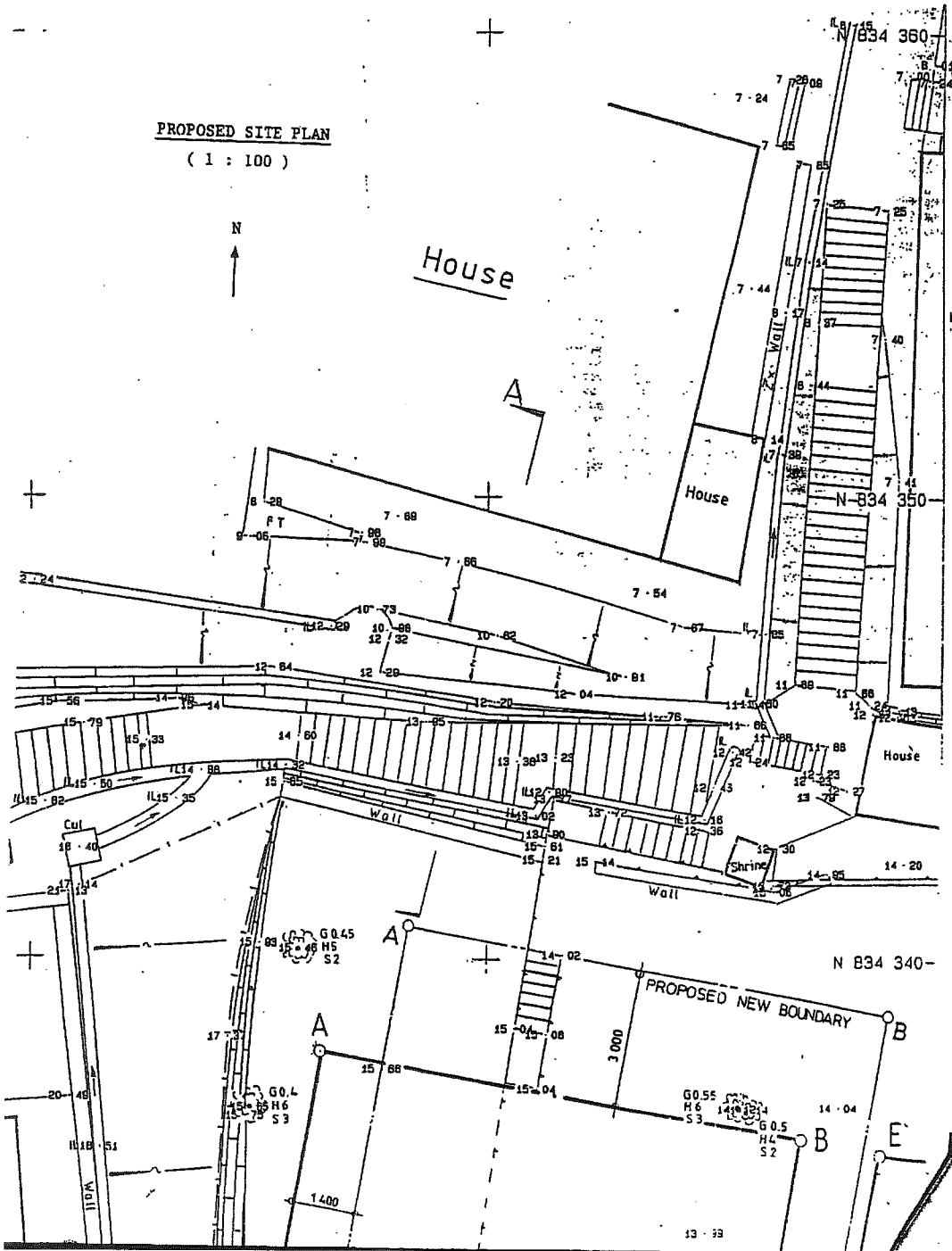


W. K. FUNG
B.S.C., C. ENG., M.I.C.E.

APPENDIX I

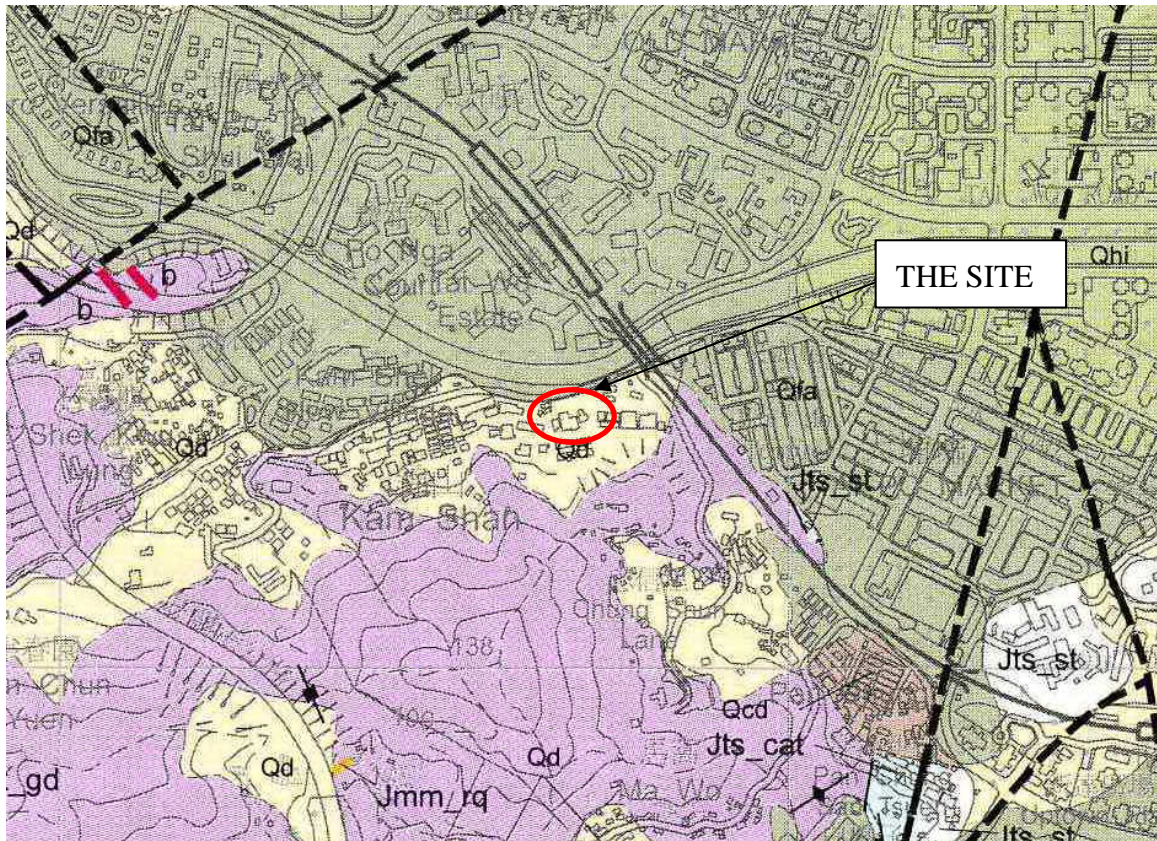
Site Plan and Typical Section

PROPOSED SITE PLAN
(1 : 100)

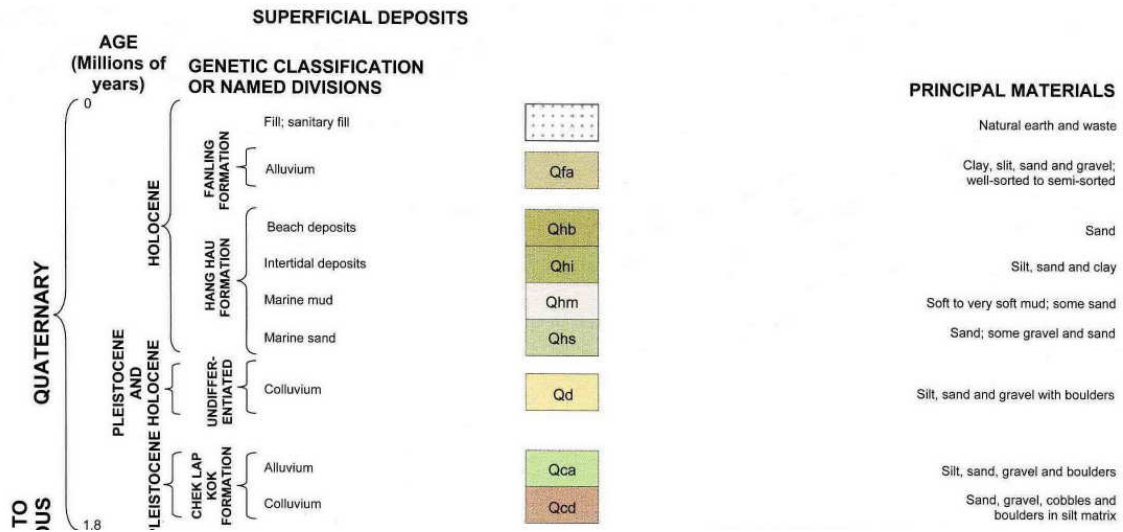


APPENDIX E

GEOLOGICAL SURVEY MAP OF THE APPLICATION SITE



LEGEND:



**Geology Map Extracted from
Sheet No.7 (Sha Tin) 1:20000 HGM 20-Series Hong Kong Geological Survey Map**

APPENDIX F

RETRIEVED GROUND INVESTIGATION RECORDS

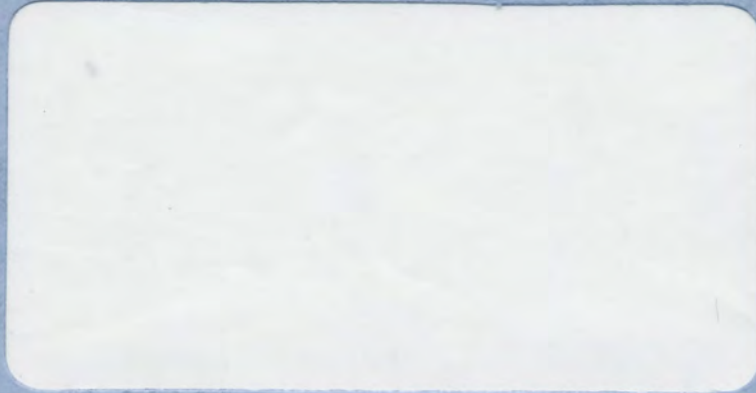
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Contract No. GE/ 99/06
requirements and accepted.

Sign  Date 24/4/01



Enpack (Hong Kong) Limited



ENPACK (HONG KONG) LIMITED

Civil Engineers & Contractors

綜建(香港)有限公司

CONTRACT No. GE/99/06

Works Order No. GE/99/06.211

Feature No. 7NW-B/CR 368


**Location : South of 43-45 Kam Shan Village
Ground Investigation**


Final Field Work Report

**CIVIL ENGINEERING DEPARTMENT CONTRACT No. GE/99/06
GROUND INVESTIGATION - NEW TERRITORIES EAST
(TERM CONTRACT)**

CLIENT The Government of the Hong Kong Special
Administrative Region

ARCHITECT/ENGINEER
GEO / Materials Division

Prepared By : 
Y.M. Leung

Checked By : 
C.R. Rigby

Certified By : 
Richard C.K. Chan

Job No. : 2/1526
Date : 27th March, 2001

Version No. : ---

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c.c.	b.u.

MEMO

From CGE/M
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 Tel. No. 2716 8611
 Fax No. 2715 7572
 Date 26 April, 2001

To AL, CEL
 (Attn.: 2.5.2001)
 Your Ref. in
 Dated _____ Fax No. _____
 Total Pages _____

Submission of Documents to General Library/GIU *

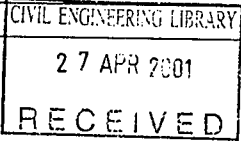
Title: LPM Feature No. 7NW - B/CR 368, Location: South of 43 - 45 Kam Shan Village Ground Investigation
 Consultant/Contractor/Author: GEO [Design] / Enpack (HK) Limited
 Client Department/Owner (if applicable): C.E.D. [GEO/Design]
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Top Left (E,N): 834594.00 E, 834306.38N Top Right (E, N): 834594.00 E, 834318.88N
 Bottom Left (E,N): 834618.03 E, 834306.38N Bottom Right (E,N): 834618.03 E, 834318.88N

For documents related to slope features, please provide below the representing coordinates of any feature covered by the document:

Feature No.: _____ E,N Coordinates: _____
 Feature No.: _____ E,N Coordinates: _____




 (Robert C. Y. Ho)
 for Chief Geotechnical Engineer/ Materials

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 for AL, CEL
 Form Revised: Oct. 1999

Contract Data Summary

Project Name & No. Ground Investigation - New Territories East (Term Contract)		Site Name : Feature No. 7NW - B/CR 368, Location : South of 43 - 45 Kam Shan Village, Ground Investigation	Date: 07/11/1999 to 06/11/2001
			Official only
G.I. Contractor	Enpack (HK) Ltd.	Client	Geotechnical Engineering Office
Contract No.	GE/99/06	W.O. No.	GE/99/06.211
			File Ref.

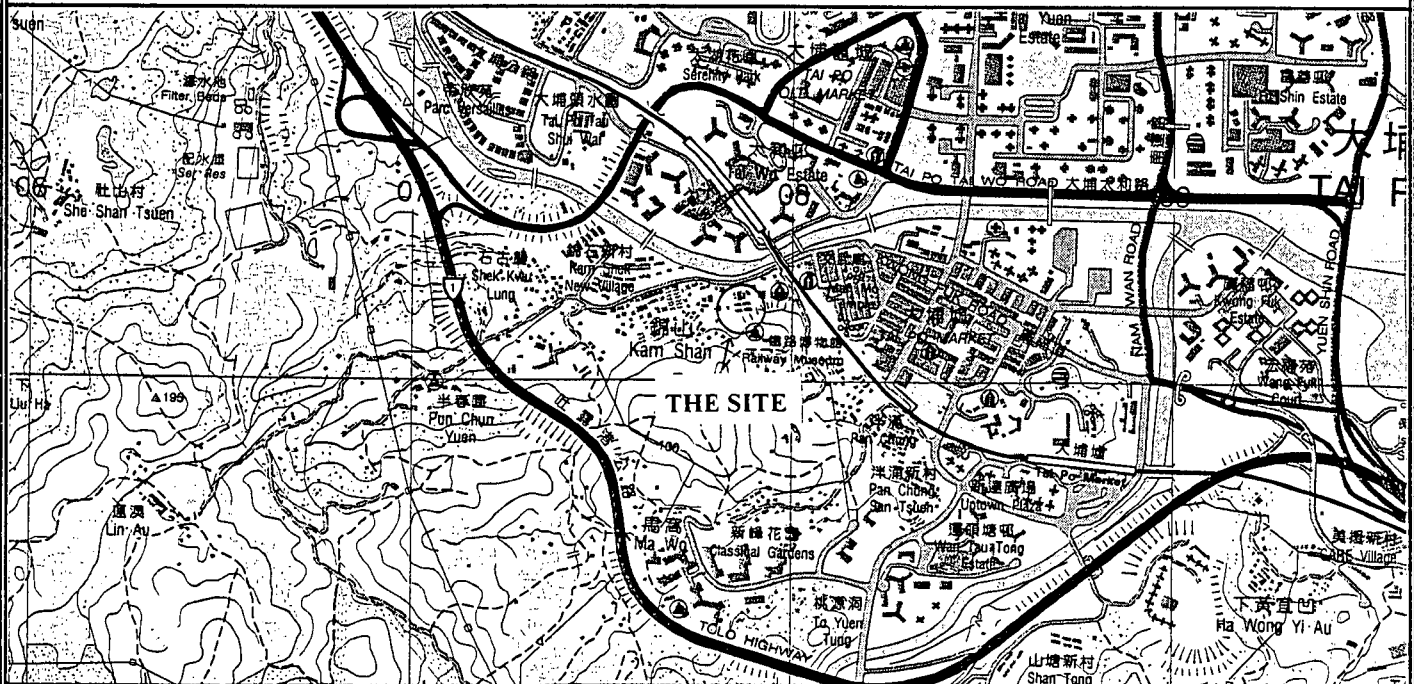
Field Work Summary

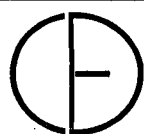
Drillhole Nos.	2	Method:	Rotary	Date:	30/01/2001 to 23/02/2001
Coreholes: Nos.	6				
Slope Surface Protection Stripping : Nos.	3				
Field Installations :	3 Nos. Piezometers				
In situ Tests : Nos.	10	Types	10 Nos. Standard Penetration Tests		

Laboratory Testing Summary

Total No. of Tests :		Date			
Soil	Physical Properties	LL	PL	PSD	MC
		SG	γ_m / γ_d		
	Strength Tests	CU	CD	UU	Shear Box
	Compaction & CBR Tests	Standard	Modified		CBR
	Oedometer & Perm. Tests	Cv	k		
Others					
Rock	Y	Pt load	UC	Shear Box	US Vel.

Location Plan	SCALE 1 : 20 000 5 000	Derived from :	HMC 20 20 000 Sheet 7 5 000 Sheet
---------------	--------------------------------------	----------------	---



	G.I.	Laboratory	GEOTECHNICAL ENGINEERING OFFICE
Contractor	ENPACK (HK) LTD		 CIVIL ENGINEERING DEPARTMENT HONG KONG
Works Order No.	GE/99/06.211		

Works Order No. GE/99/06.211
Feature No. 7NW-B/CR 368
Location : South of 43 - 45 Kam Shan Village
Ground Investigation

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As 'completed' Drillhole, Corehole and	
Slope Surface Protection Stripping Locations	

1. INTRODUCTION

In November 1999, Enpack (HK) Ltd. was awarded a two year Term Contract to carry out ground investigations in the eastern New Territories for the Geotechnical Engineering Office (G.E.O.) of the Civil Engineering Department. The Contract Area for the Work consists of any location in the eastern New Territories including all Islands, to the east of a line joining Lo Wu and Chai Wan Kok (excluding Lamma and Tsing Yi).

This report details the ground investigation work carried out for proposed landslip preventive measures to be undertaken on a slope (Feature No. 7NW-B/CR368) at Kam Shan, Tai Po in the north-eastern New Territories.

The ground investigation consisted of two drillholes (Nos. DH1 and DH2), six coreholes (Nos. CH1 to CH6) and three slope surface protection strippings (Nos. CS1 to CS3). The fieldwork was undertaken between the 30th January, 2001 and 23rd February, 2001 under the supervision of the Design and the Materials Divisions of the G.E.O.

2. THE SITE

The site is located in Kam Shan Village, approximately 0.5km due south of Tai Wo Estate railway station at Tai Po in the north-eastern New Territories (see Contract Data Summary Sheet)

The ground investigation stations are concentrated on feature No. 7NW-B/CR 368. The two drillholes (Nos. DH1 and DH2) are located near the top of the feature. The coreholes (Nos. CH1 to CH6) are generally located towards the base of the feature on a masonry wall. The slope surface protection strippings (Nos. CS1 to CS3) extend from the top of the masonry wall to the top of the spray concrete section of the feature (see Drawing No. GED 4329 – Appendix I).

The investigation stations are bounded by the co-ordinates of :

* 834594.00 E	834306.38 N
* 834594.00 E	834318.88 N
* 834618.03 E	834306.38 N
* 834618.03 E	834318.88 N

3. GEOLOGY

According to the 1:20,000 HGM 20 series geological map of Hong Kong, sheet 7 (Sha Tin, Edition 1, 1989) the site is underlain by Jurassic to Cretaceous aged granodiorite.

The findings of the ground investigation are generally in accordance with the geological map.

The sequence of soil and rock encountered during this investigation may be summarised as follows:

- FILL
- COLLUVIUM
- Grade V GRANODIORITE
- Grade V-IV GRANODIORITE
- Grade IV-II GRANODIORITE

FILL was encountered in one drillhole (No. DH2), each corehole (Nos. CH1 to CH6) and one slope surface protection stripping (No. CS3) and consisted of :

- Sandy silty fine to coarse GRAVEL, COBBLE and locally BOULDER sized fragments (MASONRY WALL) / CONCRETE / Soft, sandy silty CLAY with gravel sized fragments / MASONRY FACING.

COLLUVIUM was encountered in both drillholes (Nos. DH1 and DH2) and each slope surface protection strippings (Nos. CS1 to CS3) and consisted of :

- Soft to firm, sandy silty CLAY with gravel sized fragments / Firm, sandy clayey SILT with gravel sized rock fragments.

Grade V GRANDIORITE was encountered in both drillholes (Nos. DH1 and DH2), each corehole (Nos. CH1 to CH6) and each slope surface protection stripping (Nos. CS1 to CS3) and consisted of :

- Extremely weak, completely decomposed GRANODIORITE.
(Firm to very stiff, locally clayey sandy SILT locally with gravel sized rock fragments / Firm, silty CLAY with gravel sized rock fragments / Dense, silty locally clayey silty fine to coarse SAND, locally with gravel sized rock fragments)

Grade V-IV GRANODIORITE was encountered in one drillhole (No. DH2) only and consisted of :

- Extremely weak to very weak, completely to highly decomposed GRANODIORITE. (Very dense, sandy fine to coarse GRAVEL sized rock fragments)

Grade IV-II GRANODIORITE was encountered in each drillhole (Nos. DH1 and DH2), four coreholes (Nos. CH1, CH3, CH4 and CH6) and one slope surface protection stripping (No. CS3) and consisted of:

- Weak to strong, highly to slightly decomposed GRANODIORITE.

Detailed descriptions of the soils and rock encountered are given in the drillhole, corehole and slope surface protection stripping records (Appendices B, D and F respectively). Soil and rock strata depth intervals and thicknesses (drillholes and coreholes only) are given in Table 1.

4. FIELDWORK

4.1 Drilling

The two drillholes (Nos. DH1 and DH2) were carried out using conventional rotary drilling utilising one hydraulic feed rotary drilling rig equipped with diamond and tungsten carbide bits and using water as the flushing medium.

The drillholes were advanced through Common Ground using PX (140mm diameter) and HX (114mm diameter) drill casings, and through rock using a T2-101 double tube ball bearing swivel – type core barrels with the core lifter located at the lower end of the inner barrels.

Rock core samples of 84mm diameter (T2101) were recovered from the inner stationary tube of the core barrels and brought to the surface. The rock core was then hydraulically extruded from the barrels and arranged in the correct sequence in the core boxes with dividers marking the start and finish of each core run.

Sampling (Mazier, SPT liner and small disturbed samples) and in-situ testing (refer to Section 4.4) were carried out in the drillholes as instructed on the Works Order. All sampling is reported at the relevant depth on the drillhole records. Small disturbed sample depths generally refer to the base of mazier and liner samples. Continuous mazier samples were carried out in one drillhole (No. DH2) to 12.00m depth as instructed by the Engineer.

4.2 Coring

The six coreholes (Nos. CH1 to CH6) were drilled using one portable electric powered drilling rig using water as the flushing medium.

Rock core samples of 68mm diameter were recovered from the coreholes using a single tubed thin walled core barrel and diamond bit.

The core was then arranged in the correct sequence in the core boxes with dividers marking the start and finish of each core.

Sampling (small jar samples) was carried out in the coreholes and is reported at the relevant depth on the corehole records (Appendix D).

4.3 Slope Surface Protection Stripping

Three slope surface protection strips (Nos. CS1 to CS3) were manually excavated under the supervision of the engineer. Sampling (small disturbed samples) was carried out at 0.5m centres within the soil strata. All sampling is recorded at the relevant depth on the slope surface protection stripping records (Appendix F).

4.4 Field Tests

Standard Penetration Tests (SPT's) were carried out in both drillholes (Nos. DH1 and DH2) at a spacing as instructed on the Works Order. The SPT results are reported at the relevant depth on the drillhole records.

4.5 Field Installations

Two piezometers were installed in one drillhole (No. DH2) at a depth as instructed on site. One piezometer was installed in one drillhole (No. DH1) at a depth as instructed on site.

Response tests were carried out in each piezometer to check they were functioning correctly.

The piezometer details with response test record sheets are included Appendix G.

The groundwater records are included in Appendix H.

4.6 Sample Description

Soil and rock descriptions are in accordance with the general principles given in Geoguide 3 - Guide to Rock and Soil Descriptions (GEO, 1988).

The drillhole, corehole and slope surface protection stripping records are shown in Appendices B, D and F respectively. Sample descriptions given on the records have been amended to incorporate comments provided by the G.E.O. Soil descriptions and delineation of strata (drillholes and coreholes only) have been based primarily on the examination of samples obtained from the cutting shoes of the standard penetration tests and mazier samples. Non-destructive logging techniques have been employed in the preparation of rock descriptions.

4.7 Drillhole and Corehole Photography

Photographs were taken of all rotary cored materials in the core boxes. The photographs are included in Appendix C (Drillhole Photographs) and Appendix E (Corehole Photographs).

Where jar samples have been taken the jar lids have been removed prior to photography to display the disturbed samples. The reference board shown in each photograph gives details of Contract and Works Order numbers, ground investigation title and other information as specified together with a Kodak colour chart and reference scale marked in 100mm units.

5. DIGITAL RECORDS

5.1 Method

The preliminary and final drillhole, corehole and slope surface protection stripping records have been produced using gINT, a commercially available software package capable of providing the ground investigation data in ASCII digital format. The data is provided in uncompressed form on the 3.5" disk (formatted to MS-DOS Version 6.0) submitted with each copy of the Final Field Work Report. The data file format complies with Appendix 1 of the latest edition of Association of Geotechnical Specialists (AGS) publication "Electronic Transfer of Geotechnical Data from Ground Investigations (AGS 1994)". The data dictionary used for data field headings are in accordance with that recommended by the AGS with local variations as instructed by the G.E.O.

5.2 Data Index

The media index record and the data disk is included with each copy of the Final Field Work Report.

REFERENCES

GEO (1986). Map HGM 20, sheet 7 (Sha Tin, Edition 1989). Solid and Superficial Geology (1:20,000 map).

GEO (1988). Guide to Rock and Soil Descriptions (Geoguide 3). Geotechnical Engineering Office, Hong Kong.

AGS (1994). Transfer of Geotechnical Data from Ground Investigations. Association of Geotechnical Specialists.

Macbeth (1992). Munsell Soil Colour Charts.

Tables

LIST OF TABLES

Table 1 - Summary of Strata Depth Intervals and Thicknesses
(Drillholes and Coreholes only)

Table 2 - Investigation Station Co-ordinates and Ground Levels

**Table 1 - Summary of Strata Depth Intervals and Thicknesses
(Drillholes and Coreholes only)**

CONTRACT NO.

GE/99/06

WORKS ORDER NO.

GE/99/06.211

PROJECT :

Feature No. 11NW-B/CR 368

Location : South of 43 - 45 Kam Shan Village

Ground Investigation

DRILLHOLE NO.	TERMINATION DEPTH (m)	STRATA DESCRIPTION									
		FILL	COLLUVIUM	Completely Decomposed GRANODIORITE (Grade V)	Completely to Highly Decomposed GRANODIORITE (Grade V/IV)	Highly to slightly Decomposed GRANODIORITE (Grade IV-II)					
		Depth Intervals (m) Thickness(m)	Depth Intervals (m) Thickness(m)	Depth Intervals (m) Thickness(m)	Depth Intervals (m) Thickness(m)	Depth Intervals (m) Thickness(m)	Depth Intervals (m) Thickness(m)	Depth Intervals (m) Thickness(m)	Depth Intervals (m) Thickness(m)	Depth Intervals (m) Thickness(m)	Depth Intervals (m) Thickness(m)
DH 1	15.09	-	0.00 - 2.10 2.10	3.76 - 5.40 1.64	-	2.10 - 3.76 1.66	-	-	-	-	-
		-	-	6.15 - 6.83 0.68	-	5.40 - 6.15 0.75	-	-	-	-	-
		-	-	-	-	6.83 - 15.09 8.26	-	-	-	-	-
		-	-	-	-	-	-	-	-	-	-
DH 2	31.54	0.00 - 1.15 1.15	1.15 - 2.20 1.05	2.20 - 17.80 15.60	18.10 - 19.80 1.70	17.80 - 18.10 0.30	-	-	-	-	-
		-	-	20.50 - 24.70 4.20	24.70 - 26.30 1.60	19.80 - 20.50 0.70	-	-	-	-	-
		-	-	-	-	26.30 - 31.54 5.24	-	-	-	-	-
		-	-	-	-	-	-	-	-	-	-
CH 1	6.00	0.00 - 1.15 1.15	-	2.25 - 2.75 0.50	-	1.15 - 2.25 1.10	-	-	-	-	-
		-	-	3.15 - 3.65 0.50	-	2.75 - 3.15 0.40	-	-	-	-	-
		-	-	5.30 - 6.00 0.70	-	3.65 - 5.30 1.65	-	-	-	-	-
		-	-	-	-	-	-	-	-	-	-
CH 2	6.00	0.00 - 4.40 4.40	-	4.40 - 6.00 1.60	-	-	-	-	-	-	-
		-	-	-	-	-	-	-	-	-	-
		-	-	-	-	-	-	-	-	-	-

Prepared By: Y.M. Leung

Checked By: C.R. Rigby

Date of Issue: 26/03/2001

**Table 1 - Summary of Strata Depth Intervals and Thicknesses
(Drillholes and Coreholes only)**

CONTRACT NO.

GE/99/06

Sheet 2 of 2

WORKS ORDER NO.

GE/99/06.211

PROJECT :

Feature No. 11NW-B/CR 368

Location : South of 43 - 45 Kam Shan Village

Ground Investigation

DRILLHOLE NO.	TERMINATION DEPTH (m)	STRATA DESCRIPTION									
		FILL	COLLUVIUM	Completely Decomposed GRANODIORITE (Grade V)	Completely to Highly Decomposed GRANODIORITE (Grade V/IV)	Highly to slightly Decomposed GRANODIORITE (Grade IV-II)					
		Depth Intervals (m) Thickness(m)	Depth Intervals (m) Thickness(m)	Depth Intervals (m) Thickness(m)	Depth Intervals (m) Thickness(m)	Depth Intervals (m) Thickness(m)	Depth Intervals (m) Thickness(m)	Depth Intervals (m) Thickness(m)	Depth Intervals (m) Thickness(m)	Depth Intervals (m) Thickness(m)	Depth Intervals (m) Thickness(m)
CH 3	6.05	0.00 - 0.36	-	0.36 - 2.86	-	2.86 - 4.96	-	-	-	-	-
		0.36		2.50		2.10					
CH 4	6.05	0.00 - 0.75	-	0.75 - 1.75	-	1.75 - 6.05	-	-	-	-	-
		0.75		1.00		4.30					
CH 5	6.20	0.00 - 0.75	-	0.75 - 6.20	-	-	-	-	-	-	-
		0.75		5.45							
CH 6	6.20	0.00 - 0.90	-	0.90 - 3.40	-	3.40 - 3.70	-	-	-	-	-
		0.90		2.50		0.30					
		-	-	3.70 - 6.20	-	-	-	-	-	-	-
				2.50							
		-	-	-	-	-	-	-	-	-	-
		-	-	-	-	-	-	-	-	-	-
		-	-	-	-	-	-	-	-	-	-
		-	-	-	-	-	-	-	-	-	-
		-	-	-	-	-	-	-	-	-	-

Prepared By: Y.M. Leung Checked By: C.R. Rigby

Date of Issue: 26/03/2001

Appendix A - Legend Patterns

Appendix B - Drillhole Records



ENPACK (H.K.) LIMITED

Civil Engineers & Contractors
Astoria Building, 8th floor, 34 Ashley Road
Kowloon, Hong Kong

Tel : 23782121 Fax : 23782282



ISO 9002 : 1994
Certificate No. CC545

DRILLHOLE RECORD

HOLE NO.

DH 1

CONTRACT NO. GE/99/06

SHEET

1

of

2

PROJECT Feature No. 7NW-B/CR368, Location : South of 43-45 Kam Shan Village, Ground Investigation

METHOD W+RC

CO-ORDINATES

W.O. No GE/99/06.211

MACHINE & No. DR 82

E 834,595.84

DATE: 27/02/2001 to 01/03/2001

N 834,306.71

FLUSHING MEDIUM WATER

ORIENTATION VERTICAL

GROUND LEVEL +33.35 mPD

Drilling Progress	Casing size	Water level (m) Shift start/end	T.C.R.(%)	S.C.R.(%)	R.Q.D.(%)	F.I.	Tests	Samples	Reduced Level	Depth (m)	Legend	Grade	Description
27.2.01	PX							1 0.50					Firm, dark red (2.5YR 4/8), slightly sandy silty CLAY with occasional subangular fine to medium gravel sized rock fragments. (COLLUVIUM)
1			95				2 1.00						
2								3 2.00	+31.25	2.10			Moderately strong to strong, grey (7.5YR 5/1) spotted white and mottled yellowish brown, moderately to slightly decomposed GRANODIORITE. (CORESTONE)
3	PX HX		89	51	33	NI 6.0	T2-101 2.55						
4		3.01m at 18:00	95	95	49		T2-101 3.18						Extremely weak, dark red (2.5YR 4/8) spotted white, completely decomposed GRANODIORITE. (Firm, silty CLAY with occasional angular fine gravel sized rock fragments)
27.2.01 28.2.01		Dry at 08:00	83	83	45		T2-101 3.78	+29.59	3.78				
5			100				4 3.78 5 4.16 6 4.21						Strong, dark grey spotted white, slightly decomposed GRANODIORITE. (CORESTONE)
6							7 5.21 8 5.40	+27.95	5.40				
7	HX					2.7		8 6.15 9 6.25	+27.20	6.15			Extremely weak, dark yellowish brown (10YR 4/6), completely decomposed GRANODIORITE. (Very stiff, sandy SILT with many angular fine to medium gravel sized rock fragments)
8			87	87	68		T2-101 6.83	+26.52	6.83				
9								9 6.55 10 6.83					Strong, dark grey spotted white, slightly decomposed GRANODIORITE. Joints are widely spaced, rough, undulating and planar, narrow, occasionally kaolin infilled (<1.5mm), dipping at 15°-25° and 60°-70°. (Note : approximately 10-20mm of moderately decomposed granodiorite surrounds each joint)
28.2.01			95	95	95		T2-101 8.40						
29.2.01		3.31m at 18:00	88	88	88			T2-101 9.22					
			96	96	96			T2-101 10.01					

- Small Disturbed Sample
- Piston Sample
- U78 Undisturbed Sample
- U100 Undisturbed Sample
- Mazier Sample
- SPT Liner Sample
- Water Sample
- Standard Penetration Test
- In-situ Vane Shear Test
- Permeability Test
- Impression Packer Test
- Packer Test
- Piezometer Tip
- Standpipe Tip

LOGGED P. Barry

DATE 02/03/2001

CHECKED C.R. Rigby

DATE 12/03/2001

REMARKS

1. A piezometer tip was installed at 6.80m depth.

ENPACK (H.K.) LIMITED
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 Aetoria Building, 6th Floor, 34 Ashley Road
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 ISO 9002 : 1994
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DRILLHOLE RECORD

HOLE NO. **DH 1**

CONTRACT NO. **GE/99/06**

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

PROJECT Feature No. 7NW-B/CR368, Location : South of 43-45 Kam Shan Village, Ground Investigation

METHOD **W+RC**

CO-ORDINATES

W.O. No **GE/99/06.211**

MACHINE & No. **DR 82**

E 834,595.84

DATE: **27/02/2001** to **01/03/2001**

N 834,306.71

FLUSHING MEDIUM **WATER**

ORIENTATION **VERTICAL**

GROUND LEVEL **+33.35** mPD

Drilling Progress	Casing size	Water level (m) Shift start/end	T.C.R. (%)	S.C.R. (%)	R.Q.D. (%)	F.I.	Tests	Samples	Reduced Level	Depth (m)	Legend	Grade	Description
10 1.3.01		Dry at 08:00									x x x x		As sheet 1 of 2.
11			100	100	95		T2-101				x x x x		
12						1.6	T2-101	11.52			x x x x		
13			92	92	92		T2-101	13.05			x x x x		
14			95	95	36		T2-101	13.47			x x x x		
14			86	49	100	>20	T2-101	14.44	+19.55	13.80	x x x x	III	Moderately strong, light yellowish brown mottled grey, moderately decomposed GRANODIORITE. Joints are very closely to closely spaced, rough, planar, stepped, very narrow, kaolin infilled (<1.5mm), dipping at 15°-25° and subvertical.
15 1.3.01		9.31m at 18:00	100	100	91	6.2	T2-101	15.09	+18.26	15.09	x x x x		
16													End of Investigation hole at 15.09m.
17													
18													
19													
20													

- Small Disturbed Sample
- Piston Sample
- U76 Undisturbed Sample
- U100 Undisturbed Sample
- Mazier Sample
- SPT Liner Sample
- Water Sample
- Standard Penetration Test
- In-situ Vane Shear Test
- Permeability Test
- Impression Packer Test
- Packer Test
- Piezometer Tip
- Standpipe Tip

LOGGED **P. Barry**
 DATE **02/03/2001**
 CHECKED **C.R. Rigby**
 DATE **12/03/2001**

REMARKS

DRILLHOLE RECORD

HOLE NO. **DH 2**

CONTRACT NO. **GE/99/06**

SHEET **1** of **4**

PROJECT Feature No. **7NW-B/CR368**, Location : South of 43-45 Kam Shan Village, Ground Investigation

METHOD **W+RC**

CO-ORDINATES

W.O. No **GE/99/06.211**

MACHINE & No. **DR 82**

E 834,614.99

DATE: **19/02/2001** to **23/02/2001**

N 834,306.38

FLUSHING MEDIUM **WATER**

ORIENTATION **VERTICAL**

GROUND LEVEL **+33.38** mPD

Drilling Progress	Casing size	Water level (m) Shift start/end	T.C.R.(%)	S.C.R.(%)	R.Q.D.(%)	F.I.	Tests	Samples	Reduced Level	Depth (m)	Legend	Grade	Description
19.2.01	PX		71										CONCRETE.
1			56					T2-101 0.50	+32.88	0.50	△ △		Grey, angular coarse GRAVEL and COBBLE sized moderately strong rock and concrete fragments. (FILL)
			100					1.25	+32.23	1.15	▨		Soft to firm, red (2.5YR 6/8), slightly sandy silty CLAY with occasional angular fine quartz gravel (COLLUVIUM)
2			100					2.20	+31.18	2.20	▨		Extremely weak, brown (7.5YR 5/8) spotted black, completely decomposed GRANODIORITE. (Firm, slightly sandy clayey SILT with occasional angular fine gravel sized rock fragments)
			100					3.30			▨		
3			100					4.40			▨		Extremely weak, brown (7.5YR 5/3) mottled black, completely decomposed GRANODIORITE. (Silty fine to coarse SAND with some angular fine to medium gravel sized rock fragments)
			100					5.50			▨		
4			85					6.80			▨		
			89					7.70			▨		
5	PX HX	5.22m at 18:00	90					8.80			▨		
			90					8.90			▨		
6		Dry at 08:00	87					9.80			▨		
			100					10.00			▨		
7								8.80	+24.48	8.90			
8							9.80						
9			100					9.80			▨		
			100					10.00			▨		
10								9.80	+23.38	10.00			

- Small Disturbed Sample
- Piston Sample
- U78 Undisturbed Sample
- U100 Undisturbed Sample
- Mazier Sample
- SPT Liner Sample
- Water Sample
- Standard Penetration Test
- In-situ Vane Shear Test
- Permeability Test
- Impression Packer Test
- Packer Test
- Piezometer Tip
- Standpipe Tip

LOGGED **P. Barry**
 DATE **24/02/2001**
 CHECKED **C.R. Rigby**
 DATE **02/03/2001**

REMARKS
 1. Two piezometer tips were installed at 17.30m and 25.50m respectively.

DRILLHOLE RECORD

HOLE NO. **DH 2**

CONTRACT NO. **GE/99/06**

SHEET **2** of **4**

PROJECT Feature No. 7NW-B/CR368, Location : South of 43-45 Kam Shan Village, Ground Investigation

METHOD **W+RC**

CO-ORDINATES

W.O. No **GE/99/06.211**

MACHINE & No. **DR 82**

E 834,614.99

DATE: **19/02/2001** to **23/02/2001**

N 834,306.38

FLUSHING MEDIUM **WATER**

ORIENTATION **VERTICAL**

GROUND LEVEL **+33.38** mPD

Drilling Progress	Casing size	Water level (m) Shift start/end	T.C.R.(%)	S.C.R.(%)	R.Q.D.(%)	F.I.	Tests	Samples	Reduced Level	Depth (m)	Legend	Grade	Description
11			98					18 18		11.00 11.10		V	Extremely weak, olive (5Y 5/3) spotted white, completely decomposed GRANODIORITE. (Stiff, slightly sandy SILT)
12			100				(3, 4, 7, 7, 9, 10) N = 33	20 21 22 23	+20.73	12.10 12.30 12.60 12.65		V	Extremely weak, brown (7.5YR 5/8) mottled black, completely decomposed GRANODIORITE. (Silty fine to coarse SAND with some angular fine to medium gravel sized rock fragments)
14		11.23m at 18:00					(3, 8, 10, 15, 20, 28) N = 73	24 25	+19.63	13.65 13.85		V	Extremely weak, dark brown (7.5YR 3/4) mottled black, completely decomposed GRANODIORITE. (Very stiff, sandy SILT with some angular fine to medium gravel sized rock fragments)
15		Dry at 08:00	100				(1, 2, 3, 6, 11, 12) N = 32	26 27	+17.63	14.15 14.20		V	Extremely weak, light olive grey (5Y 6/2), completely decomposed GRANODIORITE. (Silty fine to coarse SAND with some angular fine to medium gravel sized rock fragments)
16			90				(2, 2, 3, 8, 14, 20) N = 48	28 29 30 31	+15.58	15.20 15.40 15.70 15.75		V	Moderately weak to moderately strong, yellow, highly to moderately decomposed GRANODIORITE, highly fractured. (CORESTONE)
18		11.62m at 18:00	87	0	0	NI	(7, 9, 14, 16, 19, 36) N = 85	32 33 34 35 36 37	+13.58	16.75 16.90 17.25 17.30 17.70 17.80 18.10 18.20 18.50		V/IV	Extremely weak to very weak, grey spotted white (7.5YR 6/1), completely to highly decomposed GRANODIORITE. (Very dense, sandy angular fine to coarse GRAVEL sized weak rock fragments)
19		Dry at 08:00	0					38 39		19.55 19.80			
20						NI		T2-101 T2-101					

- Small Disturbed Sample
- Piston Sample
- U78 Undisturbed Sample
- U100 Undisturbed Sample
- Mazier Sample
- SPT Liner Sample
- Water Sample
- Standard Penetration Test
- In-situ Vane Shear Test
- Permeability Test
- Impression Packer Test
- Packer Test
- Piezometer Tip
- Standpipe Tip

LOGGED **P. Barry**

DATE **24/02/2001**

CHECKED **C.R. Rigby**

DATE **02/03/2001**

REMARKS



ENPACK (H.K.) LIMITED

Civil Engineers & Contractors

Astoria Building, 6th Floor, 34 Ashley Road
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ISO 9002 : 1994
Certificate No. CC545

DRILLHOLE RECORD

HOLE NO.

DH 2

CONTRACT NO. GE/99/06

SHEET

3

of

4

PROJECT Feature No. 7NW-B/CR368, Location : South of 43-46 Kam Shan Village, Ground Investigation

METHOD W+RC

CO-ORDINATES

W.O. No GE/99/06.211

MACHINE & No. DR 82

E 834,614.99

N 834,306.38

DATE: 19/02/2001 to 23/02/2001

FLUSHING MEDIUM WATER

ORIENTATION VERTICAL

GROUND LEVEL +33.38 mPD

Drilling Progress	Casing size	Water level (m) Shift start/end	T.C.R.(%)	S.C.R.(%)	R.Q.D.(%)	F.I.	Tests	Samples	Reduced Level	Depth (m)	Legend	Grade	Description
21			40	0	0	NR	(7, 8, 11, 17, 19, 23) N = 70	T2-101 39 20.50 40 20.60 41 20.90 42 20.95	+12.88	20.50	x x x x x x x x x x x x	III	Moderately weak, gray, highly to moderately decomposed GRANODIORITE, highly fractured. (CORESTONE)
22			40					43 21.85 44 22.05				V	From 20.08-20.50m : No recovery inferred as completely to highly decomposed.
23			90					45 23.05 46 23.25					Extremely weak, yellowish brown (10YR 5/6), completely decomposed GRANODIORITE. (Very stiff, slightly sandy SILT with occasional angular fine gravel sized rock fragments)
22.2.01		11.23m at 18:00					(5, 6, 14, 20, 25, 28) N = 94	47 23.55 48 23.60					
23.2.01		Dry at 08:00						49 24.60 50 24.80	+8.68	24.70		V/IV	Extremely weak to very weak, brownish yellow (10YR 6/8), completely to highly decomposed GRANODIORITE. (Very dense, sandy angular fine to coarse GRAVEL sized weak rock fragments)
24			90					51 25.10 52 25.15					
25			70				(8, 11, 12, 14, 29, 31) N = 88	53 26.15 54 26.30	+7.08	26.30		III	Moderately weak to moderately strong, olive grey spotted white, moderately decomposed GRANODIORITE.
26	HX					NI							Joint are very closely to closely spaced, rough and smooth, planar and occasionally stepped, narrow, iron and manganese stained, dipping at 10°-20°, 35°-45° and 60°-70°.
27			72	45	0	11.4		T2-101 26.88					From 26.30-26.50m : Moderately weak, highly to moderately decomposed and highly fractured.
28			94	55	40	>20		T2-101 28.43					
29			100	95	48	8.4		T2-101 29.37					
30								T2-101					

- Small Disturbed Sample
- Piston Sample
- U78 Undisturbed Sample
- U100 Undisturbed Sample
- Mazler Sample
- SPT Liner Sample
- Water Sample
- Standard Penetration Test
- In-situ Vane Shear Test
- Permeability Test
- Impression Packer Test
- Packer Test
- Piezometer Tip
- Standpipe Tip

LOGGED P. Barry

DATE 24/02/2001

CHECKED C.R. Rigby





DATE 02/03/2001

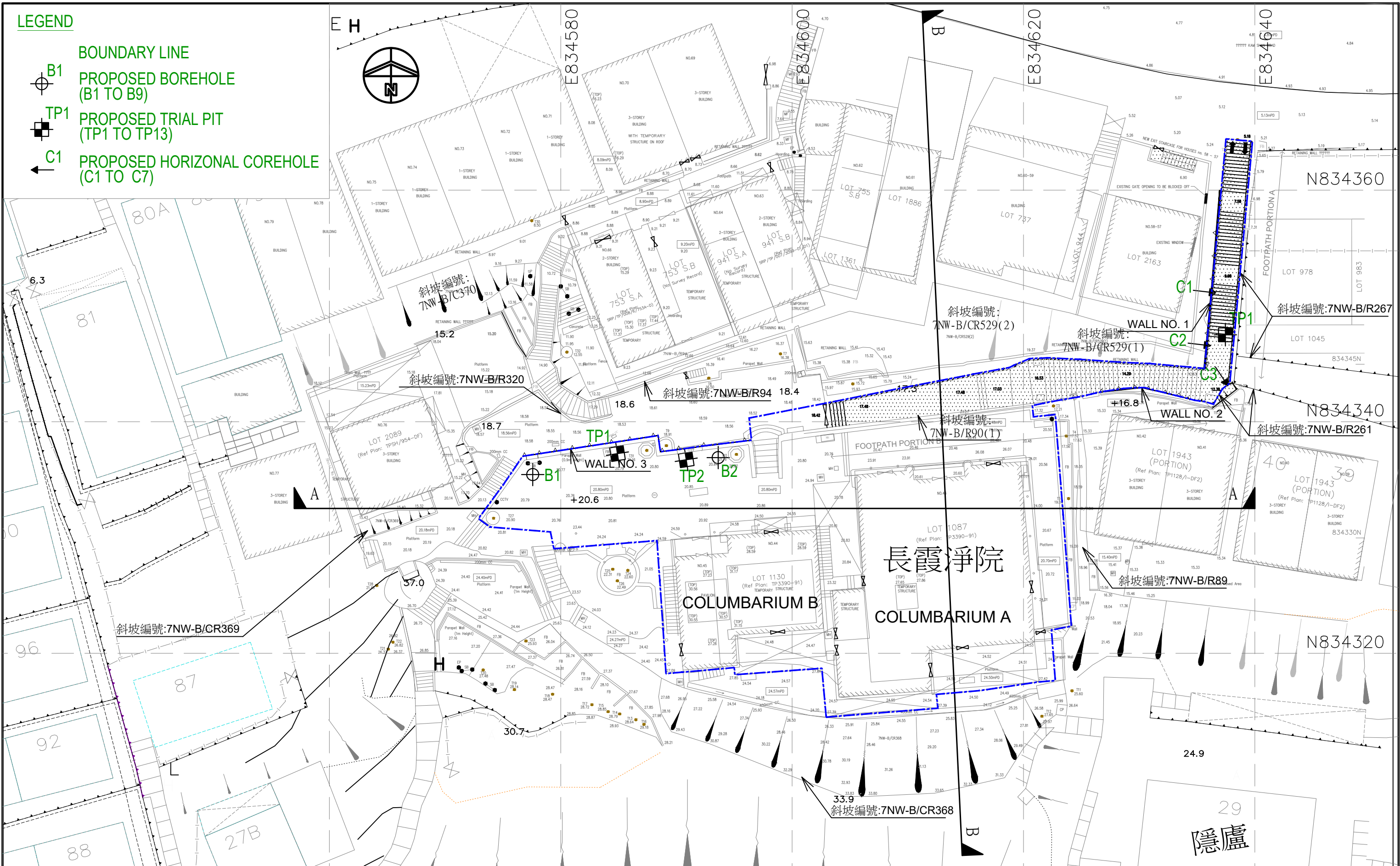
REMARKS

APPENDIX G

PROPOSED SITE FORMATION PLAN & SECTIONS WITH PROPOSED GROUND INVESTIGATION

LEGEND

-  **BOUNDARY LINE**
-  **PROPOSED BOREHOLE (B1 TO B9)**
-  **PROPOSED TRIAL PIT (TP1 TO TP13)**
-  **PROPOSED HORIZONTAL COREHOLE (C1 TO C7)**



PROJECT :
 SECTION 12A REZONING APPLICATION FROM "V" TO "G/IC(3)" FOR PRE-CUT OFF COLUMBARIUMS AT BUDDHIST CHEUNG HA TEMPLE,
 LOT NOS. 1087 AND 1130 IN D.D. 6 AND ADJOINING GOVERNMENT LAND, TAI PO, NEW TERRITORIES

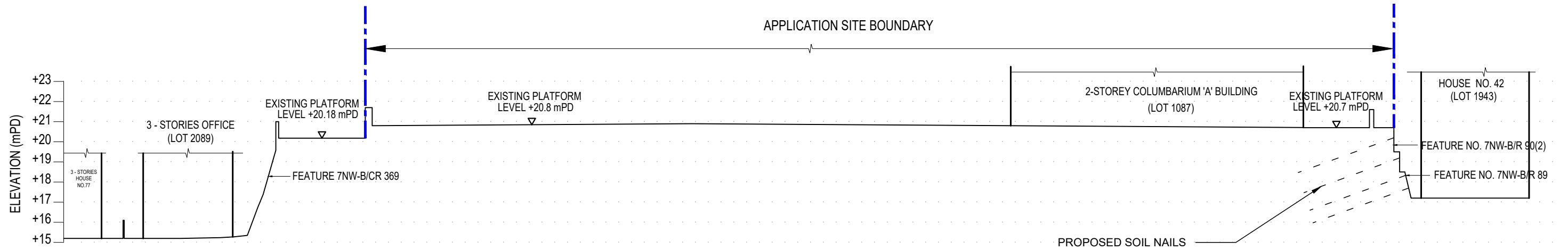
CLIENT :
 BUDDHIST CHEUNG HA TEMPLE

DRAWING TITLE :
 PROPOSED SITE FORMATION PLAN

DRAWING NO. :
 SF-01

PROJECT NO. :
 J1926/B

APPROVED BY HC	DATE 29/04/2024
REVISION B	SCALE 1 : 300
DESIGNED BY PH	DRAWN BY AM

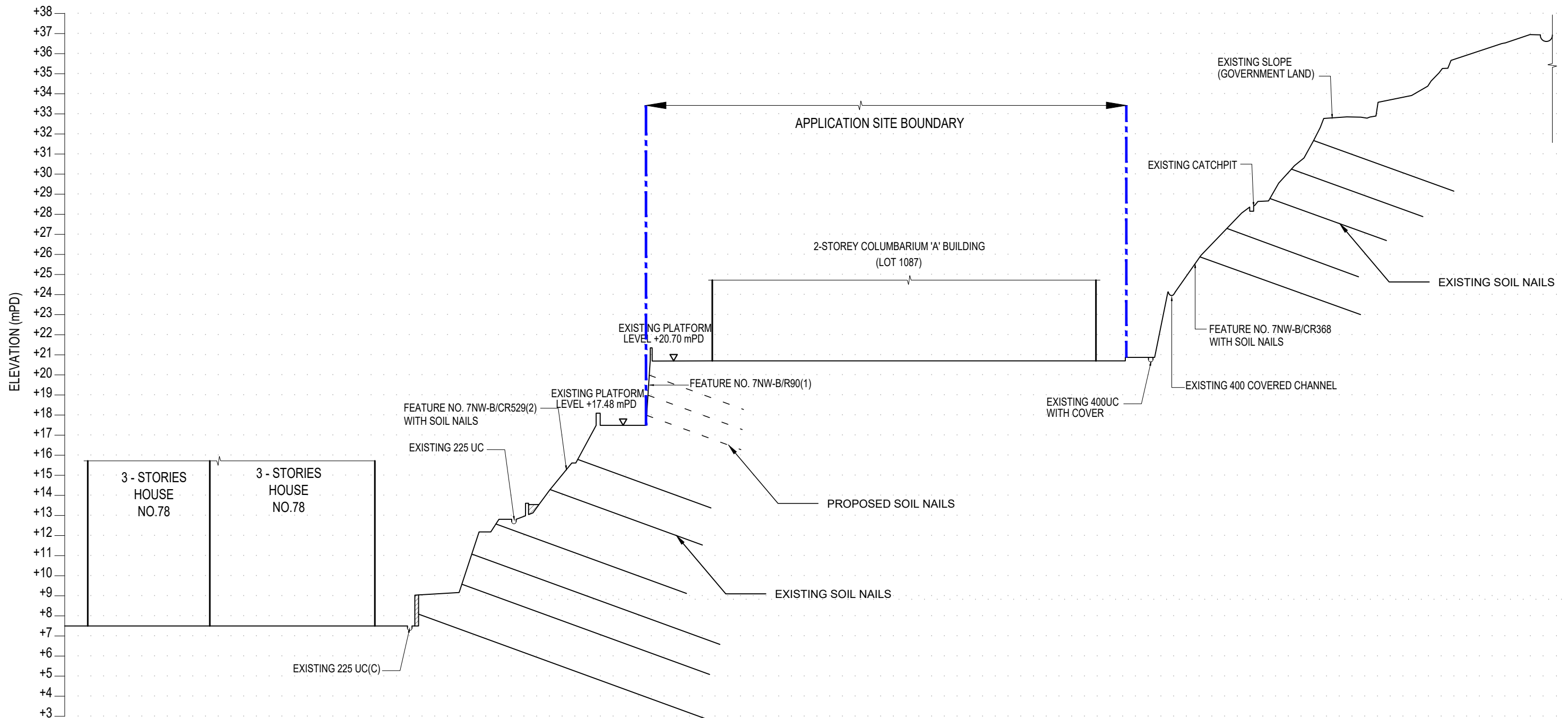


SECTION A - A
1 : 100

PROJECT :
SECTION 12A REZONING APPLICATION FROM "V" TO "G/IC(3)" FOR PRE-CUT OFF COLUMBARIUMS AT BUDDHIST CHEUNG HA TEMPLE,
LOT NOS. 1087 AND 1130 IN D.D. 6 AND ADJOINING GOVERNMENT LAND, TAI PO, NEW TERRITORIES

CLIENT :
BUDDHIST CHEUNG HA TEMPLE
DRAWING TITLE :
SECTION A-A & B-B
DRAWING NO.: SF-02

PROJECT NO. J1926/B	
APPROVED BY HC	DATE 29/04/2024
REVISION B	SCALE AS-SHOWN
DESIGNED BY PH	DRAWN BY AM



SECTION B - B
1 : 100

PROJECT :
SECTION 12A REZONING APPLICATION FROM "V" TO "G/IC(3)" FOR PRE-CUT OFF COLUMBARIUMS AT BUDDHIST CHEUNG HA TEMPLE,
LOT NOS. 1087 AND 1130 IN D.D. 6 AND ADJOINING GOVERNMENT LAND, TAI PO, NEW TERRITORIES

CLIENT :
BUDDHIST CHEUNG HA TEMPLE
DRAWING TITLE :
SECTION C-C
DRAWING NO. : SF-03

PROJECT NO. J1926/B	
APPROVED BY HC	DATE 29/04/2024
REVISION B	SCALE AS-SHOWN
DESIGNED BY PH	DRAWN BY AM