

Supplementary Statement

1) Background

- 1.1 The applicant seeks planning permission from the Town Planning Board (the Board) to use *Lots 645 (Part), 647, 650 S.A, 650 S.B (Part), 651 (Part), 653 (Part) and 654 (Part) in D.D. 82, Ta Kwu Ling, New Territories* (the Site) for '**Temporary Open Storage of Construction Materials and Machinery with Ancillary Facilities and Associated Filling of Land for a Period of 3 Years**' (the development) (**Plans 1 to 3**).
- 1.2 The applicant is an engineering company providing construction services for the locals. They would like to continue to use the Site for storage of the company's construction materials (i.e. scaffold, bricks, tiles, column etc.) and machinery (i.e. chainsaw, elevated platform etc.) in order to support the construction industry and to serve nearby business owners.

2) Planning Context

- 2.1 The Site currently falls within an area zoned "Agriculture" ("AGR") on the Approved Ping Che and Ta Kwu Ling Outline Zoning Plan (OZP) No.: S/NE-TKL/14. According to the Notes of the OZP, 'open storage' use is neither a column one nor a column two use within the "AGR" zone, which requires planning permission from the Board (**Plan 2**).
- 2.2 The applied use is considered not incompatible with surrounding workshops, warehouses and open storage yards. Although the Site falls within "AGR" zone, there is no active agricultural activities within the Site. The Site also falls within Category 2 area under the *Town Planning Board Planning Guidelines No. 13G*, which is considered suitable for open storage and port back-up uses (**Plan 4**). As there are various open storage yards and warehouses are also located at the east and south of the Site, the development is considered not incompatible with the surrounding areas. Therefore, approval of the current application on a temporary basis of 3 years would better utilise precious land resources and would not frustrate the long-term planning intention of the "AGR" zone.
- 2.3 Several similar applications for 'open storage' use have been approved by the Board within the same "AGR" zone on the OZP in the previous five years, which the latest application (No. A/NE-TKL/821) for 'open storage' use (located southwest of the Site) was approved by the Board on a temporary basis of 3 years on 05.12.2025. Hence, approval of the current application is in

line with previous decisions of the Board and would not set an undesirable precedent.

2.4 In addition, the Site is the subject of a previous planning application (No. A/NE-TKL/746) for the same use that submitted by the same applicant as the current application, and the application was approved by the Board on a temporary basis in 2024. Hence approval of the current application is in line with the Board's previous decision.

2.5 When compared with the previous application (No. A/NE-TKL/746), all major development parameters remain unchanged. The applicant has made effort to comply with approval conditions of the previous approved application, details are shown at **Table 1** below:

Table 1 – Details of Compliance with Approval Conditions of the Previous Application

Approval Conditions of Application No. A/NE-TKL/746		Date of Compliance
(b)	Submission of a drainage proposal	08.01.2025
(c)	Provision of drainage facilities	Not complied with
(e)	Provision of fire extinguisher(s)	12.04.2024
(f)	Submission of proposals for water supplies for fire-fighting and fire service installations (FSIs)	12.04.2024
(g)	Provision of water supplies for fire-fighting and FSIs	31.07.2024

2.6 The applicant submitted a revised drainage proposal to comply with condition (b), i.e. the submission of a drainage proposal on 20.12.2024 to the Chief Engineer/Mainland North, Drainage Services Department (CE/MN, DSD) and the submission was considered acceptable by CE/MN, DSD on 08.01.2025. The applicant has been liaising with one's drainage consultant regarding the implementation work of the accepted proposal. However, the applicant did not manage to implement the approved drainage proposal at the Site within the time limit, which led to the revocation of the previous application.

2.7 Thus, the applicant would like to continue the implementation work within the current application period. In support of the application, the applicant has submitted a FSIs proposal and the previously approved drainage proposal to support the current application (**Appendices I and II**). For information, the submitted FSIs proposal is the same as the approved FSIs proposal under the previous application period (No. A/NE-TKL/746).

3) Development Proposal

- 3.1 The Site area is 5,913 m² (about). No structure is proposed at the Site (**Plan 5**). Ancillary facilities, i.e. loading/unloading (L/UL) spaces, circulation area, FSI, drainage facilities etc. are intended to support the daily operation of the Site. The operation hours of Site are Mondays to Saturdays from 09:00 to 18:00; and there is no operation on Sundays and public holidays. As the Site is for 'open storage' use with no shopfront, no visitor is anticipated. No staff will be stationed within the Site. Only open storage activities will be carried out within the Site. Details of development parameters are shown at **Table 2** below:

Table 2 – Major Development Parameters

Application Site Area	5,913 m ² (about)
Covered Area	not applicable
Uncovered Area	5,913 m ² (about)

- 3.2 The Site has already been paved with concrete (of not more than 1.9 m in depth) to the surrounding site level for L/UL spaces, open storage use and circulation area (**Plan 6**). This application is intended to regularise the filled area. The filled area is considered necessary to meet the operational needs and the extent of filling has been kept to minimal. The applicant will strictly follow the approved scheme and no further filling of land will be carried out at the Site after planning permission has been granted from the Board.
- 3.3 The Site is accessible from Ping Che Road via a local access (**Plan 1**). A total of 2 L/UL spaces are provided at the Site, details are shown at **Table 3** below:

Table 3 – L/UL Provisions

Type of Space	No. of Space
L/UL Space for Light Goods Vehicle (LGV) - 3.5 m (W) x 7 m (L)	1
L/UL Space for Medium Goods Vehicle (MGV) - 3.5 m (W) x 11 m (L)	1

- 3.4 LGVs and MGVs will be deployed for transportation of construction materials and machinery into/out of the Site. Sufficient space is provided for vehicles to smoothly manoeuvre within the Site to ensure that no vehicle will turn back onto Ping Che Road via the local access (**Plan 7**). Staff will be deployed to station at the vehicular ingress/egress of the Site to direct incoming/outgoing vehicles to enhance pedestrian and road safety.

- 3.5 Heavy goods vehicles, including container tractors/trailers, as defined in the *Road Traffic Ordinance*, are prohibited to be parked/stored on or enter/exit the Site at any time during the planning approval period. As the Site will be used for 'open storage' use only, infrequent trips will only be anticipated, hence, traffic generated and attracted by the development is minimal (as shown at **Table 4** below).

Table 4 – Trip Generation and Attraction of the Proposed Development

Time Period	Trip Generation and Attraction				
	LGV		MGV		2-Way Total
	In	Out	In	Out	
Trips at <u>AM peak</u> per hour (09:00 – 10:00)	1	0	1	0	2
Trips at <u>PM peak</u> per hour (17:00 – 18:00)	0	1	0	1	2
Traffic trip per hour (average)	1	1	1	1	4

- 3.6 No dismantling, maintenance, repairing, cleansing, paint spraying or other workshop activities and storage of dangerous goods will be carried out at the Site at any time during the planning approval period. The construction materials would only be stored at the designated storage area (i.e. about 3,391 m²) during the planning approval period. 2.5m high solid metal wall will be erected along the site boundary to minimise nuisance to the surrounding area. The boundary wall will be installed properly by licensed contractor to prevent misalignment of walls, to ensure that there is no gap or slit on boundary wall.
- 3.7 The applicant will strictly comply with all environmental protection / pollution control ordinances, i.e. *Water Pollution Control Ordinance*, *Air Pollution Control Ordinance*, *Noise Control Ordinance* etc. at all times during the planning approval period. The applicant will also follow relevant mitigation measures and requirements in the latest the 'Code of Practice on Handling the Environmental Aspects of Temporary Uses and Open Storage Sites' issued by Environmental Protection Department to minimise adverse environmental impacts and nuisance to the surrounding area. The applicant will also implement mitigation measures listed in 'Recommended Control Clauses for Construction Contracts' during the planning approval period.

4) Conclusion

- 4.1 Significant nuisance to the surrounding areas arising from the development is not anticipated. Adequate mitigation measures, e.g. *FSIs proposal and previous approved drainage proposal* have been provided by the applicant to mitigate any adverse impact that would have arisen from the proposed development (**Appendices I and II**).
- 4.2 In view of the above, the Board is hereby respectfully recommended to approve the subject application for '**Temporary Open Storage of Construction Materials and Machinery with Ancillary Facilities and Associated Filling of Land for a Period of 3 Years**'.

Tai Wah Development Consultants Limited

August 2026

LIST OF PLANS

Plan 1	Location Plan
Plan 2	Zoning Plan
Plan 3	Land Status Plan
Plan 4	Plan Showing the Site under TPB PG No. 13G
Plan 5	Layout Plan
Plan 6	Land Filling Plan
Plan 7	Swept Path Analysis

APPENDICES

Appendix I	Fire Service Installations Proposal
Appendix II	Approved Drainage Proposal under Previous Application No. A/NE-TKL/746

LOCATION OF THE APPLICATION SITE

APPLICATION SITE AREA : 5,913 m² (ABOUT)

VEHICULAR ACCESS

ACCESSIBLE FROM PING CHE ROAD VIA A LOCAL ACCESS

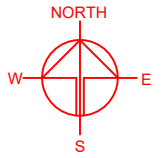
APPLICATION SITE

ACCESSIBLE FROM PING CHE ROAD VIA A LOCAL ACCESS

LEGEND

APPLICATION SITE

SITE BOUNDARY FOR IDENTIFICATION PURPOSE ONLY.



PLANNING CONSULTANT

TAI WAH DEVELOPMENT CONSULTANTS LIMITED

PROJECT

TEMPORARY OPEN STORAGE OF CONSTRUCTION MATERIAL AND MACHINERY WITH ANCILLARY FACILITIES FOR A PERIOD OF 3 YEARS AND ASSOCIATED FILLING OF LAND

SITE LOCATION

VARIOUS LOTS IN D.D. 82, TA KWU LING, NEW TERRITORIES

SCALE

1 : 3000 @ A4

DRAWN BY

MN

DATE

19.8.2026

CHECKED BY

DATE

APPROVED BY

DATE

DWG. TITLE

LOCATION PLAN

DWG NO.

PLAN 1

VER.

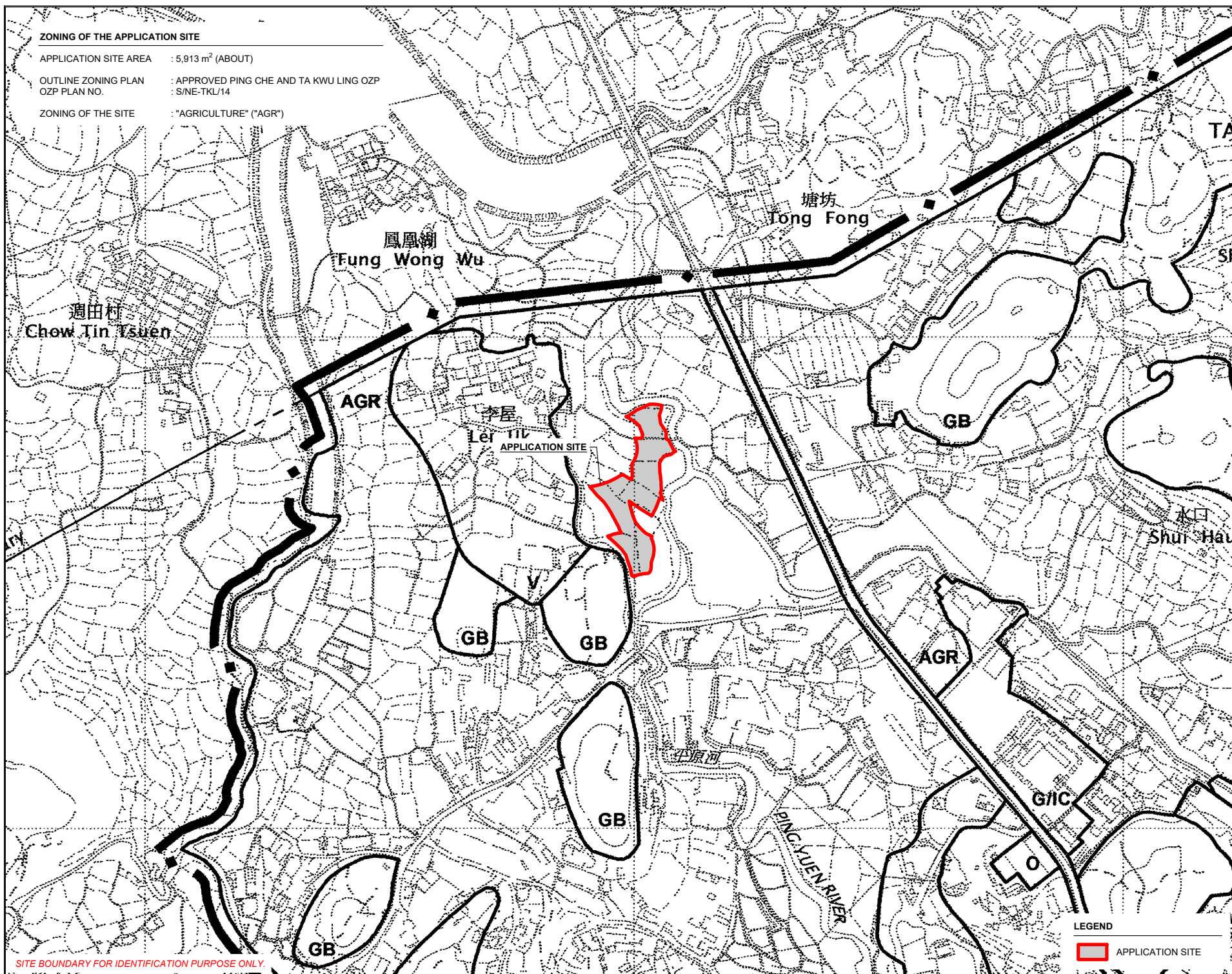
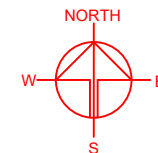
001

ZONING OF THE APPLICATION SITE

APPLICATION SITE AREA : 5,913 m² (ABOUT)

OUTLINE ZONING PLAN : APPROVED PING CHE AND TA KWU LING OZP
OZP PLAN NO. : S/NE-TKL/14

ZONING OF THE SITE : "AGRICULTURE" ("AGR")



SITE BOUNDARY FOR IDENTIFICATION PURPOSE ONLY.

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PROJECT
TEMPORARY OPEN STORAGE OF CONSTRUCTION MATERIAL AND MACHINERY WITH ANCILLARY FACILITIES FOR A PERIOD OF 3 YEARS AND ASSOCIATED FILLING OF LAND

SITE LOCATION
VARIOUS LOTS IN D.D. 82, TA KWU LING, NEW TERRITORIES

SCALE
1 : 5000 @ A4

DRAWN BY
MN

DATE
19.8.2026

CHECKED BY

DATE

APPROVED BY

DATE

LEGEND

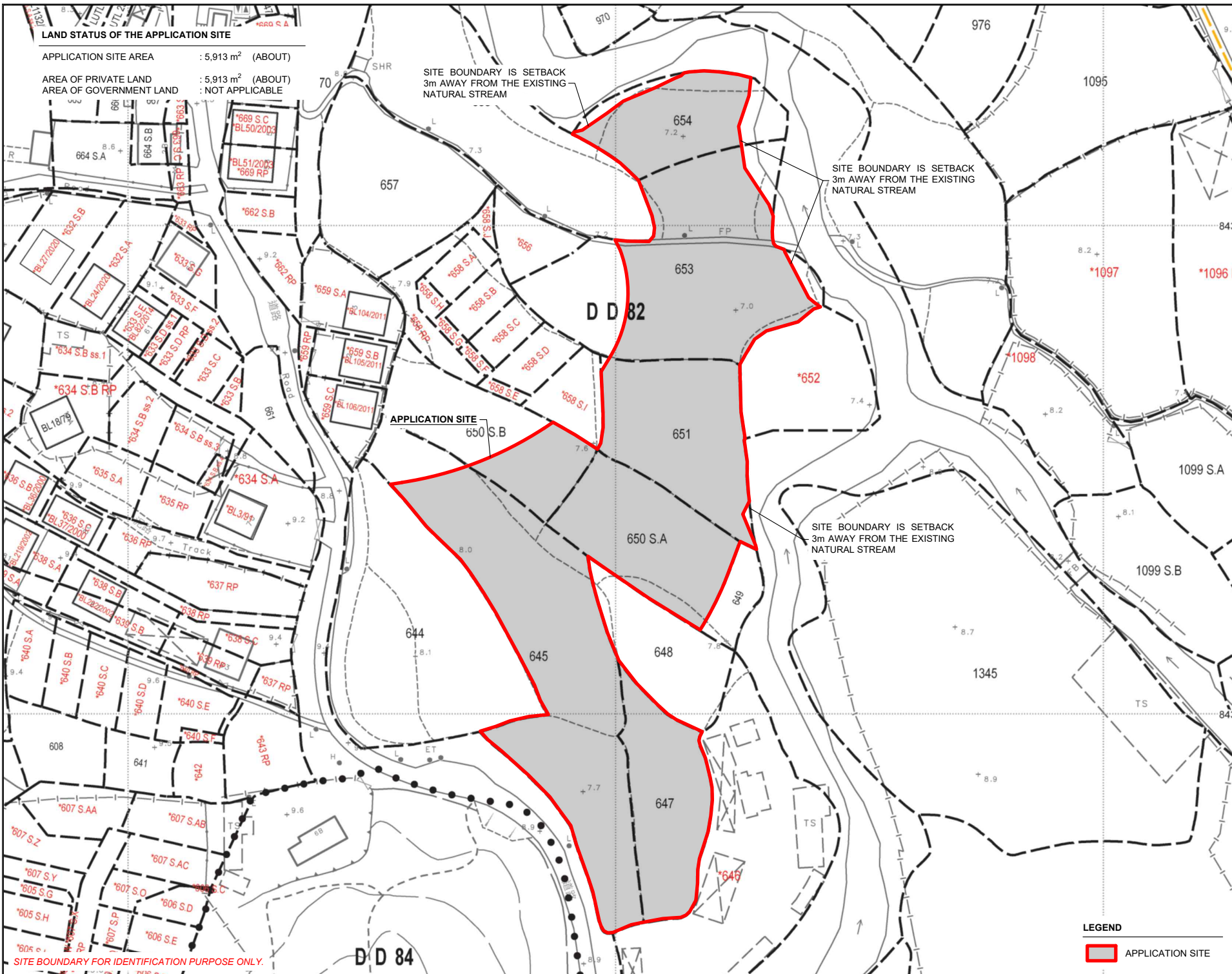


APPLICATION SITE

DWG. TITLE
ZONING OF THE SITE

DWG NO.
PLAN 2

VER.
001



LAND STATUS OF THE APPLICATION SITE

APPLICATION SITE AREA : 5,913 m² (ABOUT)

AREA OF PRIVATE LAND : 5,913 m² (ABOUT)

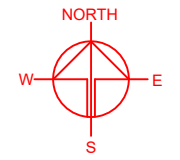
AREA OF GOVERNMENT LAND : NOT APPLICABLE

SITE BOUNDARY IS SETBACK
3m AWAY FROM THE EXISTING
NATURAL STREAM

SITE BOUNDARY IS SETBACK
3m AWAY FROM THE EXISTING
NATURAL STREAM

SITE BOUNDARY IS SETBACK
3m AWAY FROM THE EXISTING
NATURAL STREAM

SITE BOUNDARY FOR IDENTIFICATION PURPOSE ONLY.



LEGEND

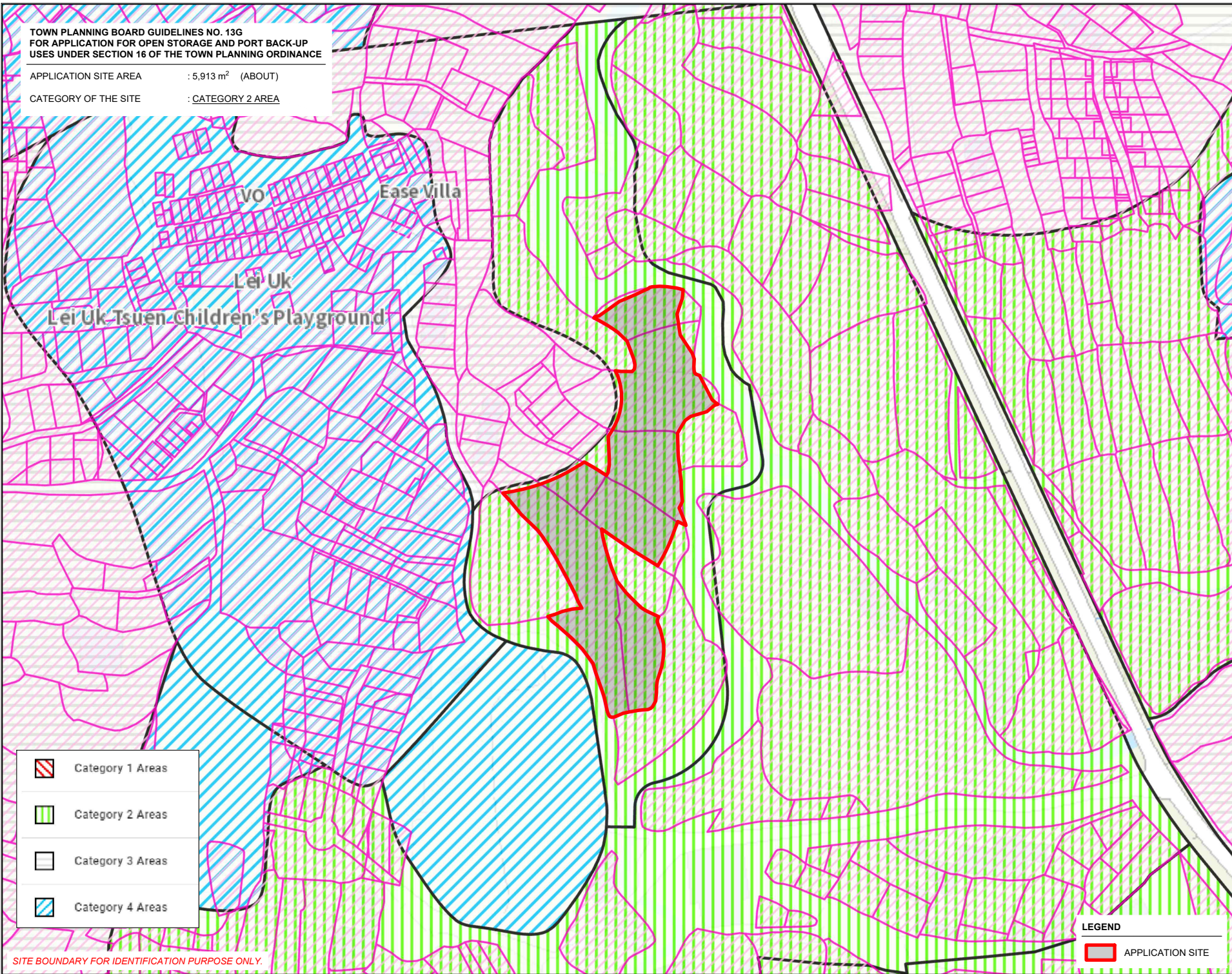
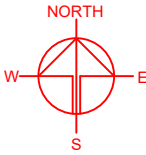
APPLICATION SITE

PLANNING CONSULTANT	
TAI WAH	DEVELOPMENT CONSULTANTS LIMITED
PROJECT	
TEMPORARY OPEN STORAGE OF CONSTRUCTION MATERIAL AND MACHINERY WITH ANCILLARY FACILITIES FOR A PERIOD OF 3 YEARS AND ASSOCIATED FILLING OF LAND	
SITE LOCATION	
VARIOUS LOTS IN D.D. 82, TA KWU LING, NEW TERRITORIES	
SCALE	
1 : 1000 @ A4	
DRAWN BY	DATE
MN	19.8.2026
CHECKED BY	DATE
APPROVED BY	DATE
DWG. TITLE	
LAND STATUS OF THE SITE	
DWG NO.	VER.
PLAN 3	001

TOWN PLANNING BOARD GUIDELINES NO. 13G
FOR APPLICATION FOR OPEN STORAGE AND PORT BACK-UP
USES UNDER SECTION 16 OF THE TOWN PLANNING ORDINANCE

APPLICATION SITE AREA : 5,913 m² (ABOUT)

CATEGORY OF THE SITE : CATEGORY 2 AREA



-  Category 1 Areas
-  Category 2 Areas
-  Category 3 Areas
-  Category 4 Areas

SITE BOUNDARY FOR IDENTIFICATION PURPOSE ONLY.

LEGEND
 APPLICATION SITE

PLANNING CONSULTANT
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PROJECT
TEMPORARY OPEN STORAGE OF CONSTRUCTION MATERIAL AND MACHINERY WITH ANCILLARY FACILITIES FOR A PERIOD OF 3 YEARS AND ASSOCIATED FILLING OF LAND

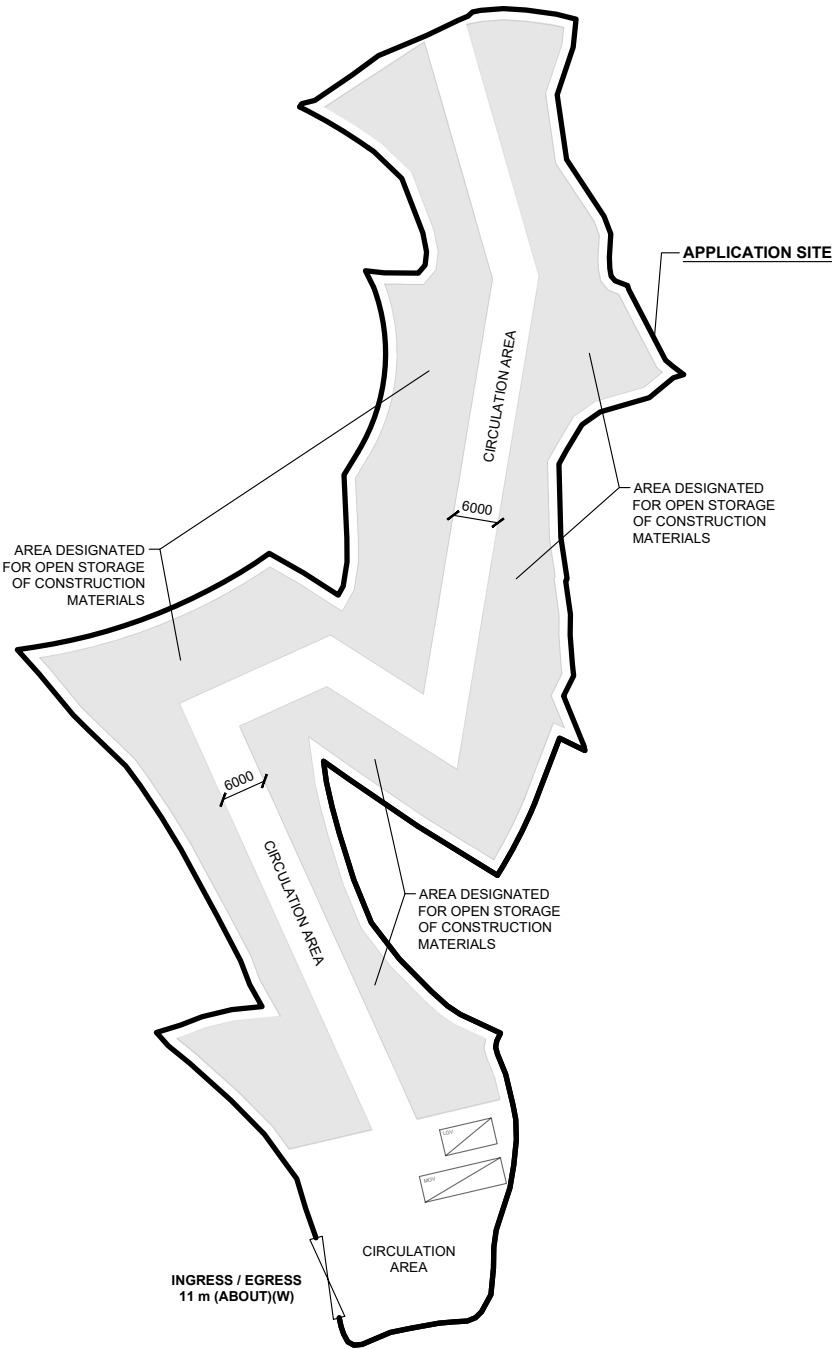
SITE LOCATION
VARIOUS LOTS IN D.D. 82, TA KWU LING, NEW TERRITORIES

SCALE 1 : 2000 @ A4	
DRAWN BY MN	DATE 19.8.2026
CHECKED BY	DATE
APPROVED BY	DATE
DWG. TITLE TPB PG-13G	
DWG NO. PLAN 4	VER. 001

DEVELOPMENT PARAMETERS

APPLICATION SITE AREA	: 5,913 m ² (ABOUT)
COVERED AREA	: NOT APPLICABLE
UNCOVERED AREA	: 5,913 m ² (ABOUT)
OPEN STORAGE AREA	: 3,391 m ² (ABOUT)

* NO STRUCTURE IS PROPOSED AT THE APPLICATION SITE

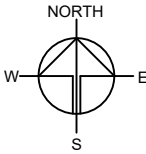


PARKING AND LOADING/UNLOADING PROVISIONS

NO. OF L/UL SPACE FOR LIGHT GOODS VEHICLE	: 1
DIMENSION OF L/UL SPACE	: 7 m (L) X 3.5 m (W)
NO. OF L/UL SPACE FOR MEDIUM GOODS VEHICLE	: 1
DIMENSION OF L/UL SPACE	: 11 m (L) X 3.5 m (W)

LEGEND

	APPLICATION SITE
	STRUCTURE
	L/UL SPACE (LIGHT GOODS VEHICLE)
	L/UL SPACE (MEDIUM GOODS VEHICLE)
	INGRESS / EGRESS



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PROJECT

TEMPORARY OPEN STORAGE OF CONSTRUCTION MATERIAL AND MACHINERY WITH ANCILLARY FACILITIES FOR A PERIOD OF 3 YEARS AND ASSOCIATED FILLING OF LAND

SITE LOCATION

VARIOUS LOTS IN D.D. 82, TA KWU LING, NEW TERRITORIES

SCALE

1 : 1000 @ A4

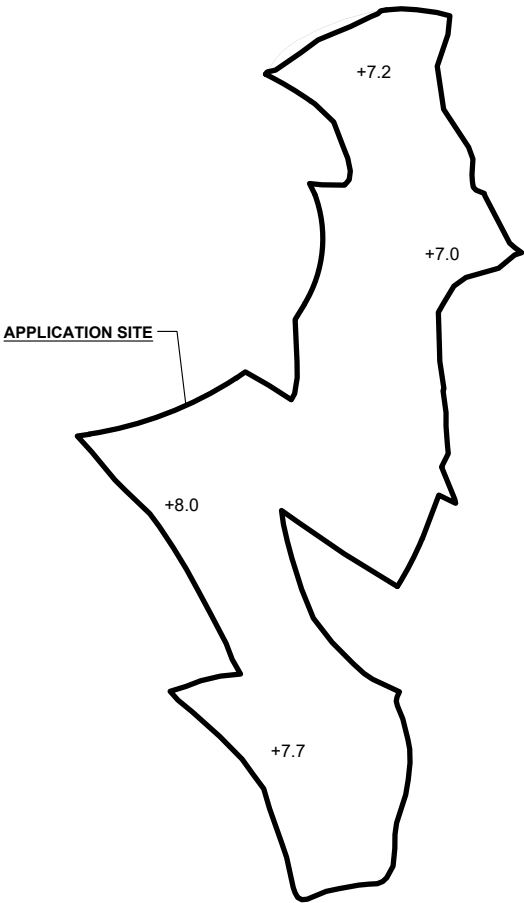
DRAWN BY	DATE
MN	19.8.2026
CHECKED BY	DATE
APPROVED BY	DATE

DWG. TITLE
LAYOUT PLAN

DWG NO. PLAN 5	VER 001
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PREVIOUS CONDITION OF THE APPLICATION SITE

APPLICATION SITE AREA	: 5,913 m ²	(ABOUT)
SOILED GROUND AREA	: 5,913 m ²	(ABOUT)
SITE LEVELS	: +7.0 mPD TO +8.0 mPD	(ABOUT)



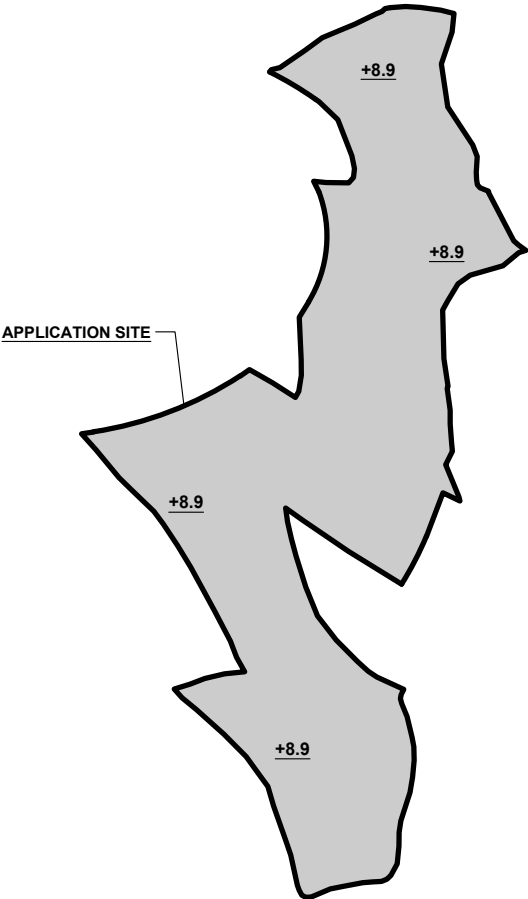
LEGEND

	APPLICATION SITE
	EXISTING SITE LEVEL

*SITE LEVELS ARE FOR ILLUSTRATION PURPOSE ONLY

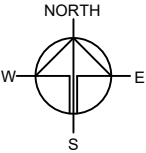
EXISTING CONDITION OF THE APPLICATION SITE

APPLICATION SITE AREA	: 5,913 m ²	(ABOUT)
COVERED BY STRUCTURE	: NOT APPLICABLE	(ABOUT)
PROPOSED FILLING AREA	: 5,913 m ²	(ABOUT)
DEPTH OF LAND FILLING	: NOT MORE THAN 1.9 m	(ABOUT)
EXISTING SITE LEVELS	: +8.9 mPD	(ABOUT)
MATERIAL OF LAND FILLING	: CONCRETE	
USE	: PARKING AND LOADING / UNLOADING SPACE, OPEN STORAGE AND CIRCULATION AREA	



LEGEND

	APPLICATION SITE
	LAND FILLING AREA
	PROPOSED SITE LEVEL

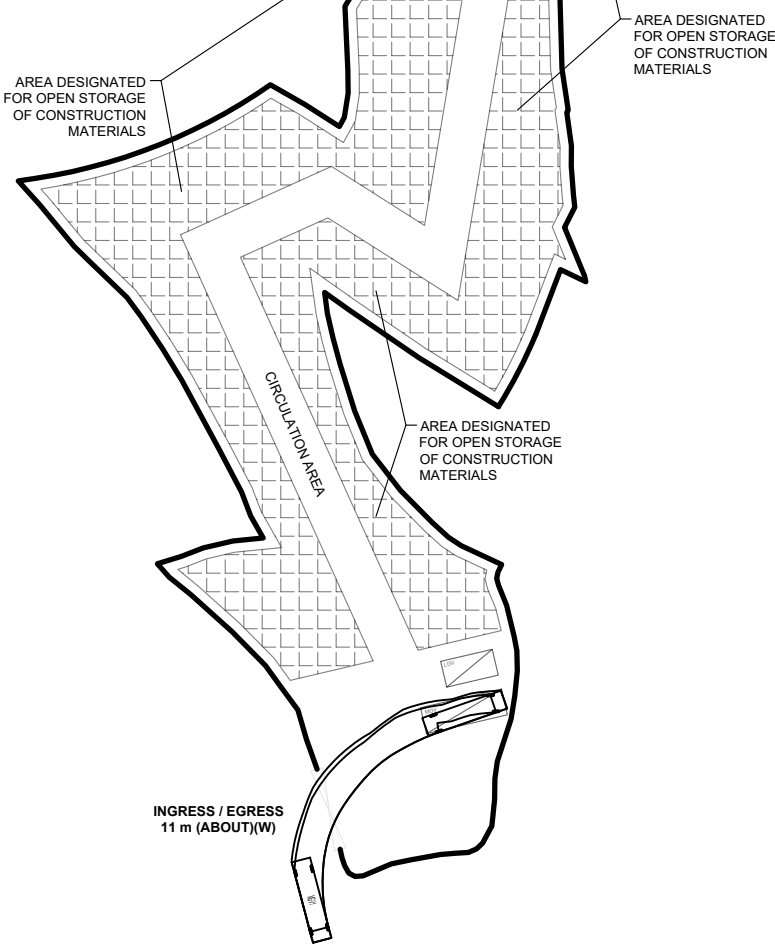


PLANNING CONSULTANT	
TAI WAH	DEVELOPMENT CONSULTANTS LIMITED
PROJECT	
TEMPORARY OPEN STORAGE OF CONSTRUCTION MATERIAL AND MACHINERY WITH ANCILLARY FACILITIES FOR A PERIOD OF 3 YEARS AND ASSOCIATED FILLING OF LAND	
SITE LOCATION	
VARIOUS LOTS IN D.D. 82, TA KWU LING, NEW TERRITORIES	
SCALE	
1 : 1500 @ A4	
DRAWN BY	DATE
MN	19.8.2026
REVISED BY	DATE
APPROVED BY	DATE
DWG. TITLE	
FILLING OF LAND AREA	
DWG NO.	VER.
PLAN 6	001

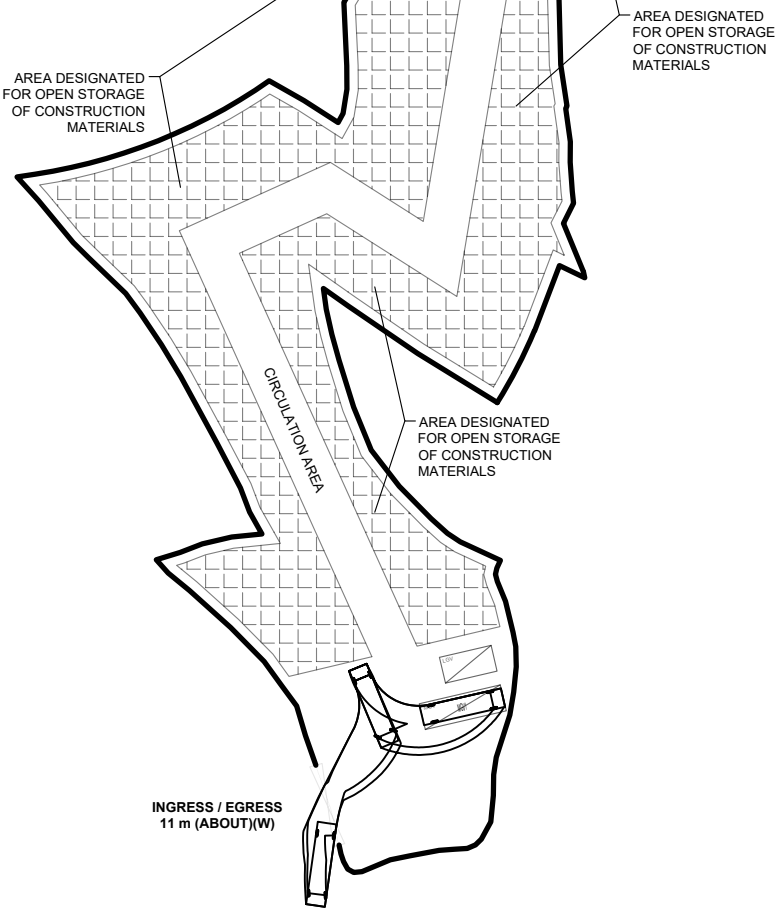
SWEPT PATH ANALYSIS

TYPE OF VEHICLE : MEDIUM GOODS VEHICLE
DIMENSION OF VEHICLE : 2.5m (W) X 11m (L)

SWEPT PATHS GENERATED BY AUTODESK VEHICLE TRACKING 2024



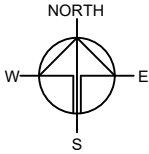
FROM THE LOCAL ACCESS TO
THE APPLICATION SITE



FROM THE APPLICATION SITE TO
THE LOCAL ACCESS

LEGEND

- APPLICATION SITE
- STRUCTURE
- L/UL SPACE (LIGHT GOODS VEHICLE)
- L/UL SPACE (MEDIUM GOODS VEHICLE)
- INGRESS / EGRESS
- MEDIUM GOODS VEHICLE
- SWEPT PATH OF VEHICLE



PLANNING CONSULTANT

TAI WAH | DEVELOPMENT
CONSULTANTS LIMITED

PROJECT

TEMPORARY OPEN STORAGE
OF CONSTRUCTION MATERIAL
AND MACHINERY WITH
ANCILLARY FACILITIES FOR A
PERIOD OF 3 YEARS AND
ASSOCIATED FILLING OF LAND

SITE LOCATION

VARIOUS LOTS IN D.D. 82, TA
KWU LING, NEW TERRITORIES

SCALE

1 : 1000 @ A4

DRAWN BY

MN

DATE

19.8.2026

CHECKED BY

DATE

APPROVED BY

DATE

DWG. TITLE

SWEPT PATH ANALYSIS

DWG NO.

PLAN 7

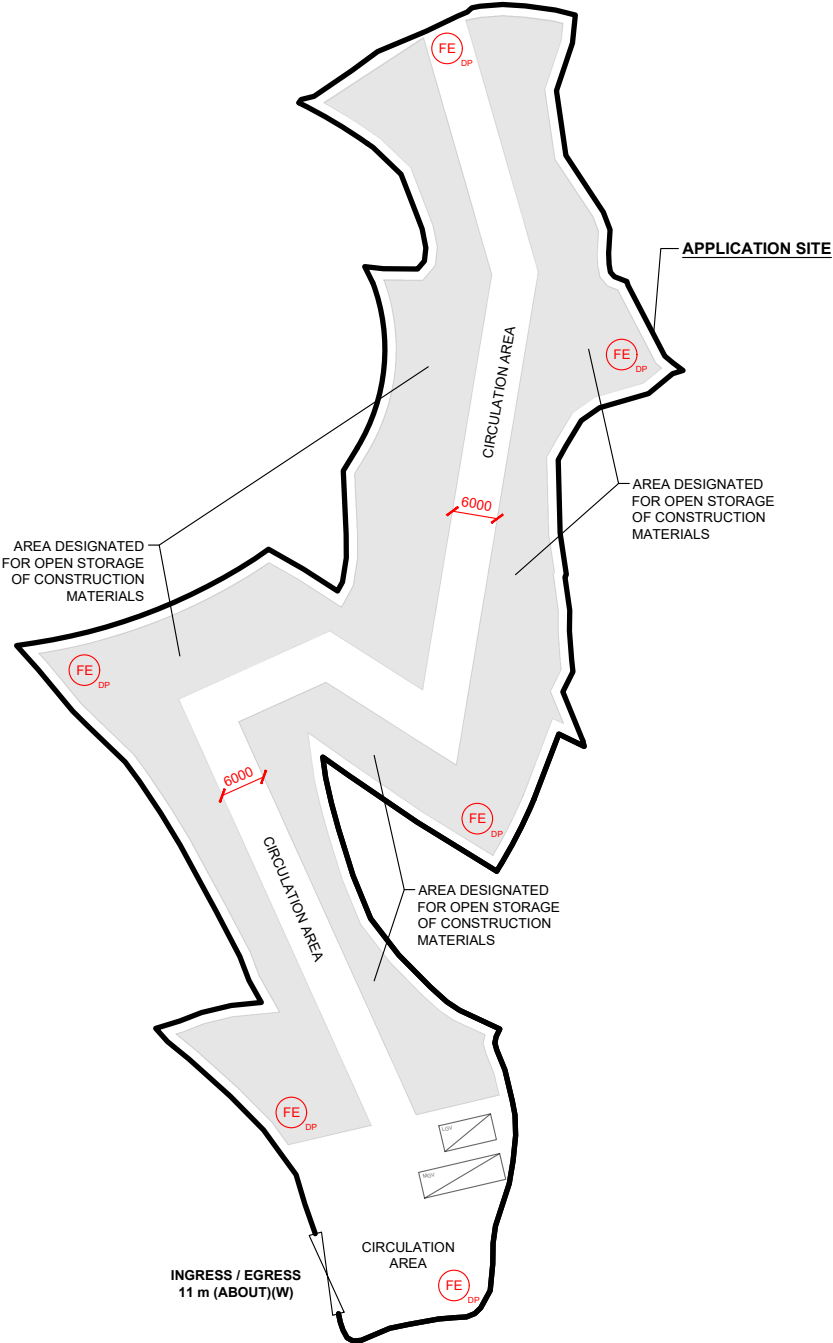
VER.

001

DEVELOPMENT PARAMETERS

APPLICATION SITE AREA : 5,913 m² (ABOUT)
COVERED AREA : NOT APPLICABLE
UNCOVERED AREA : 5,913 m² (ABOUT)

* **NO** STRUCTURE IS PROPOSED AT THE APPLICATION SITE



FIRE SERVICE INSTALLATIONS

FE DP 5 KG DRY POWDER FIRE EXTINGUISHER

FS NOTES:

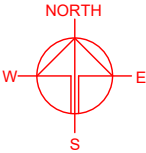
1. PORTABLE HAND-OPERATED APPROVED APPLIANCE SHALL BE PROVIDED AS REQUIRED BY OCCUPANCY.
2. ACCESS IS PROVIDED FOR EMERGENCY VEHICLE TO REACH 30m OF ALL PART THE APPLICATION SITE.

PARKING AND LOADING/UNLOADING PROVISIONS

NO. OF L/UL SPACE FOR LIGHT GOODS VEHICLE : 1
DIMENSION OF L/UL SPACE : 7 m (L) X 3.5 m (W)
NO. OF L/UL SPACE FOR MEDIUM GOODS VEHICLE : 1
DIMENSION OF L/UL SPACE : 11 m (L) X 3.5 m (W)

LEGEND

- APPLICATION SITE
- OPEN STORAGE AREA
- L/UL SPACE (LIGHT GOODS VEHICLE)
- L/UL SPACE (MEDIUM GOODS VEHICLE)
- INGRESS / EGRESS



PROJECT
PROPOSED TEMPORARY OPEN STORAGE OF CONSTRUCTION MATERIAL AND MACHINERY WITH ANCILLARY FACILITIES FOR A PERIOD OF 3 YEARS AND ASSOCIATED FILLING OF LAND

SITE LOCATION
VARIOUS LOTS IN D.D. 82, TA KWU LING, NEW TERRITORIES

SCALE 1 : 1000 @ A4	
DRAWN BY MN	DATE 18.3.2024
CHECKED BY	DATE
APPROVED BY	DATE
DWG. TITLE FSIs PROPOSAL	
DWG NO. APPENDIX I	VER. 001

規 劃 署

沙田、大埔及北區規劃處
香港新界沙田上禾輦路一號
沙田政府合署
十三樓 1301-1314 室

**Planning Department**

Sha Tin, Tai Po & North
District Planning Office
Rooms 1301-1314, 13/F,
Shatin Government Offices,
1 Sheung Wo Che Road, Sha Tin,
N.T., Hong Kong

來函檔號 Your Reference DD82 Lot 647 & VL
本署檔號 Our Reference () in TPB/A/NE-TKL/746
電話號碼 Tel. No.: 2158 6220
傳真機號碼 Fax No.: 2691 2806

By Post and Fax

8 January 2025

R-riches Property Consultants Ltd.



(Attn.: Danny NG)

Dear Sir/Madam,

**Proposed Temporary Open Storage of Construction Material
and Machinery with Ancillary Facilities for a Period of 3 Years and
Associated Filling of Land in "Agriculture" Zone, Lots 645 (Part), 647, 650 S.A,
650 S.B (Part), 651 (Part), 653 (Part) and 654 (Part) in D.D. 82, Ta Kwu Ling
(Compliance with Approval Condition (b) for Planning Application No. A/NE-TKL/746)**

I refer to your submission dated 20.12.2024 for compliance with approval condition (b) in relation to the submission of a drainage proposal to the satisfaction of the Director of Drainage Services or of the Town Planning Board under the captioned planning application.

The Chief Engineer/Mainland North, Drainage Services Department (Contact person: Mr. Samuel WANG; Tel.: 2300 1135) has been consulted and considered the approval condition (b) has been complied with. Her advisory comments are attached at **Appendix I** for your reference. Please proceed to implement the accepted drainage proposal for compliance with approval condition (c).

Should you have any other queries related to planning matters, please contact Ms. Sheren LEE of this department at 2158 6391.

Yours faithfully,

(Rico TSANG)
for Director of Planning

Appendix I

Comments of the Chief Engineer/Mainland North, Drainage Services Department (CE/MN, DSD)
(Contact person: Mr. Samuel WANG; Tel. No.: 2300 1135):

- (i) no works including landfilling and hard paving works which may induce adverse drainage impact should be carried out until completion of the proposed drainage facilities;
- (ii) the applicant shall take all precautionary measures to prevent any disturbance, damage and pollution from the development to any parts of the existing drainage facilities, especially the Ping Yuen River, in the vicinity of the lots. In the event of any damage to the existing drainage facilities, the applicant shall be held responsible for the cost of all necessary repair works, compensation and any other consequences arising there from. The applicant shall place all the proposed works at least 3m away from the top of the bank of Ping Yuen River at all the time;
- (iii) the applicant is required to construct and maintain the proposed drainage works properly and rectify the drainage systems if they are found to be inadequate or ineffective during operation. Regular maintenance should be carried out by the applicant to avoid blockage of drain. The applicant shall also be liable for and shall indemnify claims and demands arising out of damage or nuisance caused by a failure of the systems. For works undertaken outside the lot boundary, prior consent and agreement from District Lands Office/ North, Lands Department and/or relevant private lot owners should be sought;
- (iv) the applicant is reminded that all existing flow paths as well as the run-off falling onto and passing through the site should be intercepted and disposed of via proper discharge points. The applicant shall also ensure that no works, including any site formation works, shall be carried out as may adversely interfere with the free flow condition of the existing drain, channels and watercourses on or in the vicinity of the subject site any time during or after the works;
- (v) the applicant shall allow all time free access for the Government and its agent to conduct site inspection on his completed drainage works; and
- (vi) the applicant should also be advised that the limited desk-top checking by Government on the drainage impact assessment covers only the fundamental aspects of the drainage design which will by no means relieve his obligations to ensure that (i) the proposed drainage works will not cause any adverse drainage or environmental impacts in the vicinity; and (ii) the proposed drainage works and the downstream drainage systems have the adequate capacity and are in good conditions to receive the flows collected from his lot and all upstream catchments.

Our Ref.: DD82 Lot 647 & VL
Your Ref.: TPB/A/NE-TKL/746

The Secretary,
Town Planning Board,
15/F, North Point Government Offices,
333 Java Road,
North Point, Hong Kong

By Email

20 December 2024

Dear Sir,

Compliance with Approval Condition (b)

**Proposed Temporary Open Storage of Construction Material and Machinery with
Ancillary Facilities for a Period of 3 Years and Associated Filling of Land in "Agriculture"
Zone, Various Lots in D.D. 82, Ta Kwu Ling, New Territories**

(S.16 Planning Application No. A/NE-TKL/746)

We are writing to submit a response-to-the-comments table and a revised drainage proposal for compliance with approval condition (b) of the subject application, i.e. *the submission of a drainage proposal* (**Appendices I and II**).

Should you require more information regarding the application, please contact the undersigned at your convenience. Thank you for your kind attention.

Yours faithfully,

For and on behalf of
R-riches Property Consultants Limited



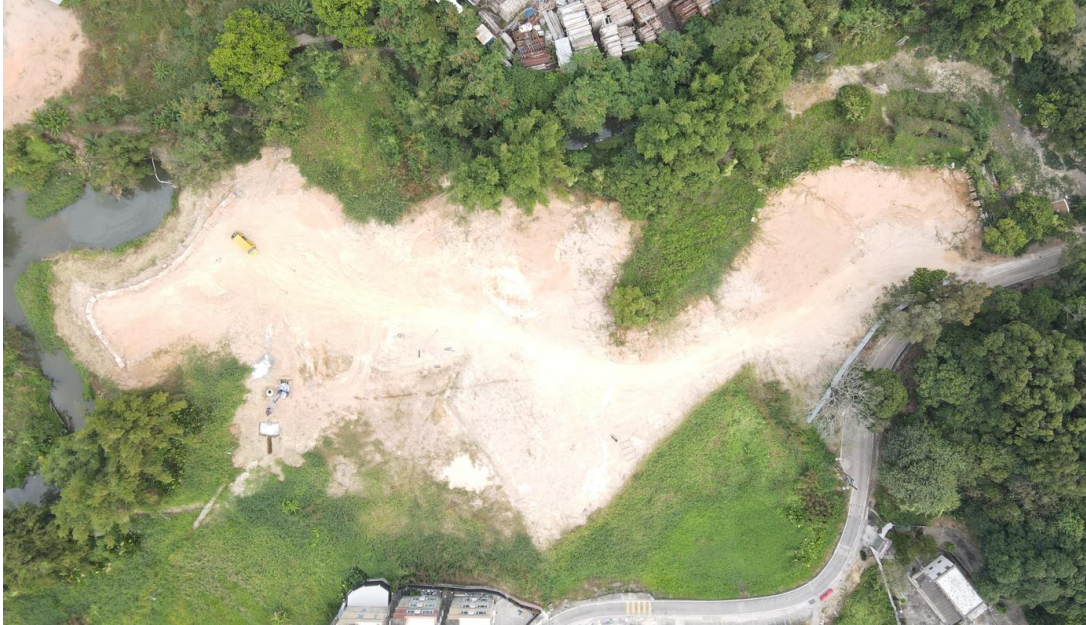
Danny NG
Town Planner

Appendix I – Response to the Comments of Chief Engineer/Mainland North, Drainage Services Department (CE/MN, DSD)

Comments of the CE/MN, DSD (Contact Person: Mr. Samuel X WANG; Tel: 2300 1135)		
(i)	Despite the drainage proposal committed that the works would be set back from the Ping Yuen River for at least 3m, our recent site inspection revealed that there were concrete blocks placed at the riverbank and substantive landfilling activities were being implemented near the Ping Yuen River. Some site photos are attached for reference. DSD is deeply concerned with the potential impact to the Ping Yuen River and the resultant loss of drainage buffer area. The applicant should be requested to set back all his works for at least 3m from top of bank of Ping Yuen River and reinstate the original condition near the Ping Yuen River as a matter of urgency;	Noted. Please note the site has been set back 3m away from Ping Yuen River. Please find attached <i>aerial photos 1 and 2</i> below for your reference.
(ii)	In view of the potential catchment area, please adopt 50 years as the design return periods and review the design accordingly;	Noted. Please refer to Appendix D of the revised drainage proposal (Appendix II) .
(iii)	Please adopt the storm constants of North District Area rather than HKO Headquarters as specified under the Corrigendum No. 1/2024 to the Stormwater Drainage Manual; and	Noted. The calculation is updated. Please refer to section 3 of the drainage report and revised Appendix A of Appendix II. Please kindly note the according to the checking in Appendix A, the last proposed channels are capable for the design scenario. No further upgrade is required. (Appendix II).
(iv)	Please clarify the future site formation level within the site and demonstrate if the existing overland flow from the west side of the site can be captured by the proposed drainage facilities.	Noted. Please note the future site formation level is proposed at +8.9 mPD. The ground level would slightly fall toward the river side. The existing overland flow from the west would be intercepted by UC1 and UC2 along

the west side of the site boundary such that it would be eventually discharged Ping Yuen River at the North side of the site.

A typical section is shown in Figure 3 for your reference. **(Appendix II).**



Aerial Photo 1



Aerial Photo 2

Proposed Temporary Open Storage of
Construction Material and Machinery with
Ancillary Facilities for a Period of 3 Years and
Associated Filling of Land in “Agriculture” Zone,
Various Lots in D.D. 82, Ta Kwu Ling, New
Territories

Drainage Appraisal

Dec 2024

Table of Content

1. Introduction	1
1.1 Background	1
1.2 The Site	1
2. Development Proposal.....	2
2.1 The Proposed Development	2
3. Assessment Criteria	2
4. Proposed Drainage System	5
5. Conclusion	5

List of Table

Table 1 - Key Development Parameters	2
Table 2– Design Return Periods under SDM	2

List of Figure

Figure 1 – Site Location Plan
Figure 2 - Existing Drainage Plan
Figure 3 – Proposed Drainage System
Figure 4 – Catchment Plan

List of Appendix

Appendix A – Design Calculation
Appendix B - Development Layout Plan
Appendix C – Reference Drawings for UChannel, Catchpit and Sandtrap
Appendix D - Photos of Surroundings
Appendix E – Checking of Existing Downstream to Proposed Connection

1. Introduction

1.1 Background

- 1.1.1 The applicant seeks planning permission from the Town Planning Board (the Board) to use Lots 645 (Part), 647, 650 S.A, 650 S.B (Part), 651 (Part), 653 (Part) and 654 (Part) in D.D. 82, Ta Kwu Ling, New Territories (the Site) for 'Proposed Temporary Open Storage of construction Material and Machinery with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land' (Proposed Development).
- 1.1.2 This Drainage Proposal is to support the planning application for the proposed use.

1.2 The Site

- 1.2.1 The Application Site at Ta Kwu Ling has an area of about 5,913 m². It situates beside local village road to the west and existing stream to the east. The site is currently an unused grassland. The site location plan is shown in **Figure 1**.
- 1.2.2 The existing ground level of the site is various from of approx. +7.2 mPD to +8.9 mPD. It is intended to fill the proposed site level to +8.9 mPD. The surrounding ground levels are generally higher at the west and lower at the east. An existing natural stream is running from southeast to northeast of the site. Existing Drainage Plan is shown in **Figure 2** for reference.
- 1.2.3 Proposed Development Layout plan is shown in **Appendix B** for reference.

2. Development Proposal

2.1 The Proposed Development

- 2.1.1 The total site area is approximately 5,913 m². The indicative development schedule is summarized in **Table 1** below for technical assessment purpose. Catchment Plan is shown in **Figure 4**.

Proposed Development	
Total Site Area (m ²)	5,913
Assume all proposed site area as paved area after development for assessment purpose (m ²)	5,913

Table 1 - Key Development Parameters

3. Assessment Criteria

- 3.1.1 The Recommended Design Return Period based on Flood Level from SDM (Table 10) is adopted for this DIA. The recommendation is summarized in **Table 2** below.

Description	Design Return Periods
Intensively Used Agricultural Land	2 – 5 Years
Village Drainage Including Internal Drainage System under a polder Scheme	10 Years
Main Rural Catchment Drainage Channels	50 Years
Urban Drainage Trunk System	200 Years
Urban Drainage Branch System	50 Years

Table 2– Design Return Periods under SDM

- 3.1.2 The proposed village drainage system intended to collect runoff from the internal site and discharge to existing nearby public drainage system. **1 in 50 years** return period is adopted for the drainage design.

3.1.3 Stormwater drainage design will be carried out in accordance with the criteria set out in the Stormwater Drainage Manual published by DSD. The proposed design criteria to be adopted for design of this stormwater drainage system and factors which have been considered are summarised below.

1. Intensity-Duration-Frequency Relationship – The Recommended Intensity-Duration-Frequency relationship is used to estimate the intensity of rainfall. It can be expressed by the following algebraic equation.

$$i = \frac{a}{(t_d + b)^c}$$

The site is located within the North District Rainfall Zone. Therefore, for 1 in 50 years return period, the following values are adopted.

a	=	474.6
b	=	2.9
c	=	0.371

(Corrigendum No. 1/2024)

2. The peak runoff is calculated by the Rational Method
 i.e. $Q_p = 0.278CiA$

where	Q_p	=	peak runoff in m ³ /s
	C	=	runoff coefficient (dimensionless)
	i	=	rainfall intensity in mm/hr
	A	=	catchment area in km ²

3. The run-off coefficient (C) of surface runoff are taken as follows:

- Paved Area: C = 0.95
- Unpaved Area: C = 0.35

4. Manning's Equation is used for calculation of velocity of flow inside the channels:

$$\text{Manning's Equation: } v = \frac{R^{2/3}}{n} S_f^{1/2}$$

Where,

V = velocity of the pipe flow (m/s)

S_f = hydraulic gradient

n = manning's coefficient

R = hydraulic radius (m)

5. Colebrook-White Equation is used for calculation of velocity of flow inside the pipes:

$$\text{Colebrook-White Equation: } \frac{1}{\sqrt{f}} = -\log \left(\frac{k_s}{3.7R} + \frac{2.5}{R \sqrt{f}} \right)$$

where,

V	=	velocity of the pipe flow (m/s)
S _f	=	hydraulic gradient
k _f	=	roughness value (m)
v	=	kinematics viscosity of fluid
D	=	pipe diameter (m)
R	=	hydraulic radius (m)

4. Proposed Drainage System

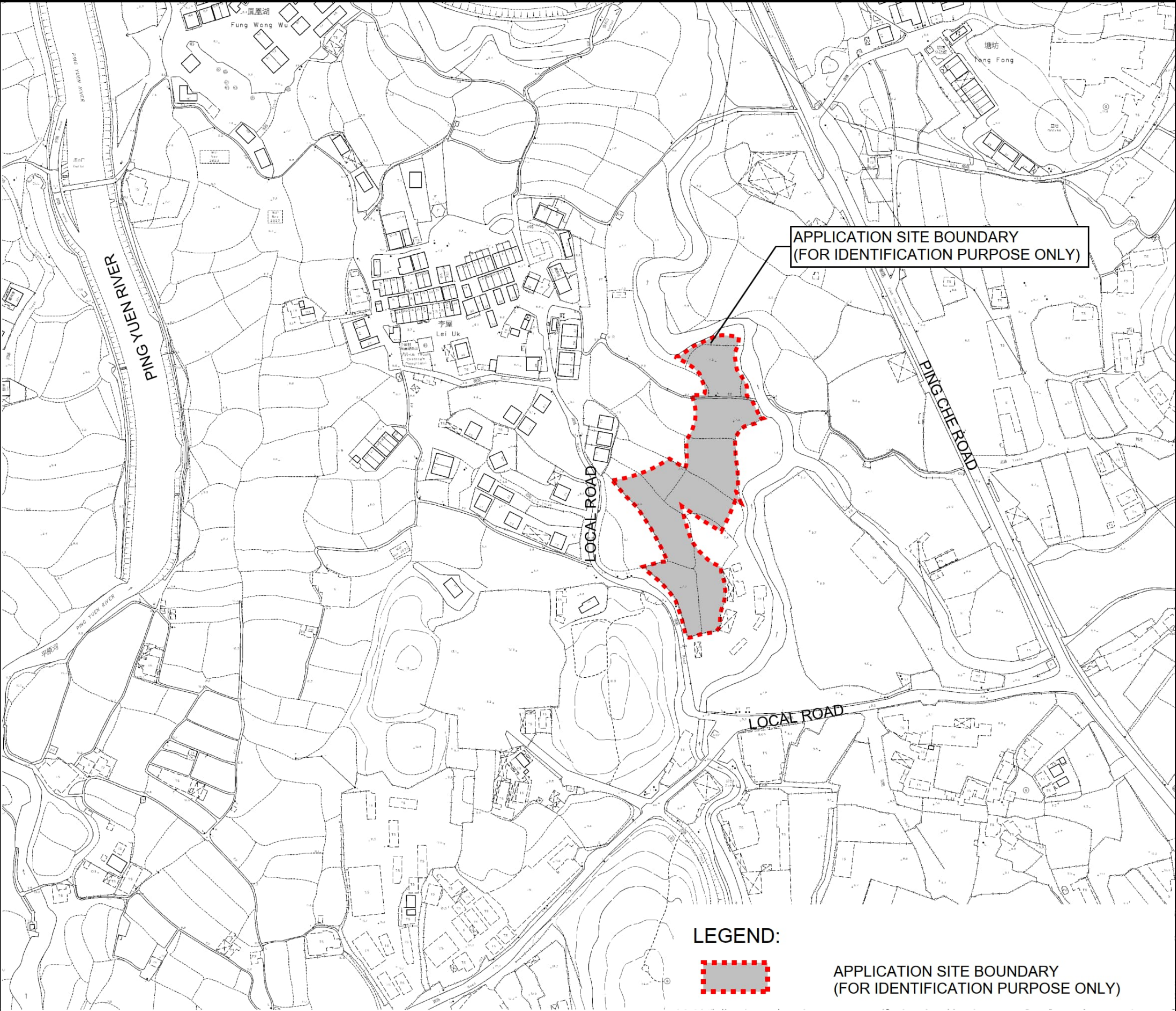
- 4.1.1 Drainage system is proposed to collect the runoff from the application site and external catchment at the west. It is proposed to discharge to existing stream at the east. The alignment, size and gradient of the proposed drains are shown in **Figure 3**. The catchment plan is shown in **Figure 4**.
- 4.1.2 The design calculations of proposed drains are shown in **Appendix A**.
- 4.1.3 The reference standard drawings of existing drains are shown in **Appendix C**.
- 4.1.4 The checking of existing downstream to proposed connection is shown in **Appendix E**.

5. Conclusion

- 5.1.1 A drainage appraisal has been conducted for the Proposed Development. The surface runoff from the Application Site will be collected by the proposed drains and discharged to the existing stream at the east.
- 5.1.2 With the proposed drainage system, it is anticipated that there will be no significant drainage impact to the area after the implementation of the development.

- End of Text -

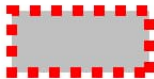
FIGURES



APPLICATION SITE BOUNDARY
(FOR IDENTIFICATION PURPOSE ONLY)

PROJECT:
Proposed Temporary Open
Storage of Construction
Material and Machinery with
Ancillary Facilities for a
Period of 3 Years and
Associated Filling of Land in “
Agriculture” Zone, Various
Lots in D.D. 82, Ta Kwu Ling,
New Territories

LEGEND:

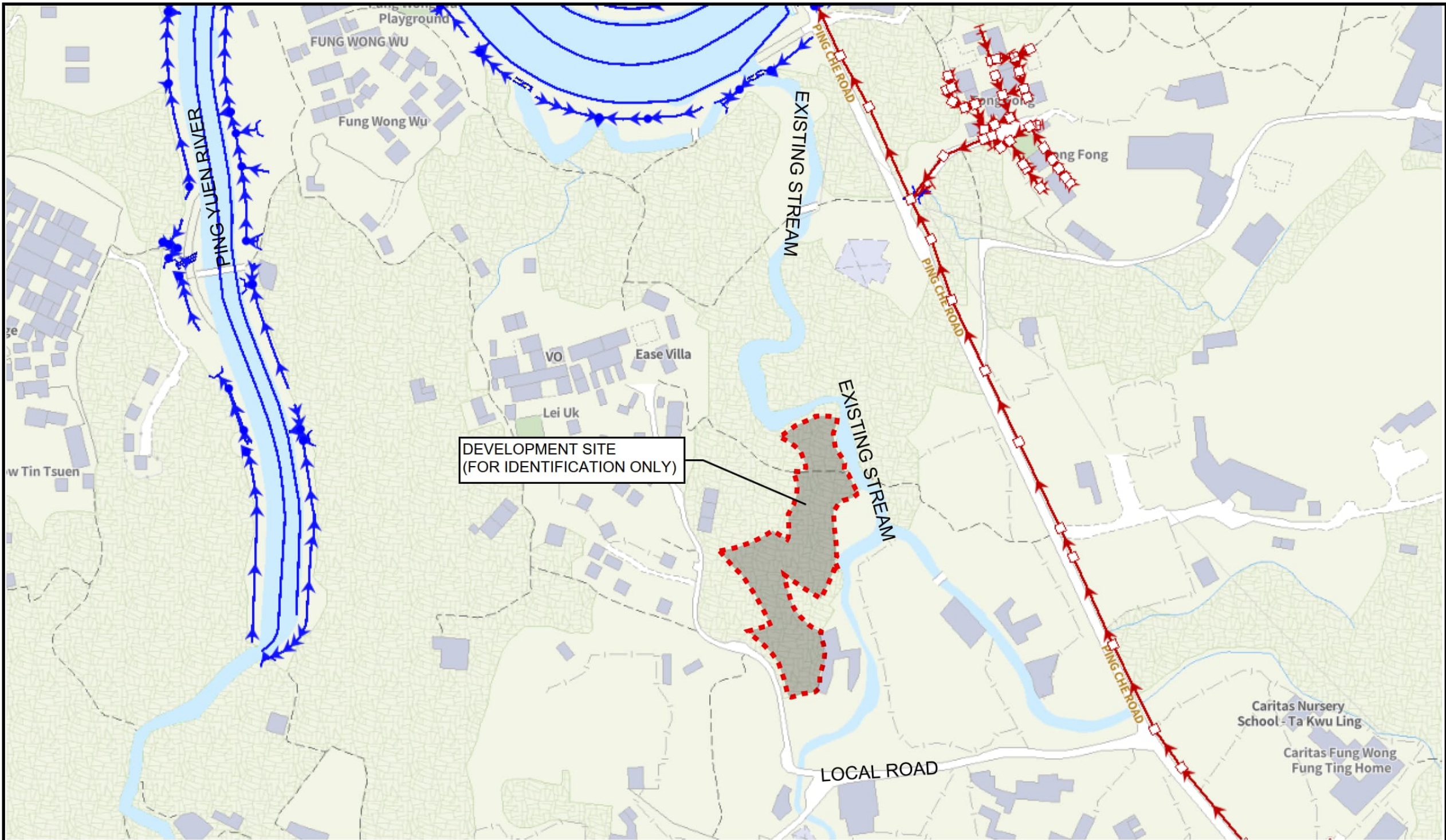


APPLICATION SITE BOUNDARY
(FOR IDENTIFICATION PURPOSE ONLY)

REV	DESCRIPTION	DATE
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DRAWING TITLE
SITE LOCATION PLAN

DRAWING NUMBER
FIGURE 1



PROJECT:
 Proposed Temporary Open Storage of Construction Material and Machinery with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land in "Agriculture" Zone, Various Lots in D.D. 82, Ta Kwu Ling, New Territories

LEGEND:

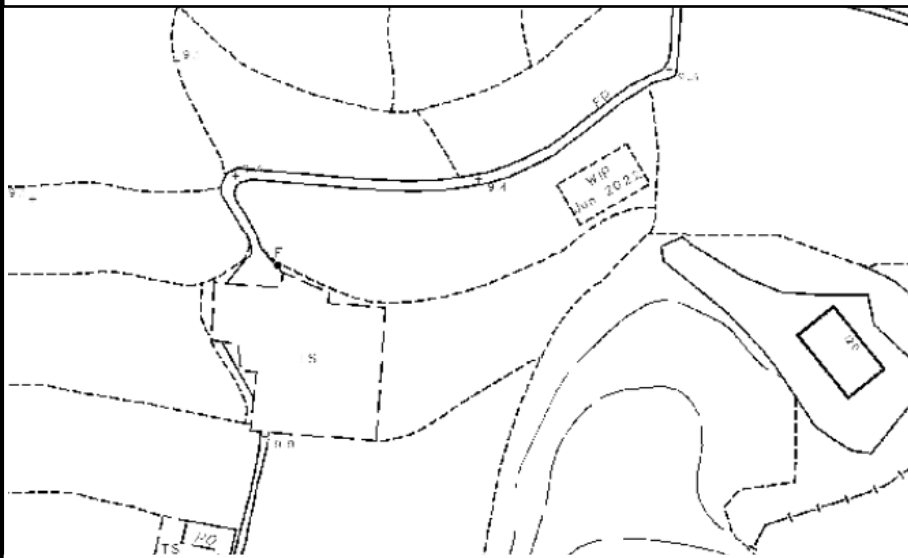
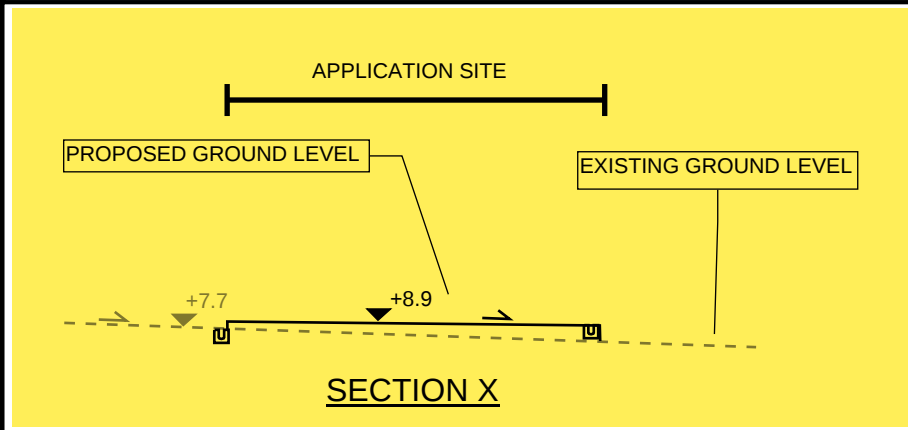
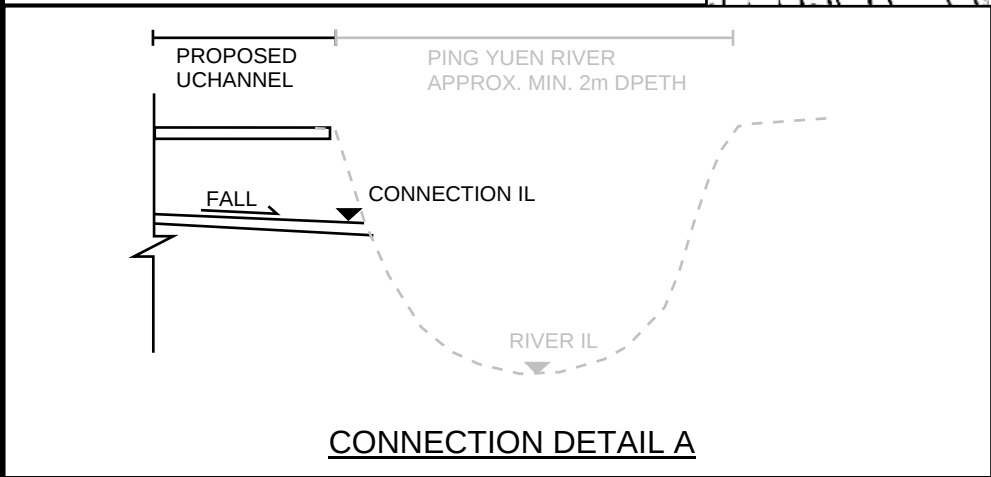
	Combined Manhole		Tapping Point (Sewer)		Tapping Point (Storm)
	Overflow (Combined)		Sewer Terminal Manhole		Storm Water Terminal Manhole
	Pipe (Combined)		Catchpit		Tunnel Protection Zone (100m / 200m)
	Interface Valve Chamber		Inlet		Tunnel Protection Zone (General Range)
	Sewer Manhole		Storm Water Manhole		Tunnel / Box Culvert (Sewer)
	Oil / Petrol Interceptor		Outlet		Tunnel / Box Culvert (Storm)
	Overflow (Sewer)		Pipe (Storm)		
	Pipe (Sewer)		Sand Trap		

REV	DESCRIPTION	DATE
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DRAWING TITLE
EXISTING DRAINAGE PLAN

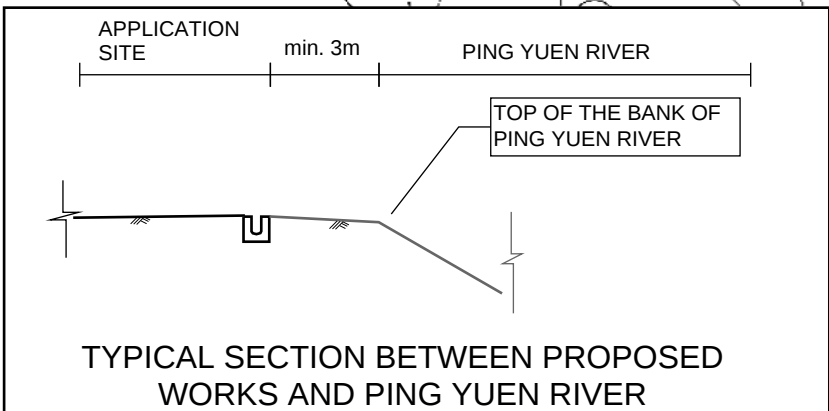
DRAWING NUMBER
FIGURE 2

UCHANNEL TYPE
UCHANNEL 1 (UC1) - 450mm, 1 IN 100
UCHANNEL 2 (UC2) - 450mm, 1 IN 100
UCHANNEL 3 (UC3) - 450mm, 1 IN 200
UCHANNEL 4 (UC4) - 450mm, 1 IN 200
UCHANNEL 5 (UC5) - 300mm, 1 IN 200
UCHANNEL 6 (UC6) - 450mm, 1 IN 100



LEGEND:

- APPLICATION SITE BOUNDARY (FOR IDENTIFICATION PURPOSE ONLY)
- PROPOSED SANDTRAP
- PROPOSED CATCHPIT WO/TRAP
- PROPOSED UCHANNEL



NOTES:

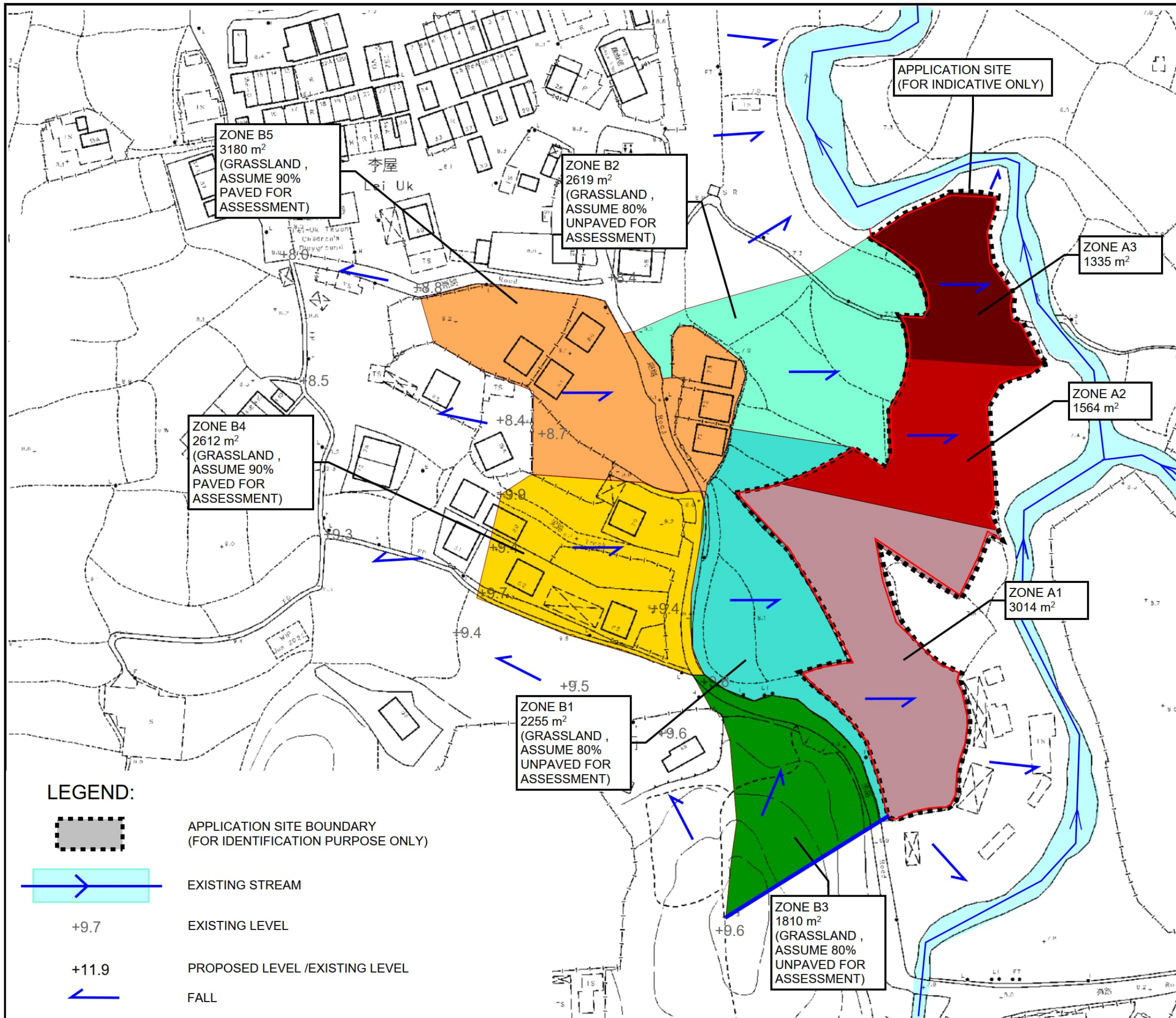
1. GROUND LEVELS ARE INDUCATIVE ONLY AND SHOULD BE VERIFIED ON SITE.
2. THE LOCATION OF CATCHPITS ARE APPROXIMATE ONLY.
3. INVERT LEVEL OF CONNECTION POINT SHOULD BE VERIFIED ON SITE BEFORE CONSTRUCTION.

PROJECT:
Proposed Temporary Open Storage of Construction Material and Machinery with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land in "Agriculture" Zone, Various Lots in D.D. 82, Ta Kwu Ling, New Territories

REV	DESCRIPTION	DATE
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DRAWING TITLE
PROPOSED DRAINAGE SYSTEM

DRAWING NUMBER
FIGURE 3B



PROJECT:
Proposed Temporary Open
Storage of Construction
Material and Machinery with
Ancillary Facilities for a
Period of 3 Years and
Associated Filling of Land in “
Agriculture” Zone, Various
Lots in D.D. 82, Ta Kwu Ling,
New Territories

REV	DESCRIPTION	DATE
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DRAWING TITLE
CATCHMENT PLAN

DRAWING NUMBER
FIGURE 4A

APPENDIX

Appendix A - Design Calculation

U Channel 1 (Zone B1 + B3 + B4)

Runoff Estimation				
Design Return Period		1 in	50	years
Paved Area	2255 x 0.2 + 1810 x 0.2 + 2612 x 0.9 =		3164	(m2)
Unpaved Area	2255 x 0.8 + 1810 x 0.8 + 2612 x 0.1 =		3513	(m2)
Total Equivalent Area	3164 x 0.95 + 3513 x 0.35 =		4235	(m2)
Rainfall Intensity, I *			220	mm/hr
Design Discharge Rate, Q	0.278 x 4235 x 220 / 1000000 =		0.260	m3/s

$$* i = \frac{a}{(t_d + b)^c}$$

U Channel				
Channel Size		1 in	450	(mm)
Gradient			100	
Velocity			2.07	m/s
Capacity			0.375	m3/s

Utilization	0.26 / 0.375	=	69.29	%
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OK (less than 90%, for 10% siltation allowance)

U Channel 2 (Zone [B1 + B3 + B4] + B2 + B5)

Runoff Estimation				
Design Return Period		1 in	10	years
Paved Area	3164 + 2619 x 0.2 + 3180 x 0.9 =		3688	(m2)
Unpaved Area	3513 + 2619 x 0.8 + 3180 x 0.1 =		5608	(m2)
Total Equivalent Area	3688 x 0.95 + 5608 x 0.35 =		5466	(m2)
Rainfall Intensity, I *			220	mm/hr
Design Discharge Rate, Q	0.278 x 5608 x 220 / 1000000 =		0.335	m3/s

$$* i = \frac{a}{(t_d + b)^c}$$

U Channel				
Channel Size		1 in	450	(mm)
Gradient			100	
Velocity			2.07	m/s
Capacity			0.375	m3/s

Utilization	0.335 / 0.375	=	89.43	%
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OK (less than 90%, for 10% siltation allowance)

U Channel 3 (Zone A1)

Runoff Estimation				
Design Return Period		1 in	10	years
Paved Area	3013 =		3013	(m2)
Unpaved Area			0	(m2)
Total Equivalent Area	3013 x 0.95 + 0 x 0.35 =		2862	(m2)
Rainfall Intensity, I *			220	mm/hr
Design Discharge Rate, Q	0.278 x 2862 x 220 / 1000000 =		0.175	m3/s

$$* i = \frac{a}{(t_d + b)^c}$$

U Channel				
Channel Size		1 in	450	(mm)
Gradient			200	
Velocity			1.47	m/s
Capacity			0.265	m3/s

Utilization	0.175 / 0.265	=	66.22	%
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OK (less than 90%, for 10% siltation allowance)

U Channel 4 (Zone A2)

Runoff Estimation				
Design Return Period		1 in	10	years
Paved Area	1564 =		1564	(m2)
Unpaved Area			0	(m2)
Total Equivalent Area	1564 x 0.95 + 0 x 0.35 =		1486	(m2)
Rainfall Intensity, I *			220	mm/hr
Design Discharge Rate, Q	0.278 x 1486 x 220 / 1000000 =		0.091	m3/s

$$* i = \frac{a}{(t_d + b)^c}$$

U Channel				
Channel Size		1 in	450	(mm)
Gradient			200	
Velocity			1.47	m/s
Capacity			0.265	m3/s

Utilization	0.091 / 0.265	=	34.38	%
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OK (less than 90%, for 10% siltation allowance)

U Channel 5 (Zone A3)

Runoff Estimation

Design Return Period		1 in	10	years
Paved Area	1335 =		1335	(m2)
Unpaved Area			0	(m2)
Total Equivalent Area	1335 x 0.95 + 0 x 0.35 =		1268	(m2)
Rainfall Intensity, I *			220	mm/hr
Design Discharge Rate, Q	0.278 x 1268 x 220 / 1000000 =		0.078	m3/s

$$* i = \frac{a}{(t_d + b)^c}$$

U Channel

Channel Size		1 in	300	(mm)
Gradient			200	
Velocity			1.12	m/s
Capacity			0.090	m3/s

Utilization	0.078 / 0.09	=	86.51	%
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OK (less than 90%, for 10% siltation allowance)

U Channel 6 (Zone A2 + A3)

Runoff Estimation

Design Return Period		1 in	10	years
Paved Area	1564 + 1335 =		2899	(m2)
Unpaved Area			0	(m2)
Total Equivalent Area	2899 x 0.95 + 0 x 0.35 =		2754	(m2)
Rainfall Intensity, I *			220	mm/hr
Design Discharge Rate, Q	0.278 x 2754 x 220 / 1000000 =		0.169	m3/s

$$* i = \frac{a}{(t_d + b)^c}$$

U Channel

Channel Size		1 in	450	(mm)
Gradient			100	
Velocity			2.07	m/s
Capacity			0.375	m3/s

Utilization	0.169 / 0.375	=	45.06	%
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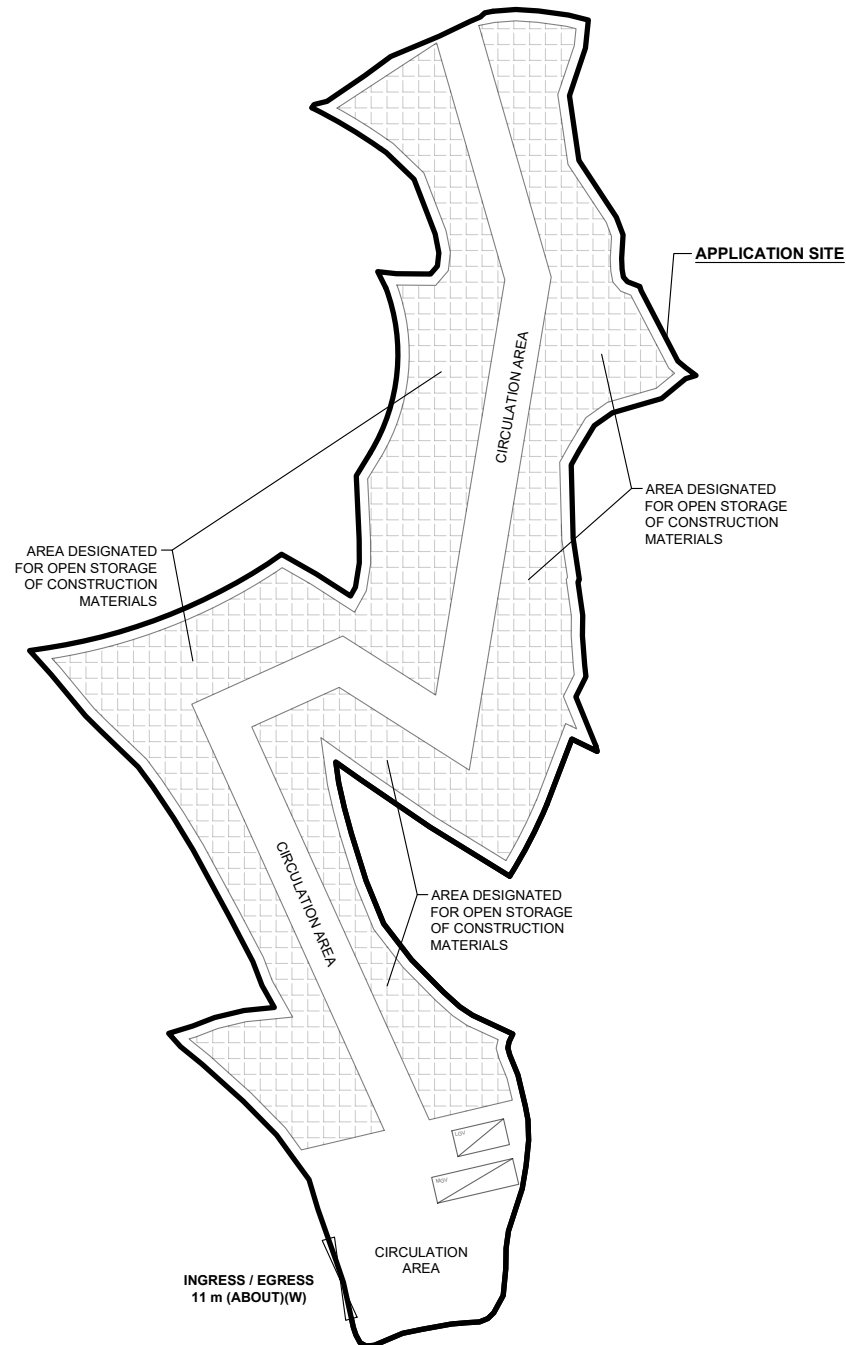
OK (less than 90%, for 10% siltation allowance)

Appendix B - Proposed Development Layout Plan

DEVELOPMENT PARAMETERS

APPLICATION SITE AREA : 5,913 m² (ABOUT)
COVERED AREA : NOT APPLICABLE
UNCOVERED AREA : 5,913 m² (ABOUT)

* NO STRUCTURE IS PROPOSED AT THE APPLICATION SITE



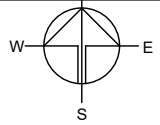
PARKING AND LOADING/UNLOADING PROVISIONS

NO. OF L/UL SPACE FOR LIGHT GOODS VEHICLE : 1
DIMENSION OF L/UL SPACE : 7 m (L) X 3.5 m (W)

NO. OF L/UL SPACE FOR MEDIUM GOODS VEHICLE : 1
DIMENSION OF L/UL SPACE : 11 m (L) X 3.5 m (W)

LEGEND

- APPLICATION SITE
- STRUCTURE
- L/UL SPACE (LIGHT GOODS VEHICLE)
- L/UL SPACE (MEDIUM GOODS VEHICLE)
- INGRESS / EGRESS



PLANNING CONSULTANT



PROJECT

PROPOSED TEMPORARY OPEN STORAGE OF CONSTRUCTION MATERIAL AND MACHINERY WITH ANCILLARY FACILITIES FOR A PERIOD OF 3 YEARS AND ASSOCIATED FILLING OF LAND

SITE LOCATION

VARIOUS LOTS IN D.D. 82, TA KWU LING, NEW TERRITORIES

SCALE

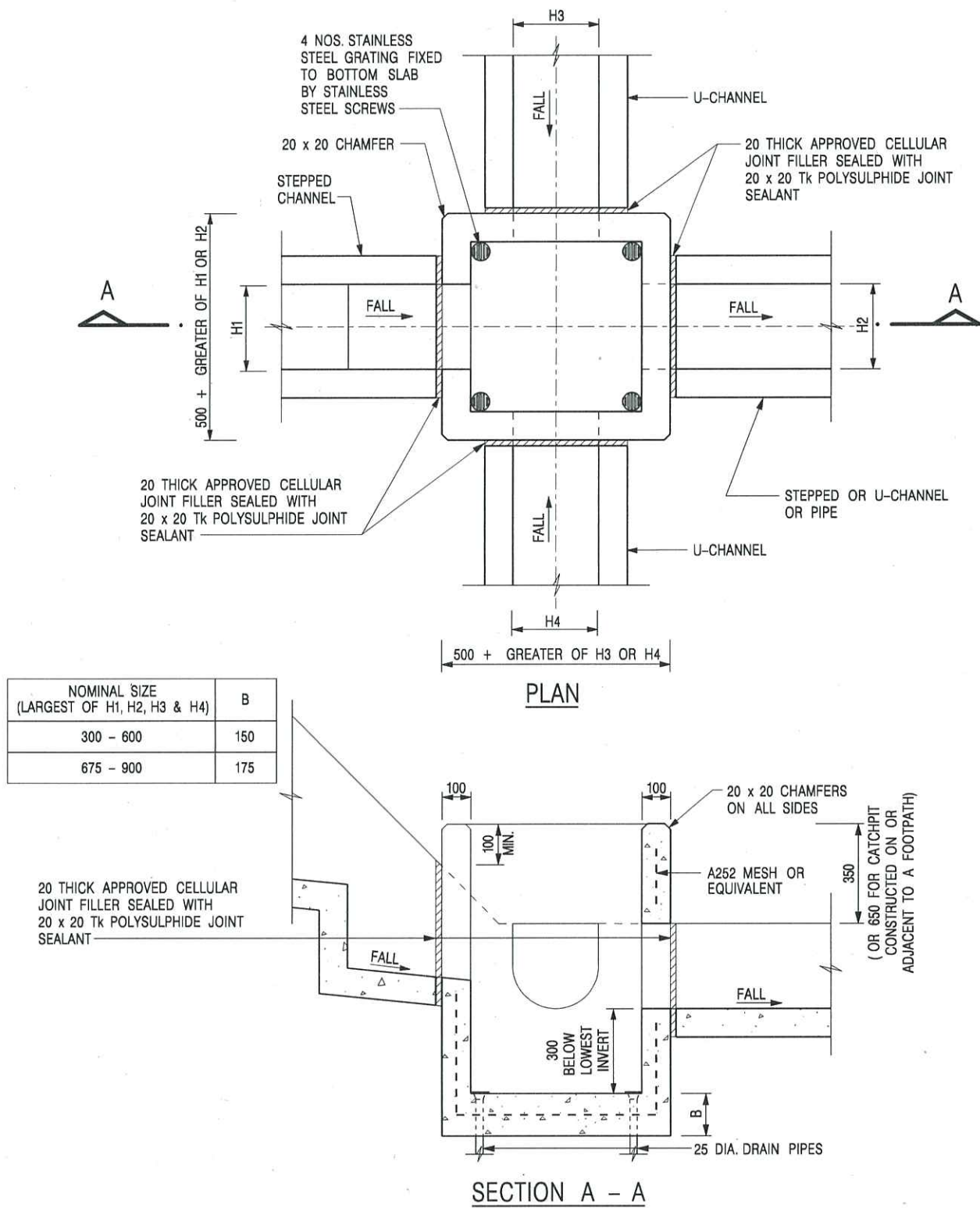
1 : 1000 @ A4

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MN	5.1.2024
CHECKED BY	DATE
APPROVED BY	DATE

DWG. TITLE
LAYOUT PLAN

DWG NO.	VER.
PLAN 5	001

Appendix C - Reference Drawings



NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. REFER TO SHEET 2 FOR OTHER NOTES.

CATCHPIT WITH TRAP
(SHEET 1 OF 2)

-	FORMER DRG. NO. C2406J.	Original Signed	03.2015
REF.	REVISION	SIGNATURE	DATE



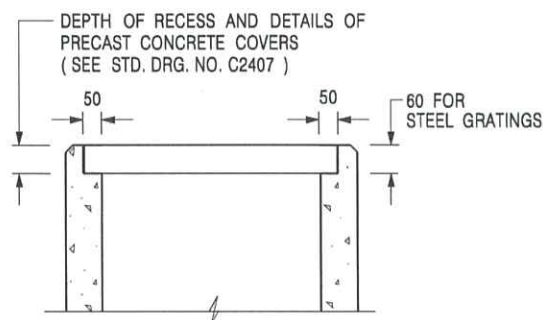
CIVIL ENGINEERING AND
DEVELOPMENT DEPARTMENT

SCALE 1 : 20

DATE JAN 1991

DRAWING NO.

C2406 /1



**ALTERNATIVE TOP SECTION
FOR PRECAST CONCRETE COVERS / GRATINGS**

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. ALL CONCRETE SHALL BE GRADE 20 /20.
3. CONCRETE SURFACE FINISH SHALL BE CLASS U2 OR F2 AS APPROPRIATE.
4. FOR DETAILS OF JOINT, REFER TO STD. DRG. NO. C2413.
5. CONCRETE TO BE COLOURED AS SPECIFIED.
6. UNLESS REQUESTED BY THE MAINTENANCE PARTY AND AS DIRECTED BY THE ENGINEER, CATCHPIT WITH TRAP IS NORMALLY NOT PREFERRED DUE TO PONDING PROBLEM.
7. UPON THE REQUEST FROM MAINTENANCE PARTY, DRAIN PIPES AT CATCHPIT BASE CAN BE USED BUT THIS IS FOR CATCHPITS LOCATED AT SLOPE TOE ONLY AND AS DIRECTED BY THE ENGINEER.
8. FOR CATCHPITS CONSTRUCTED ON OR ADJACENT TO A FOOTPATH, STEEL GRATINGS (SEE DETAIL 'A' ON STD. DRG. NO. C2405 /2) OR CONCRETE COVERS (SEE STD. DRG. NO. C2407) SHALL BE PROVIDED AS DIRECTED BY THE ENGINEER.
9. IF INSTRUCTED BY THE ENGINEER, HANDRAILING (SEE DETAIL 'J' ON STD. DRG. NO. C2405 /5; EXCEPT ON THE UPSLOPE SIDE) IN LIEU OF STEEL GRATINGS OR CONCRETE COVERS CAN BE ACCEPTED AS AN ALTERNATIVE SAFETY MEASURE FOR CATCHPITS NOT ON A FOOTPATH NOR ADJACENT TO IT. TOP OF THE HANDRAILING SHALL BE 1 000 mm MIN. MEASURED FROM THE ADJACENT GROUND LEVEL.
10. MINIMUM INTERNAL CATCHPIT WIDTH SHALL BE 1 000 mm FOR CATCHPITS WITH A HEIGHT EXCEEDING 1 000 mm MEASURED FROM THE INVERT LEVEL TO THE ADJACENT GROUND LEVEL. AND, STEP IRONS (SEE DSD STD. DRG. NO. DS1043) AT 300 c/c STAGGERED SHALL BE PROVIDED. THICKNESS OF CATCHPIT WALL FOR INSTALLATION OF STEP IRONS SHALL BE INCREASED TO 150 mm.
11. FOR RETROFITTING AN EXISTING CATCHPIT WITH STEEL GRATING, SEE DETAIL 'G' ON STD. DRG. NO. C2405 /4.
12. SUBJECT TO THE APPROVAL OF THE ENGINEER, OTHER MATERIALS CAN ALSO BE USED AS COVERS / GRATINGS.

A	MINOR AMENDMENT.	Original Signed	04.2016
-	FORMER DRG. NO. C2406J.	Original Signed	03.2015
REF.	REVISION	SIGNATURE	DATE

**CATCHPIT WITH TRAP
(SHEET 2 OF 2)**



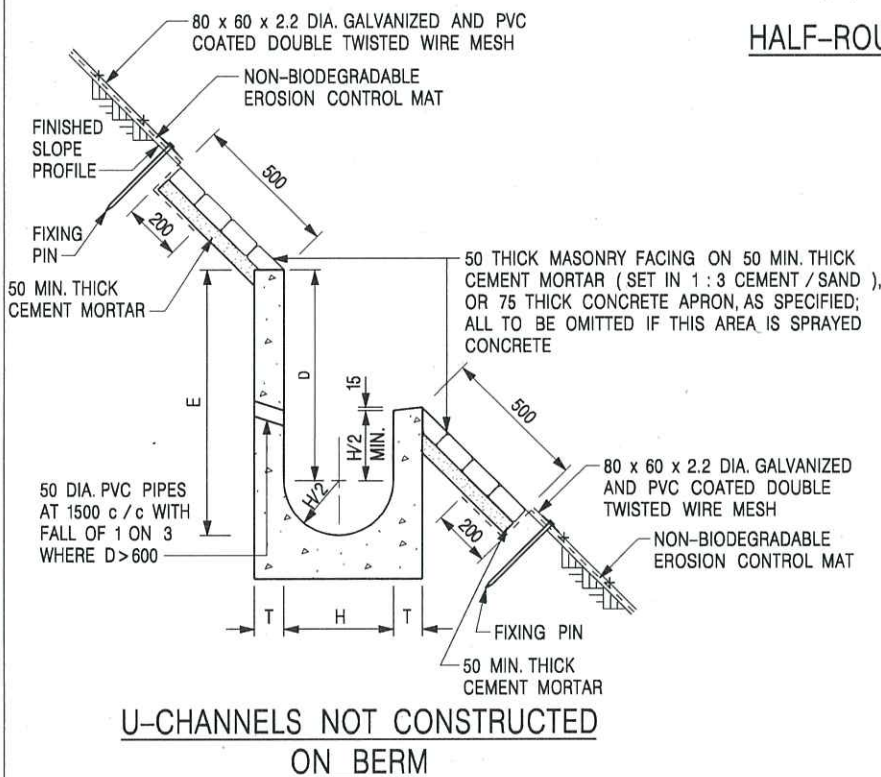
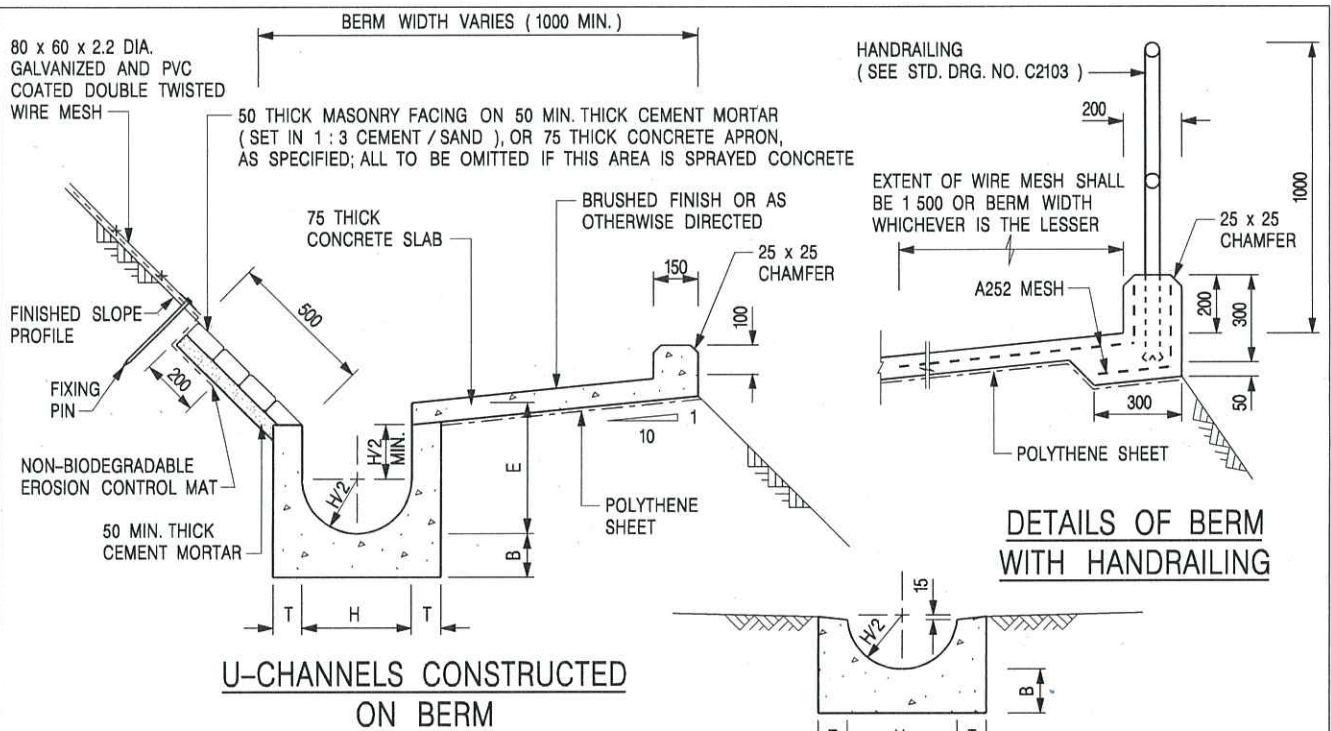
**CIVIL ENGINEERING AND
DEVELOPMENT DEPARTMENT**

SCALE 1 : 20

DRAWING NO.

DATE JAN 1991

C2406 /2A



NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. ALL CONCRETE TO BE GRADE 20 / 20.
3. CONCRETE SURFACE FINISH SHALL BE CLASS U2, F2 OR BRUSHED FINISH AS DIRECTED.
4. SPACING OF EXPANSION JOINT IN CHANNELS, BERM SLABS AND APRONS TO BE 10 METRES MAXIMUM, SEE STD. DRG. NO. C2413 FOR DETAILS.
5. JOINTS FOR CHANNELS, BERM SLABS, APRONS AND WALLS, ETC. TO BE ON THE SAME ALIGNMENT.
6. FOR DIMENSIONS T, H, & B, SEE TABLE BELOW.
7. BIODEGRADABLE EROSION CONTROL MAT IF REQUIRED, SEE STD. DRG. NO. C2511/E.
8. CONCRETE TO BE COLOURED AS SPECIFIED.
9. CONCRETE U-CHANNEL CAN BE CAST IN-SITU OR PRECAST CONCRETE SUBJECT TO THE ENGINEER'S AGREEMENT ON THE DETAILS.
10. DETAILS OF EROSION CONTROL MAT AND WESH MESH ON BERM. (SEE STD DRG. NO. C2511/E)

NOMINAL SIZE H	T	B	REINFORCEMENT
300	80	100	A252 MESH PLACED CENTRALLY AND T=100 WHEN E > 650
375 - 600	100	150	
675 - 900	125	175	A252 MESH PLACED CENTRALLY

I	MINOR AMENDMENT.	Original Signed	07.2018
H	THICKNESS OF MASONRY FACING AMENDED.	Original Signed	01.2005
G	MINOR AMENDMENT.	Original Signed	01.2004
F	GENERAL REVISION.	Original Signed	12.2002
E	DRAWING TITLE AMENDED.	Original Signed	11.2001
D	MINOR AMENDMENT.	Original Signed	08.2001
C	150 x 100 UPSTAND ADDED AT BERM.	Original Signed	6.99
B	MINOR AMENDMENTS.	Original Signed	3.94
REF.	REVISION	SIGNATURE	DATE

DETAILS OF HALF-ROUND AND U-CHANNELS (TYPE A - WITH MASONRY APRON)



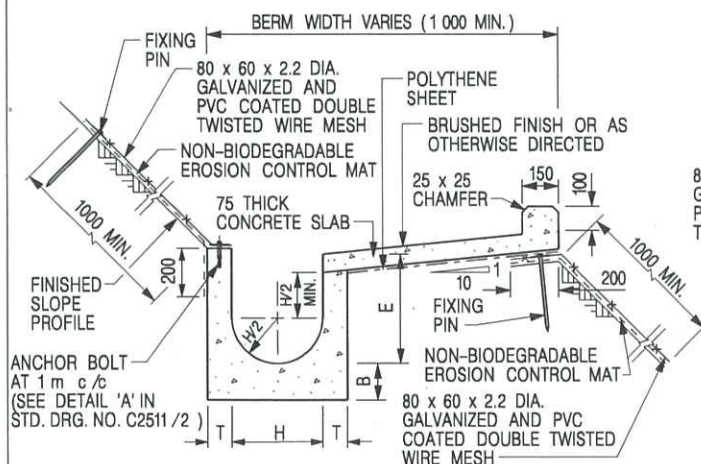
CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

SCALE 1 : 25

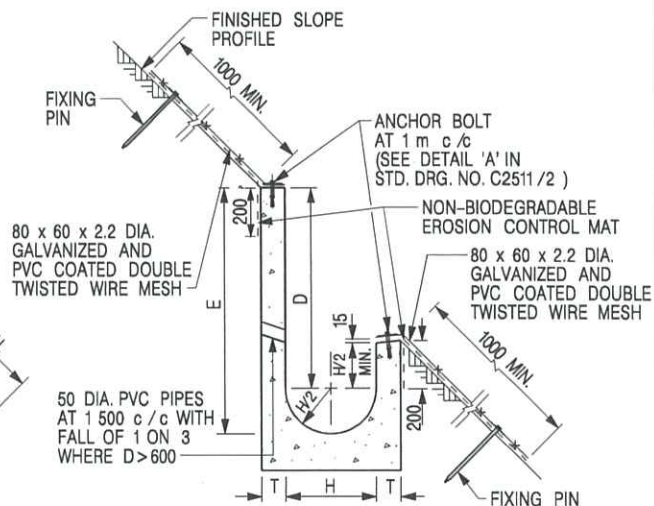
DRAWING NO.

DATE JAN 1991

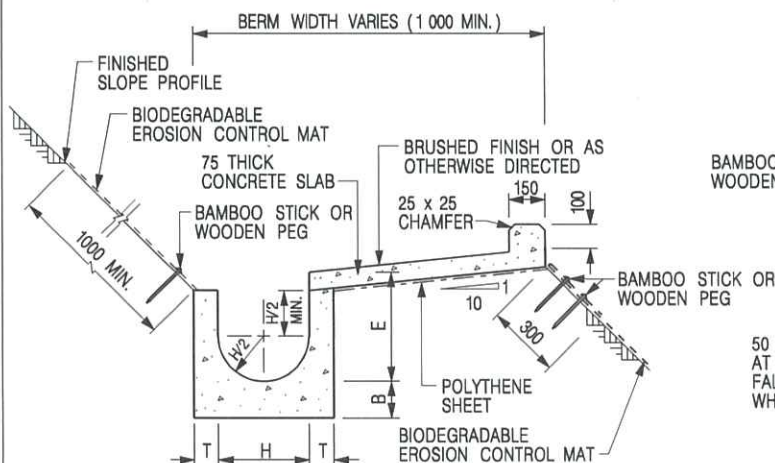
C2409I



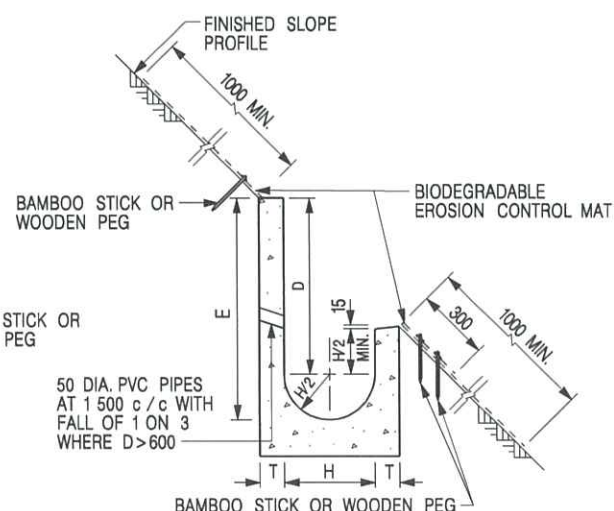
**U-CHANNELS CONSTRUCTED ON BERM
WITH NON-BIODEGRADABLE
EROSION CONTROL MAT**



**U-CHANNELS NOT CONSTRUCTED ON BERM
WITH NON-BIODEGRADABLE
EROSION CONTROL MAT**



**U-CHANNELS CONSTRUCTED ON BERM
WITH BIODEGRADABLE
EROSION CONTROL MAT**



**U-CHANNELS NOT CONSTRUCTED ON BERM
WITH BIODEGRADABLE
EROSION CONTROL MAT**

NOTES:

- ALL DIMENSIONS ARE IN MILLIMETRES.
- ALL CONCRETE TO BE GRADE 20 /20.
- CONCRETE SURFACE FINISH SHALL BE CLASS U2, F2 OR BRUSHED FINISH AS DIRECTED.
- SPACING OF EXPANSION JOINT IN CHANNELS, BERM SLABS AND APRONS TO BE 10 METRES MAXIMUM, SEE STD. DRG. NO. C2413 FOR DETAILS.
- JOINTS FOR CHANNELS, BERM SLABS, APRONS AND WALLS, ETC. TO BE ON THE SAME ALIGNMENT.
- FOR DIMENSIONS T, H, & B, SEE TABLE BELOW.
- FOR TYPICAL FIXING PIN DETAILS, SEE STD. DRG. NO. C2511/2.
- MINIMUM SIZE OF 25 x 50 x 300mm SHALL BE PROVIDED FOR WOODEN PEG.
- MINIMUM SIZE OF 10mm DIAMETER WITH 200mm LONG SHALL BE PROVIDED FOR BAMBOO STICK.
- THE FIXING DETAILS OF NON-BIODEGRADABLE AND BIODEGRADABLE EROSION CONTROL MATS ON EXISTING BERM SHALL REFER TO STD. DRG. NO. C2511/1.

NOMINAL SIZE H	T	B	REINFORCEMENT
300	80	100	A252 MESH PLACED CENTRALLY AND T=100 WHEN E>650
375 - 600	100	150	
675 - 900	125	175	A252 MESH PLACED CENTRALLY

REF.	REVISION	SIGNATURE	DATE
I	MINOR AMENDMENT.	Original Signed	07.2018
H	FIXING DETAILS OF BIODEGRADABLE EROSION CONTROL MAT ADDED.	Original Signed	12.2017
G	DIMENSION TABLE AMENDED.	Original Signed	01.2005
F	MINOR AMENDMENT.	Original Signed	01.2004
E	GENERAL REVISION.	Original Signed	12.2002
D	MINOR AMENDMENT.	Original Signed	08.2001
C	150 x 100 UPSTAND ADDED AT BERM.	Original Signed	6.99
B	MINOR AMENDMENT.	Original Signed	3.94
A	MINOR AMENDMENT.	Original Signed	10.92

**DETAILS OF HALF-ROUND AND
U-CHANNELS (TYPE B - WITH
EROSION CONTROL MAT APRON)**



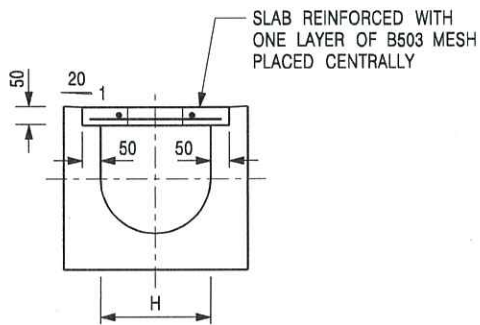
**CIVIL ENGINEERING AND
DEVELOPMENT DEPARTMENT**

SCALE DIAGRAMMATIC

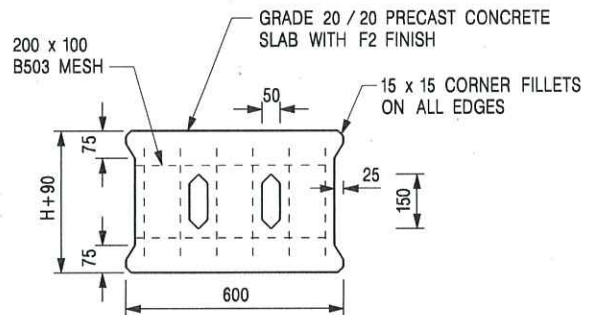
DRAWING NO.

DATE JAN 1991

C24101



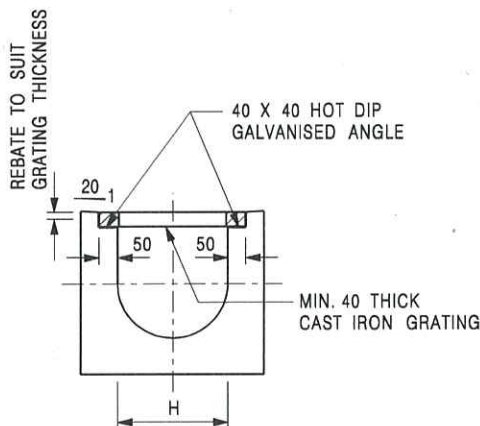
TYPICAL SECTION



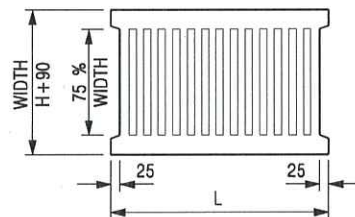
PLAN OF SLAB

U-CHANNELS WITH PRECAST CONCRETE SLABS

(UP TO H OF 525)



TYPICAL SECTION



L = 600mm FOR H ≤ 375mm
L = 400mm FOR H > 375mm

CAST IRON GRATING

(DIMENSIONS ARE FOR GUIDANCE ONLY, CONTRACTOR MAY SUBMIT EQUIVALENT TYPE)

U-CHANNEL WITH CAST IRON GRATING

(UP TO H OF 525)

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. H = NOMINAL CHANNEL SIZE.
3. ALL CAST IRON FOR GRATINGS SHALL BE GRADE EN-GJL-150 COMPLYING WITH BS EN 1561.
4. FOR COVERED CHANNELS TO BE HANDED OVER TO HIGHWAYS DEPARTMENT FOR MAINTENANCE, THE GRATING DETAILS SHALL FOLLOW THOSE AS SHOWN ON HyD STD. DRG. NO. H3156.

E	NOTES 3 & 4 AMENDED.	Original Signed	12.2014
D	NOTE 4 ADDED.	Original Signed	06.2008
C	MINOR AMENDMENT. NOTE 3 ADDED.	Original Signed	12.2005
B	NAME OF DEPARTMENT AMENDED.	Original Signed	01.2005
A	CAST IRON GRATING AMENDED.	Original Signed	12.2002
REF.	REVISION	SIGNATURE	DATE

COVER SLAB AND CAST IRON
GRATING FOR CHANNELS



**CIVIL ENGINEERING AND
DEVELOPMENT DEPARTMENT**

SCALE 1 : 20

DATE JAN 1991

DRAWING NO.

C2412E

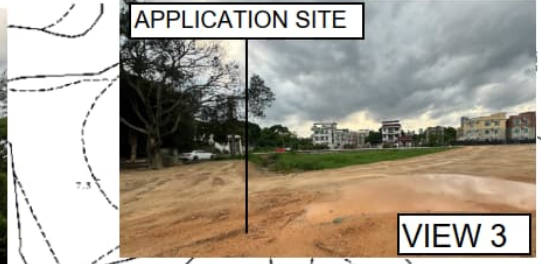


VIEW 1



APPLICATION SITE

VIEW 2

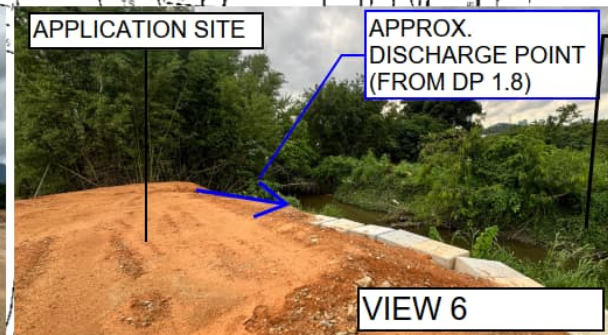


APPLICATION SITE

VIEW 3



VIEW 4



APPLICATION SITE

APPROX. DISCHARGE POINT (FROM DP 1.8)

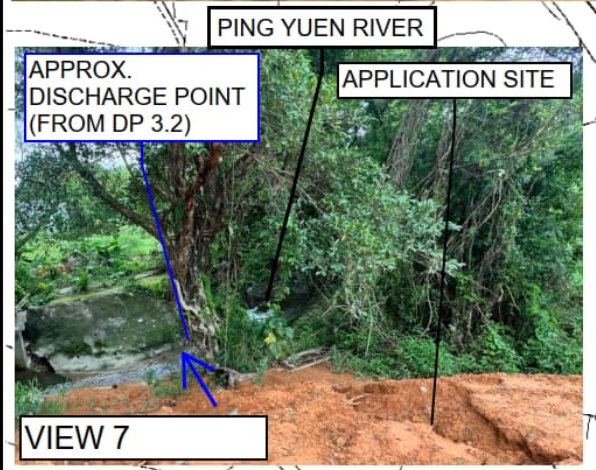
PING YUEN RIVER

VIEW 6



VIEW 5

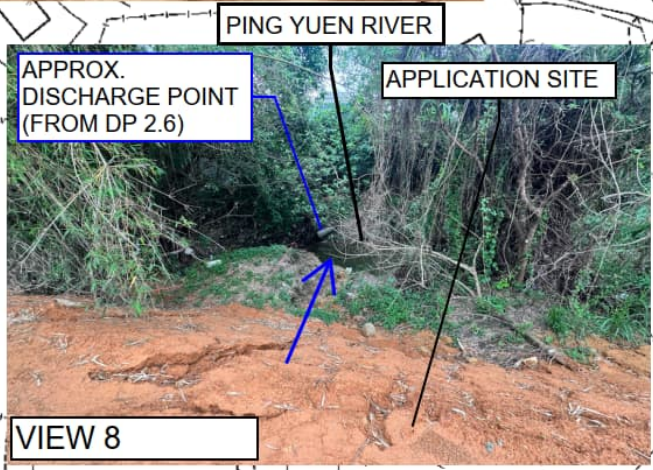
APPLICATION SITE



VIEW 7

PING YUEN RIVER

APPLICATION SITE



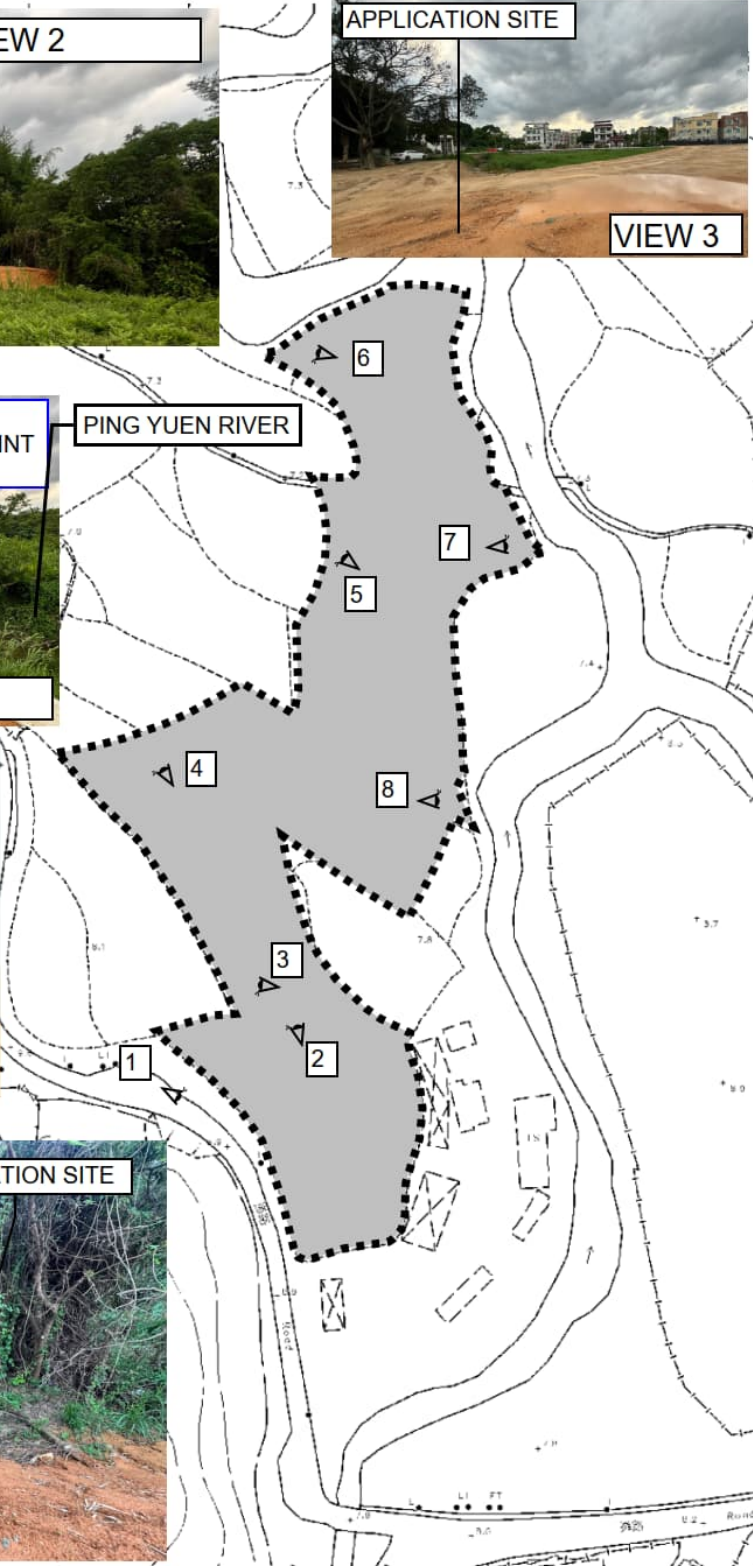
VIEW 8

PING YUEN RIVER

APPLICATION SITE

APPROX. DISCHARGE POINT (FROM DP 2.6)

APPROX. DISCHARGE POINT (FROM DP 3.2)



PROJECT:
Proposed Temporary Open Storage of Construction Material and Machinery with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land in "Agriculture" Zone, Various Lots in D.D. 82, Ta Kwu Ling, New Territories

Photos Record of Surroundings

Appendix D

APPENDIX E - Checking of Existing Downstream to Proposed Connection (Downstream of CP 1.8)

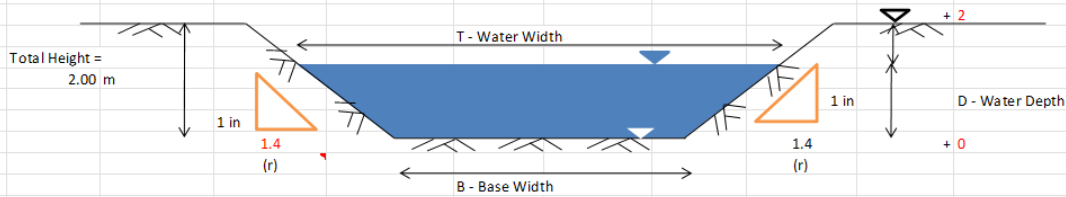
Total Runoff (A1 + A2 + A3)

Design Return Period		1 in	10	years
Paved Area	3013 + 2899 =		5912	(m ²)
Unpaved Area	0 + 0 =		0	(m ²)
Total Equivalent Area	5912 x 0.95 + 0 x 0.35 =		5616	(m ²)
Rainfall Intensity, I*			220	mm/hr
Design Discharge Rate, Q	0.278 x 5616 x 220 / 1000000 =		0.344	m ³ /s

$$* i = \frac{a}{(t_d + b)^c}$$

Manning's to estimate Capacity of Existing Drainage Downstream (Downstream of CP 1.8)

Checking of Capacity of Ping Yuen River



Scenario & Case	Assumed Water Depth (m)	Water Width (m)	Base Width (m)	Area (m ²)	Wetted Perimeter (m)	Hydraulic Radius (m)	Manning's Roughness n	Friction Slope S _f (1 in)	Velocity (m/s)	Capacity
A	D ₁	T	B	A ₁	P ₁	R ₁	n	S _f	V ₁	Q ₁
	1.70	12.26	7.5	16.80	13.35	1.26	0.035	200	2.3546	39.547
	Utilitization	=	0.344 / 39.547		0.87	%	OK	(Only 0.87% of Capacity of existing drainage)		
								(no significant impact to existing downstream)		