Your Ref.: A/TM/592 Our Ref.: P22015

Comments of Head of Geotechnical Engineering Office, CEDD dated 9.7.2024
Contact Person: Mr. T.K. Tse; Tel: 2762 5384

	Comments		Responses
2.	R-to-C item 2 and Plan 4a in the FI - The applicant's responses are noted. It is noted that some tents are proposed on the adjacent Government Land at the toe of Feature no. 6SW-D/F278 (maximum height about 10m). As such, the subject application meets the criteria for submission of a Geotechnical Planning Review Report.		The layout is updated. The tent camping ground area is away from the slope at a distance of at least 7m. Please refer to the revised plans (**Plans 3b and 4b**). A GPRR may not be required.

Comments of DEP dated 9.7.2024
Contact Person: Ms. Flora NG, Tel: 2835 2319

Comments		Responses
Regarding the "Justification" document, the applicant is advised to move Section 5.5 to Section 7.4 and revise the provided information accordingly.		"Justification" is updated.

Comments of District Lands Officer/Tuen Mun, Lands Department dated 11.7.2024
Contact Person: Mr. Henry Ng; Tel: 2451 3249

	Comments		Responses
2.	A site inspection conducted on 27.6.2024 revealed that all unauthorized structures such as tents and porches identified during the site inspection in April2024 remained intact and not covered by the subject planning application. Meanwhile, the height of Structure 1 for office purposes as marked on Plan 3a (P22015) did not reflect the actual site condition (i.e. a converted-container with advertisement board about 4.5m). Besides, some miscellaneous items were newly found on Government land without our permission, including a wooden gate and some advertising stands mounted on the railings, some stands with lights fixed to the ground along the staircase leading to the site, and a wheeled advertising board placed on Government land. The applicant should remove the said miscellaneous items on Government land.		The height of structures has been revised to 6m. Please refer to the revised layout plan (**Plan 3b**) for details. The tents and porches have been removed. The advertisement board has been removed. The miscellaneous items on Government Land have been removed. Please refer to the Plan Showing Viewpoints of Site Photographs (**Plan 11**) and the site photos (**Viewpoints 1-7**) for details.
3.	In view of no permission has been given for erection of for the said unauthorized structures which are not covered by the planning application, our previous comments are still valid.		The unauthorized structures which are not covered by the planning application have been removed.

Comments of Chief Engineer/Mainland North, Drainage Services Department
Contact Person: Ms. April CHEUNG; Tel: 2300 1542

	Comments		Responses
1.	The catchment plan and proposed drainage plan are missing. Please provide.		The catchment plan and proposed drainage plan are attached (**Plan 5a**).
2.	The site is located at low lying area and closed to coastal line while the ground level is +3mPD. Please take necessary precautionary measures to mitigate the risk of storm surge.		The site will not operate under Red Rainstorm Signal or Typhoon no. 3. All movable items will be stored indoor.
3.	Please note that previous comments (a), (d) & (e) are still valid.		Noted.
(a)	Section 7.4 - DSD noticed that the proposed drainage connection(s) to the surrounding/downstream area(s) will run through other private lot(s). The developer / AP shall demonstrate that the proposed drainage construction / improvement / modification works and the operation of the drainage can be practicably implemented on site. Please note that the u-channel system and the existing stream connected by the u-channel system are not DSD's facilities. Consent should be sought from relevant departments/ parties.		Noted.
(c)	Drainage Calculation - Please refer to SDM Corrigendum No. 1/2024 for rainfall intensity.		Drainage Calculation has been updated regarding to SDM Corrigendum No. 1/2024 for rainfall intensity. The data in Table 3a has been adopted (T = 50, a = 505.5, b = 3.29 and c = 0.355).
(e)	The AP is reminded that the sewerage impact should meet the full satisfaction of Environmental Protection Department (EPD), the planning authority of sewerage infrastructure.		Noted.

GoldRich PLANNERS & SURVEYORS LTD.
金 潤 規 劃 測 量 師 行 有 限 公 司
Room E, 8/F., Keader Centre, 129 On Lok Rd, Yuen Long, N.T. H.K. 香港新界元朗安樂路129號基達中心8樓 E室
Tel. 電話: (852) 2714 2821, 2713 2138 Fax. 傳真: (852) 2762 1783 E-mail 電郵: goldrichplanners@gmail.com

Executive Summary

1. The application site is on Lots 788 (Part), 790 (Part), 793, 794 and 801R.P. in D.D. 381 and Adjoining Government Land (not yet occupied), Tuen Mun, New Territories.
2. The applied use is "Proposed Temporary Place of Recreation, Sports or Culture (Barbecue Area) and Temporary Holiday Camp (Private Tent Camping Ground)" for a Period of 6 Years.
3. The site falls within "Open Space" and "Government, Institution or Community" zone. Place of Recreation, Sports or Culture and Holiday Camp use may be permitted on application to the Town Planning Board.
4. The site area is about 4,009 m^2 which includes 497 m^2 of Government Land
5. A total of 17 temporary structures (total floor area of about 776 m^2) are proposed on the site for office, service counters, staff pantry, storage, function room, open shed, toilet and paved walkway with hand rails uses (floor area of about 70 m^2).
6. The site is accessible via Castle Peak Road – Tai Lam and a walkway leading from the public staircase to the site.
7. The operation hours for barbecue activities are from 10 a.m. to 11 p.m., including Sundays and public holidays. The operation hours for tent camping activities are 24 hours every day, including Sundays and public holidays.

行政摘要

1. 申請地點位於新界屯門丈量約份第 381 約地段第 788 號(部分)、第 790 號(部分)、第 793 號、第 794 號及第 801 號餘段和毗連政府土地。
2. 申請用途為「擬議臨時康體文娛場所(燒烤場)及臨時度假營(私人帳幕營地)」(為期六年) 的規劃許可申請。
3. 申請地點位於 「休憩用地」及「政府、機構或社區」用途地帶。康體文娛場所及度假營用途，如向城市規劃委員會申請許可，或會獲得批准。
4. 申請面積為大約 4,009 平方米，包括約 497 平方米的政府土地。
5. 申請地點擬議提供 17 個臨時構築物 (總樓面面積約 776 平方米)作辦公室、服務部、員工茶水間、貯物室、活動室、開放式蔭棚、廁所及扶手行人道用途 (樓面面積約 70 平方米)。
6. 申請地點可經青山公路 - 大欖段到達及一條由公共樓梯至場地的通道。
7. 燒烤活動的營業時間為每天早上 10 時至晚上 11 時(星期日及公眾假期照常營業)。帳幕營地活動的營業時間為每天 24 小時(星期日及公眾假期照常營業)。

Justifications

1. Applied Use

1.1. The applied use is "Proposed Temporary Place of Recreation, Sports or Culture (Barbecue Area) and Temporary Holiday Camp (Private Tent Camping Ground)" for a Period of 6 Years.

2. Location

2.1. The application site is on Lots 788 (Part), 790 (Part), 793, 794 and 801R.P. in D.D. 381 and Adjoining Government Land (not yet occupied), Tuen Mun, New Territories.

3. Site Area

3.1. The site area is about 4,009 m^2 which includes 497 m^2 of Government Land.

4. Town Planning Zoning

4.1. The application site falls within the area zoned "Open Space" ("O") and "Government, Institution or Community" ("G/IC") on the Draft Tuen Mun Outline Zoning Plan (OZP) No. S/TM/38.

4.2. The planning intention of this "O" zone is primarily for the provision of outdoor open-air public space for active and/or passive recreational uses serving the needs of local residents as well as the general public.

4.3. This planning intention of this "G/IC" zone is intended primarily for the provision of Government, institution or community facilities serving the needs of the local residents and/or a wider district, region or the territory. It is also intended to provide land for uses directly related to or in support of the work of the Government, organizations providing social services to meet community needs, and other institutional establishments.

4.4. Proposed Temporary Place of Recreation, Sports or Culture (Barbecue Area) and Temporary Holiday Camp (Private Tent Camping Ground) are in line with the planning intention of this zone.

5. Development parameters

Operation Hours

5.1. The operation hours for barbecue activities are from 10 a.m. to 11 p.m., including Sundays and public holidays. The operation hours for tent camping activities are 24 hours every day, including Sundays and public holidays.

Estimated number of visitors

5.2. About 40 visitors is anticipated during weekends and holidays and about 20 visitors during weekdays. The maximum number of visitors will be about 40 persons per day.

Proposed Structures

5.3. There are 17 temporary 1-storey structures with a total floor area of about 776 m^2 at a height of about 6 m. All structures are built of temporary material, including metal sheets and container-converted structures. Please refer to the Layout Plan (Plan 3) for details.

Proposed Structures

No.	Structure	Floor Area (about)	Covered Area (about)	Height (about)	No. of storey
1.	Office	33 m^2	33 m^2	6 m	1
2.	Service Counter	29 m^2	29 m^2		
3.	Service Counter	29 m^2	29 m^2		
4.	Staff Pantry	43 m^2	43 m^2		
5.		22 m^2	22 m^2		
6.		43 m^2	43 m^2		
7.	Storage	22 m^2	22 m^2		
8.	Storage	43 m^2	43 m^2		
9.	Function Room	60 m^2	60 m^2		
10.	Open Shed	189 m^2	189 m^2		
11.	Toilets	19 m^2	19 m^2		
12.		19 m^2	19 m^2		
13.	Function Room	50 m^2	50 m^2		
14.	Storage	25 m^2	25 m^2		
15	Function Room	75 m^2	75 m^2		
16	Storage	25 m^2	25 m^2		
17	Function Room	50 m^2	50 m^2		
	Total	776 m^2	776 m^2		

Proposed paved walkway with hand rails

18	Paved walkway with hand rails	70 m^2	70 m^2	-	-

Site Management

5.4. The waste will be collected by covered rubbish bins. Rubbish bags will be dumped to the refuse collection point at Ching Lai Road by hand twice a week depending on the amount of rubbish found.

5.5. No public announcement system or any form of audio amplification system will be used at the site.

5.6. No shower facilities will be provided at the site.

5.7. There will be no barbecue activity after 11:00 p.m.

5.8. At 11:00 p.m., the main lights will be turned off. Some street lights of a lower illumination will remain turned on along the footpath to provide light for walking within the site.

5.9. After 11:00 p.m., staff will remind customers to lower their voice and manage the order in the site.

6. Similar Applications in Vicinity

6.1. There are a few similar approved cases in the vicinity in Siu Lam area (under a different OZP no. S/TM-SKW/14).

Application No.	Applied Use	Decision
A/TM-SKW/42	Temporary Barbecue Area with Structures for a Period of 3 Years	Approved on 28.5.2004
A/TM-SKW/47	Temporary Barbecue Area with Structures for a Period of 3 Years	Approved on 10.3.2006
A/TM-SKW/48	Temporary Barbecue Area for a period of 3 years	Approved on 23.6.2006
A/TM-SKW/54	Temporary Barbecue Area for a Period of 3 Years	Approved on 28.9.2007
A/TM-SKW/57	Temporary Barbecue Area for a Period of 3 Years	Approved on 9.5.2008
A/TM-SKW/63	Temporary Barbecue Area with Structures for a Period of 3 Years	Approved on 24.7.2009
A/TM-SKW/67	Temporary Barbecue Area For a Period of 3 Years	Approved on 17.6.2011
A/TM-SKW/78	Temporary Barbecue Area For a Period of 3 Years	Approved on 1.3.2013
A/TM-SKW/93	Temporary Barbecue Area for a Period of 3 Years	Approved on 18.12.2015
A/TM-SKW/94	Temporary Barbecue Area for a Period of 3 Years	Approved on 4.3.2016
A/TM-SKW/101	Temporary Barbecue Area for a Period of 3 Years	Approved on 31.5.2019
A/TM-SKW/114	Renewal of Planning Approval for Temporary Barbecue Area for a Period of 3 Years	Approved on 20.5.2022

7. Justifications

Planning Intention of the "O" and "G/IC" zone

7.1. The planning intention of this "O" zone is primarily for the provision of outdoor open-air public space for active and/or passive recreational uses serving the needs of local residents as well as the general public. Proposed Temporary Place of Recreation, Sports or Culture (Barbecue Area) and Temporary Holiday Camp (Private Tent Camping Ground) are in line with the planning intention of this zone.

7.2. This planning intention of this "G/IC" zone is intended primarily for the provision of Government, institution or community facilities serving the needs of the local residents and/or a wider district, region or the territory. It is also intended to provide land for uses directly related to or in support of the work of the Government, organizations providing social services to meet community needs, and

other institutional establishments. Open space for vehicular access and manuevouring does not jeopardize the planning intention of this zone.

Compatibility with surrounding environment

7.3. The proposed use is compatible with the surrounding uses that are comprised of mainly open areas. Residential uses of 3-storey houses are further away to the east and west. In view of the restricted operation hours for the barbecue activities and existing landscaping. No significant impact to the surrounding area is anticipated.

No adverse environmental impact

Drainage

7.4. The site is at the highest point of the piece of land between Castle Peak Road – Tai Lam and the sea. Surface water from the north is intercepted by a public u-channel system. Surface water will flow downwards to the river at the east and the sea via the woodland to the south.

Sewerage

7.5. Replaceable waste tank portable toilet will be used on site. When the waste tank is full, the waste tank will be taken out and sealed by a cover. The waste tank will be taken by hand to the loading/unloading space on Lot 790 in D.D. 381 and collected by professional contractor. An empty waste tank will be placed to the replaceable waste tank portable toilet. It does not involve any construction work for the operation.

7.6. No construction debris, silt and sewage will be discharged to or deposited inside the public drains from the site and no blockage will be induced to the natural stream to increase flooding risk.

Traffic

7.7. The site is accessible via a staircase connecting to Castle Peak Road – Tai Lam. No parking space is provided. Visitors come to the site by public transport.

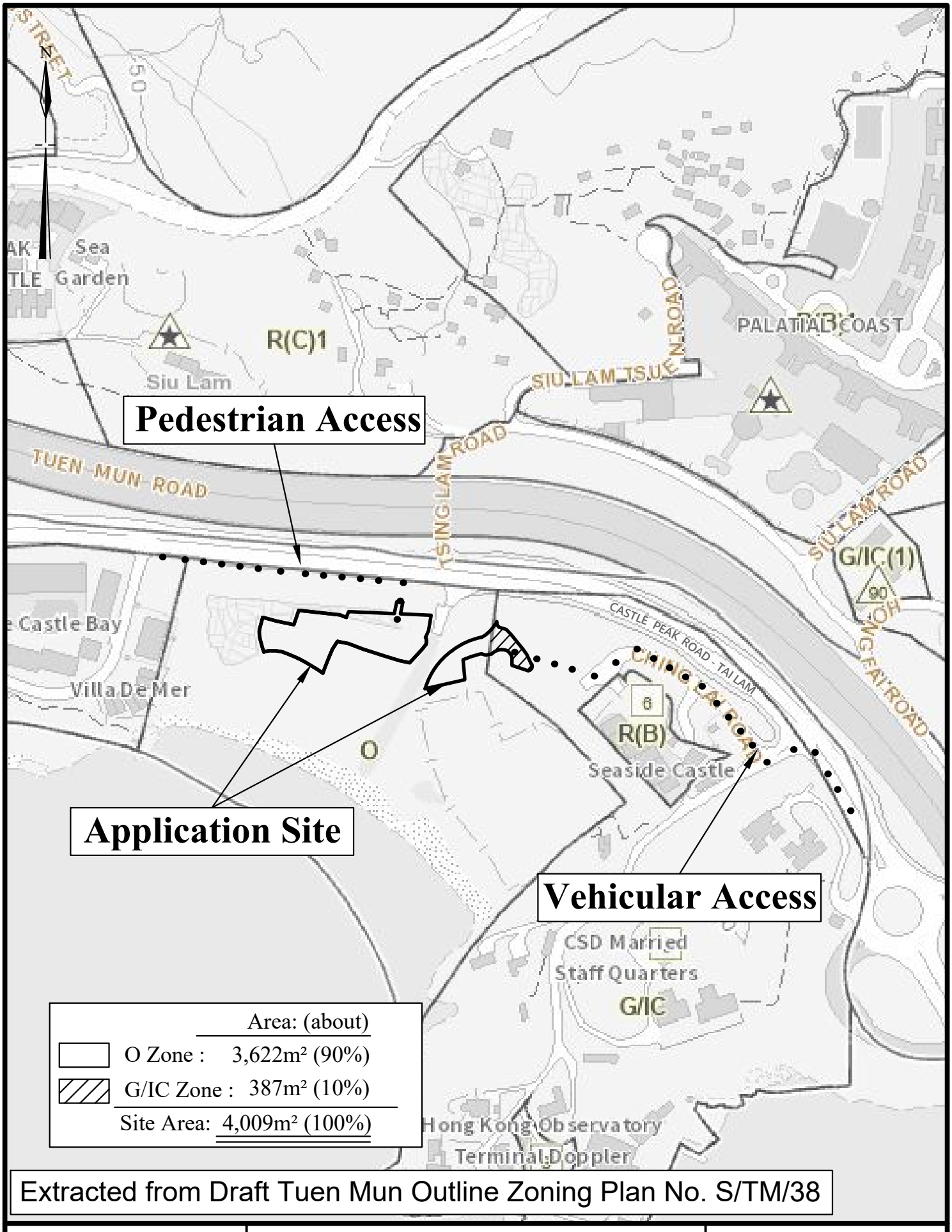
7.8. A loading/unloading space for light goods vehicles is proposed on Lot 790 in D.D. 381. Goods for operation will be unloaded on this lot and delivered to the site by hand. It is estimated that a total of 2 trips (1 in and 1 out) will be generated per week.

8. Planning Gain

8.1. The site is desirable for family and friends to spend quality time together with barbecue and tent camping activities.

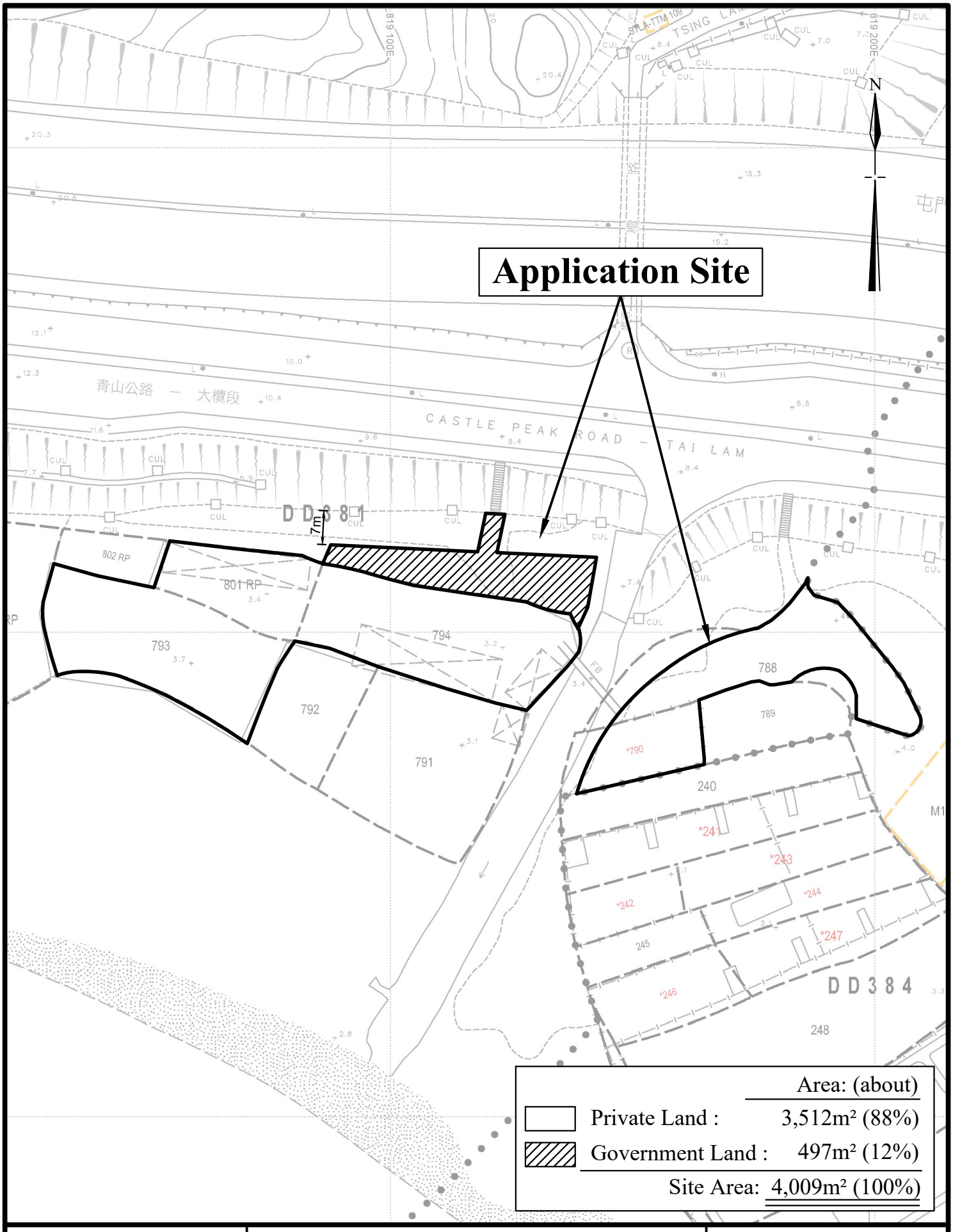
8.2. The proposed use provides valuable employment opportunities in the local area.

- END -

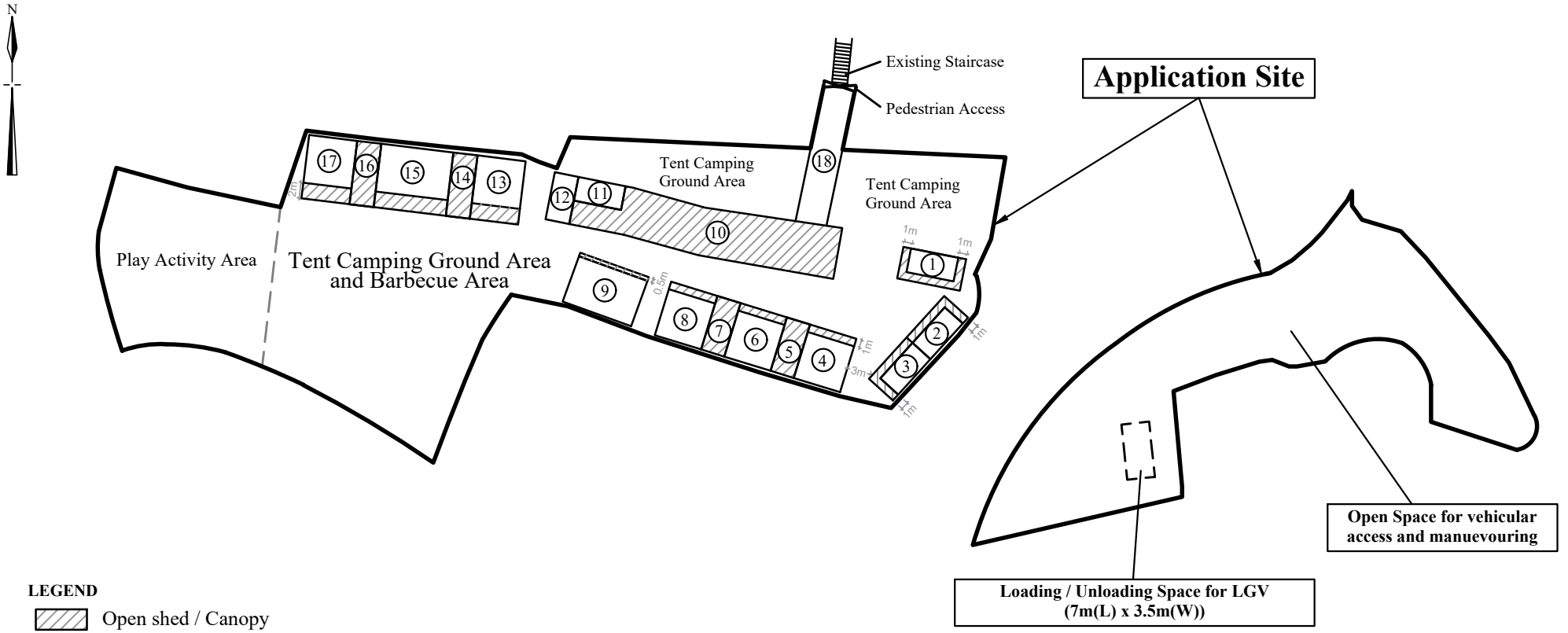


Extracted from Draft Tuen Mun Outline Zoning Plan No. S/TM/38

N.T.S	**Location Plan**	**Goldrich Planners & Surveyors Ltd.**
July 2024	Lots 788(Part), 790(Part), 793, 794 & 801 RP in D. D. 381 and Adjoining Government Land Tuen Mun, New Territories	**Plan 1b (P 22015)**



1:1000	**Lot Index Plan** Lot No. 788(part), 790(part), 793, 794 & 801 RP in D. D. 381 and Adjoining Government Land Tuen Mun, New Territories	**Goldrich Planners & Surveyors Ltd.**
July 2024		**Plan 2b** **(P 22015)**



LEGEND

Open shed / Canopy

No.	Structure / Use	Covered Area (about)	Floor Area (about)	Height	No. of storey
1	Office	33m²	33m²	6m	1
2	Service Counter	58m²	29m²		
3	Service Counter		29m²		
4	Staff Pantry	173m²	43m²		
5			22m²		
6			43m²		
7	Storage		22m²		
8	Storage		43m²		
9	Function Room	60m²	60m²		

No.	Structure / Use	Covered Area (about)	Floor Area (about)	Height	No. of storey
10	Open Shed	227m²	189m²	6m	1
11	Toilets		19m²		
12			19m²		
13	Function Room	225m²	50m²		
14	Storage		25m²		
15	Function Room		75m²		
16	Storage		25m²		
17	Function Room		50m²		
	Total:	776m²	776m²		

No.	Structure / Use	Area (about)	Height	Storey
18	Paved Walkway with Hand Rails	70m²	—	—

1:750 (A4)	**LayoutPlan** Lot No. 788(part), 790(part), 793, 794 & 801 RP in D. D. 381 and Adjoining Government Land Tuen Mun, New Territories	**Goldrich Planners & Surveyors Ltd.**
July 2024		**Plan 3b** **(P 22015)**

The proposed use is Temporary Place of Recreation, Sports or Culture (Barbecue Area) and Temporary Holiday Camp (Private Tent Camping Ground).

Three containers are placed on the private lots and some tents are proposed on the adjacent Government Land with tent camping activity.

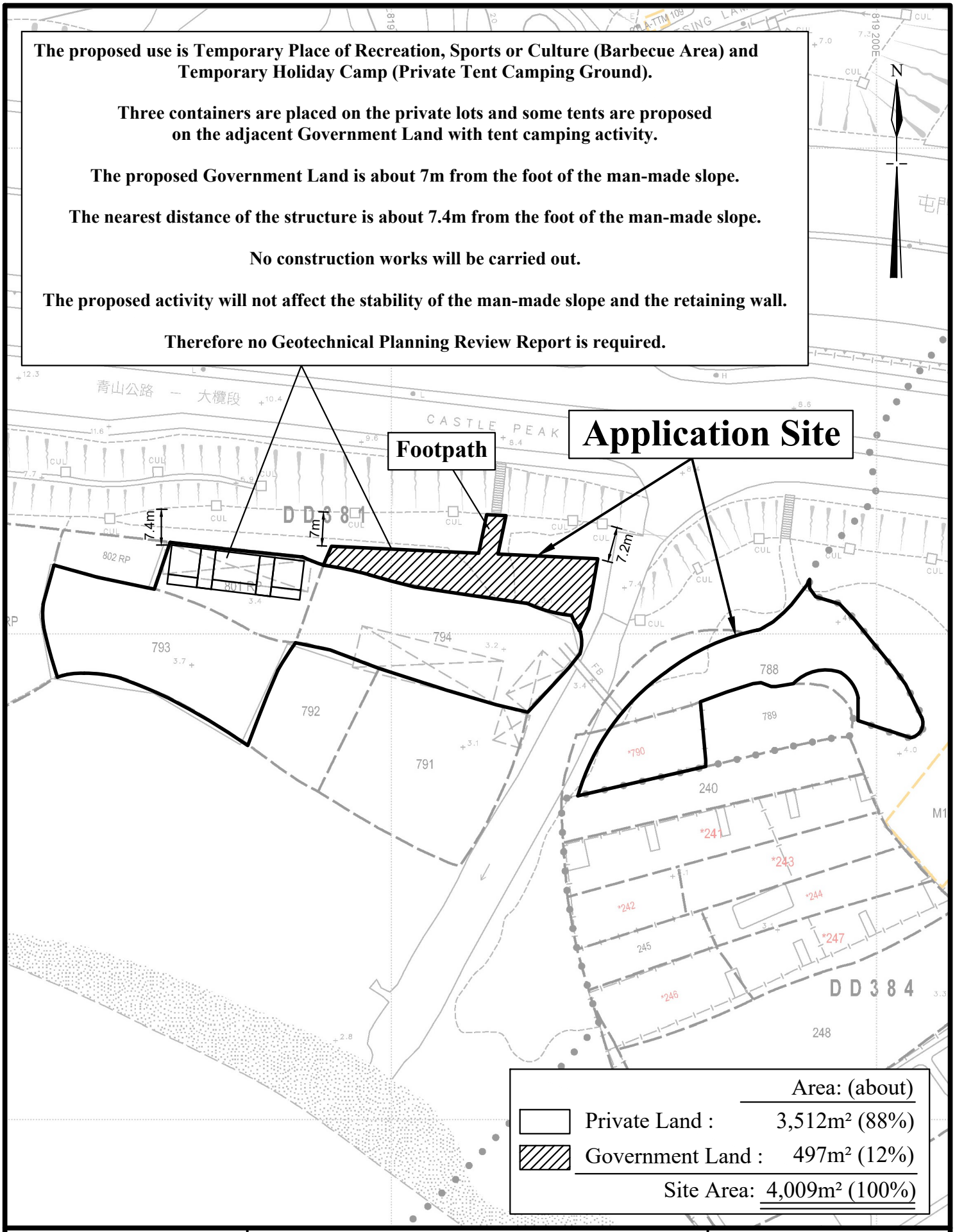
The proposed Government Land is about 7m from the foot of the man-made slope.

The nearest distance of the structure is about 7.4m from the foot of the man-made slope.

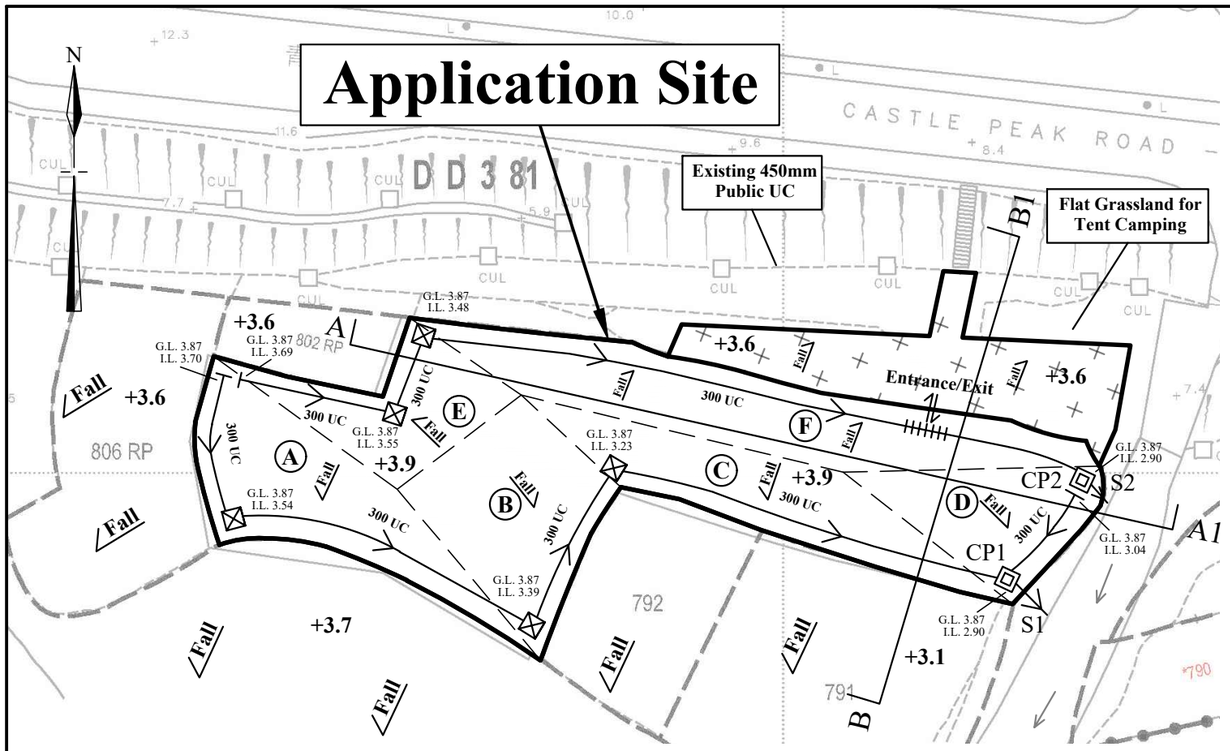
No construction works will be carried out.

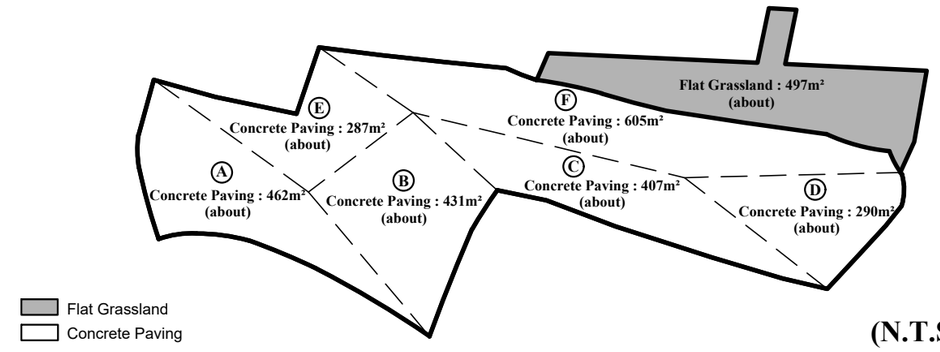
The proposed activity will not affect the stability of the man-made slope and the retaining wall.

Therefore no Geotechnical Planning Review Report is required.

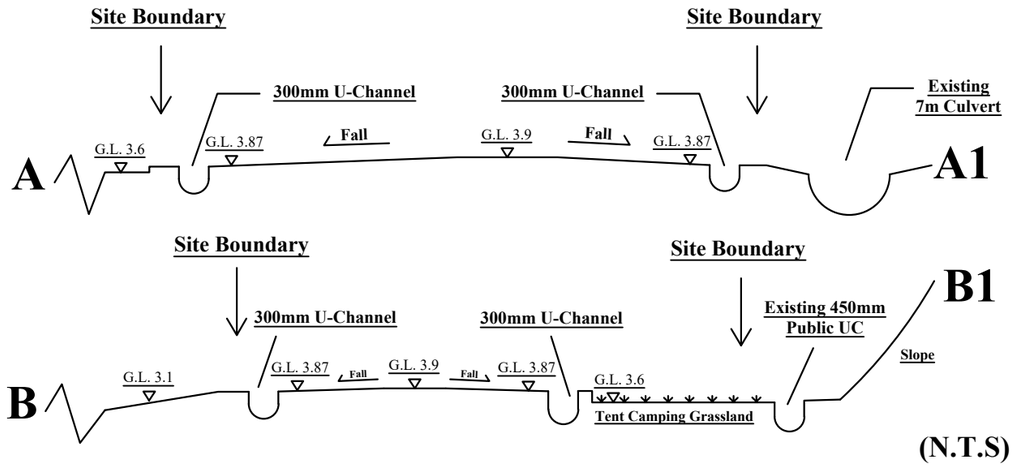


1:1000	**Plan showing the distance between the foot of the man-made slope and the nearest structure**	**Goldrich Planners & Surveyors Ltd.**
July 2024	Lot No. 788(part), 790(part), 793, 794 & 801 RP in D. D. 381 and Adjoining Government Land Tuen Mun, New Territories	**Plan 4b** **(P 22015)**





(N.T.S)



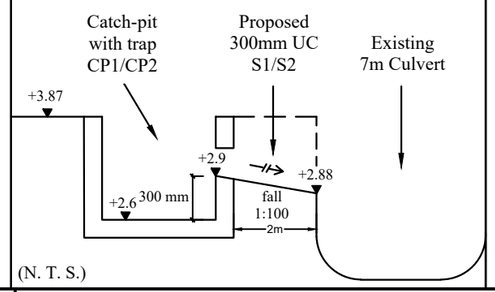
(N.T.S)

Legend:

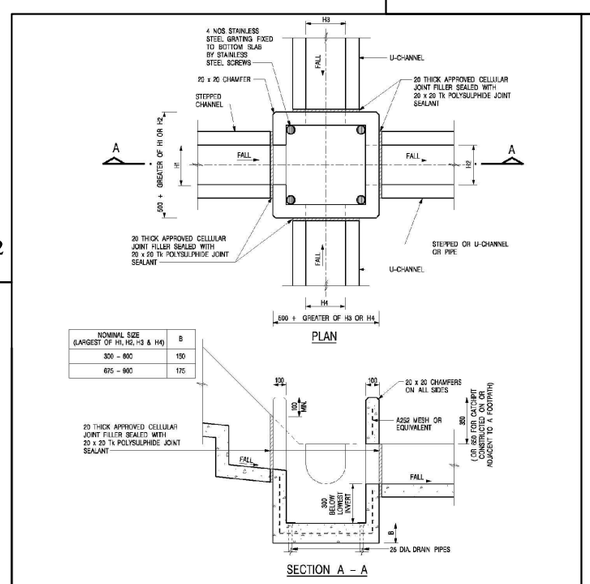
- Proposed Catch-pit
- Proposed Catch-pit with trap
- Proposed 300mm U-Channel
- Proposed UC with C.I cover
- Boundary of Catchment Area
- Flat Grassland

Site Area(about) : 3,159m²

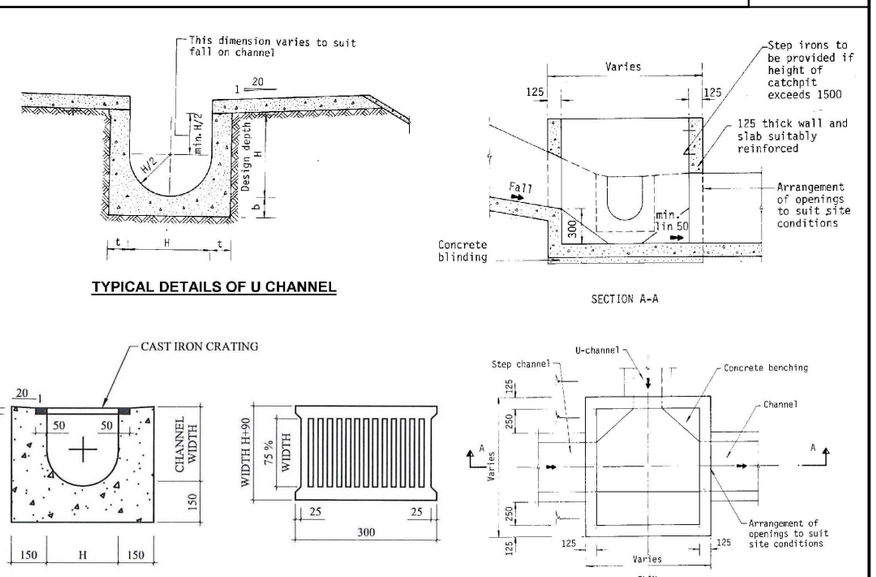
Connection details of S1 and S2
Proposed outfall between CP1/CP2, S1/S2 and existing watercourse



(N. T. S.)



DETAILS OF CATCHPIT WITH TRAP
(REFER TO CEDD'S STANDARD DWG. C2406/1)



TYPICAL SECTION OF U-CHANNEL WITH COVER
(N.T.S.)

CAST IRON CRATING
(HEAVY DUTY)

TYPICAL DETAILS OF CATCHPIT

1:750 (A3)

July 2024

Drainage Proposal

Lot 788(part), 790(part), 793, 794 & 801 RP in D.D. 381
and Adjoining Government Land
Tuen Mun, New Territories

Goldrich Planners & Surveyors Ltd.

Plan 5a
(P 22015)

1 For Catchment Area A

Ref.

Area, A = 462 m^2
Average slope, H = 0.1 m per 100m
Distance on the line of natural flow, L = 19.5 m

Time of concentraction, t_o = $0.14465L / (H^{0.2}A^{0.1})$ = 0.14465 (19.5) / (0.1^0.2*462^0.1) — SDM 7.5.2 (d)
= 2.4 min

2 For Proposed U-Channel in catchment area A

	From	To
Ground level (mPD)	3.87	3.87
Invert level (mPD)	3.70	3.39

Width of u-channel, w = 300 mm
Length of u-channel, L_c = 46.8 m
Depth of vertical part of u-channel, d = 330 mm
Gradient of u-channel, S_f = (3.7-3.39)/46.8 = 0.007

Cross-Section Area, a = 0.5 πr^2 + w d = 0.5 x 3.14 x 150^2 + 300 x 330
= 0.134 m^2
Wetted Perimeter, p = π r + 2 d = 3.14 x 150 + 2 x 330
= 1.131 m
Hydralic radius, R = a / p — SDM 8.2.1
= 0.119 m

3 Use Manning Equation for estimating velocity of stormwater

Take n = 0.016 for concrete lined channels:- — SDM Table 13
Allowable velocity, v = $R^{1/6}x (RS_f)^{1/2}/n$ = (0.119)^1/6 x (0.119 x 0.007)^1/2 / 0.016 — SDM Table 12
= 1.23 m/s
Time of flow, t_f = 0.6 min

4 Use "Rational Method" for calculation of design flow

Design intensity, i = $a / (t_o + t_f + b)^c$ — SDM 4.3.2
= 505.5 / (2.4+0.6+3.29)^0.35 for return period T = 50 years — SDM Table 3(a)
= 262

Type of surface	Runoff Coefficient C	Catchment Area A (m^2)	C x A
Flat Glassland(heavy soil)	0.25	0.0	0.0
Concrete Paving	0.95	462.0	438.9
		SUM =	438.9

— SDM 7.5.2 (b)

Upstream flow, Q_u = 0 m^3/s

Design flow, Q_d = $0.278i \Sigma C_j A_j + Q_u$ where A_j is in km^2 — SDM 7.5.2 (a)
= 0.278 x 262 x 438.9 / 1000000 + 0
= 0.032 m^3/s

Allowable flow, Q_a = a x v
= 0.134 x 1.23
= 0.165 m^3/s

> Q_d (O.K.)

Reference was made to Stormwater Drainage Manual (SDM) by DSD

Scale: NA	**Drainage Calculation**	Goldrich Planners & Surveyors Ltd.
June 2024	Lots 793, 794 and 801 RP in D.D. 381 and Adjoining Government Land, Tuen Mun, New Territories	Page 1 (P22015)

1 For Catchment Area B

Ref.

Area, A = 431 m^2
Average slope, H = 0.1 m per 100m
Distance on the line of natural flow, L = 24 m

Time of concentration, t_o = $0.14465L / (H^{0.2}A^{0.1})$ = 0.14465 (24) / (0.1^0.2*431^0.1) — SDM 7.5.2 (d)
= 3.0 min

2 For Proposed U-Channel in catchment area B

	From	To
Ground level (mPD)	3.87	3.87
Invert level (mPD)	3.39	3.23

Width of u-channel, w = 300 mm
Length of u-channel, L_c = 23.4 m
Depth of vertical part of u-channel, d = 490 mm
Gradient of u-channel, S_f = (3.39-3.23)/23.4 = 0.007

Cross-Section Area, a = 0.5 πr^2 + w d = 0.5 x 3.14 x 150^2 + 300 x 490
= 0.182 m^2
Wetted Perimeter, p = π r + 2 d = 3.14 x 150 + 2 x 490
= 1.451 m
Hydralic radius, R = a / p — SDM 8.2.1
= 0.126 m

3 Use Manning Equation for estimating velocity of stormwater

Take n = 0.016 for concrete lined channels:- — SDM Table 13
Allowable velocity, v = $R^{1/6}x (RS_f)^{1/2}/n$ = (0.126)^1/6 x (0.126 x 0.007)^1/2 / 0.016 — SDM Table 12
= 1.30 m/s
Time of flow, t_f = 0.3 min

4 Use "Rational Method" for calculation of design flow

Design intensity, i = $a / (t_o + t_f + b)^c$ — SDM 4.3.2
= 505.5 / (3+0.3+3.29)^0.355 for return period T = 50 years — SDM Table 3(a)
= 259

SDM 7.5.2 (b)

Type of surface	Runoff Coefficient C	Catchment Area A (m^2)	C x A
Flat Glassland(heavy soil)	0.25	0.0	0.0
Concrete Paving	0.95	431.0	409.5
		SUM =	409.5

Upstream flow, Q_u = 0.032 m^3/s

Design flow, Q_d = $0.278i \Sigma C_jA_j + Q_u$ where A_j is in km^2 — SDM 7.5.2 (a)
= 0.278 x 259 x 409.45 / 1000000 + 0.032
= 0.061 m^3/s

Allowable flow, Q_a = a x v
= 0.182 x 1.3
= 0.236 m^3/s

> Q_d (O.K.)

Reference was made to Stormwater Drainage Manual (SDM) by DSD

1 For Catchment Area C

Ref.

Area, A = 407 m^2
Average slope, H = 0.1 m per 100m
Distance on the line of natural flow, L = 16.5 m

Time of concentraction, t_o = $0.14465L / (H^{0.2}A^{0.1})$ = 0.14465 (16.5) / (0.1^0.2*407^0.1) — SDM 7.5.2 (d)
= 2.1 min

2 For Proposed U-Channel in catchment area C

	From	To
Ground level (mPD)	3.87	3.87
Invert level (mPD)	3.23	2.90

Width of u-channel, w = 300 mm
Length of u-channel, L_c = 50.1 m
Depth of vertical part of u-channel, d = 820 mm
Gradient of u-channel, S_f = 3.23-2.9)/50.1 = 0.007

Cross-Section Area, a = $0.5 \pi r^2 + w d$ = 0.5 x 3.14 x 150^2 + 300 x 820
= 0.281 m^2
Wetted Perimeter, p = $\pi r + 2 d$ = 3.14 x 150 + 2 x 820
= 2.111 m
Hydralic radius, R = a / p — SDM 8.2.1
= 0.133 m

3 Use Manning Equation for estimating velocity of stormwater

Take n = 0.016 for concrete lined channels:- — SDM Table 13
Allowable velocity, v = $R^{1/6} x (RS_f)^{1/2}/n$ = (0.133)^1/6 x (0.133 x 0.007)^1/2 / 0.016 — SDM Table 12
= 1.32 m/s
Time of flow, t_f = 0.6 min

4 Use "Rational Method" for calculation of design flow

Design intensity, i = $a / (t_o + t_f + b)^c$ — SDM 4.3.2
= 505.5 / (2.1+0.6+3.29)^0.355 for return period T = 50 years — SDM Table 3(a)
= 268

Type of surface	Runoff Coefficient C	Catchment Area A (m^2)	C x A
Flat Glassland(heavy soil)	0.25	0.0	0.0
Concrete Paving	0.95	407.0	386.7
		SUM =	386.7

— SDM 7.5.2 (b)

Upstream flow, Q_u = 0.061 m^3/s

Design flow, Q_d = $0.278i \Sigma C_j A_j + Q_u$ where A_j is in km^2 — SDM 7.5.2 (a)
= 0.278 x 268 x 386.65 / 1000000 + 0.061
= 0.090 m^3/s

Allowable flow, Q_a = a x v
= 0.281 x 1.32
= 0.372 m^3/s

> Q_d (O.K.)

Reference was made to Stormwater Drainage Manual (SDM) by DSD

1 For Catchment Area D

Ref.

Area, A = 290 m^2
Average slope, H = 0.1 m per 100m
Distance on the line of natural flow, L = 27.8 m

Time of concentration, t_o = 0.14465L / ($H^{0.2}A^{0.1}$) = 0.14465 (27.8) / (0.1^0.2*290^0.1) — SDM 7.5.2 (d)
= 3.6 min

2 For Proposed U-Channel in catchment area D

	From	To
Ground level (mPD)	3.87	3.87
Invert level (mPD)	3.04	2.90

Width of u-channel, w = 300 mm
Length of u-channel, L_c = 20.7 m
Depth of vertical part of u-channel, d = 820 mm
Gradient of u-channel, S_f = (3.04-2.9)/20.7 = 0.007

Cross-Section Area, a = 0.5 πr^2 + w d = 0.5 x 3.14 x 150^2 + 300 x 820
= 0.281 m^2
Wetted Perimeter, p = π r + 2 d = 3.14 x 150 + 2 x 820
= 2.111 m
Hydralic radius, R = a / p — SDM 8.2.1
= 0.133 m

3 Use Manning Equation for estimating velocity of stormwater

Take n = 0.016 for concrete lined channels:- — SDM Table 13
Allowable velocity, v = $R^{1/6}$x $(RS_f)^{1/2}$/n = (0.133)^1/6 x (0.133 x 0.007)^1/2 / 0.016 — SDM Table 12
= 1.34 m/s
Time of flow, t_f = 0.3 min

4 Use "Rational Method" for calculation of design flow

Design intensity, i = a / (t_o + t_f +b)^c — SDM 4.3.2
= 505.5 / (3.6+0.3+3.29)^0.355 for return period T = 50 years — SDM Table 3(a)
= 251

SDM 7.5.2 (b)

Type of surface	Runoff Coefficient C	Catchment Area A (m^2)	C x A
Flat Glassland(heavy soil)	0.25	0.0	0.0
Concrete Paving	0.95	290.0	275.5
		SUM =	275.5

Upstream flow, Q_u = 0 m^3/s

Design flow, Q_d = 0.278i Σ C_jA_j + Q_u where A_j is in km^2 — SDM 7.5.2 (a)
= 0.278 x 251 x 275.5 / 1000000 + 0
= 0.019 m^3/s

Allowable flow, Q_a = a x v
= 0.281 x 1.34
= 0.377 m^3/s

> Q_d (O.K.)

Reference was made to Stormwater Drainage Manual (SDM) by DSD

1 For Channel Section S1

Ref.

Area, A = 0 m^2

Average slope, H = 0.1 m per 100m

Distance on the line of natural flow, L = 0 m

Time of concentration, t_o = $0.14465L / (H^{0.2}A^{0.1})$ = 0.14465 (0) / (0.1^0.2*0^0.1) — SDM 7.5.2 (d)

= 0.0 min

2 For Proposed U-Channel Section S1

	From	To
Ground level (mPD)	3.87	3.87
Invert level (mPD)	2.90	2.88

Width of u-channel, w = 300 mm

Length of u-channel, L_c = 2 m

Depth of vertical part of u-channel, d = 840 mm

Gradient of u-channel, S_f = (2.9-2.88)/2 = 0.010

Cross-Section Area, a = $0.5\ \pi r^2 + w\ d$ = 0.5 x 3.14 x 150^2 + 300 x 840

= 0.287 m^2

Wetted Perimeter, p = $\pi\ r + 2\ d$ = 3.14 x 150 + 2 x 840

= 2.151 m

Hydralic radius, R = a / p — SDM 8.2.1

= 0.134 m

3 Use Manning Equation for estimating velocity of stormwater

Take n = 0.016 for concrete lined channels:- — SDM Table 13

Allowable velocity, v = $R^{1/6} x (RS_f)^{1/2}/n$ = (0.134)^1/6 x (0.134 x 0.01)^1/2 / 0.016 — SDM Table 12

= 1.63 m/s

Time of flow, t_f = 0.02 min

4 Use "Rational Method" for calculation of design flow

Design intensity, i = $a / (t_o + t_f + b)^c$ — SDM 4.3.2

= 505.5 / (0+0+3.29)^0.35 for return period T = 50 years — SDM Table 3(a)

= 330

Type of surface	Runoff Coefficient C	Catchment Area A (m^2)	C x A
Flat Glassland(heavy soil)	0.25	0.0	0.0
Concrete Paving	0.95	0.0	0.0
		SUM =	0.0

— SDM 7.5.2 (b)

Upstream flow, Q_u = 0.109 m^3/s

Design flow, Q_d = $0.278i \Sigma C_jA_j + Q_u$ where A_j is in km^2 — SDM 7.5.2 (a)

= 0.278 x 330 x 0 / 1000000 + 0.109

= 0.109 m^3/s

Allowable flow, Q_a = a x v

= 0.287 x 1.63

= 0.469 m^3/s

> Q_d (O.K.)

Reference was made to Stormwater Drainage Manual (SDM) by DSD

1 For Catchment Area E

Ref.

Area, A = 287 m^2
Average slope, H = 0.1 m per 100m
Distance on the line of natural flow, L = 15.8 m

Time of concentraction, t_o = $0.14465L / (H^{0.2}A^{0.1})$ = 0.14465 (15.8) / (0.1^0.2*287^0.1) — SDM 7.5.2 (d)
= 2.1 min

2 For Proposed U-Channel in catchment area E

	From	To
Ground level (mPD)	3.87	3.87
Invert level (mPD)	3.69	3.48

Width of u-channel, w = 300 mm
Length of u-channel, L_c = 31.5 m
Depth of vertical part of u-channel, d = 240 mm
Gradient of u-channel, S_f = 3.69-3.48)/31.5 = 0.007

Cross-Section Area, a = $0.5\ \pi r^2 + w\ d$ = 0.5 x 3.14 x 150^2 + 300 x 240
= 0.107 m^2
Wetted Perimeter, p = π r + 2 d = 3.14 x 150 + 2 x 240
= 0.951 m
Hydralic radius, R = a / p — SDM 8.2.1
= 0.113 m

3 Use Manning Equation for estimating velocity of stormwater

Take n = 0.016 for concrete lined channels:- — SDM Table 13
Allowable velocity, v = $R^{1/6} x (RS_f)^{1/2}/n$ = (0.113)^1/6 x (0.113 x 0.007)^1/2 / 0.016 — SDM Table 12
= 1.19 m/s
Time of flow, t_f = 0.4 min

4 Use "Rational Method" for calculation of design flow

Design intensity, i = $a / (t_o + t_f + b)^c$ — SDM 4.3.2
= 505.5 / (2.1+0.4+3.29)^0.355 for return period T = 50 years — SDM Table 3(a)
= 271

Type of surface	Runoff Coefficient C	Catchment Area A (m^2)	C x A
Flat Glassland(heavy soil)	0.25	0.0	0.0
Concrete Paving	0.95	287.0	272.7
		SUM =	272.7

— SDM 7.5.2 (b)

Upstream flow, Q_u = 0 m^3/s

Design flow, Q_d = $0.278i \Sigma C_j A_j + Q_u$ where A_j is in km^2 — SDM 7.5.2 (a)
= 0.278 x 271 x 272.65 / 1000000 + 0
= 0.021 m^3/s

Allowable flow, Q_a = a x v
= 0.107 x 1.19
= 0.128 m^3/s

> Q_d (O.K.)

Reference was made to Stormwater Drainage Manual (SDM) by DSD

1 For Catchment Area F

Ref.

Area, A = 605 m^2
Average slope, H = 0.1 m per 100m
Distance on the line of natural flow, L = 9 m

Time of concentraction, t_o = 0.14465L / ($H^{0.2}A^{0.1}$) = 0.14465 (9) / (0.1^0.2*605^0.1) — SDM 7.5.2 (d)
= 1.1 min

2 For Proposed U-Channel in catchment area F

	From	To
Ground level (mPD)	3.87	3.87
Invert level (mPD)	3.48	2.90

Width of u-channel, w = 300 mm
Length of u-channel, L_c = 88.3 m
Depth of vertical part of u-channel, d = 820 mm
Gradient of u-channel, S_f = (3.48-2.9)/88.3 = 0.007

Cross-Section Area, a = 0.5 πr^2 + w d = 0.5 x 3.14 x 150^2 + 300 x 820
= 0.281 m^2
Wetted Perimeter, p = π r + 2 d = 3.14 x 150 + 2 x 820
= 2.111 m
Hydralic radius, R = a / p — SDM 8.2.1
= 0.133 m

3 Use Manning Equation for estimating velocity of stormwater

Take n = 0.016 for concrete lined channels:- — SDM Table 13
Allowable velocity, v = $R^{1/6}$x $(RS_f)^{1/2}$/n = (0.133)^1/6 x (0.133 x 0.007)^1/2 / 0.016 — SDM Table 12
= 1.32 m/s
Time of flow, t_f = 1.1 min

4 Use "Rational Method" for calculation of design flow

Design intensity, i = a / (t_o + t_f +b)^c — SDM 4.3.2
= 505.5 / (1.1+1.1+3.29)^0.355 for return period T = 50 years — SDM Table 3(a)
= 276

SDM 7.5.2 (b)

Type of surface	Runoff Coefficient C	Catchment Area A (m^2)	C x A
Flat Glassland(heavy soil)	0.25	0.0	0.0
Concrete Paving	0.95	605.0	574.8
		SUM =	574.8

Upstream flow, Q_u = 0.021 m^3/s

Design flow, Q_d = 0.278i Σ C_jA_j + Q_u where A_j is in km^2 — SDM 7.5.2 (a)
= 0.278 x 276 x 574.75 / 1000000 + 0.021
= 0.065 m^3/s

Allowable flow, Q_a = a x v
= 0.281 x 1.32
= 0.372 m^3/s

> Q_d (O.K.)

Reference was made to Stormwater Drainage Manual (SDM) by DSD

1 For Channel Section S2

Ref.

Area, A = 0 m^2
Average slope, H = 0.1 m per 100m
Distance on the line of natural flow, L = 0 m

Time of concentration, t_o = $0.14465L / (H^{0.2}A^{0.1})$ = 0.14465 (0) / (0.1^0.2*0^0.1) — SDM 7.5.2 (d)
= 0.0 min

2 For Proposed U-Channel Section S2

	From	To
Ground level (mPD)	3.87	3.87
Invert level (mPD)	2.90	2.88

Width of u-channel, w = 300 mm
Length of u-channel, L_c = 2 m
Depth of vertical part of u-channel, d = 840 mm
Gradient of u-channel, S_f = (2.9-2.88)/2 = 0.010

Cross-Section Area, a = $0.5\ \pi r^2 + w\ d$ = 0.5 x 3.14 x 150^2 + 300 x 840
= 0.287 m^2
Wetted Perimeter, p = $\pi\ r + 2\ d$ = 3.14 x 150 + 2 x 840
= 2.151 m
Hydralic radius, R = a / p — SDM 8.2.1
= 0.134 m

3 Use Manning Equation for estimating velocity of stormwater

Take n = 0.016 for concrete lined channels:- — SDM Table 13
Allowable velocity, v = $R^{1/6}x\ (RS_f)^{1/2}/n$ = (0.134)^1/6 x (0.134 x 0.01)^1/2 / 0.016 — SDM Table 12
= 1.63 m/s
Time of flow, t_f = 0.02 min

4 Use "Rational Method" for calculation of design flow

Design intensity, i = $a / (t_o + t_f + b)^c$ — SDM 4.3.2
= 505.5 / (0+0+3.29)^0.355 for return period T = 50 years — SDM Table 3(a)
= 330

Type of surface	Runoff Coefficient C	Catchment Area A (m^2)	C x A
Flat Glassland(heavy soil)	0.25	0.0	0.0
Concrete Paving	0.95	0.0	0.0
		SUM =	0.0

— SDM 7.5.2 (b)

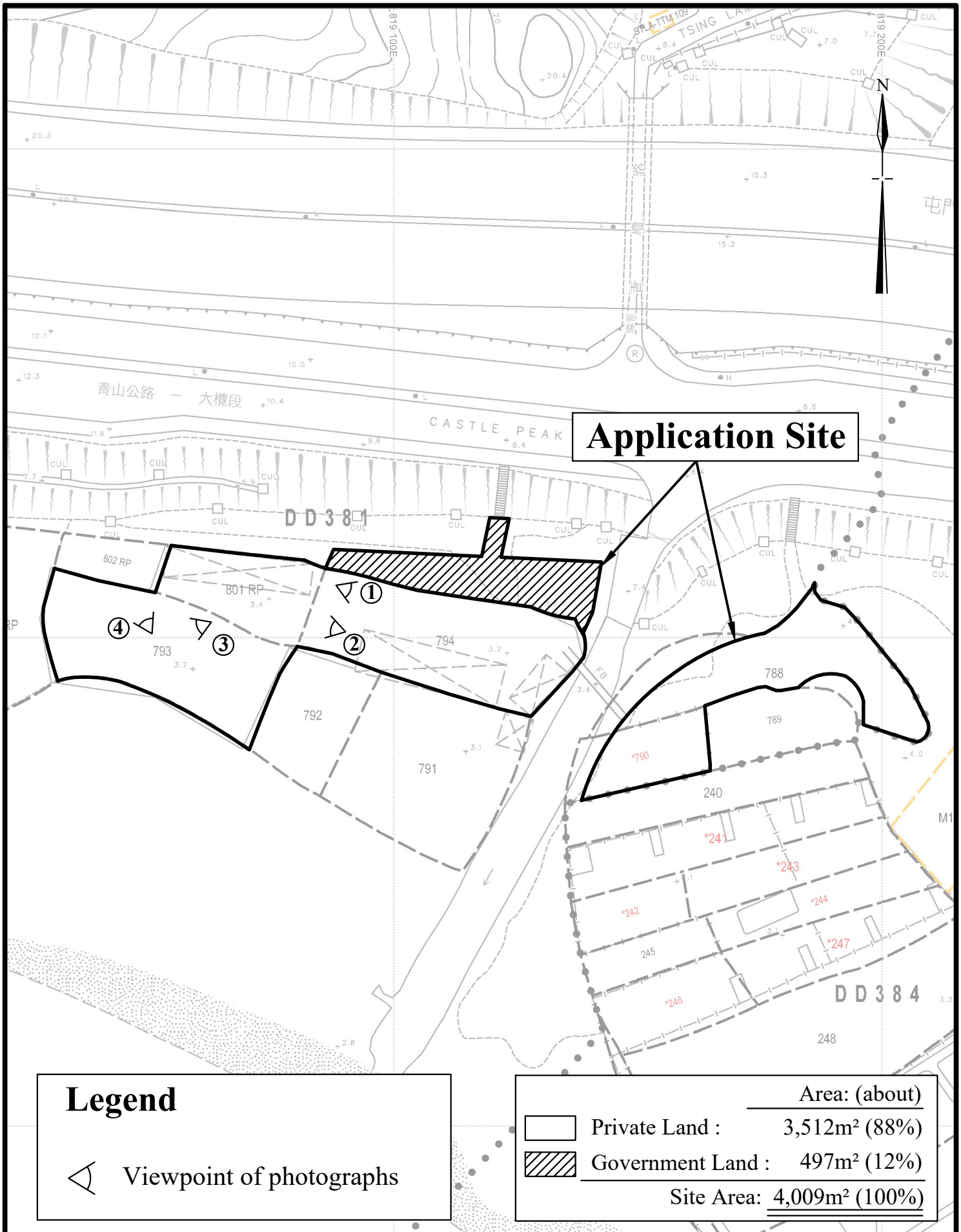
Upstream flow, Q_u = 0.065 m^3/s

Design flow, Q_d = $0.278i\ \Sigma\ C_jA_j + Q_u$ where A_j is in km^2 — SDM 7.5.2 (a)
= 0.278 x 330 x 0 / 1000000 + 0.065
= 0.065 m^3/s

Allowable flow, Q_a = a x v
= 0.287 x 1.63
= 0.469 m^3/s

> Q_d (O.K.)

Reference was made to Stormwater Drainage Manual (SDM) by DSD

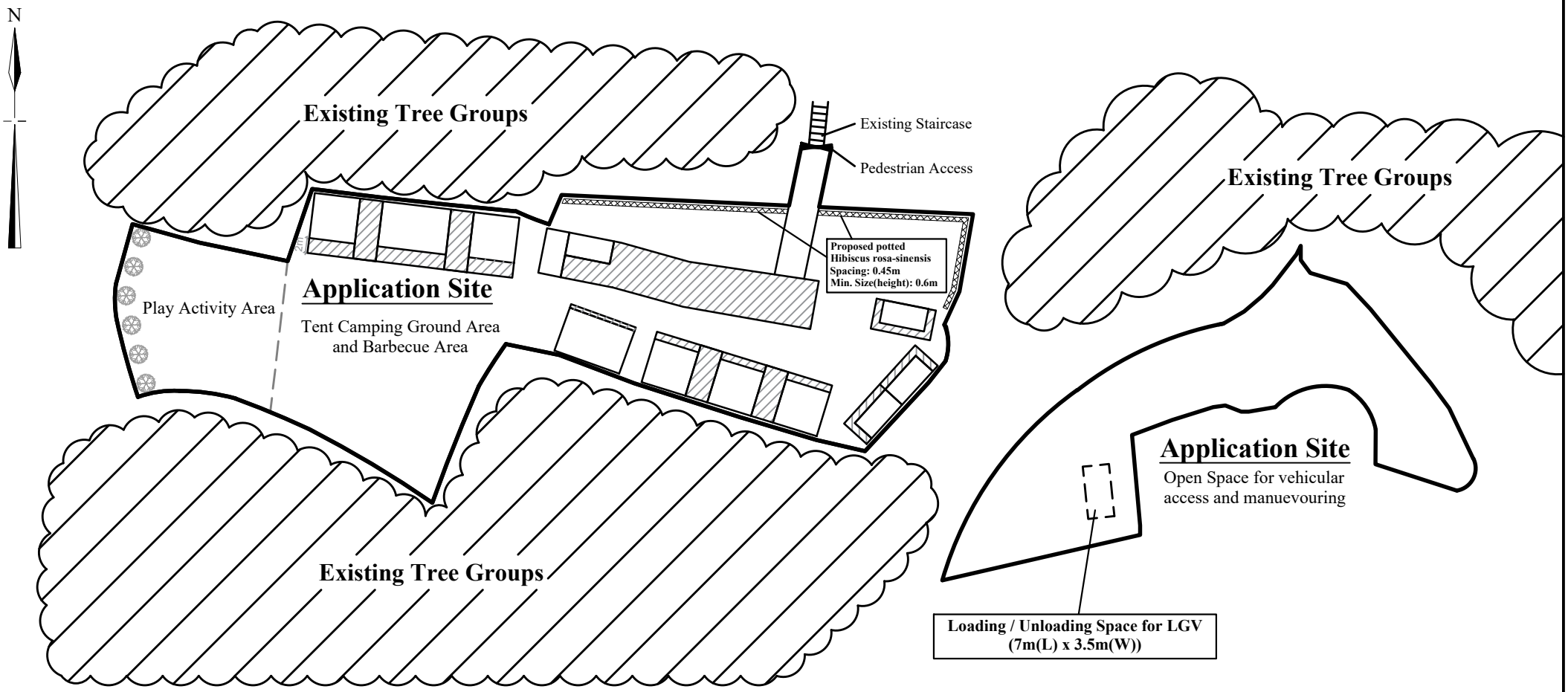


Legend

◁ Viewpoint of photographs

	Area: (about)
Private Land :	3,512m² (88%)
Government Land :	497m² (12%)
Site Area:	4,009m² (100%)

1:1000	**Viewpoints of Site Photographs taken on 24.7.2021** Lot No. 788(part), 790(part), 793, 794 & 801 RP in D. D. 381 and Adjoining Government Land Tuen Mun, New Territories	**Goldrich Planners & Surveyors Ltd.**
July 2024		**Plan 6b** **(P 22015)**



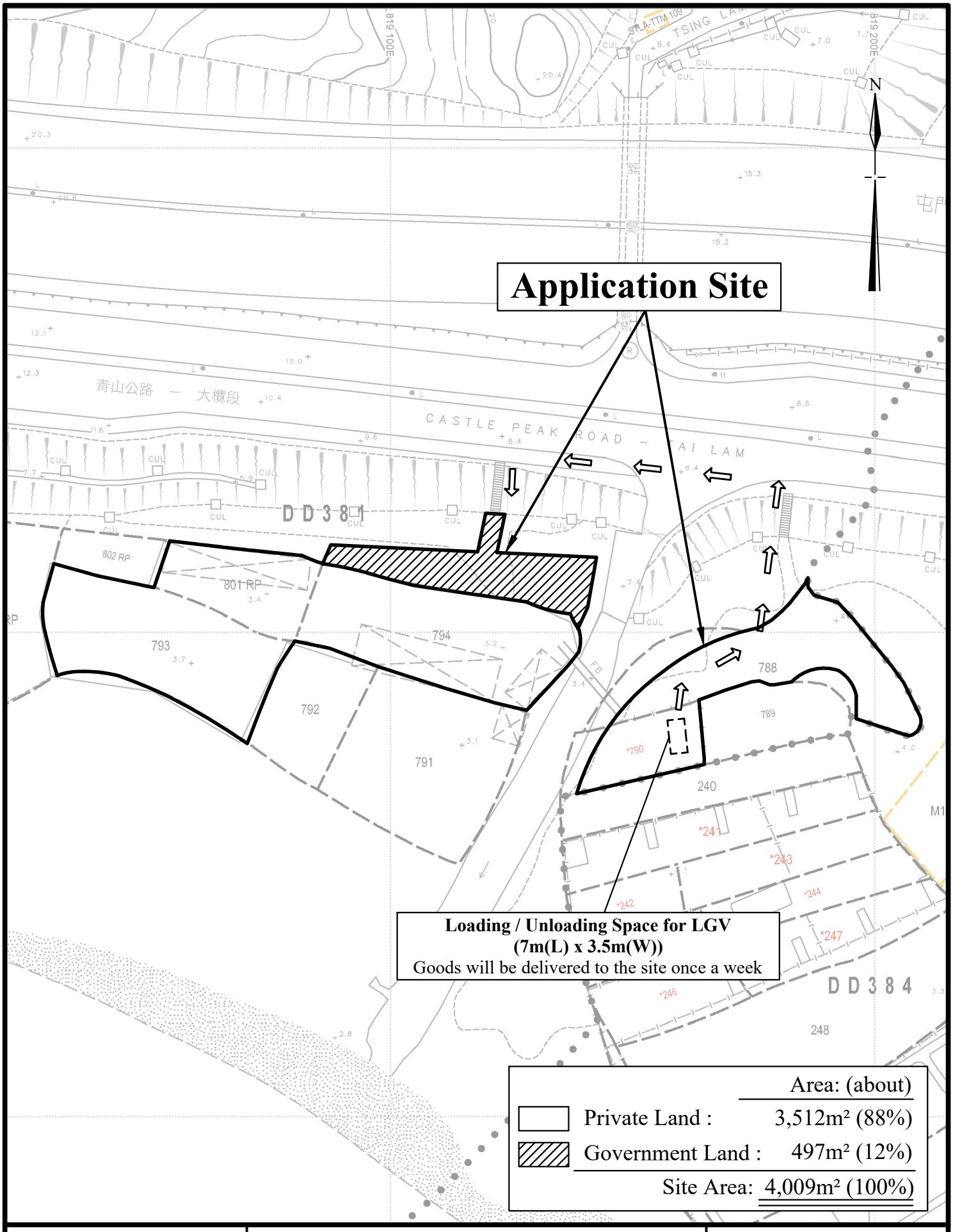
	Spacing (Centre to Centre)	Min. Size (Height)	Quantity
Proposed Bauhinia blakeana (洋紫荊)	4m	2.75m	6
Total	-	-	6

Legend

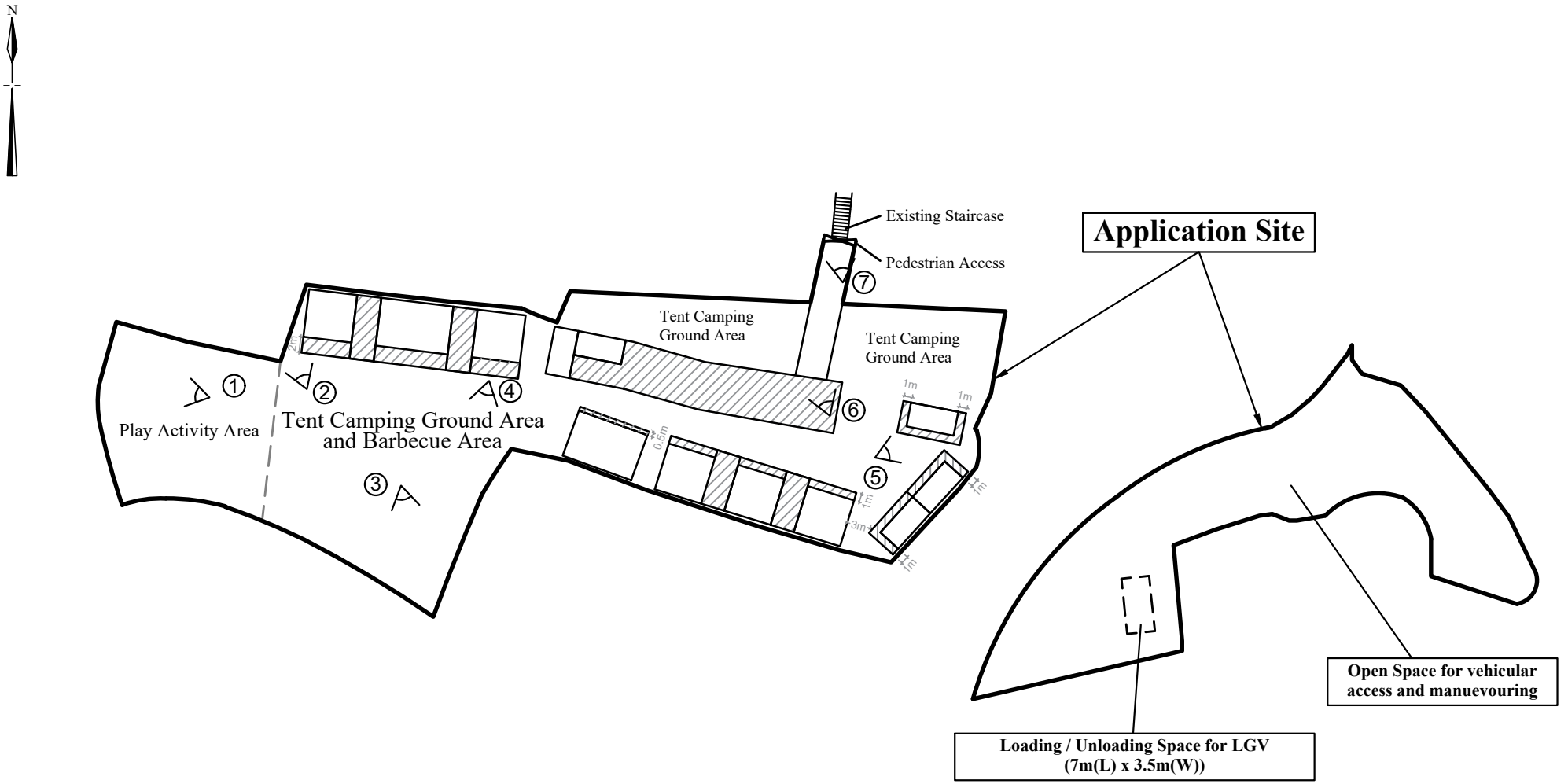
- Open shed / Canopy
- Temporary Single Storey Structure
- Proposed Bauhinia blakeana
- Proposed potted Hibiscus rosa-sinensis

1 : 750	# Landscape Proposal Lot 788(part), 790(part), 793, 794 & 801 RP in D.D. 381 and Adjoining Government Land Tuen Mun, New Territories	**Goldrich Planners & Surveyors Ltd.**
July 2024		**Plan 7b** **(P 22015)**

N.T.S	# Aerial Photo Showing the Existing Tree Groups in the Vicinity Lot 788(part), 790(part), 793, 794 & 801 RP in D.D. 381 and Adjoining Government Land Tuen Mun, New Territories	**Goldrich Planners & Surveyors Ltd.**
July 2024		**Plan 8b (P 22015)**



1:1000	**Plan Showing the Loading/Unloading Space for LGV** **Lot No. 788(part), 790(part), 793, 794 & 801 RP in D. D. 381 and Adjoining Government Land** **Tuen Mun, New Territories**	**Goldrich Planners & Surveyors Ltd.**
July 2024		**Plan 9b (P 22015)**



Legend

Open shed / Canopy

Viewpoint of Site Photo

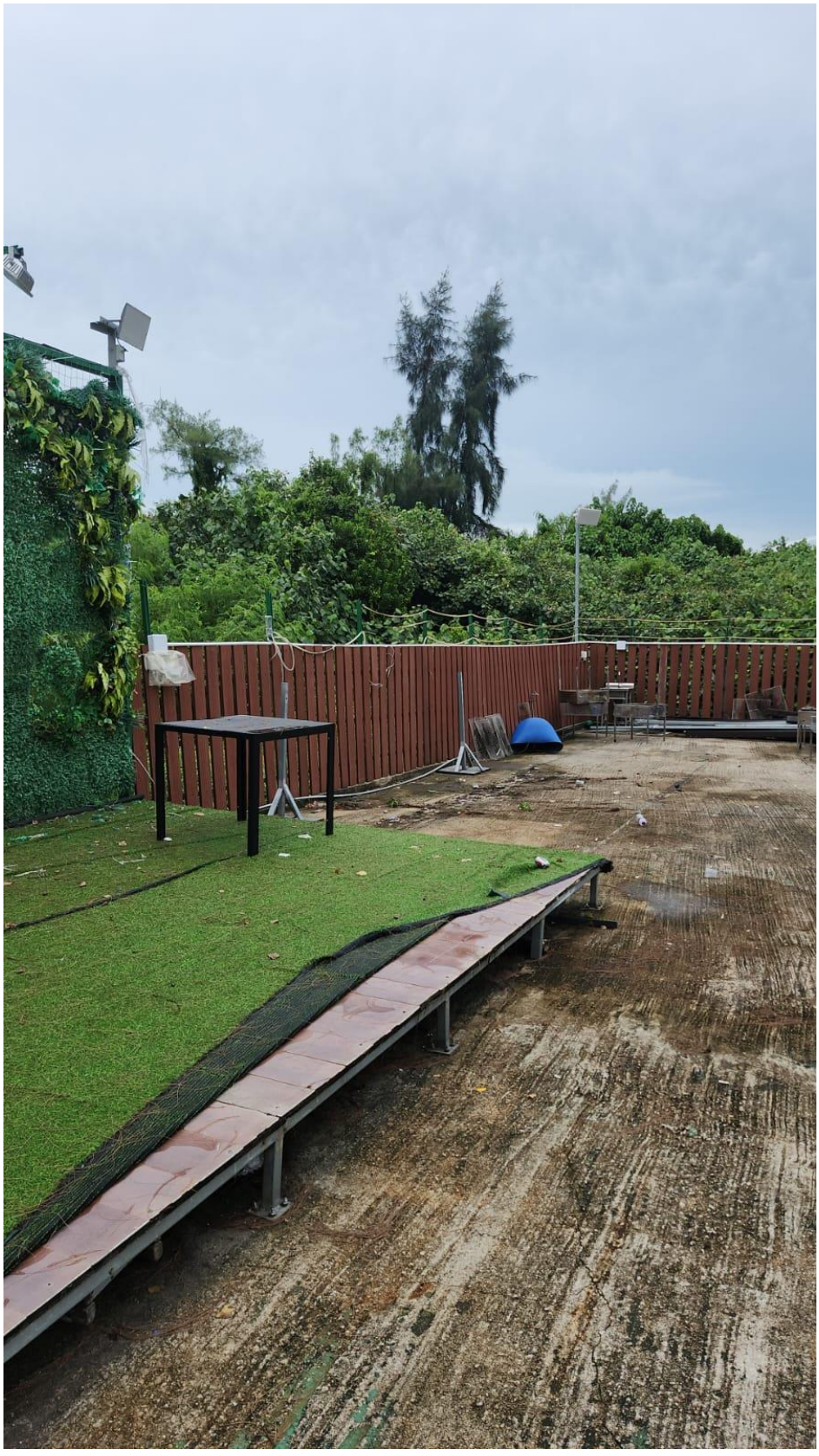
1:750 (A4)	**Plan Showing Viewpoints of Site Photographs** Lot No. 788(part), 790(part), 793, 794 & 801 RP in D. D. 381 and Adjoining Government Land Tuen Mun, New Territories	Goldrich Planners & Surveyors Ltd.
July 2024		Plan 11 (P 22015)

Your Ref.: A/TM/592 Our Ref.: P22015

Viewpoint 1

Viewpoint 2

Viewpoint 3



Your Ref.: A/TM/592 Our Ref.: P22015

Viewpoint 4

Viewpoint 5

Viewpoint 6

Viewpoint 7