Proposed Temporary Public Vehicle Park for Private Car for a Period of 3 Years and Associated Excavation of Land
at
Lot 2657 RP (Part) in D.D. 120, Shan Ha Tsuen, Yuen Long, N.T.

Annex 1 DRAINAGE PROPOSAL

1.1 Existing Situation

A. Site particulars

1.1.1 The application site has been hard paved and occupied an area of about 910m^2.

1.1.2 The application site will be occupied for a public vehicle park for private car.

B. Level and gradient of the application site & proposed surface channel

1.1.3 The lowest point of the site is at the northeastern part which is about +10.0mPD. The highest point of the site is at the southwestern part which is about +9.5mPD.

C. Catchment area of the proposed drainage provision at the application site

1.1.4 According to **Figure 4**, it is noted that the land to surrounding the application site commands a lower level or about the same level as the application site. As such, no external catchment has been identified.

D. Particulars of the existing drainage facilities to accept the surface runoff collected at the application site

1.1.5 As shown in **Figure 4,** an open drain is found to the immediate south of the application site.

1.2 Runoff Estimation

1.2.1 Rational method is adopted for estimating the designed run-off

$$Q = k \times i \times A/3{,}600$$

Assuming that:
i. The area of the entire catchment is approximately 910m^2; (**Figure 4**)
ii. It is assumed that the value of run-off co-efficient (k) is taken as 1.

Difference in Land Datum = 10.0m – 9.5m = 0.5m

L = 60m

$\therefore$ Average fall = 0.5m in 60m or 1m in 120m

According to the Brandsby-Williams Equation adopted from the "Stormwater Drainage Manual – Planning, Design and Management" published by the Drainage Services Department (DSD),

$$\text{Time of Concentration } (t_c) = 0.14465 \left[L/(H^{0.2} \times A^{0.1}) \right]$$

$$t_c = 0.14465 \left[60/ (0.83^{0.2} \times 910^{0.1}) \right]$$

$$t_c = 4.55 \text{ minutes}$$

With reference to the Intensity-Duration-Frequency Curves provided in the abovementioned manual, the mean rainfall intensity (i) for 1 in 50 recurrent flooding period is found to be 280mm/hr

$$\textbf{\textit{By Rational Method}}, Q_1 = 1 \times 280 \times 910 / 3{,}600$$

$$\therefore Q_1 = 70.78 \text{ l/s} = 4{,}246.67 \text{ l/min} = 0.07 m^3/s$$

In accordance with the Chart or the Rapid Design of Channels in "Geotechnical Manual for Slopes", 300mm surface U-channel at 1:140 gradient is considered adequate to dissipate all the stormwater accrued by the application site and adjacent land.

1.3 Proposed Drainage Facilities

1.3.1 Subject to the calculations in 1.2 above, it is determined that proposed 300mm concrete surface channel at gradient of about 1:140 along the site periphery is adequate to intercept storm generated at the application site (**Figure 4**).

1.3.2 The collected stormwater will then be discharged to the existing open drain to the south of the application site via the proposed 300mm surface channel outside the application site.

1.3.3 All the proposed drainage facilities will be provided and maintained at the applicant's own expense. Also, surface channel will be cleaned at regular interval to avoid the accumulation of rubbish/debris which would affect the dissipation of storm water.

1.3.4 Sand trap or alike will be provided at the terminal catchpit to avoid the addition of load into public drainage.

1.3.5 All the proposed drainage facilities will be constructed and maintained at the expense of the applicant.

1.3.6 For the drainage works outside the jurisdiction of the applicant, the applicant will seek the consent of land owners or District Lands Office/Yuen Long for works

outside application site prior to the commencement of works.

1.3.7 The development would neither obstruct overland flow nor adversely affect existing natural streams, village drains, ditches and the adjacent areas, etc.

1.3.8 All proposed works at the site periphery would not obstruct the flow of surface runoff from the adjacent areas, the provision of surface channel at site boundary is detailed hereunder:

(a) Soil excavation at site periphery, although at minimal scale, is inevitably for the provision of surface channel and landscaping. In the reason that the accumulation of excavated soil at the site periphery would obstruct the free flow of the surface runoff from the surroundings, the soil will be cleared at the soonest possible after the completion of the excavation process.

(b) In view of that soil excavation may be continued for several working days, surface channel will be dug in short sections and all soil excavated will be cleared before the excavation of another short section.

(c) No leveling work will be carried at the site periphery. The level of the site periphery will be maintained during and after the works. As such, the works at the site periphery would not either alter or obstructed the flow of surface runoff from adjacent areas.

(d) Adequate gap, 100mm, will be reserved at the toe of the site hoarding to allow free flowing of surface runoff to and from the application site.

Annex 2 Estimated Traffic Generation

2.1 The application site is accessible via a vehicular track leading from Shan Ha Road. In view of that the proposed development is target for the nearby residents and villagers, no new vehicle will be attracted to the application site in particular of the geographical location of Shan Ha Tsuen which is not close to other settlements.

2.2 The estimated average traffic generation and traffic generation rate at peak hours are as follow:

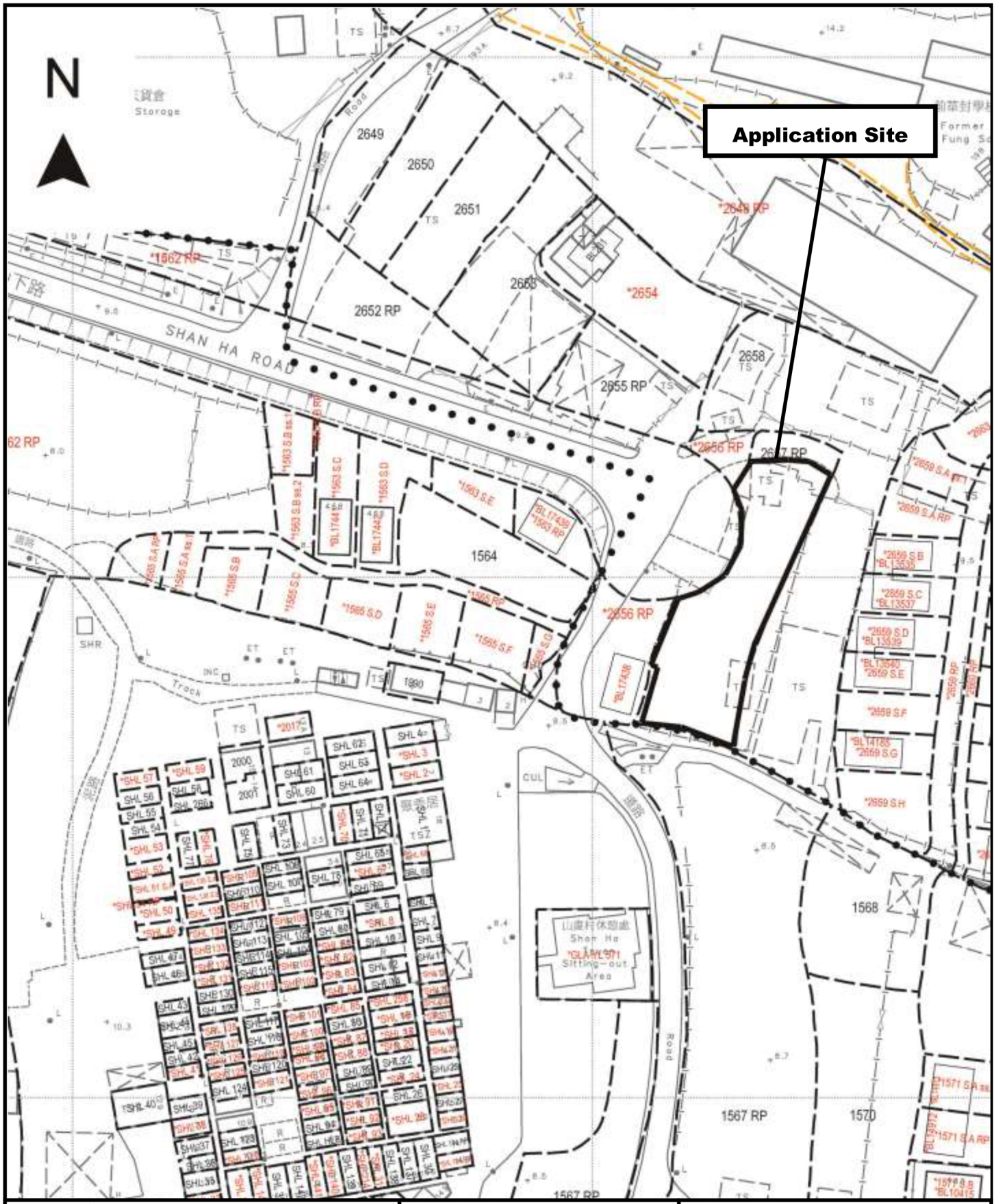
Type of Vehicle	Average Traffic Generation Rate (pcu/hr)	Average Traffic Attraction Rate (pcu/hr)	Traffic Generation Rate at Peak Hours (pcu/hr)	Traffic Attraction Rate at Peak Hours (pcu/hr)
Private car	1.25	1.25	10	8

Note 1: The opening hour of the proposed development is restricted to 7:00 a.m. to 11:00 p.m. at all days including Sundays and public holidays.

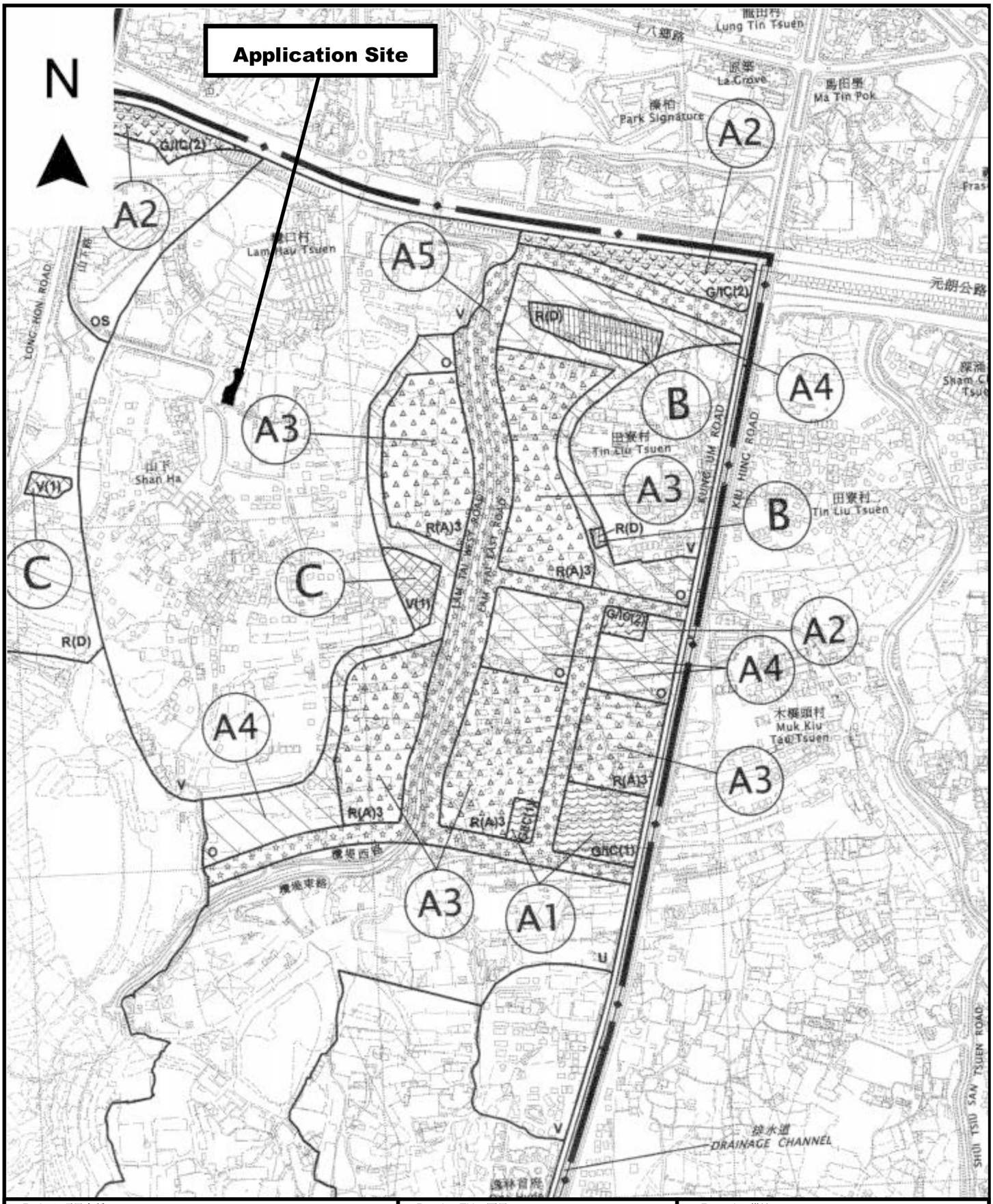
Note 2: The pcu of private car are taken as 1.

Note 3: Morning peak is defined as 7:00a.m. to 9:00a.m. whereas afternoon peak is defined as 5:00p.m. to 7:00p.m.

2.3 In association with the intended purpose, adequate space for manoeuvring of vehicle would be provided within the application site and queueing up of traffic would not be the result especially that the traffic generated is insignificant. The negligible increase in traffic would not aggravate the traffic condition of Shan Ha Road and nearby road networks.



Project 項目名稱:	Drawing Title 圖目:	Remarks 備註:
Proposed Temporary Public Vehicle Park for Private Car for a Period of 3 Years at Lot 2657 RP (Part) in D.D. 120, Shan Ha Tsuen, Yuen Long, N.T.	Site Plan	
	Drawing No. 圖號: Figure 1	Scale 比例: 1:1000



Project 項目名稱: Proposed Temporary Public Vehicle Park for Private Car for a Period of 3 Years at Lot 2657 RP (Part) in D.D. 120, Shan Ha Tsuen, Yuen Long, N.T.	Drawing Title 圖目: Location Plan	Remarks 備註:
	Drawing No. 圖號: Figure 2	Scale 比例 1:7500

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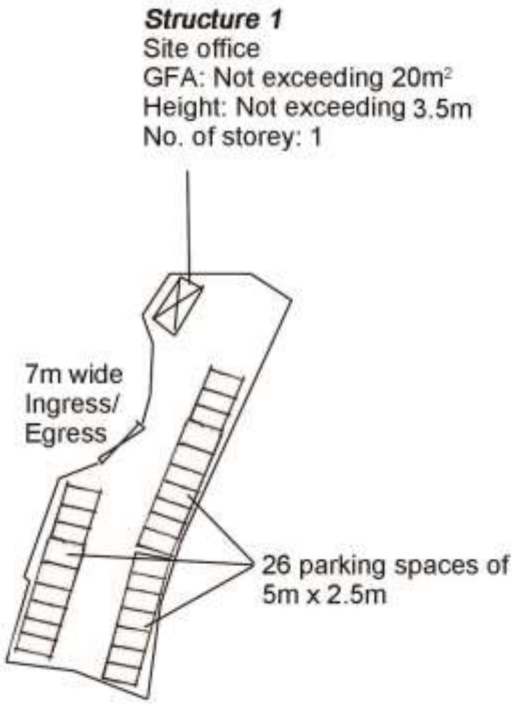
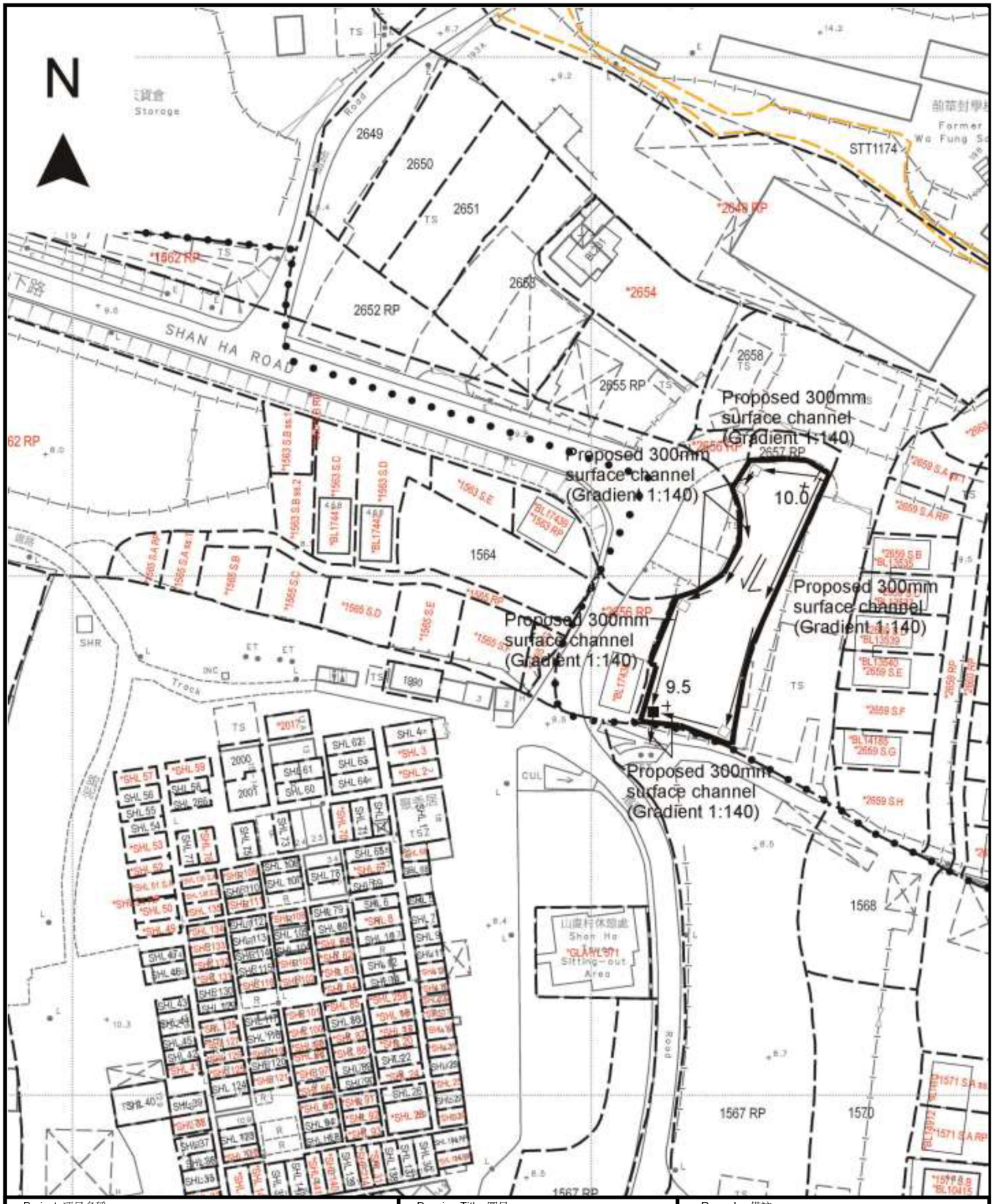
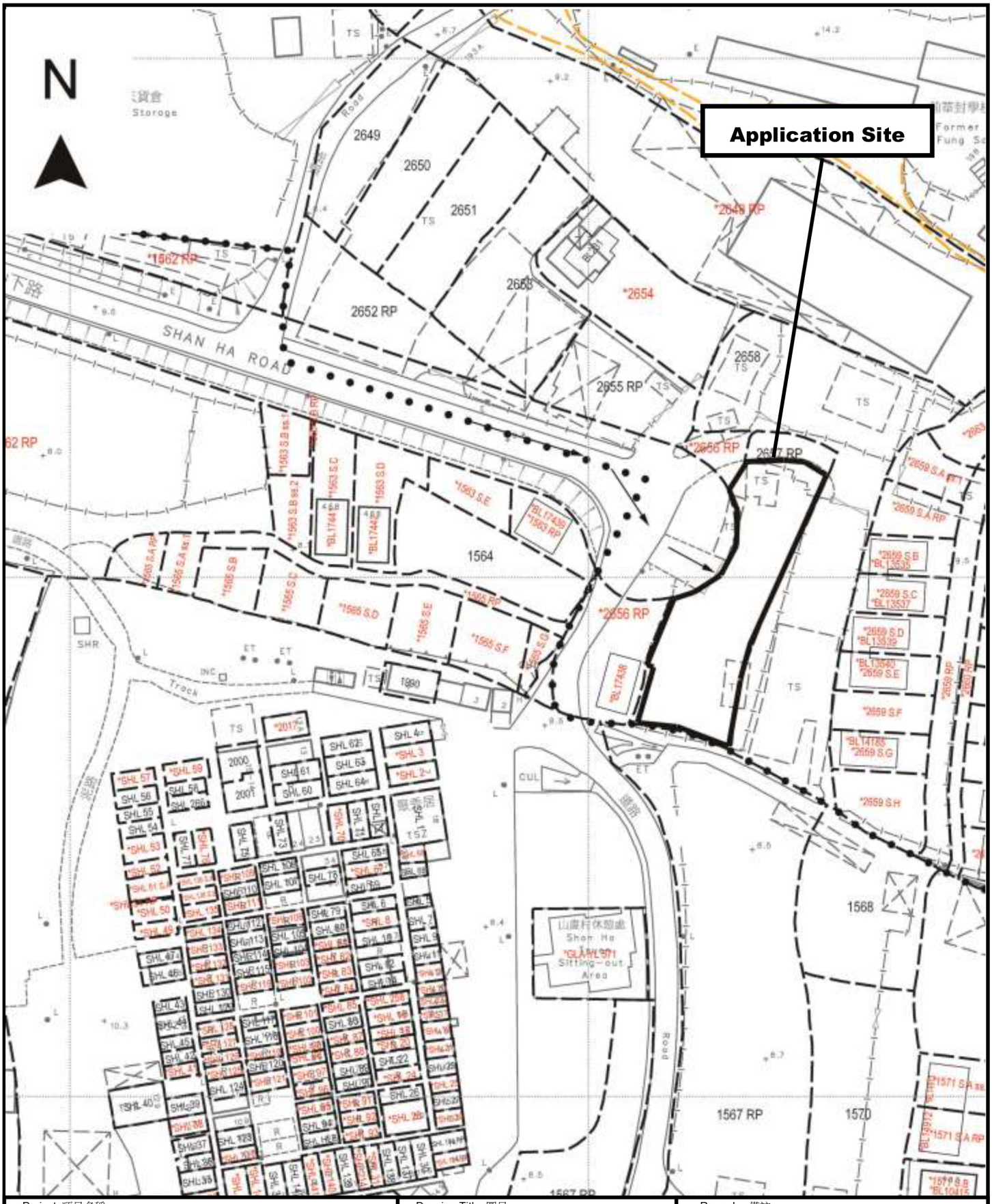


Project 項目名稱:	Drawing Title 圖目:	Remarks 備註:
Proposed Temporary Public Vehicle Park for Private Car for a Period of 3 Years at Lot 2657 RP (Part) in D.D. 120, Shan Ha Tsuen, Yuen Long, N.T.	Proposed Layout Plan	
	Drawing No. 圖號: Figure 3	Scale 比例: 1:1000



Project 項目名稱: Proposed Temporary Public Vehicle Park for Private Car for a Period of 3 Years at Lot 2657 RP (Part) in D.D. 120, Shan Ha Tsuen, Yuen Long, N.T.	Drawing Title 圖目: Proposed Drainage Plan	Remarks 備註: □ Proposed catchpit ■ Catchpit with sand trap ⟸ Flow of surface runoff +10.0 Level (in mPD)
	Drawing No. 圖號: Figure 4	Scale 比例: 1:1000



Project 項目名稱: Proposed Temporary Public Vehicle Park for Private Car for a Period of 3 Years at Lot 2657 RP (Part) in D.D. 120, Shan Ha Tsuen, Yuen Long, N.T.	Drawing Title 圖目: Vehicular Access Plan	Remarks 備註: → Vehicular access leading from Shan Ha Road
	Drawing No. 圖號: Figure 5	Scale 比例: 1:1000