Proposed Temporary Public Vehicle Park for Private Car for a Period of 3 Years at
Lots 20 RP (Part), 21 RP (Part) & 22 RP (Part) in D.D. 121, Ping Shan, 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 2,600m^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 northwestern part which is about +6.5mPD. The highest point of the site is at the southeastern part which is about +7.0mPD.

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,** a public manhole SCH1006297 connecting to the river to the west is found to the west 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 2,600m^2; (**Figure 4**)
ii. It is assumed that the value of run-off co-efficient (k) is taken as 1.

Difference in Land Datum = 7.0m – 6.5m = 0.5m

L = 75m

∴ Average fall = 0.5m in 75m or 1m in 150m

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

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

$$t_c = 0.14465 \left[75/ (0.67^{0.2} \times 2{,}600^{0.1}) \right]$$

$$t_c = 5.35 \text{ minutes}$$

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 275mm/hr

$$\textbf{\textit{By Rational Method}}, Q_1 = 1 \times 275 \times 2{,}600 / 3{,}600$$

$$\therefore Q_1 = 198.61 \text{ l/s} = 11{,}916.67 \text{ l/min} = 0.19 m^3/s$$

In accordance with the Chart or the Rapid Design of Channels in "Geotechnical Manual for Slopes", 450mm surface U-channel at 1:120 and 1:160 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 450mm concrete surface U-channel at gradient of about 1:200 along the site periphery is adequate to intercept storm water passing through and generated at the application site (**Figure 4**).

1.3.2 The collected stormwater will then be discharged to the existing river to the west of the application site via the proposed 450mm surface U-channel outside the application site connecting to the public manhole SCH1006297.

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 trees and 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 will be opened for parking of private cars only. No light goods vehicle, medium goods vehicle ad heavy goods vehicle or container trailer/tractor will be allowed to enter the site. A total of 85 parking spaces are proposed for the parking of private car. Also, vehicles without valid licences issued under the Road Traffic Ordinance will not be permitted to park at the application site.

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

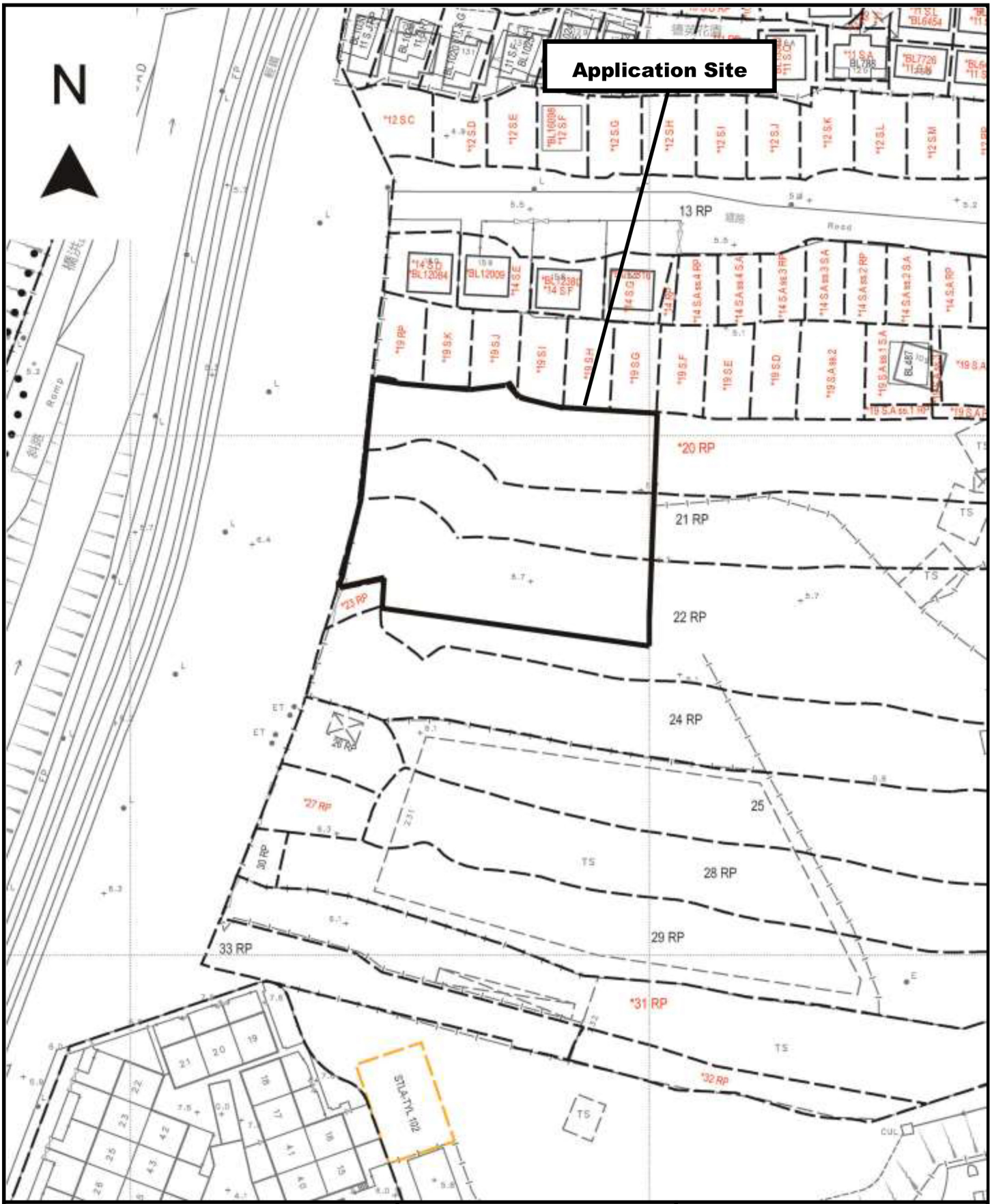
Type of Vehicle	Average Traffic Generation Rate (pcu/hr)	Average Traffic Attraction Rate (pcu/hr)	Traffic Generation Rate at Peak Hours (pcu/hr)	Traffic Attraction Rate at Peak Hours (pcu/hr)
Private cars	3.94	3.94	25	21

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

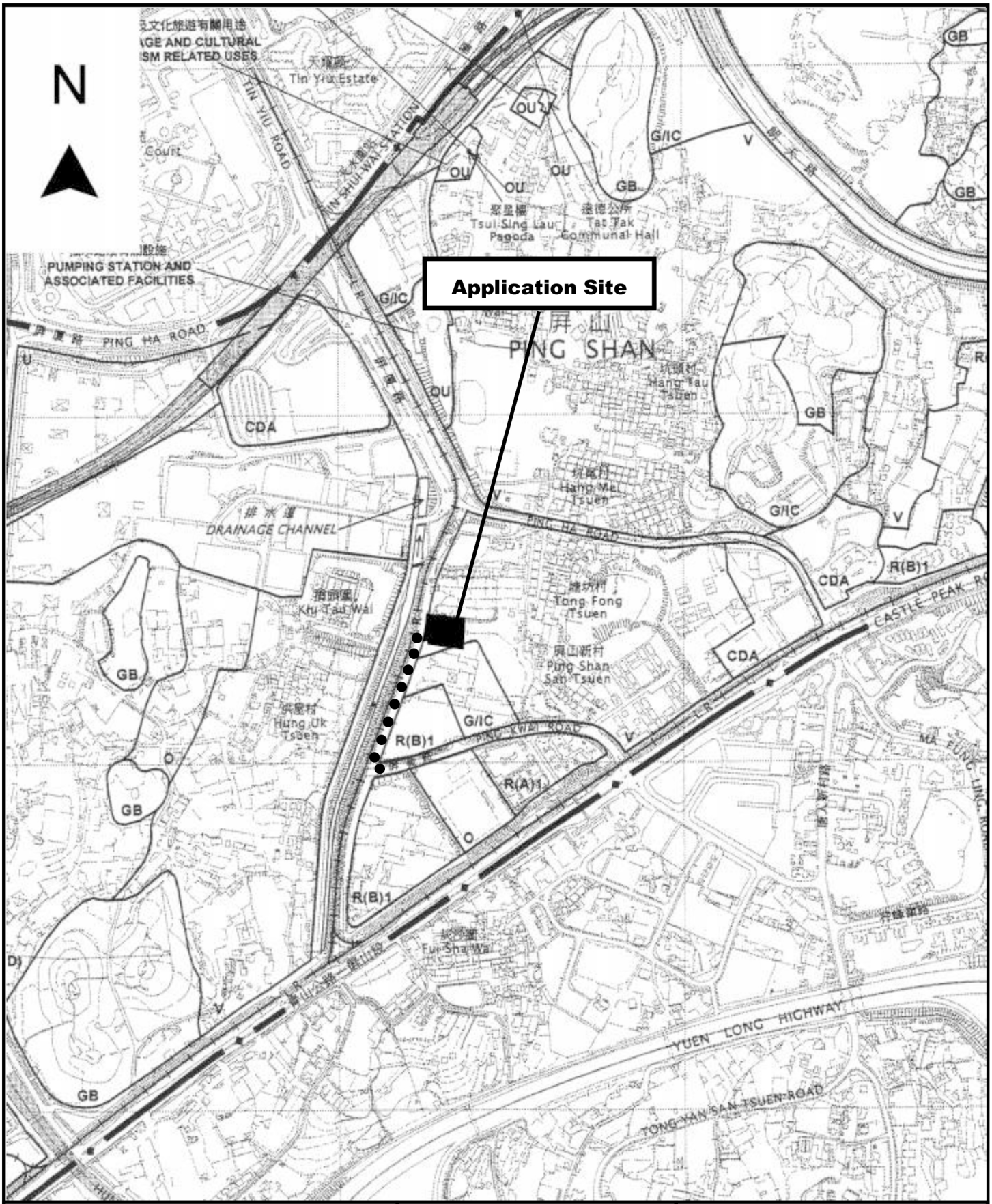
Note 2: The pcu of private car is taken as 1.

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 As shown in the above estimation, it is estimated that the proposed development would not generate significant amount of traffic. It would not affect the traffic condition of the area especially that the proposed development would provide only 85 parking spaces.



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 Lots 20 RP (Part), 21 RP (Part) & 22 RP (Part) in D.D. 121, Ping Shan, 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 Lots 20 RP (Part), 21 RP (Part) & 22 RP (Part) in D.D. 121, Ping Shan, Yuen Long, N.T. .	Drawing Title 圖目: Location Plan	Remarks 備註: ●●● Vehicular access leading from Ping Kwai Road
	Drawing No. 圖號: Figure 2	Scale 比例: 1:7500

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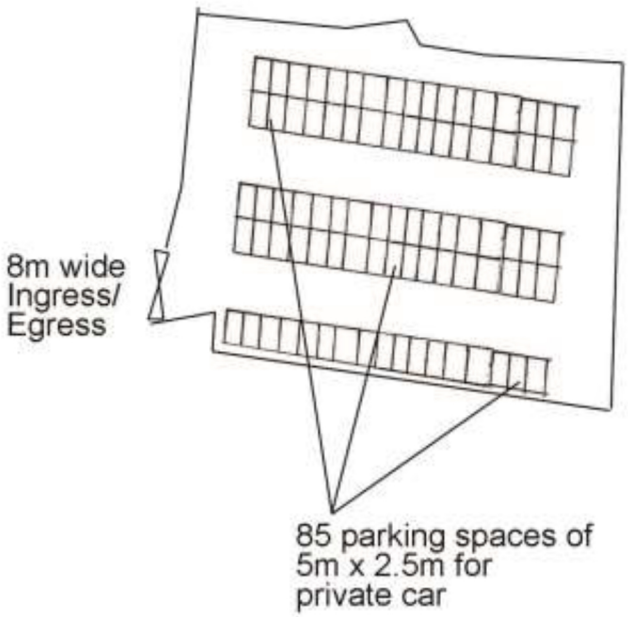

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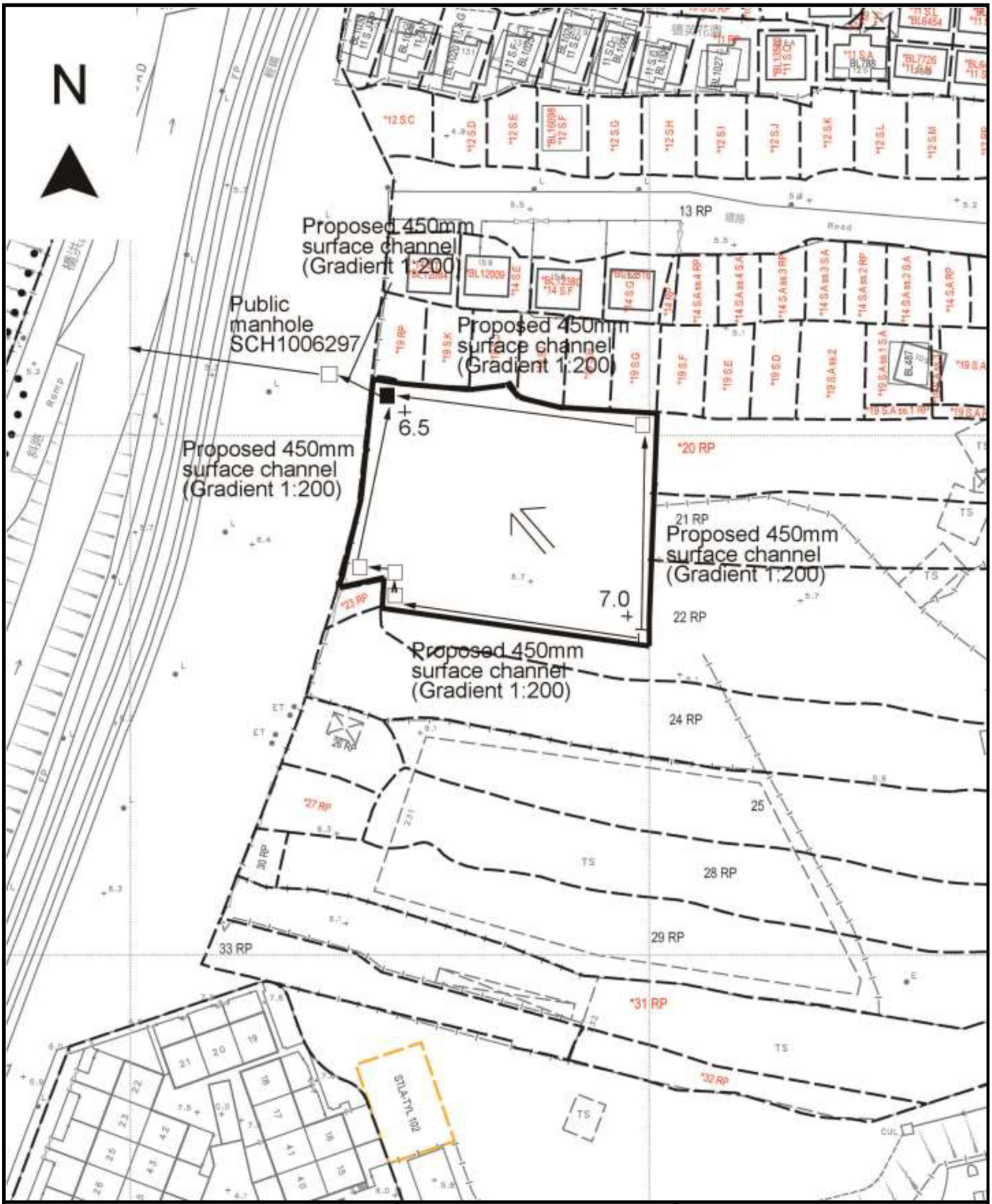
Proposed Temporary Public Vehicle Park for Private Car for a Period of 3 Years at Lots 20 RP (Part), 21 RP (Part) & 22 RP (Part) in D.D. 121, Ping Shan, Yuen Long, N.T. .	Proposed Layout Plan	
	Drawing No. 圖號: Figure 3	Scale 比例: 1:1000



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Drawing Title 圖目:

Proposed Drainage Plan

Drawing No. 圖號:

Figure 4

Remarks 備註:

- □ Proposed catchpit
- ■ Catchpit with sand trap
- ⇐ Flow of surface runoff
- +7.0 Level (in mPD)

Scale 比例:

1:1000