Drainage proposal

In the vehicle parking area, no channelised drainage facilities is now present on site to collect and discharge the surface runoff. It would not be technically nor economically difficult to construct U-channels, with associated facilities to discharge the surface runoff. However, to reduce erosion of the natural ground from concentrated channelised surface runoff, spreading features, such as bell out with rubble surface protection would need to be incorporated into the scheme. As described above, the surface runoff is evenly discharged into the flat non protected ground surface and dispersed naturally. The surface runoff is then naturally discharged onto the gentle vegetated slope. No flooding or surface erosion on the flat ground or natural gentle slope were observed. The objectives of drainage proposal would be to achieve the above. It appears the current drainage pattern is serving the above function. Further engineering solution appears not necessary. Along this line, it appears suitable to allow the surface runoff to be discharged in the current mechanism. Construction of man.made features to collect the surface runoff appears not necessry.

Conclusion and recommendation

It could be concluded based on result-oriented approach; the current drainage condition is acceptable. No engineering works would be needed.

I hope the above recommendation is acceptable. If further information is needed, I am available for discussion anytime at [redacted]

Yours faithfully,

CHUNG KWOK-FAI EDWIN
MASc, B Eng FHKIE
Registered Structural Engineer
Registered Geotechnical Engineer
Registered Professional Engineer

Encl

CC. Operator of restaurant

Current Site and Drainage Condition

Layout of the car park as indicated in **drawing A-1**
Area Photo showing the conditions of the adjoining land/ground **Pan A-3**
Topographical survey carried out be certified survey in July 2021
Plan showing the direction of photos taken and photos

28 parking space is proposed, it is however believed that the available space could be less as it would not be possible to utilize some spaces near the end.

From the site survey and site inspections, vehicle park area is paved, the gradient of the car park in the south-east direction is about 3% and that along the other direction toward the gentle nature slope is about 1%. The surface water would be evenly drained toward the end of the car park along a 15 meters strip of relatively level ground. The paved area would effectively act as a 15 to 20 meters wide flat channel. With the 3% gradient, no ponding of surface water would occur, and the surface runoff shall cease shortly after rain stops. The drainage condition was observed during a rainy day as indicated in the photos. It appears that mother nature is exercising her natural ability to take care of the surface water.

As I am a regular customer of this restaurant for close to 40 years with different operators, the vehicle parking area in the present form always exists.. No signs of distress or evident of erosion were observed on the current surface discharge location and the surrounding grounds, including the gentle nature slope further down. Please refer to photos of the discharge location.

Vehicle Parking conditions

The parking is solely for the customers of the restaurant during the operation hours from 10 am in the morning to 11pm at night. In fact, the vehicle park would only have vehicle during lunch and dinner hours. The restaurant is a high-end restaurant, vehicles of customers are relatively high end and new vehicles. Leakage of oil during the short parking during dining is very unlikely. There is also no vehicle washing facilities. Generation of oil or other polluted material from the cars parked shall be unlikely. A gate shall be constructed for better control of the parking.

Current condition of adjoining ground

Inspections were condition on the ground and gentle slope where the surface runoff is being drained have been conducted. As may be seen from the photos, no signs of distress and erosion have been observed.

Chung Kwok Fai, Edwin
[redacted]

Reference: A/NE-YTT/2
Our Ref: SMT/Drainage/01
Date: 4 May 2022

Chief Engineer, Mainland North Division
Drainage Services Department
5/F, Kowloon Government Offices
405 Nathan Road, Kowloon

Attn: Ms Ha Mei Ying

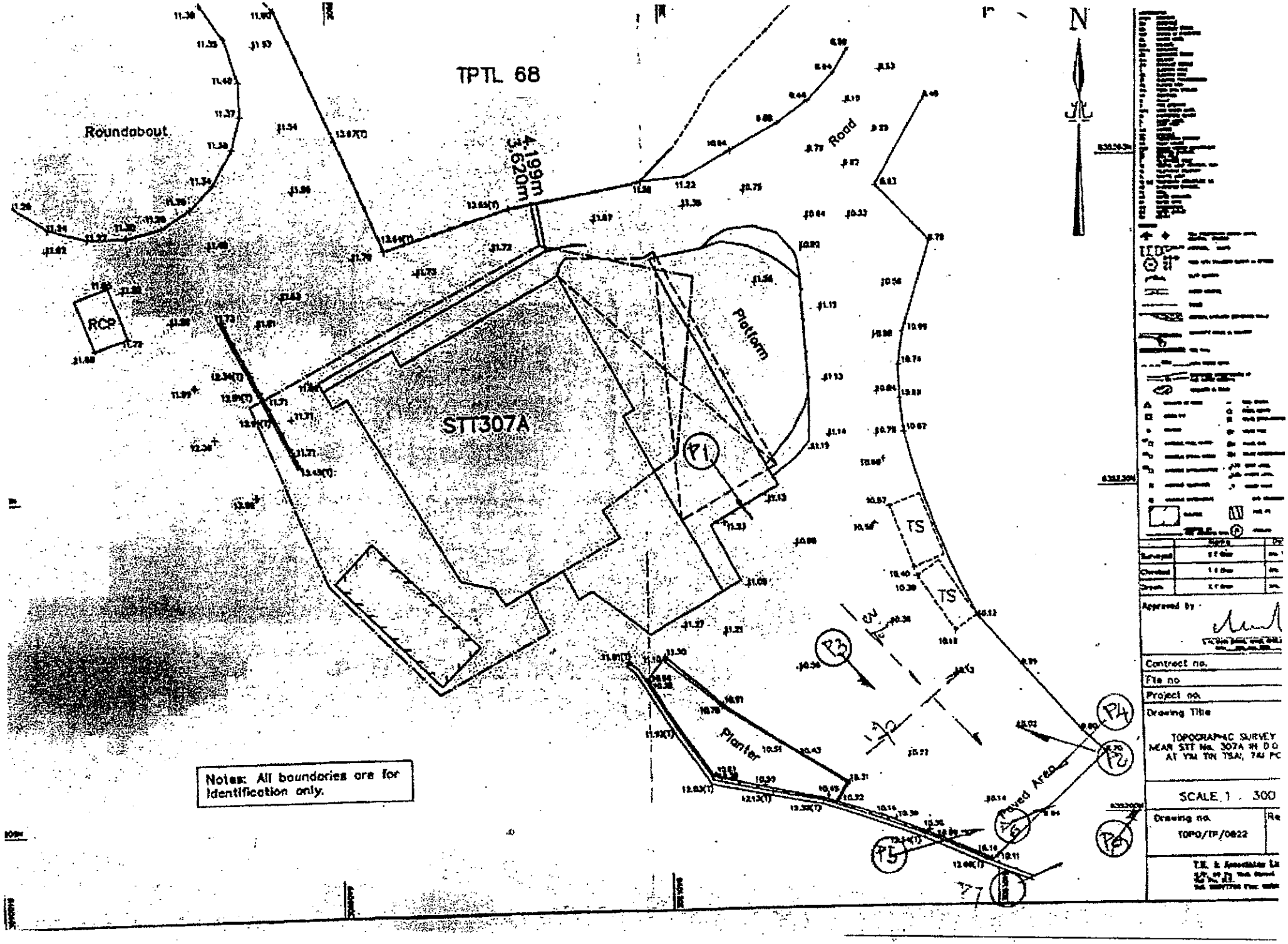
Dear Ms Ha,

Proposed Ancillary Vehicle Park for a Period of 3 years
Lot 70(part) in DD 27 and Adjoining Government Land
Yim Tin Tsai, Tai Po, NT
Drainage Proposal

I refer to approval from Town Planning Board dated 1st April 2022 (copy attached). One of the conditions requires submission of the drainage proposal for the vehicle parking area. I was requested by the restaurant operator to address this condition. This letter provides the drainage proposal for consideration of Chief Engineer, Mainland North Division of Drainage Services Department.

Introduction

Town Planning Board approved the application for Vehicle Park for the customers of the restaurant in a piece of land adjoining the restaurant in April 2022. One of the conditions requires submission of the drainage proposal for the vehicle parking area. The following presents the current site and drainage conditions, the vehicle parking condition and the recommendation based on the above conditions. ***Result-oriented approach*** was adopted to prepare the proposal. Site inspections (some conducted during rain) and discussions with the current restaurant operator have been conducted. Topographical survey of the vehicle park was carried out by TH & Associates Limited in July 2021 to provide information on the ground profile and the flow direction of the surface runoff.


TPTL 68
Roundabout
4,199m
3,620m
Road
Platform
RCP
STT307A
P1
P2
P3
P4
P5
P6
P7
TS
TS
CW
Planter
Paved Area
N
Notes: All boundaries are for identification only.
Approved by
Contract no.
File no
Project no.
Drawing Title
TOPOGRAPHIC SURVEY
NEAR STT No. 307A IN D.D.
AT YIM TIN TSAI, TAI PO
SCALE 1 : 300
Drawing no.
TOPO/TP/0822