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By Email and Hand

Date : 13 November 2025
Your Ref.: TPB/A/TM/601
Our Ref. : LDS/PLAN/7145

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

Dear Sir/Madam,

**Application for Planning Permission for
Proposed House at Tuen Mun Town Lot No. 550 (TMTL 550), Tuen Mun, N.T.
(Application No. A/TM/601)**

We refer to the comments from various Government departments on the captioned application and submit herewith our response in **Table 1** and relevant revised technical assessments for your consideration.

Should there be any queries, please contact our Ms. Cannis Lee at [REDACTED]

Yours faithfully,
For and on behalf of
Lawson David & Sung Surveyors Limited




Encl.

c.c. DPO/TM&YLW (Attn.: Mr. Aiden Chu) – By Email
Client

Table 1: Responses to Comments from Government Departments on Planning Application No. A/TM/601 (13 November, 2025)

COMMENTS	RESPONSES
1. Drainage Services Department (DSD)	
The applicant should be advised that the limited desk-top checking by Government on the drainage proposal covers only the fundamental aspects of the drainage design which will by no means relieve his/her 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 comments on the submitted Drainage Impact Assessment (DIA) are as follows:	Noted and agreed.
(a) Re: Section 7.5, while additional runoff would be generated due to the proposed development, it would be inappropriate to conclude that “the proposed development would not cause any adverse drainage impact onto the area.” Please rephrase.	(a) The phrase is amended to “the proposed development would not cause any <u>unacceptable</u> adverse drainage impact onto the area” (see the revised DIA report in Annex A).
(b) Re: Figure 4, please show clearly the paved and unpaved area on this plan or on another plan with satellite imagery to confirm the correct adoption of the paving area assumption. In particular, it is noted that A3 is a large catchment where part of it appears to be paved area. In view of the above, please review whether it is appropriate to apply the unpaved catchment coefficient to the entire catchment and revise the calculations accordingly.	(b) Most of the area of the concerned subcatchment area, i.e. A3, is unpaved and some scattered houses exist near the uphill side of Shan Shek Wan Road. In order to cater for the existence of the currently paved areas, i.e. the scattered houses and the road, as demarcated in Figure 4, an equivalent catchment coefficient taking into consideration of the ratio between paved and unpaved areas of the concerned subcatchment area is therefore adopted in the calculations in the amended DIA.

COMMENTS	RESPONSES
	
(c) Re: Figure 5, (i) Please also advise the fall of the catchment situated immediately west of the proposed road to demonstrate that runoff of such catchment would not be delivered by the proposed 300mm U-channel.	(c) (i) Contribution of the catchment situated immediately west of the proposed road to the proposed 300mm U-channel is reviewed according to the topographical results and is added into Figure 5 and the calculations.
(ii) The proposed terminal manhole TM should only have one outlet where its invert level is denoted as D.T.L. Please review if X1 is redundant.	(ii) The X1 is redundant and therefore deleted.
(iii) It is noted that the invert level of the proposed outfall (+28.33 mPD) is lower than the existing stream bed level (+28.41 mPD). The invert level of the proposed outfall should be higher than the existing stream bed level to maintain free discharge of the flow at the outfall and to avoid backwater effect.	(iii) The gradients of the internal channels are amended such that the invert level of the proposed outfall, i.e. +28.43 mPD, is not lower than the existing stream bed level (+28.41 mPD). Hence, backwater effect is avoided.

COMMENTS	RESPONSES
(d) Re: Assessment of Hydraulic Capacities of the Proposed Drainage System, (i) With reference to Section 4.3.3 of the Stormwater Drainage Manual, please be advised that the recommended Intensity-Duration Frequency Relationship is based on the GEV distribution model instead of the Gumbel solution indicated in your assessment. Please revise the calculations accordingly.	(d) (i) Amended accordingly.
(ii) Two fields of “Top of Area A1” were labelled. Please check if any typo may be involved.	(ii) A typo was made. “Top of Area A2” shall be used at the upstream of CP1.
(iii) Please elaborate how the discharge of 1/3 to CP16 and 2/3 to CP9 was assumed and supplement the relevant delineation of such sub-catchment in Figure 5.	(iii) The relevant delineation of sub-catchment of CP16 and CP9 within the subject site boundary is added in Figure 5 and the calculations are amended accordingly in the amended DIA.
(iv) Please indicate clearly whether Manning equation or Colebrook-White equation was adopted for the calculation of each section.	(iv) Manning Equation is for channel flow and Colebrook's White Equation is for pipe flow. The relevant type of provision is stipulated in Column (26) in the calculations.
(v) Please elaborate on Column (22) EFF. AREA, which is not a standard term in the Stormwater Drainage Manual, in the calculation.	(v) ‘EFFECTIVE CATCHMENT AREA’ is adopted.
(vi) Please illustrate and elaborate on what basis the follow section parameter of section X-X was adopted in the calculation. Please provide relevant site survey record of the relevant existing streamcourse at downstream for reference.	(vi) The section X-X was adopted in the calculation because it is a comparatively narrow section of the existing streamcourse in the vicinity at the downstream of the subject site and the existing streamcourse becomes relatively steeper at the further downstream, i.e. having greater capacity, as indicated in the Government survey sheets.

COMMENTS	RESPONSES
(vii) Please advise how this special note “*” may be relevant to this calculation.	(vii) The special note “*” is obsolete and therefore deleted.
(e) The existing drainage system to which the proposed drainage connection is to be made and the existing drainage facilities to be modified are not maintained by this Department. Consent from the concerned departments/maintenance parties/owners should be obtained for the proposed connections to their drainage systems and the proposed modification of their drainage facilities to ensure that the proposed drainage systems can be practicably implemented.	(e) Noted and agreed. The proposed drainage works would only be constructed within the Application Lot, i.e. TMTL 550 and adjacent Government land. Detail design of the proposed drainage works shall be submitted to Buildings Department and undergo central processing mechanism under which all relevant Government departments will be notified and can grant their approvals/consents on the proposed drainage works.
(f) Please clarify the maintenance parties of the proposed drainage works.	(f) The proposed drainage works will be maintained by the owners of the subject proposed development.
In addition, we have the following general reminders:- (a) There are existing drainage facilities maintained by DSD in the vicinity of the site. The applicant shall take extreme care when working in the vicinity of any existing drainage works in order not to disturb, interfere with or cause damage to them. Any blockage or damaged to the said works due to the proposed development shall be made good at the applicant’s cost.	(a) Noted and agreed.
(b) For any works to be undertaken outside the lot boundary, the applicant should obtain prior agreement from DLO/TM and/or the relevant private lot owners.	(b) Noted and agreed.
(c) The applicant should construct and maintain the proposed drainage facilities properly whether within or outside the subject lots and rectify them if they are found to be	(c) Noted and agreed.

COMMENTS	RESPONSES
inadequate or ineffective during operation at their own expense. The applicant shall also be liable for and shall indemnify claims and demands arising out of any damage and/or nuisance caused by failure of their facilities/systems.	
2. Environmental Protection Department (EPD)	
EPD's Comments on Environmental Assessment (EA) 1. Air Quality 1.1 Table 2.1 – Please remove “for Government Projects” in the title.	1. 1.1 Revised accordingly (see revised EA in Annex B).
1.2 Section 2.2.1 – Please revise as: “The Air Pollution Control (Fuel Restriction) Regulations” in Line 1, 4, 5. Please also check the numbering of the sections.	1.2 Revised accordingly.
1.3 Section 2.3.1 – 1.3.1 Suggest to replace “other criteria air pollutants” by “air pollutants other than dust” in Line 2-3.	1.3.1 Revised accordingly.
1.3.2 Please revise as “At this planning application stage” in Line 8.	1.3.2 Revised accordingly.
1.4 Section 2.3.4 – Please remove “Where appropriate” in Line 2, and replace “are recommended” by “shall be carried out” in Line 2-3.	1.4 Revised accordingly.
1.5 Section 2.3.5 – Suggest to delete this section.	1.5 The sections has been deleted.

COMMENTS	RESPONSES															
1.6 Section 2.3.6 – Please replace “should” by “shall” in Line 1, “could” by “shall” in Line 3, “may” by “shall” in Line 5.	Revised accordingly. Please refer to updated S2.3.5.															
1.7 Section 2.4.1 & 7.1.4 – 1.7.1 Please provide the effluent volume/flow rate to justify that the scale is small.	1.7.1 One residential unit with flow rate of 0.7m³ per day. <table><tr><td colspan="3">1. Proposed Development</td></tr><tr><td>1a. Total number of units</td><td>=</td><td>1 units</td></tr><tr><td>1b. Total number of residents</td><td>=</td><td>3 people -- (avg household size of 2.6 from 2021 Population Census - Tuen Mun)</td></tr><tr><td>1c. Design flow</td><td>=</td><td>270 litre/person/day -- (Modern Village in Table T-1 of GESF)</td></tr><tr><td>1d. Sewage Generation rate</td><td>=</td><td>0.7 m³/day</td></tr></table> Please refer to updated S2.4.1 & S7.1.4.	1. Proposed Development			1a. Total number of units	=	1 units	1b. Total number of residents	=	3 people -- (avg household size of 2.6 from 2021 Population Census - Tuen Mun)	1c. Design flow	=	270 litre/person/day -- (Modern Village in Table T-1 of GESF)	1d. Sewage Generation rate	=	0.7 m ³ /day
1. Proposed Development																
1a. Total number of units	=	1 units														
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1c. Design flow	=	270 litre/person/day -- (Modern Village in Table T-1 of GESF)														
1d. Sewage Generation rate	=	0.7 m ³ /day														
1.7.2 Please supplement the separation distance between the septic tank and the proposed development to confirm no adverse odour impact to the proposed development.	1.7.2 With distance of ~31m between the proposed septic tank and proposed development. Please refer to updated S2.4.1 & S7.1.4.															
1.8 Section 2.4.3, 2.4.4 & Table 2.4 – 1.8.1 Please supplement source of reference of the road type of the concerned roads (e.g. TD Traffic Census).	1.8.1 TD’s endorsement on road type of the concerned roads will be provided once available.															
1.8.2 For Lung Fu Road, according to TD Traffic Census 2023, the road type should be Primary Distributor rather than District Distributor. Please check.	1.8.2 Revised accordingly.															
1.8.3 For San Shek Wan Road, the road type cannot be found in TD Traffic Census 2023. Please seek TD’s advice whether the road should be classified as Local Distributor. Alternatively, the Consultant may adopt 20m buffer distance for the San Shek Wan Road as a conservative approach.	1.8.3 TD’s endorsement on road type of the concerned roads will be provided once available.															

COMMENTS	RESPONSES
1.9 Section 2.4.4 – Please supplement the shortest separation between the proposed access road and existing air sensitive receives to confirm that the access road would not cause adverse air quality impact the existing ASRs.	1.9 The shortest separation between the proposed access road and existing air sensitive receiver (ASR A1) is about 143m.
1.10 Section 7.1.2 – Please replace “significant” by “adverse” in Line 3.	1.10 Revised accordingly.
2. Land Contamination 2.1 Section 6.3 & Appendix 4 – Please provide the updated aerial photos and relevant observation in the sections. Moreover, please rearrange all the aerial photos in similar orientation for easier review.	2. Table 6.1 and Appendix 4 have been updated.
3. Waste Management 3.1 Section 5.2.1 – The Dumping at Sea Ordinance (Cap. 466) seems irrelevant to the proposed development. Please remove it.	3. 3.1 The Dumping at Sea Ordinance (Cap. 466) has been deleted to avoid confusion.
3.2 Section 5.2.2 - PNAP 252 ADV-21 seems irrelevant to the proposed development. Please remove it.	3.2 PNAP 252 ADV- has been deleted to avoid confusion.
3.3 Section 5.3.2 - Please confirm if timber is anticipated to be generated during construction. If so, please specify in relevant sections on whether the timber will be sent to Y·PARK for recycling.	3.3 Timber in S5.3.2 has been removed to avoid confusion.
3.4 Sections 5.3.8 & 5.3.12 - The term "small" is subjective and can be misleading, as it does not accurately reflect the actual waste quantities. Please	3.4 Revised accordingly. Please refer to S5.3.8 & S5.3.12.

COMMENTS	RESPONSES
remove this term, and avoid to use other ambiguous terms (e.g. "limited", "minimal", and "insignificant" etc.)	
3.5 Section 5.5.3 – Please provide the estimated quantity of general refuse to be generated during operation.	3.5 S5.5.3 and S7.1.11 have been revised.
3.6 Section 5.4.6 (1st bullet) - It is suggested to specify whether the Waste Management Plan will be submitted as part of the Environmental Management Plan to the Architect/Engineer for approval in accordance with ADV-19.	3.6 Revised accordingly.
3.7 Section 5.7 – For completeness, please also include the summary of operation phase.	3.7 S5.7.2 has been revised.
4. Sewerage The sewerage arrangement remains unchanged in this submission (as compared to s.12A rezoning application No. Y/TM/31), i.e. the applicant proposed to use septic tank as there is no public sewer in the vicinity of the site. In view that there is no existing or planned public sewers in the vicinity, and the population size is small, the septic tank proposed by the applicant is acceptable. The applicant should follow all the requirements as stipulated in ProPECC PN 1/23.	4. Noted.

COMMENTS	RESPONSES
3. Geotechnical Engineering Office, Civil Engineering and Development Department (GEO/CEDD)	
(a) Section 4.2, Figure 7 and Figure 14 of the GPRR. It is noted that the applicant has committed, in the GPRR, to undertake a natural terrain hazard study (NTHS) and to implement mitigation measures, if necessary, as part of the proposed development. However, the proposed NTHS study area as shown in Figure 7 and Figure 14 are inconsistent. The applicant is reminded that the NTHS study area should include the entire upslope natural terrain catchment above the subject site. Please ask the applicant to clarify and amend the figure(s) accordingly.	(a) Figure 7 and Figure 14 are revised to include the entire upslope natural terrain catchment above the site (see the revised Figure 7 and Figure 14 of the GPRR report in Annex C).
4. District Planning Officer/Tuen Mun and Yuen Long West, Planning Department (DPO/TM&YLW, PlanD)	
1. Planning Statement 1.1 Figure 7 - Section C-C in is apparently missing in the Master Layout Plan in Figure 4, please amend the figures accordingly.	1. Updated Figure 4 Master Layout Plan enclosed with building section C-C mark incorporated (see Annex D). Updated Figure 5 Floor Plan also enclosed with section A-and section C marks direction corrected (see Annex D).
2. Landscape Proposal with Tree Survey Report 2.1 Sections 2.10 and 2.11 – it is mentioned that a total of 7 <i>Leucaena leucocephala</i> will be fell. However, in the Tree Survey Report (Section 3.2, Table A2.1 and Annex II – Tree Treatment Schedule), the number of <i>Leucaena leucocephala</i> affected is shown as 6, please clarify. If the number of <i>Leucaena leucocephala</i> to be fell is confirmed to be 6, amendments to the relevant sections of the Landscape Proposal and Planning Statement are also required.	2. The proposal concludes that 17 trees are required of tree felling plus the removal of 6 weedy trees, <i>Leucaena leucocephala</i> . A total of 17 new trees of heavy standard stocks would be planted with 1:1 replanting ratio (17 trees felled: 17 new trees planted) with excluding the removal of 6 no. of <i>Leucaena leucocephala</i> . Relevant text and figures of Landscape Proposal and Tree Survey Report (see Annex E) and the Planning Statement (see Annex D) have been revised. Revised pages with highlight of changes enclosed to this FI.

COMMENTS		RESPONSES	
5. Transport Department (TD)			
2.	Regarding the Traffic Impact Assessment, we have the following comments:	2.	
(i)	Section 5.2 – please provide the details of 2025 existing pedestrian flow;	(i)	Please refer to Sections 2.11 to 2.14 in the Traffic Impact Assessment (TIA) report (see Annex F) for the details of 2025 existing pedestrian flow.
(ii)	To minimize impact on San Shek Wan Road, the junction with access road is suggested to be designed for maneuvering of two private cars at the same time.	(ii)	The design of junction of San Shek Wan Road / Proposed Access Road shown in Figure 3.2 in the TIA report has already allowed for 2 private cars to enter and leave simultaneously. Please see Figure R1 .
(iii)	Suitable signs and marking should be provided at the junction between San Shek Wan Road and the access road, at the relocated passing bay and at San Shek Wan Road to alert motorist the access road ahead and slow down.	(iii)	Please refer to Figure R2 for the proposed traffic signs and road marking for the junction of San Shek Wan Road / Proposed Access Road.
(iv)	For pedestrian safety, footpath near the new location of passing bay should be provided.	(iv)	Please refer to Figure R2 which shows the 1.5m-wide footpath provided near the proposed passing bay.
4.	Regarding the access management, please note that we have the following comments from traffic engineering viewpoint:-	4.	
(i)	Please be advised that the proposed vehicular access points is not located at public road under management of this department. Comments of the management and maintenance authorities of the location concerned should be sought.	(i)	Noted. The applicant will take the responsibility for the management and maintenance of the Proposed Access Road.
(ii)	Please be advised that the Subject Site is served by an access road which is not a public road under management of this department. The applicant should consult the management and maintenance authorities for the captioned application, including whether the access road	(ii)	Noted. The applicant will take the responsibility for the management and maintenance of the Proposed Access Road.

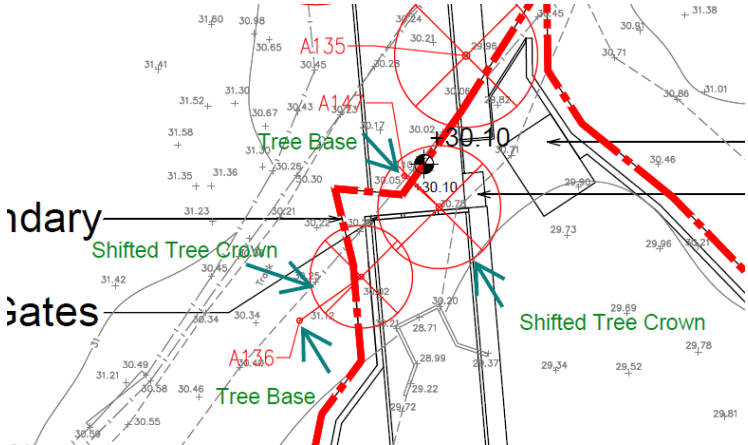
COMMENTS	RESPONSES
is adequate to serve the proposed use or upgrading works are required.	
(iii) No motor vehicles shall be permitted to reverse into and out of the subject site onto adjacent public roads.	(iii) Noted.
6. Leisure and Culture Services Department (LCSD)	
1. In light of the Proposed Access Road would affect a section of an existing horse trail currently use by the Tuen Mun Public Riding School (TMPRS) of HKJC Public Riding School Limited (HKJCPRS), which under tendency agreement with LCSD (held under permanent government land allocation no. GLA-TM296). From our preliminary assessment and two previous applications, interference is observed and will definitely pose potential risks to the horse riders and horses by the proposed vehicular traffic generated by the proposed residential development and the road widening/improvement works of the Proposed Access Road, as such, we have consulted the TMPRS and in-corporate their comment at below:	1. Please note that similar concerns were addressed in the S12A (No. Y/TM/11) and S16 (No. A/TM/469) applications, which were previously approved for the proposed holiday camp development. Approval condition “the submission and implementation of the management plan and operational plan for the vehicles and pedestrians of the holiday camp for passing the horse trail to the proposed holiday camp to the satisfaction of the Director of Leisure and Cultural Services or of the TPB” was imposed on the last application (No. A/TM/469). These concerns were also discussed at the District Lands Conference (DLC) on 5.5.2016 and addressed in the Special Conditions of New Grant No. 22878 (see Annex G). The Applicant has taken note of the comments from TMPRS and HKJCPRS as well as the LCSD’s advice and is obliged to ensure the safety of vehicles and pedestrians passing through the horse trail to reach the Application Site. A similar arrangement could be adopted for the current application. Compared with previous applications (Nos. A/TM/469 and Y/TM/31), the number of residents at the Application Site has been further reduced. The Applicant noted that, given the nature of the proposed residential development, the presumed number of users and traffic it will generate, it will be less than the formerly approved holiday camp. Therefore, the potential impact on and risk to the existing horse trail will be comparatively lower. Electronic gates will be installed at both sides of the intersecting points

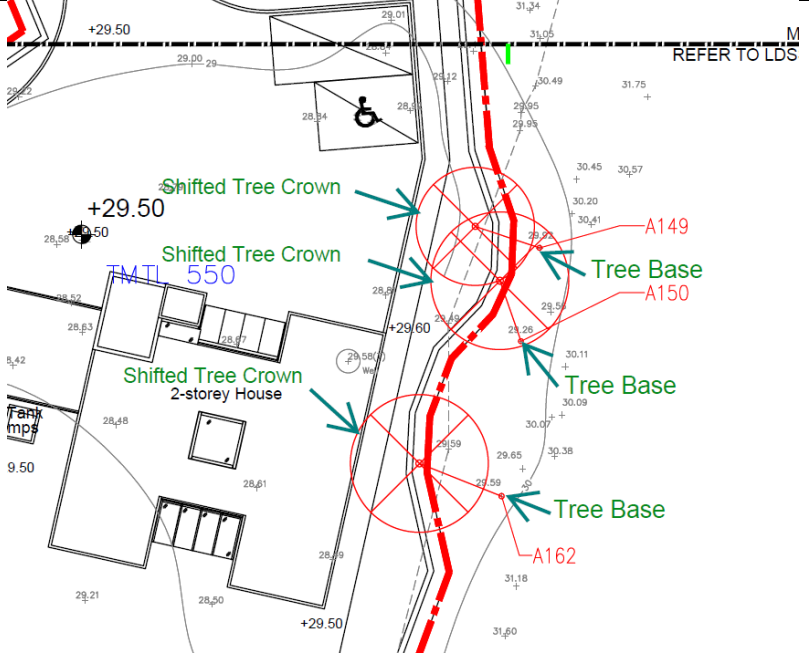
COMMENTS	RESPONSES
	to ensure that drivers stop and check the traffic conditions before entering the horse trail. Warning signs will also be erected to alert drivers and horse riders to pay attention at the road intersection. Safety measures will also be adopted during the widening and improvement works on the Proposed Access Road. As with the previous S12A and S16 applications, the Applicant will maintain on-going communication with TMPRS, HKJCPRS and the relevant government departments, holding regular meetings to address their concerns and agree on measures to handle any potential issues.
2. The HKJCPRS expressed their concerns about the impacts on the routine operation and riding safety at TMPRS and its hacking trail as follows :	2. Noted. See our response in 1 above.
<u>HKJCPRS's Comment</u> a. Unsafe condition: There are inherent risks involved in horse riding and horses can be unpredictable at times. All manner of situations, such as loud noises, sudden movements and loose dogs, generated by the occupants of the proposed development site can frighten the horses and result in serious accidents.	
b. Unauthorized entry: The occupants of the proposed development site are potentially and unknowingly putting themselves and riders at risk for injury, as they have no knowledge of equine behavior when trespassing on the hacking trail.	
c. Traffic impact:	

COMMENTS	RESPONSES
With the completion of the access road widening works, the utilization of the road will be increased. As the drivers are not aware of the horse behavior, their vehicles can pose danger to horses and riders by starting the engine suddenly, sounding the horn and shining the headlights.	
d. Facility damage: Due to the close proximity of the proposed development site to the hacking trail, there may be damage to the facilities in the course of construction works, such as the concrete surface with rubber mats, metal railings and drainage channels. Any alteration of landscape and topography of the hacking trail caused by the construction works will adversely affect the safety and suitability of the site for horse riding.	
e. Construction noise: The large machines in the construction site will generate very loud noises, affecting the whole riding school area where riding activities are regularly conducted for abled-bodied and disabled riders. Horses may react vigorously to the construction noise through nervousness and anxiety, which can result in them suddenly running away or moving sideways, which can result in severe accidents for the riders and employees while they are working around horses in the stables and paddocks.	
f. Hoarding structure: The set-up of the hoarding structure along the construction site of the hacking trail will not only cause an obstruction to the riding route but also impose adverse visual effect to frighten and spook the horses.	

COMMENTS	RESPONSES
The proposed access road would affect a section of the existing horse trail currently used by the TMPRS. The interface is observed and may pose potential risks to the horse riders and horses by the vehicular traffic generated by the proposed development and the road widening/improvement works of the proposed access road. HKJCPRS has no objection to the application provided the relevant mitigation measures to address the interface issues would be imposed in the land lease apart from regular meetings and ongoing communications with the applicant, contractors and occupants of the proposed development.	
<u>Both of Tuen Mun Recreation & Sports Centre (TMRSC)'s and HKJCPRS's Comment</u> 3. Both LCSD and HKJCPRS shall not be responsible for the liabilities and damages of any vehicle and injury of pedestrian/ resident using and passing the horse trail of TMPRS. The project proponent shall possess valid third party insurance to protect both LCSD and HKJCPRS against any potential claims that may happen in the future.	3. Noted. Please note that similar concerns have been addressed in DLC meeting on 5.5.2016 (see Annex G).
4. Submission of implementation of management plan and construction plan with detailed works programmes to LCSD and HKJCPRS, as well as the operation plan for the vehicles and pedestrians/resident of the development for passing the horse trail shall be provided and upon satisfaction before any commencement of works. Division	4. Noted.

COMMENTS	RESPONSES
of noisy work and cope with the operation of TMPRS in which to minimize the noise impact caused to the horses and horse riders, this may impose dangerous or frightening the horses. Therefore we wish we could have more information of a holistic planning for our comments on the drawings and settings.	
<u>TMRSC's Comment</u> 5. In the event that any trees are in direct conflict with the proposed works, relevant authority's approval shall be obtained for their removal as according to prevailing Technical Circular; besides the planting of vegetation/ tree shall not affect the health of horses.	5. Noted. Please also refer to Tree Survey Report attached in the submitted Landscape Proposal in regards of the proposed trees to be felled within the Application Site and Proposed Access Road.
6. The project proponent shall follow and consider all the advices and comments provided by Lands Department and Buildings Department or relevant departments upon the application is approved.	6. Noted.
7. If it is inevitable for causing interference to the horse trail and no other alternative to resolve, the project proponent is recommended to study the feasibility on shifting the horse trail out of the construction site or even the future residential area or provision of a new horse trail for use.	7. Noted.
7. Chief Town Planner/Urban Design and Landscape, Planning Department (UD&L, PlanD)	
1. Please note below our comments on the submission from landscape planning perspective:	
<u>Appendix 1 (Landscape Proposal with Tree Survey Report)</u> a. Discrepancy in the description of the existing trees location is observed between para. 2.7 under Appendix 1	a. When tree is found leaning and the tree crown is significantly shifting away from its tree base, it is a common practice of land surveyor to

COMMENTS	RESPONSES
and drawing no. LDSS02A-TT02 ; and drawing no. LDSS02A-TT03. According to para. 2.7, it is noted that “...Refers to the recent topographical survey update of existing tree location, there is <u>no tree (base level) exactly located within the site...</u>” However, referring to drawing no. LDSS02A-TT01 and drawing no. LDSS02A-TT02, the base level of the existing trees (A136, A147, A149, A150 & A162) are located within the application site. The Applicant is advised to carefully review and verify the accuracy and consistency of the information provided.	show how far and where the crown shifted in tree survey plan to reflect the actual tree condition for reviewing potential tree impact. See below clarification. Please note Trees A147 and A136 will be affected by the roadworks, Trees A149, A150 and A162 will be affected by the boundary wall works. Regards of their poor leaning form or being as weedy tree, their main trunks and majority of their tree crown would be affected by the works, therefore they are recommended to be felled. 

COMMENTS	RESPONSES
	
b. <u>Table 9.1 (Proposed Planting Mix)</u> i. The Applicant is advised to provide a column / remarks to show whether the proposed shrub, ground cover and lawn species are native or exotic for reference.	i. The proposed planting/garden areas are solely designed for the single house family. The proposed planting mix is indicative at planning stage, to demonstrate how the planting proposal associated with the house development can integrate with the green environment. The planting proposal is subject to future detailed planting design according to owner's preference. Native plant species remarked in the table for reference only. Relevant text and figures of Landscape Proposal and Tree Survey Report have been revised (see Annex E).
ii. The Applicant is advised to provide a column to show the number of the proposed tree species for reference.	ii. The proposed tree planting is solely designed for the single house family, providing shade and amenity as well as edge planting to soften the development edge. The proposed tree planting species is indicative

COMMENTS	RESPONSES
	at planning stage and it is subject to future detailed planting design according to owner's preference. Reference tree number of the proposed tree species added to the table for reference only. Relevant text and figures of Landscape Proposal and Tree Survey Report have been revised (see Annex E).
iii. For item (i) and (ii) above due consideration of biodiversity aspect by enriching diversification of landscape planting and optimizing the use of native species in the proposed development are recommended.	iii. Noted. The proposed planting/garden areas are solely designed for the single house family; the planting proposal is subject to future detailed planting design according to owner's preference. For such a small house development, the indicative planting proposal has enriched the diversification of landscape planting and optimised the use of native species.
iv. It is noted that the size of the proposed trees is "Heavy Standard." The applicant is advised to provide a note on the source and the size of the "Heavy Standard" tree for reference.	iv. The planting proposal is subject to future detailed planting design according to owner's preference. Proposed tree species are common to Hong Kong and they are native or locally adopted species. All proposed species are commonly found in Mainland China nurseries. Specification of "Heavy Standard" tree has been put in Annex A Section 5.5, extracts relevant section below for your reference. " 5.5 Trees with Heavy Standard are defined as follow: Heavy Standard: • A sturdy straight stem at least 2000mm high from the root collar to the lowest branch; • Total height above the root collar exceeding 3500mm but not exceeding 6000mm; • Stem diameter exceeding 75mm but not exceeding 150mm measured at a height of 1300mm from the root collar; • According to the species, either a well-balanced branching head, or a well-defined straight and upright leader with branches growing out from the stem with good symmetry, and a minimum length of

COMMENTS	RESPONSES
	800mm; • A rootball not less than 750mm in diameter and 400mm in depth; • Grown in a container not less than 750mm in diameter and 600mm in depth; and • Free from any kind of pest, fungi, disease and parasitic plants.
c. <u>Figure 1.1 & 1.2 (Landscape Plan)</u> i. It is observed that some grey and beige colors occupy a large portion of the application site that is connected to the pedestrian and vehicular entrance/exist, but they are not indicated in the legend table. Please review.	i. Relevant legend added (see Annex E).
ii. A discrepancy in the proposed soft-landscape treatment is observed among this figure, Section B-B', and paragraph 9.10. Paragraph 9.10 notes "<i>Hydroseeding on sloping area</i>." However, the Landscape Plan shows that the northern area adjacent to the application boundary is proposed for lawn planting, while Section B-B' indicates that the proposed lawn area is a slope. Please review.	ii. "<i>Hydroseeding on sloping area</i>." is a potential treatment on slope/retaining wall. Whilst there is no sloping area proposed within the application site, this sentence in para. 9.10 has been deleted. Section B-B' is cutting across the site showing the edge plantings, part tree planting in lawn in the north of the site can only be seen in far and largely screened by the house. These planting behind the house is added to Section B-B'. Existing sloping green is location outside the application site. Relevant text and figures of Landscape Proposal and Tree Survey Report have been revised (see Annex E).
d. <u>Appendix A (Tree Survey Report) of Appendix 1 Drawings LDSS02A-TT01 – TT03</u> – It is observed that some surveyed trees are outside the application site. The applicant is reminded that the surveyed tree(s) outside the application site is for our reference only. The applicant should seek comments and approval from the relevant authority on the tree works concerned and/or compensatory/replacement planting proposal, where	d. Noted. Affected trees outside the application site will seek comments and approval from the relevant authority on the tree works. The loss of existing trees will be compensated/ replaced with high quality trees within the development.

COMMENTS	RESPONSES
appropriate.	
e. <u>Para 4.4</u> - Discrepancy in the number of <i>Leucaena leucocephala</i> is observed between this paragraph, Table A2.1 and Annex II. According to Table A2.1 and Annex II, only <u>six</u> <i>Leucaena leucocephala</i> are found, but <u>seven</u> <i>Leucaena leucocephala</i> are stated in para. 4.4. Please review.	e. Text has been revised (see Annex E).
f. <u>Para. 5.2</u> – It is noted that “A total of 16 new trees will be planted within the site to compensate for the tree loss, excluding the removal of 7 nos. of <i>Leucaena leucocephala</i> . A re-planting ratio in terms of quantity of at least 1:1 would be achieved (16 trees felled : 16 new planted).” The applicant is advised to review the number of <i>Leucaena leucocephala</i> and to achieve the stated a re-planting ratio and quantity.	f. Text has been revised. “A total of 17 new trees will be planted within the site for compensate the tree loss with excluding the removal of 6 nos. of <i>Leucaena leucocephala</i> . A replanting ratio in term of quantity of minimum 1:1 would be achieved (17 trees felled: 17 new planted).” (see Annex E).
8. Lands Department (LandsD)	
Our comments on the subject planning application from land administration point of view are as follows: i. According to para. 4.3 and Table 4.1 of the Planning Statement (PS), the proposed house development would be a single family house with a designed population of 3, and the house contains a guardroom with a non-domestic GFA of 0.949m ² . The applicant should be reminded that such GFA would be counted as domestic GFA under the land administration regime.	i. Noted.
ii. Notwithstanding that a single family house is proposed, according to para. 5.5 of the PS, a leisure lawn of about 3m ² is proposed at the northern portion of the subject site	ii. The leisure lawn is a private open space and will be solely used for the proposed single family house.

COMMENTS	RESPONSES
as <u>communal open space</u> for the enjoyment of the residents. The applicant is requested to clarify whether the said leisure lawn should be solely used for the proposed single family house.	
iii. According to paras. 4.4 - 4.5 and Figure 4 of the PS, road widening/improvement works to the existing access connecting the application site and San Shek Wan Road are proposed (“the Proposed Access Road”) and the applicant would be responsible for the construction and the future management and maintenance of the Proposed Access Road. It is noted that majority of the Proposed Access Road falls on Government land adjacent to Slope No. 5SE-D/C76 while a minor portion falls on Government land within Slope No. 5SE-D/C172. Besides, its alignment differs from that of the right of way (“the Brown Area”) granted under the New Grant No. 22878. Further, according to the applicant’s Traffic Impact Assessment at Appendix Id of the PS, a new location of passing bay at San Shek Wan Road adjacent to Slope No. 5SE-D/C172 is proposed (“the Passing Bay”). TD, HyD and GEO, CEDD’s technical comments should be sought on the Proposed Access Road and the Passing Bay. This Office would reserve comment at this preliminary stage. Furthermore, details of the proposed right of way from and to the application site under lease including its extent and alignment would be considered during the processing of the lease modification or land exchange application stage.	iii. Noted. TD, HyD and GEO, CEDD’s technical comments have been sought on the Proposed Access Road and the Passing Bay.
iv. According to para. 4.6 and Figure 4 of the PS, the Proposed Access Road would affect a section of an existing horse trail currently maintained by LCSD in connection with the use of LCSD’s public horse-riding	iv. The Applicant will be responsible for the construction and the future management and maintenance of the proposed structures. LCSD and TD’s comments have been sought on the interference that may cause to the horse riders and horses by the proposed vehicular traffic

COMMENTS	RESPONSES
centre (held under permanent Government land allocation no. GLA-TM296). In this regard, electronic gates and warning signs are proposed. The applicant is requested to clarify the party who would be responsible for the construction and the future management and maintenance of the proposed structures. In addition, LCSD and TD's comments should be sought on the interference that may cause to the horse riders and horses by the proposed vehicular traffic generated by the proposed residential development and the road widening/improvement works of the Proposed Access Road. Further, it is noted that one of the proposed electronic gates is located within the Proposed Access Road. As the proposed right of way under lease should not give the owner of the Lot the exclusive right over it. The applicant is requested to clarify that the proposed safety measures would not result in exclusive use of the Proposed Access Road or any part thereof by the owner of the Lot.	generated by the proposed residential development and the road widening/improvement works of the Proposed Access Road. The proposed safety measures, installation of an electronic gates, would not result in exclusive use of the Proposed Access Road or any part thereof by the owner of the Lot.
v. According to Figure 4 of the Flaming Submission, a 1.5m toe wall along the northern part of the Proposed Access Road is proposed. The applicant is requested to clarify the party who would be responsible for the construction and the future management and maintenance of the proposed toe wall. In addition, GEO, CEDD's comments should be sought on the proposed toe wall. This Office would reserve comment at this preliminary stage.	v. The Applicant will be responsible for the construction and its future management and maintenance of the proposed toe wall. GEO, CEDD's comments has been sought on the proposed toe wall.

Annex A

Revised Drainage Impact Assessment

**S16 Planning Application for
Development of 1 House at TMTL 550, Tuen Mun,
New Territories**

(HT25045)

Drainage Impact Assessment (DIA) Report

October 2025

Prepared & approved by	LEE Kwok Cheung <i>RPE(Civil)</i>
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何田顧問工程師有限公司
HO TIN & ASSOCIATES
CONSULTING ENGINEERS LIMITED



CONTENT

1. Introduction
2. General Site Description and the Proposed Development
3. Existing Drainage System of the Area
4. Potential Drainage Impact
5. Proposed Drainage Works
6. Hydraulic Calculation
7. Conclusion

FIGURE

Figure 1	Site Location Plan
Figure 2	Conditions of the Application Site on 15 May 2025
Figure 3	Proposed Master Layout Plan
Figure 4	Existing Drainage Flow Paths and Catchment Areas
Figure 5	Proposed Stormwater Drainage Layout
Figure 6	Outfall Details

APPENDIX	Assessment of Hydraulic Capacities of the Proposed Drainage System
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1. Introduction

1.1 Ho Tin & Associates Consulting Engineers Limited (HTA) was appointed by the client to prepare a Drainage Impact Assessment (DIA) in support of a S16 Planning Application for changing the land use from recreation into residential use with plot ratio of 0.2 for development of a two storey house at TMTL 550, Tuen Mun, New Territories (the ‘subject site’).

1.2 This report presents the DIA for the proposed house development at the subject site.

1.3 The objectives of this DIA are to:

- indicate any changes/increase in drainage characteristics due to the proposed development;
- assess any potential drainage impacts of the existing/planned drainage facilities nearby due to the proposed development; and
- propose mitigation measures and drainage improvement work, if necessary, to minimize any adverse drainage impact.

1.4 The scope of this DIA includes:-

- site description and existing land use;
- identification of stormwater flow pattern before and after proposed development of the subject site;
- assessment of impact on the existing drainage facilities due to the proposed development; and
- proposal of new drainage facilities for the proposed development if found necessary.

2. General Site Description and the Proposed Development

2.1 A Site Location Plan is shown in **Figure 1**. The subject site is currently zoned “Recreation” on the Approved Tuen Mun Outline Zoning Plan No. S/TM/41. Its area is about 1,852m². It is located within a parcel of land bounded by Lung Mun Road on the east, Hung Lau on the south, Lung Fu Road on the west and San Shek Wan Road on the north. It is currently a piece of vacant land (please refer to **Figure 2**).

- 2.2 The subject site was previously approved for a holiday camp development and is now proposed to construct a 2-storey house with plot ratio of about 0.2. A Proposed Master Layout Plan is shown in **Figure 3**.

3. Existing Drainage System of the Area

- 3.1 Catchment areas and flow paths of the concerned area is shown in **Figure 4**. The subject site is located at the toe of embankment of Lung Fu Road near the toe of Castle Peak. The subject site would receive surface runoff from the adjacent Catchment A1 and A2 in addition to the rain falling directly onto its area. With respect to the existing topography, total surface runoff of the subject site would flow westward into an existing streamcourse which conveys the surface runoff of the Catchment A3.
- 3.2 A small Catchment A4 is demarcated to identify the stormwater catchment of the proposed access linking between the subject site and San Shek Wan Road.

4. Potential Drainage Impact

- 4.1 Since the subject site would be converted from a campsite into a residential area, the runoff coefficient of the subject site area will then be changed from 0.25 (conservatively a flat grassland (heavy soil) condition is presumed, and for other areas 0.35 is adopted) to 0.95 (for concrete). The subject site discharges and will continue to discharge stormwater into the same location of the existing watercourse in the vicinity at its west side. The flow patterns and the catchment boundaries of the subject area would remain unchanged. Therefore, the increase in surface runoff at the existing watercourse in the vicinity at the west side of the subject site would be solely due to the change in the runoff coefficient of the subject site area after the proposed development.
- 4.2 Referring to the attached **Figure 4**, total catchment area (excluding the subject site) of the existing watercourse at the point of discharge of the subject site

$$= (150,515 \text{ (including 9,484 m}^2 \text{ of paved area)} + 722 + 6,203) \text{ m}^2 = 157,440 \text{ m}^2$$

Hence, the equivalent runoff coefficient of the total catchment area (excluding the subject site) = $(9,484 \times 0.95 + (157,440 - 9,484) \times 0.35) / 157,440 = 0.39$

The subject site area = $1,852 \text{ m}^2$

Increase in runoff coefficient of the subject site, $C = 0.95 - 0.25 = 0.70$

Since $Q = 0.278 \times C \times i \times A$, increase in quantity of surface runoff solely due to change in C in all design periods = $[0.70 \times 1,852 / (0.25 \times 1,852 + 0.39 \times 157,440)] \times 100\% = 2.10\%$ which is insignificant.

- 4.3 Detailed calculation for assessment of drainage impact on the existing drainage facilities and streamcourse due to additional runoff generated from the development is shown in the lower part of the **Appendix**. The calculation illustrates that the existing drainage facilities and streamcourse at the downstream of the subject site are capable to collect additional runoff generated from the development without causing any unacceptable drainage impact.
- 4.4 Therefore, it is considered that the proposed development would not cause any unacceptable adverse drainage effects upon the subject area and its surroundings.

5. Proposed Drainage Works

- 5.1 The proposed finished ground levels of the subject development are close to the existing site levels such that no substantial ground levelling nor site formation works would be required. Ground surfaces of the subject site would be generally paved.
- 5.2 Existing flow paths of the catchments in the concerned area would be maintained in general. Surface runoff from the Catchment A1 and A2 flowing onto the subject site would be intercepted by peripheral channels at the subject site boundary. Total surface runoff received from the subject site would be conveyed to a discharge point at the existing streamcourse to the west.
- 5.3 In order to properly manage surface runoff of the subject site, peripheral U-channels with catchpit at corner will be constructed along the subject site boundary. The flows inside the channels will be discharged into a proposed terminal manhole TM with desilting trap located near the western corner of the subject site near the existing streamcourse. A Stormwater Drainage Layout Plan is shown in **Figure 5**. Proposed Outfall Details at the existing watercourse is shown in **Figure 6**.
- 5.4 All surface runoff collected within the subject site would be conveyed to the proposed terminal manhole and from which the collected flow would be discharged into the adjacent existing streamcourse. It should not have implementation problems on construction works and the operation of the drainage.

- 5.5 300mm U-channel is proposed along the western side of the proposed external access to receive surface runoff from the access itself as well as the adjacent area. The channel would discharge into an existing 375mm U-channel abutting on the edge of San Shek Wan Road. It has to notice that because of the existing topography, flows from the same area of the external access road would inevitably flow into the existing 375mm U-channel at present, hence there would be no change in drainage pattern of the concerned area after the completion of the proposed access road (please refer to the photo below).



- 5.6 There is no change in the drainage paths of the area of the external access, i.e. the concerned existing 375mm U-channel has been conveying surface runoff from the same area of the access road, except an U-channel will be provided along the access road to properly manage the surface runoff after the subject development. Hence, it also should not have implementation problems on construction works and the operation of the drainage. Besides, the subject proposed development including the external access road would be subject to Buildings Ordinance. Drainage and road drainage plan of the subject proposed development shall be submitted to all relevant government departments via the Buildings Department's central processing mechanism for approval at the later detail design stage.
- 5.7 Details of proposed drainage provisions shall follow relevant details shown in Government departments' Standard Drawings as follows:

Proposed Drainage Provisions	Standard Drawings	Drawing No. & Title
Terminal manhole with trap	DSD Standard Drawings	DS 1091A - Terminal Manhole Type T2_1
Catchpit	CEDD Standard Drawings	C 2405/1 to /5 – Standard Catchpit Details

U-channel		C2409J – Details of Half-round and U-channels
Channel cover / grating		C2412E – Cover Slab and Cast Iron Grating for Channels

6. Hydraulic Calculation

6.1 Assessment criteria is based on the recommendation set out in the Stormwater Drainage Manual (Fifth edition, Jan 2018) (SDM) and its Corrigendum No. 1/2022, 1/2024 and 2/2024 issued by DSD. Design Return Period of 50 years (recommended for ‘Main Rural Catchment Drainage Channel’ in SDM) is adopted.

6.2 The corresponding runoffs under rainfall intensity for various return period are worked out with reference to Rational Method. Brandy-Williams method is used in calculation of the time of concentration. A uniformly distributed rainfall with an intensity is determined by the Intensity-Duration-Frequency. With referenced to Table 3a - Storm Constants for different return periods of HKO Headquarters from SDM, the rainfall profiles are derived based on the following equation:

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

where i = mean rainfall intensity (mm/hr)
 t = duration time of concentration (min)
 a, b and c = storm constants given in Table below

Table : Storm Constants

Return Period (years)	50
a	505.5
b	3.29
c	0.355

A 16.0% rainfall increase is adopted in the hydraulic calculation to cater for effects due to climate change in accordance with the table 28 with projection to End of 21st Century as stipulated in the item (e) and (k) of the SDM - Corrigendum No. 1/2022. Besides, taking into consideration of design allowance in End of 21st Century, a further 12.1% rainfall increase is incorporated into the hydraulic assessment.

6.3 Hydraulic assessment is enclosed in the **Appendix**. 10% reduction in flow area has been incorporated to cater for potential deposition of sediment in stormwater channels and pipes as recommended in the SDM. The proposed channels and underground drainage are

designed to cater for the estimated runoff under the designed rainstorms. With respect to the calculation, the proposed stormwater drainage system is capable to cater for the surface runoff without causing any adverse drainage impacts on the subject site and its surroundings.

- 6.4 Since all drainage would have sufficient spare capacity, no water backup will occur at the upstream under rainstorms of 50-year (or lower) return periods.

7. Conclusion

- 7.1 The subject site was previously approved for a holiday camp development and is now proposed to erect a 2-storey house with plot ratio of about 0.2. Only minor land levelling works would be required at the subject site.
- 7.2 Existing flow paths of the adjacent upstream areas of the subject site, i.e. Catchment A1, A2, A3 and A4, would be maintained in general. The subject site therefore would not cause any blockage to the flows of its adjacent areas.
- 7.3 Peripheral U-channels will be constructed along the subject site boundary to receive surface runoff from the adjacent areas in addition to avoid surface runoff running outside onto the surroundings. The flow inside the channels will be discharged via a purportedly constructed terminal manhole into the existing streamcourse. The existing streamcourse is checked to have sufficient capacity to convey the total flow of the concerned areas.
- 7.4 In addition, proposed U-channels will also be constructed to receive surface runoff on the proposed access road and the collected surface runoff will be properly conveyed to the existing 375mm U-channel abutting on the edge of San Shek Wan Road instead of uncontrolled overland flow toward the same existing 375mm U-channel as present.
- 7.5 In conclusion, the subject proposed development would not cause any unacceptable adverse drainage impact onto the area.

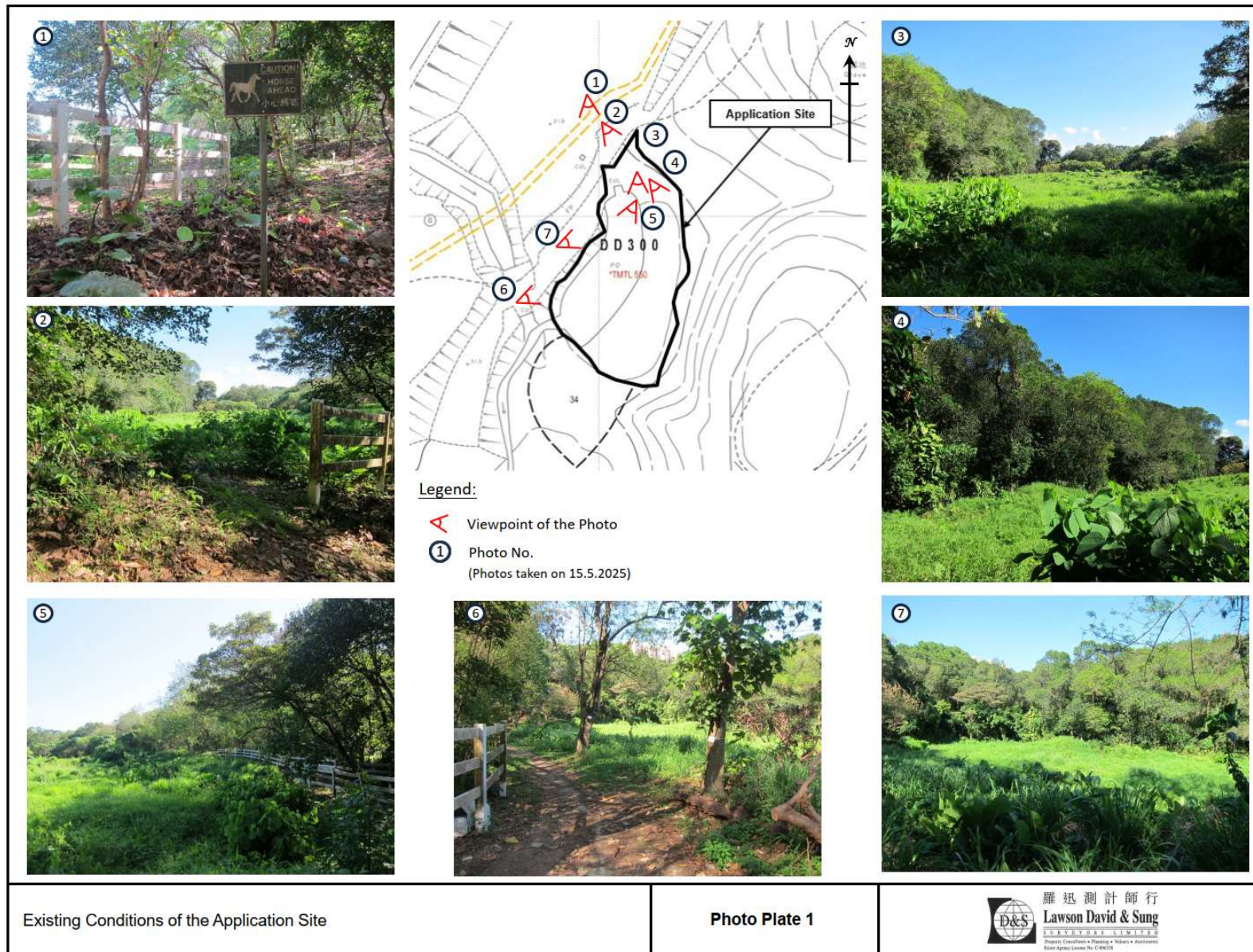
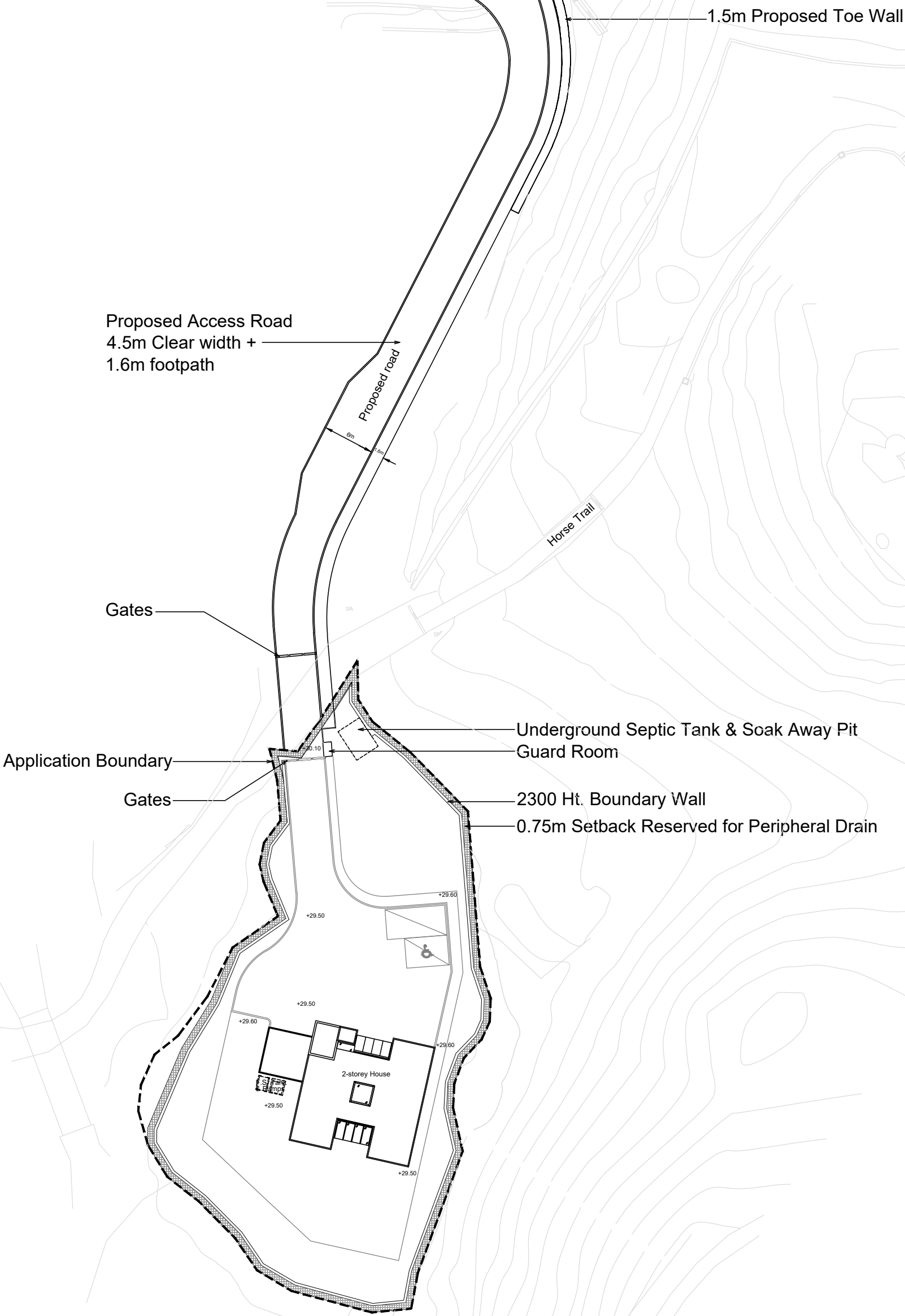


Figure 2 – Conditions of the Application Site on 15 May 2025



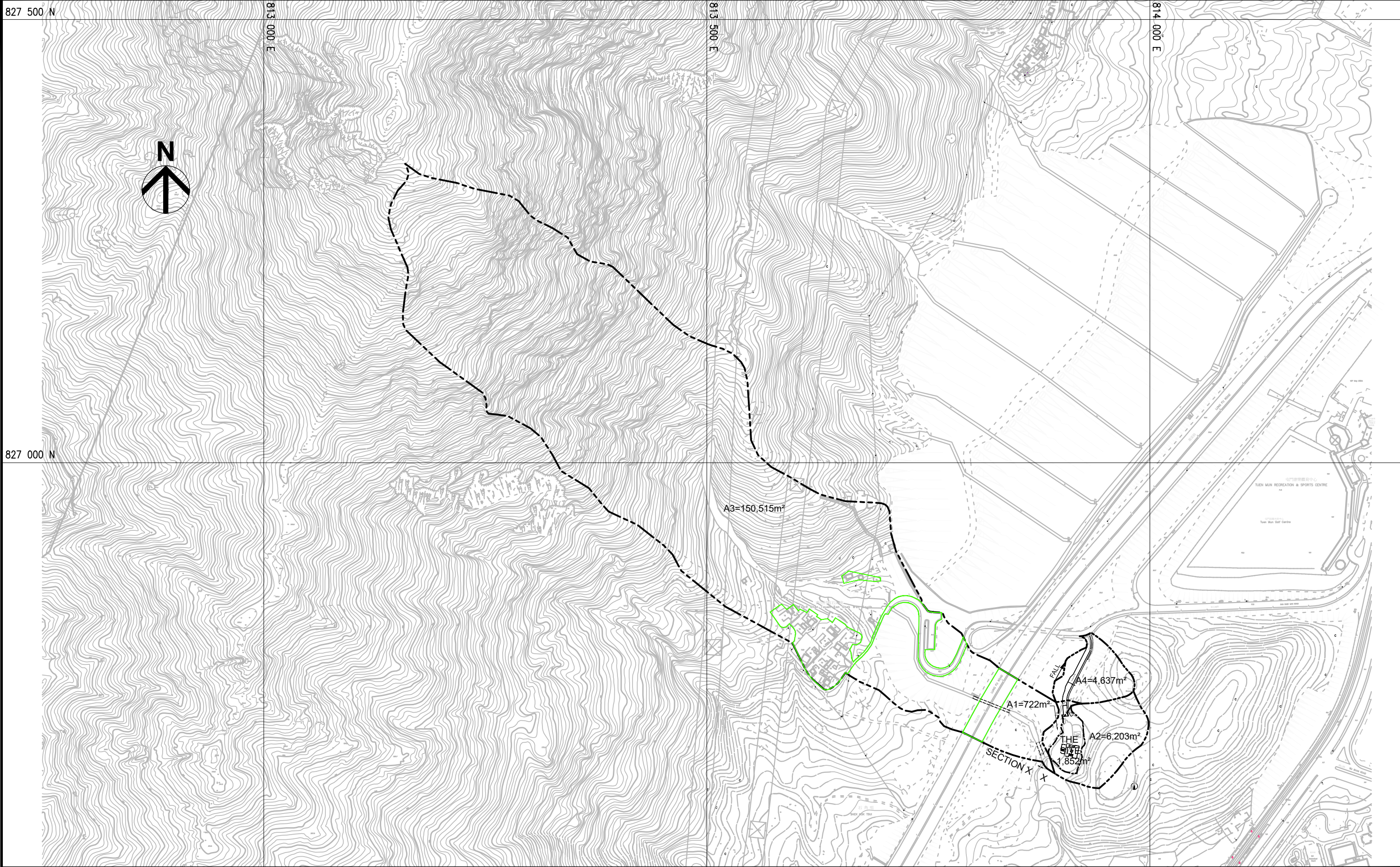
PROJECT
PROPOSED HOUSE DEVELOPMENT AT TUEN MUN TOWN
LOT NO. 550 (TMTL 550), TUEN MUN, N.T.

TITLE
PROPOSED MASTER LAYOUT PLAN

何田顧問工程師有限公司
HO TIN & ASSOCIATES
CONSULTING ENGINEERS LIMITED

SCALE
1 : 500 - A3

DRAWING No.
FIGURE 3



LEGEND:

----- SUBJECT SITE BOUNDARY

----- CATCHMENT BOUNDARY

REMARK:

PAVED AREA WITHIN SUBCATCHMENT A3 (TOTAL AREA =9484m²)

PROJECT

PROPOSED HOUSE DEVELOPMENT AT TUEN MUN TOWN
LOT NO. 550 (TMTL 550), TUEN MUN, N.T.

TITLE

EXISTING DRAINAGE FLOW PATHS
AND CATCHMENT AREAS

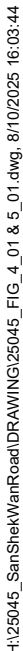
何田顧問工程師有限公司
HO TIN & ASSOCIATES
CONSULTING ENGINEERS LIMITED

SCALE

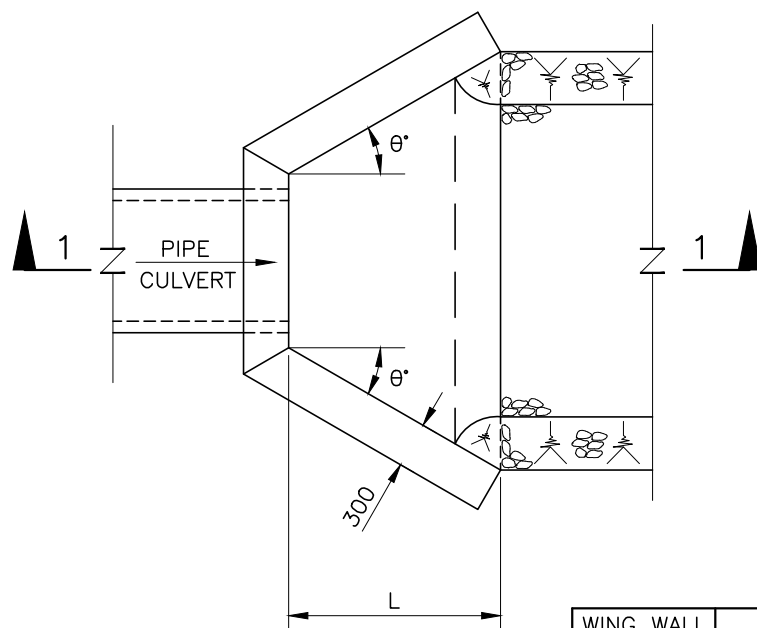
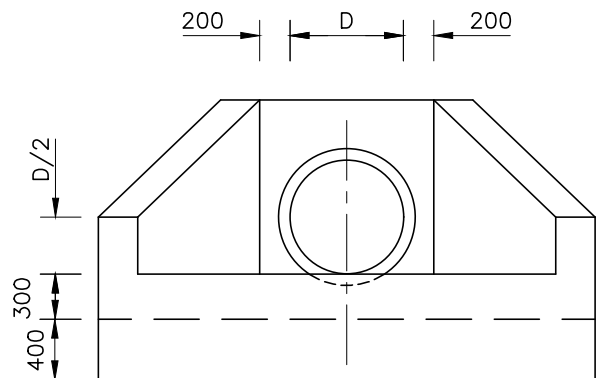
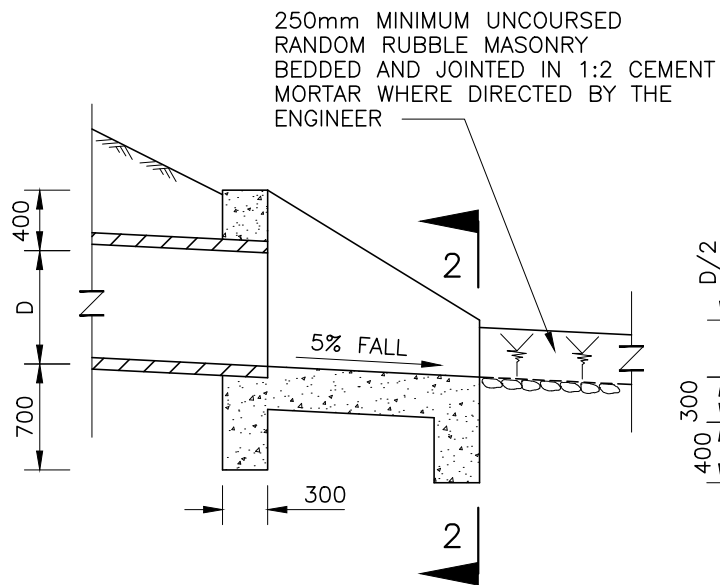
1 : 4000 - A3

DRAWING No.

FIGURE 4



	PROJECT PROPOSED HOUSE DEVELOPMENT AT TUEN MUN TOWN LOT NO. 550 (TMTL 550), TUEN MUN, N.T.	何田顧問工程師有限公司 HO TIN & ASSOCIATES CONSULTING ENGINEERS LIMITED	
	TITLE PROPOSED STORMWATER DRAINAGE LAYOUT	SCALE 1 : 500 - A3	DRAWING No. FIGURE 5



NOTES :

1. CONCRETE : GRADE 30D/20

WING WALL FLARE θ°	DIAMETER OF PIPE CULVERT D			
	450-750	900-1200	1350-1650	1800-1950
	L			
0°	1800	2400	3000	3600
30°	1400	1800	2300	2700
45°	1200	1500	1900	2300

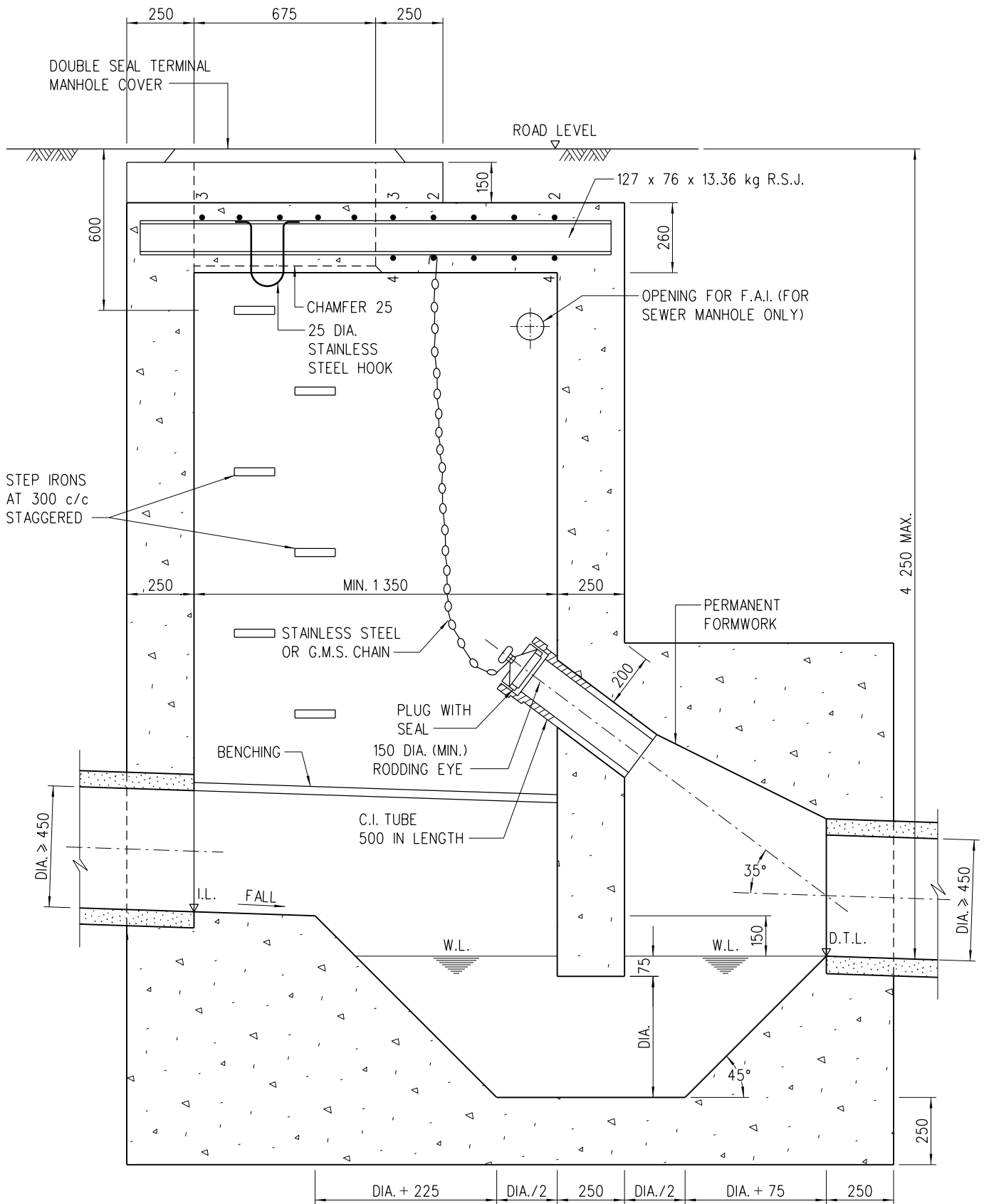
PROJECT
PROPOSED HOUSE DEVELOPMENT AT TUEN MUN TOWN
LOT NO. 550 (TMTL 550), TUEN MUN, N.T.

何田顧問工程師有限公司
HO TIN & ASSOCIATES
CONSULTING ENGINEERS LIMITED

TITLE
OUTFALL DETAILS

SCALE
N. T. S.

DRAWING No.
FIGURE 6



SECTION A-A

A	NOTE 16 ADDED	ORIGINAL SIGNED	2.8.2022
	NEW ISSUE	ORIGINAL SIGNED	13.1.2016
REV.	DESCRIPTION	SIGNATURE	DATE

TERMINAL MANHOLE
TYPE T2_1

DRAINAGE SERVICES DEPARTMENT

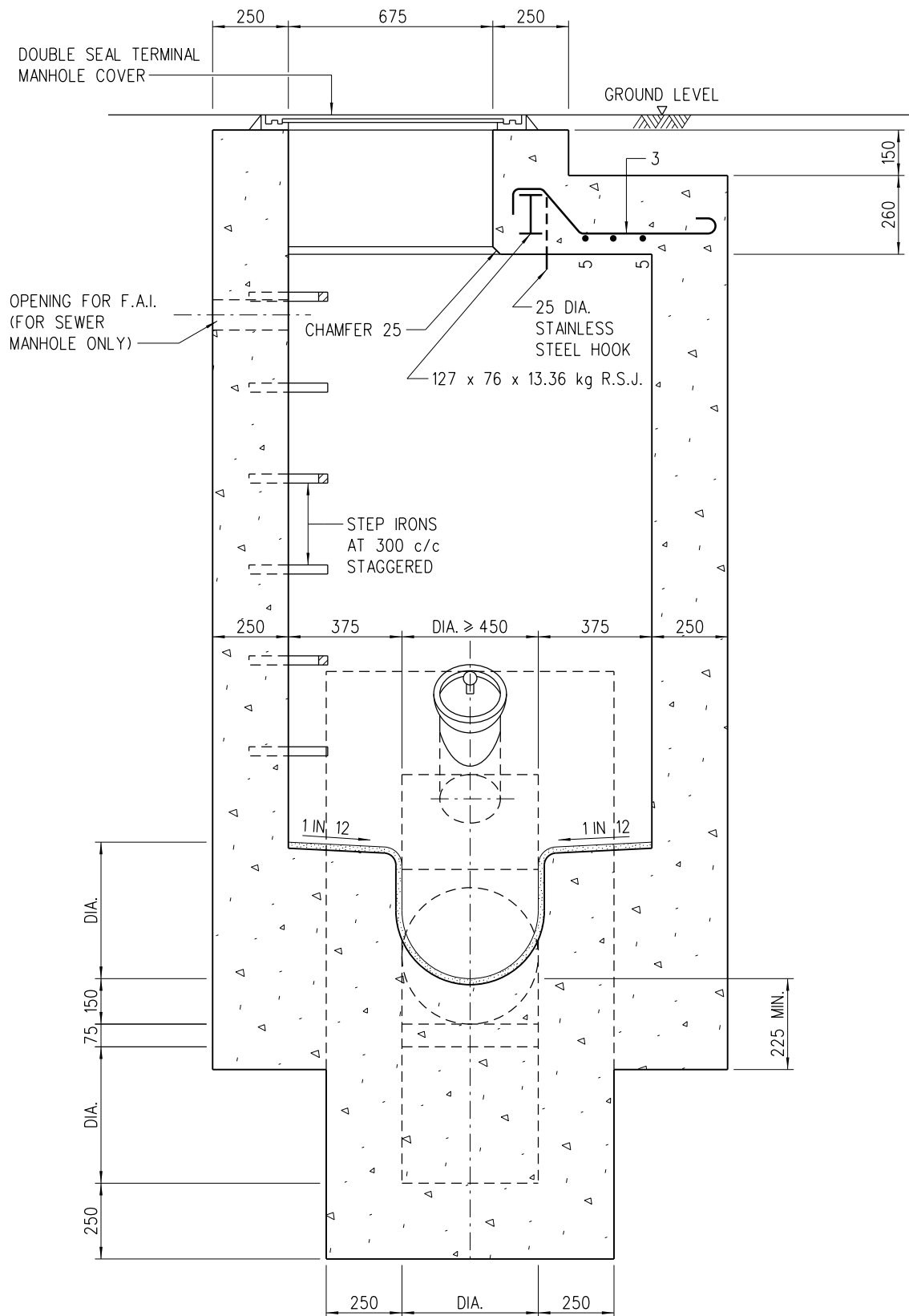
REFERENCE

DRAWING No.

SCALE

1 : 20

DS 1091A
(SHEET 2 OF 3)



SECTION B-B

A	NOTE 16 ADDED	ORIGINAL SIGNED	2.8.2022
	NEW ISSUE	ORIGINAL SIGNED	13.1.2016
REV.	DESCRIPTION	SIGNATURE	DATE

**TERMINAL MANHOLE
TYPE T2_1**

DRAINAGE SERVICES DEPARTMENT

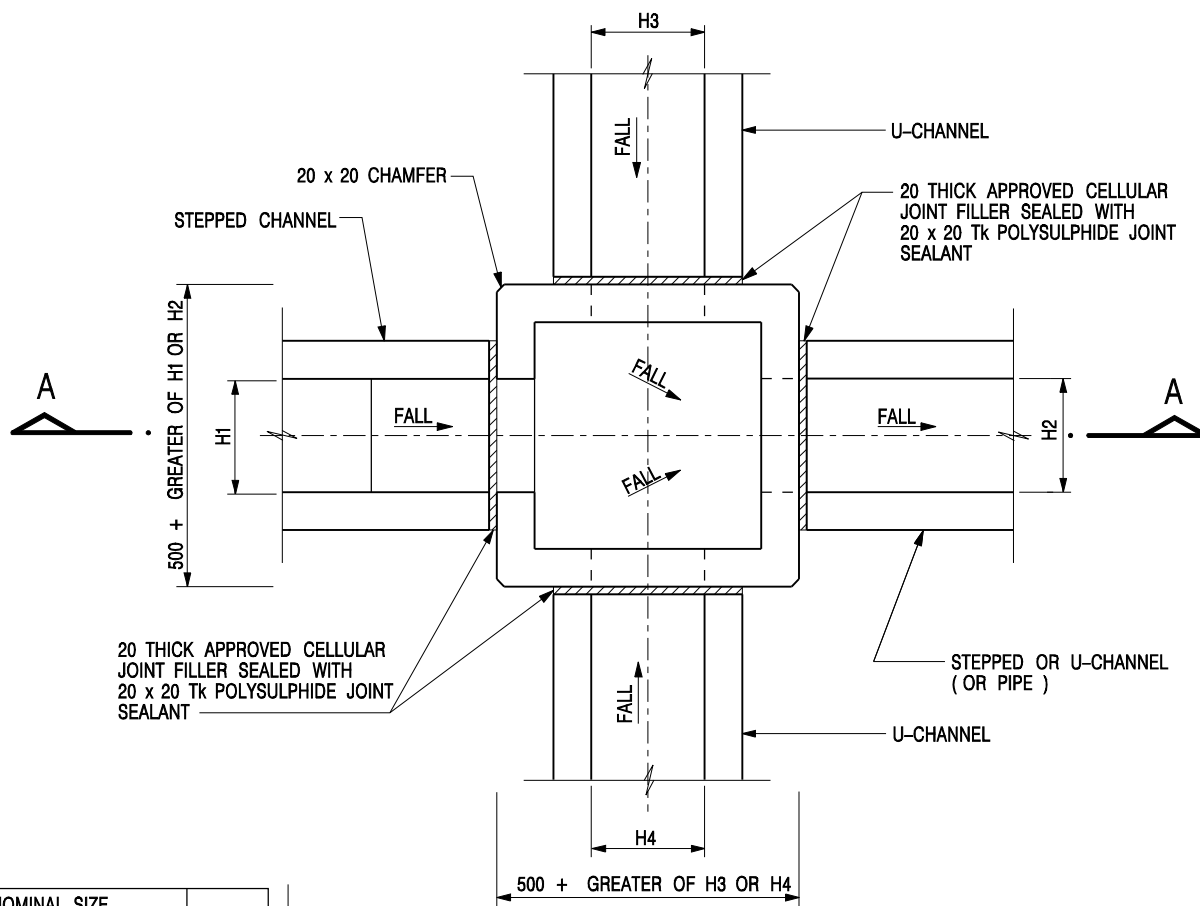
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DRAWING No.

SCALE

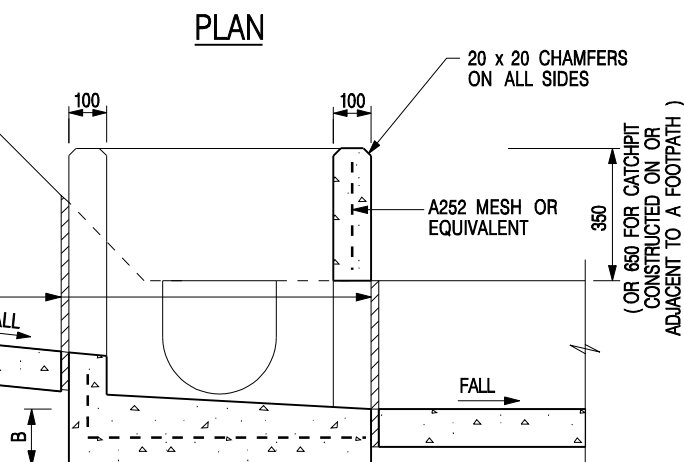
1 : 20

DS 1091A
(SHEET 3 OF 3)



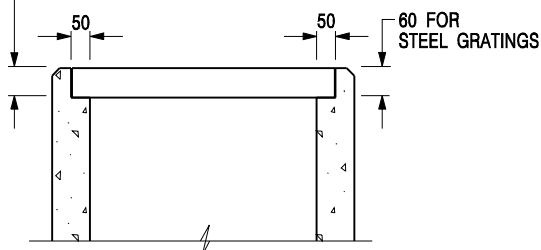
NOMINAL SIZE (LARGEST OF H1, H2, H3 & H4)	B
300 - 600	150
675 - 900	175

20 THICK APPROVED CELLULAR JOINT FILLER SEALED WITH 20 x 20 Tk POLYSULPHIDE JOINT SEALANT



SECTION A - A

DEPTH OF RECESS AND DETAILS OF PRECAST CONCRETE COVERS (SEE STD. DRG. NO. C2407)



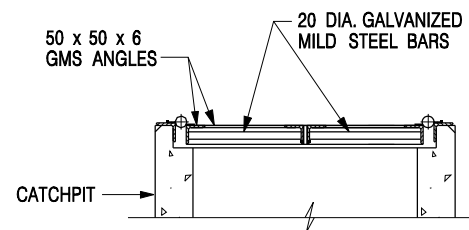
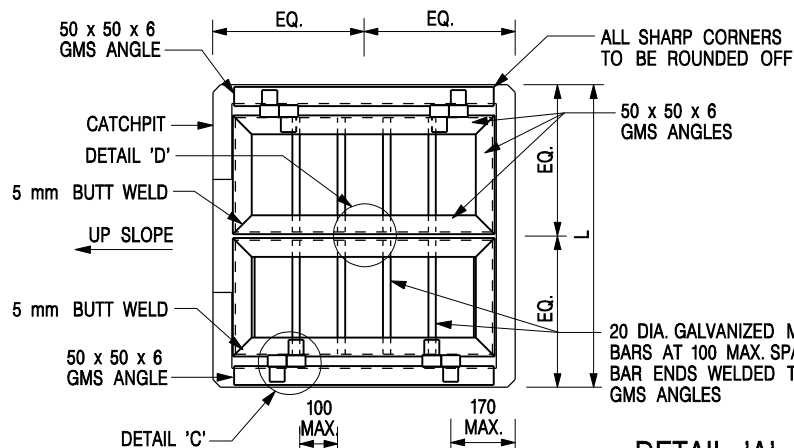
NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. REFER TO SHEET 5 FOR OTHER NOTES.

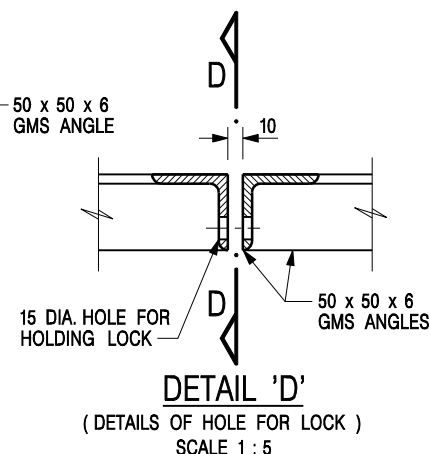
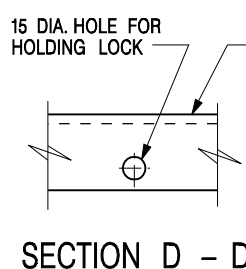
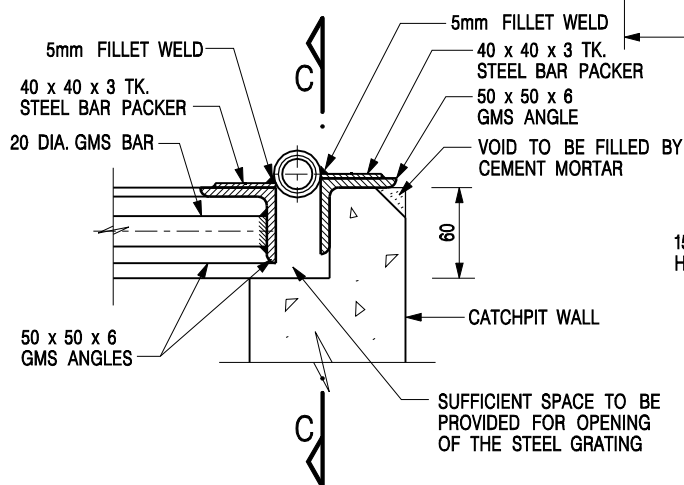
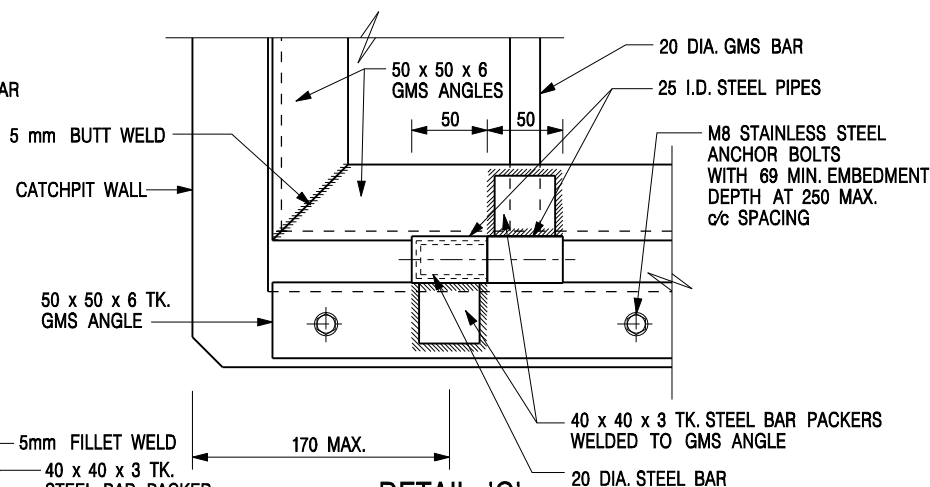
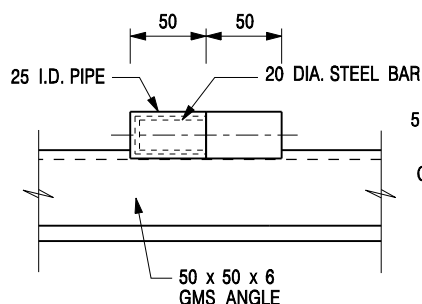
ALTERNATIVE TOP SECTION FOR PRECAST CONCRETE COVERS / GRATINGS

STANDARD CATCHPIT DETAILS (SHEET 1 OF 5)

-	FORMER DRG. NO. C2405J.	Original Signed	03.2015
REF.	REVISION	SIGNATURE	DATE
 CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT			
SCALE 1 : 20		DRAWING NO. C2405 /1	
DATE JAN 1991			



DETAIL 'A'
(DETAILS OF DOUBLE SIDE OPENING STEEL GRATING FOR L > 900mm)
SCALE 1 : 20

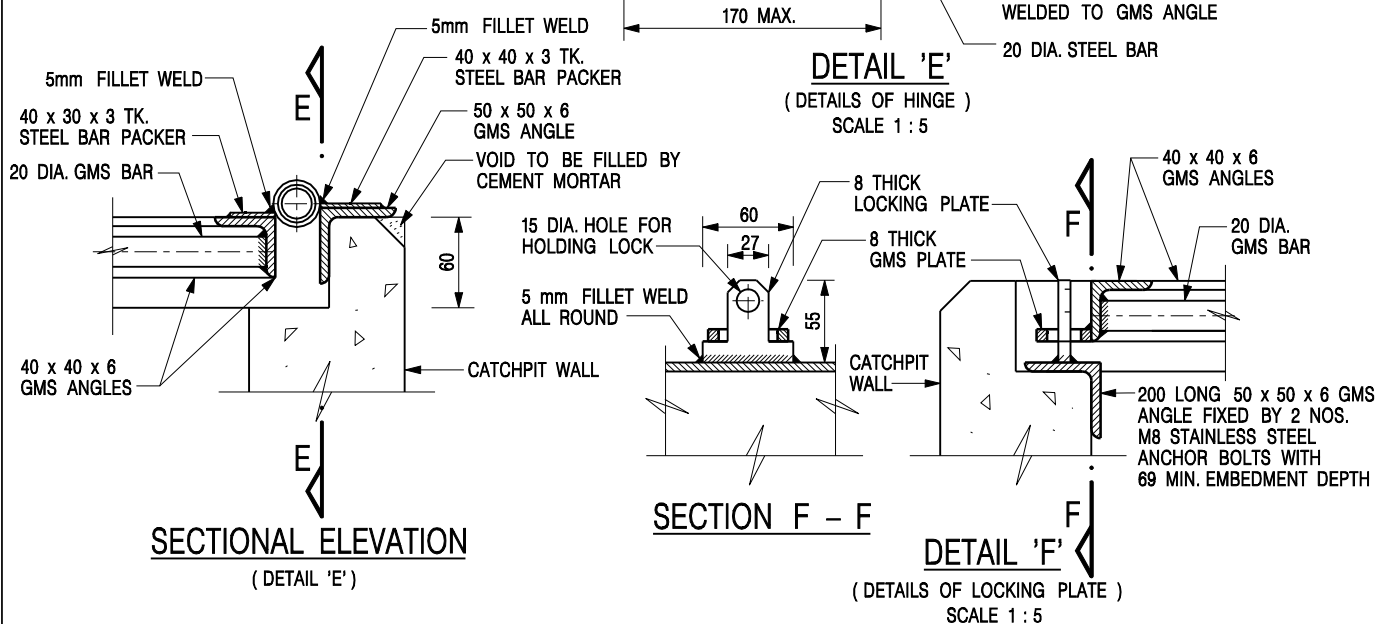
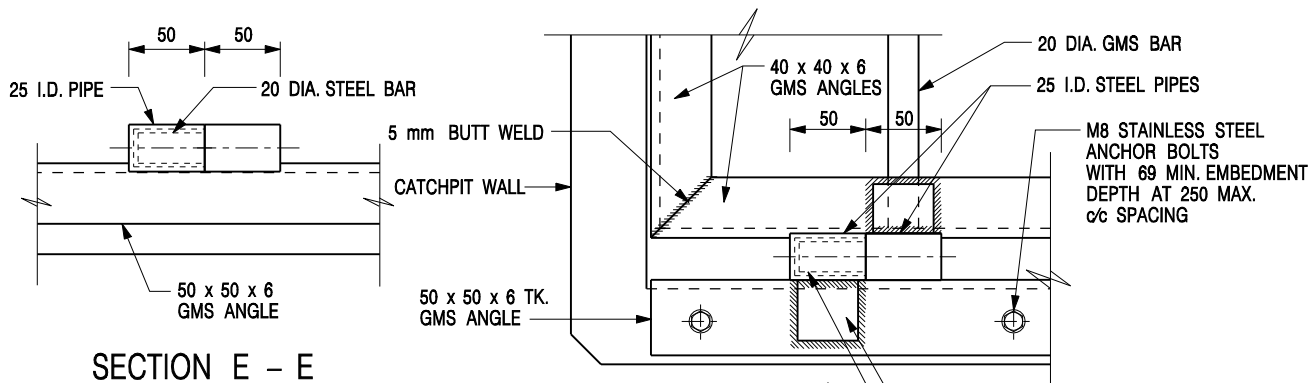
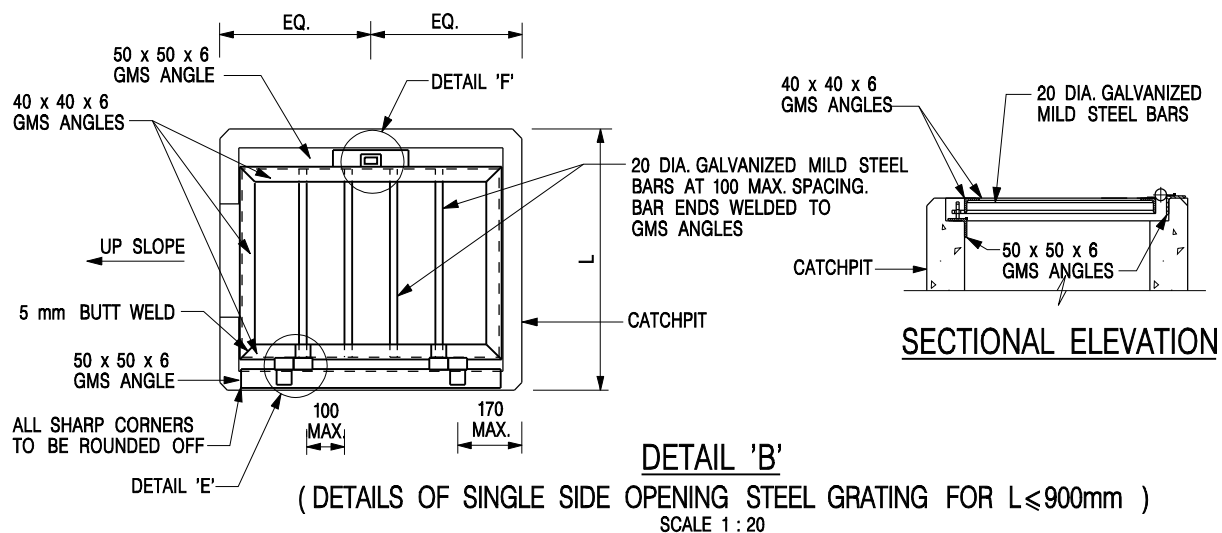


NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. REFER TO SHEET 5 FOR OTHER NOTES.

STANDARD CATCHPIT DETAILS
(SHEET 2 OF 5)

-	FORMER DRG. NO. C2405J.	Original Signed	03.2015
REF.	REVISION	SIGNATURE	DATE
 CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT		SCALE AS SHOWN DATE JAN 1991	
		DRAWING NO. C2405 /2	

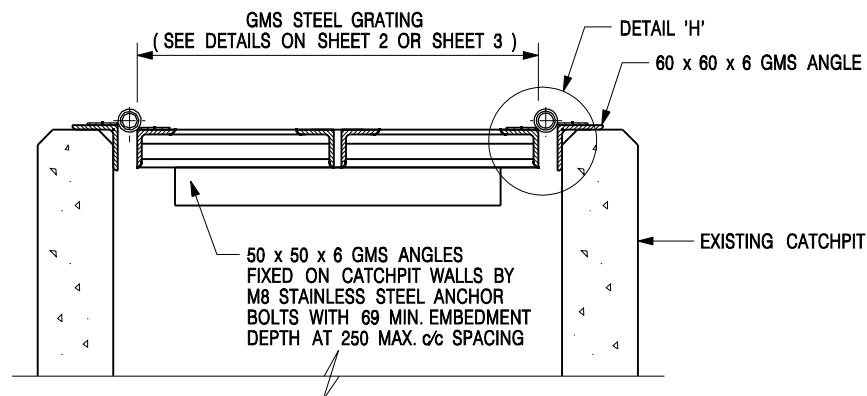


NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. REFER TO SHEET 5 FOR OTHER NOTES.

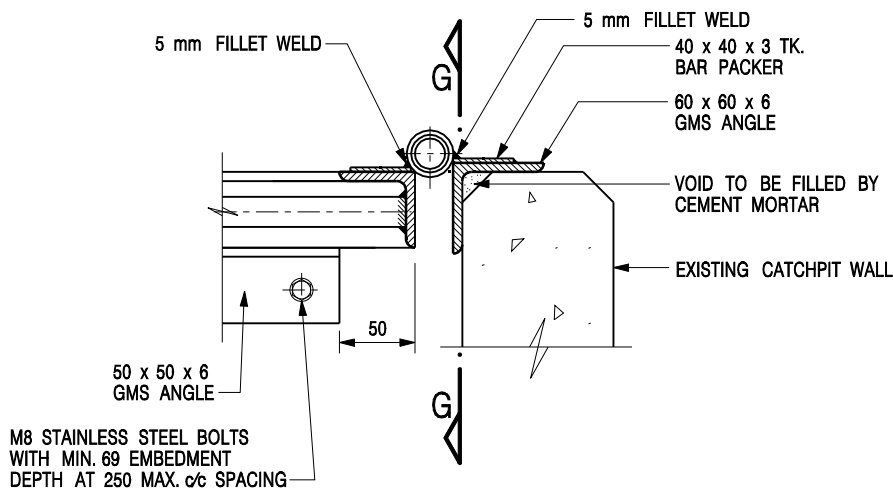
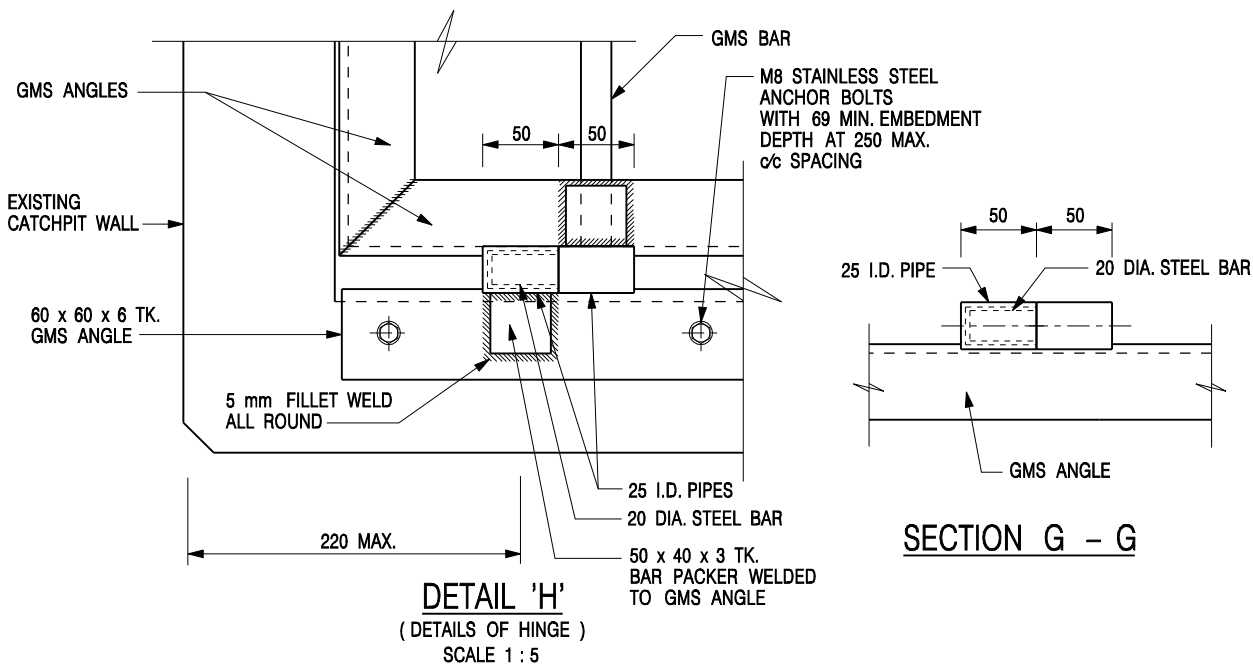
STANDARD CATCHPIT DETAILS
(SHEET 3 OF 5)

-	FORMER DRG. NO. C2405J.	Original Signed	03.2015
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 CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT		SCALE AS SHOWN DATE JAN 1991	
		DRAWING NO. C2405 /3	



DETAIL 'G' - DETAILS OF STEEL GRATING CONSTRUCTED ON EXISTING CATCHPIT

SCALE 1 : 10

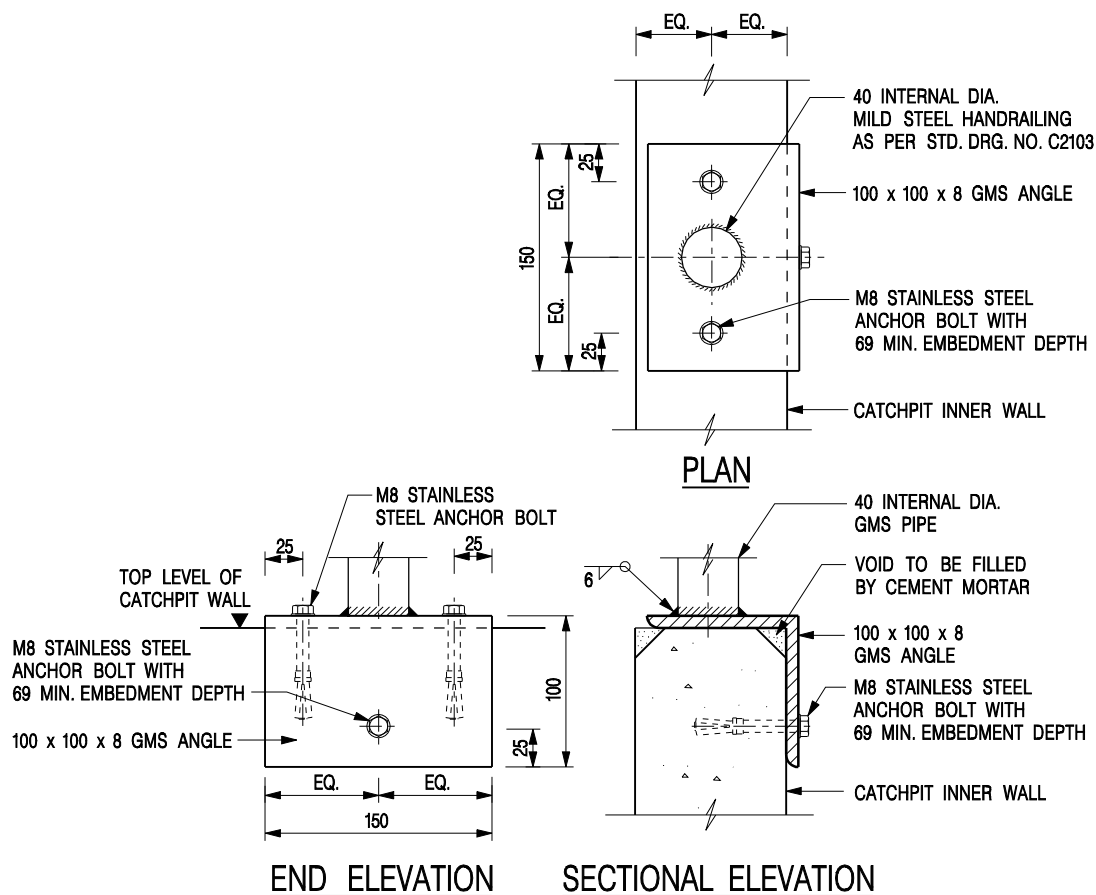


NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. REFER TO SHEET 5 FOR OTHER NOTES.

STANDARD CATCHPIT DETAILS
(SHEET 4 OF 5)

-	FORMER DRG. NO. C2405J.	Original Signed	03.2015
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 CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT			
SCALE AS SHOWN		DRAWING NO. C2405 /4	
DATE JAN 1991			



DETAIL 'J' – FIXING DETAILS FOR HANDRAILING ON TOP OF CATCHPIT WALL

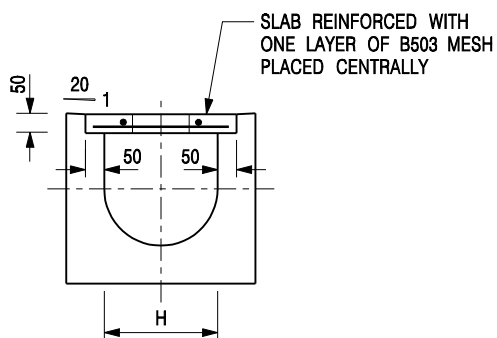
SCALE 1 : 5

NOTES:

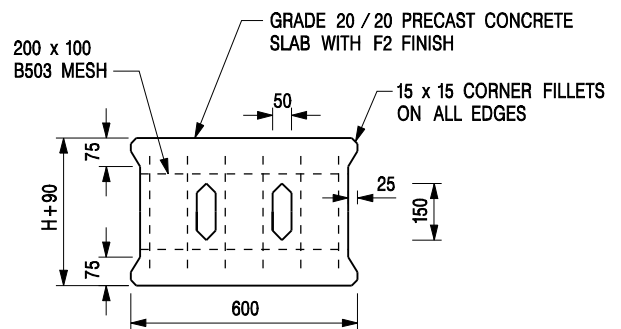
- ALL DIMENSIONS ARE IN MILLIMETRES.
- ALL CONCRETE SHALL BE GRADE 20 /20.
- CONCRETE SURFACE FINISH SHALL BE CLASS U2 OR F2 AS APPROPRIATE.
- FOR DETAILS OF JOINT, REFER TO STD. DRG. NO. C2413.
- CONCRETE TO BE COLOURED AS SPECIFIED.
- FOR CATCHPITS CONSTRUCTED ON OR ADJACENT TO A FOOTPATH, STEEL GRATINGS (SEE DETAILS ON SHEET 2 OR SHEET 3) OR CONCRETE COVERS (SEE STD. DRG. NO. C2407) SHALL BE PROVIDED AS DIRECTED BY THE ENGINEER.
- IF INSTRUCTED BY THE ENGINEER, HANDRAILING (SEE DETAIL 'J' ON SHEET 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.
- 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 mm c/c STAGGERED SHALL BE PROVIDED. THICKNESS OF CATCHPIT WALL FOR INSTALLATION OF STEP IRONS SHALL BE INCREASED TO 150 mm.
- FOR RETROFITTING AN EXISTING CATCHPIT WITH STEEL GRATING, SEE DETAIL 'G' ON SHEET 4.
- ALL STEEL ANGLES SHALL COMPLY WITH BS EN 10025 AND BS EN 10056.
- UNLESS OTHERWISE SPECIFIED, ALL WELDS SHALL BE 5 mm CONTINUOUS FILLET WELDS.
- ALL WELDS SHALL BE CHIPPED, GROUND SMOOTH, BRUSHED TO REMOVE SLAG PRIOR TO HOT-DIP GALVANIZATION.
- ALL STEELWORK SHALL BE HOT-DIP GALVANIZED TO BS EN ISO 1461. ALL EXPOSED STEELWORK SURFACES SHALL BE TREATED AND PAINTED IN ACCORDANCE WITH THE GENERAL SPECIFICATION.
- SUBJECT TO THE APPROVAL OF THE ENGINEER, OTHER MATERIALS CAN ALSO BE USED AS COVERS / GRATINGS.

STANDARD CATCHPIT DETAILS
(SHEET 5 OF 5)

-	FORMER DRG. NO. C2405J.	Original Signed	03.2015
REF.	REVISION	SIGNATURE	DATE
 CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT			
SCALE AS SHOWN		DRAWING NO. C2405 /5	
DATE JAN 1991			



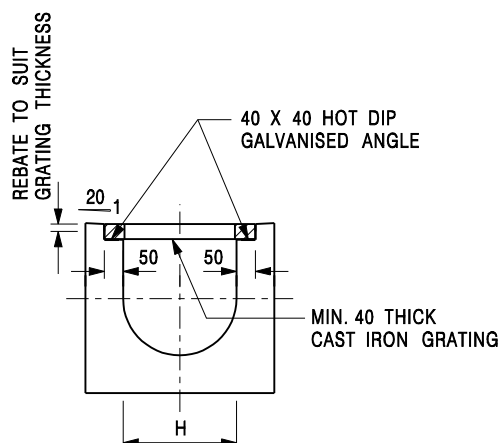
TYPICAL SECTION



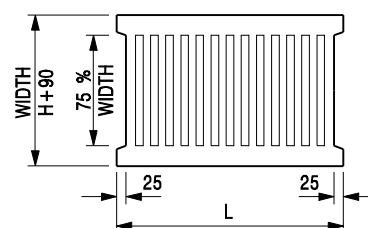
PLAN OF SLAB

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:

- ALL DIMENSIONS ARE IN MILLIMETRES.
- H=NOMINAL CHANNEL SIZE.
- ALL CAST IRON FOR GRATINGS SHALL BE GRADE EN-GJL-150 COMPLYING WITH BS EN 1561.
- 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

Assessment of Hydraulic Capacities of the Proposed Drainage System for 1 in 50 year design return period

Using Rational Method

Design Flow = 0.278CIA m³/s

for grassland (heavy soil) - steep, C = 0.35
for concrete surface, C = 0.95

Using Manning Equation (for channel flow)

Design Mean Velocity = $R^{1/6}n(RS_b)^{1/2}$

where n = 0.016
0.045

for concrete-lined open channel with fair surface
for natural stream channels, winding some pools and shoals with some weeds and stones with fair surface

Using GEV distribution model in frequency analysis

Rainfall intensity = $a / (t_c+b)^c$

where a = 505.5, b= 3.29 and c= 0.355

referenced from Table 3a in SDM Corrigendum No. 1/2022 - Storm Constants for Different Return Periods of HKO Headquarters

in 50 year design return period

Using Bransby William's Equation

Inlet time t₀ = 0.14465L / (H^{2/3}A^{0.1})

or 2

when the distance is too short

Using Colebrook's White Equation (for pipe flow)

V = - Sqrt (8gDs) x log [(k_s / 3.7D) + (2.51v / D x Sqrt (2gDs))]

For precast concrete pipes with 'O' ring joints with poor condition,

k_s (mm) = 0.6

v (m²/s) = 1.00E-06

g (m²/s) = 9.81

k_s (m) = 0.0006

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)
USCP/USMH	DSCP/DSMH	Collected Runoff from Catchment (refer to Figure 3 and 4)	USGL (mPD)	DSGL (mPD)	USIL (mPD)	DSIL (mPD)	INVERT DIFF. (m)	LENGTH OF CHANNEL / DRAIN l (m)	SLOPE s	SLOPE 1 IN	LENGTH FOR CALCULATION OF INLET TIME L (m)	AVERAGE SLOPE OF GROUND FOR CALCULATION OF INLET TIME H (m per 100m)	INLET TIME t ₀ (min) = 0.14465 x [L/(H ^{2/3} x A ^{0.1})]	TIME OF FLOW INSIDE CHANNEL/ DRAIN t ₁ (min) = l/V (i.e. Column (9) + Column (26) + 60)	TIME OF CONCENTRATION t _c (min) = t ₀ + t ₁	RAINFALL INTENSITY I (mm/hr)	RAINFALL INTENSITY INCLUDING EFFECT OF CLIMATE CHANGE (+16.0%) (mm/hr) [refer to item (e) and (k) in SDM Corrigendum No. 1/2022]	ADOPTED RAINFALL INTENSITY INCLUDING EFFECT OF CLIMATE CHANGE (+16.0%) & DESIGN ALLOWANCE (12.1%) (mm/hr) [refer to item (e), (k) and (n) in SDM Corrigendum No. 1/2022]	RUNOFF COEF. C	SUB-CATCHMENT AREA A (m ²)	EFFECTIVE CATCHMENT AREA (m ²)	CUM. EFFECTIVE CATCHMENT AREA (m ²)	DESIGN FLOW (m ³ /s)	SIZE (mm)	CHANNEL TYPE	VELOCITY (m/s)	FLOW CAPACITY (m ³ /s)	90% FLOW CAPACITY (m ³ /s) (to cater for potential deposition of sediment)	SPARE CAPACITY (m ³ /s)	Occupancy of the Proposed Pipe / Channel
Top of Area A1	Starting Point	A1			31.58	30.00		17.00			17.00	0.35	1.57						0.35	722	253	253								
Starting Point	CP10	A1 + area a	30.00	30.10	29.53	29.47	0.06	13.00	0.005	220	-	-	1.57	0.18	1.75	284.63	330.17	370.12	0.95	526	500	752	0.077	375	UC	1.19	0.27	0.24	0.161	32.4%
CP10	CP11	ditto	30.10	30.20	29.47	29.45	0.01	3.00	0.005	220	-	-	1.75	0.04	1.79	283.81	329.22	369.05	0.95	0	0	752	0.077	375	UC	1.22	0.32	0.29	0.213	26.6%
CP11	CP12	ditto	30.20	29.83	29.45	29.41	0.04	9.00	0.005	220	-	-	1.79	0.14	1.93	281.17	326.16	365.63	0.95	0	0	752	0.076	375	UC	1.11	0.16	0.14	0.065	54.0%
CP12	CP13	ditto	29.83	29.75	29.41	29.38	0.03	5.50	0.005	220	-	-	1.93	0.08	2.01	279.57	324.30	363.55	0.95	0	0	752	0.076	375	UC	1.08	0.14	0.12	0.046	62.2%
CP13	CP14	ditto	29.75	29.60	29.38	29.23	0.03	7.00	0.005	220	-	-	2.01	0.11	2.12	277.58	322.00	360.96	0.95	0	0	752	0.076	375	UC	1.08	0.14	0.12	0.047	61.7%
CP14	CP15	ditto	29.60	29.60	29.23	29.19	0.03	7.00	0.005	220	-	-	2.12	0.11	2.23	275.68	319.79	358.48	0.95	0	0	752	0.075	375	UC	1.10	0.15	0.14	0.061	55.0%
CP15	CP16	ditto	29.60	29.50	29.19	29.11	0.08	18.00	0.005	220	-	-	2.23	0.27	2.50	270.96	314.32	352.35	0.95	0	0	752	0.074	375	UC	1.09	0.14	0.13	0.055	57.4%
CP16	TM	ditto	29.50	29.50	29.11	29.08	0.03	7.00	0.005	220	-	-	2.50	0.11	2.61	269.24	312.32	350.11	0.95	0	0	752	0.073	375	UC	1.11	0.16	0.14	0.069	51.4%
Top of Area A2	Starting Point	A2			40.00	30.00		88.00			88.00	0.35	6.56						0.35	6,203	2,171	2,171								
Starting Point	CP1	A2 + area b	30.45	30.20	30.00	29.75	0.09	7.00	0.013	80	-	-	6.56	0.06	6.61	223.97	259.81	291.24	0.95	1,326	1,260	3,431	0.278	450	UC	2.03	0.37	0.33	0.052	84.2%
CP1	CP2	ditto	30.20	30.15	29.75	29.57	0.18	18.00	0.010	100	-	-	6.61	0.16	6.77	222.72	258.36	289.62	0.95	0	0	3,431	0.276	450	UC	1.91	0.46	0.41	0.135	67.2%
CP2	CP3	ditto	30.15	29.60	29.57	29.15	0.26	21.00	0.013	80	-	-	6.77	0.17	6.94	221.38	256.80	287.88	0.95	0	0	3,431	0.275	450	UC	2.03	0.37	0.33	0.055	83.2%
CP3	CP4	ditto	29.60	29.60	29.15	29.08	0.07	7.00	0.010	100	-	-	6.94	0.06	7.01	220.91	256.25	287.26	0.95	0	0	3,431	0.274	450	UC	1.87	0.40	0.36	0.083	76.7%
CP4	CP5	ditto	29.60	29.50	29.08	28.99	0.09	9.00	0.010	100	-	-	7.01	0.08	7.09	220.30	255.54	286.46	0.95	0	0	3,431	0.273	450	UC	1.86	0.39	0.35	0.075	78.4%
CP5	CP6	ditto	29.50	29.50	28.99	28.91	0.08	8.00	0.010	100	-	-	7.09	0.07	7.16	219.77	254.94	285.79	0.95	0	0	3,431	0.273	450	UC	1.92	0.47	0.42	0.148	64.9%
CP6	CP7	ditto	29.50	29.30	28.91	28.75	0.16	22.00	0.007	135	-	-	7.16	0.23	7.38	218.12	253.02	283.63	0.95	0	0	3,431	0.271	450	UC	1.63	0.37	0.33	0.062	81.2%
CP7	CP8	ditto	29.30	29.50	28.75	28.69	0.06	15.00	0.004	260	-	-	7.38	0.20	7.58	216.68	251.35	281.76	0.95	0	0	3,431	0.269	450	UC	1.25	0.43	0.39	0.117	69.7%
CP8	CP9	ditto	29.50	29.50	28.69	28.62	0.07	22.00	0.003	300	-	-	7.58	0.31	7.89	214.52	248.84	278.95	0.95	0	0	3,431	0.266	450	UC	1.17	0.44	0.40	0.132	66.9%
CP9	TM	ditto	29.50	29.50	28.62	28.60	0.02	5.00	0.003	300	-	-	7.89	0.07	7.97	214.04	248.28	278.32	0.95	0	0	3,431	0.265	450	UC	1.18	0.45	0.41	0.141	65.3%
Discharge Point																														
TM	Proposed outfall	A1 + A2 + Site Area	29.50	30.00	28.45	28.43	0.02	1.00	0.017	60			7.97	0.01	7.97	213.99	248.23	278.27	0.95	0	0	4,183	0.289	450	pipe	2.63	0.42	0.38	0.088	76.7%
Existing Streamcourse at Downstream of the Subject Site																														
Proposed outfall	Section X-X at the immediate downstream of the Proposed outfall	A1 + A2 + Site Area + A3		30.00	494.00	28.41		995.00			100		20.25	10.46	30.70	144.57	167.70	187.99	0.39	150,515	58,701	62,884	2,932	3000	V-shaped earth channel	1.59	3.78	3.40	0.472	86.1%
U-channel at the Proposed External Access																														
Proposed 300 UC	Existing 375 UC	A4	30.47	28.69	30.12	28.32	1.80	72.00	0.025	40			2.00	0.53	2.53	270.59	313.88	351.86	0.35	4,637	1,623	1,623	0.142	300	UC	2.29	0.23	0.21	0.067	67.9%

subcatchment	area a	area b	
Site Area	1,852	526	1,326
A1	722		
A2	6,203		
A3	150,515	(including paved area = 9,484 m ²)	equivalent runoff coef. = (9,484 x 0.95 + (150,515 - 9,484) x 0.35) / 150,515 = 0.39
total =	159,292		

Annex B

Revised Environmental Assessment

Prepared for

King Brave Limited c/o Lawson David & Sung Surveyors Limited

Prepared by

Ramboll Hong Kong Limited

**PROPOSED HOUSE DEVELOPMENT AT T.M.T.L. 550, TUEN
MUN, NEW TERRITORIES**

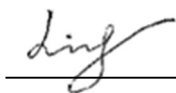
S16 PLANNING APPLICATION

ENVIRONMENTAL ASSESSMENT

Date **November 2025**

Prepared by **Tony Ling**
Environmental Consultant

Signed



Approved by

Tony Cheng
Senior Manager

Signed



Project Reference

RILTM550EI00

Document No.

R8944_v2.1

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56 Gloucester Road, Wan Chai, Hong Kong



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APPENDICES

Appendix 1	Master Layout Plan and Section
Appendix 2	Traffic Forecast
Appendix 3	Traffic Noise Impact Assessment Result for the Proposed NSRs
Appendix 4	Aerial Photos for Land Contamination Assessment

1. INTRODUCTION

1.1 Project Background

- 1.1.1 The Application Site is located at T.M.T.L. 550, Tuen Mun, New Territories, zoned as "Recreation" ("REC") under the Approved Tuen Mun Outline Zoning Plan No. S/TM/41. The Subject Site is about 1,852 m². A planning application for the use of "Holiday Camp" was approved in May 2015 (A/TM/469).
- 1.1.2 The purpose of the submission is to develop the Application Site to a 2-storey house.
- 1.1.3 In order to support the planning application of the proposed development, an environmental assessment (EA) shall be prepared to support the proposed development from the environmental points of view.
- 1.1.4 Ramboll Hong Kong Limited (the Consultant) has been commissioned by the applicant to conduct this environmental assessment in relation to the planning application. Architectural drawings and technical information of the Subject Site were provided by Design Consultants Limited and Lawson David & Sung Surveyors Limited respectively whereas information on road traffic forecast was provided by CKM Asia Limited (the Traffic Consultant).

1.2 Application Site and its Environs

- 1.2.1 The Application Site is located at T.M.T.L. 550 in Tuen Mun. The site is currently zoned "Recreation".
- 1.2.2 The Subject Site is bounded by road carriageways on three sides. Lung Fu Road and Lung Mun Road are aligned on the northwest and southeast sides of the Subject Site respectively.
- 1.2.3 The Application Site is vacant currently and situated more than 1 km away from any existing/planned industrial developments.
- 1.2.4 **Figure 1** shows the location of the Application Site and the surrounding environs.

1.3 Proposed Development

- 1.3.1 Under the current application, the Proposed Development consists of one 2-storey house for residential purpose. The maximum building height is 36.6 mPD. A proposed underground septic tank which follows the same treatment strategy proposed in the previous approved holiday camp application, will be located at the north of House. The master layout plan and sections of the Proposed Development are shown in **Appendix 1**.
- 1.3.2 The tentative completion year for the Proposed Development is 2031.

1.4 Key Environmental Issues and Study Approach

- 1.4.1 Key Environmental issues and concerns as identified for the Project include:
Air Quality
- 1.4.2 For the construction phase, the potential air quality impacts would be caused by the dust emissions generated during construction activities. For the operation phase, the potential air quality impacts arising from the vehicular emissions of the nearby roads, and the chimney emissions (if any) of the nearby industrial activities should be addressed.

Noise

- 1.4.3 Site visits were conducted on 27 June 2025 to identify whether there is any potential industrial noise source in the vicinity (i.e. 300m) of the Application Site. No industrial activities are identified in the vicinity.
- 1.4.4 The identified noise source in the vicinity of the Application Site is the road traffic noise from nearby road network. Practical noise mitigation measures should be recommended where required in order to satisfy the requirement of the Hong Kong Planning Standards and Guidelines (HKPSG).

Water Quality

- 1.4.5 For the construction and operation phase, potential water quality impact arising from the Application Site on the Water Sensitive Receiver in the vicinity (i.e. 500m) of the site boundary of Application Site will be discussed in **Section 4**. Practical mitigation measures should be recommended, where necessary, to reduce the potential water quality impacts in order to control the residual impacts to acceptable levels.

Waste Management

- 1.4.6 Potential waste management issues in connection with construction and operation of the Project will be discussed in **Section 5**. It also recommends mitigation measures to alleviate impacts, where necessary.

Land Contamination

- 1.4.7 The historical landuse and existing condition have been studied for the purpose to identify if there is/was any potentially land contaminating activity held onsite, and actions recommended to be taken afterwards. A land contamination appraisal is included in **Section 6**.

2. AIR QUALITY IMPACT ASSESSMENT

2.1 Introduction

2.1.1 This section examines the potential air quality impacts that could arise from the construction phase and operation phase of the Project.

2.2 Environmental Legislation and Guidelines

2.2.1 The following legislation and regulations provide the standards and guidelines for evaluation of air quality impacts and the type of works that are subject to air pollution control:

- Air Pollution Control Ordinance (APCO) (Cap. 311) and the Air Quality Objectives (AQO)
- Air Pollution Control (Construction Dust) Regulation
- Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation
- Air Pollution Control (Fuel Restriction) Regulations
- Hong Kong Planning Standards and Guidelines (HKPSG)

Air Pollution Control Ordinance (CAP 311)

2.2.2 To achieve as soon as reasonably practicable and to maintain thereafter to safeguard the health of the community, a set of Air Quality Objectives (AQOs) is established under the Air Pollution Control Ordinance (Cap. 311). The prevailing AQOs that came into effect on 11 April 2025 are listed in **Table 2.1**.

Table 2.1 The Hong Kong Air Quality Objectives (HKAQOs)

Pollutant	Averaging time	Concentration limit ^[i] (µg/m ³)	Number of exceedances allowed per calendar year
Sulphur dioxide, SO ₂	10-min	500	3
	24-Hour	40	3
Respirable suspended particulates, RSP (PM ₁₀) ^[ii]	24-Hour	75	9
	Annual	30	NA
Fine suspended Particulates, FSP (PM _{2.5}) ^[iii]	24-Hour	37.5	18
	Annual	15	NA
Nitrogen dioxide, NO ₂	1-Hour	200	18
	24-Hour	120	9
	Annual	40	NA
Ozone, O ₃	8-Hour	160	9
	Peak Season	100	NA
Carbon monoxide, CO	1-Hour	30,000	0
	8-Hour	10,000	0
	24-Hour	4,000	0
Lead	Annual	0.5	NA

Notes:

^[i] All measurements of the concentration of gaseous air pollutants, i.e. sulphur dioxide, nitrogen dioxide, ozone and carbon monoxide, are to be adjusted to a reference temperature of 293 Kelvin and a reference pressure of 101.325 kilopascal.

^[ii] Respirable suspended particulates means suspended particles in air with a nominal aerodynamic diameter of 10 µm or less.

[iii] *Fine suspended particulates means suspended particles in air with a nominal aerodynamic diameter of 2.5 µm or less.*

- 2.2.3 For odour impact assessment, Annex 4 of TM-EIAO stipulates an odour limit of 5 odour units based on an averaging time of 5 seconds at an air sensitive receiver should be met.

Air Pollution Control (Construction Dust) Regulation

- 2.2.4 Made under Section 43 of the APCO, this Regulation defines notifiable and regulatory works for achieving the purpose of dust control for a number of activities. The Regulation requires that any notifiable work shall give advance notice to EPD, and the Contractors shall ensure that the notifiable and regulatory works are carried out in accordance with the Schedule of the Regulation. Dust control and suppression measures are also provided in the Schedule.
- 2.2.5 The proposed construction works for the proposed Project are both regulatory and notifiable works due to activities including material stockpiling and dusty material handling as potential sources of fugitive dust emissions as detailed under Parts I to IV of the Schedule on Dust Control Requirements.

Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation

- 2.2.6 The Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation, which aims to control emissions from non-road mobile machinery (NRMMs) to improve air quality, became effective on 1 June 2015. NRMMs include non-road vehicles, as well as mobile machines and equipment (regulated machines) such as crawler cranes, excavators and air compressors.
- 2.2.7 Under the regulation, regulated machines have to comply with the Stage IIIA emission standards of the European Union (EU). It also requires all regulated machines sold or leased for use in Hong Kong to bear an approval or exemption label issued to them by the EPD, started from 1 September 2015. It restricts specified activities and locations including construction sites, designed waste disposal facilities and specified processes to use only NRMMs that bear an approval or exemption label issued to them by the EPD, with effect from 1 December 2015.

Air Pollution Control (Fuel Restriction) Regulations

- 2.2.8 The Air Pollution Control (Fuel Restriction) Regulations was enacted in 1990 to impose legal control on the type of fuels allowed for use and their sulphur contents in commercial and industrial processes to reduce sulphur dioxide (SO₂) emissions. In April 2025, the Air Pollution Control (Fuel Restriction) Regulations was amended to tighten the control requirements of liquid fuels. The Regulations does not apply to any fuel-using equipment that is used or operated in premises used solely as a dwelling, or is used or operated in or on a vessel, motor vehicle, railway locomotive or aircraft.

Hong Kong Planning Standard and Guidelines (HKPSG)

- 2.2.9 Potential air quality impacts associated with the surrounding road carriageways and chimney emission from industrial stack shall be evaluated in accordance with the guidelines set out in HKPSG.
- 2.2.10 **Table 2.2** below is the extract of Table 3.1 in Chapter 9 "Environment" of Hong Kong Planning Standard and Guidelines (HKPSG) stating the recommended minimum horizontal buffer distance against pollution sources generated from road & highways and industrial areas.

Table 2.2 Guidelines on Usage of Open Space Site

Pollution Source	Parameter	Buffer Distance	Permitted Uses
Road and Highways	Type of Road		
	Trunk Road and Primary Distributor	>20 m	Active and passive recreational uses
		3 – 20 m	Passive recreational uses
		<3 m	Amenity areas
	District Distributor	>10 m	Active and passive recreational uses
		<10 m	Passive recreational uses
	Local Distributor	>5 m	Active and passive recreational uses
		<5 m	Passive recreational uses
	Under Flyovers		Passive recreational uses
Industrial Areas	Difference in Height between Industrial Chimney Exit and the Site		
	<20 m	>200 m	Active and passive recreational uses
		5 – 200 m	Passive recreational uses
	20 – 30 m (*)	>100 m	Active and passive recreational uses
		5 – 100 m	Passive recreational uses
	30 – 40 m	>50 m	Active and passive recreational uses
		5 – 50m	Passive recreational uses
	>40 m	>10 m	Active and passive recreational uses
Construction and Earth Moving Activities	-	<50 m	Passive recreational uses
		>50 m	Active and passive recreational uses

Note:

- (i) In situations which the height of chimneys is not known, use the set of guidelines marked with an asterisk for preliminary planning purpose and refine as and when more information is available.
- (ii) The buffer distance is the horizontal, shortest distance from the boundary of the industrial lot, the position of existing chimneys or the edge of road kerb, to the boundary of open space sites.
- (iii) The guidelines are generally applicable to major industrial areas but NOT individual large industrial establishment which are likely to be significant air pollution sources. Consult EPD should be consulted when planning open spaces close to such establishments.
- (iv) Amenity areas are permitted in any situation.

2.3 Construction Phase

Impact Brought during Construction Phase

- 2.3.1 Construction activities will bring potential temporary air quality impact to the surrounding area. Significant emissions are not anticipated from air pollutants other than dust - NO₂, SO₂, and CO, etc. as the number of on-site diesel/petroleum fuelled machinery (1-2 machineries) to be used for construction works is limited owing to the small size of the work site with an area of 1,852 m². However, electric power supply shall be provided for on-site machinery as far as practicable and diesel generators shall be avoided to minimize the gaseous and PM emissions. Travelling of the dump trucks is another potential source of construction dust. At this planning application stage, there is no detailed information on the construction program; however, with reference to other similar scale projects, there is likely to be around 2 dump trucks per hour during the site formation stage of the Proposed Development. Watering the haul road

and the site once per hour would be implemented to minimize the potential dust emission during the traveling of the dump trucks within the site.

- 2.3.2 Furthermore, there is a potential concurrent project "Proposed Public Housing Development at Wu Shan Road" within the 500m study area from the site boundary which would contribute to the cumulative impact during the construction phase. According to the available public information, the tentative completion year of the potential concurrent project would be 2025/26. Nevertheless, with the adoption of good practices, it is expected that emission of construction fugitive dust can be kept to an acceptable level. In addition, the applicant will liaise with the relevant parties of the concurrent project, if any, to avoid any heavy dusty activities to be conducted at the same time to minimize the cumulative dust impact at the area. The location of the potential concurrent project is shown in **Figure 2**.

Representative Air Sensitive Receivers

- 2.3.3 There are a number of village houses, planned public housing development, golf centre, sitting-out area and riding school located within 500m of the Proposed Development. The representative ASRs are tabulated below. The relative location and distance between the representative ASRs and the Subject Site can be referred to **Figure 3**.

Table 2.3 Representative ASRs during Construction Phase

Ref	Descriptions	Type	Use	Distance from the Project Boundary
A1	Tuen Mun Golf Centre	Existing	Recreation	~212m
A2	Public Housing Development at Wu Shan Road	Planned	Residential	~302m
A3	Hung Lau Sitting-out Area	Existing	Recreation	~107m
A4	Tuen Mun Public Riding School	Existing	Education	~216m
A5	Tsing Shan Tsuen San Shek Wan South	Existing	Residential	~256m

- 2.3.4 It is necessary to adopt a management strategy for controlling the construction dust generated from the construction of the Proposed Development. **Air quality control measures for avoiding and minimising the potential impacts shall be carried out.**

Control Measures Recommended during Construction Phase

- 2.3.5 Appropriate dust reduction measures **shall** be adopted as required under the Air Pollution Control (Construction Dust) Regulation. Essential dust mitigation measures must be implemented to minimize the potential dust impact. Dust impact **shall** be effectively mitigated by inclusion of appropriate contract clauses for dust minimisation in the work contracts. Mitigation measures **shall** include:

- dump trucks for material transport should be totally enclosed using impervious sheeting;

- any excavated dusty materials or stockpile of dusty materials should be covered entirely by impervious sheeting or sprayed with water so as to maintain the entire surface wet, and recovered or backfilled or reinstated within 24 hours of the excavation or unloading;
- the stockpiled malodorous materials should be removed from Application Site as soon as possible, and they should be covered entirely by plastic tarpaulin sheets;
- dusty materials remaining after a stockpile is removed should be wetted with water;
- the area where vehicle washing takes place and the section of the road between the washing facilities and the exit point should be paved with e.g. concrete, bituminous materials or hardcore or similar;
- stockpile of dusty materials to be either covered entirely by impervious sheeting, placed in an area sheltered on the top and the 3 sides; or sprayed with water so as to maintain the entire surface wet;
- all dusty materials to be sprayed with water prior to any loading, unloading or transfer operation so as to maintain the dusty material wet;
- vehicle speed to be limited to 10 km/hr except on completed access roads;
- the portion of road leading only to a construction site that is within 30 m of a designated vehicle entrance or exit should be kept clear of dusty materials;
- every vehicle should be washed to remove any dusty materials from its body and wheels before leaving the construction sites;
- the load of dusty materials carried by vehicle leaving a construction site should be covered entirely by clean impervious sheeting to ensure that the dusty materials would not leak from the vehicle;
- the working area of excavation should be sprayed with water immediately before, during and immediately after (as necessary) the operations so as to maintain the entire surface wet; and
- use of effective dust screens, sheeting or netting to be provided to enclose dry scaffolding which may be provided from the ground floor level of the building or if a canopy is provided at the first floor level, from the first floor level, up to the highest level (maximum four floors for this Project) of the scaffolding where scaffolding is erected around the perimeter of a building under construction.

2.3.6 In addition to the dust control measures described above, dust suppression measures stipulated in the Air Pollution Control (Construction Dust) Regulation and good site practices listed below shall be carried out to further minimize construction dust impact:

- Plan site layout so that machinery and dust causing activities (e.g. haul roads and stockpiling areas) are located away from receptors as far as possible;
- Consider connecting construction plant and equipment to main electricity supply and avoid use of diesel generators and diesel-powered equipment as far as practicable;
- Provision of not less than 2.4m high hoarding from ground level along site boundary where adjoins a road, streets or other accessible to the public except for a site entrance or exit;
- Implement phasing of the excavation work to avoid large scale excavation at the same time in vicinity of nearby ASRs; and
- Erect solid screens or barriers around dusty activities, etc.

- 2.3.7 A monitoring programme could also be instigated to monitor the construction process in order to enforce dust controls and modify methods of works to reduce the dust emission down to an acceptable level.
- 2.3.8 Good site management is important for reducing potential air quality impact down to an acceptable level. As a general guidance, the contractor shall maintain high standard of site management to prevent potential emission of fugitive dust emission. Loading, unloading, handling and storage of fuel, raw materials, products, wastes or by-products should also be carried out in a manner so as to minimise the release of visible dust emission.
- 2.3.9 A high standard of site management shall be maintained. Any piles of materials accumulated on or around the work areas shall be cleaned up regularly. Cleaning, repair and maintenance of all plant facilities within the work areas shall be carried out in a manner without generating fugitive dust emissions. The material shall be handled properly to prevent fugitive dust emission before cleaning.
- 2.3.10 "Recommended Pollution Control Clauses for Construction Contracts" is available on EPD website. It contains the recommended air pollution control measures to be implemented by the contractor during the construction stage.

2.4 Operation Phase

Review on Odour Impact

- 2.4.1 All sewage and wastewater generated from the proposed development would be treated by the proposed underground septic tank and treated effluent would be percolated to surrounding subsoil in the soakaway pit. Further sewerage treatment arrangement will be submitted to Environmental Protection Department for approval at the detailed design stage. In view of that the development and effluent volume are small in scale (1 residential unit with flow rate of 0.7m³ per day); with distance of ~31m between the proposed septic tank and proposed development; with distance of >100m between Subject Site and nearby ASRs; no exhaust on the proposed underground septic tank; the system is same as that adopted in the previous approved Holiday Camp application (A/TM/469) and all the requirement as stipulated in ProPECC PN 1/23 would be followed, it is anticipated that the proposed underground septic tank would not cause any adverse odour impact to the proposed development and nearby ASRs.

Review on Industrial Emission Impact

- 2.4.2 Onsite surveys were conducted on 27 June 2025 to verify the presence of chimneys. There was no chimney identified within 200m from the boundary of Proposed Development. As such, it is anticipated that the Proposed Development would not be subject to adverse industrial emission impact.

Review on Vehicular Emission Impact

- 2.4.3 In accordance with above table as stipulated in HKPSG, the minimum requirements on the buffer distance from Lung Fu Road and Lung Mun Road is >10m, from San Shek Wan Road and Proposed Access Road is >5m.

Table 2.4 Buffer Distances between Kerb Side of Concerned Road Links and Proposed Air Sensitive Uses

Road Name	Road Type	Recommended Buffer Distance (m)	Shortest Horizontal Distances Between Kerb Side of Concerned Road Links and the Application Site (m)
Lung Fu Road	Primary Distributor	>20m	~70m
Lung Mun Road	District Distributor	>10m	~211m
San Shek Wan Road	Local Distributor	>5m	~79m
Proposed Access Road	Local Distributor	>5m	~4.7m

- 2.4.4 As shown in **Table 2.4** and **Figure 4**, the recommended buffer distance requirement for Lung Fu Road, Lung Mun Road and San Shek Wan Road in the HKPSG would be complied. For the proposed access road, a small portion of the application site is within 5m buffer distance of the access road, however, no air sensitive uses (including fresh air intake, openable window, and open space for recreational use, etc.) would be located within 5m buffer distance, the shortest separation between the proposed access road and existing air sensitive receiver (ASR A1) is about 143m. In conclusion, there would be no air sensitive uses within the above-mentioned 10m and 5m buffer zones. Since the recommended minimum buffer distance of the vehicular emission in the HKPSG can be met, the future residents and occupants of Proposed Development and existing air sensitive receivers will not be subjected to insurmountable vehicular emission impact.

3. NOISE IMPACT ASSESSMENT

3.1 Introduction

- 3.1.1 This section assesses the potential industrial noise and road traffic noise impacts on the noise sensitive uses of the Proposed Development. Practical mitigation measures are proposed to mitigate the potential noise impacts, where necessary.

3.2 Industrial Noise Impact Assessment

- 3.2.1 Onsite surveys were conducted on 27 June 2025 to verify the presence of industrial noise sources. There was no industrial noise source identified within 300m from the boundary of Proposed Development. As such, it is anticipated that the Proposed Development would not be subject to adverse industrial noise impact.

3.3 Railway Noise Impact Assessment

- 3.3.1 According to the desktop studies and onsite surveys conducted on 27 June 2025, light rail transit as a potential noise source is identified with distance of ~200m, located to the southeast of the Application Site. However, the direct line of sight between proposed development and identified light rail (e.g. Butterfly Station) is blocked by natural terrain (Approximate 40mPD or higher). In view of the separation distance of 25m is met and existing topographic screening, it is anticipated that the Proposed Development would not be subject to adverse railway noise impact. Location of the light rail transit and separation distance from the Application Site is shown in **Figure 5**.

3.4 Road Traffic Noise Impact Assessment

3.4.1 Assessment Criteria

- 3.4.1.1 Noise standards are recommended in the HKPSG for planning against possible noise impact from road traffic.
- 3.4.1.2 Domestic dwellings of the Proposed Development will rely on openable window for ventilation. According to the guidelines, the maximum noise level from road traffic, measured in terms of L_{10} (1-hr), is recommended to be 70 dB(A) at typical facades of new domestic dwellings.

3.4.2 Assessment Methodology

- 3.4.2.1 The methodology involves the prediction of future noise impacts on Noise Sensitive Receivers (NSRs) arising from road traffic of the existing and future road carriageways in the 300m assessment area. The 300m assessment area is shown in **Figure 6**.
- 3.4.2.2 The U.K. Department of Transport's procedure "Calculation of Road Traffic Noise" was applied to predict the hourly L_{10} noise level generated from road traffic at selected representative facades (NSRs) of the Proposed Development. The predicted noise levels were then compared with the HKPSG noise criterion for assessing the impact.
- 3.4.2.3 Based on the tentative completion year of Proposed Development (Year 2031), traffic forecast for the Year 2046 (AM Peak) on the road carriageways in the vicinity of the Proposed Development, which has the maximum traffic projection within 15 years from the completion of the Proposed Development, was provided by CKM (the project traffic consultant) for prediction of the worst-case traffic noise impact. The projected traffic flows and vehicle composition are shown in **Appendix 2**.

3.4.3 Road Characteristics

- 3.4.3.1 All roads surrounding the Application Site are assumed with a speed limit of 50km/hr with an impervious surface.

3.4.4 Noise Sensitive Receivers

3.4.4.1 The representative facades with openable windows/doors were identified as NSRs in the assessment. Locations of proposed NSRs are shown in **Figure 7**. The assessment points are taken at 1.2 m above the floors of the selected storey and 1m away from the facades of openable windows.

3.4.5 Review of Road Traffic Noise Impact for Proposed Development

3.4.5.1 A road traffic noise impact assessment has been prepared to estimate the traffic noise level at all representative NSRs.

3.4.6 The assessment results show that full compliance rate is achieved. Maximum predicted traffic noise level is 70 dB(A), which complies with the 70 dB(A) noise criterion as listed in HKPSG for residential units. Therefore, no adverse road traffic noise impact is anticipated at the proposed NSRs.

3.4.6.1 The predicted road traffic noise result is summarised in **Appendix 3**.

4. WATER QUALITY ASSESSMENT

4.1 Introduction

- 4.1.1 This section presents the water quality impact assessment for the construction and operational phases of the Project. Potential impacts have been identified and their significance on the Water Sensitive Receivers (WSRs) evaluated. The location of these WSRs can be referred to **Figure 8**. Appropriate mitigation measures and good site practices are recommended, where necessary, to reduce the potential water quality impacts in order to control the residual impacts to acceptable levels.

4.2 Environmental Legislation, Standards and Guidelines on Construction Phase Water Quality Impact

- 4.2.1 Construction activities may induce potential water quality impact due to the discharge of the effluent generated from the construction site. Effluent discharges from construction site are subject to control under the Water Pollution Control Ordinance and the Technical Memorandum Standards for Effluents Discharged in Drainage and Sewerage Systems, Inland and Coastal Water issued by EPD. Information in the ProPECC PN2/24 Construction Site Drainage will also be considered to provide some basic environmental guidelines for handling and disposal of construction site discharges.

4.3 Construction Phase Water Quality Impacts

- 4.3.1 Site construction activities will inevitably have the potential to generate wastewater. As such works should be carried out in such a manner as to minimize potential impacts on the water quality. Pollution sources could include:
- Construction runoff and drainage;
 - Sewage effluent from construction site; and
 - Liquid spillage, e.g. oil, diesel and solvents etc.

Construction Runoff and Drainage

- 4.3.2 Construction runoff contains increased loads of sediments, other suspended solids and contaminants. Potential sources of pollution include runoff and erosion from the site surfaces, drainage channels; bentonite slurries and other grouting materials, concrete washout and drainage from dust suppression sprays, fuel, oil and lubricants from construction vehicles and other equipment.
- 4.3.3 Sufficient silt removal facilities should be installed to settle out sediment prior to discharge. Such facilities shall be properly designed in accordance with guidelines from the Civil Engineering and Development Department (CEDD) to achieve the desired mitigating effect. Typically, a detention time not less than 5 minutes for maximum design flow of inlet should achieve adequate sediment removal. Channels or earth berm or sand bag barriers should be provided on site to properly direct surface runoff to such silt removal facilities. Sediment traps, channels and manholes should be maintained and the deposited silt and grit should be removed on regular basis so that potential impacts on WSR can be minimized.

Sewage Effluent from Construction Site

- 4.3.4 Water pollution due to site facilities e.g. toilets could be source of pollution if appropriate measures are not implemented properly in respect of storage and discharge.
- 4.3.5 In this construction site, portable chemical toilets will be provided. Chemical toilets should be provided at a minimum rate of about 1 per 50 workers. The facility should be serviced and cleaned by a specialist contractor at regular intervals. Sewage generated from the construction workforce will be contained in chemical toilets and be tanked away. Therefore, no adverse water quality impact is anticipated on WSR.

Liquid Spillage

- 4.3.6 To prevent spillage of fuel oils or other polluting fluids at sources, it is recommended that all the stocks should be stored inside proper containers and sited on sealed areas, preferably surrounded by bunds.
- 4.3.7 "Recommended Pollution Control Clauses for Construction Contracts" (RPCC) also recommends appropriate wastewater control measures to be implemented at the construction site by the contractor. The RPCC is available on EPD website.
- 4.3.8 The quality of the discharge wastewater should meet the standards specified in the Technical Memorandum – Standards for Effluents Discharged into Drainage and Sewerage Systems, Inland and Coastal Waters. The above proposed mitigation measures and control measures should be implemented and an environmental monitoring and audit should be carried out to ensure the effectiveness of the proposed mitigation measures and subsequently ensure the water quality of the nearby water sensitive receivers would not be adversely affected by the construction of the project.

4.4 Best Management Practices (BMPs) for Stormwater Discharge

- 4.4.1 The BMPs given in the ProPECC PN 2/24 shall be implemented in controlling water pollution during the whole construction phase to minimize the impact on WSR. The main practices provided in the above-mentioned document (i.e. ProPECC PN 2/24) are also summarized in the following paragraphs which should be implemented by the contractor during the construction phase, where practicable:
- High loading of suspended solids (SS) in construction site runoff will be prevented through proper site management by the contractor;
 - The boundary of critical work areas will be surrounded by ditches or embankment. Accidental release of soil or refuse into the adjoining lands should be prevented by the provision of site hoarding or earth bunds, etc. at the site boundary. These facilities should be constructed in advance of the site formation works and roadworks;
 - Consideration will be given to plan construction activities to allow the use of natural topography of the Project Site as a barrier to minimize uncontrolled non-point discharge of construction runoff;
 - Temporary ditches, earth bunds should be provided to facilitate controlled discharge of runoff into storm drains via sand/ silt removal facilities such as sand traps and sedimentation basins. Oil and grease removal facilities should also be provided where appropriate, for example, in area near plant workshop/ maintenance areas;
 - Sedimentation basins and sand traps designed in accordance with the requirements of ProPECC Note PN 2/24 should be installed at the construction site for collecting surface runoff;

- Sand and silt removal facilities, channels and manholes should be maintained and the deposited silt and grit should be removed regularly by the contractor, and at the onset of and after each rainstorm to ensure that these facilities are functioning properly;
- Slope exposure should be minimized where practicable especially during the wet season. Exposed soil surfaces should be protected from rainfall through covering the temporarily exposed slope surfaces or stockpiles with tarpaulin or the like;
- Haul roads should be protected by crushed rock, gravel or other granular materials (i.e. hard paved) to minimize discharge of contaminated runoff;
- Slow down water run-off flowing across exposed soil surfaces;
- Plant workshop/ maintenance areas should be bonded and constructed on a hard standing. Sediment traps and oil interceptors should be provided at appropriate locations;
- Manholes (including newly constructed ones) should be adequately covered or temporarily sealed so as to prevent silt, construction materials or debris from getting into the drainage system;
- Construction works should be programmed to operate in dry seasons and minimize soil excavation works where practicable during the rainy days;
- Chemical stores will be contained (bonded) to prevent any spills from contact with water bodies. All fuel tanks and/ or storage areas should be provided with locks and be sited on hard surface;
- Chemical waste arising from the Project Site should be properly stored, handled, treated and disposed of in compliance with the requirements stipulated under the Waste Disposal (Chemical Waste) (General) Regulation;
- Drainage facilities must be adequate for the controlled release of storm flows;
- Vehicle wheel washing facilities should be provided at the site exit such that mud, debris, etc. attached to the vehicle wheels or body can be washed off before the vehicle leaves the work site;
- Section of the road between the wheel washing bay and the public road will be paved to reduce vehicle tracking of soil and to prevent site run-off from entering public road drains; and
- Bentonite slurries, if any to be generated, shall be reconditioned and reused as far as practicable. Spent bentonite should be kept in a separate slurry collection system for disposal at a marine spoil grounds subject to obtaining a marine dumping licence from EPD. If used bentonite slurry is to be disposed of through public drainage system, it should be treated to meet the respective applicable effluent standards for discharges into sewers, storm drains or the receiving waters.

4.5 Potential Operation Phase Water Quality Impacts

- 4.5.1 According to the major operation phase activities in the Proposed Development, the key potential water quality impact is due to the surface runoff and treated effluent discharge from the Proposed Development.
- 4.5.2 The management and mitigation strategy of the potential water quality impact is addressed below, with appropriate environmental control measures recommended.
- 4.5.3 Best practices as stated in ProPECC PN 1/23 "Drainage Plans Subject to Comment by the Environmental Protection Department" shall be followed. It states out the handling,

treatment and disposal of various effluent discharges to stormwater drains and foul sewers during the operation phase. Some examples of the recommendations listed in the ProPECC PN 1/23 are as below.

- Drainage in covered car parks should be connected to foul sewers via petrol interceptors;
- Disposal of commercial and industrial wastewater by injection into the ground (e.g. by soakaway pits) is normally not allowed; and
- All wastewater collected from a restaurant kitchen, including that from basins, sinks and floor drains, should be discharged via a grease trap capable of providing at least 20 minutes retention during peak flow.

4.6 Surface Runoff Discharge/ Stormwater Discharge

- 4.6.1 During operation, the irrigation runoff and surface runoff during rainfall events, which is known as non-point source of pollution, may be the cause potential water quality impact. Fallen leaves, particles, litter from open areas, which is a source of organic and nutrient pollutants, can be washed into the drainage system during heavy rainfall if it is not properly controlled. Pollutants, contributed by non-point source are often bound or adsorbed onto particles, thus an effective stormwater management system will be required for the removal of pollution sources prior to rainstorm and the provision of degritting/screening facilities will be required for sediment collection. As the particles settle out, the associated pollutants will also settle out and removed from stormwater.
- 4.6.2 Under normal condition, runoff carrying pollutants will not be generated in low rainfall intensity, but increased runoff may occur during heavy rainfall condition. The first flush flow would carry most of the pollutants and the subsequent overland flow generated from rainstorms is expected to be uncontaminated. Thus, prevention of "first flush" pollution in stormwater runoff will be an effective way in controlling pollution at source and to abate pollutants.
- 4.6.3 Relevant assessment on the total peak flow of stormwater of the Proposed Development and the capacity of proposed drainage system are provided in a separate Drainage Proposal.

4.7 Sewage Effluent from Proposed Development

- 4.7.1 At present, there is no existing or planned public sewer for connections in the vicinity of the Application Site. Given that the development is small in scale. All sewage and wastewater generated from the proposed development would be treated by the proposed underground septic tank and treated effluent would be percolated to surrounding subsoil in the soakaway pit. This system is same as that adopted in the previous approved Holiday Camp application (A/TM/469) and all the requirement as stipulated in ProPECC PN 1/23 would be followed. It is expected that the operation of the proposed development would not cause operational phase water quality impact. Further sewerage treatment arrangement will be submitted to Environmental Protection Department for approval at the detailed design stage.
- 4.7.2 There will not be any greywater recycling activities planned due to hygienic considerations.

4.8 Implementation of Best Management Practices (BMPs)

- 4.8.1 Surface runoff can be controlled by good drainage design and implementation of BMPs. The Proposed Development shall adopt the following BMPs.

Runoff Control

- 4.8.2 Site drainage system of the development shall be reviewed regularly in such way that surface runoff shall be directed towards the internal access road. If necessary, additional paved U-channels with screening facilities shall also be provided along the edge of Proposed Development to avoid uncontrolled spillage of runoff.

Prevention of Pollution at Source

- 4.8.3 Regular cleaning and sweeping of road surface/ open areas is suggested so as to minimize exposure of pollutants to stormwater. The road surface/ open area cleaning should also be carried out prior to occurrence of rainstorm.
- 4.8.4 With the above measures, the amount of pollutants at source has been largely reduced/ avoided as far as possible so that the impact on WSR would not be adverse.

Devices for Removal of Pollutants

- 4.8.5 In addition to the above, screening facilities such as standard gully grating and trash grille, with spacing which is capable of screening off large substances such as fallen leaves and rubbish should be provided at the inlet of drainage system as well as at upstream location of the u-channels. It is expected that most of the large substances in stormwater runoff would be removed with such devices so as to prevent it from entering the drainage system. Road gullies with standard design should be incorporated during the detailed design to remove particles present in stormwater runoff.
- 4.8.6 In the event of emergency (e.g. car accident) where there is a major spillage of oil, chemical or fuel, dispersants or firefighting foam, etc., a system of contaminant bunding will be implemented as appropriate.

Management Measures

- 4.8.7 Good management measures such as regular cleaning and sweeping of road surface/ open areas is suggested. The road surface/ open area cleaning should also be carried out prior to occurrence of rainstorm.
- 4.8.8 Stormwater gullies and ditches provided among the Proposed Development will be regularly inspected and cleaned by the property management company.
- 4.8.9 With the removal of pollutants, the pollution levels from stormwater would be much reduced, and given the stochastic nature of non-point source pollution and the proposed management measures, there will be no significant impact expected on WSR.
- 4.8.10 With appropriate management measures in place, the risk of untreated sewage effluent discharge to North Western Control Zone due to emergency events is considered to be negligible.

5. WASTE MANGEMENT

5.1 Introduction

- 5.1.1 This section presents an assessment of the potential waste management issues in connection with construction and operation of the Project. The options for waste minimization, reuse, recycling, collection, transport and disposal of wastes arising from the construction and demolition work have been examined. Where appropriate, procedures for waste reduction and management are considered and environmental control measures for avoiding and minimising the potential impacts are recommended.
- 5.1.2 Recommended Pollution Control Clauses for Construction Contracts published by Environmental Protection Department would be implemented during the construction phase of the proposed development. Waste generated from the Proposed Development would be properly controlled and adverse waste management would not be anticipated.

5.2 Relevant Legislation, Standards & Guidelines

- 5.2.1 In carrying out the assessment, reference has been made to the following relevant Hong Kong legislation governing waste management and disposal. Directly relevant legislation include:
1. The Waste Disposal Ordinance (Cap. 354) and subsidiary legislation such as the Waste Disposal (Chemical Waste) (General) Regulation, and the Waste Disposal (Clinical Waste) (General) Regulation, set out requirements for the storage, handling and transportation of all types of wastes;
 2. Land (Miscellaneous Provisions) Ordinance (Cap 28); and
 3. Public Health and Municipal Services Ordinance (Cap 132) – Public Cleansing and Prevention of Nuisance Regulation – control of disposal of general refuse.
- 5.2.2 Other relevant documents and guidelines that are applicable to waste management and disposal include:
4. PNAP 243 ADV-19 - Construction and Demolition Waste;
 5. Development Bureau Technical Circular (Works) No. 8/2010 - Enhanced Specification for Site Cleanliness and Tidiness;
 6. ETWB TCW No. 22/2003A - Additional Measures to Improve Site Cleanliness and Control Mosquito Breeding on Construction Sites;
 7. Development Bureau Technical Circular (Works) No. 6/2010 - Trip-ticket System for Disposal of Construction and Demolition Materials;
 8. WBTC No. 19/2001 - Metallic Site Hoardings and Signboards;
 9. Works Bureau Technical Circular No. 12/2000 - Fill Management;
 10. Works Branch Technical Circular No. 2/93 - Public Dumps;
 11. Works Branch Technical Circular No. 2/93B - Public Filling Facilities; and
 12. Project Administration Handbook for Civil Engineering concerning Management of Construction and Demolition Materials Including Rock.

5.3 Identification and Evaluation of Potential Waste Impact during Construction Phase

5.3.1 The construction activities to be carried out for the proposed Project would generate a variety of wastes that can be divided into distinct categories based on their composition and ultimate method of disposal. The identified waste types include:

- Construction and Demolition (C&D) materials;
- Chemical waste; and
- General refuse.

C&D Materials

5.3.2 C&D materials comprise mainly of unwanted materials, including surplus materials arising from excavations that are generated from the works (e.g. site clearance, site formation works, excavation work for basement). Inert soft C&D materials comprise of soil, sand, clay, slurry, etc., while hard C&D materials comprise of crushed concrete, asphalt, rock, etc. The amount of non-inert C&D materials generated during site clearance would be minor (as there is little vegetation at the Subject Site). C&D materials may comprise different types of materials, including:

- Non-inert C&D materials (e.g. bamboo, paper, metal, glass, plastic, packaging wastes, etc.) decompose and are not suitable for land reclamation. Non-inert C&D materials should be reused or recycled as far as possible. For those non-inert C&D materials that cannot be reused or recycled should be disposed of at landfill as last resort;
- Inert C&D materials do not decompose (e.g. soil, rock debris, rubble earth, concrete, etc.) and is suitable to reuse as filling materials for land reclamation and site formation. Inert C&D materials could be reused on-site as filling materials. For those inert C&D materials that cannot be reused should be disposed at a Public Fill Reception Facilities.

5.3.3 The general waste management strategy is to avoid waste generation in the first place. Should it be unavoidable, reduction and segregation at-source should be exercised as far as practicable, and recycling and reuse should be adopted at the same time to salvage all the recyclable and reusable materials as much as possible.

5.3.4 Inert C&D materials should be re-used on-site (e.g for backfilling) if it is practical and/or disposed of at public filling area or other CEDD designated public fill reception facilities. Non-inert C&D materials (i.e. C&D waste) should be re-used or recycled. For those that cannot be reused or recycled, they should be disposed of at designated landfill sites as last resort.

5.3.5 The Contractor(s) should be responsible for ensuring that all on-site wastes will be collected by approved waste collectors and appropriate measures should be undertaken to minimise adverse impacts to the surrounding environment, such as dust generation. The Contractor(s) must also ensure that all necessary waste disposal permits have been obtained before actions.

5.3.6 Prior to disposal of non-inert C&D materials, it is recommended that wood, steel, glass and other metals will be collected separately for re-use and/or recycling and inert C&D materials utilized as fill materials to minimize the quantity of waste to be disposed of at the Public Fill Reception Facilities and landfill.

Chemical Waste

5.3.7 Construction plant and equipment will require regular maintenance and servicing, which would generate waste such as solvents, lubrication oil and fuel, etc. Chemical wastes arising during the construction phase may pose serious environmental, health and safety hazards if not stored and disposed of in an appropriate manner.

- 5.3.8 It is difficult to quantify the amount of chemical wastes as it will solely depend on the contractor's on-site maintenance practice and the quantities of plant and vehicles utilized at the construction site. Nevertheless, it is anticipated that the quantity of chemical waste such as lubrication oil and solvent produced from equipment maintenance **would be less** than hundred litres per month.
- 5.3.9 The contractor is required to register as a chemical waste producer if chemical wastes would be produced from the construction activities. The Waste Disposal Ordinance (Cap 354) and its subsidiary regulations in particular the Waste Disposal (Chemical Waste) (General) Regulation should be observed and complied with for control of chemical wastes.
- 5.3.10 Storage, handling, transport and disposal of chemical waste should be arranged in accordance with the Code of Practice on the Packaging, Labelling and Storage of Chemical Waste published by the EPD. Chemical wastes such as wasted solvents, lubrication oil and fuel, etc. will need special handling and storage arrangements and should be collected by licensed collectors for subsequent disposal and appropriate treatment at licensed waste disposal facilities, for example the Chemical Waste Treatment Centre (CWTC) in Tsing Yi. Mitigation and control requirements for chemical waste are provided in the "Recommended Pollution Control Clauses for Construction Contracts" available in EPD website mentioned the handling, storage and disposal of chemical wastes. With good management and site particles, adverse environmental impacts should not result.

General Refuse

- 5.3.11 Throughout the construction stage, the workforce would generate general refuse comprising food scraps, waste paper, empty containers, etc. Release of general refuse into watercourses or marine waters should not be permitted as introduction of these wastes is likely to have detrimental effects on water quality in the area. Effective collection of site wastes would be required to prevent waste materials being blown around by wind, flushed or leached into the marine environment, and odour nuisance. The work sites may also attract pests and vermin if the waste storage area is not well maintained and cleaned regularly. Disposal of refuse at sites other than approved waste transfer or disposal facilities can also result in similar impacts. The number of work force to be employed for the Project is around 10. Based on the generation rate of 0.65kg/person/day, the estimated total refuse generated per day (maximum) would be about 6.5kg/day.
- 5.3.12 Recyclable materials (i.e. paper, plastic bottles and aluminium cans) will be collected separately for recycling, in order to reduce the amount of general refuse to be disposed into the landfill. Adequate number of enclosed waste containers will be provided to avoid over-spillage of waste. The non-recyclable refuse will be placed in bags and stored in enclosed containers, and disposed of on a daily basis to the designated landfill. Given that the quantity of general refuse to be disposed is **6.5kg per day**, no adverse impact on the operation of these waste disposal facilities is anticipated. With the implementation of the recommended waste management practices at the site, adverse environmental impacts would not arise from the storage, handling and transportation of refuse.
- 5.3.13 Preliminary quantity estimation of construction waste involved and disposal method is summarised in the **Table 5.1** below.

Table 5.1 **Summary of Estimated Construction Waste and Disposal Method**

Waste Material Type		Estimated Quantity Generated	Disposal Method
Inert C&D Materials	Excavation	~6500 m ³	To be reused or recycled on site or in other projects; and delivered to Public Fill Reception Facilities for other beneficial reuse
	Construction of New Buildings/Structures	~500 m ³	
Non-inert C&D Materials	Excavation	~500 m ³	To be reused, recycled or disposed of at landfill as the last resort
	Construction of New Buildings/Structures	~80 m ³	
Chemical Waste	-	Less than hundred litres /month (preliminary estimate)	For treatment at licensed facilities
General Refuse	-	6.5kg/day (preliminary estimate, assuming there are 10 workers at any one time with generation rate of 0.65kg per worker per day)	Disposal to landfill

5.4 Waste Disposal and Mitigation Measures

5.4.1 Waste generated by construction activities should be properly sorted and certain waste management requirements must be followed to minimize the impacts arising because of the generation, storage, handling, transport and disposal of wastes. Good site management and control can **reduce the generation** of “mixed waste”. For unavoidable wastes, reuse, recycling and optimal disposal are most practical when segregation occurs on the construction site, categorized as follows:

- Inert C&D materials for reuse on-site or delivering to Public Fill Reception Facilities for beneficial reuse at other projects;
- Non-inert C&D materials for reuse or recycle or disposal at landfill as last resort;
- Chemical waste for treatment at licensed facilities; and
- General refuse for disposal at landfill.

C&D Material

5.4.2 Proper storage and site practices should be adopted to minimize the damage to, or contamination of, C&D materials that may reduce their recyclability and suitability for disposal in public fill reception facilities. The inert C&D materials shall be reused in earth filling, reclamation or site formation works. The non-inert C&D materials shall be reused or recycled and, as the last resort, disposed of at landfills.

5.4.3 Appropriate measures should also be employed to minimize windblown litter and dust during transportation by either covering trucks with tarpaulin or transporting wastes in enclosed containers. Waste should only be disposed at licensed sites. Resident site staff and the contractors should develop procedures to ensure that illegal disposal of waste does not occur. In addition, waste storage areas within the Project should be well maintained and cleaned regularly to prevent cross-contamination. The disposal of inert C&D materials and non-inert C&D materials to public fill reception facilities/sorting

facilities respectively through a trip-ticket system, while general refuse will be disposed of at landfill.

Chemical Waste

- 5.4.4 Chemical and oily wastes generated from the construction activities, vehicle and plant maintenance should be disposed of as chemical waste in strict compliance with the Waste Disposal (Chemical Waste) (General) Regulations.

General Refuse

- 5.4.5 For general refuse, mitigation measures should include provision of a collection area where waste can be sorted, stored and loaded prior to removal from the site during construction phase.
- 5.4.6 In addition, with the implementation of the recommended mitigation measures in the "Recommended Pollution Control Clauses for Construction Contracts" available in EPD website, the potential environmental impacts resulting from the storage, handling and transportation of inert C&D materials, non-inert C&D materials, chemical wastes and general site wastes would **not be anticipated**. Below are the examples of the relevant measures:-

Waste Minimisation

- The Contractor shall submit to the **Architect/Engineer** for approval a waste management plan with appropriate mitigation measures including the allocation of an area for waste segregation, **as part of the Environmental Management Plan to the Architect/Engineer for approval in accordance with ADV-19** and shall ensure that the day-to-day site operations comply with the approved waste management plan.
- The Contractor shall minimise the generation of waste from his work. Avoidance and minimisation of waste generation can be achieved through changing or improving design and practices, careful planning and good site management.
- The Contractor shall ensure that different types of wastes are segregated on-site and stored in different containers, skips or stockpiles to facilitate reuse/recycling of waste and, as the last resort, disposal at different outlets as appropriate.
- The reuse and recycling of waste shall be practised as far as possible.
- The Contractor shall record the amount of wastes generated, recycled and disposed of (including the disposal sites).
- The Contractor shall use a trip ticket system for the disposal of C&D materials to any designated public filling facility and/or landfill.

Waste Nuisance Control

- 5.4.7 The Contractor shall not permit any sewage, waste water or effluent containing sand, cement, silt or any other suspended or dissolved material to flow from the Site onto any adjoining land or allow any waste matter (or refuse) which is not part of the final product from waste processing plants to be deposited anywhere within the Site (or onto any adjoining land). He shall arrange removal of such matter from the site (or any building erected or to be erected thereon) in a proper manner to the satisfaction of the Engineer in consultation with the Director of Environmental Protection.

Chemical Waste Control

- The Contractor shall observe and comply with the Waste Disposal (Chemical Waste) (General) Regulation.
- The Contractor shall apply for registration as chemical waste producer under the Waste Disposal (Chemical Waste) (General) Regulation when chemical waste is

produced. All chemical waste shall be properly stored, labelled, packaged and collected in accordance with the Regulation.

5.5 Identification and Evaluation of Potential Impact during Operational Phase

- 5.5.1 During operational phase of the proposed development, since the proposed use is residential only, disposal of chemical, livestock and clinical waste are not anticipated. Instead, general waste is anticipated to be the major type of waste generated during the operation of the proposed development.
- 5.5.2 Release of general refuse into watercourses or marine waters should not be permitted as introduction of these wastes is likely to have detrimental effects on water quality in the area. Effective collection of site wastes is suggested to prevent waste materials being blown around by wind, flushed or leached into the marine environment, and odour nuisance.

General Refuse

- 5.5.3 During operational phase of the Proposed Development, general refuse is anticipated to be the major type of waste generated by the occupants of Proposed Development. With reference to the latest data from "Monitoring of Solid Waste in Hong Kong 2023" by EPD, the per capita disposal rate of domestic waste is 0.89 kg/person/day (Plate 2.7 of Waste Statistics for 2023) and the recovery rate for domestic waste is 21% (Plate 3.2 of Waste Statistics for 2023). The Proposed Development consists of about around 3 residential population. By applying this figure to the projected population from the site after full occupation, the estimated daily waste generation will be around 3.38 kg/day (i.e. $0.89 / (1-21\%) \times 3$), in which approximately 2.67 kg/day of waste (i.e. 0.89×3) would be disposed, and 0.71 kg/day of waste (i.e. $3.38-2.67$) would be recovered.
- 5.5.4 For general waste such as metal, paper, plastic and glass, recycling bins for each type of wastes will be placed at prominent locations such as areas near main entrance to reduce waste disposal amount. Also, the waste collection frequency is recommended to be at least once a day to reduce chances of hygiene issue.
- 5.5.5 For wastes such as leftover, an adequate number of enclosed waste containers will be provided to avoid over-spillage of waste. Also, leftover will be placed in bags and stored in enclosed containers, and disposed of on a daily basis to the designated landfill. In addition, the project proponent is recommended to deliver leftover generated to Organic Resources Recovery Centre (ORRC) or installation of food waste recycling machines for composting treatment, etc. Therefore, the chances of odour nuisance and hygiene issue are reduced.
- 5.5.6 As the generation rate of the general refuse at the proposed development is anticipated to be similar to those of the domestic use in Hong Kong, with the implementation of the above measures, the adverse impact from the waste disposal of the operational phase is not anticipated.

5.6 Environmental Monitoring & Audit Requirements

- 5.6.1 The foregoing assessment has concluded that proper handling, storage, collection, transportation and disposal of waste materials generated during construction of the Project will not give rise to adverse impacts to nearby sensitive receivers.
- 5.6.2 Whilst no specific environmental monitoring requirements are considered necessary, it is recommended that during the construction phase, site inspections and supervisions of waste management procedures and auditing of the effectiveness of implemented mitigation measures should be undertaken on a regular basis.
- 5.6.3 These tasks shall be scheduled in a Waste Management Plan ("WMP") to be prepared by the contractor and updated regularly. The WMP shall be submitted to the

Architect/Engineer for approval. A summary of the site audits shall be presented in the monthly EM&A reports.

5.7 Conclusion and Recommendation

- 5.7.1 The potential impacts of wastes arising from the construction and operation of the Proposed Development have been assessed. The construction activities will generate a variety of wastes including materials from site clearance, excavated materials, construction wastes, chemical and general refuse.
- 5.7.2 The generation rate of the general refuse at the proposed development is anticipated to be similar to those of the domestic use in Hong Kong, with the implementation of the above measures, the adverse impact from the waste disposal of the operational phase is not anticipated.
- 5.7.1 Recommended Pollution Control Clauses for Construction Contracts published by Environmental Protection Department would be implemented during the construction phase of the proposed development.
- 5.7.2 With the recommended waste management practices put in place, no unacceptable impacts associated with waste management during the construction and operation phase are envisaged.

6. LAND CONTAMINATION

6.1 Scope of Work

- 6.1.1 The aim of this study is to assess the potential land contamination impact under the Proposed Development due to the previous land uses and/ or the existing operations.

6.2 Assessment Criteria

- 6.2.1 The following guidelines published by EPD have been followed:
- Guidance Manual for Use of Risk-based Remediation Goals (RBRGs) for Contaminated Land Management (Guidance Manual), EPD, Revised in April 2023;
 - Guidance Note for Contaminated Land Assessment and Remediation (Guidance Note), EPD, Revised in April 2023; and
 - Practice Guide for Investigation and Remediation of Contaminated Land (Practice Guide), EPD, Revised in April 2023.
- 6.2.2 As the RBRGs and the Practice Guide are the latest guidelines promulgated for use in April 2023, the RBRGs criteria and the requirements stated in the Practice Guide will be adopted in this Land Contamination Review.

6.3 Review of Historical and Current Available Information

- 6.3.1 The Application Site is a natural terrain and currently zoned as "Recreation" under the approved Tuen Mun Outline Zoning Plan No. S/TM/41.
- 6.3.2 Historical aerial photos of the Application Site have been reviewed to identify if any possible land contamination related activities or uses have been carried out. **Table 6.1** shows the description of each aerial photos. Besides, the original version of each aerial photo is presented in **Appendix 4**.

Table 6.1 Landuse Summary of Proposed Development

Period/ Year	Description
1949	The whole Application Site was a natural terrain.
1961	The land use of the whole Application Site remained unchanged.
1980	The land use of the whole Application Site remained unchanged.
2001	The land use of the whole Application Site remained unchanged.
2021	The land use of the whole Application Site remained unchanged.
2024	The land use of the whole Application Site remained unchanged.

- 6.3.3 From the landuse summary and aerial photos, the Application Site has been a natural terrain since 1949 and no landuse change related to potential contamination works and activities is observed. Therefore, land contamination issue within the Application Site is not anticipated. Further site investigation is not required.

7. CONCLUSION

- 7.1.1 The key environmental issues associated with both operation and construction phase of the Application Site are qualitatively discusses in this report.

Air Quality

- 7.1.2 With sufficient buffer distance from the surrounding road network and Proposed New Access Road, and there would be no air sensitive uses within the buffer zones, the future occupants of the Proposed Development will not be subject to **adverse** vehicular emission impact.
- 7.1.3 There was no chimney identified within 200m from the site boundary of Application Site. As such, it is anticipated that Proposed Development would not be subject to adverse industrial emission impact.
- 7.1.4 All sewage and wastewater generated from the proposed development would be treated by the proposed underground septic tank and treated effluent would be percolated to surrounding subsoil in the soakaway pit. Further sewerage treatment arrangement will be submitted to Environmental Protection Department for approval at the detailed design stage. In view of that the development and effluent volume are small in scale (1 residential unit with flow rate of 0.7m³ per day); with distance of ~31m between the proposed septic tank and proposed development; with distance of >100m between Subject Site and nearby ASRs; no exhaust on the proposed underground septic tank; the system is same as that adopted in the previous approved Holiday Camp application (A/TM/469) and all the requirement as stipulated in ProPECC PN 1/23 would be followed, it is anticipated that the proposed underground septic tank would not cause any adverse odour impact to the proposed development and nearby ASRs.

Noise

- 7.1.5 There was no industrial noise source identified within 300m from the boundary of Proposed Development. As such, it is anticipated that the Proposed Development would not be subject to adverse industrial noise impact.
- 7.1.6 According to the desktop studies and onsite surveys conducted in June 2025, light rail transit as a potential noise source is identified with distance of ~200m, located to the southeast of the Application Site. However, the direct line of sight between proposed development and identified light rail (e.g. Butterfly Station) is blocked by natural terrain (Approximate 40mPD or higher). In view of the separation distance of 25m is met and existing topographic screening, it is anticipated that the Proposed Development would not be subject to adverse railway noise impact.
- 7.1.7 A road traffic noise impact assessment has been carried out for the Proposed Development and existing NSRs. According to the result of base scenario at Proposed Development, the predicted noise level of all selected NSRs would comply with the relevant Noise Control Ordinance standard. Therefore, no adverse road traffic noise impact is anticipated on the Proposed Development.

Water Quality

- 7.1.8 With proper implementation of the recommended mitigation measures, good construction site practices as recommended in relevant regulatory guidelines, adverse water quality impacts are not expected at the identified WSRs.
- 7.1.9 An underground septic tank is proposed to handle the sewage generation by the Proposed Development during the operation phase. With appropriate management measures in place, it is anticipated that the Proposed Development would not pose significant impact on the water quality of identified WSRs.

Waste Management

- 7.1.10 With the recommended waste management practices put in place, no unacceptable impacts associated with waste management during the construction and operation phases are envisaged.
- 7.1.11 The generation rate of the general refuse at the proposed development is anticipated to be similar to those of the domestic use in Hong Kong, with the implementation of the above measures, the adverse impact from the waste disposal of the operational phase is not anticipated

Land Contamination

- 7.1.12 The Application Site has been a natural terrain since 1949 and no landuse change related to potential contamination works and activities is observed. Therefore, land contamination issue within the Application Site is not anticipated.
- 7.1.13 The environmental assessment study confirms the acceptability of Proposed Development from environmental point of view.

Figures

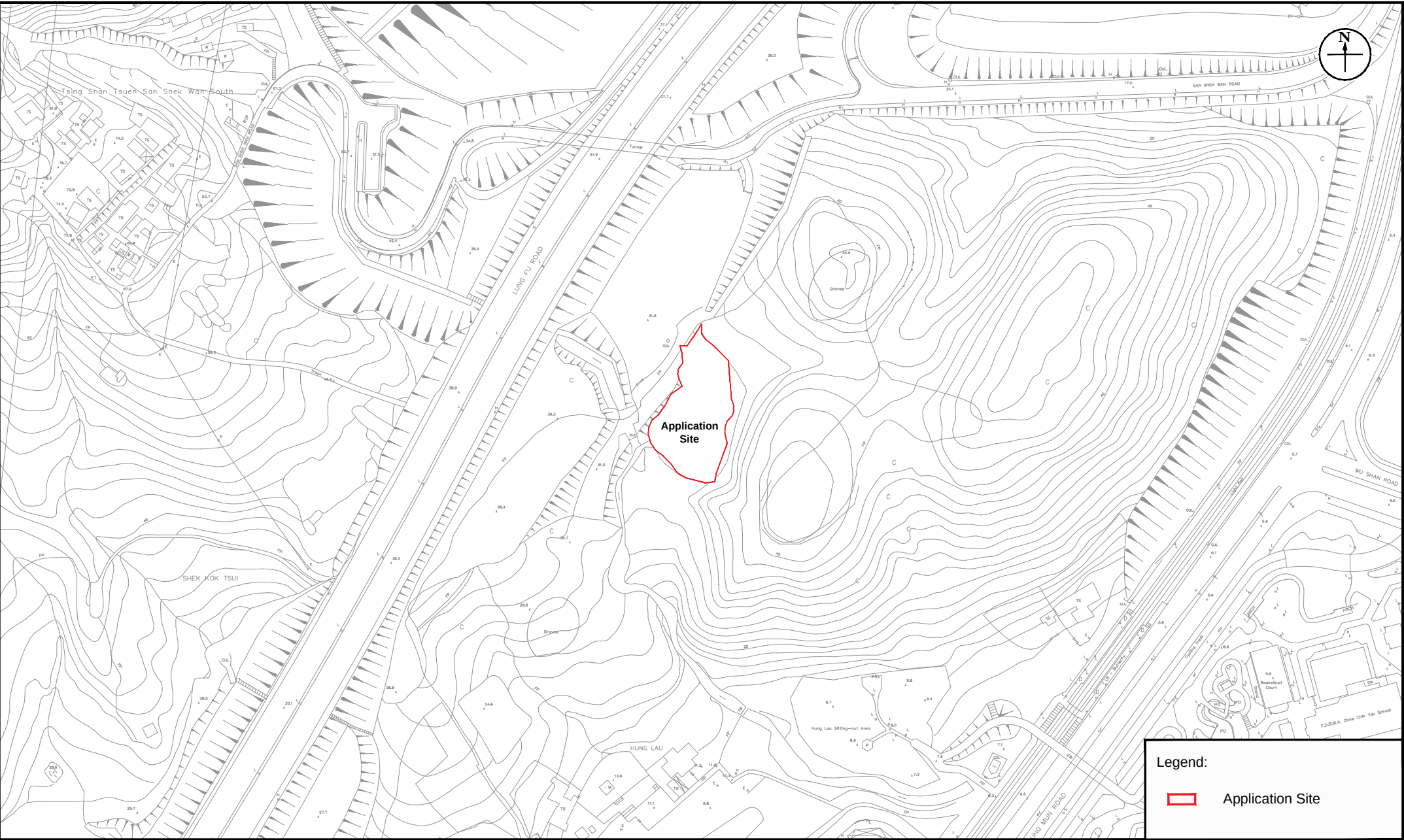


Figure: 1			
Title: Location of the Application Site and its Environs		Drawn by: TL	
Project: Proposed House Development at T.M.T.L. 550, Tuen Mun, New Territories		Checked by: TC	
		Rev.: 2.0	
		Date: Aug 2025	

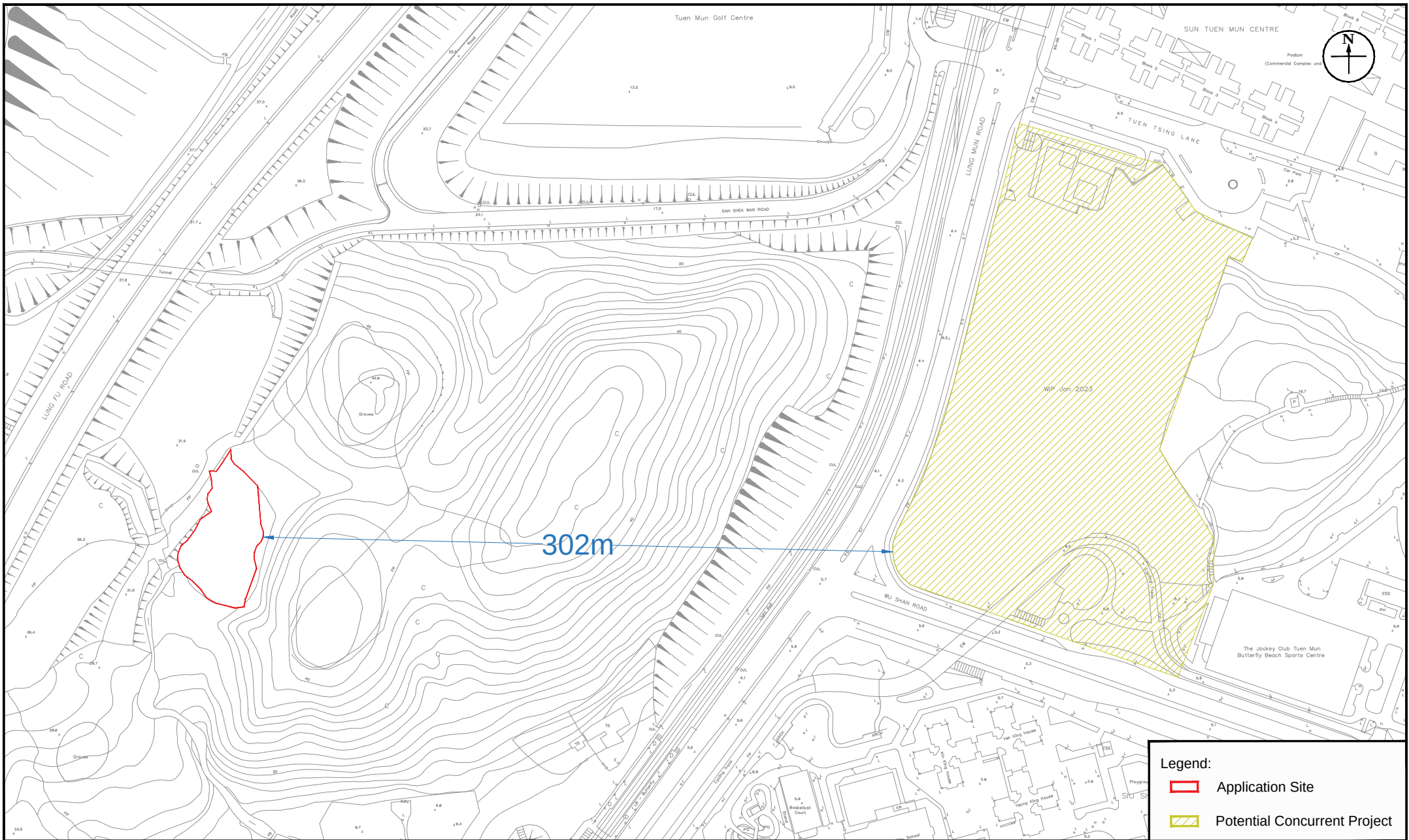


Figure: 2	
Title: Location of the Potential Concurrent Project	
Project: Proposed House Development at T.M.T.L. 550, Tuen Mun, New Territories	
Drawn by: TL	Checked by: TC
Rev.: 2.0	Date: Aug 2025

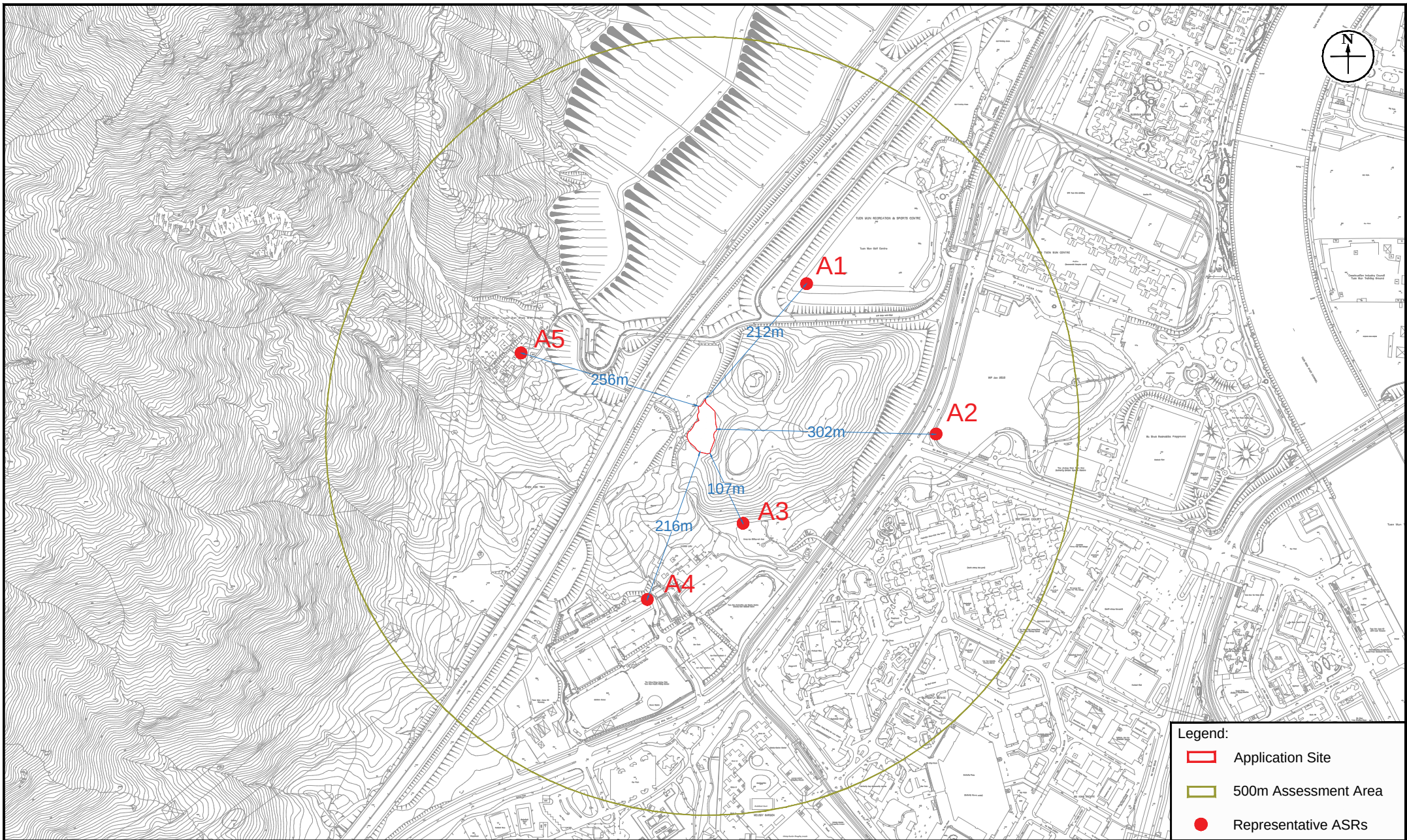


Figure: 3	
Title: Location of the Representative Air Sensitive Receivers	
Project: Proposed House Development at T.M.T.L. 550, Tuen Mun, New Territories	
Drawn by: TL	Checked by: TC
Rev.: 2.0	Date: Aug 2025

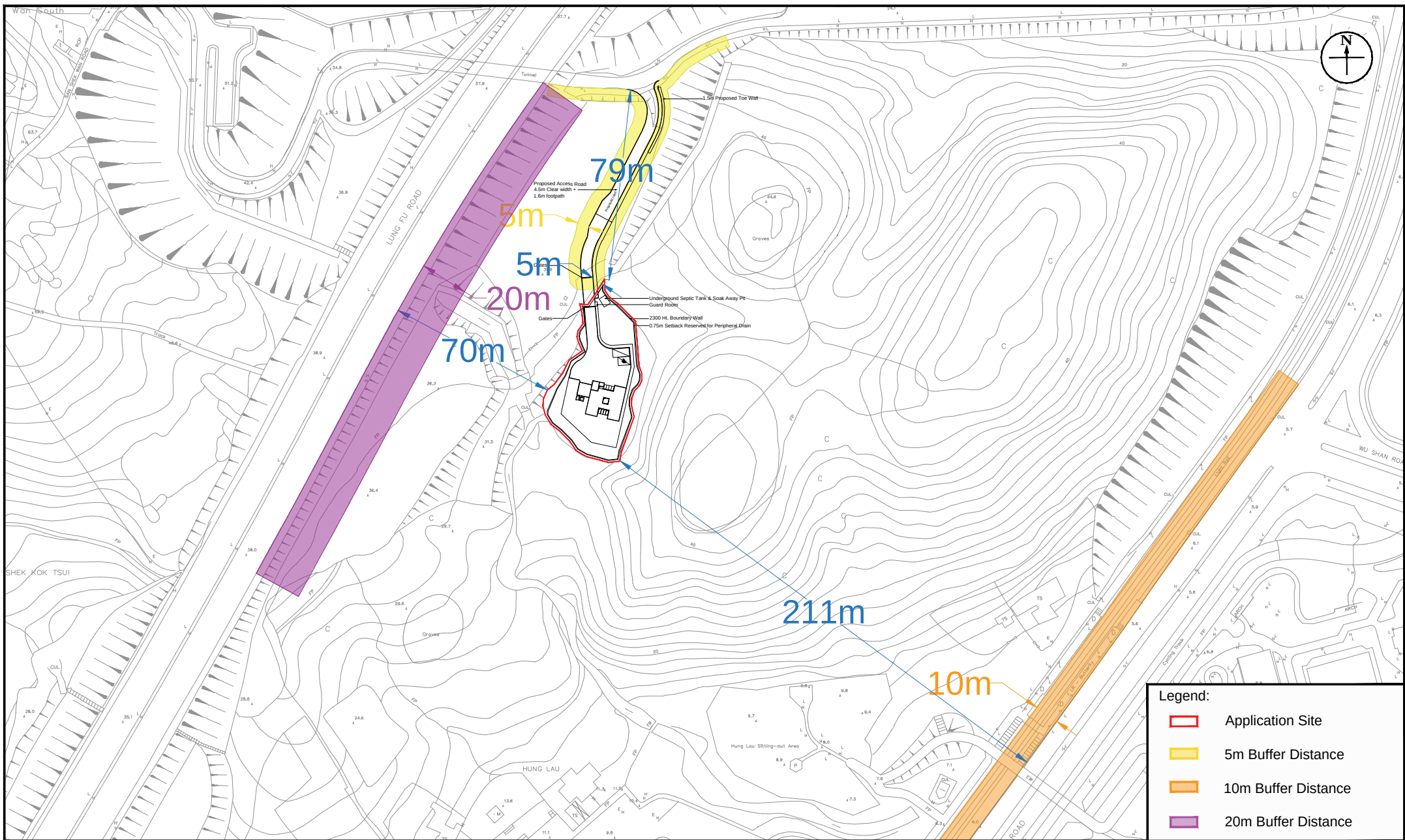


Figure: 4

Title: Buffer Distance between the Proposed Development and the Kerb Side of the Nearest Carriageway

Project: Proposed House Development at T.M.T.L. 550, Tuen Mun, New Territories

RAMBOLL

Drawn by: TL

Checked by: TC

Rev.: 2.1

Date: Nov 2025

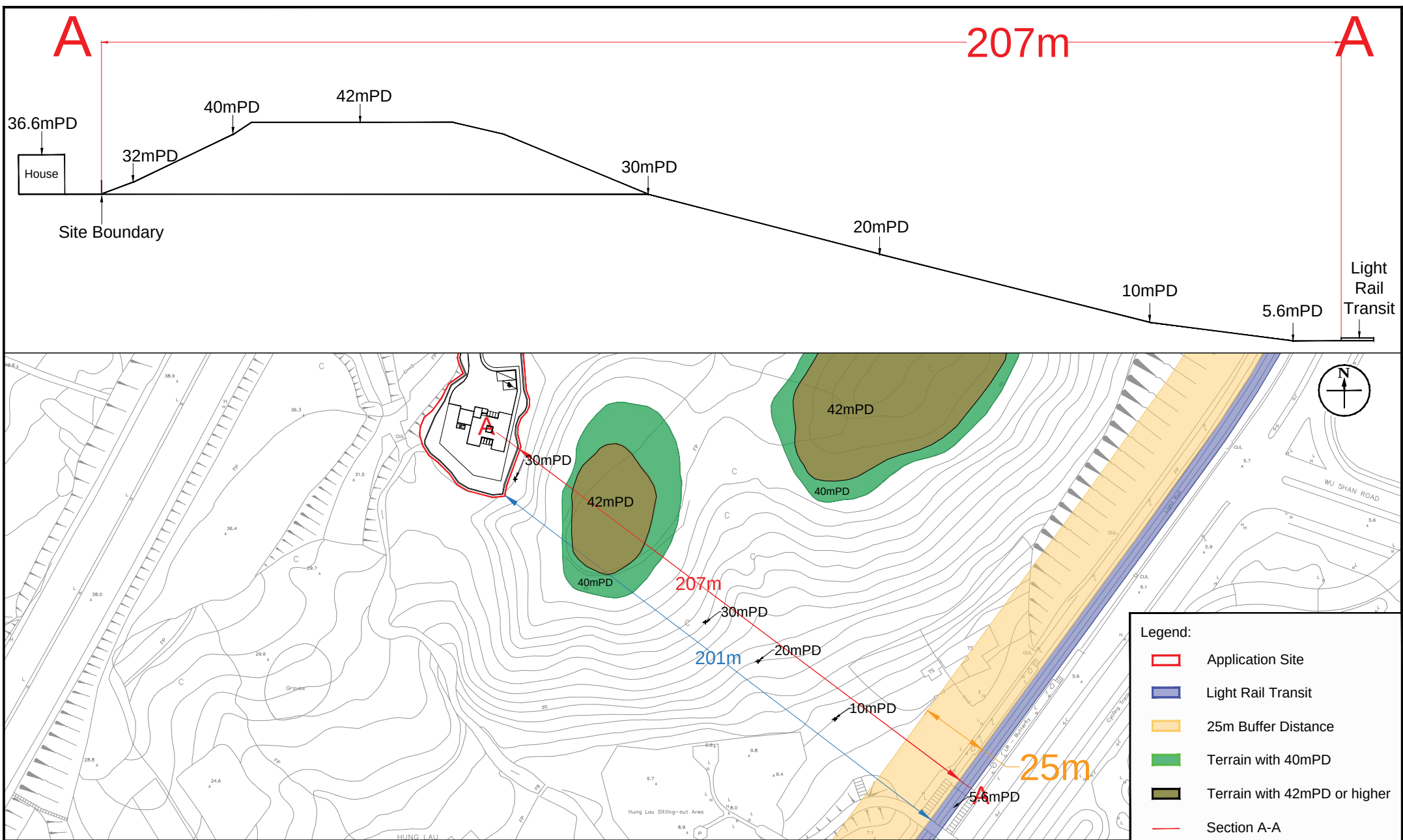


Figure: 5

Title: Location of Light Rail Transit and Separation Distance from the Application Site

Project: Proposed House Development at T.M.T.L. 550, Tuen Mun, New Territories

RAMBOLL

Drawn by: TL

Checked by: TC

Rev.: 2.0

Date: Aug 2025

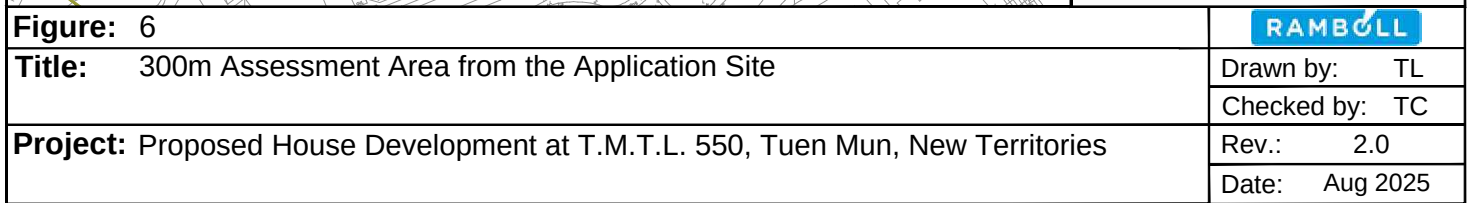




Figure: 7

Title: Location of Proposed Noise Sensitive Receivers

Project: Proposed House Development at T.M.T.L. 550, Tuen Mun, New Territories

Legend:

○ Noise Sensitive Receivers

RAMBOLL

Drawn by: TL

Checked by: TC

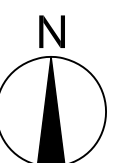
Rev.: 2.0

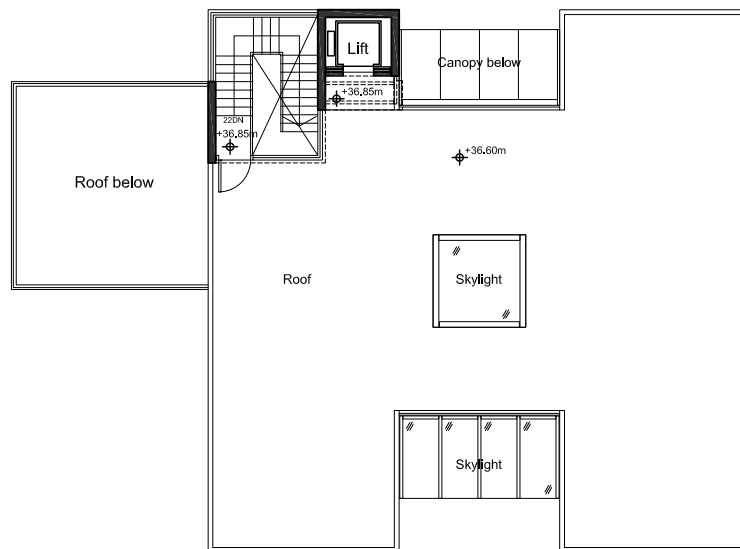
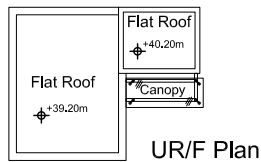
Date: Aug 2025

Appendix 1 Master Layout Plan and Section



A horizontal scale bar with alternating black and white segments. It is marked with the numbers 0, 5, 10, and 25m.



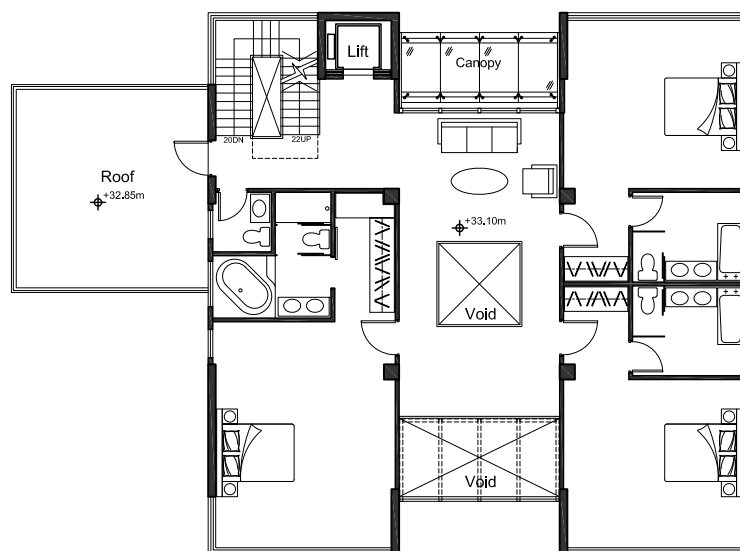


GFA & Plot Ratio Calculation

Total GFA
 = G/F 189.135 + 0.949 (Guardroom)
 [Exemption for F.S. Tank & Pumps
 Enclosure, Carport (28.60), and
 area covered by canopy (8.181)
 to be applied to BD and LD]
 + 1/F 180.316
 [Exemption for 1/F Void near South
 Elevation (8.819) & R/F Stair Hood
 and Lift (17.723) to be applied to
 BD and LD]
 = 370.400 m²

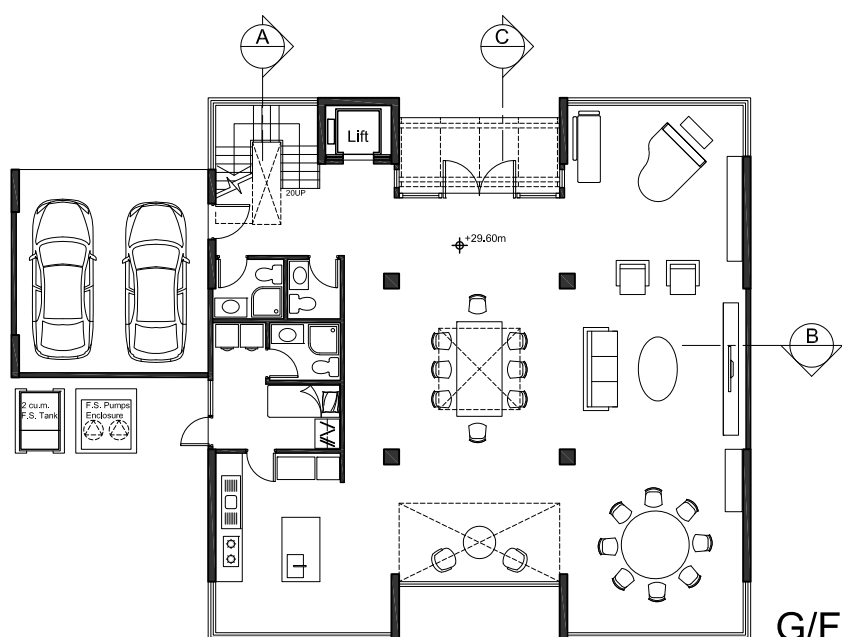
Site Area
 = 1852 m²

Plot Ratio
 = 370.400 / 1852
 = 0.2000



Site Coverage Calculation

Site Coverage
 = (217.735 + 0.949)
 [Exemption for area covered by
 canopy (8.181) to be applied]
 / 1852 x 100%
 = 11.808% < 20%



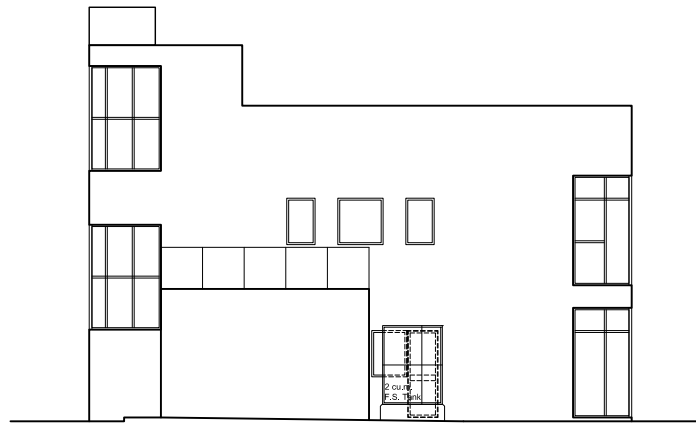
Proposed House Development
 at Tuen Mun Town Lot No. 550
 (TMTL 550), Tuen Mun, N.T.

Design Consultant Limited
 8 October 2025

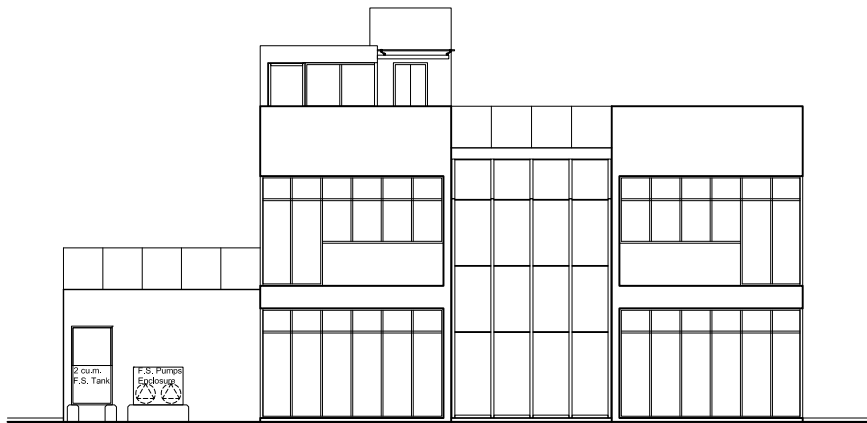
FIGURE 5
 FLOOR PLAN

0 2 4 6 8 10m

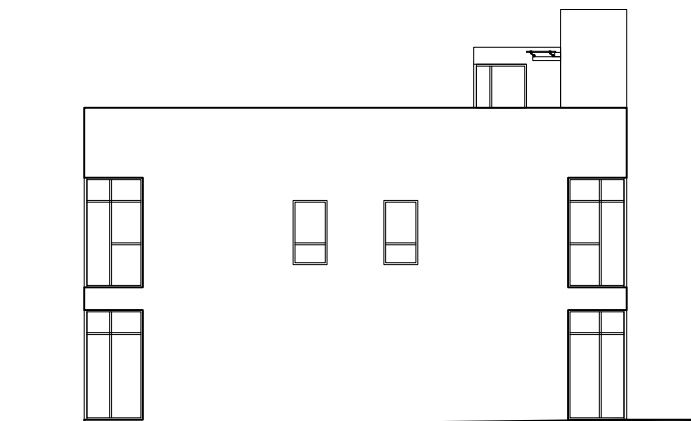




West Elevation



South Elevation



East Elevation

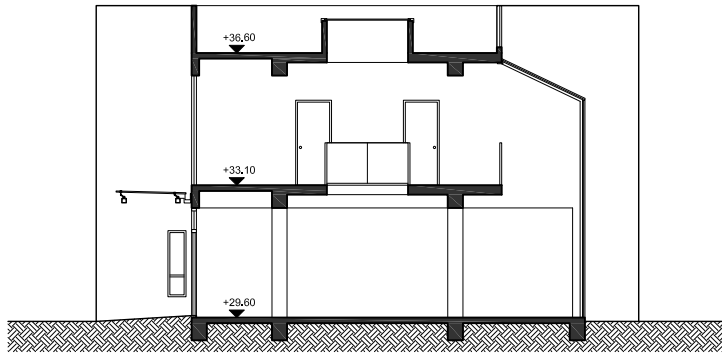


North Elevation

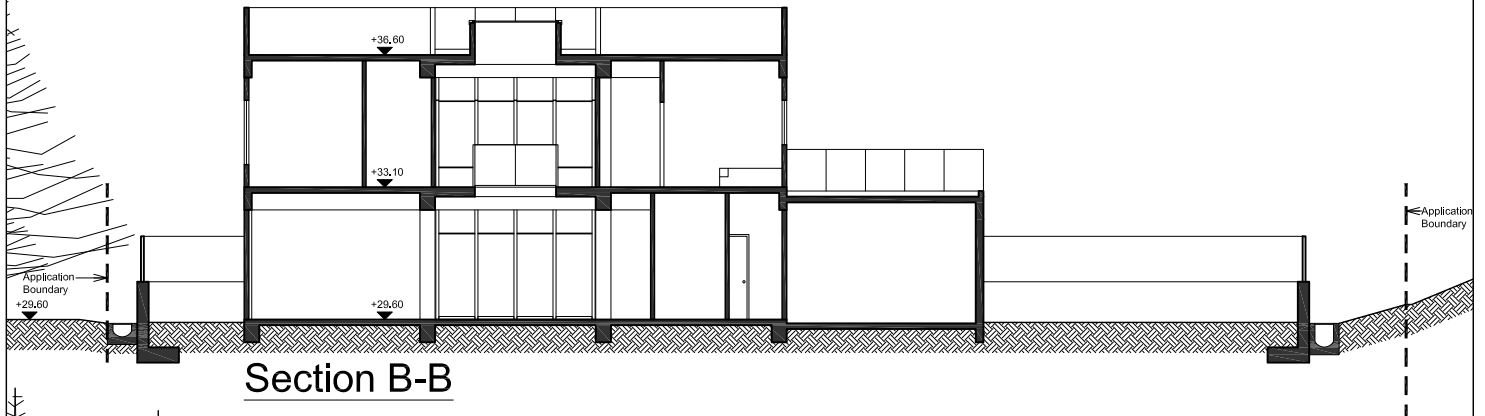
Proposed House Development
at Tuen Mun Town Lot No. 550
(TMTL 550), Tuen Mun, N.T.

Design Consultant Limited
7 July 2025

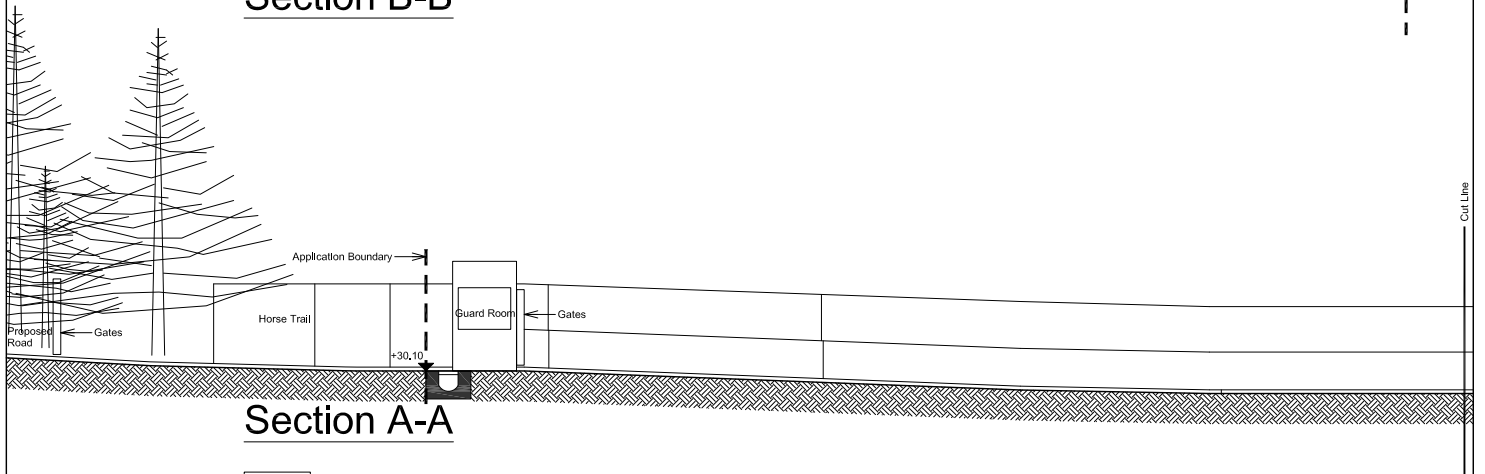




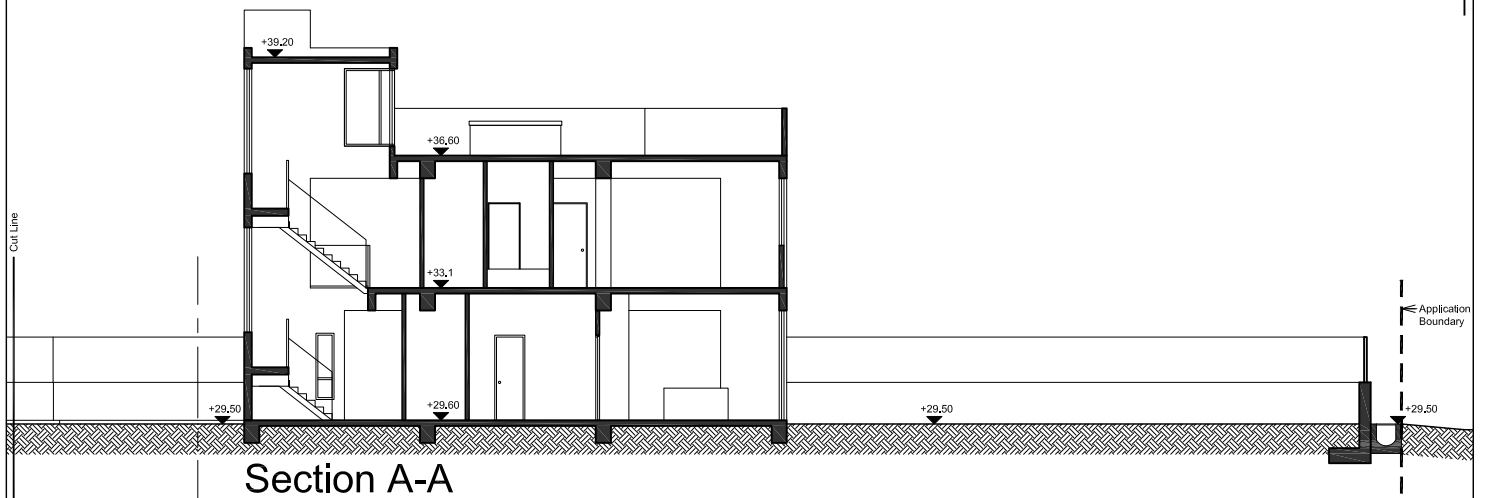
Section C-C



Section B-B



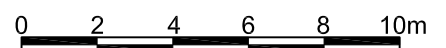
Section A-A



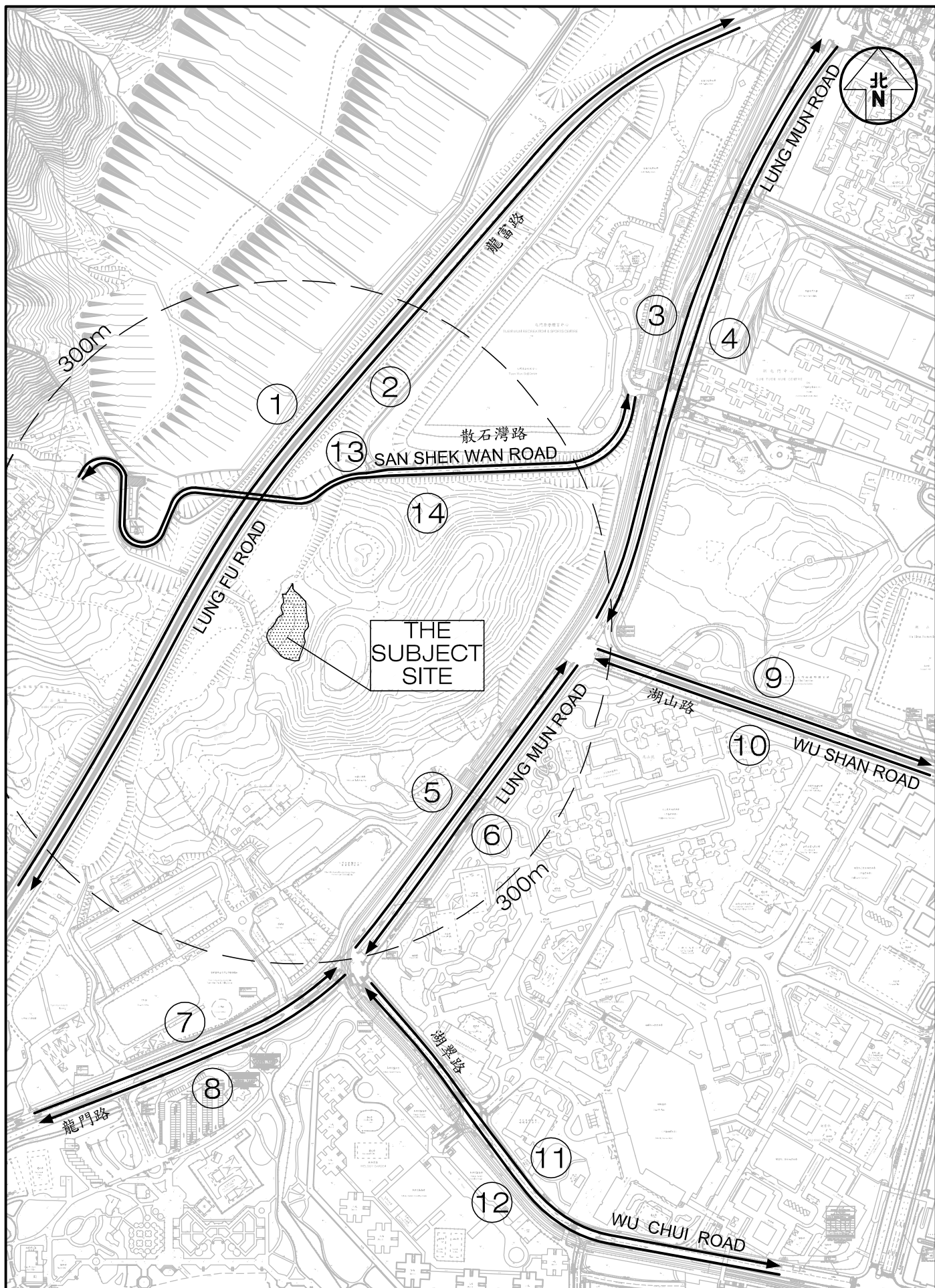
Section A-A

Proposed House Development
at Tuen Mun Town Lot No. 550
(TMTL 550), Tuen Mun, N.T.

Design Consultant Limited
7 July 2025



Appendix 2 Traffic Forecast



Project Title
SECTION 16 PLANNING APPLICATION FOR HOUSE DEVELOPMENT
AT T.M.T.L. 550, TUEN MUN, NEW TERRITORIES

Figure Title
LOCATION OF TRAFFIC DATA

Job No. J7406	Figure No. NIA1	Scale in A4 1 : 5000	
Designed by L C H	Drawn by N C M	Checked by K C	Revision A
		Date 15 AUG 2025	

CKM Asia Limited
Traffic and Transportation Planning Consultants

YEAR 2046 TRAFFIC FORECAST
Date: 31 JULY 2025
Job No.: J7406

No.	Road	From	To	2046 AM Peak Hour Traffic Flows			
				Veh/hr	Vehicle Type for Noise Assessment (%)		
					PV	HV	Total
L001	Lung Fu Road NB	Wong Chu Road	Lung Mun Road	1100	66%	34%	100%
L002	Lung Fu Road SB	Wong Chu Road	Lung Mun Road	1250	63%	37%	100%
L003	Lung Mun Road NB	Tuen Tsing Lane	Wu Shan Road	1000	74%	26%	100%
L004	Lung Mun Road SB	Tuen Tsing Lane	Wu Shan Road	1050	64%	36%	100%
L005	Lung Mun Road NB	Wu Shan Road	Wu Chui Road	700	77%	23%	100%
L006	Lung Mun Road SB	Wu Shan Road	Wu Chui Road	1150	63%	37%	100%
L007	Lung Mun Road NB	Wu Chui Road	Lung Fu Road	450	83%	17%	100%
L008	Lung Mun Road SB	Wu Chui Road	Lung Fu Road	750	62%	38%	100%
L009	Wu Shan Road EB	Lung Mun Road	Wu King Road	400	78%	22%	100%
L010	Wu Shan Road WB	Lung Mun Road	Wu King Road	800	72%	28%	100%
L011	Wu Chui Road EB	Lung Mun Road	Tip King Road	400	66%	34%	100%
L012	Wu Chui Road WB	Lung Mun Road	Tip King Road	300	67%	33%	100%
L013	San Shek Wan Road EB	San Shek Wan San Tsuen	Lung Mun Road	50	86%	14%	100%
L014	San Shek Wan Road WB	Lung Mun Road	San Shek Wan San Tsuen	50	83%	17%	100%

Note: "LV" includes motorcycle, private car and taxi

"HV" includes light / medium / heavy goods vehicle, public / private light bus, non-franchised bus and franchised bus

YEAR 2046 TRAFFIC FORECAST
Date: 31 JULY 2025
Job No.: J7406

No.	Road	From	To	2046 PM Peak Hour Traffic Flows			
				Veh/hr	Vehicle Type for Noise Assessment (%)		
					PV	HV	Total
L001	Lung Fu Road NB	Wong Chu Road	Lung Mun Road	1400	63%	37%	100%
L002	Lung Fu Road SB	Wong Chu Road	Lung Mun Road	1100	63%	37%	100%
L003	Lung Mun Road NB	Tuen Tsing Lane	Wu Shan Road	950	59%	41%	100%
L004	Lung Mun Road SB	Tuen Tsing Lane	Wu Shan Road	950	71%	29%	100%
L005	Lung Mun Road NB	Wu Shan Road	Wu Chui Road	1100	65%	35%	100%
L006	Lung Mun Road SB	Wu Shan Road	Wu Chui Road	800	69%	31%	100%
L007	Lung Mun Road NB	Wu Chui Road	Lung Fu Road	850	65%	35%	100%
L008	Lung Mun Road SB	Wu Chui Road	Lung Fu Road	250	65%	35%	100%
L009	Wu Shan Road EB	Lung Mun Road	Wu King Road	600	80%	20%	100%
L010	Wu Shan Road WB	Lung Mun Road	Wu King Road	350	69%	31%	100%
L011	Wu Chui Road EB	Lung Mun Road	Tip King Road	550	71%	29%	100%
L012	Wu Chui Road WB	Lung Mun Road	Tip King Road	250	63%	37%	100%
L013	San Shek Wan Road EB	San Shek Wan San Tsuen	Lung Mun Road	50	91%	9%	100%
L014	San Shek Wan Road WB	Lung Mun Road	San Shek Wan San Tsuen	50	80%	20%	100%

Note: "LV" includes motorcycle, private car and taxi

"HV" includes light / medium / heavy goods vehicle, public / private light bus, non-franchised bus and franchised bus

Appendix 3 Traffic Noise Impact Assessment Result for the Proposed NSRs

Proposed House Development at T.M.T.L. 550,Tuen Mun, New Territories

Predicted Road Traffic Noise Level at Proposed Representative Noise Sensitive Receivers

1. Base Case (AM)

Floor	mPD	House 1									
		N01	N02	N03	N04	N05	N06	N07	N08	N09	N10
G/F	29.60	66	63	65	59	57	62	53	63	66	66
1/F	33.10	67	64	66	61	59	63	57	65	68	68
Max. Noise Level		67	64	66	61	59	63	57	65	68	68
No. of Exceedance		0	0	0	0	0	0	0	0	0	0
No. of Exceedance Unit		0									
No. of Unit		1									

Max. Noise Level	68
Compliance Rate	100%

Remarks:

Shaded cell denotes noise level exceeding the limit of 70 dB(A)

Appendix 4 Aerial Photos for Land Contamination Assessment

Aerial Photos for Land Contamination Assessment

Year	Aerial Photo
1949 Photo No.: 81A_125-5070	

1961

Photo No.: F43_625-0147



1980

Photo No.: 30633



2001

Photo No.: CW31699



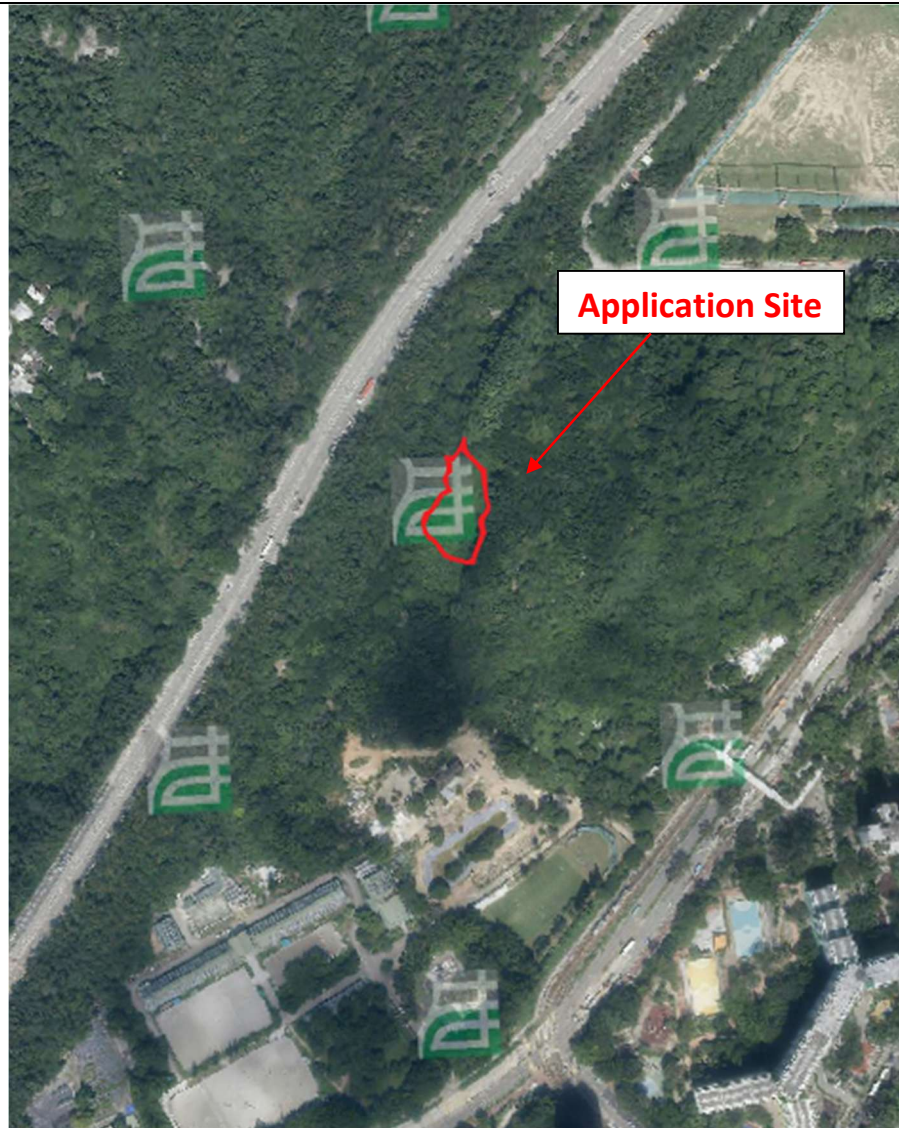
2021

Photo No.: E129466C



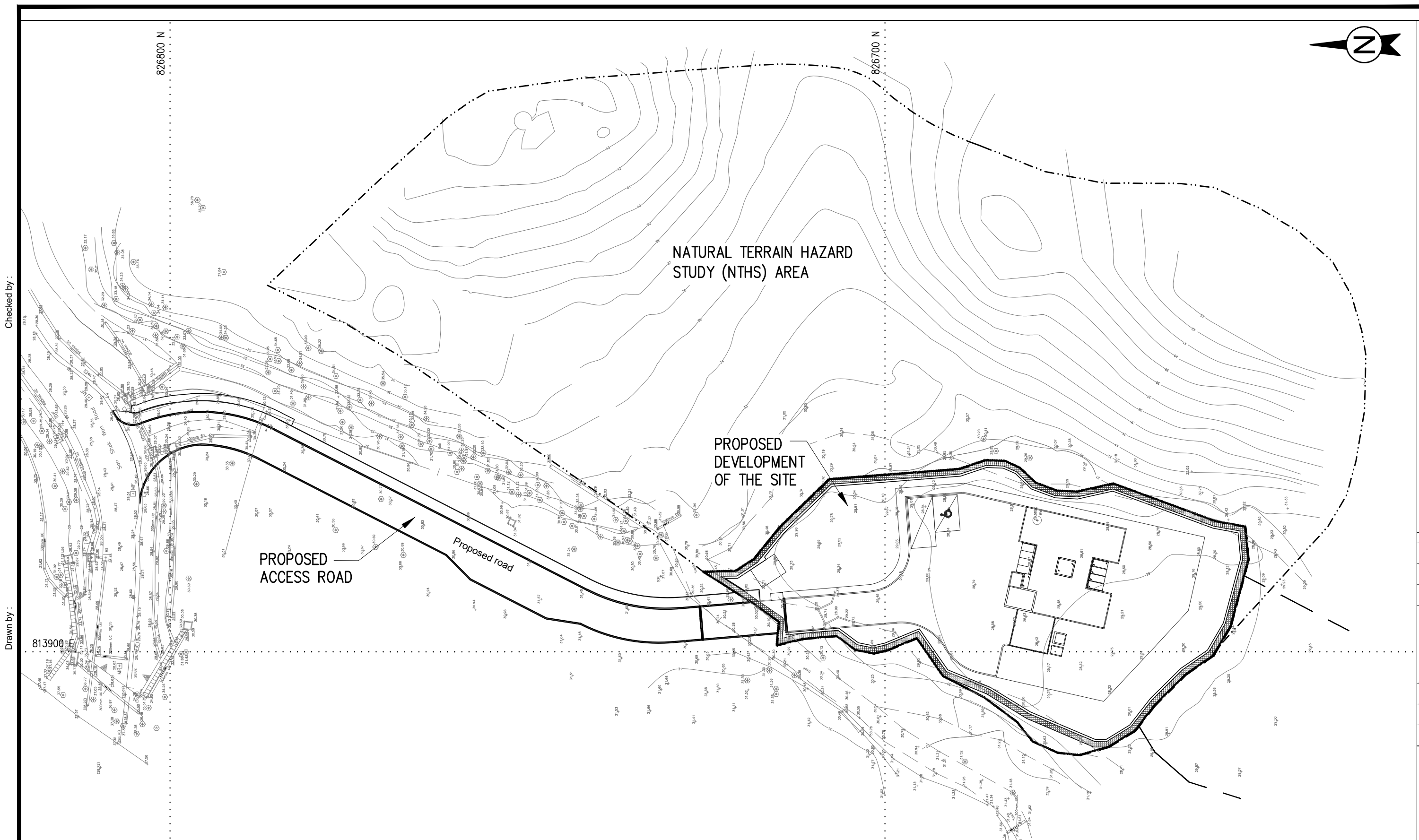
2024

Photo No.: E228839C



Annex C

Revised Figure 7 and Figure 14 of the
Geotechnical Planning Review Report



LEGEND :

- DEVELOPMENT SITE BOUNDARY
- NATURAL TERRAIN HAZARD STUDY (NTHS) BOUNDARY

PLAN

SCALE 1 : 500

Compiled by : _____

FUGRO FUGRO (HONG KONG) LIMITED

Project
PROPOSED HOUSE DEVELOPMENT AT TUEN MUN
TOWN LOT NO. (TM TL 550), TUEN MUN, N.T. -
SECTION 16 PLANNING APPLICATION

Drawing Title
SITE PLAN

Job No.
090691

Figure
7

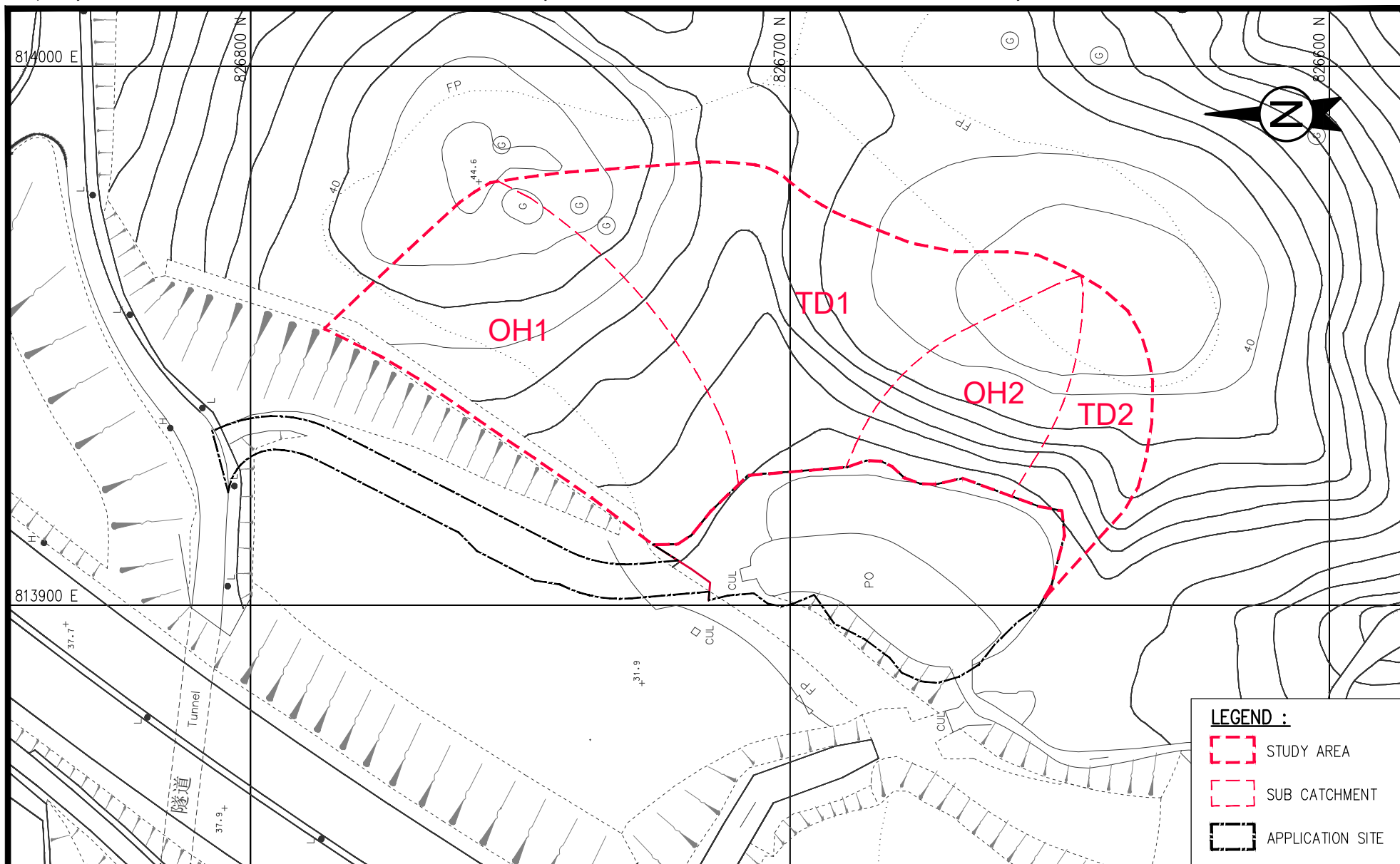
Scale
1:500

Date
JUL-2025

Compiled by :

Drawn by :

Checked by :



LEGEND :

- STUDY AREA
- SUB CATCHMENT
- APPLICATION SITE



Project
**PROPOSED HOUSE DEVELOPMENT AT
 TUEN MUN TOWN LOT NO. (TMTL 550),
 TUEN MUN, N.T. - SECTION 16
 PLANNING APPLICATION**

Drawing Title
CATCHMENT CLASSIFICATION MAP

Job No.
090691

Figure No.
14

Scale
1:1000

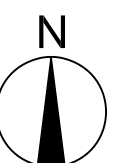
Date
JUL-2025

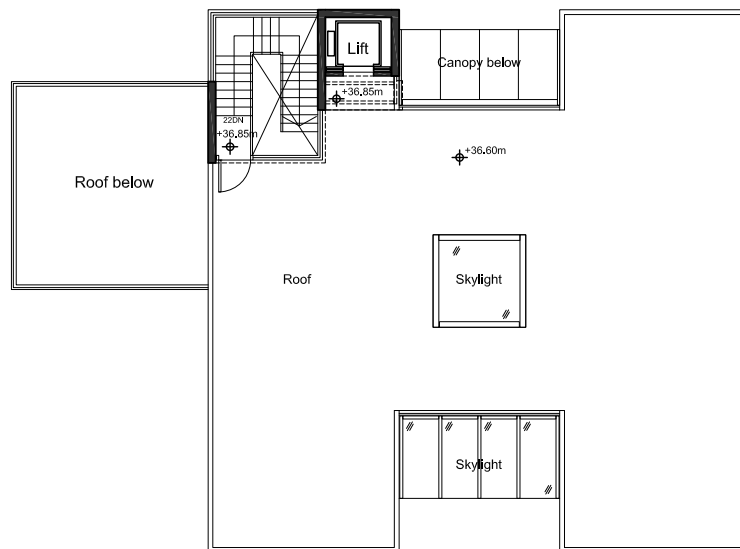
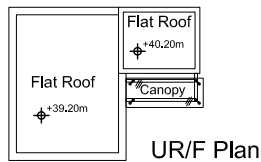
Annex D

Revised Figures 4 and 5 and
Replacement Page (Page 6) of the Planning Statement



A horizontal scale bar with alternating black and white segments. It is marked with the numbers 0, 5, 10, and 25m.





GFA & Plot Ratio Calculation

Total GFA

= G/F 189.135 + 0.949 (Guardroom)
 [Exemption for F.S. Tank & Pumps
 Enclosure, Carport (28.60), and
 area covered by canopy (8.181)
 to be applied to BD and LD]
 + 1/F 180.316
 [Exemption for 1/F Void near South
 Elevation (8.819) & R/F Stair Hood
 and Lift (17.723) to be applied to
 BD and LD]
 = 370.400 m²

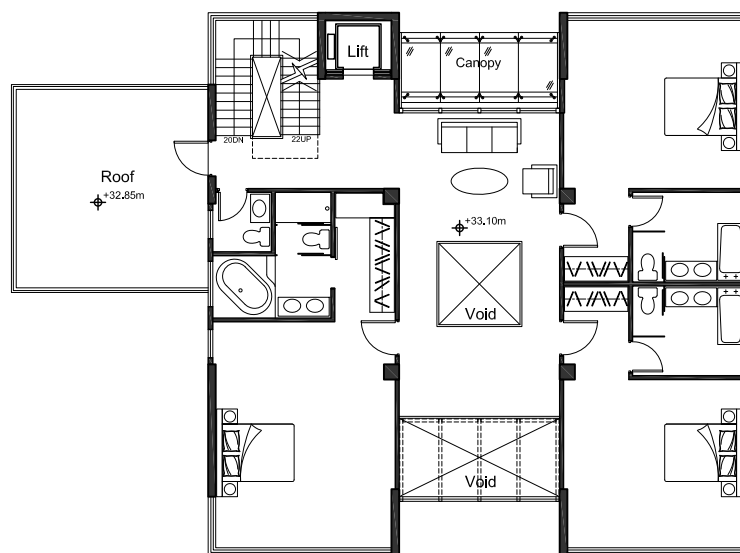
Site Area

= 1852 m²

Plot Ratio

= 370.400 / 1852

= 0.2000

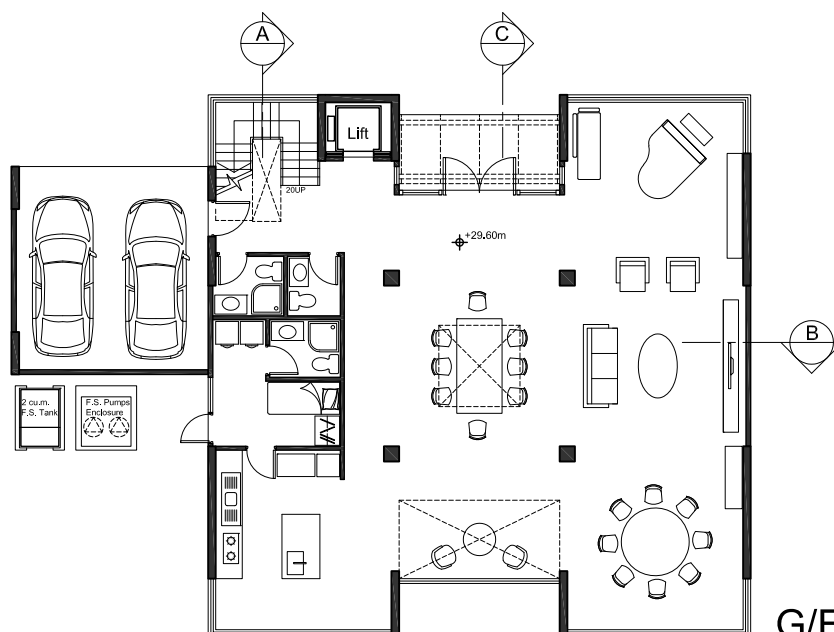


Site Coverage Calculation

Site Coverage

= (217.735 + 0.949)

[Exemption for area covered by
 canopy (8.181) to be applied]
 / 1852 x 100%
 = 11.808% < 20%



Proposed House Development
 at Tuen Mun Town Lot No. 550
 (TMTL 550), Tuen Mun, N.T.

Design Consultant Limited
 8 October 2025

FIGURE 5
FLOOR PLAN

0 2 4 6 8 10m



impact on horse riders and horses, electronic gates will be installed on both sides of the intersecting points so that the drivers must stop and check the traffic condition before entering the horsing trail. Besides, warning signs will also be erected for drivers and horse riders to alert them to pay attention at the road intersection point. Safety measures will also be adopted during the road widening / improvement works of the proposed access road. The Applicant is also committed to arrange ongoing communication and meetings with relevant parties/departments to address their concerns and implement respective measures to handle any further potential issues.

- 4.7 The car parking spaces provided for the proposed development will comply with the requirement under the HKPSG. The proposed house will provide two proposed parking spaces for private vehicles (2.5m x 5m) for residents / visitors located at the carport at the G/F of the proposed house. One disabled parking space (3.5m x 5m) and 1 loading/unloading space (3.5m x 7m) for light goods vehicle (LGV) will be provided to the north of the proposed house. A security guard will be present at the guard room to manage the traffic flow.

5. TECHNICAL ASSESSMENTS

Tree Survey, Landscape and Tree Preservation Proposal

- 5.1 A Landscape Proposal and Tree Survey Report (see **Appendix 1**) is prepared by ADI Limited to assess the potential landscape impact on the Application Site and to provide landscape design of the proposed residential development.

Tree Survey

- 5.2 The Application Site has been vacant for years with no tree exactly located within the site. However, 5 existing trees, a weedy tree *Leucaena leucocephala*, a *Macaranga tanarius* and three *Artocarpus heterophyllus*, are located on / very close to the site boundary and seriously leaning into the site, which would be affected by the roadworks or site formation works for the proposed development. Besides, the proposed access road from San Shek Wan Road to the Application Site would affect another 20 trees outside the Application Site. All of the affected trees are not registered old and valuable trees and with generally fair to poor health conditions. Having considered the species and condition of these affected trees, they are not suitable candidates for tree transplanting, therefore, felling of the above 23 trees is recommended.
- 5.3 The new tree planting proposal intends to create a good quality of green environment for future residents with proper and good quality planting establishment. A total of 17 new trees of heavy standard stocks would be planted with 1:1 replanting ratio (17 trees felled: 17 new trees planted), with exclusion of the removal of 6 nos. of weedy trees, *Leucaena leucocephala*.

Landscape Design Proposal

- 5.4 The landscape design concept for the proposed residential development provides a synthesis between the contemporary design philosophy and sustainable design principle responding to both site context and the proposed nature of the development, and respects the surrounding landscape features. The proposed scheme aims to provide a high-quality living environment for the future residents. The landscape area will be designed with contemporary design language and sustainable principles which will provide private relaxing and recreational space for the residents. A leisure lawn with benches and embraced with trees is set at the front court creating share and comfortable environment for relaxing as well as an intimate garden courtyard for the residents. Upon full establishment of greening measures in the landscape design proposal, the proposed greenery coverage within the development will not be less than 555.6 sq.m. (about 30% of the total site area of 1,852 sq.m.), which complies with the 30% OZP greenery requirement under the subject "REC" zone.

Annex E

Revised Pages of Landscape Proposal with Tree Survey Report

**Proposed House Development at
Tuen Mun Town Lot No. 550 (TMTL 550),
Tuen Mun, N.T.**

**Landscape Proposal
with
Tree Survey Report**

(Revised pages)

November 2025

Prepared By:
ADI Limited



ADI

Project Title	Proposed House Development at Tuen Mun Town Lot No. 550 (TMTL 550), Tuen Mun, N.T.
Report Title	Landscape Proposal with Tree Survey Report
Date of Issue	4 th November 2025

	Name	Signature	Date
Compiled by	Elsa Kwong		4 th November 2025
Checked by	Barry Lo		4 th November 2025
Approved by	Alison Lee		4 th November 2025

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1.0	Introduction
2.0	Existing Site Condition
3.0	Project Description
4.0	Landscape Design Proposal
5.0	Landscape Design Objectives
6.0	Greenery Coverage
7.0	Open Space Proposal
8.0	Landscape Design Components
9.0	Landscape Design Elements
10.0	Landscape Management and Maintenance

Tables

Table 9.1	Proposed Planting Mix
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Figures

Figure 1.1	Landscape Plan - Sheet 1 of 2
Figure 1.2	Landscape Plan - Sheet 2 of 2
Figure 2.1	Landscape Section A - A' and B - B'
Figure 2.2	Landscape Section C -C'
Figure 3.0	Greenery Coverage
Figure 4.0	Open Space Framework
Figure 5.1	Typical Planter Detail - At Grade

Appendix

Appendix A	Tree Survey Report
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1.0 Introduction

- 1.1 This Landscape Proposal forms part of the planning statement in support the S16 planning application for proposed house development at Tuen Mun Town Lot No. 550 (TMTL550), Tuen Mun, New Territories. The Application Site (hereafter the site) locates in "Recreation" zone in the Approved Tuen Mun Outline Zoning Plan No. S/TM/41. The Landscape Plans **Figures 1.1 - 1.2** and Landscape Sections **Figures 2.1 and 2.2**, demonstrate the quality and the character of the future exterior environment of the development, its structure and its relationship to the existing landscape context of adjacent horse trail. **Figures 3.0 and 4.0** show the greenery coverage and open space framework of the development site. Typical landscape details are illustrated in **Figure 5.1**. The Tree Survey Report is presented in **Appendix A** in this Report.

2.0 Existing Site Condition

- 2.1 The site is situated approximate 2km to the southwest of Tuen Mun Town Centre. It is bounded by Lung Fu Road (elevated road, +38.9mPD) to the northwest and vegetated knolls to the southeast along Lung Mun Road in a wider context. On the other side of Lung Mun Road, the area is highly developed and dominated by high-rise residential developments including Sun Tuen Mun Centre, Siu Shan Court, Butterfly Estate and Melody Garden. In the local context, the site is surrounding by a vacant government land to the north and the west, another piece of small private land to the south, vegetated knolls to the east. Proposed development covers the TMTL550. The site has an approximate area of 1,852m², it is a flat vacant land which was utilised for agricultural purposes many years ago. A vacant well and an unused culvert are observed in the east and the north of the site.
- 2.2 There is an existing footpath connecting the site and San Shek Wan Road to the north of the site. There is a horse trail, operating by the Public Riding School running alongside the west and north outside of the site.

Landscape Context & Resources

- 2.3 The site is located at about +29 to 30mPD lower than the surrounding topography, knolls located to its east and south at varies height from +42 to 44mPD, with over 10m high mature tree plantation on top, which formed a natural green buffer to developments on the other side of Lung Mun Road. The plantation along the horse trail and Lung Fu Road forms another landscape buffer along the west and the north periphery of the site. Given to this setting, the site is relatively enclosed.
- 2.4 The site is currently vacant for years pending for development and mostly covered by soil and weeds.
- 2.5 Having considered the retention of exiting trees surrounding the site, the access road alignment, the boundary wall/ retaining wall treatment and drainage proposal of the proposed development have been carefully planned to minimise the effect on the existing trees in particular those on vegetated slope, given that the proposed scheme has been maximised the tree preservation opportunities.
- 2.6 Proposed house development and associated landscape proposal would enhance the local landscape quality though planting of new trees which would create a seamless transition from the house development to surrounding green context. Given the scale of development is very small, responsive site planning for tree preservation, the local landscape context and character will largely remain unchanged upon full establishment of the planting proposal. The proposed development will be compatible with the sub-urban landscape context.

Existing Trees

- 2.7 The site is vacant. Refers to the recent topographical survey update of existing tree location, there is no tree (base level) exactly located within the site. However, there are 5 nos. of existing trees, A136, A147, A149, A150 and A162 which located on/very close to the site boundary, and which have been contained in the previous and the recent tree survey. The main trunk of these existing trees and majority of their crown spread are seriously leaning into the site, which will be affected by the roadworks or site formation works for proposed boundary wall/ retaining wall and/or periphery drainage system which are required by the proposed development. Besides, another 20 trees (including Tree A136 and A147) are observed along the existing track connecting San Shek Wan Road and the site which will be affected by the proposed EVA/new access road to the site.
- 2.8 No registered Old and Valuable Trees (DEVB TC(W) No. 5/2020 Registration and Preservation of Old and Valuable Trees) and no protected specimen under Endangered Species of Animals and Plants Ordinance Cap. 586, the Rare and Precious Plants of Hong Kong (Status in China), and under China Plant Red Data Book exists on site or being affected.
- 2.9 Existing trees condition and their treatment as result of proposed development refer to **Appendix A Tree Survey Report**.
- 2.10 Having considered the tree species, which are weedy trees, poor condition of these affected trees, trees have unrecoverable defects, the affected trees are not suitable candidate for tree transplanting, and therefore tree felling is recommended. According to the tree survey findings, unrecoverable defects are frequently found in many existing trees. Defects include seriously leaning, epicormic sprouts, unbalanced crown/form, exposed and restricted rooting area that are unfavourable and not recommended to be retained. The proposal concludes that 17 trees are required of tree felling plus the removal of 6 weedy trees, *Leucaena leucocephala*. Trees of low amenity value and/or having defects will be replaced by a combination of high-quality broadleaf and ornamental trees in the proposed development.
- 2.11 The new tree planting proposal intends to create a good quality of green environment for future residents with proper and good quality planting establishment. A total of 17 new trees of heavy standard stocks would be planted with 1:1 replanting ratio (17 trees felled: 17 new trees planted) with excluding the removal of 6 no. of *Leucaena leucocephala*.
- 2.12 The selection of good quality species will enhance the visual amenity of the site, improves bio-diversity in the local landscape context and provides a high-quality living environment for the future residents. Tree planting opportunities have been maximised within the proposed development in balance with the provision of other facilities, utilities and traffic layout arrangement necessarily required for the residents. Implementation of planting proposal will create a high-quality living environment, and will establish the character and identity for the future development. With the full establishment of the planting proposal, the local landscape context and visual amenity would be enhanced.

3.0 Project Description

- 3.1 The site is proposed for a house development comprises of a 2-storey house, a guard room, an underground septic tank, car parking spaces and associated landscape areas. The development also involves an EVA/new access road connecting to San Shek Wan Road.

4.0 Landscape Design Proposal

- 4.1 The concept underpinning the landscape design of proposed development is to provide a synthesis between the contemporary design philosophy and sustainable development

principle responding to both site context and the proposed nature of the development and respects the surrounding landscape features.

- 4.2 Proposed scheme aims to provide a high-quality living environment for the future residents. The landscape area will be designed with contemporary design language and sustainable principles which will provide private relaxing and recreational space for the residents.
- 4.3 The landscape design proposal is described in terms of the main design objectives followed by a description of the key landscape components, and finally the landscape elements including the proposed hard and soft landscape, which form the palette of materials.

5.0 Landscape Design Objectives

- 5.1 The following design objectives are taken into account in the formulation of development scheme and landscape proposal:

- Integrate the proposed development from a landscape and visual perspective with the surrounding landscape context.
- Provide a quality and sustainable living environment for the future residents.
- Provide adequate open space for the future residents.
- Respond to the character of the architectural scheme and its suburban landscape context with an aesthetically appropriate treatment.
- Provide a landscape framework for the development for softening of the built form to the surrounding vegetated knolls;
- Maximise opportunities for the planting of new trees and shrubs within the development to enhance the amenity value of local landscape context; and
- Maximise opportunities for the greenery within the development.

6.0 Greenery Coverage

- 6.1 Upon full establishment of greening measures in the above landscape design proposal, greenery coverage within the development will not be less than 30% of the total site area of 1,852m² (not less than 555.6m²), which is complied with the OZP greenery requirement for this "Recreation" zone. The greenery coverage is shown in **Figure 3.0** Greenery Coverage.

7.0 Open Space Proposals

- 7.1 Adequate open space will be provided in accordance with the requirements of HKPSG for the provision of local open space with the objective of providing high quality passive recreational space that will satisfy the needs of the residents. **Figure 4.0** shows the open space framework of proposed development which is designed for the enjoyment of the residents only i.e. for the single house family. It will be managed and maintained by the owner of the house. The proposed scheme is designed to meet the requirement providing minimum 1m² per person of local open space as required by the HKPSG i.e. not less than 3m².

8.0 Landscape Design Components

Residential Landscape

- 8.1 Planting with broadleaf native trees (*Bischofia javanica*) at the entrance of the site will integrate with the character of surrounding vegetated slopes, highlights the entrance threshold of the development and establishes the identity for the development. This tree planting proposal extends continuously at the site periphery to visually soften the

development edge and provides screening for the privacy of the proposed development.

- 8.2 A leisure lawn with benches is embraced by trees is set at the front court creating shade and comfortable environment for relaxing as well as an intimate garden courtyard for residents to appreciate different form and texture of greenery linking to the surrounding vegetated slopes. Planting of broadleaf trees/ flowering trees with fragrance, such as *Bischofia javanica* and *Osmanthus fragrans*, would provide shade and enrich the senses of the users. A paved courtyard is set at the back of the house provides flexible gathering space for the residents.

9.0 Landscape Design Elements

Soft Landscape

- 9.1 The landscape design has been maximised the opportunities for tree and shrub planting to enhance the character of the development and the local landscape context. The basis for the proposed planting scheme would provide a green and comfortable environment for the residents. Shade trees with dense canopy and flowering shrubs would be used to emphasise the character of landscaped areas described above. The use of well combination of evergreen, broadleaf and/or ornamental trees and/or flowering shrubs will also screen and visually soften the appearance of the development. **Using native or locally adopted trees and shrubs to fill in planting areas would improve biodiversity and ecological health, creates a more harmonious aesthetic with the surrounding landscape.**
- 9.2 Whilst the landscape design is subject to review during the detailed design stage of the project, the following description seeks to establish some guiding principles that are important for implementing the landscape as part of the overall scheme and in ensuring its feasibility. **All proposed species are commonly found in Mainland China nurseries.**
- 9.3 The plant species for the landscaped areas will be selected to provide colour throughout the year with seasonal variation. This will be achieved through the selection of species with an interesting form, colour and texture of their foliage and through the use of flowering species to provide an architectural highlight. Shade tolerant species will be considered in the planting area with less exposure of sunlight.
- 9.4 In order to achieve the landscape character at this initial stage, new trees will be specified with larger sized tree stock. The following species in **Table 9.1** will form the basis of the planting design proposals and subject to develop at detailed design stage.

Table 9.1: Proposed Planting Mix

Botanical Name	Heavy Standard Tree Size for reference only DBH (mm) x Height (mm) x Spread (mm)	Spacing (mm)	Indicative number of tree to be planted
Tree			
<i>*Bischofia javanica</i>	100 x 5500 x 4000	5000	13
<i>Osmanthus fragrans</i>	100 x 4000 x 3500	4000	4

Note: * denotes native tree species.

Botanical Name	Height x Spread (mm)	Spacing (mm)
Shrub		
<i>Allamanda cathartica</i>	500H x 500S	400
<i>Artemisia argyi</i>	400H x 400S	300
<i>Bougainvillea spectabilis</i>	600H x 500S	500
* <i>Camellia japonica</i>	600H x 500S	400
* <i>Dillenia indica</i>	500H x 400S	300
<i>Duranta repens</i> 'Golden Leave'	300H x 300S	200
<i>Fagraea ceilanica</i> 'Variegata'	500H x 500S	400
* <i>Gardenia jasminoides</i>		
* <i>Ligustrum sinense</i>	700H x 500S	500
<i>Aglaia odorata</i>	700H x 500S	300
<i>Pittosporum tobira</i>	500H x 400S	400
* <i>Melastoma candidum</i>	300H x 300S	200
<i>Michelia figo</i>	300H x 300S	250
* <i>Nephrolepis auriculata</i>	300H x 300S	250
<i>Phyllanthus myrtifolius</i>	200H x 300S	200
* <i>Rhododendron simiarum</i> Hance	600H x 400S	350

Botanical Name	Height x Spread (mm)	Spacing (mm)
Ground Cover		
<i>Alternanthera dentata</i>	200H x 200S	300
<i>Cuphea hyssopifolia</i>	150H x 150S	200
<i>Lantana mista</i>	200H x 300S	500
<i>Ophiopogon japonicus</i> 'variegatum'	100H x 150S	250

Botanical Name	Height x Spread (mm)	Spacing (mm)
Lawn		
<i>Zoysia japonica</i>	300 x 300 Turf	even density

Note: * denotes native plant species.

Soil Depth for Planting Areas

- 9.5 In order to ensure that these planting proposals are feasible, it is proposed that an adequate planting medium be incorporated into the design of the soft landscape areas. For example, the tree planting in planter or planting area will utilise a minimum 1200mm depth of planting medium, 600mm depth of soil will be required for shrub areas and a minimum soil depth of 300mm for lawn. These are minimum soil depths required in planting areas and planters with exclusion of structural and drainage layers to ensure healthy plant establishment. Planting spacing and soiling requirement follow the guidelines for tree planting published by DEVB GLTM and have considered the mature size of proposed species to ensure enough space is reserved for healthy establishment of the new planted trees.

Irrigation and Drainage

- 9.6 The proposed irrigation system will be via manual water point operation, covering the entire planting area within the site. The proposed source of water supply is subject to final approval from the Water Supplies Department. Sub-soil drainage shall be provided for all planting areas.

Paving

9.7 The paving will be an important element of the landscape design, both in aesthetic terms and in producing a hardwearing landscape for usage by the future residents. These surfaces would be constructed of high-quality materials. Granite tile/paving block will be used in the garden area associated with the house.

9.8 Non-slip and durable paving materials will be selected. Concrete paving blocks will be utilised on EVA / driveway. Recycled paving blocks will be used on footpath alongside of access road to HyD standards.

Lighting

9.9 The lighting design concept for the landscaped areas will be designed to contribute to the quality of the development in nocturnal views providing an aesthetically pleasing environment through the creation of mood and highlighting of the landscape elements. Open spaces will be provided with sufficient illumination to meet the required lighting standards. Lighting designed for all open space will be carefully designed to avoid glare and shall be effective in energy saving. A timer switch control system shall be provided and where possible the lighting will be designed to avoid spillage and potential glare impacts.

Treatment of Slopes and Retaining Walls

9.10 Engineering structures will be aesthetically enhanced through the use of soft landscape works to give man-made slopes a more natural appearance blending into surrounding landscape setting such as (1) Shade tolerant species will be planted under understory of trees, and/or (2) Tree/shrub plantings alongside of the wall to disguise its functional appearance.

10.0 Landscape Management and Maintenance

10.1 Upon completion of the construction works, a 12-months defect liability period will be implemented which applies to both hard and soft landscaping works. The soft landscape specialist contractor will be responsible for the maintenance of planting during this first year following practical completion to ensure proper establishment of planting works. Ultimately the property management team of proposed development will employ maintenance staff to take care of all landscape areas including hard and soft landscape works as described below:

Hard Landscape Elements

I - Routine Maintenance (Daily –Weekly)

- a. Rubbish and litter removal;
- b. Sweeping and cleaning;
- c. Water feature cleaning; and
- d. Damage inspection and repair for site furniture and light bulb replacement.

II – Annual / Long Term Maintenance

- a. Repainting;
- b. Resurfacing of worn pavements;
- c. Replacing worn parts site furniture, lighting fixture and other facilities;

- d. Replacement of worn landscape furniture; and
- e. Landscape hard elements.

Soft Landscape Elements

- 10.2 The softworks contractor will be responsible for a 12-month establishment period of plants after practical completion of the planting works. It allows a period of time for proper establishment of the plants.
- 10.3 Upon the end of the 12-months establishment period, the developer will employ maintenance staff to take care of all landscape areas within the development.

Figures



- Legend**
- Application Site Boundary
 - Lawn
 - Shrub
 - Bench
 - New Tree Planting 17nos.
 - EVA/Access Road/ Carparking Area
 - Hard Paved Garden Area/ Footpath
 - +4.50 Proposed Level
 - Pedestrian Entrance/Exit
 - Vehicular Entrance/Exit
- 1 Tree planting highlights the entrance threshold of the development.
- 2 Leisure Lawn is embraced with trees and benches which provides shaded and comfortable area for relaxing.
- 3 Continuous edge plantings to soften the development edge.
- 4 Proposed access road aligns in areas with less tree impact.

Development Site : 1.852m²
Private Open Space for Residents: Total not less than 3m²
(For estimated population of 3 people)

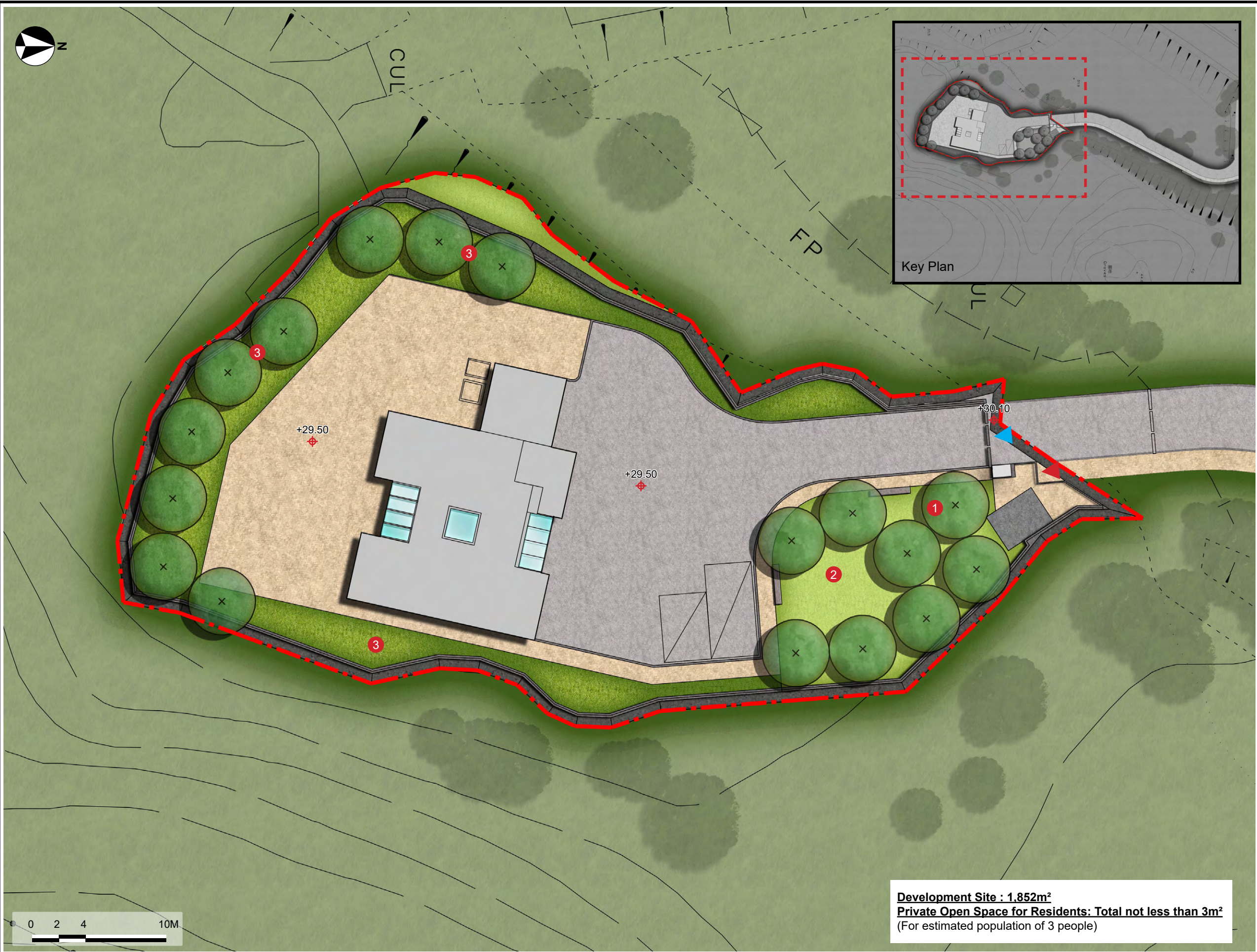
Proposed House Development at Tuen Mun Town Lot No. 550 (TMTL 550), Tuen Mun, N.T.

Landscape Plan - Sheet 1 of 2

SCALE	AS SHOWN	DATE	November 2025
CHECKED	ELK	DRAWN	TEAM
FIGURE NO.	Figure 1.1		REV
			-



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- Legend
- Application Site Boundary
 - Lawn
 - Shrub
 - Bench
 - New Tree Planting 17nos.
 - EVA/Access Road/ Carparking Area
 - Hard Paved Garden Area/ Footpath
 - +4.50 Proposed Level
 - Pedestrian Entrance/Exit
 - Vehicular Entrance/Exit

Development Site : 1.852m²
Private Open Space for Residents: Total not less than 3m²
(For estimated population of 3 people)

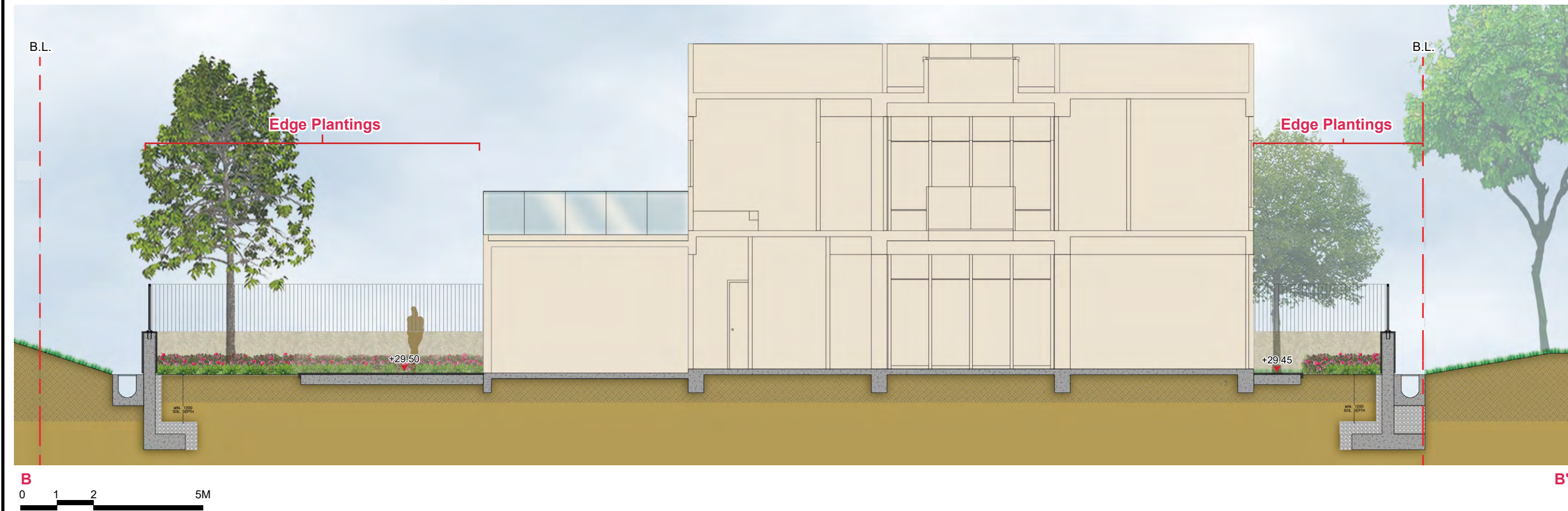
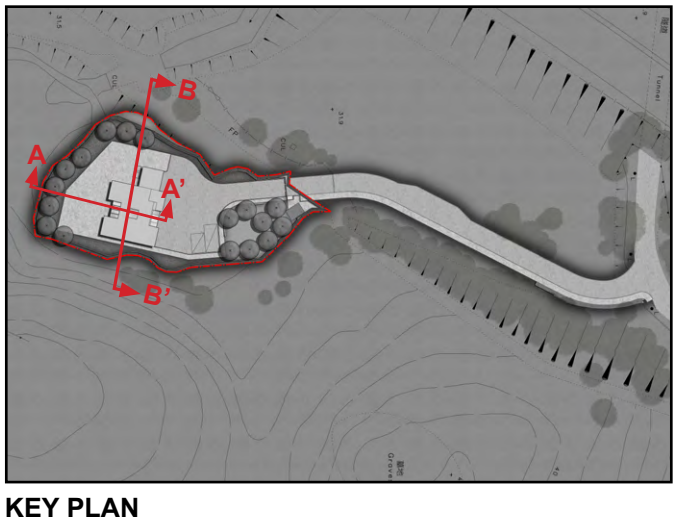
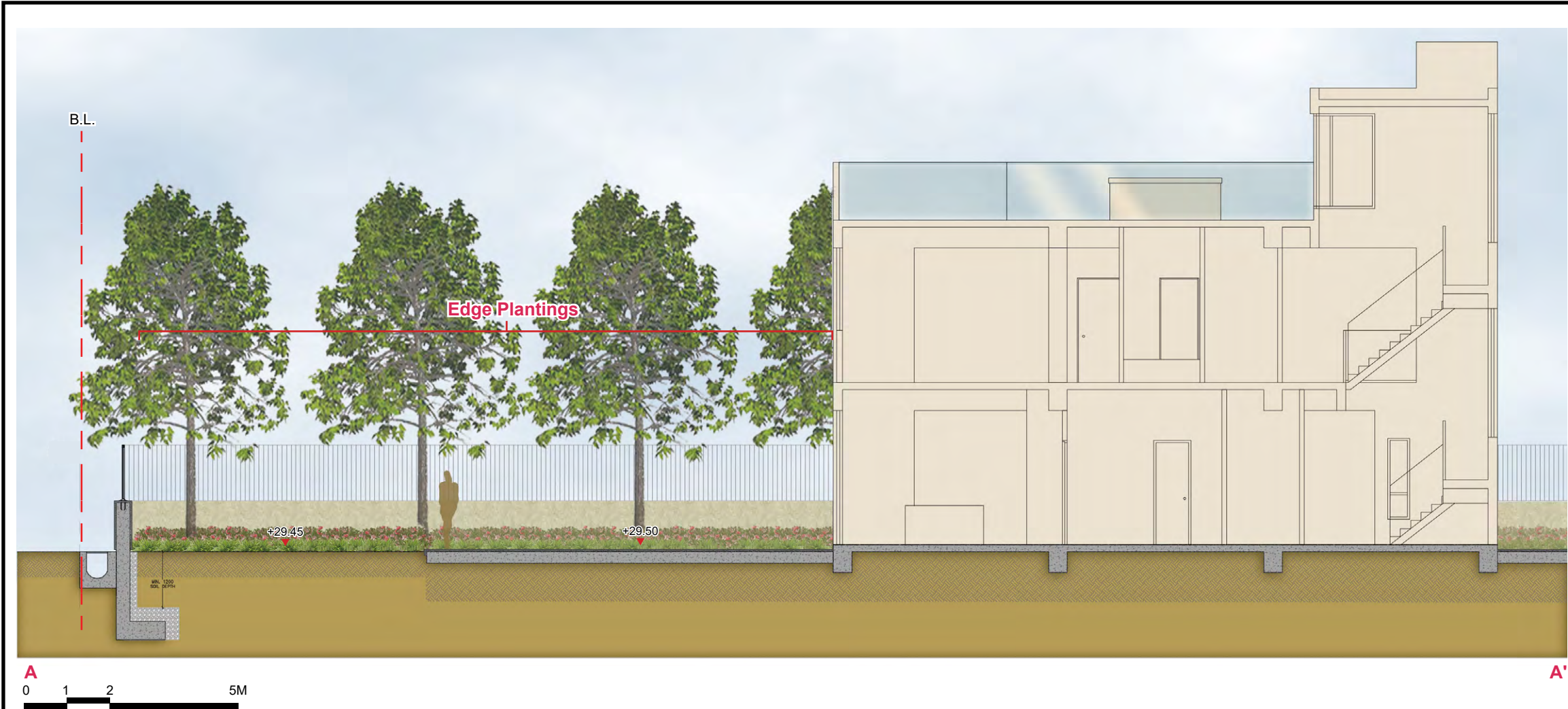
Proposed House Development at Tuen Mun Town Lot No. 550 (TMTL 550), Tuen Mun, N.T.

Landscape Plan - Sheet 2 of 2

SCALE	AS SHOWN	DATE	November 2025
CHECKED	ELK	DRAWN	TEAM
FIGURE NO.	Figure 1.2		REV
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Proposed House Development at Tuen Mun Town Lot No. 550 (TMTL 550), Tuen Mun, N.T.

Landscape Section A-A' and B-B'

SCALE	AS SHOWN	DATE	November 2025
CHECKED	ELK	DRAWN	TEAM
FIGURE NO.	Figure 2.1		REV
			-

ADI

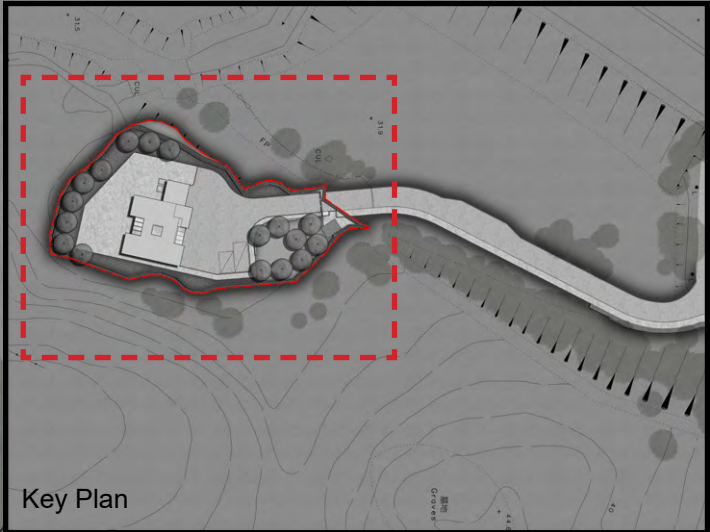
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Legend

- Application Site Boundary
- +4.50 Proposed Level
- Greenery Coverage (Uncovered)

Note:
Greenery Provision
Total not less than 555.6m²
30% of the Site Area (1,852m²)
complied with ozp requirement.



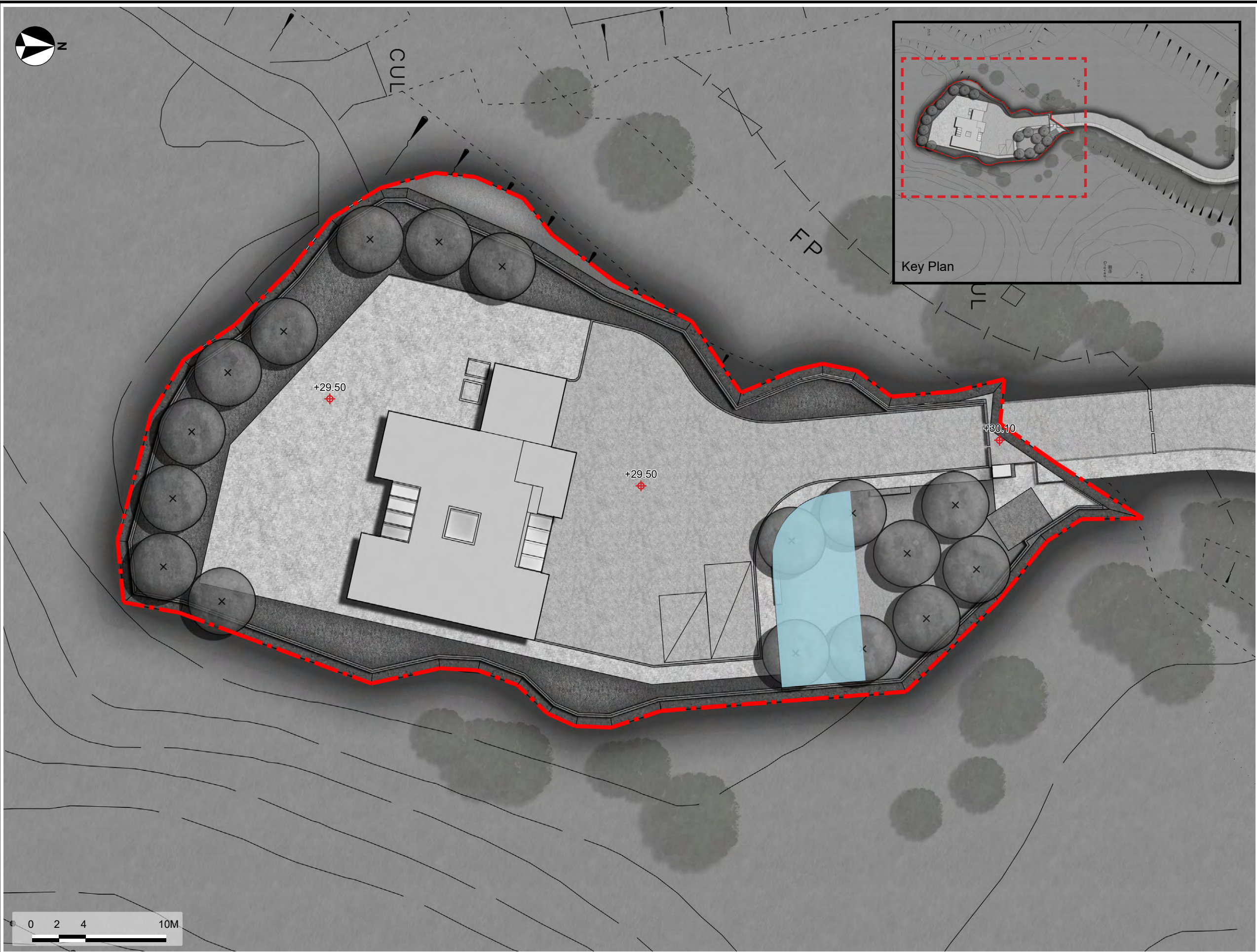
Proposed House Development at Tuen Mun Town Lot No. 550 (TMTL 550), Tuen Mun, N.T.

Greenery Coverage

SCALE	AS SHOWN	DATE	November 2025
CHECKED	ELK	DRAWN	TEAM
FIGURE NO.	Figure 3.0		REV
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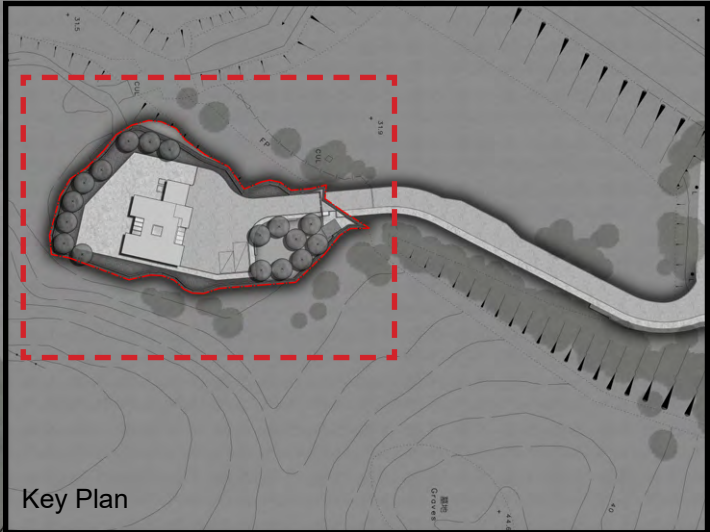
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Legend

- Application Site Boundary
- +4.50 Proposed Level
- Private Open Space (for Passive Recreation)

Note: Total Not less than 3m² Following HKPSG requirement (1m²/person) for estimated population of 3



Proposed House Development at Tuen Mun Town Lot No. 550 (TMTL 550), Tuen Mun, N.T.

Open Space Framework

SCALE	AS SHOWN	DATE	November 2025
CHECKED	ELK	DRAWN	TEAM
FIGURE NO.	Figure 4.0		REV
			-



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Appendix A

Tree Survey Report

Appendix A

Tree Survey Report

- 1.0 Introduction
- 2.0 Existing Site Condition
- 3.0 Existing Vegetation
- 4.0 Recommendations
- 5.0 New Tree Planting Proposal
- 6.0 Conclusion

Tables

- Table A2.1 Summary of Existing Tree Species
- Table A2.2 Summary of Existing Tree Condition
- Table A4.1 Tree Planting Mix

Annexes

- Annex I Tree Survey Methodology
- Annex II Tree Treatment Schedule**
- Annex III Tree Treatment Plan
- Annex IV Photographic Record of Existing Trees
- Annex V New Tree Planting Proposal**

1.0 Introduction

- 1.1 ADI Limited has been commissioned by the Applicant to carry out an individual tree survey to support the S16 planning application for proposed house development at Tuen Mun Town Lot No. 550 (TMTL550), Tuen Mun, New Territories. The objective of this tree survey report is to provide a picture of the existing trees within and adjacent to the lot boundary and make recommendations to their treatment aiming for minimal disturbance to existing trees and creating eventual high quality landscape setting. This report should be read in conjunction with the landscape proposal.
- 1.2 The tree survey has been completed in broad accordance with Practice Note for Professional Persons No. 1/2019 Processing and Compliance Checking of Landscape Submissions related to Planning Applications. This report outlines the approach and findings of the tree survey, the type and extent of vegetation that will be affected by the proposed development and the proposed treatment of the vegetation. A formal Tree Preservation and Removal Proposal (TPRP) according to LAO Practice Note Issue No. 6/2023 Tree Preservation and Tree Removal Application for Building Development in Private Projects will be prepared during the detailed design stage of the project and submitted to the relevant government departments for approval at that time. The survey approach is presented as **Appendix I – Tree Survey Methodology**.
- 1.3 The tree survey was undertaken in June 2025 to reflect the current condition of existing trees within and adjacent to the application site, and to reflect any potential impact caused on existing trees due to the proposed house development and associated vehicular access/EVA from San Shek Wan Road.
- 1.4 The application site is proposed for a house development comprises of a 2-storey house, a guard room, an underground septic tank, car parking spaces and associated landscape areas. The development also involves an EVA/new access road connecting to San Shek Wan Road. Detail of existing trees within the site/ close to the site being affecting, and their treatment are presented in **Annex II – Tree Treatment Schedule, Annex III – Tree Treatment Plan, Annex IV – Photographic Record of Existing Trees**.

2.0 Existing Condition

- 2.1 The Application Site (hereafter the site) is situated approximate 2km to the southwest of Tuen Mun Town Centre. It is bounded by Lung Fu Road (elevated road, +38.9mPD) to the northwest and vegetated knolls to the southeast along Lung Mun Road in a wider context. On the other side of Lung Mun Road, the area is highly developed and dominated by high-rise residential developments including Sun Tuen Mun Centre, Siu Shan Court, Butterfly Estate and Melody Garden. In the local context, the site is surrounding by a vacant government land to the north and the west, another piece of small private land to the south, vegetated knolls to the east. Proposed development covers the TMTL550. The site has an approximate area of 1,852m², it is a flat vacant land which was utilised for agricultural purposes many years ago. A vacant well and an unused culvert are observed in the east and the north of the site.
- 2.2 There is an existing footpath connecting the site and San Shek Wan Road to the north of the site. There is a horse trail, operating by the Public Riding School running alongside the west and north outside of the site.
- 2.3 The site is located at about +29 to 30mPD lower than the surrounding topography, knolls located to its east and south at varies height from +42 to 44mPD, with over 10m high mature tree plantation on top, which formed a natural green buffer to developments on the other side of Lung Mun Road. The plantation along the horse trail and Lung Fu Road forms another landscape buffer along the west and the north periphery of the site. Given to this setting, the site is relatively enclosed.

3.0 Existing Vegetation

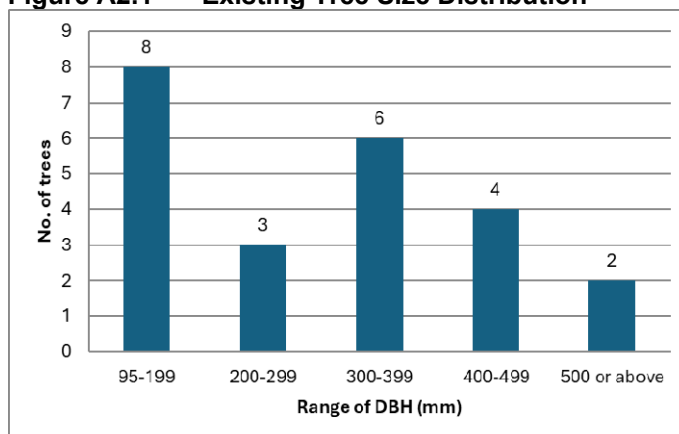
- 3.1 The site is vacant. Refers to the recent topographical survey update of existing tree location, there is no tree (base level) exactly located within the site. However, there are 5 nos. of existing trees, A136, A147, A149, A150 and A162 which located on/very close to the site boundary, and which have been contained in the previous and the recent tree survey. The main trunk of these existing trees and majority of their crown spread are seriously leaning into the site, which are potentially affected by the roadworks or site formation works for proposed boundary wall/ retaining wall and/or periphery drainage system which are required by the proposed development. Besides, another 20 trees (including Tree A136 and a147) are observed along the existing track connecting San Shek Wan Road and the site which are potentially affected by the proposed EVA/new access road to the site.
- 3.2 A total of 7 tree species were identified in the survey. About 26% of existing trees are self-seeded weedy trees, *Leucaena leucocephala*. Another 43% are also self-seeded trees with prolific nature, such as *Bauhinia variegata* and *Macaranga tanarius* var. *tomentosa*. The remaining are fruit trees, native/ exotic plantation species that are commonly found in Hong Kong and are few in numbers. Table A2.1 below listed the tree species surveyed and their relative abundance. Tree composition contains 3 native species and the other 4 are exotic species which accounts for 21% and 79% of total tree number respectively.
- 3.3 No registered Old and Valuable Trees (DEVB TC(W) No. 5/2020 Registration and Preservation of Old and Valuable Trees) and no protected specimen under Endangered Species of Animals and Plants Ordinance Cap. 586, the Rare and Precious Plants of Hong Kong (Status in China), and under China Plant Red Data Book exists on site or being affected.
- 3.3 The existing tree locations are illustrated on **Annex III – Tree Treatment Plan**. Identification of tree species, form and health condition of these trees are reviewed in the following paragraphs and listed in **Annex II - Tree Treatment Schedule**. A **Photographic Record of Existing Trees** is enclosed in **Annex IV**.

Table A2.1 Summary of Existing Tree Species

Botanical Name	Chinese Name	No. of Trees	%	Native (N)/ Exotic (E)
<i>Artocarpus heterophyllus</i>	波蘿蜜	4	18%	E
<i>Bauhinia variegata</i>	宮粉羊蹄甲	7	31%	E
<i>Eucalyptus torelliana</i>	毛葉桉	1	4%	E
<i>Leucaena leucocephala</i>	銀合歡	6	26%	E
<i>Macaranga tanarius</i> var. <i>tomentosa</i>	血桐	3	13%	N
<i>Mallotus paniculatus</i>	白楸	1	4%	N
<i>Sterculia lanceolata</i>	假蘋婆	1	4%	N
Total		23	100%	

- 3.4 The average DBH of the surveyed trees is about 295mm, with average height of 8.3m and average crown spread of 6.4m which indicates their fast growing nature of weedy trees or fruit trees. **Figure A2.1 Existing Tree Size Distribution** below shows that about half of existing trees have a DBH less than 300mm which indicates that they are relatively young and are trees recently self-seeded in the area. The fruit tree/ weedy tree, such as *Artocarpus heterophyllus* and *Leucaena leucocephala*, have larger DBH over 500mm regarding their fast growing nature. Given the dense growing condition, the average crown spread of the plantation species on slope is relatively small while their tree growth is constrained by adjacent trees, low live crown ratio and “lion tail”/ “poor taper” are common evidence observed on these trees.

Figure A2.1 Existing Tree Size Distribution



- 3.5 In general, a high percentage of these trees have a poor form, their structural and health condition are generally fair to poor. Defects on these trees are observed including leaning, contorted trunk, poor taper, epicormic sprout on branch, broken branch with dead wood, restricted and exposed root, and codominant trunk. **Table A2.2** below shows the summary of tree condition.

Table A2.2 Summary of Tree Condition

Assessment Criteria	Status of Trees	% Trees
Form	Good	0%
	Fair	22%
	Poor	78%
Health Condition	Good	0%
	Fair	65%
	Poor	35%
Structural Condition	Good	0%
	Fair	52%
	Poor	48%
Anticipated Survival Rate after Transplanting	High	0%
	Medium	13%
	Low	87%

4.0 Recommendations

- 4.1 The proposed development considered the spatial constraints of the site, proposed house, proposed access road/EVA, car parking facilities, utilities, and necessary ancillary facilities for the development, boundary wall/retaining wall and site formation, drainage system and flooding prevention works etc., therefore existing tree surveyed and mentioned above would be inevitably being affected. The recommendation for the treatment of existing trees and new tree planting concept are illustrated in **Annex II – Tree Treatment Schedule, Annex III – Tree Treatment Plan, Annex IV – Photographic Record of Existing Trees** and **Annex V – New Tree Planting Proposal**.

Tree Retention

- 4.2 Having considered the retention of existing trees surrounding the site, the access road alignment, the boundary wall/ retaining wall treatment and drainage proposal, have been carefully planned to minimise the effect on the existing trees in particular those on vegetated

slope, given that the proposed scheme has been maximised the tree preservation opportunities.

Tree Felling

- 3.4 The site is vacant for years, there is no tree (base level) exactly located within the site. However, there are 5 nos. of existing trees, A136, A147, A149, A150 and A162 which located on/very close to the site boundary, and which have been contained in the previous and the recent tree survey. The main trunk of these existing trees and majority of their crown spread are seriously leaning into the site, which are inevitably affected by the roadworks or site formation works for proposed boundary wall/ retaining wall and/or periphery drainage system which are required by the proposed development. Besides, another 20 trees (including Trees A136 and A147) are observed along the existing track connecting San Shek Wan Road and the site which will be affected by the proposed EVA/new access road to the site.
- 4.3 Having considered the tree species, which are weedy trees, poor condition of these affected trees, trees have unrecoverable defects, the affected trees are not suitable candidate for tree transplanting, and therefore tree felling is recommended.
- 4.4 According to the tree survey findings, unrecoverable defects are frequently found in the majority of existing trees. Defects include seriously leaning, epicormic sprouts, unbalanced crown/form, exposed and restricted rooting area that are unfavourable and not recommended to be retained. The proposal concludes that 17 trees are required of tree felling plus the removal of 6 weedy trees, *Leucaena leucocephala*.
- 4.5 The removal of trees will be compensated and replaced by high quality broadleaf/evergreen/ornamental trees and suitable greening treatment in proposed development by maximising the landscape and greening opportunities. Upon full establishment of proposed planting, the local landscape context will be enhanced.

5.0 New Tree Planting Concept

- 5.1 As described above, the loss of existing trees will be replaced by broadleaf/evergreen/ornamental trees creating a good quality residential landscape that would enhance the visual amenity of the local context, benefiting both the future residents, pedestrians and their neighbourhoods. The New Tree Planting Concept is presented in **Appendix V**. The planting proposal has sought to:
- Provide physical and visual integration with the surrounding neighbourhoods.
 - Provide screening of the built-form and softening the development edge.
 - Provide quality and sustainable residential environment for the future residents.
 - Provide compensation for felling of existing trees.
 - Maximise opportunities for the planting of new tree as well as other forms of greening measures; and
 - Using native or locally adopted trees and shrubs to fill in planting areas would improve biodiversity and ecological health, creates a more harmonious aesthetic with the surrounding landscape.
- 5.2 The planting proposal provides a green environment, good quality communal spaces, and good quality planting establishment for the proposed development. A total of 17 new trees will be planted within the site for compensate the tree loss with excluding the removal of 6 nos. of *Leucaena leucocephala*. A replanting ratio in term of quantity of minimum 1:1 would be achieved (17 trees felled: 17 new planted). Heavy standard size tree stock will be utilised to create an instant greening effect. This proposal has been maximised the opportunity of greening within the development.
- 5.4 The selection of good quality species will enhance the local landscape context upon full establishment. These trees form part of the overall landscape design proposal which will be further developed during the detailed design stage of the project. A summary of the new tree planting proposal is provided in **Table A5.1** below.

Table A5.1 Tree Planting Mix

Botanical Name	Heavy Standard Tree Size for reference only DBH (mm) x Height (mm) x Spread (mm)	Spacing (mm)	Indicative number of tree to be planted
Tree			
<i>*Bischofia javanica</i>	100 x 5500 x 4000	5000	13
<i>Osmanthus fragrans</i>	100 x 4000 x 3500	4000	4

Note: * denotes native tree species.

5.5 Trees with Heavy Standard are defined as follow:

Heavy Standard:

- A sturdy straight stem at least 2000mm high from the root collar to the lowest branch;
- Total height above the root collar exceeding 3500mm but not exceeding 6000mm;
- Stem diameter exceeding 75mm but not exceeding 150mm measured at a height of 1300mm from the root collar;
- According to the species, either a well-balanced branching head, or a well-defined straight and upright leader with branches growing out from the stem with good symmetry, and a minimum length of 800mm;
- A rootball not less than 750mm in diameter and 400mm in depth;
- Grown in a container not less than 750mm in diameter and 600mm in depth; and
- Free from any kind of pest, fungi, disease and parasitic plants.

5.6 The height of all trees shall be measured above the root collar, and the diameter of all stems to be measured at a height of 1300mm above ground level.

6.0 Conclusion

- 6.2 The site is vacant. Refers to the recent topographical survey update of existing tree location, there is no tree (base level) exactly located within the site. However, there are 5 nos. of existing trees, A136, A147, A149, A150 and A162 which located on/very close to the site boundary, and which have been contained in the previous and the recent tree survey. The main trunk of these existing trees and majority of their crown spread is seriously leaning into the site, which will be affected by the roadworks or site formation works for proposed boundary wall/ retaining wall and/or periphery drainage system which are required by the proposed development. Besides, another 20 trees (including Tree A136 and A147) are observed along the existing track connecting San Shek Wan Road and the site which will be affected by the proposed EVA/new access road to the site.
- 6.3 No rare or protected tree species (Cap 96 refers) is found to exist in the site. No registered Old and Valuable Trees (DEVB TC(W) No. 5/2020 Registration of Old and Valuable Trees, and Guidelines for their Preservation) is found in the survey.
- 6.4 Having considered the retention of exiting trees surrounding the site, the access road alignment, the boundary wall/ retaining wall treatment and drainage proposal, have been carefully planned to minimise the effect on the existing trees in particular those on vegetated slope, given that the proposed scheme has been maximised the tree preservation opportunities.
- 6.5 Having considered the tree species, which are weedy trees, poor condition of these affected trees, trees have unrecoverable defects, the affected trees are not suitable candidate for tree transplanting, and therefore tree felling is recommended. According to the tree survey findings, unrecoverable defects are frequently found in many existing trees. Defects include

seriously leaning, epicormic sprouts, unbalanced crown/form, exposed and restricted rooting area that are unfavourable and not recommended to be retained. The proposal concludes that 17 trees are required of tree felling plus the removal of 6 weedy trees, *Leucaena leucocephala*. Trees of low amenity value and/or having defects will be replaced by a combination of high-quality broadleaf and ornamental trees in the proposed development.

- 6.6 The new tree planting proposal intends to create a good quality of green environment for future residents with proper and good quality planting establishment. A total of 16 new trees of heavy standard stocks would be planted with 1:1 replanting ratio (17 trees felled: 17 new trees planted) with excluding the removal of 6 no. of *Leucaena leucocephala*.
- 6.7 The selection of good quality species will enhance the visual amenity of the site, improves biodiversity in the local landscape context and provides a high-quality living environment for the future residents. Tree planting opportunities have been maximised within the proposed development in balance with the provision of other facilities, utilities and traffic layout arrangement necessarily required for the residents. Implementation of planting proposal will create a high-quality living environment and will establish the character and identity for the future development. With the full establishment of the planting proposal, the local landscape context and visual amenity would be enhanced.

Annexes

Annex II

Tree Treatment Schedule

Tree Treatment Schedule
Address: TMTL 550, Tuen Mun, N.T
Prepared by Pang Shun Chin, Howard Pang (Certified ISA No. HK-0520A)
Field Survey conducted in 20 June, 2025
To be read in conjunction with drawing numbers: LDSS03A -TT01 to TT03

Tree ID	Photo No.	Tree Species		Trunk diameter (mm)	Overall Height (m)	Average Crown Spread (m)	Top of soil level above root collar (mPD)	Form			Health Condition			Structural Condition			Anticipated Survival Rate after Transplanting			Location		Conservation Status	Proposed Treatment			Justification	Remarks
		Scientific Name	Chinese Name					Good	Fair	Poor	Good	Fair	Poor	Good	Fair	Poor	High	Med	Low	Flat	Slope		Retain	Transplant	Fell		
A035	A035	Leucaena leucocephala	銀合歡	600	15	8	31.35			1		1			1				1	1		Not listed			1	B,E	Included bark, sparse leaves, codominant trunk,leaning 10°
A036	A036	Bauhinia variegata	宮粉羊蹄甲	335	10	7	30.62			1		1			1				1	1		Not listed			1	B,E	Multi-stem, codominant trunk, crooked branch,sucker
A037	A037	Macaranga tanarius var. tomentosa	血桐	300	7	6	31.34			1		1				1			1		1	Not listed			1	B,E	Root exposed, leaning 15°, attached to concrete structure, broken branch with dead wood
A061	A061	Bauhinia variegata	宮粉羊蹄甲	360	7	6	30.77			1		1				1			1	1		Not listed			1	B,E	Codominant trunk forked at base, sucker at base, one trunk broken
A115	A115	Eucalyptus torelliana	毛葉桉	450	10	7	29.95			1		1			1				1	1		Not listed			1	B,E	Contorted trunk, bending trunk 5°, codominant trunk, one broken & decay trunk
A135	A135	Artocarpus heterophyllus	波羅蜜	500	10	7	29.96			1		1			1				1	1		Not listed			1	B,E	Imbalance crown, wounds on trunk
A136	A136	Leucaena leucocephala	銀合歡	300	5	5	31.12			1			1			1			1	1		Not listed			1	B,E	main trunk broken, imbalance form, epicormics on trunk, bending
A147	A147	Macaranga tanarius var. tomentosa	血桐	130	7	6	30.05			1		1				1			1	1		Not listed			1	B,E	Imbalacne crown, bending trunk, Leaning 15°, wound on trunk
A149	A149	Artocarpus heterophyllus	波羅蜜	400	9	6	29.92		1			1			1			1		1		Not listed			1	B,E	Imbalance crown, leaning 15°
A150	A150	Artocarpus heterophyllus	波羅蜜	430	12	7	29.26		1			1			1			1		1		Not listed			1	B,E	Imbalance crown, leaning 10°
A162	A162	Artocarpus heterophyllus	波羅蜜	450	8	7	29.59			1		1				1			1		1	Not listed			1	B,E	Imbalance crown, leaning 20°
B002	B002	Leucaena leucocephala	銀合歡	170	8	6	30.27			1		1				1			1		1	Not listed			1	B,E	Forked at base. 2 contorted trunks
B003	B003	Mallotus paniculatus	白楸	100	6	3	31.21		1			1			1				1	1		Not listed			1	B	
B014	B014	Macaranga tanarius var. tomentosa	血桐	250	9	9	30.88			1			1		1				1		1	Not listed			1	B,E	Sprase foliage, leaning, suppressed by adjacent trees
B015	B015	Bauhinia variegata	宮粉羊蹄甲	160	7	6	30.51			1			1		1				1	1		Not listed			1	B,E	Fork at base, sprase foliage, leaning 5°, suppressed by adjacent trees
B016	B016	Leucaena leucocephala	銀合歡	290	6	7	31.51			1		1				1			1	1		Not listed			1	B,E	Fork at base, heavy leaning 45°
B017	B017	Leucaena leucocephala	銀合歡	230	8	10	31.67			1		1				1			1	1		Not listed			1	B,E	Fork at base, heavy leaning 45°
B018	B018	Leucaena leucocephala	銀合歡	390	11	12	31.59			1		1				1			1	1		Not listed			1	B,E	Heavy leaning 45°
B018A	B018A	Bauhinia variegata	宮粉羊蹄甲	300	9	8	31.82		1			1			1				1	1		Not listed			1	B,E	Imbalance crown, sparse foliage, suppressed by adjacent tree
B018B	B018B	Sterculia lanceolata	假蘋婆	110	6	3	31.62		1			1			1			1		1		Not listed			1	B	
B019	B019	Bauhinia variegata	宮粉羊蹄甲	160	9	5	30.64			1		1			1				1	1		Not listed			1	B,E	Taper, contorted trunk, developed from collapsed trunk
B022	B022	Bauhinia variegata	宮粉羊蹄甲	180	7	3	30.54			1			1			1			1	1		Not listed			1	B,E	Developed from collapsed tree, exposed root, contorted trunk, taper
B023	B023	Bauhinia variegata	宮粉羊蹄甲	190	5	3	30.35			1			1			1			1	1		Not listed			1	B,E	Developed from collapsed tree, exposed root, one trunk collapsed, suppressed by adjacent tree
								0	5	18	0	15	8	0	12	11	0	3	20	19	4		0	0	23		23 Total of existing trees surveyed
								0%	22%	78%	0%	66%	35%	0%	52%	48%	0%	13%	87%	83%	17%		0%	0%	100%		
								Good	Fair	Poor	Good	Fair	Poor	Good	Fair	Poor	High	Med	Low	Flat	Slope		Retain	Trans	Fell		

Summary Table

	Number of Tree(s) within TMTL550	Number of Tree(s) affected boudnary wall works	Number of Tree(s) affected by roadworks
Tree to be Retained	0	0	0
Tree to be Transplanted	0	0	0
Tree to be Felled	0	3	14
Leucaena leucocephala to be Removed	0	0	6
Total Number of Existing Tree(s)	0	3	20

Legend

Tree Species

Guidance on proper use of scientific name of plants is give in the AFCD's Nature Conservation Practice Note (NCPN) No. 3 "The Use of Plant Names"

DBH

DBH of a tree refers to its diameter at breast height (i.e. measured at 1.3m above ground level).
"mm" stands for millimetre and "m" stands for metre.

Top of soil level above root collar

This figure provides the existing soil level; when trees retained in-situ, the soil level should be maintained and not cover the root collar.

Tree Form/ Health Condition/ Structural Condition

- G Good
- F Fair
- P Poor

Form of a tree will take account of the overall tree size, shape and any special feature.

Anticipated Survival Rate after Transplanting

- High Very likely to survive after transplant
- Medium >50% possibility of survival after transplantation
- Low Unlikely to survive due to poor health/form; or tree species has little tolerance to the effects of transplanting; or difficult to transplant

Location

Location of tree if it is growing on flat or sloping location.

Conservation Status

Indicated rarity and protection status under relevant ordinances of a species in Hong Kong/ in Mainland China/ of nationally importance

Justification for Tree Recommendation

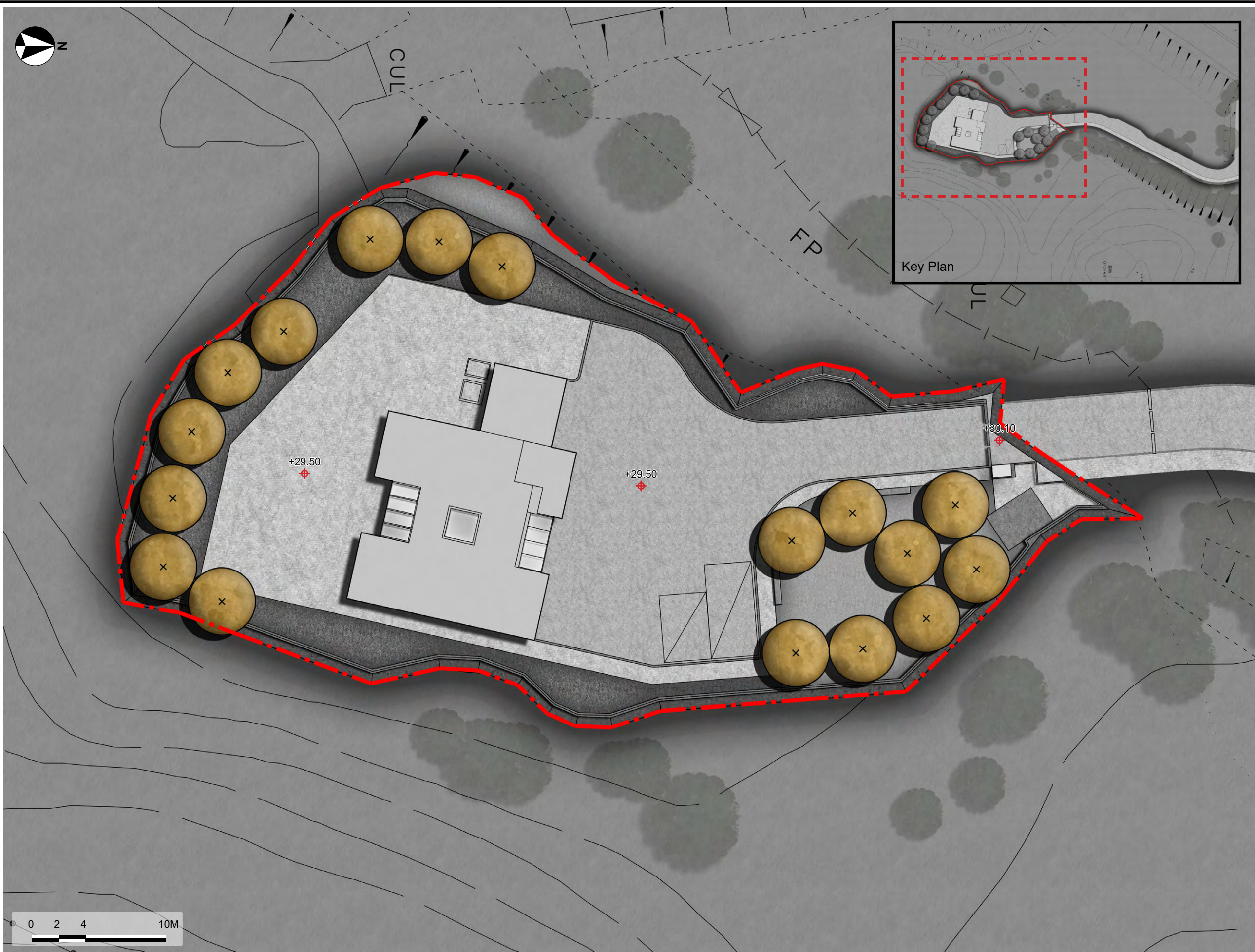
- A Tree retention recommended
- B Felling recommended as tree is directly in conflict with the building and/or site formation works and/or access road works
- C Tree transplanting recommended as tree is affected by the building and/or site formation works
- D Dead tree to be removed
- E Weedy species or tree has unrecoverable defect

Remarks

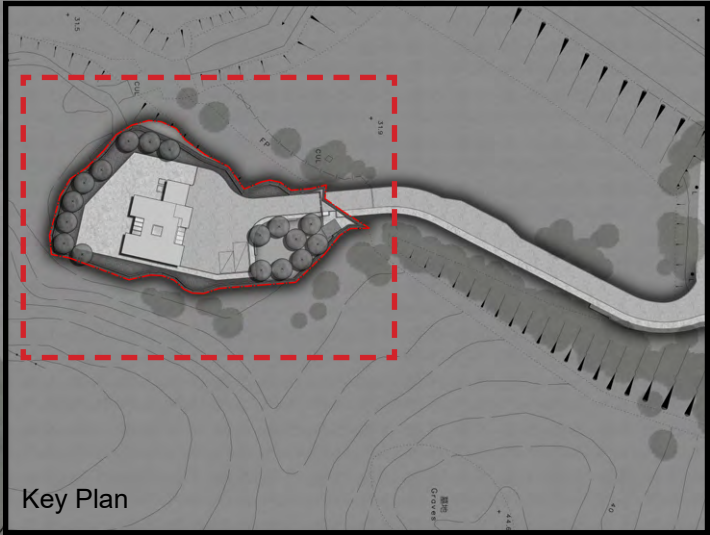
The tree status whether the registered OVT, the TPI, the Precious or rare or endangered species; amenity or ecological value; anticipated root-ball size to be preserved (with Ø. x depth in mm); historical significance and any other on-site conditions, etc. within and/or adjacent to the site is likely to be affected by the proposed developmer
Special characteristics of tree form and health condition, any evidence of broken trunk/ leaning trunk/ trunk decay or water sprouts will be recorded in the remarks of the Tree Survey Schedule.

Appendix V

New Tree Planting Proposal



- Legend
- Application Site Boundary
 - +4.50 Proposed Level
 - New Tree Planting 17 nos.



Proposed House Development at Tuen Mun Town Lot No. 550 (TMTL 550), Tuen Mun, N.T.

New Tree Planting Proposal

SCALE	AS SHOWN	DATE	November 2025
CHECKED	ELK	DRAWN	TEAM
FIGURE NO.	Annex V		REV
			-



ADI LIMITED
LANDSCAPE ARCHITECTURE, URBAN DESIGN AND MASTER PLANNING
雅博奧德國際設計有限公司
園林景觀設計、城市規劃設計、園林建築設計

Annex F

Revised Traffic Impact Assessment

Proposed House Development
At Tuen Mun Town Lot No.550
(TMTL 550), Tuen Mun, N.T.

Traffic Impact Assessment
Final Report
October 2025

Prepared by: CKM Asia Limited

Proposed House Development at Tuen Mun Town Lot No.550
(TMTL 550), Tuen Mun, N.T.

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Proposed House Development at Tuen Mun Town Lot No.550
(TMTL 550), Tuen Mun, N.T.

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Proposed House Development at Tuen Mun Town Lot No.550
(TMTL 550), Tuen Mun, N.T.

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1.0 INTRODUCTION

Background

- 1.1 The Subject Site is located at T.M.T.L. 550 near San Shek Wan Road in Tuen Mun. The Owner has the intention to build one 2-storey house with some 370m² GFA, at the Subject Site (the “Proposed Development”). The location of the Subject Site is shown in Figure 1.1.
- 1.2 Against this background, CKM Asia Limited, a traffic and transportation planning consultancy firm, was commissioned to conduct a Traffic Impact Assessment (“TIA”) in support of the Proposed Development. The report presents the findings of the traffic impact assessment for the Proposed Development.

Scope of the Assessment

- 1.3 The main objectives of this TIA are as follows:
- To assess the existing traffic issues in the vicinity of the Subject Site;
 - To quantify the amount of traffic generated by the Proposed Development; and
 - To examine the traffic impact on the local road network in the vicinity of the Subject Site.

Contents of the Report

- 1.4 After this introduction, the remaining chapters contain the following:

Chapter Two	- describes the existing situation;
Chapter Three	- outlines the development proposal;
Chapter Four	- presents the traffic impact analysis; and
Chapter Five	- summarises the overall conclusion

2.0 THE EXISTING SITUATION

The Subject Site

- 2.1 The Subject Site is located some 100m to the south of San Shek Wan Road. At present, there is no vehicular access connecting San Shek Wan Road and the Subject Site.

Existing Road Network

- 2.2 San Shek Wan Road is a local distributor, and it is of single carriageway 2 lane standard. It connects with Lung Mun Road to the east. The portion of San Shek Wan Road fronting the Subject Site is single track access road which connects with the San Shek Wan San Tsuen to the west.

- 2.3 Lung Mun Road is district distributor and is of dual carriageway 2/3-lane standard. It connects with Tsing Wun Road to the north and Wu Shan Road to the south.

Traffic Survey

- 2.4 To quantify the traffic flows at junctions selected for the capacity analysis, manual classified count was conducted on Tuesday, 13th May 2025 during the AM and PM peak periods. The locations of the surveyed junctions are presented in Figure 2.1 and their layouts are shown in Figures 2.2 to 2.4.

- 2.5 The surveyed junctions include the following:

- J1: Signalised Junction of Lung Mun Road / Light Rail Transit Depot Access;
- J2: Signalised Junction of Lung Mun Road / Tuen Tsing Lane; and
- J3: Signalised Junction of Lung Mun Road / Wu Shan Road

- 2.6 The counts were classified by vehicle type to enable traffic flows in passenger car units ("pcu") to be calculated. From the survey, the AM and PM peak hours were found to be between 0730 – 0830 and 1745 – 1845 hours respectively, and the existing AM and PM peak hour traffic flows are presented in Figure 2.5.

Operational Performance of the Surveyed Junctions

- 2.7 The existing operational performance of the surveyed junctions is calculated based on the observed traffic counts and the analysis is undertaken using the methods outlined in Volume 2 of Transport Planning and Design Manual. The existing operational performance of the junctions are summarised in Table 2.1 and the detailed calculations are found in Appendix 1.

TABLE 2.1 EXISTING JUNCTION OPERATIONAL PERFORMANCE

Ref.	Junction	Type of Junction	Parameter ⁽¹⁾	AM Peak Hour	PM Peak Hour
J1	Lung Mun Road / Light Rail Transit Depot Access	Signalised	RC	> 100%	> 100%
J2	Lung Mun Road / Tuen Tsing Lane	Signalised	RC	62%	75%
J3	Lung Mun Road / Wu Shan Road	Signalised	RC	84%	> 100%

Notes: ⁽¹⁾ RC – reserve capacity

Public Transport Facilities

- 2.8 The Subject Site is served by various public transport services, including Light Rail Transit ("LRT"), franchised bus and green minibus ("GMB") which is some

600 metres or around 10 minutes' walk away. Details of the public transport services operating in the vicinity of the Subject Site are presented in Figure 2.6 and Table 2.2.

TABLE 2.2 FRANCHISED BUS AND GMB SERVICES OPERATING CLOSE TO THE SUBJECT SITE

Route	Routing	Frequency (minutes)
KMB 259B	Tuen Mun Pier Head – Tsim Sha Tsui	AM Peak
KMB 259C	Sun Tuen Mun Centre – Tsim Sha Tsui	AM Peak
KMB 259D	Tuen Mun (Lung Mun Oasis) – Lei Yue Mun Estate	7 – 25
KMB 259E	Tuen Mun (Lung Mun Oasis) – Tsuen Wan Station	AM Peak
KMB 259X	Tuen Mun (Lung Mun Oasis) – Kwun Tong Ferry	AM, PM Peak
KMB 59A ⁽¹⁾	Tuen Mun Pier Head – Kwai Fong (Kwai Tsui Estate)	6 – 60
KMB 59M	Tuen Mun Pier Head – Tsuen Wan Station	6 – 20
KMB 59X	Tuen Mun Pier Head – Mong Kok East Station	3 – 15
KMB N260	Tuen Mun Pier Head – Mei Foo	Overnight
CTB 962	Tuen Mun (Lung Mun Oasis) – Causeway Bay (Moreton Terrace)	AM, PM Peak
CTB 962C ⁽¹⁾	Tuen Mun (Lung Mun Oasis) – Tai Koo (Kornhill Plaza)	AM, PM Peak
CTB 962G ⁽¹⁾	Admiralty (West) → Tuen Mun (Wu King Road)	PM Peak
CTB 962P	Lung Mun Oasis → Causeway Bay (Moreton Terrace)	AM Peak
CTB 962X	Lung Mun Oasis – Causeway Bay (Moreton Terrace)	11 – 25
CTB B3	Tuen Mun Ferry Pier – Shenzhen Bay Port	15 – 30
CTB N962	Tuen Mun (Lung Mun Oasis) – Causeway Bay (Moreton Terrace)	Overnight
CTB X962 ⁽¹⁾	Admiralty (West) → Tuen Mun (Lung Mun Oasis)	PM Peak
LWB A33	Tuen Mun Road Interchange – Airport (Ground Transportation Centre)	20 – 60
LWB A34	Hung Shui Kiu (Hung Yuen Road) – Airport (Ground Transportation Centre)	20 – 60
LWB E33	Tuen Mun Central – Airport (Ground Transportation Centre)	6 – 25
LWB E33P	Siu Hong Station (South) – Airport (Ground Transportation Centre)	12 – 45
LWB E36C	Yuen Long (Tak Yip Street) to Aircraft Maintenance Area	AM, PM Peak
LWB R33	Tuen Mun Station – Disneyland	AM, PM Peak
LWB NA33	Tuen Mun (Fu Tai Estate) – Cathay Pacific City	Overnight
MTRB 506	Tuen Mun Ferry Pier – Siu Lun	4 – 10
MTRB K52	Tuen Mun Station – Lung Kwu Tan	9 – 20
MTRB K52A	Tuen Mun Station – Tsang Tsui	20 – 60
MTRB K52P	Lung Kwu Tan – Tuen Mun Station	AM Peak
GMB 41	Tuen Mun Town Centre (Tuen Fat Road) – Lung Mun Oasis	10 – 20
GMB 44	Tuen Mun Ferry Pier (Public Light Bus (Scheduled Services) Terminus on Wu Shan Road – Sheung Shui Station	2 – 8
GMB 44B1	Lok Ma Chau (San Tin) Public Transport Interchange – Tuen Mun Ferry Pier (Public Light Bus Terminus on Wu Shan Road)	15 – 20
GMB 47S	Tuen Mun Pier-Head – Mong Kok	15 – 20
GMB 48S	Leung King Estate – Mong Kok	15 – 20
GMB N44B	Lok Ma Chau Control Point – Tuen Mun Ferry Pier (Public Light Bus Terminus on Wu Shan Road)	Overnight

Note: KMB – Kowloon Motor Bus

CTB – City Bus

LWB – Long Win Bus

MTRB – MTR Bus

GMB – Green Minibus

⁽¹⁾ Mondays – Fridays only

⁽²⁾ Sunday and Public Holiday

Pedestrian Survey

- 2.11 To quantify the existing pedestrian flows using the footpaths presented in Figure 2.7, pedestrian counts were conducted during the AM and PM peak periods on Tuesday, 13th May 2025. The existing peak 15-minute two-way pedestrian flows are presented in Figure 2.8.

Level-of-Service

- 2.12 The level-of-service (LOS) of a pedestrian facility is dependent on its width and the number of pedestrians using the facility. Description of the LOS is obtained from the Transport Planning and Design Manual, and is given in Table 2.3.

TABLE 2.3 DESCRIPTION OF PEDESTRIAN FACILITY LOS

LOS	Maximum Pedestrian Flow Rate - ped/min/m	Description
A	< = 16	Pedestrians basically move in desired paths without altering their movements in response to other pedestrians. Walking speeds are freely selected and conflicts between pedestrians are unlikely.
B	> 16 - 23	Sufficient space is provided for pedestrians to freely select walking speeds, to bypass other pedestrians and to avoid crossing conflicts with others. At this level, pedestrians begin to be aware of other pedestrians and to respond to their presence in the selection of walking paths.
C	> 23 – 33	Sufficient space is available to select normal walking speeds and to bypass other pedestrians primarily in unidirectional streams. Where reverse directions or crossing movements exist, minor conflicts will occur, and speed and volume will be somewhat lower.
D	> 33 - 49	Freedom to select individual walking speed and bypass other pedestrians is restricted. Where crossing or reverse-flow movements exist, the probability of conflict is high and its avoidance requires frequent changes in speed and position. The LOS provides reasonably fluid flow; however considerable friction and interaction between pedestrians is likely to occur.
E	> 49 – 75	Virtually, all pedestrians would have their normal walking speed restricted. At the lower range of this LOS, forward movement is possible only by shuffling. Space is insufficient to pass over slower pedestrians. Cross- or reverse-flow movements are possible only with extreme difficulties. Design volumes approach the limit of walkway capacity with resulting stoppages and interruptions to flow.
F	> 75	Walking speeds are severely restricted. Forward progress is made only by "shuffling". There is frequent and unavoidable contact with other pedestrians. Cross- and reverse-flow movements are virtually impossible. Flow is sporadic and unstable. Space is more characteristic of queued pedestrians than of moving pedestrian streams.

Source: Transport Planning & Design Manual Volume 6, Transport Department

- 2.13 The effective width of the Proposed Footpath is presented in Table 2.4.

TABLE 2.4 EFFECTIVE WIDTH OF THE SURVEYED FOOTPATHS

Ref.	Location		Footpath Width (m)	Effective Width (m)
1	San Shek Wan Road between Subject Site and Lung Mun Road	Southern footpath	1.6	0.6
2	Lung Mun Road between San Shek Wan and Light Rail Station - Light Rail Depot	Western footpath	3.0	2.0

- 2.14 The existing LOS at the surveyed footpath is presented in Table 2.5.

TABLE 2.5 EXISTING LOS AT THE SURVEYED FOOTPATHS

Ref.	Location		Peak Period	Existing Condition		
				Ped / 15min	Ped / min/m	LOS
1	San Shek Wan Road between Subject Site and Lung Mun Road	Southern footpath	AM	8	0.9	A
			PM	6	0.7	A
2	Lung Mun Road between San Shek Wan and Light Rail Station - Light Rail Depot	Western footpath	AM	34	1.1	A
			PM	37	1.2	A

3.0 THE PROPOSED DEVELOPMENT

Proposed Development

- 3.1 The car parking spaces provided for the Proposed Development, which is one 2-storey house with some 370m² GFA, comply with the maximum recommendation of the Hong Kong Planning Standards and Guidelines (“HKPSG”).
- 3.2 The calculation on the provision of internal transport facilities is found in Table 3.1, and the layout of the car park is found in Figure 3.1.

TABLE 3.1 PROVISION OF INTERNAL TRANSPORT FACILITIES FOR THE PROPOSED DEVELOPMENT

Use	HKPSG Recommendation	Proposed Provision
Car Parking Space		
Residential (I)	Number of space = $GPS \times R1 \times R2 \times R3$, where: Global Parking Standard (GPS) = 1 space per 4 – 7 flats $R1 = 7$ for flat size of > 160m² $R2 = 0.75$ for development within 500m of rail station $R3 = 1.3$ for domestic plot ratio (PR) ≤ 1 <u>Minimum</u> $= (1 \div 7 \times 7 \times 0.75 \times 1.3) = 0.98$, say <u>1 no.</u> <u>Maximum</u> $= (1 \div 4 \times 7 \times 0.75 \times 1.3) = 1.71$, say <u>2 nos.</u>	2 @ 5m (L) x 2.5m (W) x 2.4m (H); and 1 @ 5m (L) x 3.5m (W) x 2.4m (H) for persons with disabilities = 3 nos. = <u>maximum HKPSG, OK</u>
Visitor (II)	For private residential developments with 75 units or less per block, the visitor car parking provision will be determined by Transport Department on a case-by-case basis. <u>1 no. visitor car parking spaces are provided</u>	
Total (I) + (II)	Minimum = 1 + 1 = <u>2 nos.</u> Maximum = 2 + 1 = <u>3 nos.</u>	
Motorcycle Parking Space		
Residential	1 motorcycle parking space per 100 – 150 flats, <u>NA</u>	<u>NA</u>
Loading / Unloading Bay		
Residential	Minimum of 1 loading / unloading bay for goods vehicles within the site for every 800 flats or part thereof, subject to a minimum of 1 bay for each housing block or as determined by the Authority.	1 LGV loading / unloading bay @ 7.0m (L) x 3.5m (W) x 3.6m (H) (Note: Since vehicles exceeding 10m in length are prohibited from entering San Shek Wan Road, a LGV loading / unloading bay will be provided.)

Proposed Access Road

3.3 As part of the development, an access road connecting San Shek Wan Road and the Proposed Development will be provided (the "Proposed Access Road"). The existing passing at San Shek Wan Road, where the Proposed Access Road is to be provided, is shifted some 20m to the west. The Proposed Access Road and the new location of the passing bay at San Shek Wan Road are found in Figure 3.2.

3.4 The key design features of the Proposed Access Road are:

- i) Minimum road width is 4.5m;
- ii) 12m-long passing bay at midway of the straight section of Proposed Access Road (the "passing bay of Proposed Access Road");
- iii) 50m sight distance at the passing bay of the Proposed Access Road which is found in Figure 3.3;
- iv) One footpath along the eastern side with minimum width of 1.6m (the "Proposed Footpath");
- v) Road gradient of some 2%, which fulfils the Transport Planning and Design Manual maximum desirable gradient of 16% for small and light vehicles.

Swept Path Analysis

3.5 The CAD-based swept path analysis program, Autodesk Vehicle Tracking, was used to check the ease of vehicle manoeuvring within the Proposed Development and no manoeuvring issue is found. The swept path analysis drawings for critical movements are found in Appendix 2.

4.0 TRAFFIC IMPACT

Design Year

- 4.1 The Proposed Development is expected to be completed by 2031, and the design year adopted for the capacity analysis is 2034, i.e. 3 years after the completion of the Proposed Development.

Traffic Forecasting

- 4.2 The 2034 traffic flows used for the junction analysis are produced with reference to the following:
- (i) 2031 traffic flows derived with reference to Base District Traffic Model ("BDTM");
 - (ii) estimated traffic growth from 2031 to 2034 based on the higher of: (a) 2021 – based Territorial Population and Employment Data Matrix ("TPEDM") data produced by Planning Department, (b) Hong Kong Population Projections 2022 – 2046, published by Census and Statistics Department, or (c) historic Annual Average Daily Traffic ("AADT") produced by Transport Department;
 - (iii) the other developments in the vicinity of the Proposed Development; and
 - (iv) Traffic generated by the Proposed Development.
- 4.3 The (ii) estimated traffic growth from 2031 to 2034, (iii) the other development in the vicinity of the Proposed Development, and (iv) traffic generated by the Proposed Development are presented in the paragraphs below.

Estimated Traffic Growth Rate from 2031 to 2034

- 4.4 The (a) 2021 – based TPEDM data for Tuen Mun District, and the (b) Hong Kong Population Projections 2022 – 2046, and (c) historic AADT are summarised in Tables 4.1 – 4.3 respectively.

TABLE 4.1 2021-BASED TPEDM DATA FOR TUEN MUN DISTRICT

Item	TPEDM Estimation / Projection			Annual Growth Rate		
	2021	2026	2031	2021 to 2026	2026 to 2031	2021 to 2031
Population	506,900	557,650	586,200	1.93%	1.00%	1.46%
Employment	133,400	132,450	152,650	-0.14%	2.88%	1.36%

TABLE 4.2 HONG KONG POPULATION PROJECTIONS 2022 – 2046

Whole Territory Population		Annual Growth Rate
Year 2031	Year 2034	2031 to 2034
7,820,200	7,945,100	0.53%

TABLE 4.3 AADT OF THE STATION IN THE VICINITY OF THE SUBJECT SITE

Station	5640	5654	5839	6633	Overall
Road	Lung Mun Road	Wu Shan Road	Lung Mun Road	Wu Chui Road	
From	Wu Shan Road	Lung Mun Road	Wong Chu Road	Lung Mun Road	
To	Wu Chui Road	Wu King Road	Wu Shan Road	Wu Shan Road	
2011	12,420	6,410	17,210	8,580	44,620
2012	12,340	6,370	14,530	8,480	41,720
2013	12,440	6,420	14,650	8,060	41,570
2014	12,310	6,350	14,500	7,350	40,510
2015	12,410	6,350	14,380	8,190	41,330

2016	12,090	6,860	17,860	8,340	45,150
2017	11,900	6,750	18,360	8,100	45,110
2018	12,190	6,920	18,810	8,540	46,460
2019	12,100	6,870	18,670	8,710	46,350
2020	12,230	7,100	17,900	7,130	44,360
2021	12,990	7,610	18,940	7,670	47,210
2022	12,600	7,380	19,530	8,190	47,700
2023	12,890	7,550	14,449	9,280	49,710
Average Annual Growth					0.90%

- 4.5 Table 4.1 shows that the highest annual growth rate for population is +1.93% and for employment is +2.88%. Table 4.2 shows that the annual growth rate from 2031 to 2034 is +0.53%. Table 4.3 shows that in the historic AADT of the stations between 2011 and 2023 in the vicinity has average annual growth rate of 0.90% per annum. To be conservative, the growth rate of +2.88% per annum is adopted for the traffic growth between 2031 and 2034.

Other developments in the vicinity of the Proposed Development

- 4.6 The planned development included in the 2034 reference traffic flows are presented in Table 4.4.

TABLE 4.4 PLANNED DEVELOPMENT IN THE VICINITY OF THE PROPOSED DEVELOPMENT

Site	Planning Application No.	Address	Use
1	A/TM/565	Government Land in D.D. 138 and D.D. 300, Tuen Mun	Proposed Bus Depots with Ancillary Public Utility Installation (Electricity Substation)

- 4.7 In addition, the infrastructure and road network considered in the traffic model include the following:

- Wu Shan Road Public Housing Development
- New Lung Fu Road slip road northbound
- New Lung Fu Road slip road southbound
- New slip road from Tuen Mun Road northbound to Hoi Wing Road westbound
- New Tuen Mun Swimming Pool

Traffic Generated by the Proposed Development

- 4.8 Traffic generation associated with the Proposed Development is calculated based on the trip rates from the Transport Planning and Design Manual published by Transport Department and is presented in Table 4.5.

TABLE 4.5 TRAFFIC GENERATION OF THE PROPOSED DEVELOPMENT

Item	AM Peak Hour			PM Peak Hour		
	In	Out	2-way	In	Out	2-way
Trip Generation Rates for residential use (pcu/hour/flat) ⁽¹⁾						
Private Housing: low-density / R(C) with an average flat size of 300m ²	0.2609	0.3252	NA	0.4074	0.2835	NA
Traffic Generation of Proposed Development (pcu/hour)						
Residential Use: 1 house [a]	1	1	2	1	1	2

Note: ⁽¹⁾ Mean rates taken from the Transport Planning and Design Manual.

- 4.9 Table 4.5 shows that the Proposed Development is expected to generate only 2 pcu/hour (2-way) during both the AM and PM peak hours.

2034 Traffic Flows

- 4.10 Year 2034 traffic flows for the following cases are derived:

2034 without the Proposed Development [A] = (i) 2031 traffic flows derived with reference to BDTM + (ii) estimated total growth from 2031 to 2034 + (iii) Other developments in the vicinity of the Proposed Development

2034 with the Proposed Development [B] = [A] + (iv) Traffic generated by the Proposed Development (Table 4.5)

- 4.11 The 2034 peak hour traffic flows for the cases without and with the Proposed Development, are shown in Figures 4.1 – 4.2, respectively.

2034 Junction Operational Performance

- 4.12 Year 2034 capacity analysis for the cases without and with the Proposed Development are summarised in Table 4.6 and detailed calculations are found in the Appendix 1.

TABLE 4.6 2034 JUNCTION OPERATIONAL PERFORMANCE

Ref.	Junction	Type of Junction / Parameter ⁽¹⁾	Year 2034 without the Proposed Development		Year 2034 with the Proposed Development	
			AM Peak	PM Peak	AM Peak	PM Peak
J1	Lung Mun Road / Light Rail Transit Depot Access	Signal / RC	> 100%	> 100%	> 100%	> 100%
J2	Lung Mun Road / Tuen Tsing Lane	Signal / RC	43%	65%	43%	65%
J3	Lung Mun Road / Wu Shan Road	Signal / RC	69%	93%	69%	93%

Notes: ⁽¹⁾ RC – reserve capacity

- 4.13 Table 4.6 shows that the junctions operate with capacities during the AM and PM peak hours for the cases without and with the Proposed Development.

5.0 PEDESTRIAN ASSESSMENT

Estimation of Future Pedestrian Flows

- 5.1 The year 2034 pedestrian flow is estimated based on the following:
- (i) 2025 Existing pedestrian flows in Figure 2.8;
 - (ii) Estimated annual pedestrian growth rates from 2025 to 2034; and
 - (iii) Pedestrians generated by the Proposed Development.

Estimated Annual Pedestrian Growth Rates from 2025 to 2034

- 5.2 The 2034 reference pedestrian flow is estimated based on the 2025 observed pedestrian flows and the annual pedestrian growth rate from 2025 to 2034. The pedestrian growth rate from 2025 to 2034 is assumed to be +2.88% per annum which is taken from Table 4.1.

Pedestrian Generated by the Proposed Development

- 5.3 As stated in the planning statement, the Proposed Development, which is one 2-storey house with some 370m² GFA, is expected to have a design population of 3. However, to be conservative, it is assumed that all residents will leave and enter within 15 minutes, a generation of 3 ped/15min (2-way) during the AM and PM peak periods.

2034 Pedestrian Flows

- 5.4 The 2034 pedestrian flows without and with the Proposed Development are derived using the following method:

2034 without the Proposed Development [A] = (i) 2025 existing pedestrian flows + (ii) estimated annual pedestrian growth rates from 2025 to 2034

2034 with the Proposed Development [B] = [A] + (iii) pedestrian generated by the Proposed Development

- 5.5 The 2034 pedestrian flows without and with the Proposed Development are presented in Figures 5.3 and 5.4.

- 5.6 The effective width of the Proposed Footpath is presented in Table 5.1.

TABLE 5.1 EFFECTIVE WIDTH OF THE PROPOSED FOOTPATH

Ref.	Location		Footpath Width (m)	Effective Width (m)
3	The Proposed Footpath	Eastern footpath	1.6	0.6

- 5.7 The 2034 weekday LOS at the surveyed footpaths for the cases without and with the Proposed Development is presented in Table 5.2.

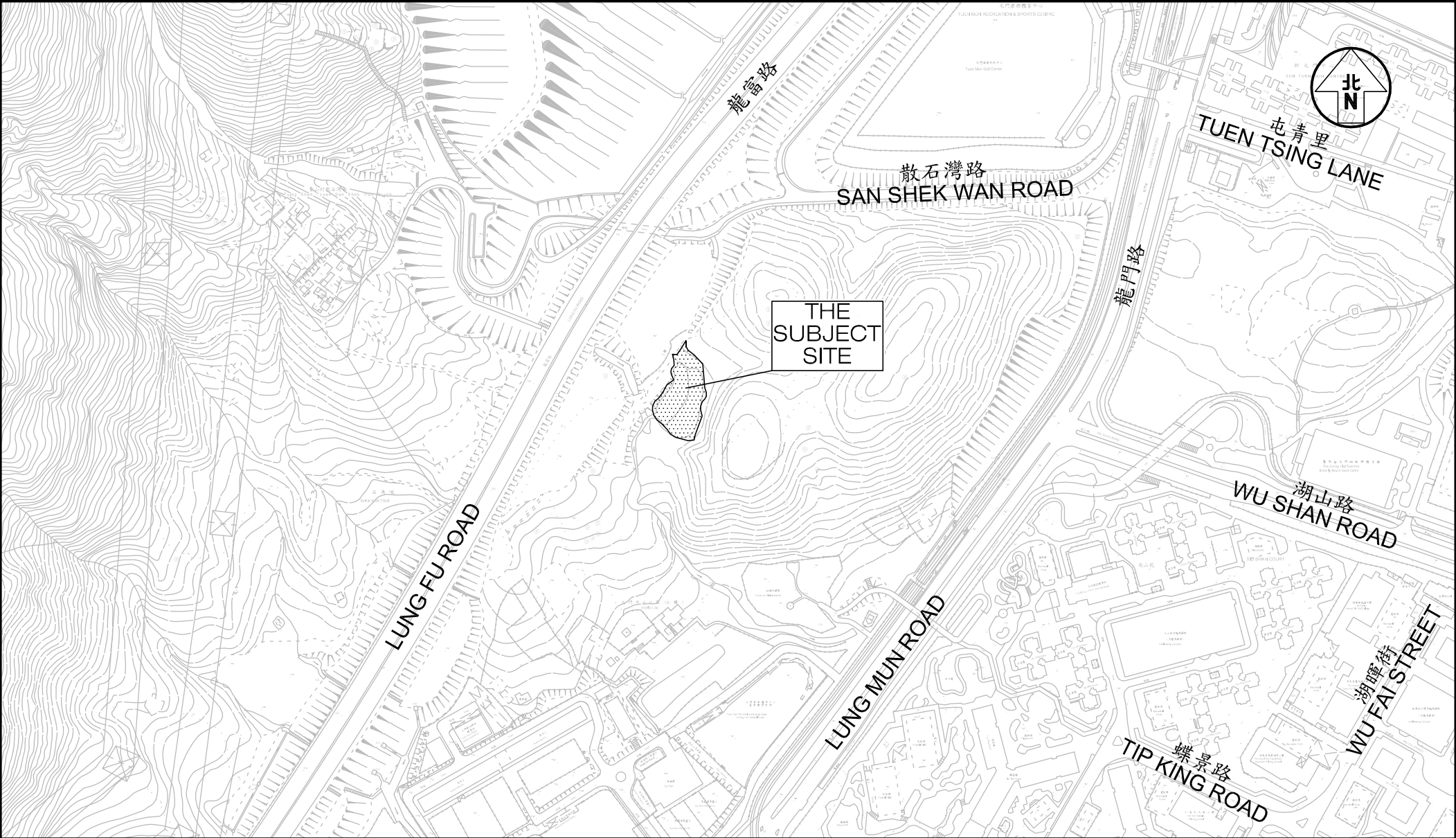
TABLE 5.2 2034 LOS WITHOUT AND WITH THE PROPOSED DEVELOPMENT

Ref.	Location		Peak Period	Year 2034 without the Proposed Development			Year 2034 with the Proposed Development		
				Ped / 15min	Ped / min/m	LOS	Ped / 15min	Ped / min/m	LOS
1	San Shek Wan Road between Subject Site and Lung Mun Road	Southern footpath	AM	11	1.2	A	14	1.6	A
			PM	8	0.9	A	11	1.2	A
2	Lung Mun Road between San Shek Wan and Light Rail Station - Light Rail Depot	Western footpath	AM	44	1.5	A	47	1.6	A
			PM	48	1.6	A	51	1.7	A
3	The Proposed Footpath	Eastern footpath	AM	N/A			3	0.3	A
			PM	N/A			3	0.3	A

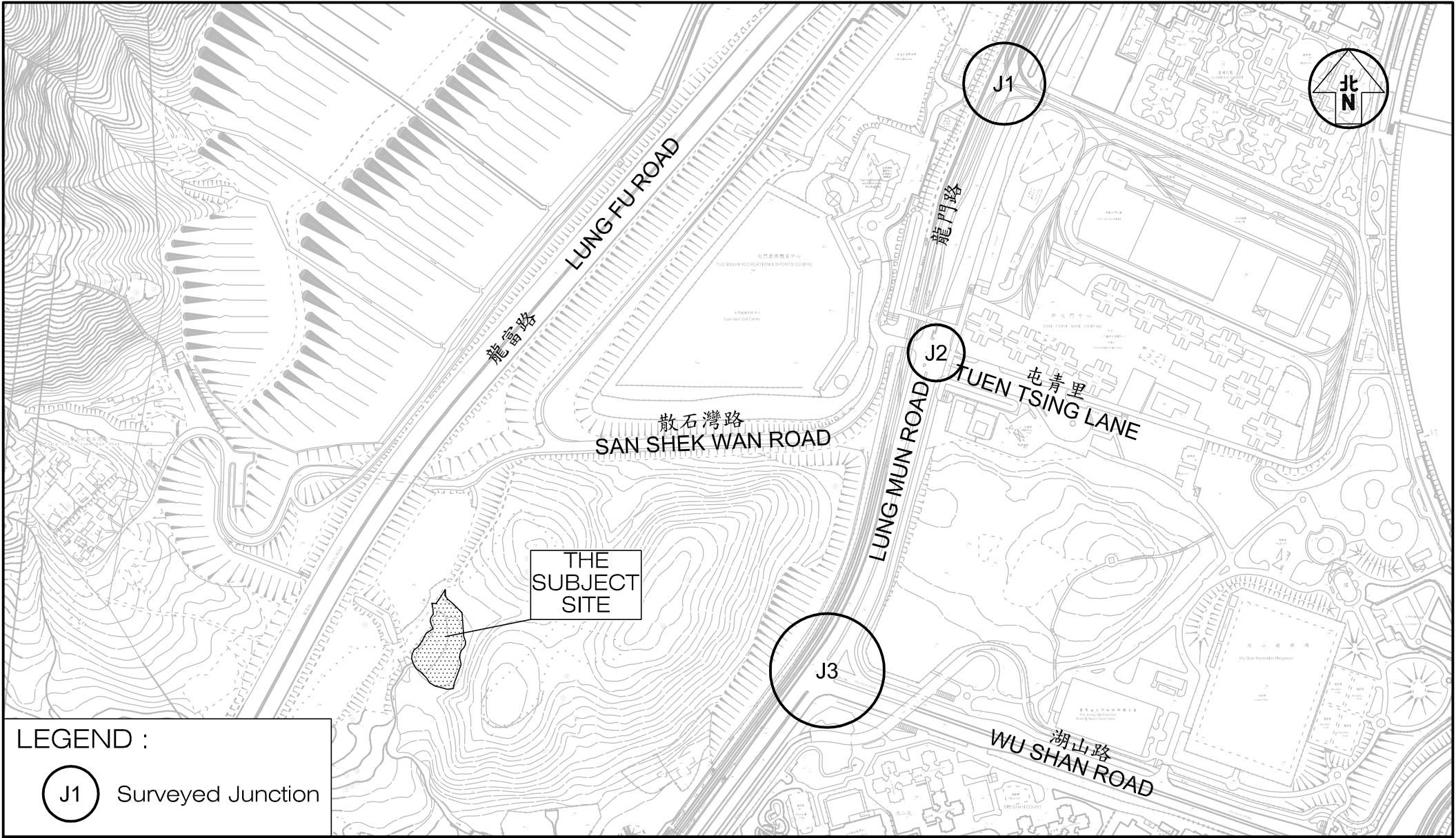
- 5.8 Table 5.4 shows that all surveyed footpaths operate with LOS A for the case without and with the Proposed Development. Hence, it can be concluded that the Proposed Development will result in no impact to the footpaths assessed.

6.0 CONCLUSION

- 6.1 The Subject Site is located at T.M.T.L 550 near San Shek Wan Road in Tuen Mun. The Owner has the intention to build one 2-storey house with some 370m² GFA, at the Subject Site.
- 6.2 Manual classified counts were conducted at surveyed junctions located in the vicinity of the Proposed Development in order to establish the peak hour traffic flows. Currently, these junctions operate with capacities during the AM and PM peak hours.
- 6.3 The car parking spaces provided for the Proposed Development comply with the maximum recommendation of the HKPSG. Since the vehicles over 10m in length are prohibited from entering San Shek Wan Road, LGV loading / unloading bay will be provided.
- 6.4 The Proposed Access Road connects San Shek Wan Road with the Proposed Development. To provide the Proposed Access Road, the existing passing bay at San Shek Wan Road is shifted some 20m to the west.
- 6.5 The Proposed Development is expected to be completed by 2031, and the junction capacity analysis is undertaken for year 2034. For the design year 2034, the junctions analysed are expected to operate with capacities during the peak hours for the case without and with the Proposed Development.
- 6.6 The pedestrian assessment conducted found that the surveyed footpaths would operate with LOS A in 2034 for the case without and with the Proposed Development, and the Proposed Development has no adverse impact to the footpaths assessed.
- 6.7 It is concluded that the Proposed Development will result in no adverse traffic impact to the surrounding road network. From traffic engineering grounds, the Proposed Development is acceptable.



Project Title	PROPOSED HOUSE DEVELOPMENT AT TUEN MUN TOWN LOT NO.550 (TMTL 550), TUEN MUN, N.T.			Figure No.	1.1	Revision	B
Figure Title	LOCATION OF SUBJECT SITE			Designed by	C Y Y	Drawn by	N C M
				Checked by	K C	CKM Asia Limited Traffic and Transportation Planning Consultants	
				Scale in A4	1 : 4,000	Date	24 OCT 2025



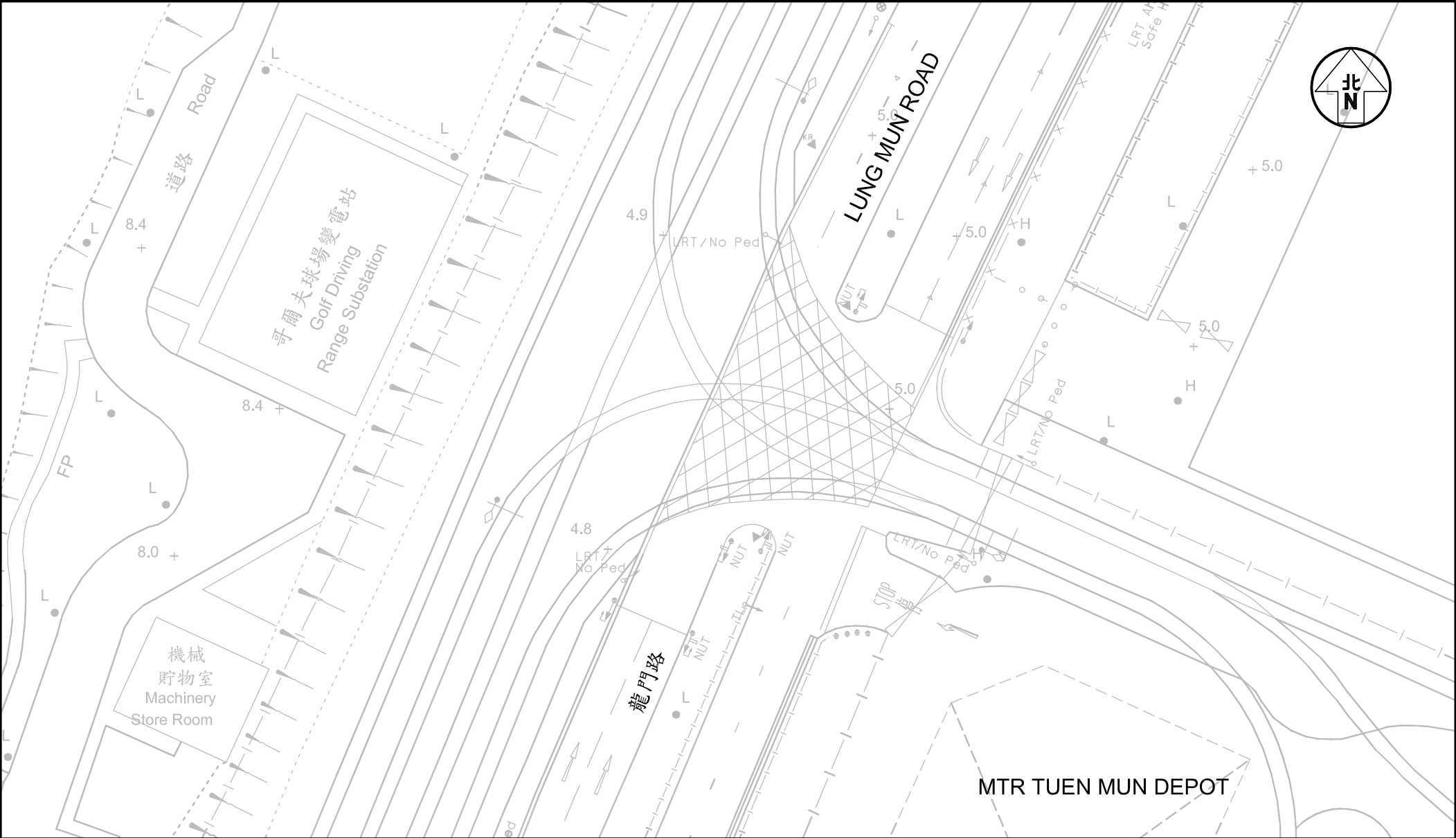
LEGEND :

J1

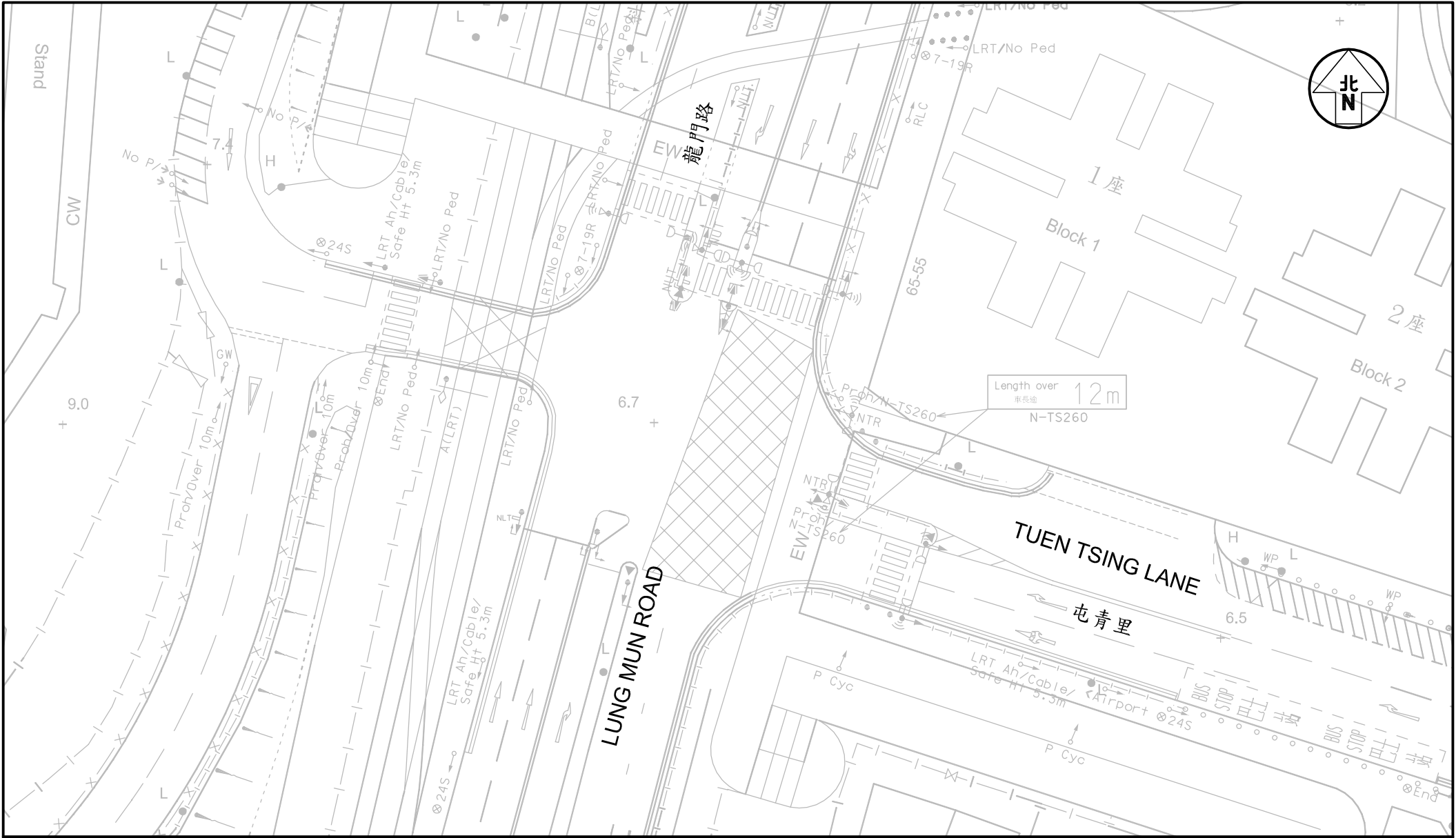
 Surveyed Junction

Project Title	PROPOSED HOUSE DEVELOPMENT AT TUEN MUN TOWN LOT NO.550 (TMTL 550), TUEN MUN, N.T.			Figure No.	2.1	Revision	B	CKM Asia Limited Traffic and Transportation Planning Consultants
Figure Title	LOCATION OF SURVEYED JUNCTIONS			Designed by	C Y Y	Drawn by	N C M	
			Scale in A4	1 : 4,000		Date	24 OCT 2025	

T:\JOB\J7400-J7449\J7406\2025 10\Fig 2.1 RevB.dwg

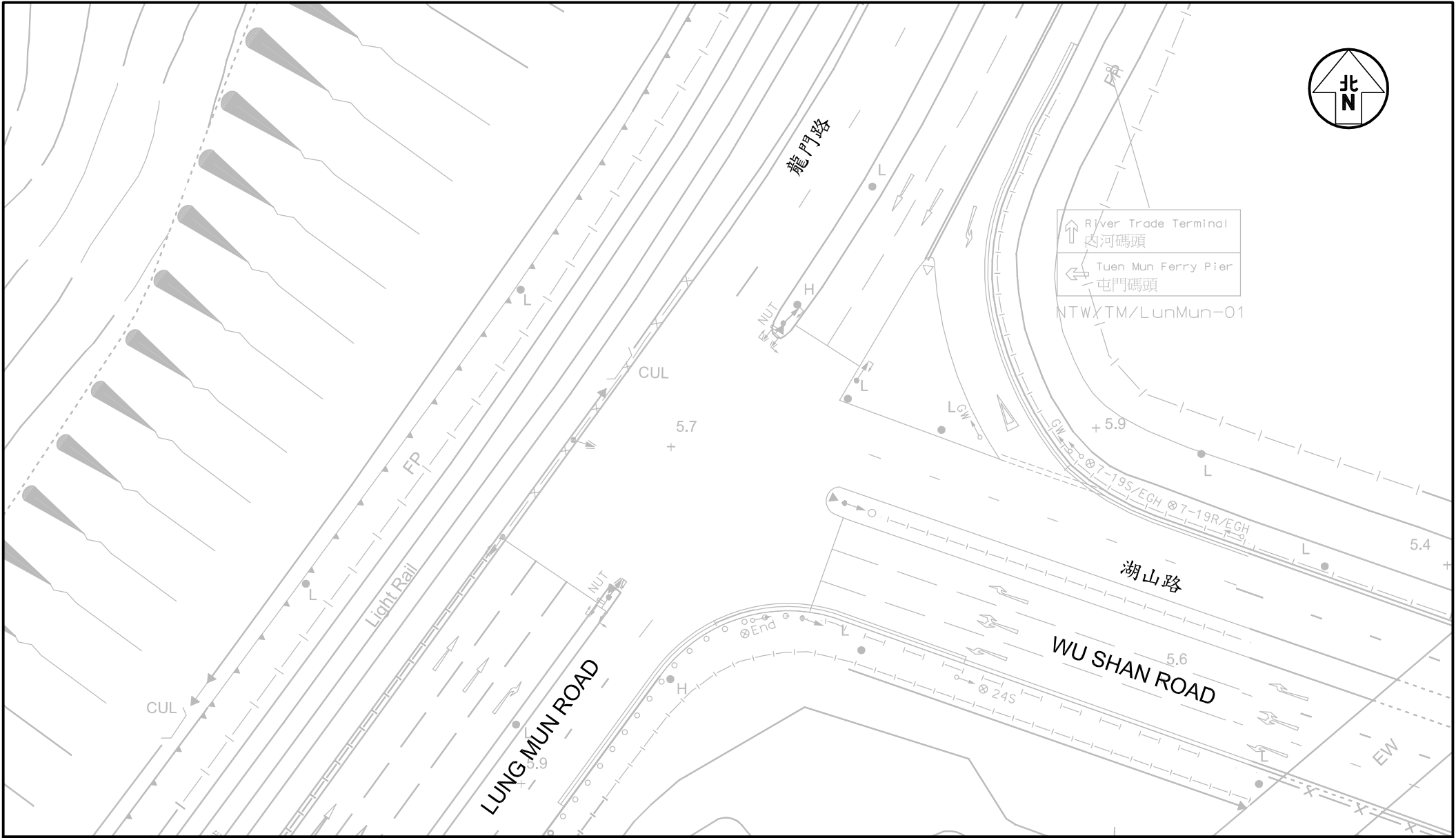


Project Title		PROPOSED HOUSE DEVELOPMENT AT TUEN MUN TOWN LOT NO.550 (TMTL 550), TUEN MUN, N.T.				Figure No.		Revision		CKM Asia Limited Traffic and Transportation Planning Consultants			
Figure Title		J7406				2.2		B					
						Designed by		Drawn by				Checked by	
						C Y Y		N C M				K C	
LAYOUT OF JUNCTION OF LUNG MUN ROAD / LIGHT RAIL TRANSIT DEPOT ACCESS						Scale in A4		Date					
						1 : 500		24 OCT 2025					



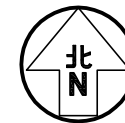
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Figure Title		LAYOUT OF JUNCTION OF LUNG MUN ROAD / TUEN TSING LANE				Designed by C Y Y		Drawn by N C M		Checked by K C	
						Scale in A4 1 : 500		Date 24 OCT 2025		Traffic and Transportation Planning Consultants	

T:\JOB\J7400-J7449\J7406\2025 10\Fig 2.2 - 2.4 RevB.dwg



Project Title		PROPOSED HOUSE DEVELOPMENT AT TUEN MUN TOWN LOT NO.550 (TMTL 550), TUEN MUN, N.T.			J7406		Figure No. 2.4		Revision B		CKM Asia Limited			
Figure Title		LAYOUT OF JUNCTION OF LUNG MUN ROAD / WU SHAN ROAD					Designed by C Y Y		Drawn by N C M		Checked by K C		Traffic and Transportation Planning Consultants	
							Scale in A4 1 : 500		Date 24 OCT 2025					

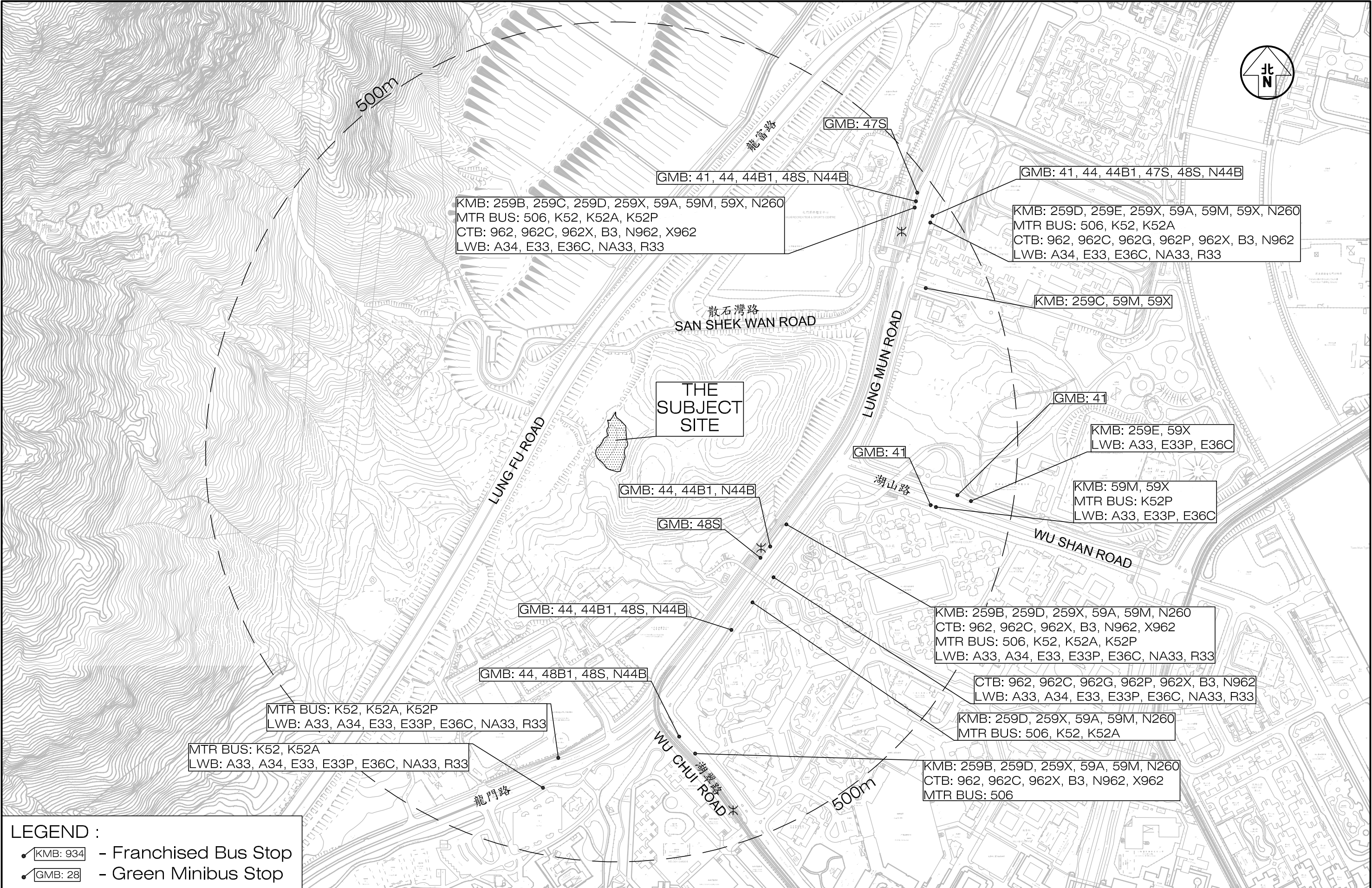
T:\JOB\J7400-J7449\J7406\2025 10\Fig 2.2 - 2.4 RevB.dwg



LEGEND :

123 - AM peak hour traffic flow, pcu / hr
(456) - PM peak hour traffic flow, pcu / hr

Project Title PROPOSED HOUSE DEVELOPMENT AT TUEN MUN TOWN LOT NO.550 (TMTL 550), TUEN MUN, N.T.		Figure No. 2.5		Revision B	CKM Asia Limited Traffic and Transportation Planning Consultants
Figure Title EXISTING PEAK HOUR TRAFFIC FLOWS		Designed by C Y Y	Drawn by N C M	Checked by K C	
		Scale in A4 N.T.S.		Date 24 OCT 2025	



LEGEND :

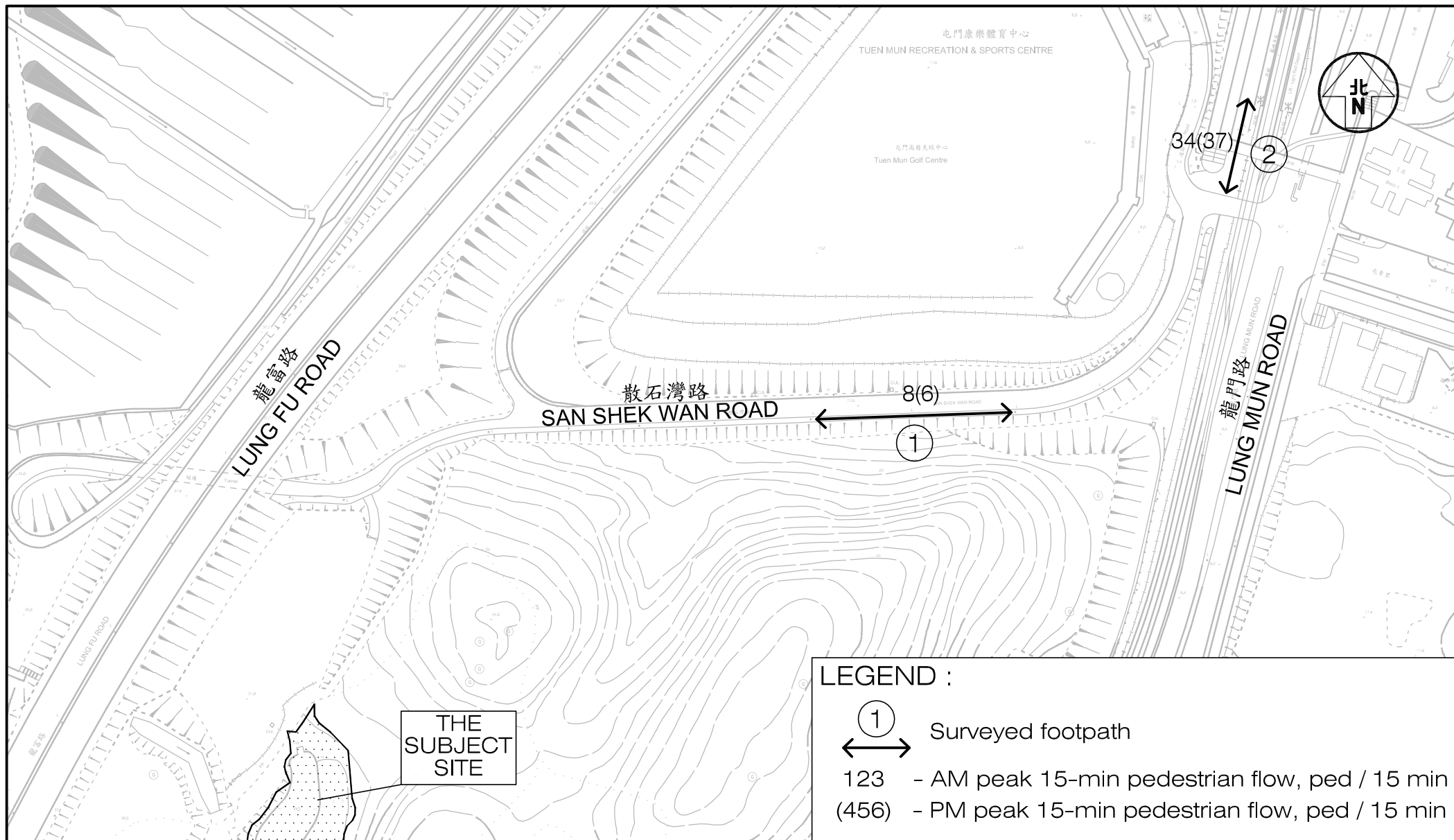
- [KMB: 934] - Franchised Bus Stop
- [GMB: 28] - Green Minibus Stop

Project Title		PROPOSED HOUSE DEVELOPMENT AT TUEN MUN TOWN LOT NO.550 (TMTL 550), TUEN MUN, N.T.				Figure No.		Revision		CKM Asia Limited Traffic and Transportation Planning Consultants	
		J7406				2.6		B			
Figure Title		THE PUBLIC TRANSPORT SERVICES PROVIDED IN THE VICINITY OF THE SUBJECT SITE				Designed by		Drawn by			
						L C H		N C M		K C	
						Scale in A3		Date			
						1 : 5000		24 OCT 2025			

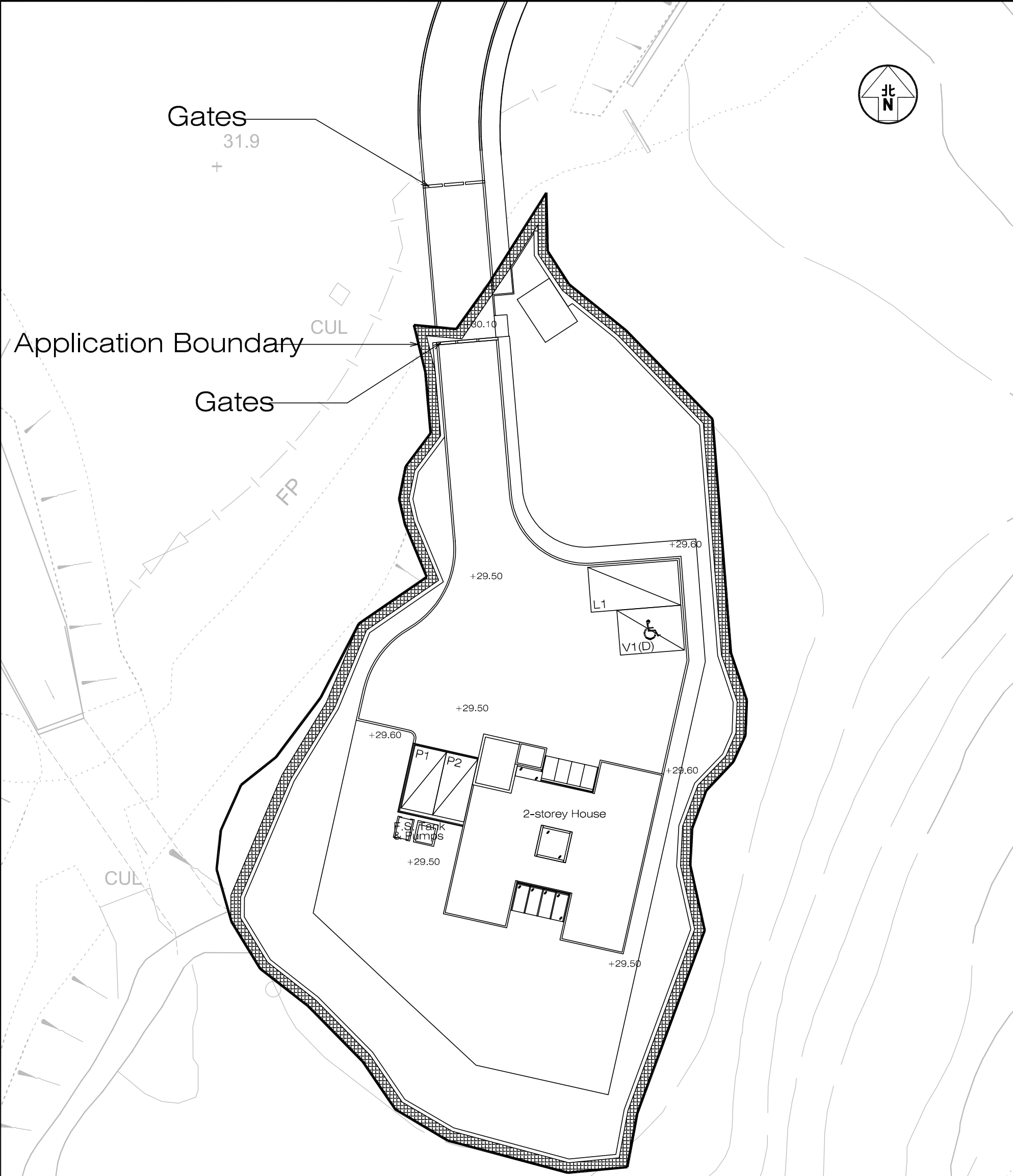
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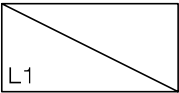
Project Title			PROPOSED HOUSE DEVELOPMENT AT TUEN MUN TOWN LOT NO.550 (TMTL 550), TUEN MUN, N.T.			Figure No.		Revision		CKM Asia Limited Traffic and Transportation Planning Consultants 	
			J7406			2.7		B			
Figure Title			LOCATION OF THE SURVEYED FOOTPATHS			Designed by		Drawn by			Checked by
						C Y Y		N C M			K C
						Scale in A4		Date			
						1 : 2000		24 OCT 2025			



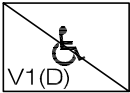
Project Title PROPOSED HOUSE DEVELOPMENT AT TUEN MUN TOWN LOT NO.550 (TMTL 550), TUEN MUN, N.T.	Figure No. 2.8	Revision B
Figure Title EXISTING PEDESTRIAN FLOWS	Designed by C Y Y	Drawn by N C M
	Scale in A4 1 : 2000	Checked by K C
	Date 24 OCT 2025	CKM Asia Limited Traffic and Transportation Planning Consultants



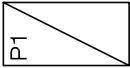
LEGEND :



LGV loading / unloading bay
@7m(L) X 3.5m(W) X 3.6m(H)



Accessible car parking space
@5m(L) X 3.5m(W) X 2.4m(H)



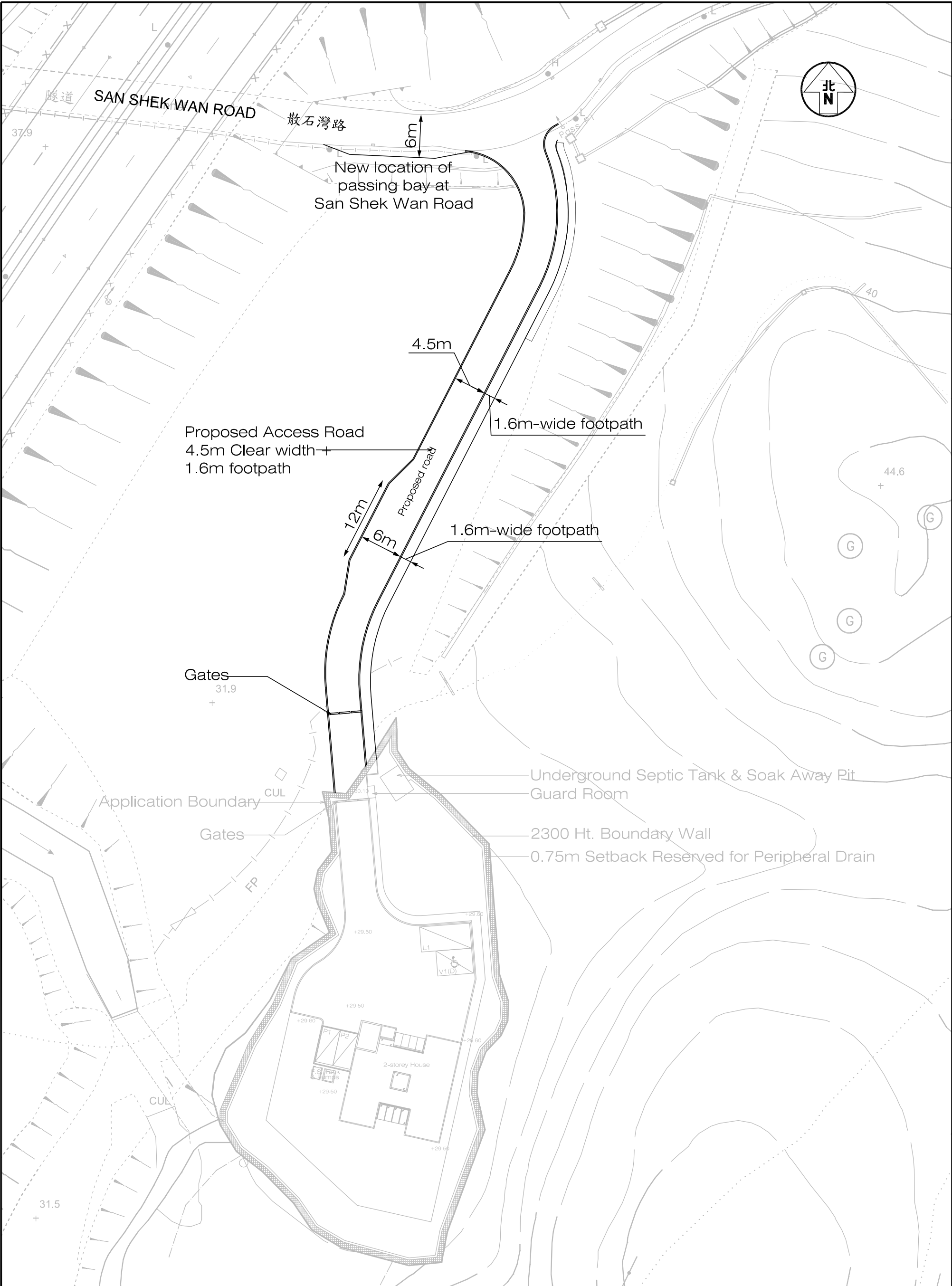
Private car parking space
@5m(L) X 2.5m(W) X 2.4m(H)

Project Title
PROPOSED HOUSE DEVELOPMENT AT TUEN MUN TOWN LOT NO.550 (TMTL 550), TUEN MUN, N.T.

Figure Title
CAR PARK LAYOUT

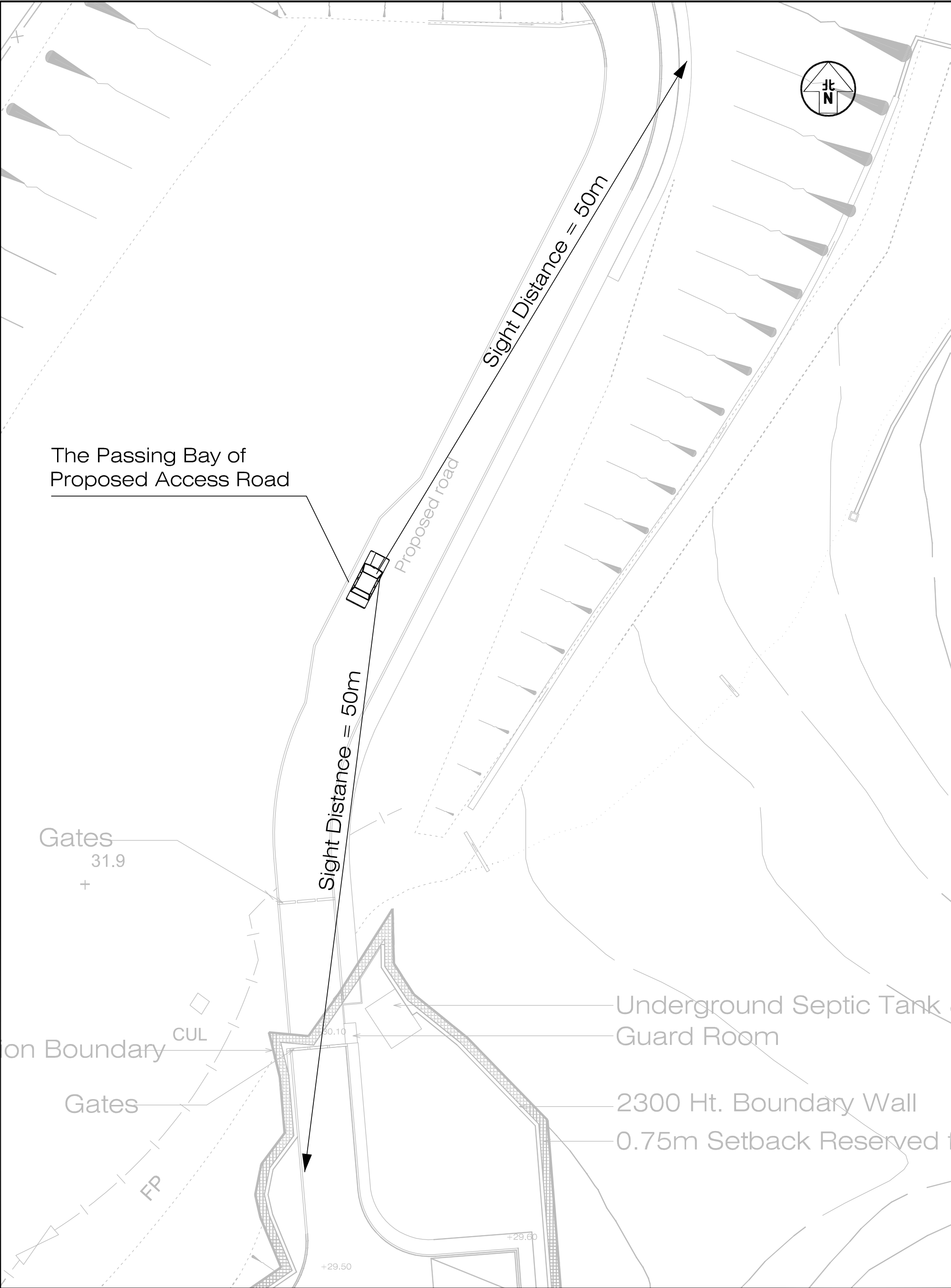
Job No. J7406	Figure No. 3.1	Scale in A3 1 : 300		
Designed by C Y Y	Drawn by N C M	Checked by K C	Revision B	Date 24 OCT 2025
CKM Asia Limited Traffic and Transportation Planning Consultants				

T:\JOB\J7400-J7449\J7406\2025-10\Fig 3.1 RevB.dwg



Project Title	PROPOSED HOUSE DEVELOPMENT AT TUEN MUN TOWN LOT NO.550 (TMTL 550), TUEN MUN, N.T.	Job No. J7406	Figure No. 3.2		Scale in A3 1 : 500
		Designed by C Y Y	Drawn by N C M	Checked by K C	Revision B
Figure Title	THE PROPOSED ACCESS ROAD AND THE NEW LOCATION OF PASSING BAY AT SAN SHEK WAN ROAD	CKM Asia Limited			
		Traffic and Transportation Planning Consultants			

T:\JOB\J7400-J7449\J7406\2025-10\Fig 3.2 RevB.dwg

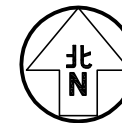


Project Title
PROPOSED HOUSE DEVELOPMENT AT TUEN MUN TOWN LOT NO.550 (TMTL 550), TUEN MUN, N.T.

Figure Title
SIGHT DISTANCE AT THE PASSING BAY OF PROPOSED ACCESS ROAD

Job No. J7406	Figure No. 3.3	Scale in A3 1 : 300
Designed by C Y Y	Drawn by N C M	Checked by K C
	Revision B	Date 24 OCT 2025
CKM Asia Limited Traffic and Transportation Planning Consultants		

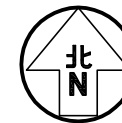
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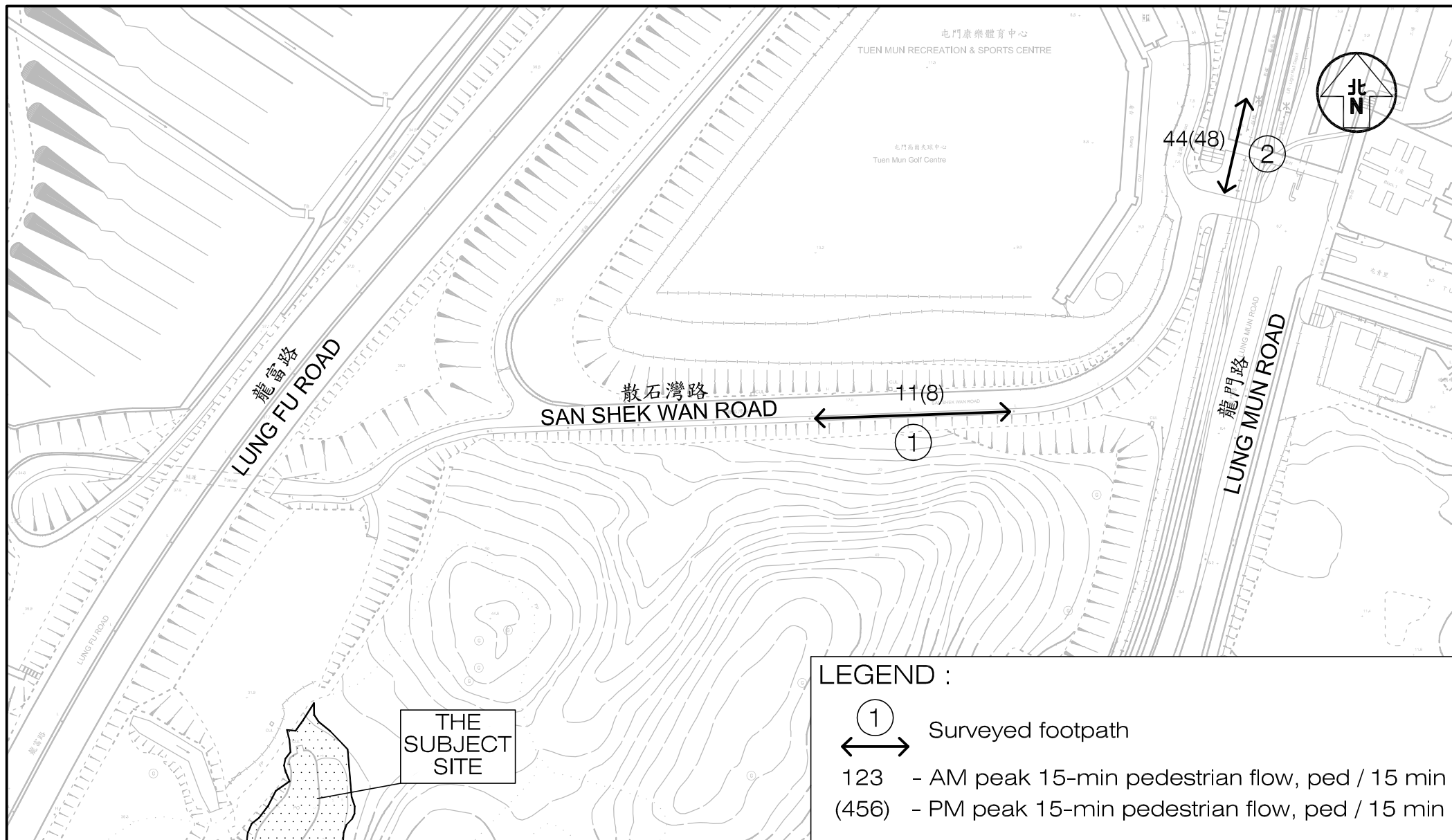
LEGEND :

123 - AM peak hour traffic flow, pcu / hr
(456) - PM peak hour traffic flow, pcu / hr

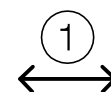
Project Title	PROPOSED HOUSE DEVELOPMENT AT TUEN MUN TOWN LOT NO.550 (TMTL 550), TUEN MUN, N.T.	Figure No.	4.1	Revision	B	CKM Asia Limited Traffic and Transportation Planning Consultants
Figure Title	YEAR 2034 PEAK HOUR TRAFFIC FLOWS WITHOUT THE PROPOSED DEVELOPMENT	Designed by	C Y Y	Drawn by	N C M	
		Scale in A4	N.T.S.	Date	24 OCT 2025	



Project Title	PROPOSED HOUSE DEVELOPMENT AT TUEN MUN TOWN LOT NO.550 (TMTL 550), TUEN MUN, N.T.				Figure No.	4.2		Revision	B	CKM Asia Limited Traffic and Transportation Planning Consultants		
Figure Title	YEAR 2034 PEAK HOUR TRAFFIC FLOWS WITH THE PROPOSED DEVELOPMENT				Designed by	C Y Y		Drawn by	N C M		Checked by	K C
					Scale in A4	N.T.S.		Date	24 OCT 2025			



LEGEND :

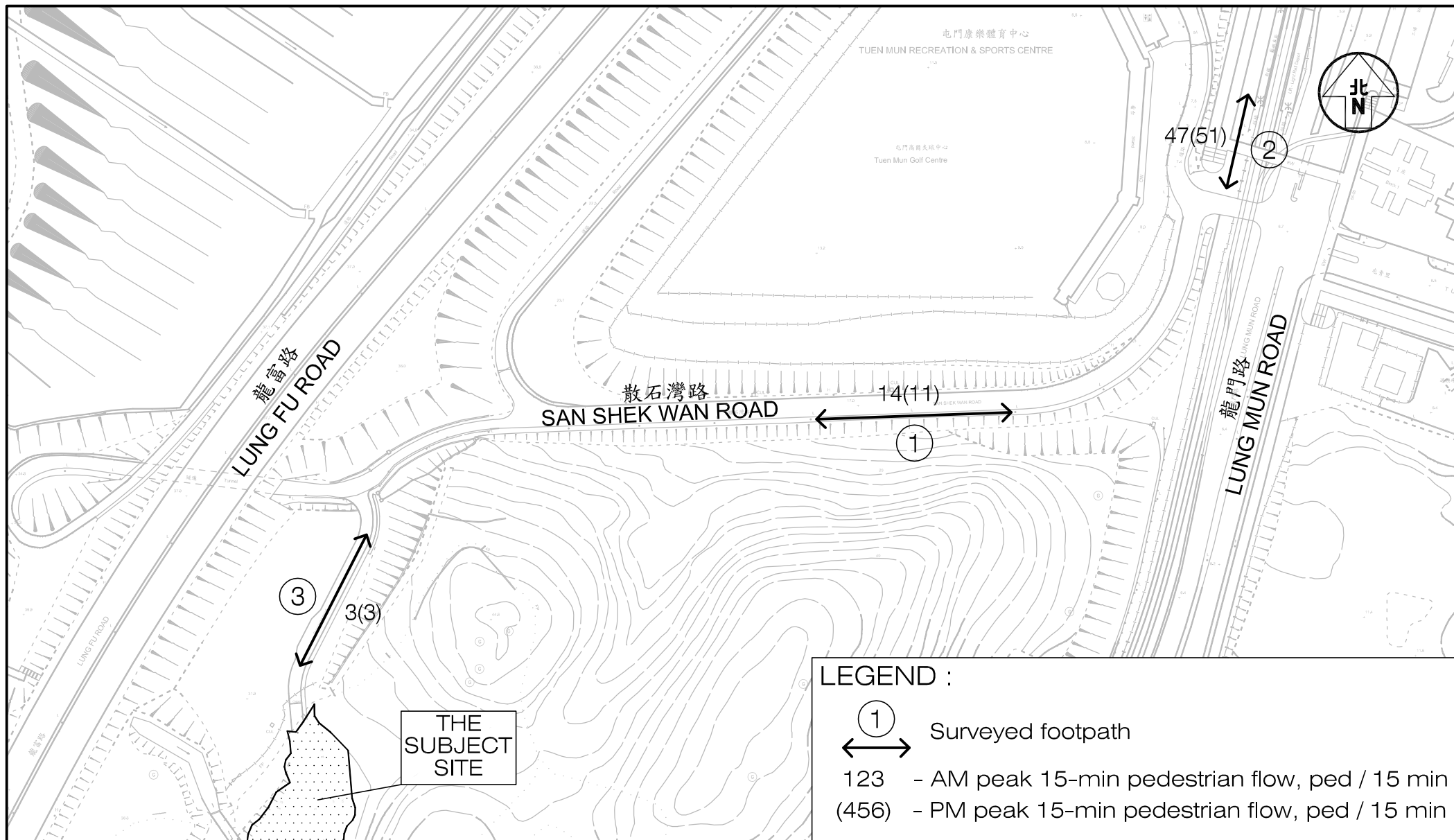


Surveyed footpath

123 - AM peak 15-min pedestrian flow, ped / 15 min

(456) - PM peak 15-min pedestrian flow, ped / 15 min

Project Title PROPOSED HOUSE DEVELOPMENT AT TUEN MUN TOWN LOT NO.550 (TMTL 550), TUEN MUN, N.T.	Figure No. 5.1	Revision B
Figure Title YEAR 2034 PEDESTRIAN FLOWS WITHOUT THE PROPOSED DEVELOPMENT	Designed by C Y Y Drawn by N C M Checked by K C Scale in A4 1 : 2000	CKM Asia Limited Traffic and Transportation Planning Consultants Date 24 OCT 2025



Project Title PROPOSED HOUSE DEVELOPMENT AT TUEN MUN TOWN LOT NO.550 (TMTL 550), TUEN MUN, N.T.	Figure No. 5.2	Revision B
Figure Title YEAR 2034 PEDESTRIAN FLOWS WITH THE PROPOSED DEVELOPMENT	Designed by C Y Y	Drawn by N C M
	Scale in A4 1 : 2000	Checked by K C Date 24 OCT 2025

CKM Asia Limited
Traffic and Transportation Planning Consultants

Signal Junction Analysis

Junction: Lung Mun Road / Light Rail Transit Depot Access

Job Number: J7406

Scenario: Existing Condition

P. 1

Design Year: 2025

Designed By:

Checked By:

Date: 15 Jul 2025

[illegible]

AM Traffic Flow (pcu/hr)	PM Traffic Flow (pcu/hr)	Note:																					
		$S = 1940 + 100(W - 3.25)$ $S = 2080 + 100(W - 3.25)$ $S_M = S \div (1 + 1.5f/r)$ $S_M = (S - 230) \div (1 + 1.5f/r)$																					
		<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>AM Peak</th> <th>PM Peak</th> </tr> </thead> <tbody> <tr> <td>Group</td> <td>1</td> <td>1</td> </tr> <tr> <td>Sum y</td> <td>0.277</td> <td>0.289</td> </tr> <tr> <td>L (s)</td> <td>156</td> <td>104</td> </tr> <tr> <td>C (s)</td> <td>3600</td> <td>3600</td> </tr> <tr> <td>practical y</td> <td>0.861</td> <td>0.874</td> </tr> <tr> <td>R.C. (%)</td> <td>211%</td> <td>203%</td> </tr> </tbody> </table>		AM Peak	PM Peak	Group	1	1	Sum y	0.277	0.289	L (s)	156	104	C (s)	3600	3600	practical y	0.861	0.874	R.C. (%)	211%	203%
	AM Peak	PM Peak																					
Group	1	1																					
Sum y	0.277	0.289																					
L (s)	156	104																					
C (s)	3600	3600																					
practical y	0.861	0.874																					
R.C. (%)	211%	203%																					

1		2*		3		4*		5	
AM	G = I/G =	G = I/G = 5	G = 33 I/G = 15	G = I/G =	G = I/G =				
PM	G = I/G =	G = I/G =	G = I/G =	G = I/G =	G = I/G =				

Signal Junction Analysis

Junction: Lung Mun Road / Light Rail Transit Depot Access

Job Number: J7406

Scenario: Future Condition (Without Proposed Development)

P. 2

Design Year: 2031

Designed By:

Checked By:

Date:

15 Jul 2025

[illegible]

AM Traffic Flow (pcu/hr)	PM Traffic Flow (pcu/hr)	S=1940+100(W-3.25) S=2080+100(W-3.25) S _M =S÷(1+1.5f/r) S _M =(S-230)÷(1+1.5f/r)																					
		Note: <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>AM Peak</th> <th>PM Peak</th> </tr> </thead> <tbody> <tr> <td>Group</td> <td>1</td> <td>1</td> </tr> <tr> <td>Sum y</td> <td>0.321</td> <td>0.302</td> </tr> <tr> <td>L (s)</td> <td>156</td> <td>104</td> </tr> <tr> <td>C (s)</td> <td>3600</td> <td>3600</td> </tr> <tr> <td>practical y</td> <td>0.861</td> <td>0.874</td> </tr> <tr> <td>R.C. (%)</td> <td>169%</td> <td>189%</td> </tr> </tbody> </table>		AM Peak	PM Peak	Group	1	1	Sum y	0.321	0.302	L (s)	156	104	C (s)	3600	3600	practical y	0.861	0.874	R.C. (%)	169%	189%
	AM Peak	PM Peak																					
Group	1	1																					
Sum y	0.321	0.302																					
L (s)	156	104																					
C (s)	3600	3600																					
practical y	0.861	0.874																					
R.C. (%)	169%	189%																					

1		2*		3		4*		5	
AM	G = I/G =	G = I/G = 5	G = 33 I/G = 15	G = I/G =	G = I/G =	G = I/G =			
PM	G = I/G =	G = I/G =	G = I/G =	G = I/G =	G = I/G =	G = I/G =			

Signal Junction Analysis

Junction: Lung Mun Road / Light Rail Transit Depot Access

Job Number: J7406

Scenario: Future Condition (With Proposed Development)

P. 3

Design Year: 2036

Designed By:

Checked By:

Date: 15 Jul 2025

[illegible]

AM Traffic Flow (pcu/hr)

PM Traffic Flow (pcu/hr)

Note:

$$S = 1940 + 100(W - 3.25) \quad S = 2080 + 100(W - 3.25)$$

$$S_M = S \div (1 + 1.5f/r) \quad S_M = (S - 230) \div (1 + 1.5f/r)$$

	AM Peak		PM Peak	
Group	1		1	
Sum y	0.321		0.302	
L (s)	156		104	
C (s)	3600		3600	
practical y	0.861		0.874	
R.C. (%)	169%		189%	

1		2*		3		4*		5	
AM	G = I/G =	G = I/G = 5	G = 33 I/G = 15	G = I/G =	G = I/G =				
PM	G = I/G =	G = I/G =	G = I/G =	G = I/G =	G = I/G =				

Signal Junction Analysis

Junction: Lung Mun Road / Tuen Tsing Lane

Job Number: J7406

Scenario: Existing Condition

P. 4

Design Year: 2025 Designed By: Checked By:

Checked By:

Date: 15 Jul 2025

Approach	Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak					PM Peak					
						Turning %	Sat. Flow (pcu/hr)	Flow (pcu/hr)	y value	Critical y	Turning %	Sat. Flow (pcu/hr)	Flow (pcu/hr)	y value	Critical y	
Lung Mun Road NB	SA	A1	2	3.20			2075	468	0.226			2075	519	0.250	0.250	
	SA	A2	2	3.10			2065	466	0.226			2065	516	0.250		
	RT	A3	1	3.30	20.0		100	1940	103	0.053	0.053	100	1940	58	0.030	0.030
Access Road to	LT+SA+RT	B1	3	3.50	13.0		78	1803	11	0.006	0.006	92	1776	41	0.023	0.023
Sports Centre EB																
Lung Mun Road SB	SA+LT	C1	2	4.70	14.0		22	2037	552	0.271	0.271	30	2020	476	0.236	
	SA	C2	2	3.70				2125	575	0.271			2125	500	0.235	
	RT	C3	1	3.10	12.0		100	1836	6	0.003		100	1836	24	0.013	
Tuen Tsing Lane WB	LT+SA+RT	D1	4	3.40	13.0		99	1755	120	0.068		99	1755	80	0.046	
	RT	D2	4	3.40	22.0		100	1961	134	0.068	0.068	100	1961	89	0.045	0.045
											</					

AM Traffic Flow (pcu/hr)

PM Traffic Flow (pcu/hr)

S=1940+100(W-3.25)		S=2080+100(W-3.25)		Note:
S _M =S÷(1+1.5f/r)		S _M =(S-230)÷(1+1.5f/r)		
	AM Peak	PM Peak		
Group	1+2+3+4		1+2+3+4	
Sum y	0.399		0.348	
L (s)	1012		1161	
C (s)	3600		3600	
practical y	0.647		0.610	
R.C. (%)	62%		75%	

1		2		3		4		
AM	G = I/G = 7	G = I/G = 14	G = I/G = 13	G = I/G = 14	G = I/G =			
PM	G = I/G = 5	G = I/G = 15	G = I/G = 13	G = I/G = 14	G = I/G =			

Signal Junction Analysis

Junction: Lung Mun Road / Tuen Tsing Lane

Job Number: J7406

Scenario: Future Condition (Without Proposed Development)

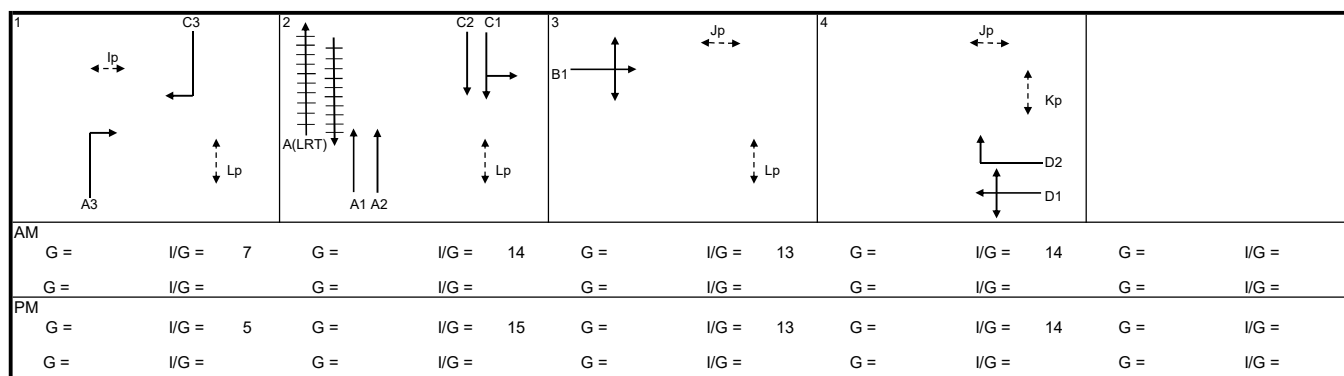
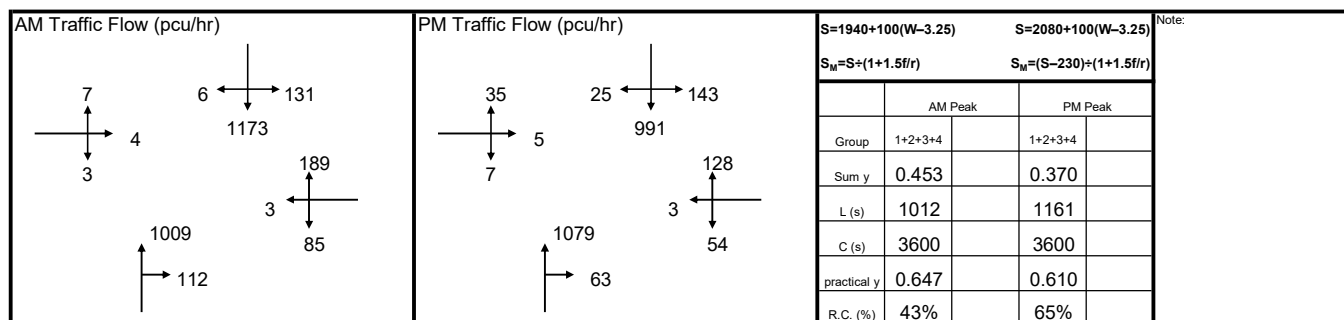
P. 5

Design Year: 2031 Designed By:

Checked By:

Date: 15 Jul 2025

Approach	Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak					PM Peak						
						Turning %	Sat. Flow (pcu/hr)	Flow (pcu/hr)	y value	Critical y	Turning %	Sat. Flow (pcu/hr)	Flow (pcu/hr)	y value	Critical y		
Lung Mun Road NB	SA	A1	2	3.20				2075	506	0.244				2075	541	0.261	0.261
	SA	A2	2	3.10				2065	503	0.244				2065	538	0.261	
	RT	A3	1	3.30	20.0		100	1940	112	0.058	0.058	100	1940	63	0.032	0.032	
Access Road to	LT+SA+RT	B1	3	3.50	13.0		83	1793	14	0.008	0.008	93	1775	47	0.026	0.026	
Sports Centre EB																	
Lung Mun Road SB	SA+LT	C1	2	4.70	14.0		21	2039	639	0.313	0.313	27	2026	553	0.273		
	SA	C2	2	3.70				2125	665	0.313			2125	581	0.273		
	RT	C3	1	3.10	12.0		100	1836	6	0.003		100	1836	25	0.014		
Tuen Tsing Lane WB	LT+SA+RT	D1	4	3.40	13.0		98	1756	131	0.075		98	1756	87	0.050		
	RT	D2	4	3.40	22.0		100	1961	146	0.074	0.074	100	1961	98	0.050	0.050	
pedestrian phase	Ip	1		min crossing time =			7	sec GM +			7	sec FGM =		14	sec		
	Jp	3,4		min crossing time =			10	sec GM +			10	sec FGM =		20	sec		
	Kp	4		min crossing time =			5	sec GM +			6	sec FGM =		11	sec		
	Lp	1,2,3		min crossing time =			5	sec GM +			6	sec FGM =		11	sec		



Signal Junction Analysis

Junction: Lung Mun Road / Tuen Tsing Lane

Job Number: J7406

Scenario: Future Condition (With Proposed Development)

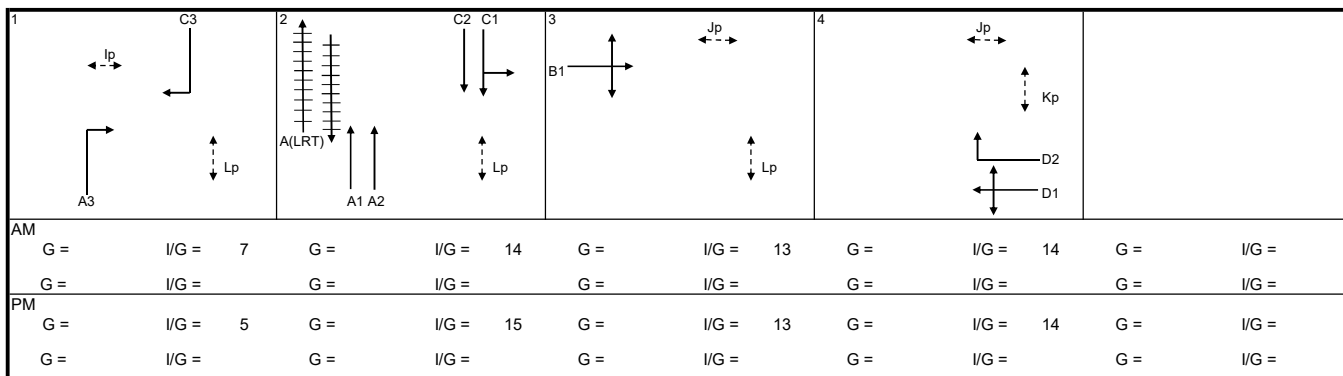
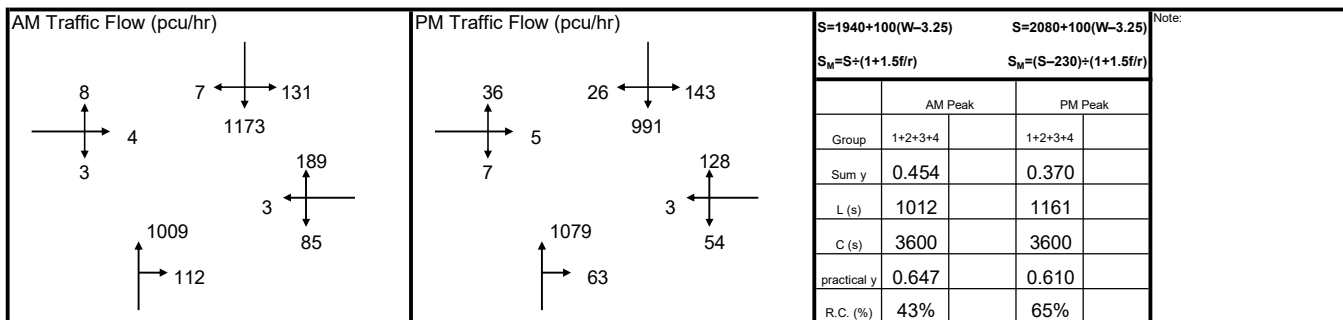
P. 6

Designed By:

Checked By:

Date: 15 Jul 2025

Approach	Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak					PM Peak					
						Turning %	Sat. Flow (pcu/hr)	Flow (pcu/hr)	y value	Critical y	Turning %	Sat. Flow (pcu/hr)	Flow (pcu/hr)	y value	Critical y	
Lung Mun Road NB	SA	A1	2	3.20			2075	506	0.244			2075	541	0.261	0.261	
	SA	A2	2	3.10			2065	503	0.244			2065	538	0.261		
	RT	A3	1	3.30	20.0		100	1940	112	0.058	0.058	100	1940	63	0.032	0.032
Access Road to	LT+SA+RT	B1	3	3.50	13.0		85	1789	15	0.008	0.008	93	1775	48	0.027	0.027
Sports Centre EB																
Lung Mun Road SB	SA+LT	C1	2	4.70	14.0		21	2039	639	0.313	0.313	27	2026	553	0.273	
	SA	C2	2	3.70				2125	665	0.313			2125	581	0.273	
	RT	C3	1	3.10	12.0		100	1836	7	0.004		100	1836	26	0.014	
Tuen Tsing Lane WB	LT+SA+RT	D1	4	3.40	13.0		98	1756	131	0.075		98	1756	87	0.050	
	RT	D2	4	3.40	22.0		100	1961	146	0.074	0.074	100	1961	98	0.050	0.050
pedestrian phase	Ip	1		min crossing time =			7	sec GM +		7	sec FGM =		14	sec		
	Jp	3,4		min crossing time =			10	sec GM +		10	sec FGM =		20	sec		
	Kp	4		min crossing time =			5	sec GM +		6	sec FGM =		11	sec		
	Lp	1,2,3		min crossing time =			5	sec GM +		6	sec FGM =		11	sec		



Signal Junction Analysis

Junction: Lung Mun Road / Wu Shan RoadJob Number: J7406Scenario: Existing Condition

P. 7

Design Year: 2025

Designed By:

Checked By:

Date:

15 Jul 2025

[illegible]

AM Traffic Flow (pcu/hr)

PM Traffic Flow (pcu/hr)

Note:

$S = 1940 + 100(W - 3.25)$ $S = 2080 + 100(W - 3.25)$

$S_M = S \div (1 + 1.5f/r)$ $S_M = (S - 230) \div (1 + 1.5f/r)$

	AM Peak		PM Peak	
Group	1+2+3	1,2 + 3	1+2+3	1,2 + 3
Sum y	0.432	0.288	0.371	0.278
L (s)	14	10	14	10
C (s)	120	120	108	108
practical y	0.795	0.825	0.783	0.817
R.C. (%)	84%	187%	111%	193%

1	C1 C2 A3 A2 A1	2	C1 C2 C3 A1	3	B3 B2 B1 A1		
AM	G = I/G = 5	G = I/G = 7	G = I/G = 5	G = I/G =	G = I/G =		
PM	G = I/G = 5	G = I/G = 7	G = I/G = 5	G = I/G =	G = I/G =		

Signal Junction Analysis

Junction: Lung Mun Road / Wu Shan RoadJob Number: J7406

Scenario: Future Condition (Without Proposed Development)

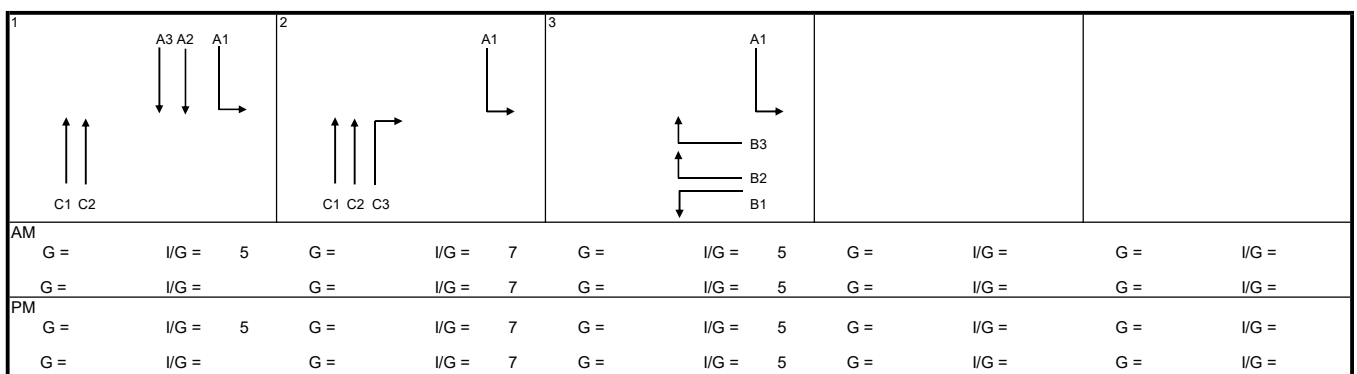
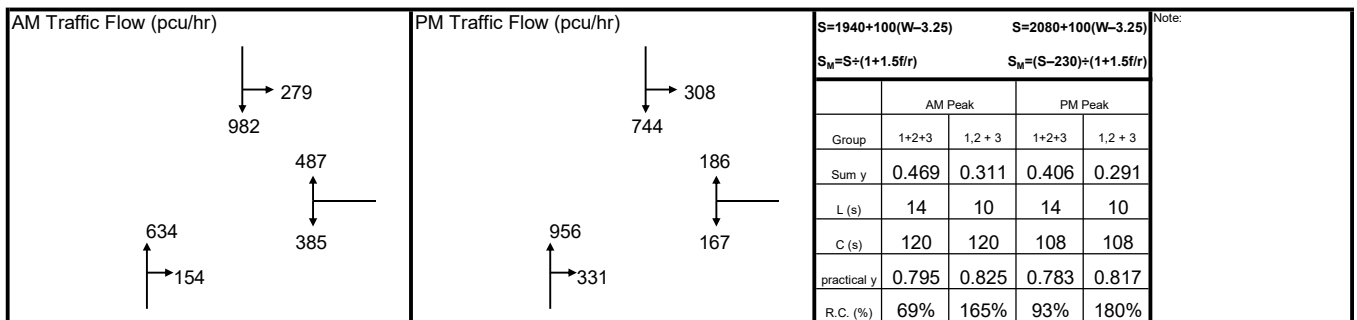
P. 8

Design Year: 2031

Designed By: _____

Checked By: _____

Date: 15 Jul 2025

[illegible]

Signal Junction Analysis

Junction: Lung Mun Road / Wu Shan Road

Job Number: J7406

Scenario: Future Condition (With Proposed Development)

P. 9

Design Year: 2036 Designed By: _____ Checked By: _____

Date: 15 Jul 2025

[illegible]

AM Traffic Flow (pcu/hr)

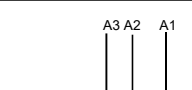
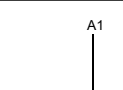
PM Traffic Flow (pcu/hr)

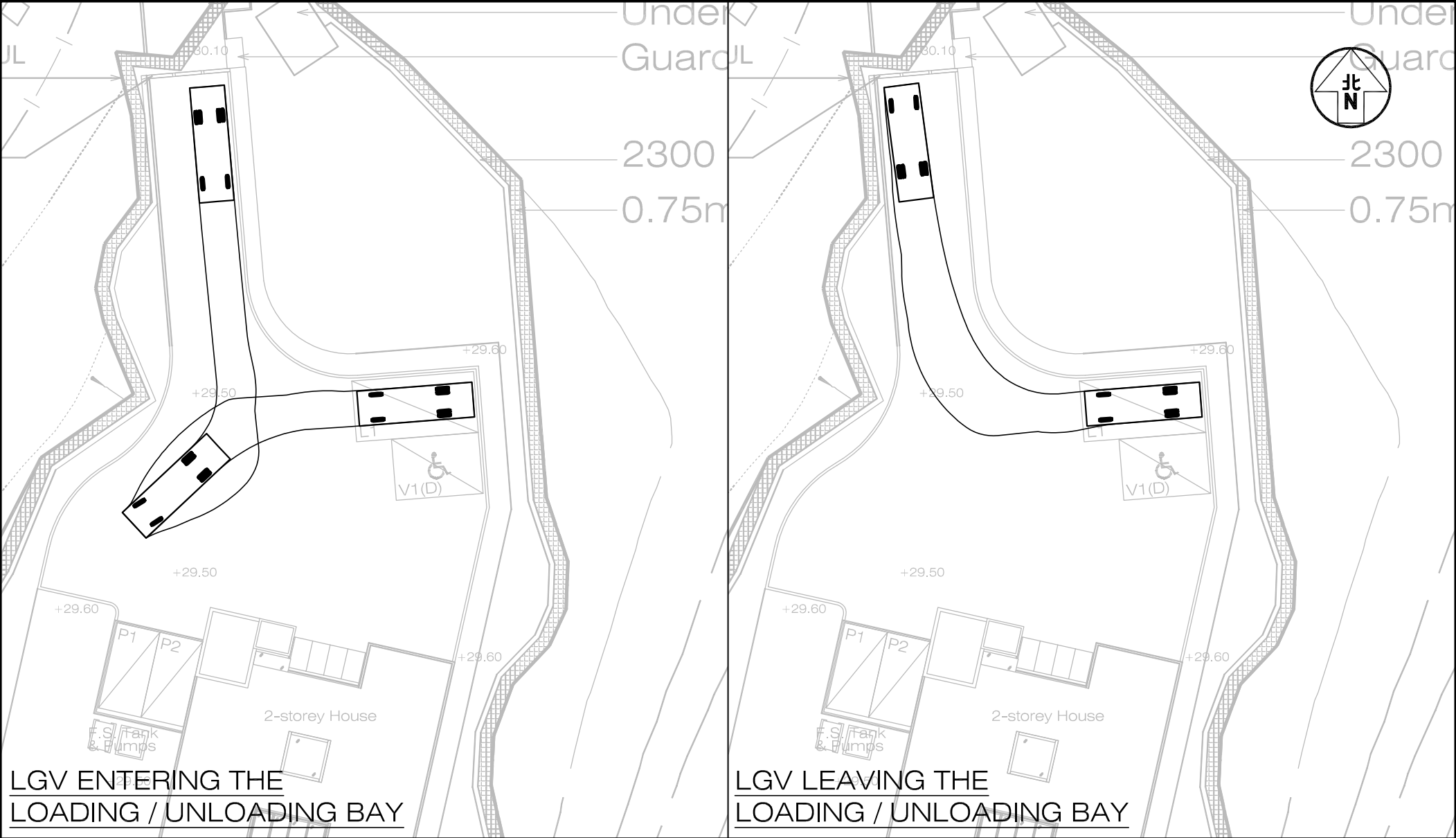
Note:

$S = 1940 + 100(W - 3.25)$ $S = 2080 + 100(W - 3.25)$

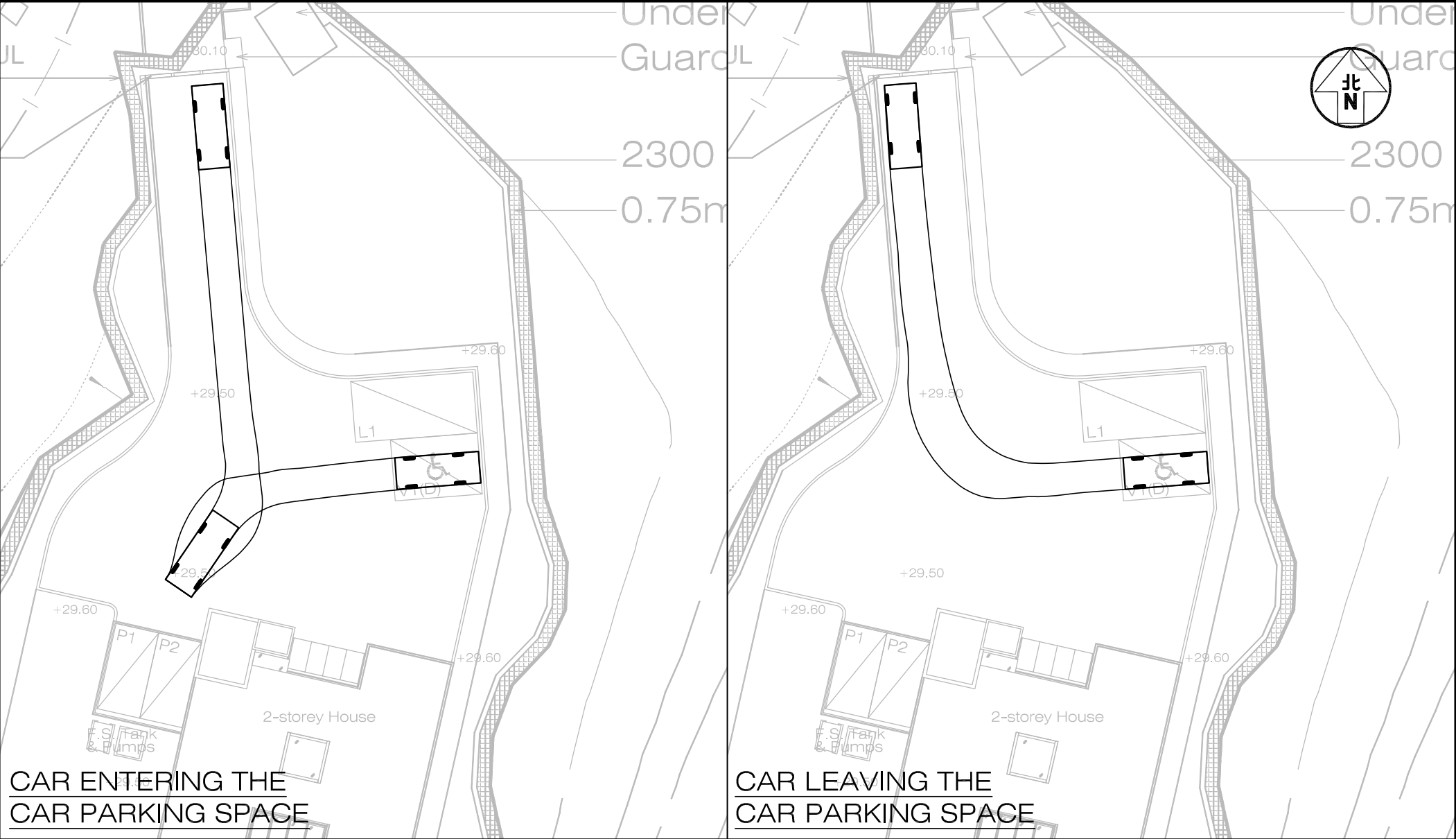
$S_M = S \div (1 + 1.5f/r)$ $S_M = (S - 230) \div (1 + 1.5f/r)$

	AM Peak		PM Peak	
Group	1+2+3	1,2 + 3	1+2+3	1,2 + 3
Sum y	0.469	0.311	0.406	0.291
L (s)	14	10	14	10
C (s)	120	120	108	108
practical y	0.795	0.825	0.783	0.817
R.C. (%)	69%	165%	93%	180%

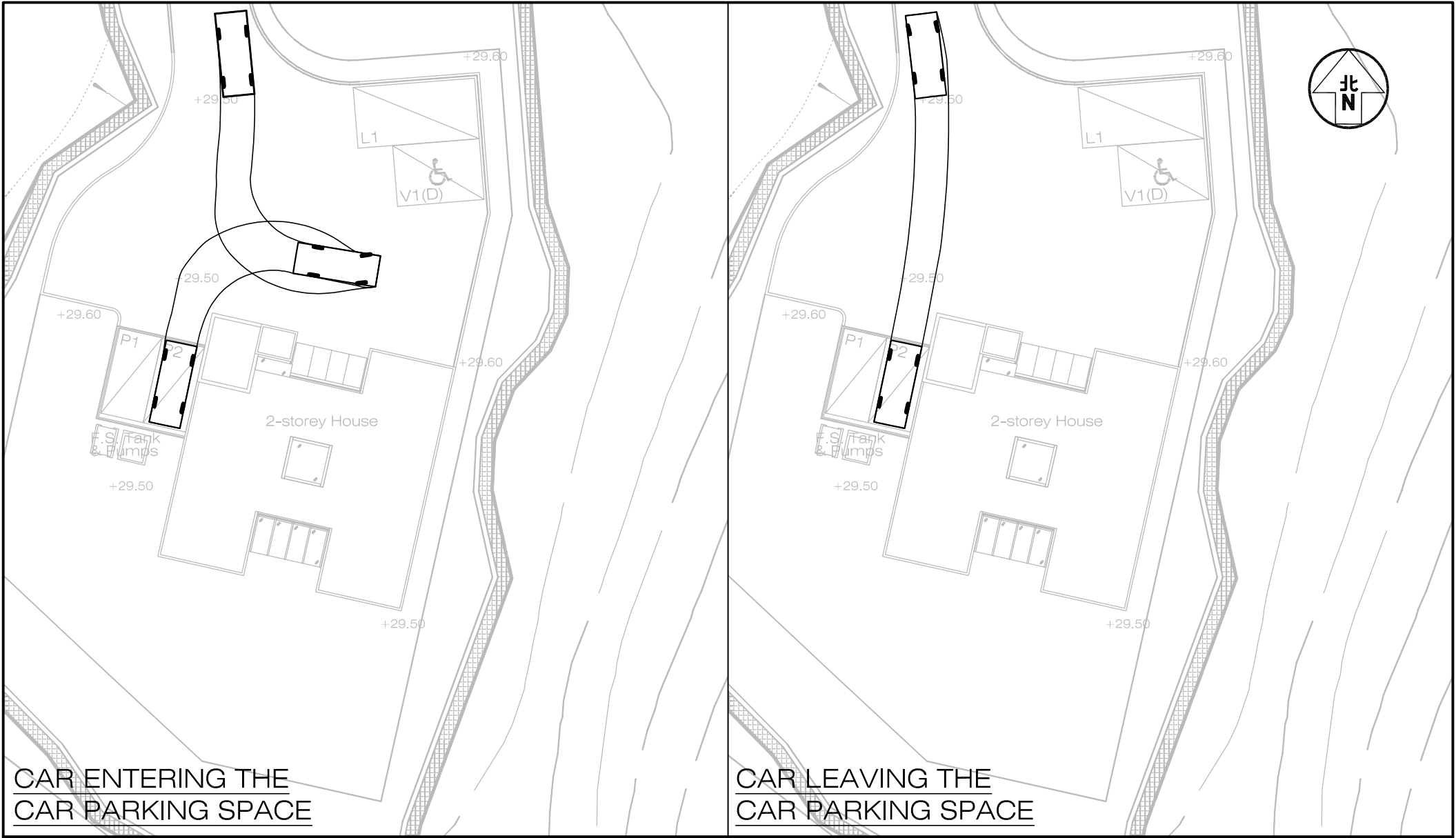
1		2		3			
AM	G = I/G = 5	G = I/G = 7	G = I/G = 5	G = I/G =	G = I/G =		
PM	G = I/G = 5	G = I/G = 7	G = I/G = 5	G = I/G =	G = I/G =		



Project Title	PROPOSED HOUSE DEVELOPMENT AT TUEN MUN TOWN LOT NO.550 (TMTL 550), TUEN MUN, N.T.					J7406	Figure No. SP1	Revision B	CKM Asia Limited Traffic and Transportation Planning Consultants
Figure Title	SWEPT PATH OF LGV ENTERING AND LEAVING THE LOADING / UNLOADING BAY L1					Designed by C Y Y	Drawn by N C M	Checked by K C	
						Scale in A4 1 : 300		Date 24 OCT 2025	

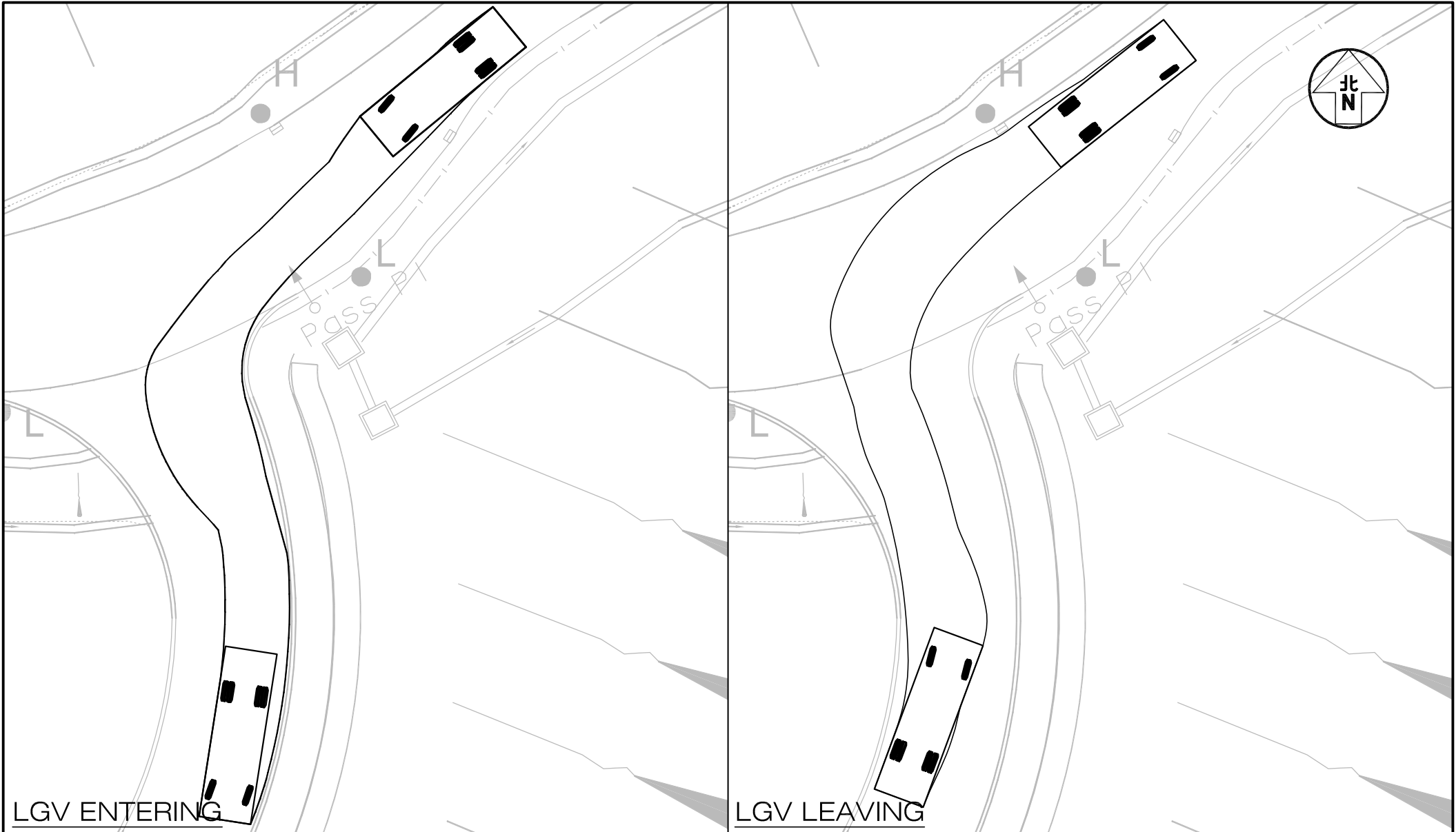


Project Title		PROPOSED HOUSE DEVELOPMENT AT TUEN MUN TOWN LOT NO.550 (TMTL 550), TUEN MUN, N.T.		Figure No.		Revision		CKM Asia Limited Traffic and Transportation Planning Consultants	
Figure Title		SWEPT PATH OF PRIVATE CAR ENTERING AND LEAVING THE CAR PARKING SPACE V1(D)		J7406		SP2			
				Designed by		Drawn by		Checked by	
				C Y Y		N C M		K C	
				Scale in A4		Date			
				1 : 300		24 OCT 2025			



Project Title		PROPOSED HOUSE DEVELOPMENT AT TUEN MUN TOWN LOT NO.550 (TMTL 550), TUEN MUN, N.T.			Figure No.		Revision		CKM Asia Limited Traffic and Transportation Planning Consultants 		
		J7406			SP3		B				
Figure Title		SWEPT PATH OF PRIVATE CAR ENTERING AND LEAVING THE CAR PARKING SPACE P2			Designed by		Drawn by			Checked by	
					C Y Y		N C M			K C	
					Scale in A4		Date				
					1 : 300		24 OCT 2025				

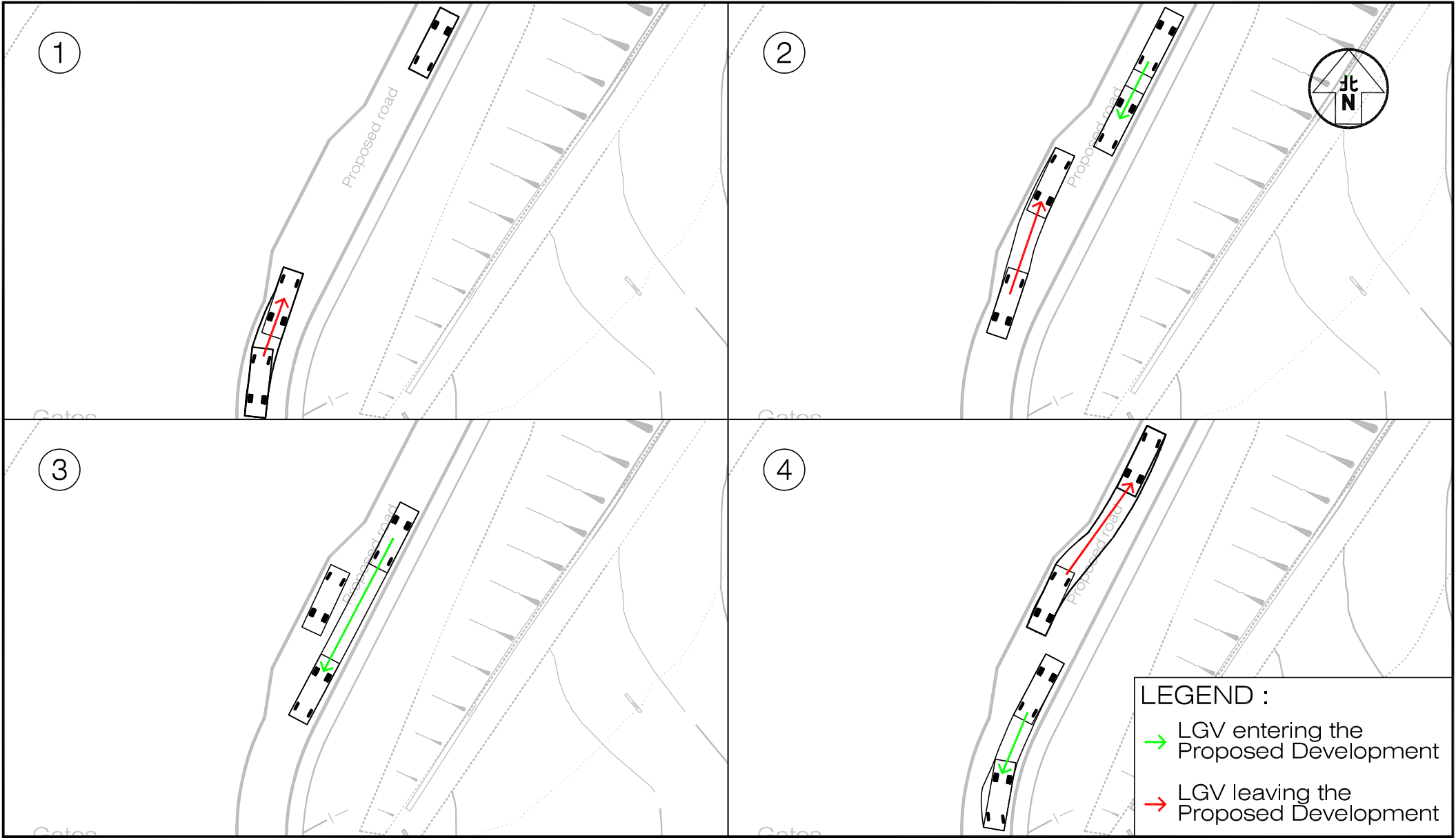
T:\JOB\J7400-J7449\J7406\2025 10\Fig 3.3, SP1 - SP7 RevB.dwg



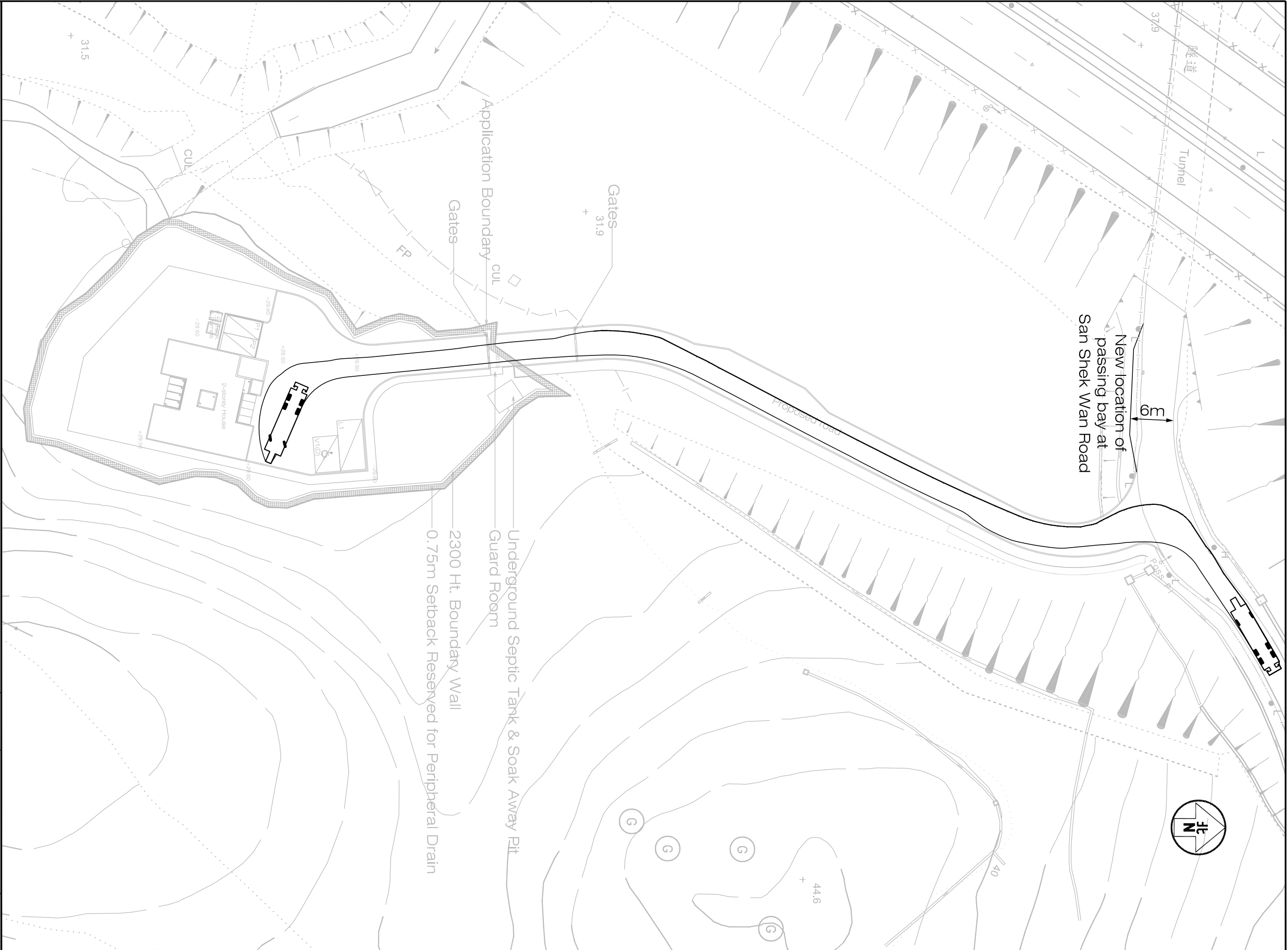
Project Title PROPOSED HOUSE DEVELOPMENT AT TUEN MUN TOWN LOT NO.550 (TMTL 550), TUEN MUN, N.T.	Figure No. SP4	Revision B
Figure Title SWEPT PATH OF LGV ENTERING AND LEAVING THE PROPOSED ACCESS ROAD	Designed by C Y Y	Drawn by N C M
	Checked by K C	Date 24 OCT 2025

CKM Asia Limited
 Traffic and Transportation Planning Consultants

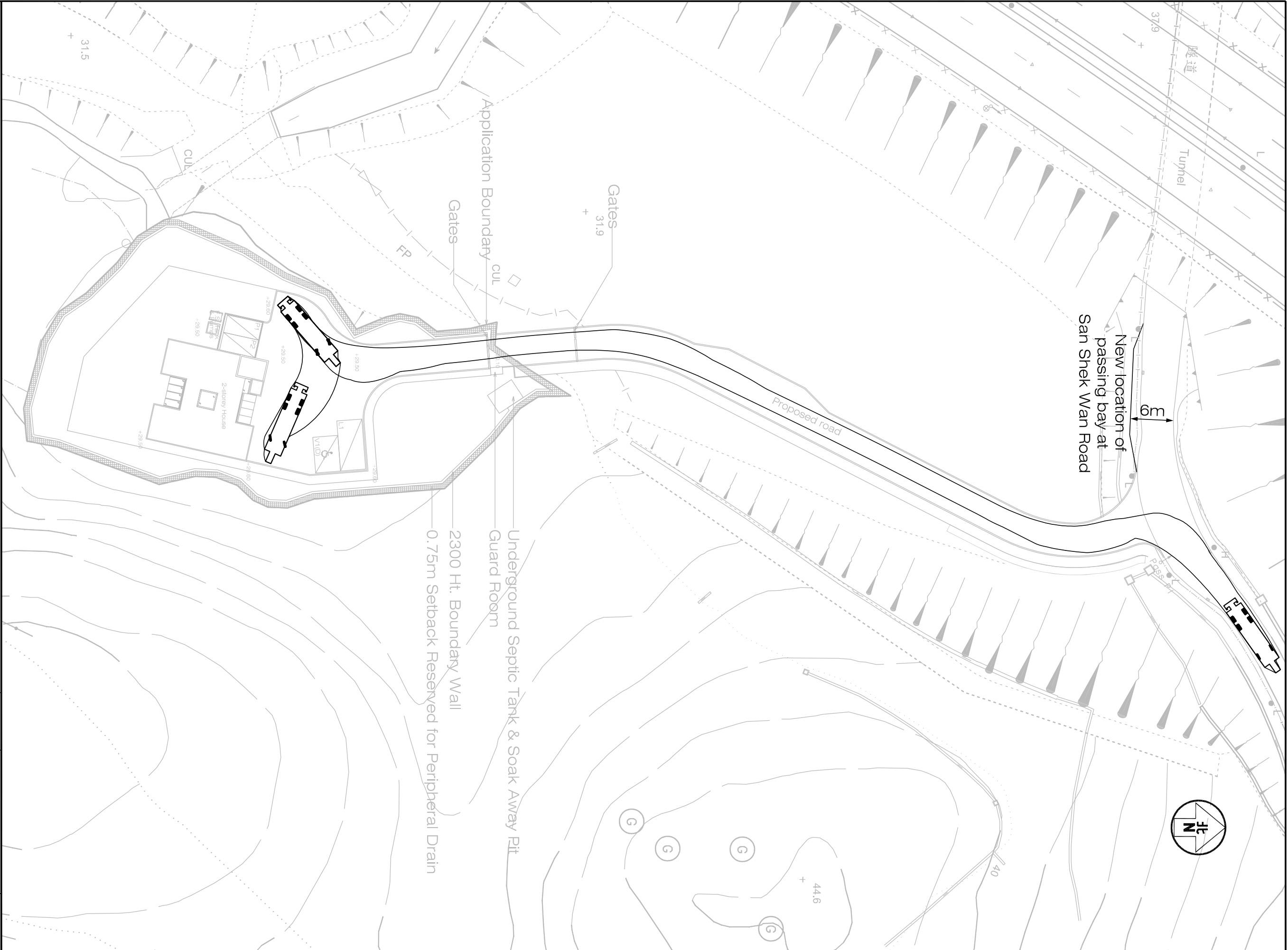
T:\JOB\J7400-J7449\J7406\2025 10\Fig 3.3, SP1 - SP7 RevB.dwg



Project Title		PROPOSED HOUSE DEVELOPMENT AT TUEN MUN TOWN LOT NO.550 (TMTL 550), TUEN MUN, N.T.				Figure No.		Revision		CKM Asia Limited Traffic and Transportation Planning Consultants 			
		J7406				SP5		B					
Figure Title		SWEPT PATH OF 2-WAY TRAFFIC OPERATION AT THE PROPOSED ACCESS ROAD				Designed by		Drawn by				Checked by	
						C Y Y		N C M				K C	
						Scale in A4		Date					
						1 : 500		24 OCT 2025					



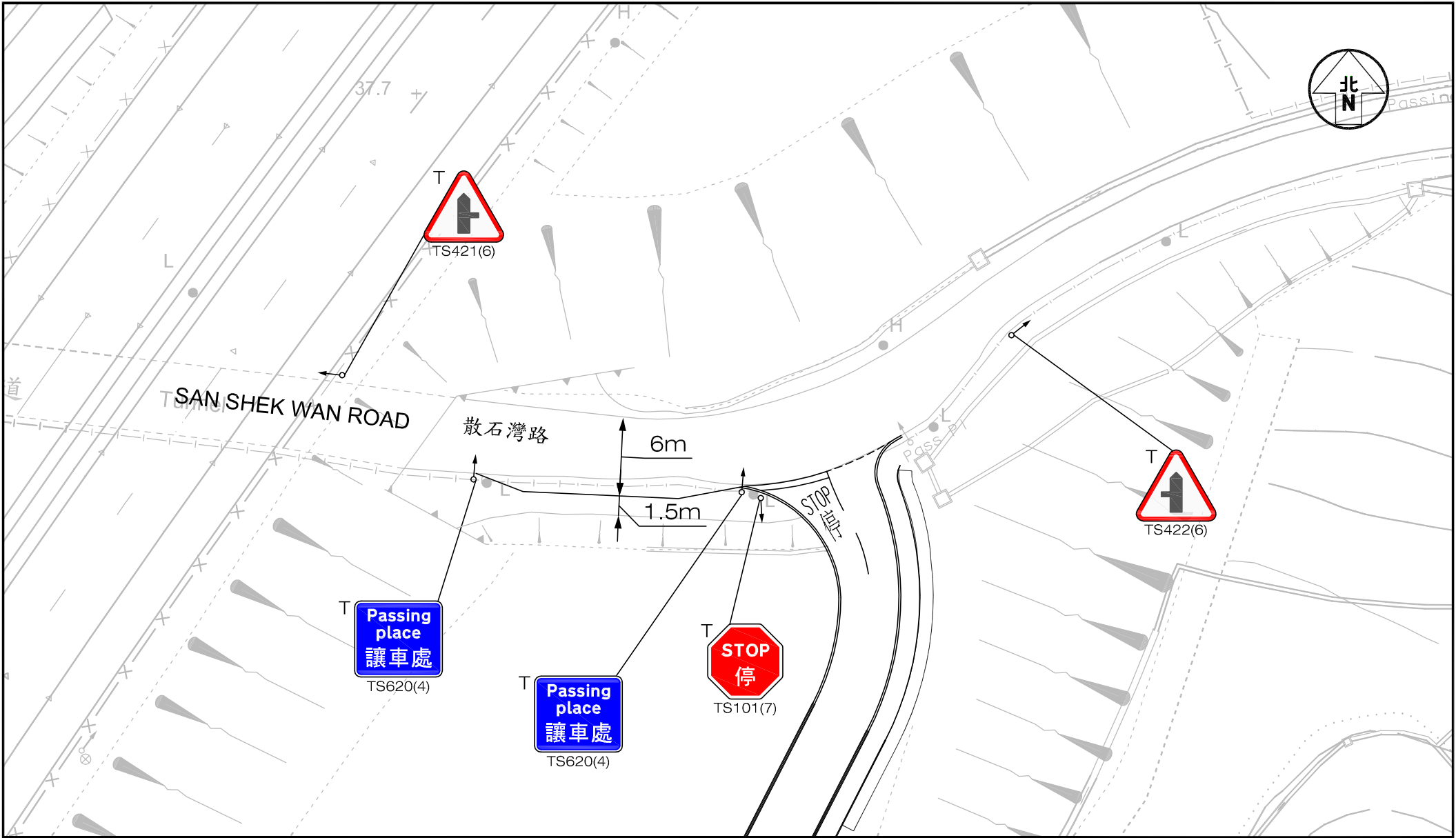
Project Title					Job No.	Figure No.	Scale in A3	
PROPOSED HOUSE DEVELOPMENT AT TUEN MUN TOWN LOT NO.550 (TML 550), TUEN MUN, N.T.					J7406	SP6	1	500
					Designed by C Y Y	Drawn by N C M	Checked by K C	Revision B
Figure Title					Date 24 OCT 2025			
					CKM Asia Limited			
					Traffic and Transportation Planning Consultants			



Project Title					Job No.	Figure No.	Scale in A3	
PROPOSED HOUSE DEVELOPMENT AT TUEN MUN TOWN LOT NO.550 (TML 550), TUEN MUN, N.T.					J7406	SP7	1	500
					Designed by C Y Y	Drawn by N C M	Checked by K C	Revision B
Figure Title					Date 24 OCT 2025			
					CKM Asia Limited Traffic and Transportation Planning Consultants			



Project Title		PROPOSED HOUSE DEVELOPMENT AT TUEN MUN TOWN LOT NO.550 (TMTL 550), TUEN MUN, N.T.				Figure No.		Revision		CKM Asia Limited Traffic and Transportation Planning Consultants 			
Figure Title		SWEPT PATH OF PRIVATE CARS ENTERING AND LEAVING THE JUNCTION OF SAN SHEK WAN ROAD / PROPOSED ACCESS ROAD				J7406		R1				A	
						Designed by		Drawn by				Checked by	
						L C H		N C M				K C	
						Scale in A4		Date					
						1 : 200		24 OCT 2025					



Project Title		PROPOSED HOUSE DEVELOPMENT AT TUEN MUN TOWN LOT NO.550 (TMTL 550), TUEN MUN, N.T.			J7406	Figure No.		R2		Revision		A		CKM Asia Limited					
Figure Title		PROPOSED TRAFFIC SIGN AND ROAD MARKING AT THE JUNCTION OF SAN SHEK WAN ROAD / PROPOSED ACCESS ROAD				Designed by		L C H		Drawn by		N C M		Checked by		K C		Traffic and Transportation Planning Consultants	
						Scale in A4		1 : 400		Date		24 OCT 2025							

T:\JOB\J7400-J7449\J7406\2025 10\Fig R1 RevA.dwg

Annex G

Extract of District Lands Conference Notes dated 5 May 2016
Extract of New Grant No. 22878

- (ii) The section of San Shek Wan Road, which is maintained by HyD, connecting Lung Fu Road and the proposed Brown Area, does not have a width in excess of 4.5m. The narrowest width of San Shek Wan Road is about 3.4m according to desktop measurement. Would D of FS and CBS/NTW, BD please confirm whether San Shek Wan Road together with the Brown Area qualify as an Emergency Vehicular Access for the proposed holiday camp development. Besides, would CBS/NTW, BD please confirm the site classification of the lot having regard to the existing situation.

2.10 Existing horse trail

According to our record, a horse trail was found encroached onto the proposed Brown Area, Green Cross-hatched Black Area and Green Hatched Black Areas as shown on Appendix I. As per the request from the then Regional Services Department (now LCSD) in 1994, DLO has given no objection to the use of the horse trail on a non-exclusive use basis in conjunction with the Government Land Allocation TM 296 for the purpose of public horse-riding centre. While the horse trail does not form part of the subject land allocation, DLO has the right to request LCSD to reinstate and hand back the horse trail upon a 3 months' notice. The horse trail is maintained by LCSD.

Comment on the proposed development from LCSD was given to TPB upon planning application. LCSD advised that the applicant shall inform and consult with the Hong Kong Jockey Club (HKJC), the existing tenant and operator of the Tuen Mun Public Riding School (TMRP), on any plan relevant to and / or interfacing with the existing horse trail of the school. All design and information interrelating to the horse trail of TMRP and all relevant correspondences of the applicant with HKJC should be copied to LCSD for information. Should the holiday camp be taken place, the applicant should be obliged to bear the safety of all vehicles and pedestrians for passing the horse trail of TMRP for going to the holiday camp. LCSD and HKJC shall not be responsible for the damage of any vehicle and injury of pedestrian using and passing the horse trail of TMRP. The applicant should also possess valid third party insurance to protect LCSD and HKJC against any potential claims that may happen on the part of vehicular access intersected with the horse trail of LCSD.

2.11 Natural terrain [SC24]

GEO, CEDD recommended the incorporation of "Natural terrain" clause for green cross-hatched black area ("Green Cross-hatched Black Area"). They considered the lot could be affected landslide and boulder fall hazards arising from areas within the lot and those area outside the lot coloured Green Cross-hatched Black at Appendix I. The applicant will be required to carry out and complete to the satisfaction of the Director a geotechnical investigation within the lot and the Green Cross-hatched Black Area for the purpose of studying the natural terrain hazards and thereafter carrying out, completing and maintaining all necessary mitigation and

Licence for
guest rooms

- (B) grant licence to occupy all or any of the guest rooms on condition that the term of the licence shall not exceed 12 calendar months in the aggregate including any right of renewal; and
- (C) grant licence to use or occupy all or any of the spaces provided pursuant to Special Condition No. (16) hereof on the condition that the term of the licence shall not exceed 12 calendar months in the aggregate including any right of renewal.

One assignment

(11) Notwithstanding anything to the contrary herein contained, the Grantee (which expression shall, for the purpose of this Special Condition only, exclude his executors, administrators, successors and assigns) may, after he has complied with Special Conditions Nos. (1) and (2) hereof but before he has in all respects observed and complied with and fulfilled all of his obligations under these Conditions to the satisfaction of the Director, assign the whole of the lot, but not a part thereof, absolutely.

Registration

(12) Every assignment, mortgage, charge, underletting for more than three years or other alienation of the lot or any part thereof or any interest therein shall be registered at the Land Registry.

Restriction on
partitioning

(13) The Grantee shall not, without the prior written consent of the Director, partition (whether by way of assignment or other disposal or by any other means) the lot or any part thereof or any section which has been partitioned with the prior written consent of the Director under this Special Condition.

Non-exclusive right
of way

(14) (a) The lot is granted together with a right for the Grantee and his servants, visitors, workmen and other persons authorized by the Grantee in that behalf from time to time and at all times during the term hereby agreed to be granted for all purposes connected with the proper use and enjoyment of the lot to pass and repass on, along, over, by and through the area shown coloured brown on PLAN I annexed hereto (hereinafter referred to as "the Brown Area") at such level or levels as may be approved by the Director.

(b) (i) The Grantee hereby acknowledges that as at the date of this Agreement, there is in existence a horse trail within the Government land adjoining the lot, the approximate alignment of which is shown for identification purpose only by two pecked purple lines and marked "HORSE TRAIL OF GLA-TM296" on PLAN I annexed hereto (hereinafter referred to as "the Horse Trail"). The Grantee hereby further acknowledges that as at the date of this Agreement, a portion of the Horse Trail is within a portion of the Brown Area (which portion of the Horse Trail is hereinafter referred to as "the Horse Trail – Brown Area").

(ii) The Grantee shall on or before the 30th day of September, 2025 or such other date as may be approved by the Director, at his own expense, in such manner, with such

materials and to such standards, levels, alignment and design as the Director shall require or approve and in all respects to the satisfaction of the Director lay and form the Brown Area and provide and construct such associated street furniture, traffic aids, street lighting, sewers, drains and other structures thereon as the Director in his sole discretion may require so that vehicular and pedestrian traffic may be carried on the Brown Area and horse riding or leading may be carried on the Horse Trail – Brown Area.

(iii) In carrying out the works required under sub-clause (b)(ii) of this Special Condition,

(I) the Grantee shall not obstruct, interfere, close, alter, divert, relocate, demolish or permit to be obstructed, interfered, closed, altered, diverted, relocated or demolished the Horse Trail – Brown Area or any part thereof without the prior approval of the Director; and

(II) the Grantee shall cause or permit or suffer to be caused minimum disturbance to the owners of any other lots and users in the vicinity to whom rights of way over the whole or any portion of the Brown Area may have been granted.

(c) The Grantee shall at his own expense uphold, maintain and repair the Brown Area and everything forming a portion of or pertaining to it, all to be done to the satisfaction of the Director and the Grantee shall be responsible for the whole as if he were the absolute owner thereof.

(d) Any alteration to any public road absorbing a portion or portions of the Brown Area over and along which a right of way is given or affecting the gradient thereof shall not give rise to any claim by the Grantee who shall at his own expense carry out all consequent alterations to the Brown Area to the satisfaction of the Director.

(e) The grant of the right of way referred to in sub-clause (a) of this Special Condition shall not give the Grantee the exclusive right over the Brown Area. The Government shall have the right to grant rights of way over the Brown Area to the owners and the Government's licensees, permittees and tenants of any other lots in the vicinity now or at any time in the future and their contractors, workmen and other persons authorized by the Government, or to take over the whole or any portion of the Brown Area for the purposes of a public street or for such other purposes as may be determined by the Director whose decision shall be final and binding on the Grantee without payment of any compensation to the Grantee or to other owners to whom rights of way over the whole or any portion of the Brown Area may have been granted.



(f) In the event of the non-fulfilment of the Grantee's obligations under sub-clauses (b) and (c) of this Special Condition, the Government may carry out the necessary construction, maintenance and repair works at the cost of the Grantee who shall pay to the Government on demand a sum equal to the cost thereof, such sum to be determined by the Director whose determination shall be final and binding upon the Grantee.

(g) The Government shall have no liability in respect of any loss, damage, nuisance or disturbance whatsoever caused to or suffered by the Grantee or any other person whether arising out of or incidental to the fulfilment of the Grantee's obligations under sub-clauses (b) and (c) of this Special Condition or the exercise of the rights by the Government under sub-clause (f) of this Special Condition or the presence and use of the Horse Trail – Brown Area or otherwise, and no claim whatsoever shall be made against the Government by the Grantee in respect of any such loss, damage, nuisance or disturbance.

(h) Notwithstanding the grant of the right of way referred to in sub-clause (a) of this Special Condition, the Government shall have the full right and power, upon giving to the Grantee, not less than fourteen days' written notice (save in case of emergency), to lay, install, relay, divert, remove, reprovise, replace, inspect, operate, repair, maintain and renew any Government or other drain, culvert, waterway or watercourse, sewer, nullah, water main, pipe, cable, wire, line, utility service or other works or installations (all together hereinafter referred to as "the Brown Area Services") which are now or may hereafter be upon, over, under or adjacent to the Brown Area as the Director may in his absolute discretion deem fit, making good any and all damages caused thereby, and the Director, his officers, contractors and agents and any other persons authorized by him, his or their workmen with or without tools, equipment, plant, machinery or motor vehicles shall have the right of free ingress, egress and regress at all times to and from the Brown Area for the purposes aforesaid. The Grantee shall not disturb or allow anybody to disturb the Brown Area Services without the prior written approval from the Director. Save in respect of making good any and all damage caused by any exercise of the aforesaid rights and powers, the Government, the Director, his officers, contractors and agents and any other persons authorized by him, his or their workmen shall have no liability in respect of any loss, damage, nuisance or disturbance whatsoever caused to or suffered by the Grantee arising out of or incidental to the exercise of the rights conferred under this sub-clause (h), and no claim nor objection shall be made against him or them by the Grantee.

Vehicular access

(15) The Grantee shall have no right of ingress or egress to or from the lot for the passage of motor vehicles except between the points X and Y through Z shown and marked on PLAN I annexed hereto or at such other points as may be approved in writing by the Director. Upon development or redevelopment of the lot, a temporary access for construction vehicles into the lot may be permitted in such position and subject to such conditions as may be imposed by the Director. Upon completion of the development or redevelopment, the Grantee shall at his own expense within the time limit specified by the Director and in all respects to the satisfaction of the