

10 July 2026

The Secretary
Town Planning Board
c/o Planning Department
15/F North Point Government Offices
333 Java Road
Hong Kong

By Hand and By Email

Dear Sir

Section 16 Planning Application for Proposed Minor Relaxation of Plot Ratio Restriction for Permitted Flat Use (Proposed Amendments to an Approved Scheme with Minor Relaxation of Plot Ratio Restriction under Application No. A/H6/91) at 4, 4A, 4B and 4C Tai Hang Road, Hong Kong (Application No. A/H6/97)

Reference is made to the captioned application submitted to the Town Planning Board (the Board) on 11 May 2026 and the comments received from relevant departments via the Hong Kong District Planning Office in June 2026.

Further to our request for deferment on 25 June 2026, we would like to reactivate the captioned application by submitting herewith 4 copies of Further Information (FI) for the Board's consideration. In response to the departmental comments received, the current FI comprises a responses-to-comments table with the support of the following attachments:

- Attachment 1 Replacement Pages of Planning Statement
- Attachment 2 Revised Traffic Impact Assessment
- Attachment 3 Revised Environmental Assessment
- Attachment 4 Revised Sewerage Impact Assessment
- Attachment 5 Geotechnical Statement

Concurrently, the Applicant has made minor design refinements to the podium in view of geotechnical considerations, which result in a slight increase in site coverage from not more than 60% to not more than 62% (at 57mPD or below). The updated development schedule and plans are enclosed in **Attachment 1** for consideration.

Please note that the current submission is mainly made to provide technical clarifications and responses to departmental comments. While there is minor adjustment in site coverage, there are no changes to the proposed block layout and other key development parameters such as GFA, PR, building height, number of storeys, number of units and anticipated population as submitted on 11 May 2026.

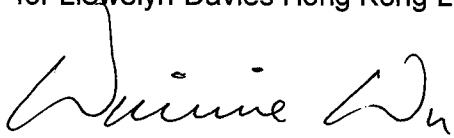
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Town Planning Board
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Thank you for your kind attention. Should there be any queries, please do not hesitate to contact the undersigned at [REDACTED]

Yours faithfully
for Llewelyn-Davies Hong Kong Ltd

A handwritten signature in black ink, appearing to read 'Winnie Wu', with a stylized flourish at the end.

Winnie Wu
Planning Director

WW/jc
Encl

Section 16 Planning Application for Proposed Minor Relaxation of Plot Ratio Restriction for Permitted Flat Use (Proposed Amendments to an Approved Scheme with Minor Relaxation of Plot Ratio Restriction under Application No. A/H6/91) at 4, 4A, 4B and 4C Tai Hang Road, Hong Kong (Application No. A/H6/97)

Responses to Departmental Comments

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Annex A

Planning and Design Merits of the Proposed Scheme as Compared with the Approved Scheme (Application No. A/H6/91)

Responses to Departmental Comments

	Departmental Comments	Responses to Comments
1.	Comments of Planning Department – Hong Kong District Planning Office	
1.1	<u>General Comments</u> It is noted that the current submission generally follows the broad development parameters of the previously approved scheme under Application No. A/H6/91. Nevertheless, the previous approval was granted in respect of the previous scheme and on the basis of its own planning merits, having regard to the information submitted and the circumstances at that time. The current submission should therefore be treated as a fresh application for independent consideration on its own merits. In this regard, the applicant is required to clearly demonstrate and substantiate the planning justifications and merits of the current proposal, including a clear comparison with the previously approved scheme and an explanation of whether and how any planning gain, design improvement or other material planning benefit would arise from the current submission. Besides, please ensure that all revised plans, schedules, drawings and technical information submitted under the current application are consistent with the planning statement and appendices. We have the following observation/comments from district planning perspective:	Noted.

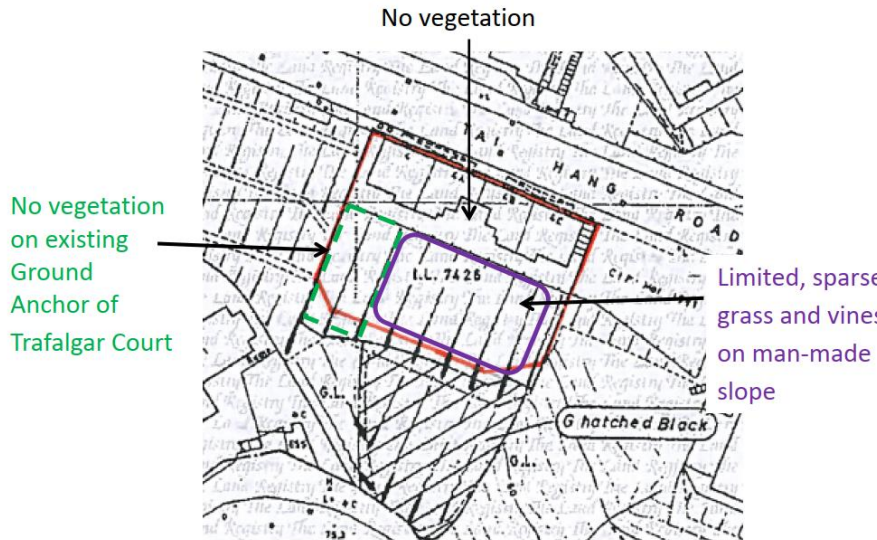
	Departmental Comments	Responses to Comments
1.2	<u>Planning Merit / Local Gain</u> Please clarify and substantiate the planning merits of the current development proposal, and explain what local gain / planning gain would be achieved as compared with the previously approved scheme under Application No. A/H6/91 (such as site planning, building design, landscaping, traffic and environmental aspects, etc) with relevant comparative information and supporting justifications.	The Proposed Scheme has maintained the planning and design merits of the Approved Scheme, and also introduces substantial additional planning gains and design improvements. These include: (i) reducing the overall building height from 145.6mPD to 142.2mPD; (ii) reducing the number of carparking floors from 4 to 3, and adjusting the corresponding floor-to-floor height from 4.5m to 3.5m, thereby lowering the podium height from 57mPD to 45.2mPD; (iii) adopting a stepped podium design, with the lower portion of the podium reaching up to 38.2mPD only, instead of 45.2mPD; (iv) breaking down the overall development bulk by introducing a covered landscape area on 6/F between the podium and the residential tower atop; (v) facilitating cross-ventilation through the 6/F covered landscape area and the 28/F sky garden; (vi) providing quality landscaping including periphery planters and vertical greening (VG) at the lower portion of the podium, offering a more comfortable environment for pedestrians compared to the vehicular access, L/UL bay and turn table in the Approved Scheme; (vii) maintaining provision of VG, and adjusting the location of VG to lower floors closer to the at-grade pedestrian level; (viii) offering a greater buffer between the podium and the “Green Belt” zone; (ix) maintaining the provision of private open space of 1m² per person in accordance with the HKPSG; and (x) further addressing the continuous housing demand. For details and illustrations of these planning and design merits, please refer to Annex A of this RtoC table.

	Departmental Comments	Responses to Comments
1.3	<u>Building Design</u> One of the planning merits of the previously approved scheme under Application No. A/H6/91 is the proposed private open space at the north-western part of the Site which would provide visual and physical permeability at pedestrian level and help to reduce the wall effect along lower Tai Hang Road. However, it is noticed that under the current scheme, the podium spans along the entire lot fronting lower Tai Hang Road without building gap despite a reduction in car parking space provision for the proposed development. Please explain the rationale behind the change in design and advise whether there will be any architectural/design features incorporated to mitigate the impact of visual and physical permeability at the pedestrian level.	Under the Approved Scheme, although the podium footprint did not extend to the northwestern corner of the site, this “open area” at the northwestern corner of the site was not for private open space use, but was occupied by a vehicular access and loading/unloading bay, with a turn table for vehicular use, offering minimal amenity and aesthetic value. By contrast, under the Proposed Scheme, the Applicant has introduced an enhanced podium design, by reducing the number of car parking floors from 4 to 3 and adjusting the corresponding floor-to-floor height from 4.5m to 3.5m. As a result, the podium height is reduced from 57mPD to 45.2mPD, representing a significant reduction of 11.8m (about 21%). After reducing the podium height significantly, the podium length has to be extended along the frontage of Tai Hang Road inevitably to accommodate the necessary parking and E&M facilities. Yet, effort has been made to minimize the height of the extended portion of the podium as far as practicable. Compared with the height of the main portion of the podium at 45.2mPD, the height of the extended portion of the podium is minimized to 38.2mPD only, facilitating air ventilation above. To further mitigate its bulk, quality landscaping is incorporated on the flat roof of the podium, with planters provided along the podium edges in the northern (facing Tai Hang Road), western and southern sides to enhance the landscape and amenity. Vertical greening is also provided along the podium façades in the northern (facing Tai Hang Road) and western sides, which helps shield the retaining slope structure at the back to provide effective visual relief. For details and illustrations, please refer to Annex A of this RtoC table.
1.4	Please advise whether the proposed development complies with the ‘Sustainable Building Design Guidelines’.	Please be advised that the proposed development will comply with the Sustainable Building Design Guidelines.

	Departmental Comments	Responses to Comments																						
1.5	<u>Gross Floor Area (GFA)</u> For the GFA of approximately 9,730.12 sqm as stated in Table 2.1, please specify whether any ancillary facilities (such as residents' recreation facilities, E&M installations, or carparking provisions) have been assumed to be exempted from the GFA calculation; please also clarify the basis of the GFA calculation and whether any covered landscape area, lift lobbies/common areas, plant rooms, loading/unloading facilities, roof structures and/or other ancillary facilities/features have been assumed to be exempted from and/or disregarded in the GFA calculation.	Please find below a summary of features to be exempted / disregarded from GFA calculations: <table><tr><th colspan="3">Features to be exempted from GFA Calculations</th></tr><tr><td>1</td><td>Balconies and utility platforms</td><td rowspan="5">Subject to the overall cap of 10% of PNAP APP-151</td></tr><tr><td>2</td><td>Non-structural prefabricated external wall</td></tr><tr><td>3</td><td>Guard room and lavatory for management staff and owners' corporation office</td></tr><tr><td>4</td><td>Residents' recreation facilities (Max. 5% of GFA)</td></tr><tr><td>5</td><td>Larger lift shaft (Max. 3.5% of GFA)</td></tr><tr><th colspan="3">Features to be disregarded from GFA Calculations</th></tr><tr><td>1</td><td>Essential Plant Room, such as Lift Machine Room, TBE Room, Refuse Storage Chamber, FSI, Meter Room, Potable and Flushing Water Tank, Pipe Duct etc.</td><td rowspan="2">100% disregarded subject to compliance with prerequisites in Para. 6&7 of PNAP APP-151</td></tr><tr><td>2</td><td>Carpark</td></tr></table>	Features to be exempted from GFA Calculations			1	Balconies and utility platforms	Subject to the overall cap of 10% of PNAP APP-151	2	Non-structural prefabricated external wall	3	Guard room and lavatory for management staff and owners' corporation office	4	Residents' recreation facilities (Max. 5% of GFA)	5	Larger lift shaft (Max. 3.5% of GFA)	Features to be disregarded from GFA Calculations			1	Essential Plant Room, such as Lift Machine Room, TBE Room, Refuse Storage Chamber, FSI, Meter Room, Potable and Flushing Water Tank, Pipe Duct etc.	100% disregarded subject to compliance with prerequisites in Para. 6&7 of PNAP APP-151	2	Carpark
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1.6	Please provide a detailed breakdown of the GFA concessions applied under the current submission; including a clear schedule showing domestic GFA, ancillary floor area, areas counted and not counted towards GFA, and the basis/details of any GFA exemption and/or concession claimed under the current scheme.	Ditto.																						

	Departmental Comments	Responses to Comments																		
1.7	Please provide a clear comparison of the major development parameters between the current submission and the previously approved scheme under Application No. A/H6/91, including site area, GFA, plot ratio, number of storeys, number of carparking levels, number of flats, private open space provision, and major ancillary facilities.	A comparison of the major development parameters is shown in the updated Table 2.1 of the Planning Statement under Attachment 1 .																		
1.8	<u>Clarification on ancillary uses</u> Please clarify what kinds of residents’ recreational facilities will be provided with details, including their nature, location and floor area.	The residents’ recreational facilities comprise a residents’ clubhouse with GFA of about 462m ² (exempted from GFA calculation according to PNAP APP-104) located on 29/F of the proposed development. The residents’ clubhouse will feature various amenities, including multi-purpose rooms, gym, children’s play area, reading room etc., subject to refinement during detailed design stage.																		
1.9	<u>Flat mix</u> Given the proposed increase in the number of flats from 61 to 176, please provide a detailed flat mix schedule, including the number of units by flat type, size of each unit type, number of units on each floor, and floor-by-floor unit distribution.	The indicative flat mix schedule is as follows: <table><tr><th>Flat Size</th><th>No. of Units and Location</th></tr><tr><td>FS ≤ 40:</td><td>54 units (located on 7/F – 27/F)</td></tr><tr><td>40 < FS ≤ 70:</td><td>108 units (located on 7/F – 27/F)</td></tr><tr><td>100 < FS ≤ 130:</td><td>12 units (located on 30/F – 32/F)</td></tr><tr><td>160 < FS:</td><td>2 units (located on 33/F)</td></tr></table> The number of units on each floor is as follows: <table><tr><th>Floor No.</th><th>No. of Units per Floor</th></tr><tr><td>7/F – 27/F:</td><td>9 units per floor</td></tr><tr><td>30/F – 32/F:</td><td>4 units per floor</td></tr><tr><td>33/F:</td><td>2 units per floor</td></tr></table> Please note that the above information is indicative and for reference only and subject to refinement during detailed design stage.	Flat Size	No. of Units and Location	FS ≤ 40:	54 units (located on 7/F – 27/F)	40 < FS ≤ 70:	108 units (located on 7/F – 27/F)	100 < FS ≤ 130:	12 units (located on 30/F – 32/F)	160 < FS:	2 units (located on 33/F)	Floor No.	No. of Units per Floor	7/F – 27/F:	9 units per floor	30/F – 32/F:	4 units per floor	33/F:	2 units per floor
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	Departmental Comments	Responses to Comments
	<u>Floor Plans and Architectural Drawings</u>	
1.10	Please revise relevant floor plans, sections/elevations indicating corresponding floor levels, mPD levels/building height for easy reference, and clearly indicate the use of each floor/area, the main roof level and overall building height.	The mPD levels have been indicated on the relevant floor plans and sections accordingly. Please refer to the updated Figures 2.1 to 2.15 of the Planning Statement under Attachment 1 .
1.11	It is noted that part of the development will be constructed on slope. With the reference to previously approved application (No. A/H6/91), please revise the relevant plans/drawings indicating the proposed pipe pile layout, proposed building footprint, foundation/structural works, slope area, lot boundary and application site boundary;	The proposed pipe pile layout has been indicated on the updated Figure 2.1 of the Planning Statement under Attachment 1 .
1.12	According to Figure 2.14, please clarify whether the dotted line indicates relevant slope treatment/slope cutting works; and please advise whether aforementioned works will be done outside the application site boundary; please also clarify whether any retaining works, stabilisation works or other geotechnical works are proposed.	The dotted line indicates the existing slope within the Application Site. The proposed slope works are summarised in the Geotechnical Statement under Attachment 5 .
1.13	Please provide an area calculation schedule and relevant plans/drawings indicating the location and showing how the proposed private open space provision of about 458m ² is derived (i.e. any covered landscape area, roof area and/or other communal space is counted)	The proposed private open space will be provided at the flat roof on 3/F and the covered landscape area on 6/F. Their areas have been indicated on the updated Figures 2.5 and 2.7 of the Planning Statement under Attachment 1 for reference.
1.14	Please provide relevant plans/drawings indicating the roof floor area (including the roof floor level and details of the covered rooftop structures); and clarify the use of the roof areas/covered rooftop structures, whether such roof areas are accessible to residents or for maintenance only.	An indicative R/F plan showing the proposed roof area, proposed rooftop structures area and private flat roofs have been supplemented in Figure 2.13 of the Planning Statement under Attachment 1 .

	Departmental Comments	Responses to Comments
1.15	According to our site inspection, vegetations are found on the slope which located within the application site boundary. Please clarify whether any tree felling/removal of vegetation will be carried out; and please provide details on the extent of vegetation/tree affected, if any, and whether any tree preservation, transplanting, pruning and/or compensatory planting proposal will be involved.	Please be clarified that no trees are located within the Application Site. The slopes within the Application Site are entirely man-made retaining structures with limited, sparse grass and vines only.  Base Plan extracted from Lease of IL 7426
1.16	It is noted that a covered landscape area is proposed on the 2/F. Please clarify if any structures/facilities will be provided in this area and provide details (i.e. proposed landscape proposal/plan).	A landscaped flat roof, a covered landscape area and a sky garden are provided on 3/F, 6/F and 28/F respectively. The Indicative Landscape Plans are provided in Figures 2.16 to 2.18 of the Planning Statement under Attachment 1 for reference.

	Departmental Comments	Responses to Comments																																																																																																													
1.17	<u>Traffic and Transport Aspects</u> Tai Hang Road and its junctions are all along suffered from traffic and road safety concerns, given the proposed increase in the number of flats from 61 to 176, please clarify whether the current proposal would result in any change in local traffic generation and traffic impact, in particular potential impact on Tai Hang Road and nearby junctions / local road network, as well as burden to the use of public transport.	Although the number of flats has increased from 61 to 176, the average flat size in the current proposal is smaller than that of the approved scheme. Since smaller flat sizes have lower trip rates and trip generations, the overall traffic generation between the two schemes is similar. Therefore, the current proposal will not cause any adverse traffic impacts compared to the approved scheme. Table 4.6 Estimated Traffic Generations and Attractions of Proposed Development <table><tr><th rowspan="3">Proposed Development</th><th rowspan="3">Avg Flat Size (m²)</th><th rowspan="3">Adopted Flat Size Trip Rate (m²)</th><th rowspan="3">No. of Flat</th><th colspan="2">AM Peak Hour</th><th colspan="2">PM Peak Hour</th></tr><tr><th>Gen.</th><th>Att.</th><th>Gen.</th><th>Att.</th></tr><tr><th colspan="4">pcu/hr</th></tr><tr><td rowspan="6">Approved Scheme (A/H6/91) [A]</td><td>100 < FS ≤ 130</td><td>130</td><td>24</td><td>7</td><td>4</td><td>4</td><td>5</td></tr><tr><td>130 < FS ≤ 160</td><td>160</td><td>24</td><td>8</td><td>5</td><td>5</td><td>6</td></tr><tr><td rowspan="3">160 < FS</td><td>165</td><td>8</td><td>3</td><td>2</td><td>2</td><td>2</td></tr><tr><td>270</td><td>4</td><td>1</td><td>1</td><td>1</td><td>2</td></tr><tr><td>390</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td></tr><tr><td colspan="2">Sub-Total</td><td>61</td><td>20</td><td>13</td><td>13</td><td>16</td></tr><tr><td rowspan="5">Proposed Scheme [B]</td><td>FS ≤ 40</td><td>60</td><td>54</td><td>6</td><td>4</td><td>2</td><td>3</td></tr><tr><td>40 < FS ≤ 70</td><td>70</td><td>108</td><td>12</td><td>8</td><td>5</td><td>6</td></tr><tr><td>100 < FS ≤ 130</td><td>130</td><td>12</td><td>3</td><td>2</td><td>2</td><td>2</td></tr><tr><td>160 < FS</td><td>180</td><td>2</td><td>1</td><td>1</td><td>1</td><td>1</td></tr><tr><td colspan="2">Sub-Total</td><td>176</td><td>22</td><td>15</td><td>10</td><td>12</td></tr><tr><td colspan="4">Net Difference [B] – [A]</td><td>2</td><td>2</td><td>-3</td><td>-4</td></tr><tr><td colspan="4">Net Difference (Adopted)</td><td>2</td><td>2</td><td>0</td><td>0</td></tr></table>	Proposed Development	Avg Flat Size (m ²)	Adopted Flat Size Trip Rate (m ²)	No. of Flat	AM Peak Hour		PM Peak Hour		Gen.	Att.	Gen.	Att.	pcu/hr				Approved Scheme (A/H6/91) [A]	100 < FS ≤ 130	130	24	7	4	4	5	130 < FS ≤ 160	160	24	8	5	5	6	160 < FS	165	8	3	2	2	2	270	4	1	1	1	2	390	1	1	1	1	1	Sub-Total		61	20	13	13	16	Proposed Scheme [B]	FS ≤ 40	60	54	6	4	2	3	40 < FS ≤ 70	70	108	12	8	5	6	100 < FS ≤ 130	130	12	3	2	2	2	160 < FS	180	2	1	1	1	1	Sub-Total		176	22	15	10	12	Net Difference [B] – [A]				2	2	-3	-4	Net Difference (Adopted)				2	2	0	0
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1.18	Please clarify whether the current proposal would bring about any improvement in local traffic and transport terms as compared with the previously approved scheme under Application No. A/H6/91, in particular any queuing/ waiting space, lay-by, pick-up/drop-off area, taxi stopping arrangement or visitor waiting area is proposed within the site, and whether such arrangement would affect the operation of the internal driveway and adjacent public road.	In both the approved and current schemes, pick-up/drop-off activities can be carried out within the site, and sufficient visitor car parking spaces will be provided. Such an arrangement would not affect the operation of the internal driveway or the adjacent public road in either scheme.																																																																																																													

	Departmental Comments	Responses to Comments
1.19	Please provide information on pedestrian access to/from the site, including the width of the existing pedestrian footpath, pedestrian entrance arrangement, connection to adjacent footpath/road network, and whether there would be any pedestrian-vehicular conflict point within or near the site.	The pedestrian access will be located at Tai Hang Road, where the existing footpath is about 2.1m wide. Since the pedestrian entrance is completely separated from the vehicular entrance, there will be no conflict between pedestrians and vehicles.
1.20	Please make responses to the public comments received under the current planning application in the next submission of further information.	Noted. Response to public comments are provided in the final part of this RtoC table.
2.	Comments of Planning Department – Urban Design Unit	
	Please find the following comments on the proposal from urban design perspective:	
2.1	Para. 3.1.1 – there is no information/illustration to demonstrate that the Proposed Scheme will not create additional visual and air ventilation impacts as compared to the Approved Scheme as stated in this paragraph; and	Noted. Section 3.1 of the Planning Statement under Attachment 1 has been supplemented and revised accordingly.
2.2	Paras. 3.1.1 and 4.1 – according to these paragraphs, the proposed changes under the current application is primarily attributed to the increase in the number of flats and there is no change to the overall development bulk as compared with the Approved Scheme. However, it is noted from the drawings that the design/layout of the proposed podium and residential tower is not exactly the same as the Approved Scheme under Planning Application No. A/H6/91.	Please note that the tower footprints of the Approved Scheme and the Proposed Scheme are largely similar in size and configuration, with only minor changes in the configuration/orientation of individual flats as a result of adjustments in flat mix. The Proposed Scheme has largely maintained the overall development bulk as compared with the Approved Scheme. For the enhanced podium design, please refer to our responses under Items 1.2 and 1.3 of this RtoC table. For clarity purpose, the wordings of Paras. 3.1.1 and 4.1.1 of the Planning Statement under Attachment 1 have been updated accordingly.

	Departmental Comments	Responses to Comments
3.	Comments of Architectural Services Department	
3.1	Based on the information provided, it is noted that the plot ratio of the proposed development is intended to be relaxed from 5 to 5.687, which is an increase of about 13.74%. Please provide images/photomontages showing the full extent of the proposal within its immediate surrounding context from different vantage points to demonstrate whether the proposal would be visually compatible with the existing surrounding development.	The Application Site is zoned “Residential (Group B)” on the OZP subject to a maximum BH restriction of 30 storeys (including carport). The proposed development <u>fully complies</u> with the BH restriction on the OZP. Furthermore, the Application Site is surrounded by high-rise developments. For example, Grand Deco Tower, which falls within the same OZP zoning as the Application Site, features both a higher roof level (about 162.8mPD) and a greater absolute BH (about 127.87m) than the proposed development. As such, the proposed development is considered to be visually compatible with the existing surrounding developments.
4.	Comments of Buildings Department	
4.1	Please find the following comments on the proposal under the BO: (i) Gross Floor Area (GFA) concessions (i.e. excluding/disregarding green/amenity features and non-mandatory/non-essential plant rooms and services from GFA and/or Site Coverage calculation) under PNAP APP-151 will only be considered when the pre-requisites in paragraph 6 of PNAP APP-151, including Sustainable Building Design Guidelines as stated in PNAP APP-152, have been complied with; (ii) GFA concession for private carparking spaces and loading/unloading areas may be considered when the relevant requirements as laid down in PNAP APP-2 have been complied with; and (iii) For the proposed site coverage, application for flexible site coverage under PNAP APP-132 should be made and fully justified, if applicable.	Noted.

	Departmental Comments	Responses to Comments
5.	Comments of Civil Engineering and Development Department – Geotechnical Engineering Office	
5.1	It is noted that the applicant has submitted a geotechnical statement under the previous application (No. A/H6/91) in 2021, and such statement is now referred in Section 3.6 of the Planning Statement. However, the reference geotechnical statement is not included as part of the current application. The applicant should provide an updated geotechnical statement, or a Geotechnical Planning Review Report in support of the current application.	Noted. An updated geotechnical statement is provided under Attachment 5 .
6.	Comments of Drainage Services Department	
	Please find the following comments on the submission:	
	<u>Planning Statement</u>	
6.1	Para. 3.4.2: “Stonecutter Island Treatment Works” should read as “Stonecutters Island Sewage Treatment Works”, please revise; and	Noted, Para. 3.4.2 of the Planning Statement under Attachment 1 has been updated accordingly.
6.2	There was no assessment on capacity of Stonecutters Island Sewage Treatment Works in the SIA, please provide justification on the statement.	According to the “Drainage Services Department in Brief 2024-25”, the treatment capacity of the SCISTW is 2,450,000m ³ /day. The sewage loading from the Proposed Development takes up 0.005% in capacity of the SCISTW, which remains with generous capacity to cater for the increase in sewage generated by the Proposed Development.
	<u>Sewerage Impact Assessment</u>	
6.3	Para. 4.1.2: “Stonecutter Island Sewage Treatment Works” should read as “Stonecutters Island Sewage Treatment Works”, please revise; and	Noted, Para. 4.1.2 of the SIA under Attachment 4 has been updated accordingly.
6.4	Section 7: please demonstrate the existing sewer along Tai Hang Road outside the subject site will not be surcharged after the proposed increase in sewage flow.	The calculation results summarized in Table 7-1 and Appendix 7-1 of the SIA under Attachment 4 demonstrate that the existing sewerage system has sufficient capacity to cater for the sewage generated from the Proposed Development in the future.

	Departmental Comments	Responses to Comments
7.	Comments of Environmental Protection Department	
	<u>Sewerage Impact Assessment</u>	
7.1	Please include sewage flow estimation from upstream catchments and conduct hydraulic assessment from manhole FMH7013366 to FMH7013335 to assess sewerage impact comprehensively, as increase in ADWF and peak flow estimation are observed; and	Please note that hydraulic assessment from manhole FMH7013366 to FMH7013335 has been conducted and the detailed calculation is presented in Appendix 7-1 of the SIA under Attachment 4 .
7.2	When comparing the current SIA submission against the previous one in Feb 2023, the previously proposed swimming pool and jacuzzi are no longer included in current submission. As such, the Applicant is required to confirm these non-provision.	Please be confirmed that there is no provision for swimming pool or jacuzzi under the current submission.
	<u>Environmental Assessment</u>	
7.3	Please highlight all changes in the next submission;	Noted. The changes have been highlighted in the revised EA under Attachment 3 .
7.4	It is noted that a revised Environmental Assessment (EA2) was considered acceptable in respect of condition (b) of the approved planning application (No. A/H6/91). The consultant is required to elaborate on how this submission (EA2) consumption remains valid and applicable to this planning application. Some observations are suggested (please refer to item #4).	Noted. Discussion on air quality impact with reference to EA2 has been supplemented in the new Chapter 3 of the revised EA under Attachment 3 .
	<u>Air Quality</u>	
7.5	Section 1.4.5-1.4.8 - Results in EA2 should be used to discuss the operational air quality impact since it is more updated, please remove discussion on EA1.	Noted. Discussion on EA1 has been removed from Sections 1.4.5 to 1.4.8 of the EA under Attachment 3 .

	Departmental Comments	Responses to Comments
7.6	Please elaborate and re-organize the discussion of operational air quality impact by utilizing the results in EA2 to demonstrate that there would be no adverse air quality impact for the proposed scheme: (a) Any change in emission sources. (b) Whether the discrete and contour results of SO₂ are well below the pre-amended and prevailing AQOs. Since the AQOs have been updated in 2025, more discussion on the followings should be included to support that the findings in EA2 could still demonstrate that there would be no adverse air quality impact (NO₂, RSP, FSP) for the proposed scheme. (c) Traffic data and PATH background of year 2025 were adopted in EA2, while population intake of the proposed scheme would be in year 2030. Please discuss whether the traffic data in year 2025 represents a worst traffic year, and whether there is improvement in PATH background, such that there would be improvement of air quality for the proposed development when compared with EA2. Although Section 1.4.7 suggests that the traffic forecast in year 2045 is lower than year 2040 in EA2, there is no comparison in Appendix 2.1.	Noted. Discussion on air quality impact with reference to EA2 has been supplemented in the new Chapter 3 of the revised EA under Attachment 3: (a) There are no extra emission sources identified. The surrounding major emission sources are vehicular emissions from the nearby open roads. (b) Discussion on discrete and contour results of SO₂ has been supplemented. More discussion has also been supplemented to demonstrate that there would be no adverse air quality impact (NO₂, RSP, FSP) for the Proposed Scheme. (c) In EA2, the total emissions derived based on traffic forecasts and emission factors were compared across different assessment years (completion year, +7, and +15). It is observed that the total emissions would decrease over time, making the completion year the representative worst-case scenario. Therefore, with the delay of implementation programme of the proposed development (i.e. Year 2030), it is anticipated that the total emission would decrease as compared with Year 2025. Moreover, with reference to PATH background of Year 2025 and Year 2030, it is observed that the concentration of criteria pollutant (i.e. RSP, FSP, SO₂ and O₃) would decrease as well. Furthermore, when comparing the traffic flow at peak hour of the traffic forecast in Year 2040 in EA2 and in Year 2045 in the current EA report, it is observed that there is already decrease in flow for road links in vicinity of the site (i.e. Tai Hang Road). Therefore, with lower background concentration, delay of the programme (i.e. general decrease of total emission over time), and reduced traffic flow, it is considered that there would be improvement of air quality when compared with EA2.

	Departmental Comments	Responses to Comments
	(d) Discuss the worst-affected ASRs and worst-hit levels in EA2 for NO₂, RSP and FSP, and the trend of pollutant concentrations at elevated levels, so as to support that road emission is the major emission source, and that no adverse air quality impact would be anticipated for the increased building height of the proposed scheme. (e) Compare the scheme in EA2 and the proposed scheme, including separation distance of between Tai Hang Road and the nearest air sensitive use of the proposed development, and the first level of air-sensitive use. Please check whether the covered landscaped area is an air-sensitive use. Please provide a figure overlaying the disposition for scheme in EA2 and the proposed scheme. (f) For contour results in EA2, please discuss if there is any exceedance of pre-amended and prevailing AQOs at the levels with air-sensitive use. (g) Please examine the discrete results in EA2 for the 10th highest 24-hour NO₂ and 19th highest 24-hour FSP, to evaluate if the results would also comply with the prevailing AQOs. (h) In view of the updates in model tools and AQOs, consultant could consider to adopt a delta approach with the same model tools but different sets of traffic data and assessment years to compare the concentrations of the air pollutants at all identified ASRs of the approved and the proposed scheme. If the concentrations of all pollutants at all ASRs are smaller in the proposed scheme than the approved scheme, it could be concluded that there would be no adverse air quality impact due to the proposed changes and cumulative AQIA will not be necessary.	(d) Noted. The trend of pollutant concentrations at elevated levels of the updated predicted results of the ASRs have been discussed. (e) An overlay of the current scheme and the scheme in EA2 is provided in Figure 3.1. As confirmed by the Project Architect, there will be no air sensitive use at the covered landscaped area. (f) Despite that there will be an exceedance in annual average FSP with the update of the AQOs after the approval of EA2, since the PATH background has been changed from 2025 to 2030, by utilizing PATH background 2030, the contour results for the area with air sensitive use would comply with the prevailing AQOs. (g) Discrete results in EA2 for 10th highest 24-hour NO₂ and 19th highest 24-hour FSP have been examined. Their predicted results at all selected ASRs would comply with the prevailing AQOs. (h) The predicted results have been updated by using PATH background in Year 2030. The updated results could demonstrate that there would be no adverse air quality impact at the ASRs due to the proposed changes.

	Departmental Comments	Responses to Comments
7.7	Please append the ASR locations, assessment area overlayed with PATH grids, discrete results and contour plots of EA2.	Since the contour plots have been updated with the background air pollution concentrations of PATH model (version 3.0), please refer to the updated contour plots in Appendix 3-2 of the revised EA under Attachment 3 .
7.8	Please confirm and supplement whether the proposed development would have no industrial emission.	Please be confirmed that the proposed development would have no industrial emission.
7.9	Please discuss constructional air quality impact, including the followings: (a) Identify the representative ASRs, including (IDs, name, types, heights, shortest distance to the project) during construction phase. (b) Provide the construction programme and review whether there are any concurrent projects with 500m assessment area during construction phase. If affirmative, the cumulative impact during construction phase should also be evaluated. (c) Present the representative ASRs and concurrent projects in a figure, with overlay of PATH grid and 500m assessment area. (d) Evaluate the constructional air quality impact, including dust and gaseous emissions, and provide information including but not limited to: the size of the demolition, site foundation or/and excavation area, amount of excavated materials to be handled, number of dump trucks and mechanical equipment to be used per time over the work site. (e) Discuss mitigation measures during construction phase.	Noted. Discussion on construction phase air quality impact has been supplemented in the new Section 3.6 of the revised EA under Attachment 3 .

	Departmental Comments	Responses to Comments
7.10	Please review whether the proposed carpark will satisfy the requirements, including design, maintenance and operation of the ventilation systems, stipulated in the ProPECC PN 2/96 - Control of Air Pollution in Car Park. Please indicate the location of the exhaust outlet of the ventilation system to demonstrate the exhaust air outlet will be located as far as possible from nearby air sensitive uses to avoid causing an air pollutant nuisance.	The design and operation of the proposed car park will comply with the requirements stipulated in EPD's Practice Note for Professional Persons – Control of Air Pollution in Car Parks (ProPECC PN 2/96). With the adoption of appropriate ventilation systems and design measures, the air quality associated with the proposed car park is expected to meet the air quality guidelines. The locations of the potential mechanical ventilation exhaust are shown in Figure 3.3 of the revised EA under Attachment 3 .
7.11	Appendix 2.1: Please provide TD endorsement on traffic forecast on 2045.	Noted. TD's endorsement will be provided once available.
7.12	Section 1.4.6: Typo "Therefoe"	Noted. Section 1.4.6 of the EA under Attachment 3 has been revised accordingly.
7.13	Figure 2.1a & 2.2a: The floor of figure title of 2.2a is inconsistent with 2.1a.	Noted. The title of Figure 2.2a of the EA under Attachment 3 has been revised accordingly.
7.14	Noise Model: (a) The traffic flow of "Flow ID: 2" is wrongly applied in to segments of "Fink No. 4" in noise model. (b) The traffic flow of "Flow ID: 2" is wrongly applied in to segments of "Fink No. 4" in noise model.	Noted and revised accordingly. Noted and revised accordingly.
7.15	Figure 2.2b, Appendix 2-2 & 2-5: The mitigation measure for H-05 shown in Appendix 2-2 is inconsistent with Figure 2.2b and Appendix 2-5.	Noted. Appendix 2-2 of the EA under Attachment 3 has been revised accordingly.

	Departmental Comments	Responses to Comments
8.	Comments of Food and Environmental Hygiene Department	
8.1	Please find the following comments on the proposal: (i) If provision of cleansing service for new roads, streets, cycle tracks, footpaths, paved areas etc, is required, her office should be separately consulted. Prior consent from her office must be obtained; (ii) No environmental nuisance should be generated to the surroundings; and (iii) Arrangement shall be made to dispose any waste so generated at own expenses. Please advise the waste management plan of the proposed flat use.	Noted. Noted. Noted.
9.	Comments of Hong Kong Police Force	
9.1	The applicant is advised that the proposal should not cause adverse traffic impact to the local community and each Temporary Traffic Arrangement (TTA) involving works on footpath and/or carriageway should be submitted to his office and Transport Department for comment before implementation.	Noted.
10.	Comments of Lands Department	
10.1	The application site falls within IL 7426 which is governed by a Government lease dated 1.2.1971 for a term of 75 years from 22.9.1958 as varied and modified by two letters dated 9.10.1991 and 20.6.2011 (collectively "the Lease") for private residential purposes. Notwithstanding, a land exchange application concerning the application site is under processing by his office. The Binding Basic Term Offer was accepted by the applicant and the Conditions of Exchange ("C/E") for the new lot (to be known as IL 9097) is pending execution.	Noted.

	Departmental Comments	Responses to Comments
10.2	It is noted that the application site is the subject to a s.16 planning application (Application No. A/H6/91) approved by TPB on 14.1.2022 for minor relaxation of plot ratio from 5 to 5.687 ("the Approved Scheme"). According to section 2.2 of the planning statement, the proposed amendment to the Approved Scheme under the current application includes (i) increase in the number of units from 61 to 176; (ii) adjustments to parking, loading and unloading provision; and (iii) increased provision of private open space. However, the C/E pending execution contains parking, loading and unloading requirements. The applicant shall ensure the proposed parking, loading and unloading provision complies with the parking, loading and unloading requirements stipulated under the C/E.	Noted.
11.	Comments of Transport Department	
11.1	The proposed car parking layout under Figures 2.3, 2.4 and 2.5 refers: - Please indicate the dimensions of the parking spaces and the internal access roads. - Please provide swept path analysis for private car (PC) parking spaces P5-08 to P5-15 at 5/F and the heavy goods vehicle (HGV) loading/unloading (L/UL) bay at G/F. - Please indicate the locations of the 2 motorcycle (MC) parking spaces, as they appear to be missing from the car parking layout.	The dimensions have been indicated in Figures 2.1 to 2.5 of the TIA under Attachment 2. The swept path analyses are shown in Figure 2.1(SP1) and Figures 2.5(SP1) to 2.5(SP4) of the TIA under Attachment 2. The 2 motorcycle parking spaces (M-01 & M-02) are located on 1/F next to the car ramp as show in Figure 2.2 of the TIA under Attachment 2.
11.2	Section 3 – The capacity performance assessments of the following critical junctions were included in the earlier TIA report submitted under the previous planning application in 2021. Please advise why they are not included in the current TIA report. - Gloucester Road/ Kingston Street - Gloucester Road/ Great George Street - Tai Hang Road/ Broadwood Road	Noted. The assessments of these junctions have been included in the updated TIA under Attachment 2 .

	Departmental Comments	Responses to Comments
11.3	Sections 4 and 6 – Please include the planned/committed developments in the vicinity of the proposed development and assess the cumulative traffic impact at the design year.	The planned/committed developments have been added in Section 4.2 of the TIA under Attachment 2 . As the planned/committed developments are far away from Tai Hang Road and will not increase its pedestrian flow, they are not included in the Pedestrian Impact Assessment in Section 6.
11.4	Table 4.3 “Adopted Trip Rate of Proposed Development” – Note 1 of the table 4.3 states that upper limit value was adopted for trip rates, but it appears that the mean value was adopted instead for the category “180m ² average flat size”. Please revise accordingly.	Noted. Table 4.5 (previously Table 4.3) of the TIA under Attachment 2 has been revised accordingly.
11.5	Section 6 – According to TPDM Volume 6, Clause 10.6.1.13, the LOS assessment should be calculated based on the 15-minute peak pedestrian flow instead of hourly peak pedestrian flow. Please review the calculation.	Noted. Section 6 of the TIA under Attachment 2 has been revised accordingly to calculate based on the 15-minute peak pedestrian flow.
11.6	Figures 4.1 and 4.2 – The peak flows presented in Figures 4.1 and 4.2 are the same. As the traffic generation and attraction of the proposed development and previous approved development are different, please review whether the peak flows presented in the Figures are accurate.	As shown in Table 4.6 of the TIA under Attachment 2 , the net different of traffic generation and attraction between the Approved Scheme and the Current Scheme are very small and only up to 2 pcu/hr (one-way). As the presentation on traffic flows in Figures 4.2 and 4.3 (previously Figures 4.1 and 4.2) are rounded to 5 pcu/hr, the resultant traffic flows are the same.
11.7	Appendix I of the TIA report – Regarding the junction calculation sheets, please review the lost time under the traffic signal calculation sheets as per the marked-up comments in Annex A given by his office.	Noted. The lost time under the traffic signal calculation sheets in Appendix I of the TIA under Attachment 2 has been updated accordingly.

Responses to Public Comments

	Public Comments	Responses to Comments
1.	The development intensity, PR and BH are excessive. All development parameters shall be specified and controlled under the planning approval. GFA non-accountable uses should also be included within the overall GFA cap.	The Site is subject to an approved planning application No. A/H6/91 with minor relaxation of PR from 5 to 5.687 approved by the Board on 14 January 2022. The proposed development under the current submission has maintained the approved PR of 5.687, and complies with the OZP BH restriction of 30 storeys. The features to be exempted/disregarded from GFA calculations will be determined as per relevant PNAPs and are subject to approval by the Buildings Department at the GBP stage.
2.	The development will aggravate traffic congestion and compromise fire rescue and emergency services.	A Traffic Impact Assessment (TIA) has been conducted. The results of the TIA show that the traffic generated by the proposed development can be accommodated by the existing road network, and all critical junctions and critical pedestrian sections will still operate within their capacities.
3.	The development will aggravate noise and air pollution.	An Environmental Assessment (EA) has been conducted. The results of the EA show that the proposed development is acceptable in environmental terms.
4.	The development will block the existing views and natural daylighting for surrounding developments. It will affect air ventilation and degrade the streetscape.	The proposed development complies with the OZP BH restriction of 30 storeys. In addition to maintaining the planning and design merits of the Approved Scheme, the Proposed Scheme also introduces additional planning gains and design improvements. Please refer to Annex A of this RtoC table for details.
5.	The development will overload the drainage network.	According to the Drainage Impact Assessment (DIA) submitted under the previous application in support of the Approved Scheme, no adverse drainage impact was anticipated from the development at the Application Site. Given that the Proposed Scheme is largely similar to the Approved Scheme with only changes to the number of units, the findings of the previous DIA would remain valid.

	Public Comments	Responses to Comments
6.	The development will affect slope and structural stability.	Slope stabilization works and slope stability checking will be conducted to ensure slope safety.
7.	The previous Section 16 approval has expired and cannot be treated as a valid Approved Scheme. Repeated planning submissions are an abuse of the planning system.	Subsequent to the approval of the previous planning application, the Applicant has been actively proceeding with the detailed design and implementation of the residential development. The current application is submitted to propose minor amendments to the Approved Scheme in response to the latest market trend and to address the continuous housing demand in Hong Kong.
8.	The proposal lacks community benefits or local gains.	The Proposed Scheme has maintained the planning and design merits of the Approved Scheme, and also introduces additional planning gains and design improvements. Please refer to Annex A of this RtoC table for details.
9.	With a reduced flat size, the development will lower the living quality of the residents.	In accordance with the HKPSG, not less than 1m ² of private open space per person will be provided to enhance the living quality of residents.
10.	The prolonged vacancy of the site has already generated rodent infestations, environmental degradation, and hygiene problems.	Noted. The Applicant will proceed with implementation of the proposed development after the approval of the current application and approval of GBP submission.

Annex A

Planning and Design Merits of the Proposed Scheme as Compared with the Approved Scheme (Application No. A/H6/91)

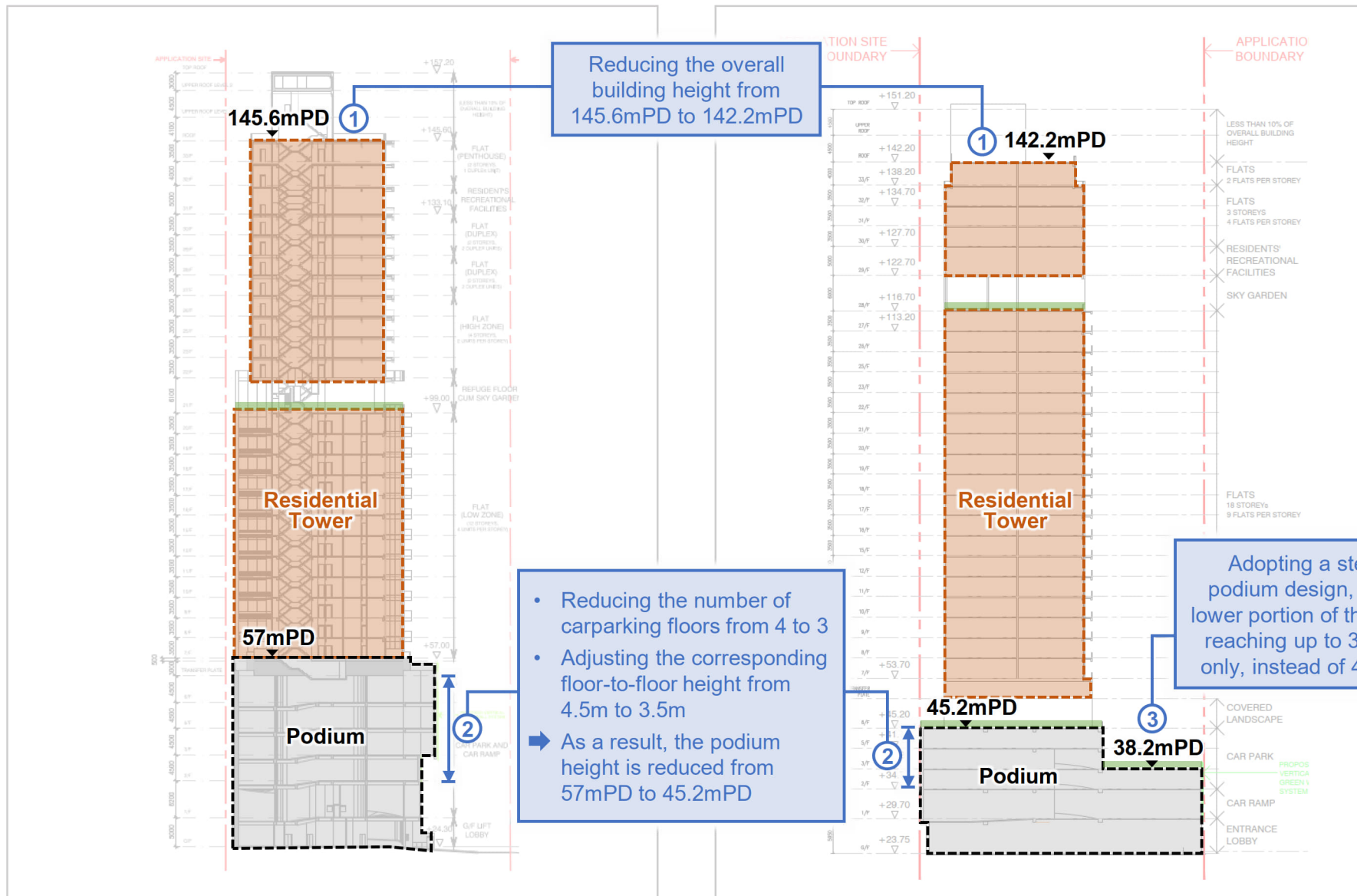
Item		Approved Scheme (Application No. A/H6/91)	Proposed Scheme
1	Overall Building Height (Figure A1)	The Approved Scheme complied with the OZP BH restriction of 30 storeys, with the main roof reaching 145.6mPD.	- In addition to complying with the OZP BH restriction of 30 storeys, the Applicant has proactively reduced the BH of the proposed development from 145.6mPD to 142.2mPD; - With a reduced BH as compared with the Approved Scheme, the proposed development will unlikely result in any additional visual or air ventilation impacts, and will ensure its visual compatibility with the surroundings.
2	Podium Height (Figure A1)	The podium has a height of 57mPD, comprising 4 carparking floors with floor-to-floor (FtF) height of 4.5m.	The Applicant has proactively optimized the podium design by reducing the number of carparking floors from 4 to 3, and adjusting the corresponding FtF height from 4.5m to 3.5m, thereby lowering the podium height to 45.2mPD. This represents a significant reduction of 11.8m (about 21%), which helps minimize the podium bulk, enhance the pedestrian streetscape and effectively mitigate its visual impact.
3	Stepped Podium Design (Figure A1)	N/A	The Proposed Scheme adopts a stepped podium design, with the lower portion of the podium reaching up to 38.2mPD only, instead of 45.2mPD, to break down the podium massing.
4	Breaking Down Development Bulk (Figure A2)	The residential tower extends directly upwards from the podium, creating a continuous and massive development bulk.	A covered landscape area is introduced on 6/F to create a separation between the podium and the residential tower atop, breaking down the development bulk.
5	Allowing Cross-Ventilation (Figure A2)	A sky garden is provided on 21/F to allow cross-ventilation through the development.	In addition to the sky garden on 28/F, a new covered landscape area is also provided on 6/F, which will further allow cross-ventilation through the development.

Item		Approved Scheme (Application No. A/H6/91)	Proposed Scheme
6	Podium Extent (Figure A3)	Under the Approved Scheme, although the podium footprint did not extend to the northwestern corner of the site, the “open area” at the northwestern corner of the site was not for private open space use, but was occupied by a vehicular access and loading/unloading bay, with a turn table for vehicular use, offering minimal amenity and aesthetic value.	- By contrast, under the Proposed Scheme, the Applicant has reduced the podium height from 57mPD to 45.2mPD (as discussed in Item 2 above). After reducing the podium height significantly, the podium length has to be extended along the frontage of Tai Hang Road inevitably to accommodate the necessary parking and E&M facilities. Yet, effort has been made to minimize the height of the extended portion of the podium as far as practicable. Compared with the height of the main portion of the podium at 45.2mPD, the height of the extended portion of the podium is minimized to 38.2mPD only, facilitating air ventilation above. - To further mitigate its bulk, quality landscaping is incorporated on the flat roof of the podium, with planters provided along the podium edges in the northern (facing Tai Hang Road), western and southern sides to enhance the landscape and amenity. Vertical greening is also provided along the podium façades in the northern (facing Tai Hang Road) and western sides, which helps shield the retaining slope structure at the back to provide effective visual relief. This offers a more comfortable environment for pedestrians compared to the vehicular access, L/UL bay and turn table in the Approved Scheme.
7	Vertical Greening (Figure A4)	Vertical greening is provided along the podium façades in the northern (facing Tai Hang Road) and western sides to serve as visual relief and enhance the street environment.	- Same as the Approved Scheme, vertical greening is provided along the podium façades in the northern (facing Tai Hang Road) and western sides to serve as visual relief and enhance the street environment; - In addition to maintaining the provision of vertical greening, the Proposed Scheme also adjusted the location of vertical greening to lower floors closer to the at-grade pedestrian level. This ensures that pedestrians passing by can experience a more pleasant and immediate green environment.

Item		Approved Scheme (Application No. A/H6/91)	Proposed Scheme
8	Buffer between Podium and the “Green Belt” Zone (Figure A5)	The podium is located very close to / directly abuts the “Green Belt” zone to the south.	A greater buffer between the podium and the “Green Belt” zone is provided.
9	Private Open Space Provision	In accordance with the HKPSG, private open space of 1m² per person is provided to enhance the living environment for the residents.	In accordance with the HKPSG, private open space of 1m² per person is provided to enhance the living environment for the residents.
10	Flat Production	61 residential units are provided.	With the proposed increase in number of units from 61 to 176, the proposed development will further contribute to housing supply, address the continuous housing demand in the short to medium term and benefiting the society. This echoes with the Government’s policy to enhance the speed, quantity, quality, and efficiency of housing production as a key to making Hong Kong a better place for living and working.

Approved Scheme (Application No. A/H6/91)

Proposed Scheme

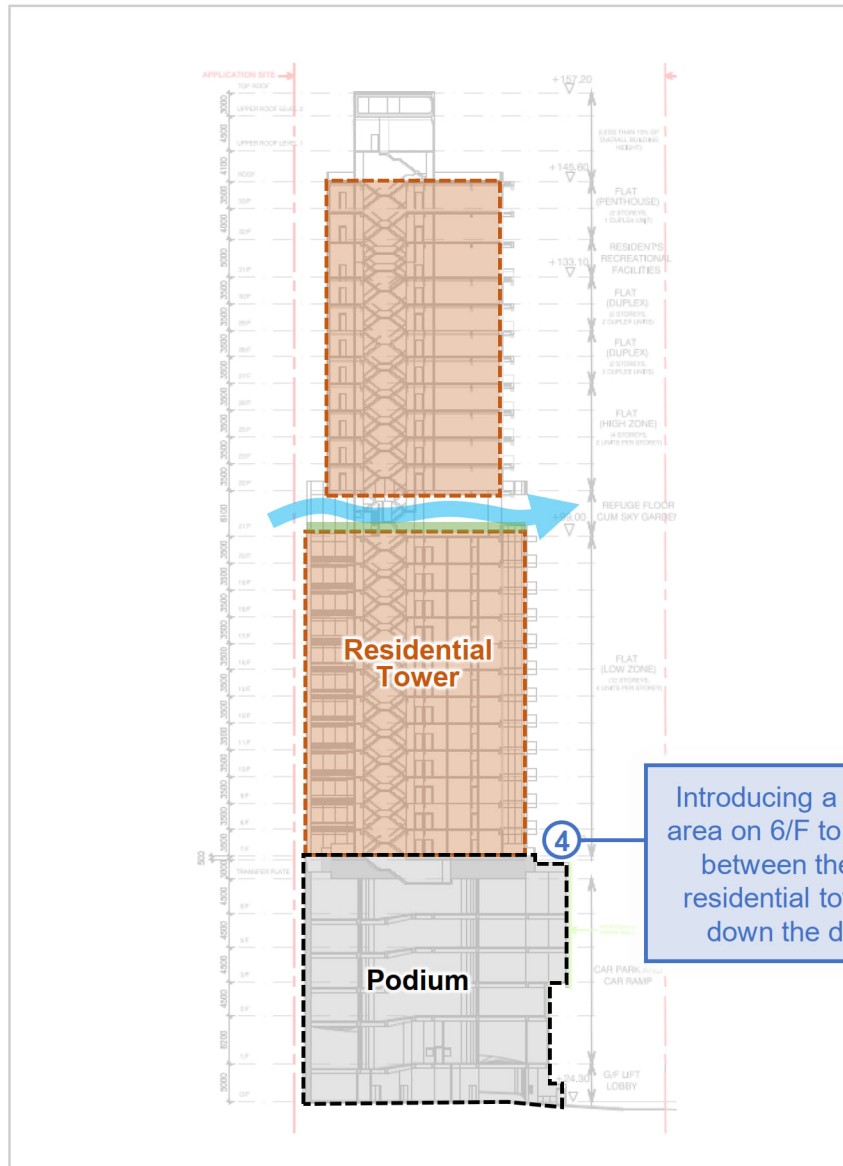


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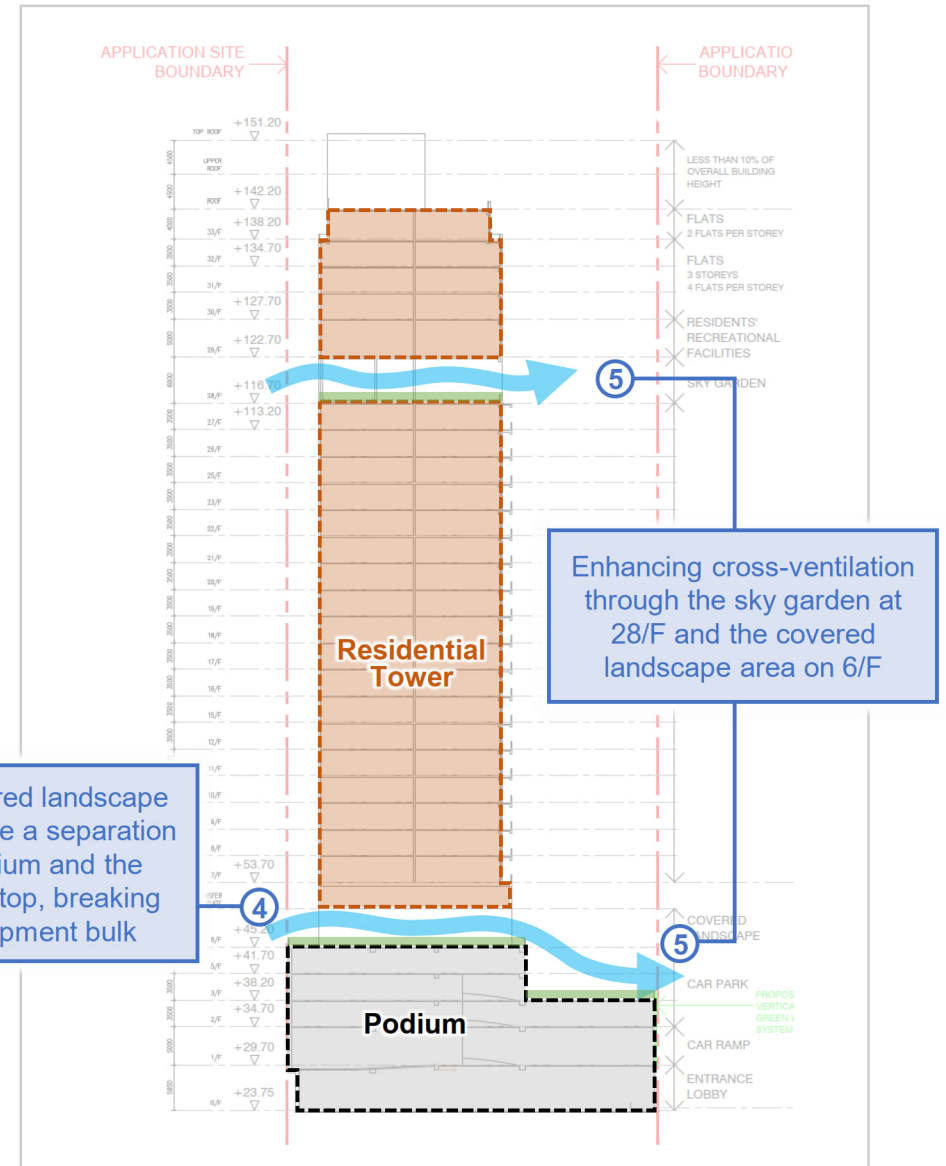
Planning and Design Merits of the Proposed Scheme as Compared with the Approved Scheme (Application No. A/H6/91)

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Rev	0	Date	Jul 2026
Scale		Figure	A1

Approved Scheme (Application No. A/H6/91)



Proposed Scheme

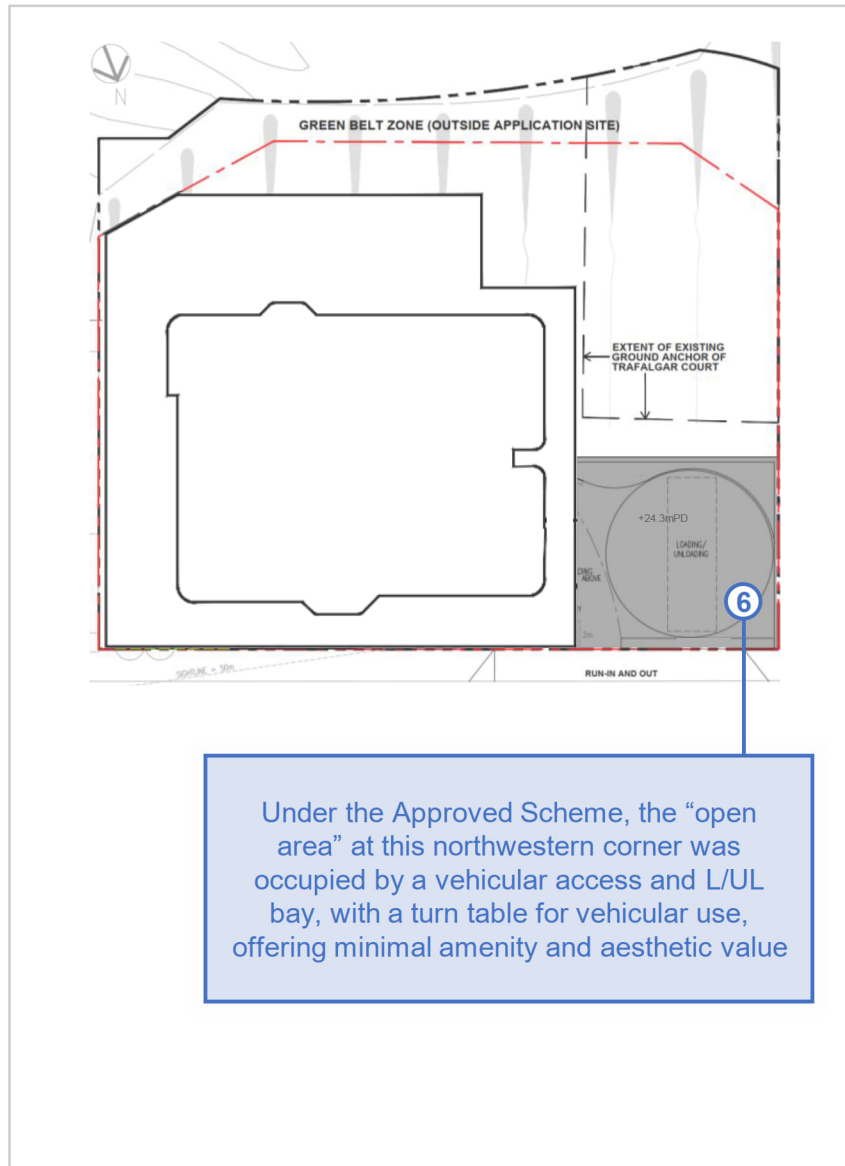


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Planning and Design Merits of the Proposed Scheme as Compared with the Approved Scheme (Application No. A/H6/91)

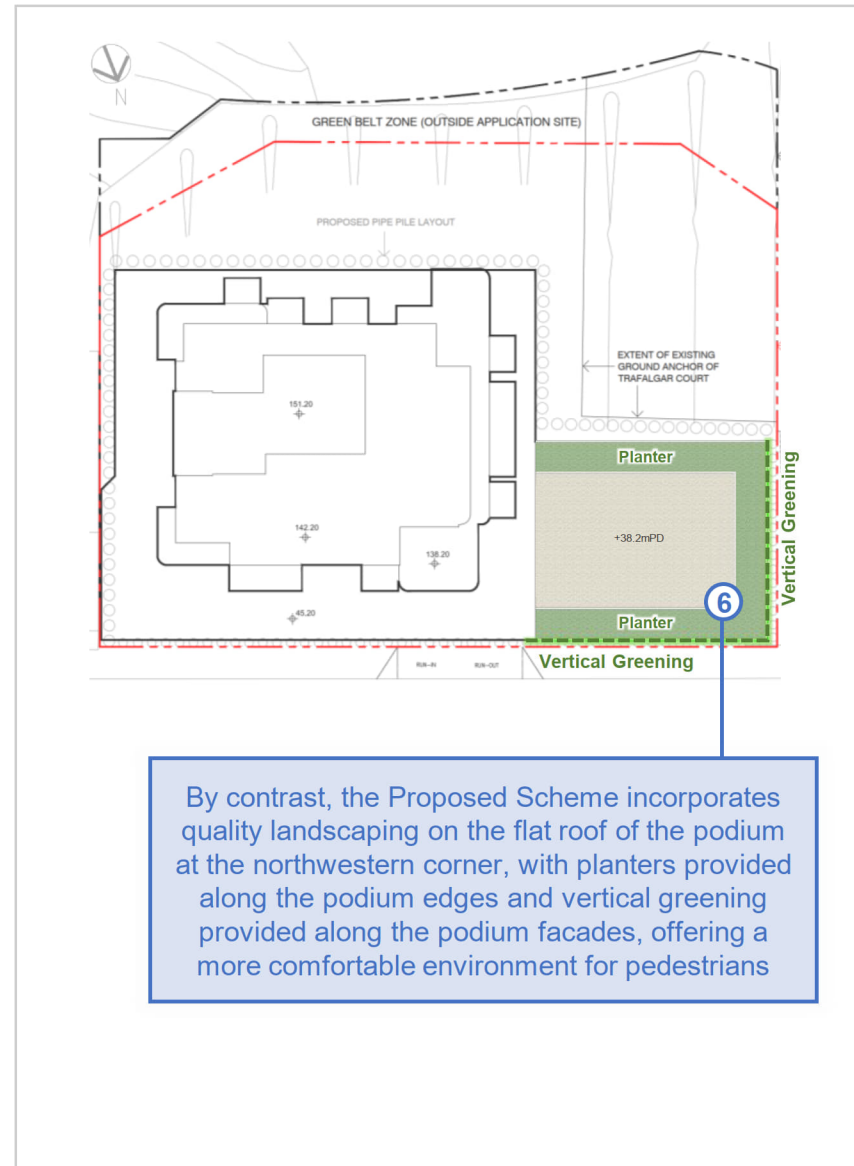
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Scale		Figure	A2

Approved Scheme (Application No. A/H6/91)



Under the Approved Scheme, the “open area” at this northwestern corner was occupied by a vehicular access and L/UL bay, with a turn table for vehicular use, offering minimal amenity and aesthetic value

Proposed Scheme



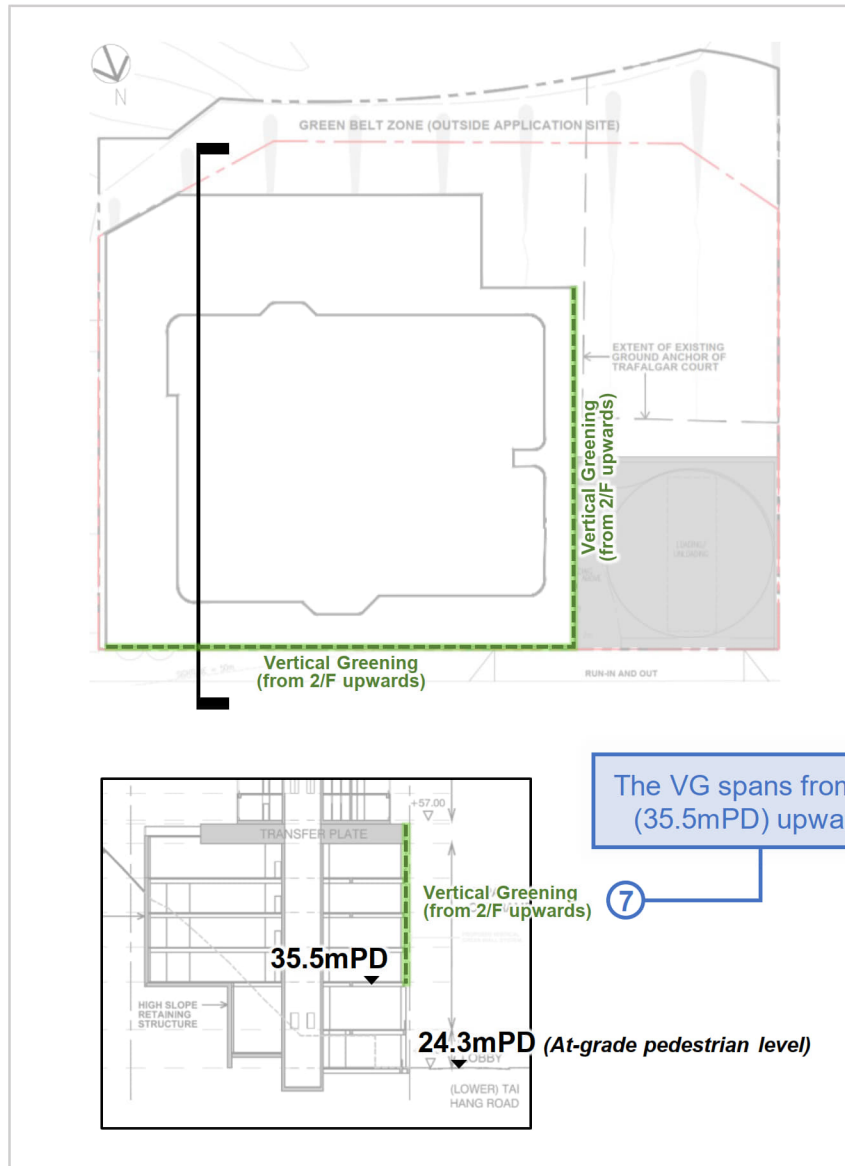
By contrast, the Proposed Scheme incorporates quality landscaping on the flat roof of the podium at the northwestern corner, with planters provided along the podium edges and vertical greening provided along the podium facades, offering a more comfortable environment for pedestrians

Title

Planning and Design Merits of the Proposed Scheme as Compared with the Approved Scheme (Application No. A/H6/91)

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Rev	0	Date	Jul 2026
Scale		Figure	A3

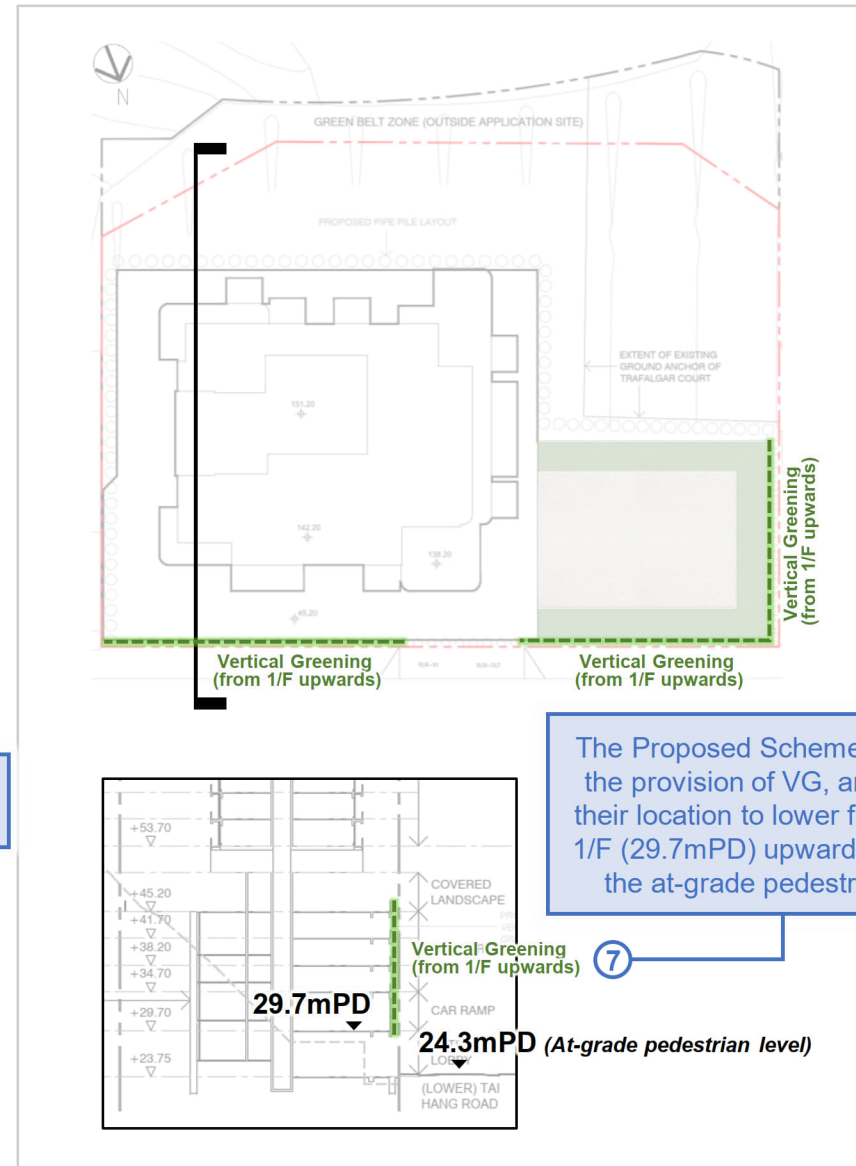
Approved Scheme (Application No. A/H6/91)



The VG spans from 2/F (35.5mPD) upwards

⑦

Proposed Scheme



The Proposed Scheme maintains the provision of VG, and adjusts their location to lower floors (from 1/F (29.7mPD) upwards) closer to the at-grade pedestrian level

⑦

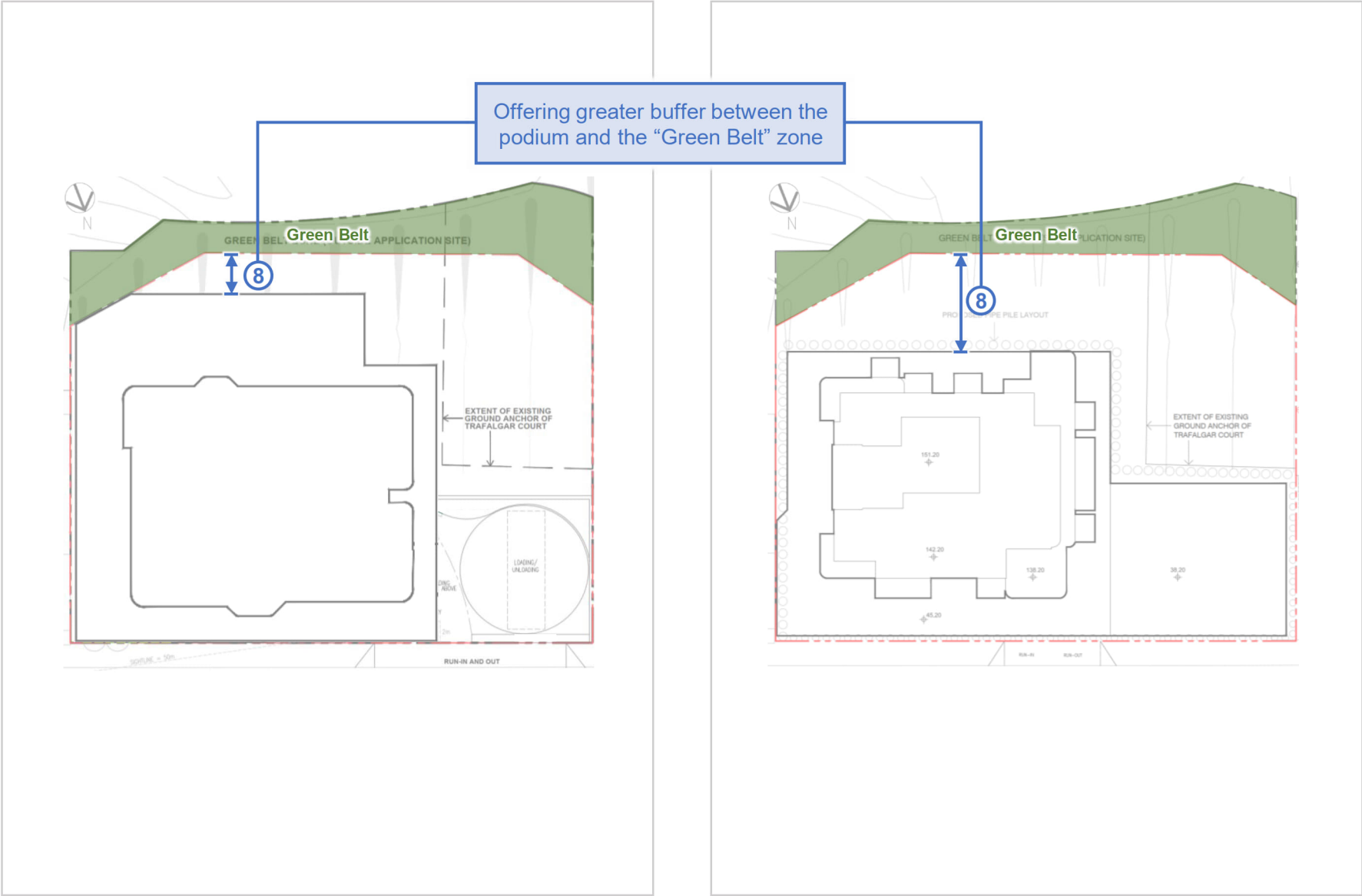
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Planning and Design Merits of the Proposed Scheme as Compared with the Approved Scheme (Application No. A/H6/91)

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Rev	0	Date	Jul 2026
Scale	Figure A4		

Approved Scheme (Application No. A/H6/91)

Proposed Scheme



Title

Planning and Design Merits of the Proposed Scheme as Compared with the Approved Scheme (Application No. A/H6/91)

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Rev	0	Date	Jul 2026
Scale		Figure	A5

Attachment 1 –

Replacement Pages of the Planning Statement

2 INDICATIVE DEVELOPMENT PROPOSAL

2.1 Indicative Development Scheme and Development Schedule

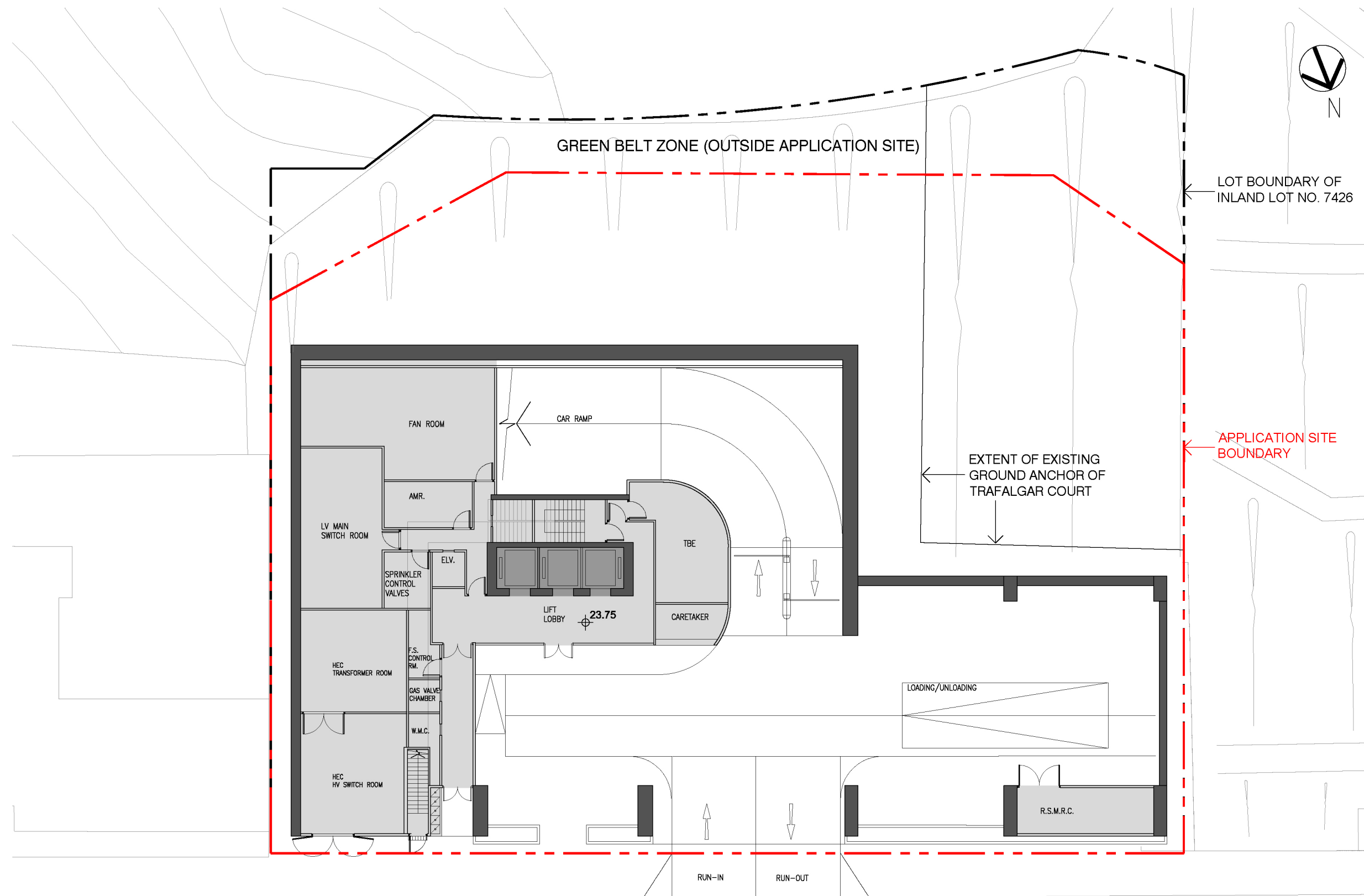
2.1.1 The Proposed Development is planned with a GFA of about 9,730.12m² (equivalent to a PR of about 5.687) comprising a 30-storey residential building (including 3 levels of carports). There is no change in GFA, PR and number of storeys as compared with the Approved Scheme. The differences are mainly attributed to the increase in number of units from 61 to 176. **Table 2.1** below shows the indicative development schedule of the Proposed Scheme as compared with the Approved Scheme. The Indicative Block Plan, Floor Plans, Sections and Landscape Plans of the Proposed Scheme are shown in **Figures 2.1 to 2.18**.

Table 2.1 Indicative Development Schedule of the Proposed Development

	Approved Scheme (No. A/H6/91)	Proposed Scheme	Difference
Site Area (about)	1,711m ²	1,711m ²	-
GFA (about)	9,730.12m ²	9,730.12m ²	-
Plot Ratio (about)	5.687	5.687	-
No. of Block	1	1	-
No. of Storeys ⁽¹⁾	30 (including 4 levels of carports)	30 (including 3 levels of carports)	-
Maximum Site Coverage 57mPD or below - Above 57mPD	Not more than 60% Not more than 30.5%	Not more than 62% Not more than 30.5%	+2% -
No. of Flats	61	176	+115 (+188.5%)
Average Flat Size (about)	159.5m ²	55.3m ²	-104.2m ² (-65.3%)
Anticipated Population (about)	165 ⁽²⁾	458 ⁽³⁾	+293 (+177.6%)
Private Open Space (not less than) ⁽⁴⁾	165m ²	458m ²	+293m ² (+177.6%)
Major Ancillary Facilities	- E&M Facilities - Clubhouse	- E&M Facilities - Clubhouse (about 462m²) ⁽⁵⁾	-

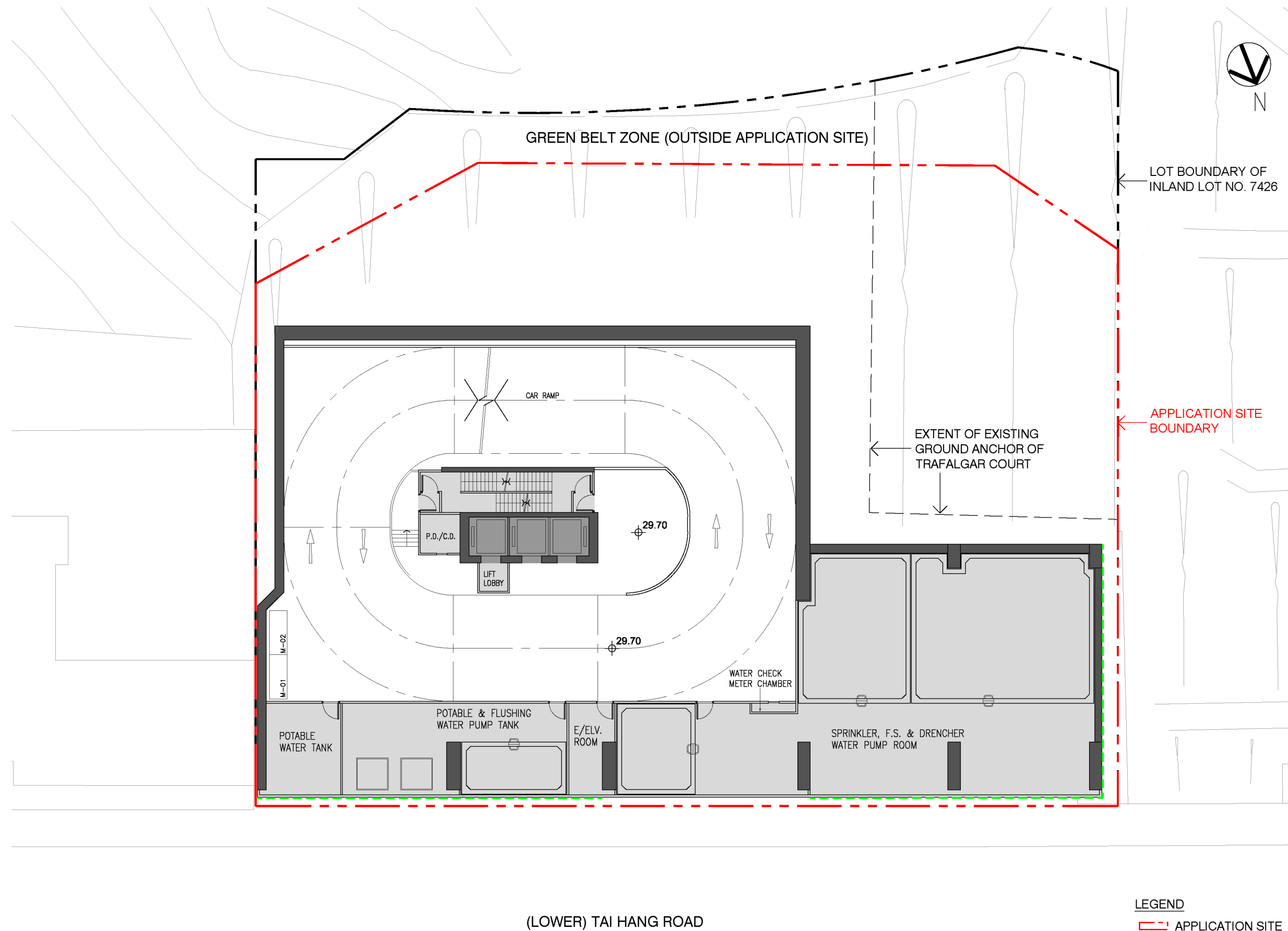
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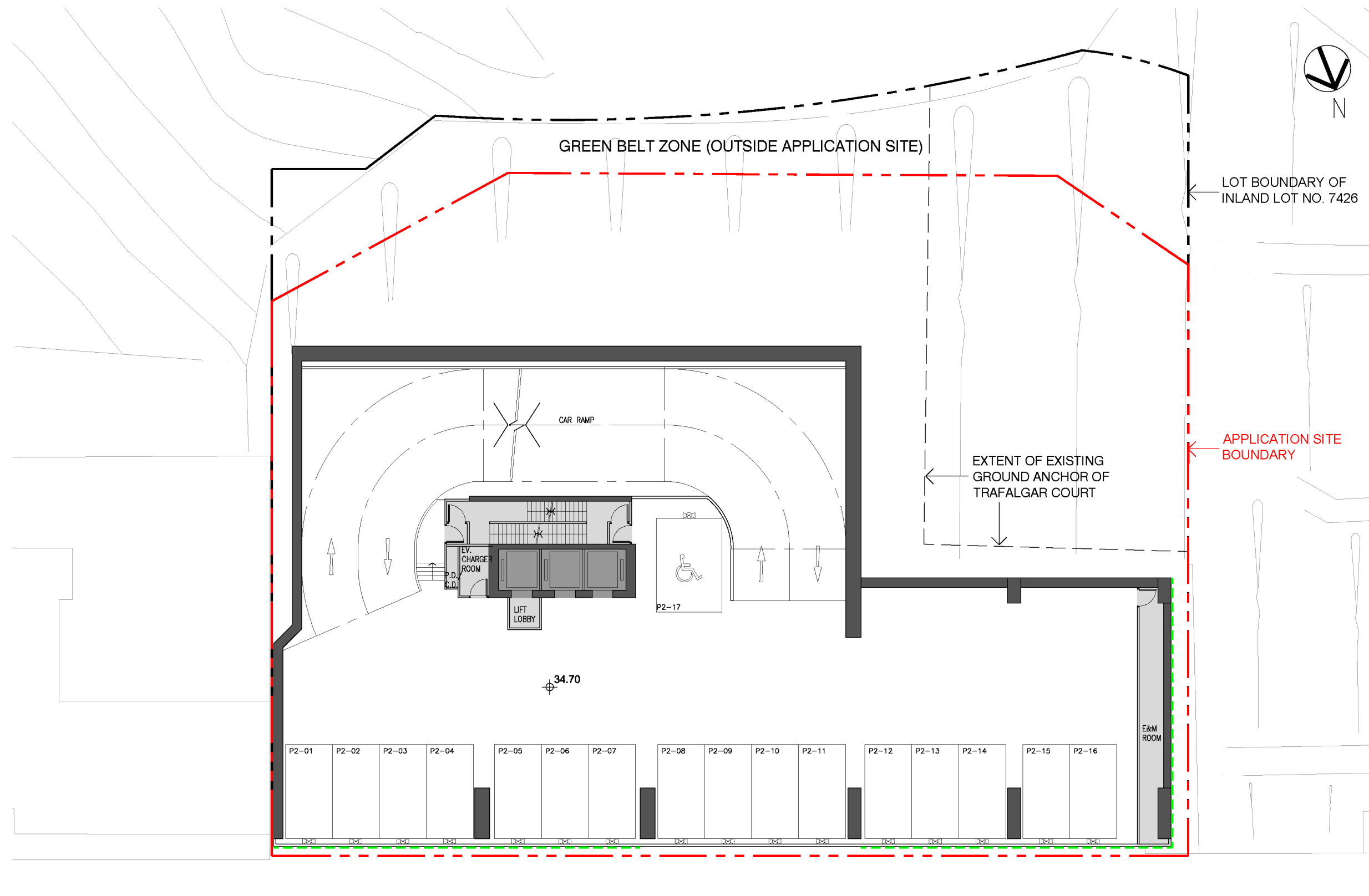
- (1) Excluding transfer plate.
- (2) Based on a person-per-flat ratio of 2.7 for Wan Chai District as per the 2016 Population By-census.
- (3) Based on a person-per-flat ratio of 2.6 for Wan Chai District as per the 2021 Population Census.
- (4) Not less than 1m² per person according to HKPSG.
- (5) The clubhouse GFA is not more than 5% of the domestic GFA and is exempted from GFA calculation.



LEGEND

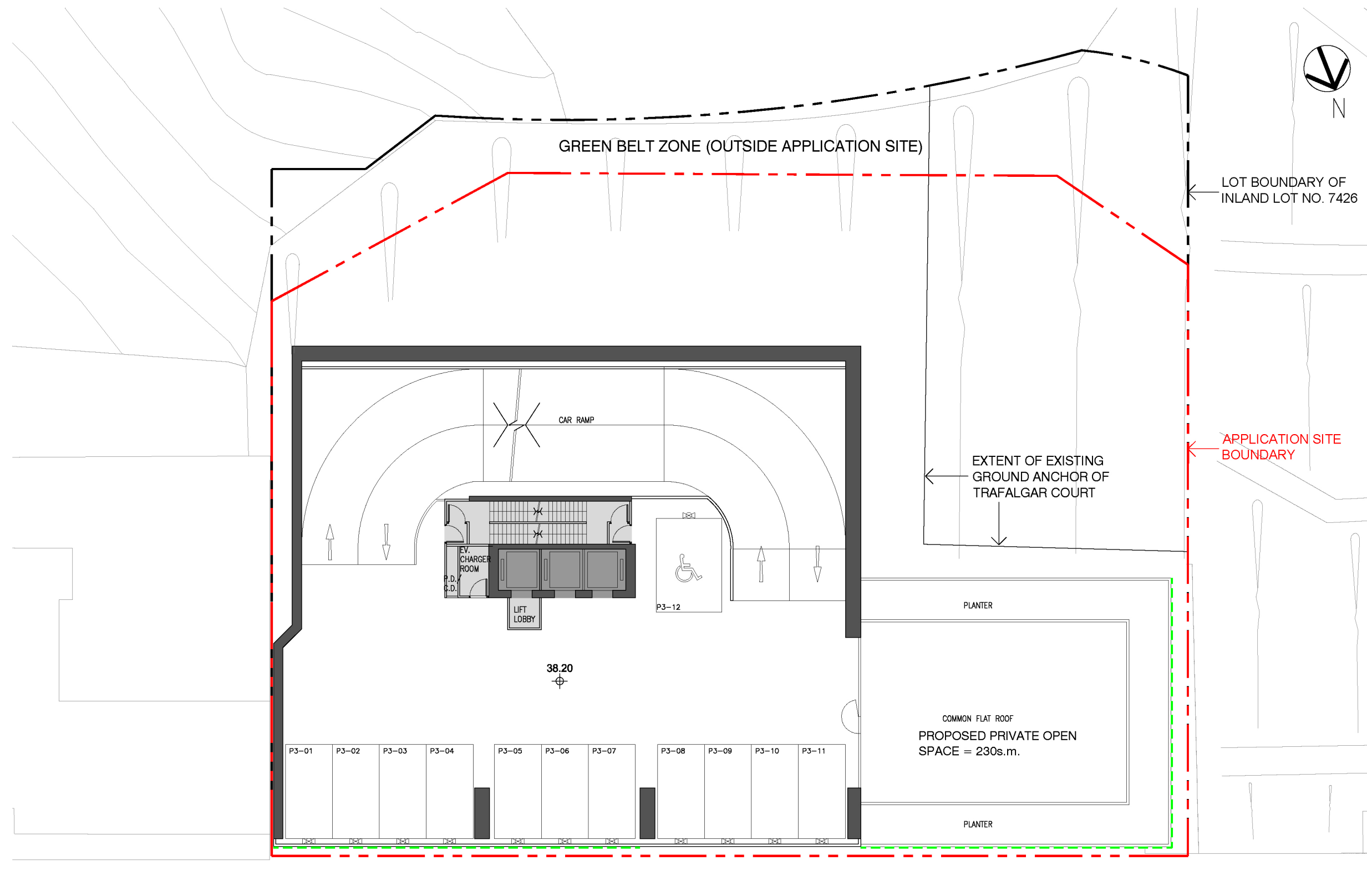
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- PROPOSED LIFT CORE
- PROPOSED ANCILLARY FACILITIES





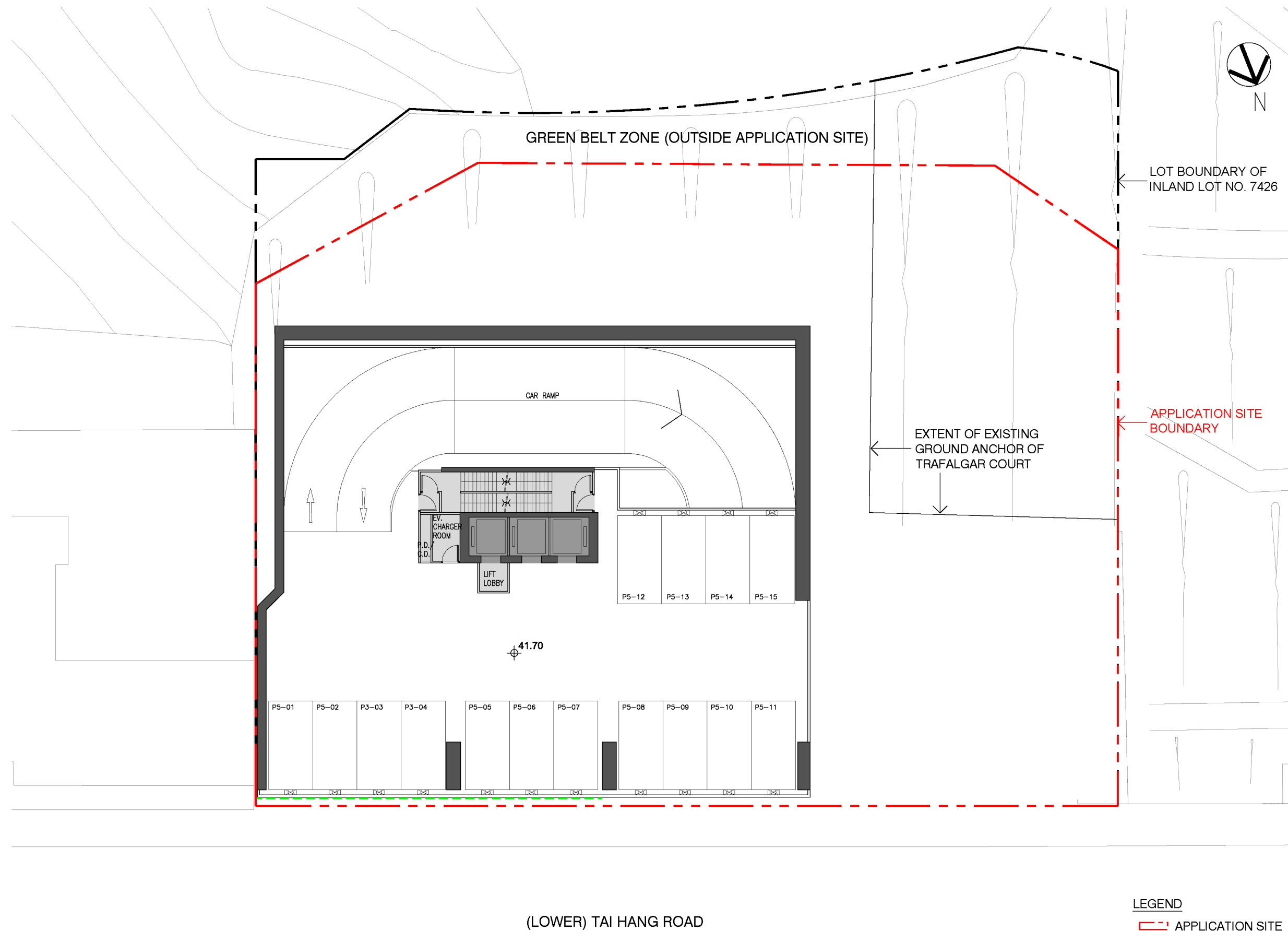
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- APPLICATION SITE
- PROPOSED LIFT CORE
- PROPOSED ANCILLARY FACILITIES
- PROPOSED VERTICAL GREEN WALL SYSTEM



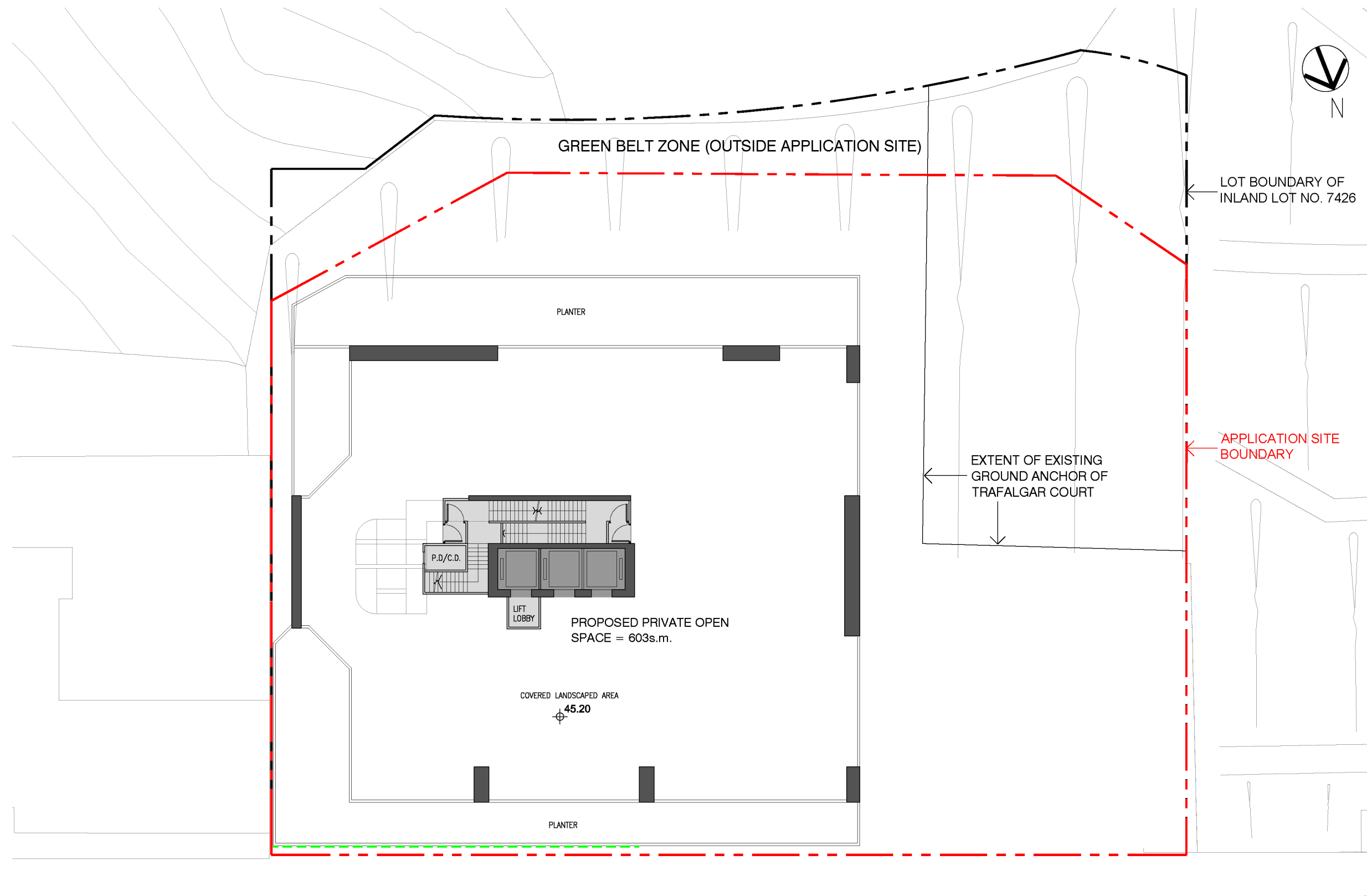
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- PROPOSED LIFT CORE
- PROPOSED ANCILLARY FACILITIES
- PROPOSED VERTICAL GREEN WALL SYSTEM



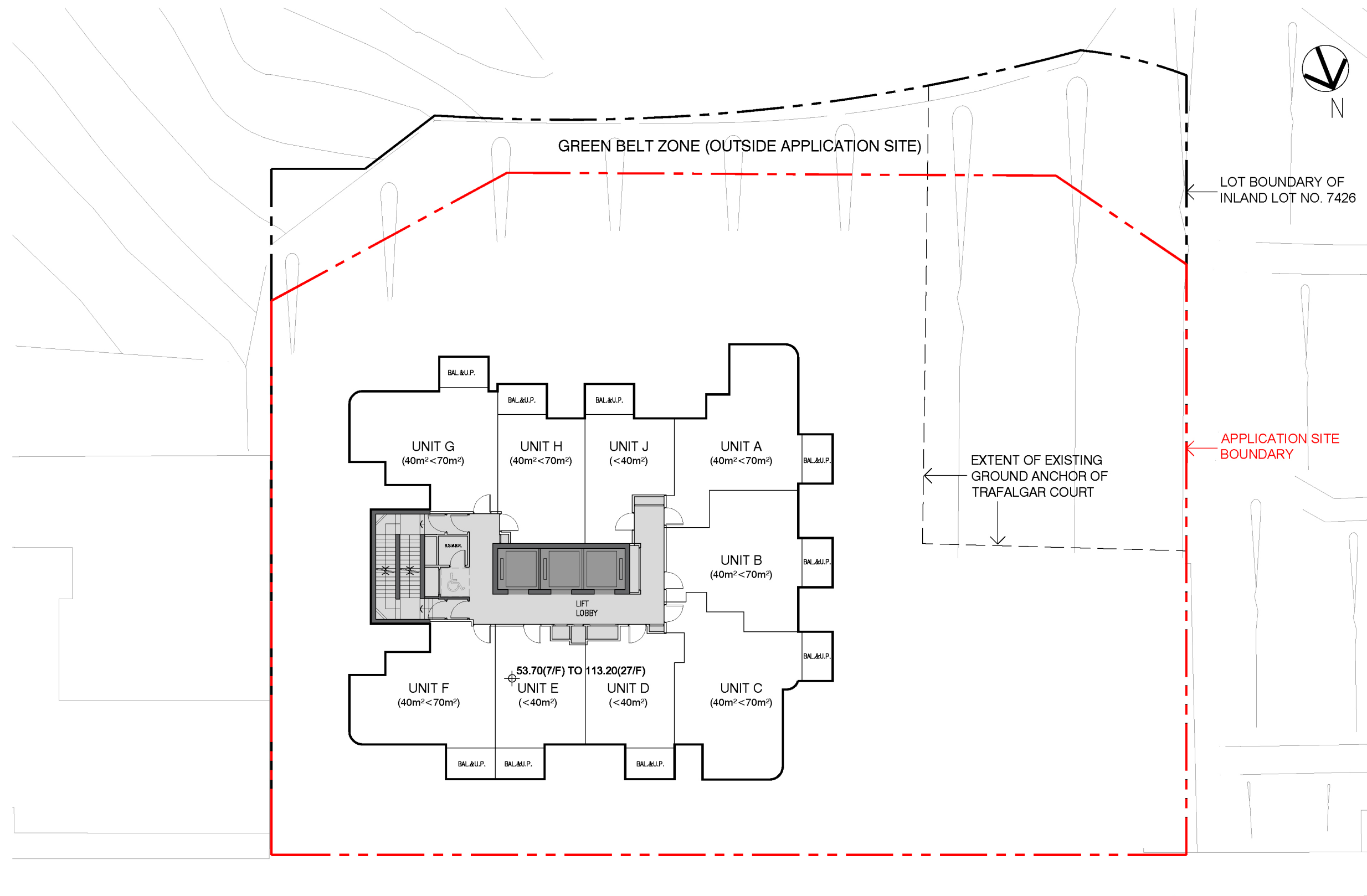
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- PROPOSED VERTICAL GREEN WALL SYSTEM



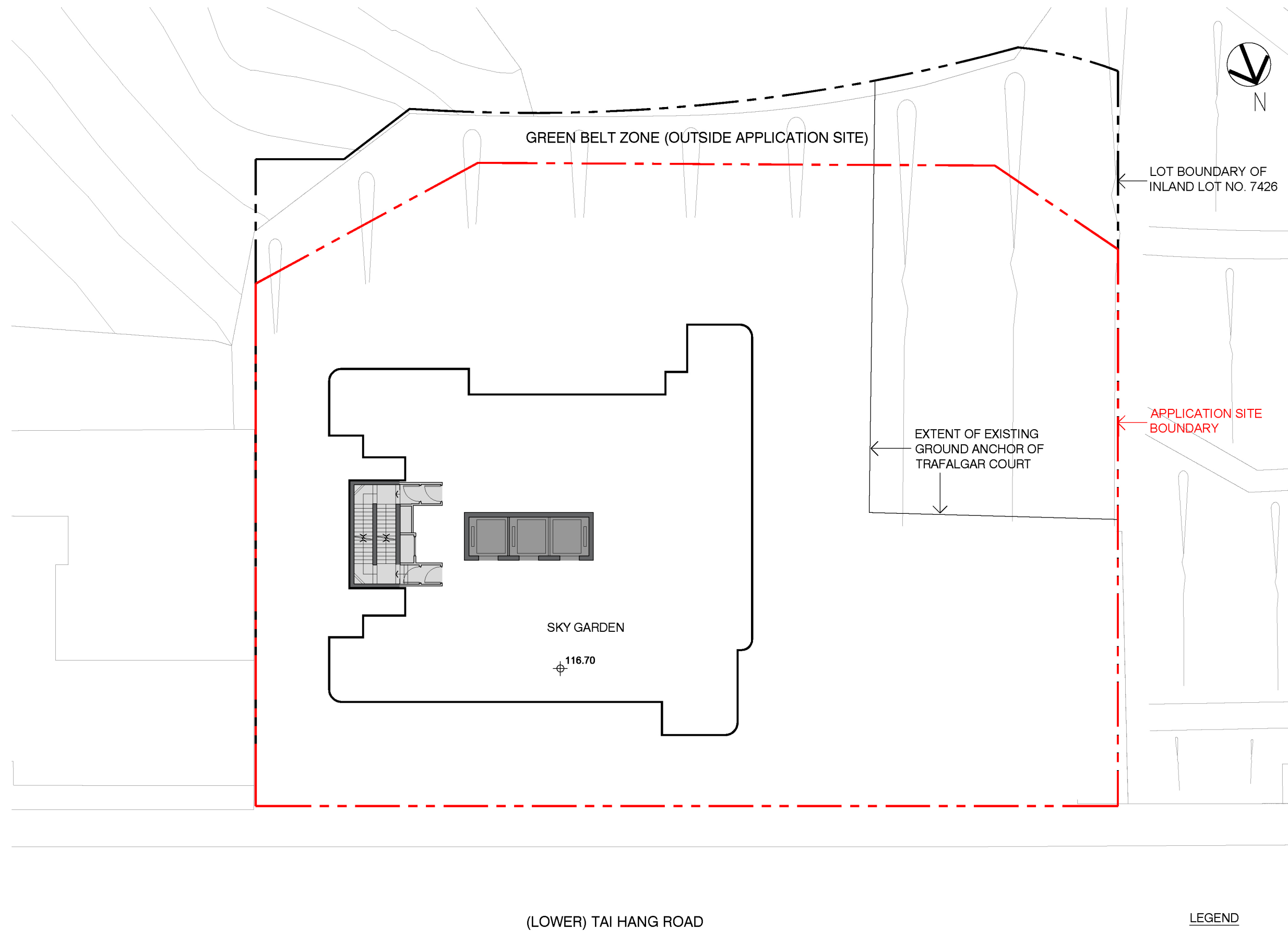
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- PROPOSED ANCILLARY FACILITIES
- PROPOSED VERTICAL GREEN WALL SYSTEM



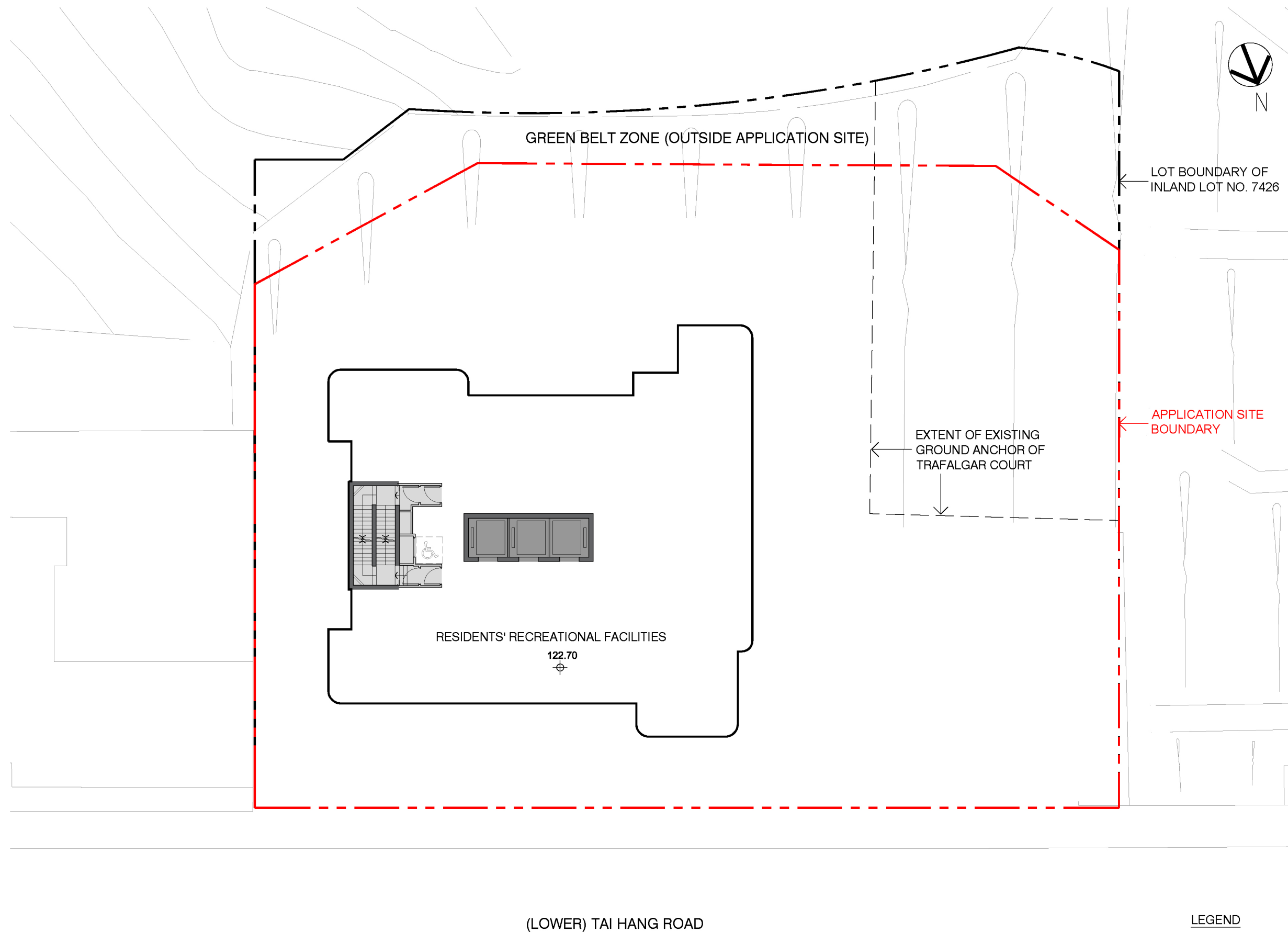
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- PROPOSED LIFT CORE
- PROPOSED ANCILLARY FACILITIES



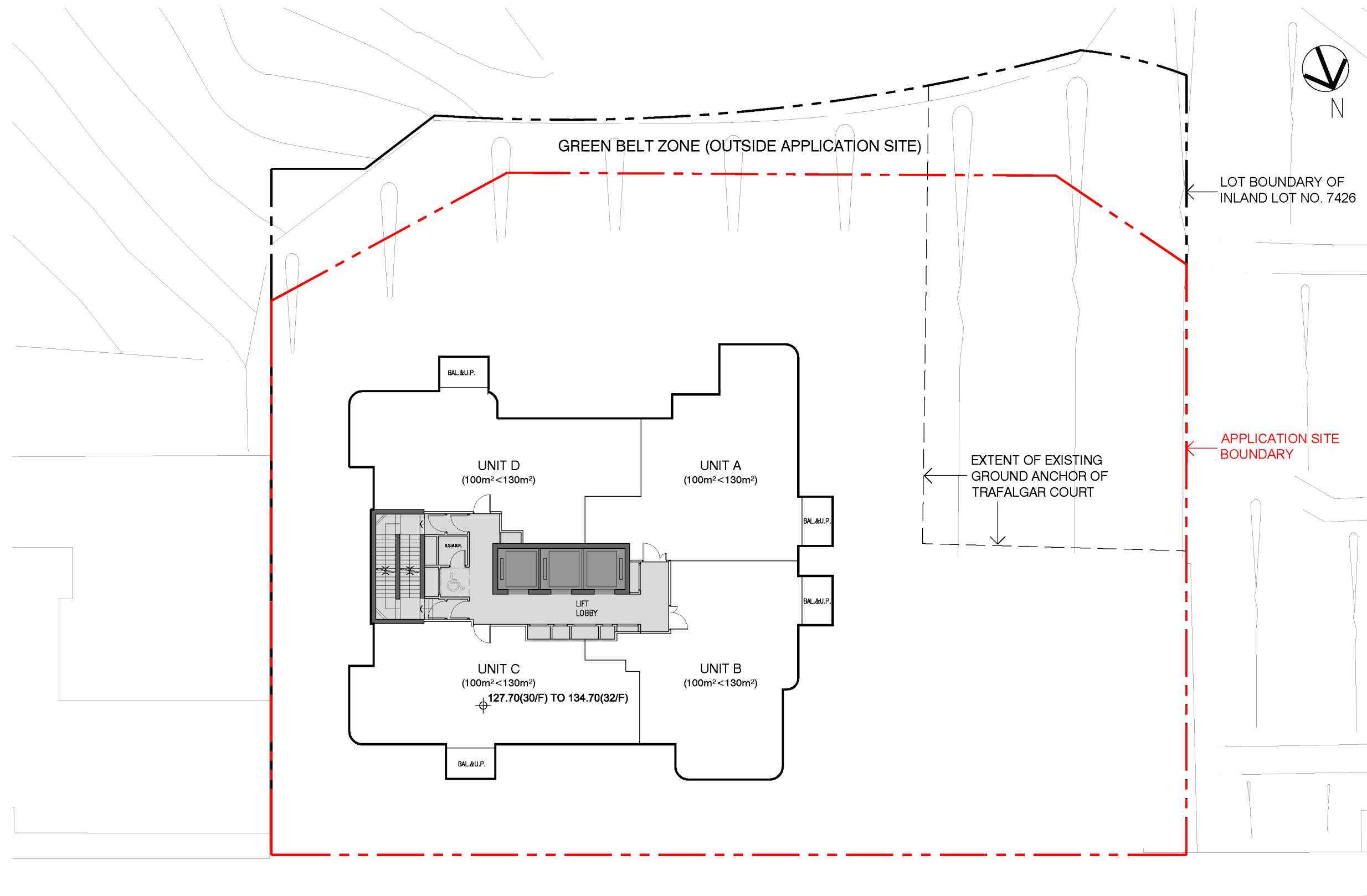
LEGEND

- APPLICATION SITE
- PROPOSED LIFT CORE
- PROPOSED ANCILLARY FACILITIES



LEGEND

- APPLICATION SITE
- PROPOSED LIFT CORE
- PROPOSED ANCILLARY FACILITIES



GREEN BELT ZONE (OUTSIDE APPLICATION SITE)

LOT BOUNDARY OF
INLAND LOT NO. 7426

APPLICATION SITE
BOUNDARY

EXTENT OF EXISTING
GROUND ANCHOR OF
TRAFALGAR COURT

BAL.&U.P.

UNIT D
(100m² < 130m²)

UNIT A
(100m² < 130m²)

BAL.&U.P.

BAL.&U.P.

UNIT C
(100m² < 130m²)

127.70(30/F) TO 134.70(32/F)

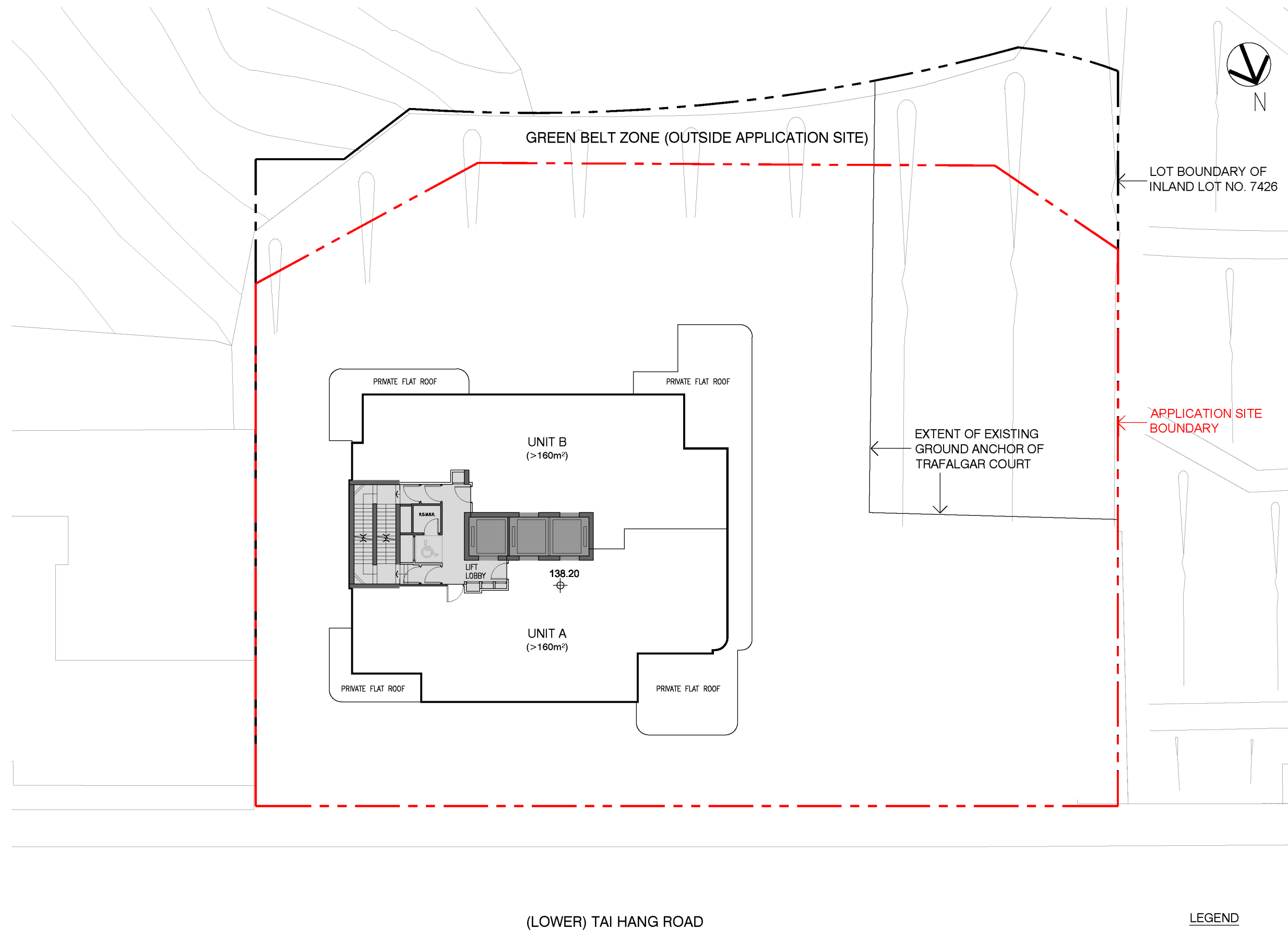
UNIT B
(100m² < 130m²)

BAL.&U.P.

(LOWER) TAI HANG ROAD

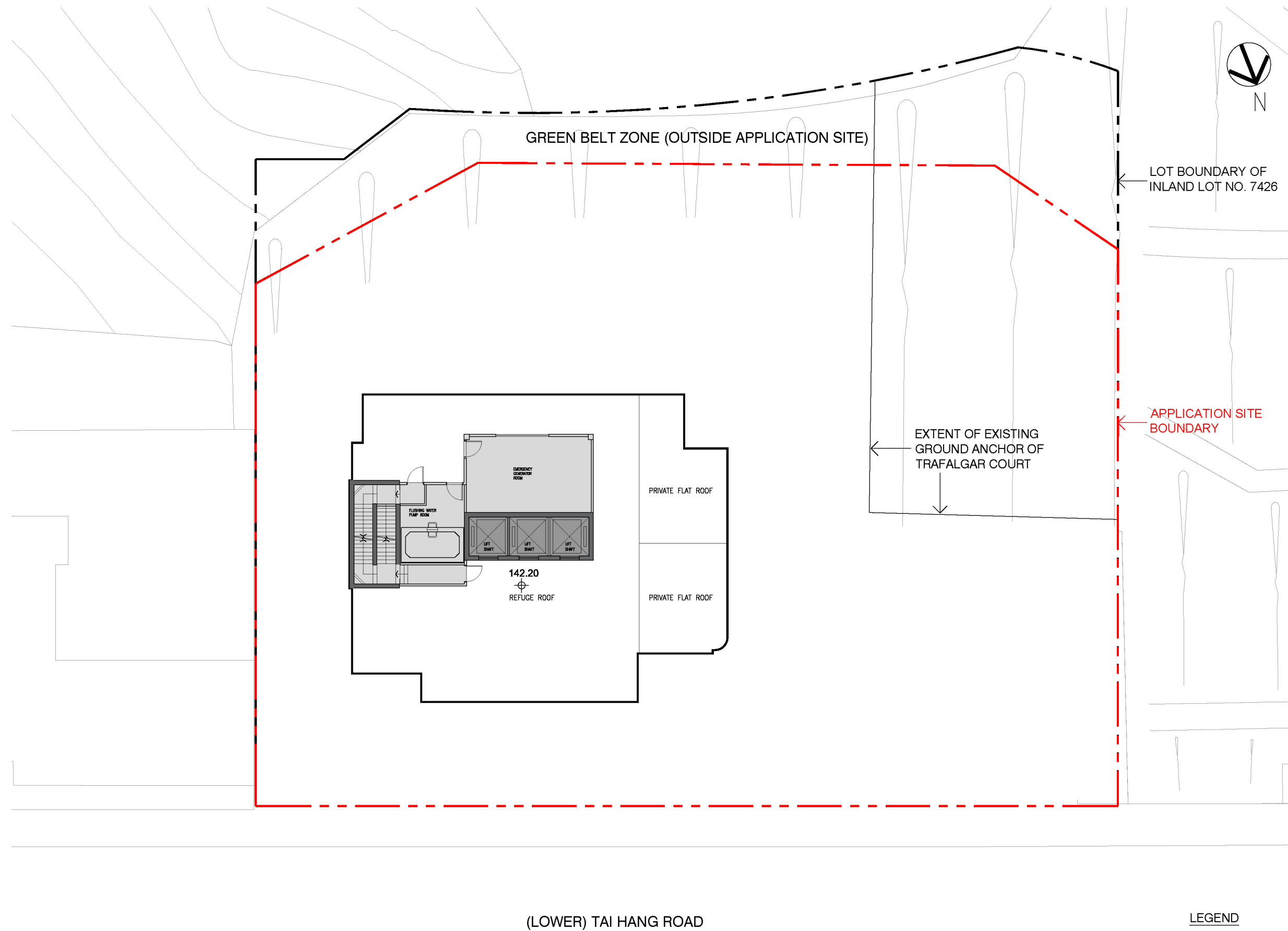
LEGEND

- APPLICATION SITE
- PROPOSED LIFT CORE
- PROPOSED ANCILLARY FACILITIES



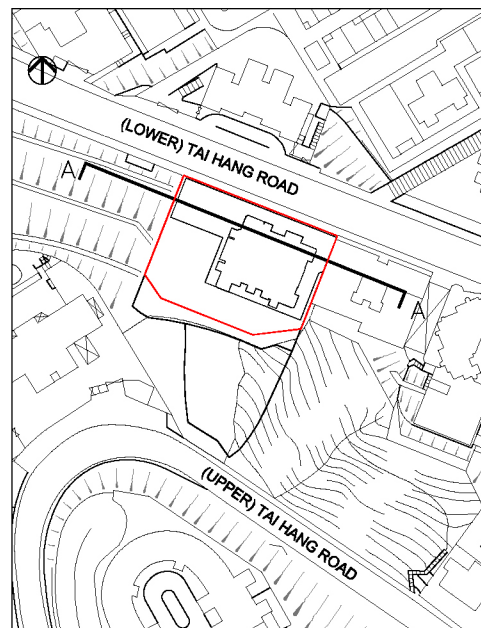
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- APPLICATION SITE
- PROPOSED LIFT CORE
- PROPOSED ANCILLARY FACILITIES

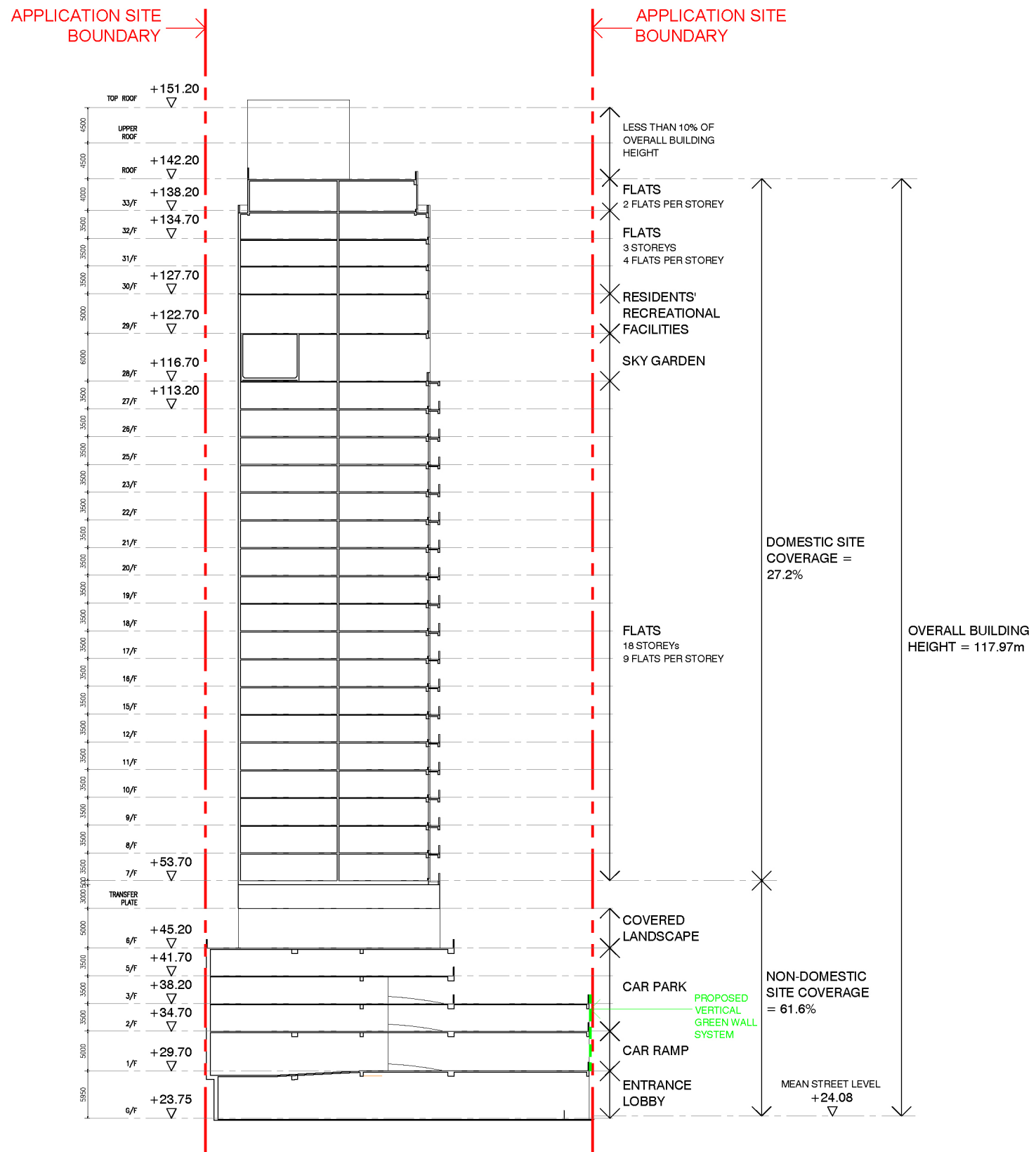


LEGEND

- APPLICATION SITE
- PROPOSED LIFT CORE
- PROPOSED ANCILLARY FACILITIES

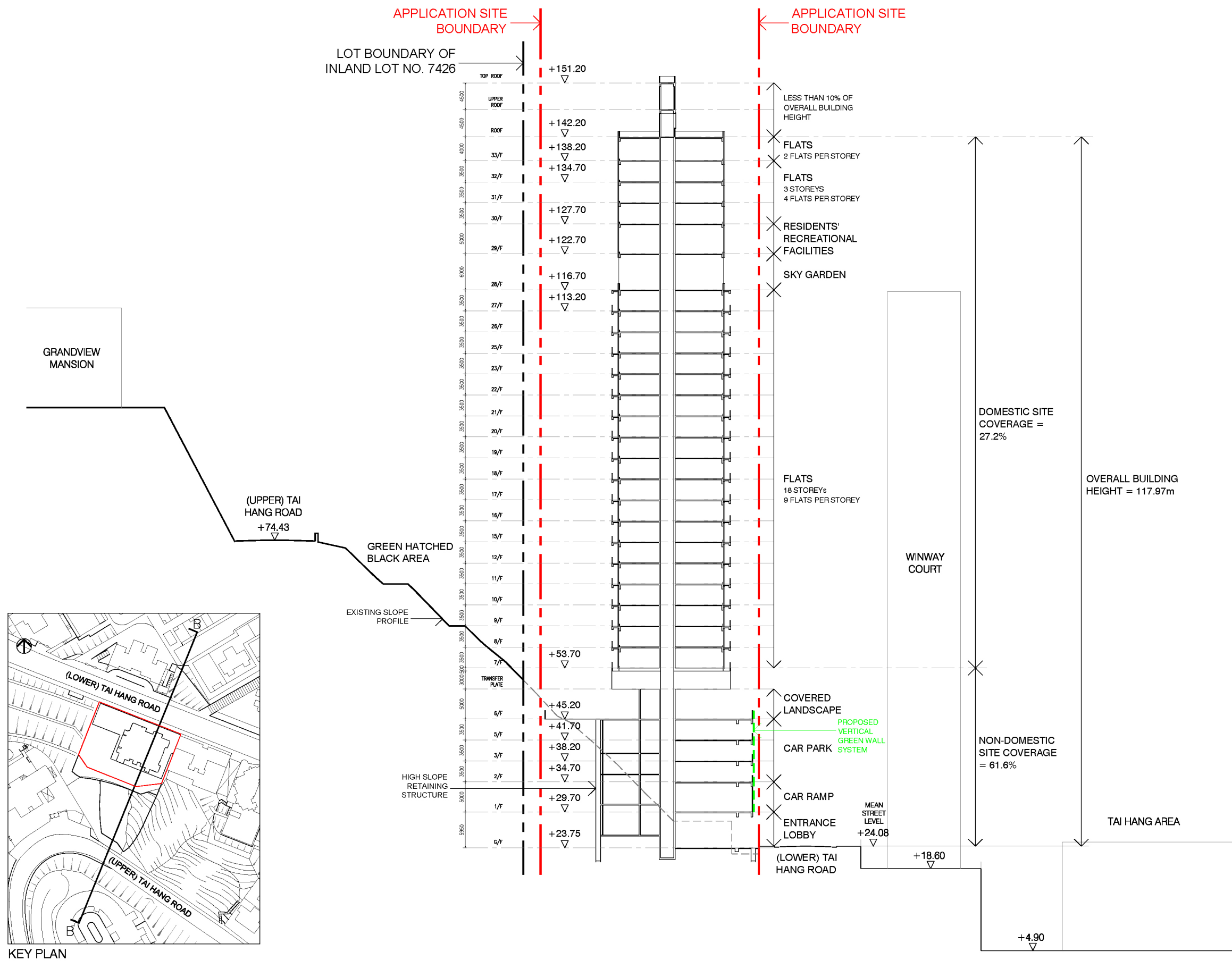


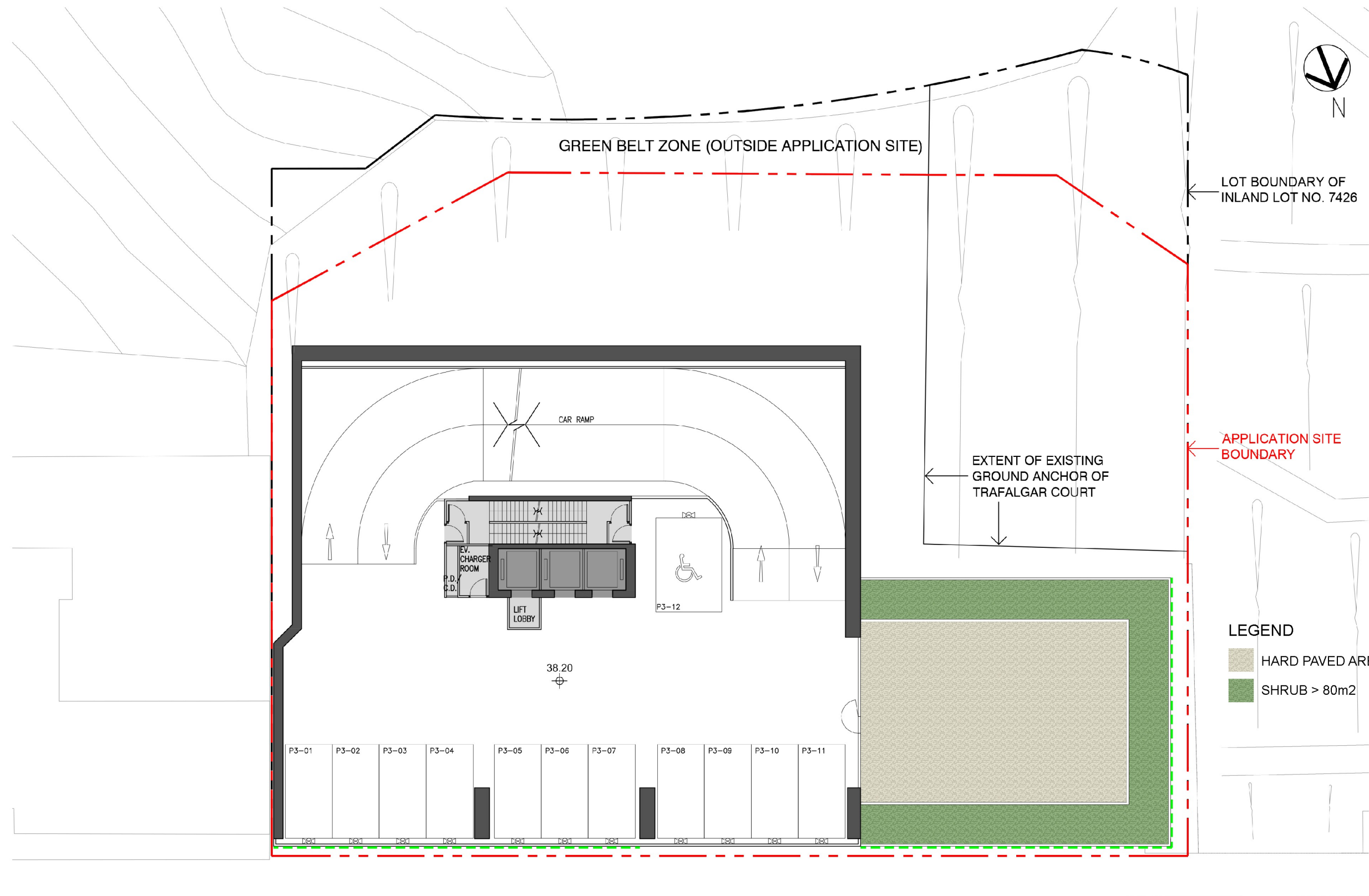
KEY PLAN



LEGEND

APPLICATION SITE



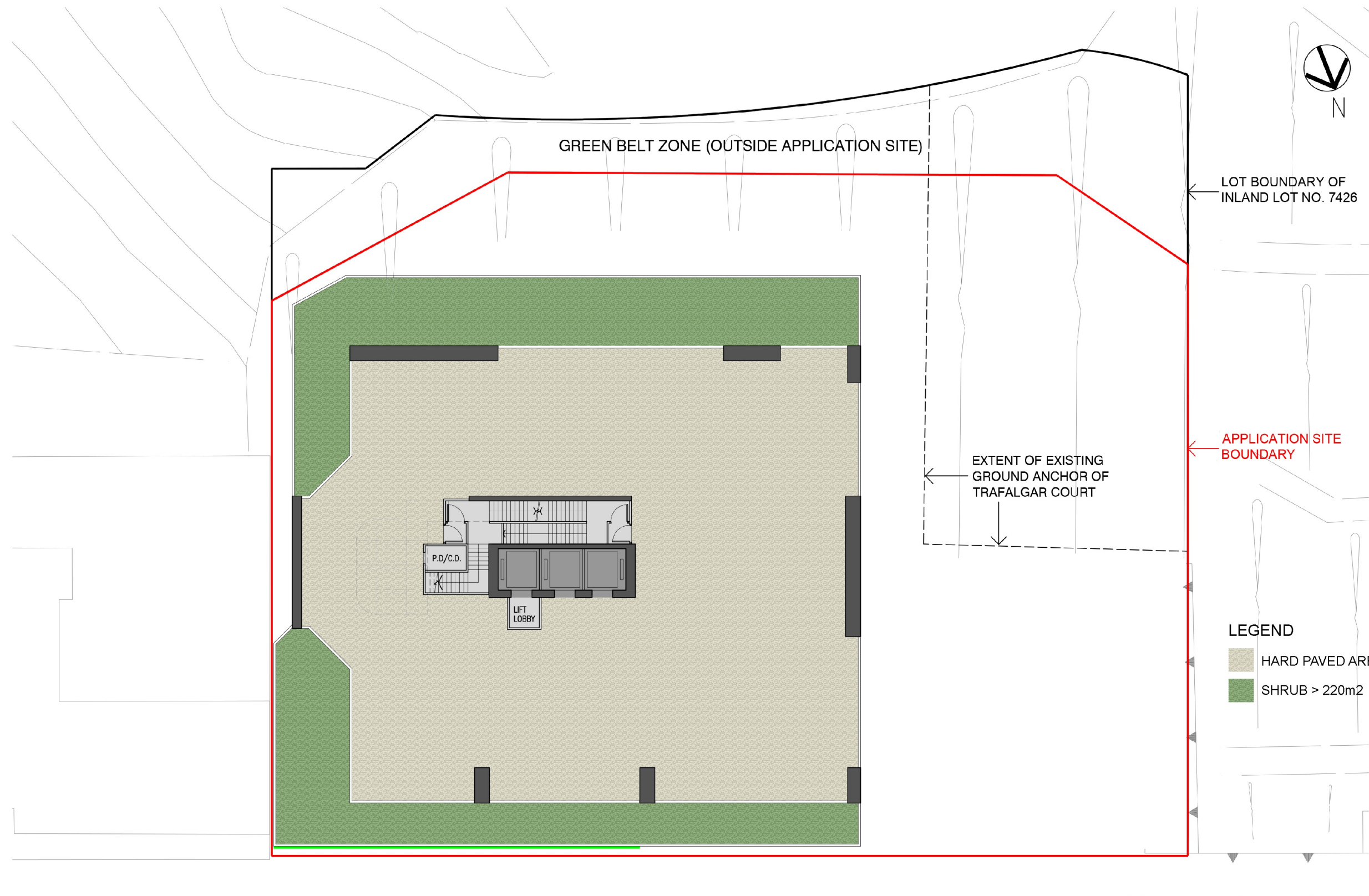


LEGEND

- HARD PAVED AREA > 130m²
- SHRUB > 80m²

LEGEND

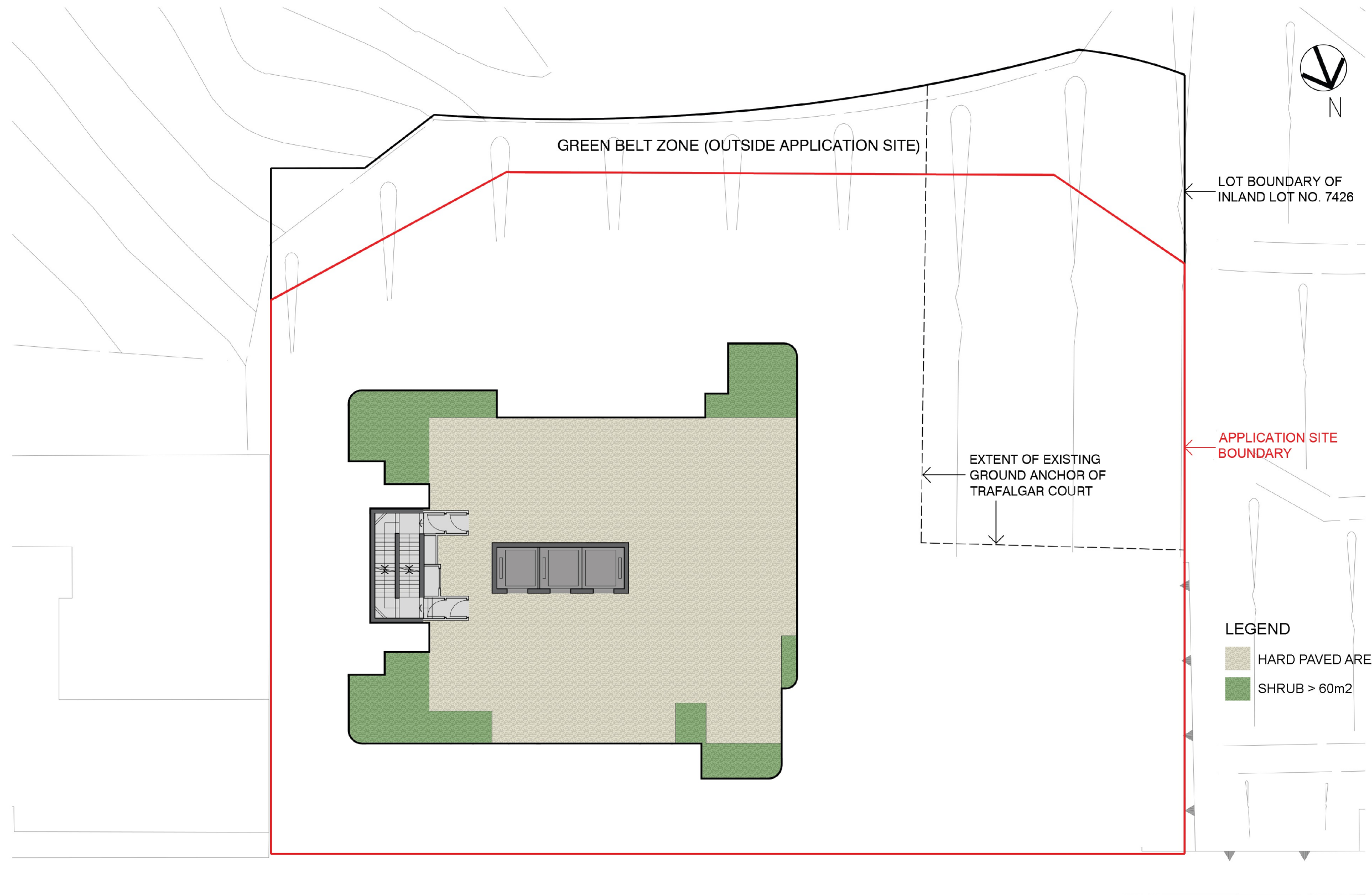
- APPLICATION SITE
- PROPOSED LIFT CORE
- PROPOSED ANCILLARY FACILITIES
- PROPOSED VERTICAL GREEN WALL SYSTEM



(LOWER) TAI HANG ROAD

LEGEND

- APPLICATION SITE
- PROPOSED LIFT CORE
- PROPOSED ANCILLARY FACILITIES
- PROPOSED VERTICAL GREEN WALL SYSTEM



(LOWER) TAI HANG ROAD

LEGEND			
---	APPLICATION SITE		
	PROPOSED LIFT CORE		
	PROPOSED ANCILLARY FACILITIES		

3 TECHNICAL CONSIDERATIONS

3.1 Visual and Air Ventilation Considerations

3.1.1 As shown in **Table 2.1** above, there are no changes to the GFA, PR and number of storeys as compared with the Approved Scheme. The proposed changes under the current application is primarily attributed to the increase in the number of units through adjustments to the average flat size and flat mix, which would largely maintain the overall development bulk.

3.1.2 In addition, as compared with the Approved Scheme, the Applicant has introduced substantial design improvements in the Proposed Scheme. These include:

- (i) reducing the overall building height from 145.6mPD to 142.2mPD;
- (ii) reducing the number of carparking floors from 4 to 3, and adjusting the corresponding floor-to-floor height from 4.5m to 3.5m, thereby lowering the podium height from 57mPD to 45.2mPD;
- (iii) adopting a stepped podium design, with the lower portion of the podium reaching up to 38.2mPD only, instead of 45.2mPD;
- (iv) breaking down the overall development bulk by introducing a covered landscape area on 6/F between the podium and the residential tower atop;
- (v) facilitating cross-ventilation through the 6/F covered landscape area and the 28/F sky garden;
- (vi) providing quality landscaping including periphery planters and vertical greening (VG) at the lower portion of the podium, offering a more comfortable environment for pedestrians compared to the vehicular access, L/UL bay and turn table in the Approved Scheme;
- (vii) maintaining provision of VG, and adjusting the location of VG to lower floors closer to the at-grade pedestrian level; and
- (viii) offering a greater buffer between the podium and the “Green Belt” zone.

3.1.3 Taking into consideration the above, the Proposed Scheme will unlikely create additional visual and air ventilation impacts as compared to the Approved Scheme, and is therefore considered acceptable in visual and air ventilation terms.

3.4 Sewerage Consideration

3.4.1 A Sewerage Impact Assessment (SIA) has been conducted to assess the potential sewerage impacts of the Proposed Scheme. Details of the SIA are provided in **Appendix D**.

3.4.2 According to the SIA, the contribution of sewage generation from the proposed development to the existing sewerage system is insignificant, which takes up only 0.005% of the capacity of the Stonecutters Island Sewage Treatment Works (SCISTW). The SCISTW remains with generous capacity to cater for the increase in sewage generation. In this connection, no adverse sewerage impact is anticipated.

3.5 Drainage Consideration

3.5.1 According to the Drainage Impact Assessment (DIA) submitted under the previous application in support of the Approved Scheme, no adverse drainage impact was anticipated from the development at the Application Site. Given that the Proposed Scheme is largely similar to the Approved Scheme with only changes to the number of units, the findings of the previous DIA would remain valid.

3.6 Geotechnical Consideration

3.6.1 According to the Geotechnical Statement (GS) submitted under the previous application in support of the Approved Scheme, the development would result in negligible effect to the slope features and existing ground anchors, and was considered acceptable from geotechnical engineering point of view. Given that the Proposed Scheme is largely similar to the Approved Scheme with only changes to the number of units, the findings of the previous GS would remain valid.

4 DEVELOPMENT JUSTIFICATIONS

4.1 Largely Maintaining Overall Development Bulk as Compared with the Approved Scheme

4.1.1 The Application Site is the subject of an approved planning application (No. A/H6/91) for proposed increase in PR from 5 to 5.687 approved by the Board on 14 January 2022. Under the current submission, the Applicant proposes amendments to the Approved Scheme to increase in the number of units from 61 to 176, with no change in GFA, PR, and the number of storeys. The additional units are accommodated primarily through adjustments to the average flat size and flat mix, thereby largely maintaining the overall development bulk of the Approved Scheme.

4.2 Compatible with the Surrounding High-rise High-density Developments

4.2.1 The Application Site is situated within a high-rise, high-density residential neighborhood in Tai Hang. A large "Residential (Group A)1" zone comprising Warrenwoods, Winway Court, Illumination Terrace, among other high-density residential developments, lies to the north of the Application Site across Tai Hang Road (**Figure 1.1** refers). For this reason, the Approved Scheme was considered not incompatible with the surroundings and unlikely to induce any significant adverse visual impact on the surrounding areas ⁽¹⁾.

4.2.2 Given that the Proposed Scheme under the current submission has maintained the same GFA, PR, number of storeys, as well as the overall development bulk of the Approved Scheme, the planning considerations and assessments under the previous application as mentioned above remain applicable. The Proposed Scheme is therefore considered fully compatible with the surrounding high-rise high-density developments.

⁽¹⁾ According to Metro Planning Committee (MPC) Paper No. A/H6/91B.

Attachment 2 –

Revised Traffic Impact Assessment

**Section 16 Planning Application for Proposed Amendments
to an Approved Scheme (under Application No. A/H6/91
with Minor Relaxation of Plot Ratio Restriction Approved)
for Permitted Flat Use at 4, 4A, 4B and 4C Tai Hang Road,
Hong Kong**

Traffic Impact Assessment

Final Report

July 2026



CTA Consultants Limited

志達顧問有限公司

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Appendix I Junction Calculation Sheets



1. INTRODUCTION

1.1 Background

- 1.1.1 A planning application No. A/H6/91 was submitted to the Town Planning Board (the Board) on 4 June 2021 under Section 16 of the Town Planning Ordinance for Proposed Minor Relaxation of Plot Ratio (PR) Restriction for Permitted Flat Use at 4, 4A, 4B and 4C Tai Hang Road, Hong Kong. The Application Site covers an area of about 1,711m², and is zoned “Residential (Group B)” on the Approved Causeway Bay Outline Zoning Plan (OZP) No. S/H6/17, subject to a maximum PR of 5 and a maximum building height (BH) of 30 storeys (including carports). The application sought to relax the PR from 5 to 5.687 (+13.74%) to facilitate a 30-storey residential development providing a total of 61 residential units. The application was approved with conditions by the Board on 14 January 2022 (the Approved Scheme).
- 1.1.2 Subsequent to the approval of the above planning application, the Applicant has been actively proceeding with the detailed design and implementation of the residential development. In response to the latest market trend and to address the continuous housing demand in Hong Kong, the Applicant hereby submits the current application to propose amendments to the Approved Scheme to increase the number of units from 61 to 176, with no change to other major development parameters including GFA, PR and number of storeys as compared with the Approved Scheme.
- 1.1.3 We, CTA Consultants Limited (CTA), are commissioned by the Applicant to prepare a Traffic Impact Assessment (TIA) study in supporting of the proposed residential development in traffic engineering point of view.



1.2 Study Objectives

1.2.1 The main objectives of this study are listed as follows:

- To assess the existing traffic condition in the vicinity of the proposed development;
- To forecast the traffic demands on the adjacent road network in the design year 2033;
- To estimate the likely traffic generated by the proposed development on the adjacent road network;
- To recommend the proposed parking provision of the proposed development;
- To recommend improvement measures, if necessary to alleviate and foreseeable traffic problems on the road network in the vicinity.

1.3 Structure of the Report

1.3.1 Following this introductory chapter, there are **SIX** further chapters:

- **Chapter 2 – THE PROPOSED DEVELOPMENT**, which presents the site location and details of the proposed development;
- **Chapter 3 – THE EXISTING TRAFFIC CONDITIONS**, which describes the existing local road network and the public transport provisions in the vicinity of the subjected area, and presents a summary of the traffic count survey and assesses the traffic conditions;
- **Chapter 4 – THE FUTURE TRAFFIC CONDITIONS**, which discusses the potential traffic generation and attraction of the proposed development and summaries the methodology for future traffic forecasts;
- **Chapter 5 – TRAFFIC IMPACT ASSESSMENT**, which presents the findings of the traffic impact assessment for the future design and recommends improvement measure, if necessary; and



- **Chapter 6 – PEDESTRIAN IMPACT ASSESSMENT**, which describes the existing pedestrian network in the vicinity of the subject site and estimates the future condition for design year; and
- **Chapter 7 – SUMMARY AND CONCLUSION**, which summaries the findings of the study and presents the conclusions regarding the traffic issues associated with proposed development.

2. THE PROPOSED DEVELOPMENT

2.1 Site Location

2.1.1 The Application Site is situated at Nos. 4 - 4C Tai Hang Road, Hong Kong. The location of the proposed development is shown in **Figure 1.1**.

2.2 Proposed Development

2.2.1 The proposed development parameters are summarized in below **Table 2.1**.

Table 2.1 Proposed Development Parameters

	Approved Scheme (A/H6/91)	Proposed Scheme	Difference
Site Area (R(B))	1,711 m ²	1,711 m ²	-
Plot Ratio	5.687	5.687	-
Total Gross Floor Area (GFA)	9,730.12 m ²	9,730.12 m ²	-
Proposed Usage	Residential	Residential	-
Nos. of Unit	61	176	+115
No. of Block	1	1	-
Average Flat Size	159.5 m ²	55.3m ²	-104.2 m ²

2.3 Development Access

2.3.1 The proposed vehicular access to the proposed development is located at Tai Hang Road. As requested by TD during the submission of the GBP of the approved scheme, to minimize the traffic impact of long vehicle egress from the proposed development to Tai Hang Road, vehicle longer than 7 m could only turn right to Tai Hang Road to uphill direction. The proposed scheme follows the same principle of turn banning. Traffic signs of ban left turn for vehicles longer than 7m will be added as shown in **Figure 2.1**.

2.4 Internal Transport Facilities Provisions of Proposed Development

2.4.1 The provision of internal transport facilities will make reference to the requirements of the Binding Basic Terms Offer (BBTO) from DLO. The following **Tables 2.2** and **2.3** summarizes the required internal transport facilities provision for the proposed development.

Table 2.2 Internal Transport Facilities Provision required under the Binding Basic Terms Offer (BBTO) from DLO

Proposed Development			Parking Requirement		Loading/Unloading Requirement	
			Private Car Parking Space		Motorcycle Parking Space	Loading / Unloading Bay for Goods Vehicles
Private Housing	GFA	No. of Flat	Requirement	No. of CPS	1 space for every 100 residential units	1 space for every 800 residential units. Minimum of 1 bay for each block
	FS ≤ 40	54	1 space for every 13.3 residential units	5		
	40 < FS ≤ 70	108	1 space for every 5.6 residential units	20		
	70 < FS ≤ 100	0	1 space for every 2.8 residential units	0		
	100 < FS ≤ 130	12	1 space for every 1.6 residential units	8		
	130 < FS ≤ 160	0	1 space for every 1.2 residential units	0		
	160 < FS	2	1 space for every 1.0 residential units	2		
	Sub-Total	176	35			
	Visitor (1 Block)		5 space for above 75 residential units			
5						
Total (Required)			40 ⁽¹⁾		2	1 (HGV)
Total (Provided)			44 ⁽²⁾⁽³⁾		2	1 (HGV)

- Notes:
- (1) Including 1 accessible car parking space
 - (2) Including 2 accessible car parking space
 - (3) Flexibility of residential parking space ±5% & additional ±5% under the BBTO

2.4.2 The indicative layout plan of proposed internal transport facilities is shown in **Figures 2.1 to 2.5**. Swept path analysis are shown in **Figures 2.1 (SP1)**, and **2.5 (SP1) to 2.5 (SP4)**.

3. THE EXISTING TRAFFIC CONDITIONS

3.1 Existing Road Network

3.1.1 The existing road network in the vicinity of the proposed development is shown in **Figure 3.1**. The area surrounding the Application Site is mainly served by Tai Hang Road and Lai Tak Tsuen Road. Tai Hang Road connects the area to Wan Chai through Stubbs Road in the south and to Causeway Bay through Moreton Terrace Flyover in the west.

3.1.2 Lower portion of Tai Hang Road is a single 3-lane road of which two lanes are for eastbound (uphill direction) and one lane for westbound (downhill direction).

3.1.3 Upper portion of Tai Hang Road is a single 2-lane road running in east-west direction.

3.1.4 Lai Tak Tsuen Road is a single 2-lane road serving the local residence in Lai Tak Tsuen connecting the area to North Point and Fortress Hill through Yee King Road in the north and Causeway Bay through to Tai Hang Road in the south.

3.2 Critical Junctions

3.2.1 **Nine** key junctions were identified to be critical for the traffic impact assessment due to the proposed development which are listed in the below **Table 3.1** and showed in **Figure 3.1**. Their existing junction layout arrangements and the method of control are shown in **Figures 3.2 to 3.10** respectively.

Table 3.1 Identified Critical Junctions

Ref.	Junction	Type	Fig. No.
J1	Causeway Road / Irving Street / Leighton Road / Tung Lo Wan Road	Signal	3.2
J2	Tung Lo Wan Road / Ka Ning Path / Eastern Hospital Road	Signal	3.3
J3	Causeway Road / Moreton Terrace	Signal	3.4
J4	Tung Lo Wan Road / Moreton Terrace	Signal	3.5
J5	Tai Hang Road / Pedestrian Crossing near Ka Ning Path	Signal	3.6
J6	Tai Hang Road / Lai Tak Tsuen Road / Fuk Kwan Avenue	Roundabout	3.7
J7	Gloucester Road / Kingston Street	Signal	3.8
J8	Gloucester Road / Great George Street	Signal	3.9
J9	Tai Hang Road / Broadwood Road	Roundabout	3.10

- 3.2.2 In order to study the existing traffic condition in the above critical junctions, traffic survey in form of manual classified counts was conducted.
- 3.2.3 The survey was carried out during the morning and evening peak periods on a typical weekday on 25 March 2026. Analysis of the observed traffic data indicated that the AM and PM peak hour flows occurred from 07:45am to 08:45am and PM between 18:00pm to 19:00pm respectively.
- 3.2.4 The 2026 observed AM and PM peak hour traffic flows are presented in **Figure 3.11**.
- 3.2.5 Existing operational performance of the critical junctions are listed in **Table 3.2** below.

Table 3.2 Observed Junctions Performance

Ref.	Junction	Type	2026 RC(%) / DFC	
			AM Peak	PM Peak
J1	Causeway Road / Irving Street / Leighton Road / Tung Lo Wan Road	Signal	86%	120%
J2	Tung Lo Wan Road / Ka Ning Path / Eastern Hospital Road	Signal	96%	99%
J3	Causeway Road / Moreton Terrace	Signal	55%	59%
J4	Tung Lo Wan Road / Moreton Terrace	Signal	74%	78%
J5	Tai Hang Road / Pedestrian Crossing near Ka Ning Path	Signal	47%	47%
J6	Tai Hang Road / Lai Tak Tsuen Road / Fuk Kwan Avenue	Roundabout	0.66	0.59
J7	Gloucester Road / Kingston Street	Signal	65%	55%
J8	Gloucester Road / Great George Street	Signal	87%	83%
J9	Tai Hang Road / Broadwood Road	Roundabout	0.46	0.51

Note: (1) RC = Reserve Capacity for signal junction;

(2) DFC = Design Flow/Capacity Ratio for Priority Junction or Roundabout

3.2.6 The assessment results in **Table 3.2** indicate that all critical junctions are at present operating with ample capacities during the peak hours.

3.3 Existing Public Transport Facilities

3.3.1 Numerous road-based public transport services are currently operating in the vicinity of the subject site. Details of Franchised Bus and GMB routes operating in the vicinity of the 500m catchment area are summarized in the below **Table 3.3**.



Table 3.3 Road-Based Public Transport Service in the Vicinity

Service	Route	Origin - Destination	Frequency (min)
Franchised Bus	2	Grand Promenade – Central (Macau Ferry)	20-30
	2A	Yiu Tung Estate – Exhibition Centre Station	5-24
	2A*	Yiu Tung Estate – Causeway Bay (Hysan Place)	Mon – Sat: 20-80
	2X	Grand Promenade – Exhibition Centre Station	6-20
	5B	Felix Villas - Hong Kong Stadium	Mon – Sat: 8-30
	5B*	Felix Villas - Hong Kong Stadium (omit Charter Road)	Sun & PH: 10-30
	5B*	Causeway Bay (Tung Lo Wan Road) - Felix Villas	Mon – Fri: 08:40
	5X	Causeway Bay (Whitfield Road) - Kennedy Town	20-30
	5X*	Causeway Bay (Whitfield Road) - Kennedy Town (omit Ice House Street)	Sun and PH: 30
	8	Heng Fa Chuen - Exhibition Centre Station	12-25
	8H	Siu Sai Wan (Island Resort) - Tung Wah Eastern Hospital	30
	8P	Siu Sai Wan (Island Resort) - Exhibition Centre Station	5-22
	8P*	Siu Sai Wan (Island Resort) - Exhibition Centre Station (omit Fullview Garden)	Mon - Sat: 5-10
	8P*	Siu Sai Wan (Island Resort) - Causeway Bay (Hysan Place)	Mon - Sat: 13-33
	8X	Siu Sai Wan (Island Resort) - Happy Valley (Upper)	6-20
	8X*	Siu Sai Wan (Island Resort) - Moreton Terrace	Mon - Fri: 07:37, 08:35, 09:35, 17:48, 18:45, 19:45
	8X*	Siu Sai Wan (Island Resort) - Victoria Park	Mon - Fri: 08:25, 09:25, 10:25, 18:30, 19:25, 20:25
	10	Kennedy Town – North Point Ferry	8-30
	10*	Kennedy Town – North Point Ferry (omit Charter Road)	Sun and PH: 12-25
	11	Central (Ferry Piers) – Jardine’s Lookout (Circular)	12-30
	15B	The Peak - Wan Chai (Convention Centre)	Sun and PH: 17:30, 19:30
	19P	Shau Kei Wan - Tai Hang Road	School Days: 07:00
	23	North Point Ferry Pier - Pokfield Road	7-20
	23B	Braemar Hill – Park Road/Robinson Road	School Days 06:55, 07:10, 07:30, 15:30, 16:00, 16:35
	25	Central (Pier 5) – Braemar Hill (Circular)	10-20
	25*	Central (Piers 3) - Braemar Hill (Circular) (via Central Star Ferry)	Sat, Sun&PH: 20



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Service	Route	Origin - Destination	Frequency (min)
Franchised Bus	25*	Central (Pier 3) - Concordia Lutheran School	School Day: 07:20
	25*	Central (Piers 3) - Fortress Hill Road	23:15, 23:30
	25A	Exhibition Centre Station - Braemar Hill (Circular)	12-30
	26	Lai Tak Tsuen - Hollywood Road (Circular)	Mon - Sat: 10-25
	26*	Lai Tak Tsuen - Hollywood Road (Circular) (omit Charter Road)	Sun & PH: 20-25
	38	North Point Ferry - Chi Fu Fa Yuen	6-20
	38*	North Point Ferry - Chi Fu Fa Yuen (omit Wai Fu)	Mon - Sat: 8-15
	38*	Causeway Bay (Central Library) - Chi Fu	Mon - Sat: 17:55, 18:25
	41A	North Point Ferry Pier - Wah Fu (Central)	5-30
	41A*	North Point Ferry Pier - Wah Fu (Central) (via Braemar Hill)	School Days 07:00, 07:20, 14:35, 15:20
	42	North Point Ferry Pier - Wah Fu (South)	Mon - Sat: 10-20
	42C	Cyberport - North Point Ferry Pier	Mon - Fri: 08:05, 08:35, 18:10, 18:40
	63	North Point Ferry Pier - Stanley Market	Mon - Sat: 30
	63*	North Point Ferry Pier - Stanley Prison	Mon - Sat: 06:30, 19:30
	65	North Point Ferry Pier - Stanley Market	Sun and PH: 12-30
	72	Causeway Bay (Moreton Terrace) - Wah Kwai Estate	4-20
	72A	Causeway Bay (Moreton Terrace) - Sham Wan	20-35
	77	Shau Kei Wan - Tin Wan Estate	11-30
	81	Hing Wah Estate - Lai Tak Tsuen	15-20
	81A	Lai Tak Tsuen - Chai Wan (Hing Wah Estate)	School Days: 06:55, 07:02, 07:10, 16:05
	99	South Horizons - Shau Kei Wan	14-25
	102	Mei Foo - Shau Kei Wan	5-20
	102*	Hung Hom (Cross Harbour Tunnel) - Shau Kei Wan	Mon - Fri: 08:30, 09:00
	103	Pokfield Road - Chuk Yuen Estate	14-30
	106	Wong Tai Sin - Siu Sai Wan (Island Resort)	6-22
	108	Braemar Hill - Kai Yip	10-30
	112	North Point - So Uk	5-30
	116	Quarry Bay - Tsz Wan Shan (Central)	4-20



Service	Route	Origin - Destination	Frequency (min)
Franchised Bus			
	116*	Fortress Hill Station - Tsz Wan Shan (Central)	Mon - Fri: 20:40, 21:55, 22:40
	170	Wah Fu (Central) – Sha Tin Station	15-30
	170*	Wah Fu (Central) – Sha Tin Station (via Ocean Park)	Sun & PH: 17
	511	Tai Hang Drive - Central (Central Ferry Piers)	Mon – Fri: 07:50, 08:10, 08:25, 08:40
	592	Causeway Bay (Moreton Terrace) – South Horizons	8-30
	600	Anderson - Central (Rumsey Street)	15-30
	601	Po Tat – Admiralty Station (East)	6-25
	601P	Sheung Wan – Po Tat	Mon – Fri: 15-25
	603	Central (Central Ferry Piers) – Ping Tin	10-30
	603A	Ping Tin – Central Market	Mon - Fri: 07:39, 07:51, 17:16, 17:40
	619	Central (Macau Ferry) – Shun Lee	7-27
	619X	Central (Macau Ferry) – Shun Lee	Mon – Fri: 16:45, 17:18, 17:37, 18:01, 18:30
	621	Central (Hong Kong Station) – Laguna City	Mon - Fri: 18:05, 18:35
	671	Diamond Hill Station – Ap Lei Chau (Lee Lok Street)	15-40
	673	Sheung Shui – Central (Hong Kong Station)	20-30
	673A	Sheung Shui – Central (Rumsey Street)	Mon - Fri: 06:50, 17:45
	678	Sheung Shui – Causeway Bay	Mon - Fri: 10-20
	679	Queen's Hill Fanling - Central (Hong Kong Station)	Mon - Fri: 07:00, 07:30
	680	Lee On – Admiralty Station (East)	10-30
	680	Lee On – Admiralty Station (East) (via Chung On Estate)	Mon - Fri: 07:30, 07:52
	680P	Wu Kai Sha Station - Admiralty Station (East)	Mon - Fri: 07:10, 07:25, 07:40
	680X	Central (Macau Ferry) - Wu Kai Sha Station	Mon - Fri: 17:55, 18:15, 18:40, 19:05
	681	Central (Hong Kong Station) – Ma On Shan Town Centre	10-30
	681P	Yiu On – Sheung Wan	Mon - Fri: 17:45, 18:15
	690	Tseung Kwan O (Hong Sing Garden) – Central (Exchange Square)	20-30



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Service	Route	Origin - Destination	Frequency (min)
Franchised Bus	690S	Central (Exchange Square) - Hang Hau (via LOHAS Park)	Mon - Fri: 17:40, 18:00, 18:15, 18:30
	914	Hoi Lai Estate – Causeway Bay (Tin Hau)	13-30
	914P	Hoi Lai Estate – Causeway Bay (Tin Hau)	Mon-Sat: 08:35
	914X	Hoi Lai Estate – Causeway Bay (Tin Hau)	Mon - Fri: 07:38, 08:05
	930B	Kwai Shing Circuit - Causeway Bay (Moreton Terrace) (omit Kwai Fong)	Mon - Fri: 07:45
	930X	Causeway Bay (Moreton Terrace) - Tsuen Wan (Discovery Park)	12-25
	930X	Tsuen Wan (Discovery Park) - Causeway Bay (Moreton Terrace) (omit Nina Tower)	Mon - Fri: 8-20
	936	Tsuen Wan (Shek Wai Kok) – Causeway Bay (Cotton Path)	15-30
	936A	Tsuen Wan (Shek Wai Kok) – Causeway Bay (Cotton Path)	Mon - Sat: 12 - 15
	936A	Lei Muk Shue – Causeway Bay (Cotton Path)	Mon - Fri: 18:15
	948	Cheung On Estate – Causeway Bay (Tin Hau)	8-30
	948A	Cheung On Estate – Causeway Bay (Tin Hau)	Mon – Sat: 5-30
	948B	Greenfield Garden – Causeway Bay (Tin Hau)	Mon – Fri: 08:04, 08:15
	948P	Cheung On Estate – Causeway Bay (Tin Hau)	Mon - Sat: 10-16
	948X	Cheung Wang – Causeway Bay (Tin Hau)	Mon - Sat: 10-15
	952	Tuen Mun (Chi Lok Fa Yuen) - Causeway Bay (Moreton Terrace)	10-30
	952P	Tuen Mun (Chi Lok Fa Yuen) - Causeway Bay (Moreton Terrace)	Mon - Sat: 8-20
	952P	So Kwun Wat - Causeway Bay (Moreton Terrace)	Mon - Fri: 07:10, 07:25, 07:40, 07:50
	952P	Gold Coast - Causeway Bay (Moreton Terrace)	Mon - Fri: 07:33
	960C	Causeway Bay – Fu Tai Estate	Mon - Fri: 07:00, 07:15, 17:05, 17:22
	960P	Causeway Bay – Hung Shui Kiu	10-35
	960S	Causeway Bay – Tuen Mun (Fu Tai Estate)	Mon - Sat: 6-18
	961	Wan Chai (HKCECE) - Tuen Mun (Shan King Estate)	7-25
	961P	Tuen Mun (Leung King Estate) - Causeway Bay (Victoria Park)	Mon - Fri: 07:35
	961S	Tuen Mun (Leung King Estate) - Causeway Bay (Victoria Park)	Mon - Fri: 07:30
	961S	Tuen Mun (Leung King Estate) - Causeway Bay (Victoria Park) (via Yip Wong Estate)	Mon - Fri: 07:15, 07:45
	962	Tuen Mun (Lung Mun Oasis) – Causeway Bay (Moreton Terrace)	Mon – Sat: 8-25



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Service	Route	Origin - Destination	Frequency (min)
Franchised Bus	962*	Tuen Mun (Lung Mun Oasis) – Causeway Bay (Moreton Terrace) (via So Kwun Wat)	Mon - Fri: 18:30, 18:50, 19:10
	962G	Causeway Bay (Moreton Terrace) - Tuen Mun (Yuet Wu Villa)	Mon - Fri: 17:40, 18:05, 18:30
	962P	Tuen Mun (Lung Mun Oasis) – Causeway Bay (Moreton Terrace)	Mon - Sat: 4-15
	962P	Yip Wong Estate – Causeway Bay (Moreton Terrace)	Mon - Fri: 07:18
	962X	Tuen Mun (Lung Mun Oasis) – Causeway Bay (Moreton Terrace)	9-30
	967X	Causeway Bay (Moreton Terrace) - Tin Shui Wai (Tin Yan Estate)	12-20
	967X	Causeway Bay (Moreton Terrace) - Tin Shui Wai (Tin Yan Estate) (omit Admiralty Centre)	Mon - Fri: 15-30
	968	Yuen Long (West) – Causeway Bay (Tin Hau)	5-25
	968	Yeun Long Park – Causeway Bay (Tin Hau)	Mon - Sat: 6-20
	968A	Yuen Long (West) – Causeway Bay (Tin Hau)	Mon - Fri: 07:15, 07:30, 07:45
	969	Tin Shui Wai Town Center – Causeway Bay (Moreton Terrace)	8-30
	969	Tin Yan Estate – Causeway Bay (Moreton Terrace)	20-30
	969	Tin Shui Wai Town Center - Causeway Bay (Moreton Terrace) (omit Maywood Court and Kenswood Court)	Mon - Sat: 8-15
	969N	Tin Shui Wai Town Center – Causeway Bay (Moreton Terrace)	05:10
	969P	Tin Shui Wai Town Center – Causeway Bay (Moreton Terrace)	Mon – Sat: 8-20
	A11	Airport – North Point Ferry Pier	15-60
	E11	Tin Hau Station - Skycity	20-40
	E11A	Tin Hau Station - Skycity	35-44
	E11B	Tin Hau Station - Tung Chung (Mun Tung Estate)	10-40
	E11S	Tung Chung (Mun Tung Estate) - Tin Hau Station	Mon - Fri: 5-20
	P968	Yuen Long (West) – Causeway Bay (Tin Hau)	Mon - Fri: 30-60
	N11	Central (Macau Ferry) - Airport (Ground Transportation Centre)	01:20, 02:20, 03:20, 04:20
	N122	Mei Foo – Shau Kei Wan	17-35
	N170	Sha Tin Central – Wah Fu (Central)	30
	N182	Central (Macau Ferry) – Kwong Yuen	20
	N307	Tai Wo – Sheung Wan	00:30, 00:10, 04:50, 05:20
	N368	Yuen Long (West) – Central (Macau Ferry)	20-25
	N373	Central (Macau Ferry) – Fanling (Luen Wo Hui)	20-30



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Service	Route	Origin - Destination	Frequency (min)
Franchised Bus	N619	Shun Lee – Central (Macau Ferry)	10-20
	N680	Kam Ying Court – Central (Macau Ferry)	20-30
	N691	Tiu Keng Leng – Central (Macau Ferry)	20-30
	N72	Quarry Bay (Hoi Chak Street) – Wah Kwai Estate	15-20
	N8P	Siu Sai Wan (Island Resort) – Wan Chai (Harbour Road) (Circular)	15-20
	N8X	Siu Sai Wan (Island Resort) – Kennedy Town	30
	N930	Tsuen Wan (Discovery Park) – Causeway Bay (Moreton Terrace)	01:35, 05:15, 05:35
	N952	Tuen Mun (Chi Lok Fa Yuen) – Causeway Bay (Moreton Terrace)	00:50, 01:10, 05:10, 05:40
	N962	Tuen Mun (Lung Mun Oasis) – Causeway Bay (Moreton Terrace)	25-45
	N969	Tin Shui Wai Town Centre – Causeway Bay (Moreton Terrace)	20-45
	NA11	HXMB Hong Kong Port – North Point Ferry Pier	From North Point: 04:20, 04:50 From HZMB: 04:00, 01:00 From Airport: 00:50, 01:10
GMB	14M	Lan Fong Road – Moorsom Road (Circular)	4-12
	14M	Causeway Bay Lan Fong Road - Moorsom Road (Circular) (Special Route via Copper Road)	12-28
	21A	Lai Tak Tsuen (Circular) – Causeway Bay (Lan Fong Road)	4-12
	21M	Tai Hang Drive (Circular) – Causeway Bay (Lan Fong Road)	4-12
	25	Upper Braemar Hill – Causeway Bay (Circular)	5-8
	56	North Point (Marble Road) – Mid-Levels (Robinson Road)	20
	56A	Tin Hau Station – Mid-Levels (Robinson Road)	8-15
	56B	Tin Hau Station – Mid-Levels (Robinson Road)	10-30

Notes:

*: Special Service

N: Night Time Services Only (After 00:00 am)



4. THE FUTURE TRAFFIC CONDITIONS

4.1 Design Year

4.1.1 It is anticipated that the proposed development will be completed by 2030 tentatively. In order to assess the possible impact of the development related to traffic on the local road network, year 2033 (i.e. 3 years after completion of the proposed development) is adopted as the design year for this study.

4.2 Reference Traffic Flows

4.2.1 To estimate the 2033 reference traffic flows (Approved Scheme) in the local road network, an appropriate growth factor has to be identified for the area in the first instance.

Historical Trend

4.2.2 Numerous of traffic count stations are located in the vicinity of the proposed development. The traffic counts reported in the Annual Traffic Census (ATC), which is published by Transport Department, over a period of six years, i.e. 2018 to 2024 are summarized in below **Table 4.1**.

Table 4.1 – Historical Traffic Data from Annual Traffic Census (ATC)

ATC Stn.	Road Name	Annual Average Daily Traffic (AADT)							Annual Growth Rate
		2018	2019	2020	2021	2022	2023	2024	
1024	Tai Hang Rd. (From Ka Ning Path – Lai Tak Tseun Rd.)	24,560	25,010	23,090	25,500	24,170	24,880	24,290	-0.18%
1852	Tai Hang Rd. (From Lai Tak Tseun Rd. – Perkins Rd.)	11,610*	11,510*	10,950*	11,950	9,290	9,500*	9,410*	-3.44%
Total		36,170	36,520	34,040	37,450	33,460	34,380	33,700	-1.17%

*AADT estimated by Growth Factor

4.2.3 As shown in **Table 4.1**, it is noted that the average annual traffic growth pattern in the vicinity of the proposed development shows a growth trend of -1.17% per year.

Planning Data

4.2.4 Reference is also made to the latest 2021-Based Territorial Population and Employment Data Matrix (TPEDM) planning data published by Planning Department in Wai Chai District. The average annual growth rates in terms of population and employment from 2026 to 2031 are tabulated in **Table 4.2**.

Table 4.2 TPEDM Population and Employment Planning Data

Wai Chai District			
Data	Year		Average Annual Growth Rate
	2026	2031	
Population	156,000	145,700	-1.36%
Employment	301,700	287,250	-0.98%
Total	457,700	432,950	-1.11%

4.2.5 The planning data indicates that the total of population and employment in the area is expected to develop with annual growth rate of -1.11% from 2026 to 2031.

Adopted Growth Rate

4.2.6 A.A.D.T. of ATC indicates that the traffic flows in the local road network have annual growth rate of -1.17% during past years from 2018 to 2024.

4.2.7 Whilst, the projection population data indicates that the population in the area are expected to develop with annual growth rate of -1.11% from 2026 to 2031.

4.2.8 As a conservative approach, annual growth rate **+0.50%** is adopted for the Year 2033 traffic forecast. It is deemed sufficient to allow for any unexpected future growth as a result of some changes in land use or development in the study area.

Adjacent New Developments

4.2.9 Additional traffic generation and attraction of major committed/planned developments in the vicinity have been estimated and superimposed onto the road network to derive the year 2033 reference traffic flow. The committed/planned developments in the vicinity are summarized **Tables 4.3 and 4.4** and illustrated in **Figure 4.1**.

Table 4.3 Development Parameters of Planned/Committed Developments in the Vicinity

Ref.	Developments	Use	Development Parameters
1.	District Court Site	District Court	GFA 70,000 m ²
2.	Commercial Development in 8 Leighton Road	Commercial	GFA 14,945 m ²
3.	Redevelopment of Po Leung Kuk Headquarters	Social Services	GFA: 37,725 m ²
4.	Commercial Development on Inland Lot No. 8945 (Lee Garden Eight)	Commercial	GFA: 102,000 m ²
5.	Sport Link at 88 Caroline Hill Road	Sport centre	GFA: 31,327 m ²
6.	Redevelopment of 5-19 Jardine's Bazaar	Commercial	GFA: 4,756 m ²
7.	Redevelopment of 36 Jardine's Bazaar	Office	GFA: 979 m ²

Note: (1) According to the Approved TIA reports of Inland Lot No. 8945 (Lee Garden Eight) and Sport Link at 88 Caroline Hill Road

4.2.10 The estimated trips of the proposed developments in vicinity are listed in below **Table 4.4**.

Table 4.4 Estimated Trips of Planned/Committed Developments in the Vicinity

Ref.	Developments	AM Peak		PM Peak	
		Gen.	Att.	Gen.	Att.
		pcu/hr			
1.	District Court Site	42	64	33	31
2.	Commercial Development in 8 Leihton Road	25	37	24	18
3.	Redevelopment of Po Leung Kuk Headquarters	16	6	6	7
4.	Commercial Development on Inland Lot No. 8945 (Lee Garden Eight)	272	398	308	239
5.	Sport Link at 88 Caroline Hill Road	13	28	34	25
6.	Redevelopment of 5-19 Jardine's Bazaar	11	12	15	17
7.	Redevelopment of 36 Jardine's Bazaar	2	3	2	2

Note: (1) According to the Approved TIA reports of Inland Lot No. 8945 (Lee Garden Eight) and Sport Link at 88 Caroline Hill Road

4.3 Traffic Generations and Attractions of Proposed Development

- 4.3.1 In order to estimate the traffic generation and attraction of the proposed development, reference has been made to the trip generation rates as stipulated in Volume 1 Chapter3 Appendix D Table 1 of the latest T.P.D.M. published by Transport Department. The adopted trip rates are summarized in below **Table 4.5**.

Table 4.5 Adopted Trip Rate of Proposed Development

Proposed Development	Avg Flat Size	AM Peak		PM Peak	
		Generation	Attraction	Generation	Attraction
		(pcu/hr/flat)			
<u>Private Housing</u> <u>Medium - Density / R(B)</u>	60m ²	0.1021	0.0709	0.0415	0.0464
	70m ²	0.1117	0.0729	0.0454	0.0551
	120m ² ⁽¹⁾	0.2601	0.1469	0.1353	0.1862
	130m ² ⁽²⁾	0.2822	0.1613	0.1490	0.2035
	140m ² ⁽¹⁾	0.3042	0.1756	0.1626	0.2207
	160m ² ⁽²⁾	0.3483	0.2043	0.1899	0.2552
	165m ² ⁽²⁾	0.3593	0.2115	0.1967	0.2638
<u>Private Housing</u> <u>Medium - Density / R(C)</u>	180 m ² ⁽¹⁾	0.3276	0.2407	0.2233	0.3097
	240m ² ⁽¹⁾	0.3524	0.2837	0.2842	0.3948
	270m ² ⁽²⁾	0.3710	0.3130	0.3220	0.4459
	300m ² ⁽¹⁾	0.3896	0.3423	0.3598	0.4970
	390m ² ⁽²⁾	0.4454	0.4302	0.4732	0.6503

Note:

- The trip rates refer to TPDM Vol. 1 Appendix D Table 1 (“upper limit value”)
- Technique of Interpolation/Extrapolation is adopted to derive the trip rate for this case.
For example, to calculate the generation rate of AM peak “X” for Avg Flat Size 160 m²:

$$(X - 0.3042) / (0.3042 - 0.2601) = (160 - 140) / (140 - 120)$$

$$X = (160 - 140) / (140 - 120) \times (0.3042 - 0.2601) + (0.3042) = 0.3483$$

4.3.2 Based on the adopted trip rate listed in the above **Table 4.5** and the development parameters in **Table 2.1**, the trip generated and attracted by the proposed development are estimated and summarized in the following **Table 4.6**.

Table 4.6 Estimated Traffic Generations and Attractions of Proposed Development

Proposed Development	Avg Flat Size (m ²)	Adopted Flat Size Trip Rate (m ²)	No. of Flat	AM Peak Hour		PM Peak Hour	
				Gen.	Att.	Gen.	Att.
				pcu/hr			
Approved Scheme (A/H6/91) [A]	100 < FS ≤ 130	130	24	7	4	4	5
	130 < FS ≤ 160	160	24	8	5	5	6
	160 < FS	165	8	3	2	2	2
		270	4	1	1	1	2
		390	1	1	1	1	1
	Sub-Total		61	20	13	13	16
Proposed Scheme [B]	FS ≤ 40	60	54	6	4	2	3
	40 < FS ≤ 70	70	108	12	8	5	6
	100 < FS ≤ 130	130	12	3	2	2	2
	160 < FS	180	2	1	1	1	1
	Sub-Total		176	22	15	10	12
Net Difference [B] – [A]				2	2	-3	-4
Net Difference (Adopted)				2	2	0	0

4.3.3 From **Table 4.6**, the proposed scheme will generate -4 to 2 pcu/hr (adopted 0 to 2 pcu/hr) trips more than the approved scheme, which represents a very small fraction of the overall traffic in the area.

4.3.4 Based on the above information, the 2033 Reference Flows (Approved Scheme) is estimated and shown in **Figure 4.2**:

$$\begin{array}{l}
 \text{2033 Reference Flows (Approved Scheme)} = \text{2026 Observed Flows} \times \text{Adopted Growth Factor (i.e. +0.5\% p.a for 7 years)} + \text{Trip Generated by the Adjacent Developments} + \text{Trip Generated by the Proposed Development under Approved Scheme}
 \end{array}$$

4.4 Design Traffic Forecasts

4.4.1 The net traffic generated by the proposed development is then superimposed onto the 2033 reference traffic flows (Approved Scheme) as shown in **Figure 4.2** to derive the 2033 design traffic forecasts (Proposed Scheme).

$$\begin{array}{l} \text{2033 Design Flows} \\ \text{(Proposed Scheme)} \end{array} = \begin{array}{l} \text{2033 Reference Flows} \\ \text{(Approved Scheme)} \end{array} + \begin{array}{l} \text{Net Increase of} \\ \text{Proposed} \\ \text{Development Traffic} \end{array}$$

4.4.2 The 2033 AM and PM Peak design traffic flows (Proposed Scheme) are shown in **Figure 4.3**.

5. TRAFFIC IMPACT ASSESSMENT

5.1 Operational Assessment

5.1.1 To assess the traffic impact due to the proposed development, capacity analysis of the identified critical junctions for both reference and design scenarios in year 2033 has been carried out. The results are summarized in below **Table 5.1**.

Table 5.1 Operational Performance of Critical Junctions in Year 2033

Ref.	Junction	Type	2033 RC(%) / DFC			
			Reference Case (Approved Scheme)		Design Case (Proposed Scheme)	
			AM Peak	PM Peak	AM Peak	PM Peak
J1	Causeway Road / Irving Street / Leighton Road / Tung Lo Wan Road	Signal	75%	106%	75%	106%
J2	Tung Lo Wan Road / Ka Ning Path / Eastern Hospital Road	Signal	62%	66%	62%	66%
J3	Causeway Road / Moreton Terrace	Signal	44%	48%	44%	48%
J4	Tung Lo Wan Road / Moreton Terrace	Signal	54%	59%	54%	59%
J5	Tai Hang Road / Pedestrian Crossing near Ka Ning Path	Signal	40%	40%	40%	40%
J6	Tai Hang Road / Lai Tak Tsuen Road / Fuk Kwan Avenue	Roundabout	0.69	0.62	0.69	0.62
J7	Gloucester Road / Kingston Street	Signal	57%	49%	57%	49%
J8	Gloucester Road / Great George Street	Signal	81%	77%	81%	77%
J9	Tai Hang Road / Broadwood Road	Roundabout	0.48	0.53	0.48	0.53

Note: (1) RC = Reserve Capacity for signal junction;

(2) DFC = Design Flow/Capacity Ratio for Priority Junction or Roundabout



- 5.1.2 Although there is an increase in the no. of units compare with the approved scheme, the average unit size of the proposed scheme become smaller, the overall traffic trips of the approved scheme and proposed Scheme are more or less the same. Based on the assessment result in above **Table 5.1**, there is no change in the RC/DFC between reference year and design year. It is revealed that the proposed increase the number of units would not cause any noticeable traffic effect and all critical junctions will be operating with sufficient capacity in year 2033.

6. PEDESTRIAN IMPACT ASSESSMENT

6.1 Existing Pedestrian Condition

6.1.1 In order to acquire the existing pedestrian condition around the proposed development, a pedestrian headcount survey was conducted at concerned footpath sections during AM and PM peak periods on same day as vehicular traffic survey.

6.1.2 The concept of Level-of-service (LOS) in accordance with T.P.D.M. and Highway Capacity Manual has been applied for assessing the concerned walkways. LOS directly relates to the pedestrian comfort and ease with which pedestrians queued and proceed at the walkway.

6.1.3 The survey results are summarised in **Table 6.1** and indicated that the pedestrian flow peaks at AM between 07:45am to 08:00am and PM between 18:10pm to 18:25pm at the concerned footpath. The location of the critical sections of footpath is shown in **Figure 6.1**.

Table 6.1 LOS Assessment of the Critical Sections of Footpath in Existing Year 2026

Critical Sections	Total Footpath Width (m) ⁽¹⁾	Effective Footpath Width (m) ⁽²⁾	Existing Scenario					
			Two-way Pedestrian Flow (ped/15 min)		Two-way Pedestrian Flow Rate (ped/min/m) ⁽³⁾		LOS	
			AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
P1	2.1	1.6	50	50	2.08	2.08	A	A

- Notes:
- (1) Total Footpath Width = Footpath Width between walls of buildings and road kerb
 - (2) Effective Footpath Width = Total Footpath Width – Dead Width
(Assume 0.5m for dead areas and 1m for shopping frontages)
 - (3) Two-way Pedestrian Flow (ped/min/m) = Pedestrian Flow/ Minutes/ Through Zone Footpath Width

6.2 Future Pedestrian Condition

- 6.2.1 It is anticipated that the proposed redevelopment will be completed in 2030 tentatively for operation. In order to assess the possible impacts to the surrounding footpath due to the proposed development, year 2033 has been adopted as the design year for this study.
- 6.2.2 In order to estimate the 2033 pedestrian flows in the local road network, a growth factor is derived for the study area as detailed in **Section 4.2**. The average annual growth rate is adopted as **+0.05%** per annum.
- 6.2.3 The pedestrian trip generation and attraction for the proposed development can be defined from in-house survey and results are summarised in **Table 6.2**.

Table 6.2 Adopted Pedestrian Trip Generation of Proposed Development

Unit		AM Peak		PM Peak	
		Gen.	Attr.	Gen.	Attr.
Adopted Pedestrian Trip Rate					
Ped/hr/flat		0.2000	0.0385	0.0308	0.1538
Estimated Pedestrian Traffic Trips (176 flats)					
Approved Scheme (A/H6/91) [A]	Ped/15 min	12	2	2	9
Proposed Scheme [B]	Ped/15 min	35	7	5	27
Net Difference [B] – [A]	Ped/15 min	23	5	3	18

- 6.2.4 The pedestrian trip generation and attraction (Approved Scheme) during the AM and PM peak are superimposed to the network to obtain the Reference Flow (Approved Scheme) in 2033, which are summarized as **Table 6.3** below.

Table 6.3 LOS Assessment of the Critical Sections of Footpath in Reference Year 2033 (Approved Scheme)

Critical Sections	Total Footpath Width (m) ⁽¹⁾	Effective Footpath Width (m) ⁽²⁾	Reference Year 2033 (Approved Scheme)					
			Two-way Pedestrian Flow (ped/15 min)		Two-way Pedestrian Flow Rate (ped/min/m) ⁽³⁾		LOS	
			AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
P1	2.1	1.6	60	55	2.50	2.29	A	A

- Notes: (1) Total Footpath Width = Footpath Width between walls of buildings and road kerb
(2) Effective Footpath Width = Total Footpath Width – Dead Width (Assume 0.5m for dead areas and 1m for shopping frontages)
(3) Two-way Pedestrian Flow (ped/min/m) = Pedestrian Flow/ Minutes/ Through Zone Footpath Width

6.2.5 The pedestrian trip generation and attraction (Proposed Scheme) during the AM and PM peak are superimposed to the network to obtain the Design Flow (Proposed Scheme) in 2033, which are summarized as **Table 6.4** below.

Table 6.4 LOS Assessment of the Critical Sections of Footpath in Design Year 2033 (Proposed Scheme)

Critical Sections	Total Footpath Width (m) ⁽¹⁾	Effective Footpath Width (m) ⁽²⁾	Design Year 2033 (Proposed Scheme)					
			Two-way Pedestrian Flow (ped/15 min)		Two-way Pedestrian Flow Rate (ped/min/m) ⁽³⁾		LOS	
			AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
P1	2.1	1.6	90	75	3.75	3.13	A	A

- Notes: (1) Total Footpath Width = Footpath Width between walls of buildings and road kerb
(2) Effective Footpath Width = Total Footpath Width – Dead Width (Assume 0.5m for dead areas and 1m for shopping frontages)
(3) Two-way Pedestrian Flow (ped/min/m) = Pedestrian Flow/ Minutes/ Through Zone Footpath Width

6.2.6 It is revealed from the assessment results in **Table 6.4** that the concerned sections of footpath will have adequate capacity to cater for the design year 2033 pedestrian flows. Thus, pedestrian trips by the proposed development could be absorbed by the pedestrian network from traffic engineering point of view.



7. SUMMARY AND CONCLUSION

7.1 Summary

- 7.1.1 The Applicant hereby submits the current application to propose amendments to the Approved Scheme to increase the number of units from 61 to 176, with no change to other major development parameters including GFA, PR and number of storeys as compared with the Approved Scheme.
- 7.1.2 The proposed residential development providing 176 nos. of flats is scheduled for completion by 2030 tentatively.
- 7.1.3 The proposed vehicular access to the proposed development is located at Tai Hang Road which is currently a single 3-lane road of which two lanes are for eastbound (uphill direction) and one lane for westbound (downhill direction).
- 7.1.4 Required internal transport facilities provision for the proposed development as stipulated under the Binding Basic Terms Offer (BBTO) from DLO are checked and complied.
- 7.1.5 Manual count traffic survey was conducted in the surrounding road network of the proposed development in order to study the existing traffic conditions. Current operational performance of critical junctions has been assessed and the results indicated that all the identified critical junctions are at present operating with ample capacities.
- 7.1.6 Assessment of operational performance of the critical junctions indicates that all critical junctions will still operate within their capacities in both reference and design scenarios in year 2033.
- 7.1.7 Although there is an increase in the no. of units compared with the approved scheme, the average unit size of the proposed scheme becomes smaller and therefore, the overall traffic trips of the approved scheme and proposed Scheme are more or less the same. The increase the number of units will generate -4 to 2 pcu/hr in peak hours, which represents an insignificant impact to the overall traffic in the area.



7.1.8 Manual count traffic survey on pedestrian was also conducted and assessment has been carried out. All critical section will still operate within their capacities in both reference and design scenarios in year 2033.

7.2 Conclusion

7.2.1 In conclusion, this traffic impact assessment (TIA) has demonstrated that the traffic generated by the proposed development to the surrounding road network can be accommodated by existing road network.

7.2.2 Therefore, the proposed amendments to the Approved Scheme to increase the number of units from 61 to 176, with no change to other major development parameters including GFA, PR and number of storeys as compared with the Approved Scheme is considered acceptable in traffic engineering point of view.

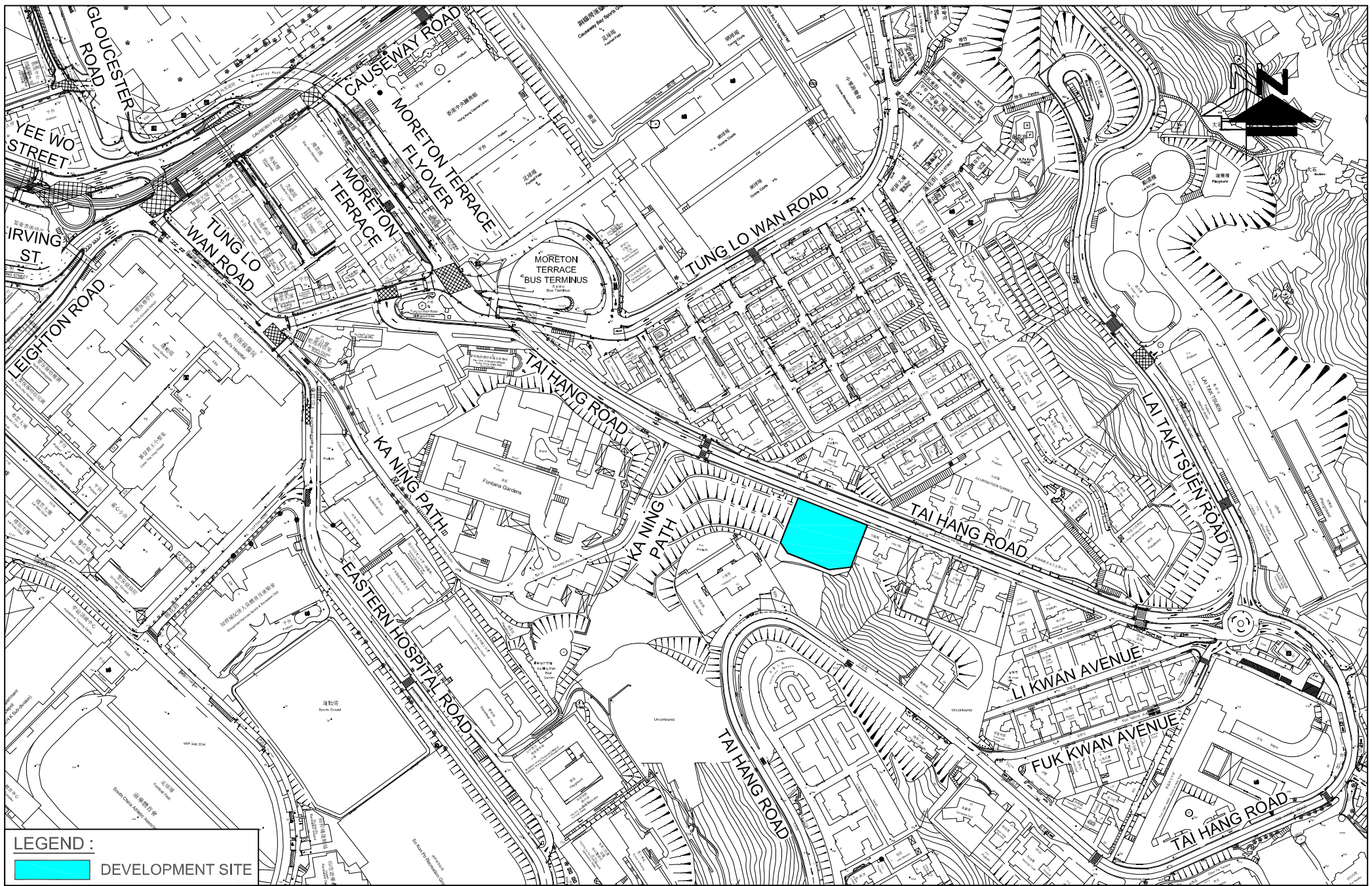


FIGURE NO.: 1.1		PROJECT TITLE: Residential Redevelopment at Nos 4-4C Tai Hang Road, Hong Kong		 CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 26021HK		DRAWING TITLE: SITE LOCATION PLAN		
SCALE: 1 : 3250 @A4	DATE: 13 APR 2026			

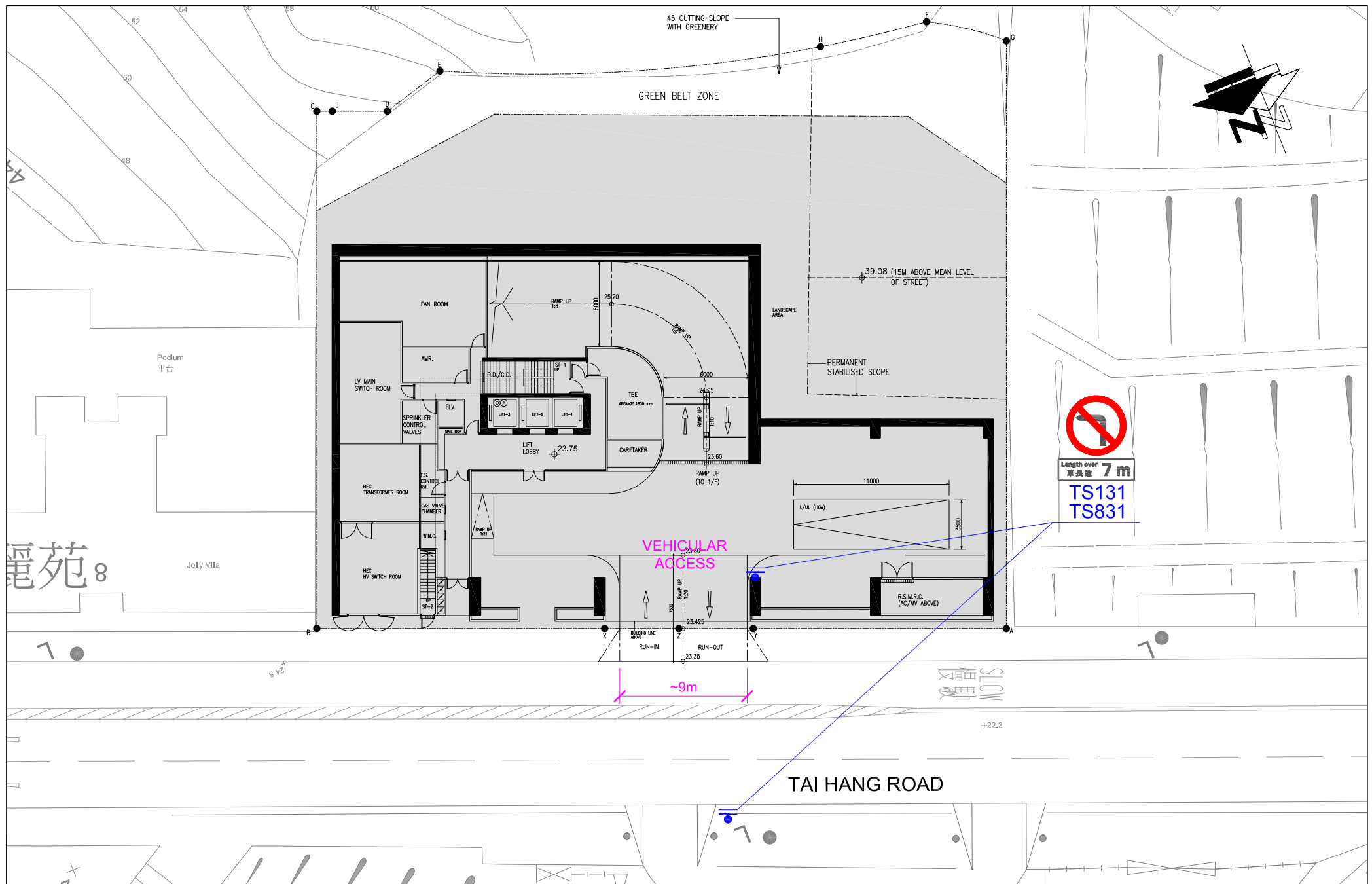
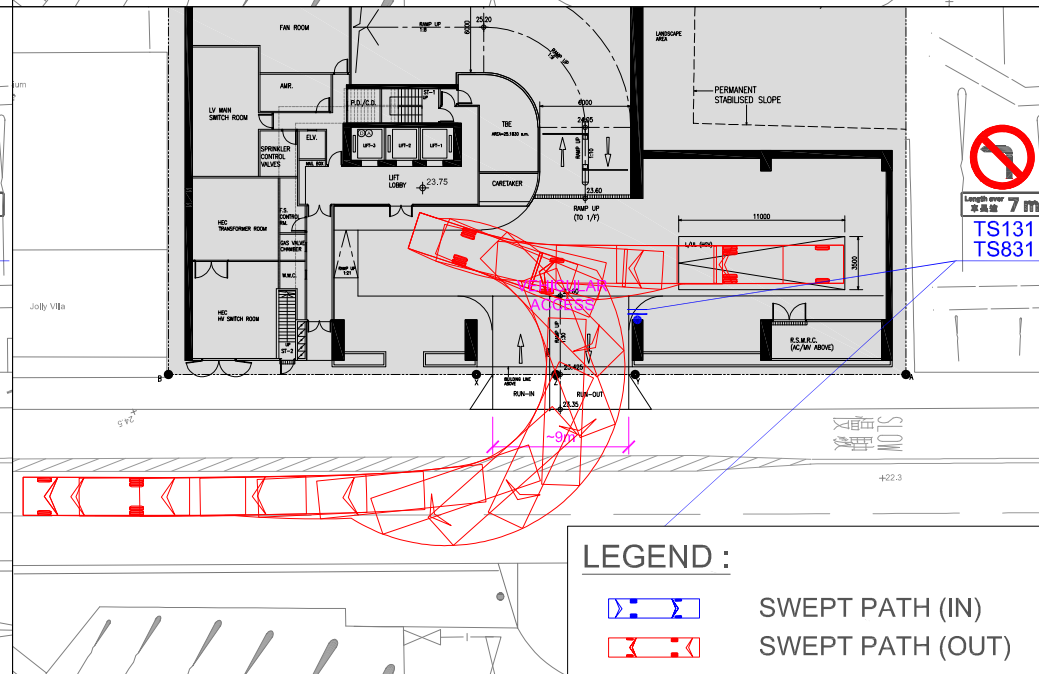
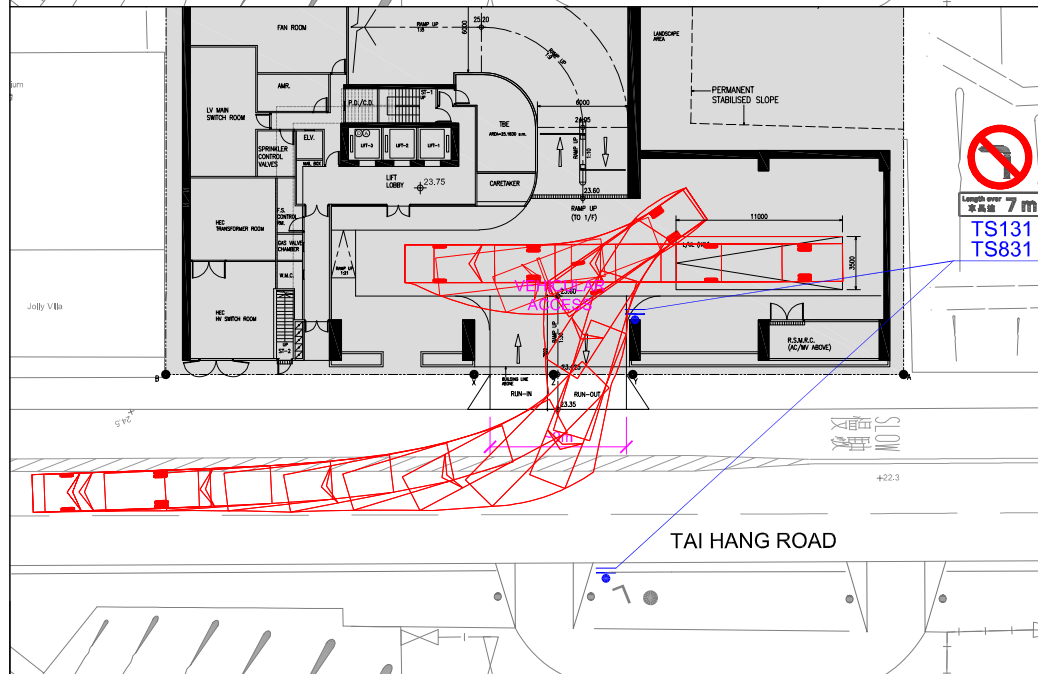


FIGURE NO.: 2.1	PROJECT TITLE: Residential Redevelopment at Nos 4-4C Tai Hang Road, Hong Kong	 CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 26021HK	DRAWING TITLE: G/F LAYOUT PLAN	
SCALE: 1 : 350 @A4	DATE: 06 JUL 2026	



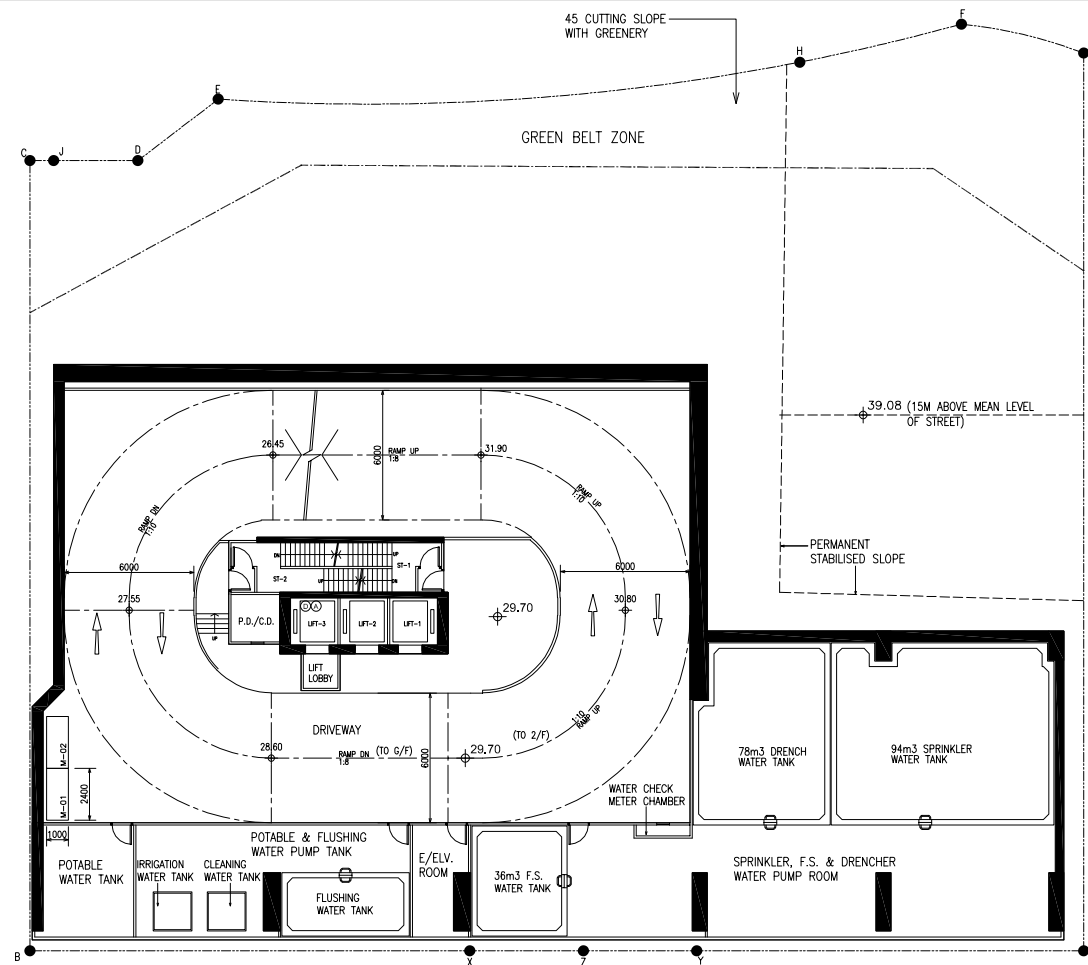


FIGURE NO.: 2.2		PROJECT TITLE: Residential Redevelopment at Nos 4-4C Tai Hang Road, Hong Kong		 CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 26021HK		DRAWING TITLE:		
SCALE: 1 : 350 @A4	DATE: 07 JUL 2026	1/F LAYOUT PLAN		

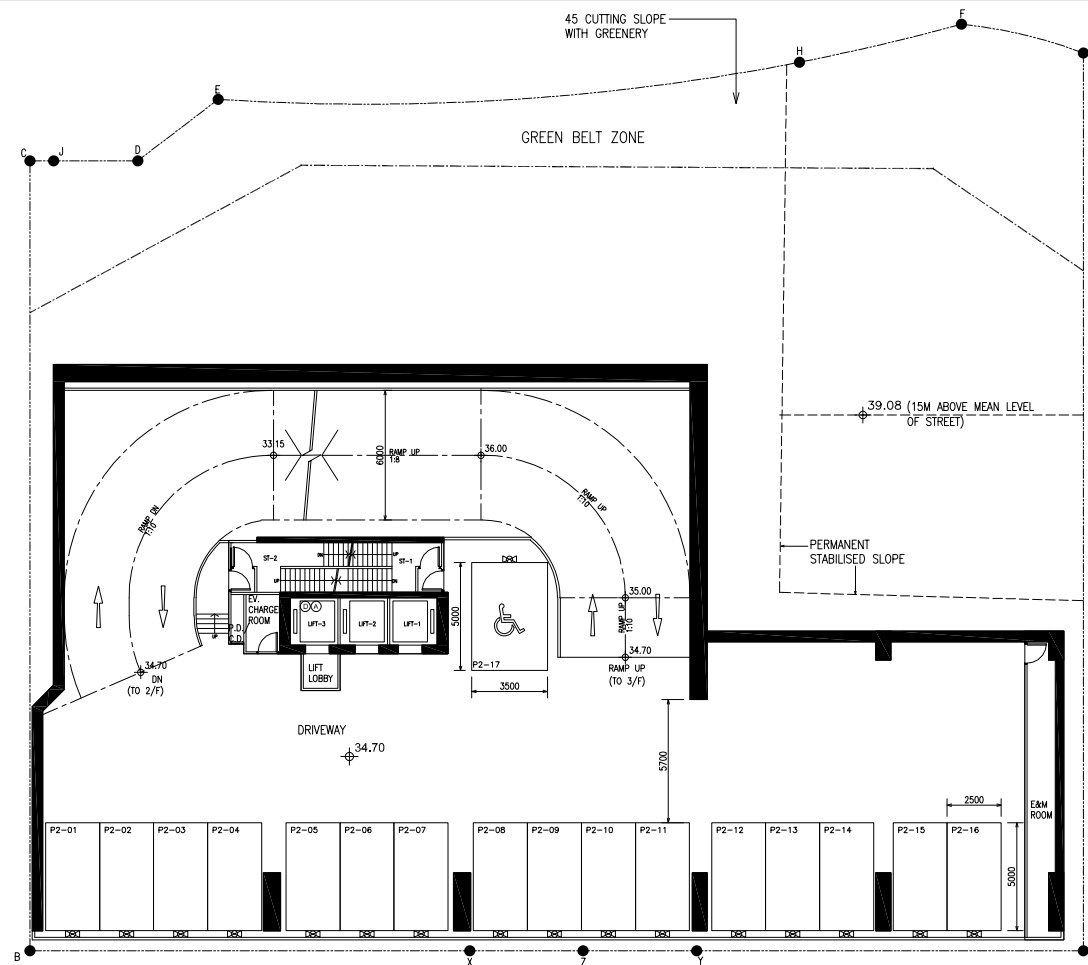


FIGURE NO.: 2.3		PROJECT TITLE: Residential Redevelopment at Nos 4-4C Tai Hang Road, Hong Kong	
PROJECT NO.: 26021HK		DRAWING TITLE: 2/F LAYOUT PLAN	
SCALE: 1 : 350 @A4	DATE: 07 JUL 2026	 CTA Consultants Limited 志達顧問有限公司	

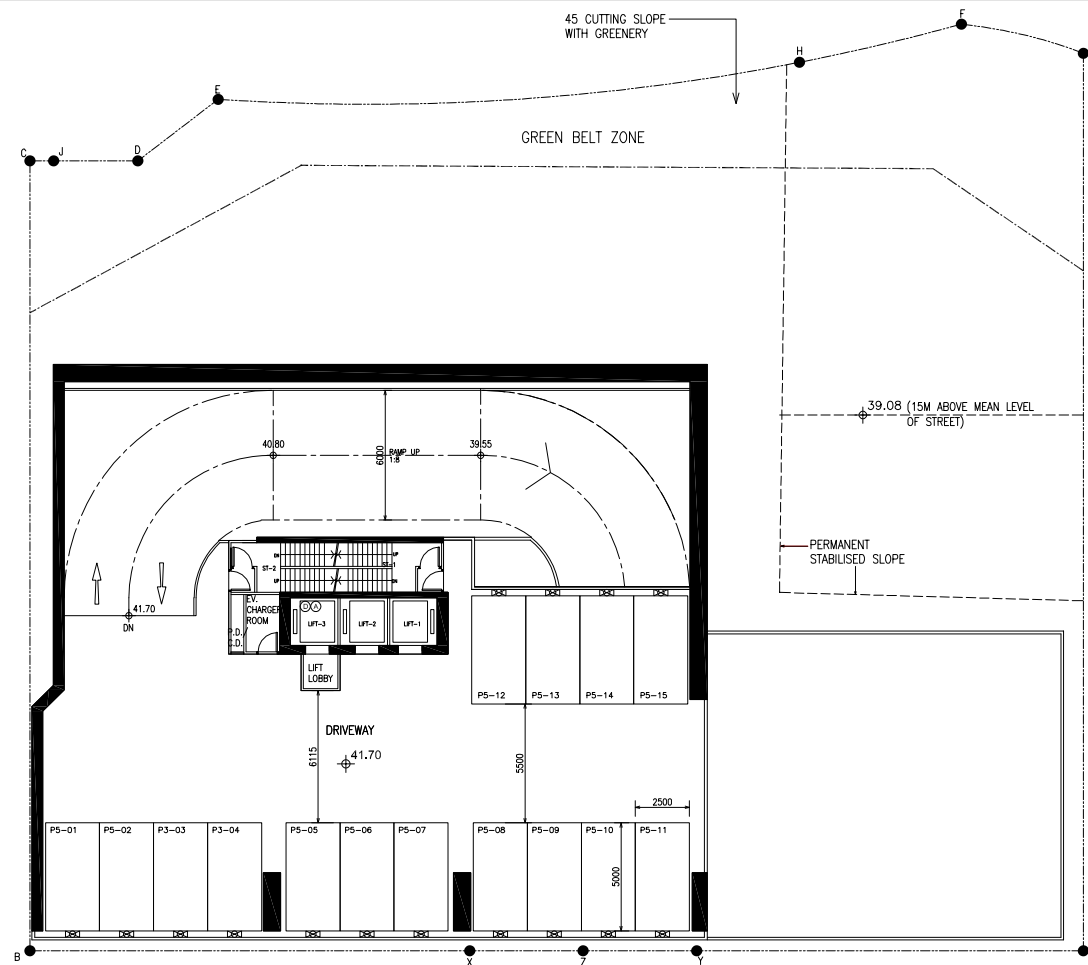
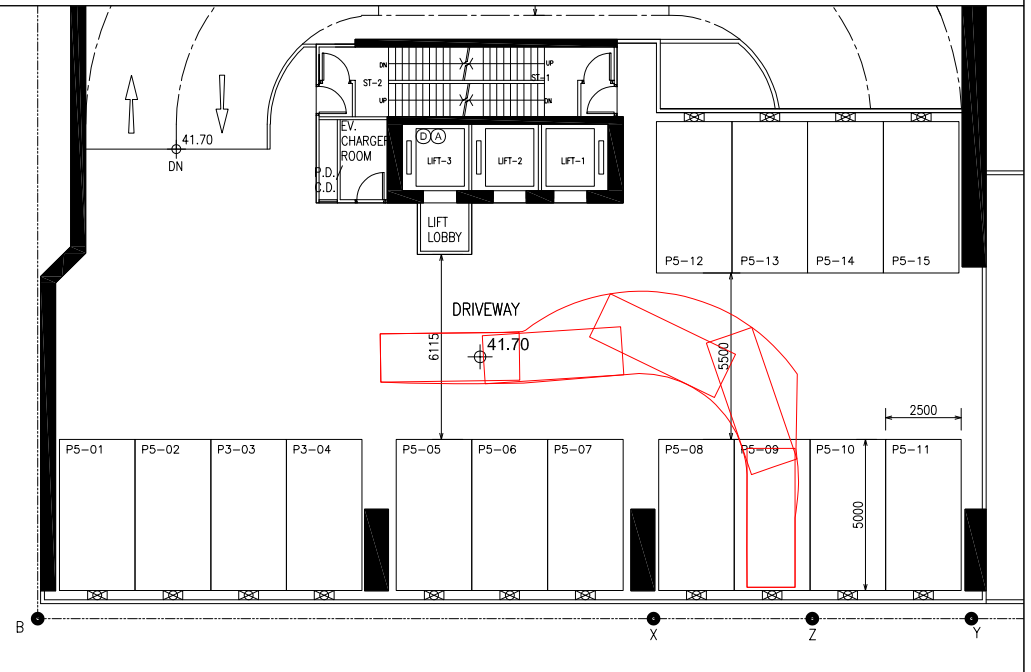
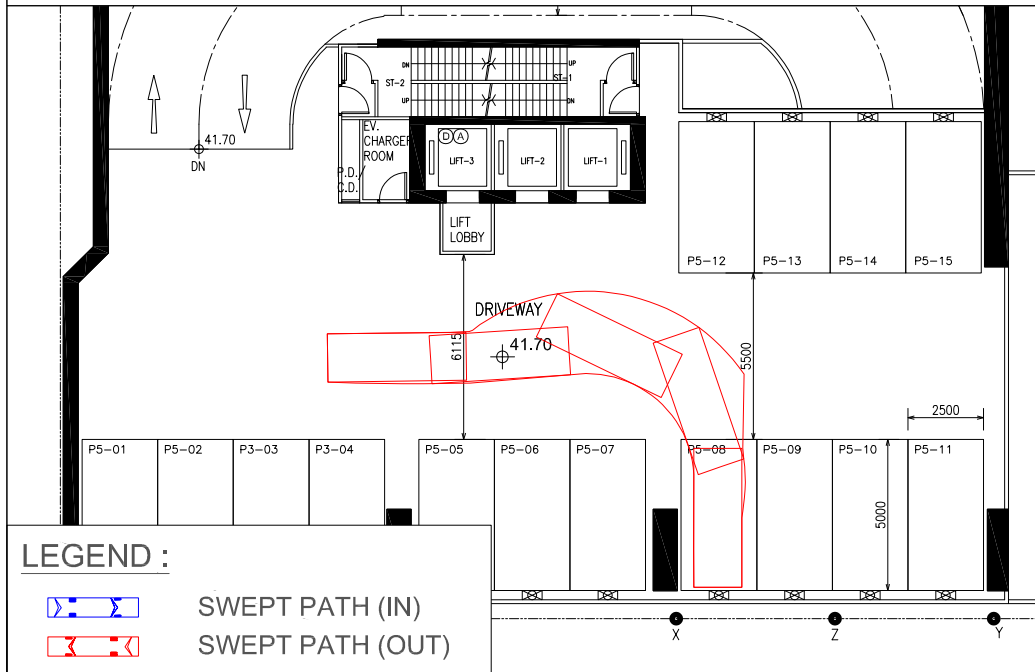
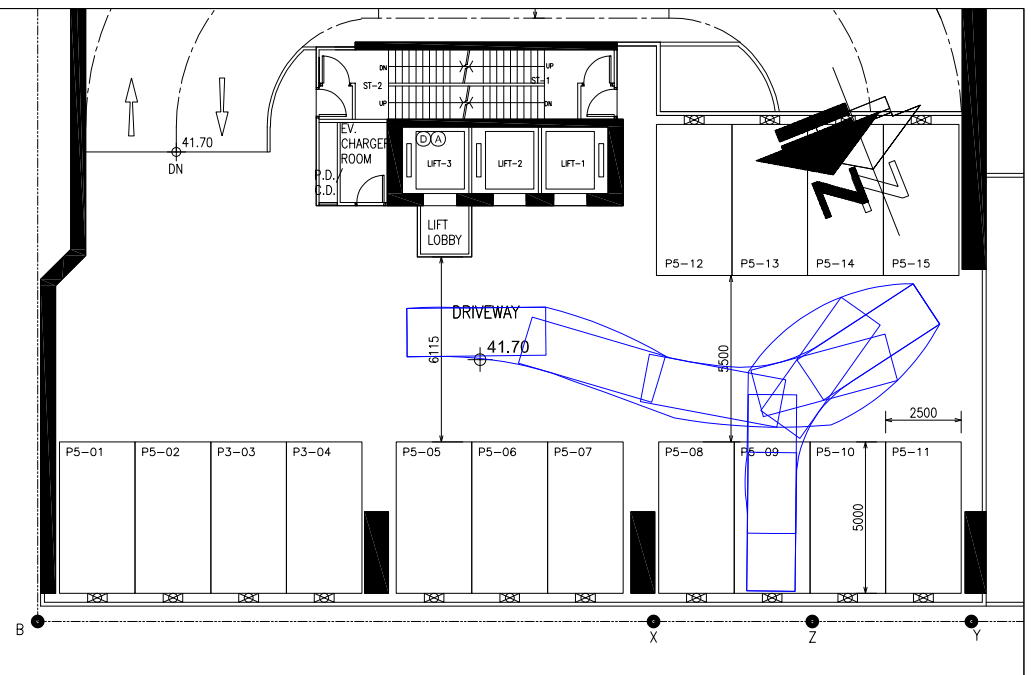
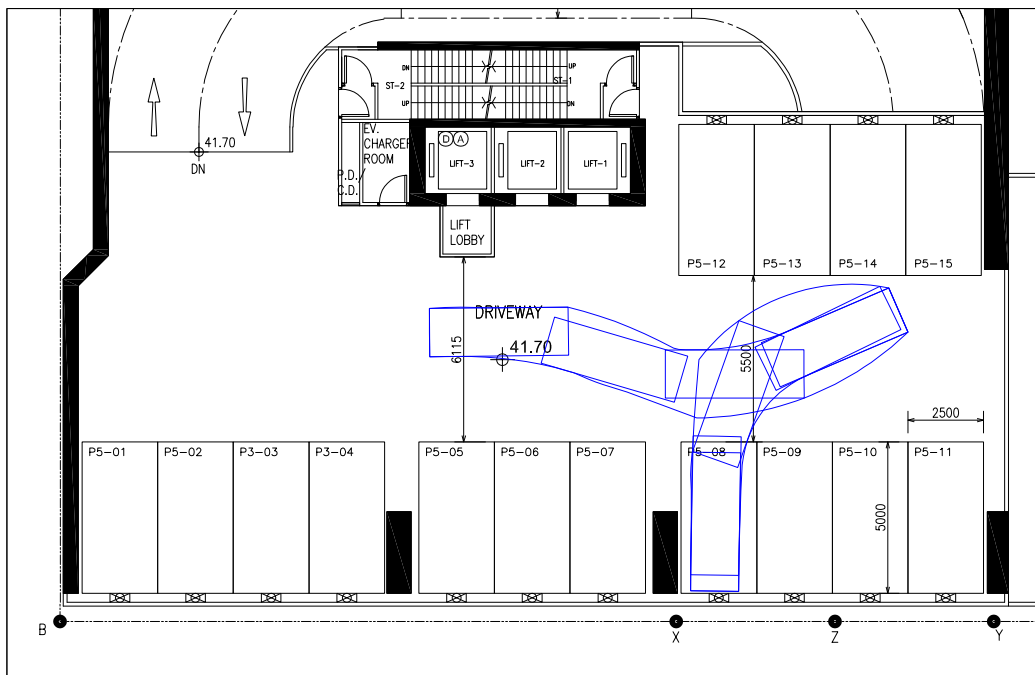


FIGURE NO.: 2.5		PROJECT TITLE: Residential Redevelopment at Nos 4-4C Tai Hang Road, Hong Kong	 CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 26021HK		DRAWING TITLE: 5/F LAYOUT PLAN	
SCALE: 1 : 350 @A4	DATE: 07 JUL 2026		



LEGEND :



SWEPT PATH (IN)



SWEPT PATH (OUT)

FIGURE NO.:

2.5(SP1)

PROJECT TITLE:

Residential Redevelopment at Nos 4-4C Tai Hang Road, Hong Kong

PROJECT NO.:

26021HK

DRAWING TITLE:

5/F LAYOUT PLAN
(SWEPT PATH ANALYSIS OF PRIVATE VEHICLE)

SCALE:

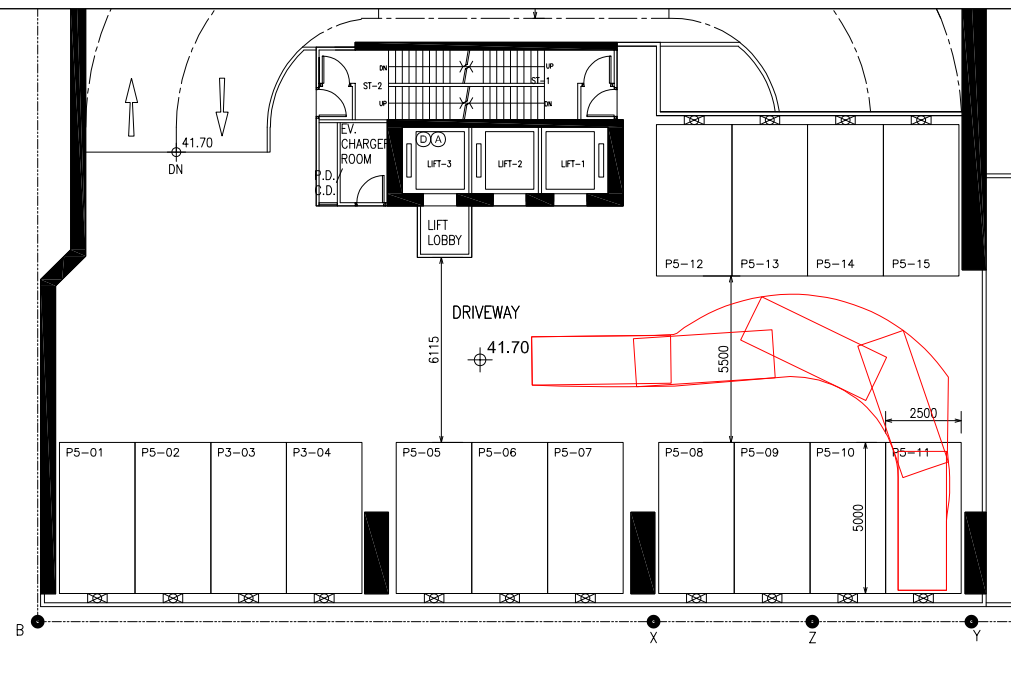
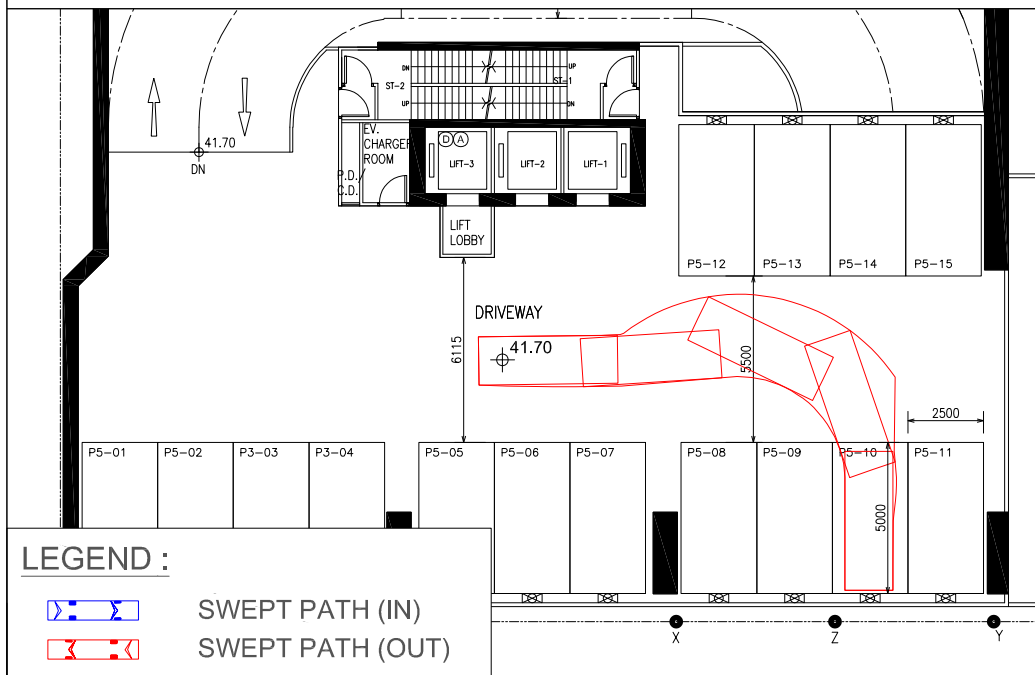
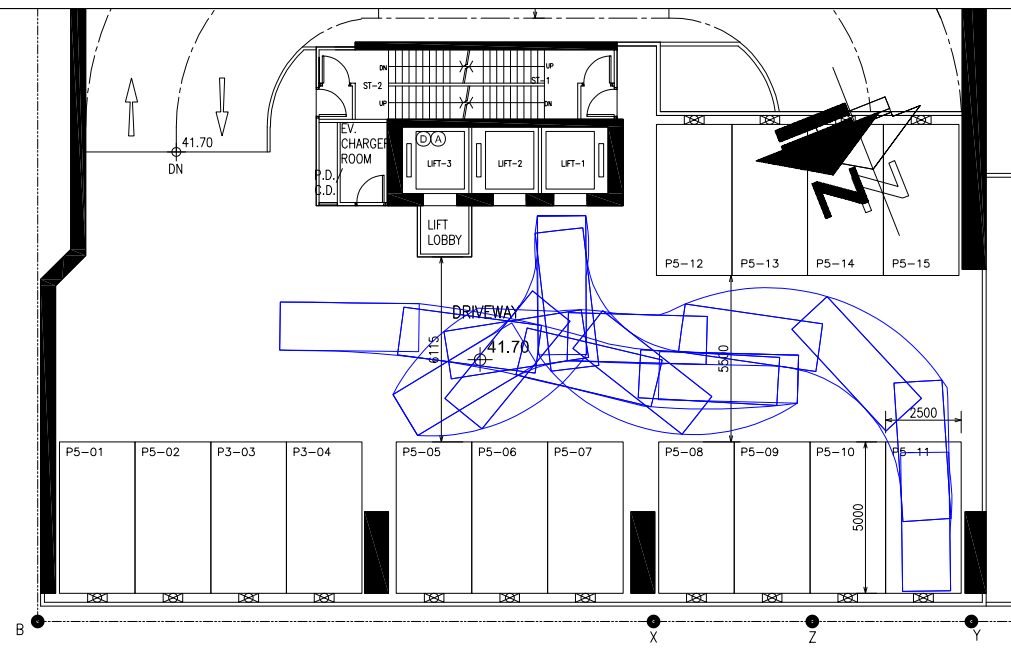
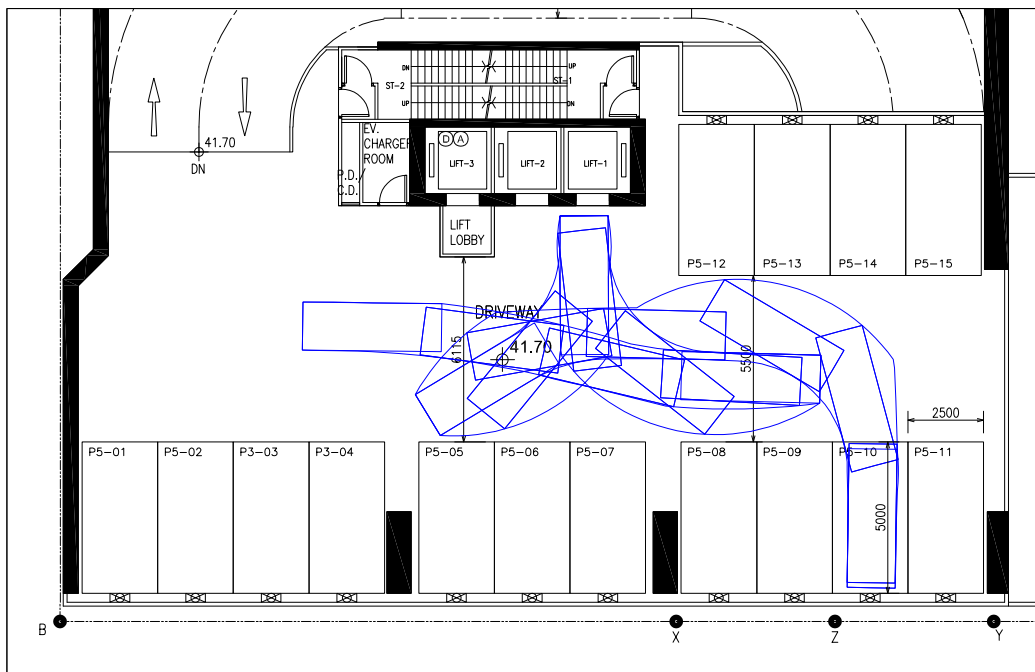
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DATE:

07 JUL 2026



CTA Consultants Limited
志達顧問有限公司



LEGEND :



SWEPT PATH (IN)



SWEPT PATH (OUT)

FIGURE NO.:

2.5(SP2)

PROJECT TITLE:

Residential Redevelopment at Nos 4-4C Tai Hang Road, Hong Kong

PROJECT NO.:

26021HK

DRAWING TITLE:

5/F LAYOUT PLAN
(SWEPT PATH ANALYSIS OF PRIVATE VEHICLE)

SCALE:

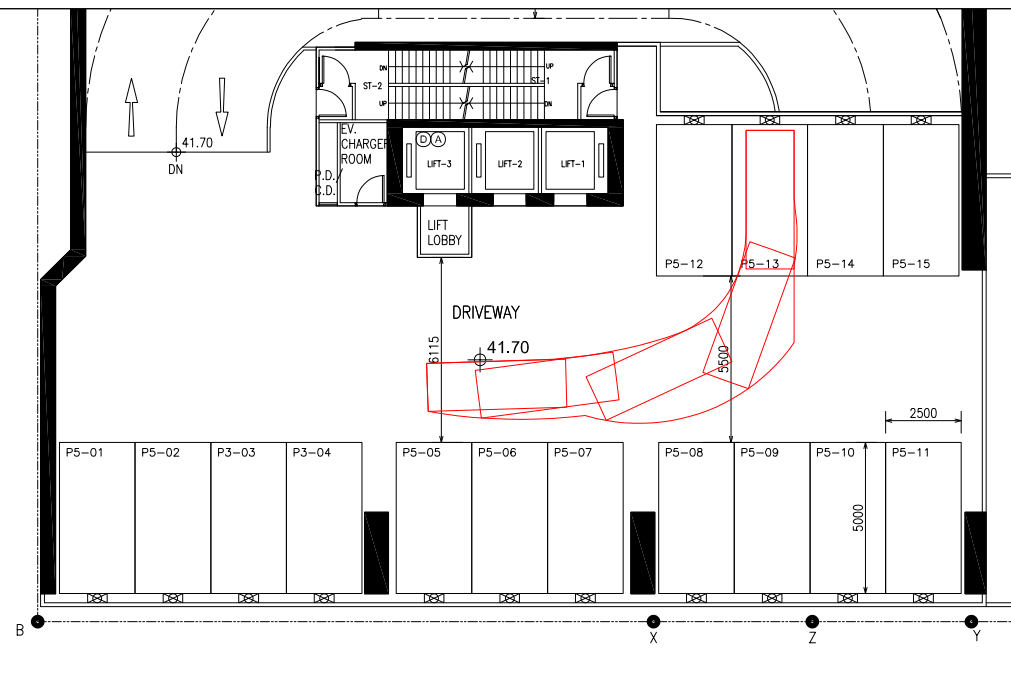
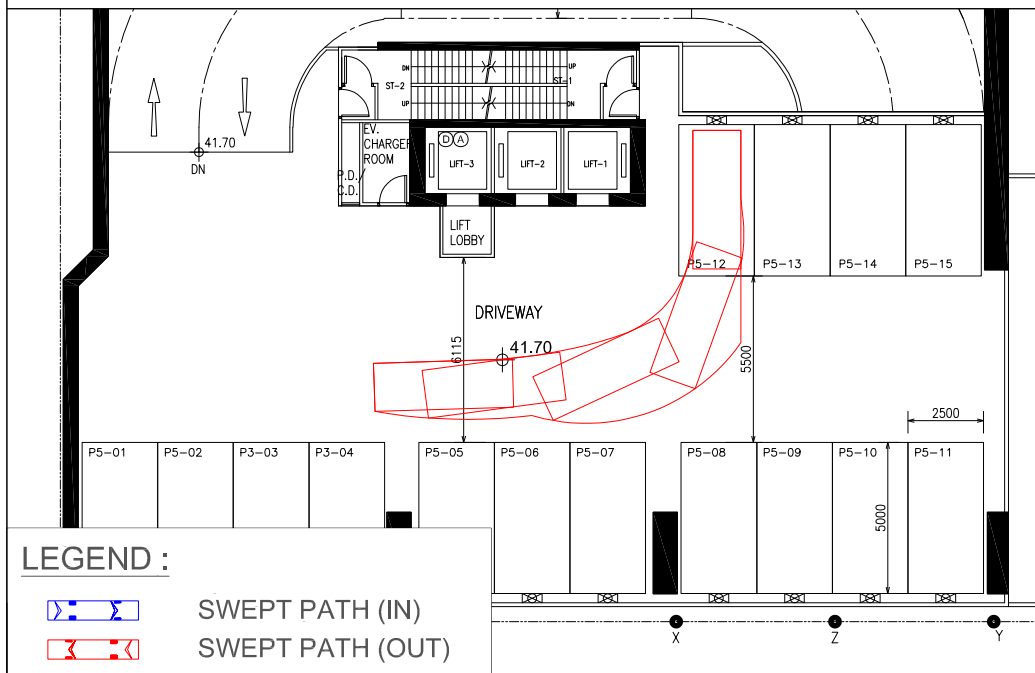
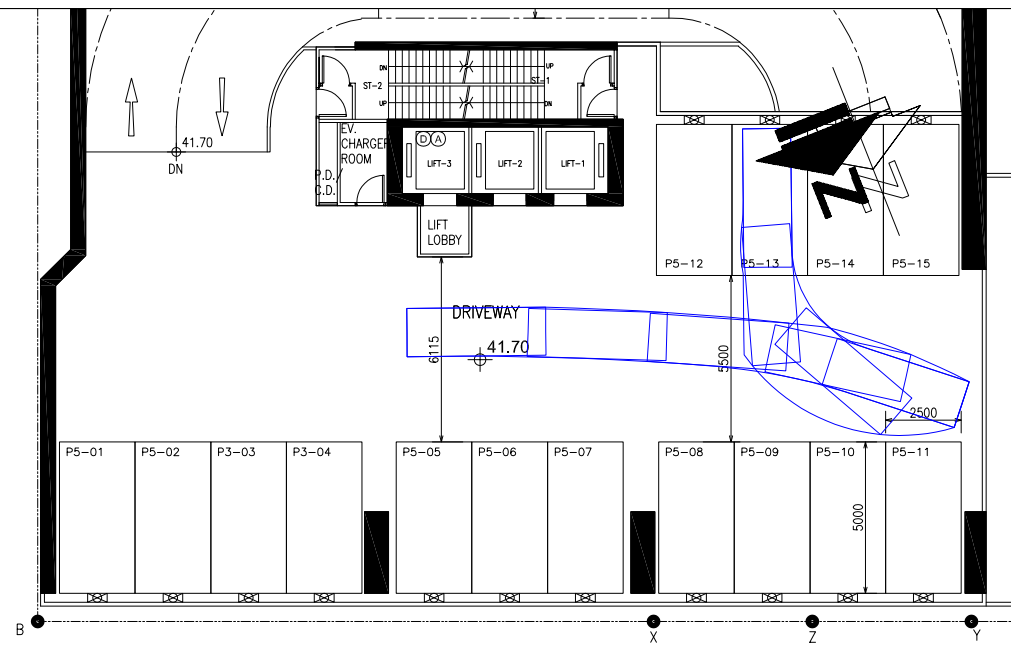
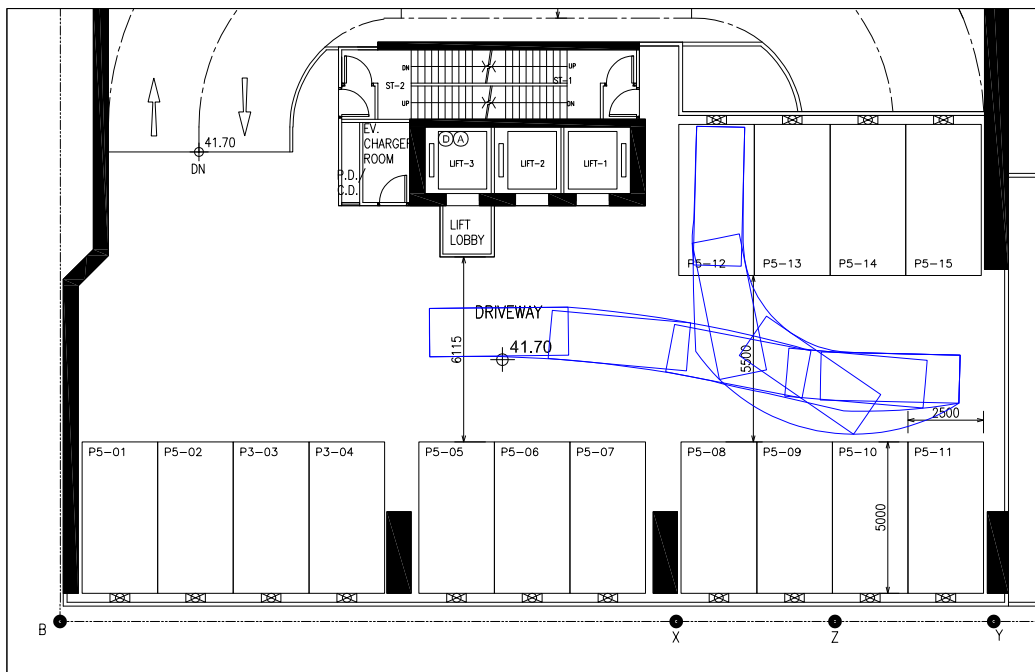
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DATE:

07 JUL 2026



CTA Consultants Limited
志達顧問有限公司



LEGEND :



SWEPT PATH (IN)



SWEPT PATH (OUT)

FIGURE NO.:

2.5(SP3)

PROJECT TITLE:

Residential Redevelopment at Nos 4-4C Tai Hang Road, Hong Kong

PROJECT NO.:

26021HK

DRAWING TITLE:

5/F LAYOUT PLAN
(SWEPT PATH ANALYSIS OF PRIVATE VEHICLE)

SCALE:

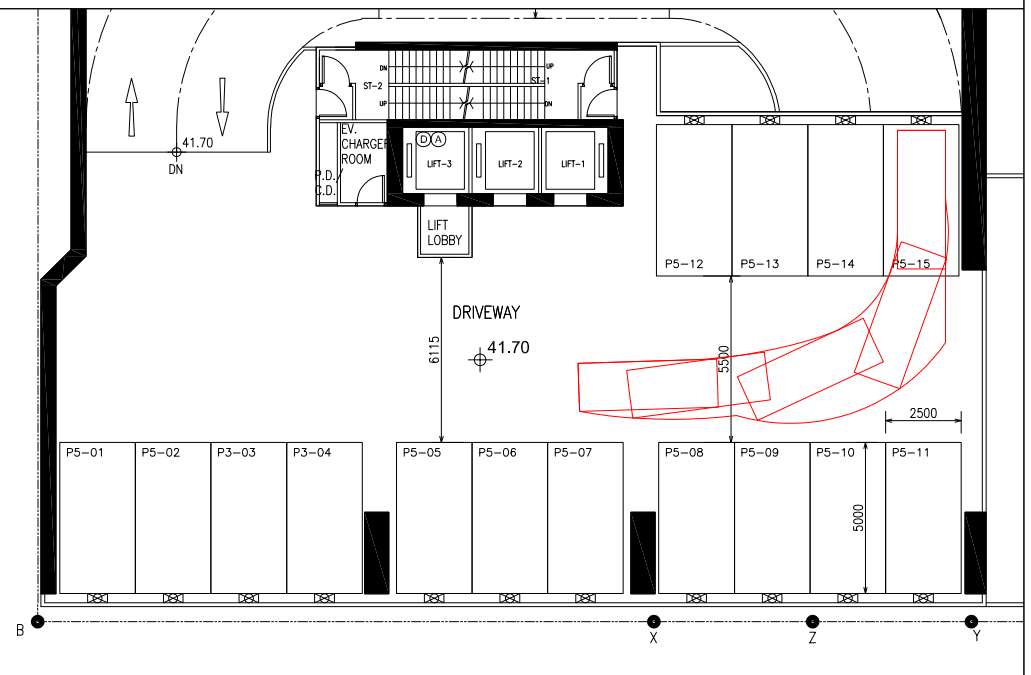
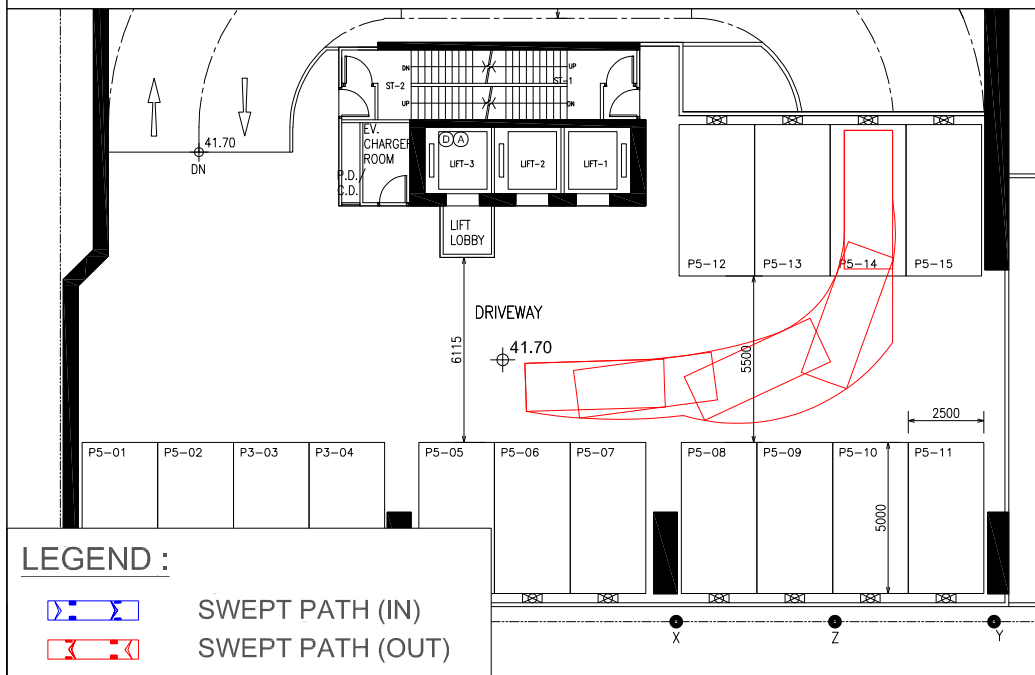
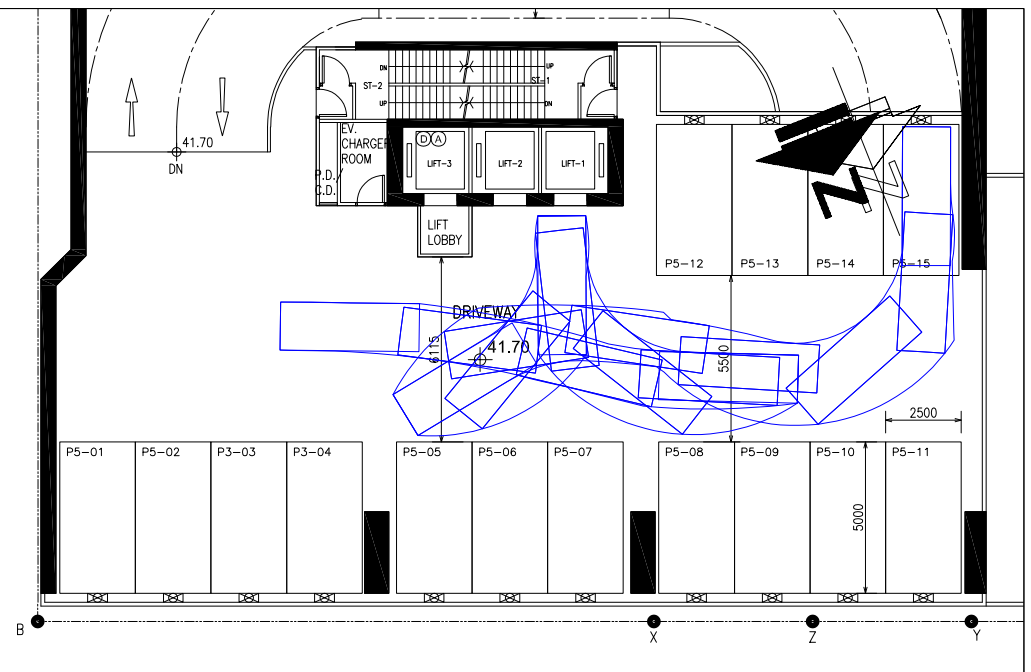
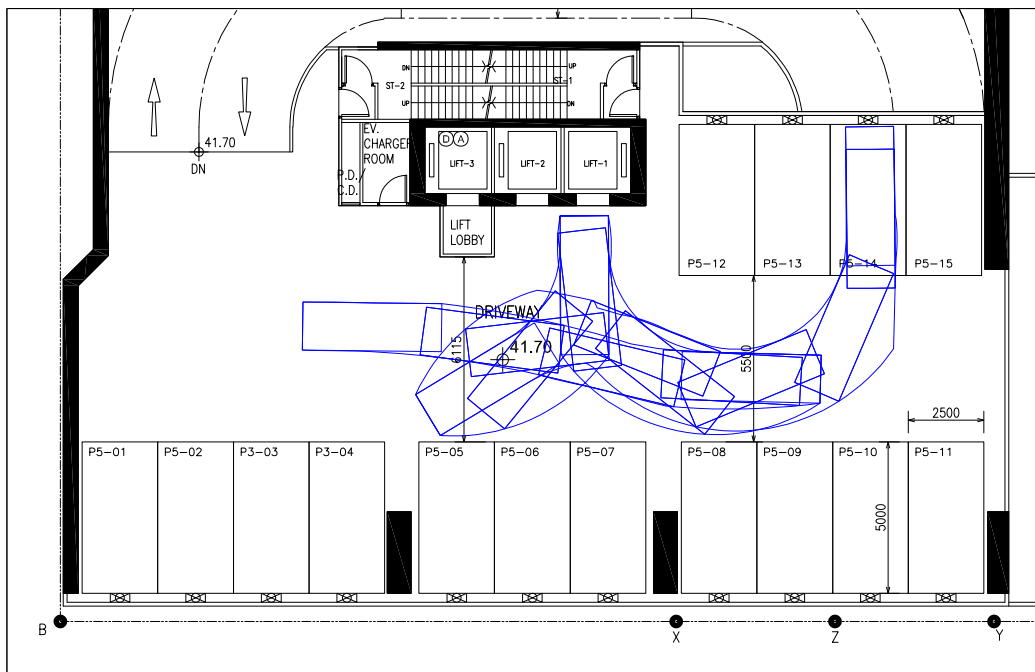
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DATE:

07 JUL 2026



CTA Consultants Limited
志達顧問有限公司



LEGEND :



SWEPT PATH (IN)



SWEPT PATH (OUT)

FIGURE NO.:

2.5(SP4)

PROJECT TITLE:

Residential Redevelopment at Nos 4-4C Tai Hang Road, Hong Kong

PROJECT NO.:

26021HK

DRAWING TITLE:

5/F LAYOUT PLAN
(SWEPT PATH ANALYSIS OF PRIVATE VEHICLE)

SCALE:

1 : 250 @A4

DATE:

07 JUL 2026



CTA Consultants Limited
志達顧問有限公司



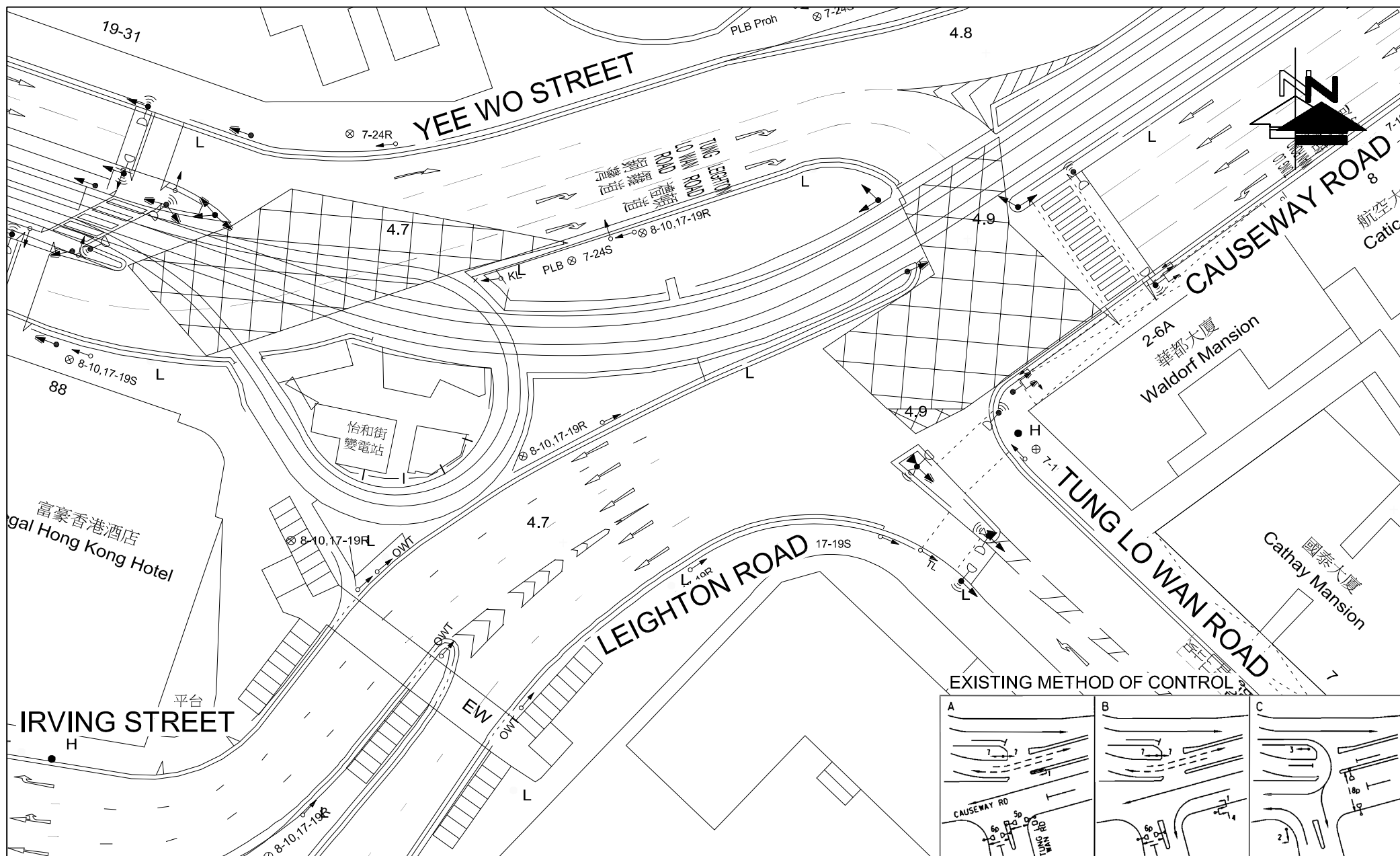


FIGURE NO.: 3.2		PROJECT TITLE: Residential Redevelopment at Nos 4-4C Tai Hang Road, Hong Kong
PROJECT NO.: 26021HK		DRAWING TITLE: EXISTING JUNCTION LAYOUT OF CAUSEWAY ROAD / TUNG LO WAN ROAD / LEIGHTON ROAD / IRVING STREET / YEE WO STREET (J1)
SCALE: 1 : 500 @A4	DATE: 28 APR 2026	

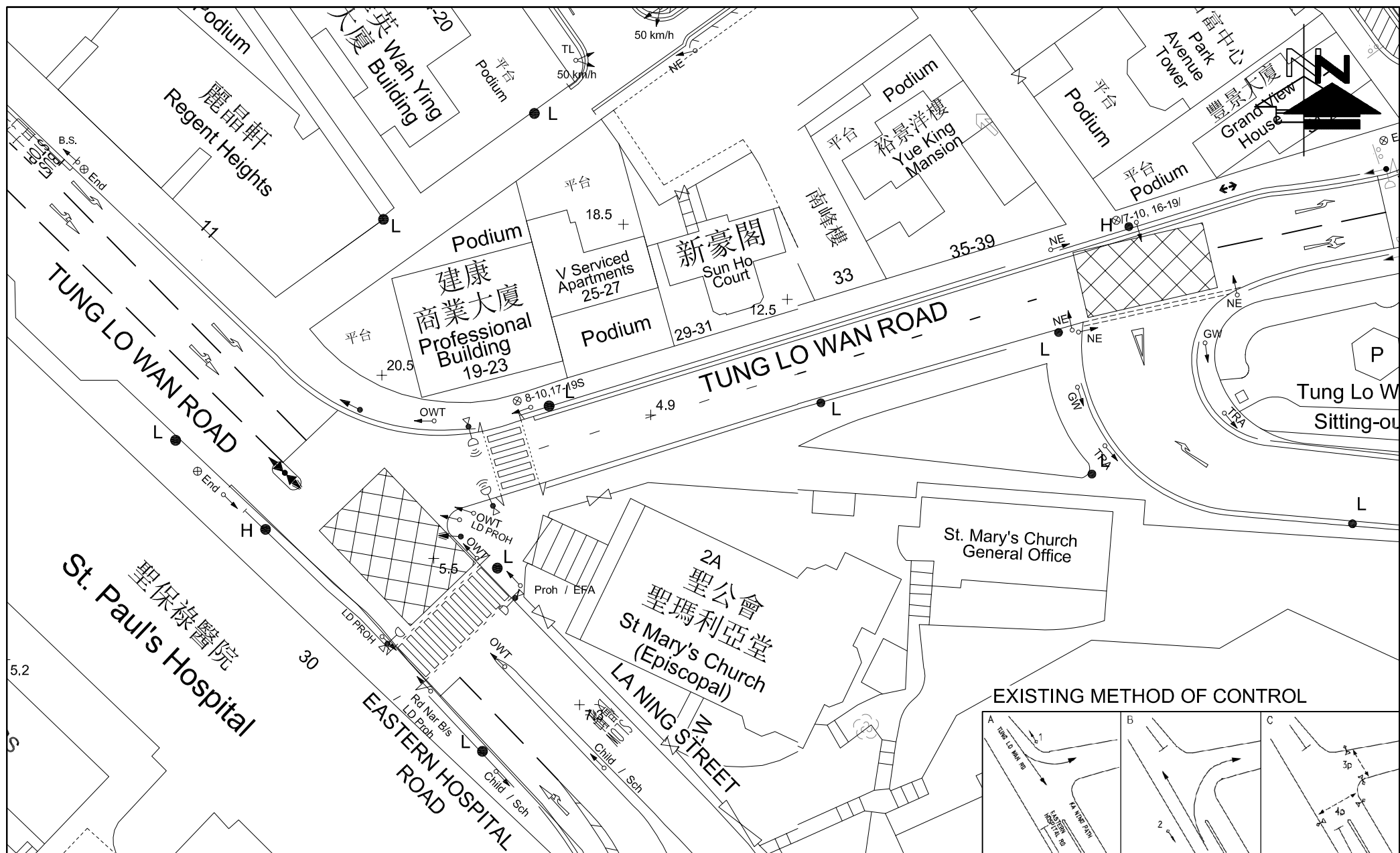


FIGURE NO.: 3.3		PROJECT TITLE: Residential Redevelopment at Nos 4-4C Tai Hang Road, Hong Kong		CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 26021HK		DRAWING TITLE: EXISTING JUNCTION LAYOUT OF TUNG LO WAN ROAD / EASTERN HOSPITAL ROAD / KA NING PATH (J2)		
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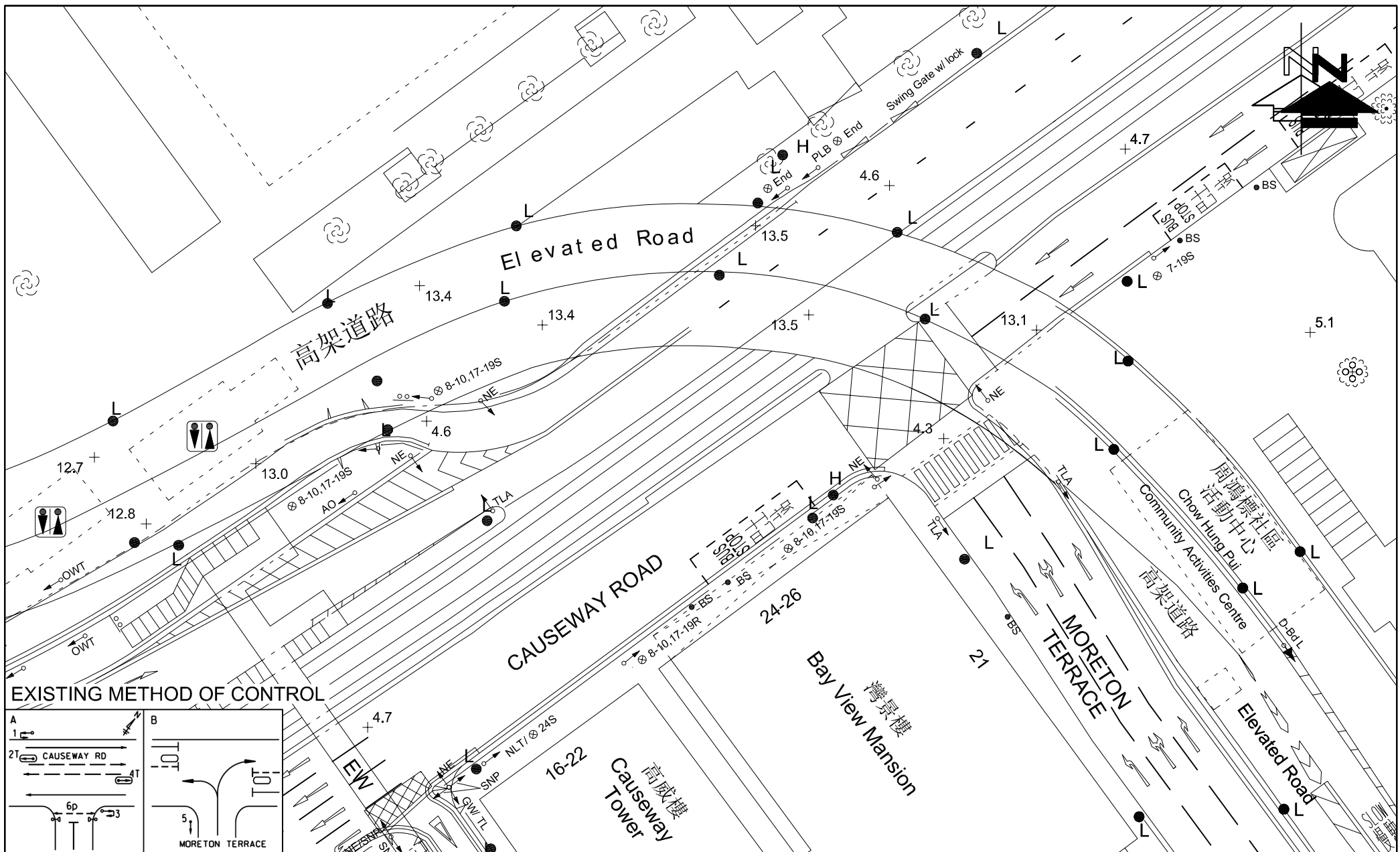
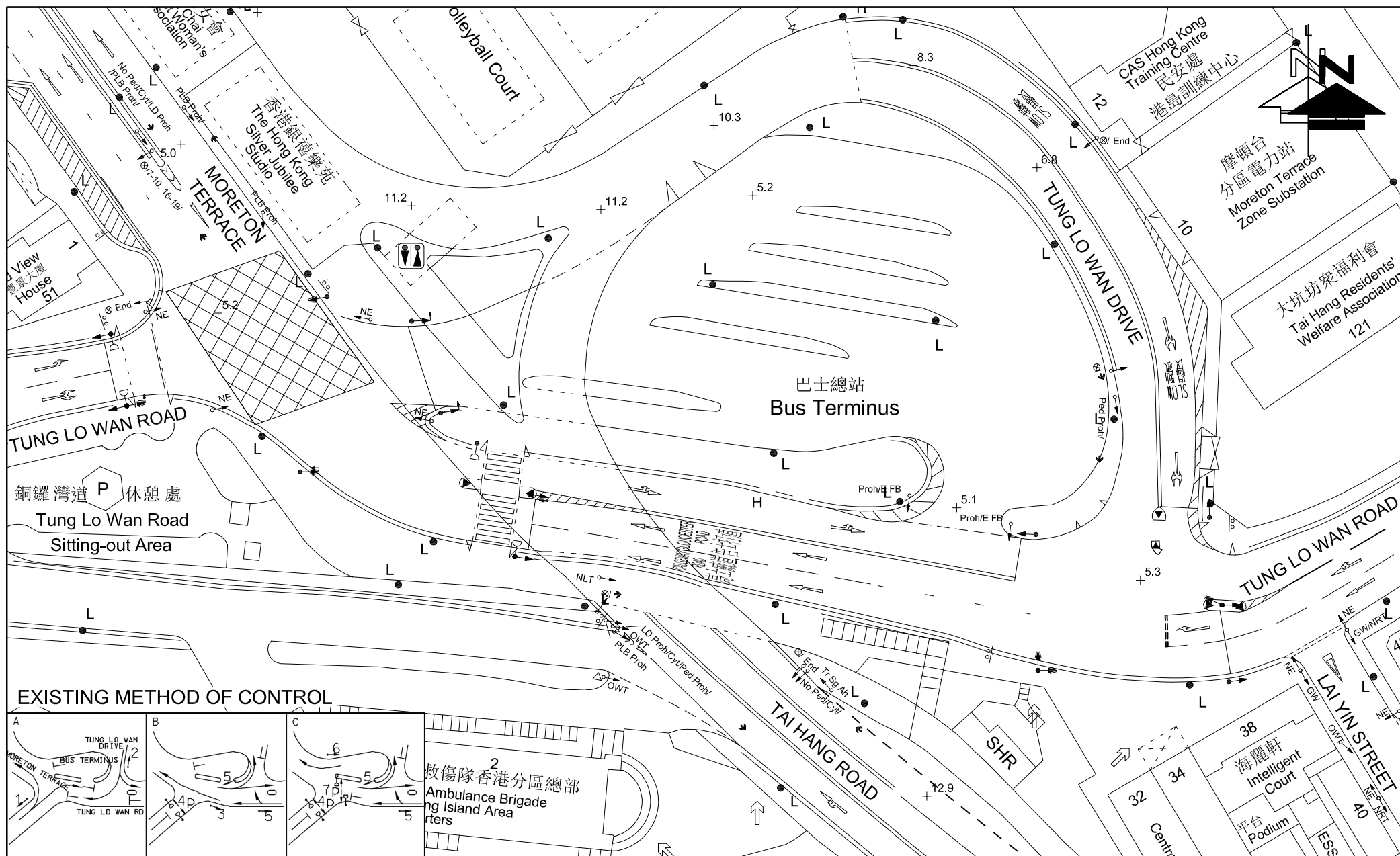


FIGURE NO.: 3.4	PROJECT TITLE: Residential Redevelopment at Nos 4-4C Tai Hang Road, Hong Kong	 CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 26021HK	DRAWING TITLE: EXISTING JUNCTION LAYOUT OF CAUSEWAY ROAD / MORETON TERRACE (J3)	
SCALE: 1 : 500 @A4	DATE: 20 APR 2026	



EXISTING METHOD OF CONTROL

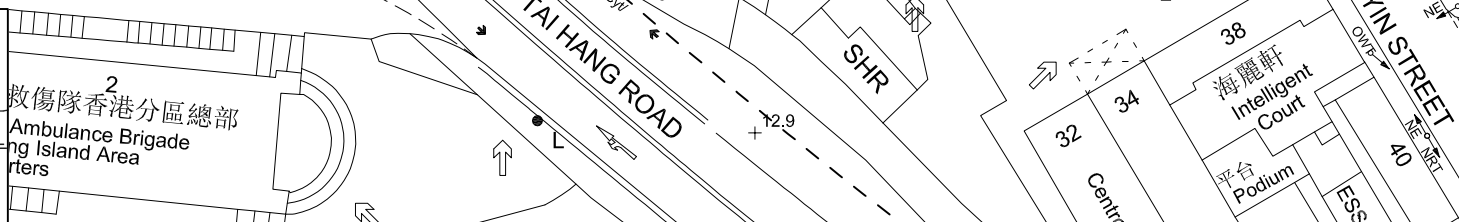
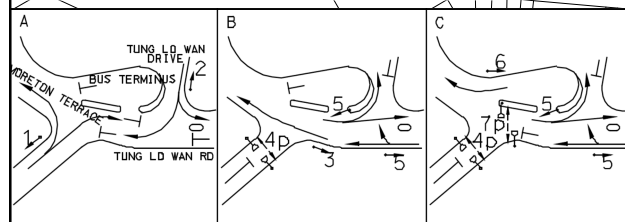
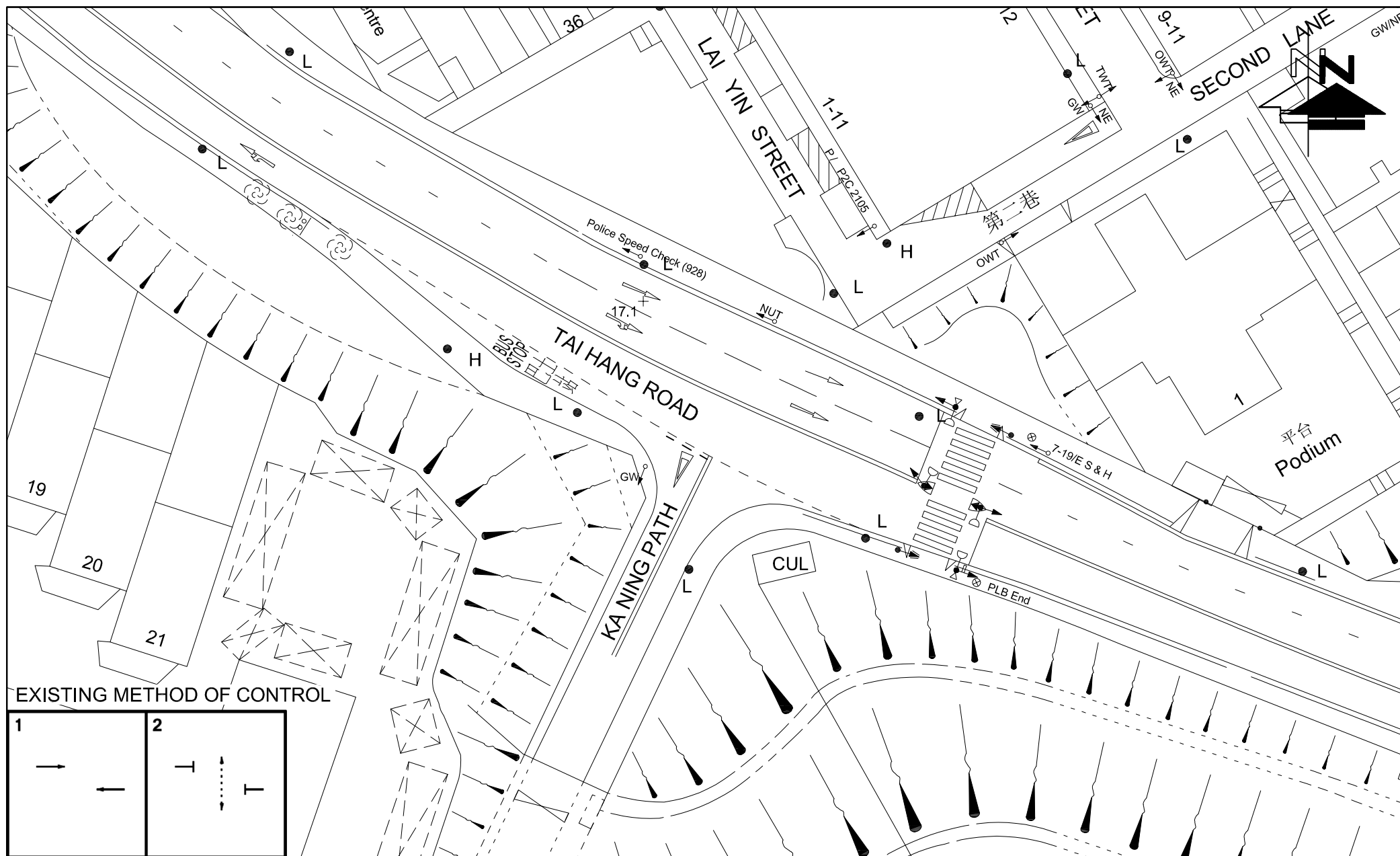


FIGURE NO.: 3.5	PROJECT TITLE: Residential Redevelopment at Nos 4-4C Tai Hang Road, Hong Kong	 CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 26021HK	DRAWING TITLE: EXISTING JUNCTION LAYOUT OF TUNG LO WAN ROAD / MORETON TERRACE (J4)	
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EXISTING METHOD OF CONTROL

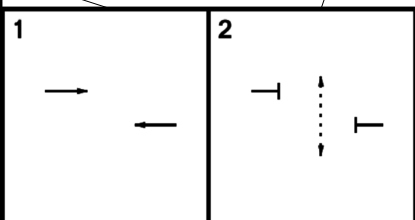


FIGURE NO.: 3.6		PROJECT TITLE: Residential Redevelopment at Nos 4-4C Tai Hang Road, Hong Kong	 CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 26021HK		DRAWING TITLE: EXISTING JUNCTION LAYOUT OF TAI HANG ROAD / PEDESTRIAN CROSSING NEAR KA NING PATH (J5)	
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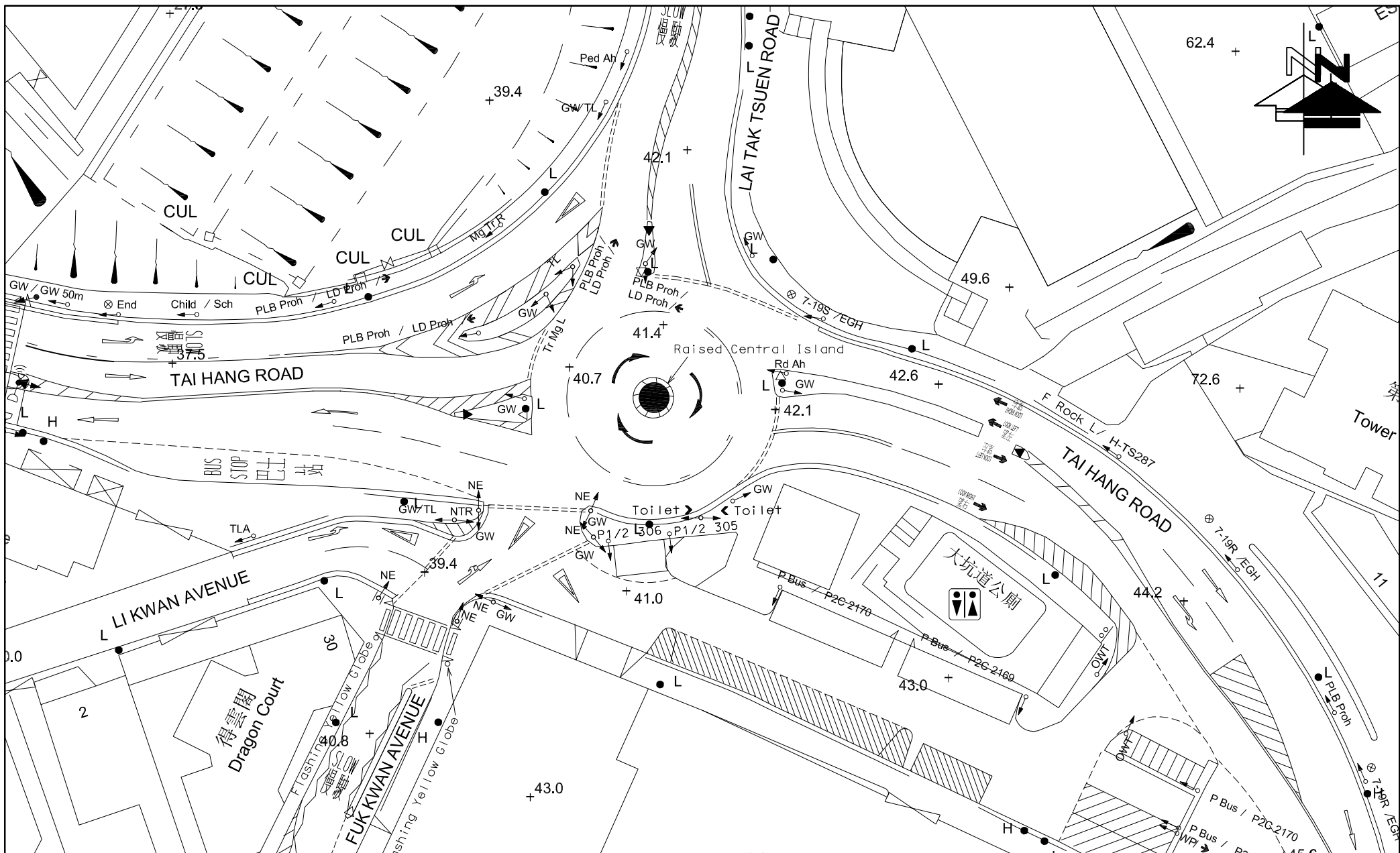


FIGURE NO.: 3.7		PROJECT TITLE: Residential Redevelopment at Nos 4-4C Tai Hang Road, Hong Kong		 CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 26021HK		DRAWING TITLE: EXISTING JUNCTION LAYOUT OF TAI HANG ROAD / LAI TAK TSUEN ROAD / FUK KWAN AVENUE / LI KWAN AVENUE (J6)		
SCALE: 1 : 500 @A4	DATE: 20 APR 2026			

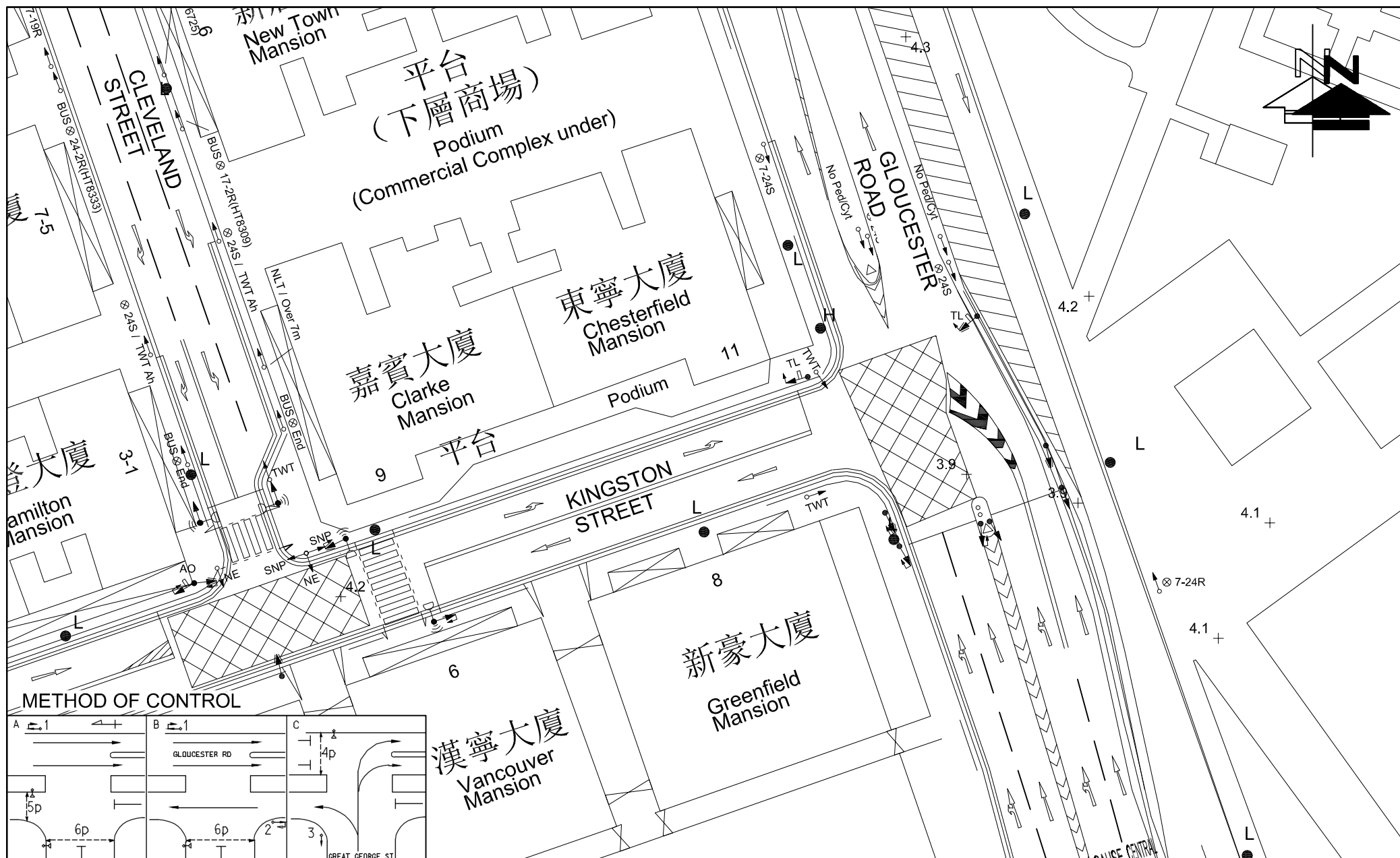


FIGURE NO.: 3.8		PROJECT TITLE: Residential Redevelopment at Nos 4-4C Tai Hang Road, Hong Kong	 CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 26021HK		DRAWING TITLE:	
SCALE: 1 : 500@A4	DATE: 24 JUN 2026	EXISTING JUNCTION LAYOUT OF GLOUCESTER ROAD / KINGSTON STREET (J7)	

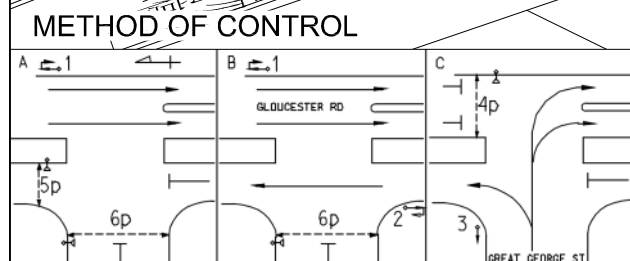
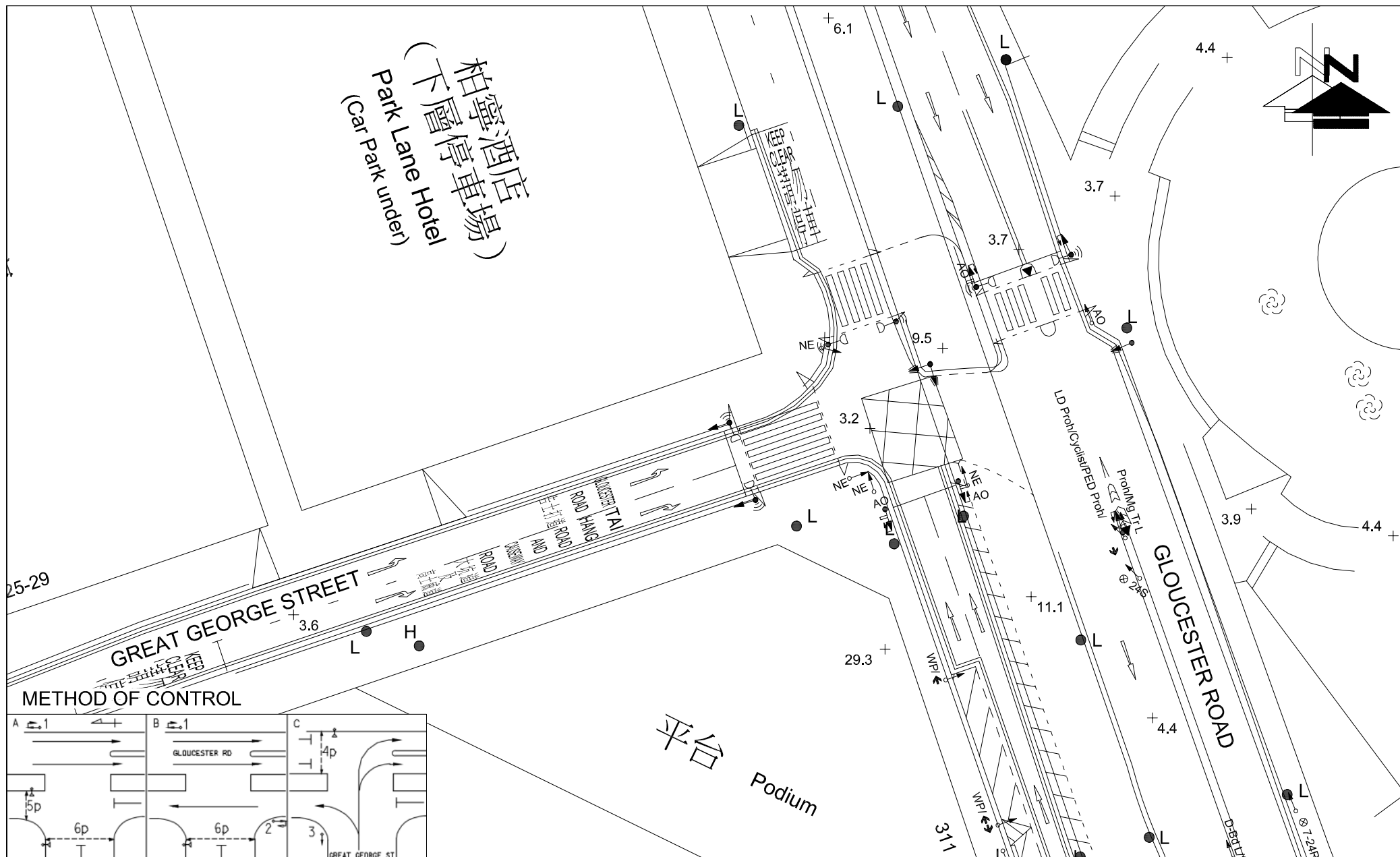


FIGURE NO.: 3.9		PROJECT TITLE: Residential Redevelopment at Nos 4-4C Tai Hang Road, Hong Kong
PROJECT NO.: 26021HK		DRAWING TITLE: EXISTING JUNCTION LAYOUT OF GLOUCESTER ROAD / GREAT GEORGE STREET (J8)
SCALE: 1 : 500@A4	DATE: 24 JUN 2026	 CTA Consultants Limited 志達顧問有限公司

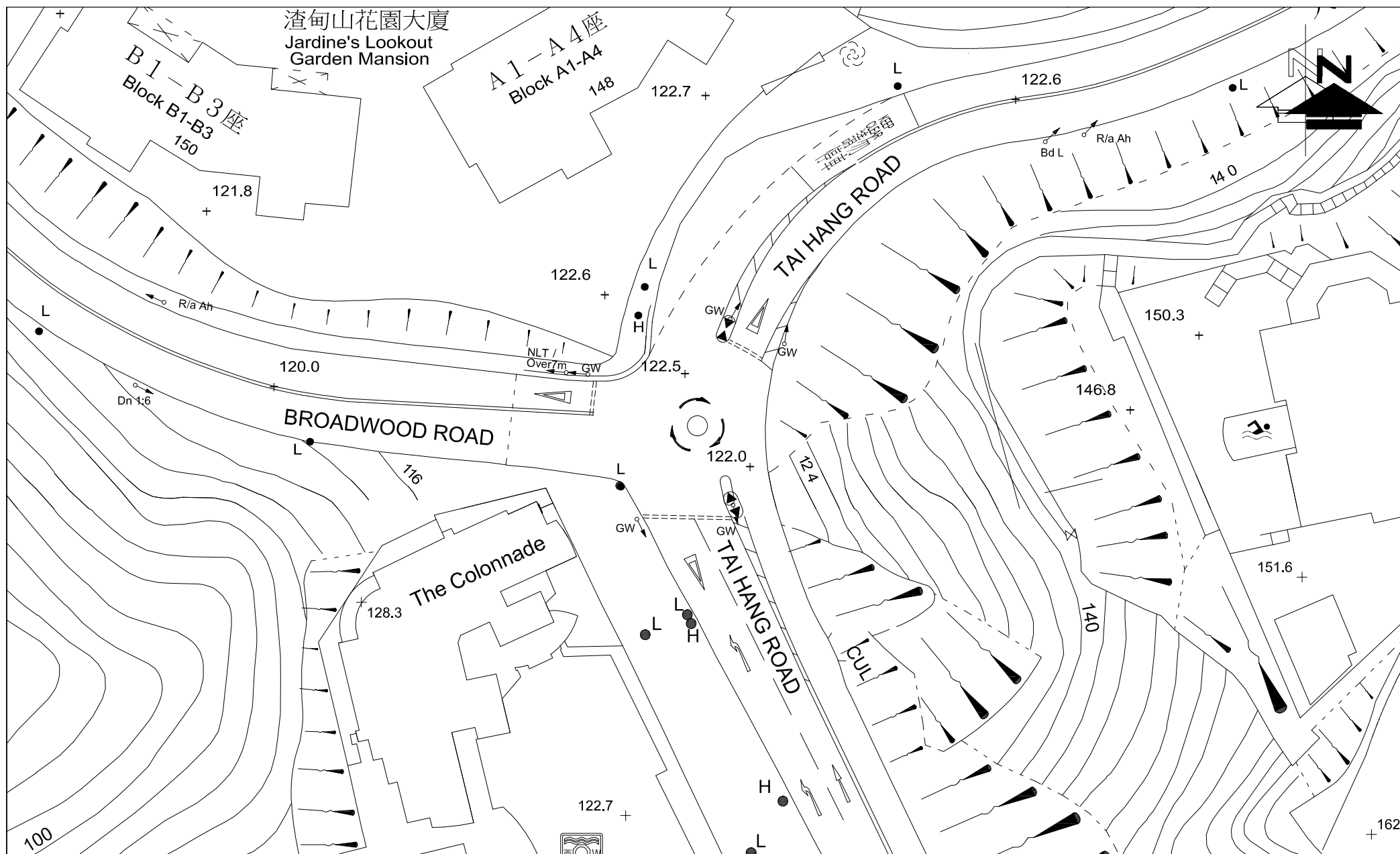
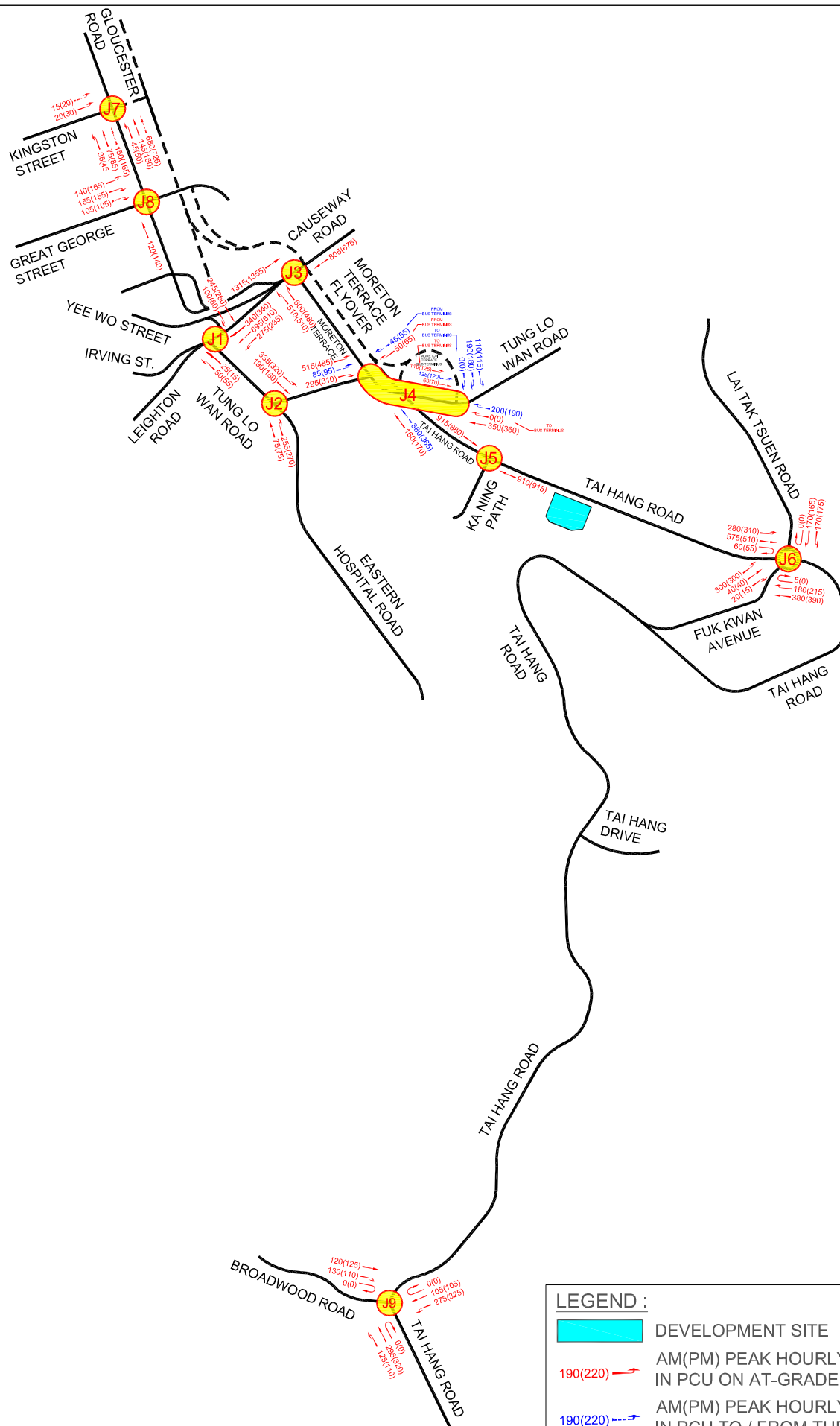
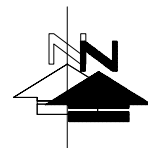


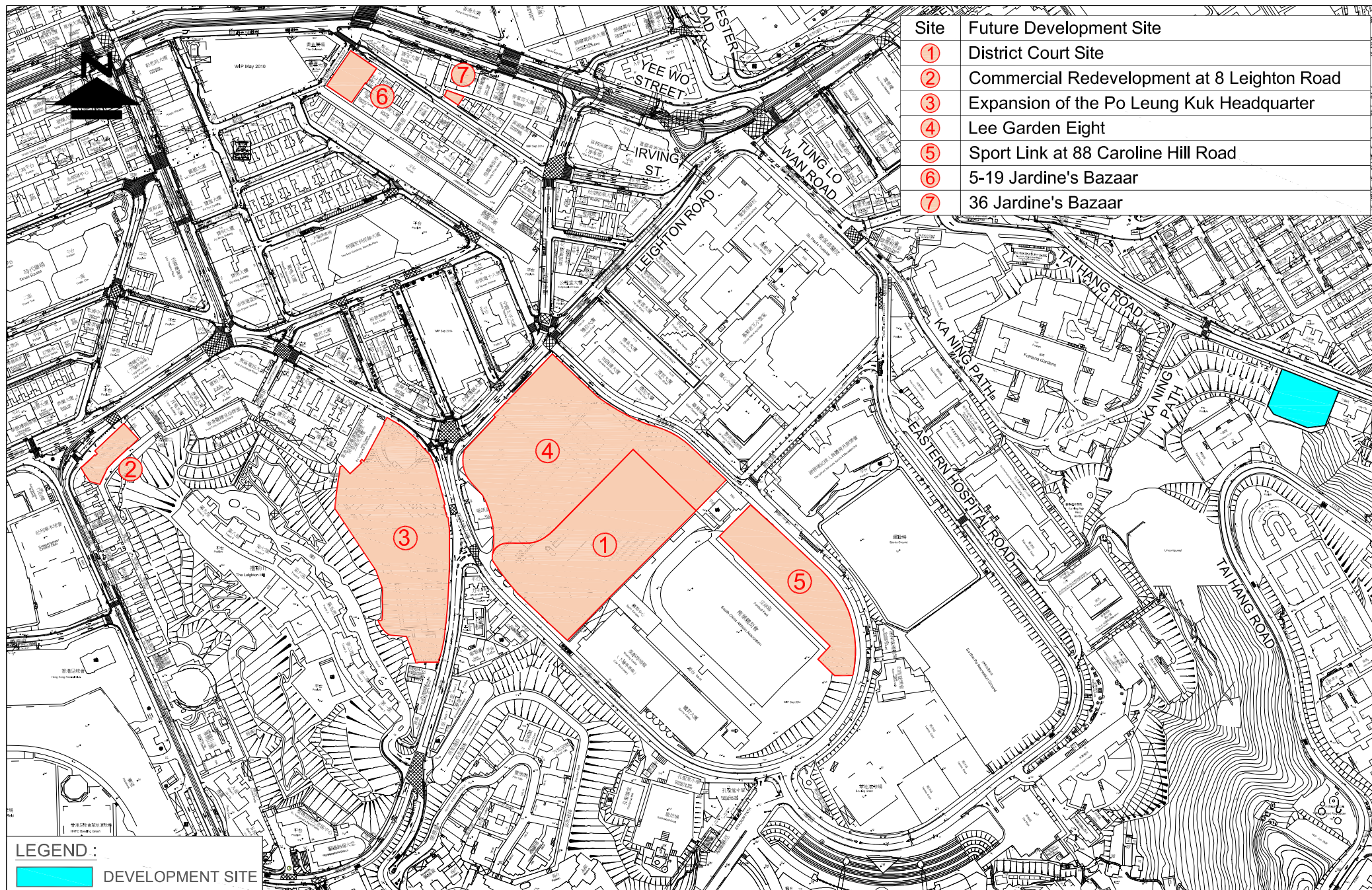
FIGURE NO.: 3.10		PROJECT TITLE: Residential Redevelopment at Nos 4-4C Tai Hang Road, Hong Kong	 CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 26021HK		DRAWING TITLE: EXISTING JUNCTION LAYOUT OF ROUNDABOUT OF TAI HANG ROAD / BROADWOOD ROAD (J9)	
SCALE: 1 : 600@A4	DATE: 03 JUL 2026		



LEGEND :

-  DEVELOPMENT SITE
-  190(220) AM(PM) PEAK HOURLY TRAFFIC FLOW IN PCU ON AT-GRADE ROAD NETWORK
-  190(220) AM(PM) PEAK HOURLY TRAFFIC FLOW IN PCU TO / FROM THE FLYOVER

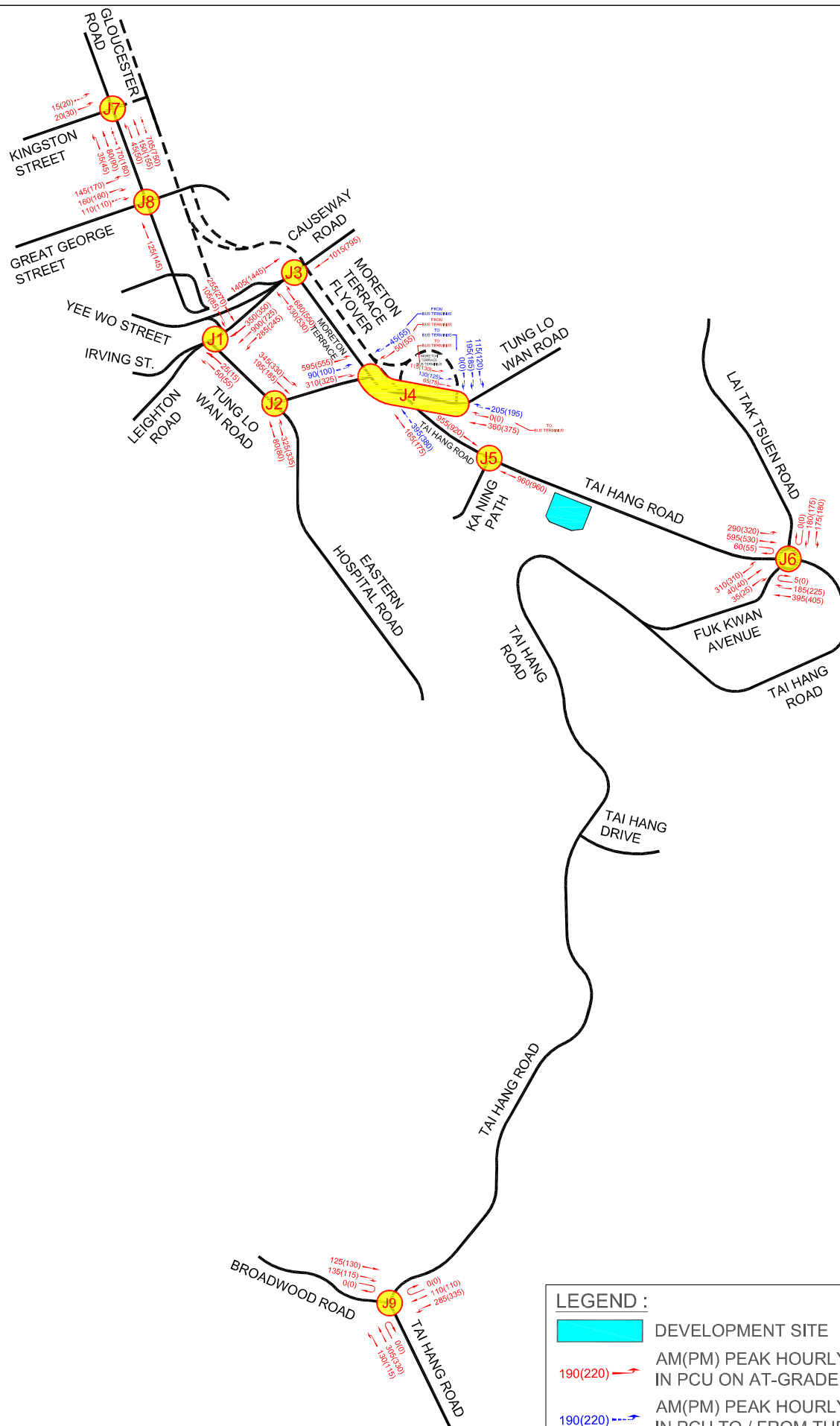
FIGURE NO.:	3.11	PROJECT TITLE:	Residential Redevelopment at Nos 4-4C Tai Hang Road, Hong Kong	 CTA Consultants Limited 志達顧問有限公司
PROJECT NO.:	26021HK	DRAWING TITLE:	2026 OBSERVED TRAFFIC FLOW	
SCALE:	1 : 7000 @A4	DATE:	03 JUL 2026	



Site	Future Development Site
①	District Court Site
②	Commercial Redevelopment at 8 Leighton Road
③	Expansion of the Po Leung Kuk Headquarter
④	Lee Garden Eight
⑤	Sport Link at 88 Caroline Hill Road
⑥	5-19 Jardine's Bazaar
⑦	36 Jardine's Bazaar

LEGEND :
 DEVELOPMENT SITE

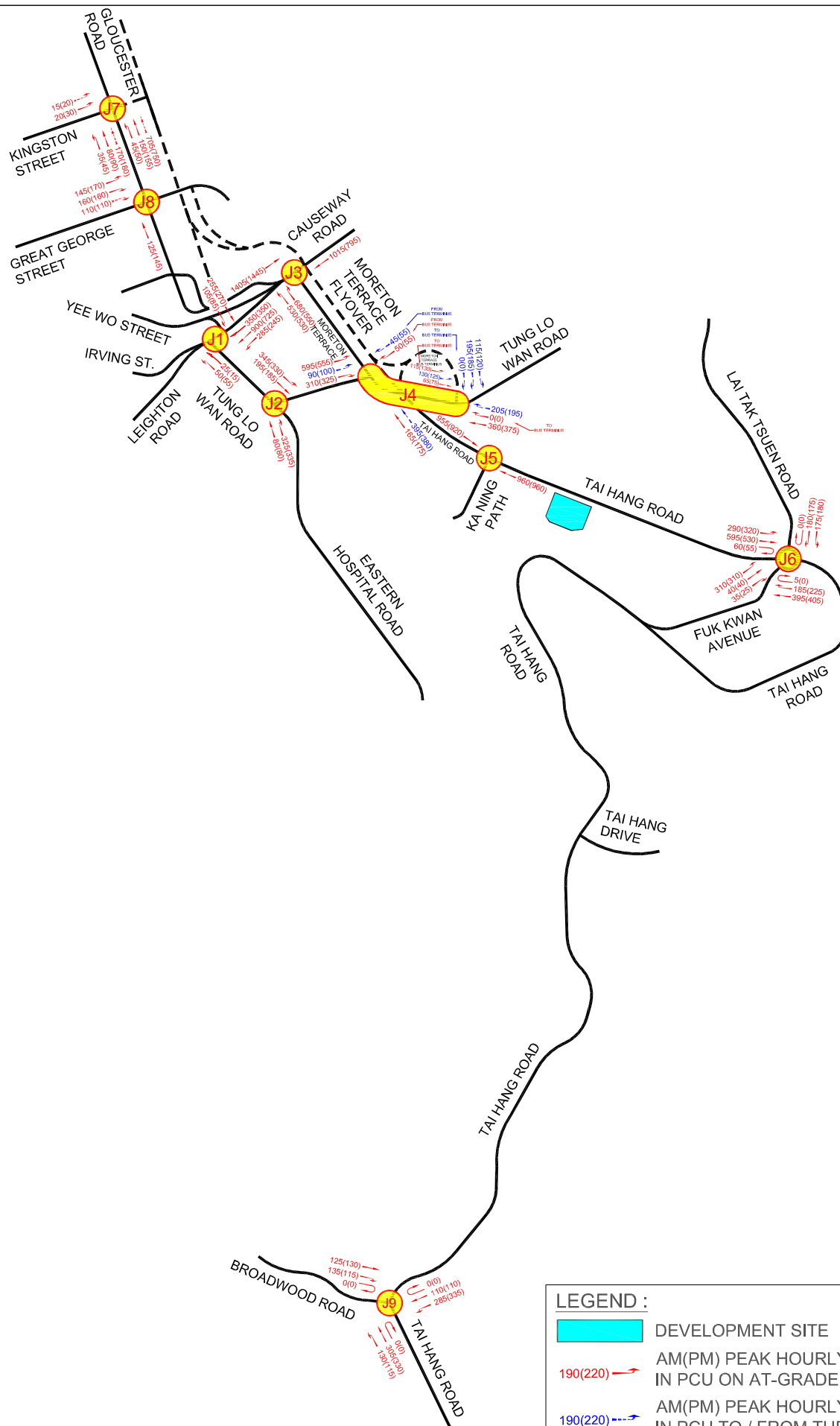
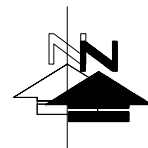
FIGURE NO.: 4.1		PROJECT TITLE: Residential Redevelopment at Nos 4-4C Tai Hang Road, Hong Kong		 CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 26021HK		DRAWING TITLE: PLANNED / POTENTIAL FUTURE DEVELOPMENT IN THE VICINITY		
SCALE: 1 : 4000@A4	DATE: 03 JUL 2026			



LEGEND :

-  DEVELOPMENT SITE
-  190(220) AM(PM) PEAK HOURLY TRAFFIC FLOW IN PCU ON AT-GRADE ROAD NETWORK
-  190(220) AM(PM) PEAK HOURLY TRAFFIC FLOW IN PCU TO / FROM THE FLYOVER

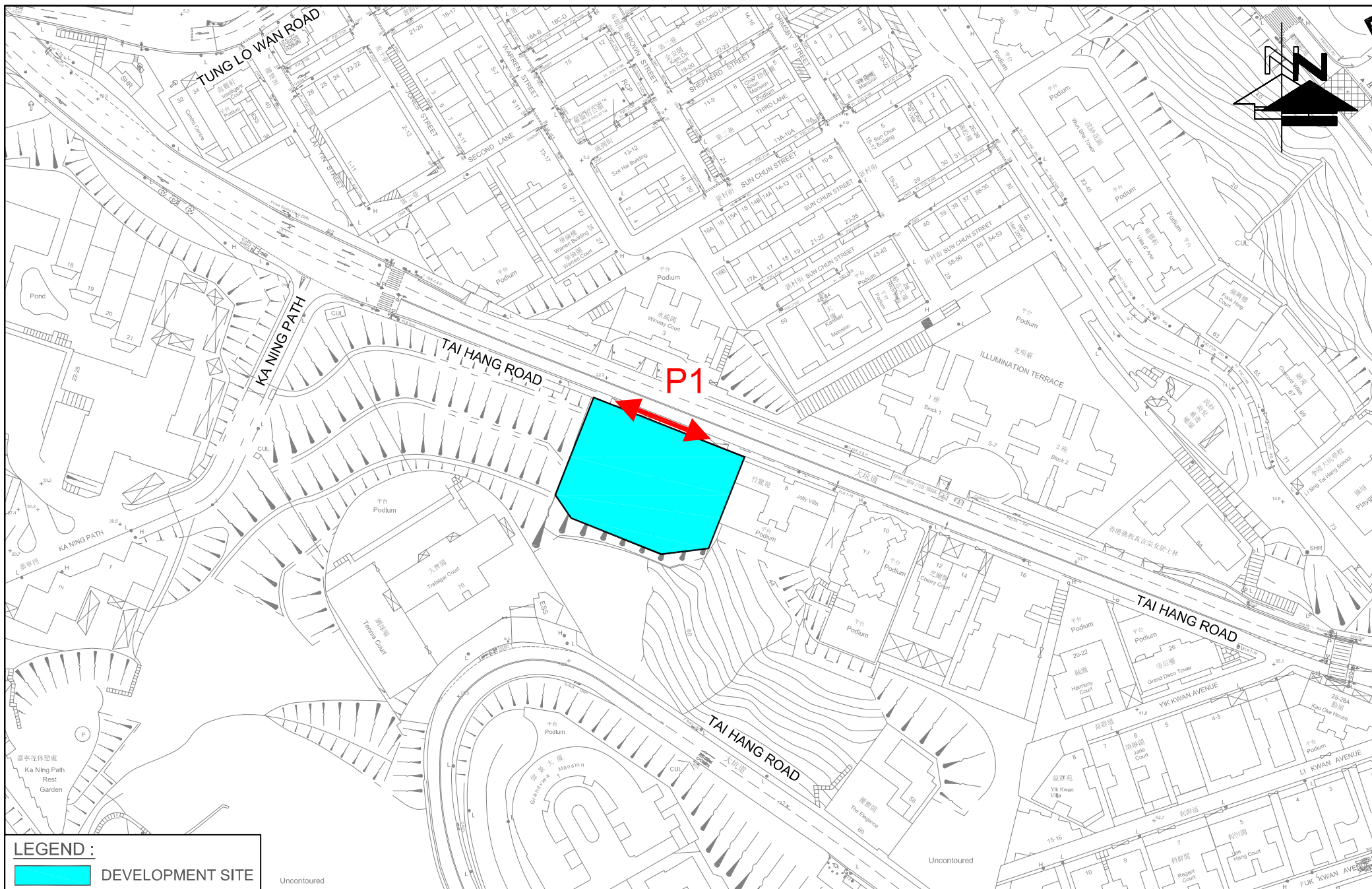
FIGURE NO.:	4.2	PROJECT TITLE:	Residential Redevelopment at Nos 4-4C Tai Hang Road, Hong Kong	 CTA Consultants Limited 志達顧問有限公司
PROJECT NO.:	26021HK	DRAWING TITLE:	2033 REFERENCE TRAFFIC FLOW (APPROVED S16 APPLICATION)	
SCALE:	1 : 7000 @A4	DATE:	03 JUL 2026	



LEGEND :

-  DEVELOPMENT SITE
-  190(220) AM(PM) PEAK HOURLY TRAFFIC FLOW IN PCU ON AT-GRADE ROAD NETWORK
-  190(220) AM(PM) PEAK HOURLY TRAFFIC FLOW IN PCU TO / FROM THE FLYOVER

FIGURE NO.:	4.3	PROJECT TITLE:	Residential Redevelopment at Nos 4-4C Tai Hang Road, Hong Kong	 CTA Consultants Limited 志達顧問有限公司
PROJECT NO.:	26021HK	DRAWING TITLE:	2033 DESIGN TRAFFIC FLOW (THIS APPLICATION)	
SCALE:	1 : 7000 @A4	DATE:	03 JUL 2026	



LEGEND :	
	DEVELOPMENT SITE

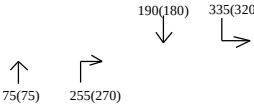
FIGURE NO.: 6.1		PROJECT TITLE: Residential Redevelopment at Nos 4-4C Tai Hang Road, Hong Kong		CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 26021HK		DRAWING TITLE: IDENTIFIED CRITICAL SECTION OF FOOTPATH		
SCALE: 1 : 1500 @A4	DATE: 15 APR 2026			



Appendix I

Junction Calculation Sheets

Junction: (J1) Tong Lo Wan Road / Leighton Road / Causeway Road/ Yee Wo Street																							
Description: 2026 Observed Traffic Flow																							
Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		Nearside O/I	Pro. Turning (%)		Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)		Total Revised Saturation Flow (pcu/hr)		AM Peak			PM Peak			
						Left	Right		AM	PM			AM	PM	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y	
Yee Wo Street to Tung Lo Wan Road	EB	↘	3	3	3.1	0.0	7.5	0	100%	100%	2065	2065	1720	1720	1720	1720	245	0.142	0.142	260	0.151	0.151	
Yee Wo Street to Causeway Road	EB	↘	3	3	3.1	0.0	12.5	0	100%	100%	2065	2065	1845	1845	1845	1845	100	0.054		80	0.043		
Tong Lo Wan Road	NB	↙	2	2	4.0	22.5	0	1	100%	100%	2015	2015	1890	1890	1890	1890	75	0.040		70	0.037		
Causeway Road	WB	←	1	1	3.3	0.0	0	0	0%	0%	2085	6255	2085	2085	6255	6255	345	0.165	0.184	317	0.152	0.157	
		←	1	1	3.3	0.0	0	0	0%	0%	2085	0	2085	2085	0	0	345	0.165		317	0.152		
		←	1	1	3.3	0.0	0	0	0%	0%	2085	0	2085	2085	0	0	345	0.165		317	0.152		
		↙	4	1	3.3	5.0	0	1	100%	100%	1945	1945	1495	1495	1495	1495	275	0.184		235	0.157		
Pedestrian Crossing				5p	2	Min Green = 8Gm + 8 FGm = 16s																	
				6p	1,3	Min Green = 5Gm + 10 FGm = 15s																	
				7p	2,3	Min Green = 11Gm + 11FGm = 22s																	
Notes: (None)											Traffic Flow (pcu / hr) (To Tung Lo Wan Rd) 245(260) ↘ (To Leighton Rd) 100(80) ↘ ↙ ↘ 1035(950) 75(70) 275(235)						AM Peak Check Phase εy 0.326 L (sec) 26 C (sec) 80 y pract. 0.608 R.C. (%) 86%			PM Peak Check Phase εy 0.308 L (sec) 26 C (sec) 105 y pract. 0.677 R.C. (%) 120%			
Stage / Phase Diagrams																							
1 			2 									3 											
I/G = 7s			I/G = 10 + 5s (Min. Green)									I/G = 6s											
I/G = 7s			I/G = 10 + 5s (Min. Green)									I/G = 6s											

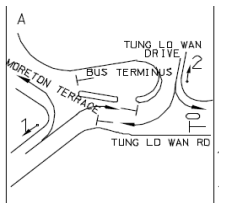
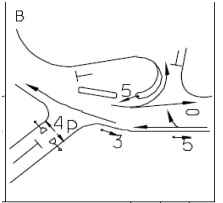
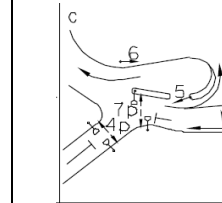
Junction: (J2) Tung Lo Wan Road / Ka Ning Path / Eastern Hospital Road																										
Description: 2026 Observed Traffic Flow																										
Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		Nearside O/I	Pro. Turning (%)		Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)		Total Revised Saturation Flow (pcu/hr)		AM Peak			PM Peak						
						Left	Right		AM	PM			AM	PM	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y				
Tung Lo Wan Road	SB		1	1	3.3	22.5	0	1	100%	100%	1945	4030	1825	1825	3875	3870	247	0.136	0.136	236	0.129	0.129				
			1	1	3.3	26.0	0	0	32%	32%	2085	0	2050	2045	0	0	278	0.135		264	0.129					
Eastern Hospital Road	NB		2	2	3.3	0.0	12.5	1	77%	78%	1945	1945	1780	1780	1780	1780	330	0.185	0.185	345	0.194	0.194				
Pedestrian Crossing			3p	3	Min Green = 7Gm + 7 FGm = 14s																					
			4p	4	Min Green = 8Gm + 10 FGm = 18s																					
Notes: (None)										Traffic Flow (pcu / hr)							AM Peak Check Phase			PM Peak Check Phase						
																	E _y 0.321 L (sec) 34 C (sec) 100 y pract. 0.594 R.C. (%) 85%			E _y 0.323 L (sec) 34 C (sec) 105 y pract. 0.609 R.C. (%) 88%						
Stage / Phase Diagrams																										
1									2												3					
																										
I/G = 4s			I/G = 5s						I/G = 9 + 18s																	
I/G = 4s			I/G = 5s						I/G = 9 + 18s																	

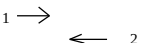
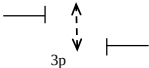
Junction: (J3) Causeway Road / Moreton Terrace / Yee Wo Street																							
Description: 2026 Observed Traffic Flow																							
Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		Nearside O/I	Pro. Turning (%)		Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)		Total Revised Saturation Flow (pcu/hr)		AM Peak			PM Peak			
						Left	Right		AM	PM			AM	PM	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y	
Causeway Road	WB	→	1	1	4.2	0.0	0	1	0%	0%	1831.5	4006.5	1831.5	1831.5	4006.5	4006.5	601	0.328	0.328	619	0.338	0.338	
		→	1	1	4.2	0.0	0	0	0%	0%	2175	0	2175	2175	0	0	714	0.328		736	0.338		
Moreton Terrace	NB	↙	5	2	3.4	15.0	0	1	100%	100%	1955	6125	1775	1775	5695	5685	346	0.195	0.195	309	0.174	0.174	
		↔	5	2	3.3	18.0	28	0	43% / 57%	59% / 41%	2085	0	1955	1945	0	0	381	0.195		339	0.174		
		↘	5	2	3.3	0.0	25	0	100%	100%	2085	0	1965	1965	0	0	383	0.195		342	0.174		
Yee Wo Street	EB	←	3	1	4.0	0.0	0	1	0%	0%	2015	4170	2015	2015	4170	4170	389	0.193		326	0.162		
		←	3	1	4.0	0.0	0	0	0%	0%	2155	0	2155	2155	0	0	416	0.193		349	0.162		
Pedestrian Crossing			6p	1	Min Green = 8Gm + 10 FGm = 18s																		
Notes: (None)									Traffic Flow (pcu / hr) 1315(1355) → ↙ ↘ ← 805(675) 510(510) 600(480)								AM Peak Check Phase εy 0.523 L (sec) 10 C (sec) 100 y pract. 0.810 R.C. (%) 55%			PM Peak Check Phase εy 0.512 L (sec) 10 C (sec) 105 y pract. 0.814 R.C. (%) 59%			
Stage / Phase Diagrams																							
1			2						3														
I/G = 7s			I/G = 5s																				
I/G = 7s			I/G = 5s																				

TRAFFIC SIGNALS CALCULATION

Job No: 26021HK

CTA Consultants Ltd.

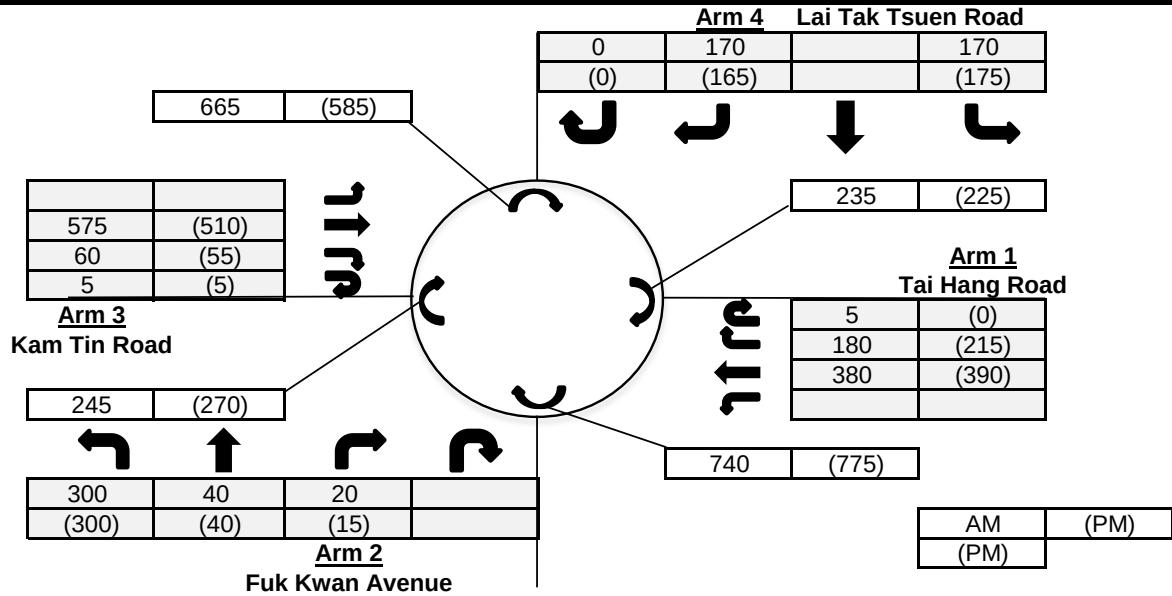
Junction: (J4) Tung Lo Wan Road / Moreton Terrace																											
Description: 2026 Observed Traffic Flow																											
Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		Nearside O/V	Pro. Turning (%)		Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)		Total Revised Saturation Flow (pcu/hr)		AM Peak			PM Peak							
						Left	Right		AM	PM			AM	PM	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y					
Tung Lo Wan Road	NB	↕	1	1	3.7	7.5	0	1	100%	100%	1980	4100	1650	1650	3635	3640	406	0.246	0.246	403	0.244	0.245					
Tung Lo Wan Road (2nd stopline)	WB	←	3	2	3.0	0.0	0	1	0%	0%	1915	3970	1915	1915	3970	3970	260	0.136	0.136	258	0.135	0.135					
		←	3	2	3.0	0.0	0	0	0%	0%	2055	0	2055	2055	0	0	280	0.136		277	0.135						
Moreton Terrace Bus Terminus	WB	←	6	3	9.5	0.0	0	1	0%	0%	2565	2565	2565	2565	2565	2565	95	0.037		110	0.043						
Tung Lo Wan Road (2nd stopline)	EB	↗	5	2,3	4.5	10.0	0	1	68%	63%	2065	2065	1875	1885	1875	1885	185	0.099		190	0.101						
Tung Lo Wan Road (1st stopline)	WB	↖	5	2,3	4.0	0.0	7	0	79%	74%	1925	0	1645	1660	0	0	254	0.155		255	0.154						
		←	5	2,3	3.0	0.0	0	1	0%	0%	1915	3840	1915	1915	3560	3575	296	0.154		295	0.154						
Tung Lo Wan Drive	SB	↖	2	1	3.3	5.0	9.5	1	37% / 63%	39% / 61%	1819	1819	1505	1500	1505	1500	300	0.199		295	0.197						
Pedestrian Crossing			4p	2,3	Min Green = 8Gm + 8 FGm = 16s																						
			7p	3	Min Green = 9Gm + 6 FGm = 15s																						
Notes: (None)												Traffic Flow (pcu / hr)					AM Peak Check Phase				PM Peak Check Phase						
												50(55)	45(55)	0(0)	190(180)	110(115)	εy	0.382	εy	0.379							
												515(485)	125(110)	Bus	125(110)	60(70)	L (sec)	29	L (sec)	29							
												85(95)	60(70)	→	→	→	C (sec)	100	C (sec)	105							
												295(310)					y pract.	0.639	y pract.	0.651							
														←	160(170)	0(0)	200(190)	R.C. (%)	67%	R.C. (%)	72%						
														←	380(365)	←	350(360)										
Stage / Phase Diagrams																											
																											
I/G = 2s						I/G = 6s						I/G = 5s + 18															
I/G = 2s						I/G = 6s						I/G = 5s + 18															

Junction: (J5) Tai Hang Road / Pedestrian Crossing near Ka Ning Path																						
Description: 2026 Observed Traffic Flow																						
Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		Nearside O/I	Pro. Turning (%)		Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)		Total Revised Saturation Flow (pcu/hr)		AM Peak			PM Peak		
						Left	Right		AM	PM			AM	PM	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Tai Hang Road	EB	→	1	1	3.5	0.0	0	1	0%	0%	1965	4070	1965	1965	4070	4070	442	0.225		425	0.216	
			1	1	3.5	0.0	0	0	0%	0%	2105	0	2105	2105	0	0	473	0.225		455	0.216	
Tai Hang Road	WB	←	2	1	4.0	0.0	0	1	0%	0%	2015	2015	2015	2015	2015	2015	910	0.452	0.452	915	0.454	0.454
Pedestrian Crossing			3p	2	Min Green = 12Gm + 8 FGm = 20s																	
Notes: (None)									Traffic Flow (pcu / hr)						AM Peak Check Phase			PM Peak Check Phase				
									915(880) → ← 910(915)						Ey 0.452			Ey 0.454				
															L (sec) 26			L (sec) 26				
															C (sec) 100			C (sec) 100				
															y pract. 0.666			y pract. 0.666				
															R.C. (%) 47%			R.C. (%) 47%				
Stage / Phase Diagrams																						
1			2						3													
																						
I/G = 3s			I/G = 4+20s																			
I/G = 3s			I/G = 4+20s																			

Roundabout Junction Calculation

Junction : (J6) Tai Hang Road / Lai Tak Tsuen Road / Fuk Kwan Avenue / Li Kwar Job No.: 26021HK

Scenario : 2026 Observed Traffic Flow



Input Parameters

			Arm 1	Arm 2	Arm 3	Arm 4
V	=	Approach half width (m)	2.8	4	3.5	3.5
E	=	Entry width (m)	6.6	5	4	7.5
L	=	Effective length of flare (m)	35	10	14	27
R	=	Entry radius	15	6	24	15
D	=	Inscribed circle diameter (m)	24	24	24	24
A	=	Entry angle (degree)	32	30	56	32
Q	=	Entry flow (pcu/hr)				
		AM	565	360	640	340
		PM	605	355	570	340
Qc	=	Circulating flow across entry (pcu/hr)				
		AM	235	740	245	665
		PM	225	775	270	585

Output Parameters

			Arm 1	Arm 2	Arm 3	Arm 4
S	=	Sharpness of flare = $1.6 \cdot (E - V) / L$	0.17	0.16	0.06	0.24
K	=	$1 - 0.00347 \cdot (A - 30) - 0.978 \cdot (1 / R - 0.05)$	0.98	0.89	0.92	0.98
X2	=	$V + ((E - V) / (1 + 2 \cdot S))$	5.62	4.76	3.95	6.21
M	=	$\text{Exp}((D - 60) / 10)$	0.03	0.03	0.03	0.03
F	=	$303 \cdot X2$	1703	1442	1196	1883
Td	=	$1 + (0.5 / (1 + M))$	1.49	1.49	1.49	1.49
Fc	=	$0.21 \cdot Td \cdot (1 + 0.2 \cdot X2)$	0.66	0.61	0.56	0.70
Qe	=	Capacity = $K \cdot (F - Fc \cdot Qc)$				
		AM	1511	878	973	1384
		PM	1518	859	960	1439
DFC	=	Entry Flow/Capacity = Q / Qe				
		AM	0.37	0.41	0.66	0.25
		PM	0.40	0.41	0.59	0.24

DFC of Critical Approach = AM 0.66
PM 0.59

TRAFFIC SIGNALS CALCULATION

Job No: 26021HK

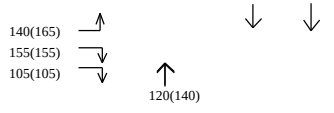
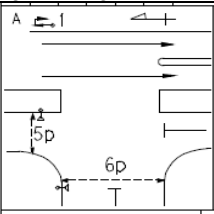
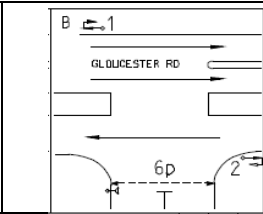
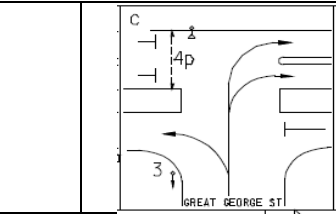
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Junction: (J7) Kingston Street / Gloucester Road																						
Description: 2026 Observed Traffic Flow																						
Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		Nearside O/I	Pro. Turning (%)		Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)		Total Revised Saturation Flow (pcu/hr)		AM Peak			PM Peak		
						Left	Right		AM	PM			AM	PM	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Kingston Street	EB	↗	1	1	4.2	4.5	0	1	100%	100%	2035	2035	1525	1525	1525	1525	85	0.056		70	0.046	0.046
Gloucester Road (At Grade to At Grade)	NB	↖	3	3	3.8	5.0	0	1	32%	35%	1995	1995	1820	1805	1820	1805	110	0.060	0.076	130	0.072	
Gloucester Road (At Grade to Flyover)	NB	↑	3	3	3.5	0.0	0	1	0%	0%	1965	1965	1965	1965	1965	1965	150	0.076		165	0.084	0.084
Gloucester Road (Flyover to at Grade)	NB	↖	2	2	3.5	6.5	0	1	24%	25%	1965	1965	1865	1860	1865	1860	190	0.102		200	0.108	
Gloucester Road (Flyover to Flyover)	NB	↑	2	2	3.8	0.0	0	1	0%	0%	1995	1995	1995	1995	1995	1995	680	0.341	0.341	725	0.363	0.363
Pedestrian Crossing																						
Notes: (None)									Traffic Flow (pcu / hr)							AM Peak Check Phase			PM Peak Check Phase			
									15(20) 20(30) 35(45) 75(85) 150(165) 45(50) 145(150) 680(725)							εy 0.417 L (sec) 21 C (sec) 90 y pract. 0.690 R.C. (%) 65%			εy 0.493 L (sec) 15 C (sec) 100 y pract. 0.765 R.C. (%) 55%			
Stage / Phase Diagrams																						
A			B			C																
I/G = 6s + 5s			I/G = 6s			I/G = 6s																
I/G = 6s			I/G = 6s			I/G = 6s																

TRAFFIC SIGNALS CALCULATION

Job No: 26021HK

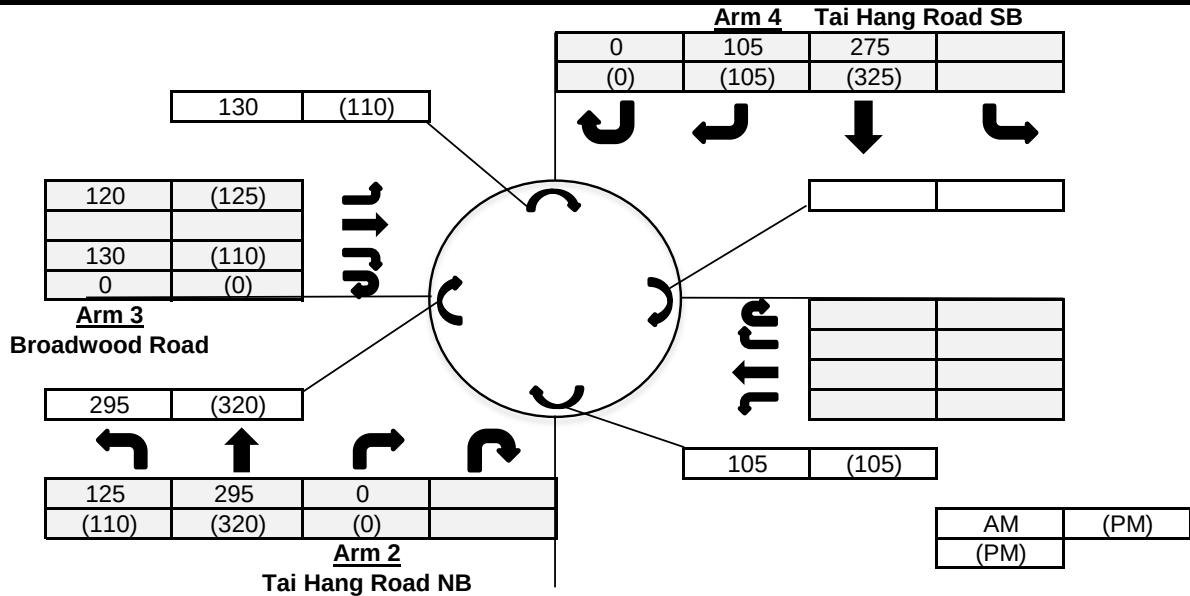
CTA Consultants Ltd.

Junction: (J8) Great George Street / Gloucester Road																												
Description: 2026 Observed Traffic Flow																												
Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		Nearside O/I	Pro. Turning (%)		Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)		Total Revised Saturation Flow (pcu/hr)		AM Peak			PM Peak								
						Left	Right		AM	PM			AM	PM	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y						
Great George Street	EB		3	3	3.5	8.5	0	1	100%	100%	1965	1965	1670	1670	1670	1670	140	0.084		165	0.099							
			3	3	3.3	0.0	20	0	100%	100%	2085	2085	1940	1940	1940	1940	260	0.134	0.134	260	0.134	0.134						
Gloucester Road	NB		2	2	3.3	0.0	0	1	0%	0%	975	3060	975	975	3060	3060	38	0.039		45	0.046							
			2	2	3.3	0.0	0	0	0%	0%	2085	0	2085	2085	0	0	82	0.039		95	0.046							
Gloucester Road (At Grade to At Grade)	SB		1	1,2	3.0	0.0	0	1	0%	0%	1915	1915	1915	1915	1915	1915	180	0.094		205	0.107							
Gloucester Road (At Grade to Flyover)	SB		1	1,2	4.0	0.0	0	1	0%	0%	2015	2015	2015	2015	2015	2015	570	0.283	0.283	600	0.298	0.298						
Pedestrian Crossing			4p	3	Min Green = 7Gm + 10 FGm = 17s																							
			5p	1	Min Green = 7Gm + 6 FGm = 13s																							
			6p	1,2	Min Green = 8Gm + 7 FGm = 15s																							
Notes: (None)										Traffic Flow (pcu / hr)										570(600) 180(205)			AM Peak Check Phase			PM Peak Check Phase		
																				E _y 0.417 L (sec) 12 C (sec) 90 y pract. 0.780 R.C. (%) 87%			E _y 0.432 L (sec) 12 C (sec) 100 y pract. 0.792 R.C. (%) 83%					
Stage / Phase Diagrams																												
																												
I/G = 8s					I/G =					I/G = 6s																		
I/G = 8s					I/G =					I/G = 6s																		

Roundabout Junction Calculation

Junction : (J9) Tai Hang Road / Lai Tak Tsuen Road / Fuk Kwan Avenue / Li Kwar Job No.: 26021HK

Scenario : 2026 Observed Traffic Flow



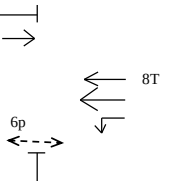
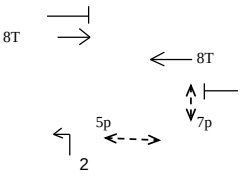
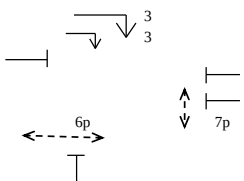
Input Parameters

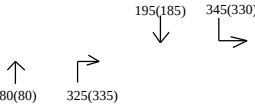
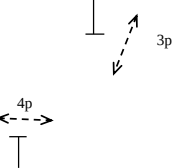
			Arm 2	Arm 3	Arm 4
V	=	Approach half width (m)	5.5	3	3
E	=	Entry width (m)	7	4	4
L	=	Effective length of flare (m)	30	1	1
R	=	Entry radius	15	6	30
D	=	Inscribed circle diameter (m)	16	16	16
A	=	Entry angle (degree)	20	60	60
Q	=	Entry flow (pcu/hr)			
		AM	420	250	380
		PM	430	235	430
Qc	=	Circulating flow across entry (pcu/hr)			
		AM	105	295	130
		PM	105	320	110

Output Parameters

			Arm 2	Arm 3	Arm 4
S	=	Sharpness of flare = $1.6 \cdot (E-V)/L$	0.08	1.60	1.60
K	=	$1 - 0.00347 \cdot (A-30) - 0.978 \cdot (1/R - 0.05)$	1.02	0.78	0.91
X2	=	$V + ((E-V)/(1+2 \cdot S))$	6.79	3.24	3.24
M	=	$\text{Exp}((D-60)/10)$	0.01	0.01	0.01
F	=	$303 \cdot X2$	2058	981	981
Td	=	$1 + (0.5/(1+M))$	1.49	1.49	1.49
Fc	=	$0.21 \cdot Td \cdot (1 + 0.2 \cdot X2)$	0.74	0.52	0.52
Qe	=	Capacity = $K \cdot (F - Fc \cdot Qc)$			
		AM	2017	648	834
		PM	2017	638	843
DFC	=	Entry Flow/Capacity = Q/Qe			
		AM	0.21	0.39	0.46
		PM	0.21	0.37	0.51

DFC of Critical Approach = AM 0.46
PM 0.51

Junction: (J1) Tong Lo Wan Road / Leighton Road / Causeway Road/ Yee Wo Street																								
Description: 2033 Reference Traffic Flow (Approved S16 Application)																								
Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		Nearside 0/1	Pro. Turning (%)		Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)		Total Revised Saturation Flow (pcu/hr)		AM Peak			PM Peak				
						Left	Right		AM	PM			AM	PM	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y		
Yee Wo Street to Tung Lo Wan Road	EB		3	3	3.1	0.0	7.5	0	100%	100%	2065	2065	1720	1720	1720	1720	255	0.148	0.148	270	0.157	0.157		
Yee Wo Street to Causeway Road	EB		3	3	3.1	0.0	12.5	0	100%	100%	2065	2065	1845	1845	1845	1845	105	0.057		85	0.046			
Tong Lo Wan Road	NB		2	2	4.0	22.5	0	1	100%	100%	2015	2015	1890	1890	1890	1890	75	0.040		70	0.037			
Causeway Road	WB		1	1	3.3	0.0	0	0	0%	0%	2085	6255	2085	2085	6255	6255	417	0.200	0.200	358	0.172	0.172		
			1	1	3.3	0.0	0	0	0%	0%	2085	0	2085	2085	0	0	417	0.200		358	0.172			
			1	1	3.3	0.0	0	0	0%	0%	2085	0	2085	2085	0	0	417	0.200		358	0.172			
			4	1	3.3	5.0	0	1	100%	100%	1945	1945	1495	1495	1495	1495	285	0.191		245	0.164			
Pedestrian Crossing			5p	2	Min Green = 8Gm + 8 FGm = 16s																			
			6p	1,3	Min Green = 5Gm + 10 FGm = 15s																			
			7p	2,3	Min Green = 11Gm + 11FGm = 22s																			
Notes: (None)										Traffic Flow (pcu / hr) (To Tung Lo Wan Rd) 255(270)  (To Leighton Rd) 105(85)   75(70)								AM Peak Check Phase E _y 0.348 L (sec) 26 C (sec) 80 y pract. 0.608 R.C. (%) 75%			PM Peak Check Phase E _y 0.329 L (sec) 26 C (sec) 105 y pract. 0.677 R.C. (%) 106%			
Stage / Phase Diagrams																								
1 			2 								3 													
I/G = 7s I/G = 7s			I/G = 10 + 5s (Min. Green) I/G = 10 + 5s (Min. Green)								I/G = 6s I/G = 6s													

Junction: (J2) Tung Lo Wan Road / Ka Ning Path / Eastern Hospital Road																							
Description: 2033 Reference Traffic Flow (Approved S16 Application)																							
Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		Nearside O/I	Pro. Turning (%)		Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)		Total Revised Saturation Flow (pcu/hr)		AM Peak			PM Peak			
						Left	Right		AM	PM			AM	PM	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y	
Tung Lo Wan Road	SB		1	1	3.3	22.5	0	1	100%	100%	1945	4030	1825	1825	3875	3870	254	0.139	0.139	243	0.133	0.133	
			1	1	3.3	26.0	0	0	32%	32%	2085	0	2050	2045	0	0	286	0.139		272	0.133		
Eastern Hospital Road	NB		2	2	3.3	0.0	12.5	1	80%	81%	1945	1945	1775	1775	1775	1775	405	0.228	0.228	415	0.234	0.234	
Pedestrian Crossing			3p	3	Min Green = 7Gm + 7 FGm = 14s																		
			4p	4	Min Green = 8Gm + 10 FGm = 18s																		
Notes: (None)										Traffic Flow (pcu / hr)							AM Peak Check Phase			PM Peak Check Phase			
																	E _y 0.368 L (sec) 34 C (sec) 100 y pract. 0.594 R.C. (%) 62%			E _y 0.367 L (sec) 34 C (sec) 105 y pract. 0.609 R.C. (%) 66%			
Stage / Phase Diagrams																							
1			2						3														
																							
I/G = 4s			I/G = 5s						I/G = 9 + 18s														
I/G = 4s			I/G = 5s						I/G = 9 + 18s														

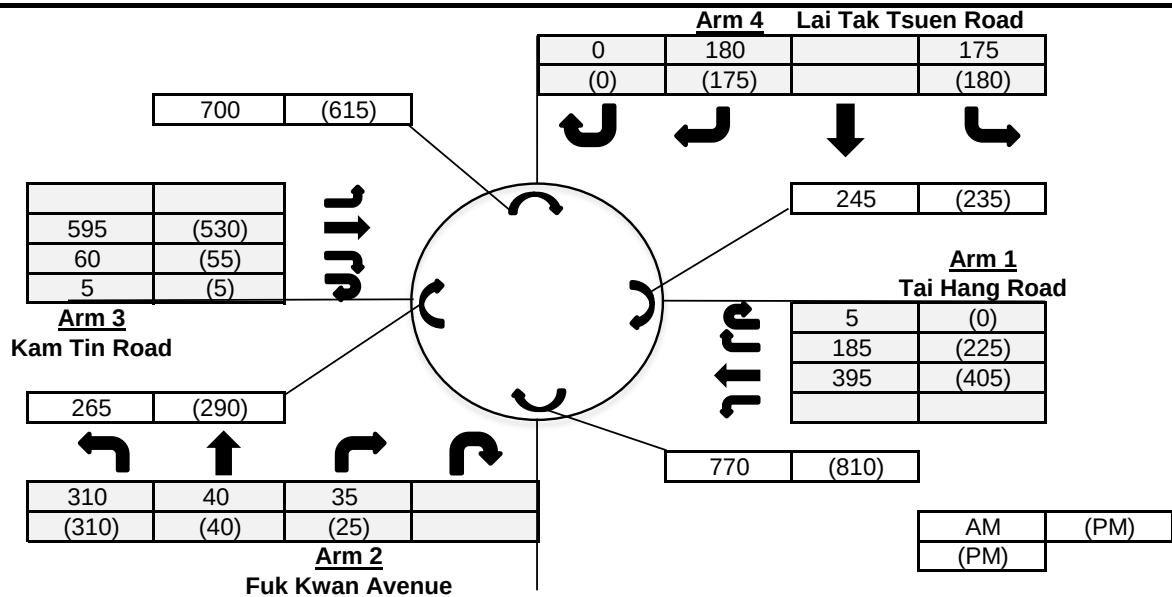
Junction: (J3) Causeway Road / Moreton Terrace / Yee Wo Street																						
Description: 2033 Reference Traffic Flow (Approved S16 Application)																						
Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		Nearside O/I	Pro. Turning (%)		Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)		Total Revised Saturation Flow (pcu/hr)		AM Peak			PM Peak		
						Left	Right		AM	PM			AM	PM	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Causeway Road	WB	→	1	1	4.2	0.0	0	1	0%	0%	1831.5	4006.5	1831.5	1831.5	4006.5	4006.5	642	0.351	0.351	661	0.361	0.361
		→	1	1	4.2	0.0	0	0	0%	0%	2175	0	2175	2175	0	0	763	0.351		784	0.361	
Moreton Terrace	NB	↶	5	2	3.4	15.0	0	1	100%	100%	1955	6125	1775	1775	5700	5690	377	0.212	0.212	337	0.190	0.190
		↷	5	2	3.3	18.0	28	0	37% / 63%	52% / 48%	2085	0	1960	1950	0	0	416	0.212		370	0.190	
		↷	5	2	3.3	0.0	25	0	100%	100%	2085	0	1965	1965	0	0	417	0.212		373	0.190	
Yee Wo Street	EB	←	3	1	4.0	0.0	0	1	0%	0%	2015	4170	2015	2015	4170	4170	490	0.243		384	0.191	
		←	3	1	4.0	0.0	0	0	0%	0%	2155	0	2155	2155	0	0	525	0.243		411	0.191	
Pedestrian Crossing			6p	1	Min Green = 8Gm + 10 FGm = 18s																	
Notes: (None)									Traffic Flow (pcu / hr) 1405(1445) → ↶ ↷ ← 1015(795) 530(530) 680(550)								AM Peak Check Phase Ey 0.563 L (sec) 10 C (sec) 100 y pract. 0.810 R.C. (%) 44%			PM Peak Check Phase Ey 0.550 L (sec) 10 C (sec) 105 y pract. 0.814 R.C. (%) 48%		
Stage / Phase Diagrams																						
1			2						3													
1 → 2T → ← 4T ← 6p ↔ 			2 — ↷ 5 																			
I/G = 7s			I/G = 5s																			
I/G = 7s			I/G = 5s																			

Junction: (J5) Tai Hang Road / Pedestrian Crossing near Ka Ning Path																						
Description: 2033 Reference Traffic Flow (Approved S16 Application)																						
Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		Nearside O/I	Pro. Turning (%)		Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)		Total Revised Saturation Flow (pcu/hr)		AM Peak			PM Peak		
						Left	Right		AM	PM			AM	PM	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Tai Hang Road	EB	→	1	1	3.5	0.0	0	1	0%	0%	1965	4070	1965	1965	4070	4070	461	0.235		444	0.226	
			1	1	3.5	0.0	0	0	0%	0%	2105	0	2105	2105	0	0	494	0.235		476	0.226	
Tai Hang Road	WB	←	2	1	4.0	0.0	0	1	0%	0%	2015	2015	2015	2015	2015	2015	960	0.476	0.476	960	0.476	0.476
Pedestrian Crossing			3p	2	Min Green = 12Gm + 8 FGm = 20s																	
Notes: (None)									Traffic Flow (pcu / hr)							AM Peak Check Phase			PM Peak Check Phase			
									955(920) → ← 960(960)							Ey 0.476			Ey 0.476			
																L (sec) 26			L (sec) 26			
																C (sec) 100			C (sec) 100			
																y pract. 0.666			y pract. 0.666			
																R.C. (%) 40%			R.C. (%) 40%			
Stage / Phase Diagrams																						
1			2					3														
I/G = 3s			I/G = 4+20s																			
I/G = 3s			I/G = 4+20s																			

Roundabout Junction Calculation

Junction : (J6) Tai Hang Road / Lai Tak Tsuen Road / Fuk Kwan Avenue / Li Kwar Job No.: 26021HK

Scenario : 2033 Reference Traffic Flow (Approved S16 Application)



Input Parameters

			Arm 1	Arm 2	Arm 3	Arm 4
V	=	Approach half width (m)	2.8	4	3.5	3.5
E	=	Entry width (m)	6.6	5	4	7.5
L	=	Effective length of flare (m)	35	10	14	27
R	=	Entry radius	15	6	24	15
D	=	Inscribed circle diameter (m)	24	24	24	24
A	=	Entry angle (degree)	32	30	56	32
Q	=	Entry flow (pcu/hr)	AM	585	385	660
			PM	630	375	590
Qc	=	Circulating flow across entry (pcu/hr)	AM	245	770	265
			PM	235	810	290

Output Parameters

			Arm 1	Arm 2	Arm 3	Arm 4
S	=	Sharpness of flare = $1.6 \cdot (E - V) / L$	0.17	0.16	0.06	0.24
K	=	$1 - 0.00347 \cdot (A - 30) - 0.978 \cdot (1 / R - 0.05)$	0.98	0.89	0.92	0.98
X2	=	$V + ((E - V) / (1 + 2 \cdot S))$	5.62	4.76	3.95	6.21
M	=	$\text{Exp}((D - 60) / 10)$	0.03	0.03	0.03	0.03
F	=	$303 \cdot X2$	1703	1442	1196	1883
Td	=	$1 + (0.5 / (1 + M))$	1.49	1.49	1.49	1.49
Fc	=	$0.21 \cdot Td \cdot (1 + 0.2 \cdot X2)$	0.66	0.61	0.56	0.70
Qe	=	Capacity = $K \cdot (F - Fc \cdot Qc)$	AM	1505	861	962
			PM	1511	840	950
DFC	=	Entry Flow/Capacity = Q / Qe	AM	0.39	0.45	0.69
			PM	0.42	0.45	0.62

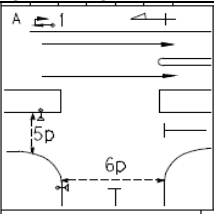
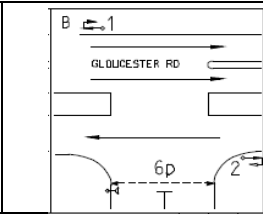
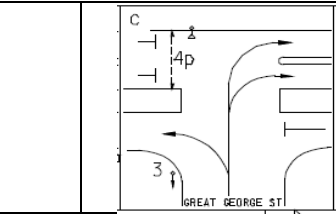
DFC of Critical Approach = AM 0.69
PM 0.62

Junction: (J7) Kingston Street / Gloucester Road																						
Description: 2033 Reference Traffic Flow (Approved S16 Application)																						
Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		Nearside O/I	Pro. Turning (%)		Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)		Total Revised Saturation Flow (pcu/hr)		AM Peak			PM Peak		
						Left	Right		AM	PM			AM	PM	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Kingston Street	EB	↱↑	1	1	4.2	4.5	0	1	100%	100%	2035	2035	1525	1525	1525	1525	85	0.056		70	0.046	0.046
Gloucester Road (At Grade to At Grade)	NB	↰↱	3	3	3.8	5.0	0	1	30%	33%	1995	1995	1830	1815	1830	1815	115	0.063	0.087	135	0.074	
Gloucester Road (At Grade to Flyover)	NB	↑	3	3	3.5	0.0	0	1	0%	0%	1965	1965	1965	1965	1965	1965	170	0.087		180	0.092	0.092
Gloucester Road (Flyover to at Grade)	NB	↰↱	2	2	3.5	6.5	0	1	23%	24%	1965	1965	1865	1860	1865	1860	195	0.105		205	0.110	
Gloucester Road (Flyover to Flyover)	NB	↑	2	2	3.8	0.0	0	1	0%	0%	1995	1995	1995	1995	1995	1995	705	0.353	0.353	750	0.376	0.376
Pedestrian Crossing																						
Notes: (None)									Traffic Flow (pcu / hr)							AM Peak Check Phase			PM Peak Check Phase			
									15(20) ↱↑ 20(30) ↰↱↑ 35(45) ↰↱↑ 80(90) ↰↱↑ 170(180) ↑ 45(50) ↰↱↑ 150(155) ↑ 705(750) ↑							εy 0.440 L (sec) 21 C (sec) 90 y pract. 0.690 R.C. (%) 57%			εy 0.513 L (sec) 15 C (sec) 100 y pract. 0.765 R.C. (%) 49%			
Stage / Phase Diagrams																						
A			B			C																
I/G = 6s + 5s			I/G = 6s			I/G = 6s																
I/G = 6s			I/G = 6s			I/G = 6s																

TRAFFIC SIGNALS CALCULATION

Job No: 26021HK

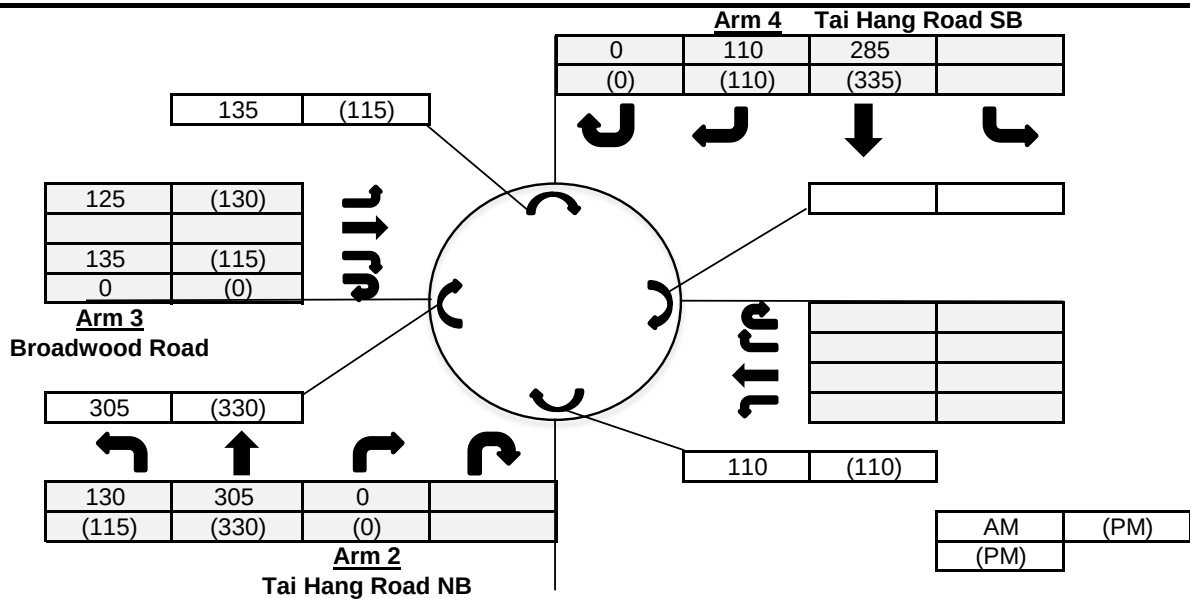
CTA Consultants Ltd.

Junction: (J8) Great George Street / Gloucester Road																												
Description: 2033 Reference Traffic Flow (Approved S16 Application)																												
Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		Nearside O/I	Pro. Turning (%)		Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)		Total Revised Saturation Flow (pcu/hr)		AM Peak			PM Peak								
						Left	Right		AM	PM			AM	PM	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y						
Great George Street	EB		3	3	3.5	8.5	0	1	100%	100%	1965	1965	1670	1670	1670	1670	145	0.087		170	0.102							
			3	3	3.3	0.0	20	0	100%	100%	2085	2085	1940	1940	1940	1940	270	0.139	0.139	270	0.139	0.139						
Gloucester Road	NB		2	2	3.3	0.0	0	1	0%	0%	975	3060	975	975	3060	3060	40	0.041		46	0.047							
			2	2	3.3	0.0	0	0	0%	0%	2085	0	2085	2085	0	0	85	0.041		99	0.047							
Gloucester Road (At Grade to At Grade)	SB		1	1,2	3.0	0.0	0	1	0%	0%	1915	1915	1915	1915	1915	1915	185	0.097		210	0.110							
Gloucester Road (At Grade to Flyover)	SB		1	1,2	4.0	0.0	0	1	0%	0%	2015	2015	2015	2015	2015	2015	590	0.293	0.293	620	0.308	0.308						
Pedestrian Crossing			4p	3	Min Green = 7Gm + 10 FGm = 17s																							
			5p	1	Min Green = 7Gm + 6 FGm = 13s																							
			6p	1,2	Min Green = 8Gm + 7 FGm = 15s																							
Notes: (None)										Traffic Flow (pcu / hr)										590(620) 185(210)			AM Peak Check Phase			PM Peak Check Phase		
																				E _y 0.432 L (sec) 12 C (sec) 90 y pract. 0.780 R.C. (%) 81%			E _y 0.447 L (sec) 12 C (sec) 100 y pract. 0.792 R.C. (%) 77%					
Stage / Phase Diagrams																												
																												
I/G = 8s						I/G =						I/G = 6s																
I/G = 8s						I/G =						I/G = 6s																

Roundabout Junction Calculation

Junction : (J9) Tai Hang Road / Lai Tak Tsuen Road / Fuk Kwan Avenue / Li Kwar Job No.: 26021HK

Scenario : 2033 Reference Traffic Flow (Approved S16 Application)



Input Parameters

			Arm 2	Arm 3	Arm 4
V	=	Approach half width (m)	5.5	3	3
E	=	Entry width (m)	7	4	4
L	=	Effective length of flare (m)	30	1	1
R	=	Entry radius	15	6	30
D	=	Inscribed circle diameter (m)	16	16	16
A	=	Entry angle (degree)	20	60	60
Q	=	Entry flow (pcu/hr)			
		AM	435	260	395
		PM	445	245	445
Qc	=	Circulating flow across entry (pcu/hr)			
		AM	110	305	135
		PM	110	330	115

Output Parameters

			Arm 2	Arm 3	Arm 4
S	=	Sharpness of flare = $1.6 \cdot (E - V) / L$	0.08	1.60	1.60
K	=	$1 - 0.00347 \cdot (A - 30) - 0.978 \cdot (1 / R - 0.05)$	1.02	0.78	0.91
X2	=	$V + ((E - V) / (1 + 2 \cdot S))$	6.79	3.24	3.24
M	=	$\text{Exp}((D - 60) / 10)$	0.01	0.01	0.01
F	=	$303 \cdot X2$	2058	981	981
Td	=	$1 + (0.5 / (1 + M))$	1.49	1.49	1.49
Fc	=	$0.21 \cdot Td \cdot (1 + 0.2 \cdot X2)$	0.74	0.52	0.52
Qe	=	Capacity = $K \cdot (F - Fc \cdot Qc)$			
		AM	2013	644	831
		PM	2013	634	841
DFC	=	Entry Flow/Capacity = Q / Qe			
		AM	0.22	0.40	0.48
		PM	0.22	0.39	0.53

DFC of Critical Approach = **AM 0.48**
PM 0.53

Junction: (J1) Tong Lo Wan Road / Leighton Road / Causeway Road/ Yee Wo Street																							
Description: 2033 Design Traffic Flow (This Application)																							
Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		Nearside 0/1	Pro. Turning (%)		Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)		Total Revised Saturation Flow (pcu/hr)		AM Peak			PM Peak			
						Left	Right		AM	PM			AM	PM	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y	
Yee Wo Street to Tung Lo Wan Road	EB	↘	3	3	3.1	0.0	7.5	0	100%	100%	2065	2065	1720	1720	1720	1720	255	0.148	0.148	270	0.157	0.157	
Yee Wo Street to Causeway Road	EB	↘	3	3	3.1	0.0	12.5	0	100%	100%	2065	2065	1845	1845	1845	1845	105	0.057		85	0.046		
Tong Lo Wan Road	NB	↙	2	2	4.0	22.5	0	1	100%	100%	2015	2015	1890	1890	1890	1890	75	0.040		70	0.037		
Causeway Road	WB	←	1	1	3.3	0.0	0	0	0%	0%	2085	6255	2085	2085	6255	6255	417	0.200	0.200	358	0.172	0.172	
		←	1	1	3.3	0.0	0	0	0%	0%	2085	0	2085	2085	0	0	417	0.200		358	0.172		
		←	1	1	3.3	0.0	0	0	0%	0%	2085	0	2085	2085	0	0	417	0.200		358	0.172		
		↙	4	1	3.3	5.0	0	1	100%	100%	1945	1945	1495	1495	1495	1495	285	0.191		245	0.164		
Pedestrian Crossing				5p	2	Min Green = 8Gm + 8 FGm = 16s																	
				6p	1,3	Min Green = 5Gm + 10 FGm = 15s																	
				7p	2,3	Min Green = 11Gm + 11FGm = 22s																	
Notes: (None)										Traffic Flow (pcu / hr) (To Tung Lo Wan Rd) 255(270) ↘ (To Leighton Rd) 105(85) ↘							AM Peak Check Phase εy 0.348 L (sec) 26 C (sec) 80 y pract. 0.608 R.C. (%) 75%				PM Peak Check Phase εy 0.329 L (sec) 26 C (sec) 105 y pract. 0.677 R.C. (%) 106%		
Stage / Phase Diagrams																							
1 8T 			2 8T 									3 											
I/G = 7s			I/G = 10 + 5s (Min. Green)									I/G = 6s											
I/G = 7s			I/G = 10 + 5s (Min. Green)									I/G = 6s											

Junction: (J2) Tung Lo Wan Road / Ka Ning Path / Eastern Hospital Road																							
Description: 2033 Design Traffic Flow (This Application)																							
Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		Nearside O/I	Pro. Turning (%)		Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)		Total Revised Saturation Flow (pcu/hr)		AM Peak			PM Peak			
						Left	Right		AM	PM			AM	PM	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y	
Tung Lo Wan Road	SB	↓	1	1	3.3	22.5	0	1	100%	100%	1945	4030	1825	1825	3875	3870	254	0.139	0.139	243	0.133	0.133	
		↘	1	1	3.3	26.0	0	0	32%	32%	2085	0	2050	2045	0	0	286	0.139		272	0.133		
Eastern Hospital Road	NB	↗	2	2	3.3	0.0	12.5	1	80%	81%	1945	1945	1775	1775	1775	1775	405	0.228	0.228	415	0.234	0.234	
Pedestrian Crossing			3p	3	Min Green = 7Gm + 7 FGm = 14s																		
			4p	4	Min Green = 8Gm + 10 FGm = 18s																		
Notes: (None)									Traffic Flow (pcu / hr)									AM Peak Check Phase			PM Peak Check Phase		
									80(80)325(335)195(185)345(330)									E _y 0.368 L (sec) 34 C (sec) 100 y pract. 0.594 R.C. (%) 62%			E _y 0.367 L (sec) 34 C (sec) 105 y pract. 0.609 R.C. (%) 66%		
Stage / Phase Diagrams																							
1			2						3														
11			2						3p4p														
I/G = 4s			I/G = 5s						I/G = 9 + 18s														
I/G = 4s			I/G = 5s						I/G = 9 + 18s														

TRAFFIC SIGNALS CALCULATION

Job No: 26021HK

CTA Consultants Ltd.

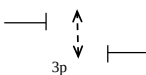
Junction: (J3) Causeway Road / Moreton Terrace / Yee Wo Street																								
Description: 2033 Design Traffic Flow (This Application)																								
Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		Nearside O/I	Pro. Turning (%)		Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)		Total Revised Saturation Flow (pcu/hr)		AM Peak			PM Peak				
						Left	Right		AM	PM			AM	PM	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y		
Causeway Road	WB	→	1	1	4.2	0.0	0	1	0%	0%	1831.5	4006.5	1831.5	1831.5	4006.5	4006.5	642	0.351	0.351	661	0.361	0.361		
		→	1	1	4.2	0.0	0	0	0%	0%	2175	0	2175	2175	0	0	763	0.351		784	0.361			
Moreton Terrace	NB	↙	5	2	3.4	15.0	0	1	100%	100%	1955	6125	1775	1775	5700	5690	377	0.212	0.212	337	0.190	0.190		
		↔	5	2	3.3	18.0	28	0	37% / 63%	52% / 48%	2085	0	1960	1950	0	0	416	0.212		370	0.190			
		↘	5	2	3.3	0.0	25	0	100%	100%	2085	0	1965	1965	0	0	417	0.212		373	0.190			
Yee Wo Street	EB	←	3	1	4.0	0.0	0	1	0%	0%	2015	4170	2015	2015	4170	4170	490	0.243		384	0.191			
		←	3	1	4.0	0.0	0	0	0%	0%	2155	0	2155	2155	0	0	525	0.243		411	0.191			
Pedestrian Crossing			6p	1	Min Green = 8Gm + 10 FGm = 18s																			
Notes: (None)									Traffic Flow (pcu / hr) 1405(1445) → ↙ ↘ ← 1015(795) 530(530) 680(550)								AM Peak Check Phase Ey 0.563 L (sec) 10 C (sec) 100 y pract. 0.810 R.C. (%) 44%				PM Peak Check Phase Ey 0.550 L (sec) 10 C (sec) 105 y pract. 0.814 R.C. (%) 48%			
Stage / Phase Diagrams																								
1 1 → 2T → ← 4T ← 6p ←- - -→ 			2 — ↔ 5									3												
I/G = 7s			I/G = 5s																					
I/G = 7s			I/G = 5s																					

Job No: 26021HK

Junction: (J4) Tung Lo Wan Road / Moreton Terrace
Description: 2033 Design Traffic Flow (This Application)

Notes: (None)	Traffic Flow (pcu / hr)					AM Peak Check Phase		PM Peak Check Phase		
		50(55)	45(55)	0(0)	195(185)	115(120)	Ey	0.415	Ey	0.409
	595(555)	↗	↖	Bus ↖	↖	↘	L (sec)	29	L (sec)	29
	90(100)	↗	130(125)	↗			C (sec)	100	C (sec)	105
	310(325)	↘	65(75)	↗			y pract.	0.639	y pract.	0.651
			←	165(175) Bus	205(195) 0(0)		R.C. (%)	54%	R.C. (%)	59%
		←	395(380)	360(375)						

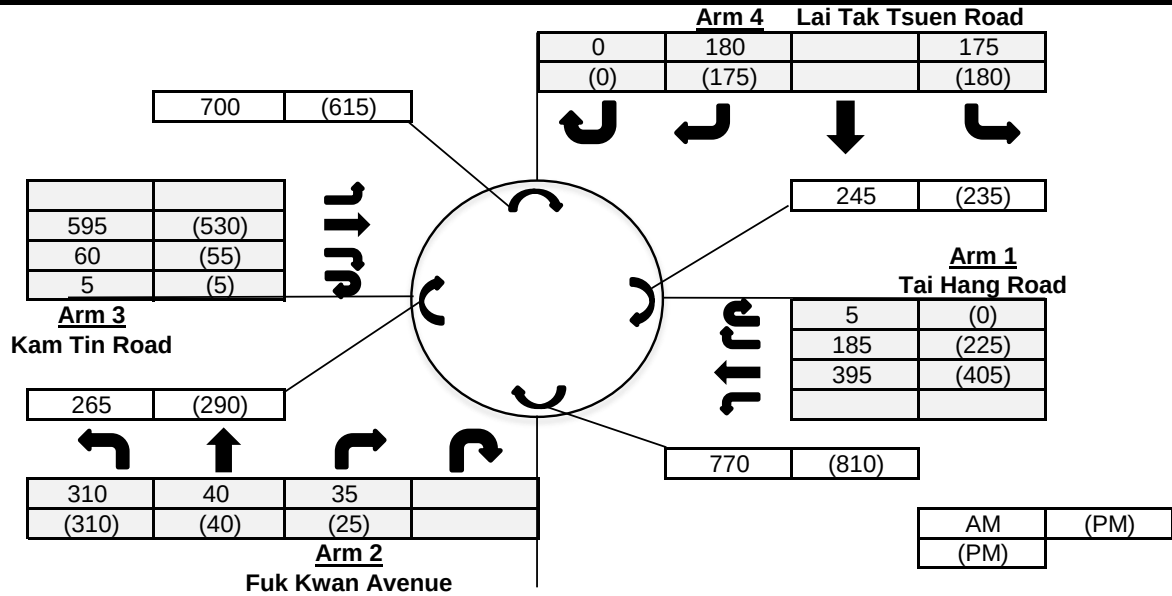
$I/G = 2s$	$I/G = 6s$	$I/G = 5s + 18$	
$I/G = 2s$	$I/G = 6s$	$I/G = 5s + 18$	

Junction: (J5) Tai Hang Road / Pedestrian Crossing near Ka Ning Path																						
Description: 2033 Design Traffic Flow (This Application)																						
Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		Nearside O/I	Pro. Turning (%)		Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)		Total Revised Saturation Flow (pcu/hr)		AM Peak			PM Peak		
						Left	Right		AM	PM			AM	PM	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Tai Hang Road	EB	→	1	1	3.5	0.0	0	1	0%	0%	1965	4070	1965	1965	4070	4070	461	0.235		444	0.226	
			1	1	3.5	0.0	0	0	0%	0%	2105	0	2105	2105	0	0	494	0.235		476	0.226	
Tai Hang Road	WB	←	2	1	4.0	0.0	0	1	0%	0%	2015	2015	2015	2015	2015	2015	960	0.476	0.476	960	0.476	0.476
Pedestrian Crossing																						
			3p	2	Min Green = 12Gm + 8 FGm = 20s																	
Notes: (None)									Traffic Flow (pcu / hr)							AM Peak Check Phase			PM Peak Check Phase			
									955(920) → ← 960(960)							E _y 0.476			E _y 0.476			
																L (sec) 26			L (sec) 26			
																C (sec) 100			C (sec) 100			
																y pract. 0.666			y pract. 0.666			
																R.C. (%) 40%			R.C. (%) 40%			
Stage / Phase Diagrams																						
1			2					3														
1 → ← 2																						
I/G = 3s			I/G = 4+20s																			
I/G = 3s			I/G = 4+20s																			

Roundabout Junction Calculation

Junction : (J6) Tai Hang Road / Lai Tak Tsuen Road / Fuk Kwan Avenue / Li Kwar Job No.: 26021HK

Scenario : 2033 Design Traffic Flow (This Application)



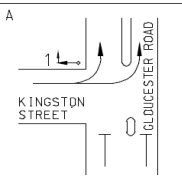
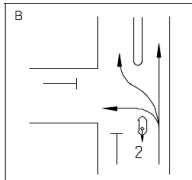
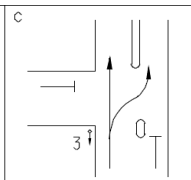
Input Parameters

			Arm 1	Arm 2	Arm 3	Arm 4
V	=	Approach half width (m)	2.8	4	3.5	3.5
E	=	Entry width (m)	6.6	5	4	7.5
L	=	Effective length of flare (m)	35	10	14	27
R	=	Entry radius	15	6	24	15
D	=	Inscribed circle diameter (m)	24	24	24	24
A	=	Entry angle (degree)	32	30	56	32
Q	=	Entry flow (pcu/hr)	AM	585	385	660
			PM	630	375	590
Qc	=	Circulating flow across entry (pcu/hr)	AM	245	770	265
			PM	235	810	290

Output Parameters

			Arm 1	Arm 2	Arm 3	Arm 4
S	=	Sharpness of flare = $1.6 \cdot (E - V) / L$	0.17	0.16	0.06	0.24
K	=	$1 - 0.00347 \cdot (A - 30) - 0.978 \cdot (1 / R - 0.05)$	0.98	0.89	0.92	0.98
X2	=	$V + ((E - V) / (1 + 2 \cdot S))$	5.62	4.76	3.95	6.21
M	=	$\text{Exp}((D - 60) / 10)$	0.03	0.03	0.03	0.03
F	=	$303 \cdot X2$	1703	1442	1196	1883
Td	=	$1 + (0.5 / (1 + M))$	1.49	1.49	1.49	1.49
Fc	=	$0.21 \cdot Td \cdot (1 + 0.2 \cdot X2)$	0.66	0.61	0.56	0.70
Qe	=	Capacity = $K \cdot (F - Fc \cdot Qc)$	AM	1505	861	962
			PM	1511	840	950
DFC	=	Entry Flow/Capacity = Q / Qe	AM	0.39	0.45	0.69
			PM	0.42	0.45	0.62

DFC of Critical Approach = AM 0.69
PM 0.62

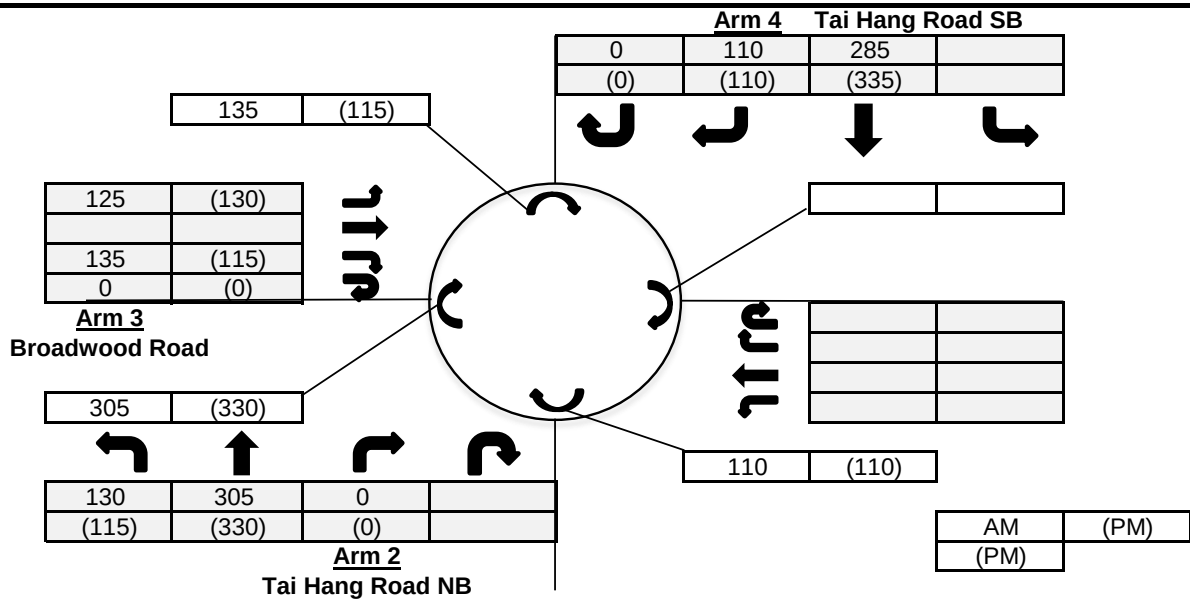
Junction: (J7) Kingston Street / Gloucester Road																						
Description: 2033 Design Traffic Flow (This Application)																						
Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		Nearside O/I	Pro. Turning (%)		Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)		Total Revised Saturation Flow (pcu/hr)		AM Peak			PM Peak		
						Left	Right		AM	PM			AM	PM	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Kingston Street	EB		1	1	4.2	4.5	0	1	100%	100%	2035	2035	1525	1525	1525	1525	85	0.056		70	0.046	0.046
Gloucester Road (At Grade to At Grade)	NB		3	3	3.8	5.0	0	1	30%	33%	1995	1995	1830	1815	1830	1815	115	0.063	0.087	135	0.074	
Gloucester Road (At Grade to Flyover)	NB		3	3	3.5	0.0	0	1	0%	0%	1965	1965	1965	1965	1965	1965	170	0.087		180	0.092	0.092
Gloucester Road (Flyover to at Grade)	NB		2	2	3.5	6.5	0	1	23%	24%	1965	1965	1865	1860	1865	1860	195	0.105		205	0.110	
Gloucester Road (Flyover to Flyover)	NB		2	2	3.8	0.0	0	1	0%	0%	1995	1995	1995	1995	1995	1995	705	0.353	0.353	750	0.376	0.376
Pedestrian Crossing																						
Notes: (None)									Traffic Flow (pcu / hr)							AM Peak Check Phase			PM Peak Check Phase			
																εy 0.440 L (sec) 21 C (sec) 90 y pract. 0.690 R.C. (%) 57%			εy 0.513 L (sec) 15 C (sec) 100 y pract. 0.765 R.C. (%) 49%			
Stage / Phase Diagrams																						
																						
I/G = 6s + 5s			I/G = 6s			I/G = 6s																
I/G = 6s			I/G = 6s			I/G = 6s																

Junction: (J8) Great George Street / Gloucester Road																									
Description: 2033 Design Traffic Flow (This Application)																									
Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		Nearside O/I	Pro. Turning (%)		Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)		Total Revised Saturation Flow (pcu/hr)		AM Peak			PM Peak					
						Left	Right		AM	PM			AM	PM	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y			
Great George Street	EB	↘	3	3	3.5	8.5	0	1	100%	100%	1965	1965	1670	1670	1670	1670	145	0.087		170	0.102				
		↙	3	3	3.3	0.0	20	0	100%	100%	2085	2085	1940	1940	1940	1940	270	0.139	0.139	270	0.139	0.139			
Gloucester Road	NB	↑	2	2	3.3	0.0	0	1	0%	0%	975	3060	975	975	3060	3060	40	0.041		46	0.047				
		↑	2	2	3.3	0.0	0	0	0%	0%	2085	0	2085	2085	0	0	85	0.041		99	0.047				
Gloucester Road (At Grade to At Grade)	SB	↓	1	1,2	3.0	0.0	0	1	0%	0%	1915	1915	1915	1915	1915	1915	185	0.097		210	0.110				
Gloucester Road (At Grade to Flyover)	SB	↓	1	1,2	4.0	0.0	0	1	0%	0%	2015	2015	2015	2015	2015	2015	590	0.293	0.293	620	0.308	0.308			
Pedestrian Crossing			4p	3	Min Green = 7Gm + 10 FGm = 17s																				
			5p	1	Min Green = 7Gm + 6 FGm = 13s																				
			6p	1,2	Min Green = 8Gm + 7 FGm = 15s																				
Notes: (None)									Traffic Flow (pcu / hr)									AM Peak Check Phase				PM Peak Check Phase			
									590(620) 185(210)									εy 0.432				εy 0.447			
									145(170) 160(160) 110(110) 125(145)									L (sec) 12				L (sec) 12			
																		C (sec) 90				C (sec) 100			
																		y pract. 0.780				y pract. 0.792			
																		R.C. (%) 81%				R.C. (%) 77%			
Stage / Phase Diagrams																									
I/G = 8s						I/G =						I/G = 6s													
I/G = 8s						I/G =						I/G = 6s													

Roundabout Junction Calculation

Junction : (J9) Tai Hang Road / Lai Tak Tsuen Road / Fuk Kwan Avenue / Li Kwar Job No.: 26021HK

Scenario : 2033 Design Traffic Flow (This Application)



Input Parameters

			Arm 2	Arm 3	Arm 4
V	=	Approach half width (m)	5.5	3	3
E	=	Entry width (m)	7	4	4
L	=	Effective length of flare (m)	30	1	1
R	=	Entry radius	15	6	30
D	=	Inscribed circle diameter (m)	16	16	16
A	=	Entry angle (degree)	20	60	60
Q	=	Entry flow (pcu/hr)			
		AM	435	260	395
		PM	445	245	445
Qc	=	Circulating flow across entry (pcu/hr)			
		AM	110	305	135
		PM	110	330	115

Output Parameters

			Arm 2	Arm 3	Arm 4
S	=	Sharpness of flare = $1.6 \cdot (E - V) / L$	0.08	1.60	1.60
K	=	$1 - 0.00347 \cdot (A - 30) - 0.978 \cdot (1 / R - 0.05)$	1.02	0.78	0.91
X2	=	$V + ((E - V) / (1 + 2 \cdot S))$	6.79	3.24	3.24
M	=	$\text{Exp}((D - 60) / 10)$	0.01	0.01	0.01
F	=	$303 \cdot X2$	2058	981	981
Td	=	$1 + (0.5 / (1 + M))$	1.49	1.49	1.49
Fc	=	$0.21 \cdot Td \cdot (1 + 0.2 \cdot X2)$	0.74	0.52	0.52
Qe	=	Capacity = $K \cdot (F - Fc \cdot Qc)$			
		AM	2013	644	831
		PM	2013	634	841
DFC	=	Entry Flow/Capacity = Q / Qe			
		AM	0.22	0.40	0.48
		PM	0.22	0.39	0.53

DFC of Critical Approach = AM 0.48
PM 0.53

Attachment 3 –

Revised Environmental Assessment

Prepared for

Century Shiner Limited

Prepared by

Ramboll Hong Kong Limited

**SECTION 16 PLANNING APPLICATION FOR PROPOSED
AMENDMENTS TO AN APPROVED SCHEME (UNDER
APPLICATION NO. A/H6/91 WITH MINOR RELAXATION OF
PLOT RATIO RESTRICTION APPROVED) FOR PERMITTED
FLAT USE AT 4, 4A, 4B AND 4C TAI HANG ROAD, HONG
KONG
ENVIRONMENTAL ASSESSMENT**

Date **July 2026**

Prepared by **Coco MA**
Environmental Consultant

Signed 

Approved by **Calvin Chiu**
Technical Director

Signed 

Project Reference **CTCTAIHGEI00**

Document No. **R5123_V4.1.docx**

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APPENDICES

Appendix 1-1	Layout and Floor Plans of the Proposed Development
Appendix 1-2	Comparison of Year 2040 Traffic Forecast and Year 2045 Traffic Forecast
Appendix 2-1	Traffic Forecast for Year 2045
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Appendix 2-3	Proposed Acoustic Window and Acoustic Door (Baffle Type) Design
Appendix 2-4	Estimation of Maximum Allowed Sound Attenuation of Acoustic Window and Acoustic Door (Baffle Type)
Appendix 2-5	Schedule of Noise Mitigation Measures
Appendix 3-1	Predicted Air Quality Impact Assessment Results
Appendix 3-2	Contour Map of SO ₂ , NO ₂ , RSP and FSP

1. INTRODUCTION

1.1 Background and Objectives

- 1.1.1 The Application Site at Nos. 4, 4A, 4B and 4C Tai Hang Road, Hong Kong is zoned "Residential Group (B)" ("R(B)") under the Approved Causeway Bay Outline Zoning Plan No. S/H6/17. It is currently vacant.
- 1.1.2 A Section 16 planning application (No. A/H6/91) was submitted to the Town Planning Board (TPB) for the proposed development to be redeveloped as residential use with minor relaxation of the plot ratio. Technical assessments including environmental assessment were prepared to support the application. In the environmental assessment (EA1) prepared for the application (No. A/H6/91), road traffic noise and air quality impacts were addressed. The application was approved in early 2022 with conditions.
- 1.1.3 It is noted that condition (b) of the approved planning application (No. A/H6/91) requires the submission of a revised environmental assessment and implementation of the mitigation measures identified therein to the satisfaction of the Director of Environmental Protection or of the TPB. A revised environmental report (Ref: R5123_V3.2 August 2023) (EA2) has been submitted with respect to condition (b) and was considered acceptable according to letter from Planning Department (Ref.: TPB/A/H6/91 dated 19 September 2023). In EA2, road traffic noise and air quality impacts were addressed, resembling EA1.
- 1.1.4 Recently, due to further development of the design, further amendment to the original proposal approved under planning application (No. A/H6/91) is considered necessary. The current application proposes amendments to the Approved Scheme to increase the number of units from 61 to 176, with no change to other major development parameters including GFA, PR and number of storeys as compared with the Approved Scheme. Ramboll Hong Kong Limited is commissioned by the Applicant to update the environmental assessment based on the current proposal.
- 1.1.5 This environmental assessment follows the approved EA1 and EA2 by addressing environmental noise and air quality impact with respect to the latest redevelopment proposal.

1.2 Environs of the Subject Site

- 1.2.1 The Subject Site is bounded by (Lower) Tai Hang Road to the north. To the immediate east is an existing residential development (Jolly Villa). The other two sides immediate to the Application Site are slope area and zoned "Green Belt" ("GB").
- 1.2.2 The southern side of the Application site is sloping upward so that existing towers are erected near to the northern site boundary close to Tai Hang Road. The elevation of east side of Tai Hang Road abutting the Application Site is relatively higher.
- 1.2.3 The district is characterised by residential uses so that proposed development is fully compatible with the surrounding.
- 1.2.4 **Figure 1.1** shows the location of the Application Site.

1.3 Proposed Development

- 1.3.1 The proposed development consists of 1 residential tower sitting on top of a 6-storey carpark podium building. The main roof of the tower is elevated at 142.20mPD. There

are 22 residential storeys (7/F to 33/F with 13/F, 14/F, 24/F omitted; 28/F designed as refuge cum skygarden & 29/F designed as Resident's Recreational). Low zone residential floor (7/F to 27/F; 18 storeys) consists of 9 flats per floor. High zone residential floor (30/F to 32/F; 3 storeys) consists of 4 flats per floor. 33/F (1 storey) accommodates penthouse (2 flat). There are altogether 176 flats in the proposed development.

- 1.3.2 The residential tower is generally close to the northern site boundary, but relatively apart from the boundary when compared to MLP of approved planning application (No. A/H6/91). The lowest residential floor is elevated at about 54mPD and over 30m above Tai Hang Road on northern side which will provide vertical buffer separation to reduce environmental noise and air quality impact originated from Tai Hang Road.
- 1.3.3 The proposed development is tentatively completed for occupation in 2030.
- 1.3.4 **Appendix 1-1** shows the proposed development scheme.

1.4 Appraisal of Environmental Noise and Air Quality

Noise Impact

- 1.4.1 There is no aboveground railway system in the vicinity of the Application Site. Railway noise impact is not a concern.
- 1.4.2 The district is characterised by residential uses. No industrial or fixed noise source can be identified in the vicinity of the Application Site. Fixed/industrial noise impact is not considered a concern.
- 1.4.3 In detailed design of the potentially noisy equipment onsite (e.g. AC system for clubhouse, ventilation system for carpark podium building), the potential noise impact will be controlled in accordance with the standard under HKPSG (i.e. ANL-5dB(A) or prevailing background whichever is lower). There are practical noise mitigation measures such as selection of more quiet equipment, careful design of locations, enclosure or simply with the fixed noise source (e.g. pumps) housed indoors, use of silencer, acoustic louvre, etc. Adverse fixed noise impact from future operation of the proposed development is not anticipated.
- 1.4.4 Tai Hang Road is the major road serving this district and relatively high volume of traffic flow is expected. Moreover, since the tower disposition is close to Tai Hang Road, road traffic noise should be a concern. The tentative completion year is different from assumption in EA1 and EA2 which necessitates assessment based on new set of traffic forecast. Chapter 2 includes an assessment of road traffic noise impact.

Air Quality Impact

- 1.4.5 Referring to the finding of EA2, the concentrations of criteria pollutants (SO₂, NO₂, RSP and FSP) at air sensitive receivers (ASRs) are predicted to be within the relevant prevailing Air Quality Objectives (AQOs), except NO₂ concentration at north portion of the Application Site facing Tai Hang Road from 25.10mPD to 40.05mPD (G/F to 3/F in the current scheme which are occupied by non-air sensitive uses including car ramp, parking space and plant rooms). It is also noted that the air sensitive uses of the proposed development (residential unit starting from 7/F, residents' recreational facilities at much higher floors) are elevated much higher at 53.70mPD and above, which is higher than the air sensitive uses adopted in EA2. The impact is envisaged to be much lower. With minor update of the development scheme with building height

increased, shift of tentative completion year and change of prevailing AQOs, the potential air quality impact is appraised in Chapter 3 of this report.

- 1.4.6 Moreover, based on the contour plots in EA2, it is understood that major emission should come from northern side. In the current scheme, the block disposition is generally the same as that in EA2. When compared to EA2, the blocks is slightly setback from northern site boundary. Therefore, the likely air quality impact will be lower or at least not worse than before as determined in EA2.
- 1.4.7 Disregard that the tentative completion year (2030) for the current application is shifted when compared to the assumptions in EA2 (2025), the traffic forecast (see **Appendix 1-2**) suggests that the forecasted flow for year 2045 for road links in the vicinity of the Application Site (i.e. Tai Hang Road) is lower than the forecast for year 2040 adopted in the EA2. Moreover, the average vehicular emission strength should generally decrease due to the Government's policy to gradually phase out vehicles with higher emissions. In other words, the overall pollutant emission by considering the traffic flow and vehicular emission strength will be lower or not worse than the assumption in the EA2 so that worsened impact is not anticipated.
- 1.4.8 Therefore, it is considered that the finding and conclusion in the EA2 is still valid and applicable. No adverse air quality impact on the proposed development is anticipated. The air quality impact is not discussed further in this context.

2. ROAD TRAFFIC NOISE IMPACT ASSESSMENT

2.1 Introduction

- 2.1.1 Potential noise impact arising from nearby existing and future road carriageways on the proposed development at the Application Site has been assessed by using modelling in this assessment. Practicable environmental mitigation measures have been recommended, where necessary.

2.2 Assessment Criteria

- 2.2.1 Noise standards are recommended in the Hong Kong Planning Standards and Guidelines (HKPSG) for planning against noise impact from sources such as road traffic, railway and aircraft etc.
- 2.2.2 The proposed development includes domestic dwellings which would rely on opened window for ventilation purpose. Other uses such as carpark or clubhouse are either non-noise sensitive in nature or does not rely on openable window for ventilation purpose.
- 2.2.3 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 dwellings.

2.3 Assessment Methodology

- 2.3.1 The methodology involved the prediction of future noise impacts on Noise Sensitive Receivers (NSRs) arising from traffic flows on existing and future road carriageways situated in the vicinity of the Application Site.
- 2.3.2 The U.K. Department of Transport's procedure "Calculation of Road Traffic Noise" was used to predict the hourly L_{10} noise levels generated from road traffic at selected representative NSRs. The predicted noise levels were then compared with the relevant HKPSG noise standards. Noise mitigation measures are recommended at situations when adverse road traffic noise impact is predicted.
- 2.3.3 Based on the tentative completion date of the development (2030), traffic forecast for the year 2045 (peak traffic flow) on the road carriageways situated in the vicinity of the proposed development was provided by CTA (the project traffic consultant) for prediction of the worst case traffic noise impact within 15 years from the completion of the proposed development. The projected traffic flows and vehicle composition are shown in **Appendix 2-1**. Project traffic consultant has sought Transport Department (TD) for agreement and respective correspondence is provided in **Appendix 2-1**.

2.4 Noise Sensitive Receivers (NSRs)

- 2.4.1 NSRs were selected to represent the noise sensitive uses of the proposed development. Locations of the representative NSRs are shown in **Figure 2.1**. The assessment points have been taken to be situated at 1.2m above floor slabs and at 1m away from the external facade of windows of the residential unit.

2.5 Predicted Traffic Noise Levels under Base Scenario

- 2.5.1 The proposed development is designed so that the residential portion of the proposed development is elevated around 30m above ground to maximise vertical separation between the noise sensitive uses and Tai Hang Road.

2.5.2 Under the base scenario, there is no additional noise mitigation measures assumed. The predicted traffic noise level was shown in **Appendix 2-2**.

2.5.3 According to the result adopting peak traffic flow, there will be exceedance of the road traffic noise standard. The maximum predicted noise level is $L_{10(1-hr)}$ 75 dB(A). There are 106 out of 176 dwellings with road traffic noise exceedance affecting up to 33/F, equivalent to a road traffic noise compliance rate of 40%.

2.6 Consideration of Noise Mitigation Measures

2.6.1 In consideration of the above, noise mitigation measures for domestic uses are duly considered below.

Blank Wall / Fixed Glazing / Maintenance Window

- For some locations not necessary to provide ventilation openings but nearer to noise source and possibly with noise exceedance will be dedicated as blank wall, fixed glazing with or without maintenance window (i.e. no ventilation opening). The fixed glazing with maintenance window will be equipped with a removable handle or key lock system to ensure the maintenance window remains locked except for cleaning and maintenance purposes. The purpose of fixed glazing (not for ventilation purpose) will be stated in relevant documents such as sales brochure, GBP and DMC in future.

Acoustic Window/ Acoustic Door (Baffle Type)

- According to ProPECC PN 5/23, there are configurations of Acoustic Window (Baffle Type) with opening of around 0.5m^2 (600mm x 870mm) and 1.1m^2 (750mm x 1500mm), inner sliding panel with gap width of 100mm to 175mm and overlapping length of at least 100mm with the referenced room area of 8m^2 and 18m^2 . Noise reduction of respectively 6 dB(A) and 7dB(A) are achievable.
- To increase the flexibility on balcony design, the applied Acoustic Door (Baffle Type) has been referenced to the redevelopment project of ex-North Point Estate (hereafter referred as "NPE"). A road traffic noise sound attenuation of 8.8dB(A) for living rooms determined based on onsite field test is adopted. The system has gap width of 100mm, overlapping length of 375mm, opening area of 3.2m^2 and no micro-perforated absorber (MPA) applied.
- The configuration and noise reduction of these innovative measures after adjustment for improvement measures, room size, etc. are tabulated and shown in **Appendix 2-4**.

2.6.2 **Figure 2.2** shows the noise mitigation measures. A schedule of noise mitigation measures is tabulated in **Appendix 2-5**.

2.7 Predicted Traffic Noise Levels under Mitigated Scenario

2.7.1 The predicted traffic noise level after mitigation was shown in **Appendix 2-2**. It is noted that the predicted mitigated noise level using acoustic window (baffle type or acoustic door (baffle type) as shown in the table is not the actual noise level at the external façade after the application of acoustic windows. These predicted noise levels

are the equivalent noise levels at 1m from the external façade after accounting the reduction in noise levels inside the flat offered by the proposed baffle type acoustic window.

- 2.7.2 According to the result, with all recommended noise mitigations in place, full compliance of road traffic noise standard (i.e. $L_{10(1-hr)}$ 70 dB(A)) can be achieved. No adverse road traffic noise impact is anticipated.

2.8 Conclusion

- 2.8.1 A road traffic noise impact assessment was conducted based on the worst case scenario within 15 years from tentative completion year of the proposed development.
- 2.8.2 The result indicated that with noise mitigation measures (i.e. acoustic window (baffle type), acoustic door (baffle type), blank wall/fixed glazing/maintenance window) in place, there will be no adverse road traffic noise impact on the proposed development.

3. AIR QUALITY IMPACT ASSESSMENT

3.1 Introduction

3.1.1 This chapter includes discussion and appraisal of air quality impact based on the updated development proposal with reference to the findings of the latest approved environmental assessment report (EA2).

3.1.2 It is noted that EA2 has been prepared in 2023 for the purpose to partially discharge condition (b) of the approved planning application (No. A/H6/91). At that time, tentative completion year of 2025 was assumed. The lowest residential floor level was about 51mPD. The concentrations of criteria pollutants including SO₂ (4th highest 10-minute average; 4th highest 24-hour average), NO₂ (19th highest 1-hour average; annual average), RSP (10th highest 24-hour average; annual average) and FSP (36th highest 24-hour average; annual average) at discrete ASRs and contour plots at worst-hit levels have been predicted under year 2025 scenario, which represented the highest emission scenario between 2025 and 2040. Moreover, it is also shown in the discrete ASR results and contour plots that the predicted pollutant concentration would generally decrease with the elevation and increase at location closer to the northern site boundary (i.e. when closer to the section of Tai Hang Road on northern side), except for SO₂.

3.2 Assessment Criteria

3.2.1 The prevailing Hong Kong AQOs updated in April 2025 and the assessment criteria are listed in **Table 3.1** below. Bold fields are those different from last version of the AQOs.

Table 3.1 Hong Kong Air Quality Objectives

Pollutants	Average Time	Standard [i] (µg/m ³)	No. of exceedances allowed
SO ₂	10-min	500	3
	24-Hour	40	3
RSP (PM ₁₀) [ii]	24-Hour	75	9
	Annual	30	Not applicable
FSP (PM _{2.5}) [iii]	24-Hour	37.5	18
	Annual	15	Not applicable
NO ₂	1-Hour	200	18
	24-Hour	120	9
	Annual	40	Not applicable
Ozone (O ₃)	8-Hour	160	9
	Peak season	100	Not applicable
Carbon Monoxide (CO)	1-Hour	30,000	0
	8-Hour	10,000	0
	24-Hour	4,000	0
Lead (Pb)	Annual	0.5	Not applicable

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.

3.3 Background Air Quality

3.3.1 In EA2, the background air quality based on data for Year 2025 was extracted from the Pollutants in the Atmosphere and the Transport over Hong Kong-model version 2.1 (PATH v2.1) developed and released by EPD in July 2021 (Grid 42, 29) and adopted as background air pollutant concentration.

3.3.2 The tentative year of completion based on the latest development proposal is 2030. The data for year 2030 based on the latest PATH model (version 3.0) released in 2024 has been extracted, summarised and compared with the data adopted in EA2 as follows.

Table 3.2 Comparison of Air Quality Data of PATH v2.1 and PATH v3.0

Pollutant	Averaging time	Parameter	AQO ^[1] ($\mu\text{g}/\text{m}^3$)	Concentration ^[2] ($\mu\text{g}/\text{m}^3$)		
				PATH v2.1 in Year 2025 (42,29, L1)	PATH v3.0 in Year 2030 (42,29, L1)	Difference
RSP (PM ₁₀)	24-hour	10 th highest	75	64	51	-13
	Annual	Maximum	30	27	19	-8
FSP (PM _{2.5})	24-hour	19 th highest	37.5	35	30	-5
	Annual	Maximum	15	15	12	-6
NO ₂	1-hour	19 th highest	200	53	71	18
	24-hour	10 th highest	120	Not Available	29	--
	Annual	Maximum	40	9	13	4
SO ₂	10-minute	4 th highest	500	44	22	-22
	24-hour	4 th highest	40	9	7	-2
O ₃	8-hour	10 th highest	160	194	172	-22
	Peak Season	Maximum	100	Not Available	119	--

Notes:

[1] Air Quality Objectives enacted on 11 April 2025.

[2] Bolded and underlined values exceed the relevant AQO.

3.3.3 Generally, it can be observed that the background pollutant concentration in year 2030 based on PATH model (version 3.0) is lower than that in year 2025 based on PATH model (version 2.1) adopted in the EA2, except NO₂ 19th highest 1-hour average of NO₂ and annual average of NO₂. Since the tentative completion year of the proposed development will be in year 2030, the predicted results of the ASRs and contour plots of EA2 would be updated with the background air pollution concentrations of PATH model (version 3.0).

3.4 Emission Sources

3.4.1 In EA2, emission sources including chimney, marine vessels, open roads and public transport interchange (PTI) have been accounted.

Chimney Stacks

3.4.2 Chimneys within 500m study area identified in the EA2 are those related to hospital and clinical facilities. There is no change (addition, deletion) of the identified chimneys within the study area under prevailing situation.

Marine Vessels

3.4.3 Ocean Terminal within 4km study area has been identified in the EA2. There is no change (addition, deletion) of the marine vessel related facilities within the study area under prevailing situation.

Open Roads

3.4.4 Open road emissions from road links within 500m study area have been accounted in the EA2. There is no change (addition, deletion) of carriageway found within the study area under prevailing situation.

3.4.5 In the EA2, traffic forecast data in year 2025, 2033 and 2040 (i.e. between 2025 (tentative completion year) and 15 years after completion) has been reviewed. Sensitivity tests have been conducted to determine the worst-case scenario given the combination of vehicular emission factors and the projected traffic flow in these three years. The worst assessment year has been determined based on the highest NO_x, RSP and FSP emission scenario using the EMFAC-HK model. Total emissions of NO_x, RSP and FSP were found to be decreasing with time because the vehicle fleet will become cleaner over time as the fleet incorporates newer vehicles adhering to more stringent emission standards in future years, and the increase of traffic flow could not offset this factor. Year 2025 has been selected as the worst-case model year for air quality in the EA2.

3.4.6 Based on the latest development proposal, the tentative completion year is adjusted to 2030 and after the assumed completion year in the EA2. It is reasonable to expect that the total emission in latter year would be lower. The highest emission between year 2030 and 2045 based on the latest development proposal will be lower than that of the year 2025 scenario adopted in the EA2.

PTIs

3.4.7 There was no enclosed PTI and one bus terminus at the south of Moreton Terrace Temporary Playground was identified in the EA2. There is no change of the operation of the bus terminus observed under prevailing situation. Again, since the vehicle fleet will become cleaner over time as the fleet incorporates newer vehicles adhering to more stringent emission standards in future years, the emission from bus terminus operation between year 2030 and 2045 should be lower than the assumption adopted in the EA2.

3.4.8 With reference to the findings in the EA2, there is no change of the emission sources discussed above. With the tentative complete year adjusted to 2030, it is expected that emission from chimneys, marine vessels, open roads and bus terminus between year 2030 and 2045 would either be the same or lower than that assumed in the EA2. Therefore, the predicted impact in the EA2 is representative of the more conservative scenario that the latest development proposal should adopt.

Carpark

3.4.9 On the other hand, while the nature of the proposed development is not environmentally polluting in nature, there exists future use such as carpark with mechanical ventilation system that may emit pollutant at all. The design and operation

of the proposed car park will comply with the requirements stipulated in EPD's Practice Note for Professional Persons – Control of Air Pollution in Car Parks (ProPECC PN 2/96). With the adoption of appropriate ventilation systems and design measures, the air quality associated with the proposed car park is expected to meet the air quality guidelines as given in **Table 3.3**. The locations of the potential mechanical ventilation exhaust are shown in **Figure 3.3**.

Table 3.3 Concentration Limits

Air Pollutants	Maximum Concentration		
	Averaging Time	Micrograms Per Cubic Metre ($\mu\text{g}/\text{m}^3$)	Parts Per Million (ppm)
CO	5 minutes	115,000	100
NO ₂	5 minutes	1,800	1

3.5 Air Sensitive Receivers

3.5.1 The proposed development consists of a residential tower erected atop a carpark podium building. A covered landscape area is provided at 6/F which is passive in nature and does not provide any recreational facilities. Skygarden and clubhouse are located at higher floors (28/F to 29/F). The proposed uses resemble the development scheme in EA2. That is, the lowest elevation of the ASRs is the lowest residential floor of the proposed residential tower which is at about 53.7mPD, versus about +51mPD in EA2.

3.5.2 While the nature of the proposed uses under this latest proposal resembles that in the EA2, the location and elevation of ASRs is slightly changed. A portion of the residential tower in the latest proposal will be closer to the northern site boundary leading to higher pollutant concentration while the lowest ASRs in the latest proposal is around 2.7m higher than that assumed in the EA2. Comparison of the current scheme and the scheme in EA2 is shown in **Figure 3.1**.

3.5.3 As mentioned in **Section 3.3.3**, the predicted results of the ASRs and contour plots of EA2 would be updated with the background air pollution concentrations of PATH model (version 3.0). The updated predicted results of the ASRs are summarized in **Appendix 3-1**. As shown by the updated predicted results of the ASRs in **Appendix 3-1**, the trend of pollutant concentrations at elevated levels is decreasing as the open road emission is the major emission source. Therefore, it is anticipated that no adverse air quality impact for the increased building height of the proposed scheme. The updated contour plots for 10-minute average SO₂ & 24-hour average SO₂, 1-hour average NO₂ & 24-hour average NO₂ & annual average NO₂, 24-hour average RSP & annual average RSP, 24-hour average FSP & annual average FSP are shown in **Appendix 3-2**. Although exceedances are shown in the contour plots of annual average NO₂ at G/F and 5/F, there is no air sensitive uses would be located within the area of exceedances. Therefore, it is anticipated that the proposed development would not be subject to adverse air quality impact.

3.6 Construction Phase Air Quality Impact Assessment

Identification of Potential Construction Air Quality Impacts

3.6.1 The major air quality impact of concern during the construction phase will be the potential fugitive dust and gaseous emission. The Project is at the early planning stage, the construction works of the proposed development will be commenced in Year 2027.

The major air quality impacts during the construction phase of the proposed development are expected to arise from construction activities such as foundation works and superstructure construction.

- 3.6.2 There will be also potential impacts from the criteria pollutants (e.g. nitrogen oxides (NO_x), sulphur dioxide (SO₂), and carbon monoxide (CO)) during construction phase. Emission from diesel trucks for the haulage of materials and construction plants will contain high percentage of smoke particulate and unburned hydrocarbons in comparison with petrol driven vehicles. The Application Site is of ~0.17 ha and currently vacant so that development scale is very low and no demolition of existing structures is required. There is no basement proposed so that deep excavation is not necessary. Therefore, it is estimated that a maximum number of 1 dump truck per hour will be required due to limited generation of C&D materials. The Development Site is located at urban area. It is not practical to plan a travelling route which will be away from ASRs. However, due to limited number of dump trucks, the air quality impact arisen from the gaseous emissions of dump trucks to nearby ASRs would not be considered as significant. The anticipated number of construction plants that result from the construction works will not be excessive due to the site constraint of the site area. Therefore, significant impact on the existing air quality is not envisaged. Under Air Pollution Control (Non-road Mobile Machinery) Emission Regulation and Air Pollution Control (Fuel Restriction) Regulations, there is also adequate control for emission from on-site machinery and non-road vehicles. It is expected that approximately 4-5 on-site diesel/petroleum fuelled machineries will be used for construction works. In addition, availability of electricity supply during construction of the project will be explored and such requirement will be specified in future contract. If available, contractor should maximise use of electricity and with least reliance of diesel fuelled equipment (e.g. for electricity powered stationary equipment such as pump instead of using generator). In all circumstances, the contractor will be required to observe all relevant regulations and maintain all equipment in good condition to avoid any excessive emission.

Representative Air Sensitive Receivers

- 3.6.3 There are ASRs located within 500m from the proposed development and considered as Air Sensitive Receivers (ASRs). **Figure 3.1** shows the separation distance between the Application Site and the nearby ASRs which are expected to be worst affected and also listed in **Table 3-4**.

Table 3-4 Representative Air Sensitive Receivers for Construction Phase

ASR ID	ASR	Land Uses	Height (mPD)	Shortest Distance to Application Site
ASR1	Jolly Villa	Residential	114.6	0m
ASR2	Illumination Terrace	Residential	165.5	25m
ASR3	50 Sun Chun Street	Residential	26.1	30m
ASR4	Winway Court	Residential	94.4	20m
ASR5	1 Tai Hang Road	Residential	100.9	40m
ASR6	Fontana Gardens 22-25	Residential	103.6	110m
ASR7	Trafalgar Court	Residential	169.4	20m

Potential Concurrent Projects

3.6.4 According to the desktop research, it is expected that the construction works of the nearby construction sites, including the Approved Planning Application No. A/H7/188 (440m apart) and Approved Planning Application No. A/H7/189 (375m apart), as well as the Proposed Residential Development at 89-93 Tai Hang Road (320m apart) and Proposed Composite Development at 17A-25 Sun Chun Street (45m apart)), are identified concurrent projects. It is anticipated that the construction works will be carried out concurrently with the construction works of the proposed development. However, it is anticipated that mitigation measures for fugitive dust and gaseous emission would be implemented at these construction sites to reduce the impact generated. In all circumstances, it is believed that best management practice will be implemented for all concurrent projects. Moreover, it is recommended that the contractors of all the concurrent projects in the vicinity should have close liaison to avoid any dusty activities to be taken in place at the same time or at locations nearby to minimise the cumulative dust impact. The locations of the potential concurrent projects are shown in **Figure 3.2**.

Mitigation Measures for Construction Air Quality Impact

3.6.5 Fugitive dust emission arising from conversion activities can be effectively suppressed by incorporating proper mitigation measures into work procedures through contractual clauses, good site management, and close monitoring by the resident engineers. The contractor shall be required to follow the requirements of the Air Pollution Control (Construction Dust) Regulation. With the adoption of good practices, it is expected that emission of construction dust can be kept at an acceptable level. The recommended dust mitigation measures are described below. In addition, EPD's recommended pollution control clause for construction contracts will be incorporated and required in future tender document to ensure that all relevant environmental protection and pollution control ordinances are observed and complied with. Moreover, regular site audit shall be implemented to monitor the dust impact arising from the construction activities associated with the proposed development during construction phase.

3.6.6 The dust control measures detailed below shall also be incorporated into the Contract Specification where practicable as an integral part of good construction practices:

- Locate the haul road away from those concerned ASRs;
- Avoid dusty works or placing stockpiles near to those concerned ASRs;
- Minimization of unpaved, exposed earth by immediate covering/ permanent paving as soon as the works have been completed.
- Any debris that may dislodge dust particles shall be covered entirely by impervious sheeting or stored in a debris collection area sheltered on the top and the 3 sides;
- Every debris chute shall be enclosed by impervious sheeting or similar materials;
- Before debris is dumped into a debris chute, it shall be sprayed with water or a dust suppression chemical so that it remains wet when it is dumped;
- Spray water when conducting dusty operation, such as breaking, grinding, sand papering and wood cutting work;
- Fit vacuum cleaner to grinding, sand papering or wood cutting machines;
- Maximise the use of electricity and minimise reliance on diesel-fuelled equipment as far as practicable; and

- Maintain good house-keeping and increase the cleaning frequency of the surrounding areas.

General Site Management

3.6.7 Appropriate working methods should be devised and arranged to minimise dust emissions and to ensure any installed control system and/or measures are operated and/or implemented in accordance with their design merits. No free falling of construction debris should be allowed, which should be let down by hoist or enclosed tunnel to the ground.

3.6.8 Frequent mist/ water spraying should be applied on dusty areas when conducting dusty operation. The amount of water spraying should be just enough to dampen the material without over-watering.

3.6.9 Hoarding of not less than 2.4m high from ground level along site boundary, which is next to a road or other public area should be provided.

Vehicles and Unpaved Site Roads

3.6.10 Dust emission from unpaved roads comes predominantly from travelling of vehicles. Areas within the site where there are regular vehicle movements should have an approved hard surface. Speed controls at an upper limit of 10km/hr should be imposed and their movements should be confined to designed roadways within the site. All dusty vehicle loads should have side and tail boards covered by tarpaulin extending at least 300mm over the edges of the side and tail boards. Wheel-wash troughs and hoses should be provided at exit points of the site.

Material Stockpiling and Handling

3.6.11 The amount of stockpiling should be minimised where possible. Construction material or debris should be covered and stored inside enclosed areas. Other control measures such as enclosed or semi-enclosed windboard should be used, where applicable, to minimise dust emission. Regular watering is needed at areas such as storage piles, where there could be potential dust emission. Placing dusty material storage piles near ASRs should be prevented.

3.6.12 The dust control measures detailed below shall also be incorporated into the Contract Specification where practicable as an integral part of good construction practices:

- All demolished items (including vegetation, boulders, poles, pillars, structures, debris, rubbish and other items arising from site clearance) that may dislodge dust particles shall be covered entirely by impervious sheeting or placed in an area sheltered on the top and the 3 sides within a day of demolition;
- Where a site boundary adjoins a road, streets or other accesses to the public, hoarding of not less than 2.4 m high from ground level should be provided along the entire length except for a site entrance or exit;
- The working area of any excavation or earth moving operation shall be sprayed with water or a dust suppression chemical immediately before, during and immediately after the operation so as to maintain the entire surface wet;
- Use of regular watering to reduce dust emissions from exposed site surfaces and unpaved roads, particularly during dry weather;
- Use of frequent watering for particularly dusty construction areas and areas close to ASRs;

- Side enclosure and covering of any aggregate or dusty material storage piles to reduce emissions. Where this is not practicable owing to frequent usage, watering shall be applied to aggregate fines;
- Open stockpiles (if any) shall be avoided or covered. Prevent placing dusty material storage piles near ASRs;
- Any stockpile of dusty materials shall be either covered entirely by impervious sheeting; placed in an area sheltered on the top and the 3 sides; or sprayed with water or a dust suppression chemical so as to maintain the entire surface wet.
- Stockpiles of C&D materials should be kept covered by impervious sheets for the foreseeable inclement weather such as typhoon or heavy rain.
- Tarpaulin covering of all dusty vehicle loads transported to, from and between site locations;
- Establishment and use of vehicle wheel and body washing facilities at the exit points of the Site;
- Imposition of speed controls for vehicles on unpaved site roads, 8 km per hour is the recommended limit;
- Routing of vehicles and position of construction plant should be at the maximum possible distance from ASRs;
- Every stock of more than 20 bags of cement or dry pulverized fuel ash (PFA) should be covered entirely by impervious sheeting or placed in an area sheltered on the top and the 3 sides;
- Cement or dry PFA delivered in bulk should be stored in a closed silo fitted with an audible high-level alarm which is interlocked with the material filling line and no overfilling is allowed;
- Cement, PFA or any other dusty materials collected by fabric filters or other air pollution control system or equipment shall be disposed of in totally enclosed containers;
- Silos used for the storage of cement or dry pulverized fuel ash shall not be overfilled;
- Loading, unloading, transfer, handling or storage of bulk cement or dry PFA should be carried out in a totally enclosed system or facility, and any vent or exhaust should be fitted with an effective fabric filter or equivalent air pollution control system;
- The 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;
- Locate all the dusty activities away from any nearby ASRs as far as practicable; and
- Erection of higher hoarding at the locations with ASRs in immediate proximity to the project site boundary.

3.6.13 With the implementation of dust mitigation measures in accordance with the Air Pollution Control (Construction Dust) Regulation and good construction practices, no adverse air quality impact on nearby ASRs is anticipated during the construction phase.

3.7 Conclusion

- 3.7.1 Given the aforementioned discussion, it is considered that the predicted air pollutant concentration result in the EA2 is representative of a more conservative scenario that the latest scheme should adopt.
- 3.7.2 By referencing most results in the EA2, it can be concluded that the worst affected ASRs of the latest scheme would be below relevant prevailing standards.
- 3.7.3 Exceedance of prevailing standards is unlikely for future ASRs of the latest proposed scheme.
- 3.7.4 No adverse air quality impact is therefore anticipated during operation of the project.

4. CONCLUSION

- 4.1.1 The potential environmental noise and air quality impacts arising from the proposed development at the Application Site have been evaluated either quantitatively or qualitatively.

Road Traffic Noise Impact

- 4.1.2 A road traffic noise impact assessment was conducted based on the worst case scenario within 15 years from tentative completion year of the proposed development. The result indicated that with noise mitigation measures (i.e. acoustic window (baffle type), acoustic door (baffle type), and blank wall/fixed glazing/maintenance window) in place, there will be no adverse road traffic noise impact on the proposed development.

Other Environmental Noise Impact

- 4.1.3 There is absence of any aboveground railway system, industrial and fixed noise source in the surrounding. The potential railway and fixed/industrial noise impact is not considered a concern.
- 4.1.4 In detailed design of the potentially noisy equipment onsite (e.g. AC system for clubhouse, ventilation system for carpark podium building), the potential noise impact will be controlled in accordance with the standard under HKPSG (i.e. ANL-5dB(A) or prevailing background whichever is lower). There are practical noise mitigation measures such as selection of more quiet equipment, careful design of locations, enclosure or simply with the fixed noise source (e.g. pumps) housed indoors, use of silencer, acoustic louvre, etc. Adverse fixed noise impact from future operation of the proposed development is not anticipated.

Air Quality Impact

- 4.1.5 The finding and conclusion of previous EA reports is considered valid and applicable. Air pollutant emission is mainly from open road traffic emission. Based on the current scheme, the air sensitive uses of the proposed development provide sufficient vertical separation from pollutant emission sources at lower elevations. Moreover, the building disposition is relatively setback from northern boundary and relatively distance apart from Tai Hang Road on northern side which was found to contribute more air quality impact. Added that the overall emissions from overall pollutant emission is expected not to be worse than before, the conclusion in previous EA reports that the development is not subject to adverse air quality impact is considered still valid with respect to the current proposal.
- 4.1.6 Potential air quality impacts arising from the construction phase would mainly be associated with foundation works and superstructure construction. Concurrent construction activities within the 500m Assessment Area may also give rise to cumulative dust impacts. With the implementation of appropriate mitigation measures, as well as good construction practices such as frequent watering of active work areas, exposed surfaces, and unpaved haul roads, as well as proper site management and regular site audit, no adverse air quality impact on ASRs in the vicinity of the Application Site is anticipated during the construction phase.

Figures

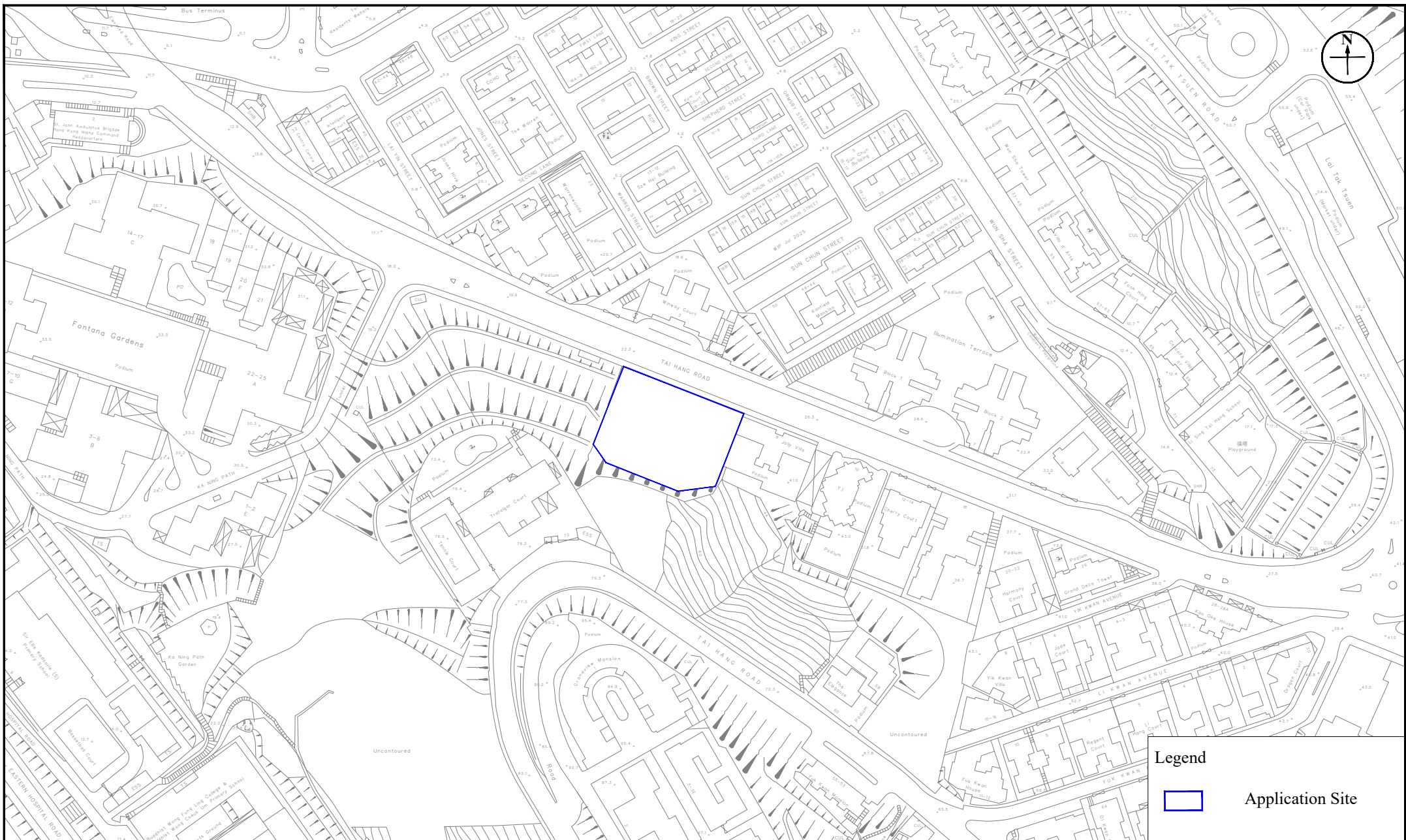


Figure: 1.1

Title: Location of Application Site and its Environs

Project: Section 16 Planning Application for Proposed Amendments to an Approved Scheme (under Application No. A/H6/91 with Minor Relaxation of Plot Ratio Restriction Approved) for Permitted Flat Use at 4, 4A, 4B and 4C Tai Hang Road, Hong Kong

RAMBOLL

Drawn by: CM

Checked by: CC

Rev.: 2.0

Date: Apr 2026



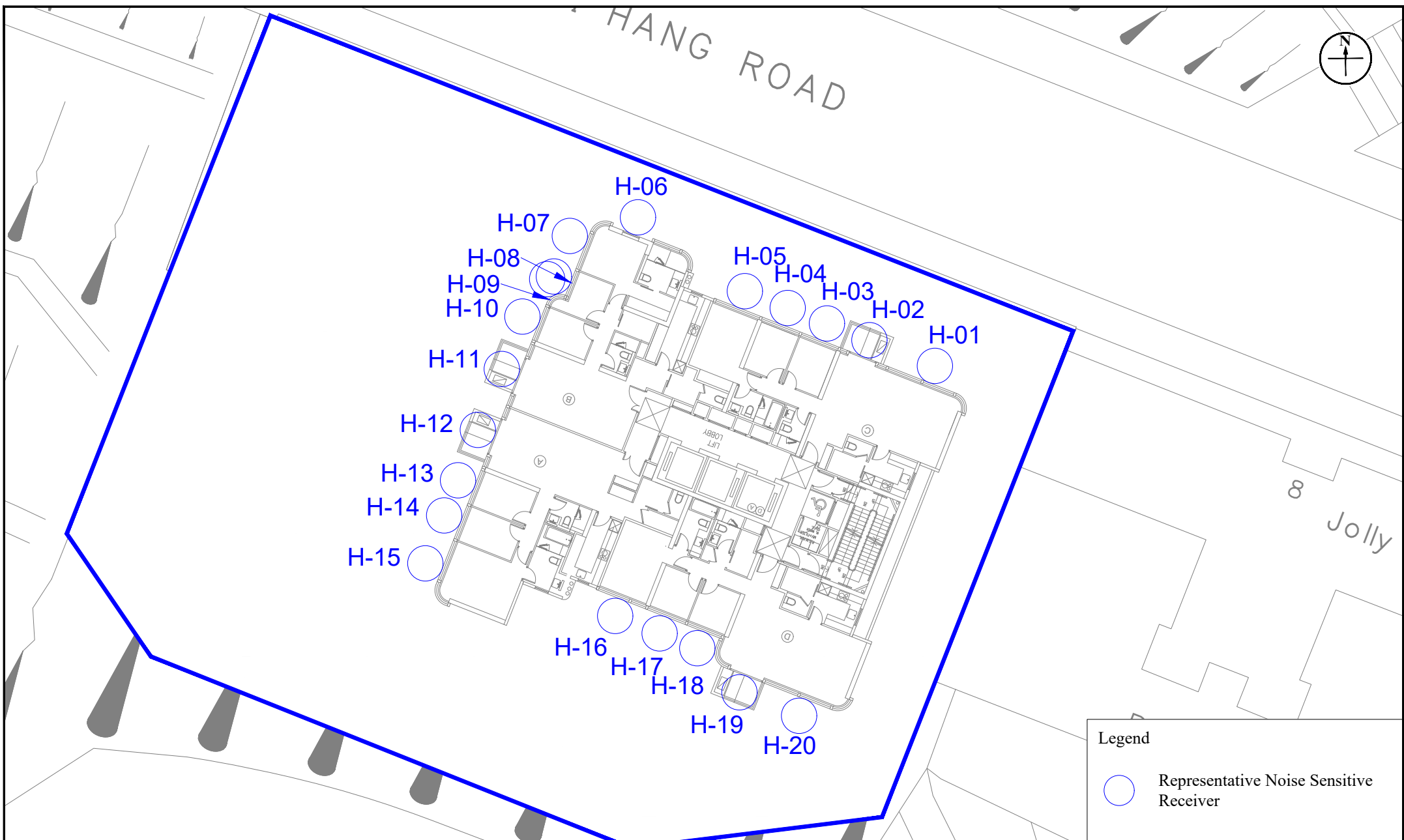


Figure: 2.1b

Title: Locations of Noise Sensitive Receivers for Road Traffic Noise Impact Assessment (High Zone: 30/F - 32/F)

Project: Section 16 Planning Application for Proposed Amendments to an Approved Scheme (under Application No. A/H6/91 with Minor Relaxation of Plot Ratio Restriction Approved) for Permitted Flat Use at 4, 4A, 4B and 4C Tai Hang Road, Hong Kong

RAMBOLL

Drawn by: CM

Checked by: CC

Rev.: 4.0

Date: Apr 2026



Figure: 2.1c

Title: Locations of Noise Sensitive Receivers for Road Traffic Noise Impact Assessment (Penthouse: 33/F)

Project: Section 16 Planning Application for Proposed Amendments to an Approved Scheme (under Application No. A/H6/91 with Minor Relaxation of Plot Ratio Restriction Approved) for Permitted Flat Use at 4, 4A, 4B and 4C Tai Hang Road, Hong Kong

RAMBOLL

Drawn by: CM

Checked by: CC

Rev.: 4.0

Date: Apr 2026

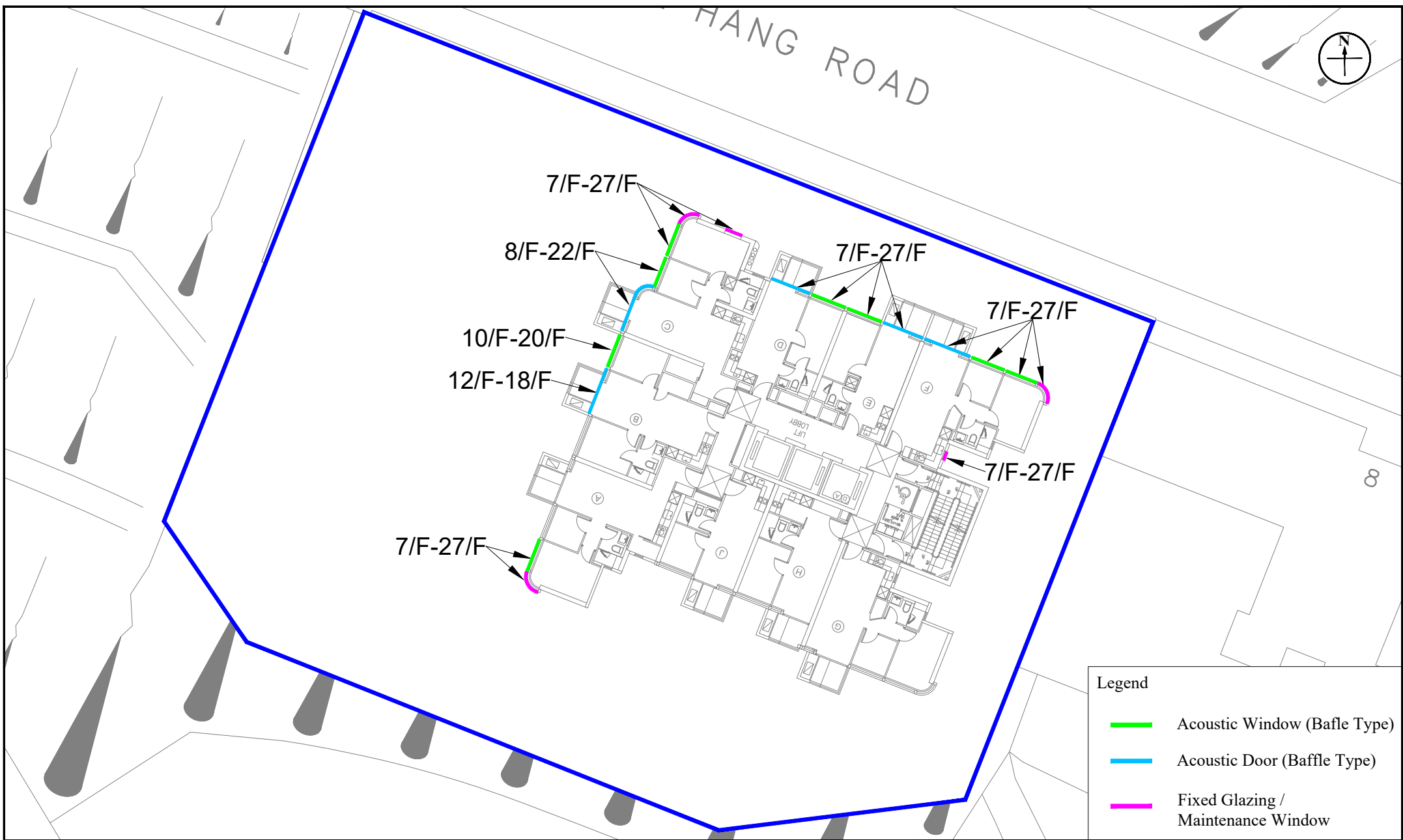


Figure: 2.2a

Title: Locations of Proposed Road Traffic Noise Mitigation Measures (Low Zone: 7/F - 27/F)

Project: Section 16 Planning Application for Proposed Amendments to an Approved Scheme (under Application No. A/H6/91 with Minor Relaxation of Plot Ratio Restriction Approved) for Permitted Flat Use at 4, 4A, 4B and 4C Tai Hang Road, Hong Kong

RAMBOLL

Drawn by: CM

Checked by: CC

Rev.: 4.1

Date: Jun 2026

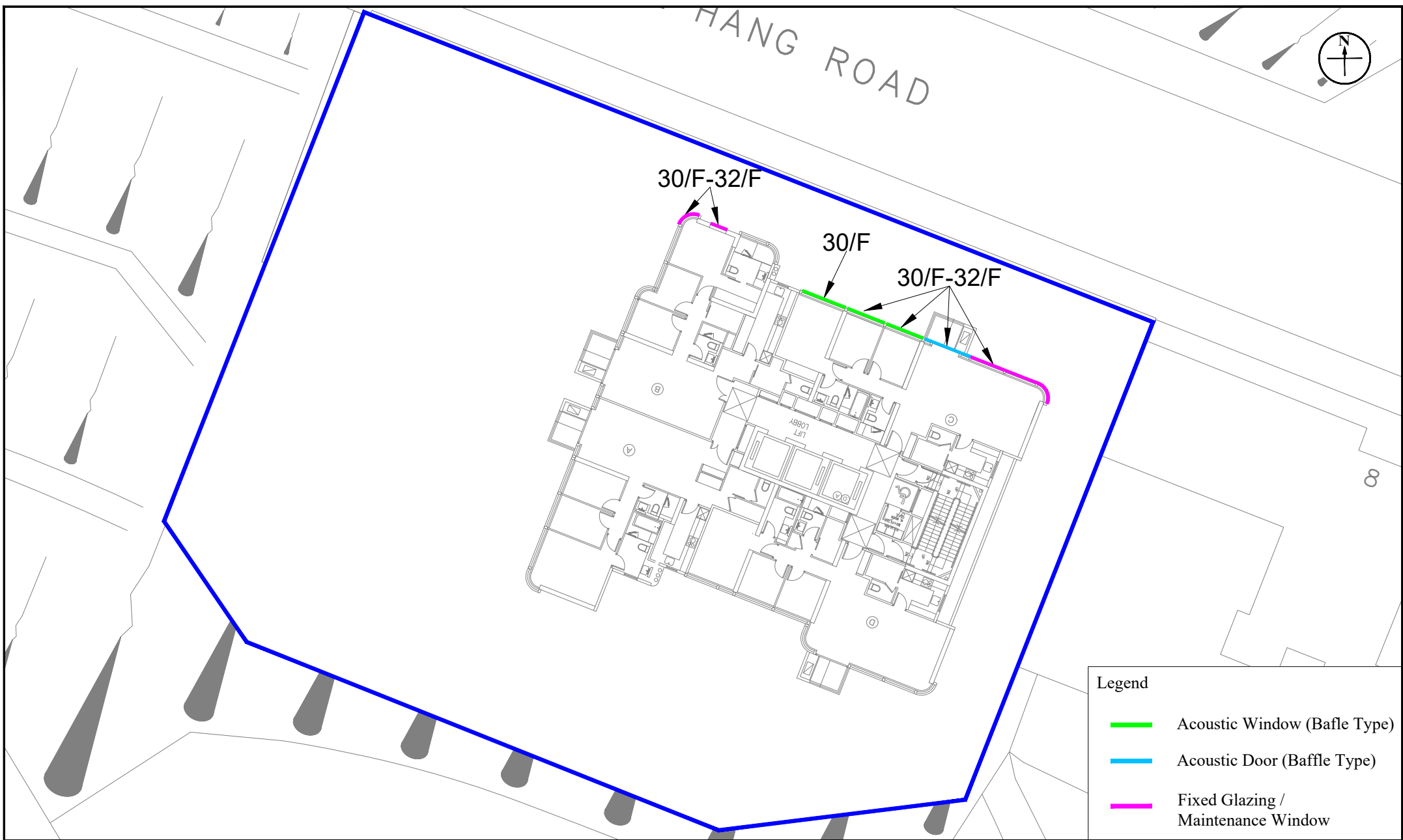


Figure: 2.2b

Title: Locations of Proposed Road Traffic Noise Mitigation Measures (High Zone: 30/F - 32/F)

Project: Section 16 Planning Application for Proposed Amendments to an Approved Scheme (under Application No. A/H6/91 with Minor Relaxation of Plot Ratio Restriction Approved) for Permitted Flat Use at 4, 4A, 4B and 4C Tai Hang Road, Hong Kong

RAMBOLL

Drawn by: CM

Checked by: CC

Rev.: 4.0

Date: Apr 2026

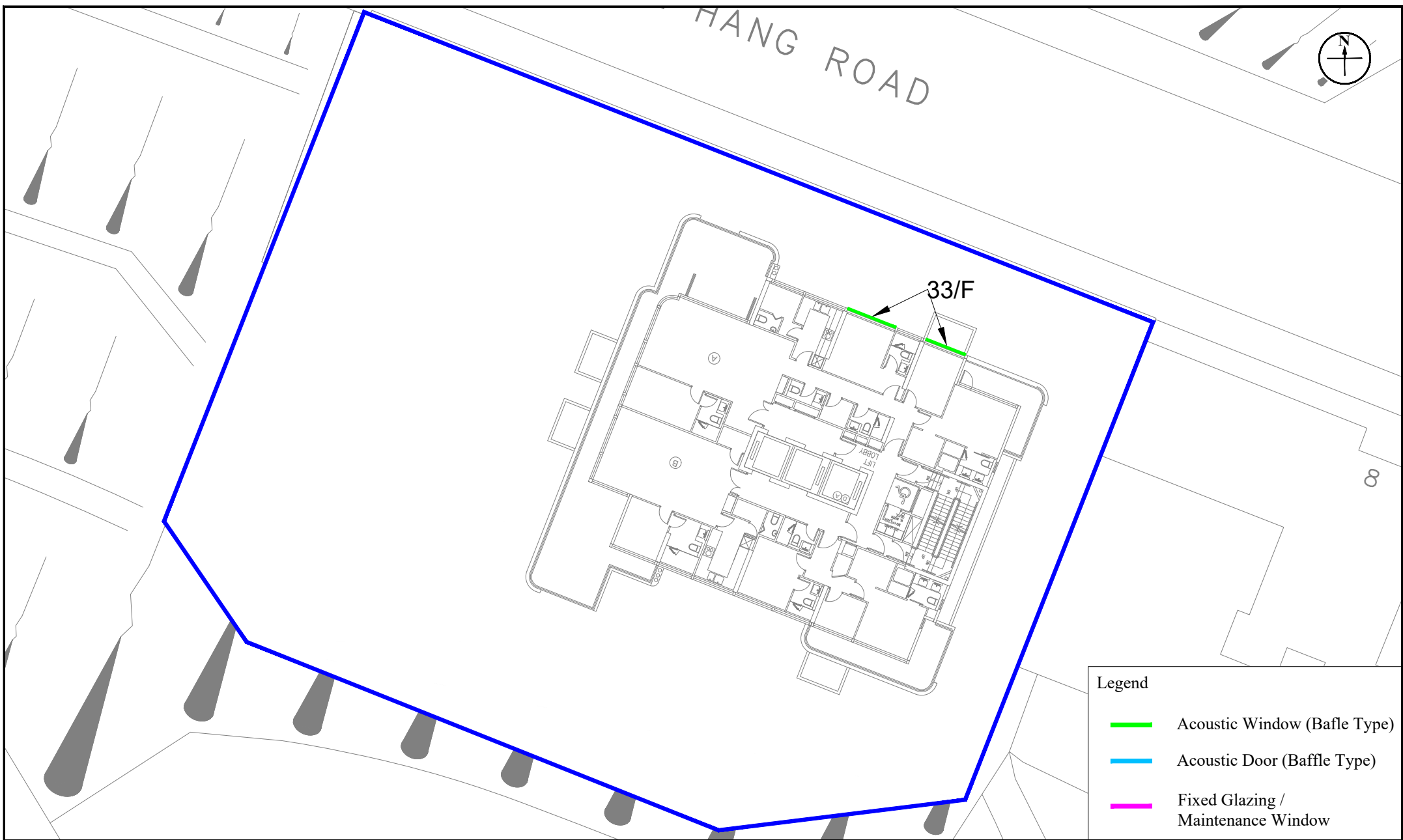


Figure: 2.2c

Title: Locations of Proposed Road Traffic Noise Mitigation Measures (Penthouse: 33/F)

Project: Section 16 Planning Application for Proposed Amendments to an Approved Scheme (under Application No. A/H6/91 with Minor Relaxation of Plot Ratio Restriction Approved) for Permitted Flat Use at 4, 4A, 4B and 4C Tai Hang Road, Hong Kong

RAMBOLL

Drawn by: CM

Checked by: CC

Rev.: 4.0

Date: Apr 2026

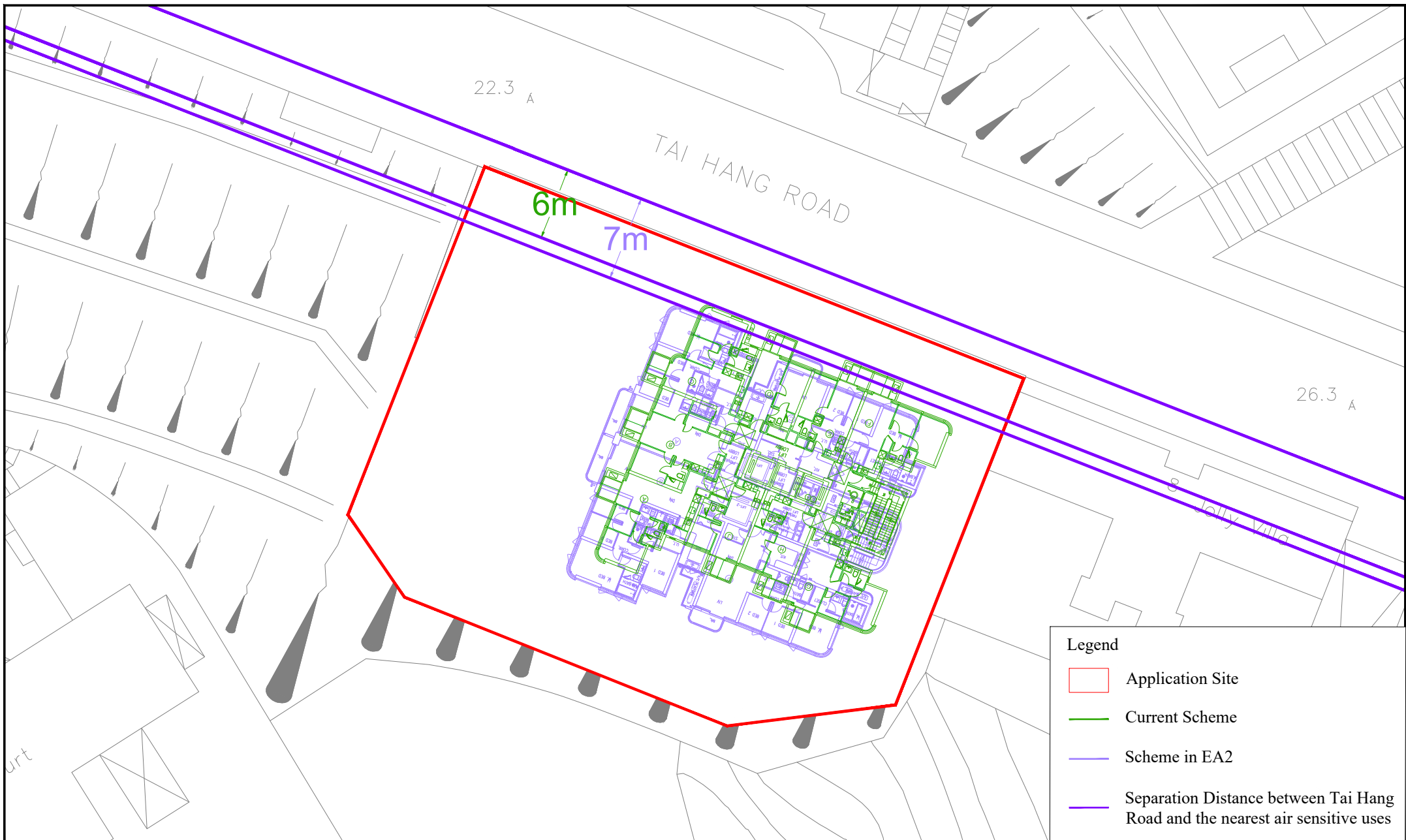


Figure: 3.1

Title: Comparison of Current Scheme and Scheme in EA2

Project: Section 16 Planning Application for Proposed Amendments to an Approved Scheme (under Application No. A/H6/91 with Minor Relaxation of Plot Ratio Restriction Approved) for Permitted Flat Use at 4, 4A, 4B and 4C Tai Hang Road, Hong Kong

RAMBOLL

Drawn by: AW

Checked by: BF

Rev.: 4.1

Date: Jul 2026

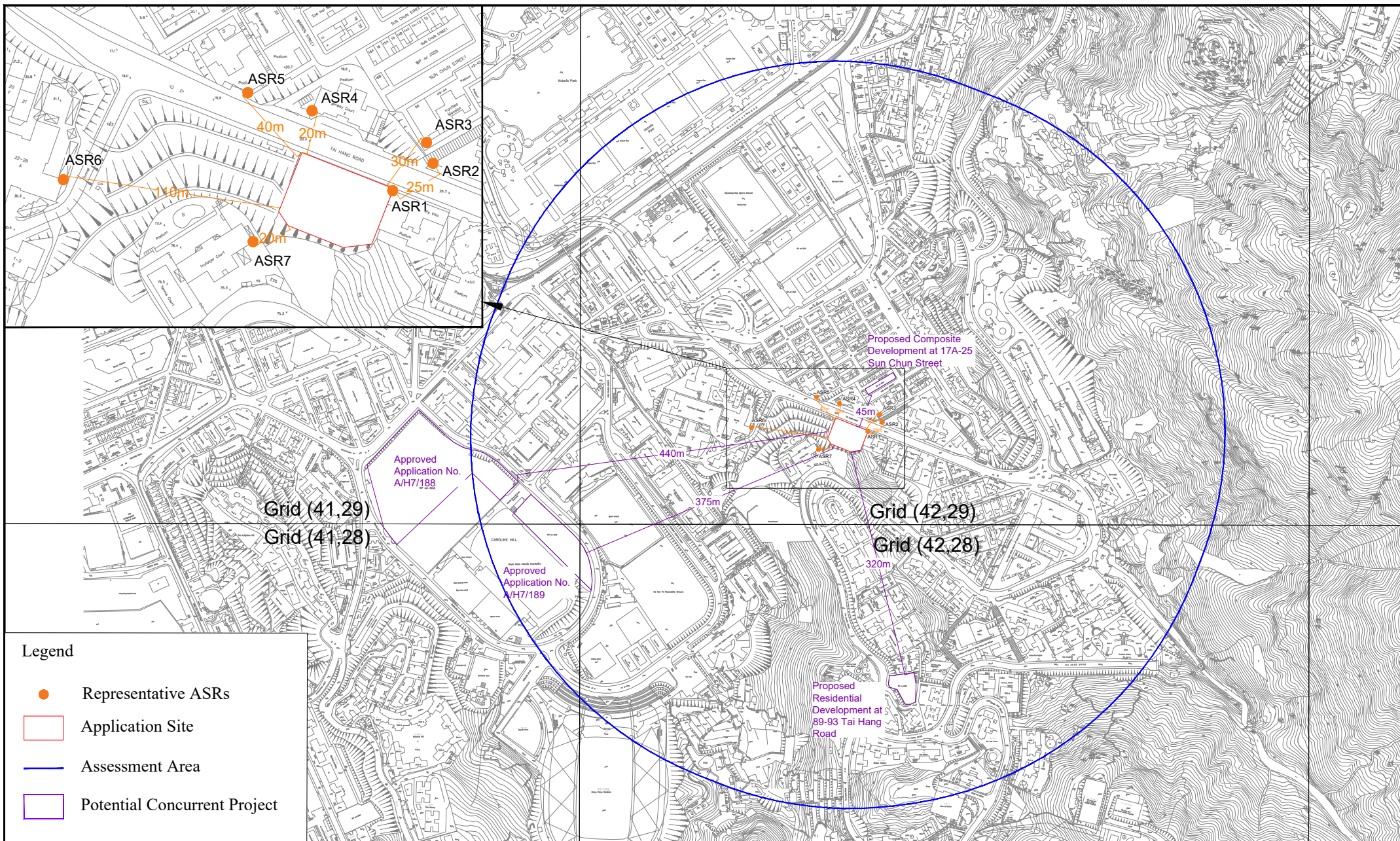


Figure: 3.2

Title: Locations of Representative Air Sensitive Receivers and Potential Concurrent Projects during Construction Phase

Project: Section 16 Planning Application for Proposed Amendments to an Approved Scheme (under Application No. A/H6/91 with Minor Relaxation of Plot Ratio Restriction Approved) for Permitted Flat Use at 4, 4A, 4B and 4C Tai Hang Road, Hong Kong

RAMBOLL

Drawn by: AW

Checked by: BF

Rev.: 4.1

Date: Jul 2026

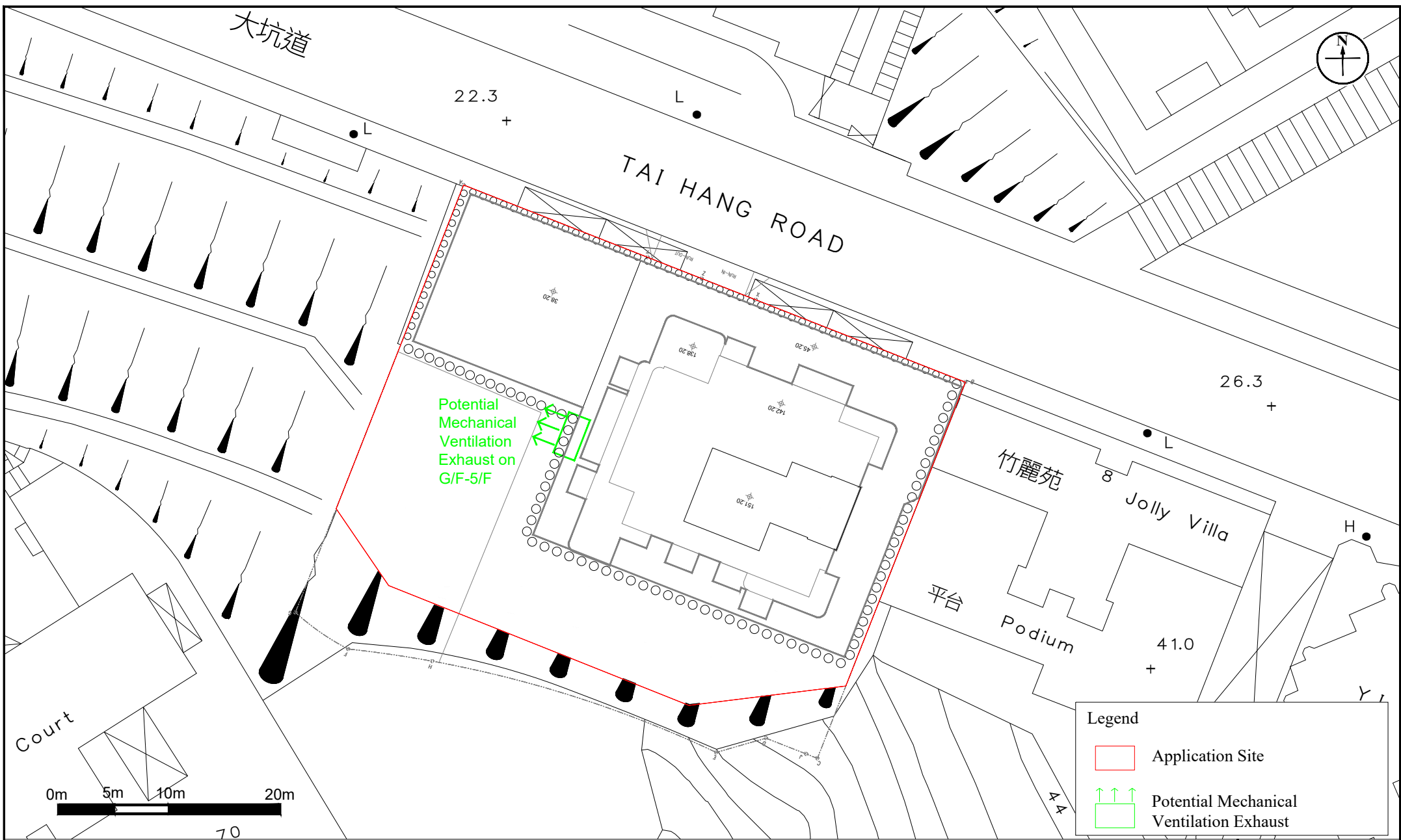


Figure: 3.3

Title: Locations of Potential Mechanical Ventilation Exhaust

Project: Section 16 Planning Application for Proposed Amendments to an Approved Scheme (under Application No. A/H6/91 with Minor Relaxation of Plot Ratio Restriction Approved) for Permitted Flat Use at 4, 4A, 4B and 4C Tai Hang Road, Hong Kong

RAMBOLL

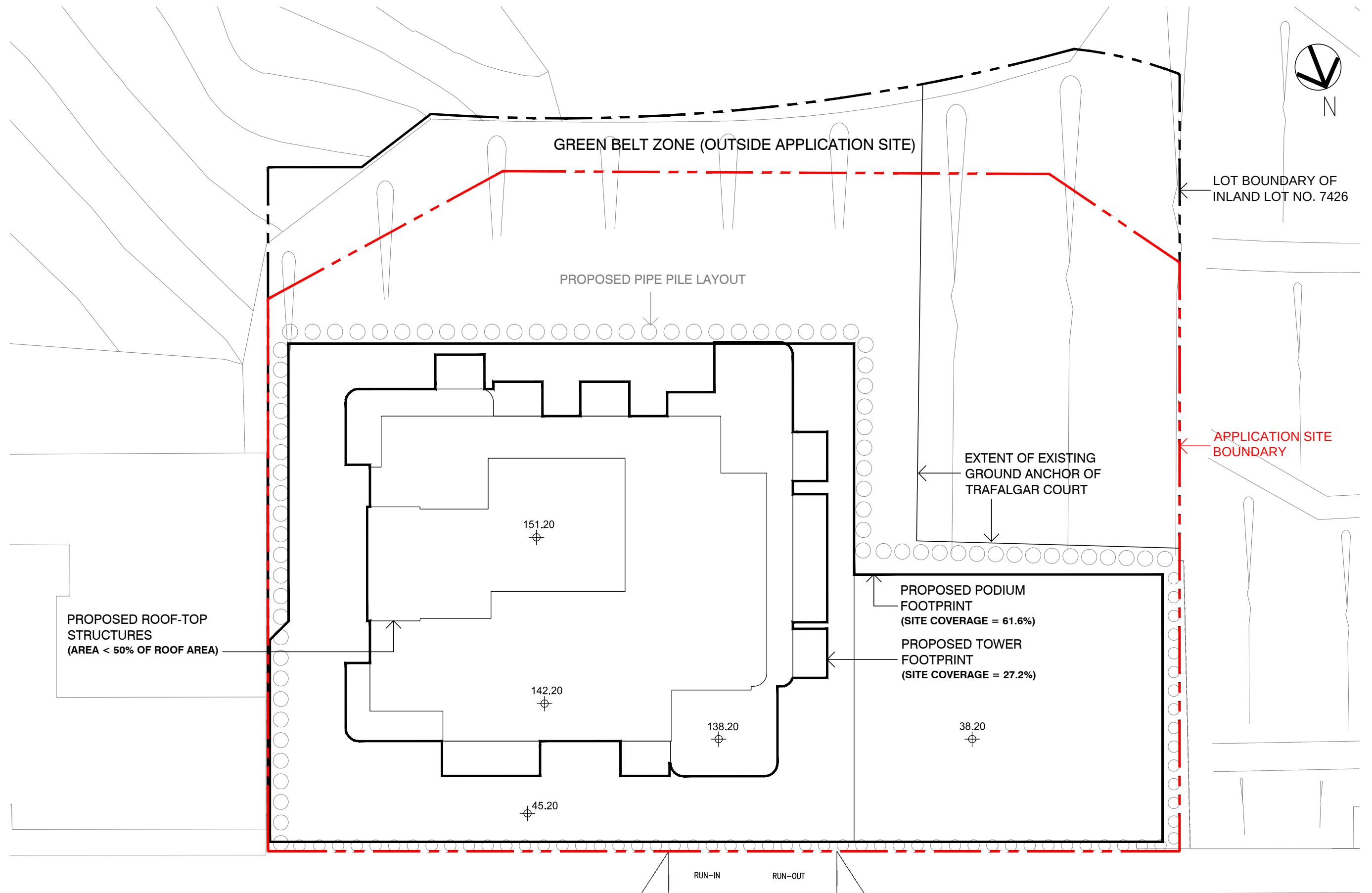
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Rev.: 4.0

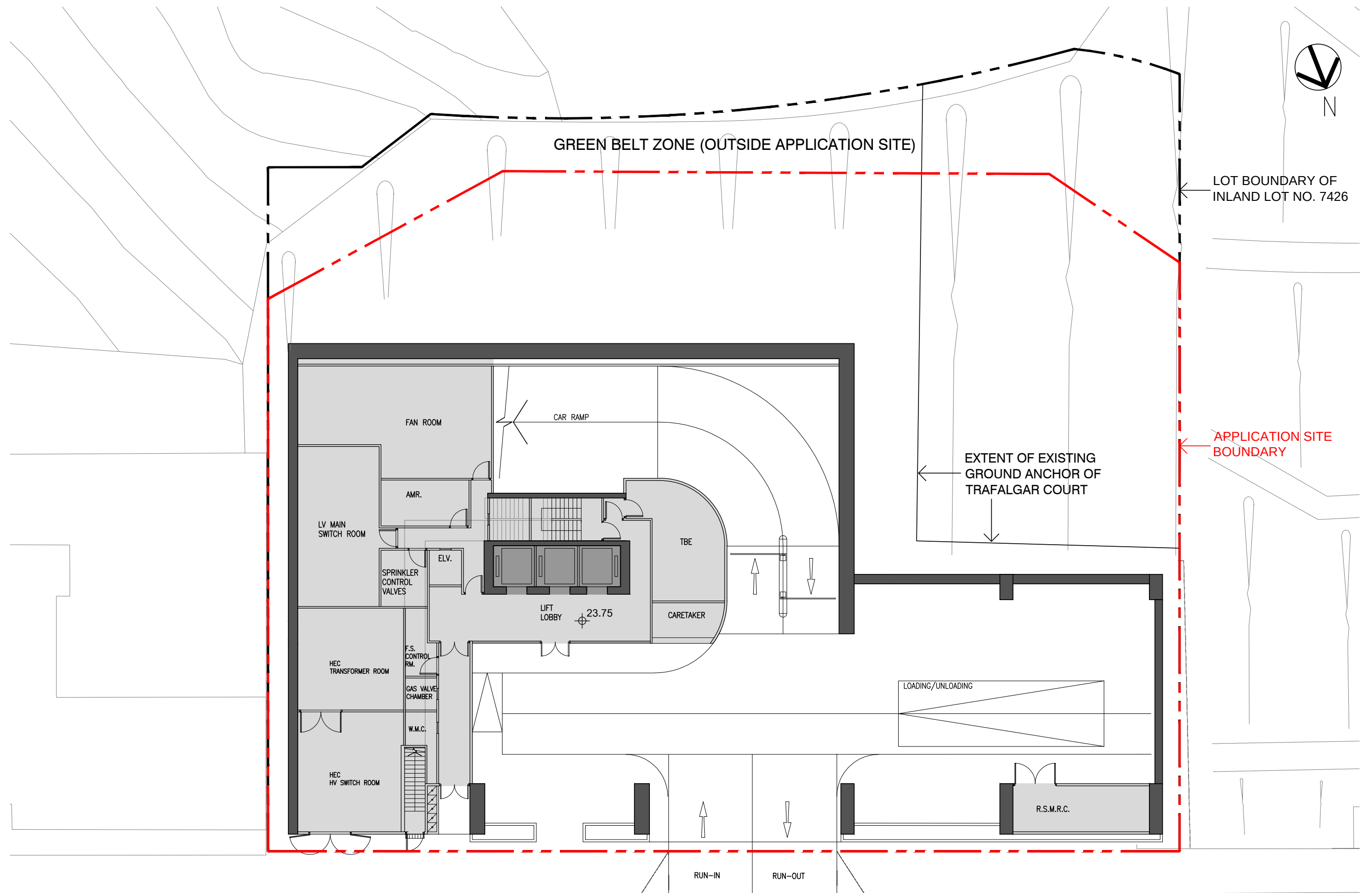
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Appendix 1-1 Layout and Floor Plans of the Proposed Development



COMBINED PLAN

(LOWER) TAI HANG ROAD

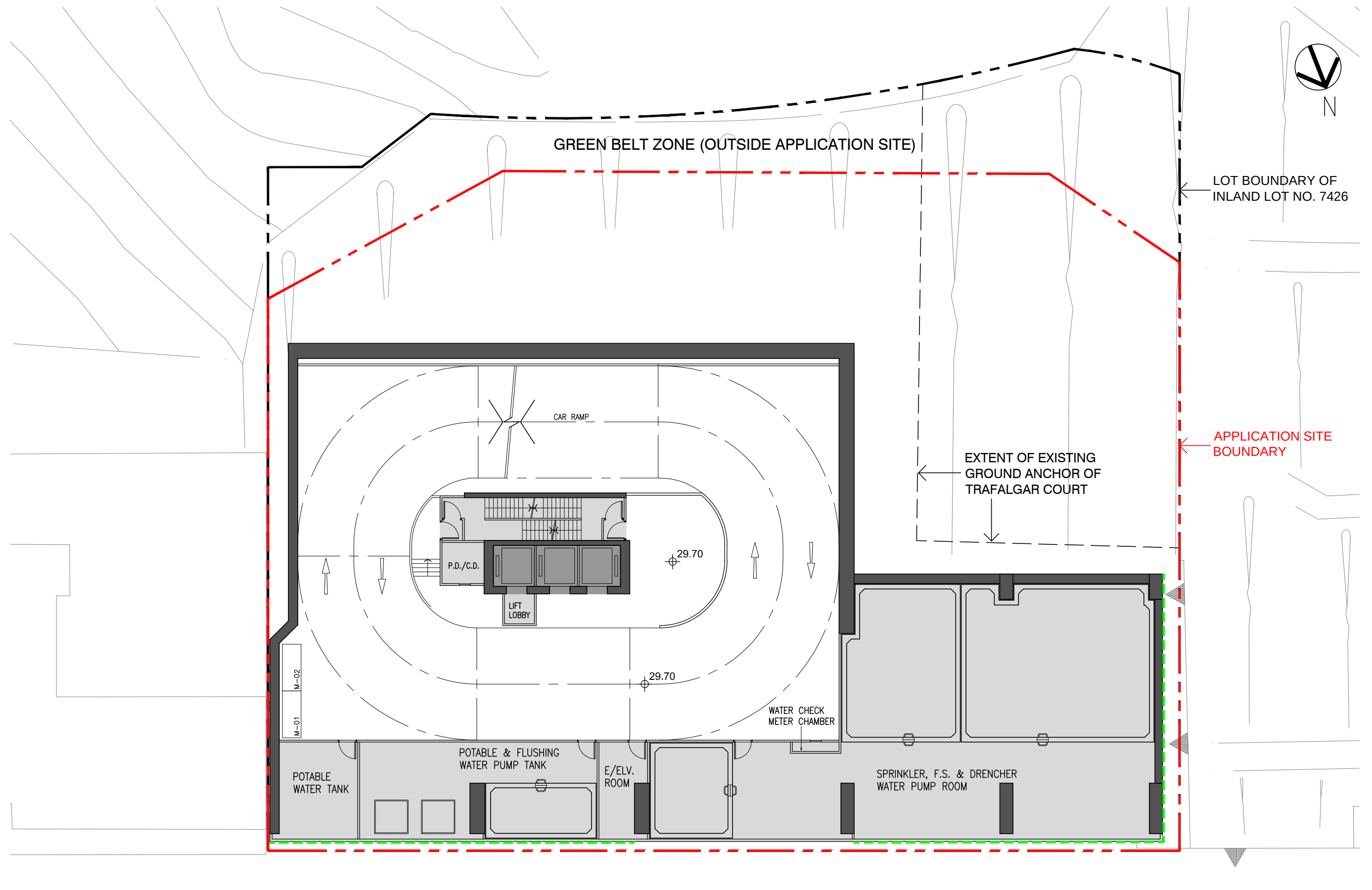


GROUND FLOOR PLAN

(LOWER) TAI HANG ROAD

LEGEND

- PROPOSED LIFT CORE
- PROPOSED ANCILLARY FACILITIES



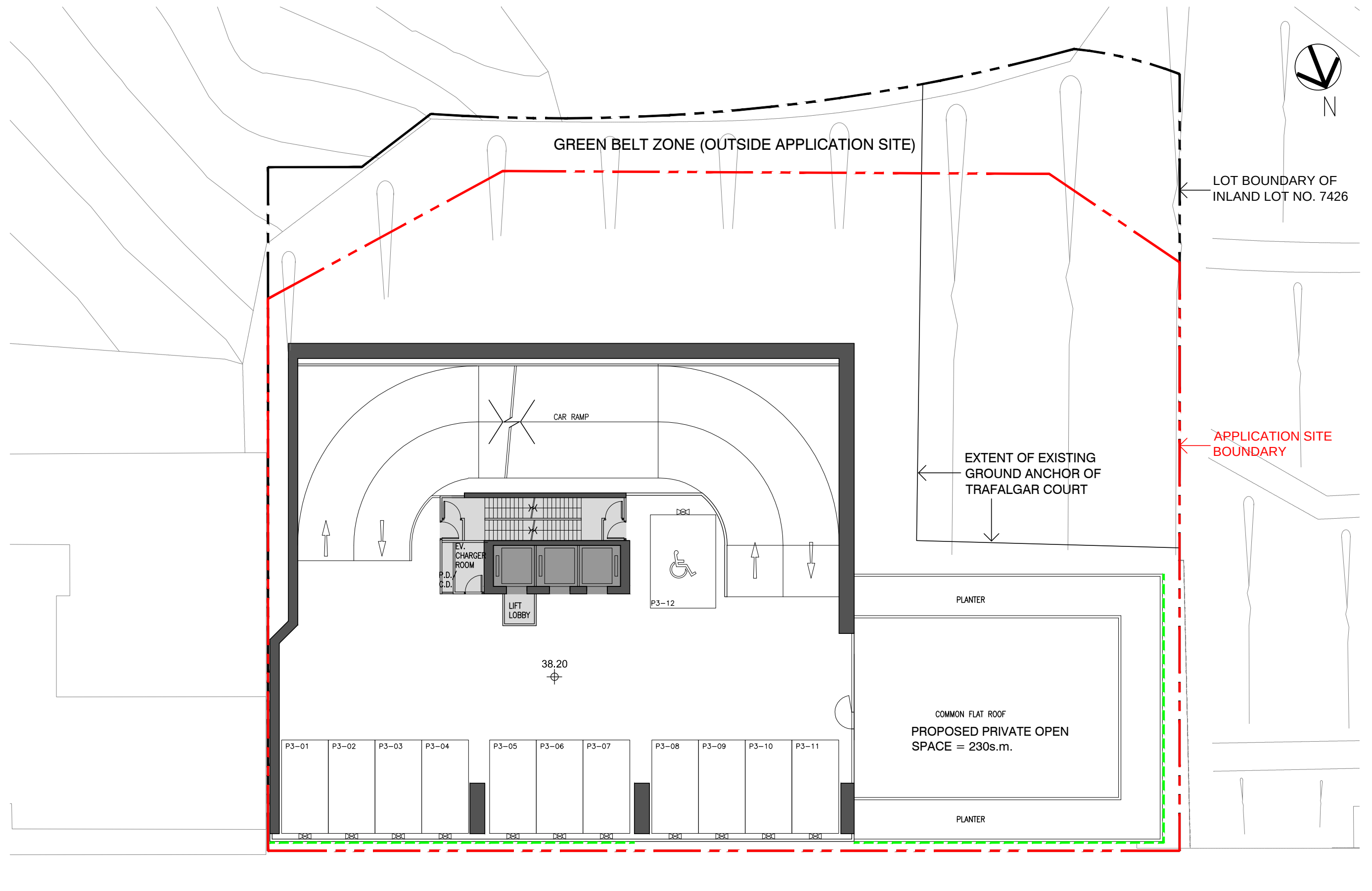
1ST FLOOR PLAN

PARKING SPACE PROVISION:
M-01 TO M-02 = 2 NOS.

(LOWER) TAI HANG ROAD

LEGEND

- PROPOSED LIFT CORE
- PROPOSED ANCILLARY FACILITIES
- PROPOSED VERTICAL GREEN WALL SYSTEM

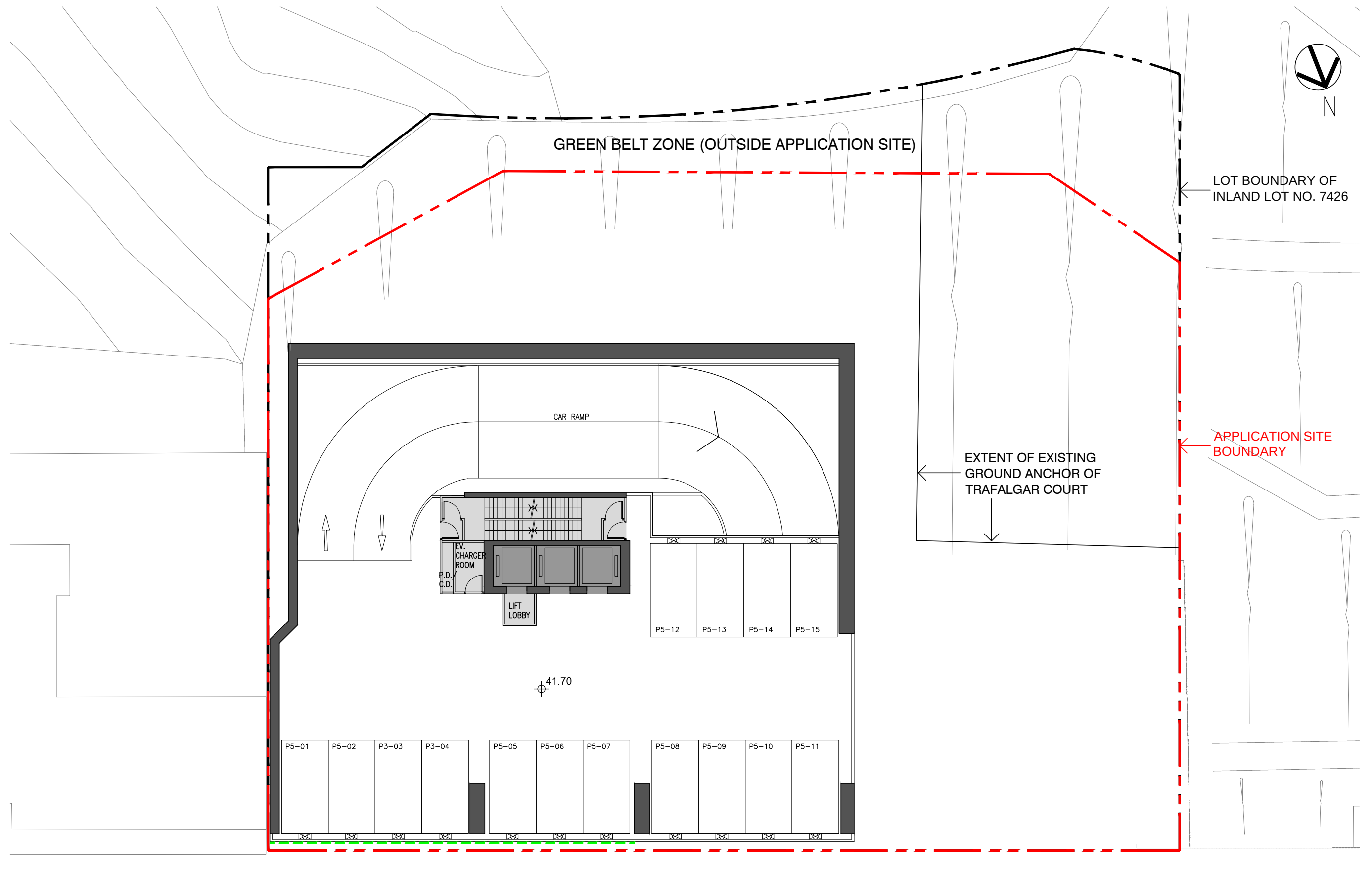


3RD FLOOR PLAN
 PARKING SPACE PROVISION:
 P3-01 TO P3-12 = 12 NOS.

(LOWER) TAI HANG ROAD

LEGEND

- PROPOSED LIFT CORE
- PROPOSED ANCILLARY FACILITIES
- PROPOSED VERTICAL GREEN WALL SYSTEM

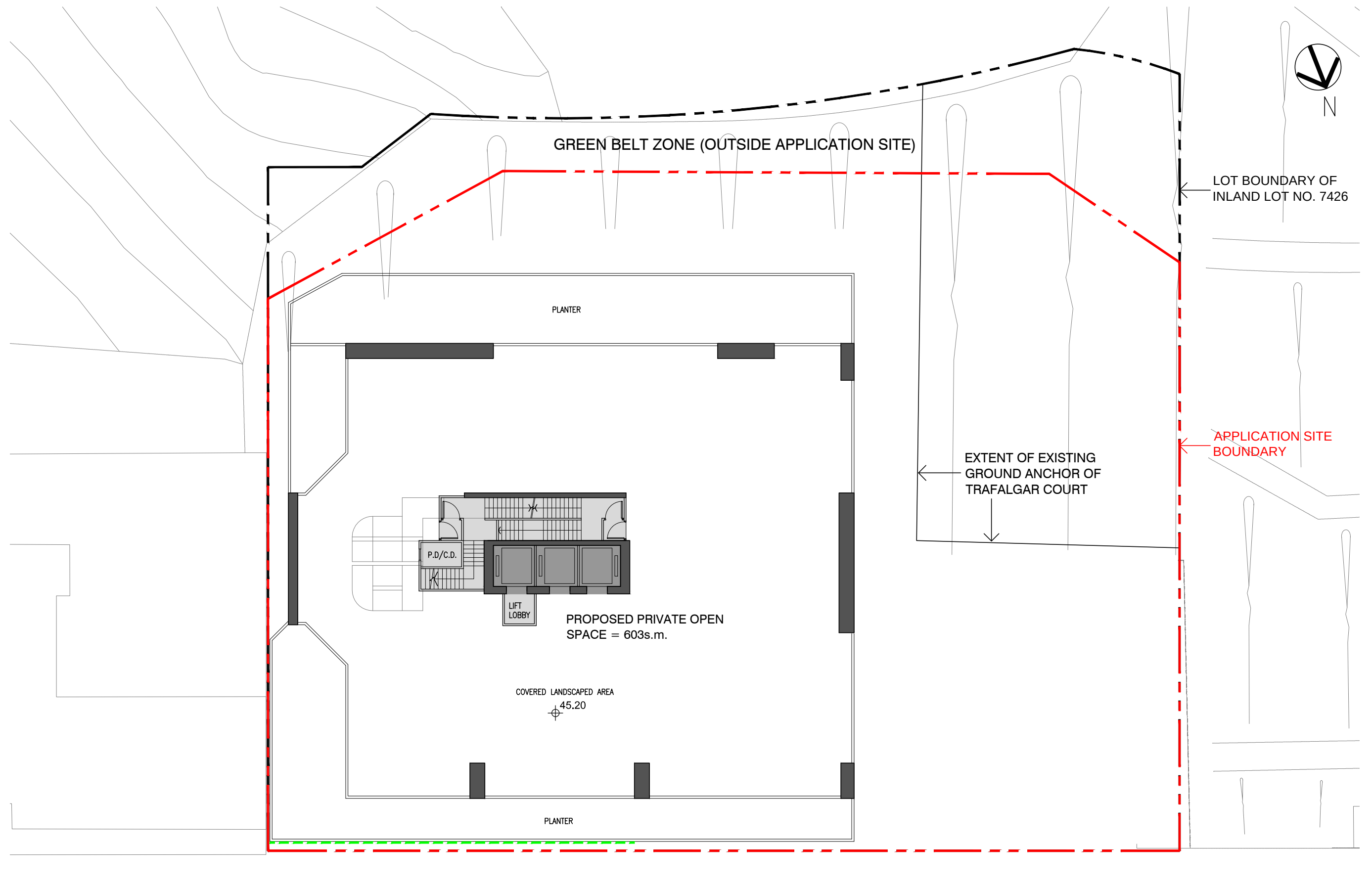


5TH FLOOR PLAN
 PARKING SPACE PROVISION:
 P5-01 TO P5-15 = 15 NOS.

(LOWER) TAI HANG ROAD

LEGEND

- PROPOSED LIFT CORE
- PROPOSED ANCILLARY FACILITIES
- PROPOSED VERTICAL GREEN WALL SYSTEM

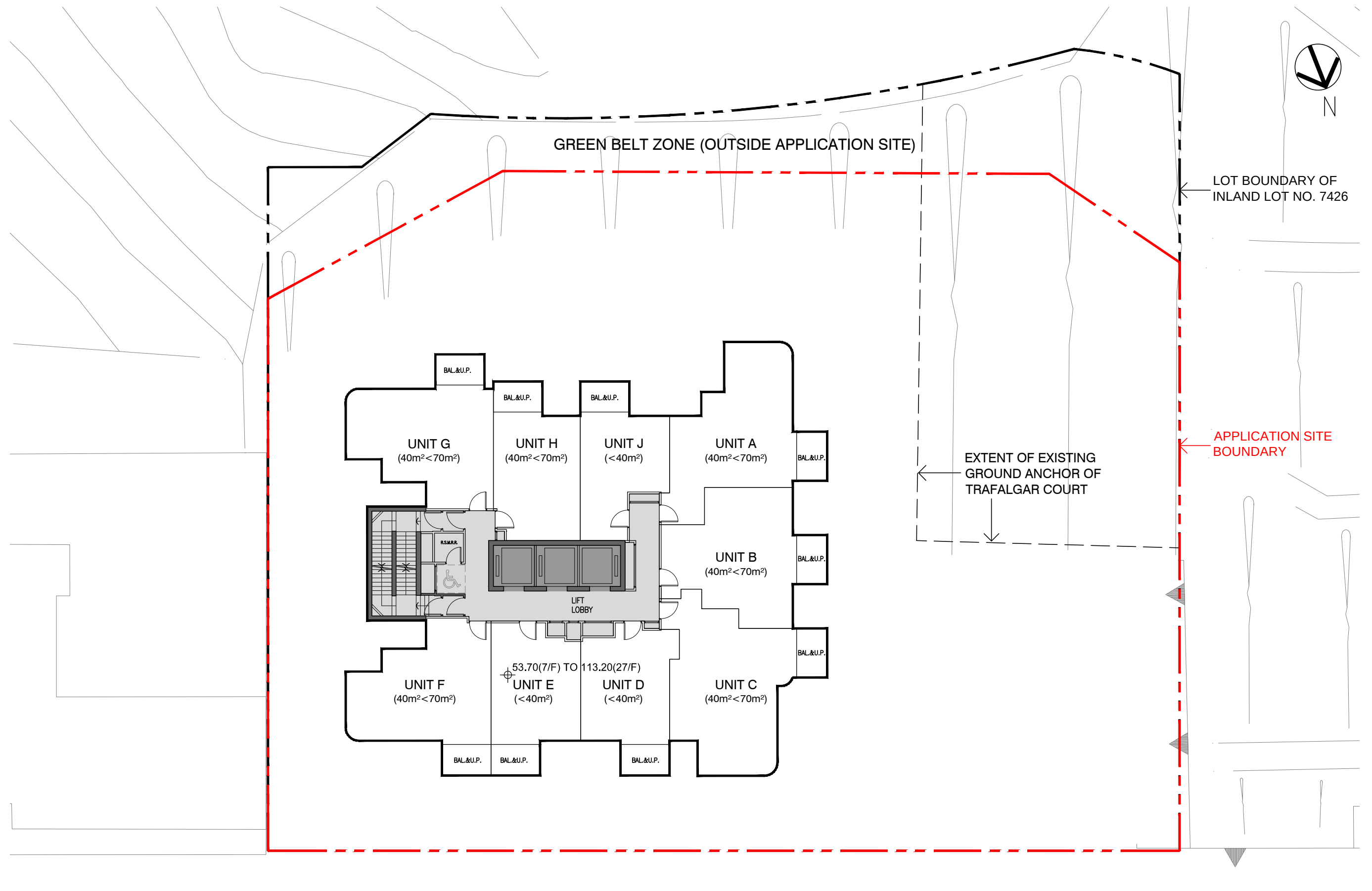


6TH FLOOR PLAN

(LOWER) TAI HANG ROAD

LEGEND

- PROPOSED LIFT CORE
- PROPOSED ANCILLARY FACILITIES
- PROPOSED VERTICAL GREEN WALL SYSTEM

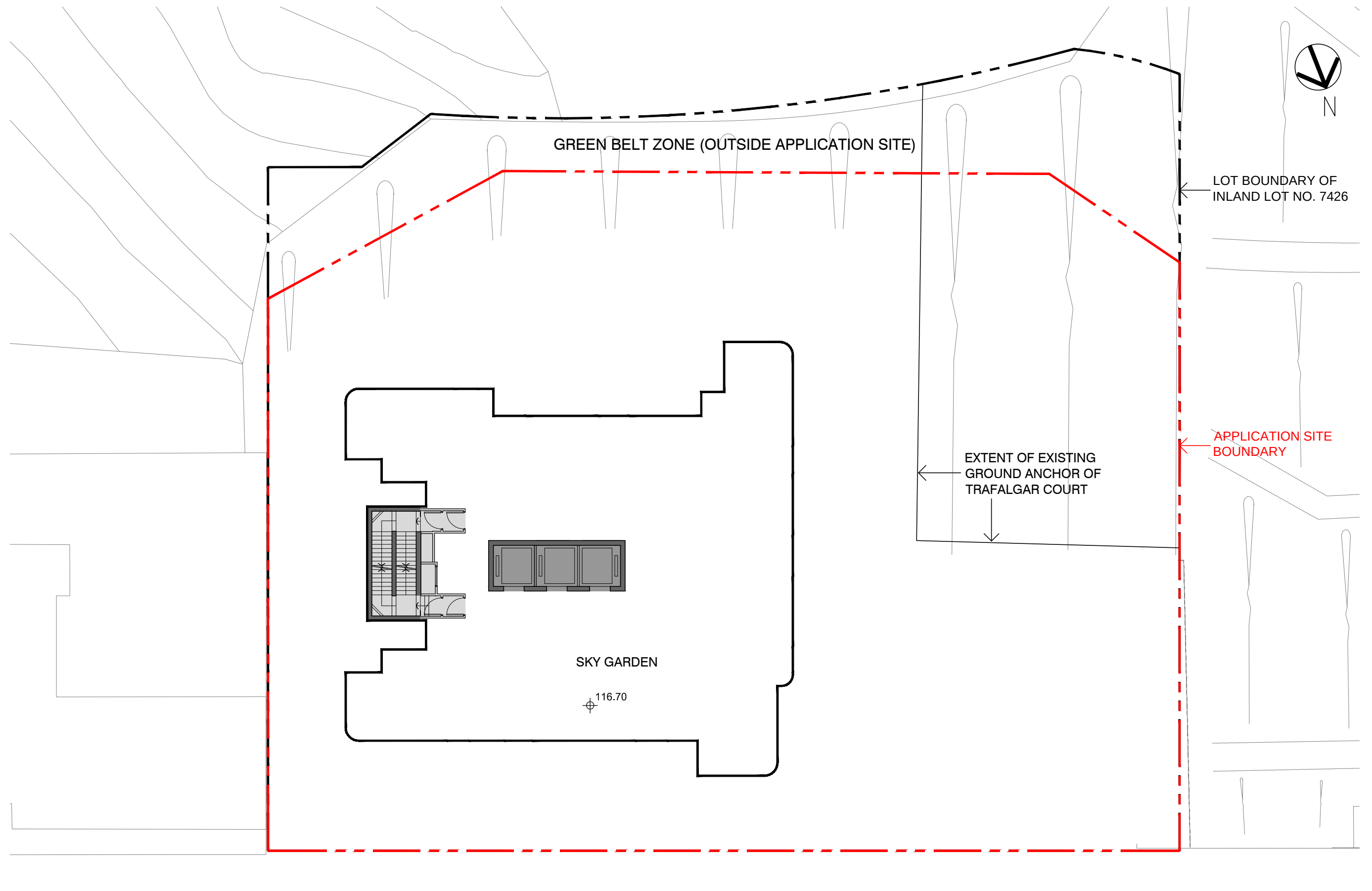


7TH TO 27TH FLOOR PLAN
(DESIGNATION OF 13TH, 14TH AND 24TH FLOOR ARE OMITTED)

(LOWER) TAI HANG ROAD

LEGEND

- PROPOSED LIFT CORE
- PROPOSED ANCILLARY FACILITIES

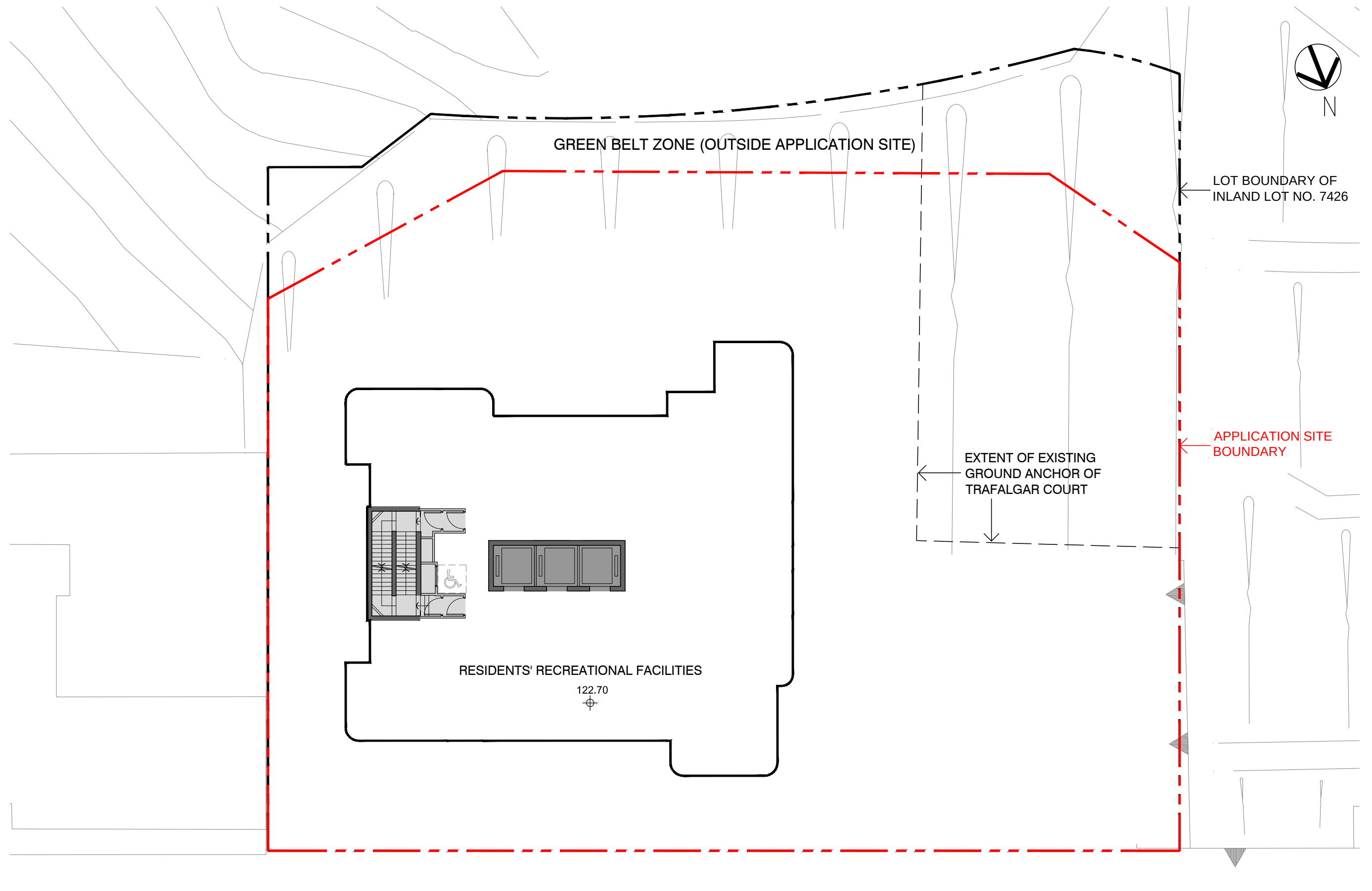


28TH FLOOR PLAN

(LOWER) TAI HANG ROAD

LEGEND

- PROPOSED LIFT CORE
- PROPOSED ANCILLARY FACILITIES

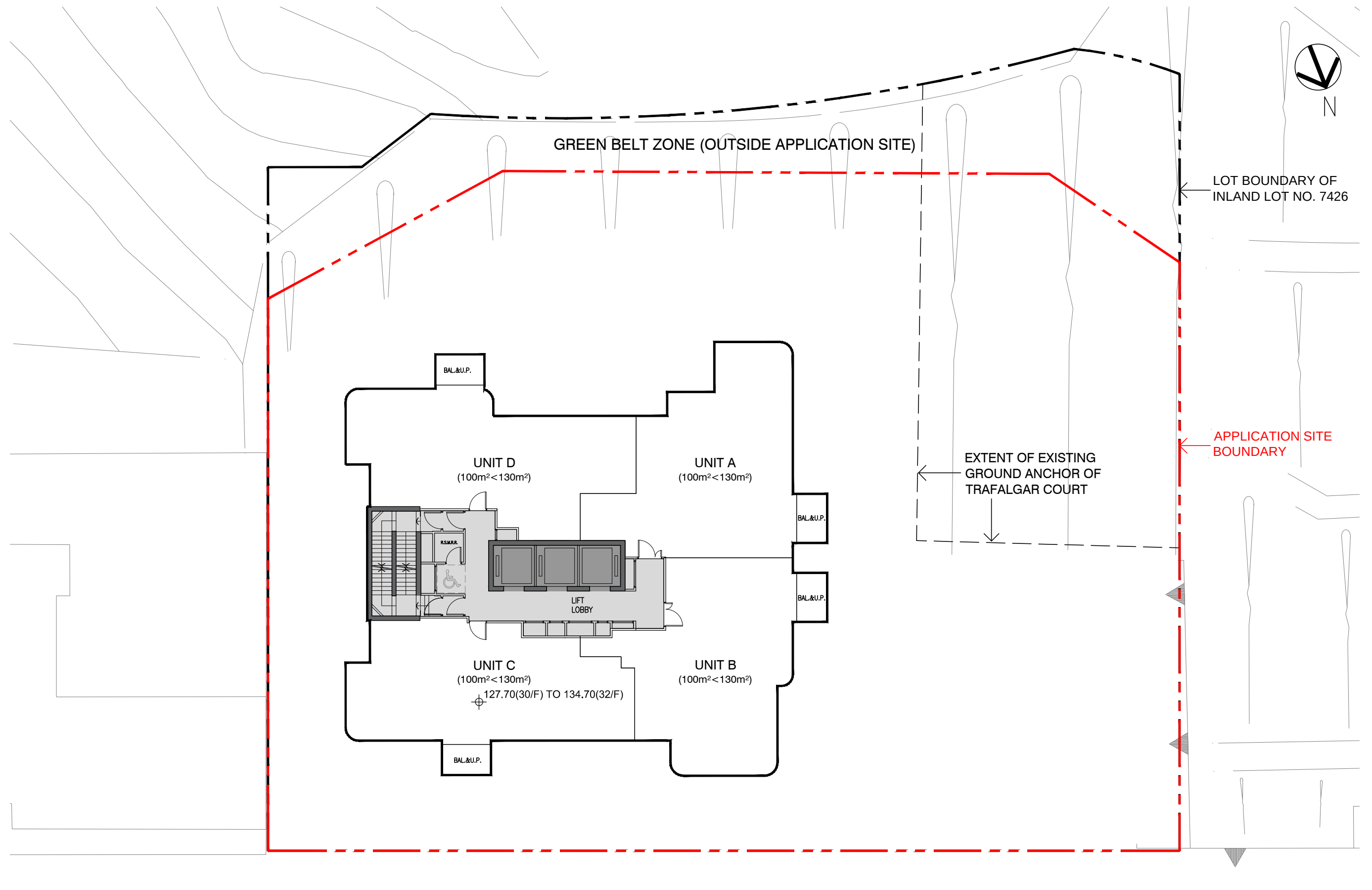


29TH FLOOR PLAN

(LOWER) TAI HANG ROAD

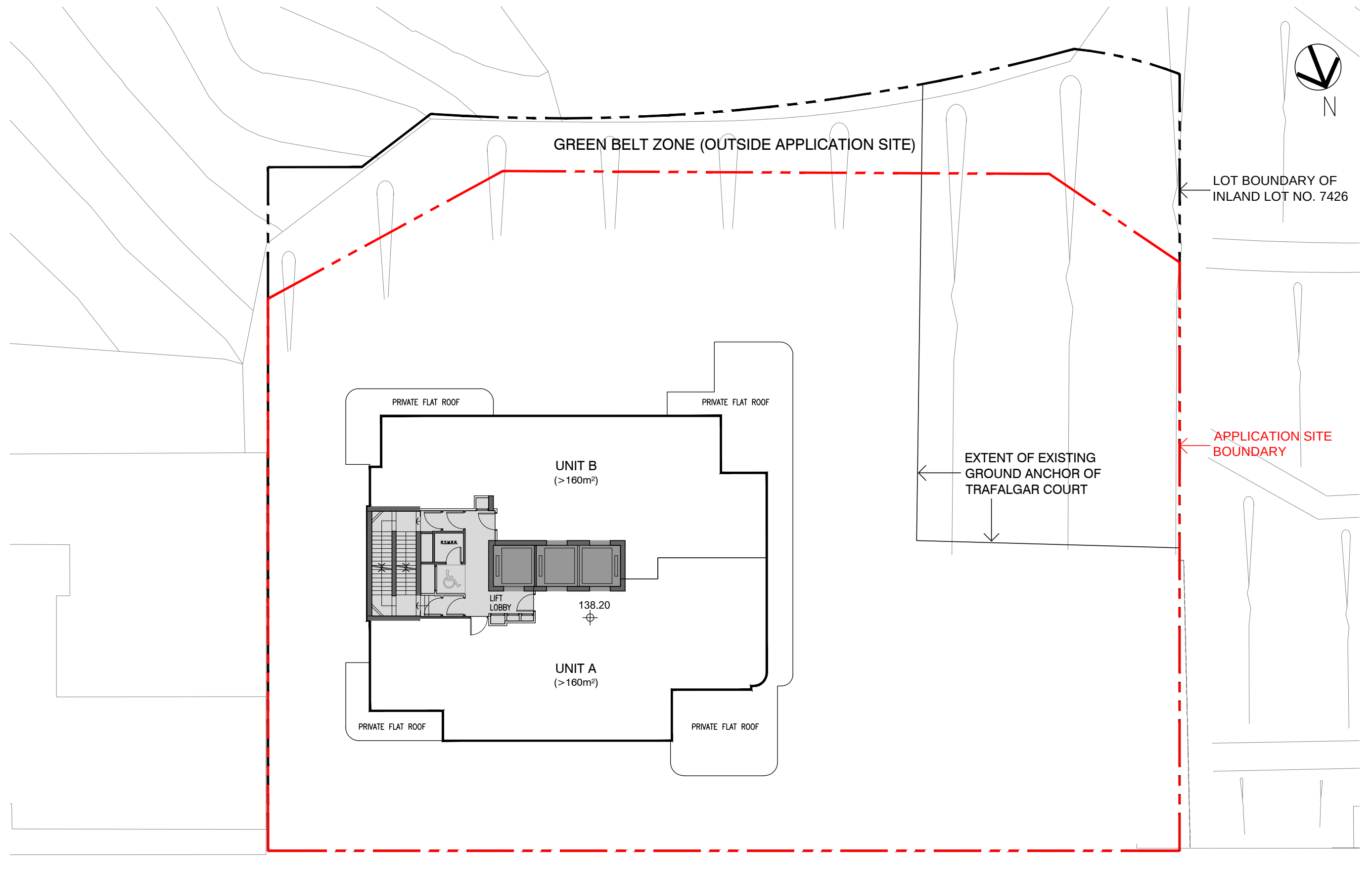
LEGEND

- PROPOSED LIFT CORE
- PROPOSED ANCILLARY FACILITIES



LEGEND

- PROPOSED LIFT CORE
- PROPOSED ANCILLARY FACILITIES

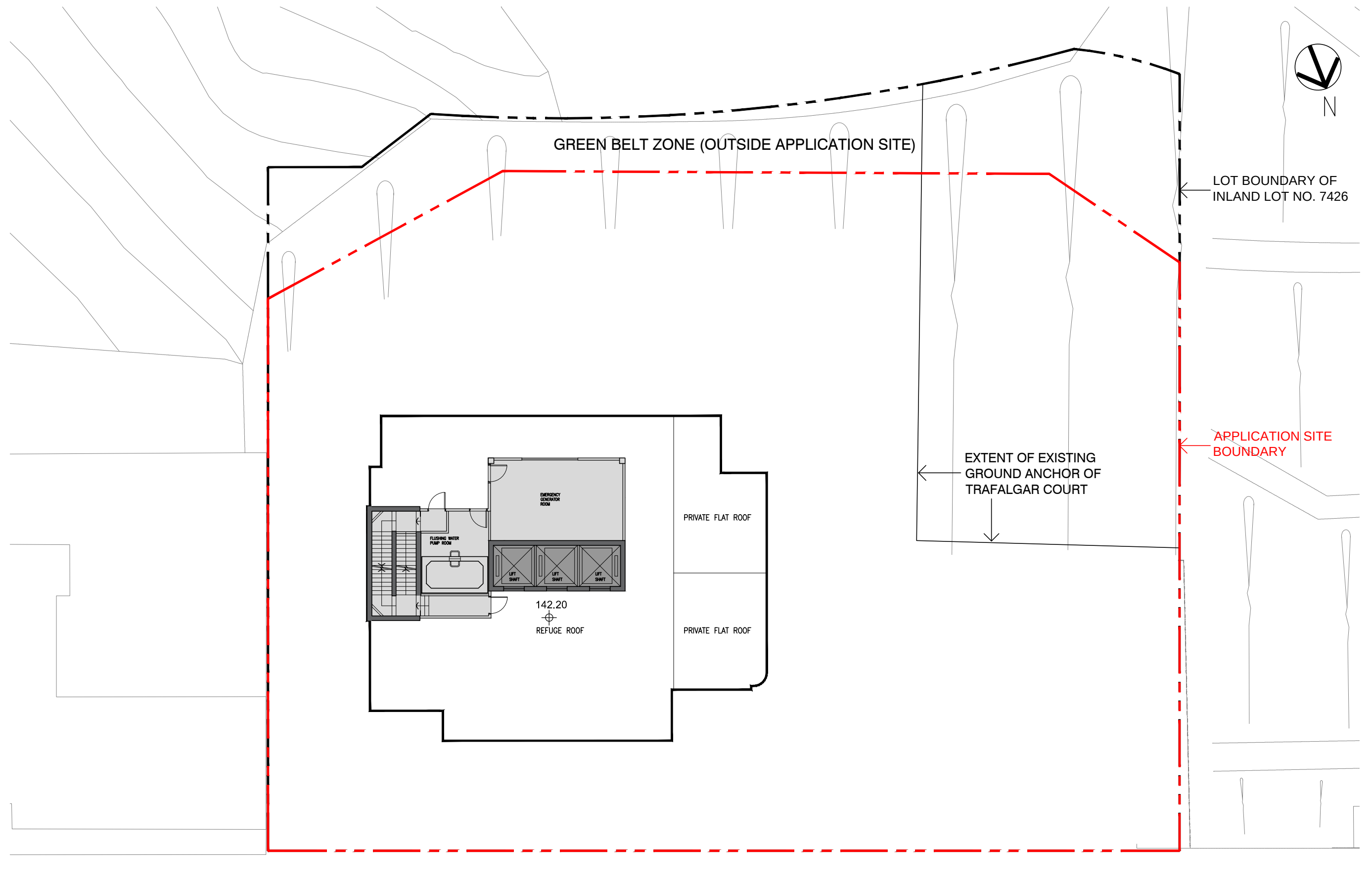


33RD FLOOR PLAN

(LOWER) TAI HANG ROAD

LEGEND

- PROPOSED LIFT CORE
- PROPOSED ANCILLARY FACILITIES

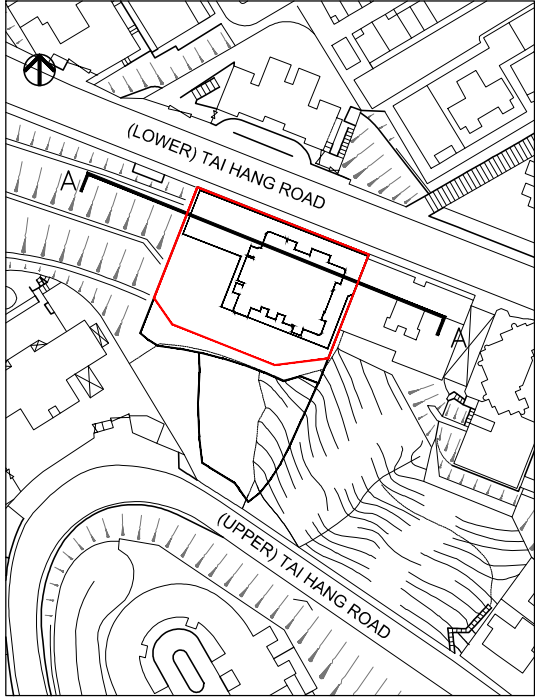


ROOF PLAN

(LOWER) TAI HANG ROAD

LEGEND

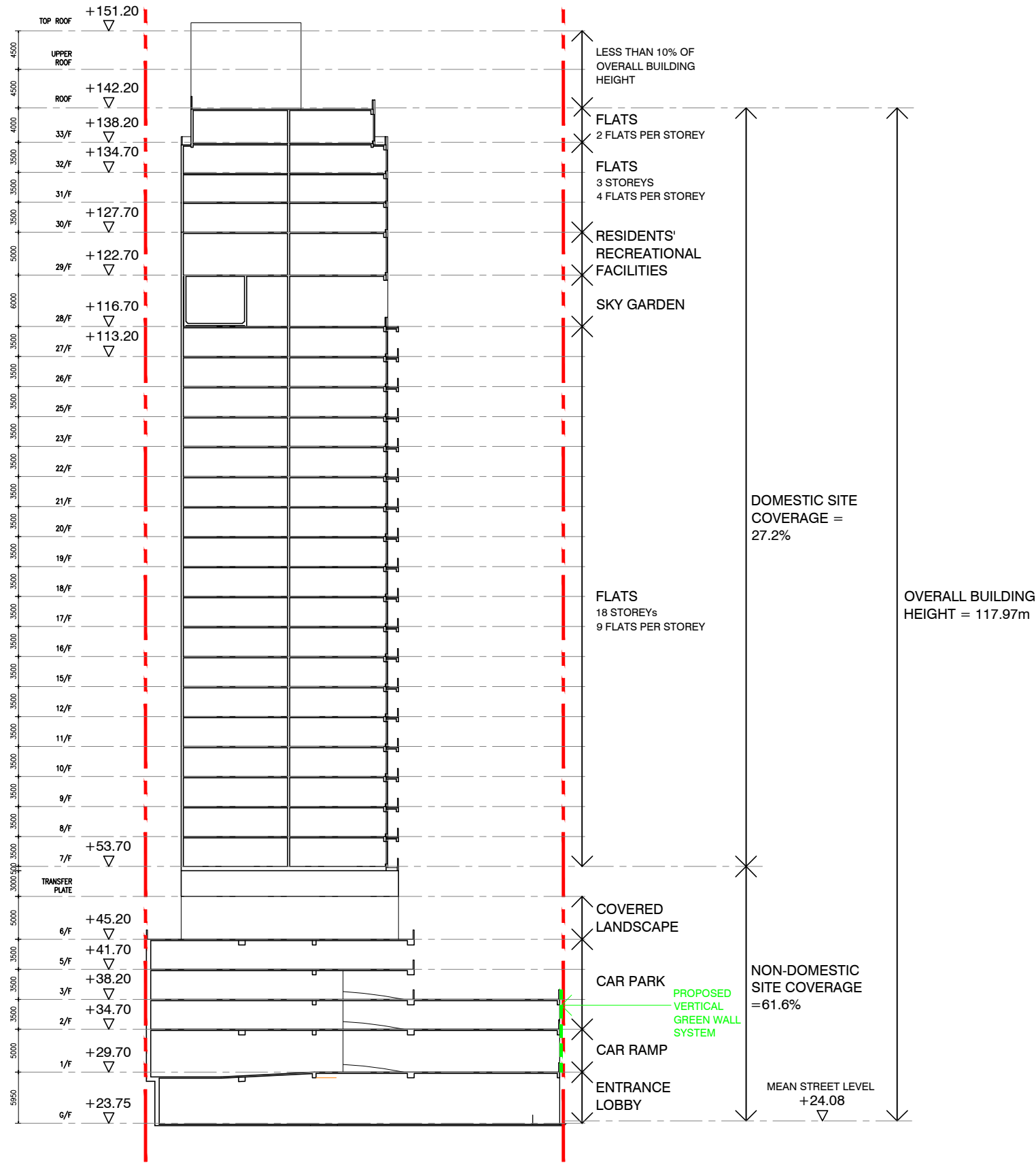
- PROPOSED LIFT CORE
- PROPOSED ANCILLARY FACILITIES



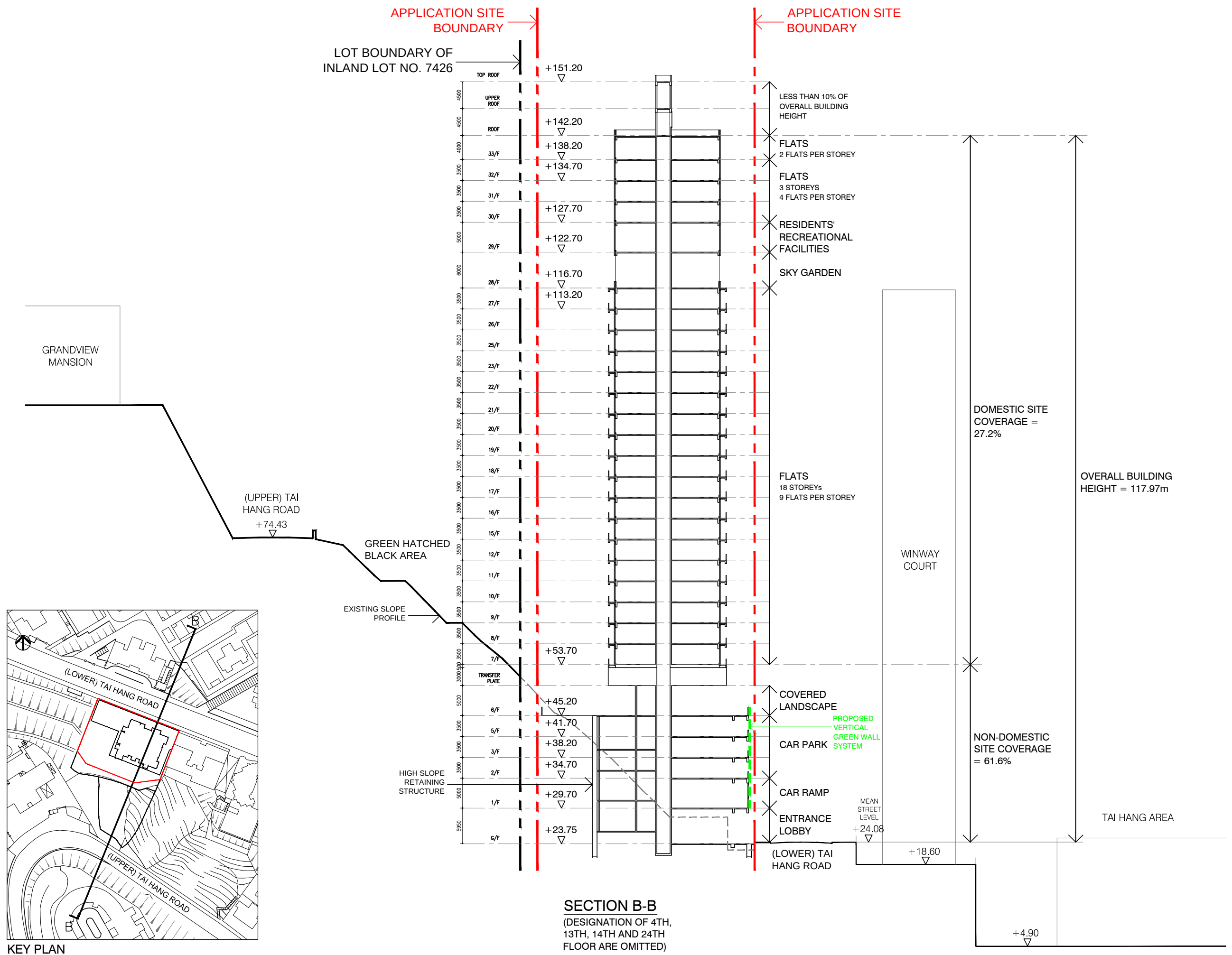
KEY PLAN

APPLICATION SITE
BOUNDARY

APPLICATION SITE
BOUNDARY



SECTION A-A
(DESIGNATION OF 4TH,
13TH, 14TH AND 24TH
FLOOR ARE OMITTED)



**Appendix 1-2 Comparison of Year 2040 Traffic Forecast and Year 2045 Traffic
Forecast**

Comparison of Year 2040 Traffic Forecast and Year 2045 Traffic Forecast

Link No.	Road Name	Direction	Traffic Forecast		
			Year 2040	Year 2045	Difference
			PM Peak	PM Peak	PM Peak
			Traffic Flow (veh/hr)	Traffic Flow (veh/hr)	Traffic Flow (veh/hr)
42a	Tai Hang Rd	NB	850	890	40
42b	Tai Hang Rd	SB	1193	850	-343
47a	Tai Hang Rd	NB	620	890	270
47b	Tai Hang Rd	SB	1330	670	-660
		Total	3993	3300	-693

Appendix 2-1 Traffic Forecast for Year 2045

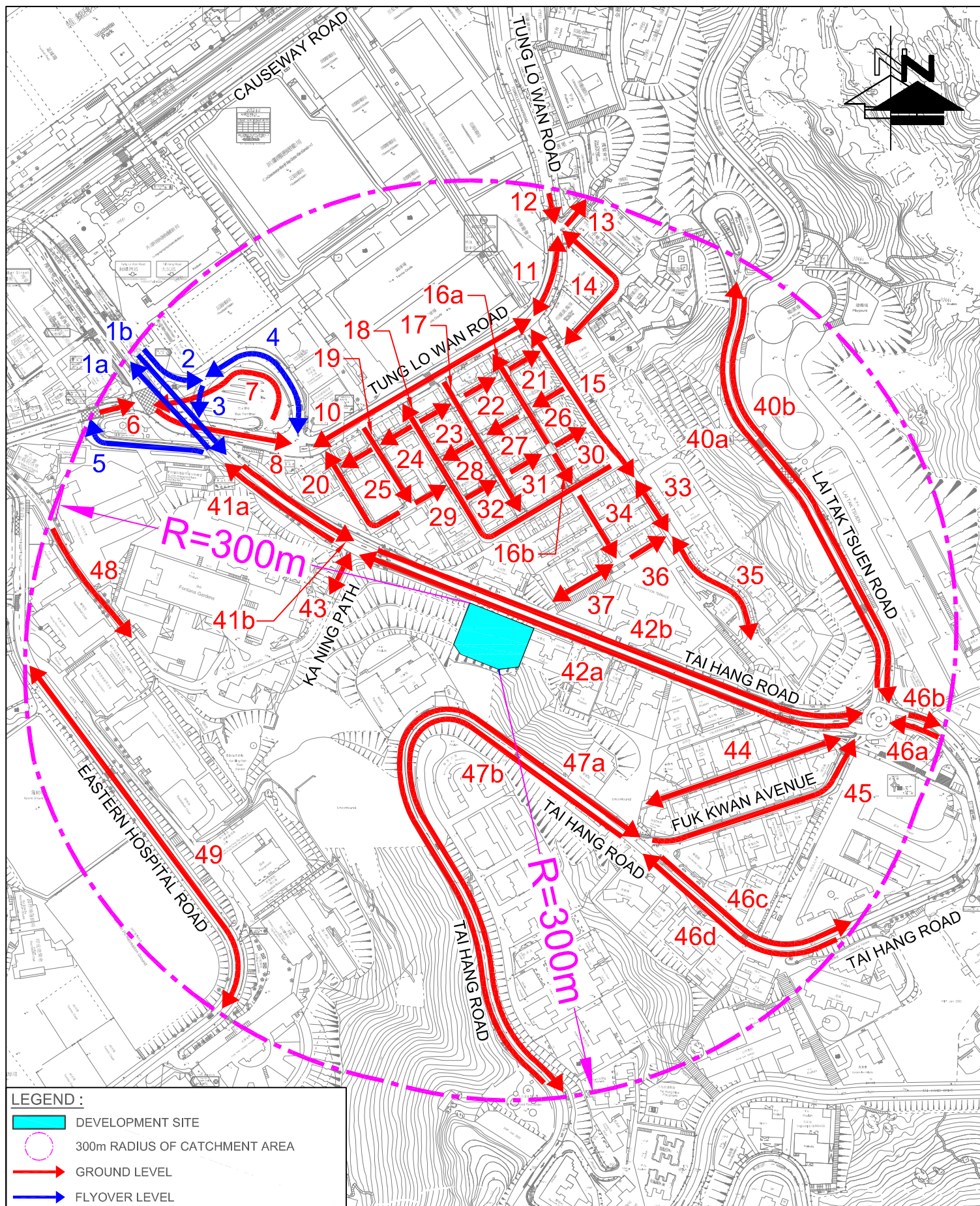


FIGURE NO.: 1		PROJECT TITLE: Residential Redevelopment at Nos 4-4C Tai Hang Road, Hong Kong	
PROJECT NO.: 26021HK		DRAWING TITLE: INDEX PLAN	
SCALE: 1 : 3500 @A4	DATE: 14 APR 2026	 CTA Consultants Limited 志達顧問有限公司	

26021HK
Residential Redevelopment at Nos 4-4C Tai Hang Road, Hong Kong
TRAFFIC FORECAST FOR TRAFFIC NOISE IMPACT ASSESSMENT

Link No.	Road Name	Direction	Year 2045			
			AM Peak		PM Peak	
			Traffic Flow (veh/hr)	HV%	Traffic Flow (veh/hr)	HV%
1a	Moreton Terrace Flyover	NB	590	20%	420	20%
1b	Moreton Terrace Flyover	SB	550	20%	580	20%
2	Ramp from Moreton Terrace Flyover to Tung Lo Wan Dr	EB	270	27%	280	15%
3	Ramp from Tung Lo Wan Dr to Moreton Terrace Flyover	WB	300	35%	300	25%
4	Tung Lo Wan Dr	Two-way	570	31%	580	22%
5	Ramp from Moreton Terrace Flyover to Tung Lo Wan Rd	NB	290	25%	480	23%
6	Tung Lo Wan Rd	EB	830	41%	860	32%
7	Bus Station to Tung Lo Wan Rd	WB	80	100%	100	100%
8	Tung Lo Wan Rd	Two-way	770	30%	820	10%
10	Tung Lo Wan Rd	Two-way	510	32%	560	20%
11	Tung Lo Wan Rd	Two-way	410	24%	430	11%
12	Tung Lo Wan Rd	SB	240	24%	240	11%
13	Lai Yin Ln	WB	240	21%	240	12%
14	Lin Fa Kung St West	Two-way	120	8%	120	4%
15	Wn Sha St	Two-way	240	8%	260	4%
16a	Ormsby St	NB	120	8%	120	4%
16b	Ormsby St	SB	60	8%	60	4%
17	Brown St	SB	170	8%	170	4%
18	Sun Chun St /Warren St	NB	170	8%	170	4%
19	Jones St	SB	120	8%	120	4%
20	Lai Yin St	NB	60	8%	60	4%
21	School St	EB	60	8%	60	4%
22	School St	EB	60	8%	60	4%
23	School St	EB	60	8%	60	4%
24	School St	WB	60	8%	60	4%
25	School St	WB	60	8%	60	4%
26	King St	WB	60	8%	60	4%
27	King St	WB	60	8%	60	4%
28	King St	WB	60	8%	60	4%
29	Second Lane	EB	60	8%	60	4%
30	Shepherd St	EB	60	8%	60	4%
31	Shepherd St	EB	60	8%	60	4%
32	Shepherd St	EB	60	8%	60	4%
33	Wun Sha St	Two-way	230	8%	190	4%
34	Ormsby St	SB	60	8%	60	4%
35	Wun Sha St	Two-way	160	8%	140	4%
36	Sun Chun St	EB	60	8%	60	4%
37	Sun Chun St	Two-way	60	8%	60	4%
40a	Lai Tak Tsuen Rd	NB	460	24%	540	17%
40b	Lai Tak Tsuen Rd	SB	310	28%	330	15%
41a	Tai Hang Rd	NB	870	17%	900	18%
41b	Tai Hang Rd	SB	850	27%	880	15%
42a	Tai Hang Rd	NB	850	16%	890	16%
42b	Tai Hang Rd	SB	850	26%	850	12%
43	Ka Ning Path	Two-way	30	0%	30	0%
44	Li Kwan Ave	Two-way	40	0%	40	0%
45	Fuk Kwan Ave	NB	280	0%	310	1%
46a	Tai Hang Rd	NB	520	14%	580	12%
46b	Tai Hang Rd	SB	700	23%	670	6%
46c	Tai Hang Rd	SB	700	23%	670	6%
46d	Tai Hang Rd	NB	520	14%	580	12%
47a	Tai Hang Rd	NB	800	11%	890	9%
47b	Tai Hang Rd	SB	700	20%	670	6%
48	Ka Ning Path	SB	30	0%	40	0%
49	Eastern Hospital Rd	Two-way	290	15%	230	14%

Appendix 2-2 Result of Road Traffic Noise Impact Assessment (Base and Mitigated Scenarios)

Predicted Road Traffic Noise (L10, dB(A)) at Selected Sensitive Receivers
Base Case - AM Peak Flow (Worst Case)

Low Zone (7/F-27/F)																											
Floor	mPD	L-01	L-02	L-03	L-04	L-05	L-06	L-07	L-08	L-09	L-10	L-11	L-12	L-13	L-14	L-15	L-16	L-17	L-18	L-19	L-20	L-21	L-22	L-23	L-24	L-25	L-26
7/F	53.7	47	71	71	71	71	71	71	71	74	72	70	70	69	69	69	69	70	71	69	70	70	70	70	70	70	70
8/F	57.2	46	73	73	73	73	73	73	73	75	73	71	71	70	69	70	70	70	71	70	70	70	70	70	70	70	70
9/F	60.7	46	73	73	74	74	74	74	73	75	73	71	71	70	70	70	70	70	71	70	70	70	70	70	70	70	70
10/F	64.2	46	73	74	74	74	74	74	74	75	73	72	71	71	70	70	70	70	71	70	70	70	70	70	70	70	70
11/F	67.7	46	73	73	74	74	74	74	73	74	73	72	71	71	70	70	70	70	71	70	70	70	70	70	70	70	70
12/F	71.2	46	73	73	73	73	74	74	73	74	73	72	71	71	71	70	70	70	71	70	70	70	70	70	70	70	70
15/F	74.7	45	73	73	73	73	73	73	73	74	73	72	71	71	71	70	70	70	71	70	70	70	70	70	70	70	70
16/F	78.2	45	73	73	73	73	73	73	73	74	73	72	71	71	71	70	70	70	72	70	70	70	70	70	70	70	70
17/F	81.7	45	73	73	73	73	73	73	73	73	72	71	71	71	71	70	70	70	72	70	70	70	70	70	70	70	70
18/F	85.2	45	72	72	73	73	73	73	73	73	72	71	71	71	71	70	70	70	72	70	70	70	70	70	70	70	70
19/F	88.7	45	72	72	72	73	73	73	72	73	72	71	71	71	71	70	70	70	71	70	70	70	70	70	70	70	70
20/F	92.2	45	72	72	72	72	72	72	72	73	72	71	71	71	71	70	70	70	71	70	70	70	70	70	70	70	70
21/F	95.7	45	72	72	72	72	72	72	72	73	72	71	71	71	70	70	70	70	71	69	69	70	70	70	70	70	70
22/F	99.2	45	72	72	72	72	72	72	72	72	72	71	71	71	70	70	70	70	71	69	69	69	69	69	70	70	70
23/F	102.7	45	71	72	72	72	72	72	72	72	71	70	70	70	70	70	70	70	71	69	69	69	69	69	70	69	70
25/F	106.2	45	71	71	71	72	72	72	72	71	72	71	70	70	70	70	70	70	71	69	69	69	69	69	69	69	69
26/F	109.7	47	71	71	71	72	72	72	71	72	71	70	70	70	70	70	70	70	71	69	69	69	69	69	69	69	69
27/F	113.2	51	71	71	71	71	71	71	71	72	71	70	70	70	70	70	70	70	71	69	69	69	69	69	69	69	69
Max Noise Level	51	73	74	74	74	74	74	74	74	75	73	72	71	71	71	70	70	70	72	70	70	70	70	70	70	70	70
Exceedance		18				18			18			18			9			18			0		0		0		

High Zone (30/F-32/F)																					
Floor	mPD	H-01	H-02	H-03	H-04	H-05	H-06	H-07	H-08	H-09	H-10	H-11	H-12	H-13	H-14	H-15	H-16	H-17	H-18	H-19	H-20
30/F	127.7	71	71	71	71	71	71	70	69	69	69	69	69	69	69	70	68	68	68	69	69
31/F	131.2	71	71	71	71	71	70	71	70	69	69	69	69	69	69	70	68	68	68	68	68
32/F	134.7	70	71	71	71	71	70	71	70	69	69	69	69	69	69	70	68	68	68	68	68
Max Noise Level		71	71	71	71	71	71	71	70	69	69	69	69	69	69	70	68	68	68	69	69
Exceedance		3					3					0					0				

Penthouse (33/F)														
Floor	mPD	S-01	S-02	S-03	S-04	S-05	S-06	S-07	S-08	S-09	S-10	S-11	S-12	S-13
33/F	138.2	62	71	71	56	62	62	63	57	67	68	67	67	61
Max Noise Level	62	71	71	56	62	62	63	57	67	67	68	67	67	61
Exceedance		1						0						

Total no. of Flats:	176
Total no. of Exceedance:	106
Compliance Level:	40%
Max. Noise Level:	75

Notes:
71 Noise level exceed stardand of 70 dB(A)

Predicted Road Traffic Noise (L10, dB(A)) at Selected Sensitive Receivers
Base Case - PM Peak Flow

Low Zone (7/F-27/F)																											
Floor	mPD	L-01	L-02	L-03	L-04	L-05	L-06	L-07	L-08	L-09	L-10	L-11	L-12	L-13	L-14	L-15	L-16	L-17	L-18	L-19	L-20	L-21	L-22	L-23	L-24	L-25	L-26
7/F	53.7	45	69	69	69	70	70	69	69	73	70	69	68	68	68	68	68	68	69	68	68	68	68	68	68	68	68
8/F	57.2	45	71	71	71	72	72	72	71	73	71	69	69	68	68	68	68	68	70	68	68	68	68	68	68	68	68
9/F	60.7	45	72	72	72	72	72	72	72	73	72	70	69	69	68	68	68	69	70	68	68	68	68	68	68	68	68
10/F	64.2	45	72	72	72	72	72	72	72	73	72	70	70	69	69	69	69	69	70	68	68	68	68	68	68	68	69
11/F	67.7	44	72	72	72	72	72	72	72	73	72	70	70	69	69	69	69	69	70	68	68	68	68	68	68	68	69
12/F	71.2	44	72	72	72	72	72	72	72	73	72	70	70	69	69	69	69	69	70	68	68	68	68	68	69	68	69
15/F	74.7	44	72	72	72	72	72	72	72	73	71	70	70	69	69	69	69	69	70	68	68	68	68	68	69	68	69
16/F	78.2	44	71	72	72	72	72	72	72	72	71	70	70	69	69	69	69	69	70	68	68	68	68	68	68	68	69
17/F	81.7	44	71	71	72	72	72	72	71	72	71	70	70	69	69	69	69	69	70	68	68	68	68	68	68	68	69
18/F	85.2	44	71	71	71	71	71	71	71	72	71	70	70	69	69	69	69	69	70	68	68	68	68	68	68	68	68
19/F	88.7	43	71	71	71	71	71	71	71	72	71	70	70	69	69	69	69	69	70	68	68	68	68	68	68	68	68
20/F	92.2	43	71	71	71	71	71	71	71	71	71	70	69	69	69	69	69	69	70	68	68	68	68	68	68	68	68
21/F	95.7	43	70	71	71	71	71	71	71	71	71	70	69	69	69	69	69	69	70	68	68	68	68	68	68	68	68
22/F	99.2	43	70	70	71	71	71	71	71	70	71	70	69	69	69	69	69	69	70	68	68	68	68	68	68	68	68
23/F	102.7	43	70	70	70	71	71	71	71	70	71	70	69	69	69	69	69	69	70	68	68	68	68	68	68	68	68
25/F	106.2	44	70	70	70	70	70	70	70	71	70	69	69	69	68	68	68	69	70	67	67	68	68	68	68	68	68
26/F	109.7	46	70	70	70	70	70	70	70	71	70	69	69	69	68	68	68	68	69	67	67	67	67	67	68	68	68
27/F	113.2	49	70	70	70	70	70	70	70	70	70	69	69	68	68	68	68	68	69	67	67	67	67	67	67	67	68
Max Noise Level		49	72	72	72	72	72	72	72	73	72	70	70	69	69	69	69	69	70	68	68	68	68	68	69	68	69
Exceedance			13			14			14			17			0			0			0			0			0

High Zone (30/F-32/F)																					
Floor	mPD	H-01	H-02	H-03	H-04	H-05	H-06	H-07	H-08	H-09	H-10	H-11	H-12	H-13	H-14	H-15	H-16	H-17	H-18	H-19	H-20
30/F	127.7	69	70	70	70	69	70	69	68	68	68	68	68	68	68	69	67	67	67	67	67
31/F	131.2	69	70	70	69	69	70	69	68	68	68	68	68	68	68	68	67	67	67	67	67
32/F	134.7	69	69	69	69	69	70	69	68	68	68	68	68	68	68	68	66	66	66	67	67
Max Noise Level		69	70	70	70	69	70	69	68	68	68	68	68	68	68	69	67	67	67	67	67
Exceedance		0					0					0					0				

Penthouse (33/F)														
Floor	mPD	S-01	S-02	S-03	S-04	S-05	S-06	S-07	S-08	S-09	S-10	S-11	S-12	S-13
33/F	138.2	61	69	69	55	61	61	61	55	65	66	65	65	60
Max Noise Level		61	69	69	55	61	61	61	55	65	66	65	65	60
Exceedance		0						0						

Total no. of Flats:	176
Total no. of Exceedance:	58
Compliance Level:	67%
Max. Noise Level:	73

Notes:
71 Noise level exceed stardand of 70 dB(A)

Predicted Road Traffic Noise (L10, dB(A)) at Selected Sensitive Receivers
Mitigated Case (Acoustic Window (Baffle Type), Acoustic Door (Baffle Type) and Fixed Glazing / Maintenance Window) - AM Peak Flow (Worst Case)

Low Zone (7/F-27/F)																											
Floor	mPD	L-01	L-02	L-03	L-04	L-05	L-06	L-07	L-08	L-09	L-10	L-11	L-12	L-13	L-14	L-15	L-16	L-17	L-18	L-19	L-20	L-21	L-22	L-23	L-24	L-25	L-26
7/F	53.7	-	67	68	65	67	65	65	66	-	67	70	70	69	69	69	69	70	67	69	70	70	70	70	70	70	70
8/F	57.2	-	69	70	67	68	67	67	68	-	68	67	64	70	69	70	70	70	67	70	70	70	70	70	70	70	70
9/F	60.7	-	70	70	67	69	68	68	69	-	69	67	64	70	70	70	70	70	67	70	70	70	70	70	70	70	70
10/F	64.2	-	70	70	68	69	68	68	69	-	69	68	64	66	70	70	70	70	67	70	70	70	70	70	70	70	70
11/F	67.7	-	70	70	67	69	68	68	69	-	69	68	65	66	70	70	70	70	67	70	70	70	70	70	70	70	70
12/F	71.2	-	69	70	67	69	68	68	68	-	69	68	65	66	64	70	70	70	67	70	70	70	70	70	70	70	70
15/F	74.7	-	69	70	67	69	68	67	68	-	68	68	65	66	64	70	70	70	67	70	70	70	70	70	70	70	70
16/F	78.2	-	69	70	67	68	67	67	68	-	68	68	65	66	64	70	70	70	67	70	70	70	70	70	70	70	70
17/F	81.7	-	69	69	67	68	67	67	68	-	68	67	64	66	64	70	70	70	67	70	70	70	70	70	70	70	70
18/F	85.2	-	69	69	66	68	67	67	68	-	68	67	64	66	64	70	70	70	67	70	70	70	70	70	70	70	70
19/F	88.7	-	68	69	66	68	67	67	67	-	68	67	64	66	70	70	70	70	67	70	70	70	70	70	70	70	70
20/F	92.2	-	68	69	66	68	67	66	67	-	68	67	64	66	70	70	70	70	67	70	70	70	70	70	70	70	70
21/F	95.7	-	68	69	66	67	66	66	67	-	67	67	64	70	70	70	70	70	67	69	69	70	70	70	70	70	70
22/F	99.2	-	68	68	66	67	66	66	67	-	67	67	64	70	70	70	70	70	67	69	69	69	69	69	70	70	70
23/F	102.7	-	68	68	66	67	66	66	67	-	67	70	70	70	70	70	70	70	67	69	69	69	69	69	70	69	70
25/F	106.2	-	68	68	65	67	66	66	66	-	67	70	70	70	70	70	70	70	67	69	69	69	69	69	69	69	69
26/F	109.7	-	67	68	65	67	66	66	66	-	67	70	70	70	70	70	70	70	67	69	69	69	69	69	69	69	69
27/F	113.2	-	67	68	65	67	66	65	66	-	67	70	70	70	70	70	70	70	67	69	69	69	69	69	69	69	69
Max Noise Level	0	70	70	68	69	68	68	69	0	69	70	70	70	70	70	70	70	70	67	70	70	70	70	70	70	70	70
Exceedance	0																										

High Zone (30/F-32/F)																					
Floor	mPD	H-01	H-02	H-03	H-04	H-05	H-06	H-07	H-08	H-09	H-10	H-11	H-12	H-13	H-14	H-15	H-16	H-17	H-18	H-19	H-20
30/F	127.7	-	62	66	66	65	-	70	69	69	69	69	69	69	69	70	68	68	68	69	69
31/F	131.2	-	62	66	66	70	-	70	69	69	69	69	69	69	69	70	68	68	68	68	68
32/F	134.7	-	62	66	66	70	-	70	69	69	69	69	69	69	69	70	68	68	68	68	68
Max Noise Level	0	62	66	66	70	0	70	69	69	69	69	69	69	69	69	70	68	68	68	69	69
Exceedance	0																				

Penthouse (33/F)														
Floor	mPD	S-01	S-02	S-03	S-04	S-05	S-06	S-07	S-08	S-09	S-10	S-11	S-12	S-13
33/F	138.2	62	67	65	56	62	62	63	57	67	68	67	67	61
Max Noise Level	62	67	65	56	62	62	63	57	67	68	67	67	67	61
Exceedance	0													

Total no. of Flats:	176
Total no. of Exceedance:	0
Compliance Level:	100%
Max. Noise Level:	70

Notes:	
71	Noise level exceed stardand of 70 dB(A)
	Acoustic Window (Baffle Type)
	Acoustic Door (Baffle Type)
-	Fixed Glazing / Maintenance Window

**Appendix 2-3 Proposed Acoustic Window and Acoustic Door (Baffle Type)
Design**

Road Traffic Noise Impact Assessment

Acoustic Window (Baffle Type) and Acoustic Door (Baffle Type)

Summary Table of Major Parameters of Reference Case and Maximum Sound Attenuation Available

Name	Outer opening width, mm	Outer opening height, mm	Outer opening area, m ²	Air gap, mm	Overlapping length, mm	MPA Applied	Room Area, m ²	Maximum Noise Reduction Available, dB(A)
Acoustic Window (Baffle Type)								
AW1-PN	600	870	0.5	100	100	No	8.0	6.0
AW2-PN	750	1500	1.1	100	100	No	18.0	7.0
Acoustic Door (Baffle Type)								
AD-NPE	1275	2535	3.2	100	375	No	38.3	8.8

Note:

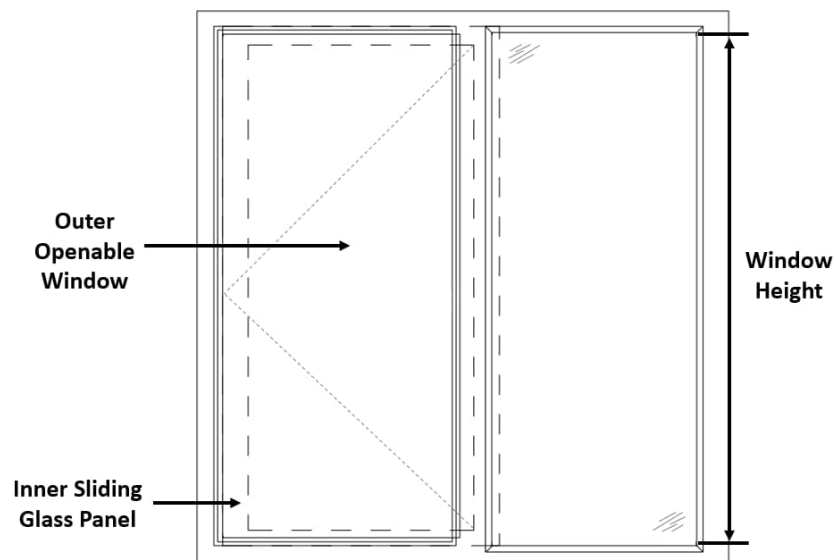
MPA: Micro Perforated Absorber

Road Traffic Noise Impact Assessment
Acoustic Window (Baffle Type) and Acoustic Door (Baffle Type)
Table of Major Parameters, Room Size and Sound Attenuation Adjustment of "Proposed Case for Proposed Development" and "Corresponding Reference Case"

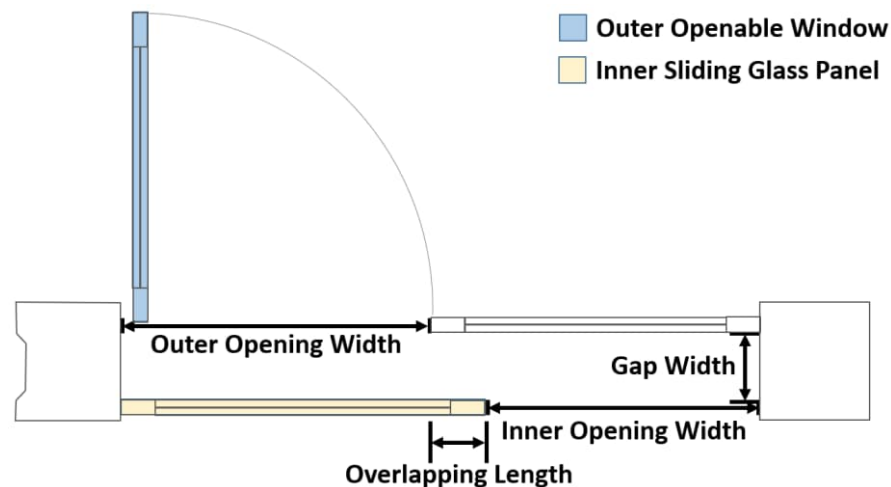
Zone	Unit	Room	Opening	NSRs	Case	Proposed Development					Reference Case								Room Size Adjustment: 10xlog(RA / RAref) (adjust downward only), dB(A)	Relative Noise Reduction, dB(A)	Noise Reduction Required, dB(A)
						Outer opening area, m ²	Air gap, mm	Overlapping length, mm	MPA applied?	Room area (RA), m ²	Outer opening width, mm	Outer opening height, mm	Outer opening area, m ²	Air gap, mm	Overlapping length, mm	MPA applied?	Room area (RAref), m ²	Ref. sound attenuation, dB(A)			
Low Zone	F	BR	W	L-02	AW2-PN	1.1	100	100	No	8.4	750	1500	1.1	100	100	No	18.0	7.0	-3.3	3.7	2.9
Low Zone	F	BR	W	L-03	AW1-PN	0.5	100	100	No	4.2	600	870	0.5	100	100	No	8.0	6.0	-2.8	3.2	3.1
Low Zone	F	LIV/DIN	D	L-04	AD-NPE	3.2	100	375	No	20.8	1275	2535	3.2	100	375	No	38.3	8.8	-2.7	6.1	3.3
Low Zone	E	LIV/DIN	D	L-05	AD-NPE	3.2	100	375	No	15.2	1275	2535	3.2	100	375	No	38.3	8.8	-4.0	4.8	3.4
Low Zone	E	BR	W	L-06	AW1-PN	0.5	100	100	No	7.5	600	870	0.5	100	100	No	8.0	6.0	-0.3	5.7	3.3
Low Zone	D	BR	W	L-07	AW1-PN	0.5	100	100	No	7.9	600	870	0.5	100	100	No	8.0	6.0	-0.1	5.9	3.3
Low Zone	D	LIV/DIN	D	L-08	AD-NPE	3.2	100	375	No	15.5	1275	2535	3.2	100	375	No	38.3	8.8	-3.9	4.9	3.1
Low Zone	C	BR	W	L-10	AW2-PN	1.1	100	100	No	9.8	750	1500	1.1	100	100	No	18.0	7.0	-2.6	4.4	2.7
Low Zone	C	BR	W	L-11	AW1-PN	0.5	100	100	No	4.9	600	870	0.5	100	100	No	8.0	6.0	-2.1	3.9	1.4
Low Zone	C	LIV/DIN	D	L-12	AD-NPE	3.2	100	375	No	24.1	1275	2535	3.2	100	375	No	38.3	8.8	-2.0	6.8	1.0
Low Zone	B	BR	W	L-13	AW1-PN	0.5	100	100	No	5.8	600	870	0.5	100	100	No	8.0	6.0	-1.4	4.6	0.5
Low Zone	B	LIV/DIN	D	L-14	AD-NPE	3.2	100	375	No	21.0	1275	2535	3.2	100	375	No	38.3	8.8	-2.6	6.2	0.1
Low Zone	A	BR	W	L-18	AW2-PN	1.1	100	100	No	9.2	750	1500	1.1	100	100	No	18.0	7.0	-2.9	4.1	1.1
High Zone	C	LIV/DIN	D	H-02	AD-NPE	3.2	100	375	No	37.6	1275	2535	3.2	100	375	No	38.3	8.8	-0.1	8.7	0.4
High Zone	C	BR	W	H-03	AW1-PN	0.5	100	100	No	6.10	600	870	0.5	100	100	No	8.0	6.0	-1.2	4.8	0.5
High Zone	C	BR	W	H-04	AW1-PN	0.5	100	100	No	6.30	600	870	0.5	100	100	No	8.0	6.0	-1.0	5.0	0.5
High Zone	C	BR	W	H-05	AW2-PN	1.1	100	100	No	12.60	750	1500	1.1	100	100	No	18.0	7.0	-1.5	5.5	0.2
Penthouse	A	BR	W	S-02	AW2-PN	1.1	100	100	No	8.70	750	1500	1.1	100	100	No	18.0	7.0	-3.2	3.8	0.1
Penthouse	A	BR	W	S-03	AW2-PN	1.1	100	100	No	12.80	750	1500	1.1	100	100	No	18.0	7.0	-1.5	5.5	0.2

**Appendix 2-4 Estimation of Maximum Allowed Sound Attenuation of Acoustic
Window and Acoustic Door (Baffle Type)**

(I) Possible design of “Acoustic Window (Baffle Type)” for 8m² and 18m² habitable rooms (i.e. dining room, living room or bedroom)



INTERNAL VIEW (NOT TO SCALE)



PLAN (NOT TO SCALE)

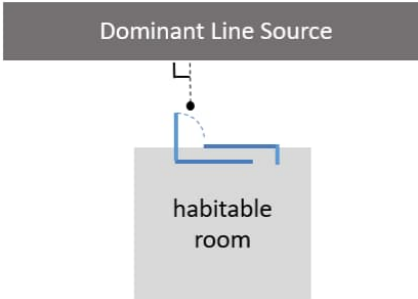
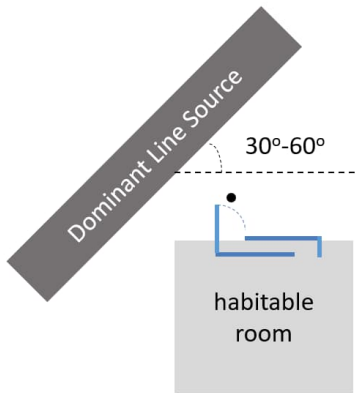
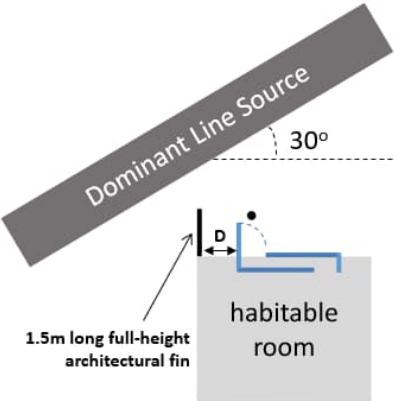
Possible Designs of “Acoustic Window (Baffle Type)” for 8m ² and 18m ² rooms					
Room Size (m ²)	Room Dimensions (mm ³)	Inner Window Opening (mm ²)	Outer Window Opening (mm ²)	Overlapping Length (mm)	Gap Width (mm)
8	3200 (W) x 2500 (D) x 3400 (H)	580 (W) x 870 (H)	600 (W) x 870 (H)	≥ 100	100 to 175
18	5300 (W) x 3390 (D) x 3400 (H)	750 (W) x 1500 (H)	750 (W) x 1500 (H)	≥ 100	100 to 175

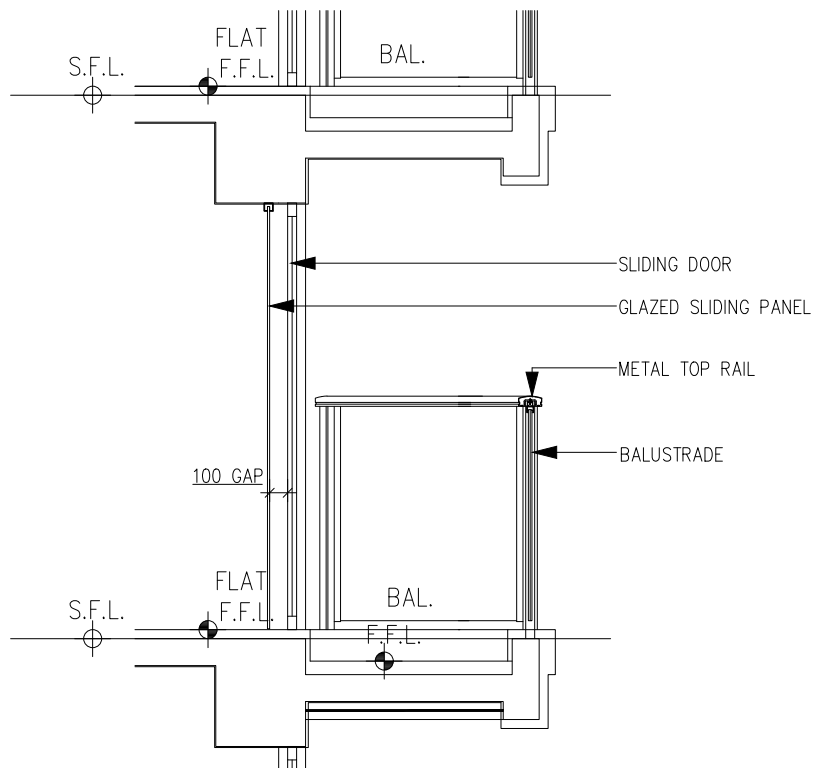
Notes:

a. These are feasible designs of AW(BT) for 8m² and 18m² rooms.

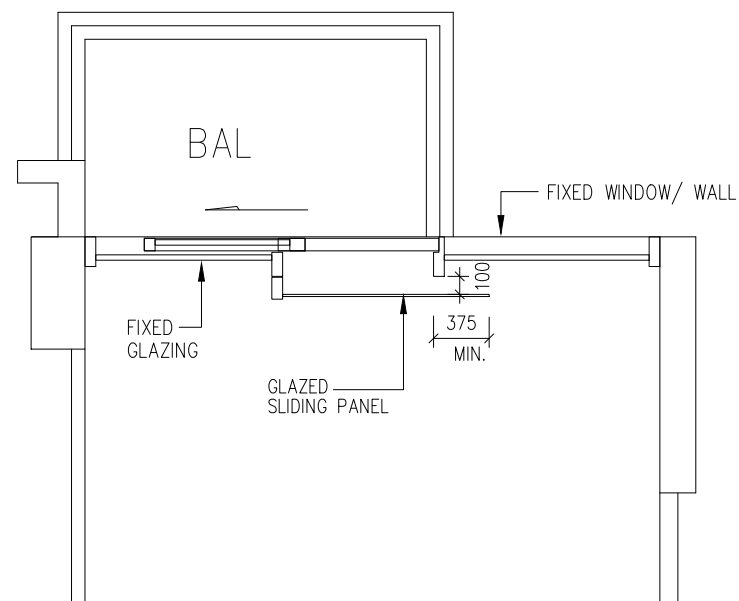
b. For optimum performance of noise reduction, the air gap should have a pane-to-pane overlapping length of ≥ 100mm and a gap width between 100mm and 175mm, with the inner sliding glass panel in a closed position. The window pane shall be ≥ 6mm in thickness.

Proposed Acoustic Window (Baffle Type) Design

Table 1: Summary on RNR of Acoustic Window (Baffle Type) (for use in NIA) *Plan not to scale		Correction dB(A) L10(1hr)	
		8m ²	18m ²
	(a) Provision of AW(BT) parallel to dominant line source (whichever side the outer side-hung window is)	- 6.0	- 7.0
		- 7.5 (added SAM ¹)	- 8.5 (added SAM ¹)
	(b) Tilting the AW(BT) in (a) above to 30° - 60° horizontal incident angle to dominant line source (whichever side the outer side-hung window is)	- 7.0	- 8.0
		- 8.5 (added SAM ¹)	- 9.5 (added SAM ¹)
 D = Distance from architectural fin to nearest window frame should be at most 900mm.	(b1) If tilted AW(BT) is at 30° horizontal incident angle to dominant line source + 1.5m long full-height architectural fin² * AW(BT) + architectural fin should be considered as ONE package of noise mitigation measures. Outer side-hung window of AW(BT) and architectural fin should be installed at the side nearer to dominant line source.	- 8.0	- 9.0
		- 9.5 (added SAM ¹)	- 10.5 (added SAM ¹)



TYPICAL SECTION



TYPICAL PLAN

Appendix: 2-3

Title: Proposed Acoustic Door (Baffle Type) Design

Project: Section 16 Planning Application for Proposed Amendments to an Approved Scheme (under Application No. A/H6/91 with Minor Relaxation of Plot Ratio Restriction) for Permitted Flat Use at 4, 4A, 4B and 4C Tai Hang Road, Hong Kong

RAMBOLL

Drawn by: CM

Checked by: CC

Rev.: 1.0

Date: Apr 2026

Appendix 2-5 Schedule of Noise Mitigation Measures

Appendix 2.5 Schedule of Noise Mitigation Measures

Zone	NSR	Unit	Room	Floor	Noise Mitigation Measures
Low Zone	L-01	F	LIV/DIN	7/F-27/F	Fixed Glazing / Maintenance Window
Low Zone	L-02		BR	7/F-27/F	Acoustic Window (Baffle Type)
Low Zone	L-03		BR	7/F-27/F	Acoustic Window (Baffle Type)
Low Zone	L-04		LIV/DIN	7/F-27/F	Acoustic Door (Baffle Type)
Low Zone	L-05	E	LIV/DIN	7/F-27/F	Acoustic Door (Baffle Type)
Low Zone	L-06		BR	7/F-27/F	Acoustic Window (Baffle Type)
Low Zone	L-07	D	BR	7/F-27/F	Acoustic Window (Baffle Type)
Low Zone	L-08		LIV/DIN	7/F-27/F	Acoustic Door (Baffle Type)
Low Zone	L-09	C	BR	7/F-27/F	Fixed Glazing / Maintenance Window
Low Zone	L-10			7/F-27/F	Acoustic Window (Baffle Type) & Fixed Glazing / Maintenance Window
Low Zone	L-11		BR	8/F-22/F	Acoustic Window (Baffle Type)
Low Zone	L-12		LIV/DIN	8/F-22/F	Acoustic Door (Baffle Type)
Low Zone	L-13	B	BR	10/F-20/F	Acoustic Window (Baffle Type)
Low Zone	L-14		LIV/DIN	12/F-18/F	Acoustic Door (Baffle Type)
Low Zone	L-18	A	BR	7/F-27/F	Acoustic Window (Baffle Type) & Fixed Glazing / Maintenance Window
High Zone	H-01	C	LIV/DIN	30/F-32/F	Fixed Glazing / Maintenance Window
High Zone	H-02			30/F-32/F	Acoustic Door (Baffle Type)
High Zone	H-03		BR	30/F-32/F	Acoustic Window (Baffle Type)
High Zone	H-04		BR	30/F-32/F	Acoustic Window (Baffle Type)
High Zone	H-05		BR	30/F	Acoustic Window (Baffle Type)
High Zone	H-06	B	BR	30/F-32/F	Fixed Glazing / Maintenance Window
High Zone	-			30/F-32/F	Fixed Glazing / Maintenance Window
Penthouse	S-02	A	BR	33/F	Acoustic Window (Baffle Type)
Penthouse	S-03		BR	33/F	Acoustic Window (Baffle Type)

Note:

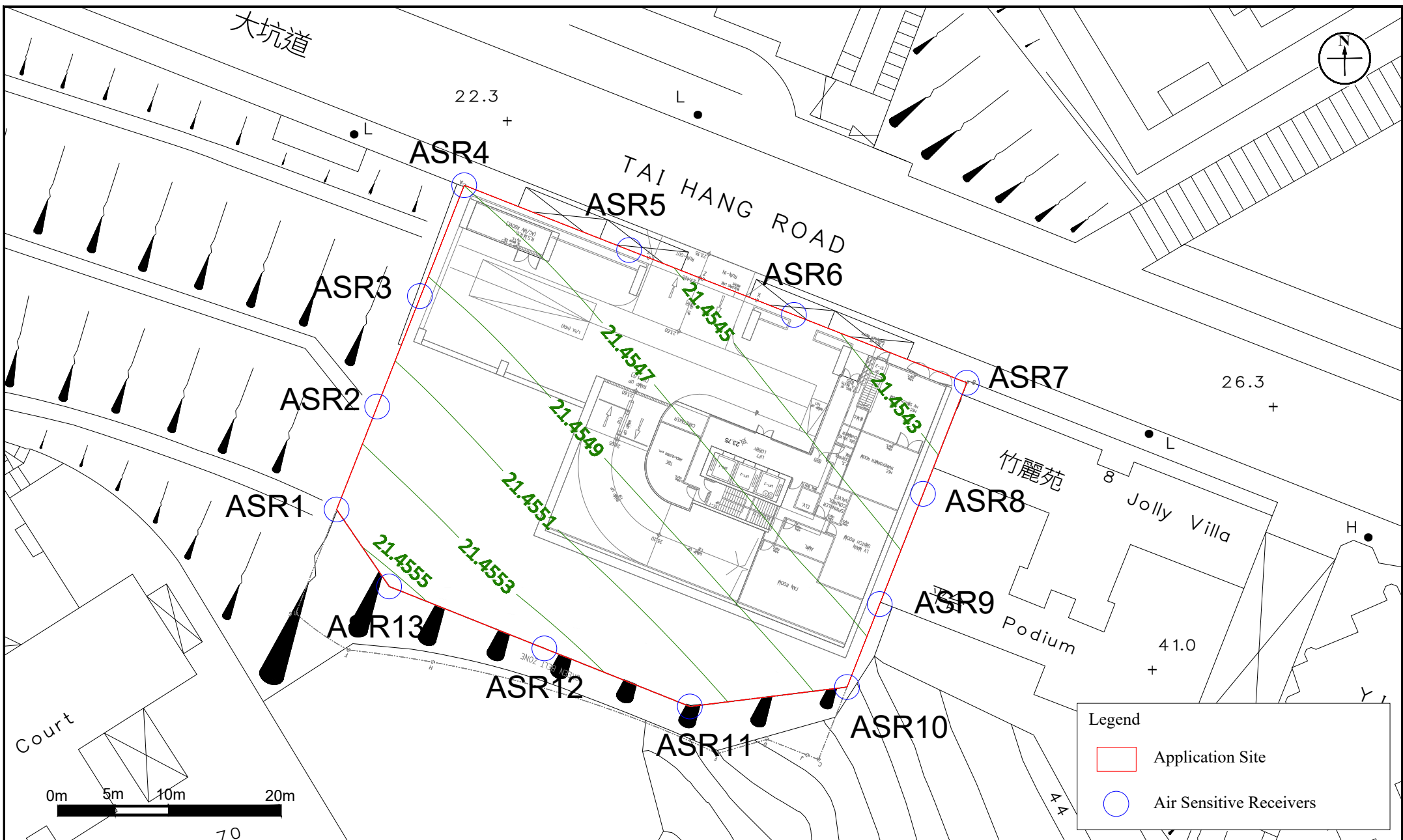
13/F, 14/F and 24/F omitted.

Appendix 3-1 Predicted Air Quality Impact Assessment Results

ASRs ID	PATH Grid	ASR Coordinates		Local Ground, z mPD	Flag Pole Receiver Height, mAG	Flag Pole Receiver Height, mPD	Model Height, mPD	PATH level	Predicted Cumulative Impacts (µg/m³) in Year 2030									
		x	y						SO ₂		NO ₂		RSP		FSP			
									10-min (AQO=500)	24-h (AQO=40)	1-h (AQO=200)	24-h (AQO=120)	Annual (AQO=40)	24-h (AQO=75)	Annual (AQO=30)	24-h (AQO=37.5)	Annual (AQO=15)	
									4 th highest	4 th highest	19 th highest	10 th highest		10 th highest		19 th highest		
ASR1_1	42,29	837792	815385	23.60	1.50	25.10	1.55	1	21.5	6.7	122.0	51.6	28.2	51.2	19.7	29.9	12.1	
ASR1_2	42,29	837792	815385	23.60	16.45	40.05	2.66	1	21.5	6.7	119.6	50.7	28.0	51.2	19.7	29.9	12.1	
ASR1_3	42,29	837792	815385	23.60	19.95	43.55	2.92	2	21.6	6.7	117.2	49.1	26.0	51.1	19.4	29.9	11.8	
ASR1_4	42,29	837792	815385	23.60	27.95	51.55	3.52	2	21.6	6.7	116.3	48.5	25.9	51.1	19.4	29.9	11.8	
ASR1_5	42,29	837792	815385	23.60	31.45	55.05	3.78	2	21.6	6.7	115.7	48.2	25.7	51.1	19.4	29.9	11.8	
ASR1_6	42,29	837792	815385	23.60	34.95	58.55	4.04	2	21.6	6.7	115.1	48.0	25.6	51.1	19.4	29.9	11.8	
ASR1_7	42,29	837792	815385	23.60	38.45	62.05	4.30	3	21.7	6.8	113.0	46.4	24.2	50.9	19.2	29.8	11.6	
ASR1_8	42,29	837792	815385	23.60	41.95	65.55	4.56	3	21.7	6.8	112.1	46.1	24.0	50.9	19.2	29.8	11.6	
ASR1_9	42,29	837792	815385	23.60	48.95	72.55	5.08	3	21.7	6.8	110.5	45.5	23.6	50.9	19.1	29.8	11.6	
ASR1_10	42,29	837792	815385	23.60	55.95	79.55	5.61	4	21.7	6.8	108.2	43.9	22.5	50.7	19.0	29.6	11.4	
ASR1_11	42,29	837792	815385	23.60	62.95	86.55	6.13	4	21.7	6.8	106.7	43.3	22.1	50.7	18.9	29.6	11.4	
ASR1_12	42,29	837792	815385	23.60	69.95	93.55	6.65	4	21.7	6.8	104.6	42.8	21.8	50.7	18.9	29.6	11.4	
ASR1_13	42,29	837792	815385	23.60	79.45	103.05	7.36	5	21.8	6.8	103.4	41.0	20.6	50.6	18.8	29.4	11.3	
ASR1_14	42,29	837792	815385	23.60	84.45	108.05	7.73	5	21.8	6.8	102.1	40.6	20.4	50.6	18.8	29.4	11.3	
ASR1_15	42,29	837792	815385	23.60	91.45	115.05	8.25	5	21.8	6.8	99.9	40.0	20.1	50.6	18.8	29.4	11.3	
ASR1_16	42,29	837792	815385	23.60	98.45	122.05	8.77	5	21.8	6.8	99.5	39.6	19.8	50.6	18.7	29.3	11.3	
ASR1_17	42,29	837792	815385	23.60	105.45	129.05	9.30	6	21.8	6.8	96.7	38.0	18.8	50.4	18.6	29.1	11.1	
ASR1_18	42,29	837792	815385	23.60	112.95	136.55	9.85	6	21.8	6.8	95.5	37.3	18.4	50.3	18.6	29.0	11.1	
ASR2_1	42,29	837796	815394	23.60	1.50	25.10	1.55	1	21.5	6.7	125.0	55.5	30.0	51.2	19.7	30.0	12.2	
ASR2_2	42,29	837796	815394	23.60	16.45	40.05	2.66	1	21.5	6.7	123.0	53.2	29.7	51.2	19.7	30.0	12.2	
ASR2_3	42,29	837796	815394	23.60	19.95	43.55	2.92	2	21.6	6.7	122.7	52.0	27.6	51.2	19.4	30.0	11.8	
ASR2_4	42,29	837796	815394	23.60	27.95	51.55	3.52	2	21.6	6.7	122.7	50.9	27.4	51.2	19.4	30.0	11.8	
ASR2_5	42,29	837796	815394	23.60	31.45	55.05	3.78	2	21.6	6.7	122.2	50.3	27.2	51.2	19.4	30.0	11.8	
ASR2_6	42,29	837796	815394	23.60	34.95	58.55	4.04	2	21.6	6.7	121.3	50.0	27.0	51.2	19.4	30.0	11.8	
ASR2_7	42,29	837796	815394	23.60	38.45	62.05	4.30	3	21.7	6.8	118.0	48.4	25.6	51.0	19.2	29.8	11.6	
ASR2_8	42,29	837796	815394	23.60	41.95	65.55	4.56	3	21.7	6.8	116.9	48.0	25.3	50.9	19.2	29.8	11.6	
ASR2_9	42,29	837796	815394	23.60	48.95	72.55	5.08	3	21.7	6.8	116.6	47.2	24.8	50.9	19.2	29.8	11.6	
ASR2_10	42,29	837796	815394	23.60	55.95	79.55	5.61	4	21.7	6.8	113.6	46.3	23.5	50.8	19.0	29.7	11.5	
ASR2_11	42,29	837796	815394	23.60	62.95	86.55	6.13	4	21.7	6.8	111.6	45.4	23.0	50.8	19.0	29.7	11.4	
ASR2_12	42,29	837796	815394	23.60	69.95	93.55	6.65	4	21.7	6.8	109.9	45.0	22.6	50.8	18.9	29.7	11.4	
ASR2_13	42,29	837796	815394	23.60	79.45	103.05	7.36	5	21.8	6.8	106.2	41.7	21.2	50.6	18.8	29.4	11.3	
ASR2_14	42,29	837796	815394	23.60	84.45	108.05	7.73	5	21.8	6.8	105.7	41.1	20.9	50.6	18.8	29.4	11.3	
ASR2_15	42,29	837796	815394	23.60	91.45	115.05	8.25	5	21.8	6.8	103.7	40.2	20.4	50.6	18.8	29.4	11.3	
ASR2_16	42,29	837796	815394	23.60	98.45	122.05	8.77	5	21.8	6.8	102.9	39.7	20.0	50.6	18.8	29.3	11.3	
ASR2_17	42,29	837796	815394	23.60	105.45	129.05	9.30	6	21.8	6.8	99.3	38.3	19.0	50.4	18.6	29.1	11.1	
ASR2_18	42,29	837796	815394	23.60	112.95	136.55	9.85	6	21.8	6.8	97.0	37.3	18.5	50.3	18.6	29.1	11.1	
ASR3_1	42,29	837800	815404	23.60	1.50	25.10	1.55	1	21.5	6.7	138.9	63.2	33.8	51.2	19.8	30.1	12.2	
ASR3_2	42,29	837800	815404	23.60	16.45	40.05	2.66	1	21.5	6.7	138.0	60.6	32.8	51.1	19.8	30.1	12.2	
ASR3_3	42,29	837800	815404	23.60	19.95	43.55	2.92	2	21.6	6.7	138.6	58.2	30.7	51.4	19.5	30.1	11.9	
ASR3_4	42,29	837800	815404	23.60	27.95	51.55	3.52	2	21.6	6.7	136.8	55.9	30.1	51.3	19.5	30.1	11.9	
ASR3_5	42,29	837800	815404	23.60	31.45	55.05	3.78	2	21.6	6.7	134.0	55.6	29.7	51.3	19.5	30.0	11.9	
ASR3_6	42,29	837800	815404	23.60	34.95	58.55	4.04	2	21.6	6.7	133.5	55.3	29.3	51.3	19.5	30.0	11.9	
ASR3_7	42,29	837800	815404	23.60	38.45	62.05	4.30	3	21.7	6.8	130.9	53.6	27.8	51.1	19.3	29.9	11.7	
ASR3_8	42,29	837800	815404	23.60	41.95	65.55	4.56	3	21.7	6.8	130.4	53.0	27.3	51.1	19.2	29.9	11.7	
ASR3_9	42,29	837800	815404	23.60	48.95	72.55	5.08	3	21.7	6.8	128.3	50.8	26.4	51.0	19.2	29.9	11.6	
ASR3_10	42,29	837800	815404	23.60	55.95	79.55	5.61	4	21.7	6.8	124.1	49.1	24.9	50.9	19.0	29.7	11.5	
ASR3_11	42,29	837800	815404	23.60	62.95	86.55	6.13	4	21.7	6.8	120.6	48.6	24.1	50.9	19.0	29.7	11.5	
ASR3_12	42,29	837800	815404	23.60	69.95	93.55	6.65	4	21.7	6.8	119.5	47.8	23.3	50.8	19.0	29.7	11.4	
ASR3_13	42,29	837800	815404	23.60	79.45	103.05	7.36	5	21.8	6.8	115.7	44.8	21.6					

ASRs ID	PATH Grid	ASR Coordinates		Local Ground, z mPD	Flag Pole Receiver Height, mAG	Flag Pole Receiver Height, mPD	Model Height, mPD	PATH level	Predicted Cumulative Impacts (µg/m³) in Year 2030									
		x	y						SO ₂		NO ₂		RSP		FSP			
									10-min (AQO=500)	24-h (AQO=40)	1-h (AQO=200)	24-h (AQO=120)	Annual (AQO=40)	24-h (AQO=75)	Annual (AQO=30)	24-h (AQO=37.5)	Annual (AQO=15)	
									4 th highest	4 th highest	19 th highest	10 th highest		10 th highest		19 th highest		
ASR7_1	42,29	837849	815396	23.60	1.50	25.10	1.55	1	21.5	6.7	170.7	81.3	44.6	51.4	20.2	30.5	12.6	
ASR7_2	42,29	837849	815396	23.60	16.45	40.05	2.66	1	21.5	6.7	165.6	73.9	40.6	51.2	20.1	30.3	12.4	
ASR7_3	42,29	837849	815396	23.60	19.95	43.55	2.92	2	21.6	6.7	161.1	71.8	38.1	51.4	19.7	30.3	12.1	
ASR7_4	42,29	837849	815396	23.60	27.95	51.55	3.52	2	21.6	6.7	156.8	66.9	35.4	51.4	19.7	30.2	12.0	
ASR7_5	42,29	837849	815396	23.60	31.45	55.05	3.78	2	21.6	6.7	155.1	63.8	34.0	51.3	19.6	30.2	12.0	
ASR7_6	42,29	837849	815396	23.60	34.95	58.55	4.04	2	21.6	6.7	153.9	61.7	33.0	51.3	19.6	30.1	12.0	
ASR7_7	42,29	837849	815396	23.60	38.45	62.05	4.30	3	21.7	6.8	150.5	58.7	30.6	51.2	19.3	30.0	11.7	
ASR7_8	42,29	837849	815396	23.60	41.95	65.55	4.56	3	21.7	6.8	149.2	57.1	29.3	51.2	19.3	29.9	11.7	
ASR7_9	42,29	837849	815396	23.60	48.95	72.55	5.08	3	21.7	6.8	145.9	53.6	27.4	51.1	19.2	29.9	11.7	
ASR7_10	42,29	837849	815396	23.60	55.95	79.55	5.61	4	21.7	6.8	145.1	49.8	25.1	50.9	19.0	29.7	11.5	
ASR7_11	42,29	837849	815396	23.60	62.95	86.55	6.13	4	21.7	6.8	141.0	47.9	23.8	50.9	19.0	29.7	11.5	
ASR7_12	42,29	837849	815396	23.60	69.95	93.55	6.65	4	21.7	6.8	135.2	45.5	22.7	50.8	18.9	29.7	11.4	
ASR7_13	42,29	837849	815396	23.60	79.45	103.05	7.36	5	21.8	6.8	131.3	41.9	20.7	50.7	18.8	29.5	11.3	
ASR7_14	42,29	837849	815396	23.60	84.45	108.05	7.73	5	21.8	6.8	129.8	41.1	20.2	50.7	18.8	29.5	11.3	
ASR7_15	42,29	837849	815396	23.60	91.45	115.05	8.25	5	21.8	6.8	129.2	39.2	19.5	50.6	18.7	29.4	11.2	
ASR7_16	42,29	837849	815396	23.60	98.45	122.05	8.77	5	21.8	6.8	127.5	38.5	19.0	50.6	18.7	29.4	11.2	
ASR7_17	42,29	837849	815396	23.60	105.45	129.05	9.30	6	21.8	6.8	123.5	37.4	17.9	50.3	18.6	29.1	11.1	
ASR7_18	42,29	837849	815396	23.60	112.95	136.55	9.85	6	21.8	6.8	118.1	36.3	17.4	50.2	18.6	29.1	11.1	
ASR8_1	42,29	837845	815386	23.60	1.50	25.10	1.55	1	21.5	6.7	138.3	62.3	33.7	51.2	19.8	30.1	12.2	
ASR8_2	42,29	837845	815386	23.60	16.45	40.05	2.66	1	21.5	6.7	136.1	60.1	32.8	51.1	19.8	30.1	12.2	
ASR8_3	42,29	837845	815386	23.60	19.95	43.55	2.92	2	21.6	6.7	134.6	58.1	30.7	51.4	19.5	30.1	11.9	
ASR8_4	42,29	837845	815386	23.60	27.95	51.55	3.52	2	21.6	6.7	132.3	56.6	30.0	51.3	19.5	30.0	11.9	
ASR8_5	42,29	837845	815386	23.60	31.45	55.05	3.78	2	21.6	6.7	130.9	55.6	29.6	51.3	19.5	30.0	11.9	
ASR8_6	42,29	837845	815386	23.60	34.95	58.55	4.04	2	21.6	6.7	130.9	54.8	29.3	51.3	19.5	30.0	11.9	
ASR8_7	42,29	837845	815386	23.60	38.45	62.05	4.30	3	21.7	6.8	129.2	52.3	27.7	51.1	19.3	29.9	11.7	
ASR8_8	42,29	837845	815386	23.60	41.95	65.55	4.56	3	21.7	6.8	126.5	51.0	27.2	51.1	19.2	29.9	11.7	
ASR8_9	42,29	837845	815386	23.60	48.95	72.55	5.08	3	21.7	6.8	125.1	49.6	26.3	51.0	19.2	29.8	11.6	
ASR8_10	42,29	837845	815386	23.60	55.95	79.55	5.61	4	21.7	6.8	124.2	48.4	24.8	50.9	19.0	29.7	11.5	
ASR8_11	42,29	837845	815386	23.60	62.95	86.55	6.13	4	21.7	6.8	121.3	47.8	24.0	50.8	19.0	29.7	11.5	
ASR8_12	42,29	837845	815386	23.60	69.95	93.55	6.65	4	21.7	6.8	120.0	45.8	23.3	50.8	19.0	29.7	11.4	
ASR8_13	42,29	837845	815386	23.60	79.45	103.05	7.36	5	21.8	6.8	115.2	43.3	21.6	50.7	18.8	29.5	11.3	
ASR8_14	42,29	837845	815386	23.60	84.45	108.05	7.73	5	21.8	6.8	113.6	42.4	21.2	50.7	18.8	29.4	11.3	
ASR8_15	42,29	837845	815386	23.60	91.45	115.05	8.25	5	21.8	6.8	111.6	40.8	20.5	50.6	18.8	29.4	11.3	
ASR8_16	42,29	837845	815386	23.60	98.45	122.05	8.77	5	21.8	6.8	107.8	39.7	19.9	50.6	18.7	29.4	11.3	
ASR8_17	42,29	837845	815386	23.60	105.45	129.05	9.30	6	21.8	6.8	105.1	37.4	18.8	50.3	18.6	29.1	11.1	
ASR8_18	42,29	837845	815386	23.60	112.95	136.55	9.85	6	21.8	6.8	102.4	36.4	18.2	50.3	18.6	29.1	11.1	
ASR9_1	42,29	837841	815376	23.60	1.50	25.10	1.55	1	21.5	6.7	123.7	54.4	29.9	51.2	19.7	30.0	12.2	
ASR9_2	42,29	837841	815376	23.60	16.45	40.05	2.66	1	21.5	6.7	121.1	53.2	29.6	51.2	19.7	30.0	12.1	
ASR9_3	42,29	837841	815376	23.60	19.95	43.55	2.92	2	21.6	6.7	120.2	51.0	27.6	51.2	19.4	30.0	11.8	
ASR9_4	42,29	837841	815376	23.60	27.95	51.55	3.52	2	21.6	6.7	119.2	50.8	27.3	51.2	19.4	30.0	11.8	
ASR9_5	42,29	837841	815376	23.60	31.45	55.05	3.78	2	21.6	6.7	117.8	50.6	27.1	51.2	19.4	30.0	11.8	
ASR9_6	42,29	837841	815376	23.60	34.95	58.55	4.04	2	21.6	6.7	116.9	50.2	26.9	51.2	19.4	29.9	11.8	
ASR9_7	42,29	837841	815376	23.60	38.45	62.05	4.30	3	21.7	6.8	116.3	48.4	25.5	50.9	19.2	29.8	11.6	
ASR9_8	42,29	837841	815376	23.60	41.95	65.55	4.56	3	21.7	6.8	115.2	47.5	25.2	50.9	19.2	29.8	11.6	
ASR9_9	42,29	837841	815376	23.60	48.95	72.55	5.08	3	21.7	6.8	112.6	46.3	24.6	50.9	19.1	29.8	11.6	
ASR9_10	42,29	837841	815376	23.60	55.95	79.55	5.61	4	21.7	6.8	112.0	45.2	23.4	50.8				

Appendix 3-2 Contour Map of SO₂, NO₂, RSP and FSP



Appendix: 3.1a

Title: Contour Map of 4th Highest 10 minutes Average Concentration of SO_2 in μgm^{-3}
(Assessment Level: 25.1mPD, Floor No.: G/F) (AQO standard: $500\mu\text{gm}^{-3}$)

Project: Section 16 Planning Application for Proposed Amendments to an Approved Scheme (under Application No. A/H6/91 with Minor Relaxation of Plot Ratio Restriction Approved) for Permitted Flat Use at 4, 4A, 4B and 4C Tai Hang Road, Hong Kong

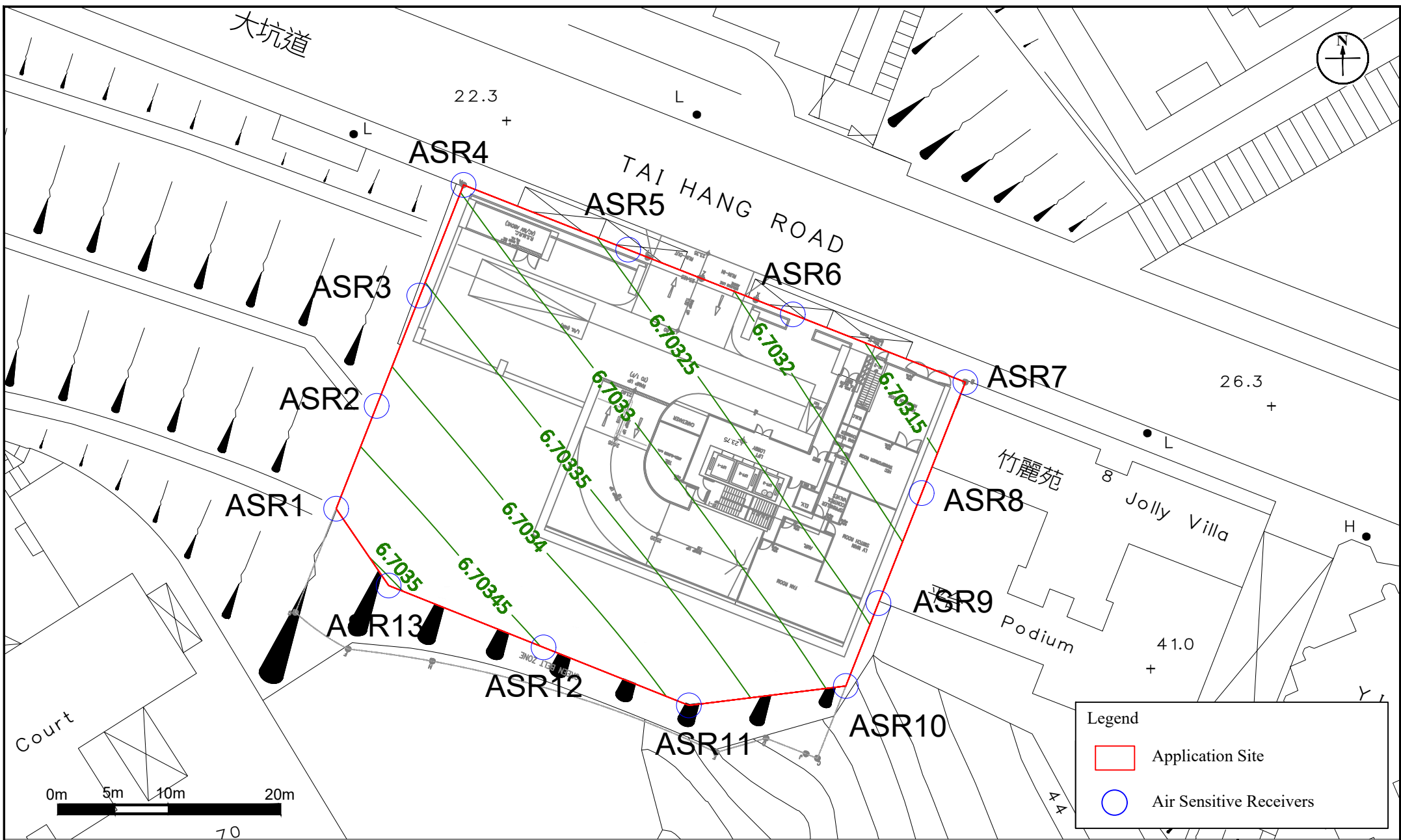
RAMBOLL

Drawn by: SC

Checked by: CC

Rev.: 4.1

Date: Jul 2026



Appendix: 3.1b

Title: Contour Map of 4th Highest Daily Average Concentration of SO_2 in μgm^{-3}
(Assessment Level: 25.1mPD, Floor No.: G/F) (AQO standard: $40\mu\text{gm}^{-3}$)

Project: Section 16 Planning Application for Proposed Amendments to an Approved Scheme (under Application No. A/H6/91 with Minor Relaxation of Plot Ratio Restriction Approved) for Permitted Flat Use at 4, 4A, 4B and 4C Tai Hang Road, Hong Kong

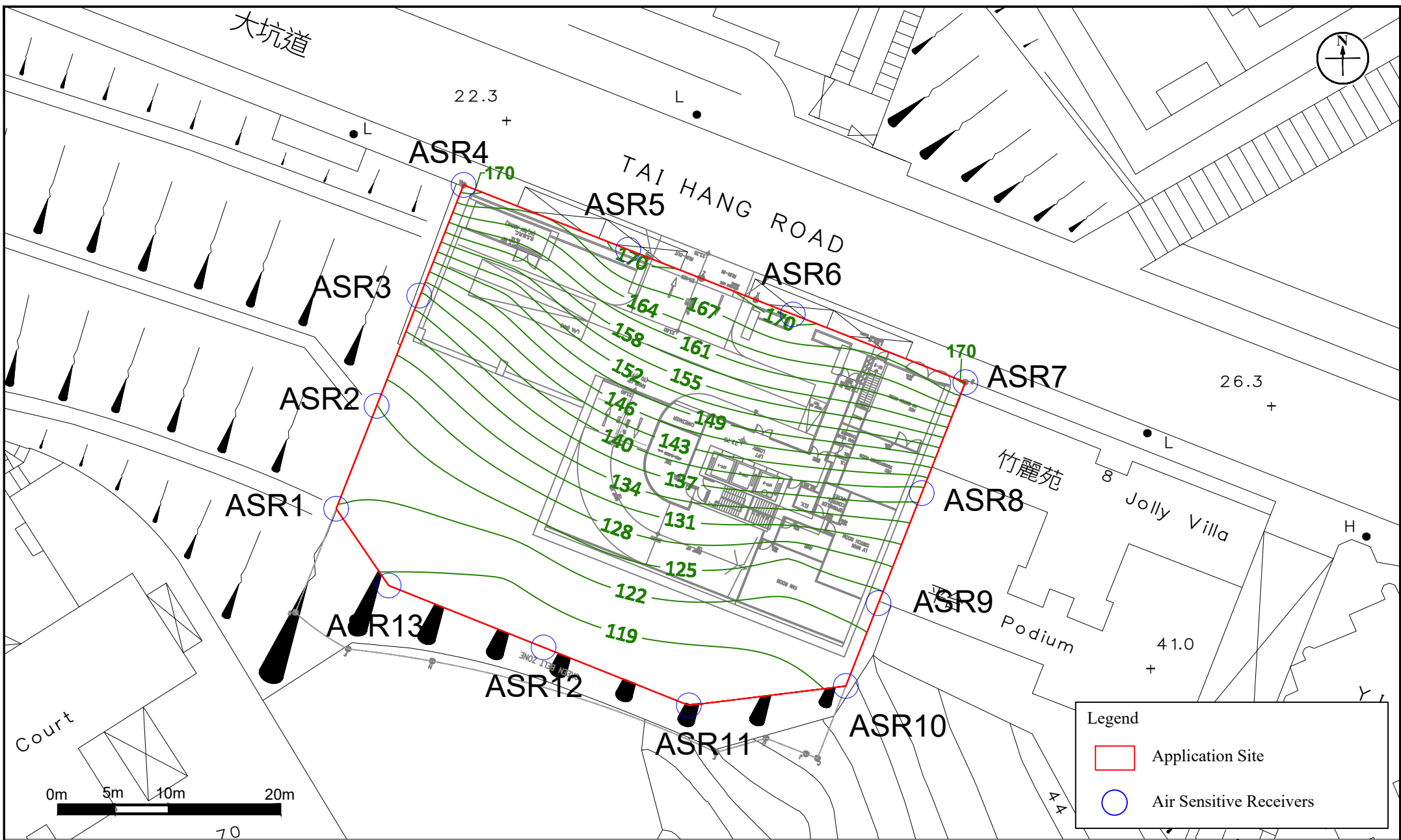
RAMBOLL

Drawn by: SC

Checked by: CC

Rev.: 4.1

Date: Jul 2026



Appendix: 3.1c

Title: Contour Map of the 19th Highest Hourly Average Concentration of NO_2 in μgm^{-3}
(Assessment Level: 25.1mPD, Floor No.: G/F) (AQO standard: $200\mu\text{gm}^{-3}$)

Project: Section 16 Planning Application for Proposed Amendments to an Approved Scheme (under Application No. A/H6/91 with Minor Relaxation of Plot Ratio Restriction Approved) for Permitted Flat Use at 4, 4A, 4B and 4C Tai Hang Road, Hong Kong

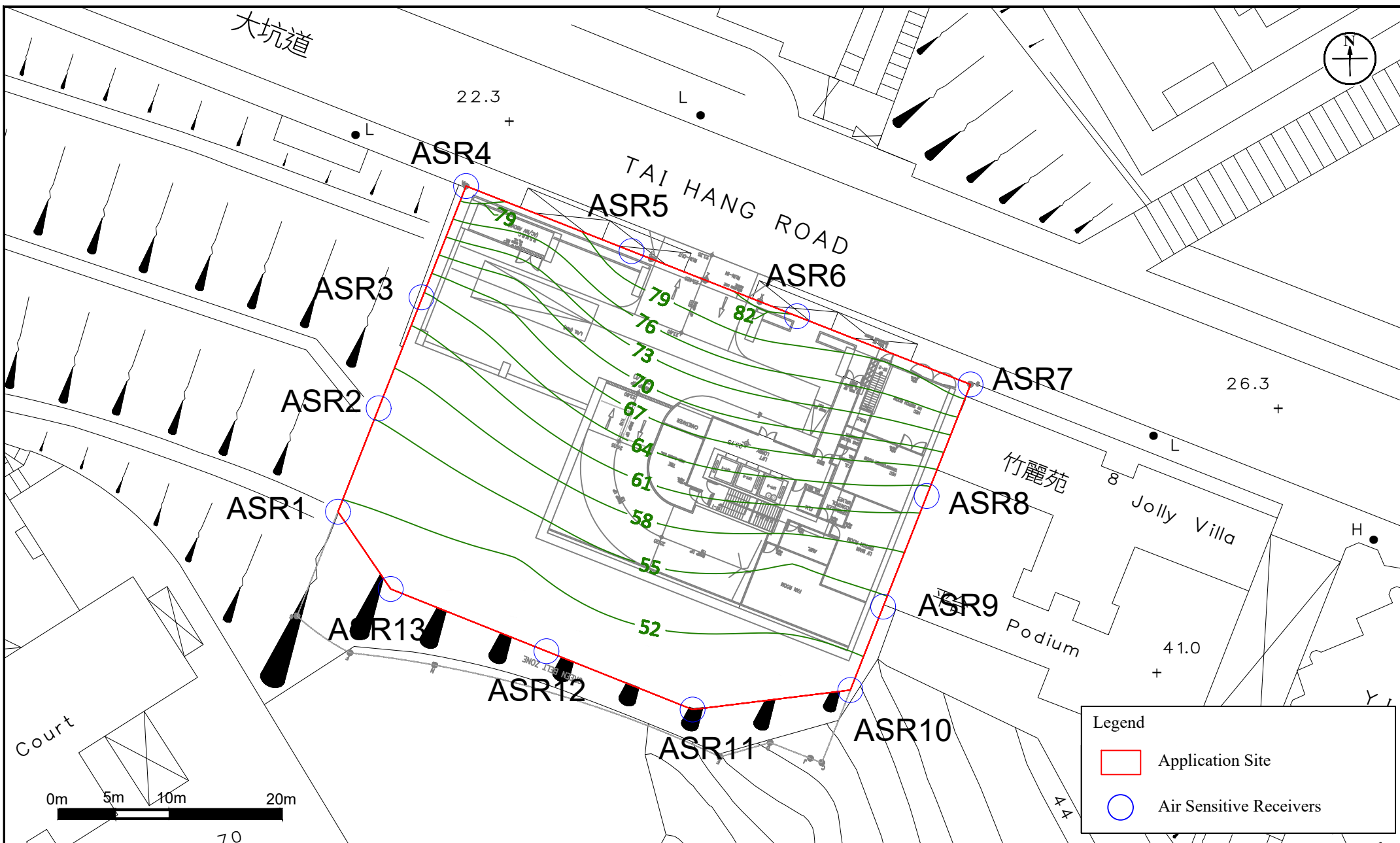
RAMBOLL

Drawn by: SC

Checked by: CC

Rev.: 4.1

Date: Jul 2026



Appendix: 3.1d

Title: Contour Map of the 10th Highest Hourly Average Concentration of NO_2 in μgm^{-3}
(Assessment Level: 25.1mPD, Floor No.: G/F) (AQO standard: $120\mu\text{gm}^{-3}$)

Project: Section 16 Planning Application for Proposed Amendments to an Approved Scheme (under Application No. A/H6/91 with Minor Relaxation of Plot Ratio Restriction Approved) for Permitted Flat Use at 4, 4A, 4B and 4C Tai Hang Road, Hong Kong

RAMBOLL

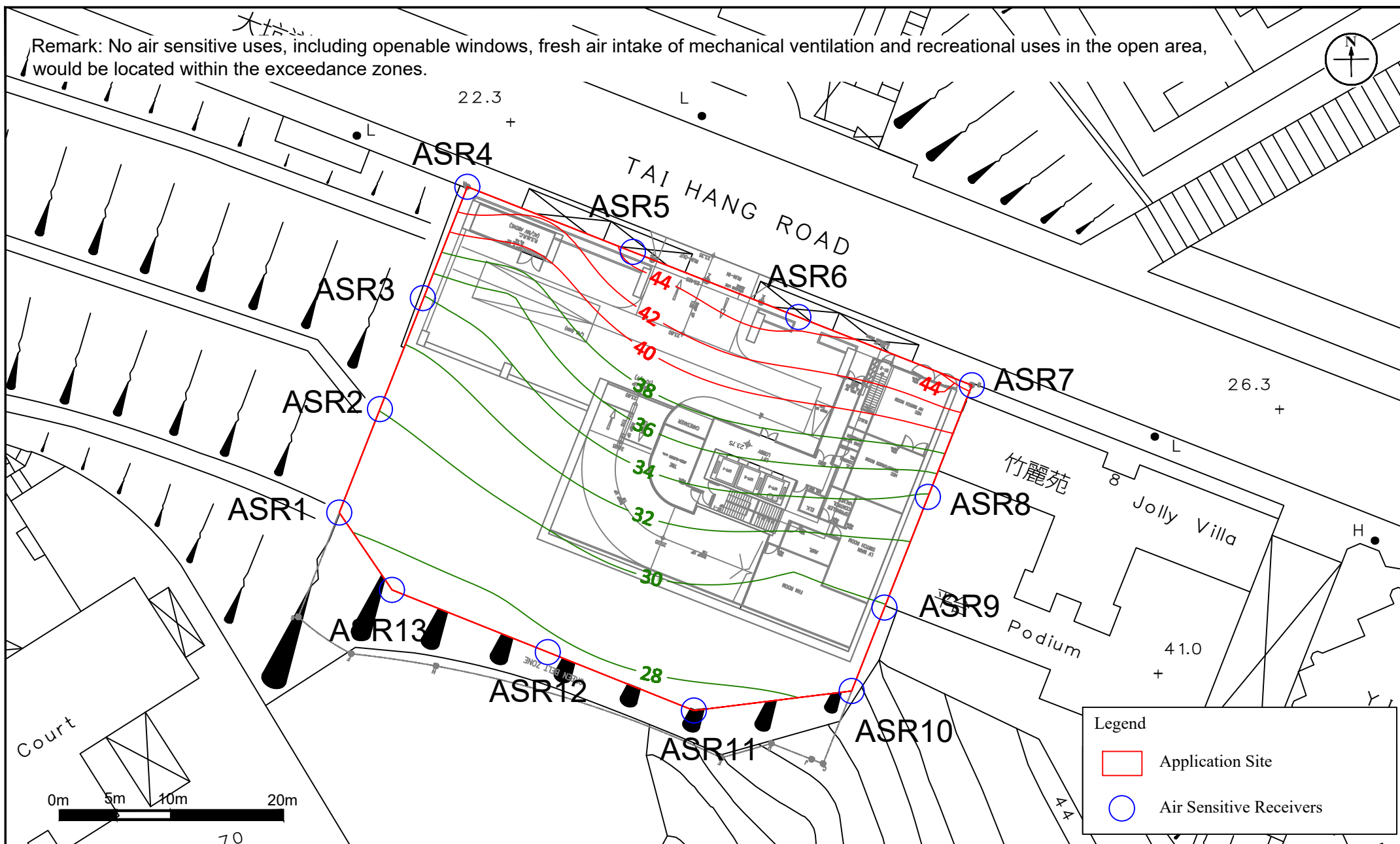
Drawn by: SC

Checked by: CC

Rev.: 4.1

Date: Jul 2026

Remark: No air sensitive uses, including openable windows, fresh air intake of mechanical ventilation and recreational uses in the open area, would be located within the exceedance zones.



Appendix: 3.1e

Title: Contour Map of Annual Average Concentration of NO_2 in $\mu\text{g}/\text{m}^3$
(Assessment Level: 25.1mPD, Floor No.: G/F) (AQO standard: $40\mu\text{g}/\text{m}^3$)

Project: Section 16 Planning Application for Proposed Amendments to an Approved Scheme (under Application No. A/H6/91 with Minor Relaxation of Plot Ratio Restriction Approved) for Permitted Flat Use at 4, 4A, 4B and 4C Tai Hang Road, Hong Kong

RAMBOLL

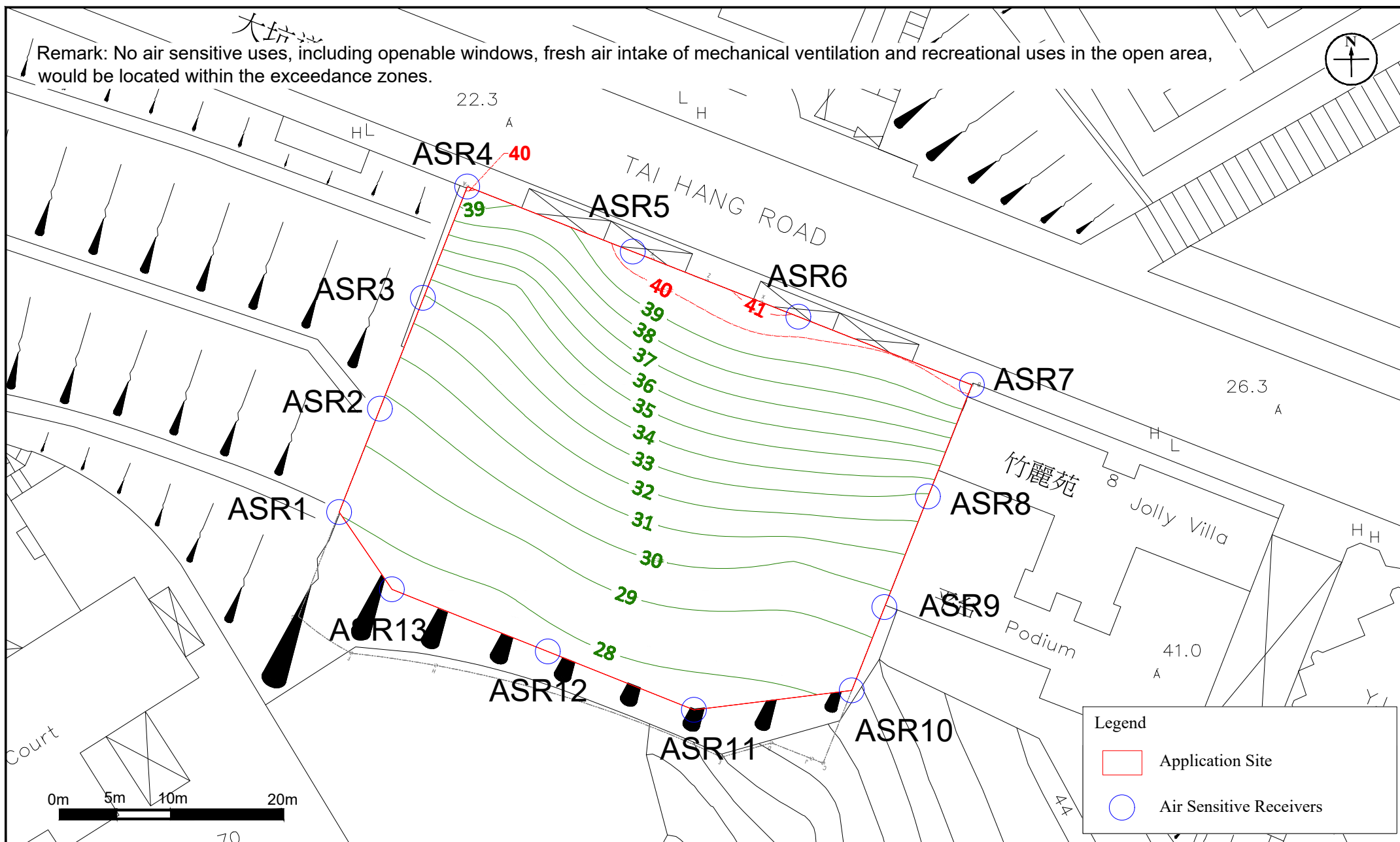
Drawn by: SC

Checked by: CC

Rev.: 4.1

Date: Jul 2026

Remark: No air sensitive uses, including openable windows, fresh air intake of mechanical ventilation and recreational uses in the open area, would be located within the exceedance zones.



Appendix: 3.2f

Title: Contour Map of Annual Average Concentration of NO₂ in µgm⁻³
(Assessment Level: 40.05mPD, Floor No.: 5/F) (AQO standard: 40µgm⁻³)

Project: Section 16 Planning Application for Proposed Amendments to an Approved Scheme (under Application No. A/H6/91 with Minor Relaxation of Plot Ratio Restriction Approved) for Permitted Flat Use at 4, 4A, 4B and 4C Tai Hang Road, Hong Kong

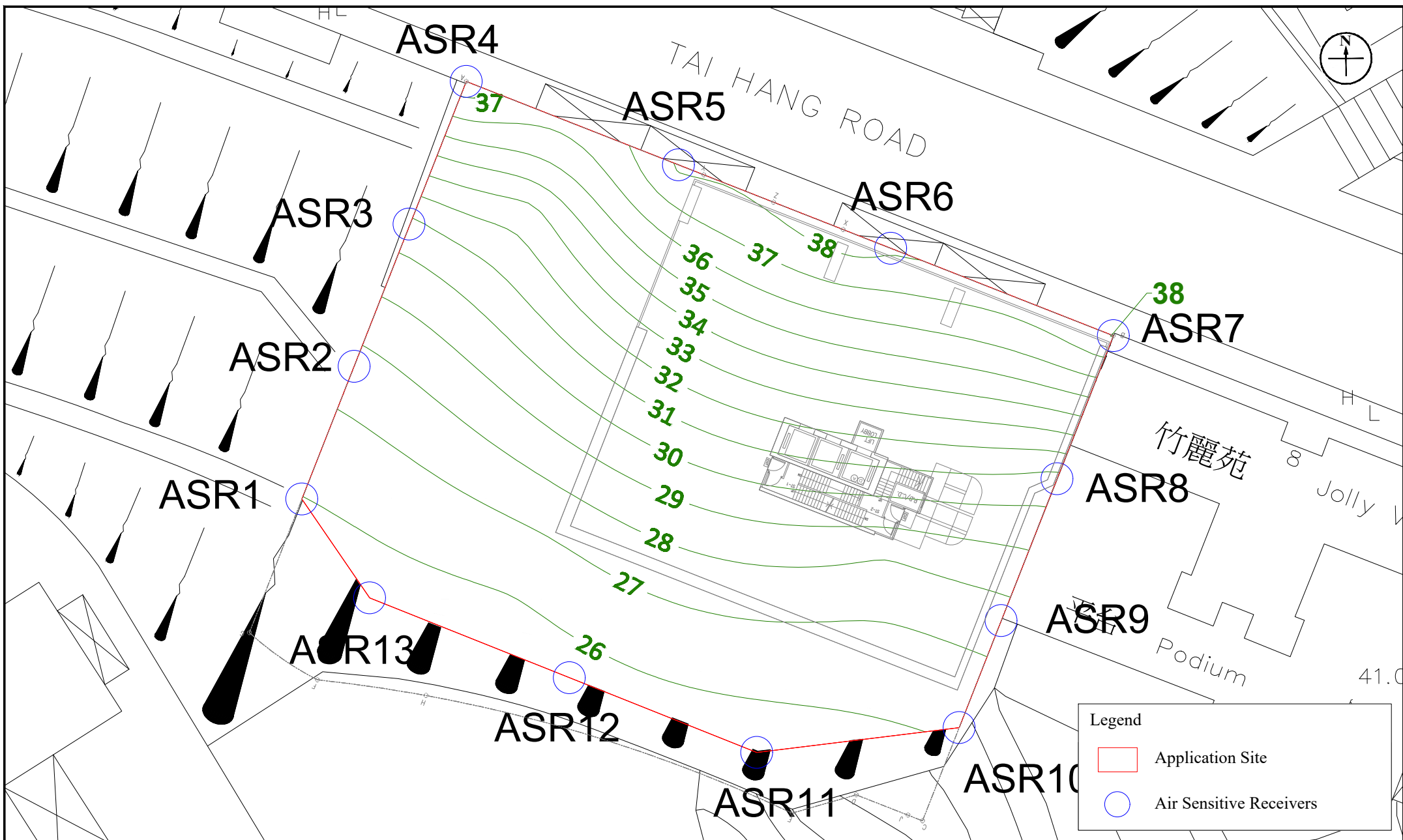
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Checked by: CC

Rev.: 4.1

Date: Jul 2026



Appendix: 3.2g

Title: Contour Map of Annual Average Concentration of NO₂ in µgm⁻³
(Assessment Level: 43.55mPD, Floor No.: 6/F) (AQO standard: 40µgm⁻³)

Project: Section 16 Planning Application for Proposed Amendments to an Approved Scheme (under Application No. A/H6/91 with Minor Relaxation of Plot Ratio Restriction Approved) for Permitted Flat Use at 4, 4A, 4B and 4C Tai Hang Road, Hong Kong

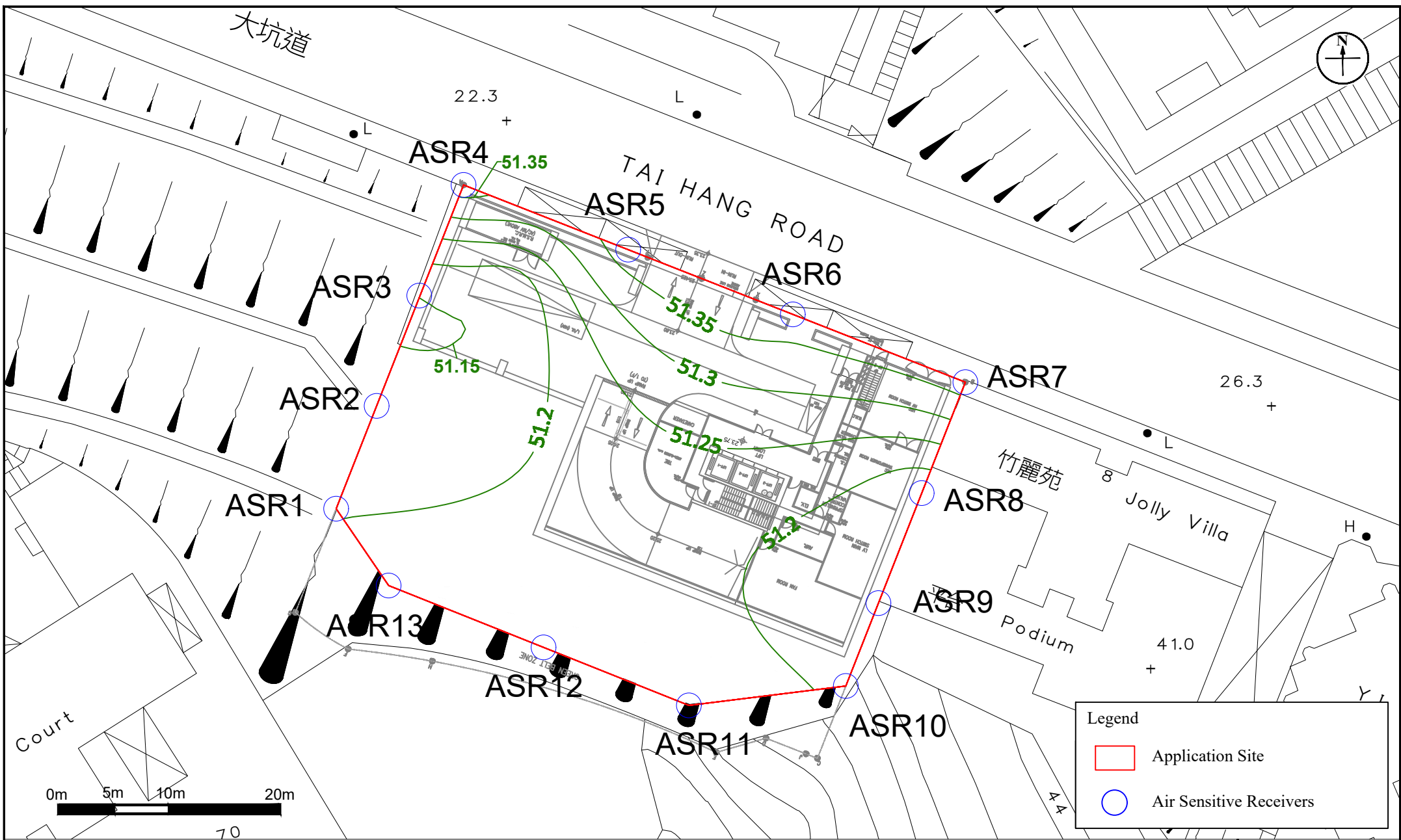
RAMBOLL

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Rev.: 4.1

Date: Jul 2026



Appendix: 3.1h

Title: Contour Map of the 10th Highest Daily Average Concentration of RSP in μgm^{-3}
(Assessment Level: 25.1mPD, Floor No.: G/F) (AQO standard: $75\mu\text{gm}^{-3}$)

Project: Section 16 Planning Application for Proposed Amendments to an Approved Scheme (under Application No. A/H6/91 with Minor Relaxation of Plot Ratio Restriction Approved) for Permitted Flat Use at 4, 4A, 4B and 4C Tai Hang Road, Hong Kong

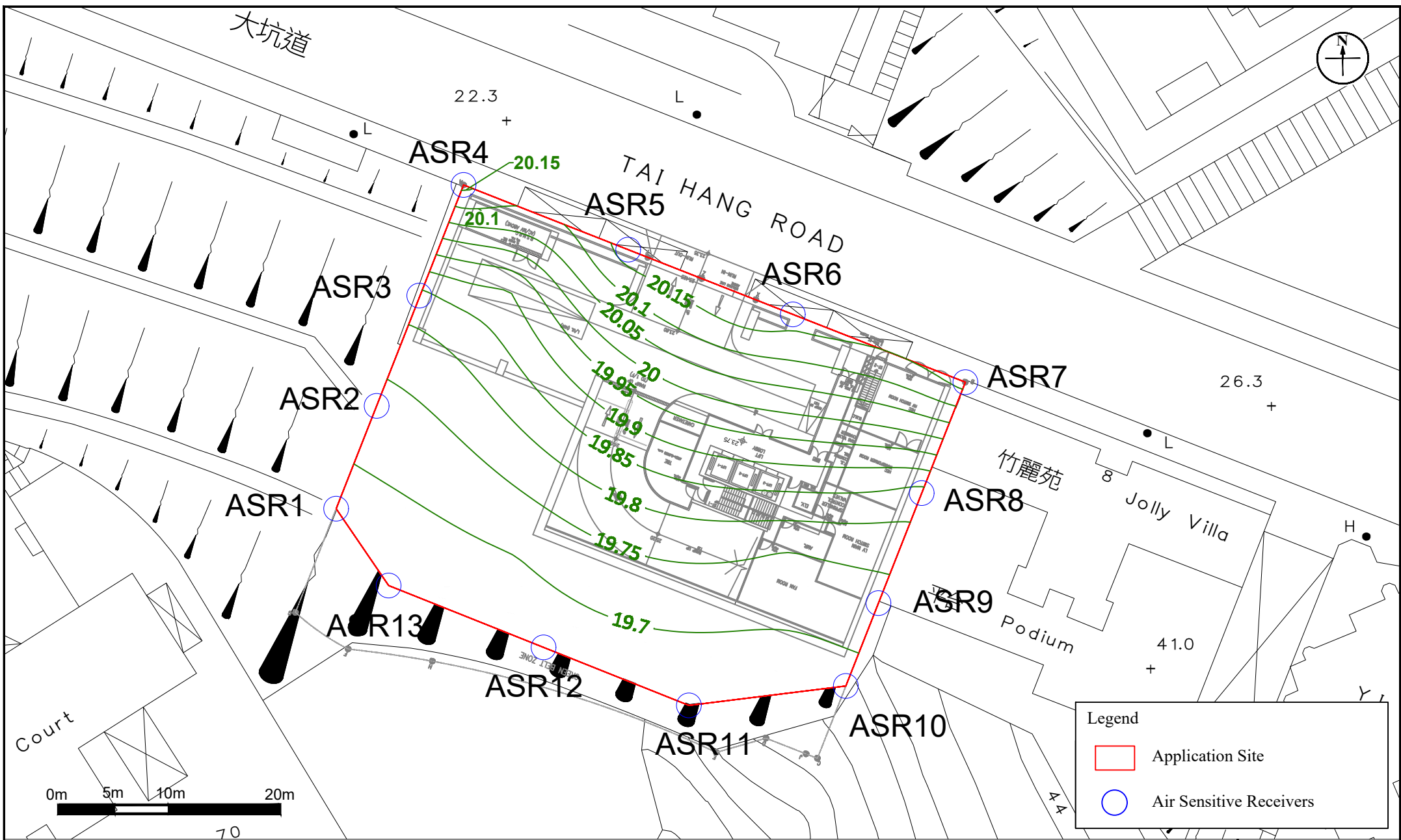
RAMBOLL

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Checked by: CC

Rev.: 4.1

Date: Jul 2026



Appendix: 3.1i

Title: Contour Map of Annual Average Concentration of RSP in $\mu\text{g}/\text{m}^3$
(Assessment Level: 25.1mPD, Floor No.: G/F) (AQO standard: $30\mu\text{g}/\text{m}^3$)

Project: Section 16 Planning Application for Proposed Amendments to an Approved Scheme (under Application No. A/H6/91 with Minor Relaxation of Plot Ratio Restriction Approved) for Permitted Flat Use at 4, 4A, 4B and 4C Tai Hang Road, Hong Kong

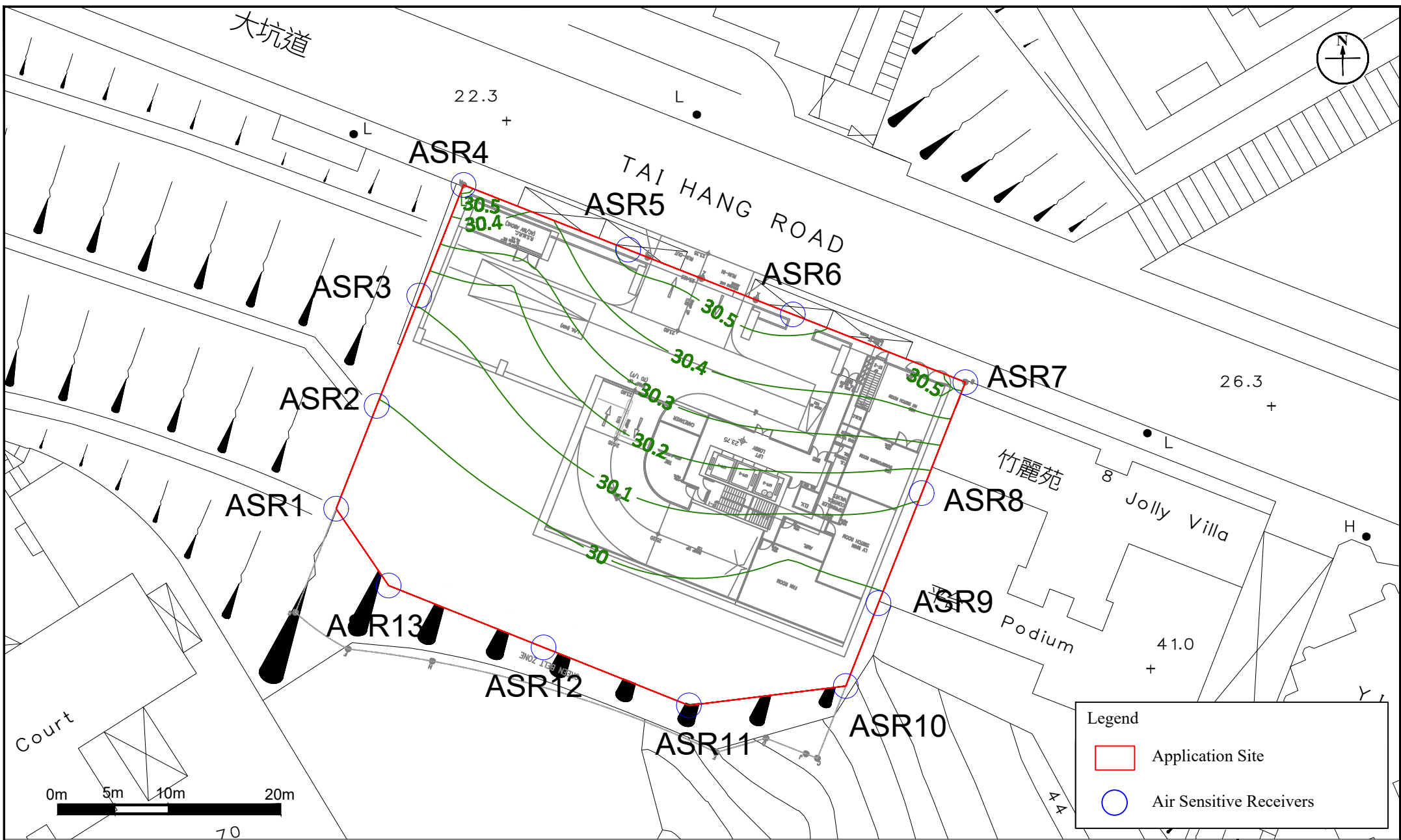
RAMBOLL

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Date: Jul 2026



Appendix: 3.1j

Title: Contour Map of the 19th Highest Daily Average Concentration of FSP in μgm^{-3}
(Assessment Level: 25.1mPD, Floor No.: G/F) (AQO standard: 37.5 μgm^{-3})

Project: Section 16 Planning Application for Proposed Amendments to an Approved Scheme (under Application No. A/H6/91 with Minor Relaxation of Plot Ratio Restriction Approved) for Permitted Flat Use at 4, 4A, 4B and 4C Tai Hang Road, Hong Kong

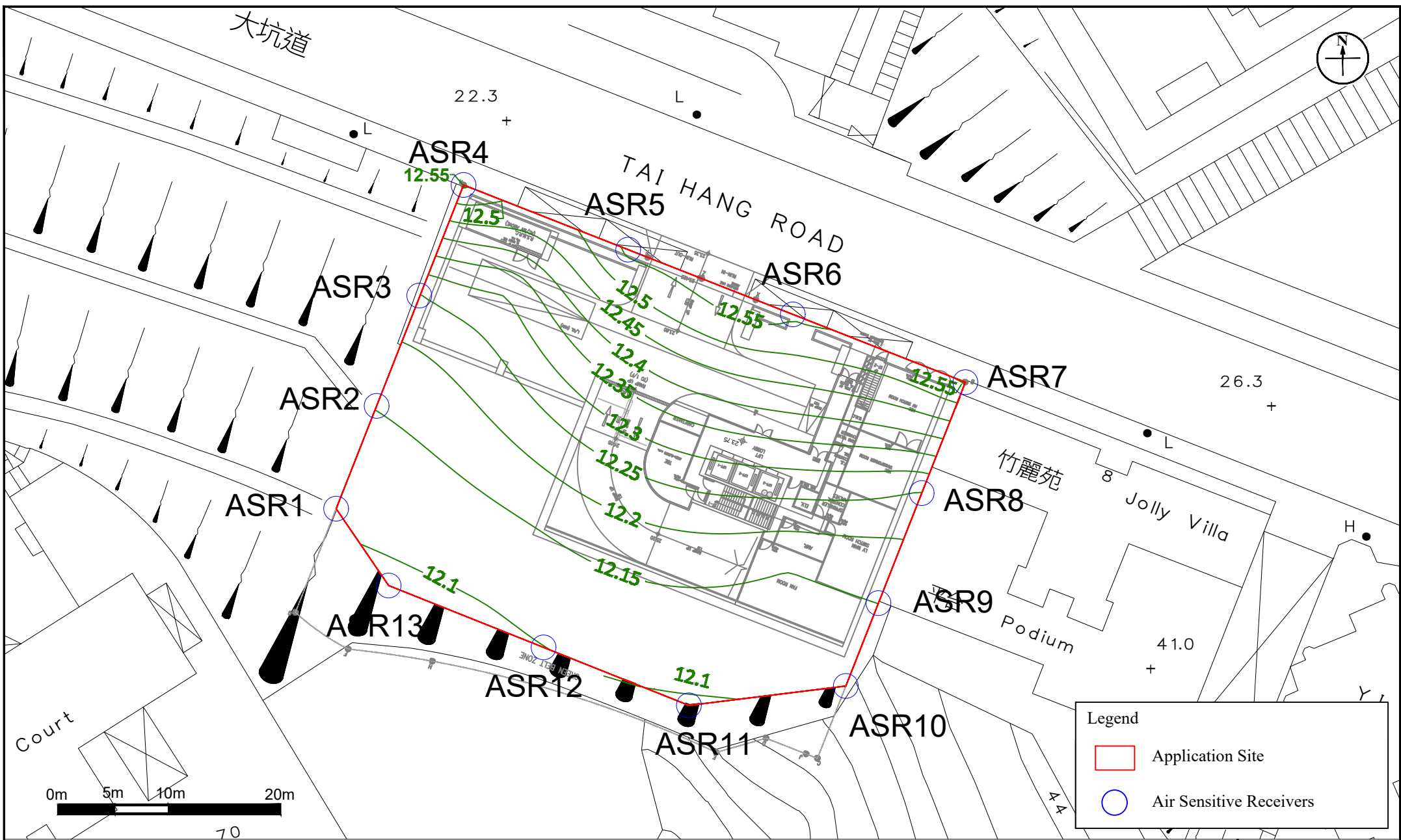
RAMBOLL

Drawn by: SC

Checked by: CC

Rev.: 4.1

Date: Jul 2026



Appendix: 3.1k

Title: Contour Map of Annual Average Concentration of FSP in $\mu\text{g}/\text{m}^3$
(Assessment Level: 25.1mPD, Floor No.: G/F) (AQO standard: $15\mu\text{g}/\text{m}^3$)

Project: Section 16 Planning Application for Proposed Amendments to an Approved Scheme (under Application No. A/H6/91 with Minor Relaxation of Plot Ratio Restriction Approved) for Permitted Flat Use at 4, 4A, 4B and 4C Tai Hang Road, Hong Kong

RAMBOLL

Drawn by: SC

Checked by: CC

Rev.: 4.1

Date: Jul 2026

Attachment 4 –

Revised Sewerage Impact Assessment

Issue No. : Issue 4
Issue Date : July 2026
Project No. : 1947



SEWERAGE IMPACT ASSESSMENT

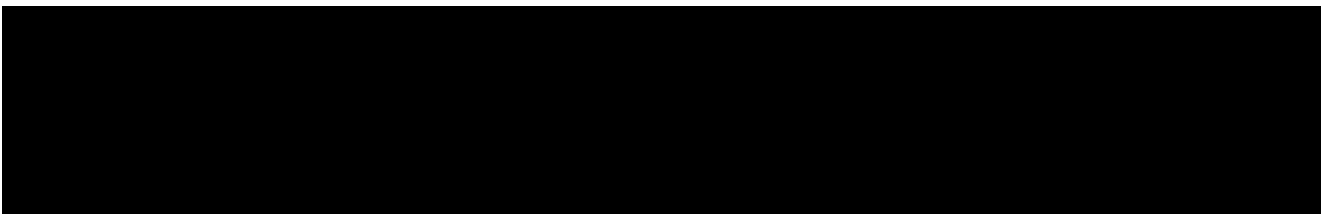
FOR

**SECTION 16 PLANNING
APPLICATION FOR PROPOSED
AMENDMENTS TO AN
APPROVED SCHEME (UNDER
APPLICATION NO. A/H6/91
WITH MINOR RELAXATION OF
PLOT RATIO RESTRICTION
APPROVED) FOR PERMITTED
FLAT USE AT 4, 4A, 4B AND 4C
TAI HANG ROAD, HONG KONG**

Prepared by

Allied Environmental Consultants Limited

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Document Verification



Project Title Section 16 Planning
Application for Proposed
Amendments to an
Approved Scheme (under
Application No. A/H6/91
with Minor Relaxation of
Plot Ratio Restriction
Approved) for Permitted
Flat Use at 4, 4A, 4B and
4C Tai Hang Road, Hong
Kong

Project No.
1947

Document Title Sewerage Impact Assessment

Issue No.	Issue Date	Description	Prepared by	Checked by	Approved by
1	September 2021	1 st Submission	Chris Lo	Joanne Ng	Grace Kwok
2	October 2021	2 nd Submission	Chris Lo	Joanne Ng	Grace Kwok
3	December 2022	3 rd Submission	Carmen Tam	Joanne Ng	Grace Kwok
3	April 2026	4 th Submission	Zi Xuan	Joanne Ng	Grace Kwok
4	July 2026	5 th Submission	Zi Xuan	Joanne Ng	Grace Kwok

Chris Zi Xuan Joanne Ng

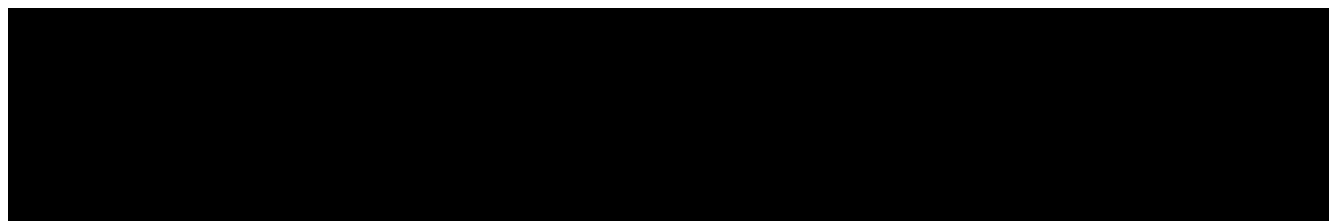


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1. Introduction

- 1.1.1. A planning application No. A/H6/91 was submitted to the Town Planning Board (the Board) on 4 June 2021 under Section 16 of the Town Planning Ordinance for Proposed Minor Relaxation of Plot Ratio (PR) Restriction from 5 to 5.687 for Permitted Flat Use at 4, 4A, 4B and 4C Tai Hang Road, Hong Kong (Application Site). The application was approved with conditions by the Board on 14 January 2022. The previous Sewerage Impact Assessment (SIA) report (Issue 2) in support of the Approved Scheme was accepted by DSD and EPD.
- 1.1.2. Subsequent to the approval of the above planning application, the Applicant has been actively proceeding with the detailed design and implementation of the residential development. In response to the latest market trend and to address the continuous housing demand in Hong Kong, the Applicant hereby submits the current application to propose amendments to the Approved Scheme to increase the number of units from 61 to 176, with no change to other major development parameters including GFA, PR and number of storeys as compared with the Approved Scheme. Allied Environmental Consultants Limited (AEC) has been appointed to conduct the current SIA (Issue 3) for the current application.
- 1.1.3. The layout plan updates between approved Issue 2 and Issue 3 are summarized as shown in **Table 1-1**. In view of updates of the layout plan, 72 residential unit (R1 type), 90 residential unit (R2 type) and 14 residential unit (R3 type) were noted. Hence, this SIA report is updated to reflect the change.

Table 1-1 Comparison of number of residential units in approved Issue 2 and Issue 3

Residential Unit Category	Approved Issue 2	Issue 3	Remark
	Number of Unit		
R1 Type	0	72	The GFA of unit is <50 m ²
R2 Type	12	90	The GFA of unit is >50 and <110m ²
R3 Type	49	14	The GFA of unit is >110m ²
Total	61	176	

2. Objectives

- 2.1.1. Main objectives of the study are to evaluate potential sewerage impacts based on estimated sewage generation, and to recommend appropriate options for sewage discharge from the Proposed Development.

3. Description of the Proposed Development

- 3.1.1. The Application Site is located within Inland Lot No. 7426 zoned Residential (Group B) ("R(B)") on the Approved Causeway Bay Outline Zoning Plan No. S/H6/17, in the vicinity of the Application Site include Winway Court, Jolly Villa, Y.I. and Illumination Terrace on the lower Tai Hang Road, and Trafalgar Court and The Elegance on the upper Tai Hang Road. Its surrounding areas are zoned Residential (Group B) ("R(B)"), and Green Belt ("GB"). Location of the Application Site is shown in **Figure 3-1**.
- 3.1.2. The Proposed Development comprise of 1 no. residential tower, podium and 3 levels of carpark. The Proposed Development is expected to be operated in Year 2030.

4. Description of Sewerage System

- 4.1.1. Drainage record plans were obtained from the drawing office of the Drainage Services Department (“DSD”) and the Application Site is indicated on the drainage record plans as shown in **Figure 3-1**. Concerned sewerage network was identified for succeeding estimation of the potential sewerage impact to the downstream sewers associated with the Proposed Development.
- 4.1.2. The sewerage network of existing gravity sewers along Tai Hang Road collects sewage generated from the Proposed Development, via the public sewage manholes FMH7013366 and FMH7013365. The sewage discharged from the Proposed Development is conveyed to North Point Preliminary Treatment Works, and discharged to **Stonecutters Island Sewage Treatment Works** (SCISTW) for further treatment and ultimate disposal.

5. Legislation, Standards and Guidelines

- 5.1.1. Water quality in Hong Kong is legislated by the provisions of the Water Pollution Control Ordinance (Cap 358), 1980 (WPCO). Territorial Water has been subdivided into ten Water Control Zones (WCZ) and four supplementary water control zones. A Technical Memorandum on Standards for Effluents discharged into Drainage and Sewerage Systems, Inland and Coastal Water (TMES) has been issued, which requires licensing of all discharges into all public sewers and drains. The water quality standards will have to be met during the operation stage.
- 5.1.2. Besides as stipulated in the Building (Standards of Sanitary Fitments, Plumbing, Drainage Works and Latrines) Regulations 41(1), 40(2), 41(1), 90 and recap in ProPECC PN 1/23, domestic sewage should be discharged to a foul water sewer and surface water should be discharged via rainwater pipes to stormwater drains during operation phase.
- 5.1.3. The following standards and guidelines are adopted for estimation, assessment and evaluation of sewerage implication of the Proposed Development:
- “Hong Kong Planning Standards and Guidelines” issued by the Planning Department;
 - “Sewerage Manual Part 1” published by DSD; and

- “Guidelines for Estimating Sewage Flows for Sewage Infrastructure Planning Version 1.0 (Report No.: EPD/TP1/05)” (“GESF”) published by Environmental Protection Department (“EPD”).

6. Estimation of Sewage Flow and Peak Discharge

6.1. Methodology for Estimation of Average Dry Weather Flow

- 6.1.1. With reference to the GESF, the Unit Flow Factors (“UFF”) for different types of population as shown in **Table 6-1** have been used in calculation of sewerage flow from the Proposed Development.

Table 6-1 Global Unit Flow Factors

Development Type	Unit	UFF (m ³ /day)
Domestic Flow ^[1] ^[2]		
Residential R1	Person	0.19
Residential R2	Person	0.27
Residential R3	Person	0.37
Commercial Flow ^[2]		
Job Type J11, Community, Social & Personal Services	Employee	0.28

Notes:

^[1] Initial flat size assumptions in are based on Table 8 in Chapter 2 of “Hong Kong Planning Standards and Guidelines”. Assumption values under the category of Hong Kong & Kowloon is selected.

^[2] UFFs for various occupancy types are adopted according to Table T-1 and Table T-2 of the GESF.

6.2. Estimation of Sewage Flow from Proposed Development

- 6.2.1. With reference to **Table 6-2**, the total estimated Average Dry Weather Flow (“ADWF”) from the Proposed Development is 112.9m³/day. The population estimated ADWF of Proposed Development are summarized in **Appendix 6-1**.

Table 6-2 Sewage Flow Estimation for the Proposed Development

Type of Occupancy ^[1]	Population ^[1]	Category ^[3]	UFF (m ³ /day)	ADWF (m ³ /day)
Proposed Development (Domestic) ^[4]	187 Persons ^[2]	Domestic Private R1	0.19	35.6
	234 Persons ^[2]	Domestic Private R2	0.27	63.2
	36 Persons ^[2]	Domestic Private R3	0.37	13.5

Type of Occupancy ^[1]	Population ^[1]	Category ^[3]	UFF (m ³ /day)	ADWF (m ³ /day)
Clubhouse (Non-Domestic) ^[5,6]	2 Employees	Job Type J11, Community, Social & Personal Services	0.28	0.6
Total				112.9

Notes:

[1] Based on the latest layout plan, the design flat mix for the Proposed Development are 72 flats with GFA less than 50m² (i.e. "Domestic Private R1"), 90 flats with GFA between 50m² to 110m² (i.e. "Domestic Private R2"), and 14 flats of GFA of larger than 110m² (i.e. "Domestic Private R3").

[2] According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.

[3] Categories of UFFs are selected according to Table T-1 and Table T-2 in GESF.

[4] For floor area less than 50m², UFF of "Domestic Private R1" is deployed (i.e. 0.19 m³/day); for floor area between 50m² and 110m², UFF of "Domestic Private R2" is deployed (i.e. 0.27 m³/day); while, for floor area larger than 110m², UFF of "Domestic Private R3" is deployed (i.e. 0.37 m³/day).

[5] UFF of "Job Type J11 Community, Social & Personal Services" is adopted. UFF for each employee is the sum of UFF of "Commercial Employee" (i.e. 0.08m³/day) and UFF of "Job Type J11 Community, Social & Personal Services" (i.e. 0.20m³/day).

[6] As advised by Project team.

6.3. Estimation of Sewage Flow from Upstream and Downstream Catchments

6.3.1. Different catchment areas are defined as shown in **Figure 6-1** to consider upstream and downstream sewage generation.

6.3.2. Based on information collected from desktop study, population estimations and sewage flow from different catchments at the study area are calculated as given in **Appendix 6-2** and **Appendix 6-3**.

6.4. Estimation of Peak Discharge

6.4.1. Catchment inflow factor ("P_{cif}") caters for the net overall ingress of wastewater to the sewerage system. They are catchment-dependent and applicable to major sewerage facilities of a catchment.

6.4.2. As mentioned in **Section 4.1.2**, sewage discharged from concerned catchments is conveyed to North Point Preliminary Treatment Works, and discharged to the SCISTW. In accordance with Table T-4 and Annex 1 of Appendix VII - Part 1 of the GESF, the P_{cif} of 1.0 is adopted for existing sewerage because concerned sewerage system is identified in North Point.

- 6.4.3. Revised average dry weather flow (“revised ADWF”) is determined by production of average dry weather flow and catchment inflow factor. Contributing population is then calculated by dividing the revised ADWF by 0.27. The calculated contributing population is finally used for selection of peaking factors.
- 6.4.4. Based on **Table 6-3** which is also presented in Table T-5 in GESF, the peaking factors for each sewer are chosen in the hydraulic calculation for peak flow estimation.

Table 6-3 Peaking Factors

Population Range for Sewers ^{[1] [2]}	Peaking Factor (including storm water allowance) for facility with existing upstream sewerage	Peaking Factor (excluding storm water allowance) for facility with new upstream sewerage
< 1000	8	6
1000 - 5000	6	5
5000 - 10000	5	4
10000 - 50000	4	3
> 50000	Max (7.3 / N ^{0.15} , 2.4)	Max (6 / N ^{0.175} , 1.6)

Notes:

[1] N is the contributing population in thousands.

[2] According to Section 12.1 of GESF, Contributing Population = Calculated Total Average Flow (m³/day) ÷ 0.27 (m³/person/day)

6.5. Peak Discharge from Proposed Development and Catchment Areas

- 6.5.1. Flow rates of peak discharge from the Proposed Development and other catchment areas are estimated in accordance with the DSD’s “Sewerage Manual Part 1”. Peak flows from Proposed Development at the study area under future condition are summarized in **Table 6-4**.

Table 6-4 Population and Sewage Flow Estimation under Future Condition

Contributing Catchment Area ^[4]	Sewer No.				Contributing Population ^[2]	Peaking Factor ^[3]	Revised ADWF (m ³ /day) ^[1]	Total Peak Discharge (with Swimming pool) ^[5] (m ³ /s)
	ID	From	ID	To				
<u>Proposed Development</u>	1	FMH7013366	2	FMH7013365	418	8.0	113	0.010
Proposed Development + A + B + C + D + E + F + G + H + I	2	FMH7013365	3	FMH7013351	18785	4.0	5072	0.502
Proposed Development + A + B + C + D + E + F + G + H + I	3	FMH7013351	4	FMH7013350	18785	4.0	5072	0.502
Proposed Development + A + B + C + D + E + F + G + H + I	4	FMH7013350	5	FMH7047900	18785	4.0	5072	0.502
Proposed Development + A + B + C + D + E + F + G + H + I	5	FMH7047900	6	FMH7063779	18785	4.0	5072	0.502
Proposed Development + A + B + C + D + E + F + G + H + I	6	FMH7063779	7	FMH7063780	18785	4.0	5072	0.502
Proposed Development + A + B + C + D + E + F + G + H + I + <u>J</u>	7	FMH7063780	8	FMH7013348	19537	4.0	5275	0.519
Proposed Development + A + B + C + D + E + F + G + H + I + <u>J</u>	8	FMH7013348	9	FMH7013335	19537	4.0	5275	0.519

Notes:[1] Revised ADWF (m³/day) = ADWF (m³/day) × Catchment Inflow Factor[2] According to Section 12.1 of GESF, Contributing Population = Calculated Total Average Flow (m³/day) ÷ 0.27 (m³/person/day)

[3] According to Table T-5 of GESF.

[4] Underlined and bold means it is a new contributing for the sewer.

[5] Total Peak Discharge (With Swimming Pool) (m³/s) = (Revised ADWF (m³/day) × Peaking Factor ÷ 86400s/day) + Swimming Pool Backwash (m³/s)

7. Sewer Capability

- 7.1.1. The Colebrook White's equation is adopted for hydraulic analysis of the sewerage system. Various roughness coefficients, k_s , are adopted in accordance with Table 5 of DSD's "*Sewerage Manual Part 1*".
- 7.1.2. Occupancy rate and capacity of the sewerage system are tabulated in **Table 7-1** and detailed calculation is given in **Appendix 7-1**.

Table 7-1 Occupancy Rate of Concerned Foul Sewers

Contributing Catchment Area ^[2]	ID	From	ID	To	Total Peak Discharge (with Swimming pool) (m ³ /s)	Maximum Capacity (m ³ /s)	Occupancy Rate (%) ^[1]
Proposed Development	1	FMH7013366	2	FMH7013365	0.010	0.118	8.9
Proposed Development + A + B + C + D+ E+ F+ G + H + I	2	FMH7013365	3	FMH7013351	0.502	0.577	85.5
Proposed Development + A + B + C + D+ E+ F+ G + H + I	3	FMH7013351	4	FMH7013350	0.502	0.744	67.5
Proposed Development + A + B + C + D+ E+ F+ G + H + I	4	FMH7013350	5	FMH7047900	0.502	0.744	67.5
Proposed Development + A + B + C + D+ E+ F+ G + H + I	5	FMH7047900	6	FMH7063779	0.502	0.744	67.5
Proposed Development + A + B + C + D+ E+ F+ G + H + I	6	FMH7063779	7	FMH7063780	0.502	0.744	67.5
Proposed Development + A + B + C + D+ E+ F+ G + H + I + J	7	FMH7063780	8	FMH7013348	0.519	0.744	69.7
Proposed Development + A + B + C + D+ E+ F+ G + H + I + J	8	FMH7013348	9	FMH7013335	0.519	1.116	46.5

Notes:

[1] Occupancy Rate = Peak Discharge (m³/s) ÷ Maximum Capacity (m³/s)

[2] Underlined and bold means it is a new contributing for the sewer.

7.1.3. Calculation results summarized in **Table 7-1** indicated that the total peak flow occupancy of the sewer pipes is ranging from 8.9% to 85.5%. It is demonstrated that the existing sewerage system has sufficient capacity to cater for the sewage generated from the Proposed Development in the future.

7.1.4. According to the *Drainage Services Department in Brief 2024-25*, the treatment capacity of the SCISTW is 2,450,000m³/day. The sewage loading from the Proposed Development takes up 0.005% in capacity of the SCISTW, which remains with generous capacity to cater for the increase in sewage generated by the Proposed Development.

7.1.5. Owing to the insignificant contribution of sewage generation from Proposed Development to the existing sewerage system, and to the capacity of SCISTW, no adverse impact to public sewerage system associated with the Proposed Development is expected.

8. Liability

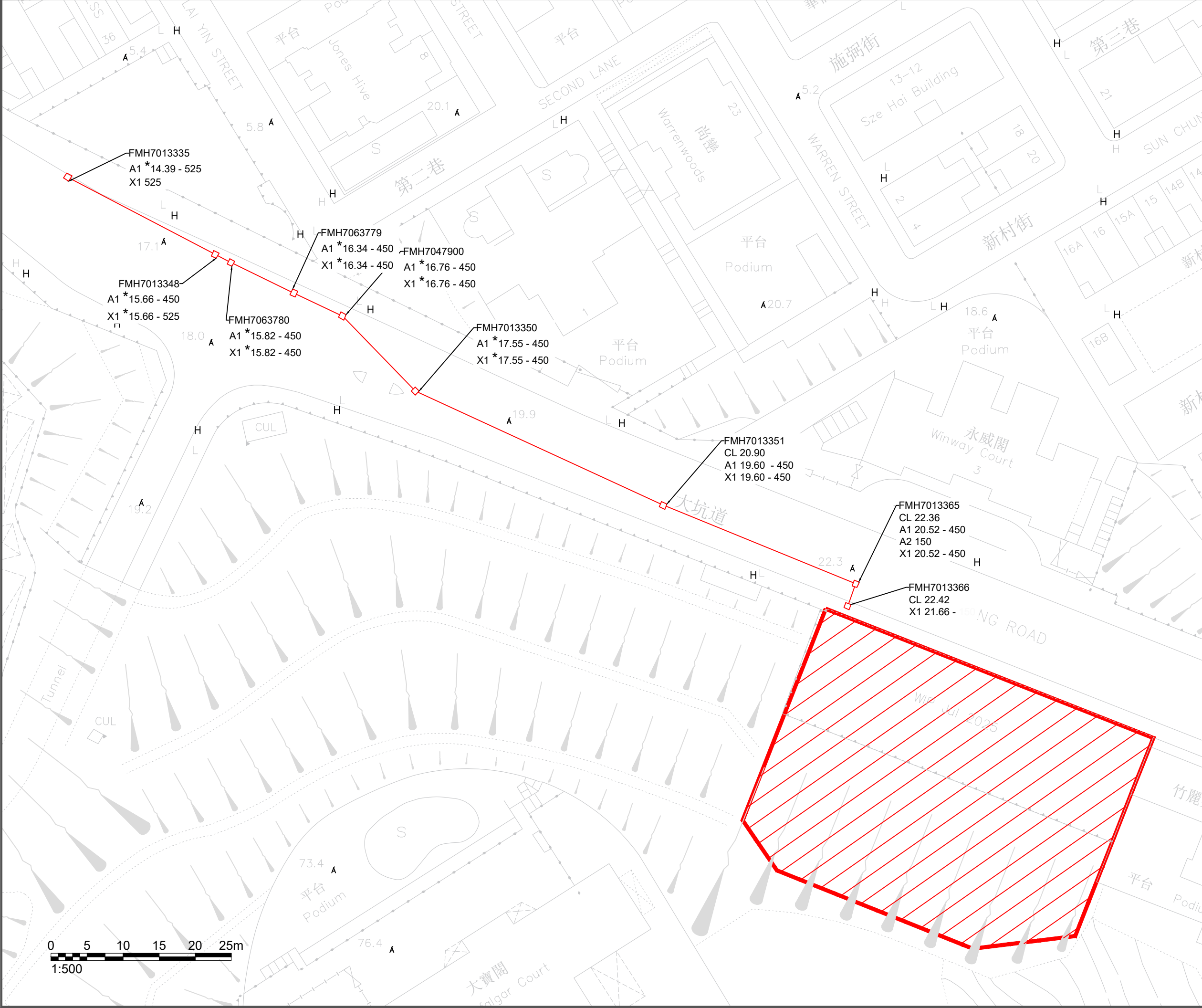
8.1.1. The project proponent will be responsible for construction of the proposed sewers and manholes, for future connection to public sewage system, while future maintenance of the sewers outside the Application Site boundary will be carried out by the DSD.

8.1.2. During operation phase, regular inspection of the sewers within the Application Site should be conducted by the property management office to ensure proper performance. Regular maintenance should also be carried out in accordance with standard practices stated in the DSD's "*Sewerage Manual Part 1*".

9. Conclusions

9.1.1. Sewerage impact assessment has been conducted for the Proposed Development. The result showed that 0.010m³/s of peak sewage discharge is expected to be generated from the Proposed Development upon full occupancy.

9.1.2. Given the negligible sewage flow generated by the Proposed Development, no adverse impacts on the existing public sewerage network or the capacity of the Stonecutters Island Sewage Treatment Works (SCISTW) are anticipated.



- NOTES :
-  Application Site
 -  Existing Sewerage System
 -  Assumption based on Interpolation

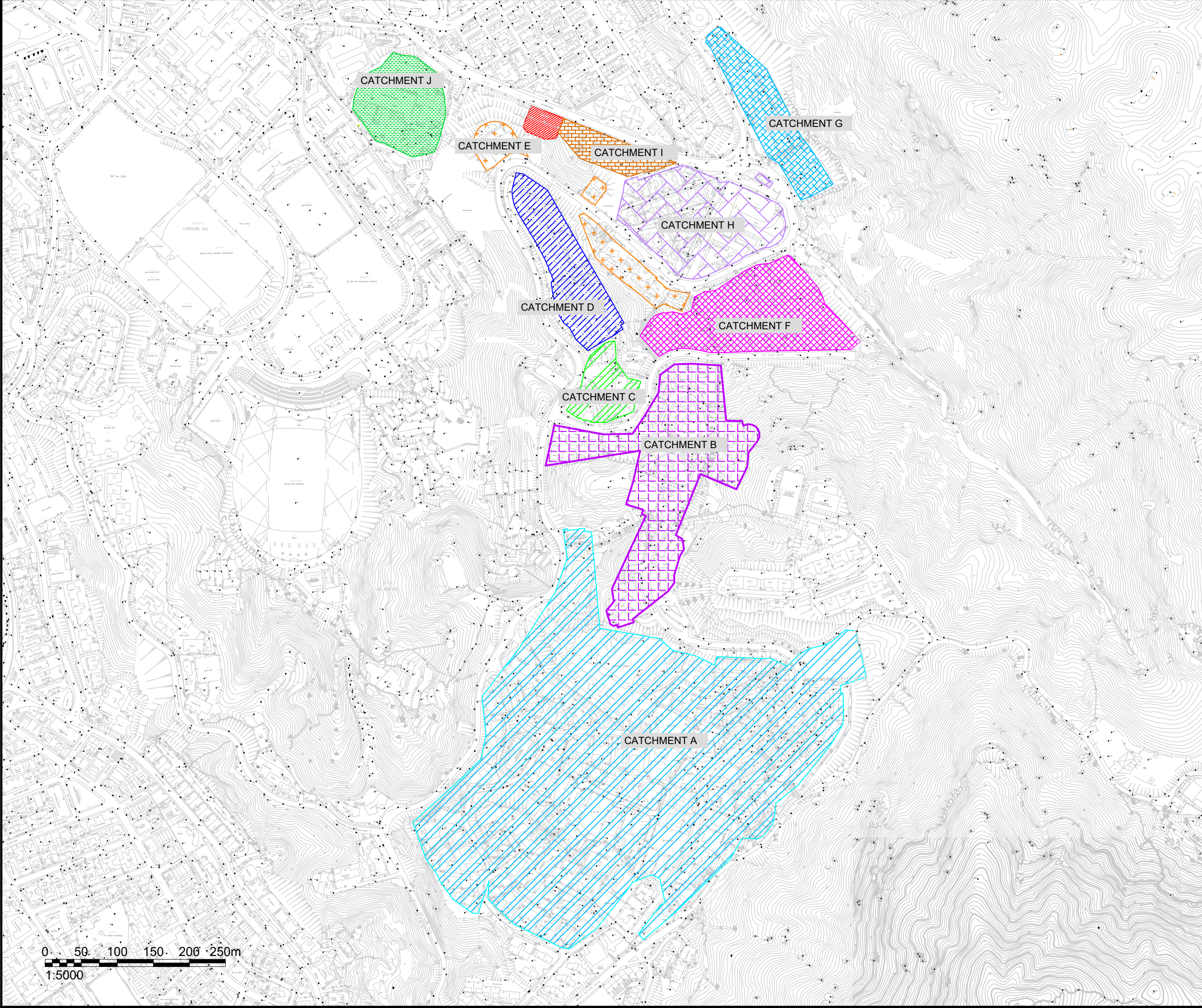
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AEC

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Project No. : 1947	
Drawn By : ZX	
Project : Section 16 Planning Application for Proposed Amendments to an Approved Scheme (under Application No. A/H6/91 with Minor Relaxation of Plot Ratio Restriction Approved) for Permitted Flat Use at .4, 4A, 4B & 4C Tai Hang Road, Hong Kong	
Drawing Title : Application Site Location & Existing Sewerage System	
Drawing No : Figure 3-1	Revision : 1
Scale : As Shown	Date : July 2026
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- NOTES :
- Application Site
 - Catchment A
 - Catchment B
 - Catchment C
 - Catchment D
 - Catchment E
 - Catchment F
 - Catchment G
 - Catchment H
 - Catchment I
 - Catchment J

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Project No. : 1947	
Drawn By : ZX	
Project : Section 16 Planning Application for Proposed Amendments to an Approved Scheme (under Application No. A/H6/91 with Minor Relaxation of Plot Ratio Restriction Approved) for Permitted Flat Use at .4, 4A, 4B & 4C Tai Hang Road, Hong Kong	
Drawing Title : Application Site & Catchment Areas	
Drawing No : Figure 6-1	Revision : 1
Scale : As Shown	Date : July 2026
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Project No. 1947

Sewerage Impact Assessment for Section 16 Planning Application for Proposed Amendments to an Approved Scheme (under Application No. A/H6/91 with Minor Relaxation of Plot Ratio Restriction Approved) for Permitted Flat Use at 4, 4A, 4B and 4C Tai Hang Road, Hong Kong

Appendix 6-1

Estimation of Sewerage Flow from the Proposed Development

Appendix 6-1 : Estimation of Sewerage Flow from the Proposed Development

Type of Occupancy	Number of Unit [2]	Household Size [5]	Population Growth Rate [1]	No. of Occupancy [2]	Unit Flow Factor		Total Average Sewage Discharge (m ³ /day) [4]	Remark
					Category [3]	m ³ /day		
Residential	72	2.6	0.0%	187	T1, Domestic (private permanent housing R1)	0.19	35.6	The area of unit is approx <50 m2. Therefore, Type R1 is adopted.
Residential	90	2.6	0.0%	234	T1, Domestic (private permanent housing R2)	0.27	63.2	The area of unit is approx >50 and <110m2. Therefore, Type R2 is adopted.
Residential	14	2.6	0.0%	36	T1, Domestic (private permanent housing R3)	0.37	13.5	The area of unit is >110m2. Therefore, Type R3 is adopted.
Clubhouse	-	N/A	-	2	Community, Social & Personal Services	0.28	0.6	-
176				458			112.9	

Notes:

[1] According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.

[2] Information provided by Applicant, the design flat mix for the Proposed Redevelopment are 72 flats with floor areas less than 50m2 (i.e. "Domestic Private R1"), 102 flats with floor areas between 50m2 to 110m2 (i.e. "Domestic Private R2"), and 2 flats of floor area of larger than 110m2 (i.e. "Domestic Private R3"). The design occupancy for the Proposed Redevelopment is 187 persons for "Domestic Private R1", 265 persons for "Domestic Private R2" and 6 persons for "Domestic Private R3".

[3] The unit flow factor is made reference to "Guidelines for Estimating Sewage Flows for Sewage Infrastructure Planning (Version 1.0)", published by EPD.

[4] The presented value of Average Dry Weather Flow would be slightly different to the value from manual calculation due to numerical round-off.

[5] According to 2021 Population Census, the average Household Size in Wan Chai is 2.6 persons.

Project No. 1947

Sewerage Impact Assessment for Section 16 Planning Application for Proposed Amendments to an Approved Scheme (under Application No. A/H6/91 with Minor Relaxation of Plot Ratio Restriction Approved) for Permitted Flat Use at 4, 4A, 4B and 4C Tai Hang Road, Hong Kong

Appendix 6-2

Population Estimation for Catchment Areas

Appendix 6-2 Population Estimation for Catchment Areas

Operation Year	2030
By Census Year	2021

Catchment A

Description		Reference
A1	Buddhist Li Ka Shing Care and Attention Home for the Elderly	
	Total Area (m2)	521
	Number of Floors	11
	Total Floor Area (m2)	5731
	Worker Density (per 100m2)	3.3 The development is used as a care home. With reference to CIFSUS, the worker density for Community, Social & Personal Services is adopted (https://www.pland.gov.hk/pland_en/p_study/comp_s/cifsus/cifsusReport.pdf)
	Total Workers	190
	Bed Spaces	242 According to the information from Buddhist Li Ka Shing Care and Attention Home for the Elderly, there are 242 bed spaces for residents (http://bks.buddhist-hhckla.org/intro/)
Total Pop.		432
Description		Reference
A2	Jardini	
	Residential	
	No. of Households	114 Jardini Tai Hang Mid-Levels Estate Info Centaline Property
	Average Household Size (2021) in Wan Chai	2.6 https://www.census2021.gov.hk/en/district_profiles.html
	Total Pop.	297
	Average Population Growth Per Year	0.00% According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.
	Est. Pop. (persons) (2030)	297
Description		Reference
A3	Perkins Road Dairy Farm Shopping Centre	
	Total Pop.	31 According to information from Wellcome Supermarkets, there are approximately 8,700 employees across 280 stores in Hong Kong. (https://www.wellcome.com.hk/en/about-wellcome)
Description		Reference
A4	Tai Hang Road Petrol Filling Station	
	Total Area (m2)	92
	Number of Floors	1
	Total Floor Area (m2)	92
	Worker Density (per 100m2)	3.5 The development is a petrol filling station. With reference to CIFSUS, the worker density for Retail Trade is adopted (https://www.pland.gov.hk/pland_en/p_study/comp_s/cifsus/cifsusReport.pdf)
	Total Pop.	4
Description		Reference
A5	Villa De Perkins (7, 9, 11, 13, 15, 17, 19, 21 and 23 Perkins Road)	
	Residential	
	No. of Households	11 https://www.midland.com.hk/en/estate/Hong-Kong-Villa-De-Perkins-E000005982
	Average Household Size (2021) in Wan Chai	2.6 https://www.census2021.gov.hk/en/district_profiles.html
	Total Pop.	29
	Average Population Growth Per Year	0.00% According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.
	Est. Pop. (persons) (2030)	29
	Swimming Pool	
	Swimming Pool Area, m2	128
	Height of Swimming Pool, m	1.5
	Estimated volume of the Swimming pool, m ³	192
	Turnover Rate, hour	6 General Specification for Swimming Pool Water Treatment Installation in Government Buildings of The Hong Kong Special Administrative Region
	Surface Loading Rate of Filter, m ³ /m ² /hr	50 Swimming Pools: Design and Construction, Fourth Edition By Philip H. Perkins (50 m3/m2/hr adopted)
	Required Filter Area, m ²	0.64
	Backwash Duration (mins)	7.00 With reference to Section B8.5.5 of General Specification for Swimming Pool Water Treatment Installation in Government Buildings of the HKSAR published by the ArchSD, "the water velocity chosen shall be effective in cleaning the filter in duration of 7 minutes for sand filter".
	Backwash Flow Rate, m ³ /m ² /hr	30 Technical Paper - Domestic Swimming Pool Filtration by European Union of Swimmingpool and Spa Associations
	Maximum backwash volume, m ³	2.2
	Maximum backwash volume, L/s	7.47
	Maximum backwash volume, m3/s	0.007
Description		Reference
A6	No.25 Perkins Road	
	Residential	
	No. of Households	1 https://www.midland.com.hk/en/estate/Hong-Kong-Island-Jardine-s-Lookout-Tai-Hang-25-Perkins-Road-E000011818
	Average Household Size (2021) in Wan Chai	2.6 https://www.census2021.gov.hk/en/district_profiles.html
	Total Pop.	3
	Average Population Growth Per Year	0.00% According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.
	Est. Pop. (persons) (2030)	3
	Swimming Pool	
	Swimming Pool Area, m2	55
	Height of Swimming Pool, m	1.5
	Estimated volume of the Swimming pool, m ³	83
	Turnover Rate, hour	6 General Specification for Swimming Pool Water Treatment Installation in Government Buildings of The Hong Kong Special Administrative Region
	Surface Loading Rate of Filter, m ³ /m ² /hr	50 Swimming Pools: Design and Construction, Fourth Edition By Philip H. Perkins (50 m3/m2/hr adopted)
	Required Filter Area, m ²	0.28
	Backwash Duration (mins)	7.00 With reference to Section B8.5.5 of General Specification for Swimming Pool Water Treatment Installation in Government Buildings of the HKSAR published by the ArchSD, "the water velocity chosen shall be effective in cleaning the filter in duration of 7 minutes for sand filter".
	Backwash Flow Rate, m ³ /m ² /hr	30 Technical Paper - Domestic Swimming Pool Filtration by European Union of Swimmingpool and Spa Associations
	Maximum backwash volume, m ³	1.0
	Maximum backwash volume, L/s	3.21
	Maximum backwash volume, m3/s	0.003
Description		Reference
A7	Cavendish Heights	
	Residential	
	No. of Households	440 https://www.midland.com.hk/en/estate/Hong-Kong-Island-Jardine-s-Lookout-Tai-Hang-Cavendish-Heights-E00124
	Average Household Size (2021) in Wan Chai	2.6 https://www.census2021.gov.hk/en/district_profiles.html
	Total Pop.	1144
	Average Population Growth Per Year	0.00% According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.
	Est. Pop. (persons) (2030)	1144
	Swimming Pool (Large)	
	Swimming Pool Area, m2	251
	Height of Swimming Pool, m	1.5
	Estimated volume of the Swimming pool, m ³	377
	Turnover Rate, hour	6 General Specification for Swimming Pool Water Treatment Installation in Government Buildings of The Hong Kong Special Administrative Region
	Surface Loading Rate of Filter, m ³ /m ² /hr	50 Swimming Pools: Design and Construction, Fourth Edition By Philip H. Perkins (50 m3/m2/hr adopted)
	Required Filter Area, m ²	1.28
	Backwash Duration (mins)	7.00 With reference to Section B8.5.5 of General Specification for Swimming Pool Water Treatment Installation in Government Buildings of the HKSAR published by the ArchSD, "the water velocity chosen shall be effective in cleaning the filter in duration of 7 minutes for sand filter".
	Backwash Flow Rate, m ³ /m ² /hr	30 Technical Paper - Domestic Swimming Pool Filtration by European Union of Swimmingpool and Spa Associations
	Maximum backwash volume, m ³	4.4
	Maximum backwash volume, L/s	14.64
	Maximum backwash volume, m3/s	0.015

Appendix 6-2 Population Estimation for Catchment Areas

Swimming Pool (Small)			
Swimming Pool Area, m2	36		
Height of Swimming Pool, m	1.5		
Estimated volume of the Swimming pool, m³	54		
Turnover Rate, hour	6	General Specification for Swimming Pool Water Treatment Installation in Government Buildings of The Hong Kong Special Administrative Region	
Surface Loading Rate of Filter, m³/m²/hr	50	Swimming Pools: Design and Construction, Fourth Edition By Philip H. Perkins (50 m³/m²/hr adopted)	
Required Filter Area, m²	0.18		
Backwash Duration (mins)	7.00	With reference to Section B8.5.5 of General Specification for Swimming Pool Water Treatment Installation in Government Buildings of the HKSAR published by the ArchSD, "the water velocity chosen shall be effective in cleaning the filter in duration of 7 minutes for sand filter".	
Backwash Flow Rate, m³/m²/hr	30	Technical Paper - Domestic Swimming Pool Filtration by European Union of Swimmingpool and Spa Associations	
Maximum backwash volume, m³	0.6		
Maximum backwash volume, L/s	2.10		
Maximum backwash volume, m³/s	0.002		

Description		Reference	
A8 New Development at No.41, 43 and 45 Perkins Road			
Total Area (m2)	1871		
Allowable Plot Ratio	1	With reference to the Approved Tai Hang and Wong Nai Chung Gap Outline Zoning Plan (SH13/12), for Residential (Group C) 3, maximum plot ratio of 1 and maximum building height of 6 storeys including carports is allowed.	
Gross Floor Area (GFA) (m2)	1871		
Number of Households	9	With reference to Chapter 2 (Residential) of HKPSG, the flat size is assume to be 210m2 (Residential Type 3)	
Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html	
Total Pop.	24		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.	
Est. Pop. (persons) (2030)	24		

Description		Reference	
A9 Pinewood Garden			
No. of Households	19	https://www.midland.com.hk/en/estate/Hong-Kong-Island-Jardine-s-Lookout-Tai-Hang-Pinewood-Garden-E07061	
Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html	
Total Pop.	50		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.	
Est. Pop. (persons) (2030)	50		

Description		Reference	
A10 Dukes Place			
No. of Households	16	https://www.midland.com.hk/en/estate/Hong-Kong-Island-Jardine-s-Lookout-Tai-Hang-Dukes-Place-E000018636	
Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html	
Total Pop.	42		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.	
Est. Pop. (persons) (2030)	42		

Swimming Pool			
Swimming Pool Area, m2	104		
Height of Swimming Pool, m	1.5		
Estimated volume of the Swimming pool, m³	156		
Turnover Rate, hour	6	General Specification for Swimming Pool Water Treatment Installation in Government Buildings of The Hong Kong Special Administrative Region	
Surface Loading Rate of Filter, m³/m²/hr	50	Swimming Pools: Design and Construction, Fourth Edition By Philip H. Perkins (50 m³/m²/hr adopted)	
Required Filter Area, m²	0.52		
Backwash Duration (mins)	7.00	With reference to Section B8.5.5 of General Specification for Swimming Pool Water Treatment Installation in Government Buildings of the HKSAR published by the ArchSD, "the water velocity chosen shall be effective in cleaning the filter in duration of 7 minutes for sand filter".	
Backwash Flow Rate, m³/m²/hr	30	Technical Paper - Domestic Swimming Pool Filtration by European Union of Swimmingpool and Spa Associations	
Maximum backwash volume, m³	1.8		
Maximum backwash volume, L/s	6.07		
Maximum backwash volume, m³/s	0.006		

Description		Reference	
A11 No.3 Moorsom Road			
No. of Households	1	https://www.midland.com.hk/en/estate/Hong-Kong-Jardine-S-Lookout-Tai-Hang-3-Moorsom-Road-E000007380	
Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html	
Total Pop.	3		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.	
Est. Pop. (persons) (2030)	3		

Description		Reference	
A12 No.5 Moorsom Road			
No. of Households	1	https://www.midland.com.hk/en/estate/Hong-Kong-Jardine-S-Lookout-Tai-Hang-5-Moorsom-Road-E000008460	
Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html	
Total Pop.	3		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.	
Est. Pop. (persons) (2030)	3		

Description		Reference	
A13 No.7 Moorsom Road			
No. of Households	1	https://www.midland.com.hk/en/estate/Hong-Kong-7-Moorsom-Road-E000011810	
Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html	
Total Pop.	3		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.	
Est. Pop. (persons) (2030)	3		

Description		Reference	
A14 No.9 Moorsom Road			
No. of Households	1	https://www.midland.com.hk/en/estate/Hong-Kong-Jardine-S-Lookout-Tai-Hang-9-Moorsom-Road-E000011811	
Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html	
Total Pop.	3		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.	
Est. Pop. (persons) (2030)	3		

Description		Reference	
A15 No.11 Moorsom Road			
No. of Households	1	https://www.midland.com.hk/en/estate/Hong-Kong-Jardine-S-Lookout-Tai-Hang-11-Moorsom-Road-E000008326	
Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html	
Total Pop.	3		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.	
Est. Pop. (persons) (2030)	3		

Appendix 6-2 Population Estimation for Catchment Areas

Description			Reference
A16 No.15 Moorsom Road			
No. of Households	1	https://hk.censtat.net/estate/en/15%20Moorsom%20Road/2-TZ1TZ-HMYH	
Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html	
Total Pop.	3		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.	
Est. Pop. (persons) (2030)	3		
Description			Reference
A17 No.17 Moorsom Road			
No. of Households	1	https://hk.censtat.net/estate/en/17%20MOORSOM%20ROAD/1-TZMTZ-HMXHL	
Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html	
Total Pop.	3		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.	
Est. Pop. (persons) (2030)	3		
Description			Reference
A18 No.19 Moorsom Road			
No. of Households	1	https://hk.censtat.net/estate/en/19%20MOORSOM%20ROAD/1-TZMTZ-HMYHL	
Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html	
Total Pop.	3		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.	
Est. Pop. (persons) (2030)	3		
Description			Reference
A19 Jardine's Lookout Garden Houses (No.21-49 Moorsom Road)			
No. of Households	15	https://www.midland.com.hk/en/estate/Hong-Kong-Island-Jardine-s-Lookout-Tai-Hang-Jardine-s-Lookout-Garden-Houses-ED4416	
Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html	
Total Pop.	39		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.	
Est. Pop. (persons) (2030)	39		
Flat size assumption (Hong Kong & Kowloon)			
R3 (210m ² per flat)	15	GFA of flat is 159-236m ² . The area of unit is >110m ² . Adopting R3 to represent a worst case scenario.	
Description			Reference
A20 No.1 Moorsom Drive			
No. of Households	1	https://www.midland.com.hk/en/estate/Hong-Kong-Island-Jardine-s-Lookout-Tai-Hang-1-Moorsom-Drive-E000008359	
Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html	
Total Pop.	3		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.	
Est. Pop. (persons) (2030)	3		
Swimming Pool.			
Swimming Pool Area, m ²	84		
Height of Swimming Pool, m	1.5		
Estimated volume of the Swimming pool, m ³	126		
Turnover Rate, hour	6	General Specification for Swimming Pool Water Treatment Installation in Government Buildings of The Hong Kong Special Administrative Region	
Surface Loading Rate of Filter, m ³ /m ² /hr	50	Swimming Pools: Design and Construction, Fourth Edition By Philip H. Perkins (50 m ³ /m ² /hr adopted)	
Required Filter Area, m ²	0.42		
Backwash Duration (mins)	7.00	With reference to Section B8.5.5 of General Specification for Swimming Pool Water Treatment Installation in Government Buildings of the HKSAR published by the ArchSD, "the water velocity chosen shall be effective in cleaning the filter in duration of 7 minutes for sand filter".	
Backwash Flow Rate, m ³ /m ² /hr	30	Technical Paper - Domestic Swimming Pool Filtration by European Union of Swimmingpool and Spa Associations	
Maximum backwash volume, m ³	1.5		
Maximum backwash volume, L/s	4.90		
Maximum backwash volume, m ³ /s	0.005		
Description			Reference
A21 No.2 Moorsom Drive			
No. of Households	1	https://www.midland.com.hk/en/estate/Hong-Kong-Island-Jardine-s-Lookout-Tai-Hang-2-Moorsom-Drive-E000008505	
Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html	
Total Pop.	3		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.	
Est. Pop. (persons) (2030)	3		
Description			Reference
A22 No.3 Moorsom Drive			
No. of Households	1	https://www.google.com/search?q=3+moorsom+drive%2C+jardine%27s+lookout&rlz=1C1CHZO_en-GBHKG13HKG13&asf=ALeK01yOLU3vLKSITaIyOmgjd3lx9e%3A1628751833293&e=2ocU	
Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html	
Total Pop.	3		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.	
Est. Pop. (persons) (2030)	3		
Swimming Pool.			
Swimming Pool Area, m ²	31		
Height of Swimming Pool, m	1.5		
Estimated volume of the Swimming pool, m ³	47		
Turnover Rate, hour	6	General Specification for Swimming Pool Water Treatment Installation in Government Buildings of The Hong Kong Special Administrative Region	
Surface Loading Rate of Filter, m ³ /m ² /hr	50	Swimming Pools: Design and Construction, Fourth Edition By Philip H. Perkins (50 m ³ /m ² /hr adopted)	
Required Filter Area, m ²	0.16		
Backwash Duration (mins)	7.00	With reference to Section B8.5.5 of General Specification for Swimming Pool Water Treatment Installation in Government Buildings of the HKSAR published by the ArchSD, "the water velocity chosen shall be effective in cleaning the filter in duration of 7 minutes for sand filter".	
Backwash Flow Rate, m ³ /m ² /hr	30	Technical Paper - Domestic Swimming Pool Filtration by European Union of Swimmingpool and Spa Associations	
Maximum backwash volume, m ³	0.5		
Maximum backwash volume, L/s	1.81		
Maximum backwash volume, m ³ /s	0.002		
Description			Reference
A23 No.4 Moorsom Drive			
No. of Households	1	https://www.midland.com.hk/en/estate/Hong-Kong-Island-Jardine-s-Lookout-Tai-Hang-4-Moorsom-Drive-E0000011806	
Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html	
Total Pop.	3		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.	
Est. Pop. (persons) (2030)	3		
Description			Reference
A24 No.5 Moorsom Drive			
No. of Households	1	https://www.midland.com.hk/en/estate/Hong-Kong-Island-Jardine-s-Lookout-Tai-Hang-5-Moorsom-Drive-E000007698	
Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html	
Total Pop.	3		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.	
Est. Pop. (persons) (2030)	3		

Appendix 6.2 Population Estimation for Catchment Areas

Description		Reference	
A25 No.6 Moorsom Drive	No. of Households	1	https://www.midland.com.hk/en/estate/Hong-Kong-Jardine-S-1-lookout-Tai-Hang-6-Moorsom-Drive-E000012542
	Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html
	Total Pop.	3	
	Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.
	Est. Pop. (persons) (2030)	3	
Description		Reference	
A26 No.7 Moorsom Drive	No. of Households	1	https://www.midland.com.hk/en/estate/Hong-Kong-Island-Jardine-S-1-lookout-Tai-Hang-7-Moorsom-Drive-E000011897
	Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html
	Total Pop.	3	
	Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.
	Est. Pop. (persons) (2030)	3	
Description		Reference	
A27 No.8 Moorsom Drive	No. of Households	1	https://www.midland.com.hk/en/estate/Hong-Kong-Jardine-S-1-lookout-Tai-Hang-8-Moorsom-Drive-E000011808
	Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html
	Total Pop.	3	
	Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.
	Est. Pop. (persons) (2030)	3	
Description		Reference	
A28 No.9 Moorsom Drive	No. of Households	1	https://www.midland.com.hk/en/estate/Hong-Kong-2-Moorsom-Drive-E000011809
	Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html
	Total Pop.	3	
	Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.
	Est. Pop. (persons) (2030)	3	
Description		Reference	
A29 Butler Towers	No. of Households	118	https://www.midland.com.hk/en/estate/Hong-Kong-Island-Jardine-s-1-lookout-Tai-Hang-Butler-Towers-E01661
	Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html
	Total Pop.	307	
	Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.
	Est. Pop. (persons) (2030)	307	
Description		Reference	
A30 Wing On Towers	No. of Households	68	https://www.midland.com.hk/en/estate/Hong-Kong-Island-Jardine-s-1-lookout-Tai-Hang-Wing-On-Towers-E0926
	Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html
	Total Pop.	177	
	Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.
	Est. Pop. (persons) (2030)	177	
Description		Reference	
A31 No.2 Boyce Road	No. of Households	1	https://www.midland.com.hk/en/estate/Hong-Kong-Island-Jardine-s-1-lookout-Tai-Hang-2-Boyce-Road-E000007261
	Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html
	Total Pop.	3	
	Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.
	Est. Pop. (persons) (2030)	3	
Description		Reference	
A32 No.4 Boyce Road	No. of Households	1	https://www.midland.com.hk/en/estate/Hong-Kong-Jardine-S-1-lookout-Tai-Hang-4-Boyce-Road-E000007612
	Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html
	Total Pop.	3	
	Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.
	Est. Pop. (persons) (2030)	3	
Description		Reference	
A33 No.6 Boyce Road	No. of Households	1	https://www.midland.com.hk/en/estate/Hong-Kong-Jardine-S-1-lookout-Tai-Hang-6-Boyce-Road-E000007613
	Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html
	Total Pop.	3	
	Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.
	Est. Pop. (persons) (2030)	3	
Description		Reference	
A34 No.8 Boyce Road	No. of Households	1	https://www.midland.com.hk/en/estate/Hong-Kong-Island-Jardine-S-1-lookout-Tai-Hang-8-Boyce-Road-E000007614
	Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html
	Total Pop.	3	
	Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.
	Est. Pop. (persons) (2030)	3	
Description		Reference	
A35 No.10 Boyce Road	No. of Households	1	https://www.midland.com.hk/en/estate/Hong-Kong-10-Boyce-Road-E000007611
	Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html
	Total Pop.	3	
	Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.
	Est. Pop. (persons) (2030)	3	
Description		Reference	
A36 Linden Height	No. of Households	36	https://www.enxucityhomes.hk.com/properties/jardines-lookout/linden-height/100617
	Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html
	Total Pop.	94	
	Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.
	Est. Pop. (persons) (2030)	94	
Description		Reference	
A37 No.12 Boyce Road	No. of Households	6	https://hk.centarset.com/estate/en/12%20BOYCE%20ROAD/1-SKRAPPPXFW
	Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html
	Total Pop.	16	
	Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.
	Est. Pop. (persons) (2030)	16	

Appendix 6-2 Population Estimation for Catchment Areas

Description			Reference
A38 No.6 Moorsom Road			
No. of Households	1		https://www.oneday.com.hk/en_US/buildings/6-moorsom-road/
Average Household Size (2021) in Wan Chai	2.6		https://www.census2021.gov.hk/en/district_profiles.html
Total Pop.	3		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.	
Est. Pop. (persons) (2030)	3		
Description			Reference
A39 No.8 Moorsom Road			
No. of Households	1		https://www.ckay.com/en/building/8-moorsom-road/9492
Average Household Size (2021) in Wan Chai	2.6		https://www.census2021.gov.hk/en/district_profiles.html
Total Pop.	3		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.	
Est. Pop. (persons) (2030)	3		
Description			Reference
A40 No.10 Moorsom Road			
No. of Households	1		https://hk.centanet.com/estate/en/10-Moorsom-Road/2-72172-HH/VH4
Average Household Size (2021) in Wan Chai	2.6		https://www.census2021.gov.hk/en/district_profiles.html
Total Pop.	3		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.	
Est. Pop. (persons) (2030)	3		
Swimming Pool			
Swimming Pool Area, m2	37		
Height of Swimming Pool, m	1.5		
Estimated volume of the Swimming pool, m ³	56		
Turnover Rate, hour	6	General Specification for Swimming Pool Water Treatment Installation in Government Buildings of The Hong Kong Special Administrative Region	
Surface Loading Rate of Filter, m ³ /m ² /hr	50	Swimming Pools: Design and Construction, Fourth Edition By Philip H. Perkins (50 m ³ /m ² /hr adopted)	
Required Filter Area, m ²	0.19		
Backwash Duration (mins)	7.00	With reference to Section B8.5.5 of General Specification for Swimming Pool Water Treatment Installation in Government Buildings of the HKSAR published by the ArchSD, "the water velocity chosen shall be effective in cleaning the filter in duration of 7 minutes for sand filter".	
Backwash Flow Rate, m ³ /m ² /hr	30	Technical Paper - Domestic Swimming Pool Filtration by European Union of Swimmingpool and Spa Associations	
Maximum backwash volume, m ³	0.6		
Maximum backwash volume, L/s	2.16		
Maximum backwash volume, m ³ /s	0.002		
Description			Reference
A41 No.12 Moorsom Road			
No. of Households	1		https://www.midland.com.hk/en/estate/Hong-Kong-Island-Jardine-s-Lookout-Tai-Hang-12-Moorsom-Road-E000011815
Average Household Size (2021) in Wan Chai	2.6		https://www.census2021.gov.hk/en/district_profiles.html
Total Pop.	3		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.	
Est. Pop. (persons) (2030)	3		
Description			Reference
A42 No.14 Moorsom Road			
No. of Households	1		https://www.midland.com.hk/en/estate/Hong-Kong-Island-Jardine-s-Lookout-Tai-Hang-14-Moorsom-Road-E000008213
Average Household Size (2021) in Wan Chai	2.6		https://www.census2021.gov.hk/en/district_profiles.html
Total Pop.	3		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.	
Est. Pop. (persons) (2030)	3		
Description			Reference
A43 Moorsom Lodge			
No. of Households	6		https://www.midland.com.hk/en/estate/Hong-Kong-Island-Jardine-s-Lookout-Tai-Hang-Moorsom-Lodge-E06420
Average Household Size (2021) in Wan Chai	2.6		https://www.census2021.gov.hk/en/district_profiles.html
Total Pop.	16		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.	
Est. Pop. (persons) (2030)	16		
Description			Reference
A44 No.53 Perkins Road			
No. of Households	1		https://www.midland.com.hk/en/estate/Hong-Kong-Island-Jardine-s-Lookout-Tai-Hang-53-Perkins-Road-E000011819
Average Household Size (2021) in Wan Chai	2.6		https://www.census2021.gov.hk/en/district_profiles.html
Total Pop.	3		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.	
Est. Pop. (persons) (2030)	3		
Swimming Pool			
Swimming Pool Area, m2	85		
Height of Swimming Pool, m	1.5		
Estimated volume of the Swimming pool, m ³	127		
Turnover Rate, hour	6	General Specification for Swimming Pool Water Treatment Installation in Government Buildings of The Hong Kong Special Administrative Region	
Surface Loading Rate of Filter, m ³ /m ² /hr	50	Swimming Pools: Design and Construction, Fourth Edition By Philip H. Perkins (50 m ³ /m ² /hr adopted)	
Required Filter Area, m ²	0.42		
Backwash Duration (mins)	7.00	With reference to Section B8.5.5 of General Specification for Swimming Pool Water Treatment Installation in Government Buildings of the HKSAR published by the ArchSD, "the water velocity chosen shall be effective in cleaning the filter in duration of 7 minutes for sand filter".	
Backwash Flow Rate, m ³ /m ² /hr	30	Technical Paper - Domestic Swimming Pool Filtration by European Union of Swimmingpool and Spa Associations	
Maximum backwash volume, m ³	1.5		
Maximum backwash volume, L/s	4.95		
Maximum backwash volume, m ³ /s	0.005		
Description			Reference
A45 No.55 Perkins Road			
No. of Households	1		https://www.midland.com.hk/en/estate/Hong-Kong-Island-Jardine-s-Lookout-Tai-Hang-55-Perkins-Road-E000011819
Average Household Size (2021) in Wan Chai	2.6		https://www.census2021.gov.hk/en/district_profiles.html
Total Pop.	3		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.	
Est. Pop. (persons) (2030)	3		
Description			Reference
A46 Minton Court			
No. of Households	7		https://www.midland.com.hk/en/estate/Hong-Kong-Island-Jardine-s-Lookout-Tai-Hang-Minton-Court-E06376
Average Household Size (2021) in Wan Chai	2.6		https://www.census2021.gov.hk/en/district_profiles.html
Total Pop.	19		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.	
Est. Pop. (persons) (2030)	19		

Appendix 6-2 Population Estimation for Catchment Areas

Description			Reference
A47 No.59 Perkins Road			
No. of Households	1		https://www.midland.com.hk/en/estate/Hong-Kong-Island-Jardine-S-4-lookout-Tai-Hang-59-Perkins-Road-E00006959
Average Household Size (2021) in Wan Chai	2.6		https://www.census2021.gov.hk/en/district_profiles.html
Total Pop.	3		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.	
Est. Pop. (persons) (2030)	3		
Description			Reference
A48 Falcon Lodge			
No. of Households	5		https://www.midland.com.hk/en/estate/Hong-Kong-Jardine-S-4-lookout-Tai-Hang-Falcon-Lodge-E02758
Average Household Size (2021) in Wan Chai	2.6		https://www.census2021.gov.hk/en/district_profiles.html
Total Pop.	13		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.	
Est. Pop. (persons) (2030)	13		
Description			Reference
A49 No.69 Perkins Road			
No. of Households	6		https://www.okay.com/en/building/69-perkins-road/rent/3452
Average Household Size (2021) in Wan Chai	2.6		https://www.census2021.gov.hk/en/district_profiles.html
Total Pop.	16		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.	
Est. Pop. (persons) (2030)	16		
Description			Reference
A50 No.71 Perkins Road			
No. of Households	3		https://www.okay.com/en/building/69-perkins-road/rent/3452
Average Household Size (2021) in Wan Chai	2.6		https://www.census2021.gov.hk/en/district_profiles.html
Total Pop.	8		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.	
Est. Pop. (persons) (2030)	8		
Description			Reference
A51 No.73 Perkins Road			
No. of Households	1		https://www.midland.com.hk/en/estate/Hong-Kong-Island-Jardine-S-4-lookout-Tai-Hang-73-Perkins-Road-E000016271
Average Household Size (2021) in Wan Chai	2.6		https://www.census2021.gov.hk/en/district_profiles.html
Total Pop.	3		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.	
Est. Pop. (persons) (2030)	3		
Flat size assumption (Hong Kong & Kowloon)			
R3 (210m ² per flat)	1	GFA of flat is 513m ² . The area of unit is >110m ² . Adopting R3 to represent a worst case scenario.	
Description			Reference
A52 No.75 Perkins Road			
No. of Households	2		https://www.midland.com.hk/en/estate/Hong-Kong-Island-Jardine-S-4-lookout-Tai-Hang-75-Perkins-Road-E000011821
Average Household Size (2021) in Wan Chai	2.6		https://www.census2021.gov.hk/en/district_profiles.html
Total Pop.	6		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.	
Est. Pop. (persons) (2030)	6		
Description			Reference
A53 No.77 Perkins Road			
No. of Households	1		https://www.midland.com.hk/en/estate/Hong-Kong-Island-Jardine-S-4-lookout-Tai-Hang-77-Perkins-Road-E000013147
Average Household Size (2021) in Wan Chai	2.6		https://www.census2021.gov.hk/en/district_profiles.html
Total Pop.	3		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.	
Est. Pop. (persons) (2030)	3		
Swimming Pool.			
Swimming Pool Area, m ²	38		
Height of Swimming Pool, m	1.5		
Estimated volume of the Swimming pool, m ³	57		
Turnover Rate, hour	6	General Specification for Swimming Pool Water Treatment Installation in Government Buildings of The Hong Kong Special Administrative Region	
Surface Loading Rate of Filter, m ³ /m ² /hr	50	Swimming Pools: Design and Construction, Fourth Edition By Philip H. Perkins (50 m ³ /m ² /hr adopted)	
Required Filter Area, m ²	0.19		
Backwash Duration (mins)	7.00	With reference to Section B8.5.5 of General Specification for Swimming Pool Water Treatment Installation in Government Buildings of the HKSAR published by the ArchSD, "the water velocity chosen shall be effective in cleaning the filter in duration of 7 minutes for sand filter".	
Backwash Flow Rate, m ³ /m ² /hr	30	Technical Paper - Domestic Swimming Pool Filtration by European Union of Swimmingpool and Spa Associations	
Maximum backwash volume, m ³	0.7		
Maximum backwash volume, L/s	2.22		
Maximum backwash volume, m ³ /s	0.002		
Description			Reference
A54 No.79 Perkins Road			
No. of Households	1		https://hk.ceritanet.com/estate/en/79%20PERKINS%20ROAD%201-SKSABPGHPW
Average Household Size (2021) in Wan Chai	2.6		https://www.census2021.gov.hk/en/district_profiles.html
Total Pop.	3		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.	
Est. Pop. (persons) (2030)	3		
Description			Reference
A55 No.81 Perkins Road			
No. of Households	1		https://hk.ceritanet.com/estate/en/81%20PERKINS%20ROAD%201-SKCYBPGAPW
Average Household Size (2021) in Wan Chai	2.6		https://www.census2021.gov.hk/en/district_profiles.html
Total Pop.	3		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.	
Est. Pop. (persons) (2030)	3		
Description			Reference
A56 No.83 Perkins Road			
No. of Households	1		https://hk.ceritanet.com/estate/en/83-Perkins-Road%201-SKYAGPGAPW
Average Household Size (2021) in Wan Chai	2.6		https://www.census2021.gov.hk/en/district_profiles.html
Total Pop.	3		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.	
Est. Pop. (persons) (2030)	3		
Description			Reference
A57 No.2 Perkins Road			
No. of Households	1		https://www.midland.com.hk/en/estate/Hong-Kong-Jardine-S-4-lookout-Tai-Hang-2-Perkins-Road-E000013142
Average Household Size (2021) in Wan Chai	2.6		https://www.census2021.gov.hk/en/district_profiles.html
Total Pop.	3		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.	
Est. Pop. (persons) (2030)	3		

Appendix 6-2 Population Estimation for Catchment Areas

Description			Reference
A58 No.4 Perkins Road			
No. of Households	1	https://www.midland.com.hk/en/estate/Hong-Kong-Island-Jardine-S-4-lookout-Tai-Hang-4-Perkins-Road-E000013143	
Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html	
Total Pop.	3		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.	
Est. Pop. (persons) (2030)	3		
Description			Reference
A59 No.6 Perkins Road			
No. of Households	1	https://www.midland.com.hk/en/estate/Hong-Kong-Island-Jardine-s-4-lookout-Tai-Hang-6-Perkins-Road-E000013145	
Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html	
Total Pop.	3		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.	
Est. Pop. (persons) (2030)	3		
Swimming Pool			
Swimming Pool Area, m2	129		
Height of Swimming Pool, m	1.5		
Estimated volume of the Swimming pool, m ³	194		
Turnover Rate, hour	6	General Specification for Swimming Pool Water Treatment Installation in Government Buildings of The Hong Kong Special Administrative Region	
Surface Loading Rate of Filter, m ³ /m ² /hr	50	Swimming Pools: Design and Construction, Fourth Edition By Philip H. Perkins (50 m ³ /m ² /hr adopted)	
Required Filter Area, m ²	0.65		
Backwash Duration (mins)	7.00	With reference to Section B8.5.5 of General Specification for Swimming Pool Water Treatment Installation in Government Buildings of the HKSAR published by the ArchSD, "the water velocity chosen shall be effective in cleaning the filter in duration of 7 minutes for sand filter".	
Backwash Flow Rate, m ³ /m ² /hr	30	Technical Paper - Domestic Swimming Pool Filtration by European Union of Swimmingpool and Spa Associations	
Maximum backwash volume, m ³	2.3		
Maximum backwash volume, L/s	7.53		
Maximum backwash volume, m3/s	0.006		
Description			Reference
A60 No.8 Perkins Road			
No. of Households	1	https://www.midland.com.hk/en/estate/Hong-Kong-Island-Jardine-s-4-lookout-Tai-Hang-8-Perkins-Road-E000013148	
Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html	
Total Pop.	3		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.	
Est. Pop. (persons) (2030)	3		
Description			Reference
A61 No.10 Perkins Road			
No. of Households	1	https://hk.centagent.com/estate/en/NO%2010%20PERKINS%20ROAD%20SKPPWPXPKV	
Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html	
Total Pop.	3		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.	
Est. Pop. (persons) (2030)	3		
Swimming Pool			
Swimming Pool Area, m2	108		
Height of Swimming Pool, m	1.5		
Estimated volume of the Swimming pool, m ³	162		
Turnover Rate, hour	6	General Specification for Swimming Pool Water Treatment Installation in Government Buildings of The Hong Kong Special Administrative Region	
Surface Loading Rate of Filter, m ³ /m ² /hr	50	Swimming Pools: Design and Construction, Fourth Edition By Philip H. Perkins (50 m ³ /m ² /hr adopted)	
Required Filter Area, m ²	0.54		
Backwash Duration (mins)	7.00	With reference to Section B8.5.5 of General Specification for Swimming Pool Water Treatment Installation in Government Buildings of the HKSAR published by the ArchSD, "the water velocity chosen shall be effective in cleaning the filter in duration of 7 minutes for sand filter".	
Backwash Flow Rate, m ³ /m ² /hr	30	Technical Paper - Domestic Swimming Pool Filtration by European Union of Swimmingpool and Spa Associations	
Maximum backwash volume, m ³	1.9		
Maximum backwash volume, L/s	6.30		
Maximum backwash volume, m3/s	0.006		
Description			Reference
A62 No.12 Perkins Road			
No. of Households	1	https://www.midland.com.hk/en/estate/Hong-Kong-Jardine-S-4-lookout-Tai-Hang-12-Perkins-Road-E000013140	
Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html	
Total Pop.	3		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.	
Est. Pop. (persons) (2030)	3		
Swimming Pool			
Swimming Pool Area, m2	180		
Height of Swimming Pool, m	1.5		
Estimated volume of the Swimming pool, m ³	270		
Turnover Rate, hour	6	General Specification for Swimming Pool Water Treatment Installation in Government Buildings of The Hong Kong Special Administrative Region	
Surface Loading Rate of Filter, m ³ /m ² /hr	50	Swimming Pools: Design and Construction, Fourth Edition By Philip H. Perkins (50 m ³ /m ² /hr adopted)	
Required Filter Area, m ²	0.90		
Backwash Duration (mins)	7.00	With reference to Section B8.5.5 of General Specification for Swimming Pool Water Treatment Installation in Government Buildings of the HKSAR published by the ArchSD, "the water velocity chosen shall be effective in cleaning the filter in duration of 7 minutes for sand filter".	
Backwash Flow Rate, m ³ /m ² /hr	30	Technical Paper - Domestic Swimming Pool Filtration by European Union of Swimmingpool and Spa Associations	
Maximum backwash volume, m ³	3.2		
Maximum backwash volume, L/s	10.50		
Maximum backwash volume, m3/s	0.011		
Description			Reference
A63 No.14 Perkins Road			
No. of Households	1	https://www.midland.com.hk/en/estate/Hong-Kong-Jardine-S-4-lookout-Tai-Hang-14-Perkins-Road-E000011821	
Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html	
Total Pop.	3		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.	
Est. Pop. (persons) (2030)	3		
Description			Reference
A64 Redwoods			
No. of Households	1	https://hk.centagent.com/estate/en/Redwoods/1-SKEGPPDHPW	
Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html	
Total Pop.	3		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.	
Est. Pop. (persons) (2030)	3		
Swimming Pool			
Swimming Pool Area, m2	270		
Height of Swimming Pool, m	1.5		
Estimated volume of the Swimming pool, m ³	405		
Turnover Rate, hour	6	General Specification for Swimming Pool Water Treatment Installation in Government Buildings of The Hong Kong Special Administrative Region	
Surface Loading Rate of Filter, m ³ /m ² /hr	50	Swimming Pools: Design and Construction, Fourth Edition By Philip H. Perkins (50 m ³ /m ² /hr adopted)	
Required Filter Area, m ²	1.35		
Backwash Duration (mins)	7.00	With reference to Section B8.5.5 of General Specification for Swimming Pool Water Treatment Installation in Government Buildings of the HKSAR published by the ArchSD, "the water velocity chosen shall be effective in cleaning the filter in duration of 7 minutes for sand filter".	
Backwash Flow Rate, m ³ /m ² /hr	30	Technical Paper - Domestic Swimming Pool Filtration by European Union of Swimmingpool and Spa Associations	
Maximum backwash volume, m ³	4.7		
Maximum backwash volume, L/s	15.75		
Maximum backwash volume, m3/s	0.016		

Appendix 6-2 Population Estimation for Catchment Areas

Description			Reference
A65 No.18 Perkins Road			
No. of Households	1		https://www.midland.com.hk/en/estate/Hong-Kong-Island-96C9B8FA31E77945B8E556815681-18-Perkins-Road-0000013441
Average Household Size (2021) in Wan Chai	2.6		https://www.census2021.gov.hk/en/district_profiles.html
Total Pop.	3		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.	
Est. Pop. (persons) (2030)	3		
Description			Reference
A66 No.20 Perkins Road			
No. of Households	1		https://www.midland.com.hk/en/estate/Hong-Kong-Island-Jardine's-Lookout-Tai-Hang-20-Perkins-Road-000007125
Average Household Size (2021) in Wan Chai	2.6		https://www.census2021.gov.hk/en/district_profiles.html
Total Pop.	3		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.	
Est. Pop. (persons) (2030)	3		
Description			Reference
A67 No.22 Perkins Road			
No. of Households	1		https://hk.centanet.com/estate/en/HO-5/2022%20PERKINS%20ROAD/1-56PPWPPJPW
Average Household Size (2021) in Wan Chai	2.6		https://www.census2021.gov.hk/en/district_profiles.html
Total Pop.	3		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.	
Est. Pop. (persons) (2030)	3		
Description			Reference
A68 No.24 Perkins Road			
No. of Households	1		https://www.midland.com.hk/en/estate/Hong-Kong-24-Perkins-Road-0000011824
Average Household Size (2021) in Wan Chai	2.6		https://www.census2021.gov.hk/en/district_profiles.html
Total Pop.	3		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.	
Est. Pop. (persons) (2030)	3		
Description			Reference
A69 No.2 Henderson Road			
No. of Households	1		https://www.squarefoot.com.hk/en/2-2-a-henderson-road-bid-33079/
Average Household Size (2021) in Wan Chai	2.6		https://www.census2021.gov.hk/en/district_profiles.html
Total Pop.	3		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.	
Est. Pop. (persons) (2030)	3		
Description			Reference
A70 No.3 Henderson Road			
No. of Households	1		https://www.midland.com.hk/en/estate/Hong-Kong-Jardine's-Lookout-Tai-Hang-3-Henderson-Road-0000014430
Average Household Size (2021) in Wan Chai	2.6		https://www.census2021.gov.hk/en/district_profiles.html
Total Pop.	3		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.	
Est. Pop. (persons) (2030)	3		
Description			Reference
A71 No.4 Henderson Road			
No. of Households	1		https://www.midland.com.hk/en/estate/Hong-Kong-4-Henderson-Road-0000011475
Average Household Size (2021) in Wan Chai	2.6		https://www.census2021.gov.hk/en/district_profiles.html
Total Pop.	3		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.	
Est. Pop. (persons) (2030)	3		
Description			Reference
A72 No.5 Henderson Road			
No. of Households	1		https://www.midland.com.hk/en/estate/Hong-Kong-4-Henderson-Road-0000011475
Average Household Size (2021) in Wan Chai	2.6		https://www.census2021.gov.hk/en/district_profiles.html
Total Pop.	3		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.	
Est. Pop. (persons) (2030)	3		
Description			Reference
A73 No.6 Henderson Road			
No. of Households	1		https://www.midland.com.hk/en/estate/Hong-Kong-Jardine's-Lookout-Tai-Hang-6-Henderson-Road-0000011478
Average Household Size (2021) in Wan Chai	2.6		https://www.census2021.gov.hk/en/district_profiles.html
Total Pop.	3		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.	
Est. Pop. (persons) (2030)	3		
Description			Reference
A74 No.7 Henderson Road			
No. of Households	1		https://www.midland.com.hk/en/estate/Hong-Kong-7-Henderson-Road-0000011476
Average Household Size (2021) in Wan Chai	2.6		https://www.census2021.gov.hk/en/district_profiles.html
Total Pop.	3		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.	
Est. Pop. (persons) (2030)	3		
Description			Reference
A75 No.8 Henderson Road			
No. of Households	1		https://hk.centanet.com/estate/en/BS/20HENDERSON%20ROAD/1-9KXDPPIJPW
Average Household Size (2021) in Wan Chai	2.6		https://www.census2021.gov.hk/en/district_profiles.html
Total Pop.	3		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.	
Est. Pop. (persons) (2030)	3		
Description			Reference
A76 No.9 Henderson Road			
No. of Households	1		https://www.midland.com.hk/en/estate/Hong-Kong-Island-Jardine's-Lookout-Tai-Hang-9-Henderson-Road-0000011477
Average Household Size (2021) in Wan Chai	2.6		https://www.census2021.gov.hk/en/district_profiles.html
Total Pop.	3		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.	
Est. Pop. (persons) (2030)	3		

Appendix 6-2 Population Estimation for Catchment Areas

Description		Reference	
A77 No.10 Henderson Road			
No. of Households	1	https://www.midland.com.hk/en/estate/Hong-Kong-Jardine-5-lookout-Tai-Hang-10-Henderson-Road-E000008161	
Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html	
Total Pop.	3		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.	
Est. Pop. (persons) (2030)	3		
Swimming Pool			
Swimming Pool Area, m2	57		
Height of Swimming Pool, m	1.5		
Estimated volume of the Swimming pool, m ³	86		
Turnover Rate, hour	6	General Specification for Swimming Pool Water Treatment Installation in Government Buildings of The Hong Kong Special Administrative Region	
Surface Loading Rate of Filter, m ³ /m ² /hr	50	Swimming Pools: Design and Construction, Fourth Edition By Philip H. Perkins (50 m ³ /m ² /hr adopted)	
Required Filter Area, m ²	0.29		
Backwash Duration (mins)	7.00	With reference to Section B8.5.5 of General Specification for Swimming Pool Water Treatment installation in Government Buildings of the HKSAR published by the ArchSD, "the water velocity chosen shall be effective in cleaning the filter in duration of 7 minutes for sand filter".	
Backwash Flow Rate, m ³ /m ² /hr	30	Technical Paper - Domestic Swimming Pool Filtration by European Union of Swimmingpool and Spa Associations	
Maximum backwash volume, m ³	1.0		
Maximum backwash volume, L/s	3.33		
Maximum backwash volume, m ³ /s	0.003		
Description		Reference	
A78 No.11 Henderson Road			
No. of Households	1	https://www.midland.com.hk/en/estate/Hong-Kong-Island-Jardine-5-lookout-Tai-Hang-11-Henderson-Road-E000007121	
Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html	
Total Pop.	3		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.	
Est. Pop. (persons) (2030)	3		
Description		Reference	
A79 No.12 Henderson Road			
No. of Households	1	https://www.midland.com.hk/en/estate/Hong-Kong-Jardine-5-lookout-Tai-Hang-12-Henderson-Road-E000002041	
Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html	
Total Pop.	3		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.	
Est. Pop. (persons) (2030)	3		
Description		Reference	
A80 No.12A Henderson Road			
No. of Households	1	https://www.midland.com.hk/en/estate/Hong-Kong-Island-Jardine-5-lookout-Tai-Hang-12A-Henderson-Road-E000007165	
Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html	
Total Pop.	3		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.	
Est. Pop. (persons) (2030)	3		
Description		Reference	
A81 No.18 Henderson Road			
No. of Households	1	https://hk.centanet.com/estate/en/18%20HENDERSON%20ROAD/1-OSCOBURRIC	
Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html	
Total Pop.	3		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.	
Est. Pop. (persons) (2030)	3		
Description		Reference	
A82 No.1 Cooper Road			
No. of Households	1	https://hk.centanet.com/estate/en/1-Cooper-Road/1-OSOURRARC	
Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html	
Total Pop.	3		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.	
Est. Pop. (persons) (2030)	3		
Description		Reference	
A83 No.1 Purves Road			
No. of Households	1	https://www.midland.com.hk/en/estate/Hong-Kong-1-Purves-Road-E000008131	
Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html	
Total Pop.	3		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.	
Est. Pop. (persons) (2030)	3		
Description		Reference	
A84 No.2 Purves Road			
No. of Households	1	https://www.midland.com.hk/en/estate/Hong-Kong-Jardine-5-lookout-Tai-Hang-2-Purves-Road-E000011825	
Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html	
Total Pop.	3		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.	
Est. Pop. (persons) (2030)	3		
Description		Reference	
A85 No.3 Purves Road			
No. of Households	1	https://www.midland.com.hk/en/estate/Hong-Kong-Island-Jardine-5-lookout-Tai-Hang-3-Purves-Road-E000011826	
Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html	
Total Pop.	3		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.	
Est. Pop. (persons) (2030)	3		
Description		Reference	
A86 No.4 Purves Road			
No. of Households	1	https://www.midland.com.hk/en/estate/Hong-Kong-Jardine-5-lookout-Tai-Hang-4-Purves-Road-E000011827	
Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html	
Total Pop.	3		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.	
Est. Pop. (persons) (2030)	3		
Description		Reference	
A87 No.5 Purves Road			
No. of Households	1	https://www.midland.com.hk/en/estate/Hong-Kong-Island-Jardine-5-lookout-Tai-Hang-5-Purves-Road-E000011828	
Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html	
Total Pop.	3		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.	
Est. Pop. (persons) (2030)	3		
Description		Reference	
A88 No.6 Purves Road			
No. of Households	1	https://www.midland.com.hk/en/estate/Hong-Kong-Jardine-5-lookout-Tai-Hang-6-Purves-Road-E000011829	
Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html	
Total Pop.	3		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.	
Est. Pop. (persons) (2030)	3		

Appendix 6-2 Population Estimation for Catchment Areas

Description		Reference
A89 No.7 Purves Road		
No. of Households	1	https://www.midland.com.hk/en/estate/Hong-Kong-Jardine-S-lookout-Tai-Hang-7-Purves-Road-E000011830
Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html
Total Pop.	3	
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.
Est. Pop. (persons) (2030)	3	
Swimming Pool		
Swimming Pool Area, m2	22	
Height of Swimming Pool, m	1.5	
Estimated volume of the Swimming pool, m³	33	
Turnover Rate, hour	6	General Specification for Swimming Pool Water Treatment Installation in Government Buildings of The Hong Kong Special Administrative Region
Surface Loading Rate of Filter, m³/m²/hr	50	Swimming Pools: Design and Construction, Fourth Edition By Philip H. Perkins (50 m³/m²/hr adopted)
Required Filter Area, m²	0.11	
Backwash Duration (mins)	7.00	With reference to Section B8.5.5 of General Specification for Swimming Pool Water Treatment Installation in Government Buildings of the HKSAR published by the ArchSD, "the water velocity chosen shall be effective in cleaning the filter in duration of 7 minutes for sand filter".
Backwash Flow Rate, m³/m²/hr	30	Technical Paper - Domestic Swimming Pool Filtration by European Union of Swimmingpool and Spa Associations
Maximum backwash volume, m³	0.4	
Maximum backwash volume, L/s	1.28	
Maximum backwash volume, m³/s	0.001	
Description		Reference
A90 New Development at No.8 Purves Road		
Total Area (m2)	892	
Allowable Plot Ratio	0.6	With reference to the Approved Tai Hang and Wong Nai Chung Gap Outline Zoning Plan (S/H13/12), for Residential (Group C) 1, maximum plot ratio of 0.6 and maximum building height of 3 storeys including carports.
Gross Floor Area (GFA) (m2)	535	
Number of Households	3	With reference to Chapter 2 (Residential) of HKPSG, the flat size is assume to be 210m2 (Residential Type 3)
Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html
Total Pop.	8	
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.
Est. Pop. (persons) (2030)	8	
Description		Reference
A91 No.4A Cooper Road		
No. of Households	1	https://www.midland.com.hk/en/estate/Hong-Kong-Island-Jardine-s-lookout-Tai-Hang-4A-Cooper-Road-E000010748
Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html
Total Pop.	3	
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.
Est. Pop. (persons) (2030)	3	
Swimming Pool		
Swimming Pool Area, m2	35	
Height of Swimming Pool, m	1.5	
Estimated volume of the Swimming pool, m³	53	
Turnover Rate, hour	6	General Specification for Swimming Pool Water Treatment Installation in Government Buildings of The Hong Kong Special Administrative Region
Surface Loading Rate of Filter, m³/m²/hr	50	Swimming Pools: Design and Construction, Fourth Edition By Philip H. Perkins (50 m³/m²/hr adopted)
Required Filter Area, m²	0.18	
Backwash Duration (mins)	7.00	With reference to Section B8.5.5 of General Specification for Swimming Pool Water Treatment Installation in Government Buildings of the HKSAR published by the ArchSD, "the water velocity chosen shall be effective in cleaning the filter in duration of 7 minutes for sand filter".
Backwash Flow Rate, m³/m²/hr	30	Technical Paper - Domestic Swimming Pool Filtration by European Union of Swimmingpool and Spa Associations
Maximum backwash volume, m³	0.6	
Maximum backwash volume, L/s	2.04	
Maximum backwash volume, m³/s	0.002	
Description		Reference
A92 No.4 Cooper Road		
No. of Households	2	https://hk.cerantet.com/estate/en/Maisonette/2-SKKYBPPEPW
Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html
Total Pop.	6	
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.
Est. Pop. (persons) (2030)	6	
Description		Reference
A93 No.6 Cooper Road		
No. of Households	1	https://www.midland.com.hk/en/estate/Hong-Kong-Island-Jardine-s-lookout-Tai-Hang-6-Cooper-Road-E000010741
Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html
Total Pop.	3	
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.
Est. Pop. (persons) (2030)	3	
Swimming Pool		
Swimming Pool Area, m2	71	
Height of Swimming Pool, m	1.5	
Estimated volume of the Swimming pool, m³	107	
Turnover Rate, hour	6	General Specification for Swimming Pool Water Treatment Installation in Government Buildings of The Hong Kong Special Administrative Region
Surface Loading Rate of Filter, m³/m²/hr	50	Swimming Pools: Design and Construction, Fourth Edition By Philip H. Perkins (50 m³/m²/hr adopted)
Required Filter Area, m²	0.36	
Backwash Duration (mins)	7.00	With reference to Section B8.5.5 of General Specification for Swimming Pool Water Treatment Installation in Government Buildings of the HKSAR published by the ArchSD, "the water velocity chosen shall be effective in cleaning the filter in duration of 7 minutes for sand filter".
Backwash Flow Rate, m³/m²/hr	30	Technical Paper - Domestic Swimming Pool Filtration by European Union of Swimmingpool and Spa Associations
Maximum backwash volume, m³	1.2	
Maximum backwash volume, L/s	4.16	
Maximum backwash volume, m³/s	0.004	
Description		Reference
A94 No.8 Cooper Road		
No. of Households	1	https://www.midland.com.hk/en/estate/Hong-Kong-Jardine-S-lookout-Tai-Hang-8-Cooper-Road-E000007352
Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html
Total Pop.	3	
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.
Est. Pop. (persons) (2030)	3	
Swimming Pool		
Swimming Pool Area, m2	69	
Height of Swimming Pool, m	1.5	
Estimated volume of the Swimming pool, m³	104	
Turnover Rate, hour	6	General Specification for Swimming Pool Water Treatment Installation in Government Buildings of The Hong Kong Special Administrative Region
Surface Loading Rate of Filter, m³/m²/hr	50	Swimming Pools: Design and Construction, Fourth Edition By Philip H. Perkins (50 m³/m²/hr adopted)
Required Filter Area, m²	0.35	
Backwash Duration (mins)	7.00	With reference to Section B8.5.5 of General Specification for Swimming Pool Water Treatment Installation in Government Buildings of the HKSAR published by the ArchSD, "the water velocity chosen shall be effective in cleaning the filter in duration of 7 minutes for sand filter".
Backwash Flow Rate, m³/m²/hr	30	Technical Paper - Domestic Swimming Pool Filtration by European Union of Swimmingpool and Spa Associations
Maximum backwash volume, m³	1.2	
Maximum backwash volume, L/s	4.03	
Maximum backwash volume, m³/s	0.004	

Appendix 6-2 Population Estimation for Catchment Areas

Description		Reference	
A85 No.10 Cooper Road			
No. of Households	1	https://www.midland.com.hk/en/estate/Hong-Kong-Island-Jardine's-Lookout-Tai-Hang-10-Cooper-Road-E000010742	
Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html	
Total Pop.	3		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted	
Est. Pop. (persons) (2030)	3		
Swimming Pool			
Swimming Pool Area, m2	104		
Height of Swimming Pool, m	1.5		
Estimated volume of the Swimming pool, m ³	156		
Turnover Rate, hour	6	General Specification for Swimming Pool Water Treatment Installation in Government Buildings of The Hong Kong Special Administrative Region	
Surface Loading Rate of Filter, m ³ /m ² /hr	50	Swimming Pools: Design and Construction, Fourth Edition By Philip H. Perkins (50 m ³ /m ² /hr adopted)	
Required Filter Area, m ²	0.52		
Backwash Duration (mins)	7.00	With reference to Section B8.5.5 of General Specification for Swimming Pool Water Treatment Installation in Government Buildings of the HKSAR published by the ArchSD, "the water velocity chosen shall be effective in cleaning the filter in duration of 7 minutes for sand filter".	
Backwash Flow Rate, m ³ /m ² /hr	30	Technical Paper - Domestic Swimming Pool Filtration by European Union of Swimmingpool and Spa Associations	
Maximum backwash volume, m ³	1.8		
Maximum backwash volume, L/s	6.07		
Maximum backwash volume, m ³ /s	0.006		
Description		Reference	
A86 No.12 Cooper Road			
No. of Households	1	https://www.midland.com.hk/en/estate/Hong-Kong-Island-Jardine's-Lookout-Tai-Hang-12-Cooper-Road-E000010743	
Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html	
Total Pop.	3		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted	
Est. Pop. (persons) (2030)	3		
Description		Reference	
A87 No.1 Goldsmith Road			
No. of Households	1	https://www.midland.com.hk/en/estate/Hong-Kong-Island-Jardine's-Lookout-Tai-Hang-1-Goldsmith-Road-E000011804	
Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html	
Total Pop.	3		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted	
Est. Pop. (persons) (2030)	3		
Swimming Pool			
Swimming Pool Area, m2	77		
Height of Swimming Pool, m	1.5		
Estimated volume of the Swimming pool, m ³	116		
Turnover Rate, hour	6	General Specification for Swimming Pool Water Treatment Installation in Government Buildings of The Hong Kong Special Administrative Region	
Surface Loading Rate of Filter, m ³ /m ² /hr	50	Swimming Pools: Design and Construction, Fourth Edition By Philip H. Perkins (50 m ³ /m ² /hr adopted)	
Required Filter Area, m ²	0.39		
Backwash Duration (mins)	7.00	With reference to Section B8.5.5 of General Specification for Swimming Pool Water Treatment Installation in Government Buildings of the HKSAR published by the ArchSD, "the water velocity chosen shall be effective in cleaning the filter in duration of 7 minutes for sand filter".	
Backwash Flow Rate, m ³ /m ² /hr	30	Technical Paper - Domestic Swimming Pool Filtration by European Union of Swimmingpool and Spa Associations	
Maximum backwash volume, m ³	1.3		
Maximum backwash volume, L/s	4.49		
Maximum backwash volume, m ³ /s	0.004		
Description		Reference	
A88 No.2-3 Goldsmith Road			
No. of Households	1	https://www.midland.com.hk/en/estate/Hong-Kong-Island-Jardine's-Lookout-Tai-Hang-2-Goldsmith-Road-E000011181	
Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html	
Total Pop.	3		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.	
Est. Pop. (persons) (2030)	3		
Swimming Pool			
Swimming Pool Area, m2	158		
Height of Swimming Pool, m	1.5		
Estimated volume of the Swimming pool, m ³	237		
Turnover Rate, hour	6	General Specification for Swimming Pool Water Treatment Installation in Government Buildings of The Hong Kong Special Administrative Region	
Surface Loading Rate of Filter, m ³ /m ² /hr	50	Swimming Pools: Design and Construction, Fourth Edition By Philip H. Perkins (50 m ³ /m ² /hr adopted)	
Required Filter Area, m ²	0.79		
Backwash Duration (mins)	7.00	With reference to Section B8.5.5 of General Specification for Swimming Pool Water Treatment Installation in Government Buildings of the HKSAR published by the ArchSD, "the water velocity chosen shall be effective in cleaning the filter in duration of 7 minutes for sand filter".	
Backwash Flow Rate, m ³ /m ² /hr	30	Technical Paper - Domestic Swimming Pool Filtration by European Union of Swimmingpool and Spa Associations	
Maximum backwash volume, m ³	2.8		
Maximum backwash volume, L/s	9.22		
Maximum backwash volume, m ³ /s	0.009		
Description		Reference	
A89 No.4 Goldsmith Road			
No. of Households	1	https://www.midland.com.hk/en/estate/Hong-Kong-Island-Jardine's-Lookout-Tai-Hang-4-Goldsmith-Road-E000011182	
Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html	
Total Pop.	3		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted	
Est. Pop. (persons) (2030)	3		
Description		Reference	
A100 No.5 Goldsmith Road			
No. of Households	1	https://hk.centanet.com/estate/en/Goldsmith-Road/2-1796.ZHTV6s	
Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html	
Total Pop.	3		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.	
Est. Pop. (persons) (2030)	3		
Swimming Pool			
Swimming Pool Area, m2	55		
Height of Swimming Pool, m	1.5		
Estimated volume of the Swimming pool, m ³	83		
Turnover Rate, hour	6	General Specification for Swimming Pool Water Treatment Installation in Government Buildings of The Hong Kong Special Administrative Region	
Surface Loading Rate of Filter, m ³ /m ² /hr	50	Swimming Pools: Design and Construction, Fourth Edition By Philip H. Perkins (50 m ³ /m ² /hr adopted)	
Required Filter Area, m ²	0.28		
Backwash Duration (mins)	7.00	With reference to Section B8.5.5 of General Specification for Swimming Pool Water Treatment Installation in Government Buildings of the HKSAR published by the ArchSD, "the water velocity chosen shall be effective in cleaning the filter in duration of 7 minutes for sand filter".	
Backwash Flow Rate, m ³ /m ² /hr	30	Technical Paper - Domestic Swimming Pool Filtration by European Union of Swimmingpool and Spa Associations	
Maximum backwash volume, m ³	1.0		
Maximum backwash volume, L/s	3.22		
Maximum backwash volume, m ³ /s	0.003		

Description		Reference
A101 No.6 Goldsmith Road		
No. of Households	1	https://hk.censtatet.com/estate/en/Goldsmith-Road/7-17N6-ZH7N6
Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html
Total Pop.	3	
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.
Est. Pop. [persons] (2030)	3	
Description		Reference
A102 Valley View		
No. of Households	2	Valley View Jardine's Estate Info Centaline Property
Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html
Total Pop.	6	
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.
Est. Pop. [persons] (2030)	6	
Swimming Pool		
Swimming Pool Area, m2	66	
Height of Swimming Pool, m	1.5	
Estimated volume of the Swimming pool, m ³	99	
Turnover Rate, hour	6	General Specification for Swimming Pool Water Treatment Installation in Government Buildings of The Hong Kong Special Administrative Region
Surface Loading Rate of Filter, m ³ /m ² /hr	50	Swimming Pools: Design and Construction, Fourth Edition By Philip H. Perkins (50 m3/m2/hr adopted)
Required Filter Area, m ²	0.33	
Backwash Duration (mins)	7.00	With reference to Section B8.5.5 of General Specification for Swimming Pool Water Treatment Installation in Government Buildings of the HKSAR published by the ArchSD, "the water velocity chosen shall be effective in cleaning the filter in duration of 7 minutes for sand filter".
Backwash Flow Rate, m ³ /m ² /hr	30	Technical Paper - Domestic Swimming Pool Filtration by European Union of Swimmingpool and Spa Associations
Maximum backwash volume, m ³	1.2	
Maximum backwash volume, L/s	3.85	
Maximum backwash volume, m3/s	0.004	
Description		Reference
A103 No.17 Cooper Road		
No. of Households	1	https://hk.censtatet.com/estate/en/17%20COOPER%20ROAD/1-OSRDQRRXRC
Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html
Total Pop.	3	
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.
Est. Pop. [persons] (2030)	3	
Swimming Pool		
Swimming Pool Area, m2	62	
Height of Swimming Pool, m	1.5	
Estimated volume of the Swimming pool, m ³	94	
Turnover Rate, hour	6	General Specification for Swimming Pool Water Treatment Installation in Government Buildings of The Hong Kong Special Administrative Region
Surface Loading Rate of Filter, m ³ /m ² /hr	50	Swimming Pools: Design and Construction, Fourth Edition By Philip H. Perkins (50 m3/m2/hr adopted)
Required Filter Area, m ²	0.31	
Backwash Duration (mins)	7.00	With reference to Section B8.5.5 of General Specification for Swimming Pool Water Treatment Installation in Government Buildings of the HKSAR published by the ArchSD, "the water velocity chosen shall be effective in cleaning the filter in duration of 7 minutes for sand filter".
Backwash Flow Rate, m ³ /m ² /hr	30	Technical Paper - Domestic Swimming Pool Filtration by European Union of Swimmingpool and Spa Associations
Maximum backwash volume, m ³	1.1	
Maximum backwash volume, L/s	3.64	
Maximum backwash volume, m3/s	0.004	
Description		Reference
A104 No.19 Cooper Road		
No. of Households	1	Reference to Database of Private Buildings in Hong Kong by Home Affairs Department (https://bmis1.buildingmgt.gov.hk/bd_hadbiex/content/searchbuilding/building_search.jsf#f)
Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html
Total Pop.	3	
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.
Est. Pop. [persons] (2030)	3	
Swimming Pool		
Swimming Pool Area, m2	85	
Height of Swimming Pool, m	1.5	
Estimated volume of the Swimming pool, m ³	128	
Turnover Rate, hour	6	General Specification for Swimming Pool Water Treatment Installation in Government Buildings of The Hong Kong Special Administrative Region
Surface Loading Rate of Filter, m ³ /m ² /hr	50	Swimming Pools: Design and Construction, Fourth Edition By Philip H. Perkins (50 m3/m2/hr adopted)
Required Filter Area, m ²	0.43	
Backwash Duration (mins)	7.00	With reference to Section B8.5.5 of General Specification for Swimming Pool Water Treatment Installation in Government Buildings of the HKSAR published by the ArchSD, "the water velocity chosen shall be effective in cleaning the filter in duration of 7 minutes for sand filter".
Backwash Flow Rate, m ³ /m ² /hr	30	Technical Paper - Domestic Swimming Pool Filtration by European Union of Swimmingpool and Spa Associations
Maximum backwash volume, m ³	1.5	
Maximum backwash volume, L/s	4.97	
Maximum backwash volume, m3/s	0.005	
Description		Reference
A105 No.21 Cooper Road		
No. of Households	1	Reference to Database of Private Buildings in Hong Kong by Home Affairs Department (https://bmis1.buildingmgt.gov.hk/bd_hadbiex/content/searchbuilding/building_search.jsf#f)
Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html
Total Pop.	3	
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.
Est. Pop. [persons] (2030)	3	
Description		Reference
A106 No.23 Cooper Road		
No. of Households	1	Reference to Database of Private Buildings in Hong Kong by Home Affairs Department (https://bmis1.buildingmgt.gov.hk/bd_hadbiex/content/searchbuilding/building_search.jsf#f)
Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html
Total Pop.	3	
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach

Appendix 6-2 Population Estimation for Catchment Areas

Description		Reference
A108 No.1 Cooper Road		
No. of Households	1	Reference to Database of Private Buildings in Hong Kong by Home Affairs Department (https://bmis1.buildingmgt.gov.hk/bd_hadbiex/content/searchbuilding/building_search.js#f)
Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html
Total Pop.	3	
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted
Est. Pop. (persons) (2030)	3	
Description		Reference
A109 No.9 Creasy Road		
No. of Households	1	Reference to Database of Private Buildings in Hong Kong by Home Affairs Department (https://bmis1.buildingmgt.gov.hk/bd_hadbiex/content/searchbuilding/building_search.js#f)
Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html
Total Pop.	3	
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted
Est. Pop. (persons) (2030)	3	
Description		Reference
A110 No.11 Creasy Road		
No. of Households	1	https://hk.cerantet.com/estate/en/11-Creasy-Road1-SKBPPSPSPW
Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html
Total Pop.	3	
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted
Est. Pop. (persons) (2030)	3	
Description		Reference
A111 No.11A Creasy Road		
No. of Households	1	Reference to Database of Private Buildings in Hong Kong by Home Affairs Department (https://bmis1.buildingmgt.gov.hk/bd_hadbiex/content/searchbuilding/building_search.js#f)
Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html
Total Pop.	3	
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted
Est. Pop. (persons) (2030)	3	
Swimming Pool		
Swimming Pool Area, m ²	81	
Height of Swimming Pool, m	1.5	
Estimated volume of the Swimming pool, m ³	121	
Turnover Rate, hour	6	General Specification for Swimming Pool Water Treatment Installation in Government Buildings of The Hong Kong Special Administrative Region
Surface Loading Rate of Filter, m ³ /m ² /hr	50	Swimming Pools: Design and Construction, Fourth Edition By Philip H. Perkins (50 m ³ /m ² /hr adopted)
Required Filter Area, m ²	0.40	
Backwash Duration (mins)	7.00	With reference to Section B8.5.5 of General Specification for Swimming Pool Water Treatment Installation in Government Buildings of the HKSAR published by the ArchSD, "the water velocity chosen shall be effective in cleaning the filter in duration of 7 minutes for sand filter".
Backwash Flow Rate, m ³ /m ² /hr	30	Technical Paper - Domestic Swimming Pool Filtration by European Union of Swimmingpool and Spa Associations
Maximum backwash volume, m ³	1.4	
Maximum backwash volume, L/s	4.71	
Maximum backwash volume, m ³ /s	0.005	
Description		Reference
A112 No.15 Creasy Road		
No. of Households	2	https://www.midland.com.hk/en/estate/Hono-Kono-15-Creasy-Road-E000010752
Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html
Total Pop.	6	
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted
Est. Pop. (persons) (2030)	6	
Description		Reference
A113 Jardine's Lookout Residents' Association- Creasy Road Building		
Restaurant		
Total Area (m ²)	714	
Number of Floors	1	
Total Floor Area (m ²)	714	
Worker Density (per 100m ²)	5.1	The main user of the Jardine's Lookout Residents Association Creasy Road Building is the restaurant. With reference to CIFSUS, the worker density for Restaurant is adopted (https://www.pland.gov.hk/pland_enip_study/comp_s/cifsus/cifsusReport.pdf)
Total Pop.	37	
Description		Reference
A114 Jardine's Lookout Residents' Association- Purves Road Buildings		
Total Area (m ²)	121	
Number of Floors	2	
Total Floor Area (m ²)	242	
Worker Density (per 100m ²)	3.3	The main use of the Jardine's Lookout Residents Association Purves Road Building is clubhouses. With reference to CIFSUS, the worker density for Community, Social & Personal Services is adopted (https://www.pland.gov.hk/pland_enip_study/comp_s/cifsus/cifsusReport.pdf)
Total Pop.	8	
Swimming Pool		
Swimming Pool Area, m ²	174	
Height of Swimming Pool, m	1.5	
Estimated volume of the Swimming pool, m ³	261	
Turnover Rate, hour	6	General Specification for Swimming Pool Water Treatment Installation in Government Buildings of The Hong Kong Special Administrative Region
Surface Loading Rate of Filter, m ³ /m ² /hr	50	Swimming Pools: Design and Construction, Fourth Edition By Philip H. Perkins (50 m ³ /m ² /hr adopted)
Required Filter Area, m ²	0.67	
Backwash Duration (mins)	7.00	With reference to Section B8.5.5 of General Specification for Swimming Pool Water Treatment Installation in Government Buildings of the HKSAR published by the ArchSD, "the water velocity chosen shall be effective in cleaning the filter in duration of 7 minutes for sand filter".
Backwash Flow Rate, m ³ /m ² /hr	30	Technical Paper - Domestic Swimming Pool Filtration by European Union of Swimmingpool and Spa Associations
Maximum backwash volume, m ³	3.0	
Maximum backwash volume, L/s	10.15	
Maximum backwash volume, m ³ /s	0.010	
Catchment B		
Description		Reference
B1 Swiss Towers		
No. of Households	159	Swiss Towers Tai Hang Mid-Levels Estate Info Centaline Property
Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html
Total Pop.	414	
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.
Est. Pop. (persons) (2030)	414	

Appendix 6-2 Population Estimation for Catchment Areas

Description			Reference
B2 Park Garden			
No. of Households	88		https://www.midland.com.hk/en/estate/Hong-Kong-Island-Jardine's-Logout-Tai-Hang-Park-Garden-E06914
Average Household Size (2021) in Wan Chai	2.6		https://www.census2021.gov.hk/en/district_profiles.html
Total Pop.	229		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.	
Est. Pop. (persons) (2030)	229		
Description			Reference
B3 Bellevue Heights			
No. of Households	54		https://www.midland.com.hk/en/estate/Hong-Kong-Jardine's-Logout-Tai-Hang-Bellevue-Heights-E01911
Average Household Size (2021) in Wan Chai	2.6		https://www.census2021.gov.hk/en/district_profiles.html
Total Pop.	141		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.	
Est. Pop. (persons) (2030)	141		
Description			Reference
B4 Yick King Building			
No. of Households	44		https://www.midland.com.hk/en/estate/Hong-Kong-Island-Jardine's-Logout-Tai-Hang-Yick-King-Building-E10067
Average Household Size (2021) in Wan Chai	2.6		https://www.census2021.gov.hk/en/district_profiles.html
Total Pop.	115		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.	
Est. Pop. (persons) (2030)	115		
Description			Reference
B5 Tai Hang Terrace			
No. of Households	240		https://www.midland.com.hk/en/estate/Hong-Kong-Island-Jardine's-Logout-Tai-Hang-Tai-Hang-Terrace-E08284
Average Household Size (2021) in Wan Chai	2.6		https://www.census2021.gov.hk/en/district_profiles.html
Total Pop.	624		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.	
Est. Pop. (persons) (2030)	624		
Description			Reference
B6 Flora Garden			
No. of Households	240		Flora Garden Tai Hang Mid-Levels Estate Info Centaline Property
Average Household Size (2021) in Wan Chai	2.6		https://www.census2021.gov.hk/en/district_profiles.html
Total Pop.	624		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.	
Est. Pop. (persons) (2030)	624		
Swimming Pool			
Swimming Pool Area, m ²	154		
Height of Swimming Pool, m	1.5		
Estimated volume of the Swimming pool, m ³	231		
Turnover Rate, hour	6	General Specification for Swimming Pool Water Treatment Installation in Government Buildings of The Hong Kong Special Administrative Region	
Surface Loading Rate of Filter, m ³ /m ² /hr	50	Swimming Pools: Design and Construction, Fourth Edition By Philip H. Perkins (50 m ³ /m ² /hr adopted)	
Required Filter Area, m ²	0.77		
Backwash Duration (mins)	7.00	With reference to Section B8.5.5 of General Specification for Swimming Pool Water Treatment Installation in Government Buildings of the HKSAR published by the ArchSD, "the water velocity chosen shall be effective in cleaning the filter in duration of 7 minutes for sand filter".	
Backwash Flow Rate, m ³ /m ² /hr	30	Technical Paper - Domestic Swimming Pool Filtration by European Union of Swimmingpool and Spa Associations	
Maximum backwash volume, m ³	2.7		
Maximum backwash volume, L/s	8.98		
Maximum backwash volume, m ³ /s	0.009		
Description			Reference
B7 Elm Tree Towers			
No. of Households	114		https://www.midland.com.hk/en/estate/Hong-Kong-Island-Jardine's-Logout-Tai-Hang-Flora-Garden-E00448
Average Household Size (2021) in Wan Chai	2.6		https://www.census2021.gov.hk/en/district_profiles.html
Total Pop.	297		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.	
Est. Pop. (persons) (2030)	297		
Swimming Pool (Large)			
Swimming Pool Area, m ²	119		
Height of Swimming Pool, m	1.5		
Estimated volume of the Swimming pool, m ³	179		
Turnover Rate, hour	6	General Specification for Swimming Pool Water Treatment Installation in Government Buildings of The Hong Kong Special Administrative Region	
Surface Loading Rate of Filter, m ³ /m ² /hr	50	Swimming Pools: Design and Construction, Fourth Edition By Philip H. Perkins (50 m ³ /m ² /hr adopted)	
Required Filter Area, m ²	0.60		
Backwash Duration (mins)	7.00	With reference to Section B8.5.5 of General Specification for Swimming Pool Water Treatment Installation in Government Buildings of the HKSAR published by the ArchSD, "the water velocity chosen shall be effective in cleaning the filter in duration of 7 minutes for sand filter".	
Backwash Flow Rate, m ³ /m ² /hr	30	Technical Paper - Domestic Swimming Pool Filtration by European Union of Swimmingpool and Spa Associations	
Maximum backwash volume, m ³	2.1		
Maximum backwash volume, L/s	6.94		
Maximum backwash volume, m ³ /s	0.007		
Swimming Pool (Small)			
Swimming Pool Area, m ²	20		
Height of Swimming Pool, m	1.5		
Estimated volume of the Swimming pool, m ³	30		
Turnover Rate, hour	6	General Specification for Swimming Pool Water Treatment Installation in Government Buildings of The Hong Kong Special Administrative Region	
Surface Loading Rate of Filter, m ³ /m ² /hr	50	Swimming Pools: Design and Construction, Fourth Edition By Philip H. Perkins (50 m ³ /m ² /hr adopted)	
Required Filter Area, m ²	0.10		
Backwash Duration (mins)	7.00	With reference to Section B8.5.5 of General Specification for Swimming Pool Water Treatment Installation in Government Buildings of the HKSAR published by the ArchSD, "the water velocity chosen shall be effective in cleaning the filter in duration of 7 minutes for sand filter".	
Backwash Flow Rate, m ³ /m ² /hr	30	Technical Paper - Domestic Swimming Pool Filtration by European Union of Swimmingpool and Spa Associations	
Maximum backwash volume, m ³	0.4		
Maximum backwash volume, L/s	1.17		
Maximum backwash volume, m ³ /s	0.001		
Description			Reference
B8 Chun Fai Centre			
Kindergarten (2/F of Chun Fai Centre)			
Number of Students	448		https://www.schooland.hk/az/bhns
Number of Staffs	37		
Total Pop.	485		
Supermarket (1/F of Chun Fai Centre)			
Total Pop.	30	According to information from ParknShop, there are approximately 30 employees at each branch (https://career.asiatron.com/termsportal/vacancy/index/parknshop/en)	

Appendix 6-2 Population Estimation for Catchment Areas

Description		Reference	
B9 Aurizon			
No. of Households	82	Home Affairs Department Database of Private Buildings in Hong Kong	
Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html	
Total Pop.	214		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.	
Est. Pop. (persons) (2030)	214		
Description		Reference	
B10 Aurora			
No. of Households	42	https://www.qi-homes.com/properties/aurora/21731	
Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html	
Total Pop.	110		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.	
Est. Pop. (persons) (2030)	110		
Catchment C			
Description		Reference	
C1 No.83-87 Tai Hang Road			
No. of Households	12	https://www.okay.com/en/building/tai-hang-road-83-87/7074	
Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html	
Total Pop.	32		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.	
Est. Pop. (persons) (2030)	32		
Description		Reference	
C2 New Development at No.89-93 Tai Hang Road			
Total Area (m2)	1006		
Allowable Plot Ratio	2	With reference to the Approved Causeway Bay Outline Zoning Plan (S/H6/17), for Residential (Group C), maximum plot ratio of 2.0 and maximum building height of 6 storeys including carports.	
Gross Floor Area (GFA) (m2)	2012		
Number of Households	10	With reference to Chapter 2 (Residential) of HKPSG, the flat size is assume to be 210m2 (Residential Type 3)	
Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html	
Total Pop.	26		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.	
Est. Pop. (persons) (2030)	26		
Description		Reference	
C3 Gold King Mansion			
No. of Households	80	https://www.midland.com.hk/en/estate/Hong-Kong-Island-Jardine-s-Lookout-Tai-Hang-Gold-King-Mansion-E03293	
Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html	
Total Pop.	208		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.	
Est. Pop. (persons) (2030)	208		
Description		Reference	
C4 Gold Ning Mansion			
No. of Households	80	https://www.midland.com.hk/en/estate/Hong-Kong-Island-Jardine-s-Lookout-Tai-Hang-Gold-Ning-Mansion-E10355	
Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html	
Total Pop.	208		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.	
Est. Pop. (persons) (2030)	208		
Description		Reference	
C5 Alpha Court			
No. of Households	12	https://hk.ceritaneet.com/estate/en/ALPHA%20COURT/1-OSRVQRDARY	
Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html	
Total Pop.	32		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.	
Est. Pop. (persons) (2030)	32		
Description		Reference	
C6 Renown Court			
No. of Households	30	https://www.okay.com/en/building/renown-court/5127	
Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html	
Total Pop.	78		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.	
Est. Pop. (persons) (2030)	78		
Catchment D			
Description		Reference	
D1 Grandview Mansion			
No. of Households	33	https://www.midland.com.hk/en/estate/Hong-Kong-Island-Jardine-s-Lookout-Tai-Hang-Grandview-Mansion-E03462	
Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html	
Total Pop.	86		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.	
Est. Pop. (persons) (2030)	86		
Description		Reference	
D2 No.2 Wang Fung Terrace			
No. of Households	12	https://www.midland.com.hk/en/estate/Hong-Kong-Island-Jardine-S-Lookout-Tai-Hang-2-Wang-Fung-Terrace-E000010591	
Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html	
Total Pop.	32		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.	
Est. Pop. (persons) (2030)	32		
Description		Reference	
D3 No.3-3E Wang Fung Terrace			
No. of Households	23	https://www.midland.com.hk/en/estate/Hong-Kong-Island-Jardine-s-Lookout-Tai-Hang-3-3E-Wang-Fung-Terrace-E000010590	
Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html	
Total Pop.	60		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.	
Est. Pop. (persons) (2030)	60		
Description		Reference	
D4 No.4A-4D Wang Fung Terrace			
No. of Households	16	https://www.midland.com.hk/en/estate/Hong-Kong-Island-Jardine-S-Lookout-Tai-Hang-4A-4D-Wang-Fung-Terrace-E000005854	
Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html	
Total Pop.	42		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.	
Est. Pop. (persons) (2030)	42		
Description		Reference	
D5 No.4 Wang Fung Terrace			
No. of Households	3	https://hk.ceritaneet.com/estate/en/4%20WANG%20FUNG%20TERRACE/1-OSJQORFRV	
Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html	
Total Pop.	8		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.	
Est. Pop. (persons) (2030)	8		

Appendix 6-2 Population Estimation for Catchment Areas

Description		Reference	
D6	No.5 Wang Fung Terrace		
	No. of Households	16	https://www.okay.com/en/building/5-wang-fung-terrace/2535
	Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html
	Total Pop.	42	
	Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.
Est. Pop. (persons) (2030)		42	
Description		Reference	
D7	Scenic Lodge		
	No. of Households	12	https://hk.centanet.com/estate/en/Scenic-Lodge/1-SKPPW/SPEPK
	Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html
	Total Pop.	32	
	Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.
Est. Pop. (persons) (2030)		32	
Description		Reference	
D8	Jolly Garden		
	No. of Households	12	https://www.midland.com.hk/en/estate/Hong-Kong-Jardine's-lookout-Tai-Hang-Jolly-Garden-E04448
	Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html
	Total Pop.	32	
	Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.
Est. Pop. (persons) (2030)		32	
Description		Reference	
D9	Green Village		
	No. of Households	16	https://www.okay.com/en/building/green-village/2059
	Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html
	Total Pop.	42	
	Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.
Est. Pop. (persons) (2030)		42	
Description		Reference	
D10	No.9-9A Wang Fung Terrace		
	No. of Households	8	Home Affairs Department Database of Private Buildings in Hong Kong
	Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html
	Total Pop.	21	
	Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.
Est. Pop. (persons) (2030)		21	
Description		Reference	
D11	No.10 Wang Fung Terrace		
	No. of Households	6	https://www.okay.com/en/building/10-10a-wang-fung-terrace/bou/2061
	Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html
	Total Pop.	16	
	Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.
Est. Pop. (persons) (2030)		16	
Description		Reference	
D12	Verde Green		
	No. of Households	6	https://hk.centanet.com/estate/en/VERDE%20GREEN/1-SKPPWAPEPB
	Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html
	Total Pop.	16	
	Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.
Est. Pop. (persons) (2030)		16	
Description		Reference	
D13	Hecky Court		
	No. of Households	7	https://www.midland.com.hk/en/estate/Hong-Kong-Island-Jardine's-Lookout-Tai-Hang-Hecky-Court-E12050
	Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html
	Total Pop.	19	
	Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.
Est. Pop. (persons) (2030)		19	
Description		Reference	
D14	Mayflower Mansion		
	No. of Households	32	https://www.midland.com.hk/en/estate/Hong-Kong-Island-Jardine's-Lookout-Tai-Hang-Mayflower-Mansion-E11106
	Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html
	Total Pop.	84	
	Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.
Est. Pop. (persons) (2030)		84	
Description		Reference	
D15	Swimming Pool		
	Swimming Pool Area, m ²	101	
	Height of Swimming Pool, m	1.5	
	Estimated volume of the Swimming pool, m ³	152	
	Turnover Rate, hour	6	General Specification for Swimming Pool Water Treatment Installation in Government Buildings of The Hong Kong Special Administrative Region
	Surface Loading Rate of Filter, m ³ /m ² /hr	50	Swimming Pools: Design and Construction, Fourth Edition By Philip H. Perkins (50 m ³ /m ² /hr adopted)
	Required Filter Area, m ²	0.51	
	Backwash Duration (mins)	7.00	With reference to Section B8.5.5 of General Specification for Swimming Pool Water Treatment Installation in Government Buildings of the HKSAR published by the ArchSD, "the water velocity chosen shall be effective in cleaning the filter in duration of 7 minutes for sand filter".
	Backwash Flow Rate, m ³ /m ² /hr	30	Technical Paper - Domestic Swimming Pool Filtration by European Union of Swimmingpool and Spa Associations
	Maximum backwash volume, m ³	1.8	
	Maximum backwash volume, L/s	5.89	
	Maximum backwash volume, m ³ /s	0.006	
Description		Reference	
D15	No.12 Wang Fung Terrace		
	No. of Households	8	https://www.midland.com.hk/en/estate/Hong-Kong-Island-Jardine's-Lookout-Tai-Hang-12-Wang-Fung-Terrace-E000007919
	Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html
	Total Pop.	21	
	Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.
Est. Pop. (persons) (2030)		21	

Appendix 6-2 Population Estimation for Catchment Areas

Catchment E

Description		Reference	
E1	Avalon		
	No. of Households	46	https://www.midland.com.hk/en/estate/Hong-Kong-Island-Jardine-s-Lookout-Tai-Hang-Avalon-E11036
	Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html
	Total Pop.	120	
	Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.
	Est. Pop. (persons) (2030)	120	
Swimming Pool			
	Swimming Pool Area, m ²	71	
	Height of Swimming Pool, m	1.5	
	Estimated volume of the Swimming pool, m ³	107	
	Turnover Rate, hour	6	General Specification for Swimming Pool Water Treatment Installation in Government Buildings of The Hong Kong Special Administrative Region
	Surface Loading Rate of Filter, m ³ /m ² /hr	50	Swimming Pools: Design and Construction, Fourth Edition By Philip H. Perkins (50 m ³ /m ² /hr adopted)
	Required Filter Area, m ²	0.36	
	Backwash Duration (mins)	7.00	With reference to Section B8.5.5 of General Specification for Swimming Pool Water Treatment Installation in Government Buildings of the HKSAR published by the ArchSD, "the water velocity chosen shall be effective in cleaning the filter in duration of 7 minutes for sand filter".
	Backwash Flow Rate, m ³ /m ² /hr	30	Technical Paper - Domestic Swimming Pool Filtration by European Union of Swimmingpool and Spa Associations
	Maximum backwash volume, m ³	1.2	
	Maximum backwash volume, L/s	4.15	
	Maximum backwash volume, m ³ /s	0.004	
Description		Reference	
E2	Yukon Height		
	No. of Households	40	https://www.midland.com.hk/en/estate/Hong-Kong-Island-Jardine-s-Lookout-Tai-Hang-Yukon-Heights-E10316
	Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html
	Total Pop.	104	
	Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.
	Est. Pop. (persons) (2030)	104	
Description		Reference	
E3	Morengo Court		
	No. of Households	48	https://www.midland.com.hk/en/estate/Hong-Kong-Island-Jardine-s-Lookout-Tai-Hang-Morengo-Court-E06422
	Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html
	Total Pop.	125	
	Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.
	Est. Pop. (persons) (2030)	125	
Description		Reference	
E4	Wah Fung Mansion		
	No. of Households	20	https://www.midland.com.hk/en/estate/Hong-Kong-Island-Jardine-s-Lookout-Tai-Hang-Wah-Fung-Mansion-E09121
	Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html
	Total Pop.	52	
	Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.
	Est. Pop. (persons) (2030)	52	
Description		Reference	
E5	Carnation Court		
	No. of Households	44	https://www.midland.com.hk/en/estate/Hong-Kong-Island-Jardine-s-Lookout-Tai-Hang-Carnation-Court-E01745
	Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html
	Total Pop.	115	
	Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.
	Est. Pop. (persons) (2030)	115	
Swimming Pool			
	Swimming Pool Area, m ²	105	
	Height of Swimming Pool, m	1.5	
	Estimated volume of the Swimming pool, m ³	158	
	Turnover Rate, hour	6	General Specification for Swimming Pool Water Treatment Installation in Government Buildings of The Hong Kong Special Administrative Region
	Surface Loading Rate of Filter, m ³ /m ² /hr	50	Swimming Pools: Design and Construction, Fourth Edition By Philip H. Perkins (50 m ³ /m ² /hr adopted)
	Required Filter Area, m ²	0.53	
	Backwash Duration (mins)	7.00	With reference to Section B8.5.5 of General Specification for Swimming Pool Water Treatment Installation in Government Buildings of the HKSAR published by the ArchSD, "the water velocity chosen shall be effective in cleaning the filter in duration of 7 minutes for sand filter".
	Backwash Flow Rate, m ³ /m ² /hr	30	Technical Paper - Domestic Swimming Pool Filtration by European Union of Swimmingpool and Spa Associations
	Maximum backwash volume, m ³	1.8	
	Maximum backwash volume, L/s	6.14	
	Maximum backwash volume, m ³ /s	0.006	
Description		Reference	
E6	No.52 Tai Hang Road		
	No. of Households	3	https://www.okay.com/en/building/52-tai-hang-road/6966
	Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html
	Total Pop.	8	
	Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.
	Est. Pop. (persons) (2030)	8	
Description		Reference	
E7	Royal Court		
	No. of Households	25	https://hk.centanet.com/estate/en/Royal%20Court2-OSCDURJARV
	Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html
	Total Pop.	65	
	Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.
	Est. Pop. (persons) (2030)	65	
Description		Reference	
E8	Sunrise Court		
	No. of Households	24	https://www.midland.com.hk/en/estate/Hong-Kong-Island-Jardine-s-Lookout-Tai-Hang-Sunrise-Court-E08215
	Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html
	Total Pop.	63	
	Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.
	Est. Pop. (persons) (2030)	63	
Description		Reference	
E9	Fuk Kwan Mansion		
	No. of Households	12	https://www.okay.com/en/building/fuk-kwan-mansion/5332
	Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html
	Total Pop.	32	
	Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.
	Est. Pop. (persons) (2030)	32	

Appendix 6-2 Population Estimation for Catchment Areas

Description		Reference	
E10	The Elegance		
	No. of Households	17	https://www.midland.com.hk/en/estate/Hong-Kong-Island-Jardine-s-Layout-Tai-Hang-The-Elegance-ED2619
	Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html
	Total Pop.	45	
	Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.
	Est. Pop. [persons] (2030)	45	
Description		Reference	
E11	Trafalgar Court		
	No. of Households	60	https://www.midland.com.hk/en/estate/Hong-Kong-Island-Jardine-s-Layout-Tai-Hang-Trafalgar-Court-E10536
	Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html
	Total Pop.	156	
	Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.
	Est. Pop. [persons] (2030)	156	
Swimming Pool			
	Swimming Pool Area, m ²	113	
	Height of Swimming Pool, m	1.5	
	Estimated volume of the Swimming pool, m ³	170	
	Turnover Rate, hour	6	General Specification for Swimming Pool Water Treatment Installation in Government Buildings of The Hong Kong Special Administrative Region
	Surface Loading Rate of Filter, m ³ /m ² /hr	50	Swimming Pools: Design and Construction, Fourth Edition By Philip H. Perkins (50 m ³ /m ² /hr adopted)
	Required Filter Area, m ²	0.57	
	Backwash Duration (mins)	7.00	With reference to Section B8.5.5 of General Specification for Swimming Pool Water Treatment Installation in Government Buildings of the HKSAR published by the ArchSD, "the water velocity chosen shall be effective in cleaning the filter in duration of 7 minutes for sand filter".
	Backwash Flow Rate, m ³ /m ² /hr	30	Technical Paper - Domestic Swimming Pool Filtration by European Union of Swimmingpool and Spa Associations
	Maximum backwash volume, m ³	2.0	
	Maximum backwash volume, L/s	6.59	
	Maximum backwash volume, m ³ /s	0.007	
Description		Reference	
F1	Haw Par Mansion		
	Total Area (m ²)	539	https://www.heritage.gov.hk/en/hpm/background.htm
	Number of Floors	4	
	Total Floor Area (m ²)	2156	
	Worker Density (per 100m ²)	3.3	The development is currently a museum and concert space. With reference to CIFSUS, the worker density for Community, Social & Personal Services is adopted (https://www.pland.gov.hk/upland_enip_study/comp_s/cfsus/cfsusReport.pdf).
	Total Pop.	72	
Description		Reference	
F2	The Legend		
	No. of Households	382	https://hemis1.buildingmgt.gov.hk/info
	Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html
	Total Pop.	994	
	Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.
	Est. Pop. [persons] (2030)	994	
Swimming Pool			
	Swimming Pool Area, m ²	495	
	Height of Swimming Pool, m	1.5	
	Estimated volume of the Swimming pool, m ³	743	
	Turnover Rate, hour	6	General Specification for Swimming Pool Water Treatment Installation in Government Buildings of The Hong Kong Special Administrative Region
	Surface Loading Rate of Filter, m ³ /m ² /hr	50	Swimming Pools: Design and Construction, Fourth Edition By Philip H. Perkins (50 m ³ /m ² /hr adopted)
	Required Filter Area, m ²	2.48	
	Backwash Duration (mins)	7.00	With reference to Section B8.5.5 of General Specification for Swimming Pool Water Treatment Installation in Government Buildings of the HKSAR published by the ArchSD, "the water velocity chosen shall be effective in cleaning the filter in duration of 7 minutes for sand filter".
	Backwash Flow Rate, m ³ /m ² /hr	30	Technical Paper - Domestic Swimming Pool Filtration by European Union of Swimmingpool and Spa Associations
	Maximum backwash volume, m ³	8.7	
	Maximum backwash volume, L/s	28.88	
	Maximum backwash volume, m ³ /s	0.029	
Description		Reference	
F3	Gardenview Heights		
	No. of Households	68	https://www.midland.com.hk/en/estate/Hong-Kong-Island-Jardine-s-Layout-Tai-Hang-Gardenview-Heights-E03213
	Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html
	Total Pop.	177	
	Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.
	Est. Pop. [persons] (2030)	177	
Swimming Pool			
	Swimming Pool Area, m ²	105	
	Height of Swimming Pool, m	1.5	
	Estimated volume of the Swimming pool, m ³	158	
	Turnover Rate, hour	6	General Specification for Swimming Pool Water Treatment Installation in Government Buildings of The Hong Kong Special Administrative Region
	Surface Loading Rate of Filter, m ³ /m ² /hr	50	Swimming Pools: Design and Construction, Fourth Edition By Philip H. Perkins (50 m ³ /m ² /hr adopted)
	Required Filter Area, m ²	0.53	
	Backwash Duration (mins)	7.00	With reference to Section B8.5.5 of General Specification for Swimming Pool Water Treatment Installation in Government Buildings of the HKSAR published by the ArchSD, "the water velocity chosen shall be effective in cleaning the filter in duration of 7 minutes for sand filter".
	Backwash Flow Rate, m ³ /m ² /hr	30	Technical Paper - Domestic Swimming Pool Filtration by European Union of Swimmingpool and Spa Associations
	Maximum backwash volume, m ³	1.8	
	Maximum backwash volume, L/s	6.13	
	Maximum backwash volume, m ³ /s	0.006	
Description		Reference	
F4	Dragon Garden		
	No. of Households	80	Home Affairs Department Database of Private Buildings in Hong Kong
	Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html
	Total Pop.	208	
	Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.
	Est. Pop. [persons] (2030)	208	

Appendix 6-2 Population Estimation for Catchment Areas

Description		Reference	
F5	The Signature		
	No. of Households	66	https://www.midland.com.hk/en/estate/Hong-Kong-Island-Jardine-s-Lookout-Tai-Hang-The-Signature-E000010945
	Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html
	Total Pop.	172	
	Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.
Est. Pop. (persons) (2030)		172	
Swimming Pool (Large)			
	Swimming Pool Area, m ²	163	
	Height of Swimming Pool, m	1.5	
	Estimated volume of the Swimming pool, m ³	245	
	Turnover Rate, hour	6	General Specification for Swimming Pool Water Treatment Installation in Government Buildings of The Hong Kong Special Administrative Region
	Surface Loading Rate of Filter, m ³ /m ² /hr	50	Swimming Pools: Design and Construction, Fourth Edition By Philip H. Perkins (50 m ³ /m ² /hr adopted)
	Required Filter Area, m ²	0.82	
	Backwash Duration (mins)	7.00	With reference to Section B8.5.5 of General Specification for Swimming Pool Water Treatment Installation in Government Buildings of the HKSAR published by the ArchSD, "the water velocity chosen shall be effective in cleaning the filter in duration of 7 minutes for sand filter".
	Backwash Flow Rate, m ³ /m ² /hr	30	Technical Paper - Domestic Swimming Pool Filtration by European Union of Swimmingpool and Spa Associations
	Maximum backwash volume, m ³	2.9	
	Maximum backwash volume, L/s	9.51	
	Maximum backwash volume, m ³ /s	0.010	
Swimming Pool (Small)			
	Swimming Pool Area, m ²	26	
	Height of Swimming Pool, m	1.5	
	Estimated volume of the Swimming pool, m ³	39	
	Turnover Rate, hour	6	General Specification for Swimming Pool Water Treatment Installation in Government Buildings of The Hong Kong Special Administrative Region
	Surface Loading Rate of Filter, m ³ /m ² /hr	50	Swimming Pools: Design and Construction, Fourth Edition By Philip H. Perkins (50 m ³ /m ² /hr adopted)
	Required Filter Area, m ²	0.13	
	Backwash Duration (mins)	7.00	With reference to Section B8.5.5 of General Specification for Swimming Pool Water Treatment Installation in Government Buildings of the HKSAR published by the ArchSD, "the water velocity chosen shall be effective in cleaning the filter in duration of 7 minutes for sand filter".
	Backwash Flow Rate, m ³ /m ² /hr	30	Technical Paper - Domestic Swimming Pool Filtration by European Union of Swimmingpool and Spa Associations
	Maximum backwash volume, m ³	0.5	
	Maximum backwash volume, L/s	1.52	
	Maximum backwash volume, m ³ /s	0.002	
Description		Reference	
F6	Ronsdale Garden		
	No. of Households	396	https://hk.cantonet.com/estate/en/Ronsdale-Garden/2-T2MMHNR0W
	Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html
	Total Pop.	1030	
	Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.
Est. Pop. (persons) (2030)		1030	
Swimming Pool			
	Swimming Pool Area, m ²	231	
	Height of Swimming Pool, m	1.5	
	Estimated volume of the Swimming pool, m ³	347	
	Turnover Rate, hour	6	General Specification for Swimming Pool Water Treatment Installation in Government Buildings of The Hong Kong Special Administrative Region
	Surface Loading Rate of Filter, m ³ /m ² /hr	50	Swimming Pools: Design and Construction, Fourth Edition By Philip H. Perkins (50 m ³ /m ² /hr adopted)
	Required Filter Area, m ²	1.16	
	Backwash Duration (mins)	7.00	With reference to Section B8.5.5 of General Specification for Swimming Pool Water Treatment Installation in Government Buildings of the HKSAR published by the ArchSD, "the water velocity chosen shall be effective in cleaning the filter in duration of 7 minutes for sand filter".
	Backwash Flow Rate, m ³ /m ² /hr	30	Technical Paper - Domestic Swimming Pool Filtration by European Union of Swimmingpool and Spa Associations
	Maximum backwash volume, m ³	4.0	
	Maximum backwash volume, L/s	13.48	
	Maximum backwash volume, m ³ /s	0.013	
Description		Reference	
F7	The Church of Christ in China Kung Lee College		
	Number of Students	500	https://zh.wikipedia.org/wiki/%E4%B8%AD%E8%8F%AF%E5%9F%8A%E7%9D%A3%E6%95%99%E6%9C%83%E5%85%AC%E7%90%86%E9%AB%98%E4%B8%AD%E6%9B%8F%E9%99%A2
	Number of Staffs	28	https://www.schooland.hk/aa/cockle
	Total Pop.	528	
Catchment G			
Description		Reference	
G1	Tsuen Wing Lau, Lai Tak Tsuen Residential Blocks		
	Total Pop.	6211	According to 2021 population census, Population in Lai Tak Tsuen of the Wan Chai District are 6211 persons
	Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.
	Est. Pop. (persons) (2030)	6211	
Retail Units (G/F of Tsuen Wing Lau)			
	Total Area (m ²)	1239	
	Number of Floors	1	
	Total Floor Area (m ²)	1239	
	Worker Density (per 100m ²)	3.5	With reference to CIFSUS, the worker density for Retail Trade is adopted (https://www.pland.gov.hk/pland_enip_study/comp_s/cifus/cifusReport.pdf)
	Total Pop.	44	
Restaurants (G/F of Tsuen Wing Lau)			
	Total Area (m ²)	1070	
	Number of Floors	1	
	Total Floor Area (m ²)	1070	
	Worker Density (per 100m ²)	5.1	With reference to CIFSUS, the worker density for Restaurant is adopted (https://www.pland.gov.hk/pland_enip_study/comp_s/cifus/cifusReport.pdf)
	Total Pop.	55	
Pre-School (G/F and B/F of Tsuen Wing Lau)			
	Number of Students	132	https://www.schooland.hk/az/mass
	Number of Staffs	6	https://www.schooland.hk/ka/mass
	Total Pop.	138	
Description		Reference	
G2	Serenade		
	No. of Households	270	https://www.midland.com.hk/en/estate/Hong-Kong-Island-Jardine-s-Lookout-Tai-Hang-Serenade-E000007895
	Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html
	Total Pop.	702	
	Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.
Est. Pop. (persons) (2030)		702	
Swimming Pool			
	Swimming Pool Area, m ²	96	
	Height of Swimming Pool, m	1.5	
	Estimated volume of the Swimming pool, m ³	144	
	Turnover Rate, hour	6	General Specification for Swimming Pool Water Treatment Installation in Government Buildings of The Hong Kong Special Administrative Region
	Surface Loading Rate of Filter, m ³ /m ² /hr	50	Swimming Pools: Design and Construction, Fourth Edition By Philip H. Perkins (50 m ³ /m ² /hr adopted)
	Required Filter Area, m ²	0.48	
	Backwash Duration (mins)	7.00	With reference to Section B8.5.5 of General Specification for Swimming Pool Water Treatment Installation in Government Buildings of the HKSAR published by the ArchSD, "the water velocity chosen shall be effective in cleaning the filter in duration of 7 minutes for sand filter".
	Backwash Flow Rate, m ³ /m ² /hr	30	Technical Paper - Domestic Swimming Pool Filtration by European Union of Swimmingpool and Spa Associations
	Maximum backwash volume, m ³	1.7	
	Maximum backwash volume, L/s	5.62	
	Maximum backwash volume, m ³ /s	0.006	

Appendix 6-2 Population Estimation for Catchment Areas

Catchment H

Description		Reference	
H1	15-16 Li Kwan Avenue		
	No. of Households	8	https://www.okay.com/en/building/15-16-li-kwan-avenue/5926
	Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html
	Total Pop.	21	
	Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.
	Est. Pop. (persons) (2030)	21	
Description		Reference	
H2	Yik Kwan Villa		
	No. of Households	10	https://www.midland.com.hk/en/estate/hong-kong-island-jardine-s-lookout-tai-hang-yik-kwan-villa-F10105
	Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html
	Total Pop.	26	
	Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.
	Est. Pop. (persons) (2030)	26	
Description		Reference	
H3	No.7 Yik Kwan Avenue		
	No. of Households	6	https://hk.centanet.com/estate/en/5%20Yik%20Kwan%20Avenue%20QSSJFRC5RV
	Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html
	Total Pop.	16	
	Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.
	Est. Pop. (persons) (2030)	16	
Description		Reference	
H4	Jade Court		
	No. of Households	7	https://www.midland.com.hk/en/estate/hong-kong-jardine-s-lookout-tai-hang-jade-court-E000008398
	Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html
	Total Pop.	19	
	Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.
	Est. Pop. (persons) (2030)	19	
Description		Reference	
H5	No.5 Yik Kwan Avenue		
	No. of Households	6	https://hk.centanet.com/estate/en/5%20Yik%20Kwan%20Avenue%20QSSJFRC5RV
	Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html
	Total Pop.	16	
	Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.
	Est. Pop. (persons) (2030)	16	
Description		Reference	
H6	No.3-4 Yik Kwan Avenue		
	No. of Households	16	https://hk.centanet.com/estate/en/3-4%20Yik%20Kwan%20Avenue%20QSSJFRC5RV
	Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html
	Total Pop.	42	
	Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.
	Est. Pop. (persons) (2030)	42	
Description		Reference	
H7	No.1 Yik Kwan Avenue		
	No. of Households	8	https://www.okay.com/en/building/chi-foo-building/2113
	Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html
	Total Pop.	21	
	Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.
	Est. Pop. (persons) (2030)	21	
Description		Reference	
H8	Kan Oke House		
	No. of Households	23	https://hk.centanet.com/estate/en/Kan-Oke-House/1-SK5KPPDRPB
	Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html
	Total Pop.	60	
	Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.
	Est. Pop. (persons) (2030)	60	
Description		Reference	
H9	Fuk Kwan House		
	No. of Households	14	https://www.midland.com.hk/en/estate/hong-kong-jardine-s-lookout-tai-hang-fuk-kwan-house-E03072
	Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html
	Total Pop.	37	
	Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.
	Est. Pop. (persons) (2030)	37	
Description		Reference	
H10	No.9-10 Li Kwan Avenue		
	No. of Households	18	Home Affairs Department Database of Private Buildings in Hong Kong
	Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html
	Total Pop.	47	
	Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.
	Est. Pop. (persons) (2030)	47	
Description		Reference	
H11	Regent Court		
	No. of Households	18	https://hk.centanet.com/estate/en/Regent-Court/1-OSCUFURRRV
	Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html
	Total Pop.	47	
	Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.
	Est. Pop. (persons) (2030)	47	
Description		Reference	
H12	Lee Hang Court		
	No. of Households	16	https://www.oneday.com.hk/en_US/buildings/lee-hang-court/
	Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html
	Total Pop.	42	
	Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.
	Est. Pop. (persons) (2030)	42	

Appendix 6-2 Population Estimation for Catchment Areas

Description		Reference	
H13	No. 3-4 Li Kwan Avenue		
	No. of Households	6	https://www.ckay.com/en/building/3-4-li-kwan-avenue/buy/8829
	Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html
	Total Pop.	16	
	Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.
	Est. Pop. (persons) (2030)	16	
Description		Reference	
H14	No. 2-1 Li Kwan Avenue		
	No. of Households	2	https://hk.centanet.com/estate/en/2-1-li-kwan-avenue/2-TZTMH-MRHH
	Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html
	Total Pop.	6	
	Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.
	Est. Pop. (persons) (2030)	6	
Description		Reference	
H15	Dragon Court		
	No. of Households	8	https://www.midland.com.hk/en/estate/Hong-Kong-Island-Jardine-s-Logout-Tai-Hang-Dragon-Court-E02518
	Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html
	Total Pop.	21	
	Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.
	Est. Pop. (persons) (2030)	21	
Description		Reference	
H16	C.C. Lodge		
	No. of Households	16	https://www.midland.com.hk/en/estate/Hong-Kong-Island-Jardine-s-Logout-Tai-Hang-C-C-Lodge-E12638
	Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html
	Total Pop.	42	
	Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.
	Est. Pop. (persons) (2030)	42	
Description		Reference	
H17	Oi Kwan Court		
	No. of Households	16	https://www.midland.com.hk/en/estate/Hong-Kong-Oi-Kwan-Court-E06669
	Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html
	Total Pop.	42	
	Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.
	Est. Pop. (persons) (2030)	42	
Description		Reference	
H18	Rosedale		
	No. of Households	12	https://www.ckay.com/en/building/rosedale/buy/2109
	Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html
	Total Pop.	32	
	Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.
	Est. Pop. (persons) (2030)	32	
Description		Reference	
H19	Harvest Moon Villa		
	No. of Households	8	https://www.midland.com.hk/en/estate/Hong-Kong-Jardine-s-Logout-Tai-Hang-Harvest-Moon-Villa-E03727
	Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html
	Total Pop.	21	
	Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.
	Est. Pop. (persons) (2030)	21	
Description		Reference	
H20	Louvre Court		
	No. of Households	16	https://www.midland.com.hk/en/estate/Hong-Kong-Jardine-s-Logout-Tai-Hang-Louvre-Court-E05789
	Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html
	Total Pop.	42	
	Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.
	Est. Pop. (persons) (2030)	42	
Description		Reference	
H21	Jardine Summit		
	No. of Households	48	https://www.midland.com.hk/en/estate/Hong-Kong-Island-Jardine-s-Logout-Tai-Hang-Jardine-Summit-E00002229
	Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html
	Total Pop.	125	
	Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.
	Est. Pop. (persons) (2030)	125	
Swimming Pool			
Swimming Pool Area, m ²		64	
Height of Swimming Pool, m		1.5	
Estimated volume of the Swimming pool, m ³		95	
Turnover Rate, hour		6	General Specification for Swimming Pool Water Treatment Installation in Government Buildings of The Hong Kong Special Administrative Region
Surface Loading Rate of Filter, m ³ /m ² /hr		50	Swimming Pools: Design and Construction, Fourth Edition By Philip H. Perkins (50 m ³ /m ² /hr adopted)
Required Filter Area, m ²		0.32	
Backwash Duration (mins)		7.00	With reference to Section B8.5.5 of General Specification for Swimming Pool Water Treatment Installation in Government Buildings of the HKSAR published by the ArchSD, "the water velocity chosen shall be effective in cleaning the filter in duration of 7 minutes for sand filter".
Backwash Flow Rate, m ³ /m ² /hr		30	Technical Paper - Domestic Swimming Pool Filtration by European Union of Swimmingpool and Spa Associations
Maximum backwash volume, m ³		1.1	
Maximum backwash volume, L/s		3.71	
Maximum backwash volume, m ³ /s		0.004	

Catchment I

Description		Reference	
I1	Jolly Villa		
	No. of Households	48	https://hk.centanet.com/estate/en/Jolly-Villa/1-TZTDH-XQHN
	Average Household Size (2021) in Wan Chai	2.6	https://www.census2021.gov.hk/en/district_profiles.html
	Total Pop.	125	
	Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted.
	Est. Pop. (persons) (2030)	125	

Appendix 6-2 Population Estimation for Catchment Areas

Description			Reference
12 Y.L.			
No. of Households	70		https://www.midland.com.hk/en/estate/Hong-Kong-Island-Jardine-s-Lookout-Tai-Hang-Y-J-E12544
Average Household Size (2021) in Wan Chai	2.6		https://www.census2021.gov.hk/en/district_profiles.html
Total Pop.	182		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted	
Est. Pop. (persons) (2030)	182		
Description			Reference
13 Cherry Court			
No. of Households	24		https://hk.censtatet.com/estate/en/CHERRY%20COURT/1-17ZH0HX3SH
Average Household Size (2021) in Wan Chai	2.6		https://www.census2021.gov.hk/en/district_profiles.html
Total Pop.	63		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted	
Est. Pop. (persons) (2030)	63		
Description			Reference
14 16-18 Tai Hang Road			
No. of Households	23		https://hk.censtatet.com/estate/en/16-18%20TAI%20HANG%20ROAD/1-CSSRFRDXRV
Average Household Size (2021) in Wan Chai	2.6		https://www.census2021.gov.hk/en/district_profiles.html
Total Pop.	60		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted	
Est. Pop. (persons) (2030)	60		
Description			Reference
15 Harmony Court			
No. of Households	24		https://www.midland.com.hk/en/estate/Hong-Kong-Jardine-s-Lookout-Tai-Hang-Harmony-Court-E03710
Average Household Size (2021) in Wan Chai	2.6		https://www.census2021.gov.hk/en/district_profiles.html
Total Pop.	63		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted	
Est. Pop. (persons) (2030)	63		
Description			Reference
16 Grand Deco Tower			
No. of Households	54		https://www.midland.com.hk/en/estate/Hong-Kong-Island-Jardine-s-Lookout-Tai-Hang-Grand-Deco-Tower-E12048
Average Household Size (2021) in Wan Chai	2.6		https://www.census2021.gov.hk/en/district_profiles.html
Total Pop.	141		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted	
Est. Pop. (persons) (2030)	141		
Swimming Pool (Deep End)			
Swimming Pool Area, m ²	39		
Height of Swimming Pool, m	1.5		
Estimated volume of the Swimming pool, m ³	59		
Turnover Rate, hour	6	General Specification for Swimming Pool Water Treatment Installation in Government Buildings of The Hong Kong Special Administrative Region	
Surface Loading Rate of Filter, m ³ /m ² /hr	50	Swimming Pools: Design and Construction, Fourth Edition By Philip H. Perkins (50 m ³ /m ² /hr adopted)	
Required Filter Area, m ²	0.20		
Backwash Duration (mins)	7.00	With reference to Section B8.5.5 of General Specification for Swimming Pool Water Treatment Installation in Government Buildings of the HKSAR published by the ArchSD, "the water velocity chosen shall be effective in cleaning the filter in duration of 7 minutes for sand filter".	
Backwash Flow Rate, m ³ /m ² /hr	30	Technical Paper - Domestic Swimming Pool Filtration by European Union of Swimmingpool and Spa Associations	
Maximum backwash volume, m ³	0.7		
Maximum backwash volume, L/s	2.30		
Maximum backwash volume, m ³ /s	0.002		
Description			Reference
17 The Hong Kong Mantra School for Lay Buddhist			
Total Area (m ²)	138		
Number of Floors	6		
Total Floor Area (m ²)	828		
Worker Density (per 100m ²)	3.3	The development is mainly use as a religious space. With reference to CIFSUS, the worker density for Community, Social & Personal Services is adopted (https://www.pland.gov.hk/pland_en/p_study/comp_s/cifsus/cifsusReport.pdf)	
Total Pop.	28		
Description			Reference
18 The Hong Kong Mantra School for Lay Women Buddhist			
Total Area (m ²)	188		
Number of Floors	8		
Total Floor Area (m ²)	1504		
Worker Density (per 100m ²)	3.3	The development is mainly use as a religious space. With reference to CIFSUS, the worker density for Community, Social & Personal Services is adopted (https://www.pland.gov.hk/pland_en/p_study/comp_s/cifsus/cifsusReport.pdf)	
Total Pop.	50		
Catchment J			
Description			Reference
J1 Fontana Garden			
No. of Households	289		https://www.midland.com.hk/en/estate/Hong-Kong-Island-Jardine-s-Lookout-Tai-Hang-Fontana-Gardens-E00414
Average Household Size (2021) in Wan Chai	2.6		https://www.census2021.gov.hk/en/district_profiles.html
Total Pop.	752		
Average Population Growth Per Year	0.00%	According to the Projections of Population Distribution 2023-2031 published by Planning Department, the population growth of Wan Chai in 2023 is -1.3%. For conservative approach, population growth of 0% is adopted	
Est. Pop. (persons) (2030)	752		
Swimming Pool			
Swimming Pool Area, m ²	122		
Height of Swimming Pool, m	1.5		
Estimated volume of the Swimming pool, m ³	183		
Turnover Rate, hour	6	General Specification for Swimming Pool Water Treatment Installation in Government Buildings of The Hong Kong Special Administrative Region	
Surface Loading Rate of Filter, m ³ /m ² /hr	50	Swimming Pools: Design and Construction, Fourth Edition By Philip H. Perkins (50 m ³ /m ² /hr adopted)	
Required Filter Area, m ²	0.61		
Backwash Duration (mins)	7.00	With reference to Section B8.5.5 of General Specification for Swimming Pool Water Treatment Installation in Government Buildings of the HKSAR published by the ArchSD, "the water velocity chosen shall be effective in cleaning the filter in duration of 7 minutes for sand filter".	
Backwash Flow Rate, m ³ /m ² /hr	30	Technical Paper - Domestic Swimming Pool Filtration by European Union of Swimmingpool and Spa Associations	
Maximum backwash volume, m ³	2.1		
Maximum backwash volume, L/s	7.13		
Maximum backwash volume, m ³ /s	0.007		

Project No. 1947

Sewerage Impact Assessment for Section 16 Planning Application for Proposed Amendments to an Approved Scheme (under Application No. A/H6/91 with Minor Relaxation of Plot Ratio Restriction Approved) for Permitted Flat Use at 4, 4A, 4B and 4C Tai Hang Road, Hong Kong

Appendix 6-3

Estimation of Sewerage Flow from Catchment Areas

Appendix 6-3 Estimation of Sewerage Flow from Catchment Area

Table 1- Estimation of Sewage Flow from Developments in Each Catchment

Catchment	No.	Population Description	Type of Occupancy	Estimated Population	UFF Type		Total Average Sewage Discharge (m ³ /day)
					Category	m ³ /day	
A	A1	Buddhist Li Ka Shing Care and Attention Home for the Elderly	Care Workers	190	Community, Social & Personal Services	0.28	53.2
	A2	Jardini	Care Home Residents	242	Institutional & Special Class	0.19	46.0
	A3	Perkins Road Dairy Farm Shopping Centre	Residential	297	T1, Domestic (private permanent housing R2)	0.27	80.2
	A4	Tai Hang Road Petrol Filling Station	Retail	31	Wholesale & Retail	0.28	8.7
	A5	Villa De Perkins (7, 9, 11, 13, 15, 17, 19, 21 and 23 Perkins Road)	Retail	4	Wholesale & Retail	0.28	1.1
	A6	No.25 Perkins Road	Residential	29	T1, Domestic (private permanent housing R3)	0.37	10.7
	A7	Cavendish Heights	Residential	3	T1, Domestic (private permanent housing R3)	0.37	1.1
	A8	New Development at No.41, 43 and 45 Perkins Road	Residential	1144	T1, Domestic (private permanent housing R2)	0.27	308.9
	A9	Pinewood Garden	Residential	24	T1, Domestic (private permanent housing R3)	0.37	8.9
	A10	Dukes Place	Residential	50	T1, Domestic (private permanent housing R3)	0.37	18.5
	A11	No.3 Moorsom Road	Residential	42	T1, Domestic (private permanent housing R2)	0.27	11.3
	A12	No.5 Moorsom Road	Residential	3	T1, Domestic (private permanent housing R3)	0.37	1.1
	A13	No.7 Moorsom Road	Residential	3	T1, Domestic (private permanent housing R3)	0.37	1.1
	A14	No.9 Moorsom Road	Residential	3	T1, Domestic (private permanent housing R3)	0.37	1.1
	A15	No.11 Moorsom Road	Residential	3	T1, Domestic (private permanent housing R3)	0.37	1.1
	A16	No.15 Moorsom Road	Residential	3	T1, Domestic (private permanent housing R3)	0.37	1.1
	A17	No.17 Moorsom Road	Residential	3	T1, Domestic (private permanent housing R3)	0.37	1.1
	A18	No.19 Moorsom Road	Residential	3	T1, Domestic (private permanent housing R3)	0.37	1.1
	A19	Jardine's Lookout Garden Houses (No.21-49 Moorsom Road)	Residential	3	T1, Domestic (private permanent housing R3)	0.37	1.1
	A20	No.1 Moorsom Drive	Residential	39	T1, Domestic (private permanent housing R3)	0.37	14.4
	A21	No.2 Moorsom Drive	Residential	3	T1, Domestic (private permanent housing R3)	0.37	1.1
	A22	No.3 Moorsom Drive	Residential	3	T1, Domestic (private permanent housing R3)	0.37	1.1
	A23	No.4 Moorsom Drive	Residential	3	T1, Domestic (private permanent housing R3)	0.37	1.1
	A24	No.5 Moorsom Drive	Residential	3	T1, Domestic (private permanent housing R3)	0.37	1.1
	A25	No.6 Moorsom Drive	Residential	3	T1, Domestic (private permanent housing R3)	0.37	1.1
	A26	No.7 Moorsom Drive	Residential	3	T1, Domestic (private permanent housing R3)	0.37	1.1
	A27	No.8 Moorsom Drive	Residential	3	T1, Domestic (private permanent housing R3)	0.37	1.1
	A28	No.9 Moorsom Drive	Residential	3	T1, Domestic (private permanent housing R3)	0.37	1.1
	A29	Butler Towers	Residential	307	T1, Domestic (private permanent housing R2)	0.27	82.9
	A30	Wing On Towers	Residential	177	T1, Domestic (private permanent housing R2)	0.27	47.8
	A31	No.2 Boyce Road	Residential	3	T1, Domestic (private permanent housing R3)	0.37	1.1
	A32	No.4 Boyce Road	Residential	3	T1, Domestic (private permanent housing R3)	0.37	1.1
	A33	No.6 Boyce Road	Residential	3	T1, Domestic (private permanent housing R3)	0.37	1.1
	A34	No.8 Boyce Road	Residential	3	T1, Domestic (private permanent housing R3)	0.37	1.1
	A35	No.10 Boyce Road	Residential	3	T1, Domestic (private permanent housing R3)	0.37	1.1
	A36	Linden Heights	Residential	94	T1, Domestic (private permanent housing R2)	0.27	25.4
	A37	No.12 Boyce Road	Residential	3	T1, Domestic (private permanent housing R2)	0.27	4.3
	A38	No.6 Moorsom Road	Residential	16	T1, Domestic (private permanent housing R3)	0.37	1.1
	A39	No.8 Moorsom Road	Residential	3	T1, Domestic (private permanent housing R3)	0.37	1.1
	A40	No.10 Moorsom Road	Residential	3	T1, Domestic (private permanent housing R3)	0.37	1.1
	A41	No.12 Moorsom Road	Residential	3	T1, Domestic (private permanent housing R3)	0.37	1.1
	A42	No.14 Moorsom Road	Residential	3	T1, Domestic (private permanent housing R3)	0.37	1.1
	A43	Moorsom Lodge	Residential	16	T1, Domestic (private permanent housing R3)	0.37	5.9
	A44	No.53 Perkins Road	Residential	3	T1, Domestic (private permanent housing R3)	0.37	1.1
	A45	No.55 Perkins Road	Residential	3	T1, Domestic (private permanent housing R3)	0.37	1.1
	A46	Minton Court	Residential	19	T1, Domestic (private permanent housing R3)	0.37	7.0
	A47	No.59 Perkins Road	Residential	3	T1, Domestic (private permanent housing R3)	0.37	1.1
	A48	Falcon Lodge	Residential	13	T1, Domestic (private permanent housing R3)	0.37	4.8
	A49	No.69 Perkins Road	Residential	19	T1, Domestic (private permanent housing R3)	0.37	5.9
	A50	No.69 Perkins Road	Residential	8	T1, Domestic (private permanent housing R3)	0.37	3.0
	A51	No.73 Perkins Road	Residential	3	T1, Domestic (private permanent housing R3)	0.37	1.1
	A52	No.75 Perkins Road	Residential	6	T1, Domestic (private permanent housing R3)	0.37	2.2
	A53	No.77 Perkins Road	Residential	3	T1, Domestic (private permanent housing R3)	0.37	1.1
	A54	No.79 Perkins Road	Residential	3	T1, Domestic (private permanent housing R3)	0.37	1.1
	A55	No.81 Perkins Road	Residential	3	T1, Domestic (private permanent housing R3)	0.37	1.1
	A56	No.83 Perkins Road	Residential	3	T1, Domestic (private permanent housing R3)	0.37	1.1
	A57	No.2 Perkins Road	Residential	3	T1, Domestic (private permanent housing R3)	0.37	1.1
	A58	No.4 Perkins Road	Residential	3	T1, Domestic (private permanent housing R3)	0.37	1.1
	A59	No.6 Perkins Road	Residential	3	T1, Domestic (private permanent housing R3)	0.37	1.1
	A60	No.8 Perkins Road	Residential	3	T1, Domestic (private permanent housing R3)	0.37	1.1
	A61	No.10 Perkins Road	Residential	3	T1, Domestic (private permanent housing R3)	0.37	1.1
	A62	No.12 Perkins Road	Residential	3	T1, Domestic (private permanent housing R3)	0.37	1.1
	A63	No.14 Perkins Road	Residential	3	T1, Domestic (private permanent housing R3)	0.37	1.1
	A64	Redwoods	Residential	3	T1, Domestic (private permanent housing R3)	0.37	1.1
	A65	No.18 Perkins Road	Residential	3	T1, Domestic (private permanent housing R3)	0.37	1.1
	A66	No.20 Perkins Road	Residential	3	T1, Domestic (private permanent housing R3)	0.37	1.1
	A67	No.22 Perkins Road	Residential	3	T1, Domestic (private permanent housing R3)	0.37	1.1
	A68	No.24 Perkins Road	Residential	3	T1, Domestic (private permanent housing R3)	0.37	1.1
	A69	No.2 Henderson Road	Residential	3	T1, Domestic (private permanent housing R3)	0.37	1.1
	A70	No.3 Henderson Road	Residential	3	T1, Domestic (private permanent housing R3)	0.37	1.1
	A71	No.4 Henderson Road	Residential	3	T1, Domestic (private permanent housing R3)	0.37	1.1
	A72	No.5 Henderson Road	Residential	3	T1, Domestic (private permanent housing R3)	0.37	1.1
	A73	No.6 Henderson Road	Residential	3	T1, Domestic (private permanent housing R3)	0.37	1.1
	A74	No.7 Henderson Road	Residential	3	T1, Domestic (private permanent housing R3)	0.37	1.1
	A75	No.8 Henderson Road	Residential	3	T1, Domestic (private permanent housing R3)	0.37	1.1
	A76	No.9 Henderson Road	Residential	3	T1, Domestic (private permanent housing R3)	0.37	1.1
	A77	No.10 Henderson Road	Residential	3	T1, Domestic (private permanent housing R3)	0.37	1.1
	A78	No.11 Henderson Road	Residential	3	T1, Domestic (private permanent housing R3)	0.37	1.1
	A79	No.12 Henderson Road	Residential	3	T1, Domestic (private permanent housing R3)	0.37	1.1
	A80	No.12A Henderson Road	Residential	3	T1, Domestic (private permanent housing R3)	0.37	1.1
	A81	No.18 Henderson Road	Residential	3	T1, Domestic (private permanent housing R3)	0.37	1.1
	A82	No.1 Cooper Road	Residential	3	T1, Domestic (private permanent housing R3)	0.37	1.1
	A83	No.1 Purves Road	Residential	3	T1, Domestic (private permanent housing R3)	0.37	1.1
	A84	No.2 Purves Road	Residential	3	T1, Domestic (private permanent housing R3)	0.37	1.1
	A85	No.3 Purves Road	Residential	3	T1, Domestic (private permanent housing R3)	0.37	1.1
	A86	No.4 Purves Road	Residential	3	T1, Domestic (private permanent housing R3)	0.37	1.1
	A87	No.5 Purves Road	Residential	3	T1, Domestic (private permanent housing R3)	0.37	1.1
	A88	No.6 Purves Road	Residential	3	T1, Domestic (private permanent housing R3)	0.37	1.1
	A89	No.7 Purves Road	Residential	3	T1, Domestic (private permanent housing R3)	0.37	1.1
	A90	New Development at No.8 Purves Road	Residential	8	T1, Domestic (private permanent housing R3)	0.37	3.0
	A91	No.4A Cooper Road	Residential	3	T1, Domestic (private permanent housing R3)	0.37	1.1
	A92	No.4 Cooper Road	Residential	6	T1, Domestic (private permanent housing R3)	0.37	2.2
	A93	No.6 Cooper Road	Residential	3	T1, Domestic (private permanent housing R3)	0.37	1.1
	A94	No.8 Cooper Road	Residential	3	T1, Domestic (private permanent housing R3)	0.37	1.1
	A95	No.10 Cooper Road	Residential	3	T1, Domestic (private permanent housing R3)	0.37	1.1
	A96	No.12 Cooper Road	Residential	3	T1, Domestic (private permanent housing R3)	0.37	1.1
	A97	No.1 Goldsmith Road	Residential	3	T1, Domestic (private permanent housing R3)	0.37	1.1
	A98	No.2-3 Goldsmith Road	Residential	3	T1, Domestic (private permanent housing R3)	0.37	1.1
	A99	No.4 Goldsmith Road	Residential	3	T1, Domestic (private permanent housing R3)	0.37	1.1
	A100	No.5 Goldsmith Road	Residential	3	T1, Domestic (private permanent housing R3)	0.37	1.1
	A101	New Development at No.6 Goldsmith Road	Residential	3	T1, Domestic (private permanent housing R3)	0.37	1.1
	A102	Valley View	Residential	6	T1, Domestic (private permanent housing R3)	0.37	2.2
	A103	No.17 Cooper Road	Residential	3	T1, Domestic (private permanent housing R3)	0.37	1.1
	A104	No.19 Cooper Road	Residential	3	T1, Domestic (private permanent housing R3)	0.37	1.1
	A105	No.21 Cooper Road	Residential	3	T1, Domestic (private permanent housing R3)	0.37	1.1
	A106	No.23 Cooper Road	Residential	3	T1, Domestic (private permanent housing R3)	0.37	1.1
	A107	No.25 Cooper Road	Residential	3	T1, Domestic (private permanent housing R3)	0.37	1.1
	A108	No.1 Cooper Road	Residential	3	T1, Domestic (private permanent housing R3)	0.37	1.1
	A109	No.9 Creasy Road	Residential	3	T1, Domestic (private permanent housing R3)	0.37	1.1
	A110	No.11 Creasy Road	Residential	3	T1, Domestic (private permanent housing R3)	0.37	1.1
	A111	No.11A Creasy Road	Residential	3	T1, Domestic (private permanent housing R3)	0.37	1.1
	A112	No.15 Creasy Road	Residential	6	T1, Domestic (private permanent housing R3)	0.37	2.2
	A113	Jardine's Lookout Residents' Association- Creasy Road Building	Staff	37	Restaurants & Hotels	1.58	58.5
	A114	Jardine's Lookout Residents' Association- Purves Road Buildings	Staff	8	Community, Social & Personal Services	0.28	2.2

B	B1	Swiss Towers	Residential	414	T1, Domestic (private permanent housing R2)	0.27	111.8
	B2	Park Garden	Residential	229	T1, Domestic (private permanent housing R2)	0.27	61.8
	B3	Bellevue Heights	Residential	141	T1, Domestic (private permanent housing R2)	0.27	38.1
	B4	Yick King Building	Residential	115	T1, Domestic (private permanent housing R2)	0.27	31.1
	B5	Tai Hang Terrace	Residential	624	T1, Domestic (private permanent housing R2)	0.27	168.5
	B6	Flora Garden	Residential	624	T1, Domestic (private permanent housing R2)	0.27	168.5
	B7	Elm Tree Towers	Residential	237	T1, Domestic (private permanent housing R2)	0.27	80.2
	B8	Chun Fai Centre	Staff (Retail)	30	Wholesale & Retail	0.28	8.4
			Staff (School)	37	Community, Social & Personal Services	0.28	10.4
			Students	448	Students	0.04	17.9
C	B9	Aurizon	Residential	214	T1, Domestic (private permanent housing R2)	0.27	57.8
	B10	Aurora	Residential	110	T1, Domestic (private permanent housing R2)	0.27	29.7
	C1	No.83-87 Tai Hang Road	Residential	32	T1, Domestic (private permanent housing R3)	0.37	11.8
	C2	New Development at No.89-93 Tai Hang Road	Residential	26	T1, Domestic (private permanent housing R3)	0.37	9.6
	C3	Gold King Mansion	Residential	208	T1, Domestic (private permanent housing R2)	0.27	56.2
	C4	Gold Ning Mansion	Residential	208	T1, Domestic (private permanent housing R2)	0.27	56.2
	C5	Alpha Court	Residential	32	T1, Domestic (private permanent housing R3)	0.37	11.8
	C6	Renown Court	Residential	78	T1, Domestic (private permanent housing R3)	0.37	28.9
	D1	Grandview Mansion	Residential	86	T1, Domestic (private permanent housing R3)	0.37	31.8
	D2	No.2 Wang Fung Terrace	Residential	32	T1, Domestic (private permanent housing R3)	0.37	11.8
D	D3	No.3-3E Wang Fung Terrace	Residential	60	T1, Domestic (private permanent housing R3)	0.37	22.2
	D4	No.4A-4D Wang Fung Terrace	Residential	42	T1, Domestic (private permanent housing R3)	0.37	15.5
	D5	No.4 Wang Fung Terrace	Residential	8	T1, Domestic (private permanent housing R3)	0.37	3.0
	D6	No.5 Wang Fung Terrace	Residential	42	T1, Domestic (private permanent housing R3)	0.37	15.5
	D7	Scenic Lodge	Residential	32	T1, Domestic (private permanent housing R3)	0.37	11.8
	D8	Jolly Garden	Residential	32	T1, Domestic (private permanent housing R3)	0.37	11.8
	D9	Green Village	Residential	42	T1, Domestic (private permanent housing R3)	0.37	15.5
	D10	No.9-9A Wang Fung Terrace	Residential	21	T1, Domestic (private permanent housing R3)	0.37	7.8
	D11	No.10 Wang Fung Terrace	Residential	16	T1, Domestic (private permanent housing R3)	0.37	5.9
	D12	Verde Green	Residential	16	T1, Domestic (private permanent housing R3)	0.37	5.9
E	D13	Hecky Court	Residential	19	T1, Domestic (private permanent housing R3)	0.37	7.0
	D14	Mayflower Mansion	Residential	84	T1, Domestic (private permanent housing R3)	0.37	31.1
	D15	No.12 Wang Fung Terrace	Residential	21	T1, Domestic (private permanent housing R3)	0.37	7.8
	E1	Avon	Residential	120	T1, Domestic (private permanent housing R2)	0.27	32.4
	E2	Yukon Height	Residential	104	T1, Domestic (private permanent housing R2)	0.27	28.1
	E3	Morengo Court	Residential	125	T1, Domestic (private permanent housing R2)	0.27	33.8
	E4	Wah Fung Mansion	Residential	52	T1, Domestic (private permanent housing R2)	0.27	14.0
	E5	Carnation Court	Residential	115	T1, Domestic (private permanent housing R2)	0.27	31.1
	E6	No.52 Tai Hang Road	Residential	8	T1, Domestic (private permanent housing R2)	0.27	2.2
	E7	Royal Court	Residential	65	T1, Domestic (private permanent housing R2)	0.27	17.6
F	E8	Sunrise Court	Residential	63	T1, Domestic (private permanent housing R2)	0.27	17.0
	E9	Fuk Kwan Mansion	Residential	32	T1, Domestic (private permanent housing R3)	0.37	11.8
	E10	The Elegance	Residential	45	T1, Domestic (private permanent housing R2)	0.27	12.2
	E11	Trafalgar Court	Residential	156	T1, Domestic (private permanent housing R2)	0.27	42.1
	F1	Haw Par Mansion	Staff	72	Community, Social & Personal Services	0.28	20.2
	F2	The Legend	Residential	994	T1, Domestic (private permanent housing R2)	0.27	268.4
	F3	Gardenview Heights	Residential	177	T1, Domestic (private permanent housing R2)	0.27	47.8
	F4	Dragon Garden	Residential	208	T1, Domestic (private permanent housing R2)	0.27	56.2
	F5	The Signature	Residential	172	T1, Domestic (private permanent housing R2)	0.27	46.4
	F6	Ronsdale Garden	Residential	1030	T1, Domestic (private permanent housing R2)	0.27	278.1
G	G1	Tsuen Wing Lau, Lai Tak Tsuen	Students	500	Students	0.04	20.0
			Staff	28	Community, Social & Personal Services	0.28	7.8
			Residential	6211	T1, Domestic (private permanent housing R1)	0.19	1180.1
			Staff (Retail)	44	Wholesale & Retail	0.28	12.3
			Staff (Restaurants)	55	Restaurants & Hotels	1.58	86.9
			Students	132	Students	0.04	5.3
	G2	Serenade	Staff (School)	6	Community, Social & Personal Services	0.28	1.7
			Residential	702	T1, Domestic (private permanent housing R2)	0.27	189.5
			Residential	21	T1, Domestic (private permanent housing R3)	0.37	7.8
			Residential	26	T1, Domestic (private permanent housing R3)	0.37	9.6
H	H1	15-16 Li Kwan Avenue	Residential	21	T1, Domestic (private permanent housing R3)	0.37	7.8
	H2	Yik Kwan Villa	Residential	26	T1, Domestic (private permanent housing R3)	0.37	9.6
	H3	No.7 Yik Kwan Avenue	Residential	16	T1, Domestic (private permanent housing R3)	0.37	5.9
	H3	Jade Court	Residential	19	T1, Domestic (private permanent housing R3)	0.37	7.0
	H4	No.5 Yik Kwan Avenue	Residential	16	T1, Domestic (private permanent housing R3)	0.37	5.9
	H5	No.3-4 Yik Kwan Avenue	Residential	42	T1, Domestic (private permanent housing R3)	0.37	15.5
	H6	No.1 Yik Kwan Avenue	Residential	21	T1, Domestic (private permanent housing R3)	0.37	7.8
	H7	Kan Oke House	Residential	60	T1, Domestic (private permanent housing R3)	0.37	22.2
	H8	Fuk Kwan House	Residential	37	T1, Domestic (private permanent housing R3)	0.37	13.7
	H9	No.9-10 Li Kwan Avenue	Residential	47	T1, Domestic (private permanent housing R3)	0.37	17.4
I	H10	Regent Court	Residential	47	T1, Domestic (private permanent housing R3)	0.37	17.4
	H11	Lee Hang Court	Residential	42	T1, Domestic (private permanent housing R3)	0.37	15.5
	H12	No.3-4 Li Kwan Avenue	Residential	16	T1, Domestic (private permanent housing R3)	0.37	5.9
	H13	No.2 Li Kwan Avenue	Residential	6	T1, Domestic (private permanent housing R3)	0.37	2.2
	H14	Dragon Court	Residential	21	T1, Domestic (private permanent housing R3)	0.37	7.8
	H15	C.C. Lodge	Residential	42	T1, Domestic (private permanent housing R3)	0.37	15.5
	H16	Qi Kwan Court	Residential	42	T1, Domestic (private permanent housing R3)	0.37	15.5
	H17	Rosedale	Residential	32	T1, Domestic (private permanent housing R3)	0.37	11.8
	H18	Harvest Moon Villa	Residential	21	T1, Domestic (private permanent housing R3)	0.37	7.8
	H19	Louvre Court	Residential	42	T1, Domestic (private permanent housing R3)	0.37	15.5
J	H20	Jardine Summit	Residential	125	T1, Domestic (private permanent housing R3)	0.37	46.3
	I1	Jolly Villa	Residential	125	T1, Domestic (private permanent housing R2)	0.27	33.8
	I2	Y.I.	Residential	132	T1, Domestic (private permanent housing R2)	0.27	49.1
	I3	Cherry Court	Residential	63	T1, Domestic (private permanent housing R2)	0.27	17.0
	I4	16-18 Tai Hang Road	Residential	60	T1, Domestic (private permanent housing R2)	0.27	16.2
	I5	Harmony Court	Residential	63	T1, Domestic (private permanent housing R2)	0.27	17.0
	I6	Grand Deco Tower	Residential	141	T1, Domestic (private permanent housing R2)	0.27	38.1
	I7	The Hong Kong Mantra School for Lay Buddhist	Staff	28	Community, Social & Personal Services	0.28	7.8
	I8	The Hong Kong Mantra School for Lay Women Buddhist	Staff	50	Community, Social & Personal Services	0.28	14.0
	J	Fontana Garden	Residential	752	T1, Domestic (private permanent housing R2)	0.27	203.0

Total 20188

Total Domestic Discharge 5215

Table 2- Estimation of Sewage Flow Generated from Backwash Flow from Swimming Pools of the Developments in Each Catchments

Catchment	No.	Population Description	Total Swimming Pool Volume (m3)	Total Maximum Backwash Volume (m3/s)
A	A5	Villa De Perkins (7, 9, 11, 13, 15, 17, 19, 21 and 23 Perkins Road)	192	0.0075
	A6	No.25 Perkins Road	83	0.0032
	A7	Cavendish Heights	431	0.0167
	A10	Dukes Place	156	0.0061
	A20	No.1 Moorsom Drive	126	0.0049
	A22	No.3 Moorsom Drive	47	0.0018
	A40	No.10 Moorsom Road	56	0.0022
	A44	No.53 Perkins Road	127	0.0049
	A53	No.77 Perkins Road	57	0.0022
	A59	No.6 Perkins Road	194	0.0075
	A61	No.10 Perkins Road	162	0.0063
	A62	No.12 Perkins Road	270	0.0105
	A64	Redwoods	405	0.0158
	A77	No.10 Henderson Road	86	0.0033
	A89	No.7 Purves Road	33	0.0013
	A91	No.4A Cooper Road	53	0.0020
	A92	No.6 Cooper Road	107	0.0042
	A93	No.8 Cooper Road	104	0.0040
	A94	No.10 Cooper Road	156	0.0061
	A96	No.1 Goldsmith Road	116	0.0045
	A97	No.2-3 Goldsmith Road	237	0.0092
	A100	No.5 Goldsmith Road	83	0.0032
	A101	Valley View	99	0.0039
	A102	No.17 Cooper Road	94	0.0036
B	B6	Flora Garden	231	0.0090
	B7	Elm Tree Gardens	209	0.0081
D	D14	Mayflower Mansion	152	0.0059
E	E1	Avalon	107	0.0042
	E5	Carnation Court	158	0.0061
	E11	Trafalgar Court	170	0.0066
F	F2	The Legend	743	0.0289
	F3	Gardenview Heights	158	0.0061
	F5	The Signature	284	0.0110
	F6	Ronsdale Garden	347	0.0135
G	G2	Serenade	144	0.0056
H	H20	Jardine Summit	95	0.0037
I	I6	Grand Deco Tower	59	0.0023
J	J1	Fontana Garden	183	0.0071

7057.0**0.2744**

Tai Hang Path Public Toilet - Catchment A

Description	Note	Quantity		Remark
Area of Open Space with the referenced public toilet in Ma Wan Tsuen		4648	m ²	https://www1.ozp.tpb.gov.hk/qos/default.aspx?
Area of Open Space of Sam Ka Tsuen Recreational Ground		1310	m ²	https://www1.ozp.tpb.gov.hk/qos/default.aspx?
Total Daily Users of a referenced public toilet in Ma Wan Tsuen in Weekend		903	person	Table 6.6 Total Daily Users of Public Toilet in Head Count Surveys of the Approved EIA Report of Lei Yue Mun Waterfront Enhancement Project (https://www.epd.gov.hk/eia/register/report/eiareport/eia_2582018/HTML/EIA/S6_Sewage.htm#_Toc519183665)
Estimated Total Daily Users of the public toilet in Sam Ka Tsuen Recreational Ground		255	person	Total Daily Users of a referenced public toilet in Ma Wan Tsuen in Weekend × Area of Open Space of Broadcast Drive Garden ÷ Area of Open Space with the referenced public toilet in Ma Wan Tsuen
Median volume of urine for a single person after urination	(A)	0.23	L	According to Table 12 of "The Characterization of Feces and Urine: A Review of the Literature to Inform Advanced Treatment Technology" (C. Rose et al., 2015), the median value of urine wet weight is 1.4 L/cap/day. By dividing daily urination frequency (i.e. 6 urinations/24 hrs), median volume of urine is obtained.
Median volume of feces for a single person after defecation	(B)	0.12	L	According to Table 12 of "The Characterization of Feces and Urine: A Review of the Literature to Inform Advanced Treatment Technology" (C. Rose et al., 2015), the median value of fecal wet weight is 128 g/cap/day. By dividing daily defecation frequency (i.e. 1.1 motions/24 hrs) and assuming stool density is same as water density, median volume of feces is obtained.
Average volume of hand washing water for a single person after excrement in public toilets	(C)	1.38	L	According to Section 8.6 (Assumptions and baselines for water consumption) of BEAM Plus New Buildings Version 1.2, the baseline hand washing time is 10 seconds and the average tap flow rate is 8.3 L/min.
Flushing volume of a single water closet in public toilets	(D)	6.50	L	According to According to Section 6.2 (WU 7 Effluent Discharge to Foul Sewers) of BEAM Plus New Buildings Version 2.0, the baseline flushing volume of a single flush toilet is 6.5 L per flush.
Sewage generated from each urination in public toilets	(E)	8.12	L	(A) + (C) + (D)
Sewage generated from each defecation in public toilets	(F)	8.00	L	(B) + (C) + (D)
Hourly urination frequency handling in public toilets	(G)	216	times	With reference to Table 12 (Summary table of feces and urine characteristics providing on-site sanitation design criteria) of "The Characterization of Feces and Urine: A Review of the Literature to Inform Advanced Treatment Technology" (C. Rose et al., 2015), urination frequency of a single person is 6 times a day; while defecation frequency is 1.1 times a day. Urination and defecation ratio of each visitor in the public toilet is thus assumed 6 : 1.1 according to the mentioned frequency.
Hourly defecation frequency handling in public toilets	(H)	39	times	With reference to Table 12 (Summary table of feces and urine characteristics providing on-site sanitation design criteria) of "The Characterization of Feces and Urine: A Review of the Literature to Inform Advanced Treatment Technology" (C. Rose et al., 2015), urination frequency of a single person is 6 times a day; while defecation frequency is 1.1 times a day. Urination and defecation ratio of each visitor in the public toilet is thus assumed 6 : 1.1 according to the mentioned frequency.
Daily sewage generation from public toilets everyday		<u>2.07</u>	m ³ /day	(E) * (G) + (F) * (H)

Tai Hang Road Public Toilet - Catchment H

Description	Note	Quantity		Remark
Estimated Total Daily Users of the Tai Hang Road Public Toilet		1999	person	The utilisation rate of the toilet is based on the report published for "Public Accounts Committee - Consideration of Chapter 1 of the Director of Audit's Report No. 73: Planning, provision and management of public toilets by the Food and Environmental Hygiene Department" by FEHD. Tai Hang Road Public Toilet is considered as a toilet with high utilisation rate (1000-1999 persons/day)
Median volume of urine for a single person after urination	(A)	0.23	L	According to Table 12 of "The Characterization of Feces and Urine: A Review of the Literature to Inform Advanced Treatment Technology" (C. Rose et al., 2015), the median value of urine wet weight is 1.4 L/cap/day. By dividing daily urination frequency (i.e. 6 urinations/24 hrs), median volume of urine is obtained.
Median volume of feces for a single person after defecation	(B)	0.12	L	According to Table 12 of "The Characterization of Feces and Urine: A Review of the Literature to Inform Advanced Treatment Technology" (C. Rose et al., 2015), the median value of fecal wet weight is 128 g/cap/day. By dividing daily defecation frequency (i.e. 1.1 motions/24 hrs) and assuming stool density is same as water density, median volume of feces is obtained.
Average volume of hand washing water for a single person after excrement in public toilets	(C)	1.38	L	According to Section 8.6 (Assumptions and baselines for water consumption) of BEAM Plus New Buildings Version 1.2, the baseline hand washing time is 10 seconds and the average tap flow rate is 8.3 L/min.
Flushing volume of a single water closet in public toilets	(D)	6.50	L	According to According to Section 6.2 (WU 7 Effluent Discharge to Foul Sewers) of BEAM Plus New Buildings Version 2.0, the baseline flushing volume of a single flush toilet is 6.5 L per flush.
Sewage generated from each urination in public toilets	(E)	8.12	L	(A) + (C) + (D)
Sewage generated from each defecation in public toilets	(F)	8.00	L	(B) + (C) + (D)
Hourly urination frequency handling in public toilets	(G)	1690	times	With reference to Table 12 (Summary table of feces and urine characteristics providing on-site sanitation design criteria) of "The Characterization of Feces and Urine: A Review of the Literature to Inform Advanced Treatment Technology" (C. Rose et al., 2015), urination frequency of a single person is 6 times a day; while defecation frequency is 1.1 times a day. Urination and defecation ratio of each visitor in the public toilet is thus assumed 6 : 1.1 according to the mentioned frequency.
Hourly defecation frequency handling in public toilets	(H)	309	times	With reference to Table 12 (Summary table of feces and urine characteristics providing on-site sanitation design criteria) of "The Characterization of Feces and Urine: A Review of the Literature to Inform Advanced Treatment Technology" (C. Rose et al., 2015), urination frequency of a single person is 6 times a day; while defecation frequency is 1.1 times a day. Urination and defecation ratio of each visitor in the public toilet is thus assumed 6 : 1.1 according to the mentioned frequency.
Daily sewage generation from public toilets everyday		16.19	m ³ /day	(E) * (G) + (F) * (H)

Appendix 7-1

Calculation of Occupancy Rate of Sewerage System

Appendix 7-1 Calculation of Occupancy Rate of Sewerage System Under Unmitigated Scenario

Sewer No.			Internal Diameter (m) [a]	Cross-section Area (m ²)	Length (m) [a]	Inlet mPD (m) [a]	Outlet mPD (m) [a]	Hydraulic pipeline roughness (m) [b]	Hydraulic Gradient	Mean Velocity (m/s) [c]	Max Capacity of Sewer (m ³ /s)	Total Average Dry Weather Flow	Catchment Inflow Factor	Revised Total Average Dry Weather Flow	Contributing Population	Peaking Factor	Peak Discharge through Manhole (m ³ /s)	Swimming Pool Backwash (m ³ /s)	Total Peak Discharge through Manhole (With Swimming Pool Backwash) (m ³ /s)	Occupancy from Proposed Development Contribution	Percentage of capacity	Remark	
ID	From	ID	To	D	A	L			s	V		m ³ /day	[f]	m ³ /day	[d]	[e]							
1	FMH7013366	2	FMH7013365	0.150	0.0177	2.6	21.64	20.52	0.0006	0.43077	6.7	0.118	113	1.0	113	418	8.0	0.010	0.0000	0.010	8.9%	8.9%	Proposed Development
2	FMH7013365	3	FMH7013351	0.450	0.1590	28.0	20.52	19.60	0.0006	0.03286	3.7	0.587	5072	1.0	5072	18785	4.0	0.235	0.2673	0.502	0.9%	85.5%	Proposed Development + A + B + C + D+ E+ F+ G + H + I
3	FMH7013351	4	FMH7013350	0.450	0.1590	37.0	19.60	17.65 [a]	0.0006	0.05268	4.7	0.744	5072	1.0	5072	18785	4.0	0.235	0.2673	0.502	0.7%	67.5%	Proposed Development + A + B + C + D+ E+ F+ G + H + I
4	FMH7013350	5	FMH7047900	0.450	0.1590	13.7	17.65 [a]	16.93 [a]	0.0006	0.05268	4.7	0.744	5072	1.0	5072	18785	4.0	0.235	0.2673	0.502	0.7%	67.5%	Proposed Development + A + B + C + D+ E+ F+ G + H + I
5	FMH7047900	6	FMH7063779	0.450	0.1590	6.6	16.93 [a]	16.58 [a]	0.0006	0.05268	4.7	0.744	5072	1.0	5072	18785	4.0	0.235	0.2673	0.502	0.7%	67.5%	Proposed Development + A + B + C + D+ E+ F+ G + H + I
6	FMH7063779	7	FMH7063780	0.450	0.1590	8.9	16.58 [a]	16.11 [a]	0.0006	0.05268	4.7	0.744	5072	1.0	5072	18785	4.0	0.235	0.2673	0.502	0.7%	67.5%	Proposed Development + A + B + C + D+ E+ F+ G + H + I
7	FMH7063780	8	FMH7013348	0.450	0.1590	1.7	16.11 [a]	16.02 [a]	0.0006	0.05268	4.7	0.744	5275	1.0	5275	19537	4.0	0.244	0.2744	0.519	0.7%	69.7%	Proposed Development + A + B + C + D+ E+ F+ G + H + I + J
8	FMH7013348	9	FMH7013335	0.525	0.2165	22.3	16.02 [a]	14.85 [a]	0.0006	0.05268	5.2	1.116	5275	1.0	5275	19537	4.0	0.244	0.2744	0.519	0.5%	46.5%	Proposed Development + A + B + C + D+ E+ F+ G + H + I + J

Note:
[a] Information from Drainage Layout Plan
[b] According to information available in Common Spatial Data Infrastructure Portal (<https://portal.csd.gov.hk/geportal/#mapPanel>), the sewage pipe material is vitrified clay. With reference from Table 5 - Recommended Roughness Values in Sewerage Manual, roughness value, ks=0.6mm for sliamed of clayware @ 1.2m/s in "Poor" condition is adopted for existing sewer.
[c] The velocity is calculated using the Colebrook-White Formula:

$$f' = -2 \left(2gDS \right)^{0.5} \log \left(\frac{k}{3.7D} + \frac{2.5\nu}{D \left(2gDS \right)^{0.5}} \right)$$

where
k = Colebrook-White roughness coefficient, in meter
V = mean velocity (m/s)
D = circular cross-section pipe, inside diameter (m)
S = slope, in meters per meter
ν = kinematic viscosity of water, in meter per second (0.000001306 m/s)
g = gravitational acceleration (m/s²) (9.807m/s²)
[d] The Contributing Population is defined as:
Contributing Population = $\frac{\text{Calculated total average flow (m}^3\text{/day)}}{0.27 \text{ (m}^3\text{/person/day)}}$

[e] Reference from Table T-5 (a) of Guidelines for Estimating Sewage Flows for Sewerage Infrastructure Planning
[f] Reference from Table T-4 of Guidelines for Estimating Sewage Flows for Sewerage Infrastructure Planning, Catchment inflow factor of North Point is adopted.
[d] Assumptions are made based on interpolation between the inlet level of FMH7013351(D 5) and outlet level of FMH7057529.

Attachment 5 –

Geotechnical Statement

Geotechnical Statement to support the Section 16 Planning Application for Minor Relaxation of Plot Ratio at Nos. 4 to 4C, Tai Hang Road

The owner intends to increase the plot ratio from 5 to 5.687. The foundation system is proposed to be raft footing.

The effect of increase in plot ratio is negligible to the features and existing ground anchors as the excavation area remains unchanged. (The Appendix shows the geotechnical considerations for the features and existing ground anchor.)

Therefore the proposed change is considered acceptable from geotechnical engineering point of view.

No.4 to 4C Tai Hang Road, Hong Kong

11SE-A/CR109 & 11SE-A/C463 subdivision 1

The upgrading slope works and additional ground investigation works would be proposed for slope stabilization. Some soil nails would be proposed to upgrade the slope stability for proposed building works. Design amendments on upgrading works would be submitted.

Existing Ground Anchor

Existing ground anchor would be strictly monitored and slope stability checking would be carried out to ensure slope safety.

11SE-A/CR106, 11SE-A/CR463 , 11SE-A/C201

These features are outside the site boundary. Slope stability checking would be carried out to ensure slope safety.

Natural Slope

The natural slope is bounded by feature 11SE-A/CR109 and Trafalgar Court. Our development works would be designed in a manner that no adverse impact to the slope. The stability of this feature would be further assessed in detail design. If the slope is found not up to stability standard, a fence wall would be constructed along the boundary to retain the potential debris from the slope in case of failure.

Unregistered Retaining Wall A (Within the lot Site Boundary)

The unregistered RC retaining wall feature is located at the east side of the site and within the site boundary. It is proposed to remove this retaining wall and the level difference would be supported by the proposed building.

Unregistered Retaining Wall B (Within the lot Site Boundary)

The unregistered masonry retaining wall at the west side of the site is proposed to be retained and the stability of the retaining wall will be reviewed. If necessary, upgrading works would be proposed to ensure slope safety.

