

**S12A AMENDMENT OF PLAN APPLICATION
APPROVED NGAU TAM MEI
OUTLINE ZONING PLAN NO. S/YL-NTM/12**

**PROPOSED REZONING FROM “R(C)” TO “G/IC”
FOR A PROPOSED “SOCIAL WELFARE FACILITIES”
(RESIDENTIAL CARE HOMES FOR THE ELDERLY)
(RCHE)**

**AT LOT 4823 IN D.D.104, 81 SAN TAM ROAD,
SAN TIN, N.T.**

Consolidated Planning Statement

(Vol. 1)

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Chapter 1

Response-to-Comments

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(RCHE)**

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SAN TIN, N.T.**

RESPONSE-TO-COMMENT - SWD

**Proposed Rezoning From “R(C)” To “G/C” for
a Proposed “Social Welfare Facilities” (Residential Care Homes for The Elderly) (RCHE)
Lot 4823 in D.D.104, 81 San Tam Road, San Tin, N.T.
S12A Application for Planning Application No. Y/YL-NTM/9
Response-to-Comment – SWD
(dated to 27 SEPTEMBER 2022)**

Comments	Response
<p>Refer to the subject application received by the Town Planning Board (TPB) on 10.8.2022 and attached the comments of Director of Social Welfare, Social Welfare Department (DSW, SWD) :</p> <p>1.1 Comments from RCHE licensing perspective</p> <p>(i) The premises shall be constructed and maintained in accordance with the provisions of Buildings Ordinance, its allied regulations and the Code of Practice for Fire Safety in Building 2011 issued by Buildings Department.</p> <p>(ii) Compliance with the Building (Planning) Regulation 72 and the "Design Manual: Barrier Free Access 2008" on the provision of access and facilities for persons with disabilities from the lot boundary to the proposed RCHE should be demonstrated.</p> <p>(iii) Adequate natural lighting and natural ventilation to the habitable area, office and kitchen should be provided in compliance with the Building (Planning) Regulation 30 & 31 and demonstrated by window elevations and calculations. Exemption may be considered if adequate artificial lighting and mechanical ventilation for the office and kitchen is provided and these should be marked on the plans by showing both the exhaust and supply air ventilation ducts. Demonstration by calculation of 5 and 20 air changes per hour respectively is required separately.</p>	<p>Noted. The detail GBP will be submitted to BD for approval in due course.</p> <p>Noted. The detail GBP will be submitted to BD for approval in due course.</p> <p>Noted. The detail GBP will be submitted to BD for approval in due course.</p>

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Comments	Response
(iv) No part of the area used for habitation shall be more than 9 m measured within the habitable area from a prescribed window as stipulated in Building (Planning) Regulation 32.	Noted. The detail GBP will be submitted to BD for approval in due course.
(v) Adequate natural lighting and natural ventilation to the toilets should be provided in accordance with the Building (Planning) Regulation 36 and demonstrated by window elevations and calculations. Exemption may be considered if adequate artificial lighting and mechanical ventilation for the toilets are provided, and these should be marked on plans by showing both the exhaust and supply air ventilation ducts. Demonstration by calculation of 10 air changes per hour is required separately.	Noted. The detail GBP will be submitted to BD for approval in due course.
(vi) The clear width of the door opening for each dormitory and the toilet should have a width not less than 800 mm. The door should also be readily opened from inside without the use of a key.	Noted. The detail GBP will be submitted to BD for approval in due course.
(vii) The ceiling (the ceiling structure or suspended false ceiling) of the RCHE must be situated at a height not less than 2.5 m measuring vertically from the floor or not less than 2.3m measuring vertically from the floor to the underside of any beam.	Noted. The detail GBP will be submitted to BD for approval in due course.
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<p>(viii) The dead-end travel distance in every part of the proposed RCHE should not be more than 12 m to the protected exit or to a point, from which travel in different directions to 2 or more protected exits is available.</p> <p>(ix) Net floor area should be demonstrated by area calculation diagram.</p> <p>(x) A designated isolation room shall be provided for every 50 beds.</p> <p>(xi) The captioned premises should be of free of unauthorized building works.</p> <p>(xii) Any building works which fall within Minor Work under Building (Minor Works) Regulation (B(MW)R), should fully comply with the requirements of the regulation. Details of the MWCS can be found at the Buildings Department website (www. bd.gov.hk).</p>	<p>Noted. The detail GBP will be submitted to BD for approval in due course.</p> <p>Noted. The detail GBP will be submitted to BD for approval in due course.</p> <p>3 isolation rooms are provided on 3/F as shown on revised G-06 Rev B.</p> <p>No UBW exists in the captioned premises.</p> <p>Noted</p>

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Comments	Response
<p>(xiii) Under section 20 of the Residential Care Homes (Elderly Persons) Regulation, unless otherwise with Director of Social Welfare (DSW)'s notice in writing, no part of an RCHE shall be situated at a height more than 24 m above the ground floor, measuring vertically from the ground of the building to the floor of the premises in which the RCHE is to be situated. If an RCHE operator can prove that the RCHE possesses facilities for fire safety, evacuation and rescue, and appropriate evacuation, contingency and fire drill plans to the satisfaction of the DSW, the DSW may approve the ancillary facilities of the RCHE to which the residents normally do not have access (e.g. kitchen, laundry room, office, staff resting room) to be situated at a height more than 24 m above the ground.</p>	<p>Noted. Our proposed highest floor of the dormitory on 8/F is within 24 m from ground. One additional floor above the dormitory above 24 m is solely for administrative staff. A similar design is also observed in “Forward Living”, which is a RCHE at No.9 Fu Tei Road, Tuen Mun, the highest floor of dorms is 8/F and its floor slab is within 24 m from the street level.</p>

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Comments	Response
<p>1.2 Comments from RCHE services perspective</p> <p>A) Salient points on design of RCHE</p> <p>i) Boundary/ extent of the RCHE</p> <ul style="list-style-type: none"> ● The boundary/ extent of the proposed RCHE appear not well defined in the applicant's submission. ● From the table 3.1.7 of "Supporting Planning Statement" (P.13), "RCHE" is indicated to spread from 2/F to 7/F whereas other facilities including "Entrance & Carpark", "Multi-purpose rooms", "Wellness Centre + Sky Garden" and "Administrative office + Staff Quarter" are placed on upper and lower floors of the same 10-storey building. ● The applicant should clarify the boundary/ extent and the total GFA of the intended RCHE for our consideration. 	<p>The whole development is designed as RCHE, which includes other facilities such as Entrance, Carpark, Multi-purpose Room, Wellness Centre, Sky Garden, Administrative Office and Staff Quarter. The site boundary is indicated by red-dashed line in all revised drawings.</p>

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Comments	Response
<p>ii) 24m height restriction of RCHE</p> <ul style="list-style-type: none"> ● While the proposed RCHE are located on a 10-storey block with building height of 29.6m, the 24m height restriction of RCHE is one of the concerns. ● According to para 5.3 of Code of Practice for Residential Care Homes (Elderly Persons) January 2020 (Revised Edition) (CoP), "no part of the RCHE shall be situated at a height more than 24 metres above the ground floor, measuring vertically from the ground of the building to the floor of the premises in which the RCHE is to be situated.... If an RCHE is located in a building served by 2 streets/ roads at different levels, the height of the RCHE is to be measured from the level of the lower street/road". ● In view of above, would the applicant please ensure the height of the proposed RCHE is in full compliance with the prevailing licensing and statutory height requirements. 	<p>Noted. Our proposed highest floor of the dormitory on 8/F is within 24 m from ground. One additional floor above the dormitory above 24 m is solely for administrative staff. A similar design is also observed in “Forward Living”, which is a RCHE at No.9 Fu Tei Road, Tuen Mun, the highest floor of dorms is 8/F and its floor slab is within 24 m from the sheet level.</p> <p>Our proposed RCHE adjoin a run-in out of level 7.33 mPd at San Tin Road only. Therefore, +7.33 mPd should be the ground level of the RCHE.</p>

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Comments	Response
<ul style="list-style-type: none"> iii) Isolation measures ● As shown from the Proposed RCHE Design of "Drawing & Plans - Supporting Planning Statement" (P.9-17), the essential facility of isolation room is found missing in the proposed RCHE. ● As set out in para 12.4 of CoP, "RCHEs shall be provided with proper isolation facilities, and a designated isolation room shall be provided for every 50 beds.. In addition, the RCHE should ensure that the designated isolation room(s) is always ready to be used as an infection control measures." ● Hence, the applicant should provide relevant isolation rooms/ facilities for the proposed RCHE to meet the infection control purpose in accordance with licensing requirement. 	<p>3 nos. of Isolation Rooms are provided on 3/F as shown on revised G-06 Rev. B.</p>

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Comments	Response
<p>B) Views on the Applicant's intention for joining the Premium Concession Scheme</p> <ul style="list-style-type: none"> ● Should the application wish to apply for the "Scheme to Encourage Provision of Residential Care Home for the Elderly Premises in New Private Developments" (Premium Concession Scheme) for the RCHE to be developed, please submit a formal application to District Lands Office, Yuen Long, LandsD. We stand ready to tender our comments on details of layout design of the proposed RCHE and to assess its support-worthiness for joining the Premium Concession Scheme upon receipt of the LandsD's referral. ● Subject to comments from other government bureaux/ departments, please be advised we shall only support the setting up of a RCHE and consider recommending Premium Concession for the proposed RCHE on conditions that – <ul style="list-style-type: none"> a) the proposed RCHE should be a satisfactory design as agreed by the Social Welfare Department; b) there shall be no financial implications, both capital and recurrent, to the Government; c) the design and construction of the RCHE should be in full compliance with the statutory and licensing requirements including but not limited to those stipulated in the Residential Care Home (Elderly Persons) Ordinance, Cap. 459 and its subsidiary legislation, as well as the latest version of the Code of Practice for Residential Care Homes (Elderly Persons); and 	<p>We intend to apply to join the Premium Concession Scheme upon TPB approval of the subject site.</p>

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<p>d) all the requirement of the Premium Concession Scheme as set out in Lands Department (LandsD)’s Practice Note No. 4/2003, together with any other requirements imposed by LandsD in the lease exchange, if applicable, shall be complied with.</p> <ul style="list-style-type: none"> ● With a view to meeting the objective of providing a quality RCHE, the applicant should refer to the following attached – i) Guidance Note of Premium Concession Scheme; ii) Best Practices in Design and Operation of RCHE; iii) Best Practices Guideline – Basic Provision Schedule Specific Requirements for RCHE when Designing and Planning for The Proposed RCHE; and iv) A Supplement on Ventilation - Guidelines on Prevention of Communicable Diseases in RCHEs/ Residential Care Homes for Persons with Disabilities. ● While 5,400 sq.m is the maximum GFA for a RCHE built under the Premium Concession Scheme, the applicant should ensure the size of the GFA of the intended RCHE should not exceed this cap should he would like to apply for Premium Concession Scheme. 	

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Comments	Response
<ul style="list-style-type: none"> In addition, it is noted that some non-standard facilities of RCHE including the Sky Garden, Wellness Centre and Hydrotherapy Room (on 1/F), Staff Quarter involving 8 no. of staff rooms (on 8/F), Roof Garden and farming areas (on R/F) are proposed on the 10-storey building. If the applicant intends to include the above-mentioned facilities as part of the RCHE to be applied for Premium Concession Scheme, we would like to seek the applicant's confirmation if those facilities are for the exclusive use of the residents and the staff of the RCHE, and should not be opened to the use of public. Besides, the applicant should also provide the estimated area and detailed justification for incorporation of those non-standard facilities for our consideration. 	<p>Noted. The mentioned facilities are for the exclusive use of RCHE and should not be opened to the use of public.</p>

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Comments	Response
<p>1.1 Comments from RCHE licensing perspective</p> <p>(i) In assessing a licence application, the applicant is required to comply with the requirements stipulated in the Residential Care Homes (Elderly Persons) Ordinance (Cap. 459), its subsidiary legislation and the latest version of the Code of Practice for Residential Care Homes (Elderly Persons)(CoP).</p> <p>(ii) As noted from the submitted R-to-C in respect of the building height, it is mentioned that the proposed highest floor of the dormitory is on 8/F and within 24 m from ground. However, as shown on the section plan, the height of 8/F is exceeding 24 m measuring from the San Tam Road and it is proposed to be used for administrative office and staff quarter. The applicant is thus required to clarify the proposed usage of 8/F and ensure that all dormitories are located within 24 m measuring vertically from the ground of the building as required under section 20 of the Residential Care Homes (Elderly Persons) Regulation.</p> <p>(iii) For those ancillary facilities of the RCHE to which the resident normally do not have access (e.g. kitchen, laundry room, office, staff resting room) and proposed to be situated at a height more than 24 m above the ground, the applicant's attention is drawn to the previous comments lastly provided and recapped as follows :</p>	<p>Noted</p> <p>It is a typo-error of the previously submitted R-to-C. It should be “The proposed highest floor of the dormitory is on 7/F and within 24 m from ground. One additional floor above the dormitory above 24m is solely for administrative staff. A similar design is also observed in “Forward Living”, which is a RCHE at No.9 Fu Tei Road, Tuen Mun, the highest floor of dorms is 7/F and its floor slab is within 24 m from the street level.”</p> <p>Noted</p>

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Comments	Response
<p>(iv) "Under section 20 of the Residential Care Homes (Elderly Persons) Regulation, no part of an RCHE shall be situated at a height more than 24 m above the ground floor, measuring vertically from the ground of the building to the floor of the premises in which the RCHE is to be situated. If the operator of the proposed RCHE can prove that the proposed RCHE possesses facilities for fire safety, evacuation and rescue, and appropriate evacuation, contingency and fire drill plans to the satisfaction of the DSW, the DSW may approve the ancillary facilities of the RCHE to which the resident normally do not have access (e.g. kitchen, laundry room, office, staff resting room) to be situated at a height more than 24 m above the ground " .</p>	<p>Noted. Detail design would be provided on next step.</p>

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Comments	Response
<p>1.2 Comments from RCHE services perspective</p> <p>(I) Applicant's R-to-C</p> <p>A) Salient points on design of RCHE</p> <p>i) Boundary/ extent of the RCHE</p> <ul style="list-style-type: none"> ● The applicant should clarify the boundary/ extent and the total GFA of the intended RCHE for our consideration. As per our last comments, the applicant clarified that the whole development is designed as RCHE, which includes other facilities such as Entrance, Carpark, Multi-purpose Room, Wellness Centre, Sky Garden, Administrative Office and Staff Quarter. ● While the site boundary is indicated by red-dashed line in all revised drawings, we have no further comments on extent of the RCHE at this stage. <p>ii) 24m height restriction of RCHE</p> <ul style="list-style-type: none"> ● The applicant replied that the 24m height restriction of RCHE was noted. While it is indicated "our proposed highest floor of the dormitory on 8/F is within 24m from ground" and "one additional floor above the dormitory above 24m is solely for the administrative staff", we would like to defer to LORCHE for comments should the proposed location of the RCHE is in full compliance of the 24m height requirements in accordance with the licensing standard. 	<p>The boundary/extent included other facilities such as Entrance, Carpark, Multi-purpose Room, Wellness Centre, Sky Garden, Administrative Office and Staff Quarter has been submitted as per last R-to-C. The total GFA of the intended RCHE is 5,400 sq.m.</p> <p>Noted. It is a typo-error of the previously submitted R-to-C. It should be "The proposed highest floor of the dormitory is on 7/F and within 24 m from ground. One additional floor above the dormitory above 24m is solely for administrative staff. A similar design is also observed in "Forward Living", which is a RCHE at No.9 Fu Tei Road, Tuen Mun, the highest floor of dorms is 7/F and its floor slab is within 24 m from the street level."</p>

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Comments	Response
<p>iii) Isolation measures</p> <ul style="list-style-type: none"> ● As per our last comments, 3 no. of Isolation Rooms are added on 3/F as shown on the revised layout plan for the fulfilment of licensing requirements. ● Subject to design feasibility, the applicant may consider providing a protected lobby, say 2 sq.m in area, at the entrance of each Isolation Room for infection control purpose. 	<p>Protected lobbies to the 3 nos. isolation rooms of area not less than 2 sq.m are added as shown on G-06 Rev.C.</p>

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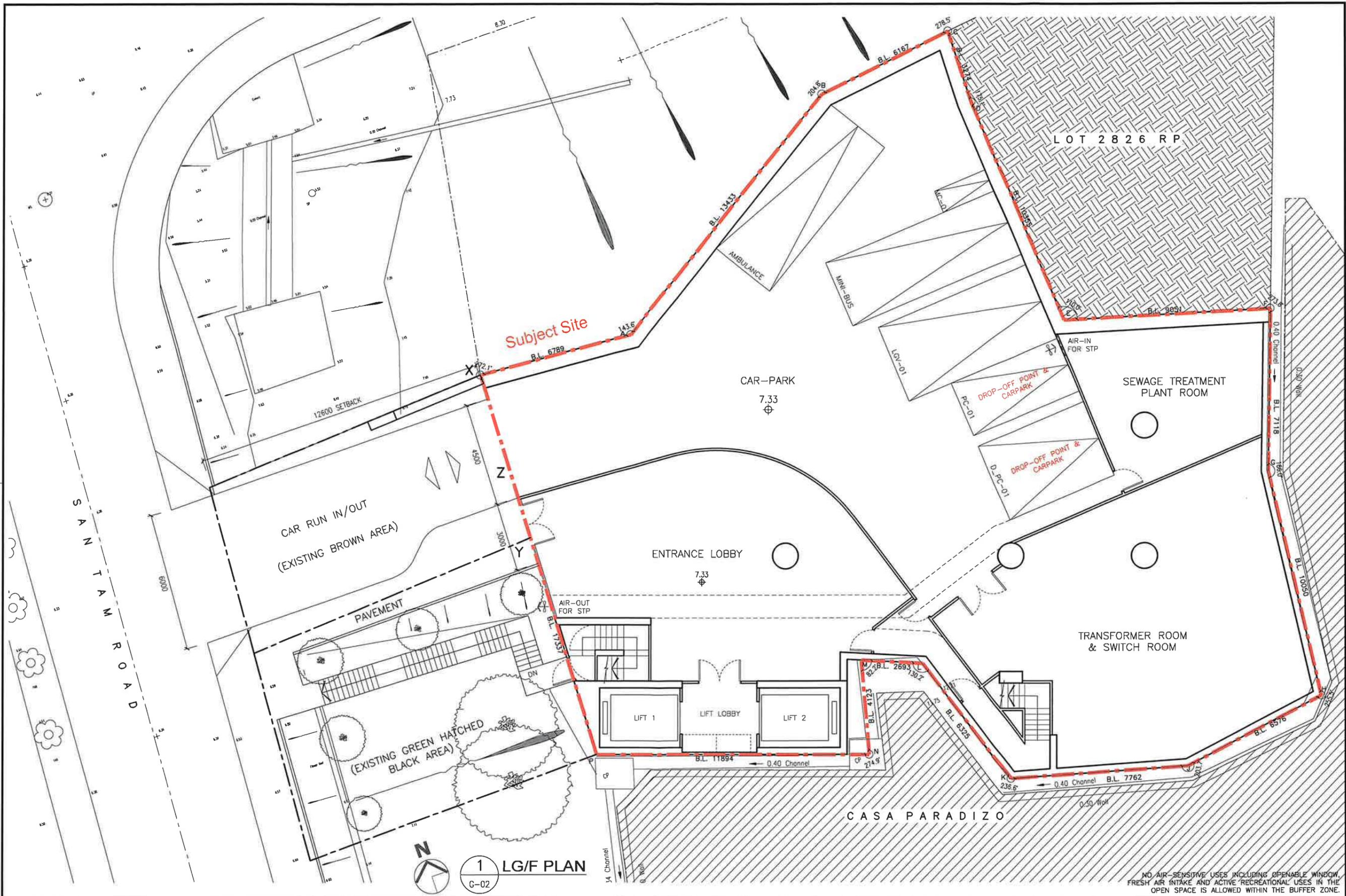
Comments	Response
<p>B) Comments on the Applicant's intention for joining the Premium Concession Scheme</p> <ul style="list-style-type: none"> ● While the applicant indicated an intention for joining the Premium Concession Scheme upon TPB's approval of the subject site, please note that our previous comments with regard to the application for joining this Scheme remains valid. ● It is noted that some non-standard facilities of RCHE, including the Sky Garden, Wellness Centre and Hydrotherapy (on 1/F) and Staff Quarter involving 8 no. of staff rooms (8/F) and Roof Garden and Farming Areas (on Roof/F) are provided for the RCHE. While the applicant stated that the mentioned facilities are for exclusive use of the RCHE and should not be opened for the public use, would the applicant please provide more information on the usage of these functional rooms/areas and the justifications for such provision for our consideration. ● With a view to providing a quality RCHE for service users, the applicant is further reminded to make reference to the attached documents (i) to (iv) in the design of the RCHE – <p>(i) Guidance Note: Guidance_Note_(Eng)_Jan_2022.pdf (ii) Best Practices in Design and Operation of RCHE: Best Practices in Design and Operation (Jan 2015).pdf</p>	<p>Noted</p> <p>Wellness Centre and Hydrotherapy are for rehabilitation use.</p> <p>The Sky Garden and Roof Garden and Farming Areas are for the residents to have outdoor exercises.</p> <p>The staff rooms of Staff Quarter are for the overnight staffs to rest. Also, it can provide spaces for the staffs during the close-loop management if necessary.</p> <p>Noted</p>

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Comments	Response
<p>(iii) Best Practices Guideline - Basic Provision Schedule Specific Requirements for RCHE: Best_Practices_Guideline_RCHE_March_2020.pdf</p> <p>(iv) A Supplement on Ventilation - Guidelines on Prevention of Communicable Diseases in RCHEs/ Residential Care Homes for Persons with Disabilities: a_supplement_on_ventilation.pdf</p> <p>(II) Revised RCHE Design</p> <ul style="list-style-type: none"> ● It is noted that most of the beds have either of the lateral sides leaning directly against the wall. To facilitate the caring of the elderly from both sides of the bed, would the applicant please review the design and position the beds with adequate spaces on both sides. ● While two lifts are provided for the RCHE, to facilitate the escort of the elderly in the event of medical emergency, would the applicant ensure that the capacity of one of the lifts is able to accommodate a stretcher bed measuring 2050mm x 560mm. ● Car parking spaces are located on LG/F. To enhance safety in escorting the elderly during adverse weather, would the applicant please ensure the walkpath from the drop-off point to the entrance of the RCHE be provided with cover and convenient for access. 	<p>Noted</p> <p>Noted</p> <p>We would provide the lifts with bare size: 2900 mm x 2000 mm. Both lifts are able to accommodate a stretcher bed of size 2050mm x 560mm.</p> <p>Two drop-off points inside covered carpark are provided as shown on G-02 Rev.C.</p>

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Comments	Response
<ul style="list-style-type: none"> ● It is noted that the design of the proposed RCHE is at a preliminary stage. If the applicant would like to apply for joining the Premium Concession Scheme for the RCHE development, the design of the RCHE should be satisfactory and agreed by SWD. In this regard, we stand ready to provide further comments at a later stage on the revised layout plan including but not limited to the number of beds to be provided. 	Noted



2202
 PROPOSED RESIDENTIAL CARE HOME FOR ELDERLY
 at 81 SAN TAM ROAD,
 YUEN LONG, N.T.

LG/F PLAN
 ENTRANCE & CARPARK

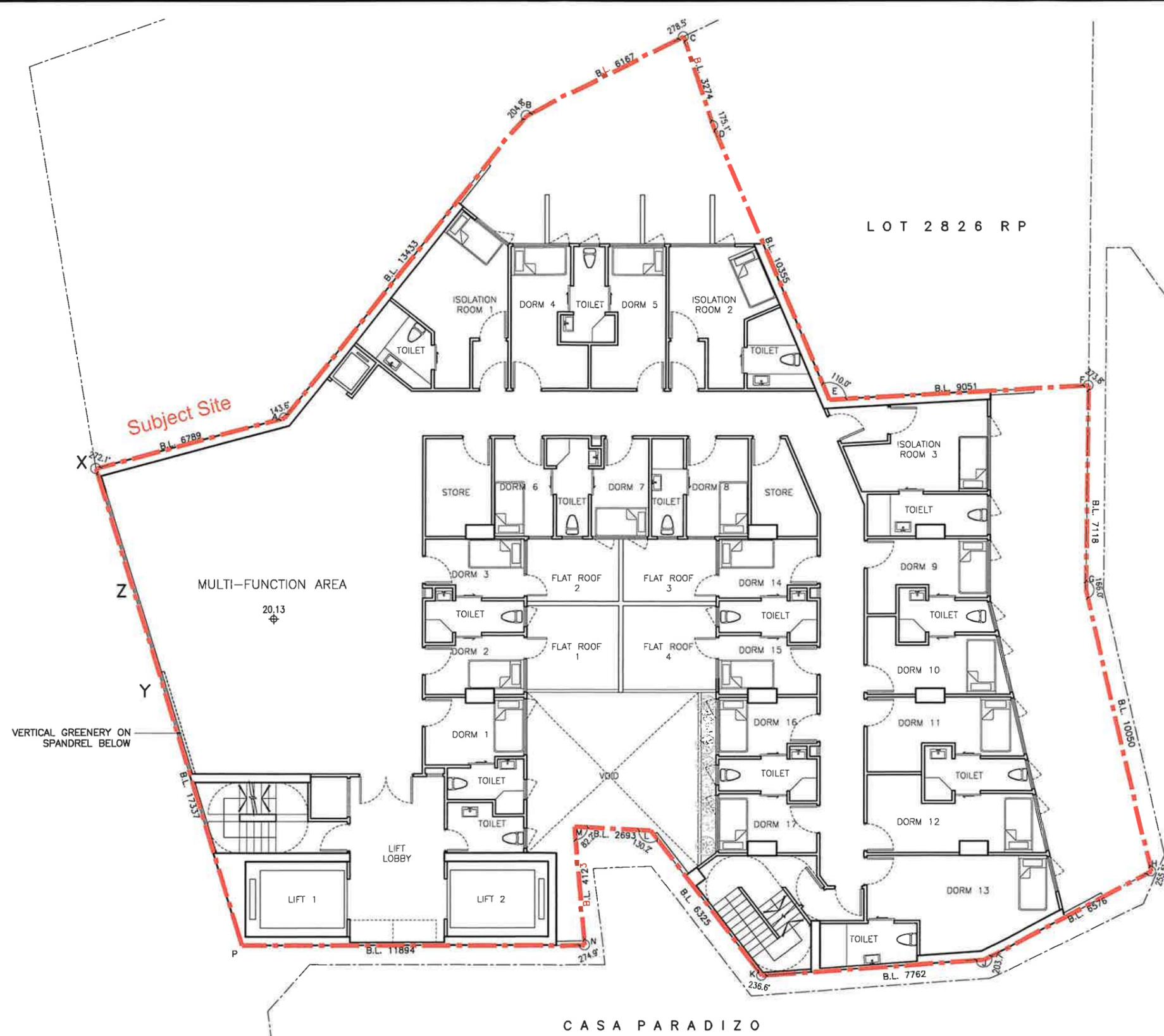
G-02
 1:150 (A3)
 1:225 (A4)

C
 B
 A
 DEC. 2022
 OCT. 2022
 JULY. 2022

Do not scale drawing.
 Contractors are required to verify exact dimensions on site.
 The drawings show the design intent of the architect only, contractors are required to submit shop drawings where appropriate.
 The design remains to be the property of "RLEE Architects (HK) Ltd" unless otherwise specified.
 This drawing is not for construction purposes unless expressly certified.

NO AIR-SENSITIVE USES INCLUDING OPENABLE WINDOW,
 FRESH AIR INTAKE AND ACTIVE RECREATIONAL USES IN THE
 OPEN SPACE IS ALLOWED WITHIN THE BUFFER ZONE.





1 3/F PLAN
G-06

2202
PROPOSED RESIDENTIAL CARE HOME FOR ELDERLY
at 81 SAN TAM ROAD,
YUEN LONG, N.T.

3/F PLAN
RCHE

G-06

1:150 (A3)
1:225 (A4)

C
B
A

DEC. 2022
OCT. 2022
JULY. 2022

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NO AIR-SENSITIVE USES INCLUDING OPENABLE WINDOW,
FRESH AIR INTAKE AND ACTIVE RECREATIONAL USES IN THE
OPEN SPACE IS ALLOWED WITHIN THE BUFFER ZONE.



**Proposed Rezoning From “R(C)” To “G/IC” for
a Proposed “Social Welfare Facilities” (Residential Care Homes for The Elderly) (RCHE)
Lot 4823 in D.D.104, 81 San Tam Road, San Tin, N.T.
S12A Application for Planning Application No. Y/YL-NTM/9
Response-to-Comment – SWD
(updated 13 April 2023)**

Comments	Response
<p>2. Comments of the Director of Social Welfare, Social Welfare Department (DSW, SWD) as follows:</p> <p><u>RCHE Services Perspective</u></p> <p><u>(A) Applicant’s R-to-C</u></p> <p><u>(i) Boundary/ Extent of the RCHE</u></p> <ul style="list-style-type: none"> ● Given the applicant has clarified the boundary of RCHE and the total GFA of the intended RCHE is 5400 sqm which is maximum GFA for fulfilling the eligibility for “Scheme to Encourage Provision of Residential Care Home for the Elderly Premises in New Private Developments”, we have no further comments on it. <p><u>(ii) 24 height restriction of RCHE</u></p> <ul style="list-style-type: none"> ● As clarified by the applicant, the proposed highest floor of the dormitory is on 7/F which is within 24m from the ground level and an additional floor above the dormitory, located at above 24m, is solely for administrative staff. While some ancillary facilities are proposed to be situated at a height over 24m, we would like to defer to the comments of LORCHE should the location of the RCHE is in full compliance of the 24m height requirements in accordance with the licensing standard. <p><u>(iii) Isolation Measures</u></p> <ul style="list-style-type: none"> ● As per our advice, protected lobbies to the 3 no. isolation rooms of area at not more 	<p>Noted.</p> <p>Noted.</p> <p>According to S20 of Residential Care Homes (Elderly Persons) Regulation, we would seek the approval from Director of Social Welfare Department on the part of RCHE which exceed a height of 24m from Ground Floor, during the Licensing application process.</p> <p>Noted.</p>

**Proposed Rezoning From “R(C)” To “G/IC” for
a Proposed “Social Welfare Facilities” (Residential Care Homes for The Elderly) (RCHE)
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Response-to-Comment – SWD
(updated 13 April 2023)**

Comments	Response
<p>than 2 sqm are added. While the installation of protected lobbies are desirable for the purpose of infection control, the provision is supported from service perspective.</p> <p>(B) Revised RCHE Layout Plan</p> <p>(i) Bed spacing requirement</p> <ul style="list-style-type: none"> ● While the applicant replied to have taken note of our advice for providing adequate spaces on both sides of beds to facilitate the caring the elderly, we still observe that some of notional beds in the partial layout drawing of RCHE are having either one side leaning directly against the wall. Hence, the applicant may need to review and make appropriate revision on bed disposition in accordance to the bed spacing requirement. <p>(ii) Dimension of lifts</p> <ul style="list-style-type: none"> ● As the applicant responded that the bare size of both lifts is at 2900mm x 2000mm and are able to accommodate a stretcher bed of 2050mm x 560mm, we have no further comments on the dimension of the lifts. <p>(iii) Location of car parking spaces</p> <ul style="list-style-type: none"> ● Given the applicant has confirmed that the two drop-off points inside covered carparks are provided on LG/F, we have no further comments on it. <p>(iv) Usages of non-standard facilities of RCHE, including Wellness Centre, Hydrotherapy, Sky Garden, Roof Garden, Farming Areas and Staff Quarter</p>	<p>Bed spacing revised as per your comment. Please refer to G-05 rev. D to G-07 rev. D.</p> <p>Noted.</p> <p>Noted.</p>

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Response-to-Comment – SWD
(updated 13 April 2023)**

Comments	Response
<ul style="list-style-type: none"> ● As per our last enquiry, the applicant clarified that the Wellness Centre and Hydrotherapy are for rehabilitation use; the Sky Garden, Roof Garden and Farming Areas are for residents to have outdoor exercises; and the staff rooms of staff Quarter are for overnight staff to take rest. Also, it can provide spaces for staff during the close-loop management if necessary. ● On the understanding that these functional areas are for the benefit to the caring/ rehabilitation of the elderly residents and operational need of the intended RCHE, we have no further comments on them at this stage. We would provide further comments upon the applicant's submission of a detailed layout plan. <p><u>(C) Views on the Applicant's Intention for Joining the Premium Concession Scheme</u></p> <ul style="list-style-type: none"> ● Should the applicant wish to apply for the “Scheme to Encourage Provision of Residential Care Home for the Elderly Premises in New Private Developments” (Premium Concession Scheme) for the RCHE to be developed, would the applicant please submit a formal application to the concerned District Lands Office of LandsD. We stand ready to provide our comments on the latest layout design of the proposed RCHE and to assess its support-worthiness for joining the Premium Concession Scheme upon receipt of LandsD's referral. ● Subject to comments from other government bureau/ departments, please be advised 	<p>Noted.</p> <p>Noted. We will submit the application and comply with the conditions and all relative</p>

**Proposed Rezoning From “R(C)” To “G/IC” for
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S12A Application for Planning Application No. Y/YL-NTM/9
Response-to-Comment – SWD
(updated 13 April 2023)**

Comments	Response
<p>that we shall only support the setting up of a RCHE and consider recommending Premium Concession for the proposed RCHE on the conditions that –</p> <p>(a) the proposed RCHE should be a satisfactory design as agreed by the Social Welfare Department (SWD);</p> <p>(b) there shall be no financial implications, both capital and recurrent, to the Government;</p> <p>(c) the design and construction of the RCHE should be in full compliance with the statutory and licensing requirements including but not limited to those stipulated in the Residential Care Home (Elderly Persons) Ordinance, Cap. 459 and its subsidiary legislation, as well as the latest version of the Code of Practice for Residential Care Homes (Elderly Persons); and</p> <p>(d) all the requirement of Premium Concession Scheme as set out in Lands Department (LandsD)’s Practice Note No. 4/2003 as attached, together with any other requirements imposed by LandsD in the lease exchange, if applicable, shall be complied with.</p> <ul style="list-style-type: none"> ● As mentioned in previous comments, the applicant has been advised to refer to the following attachments in the design of the RCHE, including (i) Guidance Note of Premium Concession Scheme; (ii) Best Practices in Design and Operation of RCHE; 	<p>guidelines.</p>

**Proposed Rezoning From “R(C)” To “G/IC” for
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Response-to-Comment – SWD
(updated 13 April 2023)**

Comments	Response
<p>(iii) Best Practices Guideline – Basic Provision Schedule Specific Requirements for RCHE when Designing and Planning for The Proposed RCHE; and (iv) A Supplement on Ventilation – Guidelines on Prevention of Communicable Diseases in RCHEs/ Residential Care Homes for Persons with Disabilities. With a view to meeting the objective of providing a quality RCHE, the applicant should study the references in details for the design/ planning of the RCHE.</p> <p><u>RCHE Licensing Perspective</u></p> <p>It is noted that the applicant has clarified that the proposed highest floor of the dormitory is on 7/F which is within 24m from the ground level and an additional floor above the dormitory, located at above 24m, is solely for administrative staff. Our previous comments on those ancillary facilities of the RCHE to which the resident normally do not have access (e.g. kitchen, laundry room, office, staff resting room) and proposed to be situated at a height more than 24m above the ground is still applicable and recapped.</p> <p>“Under section 20 of the Residential Care Homes (Elderly Persons) Regulation, no part of an RCHE shall be situated at a height more than 24m above the ground floor, measuring vertically from the ground of the building to the floor of the premises in which the RCHE is to be situated. If the operator of the proposed RCHE can prove that the proposed RCHE possesses</p>	<p>According to S20 of Residential Care Homes (Elderly Persons) Regulation, we would seek the approval from Director of Social Welfare Department on the part of RCHE were exceed a height of 24m from Ground Floor during the Licensing application process.</p>

**Proposed Rezoning From “R(C)” To “G/IC” for
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Response-to-Comment – SWD
(updated 13 April 2023)**

Comments	Response
<p>facilities for fire safety, evacuation and rescue, and appropriate evacuation, contingency and fire drill plans to the satisfaction of the DSW, the DSW may approve the ancillary facilities of the RCHE to which the resident normally do not have access (e.g. kitchen, laundry room, office, staff resting room) to be situated at a height more than 24m above the ground”.</p>	





2/F PLAN

NO AIR-SENSITIVE USES INCLUDING OPENABLE WINDOW, FRESH AIR INTAKE AND ACTIVE RECREATIONAL USES IN THE OPEN SPACE IS ALLOWED WITHIN THE BUFFER ZONE.

2202
 PROPOSED RESIDENTIAL CARE HOME FOR ELDERLY
 at 81 SAN TAM ROAD,
 YUEN LONG, N.T.

2/F PLAN
RCHE

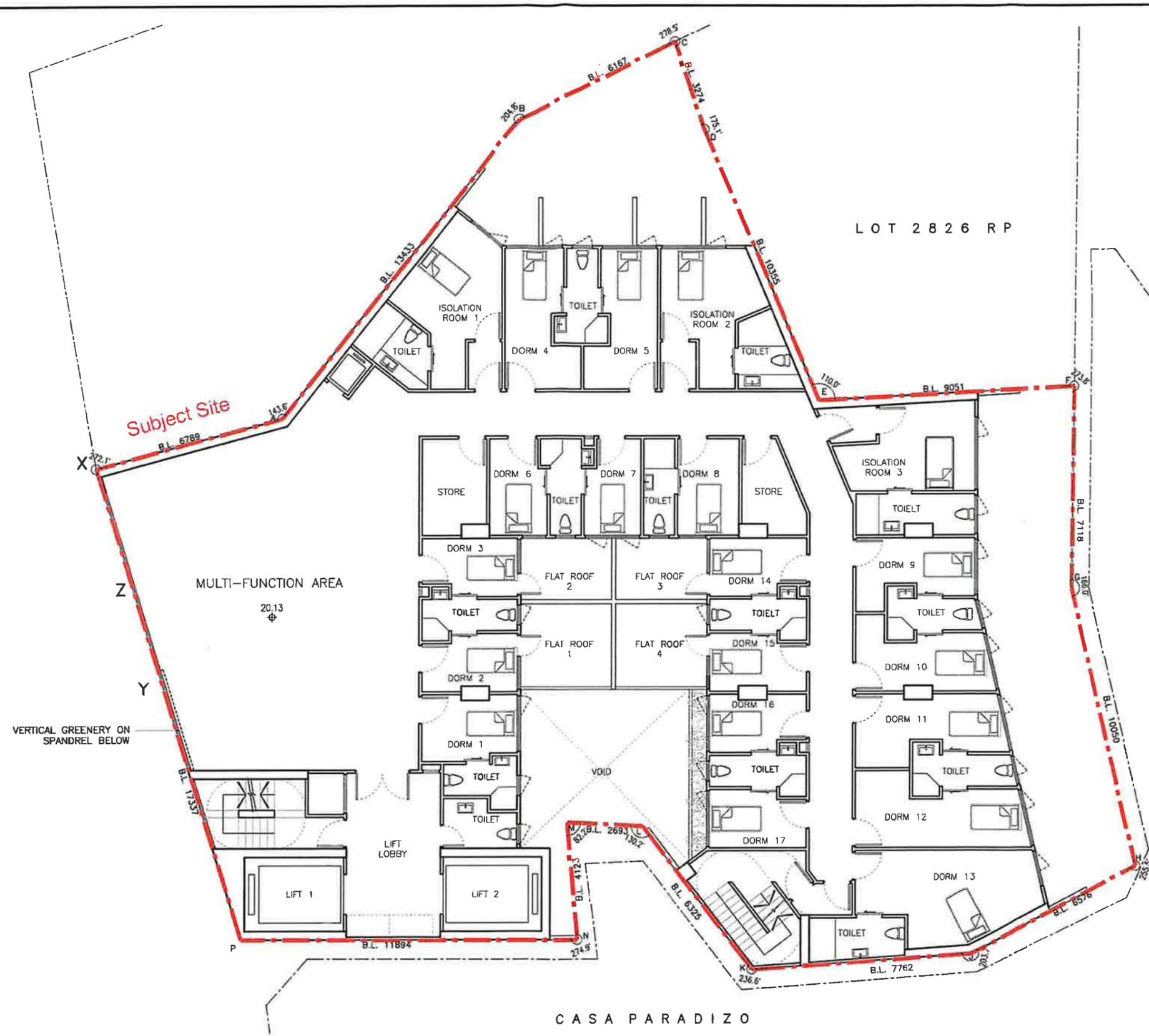
G-05 1:150 (A3)
 1:225 (A4)

D
 C
 B
 A

MAY. 2023
 APR. 2023
 OCT. 2022
 JULY. 2022

Do not scale drawing.
 Contractors are required to verify exact dimensions on site.
 The drawings show the design intent of the architect only, contractors are required to submit shop drawings where appropriate.
 The design remains to be the property of "RLEE Architects (HK) Ltd" unless otherwise specified.
 This drawing is not for construction purposes unless expressly certified.






1 **3/F PLAN**
G-06

NO AIR-SENSITIVE USES INCLUDING OPENABLE WINDOW, FRESH AIR INTAKE AND ACTIVE RECREATIONAL USES IN THE OPEN SPACE IS ALLOWED WITHIN THE BUFFER ZONE.

2202
 PROPOSED RESIDENTIAL CARE HOME FOR ELDERLY
 at 81 SAN TAM ROAD,
 YUEN LONG, N.T.

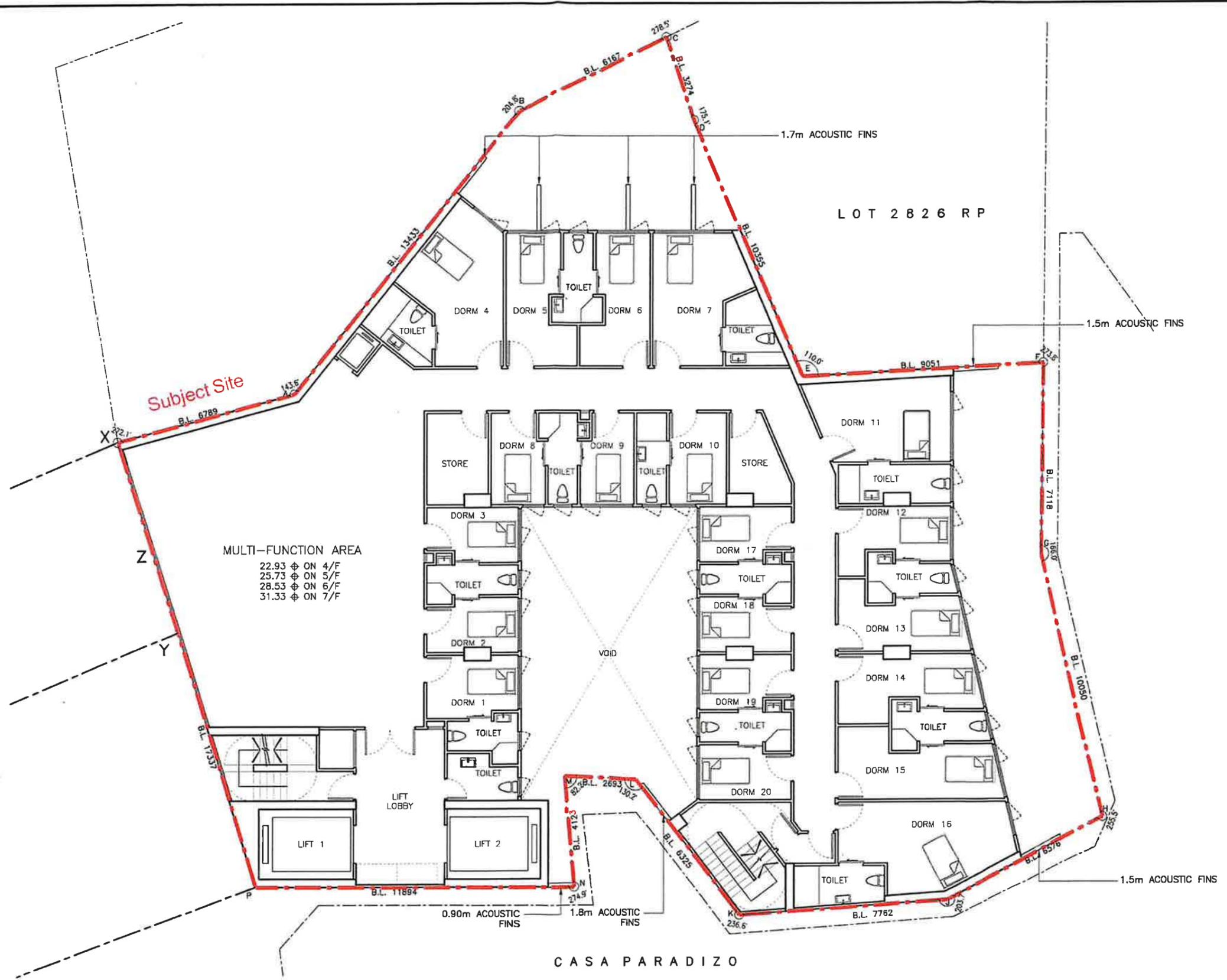
3/F PLAN
RCHE

G-06 1:150 (A3)
 1:225 (A4)

D MAY. 2023
 C APR. 2023
 B OCT. 2022
 A JULY. 2022

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1 TYPICAL FLOOR PLAN PLAN
 G-07

NO AIR-SENSITIVE USES INCLUDING OPENABLE WINDOW, FRESH AIR INTAKE AND ACTIVE RECREATIONAL USES IN THE OPEN SPACE IS ALLOWED WITHIN THE BUFFER ZONE.

2202
 PROPOSED RESIDENTIAL CARE HOME FOR ELDERLY
 at 81 SAN TAM ROAD,
 YUEN LONG, N.T.

TYPICAL FLOOR PLAN PLAN
RCHE

G-07
 1:150 (A3)
 1:225 (A4)
 D
 C
 B
 A

MAY. 2023
 APR. 2023
 OCT. 2022
 JULY. 2022

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**S12A AMENDMENT OF PLAN APPLICATION
APPROVED NGAU TAM MEI
OUTLINE ZONING PLAN NO. S/YL-NTM/12**

**PROPOSED REZONING FROM “R(C)” TO “G/IC”
FOR A PROPOSED “SOCIAL WELFARE FACILITIES”
(RESIDENTIAL CARE HOMES FOR THE ELDERLY)
(RCHE)**

**AT LOT 4823 IN D.D.104, 81 SAN TAM ROAD,
SAN TIN, N.T.**

RESPONSE-TO-COMMENT - HyD

**Proposed Rezoning From “R(C)” To “G/IC” for
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Lot 4823 in D.D.104, 81 San Tam Road, San Tin, N.T.
S12A Application for Planning Application No. Y/YL-NTM/9
Response-to-Comment – Hyd
(dated to 27 SEPTEMBER 2022)**

Comments	Response
<p>2. Comments of the Chief Highway Engineer/New Territories West, Highways Department (HyD) as follow:</p> <p>2.1 If the vehicular access at San Tam Road is agreed by TD, the applicant should design and construct the vehicular access in accordance with the latest Transport Planning and Design Manual of Transport Department (TD) and relevant HyD’s standard drawings, and to the satisfaction of TD and HyD.</p> <p>2.2 Adequate drainage measures should be provided at the site access to prevent surface water flowing from the site to nearby public roads or exclusive road drains.</p>	<p>Noted.</p> <p>Noted.</p>

**S12A AMENDMENT OF PLAN APPLICATION
APPROVED NGAU TAM MEI
OUTLINE ZONING PLAN NO. S/YL-NTM/12**

RESPONSE-TO-COMMENT - DSD

**PROPOSED REZONING FROM "R(C)" TO "G/IC"
FOR A PROPOSED "SOCIAL WELFARE FACILITIES"
(RESIDENTIAL CARE HOMES FOR THE ELDERLY)
(RCHE)**

**AT LOT 4823 IN D.D.104, 81 SAN TAM ROAD,
SAN TIN, N.T.**

**Proposed Rezoning From “R(C)” To “G/IC” for
a Proposed “Social Welfare Facilities” (Residential Care Homes for The Elderly) (RCHE)
Lot 4823 in D.D.104, 81 San Tam Road, San Tin, N.T.
S12A Application for Planning Application No. Y/YL-NTM/9
Response-to-Comment – DSD
(dated to 27 SEPTEMBER 2022)**

Comments	Response
<p>3. Comments of the Chief Engineer/Mainland North, Drainage Services Department (CE/MN, DSD) as follow:</p> <p>3.1 As the site is not covered by the previous application, this application would be processed as a new case. In this aspect, the applicant shall submit a drainage submission to demonstrate how he will collect, convey and discharge rain water falling onto or flowing to his site. A clear drainage plan showing full details of the existing drains & the proposed drains (e.g. cover & invert levels of pipes/catchpits outfalls and ground levels justifying waterflow etc.) with supporting design calculations & charts should be included. (For preparation of the drainage proposal, the Guideline on preparation of the drainage proposal is available in DSD homepage at http://www.dsd.gov.hk/EN/Files?technical_Manual/dsd_guideline/Drainage_Submission.pdf for reference). The applicant is reminded that approval of the drainage proposal must be sought prior to the implementation of drainage works on site.</p>	<p>Noted. The related submission would seek DSD approval through separate submission upon TBP approval of the subject site.</p>

**Proposed Rezoning From “R(C)” To “G/IC” for
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Response-to-Comment – DSD
(dated to 27 SEPTEMBER 2022)**

Comments	Response
<p>3.2 After completion of the required drainage works, the applicant shall provide DSD for reference a set of record photographs showing the completed drainage works with corresponding photograph locations marked clearly on the approved drainage plan. DSD will inspect the completed drainage works jointly with the applicant with reference to the set of photographs.</p>	<p>Noted. The related submission would seek DSD approval through separate submission upon TBP approval of the subject site.</p>

**Proposed Rezoning From “R(C)” To “G1C” for
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Lot 4823 in D.D.104, 81 San Tam Road, San Tin, N.T.
S12A Application for Planning Application No. Y/YL-NTM/9
Response-to-Comment – DSD
(dated to 27 SEPTEMBER 2022)**

Comments	Response
3.3 The applicant shall ascertain that all existing flow paths would be properly intercepted and maintained without increasing the flooding risk of the adjacent areas.	Noted. The related submission would seek DSD approval through separate submission upon TBP approval of the subject site.
3.4 The applicant is reminded that the proposed drainage proposal / works as well as the site boundary should not cause encroachment upon area outside his jurisdiction.	Noted. The related submission would seek DSD approval through separate submission upon TBP approval of the subject site.
3.5 No public sewerage maintained by DSD is currently available for connection. No sewerage collected from the site should be discharged to the drainage system. For sewage disposal and treatment, agreement from DEP shall be obtained.	Noted. The related submission would seek DSD approval through separate submission upon TBP approval of the subject site.
3.6 The applicant should consult DLO/YL regarding all the proposed drainage works outside the lot boundary in order to ensure the unobstructed discharge from the application suite in future.	Noted. The related submission would seek DSD approval through separate submission upon TBP approval of the subject site.
3.7 All the proposed drainage facilities should be constructed and maintained by the applicant at his own cost. The applicant should ensure and keep all drainage works on site under proper maintenance at all times.	Noted. The related submission would seek DSD approval through separate submission upon TBP approval of the subject site.

**S12A AMENDMENT OF PLAN APPLICATION
APPROVED NGAU TAM MEI
OUTLINE ZONING PLAN NO. S/YL-NTM/12**

**PROPOSED REZONING FROM "R(C)" TO "G/IC"
FOR A PROPOSED "SOCIAL WELFARE FACILITIES"
(RESIDENTIAL CARE HOMES FOR THE ELDERLY)
(RCHE)**

**AT LOT 4823 IN D.D.104, 81 SAN TAM ROAD,
SAN TIN, N.T.**

RESPONSE-TO-COMMENT - CEDD

**Proposed Rezoning From “R(C)” To “G/IC” for
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S12A Application for Planning Application No. Y/YL-NTM/9
Response-to-Comment – CEDD
(dated to 27 SEPTEMBER 2022)**

Comments	Response
<p>4. Comments of the Head of Geotechnical Engineering Office, Civil Engineering and Development Department (H(GEO), CEDD) as follow:</p> <p>4.1 Several man-made slope features, which may affect or be affected by the proposed development, are present within and/or in the vicinity of the application site. The applicant is required to submit a Geotechnical Planning Review Report (GPRR) in support of the planning application. The essential contents of a GPRR are given in the attached GEO Advice Note.</p>	<p>A Geotechnical Planning Review Report is attached herewith.</p>

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a Proposed “Social Welfare Facilities” (Residential Care Homes for The Elderly) (RCHE)
Lot 4823 in D.D.104, 81 San Tam Road, San Tin, N.T.
S12A Application for Planning Application No. Y/YL-NTM/9
Response-to-Comment – CEDD
(dated 13 DECEMBER 2022)**

Comments	Response
<p>2. Comments of the Head of Geotechnical Engineering Office, Civil Engineering and Development Department (H(GEO), CEDD) as follows:</p> <p>2. Section 4. As shown in Figure 2, it is noted that there are four registered man-made slopes (i.e. Features No. 2SE-C/C312, 2SE-C/F94, 2SE-C/R113 and 2SE-C/R114) within and adjacent to the application site. The applicant should provide cross-sections with the proposed construction works (including excavation & lateral support, foundation and site formation, if any) across the application site showing the aforementioned registered man-made geotechnical features.</p> <p>3. Section 3, 7 and 8(1). As mentioned in the GPRR, the existing 3-storey house with a car ramp will be demolished and re-developed into a 10-storey building with an approximate height of 29.6 m, together with the access point at ground level of the building lowered from +12 mPD to +7.33 mPD. In view of the proposed building and site formation works would be carried out immediately adjacent to man-made geotechnical features no. 2SE-C/C312 and 2SE-C/F94, please request the applicant to double check on the validity of the slope (2SE-C/F94) would be undisturbed” (section7) and, “...existing gentle slope (2SE-C/F94) in front would remain unchanged.” (Section 8). The applicant should clearly state whether any necessary slope upgrading works and slope stability assessment of the concerned slope should be carried out prior to commencement of works.</p>	<p>The replacement and additional pages for Geotechnical Planning Review Report attached has included four registered man-made features (2SE-C/C312, 2SE-C/F94, 2SE-C/R113 and 2SE-C/R114). Cross-sections across the application site has also been included.</p> <p>The replacement and additional pages for Geotechnical Planning Review Report attached has included the necessary slope upgrading works and slope stability assessment of the concerned slope 2SE-C/C 312 and 2SE-C/F94.</p>

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Response-to-Comment – CEDD
(dated 13 DECEMBER 2022)**

Comments	Response
<p>4. Further to para. 3 above, the applicant is advised that they should clarify with LandsD on whether necessary land allocation would be required for any slope upgrading works.</p> <p>5. Section 8(2). We note that the applicant would carry out a detailed investigation and assessment on the three existing man-made slope features no. 2SE-C/C312, 2SE-C/F94, 2SE-C/R113 and 2SE-C/R114 that may affect or be affected by the proposed development, and to carry out slope upgrading works if found necessary. Please remind the applicant to include slope feature no. 2SE-C/C312 in their future assessment with consideration of our comments in para.2 above.</p>	<p>Noted. All slope upgrading works would be carried out within our site boundary. Therefore, no land allocation by LandsD is required.</p> <p>The replacement and additional pages for Geotechnical Planning Review Report attached has included the necessary slope upgrading works and slope stability assessment of all features.</p>

**S12A AMENDMENT OF PLAN APPLICATION
APPROVED NGAU TAM MEI
OUTLINE ZONING PLAN NO. S/YL-NTM/12**

RESPONSE-TO-COMMENT - EPD

**PROPOSED REZONING FROM "R(C)" TO "G/IC"
FOR A PROPOSED "SOCIAL WELFARE FACILITIES"
(RESIDENTIAL CARE HOMES FOR THE ELDERLY)
(RCHE)**

**AT LOT 4823 IN D.D.104, 81 SAN TAM ROAD,
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**Proposed Rezoning From “R(C)” To “G/IC” for
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S12A Application for Planning Application No. Y/YL-NTM/9
Response-to-Comment – EPD
(dated to 27 SEPTEMBER 2022)**

Comments	Response
<p>5. Comments of the Director of Environmental Protection (DEP) as follow:</p> <p>5.1 Comments on ER of the supporting planning statement:</p> <p><u>5.1.1 Comments on air quality assessment</u></p> <p>1. Section 2.1.1 and 2.3.1: Please be reminded that it should be the responsibility of the applicant and their consultants to ensure the validity of the chimney data by their own site surveys. Should the information of industrial chimneys be subsequently found to be incorrect, the assessment result as presented in the planning application would be invalidated.</p> <p>2. Table 2: Please review the latest 5 years (2017 -2021) of air quality (for both long term and short term AQOs) at Yuen Long Monitoring Station and describe the baseline air quality condition in the Yuen Long area.</p> <p>3. Section 2.2.1: Please combine the 1st and 2nd bullets point to read “No air-sensitive uses including openable window, fresh air intake and active recreational uses in open space shall be allowed within buffer zones.”</p>	<p>Await replies from our Environmental Consultant.</p> <p>Await replies from our Environmental Consultant.</p> <p>Await replies from our Environmental Consultant.</p>

**Proposed Rezoning From “R(C)” To “G/IC” for
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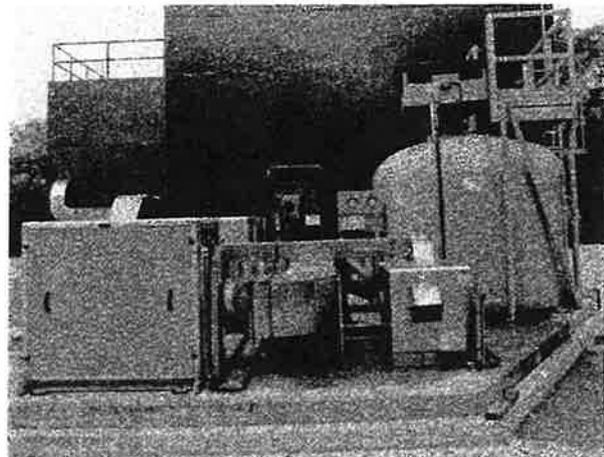
Comments	Response
<p>4. Section 2.3.1: Please clarify if there is any air and odour emission sources (e.g. any emissions from nearby nullah, warehouses and workshops) within 200 m from the site boundary and address their potential impacts on the proposed development (if any) in this section.</p>	<p>Await replies from our Environmental Consultant.</p>
<p>5. Section 2.4.1: It is recommended that electric power supply shall be provided for on-site machinery as far as practicable to minimize aerial emissions. Please supplement.</p>	<p>Await replies from our Environmental Consultant.</p>

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Response-to-Comment – EPD
(dated to 27 SEPTEMBER 2022)**

Comments	Response
<p>6. Odour impact from the proposed on-site STP (as shown in Figure 3.2.1):</p> <p>(a) The consultant should address the odour impact arising from the proposed on-site STP on the nearby ASRs including the existing ones and the proposed development in the report. Please indicate the location of the exhaust of the proposed STP in a location map with the nearest ASRs and provide their separation distances. Please also specify the odour removal efficiency of the deodorizer in the report.</p> <p>(b) The applicant should observe and follow EPD's Guidelines for the Design of Small Sewage Treatment Plants for minimization of the odour impact from the proposed STP while the exhaust outlet of the proposed STP should be located away from all nearby ASRs as far as possible.</p> <p>(c) Please clarify how the sewage and sludge generated from the STP will be discharged and whether there is any odour issues related to disposal.</p>	<p>(a) & (b): A deodorization adsorption system is proposed to install for removal of odor from generated sources, which includes a FRP vessel with activated carbon media, pre-filter, post-filter and dehumidifier, please refer to attached brochure. The deodorization adsorption system will have minimum odor removal efficiency of 99.5% at 5 ppm H2S concentration. The deodorization adsorption system will have minimum service life for 12 months continuous operation for 5ppm H2S loading. Sufficient adsorption capacity of activated carbon will be installed. The odor removal air from the outlet of deodorization adsorption system will be exhausted through the air duct to high level.</p> <p>(c): A wet sludge transfer pipe will be installed to draw wet sludge from the sludge holding tank at sewage treatment plant to the collection point adjacent to the entrance of development in fully close system for tanker collection of wasting wet sludge to dispose to Government sewage treatment plant. It will be eliminated odor release during wasting wet sludge disposal service.</p>

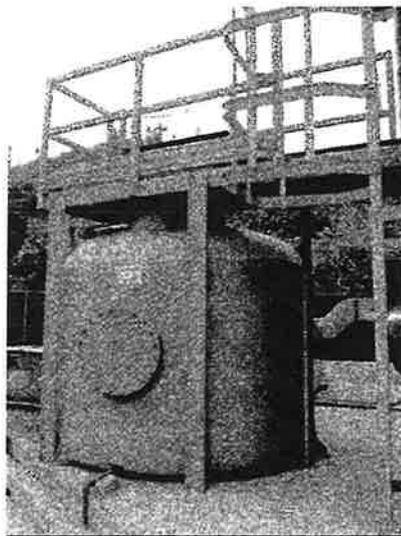


Rage Activated carbon adsorption tower is designed for industrial and municipal odour control. Activated carbon is the most widely used media for pollutant adsorption in gas phase. The carbon pellet has a very porous structure with a high surface-to-volume ratio, and enables the odorous compounds being captured when the foul gases passing through the carbon bed through the duty extraction fan.

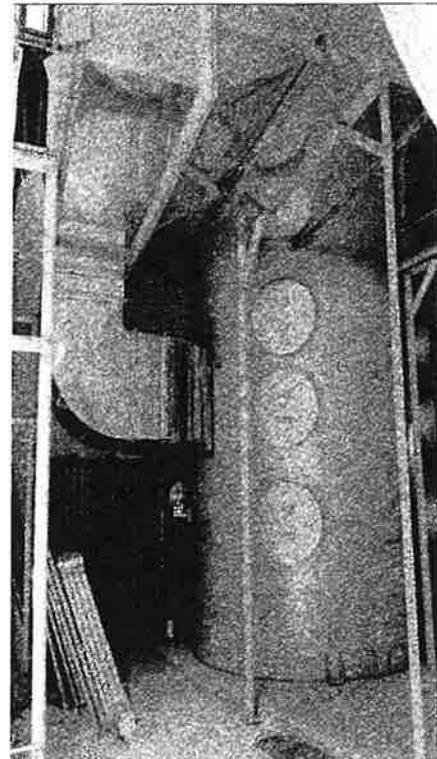


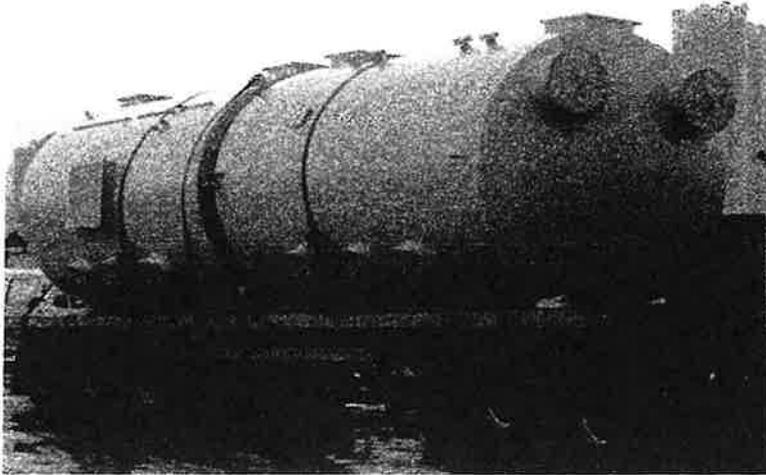
The adsorption tower can be a single bed or dual bed design depends on the air volume and made from Fiberglass Reinforced Plastic (FRP), steel or stainless steel as per the specification.

A single bed construction activated carbon filter system with cat ladder and working platform



A dual bed construction system with air duct connection





Two dual bed construction filter houses on a 12m length trailer delivered to site

A wide range of activated carbon manufactured from both bituminous coal and coconut shell and impregnated specific chemicals available for various odorous compound removal. Sometimes, beds of carbon with different chemical impregnated are packed in the single house for capture and chemically destroy different type of odourous composition. Typically, KOH or $KMNO_4$ for breaking down Hydrogen Sulphide. The disadvantage of the addition of caustics lowers the ignition temperature and shall be considered as hazardous, and higher production cost.

Recently, regenerate type activated carbon is available, which is unimpregnated carbon that regain some absorption capacity after washing. However, cost will be higher.



Benefits

- Simple in construction & maintenance
- Capable to handle a number of odourous gases.

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S12A Application for Planning Application No. Y/YL-NTM/9
Response-to-Comment – EPD
(dated to 27 SEPTEMBER 2022)**

Comments	Response
<p>7. Air quality impact from the proposed kitchen of the proposed development: Please address if there are any oily fumes from the proposed kitchen and any mitigation measures will be in place to alleviate the potential air quality impact on the nearby ASRs in the report.</p>	<p>A grease filter would be applied to remove oily fume. The Catalogue is attached for your information. Routing is shown on the revised G-03 Rev.B.</p>
<p>8. Figure 2.1.1: Please provide a remark in the figure to state clearly that no air-sensitive uses including openable window, fresh air intake and active recreational uses in the open space is allowed within the buffer zone.</p>	<p>Await reply from our Environmental Consultant.</p>

ALL STAINLESS GREASE FILTER
PLUS ONE & PLUS ONE SUPER

除油率
 Oil removal
 89.27%



加一、
 超級加一

使用不銹鋼製的廚房油煙網
 使廚房更安全、更舒適

- Good Ventilation 通風性良好
- Powerful Retention of Fumes 除垢力強煙異味
- Light-Weight Filter 耐用全不銹鋼製
- Not Easily Clogged 過濾網不易阻塞
- Save Maintenance Fee 少維修怪錢省時

KAWASHO

日本廚房工業會
 的認定品。
 適合與節省消防
 裝置有關除去油
 煙的場所。日本
 廚房工業會認可
 商標，請以放心
 使用。

JAPAN FOOD SERVICE
 EQUIPMENT ASSOCIATION

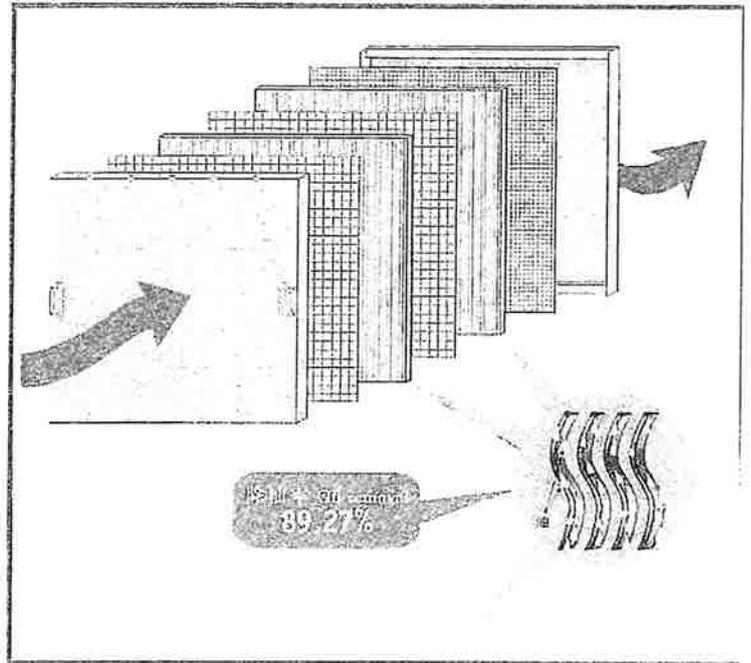


「超級加一」及「加一」的油濾光片

- 「超級加一」及「加一」的優點是通氣性，確實有效地除去油塵的 Long Life 油濾光片。
- 具有通風性和除去油塵的2種性能均能做到兩方平衡的優質 Grease Filter 。

由於油濾光片上下方面均是特殊耐熱，加上使用不銹鋼纖維組成，故此在排氣中同時可將油塵捉住及除去。所以當油濾光片累積的油塵減少，相對性便可維持長時間性能效用。

(特許取得 第3141063號)



「超級加一」及「加一」的6個特性優秀點

- 1) 優質的通風性
由於擁有優質的良好的換氣能力，故此能夠控制廚房內的溫度上升及可以將廚房的舒適環境得以維持。
- 2) 卓越的除油性能
因為長方形斷面上已佈滿特殊耐熱性及不銹鋼纖維，故能夠容易將油塵捉住。
- 3) 維持更長的高性能
由於利用編設方法而成的特殊耐熱性及不銹鋼纖維的油濾光片，不但可減少油塵的成份滯留，同時也可以使通風的效能更暢順，更甚者是能夠將除去油塵的性能得以長期性的維持。
- 4) 全是不銹鋼製的產品，長期使用更加經濟
因為擁有優良的耐蝕性、耐熱性、耐衝擊性、以及藥品性的抵擋。由於以不銹鋼製成的油濾光片非常堅硬，因此外貌美觀得以更長持久。
- 5) 節省經費
擁有優良的通風性和除去性能的不銹鋼纖維，能減輕換風氣用的摩打負擔及減少機器裏污物的積聚，當然亦可省下更多不必要的電費和減少清掃的費用。
- 6) 優良的洗淨法
油塵分子的滯留相繼減少，故可將裏面的油塵更容易洗淨。

WE GUARANTEE HYGIENIC KITCHENS 'NO GREASE, AND NO SMELLY ODOR'

This Specially-Designed Cooked Hood Serves the Kitchen Requirements of Business Establishments.

Specification :-

1. Good Ventilation - maintains a pleasant environment and does not strain the suction-fan.
2. Powerful Retention of Fumes - more efficient than other cooker hoods.
3. Light-Weight Filter - unique stainless steel which is very light.
4. Not Easily Clogged - fast, powerful and efficient suction and retention of fumes.
5. Annual maintenance fees are kept to the minimum.

KITCHEN HAZARDS : HOW TO OVERCOME THEM

Present-day kitchen environment and conditions which are greasy smoky and sticky may lead to fire hazards. In addition, the fumes which are trapped due to poor ventilation and improper kitchen maintenance may also cause fires.

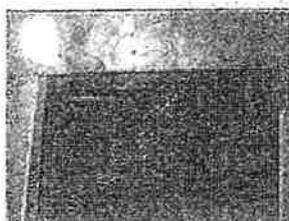
GUIDELINES ON FIRE PREVENTION

The Japanese Fire Department makes it mandatory for all Japanese kitchens to install grease filters and to clean the ducts once a month. This maintenance work is very costly. In spite of these measures, fire still occur in kitchens.

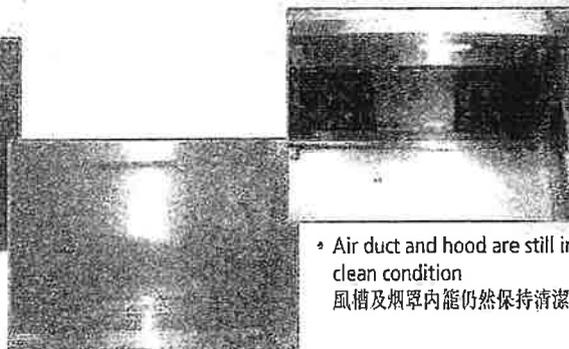
INEFFICIENT SUCTION AND RETENTION OF OIL IN THE FUMES

There is a slow build-up of grease and oil in the filter owing to non-optimum performance of the filter system. This leads to a hazardous situation likely to cause fires in the kitchen! The buffalo-shaped filter does not efficiently retain the oil in the fumes and the sub-standard and unhygienic ventilation system. The factors are the main causes of the high incidence of kitchen fires.

Due to the poor retention of oil by the filter, the filter clogs easily, Causing Oxidation. To overcome all the above problem, our company, the Totaru Plan (m) Sdn. Bhd, has invented the latest state-of-the art cooker hood. It is super efficient in oil retention and provides the highest standard in ventilation. It is hardy, durable and a boon to all consumers!

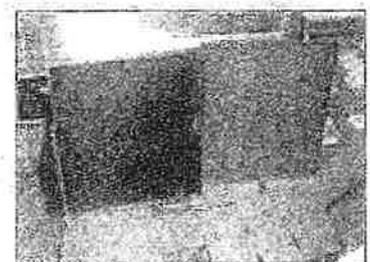


• Before Installation
未安裝 Kawasho 隔油煙網前



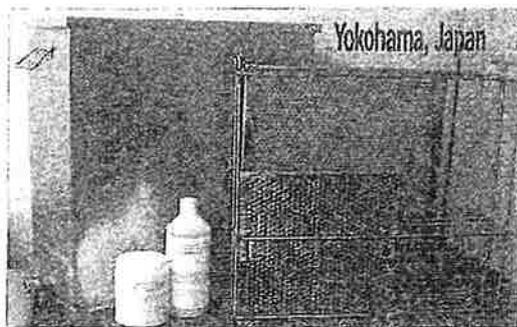
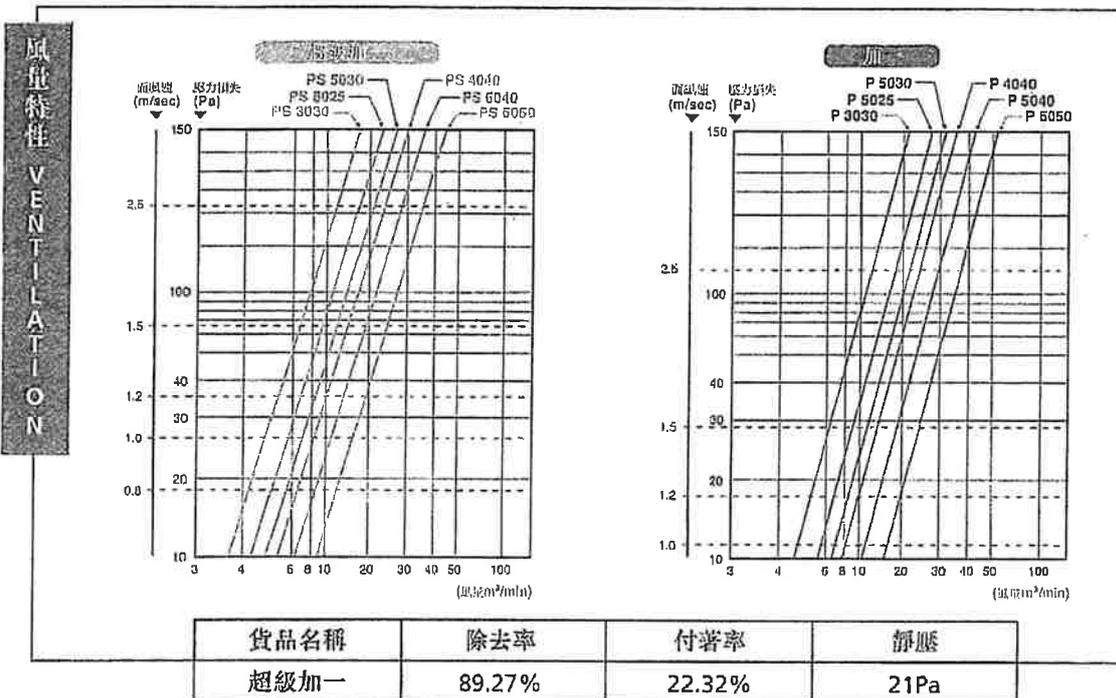
• Cleaned air duct and hood with
Kawasho grease filter installed
清潔煙罩風槽後及安裝 Kawasho 隔油煙網

• Air duct and hood are still in
clean condition
風槽及煙罩內籠仍然保持清潔



• Front and rear of Filter
隔油網的前後面

型號尺寸 SIZE CHART	超級加一	加一	捕油率	靜壓	風量
	PS 5050	PS 5050	500	500	25
	PS 5050S	PS 5050S	495	500	25
	PS 5040	PS 5040	500	400	25
	PS 5040S	PS 5040S	495	400	25
	PS 5030	PS 5030	500	300	25
	PS 5030S	PS 5030S	495	300	25
	PS 5025	PS 5025	500	250	25
	PS 5025S	PS 5025S	495	250	25
	PS 4040	PS 4040	400	400	25
PS 3030	PS 3030	300	300	25	



規格 SPECIFICATIONS	
桶子型號 Bucket Type	G. F. 5
桶子尺碼 Bucket Size	600(高)Hx540(長)Lx220(濶)W
裝置水容量 Capacity	70 (公升)Litres
隔油網容量 Filter Holding Capacity	5 (塊)Pieces
不銹鋼架尺寸 Dimension of Stainless Steel Rack	(Grease Filter) 560(高)H x 520(長)L x 120(濶)W 3(濶濶)Pieces 560(高)H x 520(長)L x 80(濶)W 2(濶濶)Pieces

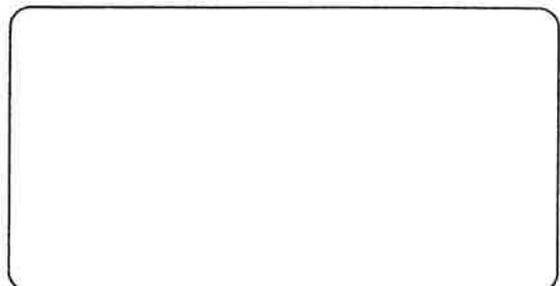
生產商
川鉄商事株式会社
Tel : 03-5203-5141

總部
株式会社
Tel : 045-471-8800

海外營業部
多德來(香港)有限公司
Tel : 852-2191-7686

TOTARU PLAN (JAPAN)
Web-site : www.totaru.com

TOTARU PLAN (H.K.) LTD.
Web-site : www.totaru.com.hk



GREASE COOL & FILTER CLEANER

SUPER GREASE FILTER POWDER CLEANER

STAINLESS GREASE FILTER CLEANER

超力油煙網清潔粉劑

不銹鋼油煙網清潔劑



業務用ステンレ製グリスフィルター

DIRECTIONS FOR USE 使用方法

Input 750g of Grease Removal Power with water (hot or cool) into TOTARU STAINLESS BUCKET, and then input 1000ml of Grease Removal Cleaner into bucket, after wipe off with dirty filter 8hrs to 48hrs, rinse with clean of water

首先將750克除油粉放入多德來不銹鋼桶內，然後再加入清水(冷熱皆可)，再將1000毫升除油劑放入桶內及攪和後便可將污垢的隔油煙網放至水中，待浸8至48小時後再用清水徹底洗淨便可

TOTARU PLAN (HK) LTD.

TOTARU G.F. BOX

Stainless Steel Grease Filter Cleaning Box

不銹鋼隔油網清潔箱



業務用ステンレ製箱

Yokohama, Japan



STAINLESS STEEL BOX

規格

SPECIFICATIONS

桶子型號 Bucket Type	G.F.5
桶子尺碼 Bucket Size	600 (高)H x 540 (長)L x 220 (闊)W
裝置水容量 Capacity	70 (公升) Litres
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不銹鋼架 Stainless Steel Rack	(Grease Filter) 560 (高)H x 520 (長)L x 120 (闊)W 3(塊用)Pieces 560 (高)H x 520 (長)L x 80 (闊)W 2(塊用)Pieces

**Proposed Rezoning From “R(C)” To “G/IC” for
a Proposed “Social Welfare Facilities” (Residential Care Homes for The Elderly) (RCHE)
Lot 4823 in D.D.104, 81 San Tam Road, San Tin, N.T.
S12A Application for Planning Application No. Y/YL-NTM/9
Response-to-Comment – EPD
(dated to 27 SEPTEMBER 2022)**

Comments	Response
<p>5.1.2 Comments on <u>Noise Impact Assessment</u></p> <p>Traffic noise</p> <p>1. Sections 3.1.2, 3.2.1 and 3.3.1: Please clarify if any diagnostic rooms/wards in the proposed RCHE development will rely on the operable window for ventilation. If yes, the road traffic noise criteria should be 55 dB(A). Please also clarify the nature and use of the Multi-Function Area, and whether there would be any openable window for ventilation.</p> <p>2. Section 3.2.2: Please review if ASR “B” would be more appropriate for representative NSRs (i.e. W07 to W13) facing away from San Tin Highway.</p> <p>3. Section 3.3.2: Please document TD’s agreement on the traffic forecast data in the report once available. In case TD has no comment on the methodology for traffic forecast only, the consultant should provide written confirmation from the respective competent party (e.g. traffic consultant) that TD’s endorsed methodology has been strictly adopted in preparing the traffic forecast data, and hence the validity of traffic data can be confirmed.</p> <p>4. Section 3.3.5: The consultant proposed vertical architectural fins at the northern, eastern and southern facade of the proposed RCHE to mitigate the traffic noise impact. Please note that the proposed architectural fin may bring a maximum of 3 dB(A) of additional noise reduction. Please review and propose noise mitigation measures such as INMD to mitigate traffic noise impact if necessary.</p>	<p>No diagnostic rooms/wards is provided in the development. The Multi-function Area is for dining and rest purpose. Since the area is air-conditioned by AC unit, openable window would not be provided.</p>

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(dated to 27 SEPTEMBER 2022)**

Comments	Response
<p>Noise model</p> <p>5. The search radius in the configuration should be set to 300m. Please review.</p> <p>6. The traffic data for Road I to R are missing. Please supplement.</p> <p>7. The traffic flow of Road C1 appeared to be inconsistent with Table 3-3. Please review and rectify.</p> <p>Fixed noise</p> <p>8. Section 3.4.4 and Table 3-7: Please provide a figure with the location of representative NSRs (i.e. NSR N01 to NSR N03) relative to the proposed fixed plant noise sources.</p> <p>9. Based on our desktop review, open storage was located approximately 100m to the west of the site, and a mobile forklift and crane were found in the open storage site. Please double-check the potential fixed noise sources in the vicinity that should be included in the fixed noise impact assessment. The fixed noise impact assessment from surrounding existing sources to the proposed development is found missing in the planning application.</p> <p>10. Figure 3.2.4: Please assign the NSRs mentioned in Table 3-7 in CadnaA for fixed noise impact assessment. Please be reminded that the cumulative fixed noise impact should be included in the fixed noise impact assessment.</p>	<p>5-7 : Await reply from our Environmental Consultant</p> <p>8-10: Await reply from our Environmental Consultant</p>

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Response-to-Comment – EPD
(dated to 27 SEPTEMBER 2022)**

Comments	Response
<p><u>5.1.3 Comments on water quality impact</u></p> <p>1. Please provide relevant baseline condition of nearby waterbodies and confirm whether the development would have adverse water quality impact on WQO.</p> <p>2. Section 4.5: Please provide more information on the sewage generation during operation, including the amount of sewage flow generated per day (from residents, staff, facilities, etc.), the size of the STP, mitigation measures to prevent discharge/ overflow of untreated raw sewage, etc. to demonstrate there would be no adverse water quality impact.</p> <p>3. Section 4.3: Please list and provide a figure to identify the WSRs within 500m area. Please also indicates the discharge route of the proposed STP. Please also elaborate whether WSRs within 500m would be affected by the proposed development during construction and operation phase.</p> <p>4. Section 4.5: Design of the STP shall follow Guidelines for the Design of Small Sewage Treatment Plants by EPD.</p>	<p>1 & 3: Please refer to the Appendix 1.</p> <p>2 & 4: The Design Calculation is attached for your information. It provides the calculation of the daily flow generated from resident and staff, the applied discharge standard and design treatment tank to fulfill the effluent quality of discharge standard of EPD.</p>

**Proposed Rezoning From “R(C)” To “G/IC” for
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Lot 4823 in D.D.104, 81 San Tam Road, San Tin, N.T.
S12A Application for Planning Application No. Y/YL-NTM/9
Response-to-Comment – EPD
(dated to 27 SEPTEMBER 2022)**

Comments	Response														
<p>5. Section 4.5: The subject site falls within Deep Bay catchment area with limited assimilative capacity. We understand that there is no public sewerage system available in the vicinity of the site. Subject to confirmation that connection to public sewerage is not feasible, the development shall be equipped with on-site tertiary sewage treatment facility. A typical tertiary treatment standard is attached below for reference.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 20%;">Parameter</th> <th style="width: 80%;">Tertiary Effluent Standards (Upper Limit) *</th> </tr> </thead> <tbody> <tr> <td>BOD5</td> <td>10 mg/L</td> </tr> <tr> <td>TSS</td> <td>10 mg/L</td> </tr> <tr> <td>TN</td> <td>20 mg/L</td> </tr> <tr> <td>TP</td> <td>2 mg/L</td> </tr> <tr> <td>Ammonia-N</td> <td>5 mg/L</td> </tr> <tr> <td>E. coli</td> <td>100units/100mL</td> </tr> </tbody> </table>	Parameter	Tertiary Effluent Standards (Upper Limit) *	BOD5	10 mg/L	TSS	10 mg/L	TN	20 mg/L	TP	2 mg/L	Ammonia-N	5 mg/L	E. coli	100units/100mL	<p>The Design Calculation is attached for your information. It provides the calculation of the daily flow generated from resident and staff, the applied discharge standard and design treatment tank to fulfill the effluent quality of discharge standard of EPD.</p>
Parameter	Tertiary Effluent Standards (Upper Limit) *														
BOD5	10 mg/L														
TSS	10 mg/L														
TN	20 mg/L														
TP	2 mg/L														
Ammonia-N	5 mg/L														
E. coli	100units/100mL														
<p>*Depending on the water body receiving the discharge, the more stringent set of the effluent standards (those listed in the table or the WPCO TM) should be adopted as appropriate.</p>															

**Proposed Rezoning From “R(C)” To “G/IC” for
a Proposed “Social Welfare Facilities” (Residential Care Homes for The Elderly) (RCHE)
Lot 4823 in D.D.104, 81 San Tam Road, San Tin, N.T.
S12A Application for Planning Application No. V/YL-NTM/9
Response-to-Comment – EPD
(dated to 27 SEPTEMBER 2022)**

Comments	Response
<p><u>5.1.4 Comments on waste management</u></p> <p>1. Please confirm whether there is any potential land contamination issue due to the historical and current land uses at the subject site.</p> <p><u>5.1.5 Comments on landfill gas hazard impact</u></p> <p>1. As the application site falls within 250m consultation zone of the restored Ngau Tam Mei Landfill, please address potential landfill gas hazard impacts during construction and operation phase of the proposed development and propose mitigation measures, if necessary.</p>	<p>Await reply from our Environmental Consultant</p> <p>A Landfill Gas Hazard Assessment Report for the existing house was submitted on 04/2016 and be approved by EPD. A revised assessment could be carried out at later stage if necessary.</p>

**S12A AMENDMENT OF PLAN APPLICATION
APPROVED NGAU TAM MEI
OUTLINE ZONING PLAN NO. S/YL-NTM/12**

**PROPOSED REZONING FROM "R(C)" TO "G/IC"
FOR A PROPOSED "SOCIAL WELFARE FACILITIES"
(RESIDENTIAL CARE HOMES FOR THE ELDERLY)
(RCHE)**

**AT LOT 4823 IN D.D.104, 81 SAN TAM ROAD,
SAN TIN, N.T.**

APPENDIX 1

RESPONSE-TO-COMMENT - EPD

5.1.3 WATER QUALITY IMPACT (COMMENT 1&3)

Please provide relevant baseline condition of nearby waterbodies and confirm whether the development would have adverse water quality impact on WQO.

For the marine environment, the nearest EPD Water Quality Monitoring Station (WQMS) to 81 San Tam Road is DM1. The latest summary of baseline condition of subject WQMS in 2020 is extracted, reference from "Marine Water Quality in Hong Kong in 2020" by EPD.

In 2020, the overall WQO compliance rate for Deep Bay WCZ was 67%, as compared with a ten year average of 47% in 2009-2018. Overall, with the measures under the Deep Bay Water Pollution Control Joint Implementation Plan taken progressively by Hong Kong and Shenzhen, there have been significant water quality improvements in Deep Bay. In particular, there have been full compliance of the DO WQO in the past two years and NH₃-N WQOs in the past five years. Although Deep Bay, as compared with other WCZs, had higher nutrient levels with annual depth averaged TIN levels exceeding the respective TIN WQOs, a noticeable long-term decrease in TIN levels since mid-2000s has been seen.

Sewage will be treated by the onsite STP before discharge. The disposal of the treated effluent shall comply with relevant statutory requirements and guidelines such as Water Pollution Control Ordinance (Cap. 358), etc. All discharges during the operation phase of the proposed development are required to comply with the Technical Memorandum for Effluents Discharged into Drainage and Sewerage Systems, Inland and Coastal Waters (TM-DSS) issued under Section 21 of the Water Pollution Control Ordinance (WPCO). The TM-DSS defines acceptable discharge limits to different types of receiving waters. Under the TM-DSS, effluents discharged into the drainage and sewerage systems, inland and coastal waters of the Water Control Zones (WCZs) are subject to pollutant concentration standards for specified discharge volumes. These are defined by the Environmental Protection Department (EPD) and are specified in licence conditions for any new discharge within a WCZ. Therefore, no adverse water quality impact on WQO is anticipated.

Summary of water quality statistics for the Deep Bay WQZ in 2020

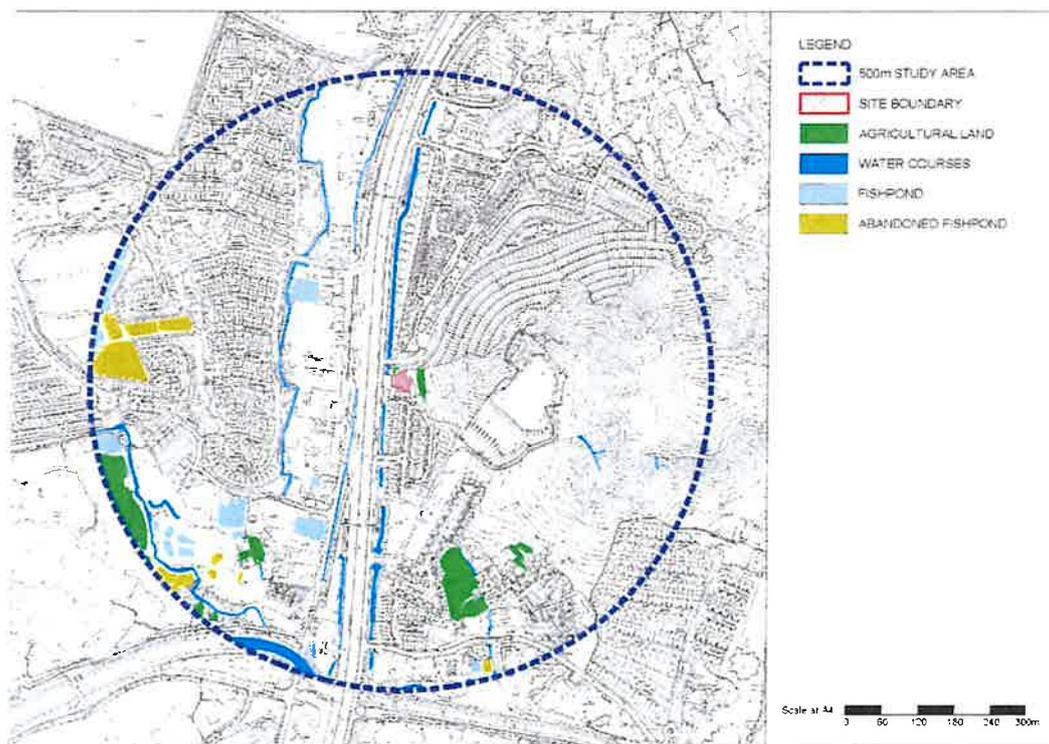
Parameter	Inner Deep Bay			Outer Deep Bay	
	Q1	Q3	Q5	Q1	Q3
Number of samples	8	8	12	8	8
Temperature (°C)	21 (20-21.2)	21.1 (21-21.6)	21.4 (21-21.9)	21.1 (21-21.6)	21.7 (21-22.3)
Salinity	146 (13-22.6)	168 (0-28.5)	215 (4-29.3)	209 (8-30.7)	237 (9-31.6)
Dissolved Oxygen (mg/L)	5.9 (4-7.6)	6.1 (4.8-7.9)	6.0 (4.3-7.1)	6.6 (4.2-8.1)	6.6 (4.7-8.0)
Bottom	NA	NA	NA	5.4 (4.8-6.5)	5.5 (4.8-7.1)
Dissolved Oxygen (% Saturation)	79 (62-105)	85 (61-114)	86 (58-121)	80 (70-104)	81 (69-96)
Bottom	NA	NA	NA	75 (61-94)	77 (66-100)
pH	7.4 (7.1-7.6)	7.9 (7.2-8.6)	7.8 (7.1-8.2)	7.7 (7.3-8.1)	7.6 (7.1-8.1)
Secchi Disc Depth (m)	1.1 (0.8-1.2)	1.1 (0.8-1.9)	1.4 (1.1-1.9)	1.5 (1.0-2.0)	1.8 (1.0-2.1)
Turbidity (NTU)	21.7 (13.3-41.3)	29.2 (10.5-42.7)	35 (6.3-114.2)	31 (6-117.4)	31 (5-214)
Suspended Solids (mg/L)	37.0 (8.0-59.0)	47.4 (24.0-80.0)	16.3 (6.5-30.0)	14.5 (6.3-21.5)	14.7 (6.9-27.3)
5-day Biochemical Oxygen Demand (mg/L)	1.6 (0.9-2.1)	1.8 (0.7-4.9)	1.0 (0.3-4.5)	1.0 (0.2-4.8)	0.6 (0.3-1.0)
Ammonia Nitrogen (mg/L)	0.05 (0.02-0.07)	0.03 (0.02-0.03)	0.13 (0.02-0.32)	0.12 (0.01-0.19)	0.09 (0.01-0.17)
Un-ionised Ammonia (mg/L)	0.005 (0.002-0.01)	0.005 (0.002-0.01)	0.04 (0.001-0.06)	0.03 (0.001-0.07)	0.02 (0.001-0.03)
Nitrite Nitrogen (mg/L)	0.01 (0.005-0.02)	0.05 (0.04-0.10)	0.08 (0.04-0.17)	0.07 (0.02-0.16)	0.02 (0.01-0.13)
Nitrate Nitrogen (mg/L)	1.39 (0.00-1.99)	1.66 (0.66-1.99)	0.53 (0.00-1.99)	0.71 (0.00-1.99)	0.66 (0.00-1.99)
Total Inorganic Nitrogen (mg/L)	1.99 (0.99-2.32)	1.52 (1.02-2.34)	0.95 (0.43-1.78)	0.88 (0.37-1.62)	0.76 (0.23-1.41)
Total Kjeldahl Nitrogen (mg/L)	0.76 (0.58-1.73)	0.73 (0.6-1.0)	0.54 (0.2-0.93)	0.54 (0.14-0.93)	0.43 (0.1-0.97)
Total Nitrogen (mg/L)	2.03 (0.91-2.91)	1.99 (1.02-3.01)	1.21 (0.77-2.11)	1.12 (0.78-1.81)	1.09 (0.73-1.72)
Orthophosphate Phosphorus (mg/L)	0.151 (0.124-0.22)	0.123 (0.09-0.18)	0.061 (0.04-0.16)	0.05 (0.01-0.09)	0.05 (0.01-0.09)
Total Phosphorus (mg/L)	0.24 (0.19-0.34)	0.21 (0.15-0.27)	0.10 (0.06-0.14)	0.07 (0.05-0.10)	0.06 (0.04-0.09)
Silica (as SiO ₂) (mg/L)	5.89 (4.13-10.0)	5.15 (3.89-10.0)	3.70 (0.47-9.5)	3.9 (0.39-9.0)	3.5 (0.34-9.27)
Chlorophyll-a (µg/L)	33 (2.5-9.9)	64 (6.5-150)	29 (1.8-11.0)	19 (0.5-4.0)	19 (0.5-3.4)
E.coli (count/100mL)	200 (12-190)	160 (17-814)	22 (1-110)	61 (1-69)	75 (9-650)
Faecal Coliforms (count/100mL)	530 (65-390)	340 (24-900)	88 (1-399)	170 (11-1000)	190 (26-450)

Figure B-10: Summary of water quality statistics for the Deep Bay WQZ in 2020. The table provides a detailed overview of various water quality parameters measured at different locations within the Deep Bay Water Quality Zone (WQZ) in 2020. The parameters are grouped into two main areas: Inner Deep Bay and Outer Deep Bay. Each parameter is reported with its minimum, maximum, and median values, along with the number of samples collected. The parameters include physical properties like temperature and salinity, chemical indicators such as dissolved oxygen, ammonia, and nitrate, biological measures like chlorophyll-a and faecal coliforms, and physical characteristics like turbidity and suspended solids. The data shows seasonal variations and differences between the inner and outer parts of the bay, with higher temperatures and salinity in the inner bay and higher turbidity and suspended solids in the outer bay. The presence of faecal coliforms and E. coli indicates potential bacterial contamination, which is a concern for water quality and public health.

Please list and provide a figure to identify the WSRs within 500m area. Please also indicates the discharge route of the proposed STP. Please also elaborate whether WSRs within 500m would be affected by the proposed development during construction and operation phase.

Water Sensitive Receivers (WSRs) are defined as those users of the aquatic/marine environment whose use of the environment could be impaired as a result of the proposed project. When WSRs that are potentially affected by the construction and operation of the Project are identified, further study will be conducted.

Representative Water Sensitive Receivers (WSRs) identified within 500m of the Project boundary that may potentially be affected are shown in Figure below.



Construction Site Runoff

The surface runoff from construction works areas may contain increased loads of suspended solids (SS) and contaminants. Potential sources of pollution from construction site drainage include:

- Runoff and erosion from site surfaces, drainage channels, demolition works, earth working areas and stockpiles;
- Release of any bentonite slurries, concrete washings and other grouting activities;
- Wash water from dust suppression spray facilities; and
- Fuel, oil, solvents and lubricants from maintenance of mechanical equipment.

Sediment laden runoff particularly from works areas subjected to excavation or earthworks, if uncontrolled, may cause increased levels of suspended solids and pollutants entering the stormwater drainage system and into the marine environment.

Mitigation measures and good site practices outlined in ProPECC PN1/94 should be implemented to control construction site runoff and drainage from the works area. The Contractor would also be required to apply for a discharge license under the WPCO. With implementation of the recommended mitigation measures along with compliance of the effluent standards set under TM-DSS, construction site runoff can be effectively controlled, and adverse impacts to storm drains or the marine environment is not anticipated.

General Construction Activities

On-site construction activities may result in water pollution from uncontrolled discharge of debris and rubbish such as packaging, construction materials, chemicals and refuse. Best Management Practices (BMPs) should be implemented at the construction site, including proper handling, sorting and storage of construction solid waste, debris and refuse generated on-site prior to disposal. General refuse and recyclable materials should be collected separately and stored in appropriately labelled bins and removed regularly to minimise the risk of windblown waste / debris discharging into the harbour.

With proper implementation of the good construction and site management practices mentioned above, water pollution arising from the general on-site construction activities can be prevented, and water quality impacts would not be anticipated.

Accidental Spillage of Chemicals

A large variety of chemicals may be used during construction activities. These may include petroleum products, surplus adhesives, spent lubrication oil, grease and mineral oil, spent acid and alkaline solutions/solvent and other chemicals. The use of these chemicals and their storage as waste materials has the potential to create impacts on the water quality of adjacent watercourses or storm drains if spillage occurs. Waste oil may infiltrate into the surface soil layer, or runoff into local watercourses, increasing hydrocarbon levels. The potential impact could however be mitigated by practical mitigation measures and good site practices as given in Waste Disposal Ordinance (Cap. 354), its subsidiary regulations in particular the Waste Disposal (Chemical Waste) (General) Regulation and The Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes.

Sewage Effluent from the Construction Workforce

During the construction of the Project, the workforce on site will generate sewage effluents, which are characterised by high levels of BOD, ammonia and E.coli counts. Potential water quality impacts upon the local drainage and freshwater system may arise from these sewage effluents, if uncontrolled.

The construction sewage should be handled by interim sewage treatment facilities, such as portable chemical toilets. Appropriate numbers of portable toilets should be provided by a licensed contractor to serve the large number of construction workers over the construction site. Provided that sewage is not discharged directly into the storm drains or watercourses adjacent to the construction site, and temporary sanitary facilities are used and properly maintained, it is unlikely that sewage generated from the site would have a significant water quality impact.

Sewage generated from the Development Operation

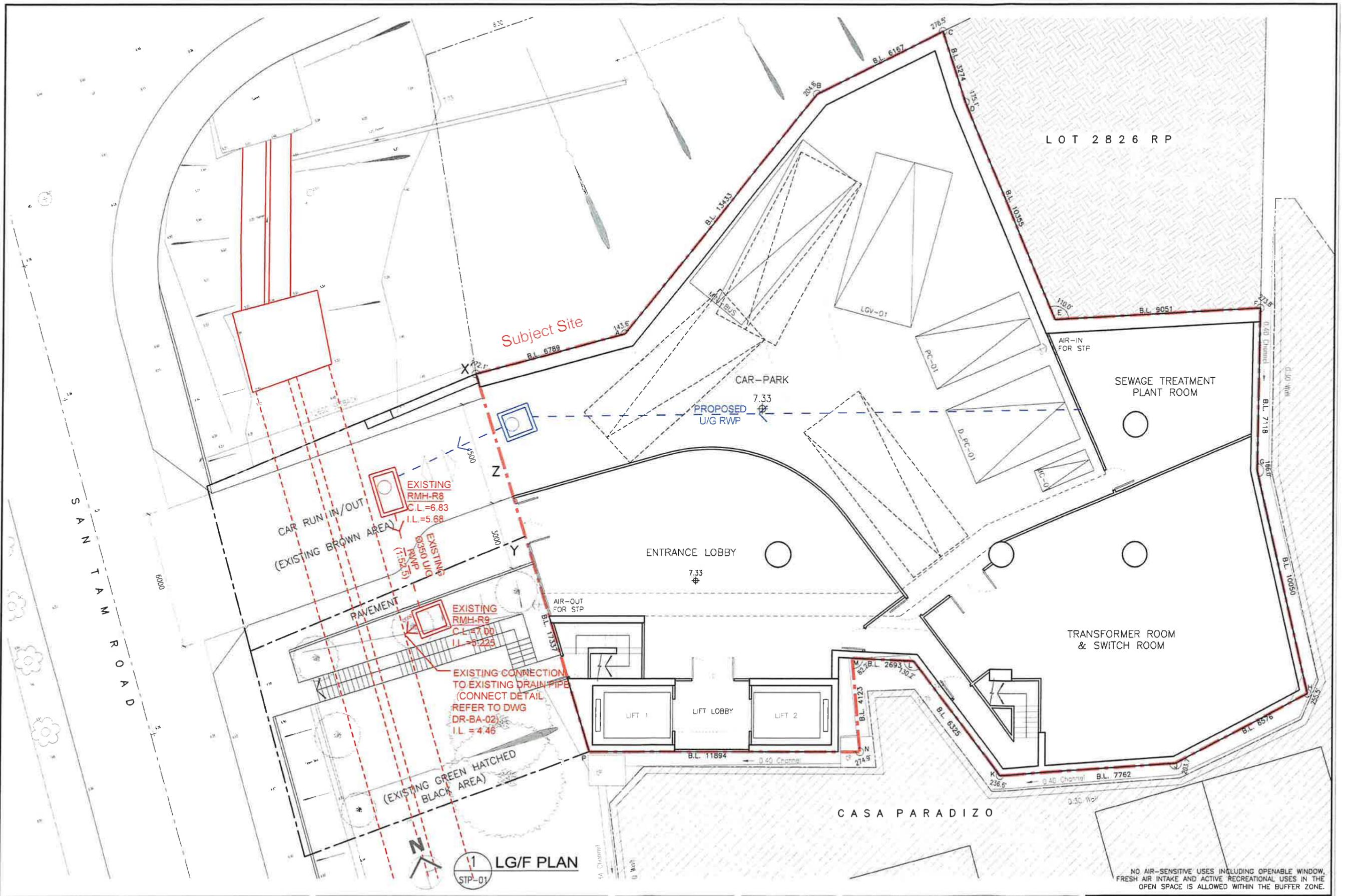
Sewage discharge will be the major water pollution source throughout the operation phase of the proposed Development. The sewage generated from the proposed Development will be collected and conveyed to the nearest public sewerage system via proper connections. No sewage will be released to the environment without treatment.

Runoff from road surfaces and paved areas

During operation phase, stormwater runoff from paved surfaces within the Project Sites will be directed to a managed stormwater drainage system. Runoff from the roofs of buildings and road surfaces within the Sites may carry suspended solids and other pollutants such as fuel, oils and heavy metals that could enter nearby surface water bodies or storm drains if uncontrolled. With implementation of stormwater best management practices including provision of trapped gullies and catch-pits, adverse impacts to the water quality is not anticipated.

Discharge route of the proposed STP

The discharge route is shown as per STP-01 attached.



2202
 PROPOSED RESIDENTIAL CARE HOME FOR ELDERLY
 at 81 SAN TAM ROAD,
 YUEN LONG, N.T.

LG/F PLAN
DISCHARGE ROUTE OF THE STP

STP-01 1:150 (A3) OCT. 2022

Do not scale drawing.
 Contractors are required to verify exact dimensions on site.
 The drawings show the design intent of the architect only, contractors are required to submit shop drawings where appropriate.
 The design remains to be the property of "RLEE Architects (HK) Ltd" unless otherwise specified.
 This drawing is not for construction purposes unless expressly certified.

NO AIR-SENSITIVE USES INCLUDING OPENABLE WINDOW,
 FRESH AIR INTAKE AND ACTIVE RECREATIONAL USES IN THE
 OPEN SPACE IS ALLOWED WITHIN THE BUFFER ZONE.



**Proposed Rezoning From “R(C)” To “G/IC” for
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S12A Application for Planning Application No. YYL-NTM/9
Response-to-Comment – EPD
(dated 27 SEPTEMBER 2022)
(updated 05 JANUARY 2023)**

Comments	Response
<p>5. Comments of the Director of Environmental Protection (DEP) as follow:</p> <p>5.1 Comments on ER of the supporting planning statement:</p> <p><u>5.1.1 Comments on air quality assessment</u></p> <p>1. Section 2.1.1 and 2.3.1: Please be reminded that it should be the responsibility of the applicant and their consultants to ensure the validity of the chimney data by their own site surveys. Should the information of industrial chimneys be subsequently found to be incorrect, the assessment result as presented in the planning application would be invalidated.</p> <p>2. Table 2: Please review the latest 5 years (2017 -2021) of air quality (for both long term and short term AQOs) at Yuen Long Monitoring Station and describe the baseline air quality condition in the Yuen Long area.</p> <p>3. Section 2.2.1: Please combine the 1st and 2nd bullets point to read “No air-sensitive uses including openable window, fresh air intake and active recreational uses in open space shall be allowed within buffer zones.”</p>	<p>Please refer to 2.1.1 para.1</p> <p>Please refer to 2.1.1 para. 2 & Table 2</p> <p>Please refer to 2.2.1</p>

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Comments	Response
<p>4. Section 2.3.1: Please clarify if there is any air and odour emission sources (e.g. any emissions from nearby nullah, warehouses and workshops) within 200 m from the site boundary and address their potential impacts on the proposed development (if any) in this section.</p>	<p>Please refer to 2.3.1</p>
<p>5. Section 2.4.1: It is recommended that electric power supply shall be provided for on-site machinery as far as practicable to minimize aerial emissions. Please supplement.</p>	<p>Please refer to 2.4.1 last bullet point</p>

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Response-to-Comment – EPD

(dated 27 SEPTEMBER 2022)

(updated 05 JANUARY 2023)

Comments	Response
<p>6. Odour impact from the proposed on-site STP (as shown in Figure 3.2.1):</p> <p>(a) The consultant should address the odour impact arising from the proposed on-site STP on the nearby ASRs including the existing ones and the proposed development in the report. Please indicate the location of the exhaust of the proposed STP in a location map with the nearest ASRs and provide their separation distances. Please also specify the odour removal efficiency of the deodorizer in the report.</p> <p>(b) The applicant should observe and follow EPD's Guidelines for the Design of Small Sewage Treatment Plants for minimization of the odour impact from the proposed STP while the exhaust outlet of the proposed STP should be located away from all nearby ASRs as far as possible.</p> <p>(c) Please clarify how the sewage and sludge generated from the STP will be discharged and whether there is any odour issues related to disposal.</p>	<p>(a) &(b): A deodorization adsorption system is proposed to install for removal of odor from generated sources, which includes a FRP vessel with activated carbon media, pre-filter, post-filter and dehumidifier, please refer to attached brochure. The deodorization adsorption system will have minimum odor removal efficiency of 99.5% at 5 ppm H2S concentration. The deodorization adsorption system will have minimum service life for 12 months continuous operation for 5ppm H2S loading. Sufficient adsorption capacity of activated carbon will be installed. The odor removal air from the outlet of deodorization adsorption system will be exhausted through the air duct to high level.</p> <p>(c): A wet sludge transfer pipe will be installed to draw wet sludge from the sludge holding tank at sewage treatment plant to the collection point adjacent to the entrance of development in fully close system for tanker collection of wasting wet sludge to dispose to Government sewage treatment plant. It will be eliminated odor release during wasting wet sludge disposal service.</p>

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Comments	Response
<p>7. Air quality impact from the proposed kitchen of the proposed development: Please address if there are any oily fumes from the proposed kitchen and any mitigation measures will be in place to alleviate the potential air quality impact on the nearby ASRs in the report.</p> <p>8. Figure 2.1.1: Please provide a remark in the figure to state clearly that no air-sensitive uses including openable window, fresh air intake and active recreational uses in the open space is allowed within the buffer zone.</p>	<p>A grease filter would be applied to remove oily fume. The Catalogue is attached for your information. Routing is shown on the revised G-03 Rev.B.</p> <p>Figure attached to Appendix 2.1</p>

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Comments	Response
<p>5.1.2 Comments on Noise Impact Assessment</p> <p>Traffic noise</p> <p>1. Sections 3.1.2, 3.2.1 and 3.3.1: Please clarify if any diagnostic rooms/wards in the proposed RCHE development will rely on the operable window for ventilation. If yes, the road traffic noise criteria should be 55 dB(A). Please also clarify the nature and use of the Multi-Function Area, and whether there would be any openable window for ventilation.</p> <p>2. Section 3.2.2: Please review if ASR “B” would be more appropriate for representative NSRs (i.e. W07 to W13) facing away from San Tin Highway.</p> <p>3. Section 3.3.2: Please document TD’s agreement on the traffic forecast data in the report once available. In case TD has no comment on the methodology for traffic forecast only, the consultant should provide written confirmation from the respective competent party (e.g. traffic consultant) that TD’s endorsed methodology has been strictly adopted in preparing the traffic forecast data, and hence the validity of traffic data can be confirmed.</p> <p>4. Section 3.3.5: The consultant proposed vertical architectural fins at the northern, eastern and southern facade of the proposed RCHE to mitigate the traffic noise impact. Please note that the proposed architectural fin may bring a maximum of 3 dB(A) of additional noise reduction. Please review and propose noise mitigation measures such as INMD to mitigate traffic noise impact if necessary.</p>	<p>No diagnostic rooms/wards is provided in the development. The Multi-function Area is for dining and rest purpose. Since the area is air-conditioned by AC unit, openable window would not be provided.</p> <p>Please refer to 3.2.2 para. 2</p> <p>TIA under process by TD. Would await TD’s confirmation on methodology in due course.</p> <p>3.3.5 para. 1, bullet point 4 & subsequent analysis.</p>

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Comments	Response
<p>Noise model</p> <p>5. The search radius in the configuration should be set to 300m. Please review.</p> <p>6. The traffic data for Road I to R are missing. Please supplement.</p> <p>7. The traffic flow of Road C1 appeared to be inconsistent with Table 3-3. Please review and rectify.</p> <p>Fixed noise</p> <p>8. Section 3.4.4 and Table 3-7: Please provide a figure with the location of representative NSRs (i.e. NSR N01 to NSR N03) relative to the proposed fixed plant noise sources.</p> <p>9. Based on our desktop review, open storage was located approximately 100m to the west of the site, and a mobile forklift and crane were found in the open storage site. Please double-check the potential fixed noise sources in the vicinity that should be included in the fixed noise impact assessment. The fixed noise impact assessment from surrounding existing sources to the proposed development is found missing in the planning application.</p> <p>10. Figure 3.2.4: Please assign the NSRs mentioned in Table 3-7 in CadnaA for fixed noise impact assessment. Please be reminded that the cumulative fixed noise impact should be included in the fixed noise impact assessment.</p>	<p>5-7 : Please refer to the attached revised traffic noise model attached in email to PlanD.</p> <p>Please refer to Appendix 3.2</p> <p>Please refer to 3.4.2 para. 2 & 3.4.6.</p> <p>Updated in Table 3-8</p>

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Comments	Response
<p><u>5.1.3 Comments on water quality impact</u></p> <p>1. Please provide relevant baseline condition of nearby waterbodies and confirm whether the development would have adverse water quality impact on WQO.</p> <p>2. Section 4.5: Please provide more information on the sewage generation during operation, including the amount of sewage flow generated per day (from residents, staff, facilities, etc.), the size of the STP, mitigation measures to prevent discharge/ overflow of untreated raw sewage, etc. to demonstrate there would be no adverse water quality impact.</p> <p>3. Section 4.3: Please list and provide a figure to identify the WSRs within 500m area. Please also indicates the discharge route of the proposed STP. Please also elaborate whether WSRs within 500m would be affected by the proposed development during construction and operation phase.</p> <p>4. Section 4.5: Design of the STP shall follow Guidelines for the Design of Small Sewage Treatment Plants by EPD.</p>	<p>Please refer to 4.3 para. 5</p> <p>2 & 4: The Design Calculation is attached for your information. It provides the calculation of the daily flow generated from resident and staff, the applied discharge standard and design treatment tank to fulfill the effluent quality of discharge standard of EPD.</p> <p>Please refer to 4.3 para. 6</p> <p>Noted</p>

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Comments	Response														
<p>5. Section 4.5: The subject site falls within Deep Bay catchment area with limited assimilative capacity. We understand that there is no public sewerage system available in the vicinity of the site. Subject to confirmation that connection to public sewerage is not feasible, the development shall be equipped with on-site tertiary sewage treatment facility. A typical tertiary treatment standard is attached below for reference.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 20%;">Parameter</th> <th style="width: 80%;">Tertiary Effluent Standards (Upper Limit) *</th> </tr> </thead> <tbody> <tr> <td>BOD5</td> <td>10 mg/L</td> </tr> <tr> <td>TSS</td> <td>10 mg/L</td> </tr> <tr> <td>TN</td> <td>20 mg/L</td> </tr> <tr> <td>TP</td> <td>2 mg/L</td> </tr> <tr> <td>Ammonia-N</td> <td>5 mg/L</td> </tr> <tr> <td>E. coli</td> <td>100units/100mL</td> </tr> </tbody> </table> <p>*Depending on the water body receiving the discharge, the more stringent set of the effluent standards (those listed in the table or the WPCO TM) should be adopted as appropriate.</p>	Parameter	Tertiary Effluent Standards (Upper Limit) *	BOD5	10 mg/L	TSS	10 mg/L	TN	20 mg/L	TP	2 mg/L	Ammonia-N	5 mg/L	E. coli	100units/100mL	<p>The Design Calculation is attached for your information. It provides the calculation of the daily flow generated from resident and staff, the applied discharge standard and design treatment tank to fulfill the effluent quality of discharge standard of EPD.</p>
Parameter	Tertiary Effluent Standards (Upper Limit) *														
BOD5	10 mg/L														
TSS	10 mg/L														
TN	20 mg/L														
TP	2 mg/L														
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Comments	Response
<p><u>5.1.4 Comments on waste management</u></p> <p>1. Please confirm whether there is any potential land contamination issue due to the historical and current land uses at the subject site.</p> <p><u>5.1.5 Comments on landfill gas hazard impact</u></p> <p>1. As the application site falls within 250m consultation zone of the restored Ngau Tam Mei Landfill, please address potential landfill gas hazard impacts during construction and operation phase of the proposed development and propose mitigation measures, if necessary.</p>	<p>Refer to enclosed FSD's letter dated 6 December 2022, neither records of dangerous goods license, nor incidents of spillage / leakage of dangerous goods were found for the captioned lots, land contamination from spillage / leakage of dangerous goods is not anticipated.</p> <p>A Landfill Gas Hazard Assessment Report for the existing house was submitted on 04/2016 and be approved by EPD. A revised assessment could be carried out at later stage if necessary.</p>

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(updated 20 FEBRUARY 2023)**

Comments	Response
<p>5.1.1.2 <u>Comments on Noise Impact Assessment</u></p> <p>Traffic noise</p> <p>1. Sections 3.1.2, 3.2.1 and 3.3.1: Please clarify if any diagnostic rooms/wards in the proposed RCHE development will rely on the operable window for ventilation. If yes, the road traffic noise criteria should be 55 dB(A). Please also clarify the nature and use of the Multi-Function Area, and whether there would be any openable window for ventilation.</p> <p>2. Section 3.2.2: Please review if ASR “B” would be more appropriate for representative NSRs (i.e. W07 to W13) facing away from San Tin Highway.</p> <p>3. Section 3.3.2: Please document TD’s agreement on the traffic forecast data in the report once available. In case TD has no comment on the methodology for traffic forecast only, the consultant should provide written confirmation from the respective competent party (e.g. traffic consultant) that TD’s endorsed methodology has been strictly adopted in preparing the traffic forecast data, and hence the validity of traffic data can be confirmed.</p> <p>4. Section 3.3.5: The consultant proposed vertical architectural fins at the northern, eastern and southern facade of the proposed RCHE to mitigate the traffic noise impact. Please note that the proposed architectural fin may bring a maximum of 3 dB(A) of additional noise reduction. Please review and propose noise mitigation measures such as INMD to mitigate traffic noise impact if necessary.</p>	<p>No diagnostic rooms/wards is provided in the development. The Multi-function Area is for dimming and rest purpose. Since the area is air-conditioned by AC unit, openable window would not be provided.</p> <p>Please refer to 3.2.2 para. 2</p> <p>TD has no comment on the methodology. “Technical Note of Methodology on Year 2042 Traffic Forecasts for Traffic Noise Impact Assessment (TNIA)” proposed by the Traffic Consultant is attached herewith. A Revised Environmental Assessment Report is attached herewith.</p> <p>3.3.5 para. 1, bullet point 4 & subsequent analysis.</p>

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Comments	Response
<p><u>5.1.4 Comments on waste management</u></p> <p>1. Please confirm whether there is any potential land contamination issue due to the historical and current land uses at the subject site.</p>	<p>Refer to enclosed FSD's letter dated 6 December 2022, neither records of dangerous goods license, nor incidents of spillage / leakage of dangerous goods were found for the captioned lots, land contamination from spillage / leakage of dangerous goods is not anticipated.</p>
<p><u>5.1.5 Comments on landfill gas hazard impact</u></p> <p>1. As the application site falls within 250m consultation zone of the restored Ngau Tam Mei Landfill, please address potential landfill gas hazard impacts during construction and operation phase of the proposed development and propose mitigation measures, if necessary.</p>	<p>A Landfill Gas Hazard Assessment Report is submitted as attached.</p>

**Proposed Rezoning From “R(C)” To “G/IC” for
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S12A Application for Planning Application No. Y/YL-NTM/9
Response-to-Comment – EPD
(updated 13 April 2023)**

Comments	Response
<p>1. Comments of the Director of Environmental Protection (DEP) as follows:</p> <p><u>EPD’s Comments on the revised EA (FI-2)</u></p> <p><u>Comments on air quality assessment</u></p> <p>1. Sections 2.1.1 and 2.3.1: Please revise the text to confirm that there is no chimney <u>within 200m</u> from the site boundary of the proposed development instead of no chimney near the site.</p> <p>2. Table 2</p> <p>(a) Please revise “2021-2022” as “2017-2021” in the title.</p> <p>(b) We noted that the values of 10th highest 24-hr PM2.5 instead of 34th highest 24-hr PM2.5 were presented in the table. Please note that the values of 36th highest 24-hr PM2.5 should be presented in the table instead of 10th/34th highest 24-hr PM2.5 when comparison with the new AQOs is made. Please revise the table accordingly.</p> <p>(c) The remark for 1-hr NO2 should be 19th highest instead of 18th highest. Please correct the typo accordingly. Please delete the last row (Lead) of the Table and “in Red” in Note [1].</p> <p>3. Section 2.2.1</p> <p>(a) Please note that 2021 Traffic Census is available now and please update the text accordingly.</p>	<p>It is confirmed that no chimneys were observed within 200m from the Site boundary.</p> <p>Section 2.1.1 and 2.3.1 have been revised accordingly.</p> <p>Revised accordingly.</p> <p>(a) Updated.</p>

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Comments	Response
<p>(b) Please delete “active” in the 1st bullet point.</p> <p>4. Section 2.4</p> <p>(a) Please identify the nearest ASRs in the vicinity of the proposed development and provide their separation distance from the subject boundary.</p> <p>(b) Please also provide the size of site formation/ excavation area, amount of excavated materials to be handled and no. of dump trucks at a time to justify that the dust impact will not be significant with mitigation measures in place.</p> <p>(c) Please clarify whether there are any concurrent projects in the surrounding area and their cumulative air quality impact shall be assessed.</p>	<p>(b) The 1st bullet point has been revised.</p> <p>(a) The nearest ASRs would be located.</p> <p>(b) The Project Site Area is only about 736m² which is a very small footprint. Considering the size of site formation and excavation is in a small scale, the amount of excavated material and number of dump truck would be limited. No significant dust impact from the construction works is anticipated.</p> <p>With implementation of the good site practice, no adverse air quality impact during the construction is anticipated. Nevertheless, it is also suggested that the contractor should set up a communication channel (e.g. regular meeting) with the management office of Casa Paradizo to have a better dust control management, if necessary.</p> <p>(c) No concurrent project in the surrounding area. In addition, as no adverse air quality impact during the construction are anticipated, no cumulative air quality impact would be anticipated due to the project</p>
<p>5. Other than the constructional dust impact, a new Section should be added to address the operational phase air quality impact arising from the proposed development as follows in the report:</p> <p><u>Operational air quality impacts</u></p> <p>(a) Odour impact from the proposed on-site STP: Please incorporate R-t-C #6(a), (b) and (c) in this section. As mentioned in R-t-C #6(a),</p>	<p>Noted. R-t-C #6(a), (b) and (c) have been incorporated.</p>

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Comments	Response
<p>(i) please indicate the location of the exhaust of the proposed STP in a location map with the nearest ASRs (including the existing ones and the proposed development) and provide their separation distances for evaluation of the odour impact. Please be reminded that the exhaust outlet of the proposed on-site STP should be designed properly and located away from all nearby ASRs (including the air sensitive use of the proposed development such as the residential units on top of the STP) as far as possible to avoid causing any odour impact.</p> <p>(ii) Please also list out the sewage treatment capacity of the proposed on-site STP and state clearly if the design of the proposed on-site STP would observe and follow the Environmental Consideration specified in EPD Guidelines for the Design of Small Sewage Treatment Plants for minimization of the odour impact from the proposed STP during operation phase.</p> <p>(b) Cooking Fume/ odour from the proposed kitchen: Please observe and follow the guidelines recommended by EPD’s Control of Oily Fume and Cooking Odour from Restaurants and Food Business to avoid causing air and odour nuisance. In particular, the exhaust vent of the kitchen should be positioned away from nearby ASRs as far as possible. Please supplement. Please also incorporate R-t-C #7 in this section.</p> <p>6. Section 6: Please clarify if there is any adverse air quality/ odour impact arising from</p>	<p>The STP will serve less than 2000 population, hence the Environmental Consideration specified in EPD Guidelines for the Design of Small Sewage Treatment Plants have been incorporated.</p> <p>The location of the exhaust of the proposed STP has been indicated in Figure 2.1.2. The location of the exhaust has been designed as far as possible all nearby ASRs. Considering that at source mitigation measures would be applied, no adverse odour impact from the proposed on-site STP is anticipated</p> <p>The recommendations on EPD’s Control of Oily Fume and Cooking Odour from Restaurants and Food Business have been incorporated. R-t-C#7 have also been incorporated.</p> <p>The tentative location of the STP/Kitchen exhaust has been designed as far as possible all</p>

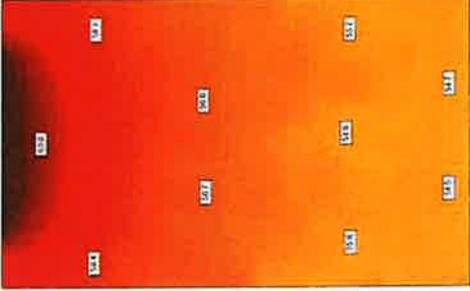
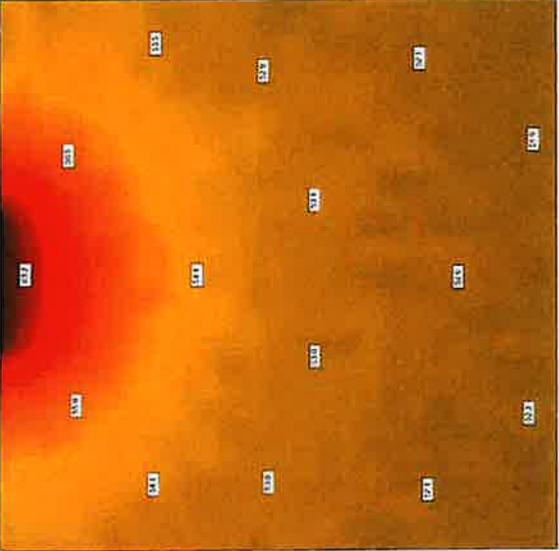
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Comments	Response
<p>the proposed on-site STP and kitchen under “Air Quality” section.</p> <p>7. Figure 2.1.1: Please delete “active” in the remark.</p> <p>8. R-t-C 6(a): The brochure of the deodorization adsorption system could not be found in the report. Please supplement.</p> <p>9. R-t-C 7: The catalogue of the grease filter could not be found in the report. Please supplement.</p> <p>10. Please highlight all the changes/ amendments in the next submission for review.</p> <p><u>Comments on Noise Impact Assessment</u></p> <p>1. Please provide more information of the proposed RCHE, such as the room size of dormitories, the spreadsheet of traffic noise and fixed noise impact assessment, for checking.</p> <p>2. Section 3.3.5</p> <p>(i) Architectural fins with acoustic windows were proposed to mitigate the traffic noise impact. Please note that the noise reduction performance of combined noise</p>	<p>nearby ASRs. Considering that at source mitigation measures (e.g. deodorization adsorption system/grease filter) would be applied, no adverse odour impact from the proposed on-site STP/Kitchen is anticipated.</p> <p>Revised.</p> <p>Added at Appendix 2.2.</p> <p>Added at Appendix 2.3.</p> <p>Noted.</p> <p>Layout plan and room size of the dormitories are attached.</p> <p>Calculation spreadsheet in excel file is attached. Due to extensive number of segments, receiver points and huge file size, only the sample calculation spreadsheet for traffic noise is attached for reference. The calculation spreadsheet for all receiver points and assessment scenarios can be directly viewed from the submitted noise model file, by selecting Calculation → Protocol → Write Protocol checkbox → export the calculation files.</p> <p>Due considerations have been given to the building layout planning and window façade orientations. No window openings are directly facing the San Tin Highway. The windows</p>

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Comments	Response
<p>mitigation measures for traffic noise impact will need to be further substantiated; mock-up test may be required to demonstrate that adequate noise reduction can be achieved.</p> <p>(ii) We noted the large room size of dormitories at 2/F and 2 to 3 acoustic windows were proposed to mitigate traffic noise, the noise reduction performance of proposed acoustic windows will need to be further substantiated by making reference to other precedent cases or otherwise, mock-up test may be required to demonstrate that adequate noise reduction can be achieved.</p>	<p>are tilted to at least 90 deg to the dominant road traffic line source. Under the proposed arrangement, the architectural fin on the sides would screen out the nearest road segments thus provide very significant screening effect to the dominant line source.</p> <p>The screening effect of architectural fins has been calculated based on the CRTN protocol taking into account all major vertical and lateral diffraction paths. The combined noise reduction performance of architectural fin with acoustic window was referred to the Practice Note on Application of INMD in Planning Private Residential Developments against Road Traffic Noise Impact.</p> <p>We have no precedent case on the performance of acoustic window in large dormitory of similar size. However based on acoustic principle, the large room size shall not have adverse acoustic impact, since the incident sound energy from window glazing would be distributed over a larger room volume.</p> <p>A sensitivity analysis has been conducted based on two different room sizes with other settings remain the same (incident sound energy, window size, extent of interior furnishing). In general, the diffuse field noise level in the larger room would be smaller as the noise radiates further into interior space.</p> <p>The CadnaA software, combined with CadnaB and CadnaR, is capable of simulating the road traffic noise impact (using CRTN) into interior space (in combination with ray tracing).</p>

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Comments	Response
	<p>Physical mock up test for such large size dormitories would be difficult in practice, where appropriate, we can construct the full scale noise model (from exterior to interior) to evaluate the interior noise reduction and compare the effect on room size based on the actual room settings.</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p>Interior noise distribution In small room 2.5 x 4m</p> </div> <div style="text-align: center;">  <p>Interior noise distribution in large room 6 x 6m</p> </div> </div>

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Comments	Response
<p>(iii) To minimize the potential reverberation noise created in the re-entrant, please consider adding SAM/ MPA and/ or other treatment on the external facade as far as practicable.</p> <p>3. Section 3.4.2: It was identified that there were potential fixed noise sources (i.e. ID S1 and S2) to the west of the site. Please add the locations of these fixed noise sources in the drawing. Please also justify the locations of these fixed noise sources adopted in the noise model.</p>	<p>Anyhow, in para. 3.3.5 of the EA, we have stated that in detail design stage, mock-up test will be conducted to demonstrate that adequate noise reduction will be achieved.</p> <p>Sound absorption material is proposed on the back side of architectural fin. Additional SAM are proposed at the entrance to the void area, as indicated in Figure 3.1.6 and 3.1.7.</p> <p>The proposed SAM would be in the form of 50mm thick rockwool covered in waterproof acoustic transparent member and perforated panel.</p> <p>To ascertain the noise compliance, an alternative noise model has been conducted with multiple reflection effect switched on (instead of using max 1.5dB reflection from opposite buildings, +2.5dB from facade strictly according to CRTN). The proposed SAM would be sufficient to suppress the multiple reflection effect.</p> <p>Anyhow, sound absorption material is proposed to be added to the architectural feature and the void area as per EA para. 3.3.5.</p> <p>Section 3.4.2 and Figure 3.2.4 Updated accordingly.</p>

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Comments	Response
<p><u>Comments on water quality impact</u></p> <ol style="list-style-type: none"> Para.5 under section 4.3: Marine Water Quality in Hong Kong in 2021 has been issued, please update the data and text. Figure B-14: Please prepare a table to list out all the parameters on the water quality monitoring station rather citing the appendix from the Marine Water Quality in Hong Kong in 2020, and please note the report in 2021 has been issued. Para.6 under section 4.3: Please provide a table listing out representative WSRs, if any, within 500m of the project boundary. Para.5 under section 4.4: Please confirm if demolition works of existing House will be involved. Section 4.5: Previous comment has not been addressed, please provide the amount of sewage flow generated, size of STP, etc. Para.4 under section 4.5: Please confirm the sewage treatment level, and incorporate the tertiary treatment standard requirement (provided in our previous comments and below table refers) in the main text and hence to revise “... an onsite <u>tertiary</u> sewage treatment plant (STP)...” in the relevant parts. development shall be equipped with on-site tertiary sewage treatment facility. A typical tertiary treatment standard is attached below for reference. 	<p>Noted and revised.</p> <p>Noted and revised.</p> <p>The WSRs shown in Figure has been listed out for ease reference.</p> <p>Will be involved. The relevant text has been added.</p> <p>The major parameter has been listed and details were shown in Appendix 4.1.</p> <p>Noted. The word of “tertiary” has been added in the sentence. The following STP represents the “tertiary STP”. In addition, the standard of a tertiary STP has been included.</p>

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Comments	Response														
<table border="1"> <thead> <tr> <th>Parameter</th> <th>Tertiary Effluent Standards (Upper Limit) *</th> </tr> </thead> <tbody> <tr> <td>BOD5</td> <td>10 mg/L</td> </tr> <tr> <td>TSS</td> <td>10 mg/L</td> </tr> <tr> <td>TN</td> <td>20 mg/L</td> </tr> <tr> <td>TP</td> <td>2 mg/L</td> </tr> <tr> <td>Ammonia-N</td> <td>5 mg/L</td> </tr> <tr> <td>E. coli</td> <td>100units/100mL</td> </tr> </tbody> </table> <p>* Depending on the water body receiving the discharge, the more stringent set of the effluent standards (those listed in the table or the WPCO TM) should be adopted as appropriate.</p> <p><u>Comments on waste management</u> R-to-C to s. 5.1.4: FSD’s reply was not attached. Besides, no information was provided on the “historical and current land uses” at the subject site in order to confirm that there is no potential land contamination issue.</p>	Parameter	Tertiary Effluent Standards (Upper Limit) *	BOD5	10 mg/L	TSS	10 mg/L	TN	20 mg/L	TP	2 mg/L	Ammonia-N	5 mg/L	E. coli	100units/100mL	<p>FSD’s reply dated 6 December 2022, neither records of dangerous license, nor incidents of spillage/ leakage of dangerous goods were found. Also, EPD has no record of any reported chemical spillage/ leakage incident at the captioned locations as shown in Appendix 5.1. There was no record of chemical waste producers’ registration found as per record inspection at EPD Territory Control Office dated 5 July 2022. Considering the historical land use of the site, it is confirmed that land contamination assessment was not required.</p>
Parameter	Tertiary Effluent Standards (Upper Limit) *														
BOD5	10 mg/L														
TSS	10 mg/L														
TN	20 mg/L														
TP	2 mg/L														
Ammonia-N	5 mg/L														
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Comments	Response
<p><u>Comments on landfill gas hazard assessment</u></p> <p>Landfill gas hazard assessment has to be carried out for the proposed development as the site concerned is within the consultation zone of the restored Ngau Tam Mei Landfill. Our previous comment as stated in 5.1.5 of the R-to-C is still valid.</p>	<p>Landfill gas hazard assessment was submitted in previous FI dated Feb 2023. The same has been supplemented again in this FI.</p>

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Comments	Response
<p>1. Comments of the Director of Environmental Protection (DEP) as follows: <u>EPD’s Comments on the revised EA (FI-4)</u> <u>Comments on air quality assessment</u></p> <p>1. Sections 2.1.1 and 2.3.1: Please conduct an updated site survey since the site survey was conducted about a year ago.</p> <p>2. Section 2.1.1 2nd bullet point and Table 2: Please note that the air quality monitoring data in Year 2022 are available now and please update the text and table.</p> <p>3. Section 2.1.1: Please revise the 2nd bullet point as “No air-sensitive uses including openable window, fresh air intake and recreational use in the open space is allowed within the buffer zone”. Similar amendment shall be applied to the legend in Figure 2.1.1.</p> <p>4. Section 2.4.1: Please delete “short-term” in lines 4-5.</p> <p>5. Section 2.4.1, last bullet point: Please revise to “No concurrent project in the surrounding area and hence adverse cumulative air quality impact during the construction stage is not anticipated.”</p> <p>6. Section 2.5.1</p> <p>(a) Please delete the 2nd bullet point since it is not related to air quality impact during operation stage.</p> <p>(b) 3rd bullet point, please provide the sewage treatment capacity of the on-site STP or other justifications (e.g. no. of bed spaces provided in the proposed RCHE) to further</p>	<p>Recent site visit on 24th July 2023 has been conducted. The observation is the same as 22nd June 2022. Date of recent site visit has been added to Section 2.1.1 and 2.3.1.</p> <p>Noted Section 2.1.1 2nd bullet point has been updated and the monitoring data of Year 2022 has been added in Table 2.</p> <p>Figure 2.1.1. and Bullet point of Section 2.2.1 has been revised.</p> <p>Noted and deleted accordingly.</p> <p>Noted and amend accordingly.</p> <p>(a) Deleted accordingly.</p> <p>(b) The Proposed Development only have a total 142 bed spaces (far below than 2000 population). The justification is stated in 2nd bullet point of Section 2.5.1. In addition, according to the STP</p>

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Comments	Response
<p>justify the scale of the on-site STP is small.</p> <p>(c) 4th bullet point, please revise “or” to “and”.</p> <p>(d) 5th bullet point, please delete “, or else odour treatment or masking facilities may be required”.</p> <p>(e) 6th bullet point, the specification of the deodorization unit including odour removal efficiency and the life time of the deodorization system could not be found in Appendix 2.2. Please supplement. If such information is not available, the consultant may consider to remove Appendix 2.2 and revise this bullet point by specifying the targeted odour removal efficiency (i.e. 99.5%) and provide source of reference (e.g. make reference to other STP with similar scale and odour removal efficiency from approved EIA reports/ AQIA, etc.) to support the targeted odour removal efficiency is achievable. Please also address if replacement of the deodorizer will be taken place annually since it is claimed that its service life is only 12 months.</p> <p>(f) Instead of providing the serving population size, please provide the sewage handling capacity of the on-site STP.</p> <p><u>Comments on Noise Impact Assessment</u></p> <p>1. The applicant will be required for submission of a detailed Noise Impact Assessment (NIA) report for the latest master layout plans (to demonstrate 100% compliance with</p>	<p>design calculation in Appendix 4.3, the treatment capacity of the on-site STP is 77.5 cu.m/day and serving 250 head/day.</p> <p>(c) Revised</p> <p>(d) Revised</p> <p>(e) The spec of deodorization unit is attached in Appendix 2.2. It is supplemented that replacement Of the deodorizing filter will be taken place annually.</p> <p>(f) The handling capacity is 77.5 cu.m/day as per calculation in Appendix 4.3.</p> <p>Noted.</p>

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<p>the noise criteria under HKPSG) and the implementation of mitigation measure identified therein, to the satisfaction of the DEP/ LandsD under land lease mechanism.</p> <p>2. Section 3.3.2: Please document TD’s agreement on the traffic forecast data in the report once available. In case TD has no comment on the methodology for traffic forecast only, the consultant should provide written confirmation from the respective competent party (e.g. traffic consultant) that TD’s endorsed methodology has been strictly adopted in preparing the traffic forecast data, and hence the validity of traffic data can be confirmed.</p> <p><u>Comments on water quality impact</u></p> <p>1. Sections 4.2: The construction works are in close proximity to the watercourse, relevant mitigation measure from the ETWB TC (Works) No. 5/2005 shall be incorporated.</p> <p>2. Section 4.3</p> <p>(a) Please provide a high-resolution figure with indicating the WSRs in Appendix.</p> <p>(b) Various fishponds and watercourses are sited within the 500m assessment area, please specify rather identifying them by general nature.</p> <p>3. Sections 4.4 and 4.5:</p> <p>(a) For better presentation, please indicate the potential source of water quality impact and respective mitigation measures during construction and operation phases in separate sections.</p>	<p>Noted. Please refer to Appendix 7.1</p> <p>Noted and supplemented.</p> <p>(a) Noted and provided in Appendix 4.2.</p> <p>(b) ID from the fishponds have been provided. Also, with reference to the Geoinfo map or basemap, drainage channel and nullah have been also identified. Others are considered as water course. Given that our project scale is small and the major WSRs have been identified, we considered the levels of details are sufficient for current planning stage.</p> <p>(a) The headline of potential source and mitigation measures have been added for better presentation. Section 4.4 and 4.5 have been revised accordingly.</p>

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<p>(b) Please elaborate on the mitigation measures to be implemented rather citing the ProPRECC notes only or selectively quote certain measures.</p> <p>4. RtC comment 5</p> <p>(a) Appendix 4.1 is missing.</p> <p>(b) Please indicate the estimated population and staff, and the unit load factor.</p> <p>5. Sections 4.5 (last bullet point on page 26): Please elaborate the mitigation measures.</p> <p>6. On-site Tertiary STP</p> <p>(a) Please indicate the discharge point of the treated effluent.</p> <p>(b) The treated effluent discharge from construction and operational stages should be sited away from natural water course.</p> <p><u>Comments on landfill gas hazard assessment</u></p> <p>1. Table 4.3 of Section 4.2.1.2 of the LGHA report stated that landfill gas monitoring data in Ngau Tam Mei Landfill is from “October 2013 to September 2015”, and the source analysis was conducted based on the subject data as stated in Section 4.2.1.3. It is contrary to “.....Recent gas monitoring data from July 2020 to June 2022 provided by</p>	<p>(b) Noted and elaborated in Section 4.4.</p> <p>(a) Appendix 4.1 has been attached.</p> <p>(b) The estimated population staff and the unit load factor has been shown in Appendix 4.1 and 4.3.</p> <p>The regular cleaning and sweeping open paved road reduce the suspended solid or other unwanted pollutants or waste fall into the stormwater drain.</p> <p>The relevant bullet point of Section 4.5 has been revised.</p> <p>(a) The proposed discharge point is shown in Appendix 4.3.</p> <p>(b) Noted. The proposed discharge point is the drainage channel.</p> <p>In addition, statement of “The treated effluent discharge from construction and operational stages should be sited away from natural water course” has been supplemented in Section 4.5.</p> <p>Relevant content has been revised to from “July 2020 to June 2022”.</p>

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Comments	Response
<p>EPD are attached in Appendix B” as stated in Section 3.4.1.1. Please review and correct inconsistency.</p> <p>2. Landfill gas hazard assessment report was found in the F1-4 but not include in the revised EA report. Please consider if it is more appropriate to include the LFGH as a section in the EA report.</p>	<p>Noted. Landfill gas hazard assessment is included following Section 5 of the EA report.</p>

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(Updated 13 October 2023)**

Comments	Response
<p>1. Comments of the Director of Environmental Protection (DEP) as follows:</p> <p><u>EPD’s Comments on the revised EA (FI-5)</u></p> <p><u>Comments on air quality assessment</u></p> <p>1. Sections 2.2.1: Please note that there is no recommended buffer distance for rural road in HKPSG and it shall be considered as either DD or LD. As a conservative approach, a 10m buffer distance shall be allowed for rural road unless justification distance from San Tam Road, it should not be a concern but please revise the text accordingly.</p> <p>2. Section 2.4.1, 1st paragraph: Please revise the last sentence to “The constructional works of the proposed project will impose potential air quality impacts on the nearby ASRs during the constructional stage (Figure 2.1.2 refers).”</p> <p>3. Section 2.5.1, Odour Impact from the proposed on-site STP.</p> <p><u>Under 5th paragraph:</u></p> <p>(a) According to Appendix 2.2(page 157), it is noted that the odour removal efficiency is 90% instead of 99.5% for the deodorizer to be used as the one for Kwu Tung Sewage Pump Room. Please rectify the discrepancy. The consultant may review if the proposed STP will impose any adverse odour impact on the nearby ASRs by making reference to the assessment results of other STPs/ STWs with similar control</p>	<p>Noted.</p> <p>Section 2.2.1 revised as “... a separation distance of more than 20m and more than 10m between the sensitive uses of this Project and from the road kerb of the San Tin Highway and San Tam Road, respectively ...”.</p> <p>Noted and revised.</p> <p>Noted.</p> <p>In order to achieve the removal efficiency to 99.5%, another deodorizer system is proposed. Another Project reference in “Ma Wan Lot No. 739, Ma Wan Village” with a removal efficiency up to 99.5% is replaced.</p> <p>The new catalogue has been attached in Appendix 2.2.</p>

**Proposed Rezoning From “R(C)” To “G/IC” for
a Proposed “Social Welfare Facilities” (Residential Care Homes for The Elderly) (RCHE)
Lot 4823 in D.D.104, 81 San Tam Road, San Tin, N.T.
S12A Application for Planning Application No. Y/YL-NTM/9
Response-to-Comment – EPD
(Updated 13 October 2023)**

Comments	Response
<p>measures (i.e. using activated carbon filters) and H2S removal efficiency. Please revise this paragraph as appropriate.</p> <p>(b) It is suggested to revise the last sentence to read as “No odour will be released during the wet sludge disposal process.”</p> <p><u>Under 6th paragraph:</u></p> <p>(c) Please revise lines 1-2 to read as “The tentative location of the STP exhaust has been designed as far away as possible from all nearby ASRs. Considering that the scale of the proposed STP is small and at source mitigation measures...”.</p> <p>4. Figure 2.1.1: The figure is illegible and please add the roads and other layout details to the figure.</p> <p>5. Figure 2.1.2: Please clarify if the exhaust of STP and kitchen will be at the same location.</p> <p><u>Comments on water quality impact</u></p> <p>1. Section 4.3</p> <p>(a) Marine Water Quality in Hong Kong in 2022 has been issued, please update.</p> <p>(b) The project boundary map should read as “Appendix 4-1 4.2”</p> <p>(c) The WSR ID should be indicated in the map / legend box.</p>	<p>Noted and revised.</p> <p>Noted and revised.</p> <p>Noted and revised.</p> <p>It is clarified that the exhaust of STP and kitchen will be at same location with different connected ducts.</p> <p>Noted and updated accordingly.</p> <p>Noted and revised in page 23.</p> <p>Noted and added in legend box accordingly in Appendix 4.2.</p>

**Proposed Rezoning From “R(C)” To “G/IC” for
a Proposed “Social Welfare Facilities” (Residential Care Homes for The Elderly) (RCHE)
Lot 4823 in D.D.104, 81 San Tam Road, San Tin, N.T.
S12A Application for Planning Application No. Y/YL-NTM/9
Response-to-Comment – EPD
(Updated 13 October 2023)**

Comments	Response
<p><u>Comments on landfill gas hazard assessment</u></p> <p>1. Table 4.3 of Section 4.2.1.2: The data presented in the Table 4.3 and used for Source Analysis in Section 4.2.1.3 are exactly the same as the report submitted in 2016. Please update the data and review the Source Analysis, the overall risk level and the recommendations and protection measures accordingly.</p>	<p>Noted and revised on Table 4.3 of Section 4.2.1.2, Section 4.2.1.3 and Table 4.4 of Section 4.5.1.1.</p>

**Proposed Rezoning From “R(C)” To “G/IC” for
a Proposed “Social Welfare Facilities” (Residential Care Homes for The Elderly) (RCHE)
Lot 4823 in D.D.104, 81 San Tam Road, San Tin, N.T.
S12A Application for Planning Application No. Y/YL-NTM/9
Response-to-Comment – EPD
(Updated 06 November 2023)**

Comments	Response
<p>1. Comments of the Director of Environmental Protection (DEP) as follows:</p> <p><u>EPD’s Comments on the revised EA (FI-5)</u></p> <p><u>Comments on air quality assessment</u></p> <p>1. Sections 2.2.1:</p> <p>(a) Please note that Traffic Census in 2022 is now available and please use the latest TC for reference.</p> <p>(b) Please state clearly in this section that a 10m buffer distance is allowed between the air-sensitive uses of the proposed development and San Tam Road by considering Rural Road as District Distributor.</p> <p>2. Section 2.4.1 and Figure 2.1.2:</p> <p>(a) The separation distances given in Section 2.4.1 and Figure 2.1.2 for Casa Paradizo and Maple Garden are not the closest distances. It should be measured from the site boundary of the proposed development and these ASRs. Please show their shortest separation distances in Figure 2.1.2 and revise the text.</p> <p>(b) Based on Figure 2.1.1, Block C2 and C3 of Casa Paradizo are found to be in close proximity of the site boundary (<10m), additional mitigation measures such as erection of higher hoarding (not less than 3m) close to these ASRs shall be considered. Please supplement.</p>	<p>Noted and revised accordingly.</p> <p>Noted. There is no specific requirement on rural road under HKPSG. Considering the San Tam Road is similar to a local distributor, 10m buffer distance thus be recommended as reference to HKPSG.</p> <p>Noted. The separation distances from the Site to Casa Paradizo Block C1-C7 and Maple Gardens Block G2&3 have been shown in Figure 2.1.2. Section 2.4.1 also revised accordingly</p> <p>Block C1 to C7 of Casa Paradizo are within 10m of the Site Boundary. Site hoarding at least 3m at the side of Casa Paradizo is proposed as the mitigation measures and shown in Figure 2.1.2</p>

**Proposed Rezoning From “R(C)” To “G/IC” for
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Lot 4823 in D.D.104, 81 San Tam Road, San Tin, N.T.
S12A Application for Planning Application No. Y/YL-NTM/9
Response-to-Comment – EPD
(Updated 06 November 2023)**

Comments	Response
<p>3. Section 2.5.1</p> <p>(a) The STP design calculation is provided in Appendix 4.3 instead of Appendix 2.2. Please check and revise. As mentioned in our previous comment, please provide the closest separation distance of the ASRs from the exhaust of the deodorization system for the on-site STP and make use of the assessment results of other STPs with similar capacity and odour removal efficiency to justify the nearby ASRs will not be subject to adverse odour impact. Please supplement.</p> <p>(b) Page 7, 3rd last paragraph – Please rectify the typo “washing sludge” in 2nd last line. Suggest to remove 3rd and 4th sentences since it is an engineering design, which depends on the performance of the deodorizer.</p> <p>4. Appendix 2.2 (P. 117)</p> <p>(a) It is noted that the deodorizer has a H₂S removal efficiency of 99.5% for 5ppm H₂S. Please clarify if the concentration of H₂S in the proposed on-site STP will not be higher than 5ppm so that the removal efficiency is achievable.</p>	<p>With reference to the EIA Report of Expansion of Sha Tau Kok Sewage Treatment Works (STKSTW), the treatment capacity is about 10,000m³/day at ADWF with 99.5% removal efficiency, the nearest ASR (20m from the boundary of STKSTW) is 0.13 OU/m³. Given that the capacity of the Project is far below than the STKSTW, it is anticipated that the odour impact generated from the Project would not greater than the SKTSTW with same odour removal efficiency of 99.5%. With reference to contour map of averaged odour concentration (Figure 3.2 – 3.5) of the said EIA Report, no average odour concentration is found >5 OU/m³. Therefore, it is anticipated that no adverse impact from the Project is anticipated.</p> <p>Noted and revised.</p> <p>Hydrogen sulphide by volume. With reference to the EPD website, the 1 odour unit is 0.00047 ppm by volume. 5 OU is equivalent to 0.00235 ppm.</p> <p>As such, 5ppm is equal to 5/0.00047 = 10638 OU. It is reasonable to assume that the small size on-site STP would not generate the odour unit higher than 5ppm.</p>

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S12A Application for Planning Application No. Y/YL-NTM/9
Response-to-Comment – EPD
(Updated 06 November 2023)**

Comments	Response
<p>(b) Please note that it is not within EPD’s purview to comment on the calculations of the design capacity of the deodorizer. The applicant/ design engineer shall ensure that the performance of the deodorizer can achieve the target odour removal efficiency of 99.5% at all time.</p>	<p>Noted. Those are added in Appendix 2.2 (page 117 and 118).</p>

**Proposed Rezoning From “R(C)” To “G/IC” for
a Proposed “Social Welfare Facilities” (Residential Care Homes for The Elderly) (RCHE)
Lot 4823 in D.D.104, 81 San Tam Road, San Tin, N.T.
S12A Application for Planning Application No. Y/YL-NTM/9
Response-to-Comment – EPD
(Updated 15 November 2023)**

Comments	Response
<p>1. Comments of the Director of Environmental Protection (DEP) as follows: <u>EPD’s Comments on the revised EA (FI-5)</u> <u>Comments on air quality assessment</u></p> <p>1. Sections 2.2.1: Please revise the 5th sentence as “As a conservative approach, San Tam Road is assumed as District Distributor and hence a 10m buffer distance shall be provided in accordance with the HKPSG’s requirement”.</p> <p>2. Section 2.5.1: Please check if “Figure 3.2 – 3.5” should be revised as “Figures 3.4 - 3.5” since the reference contour plots for the STKSTW were presented in Figures 3.4 and 3.5 of the approved EIA study (AEIAR-207/2017 - Expansion of STKSTW).</p> <p>3. Section 2.5.1 and R-t-C 4: Since no detailed calculations could be provided to justify that the H2S at the inlet of deodorizer is less 5ppm (or 10638OU/m3), please revise "at 5ppm H2S concentrations" to "for H2S" in line 4 of 5th paragraph to ensure the performance of the deodorizer can achieve the target H2S removal efficiency of 99.5% at all the time for any H2S concentrations.</p>	<p>Noted and revised as per P.5.</p> <p>Noted and revised as per P.8.</p> <p>Noted and revised as per P.7</p>

**S12A AMENDMENT OF PLAN APPLICATION
APPROVED NGAU TAM MEI
OUTLINE ZONING PLAN NO. S/YL-NTM/12**

RESPONSE-TO-COMMENT - EMSD

**PROPOSED REZONING FROM "R(C)" TO "G/IC"
FOR A PROPOSED "SOCIAL WELFARE FACILITIES"
(RESIDENTIAL CARE HOMES FOR THE ELDERLY)
(RCHE)**

**AT LOT 4823 IN D.D.104, 81 SAN TAM ROAD,
SAN TIN, N.T.**

**Proposed Rezoning From “R(C)” To “G/C” for
a Proposed “Social Welfare Facilities” (Residential Care Homes for The Elderly) (RCHE)
Lot 4823 in D.D.104, 81 San Tam Road, San Tin, N.T.
S12A Application for Planning Application No. Y/YL-NTM/9
Response-to-Comment – EMSD
(dated to 27 SEPTEMBER 2022)**

Comments	Response
<p>6. Comments of the Director of Electrical and Mechanical Services (DEMS) as follow:</p> <p>Town Gas Safety</p> <p>6.1 Please note that there is a high pressure town gas pipeline (HP pipeline) running along San Tam Road in close vicinity of the subject site.</p> <p>6.2 A Quantitative Risk Assessment (QRA) conducted by the project proponent is required to assess the potential risks associated with the HP pipeline, having considered the proposed development and implement mitigation measures if necessary for compliance with the risk guidelines of the Hong Kong Planning Standards and Guidelines.</p> <p>6.3 The project proponent is required to observe the requirements of the Electrical and Mechanical Services Department’s “Guidance Note on Quantitative Risk Assessment Study for High Pressure Town Gas Installations in Hong Kong” for carrying out the QRA. The guidance note can be downloaded via the following web-link:- https://www.emsd.gov.hk/en/gas_safety/publications/guidance_notes/index.html</p> <p>6.4 The project proponent should liaise with The Hong Kong and China Gas Company Limited in respect of the exact locations of existing and planned gas pipes/gas installations in the vicinity to the site and any required minimum set back distance away from them during the planning design and construction stages of the proposed development.</p>	<p>Noted</p> <p>QRA would be carried out if necessary.</p> <p>Noted</p> <p>Noted</p>

**Proposed Rezoning From “R(C)” To “G/IC” for
a Proposed “Social Welfare Facilities” (Residential Care Homes for The Elderly) (RCHE)
Lot 4823 in D.D.104, 81 San Tam Road, San Tin, N.T.
S12A Application for Planning Application No. Y/YL-NTM/9
Response-to-Comment – EMSD
(dated to 27 SEPTEMBER 2022)
(updated to 20 FEBRUARY 2023)**

Comments	Response
<p>6. Comments of the Director of Electrical and Mechanical Services (DEMS) as follow:</p> <p>Town Gas Safety</p> <p>6.1 Please note that there is a high pressure town gas pipeline (HP pipeline) running along San Tam Road in close vicinity of the subject site.</p> <p>6.2 A Quantitative Risk Assessment (QRA) conducted by the project proponent is required to assess the potential risks associated with the HP pipeline, having considered the proposed development and implement mitigation measures if necessary for compliance with the risk guidelines of the Hong Kong Planning Standards and Guidelines.</p> <p>6.3 The project proponent is required to observe the requirements of the Electrical and Mechanical Services Department’s “Guidance Note on Quantitative Risk Assessment Study for High Pressure Town Gas Installations in Hong Kong” for carrying out the QRA. The guidance note can be downloaded via the following web-link:- https://www.emsd.gov.hk/en/gas_safety/publications/guidance_notes/index.html</p> <p>6.4 The project proponent should liaise with The Hong Kong and China Gas Company Limited in respect of the exact locations of existing and planned gas pipes/gas installations in the vicinity to the site and any required minimum set back distance away from them during the planning design and construction stages of the proposed development.</p>	<p>Noted</p> <p>QRA Report is submitted as attached.</p> <p>Noted</p> <p>Noted</p>

**S12A AMENDMENT OF PLAN APPLICATION
APPROVED NGAU TAM MEI
OUTLINE ZONING PLAN NO. S/YL-NTM/12**

**PROPOSED REZONING FROM "R(C)" TO "G/IC"
FOR A PROPOSED "SOCIAL WELFARE FACILITIES"
(RESIDENTIAL CARE HOMES FOR THE ELDERLY)
(RCHE)**

**AT LOT 4823 IN D.D.104, 81 SAN TAM ROAD,
SAN TIN, N.T.**

RESPONSE-TO-COMMENT - PlanD

**Proposed Rezoning From “R(C)” To “G/C” for
a Proposed “Social Welfare Facilities” (Residential Care Homes for The Elderly) (RCHE)
Lot 4823 in D.D.104, 81 San Tam Road, San Tin, N.T.
S12A Application for Planning Application No. Y/YL-NTM/9
Response-to-Comment – PlanD
(dated to 27 SEPTEMBER 2022)**

Comments	Response
<p>7. Comments of the Chief Town Planner/ Urban Design and Landscape Section, Planning Department as follow:</p> <p>7.1 The visual sensitivity of VP6 as stated in paragraphs 5.1 and 3.3.6 are different. Please check.</p>	Revised
<p>8. Comments of the Chief Town Planner/ Urban Design and Landscape Section, Planning Department as follow:</p> <p>8.1 Comments on Appendix 4 – Landscape Master Plan</p> <p>(i) The application site boundary should be clearly indicated on all figures.</p> <p>(ii) Paragraphs 2.3 & 2.4, the applicant should clarify whether the “Green Hatched Black Area” and “Brown Area” are outside the application site boundary.</p> <p>(iii) Para 8.14 states that “mini flower planter at 3/F & 4/F...” but the concerned planters are shown on 2/F and 3/F on Figure 5 and 6 respectively.</p> <p>(iv) Figure 2 to Figure 16, drawing scale should be indicated.</p> <p>(v) Figure 3, “Landscape Master Plan”, new trees and existing trees to be retained and proposed landscape design on different levels should be clearly indicated.</p>	<p>Revised as per on Figure 2-10 Rev. B, 14-16 Rev. B.</p> <p>Revised</p> <p>Para 8.14 revised as “mini flower planter at 2/F & 3/F”.</p> <p>Revised as per Figure 2 Rev. B to Figure 16 Rev. B.</p> <p>Revised as per Figure 2 Rev. B.</p>

**Proposed Rezoning From “R(C)” To “G/IC” for
a Proposed “Social Welfare Facilities” (Residential Care Homes for The Elderly) (RCHE)
Lot 4823 in D.D.104, 81 San Tam Road, San Tin, N.T.
S12A Application for Planning Application No. Y/YL-NTM/9
Response-to-Comment – PlanD
(dated to 27 SEPTEMBER 2022)**

Comments	Response
<p>(vi) Figure 4 “1/F Landscape”, about half of proposed plantings are under cover and facing north and west while the floor headroom is less than 2.8m. The applicant is advised to review whether the proposed planting environment is favorable to the growth of plants and suitable species should be selected.</p> <p>(vii) Figure 5 and 6, the design of planters on 2/F and 3/F should take into consideration the needs of maintenance and replacement of plants.</p> <p>(viii) Figure 9 “Section AA Diagram”</p> <ul style="list-style-type: none"> ● It should be clearly indicated if the Green Hatch Black Area is not covered by the application. ● Broken line indicating the omission of 3/F to 7/F should be marked. <p>(ix) Figure 10 “Section BB Diagram”</p> <ul style="list-style-type: none"> ● The direction of cut-line on the key plan is different from that on Figure 2 and should be rectified. ● The layout of planters at the western side on roof garden does not tally with the layout on plan and should be rectified. ● Proposed tall plantings on 1/F will block the light and views of users on upper floors. ● Broken line indicating the omission of 3/F to 7/F should be marked. 	<p>For the covered part, artificial turf will be applied instead of plants. Those has been revised as per Figure 4 Rev. B.</p> <p>Planters on 2/F, 3/F and Vertical Greenery on San Tam Road Façade are accessed by Gondola.</p> <p>Revised as per Figure 9 Rev. B.</p> <p>Revised as per Figure 10 Rev. B.</p>

**Proposed Rezoning From “R(C)” To “G/C” for
 a Proposed “Social Welfare Facilities” (Residential Care Homes for The Elderly) (RCHE)
 Lot 4823 in D.D.104, 81 San Tam Road, San Tin, N.T.
 S12A Application for Planning Application No. Y/YL-NTM/9
 Response-to-Comment – PlanD
 (dated to 27 SEPTEMBER 2022)**

Comments	Response
(x) Figure 14 “Green Coverage Calculation” <ul style="list-style-type: none"> ● The provision of greenery coverage has not been indicated on this figure. 	Revised as per Figure 14 Rev. B.

**Proposed Rezoning From “R(C)” To “G/IC” for
a Proposed “Social Welfare Facilities” (Residential Care Homes for The Elderly) (RCHE)
Lot 4823 in D.D.104, 81 San Tam Road, San Tin, N.T.
S12A Application for Planning Application No. Y/YL-NTM/9
Response-to-Comment – PlanD
(Updated 24 November 2023)**

Comments	Response
<p>1. Comments of the Chief Town Planner/ Urban Design and Landscape Section, Planning Department as follows:</p> <p>1. Please confirm whether the completion year is 2027 as indicated in the TIA report.</p> <p>2. Please note that ‘no vehicle is allowed to queue back to or reverse onto/from public roads at any time’.</p>	<p>Confirmed. The completion year is 2027.</p> <p>Confirmed.</p>

**S12A AMENDMENT OF PLAN APPLICATION
APPROVED NGAU TAM MEI
OUTLINE ZONING PLAN NO. S/YL-NTM/12**

RESPONSE-TO-COMMENT - TD

**PROPOSED REZONING FROM "R(C)" TO "G/IC"
FOR A PROPOSED "SOCIAL WELFARE FACILITIES"
(RESIDENTIAL CARE HOMES FOR THE ELDERLY)
(RCHE)**

**AT LOT 4823 IN D.D.104, 81 SAN TAM ROAD,
SAN TIN, N.T.**



Summary Table of ‘Responses to Comments’

Comments of TD on 2022.12.02	
Comments	Responses
a) Please review the location of proposed ingress/ egress for vehicular access in order to improve sight line.	<p>Please find attached Drawing in Appendix I which shows the Subject Lot (i.e. Lot 4823 in DD104) is sandwiched by Lot 2086 in DD 105 to the North and Lot 4764 in DD 104 to the South. Please note that the Brown Area for the Subject Lot has been designated under the Lease and the vehicular access (X, Y through Z) location at San Tam Road is also designated under the Lease.</p> <p>Due to the land issue, the location of the proposed vehicular access point will be maintained. It is noted that trees and shrubs along San Tam Road are regularly maintained and trimmed by LCSD to improve sight line. In addition, similar vehicular access of other developments along San Tam Road are observed and no major Traffic Accidents has been noted so far. The Applicant would also install safety measures such as traffic signs to alert drivers drive slowly and be aware of long vehicles ahead, if necessary.</p>
b) Please indicate the location of pedestrian entrance(s) for the concerned development.	<p>Please find attached Figure 2.1 (Rev.A) in the revised TIA report showing the location of pedestrian entrance for the proposed development for your information.</p>
c) Based on the design year of 2030, a set of planning assumptions should be agreed with PlanD given that there are various on-going developments under planning application stage in the vicinity.	<p>PlanD’s agreement on the latest planning data in the vicinity has been sought. Please find PlanD’s email dated 23 December 2022 attached in Appendix II for your information.</p> <p>Please refer to Section 4.3 and Figure 4.1 (Rev.A) for the planned developments considered in the assessment for your reference.</p>



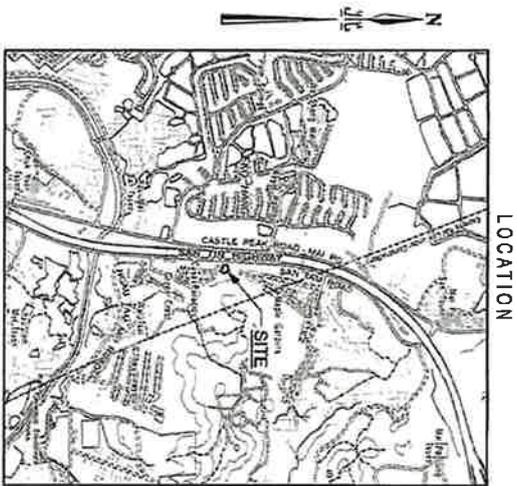
Comments of TD on 2022.12.02	
Comments	Responses
d) Swept path analysis should be carried out at critical turning location(s) at ingress/ egress, parking spaces and loading/ unloading areas to demonstrate sufficient space for vehicles manoeuvring of the types of vehicle allowed within the subject site.	Please find attached Figure SP-01 to SP-02 in Appendix III showing the swept path at ingress/ egress, parking spaces and loading/ unloading areas.
e) Table 2.3 – <ul style="list-style-type: none">• Please specify the headroom of the of the types of vehicle in the table• Please include the picking up and setting down point for ambulance	Please find the revised Table 2.3 with information of headroom of the types of vehicle in the table for your information. Please refer to Figure 2.1 (Rev.A) for the proposed picking-up/setting down point for ambulance, and Figure SP-03 showing the swept path of ambulance ingressing and egressing the site.
f) Table 3.1 – Please include Fairview Peak Interchange in the table and subsequent assessment.	Junction assessment of Fairview Park Interchange is included in the revised TIA report.
g) Section 3.2.2 – To ensure the traffic flow would not be underestimated during COVID epidemic situations, suitable rectifying factors shall be applied to the existing traffic flow to pro-rata the normal traffic condition for subsequent assessment in Year 2030.	Noted. Covid-19 factor is now applied to the existing traffic flows of the revised TIA report. Please refer to Section 3.2.3 to 3.2.4 for the derivation of Covid-19 factor.
h) Figure 2.1 – Please specify the clear width of proposed ingress/ egress, driveway and footpath.	Please find the Figure 2.1 (Rev.A) with marked width of proposed ingress/ egress, driveway and footpath for your information.
i) Adequate headroom should be allowed for the type(s) of vehicle to access.	Noted.



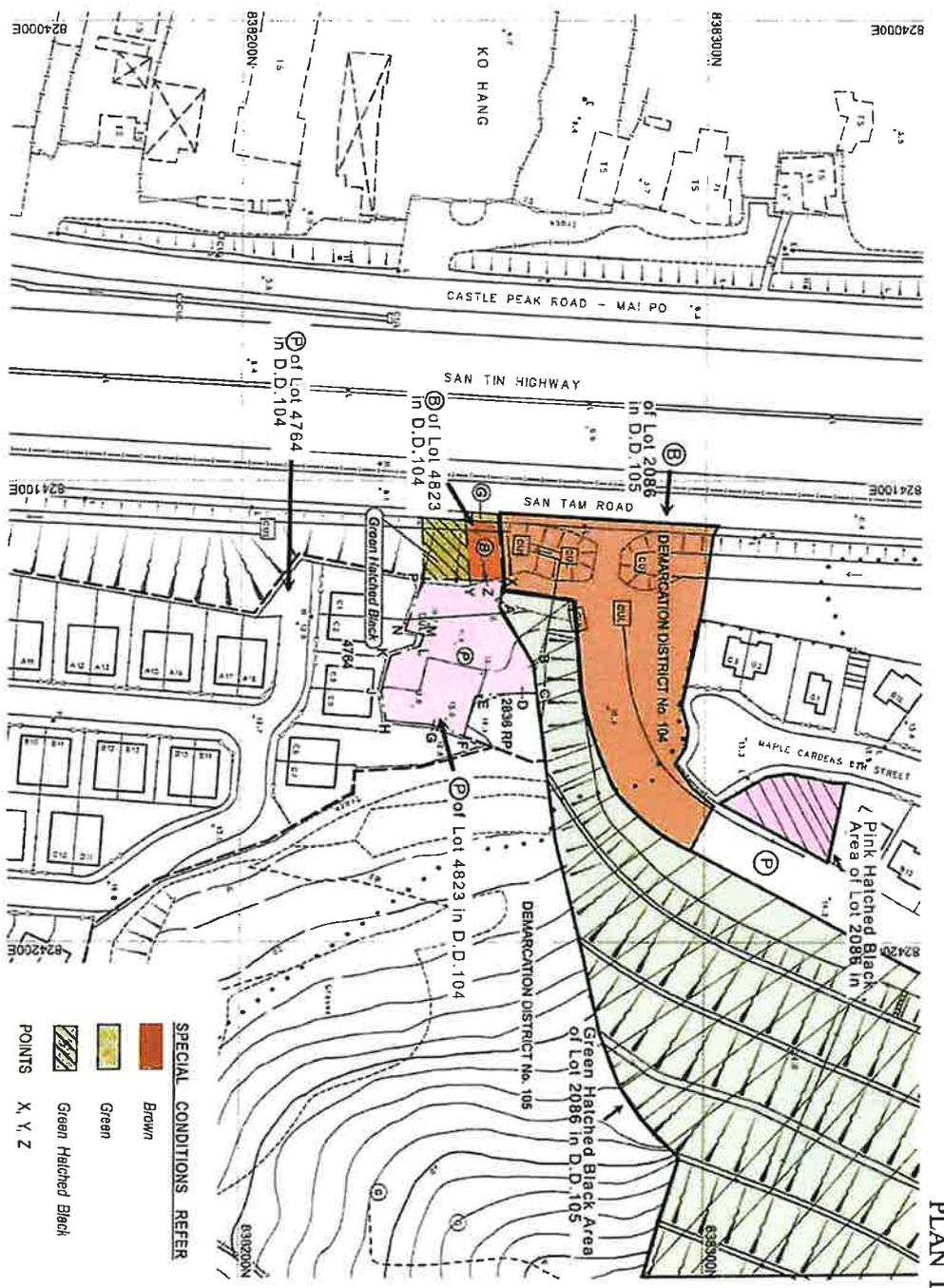
Comments of TD on 2022.12.02	
Comments	Responses
j) Please ensure vehicles would not encroach to the opposite lane of San Tam Road when entering/ leaving the subject site.	<p>Please find attached drawing Figure SP-01 to SP-03 in Appendix III showing the swept path of vehicles for your kind information and consideration.</p> <p>Swept path analysis of ambulance is illustrated diagrammatically in Figure SP-03 in Appendix III. Although the swept path of ambulance will encroach slightly onto the opposite traffic lane when egressing from the proposed development and making a left-turn, it is envisaged that the time required for encroachment will be very short. Also, the alignment of section of Sam Tam Road outside the proposed development is straight and clear sightline could be provided for the proposed run-in/out of the proposed development. Hence, for emergency purpose, it is considered that the arrangement is acceptable from traffic engineering point of view.</p> <p>Other than that, please note that 8m vehicle will encroach to the opposite lane of San Tam Road when egressing the subject site. Therefore, mitigation measure such as traffic sign will be installed inside the proposed development to ban left turn of vehicle longer than 7m when leaving the site in order to ease the problem.</p>
k) No vehicle is allowed to queue back to or reverse onto/from public road at any time during the planning approval period.	Noted.



Appendix I



SIDE	DISTANCE IN METRES	BEARING	PL.	CORNER MARKED BY
X A	8.789	93 53 38		
A B	13.433	57 27 48		
B C	6.187	82 18 08		
C D	3.274	180 47 15		
D E	10.355	175 51 27		
E F	9.051	105 50 37		
F G	7.118	109 40 20		
G H	10.060	185 42 40		
H J	6.576	281 15 10		
J K	7.782	284 55 50		
K L	6.325	341 33 50		
L M	2.683	291 48 10		
M N	4.123	194 02 10		
N P	11.894	288 55 00		
P X	17.338	1 44 54		



LOT No. 4823 IN DEMARCATION DISTRICT No. 104

DRAFT

District Lands Office, Yuen Long
Lands Department
Plan Prepared by District Survey Office, Yuen Long
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File No. DL0YLS18Y1T2012C_DS07LVW17842012
Survey Sheet No. 2-SE-17A
Layout Plan No.
Reference Plan No.
ALS Plan No.
PLAN No. YL14882-D1b

Date: 13/03/2014



S12A Amendment of Plan Application,
Approved Ngau Tam Mei Outline Zoning Plan No. S/YL-NTM/12
Proposed Rezoning from “R(C)” to “G/IC” for a Proposed “Social Welfare Facilities”
(Residential Care Homes for the Elderly) (RCHE)
At Lot 4823 in DD 104, 81 San Tam Road, San Tin, N.T.
Responses to Comments by Email on 02 Dec 2022

We commit We deliver

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Appendix II

寄件者: gtllam@pland.gov.hk

傳送時間: 2022 年 12 月 23 日 18:09

收件者: Agnes Lee

副本: evonneli@ctaconsultants.com; 'Horace Mak'

主旨: Re: S12A amendment of OZP no. S/YL-NTM/12 - Proposed RCHE at 81 San Tam Road, San Tin, NT

Dear Agnes,

My comments on the draft list of planned development is enclosed for your follow-up.

Regards,

Gary Lam

TP/YLE1

FS&YLE District Planning Office, PlanD

Tel: 3168 4043

From: "Agnes Lee" <agneslee@ctaconsultants.com>

To: <gtllam@pland.gov.hk>

Cc: "'Horace Mak'" <horacemak@ctaconsultants.com>, <evonneli@ctaconsultants.com>

Date: 08/12/2022 11:48

Subject: S12A amendment of OZP no. S/YL-NTM/12 - Proposed RCHE at 81 San Tam Road, San Tin, NT

Dear Gary,

I refer to the TD's Comment item (c) (Annex I refers) on the Application No. Y/YL-NTM/9 that **“Based on the design year of 2030, a set of planning assumptions should be agreed with PlanD given that there are various on-going developments under planning application stage in the vicinity.”**

Attached please find the list of planned developments in the vicinity obtained from OZP portal for your information and agreement. The site location of the proposed development has also been attached for your easy reference. Kindly please confirm the planning data in the table as requested by TD. Thank you.

Best regards,

Agnes Lee

CTA Consultants Limited

Unit 2108, 21/F, Westlands Centre, 20 Westlands Road, Quarry Bay, H. K.

Tel: (852) 2214 0849 Fax: (852) 2214 0817

Email : cta@ctaconsultants.com

[attachment "Annex I.pdf" deleted by Gary Tat Leung LAM/PLAND/HKSARG] [attachment
"Planned developments in the vicinity.pdf" deleted by Gary Tat Leung LAM/PLAND/HKSARG]
[attachment "FIG_1.1 SITE LOCATION PLAN.pdf" deleted by Gary Tat Leung
LAM/PLAND/HKSARG]

Planned Developments in the Vicinity

Application No.	Type	Key Development Parameters
Ongoing S12A Applications in the Vicinity		
Y/YL-NTM/5	Residential	1,980 residential units
Y/YL-NTM/6	Residential	1,990 residential units + 6,445m ² GFA for commercial
Y/YL-MP/6	Residential	<ul style="list-style-type: none"> 3,090 residential units 2,363m² retail GFA 6-classroom kindergarten 100-place RCHE Neighbourhood Elderly Centre (NEC)
Y/YL-ST/1	Residential	<ul style="list-style-type: none"> 2,075m² Retail GFA 4,176 residential units 100-place child care centre 6-classroom kindergarten
Y/YL-NSW/7	Residential	<ul style="list-style-type: none"> 900m² Retail GFA 1,997 residential units 6 classroom kindergarten 100-place child care centre
Y/YL-NTM/8	Residential	<ul style="list-style-type: none"> 6,276 residential units 67,000m² GFA for GIC facilities
Y/YL-MP/6	Residential	3,090 residential units
Y/YL-MP/7	Residential	1,228 residential units
Y/YL-MP/8	Residential	1,249 residential units
Y/YL-NSW/8	Residential	<ul style="list-style-type: none"> 6,825 residential units 750m² retail GFA 4 nos. of GIC facilities
Y/YL-NSW/9	Residential	<ul style="list-style-type: none"> 3,115 residential units 3,000m² Retail GFA 1 Primary school 3 Kindergartens 1 relocated soy sauce factory
Y/YL-NSW/6	Residential	<ul style="list-style-type: none"> 4,329 private housing 640 public housing
Approved S16 Applications in the Vicinity		
A/YL-MP/247	Residential	Domestic GFA about 16,200m ² for 105 houses
A/YL-MP/287	Residential	Domestic GFA about 7,540m ² for 65 houses
A/YL-NSW/274	Residential	Domestic GFA about 70,328m ² for 1,955 flats
A/YL-NTM/178-2	Residential	Domestic GFA about 46,365m ² for 222 houses
A/YL-NTM/432	Residential	Domestic GFA about 28,840m ² for 1,208 flats
A/YL-MP/291	Residential	268 houses
A/YL-NSW/241	Retail	37,171 m ² retail GFA

Y/YL-NTM/7.
 12,575m² →
 39,215m²
 for commercial
 - NEC
 - CCC

for commercial

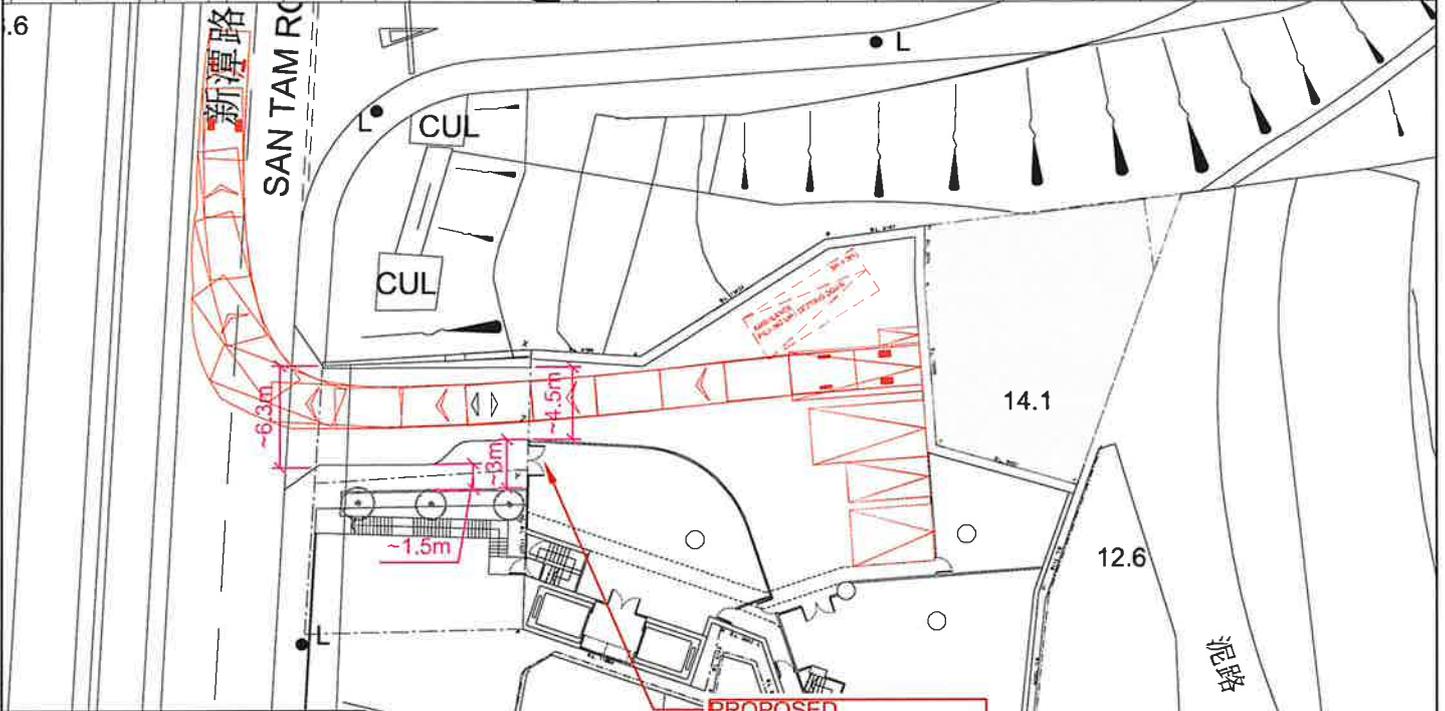
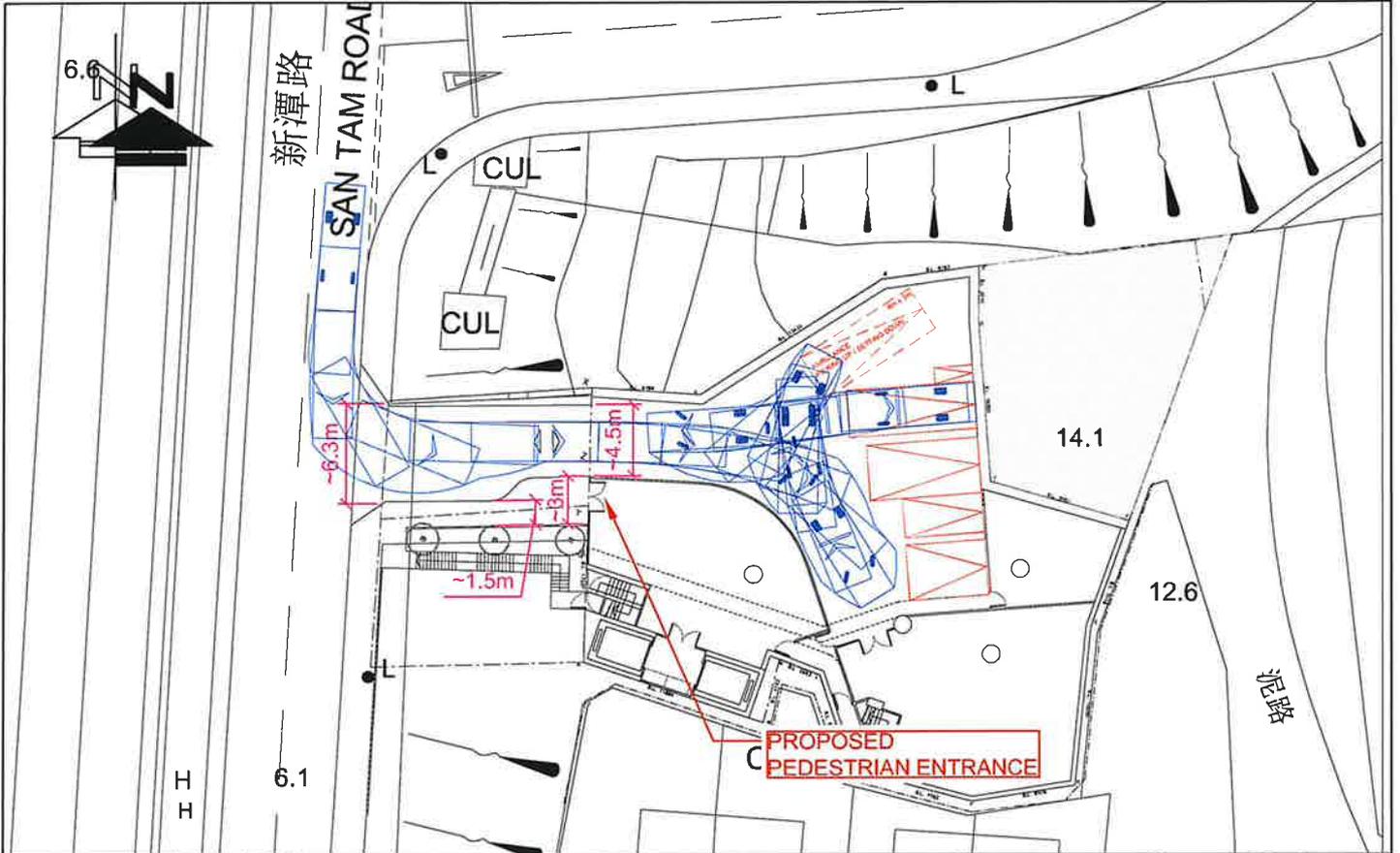
1 NEC, 100-place CCC
 100-place RCHE
 80-place Day Care
 Centre for
 Elderly

1,518

45,197m² for
 300 houses



Appendix III



LEGEND :

	SWEPT PATH (IN)
	SWEPT PATH (OUT)

FIGURE NO.:
SP-01

PROJECT TITLE: S12A Amendment of Plan Application, Approved Ngau Tam Mei Outline Zoning Plan No. S/YL-NTM/12
Proposed Rezoning from "R(C)" to "G/IC" for a Proposed "Social Welfare Facilities"
(Residential Care Homes for the Elderly) (RCHE) At Lot 4823 in DD 104, 81 San Tam Road, San Tin, N.T.

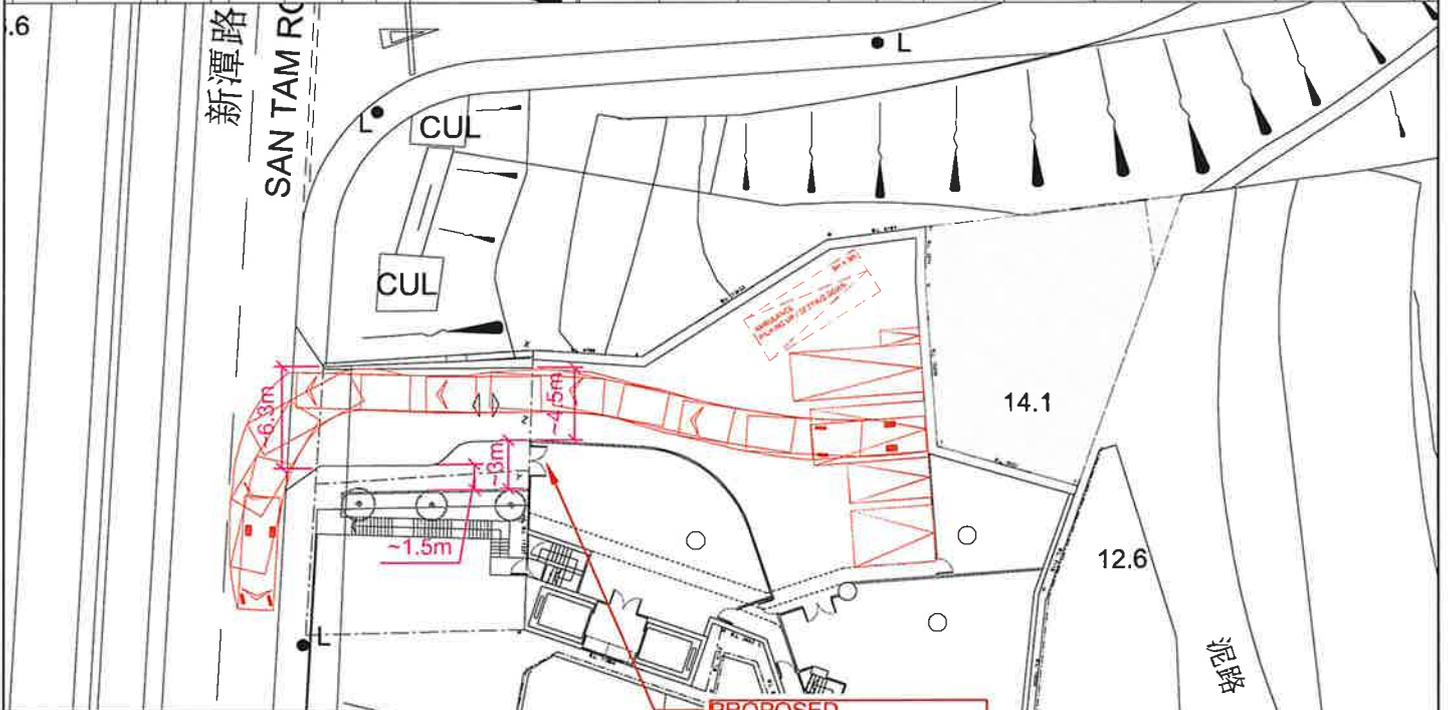
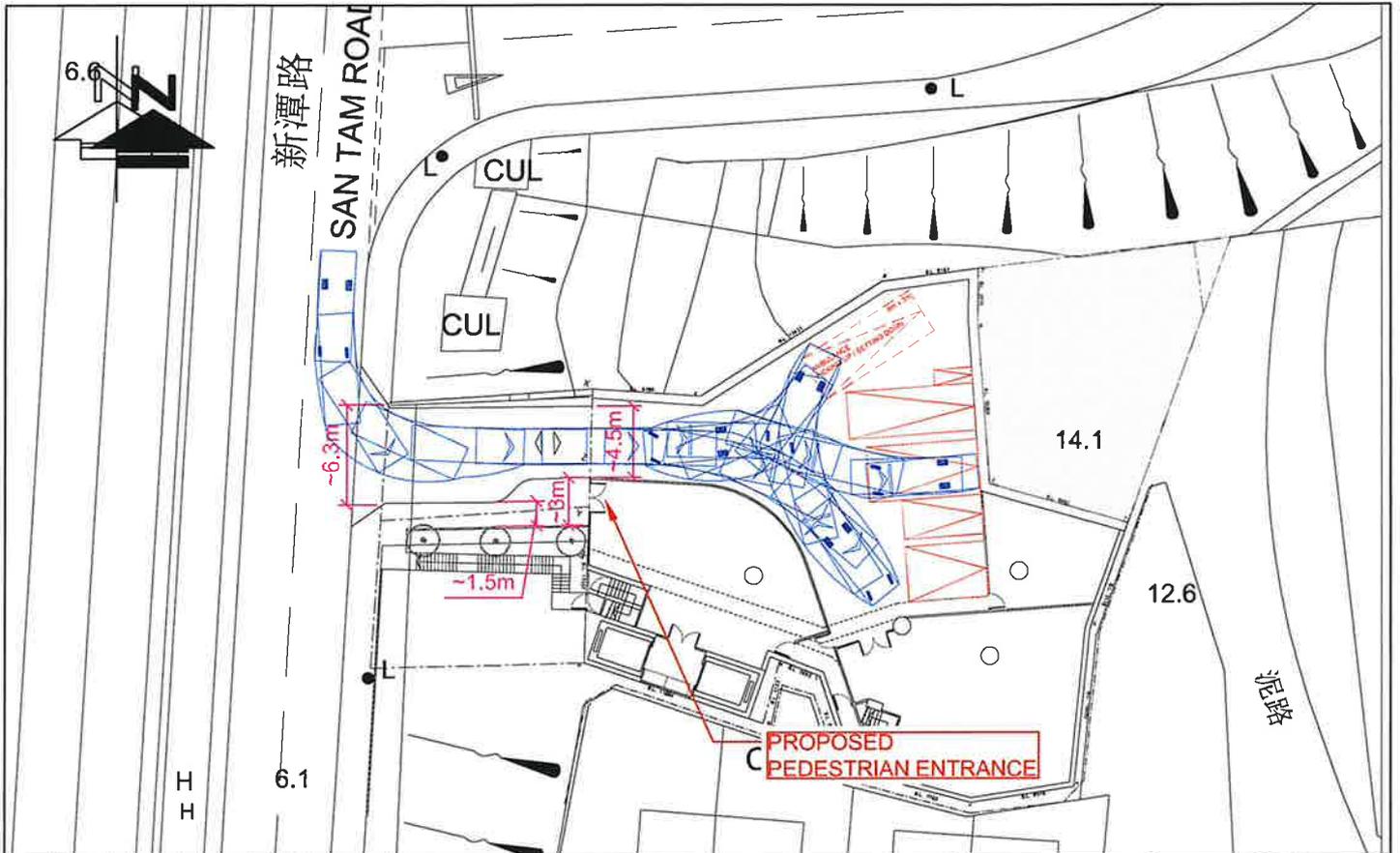
PROJECT NO.:
22069HK

DRAWING TITLE:
SWEPT PATH ANALYSIS OF 8M VEHICLE

SCALE:
1 : 350 @A4

DATE:
03 JAN 2023





LEGEND :

	SWEPT PATH (IN)
	SWEPT PATH (OUT)

FIGURE NO.:
SP-02

PROJECT TITLE: S12A Amendment of Plan Application, Approved Ngau Tam Mei Outline Zoning Plan No. SYL-NTM/12
Proposed Rezoning from "R(C)" to "G/IC" for a Proposed "Social Welfare Facilities"
(Residential Care Homes for the Elderly) (RCHE) At Lot 4823 in DD 104, 81 San Tam Road, San Tin, N.T.

PROJECT NO.:
22069HK

DRAWING TITLE:
SWEPT PATH ANALYSIS OF 7M VEHICLE

SCALE:
1 : 350 @A4

DATE:
03 JAN 2023



CTA Consultants Limited
志達顧問有限公司

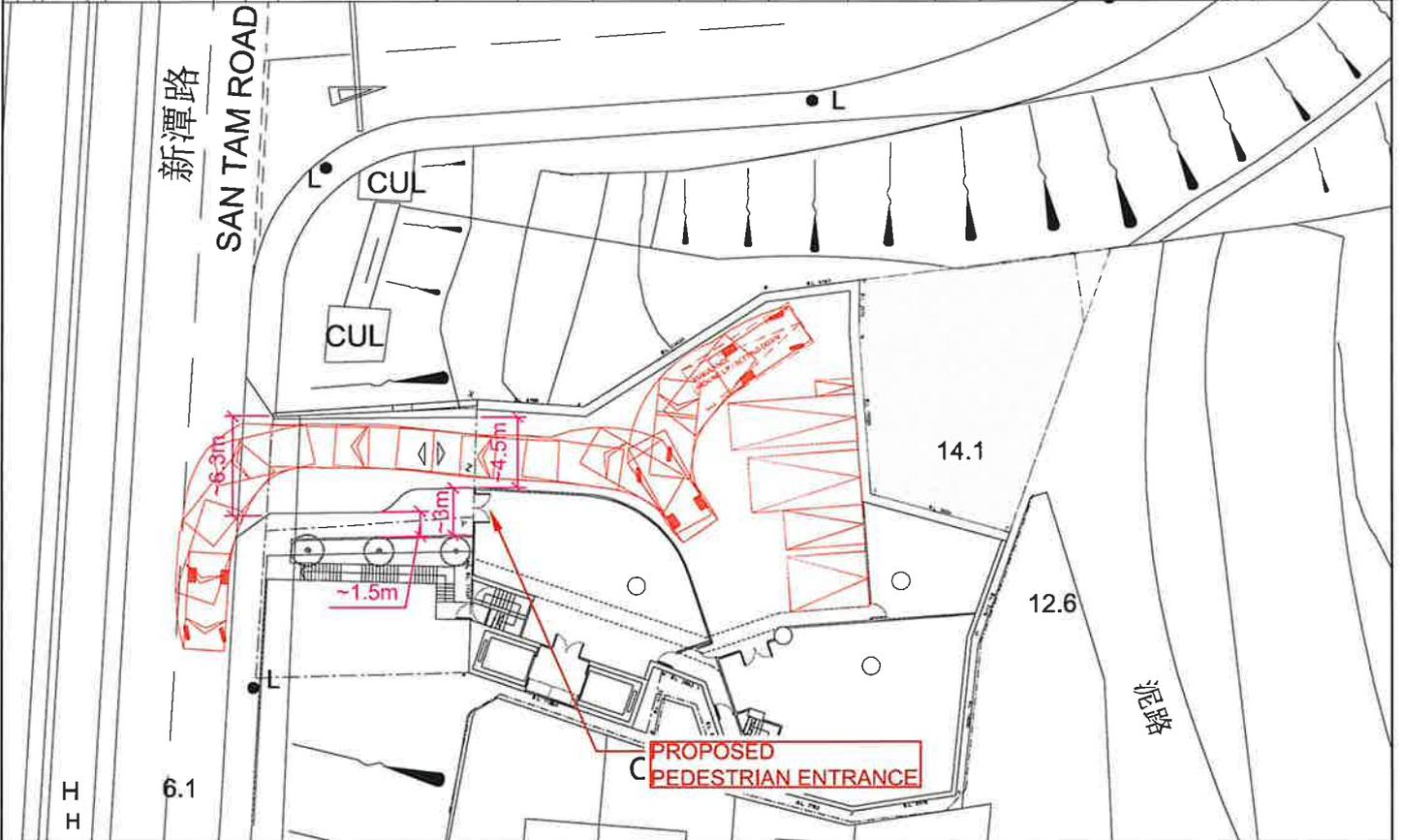
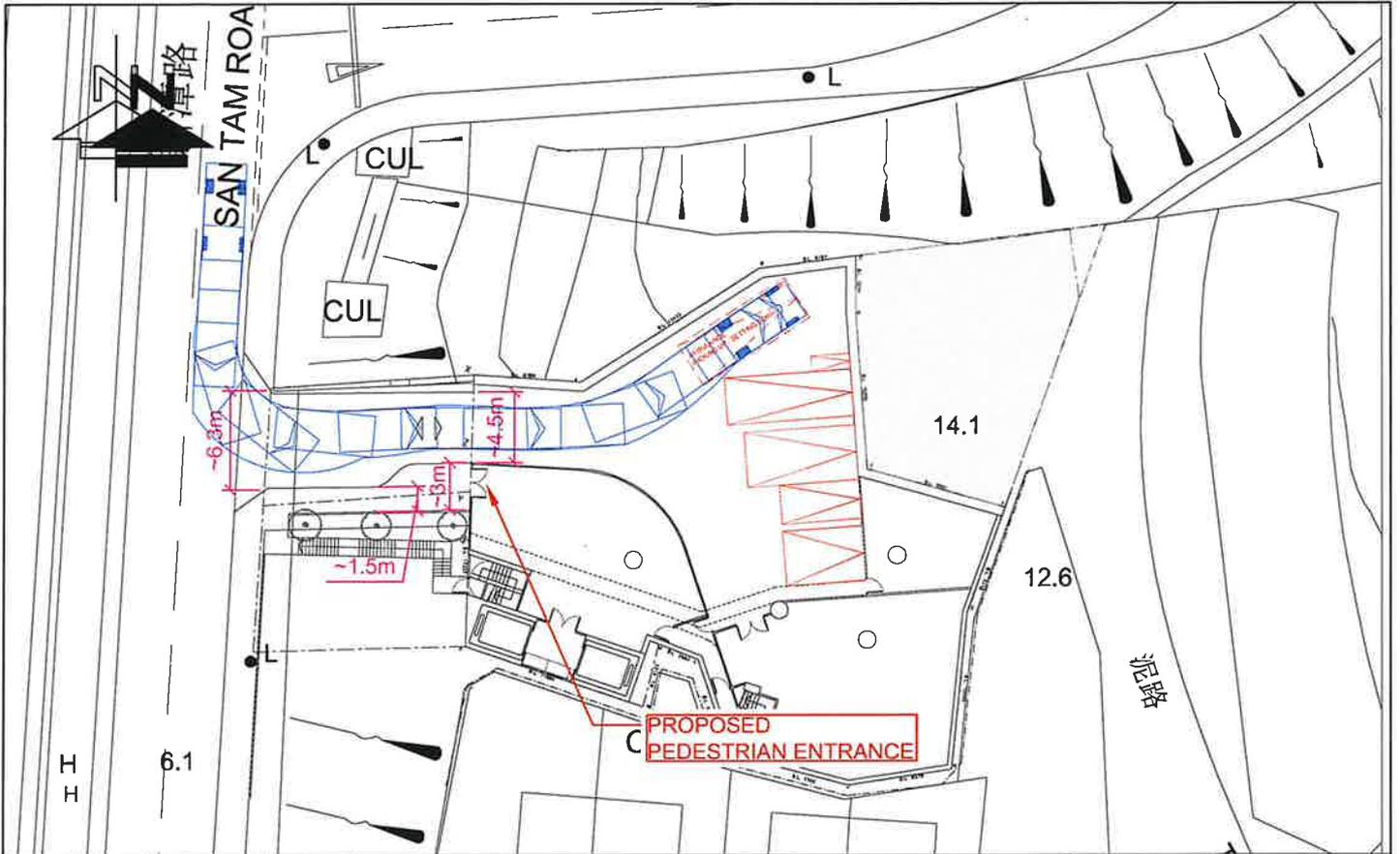


FIGURE NO.: SP-03		PROJECT TITLE: S12A Amendment of Plan Application, Approved Ngau Tam Mei Outline Zoning Plan No. S/YL-NTM/12 Proposed Rezoning from "R(C)" to "G/IC" for a Proposed "Social Welfare Facilities" (Residential Care Homes for the Elderly) (RCHE) At Lot 4823 in DD 104, 81 San Tam Road, San Tin, N.T.	
PROJECT NO.: 22069HK		DRAWING TITLE: SWEPT PATH ANALYSIS OF AMBULANCE	
SCALE: 1 : 400 @A4	DATE: 03 JAN 2023	 CTA Consultants Limited 志達顧問有限公司	



Summary Table of 'Responses to Comments'

Comments of TD on 2023.1.4	
Comments	Responses
1. Please provide the approved plan regarding the land lease instead of the "Draft" version.	Please find attached the approved Lease in Appendix I for your reference and information.
2. It was noted the XYZ points are inside the site instead of immediately adjacent to the existing footpath. Please review the location of proposed run-in/out for improving the sight line.	Please refer to Cl. 9 of the Special Conditions of the Lease (Appendix I p.10 refers) which specify the purpose of Brown Area as a Right-of-way.
3. Please advise the use of "Green Hatched Black" Area according to the land lease to see if there is flexibility to further adjust the location of proposed run-in/out.	<p>Please refer to Cl. 27 of the Special Conditions in the Lease (Appendix I p.17 and 18 refers) which specify the purpose of Green Hatched Black Area is for slope maintenance and stabilization only.</p> <p>Moreover, the Green Hatched Black Area is occupied by a slope at the moment and therefore, no access to the Lot is possible. Please refer to the drawing in Appendix II illustrating the current condition of the Green Hatched Black Area for your information and consideration.</p>



S12A Amendment of Plan Application,
Approved Ngau Tam Mei Outline Zoning Plan No. S/YL-NTM/12
Proposed Rezoning from "R(C)" to "G/IC" for a Proposed "Social Welfare Facilities"
(Residential Care Homes for the Elderly) (RCHE)
At Lot 4823 in DD 104, 81 San Tam Road, San Tin, N.T.
Responses to Comments by Email on 4 Jan 2023
We commit We deliver

用心以誠

Appendix I

COPY

電話 Tel: 2443 1105
圖文傳真 Fax: 2473 3058
電郵地址 Email:
本署檔號 Our Ref: (39) in LD/LACO/YL 74/582/2012 Pt.2
來函檔號 Your Ref: LAS/CHC/TT/pl /14-14074

來函請註明本署檔號

Please quote our reference in your reply



地政總署
法律諮詢及田土轉易處
LEGAL ADVISORY AND
CONVEYANCING OFFICE
LANDS DEPARTMENT

我們矢志努力不懈，提供盡善盡美的土地行政服務。
We strive to achieve excellence in land administration.

網址 Website: www.landsd.gov.hk

(YUEN LONG AND TUEN MUN)
12/F., Yuen Long Government Offices,
No. 2 Kiu Lok Square,
Yuen Long, New Territories

12 January 2016

BY FAX & BY COLLECTION

(Fax No. 2840 0600)

Wonder Pacific Development Limited
c/o Knight Frank Petty Limited
4/F, Shui On Centre,
6-8 Harbour Road, Wanchai,
Hong Kong

Dear Sirs,

Land Exchange
Lot No.4823 in D.D. 104

With reference to the above matter, I return herewith the original Conditions of Exchange with plan annexed thereto ("the Conditions") which was duly registered in the Land Registry by New Grant No. 22253.

Please send a representative who should bring with him/her your company chop to this office at the above address to collect the Conditions. For enquires, please contact Mr. LUK at Telephone No.2475 6317.

Yours faithfully,

(Miss Miranda LEUNG)
Land Conveyancing Officer II
for Senior Solicitor
Lands Department

Encl.

c.c. District Lands Officer/ Yuen Long) w/o encl
(Ref. DLO/YL 515/YLT/2012 Pt.2)

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準時繳納地稅 - 以免業權受損

Don't put your property at risk - make sure the Government rent is paid!

**PARTICULARS AND CONDITIONS
OF EXCHANGE**

PARTICULARS AND CONDITIONS FOR THE GRANT by the Government of the Hong Kong Special Administrative Region (hereinafter referred to as "the Government") of the lot of land described in the First Schedule hereunder and shown coloured pink on PLAN I annexed hereto for a term of fifty years commencing from the date of the Memorandum of Agreement annexed hereto at the rent specified in the First Schedule hereunder and subject to the General and Special Conditions hereunder in exchange for the surrender of the OLD LOT described in the Second Schedule hereunder and shown coloured blue on PLAN II annexed hereto.

First Schedule

PARTICULARS OF THE LOT

Registry No.	Location	Site	Area in square metres	Rent	Premium
Lot No. 4823 in Demarcation District No. 104	San Tam Road, San Tin, Yuen Long, New Territories	As delineated and shown coloured pink on PLAN I annexed hereto	736.3 (about)	An annual rent of an amount equal to 3% of the rateable value from time to time of the lot, subject to General Condition No. 1 hereof	\$30,540,000.00

Second Schedule

OLD LOT TO BE SURRENDERED

Registry No.	Location	Area in square metres
Lot No. 2837 in Demarcation District No. 104	San Tam Road, San Tin, Yuen Long, New Territories	607 (about)

GENERAL CONDITIONS

Rent

1. Rent as specified in the Particulars of the Lot shall commence and be payable from the date of this Agreement and until the expiry of the term hereby agreed to be granted, and shall be governed by the provisions of the Government Rent (Assessment and Collection) Ordinance, any regulations made thereunder and any amending legislation and also subject to a minimum rent of \$1 per annum (if demanded).

Acknowledgement by
Grantee

2. The Grantee hereby expressly acknowledges :

- (a) that the Government shall be under no liability whatsoever to the Grantee (which expression shall for the purpose of this General Condition only include his successors, assigns, mortgagees, tenants or other occupiers of the lot whether lawful or otherwise) for any loss or damage howsoever arising in connection with or as a consequence of his grant of the lot and its subsequent development;
- (b) that he has acquired the lot based on his site investigation (if any) or upon his own evaluation of land records and available geotechnical information whether obtained from Government sources or otherwise and has satisfied himself as to the state and condition of the lot in relation to the purposes for which the lot is to be developed or redeveloped;
- (c) that he takes the lot, whether on, above or below the surface of the ground, in the state and condition as it exists on the date on which possession of the lot is deemed to be given in accordance with Special Condition No. (4) of these Conditions; and
- (d) that he shall not be entitled to revoke, withdraw, cancel or resile in any way whatsoever from this Agreement nor be entitled in any way whatsoever to compensation or a reduction in the premium or any other compromise whatsoever should he subsequently determine that the lot is not fit for the purposes for which he acquired the lot.

Exclusion of
warranty

3. (a) The Government has given no warranty, express or implied, as to the suitability or fitness of the lot or any part thereof for development whether in accordance with these Conditions or otherwise. The Grantee for himself, his successors or assigns undertakes not to make any claim against the Government for any loss or damage whatsoever which he may suffer as a result of or arising from the state and condition of the lot making it either unfit for the purpose for which he acquired the lot or rendering it impossible to achieve the scale of development originally intended.

(b) The Government in no way warrants the accuracy or correctness in any way whatsoever of any information made available or obtained, and in particular does not warrant that the lot is fit and suitable

for any particular purpose.

Indemnity by
Grantee

4. The Grantee hereby indemnifies and shall keep indemnified the Government against all actions, proceedings, liabilities, demands, costs, expenses, losses (whether financial or otherwise) and claims whatsoever and howsoever arising from any breach of these Conditions or any damage or soil and groundwater contamination caused to adjacent or adjoining land or to the lot where such damage or soil and groundwater contamination has, in the opinion of the Director of Lands (hereinafter referred to as "the Director", and whose opinion shall be final and binding upon the Grantee), arisen out of any use of the lot, or any development or redevelopment of the lot or part thereof or out of any activities carried out on the lot or out of any other works carried out thereon by the Grantee whether or not such use, development or redevelopment, activities or works are in compliance with these Conditions or in breach thereof.

Setting out

5. (a) The Director shall, at such time as he thinks fit or upon the application of the Grantee, set out the lot on the ground and the Grantee or his authorized representative after such setting out when called upon by the Director will attend at the lot to inspect the survey marks delineating the lot on the ground and will be given a plan showing the positions and descriptions of each such mark. The Grantee shall not commence any operations for building on the lot until it shall have been so set out by the Director. The Grantee shall take or cause to be taken all proper care and precautions to safeguard the said survey marks from disturbance or removal. If, before commencing any operations for building on the lot, any of the said survey marks are disturbed or removed, the Grantee shall apply in writing to the Director for replacement by survey and shall pay on demand to the Government in advance the prescribed fee therefor.

Encroachment
upon Government
land

(b) In the event that the Grantee is found to have encroached upon and to be occupying Government land the Director may in his absolute discretion either require the Grantee to demolish any building or part of any building standing on such Government land, to reinstate such Government land to his satisfaction and deliver vacant possession of the same to the Government or pay to the Government such sum as the Director in his absolute discretion shall determine as the premium in respect of such Government land. A certificate under the hand of the Director shall be conclusive as to the extent of any such encroachment and as to the amount of the premium payable in respect thereof. If the Grantee fails to demolish any building as required by the Director as above it shall be lawful for the Director to demolish such building and the Grantee shall pay on demand to the Government the amount certified by the Director as the cost of such demolition. In the event that the Director exercises his discretion to require the payment of premium as aforesaid, upon the payment of such premium the area of Government land encroached upon shall be deemed in all respects to be part of the lot and shall be included in the lease of the lot when issued.

Maintenance

6. (a) The Grantee shall throughout the tenancy having built or rebuilt (which word refers to redevelopment as contemplated in sub-clause (b) of this General Condition) in accordance with these Conditions :

- (i) maintain all buildings in accordance with the approved design, disposition or height and any approved building plans without variation or modification thereto; and
- (ii) maintain all buildings erected or which may hereafter be erected in accordance with these Conditions or any subsequent contractual variation of them, in good and substantial repair and condition and in such repair and condition deliver up the same at the expiration or sooner determination of the tenancy.

(b) In the event of the demolition at any time during the tenancy of any building then standing on the lot or any part thereof the Grantee shall replace the same either by sound and substantial building or buildings of the same type and of no less gross floor area or by building or buildings of such type and value as shall be approved by the Director. In the event of demolition as aforesaid the Grantee shall within one calendar month of such demolition apply to the Director for consent to carry out building works for the redevelopment of the lot and upon receiving such consent shall within three calendar months thereof commence the necessary works of redevelopment and shall complete the same to the satisfaction of and within such time limit as is laid down by the Director.

Boundary stones

7. The Grantee shall permit boundary stones properly cut and marked with the number of the lot to be fixed at each angle thereof and either in or on the land itself or in or on any building erected thereon as may be required by the Director and shall pay the fees prescribed by him therefor as well as the prescribed fees for the refixing of such boundary stones which, through being lost, damaged or removed, need replacing.

Private streets,
roads and lanes

8. Any private streets, roads and lanes which by these Conditions are required to be formed shall be sited to the satisfaction of the Director and included in or excluded from the area to be leased as may be determined by him and in either case shall be surrendered to the Government free of cost if so required. If the said streets, roads and lanes are surrendered to the Government, the surfacing, kerbing, draining (both foul and storm water sewers), channelling and road lighting thereof shall be carried out by the Government at the expense of the Grantee and thereafter they shall be maintained at public expense. If the said private streets, roads and lanes remain part of the area to be leased, they shall be lighted, surfaced, kerbed, drained, channelled and maintained by and at the expense of the Grantee in all respects to the satisfaction of the Director and the Director may carry out or cause to be carried out the installation and maintenance of road lighting for the sake of public interest as required. The Grantee shall bear the capital cost of installation of road lighting and allow free ingress and egress to and from the area to be leased to workmen and vehicles for the purpose of installation and maintenance of the road lighting.

Right to inspect

9. (a) The Grantee shall throughout the tenancy, at all reasonable times, permit the Director or his authorized representatives, with or

1

without having given notice, to enter in or upon the lot or any part thereof or any building or part of any building erected on the lot for the purpose of inspecting the same so as to ascertain that there is no breach of or failure to observe any of these Conditions.

Right to inspect
for assessing
contamination

(b) The Grantee shall throughout the tenancy, at all reasonable times, permit the Director and the Director of Environmental Protection or his or their authorized representatives, upon serving reasonable verbal or written notice on the Grantee, to enter into or upon the lot or any part thereof or any building or part of any building erected on the lot for the purpose of carrying out site investigation works to assess the extent of contamination within the lot, which works shall include but not be limited to conducting site inspections, taking soil and water samples and any other works and operations relating or ancillary to such contamination assessment.

Breach of lease
conditions

(c) The fulfilment by the Grantee of his obligations under these Conditions shall be a condition precedent to the grant or continuance of the tenancy, and in the event of any default by the Grantee in complying therewith such default shall be deemed to be a continuing breach and the subsequent acceptance by or on behalf of the Government of any rent or rates or other payment whatsoever shall not (except where the Government has notice of such breach and has expressly acquiesced therein) be deemed to constitute any waiver or relinquishment or otherwise prejudice the enforcement of the Government's right of re-entry for or on account of such default or any other rights, remedies or claims of the Government in respect thereof under these Conditions which shall continue in force and shall apply also in respect of default by the Grantee in the fulfilment of his obligations under these Conditions within any extended or substituted period as if it had been the period originally provided.

Re-entry

10. (a) Upon any failure or neglect by the Grantee to perform, observe or comply with any of these Conditions the Government shall be entitled to re-enter upon and take back possession of the lot or any part thereof and all or any buildings, erections and works erected or to be erected on the lot or any such part thereof or any part of such buildings, erections or works and thereupon this Agreement and the rights of the Grantee hereunder shall absolutely cease and determine (in respect of such part if the re-entry is upon a part only) but without prejudice nevertheless to the rights, remedies and claims of the Government in respect of any breach, non-observance or non-performance of the terms and conditions hereof.

No refund of
premium on
re-entry

(b) In the event of re-entry by the Government for or in respect of or arising out of the breach, non-observance or non-performance by the Grantee of the provisions of these Conditions, the Grantee shall not be entitled to any refund of the premium paid by him or any part thereof or to any payment or compensation whatsoever whether in respect of the value of the land or any part thereof or any building or buildings erected or to be erected on the land or any part thereof or part of any such building or buildings or any amount expended by the Grantee in the preparation, formation or development of the lot or any part thereof or otherwise.



Lease

11. (a) When these Conditions have been complied with to the satisfaction of the Director, the Grantee shall subject to approval of his title by the Director be entitled to a lease of the lot for the term stated in the preamble to these Conditions.

(b) The Grantee shall execute and take up the lease of the lot when called upon to do so by the Director and shall pay the prescribed fees therefor. In the event of more than one building being erected on the lot the Grantee may be required to take up a separate lease for the site of each separate building and shall pay the prescribed fees for every additional lease so required to be taken up.

(c) Pending the issue of the lease the tenancy of the lot shall be deemed to be upon and subject to, and such lease, when issued, shall be subject to and contain all exceptions, reservations, covenants, clauses, conditions and provisos as are now inserted in the leases issued by the Government of similar lots in the Hong Kong Special Administrative Region (hereinafter referred to as "Hong Kong") as varied, modified or extended by these Conditions.

Definitions

12. (a) The expression "Grantee" shall in these Conditions include the person entering into and executing this Agreement and where the context so admits or requires his executors, administrators and assigns and in the case of a corporation its successors and assigns and the expression "lot", except where the context otherwise requires, means the lot stated in the First Schedule hereto. Where the context so admits or requires, words importing the masculine gender shall be deemed to include females and corporations, and words in the singular shall be deemed to include the plural and vice versa.

(b) The foregoing General Conditions shall be read and construed as varied or modified by the Special Conditions hereinafter contained, and the expression "these Conditions" whenever used shall mean and include the General and Special Conditions.

Marginal notes

13. The marginal notes to these Conditions shall not be deemed to be part of these Conditions and shall not affect the interpretation or construction thereof.



SPECIAL CONDITIONS

- Surrender** (1) The Grantee shall at his own expense surrender to the Government free of cost the old lot described in the Second Schedule hereto to the satisfaction of the Director contemporaneously with the execution of this Agreement.
- Indemnify Government against structures** (2) The Grantee acknowledges that there are some buildings and structures existing on the old lot and undertakes to remove at his own expense the said buildings and structures from the old lot. The Government will accept no responsibility or liability for any damage, nuisance or disturbance caused to or suffered by the Grantee by reason of the presence of the said buildings and structures and the Grantee hereby indemnifies and shall keep indemnified the Government from and against all liabilities, claims, costs, demands, actions or other proceedings whatsoever arising whether directly or indirectly out of or in connection with the presence and subsequent demolition of the said buildings and structures.
- Premium** (3) Having paid the deposit equal to 10% of the premium specified in the First Schedule hereto, the Grantee shall pay to the Government upon the execution of this Agreement by the Grantee the balance of the premium.
- Possession** (4) (a) Subject to compliance with Special Condition No. (1) hereof and to the payment of the balance of the premium in accordance with Special Condition No. (3) hereof, possession of the lot shall be deemed to be given to and taken by the Grantee on the date of this Agreement.
- (b) The lot is granted subject to all and any rights, claims, actions, proceedings and liabilities whether arising by way of adverse possession or otherwise as existing on the date of this Agreement in relation to the lot or any part thereof hereby agreed to be granted.
- Formation of the Green Area (time limit, manner and purpose)** (5) (a) The Grantee shall :
- (i) on or before the 30th day of June, 2019 (or such other extended period as may be approved by the Director), at his own expense, in such manner with such materials and to such standards, levels, alignment and design as the Director shall approve and in all respects to the satisfaction of the Director:
 - (I) lay and form that portion of future public road shown coloured green on PLAN I annexed hereto (hereinafter referred to as "the Green Area"); and
 - (II) provide and construct such bridges, tunnels, over-passes, under-passes, culverts, viaducts, flyovers, pavements, roads or such other structures as the Director in his sole discretion may require (hereinafter collectively referred



to as "the Structures")

so that building, vehicular and pedestrian traffic may be carried on the Green Area;

- (ii) on or before the 30th day of June, 2019 (or such other extended period as may be approved by the Director), at his own expense and to the satisfaction of the Director, surface, kerb and channel the Green Area and provide the same with such gullies, sewers, drains, fire hydrants with pipes connected to water mains, street lights, traffic signs, street furniture and road markings as the Director may require; and
- (iii) maintain at his own expense the Green Area together with the Structures and all structures, surfaces, gullies, sewers, drains, fire hydrants, services, street lights, traffic signs, street furniture, road markings and plant constructed, installed and provided thereon or therein to the satisfaction of the Director until such time as possession of the Green Area has been delivered in accordance with Special Condition No. (6) hereof.

Formation of the Green Area (non-fulfilment)

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

No claim on works on the Green Area

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

Possession of the Green Area

(6) For the purpose only of carrying out the necessary works specified in Special Condition No. (5) hereof, the Grantee shall on the date of this Agreement be granted possession of the Green Area. The Green Area shall be re-delivered to the Government on demand and in any event shall be deemed to have been re-delivered to the Government by the Grantee on the date of a letter from the Director indicating that these Conditions have been complied with to his satisfaction. The Grantee shall at all reasonable times while he is in possession of the Green Area allow free access over and along the Green Area for all Government and public vehicular and pedestrian traffic and shall ensure that such access shall not be interfered with or obstructed by the carrying out of the works whether under Special Condition No. (5) hereof or otherwise.



Restriction on use
of the Green Area

(7) The Grantee shall not without the prior written consent of the Director use the Green Area for the purpose of storage or for the erection of any temporary structure or for any purposes other than the carrying out of the works specified in Special Condition No. (5) hereof.

Access to the Green
Area for inspection

(8) (a) The Grantee shall at all reasonable times while he is in the possession of the Green Area:

(i) permit the Government, the Director and his officers, contractors and agents and any persons authorized by the Director, the right of ingress, egress and regress to, from and through the lot and the Green Area for the purpose of inspecting, checking and supervising any works to be carried out in compliance with Special Condition No. (5)(a) hereof and the carrying out, inspecting, checking and supervising of the works under Special Condition No. (5)(b) hereof and any other works which the Director may consider necessary in the Green Area;

(ii) permit the Government and the relevant public utility companies authorized by the Government the right of ingress, egress and regress to, from and through the lot and the Green Area as the Government or the relevant public utility companies may require for the purpose of any works to be carried out in, upon or under the Green Area or any adjoining land including but not limited to the laying and subsequent maintenance of all pipes, wire, conduits, cable-ducts and other conducting media and ancillary equipment necessary for the provision of telephone, electricity, gas (if any) and other services intended to serve the lot or any adjoining or neighbouring land or premises, and the Grantee shall co-operate fully with the Government and also with the relevant public utility companies duly authorized by the Government on all matters relating to any of the aforesaid works to be carried out within the Green Area; and

(iii) permit the officers of the Water Authority and such other persons as may be authorized by them the right of ingress, egress and regress to, from and through the lot and the Green Area as the officers of the Water Authority or such authorized persons may require for the purpose of carrying out any works in relation to the operation, maintenance, repairing, replacement and alteration of any other waterworks installations within the Green Area.

(b) The Government, the Director and his officers, contractors and agents and any persons or public utility companies duly authorized under sub-clause (a) of this Special Condition shall have no liability in respect of any loss, damage, nuisance or disturbance whatsoever caused to or suffered by the Grantee or any person arising out of or incidental to the

exercise of the rights by the Government, the Director and his officers, contractors and agents and any persons or public utility companies duly authorized under sub-clause (a) of this Special Condition.

Right-of-way
over Government
land (Brown Area)

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

(b) The Grantee shall, on or before the 30th day of June, 2019 (or such other extended period as may be approved by the Director), at his own expense, in such manner, with such materials and to such standards as the Director shall require or approve, construct a paved way with such associated street furniture, traffic aids, street lighting, sewers, drains, channels, catchpits, culverts and other structures as the Director may consider necessary on the Brown Area over and along which a right of way referred to in sub-clause (a) of this Special Condition is given with minimum disturbance to the owners of any other lots in the vicinity to whom rights of way over the whole or any portion of the Brown Area may have been granted.

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

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

(e) The grant of the right of way referred to in sub-clause (a) of this Special Condition shall not give the Grantee the exclusive right over the Brown Area or any part thereof. The Government shall have the right to grant rights of way over the Brown Area or any part thereof to the owners of any other lots in the vicinity now or at any time in the future, or to take over the whole or any portion of the Brown Area for the purposes of a public street without payment of any compensation to the Grantee or to other owners to whom rights of way over the whole or any portion of the Brown Area may have been granted.

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

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

Building covenant

(10) The Grantee shall develop the lot by the erection thereon of a building or buildings complying in all respects with these Conditions and all Ordinances, bye-laws and regulations relating to building, sanitation and planning which are or may at any time be in force in Hong Kong, such building or buildings to be completed and made fit for occupation on or before the 30th day of June, 2019.

User

(11) (a) Subject to sub-clause (b) of this Special Condition, the lot or any part thereof or any building or part of any building erected or to be erected thereon shall not be used for any purpose other than for private residential purposes.

(b) The lot shall be developed for use as a single family residence provided that the decision of the Director as to whether the lot is developed for use as a single family residence shall be final and binding on the Grantee.

Development conditions

(12) Subject to these Conditions, upon development or redevelopment (which term refers solely to redevelopment contemplated in General Condition No. 6 hereof) of the lot or any part thereof:

Compliance with Buildings Ordinance

(a) any building or buildings erected or to be erected on the lot shall in all respects comply with the Buildings Ordinance, any regulations made thereunder and any amending legislation;



- Compliance with Town Planning Ordinance
- (b) no building or buildings may be erected on the lot or any part thereof or upon any area or areas outside the lot specified in these Conditions, nor may any development or use of the lot or any part thereof, or of any area or areas outside the lot specified in these Conditions take place, which does not in all respects comply with the requirements of the Town Planning Ordinance, any regulations made thereunder and any amending legislation;
- Total gross floor area
- (c) the total gross floor area of any building or buildings erected or to be erected on the lot shall not be less than 176.7 square metres and shall not exceed 294.5 square metres;
- Height
- (d) no part of any building or other structure erected or to be erected on the lot together with any addition or fitting (if any) to such building or structure may in the aggregate exceed a height of 21 metres above the Hong Kong Principal Datum, or such other height limit as the Director at his sole discretion may, subject to the payment by the Grantee of any premium and administrative fee as shall be determined by the Director, approve, provided that:
- (i) machine rooms, air-conditioning units, water tanks, stairhoods and similar roof-top structures may be erected or placed on the roof of the building so as to exceed the above height limit on condition that the design, size and disposition of the said roof-top structures are to the satisfaction of the Director; and
- (ii) the Director at his sole discretion may in calculating the height of a building or structure exclude any structure or floor space referred to in Special Condition No. (34) (b)(i)(II) hereof;
- Maximum number of storeys
- (e) any building or buildings erected or to be erected on the lot shall not exceed 3 storeys including any floor or space below the level of the ground and any floor or space used for the parking of motor vehicles licensed under the Road Traffic Ordinance, any regulations made thereunder and any amending legislation provided that the Director at his sole discretion may in calculating the number of storeys referred to in this sub-clause (e) exclude:
- (i) any floor or space that he is satisfied is constructed or intended to be occupied solely by machinery or equipment for any lift, air-conditioning or heating system or any similar service; and
- (ii) any structure or floor space referred to in Special Condition No. (34)(b)(i)(II) hereof; and
- Design and disposition
- (f) the design and disposition of any building or buildings erected or to be erected on the lot shall be subject to the

approval in writing of the Director and no building works (other than site formation works and the demolition works referred to in Special Condition No. (2) hereof) shall be commenced on the lot until such approval shall have been obtained and for the purpose of these Conditions, "building works" and "site formation works" shall be as defined in the Buildings Ordinance, any regulations made thereunder and any amending legislation.

- Preservation of trees (13) No tree growing on the lot or adjacent thereto shall be removed or interfered with without the prior written consent of the Director who may, in granting consent, impose such conditions as to transplanting, compensatory landscaping or replanting as he may deem appropriate.
- Landscaping (14) The Grantee shall at his own expense landscape and plant with trees and shrubs any portion of the lot and podium (if any) not built upon and thereafter maintain and keep the same in a safe, clean, neat, tidy and healthy condition all to the satisfaction of the Director.
- No exempt building (15) No building shall be erected on the lot of a type which by virtue of the Buildings Ordinance (Application to the New Territories) Ordinance, any regulations made thereunder and any amending legislation is exempted from the provisions of the Buildings Ordinance, any regulations made thereunder and any amending legislation.
- One assignment (16) Notwithstanding anything to the contrary herein contained, the Grantee (which expression shall, for the purpose of this Special Condition only, exclude his executors, administrators and assigns) may, after he has complied with Special Condition Nos. (1) and (3) hereof but before he has in all respects observed and complied with and fulfilled all of his obligations under these Conditions to the satisfaction of the Director, assign the whole of the lot, but not a part thereof, absolutely.
- Restriction on alienation except as a whole (17) Throughout the term hereby agreed to be granted, the Grantee shall not assign, mortgage, charge, underlet, part with possession of or otherwise dispose of:
- (a) subject to sub-clause (b) of this Special Condition, any interest in the lot (including but not limited to any undivided shares therein) or any building or part of any building thereon;
 - (b) the lot except as a whole provided that any assignment, mortgage, charge, underletting, parting with possession or other disposal of the lot as a whole prior to compliance with these Conditions by the Grantee shall be subject to Special Condition No. (18) hereof;
- or enter into any agreement so to do.
- Restriction on alienation before compliance (18) Prior to compliance with these Conditions in all respects to the satisfaction of the Director, the Grantee shall not:



- (a) assign, part with possession of or otherwise dispose of the lot (whether by way of direct or indirect reservation, the grant of any right of first refusal, option or power of attorney, or any other method, arrangement or document of any description) or enter into any agreement so to do;
- (b) solicit or accept, whether directly or indirectly or through a solicitor, agent, contractor or trustee or through a company in which the Grantee or its nominee is directly or indirectly the owner of shares or which is the owner of shares in the Grantee or otherwise, any money, money's worth or other valuable consideration of any description pursuant to any transaction, present or future, conditional or unconditional whereby the lot is or may be sold, assigned or otherwise disposed of or affected, or enter into any agreement so to do;
- (c) underlet the lot or enter into any agreement so to do unless the tenancy or lease of the lot complies with the following terms and conditions:
 - (i) the term of the tenancy or lease shall not exceed 10 years in the aggregate including any right of renewal;
 - (ii) the tenancy or lease shall not commence until after the issue by the Building Authority of an occupation permit or a temporary occupation permit under the Buildings Ordinance, any regulations made thereunder and any amending legislation;
 - (iii) no premium shall be paid by the tenant;
 - (iv) the rent payable shall not exceed a rack rent;
 - (v) no rent shall be payable in advance for a period greater than 12 calendar months;
 - (vi) the user permitted in the tenancy agreement or lease or agreement for tenancy or lease shall comply with these Conditions;
 - (vii) none of the terms and conditions in the tenancy agreement or lease or agreement for tenancy or lease shall contravene these Conditions; or
- (d) mortgage or charge the lot except for the purpose of the development thereof in accordance with these Conditions and then only by way of a building mortgage of the lot, it being agreed that for this purpose a building mortgage shall be one:
 - (i) whereby the lot is mortgaged or charged in favour of a licensed bank or a registered deposit-taking company authorized under section 16 of the Banking

Ordinance to secure monies (and interest thereon) advanced or to be advanced to the Grantee for the purpose only of developing the lot in accordance with these Conditions and for the payment of legal and other professional fees in connection with such development and the mortgage (provided that such fees do not, in the aggregate, exceed 5% of the total amount secured by the mortgage), and for no other purpose; and

- (ii) under which such advances (in the case of work done) are to be made to the Grantee only in amounts to be certified from time to time by the authorized person (appointed by the Grantee under the Buildings Ordinance, any regulations made thereunder and any amending legislation for the development of the lot) as having been incurred by the Grantee for the development of the lot.

Registration (19) Every assignment, mortgage, charge, underletting for more than three years or other alienation of the lot or any part thereof or any interest therein shall be registered at the Land Registry.

Restriction on partitioning (20) The Grantee shall not partition (whether by way of assignment or other disposal or by any other means) the lot.

Residential Parking Spaces (21) (a) Two spaces shall be provided within the lot to the satisfaction of the Director for the parking of motor vehicles licensed under the Road Traffic Ordinance, any regulations made thereunder and any amending legislation, and belonging to the residents of the building or buildings erected or to be erected on the lot and their bona fide guests, visitors or invitees (hereinafter referred to as "the Residential Parking Spaces").

Dimensions of parking spaces (b) The Residential Parking Spaces shall each measure 2.5 metres in width and 5.0 metres in length with a minimum headroom of 2.4 metres.

(c) The Residential Parking Spaces shall not be used for any purpose other than for the purpose set out in sub-clause (a) of this Special Condition and in particular the said spaces shall not be used for the storage, display or exhibiting of motor vehicles for sale or otherwise or for the provision of car cleaning and beauty services.

Parking spaces etc. excluded from gross floor area calculation (22) For the purpose of calculating the total gross floor area referred to in Special Condition No. (12)(c) hereof, there shall not be taken into account the spaces provided in accordance with Special Condition No. (21) hereof.

Vehicular access (23) The Grantee shall have no right of ingress or egress to or from the lot for the passage of motor vehicles except between the points X and Y through Z shown and marked on PLAN I annexed hereto or at such other points as may be approved in writing by the Director. Upon



development or redevelopment of the lot, a temporary access for construction vehicles into the lot may be permitted in such position and subject to such conditions as may be imposed by the Director. Upon completion of the development or redevelopment, the Grantee shall at his own expense within the time limit specified by the Director and in all respects to the satisfaction of the Director, reinstate the area or areas upon which the temporary access was constructed.

Set back

(24) The Grantee shall not cut away, remove or set back any Government land adjacent to or adjoining the lot or carry out any building-up, filling-in or any slope treatment works of any kind whatsoever on any Government land except with the prior written consent of the Director who may, at his sole discretion, give his consent subject to such terms and conditions as he sees fit, including the grant of additional Government land as an extension to the lot at such premium as he may determine.

Cutting away

(25) (a) Where there is or has been any cutting away, removal or setting back of any land, or any building-up or filling-in or any slope treatment works of any kind whatsoever, whether with or without the prior written consent of the Director, either within the lot or on any Government land, which is or was done for the purpose of or in connection with the formation, levelling or development of the lot or any part thereof or any other works required to be done by the Grantee under these Conditions, or for any other purpose, the Grantee shall at his own expense carry out and construct such slope treatment works, retaining walls or other support, protection, drainage or ancillary or other works as shall or may then or at any time thereafter be necessary to protect and support such land within the lot and also any adjacent or adjoining Government or leased land and to obviate and prevent any falling away, landslip or subsidence occurring thereafter. The Grantee shall at all times during the term hereby agreed to be granted maintain at his own expense the said land, slope treatment works, retaining walls or other support, protection, drainage or ancillary or other works in good and substantial repair and condition to the satisfaction of the Director.

(b) Nothing in sub-clause (a) of this Special Condition shall prejudice the Government's rights under these Conditions, in particular Special Condition No. (24) hereof.

(c) In the event that as a result of or arising out of any formation, levelling, development or other works done by the Grantee or owing to any other reason, any falling away, landslip or subsidence occurs at any time, whether in or from any land, within the lot or from any adjacent or adjoining Government or leased land, the Grantee shall at his own expense reinstate and make good the same to the satisfaction of the Director and shall indemnify the Government, its agents and contractors from and against all costs, charges, damages, demands and claims whatsoever which shall or may be made, suffered or incurred through or by reason of such falling away, landslip or subsidence.

(d) In addition to any other rights or remedies herein provided for breach of any of these Conditions, the Director shall be entitled by notice in writing to call upon the Grantee to carry out, construct and

maintain the said land, slope treatment works, retaining walls, or other support, protection, and drainage or ancillary or other works or to reinstate and make good any falling away, landslip or subsidence, and if the Grantee shall neglect or fail to comply with the notice to the satisfaction of the Director within the period specified therein, the Director may forthwith execute and carry out any necessary works and the Grantee shall on demand repay to the Government the cost thereof, together with any administrative or professional fees and charges.

Anchor maintenance

(26) Where prestressed ground anchors have been installed, upon development or redevelopment of the lot or any part thereof, the Grantee shall at his own expense carry out regular maintenance and regular monitoring of the prestressed ground anchors throughout their service life to the satisfaction of the Director and shall supply to the Director such reports and information on all such monitoring works as the Director may from time to time in his absolute discretion require. If the Grantee shall neglect or fail to carry out the required monitoring works, the Director may forthwith execute and carry out the monitoring works and the Grantee shall on demand repay to the Government the cost thereof.

Slopes maintenance
(Green Hatched
Black Area)

(27) (a) The Grantee shall at his own expense carry out and complete to the satisfaction of the Director such geotechnical investigations and such slope treatment, landslide preventive, mitigation and remedial works on the area shown coloured green hatched black on PLAN I annexed hereto (hereinafter referred to as "the Green Hatched Black Area") as the Director in his absolute discretion may require and shall, at all times during the term hereby agreed to be granted, at his own expense, maintain in good and substantial repair and condition to the satisfaction of the Director the Green Hatched Black Area including all land, slope treatment works, earth-retaining structures, drainage and any other works therein and thereon. In the event that any landslip, subsidence or falling away occurs within the Green Hatched Black Area at any time during the term hereby agreed to be granted, the Grantee shall at his own expense reinstate and make good the same to the satisfaction of the Director together with any adjacent or adjoining areas which, in the opinion of the Director (whose decision shall be final and binding on the Grantee), have also been affected. The Grantee shall indemnify the Government, its agents and contractors against all claims, proceedings, costs, damages and expenses whatsoever incurred by reason of such landslip, subsidence or falling away. The Grantee shall ensure at all times that there shall be no illegal excavation or dumping on the Green Hatched Black Area and, subject to the prior written approval of the Director, the Grantee may erect fences or other barriers for the prevention of such illegal excavation or dumping. In addition to any other rights or remedies the Director may have in respect of any breach of these Conditions, the Director may at any time by notice in writing call upon the Grantee to carry out such geotechnical investigations, slope treatment, landslide preventive, mitigation and remedial works and to maintain, reinstate and make good any land, structure or works affected by such landslip, subsidence or falling away, and if the Grantee shall neglect or fail to comply with such notice to the satisfaction of the Director within the period specified therein, the Director may, after the expiry of such period, execute and carry out the

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required works and the Grantee shall on demand repay to the Government the cost thereof.

(b) Notwithstanding sub-clause (a) of this Special Condition, the obligations and rights of the Grantee in respect of the Green Hatched Black Area or any part thereof under this Special Condition shall absolutely determine upon the Government giving to the Grantee notice to that effect, and no claim for compensation shall be made against the Government or the Director or his authorized officer by the Grantee in respect of any loss, damage or disturbance suffered or any expense incurred as a result of such determination. However, such determination shall be without prejudice to any rights or remedies of the Government in respect of any antecedent breach, non-performance or non-observance of the said sub-clause (a).

Spoil or debris

(28) (a) In the event of earth, spoil, debris, construction waste or building materials (hereinafter referred to as "the waste") from the lot, or from other areas affected by any development of the lot being eroded, washed down or dumped onto public lanes or roads or into or onto road-culverts, foreshore or seabed, sewers, storm-water drains or nullahs or other Government properties (hereinafter referred to as "the Government properties"), the Grantee shall at his own expense remove the waste from and make good any damage done to the Government properties. The Grantee shall indemnify the Government against all actions, claims and demands arising out of any damage or nuisance to private property caused by such erosion, washing down or dumping.

(b) Notwithstanding sub-clause (a) of this Special Condition, the Director may (but is not obliged to), at the request of the Grantee, remove the waste from and make good any damage done to the Government properties and the Grantee shall pay to the Government on demand the cost thereof.

Damage to Services

(29) The Grantee shall take or cause to be taken all proper and adequate care, skill and precautions at all times, and particularly when carrying out construction, maintenance, renewal or repair work (hereinafter referred to as "the Works"), to avoid causing any damage, disturbance or obstruction to any Government or other existing drain, waterway or watercourse, water main, road, footpath, street furniture, sewer, nullah, pipe, cable, wire, utility service or any other works or installations being or running upon, over, under or adjacent to the lot or any part thereof or the Green Area or the Brown Area or the Green Hatched Black Area or any combination of any of them (hereinafter collectively referred to as "the Services"). The Grantee shall prior to carrying out any of the Works make or cause to be made such proper search and enquiry as may be necessary to ascertain the present position and levels of the Services, and shall submit his proposals for dealing with any of the Services which may be affected by the Works in writing to the Director for his approval in all respects, and shall not carry out any work whatsoever until the Director shall have given his written approval to the Works and to such aforesaid proposals. The Grantee shall comply with and at his own expense meet any requirements which may be imposed by the Director in respect of the Services in granting the aforesaid approval, including the cost of any necessary diversion, relaying or reinstatement.

The Grantee shall at his own expense in all respects repair, make good and reinstate to the satisfaction of the Director any damage, disturbance or obstruction caused to the lot or any part thereof or the Green Area or the Brown Area or the Green Hatched Black Area or any combination of any of them or any of the Services in any manner arising out of the Works (except for nullah, sewer, storm-water drain or water main, the making good of which shall be carried out by the Director, unless the Director elects otherwise, and the Grantee shall pay to the Government on demand the cost of such works). If the Grantee fails to carry out any such necessary diversion, relaying, repairing, making good and reinstatement of the lot or any part thereof or the Green Area or the Brown Area or the Green Hatched Black Area or any combination of any of them or of any of the Services to the satisfaction of the Director, the Director may carry out any such diversion, relaying, repairing, making good or reinstatement as he considers necessary and the Grantee shall pay to the Government on demand the cost of such works.

Construction of
drains
and channels

(30) (a) The Grantee shall construct and maintain at his own expense and to the satisfaction of the Director such drains and channels, whether within the boundaries of the lot or on Government land, as the Director may consider necessary to intercept and convey into the nearest stream-course, catchpit, channel or Government storm-water drain all storm-water or rain-water falling or flowing on to the lot, and the Grantee shall be solely liable for and shall indemnify the Government and its officers from and against all actions, claims and demands arising out of any damage or nuisance caused by such storm-water or rain-water.

Connecting drains
and sewers

(b) The works of connecting any drains and sewers from the lot to the Government storm-water drains and sewers, when laid and commissioned, may be carried out by the Director who shall not be liable to the Grantee for any loss or damage thereby occasioned and the Grantee shall pay to the Government on demand the cost of such connection works. Alternatively, the said connection works may be carried out by the Grantee at his own expense to the satisfaction of the Director and in such case any section of the said connection works which is constructed within Government land shall be maintained by the Grantee at his own cost and upon demand be handed over by the Grantee to the Government for future maintenance thereof at the expense of the Government and the Grantee shall pay to the Government on demand the cost of the technical audit in respect of the said connection works. The Director may, upon failure of the Grantee to maintain any section of the said connection works which is constructed within Government land, carry out such maintenance works as he considers necessary and the Grantee shall pay to the Government on demand the cost of such works.

Drainage impact
assessment

(31) (a) The Grantee shall within 6 calendar months from the date of this Agreement (or such other extended period as may be approved by the Director), at his own expense and in all respects to the satisfaction of the Director, submit or cause to be submitted to the Director for his written approval a drainage impact assessment (hereinafter referred to as "the Assessment") for all proposed works in connection with the development of the lot.



(b) The technical aspects of the Assessment shall be undertaken by a chartered civil engineer or a member of the Hong Kong Institution of Engineers with civil engineering as the specialist discipline.

(c) The Assessment shall identify all adverse drainage impact resulting from the development of the lot and the Grantee shall at his own expense carry out appropriate mitigation works in all respects to the satisfaction of the Director within such time limit as the Director may require.

(d) No building or any other works (including but not limited to site formation works and the demolition works referred to in Special Condition No. (2) hereof) shall be commenced on the lot or any part thereof until the Assessment has been approved in writing by the Director.

Qualitative
Landfill Gas
Hazard Assessment

(32) (a) The Grantee acknowledges that the lot falls within the 250 metres consultation zone of the restored Ngau Tam Mei Landfill (hereinafter referred to as "the Landfill").

(b) The Grantee shall within 12 calendar months from the date of this Agreement (or such other extended period as may be approved by the Director) at his own expense submit or cause to be submitted to the Director of Environmental Protection for his written approval a qualitative landfill gas hazard assessment report in respect of the Landfill (hereinafter referred to as "the Report") identifying all potential landfill gas problems or hazards and proposing all precautionary and protection measures to mitigate the potential landfill gas problems or hazards so identified and such other problems or hazards as may be identified by the Director of Environmental Protection (hereinafter referred to as "the Mitigation Measures"). The Report shall be prepared by a competent professional person in accordance with Landfill Gas Hazard Assessment Guidance Note and Professional Persons Environmental Consultative Committee Practice Note No. 3/96 (both issued by the Environmental Protection Department).

(c) The Grantee shall at his own expense implement the Mitigation Measures approved in accordance with sub-clause (b) of this Special Condition in all respects to the satisfaction of the Director of Environmental Protection. Upon completion of the Mitigation Measures, a competent professional person representing the Grantee shall confirm in writing to the Director of Environmental Protection that all the Mitigation Measures have been properly implemented.

(d) No building or any other works (including but not limited to site formation works and the demolition works referred to in Special Condition No. (2) hereof) shall be commenced on the lot or any part thereof until the Report has been approved in writing by the Director of Environmental Protection.

(e) The Government shall have no liability in respect of any loss, damage, nuisance or disturbance whatsoever caused to or suffered

by the Grantee whether arising out of or incidental to the Landfill or otherwise, and no claim whatsoever shall be made against the Government by the Grantee in respect of any such loss, damage, nuisance or disturbance.

(33) Wherever in these Conditions it is provided that:

Supervisory and overhead charges

(a) the Government or its duly authorized officers shall or may carry out works of any description on the lot or any part thereof or outside the lot (whether on behalf of the Grantee or on the failure of the Grantee to carry out such works or otherwise) at the cost of the Grantee or that the Grantee shall pay or repay to the Government or to its duly authorized officers on demand the cost of such works, such cost shall include such supervisory and overhead charges as may be fixed by the Government or by its duly authorized officers; or

Prior approval or consent

(b) the prior approval or consent of the Government or its duly authorized officers is required, they may give the approval or consent on such terms and conditions as they see fit or refuse it at their absolute discretion.

Definition of gross floor area

(34) (a) For the purposes of these Conditions, the expression "gross floor area" means the area contained within the external faces of the external walls (or in the absence of such walls the external perimeters) of any building or buildings erected or to be erected on the lot measured at each floor level (including any floor below the level of the ground), together with the area of each balcony in such building or buildings, which shall be calculated from the overall dimensions of the balcony (including the thickness of the sides thereof).

(b) Notwithstanding sub-clause (a) of this Special Condition, the Director at his sole discretion may:

(i) in calculating the gross floor area of any building or buildings erected or to be erected on the lot (in addition to any floor space which may be excluded by Special Condition No. (22) hereof), subject to sub-clause (c) of this Special Condition, exclude:

(I) any sunshade, reflector, any floor space that he is satisfied is constructed or intended to be used solely for the parking of motor vehicles or occupied solely by machinery or equipment for any lift, air-conditioning or heating system or any similar service and any space for refuse disposal;

(II) subject to the payment by the Grantee of any premium and administrative fee as shall be determined by the Director:



(A) any structure or floor space, including, but not limited to, any balcony, utility platform, corridor, lift lobby, communal sky garden, acoustic fin, noise barrier, wing wall, wind catcher or funnel, non-structural prefabricated external wall the thickness of which does not exceed 150 millimetres, or any part thereof (all hereinafter referred to as "environmentally friendly or innovative features") and any other structure or floor space which in the opinion of the Building Authority is an environmentally friendly or innovative feature (as to which the opinion of the Building Authority shall be conclusive) and which, for that reason, has been excluded by the Building Authority from the calculation of gross floor area under the Buildings Ordinance, any regulations made thereunder and any amending legislation; and

(B) any floor space or structure which has been excluded by the Building Authority from the calculation of gross floor area under the Buildings Ordinance, any regulations made thereunder and any amending legislation;

Calculation of gross floor area in buildings with curtain wall system forming external face of building

(ii) accept, for the purpose of calculating the gross floor area, the outer face of the structural elements of the building or buildings erected or to be erected on the lot as the external wall where a curtain wall system forms the external face of any building or buildings erected or to be erected on the lot provided that the outer face of the curtain wall system shall project no more than 200 millimetres from the outer face of the structural elements and provided also that the Director shall have the sole discretion in deciding what comprises a structural element of any building or buildings erected or to be erected on the lot.

Cap on concession

(c) (i) The floor spaces of the features listed below which may in accordance with these Conditions be excluded from the calculation of the total gross floor area stipulated in Special Condition No. (12)(c) hereof shall not in the aggregate exceed 10% of the total gross floor area of the building or buildings erected or to be erected on the lot:

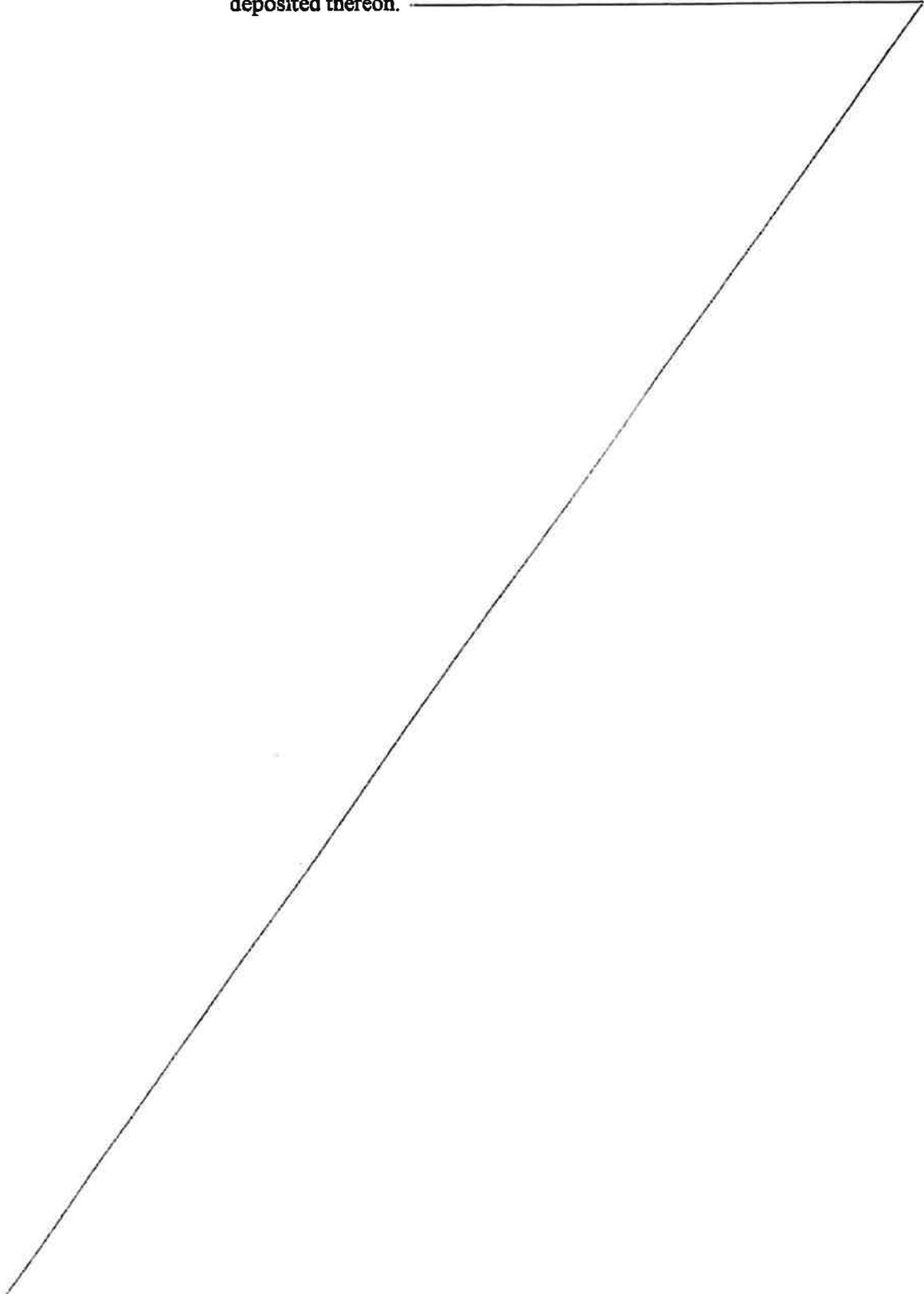


- (I) plant room which has been decided by the Building Authority as non-mandatory or non-essential plant room including but not limited to boiler room, room occupied by machinery or equipment for air-conditioning or heating system, SMATV room (as to which the decision of the Building Authority shall be final and binding on the Grantee), and pipe duct and air duct connected to such plant room;
 - (II) chimney shaft;
 - (III) portion of lift shaft which has been decided by the Building Authority as larger lift shaft (as to which the decision of the Building Authority shall be final and binding on the Grantee);
 - (IV) covered walkway, trellis and horizontal screen not landscaped to the satisfaction of the Building Authority (as to which the decision of the Building Authority shall be final and binding on the Grantee);
 - (V) corridor, lift lobby, balcony, utility platform, and non-structural prefabricated external wall the thickness of which does not exceed 150 millimetres;
 - (VI) void in duplex unit in the building or buildings erected or to be erected on the lot, and void in detached, semi-detached or terraced house erected or to be erected on the lot which is intended for use as a single family residence, and the decision of the Director as to what constitutes a detached, semi-detached or terraced house and whether such house is intended for use as a single family residence shall be final and binding on the Grantee; and
 - (VII) projection which projects more than 750 millimetres from the external wall of the building or buildings erected or to be erected on the lot.
- (ii) In calculating the total gross floor area of the building or buildings erected or to be erected on the lot referred to in sub-clause (c)(i) of this Special Condition, there shall not be taken into account the floor spaces which are excluded from the calculation of the gross floor area of the building or buildings erected or to be erected on the lot in

accordance with these Conditions as to which the decision of the Director shall be final and binding on the Grantee.

No grave or columbarium permitted

(35) No grave or columbarium shall be erected or made on the lot, nor shall any human remains or animal remains whether in earthenware jars, cinerary urns or otherwise be interred therein or deposited thereon.

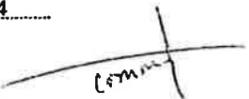


LOT NUMBER: DD/04/4823
 LOT 1: LOT 10
 LOT 11: LOT 20
 LOT 21: LOT 30
 LOT 31: LOT 40
 LOT 41: LOT 50
 LOT 51: LOT 60
 LOT 61: LOT 70
 LOT 71: LOT 80
 LOT 81: LOT 90
 LOT 91: LOT 100

Point	Hong Kong 1980 Grid Coordinates	
	N (m)	E (m)
X	838256.186	824121.777
A	838255.725	824128.550
B	838262.950	824139.875
C	838263.776	824145.986
D	838260.502	824145.941
E	838250.174	824146.689
F	838247.703	824155.396
G	838241.000	824153.000
H	838231.000	824152.000
J	838230.000	824145.500
K	838232.000	824138.000
L	838238.000	824136.000
M	838239.000	824133.500
N	838235.000	824132.500
P	838238.856	824121.248

I, AU Chi-ho, *Land Surveyor/ Yuen Long / *an Authorized Land Surveyor registered under the Land Survey Ordinance (Cap. 473), hereby certify that this land boundary plan has been prepared from land boundary surveys that were carried out by me or under my direct supervision in conformity with the *Land Boundary Survey Regulations / *Code of Practice approved by the Land Survey Authority under the above Ordinance, and that this plan correctly represents that survey completed on the 7th day of Nov 2013.

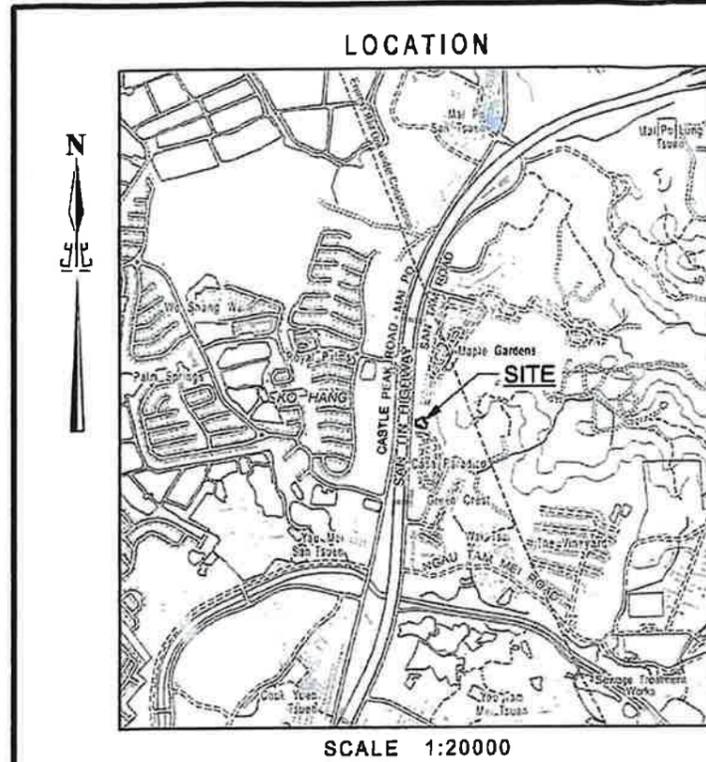
Dated this 13th day of Mar, 2014.


 *Land Surveyor/Yuen Long
 *Authorized Land Surveyor

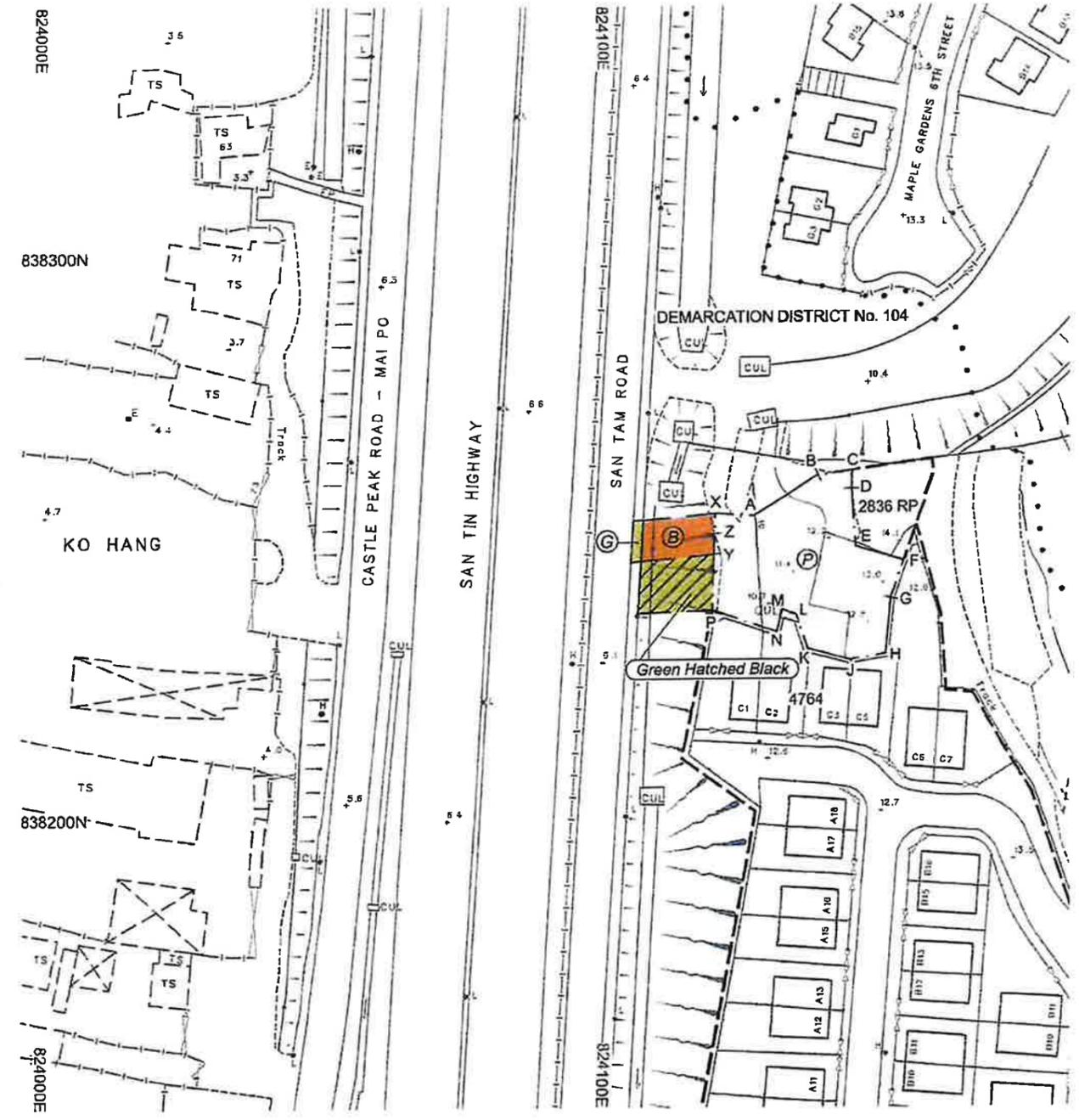
Remarks:

- (1) * - Delete as appropriate.
- (2) The practice requirements laid down in the Land Boundary Survey Regulations of the Lands Department are the same as those in the Code of Practice approved by the Land Survey Authority under the Land Survey Ordinance.

	D1	D1a	D1a	D1b
Field Book	D202251-2	D202251-2	D202251-2	D202251-2
Comp. Folder	YL14882	YL14882	YL14882	YL14882
Svy. Officer	H.Y.LAM	H.Y.LAM	H.Y.LAM	H.Y.LAM
Tech. Officer	K.F.LIU	K.F.LIU	K.F.LIU	K.F.LIU
Date	14/11/2013	03/01/2014	03/03/2014	13/03/2014
ALS Plan No.	—	—	—	—
Plan No.	YL14882-D1	YL14882-D1a	YL14882-D1a	YL14882-D1b

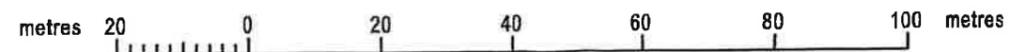


SIDE	DISTANCE IN METRES	BEARING	Pt.	CORNER MARKED BY
X A	6.789	93 53 36		
A B	13.433	57 27 48		
B C	6.167	82 18 08		
C D	3.274	180 47 15		
D E	10.355	175 51 27		
E F	9.051	105 50 37		
F G	7.118	199 40 20		
G H	10.050	185 42 40		
H J	6.576	261 15 10		
J K	7.762	284 55 50		
K L	6.325	341 33 50		
L M	2.693	291 48 10		
M N	4.123	194 02 10		
N P	11.894	288 55 00		
P X	17.338	1 44 54		



COLOURED PINK AREA 736.3 SQUARE METRES (ABOUT)

SCALE 1:1 000



 District Lands Office, Yuen Long
 Lands Department
 Plan Prepared by District Survey Office, Yuen Long
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LOT No. 4823 IN DEMARCATION DISTRICT No. 104

PLAN I

DISTRICT LANDS OFFICE
YUEN LONG
LANDS DEPARTMENT



Lee Yung Kit
LEE YUNG KIT

Execution by the Grantee,
Wonder Pacific Development Limited

(Name: *Chan Tak Yan*)
Chan Tak Yan

Witness to the Execution by the Grantee,
Wonder Pacific Development Limited

(Name: *Ms. L.L. Chiu*)
Ms. L.L. CHIU

District Lands Officer, Yuen Long

(Name: *Fung Lai Foon*)
FUNG LAI FOON

Witness to the Signature of
District Lands Officer, Yuen Long
Civil Servant,
Lands Department

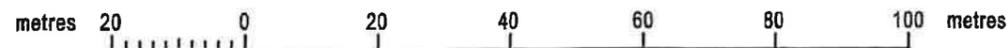
9th December 2015
Date



- SPECIAL CONDITIONS REFER
-  Brown
 -  Green
 -  Green Hatched Black
- POINTS X, Y, Z

COLOURED PINK AREA 736.3 SQUARE METRES (ABOUT)

SCALE 1:1 000



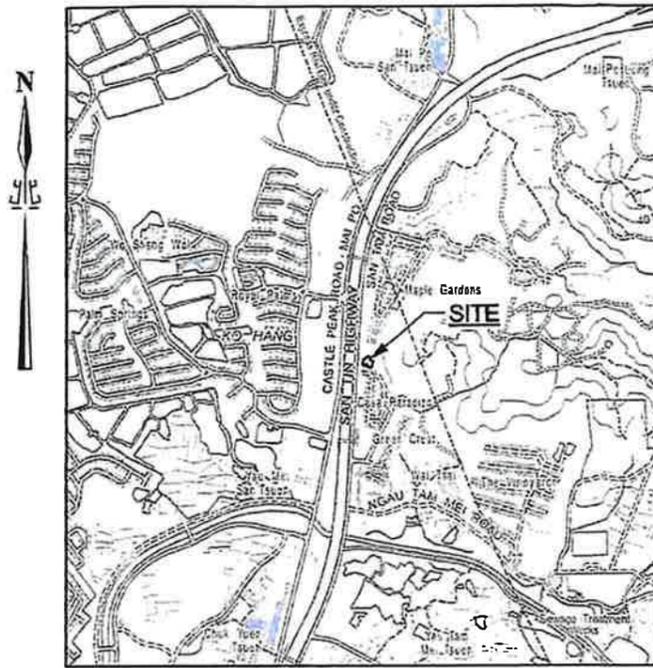
LOT No. 4823 IN DEMARCATION DISTRICT No. 104

File No. DLOYL515/YLT/2012C, DSO/YL/WI/794/2012
Survey Sheet No. 2-SE-17A
Layout Plan No. -----
Reference Plan No. -----
ALS Plan No. -----

PLAN No. YL14882-D1b

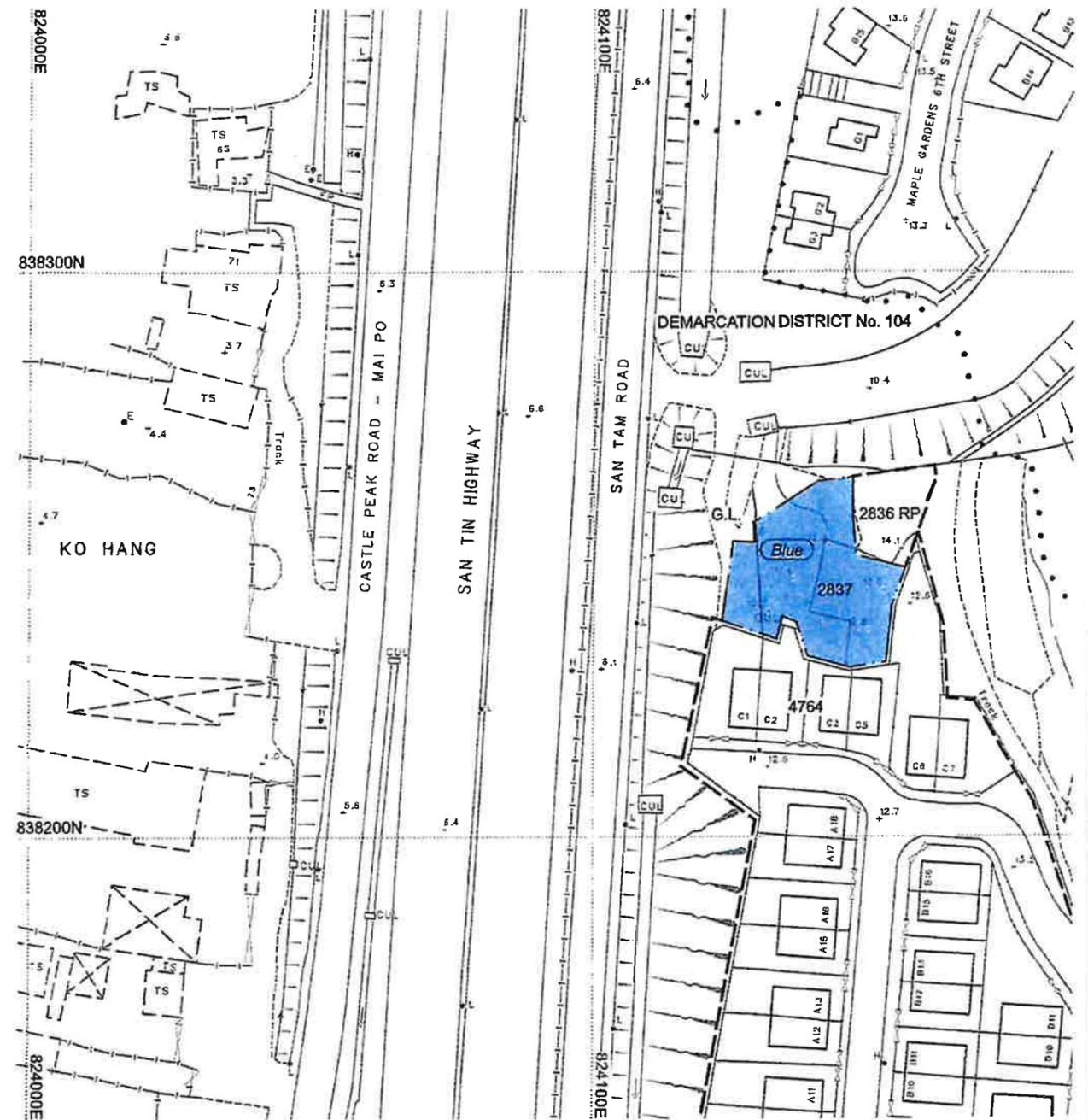
Date : 13/03/2014

LOCATION

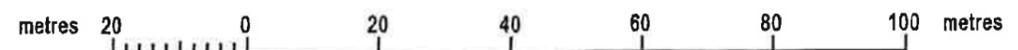


SCALE 1:20000

Blue	AREA TO BE SURRENDERED	
DEMARICATION DISTRICT No. 104 LOT No.	SQUARE METRES (ABOUT)	
2837	607	



SCALE 1:1000



	II	IIa	IIb
Field Book	---	---	---
Comp. Folder	---	---	---
Svy. Officer	---	---	---
Tech. Officer	K.F.LIU	K.F.LIU	K.F.LIU
Date	14/11/2013	03/01/2014	13/03/2014
ALS Plan No.	---	---	---
Plan No.	YL14882-II	YL14882-IIa	YL14882-IIb

FOR IDENTIFICATION PURPOSES ONLY

 District Lands Office, Yuen Long
Lands Department

Plan Prepared by District Survey Office, Yuen Long
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SURRENDER PLAN
DEMARICATION DISTRICT No. 104

PLAN II

DISTRICT LANDS OFFICE
YUEN LONG
LANDS DEPARTMENT



LEB Yung Kit
LEB YUNG KIT

Execution by the Grantee,
Wonder Pacific Development Limited

(Name: *Chan Tak Yan*)
Chan Tak Yan

Witness to the Execution by the Grantee,
Wonder Pacific Development Limited

(Name: *Ms. L.L. CHIU*)
Ms. L.L. CHIU

District Lands Officer, Yuen Long

(Name: *FUNG LAI FOON*)
FUNG LAI FOON

Witness to the Signature of
District Lands Officer, Yuen Long
Civil Servant,
Lands Department

9th December 2015
Date



SCALE 1:1 000



SURRENDER PLAN
DEMARICATION DISTRICT No. 104

File No. DLOYL515/YLT/2012G, DSO/YL/W/794/2012
Survey Sheet No. 2-SE-17A
Layout Plan No. ----
Reference Plan No. ----
ALS Plan No. ----
PLAN No. YL14882-Iib

Date : 13/03/2014

MEMORANDUM OF AGREEMENT

Memorandum that Wonder Pacific Development Limited 成暉發展有限公司 whose registered office is situate at Unit 1601, 16/F, Stelux House, 698 Prince Edward Road East, San Po Kong, Kowloon, Hong Kong, has this day agreed to carry out the terms and conditions of the foregoing Conditions of Exchange and the Grantee hereby agrees fully to observe and perform the said Conditions and to be bound thereby and the District Lands Officer, Yuen Long on behalf of the Chief Executive of the Hong Kong Special Administrative Region hereby ratifies and confirms the said Exchange on the above Conditions.

Dated this 9th day of December 2015


.....
Chan Tak Yan
Witness to the execution by the Grantee,
Wonder Pacific Development Limited


.....
LEE YING KIT
Execution by the Grantee, Wonder
Pacific Development Limited



Address Unit 1601, 16/F,
Stelux House, 698 Prince Edward
Road East, San Po Kong, Kowloon

Witness to the signature of
District Lands Officer, Yuen Long


.....
FUNG LAI FOON
Civil Servant,
Lands Department


.....
Ms. L.L. CHIU
District Lands Officer, Yuen Long

NEW GRANT NO. 22253

Dated 9th day of December 2015

AGREEMENT

AND

CONDITIONS OF EXCHANGE

of

Lot No. 4823 in Demarcation District No. 104

**Grantee : Wonder Pacific Development Limited
成暉發展有限公司**

**Rent : As specified in General Condition
No. 1**

**Term : Fifty years from the date of the
Memorandum of Agreement**

Lands Department



S12A Amendment of Plan Application,
Approved Ngau Tam Mei Outline Zoning Plan No. S/YL-NTM/12
Proposed Rezoning from “R(C)” to “G/IC” for a Proposed “Social Welfare Facilities”
(Residential Care Homes for the Elderly) (RCHE)
At Lot 4823 in DD 104, 81 San Tam Road, San Tin, N.T.
Responses to Comments by Email on 4 Jan 2023
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Appendix II

Planter on Roof
 Flat Roof Set Back On
 9/F With Planter

Vertical Greenery

Sky Garden

Existing Green
 Hatched Black Area

Existing Brown Area

2202
 PROPOSED RESIDENTIAL CARE HOME FOR ELDERLY
 at 81 SAN TAM ROAD,
 YUEN LONG, N.T.

FRONT VIEW SHOWING GREENERY

Figure 13 NTS (A3) A

JUL. 2022
 MAY. 2022

*Do not scale drawing.
 Contractors are required to verify exact dimensions on site.
 The drawings show the design intent of the architect only, contractors are required to
 submit shop drawings where appropriate.
 The design remains to be the property of "RLEE Architects (HK) Ltd" unless
 otherwise specified.
 This drawing is not for construction purposes unless expressly certified.*

RLEE

S12A AMENDMENT OF PLAN APPLICATION
APPROVED NGAU TAM MEI
OUTLINE ZONING PLAN NO. S/YL-NTM/12

PROPOSED REZONING FROM "R(C)" TO "G/IC"
FOR A PROPOSED "SOCIAL WELFARE FACILITIES"
(RESIDENTIAL CARE HOMES FOR THE ELDERLY)
(RCHE)

AT LOT 4823 IN D.D.104, 81 SAN TAM ROAD,
SAN TIN, N.T.

TECHNICAL NOTE OF METHODOLOGY ON
YEAR 2042 TRAFFIC FORECASTS FOR
TRAFFIC NOISE IMPACT ASSESSMENT (TNIA)



**S12A Amendment of Plan Application,
Approved Ngau Tam Mei Outline Zoning Plan No. S/YL-NTM/12
Proposed Rezoning from “R(C)” to “G/IC” for a Proposed “Social Welfare Facilities”
(Residential Care Homes for the Elderly) (RCHE)
At Lot 4823 in DD 104, 81 San Tam Road, San Tin, N.T.
Technical Note of Methodology on Year 2042 Traffic Forecasts for
Traffic Forecasts for Traffic Noise Impact Assessment (TNIA)**

1. Objective

- 1.1 This technical note summarizes the methodology and results of the traffic forecasts in support of the Traffic Noise Impact Assessment (TNIA) for the Proposed Rezoning from “R(C)” to “G/IC” for a Proposed “Social Welfare Facilities” (Residential Care Homes for the Elderly) (RCHE) at Lot 4823 in DD 104, 81 San Tam Road, San Tin, N.T..

2. Approach

- 2.1 The Annual Growth Rate Method has been adopted.

3. Methodology

- 3.1 The proposed Residential Care Home for the Elderly (RCHE) is planned to be completed by year 2027 tentatively and hence year 2042 traffic forecasts (i.e. year 2027 +15 years) for the roads within the 300m catchment area are required and summarized in **Appendix A**.

COVID-19 Factor

- 3.2 Due to effect of COVID-19, the surveyed traffic flows may be much less than that of the normal conditions. The COVID-19 factor has been derived by comparing the selected ATC core station with the ATC 2015-2019 record flow as shown in **Table 3.1**. A percentage of 1.33% per annum is found and applied to ATC 2019 record flows to generate a year 2021 reference flows as shown in **Table 3.2**.



Table 3.1 Historical Traffic Data from the ATC

Core Stn.	Road Name	2015	2016	2017	2018	2019	2015 to 2019
5016	San Tin Highway, Castle Peak Road & San Tam Road	86,180	92,230	90,650	86,230	90,860	1.33%

Table 3.2 Comparison of 2021 Reference Flows and ATC 2021 Record Flow

Core Stn.	Road Name	ATC 2019 Record Flow	2021 Reference Flows (2019ATC Record Flow x 1.33%)	ATC 2021 Record Flow
5016	San Tin Highway, Castle Peak Road & San Tam Road	90,860	93,295	86,620

- 3.3 To compare with 2021 reference flows with ATC 2021 record flows and hence the COVID-19 factor of 1.08 is adopted and applied to 2022 existing traffic flows, e.g.:

COVID-19 factor:

2019 ATC record flow x adopted growth factor from 2015-2019 ATC record flow /2021 ATC record flow =1.08

Annual Growth Rate

- 3.4 In order to assess the impact of the proposed development related traffic on the road links required, reference is made to the growth factor in Annual Traffic Census (ATC) which is summarized in below **Table 3.3**.

Table 3.3 Historical Traffic Data from Annual Traffic Census (ATC)

ATC Stn.	Road Name	Annual Average Daily Traffic (AADT)						Avg. Annual Growth Rate (2015-2019)
		2015	2016	2017	2018	2019	2020	
5016	San Tin Highway, Castle Peak Rd & San Tam Rd (From Kam Tin Road to Fairview Park Boulevard)	86,180	92,230	90,650	86,230	90,860	81,870	1.33%



S12A Amendment of Plan Application,
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(Residential Care Homes for the Elderly) (RCHE)
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Technical Note of Methodology on Year 2042 Traffic Forecasts for
Traffic Noise Impact Assessment (TNIA)

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5257	Castle Peak Rd - Tam Mi, Mai Po & San Tin (From Fairview Paark Boulevard to Lok Ma Chau Road)	10,510 *	10,940 *	10,770 *	11,980	11,910	11,420 *	3.18%
5297	San Tam Rd (From Castle Peak Road - Mai Po to Fairview Park Boulevard RA)	6,140 *	6,400 *	6,300 *	8,540	7,530	7,220 *	5.23%
5505	San Tam Road (From Fairview Park Boulevard RA to End)	12,090	12,590*	12,390*	12,700*	13,330	13,420	2.47%
5508	San Tin Highway (From Fairview Park Boulevard to Lok Ma Chau Road)	85,910	90760*	90,110*	92,980*	80,460	82,010	-1.63%
Total		200,830	212,920	210,220	212,430	204,090	195,940	0.40%

Notes:

1. *AADT estimated by Growth factor
2. Due to Covid-19, the data for 2020 are considered not accurate and not included.

Planning Data

- 3.5 Reference has also been made to the “Projections of Population Distribution 2021-2029” published by Planning Department on Population Distribution Projections. The annual growth rates of the Tertiary Planning Units in the vicinity are summarized in Table 3.4.

Table 3.4 Projected Populations of Selected Tertiary Planning Units

Tertiary Planning Units (TPU)	Projected Population		Annual Average Growth Rate (2019-2025)
	2019	2025	
543&546	4,300	5,000	2.55%
544	3,000	3,000	0.00%
541	19,400	18,200	-1.60%
542	13,800	14,100	0.36%
525	1,400	1,600	2.25%
526	11,200	12,400	1.71%
Total	53,100	54,300	0.37%



3.6 Reference has also been made to the latest 2019-Based Territorial Population Employment Data Matrices (TPEDM) planning data published by the Planning Department for projection of population and employment within the study district. The average annual growth rates in terms of population and employment from 2019 to 2031 are tabulated in **Table 3.5**.

Table 3.5 2019-Based Planning Data from 2019 to 2031

Yuen Long				
Data	Year			Average Annual Growth Rate (2019-2031)
	2019	2026	2031	
Population	175,150	172,350	159,850	-0.76%
Employment	68,100	70,700	70,250	0.26%
Total	243,250	243,050	230,100	-0.46%

Adopted Growth Rate

- 3.7 A.A.D.T. of ATC indicates that the traffic flow of the local road network has an average annual growth rate of **+0.40%** from year 2015 to year 2019.
- 3.8 The population projections of selected Tertiary Planning Units show that an annual growth rate of **+0.37%** is expected in the study area.
- 3.9 Whilst, the planning data indicates that the population and employment of the study area are expected to grow with an average annual growth rate of **-0.46%**.
- 3.10 As a conservative approach, annual growth rate **+1% p.a.** is adopted for the traffic forecast from 2022 to 2042. 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.

Proposed Development

3.11 The proposed development parameters for the proposed use are summarized in **Table 3.6**.



Table 3.6 Proposed Development Parameters

Site Location	Lot 4823 in DD 104, 81 San Tam Road, San Tin, N.T.
Proposed Use	Residential Care Home for the Elderly (RCHE)
Site Area	About 736.3 m ²
Total Accountable GFA	About 5,400 m ²
No. of Storeys	10
No. of Beds	142

3.12 It is noted that traffic rates of both generation and attraction for proposed Residential Care Home for the Elderly (RCHE) are not specified in the latest Transport Planning & Design Manual (T.P.D.M.).

3.13 The estimation of traffic trips due to the proposed development is based on in-house surveys carried out at Tung Wah Group of Hospitals - Wong Cho Tong Social Service Building with total 278 beds in the building. The traffic trips and the estimated trip rates are summarized in Table 3.7 and Table 3.8.

Table 3.7 In-house Traffic Trips of Reference Building

Use	Units	AM Peak		PM Peak	
		Gen.	Att.	Gen.	Att.
Surveyed Traffic Trips					
TWGHs Wong Cho Tong Social Service Building -IN/OUT of Building	(pcu/hr)	14	11	14	11
TWGHs Wong Cho Tong Social Service Building - Loading/Unloading activities of Building	(pcu/hr)	10	8	10	8
Total Traffic Trip	(pcu/hr)	24	19	24	19

Table 3.8 Estimated Traffic Trip Rates of Reference Building

Use	Units	AM Peak		PM Peak	
		Gen.	Att.	Gen.	Att.
Total Traffic Trip	(pcu/hr)	24 ⁽¹⁾	19 ⁽¹⁾	24 ⁽¹⁾	19 ⁽¹⁾
Estimated Traffic Trip Rates (278 beds)					
TWGHs Wong Cho Tong Social Service Building	(pcu/hr/bed)	0.0863	0.0684	0.0432	0.0576

Note:

(1) Based on traffic trips in Table 3.7.

3.14 Based on the in-house traffic trip rates related to the proposed development, the adopted traffic trips of the proposed development are calculated and shown in below Table 3.9.



Table 3.9 Traffic Trips of the Proposed Development

Proposed Development	Unit/ Parameter	Trip Generation (pcu/hr)			
		AM Peak		PM Peak	
		Gen.	Att.	Gen.	Att.
Adopted Traffic Trip Rates					
Proposed RCHE	(pcu/hr/bed)	0.0863 ⁽¹⁾	0.0684 ⁽¹⁾	0.0432 ⁽¹⁾	0.0576 ⁽¹⁾
Adopted Traffic Trips Generation					
Proposed RCHE	142 beds	12	10	6	8

Note:

(1) Based on traffic trip rates in Table 3.8.

Adjacent Developments

3.15 To fully reflect the traffic growth that would contribute to the adjacent road network, latest planning data has been obtained from Planning Department. The future planned developments in the vicinity provided and agreed by Planning Department are summarized in below Table 3.9.

Table 3.9 Planned Developments in the Vicinity

Application No.	Type	Key Development Parameters ⁽¹⁾
Ongoing S12A Applications in the Vicinity⁽¹⁾		
Y/YL-NTM/5	Residential	1,980 residential units
Y/YL-NTM/6	Residential	<ul style="list-style-type: none"> • 1,990 residential units • 6,485m² commercial GFA
Y/YL-NTM/7	Residential	<ul style="list-style-type: none"> • 12,575 residential units • 39,265m² commercial GFA • Neighbourhood Elderly Centre (NEC) • Child Care Centre (CCC)
Y/YL-MP/6	Residential	<ul style="list-style-type: none"> • 3,090 residential units • 2,363m² retail GFA • 6-classroom kindergarten • 100-place RCHE • Neighbourhood Elderly Centre (NEC)
Y/YL-ST/1	Residential	<ul style="list-style-type: none"> • 2,075m² Retail GFA • 4,176 residential units • 100-place child care centre • 6-classroom kindergarten



S12A Amendment of Plan Application,
Approved Ngau Tam Mei Outline Zoning Plan No. S/YL-NTM/12
Proposed Rezoning from “R(C)” to “G/IC” for a Proposed “Social Welfare Facilities”
(Residential Care Homes for the Elderly) (RCHE)
At Lot 4823 in DD 104, 81 San Tam Road, San Tin, N.T.
Technical Note of Methodology on Year 2042 Traffic Forecasts for
Traffic Noise Impact Assessment (TNIA)

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Y/YL-NSW/7	Residential	<ul style="list-style-type: none"> • 900m² Retail GFA • 1,997 residential units • 4-classroom kindergarten • 100-place child care centre
Y/YL-NTM/8	Residential	<ul style="list-style-type: none"> • 6,276 residential units • 67,000m² GFA for GIC facilities
Y/YL-MP/6	Residential	3,090 residential units
Y/YL-MP/7	Residential	1,228 residential units
Y/YL-MP/8	Residential	1,249 residential units
Y/YL-NSW/8	Residential	<ul style="list-style-type: none"> • 6,825 residential units • 750m² retail GFA • 4 nos. of GIC facilities <ul style="list-style-type: none"> - 1 no. of NEC - 100-place CCC - 100-place RCHE - 80-place Day Care Centre for Elderly
Y/YL-NSW/9	Residential	<ul style="list-style-type: none"> • 3,115 residential units • 6,000m² Retail GFA • 1 Primary school • 3 Kindergartens • 1 relocated soy sauce factory
Approved S16 Applications in the Vicinity⁽¹⁾		
A/YL-MP/247	Residential	Domestic GFA about 16,200m ² for 105 houses
A/YL-MP/287	Residential	Domestic GFA about 7,540m ² for 65 houses
A/YL-NSW/274	Residential	Domestic GFA about 70,328m ² for 1,518 flats
A/YL-NTM/178-2	Residential	Domestic GFA about 45,197m ² for 300 houses
A/YL-MP/291	Residential	268 houses
A/YL-NSW/241	Retail	37,171 m ² retail GFA

Note:

(1) Information provided and agreed by Planning Department.

3.16 The traffic generations and attractions of the adjacent development are summarized in **Table 3.10**.



Table 3.10 Estimated Traffic Generations & Attractions of the Adjacent Developments in Vicinity

Application No.	Type	Estimated Trip Generation (pcu/hr)			
		AM Peak		PM Peak	
		Gen.	Att.	Gen.	Att.
Y/YL-NTM/5	Residential	143 ⁽¹⁾	85 ⁽¹⁾	57 ⁽¹⁾	74 ⁽¹⁾
Y/YL-NTM/6	Residential	60 ⁽¹⁾	60 ⁽¹⁾	45 ⁽¹⁾	55 ⁽¹⁾
Y/YL-NTM/7	Residential	1,013 ⁽²⁾	651 ⁽²⁾	502 ⁽²⁾	626 ⁽²⁾
Y/YL-MP/6	Residential	301 ⁽¹⁾	219 ⁽¹⁾	133 ⁽¹⁾	155 ⁽¹⁾
Y/YL-ST/1	Residential	350 ⁽¹⁾	229 ⁽¹⁾	164 ⁽¹⁾	200 ⁽¹⁾
Y/YL-NSW/7	Residential	209 ⁽¹⁾	150 ⁽¹⁾	90 ⁽¹⁾	107 ⁽¹⁾
Y/YL-NTM/8	Residential	721 ⁽¹⁾	518 ⁽¹⁾	453 ⁽¹⁾	537 ⁽¹⁾
Y/YL-MP/6	Residential	301 ⁽¹⁾	219 ⁽¹⁾	133 ⁽¹⁾	155 ⁽¹⁾
Y/YL-MP/7	Residential	211 ⁽¹⁾	150 ⁽¹⁾	86 ⁽¹⁾	99 ⁽¹⁾
Y/YL-MP/8	Residential	211 ⁽¹⁾	150 ⁽¹⁾	86 ⁽¹⁾	99 ⁽¹⁾
Y/YL-NSW/8	Residential	427 ⁽¹⁾	222 ⁽¹⁾	103 ⁽¹⁾	143 ⁽¹⁾
Y/YL-NSW/9	Residential	120 ⁽¹⁾	51 ⁽¹⁾	-92 ⁽¹⁾	-117 ⁽¹⁾
A/YL-MP/247	Residential	29 ⁽²⁾	19 ⁽²⁾	17 ⁽²⁾	25 ⁽²⁾
A/YL-MP/287	Residential	15 ⁽²⁾	8 ⁽²⁾	7 ⁽²⁾	10 ⁽²⁾
A/YL-NSW/274	Residential	95 ⁽²⁾	65 ⁽²⁾	46 ⁽²⁾	61 ⁽²⁾
A/YL-NTM/178-2	Residential	84 ⁽²⁾	54 ⁽²⁾	50 ⁽²⁾	72 ⁽²⁾
A/YL-MP/291	Residential	87 ⁽¹⁾	70 ⁽¹⁾	76 ⁽¹⁾	109 ⁽¹⁾
A/YL-NSW/241	Residential	86 ⁽¹⁾	91 ⁽¹⁾	116 ⁽¹⁾	133 ⁽¹⁾

Notes:

(1) Information as obtained from submitted TIA reports.

(2) Traffic Trips have been estimated by the trip generation and attraction rates as stipulated in Volume 1 Chapter 3 Annex C Table 1 of the latest T.P.D.M. and internal trip rates.

Formulation

3.17 Therefore, the traffic forecasts for design year 2042 can be derived based on the following formula with data as shown in **Tables 3.1** to **Table 3.10**:

$$\text{Year 2042 Traffic Flow} = \frac{\text{Year 2022 Observed Traffic Flow}}{\text{Adopted COVID-19 Factor 1.08}} \times (1+1\%)^{20} + \text{Adjacent Developments} + \text{Proposed Development}$$

3.18 As a result, the traffic forecasts for design year 2042 have been estimated and summarized in **Appendix A**.



S12A Amendment of Plan Application,
Approved Ngau Tam Mei Outline Zoning Plan No. S/YL-NTM/12
Proposed Rezoning from “R(C)” to “G/IC” for a Proposed “Social Welfare Facilities”
(Residential Care Homes for the Elderly) (RCHE)
At Lot 4823 in DD 104, 81 San Tam Road, San Tin, N.T.
Technical Note of Methodology on Year 2042 Traffic Forecasts for
Traffic Noise Impact Assessment (TNIA)

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Appendix A

Year 2042 Traffic Forecasts for TNIA

S12A Amendment of Plan Application,

Approved Ngau Tam Mei Outline Zoning Plan No. S/YL-NTM/12

Proposed Rezoning from “R(C)” to “G/IC” for a Proposed “Social Welfare Facilities”

(Residential Care Homes for the Elderly) (RCHE)

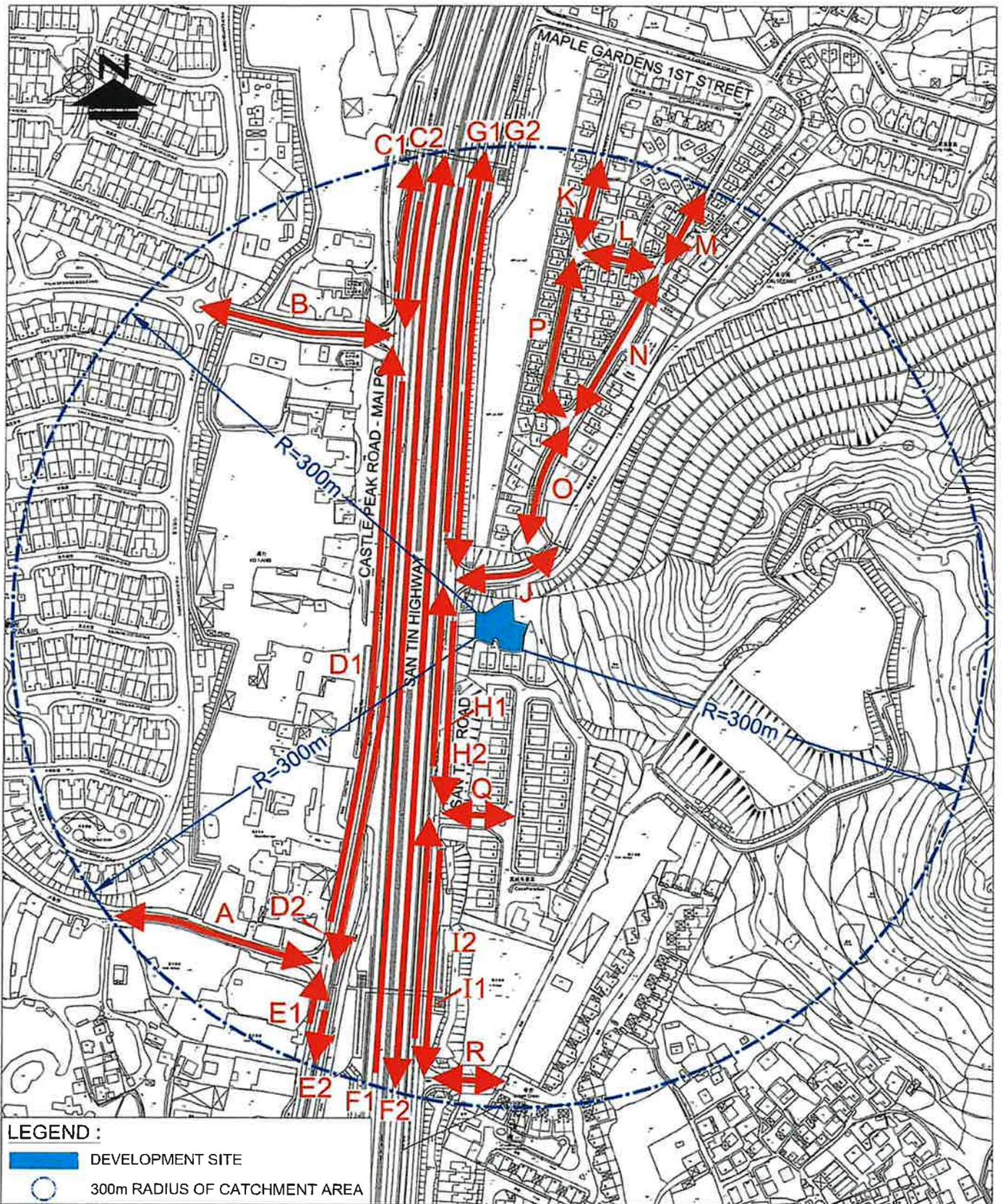
At Lot 4823 in DD 104, 81 San Tam Road, San Tin, N.T.

2042 Traffic Forecasts for Traffic Noise Impact Assessment (TNIA)

Road Link	Road Name	Direction	Road Type	Road Speed	2042 AM Peak		2042 PM Peak	
					Peak Hour Traffic Flows (in veh/hr)	% of HV ⁽¹⁾	Peak Hour Traffic Flows (in veh/hr)	% of HV ⁽¹⁾
A	Geranium Path	Two-way	Local Road	50	30	10%	30	10%
B	Royal Palms Boulevard	Two-way	Local Road	50	580	10%	565	10%
C1	Castle Peak Road - Mai Po	NB	Rural Road	50	770	34%	690	30%
C2	Castle Peak Road - Mai Po	SB	Rural Road	50	1,185	34%	640	23%
D1	Castle Peak Road - Mai Po	NB	Rural Road	50	940	25%	900	19%
D2	Castle Peak Road - Mai Po	SB	Rural Road	50	1,490	20%	790	18%
E1	Castle Peak Road - Mai Po	NB	Rural Road	50	915	23%	870	17%
E2	Castle Peak Road - Mai Po	SB	Rural Road	50	1,515	21%	815	20%
F1	San Tin Highway	NB	Expressway	100	4,700	26%	4,030	25%
F2	San Tin Highway	SB	Expressway	100	4,815	30%	5,025	20%
G1	San Tam Road	NB	Rural Road	50	740	17%	595	10%
G2	San Tam Road	SB	Rural Road	50	950	22%	650	20%
H1	San Tam Road	NB	Rural Road	50	700	15%	670	10%
H2	San Tam Road	SB	Rural Road	50	1,005	20%	585	20%
I1	San Tam Road	NB	Rural Road	50	685	15%	665	10%
I2	San Tam Road	SB	Rural Road	50	1,005	20%	585	20%
J	Access Road	Two-way	Local Road	50	25	10%	30	10%
K	Maple Gardens 5th Street	Two-way	Local Road	50	30	10%	30	10%
L	Maple Gardens 4th Street	Two-way	Local Road	50	30	10%	30	10%
M	Maple Gardens 6th Street	Two-way	Local Road	50	30	10%	30	10%
N	Maple Gardens 6th Street	Two-way	Local Road	50	30	10%	30	10%
O	Maple Gardens 6th Street	Two-way	Local Road	50	30	10%	30	10%
P	Maple Gardens 5th Street	One-way	Local Road	8	30	10%	30	10%
Q	Access Road	Two-way	Local Road	50	55	10%	55	10%
R	Access Road	Two-way	Local Road	50	55	10%	55	10%

Note:

(1) HV includes Light Van, Public Light Bus, Light Goods Vehicle, Medium Goods Vehicle, Heavy Goods Vehicle and Container/Tractor, Coach and Bus.



LEGEND :

- DEVELOPMENT SITE
- 300m RADIUS OF CATCHMENT AREA

FIGURE NO.:	1	PROJECT TITLE:	Proposed Rezoning for Proposed RCHE at 81 San Tam Road, San Tin
PROJECT NO.:	22069HK	DRAWING TITLE:	INDEX PLAN
SCALE:	DATE:		
1 : 3250 @A4	17 JUN 2022		CTA Consultants Limited 志達顧問有限公司

**S12A AMENDMENT OF PLAN APPLICATION
APPROVED NGAU TAM MEI
OUTLINE ZONING PLAN NO. S/YL-NTM/12**

**PROPOSED REZONING FROM “R(C)” TO “G/IC”
FOR A PROPOSED “SOCIAL WELFARE FACILITIES”
(RESIDENTIAL CARE HOMES FOR THE ELDERLY)
(RCHE)**

**AT LOT 4823 IN D.D.104, 81 SAN TAM ROAD,
SAN TIN, N.T.**

Chapter 2

Supporting Planning Statement

**S12A AMENDMENT OF PLAN APPLICATION
APPROVED NGAU TAM MEI
OUTLINE ZONING PLAN NO. S/YL-NTM/12**

**PROPOSED REZONING FROM "R(C)" TO "G/IC"
FOR A PROPOSED "SOCIAL WELFARE FACILITIES"
(RESIDENTIAL CARE HOMES FOR THE ELDERLY)
(RCHE)**

**AT LOT 4823 IN D.D.104, 81 SAN TAM ROAD,
SAN TIN, N.T.**

**SUPPORTING PLANNING STATEMENT
JULY 2022**

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Appendix 6

— Quantitative Risk Assessment Report For High Pressure Town Gas Pipeline



Executive Summary

This Planning Application is prepared and submitted on behalf of Wonder Pacific Development Limited ("the Applicant") to seek approval from the Town Planning Board ("TPB" / the Board") under section 12A of the Town Planning Ordinance for a proposed amendment to the approved Ngau Tam Mei Outline Zoning Plan ("the approved OZP") No. S/YL-NTM/12. The proposed amendment is to rezone a site from "R(C)" to "G/IC" to allow the development of a RCHE.

The proposed development is a 10-storey RCHE comprising about 142 bedspaces. The Application Site is proximate to the planned Northern Link Ngau Tam Mei Station and the Northern Metropolis Development. The proposed development would make optimal use of scarce land resources to address the demand for elderly home care services in the vicinity. As detailed in the Planning Statement, the proposed development is fully justified to the following reasons:

- The proposed development is in line with the Government's recent Policy Direction to increase RCHEs bedspace supply and would alleviate the shortfall of RCHEs in Ngau Tam Mei and the Northern Metropolis Development which plan to house another 2.5 million people.
- Since the launch of Encouragement Scheme by the Social Welfare Department in 2003, only one RCHE complying the standard completed in 2019. The approval of this S12A application would aid in speeding up the supply further.
- The GFA of 5,400 sm of the proposed development comply with the Conditions to encourage provision of RCHEs premises in new private development and is eligible for exemption from assessment of premium which could provide timely elderly home care services in the Ngau Tam Mei Area.



- The Lot is under the Applicant's sole ownership and could speedily redeveloped upon TPB approval.
- The proposed RCHE, although bearing higher Plot Ratio and no. of storeys than the original "R(C)" zoning, is justified by comparison to similar "G/IC" zones adjoining low-density developments.
- Technical assessments demonstrated that the proposed development would not result in insurmountable visual, traffic, environmental, sewerage and drainage impacts on the surrounding areas.

In view of the above and the list of detailed planning justifications in this Planning Statement, the Board is respectfully requested to consider the current planning application favourably.

行政摘要

(以英文版本為準)

此規劃申請是代表申請人“成暉發展有限公司”（下稱「申請人」）根據城市規劃條例第 12A 條，向城市規劃委員會（下稱城規會）遞交規劃申請，擬議對牛潭尾新潭路 81 號計劃大綱核准圖編號 No. S/YL-NTM/12 作出修訂。是次申請擬議就“住宅(丙)類”地帶更改為“政府、機構或社區”地帶。

擬議發展將於申請地點內興建一座樓高 10 層包括大概 142 張床位的社會福利設施(安老院舍)。申請地點鄰近擬建之北環線牛潭尾站及北部都會區發展。該發展將有效充分利用短缺的土地資源以回應政府對解決長者護理服務設施需求。申請人提出是次規劃申請是基於以下理據：

- 擬議發展符合政府最新的政策方向以適時回應社會對安老院舍的需求，同時亦針對未來牛潭尾及即將帶來額外二百五十萬人口之北部都會區計劃。
- 自 2003 年社會福利署推行私人土地發展安老院舍鼓勵計劃以來，只有一所安老院舍符合標準並於 2019 年落成。若此申請獲批，將可增加安老院舍的供應。
- 擬議發展提供一個整體樓面積 5,400 平方米的安老院舍，符合「鼓勵在新私人發展物業內提供安老院舍院址計劃」的指引，即合資格獲豁免繳付地價，為建立安老院舍提供誘因。
- 申請人屬申請地點內的私人土地的唯一土地擁有人。若是次規劃申請獲得城規會同意，可迅速作出重建。
- 雖則擬議中之安老院之地積比及層數較現時之“住宅(丙)類”為高，但該等增加跟一般低密度發展毗鄰之“政府、機構或社區”地帶之差距相若。
- 多個技術評估均證明是次發展計劃不會對附近地區造成不可逾越的視覺、交通、環境、排污及排水影響。

根據以上各點，申請人希望是次規劃申請能在規劃及技術層面獲城規會支持。

1.1 Background

1.1.1 This planning application is submitted to seek permission from the Town Planning Board (the Board) in support of a proposed S12A Amendment to the Approved Ngau Tam Mei Outline Zoning Plan S/YL-NTM/12 to rezone a site from "R(C)" to "G/IC" in order to allow the re-development of a House to a RCHE.

1.1.2 The location of the subject Lot is Lot 4823 in D.D.104, 81 San Tam Road, San Tin, N.T. It locates within the R(C) zone of the OZP.

1.1.3 There is an existing House of GFA 294.258 sm and a Plot Ratio 0.4. It got the O.P. on 28/07/2017.

1.1.4 The proposed amendment would replace the existing small House and would be re-developed into a RCHE of GFA of 5,400 sm, equivalent to a P.R. of 7.33 and a height of 29.6 m. The proposal is solely based on public interest to provide enough G/IC / RCHes facilities to serve foreseeable significant increase in population for the Northern Metropolis Development (NMD). It also responds to better utilisation of the scare land resources.

1.1.5 The site is surrounded by abundant greenery and could effectively shield off the increase in building bulk. The effect would be demonstrated by the Visual Impact Analysis as per attached

1.1.6 This Planning Statement consists of the following sections in support of the Proposed Development:

Section 2: Site and Surroundings

Section 3: Proposed Development

Section 4: Planning and Development Context

Section 5: Planning Justifications

Section 6: Conclusion

2.1 Location

2.1.1 The Application Site locates at no.81 San Tam Road, Lot no. 4823 in D.D. 104, with a site area of about 736.3 m². The Site is accessible from San Tam Road at level +7.33 mPd from the West. It adjoins an access road to "Crescendo" to the North and a low-rise residential development "Casa Paradiso" to the South. To the East is a small mountain full of greenery.

2.1.2 The Site is of close proximity to the "Northern Metropolis Development" (NMD) zone and is within 10 minutes walking distance from the "Planned Northern Link Ngau Tam Mei Station".

Please refer to *Figure 1* for the Location Plan of the Application Site.

2.2 Land Status

2.2.1 The Application Site is held under single ownership, under Conditions of Exchange for Lot 4823 in D.D. 104. The existing Leases are of restrictions on the Plot Ratio and Building Height, etc for R(C) development.

2.2.2 Upon TPB approval, Lease Modification is required. Subject to Guidance Notes issued by the Social Welfare Department, the Lot having a GFA of 5,400 sm would be exempted from payment of premium.

2.3 Existing and Proposed Design

2.3.1 There is an existing House of GFA 294.258 sm, with a Plot Ratio 0.4, and is 3 storeys high from carpark, the main roof level is +21.00 mPd.

2.3.2 It is situated on a platform of level +12.0 m with a car ramp leading from the existing Brown area of level +7.33 m, which gain access from San Tam Road to the West.

2.3.3 There is an existing Green Hatched Black Area adjoining the Brown area to the South-West, which is a gentle slope formed and landscaped to all Government Departments' satisfaction when the House was built in 2017.

Please refer to *Figure 2* for the existing House design.

2.3.4 The gentle slope and greenery on the existing Green Hatched Black Area would be generally maintained except with the addition of a concrete path with steps to facilitate a staircase discharge from the building.

2.3.5 The proposed Brown Area would undergo slight change to provide a pavement while the access road would be reduced to 4.5 m wide which is still good enough to serve 2 nos. of private car parks and 2 loading / unloading bays inside.

2.3.6 The existing boundary of the site already set back from San Tam Road for a distance of 12.6 m. It is considered the existing set back would be adequate to ensure no visual encroachment onto San Tam Road.

2.3.7 The existing House is proposed to demolish and re-develop into a RCHE by first of all, lowering of the access point to a level of +7.33 m, then follow up a 10-storeys building with main roof at level of + 36.93 m.

2.3.8 Please refer to *Figure 3* for the proposed RCHE Design, the Detail Design of the proposed Development would be outlined in Section 3.0.

2.4 Accessibility

2.4.1 The Application Site is easily accessible within 10 minutes walking distance from the Planned Northern Link Ngau Tam Mei Station. It is also served by existing minibus and bus route per the followings:

Future Planned Northern Link Ngau Tam Mei Station:	
13 minutes walking distance	
Minibus:	
37	Yuen Long (Fook Hong Street) ↔ Yau Tam Mei
76	Yuen Long (Fook Hong Street) ↔ Siu Hum Tsuen
78	Yuen Long (Fook Hong Street) ↔ Yau Tam Mei
Bus:	
76K	Yueng Long (Long Ping) ↔ Sheung Shui (Ching Ho)

2.4.2 Vehicular access is currently through the San Tam Road which provides convenient access to the East towards Sheung Shui and to the West toward Yuen Long through the San Tin Highway.

3.1 Proposed RCHE Development

- 3.1.1 The Development would gain access from San Tam Road at +7.33 m on LG/F. Two private Car Parks, a light Goods Vehicle Loading / Unloading Bay and a Mini-bus Parking locate beside the Entrance Lobby. Transformer Room and Sewerage Treatment Plant are located beside.
- 3.1.2 UG/F would be the supporting facilities like Multi-Purpose Rooms, Kitchen, Laundry, Store and Plant Room etc.
- 3.1.3 1/F is designed as a Wellness Centre with health facilities like hydrotherapy, yoga and gymnasium. It adjoins an outdoor Covered Sky Garden to provide covered and open leisure spaces, completed with landscaping and health equipment etc.
- 3.1.4 2/F to 7/F (total 6 storeys) are RCHE which provide a big spectrum of Dormitory Rooms combination ranging from Shared to Individual Rooms. A total of 142 bedspaces are assumed for the development.
- 3.1.5 8/F is a specially designed floor for the Staff and General Administration. Not only do it include Standard Office and Administrative space, 8 nos. of Staff Quarters are deliberately provided to facilitate the after-hour emergency services and the needs for "Epidemic closed-loop management", in case necessary.
- 3.1.6 The Roof Garden on level +36.93 provides outdoor Sun Shine spaces and individual Farming Areas for cultivation and hobbies.

3.1.7 The GFA allocation is tabulated as below:

Site Area		: 736.3 m ²	7926 ft ²
Class of Site		: A	
Proposed Plot Ratio for Non-Domestic		: 7.33	
Proposed Site Coverage above for Non-Domestic (Above 15m)		: 75.558%	
Maximum Gross Floor Area		: 5400 m ²	58125.6 ft ²
Proposed Building Height		: 36.93 mPD	
Absolute Height		: 29.6 m	
Proposed No. of Storey		: 10 STOREYS	
Proposed Gross Floor Area			
LG/F	ENTRANCE & CARPARK	: 352.479 m ²	
UG/F	MULTI-PURPOSE ROOMS	: 617.819 m ²	
1/F	WELLNESS CENTRE + SKY GARDEN	: 626.160 m ²	
2/F	RCHE	: 595.090 m ²	45 nos. of bed
3/F	RCHE	: 556.330 m ²	17 nos. of bed
4/F – 7/F	RCHE	: 556.330 m ² x 4 storeys = 2225.32 m ²	20 nos. of bed x 4 storeys
8/F	ADMIN OFFICE + STAFF QUARTER	: 426.802 m ²	
TOTAL		: 5400.000 m²	142 nos. of bed
<u>Parking Spaces :</u>			
(Loading / Unloading)			
No. of LGV		: 1 Nos.	
No. of Minibus		: 1 Nos.	
No. of Private Car Parking		: 1 Nos. + 1 Nos. (Accessible Car Parking)	
No. of Motorcycle Parking		: 1 Nos.	

Please refer to **Figure 3** for the Proposed Development

3.2 Design Concept

Concept Design (1) and (2) are described in *Figure 4A & 4B* should be read in conjunction to illustrate the following Design Concepts.

3.2.1 ①- The closest Noise Sources would be Traffic Noise generated from San Tin Highway nearby. Innovative Floor Plan is created by abutting non-domestic spaces like Multi-Function Area to the West while Noise Sensitive Dormitory Rooms are facing the other sides.

3.2.2 ②- Orientation of the Noise Sensitive Dormitory Rooms towards the N-E and S-E sides. Those Rooms could therefore enjoy quiet greenery view and at the same time, there would be no blockage of view to the neighbourhood. Acoustic Fins to combat noise are also included which would be further discussed in the Environmental Impact Assessment enclosed.

3.2.3 ③- A partially covered sky garden is formed on 1/F, together with a list of Indoor Facilities like hydrotherapy, gymnasium, yoga and multi-purpose rooms. It provides leisure activities to the Elderly. A covered sky garden would be best for the Elderly to escape from the extreme sun shine and glare, together with the heavy rainfall during Summer season. The covered sky garden also promotes ventilation and breeze through the building and would benefit the neighbourhood. A perspective view showing the proposed covered sky garden is shown on *Figure 4C*.

3.2.4 ④- A number of Dormitory Rooms face into a light well which, by means of Stack Effect created, would promote ventilation of Individual Rooms.

3.2.5 ⑤- The existing site is setback from San Tam Road for a distance of 12.6 m. It is considered adequate to provide visual comfort for the General Public.



3.2.6 ⑥- The existing Green Hatched Black Area, which is a gentle slope with Trees and Shrubs, would be maintained to soften the Building and to signify the Entrance.

3.2.7 ⑦- A Floor for General Administration locates above the Dormitory Rooms on the upper most floor. Setback is provided along the North and West side so as to minimize the Building Bulk effect.

In addition to general administration need, it provides 8 Staff Quarters, which may benefit the Elderly for after-hours emergency services and consideration is also given to the flexibility to employ "Epidemic Close Circuit Management" in case needed.

3.2.8 ⑧- A roof garden consists of outdoor Leisure Spaces, Equipment and Individual Farming Areas for interest and hobby is provided on Roof Floor.

3.3 Comparison of Design to a Newly Completed RCHE

3.3.1 There is only one successful RCHE built since the launching of Encouragement Scheme by SWD in 2003. The RCHE, named "Forward Living", completed in 2019, located at No. 9, Fu Tei Road, Tuen Mun, is within a G/IC zone in OZP Drawing No. S/TM/35. There being no restriction on Plot Ratio but a restriction of 10 storeys height.

3.3.2 The Site Particulars, Design and Height is summarized as per *Figure 6*.

3.3.3 The "Forward Living" represent a typical RCHE design which take into account to limit of 24m from street level for the Dormitories, while Administrative Office and Supporting function are put on top. The Height measured from street level to top of the Administrative Office is 31.15m

3.3.4 Our proposed design are similar to "Forward Living" in terms of GFA (both 5,400 sm) and less in height (our proposed design: 29.6 m ; "Forward Living" 31.15 m)



3.4 Visual Impact Assessment

A Report of the Visual Impact Assessment of the Development prepared by RLEE Architects (HK) Ltd is enclosed as per Appendix 1. It presents the Findings and Surveys conducted and summarized that NO adverse Impact to the Visual Aspect is created due to the increased in Plot Ratio and Height.

3.5 Traffic Impact Assessment

A Report of the Traffic Impact Assessment of the Development prepared by CTA Consultants Limited is enclosed as per Appendix 2. It presents the Findings and Surveys conducted and summarized that NO adverse Impact to the Traffic Aspect is created due to the increased in Plot Ratio.

3.6 Environmental Impact Assessment

A Report of the Environmental Impact Assessment of the Development prepared by Novox Limited is enclosed as per Appendix 3. It presents the Findings and Surveys conducted and summarized that NO adverse Impact to the Environmental Aspect is created due to the increased in Plot Ratio.

3.7 Landscape Master Planning

A Report of the Landscape Master Planning of the Development prepared by RLEE Architects (HK) Limited is enclosed as per Appendix 4. The Landscaping design could benefit the surroundings by improving the visual, Air Purification and Micro-Climate aspects.

4.1 Surrounding Land Uses Pattern

4.1.1 Please refer to *Figure 6* for the extracted OZP No. S/YL – NTM/12. By situating in a R(C) zone, the surroundings are predominately low-rise, low-density development. However, the situation may undergo rapid change since a number of adjoining Planning Applications are underway.

Figure 7 shows the Planning Application Cases Submission for higher density residential developments nearby. Should all the Planning Applications be approved, the total increase in no. of residential units is expected to be around 33,857 units which represent an increase in population of around 101,571 people.

Besides, it is the Government's intention to plan to house another 2.5 million in the whole NMD development. There would be definitely a shortage of RCHes and similar G/IC facilities in the future.

4.2 Similar Approved and Proceeding S12A Planning Applications

4.2.1 There is one approved S12A rezoning case in 8-12 Hi Yip Street (Application No. Y/YL/6) on 20/04/2012. *Figure 8* summarises one Approved and one Proceeding S12A Planning Application cases related to "RCHes".

4.3 Similar Approved S16 Planning Applications

4.3.1 *Figure 9* summarized the Approved S16 Planning Applications. It is worth noting that First 5 Applications adjoin low-density "V" zoning. Those would undoubtedly create a difference in Height with its surroundings. The comparison on Building Bulk would be carried out in Section 5.2.

5.1 Restrictions on Plot Ratio & No. of Storeys in "G/IC" Zone

5.1.1 "G/IC" zone is designated for Government, Institution and Community uses. Those should be built according to their needs for individual merit and their bulks are usually governed by relevant Regulations. Normally, the Plot Ratio are not restricted but some restrictions may apply to the No. of Storeys on Building Height.

5.1.2 Similar decision on relaxation of no. of storeys restriction can be noted from the Town Planning Board Meeting on 17.9.2021 on Proposed Amendments to the Draft Yau Ma Tei Outline Zoning Plan No. S/K2/22 (TPB Paper No. 10773), the Town Planning Board Chairman and the Planning Department were of the view that in the absence of concrete redevelopment proposals, it was difficult to predetermine any appropriate BHR for the "G/IC" sites. Plan D would, with the benefit of the redevelopment proposal(s) so put forward, review the BHRs of those sites and make suitable amendments to the OZP. The same principle of "case-by-case" should be applied to other similar "G/IC" sites in Hong Kong as well, where the BHR should be imposed based on individual proposals, subject to no significant adverse impact from planning and technical points of view.

5.1.3 As revealed from the Design of the proposed development and Building Bulk Study as per the Visual Impact Assessment. The proposed Plot Ratio of 7.33 and the Height of 29.6 m for this Planning Application is justified.

5.2 Comparison of Building Height for RCHEs / "G/IC" Developments to adjoining Low-density Developments.

5.2.1 Whenever a RCHE or a "G/IC" Development exist adjoining a low-density development, there is inevitably difference in Height. Study of Four established or approved cases are presented in **Figure 10A to 10D** are summarised below:

Figure	OZP	Description	Difference in Height
10A	S/YL-TT/18	Existing "G/IC" Building (Yuen Long Government Primary School) to adjoining "V" zone (Yeung Uk Tsuen).	17.48 m
10B	S/YL-TT/18	Existing "G/IC" Building (TWGHs C.Y. Ma Memorial College) to adjoining "R(C)" zone (Harmonic Villa).	17.7 m
10C	S/YL/25	Approved RCHE (No. A/YL/256) to adjoining "V" zone.	13.92 m
10C	S/YL/25	Approved RCHE (No. A/YL/263) to adjoining "V" zone.	14.77 m
10D	S/YL-NTM/12	Proposed RCHE at 81 San Tam Road to adjoining "R(C)" zone (Casa Paradizo)	15.38 m

5.2.2 As revealed from above comparisons, our proposed RCHE (**Figure 10D**) bear a Height Difference of **15.38 m** to its immediate neighbourhood, which is slightly higher than the two approved RCHEs adjoining "V" zone (14.77 m & 13.92 m respectively as shown in **Figure 10C**). However, the Height Difference is less than the two cases of existing "G/IC" Buildings adjoining "V" zone (17.48 m in **Figure 10A** & 17.7 m in **Figure 10B**). Therefore, the difference in height between our proposed RCHE to its surrounding "R(C)" zone is fully justified.

5.3 Increase in Population nearby

5.3.1 The "NMD" Development

The Chief Executive unveiled the Northern Metropolis plan which aims to transform the northern part of Hong Kong into a lively, attractive area.

The proposed Northern Metropolis covers the Shenzhen-Hong Kong Boundary Control Points Economic Belt, Yuen Long and North districts, with a total land area of about 300 sq km.

It encompasses mature new towns in the area and their neighbouring rural areas, as well as six new development areas and development nodes in different planning and development stages.

It will be a transport infrastructure-led development with railways as its backbone, involving projects such as the Hong Kong Shenzhen Western Railway linking up Hung Shui Kiu/Ha Tsuen and Qianhai of Shenzhen, extension of the Northern Link and the East Rail Line. An automated people mover system from Tsim Bei Tsui to Pal Nai will also be explored.

There would be an extra 600 hectares of land could be developed within the Northern Metropolis for residential and industry purposes, providing up to 186,000 flats. When fully developed, the Northern Metropolis will offer a total of up to 926,000 flats – including those existing ones in Yuen Long and North districts, capable of housing a population of about 2.5 million.

It is envisaged the increase in population would lead to an increase in Elderly Population and thus the need for RCHes in the long run.

Figure 11 illustrates the initial land use for San Tin and Lok Ma Chau Development and the relationship to the subject site.

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5.3.2 The Planned Northern Link

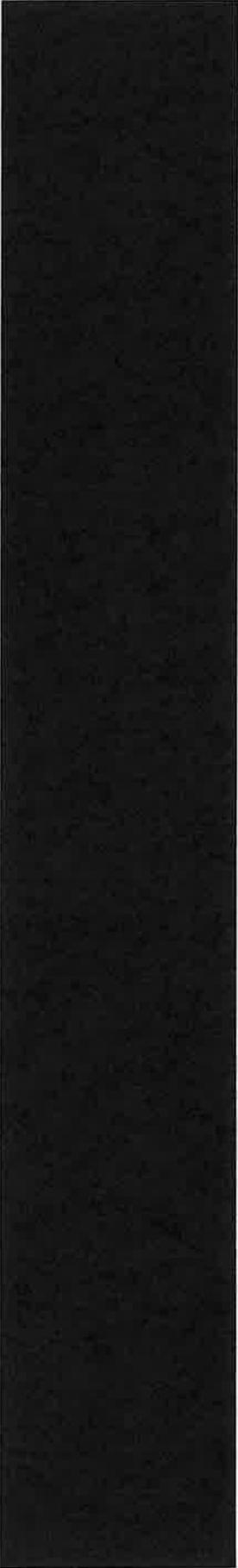
The Northern Link (NOL) is an important railway project which will connect the existing Kam Sheung Road MTR Station at the Tuen Ma Line, the planned Kwu Tung Station at the Lok Ma Chau Spur Line and hence other stations at the East Rail to form / complete a strategic rail "loop". It plans to connect the "East" and "West" together. Above all, the interchange at Kwu Tung Station with the Lok Ma Chau Spur Line will provide mass transit connecting the Northwest New Territories with Shenzhen. The detailed planning and design of this railway has already commenced in late 2020 and the construction will commence in 2025.

Figure 12 shows the proposed Route and Stations of the Planned Northern Link.

5.4 Long Term Demand for RCHes and Related Policies

5.4.1 Hong Kong has the highest life expectancy in the world – 81.7 for men and 87.66 for women. In 2016, about 8 percent of the population aged 65 or above (i.e. 93,600 nos.) lived in RCHes.

As per information from Social Welfare Department there are 31,080 waitlistees on the central waiting list applying for various types of residential care services places as at 31.10.2021, with an average waiting time for care-and-attention places and nursing home places at 19 months and 22 months respectively.



5.4.2 In order to encourage developers to provide RCHes in new private developments, in July 2003, the Government launched the “Scheme to Encourage Provision of RCHes Premises in New Private Development”, under which eligible premises would be exempted from assessment of premium for various types of land transactions, subject to meeting certain conditions for delivery of the RCHes premises, including the conditions that “only one RCHes premises per development will be eligible for the scheme” and “the size of the RCHes premises will be subject to a maximum limit of a total GFA of 5,400 m²”.

Since Launching of the Scheme in 2003, there is only one successful case completed in 2019, named “Forward Living” in Fu Tei, Tuen Mun.

5.4.3 Enhanced Bought Place Scheme

In Policy Address 2018, the Chief Executive stated that the SWD introduced a special measure from February to September this year (2018) to purchase about 250 additional residential places from private RCHes participating in the Enhanced Bought Place Scheme (EBPS), and “the Government plans to regularise the measure in 2019-20 to provide designated residential respite places in private RCHes participating in the EBPS, as to relieve the stress of cares”. To add on, it is also stated that “**the Government will purchase an additional 5000 EA1 places under EBPS in the next five years** to increase the supply of subsidised residential care places for the elderly and enhance the overall service quality of private RCHes.”

5.4.4 Recent Proposal on Increasing the Minimum Area Per Resident for RCHEs

The residential care services for the elderly in Hong Kong in general have long been criticized for their low living standards as compared to the major cities internationally, especially with regards to the amount of living space. There have been persistent discussions among the society about increasing the minimum area per resident for RCHEs. In the Report of "Working Group on the Review of Ordinances and Codes of Practice for Residential Care Homes" ("the Working Group") dated May 2019, it is proposed to increase the minimum area per resident for "Care-and-Attention Home" RCHEs from 6.5 sq.m to 9.5 sq.m. The proposal will be submitted to the Legislative Council for the procedures of amendment of the Regulation.⁷

5.5 Scarce Standalone RCHEs

In view of the scarce land resources and dense population, majority of the existing RCHEs are transformed from existing Residential and Commercial Mixed Uses Developments. Not only do it create the problem of circulation needs for Lift Usage, it also induces certain nuisance like noise and hygiene problem to the residents in daily operation.

Standalone RCHEs might be a way out for the problem. The subject Standalone application with its independent Vehicles, Pedestrian and Services Access, would create no inconvenience to the surroundings and the general public. In addition, this purpose built RCHEs would fully utilize its Developmental Potential through necessary relaxation in no. of storeys and Plot Ratio.



5.6 Consideration of Green Building Design and Sustainable Building Design Guidelines (SBDG)

5.6.1 Green Building Design

A List of Green Building Design including Covered Sky Garden and Open Roof Garden are elaborated in Section 3.2.

5.6.2 Sustainable Building Design Guideline

The Site area of the Development is below 2,000m², of which SBDG (PNAP) APP-152 would not be applicable. However, every effort is made to comply with the Guideline as much as possible in order to contribute to improve the overall Built Environment. Those are summarized as Follows:

5.6.2.1 Building Length

The projected facade length of the proposed building abutting the street is below 60m which is below the stipulation under the SBDG.

5.6.2.2 Building Setback

In the Proposed Development, no part of building is built up within 7.5m from the centreline of San Tam Road. The ventilation corridor would be well maintained. Thus, the building setback requirement has been complied with in accordance with SBDG.

5.6.2.3 Greenery

In order to improve the environmental quality of the urban space, particularly of the pedestrian level to mitigate the heat island effect, Greenery is proposed on various locations to satisfy that required under SBDG. The details are summarized in a LMP report as attached in Appendix 6.

6.0 CONCLUSION

- 6.1 This supporting Planning Statement is submitted under Section 12A of the TPO to seek approval for the rezoning of the subject site from "R(C)" to "G/IC", for the proposed RCHE.
- 6.2 The proposed RCHE with a focus on Public Interest based on the followings:
- 6.2.1 In view of the future growth in Population nearby, there is a strong demand of RCHEs in Yuen Long in the long run.
- 6.2.2 In consideration of the scarce land resources, the replacement of the existing low-rise development by a RCHE of higher Plot Ratio is justified.
- 6.2.3 The Applicant has located a number of potential experienced RCHEs Operators and would assign one of them as the Operators in future.
- 6.2.4 It is a sizable standalone RCHEs development would comply with the Encouragement Scheme of the Social Welfare Development. Since the launching of the Scheme in 2003, there is only one successful RCHE built in 2019. The approval on this S12A application would aid to speed up more RCHE developments.
- 6.2.5 The design of the proposed RCHEs is governed by relevant regulations to limit its height. The difference in Height to the surrounding is justified. The site is also surrounded by abundant Greenery and the increase in Building Bulk is adequately shield off.
- 6.2.6 The site is under single ownership, it could be readily re-developed to aid to solve the RCHEs demand in short term.



- 6.3 In addition to the planning and design merits, it is also demonstrated by technical assessments on the Environmental Impact, Traffic and Landscape aspects that the Proposed Development will NOT generate adverse impacts to the Application Site and its surroundings.
- 6.4 In the light of the planning merits and justifications put forward in this Supporting Planning Statement, we sincerely seek for the favourable consideration from the TPB to give support to this Application.

S12A AMENDMENT OF PLAN APPLICATION
APPROVED NGAU TAM MEI
OUTLINE ZONING PLAN NO. S/YL-NTM/12

PROPOSED REZONING FROM "R(C)" TO "G/IC"
FOR A PROPOSED "SOCIAL WELFARE FACILITIES"
(RESIDENTIAL CARE HOMES FOR THE ELDERLY)
(RCHE)

AT LOT 4823 IN D.D.104, 81 SAN TAM ROAD,
SAN TIN, N.T.

FIGURE 1

LOCATION PLAN

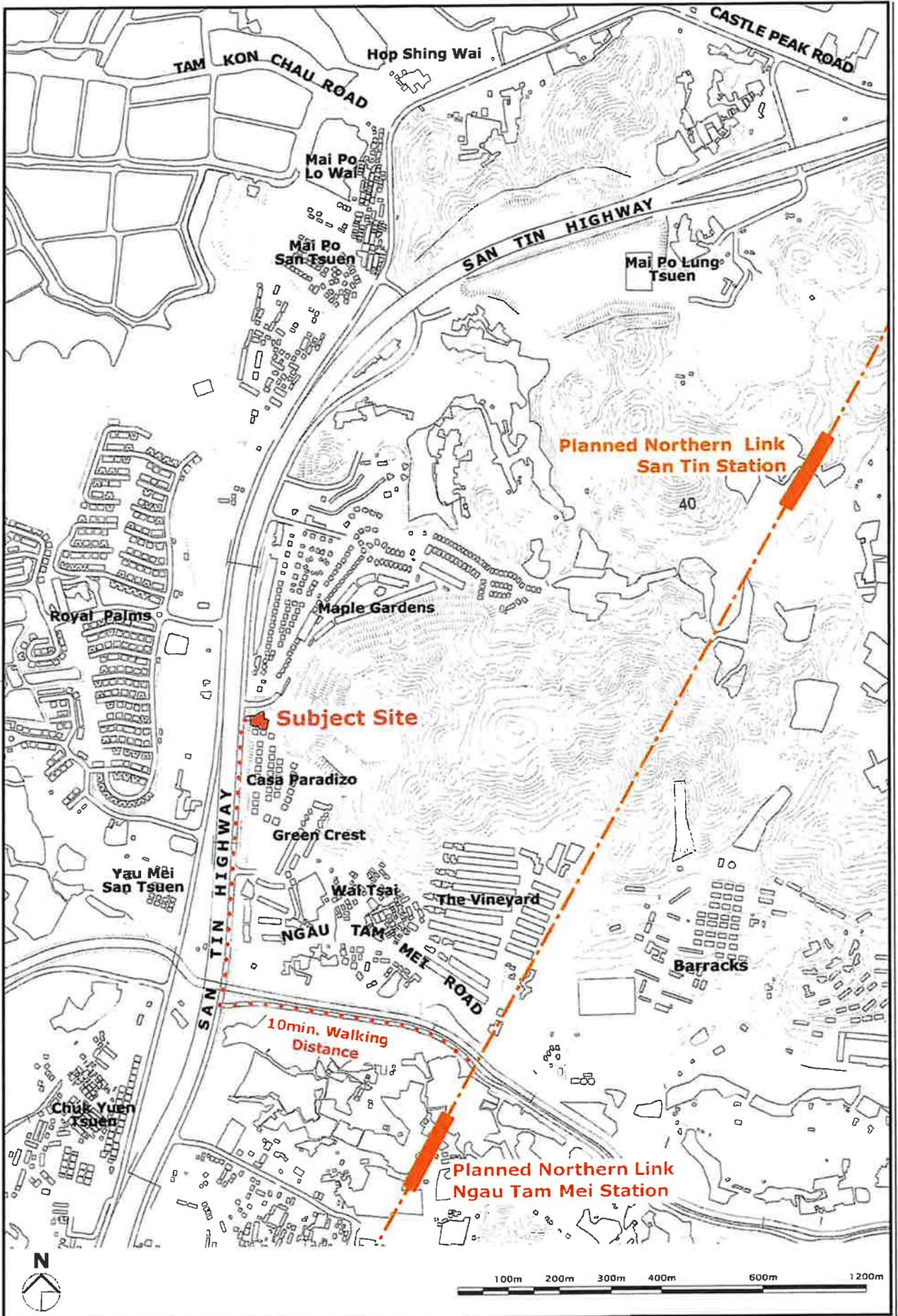


FIGURE NO.	TITLE	SCALE
1	LOCATION PLAN	1:10000
		DATE
		JUL 2022

R L E E

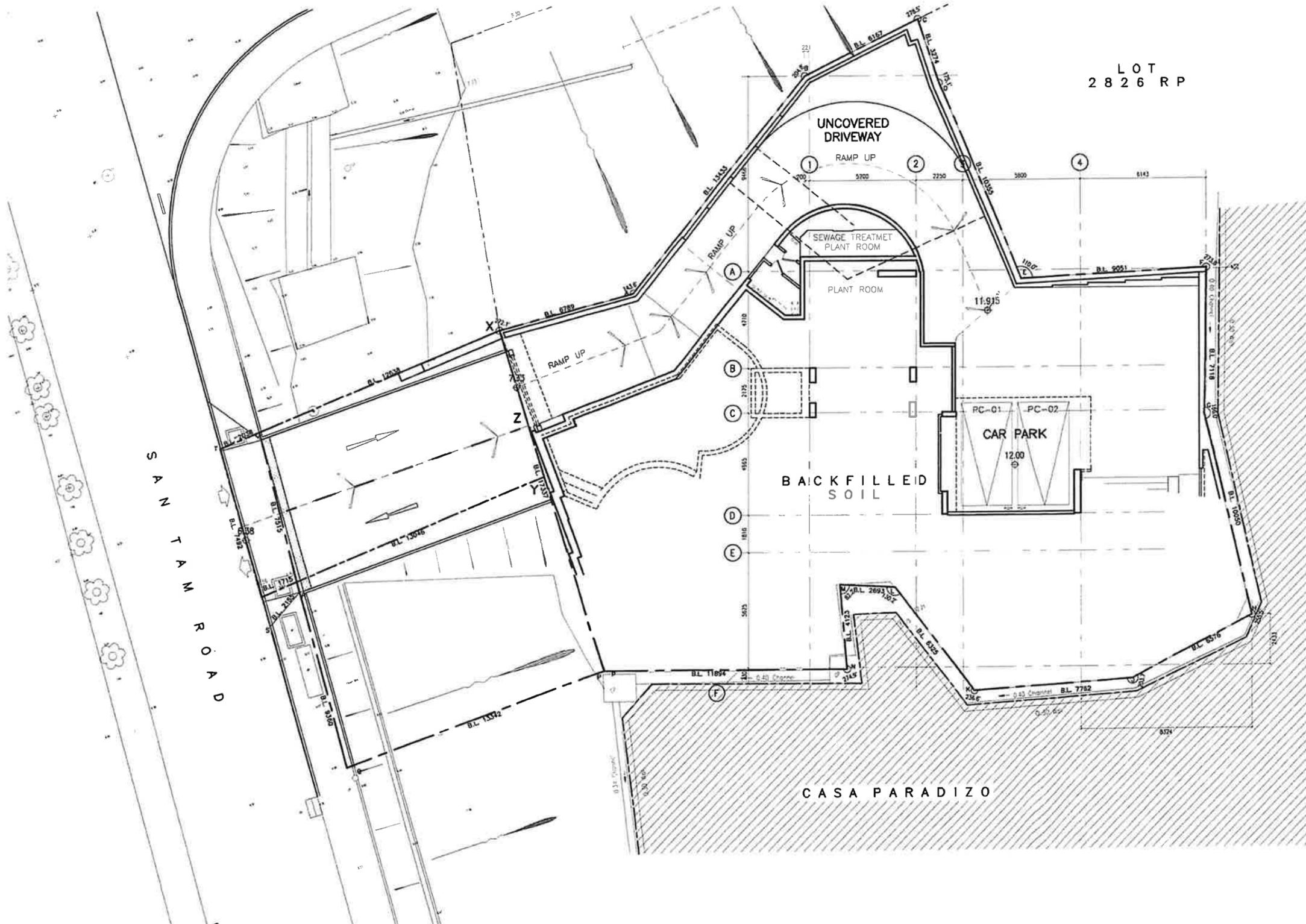
S12A AMENDMENT OF PLAN APPLICATION
APPROVED NGAU TAM MEI
OUTLINE ZONING PLAN NO. S/YL-NTM/12

PROPOSED REZONING FROM "R(C)" TO "G/IC"
FOR A PROPOSED "SOCIAL WELFARE FACILITIES"
(RESIDENTIAL CARE HOMES FOR THE ELDERLY)
(RCHE)

AT LOT 4823 IN D.D.104, 81 SAN TAM ROAD,
SAN TIN, N.T.

FIGURE 2

EXISTING HOUSE DESIGN



LOT
2826 RP

1
AP-02 LOWER GROUND FLOOR

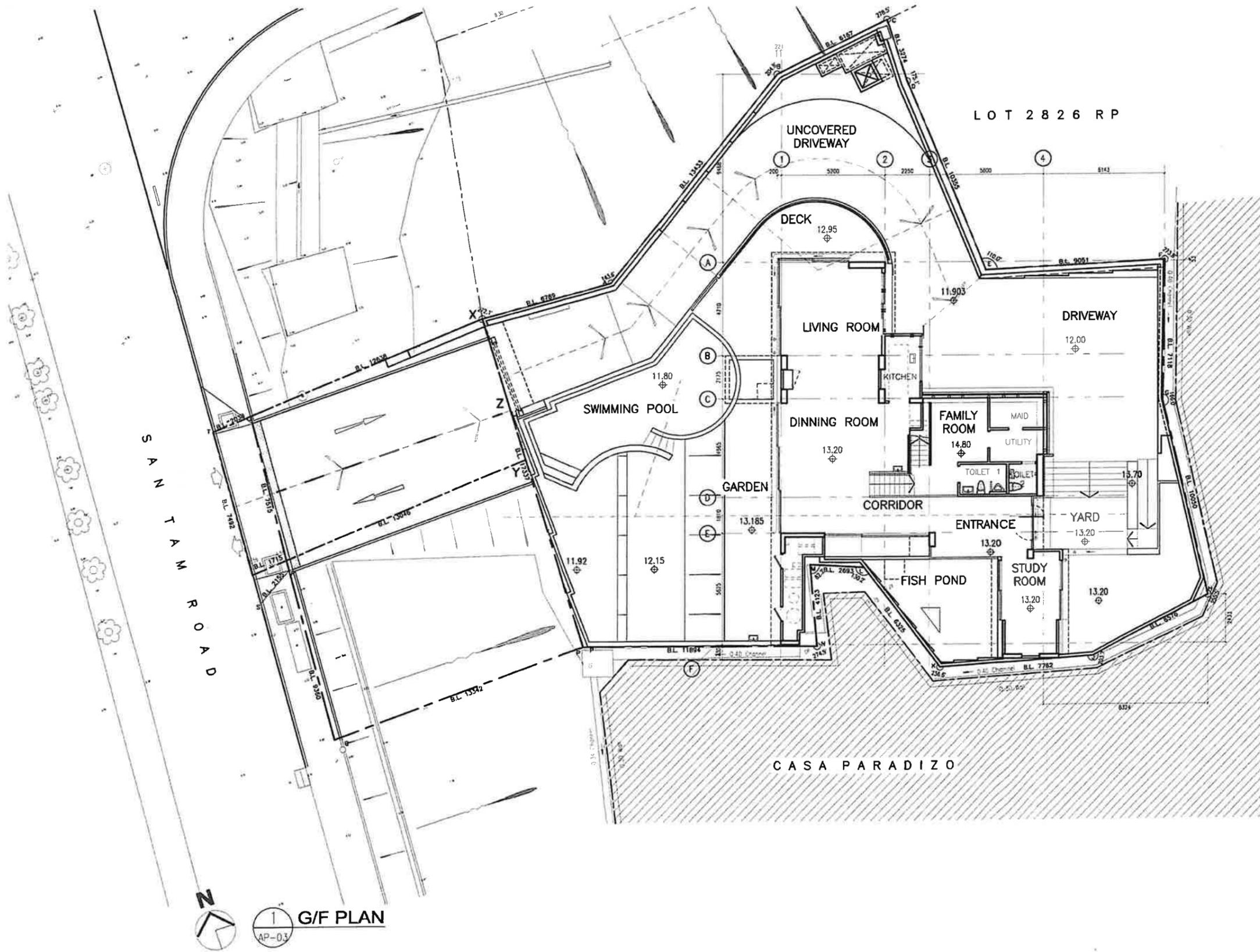
2202
PROPOSED RESIDENTIAL CARE HOME FOR ELDERLY
at 81 SAN TAM ROAD,
YUEN LONG, N.T.

28/07/2017 - APPROVED PLAN
LOWER GROUND FLOOR

AP-02 1:200 (A3) JUN. 2022

*Do not scale drawing.
Contractors are required to verify exact dimensions on site.
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1 G/F PLAN
AP-03

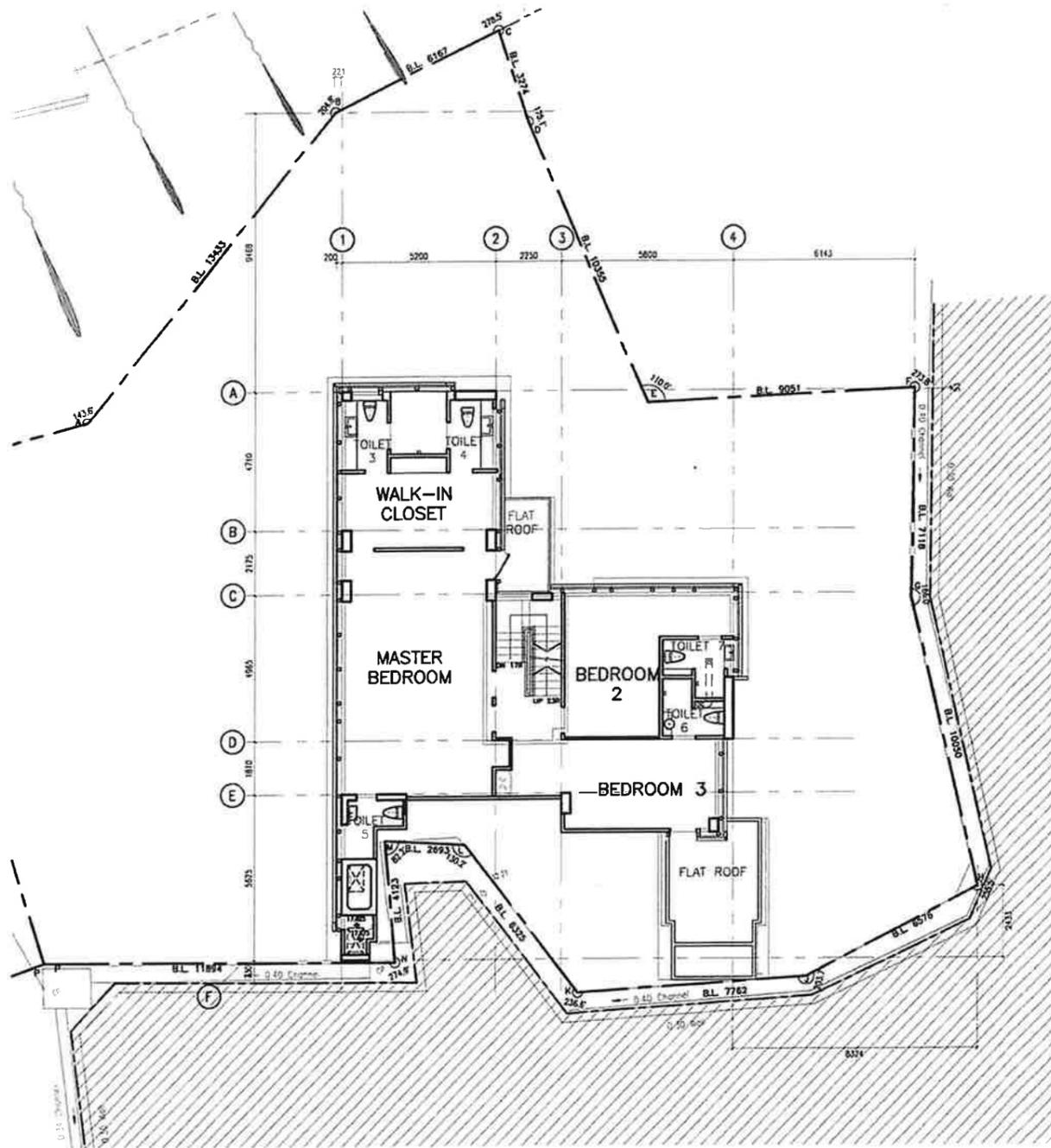
2202
PROPOSED RESIDENTIAL CARE HOME FOR ELDERLY
at 81 SAN TAM ROAD,
YUEN LONG, N.T.

28/07/2017 - APPROVED PLAN
G/F

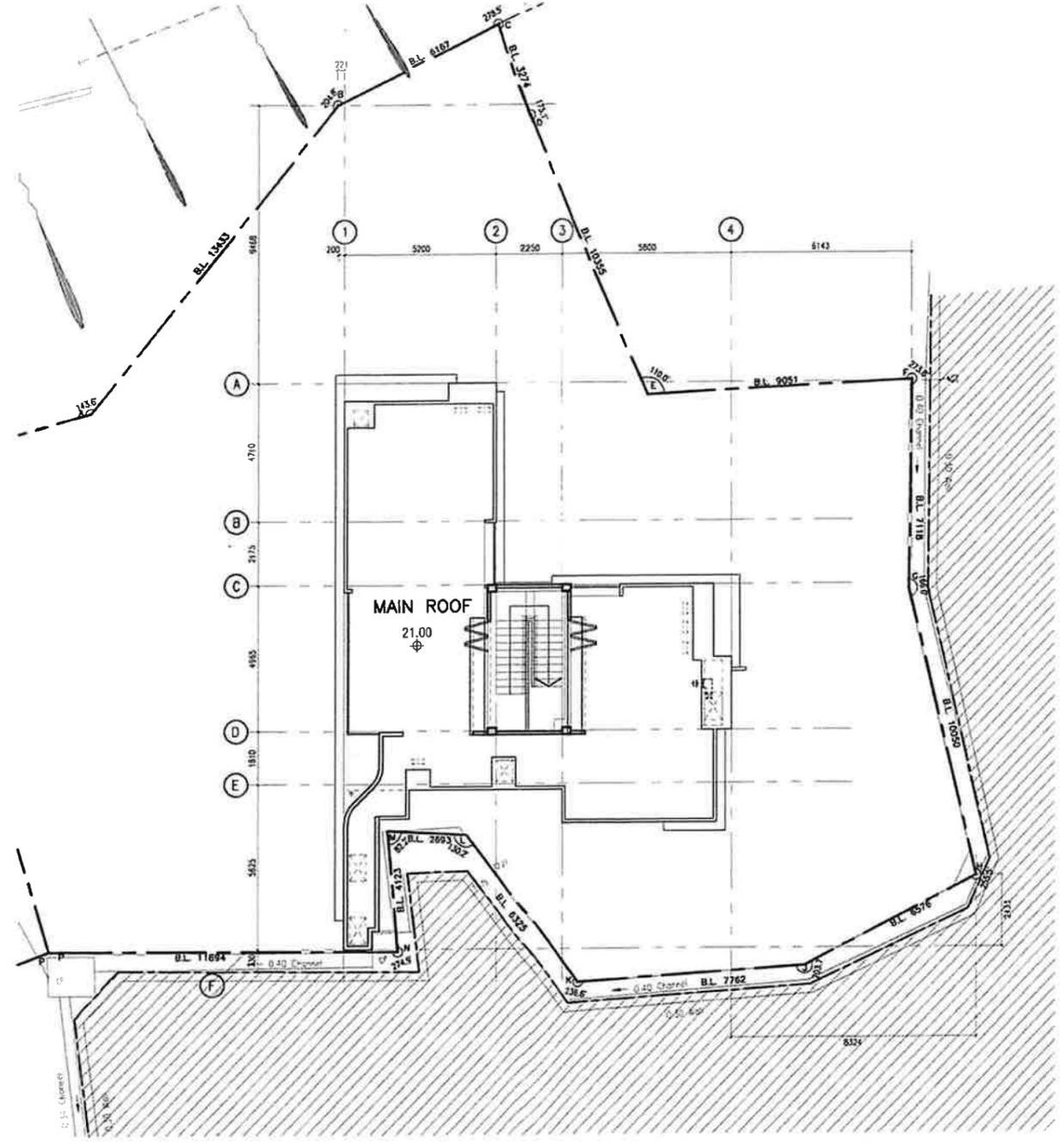
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RLEE



1/F PLAN
AP-04



2 ROOF PLAN
AP-04

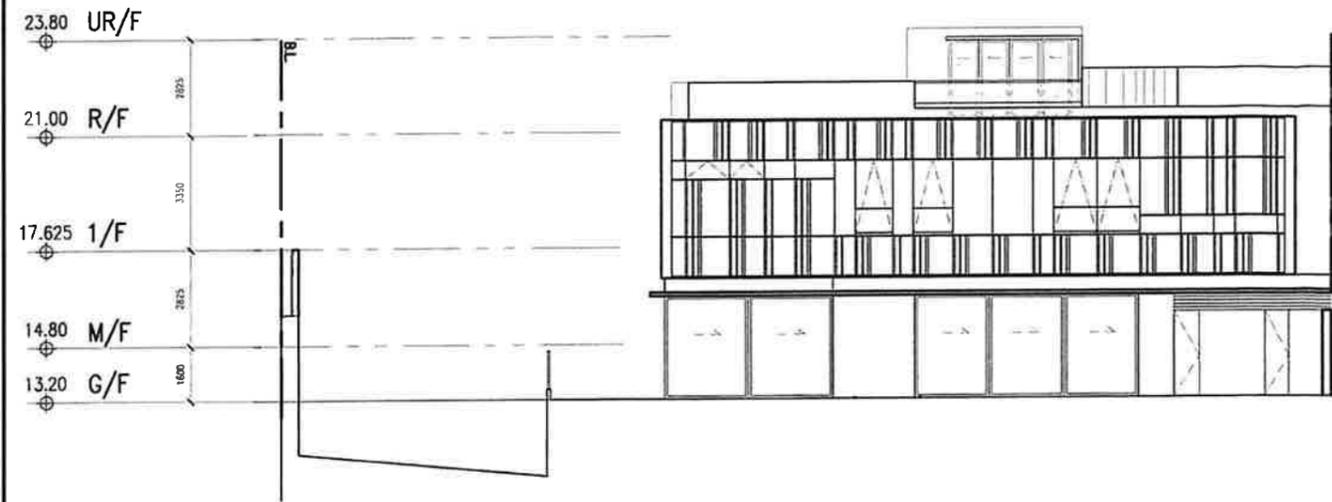
2202
PROPOSED RESIDENTIAL CARE HOME FOR ELDERLY
at 81 SAN TAM ROAD,
YUEN LONG, N.T.

28/07/2017 - APPROVED PLAN
1/F & ROOF

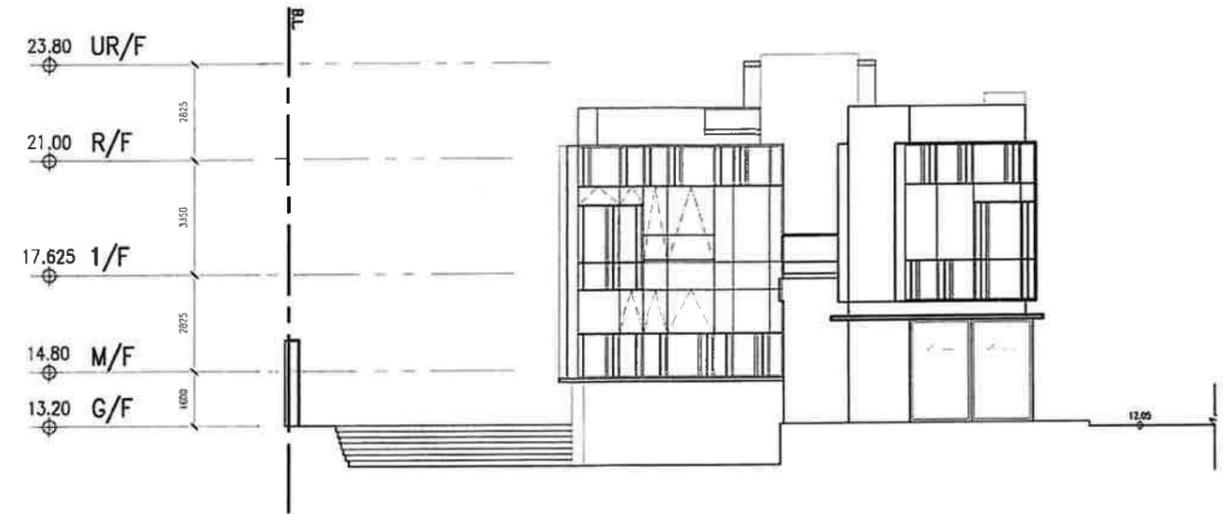
AP-04 1:200 (A3)

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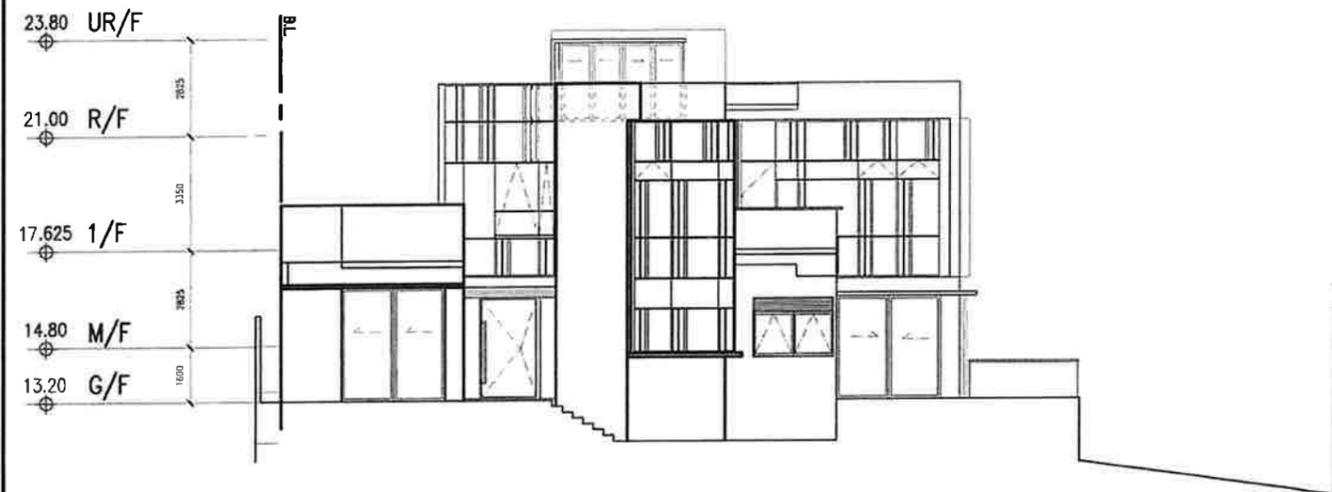
RLEE



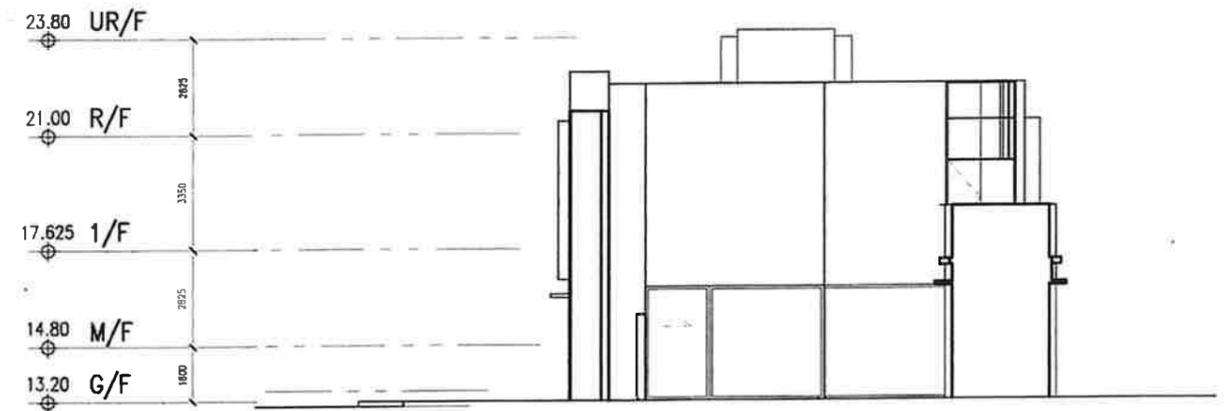
1 ELEVATION A
AP-05



1 ELEVATION B
AP-05



3 ELEVATION C
AP-05



4 ELEVATION D
AP-05

2202
PROPOSED RESIDENTIAL CARE HOME FOR ELDERLY
at 81 SAN TAM ROAD,
YUEN LONG, N.T.

28/07/2017 - APPROVED PLAN
ELEVATIONS

AP-05 1:200 (A3)

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RLEE

S12A AMENDMENT OF PLAN APPLICATION
APPROVED NGAU TAM MEI
OUTLINE ZONING PLAN NO. S/YL-NTM/12

PROPOSED REZONING FROM "R(C)" TO "G/IC"
FOR A PROPOSED "SOCIAL WELFARE FACILITIES"
(RESIDENTIAL CARE HOMES FOR THE ELDERLY)
(RCHE)

AT LOT 4823 IN D.D.104, 81 SAN TAM ROAD,
SAN TIN, N.T.

FIGURE 3

PROPOSED RCHE DESIGN



BLOCK PLAN

SCALE - 1:1000

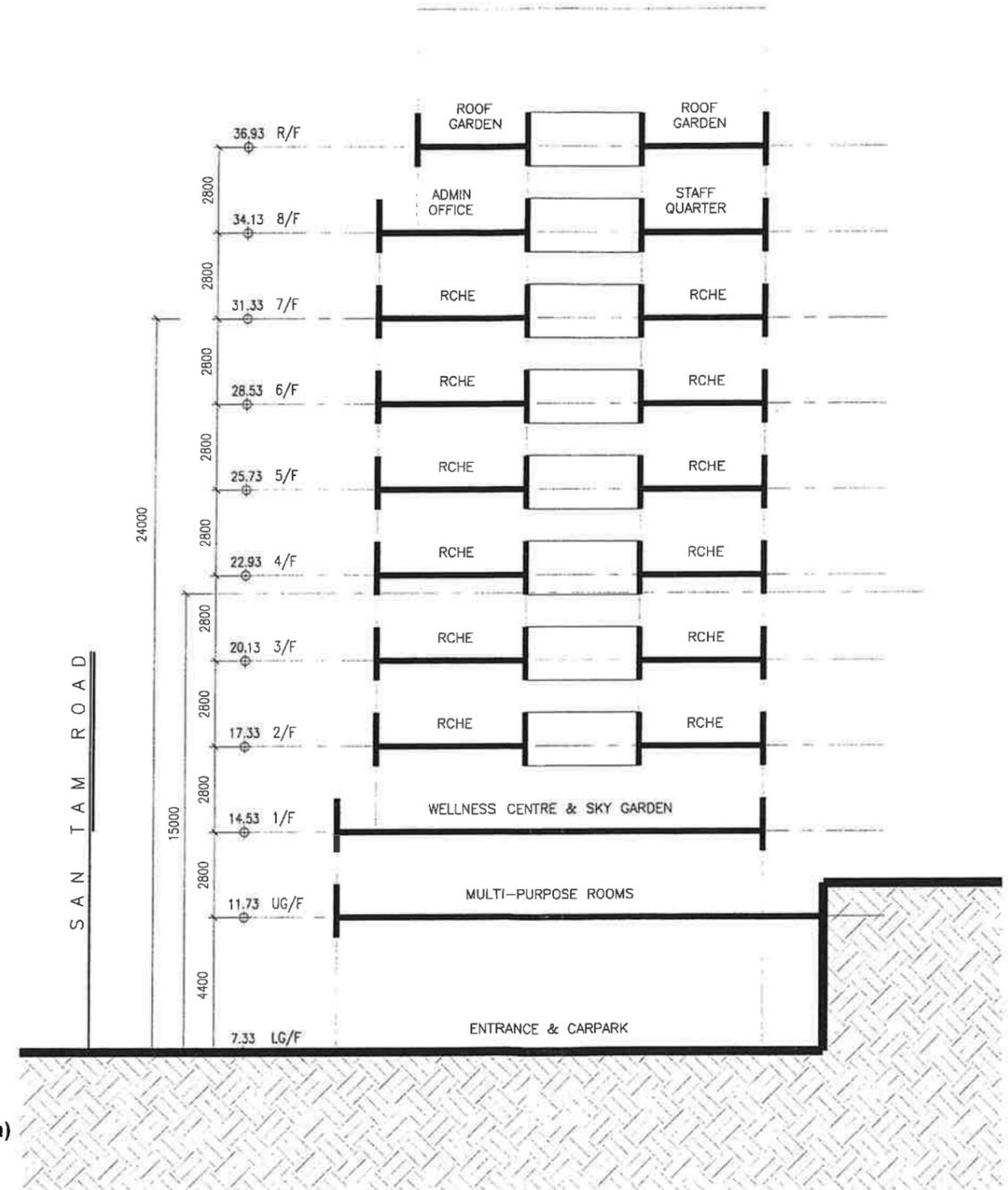


DEVELOPMENT SCHEDULE:

Site Area	:	736.3 m ²	(7926 ft ²)
Class of Site	:	A	
Proposed Plot Ratio For Non-Domestic	:	7.33	
Proposed Site Coverage above For Non-Domestic (Above 15m)	:	75.558%	
Maximum Gross Floor Area	:	5400 m ²	(58125.6 ft ²)
Proposed Building Height	:	36.93 mPD	
Absolute Height	:	29.6 m	
Proposed No. Of Storeys	:	10 STOREYS	
Proposed Gross Floor Area	:		
LG/F (ENTRANCE & CARPARK)	:	352.479 m ²	
UG/F (MULTI-PURPOSE ROOMS)	:	617.819 m ²	
1/F (WELLNESS CENTRE + SKY GARDEN)	:	626.160 m ²	
2/F (RCHE)	:	595.090 m ²	(45 nos. of bed)
3/F (RCHE)	:	556.330 m ²	(17 nos. of bed + 3 nos. of isolation room)
4/F - 7/F (RCHE)	:	556.330 m ² x 4 storeys	
	:	= 2225.32 m ²	(20 nos. of bed x 4 storeys)
8/F (ADMIN OFFIC + STAFF QUARTER)	:	426.802 m ²	
TOTAL	:	5400.000 m²	(142 nos. of bed + 3 nos. of isolation room)

Parking Spaces :

No. of LGV	:	1 Nos.
No. of Minibus	:	1 Nos.
No. of Private Car Parking	:	1 Nos. + 1 Nos. (Accessible Car Parking)
No. of Motorcycle Parking	:	1 Nos.



SECTION A-A

SCALE - 1:200

NO AIR-SENSITIVE USES INCLUDING OPENABLE WINDOW, FRESH AIR INTAKE AND ACTIVE RECREATIONAL USES IN THE OPEN SPACE IS ALLOWED WITHIN THE BUFFER ZONE.

2202
PROPOSED RESIDENTIAL CARE HOME FOR ELDERLY
at 81 SAN TAM ROAD,
YUEN LONG, N.T.

DEVELOPMENT SCHEDULE & SECTION

G-01

N.T.S. (A3)

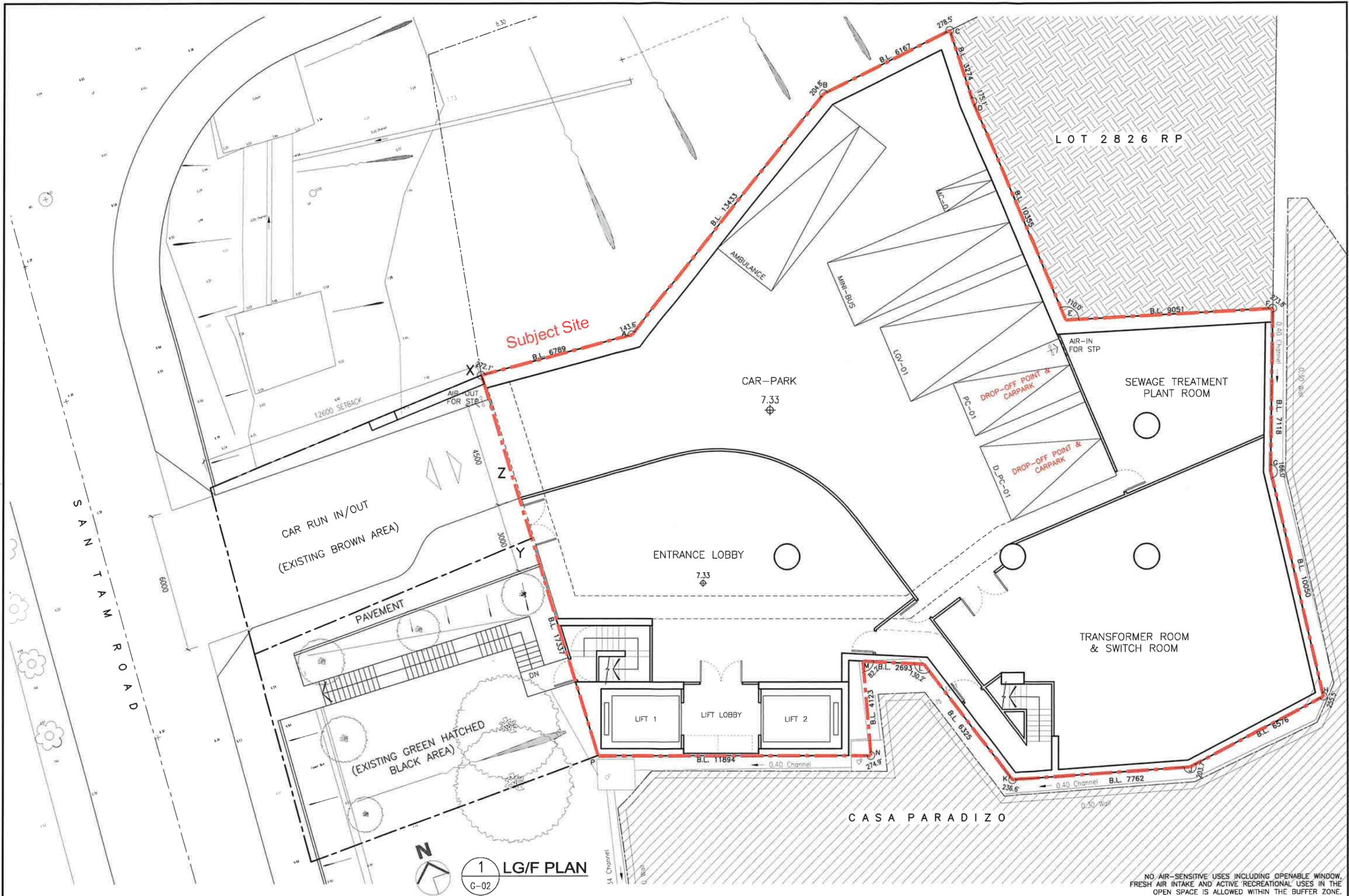
B

A

OCT. 2022
JULY. 2022

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RLEE



Subject Site

LOT 2826 RP

SAN TAM ROAD

CASA PARADIZO

CAR RUN IN/OUT
(EXISTING BROWN AREA)

(EXISTING GREEN HATCHED
BLACK AREA)

CAR-PARK
7.33

ENTRANCE LOBBY
7.33

SEWAGE TREATMENT
PLANT ROOM

TRANSFORMER ROOM
& SWITCH ROOM

LIFT 1

LIFT LOBBY

LIFT 2



1 LG/F PLAN
C-02

NO AIR-SENSITIVE USES INCLUDING OPENABLE WINDOW,
FRESH AIR INTAKE AND ACTIVE 'RECREATIONAL' USES IN THE
OPEN SPACE IS ALLOWED WITHIN THE BUFFER ZONE.

2202
PROPOSED RESIDENTIAL CARE HOME FOR ELDERLY
at 81 SAN TAM ROAD,
YUEN LONG, N.T.

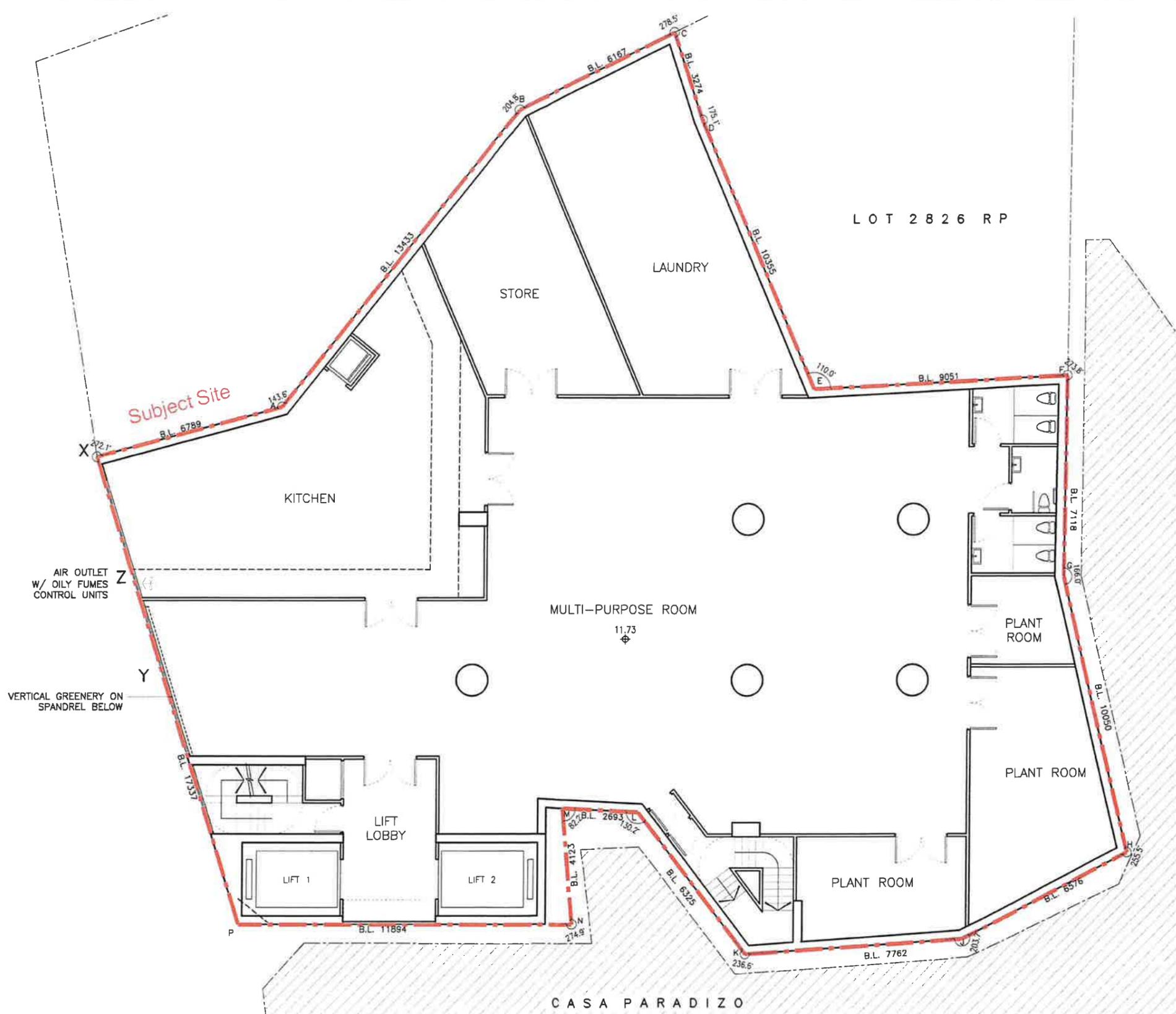
LG/F PLAN
ENTRANCE & CARPARK

G-02
1:150 (A3)
1:225 (A4)

C
B
A
APR. 2023
OCT. 2022
JULY. 2022

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RLEE




1 UG/F PLAN
G-03

NO AIR-SENSITIVE USES INCLUDING OPENABLE WINDOW, FRESH AIR INTAKE AND ACTIVE RECREATIONAL USES IN THE OPEN SPACE IS ALLOWED WITHIN THE BUFFER ZONE.

2202
 PROPOSED RESIDENTIAL CARE HOME FOR ELDERLY
 at 81 SAN TAM ROAD,
 YUEN LONG, N.T.

UG/F PLAN
 MULTI-PURPOSE ROOMS

G-03

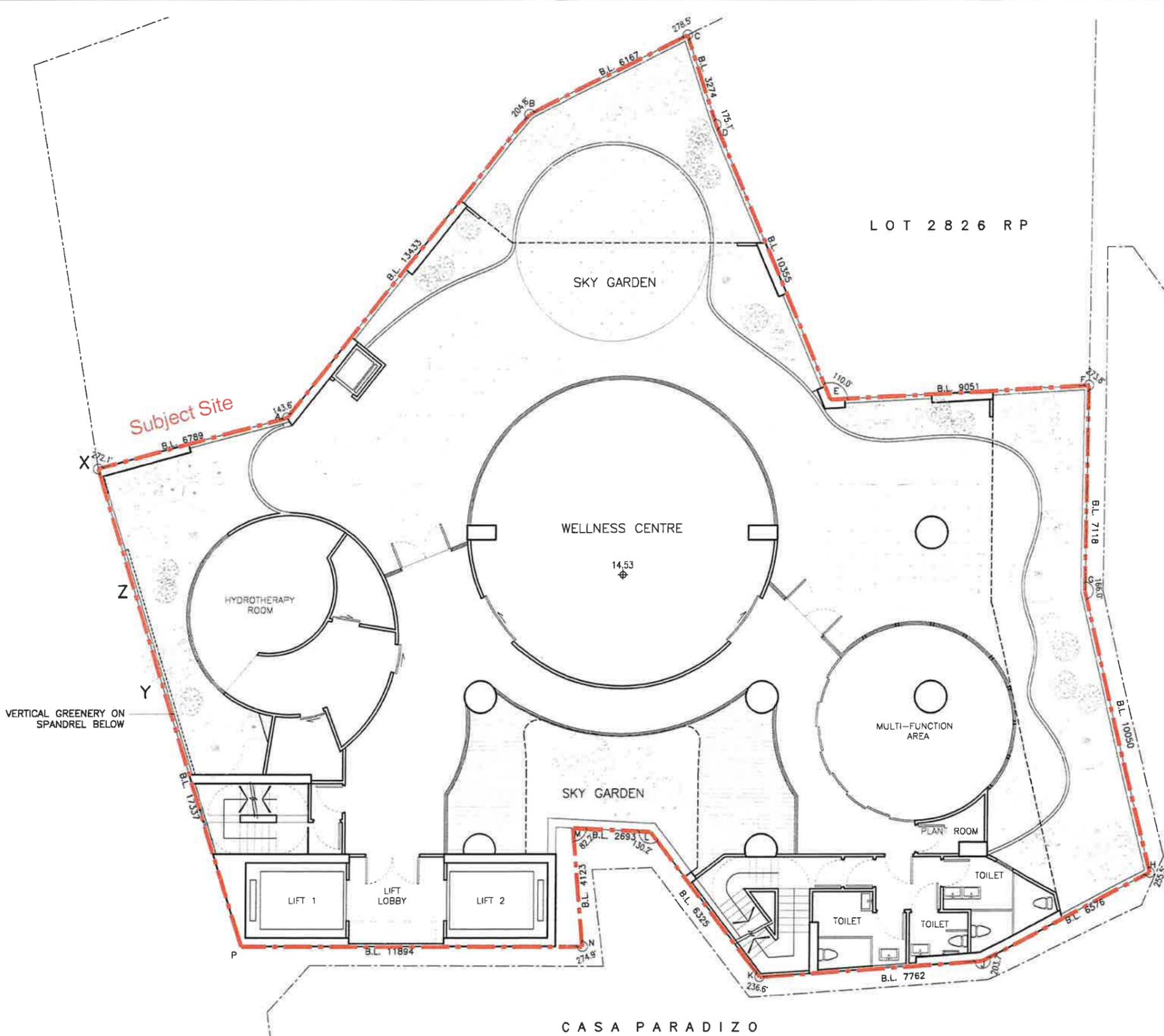
1:150 (A3)

B
A

OCT. 2022
JULY. 2022

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1
G-04
1/F PLAN

2202
PROPOSED RESIDENTIAL CARE HOME FOR ELDERLY
at 81 SAN TAM ROAD,
YUEN LONG, N.T.

1 / F PLAN
WELLNESS CENTRE & SKY GARDEN

G-04

1:150 (A3)

B
A

OCT. 2022
JULY. 2022

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NO AIR-SENSITIVE USES INCLUDING OPENABLE WINDOW,
FRESH AIR INTAKE AND ACTIVE RECREATIONAL USES IN THE
OPEN SPACE IS ALLOWED WITHIN THE BUFFER ZONE.





1 2/F PLAN
G-05

CASA PARADIZO

NO AIR-SENSITIVE USES INCLUDING OPENABLE WINDOW, FRESH AIR INTAKE AND ACTIVE RECREATIONAL USES IN THE OPEN SPACE IS ALLOWED WITHIN THE BUFFER ZONE.

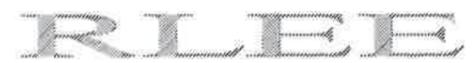
2202
PROPOSED RESIDENTIAL CARE HOME FOR ELDERLY
at 81 SAN TAM ROAD,
YUEN LONG, N.T.

2/F PLAN
RCHE

G-05
1:150 (A3)
1:225 (A4)

D
C
B
A
MAY. 2023
APR. 2023
OCT. 2022
JULY. 2022

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LOT 2826 RP

CASA PARADIZO

1 3/F PLAN
G-06

2202
PROPOSED RESIDENTIAL CARE HOME FOR ELDERLY
at 81 SAN TAM ROAD,
YUEN LONG, N.T.

3/F PLAN
RCHE

G-06 1:150 (A3)
1:225 (A4)

D MAY. 2023
C APR. 2023
B OCT. 2022
A JULY. 2022

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NO AIR-SENSITIVE USES INCLUDING OPENABLE WINDOW,
FRESH AIR INTAKE AND ACTIVE RECREATIONAL USES IN THE
OPEN SPACE IS ALLOWED WITHIN THE BUFFER ZONE.

RLEE



1 TYPICAL FLOOR PLAN PLAN
 G-07

2202
 PROPOSED RESIDENTIAL CARE HOME FOR ELDERLY
 at 81 SAN TAM ROAD,
 YUEN LONG, N.T.

TYPICAL FLOOR PLAN PLAN
 RCHE

G-07

1:150 (A3)
 1:225 (A4)

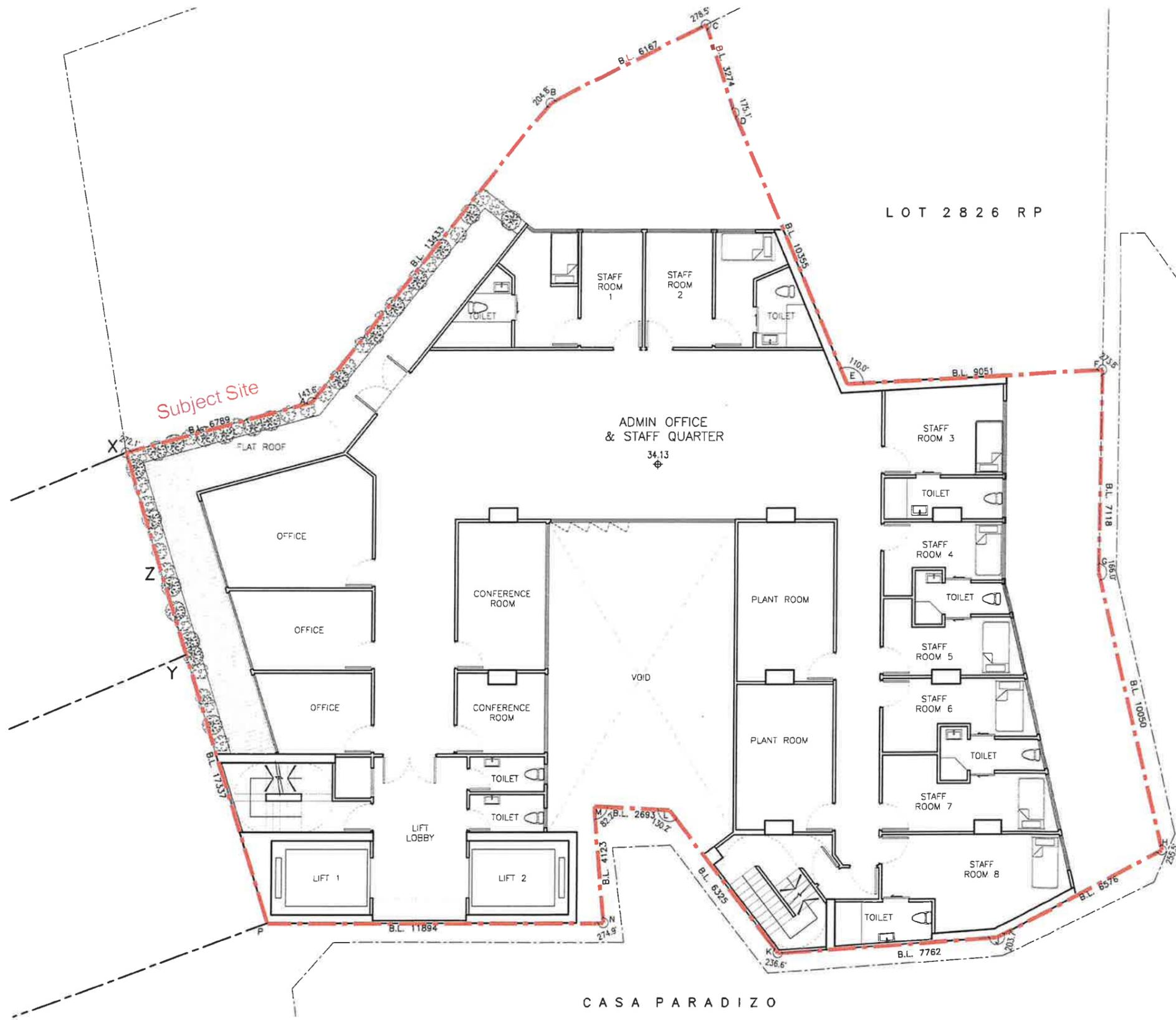
D
 C
 B
 A

MAY. 2023
 APR. 2023
 OCT. 2022
 JULY. 2022

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1 8/F PLAN
G-08

2202
PROPOSED RESIDENTIAL CARE HOME FOR ELDERLY
at 81 SAN TAM ROAD,
YUEN LONG, N.T.

8/F PLAN
ADMIN OFFICE & STAFF QUARTER

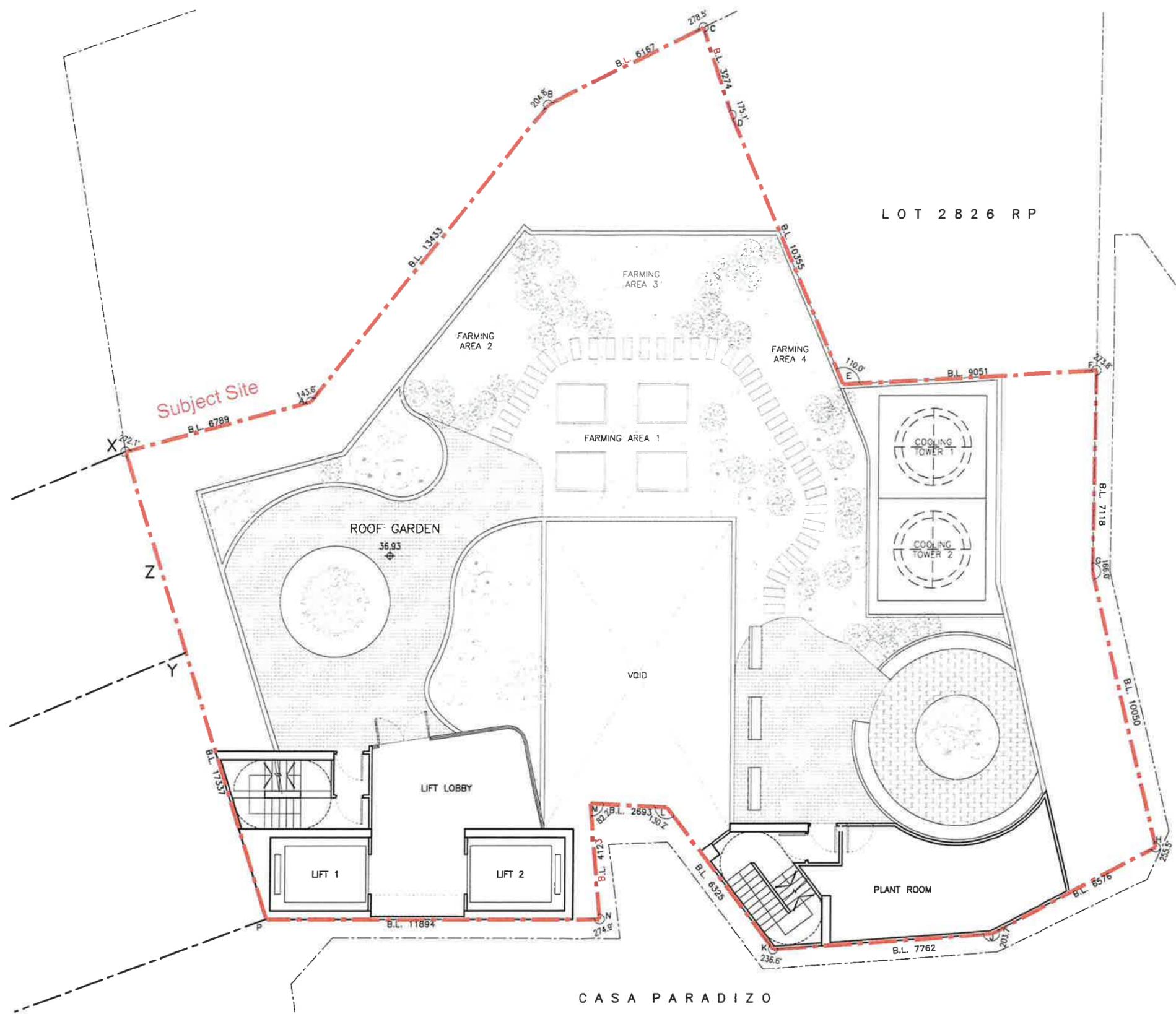
G-08 1:150 (A3)

B
A OCT. 2022
JULY. 2022

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1 ROOF GARDEN PLAN
G-09

NO AIR-SENSITIVE USES INCLUDING OPENABLE WINDOW, FRESH AIR INTAKE AND ACTIVE RECREATIONAL USES IN THE OPEN SPACE IS ALLOWED WITHIN THE BUFFER ZONE.

2202
PROPOSED RESIDENTIAL CARE HOME FOR ELDERLY
at 81 SAN TAM ROAD,
YUEN LONG, N.T.

ROOF GARDEN PLAN

G-09 1:150 (A3)

B
A OCT. 2022
JULY. 2022

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S12A AMENDMENT OF PLAN APPLICATION
APPROVED NGAU TAM MEI
OUTLINE ZONING PLAN NO. S/YL-NTM/12

PROPOSED REZONING FROM "R(C)" TO "G/IC"
FOR A PROPOSED "SOCIAL WELFARE FACILITIES"
(RESIDENTIAL CARE HOMES FOR THE ELDERLY)
(RCHE)

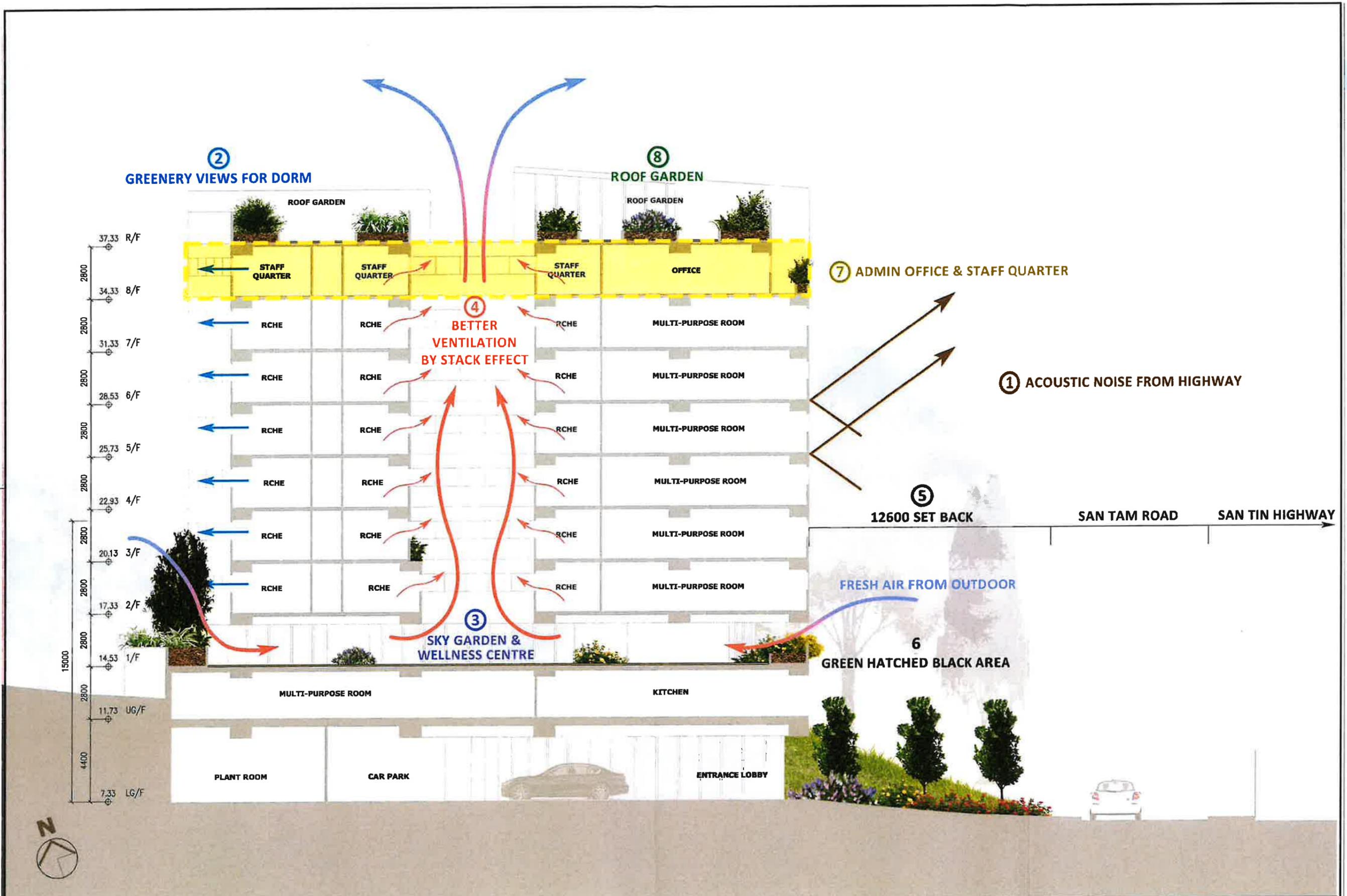
AT LOT 4823 IN D.D.104, 81 SAN TAM ROAD,
SAN TIN, N.T.

FIGURE 4A & 4B

DESIGN CONCEPT (1) & (2)

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2202
 PROPOSED RESIDENTIAL CARE HOME FOR ELDERLY
 at 81 SAN TAM ROAD,
 YUEN LONG, N.T.

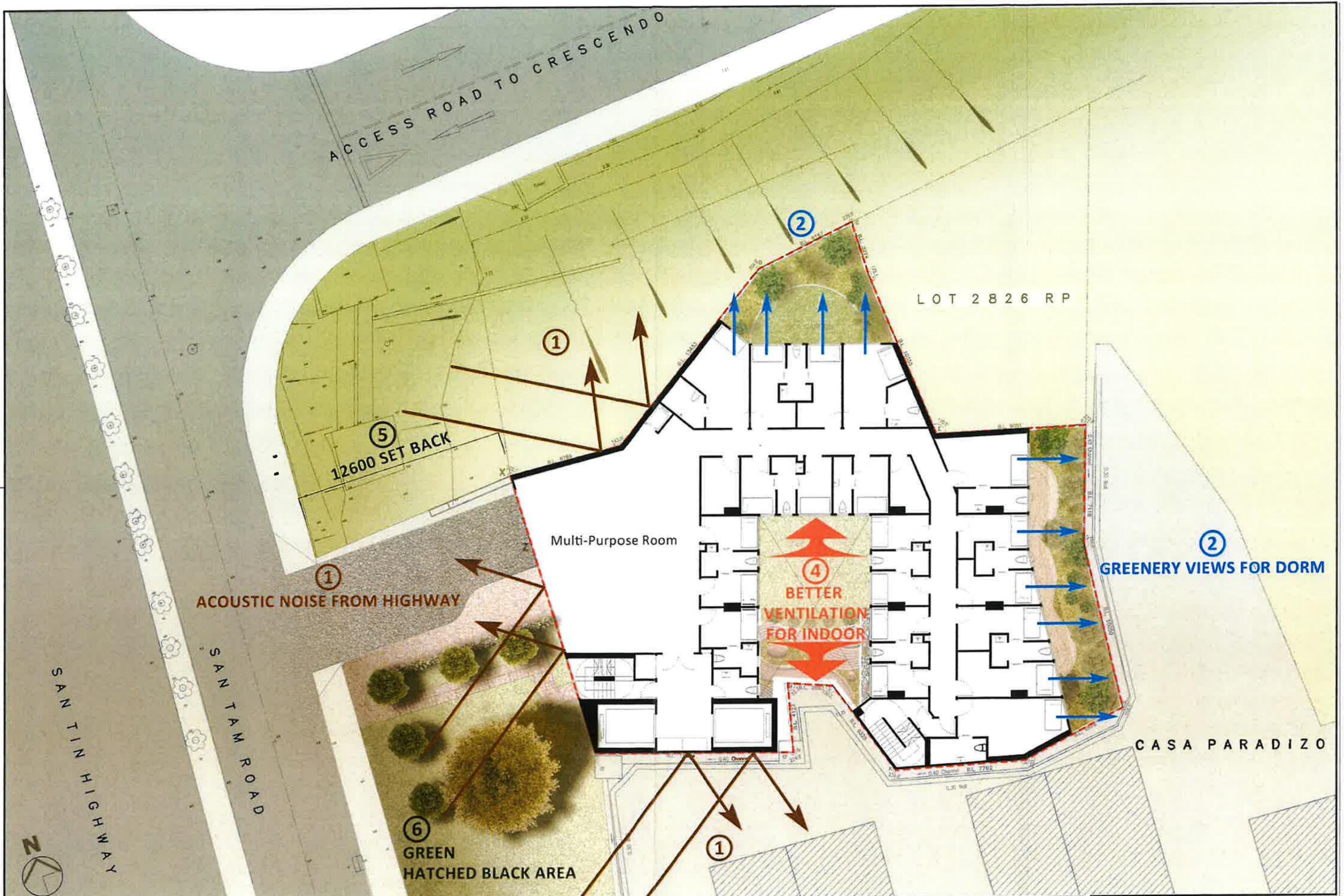
CONCEPT DIAGRAM (1)

FIGURE 4a

MAY, 2022

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2202
 PROPOSED RESIDENTIAL CARE HOME FOR ELDERLY
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 YUEN LONG, N.T.

CONCEPT DIAGRAM (2)

FIGURE 4b

MAY 2022

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S12A AMENDMENT OF PLAN APPLICATION
APPROVED NGAU TAM MEI
OUTLINE ZONING PLAN NO. S/YL-NTM/12

PROPOSED REZONING FROM "R(C)" TO "G/IC"
FOR A PROPOSED "SOCIAL WELFARE FACILITIES"
(RESIDENTIAL CARE HOMES FOR THE ELDERLY)
(RCHE)

AT LOT 4823 IN D.D.104, 81 SAN TAM ROAD,
SAN TIN, N.T.

FIGURE 4C

PERSPECTIVE VIEW THROUGH SKY GARDEN

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2202
 PROPOSED RESIDENTIAL CARE HOME FOR ELDERLY
 at 81 SAN TAM ROAD,
 YUEN LONG, N.T.

**PERSPECTIVE VIEW THROUGH
 SKYGARDEN**

Figure 4C NTS (A3) A

JUL. 2022
 MAY. 2022

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RLEE

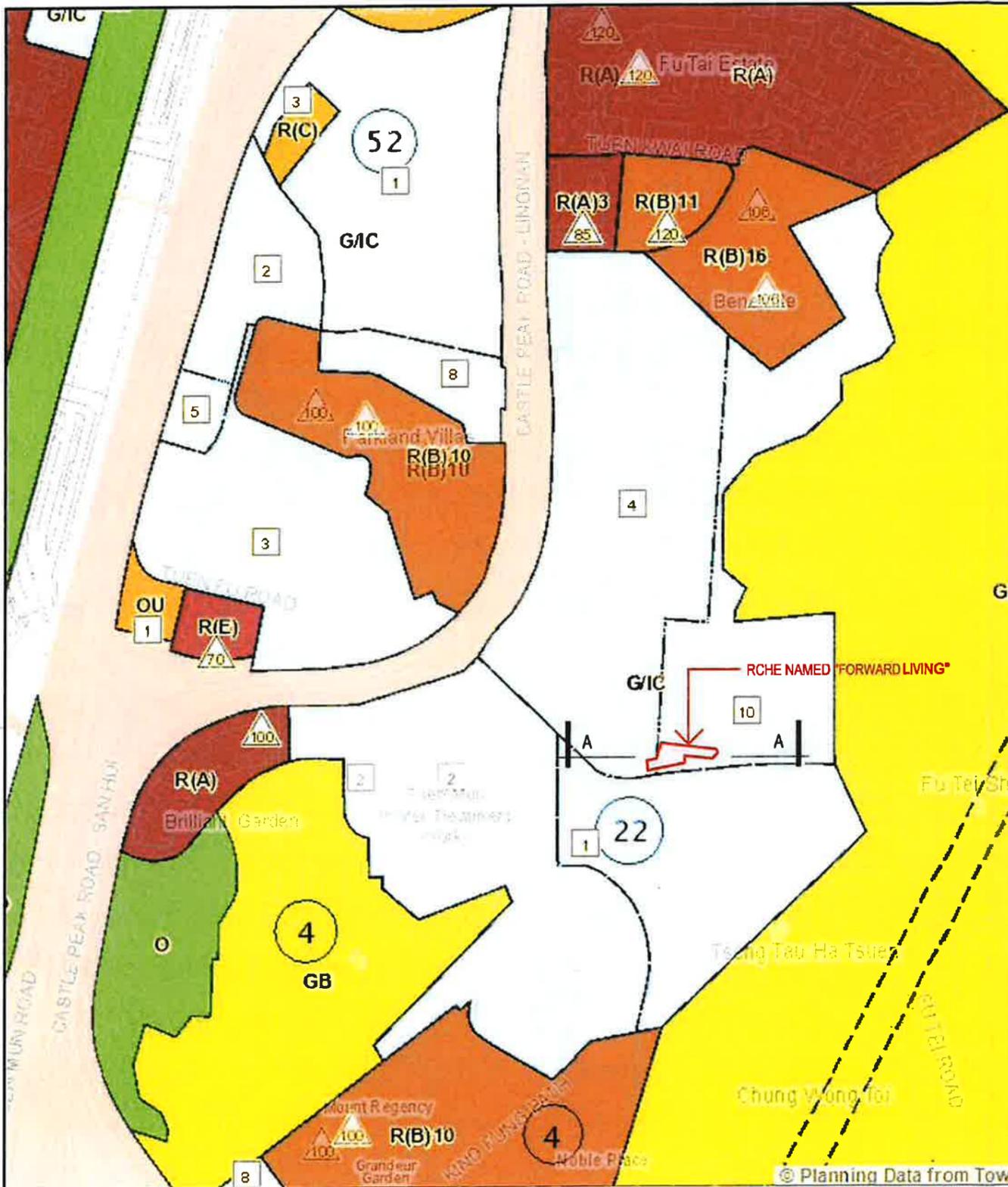
S12A AMENDMENT OF PLAN APPLICATION
APPROVED NGAU TAM MEI
OUTLINE ZONING PLAN NO. S/YL-NTM/12

PROPOSED REZONING FROM "R(C)" TO "G/IC"
FOR A PROPOSED "SOCIAL WELFARE FACILITIES"
(RESIDENTIAL CARE HOMES FOR THE ELDERLY)
(RCHE)

AT LOT 4823 IN D.D.104, 81 SAN TAM ROAD,
SAN TIN, N.T.

FIGURE 5

COMPARISON OF DESIGN TO A NEWLY
COMPLETED RCHE "FORWARD LIVING" AT
NO.9, FU TEI ROAD, TUEN MUN



DETAIL INFORMATION OF "FORWARD LIVING"

ADDRESS: NO. 9, FU TEI ROAD, TUEN MUN	
SITE AREA	1,122 S.M.
PERMITTED G.F.A.	5,400 S.M.
BUILDING HEIGHT	31.15m UP TO TOP OF ADMIN OFFICE
PLOT RATIO	4.81
NO. OF STOREY	10

31150 24000 (NOT EXCLUDING) 3650 3500 2770 2770 2770 2770 2770 2800 2770 2800 4075	PLANT ROOMS
	OFFICE
	DORMITORY
	DORMITORY
	DORMITORY
	DORMITORY
	DORMITORY
	DORMITORY
	MULTI-PURPOSE ROOM
	MAIN ENTRANCE LOBBY

1 OZP no. S/TM/35
6 SCALE: N.T.S.

2 SECTION A-A
6 SCALE: 1:500

2202
PROPOSED RESIDENTIAL CARE HOME FOR ELDERLY
at 81 SAN TAM ROAD,
YUEN LONG, N.T.

COMPARISON OF DESIGN TO A
NEWLY COMPLETED RCHE
"FORWARD LIVING" AT NO. 9, FU TEI
ROAD, TUEN MUN

FIGURE 5

(A3)

JULY, 2022

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RLEE

S12A AMENDMENT OF PLAN APPLICATION
APPROVED NGAU TAM MEI
OUTLINE ZONING PLAN NO. S/YL-NTM/12

PROPOSED REZONING FROM "R(C)" TO "G/IC"
FOR A PROPOSED "SOCIAL WELFARE FACILITIES"
(RESIDENTIAL CARE HOMES FOR THE ELDERLY)
(RCHE)

AT LOT 4823 IN D.D.104, 81 SAN TAM ROAD,
SAN TIN, N.T.

FIGURE 6

THE OUTLINE ZONING PLAN NO. S/YL – NTM/12

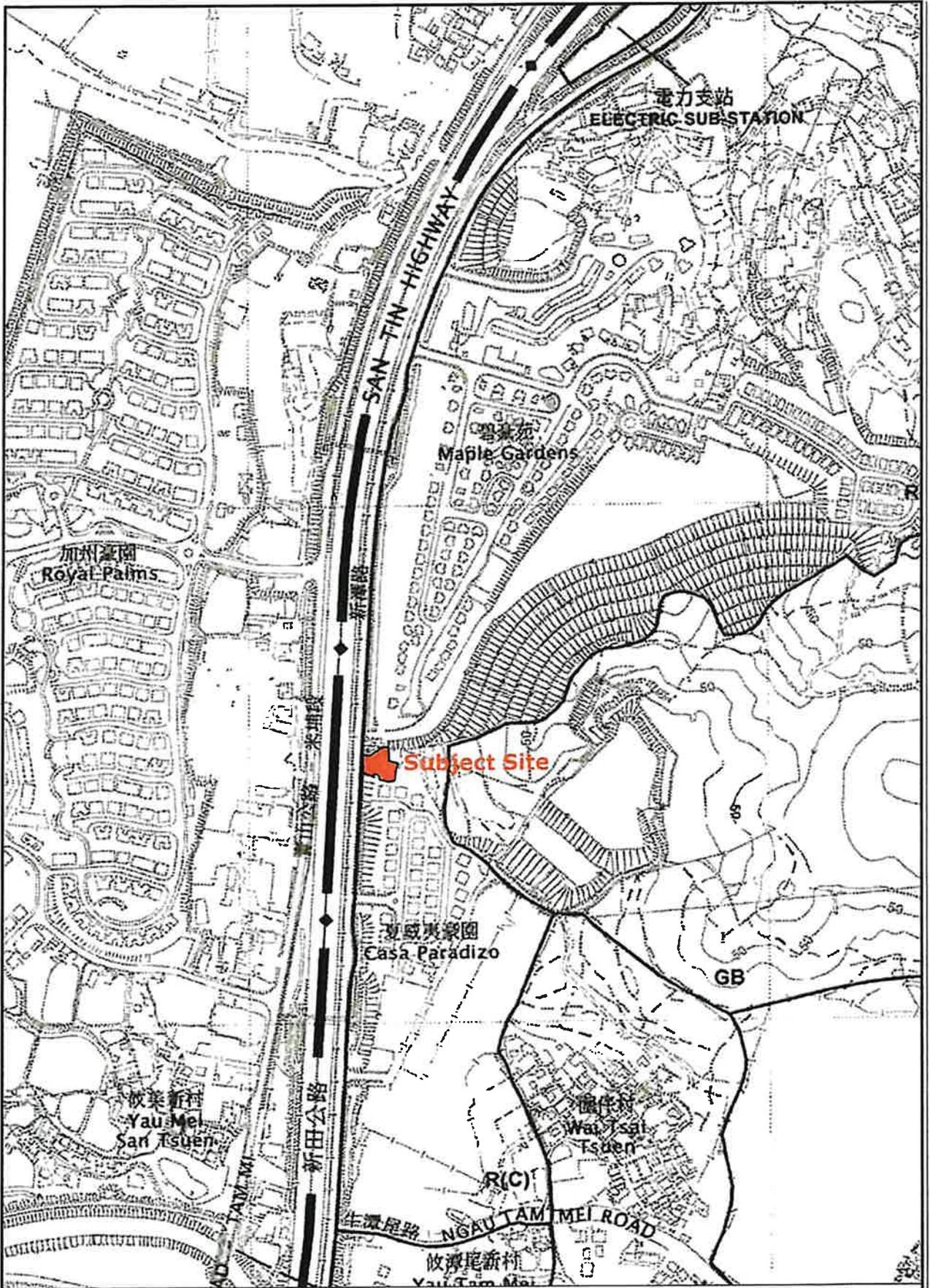


FIGURE NO. 6	TITLE OUTLINE ZONING PLAN NO. S/YL-NTM/12	SCALE 1:5000
		DATE JUL 2022

RLEP

**S12A AMENDMENT OF PLAN APPLICATION
APPROVED NGAU TAM MEI
OUTLINE ZONING PLAN NO. S/YL-NTM/12**

**PROPOSED REZONING FROM "R(C)" TO "G/IC"
FOR A PROPOSED "SOCIAL WELFARE FACILITIES"
(RESIDENTIAL CARE HOMES FOR THE ELDERLY)
(RCHE)**

**AT LOT 4823 IN D.D.104, 81 SAN TAM ROAD,
SAN TIN, N.T.**

FIGURE 6A

THE PORPOSED REZONING

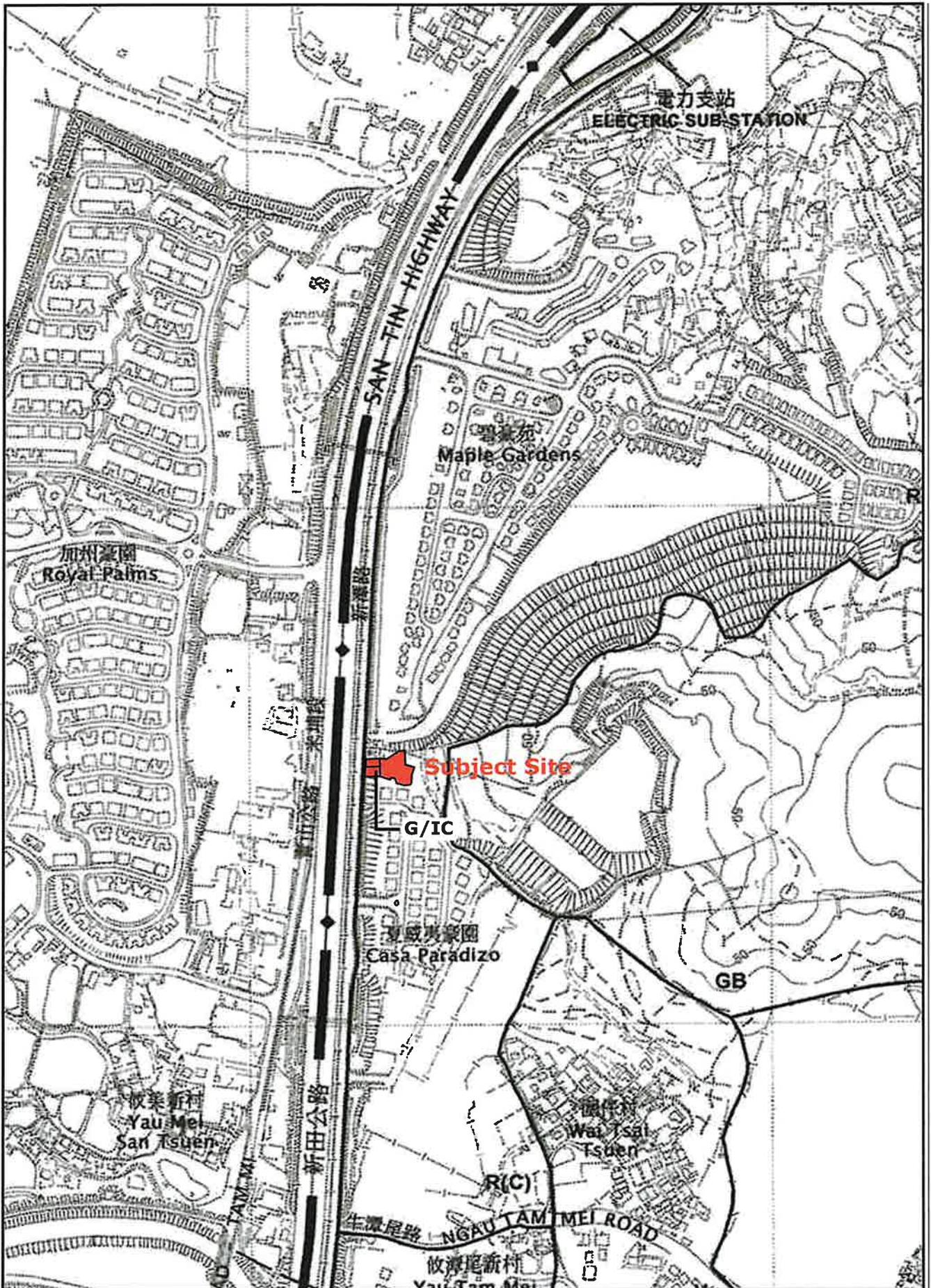


FIGURE NO.	TITLE	SCALE
6A	THE PROPOSED REZONING	1:5000
		DATE
		JUL 2022



GOVERNMENT, INSTITUTION OR COMMUNITY

Column 1 Uses always permitted	Column 2 Uses that may be permitted with or without conditions on application to the Town Planning Board
Ambulance Depot	Animal Boarding Establishment
Animal Quarantine Centre (in Government building only)	Animal Quarantine Centre (not elsewhere specified)
Broadcasting, Television and/or Film Studio	Columbarium
Eating Place (Canteen, Cooked Food Centre only)	Correctional Institution
Educational Institution	Crematorium
Exhibition or Convention Hall	Driving School
Field Study/Education/Visitor Centre	Eating Place (not elsewhere specified)
Government Refuse Collection Point	Firing Range
Government Use (not elsewhere specified)	Flat
Hospital	Funeral Facility
Institutional Use (not elsewhere specified)	Helicopter Fuelling Station
Library	Helicopter Landing Pad
Market	Holiday Camp
Place of Recreation, Sports or Culture	Hotel
Public Clinic	House (other than rebuilding of New Territories Exempted House or replacement of existing domestic building by New Territories Exempted House permitted under the covering Notes)
Public Convenience	Off-course Betting Centre
Public Transport Terminus or Station	Office
Public Utility Installation	Petrol Filling Station
Public Vehicle Park (excluding container vehicle)	Place of Entertainment
Recyclable Collection Centre	Private Club
Religious Institution	Radar, Telecommunications Electronic Microwave Repeater, Television and/or Radio Transmitter Installation
Research, Design and Development Centre	Refuse Disposal Installation (Refuse Transfer Station only)
Rural Committee/Village Office	Residential Institution
School	Sewage Treatment/Screening Plant
Service Reservoir	Shop and Services
Social Welfare Facility	Utility Installation for Private Project
Training Centre	Zoo
Wholesale Trade	

Planning Intention

This zone is intended primarily for the provision of Government, institution or community facilities serving the needs of the local residents and/or a wider district, region or the territory. It is also intended to provide land for uses directly related to or in support of the work of the Government, organizations providing social services to meet community needs, and other institutional establishments.

FIGURE NO. 6A	TITLE EXTRACTED NOTE OF G/IC ZONE ATTACHED TO OZP	SCALE N.T.S.
		DATE JUL 2022

RLEE

S12A AMENDMENT OF PLAN APPLICATION
APPROVED NGAU TAM MEI
OUTLINE ZONING PLAN NO. S/YL-NTM/12

PROPOSED REZONING FROM "R(C)" TO "G/IC"
FOR A PROPOSED "SOCIAL WELFARE FACILITIES"
(RESIDENTIAL CARE HOMES FOR THE ELDERLY)
(RCHE)

AT LOT 4823 IN D.D.104, 81 SAN TAM ROAD,
SAN TIN, N.T.

FIGURE 7

NEARBY PLANNING APPLICATION CASES

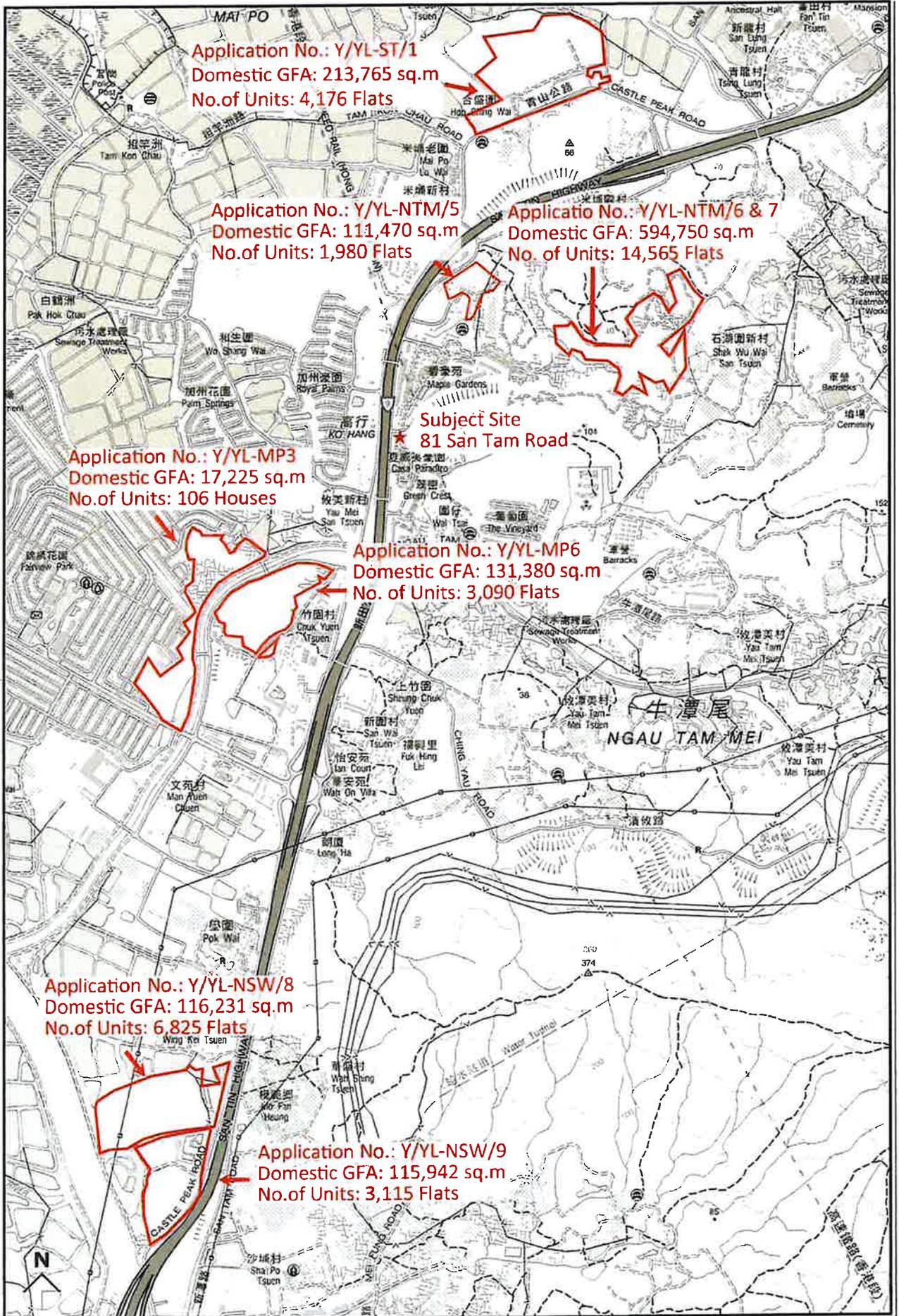


FIGURE NO. 7	TITLE NEARBY PLANNING APPLICATION CASES	SCALE
		DATE JUL 2022

RILEE

S12A AMENDMENT OF PLAN APPLICATION
APPROVED NGAU TAM MEI
OUTLINE ZONING PLAN NO. S/YL-NTM/12

PROPOSED REZONING FROM "R(C)" TO "G/IC"
FOR A PROPOSED "SOCIAL WELFARE FACILITIES"
(RESIDENTIAL CARE HOMES FOR THE ELDERLY)
(RCHE)

AT LOT 4823 IN D.D.104, 81 SAN TAM ROAD,
SAN TIN, N.T.

FIGURE 8

SIMILAR APPROVED & PROCEEDING
S12A PLANNING APPLICATIONS

Summary of S12A Planning Application of RCHE

Existing Zoning	Amended Zoning	Location	Application No.	Status
OU (B)	GIC	No. 8-12 Hi Yip Street, Yuen Long, New Territories (Yuen Long Town Lot No. 361)	Y/YL/6	Approved 20/04/2012
REC	GIC	Lot No. 953 RP (Part) in D.D. 92 and adjoining Government Land, Kam Hang Road, Kwu Tung South, New Territories	Y/NE-KTS/16	In Progress

FIGURE NO.

8

TITLE

**SIMILAR APPROVED & PROCEEDING
S12A PLANNING APPLICATIONS**

SCALE

-

DATE

JUL 2022

RLEE

S12A AMENDMENT OF PLAN APPLICATION
APPROVED NGAU TAM MEI
OUTLINE ZONING PLAN NO. S/YL-NTM/12

PROPOSED REZONING FROM "R(C)" TO "G/IC"
FOR A PROPOSED "SOCIAL WELFARE FACILITIES"
(RESIDENTIAL CARE HOMES FOR THE ELDERLY)
(RCHE)

AT LOT 4823 IN D.D.104, 81 SAN TAM ROAD,
SAN TIN, N.T.

FIGURE 9

SIMILAR APPROVED S16 PLANNING APPLICATIONS

Summary of S16 Planning Application of RCHE

Existing Zoning	Amended Zoning	Location	Application No.	Status
GIC	N/A	Lots 1695 S.E ss.1 RP, 1695 S.F ss.1 and 1695 S.H RP (Part) in D.D. 120, Tai Kei Leng, Yuen Long, New Territories	A/YL/256	Approved 20/03/2020
V / R(C)	N/A	Lot 1689 S.A and Adjoining Government Land in D.D. 109, Yuen Long	A/YL-KTS/838-6	Approved 07/03/2022
V	N/A	Lots 1695 S.D RP, 1741 RP(Part) and 1394 S.B RP (Part) in D.D. 120 and adjoining Government Land, Tai Kei Leng, Yuen Long, New Territories	A/YL/263	Approved 05/02/2021
V	N/A	Lots 834 and 838 RP in D.D. 52 and adjoining Government Land, Tin Ping Road, Sheung Shui, New Territories	A/FSS/279	Approved 29/10/2021
V	N/A	Various Lots in D.D. 51, Fanling, New Territories	A/FSS/276	Approved 06/11/2020
RE1	N/A	1 Hong Ting Road, Sai Kung, New Territories	A/SK-SKT/29	Approved 26/11/2021
RE1	N/A	2 Hong Ting Road, Sai Kung, New Territories	A/SK-SKT/30	Approved 26/11/2021
RE1	N/A	6 Hong Ting Road, Sai Kung, New Territories	A/SK-SKT/31	Approved 26/11/2021
RE1	N/A	7 Hong Ting Road, Sai Kung, New Territories	A/SK-SKT/32	Approved 26/11/2021
RE1	N/A	7 (Part) and 9 Hong Ting Road, Sai Kung, New Territories	A/SK-SKT/33	Approved 26/11/2021

FIGURE NO.

9

TITLE

**SIMILAR APPROVED & PROCEEDING
S16 PLANNING APPLICATIONS**

SCALE

DATE

JUL 2022

RLEE

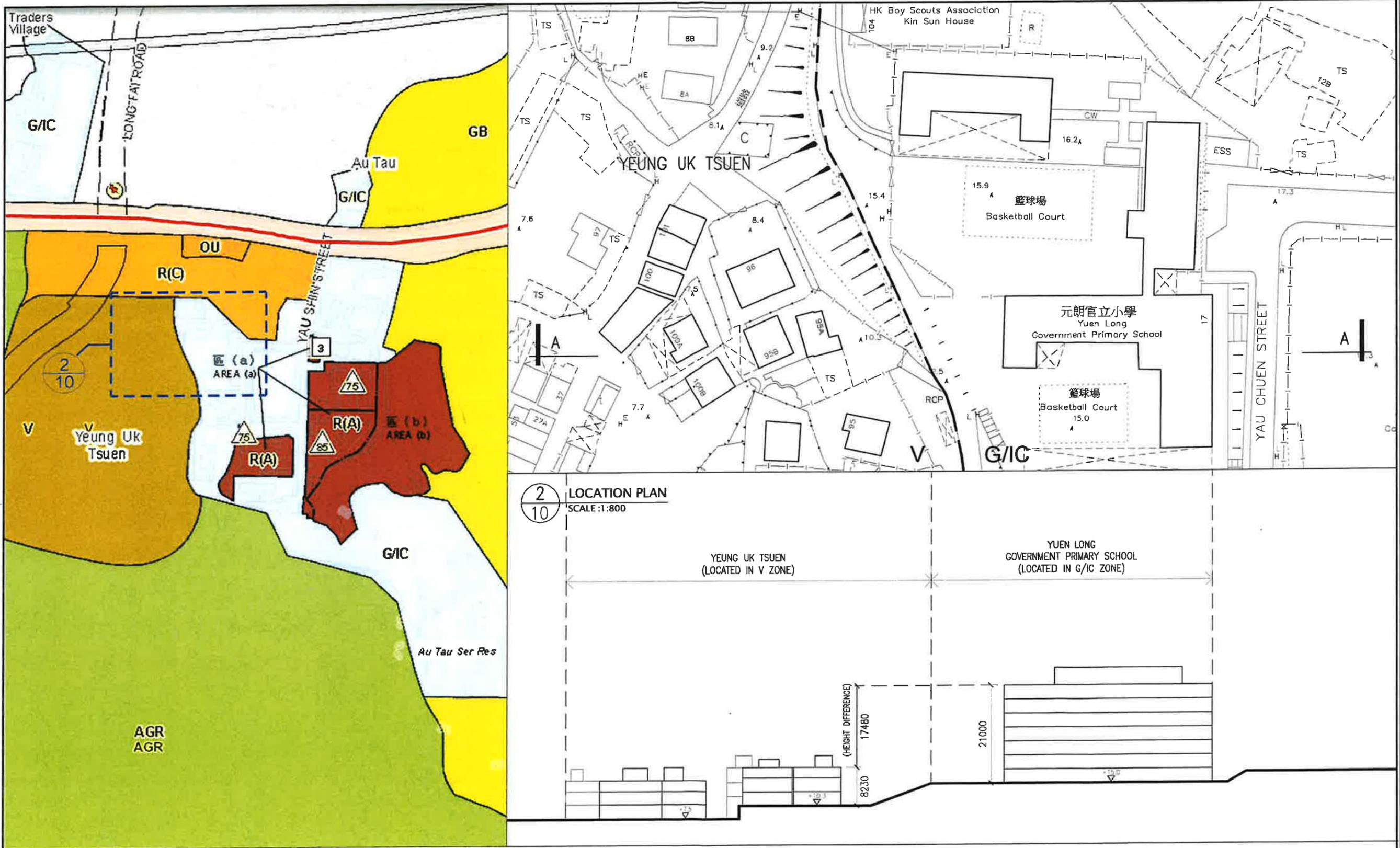
S12A AMENDMENT OF PLAN APPLICATION
APPROVED NGAU TAM MEI
OUTLINE ZONING PLAN NO. S/YL-NTM/12

PROPOSED REZONING FROM "R(C)" TO "G/IC"
FOR A PROPOSED "SOCIAL WELFARE FACILITIES"
(RESIDENTIAL CARE HOMES FOR THE ELDERLY)
(RCHE)

AT LOT 4823 IN D.D.104, 81 SAN TAM ROAD,
SAN TIN, N.T.

FIGURE 10A – 10D

COMPARISON OF BUILDING HEIGHT FOR
RCHE / "G/IC" DEVELOPMENT ADJOINING
LOW-DENSITY DEVELOPMENT



1 OZP no. S/YL-TT/18
10A SCALE :N.T.S.

3 SECTION A-A
10A SCALE :1:800

10m 20m 30m 60m

2202
PROPOSED RESIDENTIAL CARE HOME FOR ELDERLY
AT 81 SAN TAM ROAD,
YUEN LONG, N.T.

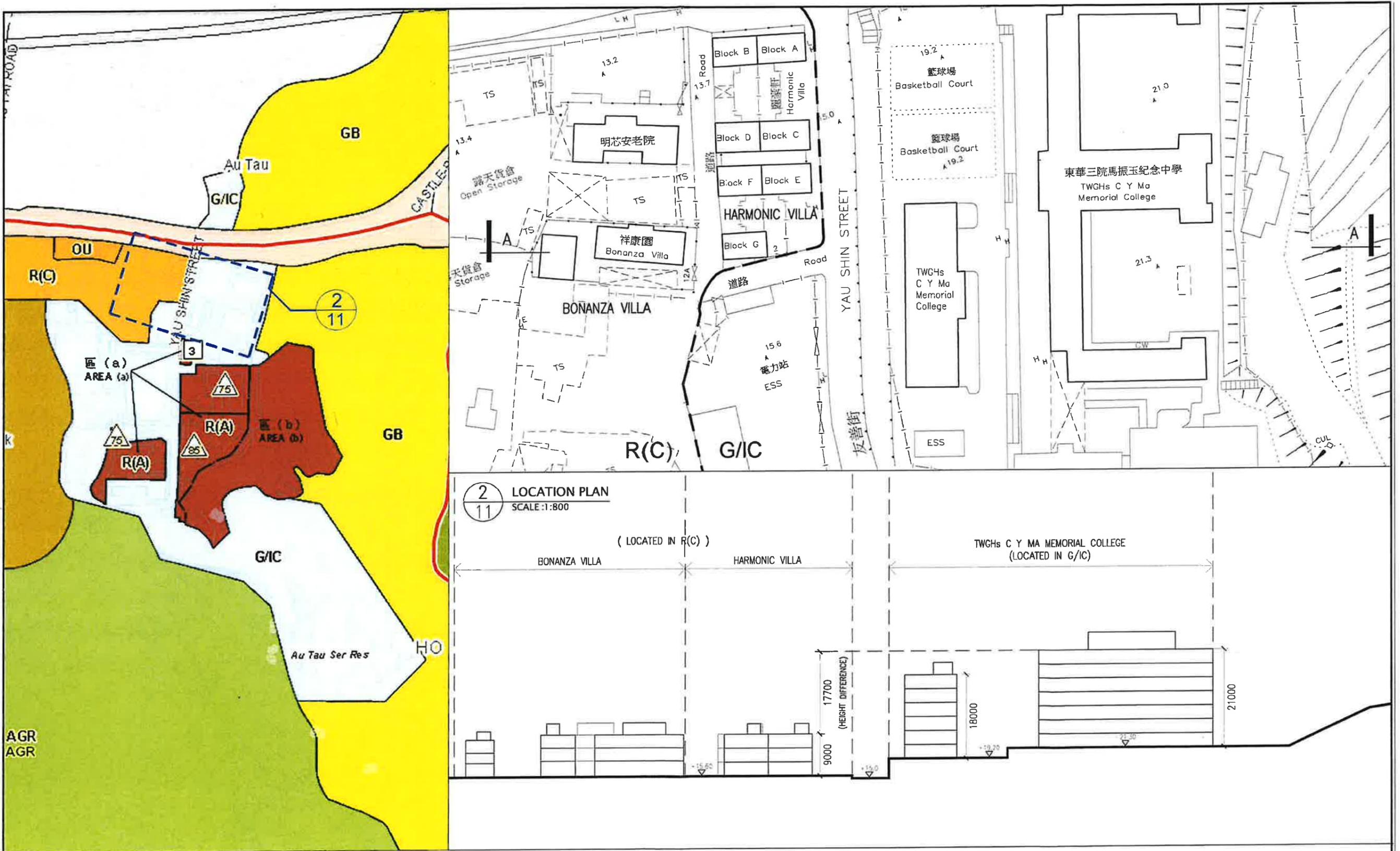
COMPARISON OF BUILDING HEIGHT
FOR RCHE/"G/IC" DEVELOPMENT
ADJOINING LOW DENSITY
DEVELOPMENTS

Figure 10A - (A3)

JULY, 2022

Do not scale drawing.
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1 OZP no. S/YL-TT/18
10B SCALE : N.T.S.

3 SECTION A-A
10B SCALE : 1:800

10m 20m 30m 60m

2202
PROPOSED RESIDENTIAL CARE HOME FOR ELDERLY
at 81 SAN TAM ROAD,
YUEN LONG, N.T.

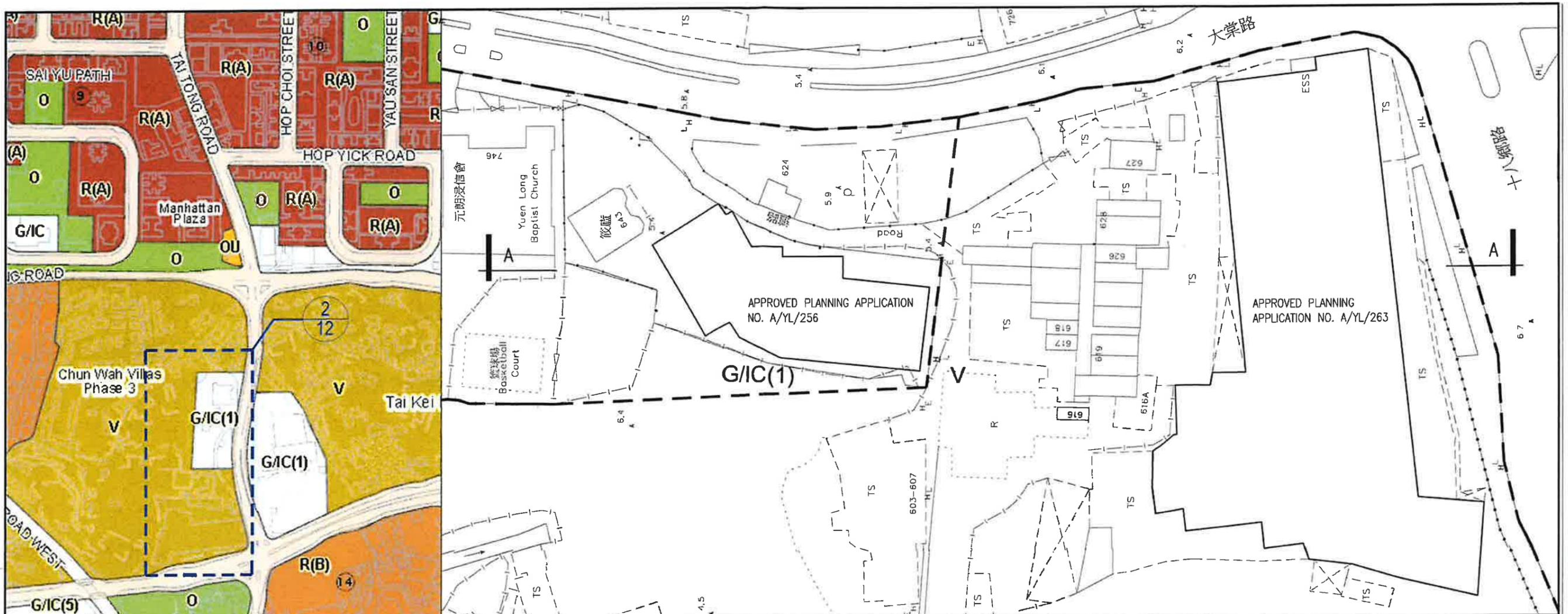
COMPARISON OF BUILDING HEIGHT
FOR RCHE/"G/IC" DEVELOPMENT
ADJOINING LOW DENSITY
DEVELOPMENTS

Figure 10B - (A3)

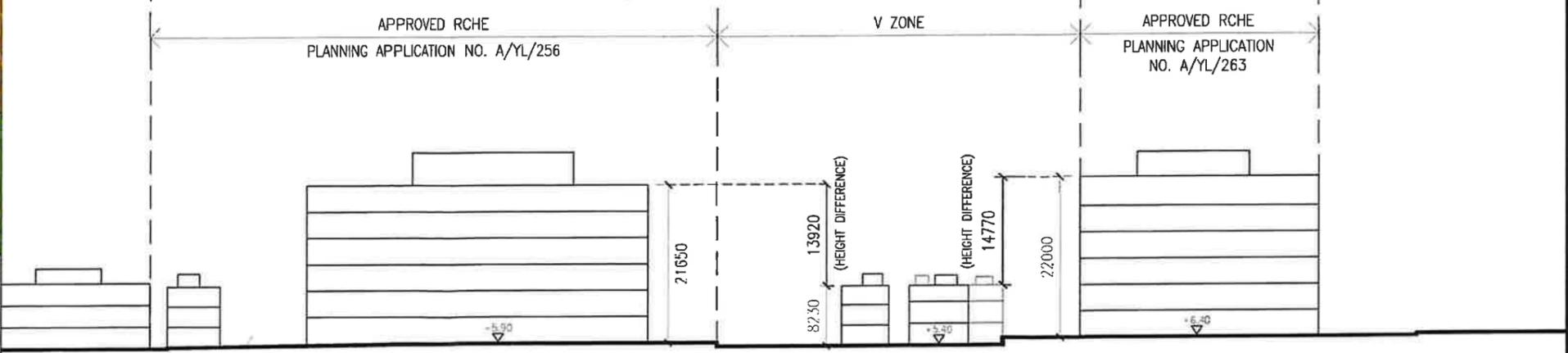
JULY, 2022

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RLEE



2 LOCATION PLAN
SCALE: 1:800



1 OZP no. S/YL/25
SCALE: N.T.S.

3 SECTION A-A
SCALE: 1:800



2202
PROPOSED RESIDENTIAL CARE HOME FOR ELDERLY
AT 81 SAN TAM ROAD,
YUEN LONG, N.T.

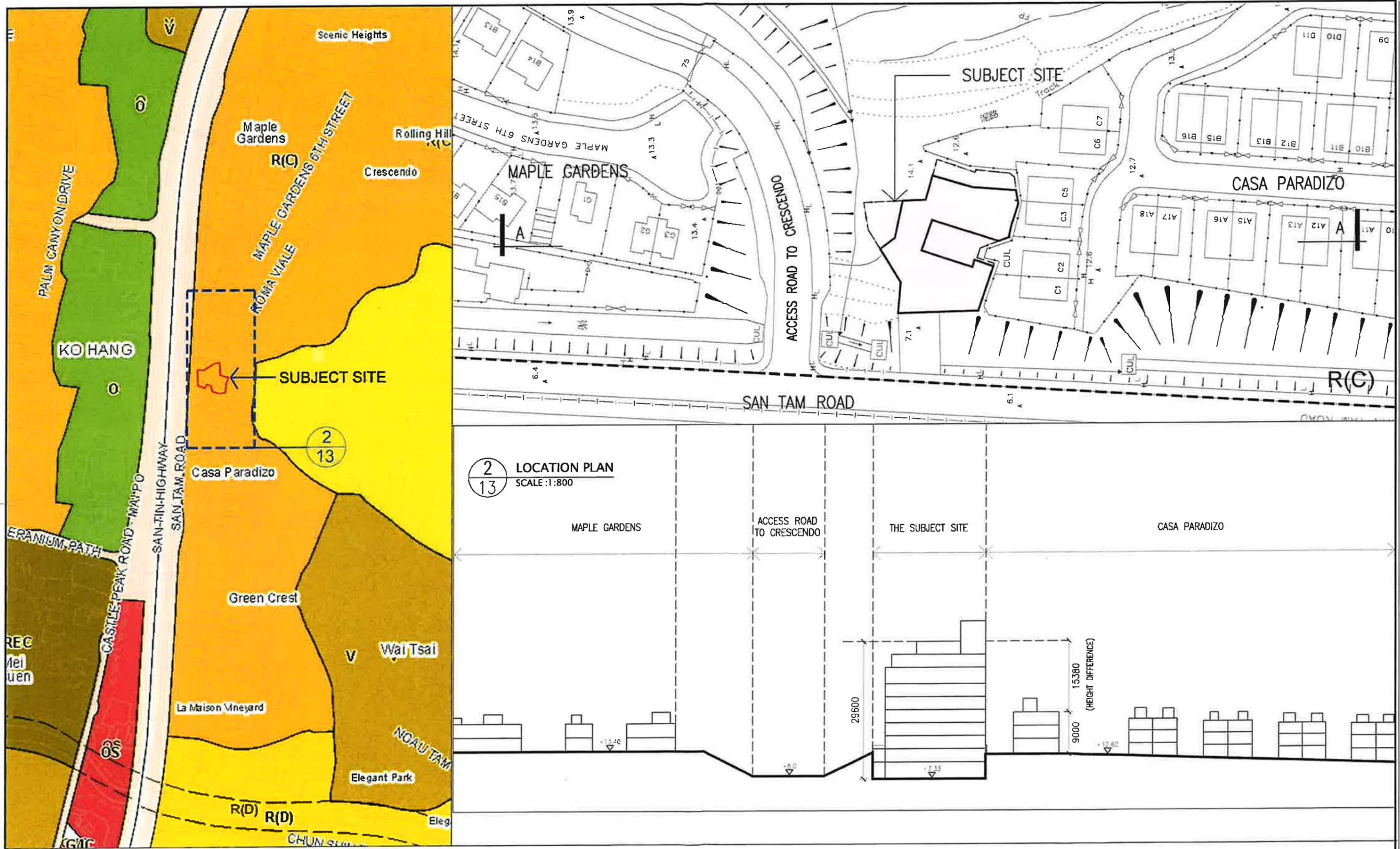
**COMPARISON OF BUILDING HEIGHT
FOR RCHE/"G/IC" DEVELOPMENT
ADJOINING LOW DENSITY
DEVELOPMENTS**

Figure 10C - (A3)

JULY, 2022

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1 OZP of S/YL-NTM/12
SCALE : N.T.S.

3 SECTION A-A
SCALE : 1:800

10m 20m 30m 60m

2202
PROPOSED RESIDENTIAL CARE HOME FOR ELDERLY
at 81 SAN TAM ROAD,
YUEN LONG, N.T.

COMPARISON OF BUILDING HEIGHT
FOR RCHE/"G/IC" DEVELOPMENT
ADJOINING LOW DENSITY
DEVELOPMENTS

Figure 10D - (A3)

JULY, 2022

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S12A AMENDMENT OF PLAN APPLICATION
APPROVED NGAU TAM MEI
OUTLINE ZONING PLAN NO. S/YL-NTM/12

PROPOSED REZONING FROM "R(C)" TO "G/IC"
FOR A PROPOSED "SOCIAL WELFARE FACILITIES"
(RESIDENTIAL CARE HOMES FOR THE ELDERLY)
(RCHE)

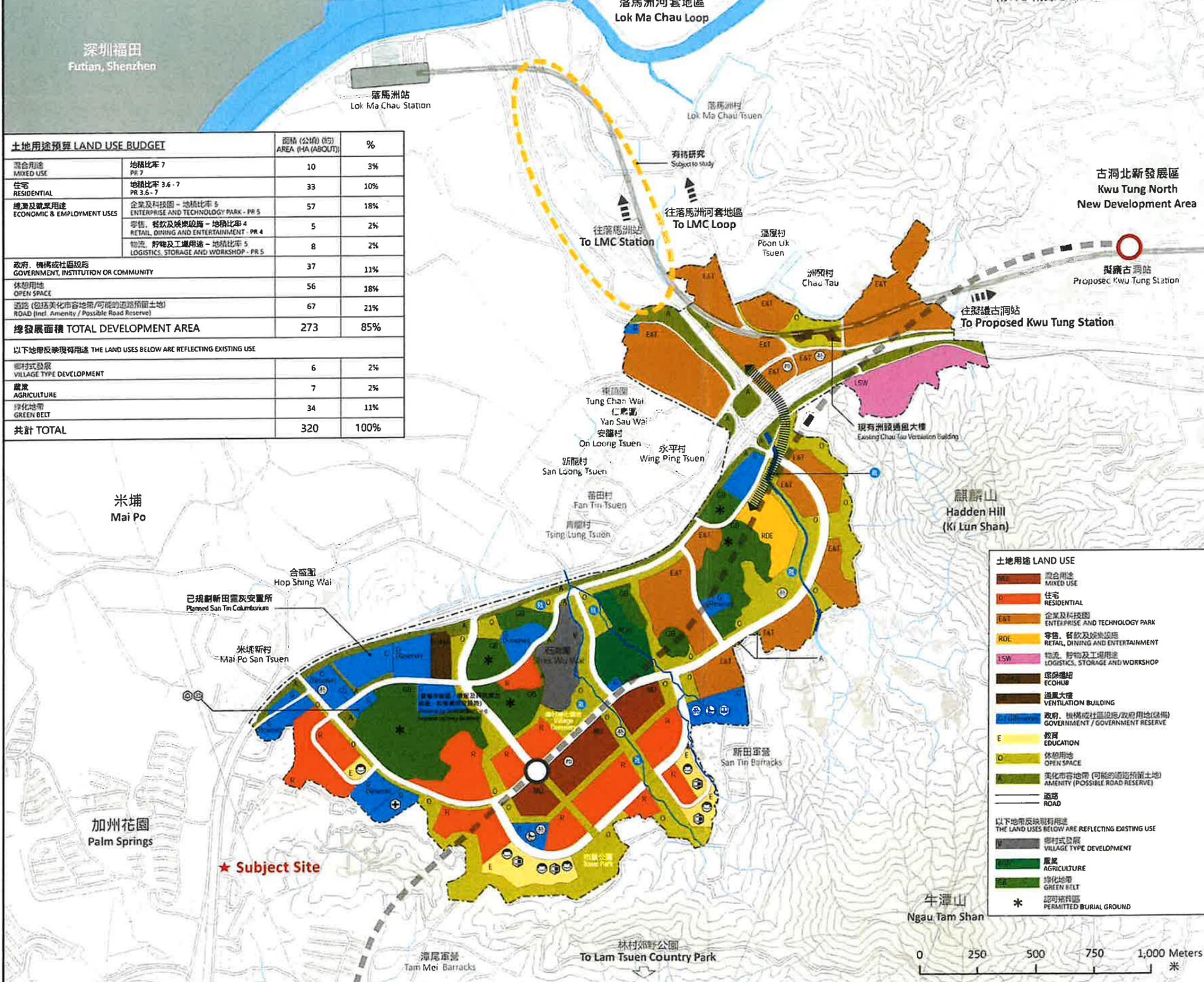
AT LOT 4823 IN D.D.104, 81 SAN TAM ROAD,
SAN TIN, N.T.

FIGURE 11

INITIAL LAND USE FOR SAN TIN & LOK MA CHAU
DEVELOPMENT

- 新田/落馬洲發展樞紐 San Tin / Lok Ma Chau Development Node
 - 擬議北環線的指示走向 Indicative Alignment of the Proposed Northern Link
 - 擬議新田站 Proposed San Tin Station
 - 擬議古洞站 Proposed Kwu Tung Station
 - 東鐵線(落馬洲支線) East Rail Line (Lok Ma Chau Spur Line)
 - 現有的落馬洲站 Existing Lok Ma Chau Station
 - 擬議標誌性綠橋 Proposed Iconic Green Bridge
 - 普通科診所 General Clinic
 - 消防局兼救護站 Fire Station cum Ambulance Depot
 - 小學 Primary School
 - 中學 Secondary School
 - 圖書館 Library
 - 體育中心 Sports Centre
 - 公共運輸交匯處 Public Transport Interchange
 - 單車停泊處 Cycle Parking Areas
 - 蓄洪湖 Retention Lake
- 水體 WATER RESOURCES**
- 河流/渠改善工程 Potential Watercourses/Nullah Upgrade
 - 鄰近新田/落馬洲發展樞紐的河溪 Watercourses around STL/MC DN
 - 現時落馬洲邊境管制站的概略位置 Broad Location of the Land of Existing Lok Ma Chau Boundary Control Point

土地用途預算 LAND USE BUDGET		面積 (公頃) (約)	%
面積 (公頃) (約)		AREA (HA) (ABOUT)	%
混合用途 MIXED USE	地積比率 7 PR 7	10	3%
住宅 RESIDENTIAL	地積比率 3.6 - 7 PR 3.6 - 7	33	10%
經濟及就業用途 ECONOMIC & EMPLOYMENT USES	企業及科技園 - 地積比率 5 ENTERPRISE AND TECHNOLOGY PARK - PR 5	57	18%
	零售、餐飲及娛樂設施 - 地積比率 4 RETAIL, DINING AND ENTERTAINMENT - PR 4	5	2%
	物流、貯物及工場用途 - 地積比率 5 LOGISTICS, STORAGE AND WORKSHOP - PR 5	8	2%
	政府、機構或社區設施 GOVERNMENT, INSTITUTION OR COMMUNITY	37	11%
休憩用地 OPEN SPACE		56	18%
道路 (包括美化市容地帶/可能的道路預留土地) ROAD (incl. Amenity / Possible Road Reserve)		67	21%
總發展面積 TOTAL DEVELOPMENT AREA		273	85%
以下地帶反映現有用途 THE LAND USES BELOW ARE REFLECTING EXISTING USE			
鄉村式發展 VILLAGE TYPE DEVELOPMENT		6	2%
農業 AGRICULTURE		7	2%
綠化地帶 GREEN BELT		34	11%
共計 TOTAL		320	100%



土地用途 LAND USE

- 混合用途 MIXED USE
- 住宅 RESIDENTIAL
- 企業及科技園 ENTERPRISE AND TECHNOLOGY PARK
- 零售、餐飲及娛樂設施 RETAIL, DINING AND ENTERTAINMENT
- 物流、貯物及工場用途 LOGISTICS, STORAGE AND WORKSHOP
- 環保地帶 ECOHUB
- 通風大樓 VENTILATION BUILDING
- 政府、機構或社區設施/政府用地(保留) GOVERNMENT / GOVERNMENT RESERVE
- 教育 EDUCATION
- 休憩用地 OPEN SPACE
- 美化市容地帶(可能的道路預留土地) AMENITY (POSSIBLE ROAD RESERVE)
- 道路 ROAD

以下地帶反映現有用途 THE LAND USES BELOW ARE REFLECTING EXISTING USE

- 鄉村式發展 VILLAGE TYPE DEVELOPMENT
- 農業 AGRICULTURE
- 綠化地帶 GREEN BELT
- 認可墳葬區 PERMITTED BURIAL GROUND

初步土地用途
(未包括落馬洲邊境管制站土地)
INITIAL LAND USE PLAN
(Not yet included the land at Lok Ma Chau Boundary Control Point)

附註：需作進一步研究及修訂
Remarks: Subject to further study and amendments

2202
PROPOSED RESIDENTIAL CARE HOME FOR ELDERLY
at 81 SAN TAM ROAD,
YUEN LONG, N.T.

INITIAL LAND USE FOR SAN TIN &
LOK MA CHOU DEVELOPMENT

FIGURE 11

- A -
JUL 2022
MAY 2022

Do not scale drawing.
Contractors are required to verify exact dimensions on site.
The drawings show the design intent of the architect only, contractors are required to submit shop drawings where appropriate.
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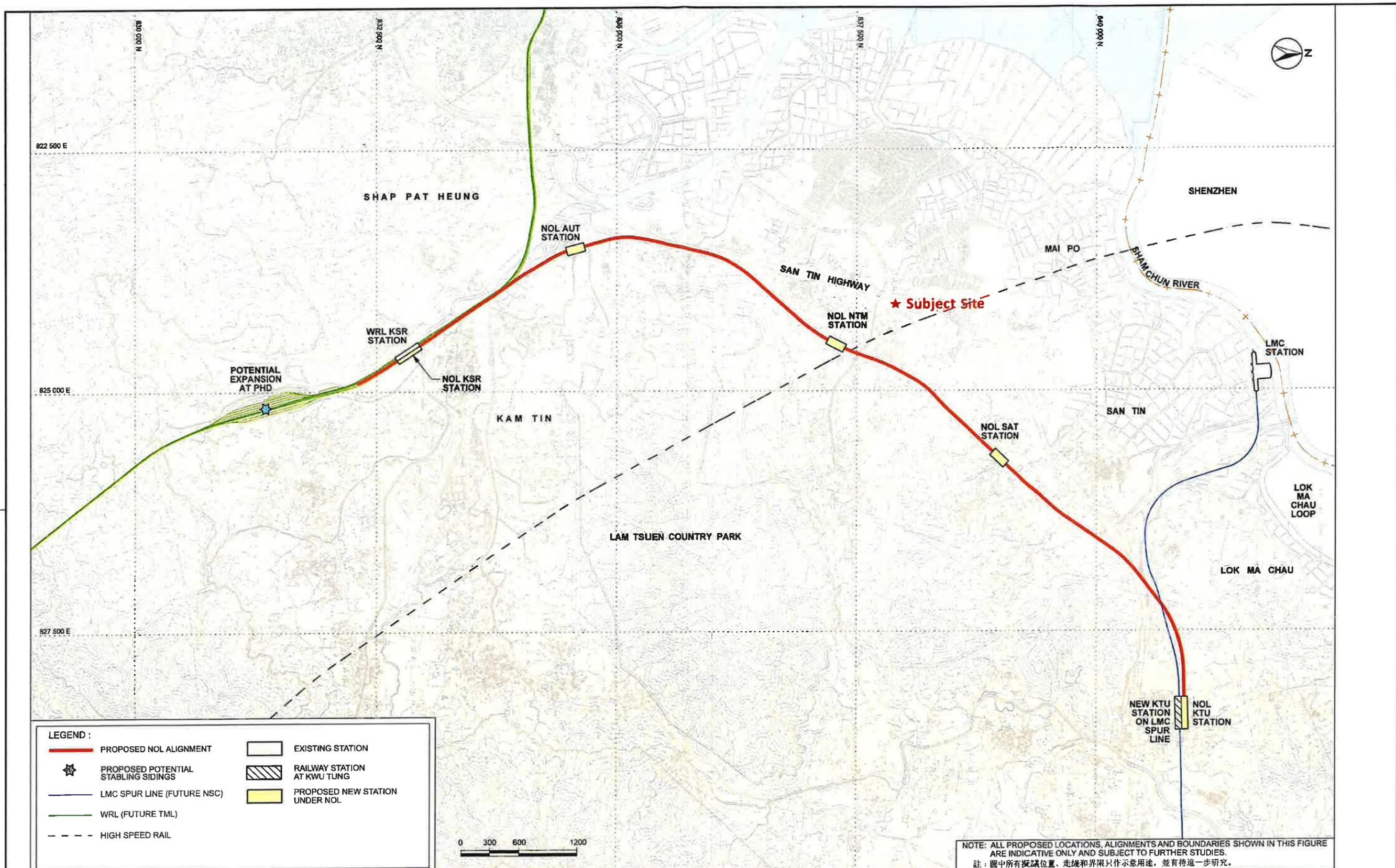
S12A AMENDMENT OF PLAN APPLICATION
APPROVED NGAU TAM MEI
OUTLINE ZONING PLAN NO. S/YL-NTM/12

PROPOSED REZONING FROM "R(C)" TO "G/IC"
FOR A PROPOSED "SOCIAL WELFARE FACILITIES"
(RESIDENTIAL CARE HOMES FOR THE ELDERLY)
(RCHE)

AT LOT 4823 IN D.D.104, 81 SAN TAM ROAD,
SAN TIN, N.T.

FIGURE 12

PROPOSED MTR NORTHERN LINK



NORTHERN LINK
北環綫

Figure 1
圖1

2202
PROPOSED RESIDENTIAL CARE HOME FOR ELDERLY
 at 81 SAN TAM ROAD,
 YUEN LONG, N.T.

PROPOSED MTR NORTHERN LINK

FIGURE 12

MAY 2022

Do not scale drawings.
 Contractors are required to verify exact dimensions on site.
 The drawings show the design intent of the architect only, contractors are required to submit shop drawings where appropriate.
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 This drawing is not for construction purposes unless expressly certified.



**S12A AMENDMENT OF PLAN APPLICATION
APPROVED NGAU TAM MEI
OUTLINE ZONING PLAN NO. S/YL-NTM/12**

**PROPOSED REZONING FROM "R(C)" TO "G/IC"
FOR A PROPOSED "SOCIAL WELFARE FACILITIES"
(RESIDENTIAL CARE HOMES FOR THE ELDERLY)
(RCHE)**

**AT LOT 4823 IN D.D.104, 81 SAN TAM ROAD,
SAN TIN, N.T.**

APPENDIX 1

VISUAL IMPACT ASSESSMENT

1.0 INTRODUCTION

1.1.1 This Visual Impact Assessment (VIA) is prepared in support of the S12A Planning Application for the proposed amendment to the Approved Ngau Tam Mei Outline Zoning Plan No. S/YL-NTM/12. The objective is to rezone a site from "R(C)" to "G/IC" for a proposed social welfare facility (Residential Care Home for the Elderly).

1.1.2 Currently, the Application Site is designated as "R(C)" zone on the Approved Ngau Tam Mei Outline Zoning Plan No. S/YL-NTM/12 "(the OZP)". There is a restriction on Plot Ratio of 0.4, 3 storeys high and a height limit of 9m from Car Park. By rezoning the site into "G/IC", the restriction on Plot Ratio is proposed to waive, while the height of the RCHE is governed by regulation and is proposed to be 29.6 m for the time being.

1.1.3 According to the Point (e) of Para. 2.3 of the Town Planning Board Guidelines (TPB PG) no. 41, a VIA is required to the proposals that "involves, modification of development parameters of a site to deviate from the statutory planning restrictions applicable to the site or the neighbourhood, and the modification will amount to pronounced increase in development scale and intensity and visual changes from key public viewing points". The visual impacts of the Proposed Scheme are evaluated against the existing condition, surrounding building(s) in order to ensure compatibility of the Proposed Scheme.

1.1.4 The VIA evaluates the visual compatibility and degree of anticipated visual impacts of the Proposed Scheme on the Visually Sensitive Receivers relevant to the Application Site. Based on the evaluation, the VIA comments on the visual acceptability of the Proposed Scheme.

1.1.5 The outline for the VIA is set out below:

- Section 2 outlines Proposed Development Particulars
- Section 3 identifies the Assessment Area and provides analysis of the viewing points;
- Section 4 assesses the visual impacts; and
- Section 5 concludes the VIA

2.1 Local Context

2.1.1 The Application Site locates at no.81 San Tam Road, Lot no. 4823 in D.D. 104, with a site area of about 736.3 m² (*Figure 1*). The Site is accessible from San Tam Road at level +7.33 mPd from the West. It adjoins an access road to "Crescendo" to the North and a low-rise residential development "Casa Paradiso" to the South. To the East is a small mountain full of greenery.

2.1.2 The Site is of close proximity to the "Northern Metropolis Development" (NMD) zone and is within 10 minutes walking distance from the "Planned Northern Link Ngau Tam Mei Station".

2.2 Existing House Design

2.2.1 There is an existing House of GFA 294.258 sm, with a Plot Ratio 0.4, and is 3 storeys high from carpark, the main roof level is +21.00 mPd.

2.2.2 It is situated on a platform of level +12.0 m with a car ramp leading from the existing Brown area of level +7.33 m, which gain access from San Tam Road to the West.

2.2.3 There is an existing Green Hatched Black Area adjoining the Brown area to the South-West, which is a gentle slope formed and landscaped to all Government Departments' satisfaction when the House was built in 2017.

Please refer to *Figure 2* for the existing House design.



2.3 Proposed RCHE Development Parameters

2.3.1 The Development would gain access from San Tam Road at +7.33 m on LG/F. Two private Car Parks, a light Goods Vehicle Loading / Unloading Bay and a Mini-bus Parking locate beside the Entrance Lobby. Transformer Room and Sewerage Treatment Plant are located beside.

2.3.2 UG/F would be the supporting facilities like Multi-Purpose Rooms, Kitchen, Laundry, Store and Plant Room etc.

2.3.3 1/F is designed as a Wellness Centre with health facilities like hydrotherapy, yoga and gymnasium. It adjoins an outdoor Covered Sky Garden to provide covered and open leisure spaces, completed with landscaping and health equipment etc.

2.3.4 2/F to 7/F (total 6 storeys) are RCHE which provide a big spectrum of Dormitory Rooms combination ranging from Shared to Individual Rooms. A total of 142 bedspaces are assumed for the development.

2.3.5 8/F is a specially designed floor for the Staff and General Administration. Not only do it include Standard Office and Administrative space, 8 nos. of Staff Quarters are deliberately provided to facilitate the after-hour emergency services and the needs for "Epidemic closed-loop management", in case necessary.

2.3.6 The Roof Garden on level +36.93 provides outdoor Sun Shine spaces and individual Farming Areas for cultivation and hobbies.

2.3.7 The GFA allocation is tabulated as below:

Site Area		: 736.3 m ²	7926 ft ²
Class of Site		: A	
Proposed Plot Ratio for Non-Domestic		: 7.33	
Proposed Site Coverage above for Non-Domestic (Above 15m)		: 75.558%	
Maximum Gross Floor Area		: 5400 m ²	58125.6 ft ²
Proposed Building Height		: 36.93 mPD	
Absolute Height		: 29.6 m	
Proposed No. of Storey		: 10 STOREYS	
Proposed Gross Floor Area			
LG/F	ENTRANCE & CARPARK	: 352.479 m ²	
UG/F	MULTI-PURPOSE ROOMS	: 617.819 m ²	
1/F	WELLNESS CENTRE + SKY GARDEN	: 626.160 m ²	
2/F	RCHE	: 595.090 m ²	45 nos. of bed
3/F	RCHE	: 556.330 m ²	17 nos. of bed
4/F – 7/F	RCHE	: 556.330 m ² x 4 storeys = 2225.32 m ²	20 nos. of bed x 4 storeys
8/F	ADMIN OFFICE + STAFF QUARTER	: 426.802 m ²	
TOTAL		: 5400.000 m²	142 nos. of bed
Parking Spaces :			
(Loading / Unloading)			
No. of LGV		: 1 Nos.	
No. of Minibus		: 1 Nos.	
No. of Private Car Parking		: 1 Nos. + 1 Nos. (Accessible Car Parking)	
No. of Motorcycle Parking		: 1 Nos.	

Please refer to *Figure 3* for the Proposed Development.

3.0 ASSESSMENT
AREA &
SELECTION OF
VIEWING
POINTS

3.1 According to the TPB PG No. 41, the Assessment Area is defined by approximately 350 m from the boundary of the Application Site and is selected for assessment purpose accordingly (*Figure 4* refers).

The visual assessment will be conducted by comparing the conditions before the rezoning (i.e. 0.4 PR Houses) (Scheme A) and after the rezoning (i.e. the RCHE) (Scheme B).

Scheme A would be the Existing House Design of Plot Ratio of 0.4, 3 storeys and 9 m high from the Carpark. A driveway leading from +7.33 from a Brown Area adjoining San Tam Road, to a platform for Carpark at +12.00. The Main Roof of the Existing House is at +21.00. (*Figure 2* refers)

Scheme B would be a RCHE of 10 storeys high, with the Vehicular and Pedestrian Entrance at +7.33 and the Main Roof of the RCHE is at +36.93. The absolute height is 29.6 m. (*Figure 3* refers)



3.2 When assessing the potential visual impacts of the Proposed Schemes, the clarification of VPs is categorized as follows:

Table 3.1 Classification of Visual Sensitivity

Receivers	Main Activities	Sensitivity
Recreational	Those viewers who would view the Application Site while engaging in recreational activities	High
Travellers	Those viewers who would view the Application Site from vehicles or on foot	Medium
Occupational	Those viewers who would view the Application Site from their workplaces.	High

3.3 Six VPs including short and long ranges are considered to be the most affected by any development on the Application Site (Figure 4 refers).

3.3.1 VP1 : Castle Peak Road – Mai Po near Ko Hang towards East (*Figure 5*)

This VP is located West and is about 100 m away from the Application Site. It is surrounded by low-rise developments and “Royal Palms” to its South-West to North-West.

This VP is set to evaluate the Medium-Range visual impacts of the Travellers. It should be considered as **Medium** Visual Sensitivity.

3.3.2 VP2 : Castle Peak Road – Mai Po towards South-East (*Figure 6*)

This VP is located North-West and is about 100 m away from the Application Site. It is surrounded by low-rise developments.

This VP is set to evaluate the Medium-Range visual impacts of the Travellers. It should be considered as **Medium** Visual Sensitivity.

3.3.3 VP3 : Castle Peak Road – Mai Po towards North-East (*Figure 7*)

This VP is located South-West is about 100 m away from the Application Site. It is surrounded by low-rise developments.

This VP is set to evaluate the Medium-Range visual impacts of the Travellers. It should be considered as **Medium** Visual Sensitivity.

3.3.4 VP4 : San Tam Road towards South-East (*Figure 8*)

This VP is located North-West and is about 50 m away from the Application Site. It is close to a junction and a driveway leading to “Crescendo”.

This VP is set to evaluate the Short-Range visual impact of the Travellers. It should be considered as **Medium** Visual Sensitivity.

3.3.5 **VP5** : Footbridge above San Tin Highway towards South (*Figure 9*)

This VP is located North and is about 300 m away from the Application Site. It is on a Footbridge above San Tin Highway.

This VP is set to evaluate the Long-Range visual impact of the Travellers. It should be considered as **Medium** Visual Sensitivity.

3.3.6 **VP6** : Footbridge above San Tin Highway towards North (*Figure 10*)

This VP is located South and is about 300 m away from the Application Site. It is on a Footbridge above San Tin Highway.

This VP is set to evaluate the Long-Range visual impact of the Travellers. It should be considered as **Medium** Visual Sensitivity.

4.0 ASSESSMENT
OF VISUAL
IMPACT

This Section evaluate the Visual Impact of the "Existing House" (Scheme A) to the "Proposed RCHE" (Scheme B).

The overall visual resultant impact of the Proposed Schemes are appraised based on the classifications of visual impact as set in the TPB PG No.41, which include 'enhanced', 'party enhanced/party adverse', 'negligible', 'slightly adverse', 'moderately adverse' and 'significantly adverse'.



4.1 **VP1** : Castle Peak Road – Mai Po near Ko Hang towards East (*Figure 5*)

4.1.1 This Medium Range VP1 located right opposite to the West of the Site across the San Tin Highway. It represents the View received by Travellers on foot and by vehicles. Therefore, the visual sensitivity is considered Medium. Both Proposed Schemes are visible at the VP.

The Visual Composition comprise Greenery on both sides with San Tin Highway and Castle Peak Road – Mai Po in the front. Rows of tree are present along both sides of the San Tin Highway which partly shield off the Visual Effect.

Scheme B would create comparatively bigger Building Bulk than Scheme A. However, the effect is somehow shield off and soften by the Greenery around. The effect would be further minimized by rows of Tree along San Tin Highway as Travellers move across.

4.1.2 Conclusion :

As a conclusion, the Visual Impact of Scheme B compared to Scheme A would be **slightly adverse**.

4.2 VP2 : Castle Peak Road – Mai Po towards South-East (*Figure 6*)

4.2.1 This Medium Range VP2 located to the North-West of the Site across the San Tin Highway. It represents the View received by Travellers on foot and by vehicles. Therefore, the visual sensitivity is considered Medium. Both Proposed Schemes are visible at the VP.

The Visual Composition comprise Greenery on both sides with San Tin Highway and Castle Peak Road – Mai Po in the front. Rows of tree are present along both sides of the San Tin Highway which partly shield off the Visual Effect.

Scheme B would create comparatively bigger Building Bulk than Scheme A. However, the effect is somehow shield off and soften by the Greenery around. The effect would be further minimized by rows of Tree along San Tin Highway as Travellers move across.

4.2.2 Conclusion :

As a conclusion, the Visual Impact of Scheme B compared to Scheme A would be **slightly adverse**.

4.3 **VP3** : Castle Peak Road – Mai Po towards North-East (*Figure 7*)

4.3.1 This Medium Range VP3 located to the South-West of the Site across the San Tin Highway. It represents the View received by Travellers on foot and by vehicles. Therefore, the visual sensitivity is considered Medium. Both Proposed Schemes are visible at the VP.

The Visual Composition comprise Greenery on both sides with San Tin Highway and Castle Peak Road – Mai Po in the front. Rows of tree are present along both sides of the San Tin Highway which partly shield off the Visual Effect.

Scheme B would create comparatively bigger Building Bulk than Scheme A. However, the effect is somehow shield off and soften by the Greenery around. The effect would be further minimized by rows of Tree along San Tin Highway as Travellers move across.

4.3.2 **Conclusion :**

As a conclusion, the Visual Impact of Scheme B compared to Scheme A would be **slightly adverse**.



4.4 VP4 : San Tam Road towards South-East (*Figure 8*)

4.4.1 This Short Range VP4 located North-West and is about 50 m away from the Application Site. It is right at the road junction between San Tam Road and an Access Road leading to a low-density Residential Development named "Crescendo". It represents the view received by Travellers on foot and by vehicles. Therefore, the visual sensitivity is considered Medium. Both the Proposed Schemes are visible at the VP.

The Visual Composition comprise a slope full of Greenery surrounding the Application Site in front, which a low-density Residential Development named "Casa Paradiso" to the back.

Scheme B would create comparatively bigger Building Bulk than Scheme A. However, the effect is somehow shield off and soften by the Greenery around.

4.4.2 Conclusion :

As a conclusion, the Visual Impact of Scheme B compared to Scheme A would be **slightly adverse**.

4.5 VP5 : Footbridge above San Tin Highway towards South (*Figure 9*)

4.5.1 This Long Range VP5 located on a Footbridge across the San Tin Highway to the North about 300 m away from the Application Site. It represents the View received by Travellers travel back and forth from San Tam Road to Castle Peak Road – Mai Po. The visual sensitivity is considered Medium.

The Visual Composition comprise San Tin Highway in the middle with rows of tree bounding on San Tam Road and Castle Peak Road – Mai Po.

Both Scheme A and Scheme B are hardly visible in this Viewpoint and are completely shield off by rows of tree.

4.5.2 Conclusion :

As a conclusion, the Visual Impact of Scheme B compared to Scheme A would be **negligible**.

4.6 **VP6 : Footbridge above San Tin Highway towards North (*Figure 10*)**

4.6.1 This Long Range VP6 located on a Footbridge across the San Tin Highway to the North about 300 m away from the Application Site. It represents the View received by Travellers travel back and forth from San Tam Road to Castle Peak Road – Mai Po. The visual sensitivity is considered Medium.

The Visual Composition comprise San Tin Highway in the middle with rows of tree bounding on San Tam Road and Castle Peak Road – Mai Po.

Both Scheme A and Scheme B are hardly visible in this Viewpoint and are completely shield off by rows of tree.

4.6.2 **Conclusion :**

As a conclusion, the Visual Impact of Scheme B compared to Scheme A would be **negligible**.

5.0 Conclusion

5.1 The Below Table summarize the Visual Impact of Scheme A (Proposed Development with permissible PR) compared to Scheme B (Proposed Development with minor relaxation) in the six VPs: -

V.P.	Visual Sensitivity	Visual Impact	Conclusion
VP1: Castle Peak Road – Mai Po near Ko Hang towards East	Medium	Slightly adversed	Slightly adversed
VP2: Castle Peak Road – Mai Po towards South-East	Medium	Slightly adversed	Slightly adversed
VP3: Castle Peak Road – Mai Po towards North-East	Medium	Slightly adversed	Slightly adversed
VP4: San Tam Road towards South-East	Medium	Slightly adversed	Slightly adversed
VP5: Footbridge above San Tin Highway towards South	Medium	Negligible	Negligible
VP6: Footbridge above San Tin Highway towards North	Medium	Negligible	Negligible



5.2 A total of six VPs (including short and medium range VPs) were assessed in this Visual Impact Assessment, covering VPs in medium visual sensitivity.

With the provision of numerous planning and design merits in our Proposed Scheme, four VPs are identified with **slightly adverse** visual impact, while the remaining two VPs are identified with **negligible** visual impact.

5.3 The Site already set back from San Tam Road by 12.6 m. It is considered adequate for not creating adverse visual impact.

5.4 Based on the above, the Proposed Scheme is considered to be fully acceptable in terms of visual impact.

S12A AMENDMENT OF PLAN APPLICATION
APPROVED NGAU TAM MEI
OUTLINE ZONING PLAN NO. S/YL-NTM/12

PROPOSED REZONING FROM "R(C)" TO "G/IC"
FOR A PROPOSED "SOCIAL WELFARE FACILITIES"
(RESIDENTIAL CARE HOMES FOR THE ELDERLY)
(RCHE)

AT LOT 4823 IN D.D.104, 81 SAN TAM ROAD,
SAN TIN, N.T.

FIGURE 1
LOCATION PLAN

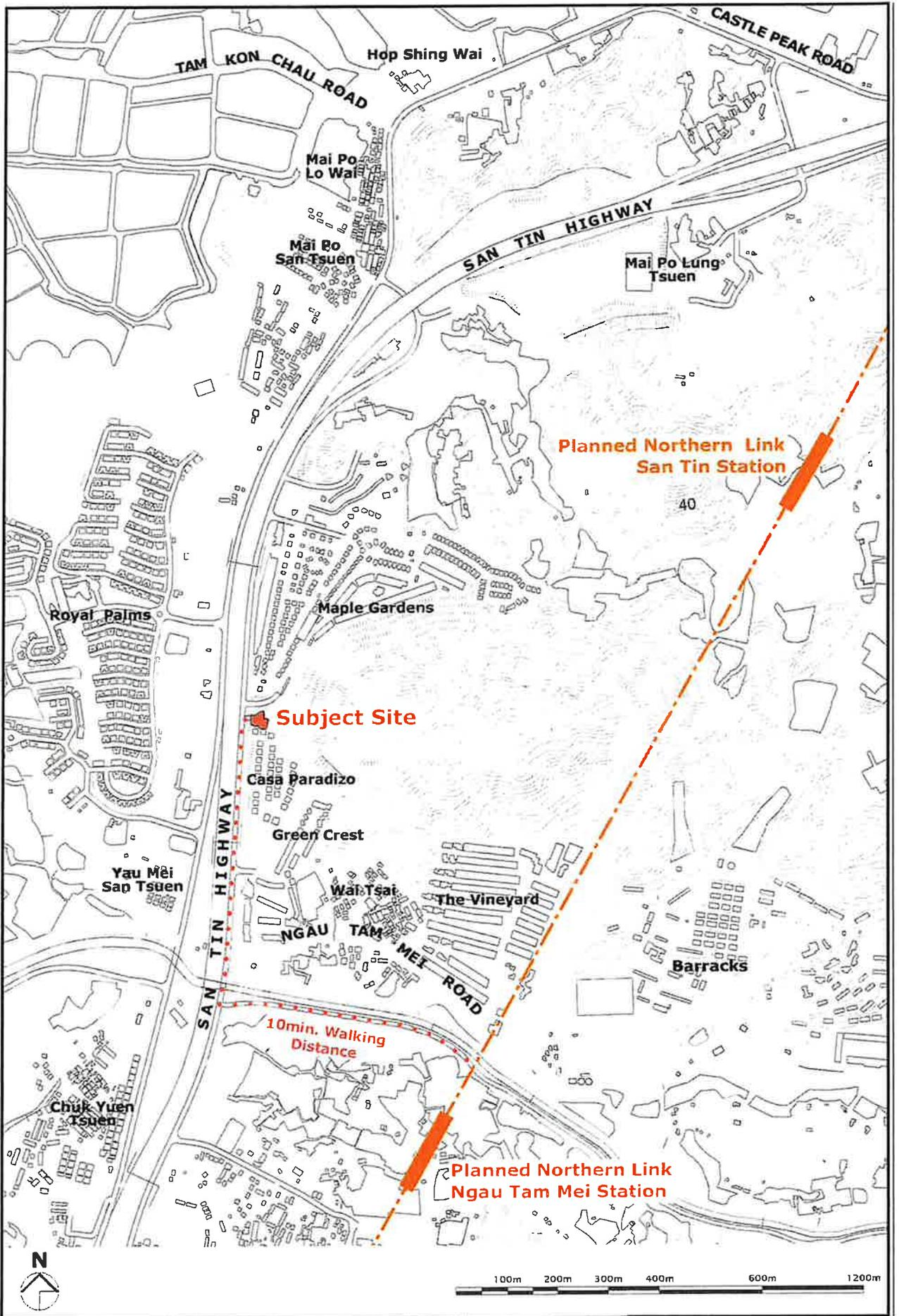


FIGURE NO. <p style="text-align: center;">1</p>	TITLE <p style="text-align: center;">LOCATION PLAN</p>	SCALE <p style="text-align: center;">1:10000</p> DATE <p style="text-align: center;">JUL 2022</p>	
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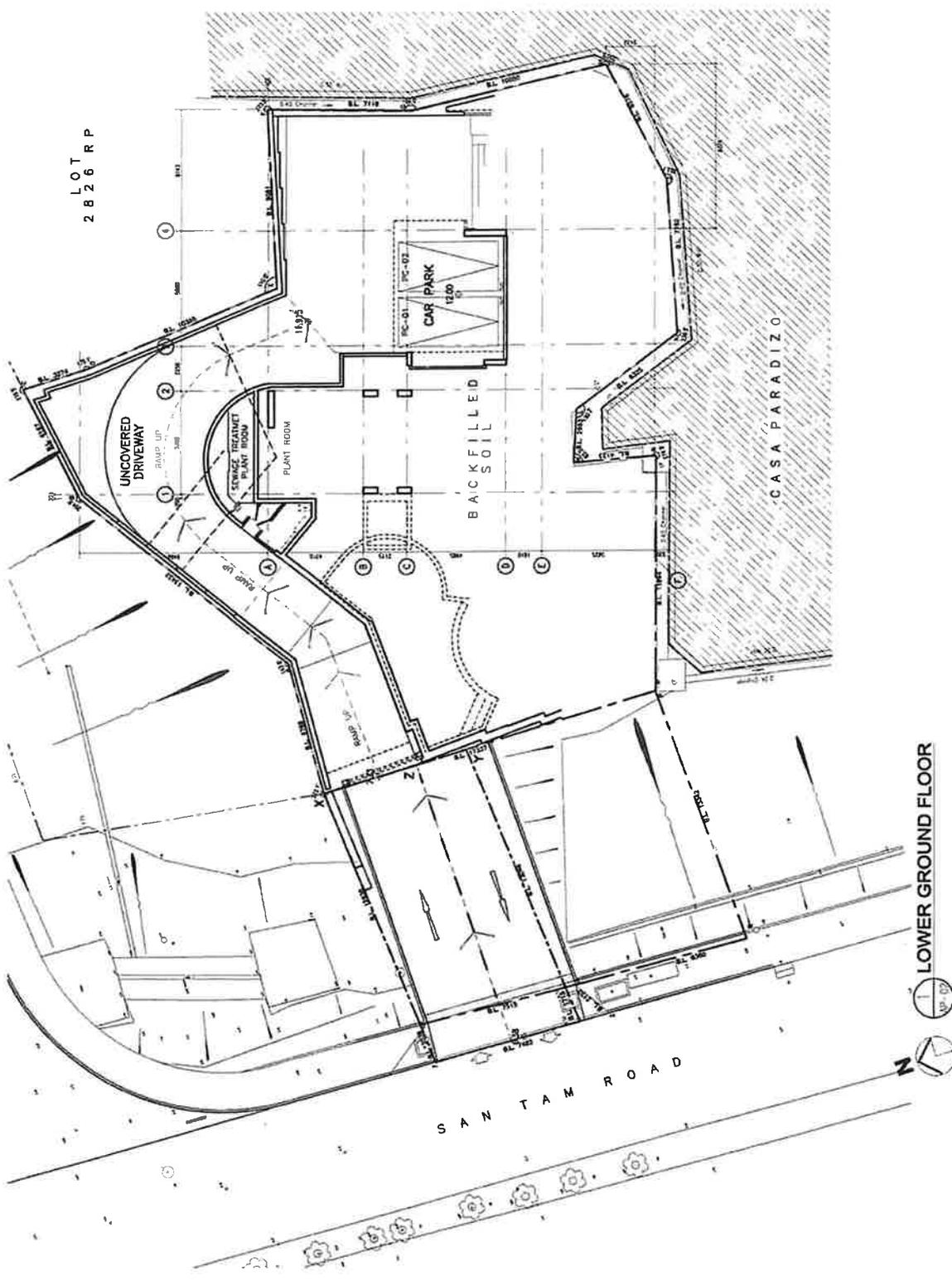
S12A AMENDMENT OF PLAN APPLICATION
APPROVED NGAU TAM MEI
OUTLINE ZONING PLAN NO. S/YL-NTM/12

PROPOSED REZONING FROM "R(C)" TO "G/IC"
FOR A PROPOSED "SOCIAL WELFARE FACILITIES"
(RESIDENTIAL CARE HOMES FOR THE ELDERLY)
(RCHE)

AT LOT 4823 IN D.D.104, 81 SAN TAM ROAD,
SAN TIN, N.T.

FIGURE 2

EXISTING HOUSE DESIGN



LOT
2826 RP

LOWER GROUND FLOOR

2202
PROPOSED RESIDENTIAL CARE HOME FOR ELDERLY
AT 81, SANTAM ROAD,
YUEN LONG, N.T.

28/07/2017 - APPROVED PLAN
LOWER GROUND FLOOR

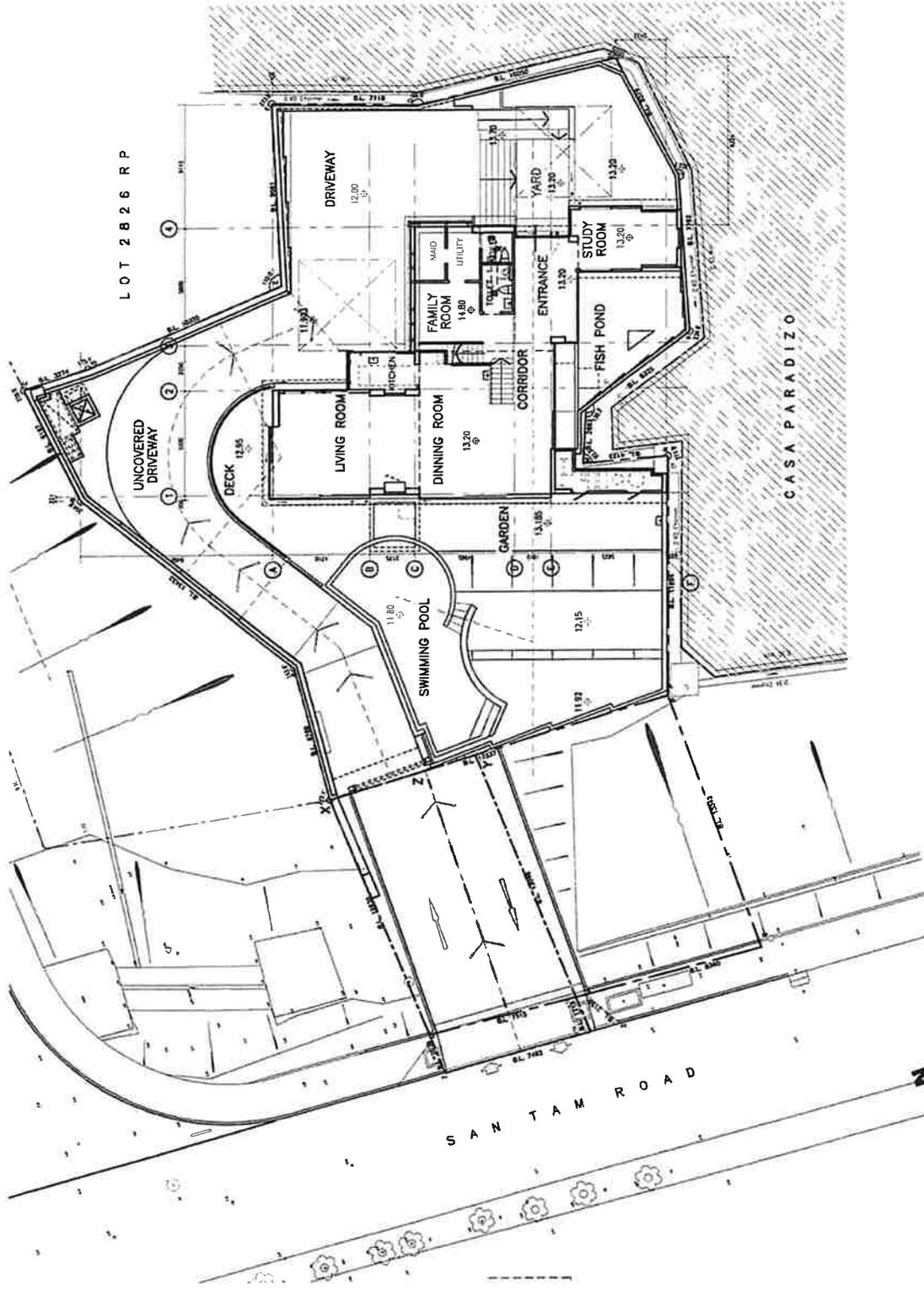
AP-02

1:200 (A3)

JUN 2022

Drawn with AutoCAD
Calculations are required to verify exact dimensions on site.
Contractors are responsible for the accuracy of the drawings and any
errors are the responsibility of the contractor. The design remains the
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otherwise stated. For construction purposes please refer to the original drawings.





Do not scale drawings. Contractors are required to verify, using dimensions on site, all construction details. Contractors are required to check any drawings where appropriate. The drawings are for the project of "Casa Paradizo (R2) L1/F" unless otherwise stated. The drawings are for construction purposes unless otherwise specified.

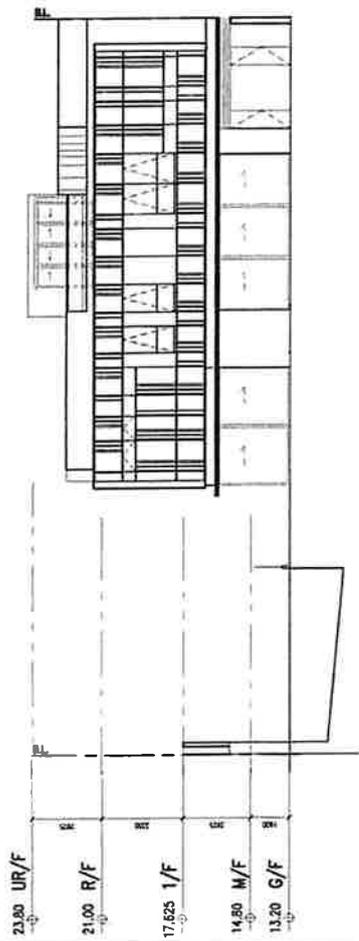
AP-03 1:200 (A3)

28/07/2017 - APPROVED PLAN
G/F

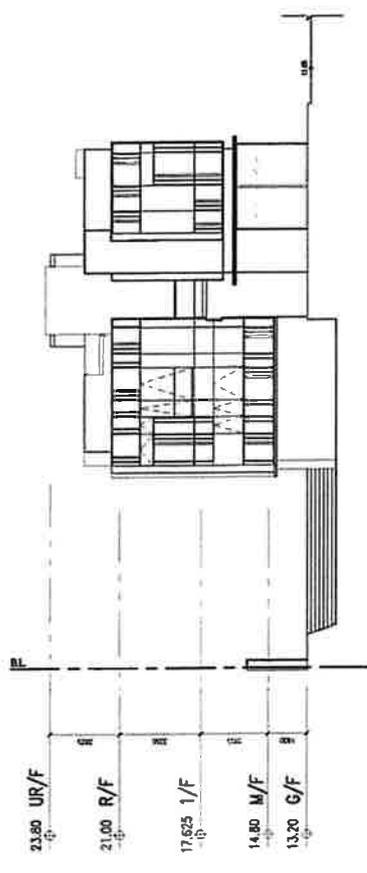
1 G/F PLAN
NO. 03

2202
PROPOSED RESIDENTIAL CARE HOME FOR ELDERLY
32 81 SAN TAM ROAD,
YUEN LONG, N.T.

RLCD



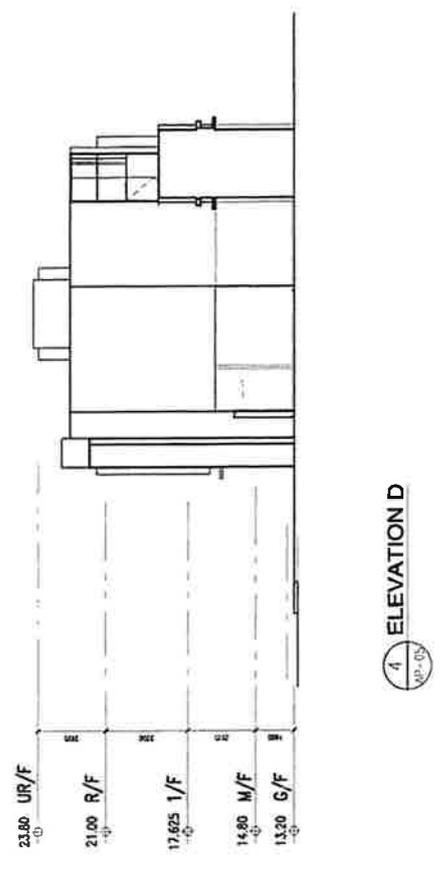
1
ELEVATION A
AP-05



1
ELEVATION B
AP-05



3
ELEVATION C
AP-05



4
ELEVATION D
AP-05

2202
PROPOSED RESIDENTIAL CARE HOME FOR ELDERLY
R.R. 81 SAN JAM ROAD,
YUEN LONG, N.T.

28/07/2017 - APPROVED PLAN
ELEVATIONS

AP-05 1:200 (A3)

Client's title drawings.
Dimensions are indicated in millimeters unless otherwise stated.
Construction is indicated in millimeters unless otherwise stated.
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RELEASE

S12A AMENDMENT OF PLAN APPLICATION
APPROVED NGAU TAM MEI
OUTLINE ZONING PLAN NO. S/YL-NTM/12

PROPOSED REZONING FROM "R(C)" TO "G/IC"
FOR A PROPOSED "SOCIAL WELFARE FACILITIES"
(RESIDENTIAL CARE HOMES FOR THE ELDERLY)
(RCHE)

AT LOT 4823 IN D.D.104, 81 SAN TAM ROAD,
SAN TIN, N.T.

FIGURE 3
PROPOSED RCHE DESIGN



BLOCK PLAN SCALE - 1:1000

DEVELOPMENT SCHEDULE:

Site Area : 736.3 m² (7926 ft²)
 Class of Site : A
 Proposed Plot Ratio For Non-Domestic : 7.33
 Proposed Site Coverage above For Non-Domestic (Above 15m) : 75.558%

Maximum Gross Floor Area : 5400 m² (58125.6 ft²)
 Proposed Building Height : 36.93 mPD
 Absolute Height : 29.6 m
 Proposed No. Of Storey : 10 STOREYS

Proposed Gross Floor Area : 352.479 m²
 LG/F (ENTRANCE & CARPARK) : 617.819 m²
 UG/F (MULTI-PURPOSE ROOMS) : 626.160 m²
 1/F (WELLNESS CENTRE + SKY GARDEN) : 595.090 m² (45 nos. of bed)
 2/F (RCHE) : 556.330 m² (17 nos. of bed + 3 nos. of isolation room)
 3/F (RCHE) : 556.330 m² x 4 storeys
 4/F - 7/F (RCHE) : = 2225.32 m² (20 nos. of bed x 4 storeys)
 8/F (ADMIN OFFIC + STAFF QUARTER) : 426.802 m²

TOTAL : 5400.000 m² (142 nos. of bed + 3 nos. of isolation room)

Parking Spaces:

No. of LGV : 1 Nos.
 No. of Minibus : 1 Nos.
 No. of Private Car Parking : 1 Nos. + 1 Nos. (Accessible Car Parking)
 No. of Motorcycle Parking : 1 Nos.

2202
 PROPOSED RESIDENTIAL CARE HOME FOR ELDERLY
 at 81 SAN TAM ROAD,
 YUEN LONG, N.T.

DEVELOPMENT SCHEDULE & SECTION

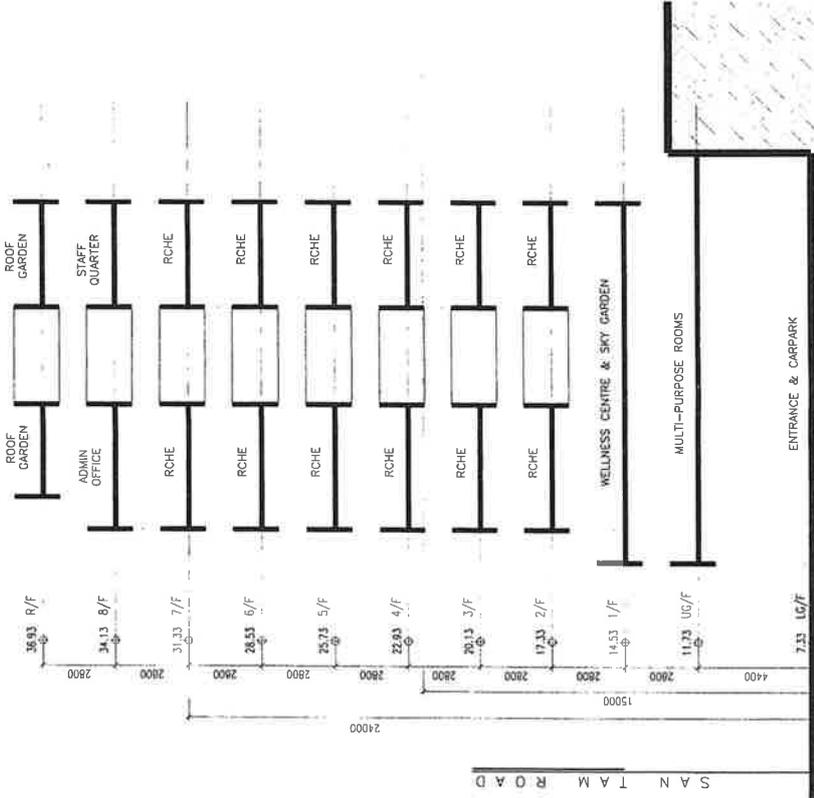
G-01 N.T.S. (A3)

B A

10/10/2022
 OCT 2022
 JUL 1 2022

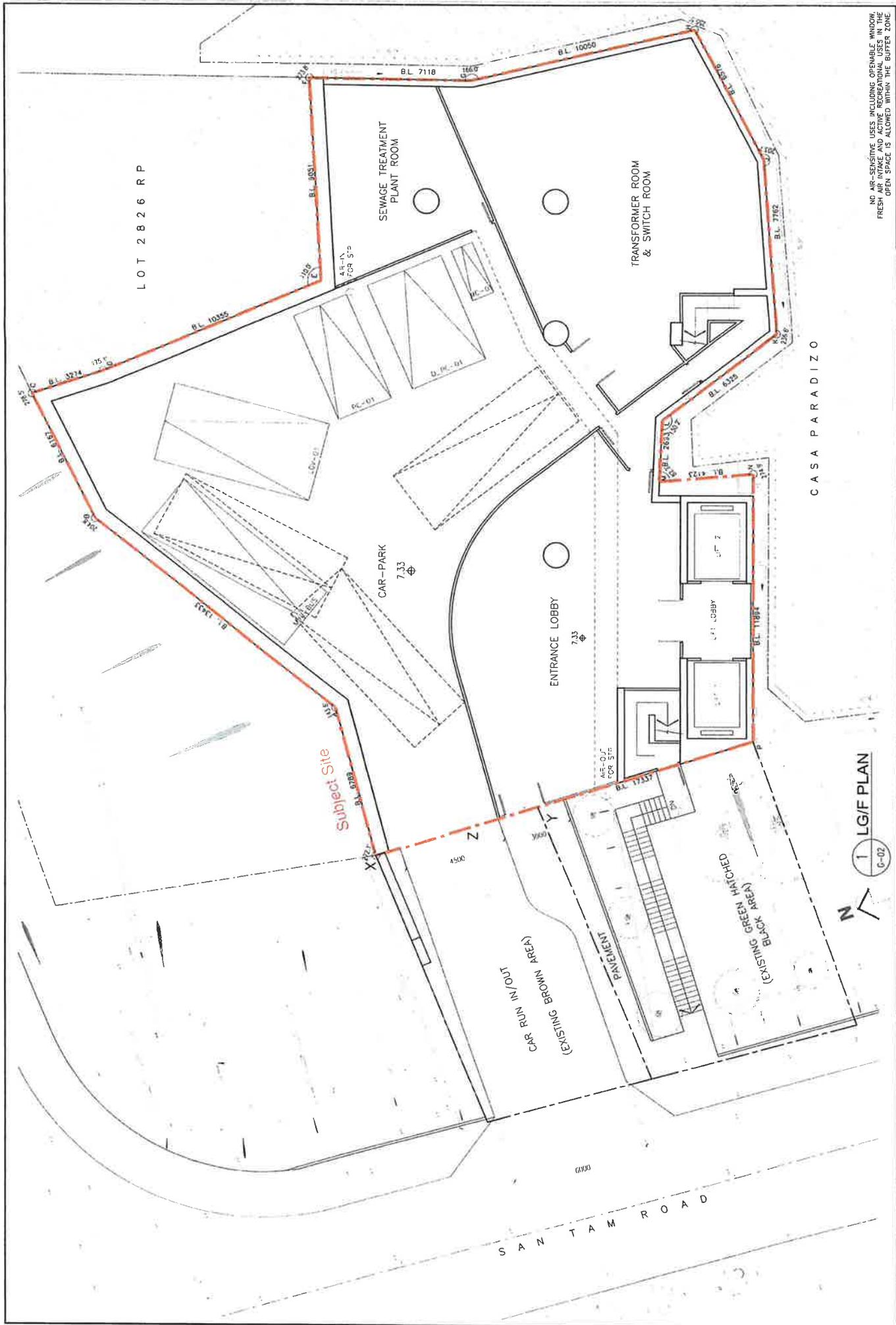
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 The drawings show the design intent of the architect only, contractors are required to submit shop drawings where appropriate.
 All measurements are to be the property of RLB Architects (HK) Ltd. unless otherwise specified.
 This drawing is not for construction purposes unless expressly certified.

RLB ARCHITECTS
 NO. AIR-SENSITIVE USES INCLUDING OPENABLE WINDOW,
 FRESH AIR INTAKE AND ACTIVE RECREATIONAL USES IN THE
 OPEN SPACE IS ALLOWED WITHIN THE BUFFER ZONE.



SECTION A-A

SCALE - 1:200



2202
 PROPOSED RESIDENTIAL CARE HOME FOR ELDERLY
 AT 81 SAN TAM ROAD,
 YUEN LONG, N.T.

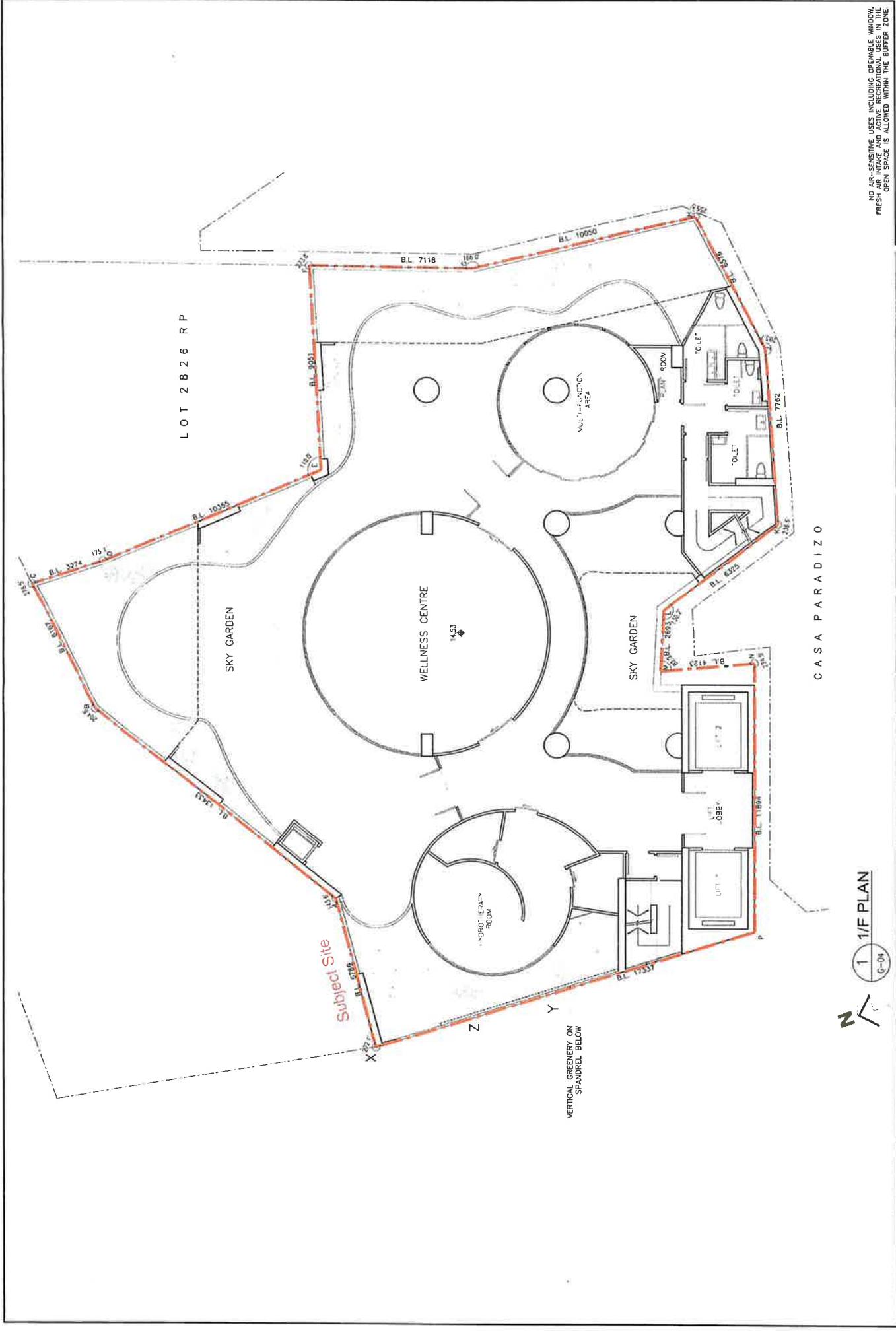
LG/F PLAN
 ENTRANCE & CARPARK

G-02 1:150 (A3) B A

OCT. 2022
 JULY 2022

Do not scale drawings.
 This drawing is not for construction purposes unless expressly certified.
 The drawing is not for construction purposes unless expressly certified.

NO AIR-SENSITIVE USES INCLUDING OPENABLE WINDOW, FRESH AIR INTAKE OR EXHAUST USES, WITHIN OPEN SPACE IS ALLOWED WITHIN THE BUFFER ZONE



2202
 PROPOSED RESIDENTIAL CARE HOME FOR ELDERLY
 AT 81 SAN TAM ROAD,
 YUEN LONG, N.T.

1/16 PLAN
 WELLNESS CENTRE & SKY GARDEN

G-04 1:150 (A3) B A

OCT 2022
 JULY 2022

US AIR RESERVE USES INCLUDING OPENABLE WINDOW, FRESH AIR INTAKE AND ACTIVE RECREATIONAL USES IN THE OPEN SPACE IS ALLOWED WITHIN THE BUFFER ZONE

RIEHL

Vertical Greenery on Spandrel Below

Subject Site

LOT 2826 RP

CASA PARADIZO

WELLNESS CENTRE 14.53

SKY GARDEN

MULTI-FUNCTION AREA

LIFT *
 LIFT **
 LIFT ***
 TOILET
 TOILET *

B.L. 10366
 B.L. 7116
 B.L. 10050
 B.L. 7762
 B.L. 6375
 B.L. 4123
 B.L. 11884
 B.L. 17357
 B.L. 5783
 B.L. 13431
 B.L. 3274
 B.L. 1751
 B.L. 3081
 B.L. 1859
 B.L. 2124

X
 Y
 Z

1/16 PLAN
 G-04

1
 1/16 PLAN
 G-04

1:150 (A3)

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Subject Site

LOT 2826 RP

CASA PARADIZO

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 B.L. 13431
 B.L. 3274
 B.L. 1751
 B.L. 3081
 B.L. 1859
 B.L. 2124

X
 Y
 Z



NO AIR-SENSITIVE USES INCLUDING OPENABLE WINDOW, FRESH AIR INTAKE AND ACTIVE RECREATIONAL USES IN THE OPEN SPACE IS ALLOWED WITHIN THE BUFFER ZONE

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OCT 2022
 JULY 2022

B A

1:150 (A3)

G-05

2/F PLAN

RCHE

PROPOSED RESIDENTIAL CARE HOME FOR ELDERLY
 at 81 SAN TAM ROAD,
 YUEN LONG, N.T.

2202





NO AIR RESERVE USE INCLUDING OPENABLE WINDOW
 FRESH AIR INTAKE AND ACCOMMODATION USES IN THE
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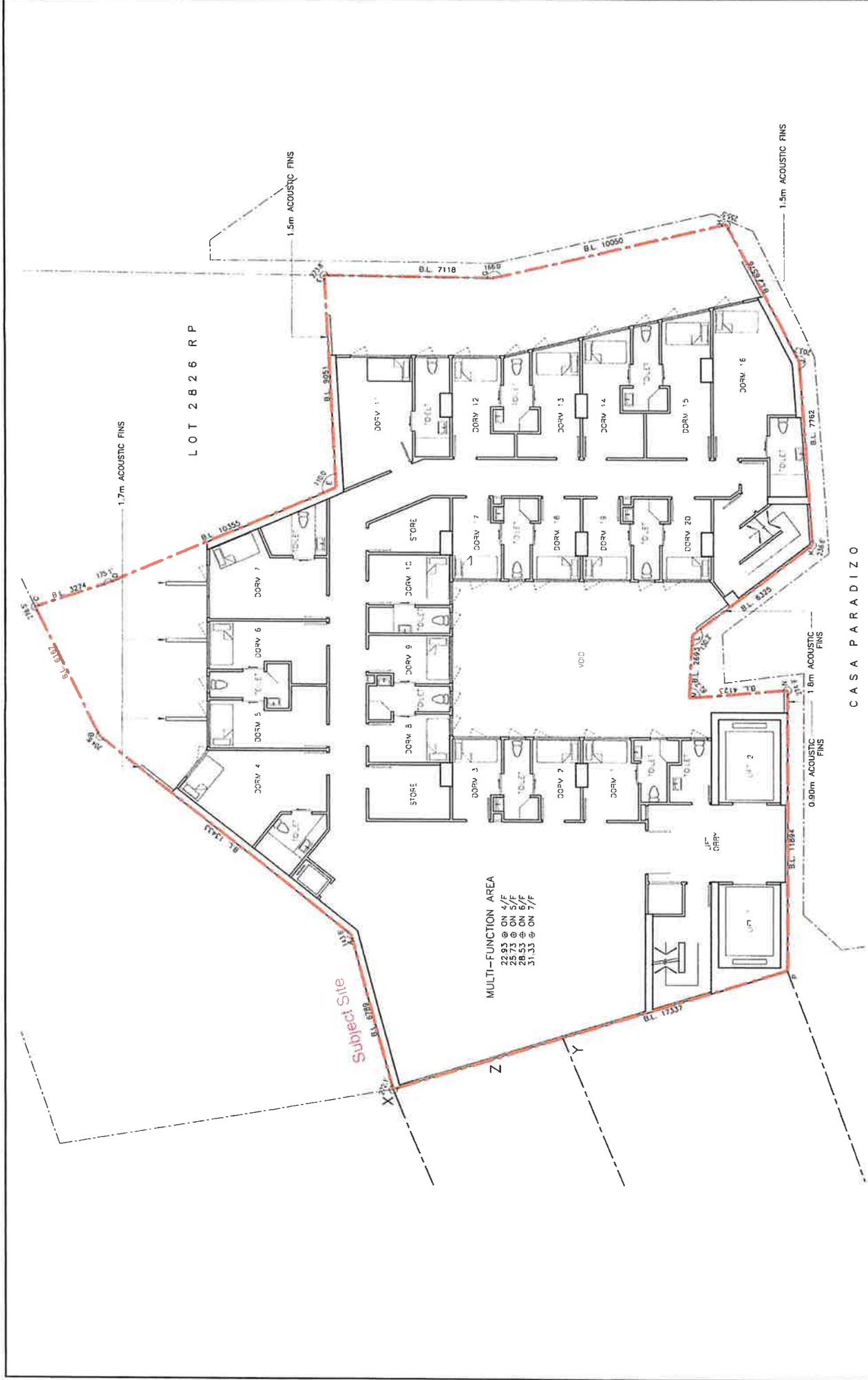
2202
 PROPOSED RESIDENTIAL CARE HOME FOR ELDERLY
 at 81 SAN TAM ROAD,
 YUEN LONG, N.T.

1
 3/F PLAN
 C-06
 RCHE



2202

PROPOSED RESIDENTIAL CARE HOME FOR ELDERLY
 at 81 SAN TAM ROAD,
 YUEN LONG, N.T.



MULTI-FUNCTION AREA
 22.93 @ ON 4/F
 25.73 @ ON 5/F
 31.33 @ ON 7/F

CASA PARADIZO



1 TYPICAL FLOOR PLAN PLAN
 G-07

2202
 PROPOSED RESIDENTIAL CARE HOME FOR ELDERLY
 581 SANTAM ROAD,
 YUEN LONG, N.T.

TYPICAL FLOOR PLAN PLAN
 RCHE

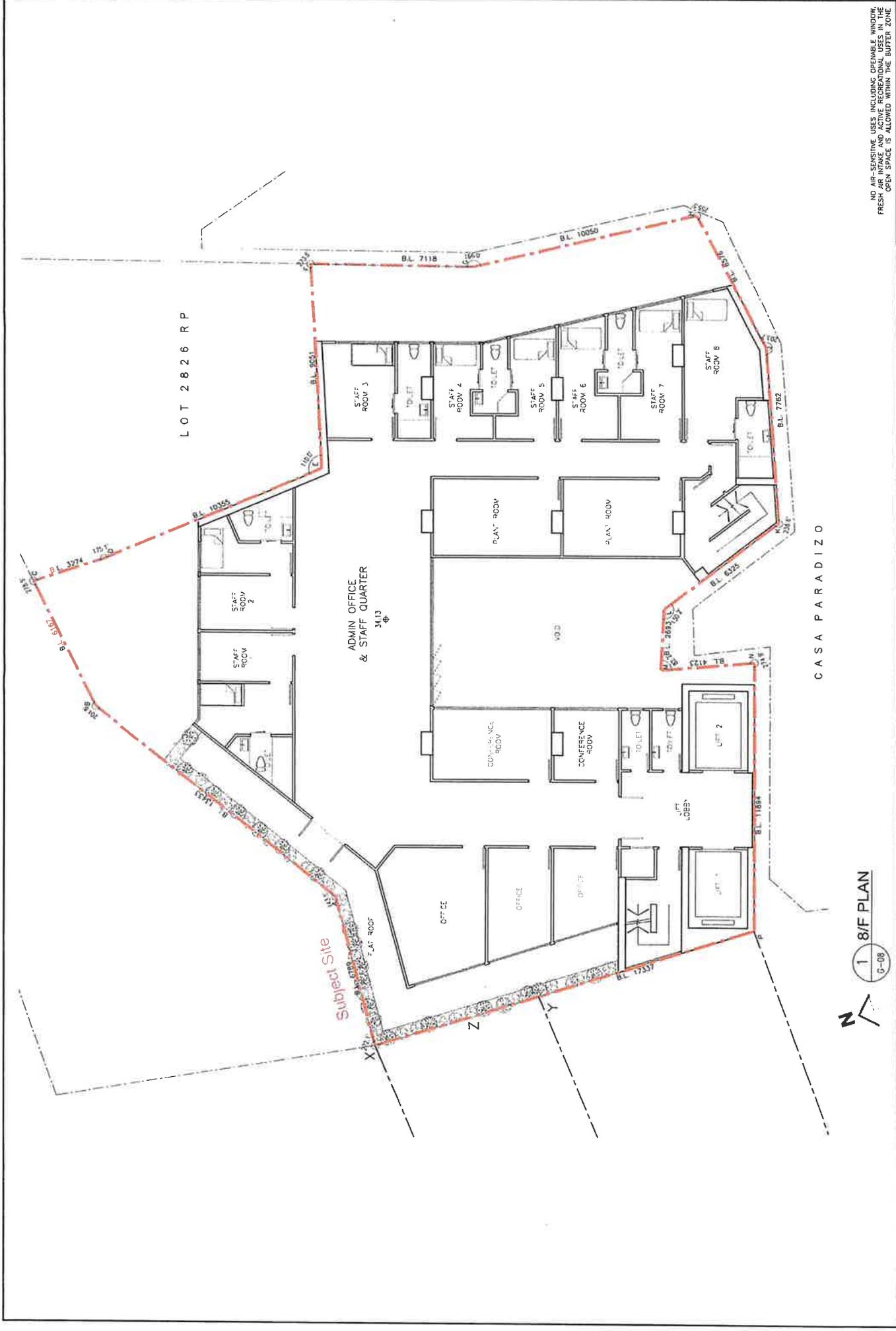
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OCT. 2022
 JULY 2022

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 FRESH AIR INTAKE OPEN SPACE IS ALLOWED WITHIN THE BUFFER ZONE.



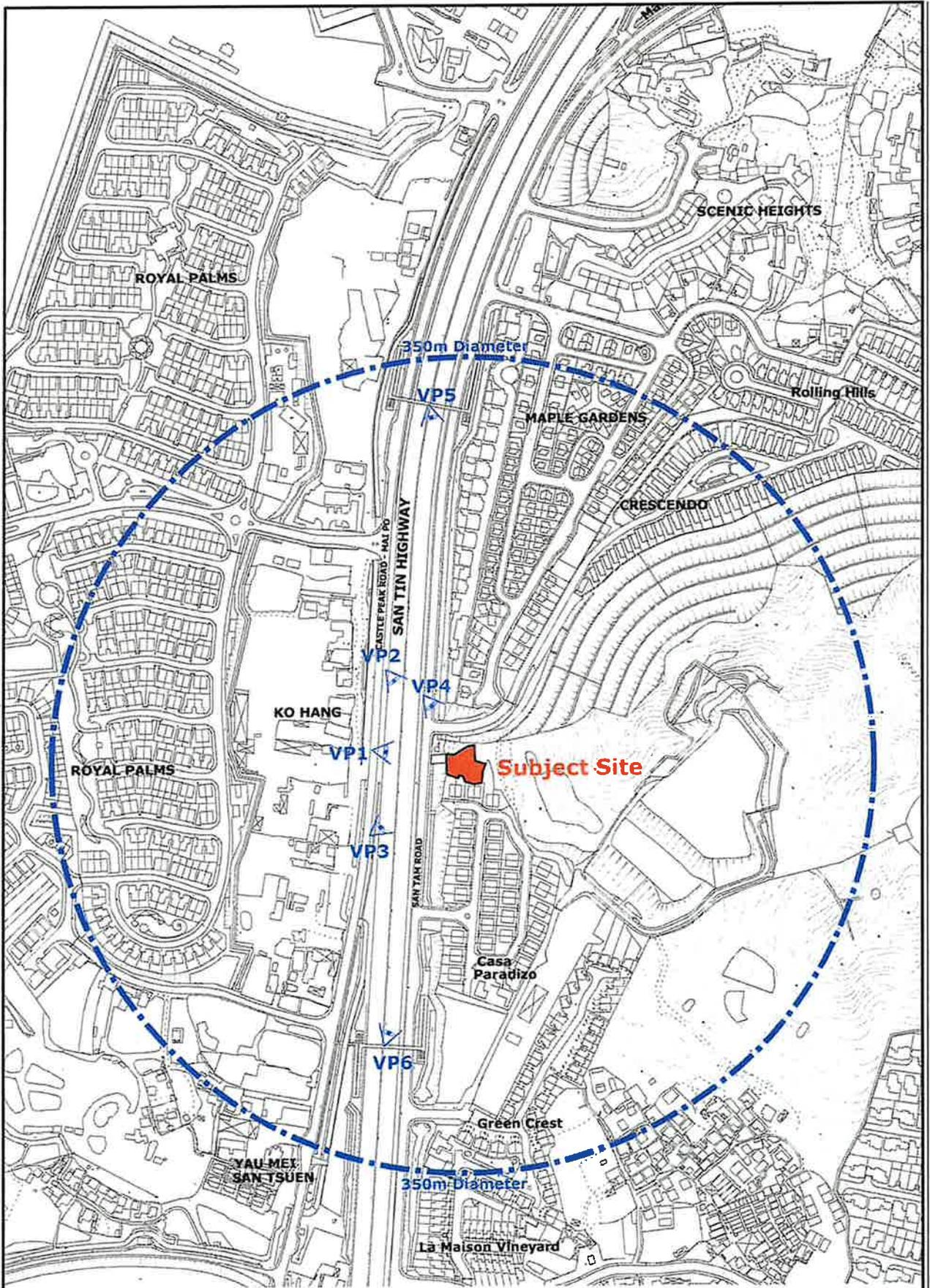


S12A AMENDMENT OF PLAN APPLICATION
APPROVED NGAU TAM MEI
OUTLINE ZONING PLAN NO. S/YL-NTM/12

PROPOSED REZONING FROM "R(C)" TO "G/IC"
FOR A PROPOSED "SOCIAL WELFARE FACILITIES"
(RESIDENTIAL CARE HOMES FOR THE ELDERLY)
(RCHE)

AT LOT 4823 IN D.D.104, 81 SAN TAM ROAD,
SAN TIN, N.T.

FIGURE 4
LOCATION OF VIEWPOINTS



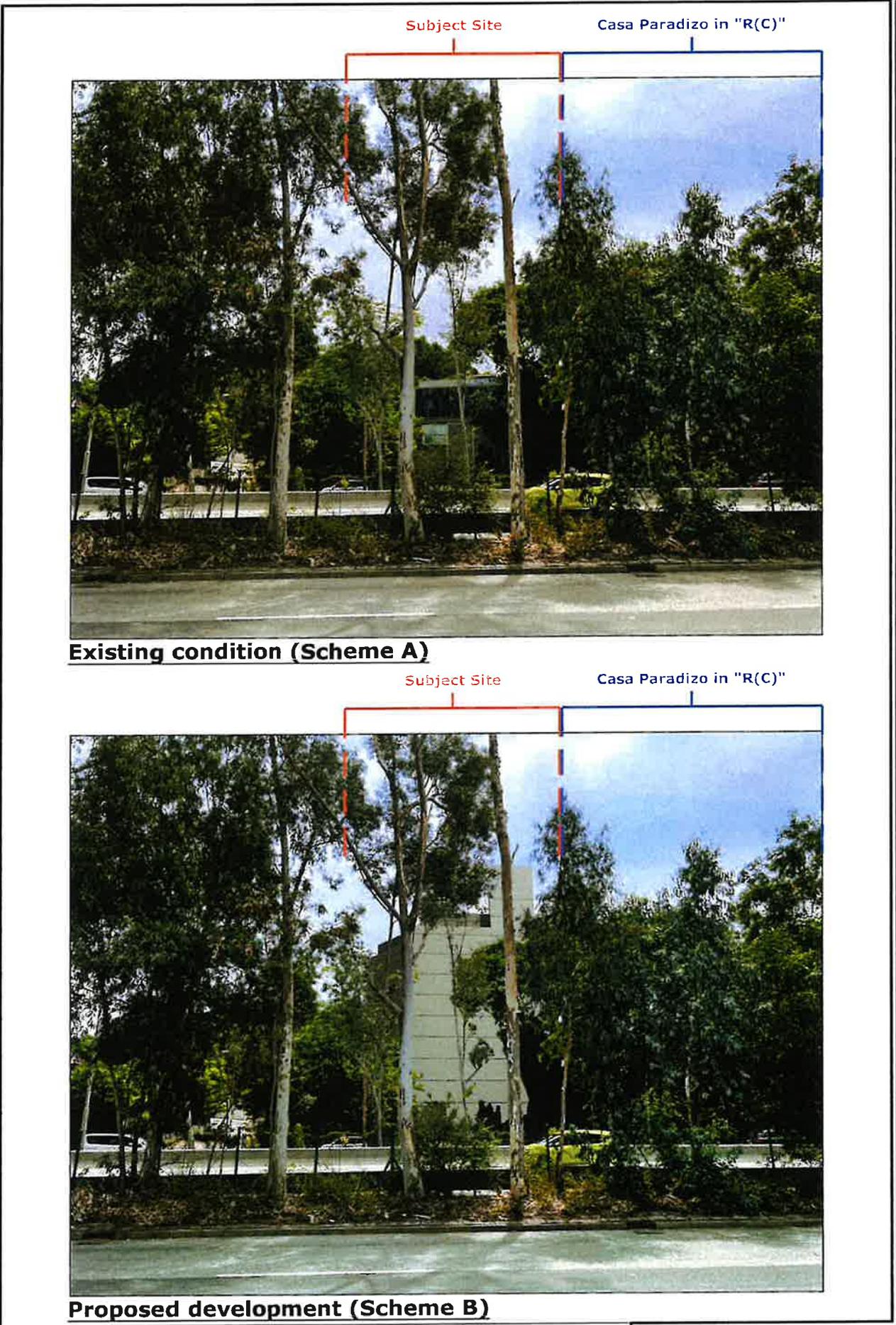
<p>FIGURE NO.</p> <p style="text-align: center;">4</p>	<p>TITLE</p> <p style="text-align: center;">LOCATION OF VIEWPOINTS</p>	<p>SCALE</p> <p style="text-align: center;">1:4500</p> <p>DATE</p> <p style="text-align: center;">JUL 2022</p>	<p style="text-align: right;">45m 90m 180m</p> <p style="text-align: right; font-size: 2em; font-weight: bold; letter-spacing: 0.5em;">RILEE</p>
--	---	--	--

S12A AMENDMENT OF PLAN APPLICATION
APPROVED NGAU TAM MEI
OUTLINE ZONING PLAN NO. S/YL-NTM/12

PROPOSED REZONING FROM "R(C)" TO "G/IC"
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(RESIDENTIAL CARE HOMES FOR THE ELDERLY)
(RCHE)

AT LOT 4823 IN D.D.104, 81 SAN TAM ROAD,
SAN TIN, N.T.

FIGURE 5 to FIGURE 10
VIEWPOINT 1 TO VIEWPOINT 6



Existing condition (Scheme A)

Proposed development (Scheme B)

FIGURE NO. 5	TITLE VIEWPOINT 1	SCALE N.T.S.
		DATE JUL 2022

RLEE

Maple Garden in "R(C)"

Subject Site

Casa Paradizo in "R(C)"



Existing condition (Scheme A)

Maple Garden in "R(C)"

Subject Site

Casa Paradizo in "R(C)"



Proposed development (Scheme B)

FIGURE NO.

6

TITLE

VIEWPOINT 2

SCALE

N.T.S.

DATE

JUL 2022

RLEE

Maple Garden in "R(C)"

Subject Site

Casa Paradizo in "R(C)"



Existing condition (Scheme A)

Maple Garden in "R(C)"

Subject Site

Casa Paradizo in "R(C)"



Proposed development (Scheme B)

FIGURE NO.

TITLE

SCALE

N.T.S.

7

VIEWPOINT 3

DATE

JUL 2022

RLEE

Subject Site

Casa Paradizo in "R(C)"



Existing condition (Scheme A)

Subject Site

Casa Paradizo in "R(C)"



Proposed development (Scheme B)

FIGURE NO.

TITLE

SCALE

N.T.S.

8

VIEWPOINT 4

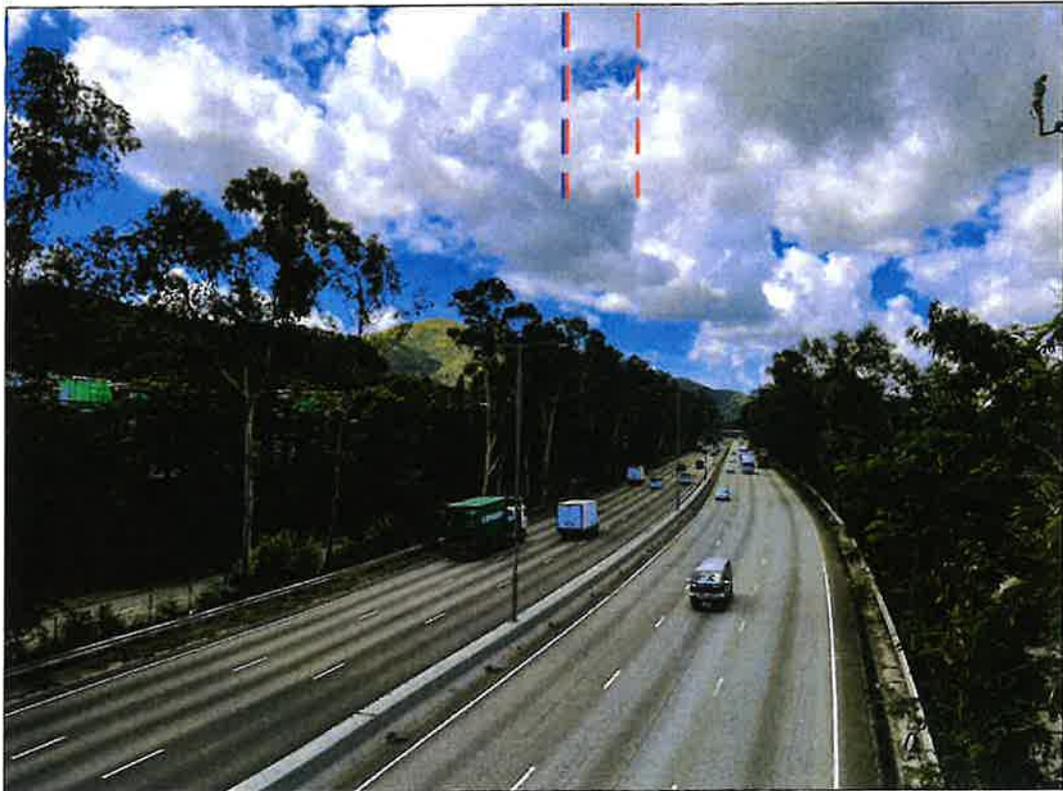
DATE

JUL 2022

RIE

Maple Garden in "R(C)"

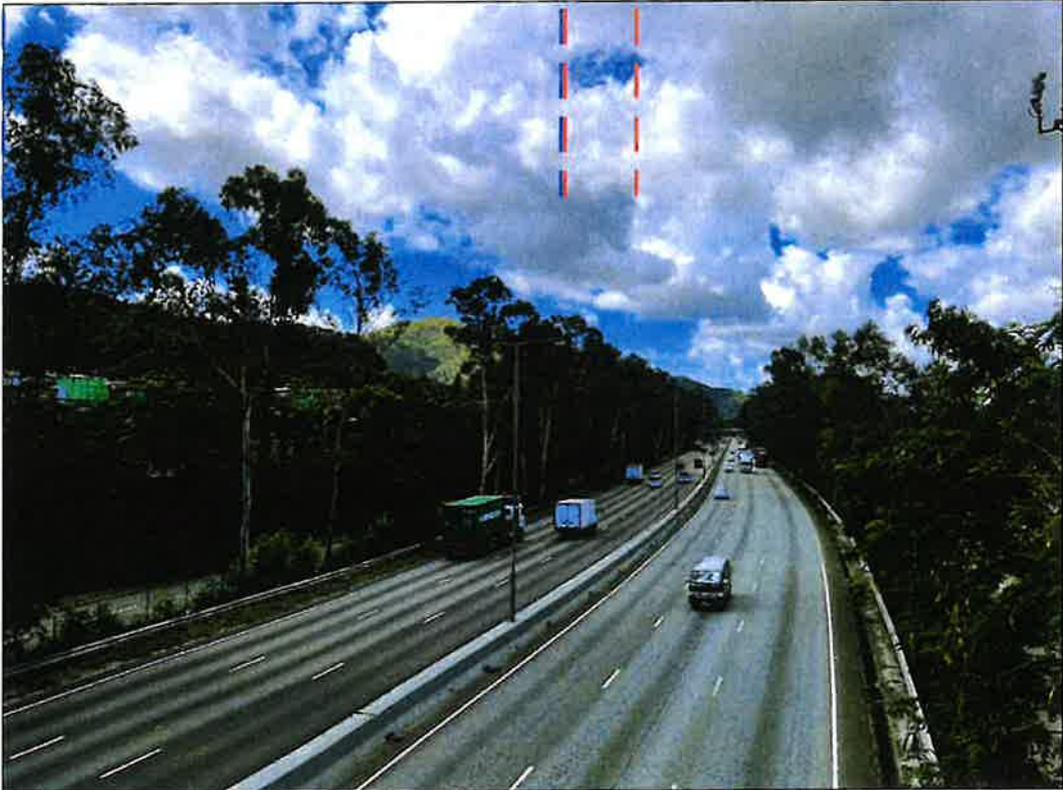
Subject Site



Existing condition (Scheme A)

Maple Garden in "R(C)"

Subject Site



Proposed development (Scheme B)

FIGURE NO. 9	TITLE VIEWPOINT 5	SCALE	N.T.S.
		DATE	JUL 2022

R L E E

Subject Site

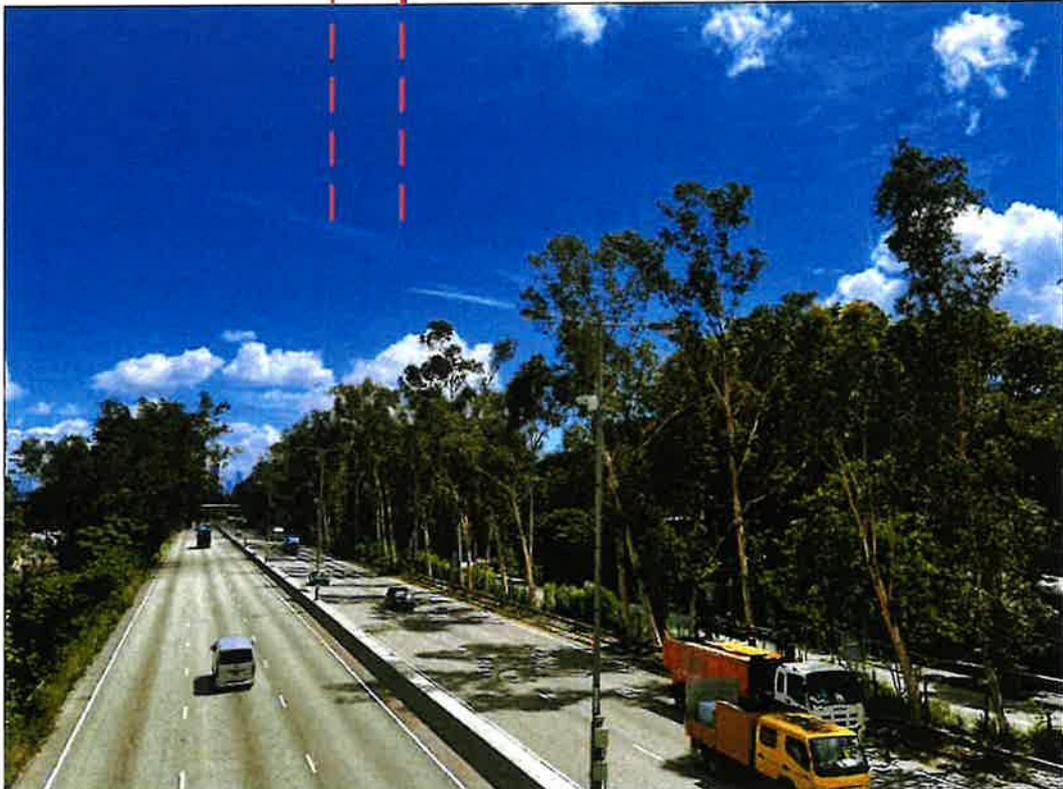
Casa Paradizo in "R(C)"



Existing condition (Scheme A)

Subject Site

Casa Paradizo in "R(C)"



Proposed development (Scheme B)

FIGURE NO.

10

TITLE

VIEWPOINT 6

SCALE

N.T.S.

DATE

JUL 2022

RILEE

**S12A AMENDMENT OF PLAN APPLICATION
APPROVED NGAU TAM MEI
OUTLINE ZONING PLAN NO. S/YL-NTM/12**

**PROPOSED REZONING FROM "R(C)" TO "G/IC"
FOR A PROPOSED "SOCIAL WELFARE FACILITIES"
(RESIDENTIAL CARE HOMES FOR THE ELDERLY)
(RCHE)**

**AT LOT 4823 IN D.D.104, 81 SAN TAM ROAD,
SAN TIN, N.T.**

APPENDIX 2

TRAFFIC IMPACT ASSESSMENT

**S12A Amendment of Plan Application,
Approved Ngau Tam Mei Outline Zoning Plan No. S/YL-NTM/12
Proposed Rezoning from "R(C)" to "G/IC" for a Proposed "Social
Welfare Facilities"
(Residential Care Homes for the Elderly) (RCHE)
At Lot 4823 in DD 104, 81 San Tam Road, San Tin, N.T.**

Traffic Impact Assessment

January 2023



CTA Consultants Limited

志達顧問有限公司

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1. INTRODUCTION

1.1 Background

1.1.1 The application site is located at Lot no. 4823 in D.D. 104, San Tin, Yuen Long, New Territories. The site location is shown in **Figure 1.1**.

1.1.2 The applicant intends to convert an existing house to proposed Residential Care Home for the Elderly (RCHE). A Section 12A application to the approved Ngau Tam Mei Outline Zoning Plan S/YL-NTM/12 to rezone the site from "R(C)" to "G/IC" is required.

1.1.3 In support of the aforesaid application, a traffic impact assessment is required to review and appraise any possible traffic impact induced by the proposed development on the adjacent road network.

1.1.4 CTA Consultants Limited (CTA) was therefore commissioned as the traffic consultant to prepare the Traffic Impact Assessment (TIA) and provide technical justifications in supporting the application from traffic engineering point of view.

1.2 Study Objectives

1.2.1 Main objectives of this study are listed below:

- To assess the existing and proposed traffic arrangement & provision of internal transport facilities at the subject site;
- To assess the existing traffic condition in the vicinity of the proposed development;
- To estimate traffic trips related to the proposed development;
- To carry out forecasts about traffic demand of the adjacent road network in design year 2030;
- To appraise any possible traffic impact induced by the proposed development on the adjacent road network;
- To recommend traffic improvement measures to alleviate any foreseeable traffic problem to the surrounding road network, if any.



2. THE PROPOSED DEVELOPMENT

2.1 Site Location

2.1.1 The application site is located at Lots no. 4823 in D.D. 104, San Tin, Yuen Long, New Territories. The site location is shown in **Figure 1.1**.

2.2 Development Proposal

2.2.1 Parameters of the proposed development are listed in **Table 2.1**.

Table 2.1 Parameters of the Proposed Development

	Proposed Scheme
Proposed Use	Residential Care Home for the Elderly (RCHE)
Site Area	About 736.3 m ²
Total Accountable GFA	About 5,400 m ²
No. of Storeys	10
No. of Beds	142

2.2.2 It is anticipated that the proposed development will be completed in year 2027. Therefore, design year 2030 (i.e., 3 years after the planned completion year of the proposed development) is adopted for the Traffic Impact Assessment.

2.3 Provision of Internal Transport Facilities

2.3.1 It is revealed that there is no parking standard for "Residential Home for Elderly" in HKPSG, therefore, the parking provision of other existing RCHEs has been referenced and are summarized in **Table 2.2** below:



Table 2.2 Examples of Existing RCHE

Name of RCHE	Location	No. of beds	No. of Staff	Observed no. of Parking Provision	Parking Facilities ⁽¹⁾⁽²⁾⁽³⁾ (Category 1/2/3)
Assemblies of God Holy Light Church Aged Home	91 Sung Ching Sun Tsuen, Tai Tong Road, Yuen Long	60	19	Nil	Category 1
Chinese Christian Worker's Fellowship Wah Hei Elderly Home (Comet Mansion)	G/F & M/F, Shop 27, Comet Mansion, 45-67 Fung Cheung Road, Yuen Long	105	29	Nil	Category 1
Pok Oi Hospital Jockey Club Care and Attention Home	Lot 1392 & 837 R.P. in D.D. 115, Au Tau, Yuen Long	213	124	Nil	Category 2
Po Leung Kuk Tin Yan Home for the Elderly cum Green Joy Day Care Centre for the Elderly	3/F and 4/F, Ancillary Facilities Block, Tin Yan Estate, Tin Shui Wai	106	74	Nil	Category 2
Yan Oi Tong Tin Ka Ping Care and Attention Home	G/F & 1/F, Wah Ping House, Long Ping Estate, Yuen Long	85	51	Nil	Category 2
T.W.G.Hs. Y. C. Liang Memorial Home for the Elderly	G/F & 1/F, Yiu Yat House, Tin Yiu Estate, Tin Shui Wai	88	47	Nil	Category 1
Caritas Ying Shui Home	3/F, Ying Shui House, Shui Pin Wai Estate, Yuen Long	75	47	Nil	Category 2
Salvation Army Kam Tin Residence for Senior Citizens (The)	103 Kam Tin Road, Yuen Long	150	81	1 car parking space + 1 light bus parking spaces	Category 3
Pok Oi Hospital Yeung Chun Pui Care and Attention Home	58 Sha Chau Lei Tsuen, Ha Tsuen, Yuen Long	143	92	2 car parking spaces + 1 light bus parking spaces	Category 3
Pok Oi Hospital Tai Kwan Care & Attention Home	G/F-3/F & KW307, Shui Kwok House, Tin Shui Estate, Tin Shui Wai, Yuen Long	109	75	Nil	Category 2
Ching Chung Taoist Association of Hong Kong Limited Ching Chung Care and Attention Home for the Aged	57 Sha Chau Lei Chuen, Ping Ha Road, Yuen Long	120	61	1 car parking space + 1 light bus parking spaces	Category 3



Notes:

- (1) Category 1 refers to homes with nil provision of car parking spaces within the Site and no public car parking spaces can be found in the close proximity.
- (2) Category 2 refers to homes with nil provision of car parking spaces within the Site but may use the public car parking spaces of nearby car park.
- (3) Category 3 refers to homes with provision of car parking spaces within the Site.

Proposed Internal Transport Facilities Provision

2.3.2 With reference to **Table 2.2** above, only one to two private parking spaces are provided by other RCHE. Taking reference to Salvation Army Kam Tin Residence for Senior Citizens, it has 1 car parking space and 1 light bus parking spaces for 150 beds are sufficient for their daily operation needs. Taking into consideration that 142 beds will be provided in our proposed development, the parking provision should be sufficient for the daily operation needs of the proposed development. The internal transport facilities provisions are proposed and summarized as **Table 2.3** below:

Table 2.3 Proposed Provisions of Internal Transport Facilities

Type	Proposed Dimensions	Proposed Number of Spaces
Private Car	5m(L) x 2.5m(W) x 2.4m(H)	1
Private Cars for Disabilities	5m(L) x 3.5m(W) x 2.4m(H)	1
Minibus	8m(L) x 3m(W) x 3.6m(H)	1
Light Goods Vehicle (LGV)	7m(L) x 3.5m(W) x 3.6m(H)	1
Motorcycle	2.4m(L) x 1m(W) x 2.4m(H)	1

Note:

The provision of PV parking space for disabilities is determined by referring to "Parking for persons with disabilities" stipulated in the latest HKPSG that 1 accessible parking space should be provided for 1-50 parking spaces

2.3.3 The ground floor layout plan of the proposed development showing the proposed internal transport provision is shown in **Figures 2.1 (Rev.A)**.



2.4 Public Transport Services in the Vicinity

2.4.1 Numerous road-based public transport services, for instance, franchised buses and GMB are also provided in vicinity of the proposed development. Details of the current services of franchised buses and GMB routes within the catchment area of 500 meters are listed in **Table 2.4** and shown in **Figure 2.2**.

Table 2.4 Public Transport Services in the Vicinity

Service	Route	Origin - Destination	Frequency (mins)
Franchised Bus	76K	Sheung Shui (Ching Ho) – Long Ping Estate	20 - 30
GMB	76	Yuen Long (Fook Hong Street) – Siu Hom Tsuen	15 - 20
	75	Yuen Long (Fook Hong Street) – Ha Wah Tsuen	15 - 20
	37	Yuen Long (Fook Hong Street) – Yau Tam Mei Village Office	12 - 15



3. EXISTING TRAFFIC CONDITION

3.1 Existing Road Network

3.1.1 The existing road network in the vicinity of the proposed development with critical junctions is illustrated diagrammatically in **Figure 3.1**. The proposed development will be mainly served by San Tam Road.

3.1.2 San Tam Road is an undivided two-lane two-way rural road. It is the major road connecting Castle Peak Road – Mai Po and San and Tin Highway.

3.2 Critical Junctions

3.2.1 Five junctions are identified to be critical for the Traffic Impact Assessment due to the proposed development. Relevant details are listed in **Table 3.1** and shown in **Figure 3.1**. Existing junction layouts are shown in **Figures 3.2** to **Figure 3.6**, and **Figure RC-01** respectively.

Table 3.1 Identified Critical Junctions

Ref.	Junction	Type	Figure No.
A	San Tam Road / Castle Peak Road – Mai Po	Priority	3.2
B	San Tam Road / Access Road	Priority	3.3
C	San Tam Road / Ngau Tam Mei Road	Priority	3.4
D	San Tam Road / Chun Shin Road	Priority	3.5
E	San Tam Road / Chuk Yau Road	Priority	3.6
F	Fairview Park Interchange	Roundabout	RC-01

3.2.2 In order to study the existing traffic condition of the above critical junctions, traffic survey in the form of manual-classified count was carried out during the Weekday AM and PM peak periods on a typical weekday on 13 June 2022 from 07:30AM to 09:30AM and 17:30PM to 19:30PM respectively. The survey provides most up-to-date details of the traffic condition within the study area. Based on the observed traffic flows, it reveals



that Weekday AM peak hour occurred from 08:15AM to 09:15AM, and PM peak hour occurred from 17:30PM to 18:30PM.

3.2.3 Due to effect of COVID-19, the surveyed traffic flows may be much less that of the normal conditions. The COVID-19 factor has been derived by comparing the selected ATC core station with the ATC 2015-2019 record flow as shown in **Table RC-1**. A percentage of 1.33% per annum is found and applied to ATC 2019 record flows to generate a year 2021 reference flows as shown in **Table RC-2**.

Table RC-1 Historical Traffic Data from the ATC

Station	Road Name	2015	2016	2017	2018	2019	2015 to 2019
5016	San Tin Highway, Castle Peak Road & San Tam Road	86,180	92,230	90,650	86,230	90,860	1.33%

Table RC-2 Comparison of 2021 Reference Flows and ATC 2021 Record Flow

Station	Road Name	ATC 2019 Record Flow	2021 Reference Flows (2019ATC Record Flow x 1.33%)	ATC 2021 Record Flow
5016	San Tin Highway, Castle Peak Road & San Tam Road	90,860	93,295	86,620

3.2.4 To compare with 2021 reference flows with ATC 2021 record flows and hence the COVID-19 factor of 1.08 is adopted and applied to 2022 existing traffic flows, e.g.:

COVID-19 factor:

2019 ATC record flow x adopted growth factor from 2015-2019 ATC record flow /2021 ATC record flow =1.08

3.2.5 The 2022 traffic flows are presented in **Figure 3.7 (Rev.A)**. The operational performances of the critical junctions are listed in **Table 3.3** below.



Table 3.3 Operational Performances of Critical Junctions in 2022

Ref.	Junction	Method of Control	Year 2022 DFC ⁽¹⁾	
			AM Peak	PM Peak
A	Castle Peak Road - Mai Po / San Tam Road	Priority	0.20	0.22
B	San Tam Road / Access Road	Priority	0.03	0.03
C	San Tam Road / Ngau Tam Mei Road	Priority	0.33	0.38
D	San Tam Road / Chun Shin Road	Priority	0.09	0.08
E	San Tam Road / Chuk Yau Road	Priority	0.56	0.43
F	Fairview Park Interchange	Roundabout	0.80	0.79

Note:

(1) DFC = Design Ratio of Flow to Capacity for Priority Junction/Roundabout

3.3 Road Link Assessment

3.3.1 Apart from junction capacity assessment, road link assessments were also carried out for the identified road links as illustrated in **Figure 3.8**. Performance of these road links were assessed in terms of traffic volume/ capacity (V/C) ratio and the results are presented in **Table 3.4**.

Table 3.4 Road Link Assessment in Observed Year 2022

Road Section	Index	Direction	Capacity (pcu/hr) (C) ⁽¹⁾⁽²⁾	AM Peak		PM Peak	
				Flow (pcu/hr) (V)	Flow / Capacity (V/C)	Flow (pcu/hr) (V)	Flow / Capacity (V/C)
San Tam Road (Between Junction A and Junction B)	LA	Two-way	1,332	205	0.15	230	0.17
San Tam Road (Between Junction B and Junction C)	LB	Two-way	1,332	270	0.20	270	0.20



San Tam Road (Between Junction C and Junction D)	LC	Two-way	1,332	535	0.40	560	0.42
San Tam Road (Between Junction D and Junction E)	LD	Two-way	1,332	600	0.45	595	0.45

Notes:

- (1) Reference has been made to the TPDM Volume 2 Chapter 2.4 for the lane capacity.
- (2) PCU factor of 1.2 has been applied to the calculation of the Lane capacity.

3.3.2 The junction assessment and road link assessment results in **Table 3.3** and **Table 3.4** indicate that all critical junctions and critical links are at present operating with ample capacities during the AM and PM peak hours.



4. FUTURE TRAFFIC CONDITION & TRAFFIC IMPACT ASSESSMENT

4.1 Design Year

4.1.1 It is anticipated that the proposed development would be completed in 2027 tentatively. In order to assess the possible traffic impacts to the local road network due to the proposed development, year 2030 (i.e., 3 years after completion) has been adopted as the design year for this study.

4.2 Traffic Forecast

4.2.1 To estimate the reference traffic flow in year 2030 (without the proposed development) in the local road network, an appropriate growth factor was identified for the area in the first instance. The following approaches have been adopted to derive the growth factor for the traffic assessment.

Historical Trend

4.2.2 Numerous 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 five years, i.e., 2015 to 2020 are summarized in **Table 4.1**.

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

ATC Stn.	Road Name	Annual Average Daily Traffic (AADT)						Avg. Annual Growth Rate (2015-2019)
		2015	2016	2017	2018	2019	2020	
5016	San Tin Highway, Castle Peak Rd & San Tam Rd (From Kam Tin Road to Fairview Park Boulevard)	86,180	92,230	90,650	86,230	90,860	81,870	1.33%



5257	Castle Peak Rd - Tam Mi, Mai Po & San Tin (From Fairview Paark Boulevard to Lok Ma Chau Road)	10,510 *	10,940 *	10,770 *	11,980	11,910	11,420 *	3.18%
5297	San Tam Rd (From Castle Peak Road - Mai Po to Fairview Park Boulevard RA)	6,140 *	6,400 *	6,300 *	8,540	7,530	7,220 *	5.23%
5505	San Tam Road (From Fairview Park Boulevard RA to End)	12,090	12,590*	12,390*	12,700*	13,330	13,420	2.47%
5508	San Tin Highway (From Fairview Park Boulevard to Lok Ma Chau Road)	85,910	90760*	90,110*	92,980*	80,460	82,010	-1.63%
Total		200,830	212,920	210,220	212,430	204,090	195,940	0.40%

Notes:

1.*AADT estimated by Growth factor

2. Due to Covid-19, the data for 2020 are considered not accurate and not included.

Planning Data

4.2.3 Reference has also been made to the “Projections of Population Distribution 2019-2029” published by Planning Department’s Working Group on Population Distribution Projections. The annual growth rates of the Tertiary Planning Units in the vicinity are summarized in **Table 4.2**.

Table 4.2 Projected Populations of Selected Tertiary Planning Units

Tertiary Planning Units (TPU)	Projected Population		Annual Average Growth Rate (2019-2025)
	2019	2025	
543&546	4,300	5,000	2.55%
544	3,000	3,000	0.00%
541	19,400	18,200	-1.60%
542	13,800	14,100	0.36%
525	1,400	1,600	2.25%



526	11,200	12,400	1.71%
Total	53,100	54,300	<u>0.37%</u>

4.2.4 Reference has also been made to the latest 2019-Based Territorial Population Employment Data Matrices (TPEDM) planning data published by the Planning Department for projection of population and employment within the study district. The average annual growth rates in terms of population and employment from 2019 to 2031 are tabulated in **Table 4.3**.

Table 4.3 2019-Based Planning Data from 2019 to 2031

Yuen Long				
Data	Year			Average Annual Growth Rate (2019-2031)
	2019	2026	2031	
Population	175,150	172,350	159,850	-0.76%
Employment	68,100	70,700	70,250	0.26%
Total	243,250	243,050	230,100	-0.46%

Adopted Growth Rate

- 4.2.5 A.A.D.T. of ATC indicates that the traffic flow of the local road network has an average annual growth rate of +0.40% from year 2015 to year 2019.
- 4.2.6 The population projections of selected Tertiary Planning Units show that an annual growth rate of 0.37% is expected in the study area.
- 4.2.7 Whilst, the planning data indicates that the population and employment of the study area are expected to grow with an average annual growth rate of -0.46%.
- 4.2.8 As a conservative approach, annual growth rate **+1% p.a.** is adopted for this traffic impact assessment. 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.



4.3 Reference Traffic Flow in Year 2030

4.3.1 The year 2030 reference traffic flow is estimated by applying the adopted growth rate to the year 2022 surveyed traffic flow.

Planned Developments in the Vicinity

4.3.2 To fully reflect the traffic growth that would contribute to the adjacent road network, latest planning data has been obtained from Planning Department. The future planned developments in the vicinity provided and agreed by Planning Department are summarized in below **Table 4.4**.

Table 4.4 Planned Developments in the Vicinity

Application No.	Type	Key Development Parameters ⁽¹⁾
Ongoing S12A Applications in the Vicinity⁽¹⁾		
Y/YL-NTM/5	Residential	1,980 residential units
Y/YL-NTM/6	Residential	<ul style="list-style-type: none"> • 1,990 residential units • 6,485m² commercial GFA
Y/YL-NTM/7	Residential	<ul style="list-style-type: none"> • 12,575 residential units • 39,265m² commercial GFA • Neighbourhood Elderly Centre (NEC) • Child Care Centre (CCC)
Y/YL-MP/6	Residential	<ul style="list-style-type: none"> • 3,090 residential units • 2,363m² retail GFA • 6-classroom kindergarten • 100-place RCHE • Neighbourhood Elderly Centre (NEC)
Y/YL-ST/1	Residential	<ul style="list-style-type: none"> • 2,075m² Retail GFA • 4,176 residential units • 100-place child care centre • 6-classroom kindergarten
Y/YL-NSW/7	Residential	<ul style="list-style-type: none"> • 900m² Retail GFA • 1,997 residential units • 4-classroom kindergarten • 100-place child care centre
Y/YL-NTM/8	Residential	<ul style="list-style-type: none"> • 6,276 residential units • 67,000m² GFA for GIC facilities
Y/YL-MP/6	Residential	3,090 residential units
Y/YL-MP/7	Residential	1,228 residential units



Y/YL-MP/8	Residential	1,249 residential units
Y/YL-NSW/8	Residential	<ul style="list-style-type: none"> • 6,825 residential units • 750m² retail GFA • 4 nos. of GIC facilities <ul style="list-style-type: none"> - 1 no. of NEC - 100-place CCC - 100-place RCHE - 80-place Day Care Centre for Elderly
Y/YL-NSW/9	Residential	<ul style="list-style-type: none"> • 3,115 residential units • 6,000m² Retail GFA • 1 Primary school • 3 Kindergartens • 1 relocated soy sauce factory
Approved S16 Applications in the Vicinity⁽¹⁾		
A/YL-MP/247	Residential	Domestic GFA about 16,200m ² for 105 houses
A/YL-MP/287	Residential	Domestic GFA about 7,540m ² for 65 houses
A/YL-NSW/274	Residential	Domestic GFA about 70,328m ² for 1,518 flats
A/YL-NTM/178-2	Residential	Domestic GFA about 45,197m ² for 300 houses
A/YL-MP/291	Residential	268 houses
A/YL-NSW/241	Retail	37,171 m ² retail GFA

Note:

(1) Information provided and agreed by Planning Department on email dated 23 December 2022.

4.3.3 Given the information listed out in **Table 4.4**, traffic trips generation of the future planned developments have been taken into consideration based on the completion year of the planned developments. Therefore, the future planned developments that have been included in the assessment of 2030 Reference traffic flow are listed out in **Table 4.5** and diagrammatically shown in **Figure 4.1 (Rev.A)**.

Table 4.5 Selected Future Planned Developments for Assessment

Application No.	Type	Key Development Parameters ⁽¹⁾
Ongoing S12A Applications in the Vicinity⁽¹⁾		
Y/YL-NTM/6	Residential	<ul style="list-style-type: none"> • 1,990 residential units • 6,485m² commercial GFA
Approved S16 Applications in the Vicinity⁽¹⁾		
A/YL-MP/247	Residential	Domestic GFA about 16,200m ² for 105 houses
A/YL-MP/287	Residential	Domestic GFA about 7,540m ² for 65 houses
A/YL-NSW/274	Residential	Domestic GFA about 70,328m ² for 1,518 flats



A/YL-NTM/178-2	Residential	Domestic GFA about 45,197m ² for 300 houses
A/YL-MP/291	Residential	268 houses
A/YL-NSW/241	Retail	37,171 m ² retail GFA

Note:

- (1) Information provided and agreed by Planning Department on email dated 23 December 2022.

4.3.4 The traffic trips generated and attracted by the selected developments in vicinity are summarized in the **Table 4.6**.

Table 4.6 Estimated Traffic Generations & Attractions of the Selected Developments in Vicinity

Application No.	Key Development Parameters	Estimated Trip Generation (pcu/hr)			
		AM Peak		PM Peak	
		Gen.	Att.	Gen.	Att.
Y/YL-NTM/6	1,990 residential units	60 ⁽¹⁾	60 ⁽¹⁾	45 ⁽¹⁾	55 ⁽¹⁾
A/YL-MP/247	Domestic GFA about 16,200m ² for 105 houses	29 ⁽²⁾	19 ⁽²⁾	17 ⁽²⁾	25 ⁽²⁾
A/YL-MP/287	Domestic GFA about 7,540m ² for 65 houses	15 ⁽²⁾	8 ⁽²⁾	7 ⁽²⁾	10 ⁽²⁾
A/YL-NSW/274	Domestic GFA about 70,328m ² for 1,518 flats	95 ⁽²⁾	65 ⁽²⁾	46 ⁽²⁾	61 ⁽²⁾
A/YL-NTM/178-2	Domestic GFA about 45,197m ² for 300 houses	84 ⁽²⁾	54 ⁽²⁾	50 ⁽²⁾	72 ⁽²⁾
A/YL-MP/291	268 houses	87 ⁽¹⁾	70 ⁽¹⁾	76 ⁽¹⁾	109 ⁽¹⁾
A/YL-NSW/241	37,171 m ² retail GFA	86 ⁽¹⁾	91 ⁽¹⁾	116 ⁽¹⁾	133 ⁽¹⁾

Notes:

- (1) Information as obtained from submitted TIA reports.
(2) Traffic Trips have been estimated by the trip generation and attraction rates as stipulated in Volume 1 Chapter 3 Annex C Table 1 of the latest T.P.D.M.

4.3.5 The 2030 reference traffic flows are presented in **Figure 4.2 (Rev.A)**.

$$\begin{array}{l}
 \text{2030} \\
 \text{Reference} \\
 \text{Flows} \\
 \text{(without} \\
 \text{proposed} \\
 \text{development)} \\
 \end{array}
 =
 \begin{array}{l}
 \text{2022} \\
 \text{Traffic} \\
 \text{Flows} \\
 \end{array}
 \times
 \begin{array}{l}
 \text{Adopted} \\
 \text{Growth Factor} \\
 \text{i.e. +1 \% p.a.} \\
 \text{for 8 years} \\
 \end{array}
 +
 \begin{array}{l}
 \text{Adjacent} \\
 \text{Developments} \\
 \end{array}$$



4.4 Traffic Trips of the Proposed Development

4.4.1 It is noted that traffic rates of both generation and attraction for proposed development uses are not specified in the latest Transport Planning & Design Manual (TPDM).

4.4.2 The estimation of traffic trips related to the proposed development is based on in-house surveys carried out at Tung Wah Group of Hospitals - Wong Cho Tong Social Service Building and summarized in the **Table 4.7**.

Table 4.7 In-house Traffic Trip Rates of Proposed Development

Use	Units / Parameters	AM Peak		PM Peak	
		Gen.	Att.	Gen.	Att.
Traffic Trip Rate					
TWGHs Wong Cho Tong Social Service Building – IN/OUT of Building	(pcu/hr)	14	11	14	11
TWGHs Wong Cho Tong Social Service Building – Loading/Unloading activities of Building	(pcu/hr)	10	8	10	8
Total Trip	(pcu/hr)	24	19	24	19
Adopted Traffic Trip Rates (278 beds)	(pcu/hr/bed)	0.0863	0.0684	0.0432	0.0576

4.4.3 Based on the in-house traffic trip rates related to the proposed development, the estimated traffic trips of the proposed development are calculated and shown in below **Table 4.8**.

Table 4.8 Traffic Trips of the Proposed Development

Proposed Development	Parameter	Trip Generation (pcu/hr)			
		Weekday AM Peak		Weekday PM Peak	
		Gen.	Att.	Gen.	Att.
RCHE	142 beds	12	10	6	8



4.5 Traffic Forecast for Design Year 2030

4.5.1 The net traffic trips of the proposed development are superimposed onto the year 2030 reference traffic flow (without the proposed development) as shown in **Figure 4.2 (Rev.A)** to derive the year 2030 design traffic flow (with the proposed development).

$$\begin{array}{l} \text{Year 2030 Design} \\ \text{Flow (with the} \\ \text{Proposed} \\ \text{Development)} \end{array} = \begin{array}{l} \text{Year 2030 Reference} \\ \text{Flow} \\ \text{(without the Proposed} \\ \text{Development)} \end{array} + \begin{array}{l} \text{Traffic Trips of the} \\ \text{Proposed} \\ \text{Development} \end{array}$$

4.5.2 The traffic flow during AM and PM peak periods in the design year 2030 (with the proposed development) are shown in **Figure 4.3 (Rev.A)**.

4.6 Operational Assessment

4.6.1 To assess traffic impacts due to the proposed development, operational assessment of the critical junctions identified in Chapter 3 are carried out for both reference (without the proposed development) and design (with the proposed development) scenarios in year 2028. The results are summarized in **Table 4.9**.

Table 4.9 Operational Performance of Critical Junctions in Year 2030

Ref.	Junction	Method of Control	Year 2030 DFC ⁽¹⁾			
			Reference Scenario (Without the Proposed Development)		Design Scenario (With the Proposed Development)	
			AM Peak	PM Peak	AM Peak	PM Peak
A	Castle Peak Road - Mai Po / San Tam Road	Priority	0.29	0.29	0.30	0.29
B	San Tam Road / Access Road	Priority	0.03	0.04	0.03	0.04
C	San Tam Road / Ngau Tam Mei Road	Priority	0.36	0.42	0.36	0.42
D	San Tam Road / Chun Shin Road	Priority	0.16	0.10	0.16	0.10
E	San Tam Road / Chuk Yau Road	Priority	0.63	0.48	0.63	0.48
F	Fairview Park Interchange	Roundabout	1.27	1.03	1.28	1.04



Note:

- (1) DFC = Design Ratio of Flow to Capacity for Priority Junction/Roundabout

Table 4.10 Road Link Assessment in Reference Year 2030

Road Section	Index	Direction	Capacity (pcu/hr) (C) ⁽¹⁾⁽²⁾	AM Peak		PM Peak	
				Flow (pcu/hr) (V)	Flow / Capacity (V/C)	Flow (pcu/hr) (V)	Flow / Capacity (V/C)
San Tam Road (Between Junction A and Junction B)	LA	Two-way	1,332	270	0.20	290	0.22
San Tam Road (Between Junction B and Junction C)	LB	Two-way	1,332	360	0.27	345	0.26
San Tam Road (Between Junction C and Junction D)	LC	Two-way	1,332	645	0.48	665	0.50
San Tam Road (Between Junction D and Junction E)	LD	Two-way	1,332	745	0.56	705	0.53

Notes:

- (1) Reference has been made to the T.P.D.M. Volume 2 Chapter 2.4 for the lane capacity.
 (2) PCU factor of 1.2 has been applied to the calculation of the Lane capacity.



Table 4.11 Road Link Assessment in Design Year 2030

Road Section	Index	Direction	Capacity (pcu/hr) (C) ⁽¹⁾⁽²⁾	AM Peak		PM Peak	
				Flow (pcu/hr) (V)	Flow / Capacity (V/C)	Flow (pcu/hr) (V)	Flow / Capacity (V/C)
San Tam Road (Between Junction A and Junction B)	LA	Two-way	1,332	275	0.21	290	0.22
San Tam Road (Between Junction B and Junction C)	LB	Two-way	1,332	375	0.28	360	0.27
San Tam Road (Between Junction C and Junction D)	LC	Two-way	1,332	660	0.50	670	0.50
San Tam Road (Between Junction D and Junction E)	LD	Two-way	1,332	760	0.57	720	0.54

Notes:

- (1) Reference has been made to the TPDM Volume 2 Chapter 2.4 for the lane capacity.
- (2) PCU factor of 1.2 has been applied to the calculation of the Lane capacity.

4.6.2 The junction assessment and road link assessment results in **Table 4.9, 4.10 and 4.11** reveal that all the junctions and critical links will operate with ample capacities in both reference and design scenarios in year 2030, except the junction of Fairview Park Interchange (F).

4.7 Proposed Junction Improvement Scheme

4.7.1 Junction improvement were proposed for Fairview Park Interchange under approved planning application no. A/YL-NSW/241. It is proposed local widening for the approaching arm of San Tin Highway southbound slip road and the approaching arm of



San Tam Road southbound. The proposed junction improvement under A/YL-NSW/241 is shown in **Figure RC-02**.

4.7.2 Junction improvement were proposed for Fairview Park Interchange under approved planning application no. A/YL-NSW/241. It is proposed local widening for the approaching arm of San Tin Highway southbound slip road and the approaching arm of San Tam Road southbound. The proposed junction improvement under A/YL-NSW/241 is shown in **Figure RC-02**.

4.7.3 The assessment result after the mitigation measure is presented in **Table 4.12**

Table 4.12 Operational Performance in 2030 Reference Case and Design Case – for the Improvement Proposal under no. A/YL-NSW/241 for Junction F

Ref.	Junction	Method of Control	Year 2030 DFC ⁽¹⁾		Year 2030 DFC ⁽¹⁾	
			Reference Scenario (With Proposed Improvement under no. A/YL-NSW/241)		Design Scenario (With Proposed Improvement under no. A/YL-NSW/241)	
			AM Peak	AM Peak	AM Peak	PM Peak
F	Fairview Park Interchange	Roundabout	1.27	1.03	1.28	1.04

Note:

(1) DFC = Design Ratio of Flow to Capacity for Priority Junction/Roundabout

4.7.4 Apart from the junction improvement scheme proposed under the approved A/YL-NSW/241, numerous on-going planning applications (e.g. Y/YL-NSW/7, Y/YL-MP/6, Y/YL-MP/7, Y/YL-MP/8, etc.) in the vicinity have also proposed further improvement schemes for the junction of Fairview Park Interchange. Also, it is noticeable that the traffic trips generation of the proposed development is very minimal and have insignificant impact to the local road network. Hence, it is envisaged that the proposed improvement schemes under other planning applications will allow the junction of Fairview Park Interchange to accommodate the traffic trips of the proposed development. Insurmountable impact to the adjacent road network will not be occurred.



5. SUMMARY AND CONCLUSION

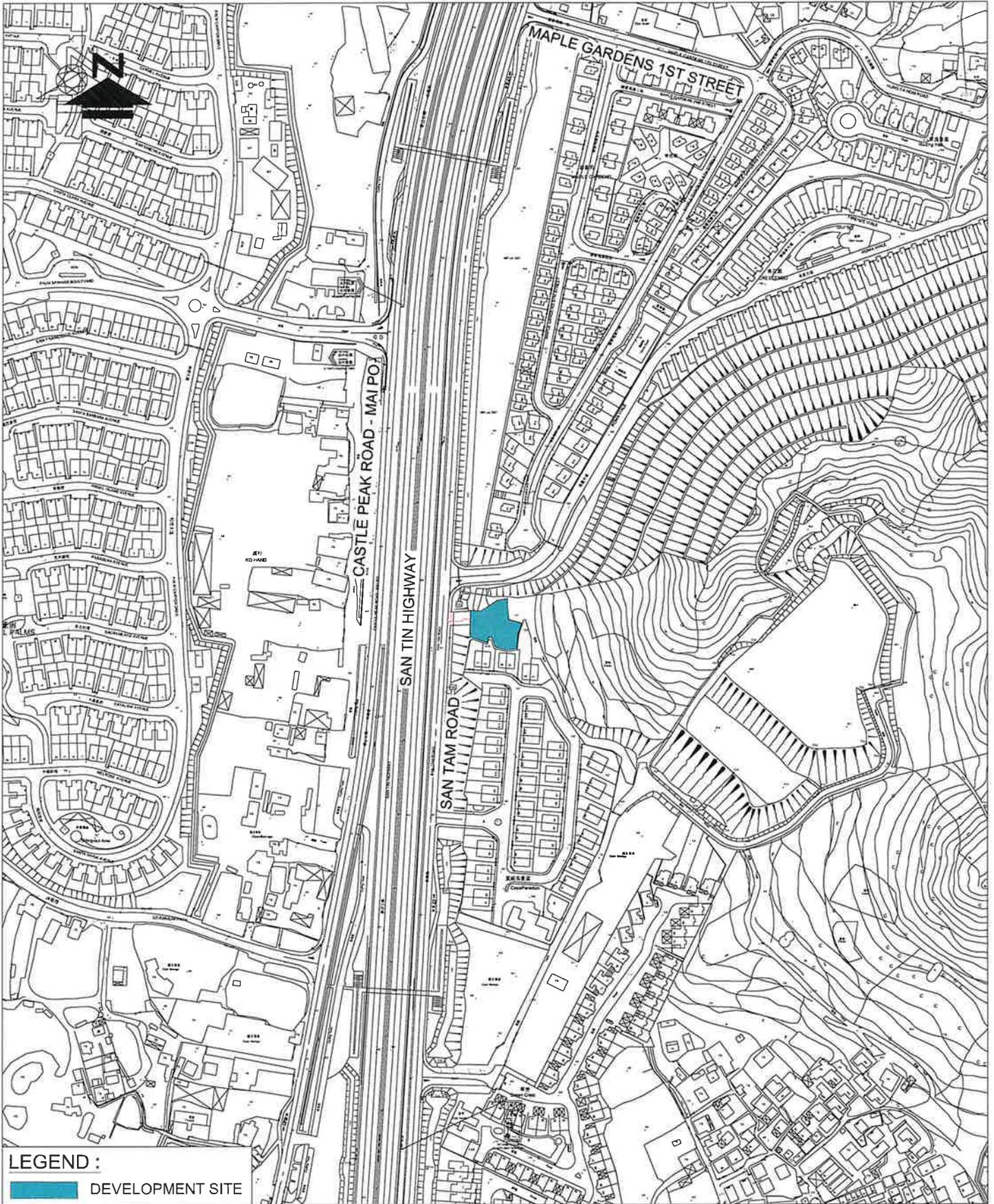
5.1 Summary

- 5.1.1 The application site intends to redevelop to Residential Care Home for the Elderly (RCHE).
- 5.1.2 CTA Consultants Limited (CTA), are therefore commissioned as the traffic consultant to prepare the Traffic Impact Assessment (TIA) and provide technical justifications in supporting the application from traffic engineering point of view.
- 5.1.3 To appraise the existing traffic condition, a vehicular survey in the form of manual-classified count was conducted at the surrounding road network of the proposed development. Current operational performance of the critical junctions and critical road links have been assessed with the observed traffic flow. The results reveal that all critical junctions and critical road links are at present operating within its capacities.
- 5.1.4 Assessment of operational performance of the critical junctions and critical road links indicates that all critical junctions and critical road links will still operate within their capacities in both reference and design scenarios in year 2030, except for the junction of Fairview Park Interchange (F).
- 5.1.5 Junction improvement for Fairview Park Interchange (F) is proposed under the approved planning application no. A/YL-NSW/241. In addition, further improvement is also proposed under various on-going applications. Considered that the traffic generation of the proposed development is very minimal and would not have significant impact to the adjacent road network, the junction improvement works by other planning applications would be able to accommodate the traffic flows of the proposed development.
- 5.1.6 The traffic generated by the proposed development would induce insignificant impact on the surrounding road network. Therefore, the application is supported from the traffic points of view.



5.2 Conclusion

- 5.2.1 In conclusion, this Traffic Impact Assessment (TIA) study demonstrated that the related traffic trips related to the proposed development can be absorbed by the nearby road network and no significant traffic impact will be induced.
- 5.2.2 Therefore, the proposed redevelop of RCHE is reckoned feasible from traffic engineering point of view.



LEGEND :
 DEVELOPMENT SITE

FIGURE NO.:		PROJECT TITLE:	S12A Amendment of Plan Application, Approved Ngau Tam Mei Outline Zoning Plan No. S/YL-NTM/12 Proposed Rezoning from "R(C)" to "G/IC" for a Proposed "Social Welfare Facilities" (Residential Care Homes for the Elderly) (RCHE) At Lot 4823 in DD 104, 81 San Tam Road, San Tin, N.T.
1.1			
PROJECT NO.:		DRAWING TITLE:	
22069HK			
SCALE:	DATE:	SITE LOCATION PLAN	
1 : 3250 @A4	05 JUL 2022		

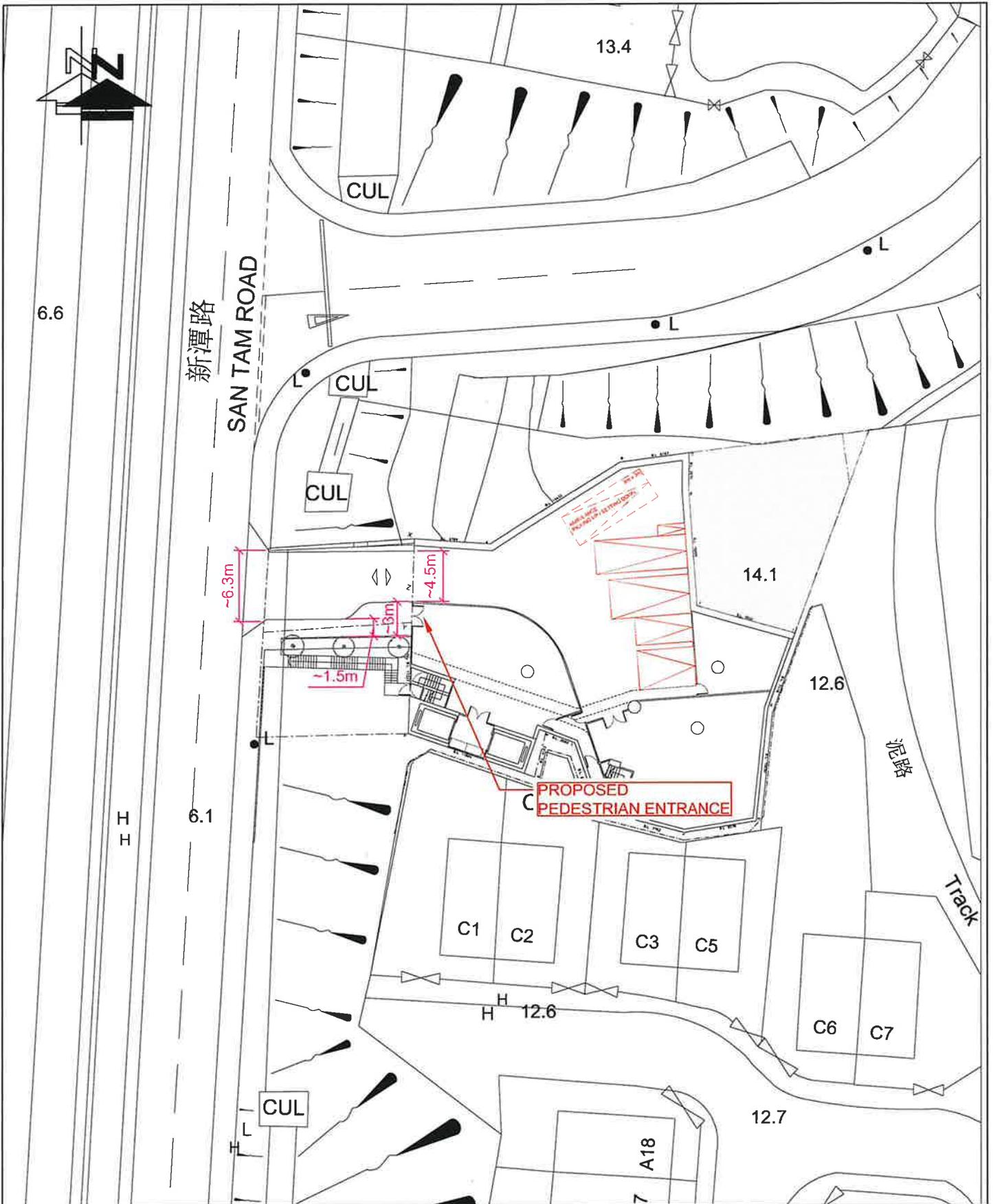


FIGURE NO.: 2.1(REV.A)		PROJECT TITLE: S12A Amendment of Plan Application, Approved Ngau Tam Mei Outline Zoning Plan No. S/YL-NTM/12 Proposed Rezoning from "R(C)" to "G/IC" for a Proposed "Social Welfare Facilities" (Residential Care Homes for the Elderly) (RCHE) At Lot 4823 in DD 104, 81 San Tam Road, San Tin, N.T.	
PROJECT NO.: 22069HK		DRAWING TITLE: GROUND FLOOR PLAN	
SCALE: 1 : 350 @A4	DATE: 03 JAN 2023	 CTA Consultants Limited 志達顧問有限公司	



FIGURE NO.:		PROJECT TITLE:	
2.2		S12A Amendment of Plan Application, Approved Ngau Tam Mei Outline Zoning Plan No. S/YL-NTM/12 Proposed Rezoning from "R(C)" to "G/I/C" for a Proposed "Social Welfare Facilities" (Residential Care Homes for the Elderly) (RCHE) At Lot 4823 in DD 104, 81 San Tam Road, San Tin, N.T.	
PROJECT NO.:		DRAWING TITLE:	
22069HK		PUBLIC TRANSPORT SERVICES IN THE VICINITY	
SCALE:	DATE:	 CTA Consultants Limited 志達顧問有限公司	
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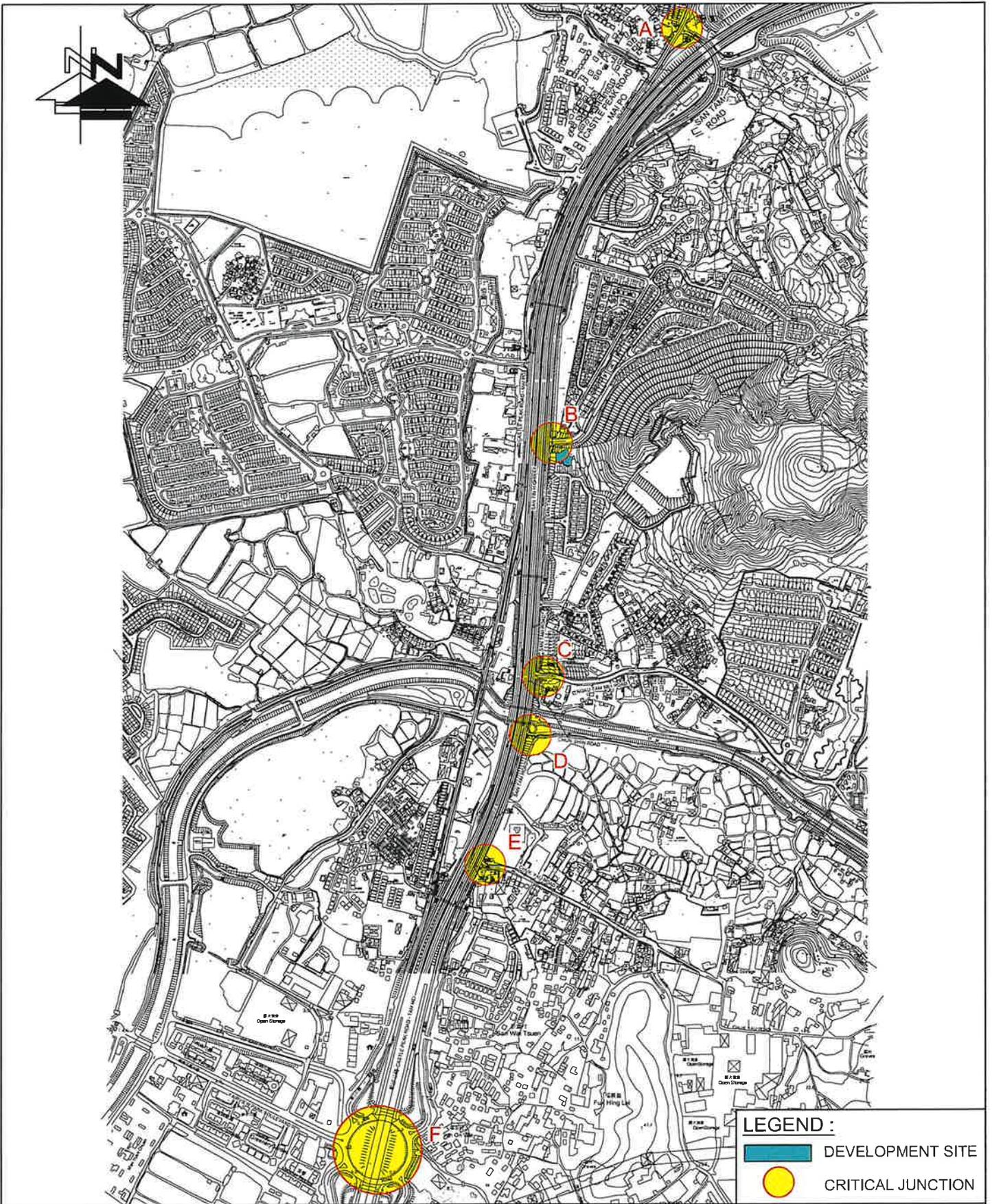


FIGURE NO.:
3.1(REV A)

PROJECT TITLE: S12A Amendment of Plan Application, Approved Ngau Tam Mei Outline Zoning Plan No. S/YL-NTM/12
Proposed Rezoning from "R(C)" to "G/IC" for a Proposed "Social Welfare Facilities" (Residential Care Homes for the Elderly) (RCHE) At Lot 4823 in DD 104, 81 San Tam Road, San Tin, N.T.

PROJECT NO.:
22069HK

DRAWING TITLE:
IDENTIFIED CRITICAL JUNCTIONS

SCALE:
1 : 10000 @A4

DATE:
08 DEC 2022



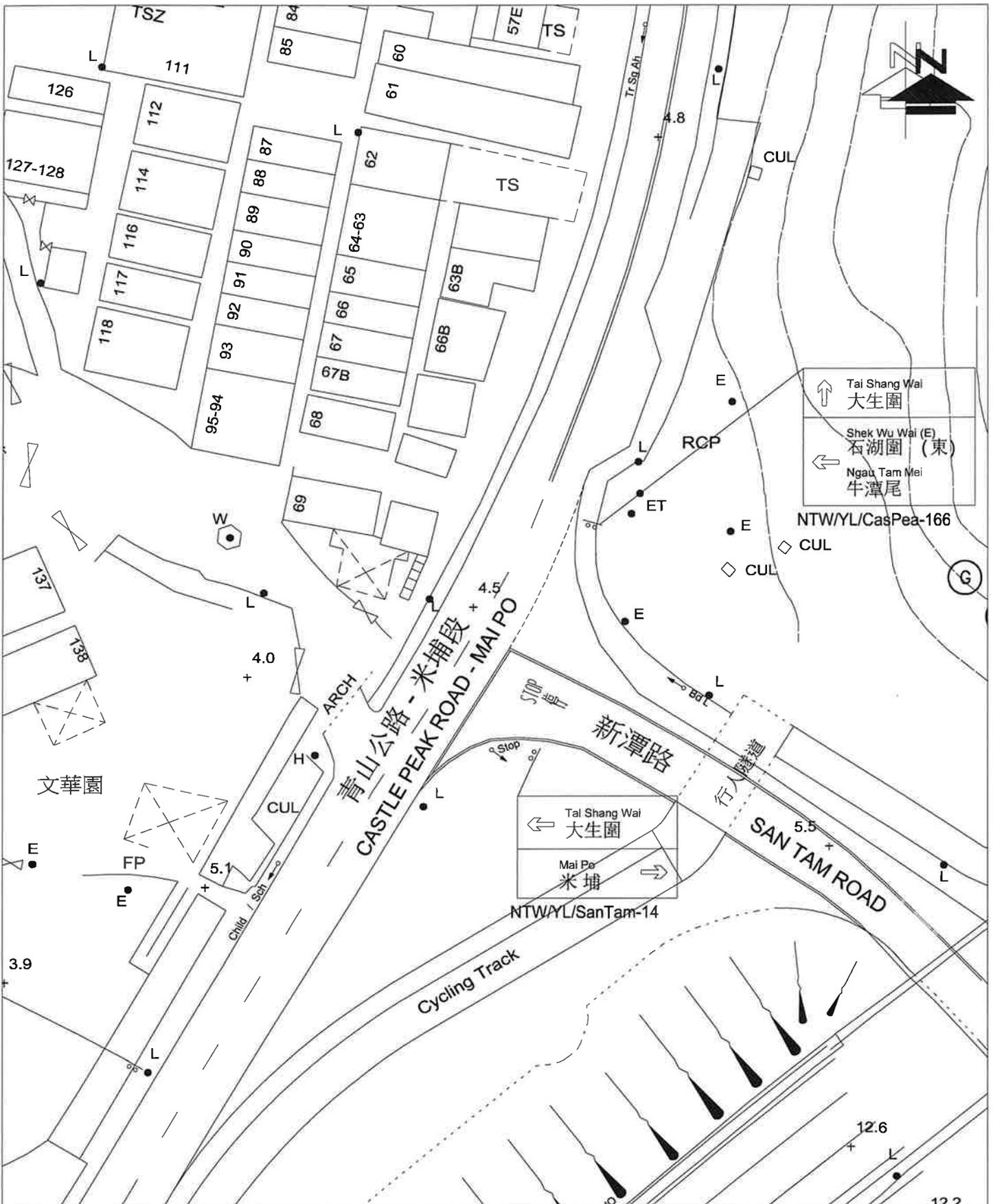
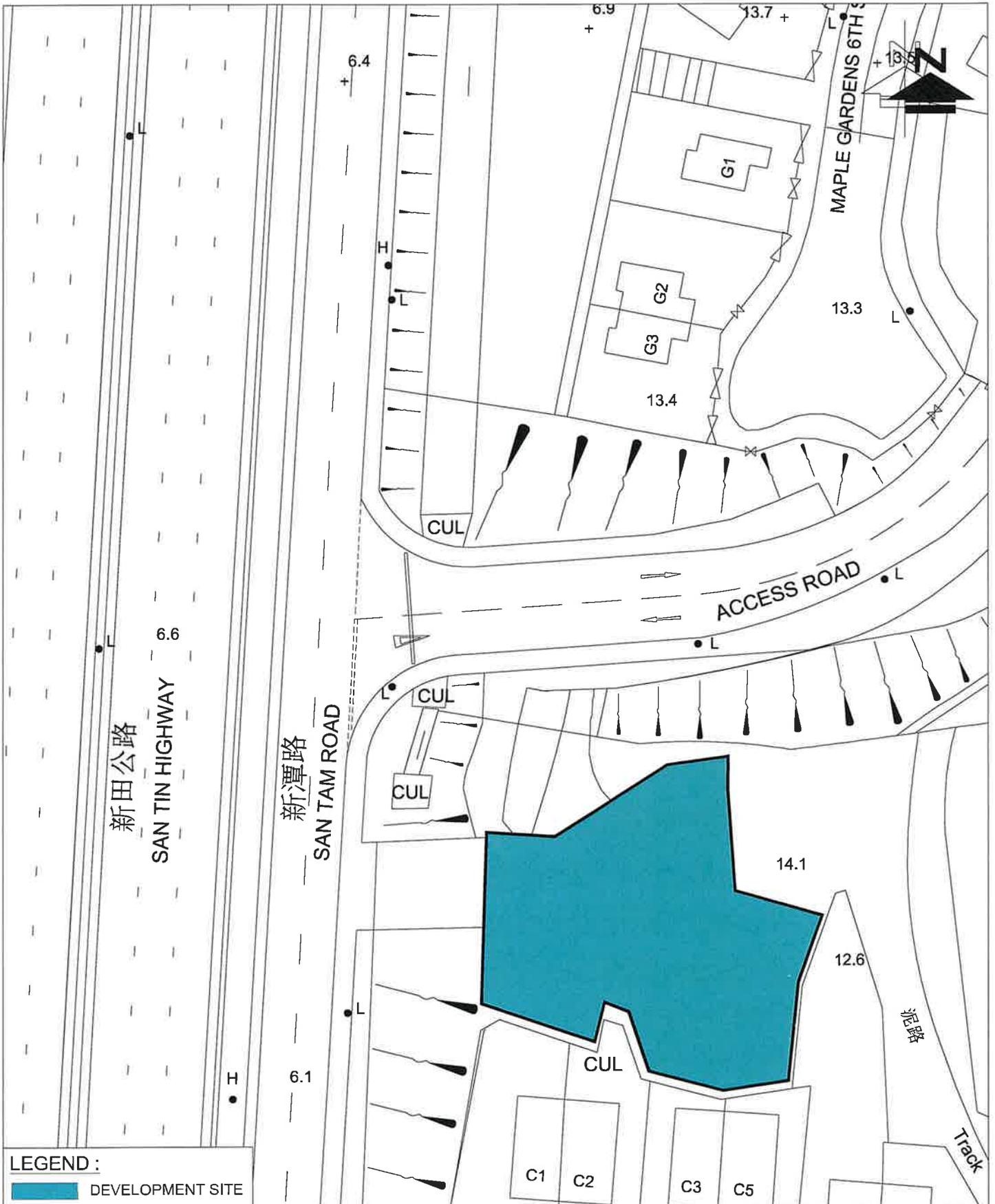


FIGURE NO.: 3.2		PROJECT TITLE: S12A Amendment of Plan Application, Approved Ngau Tam Mei Outline Zoning Plan No. S/YL-NTM/12 Proposed Rezoning from "R(C)" to "G/IC" for a Proposed "Social Welfare Facilities" (Residential Care Homes for the Elderly) (RCHE) At Lot 4823 in DD 104, 81 San Tam Road, San Tin, N.T.
PROJECT NO.: 22069HK		DRAWING TITLE: EXISTING JUNCTION LAYOUT OF SAN TAM ROAD / CASTLE PEAK ROAD - MAI PO (A)
SCALE: 1 : 500 @A4	DATE: 28 JUN 2022	 CTA Consultants Limited 志達顧問有限公司



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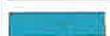
 DEVELOPMENT SITE

FIGURE NO.:

3.3

PROJECT TITLE:

S12A Amendment of Plan Application, Approved Ngau Tam Mei Outline Zoning Plan No. S/YL-NTM/12
Proposed Rezoning from "R(C)" to "G/IC" for a Proposed "Social Welfare Facilities"
(Residential Care Homes for the Elderly) (RCHE) At Lot 4823 in DD 104, 81 San Tam Road, San Tin, N.T.

PROJECT NO.:

22069HK

DRAWING TITLE:

EXISTING JUNCTION LAYOUT OF
SAN TAM ROAD / ACCESS ROAD (B)

SCALE:

1 : 500 @A4

DATE:

28 JUN 2022



CTA Consultants Limited
志達顧問有限公司

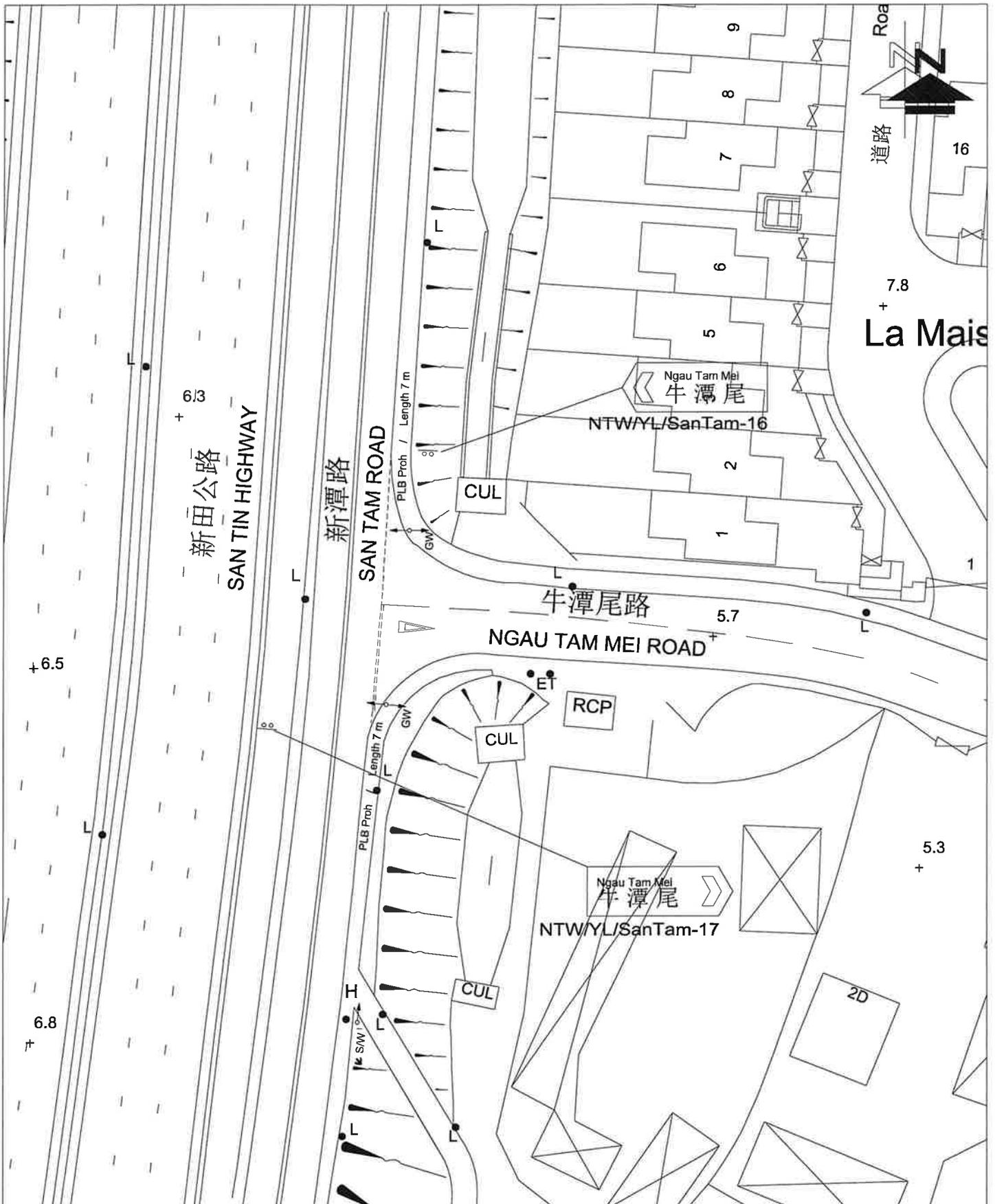


FIGURE NO.: <div style="text-align: center; font-size: 24pt; font-weight: bold;">3.4</div>		PROJECT TITLE: S12A Amendment of Plan Application, Approved Ngau Tam Mei Outline Zoning Plan No. S/YL-NTM/12 Proposed Rezoning from "R(C)" to "G/IC" for a Proposed "Social Welfare Facilities" (Residential Care Homes for the Elderly) (RCHE) At Lot 4823 in DD 104, 81 San Tam Road, San Tin, N.T.	
PROJECT NO.: 22069HK		DRAWING TITLE: <div style="text-align: center; font-weight: bold;">EXISTING JUNCTION LAYOUT OF SAN TAM ROAD / NGAU TAM MEI ROAD (C)</div>	
SCALE: 1 : 500 @A4	DATE: 28 JUN 2022	 CTA Consultants Limited 志達顧問有限公司	

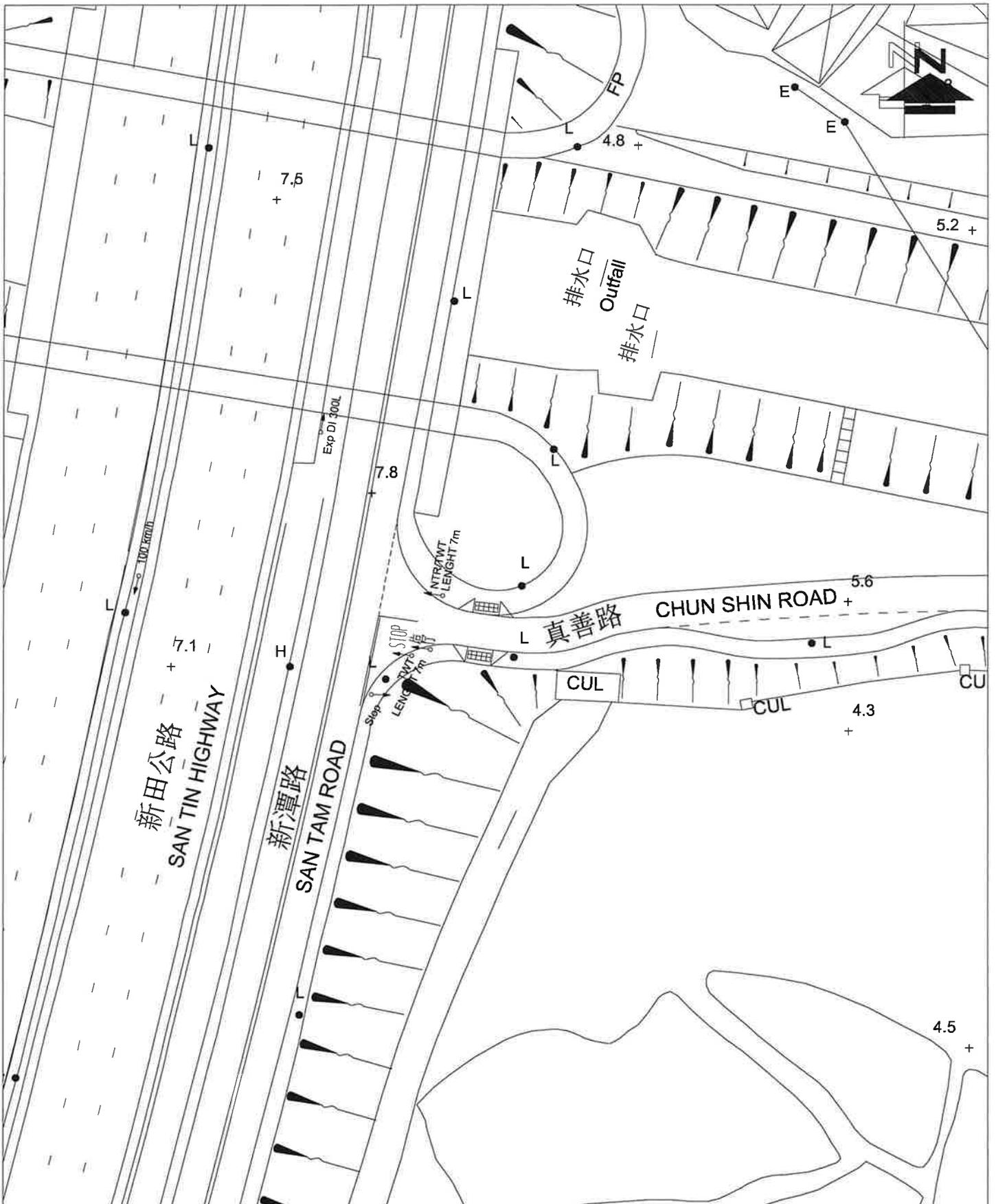


FIGURE NO.: 3.5		PROJECT TITLE: S12A Amendment of Plan Application, Approved Ngau Tam Mei Outline Zoning Plan No. S/YL-NTM/12 Proposed Rezoning from "R(C)" to "G/C" for a Proposed "Social Welfare Facilities" (Residential Care Homes for the Elderly) (RCHE) At Lot 4823 in DD 104, 81 San Tam Road, San Tin, N.T.
PROJECT NO.: 22069HK		DRAWING TITLE: EXISTING JUNCTION LAYOUT OF SAN TAM ROAD / CHUN SHIN ROAD (D)
SCALE: 1 : 500 @A4	DATE: 28 JUN 2022	
		 CTA Consultants Limited 志達顧問有限公司

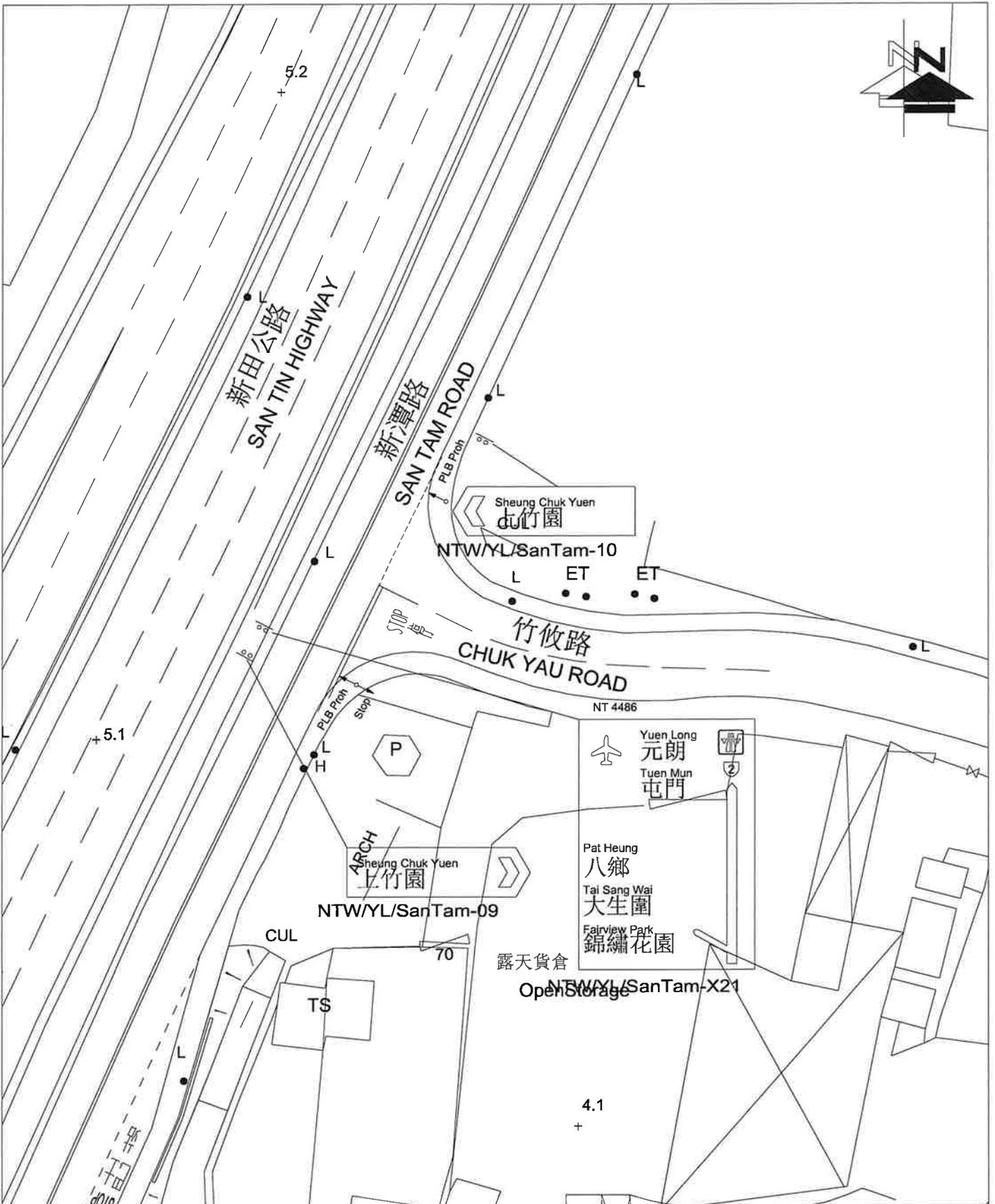
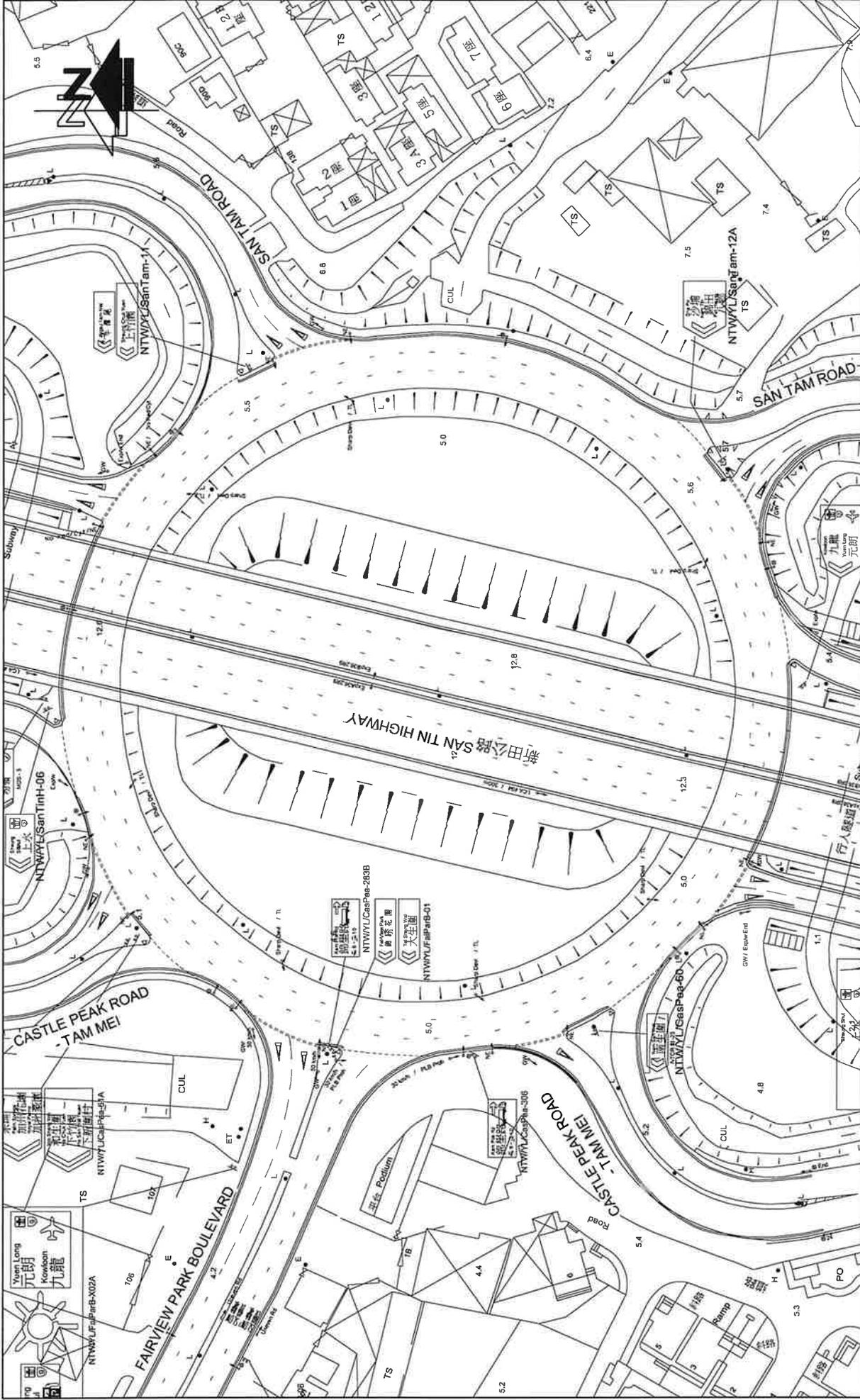


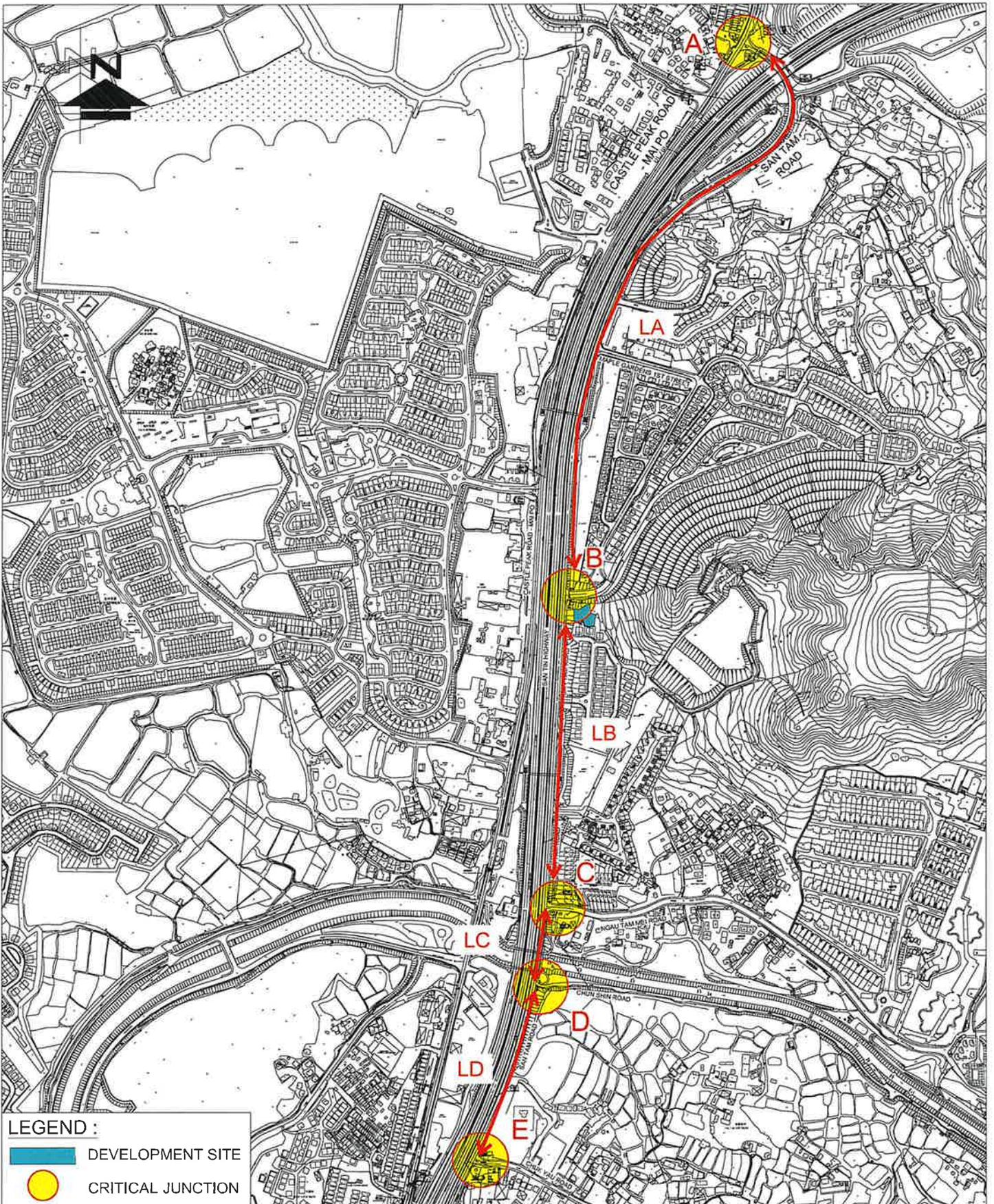
FIGURE NO.: 3.6		PROJECT TITLE: S12A Amendment of Plan Application, Approved Ngau Tam Mei Outline Zoning Plan No. S/YL-NTM/12 Proposed Rezoning from "R(C)" to "G/IC" for a Proposed "Social Welfare Facilities" (Residential Care Homes for the Elderly) (RCHE) At Lot 4823 in DD 104, 81 San Tam Road, San Tin, N.T.
PROJECT NO.: 22069HK		DRAWING TITLE: EXISTING JUNCTION LAYOUT OF SAN TAM ROAD / CHUK YAU ROAD (E)
SCALE: 1 : 500 @A4	DATE: 28 JUN 2022	 CTA Consultants Limited 志達顧問有限公司



<p>FIGURE NO.: RC-01</p>	<p>PROJECT TITLE: S12A Amendment of Plan Application, Approved Ngau Tam Mei Outline Zoning Plan No. SYL-NTM/12 Proposed Rezoning from "R(C)" to "G1C" for a Proposed "Social Welfare Facilities" (Residential Care Homes for the Elderly) (RCHE) At Lot 4823 in DD 104, 81 San Tam Road, San Tin, N.T.</p>
<p>PROJECT NO.: 22069HK</p>	<p>DRAWING TITLE: EXISTING JUNCTION LAYOUT OF FAIRVIEW PARK INTERCHANGE (F)</p>
<p>SCALE: 1 : 1000 @A4</p>	<p>DATE: 08 DEC 2022</p>

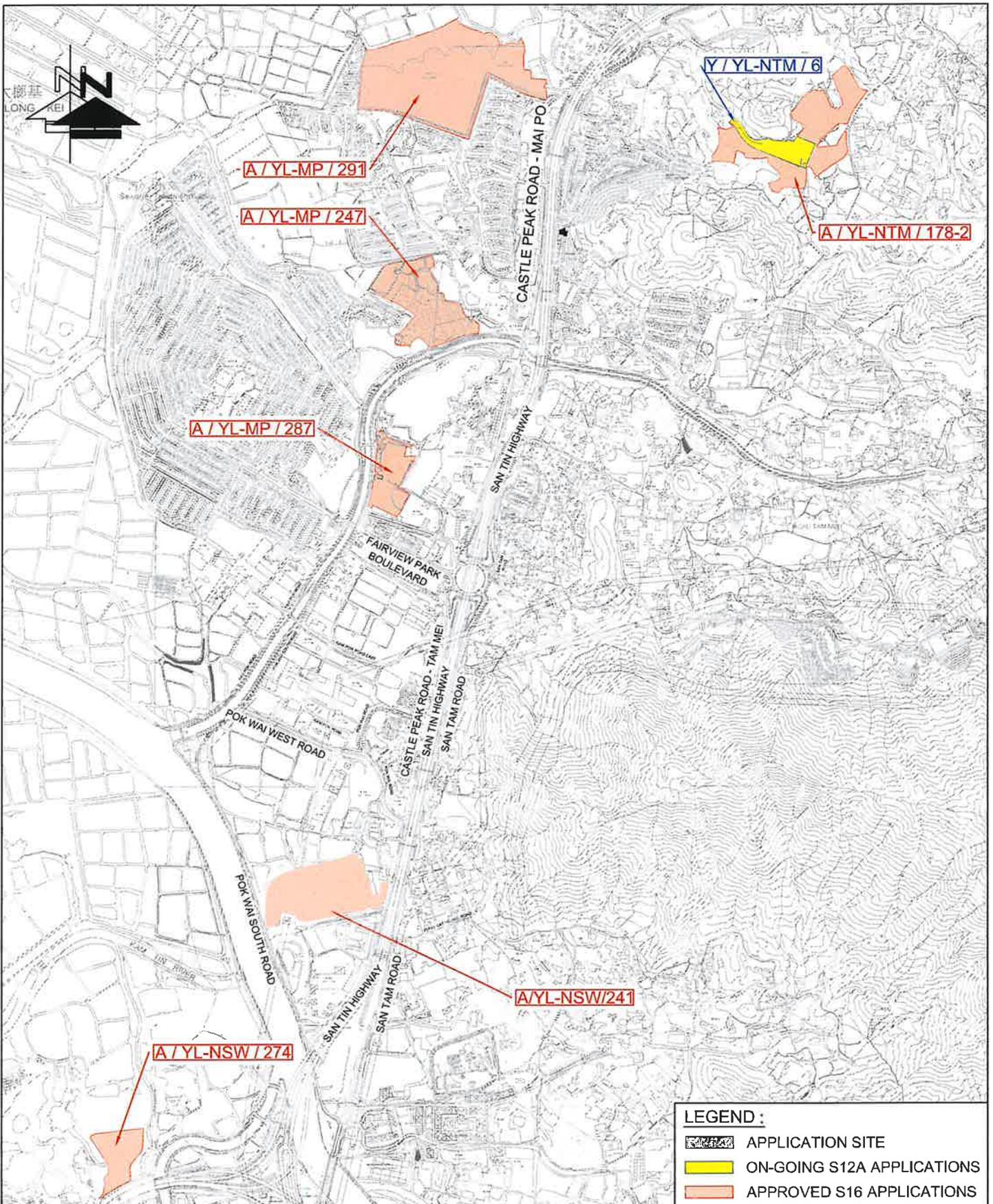


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LEGEND :
 DEVELOPMENT SITE
 CRITICAL JUNCTION

FIGURE NO.:	3.8	PROJECT TITLE: S12A Amendment of Plan Application, Approved Ngau Tam Mei Outline Zoning Plan No. S/YL-NTM/12 Proposed Rezoning from "R(C)" to "G/IC" for a Proposed "Social Welfare Facilities" (Residential Care Homes for the Elderly) (RCHE) At Lot 4823 in DD 104, 81 San Tam Road, San Tin, N.T.
PROJECT NO.:	22069HK	DRAWING TITLE:
SCALE:	DATE:	INDEX PLAN FOR LINK FLOW
1 : 7500 @A4	13 JUL 2022	CTA Consultants Limited 志達顧問有限公司



LEGEND :

-  APPLICATION SITE
-  ON-GOING S12A APPLICATIONS
-  APPROVED S16 APPLICATIONS

FIGURE NO.: 4.1(REV.A)		PROJECT TITLE: S12A Amendment of Plan Application, Approved Ngau Tam Mei Outline Zoning Plan No. S/YL-NTM/12 Proposed Rezoning from "R(C)" to "G/LC" for a Proposed "Social Welfare Facilities" (Residential Care Homes for the Elderly) (RCHE) At Lot 4823 In DD 104, 81 San Tam Road, San Tin, N.T.	
PROJECT NO.: 22069HK		DRAWING TITLE: ADJACENT DEVELOPMENT IN THE VICINITY	
SCALE: 1 : 20000 @A4	DATE: 28 Dec 2022	 CTA Consultants Limited 志達顧問有限公司	

LEGEND :

- DEVELOPMENT SITE
- 230(265)** AM(PM) PEAK HOUR TRAFFIC FLOW (IN PCU / HR)

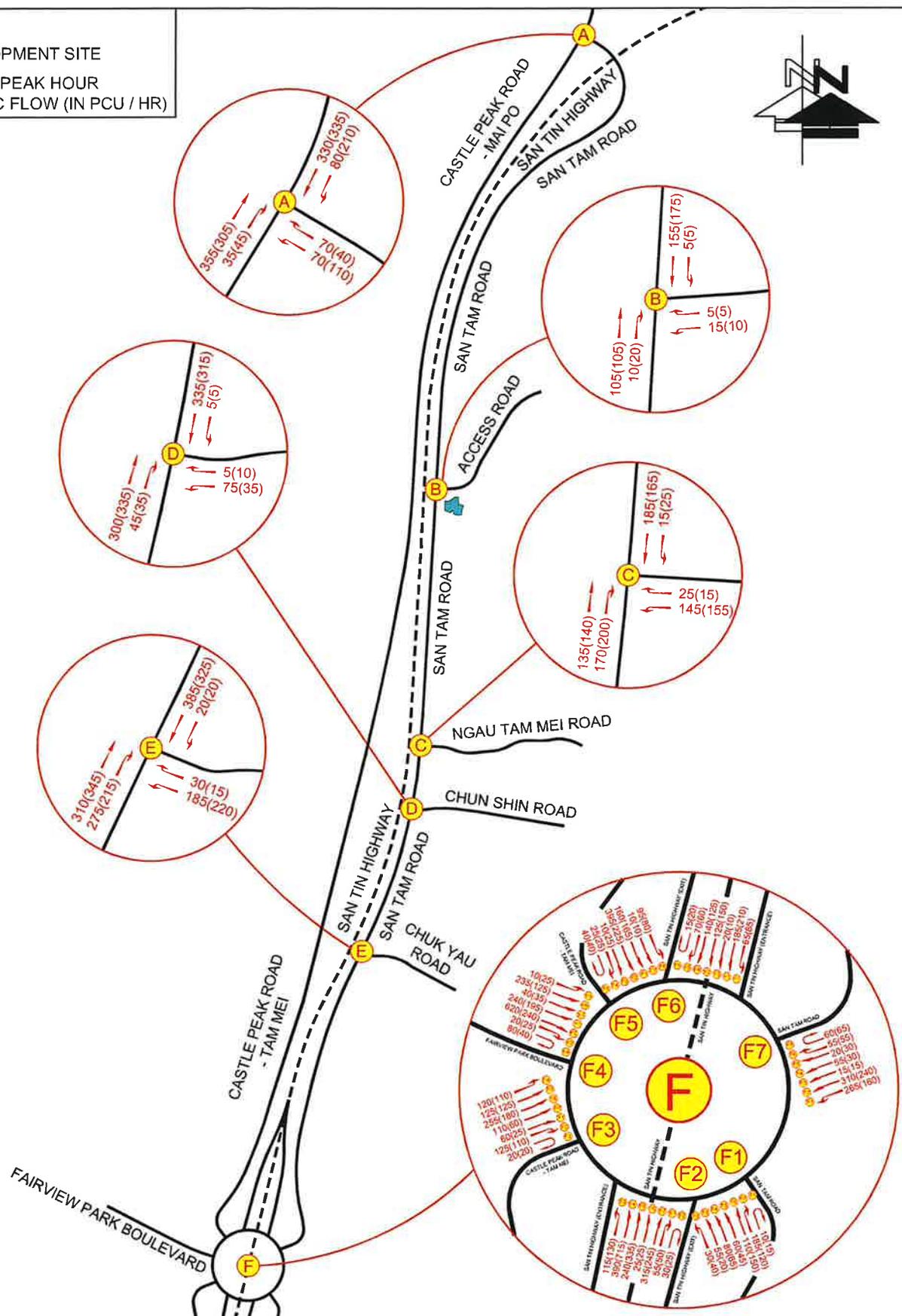


FIGURE NO.: **4.2(REV A)** PROJECT TITLE: S12A Amendment of Plan Application, Approved Ngau Tam Mei Outline Zoning Plan No. S/YL-NTM/12 Proposed Rezoning from "R(C)" to "G/IC" for a Proposed "Social Welfare Facilities" (Residential Care Homes for the Elderly) (RCHE) At Lot 4823 in DD 104, 81 San Tam Road, San Tin, N.T.

PROJECT NO.: 22069HK DRAWING TITLE: 2030 REFERENCE TRAFFIC FLOWS

SCALE: N.T.S. @A4 DATE: 21 DEC 2022



LEGEND :

- DEVELOPMENT SITE
- 230(265)** AM(PM) PEAK HOUR TRAFFIC FLOW (IN PCU / HR)

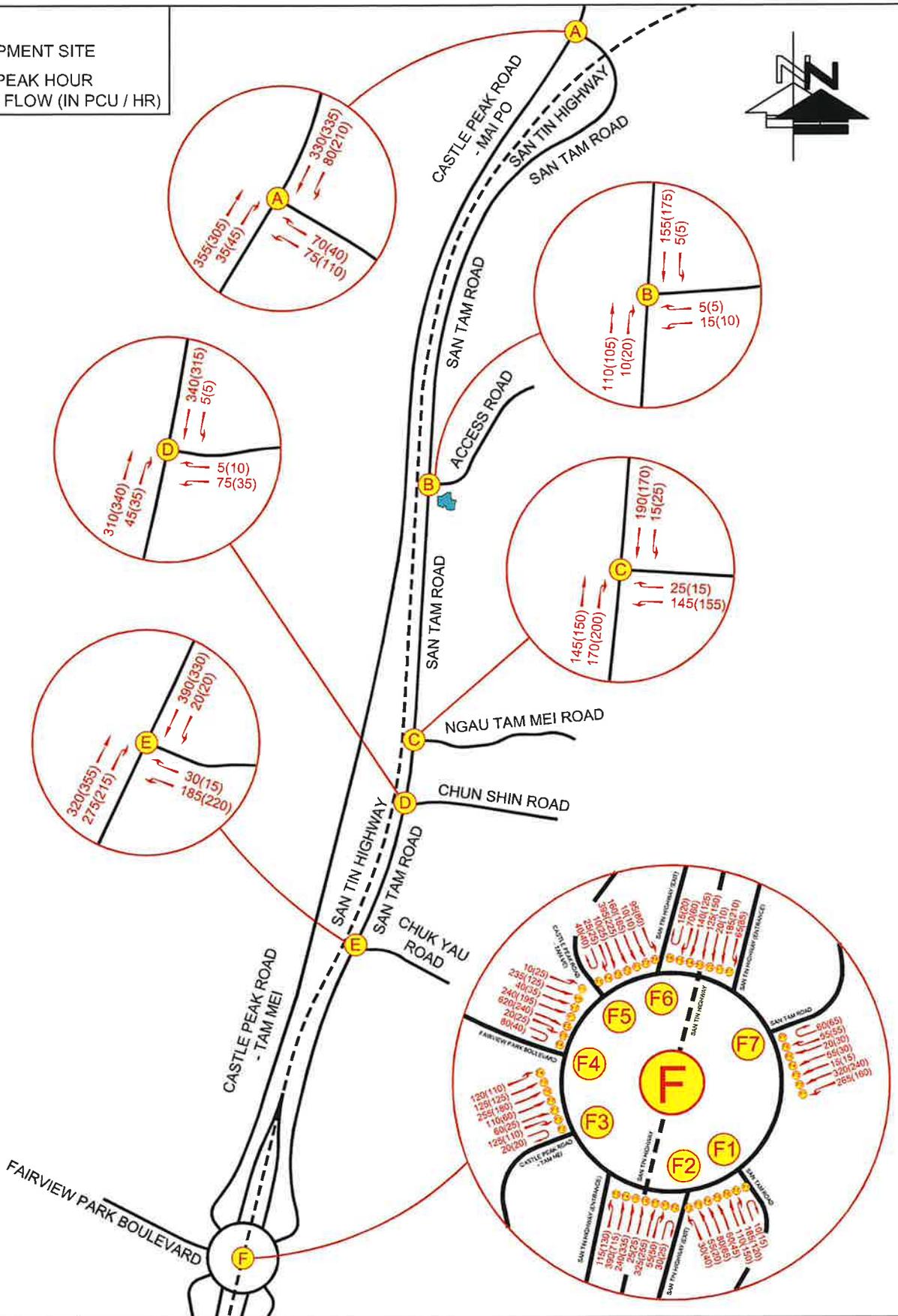


FIGURE NO.:
4.3(REV A)

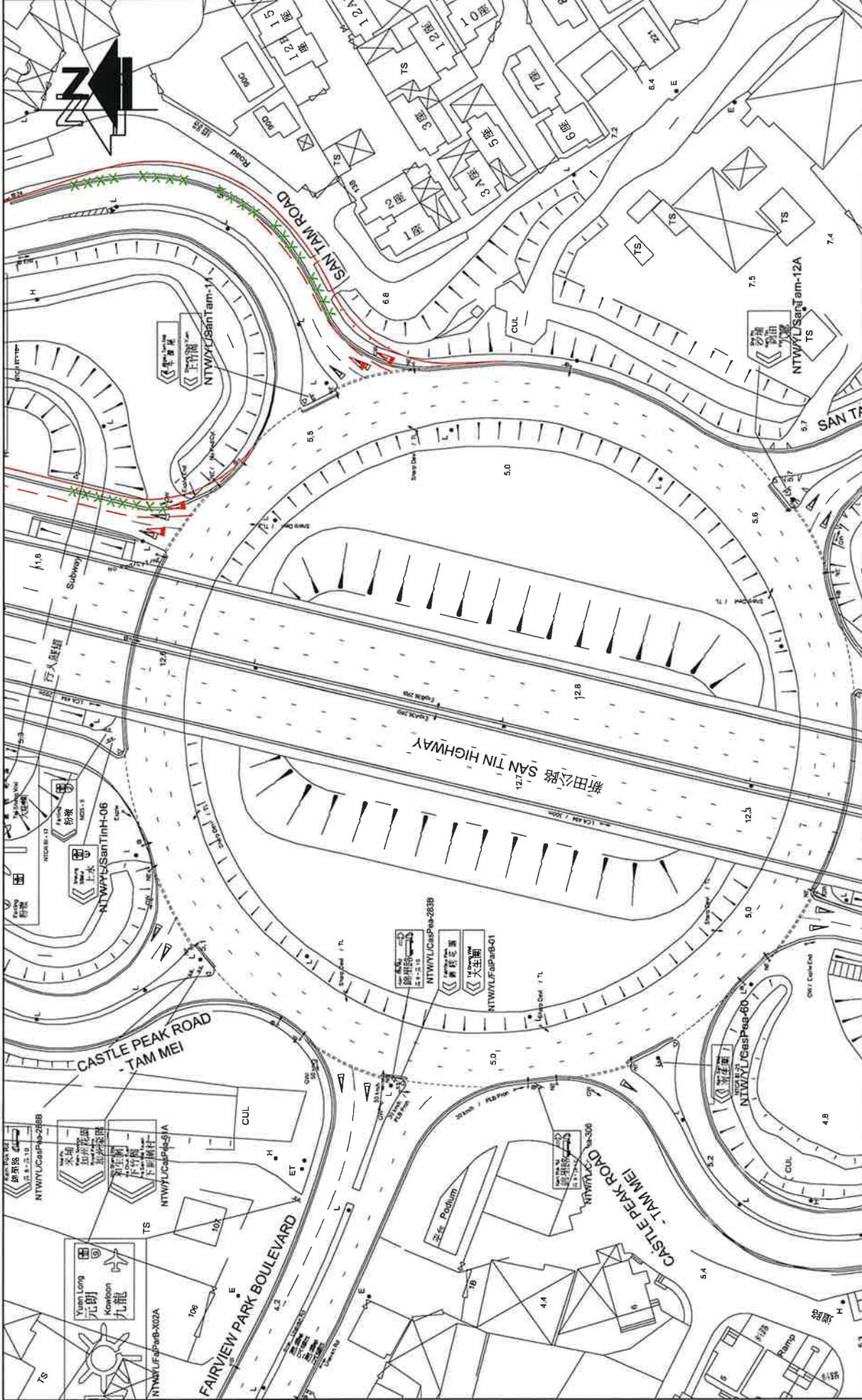
PROJECT TITLE: S12A Amendment of Plan Application, Approved Ngau Tam Mei Outline Zoning Plan No. S/YL-NTM/12
Proposed Rezoning from "R(C)" to "G/IC" for a Proposed "Social Welfare Facilities" (Residential Care Homes for the Elderly) (RCHE) At Lot 4823 in DD 104, 81 San Tam Road, San Tin, N.T.

PROJECT NO.:
22069HK

DRAWING TITLE:
2030 DESIGN TRAFFIC FLOWS

SCALE: N.T.S. @A4
DATE: 21 DEC 2022





PROJECT TITLE: S12A Amendment of Plan Application, Approved Ngau Tam Mei Outline Zoning Plan No. SYL-NTM/12 Proposed Rezoning from "R(C)" to "G/C(C)" for a Proposed "Social Welfare Facilities" (Residential Care Homes for the Elderly) (RCHE) At Lot 4823 in DD 104, 81, San Tin Road, San Tin, N.T.

DRAWING TITLE: PROPOSED IMPROVEMENT JUNCTION LAYOUT OF FAIRVIEW PARK INTERCHANGE (F) UNDER PLANNING APPLICATION NO. AYL-NSW/241

FIGURE NO.: RC-02

PROJECT NO.: 22069HK

SCALE: 1 : 1000 @A4
DATE: 28 DEC 2022



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Appendix 1

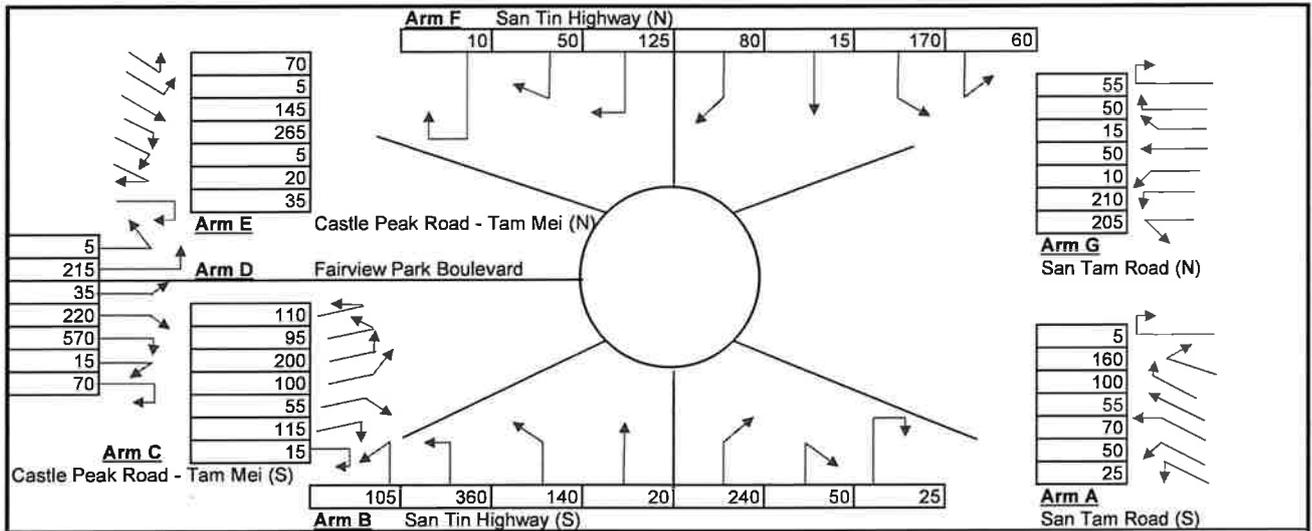
Junction Calculation Sheets

Roundabout Junction Calculation

Roundabout Junction (F) Fairview Park Interchange

Design Year : OBSERVED CASE

Scenario : AM PEAK Date : 2021



Input Parameters		Arm A	Arm B	Arm C	Arm D	Arm E	Arm F	Arm G
V	= Approach half width (m)	5.5	6	5	7	5	6.3	5.5
E	= Entry width (m)	7.8	9	5.8	10	10	7.3	8
L	= Effective length of flare (m)	5	10	5	10	5	4.5	10
R	= Entry radius	20	20	25	20	20	18	20
D	= Inscribed circle diameter (m)	140	140	140	140	140	140	140
A	= Entry angle (degree)	50	65	50	55	50	41	57
Q	= Entry flow (pcu/hr)	465	940	690	1130	545	510	595
Qc	= Circulating flow across entry (pcu/hr)	1805	1045	1705	1590	2325	2205	2060

Output Parameters		Arm A	Arm B	Arm C	Arm D	Arm E	Arm F	Arm G
S	= Sharepness of flare = $1.6*(E-V)/L$	0.74	0.48	0.26	0.48	1.60	0.36	0.40
K	= $1-0.00347*(A-30)-0.978*(1/R-0.05)$	0.93	0.88	0.94	0.91	0.93	0.96	0.91
X2	= $V+((E-V)/(1+2*S))$	6.43	7.53	5.53	8.53	6.19	6.88	6.89
M	= $Exp((D-60)/10)$	2980.96	2980.96	2980.96	2980.96	2980.96	2980.96	2980.96
F	= $303*X2$	1948.42	2281.78	1675.32	2584.78	1875.71	2085.98	2087.33
Td	= $1+(0.5/(1+M))$	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fc	= $0.21*Td*(1+0.2*X2)$	0.48	0.53	0.44	0.57	0.47	0.50	0.50
Qe	= Capacity = $K*(F-Fc*Qc)$	1006.66	1521.40	866.28	1535.22	728.46	942.22	959.36
DFC	= Entry Flow/Capacity = Q/Qe	0.46	0.62	0.80	0.74	0.75	0.54	0.62

DFC of Critical Approach = 0.80

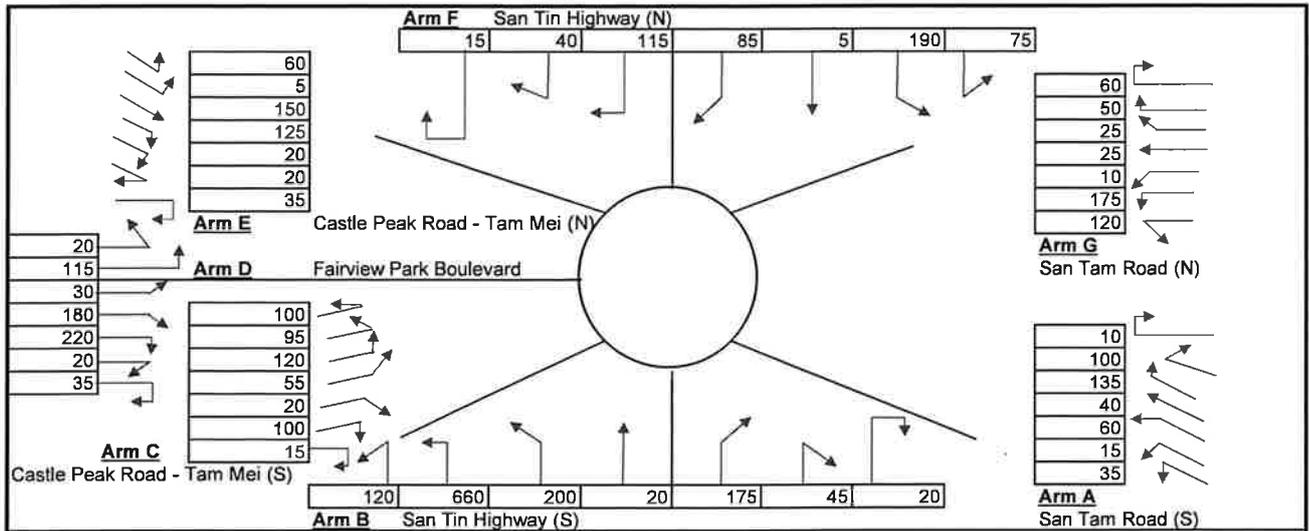
CTA

Roundabout Junction Calculation

Roundabout Junction (F) Fairview Park Interchange

Design Year : OBSERVED CASE

Scenario : PM PEAK Date : 2022



Input Parameters		Arm A	Arm B	Arm C	Arm D	Arm E	Arm F	Arm G
V	= Approach half width (m)	5.5	6	5	7	5	6.3	5.5
E	= Entry width (m)	7.8	9	5.8	10	10	7.3	8
L	= Effective length of flare (m)	5	10	5	10	5	4.5	10
R	= Entry radius	20	20	25	20	20	18	20
D	= Inscribed circle diameter (m)	140	140	140	140	140	140	140
A	= Entry angle (degree)	50	65	50	55	50	41	57
Q	= Entry flow (pcu/hr)	395	1240	505	620	415	525	465
Qc	= Circulating flow across entry (pcu/hr)	1215	930	1885	1375	1540	1440	1465

Output Parameters		Arm A	Arm B	Arm C	Arm D	Arm E	Arm F	Arm G
S	= Sharepness of flare = $1.6*(E-V)/L$	0.74	0.48	0.26	0.48	1.60	0.36	0.40
K	= $1-0.00347*(A-30)-0.978*(1/R-0.05)$	0.93	0.88	0.94	0.91	0.93	0.96	0.91
X2	= $V+((E-V)/(1+2*S))$	6.43	7.53	5.53	8.53	6.19	6.88	6.89
M	= $Exp((D-60)/10)$	2980.96	2980.96	2980.96	2980.96	2980.96	2980.96	2980.96
F	= $303*X2$	1948.42	2281.78	1675.32	2584.78	1875.71	2085.98	2087.33
Td	= $1+(0.5/(1+M))$	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fc	= $0.21*Td*(1+0.2*X2)$	0.48	0.53	0.44	0.57	0.47	0.50	0.50
Qe	= Capacity = $K*(F-Fc*Qc)$	1270.29	1574.58	791.41	1646.82	1071.86	1307.48	1228.67
DFC	= Entry Flow/Capacity = Q/Qe	0.31	0.79	0.64	0.38	0.39	0.40	0.38

DFC of Critical Approach = 0.79

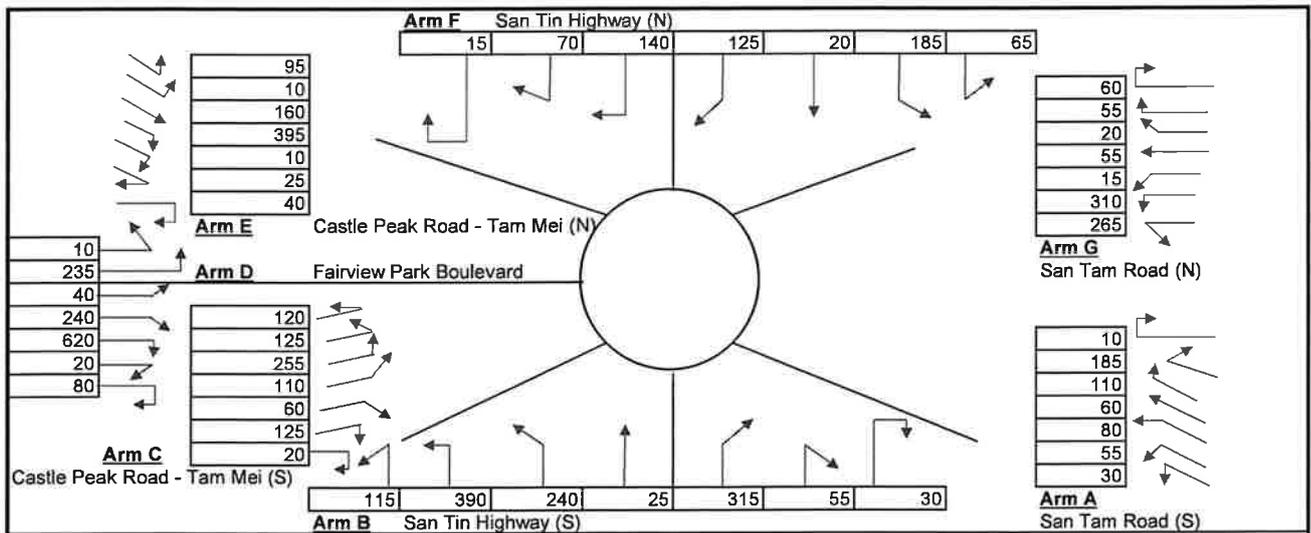
CTA

Roundabout Junction Calculation

Roundabout Junction (F) Fairview Park Interchange

Design Year : REFERENCE CASE

Scenario : AM PEAK Date : 2030



Input Parameters		Arm A	Arm B	Arm C	Arm D	Arm E	Arm F	Arm G
V	= Approach half width (m)	5.5	6	5	7	5	6.3	5.5
E	= Entry width (m)	7.8	9	5.8	10	10	7.3	8
L	= Effective length of flare (m)	5	10	5	10	5	4.5	10
R	= Entry radius	20	20	25	20	20	18	20
D	= Inscribed circle diameter (m)	140	140	140	140	140	140	140
A	= Entry angle (degree)	50	65	50	55	50	41	57
Q	= Entry flow (pcu/hr)	530	1170	815	1245	735	620	780
Qc	= Circulating flow across entry (pcu/hr)	2250	1250	2060	1985	2665	2610	2445

Output Parameters		Arm A	Arm B	Arm C	Arm D	Arm E	Arm F	Arm G
S	= Sharepness of flare = $1.6*(E-V)/L$	0.74	0.48	0.26	0.48	1.60	0.36	0.40
K	= $1-0.00347*(A-30)-0.978*(1/R-0.05)$	0.93	0.88	0.94	0.91	0.93	0.96	0.91
X2	= $V+((E-V)/(1+2*S))$	6.43	7.53	5.53	8.53	6.19	6.88	6.89
M	= $Exp((D-60)/10)$	2980.96	2980.96	2980.96	2980.96	2980.96	2980.96	2980.96
F	= $303*X2$	1948.42	2281.78	1675.32	2584.78	1875.71	2085.98	2087.33
Td	= $1+(0.5/(1+M))$	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fc	= $0.21*Td*(1+0.2*X2)$	0.48	0.53	0.44	0.57	0.47	0.50	0.50
Qe	= Capacity = $K*(F-Fc*Qc)$	807.82	1426.60	718.63	1330.18	579.72	748.85	785.10
DFC	= Entry Flow/Capacity = Q/Qe	0.66	0.82	1.13	0.94	1.27	0.83	0.99

DFC of Critical Approach = 1.27

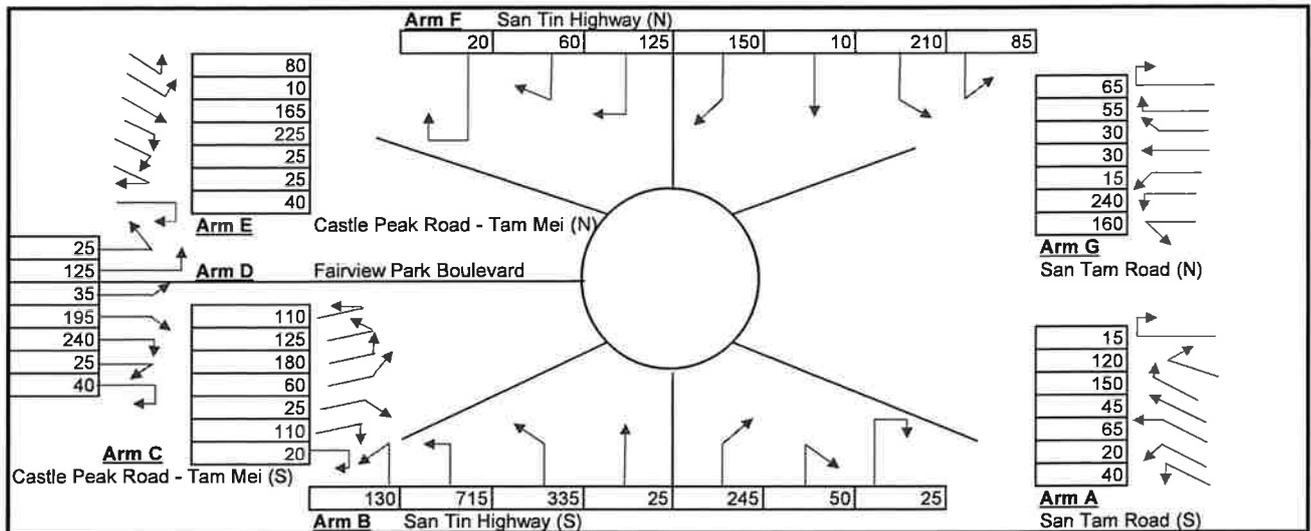
CTA

Roundabout Junction Calculation

Roundabout Junction (F) Fairview Park Interchange

Design Year : REFERENCE CASE

Scenario : PM PEAK Date : 2030



Input Parameters		Arm A	Arm B	Arm C	Arm D	Arm E	Arm F	Arm G
V	= Approach half width (m)	5.5	6	5	7	5	6.3	5.5
E	= Entry width (m)	7.8	9	5.8	10	10	7.3	8
L	= Effective length of flare (m)	5	10	5	10	5	4.5	10
R	= Entry radius	20	20	25	20	20	18	20
D	= Inscribed circle diameter (m)	140	140	140	140	140	140	140
A	= Entry angle (degree)	50	65	50	55	50	41	57
Q	= Entry flow (pcu/hr)	455	1525	630	685	570	660	595
Qc	= Circulating flow across entry (pcu/hr)	1575	1140	2280	1800	1825	1760	1800

Output Parameters		Arm A	Arm B	Arm C	Arm D	Arm E	Arm F	Arm G
S	= Sharepness of flare = $1.6*(E-V)/L$	0.74	0.48	0.26	0.48	1.60	0.36	0.40
K	= $1-0.00347*(A-30)-0.978*(1/R-0.05)$	0.93	0.88	0.94	0.91	0.93	0.96	0.91
X2	= $V+((E-V)/(1+2*S))$	6.43	7.53	5.53	8.53	6.19	6.88	6.89
M	= $Exp((D-60)/10)$	2980.96	2980.96	2980.96	2980.96	2980.96	2980.96	2980.96
F	= $303*X2$	1948.42	2281.78	1675.32	2584.78	1875.71	2085.98	2087.33
Td	= $1+(0.5/(1+M))$	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fc	= $0.21*Td*(1+0.2*X2)$	0.48	0.53	0.44	0.57	0.47	0.50	0.50
Qe	= Capacity = $K*(F-Fc*Qc)$	1109.43	1477.47	627.12	1426.21	947.18	1154.69	1077.04
DFC	= Entry Flow/Capacity = Q/Qe	0.41	1.03	1.00	0.48	0.60	0.57	0.55

DFC of Critical Approach = 1.03

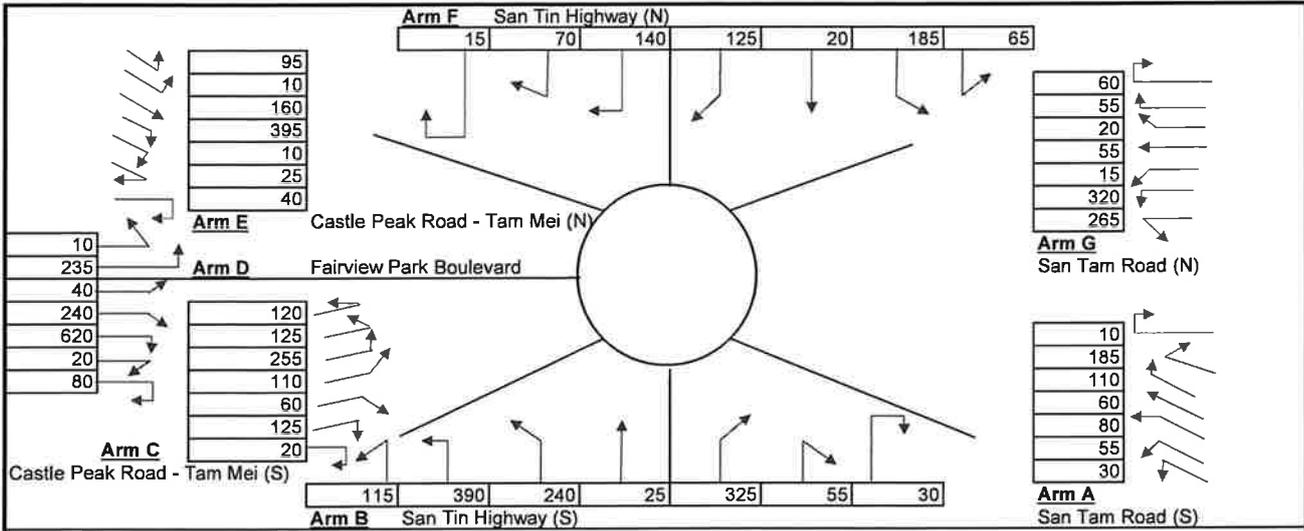
CTA

Roundabout Junction Calculation

Roundabout Junction (F) Fairview Park Interchange

Design Year : DESIGN CASE

Scenario : AM PEAK Date : 2030



Input Parameters		Arm A	Arm B	Arm C	Arm D	Arm E	Arm F	Arm G
V	= Approach half width (m)	5.5	6	5	7	5	6.3	5.5
E	= Entry width (m)	7.8	9	5.8	10	10	7.3	8
L	= Effective length of flare (m)	5	10	5	10	5	4.5	10
R	= Entry radius	20	20	25	20	20	18	20
D	= Inscribed circle diameter (m)	140	140	140	140	140	140	140
A	= Entry angle (degree)	50	65	50	55	50	41	57
Q	= Entry flow (pcu/hr)	530	1180	815	1245	735	620	790
Qc	= Circulating flow across entry (pcu/hr)	2260	1250	2070	1995	2675	2620	2445

Output Parameters		Arm A	Arm B	Arm C	Arm D	Arm E	Arm F	Arm G
S	= Sharepness of flare = $1.6*(E-V)/L$	0.74	0.48	0.26	0.48	1.60	0.36	0.40
K	= $1-0.00347*(A-30)-0.978*(1/R-0.05)$	0.93	0.88	0.94	0.91	0.93	0.96	0.91
X2	= $V+((E-V)/(1+2*S))$	6.43	7.53	5.53	8.53	6.19	6.88	6.89
M	= $Exp((D-60)/10)$	2980.96	2980.96	2980.96	2980.96	2980.96	2980.96	2980.96
F	= $303*X2$	1948.42	2281.78	1675.32	2584.78	1875.71	2085.98	2087.33
Td	= $1+(0.5/(1+M))$	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fc	= $0.21*Td*(1+0.2*X2)$	0.48	0.53	0.44	0.57	0.47	0.50	0.50
Qe	= Capacity = $K*(F-Fc*Qc)$	803.35	1426.60	714.47	1324.99	575.35	744.07	785.10
DFC	= Entry Flow/Capacity = Q/Qe	0.66	0.83	1.14	0.94	1.28	0.83	1.01

DFC of Critical Approach = 1.28

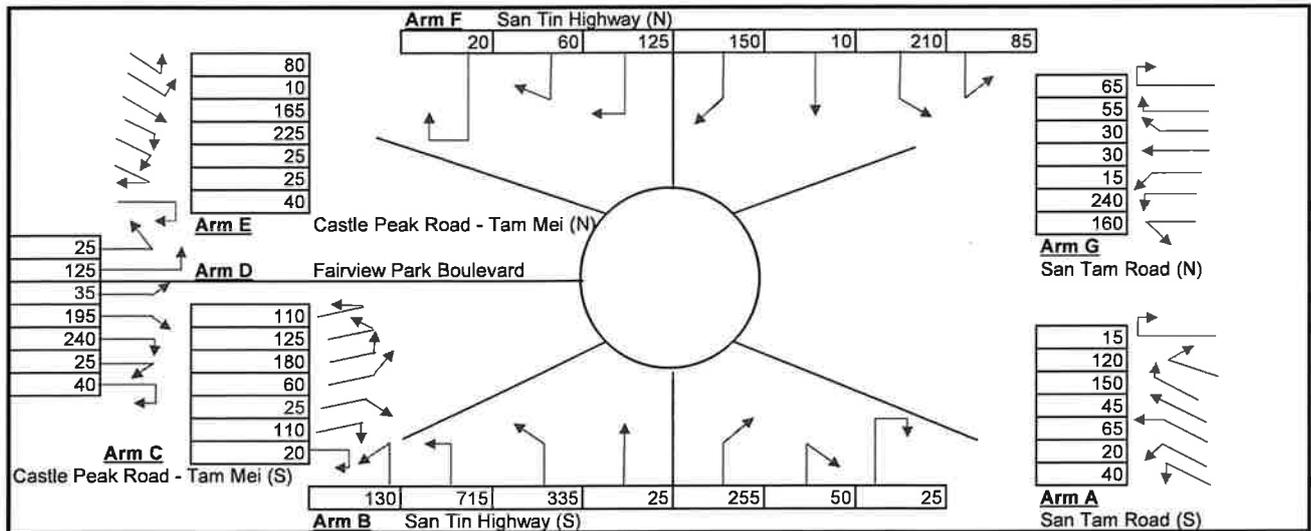
CTA

Roundabout Junction Calculation

Roundabout Junction (F) Fairview Park Interchange

Design Year : DESIGN CASE

Scenario : PM PEAK Date : 2030



Input Parameters		Arm A	Arm B	Arm C	Arm D	Arm E	Arm F	Arm G
V	= Approach half width (m)	5.5	6	5	7	5	6.3	5.5
E	= Entry width (m)	7.8	9	5.8	10	10	7.3	8
L	= Effective length of flare (m)	5	10	5	10	5	4.5	10
R	= Entry radius	20	20	25	20	20	18	20
D	= Inscribed circle diameter (m)	140	140	140	140	140	140	140
A	= Entry angle (degree)	50	65	50	55	50	41	57
Q	= Entry flow (pcu/hr)	455	1535	630	685	570	660	595
Qc	= Circulating flow across entry (pcu/hr)	1575	1140	2290	1810	1835	1770	1800

Output Parameters		Arm A	Arm B	Arm C	Arm D	Arm E	Arm F	Arm G
S	= Sharepness of flare = $1.6*(E-V)/L$	0.74	0.48	0.26	0.48	1.60	0.36	0.40
K	= $1-0.00347*(A-30)-0.978*(1/R-0.05)$	0.93	0.88	0.94	0.91	0.93	0.96	0.91
X2	= $V+((E-V)/(1+2*S))$	6.43	7.53	5.53	8.53	6.19	6.88	6.89
M	= $Exp((D-60)/10)$	2980.96	2980.96	2980.96	2980.96	2980.96	2980.96	2980.96
F	= $303*X2$	1948.42	2281.78	1675.32	2584.78	1875.71	2085.98	2087.33
Td	= $1+(0.5/(1+M))$	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fc	= $0.21*Td*(1+0.2*X2)$	0.48	0.53	0.44	0.57	0.47	0.50	0.50
Qe	= Capacity = $K*(F-Fc*Qc)$	1109.43	1477.47	622.96	1421.02	942.81	1149.92	1077.04
DFC	= Entry Flow/Capacity = Q/Qe	0.41	1.04	1.01	0.48	0.60	0.57	0.55

DFC of Critical Approach = 1.04

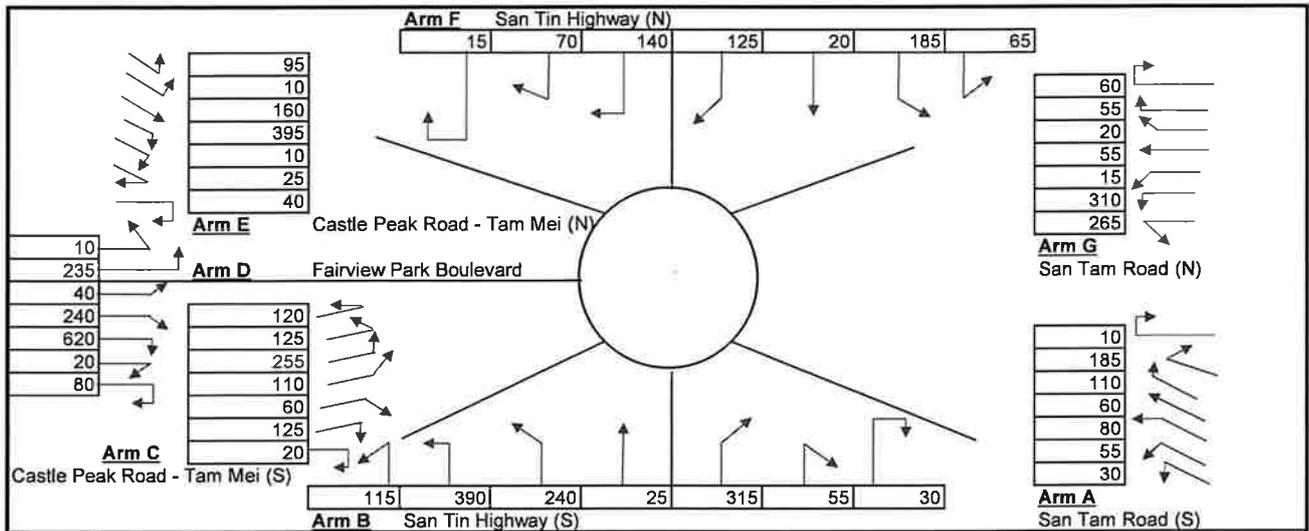
CTA

Roundabout Junction Calculation

Roundabout Junction (F) Fairview Park Interchange

Reference Year : REFERENCE CASE (WITH IMPROVEMENT)

Scenario : AM PEAK Date : 2030



Input Parameters		Arm A	Arm B	Arm C	Arm D	Arm E	Arm F	Arm G
V	= Approach half width (m)	5.5	6	5	7	5	7.3	7.3
E	= Entry width (m)	7.8	9	5.8	10	10	11	11
L	= Effective length of flare (m)	5	10	5	10	5	20	20
R	= Entry radius	20	20	25	20	20	25	25
D	= Inscribed circle diameter (m)	140	140	140	140	140	140	140
A	= Entry angle (degree)	50	65	50	55	50	25	35
Q	= Entry flow (pcu/hr)	530	1170	815	1245	735	620	780
Qc	= Circulating flow across entry (pcu/hr)	2250	1250	2060	1985	2665	2610	2445

Output Parameters		Arm A	Arm B	Arm C	Arm D	Arm E	Arm F	Arm G
S	= Sharepness of flare = $1.6*(E-V)/L$	0.74	0.48	0.26	0.48	1.60	0.30	0.30
K	= $1-0.00347*(A-30)-0.978*(1/R-0.05)$	0.93	0.88	0.94	0.91	0.93	1.03	0.99
X2	= $V+((E-V)/(1+2*S))$	6.43	7.53	5.53	8.53	6.19	9.62	9.62
M	= $Exp((D-60)/10)$	2980.96	2980.96	2980.96	2980.96	2980.96	2980.96	2980.96
F	= $303*X2$	1948.42	2281.78	1675.32	2584.78	1875.71	2916.11	2916.11
Td	= $1+(0.5/(1+M))$	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fc	= $0.21*Td*(1+0.2*X2)$	0.48	0.53	0.44	0.57	0.47	0.61	0.61
Qe	= Capacity = $K*(F-Fc*Qc)$	807.82	1426.60	718.63	1330.18	579.72	1348.36	1403.40
DFC	= Entry Flow/Capacity = Q/Qe	0.66	0.82	1.13	0.94	1.27	0.46	0.56

DFC of Critical Approach = 1.27

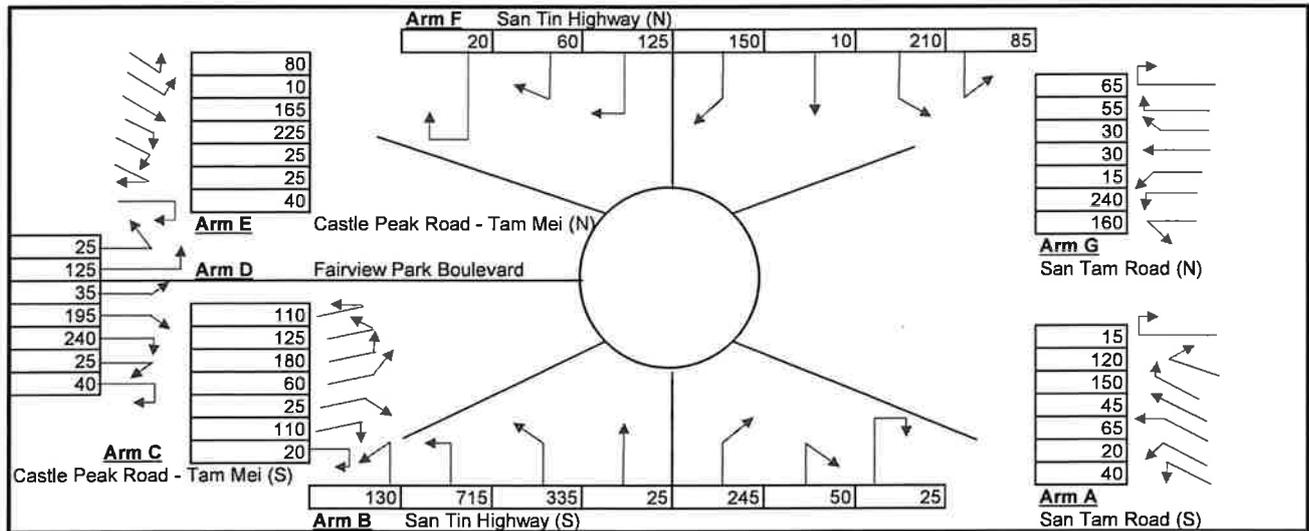
CTA

Roundabout Junction Calculation

Roundabout Junction (F) Fairview Park Interchange

Reference Year : REFERENCE CASE (WITH IMPROVEMENT)

Scenario : PM PEAK Date : 2030



Input Parameters		Arm A	Arm B	Arm C	Arm D	Arm E	Arm F	Arm G
V	= Approach half width (m)	5.5	6	5	7	5	7.3	7.3
E	= Entry width (m)	7.8	9	5.8	10	10	11	11
L	= Effective length of flare (m)	5	10	5	10	5	20	20
R	= Entry radius	20	20	25	20	20	25	25
D	= Inscribed circle diameter (m)	140	140	140	140	140	140	140
A	= Entry angle (degree)	50	65	50	55	50	25	35
Q	= Entry flow (pcu/hr)	455	1525	630	685	570	660	595
Qc	= Circulating flow across entry (pcu/hr)	1575	1140	2280	1800	1825	1760	1800

Output Parameters		Arm A	Arm B	Arm C	Arm D	Arm E	Arm F	Arm G
S	= Sharepness of flare = $1.6*(E-V)/L$	0.74	0.48	0.26	0.48	1.60	0.30	0.30
K	= $1-0.00347*(A-30)-0.978*(1/R-0.05)$	0.93	0.88	0.94	0.91	0.93	1.03	0.99
X2	= $V+((E-V)/(1+2*S))$	6.43	7.53	5.53	8.53	6.19	9.62	9.62
M	= $Exp((D-60)/10)$	2980.96	2980.96	2980.96	2980.96	2980.96	2980.96	2980.96
F	= $303*X2$	1948.42	2281.78	1675.32	2584.78	1875.71	2916.11	2916.11
Td	= $1+(0.5/(1+M))$	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fc	= $0.21*Td*(1+0.2*X2)$	0.48	0.53	0.44	0.57	0.47	0.61	0.61
Qe	= Capacity = $K*(F-Fc*Qc)$	1109.43	1477.47	627.12	1426.21	947.18	1884.69	1796.64
DFC	= Entry Flow/Capacity = Q/Qe	0.41	1.03	1.00	0.48	0.60	0.35	0.33

DFC of Critical Approach = 1.03

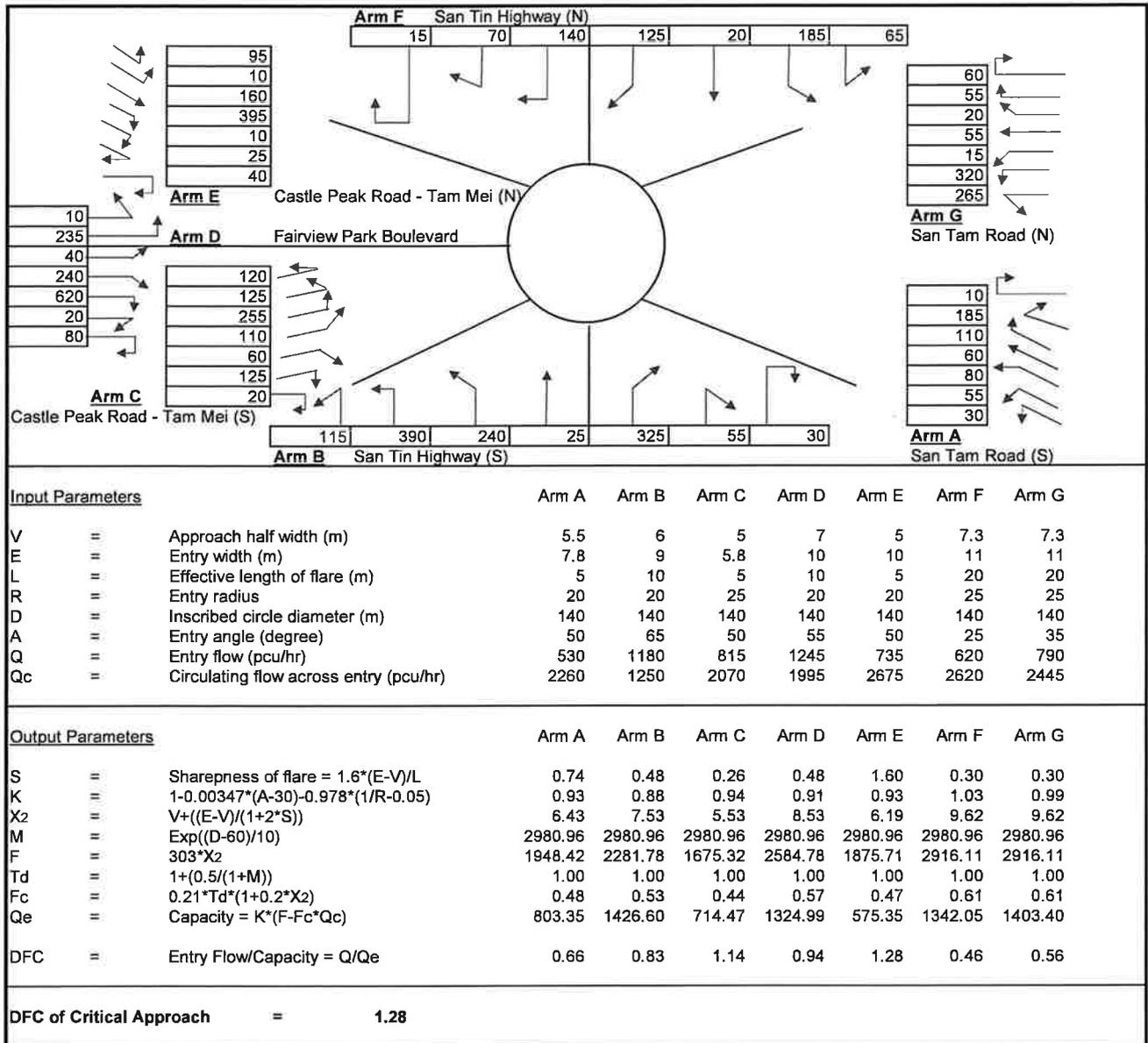
CTA

Roundabout Junction Calculation

Roundabout Junction (F) Fairview Park Interchange

Reference Year : DESIGN CASE (WITH IMPROVEMENT)

Scenario : AM PEAK Date : 2030



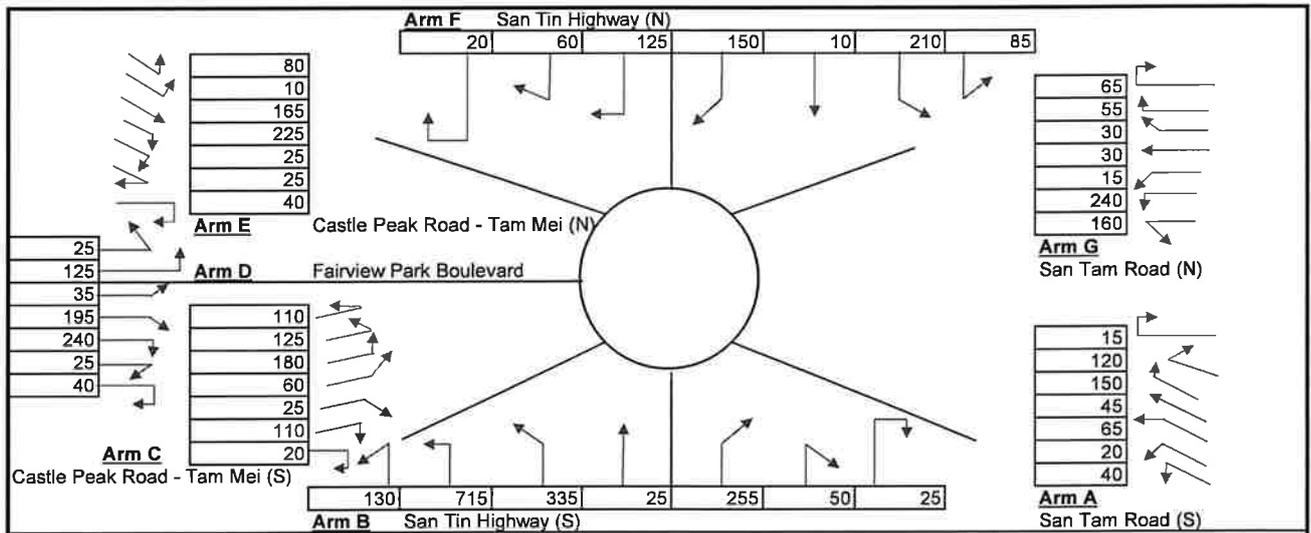
CTA

Roundabout Junction Calculation

Roundabout Junction (F) Fairview Park Interchange

Reference Year : DESIGN CASE (WITH IMPROVEMENT)

Scenario : PM PEAK Date : 2030



Input Parameters		Arm A	Arm B	Arm C	Arm D	Arm E	Arm F	Arm G
V	= Approach half width (m)	5.5	6	5	7	5	7.3	7.3
E	= Entry width (m)	7.8	9	5.8	10	10	11	11
L	= Effective length of flare (m)	5	10	5	10	5	20	20
R	= Entry radius	20	20	25	20	20	25	25
D	= Inscribed circle diameter (m)	140	140	140	140	140	140	140
A	= Entry angle (degree)	50	65	50	55	50	25	35
Q	= Entry flow (pcu/hr)	455	1535	630	685	570	660	595
Qc	= Circulating flow across entry (pcu/hr)	1575	1140	2290	1810	1835	1770	1800

Output Parameters		Arm A	Arm B	Arm C	Arm D	Arm E	Arm F	Arm G
S	= Sharepness of flare = $1.6*(E-V)/L$	0.74	0.48	0.26	0.48	1.60	0.30	0.30
K	= $1-0.00347*(A-30)-0.978*(1/R-0.05)$	0.93	0.88	0.94	0.91	0.93	1.03	0.99
X2	= $V+((E-V)/(1+2*S))$	6.43	7.53	5.53	8.53	6.19	9.62	9.62
M	= $Exp((D-60)/10)$	2980.96	2980.96	2980.96	2980.96	2980.96	2980.96	2980.96
F	= $303*X2$	1948.42	2281.78	1675.32	2584.78	1875.71	2916.11	2916.11
Td	= $1+(0.5/(1+M))$	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fc	= $0.21*Td*(1+0.2*X2)$	0.48	0.53	0.44	0.57	0.47	0.61	0.61
Qe	= Capacity = $K*(F-Fc*Qc)$	1109.43	1477.47	622.96	1421.02	942.81	1878.38	1796.64
DFC	= Entry Flow/Capacity = Q/Qe	0.41	1.04	1.01	0.48	0.60	0.35	0.33

DFC of Critical Approach = 1.04

CTA

Junctions 8
PICADY 8 - Priority Intersection Module
Version: 8.0.5.523 [19102,19/06/2015] © Copyright TRL Limited, 2022
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Filename: Junction 8 .arc8

Path: \\CTA_NAS01\Project\CTA Consultants Limited\CTA - Project\22069HK (ykl) - Prop Rezoning for Prop RCHE at 81 San Tam Rd, San Tin\Calculation

Report generation date: 28/12/2022 14:30:42

- » (Default Analysis Set) - 2030 Design, AM
- » (Default Analysis Set) - 2030 Design, PM
- » (Default Analysis Set) - 2022 Observed, AM
- » (Default Analysis Set) - 2022 Observed, PM
- » (Default Analysis Set) - 2030 Reference, AM
- » (Default Analysis Set) - 2030 Reference, PM

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
A1 - 2022 Observed								
Junction A - Stream B-AC	0.25	7.82	0.20	A	0.28	7.32	0.22	A
Junction A - Stream C-A	-	-	-	-	-	-	-	-
Junction A - Stream C-B	0.04	7.28	0.04	A	0.07	7.94	0.07	A
Junction A - Stream A-B	-	-	-	-	-	-	-	-
Junction A - Stream A-C	-	-	-	-	-	-	-	-
Junction B - Stream B-AC	0.03	5.35	0.03	A	0.03	5.51	0.02	A
Junction B - Stream C-A	-	-	-	-	-	-	-	-
Junction B - Stream C-B	0.02	6.72	0.02	A	0.03	6.85	0.03	A
Junction B - Stream A-B	-	-	-	-	-	-	-	-
Junction B - Stream A-C	-	-	-	-	-	-	-	-
Junction C - Stream B-AC	0.34	7.07	0.26	A	0.33	6.78	0.25	A
Junction C - Stream C-A	-	-	-	-	-	-	-	-
Junction C - Stream C-B	0.48	9.97	0.33	A	0.60	10.71	0.38	B
Junction C - Stream A-B	-	-	-	-	-	-	-	-
Junction C - Stream A-C	-	-	-	-	-	-	-	-
Junction D - Stream B-AC	0.10	7.08	0.09	A	0.07	7.57	0.06	A
Junction D - Stream C-A	-	-	-	-	-	-	-	-
Junction D - Stream C-B	0.09	7.77	0.09	A	0.08	7.62	0.08	A
Junction D - Stream A-B	-	-	-	-	-	-	-	-
Junction D - Stream A-C	-	-	-	-	-	-	-	-
Junction E - Stream B-AC	0.54	9.08	0.35	A	0.58	8.68	0.37	A
Junction E - Stream C-A	-	-	-	-	-	-	-	-
Junction E - Stream C-B	1.25	16.38	0.56	C	0.76	12.49	0.43	B
Junction E - Stream A-B	-	-	-	-	-	-	-	-
Junction E - Stream A-C	-	-	-	-	-	-	-	-
A1 - 2030 Design								
Junction A - Stream B-AC	0.42	9.51	0.30	A	0.40	8.73	0.29	A

Junction A - Stream C-A	-	-	-	-	-	-	-	-
Junction A - Stream C-B	0.09	8.10	0.08	A	0.12	8.92	0.11	A
Junction A - Stream A-B	-	-	-	-	-	-	-	-
Junction A - Stream A-C	-	-	-	-	-	-	-	-
Junction B - Stream B-AC	0.03	5.48	0.03	A	0.03	5.65	0.03	A
Junction B - Stream C-A	-	-	-	-	-	-	-	-
Junction B - Stream C-B	0.02	6.85	0.02	A	0.04	7.06	0.04	A
Junction B - Stream A-B	-	-	-	-	-	-	-	-
Junction B - Stream A-C	-	-	-	-	-	-	-	-
Junction C - Stream B-AC	0.39	7.50	0.28	A	0.37	7.15	0.27	A
Junction C - Stream C-A	-	-	-	-	-	-	-	-
Junction C - Stream C-B	0.55	10.64	0.36	B	0.71	11.70	0.42	B
Junction C - Stream A-B	-	-	-	-	-	-	-	-
Junction C - Stream A-C	-	-	-	-	-	-	-	-
Junction D - Stream B-AC	0.19	7.78	0.16	A	0.11	7.74	0.10	A
Junction D - Stream C-A	-	-	-	-	-	-	-	-
Junction D - Stream C-B	0.11	8.14	0.10	A	0.08	7.84	0.08	A
Junction D - Stream A-B	-	-	-	-	-	-	-	-
Junction D - Stream A-C	-	-	-	-	-	-	-	-
Junction E - Stream B-AC	0.71	10.91	0.42	B	0.68	9.61	0.41	A
Junction E - Stream C-A	-	-	-	-	-	-	-	-
Junction E - Stream C-B	1.68	20.48	0.63	C	0.91	14.09	0.48	B
Junction E - Stream A-B	-	-	-	-	-	-	-	-
Junction E - Stream A-C	-	-	-	-	-	-	-	-
A1 - 2030 Reference								
Junction A - Stream B-AC	0.40	9.47	0.29	A	0.40	8.73	0.29	A
Junction A - Stream C-A	-	-	-	-	-	-	-	-
Junction A - Stream C-B	0.09	8.10	0.08	A	0.12	8.92	0.11	A
Junction A - Stream A-B	-	-	-	-	-	-	-	-
Junction A - Stream A-C	-	-	-	-	-	-	-	-
Junction B - Stream B-AC	0.03	5.48	0.03	A	0.03	5.65	0.03	A
Junction B - Stream C-A	-	-	-	-	-	-	-	-
Junction B - Stream C-B	0.02	6.85	0.02	A	0.04	7.06	0.04	A
Junction B - Stream A-B	-	-	-	-	-	-	-	-
Junction B - Stream A-C	-	-	-	-	-	-	-	-
Junction C - Stream B-AC	0.39	7.47	0.28	A	0.37	7.12	0.27	A
Junction C - Stream C-A	-	-	-	-	-	-	-	-
Junction C - Stream C-B	0.55	10.60	0.36	B	0.71	11.65	0.42	B
Junction C - Stream A-B	-	-	-	-	-	-	-	-
Junction C - Stream A-C	-	-	-	-	-	-	-	-
Junction D - Stream B-AC	0.19	7.76	0.16	A	0.11	7.74	0.10	A
Junction D - Stream C-A	-	-	-	-	-	-	-	-
Junction D - Stream C-B	0.11	8.12	0.10	A	0.08	7.84	0.08	A
Junction D - Stream A-B	-	-	-	-	-	-	-	-
Junction D - Stream A-C	-	-	-	-	-	-	-	-
Junction E - Stream B-AC	0.70	10.83	0.42	B	0.68	9.56	0.41	A
Junction E - Stream C-A	-	-	-	-	-	-	-	-
Junction E - Stream C-B	1.67	20.34	0.63	C	0.91	14.03	0.48	B
Junction E - Stream A-B	-	-	-	-	-	-	-	-
Junction E - Stream A-C	-	-	-	-	-	-	-	-

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle.



"D1 - 2030 Design, AM" model duration: 8:00 - 9:30
 "D9 - 2030 Design, PM" model duration: 8:00 - 9:30
 "D10 - 2022 Observed, AM" model duration: 8:00 - 9:30
 "D11 - 2022 Observed, PM" model duration: 8:00 - 9:30
 "D12 - 2030 Reference, AM" model duration: 8:00 - 9:30
 "D13 - 2030 Reference, PM" model duration: 8:00 - 9:30

Run using Junctions 8.0.5.523 at 28/12/2022 14:30:30

File summary

Title	(untitled)
Location	
Site Number	
Date	21/6/2022
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	user
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75			N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin

(Default Analysis Set) - 2030 Design, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2030 Design, AM	2030 Design	AM		ONE HOUR	08:00	09:30	90	15		

Junction Network

Junctions

Junction	Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
A	A	San Tam Road / Castle Peak Road - Mai Po	T-Junction	Two-way	A,B,C	9.24	A
B	B	San Tam Road / Access Road	T-Junction	Two-way	A,B,C	5.94	A
C	C	San Tam Road / Ngau Tam Mei Road	T-Junction	Two-way	A,B,C	9.07	A
D	D	San Tam Road / Chun Shin Road	T-Junction	Two-way	A,B,C	7.91	A
E	E	San Tam Road / Chuk Yau Road	T-Junction	Two-way	A,B,C	16.28	C

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Junction	Arm	Arm	Name	Description	Arm Type
A	A	A	(untitled)		Major
A	B	B	(untitled)		Minor
A	C	C	(untitled)		Major
B	A	A	untitled		Major
B	B	B	untitled		Minor
B	C	C	untitled		Major
C	A	A	untitled		Major
C	B	B	untitled		Minor
C	C	C	untitled		Major
D	A	A	untitled		Major
D	B	B	untitled		Minor
D	C	C	untitled		Major
E	A	A	untitled		Major
E	B	B	untitled		Minor
E	C	C	untitled		Major

Major Arm Geometry

Junction	Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
A	C	8.20		0.00		2.20	0.00		
B	C	6.90		0.00		2.20	0.00		
C	C	6.80		0.00		2.20	0.00		
D	C	6.65		0.00		2.20	0.00		
E	C	7.00		0.00		2.20	0.00		

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Junction	Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
A	B	One lane	5.00										50	50
B	B	One lane	5.00										50	50
C	B	One lane	5.00										50	50
D	B	One lane	3.12										50	50
E	B	One lane	4.84										50	50

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
A	B-A	622.329	0.102	0.259	0.163	0.370
A	B-C	786.649	0.109	0.276	-	-
A	C-B	573.963	0.201	0.201	-	-

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B	B-A	622.329	0.109	0.275	0.173	0.393
B	B-C	786.649	0.116	0.293	-	-
B	C-B	573.963	0.214	0.214	-	-

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
C	B-A	622.329	0.109	0.277	0.174	0.395
C	B-C	786.649	0.116	0.294	-	-
C	C-B	573.963	0.215	0.215	-	-

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
E	B-A	614.024	0.107	0.270	0.170	0.386
E	B-C	776.151	0.114	0.288	-	-
E	C-B	573.963	0.213	0.213	-	-

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
D	B-A	524.736	0.093	0.235	0.148	0.335
D	B-C	663.287	0.099	0.250	-	-
D	C-B	573.963	0.216	0.216	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Junction	Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	A	ONE HOUR	✓	410.00	100.000
A	B	ONE HOUR	✓	145.00	100.000
A	C	ONE HOUR	✓	390.00	100.000
B	A	ONE HOUR	✓	160.00	100.000
B	B	ONE HOUR	✓	20.00	100.000
B	C	ONE HOUR	✓	120.00	100.000
C	A	ONE HOUR	✓	205.00	100.000
C	B	ONE HOUR	✓	170.00	100.000
C	C	ONE HOUR	✓	315.00	100.000
D	A	ONE HOUR	✓	345.00	100.000
D	B	ONE HOUR	✓	80.00	100.000
D	C	ONE HOUR	✓	355.00	100.000
E	A	ONE HOUR	✓	410.00	100.000
E	B	ONE HOUR	✓	215.00	100.000
E	C	ONE HOUR	✓	595.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction A (for whole period)

		To		
		A	B	C
From	A	0.000	80.000	330.000
	B	70.000	0.000	75.000
	C	355.000	35.000	0.000

Turning Proportions (PCU) - Junction A (for whole period)

		To		
		A	B	C
From	A	0.00	0.20	0.80
	B	0.48	0.00	0.52
	C	0.91	0.09	0.00

Turning Counts / Proportions (PCU/hr) - Junction B (for whole period)

		To		
		A	B	C
From	A	0.000	5.000	155.000
	B	5.000	0.000	15.000
	C	110.000	10.000	0.000

Turning Proportions (PCU) - Junction B (for whole period)

		To		
		A	B	C
From	A	0.00	0.03	0.97
	B	0.25	0.00	0.75
	C	0.92	0.08	0.00

Turning Counts / Proportions (PCU/hr) - Junction C (for whole period)

		To		
		A	B	C
From	A	0.000	15.000	190.000
	B	25.000	0.000	145.000
	C	145.000	170.000	0.000

Turning Proportions (PCU) - Junction C (for whole period)

		To		
		A	B	C
From	A	0.00	0.07	0.93
	B	0.15	0.00	0.85
	C	0.46	0.54	0.00

Turning Counts / Proportions (PCU/hr) - Junction E (for whole period)

		To		
		A	B	C
From	A	0.000	20.000	390.000
	B	30.000	0.000	185.000
	C	320.000	275.000	0.000

Turning Proportions (PCU) - Junction E (for whole period)

		To		
		A	B	C
From	A	0.00	0.05	0.95
	B	0.14	0.00	0.86
	C	0.54	0.46	0.00

Turning Counts / Proportions (PCU/hr) - Junction D (for whole period)

		To		
		A	B	C
From	A	0.000	5.000	340.000
	B	5.000	0.000	75.000
	C	310.000	45.000	0.000

Turning Proportions (PCU) - Junction D (for whole period)

		To		
		A	B	C
From	A	0.00	0.01	0.99
	B	0.06	0.00	0.94
	C	0.87	0.13	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction A (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction A (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Average PCU Per Vehicle - Junction B (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction B (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Average PCU Per Vehicle - Junction C (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction C (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Average PCU Per Vehicle - Junction E (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction E (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Average PCU Per Vehicle - Junction D (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction D (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Junction	Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
A	B-AC	0.30	9.51	0.42	A
A	C-A	-	-	-	-
A	C-B	0.08	8.10	0.09	A
A	A-B	-	-	-	-
A	A-C	-	-	-	-
B	B-AC	0.03	5.48	0.03	A
B	C-A	-	-	-	-
B	C-B	0.02	6.85	0.02	A
B	A-B	-	-	-	-
B	A-C	-	-	-	-
C	B-AC	0.28	7.50	0.39	A
C	C-A	-	-	-	-
C	C-B	0.36	10.64	0.55	B
C	A-B	-	-	-	-
C	A-C	-	-	-	-
D	B-AC	0.16	7.78	0.19	A
D	C-A	-	-	-	-
D	C-B	0.10	8.14	0.11	A
D	A-B	-	-	-	-
D	A-C	-	-	-	-
E	B-AC	0.42	10.91	0.71	B
E	C-A	-	-	-	-
E	C-B	0.63	20.48	1.68	C
E	A-B	-	-	-	-
E	A-C	-	-	-	-

Main Results for each time segment

Main results: (08:00-08:15)

Junction	Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
A	B-A-C	109.16	108.26	0.00	589.85	0.185	0.22	7.461	A
A	C-A	267.26	267.26	0.00	-	-	-	-	-
A	C-B	26.35	26.13	0.00	511.89	0.051	0.05	7.407	A
A	A-B	60.23	60.23	0.00	-	-	-	-	-
A	A-C	248.44	248.44	0.00	-	-	-	-	-
B	B-A-C	15.06	14.97	0.00	697.36	0.022	0.02	5.275	A
B	C-A	82.81	82.81	0.00	-	-	-	-	-
B	C-B	7.53	7.47	0.00	548.22	0.014	0.01	6.657	A
B	A-B	3.76	3.76	0.00	-	-	-	-	-
B	A-C	116.69	116.69	0.00	-	-	-	-	-
C	B-A-C	127.98	127.09	0.00	696.96	0.184	0.22	6.309	A
C	C-A	109.16	109.16	0.00	-	-	-	-	-
C	C-B	127.98	126.76	0.00	540.84	0.237	0.31	8.670	A
C	A-B	11.29	11.29	0.00	-	-	-	-	-
C	A-C	143.04	143.04	0.00	-	-	-	-	-
D	B-A-C	60.23	59.77	0.00	583.27	0.103	0.11	6.871	A
D	C-A	233.38	233.38	0.00	-	-	-	-	-
D	C-B	33.88	33.60	0.00	517.84	0.065	0.07	7.431	A
D	A-B	3.76	3.76	0.00	-	-	-	-	-
D	A-C	255.97	255.97	0.00	-	-	-	-	-
E	B-A-C	161.86	160.50	0.00	630.64	0.257	0.34	7.636	A
E	C-A	240.91	240.91	0.00	-	-	-	-	-
E	C-B	207.03	204.35	0.00	508.31	0.407	0.67	11.753	B
E	A-B	15.06	15.06	0.00	-	-	-	-	-
E	A-C	293.61	293.61	0.00	-	-	-	-	-

Main results: (08:15-08:30)

Junction	Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
A	B-A	130.35	130.07	0.00	568.26	0.229	0.29	8.211	A
A	C-A	319.14	319.14	0.00	-	-	-	-	-
A	C-B	31.46	31.41	0.00	499.84	0.063	0.07	7.684	A
A	A-B	71.92	71.92	0.00	-	-	-	-	-
A	A-C	296.66	296.66	0.00	-	-	-	-	-
B	B-A	17.98	17.96	0.00	689.42	0.026	0.03	5.361	A
B	C-A	98.89	98.89	0.00	-	-	-	-	-
B	C-B	8.99	8.98	0.00	543.23	0.017	0.02	6.737	A
B	A-B	4.49	4.49	0.00	-	-	-	-	-
B	A-C	139.34	139.34	0.00	-	-	-	-	-
C	B-A	152.83	152.58	0.00	684.56	0.223	0.28	6.764	A
C	C-A	130.35	130.35	0.00	-	-	-	-	-
C	C-B	152.83	152.47	0.00	534.41	0.286	0.39	9.417	A
C	A-B	13.48	13.48	0.00	-	-	-	-	-
C	A-C	170.81	170.81	0.00	-	-	-	-	-
D	B-A	71.92	71.80	0.00	569.62	0.126	0.14	7.229	A
D	C-A	278.68	278.68	0.00	-	-	-	-	-
D	C-B	40.45	40.39	0.00	506.94	0.080	0.09	7.715	A
D	A-B	4.49	4.49	0.00	-	-	-	-	-
D	A-C	305.65	305.65	0.00	-	-	-	-	-
E	B-A	193.28	192.79	0.00	604.85	0.320	0.46	8.726	A
E	C-A	287.67	287.67	0.00	-	-	-	-	-
E	C-B	247.22	246.04	0.00	495.56	0.499	0.97	14.356	B
E	A-B	17.98	17.98	0.00	-	-	-	-	-
E	A-C	350.60	350.60	0.00	-	-	-	-	-

**Main results: (08:30-08:45)**

Junction	Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
A	B-A	159.65	159.16	0.00	538.05	0.297	0.42	9.489	A
A	C-A	390.86	390.86	0.00	-	-	-	-	-
A	C-B	38.54	38.46	0.00	483.18	0.080	0.09	8.094	A
A	A-B	88.08	88.08	0.00	-	-	-	-	-
A	A-C	363.34	363.34	0.00	-	-	-	-	-
B	B-A	22.02	21.99	0.00	678.43	0.032	0.03	5.483	A
B	C-A	121.11	121.11	0.00	-	-	-	-	-
B	C-B	11.01	10.99	0.00	536.32	0.021	0.02	6.852	A
B	A-B	5.51	5.51	0.00	-	-	-	-	-
B	A-C	170.66	170.66	0.00	-	-	-	-	-
C	B-A	187.17	186.77	0.00	667.16	0.281	0.39	7.487	A
C	C-A	159.65	159.65	0.00	-	-	-	-	-
C	C-B	187.17	186.58	0.00	525.52	0.356	0.54	10.602	B
C	A-B	16.52	16.52	0.00	-	-	-	-	-
C	A-C	209.19	209.19	0.00	-	-	-	-	-
D	B-A	88.08	87.90	0.00	550.61	0.160	0.19	7.774	A
D	C-A	341.32	341.32	0.00	-	-	-	-	-
D	C-B	49.55	49.45	0.00	491.88	0.101	0.11	8.135	A
D	A-B	5.51	5.51	0.00	-	-	-	-	-
D	A-C	374.35	374.35	0.00	-	-	-	-	-
E	B-A	236.72	235.76	0.00	567.08	0.417	0.70	10.836	B
E	C-A	352.33	352.33	0.00	-	-	-	-	-
E	C-B	302.78	300.10	0.00	477.94	0.634	1.64	19.933	C
E	A-B	22.02	22.02	0.00	-	-	-	-	-
E	A-C	429.40	429.40	0.00	-	-	-	-	-

Main results: (08:45-09:00)

Junction	Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
A	B-A-C	159.65	159.64	0.00	538.03	0.297	0.42	9.513	A
A	C-A	390.86	390.86	0.00	-	-	-	-	-
A	C-B	38.54	38.53	0.00	483.18	0.080	0.09	8.096	A
A	A-B	88.08	88.08	0.00	-	-	-	-	-
A	A-C	363.34	363.34	0.00	-	-	-	-	-
B	B-A-C	22.02	22.02	0.00	678.42	0.032	0.03	5.483	A
B	C-A	121.11	121.11	0.00	-	-	-	-	-
B	C-B	11.01	11.01	0.00	536.32	0.021	0.02	6.852	A
B	A-B	5.51	5.51	0.00	-	-	-	-	-
B	A-C	170.66	170.66	0.00	-	-	-	-	-
C	B-A-C	187.17	187.16	0.00	667.09	0.281	0.39	7.500	A
C	C-A	159.65	159.65	0.00	-	-	-	-	-
C	C-B	187.17	187.16	0.00	525.52	0.356	0.55	10.637	B
C	A-B	16.52	16.52	0.00	-	-	-	-	-
C	A-C	209.19	209.19	0.00	-	-	-	-	-
D	B-A-C	88.08	88.08	0.00	550.61	0.160	0.19	7.783	A
D	C-A	341.32	341.32	0.00	-	-	-	-	-
D	C-B	49.55	49.54	0.00	491.88	0.101	0.11	8.138	A
D	A-B	5.51	5.51	0.00	-	-	-	-	-
D	A-C	374.35	374.35	0.00	-	-	-	-	-
E	B-A-C	236.72	236.69	0.00	566.62	0.418	0.71	10.909	B
E	C-A	352.33	352.33	0.00	-	-	-	-	-
E	C-B	302.78	302.61	0.00	477.94	0.634	1.68	20.475	C
E	A-B	22.02	22.02	0.00	-	-	-	-	-
E	A-C	429.40	429.40	0.00	-	-	-	-	-

Main results: (09:00-09:15)

Junction	Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
A	B-A	130.35	130.82	0.00	568.22	0.229	0.30	8.240	A
A	C-A	319.14	319.14	0.00	-	-	-	-	-
A	C-B	31.46	31.54	0.00	499.84	0.063	0.07	7.689	A
A	A-B	71.92	71.92	0.00	-	-	-	-	-
A	A-C	296.66	296.66	0.00	-	-	-	-	-
B	B-A	17.98	18.01	0.00	689.42	0.026	0.03	5.363	A
B	C-A	98.89	98.89	0.00	-	-	-	-	-
B	C-B	8.99	9.01	0.00	543.23	0.017	0.02	6.738	A
B	A-B	4.49	4.49	0.00	-	-	-	-	-
B	A-C	139.34	139.34	0.00	-	-	-	-	-
C	B-A	152.83	153.22	0.00	684.45	0.223	0.29	6.783	A
C	C-A	130.35	130.35	0.00	-	-	-	-	-
C	C-B	152.83	153.40	0.00	534.41	0.286	0.41	9.462	A
C	A-B	13.48	13.48	0.00	-	-	-	-	-
C	A-C	170.81	170.81	0.00	-	-	-	-	-
D	B-A	71.92	72.09	0.00	569.61	0.126	0.15	7.240	A
D	C-A	278.68	278.68	0.00	-	-	-	-	-
D	C-B	40.45	40.55	0.00	506.94	0.080	0.09	7.720	A
D	A-B	4.49	4.49	0.00	-	-	-	-	-
D	A-C	305.65	305.65	0.00	-	-	-	-	-
E	B-A	193.28	194.21	0.00	604.27	0.320	0.48	8.800	A
E	C-A	287.67	287.67	0.00	-	-	-	-	-
E	C-B	247.22	249.83	0.00	495.56	0.499	1.03	14.803	B
E	A-B	17.98	17.98	0.00	-	-	-	-	-
E	A-C	350.60	350.60	0.00	-	-	-	-	-

Main results: (09:15-09:30)

Junction	Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
A	B-A	109.16	109.45	0.00	589.79	0.185	0.23	7.498	A
A	C-A	267.26	267.26	0.00	-	-	-	-	-
A	C-B	26.35	26.40	0.00	511.89	0.051	0.05	7.417	A
A	A-B	60.23	60.23	0.00	-	-	-	-	-
A	A-C	248.44	248.44	0.00	-	-	-	-	-
B	B-A	15.06	15.08	0.00	697.35	0.022	0.02	5.278	A
B	C-A	82.81	82.81	0.00	-	-	-	-	-
B	C-B	7.53	7.54	0.00	548.22	0.014	0.01	6.660	A
B	A-B	3.76	3.76	0.00	-	-	-	-	-
B	A-C	116.69	116.69	0.00	-	-	-	-	-
C	B-A	127.98	128.24	0.00	696.78	0.184	0.23	6.336	A
C	C-A	109.16	109.16	0.00	-	-	-	-	-
C	C-B	127.98	128.35	0.00	540.84	0.237	0.31	8.735	A
C	A-B	11.29	11.29	0.00	-	-	-	-	-
C	A-C	143.04	143.04	0.00	-	-	-	-	-
D	B-A	60.23	60.35	0.00	583.25	0.103	0.12	6.888	A
D	C-A	233.38	233.38	0.00	-	-	-	-	-
D	C-B	33.88	33.95	0.00	517.84	0.065	0.07	7.442	A
D	A-B	3.76	3.76	0.00	-	-	-	-	-
D	A-C	255.97	255.97	0.00	-	-	-	-	-
E	B-A	161.86	162.37	0.00	630.12	0.257	0.35	7.704	A
E	C-A	240.91	240.91	0.00	-	-	-	-	-
E	C-B	207.03	208.33	0.00	508.31	0.407	0.70	12.054	B
E	A-B	15.06	15.06	0.00	-	-	-	-	-
E	A-C	293.61	293.61	0.00	-	-	-	-	-

(Default Analysis Set) - 2030 Design, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2030 Design, PM	2030 Design	PM		ONE HOUR	08:00	09:30	90	15		

Junction Network

Junctions

Junction	Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
A	A	San Tam Road / Castle Peak Road - Mai Po	T-Junction	Two-way	A,B,C	8.77	A
B	B	San Tam Road / Access Road	T-Junction	Two-way	A,B,C	6.46	A
C	C	San Tam Road / Ngau Tam Mei Road	T-Junction	Two-way	A,B,C	9.61	A
D	D	San Tam Road / Chun Shin Road	T-Junction	Two-way	A,B,C	7.78	A
E	E	San Tam Road / Chuk Yau Road	T-Junction	Two-way	A,B,C	11.75	B

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Junction	Arm	Arm	Name	Description	Arm Type
A	A	A	(untitled)		Major
A	B	B	(untitled)		Minor
A	C	C	(untitled)		Major
B	A	A	untitled		Major
B	B	B	untitled		Minor
B	C	C	untitled		Major
C	A	A	untitled		Major
C	B	B	untitled		Minor
C	C	C	untitled		Major
D	A	A	untitled		Major
D	B	B	untitled		Minor
D	C	C	untitled		Major
E	A	A	untitled		Major
E	B	B	untitled		Minor
E	C	C	untitled		Major

Major Arm Geometry

Junction	Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
A	C	8.20		0.00		2.20	0.00		
B	C	6.90		0.00		2.20	0.00		
C	C	6.80		0.00		2.20	0.00		
D	C	6.65		0.00		2.20	0.00		
E	C	7.00		0.00		2.20	0.00		

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Junction	Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
A	B	One lane	5.00										50	50
B	B	One lane	5.00										50	50
C	B	One lane	5.00										50	50
D	B	One lane	3.12										50	50
E	B	One lane	4.84										50	50

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
A	B-A	622.329	0.102	0.259	0.163	0.370
A	B-C	786.649	0.109	0.276	-	-
A	C-B	573.963	0.201	0.201	-	-

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B	B-A	622.329	0.109	0.275	0.173	0.393
B	B-C	786.649	0.116	0.293	-	-
B	C-B	573.963	0.214	0.214	-	-

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
C	B-A	622.329	0.109	0.277	0.174	0.395
C	B-C	786.649	0.116	0.294	-	-
C	C-B	573.963	0.215	0.215	-	-

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
E	B-A	614.024	0.107	0.270	0.170	0.386
E	B-C	776.151	0.114	0.288	-	-
E	C-B	573.963	0.213	0.213	-	-

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
D	B-A	524.736	0.093	0.235	0.148	0.335
D	B-C	663.287	0.099	0.250	-	-
D	C-B	573.963	0.216	0.216	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Junction	Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	A	ONE HOUR	✓	545.00	100.000
A	B	ONE HOUR	✓	150.00	100.000
A	C	ONE HOUR	✓	350.00	100.000
B	A	ONE HOUR	✓	180.00	100.000
B	B	ONE HOUR	✓	15.00	100.000
B	C	ONE HOUR	✓	125.00	100.000
C	A	ONE HOUR	✓	195.00	100.000
C	B	ONE HOUR	✓	170.00	100.000
C	C	ONE HOUR	✓	350.00	100.000
D	A	ONE HOUR	✓	320.00	100.000
D	B	ONE HOUR	✓	45.00	100.000
D	C	ONE HOUR	✓	375.00	100.000
E	A	ONE HOUR	✓	350.00	100.000
E	B	ONE HOUR	✓	235.00	100.000
E	C	ONE HOUR	✓	570.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction A (for whole period)

		To		
		A	B	C
From	A	0.000	210.000	335.000
	B	40.000	0.000	110.000
	C	305.000	45.000	0.000

Turning Proportions (PCU) - Junction A (for whole period)

		To		
		A	B	C
From	A	0.00	0.39	0.61
	B	0.27	0.00	0.73
	C	0.87	0.13	0.00

Turning Counts / Proportions (PCU/hr) - Junction B (for whole period)

		To		
		A	B	C
From	A	0.000	5.000	175.000
	B	5.000	0.000	10.000
	C	105.000	20.000	0.000

Turning Proportions (PCU) - Junction B (for whole period)

		To		
		A	B	C
From	A	0.00	0.03	0.97
	B	0.33	0.00	0.67
	C	0.84	0.16	0.00

Turning Counts / Proportions (PCU/hr) - Junction C (for whole period)

		To		
		A	B	C
From	A	0.000	25.000	170.000
	B	15.000	0.000	155.000
	C	150.000	200.000	0.000

Turning Proportions (PCU) - Junction C (for whole period)

		To		
		A	B	C
From	A	0.00	0.13	0.87
	B	0.09	0.00	0.91
	C	0.43	0.57	0.00

Turning Counts / Proportions (PCU/hr) - Junction E (for whole period)

		To		
		A	B	C
From	A	0.000	20.000	330.000
	B	15.000	0.000	220.000
	C	355.000	215.000	0.000

Turning Proportions (PCU) - Junction E (for whole period)

		To		
		A	B	C
From	A	0.00	0.06	0.94
	B	0.06	0.00	0.94
	C	0.62	0.38	0.00

Turning Counts / Proportions (PCU/hr) - Junction D (for whole period)

		To		
		A	B	C
From	A	0.000	5.000	315.000
	B	10.000	0.000	35.000
	C	340.000	35.000	0.000

Turning Proportions (PCU) - Junction D (for whole period)

		To		
		A	B	C
From	A	0.00	0.02	0.98
	B	0.22	0.00	0.78
	C	0.91	0.09	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction A (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction A (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Average PCU Per Vehicle - Junction B (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction B (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Average PCU Per Vehicle - Junction C (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction C (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Average PCU Per Vehicle - Junction E (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction E (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Average PCU Per Vehicle - Junction D (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction D (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Junction	Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
A	B-AC	0.29	8.73	0.40	A
A	C-A	-	-	-	-
A	C-B	0.11	8.92	0.12	A
A	A-B	-	-	-	-
A	A-C	-	-	-	-
B	B-AC	0.03	5.65	0.03	A
B	C-A	-	-	-	-
B	C-B	0.04	7.06	0.04	A
B	A-B	-	-	-	-
B	A-C	-	-	-	-
C	B-AC	0.27	7.15	0.37	A
C	C-A	-	-	-	-
C	C-B	0.42	11.70	0.71	B
C	A-B	-	-	-	-
C	A-C	-	-	-	-
D	B-AC	0.10	7.74	0.11	A
D	C-A	-	-	-	-
D	C-B	0.08	7.84	0.08	A
D	A-B	-	-	-	-
D	A-C	-	-	-	-
E	B-AC	0.41	9.61	0.68	A
E	C-A	-	-	-	-
E	C-B	0.48	14.09	0.91	B
E	A-B	-	-	-	-
E	A-C	-	-	-	-

Main Results for each time segment

Main results: (08:00-08:15)

Junction	Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
A	B-A	112.93	112.06	0.00	628.50	0.180	0.22	6.959	A
A	C-A	229.62	229.62	0.00	-	-	-	-	-
A	C-B	33.88	33.58	0.00	491.45	0.069	0.07	7.858	A
A	A-B	158.10	158.10	0.00	-	-	-	-	-
A	A-C	252.21	252.21	0.00	-	-	-	-	-
B	B-A	11.29	11.23	0.00	675.40	0.017	0.02	5.420	A
B	C-A	79.05	79.05	0.00	-	-	-	-	-
B	C-B	15.06	14.94	0.00	545.01	0.028	0.03	6.789	A
B	A-B	3.76	3.76	0.00	-	-	-	-	-
B	A-C	131.75	131.75	0.00	-	-	-	-	-
C	B-A	127.98	127.12	0.00	716.67	0.179	0.22	6.097	A
C	C-A	112.93	112.93	0.00	-	-	-	-	-
C	C-B	150.57	149.05	0.00	542.45	0.278	0.38	9.117	A
C	A-B	18.82	18.82	0.00	-	-	-	-	-
C	A-C	127.98	127.98	0.00	-	-	-	-	-
D	B-A	33.88	33.62	0.00	551.01	0.061	0.06	6.955	A
D	C-A	255.97	255.97	0.00	-	-	-	-	-
D	C-B	26.35	26.14	0.00	521.90	0.050	0.05	7.258	A
D	A-B	3.76	3.76	0.00	-	-	-	-	-
D	A-C	237.15	237.15	0.00	-	-	-	-	-
E	B-A	176.92	175.52	0.00	676.73	0.261	0.35	7.162	A
E	C-A	267.26	267.26	0.00	-	-	-	-	-
E	C-B	161.86	160.07	0.00	517.91	0.313	0.45	10.011	B
E	A-B	15.06	15.06	0.00	-	-	-	-	-
E	A-C	248.44	248.44	0.00	-	-	-	-	-

Main results: (08:15-08:30)

Junction	Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
A	B-A	134.85	134.58	0.00	607.22	0.222	0.28	7.614	A
A	C-A	274.19	274.19	0.00	-	-	-	-	-
A	C-B	40.45	40.38	0.00	475.44	0.085	0.09	8.274	A
A	A-B	188.79	188.79	0.00	-	-	-	-	-
A	A-C	301.16	301.16	0.00	-	-	-	-	-
B	B-A	13.48	13.47	0.00	666.06	0.020	0.02	5.516	A
B	C-A	94.39	94.39	0.00	-	-	-	-	-
B	C-B	17.98	17.96	0.00	539.39	0.033	0.03	6.903	A
B	A-B	4.49	4.49	0.00	-	-	-	-	-
B	A-C	157.32	157.32	0.00	-	-	-	-	-
C	B-A	152.83	152.59	0.00	705.96	0.216	0.27	6.502	A
C	C-A	134.85	134.85	0.00	-	-	-	-	-
C	C-B	179.80	179.33	0.00	536.34	0.335	0.50	10.070	B
C	A-B	22.47	22.47	0.00	-	-	-	-	-
C	A-C	152.83	152.83	0.00	-	-	-	-	-
D	B-A	40.45	40.39	0.00	535.85	0.076	0.08	7.266	A
D	C-A	305.65	305.65	0.00	-	-	-	-	-
D	C-B	31.46	31.42	0.00	511.80	0.061	0.06	7.493	A
D	A-B	4.49	4.49	0.00	-	-	-	-	-
D	A-C	283.18	283.18	0.00	-	-	-	-	-
E	B-A	211.26	210.80	0.00	658.82	0.321	0.47	8.027	A
E	C-A	319.14	319.14	0.00	-	-	-	-	-
E	C-B	193.28	192.65	0.00	507.04	0.381	0.60	11.426	B
E	A-B	17.98	17.98	0.00	-	-	-	-	-
E	A-C	296.66	296.66	0.00	-	-	-	-	-

Main results: (08:30-08:45)

Junction	Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
A	B-A	165.15	164.70	0.00	577.42	0.286	0.40	8.713	A
A	C-A	335.81	335.81	0.00	-	-	-	-	-
A	C-B	49.55	49.43	0.00	453.29	0.109	0.12	8.910	A
A	A-B	231.21	231.21	0.00	-	-	-	-	-
A	A-C	368.84	368.84	0.00	-	-	-	-	-
B	B-A	16.52	16.49	0.00	653.13	0.025	0.03	5.654	A
B	C-A	115.61	115.61	0.00	-	-	-	-	-
B	C-B	22.02	21.99	0.00	531.62	0.041	0.04	7.063	A
B	A-B	5.51	5.51	0.00	-	-	-	-	-
B	A-C	192.68	192.68	0.00	-	-	-	-	-
C	B-A	187.17	186.80	0.00	690.90	0.271	0.37	7.137	A
C	C-A	165.15	165.15	0.00	-	-	-	-	-
C	C-B	220.20	219.39	0.00	527.88	0.417	0.70	11.638	B
C	A-B	27.53	27.53	0.00	-	-	-	-	-
C	A-C	187.17	187.17	0.00	-	-	-	-	-
D	B-A	49.55	49.45	0.00	514.58	0.096	0.11	7.738	A
D	C-A	374.35	374.35	0.00	-	-	-	-	-
D	C-B	38.54	38.46	0.00	497.83	0.077	0.08	7.836	A
D	A-B	5.51	5.51	0.00	-	-	-	-	-
D	A-C	346.82	346.82	0.00	-	-	-	-	-
E	B-A	258.74	257.89	0.00	633.28	0.409	0.68	9.568	A
E	C-A	390.86	390.86	0.00	-	-	-	-	-
E	C-B	236.72	235.53	0.00	491.99	0.481	0.90	13.969	B
E	A-B	22.02	22.02	0.00	-	-	-	-	-
E	A-C	363.34	363.34	0.00	-	-	-	-	-

Main results: (08:45-09:00)

Junction	Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
A	B-A	165.15	165.14	0.00	577.40	0.286	0.40	8.732	A
A	C-A	335.81	335.81	0.00	-	-	-	-	-
A	C-B	49.55	49.54	0.00	453.29	0.109	0.12	8.916	A
A	A-B	231.21	231.21	0.00	-	-	-	-	-
A	A-C	368.84	368.84	0.00	-	-	-	-	-
B	B-A	16.52	16.51	0.00	653.12	0.025	0.03	5.654	A
B	C-A	115.61	115.61	0.00	-	-	-	-	-
B	C-B	22.02	22.02	0.00	531.62	0.041	0.04	7.063	A
B	A-B	5.51	5.51	0.00	-	-	-	-	-
B	A-C	192.68	192.68	0.00	-	-	-	-	-
C	B-A	187.17	187.17	0.00	690.83	0.271	0.37	7.146	A
C	C-A	165.15	165.15	0.00	-	-	-	-	-
C	C-B	220.20	220.18	0.00	527.88	0.417	0.71	11.697	B
C	A-B	27.53	27.53	0.00	-	-	-	-	-
C	A-C	187.17	187.17	0.00	-	-	-	-	-
D	B-A	49.55	49.54	0.00	514.56	0.096	0.11	7.741	A
D	C-A	374.35	374.35	0.00	-	-	-	-	-
D	C-B	38.54	38.53	0.00	497.83	0.077	0.08	7.837	A
D	A-B	5.51	5.51	0.00	-	-	-	-	-
D	A-C	346.82	346.82	0.00	-	-	-	-	-
E	B-A	258.74	258.72	0.00	633.18	0.409	0.68	9.612	A
E	C-A	390.86	390.86	0.00	-	-	-	-	-
E	C-B	236.72	236.67	0.00	491.99	0.481	0.91	14.093	B
E	A-B	22.02	22.02	0.00	-	-	-	-	-
E	A-C	363.34	363.34	0.00	-	-	-	-	-



Main results: (09:00-09:15)

Junction	Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
A	B-A	134.85	135.28	0.00	607.19	0.222	0.29	7.634	A
A	C-A	274.19	274.19	0.00	-	-	-	-	-
A	C-B	40.45	40.57	0.00	475.44	0.085	0.09	8.280	A
A	A-B	188.79	188.79	0.00	-	-	-	-	-
A	A-C	301.16	301.16	0.00	-	-	-	-	-
B	B-A	13.48	13.50	0.00	666.05	0.020	0.02	5.516	A
B	C-A	94.39	94.39	0.00	-	-	-	-	-
B	C-B	17.98	18.01	0.00	539.39	0.033	0.03	6.907	A
B	A-B	4.49	4.49	0.00	-	-	-	-	-
B	A-C	157.32	157.32	0.00	-	-	-	-	-
C	B-A	152.83	153.19	0.00	705.86	0.217	0.28	6.519	A
C	C-A	134.85	134.85	0.00	-	-	-	-	-
C	C-B	179.80	180.58	0.00	536.34	0.335	0.51	10.141	B
C	A-B	22.47	22.47	0.00	-	-	-	-	-
C	A-C	152.83	152.83	0.00	-	-	-	-	-
D	B-A	40.45	40.55	0.00	535.83	0.076	0.08	7.269	A
D	C-A	305.65	305.65	0.00	-	-	-	-	-
D	C-B	31.46	31.53	0.00	511.80	0.061	0.07	7.496	A
D	A-B	4.49	4.49	0.00	-	-	-	-	-
D	A-C	283.18	283.18	0.00	-	-	-	-	-
E	B-A	211.26	212.09	0.00	658.70	0.321	0.48	8.077	A
E	C-A	319.14	319.14	0.00	-	-	-	-	-
E	C-B	193.28	194.42	0.00	507.04	0.381	0.63	11.559	B
E	A-B	17.98	17.98	0.00	-	-	-	-	-
E	A-C	296.66	296.66	0.00	-	-	-	-	-

Main results: (09:15-09:30)

Junction	Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
A	B-A-C	112.93	113.20	0.00	628.44	0.180	0.22	6.989	A
A	C-A	229.62	229.62	0.00	-	-	-	-	-
A	C-B	33.88	33.96	0.00	491.45	0.069	0.07	7.870	A
A	A-B	158.10	158.10	0.00	-	-	-	-	-
A	A-C	252.21	252.21	0.00	-	-	-	-	-
B	B-A-C	11.29	11.31	0.00	675.38	0.017	0.02	5.422	A
B	C-A	79.05	79.05	0.00	-	-	-	-	-
B	C-B	15.06	15.08	0.00	545.01	0.028	0.03	6.795	A
B	A-B	3.76	3.76	0.00	-	-	-	-	-
B	A-C	131.75	131.75	0.00	-	-	-	-	-
C	B-A-C	127.98	128.22	0.00	716.52	0.179	0.22	6.121	A
C	C-A	112.93	112.93	0.00	-	-	-	-	-
C	C-B	150.57	151.06	0.00	542.45	0.278	0.39	9.211	A
C	A-B	18.82	18.82	0.00	-	-	-	-	-
C	A-C	127.98	127.98	0.00	-	-	-	-	-
D	B-A-C	33.88	33.94	0.00	550.97	0.061	0.07	6.965	A
D	C-A	255.97	255.97	0.00	-	-	-	-	-
D	C-B	26.35	26.40	0.00	521.90	0.050	0.05	7.268	A
D	A-B	3.76	3.76	0.00	-	-	-	-	-
D	A-C	237.15	237.15	0.00	-	-	-	-	-
E	B-A-C	176.92	177.40	0.00	676.58	0.261	0.36	7.218	A
E	C-A	267.26	267.26	0.00	-	-	-	-	-
E	C-B	161.86	162.53	0.00	517.91	0.313	0.46	10.148	B
E	A-B	15.06	15.06	0.00	-	-	-	-	-
E	A-C	248.44	248.44	0.00	-	-	-	-	-

(Default Analysis Set) - 2022 Observed, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2022 Observed, AM	2022 Observed	AM		ONE HOUR	08:00	09:30	90	15		

Junction Network

Junctions

Junction	Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
A	A	San Tam Road / Castle Peak Road - Mai Po	T-Junction	Two-way	A,B,C	7.73	A
B	B	San Tam Road / Access Road	T-Junction	Two-way	A,B,C	5.81	A
C	C	San Tam Road / Ngau Tam Mei Road	T-Junction	Two-way	A,B,C	8.52	A
D	D	San Tam Road / Chun Shin Road	T-Junction	Two-way	A,B,C	7.41	A
E	E	San Tam Road / Chuk Yau Road	T-Junction	Two-way	A,B,C	13.21	B

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Junction	Arm	Arm	Name	Description	Arm Type
A	A	A	(untitled)		Major
A	B	B	(untitled)		Minor
A	C	C	(untitled)		Major
B	A	A	untitled		Major
B	B	B	untitled		Minor
B	C	C	untitled		Major
C	A	A	untitled		Major
C	B	B	untitled		Minor
C	C	C	untitled		Major
D	A	A	untitled		Major
D	B	B	untitled		Minor
D	C	C	untitled		Major
E	A	A	untitled		Major
E	B	B	untitled		Minor
E	C	C	untitled		Major

Major Arm Geometry

Junction	Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
A	C	8.20		0.00		2.20	0.00		
B	C	6.90		0.00		2.20	0.00		
C	C	6.80		0.00		2.20	0.00		
D	C	6.65		0.00		2.20	0.00		
E	C	7.00		0.00		2.20	0.00		

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Junction	Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
A	B	One lane	5.00										50	50
B	B	One lane	5.00										50	50
C	B	One lane	5.00										50	50
D	B	One lane	3.12										50	50
E	B	One lane	4.84										50	50

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
A	B-A	622.329	0.102	0.259	0.163	0.370
A	B-C	786.649	0.109	0.276	-	-
A	C-B	573.963	0.201	0.201	-	-

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B	B-A	622.329	0.109	0.275	0.173	0.393
B	B-C	786.649	0.116	0.293	-	-
B	C-B	573.963	0.214	0.214	-	-

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
C	B-A	622.329	0.109	0.277	0.174	0.395
C	B-C	786.649	0.116	0.294	-	-
C	C-B	573.963	0.215	0.215	-	-

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
E	B-A	614.024	0.107	0.270	0.170	0.386
E	B-C	776.151	0.114	0.288	-	-
E	C-B	573.963	0.213	0.213	-	-

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
D	B-A	524.736	0.093	0.235	0.148	0.335
D	B-C	663.287	0.099	0.250	-	-
D	C-B	573.963	0.216	0.216	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Junction	Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	A	ONE HOUR	✓	260.00	100.000
A	B	ONE HOUR	✓	105.00	100.000
A	C	ONE HOUR	✓	240.00	100.000
B	A	ONE HOUR	✓	115.00	100.000
B	B	ONE HOUR	✓	20.00	100.000
B	C	ONE HOUR	✓	95.00	100.000
C	A	ONE HOUR	✓	155.00	100.000
C	B	ONE HOUR	✓	160.00	100.000
C	C	ONE HOUR	✓	250.00	100.000
D	A	ONE HOUR	✓	280.00	100.000
D	B	ONE HOUR	✓	45.00	100.000
D	C	ONE HOUR	✓	290.00	100.000
E	A	ONE HOUR	✓	315.00	100.000
E	B	ONE HOUR	✓	195.00	100.000
E	C	ONE HOUR	✓	515.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction A (for whole period)

		To		
		A	B	C
From	A	0.000	70.000	190.000
	B	65.000	0.000	40.000
	C	220.000	20.000	0.000

Turning Proportions (PCU) - Junction A (for whole period)

		To		
		A	B	C
From	A	0.00	0.27	0.73
	B	0.62	0.00	0.38
	C	0.92	0.08	0.00

Turning Counts / Proportions (PCU/hr) - Junction B (for whole period)

		To		
		A	B	C
From	A	0.000	5.000	110.000
	B	5.000	0.000	15.000
	C	85.000	10.000	0.000

Turning Proportions (PCU) - Junction B (for whole period)

		To		
		A	B	C
From	A	0.00	0.04	0.96
	B	0.25	0.00	0.75
	C	0.89	0.11	0.00

Turning Counts / Proportions (PCU/hr) - Junction C (for whole period)

		To		
		A	B	C
From	A	0.000	15.000	140.000
	B	25.000	0.000	135.000
	C	90.000	160.000	0.000

Turning Proportions (PCU) - Junction C (for whole period)

		To		
		A	B	C
From	A	0.00	0.10	0.90
	B	0.16	0.00	0.84
	C	0.36	0.64	0.00

Turning Counts / Proportions (PCU/hr) - Junction E (for whole period)

		To		
		A	B	C
From	A	0.000	15.000	300.000
	B	25.000	0.000	170.000
	C	260.000	255.000	0.000

Turning Proportions (PCU) - Junction E (for whole period)

		To		
		A	B	C
From	A	0.00	0.05	0.95
	B	0.13	0.00	0.87
	C	0.50	0.50	0.00

Turning Counts / Proportions (PCU/hr) - Junction D (for whole period)

		To		
		A	B	C
From	A	0.000	5.000	275.000
	B	5.000	0.000	40.000
	C	250.000	40.000	0.000

Turning Proportions (PCU) - Junction D (for whole period)

		To		
		A	B	C
From	A	0.00	0.02	0.98
	B	0.11	0.00	0.89
	C	0.86	0.14	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction A (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction A (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Average PCU Per Vehicle - Junction B (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction B (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Average PCU Per Vehicle - Junction C (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction C (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Average PCU Per Vehicle - Junction E (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction E (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Average PCU Per Vehicle - Junction D (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction D (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Junction	Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
A	B-A	0.20	7.82	0.25	A
A	C-A	-	-	-	-
A	C-B	0.04	7.28	0.04	A
A	A-B	-	-	-	-
A	A-C	-	-	-	-
B	B-A	0.03	5.35	0.03	A
B	C-A	-	-	-	-
B	C-B	0.02	6.72	0.02	A
B	A-B	-	-	-	-
B	A-C	-	-	-	-
C	B-A	0.26	7.07	0.34	A
C	C-A	-	-	-	-
C	C-B	0.33	9.97	0.48	A
C	A-B	-	-	-	-
C	A-C	-	-	-	-
D	B-A	0.09	7.08	0.10	A
D	C-A	-	-	-	-
D	C-B	0.09	7.77	0.09	A
D	A-B	-	-	-	-
D	A-C	-	-	-	-
E	B-A	0.35	9.08	0.54	A
E	C-A	-	-	-	-
E	C-B	0.56	16.38	1.25	C
E	A-B	-	-	-	-
E	A-C	-	-	-	-

Main Results for each time segment

Main results: (08:00-08:15)

Junction	Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
A	B-A	79.05	78.46	0.00	607.95	0.130	0.15	6.792	A
A	C-A	165.63	165.63	0.00	-	-	-	-	-
A	C-B	15.06	14.94	0.00	534.60	0.028	0.03	6.925	A
A	A-B	52.70	52.70	0.00	-	-	-	-	-
A	A-C	143.04	143.04	0.00	-	-	-	-	-
B	B-A	15.06	14.97	0.00	708.42	0.021	0.02	5.191	A
B	C-A	63.99	63.99	0.00	-	-	-	-	-
B	C-B	7.53	7.47	0.00	555.46	0.014	0.01	6.569	A
B	A-B	3.76	3.76	0.00	-	-	-	-	-
B	A-C	82.81	82.81	0.00	-	-	-	-	-
C	B-A	120.46	119.64	0.00	708.25	0.170	0.20	6.107	A
C	C-A	67.76	67.76	0.00	-	-	-	-	-
C	C-B	120.46	119.35	0.00	548.92	0.219	0.28	8.359	A
C	A-B	11.29	11.29	0.00	-	-	-	-	-
C	A-C	105.40	105.40	0.00	-	-	-	-	-
D	B-A	33.88	33.63	0.00	585.47	0.058	0.06	6.520	A
D	C-A	188.21	188.21	0.00	-	-	-	-	-
D	C-B	30.11	29.87	0.00	528.41	0.057	0.06	7.218	A
D	A-B	3.76	3.76	0.00	-	-	-	-	-
D	A-C	207.03	207.03	0.00	-	-	-	-	-
E	B-A	146.81	145.67	0.00	659.37	0.223	0.28	6.992	A
E	C-A	195.74	195.74	0.00	-	-	-	-	-
E	C-B	191.98	189.70	0.00	523.52	0.367	0.57	10.710	B
E	A-B	11.29	11.29	0.00	-	-	-	-	-
E	A-C	225.86	225.86	0.00	-	-	-	-	-

Main results: (08:15-08:30)

Junction	Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
A	B-A	94.39	94.24	0.00	594.52	0.159	0.19	7.194	A
A	C-A	197.78	197.78	0.00	-	-	-	-	-
A	C-B	17.98	17.95	0.00	526.96	0.034	0.04	7.072	A
A	A-B	62.93	62.93	0.00	-	-	-	-	-
A	A-C	170.81	170.81	0.00	-	-	-	-	-
B	B-A	17.98	17.96	0.00	702.65	0.026	0.03	5.257	A
B	C-A	76.41	76.41	0.00	-	-	-	-	-
B	C-B	8.99	8.98	0.00	551.87	0.016	0.02	6.630	A
B	A-B	4.49	4.49	0.00	-	-	-	-	-
B	A-C	98.89	98.89	0.00	-	-	-	-	-
C	B-A	143.84	143.62	0.00	698.57	0.206	0.26	6.482	A
C	C-A	80.91	80.91	0.00	-	-	-	-	-
C	C-B	143.84	143.53	0.00	544.05	0.264	0.35	8.980	A
C	A-B	13.48	13.48	0.00	-	-	-	-	-
C	A-C	125.86	125.86	0.00	-	-	-	-	-
D	B-A	40.45	40.40	0.00	573.82	0.071	0.08	6.748	A
D	C-A	224.74	224.74	0.00	-	-	-	-	-
D	C-B	35.96	35.90	0.00	519.57	0.069	0.07	7.443	A
D	A-B	4.49	4.49	0.00	-	-	-	-	-
D	A-C	247.22	247.22	0.00	-	-	-	-	-
E	B-A	175.30	174.94	0.00	639.78	0.274	0.37	7.732	A
E	C-A	233.73	233.73	0.00	-	-	-	-	-
E	C-B	229.24	228.36	0.00	513.73	0.446	0.79	12.574	B
E	A-B	13.48	13.48	0.00	-	-	-	-	-
E	A-C	269.69	269.69	0.00	-	-	-	-	-

Main results: (08:30-08:45)

Junction	Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
A	B-A	115.61	115.36	0.00	575.89	0.201	0.25	7.813	A
A	C-A	242.22	242.22	0.00	-	-	-	-	-
A	C-B	22.02	21.98	0.00	516.40	0.043	0.04	7.281	A
A	A-B	77.07	77.07	0.00	-	-	-	-	-
A	A-C	209.19	209.19	0.00	-	-	-	-	-
B	B-A	22.02	21.99	0.00	694.66	0.032	0.03	5.351	A
B	C-A	93.59	93.59	0.00	-	-	-	-	-
B	C-B	11.01	10.99	0.00	546.91	0.020	0.02	6.716	A
B	A-B	5.51	5.51	0.00	-	-	-	-	-
B	A-C	121.11	121.11	0.00	-	-	-	-	-
C	B-A	176.16	175.82	0.00	685.07	0.257	0.34	7.064	A
C	C-A	99.09	99.09	0.00	-	-	-	-	-
C	C-B	176.16	175.66	0.00	537.33	0.328	0.48	9.939	A
C	A-B	16.52	16.52	0.00	-	-	-	-	-
C	A-C	154.14	154.14	0.00	-	-	-	-	-
D	B-A	49.55	49.46	0.00	557.61	0.089	0.10	7.084	A
D	C-A	275.26	275.26	0.00	-	-	-	-	-
D	C-B	44.04	43.96	0.00	507.34	0.087	0.09	7.768	A
D	A-B	5.51	5.51	0.00	-	-	-	-	-
D	A-C	302.78	302.78	0.00	-	-	-	-	-
E	B-A	214.70	214.06	0.00	611.59	0.351	0.53	9.041	A
E	C-A	286.27	286.27	0.00	-	-	-	-	-
E	C-B	280.76	278.98	0.00	500.19	0.561	1.23	16.138	C
E	A-B	16.52	16.52	0.00	-	-	-	-	-
E	A-C	330.31	330.31	0.00	-	-	-	-	-

Main results: (08:45-09:00)

Junction	Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
A	B-A	115.61	115.60	0.00	575.88	0.201	0.25	7.821	A
A	C-A	242.22	242.22	0.00	-	-	-	-	-
A	C-B	22.02	22.02	0.00	516.40	0.043	0.04	7.281	A
A	A-B	77.07	77.07	0.00	-	-	-	-	-
A	A-C	209.19	209.19	0.00	-	-	-	-	-
B	B-A	22.02	22.02	0.00	694.66	0.032	0.03	5.351	A
B	C-A	93.59	93.59	0.00	-	-	-	-	-
B	C-B	11.01	11.01	0.00	546.91	0.020	0.02	6.716	A
B	A-B	5.51	5.51	0.00	-	-	-	-	-
B	A-C	121.11	121.11	0.00	-	-	-	-	-
C	B-A	176.16	176.16	0.00	685.01	0.257	0.34	7.073	A
C	C-A	99.09	99.09	0.00	-	-	-	-	-
C	C-B	176.16	176.15	0.00	537.33	0.328	0.48	9.967	A
C	A-B	16.52	16.52	0.00	-	-	-	-	-
C	A-C	154.14	154.14	0.00	-	-	-	-	-
D	B-A	49.55	49.54	0.00	557.60	0.089	0.10	7.084	A
D	C-A	275.26	275.26	0.00	-	-	-	-	-
D	C-B	44.04	44.04	0.00	507.34	0.087	0.09	7.770	A
D	A-B	5.51	5.51	0.00	-	-	-	-	-
D	A-C	302.78	302.78	0.00	-	-	-	-	-
E	B-A	214.70	214.68	0.00	611.34	0.351	0.54	9.075	A
E	C-A	286.27	286.27	0.00	-	-	-	-	-
E	C-B	280.76	280.67	0.00	500.19	0.561	1.25	16.380	C
E	A-B	16.52	16.52	0.00	-	-	-	-	-
E	A-C	330.31	330.31	0.00	-	-	-	-	-

Main results: (09:00-09:15)

Junction	Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
A	B-A	94.39	94.63	0.00	594.50	0.159	0.19	7.204	A
A	C-A	197.78	197.78	0.00	-	-	-	-	-
A	C-B	17.98	18.01	0.00	526.96	0.034	0.04	7.075	A
A	A-B	62.93	62.93	0.00	-	-	-	-	-
A	A-C	170.81	170.81	0.00	-	-	-	-	-
B	B-A	17.98	18.00	0.00	702.64	0.026	0.03	5.259	A
B	C-A	76.41	76.41	0.00	-	-	-	-	-
B	C-B	8.99	9.00	0.00	551.87	0.016	0.02	6.633	A
B	A-B	4.49	4.49	0.00	-	-	-	-	-
B	A-C	98.89	98.89	0.00	-	-	-	-	-
C	B-A	143.84	144.17	0.00	698.48	0.206	0.26	6.497	A
C	C-A	80.91	80.91	0.00	-	-	-	-	-
C	C-B	143.84	144.32	0.00	544.05	0.264	0.36	9.016	A
C	A-B	13.48	13.48	0.00	-	-	-	-	-
C	A-C	125.86	125.86	0.00	-	-	-	-	-
D	B-A	40.45	40.54	0.00	573.81	0.071	0.08	6.751	A
D	C-A	224.74	224.74	0.00	-	-	-	-	-
D	C-B	35.96	36.04	0.00	519.57	0.069	0.08	7.445	A
D	A-B	4.49	4.49	0.00	-	-	-	-	-
D	A-C	247.22	247.22	0.00	-	-	-	-	-
E	B-A	175.30	175.92	0.00	639.45	0.274	0.38	7.776	A
E	C-A	233.73	233.73	0.00	-	-	-	-	-
E	C-B	229.24	230.96	0.00	513.73	0.446	0.83	12.807	B
E	A-B	13.48	13.48	0.00	-	-	-	-	-
E	A-C	269.69	269.69	0.00	-	-	-	-	-

Main results: (09:15-09:30)

Junction	Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
A	B-A	79.05	79.21	0.00	607.91	0.130	0.15	6.813	A
A	C-A	165.63	165.63	0.00	-	-	-	-	-
A	C-B	15.06	15.08	0.00	534.60	0.028	0.03	6.929	A
A	A-B	52.70	52.70	0.00	-	-	-	-	-
A	A-C	143.04	143.04	0.00	-	-	-	-	-
B	B-A	15.06	15.08	0.00	708.41	0.021	0.02	5.193	A
B	C-A	63.99	63.99	0.00	-	-	-	-	-
B	C-B	7.53	7.54	0.00	555.46	0.014	0.01	6.569	A
B	A-B	3.76	3.76	0.00	-	-	-	-	-
B	A-C	82.81	82.81	0.00	-	-	-	-	-
C	B-A	120.46	120.68	0.00	708.09	0.170	0.21	6.130	A
C	C-A	67.76	67.76	0.00	-	-	-	-	-
C	C-B	120.46	120.78	0.00	548.92	0.219	0.28	8.414	A
C	A-B	11.29	11.29	0.00	-	-	-	-	-
C	A-C	105.40	105.40	0.00	-	-	-	-	-
D	B-A	33.88	33.94	0.00	585.45	0.058	0.06	6.527	A
D	C-A	188.21	188.21	0.00	-	-	-	-	-
D	C-B	30.11	30.17	0.00	528.41	0.057	0.06	7.228	A
D	A-B	3.76	3.76	0.00	-	-	-	-	-
D	A-C	207.03	207.03	0.00	-	-	-	-	-
E	B-A	146.81	147.18	0.00	659.01	0.223	0.29	7.037	A
E	C-A	195.74	195.74	0.00	-	-	-	-	-
E	C-B	191.98	192.92	0.00	523.52	0.367	0.59	10.922	B
E	A-B	11.29	11.29	0.00	-	-	-	-	-
E	A-C	225.86	225.86	0.00	-	-	-	-	-

(Default Analysis Set) - 2022 Observed, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2022 Observed, RM	2022 Observed	RM		ONE HOUR	08:00	09:30	90	15		

Junction Network

Junctions

Junction	Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
A	A	San Tam Road / Castle Peak Road - Mai Po	T-Junction	Two-way	A,B,C	7.44	A
B	B	San Tam Road / Access Road	T-Junction	Two-way	A,B,C	6.18	A
C	C	San Tam Road / Ngau Tam Mei Road	T-Junction	Two-way	A,B,C	8.89	A
D	D	San Tam Road / Chun Shin Road	T-Junction	Two-way	A,B,C	7.60	A
E	E	San Tam Road / Chuk Yau Road	T-Junction	Two-way	A,B,C	10.49	B

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Junction	Arm	Arm	Name	Description	Arm Type
A	A	A	(untitled)		Major
A	B	B	(untitled)		Minor
A	C	C	(untitled)		Major
B	A	A	untitled		Major
B	B	B	untitled		Minor
B	C	C	untitled		Major
C	A	A	untitled		Major
C	B	B	untitled		Minor
C	C	C	untitled		Major
D	A	A	untitled		Major
D	B	B	untitled		Minor
D	C	C	untitled		Major
E	A	A	untitled		Major
E	B	B	untitled		Minor
E	C	C	untitled		Major

Major Arm Geometry

Junction	Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
A	C	8.20		0.00		2.20	0.00		
B	C	6.90		0.00		2.20	0.00		
C	C	6.80		0.00		2.20	0.00		
D	C	6.65		0.00		2.20	0.00		
E	C	7.00		0.00		2.20	0.00		

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Junction	Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
A	B	One lane	5.00										50	50
B	B	One lane	5.00										50	50
C	B	One lane	5.00										50	50
D	B	One lane	3.12										50	50
E	B	One lane	4.84										50	50

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
A	B-A	622.329	0.102	0.259	0.163	0.370
A	B-C	786.649	0.109	0.276	-	-
A	C-B	573.963	0.201	0.201	-	-

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B	B-A	622.329	0.109	0.275	0.173	0.393
B	B-C	786.649	0.116	0.293	-	-
B	C-B	573.963	0.214	0.214	-	-

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
C	B-A	622.329	0.109	0.277	0.174	0.395
C	B-C	786.649	0.116	0.294	-	-
C	C-B	573.963	0.215	0.215	-	-

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
E	B-A	614.024	0.107	0.270	0.170	0.386
E	B-C	776.151	0.114	0.288	-	-
E	C-B	573.963	0.213	0.213	-	-

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
D	B-A	524.736	0.093	0.235	0.148	0.335
D	B-C	663.287	0.099	0.250	-	-
D	C-B	573.963	0.216	0.216	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Junction	Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	A	ONE HOUR	✓	395.00	100.000
A	B	ONE HOUR	✓	125.00	100.000
A	C	ONE HOUR	✓	210.00	100.000
B	A	ONE HOUR	✓	135.00	100.000
B	B	ONE HOUR	✓	15.00	100.000
B	C	ONE HOUR	✓	105.00	100.000
C	A	ONE HOUR	✓	145.00	100.000
C	B	ONE HOUR	✓	160.00	100.000
C	C	ONE HOUR	✓	295.00	100.000
D	A	ONE HOUR	✓	265.00	100.000
D	B	ONE HOUR	✓	30.00	100.000
D	C	ONE HOUR	✓	320.00	100.000
E	A	ONE HOUR	✓	280.00	100.000
E	B	ONE HOUR	✓	220.00	100.000
E	C	ONE HOUR	✓	500.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction A (for whole period)

		To		
		A	B	C
From	A	0.000	190.000	205.000
	B	35.000	0.000	90.000
	C	180.000	30.000	0.000

Turning Proportions (PCU) - Junction A (for whole period)

		To		
		A	B	C
From	A	0.00	0.48	0.52
	B	0.28	0.00	0.72
	C	0.86	0.14	0.00

Turning Counts / Proportions (PCU/hr) - Junction B (for whole period)

		To		
		A	B	C
From	A	0.000	5.000	130.000
	B	5.000	0.000	10.000
	C	90.000	15.000	0.000

Turning Proportions (PCU) - Junction B (for whole period)

		To		
		A	B	C
From	A	0.00	0.04	0.96
	B	0.33	0.00	0.67
	C	0.86	0.14	0.00

Turning Counts / Proportions (PCU/hr) - Junction C (for whole period)

		To		
		A	B	C
From	A	0.000	20.000	125.000
	B	15.000	0.000	145.000
	C	110.000	185.000	0.000

Turning Proportions (PCU) - Junction C (for whole period)

		To		
		A	B	C
From	A	0.00	0.14	0.86
	B	0.09	0.00	0.91
	C	0.37	0.63	0.00

Turning Counts / Proportions (PCU/hr) - Junction E (for whole period)

		To		
		A	B	C
From	A	0.000	20.000	260.000
	B	15.000	0.000	205.000
	C	300.000	200.000	0.000

Turning Proportions (PCU) - Junction E (for whole period)

		To		
		A	B	C
From	A	0.00	0.07	0.93
	B	0.07	0.00	0.93
	C	0.60	0.40	0.00

Turning Counts / Proportions (PCU/hr) - Junction D (for whole period)

		To		
		A	B	C
From	A	0.000	5.000	260.000
	B	10.000	0.000	20.000
	C	285.000	35.000	0.000

Turning Proportions (PCU) - Junction D (for whole period)

		To		
		A	B	C
From	A	0.00	0.02	0.98
	B	0.33	0.00	0.67
	C	0.89	0.11	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction A (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction A (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Average PCU Per Vehicle - Junction B (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction B (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Average PCU Per Vehicle - Junction C (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction C (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Average PCU Per Vehicle - Junction E (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction E (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Average PCU Per Vehicle - Junction D (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction D (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Junction	Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
A	B-A	0.22	7.32	0.28	A
A	C-A	-	-	-	-
A	C-B	0.07	7.94	0.07	A
A	A-B	-	-	-	-
A	A-C	-	-	-	-
B	B-A	0.02	5.51	0.03	A
B	C-A	-	-	-	-
B	C-B	0.03	6.85	0.03	A
B	A-B	-	-	-	-
B	A-C	-	-	-	-
C	B-A	0.25	6.78	0.33	A
C	C-A	-	-	-	-
C	C-B	0.38	10.71	0.60	B
C	A-B	-	-	-	-
C	A-C	-	-	-	-
D	B-A	0.06	7.57	0.07	A
D	C-A	-	-	-	-
D	C-B	0.08	7.62	0.08	A
D	A-B	-	-	-	-
D	A-C	-	-	-	-
E	B-A	0.37	8.68	0.58	A
E	C-A	-	-	-	-
E	C-B	0.43	12.49	0.76	B
E	A-B	-	-	-	-
E	A-C	-	-	-	-

Main Results for each time segment

Main results: (08:00-08:15)

Junction	Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
A	B-A	94.11	93.45	0.00	662.47	0.142	0.16	6.320	A
A	C-A	135.51	135.51	0.00	-	-	-	-	-
A	C-B	22.59	22.40	0.00	514.16	0.044	0.05	7.319	A
A	A-B	143.04	143.04	0.00	-	-	-	-	-
A	A-C	154.33	154.33	0.00	-	-	-	-	-
B	B-A	11.29	11.23	0.00	686.85	0.016	0.02	5.328	A
B	C-A	67.76	67.76	0.00	-	-	-	-	-
B	C-B	11.29	11.21	0.00	552.25	0.020	0.02	6.654	A
B	A-B	3.76	3.76	0.00	-	-	-	-	-
B	A-C	97.87	97.87	0.00	-	-	-	-	-
C	B-A	120.46	119.67	0.00	727.11	0.166	0.20	5.919	A
C	C-A	82.81	82.81	0.00	-	-	-	-	-
C	C-B	139.28	137.94	0.00	550.53	0.253	0.33	8.698	A
C	A-B	15.06	15.06	0.00	-	-	-	-	-
C	A-C	94.11	94.11	0.00	-	-	-	-	-
D	B-A	22.59	22.41	0.00	541.45	0.042	0.04	6.934	A
D	C-A	214.56	214.56	0.00	-	-	-	-	-
D	C-B	26.35	26.14	0.00	530.85	0.050	0.05	7.129	A
D	A-B	3.76	3.76	0.00	-	-	-	-	-
D	A-C	195.74	195.74	0.00	-	-	-	-	-
E	B-A	165.63	164.38	0.00	692.12	0.239	0.31	6.807	A
E	C-A	225.86	225.86	0.00	-	-	-	-	-
E	C-B	150.57	149.00	0.00	529.12	0.285	0.39	9.433	A
E	A-B	15.06	15.06	0.00	-	-	-	-	-
E	A-C	195.74	195.74	0.00	-	-	-	-	-



Main results: (08:15-08:30)

Junction	Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
A	B-A	112.37	112.20	0.00	648.66	0.173	0.21	6.709	A
A	C-A	161.82	161.82	0.00	-	-	-	-	-
A	C-B	26.97	26.93	0.00	502.55	0.054	0.06	7.568	A
A	A-B	170.81	170.81	0.00	-	-	-	-	-
A	A-C	184.29	184.29	0.00	-	-	-	-	-
B	B-A	13.48	13.47	0.00	679.76	0.020	0.02	5.402	A
B	C-A	80.91	80.91	0.00	-	-	-	-	-
B	C-B	13.48	13.47	0.00	548.03	0.025	0.03	6.733	A
B	A-B	4.49	4.49	0.00	-	-	-	-	-
B	A-C	116.87	116.87	0.00	-	-	-	-	-
C	B-A	143.84	143.63	0.00	718.78	0.200	0.25	6.258	A
C	C-A	98.89	98.89	0.00	-	-	-	-	-
C	C-B	166.31	165.92	0.00	545.98	0.305	0.43	9.462	A
C	A-B	17.98	17.98	0.00	-	-	-	-	-
C	A-C	112.37	112.37	0.00	-	-	-	-	-
D	B-A	26.97	26.93	0.00	527.80	0.051	0.05	7.187	A
D	C-A	256.21	256.21	0.00	-	-	-	-	-
D	C-B	31.46	31.42	0.00	522.48	0.060	0.06	7.330	A
D	A-B	4.49	4.49	0.00	-	-	-	-	-
D	A-C	233.73	233.73	0.00	-	-	-	-	-
E	B-A	197.78	197.39	0.00	677.65	0.292	0.41	7.489	A
E	C-A	269.69	269.69	0.00	-	-	-	-	-
E	C-B	179.80	179.29	0.00	520.42	0.345	0.52	10.537	B
E	A-B	17.98	17.98	0.00	-	-	-	-	-
E	A-C	233.73	233.73	0.00	-	-	-	-	-

Main results: (08:30-08:45)

Junction	Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
A	B-A	137.63	137.35	0.00	629.46	0.219	0.28	7.312	A
A	C-A	198.18	198.18	0.00	-	-	-	-	-
A	C-B	33.03	32.97	0.00	486.50	0.068	0.07	7.936	A
A	A-B	209.19	209.19	0.00	-	-	-	-	-
A	A-C	225.71	225.71	0.00	-	-	-	-	-
B	B-A	16.52	16.50	0.00	669.95	0.025	0.03	5.508	A
B	C-A	99.09	99.09	0.00	-	-	-	-	-
B	C-B	16.52	16.49	0.00	542.20	0.030	0.03	6.847	A
B	A-B	5.51	5.51	0.00	-	-	-	-	-
B	A-C	143.13	143.13	0.00	-	-	-	-	-
C	B-A	176.16	175.84	0.00	707.12	0.249	0.33	6.771	A
C	C-A	121.11	121.11	0.00	-	-	-	-	-
C	C-B	203.69	203.03	0.00	539.70	0.377	0.60	10.671	B
C	A-B	22.02	22.02	0.00	-	-	-	-	-
C	A-C	137.63	137.63	0.00	-	-	-	-	-
D	B-A	33.03	32.97	0.00	508.71	0.065	0.07	7.567	A
D	C-A	313.79	313.79	0.00	-	-	-	-	-
D	C-B	38.54	38.47	0.00	510.91	0.075	0.08	7.620	A
D	A-B	5.51	5.51	0.00	-	-	-	-	-
D	A-C	286.27	286.27	0.00	-	-	-	-	-
E	B-A	242.22	241.55	0.00	657.14	0.369	0.58	8.649	A
E	C-A	330.31	330.31	0.00	-	-	-	-	-
E	C-B	220.20	219.29	0.00	508.39	0.433	0.75	12.410	B
E	A-B	22.02	22.02	0.00	-	-	-	-	-
E	A-C	286.27	286.27	0.00	-	-	-	-	-

Main results: (08:45-09:00)

Junction	Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
A	B-A	137.63	137.62	0.00	629.45	0.219	0.28	7.318	A
A	C-A	198.18	198.18	0.00	-	-	-	-	-
A	C-B	33.03	33.03	0.00	486.50	0.068	0.07	7.938	A
A	A-B	209.19	209.19	0.00	-	-	-	-	-
A	A-C	225.71	225.71	0.00	-	-	-	-	-
B	B-A	16.52	16.52	0.00	669.95	0.025	0.03	5.508	A
B	C-A	99.09	99.09	0.00	-	-	-	-	-
B	C-B	16.52	16.51	0.00	542.20	0.030	0.03	6.847	A
B	A-B	5.51	5.51	0.00	-	-	-	-	-
B	A-C	143.13	143.13	0.00	-	-	-	-	-
C	B-A	176.16	176.16	0.00	707.06	0.249	0.33	6.780	A
C	C-A	121.11	121.11	0.00	-	-	-	-	-
C	C-B	203.69	203.67	0.00	539.70	0.377	0.60	10.711	B
C	A-B	22.02	22.02	0.00	-	-	-	-	-
C	A-C	137.63	137.63	0.00	-	-	-	-	-
D	B-A	33.03	33.03	0.00	508.70	0.065	0.07	7.567	A
D	C-A	313.79	313.79	0.00	-	-	-	-	-
D	C-B	38.54	38.53	0.00	510.91	0.075	0.08	7.620	A
D	A-B	5.51	5.51	0.00	-	-	-	-	-
D	A-C	286.27	286.27	0.00	-	-	-	-	-
E	B-A	242.22	242.21	0.00	657.07	0.369	0.58	8.677	A
E	C-A	330.31	330.31	0.00	-	-	-	-	-
E	C-B	220.20	220.17	0.00	508.39	0.433	0.76	12.486	B
E	A-B	22.02	22.02	0.00	-	-	-	-	-
E	A-C	286.27	286.27	0.00	-	-	-	-	-

Main results: (09:00-09:15)

Junction	Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
A	B-A	112.37	112.64	0.00	648.64	0.173	0.21	6.719	A
A	C-A	161.82	161.82	0.00	-	-	-	-	-
A	C-B	26.97	27.03	0.00	502.55	0.054	0.06	7.570	A
A	A-B	170.81	170.81	0.00	-	-	-	-	-
A	A-C	184.29	184.29	0.00	-	-	-	-	-
B	B-A	13.48	13.50	0.00	679.75	0.020	0.02	5.405	A
B	C-A	80.91	80.91	0.00	-	-	-	-	-
B	C-B	13.48	13.51	0.00	548.03	0.025	0.03	6.737	A
B	A-B	4.49	4.49	0.00	-	-	-	-	-
B	A-C	116.87	116.87	0.00	-	-	-	-	-
C	B-A	143.84	144.15	0.00	718.70	0.200	0.25	6.270	A
C	C-A	98.89	98.89	0.00	-	-	-	-	-
C	C-B	166.31	166.94	0.00	545.98	0.305	0.44	9.513	A
C	A-B	17.98	17.98	0.00	-	-	-	-	-
C	A-C	112.37	112.37	0.00	-	-	-	-	-
D	B-A	26.97	27.03	0.00	527.78	0.051	0.05	7.192	A
D	C-A	256.21	256.21	0.00	-	-	-	-	-
D	C-B	31.46	31.53	0.00	522.48	0.060	0.06	7.335	A
D	A-B	4.49	4.49	0.00	-	-	-	-	-
D	A-C	233.73	233.73	0.00	-	-	-	-	-
E	B-A	197.78	198.43	0.00	677.55	0.292	0.42	7.523	A
E	C-A	269.69	269.69	0.00	-	-	-	-	-
E	C-B	179.80	180.67	0.00	520.42	0.345	0.54	10.622	B
E	A-B	17.98	17.98	0.00	-	-	-	-	-
E	A-C	233.73	233.73	0.00	-	-	-	-	-

Main results: (09:15-09:30)

Junction	Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
A	B-AC	94.11	94.28	0.00	662.44	0.142	0.17	6.337	A
A	C-A	135.51	135.51	0.00	-	-	-	-	-
A	C-B	22.59	22.63	0.00	514.16	0.044	0.05	7.326	A
A	A-B	143.04	143.04	0.00	-	-	-	-	-
A	A-C	154.33	154.33	0.00	-	-	-	-	-
B	B-AC	11.29	11.31	0.00	686.83	0.016	0.02	5.328	A
B	C-A	67.76	67.76	0.00	-	-	-	-	-
B	C-B	11.29	11.31	0.00	552.25	0.020	0.02	6.654	A
B	A-B	3.76	3.76	0.00	-	-	-	-	-
B	A-C	97.87	97.87	0.00	-	-	-	-	-
C	B-AC	120.46	120.67	0.00	726.98	0.166	0.20	5.941	A
C	C-A	82.81	82.81	0.00	-	-	-	-	-
C	C-B	139.28	139.68	0.00	550.53	0.253	0.34	8.770	A
C	A-B	15.06	15.06	0.00	-	-	-	-	-
C	A-C	94.11	94.11	0.00	-	-	-	-	-
D	B-AC	22.59	22.63	0.00	541.40	0.042	0.04	6.941	A
D	C-A	214.56	214.56	0.00	-	-	-	-	-
D	C-B	26.35	26.40	0.00	530.85	0.050	0.05	7.136	A
D	A-B	3.76	3.76	0.00	-	-	-	-	-
D	A-C	195.74	195.74	0.00	-	-	-	-	-
E	B-AC	165.63	166.02	0.00	691.99	0.239	0.32	6.851	A
E	C-A	225.86	225.86	0.00	-	-	-	-	-
E	C-B	150.57	151.10	0.00	529.12	0.285	0.40	9.536	A
E	A-B	15.06	15.06	0.00	-	-	-	-	-
E	A-C	195.74	195.74	0.00	-	-	-	-	-

(Default Analysis Set) - 2030 Reference, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2030 Reference, AM	2030 Reference	AM		ONE HOUR	08:00	09:30	90	15		

Junction Network

Junctions

Junction	Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
A	A	San Tam Road / Castle Peak Road - Mai Po	T-Junction	Two-way	A,B,C	9.20	A
B	B	San Tam Road / Access Road	T-Junction	Two-way	A,B,C	5.94	A
C	C	San Tam Road / Ngau Tam Mei Road	T-Junction	Two-way	A,B,C	9.03	A
D	D	San Tam Road / Chun Shin Road	T-Junction	Two-way	A,B,C	7.89	A
E	E	San Tam Road / Chuk Yau Road	T-Junction	Two-way	A,B,C	16.17	C

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Junction	Arm	Arm	Name	Description	Arm Type
A	A	A	(untitled)		Major
A	B	B	(untitled)		Minor
A	C	C	(untitled)		Major
B	A	A	untitled		Major
B	B	B	untitled		Minor
B	C	C	untitled		Major
C	A	A	untitled		Major
C	B	B	untitled		Minor
C	C	C	untitled		Major
D	A	A	untitled		Major
D	B	B	untitled		Minor
D	C	C	untitled		Major
E	A	A	untitled		Major
E	B	B	untitled		Minor
E	C	C	untitled		Major

Major Arm Geometry

Junction	Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
A	C	8.20		0.00		2.20	0.00		
B	C	6.90		0.00		2.20	0.00		
C	C	6.80		0.00		2.20	0.00		
D	C	6.65		0.00		2.20	0.00		
E	C	7.00		0.00		2.20	0.00		

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Junction	Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
A	B	One lane	5.00										50	50
B	B	One lane	5.00										50	50
C	B	One lane	5.00										50	50
D	B	One lane	3.12										50	50
E	B	One lane	4.84										50	50

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
A	B-A	622.329	0.102	0.259	0.163	0.370
A	B-C	786.649	0.109	0.276	-	-
A	C-B	573.963	0.201	0.201	-	-

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B	B-A	622.329	0.109	0.275	0.173	0.393
B	B-C	786.649	0.116	0.293	-	-
B	C-B	573.963	0.214	0.214	-	-

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
C	B-A	622.329	0.109	0.277	0.174	0.395
C	B-C	786.649	0.116	0.294	-	-
C	C-B	573.963	0.215	0.215	-	-

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
E	B-A	614.024	0.107	0.270	0.170	0.386
E	B-C	776.151	0.114	0.288	-	-
E	C-B	573.963	0.213	0.213	-	-

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
D	B-A	524.736	0.093	0.235	0.148	0.335
D	B-C	663.287	0.099	0.250	-	-
D	C-B	573.963	0.216	0.216	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Junction	Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	A	ONE HOUR	✓	410.00	100.000
A	B	ONE HOUR	✓	140.00	100.000
A	C	ONE HOUR	✓	390.00	100.000
B	A	ONE HOUR	✓	160.00	100.000
B	B	ONE HOUR	✓	20.00	100.000
B	C	ONE HOUR	✓	115.00	100.000
C	A	ONE HOUR	✓	200.00	100.000
C	B	ONE HOUR	✓	170.00	100.000
C	C	ONE HOUR	✓	305.00	100.000
D	A	ONE HOUR	✓	340.00	100.000
D	B	ONE HOUR	✓	80.00	100.000
D	C	ONE HOUR	✓	345.00	100.000
E	A	ONE HOUR	✓	405.00	100.000
E	B	ONE HOUR	✓	215.00	100.000
E	C	ONE HOUR	✓	585.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction A (for whole period)

		To		
		A	B	C
From	A	0.000	80.000	330.000
	B	70.000	0.000	70.000
	C	355.000	35.000	0.000

Turning Proportions (PCU) - Junction A (for whole period)

		To		
		A	B	C
From	A	0.00	0.20	0.80
	B	0.50	0.00	0.50
	C	0.91	0.09	0.00

Turning Counts / Proportions (PCU/hr) - Junction B (for whole period)

		To		
		A	B	C
From	A	0.000	5.000	155.000
	B	5.000	0.000	15.000
	C	105.000	10.000	0.000

Turning Proportions (PCU) - Junction B (for whole period)

		To		
		A	B	C
From	A	0.00	0.03	0.97
	B	0.25	0.00	0.75
	C	0.91	0.09	0.00

Turning Counts / Proportions (PCU/hr) - Junction C (for whole period)

		To		
		A	B	C
From	A	0.000	15.000	185.000
	B	25.000	0.000	145.000
	C	135.000	170.000	0.000

Turning Proportions (PCU) - Junction C (for whole period)

		To		
		A	B	C
From	A	0.00	0.08	0.93
	B	0.15	0.00	0.85
	C	0.44	0.56	0.00

Turning Counts / Proportions (PCU/hr) - Junction E (for whole period)

		To		
		A	B	C
From	A	0.000	20.000	385.000
	B	30.000	0.000	185.000
	C	310.000	275.000	0.000

Turning Proportions (PCU) - Junction E (for whole period)

		To		
		A	B	C
From	A	0.00	0.05	0.95
	B	0.14	0.00	0.86
	C	0.53	0.47	0.00

Turning Counts / Proportions (PCU/hr) - Junction D (for whole period)

		To		
		A	B	C
From	A	0.000	5.000	335.000
	B	5.000	0.000	75.000
	C	300.000	45.000	0.000

Turning Proportions (PCU) - Junction D (for whole period)

		To		
		A	B	C
From	A	0.00	0.01	0.99
	B	0.06	0.00	0.94
	C	0.87	0.13	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction A (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction A (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Average PCU Per Vehicle - Junction B (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction B (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Average PCU Per Vehicle - Junction C (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction C (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Average PCU Per Vehicle - Junction E (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction E (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Average PCU Per Vehicle - Junction D (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction D (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Junction	Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
A	B-A	0.29	9.47	0.40	A
A	C-A	-	-	-	-
A	C-B	0.08	8.10	0.09	A
A	A-B	-	-	-	-
A	A-C	-	-	-	-
B	B-A	0.03	5.48	0.03	A
B	C-A	-	-	-	-
B	C-B	0.02	6.85	0.02	A
B	A-B	-	-	-	-
B	A-C	-	-	-	-
C	B-A	0.28	7.47	0.39	A
C	C-A	-	-	-	-
C	C-B	0.36	10.60	0.55	B
C	A-B	-	-	-	-
C	A-C	-	-	-	-
D	B-A	0.16	7.76	0.19	A
D	C-A	-	-	-	-
D	C-B	0.10	8.12	0.11	A
D	A-B	-	-	-	-
D	A-C	-	-	-	-
E	B-A	0.42	10.83	0.70	B
E	C-A	-	-	-	-
E	C-B	0.63	20.34	1.67	C
E	A-B	-	-	-	-
E	A-C	-	-	-	-

Main Results for each time segment

Main results: (08:00-08:15)

Junction	Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
A	B-A-C	105.40	104.53	0.00	586.27	0.180	0.22	7.459	A
A	C-A	267.26	267.26	0.00	-	-	-	-	-
A	C-B	26.35	26.13	0.00	511.89	0.051	0.05	7.407	A
A	A-B	60.23	60.23	0.00	-	-	-	-	-
A	A-C	248.44	248.44	0.00	-	-	-	-	-
B	B-A-C	15.06	14.97	0.00	697.60	0.022	0.02	5.273	A
B	C-A	79.05	79.05	0.00	-	-	-	-	-
B	C-B	7.53	7.47	0.00	548.22	0.014	0.01	6.657	A
B	A-B	3.76	3.76	0.00	-	-	-	-	-
B	A-C	116.69	116.69	0.00	-	-	-	-	-
C	B-A-C	127.98	127.10	0.00	698.43	0.183	0.22	6.292	A
C	C-A	101.64	101.64	0.00	-	-	-	-	-
C	C-B	127.98	126.76	0.00	541.64	0.236	0.31	8.653	A
C	A-B	11.29	11.29	0.00	-	-	-	-	-
C	A-C	139.28	139.28	0.00	-	-	-	-	-
D	B-A-C	60.23	59.77	0.00	584.35	0.103	0.11	6.857	A
D	C-A	225.86	225.86	0.00	-	-	-	-	-
D	C-B	33.88	33.60	0.00	518.65	0.065	0.07	7.419	A
D	A-B	3.76	3.76	0.00	-	-	-	-	-
D	A-C	252.21	252.21	0.00	-	-	-	-	-
E	B-A-C	161.86	160.50	0.00	632.17	0.256	0.34	7.611	A
E	C-A	233.38	233.38	0.00	-	-	-	-	-
E	C-B	207.03	204.35	0.00	509.11	0.407	0.67	11.714	B
E	A-B	15.06	15.06	0.00	-	-	-	-	-
E	A-C	289.85	289.85	0.00	-	-	-	-	-

Main results: (08:15-08:30)

Junction	Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
A	B-A	125.86	125.59	0.00	564.53	0.223	0.28	8.196	A
A	C-A	319.14	319.14	0.00	-	-	-	-	-
A	C-B	31.46	31.41	0.00	499.84	0.063	0.07	7.684	A
A	A-B	71.92	71.92	0.00	-	-	-	-	-
A	A-C	296.66	296.66	0.00	-	-	-	-	-
B	B-A	17.98	17.96	0.00	689.72	0.026	0.03	5.358	A
B	C-A	94.39	94.39	0.00	-	-	-	-	-
B	C-B	8.99	8.98	0.00	543.23	0.017	0.02	6.737	A
B	A-B	4.49	4.49	0.00	-	-	-	-	-
B	A-C	139.34	139.34	0.00	-	-	-	-	-
C	B-A	152.83	152.58	0.00	686.34	0.223	0.28	6.741	A
C	C-A	121.36	121.36	0.00	-	-	-	-	-
C	C-B	152.83	152.47	0.00	535.37	0.285	0.39	9.393	A
C	A-B	13.48	13.48	0.00	-	-	-	-	-
C	A-C	166.31	166.31	0.00	-	-	-	-	-
D	B-A	71.92	71.80	0.00	570.92	0.126	0.14	7.210	A
D	C-A	269.69	269.69	0.00	-	-	-	-	-
D	C-B	40.45	40.39	0.00	507.91	0.080	0.09	7.699	A
D	A-B	4.49	4.49	0.00	-	-	-	-	-
D	A-C	301.16	301.16	0.00	-	-	-	-	-
E	B-A	193.28	192.80	0.00	606.75	0.319	0.46	8.685	A
E	C-A	278.68	278.68	0.00	-	-	-	-	-
E	C-B	247.22	246.05	0.00	496.52	0.498	0.96	14.301	B
E	A-B	17.98	17.98	0.00	-	-	-	-	-
E	A-C	346.11	346.11	0.00	-	-	-	-	-

Main results: (08:30-08:45)

Junction	Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
A	B-A	154.14	153.68	0.00	534.13	0.289	0.40	9.451	A
A	C-A	390.86	390.86	0.00	-	-	-	-	-
A	C-B	38.54	38.46	0.00	483.18	0.080	0.09	8.094	A
A	A-B	88.08	88.08	0.00	-	-	-	-	-
A	A-C	363.34	363.34	0.00	-	-	-	-	-
B	B-A	22.02	21.99	0.00	678.79	0.032	0.03	5.480	A
B	C-A	115.61	115.61	0.00	-	-	-	-	-
B	C-B	11.01	10.99	0.00	536.32	0.021	0.02	6.852	A
B	A-B	5.51	5.51	0.00	-	-	-	-	-
B	A-C	170.66	170.66	0.00	-	-	-	-	-
C	B-A	187.17	186.77	0.00	669.40	0.280	0.38	7.452	A
C	C-A	148.64	148.64	0.00	-	-	-	-	-
C	C-B	187.17	186.58	0.00	526.70	0.355	0.54	10.565	B
C	A-B	16.52	16.52	0.00	-	-	-	-	-
C	A-C	203.69	203.69	0.00	-	-	-	-	-
D	B-A	88.08	87.90	0.00	552.22	0.160	0.19	7.747	A
D	C-A	330.31	330.31	0.00	-	-	-	-	-
D	C-B	49.55	49.45	0.00	493.07	0.100	0.11	8.113	A
D	A-B	5.51	5.51	0.00	-	-	-	-	-
D	A-C	368.84	368.84	0.00	-	-	-	-	-
E	B-A	236.72	235.77	0.00	569.61	0.416	0.70	10.752	B
E	C-A	341.32	341.32	0.00	-	-	-	-	-
E	C-B	302.78	300.13	0.00	479.11	0.632	1.63	19.811	C
E	A-B	22.02	22.02	0.00	-	-	-	-	-
E	A-C	423.89	423.89	0.00	-	-	-	-	-

Main results: (08:45-09:00)

Junction	Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
A	B-A	154.14	154.13	0.00	534.11	0.289	0.40	9.474	A
A	C-A	390.86	390.86	0.00	-	-	-	-	-
A	C-B	38.54	38.53	0.00	483.18	0.080	0.09	8.096	A
A	A-B	88.08	88.08	0.00	-	-	-	-	-
A	A-C	363.34	363.34	0.00	-	-	-	-	-
B	B-A	22.02	22.02	0.00	678.79	0.032	0.03	5.480	A
B	C-A	115.61	115.61	0.00	-	-	-	-	-
B	C-B	11.01	11.01	0.00	536.32	0.021	0.02	6.852	A
B	A-B	5.51	5.51	0.00	-	-	-	-	-
B	A-C	170.66	170.66	0.00	-	-	-	-	-
C	B-A	187.17	187.16	0.00	669.33	0.280	0.39	7.465	A
C	C-A	148.64	148.64	0.00	-	-	-	-	-
C	C-B	187.17	187.16	0.00	526.70	0.355	0.55	10.600	B
C	A-B	16.52	16.52	0.00	-	-	-	-	-
C	A-C	203.69	203.69	0.00	-	-	-	-	-
D	B-A	88.08	88.08	0.00	552.22	0.160	0.19	7.756	A
D	C-A	330.31	330.31	0.00	-	-	-	-	-
D	C-B	49.55	49.54	0.00	493.07	0.100	0.11	8.116	A
D	A-B	5.51	5.51	0.00	-	-	-	-	-
D	A-C	368.84	368.84	0.00	-	-	-	-	-
E	B-A	236.72	236.69	0.00	569.16	0.416	0.70	10.826	B
E	C-A	341.32	341.32	0.00	-	-	-	-	-
E	C-B	302.78	302.61	0.00	479.11	0.632	1.67	20.341	C
E	A-B	22.02	22.02	0.00	-	-	-	-	-
E	A-C	423.89	423.89	0.00	-	-	-	-	-

Main results: (09:00-09:15)

Junction	Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
A	B-A	125.86	126.31	0.00	564.50	0.223	0.29	8.223	A
A	C-A	319.14	319.14	0.00	-	-	-	-	-
A	C-B	31.46	31.54	0.00	499.84	0.063	0.07	7.689	A
A	A-B	71.92	71.92	0.00	-	-	-	-	-
A	A-C	296.66	296.66	0.00	-	-	-	-	-
B	B-A	17.98	18.01	0.00	689.71	0.026	0.03	5.359	A
B	C-A	94.39	94.39	0.00	-	-	-	-	-
B	C-B	8.99	9.01	0.00	543.23	0.017	0.02	6.740	A
B	A-B	4.49	4.49	0.00	-	-	-	-	-
B	A-C	139.34	139.34	0.00	-	-	-	-	-
C	B-A	152.83	153.21	0.00	686.23	0.223	0.29	6.760	A
C	C-A	121.36	121.36	0.00	-	-	-	-	-
C	C-B	152.83	153.39	0.00	535.37	0.285	0.41	9.440	A
C	A-B	13.48	13.48	0.00	-	-	-	-	-
C	A-C	166.31	166.31	0.00	-	-	-	-	-
D	B-A	71.92	72.09	0.00	570.91	0.126	0.15	7.218	A
D	C-A	269.69	269.69	0.00	-	-	-	-	-
D	C-B	40.45	40.55	0.00	507.91	0.080	0.09	7.704	A
D	A-B	4.49	4.49	0.00	-	-	-	-	-
D	A-C	301.16	301.16	0.00	-	-	-	-	-
E	B-A	193.28	194.20	0.00	606.19	0.319	0.47	8.759	A
E	C-A	278.68	278.68	0.00	-	-	-	-	-
E	C-B	247.22	249.80	0.00	496.52	0.498	1.02	14.742	B
E	A-B	17.98	17.98	0.00	-	-	-	-	-
E	A-C	346.11	346.11	0.00	-	-	-	-	-

Main results: (09:15-09:30)

Junction	Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
A	B-A	105.40	105.67	0.00	586.20	0.180	0.22	7.498	A
A	C-A	267.26	267.26	0.00	-	-	-	-	-
A	C-B	26.35	26.40	0.00	511.89	0.051	0.05	7.417	A
A	A-B	60.23	60.23	0.00	-	-	-	-	-
A	A-C	248.44	248.44	0.00	-	-	-	-	-
B	B-A	15.06	15.08	0.00	697.59	0.022	0.02	5.274	A
B	C-A	79.05	79.05	0.00	-	-	-	-	-
B	C-B	7.53	7.54	0.00	548.22	0.014	0.01	6.660	A
B	A-B	3.76	3.76	0.00	-	-	-	-	-
B	A-C	116.69	116.69	0.00	-	-	-	-	-
C	B-A	127.98	128.24	0.00	698.25	0.183	0.23	6.317	A
C	C-A	101.64	101.64	0.00	-	-	-	-	-
C	C-B	127.98	128.35	0.00	541.64	0.236	0.31	8.718	A
C	A-B	11.29	11.29	0.00	-	-	-	-	-
C	A-C	139.28	139.28	0.00	-	-	-	-	-
D	B-A	60.23	60.35	0.00	584.33	0.103	0.12	6.871	A
D	C-A	225.86	225.86	0.00	-	-	-	-	-
D	C-B	33.88	33.95	0.00	518.65	0.065	0.07	7.430	A
D	A-B	3.76	3.76	0.00	-	-	-	-	-
D	A-C	252.21	252.21	0.00	-	-	-	-	-
E	B-A	161.86	162.37	0.00	631.65	0.256	0.35	7.678	A
E	C-A	233.38	233.38	0.00	-	-	-	-	-
E	C-B	207.03	208.32	0.00	509.11	0.407	0.70	12.021	B
E	A-B	15.06	15.06	0.00	-	-	-	-	-
E	A-C	289.85	289.85	0.00	-	-	-	-	-

(Default Analysis Set) - 2030 Reference, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2030 Reference, PM	2030 Reference	PM		ONE HOUR	08:00	09:30	90	15		

Junction Network

Junctions

Junction	Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
A	A	San Tam Road / Castle Peak Road - Mai Po	T-Junction	Two-way	A,B,C	8.77	A
B	B	San Tam Road / Access Road	T-Junction	Two-way	A,B,C	6.46	A
C	C	San Tam Road / Ngau Tam Mei Road	T-Junction	Two-way	A,B,C	9.57	A
D	D	San Tam Road / Chun Shin Road	T-Junction	Two-way	A,B,C	7.78	A
E	E	San Tam Road / Chuk Yau Road	T-Junction	Two-way	A,B,C	11.70	B

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Junction	Arm	Arm	Name	Description	Arm Type
A	A	A	(untitled)		Major
A	B	B	(untitled)		Minor
A	C	C	(untitled)		Major
B	A	A	untitled		Major
B	B	B	untitled		Minor
B	C	C	untitled		Major
C	A	A	untitled		Major
C	B	B	untitled		Minor
C	C	C	untitled		Major
D	A	A	untitled		Major
D	B	B	untitled		Minor
D	C	C	untitled		Major
E	A	A	untitled		Major
E	B	B	untitled		Minor
E	C	C	untitled		Major

Major Arm Geometry

Junction	Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
A	C	8.20		0.00		2.20	0.00		
B	C	6.90		0.00		2.20	0.00		
C	C	6.80		0.00		2.20	0.00		
D	C	6.65		0.00		2.20	0.00		
E	C	7.00		0.00		2.20	0.00		

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Junction	Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
A	B	One lane	5.00										50	50
B	B	One lane	5.00										50	50
C	B	One lane	5.00										50	50
D	B	One lane	3.12										50	50
E	B	One lane	4.84										50	50

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
A	B-A	622.329	0.102	0.259	0.163	0.370
A	B-C	786.649	0.109	0.276	-	-
A	C-B	573.963	0.201	0.201	-	-

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B	B-A	622.329	0.109	0.275	0.173	0.393
B	B-C	786.649	0.116	0.293	-	-
B	C-B	573.963	0.214	0.214	-	-

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
C	B-A	622.329	0.109	0.277	0.174	0.395
C	B-C	786.649	0.116	0.294	-	-
C	C-B	573.963	0.215	0.215	-	-

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
E	B-A	614.024	0.107	0.270	0.170	0.386
E	B-C	776.151	0.114	0.288	-	-
E	C-B	573.963	0.213	0.213	-	-

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
D	B-A	524.736	0.093	0.235	0.148	0.335
D	B-C	663.287	0.099	0.250	-	-
D	C-B	573.963	0.216	0.216	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Junction	Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	A	ONE HOUR	✓	545.00	100.000
A	B	ONE HOUR	✓	150.00	100.000
A	C	ONE HOUR	✓	350.00	100.000
B	A	ONE HOUR	✓	180.00	100.000
B	B	ONE HOUR	✓	15.00	100.000
B	C	ONE HOUR	✓	125.00	100.000
C	A	ONE HOUR	✓	190.00	100.000
C	B	ONE HOUR	✓	170.00	100.000
C	C	ONE HOUR	✓	340.00	100.000
D	A	ONE HOUR	✓	320.00	100.000
D	B	ONE HOUR	✓	45.00	100.000
D	C	ONE HOUR	✓	370.00	100.000
E	A	ONE HOUR	✓	345.00	100.000
E	B	ONE HOUR	✓	235.00	100.000
E	C	ONE HOUR	✓	560.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction A (for whole period)

		To		
		A	B	C
From	A	0.000	210.000	335.000
	B	40.000	0.000	110.000
	C	305.000	45.000	0.000

Turning Proportions (PCU) - Junction A (for whole period)

		To		
		A	B	C
From	A	0.00	0.39	0.61
	B	0.27	0.00	0.73
	C	0.87	0.13	0.00

Turning Counts / Proportions (PCU/hr) - Junction B (for whole period)

		To		
		A	B	C
From	A	0.000	5.000	175.000
	B	5.000	0.000	10.000
	C	105.000	20.000	0.000

Turning Proportions (PCU) - Junction B (for whole period)

		To		
		A	B	C
From	A	0.00	0.03	0.97
	B	0.33	0.00	0.67
	C	0.84	0.16	0.00

Turning Counts / Proportions (PCU/hr) - Junction C (for whole period)

		To		
		A	B	C
From	A	0.000	25.000	165.000
	B	15.000	0.000	155.000
	C	140.000	200.000	0.000

Turning Proportions (PCU) - Junction C (for whole period)

		To		
		A	B	C
From	A	0.00	0.13	0.87
	B	0.09	0.00	0.91
	C	0.41	0.59	0.00

Turning Counts / Proportions (PCU/hr) - Junction E (for whole period)

		To		
		A	B	C
From	A	0.000	20.000	325.000
	B	15.000	0.000	220.000
	C	345.000	215.000	0.000

Turning Proportions (PCU) - Junction E (for whole period)

		To		
		A	B	C
From	A	0.00	0.06	0.94
	B	0.06	0.00	0.94
	C	0.62	0.38	0.00

Turning Counts / Proportions (PCU/hr) - Junction D (for whole period)

		To		
		A	B	C
From	A	0.000	5.000	315.000
	B	10.000	0.000	35.000
	C	335.000	35.000	0.000

Turning Proportions (PCU) - Junction D (for whole period)

		To		
		A	B	C
From	A	0.00	0.02	0.98
	B	0.22	0.00	0.78
	C	0.91	0.09	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction A (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction A (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Average PCU Per Vehicle - Junction B (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction B (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Average PCU Per Vehicle - Junction C (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction C (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Average PCU Per Vehicle - Junction E (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction E (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Average PCU Per Vehicle - Junction D (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction D (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Junction	Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
A	B-A-C	0.29	8.73	0.40	A
A	C-A	-	-	-	-
A	C-B	0.11	8.92	0.12	A
A	A-B	-	-	-	-
A	A-C	-	-	-	-
B	B-A-C	0.03	5.65	0.03	A
B	C-A	-	-	-	-
B	C-B	0.04	7.06	0.04	A
B	A-B	-	-	-	-
B	A-C	-	-	-	-
C	B-A-C	0.27	7.12	0.37	A
C	C-A	-	-	-	-
C	C-B	0.42	11.65	0.71	B
C	A-B	-	-	-	-
C	A-C	-	-	-	-
D	B-A-C	0.10	7.74	0.11	A
D	C-A	-	-	-	-
D	C-B	0.08	7.84	0.08	A
D	A-B	-	-	-	-
D	A-C	-	-	-	-
E	B-A-C	0.41	9.56	0.68	A
E	C-A	-	-	-	-
E	C-B	0.48	14.03	0.91	B
E	A-B	-	-	-	-
E	A-C	-	-	-	-

Main Results for each time segment

Main results: (08:00-08:15)

Junction	Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
A	B-A	112.93	112.06	0.00	628.50	0.180	0.22	6.959	A
A	C-A	229.62	229.62	0.00	-	-	-	-	-
A	C-B	33.88	33.58	0.00	491.45	0.069	0.07	7.858	A
A	A-B	158.10	158.10	0.00	-	-	-	-	-
A	A-C	252.21	252.21	0.00	-	-	-	-	-
B	B-A	11.29	11.23	0.00	675.40	0.017	0.02	5.420	A
B	C-A	79.05	79.05	0.00	-	-	-	-	-
B	C-B	15.06	14.94	0.00	545.01	0.028	0.03	6.789	A
B	A-B	3.76	3.76	0.00	-	-	-	-	-
B	A-C	131.75	131.75	0.00	-	-	-	-	-
C	B-A	127.98	127.12	0.00	718.01	0.178	0.22	6.084	A
C	C-A	105.40	105.40	0.00	-	-	-	-	-
C	C-B	150.57	149.06	0.00	543.26	0.277	0.38	9.099	A
C	A-B	18.82	18.82	0.00	-	-	-	-	-
C	A-C	124.22	124.22	0.00	-	-	-	-	-
D	B-A	33.88	33.62	0.00	551.22	0.061	0.06	6.952	A
D	C-A	252.21	252.21	0.00	-	-	-	-	-
D	C-B	26.35	26.14	0.00	521.90	0.050	0.05	7.258	A
D	A-B	3.76	3.76	0.00	-	-	-	-	-
D	A-C	237.15	237.15	0.00	-	-	-	-	-
E	B-A	176.92	175.52	0.00	678.02	0.261	0.35	7.144	A
E	C-A	259.73	259.73	0.00	-	-	-	-	-
E	C-B	161.86	160.08	0.00	518.72	0.312	0.45	9.992	A
E	A-B	15.06	15.06	0.00	-	-	-	-	-
E	A-C	244.68	244.68	0.00	-	-	-	-	-

Main results: (08:15-08:30)

Junction	Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
A	B-A	134.85	134.58	0.00	607.22	0.222	0.28	7.614	A
A	C-A	274.19	274.19	0.00	-	-	-	-	-
A	C-B	40.45	40.38	0.00	475.44	0.085	0.09	8.274	A
A	A-B	188.79	188.79	0.00	-	-	-	-	-
A	A-C	301.16	301.16	0.00	-	-	-	-	-
B	B-A	13.48	13.47	0.00	666.06	0.020	0.02	5.516	A
B	C-A	94.39	94.39	0.00	-	-	-	-	-
B	C-B	17.98	17.96	0.00	539.39	0.033	0.03	6.903	A
B	A-B	4.49	4.49	0.00	-	-	-	-	-
B	A-C	157.32	157.32	0.00	-	-	-	-	-
C	B-A	152.83	152.59	0.00	707.59	0.216	0.27	6.483	A
C	C-A	125.86	125.86	0.00	-	-	-	-	-
C	C-B	179.80	179.33	0.00	537.30	0.335	0.50	10.043	B
C	A-B	22.47	22.47	0.00	-	-	-	-	-
C	A-C	148.33	148.33	0.00	-	-	-	-	-
D	B-A	40.45	40.39	0.00	536.11	0.075	0.08	7.262	A
D	C-A	301.16	301.16	0.00	-	-	-	-	-
D	C-B	31.46	31.42	0.00	511.80	0.061	0.06	7.493	A
D	A-B	4.49	4.49	0.00	-	-	-	-	-
D	A-C	283.18	283.18	0.00	-	-	-	-	-
E	B-A	211.26	210.80	0.00	660.40	0.320	0.46	7.999	A
E	C-A	310.15	310.15	0.00	-	-	-	-	-
E	C-B	193.28	192.66	0.00	507.99	0.380	0.60	11.393	B
E	A-B	17.98	17.98	0.00	-	-	-	-	-
E	A-C	292.17	292.17	0.00	-	-	-	-	-

Main results: (08:30-08:45)

Junction	Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
A	B-A	165.15	164.70	0.00	577.42	0.286	0.40	8.713	A
A	C-A	335.81	335.81	0.00	-	-	-	-	-
A	C-B	49.55	49.43	0.00	453.29	0.109	0.12	8.910	A
A	A-B	231.21	231.21	0.00	-	-	-	-	-
A	A-C	368.84	368.84	0.00	-	-	-	-	-
B	B-A	16.52	16.49	0.00	653.13	0.025	0.03	5.654	A
B	C-A	115.61	115.61	0.00	-	-	-	-	-
B	C-B	22.02	21.99	0.00	531.62	0.041	0.04	7.063	A
B	A-B	5.51	5.51	0.00	-	-	-	-	-
B	A-C	192.68	192.68	0.00	-	-	-	-	-
C	B-A	187.17	186.80	0.00	692.94	0.270	0.37	7.108	A
C	C-A	154.14	154.14	0.00	-	-	-	-	-
C	C-B	220.20	219.39	0.00	529.06	0.416	0.70	11.593	B
C	A-B	27.53	27.53	0.00	-	-	-	-	-
C	A-C	181.67	181.67	0.00	-	-	-	-	-
D	B-A	49.55	49.45	0.00	514.92	0.096	0.11	7.732	A
D	C-A	368.84	368.84	0.00	-	-	-	-	-
D	C-B	38.54	38.46	0.00	497.83	0.077	0.08	7.836	A
D	A-B	5.51	5.51	0.00	-	-	-	-	-
D	A-C	346.82	346.82	0.00	-	-	-	-	-
E	B-A	258.74	257.90	0.00	635.28	0.407	0.68	9.517	A
E	C-A	379.85	379.85	0.00	-	-	-	-	-
E	C-B	236.72	235.54	0.00	493.17	0.480	0.90	13.908	B
E	A-B	22.02	22.02	0.00	-	-	-	-	-
E	A-C	357.83	357.83	0.00	-	-	-	-	-

Main results: (08:45-09:00)

Junction	Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
A	B-A	165.15	165.14	0.00	577.40	0.286	0.40	8.732	A
A	C-A	335.81	335.81	0.00	-	-	-	-	-
A	C-B	49.55	49.54	0.00	453.29	0.109	0.12	8.916	A
A	A-B	231.21	231.21	0.00	-	-	-	-	-
A	A-C	368.84	368.84	0.00	-	-	-	-	-
B	B-A	16.52	16.51	0.00	653.12	0.025	0.03	5.654	A
B	C-A	115.61	115.61	0.00	-	-	-	-	-
B	C-B	22.02	22.02	0.00	531.62	0.041	0.04	7.063	A
B	A-B	5.51	5.51	0.00	-	-	-	-	-
B	A-C	192.68	192.68	0.00	-	-	-	-	-
C	B-A	187.17	187.17	0.00	692.87	0.270	0.37	7.117	A
C	C-A	154.14	154.14	0.00	-	-	-	-	-
C	C-B	220.20	220.18	0.00	529.06	0.416	0.71	11.652	B
C	A-B	27.53	27.53	0.00	-	-	-	-	-
C	A-C	181.67	181.67	0.00	-	-	-	-	-
D	B-A	49.55	49.54	0.00	514.91	0.096	0.11	7.735	A
D	C-A	368.84	368.84	0.00	-	-	-	-	-
D	C-B	38.54	38.53	0.00	497.83	0.077	0.08	7.837	A
D	A-B	5.51	5.51	0.00	-	-	-	-	-
D	A-C	346.82	346.82	0.00	-	-	-	-	-
E	B-A	258.74	258.72	0.00	635.19	0.407	0.68	9.560	A
E	C-A	379.85	379.85	0.00	-	-	-	-	-
E	C-B	236.72	236.67	0.00	493.17	0.480	0.91	14.028	B
E	A-B	22.02	22.02	0.00	-	-	-	-	-
E	A-C	357.83	357.83	0.00	-	-	-	-	-

Main results: (09:00-09:15)

Junction	Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
A	B-A	134.85	135.28	0.00	607.19	0.222	0.29	7.634	A
A	C-A	274.19	274.19	0.00	-	-	-	-	-
A	C-B	40.45	40.57	0.00	475.44	0.085	0.09	8.280	A
A	A-B	188.79	188.79	0.00	-	-	-	-	-
A	A-C	301.16	301.16	0.00	-	-	-	-	-
B	B-A	13.48	13.50	0.00	666.05	0.020	0.02	5.516	A
B	C-A	94.39	94.39	0.00	-	-	-	-	-
B	C-B	17.98	18.01	0.00	539.39	0.033	0.03	6.907	A
B	A-B	4.49	4.49	0.00	-	-	-	-	-
B	A-C	157.32	157.32	0.00	-	-	-	-	-
C	B-A	152.83	153.19	0.00	707.49	0.216	0.28	6.500	A
C	C-A	125.86	125.86	0.00	-	-	-	-	-
C	C-B	179.80	180.57	0.00	537.30	0.335	0.51	10.113	B
C	A-B	22.47	22.47	0.00	-	-	-	-	-
C	A-C	148.33	148.33	0.00	-	-	-	-	-
D	B-A	40.45	40.55	0.00	536.09	0.075	0.08	7.265	A
D	C-A	301.16	301.16	0.00	-	-	-	-	-
D	C-B	31.46	31.53	0.00	511.80	0.061	0.07	7.496	A
D	A-B	4.49	4.49	0.00	-	-	-	-	-
D	A-C	283.18	283.18	0.00	-	-	-	-	-
E	B-A	211.26	212.08	0.00	660.27	0.320	0.48	8.048	A
E	C-A	310.15	310.15	0.00	-	-	-	-	-
E	C-B	193.28	194.42	0.00	507.99	0.380	0.63	11.521	B
E	A-B	17.98	17.98	0.00	-	-	-	-	-
E	A-C	292.17	292.17	0.00	-	-	-	-	-

Main results: (09:15-09:30)

Junction	Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
A	B-A	112.93	113.20	0.00	628.44	0.180	0.22	6.989	A
A	C-A	229.62	229.62	0.00	-	-	-	-	-
A	C-B	33.88	33.96	0.00	491.45	0.069	0.07	7.870	A
A	A-B	158.10	158.10	0.00	-	-	-	-	-
A	A-C	252.21	252.21	0.00	-	-	-	-	-
B	B-A	11.29	11.31	0.00	675.38	0.017	0.02	5.422	A
B	C-A	79.05	79.05	0.00	-	-	-	-	-
B	C-B	15.06	15.08	0.00	545.01	0.028	0.03	6.795	A
B	A-B	3.76	3.76	0.00	-	-	-	-	-
B	A-C	131.75	131.75	0.00	-	-	-	-	-
C	B-A	127.98	128.22	0.00	717.87	0.178	0.22	6.109	A
C	C-A	105.40	105.40	0.00	-	-	-	-	-
C	C-B	150.57	151.06	0.00	543.26	0.277	0.39	9.190	A
C	A-B	18.82	18.82	0.00	-	-	-	-	-
C	A-C	124.22	124.22	0.00	-	-	-	-	-
D	B-A	33.88	33.94	0.00	551.18	0.061	0.07	6.960	A
D	C-A	252.21	252.21	0.00	-	-	-	-	-
D	C-B	26.35	26.40	0.00	521.90	0.050	0.05	7.268	A
D	A-B	3.76	3.76	0.00	-	-	-	-	-
D	A-C	237.15	237.15	0.00	-	-	-	-	-
E	B-A	176.92	177.40	0.00	677.87	0.261	0.36	7.202	A
E	C-A	259.73	259.73	0.00	-	-	-	-	-
E	C-B	161.86	162.53	0.00	518.72	0.312	0.46	10.127	B
E	A-B	15.06	15.06	0.00	-	-	-	-	-
E	A-C	244.68	244.68	0.00	-	-	-	-	-