Annex 6

Preliminary Environmental Review

Issue No. : Issue 4

Issue Date : March 2026

Project No. : 2176EA

PRELIMINARY ENVIRONMENTAL REVIEW

FOR

SECTION 16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF BUILDING HEIGHT RESTRICTION FOR PERMITTED 'RELIGIOUS INSTITUTION' AND 'SOCIAL WELFARE FACILITY' USES, AT N.K.I.L. NO. 3635 RP AND 3762, 43 - 45 BERWICK STREET, SHAM SHUI PO, KOWLOON

Prepared by

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COMMERCIAL-IN-CONFIDENCE

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Document Verification

Project Title	Section 16 Planning Application for Proposed Minor Relaxation of Building Height Restriction for Permitted 'Religious Institution' and 'Social Welfare Facility' Uses, at N.K.I.L. No. 3635 RP and 3762, 43 - 45 Berwick Street, Sham Shui Po, Kowloon	**Project No.**	2176EA
Document Title	Preliminary Environmental Review		

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1.1.1. Allied Environmental Consultants Limited (AEC) is commissioned to conduct Preliminary Environmental Review in support of Section 16 Planning Application for Proposed Minor Relaxation of Building Height Restriction for Permitted 'Religious Institution' and 'Social Welfare Facility' Uses (hereafter refer to as the "Proposed Redevelopment") at N.K.I.L. No. 3635 RP and 3762, 43 - 45 Berwick Street, Sham Shui Po, Kowloon (hereafter refer to as the "Subject Site").

2. Project Description

2.1.1. The Subject Site is currently zoned "Government, Institution or Community" ("GIC") on the Approved Cheung Sha Wan Outline Zoning Plan ("OZP") No. S/K5/41. The surrounding areas are mainly zoned as "GIC", "Residential (Group A) 7" ("R(A)7"), "Open Space" ("O") and "Residential (Group A)" ("R(A)").

2.1.2. The Subject Site area is approximately 685.7 m^2. It is located at southwestern side of Berwick Street. ***Figure 2-1*** shows the location of the Subject Site.

2.1.3. The Subject Site is intended to be redeveloped into complex building with a total GFA of approx. 6,031.4 m^2. The Proposed Redevelopment has adopted a building height of twelve (12) storeys building (G/F – 11/F) comprising facilities including child care centre (CCC), special child care centre (SCCC), day care centre for the elderly (DE), neighborhood elderly centre (NEC), integrated elderly rehabilitation service centre (IERSC), office, church hall, activity centre and flat. The layout plan of the Proposed Redevelopment is provided in ***Appendix 2-1***

2.1.4. The Proposed Redevelopment is anticipated to complete and handover to client in 2032.

3. Environmental Legislation and Standards

3.1. Environmental Impact Assessment Ordinance (Cap. 499)

3.1.1. The proposed project is not classified as a designated project under the Environmental Impact Assessment Ordinance ("EIAO") (Chapter 499) and is not required to go through the Environmental Impact Assessment ("EIA") process under the EIAO.

3.1.2. The Technical Memorandum on Environmental Impact Assessment Ordinance ("EIAO-TM") provided details of the assessment criteria requirements related to EIAs under the EIAO. Whilst an EIA is not required for this Project, the criteria established in the EIAO-TM will be considered as reference in this assessment for assessment of air quality, noise and waste management implication where relevant.

3.2. Hong Kong Planning Standards and Guidelines

3.2.1. The Hong Kong Planning Standards and Guidelines ("HKPSG") provides non-statutory guidance, Chapter 9 provides guidance for including environmental considerations in the planning of both public and private developments.

3.3. Practice Notes for Professional Person

3.3.1. The Practice Notes for Professional Person ("ProPECC") provide guidelines on the construction and operation of a Proposed Redevelopment including:

I. Minimizing Noise from Construction Activities (Practice Note PN 1/24);
II. Control of Radon Concentration in New Buildings (Practice Note PN 1/25);
III. Planning of Residential Developments Against Road Traffic Noise (Practice Note PN 4/23);
IV. Application of Sound Insulation in Residential Buildings to Reduce Noise Transmission Between Units (ProPECC PN3/23); and
V. Application of Innovative Noise Mitigation Designs in Planning Private Residential Developments against Road Traffic Noise Impact (Practice Note PN 5/23)

3.4. Other Environmental Legislation and Guidelines

3.4.1. Other environmental legislation, guidelines and technical circulars which are of relevance to the Proposed Redevelopment include:

i. Additional Measures to Improve Site Cleanliness and Control Mosquito Breeding on

Construction Sites (ETWB TC(W) No. 22/2003)

ii. Air Pollution Control (Construction Dust) Regulation

iii. Air Pollution Control (Fuel Restriction) Regulation

iv. Air Pollution Control (Furnaces, Ovens and Chimneys) (Installation and Alteration) Regulations

v. Air Pollution Control (Non- Road Mobile Machinery) (Emission) Regulation

vi. Air Pollution Control Ordinance (Cap.311)

vii. Code of Practice for Interim Measures for Conveyance of Categories 3 & 4 Dangerous Goods by Vehicles (FSD)

viii. Code of Practice on the Packaging, Labelling and Storage of Chemical Waste

ix. Emissions Control of NRMM in Capital Works Contracts of Public Works (DEVB TC(W) No. 1/2015)

x. Enhanced Specification for Site Cleanliness and Tidiness (DEVB TC(W) No. 8/2010)

xi. Environmental Management on Construction Sites (ETWB TC(W) No. 19/2005)

xii. Fill Management (WBTC No. 12/2000)

xiii. Guidance Manual for Use of Risk-based Remediation Goals (RBRGs) for Contaminated Land Management (Guidance Manual), EPD, Revised in April 2023

xiv. Guidance Note for Contaminated Land Assessment and Remediation (Guidance Note), EPD, Revised in April 2023

xv. Guidelines for Estimating Sewage Flows for Sewage Infrastructure Planning Version 1.0 (Report No.: EPD/TP1/05" ("GESF")

xvi. Management of Construction and Demolition Materials (CEDD Technical Circular No. 11/2019)

xvii. Practice Guide for Investigation and Remediation of Contaminated Land (Practice Guide), EPD, Revised in April 2023

xviii. Public Cleansing and Prevention of Nuisances Regulation (Cap. 132BK)

xix. Public Dumps (Works Branch Technical Circular (WBTC No. 2/93)

xx. Public Filling Facilities (WBTC No. 2/93B)

xxi. Public Health and Municipal Services Ordinance (Cap. 132)

xxii. Recommended Pollution Control Clauses for Construction Contracts

xxiii. Regulating Action against Contractors for Occurrence of a Serious Incident or Conviction for Site Safety or Environmental Offences (DEVB TC(W) No. 5/2023)

xxiv. Section 4.1.3 of Chapter 4 of the Project Administration Handbook for Civil Engineering Works

xxv. Sewerage Manual (Part 1) - Key Planning Issues and Gravity Collection System (Third Edition, 5/2013)

xxvi. Specification Facilitating the Use of Recycled Aggregates (WBTC No. 12/2002)

xxvii. Technical Memorandum - Standards for Effluents Discharged into Drainage and Sewerage Systems, Inland and Coastal Waters

xxviii. Technical Memorandum for the Assessment of Noise from Places Other Than Domestic Premises, Public Places or Construction Sites (IND-TM)

xxix. Trip Ticket System for Disposal of Construction & Demolition Materials (DEVB TC(W) No. 6/2010)

xxx. Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap.354N)

xxxi. Waste Disposal (Chemical Waste) (General) Regulation (Cap.354C)

xxxii. Waste Disposal Ordinance (Cap. 354)

xxxiii. Water Pollution Control Ordinance (Cap.358)

xxxiv. Wet Soil in Public Dumps (WBTC No. 16/96)

4. Potential Environmental Impacts

4.1.1. The project scope involves construction of a development consists of 12-storey building comprising facilities including care centre, office, church hall, flat etc. This PER is prepared to examine any possible environmental problems that may be caused to or by the Proposed Redevelopment during and after construction and the proposed mitigation measures to tackle them.

4.1.2. This PER addresses different categories of possible environmental issues arising from the construction and/or operation of the proposed project in details in the subsequent sections:

I. Air Quality
II. Noise
III. Waste Management

5. Air Quality

5.1. Objectives

5.1.1. Main objective of the study is to evaluate potential air quality impacts associated with the Proposed Redevelopment during construction and operation phase. Where necessary, appropriate mitigation measures are recommended to reduce the impacts from the Proposed Redevelopment and the nearby sources at the Air Sensitive Receivers to satisfy the relevant environmental ordinance, standards and guidelines.

5.2. Environmental Legislation, Standards and Guidelines

Air Quality Objectives (AQOs)

5.2.1. Air quality in Hong Kong is governed under the Air Pollution Control Ordinance ("APCO") (Cap. 311) and its subsidiary Regulations. Under this legislation, the Government has designated Air Control Zones ("ACZ") for the whole territory, along with the new Air Quality Objectives ("AQOs") which took effect in 2025. The AQOs stipulate the statutory limits for 7 pollutants and dictate the maximum number of allowable exceedances over specified time periods. For details, please refer to ***Table 5-1*** below.

Table 5-1 Hong Kong Air Quality Objectives (AQOs)

Pollutants	Averaging Time	Concentration Limit (ug/m^3)[1]	Number of Exceedances to be allowed per calendar year
Sulphur Dioxide (SO_2)	10-minute	500	3
	24-hour	40	3
RSP or PM_{10}[2]	1-year	30	N/A
	24-hour	75	9
FSP or $PM_{2.5}$[3]	1-year	15	N/A
	24-hour	37.5	18
Nitrogen Dioxide (NO_2)	1-year	40	N/A
	24-hour	120	9
	1-hour	200	18
Ozone (O_3)	8-hour	160	9
	Peak Season	100	N/A
Carbon monoxide (CO)	1-hour	30,000	0
	8-hour	10,000	0
	24-hour	4,000	0
Lead (Pb)	1-year	0.5	N/A

Note:
[1] All measurements of the concentration of gaseous air pollutants, i.e., sulphur dioxide, nitrogen dioxide, ozone and carbon monoxide, are to be adjusted to a reference temperature of 293Kelvin and a reference pressure of 101.325 kilopascal.
[2] Respirable suspended particulates means suspended particles in air with a nominal aerodynamic diameter of 10 µm or less.
[3] Fine suspended particulates means suspended particles in air with a nominal aerodynamic diameter of 2.5 µm or less.

Hong Kong Planning Standards and Guidelines

5.2.2. General design guidelines are stated in the Hong Kong Planning Standards and Guidelines ("HKPSG") as indicated in ***Table 5-2.***

Table 5-1 Guidelines on Usage of Open Space Site under HKPSG

Polluting Uses	Sensitive Uses	Recommended Buffer Distance
Multi-storey industrial building	(a) residential areas, schools (b) commercial and GIC uses	100m 30m
Industrial areas	hospitals	500m
Industrial Chimneys Difference in Heights between Industrial Chimney Exit and The Site:		
< 20m	a) active and passive recreational uses (b) passive recreational uses	> 200m 5 – 200m
20 – 30m	a) active and passive recreational uses (b) passive recreational uses	> 100m 5 – 100m
30 – 40m	a) active and passive recreational uses (b) passive recreational uses	> 50m 5 – 50m
> 40m	a) active and passive recreational uses	> 10m
Odour sources	sensitive uses	200m
Dusty uses	sensitive uses	100m
Trunk roads	(a) active and passive recreational uses (b) passive recreational uses (c) amenity areas	>20m 3-20m < 3m
Primary distributors	(a) active and passive recreational uses (b) passive recreational uses	>20m 3- 20m
District distributors	(a) active and passive recreational uses (b) passive recreational uses	>10m <10m
Local distributors	(a) active and passive recreational uses (b) passive recreational uses	>5m <5m
Construction and Earth Moving Activities	(a) active and passive recreational uses (b) passive recreational uses	>50m <50m

5.3. Other environmental legislation, standard and guidelines

5.3.1. Other environmental legislation, standard and guidelines which are of relevance to the Proposed Redevelopment include:

i. Air Pollution Control Ordinance (APCO) (Cap. 311)

ii. Air Pollution Control (Construction Dust) Regulation
iii. Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation
iv. Air Pollution Control (Fuel Restriction) Regulation
v. Recommended Pollution Control Clauses for Construction Contracts
vi. DevB's Technical Circular No. 1/2015, Emissions Control of NRMM in Capital Works Contracts of Public Works
vii. DEVB's TC No.13/2020, Timely Application of Temporary Electricity and Water Supply for Public Works Contracts and Wider Use of Electric Vehicles in Public Works Contracts

5.4. Background air quality

5.4.1. The nearest EPD air quality monitoring station (AQMS) is Sham Shui Po monitoring station. The recent five years (2020-2024) averaged concentration of air pollutants are presented in ***Table 5-3*** below. No exceedances of pollutants were recorded at the Sham Shui Po EPD AQMS during the period of 2020-2024.

Table 5-3 Average Concentrations of Pollutants in the Recent Five Years (Year 2020 – 2024) at Sham Shui Po Air Quality Monitoring Station

Pollutant	Averaging Time	AQO[1]	Pollutant Concentration (μg/m³)[2]					
			2020	2021	2022	2023	2024	Average
RSP	10th Highest 24-hour	75 (9)	59	67	49	50	58	56.6
	Annual	30	28	28	25	24	24	25.8
FSP	19th Highest 24-hour	37.5 (18)	27	28	27	25	33	28.0
	Annual	15	14	14	12	13	15	13.6
NO_2	19th Highest 1-hour	200 (18)	151	171	158	166	155	160.2
	10th Highest 24-hour	120 (9)	84	85	79	83	74	81.0
	Annual	40	45	47	43	43	43	44.2
SO_2	4th Highest 10-Min	500 (3)	76	64	88	78	49	71

Pollutant	Averaging Time	AQO[1]	Pollutant Concentration (µg/m³)[2]					
			2020	2021	2022	2023	2024	Average
	4th Highest 24-hour	40 (3)	12	12	13	10	10	11.4
O_3	10th Highest 8-hour	160 (9)	121	123	148	116	134	128.4
	Peak season	100	70	62	88	70	69	71.8
CO	1st Highest 1-hour	30000 (0)	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	1st Highest 8-hour	10000 (0)	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	1st Highest 24-hour	4000 (0)	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.

Note:

[1] Values in ( ) indicate number of exceedances allowed under the AQO.
[2] Bolded and underlined values represent exceedances of the AQOs.

5.4.2. The commencement year of the project is 2032. The PATH v3.0 data at (39,35), (39,34), (40,35), (40,34) in Year 2030 at L1 (0m-17m) is referenced to represent the future background air quality concentrations at the Subject Site area. A summary of the background concentrations of Year 2030 is summarized in ***Table 5-4.***

Table 5-4 Background Air Pollutants in Year 2030 Extracted from the PATH Model (PATH v3.0)

Pollutant	Averaging Time	Prevailing AQO[1]	Data Summary	PATHv3.0 Grid in Year 2030 (L1)			
				39,35	39,34	40,35	40,34
FSP	24-hr	37.5 (18)	19th Max	28.77	29.98	28.21	29.79
			No. of Exceedance(s)	2	3	2	3
	Annual	15	-	11.82	12.66	11.85	12.51
RSP	24-hr	75 (9)	10th Max	48.25	50.40	48.11	50.55
			No. of Exceedance(s)	0	0	0	0
	Annual	30	-	19.31	20.28	19.27	20.10

Pollutant	Averaging Time	Prevailing AQO[1]	Data Summary	PATHv3.0 Grid in Year 2030 (L1)			
				39,35	39,34	40,35	40,34
SO_2	10-min	500 (3)	4th Max	21.32	18.66	21.20	22.97
			No. of Exceedance(s)	0	0	0	0
	24-hr	40 (3)	4th Max	6.53	5.94	6.56	6.55
			No. of Exceedance(s)	0	0	0	0
NO_2	1-hr	200 (18)	19th Max	91.52	96.20	89.66	95.87
			No. of Exceedance(s)	0	0	0	0
	24-hr	120 (9)	10th Max	36.48	41.74	34.12	40.80
			No. of Exceedance(s)	0	0	0	0
	Annual	40	-	17.53	20.60	16.54	19.64
O_3	8-hr	160 (9)	10th Max	**168.59**	**168.36**	**169.29**	**166.70**
			No. of Exceedance	**16**	**14**	**16**	**13**
	Peak Season	100	-	**119.09**	**118.86**	**117.31**	**115.35**
CO	1-hr	30,000	Max	522.89	533.04	522.85	537.48
			No. of Exceedance	0	0	0	0
	8-hr	10,000	Max	489.81	511.84	488.07	507.77
			No. of Exceedance	0	0	0	0
	24-hr	4,000	Max	464.71	484.57	460.48	479.90
			No. of Exceedance	0	0	0	0

Note:

[1] Values in ( ) indicate number of exceedance allowed under the AQO.

[2] Bolded and underlined values represent exceedances of the AQOs

5.4.3. As shown in ***Table 5-4***, the background air pollutants at PATH Grid (39,35), (39,34), (40,35), (40,34) in Year 2030 are well below the prevailing AQO criteria, except for exceedance of the daily maximum 8-hour average and peak season for O_3 criterion. However, no ozone emission would be generated in the Proposed Redevelopment during construction and operation phase so the exceedances are considered as a result of regional photochemical formation rather than local emission sources. In addition, the EPD's "Air Quality in Hong Kong 2023" report stated that NO emissions from motor vehicles have the potential to react with and remove O_3 in the air, and regions with heavy traffic normally have lower ozone levels than areas with light traffic. It is therefore possible that the Subject Site may contribute to a depletion in O_3 in the immediate area along main roads. Hence, O_3 not considered as a key parameter in this assessment.

5.5. Air Sensitive Receivers

5.5.1. Study area for AQIA has been identified by a distance of 500 m from the boundary of the Subject Site. Air Sensitive Receivers ("ASRs") within the 500 m assessment area are identified in accordance with Annex 1 and Annex 12 of the Technical Memorandum on Environmental Impact Assessment Process (TM-EIAO).

5.5.2. The nearest ASRs from all directions are selected as the representative ASR as presented in ***Table 5-5***. ***Figure 5-1*** illustrates the extent of the study area and the locations of the representative ASRs. Air sensitive uses of the Proposed Redevelopment (including church hall, study room, training room, treatment room, offices, bedrooms, etc.) should also be treated as ASRs during operational phase.

Table 5-5 Representative Air Sensitive Receivers

ID	Description	Use	Distance from the Site Boundary (m)	Roof Level (mPD)	Base Level (mPD)
ASR01	Berwick Court	Residential	<5	44.5	13.5
ASR02	Hong Kong Institute of	School	<5	25.5	6.6

ID	Description	Use	Distance from the Site Boundary (m)	Roof Level (mPD)	Base Level (mPD)
	Technology				
ASR03	Shek Kip Mei Estate Mei Shan House Block 42	Residential	20	42.3	12.1
ASR04	Shek Kip Mei Shopping Centre	Shopping Centre	45	12.1	6.9
ASR05	Shek Kip Mei Football Field	Sports field	107	8.7	8.7
ASR06	The Elchk Faith Lutheran School (Second Campus)	School	217	27.3	10.5
ASR07	St. Francis of Assisi's Church	Place of Worship	151	7.7	29.8
ASR08	High Point	Residential	20	110.2	21.8
ASR09	Residential (Group A) 7 – Belgravia Place II	Residential	40.19	110.0	6.9
ASR10	Proposed Redevelopment	Community	0	60.2	7.6

5.6. Potential Air Quality Impact in Construction Phase

5.6.1. The construction works will include building demolition, foundation and structural works. Air quality impact will be potentially generated from the construction activities, vehicular emissions, and building demolition works, including concrete breaking, debris handling, and hauling. Details such as the scale of demolition, extent of site formation and excavation, volume of excavated materials to be handled, and the number of mechanical equipment operating concurrently will be determined during the detailed design stage.

5.6.2. The construction of the Proposed Redevelopment has the potential to cause dust nuisance if not properly managed. Dust in terms of Respirable Suspended Particulates (RSP) and Fine Suspended Particulates (FSP) are the key air pollutants during construction.

5.6.3. In accordance with the Recommended Pollution Control Clauses for Construction Contracts

updated in October 2022, the following requirements shall be complied:

- The Contractor shall observe and comply with the Air Pollution Control Ordinance and its subsidiary regulations, particularly the Air Pollution Control (Open Burning) Regulation, Air Pollution Control (Construction Dust) Regulation, Air Pollution Control (Non-Road Mobile Machinery) (Emission) Regulation, Air Pollution Control (Fuel Restriction) Regulation and Air Pollution Control (Smoke) Regulation.

- In addition to the statutory requirements of the Regulations, the Contractor of the public works contracts shall also observe the requirements as set out in the government circulars, including DEVB's TC No, 13/2020 (Timely Application of Temporary Electricity and Water Supply for Public Works Contracts and Wider Use of Electric Vehicles in Public Works Contracts) and DEVB's TC No. 1/2015 (Emissions Control of NRMM in Capital Works Contracts of Public Works).

- The Contractor shall undertake at all times to prevent dust nuisance and smoke as a result of his activities, and minimise the emission of air pollutants from construction plant and equipment.

- The Contractor shall ensure that there will be adequate water supply/storage for dust suppression.

- The Contractor shall devise, arrange methods of working and carrying out the works in such a manner so as to minimise dust impacts on the surrounding environment, and shall provide experienced personnel with suitable training to ensure that these methods are implemented.

- For better smoke control, the Contractor shall not use diesel hammer for percussive piling.

- Before the commencement of any work, the Engineer may require the methods of working, plant, equipment and air pollution control system to be used on the site to be made available for inspection and approval to ensure that they are suitable for the project.

- The Contractor shall erect site hoarding of not less than 2.4 m in height.

- The Contractor shall locate haul roads as far as practicable away from the concerned ASRs.

- The Contractor shall avoid carrying out dusty works or placing stockpiles near the concerned ASRs.

- The Contractor shall minimize unpaved and exposed earth surfaces by providing immediate covering or permanent paving upon completion of the relevant works.

- Weekly site audit shall be carried out to ensure the proper implementation of the proposed measures.

5.6.4. With the implementation of good site practices and sufficient dust suppression measures as stipulated under the Air Pollution Control (Construction Dust) Regulation, significant dust generated from the construction of the Proposed Redevelopment is not anticipated. Hence, adverse dust impact during the construction phase would not be anticipated.

5.6.5. In accordance with the Air Pollution Control (Fuel Restriction) Regulation which was enacted in 1990 and amended in 2024, the regulation imposes legal control on the type of fuels allowed for use and their sulphur contents in commercial and industrial processes. Gaseous fuel, conventional solid fuel with a sulphur content not exceeding 1% by weight or liquid fuel with a sulphur content of not more than 0.001% by weight and a viscosity not more than 6 centistokes at 40^{o}C, such as Ultra Low Sulphur Diesel (ULSD) are permitted to be used in commercial and industrial processes.

5.6.6. Construction-related machines employed in the Subject Site will follow the requirements as stipulated in the Air Pollution Control (Non-Road Mobile Machinery) (Emission) Regulation to control potential emissions from non-road mobile machinery. Therefore, gaseous emission from construction equipment would be minor and would not cause any adverse air quality impact.

5.6.7. The Subject Site is relatively small and with the implementation of good site practices and sufficient dust suppression measures stipulated under the Air Pollution Control (Construction Dust) Regulation and the compliance with Air Pollution Control (Non-Road Mobile Machinery) (Emission) Regulation, no adverse cumulative constructional air quality impact.

5.6.8. All trucks will be thoroughly washed and those loaded with dusty materials will be covered

by clean impervious sheets prior to leaving the construction site. Hence, the adverse air quality impact from construction vehicles is not anticipated. In addition, routing of vehicles and positioning of construction plant should be as far as possible from ASRs.

5.6.9. The construction work for Residential (Group A) 7 namely "Belgravia Place II" that located within the 500m assessment area is on-going and expected to be completed in 2026. The construction work for the Proposed Redevelopment is anticipated to be commenced in 2030. Therefore, cumulative air quality impact due to construction activities for both developments are not anticipated.

5.7. Potential Air Quality Impact in Operation Phase

5.7.1. Study area for AQIA has been identified by a distance of 500m from the boundary of the Subject Site. ***Figure 5-1*** illustrates the extent of the study area. Vehicular emissions and industrial emissions are the key air pollution sources in the vicinity of the Subject Site that might impose air quality impacts during operation phase.

Vehicular Emissions from Road Traffic

5.7.2. The Subject Site is surrounded by four open roads, namely Berwick Street (Northeast from the Subject Site), Nam Cheong Street (Southeast from the Subject Site), Pei Ho Street (Northwest from the Subject Site) and Tai Po Road (Southwest from the Subject Site). According to the information from the Annual Traffic Census (2023) published by Transport Department, Pei Ho Street and Berwick Street are classified as Local Distributor ("LD"), Nam Cheong Streat as District Distributor ("DD") while Tai Po Road is classified as Primary Distributor ("PD").

5.7.3. With reference to the HKPSG, recommended minimum buffer distance from the nearby roads to minimise potential adverse air quality impact due to open-road vehicular emissions have been adopted as summarised in ***Table 5-6.***

Table 5-6 Buffer Distance from the Adjacent Roads

Road Name	Road Type	HKPSG Guideline Buffer Distance Requirement
Pei Ho Street	Local Distributor	5m
Berwick Street		5m

Road Name	Road Type	HKPSG Guideline Buffer Distance Requirement
Nam cheong Street	District Distributor	10m
Tai Po Road	Primary Distributor	20m

5.7.4. Buffer zone is presented in ***Figure 5-2 to Figure 5-18***. The Proposed Redevelopment would meet the buffer distance classified in HKPSG and air sensitive uses would be located outside the buffer zone required. Hence, no adverse impact is anticipated from vehicular emissions.

Industrial Emission from Chimneys

5.7.5. The Proposed Redevelopment will not include any chimney for fuel combustion. Emergency generator will be provided in the Proposed Redevelopment. Emergency generator is for emergency use only and will not be used during normal operation.

5.7.6. The Shek Kip Mei Health Centre that located within the 500m of the assessment area is currently closed for redevelopment. As no information available for potential emission source at the redeveloped health centre, the existence of such emission points in the future facility cannot be confirmed at this stage. Nevertheless, the distance between the health centre and the Subject Site is greater than 200m as shown in ***Figure 5-19***, which meets the recommended buffer distance for industrial chimneys with a height of less than 20m as specified in HKPSG. Therefore, even in the event that a chimney or emission outlet is included in the future design, no adverse air quality impact on the Proposed Redevelopment is anticipated.

Vehicular Emission in Car Park

5.7.7. The proposed carpark will satisfy the requirements, including design, maintenance and operation of the ventilation system as stipulated in the ProPECC PN 2/96 – Control of Air Pollution in Car Park. The exhaust outlet of the ventilation system will locate as far as possible from nearby air sensitive uses.

Odour Impact

5.7.8. Un Chau Street Refuse Collection Point (RCP) is located approximately 160m of the west of the Proposed Redevelopment. It is anticipated that the RCP will adopt appropriate mitigation and standard housekeeping measures in its daily operation. Therefore, potential odour impacts on the Proposed Redevelopment are expected to be insignificant.

5.8. Conclusion

5.8.1. Fugitive dust due to construction works and gaseous emission from construction equipment would make insignificant air quality impacts to the nearby air sensitive receivers, with the implementation of dust suppression measures and good site practice as stipulated under Air Pollution Control (Construction Dust) Regulation and Air Pollution Control (Non- Road Mobile Machinery) (Emission) Regulation.

5.8.2. Air sensitive use in the Subject Site have sufficient horizontal buffer distance from nearby road sections to minimize the air quality impacts of vehicular emissions as promulgated in the HKPSG. Hence, no adverse air quality impact is anticipated at the Subject Site during operation phase.

5.8.3. For industrial emission within the Proposed Redevelopment, the emergency generator is for emergency purpose only and it is not considered as an emission source under normal operation. For industrial emission within the 500m assessment area, the potential emission source is located beyond the recommended buffer distance. Hence, there is no significant impact on air quality.

5.8.4. Given the implementation of proper mitigation and housekeeping measures from the RCP, the potential odour impact on the Proposed Redevelopment is considered insignificant.

6. Noise

6.1. Objectives

6.1.1. Main objective of the study is to evaluate potential noise impacts associated with the Proposed Redevelopment. Where necessary, appropriate mitigation measures are recommended to reduce the impacts from the Proposed Redevelopment and the nearby sources at the Noise Sensitive Receivers to satisfy the relevant environmental ordinance, standards and guidelines.

6.2. Environmental Legislation, Standards and Criteria

Road Traffic Noise

6.2.1. Noise standards are recommended in Chapter 9, "Environment" of the HKPSG for planning against noise impact from sources such as road traffic, railway and aircraft. The applicable standards based on the proposed use are summarized in ***Table 6-1***:

Table 6-1 Noise Criteria for Road Traffic Noise

Proposed Usage	Road Traffic Noise Standard (dB(A))
All domestic premises including temporary housing accommodation	70
Hotels and hostels	70
Offices	70
Educational institutions including kindergartens, child care centres and all others where unaided voice communication is required	65
Places of public worship and courts of law	65
Hospitals, clinics, convalescences and	55

Proposed Usage	Road Traffic Noise Standard (dB(A))
residential care homes for the elderly - diagnostic rooms - wards	

6.2.2. The noise standard applies to uses which rely on opened windows for ventilation.

Existing and Planned Fixed Plant Noise

6.2.3. Existing Fixed Plant Noise is controlled under the NCO's Technical Memorandum for the Assessment of Noise from Places other than Domestic Premises, Public Places or Construction Sites (IND-TM), which shall not exceed the Acceptable Noise Level (ANL) for a Noise Sensitive Receiver.

6.2.4. More stringent criteria are applicable for planned fixed plants, as stipulated in the Chapter 9, "Environment" of the HKPSG with the following requirements: 5dB(A) below the appropriate ANLs in the IND-TM; or the prevailing background noise levels, whichever is lower.

Construction Noise

6.2.5. The statutory legislation controlling construction noise is the Noise Control Ordinance (NCO) (Cap.400). The following construction activities are subjected to statutory control under the NCO, as listed in the Practice Notes for Professional Person (ProPECC) PN 1/24 "Minimizing Noise from Construction Activities", A Construction Noise Permit (CNP) will be required.

- Percussive piling;
- Construction works other than percussive piling using powered mechanical equipment (PME) between the hours of 19:00 and 07:00 on any day not being a general holiday, including Sunday and at any time on a general holiday, including Sunday (i.e. restricted hours); and
- Construction works with prescribed construction works within the Designated Area of Kowloon West in restricted hours

6.2.6. Regardless of any description or assessment made in this section, in assessing a filed application for a CNP the Authority shall follow the relevant guidelines and requirements

according to Technical Memoranda. The Authority will consider all the factors affecting their decision taking contemporary situations/ conditions into account. Nothing in this study shall pre-empt the Authority in making their decisions, and there is no guarantee that a CNP will be issued. If a CNP is to be issued, the Authority may include any conditions they consider appropriate and such conditions are to be followed while the works covered by the CNP are being carried out. Failing to do so may lead to cancellation of the CNP and prosecution action under the NCO.

6.2.7. The carrying out of percussive piling is prohibited between 1900 and 0700 hours on any day not being a general holiday, including Sunday and at any time on a general holiday, including Sunday). A valid construction noise permit (CNP) is required for the carrying out of percussive piling during the permitted hours. The "Technical Memorandum on Noise from Percussive Piling" (PP-TM) sets out the requirements for working and determination of the permitted hours of operations.

6.2.8. Other than the abovementioned construction activities, ProPECC PN 1/24 stipulates noise criteria of 65 – 75 dB(A) for daytime construction activities, as shown in the ***Table 6-2***.

Table 6-2 Noise Criteria for Construction Activities

Noise Sensitive Receivers	**Noise Level, $L_{eq\ (30mins)}$* dB(A)**
	0700 to 1900 hours on any day not being a general holiday
- All domestic premises - Temporary housing accommodation - Hostels - Convalescences homes - Homes for the aged	75
- Places of public worship - Courts of law - Hospitals and medical clinics	70
- Educational institutions (including kindergartens and nurseries)	70 65 (During examinations)

* Note: Leq(30min) is a standard measure of noise level which means the continuous equivalent noise level over a 30 minute interval.

6.3. Road Traffic Noise Impact Assessment

6.3.1. The noise standards in the HKPSG apply to uses which rely on opened windows for ventilation. Livingroom and bedrooms of residential units located at 11/F are identified as noise sensitive receivers. On the other hand, the proposed facilities at G/F to 10/F will be provided with mechanical ventilation and do not rely on openable windows for ventilation. Thus, they are not considered as representative noise sensitive receiver in this study, which anticipated that there is no significant impact on the G/F to 10/F of Proposed Redevelopment from traffic noise.

Assessment Methodology

6.3.2. The potential noise arising from nearby existing road carriageways on the Proposed Redevelopment has been assessed via the use of mathematical modelling. It involved the prediction of future noise impacts on Noise Sensitive Receiver (NSR) arising from peak hourly traffic flows situated within or in the vicinity of the Subject Site. This prediction considers the worst-case scenario for 16 years beyond the Proposed Redevelopment target completion year 2032 as conservative approach.

6.3.3. ***Appendix 6-1*** presents the predicted peak hour traffic flows and speed limits on the main road carriageways surrounding the Subject Site for year 2048.

6.3.4. The U.K. Department of Transport's procedure "*Calculation of Road Traffic Noise*" was used to predict the hourly L_{10} noise levels generated from road traffic at selected representative NSRs. The predicted noise levels were compared with the relevant HKPSG noise standard (i.e. $L_{10(1\text{-hour})}$ 70dB(A)). Practicable noise mitigation measures have been recommended where necessary.

6.3.5. Road heights are defined according to 1:1000 survey map from Lands Department.

Noise Sensitive Receivers

6.3.6. Residential dwellings with openable windows/doors for prescribed ventilation purposes are identified as Noise Sensitive Receivers (NSRs). Representative noise assessment points (NAPs) have been assigned at concerned ventilation openings of NSRs. All assessment points were taken at 1.2m above the floor and 1m away from the façade of openable windows in rooms of sensitive use (e.g. living rooms and bedrooms).

6.3.7. On the other hand, the proposed facilities at G/F to 10/F will be provided with mechanical

ventilation and do not rely on openable window for ventilation. Thus, they are not considered as representative noise sensitive receiver in this study.

6.3.8. ***Figure 6.1*** shows the location of the representative noise assessment points for road traffic noise impact assessment.

Base Case Scenario Assessment Results

6.3.9. Road traffic noise prediction is carried out for a "base case scenario" which is based on the building design for Proposed Redevelopment. The prediction results indicate that 50% of the residential units will comply with the HKPSG traffic noise criteria of 70dB(A). Refer to the maximum AM and PM peak hour traffic flow, predicted noise levels at the NSRs are presented in ***Appendix 6-2***. Therefore, mitigation measures would be required to minimize the traffic noise impact as practical as possible. Summary of traffic noise prediction result is shown in *Table 6-3*.

Table 6-3 Traffic Noise Prediction Results, Base Case Scenario

Total No. of Units	2
Total No. of Units Exceed Traffic Noise Criteria	1
Percentage of Compliance	50%
Maximum Predicted Traffic Noise Level, $L_{10,peak\ hour}$ in dB(A)	71

Mitigation Measure – Acoustic windows (baffle type)

6.3.10. As mentioned in **Section 6.3.9**, certain units are exposed to traffic noise levels exceeding 70dB(A) criterion under maximum AM and PM peak hour traffic condition. Therefore, the following noise mitigation measures have been considered and included in the Proposed Redevelopment.

6.3.11. The acoustic window (baffle type) is proposed and considered as noise mitigation measures for some habitable rooms with noise exceedance. Each acoustic window comprises of two layers of window, i.e. typical window at outer layer and sliding glazing at inner layer, and with air gap in between for the supply of fresh air.

6.3.12. The proposed acoustic window (baffle type) is made reference to the acoustic window (baffle type) adopted at the following precedent case:

- ProPECC PN5/23 Application of Innovation Noise Mitigation Designs published by

Environmental Protection Department (hereinafter named to as "PN1")

6.3.13. The noise reduction for "PN1" can achieve 6 dB(A); details are provided in ***Appendix 6-3***. The adopted type of acoustic window (baffle type) for each habitable room is selected based on the room size and room layout of the Proposed Redevelopment, the details of proposed acoustic window and referenced case for each habitable room is presented in ***Appendix 6-4***.

6.3.14. In consideration of the differences in room sizes between precedent cases and the Proposed Redevelopment, further adjustment is needed and is made by accounting the difference between the room size adopted for the Proposed Redevelopment and in the precedent cases if necessary.

6.3.15. Moreover, the performance of sound attenuation of acoustic window (baffle type) is affected by various parameters. To ensure the sound attenuation performance of the proposed acoustic window (baffle type), the overlapping length of the acoustic window adopted for habitable rooms will be equal or larger the reference case. The outer opening area, inner opening area and gap width of the acoustic window will be equal or smaller than the reference case.

6.3.16. For conservative approach, the corrected sound attenuation performance of the proposed acoustic window (baffle type) would not be assumed at greater than the precedent case even the room size of Proposed Redevelopment is larger than precedent case.

6.3.17. The detailed dimension of proposed acoustic window (baffle type) and adopted sound attenuation performance for proposed acoustic window (baffle type) with room size adjustments are shown in ***Appendix 6-3***.

Mitigated Scenario Assessment Results

6.3.18. With the mitigation measures as discussed above incorporated in the design, it is anticipated that the road traffic noise compliance rate 100% could be achieved as shown in ***Table 6-4.*** Predicted noise levels at all the NSRs are shown in ***Appendix 6-2*.** The positions of traffic noise mitigation measures are shown in ***Figure 6-2***.

Table 6-4 Traffic Noise Prediction Results, Mitigated Scenario

Total No. of Units	2
Total No. of Units Exceed Traffic Noise Criteria	0
Percentage of Compliance	100%

Maximum Predicted Traffic Noise Level, $L_{10,peak\ hour}$ in dB(A)	68

Summary

6.3.19. With mitigation measures as detailed above, no adverse traffic noise impact is anticipated.

6.4. Fixed Plant Noise Assessment

Environmental Legislation and Guidance

6.4.1. Existing Fixed Plant Noise is controlled under the Noise Control Ordinance (NCO)'s Technical Memorandum for the Assessment of Noise from Places other than Domestic Premises, Public Places or Construction Sites (IND-TM), which shall not exceed the Acceptable Noise Level (ANL) for a Noise Sensitive Receiver. More stringent criteria are applicable for planned fixed plants, as stipulated in the HKPSG with the following requirements: 5dB(A) below the appropriate ANLs in the IND-TM; or the prevailing background noise levels, whichever is lower.

6.4.2. The ASR of NSRs and the ANLs for NSRs with different ASR are summarized in ***Table 6-5*** and ***Table 6-6*** respectively.

Table 6-5 Area Sensitivity Ratings of Noise Sensitive Receivers

Type of Area Containing NSR	**Degree to which NSR is affected by Influencing Factors (IFs)**		
	Not affected	**Indirectly affected**	**Directly affected**
Rural area, including country parks, or village type developments	A	B	B
Low density residential area consisting of low-rise or isolated high-rise developments	A	B	C
Urban area	B	C	C
Area other than those above	B	B	C

Table 6-6 Acceptable Noise Levels for Fixed Noise Sources

Time Period	ANL, dB(A)		
	ASR "A"	ASR "B"	ASR "C"
Day (0700 to 1900 hours)	60	65	70
Evening (1900 to 2300 hours)	60	65	70
Night (2300 to 0700 hours)	50	55	60

6.4.3. Taking into account of the Proposed Redevelopment, the area containing NSRs is located at urban area. Besides, no IF is identified in the surrounding of the Proposed Redevelopment. As a result, the noise sensitive facades in the vicinity of the Proposed Redevelopment will be considered as not affected by the IF with recommended area sensitivity rating (ASR) of "B" in this assessment.

6.4.4. Nonetheless, G/F to 10/F of the Proposed Redevelopment will be equipped with mechanical ventilation and not rely on opened windows for ventilation. The noise standard in the HKPSG apply to uses which rely on opened windows for ventilation. In view of the above, it is anticipated that there is no significant impact on the G/F to 10/F of Proposed Redevelopment from fixed plant noise

6.4.5. The adopted noise assessment criteria for the fixed plant noise assessment are summarized in ***Table 6-7*** and ***Table 6-8***.

Table 6-7 Noise Assessment Criteria for Existing Fixed Plant Noise

Existing Fixed Plant Noise Criteria	
Time Period	**ANL, dB(A)**
Day (0700-1900) / Evening (1900-2300)	65
Night (2300-0700)	55

Table 6-8 Noise Assessment Criteria for Planned Fixed Plant Noise

	Existing Fixed Plant Noise Criteria	**Planned Fixed Plant Noise Criteria**		
Time Period	**ANL, dB(A)**	**ANL-5, dB(A)**	**Prevailing Background Noise, dB(A)**	**Adopted Noise Criteria, dB(A)**
Day (0700-1900) / Evening (1900-2300)	65	60	Prevailing Background Noise, dB(A)	Whichever is lower
Night (2300-0700)	55	50		

Existing Fixed Plant Noise on the Proposed Redevelopment

6.4.6. Potential fixed plant noise sources from the fixed plant on surrounding buildings are identified within 300m of the Proposed Redevelopment.

6.4.7. The inventory of the potential fixed plant noise sources is tabulated in ***Table 6-9*** and shown in ***Figure 6-3***. The reference catalogue for the fixed plant is provided in ***Appendix 6-5***.

Table 6-9 Inventory of the potential fixed plant noise sources

Source ID	**Source Type**	**Location**	**Sound Power Level dB(A)**
YHA-01	VRV	YHA Mei Ho House Youth Hostel	87
YHA-02	VRV	YHA Mei Ho House Youth Hostel	87
YHA-03	VRV	YHA Mei Ho House Youth Hostel	87
YHA-04	VRV	YHA Mei Ho House Youth Hostel	87
YHA-05	VRV	YHA Mei Ho House Youth Hostel	83
YHA-06	VRV	YHA Mei Ho House Youth Hostel	83
YHA-07	VRV	YHA Mei Ho House Youth Hostel	83
YHA-08	VRV	YHA Mei Ho House Youth Hostel	87
YHA-09	VRV	YHA Mei Ho House Youth Hostel	83
YHA-10	VRV	YHA Mei Ho House Youth Hostel	83
YHA-11	VRV	YHA Mei Ho House Youth Hostel	83
YHA-12	VRV	YHA Mei Ho House Youth Hostel	83

Source ID	Source Type	Location	Sound Power Level dB(A)
YHA-13	VRV	YHA Mei Ho House Youth Hostel	83
GC-01	Chiller	Golden Computer Arcade	95
GC-02	Chiller	Golden Computer Arcade	95
GC-03	Chiller	Golden Computer Arcade	95
GC-04	Chiller	Golden Computer Arcade	95
GC-05	Cooling Tower	Golden Computer Arcade	87
GC-06	Cooling Tower	Golden Computer Arcade	87
GC-07	Chiller	Golden Computer Arcade	95
GC-08	Chiller	Golden Computer Arcade	95
MSB-01	Chiller	Un Chau Street Municipal Services Building	95
MSB-02	Chiller	Un Chau Street Municipal Services Building	95
MSB-03	Chiller	Un Chau Street Municipal Services Building	95
MSB-04	Chiller	Un Chau Street Municipal Services Building	95
HFB-01	Cooling Tower	Hanfast Building	94
HFB-02	Cooling Tower	Hanfast Building	94
STF-01	VRV	St. Francis of Assisi's English Primary School	83
STF-02	Chiller	St. Francis of Assisi's English Primary School	94
SKMCH-01	Chiller	Shek Kip Mei Community Hall	83
SKMCH-02	Chiller	Shek Kip Mei Community Hall	94
SKMCH-03	Chiller	Shek Kip Mei Community Hall	94
EH-01	Chiller	E Hotel	94
EH-02	Chiller	E Hotel	94
WP-01	Chiller	Welland Plaza	95
WP-02	Chiller	Welland Plaza	95

Impact Assessment

6.4.8. The prediction of noise level at the Proposed Redevelopment is calculated by applying appropriate corrections to the estimated sound pressure level as follow:

$$\mathbf{PNL = SWL - C_{dc} + C_{fc} + C_{bc} + C_{imc} + C_{tc} + C_{intc}}$$

Where

- PNL is the predicted noise level at the NSR in dB(A);
- SWL according to measured sound pressure level of fixed plant noise sources in dB(A);
- C_{dc} is distance attenuation: C_{dc}= 20log(d)+8 in dB(A) where d is the slant distance between NAP and fixed noise source;
- C_{fc} is façade correction of +3dB(A);
- C_{bc} is barrier correction, a negative 10dB(A) barrier correction would be given to NSRs with no direct line-of-sight to the noise source by screening of substantial structure. A negative 5dB(A) barrier correction would be given to NSRs which are partially screened by substantial structure. The sample barrier calculation is provided in ***Appendix 6-6***;
- C_{imc} is impulsiveness correction. No impulsive characteristic was noticed from identified fixed noise sources;
- C_{tc} is tonality correction for potential tonality perceived at source points. Tonality was not noticed; and
- C_{intc} is the intermittency correction. No intermittent characteristic was noticed from identified fixed noise sources.

6.4.9. PNL due to individual sources are then summed together in logarithm scale for overall fixed plant noise level at the NAPs. The representative noise assessment points are shown in ***Figure 6-4*** and detailed sample calculation is given in ***Appendix 6-7***.

6.4.10. The daytime, evening time and night time impact assessment results are shown in ***Appendix 6-8***. The results demonstrated that the noise level at the NAPs will be complied with the fixed plant noise criteria. Therefore, no fixed plant noise impacts caused by the surrounding fixed plants on the Proposed Redevelopment is anticipated.

Planned Fixed Plant Noise Sources from the Proposed Redevelopment

6.4.11. Potential fixed plant noise associated with the Proposed Redevelopment will include noise from the operation of AHU/PHU, building services equipment, mechanical ventilation provisions for the plant rooms in the Proposed Redevelopment and the refuse collection point.

6.4.12. In general, building services equipment (e.g. AHU, PHU, pump units, transformers, emergency generator as well as lift machines) will be placed at enclosed plant rooms with concrete building envelop. Typical acoustic treatment such as acoustic louvers and silencers will be provided at air intake and exhaust louvres of the plant rooms and refuse collection point whenever necessary. Noise emission will also be controlled by appropriate selection of equipment

6.4.13. With the abovementioned measures, noise level of the planned fixed plant noise sources at potentially affected NSRs will comply with statutory requirement in HKPSG and NCO. No insurmountable fixed plant noise impact from the Proposed Redevelopment is anticipated.

Summary

6.4.14. The fixed plant noise assessment demonstrate that the existing fixed plant noise sources will cause insignificant fixed plant noise impact to the Proposed Redevelopment. Moreover, the noise level at potentially affected NSRs will comply with statutory requirement under NCO stipulated in IND-TM. No insurmountable fixed plant noise impact from the Proposed Redevelopment is anticipated.

6.4.15. Hence, no adverse fixed plant noise impacts associated with the Proposed Redevelopment is anticipated.

6.5. Construction Noise Impact Assessment

Noise Sources during Construction Phase

6.5.1. Potential source of noise impact arising from construction phase will be the use of Powered Mechanical Equipment (PME) during various construction stages, including foundation works, superstructure works and utilities installation in the Subject Site. PME likely to be used include excavator, hand-held breaker, concrete lorry mixer, air compressor and generator etc. Percussive pilling may be involved in the construction stage.

6.5.2. Construction works in restricted hours, i.e. between 1900 and 0700 hours or any time on a general holiday including Sundays are not anticipated for this Proposed Redevelopment in general.

Prediction and Evaluation of Noise Impact

6.5.3. The potential sources of noise impact during the construction phase of the Proposed

Redevelopment are the use of PME for various construction activities. The extent of construction noise impacts depends on the type and number of PME to be used in different construction activities and hence may vary throughout the construction phase. In view of the project size, the number of PME is expected to be limited. Given that the small-scale and limited extent of construction, the construction noise is anticipated to be minimal.

Mitigation Measures

6.5.4. With the implementation of recommended noise mitigation measures as detailed in **Section 6.5.5-6.5.6** (e.g. scheduling noisy activities, use of silenced equipment/ movable noise barrier, etc.), the construction noise impact to the nearby NSRs is anticipated to be insignificant.

6.5.5. It is recommended that the following noise mitigation measures should be implemented to minimize the construction noise impact, e.g. "Recommended Pollution Control Clauses for Construction Contracts" available on EPD's website. A noise control plan should be set up to ensure regular maintenance of all plant and equipment, reduce noise generation at source, and that appropriate silencing applications are in use based upon the best reasonable practice. Typical noise mitigation measures include:

- Adoption of quieter construction methods and powered mechanical equipment;
- Scheduling of construction works outside school examination periods;
- Use of silenced equipment;
- Use of noise enclosure/ acoustic shed;
- Reduction in the number of items of PME operation at any given time; and
- Avoidance of works in restricted hours etc.

6.5.6. Quieter construction methods and powered mechanical equipment to minimize the construction noise impact will be considered and adopted as far as practicable. The following practicable quieter construction methods and powered mechanical equipment will be considered for the Proposed Redevelopment.

Quieter Construction Methods

- Diamond Blade Wall Saw
- Silent Piling by Press-in Method, Bored Piling, Helical Piling (to avoid percussive piling as far as practicable)
- Quieter Type Wire Saw or Diamond Wire Saw

- Quieter Type Blade Saw
- Hand-held Concrete Crusher
- Adoption of Modular Integrated Construction

Quieter Powered Mechanical equipment

- Excavator/ loader
- Generator
- Roller
- Poker
- Air Compressor
- Breaker

Summary

6.5.7. With the implementation of recommended noise mitigation measures as detailed (e.g. adoption of quieter construction methods and powered mechanical equipment scheduling noisy activities, use of silenced equipment/ movable noise barrier, etc.), the construction noise impact to the nearby NSRs is anticipated to be insignificant.

6.6. Conclusion

6.6.1. The potential environmental noise impacts from construction activities, road traffic and fixed noise sources to the Proposed Redevelopment, and planned fixed plant noise sources from the Proposed Redevelopment to the surrounding have been evaluated.

6.6.2. For traffic noise impact assessment, with the implementation of all the practical noise mitigation measures, all sensitive uses in the Proposed Redevelopment will comply with the relevant traffic noise standard stipulated in HKPSG. The Proposed Redevelopment would not be subject to the adverse traffic noise impact with the proposed noise mitigation measure in place.

6.6.3. The fixed plant noise assessment demonstrate that the existing fixed plant noise sources will cause insignificant fixed plant noise impact to the Proposed Redevelopment. Moreover, the noise level at potentially affected NSRs will comply with statutory requirement under NCO stipulated in IND-TM. No insurmountable fixed plant noise impact associated with the Proposed Redevelopment is anticipated.

6.6.4. The construction noise impact of the Proposed Redevelopment has been assessed. With the implementation of recommended construction noise mitigation measures, no adverse construction noise impacts associated with the Proposed Redevelopment is anticipated.

6.6.5. Hence, no adverse noise impact associated with the Proposed Redevelopment is anticipated.

7. Waste Management

7.1. Legislation and Standards on Waste Management

Waste Disposal Ordinance (WDO) (Cap. 354)

7.1.1. Waste Disposal Ordinance, Cap. 354 provides legislative control on pollution caused by all forms of wastes such as livestock wastes etc. It provides the statutory framework for the planning, management and control of wastes in Hong Kong.

Other Environmental Guidelines and Regulations

- Waste Disposal (Chemical Waste) (General) Regulation (Cap. 354C)
- Public Health and Municipal Services Ordinance (Cap. 132)
- Public Cleansing and Prevention of Nuisance Regulation (Cap. 132BK)
- Public Dumps (Works Branch Technical Circular (WBTC) No. 2/93)
- Public Filling Facilities (WBTC No. 2/93B)
- Wet Soil in Public Dumps (WBTC No. 16/96)
- Use of Public Fill in Reclamation and Earth Filling Projects (WBTC Nos. 4/98 and 4/98A)
- Incorporation of Information on Construction and Demolition Material Management in Public Works Subcommittee Papers (WBTC Nos. 25/99, 25/99A and 25/99C)
- Fill Management (WBTC No. 12/2000)
- Metallic Site Hoardings and Signboards (WBTC No. 19/2001)
- Specification Facilitating the Use of Recycled Aggregates (WBTC No. 12/2002)
- Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap. 354N)
- Trip Ticket System for Disposal of Construction & Demolition Materials (DEVB TC(W) No. 6/2010)
- Enhanced Specification for Site Cleanliness and Tidiness (DEVB TC(W) No. 8/2010)
- Encouraging the Use of Recycled and other Green Materials in Public Works Projects (DEVB TC(W) No. 2/2011)
- Enhanced Control Measures for Management of Public Fill (DEVB TC(W) No. 09/2011)
- Environmental Management on Construction Sites (ETWB TC(W) No. 19/2005)
- Management of Construction and Demolition Materials (CEDD Technical Circular No. 11/2019)
- Section 4.1.3 of Chapter 4 of the Project Administration Handbook for Civil Engineering

Works)

- Waste Disposal (Charging for Municipal Solid Waste) (Amendment) Bill 2018 (April 2024)
- Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes
- A Guide to the Chemical Waste Control Scheme (EPD)
- A Guide to the Registration of Chemical Waste Producers (EPD)

7.2. Potential Impacts during Construction Phase

7.2.1. The construction works of the Project mainly includes, excavation works, foundation works and superstructure works. Construction & Demolition (C&D) materials generated from construction works comprises of inert and non-inert materials. The inert portion, such as soil, rock, concrete, etc., namely inert C&D materials (or public fills), could be reused on-site as filling materials or off-site as public fill at public fills reception facilities. The non-inert portion, such as timber, paper, etc., namely non-inert C&D materials (or C&D waste) should be reused or recycled as far as possible before landfill disposal, which should only be considered as the last resort for waste handling.

7.2.2. Waste management planning is needed prior to the commencement of construction works. Construction waste management strategy is to avoid, minimize, reuse, re-cycle and finally dispose of waste with the desirability decreasing in this order. Contractor(s) will be required to implement effective waste management measures to ensure their practices are in line with the strategies. The use of precast units is also recommended to minimize the use of wood board for formworks.

7.2.3. General refuse such as food scraps, waste paper, empty containers, etc. would be generated from the workforce during the construction phase. General refuse should be stored in enclosed bins separately from construction wastes. Recycling bins should also be placed to encourage recycling. Enclosed and covered areas should be provided for general refuse collection to prevent waste materials being blown around by wind, flushed or leached into nearby waters, or creating an odour nuisance or pest and vermin problem. Also, routine cleaning for these areas should be implemented to keep areas clean, so that the intentional or accidental release to the surrounding environment does not occur with proper management. Waste generated will be disposed at government waste disposal facilities such as designated Landfill or refuse transfer station.

Estimation on C&D Materials Quantity

7.2.4. The majority of C&D materials will be generated from the key construction activities mentioned in **Section 7.2.1**. Where possible, inert C&D materials will be re-used on site and disposed of at public fill reception facilities as a last resort. Inert C&D materials should be segregated from other wastes to avoid contamination and ensure acceptability at public fill reception facilities. The following mitigation measures should be implemented in handling the inert C&D materials:

- Maintain temporary stockpiles and ensure with well cover to prevent inclement weather;
- Reuse excavated fill material for backfilling;
- Carry out on-site sorting; and
- According to the DEVB TC(W) No. 6/2010, implement a trip-ticket system for each works contract to ensure that the disposal of C&D materials is properly documented and verified.

7.2.5. The non-inert C&D materials (or C&D waste), such as timber, paper, etc., should be reused or recycled as far as possible before landfill disposal, which should only be considered as the last resort for waste handling. The following mitigation measures should be implemented in handling the non-inert C&D materials:

- Segregation from inert C&D materials during stockpiling and transportation
- Reusable materials should be separated and recycled as far as practicable
- Disposal of non-inert C&D materials at designated landfill shall be subjected to agreement with the relevant section of EPD.

7.2.6. The quantity of chemical waste to be generated cannot be accurately predicted at this stage but it is anticipated to be minimal due to the scale and duration of the proposed construction works. The contractor must register with EPD as a chemical waste producer. For the Proposed RCP, chemical wastes may be generated from maintenance and servicing of construction equipment/plant, painting works and waterproofing works. Chemical wastes pose serious environmental and health and safety hazards if not stored and disposed of in an appropriate manner as outlined in the Waste Disposal (Chemical Waste) (General) Regulation. These hazards include:

- Toxic effects to workers;
- Adverse effects on water quality from spills; and
- Fire hazards.

7.2.7. During construction phase, general refuse is expected to be generated from the workforce's activities. As advised by the Project Team, about 150 workers per day at peak will work simultaneously at the Subject Site. It is assumed that the generation rate is 0.65kg/person/day which is referred to the EIA Report of Agreement No. CE 18/2012 (CE) Development of Anderson Road Quarry – Investigation. Therefore, the estimated quantity of waste to be generated for workforce is about 97.5kg/day. The general refuse will be recycled as much as practicable and disposed of at the landfill.

7.2.8. The quantities of C&D materials generated will be subject to further design development and contractor's operation procedure/practices.

7.3. Mitigation Measures during Construction Phase

General

7.3.1. It is anticipated that adverse impacts would not arise at the construction site, provided that good site practices are strictly followed. Recommendations of good site practices during construction phase include:

- Nomination of an approved personnel, such as a site manager, to be responsible for good site practices, and making arrangements for collection of all wastes generated at the site and effective disposal to an appropriate facility;
- Training of site personnel in proper waste management and chemical waste handling procedures;
- Provision of sufficient waste reception/ disposal points, of a suitable vermin-proof design that minimises windblown litter;
- Arrangement for regular collection of waste for transport off-site and final disposal;
- Appropriate measures to minimise windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers;
- Regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors;
- A recording system for the amount of wastes generated, recycled and disposed (including the disposal sites) should be proposed; and
- Preparation of a WMP in accordance with ETWB TCW No. 19/2005 and submit to the Engineer for approval.

7.3.2. In order to facilitate process of transferring the construction waste to Government waste disposal facilities (e.g. public fill reception facilities, sorting facilities and landfills). Waste sorting and segregation shall be carried out on site in accordance with the following

categories:

- Hard rock and large broken concrete suitable for reuse on the Site or recycling;
- Metals (i.e. aluminium can, steel metal, ferrous metal, and non-ferrous metal);
- Plastic (i.e. plastic bag, plastic bottle, plastic packaging, etc.)
- Paper;
- Materials suitable for disposal or delivery at the following places are as below:
    - Public Fill Reception Facilities
        - Construction waste containing 100% by weight of inert construction waste can be delivered to the Public Fill Reception Facilities.
    - Sorting Facilities
        - Mixed construction waste containing more than 50% by weight of inert construction waste can be delivered to the sorting facilities. This arrangement helps waste producers, particularly small construction sites that do not have enough space to carry out on-site sorting.
    - Landfills
        - Mixed construction waste containing not more than 50% by weight of inert construction waste can be disposed of at the three strategic landfills, viz. the West New Territories (WENT) Landfill, the South East New Territories (SENT) Landfill and the North East New Territories (NENT) Landfill (e.g. general refuse or non-inert C&D materials.)

7.3.3. In addition, the Contractor is required to implement good EMP and practices on handling and disposal of waste, including but not limited to,

- A recording system for the amount of wastes generated, recycled and disposed (including the disposal sites) should be adopted for easy tracking; and
- Handle, store and dispose of all wastes in accordance with the Waste Disposal Ordinance
- Store general refuse in enclosed bins or compaction units separate from C&D materials. A reputable waste collector should be employed to collect and dispose of general refuse from the site on a daily or every second day basis.

7.3.4. The Contractor shall ensure that C&D materials are sorted into public fill (inert portion) and C&D waste (non-inert portion). The public fill which comprises soil, rock, concrete, brick, cement plaster/mortar, inert building debris, aggregates and asphalt shall be reused in earth filling, reclamation or site formation works. The C&D waste which comprises metal, timber, paper, glass, junk and general garbage shall be reused or recycled and, as the last resort, disposal of at landfills. All the materials shall be properly stored or covered during inclement

weather (e.g.: heavy rain, typhoon) to prevent the wastes to be unintentionally brought from the Subject Site to any adjoining land or water bodies. With proper waste management and training to workers, waste impacts arising from inclement weather should be insignificant.

7.3.5. Furthermore, a C&DMMP should also be prepared and submitted to Public Fill Committee (PFC) for approval as stipulated under CEDD Technical Circular No. 11/2019, if necessary.

C&D Materials

7.3.6. It is presently anticipated that most of the C&D materials will need to be transported off-site for re-use, recycling and disposal by trucks. With the implementation of the recommended dust and noise control / mitigation measures presented in the air quality and noise sections, such as covering the stockpiling materials to avoid dust and other nuisance impacts from truck movements, these secondary environmental factors are not expected to be a concern.

7.3.7. Careful design, planning together with good site management can reduce over-ordering and generation of C&D materials such as concrete, mortar and cement grouts. Formwork should be designed to maximize the use of standard wooden panels, so that high reuse levels can be achieved. Alternatives such as steel formwork or plastic facing should be considered to increase the potential for reuse.

7.3.8. In order to minimize the impacts resulting from collection and transportation of C&D materials for off-site delivery, the excavated materials arising from foundation works should be reused on-site as backfilling as far as practicable. Other mitigation requirements are listed below:

- A recording system for the amount of wastes generated, recycled and disposed (including the disposal sites) should be adopted for easy tracking; and
- In order to monitor the delivery or disposal of C&D materials at public fill reception facilities and landfills and to control fly-tipping, a trip-ticket system should be adopted (refer to DEVB TCW No. 06/2010).

7.3.9. It is recommended that specific areas should be provided by the Contractors for sorting and to provide temporary storage areas (as shown in **Appendix 8-1**) for the sorted materials. Control measures for temporary stockpiles on-site should be taken in order to minimize the noise, generation of dust and pollution of water. These measures include:

- Surface of stockpiled soil should be regularly wetted with water especially during dry season;
- Disturbance of stockpile soil should be minimised;

- Stockpiled soil should be properly covered with tarpaulin especially when heavy storms are predicted; and
- Stockpiling areas should be enclosed where space is available.

General Refuse

7.3.10. General refuse should be stored in enclosed bins separately from construction wastes. Recycling bins should also be placed to encourage recycling. Enclosed and covered areas should be provided for general refuse collection to prevent waste materials being blown around by wind, flushed or leached into nearby waters, or creating an odour nuisance or pest and vermin problem. Also, routine cleaning for these areas should be implemented to keep areas clean, so that the intentional or accidental release to the surrounding environment does not occur with proper management.

Chemical Waste

7.3.11. According to Waste Disposal (Chemical Waste) (General) Regulation (Cap.354), any person who produces or causes to be produced chemical waste is required to register with EPD. The contractor shall register with EPD as a chemical waste. The handling, storage, transport and disposal of chemical-containing wastes should be arranged in accordance with the Code of Practice on the Packaging, Labelling and Storage of Chemical Waste. Chemical waste should be collected by a licensed chemical waste collector and to be disposed of at a licensed chemical waste treatment and disposal facility.

Storage, Collection and Transportation of Waste

7.3.12. Storage of materials on site may cause adverse environmental impacts if not properly managed, the following mitigate include:

- Waste, such as soil, should be handled and stored well to ensure secure containment, thus minimizing the potential of pollution;
- Maintain and clean storage areas routinely;
- Stockpiling area should be provided with covers and water spraying system to prevent materials from wind-blown or being washed away; and
- Different locations should be designated to stockpile each material to enhance reuse.

7.3.13. Licensed waste haulers should be employed for the collection and transportation of waste generated. The following measures should be enforced to minimize the potential adverse impacts:

- Remove waste in a timely manner;

- Waste collectors should only collect wastes prescribed by their permits;
- Impacts during transportation, such as dust and odour, should be mitigated by the use of covered trucks or in enclosed containers;
- Obtain relevant waste disposal permits from the appropriate authorities;
- Dispose of waste at licensed waste disposal facilities; and
- Maintain records of quantities of waste generated, recycled and disposed.

7.4. Potential Impacts and Mitigation Measures during Operation Phase

7.4.1. During operation, general refuse is anticipated to be generated from the daily activities of pastors, staff, students and visitors, including food waste, paper waste and domestic waste. Given that approximately 6 residents, 40 workers, 90 students and 1760 visitors will occupy the Proposed Redevelopment as advised by Project Team, and with reference to a generation rate of 1.40kg/person/day adopted from the Monitoring of Solid Waste in Hong Kong 2024, the total quantity of general refuse to be generated will be approximately 2,654.40 kg per day. General refuse will be removed on regular basis to minimize odour, pest and litter impacts. To promote recycling of waste paper, aluminum cans and plastic bottles, the 3-colored waste separation bins for collection of recyclable municipal waste will be clearly labelled and placed at convenient locations. The recyclable materials will then be collected by reliable waste recycling agents on a regular basis. Waste generated will be disposed at government waste disposal facilities such as designated Landfill or refuse transfer station.

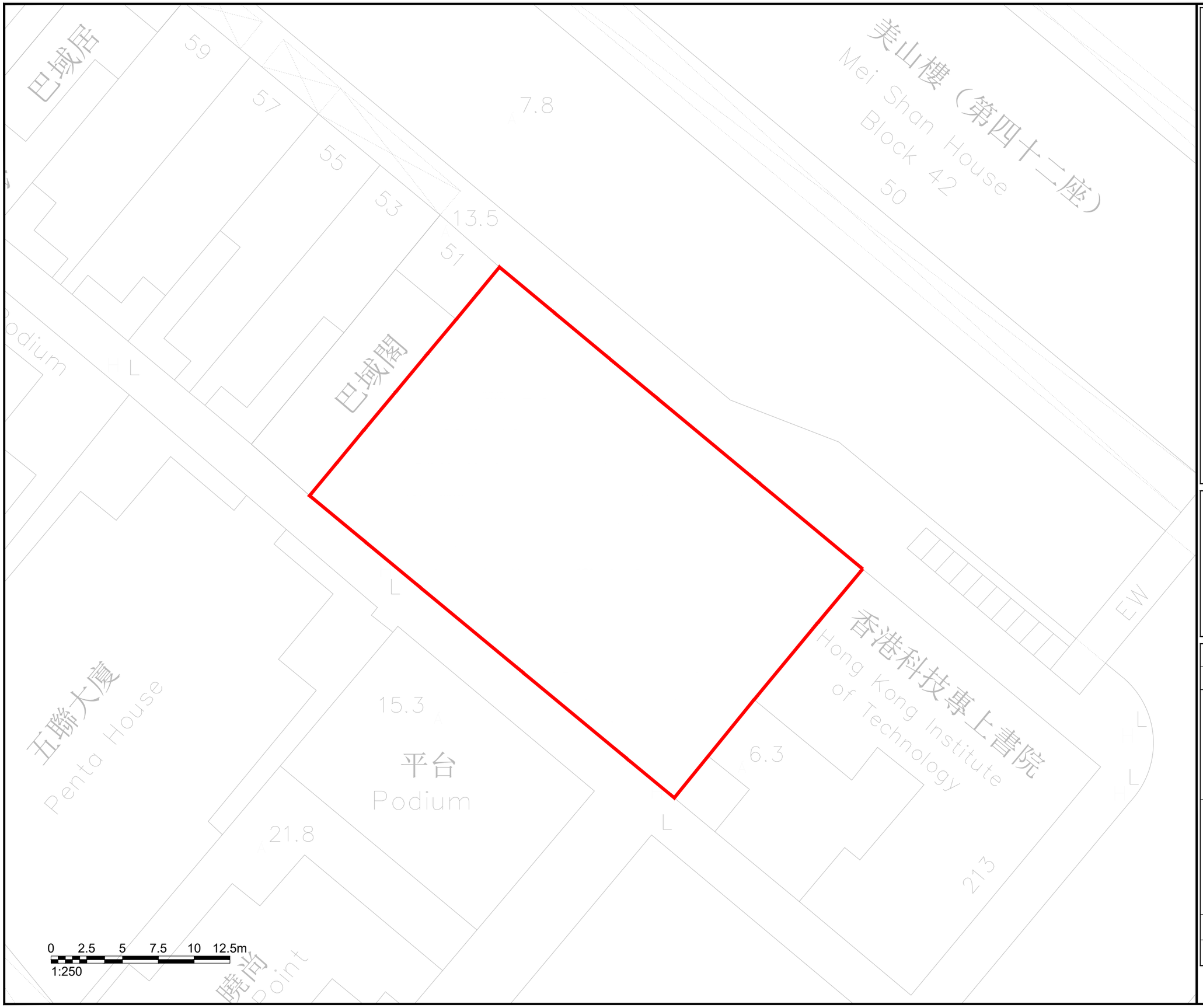
7.4.2. With reference to the domestic food waste disposal rate of 0.27kg/person/day in Monitoring of Solid Waste in Hong Kong 2024, food waste to be generated from the Proposed Redevelopment is estimated to be 511.92kg/person/day. Food waste should be segregated from other waste and collected alongside other recyclables to facilitate effective recycling.

7.4.3. Chemical waste may be generated from the disposal of unwanted and expired medicines from the Physiotherapy/ Occupational Therapy/ Treatment Room during operation of the Proposed Redevelopment. The quantity of chemical waste to be generated is expected to be only a few cubic meters per month. The chemical waste will be collected by licensed chemical waste collector regularly in accordance to Waste Disposal (Chemical Waste) (General) Regulation (Cap.354).

7.4.4. Hence, adverse waste impact is not anticipated during operation phase.

8. Conclusion

8.1.1. A PER has been prepared for the Proposed Redevelopment. The PER concludes that with the implementation of the recommended mitigation measures and management procedures, it is unlikely to cause any insurmountable environmental impact during construction and operational phases of the Proposed Redevelopment.



NOTES :

SUBJECT SITE

CONSULTANT

Allied Environmental Consultants Limited

PROJECT NO. :	2076EA
DRAWN BY :	RL

PROJECT :

SECTION 16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF BUILDING HEIGHT RESTRICTION FOR PERMITTED 'RELIGIOUS INSTITUTION' AND 'SOCIAL WELFARE FACILITY' USES, AT N.K.I.L. NO. 3635 RP AND 3762, 43 - 45 BERWICK STREET, SHAM SHUI PO, KOWLOON

DRAWING TITLE :

SUBJECT SITE LOCATION

DRAWING NO : FIGURE 2-1	REVISION : 1
SCALE : AS SHOWN	DATE : FEB 2026

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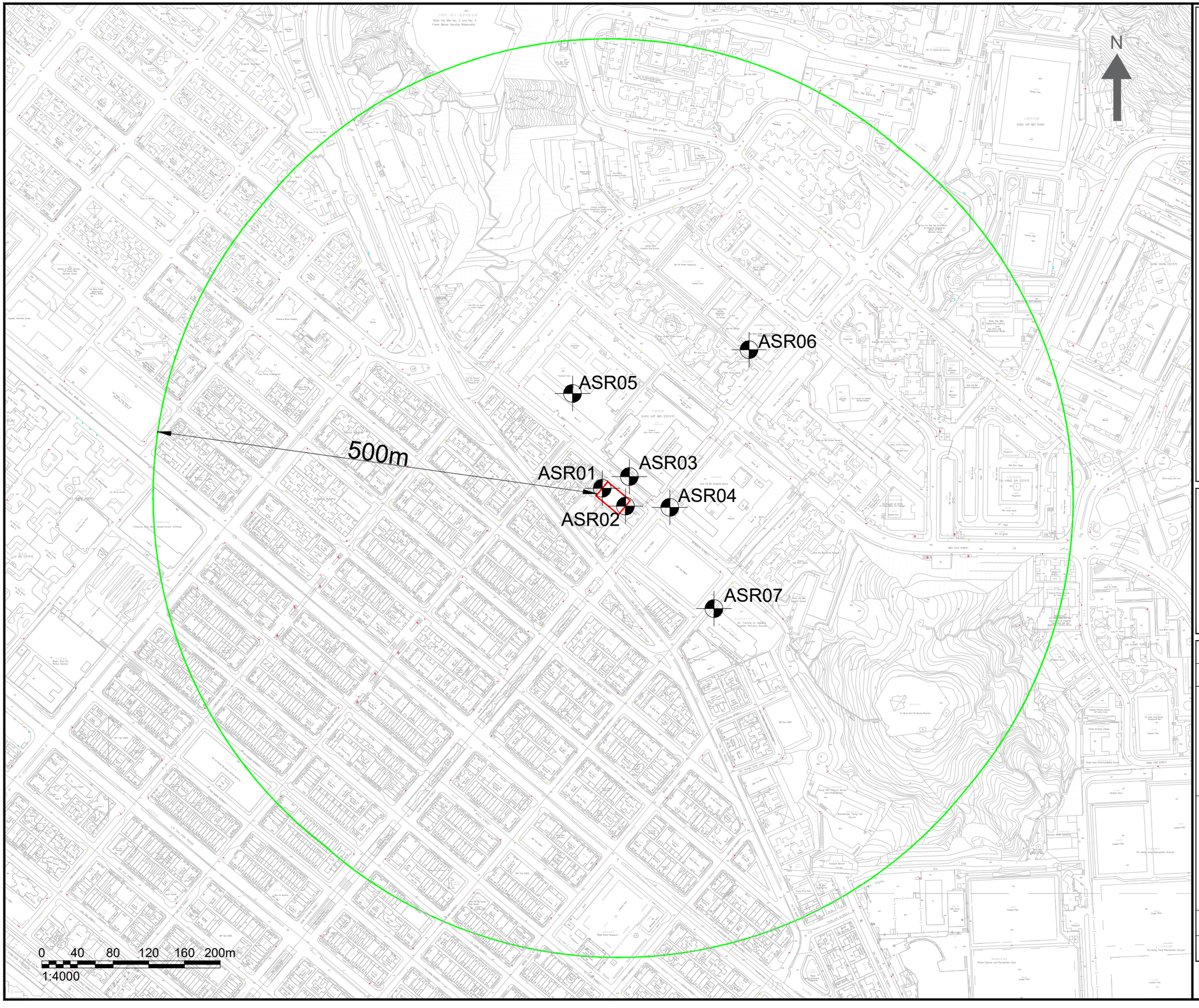

NOTES :

SUBJECT SITE

500M STUDY AREA

AIR SENSITIVE RECEIVER (ASR)

CONSULTANT

Allied Environmental Consultants Limited

PROJECT NO. :	2076EA
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SECTION 16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF BUILDING HEIGHT RESTRICTION FOR PERMITTED 'RELIGIOUS INSTITUTION' AND 'SOCIAL WELFARE FACILITY' USES, AT N.K.I.L. NO. 3635 RP AND 3762, 43 - 45 BERWICK STREET, SHAM SHUI PO, KOWLOON

DRAWING TITLE :

LOCATION OF AIR SENSITIVE RECEIVERS

DRAWING NO : FIGURE 5-1	REVISION : 0
SCALE : AS SHOWN	DATE : APRIL 2024

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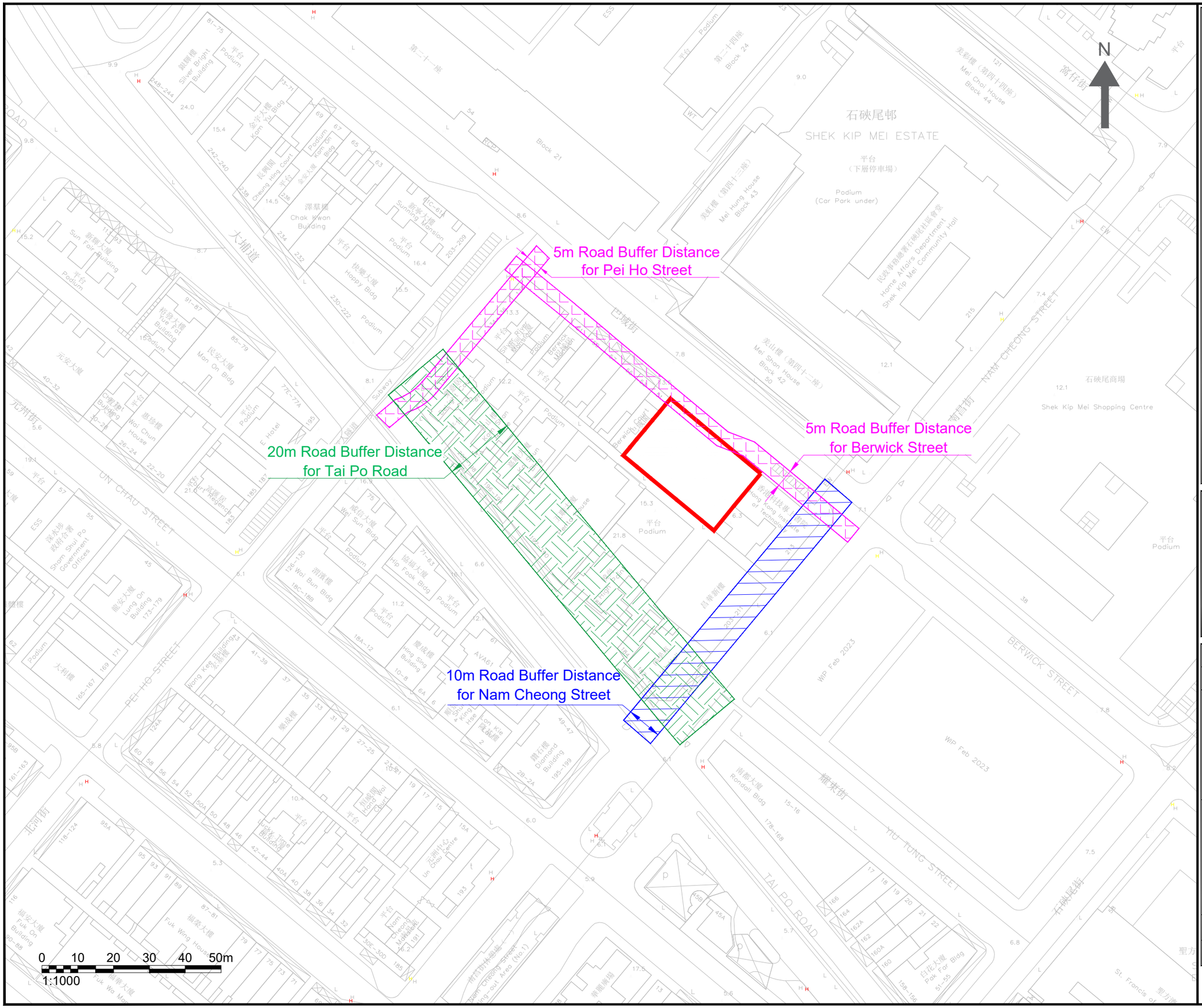

NOTES :

SUBJECT SITE

5M ROAD BUFFER DISTANCE

10M ROAD BUFFER DISTANCE

20M ROAD BUFFER DISTANCE

CONSULTANT

Allied Environmental Consultants Limited

PROJECT NO. :	2076EA
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PROJECT :

SECTION 16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF BUILDING 'RELIGIOUS INSTITUTION' AND 'SOCIAL WELFARE FACILITY' USES, AT N.K.I.L. NO. 3635 RP AND 3762, 43 - 45 BERWICK STREET, SHAM SHUI PO, KOWLOON

DRAWING TITLE :

BUFFER DISTANCE BETWEEN THE SUBJECT SITE AND ADJACENT ROADS

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FIGURE 5-2	0
SCALE : AS SHOWN	DATE : APRIL 2024

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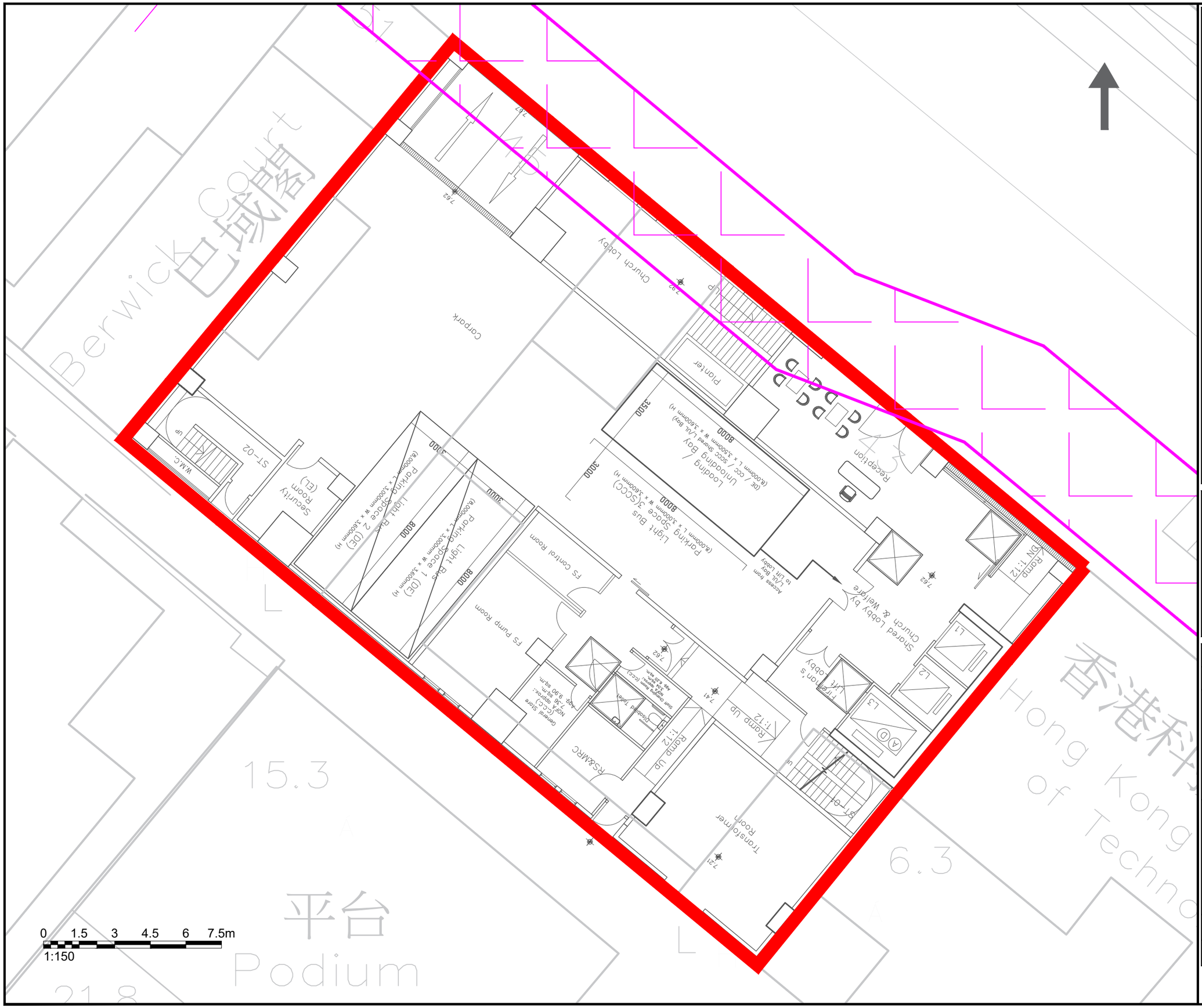

NOTES :

SUBJECT SITE

5M ROAD BUFFER DISTANCE

CONSULTANT

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SECTION 16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF BUILDING HEIGHT RESTRICTION FOR PERMITTED 'RELIGIOUS INSTITUTION' AND 'SOCIAL WELFARE FACILITY' USES, AT N.K.I.L. NO. 3635 RP AND 3762, 43 - 45 BERWICK STREET, SHAM SHUI PO, KOWLOON

DRAWING TITLE :

BUFFER DISTANCE BETWEEN THE PROPOSED REDEVELOPMENT (G/F) AND ADJACENT ROAD

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SCALE : AS SHOWN	DATE : OCTOBER 2025

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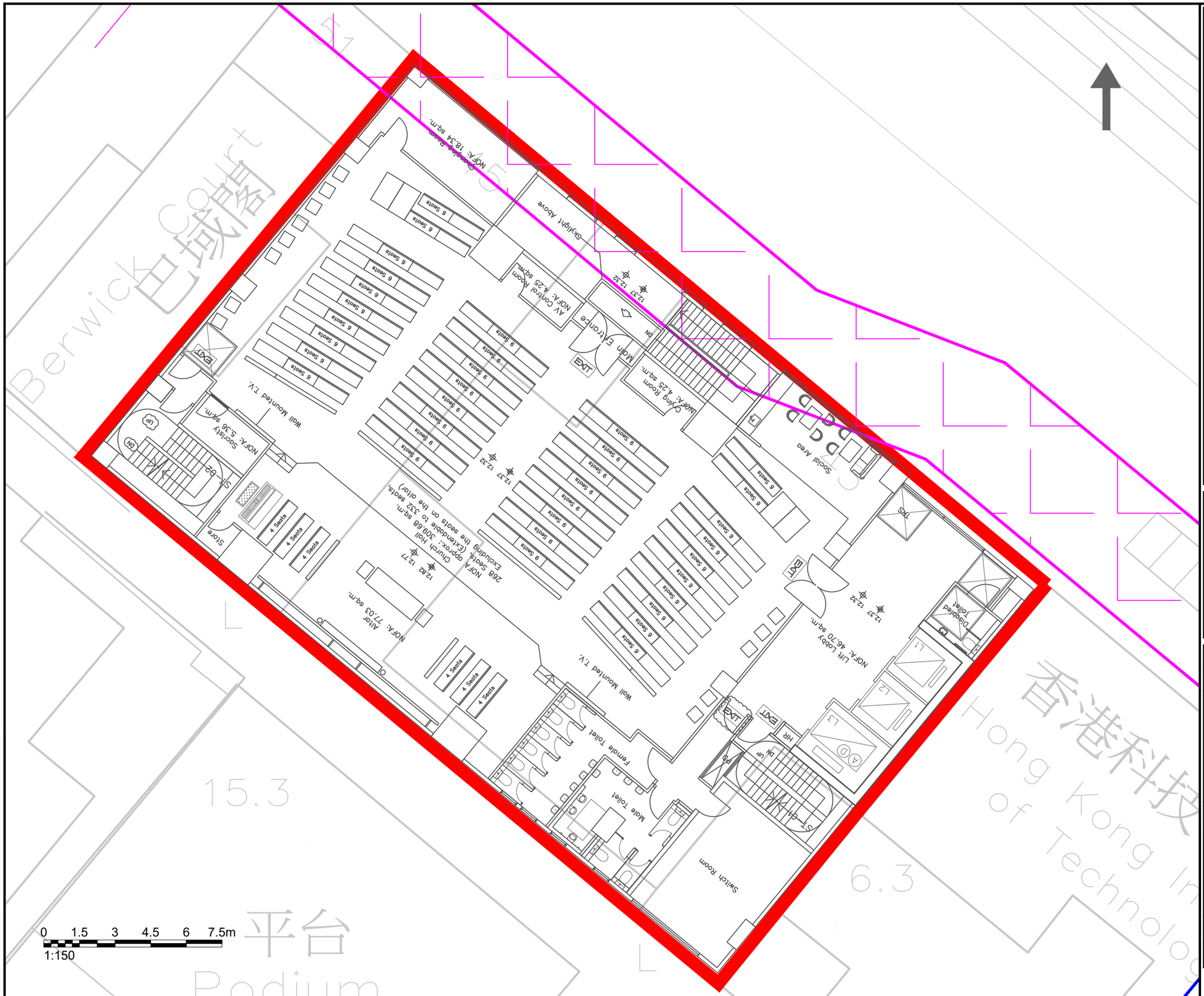

NOTES :

SUBJECT SITE

5M ROAD BUFFER DISTANCE

CONSULTANT

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DRAWING TITLE :

BUFFER DISTANCE BETWEEN THE PROPOSED REDEVELOPMENT (1/F) AND ADJACENT ROAD

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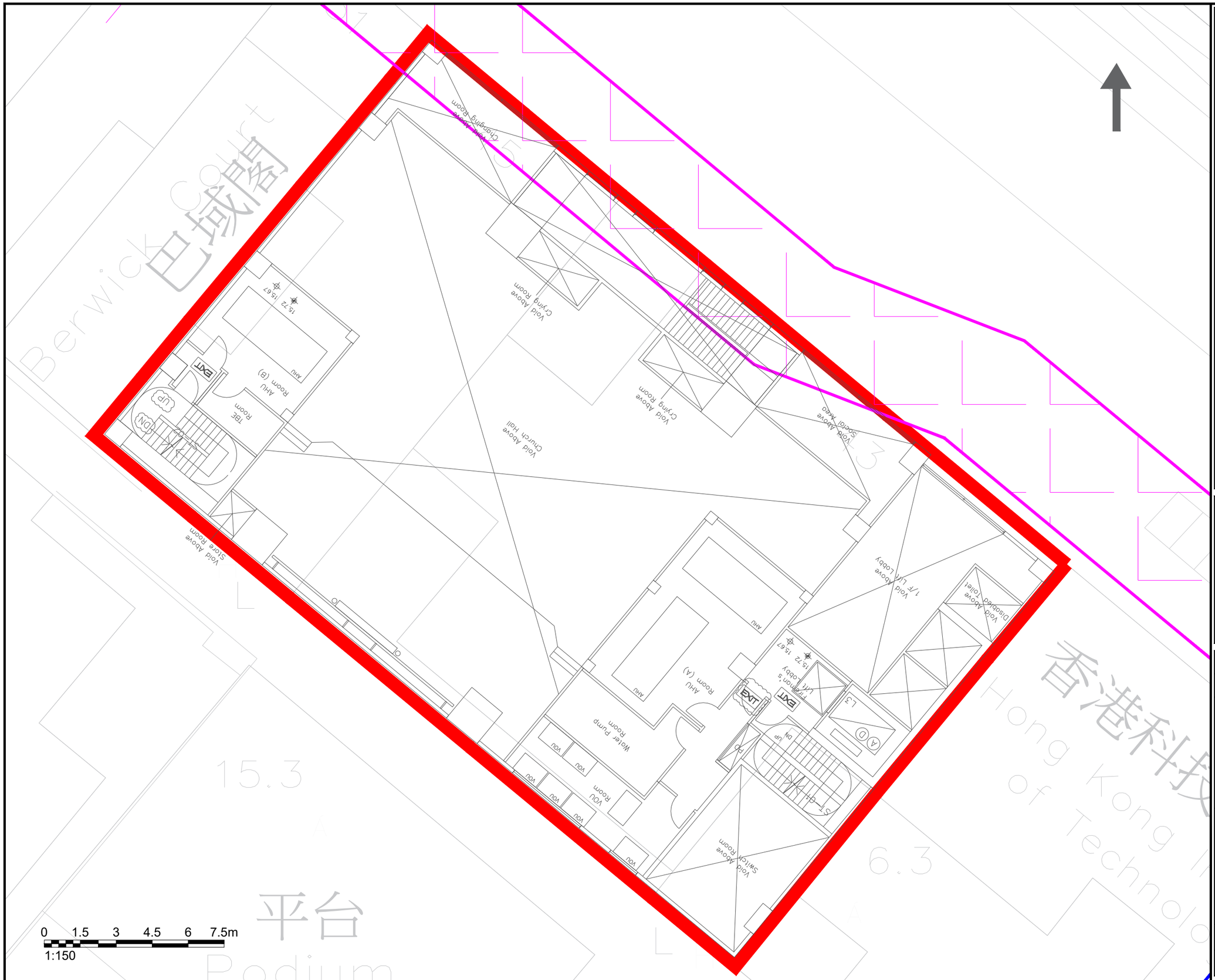

NOTES :

SUBJECT SITE

5M ROAD BUFFER DISTANCE

CONSULTANT

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DRAWING TITLE :

BUFFER DISTANCE BETWEEN THE PROPOSED REDEVELOPMENT (M/F) AND ADJACENT ROAD

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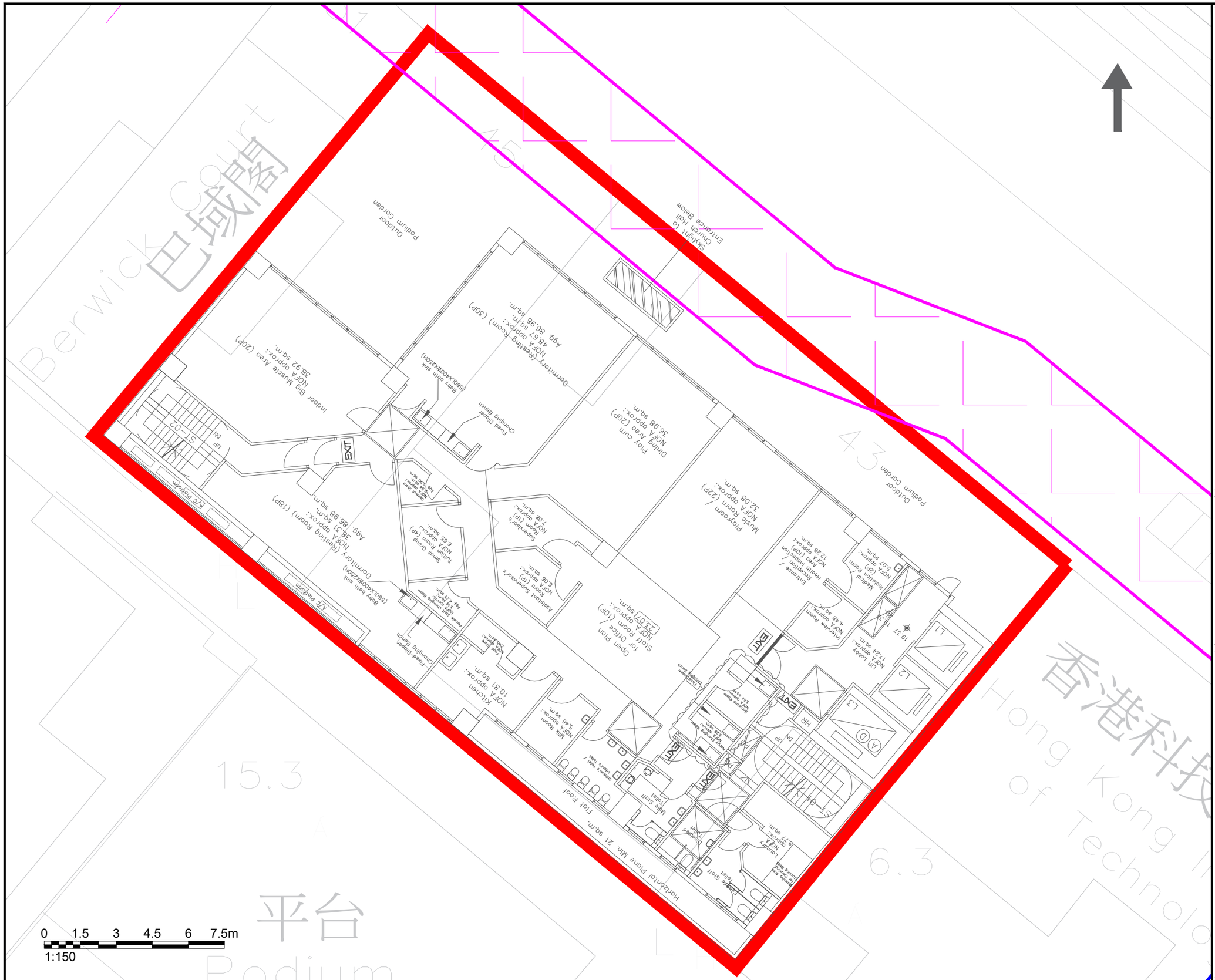

NOTES :

🟥 SUBJECT SITE

▨ 5M ROAD BUFFER DISTANCE

CONSULTANT

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PROJECT NO. : 2076EA

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PROJECT :

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DRAWING TITLE :

BUFFER DISTANCE BETWEEN THE PROPOSED REDEVELOPMENT (2/F) AND ADJACENT ROAD

DRAWING NO : FIGURE 5-6

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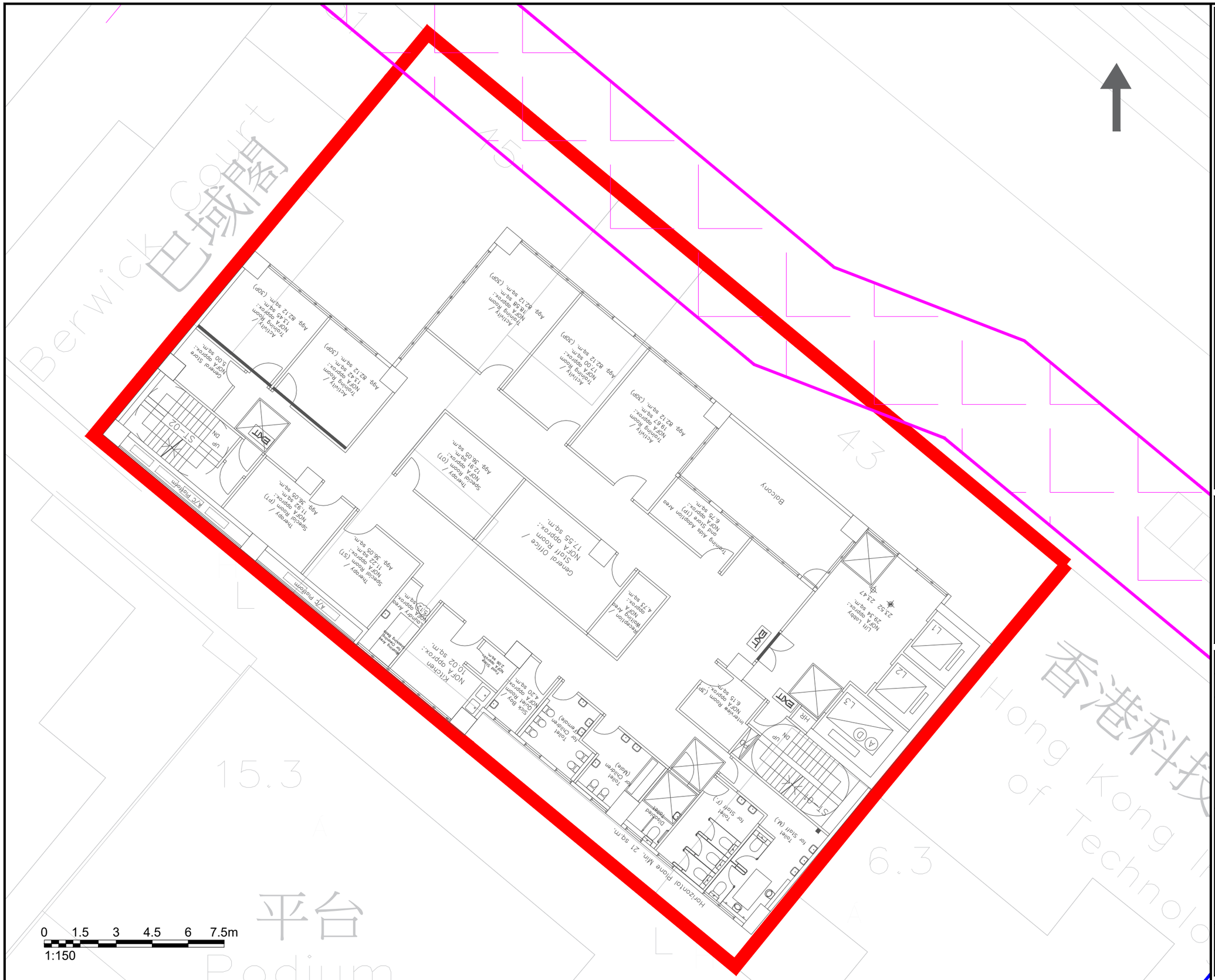

NOTES :

SUBJECT SITE

5M ROAD BUFFER DISTANCE

CONSULTANT

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DRAWING TITLE :

BUFFER DISTANCE BETWEEN THE PROPOSED REDEVELOPMENT (3/F) AND ADJACENT ROAD

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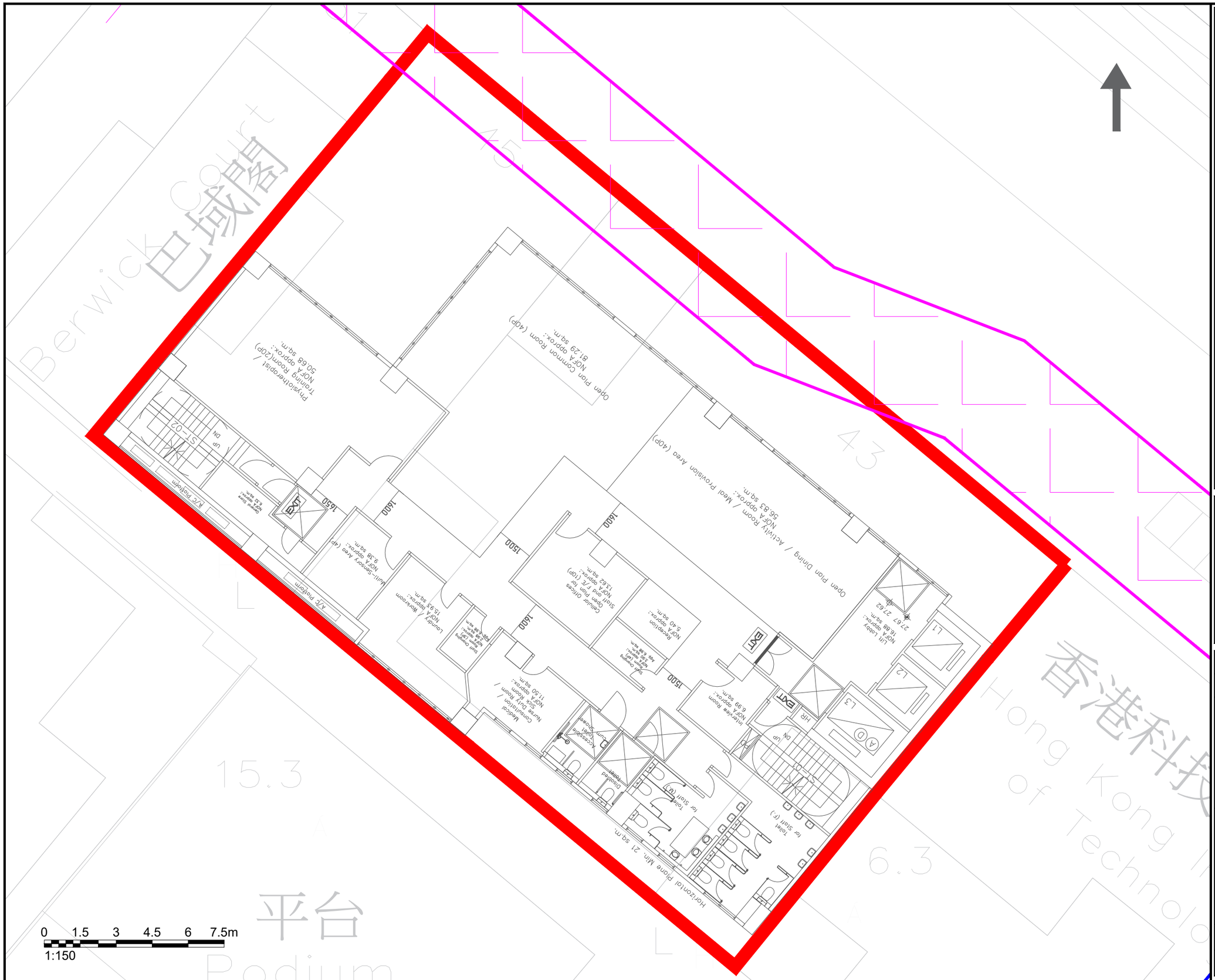

NOTES :

SUBJECT SITE

5M ROAD BUFFER DISTANCE

CONSULTANT

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DRAWING TITLE :

BUFFER DISTANCE BETWEEN THE PROPOSED REDEVELOPMENT (4/F) AND ADJACENT ROAD

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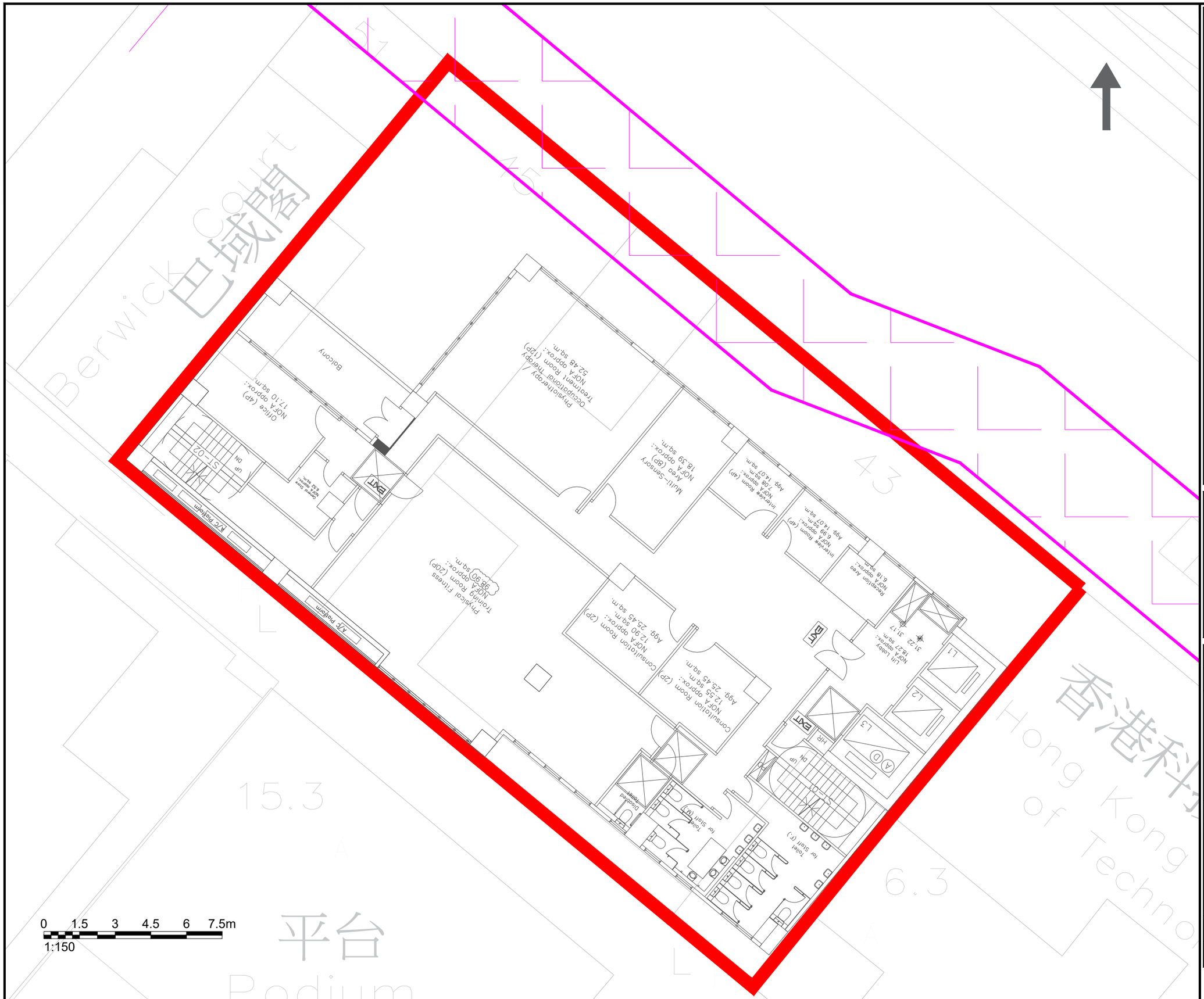

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▨ 5M ROAD BUFFER DISTANCE

CONSULTANT

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DRAWING TITLE :

BUFFER DISTANCE BETWEEN THE PROPOSED REDEVELOPMENT (5/F) AND ADJACENT ROAD

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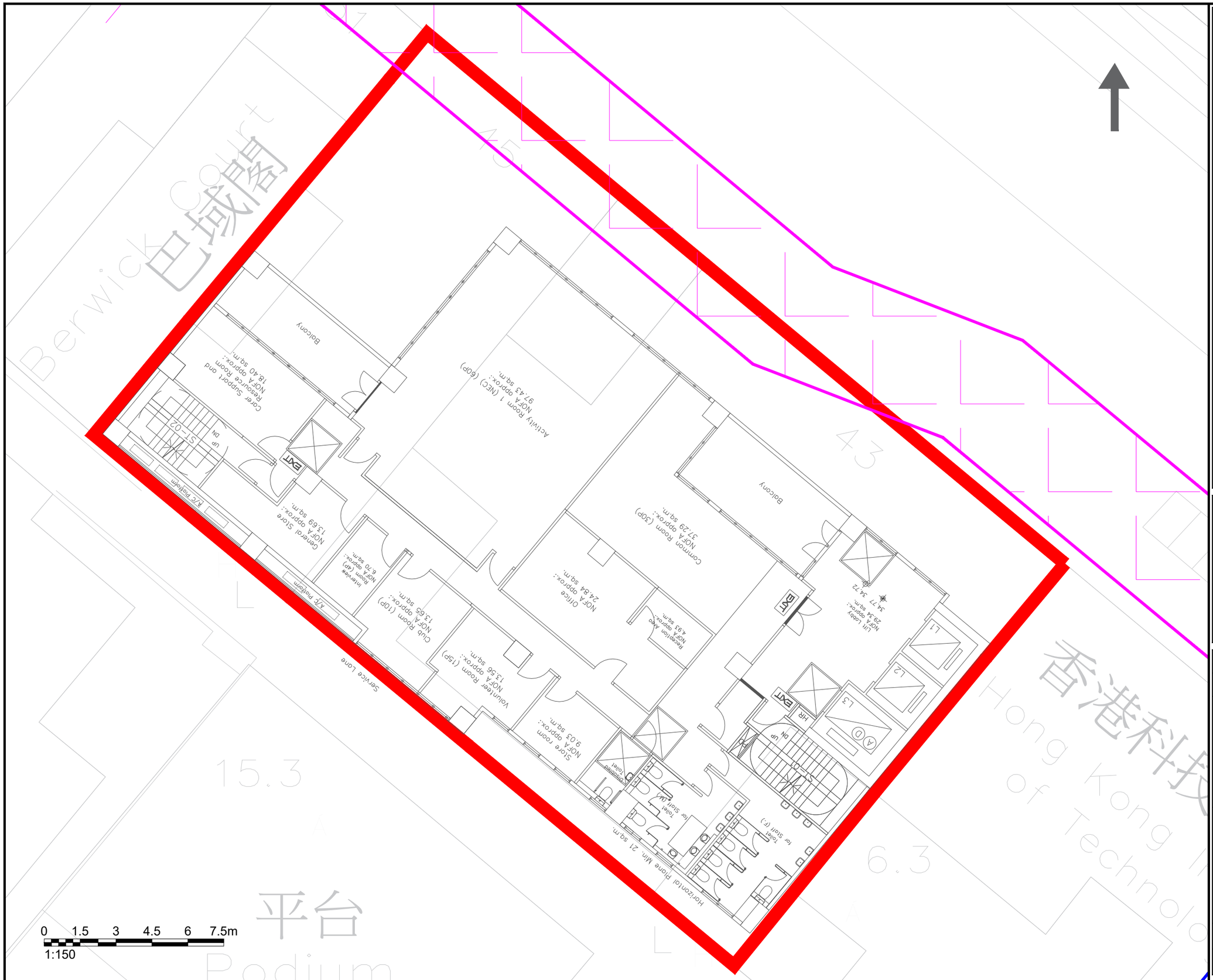

NOTES :

SUBJECT SITE

5M ROAD BUFFER DISTANCE

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DRAWING TITLE :

BUFFER DISTANCE BETWEEN THE PROPOSED REDEVELOPMENT (6/F) AND ADJACENT ROAD

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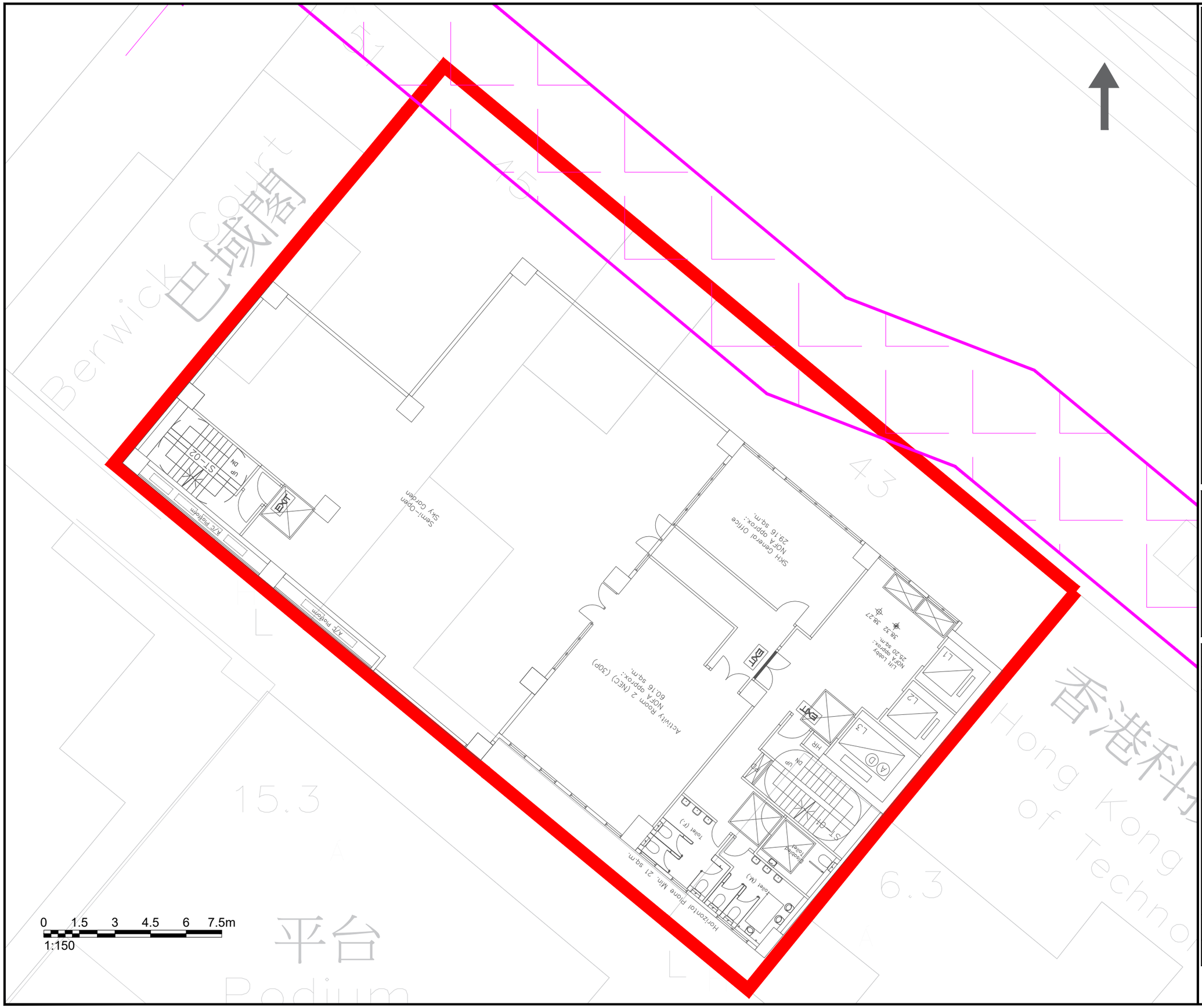

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NOTES :

SUBJECT SITE

5M ROAD BUFFER DISTANCE

CONSULTANT

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DRAWING TITLE :

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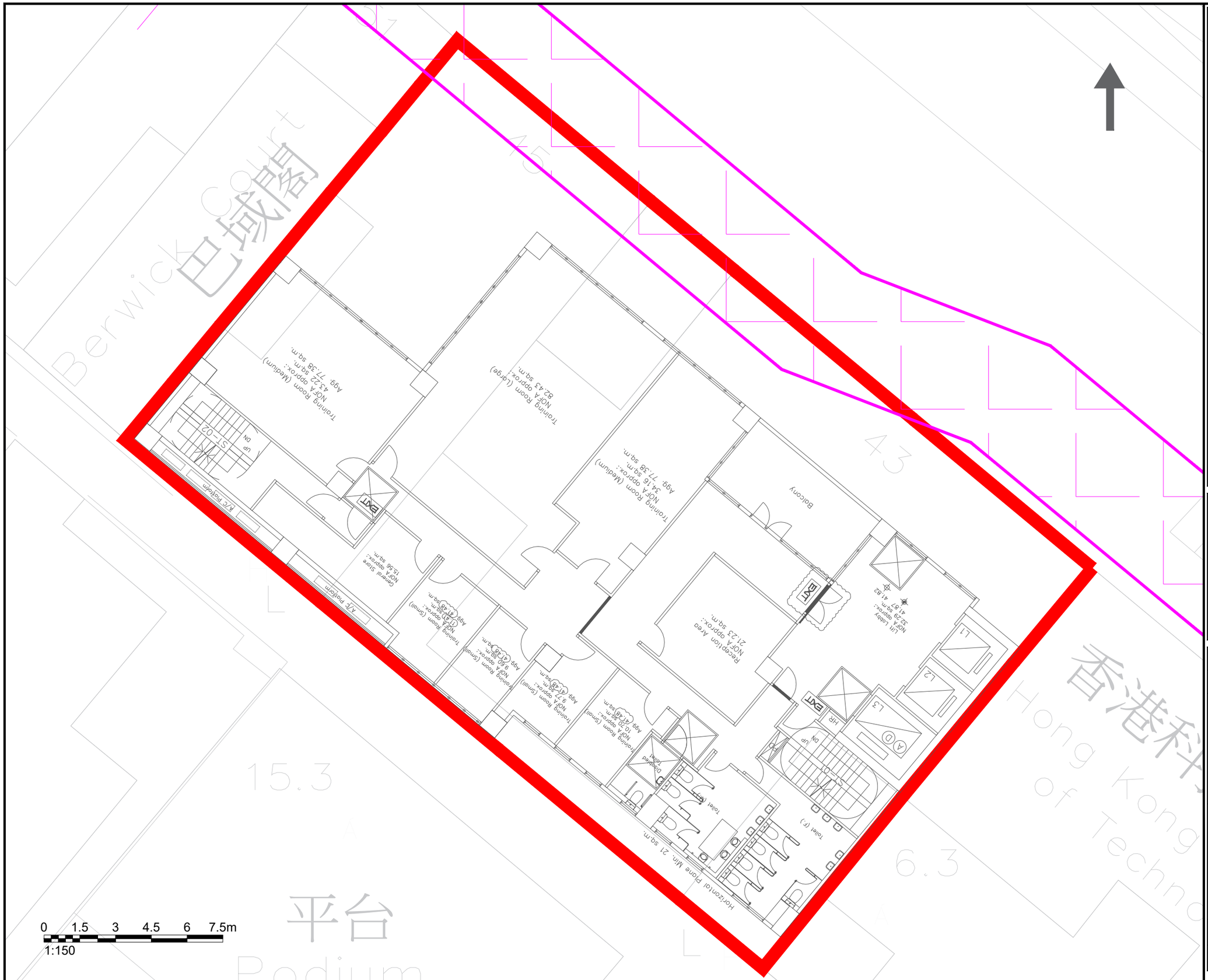

NOTES :

SUBJECT SITE

5M ROAD BUFFER DISTANCE

CONSULTANT

Allied Environmental Consultants Limited

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PROJECT :

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DRAWING TITLE :

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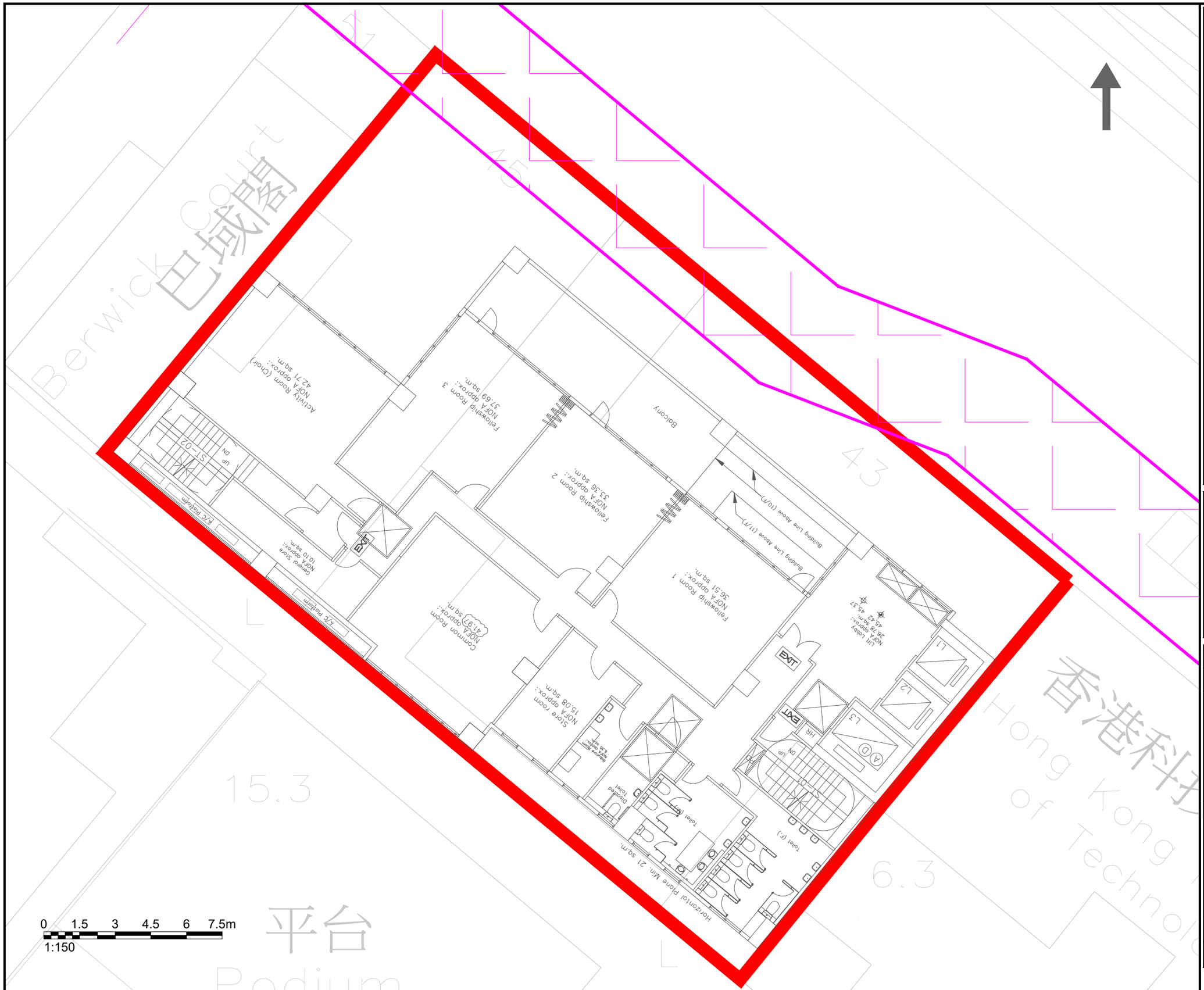

NOTES :

SUBJECT SITE

5M ROAD BUFFER DISTANCE

CONSULTANT

AEC

Allied Environmental Consultants Limited

PROJECT NO. :	2076EA
DRAWN BY :	ZX

PROJECT :

SECTION 16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF BUILDING HEIGHT RESTRICTION FOR PERMITTED 'RELIGIOUS INSTITUTION' AND 'SOCIAL WELFARE FACILITY' USES, AT N.K.I.L. NO. 3635 RP AND 3762, 43 - 45 BERWICK STREET, SHAM SHUI PO, KOWLOON

DRAWING TITLE :

BUFFER DISTANCE BETWEEN THE PROPOSED REDEVELOPMENT (9/F) AND ADJACENT ROAD

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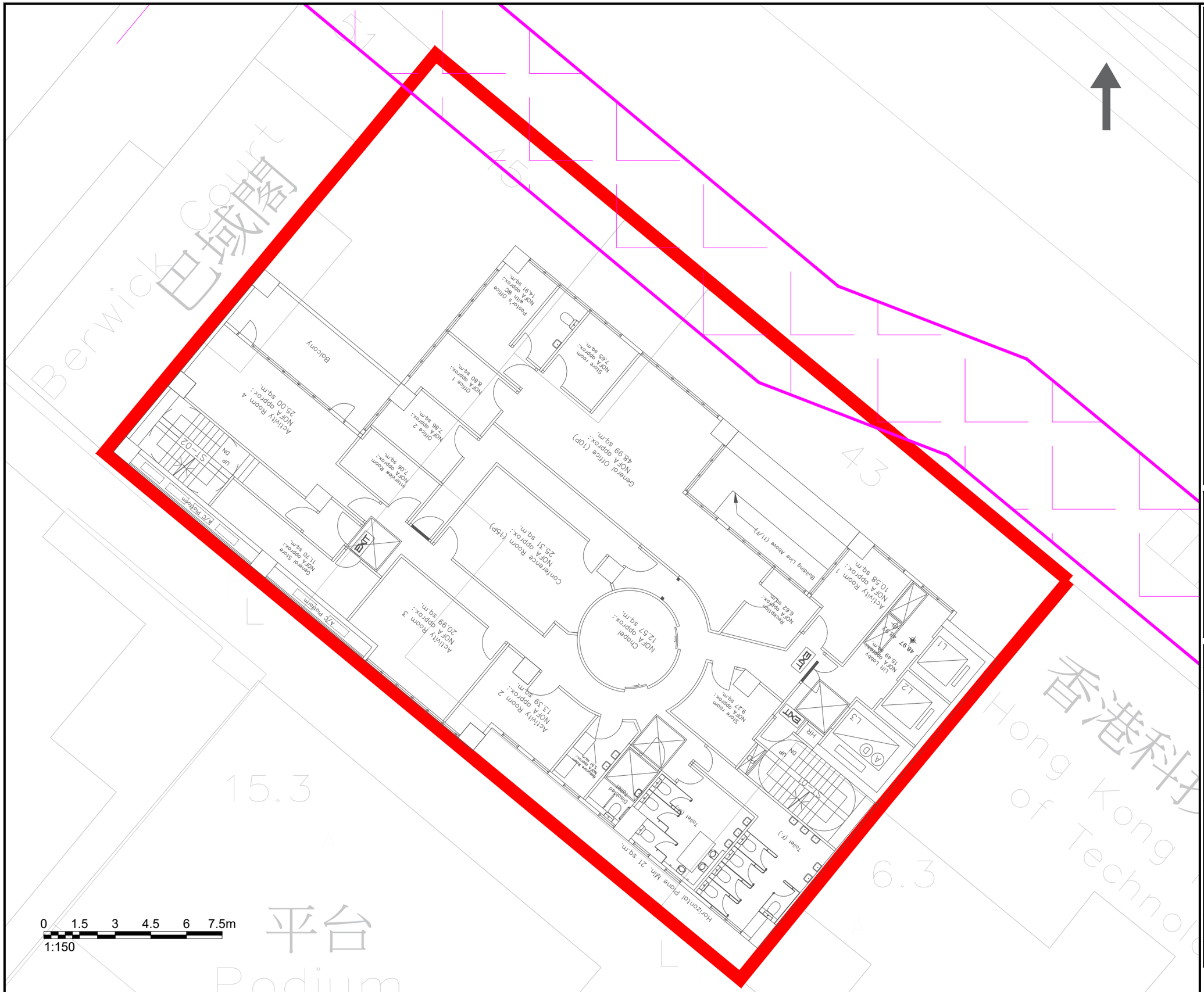


NOTES :

SUBJECT SITE

5M ROAD BUFFER DISTANCE

CONSULTANT

Allied Environmental Consultants Limited

PROJECT NO. :	2076EA
DRAWN BY :	ZX

PROJECT :

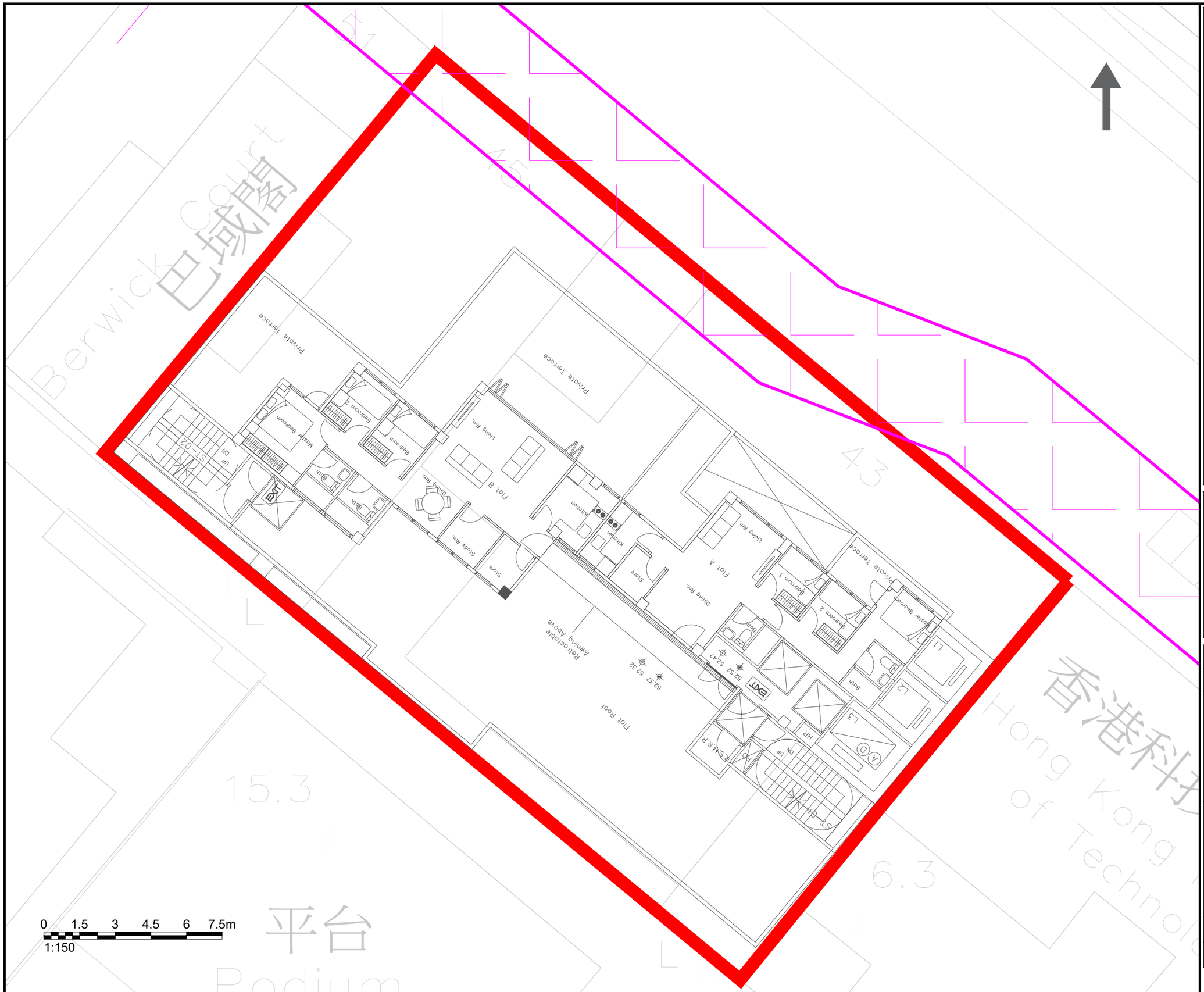
SECTION 16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF BUILDING HEIGHT RESTRICTION FOR PERMITTED 'RELIGIOUS INSTITUTION' AND 'SOCIAL WELFARE FACILITY' USES, AT N.K.I.L. NO. 3635 RP AND 3762, 43 - 45 BERWICK STREET, SHAM SHUI PO, KOWLOON

DRAWING TITLE :

BUFFER DISTANCE BETWEEN THE PROPOSED REDEVELOPMENT (10/F) AND ADJACENT ROAD

DRAWING NO : FIGURE 5-14	REVISION : 0
SCALE : AS SHOWN	DATE : OCTOBER 2025

A3 420 x 297



NOTES :

SUBJECT SITE

5M ROAD BUFFER DISTANCE

CONSULTANT

Allied Environmental Consultants Limited

PROJECT NO. :	2076EA
DRAWN BY :	ZX

PROJECT :

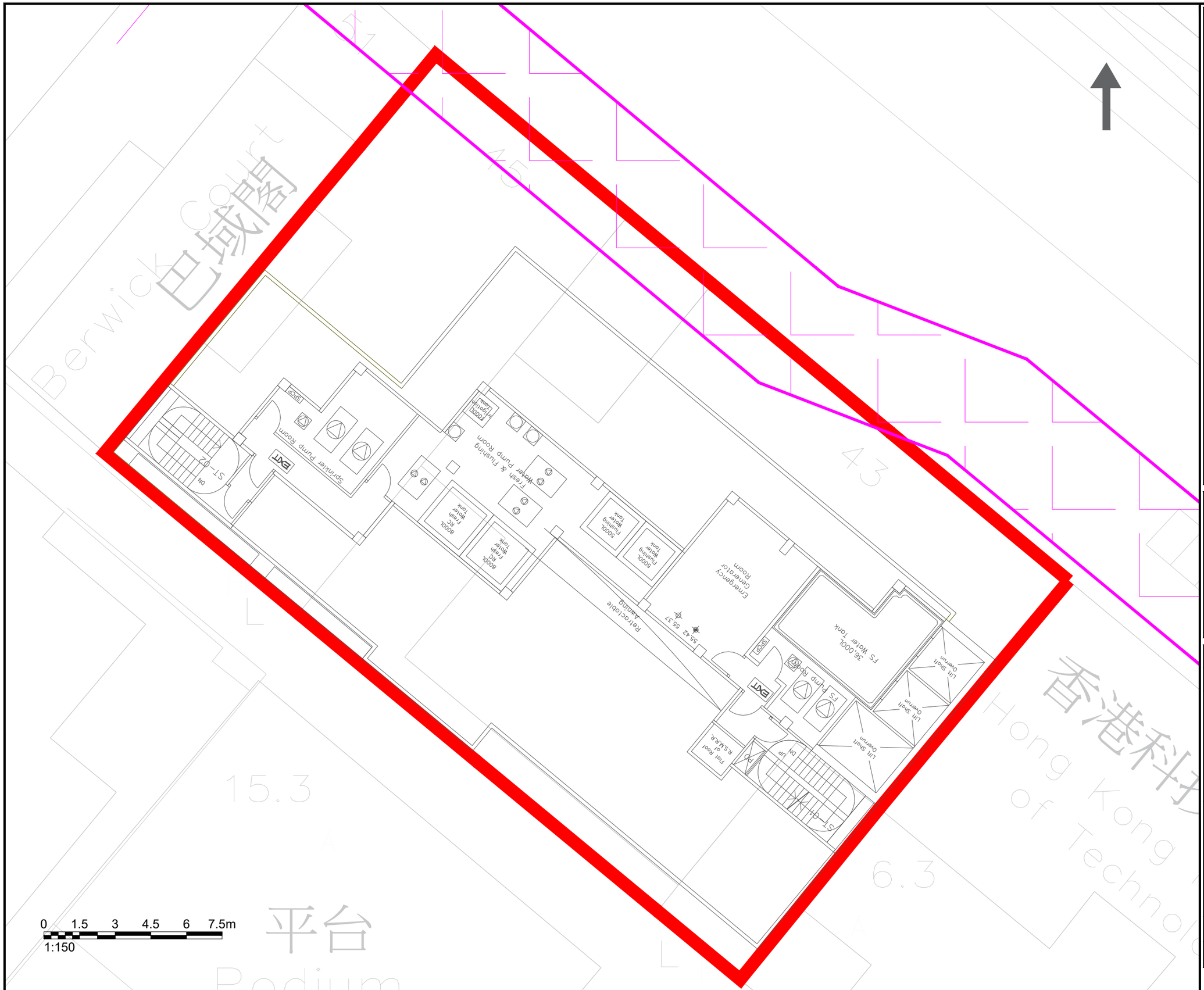
SECTION 16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF BUILDING HEIGHT RESTRICTION FOR PERMITTED 'RELIGIOUS INSTITUTION' AND 'SOCIAL WELFARE FACILITY' USES, AT N.K.I.L. NO. 3635 RP AND 3762, 43 - 45 BERWICK STREET, SHAM SHUI PO, KOWLOON

DRAWING TITLE :

BUFFER DISTANCE BETWEEN THE PROPOSED REDEVELOPMENT (11/F) AND ADJACENT ROAD

DRAWING NO : FIGURE 5-15	REVISION : 0
SCALE : AS SHOWN	DATE : OCTOBER 2025

A3 420 x 297



NOTES :

SUBJECT SITE

5M ROAD BUFFER DISTANCE

CONSULTANT

Allied Environmental Consultants Limited

PROJECT NO. :	2076EA
DRAWN BY :	ZX

PROJECT :

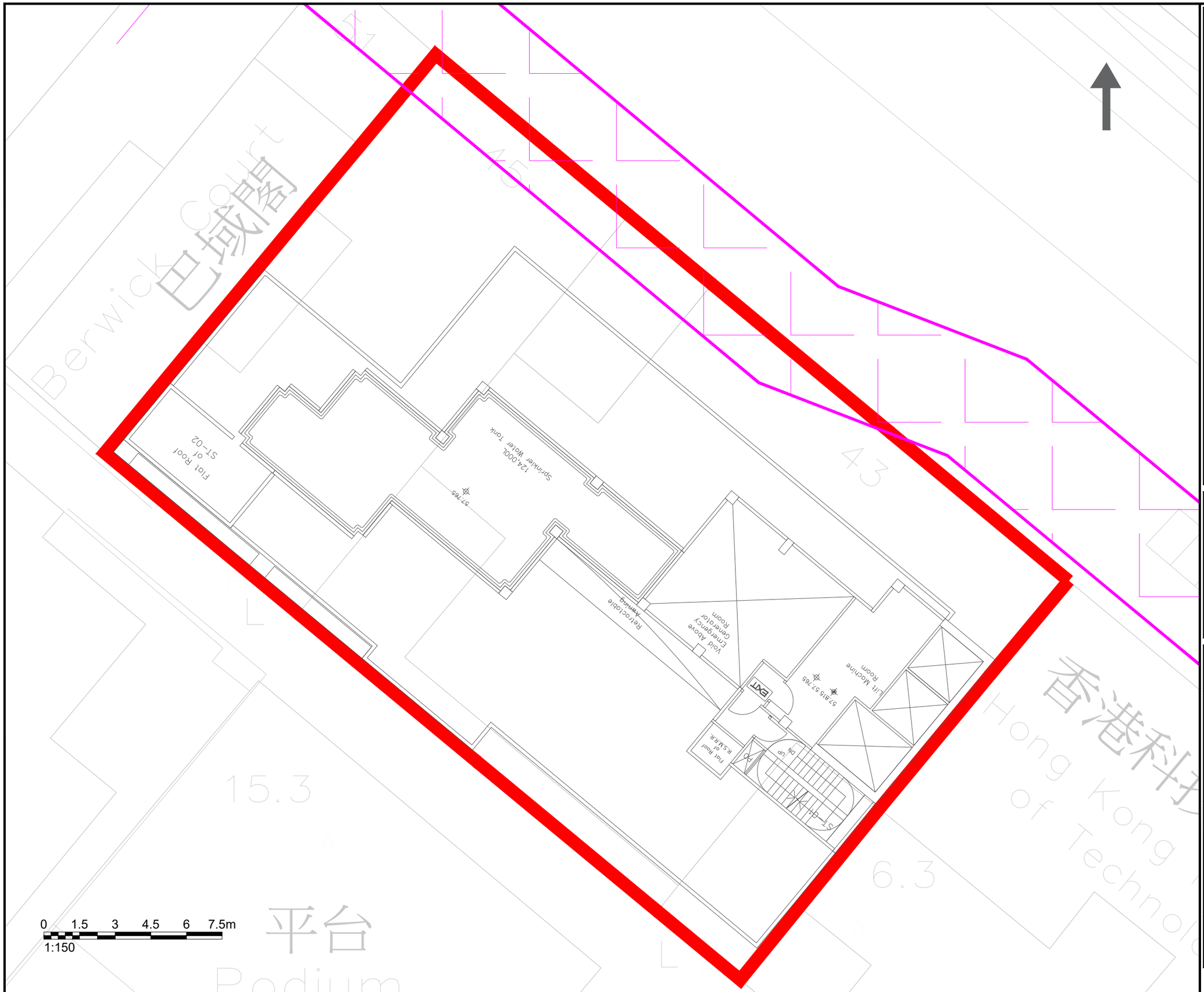
SECTION 16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF BUILDING HEIGHT RESTRICTION FOR PERMITTED 'RELIGIOUS INSTITUTION' AND 'SOCIAL WELFARE FACILITY' USES, AT N.K.I.L. NO. 3635 RP AND 3762, 43 - 45 BERWICK STREET, SHAM SHUI PO, KOWLOON

DRAWING TITLE :

BUFFER DISTANCE BETWEEN THE PROPOSED REDEVELOPMENT (R/F) AND ADJACENT ROAD

DRAWING NO : FIGURE 5-16	REVISION : 0
SCALE : AS SHOWN	DATE : OCTOBER 2025

A3 420 x 297



NOTES :

SUBJECT SITE

5M ROAD BUFFER DISTANCE

CONSULTANT

Allied Environmental Consultants Limited

PROJECT NO. :	2076EA
DRAWN BY :	ZX

PROJECT :

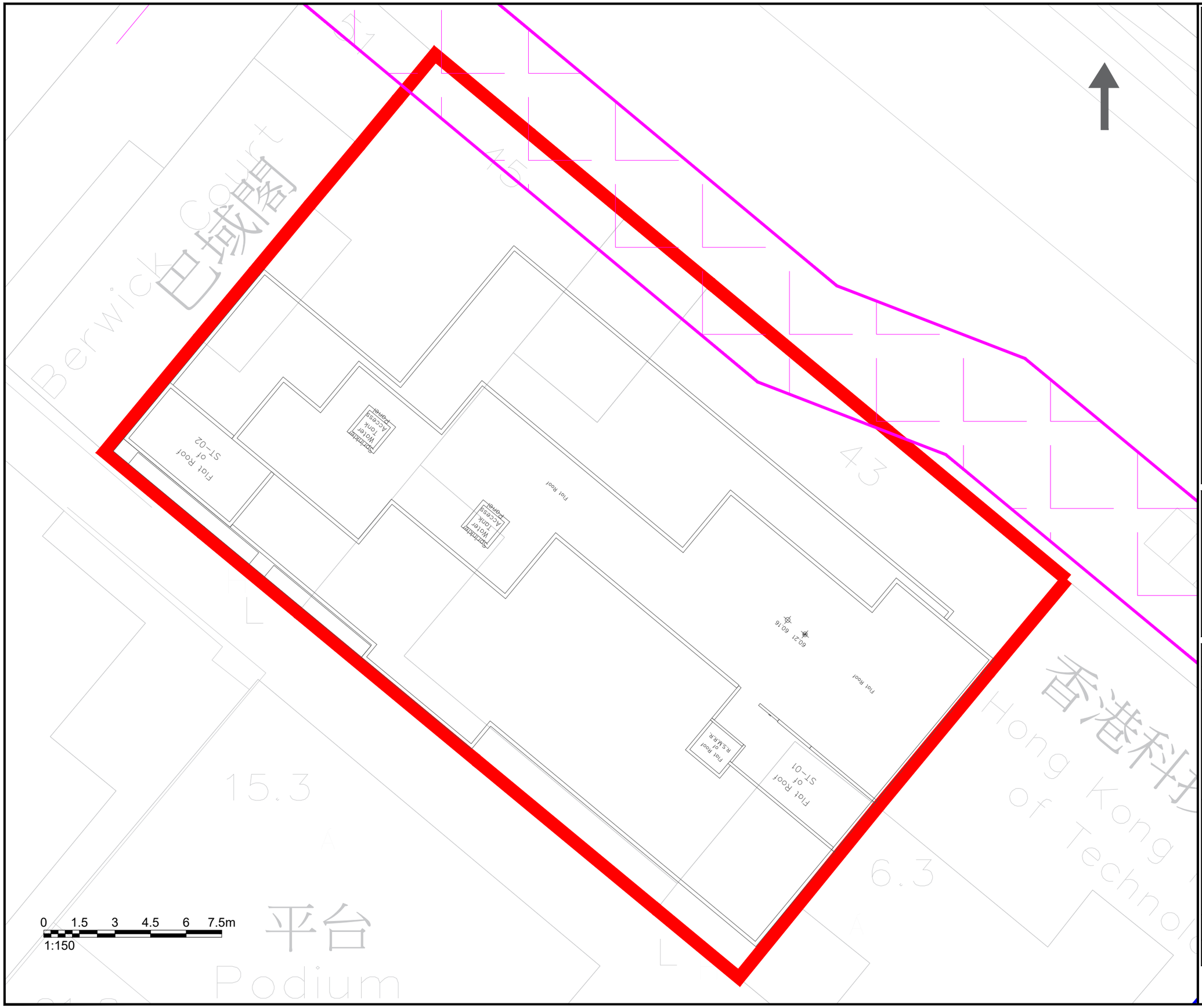
SECTION 16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF BUILDING HEIGHT RESTRICTION FOR PERMITTED 'RELIGIOUS INSTITUTION' AND 'SOCIAL WELFARE FACILITY' USES, AT N.K.I.L. NO. 3635 RP AND 3762, 43 - 45 BERWICK STREET, SHAM SHUI PO, KOWLOON

DRAWING TITLE :

BUFFER DISTANCE BETWEEN THE PROPOSED REDEVELOPMENT (UR/F) AND ADJACENT ROAD

DRAWING NO : FIGURE 5-17	REVISION : 0
SCALE : AS SHOWN	DATE : OCTOBER 2025

A3 420 x 297



NOTES :

SUBJECT SITE

5M ROAD BUFFER DISTANCE

CONSULTANT

Allied Environmental Consultants Limited

PROJECT NO. :	2076EA
DRAWN BY :	ZX

PROJECT :

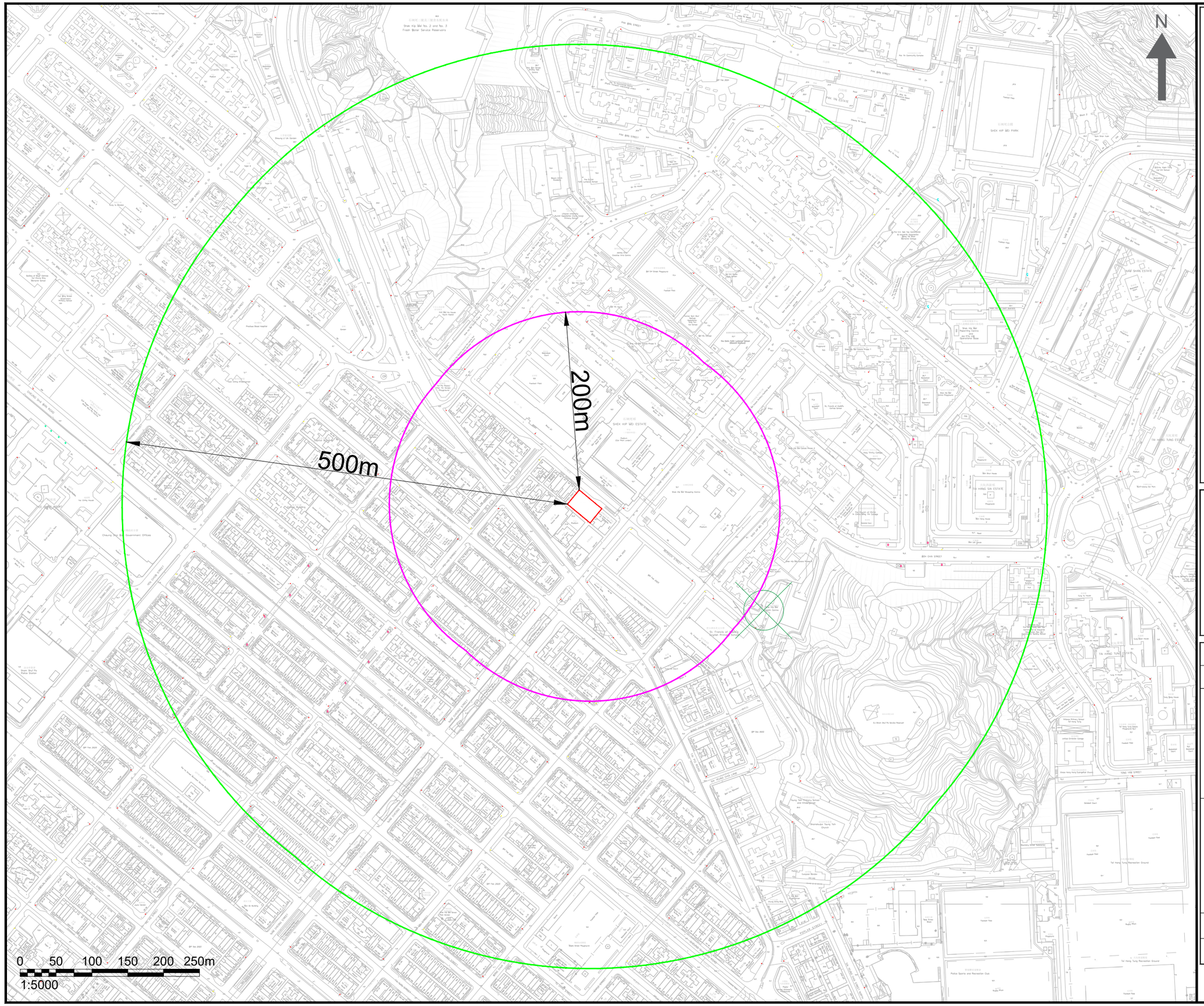
SECTION 16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF BUILDING HEIGHT RESTRICTION FOR PERMITTED 'RELIGIOUS INSTITUTION' AND 'SOCIAL WELFARE FACILITY' USES, AT N.K.I.L. NO. 3635 RP AND 3762, 43 - 45 BERWICK STREET, SHAM SHUI PO, KOWLOON

DRAWING TITLE :

BUFFER DISTANCE BETWEEN THE PROPOSED REDEVELOPMENT (TR/F) AND ADJACENT ROAD

DRAWING NO : FIGURE 5-18	REVISION : 0
SCALE : AS SHOWN	DATE : OCTOBER 2025

A3 420 x 297



NOTES :

SUBJECT SITE

200M STUDY AREA

500M STUDY AREA

POTENTIAL CHIMNEY (SHEK KIP MEI HEALTH CENTRE)

CONSULTANT

Allied Environmental Consultants Limited

PROJECT NO. :	2076EA
DRAWN BY :	ZX

PROJECT :

SECTION 16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF BUILDING HEIGHT RESTRICTION FOR PERMITTED 'RELIGIOUS INSTITUTION' AND 'SOCIAL WELFARE FACILITY' USES, AT N.K.I.L. NO. 3635 RP AND 3762, 43 - 45 BERWICK STREET, SHAM SHUI PO, KOWLOON

DRAWING TITLE :

SUBJECT SITE LOCATION, 500M, 200M STUDY AREA AND LOCATION OF CHIMNEY

DRAWING NO : FIGURE 5-19	REVISION : 1
SCALE : AS SHOWN	DATE : OCTOBER 2025

A3 420 x 297

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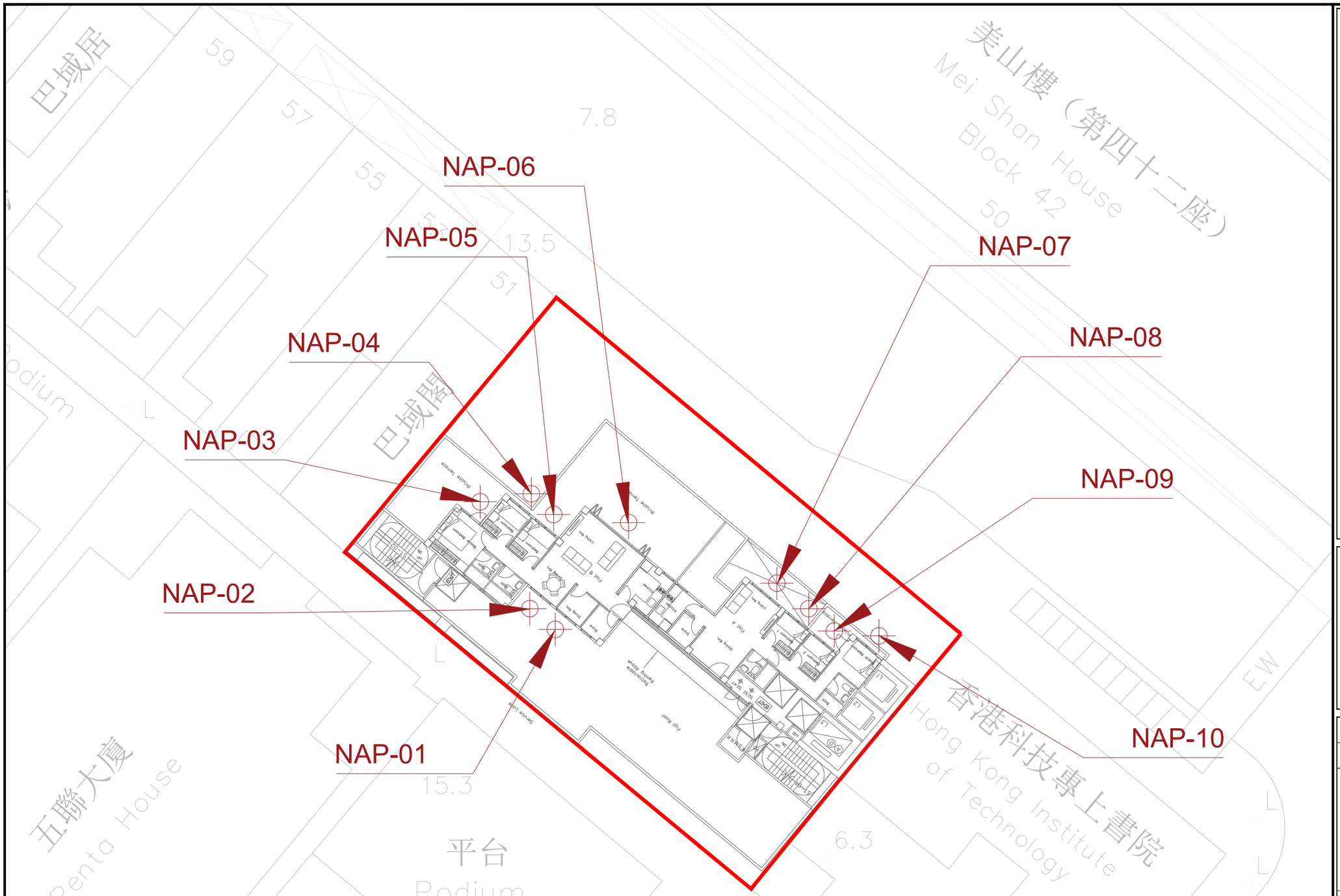

NOTES :

SUBJECT SITE

REPRESENTATIVE NOISE ASSESSMENT POINT

CONSULTANT

Allied Environmental Consultants Limited

PROJECT NO. :	2076EA
DRAWN BY :	RL

PROJECT :

SECTION 16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF BUILDING HEIGHT RESTRICTION FOR PERMITTED 'RELIGIOUS INSTITUTION' AND 'SOCIAL WELFARE FACILITY' USES, AT N.K.I.L. NO. 3635 RP AND 3762, 43 - 45 BERWICK STREET, SHAM SHUI PO, KOWLOON

DRAWING TITLE :

LOCATION OF REPRESENTATIVE NOISE ASSESSMENT POINT (11/F) FOR TRAFFIC NOISE IMPACT ASSESSMENT

DRAWING NO : FIGURE 6-1	REVISION : 1
SCALE : AS SHOWN	DATE : FEB 2026

A3 420 x 297

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NOTES :

SUBJECT SITE

ACOUSTIC WINDOW - BUFFLE TYPE
(REF: PROPECC PN 5/23)

CONSULTANT

Allied Environmental Consultants Limited

PROJECT NO. :	2076EA
DRAWN BY :	RL

PROJECT :

SECTION 16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF BUILDING HEIGHT RESTRICTION FOR PERMITTED 'RELIGIOUS INSTITUTION' AND 'SOCIAL WELFARE FACILITY' USES, AT N.K.I.L. NO. 3635 RP AND 3762, 43 - 45 BERWICK STREET, SHAM SHUI PO, KOWLOON

DRAWING TITLE :

LOCATION OF NOISE
MITIGATION MEASURE (11/F)

DRAWING NO : FIGURE 6-2	REVISION : 2
SCALE : AS SHOWN	DATE : FEB 2026

A3 420 x 297

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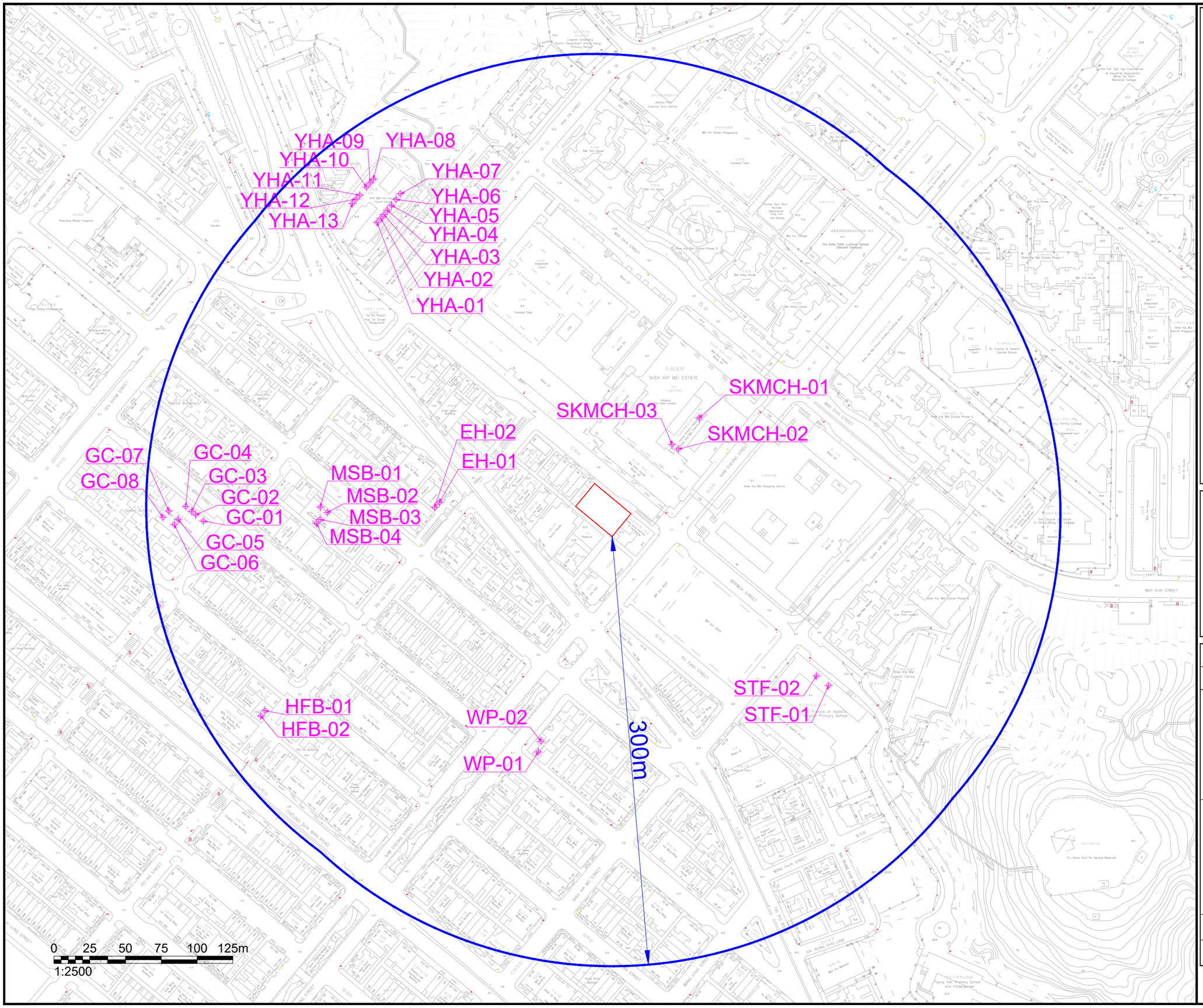

NOTES :

SUBJECT SITE

FIXED PLANT NOISE SOURCES

300M ASSESSMENT AREA

CONSULTANT

Allied Environmental Consultants Limited

PROJECT NO. :	2076EA
DRAWN BY :	RL

PROJECT :

SECTION 16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF BUILDING HEIGHT RESTRICTION FOR PERMITTED 'RELIGIOUS INSTITUTION' AND 'SOCIAL WELFARE FACILITY' USES, AT N.K.I.L. NO. 3635 RP AND 3762, 43 - 45 BERWICK STREET, SHAM SHUI PO, KOWLOON

DRAWING TITLE :

300M ASSESSMENT AREA & LOCATION OF FIXED PLANT NOISE SOURCES

DRAWING NO : FIGURE 6-3	REVISION : 0
SCALE : AS SHOWN	DATE : OCT 2025

A3 420 x 297

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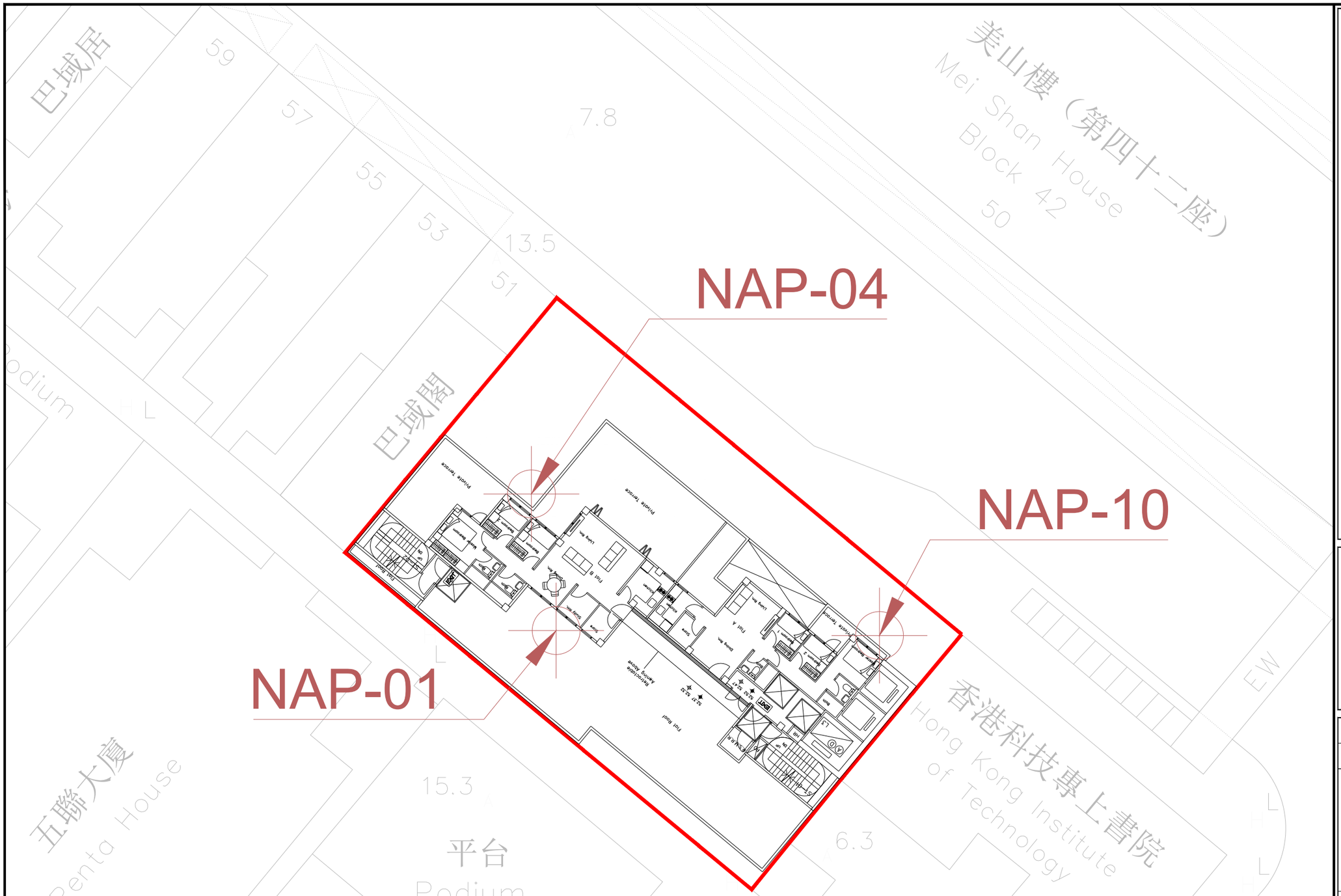

NOTES :

▭ SUBJECT SITE

⌖ REPRESENTATIVE NOISE ASSESSMENT POINT

CONSULTANT

Allied Environmental Consultants Limited

PROJECT NO. :	2076EA
DRAWN BY :	RL

PROJECT :

SECTION 16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF BUILDING HEIGHT RESTRICTION FOR PERMITTED 'RELIGIOUS INSTITUTION' AND 'SOCIAL WELFARE FACILITY' USES, AT N.K.I.L. NO. 3635 RP AND 3762, 43 - 45 BERWICK STREET, SHAM SHUI PO, KOWLOON

DRAWING TITLE :

LOCATION OF REPRESENTATIVE NOISE ASSESSMENT POINT (11/F) FOR FIXED PLANT NOISE IMPACT ASSESSMENT

DRAWING NO : FIGURE 6-4	REVISION : 1
SCALE : AS SHOWN	DATE : FEB 2026

A3 420 x 297

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Appendix 2-1

Layout Plans and the Proposed Redevelopment

Legend

CCC Area | Circulation Space | E&M

0m 5m 10m

N

Service Lane

B.L.

7.06 7.11 7.35 7.21 7.41 7.62 7.92 7.67 7.47

1 2 3 4 5 A B C D E

7200 7000 11200 7400 32800

3850 4900 20070 7200 4120

Transformer Room

RS&MRC

General Store (C.C.C.) NOFA approx.: 7.36 sq.m. Agg. 9.90 sq.m.

Ramp Up 1:12

Disabled Toilet

Male Staff Changing Room (C.C.C.) NOFA approx.: 3.08 sq.m. Agg. 6.20 sq.m.

FS Pump Room

FS Control Room

Light Bus Parking Space 1 (DE) (8,000mm L x 3,000mm W x 3,600mm H)

Light Bus Parking Space 2 (DE) (8,000mm L x 3,000mm W x 3,600mm H)

8000 3000

Security Room (EL)

W.M.C.

UP

ST-02

ST-01 UP

Ramp Up 1:12

Fireman's Lift Lobby

A D L3

L2

L1

Shared Lobby by Church & Welfare

Light Bus Parking Space 3(SCCC) (8,000mm L x 3,000mm W x 3,600mm H)

Access from L/UL Bay to Lift Lobby

Loading / Unloading Bay (DE / SCCC Shared L/UL Bay) (8,000mm L x 3,500mm W x 3,600mm H)

3500

Carpark

Planter

Reception

Church Lobby

Ramp DN 1:12

FS & Sprinkler Valve Inlet

NKIL 3635 R.P.
REMAINING PORTION

NKIL 3762

2m Depth Canopy Above Pedestrian Entrance Over Street

Run-in / out

G/F Plan | Lobby / Carpark / CCC Ancillary [1:100]

Technical Feasibility Study - Hong Kong Sheng Kung Hui St. Thomas' Church Redevelopment under Special Scheme on Privately Owned Sites for Welfare Uses (Special Sites Scheme)

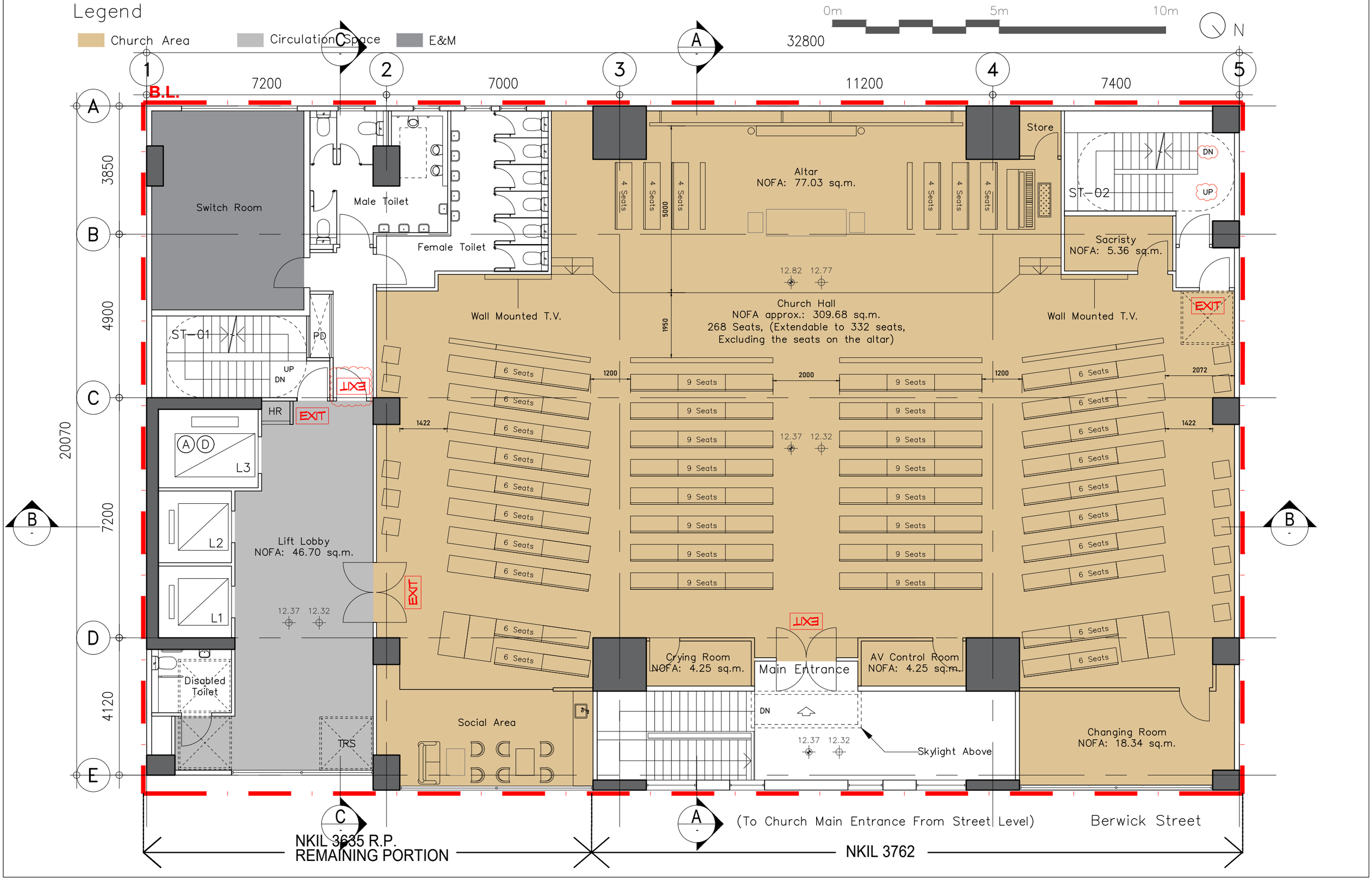
AGC DESIGN LTD
architecture urban design interior

Legend

Church Area | Circulation Space | E&M

0m 5m 10m

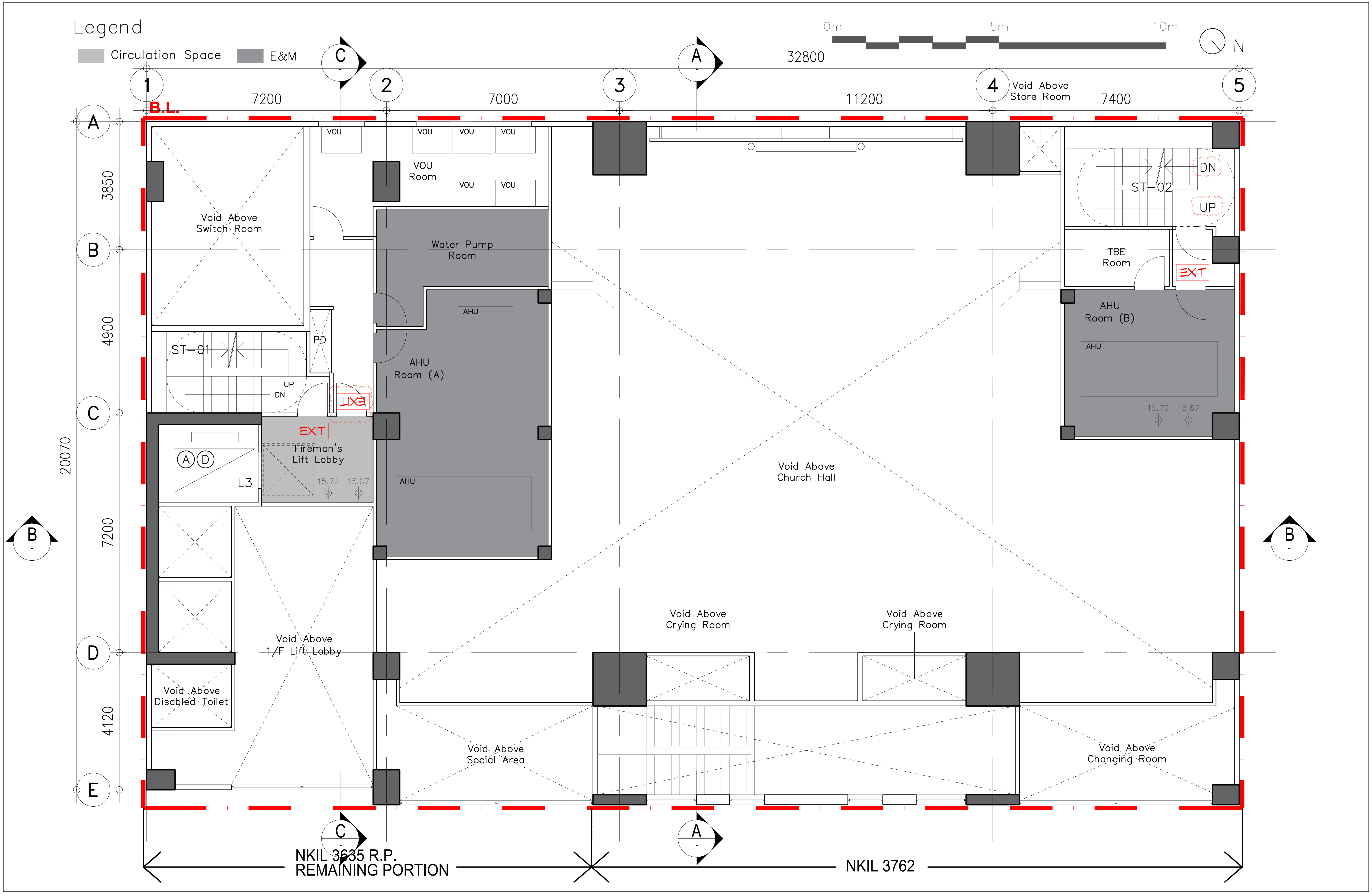
N



1/F Plan | Church Hall [1:100]

Technical Feasibility Study - Hong Kong Sheng Kung Hui St. Thomas' Church Redevelopment under Special Scheme on Privately Owned Sites for Welfare Uses (Special Sites Scheme)

AGC DESIGN LTD
architecture
urban design
interior



Legend
Circulation Space
E&M
0m
5m
10m
N
32800
7200
7000
11200
7400
B.L.
Void Above Store Room
VOU Room
Water Pump Room
AHU Room (A)
Void Above Switch Room
ST-01
ST-02
PD
EXIT
Fireman's Lift Lobby
L3
TBE Room
AHU Room (B)
Void Above Church Hall
Void Above Crying Room
Void Above Crying Room
Void Above 1/F Lift Lobby
Void Above Disabled Toilet
Void Above Social Area
Void Above Changing Room
3850
4900
7200
4120
20070
NKIL 3635 R.P.
REMAINING PORTION
NKIL 3762

M/F Plan | E&M Rooms [1:100]

Technical Feasibility Study - Hong Kong Sheng Kung Hui St. Thomas' Church Redevelopment under Special Scheme on Privately Owned Sites for Welfare Uses (Special Sites Scheme)

AGC DESIGN LTD architecture urban design interior

Legend

CCC Area | Circulation Space | Greenery

0m 5m 10m

N

32800

B.L.

Horizontal Plane Min. 21 sq.m.

Flat Roof

W-01 W-02 W-03 W-04 W-05

7200 7000 11200 7400

Service Lane

A/C Platform A/C Platform

3850 4900 7200 4120 20070

Female Staff Toilet

Disabled Toilet

Male Staff Toilet

Children's Toilet / Infant's Toilet

Milk Room NOFA approx.: 5.46 sq.m.

Kitchen NOFA approx.: 10.80 sq.m.

Fixed Diaper Changing Bench

Baby bath sink (560LX400WX250H)

Dormitory (Resting Room) (18P) NOFA approx.: 38.31 sq.m. Agg. 86.98 sq.m.

ST-02 UP DN

Food Store NOFA approx.: 2.45 sq.m.

Female Staff Changing Room NOFA approx.: 3.19 sq.m. Agg. 6.20 sq.m.

Washing Area for Cleaning Stacking Beds

Laundry NOFA approx.: 8.77 sq.m.

EXIT

Small Group Tuition Room (4P) NOFA approx.: 6.65 sq.m.

Assistant Supervisor's Room (1P) NOFA approx.: 6.06 sq.m.

General Store NOFA approx.: 2.54 sq.m. Agg. 9.90 sq.m.

Indoor Big Muscle Area (20P) NOFA approx.: 38.92 sq.m.

PD

Nappy Changing Room NOFA approx.: 3.28 sq.m.

ST-01 UP DN

Babycare Room NOFA approx.: 3.64 sq.m.

Fixed Diaper Changing Bench

Open Plan for Office / Staff Room (10P) NOFA approx.: 23.07 sq.m.

Supervisor's Room (1P) NOFA approx.: 7.08 sq.m.

HR

A D L3

L2

L1

Lift Lobby NOFA approx.: 17.24 sq.m.

19.37 19.32

Interview Room NOFA approx.: 4.48 sq.m.

Medical / Isolation Room (2P) NOFA approx.: 5.07 sq.m.

Entrance / Reception / Health Inspection Area (10P) NOFA approx.: 12.26 sq.m.

Playroom / Music Room (22P) NOFA approx.: 32.08 sq.m.

Play cum Dining Area (20P) NOFA approx.: 36.98 sq.m.

Baby bath sink (560LX400WX250H)

Fixed Diaper Changing Bench

Dormitory (Resting Room) (30P) NOFA approx.: 48.67 sq.m. Agg. 86.98 sq.m.

Outdoor Podium Garden

Outdoor Podium Garden

Skylight to Church Hall Entrance Below

NKIL 3635 R.P. REMAINING PORTION

NKIL 3762

Window:	W-01	W-02	W-03	W-04	W-05
Window Area (approx. sq.m.):	2.24	1.12	1.12	1.12	1.12
Floor Area (approx. sq.m.):	5.86	3.84	5.58	2.87	2.99
Window area / Floor Area ratio : (>10% required)	38.2%	29.2%	20.1%	39.0%	37.5%

2/F Plan | Child Care Centre (CCC) [1:100]

Technical Feasibility Study - Hong Kong Sheng Kung Hui St. Thomas' Church Redevelopment under Special Scheme on Privately Owned Sites for Welfare Uses (Special Sites Scheme)

AGC DESIGN LTD

architecture urban design interior

Legend

SCCC Area | Circulation Space | Outdoor Area

0m 5m 10m

N

32800

B.L.

Horizontal Plane Min. 21 sq.m.

W-06 W-07 W-08 W-09 W-10 W-11 Openable Window

7200 7000 11200 7400

Service Lane

3850 4900 7200 4120 20070

Toilet for Staff (M.)

Disabled Toilet

Toilet for Children (Male)

Toilet for Children (Female)

Sick Bay / Quiet Room NOFA approx.: 4.20 sq.m.

Food Store NOFA approx.: 2.06 sq.m.

Kitchen NOFA approx.: 10.02 sq.m.

Washing Area for Cleaning/ Stacking Beds

Laundry Area NOFA approx.: 5.12 sq.m.

A/C Platform

Therapy / Special Room (ST) NOFA approx.: 11.22 sq.m. Agg. 36.05 sq.m.

Therapy / Special Room (PT) NOFA approx.: 11.92 sq.m. Agg. 36.05 sq.m.

ST-02 UP DN

EXIT

General Store NOFA approx.: 5.00 sq.m.

ST-01 UP DN

PD

Interview Room (3P) NOFA approx.: 6.15 sq.m.

Reception / Waiting Area NOFA approx.: 4.73 sq.m.

General Office / Staff Room NOFA approx.: 17.55 sq.m.

Therapy / Special Room (OT) NOFA approx.: 12.91 sq.m. Agg. 36.05 sq.m.

Activity / Training Room NOFA approx.: 13.42 sq.m. Agg. 82.12 sq.m. (30P)

Activity / Training Room NOFA approx.: 13.45 sq.m. Agg. 82.12 sq.m. (30P)

HR EXIT

A D L3

L2

L1

Lift Lobby NOFA approx.: 29.34 sq.m.

23.52 23.47

Training Aids Adaption Area and Store (1P) NOFA approx.: 6.75 sq.m.

Balcony

Activity / Training Room NOFA approx.: 19.67 sq.m. Agg. 82.12 sq.m. (30P)

Activity / Training Room NOFA approx.: 17.00 sq.m. Agg. 82.12 sq.m. (30P)

Activity / Training Room NOFA approx.: 18.58 sq.m. Agg. 82.12 sq.m. (30P)

Boundary of SCCC

NKIL 3635 R.P. REMAINING PORTION

NKIL 3762

Window:	W-06	W-07	W-08	W-09	W-10	W-11
Window Area (approx. sq.m.):	2.24	1.12	1.12	1.12	1.12	1.12
Floor Area (approx. sq.m.):	10.89	7.68	3.91	7.15	7.00	
Window area / Floor Area ratio : (>10% required)	20.6%	14.6%	28.6%	15.7%	32.0%	

3/F Plan | Special Child Care Centre (SCCC) [1:100]

Technical Feasibility Study - Hong Kong Sheng Kung Hui St. Thomas' Church Redevelopment under Special Scheme on Privately Owned Sites for Welfare Uses (Special Sites Scheme)

AGC DESIGN LTD
architecture urban design interior

Legend

DE Area

Circulation Space

0m 5m 10m

N

32800

Service Lane

B.L.

Horizontal Plane Min. 21 sq.m.

7200 7000 11200 7400

3850 4900 7200 4120

20070

A/C Platform

A/C Platform

Toilet for Staff (F.)

Toilet for Staff (M.)

Disabled Toilet

Accessible Toilet cum Shower

Medical Consultation / Nurse Duty Room / Sick Room NOFA approx.: 11.50 sq.m.

Staff Changing Room (3P) NOFA approx.: 2.98 sq.m. Agg. 6.98 sq.m.

Laundry / Workroom NOFA approx.: 15.93 sq.m.

Multi-Sensory Area (4P) NOFA approx.: 9.38 sq.m.

General Store NOFA approx.: 6.32 sq.m.

ST-02 UP DN

EXIT

1650

1600

1600

1600

1500

1500

Staff Changing Room (4P) NOFA approx.: 3.90 sq.m. Agg. 6.98 sq.m.

Reception NOFA approx.: 5.40 sq.m.

Cellular Offices Open Plan for Staff and F/E (10P) NOFA approx.: 13.62 sq.m.

Physiotherapist / Training Room(20P) NOFA approx.: 50.68 sq.m.

ST-01 UP DN

PD

Interview Room NOFA approx.: 6.99 sq.m.

HR

EXIT

EXIT

A D L3

L2

L1

Lift Lobby NOFA approx.: 16.88 sq.m.

27.67 27.62

Open Plan Dining / Activity Room / Meal Provision Area (40P) NOFA approx.: 56.83 sq.m.

Open Plan Common Room (40P) NOFA approx.: 81.29 sq.m.

A B C D E

NKIL 3635 R.P.
REMAINING PORTION

NKIL 3762

4/F Plan | Day Care Centre for the Elderly (DE) [1:100]

Technical Feasibility Study - Hong Kong Sheng Kung Hui St. Thomas' Church Redevelopment under Special Scheme on Privately Owned Sites for Welfare Uses (Special Sites Scheme)

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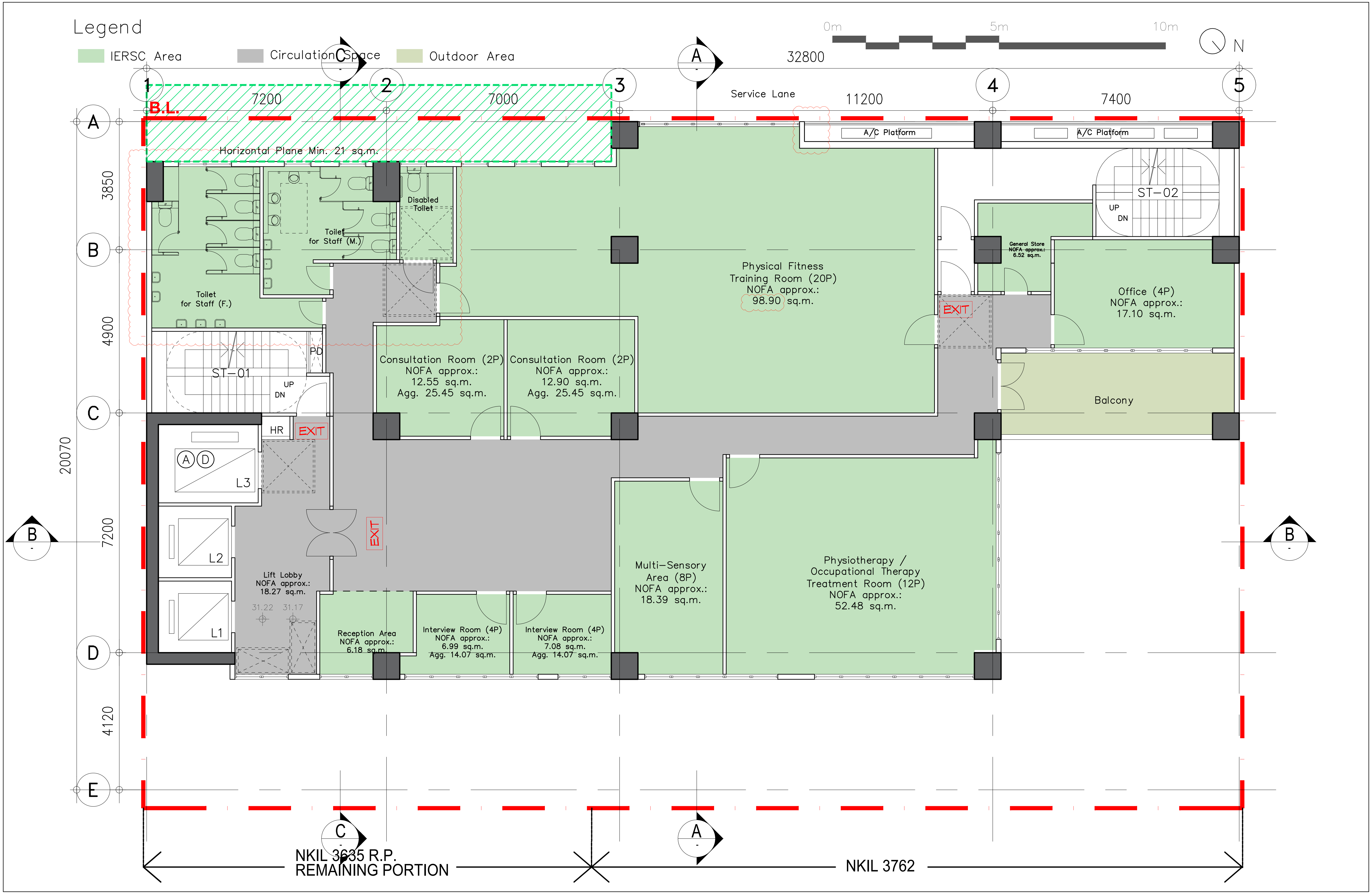
interior



Legend
IERSC Area
Circulation Space
Outdoor Area
0m
5m
10m
N
32800
Service Lane
7200
7000
11200
7400
B.L.
Horizontal Plane Min. 21 sq.m.
A/C Platform
A/C Platform
3850
4900
7200
4120
20070
Disabled Toilet
Toilet for Staff (M.)
Toilet for Staff (F.)
ST-02
UP
DN
General Store NOFA approx.: 6.52 sq.m.
Physical Fitness Training Room (20P) NOFA approx.: 98.90 sq.m.
Office (4P) NOFA approx.: 17.10 sq.m.
EXIT
PD
ST-01
UP
DN
Consultation Room (2P) NOFA approx.: 12.55 sq.m. Agg. 25.45 sq.m.
Consultation Room (2P) NOFA approx.: 12.90 sq.m. Agg. 25.45 sq.m.
Balcony
HR
EXIT
L3
L2
L1
EXIT
Lift Lobby NOFA approx.: 18.27 sq.m.
31.22
31.17
Reception Area NOFA approx.: 6.18 sq.m.
Interview Room (4P) NOFA approx.: 6.99 sq.m. Agg. 14.07 sq.m.
Interview Room (4P) NOFA approx.: 7.08 sq.m. Agg. 14.07 sq.m.
Multi-Sensory Area (8P) NOFA approx.: 18.39 sq.m.
Physiotherapy / Occupational Therapy Treatment Room (12P) NOFA approx.: 52.48 sq.m.
NKIL 3635 R.P. REMAINING PORTION
NKIL 3762

5/F Plan | Integrated Elderly Rehabilitation Services Centre (IERSC) [1:100]

Technical Feasibility Study - Hong Kong Sheng Kung Hui St. Thomas' Church Redevelopment under Special Scheme on Privately Owned Sites for Welfare Uses (Special Sites Scheme)

AGC DESIGN LTD
architecture
urban design
interior

Legend

NEC Area | Circulation Space | Outdoor Area

0m 5m 10m

N

32800

7200 | 7000 | 11200 | 7400

3850 | 4900 | 7200 | 4120 | 20070

B.L.

Horizontal Plane Min. 21 sq.m.

Service Lane

A/C Platform | A/C Platform

Store room
NOFA approx.:
9.03 sq.m.

Volunteer Room (15P)
NOFA approx.:
13.56 sq.m.

Club Room (10P)
NOFA approx.:
13.65 sq.m.

Interview Room (4P)
NOFA approx.:
6.70 sq.m.

General Store
NOFA approx.:
13.69 sq.m.

ST-02
UP
DN

Toilet for Staff (M.)

Disabled Toilet

Toilet for Staff (F.)

EXIT

Carer Support and Resource Room
NOFA approx.:
18.40 sq.m.

ST-01
UP
DN
PD

Office
NOFA approx.:
24.84 sq.m.

Reception Area
NOFA approx.:
4.93 sq.m.

Balcony

HR

EXIT

A D
L3

L2

L1

EXIT

Lift Lobby
NOFA approx.:
29.34 sq.m.

34.77 34.72

Common Room (30P)
NOFA approx.:
37.29 sq.m.

Activity Room 1 (NEC) (60P)
NOFA approx.:
97.43 sq.m.

Balcony

NKIL 3635 R.P.
REMAINING PORTION

NKIL 3762

6/F Plan | Neighbourhood Elderly Centre (NEC) [1:100]

Technical Feasibility Study - Hong Kong Sheng Kung Hui St. Thomas' Church Redevelopment under Special Scheme on Privately Owned Sites for Welfare Uses (Special Sites Scheme)

AGC DESIGN LTD
architecture
urban design
interior

Legend

NEC Area | SKHWC ST | Circulation Space | Outdoor Area

0m 5m 10m N

32800

B.L.

7200 7000 Service Lane 11200 7400

Horizontal Plane Min. 21 sq.m.

A/C Platform A/C Platform

Toilet (M.) Toilet (F.) Disabled Toilet

Activity Room 2 (NEC) (30P)
NOFA approx.:
60.16 sq.m.

Semi-Open
Sky Garden

ST-01 UP DN PD

ST-02 UP DN

EXIT EXIT EXIT

HR

A D L3 L2 L1

Lift Lobby
NOFA approx.:
25.20 sq.m.

38.32 38.27

SKH General Office
NOFA approx.:
29.16 sq.m.

3850 4900 7200 4120 20070

NKIL 3635 R.P.
REMAINING PORTION

NKIL 3762

7/F Plan | Neighbourhood Elderly Centre (NEC) / Central Administration Office / Semi-open Sky Garden [1:100]

Technical Feasibility Study - Hong Kong Sheng Kung Hui St. Thomas' Church Redevelopment under Special Scheme
on Privately Owned Sites for Welfare Uses (Special Sites Scheme)

AGC DESIGN LTD
architecture
urban design
interior

Legend

SKHWC Area | Circulation Space | Outdoor Area

0m 5m 10m

N

32800

1 2 3 4 5

A B C D E

7200 7000 11200 7400

3850 4900 7200 4120 20070

B.L.

Horizontal Plane Min. 21 sq.m.

Service Lane

A/C Platform

A/C Platform

Toilet (M.)

Disabled Toilet

Toilet (F.)

Training Room (Small)
NOFA approx.:
10.70 sq.m.
Agg. 41.48 sq.m.

Training Room (Small)
NOFA approx.:
9.77 sq.m.
Agg. 41.48 sq.m.

Training Room (Small)
NOFA approx.:
9.60 sq.m.
Agg. 41.48 sq.m.

Training Room (Small)
NOFA approx.:
11.41 sq.m.
Agg. 41.48 sq.m.

General Store
NOFA approx.:
15.56 sq.m.

ST-02
UP
DN

EXIT

Training Room (Medium)
NOFA approx.:
43.22 sq.m.
Agg. 77.38 sq.m.

ST-01
UP
DN

PD

Reception Area
NOFA approx.:
21.23 sq.m.

HR

EXIT

A D

L3

L2

L1

EXIT

Lift Lobby
NOFA approx.:
32.29 sq.m.
41.87 41.82

Balcony

Training Room (Medium)
NOFA approx.:
34.16 sq.m.
Agg. 77.38 sq.m.

Training Room (Large)
NOFA approx.:
82.43 sq.m.

NKIL 3635 R.P.
REMAINING PORTION

NKIL 3762

8/F Plan | Central Administration Office [1:100]

Technical Feasibility Study - Hong Kong Sheng Kung Hui St. Thomas' Church Redevelopment under Special Scheme on Privately Owned Sites for Welfare Uses (Special Sites Scheme)

AGC DESIGN LTD
architecture
urban design
interior

Legend

Church Area | Circulation Space | Outdoor Area

0m 5m 10m

N

32800

Foldable Diaper Changing Bench

B.L.

7200 | 7000 | Service Lane | 11200 | 7400

Horizontal Plane Min. 21 sq.m.

A/C Platform | A/C Platform

General Store NOFA approx.: 10.10 sq.m.

ST-02 UP DN

Disabled Toilet

Babycare Room NOFA approx.: 6.35 sq.m.

Toilet (M.)

Toilet (F.)

Store room NOFA approx.: 15.08 sq.m.

Common Room NOFA approx.: 41.97 sq.m.

EXIT

Activity Room (Choir) NOFA approx.: 42.71 sq.m.

ST-01 UP DN

PD

HR

EXIT

A D L3

L2

L1

Lift Lobby NOFA approx.: 28.78 sq.m.

45.42 45.37

Fellowship Room 1 NOFA approx.: 36.51 sq.m.

Fellowship Room 2 NOFA approx.: 33.36 sq.m.

Fellowship Room 3 NOFA approx.: 37.69 sq.m.

Building Line Above (11/F)

Building Line Above (10/F)

Balcony

3850 | 4900 | 7200 | 4120 | 20070

A B C D E

NKIL 3635 R.P. REMAINING PORTION

NKIL 3762

9/F Plan | Church Activity Centre [1:100]

Technical Feasibility Study - Hong Kong Sheng Kung Hui St. Thomas' Church Redevelopment under Special Scheme on Privately Owned Sites for Welfare Uses (Special Sites Scheme)

AGC DESIGN LTD
architecture
urban design
interior

Legend

Church Area | Circulation Space | Outdoor Area

0m 5m 10m

N

32800

Foldable Diaper Changing Bench

B.L.

7200 | 7000 | Service Lane | 11200 | 7400

Horizontal Plane Min. 21 sq.m.

A/C Platform | A/C Platform

General Store NOFA approx.: 11.70 sq.m.

ST-02 UP DN

Activity Room 2 NOFA approx.: 13.39 sq.m.

Activity Room 3 NOFA approx.: 20.99 sq.m.

Babycare Room NOFA approx.: 5.51 sq.m.

Disabled Toilet

Toilet (M.)

Toilet (F.)

EXIT

Activity Room 4 NOFA approx.: 25.00 sq.m.

Interview Room NOFA approx.: 7.06 sq.m.

Balcony

Office 2 NOFA approx.: 7.86 sq.m.

Office 1 NOFA approx.: 8.80 sq.m.

ST-01 UP DN PD

Store room NOFA approx.: 9.27 sq.m.

Chapel NOFA approx.: 12.57 sq.m.

Conference Room (15P) NOFA approx.: 25.31 sq.m.

HR EXIT

A D L3

L2

L1

Lift Lobby NOFA approx.: 15.49 sq.m.

48.97 48.92

Reception NOFA approx.: 6.62 sq.m.

General Office (10P) NOFA approx.: 48.99 sq.m.

Building Line Above (11/F)

Activity Room 1 NOFA approx.: 10.58 sq.m.

Store room NOFA approx.: 7.65 sq.m.

Pastor's Office with WC NOFA approx.: 14.91 sq.m.

Tie Beam

3850 | 4900 | 7200 | 4120 | 20070

A B C D E

NKIL 3635 R.P. REMAINING PORTION

NKIL 3762

10/F Plan | Church Activity Centre [1:100]

Technical Feasibility Study - Hong Kong Sheng Kung Hui St. Thomas' Church Redevelopment under Special Scheme on Privately Owned Sites for Welfare Uses (Special Sites Scheme)

AGC DESIGN LTD
architecture
urban design
interior

Legend

Church Area | Circulation Space | Outdoor Area

0m 5m 10m

N

32800

1 2 3 4 5

7200 7000 11200 7400

A B C D E

3850 4900 7200 4120

20070

B.L.

Service Lane

NKIL 3635 R.P.
REMAINING PORTION

NKIL 3762

Flat Roof

Retractable Awning Above

52.37 52.32

ST–01 UP DN PD R.S.M.R.R.

ST–02 UP DN EXIT

HR EXIT 52.52 52.47

A D L3

L2

L1

Bath Bedroom 2 Bedroom 1 Master Bedroom Dining Rm. Store Kitchen Kitchen Living Rm. Flat A Private Terrace

Store Study Rm. Dining Rm. Flat B Living Rm. Kitchen Bath Bath Master Bedroom Bedroom 1 Bedroom 2 Private Terrace

Total floor GFA: 199.533 sq.m.
Flat A SFA: 58.608 sq.m. (626 sq.ft.)
Flat B SFA: 73.672 sq.m. (793 sq.ft.)
Total of Flat A & B: 1419 sq.ft.
Lift Lobby + Corridor NOFA: 11.867 sq.m.
Common Area: 71.10 sq.m.

11/F Plan | Pastor's Flats [1:100]

Technical Feasibility Study - Hong Kong Sheng Kung Hui St. Thomas' Church Redevelopment under Special Scheme on Privately Owned Sites for Welfare Uses (Special Sites Scheme)

AGC DESIGN LTD
architecture urban design interior

Legend

E&M

0m 5m 10m

N

32800

1 2 3 4 5

7200 7000 11200 7400

A B C D E

3850 4900 20070 7200 4120

B.L.

ST–01

PD

UP

DN

Flat Roof of R.S.M.R.R.

ST–02

DN

EXIT

Sprinkler Pump Room

SPCP

8000L RC Fresh Water Tank

8000L RC Fresh Water Tank

Retractable Awning

55.42 55.37

Fresh & Flushing Water Pump Room

5000L Flushing Water Tank

5000L Flushing Water Tank

1000L Irrigation Tank

Lift Shaft Overrun

FS Pump Room

SPCP

EXIT

Emergency Generator Room

Lift Shaft Overrun

36,000L FS Water Tank

Lift Shaft Overrun

NKIL 3635 R.P.
REMAINING PORTION

NKIL 3762

R/F Plan | E&M Rooms [1:100]

Technical Feasibility Study - Hong Kong Sheng Kung Hui St. Thomas' Church Redevelopment under Special Scheme on Privately Owned Sites for Welfare Uses (Special Sites Scheme)

AGC DESIGN LTD

architecture
urban design
interior

Legend

E&M

0m 5m 10m

N

32800

1 2 3 4 5

7200 7000 11200 7400

A B C D E

3850 4900 20070 7200 4120

B.L.

Flat Roof of ST–02

Flat Roof of R.S.M.R.R.

ST–01

PD

UP

DN

Retractable Awning

57.765

124,000L Sprinkler Water Tank

EXIT

Void Above Emergency Generator Room

57.815 57.765

Lift Machine Room

NKIL 3635 R.P.
REMAINING PORTION

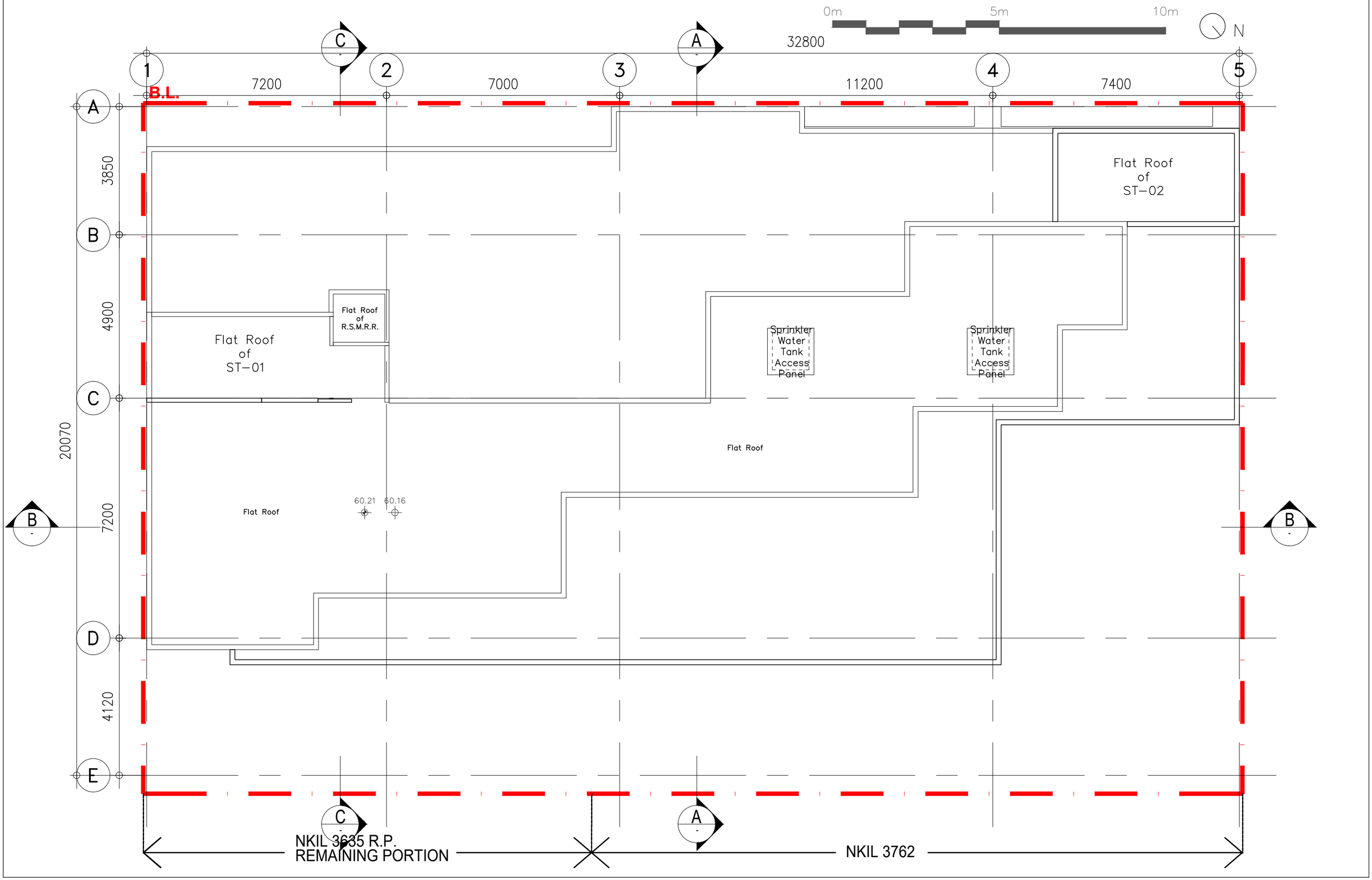
NKIL 3762

UR/F Plan | E&M Rooms [1:100]

Technical Feasibility Study - Hong Kong Sheng Kung Hui St. Thomas' Church Redevelopment under Special Scheme on Privately Owned Sites for Welfare Uses (Special Sites Scheme)

AGC DESIGN LTD

architecture
urban design
interior



TR/F Plan

Technical Feasibility Study - Hong Kong Sheng Kung Hui St. Thomas' Church Redevelopment under Special Scheme on Privately Owned Sites for Welfare Uses (Special Sites Scheme)

AGC DESIGN LTD
architecture
urban design
interior

G/F Lobby and CarPark

0m 5m 10m

N

Service Lane

32800

1 2 3 4 5

7200 7000 11200 7400

A B C D E

3850 4900 20070 7200 4120

B.L.

Transformer Room
173.13 sq.m.

RS&MRC
9.38 sq.m.

General Store (C.C.C.)
NOFA approx.: 7.36 sq.m.
Agg. 9.90 sq.m.

Disabled Toilet

Ramp Up 1:12

Staff Changing Room (C.C.C.)
NOFA approx.: 3.06 sq.m.
Agg. 6.20 sq.m.
3.45 sq.m.

FS Pump Room

FS Control Room

ST-01 UP

Ramp Up 1:12

Fireman's Lift Lobby

A D L3

L2

L1

Shared Lobby by Church & Welfare
82.99 sq.m.

Reception

Ramp DN 1:12

Light Bus Parking Space 1 (DE)
(8,000mm L x 3,000mm W x 3,600mm H)

Light Bus Parking Space 2 (DE)
(8,000mm L x 3,000mm W x 3,600mm H)

8000 8000 3000 3000

Security Room (EL)
ST-02
28.90 sq.m.

W.M.C.

UP

Light Bus Parking Space 3(SCCC)
(8,000mm L x 3,000mm W x 3,600mm H)

Access from L/UL Bay to Lift Lobby

Loading / Unloading Bay
(DE / SCCC Shared L/UL Bay)
(8,000mm L x 3,500mm W x 3,600mm H)

3000 3500

8000 8000

Carpark
321.97 sq.m.

Planter

Church Lobby
50.18 sq.m.

UP

FS & Sprinkler Valve Inlet

Run-in / out

Berwick Street

NKIL 3635 R.P.
REMAINING PORTION

NKIL 3762

2m Depth Canopy Above Pedestrian Entrance Over Street

	Construction Floor Area (m^2)
Subvented portion	334.80
Self-financing portion	0
Additional / Non-supported portion	50.18
Common area portion	285.02

Legend

- Non-supported area
- Common Area
- Aided Welfare Facilities

AGC DESIGN LTD
architecture urban design interior

0m 5m 10m

N

32800

1 2 3 4 5

7200 7000 11200 7400

A B C D E

3850 4900 7200 4120

20070

B.L.

Switch Room

Male Toilet

Female Toilet

Store

Altar
NOFA: 77.03 sq.m.

4 Seats 4 Seats 4 Seats 5000 4 Seats 4 Seats 4 Seats

21.53 sq.m.

ST-02

DN

UP

Sacristy
NOFA: 5.36 sq.m.

Wall Mounted T.V.

12.82 12.77

Church Hall
NOFA approx.: 309.68 sq.m.
268 Seats, (Extendable to 332 seats,
Excluding the seats on the altar)

1950

Wall Mounted T.V.

EXIT

ST-01

PD

UP

DN

EXIT

HR

EXIT

1200 2000 1200

2072

1422

1422

6 Seats 9 Seats

A D

L3

L2

L1

123.26 sq.m.

Lift Lobby
NOFA: 46.70 sq.m.

12.37 12.32

EXIT

519.68 sq.m.

EXIT

Disabled Toilet

5.53 sq.m.

TRS

Social Area

Crying Room
NOFA: 4.25 sq.m.

Main Entrance

AV Control Room
NOFA: 4.25 sq.m.

DN

12.37 12.32

Skylight Above

Changing Room
NOFA: 18.34 sq.m.

(To Church Main Entrance From Street Level)

Berwick Street

NKIL 3635 R.P.
REMAINING PORTION

NKIL 3762

1/F Church Hall

Legend

Non-supported area

Common Area

	Construction Floor Area (m^2)
Subvented portion	0
Self-financing portion	0
Additional / Non-supported portion	525.21
Common area portion	144.79

AGC DESIGN LTD

architecture
urban design
interior

0m 5m 10m

N

32800

1 2 3 4 5

7200 7000 11200 7400

A B C D E

3850 4900 7200 4120

20070

B.L.

VOU VOU VOU VOU VOU VOU VOU VOU

VOU Room

Void Above Switch Room

Water Pump Room

AHU

AHU Room (A)

ST-01

PD

UP DN

EXIT

EXIT

A D L3

Fireman's Lift Lobby

15.72 15.67

132.59 sq.m.

AHU

Void Above Church Hall

Void Above 1/F Lift Lobby

Void Above Disabled Toilet

Void Above Crying Room

Void Above Crying Room

Void Above Social Area

Void Above Changing Room

Void Above Store Room

DN

ST-02

UP

EXIT

TBE Room

AHU Room (B)

AHU

51.09 sq.m.

15.72 15.67

NKIL 3635 R.P.
REMAINING PORTION

NKIL 3762

M/F E&M Plant Room

Legend

Common Area

	Construction Floor Area (m^2)
Subvented portion	0
Self-financing portion	0
Additional / Non-supported portion	0
Common area portion	183.68

AGC DESIGN LTD

architecture
urban design
interior

0m 5m 10m N

32800

1 2 3 4 5 A B C D E

W-01 W-02 W-03 W-04 W-05

7200 7000 11200 7400

3850 4900 4120 7200

20070

B.L.

Horizontal Plane Min. 21 sq.m.

Flat Roof

Service Lane

A/C Platform

A/C Platform

18.33 sq.m.

ST-02

UP DN

Female Staff Toilet

Disabled Toilet

Male Staff Toilet

Children's Toilet / Infant's Toilet

Milk Room NOFA approx.: 5.46 sq.m.

Kitchen NOFA approx.: 10.88 sq.m.

Fixed Diaper Changing Bench

Baby bath sink (560LX400WX250H)

Dormitory (Resting Room) (18P) NOFA approx.: 38.31 sq.m. Agg. 86.98 sq.m.

Food Store NOFA approx.: 2.48 sq.m.

Female Staff Changing Room NOFA approx.: 3.16 sq.m. Agg. 6.20 sq.m.

Washing Area for Cleaning Stacking Beds

Laundry NOFA approx.: 8.77 sq.m.

EXIT

Small Group Tuition Room (4P) NOFA approx.: 6.65 sq.m.

EXIT

PD

Nappy Changing Room NOFA approx.: 3.28 sq.m.

PD

Babycare Room NOFA approx.: 3.64 sq.m.

Fixed Diaper Changing Bench

ST-01

UP DN

Open Plan for Office / Staff Room (10P) NOFA approx.: 23.07 sq.m.

Assistant Supervisor's Room (1P) NOFA approx.: 6.06 sq.m.

Supervisor's Room (1P) NOFA approx.: 7.08 sq.m.

General Store NOFA approx.: 2.54 sq.m. Agg. 9.90 sq.m.

EXIT

Indoor Big Muscle Area (20P) NOFA approx.: 38.92 sq.m.

HR

EXIT

EXIT

A D L3

57.35 sq.m

404.37 sq.m.

Baby bath sink (560LX400WX250H)

Fixed Diaper Changing Bench

L2

Interview Room NOFA approx.: 4.48 sq.m.

Entrance / Reception / Health Inspection Area (10P) NOFA approx.: 12.26 sq.m.

Playroom / Music Room (22P) NOFA approx.: 32.08 sq.m.

Play cum Dining Area (20P) NOFA approx.: 36.98 sq.m.

Dormitory (Resting Room) (30P) NOFA approx.: 48.67 sq.m. Agg. 86.98 sq.m.

Outdoor Podium Garden

Lift Lobby NOFA approx.: 17.24 sq.m.

19.37 19.37

L1

Medical / Isolation Room (2P) NOFA approx.: 5.07 sq.m.

Outdoor Podium Garden

Skylight to Church Hall Entrance Below

NKIL 3635 R.P. REMAINING PORTION

NKIL 3762

Window:	W-01	W-02	W-03	W-04	W-05
Window Area (approx. sq.m.):	2.24	1.12	1.12	1.12	1.12
Floor Area (approx. sq.m.):	5.86	3.84	5.58	2.87	2.99
Window area / Floor Area ratio : (>10% required)	38.2%	29.2%	20.1%	39.0%	37.5%

2/F CCC

Legend

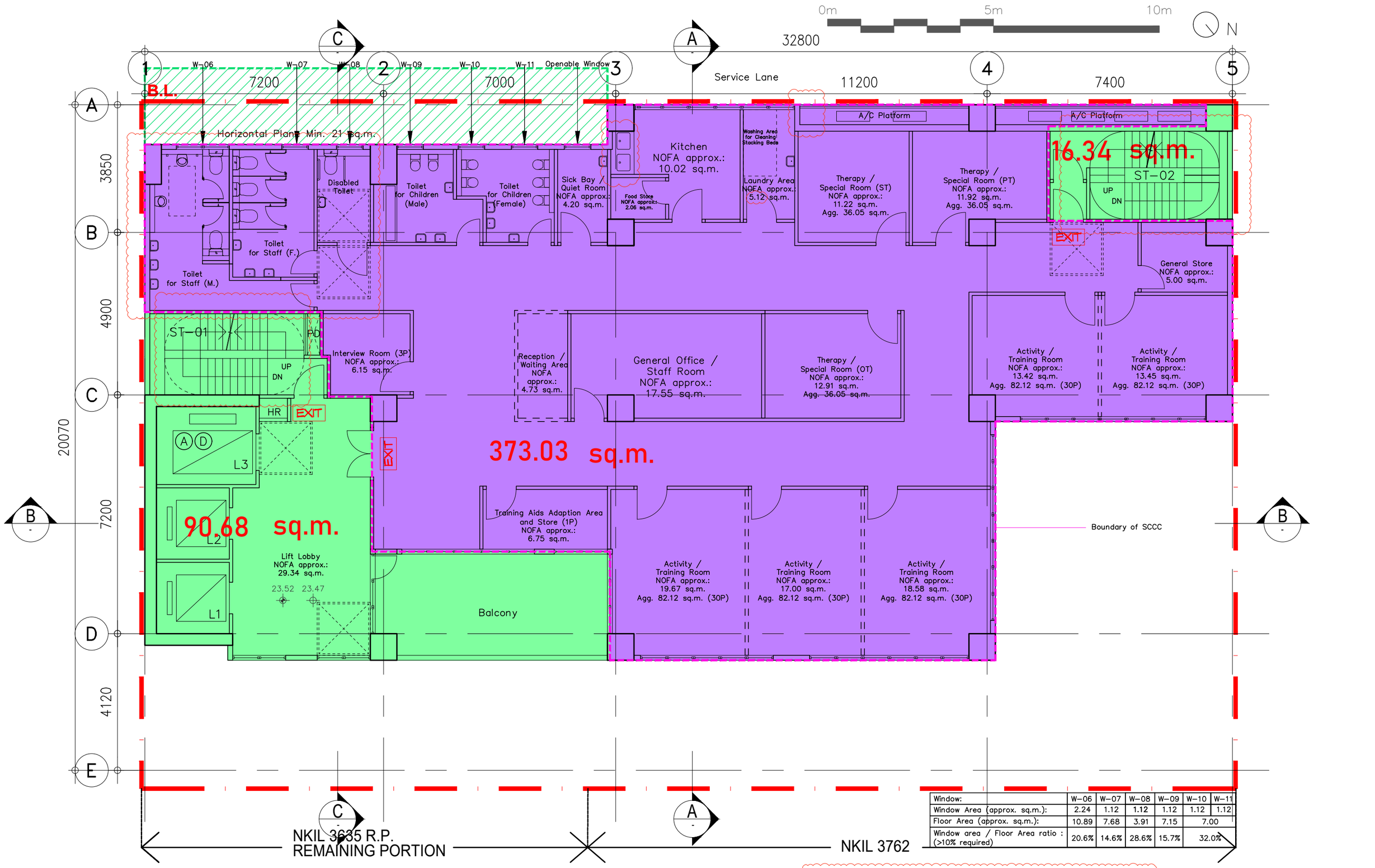
Aided Welfare Facilities

Common Area

	Construction Floor Area (m^2)
Subvented portion	404.37
Self-financing portion	0
Additional / Non-supported portion	0
Common area portion	75.68

AGC DESIGN LTD

architecture
urban design
interior



Window:	W-06	W-07	W-08	W-09	W-10	W-11
Window Area (approx. sq.m.):	2.24	1.12	1.12	1.12	1.12	1.12
Floor Area (approx. sq.m.):	10.89	7.68	3.91	7.15	7.00	
Window area / Floor Area ratio : (>10% required)	20.6%	14.6%	28.6%	15.7%	32.0%	

3/F SCCC

Legend

- Aided Welfare Facilities
- Common Area

	Construction Floor Area (m^2)
Subvented portion	373.03
Self-financing portion	0
Additional / Non-supported portion	0
Common area portion	107.02

AGC DESIGN LTD
architecture
urban design
interior

0m 5m 10m N

32800

1 2 3 4 5

A B C D E

7200 7000 11200 7400

3850 4900 7200 4120

20070

B.L.

Horizontal Plane Min. 21 sq.m.

Service Lane

A/C Platform

A/C Platform

16.34 sq.m.

ST-02

UP DN

General Store
NOFA approx.:
6.32 sq.m.

EXIT

1650

Toilet for Staff (M.)

Disabled Toilet

Accessible Toilet cum Shower

Medical Consultation / Nurse Duty Room / Sick Room
NOFA approx.:
11.50 sq.m.

Staff Changing Room (3P)
NOFA approx.:
2.98 sq.m.
Agg. 6.98 sq.m.

Laundry / Workroom
NOFA approx.:
15.93 sq.m.

Multi-Sensory Area (4P)
NOFA approx.:
9.38 sq.m.

Toilet for Staff (F.)

1600

1600

Physiotherapist / Training Room(20P)
NOFA approx.:
50.68 sq.m.

ST-01

UP DN

PD

Interview Room
NOFA approx.:
6.99 sq.m.

1500

Staff Changing Room (4P)
NOFA approx.:
3.90 sq.m.
Agg. 6.98 sq.m.

Reception
NOFA approx.:
5.40 sq.m.

Cellular Offices
Open Plan for Staff and F/E (10P)
NOFA approx.:
13.62 sq.m.

1500

1600

HR

EXIT

EXIT

A D

L3

56.84 sq.m.

406.87 sq.m.

L2

L1

Lift Lobby
NOFA approx.:
16.88 sq.m.

27.67 27.62

Open Plan Dining / Activity Room / Meal Provision Area (40P)
NOFA approx.:
56.83 sq.m.

Open Plan Common Room (40P)
NOFA approx.:
81.29 sq.m.

NKIL 3635 R.P.
REMAINING PORTION

NKIL 3762

4/F DE

Legend

Aided Welfare Facilities

Common Area

	Construction Floor Area (m^2)
Subvented portion	406.87
Self-financing portion	0
Additional / Non-supported portion	0
Common area portion	73.18

AGC DESIGN LTD

architecture
urban design
interior

0m 5m 10m

N

32800

1 2 3 4 5

A B C D E

7200 7000 11200 7400

3850 4900 4120 7200

20070

B.L.

Horizontal Plane Min. 21 sq.m.

Service Lane

A/C Platform

A/C Platform

4.13 sq.m.

25.05 sq.m.

ST-02

UP

DN

General Store
NOFA approx.:
6.52 sq.m.

Office (4P)
NOFA approx.:
17.10 sq.m.

19.33 sq.m.
Balcony

Disabled Toilet

Toilet for Staff (M.)

Toilet for Staff (F.)

Physical Fitness Training Room (20P)
NOFA approx.:
98.90 sq.m.

EXIT

ST-01

UP

DN

PD

Consultation Room (2P)
NOFA approx.:
12.55 sq.m.
Agg. 25.45 sq.m.

Consultation Room (2P)
NOFA approx.:
12.90 sq.m.
Agg. 25.45 sq.m.

375.74 sq.m.

HR

EXIT

A D

L3

55.80 sq.m.

L2

L1

EXIT

Lift Lobby
NOFA approx.:
18.27 sq.m.

31.22 31.17

Reception Area
NOFA approx.:
6.18 sq.m.

Interview Room (4P)
NOFA approx.:
6.99 sq.m.
Agg. 14.07 sq.m.

Interview Room (4P)
NOFA approx.:
7.08 sq.m.
Agg. 14.07 sq.m.

Multi-Sensory Area (8P)
NOFA approx.:
18.39 sq.m.

Physiotherapy / Occupational Therapy Treatment Room (12P)
NOFA approx.:
52.48 sq.m.

NKIL 3635 R.P.
REMAINING PORTION

NKIL 3762

5/F IERSC

Legend

Self-Financed Welfare Facilities

Common Area

	Construction Floor Area (m^2)
Subvented portion	0
Self-financing portion	379.87
Additional / Non-supported portion	0
Common area portion	100.18

AGC DESIGN LTD

architecture
urban design
interior

0m 5m 10m

N

32800

1 2 3 4 5

A B C D E

7200 7000 11200 7400

3850 4900 7200 4120 20070

B.L.

Horizontal Plane Min. 21 sq.m.

Service Lane

A/C Platform

A/C Platform

Store room
NOFA approx.:
9.03 sq.m.

Volunteer Room (15P)
NOFA approx.:
13.56 sq.m.

Club Room (10P)
NOFA approx.:
13.65 sq.m.

Interview
Room (4P)
NOFA approx.:
6.70 sq.m.

General Store
NOFA approx.:
13.69 sq.m.

ST-02

UP
DN

16.34 sq.m.

EXIT

Toilet
for Staff (M.)

Disabled
Toilet

Toilet
for Staff (F.)

Carer Support and
Resource Room
NOFA approx.:
18.40 sq.m.

Office
NOFA approx.:
24.84 sq.m.

PD

ST-01

UP
DN

19.33 sq.m.

Balcony

Reception Area
NOFA approx.:
4.93 sq.m.

HR

EXIT

A D

L3

94.30 sq.m.

350.08 sq.m.

Common Room (30P)
NOFA approx.:
37.29 sq.m.

Activity Room 1 (NEC) (60P)
NOFA approx.:
97.43 sq.m.

EXIT

L2

L1

Lift Lobby
NOFA approx.:
29.34 sq.m.

34.77 34.72

Balcony

NKIL 3635 R.P.
REMAINING PORTION

NKIL 3762

6/F NEC

Legend

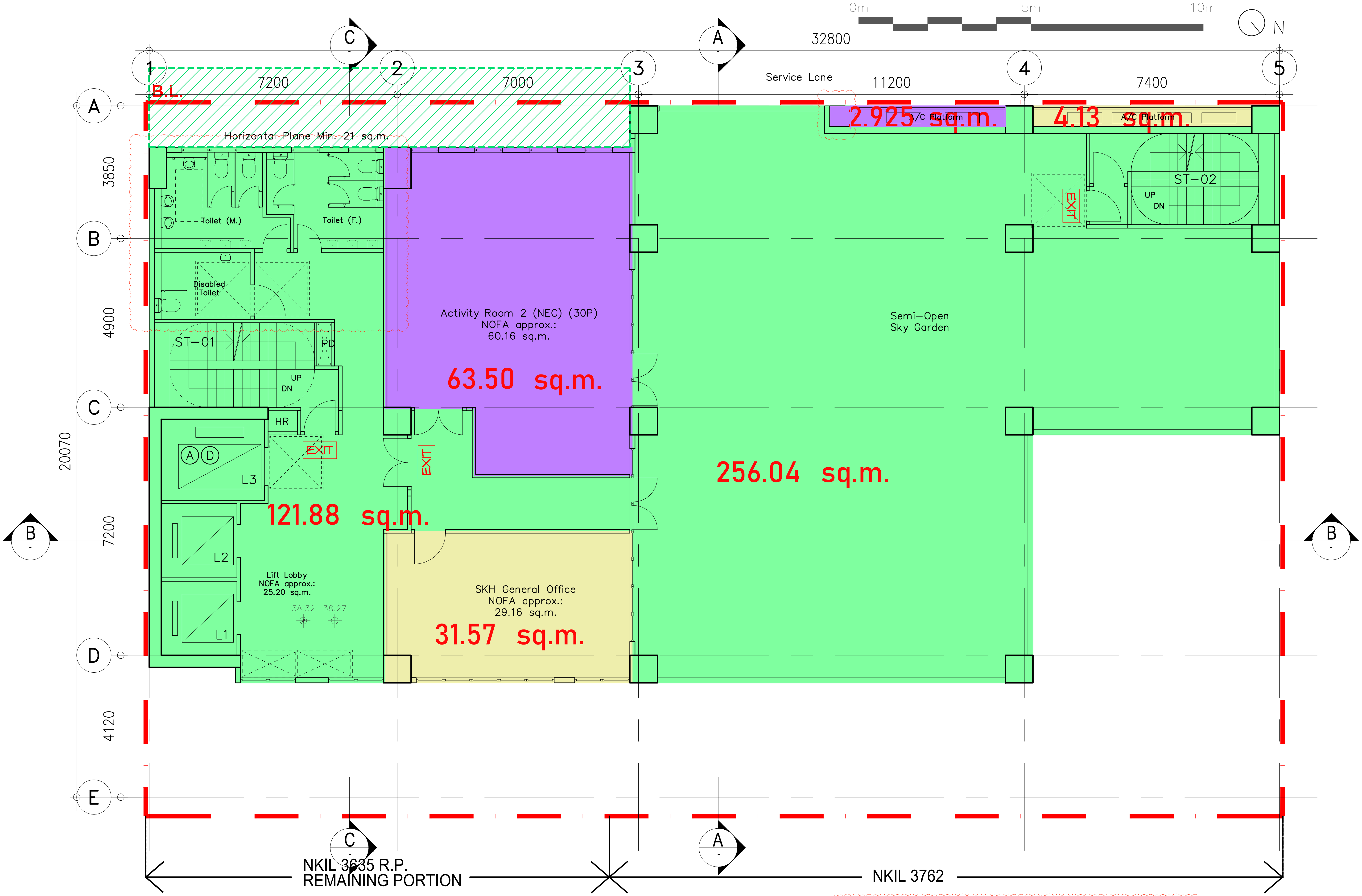
Aided
Welfare Facilities

Common Area

	Construction Floor Area (m^2)
Subvented portion	350.08
Self-financing portion	0
Additional / Non-supported portion	0
Common area portion	129.97

AGC DESIGN LTD

architecture
urban design
interior



0m
5m
10m
N
32800
Service Lane
7200
7000
11200
7400
B.L.
Horizontal Plane Min. 21 sq.m.
2.925 sq.m.
A/C Platform
4.13 sq.m.
A/C Platform
3850
4900
7200
4120
20070
Toilet (M.)
Toilet (F.)
Disabled Toilet
ST−01
PD
UP
DN
HR
EXIT
ST−02
Activity Room 2 (NEC) (30P)
NOFA approx.:
60.16 sq.m.
63.50 sq.m.
Semi−Open
Sky Garden
256.04 sq.m.
L3
L2
L1
121.88 sq.m.
Lift Lobby
NOFA approx.:
25.20 sq.m.
38.32
38.27
SKH General Office
NOFA approx.:
29.16 sq.m.
31.57 sq.m.
NKIL 3635 R.P.
REMAINING PORTION
NKIL 3762

7/F NEC + SKHWC GENERAL OFFICE

Legend

- Self−Financed Welfare Facilities
- Aided Welfare Facilities
- Common Area

	Construction Floor Area (m^2)
Subvented portion	66.43
Self−financing portion	35.70
Additional / Non−supported portion	0
Common area portion	377.92

AGC DESIGN LTD

architecture
urban design
interior

0m 5m 10m N

32800

1 2 3 4 5

A B C D E

B.L.

7200 7000 11200 7400

3850 4900 7200 4120 20070

Horizontal Plane Min. 21 sq.m.

Service Lane

A/C Platform A/C Platform

Toilet (M.)

Disabled Toilet

Toilet (F.)

Training Room (Small)
NOFA approx.:
10.70 sq.m.
Agg. 41.48 sq.m.

Training Room (Small)
NOFA approx.:
9.77 sq.m.
Agg. 41.48 sq.m.

Training Room (Small)
NOFA approx.:
9.60 sq.m.
Agg. 41.48 sq.m.

Training Room (Small)
NOFA approx.:
11.41 sq.m.
Agg. 41.48 sq.m.

General Store
NOFA approx.:
15.56 sq.m.

21.03 sq.m.

ST-02 UP DN

EXIT

Training Room (Medium)
NOFA approx.:
43.22 sq.m.
Agg. 77.38 sq.m.

ST-01 UP DN PD

EXIT

365.06 sq.m.

Reception Area
NOFA approx.:
21.23 sq.m.

HR EXIT

A D L3

L2

L1

93.96 sq.m.

EXIT

Lift Lobby
NOFA approx.:
32.29 sq.m.
41.87 41.82

Balcony

Training Room (Medium)
NOFA approx.:
34.16 sq.m.
Agg. 77.38 sq.m.

Training Room (Large)
NOFA approx.:
82.43 sq.m.

NKIL 3635 R.P.
REMAINING PORTION

NKIL 3762

8/F SKHWC STU

Legend

Self-Financed Welfare Facilities

Common Area

	Construction Floor Area (m^2)
Subvented portion	0
Self-financing portion	365.06
Additional / Non-supported portion	0
Common area portion	114.99

AGC DESIGN LTD
architecture
urban design
interior

0m 5m 10m

N

32800

1 2 3 4 5

A B C D E

7200 7000 11200 7400

3850 4900 20070 7200 4120

B.L.

Horizontal Plane Min. 21 sq.m.

Foldable Diaper Changing Bench

Service Lane

A/C Platform

A/C Platform

General Store
NOFA approx.:
10.10 sq.m.

20.65 sq.m.

ST-02

UP

DN

EXIT

Disabled Toilet

Toilet (M.)

Toilet (F.)

Babycare Room
NOFA approx.:
6.35 sq.m.

Store room
NOFA approx.:
15.08 sq.m.

Common Room
NOFA approx.:
41.97 sq.m.

Activity Room (Choir)
NOFA approx.:
42.71 sq.m.

ST-01

UP

DN

PD

HR

EXIT

A D

L3

L2

L1

110.85 sq.m.

Lift Lobby
NOFA approx.:
28.78 sq.m.
45.42 45.37

Fellowship Room 1
NOFA approx.:
36.51 sq.m.

Fellowship Room 2
NOFA approx.:
33.36 sq.m.

Fellowship Room 3
NOFA approx.:
37.69 sq.m.

333.25 sq.m.

Building Line Above (11/F)

Building Line Above (10/F)

Balcony

NKIL 3635 R.P.
REMAINING PORTION

NKIL 3762

9/F Church Activity Centre

Legend

Non-supported area

Common Area

	Construction Floor Area (m^2)
Subvented portion	0
Self-financing portion	0
Additional / Non-supported portion	333.25
Common area portion	131.50

AGC DESIGN LTD

architecture
urban design
interior

0m 5m 10m

N

32800

7200 | 7000 | Service Lane 11200 | 7400

3850 | 4900 | 7200 | 4120 | 20070

B.L.

Horizontal Plane Min. 21 sq.m.

Foldable Diaper Changing Bench

Toilet (F.)

Toilet (M.)

Disabled Toilet

Babycare Room NOFA approx.: 5.51 sq.m.

Activity Room 2 NOFA approx.: 13.39 sq.m.

Activity Room 3 NOFA approx.: 20.99 sq.m.

A/C Platform

A/C Platform

General Store NOFA approx.: 11.70 sq.m.

20.37 sq.m.

ST-02

UP

DN

EXIT

Activity Room 4 NOFA approx.: 25.00 sq.m.

19.33 sq.m.

Balcony

ST-01

UP

DN

PD

Store room NOFA approx.: 9.27 sq.m.

Chapel NOFA approx.: 12.57 sq.m.

Conference Room (15P) NOFA approx.: 25.31 sq.m.

Interview Room NOFA approx.: 7.06 sq.m.

Office 2 NOFA approx.: 7.86 sq.m.

HR

EXIT

A D

L3

52.96 sq.m.

EXIT

Reception NOFA approx.: 6.62 sq.m.

367.08 sq.m. General Office (10P) NOFA approx.: 48.99 sq.m.

Office 1 NOFA approx.: 8.80 sq.m.

L2

L1

Lift Lobby NOFA approx.: 15.49 sq.m.

48.97 | 43.02

Activity Room 1 NOFA approx.: 10.58 sq.m.

Building Line Above (11/F)

Store room NOFA approx.: 7.65 sq.m.

Pastor's Office with WC NOFA approx.: 14.91 sq.m.

Tie Beam

NKIL 3635 R.P.
REMAINING PORTION

NKIL 3762

10/F Church Office

Legend

- Non-supported area
- Common Area

	Construction Floor Area (m^2)
Subvented portion	0
Self-financing portion	0
Additional / Non-supported portion	367.08
Common area portion	92.66

AGC DESIGN LTD

architecture
urban design
interior

0m 5m 10m

N

32800

1 2 3 4 5

7200 7000 11200 7400

A B C D E

3850 4900 4120 7200

20070

B.L.

Service Lane

16.35 sq.m.

ST-02

UP DN

EXIT

Flat Roof

Retractable Awning Above

52.37 52.32

R.S.M.R.R.

PD

ST-01

UP DN

54.75 sq.m.

HR

EXIT

52.52 52.47

A D

L3

L2

L1

Bath

Dining Rm.

132.28 sq.m.

Flat A

Store

Kitchen

Kitchen

Bedroom 2

Bedroom 1

Living Rm.

Master Bedroom

Private Terrace

Store

Study Rm.

Dining Rm.

Flat B

Bath

Bath

Master Bedroom

Bedroom 1

Bedroom 2

Living Rm.

Private Terrace

Private Terrace

NKIL 3635 R.P.
REMAINING PORTION

NKIL 3762

Total floor GFA: 199.533 sq.m.
Flat A SFA: 58.608 sq.m. (626 sq.ft.)
Flat B SFA: 73.672 sq.m. (793 sq.ft.)
Total of Flat A & B: 1419 sq.ft.
Lift Lobby + Corridor NOFA: 11.867 sq.m.
Common Area: 71.10 sq.m.

11/F Pastor Flats

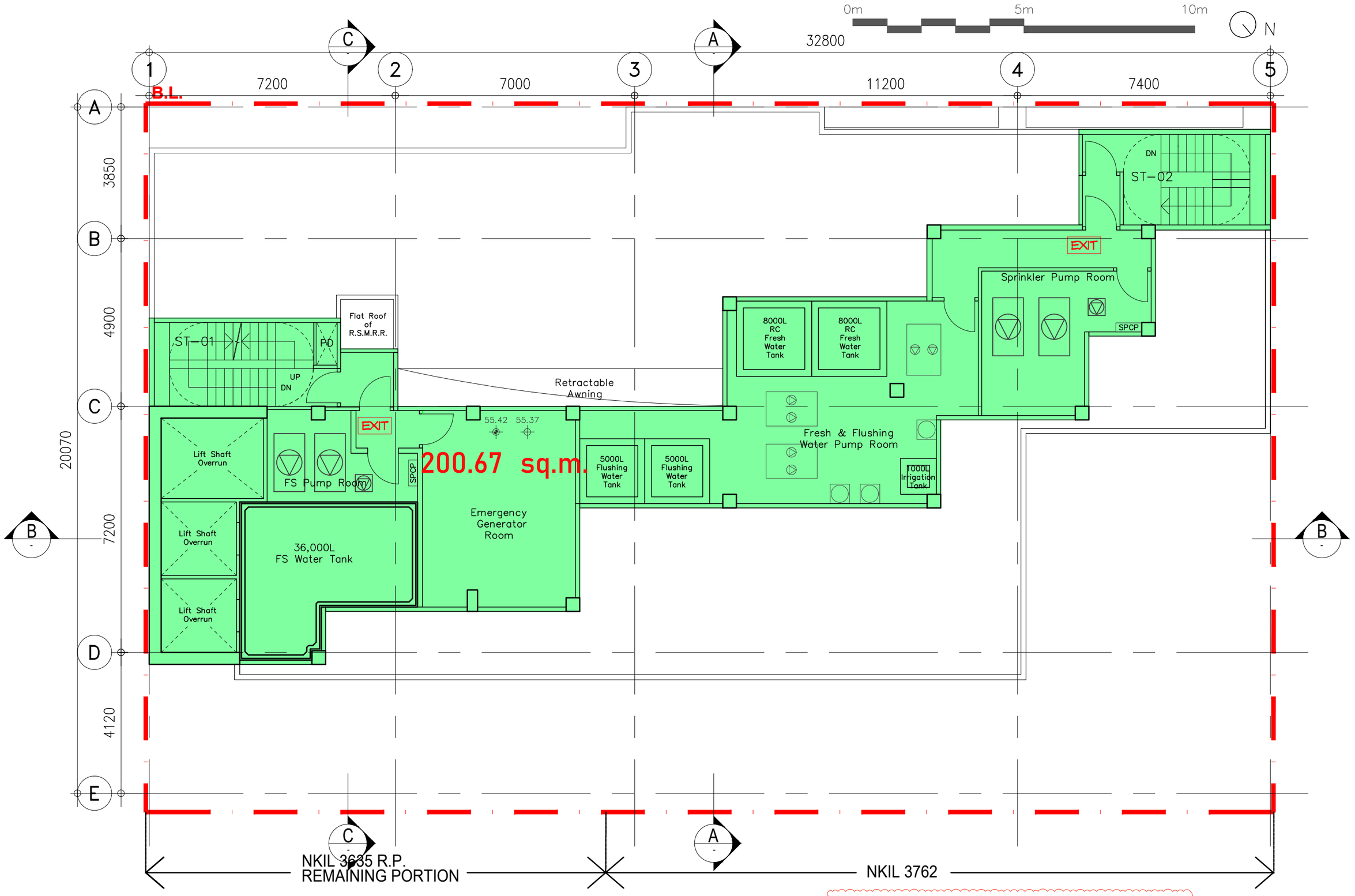
Legend

- Non-supported area
- Common Area

	Construction Floor Area (m^2)
Subvented portion	0
Self-financing portion	0
Additional / Non-supported portion	132.28
Common area portion	71.10

AGC DESIGN LTD

architecture
urban design
interior



R/F E&M Rooms

Legend

Common Area

	Construction Floor Area (m^2)
Subvented portion	0
Self–financing portion	0
Additional / Non–supported portion	0
Common area portion	200.67

AGC DESIGN LTD

architecture
urban design
interior

0m 5m 10m

N

32800

1 2 3 4 5

7200 7000 11200 7400

A B C D E

3850 4900 20070 7200 4120

B.L.

Flat Roof of ST–02

Flat Roof of R.S.M.R.R.

ST–01

PO

UP

DN

Retractable Awning

57.765

EXIT

Void Above Emergency Generator Room

29.75 sq.m.

124,000L Sprinkler Water Tank

57.815 57.765

Lift Machine Room

184.52 sq.m.

B

B

C

A

NKIL 3635 R.P.
REMAINING PORTION

NKIL 3762

UR/F E&M Rooms

Legend

Common Area

	Construction Floor Area (m^2)
Subvented portion	0
Self–financing portion	0
Additional / Non–supported portion	0
Common area portion	154.77

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architecture
urban design
interior

0m 5m 10m

N

32800

1 2 3 4 5

7200 7000 11200 7400

B.L.

A B C D E

3850 4900 20070 7200 4120

Flat Roof of ST–02

Flat Roof of R.S.M.R.R.

Flat Roof of ST–01

Sprinkler Water Tank Access Panel

Sprinkler Water Tank Access Panel

Flat Roof

Flat Roof

60.21 60.16

B

B

C

A

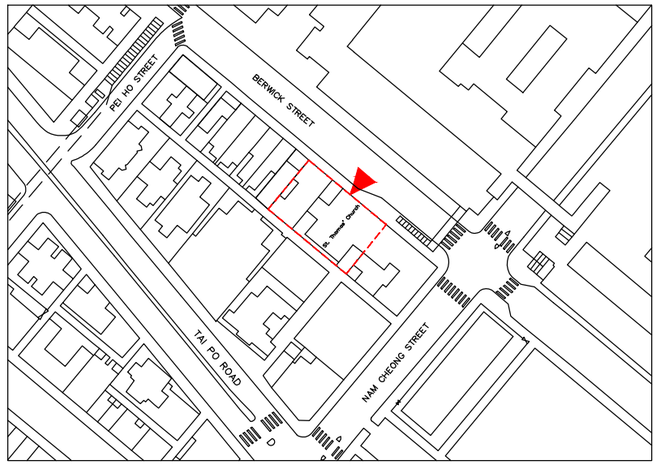
NKIL 3635 R.P.
REMAINING PORTION

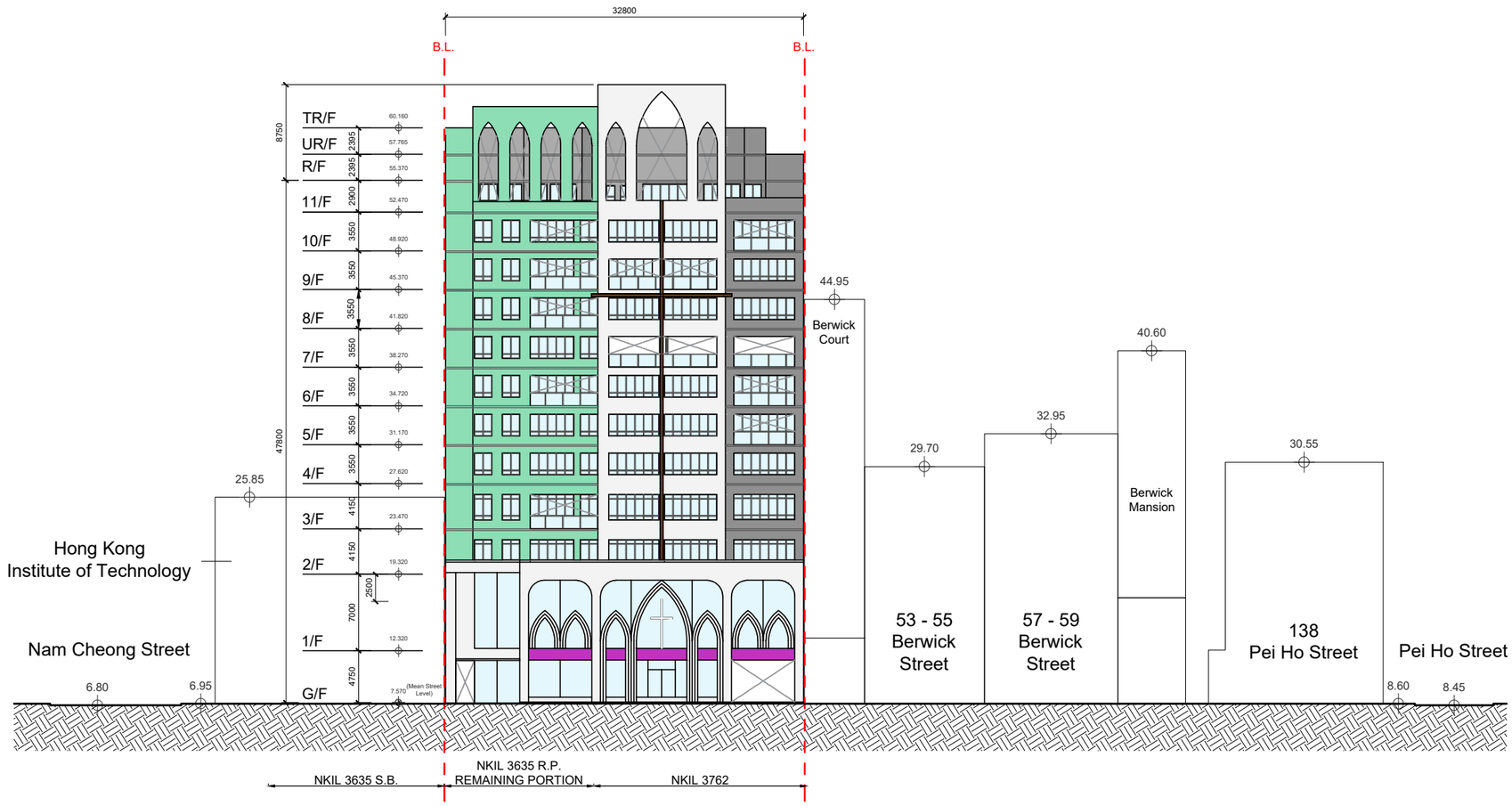
NKIL 3762

TR/F

AGC DESIGN LTD

architecture
urban design
interior

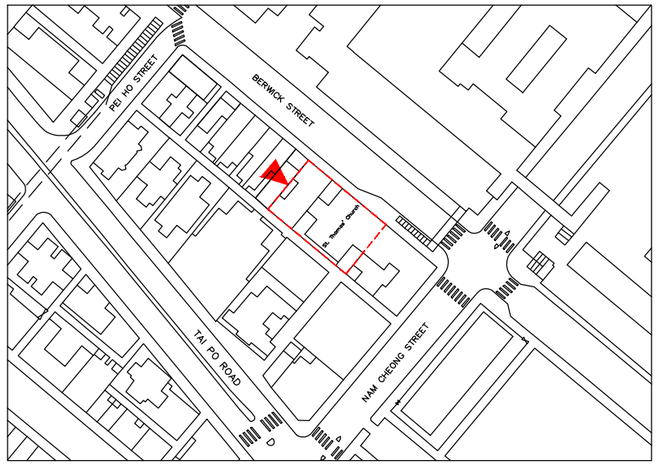


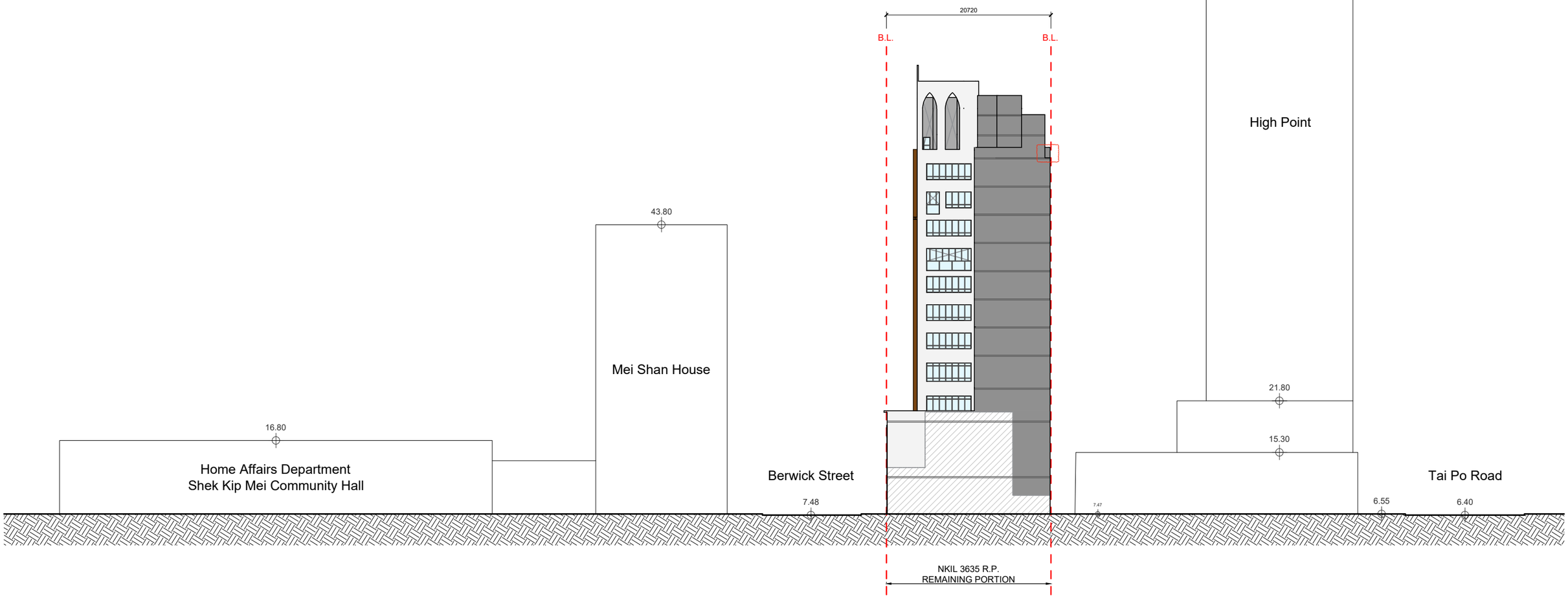


Front Elevation [1:500]

Technical Feasibility Study - Hong Kong Sheng Kung Hui St. Thomas' Church Redevelopment under Special Scheme on Privately Owned Sites for Welfare Uses (Special Sites Scheme)

AGC DESIGN LTD
architecture
urban design
interior

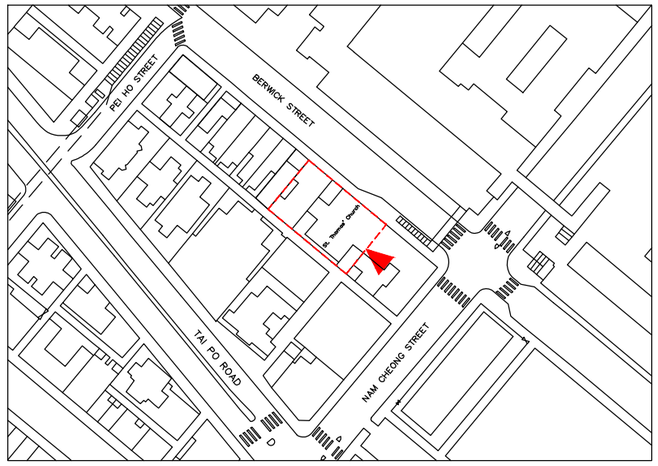


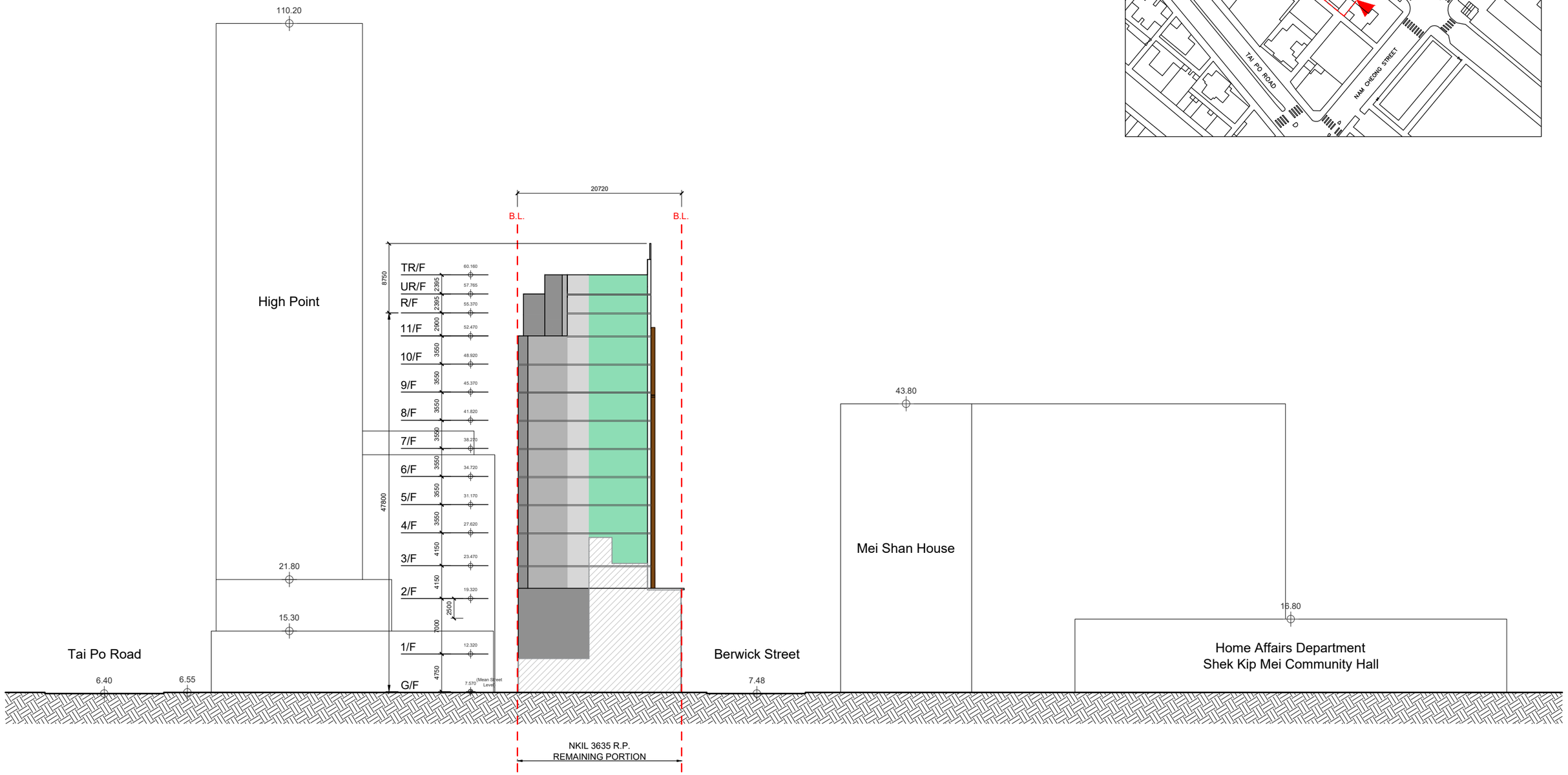


North West Elevation [1:500]

Technical Feasibility Study - Hong Kong Sheng Kung Hui St. Thomas' Church Redevelopment under Special Scheme on Privately Owned Sites for Welfare Uses (Special Sites Scheme)

AGC DESIGN LTD
architecture
urban design
interior

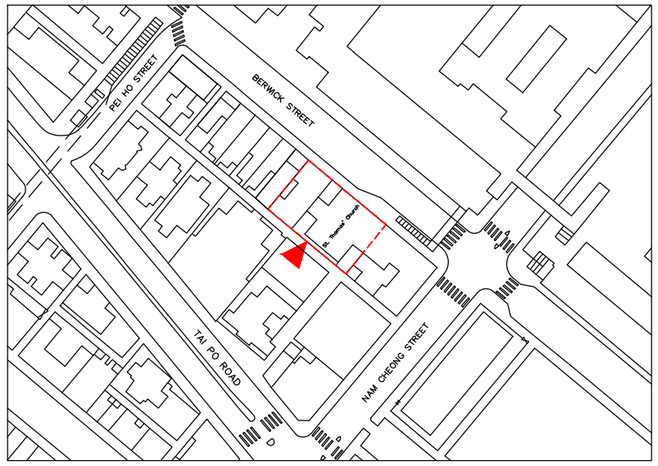


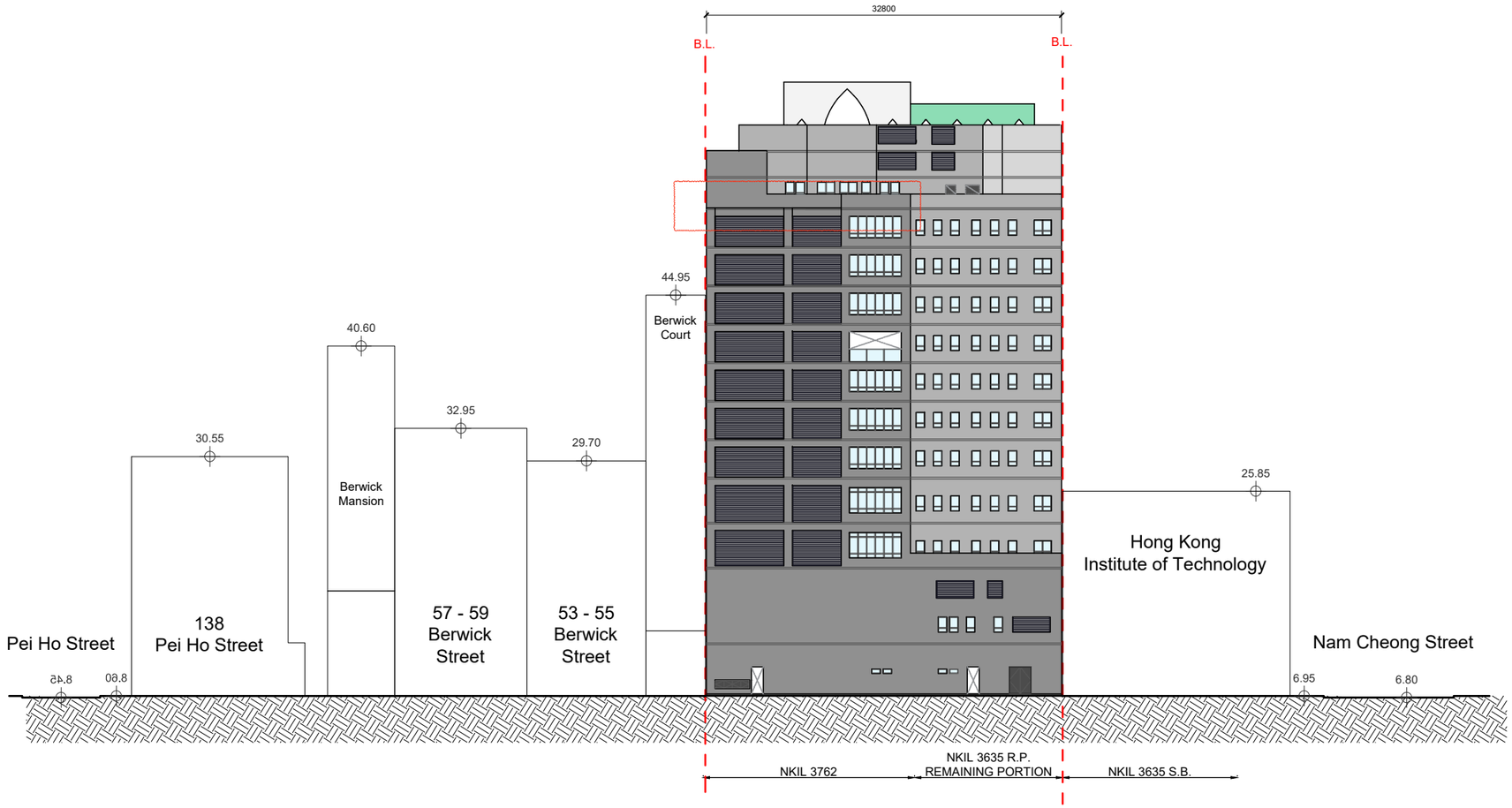


South East Elevation [1:500]

Technical Feasibility Study - Hong Kong Sheng Kung Hui St. Thomas' Church Redevelopment under Special Scheme on Privately Owned Sites for Welfare Uses (Special Sites Scheme)

AGC DESIGN LTD
architecture
urban design
interior





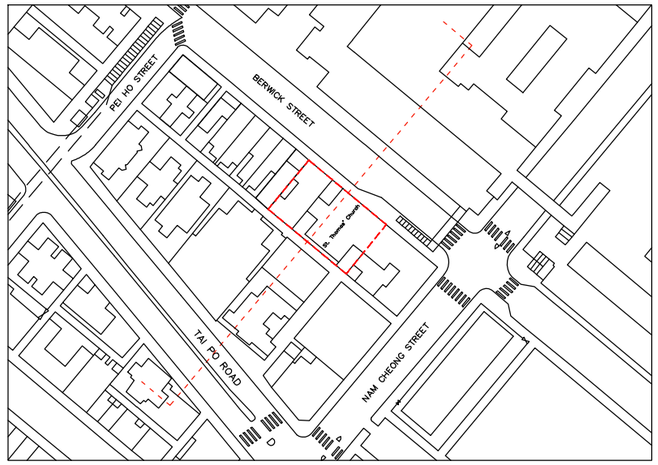
Rear Elevation [1:500]

Technical Feasibility Study - Hong Kong Sheng Kung Hui St. Thomas' Church Redevelopment under Special Scheme on Privately Owned Sites for Welfare Uses (Special Sites Scheme)

AGC DESIGN LTD
architecture
urban design
interior

LEGEND

- Saint Thomas' Church
- SKHWC General Office
- NEC
- IERSC
- DE
- SCCC
- CCC
- E&M



Building Set Back

Stepped Profile of Building Line

110.20

High Point

20720

B.L.

B.L.

TR/F 60.160
UR/F 2395 57.765
R/F 2395 55.370
11/F 2900 52.470
10/F 3550 48.920
9/F 3550 45.370
8/F 3550 41.820
7/F 3550 38.270
6/F 3550 34.720
5/F 3550 31.170
4/F 3550 27.620
3/F 4150 23.470
2/F 4150 19.320
1/F 7000 12.320
G/F 4750 (Mean Street Level) 7.570

47800

21.80

15.30

Tai Po Road

6.40

6.55

Berwick Street

7.48

43.80

Mei Shan House

16.80

Home Affairs Department
Shek Kip Mei Community Hall

Max. 24m
From G/F
(Maximum Height for CCC/DE)

Max. 12m
From G/F
(Maximum Height for CCC, children under age of 2)

NKIL 3635 R.P.
REMAINING PORTION

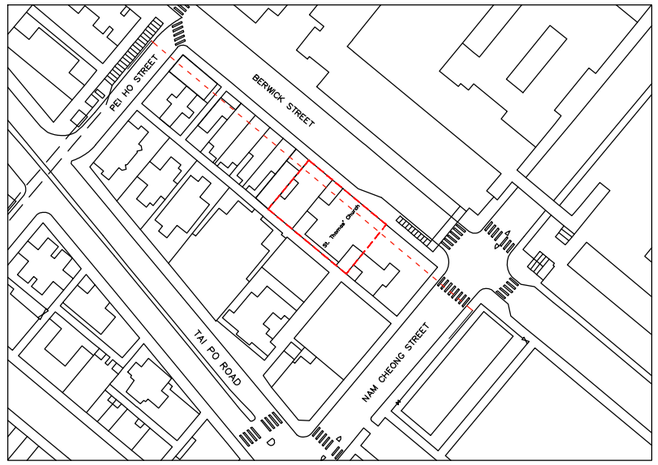
Section 01 | Cut Plane from Nam Cheong Street [1:500]

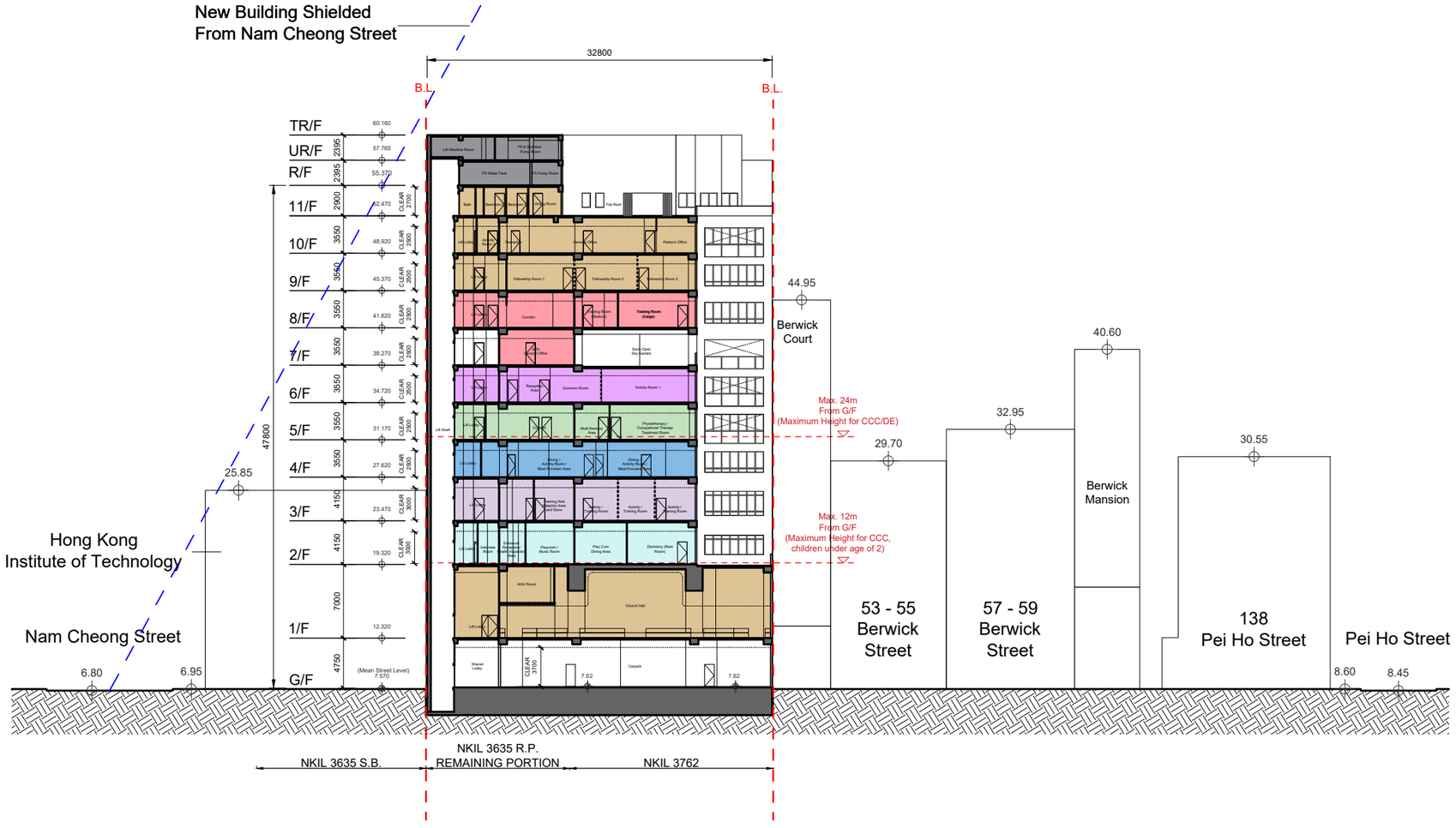
Technical Feasibility Study - Hong Kong Sheng Kung Hui St. Thomas' Church Redevelopment under Special Scheme on Privately Owned Sites for Welfare Uses (Special Sites Scheme)

AGC DESIGN LTD
architecture
urban design
interior

LEGEND

- Saint Thomas' Church
- SKHWC General Office
- NEC
- IERSC
- DE
- SCCC
- CCC
- E&M

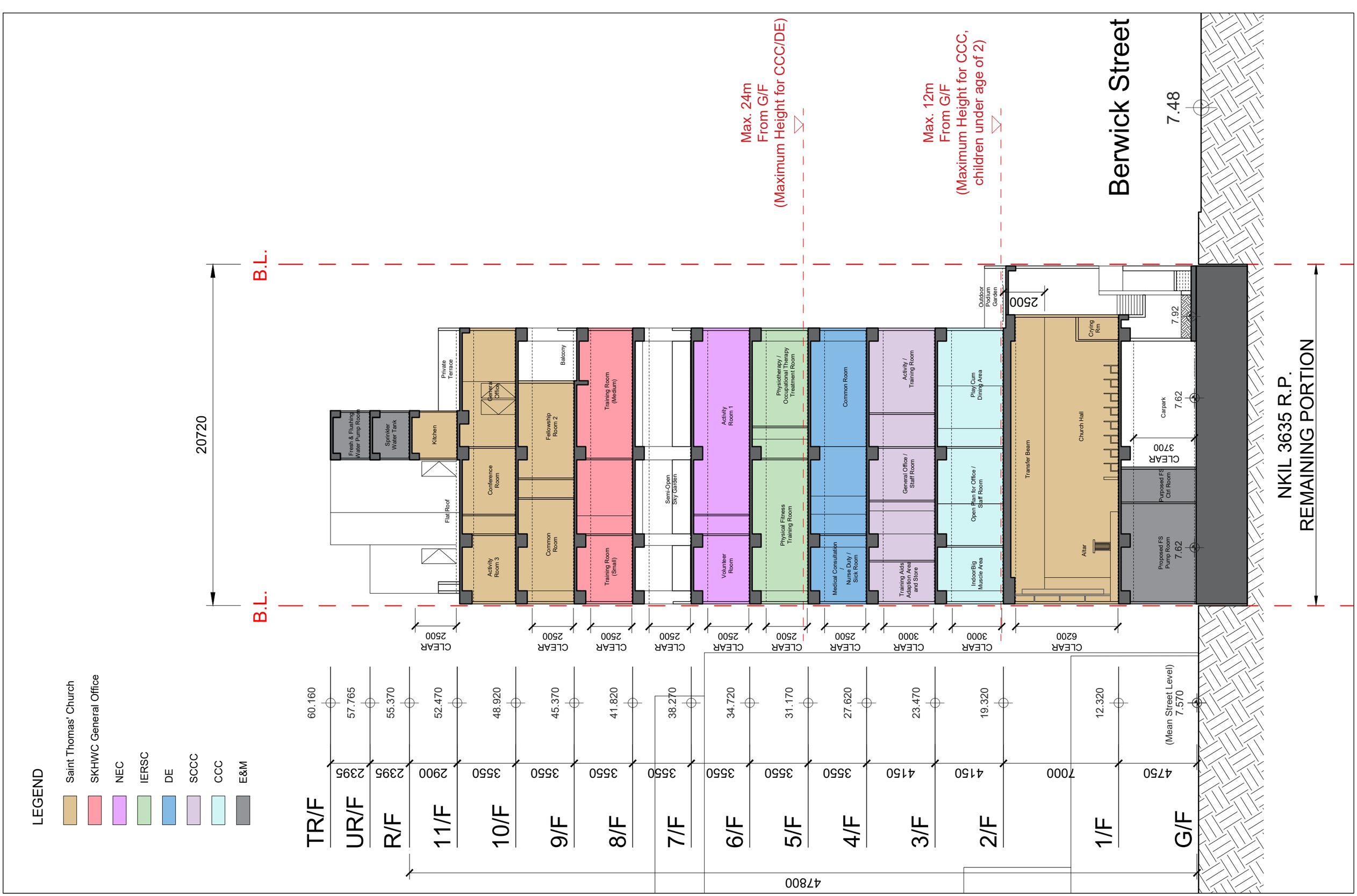




Section 02 | Cut Plane from Berwick Street [1:500]

Technical Feasibility Study - Hong Kong Sheng Kung Hui St. Thomas' Church Redevelopment under Special Scheme on Privately Owned Sites for Welfare Uses (Special Sites Scheme)

AGC DESIGN LTD
architecture
urban design
interior



Section A-A [1:200]

Technical Feasibility Study - Hong Kong Sheng Kung Hui St. Thomas' Church Redevelopment under Special Scheme on Privately Owned Sites for Welfare Uses (Special Sites Scheme)

AGC DESIGN LTD
architecture
urban design
interior

Section B-B [1:200]

Technical Feasibility Study - Hong Kong Sheng Kung Hui St. Thomas' Church Redevelopment under Special Scheme on Privately Owned Sites for Welfare Uses (Special Sites Scheme)

LEGEND

- Saint Thomas' Church
- SKHWC General Office
- NEC
- IERSC
- DE
- SCCC
- CCC
- E&M

32800

B.L. B.L.

TR/F		60.160	
UR/F	2395	57.765	
R/F	2395	55.370	
11/F	2900	52.470	CLEAR 2700
10/F	3550	48.920	CLEAR 2500
9/F	3550	45.370	CLEAR 2500
8/F	3550	41.820	CLEAR 2500
7/F	3550	38.270	CLEAR 2500
6/F	3550	34.720	CLEAR 2500
5/F	3550	31.170	CLEAR 2500
4/F	3550	27.620	CLEAR 2500
3/F	4150	23.470	CLEAR 3000
2/F	4150	19.320	CLEAR 3000
1/F	7000	12.320	
G/F	4750	(Mean Street Level) 7.570	

47800

Lift Machine Room
FS & Sprinkler Pump Room
FS Water Tank
FS Pump Room
Bath
Bedroom 2
Bedroom 1
Dining Room
Flat Roof
Lift Lobby
Activity Room 1
Reception
General Office
Pastor's Office
Lift Lobby
Fellowship Room 1
Fellowship Room 2
Fellowship Room 3
Lift Lobby
Corridor
Training Room (Medium)
Training Room (Large)
SKH General Office
Semi-Open Sky Garden
Lift Lobby
Reception Area
Common Room
Activity Room 1
Lift Shaft
Lift Lobby
Corridor
Multi-Sensory Area
Physiotherapy / Occupational Therapy Treatment Room
Lift Lobby
Dining / Activity Room / Meal Provision Area
Dining / Activity Room / Meal Provision Area
Lift Lobby
Training Aids Adaption Area and Store
Acitvity / Training Room
Acitvity / Training Room
Acitvity / Training Room
Lift Lobby
Interview Room
Entrance/ Reception/ Health Inspection Area
Playroom / Music Room
Play Cum Dining Area
Dormitory (Rest Room)
AHU Room
Church Hall
Lift Lobby
Shared Lobby
CLEAR 3700
Carpark
7.62
7.62

44.95

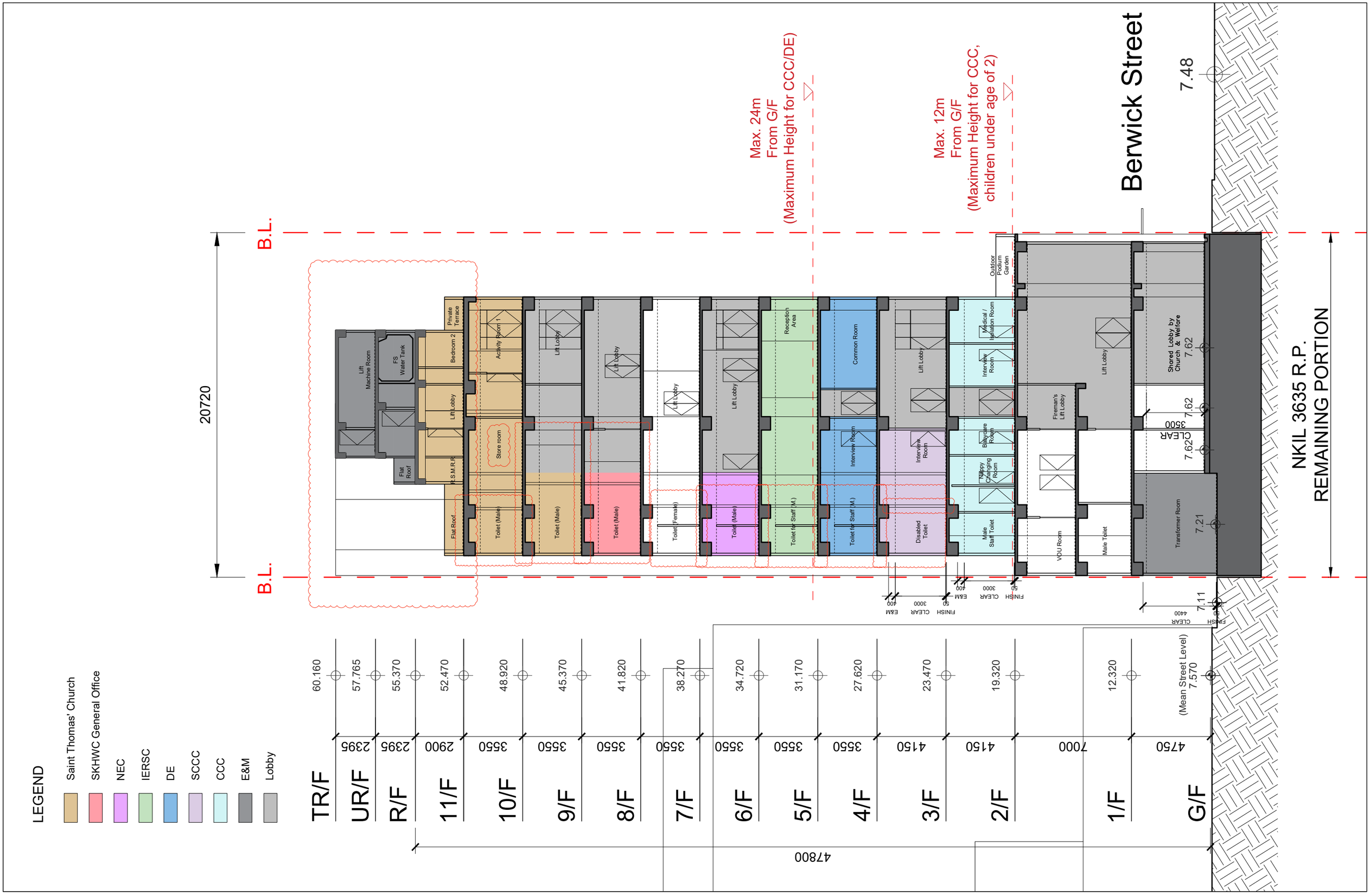
Berwick Court

(Maximum

(Maximur children

NKIL 3635 S.B. | NKIL 3635 R.P. REMAINING PORTION | NKIL 3762

AGC DESIGN LTD
architecture urban design interior



Section C-C [1:200]

Technical Feasibility Study - Hong Kong Sheng Kung Hui St. Thomas' Church Redevelopment under Special Scheme on Privately Owned Sites for Welfare Uses (Special Sites Scheme)

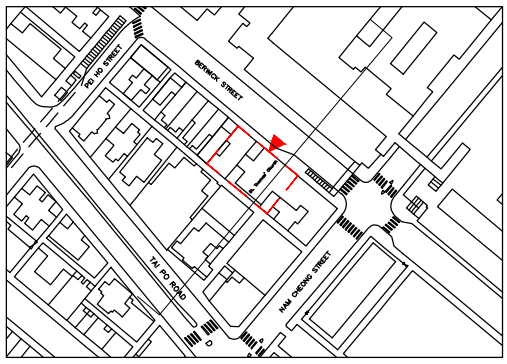
AGC DESIGN LTD
architecture
urban design
interior

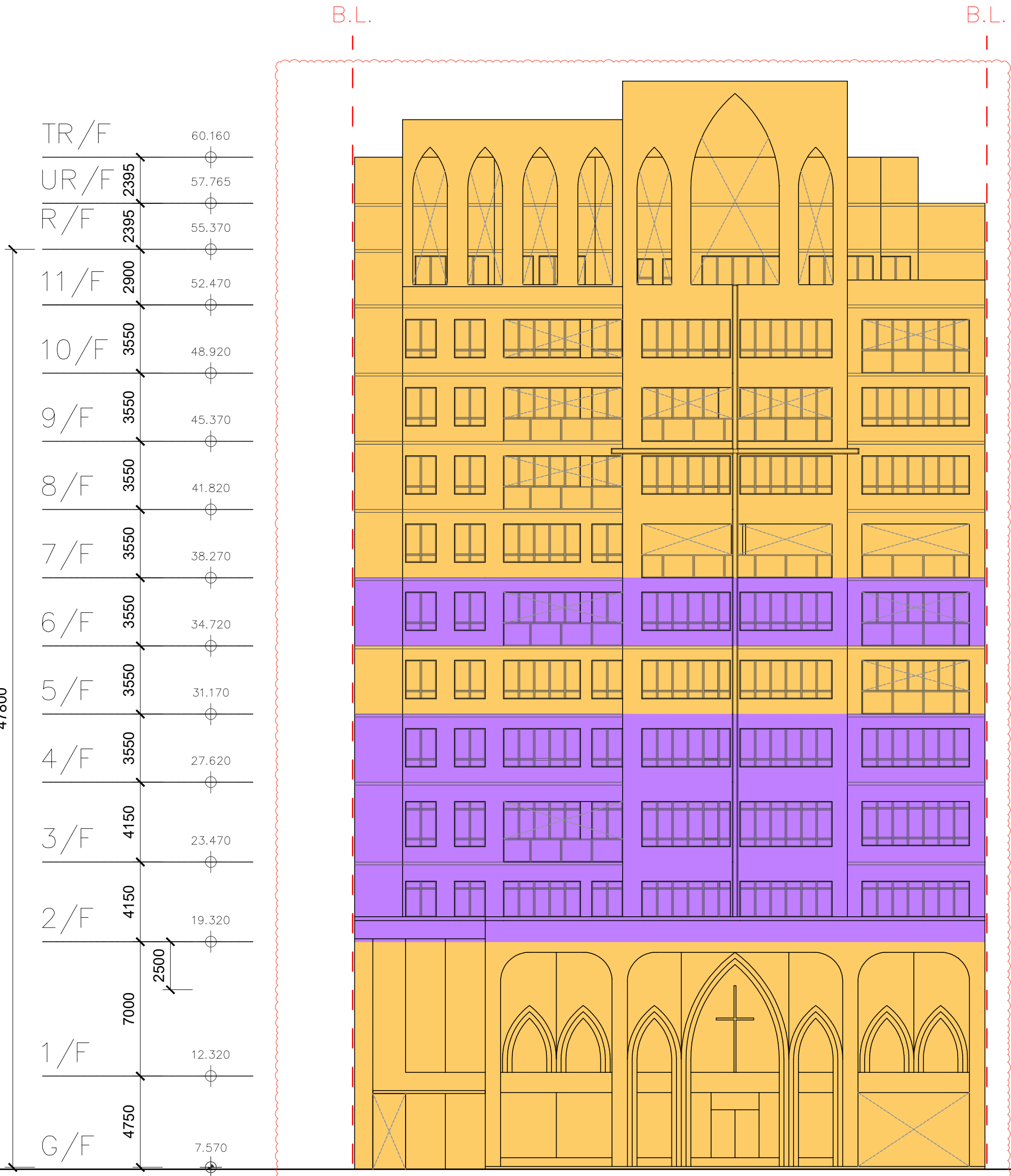
BERWICK STREET ELEVATION 1:200
DATED 20250901

Legend

Subvented portion

Non-subvented portion



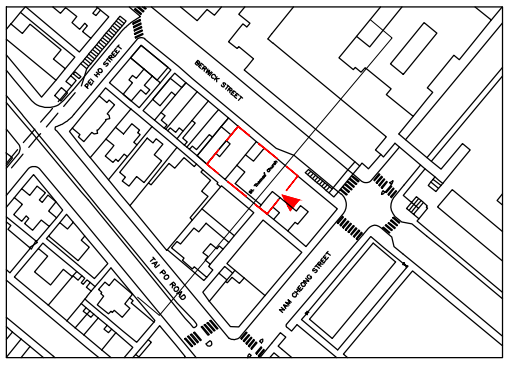


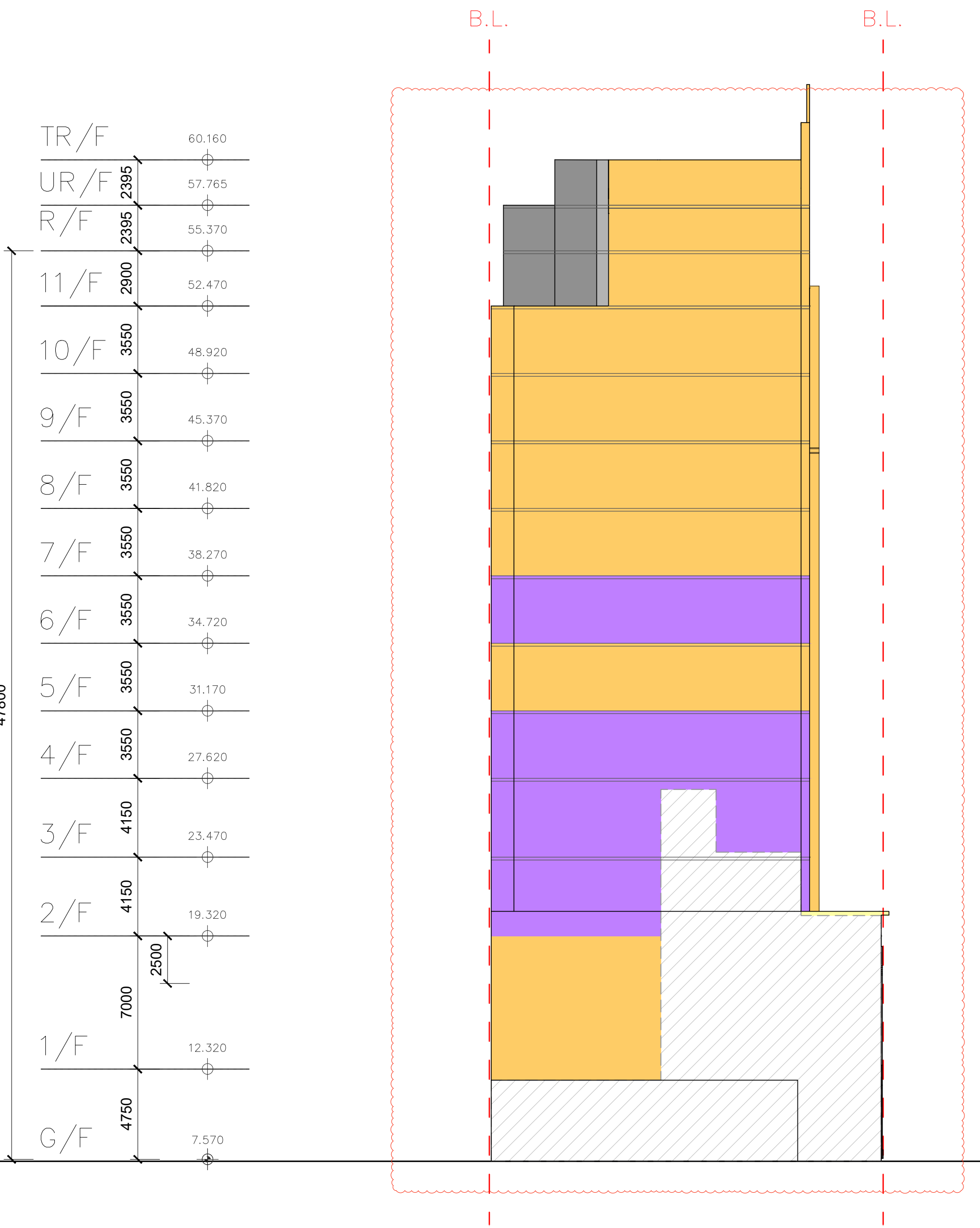
SE ELEVATION 1:200
DATED 20250901

Legend

Subvented portion

Non-subvented portion



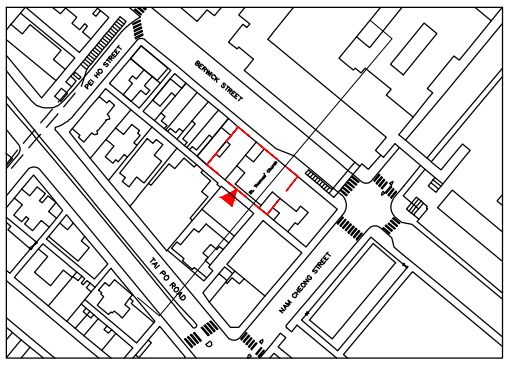


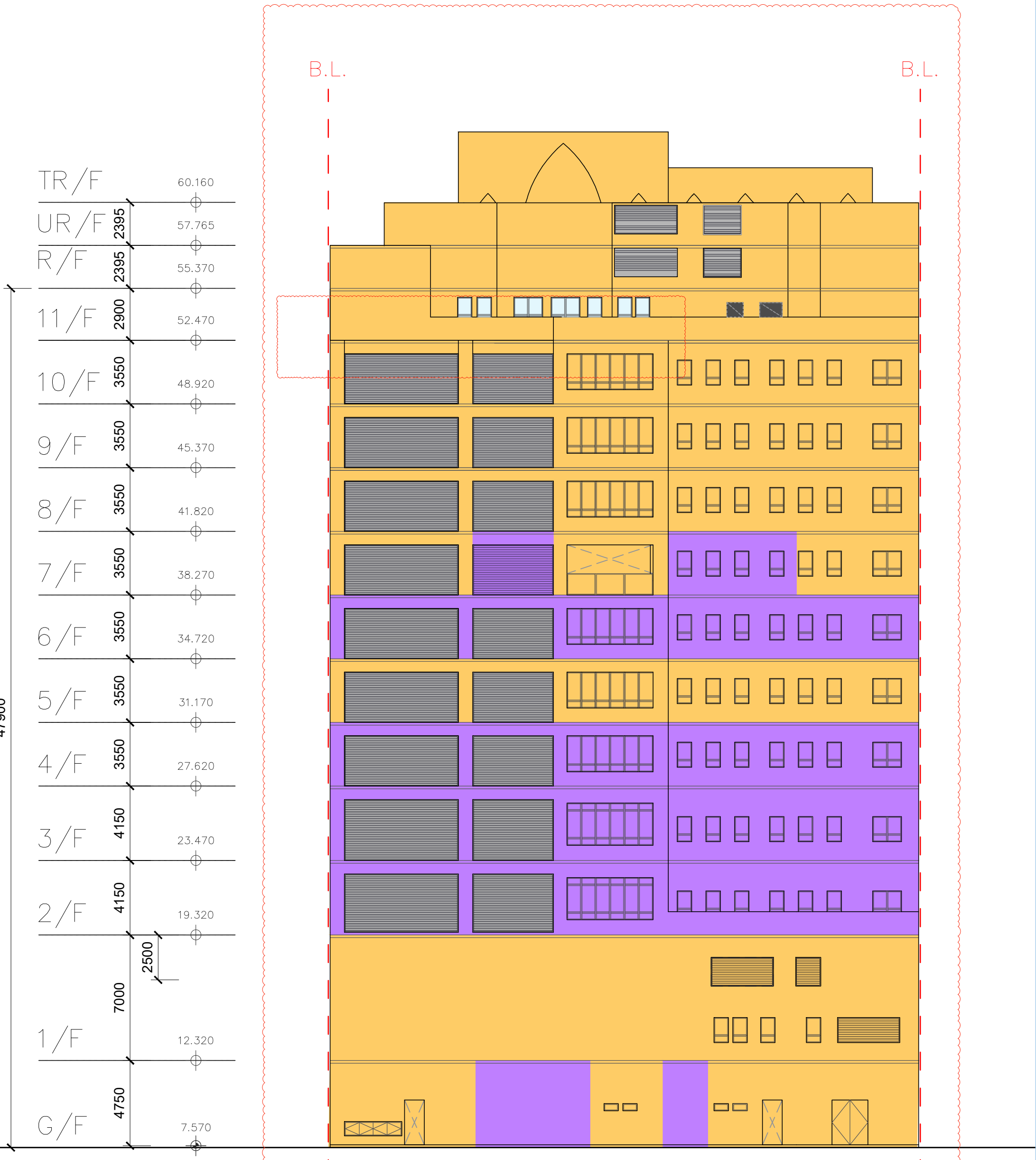
REAR LANE ELEVATION 1:200
DATED 20250901

Legend

Subvented portion

Non-subvented portion

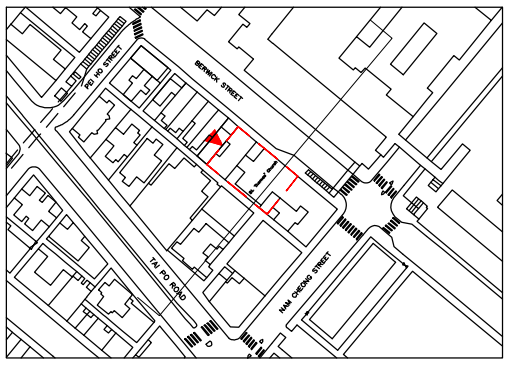


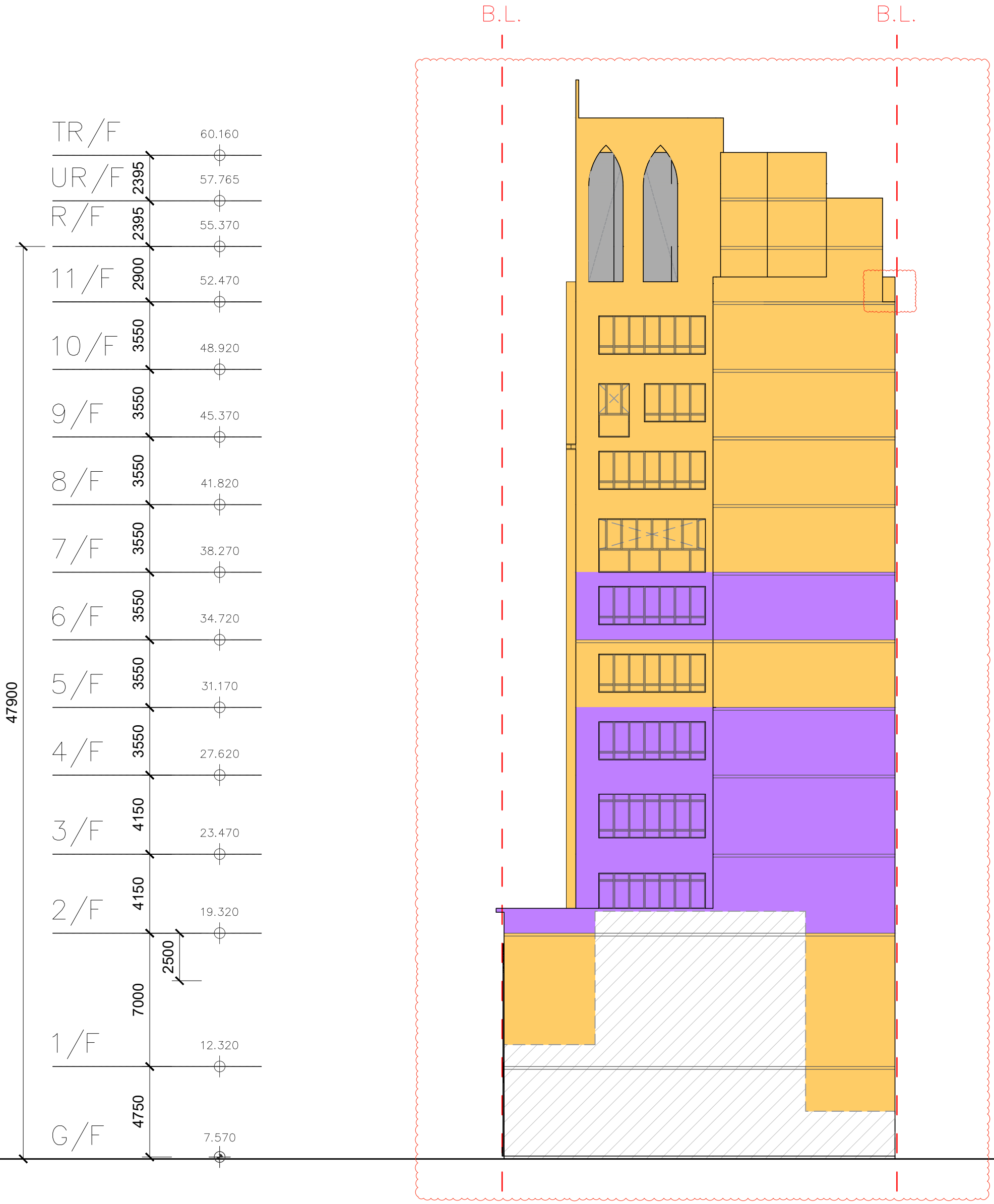


NW ELEVATION 1:200
DATED 20250901

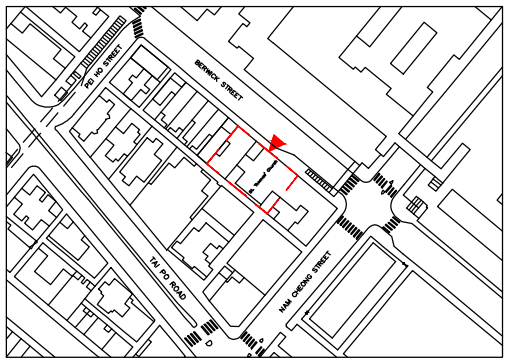
Legend

- Subvented portion
- Non-subvented portion



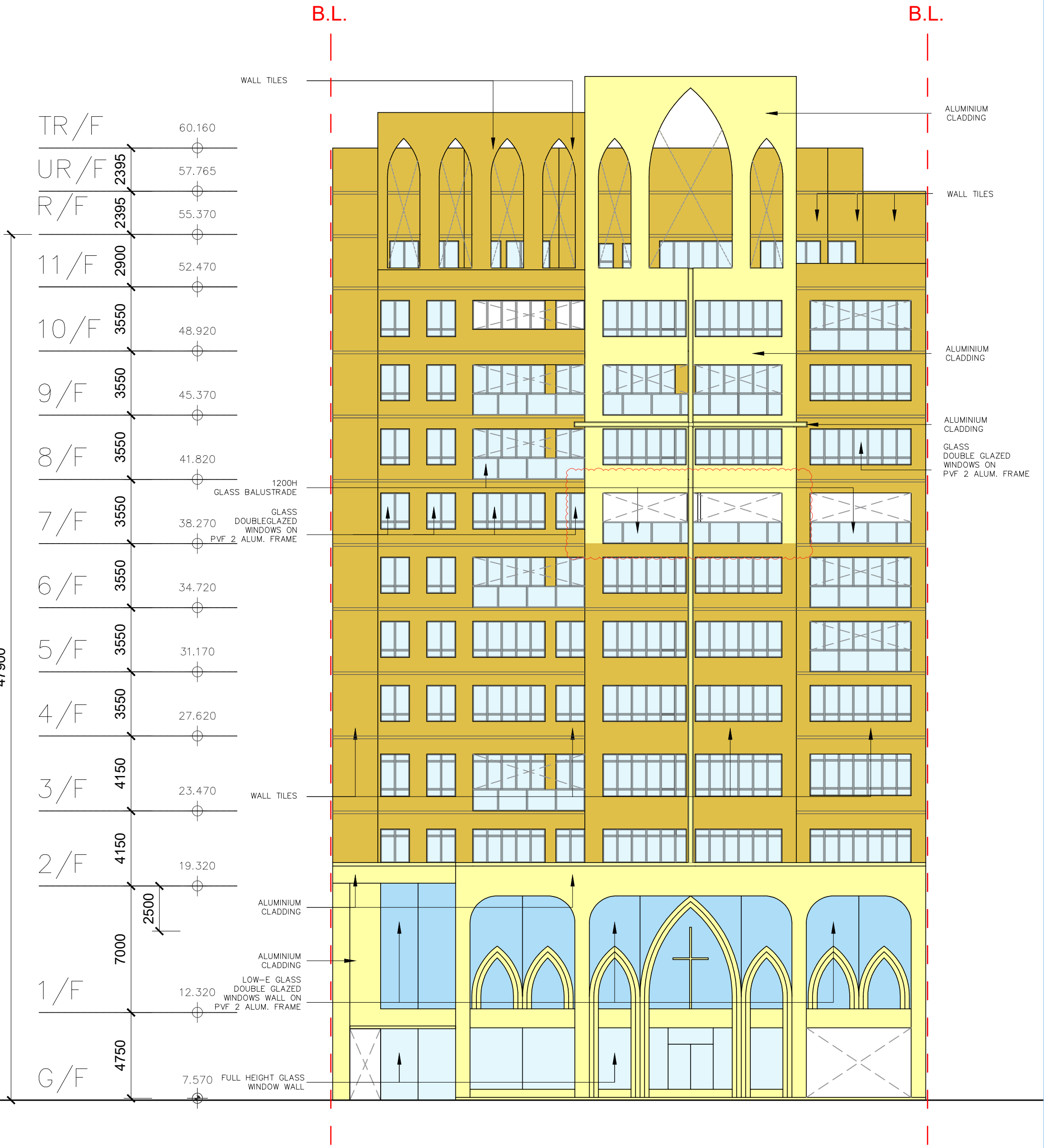


BERWICK STREET ELEVATION 1:200
DATED 20250901



Legend

- Aluminium Cladding
- Wall Tiles
- Glass
- Low-E Glass

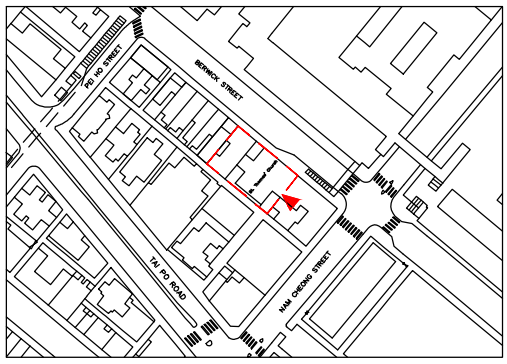


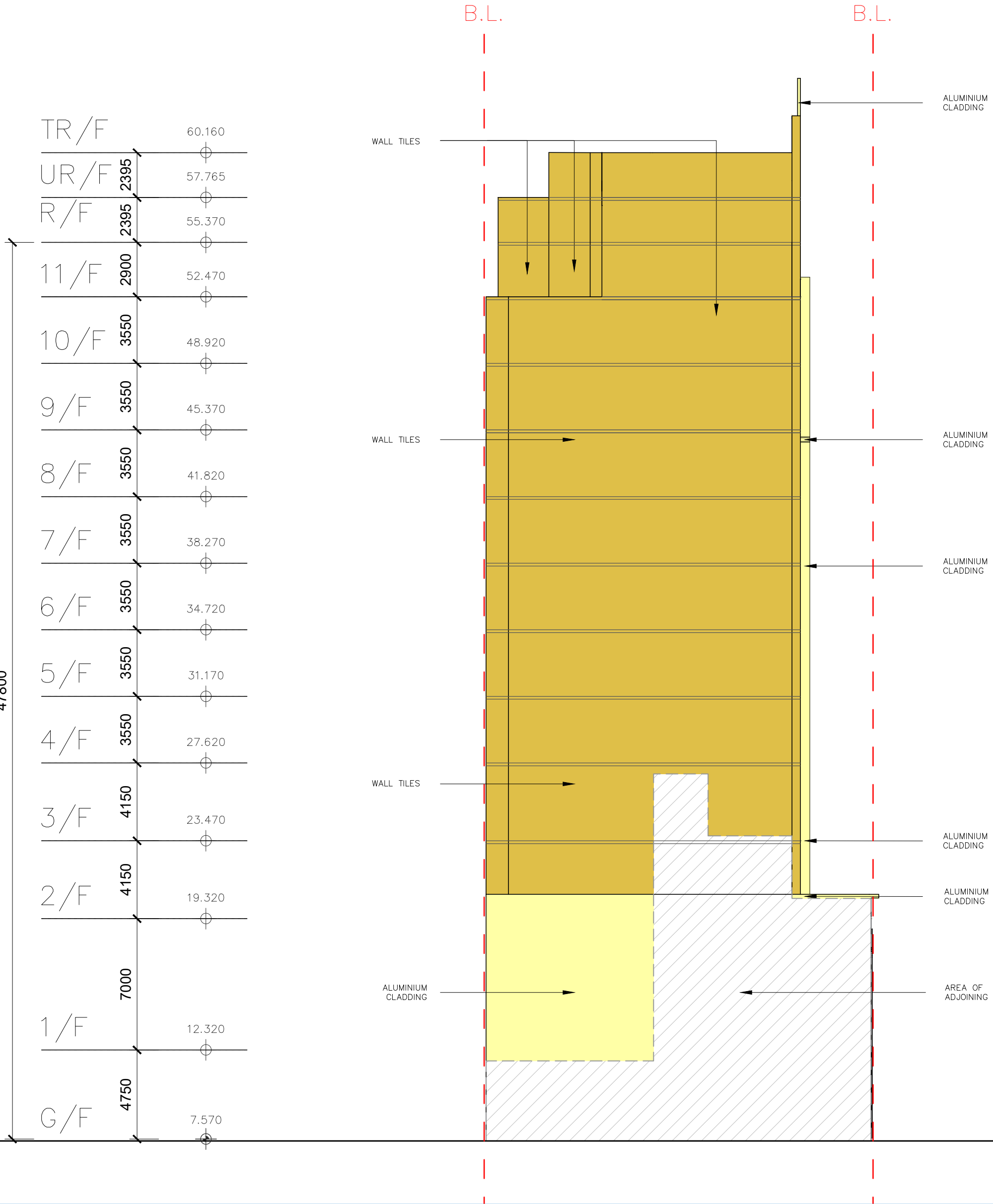
SE ELEVATION 1:200
DATED 20250901

Legend

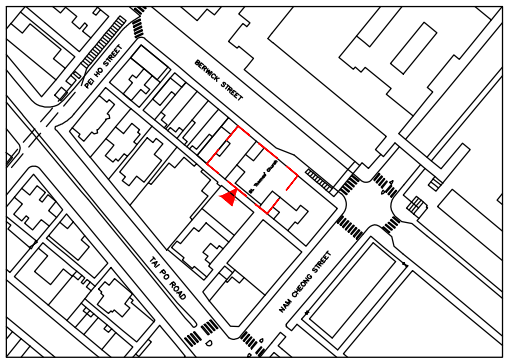
Aluminium Cladding

Wall Tiles



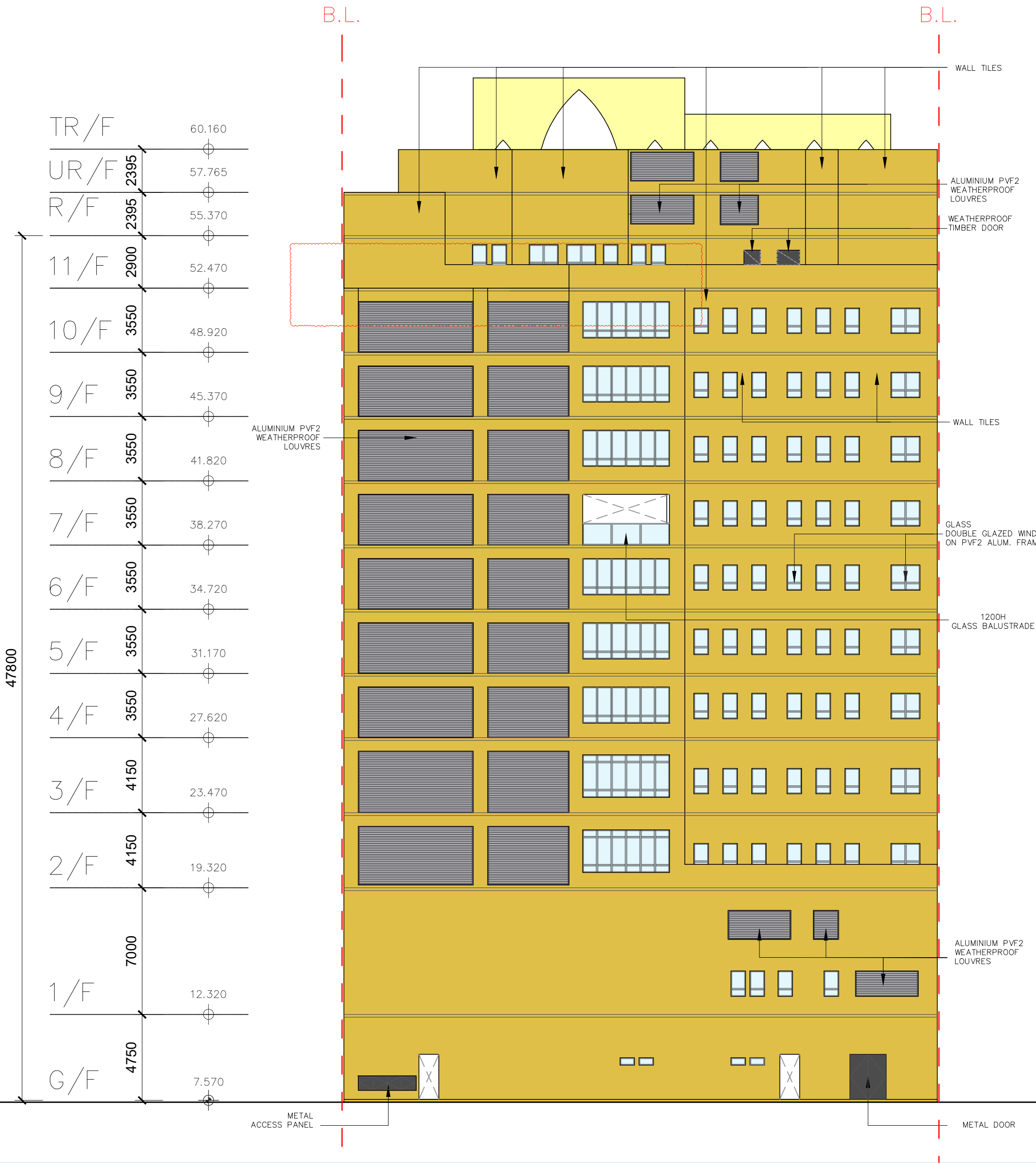


REAR LANE ELEVATION 1:200
DATED 20250901



Legend

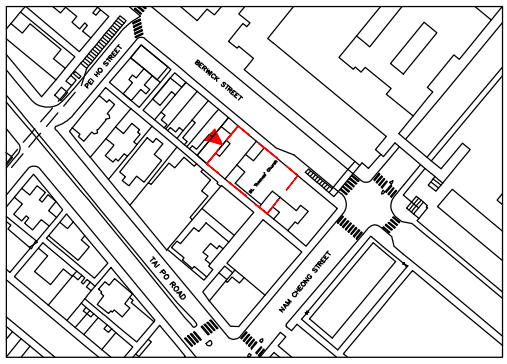
- Aluminium Cladding
- Wall Tiles
- Glass
- Aluminium Weatherproof Louvres
- Metal

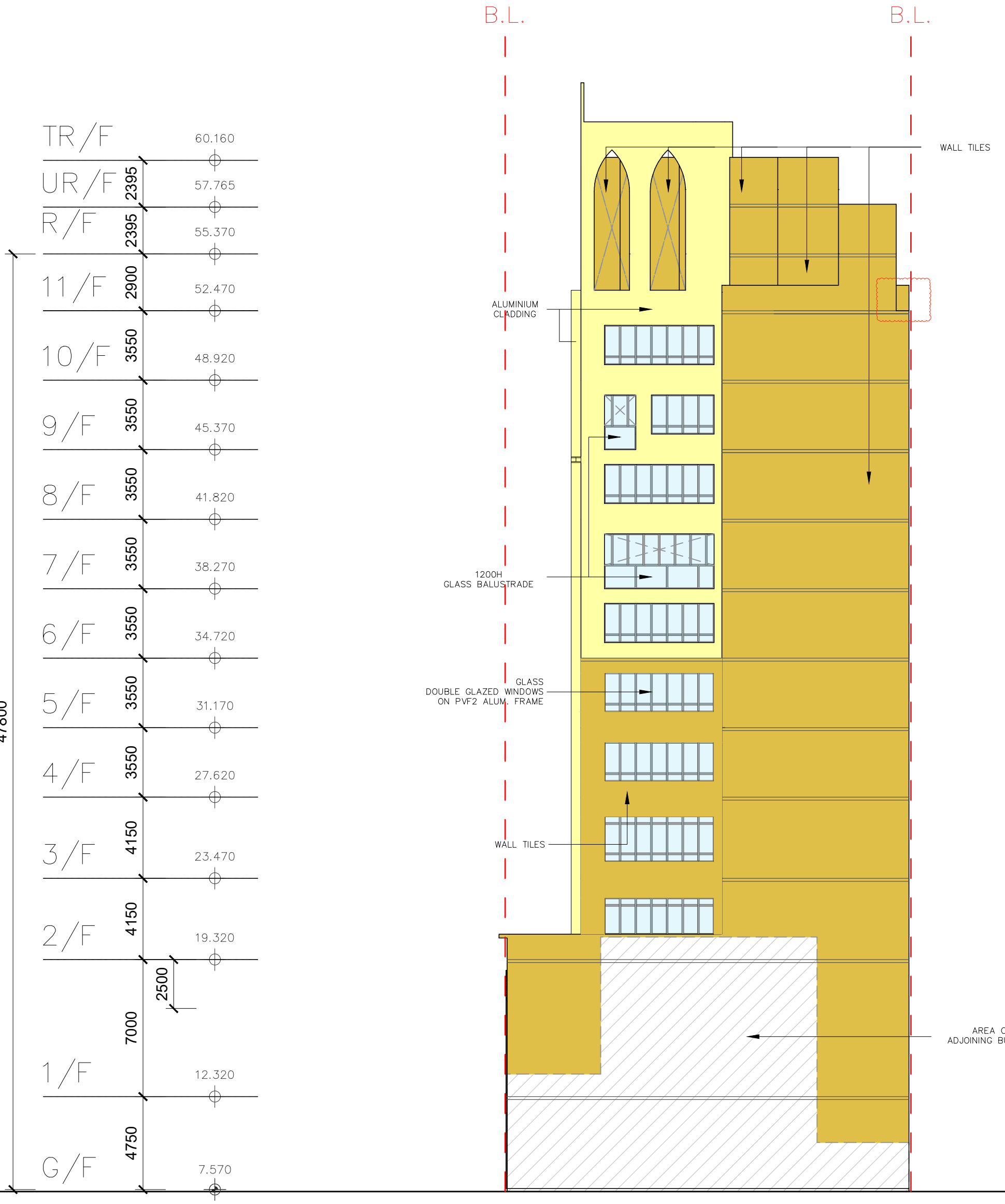


NW ELEVATION 1:200
DATED 20250901

Legend

- Aluminium Cladding
- Wall Tiles
- Glass





Appendix 6-1

Year 2048 Traffic Forecast

TNG KEL LI

From: TSUI Gary <gtsui@systra.com>
Sent: Friday, November 28, 2025 9:49 AM
To: 'j691'
Cc: 'peterkwok'; 'aubreyau'; CHAN Ray
Subject: Fw: Technical Feasibility Study for the Proposed Redevelopment of Hong Kong Sheng Kung Hui St. Thomas' Church at 43 Berwick Street, Sham Shui Po, Kowloon, N.K.I.L. No. 3762 & 3635RP - Technical Note on Traffic Forecast for Environmental Assessment Study
Attachments: St. Thomas_TN_EA_MVA20251104.pdf

Dear Matthew,

Pls note email from TD below for your record.

Thanks.

Gary Tsui

From: Wai Ho YU <waihoyu@td.gov.hk>
Sent: Thursday, November 27, 2025 5:06 PM
To: CHAN Ray <rchan3@systra.com>
Cc: KWOK Edmund <ekwok@systra.com>; TSUI Gary <gtsui@systra.com>; Peter KK FUNG <peterfung@td.gov.hk>
Subject: Re: Technical Feasibility Study for the Proposed Redevelopment of Hong Kong Sheng Kung Hui St. Thomas' Church at 43 Berwick Street, Sham Shui Po, Kowloon, N.K.I.L. No. 3762 & 3635RP - Technical Note on Traffic Forecast for Environmental Assessment Study

Dear Mr. CHAN,

We have no comment on the methodology of the traffic forecast from traffic engineering point of view provided that the traffic data estimated in the forecast will only be used for environmental assessment purpose.

Regards,

W H YU
PCK/SSP, TE/K
Transport Department
Tel.: 2399 2479

From: "CHAN Ray" <rchan3@systra.com>
To: "waihoyu@td.gov.hk" <waihoyu@td.gov.hk>
Cc: "KWOK Edmund" <ekwok@systra.com>, "TSUI Gary" <gtsui@systra.com>

Date: 04/11/2025 04:55 PM
Subject: Technical Feasibility Study for the Proposed Redevelopment of Hong Kong Sheng Kung Hui St. Thomas' Church at 43 Berwick Street, Sham Shui Po, Kowloon, N.K.I.L. No. 3762 & 3635RP - Technical Note on Traffic Forecast for Environmental Assessment Study

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Dear Mr. YU (Project Coordinator/Sham Shui Po, Transport Department),

MVA Hong Kong Limited has been commissioned by Hong Kong Sheng Kung Hui as the traffic consultant, for the provision of traffic forecasts for the environmental assessment of the proposed redevelopment project of Hong Kong Sheng Kung Hui St. Thomas' Church at Sham Shui Po.

We are pleased to provide herewith a technical note which summarizes the methodology and results of the traffic forecasts for environmental assessment for your review and approval, to support the environmental assessment submission by the environmental consultant to Environmental Protection Department. The technical note is hereby attached for your review and hard copy will also be submitted to your office for perusal and record.

We would greatly appreciate if you could kindly furnish your comments, if any, on or before 28th November 2025.

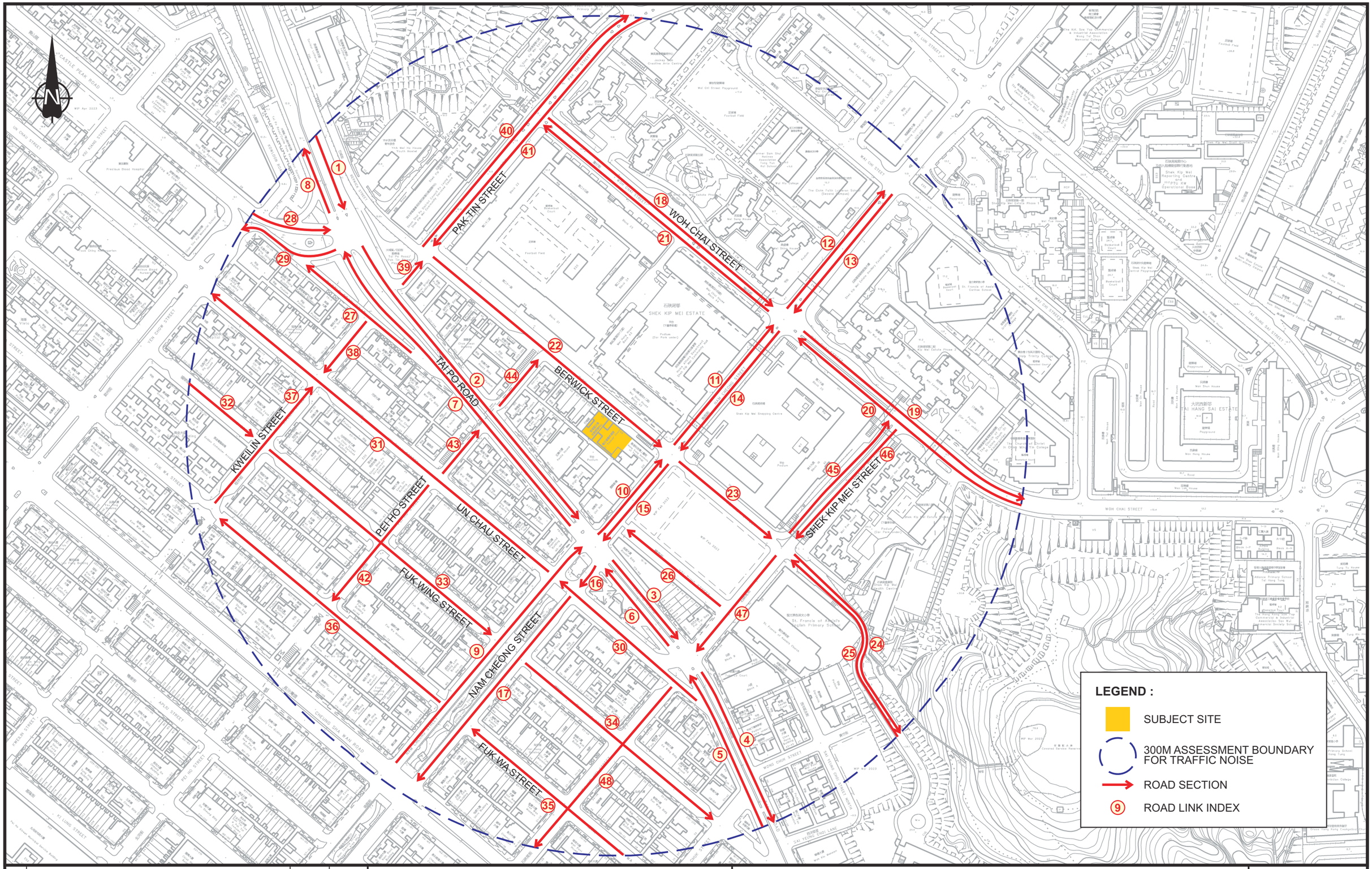
Should you have any queries, please feel free to contact our Mr. Edmund Kwok at 2864 6431 or our Mr. Ray Chan at 2864 6395. Thank you very much for your kind assistance.

Regards,

Ray Chan
Tel: +852 2864 6395 (Direct Line) • Gen: +852 2529 7037 • Fax: +852 2527 8490

SYSTRA MVA

22nd Floor • Genesis • 33-35 Wong Chuk Hang Road • Hong Kong
www.mvaasia.com



Rev.	Description	Checked	Date
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

Project Title

TECHNICAL FEASIBILITY STUDY (TFS)
FOR THE REDEVELOPMENT OF
HKSKH ST. THOMAS' CHURCH

Drawing Title

ENVIRONMENTAL ASSESSMENT STUDY AREA AND ROAD LINKS

Designed	Checked	Scale	Date	Drawing No.	Rev.
CHM	HWL	NTS	APR 2024	1	-

SYSTRA MVA

CHK50686610/EIA/F1.CDR/LLH/16APR24

Original Size : A3

Proposed Redevelopment of Hong Kong Sheng Kung Hui St. Thomas' Church –
Year 2048 Traffic Forecast in Design Scenario

Road Link Index	Road	Section	Direction[1]	Speed Limit (km/h)	Road Type	AM - Flow (veh/hr)	PM - Flow (veh/hr)	AM - HV%[2]	PM - HV%[2]
1	Tai Po Road	Kowloon Road – Castle Peak Road	SB	50	Primary Distributor	1725	1300	35%	35%
2	Tai Po Road	Castle Peak Road – Nam Cheong Street	SB	50	Primary Distributor	1530	1145	45%	40%
3	Tai Po Road	Nam Cheong Street - Shek Kip Mei Street	SB	50	Primary Distributor	910	700	25%	15%
4	Tai Po Road	Shek Kip Mei Street - Sai Yeung Choi Lane	SB	50	Primary Distributor	1125	885	20%	15%
5	Tai Po Road	Sai Yeung Choi Lane - Shek Kip Mei Street	NB	50	Primary Distributor	340	590	30%	25%
6	Tai Po Road	Shek Kip Mei Street - Nam Cheong Street	NB	50	Primary Distributor	710	855	25%	25%
7	Tai Po Road	Nam Cheong Street - Castle Peak Road	NB	50	Primary Distributor	1160	1290	50%	30%
8	Tai Po Road	Castle Peak Road - Kowloon Road	NB	50	Primary Distributor	1080	1200	35%	30%
9	Nam Cheong Street	Cheung Sha Wan Road - Tai Po Road	NB	50	District Distributor	630	565	40%	25%
10	Nam Cheong Street	Tai Po Road – Berwick Street	NB	50	District Distributor	495	420	25%	30%
11	Nam Cheong Street	Berwick Street – Woh Chai Street	NB	50	District Distributor	455	370	25%	25%
12	Nam Cheong Street	Woh Chai Street – Wai Chi Street	NB	50	District Distributor	500	360	45%	20%

13	Nam Cheong Street	Wai Chi Street – Woh Chai Street	SB	50	District Distributor	580	395	45%	50%
14	Nam Cheong Street	Woh Chai Street - Berwick Street	SB	50	District Distributor	205	160	100%	100%
15	Nam Cheong Street	Berwick Street – Tai Po Road	SB	50	District Distributor	140	100	100%	100%
16	Nam Cheong Street	Tai Po Road – Un Chau Street	SB	50	District Distributor	135	90	100%	100%
17	Nam Cheong Street	Un Chau Street - Cheung Sha Wan Road	SB	50	District Distributor	540	310	50%	55%
18	Woh Chai Street	Pak Tin Street - Nam Cheong Street	EB	50	District Distributor	280	200	50%	50%
19	Woh Chai Street	Nam Cheong Street - Wai Chi Street	EB	50	District Distributor	580	455	40%	40%
20	Woh Chai Street	Wai Chi Street - Nam Cheong Street	WB	50	District Distributor	465	350	35%	20%
21	Woh Chai Street	Nam Cheong Street - Pak Tin Street	WB	50	District Distributor	95	135	50%	35%
22	Berwick Street	Pak Tin Street - Nam Cheong Street	EB	50	Local Distributor	435	355	30%	30%
23	Berwick Street	Nam Cheong Street - Shek Kip Mei Street	EB	50	Local Distributor	550	460	35%	40%
24	Berwick Street	Shek Kip Mei Street - Wong Chuk Street	EB	50	Local Distributor	145	20	10%	10%
25	Berwick Street	Wong Chuk Street - Shek Kip Mei Street	WB	50	Local Distributor	120	30	10%	20%
26	Yiu Tung Street	Shek Kip Mei Street - Nam Cheong Street	EB	50	Local Distributor	50	50	30%	30%
27	Castle Peak Road	Near slip road of Tai Po Road to Yen Chow Street	WB	50	District Distributor	425	385	60%	35%

28	Castle Peak Road	Kowloon Road – Tai Po Road	NB	50	District Distributor	860	695	55%	45%
29	Castle Peak Road	Tai Po Road – Yen Chow Street	SB	50	District Distributor	715	565	35%	40%
30	Un Chau Street	Tai Po Road – Nam Cheong Street	WB	50	District Distributor	865	700	15%	40%
31	Un Chau Street	Nam Cheong Street - Yen Chow Street	WB	50	District Distributor	790	685	30%	65%
32	Fuk Wing Street	Yen Chow Street - Kweilin Street	EB	50	Local Distributor	100	75	35%	30%
33	Fuk Wing Street	Kweilin Street – Nam Cheong Street	EB	50	Local Distributor	220	170	35%	30%
34	Fuk Wing Street	Nam Cheong Street - Wong Chuk Street	EB	50	Local Distributor	50	30	30%	35%
35	Fuk Wa Street	Wong Chuk Street - Nam Cheong Street	EB	50	Local Distributor	135	155	30%	35%
36	Fuk Wa Street	Nam Cheong Street - Kweilin Street	EB	50	Local Distributor	105	70	35%	30%
37	Kweilin Street	Fuk Wa Street – Un Chau Street	NB	50	Local Distributor	185	75	35%	30%
38	Kweilin Street	Tai Po Road – Un Chau Street	SB	50	Local Distributor	420	380	35%	30%
39	Pak Tin Street	Tai Po Road – Berwick Street	NB	50	Local Distributor	425	350	35%	30%
40	Pak Tin Street	Berwick Street – Pui Tak Street	NB	50	Local Distributor	390	310	35%	25%
41	Pak Tin Street	Pui Tak Street – Berwick Street	SB	50	Local Distributor	180	155	35%	40%
42	Pei Ho Street	Un Chau Street – Fuk Wa Street	SB	50	Local Distributor	35	20	35%	30%

43	Pei Ho Street	Un Chau Street – Tai Po Road	NB	50	Local Distributor	260	200	35%	30%
44	Pei Ho Street	Tai Po Road – Berwick Street	NB	50	Local Distributor	130	80	25%	30%
45	Shek Kip Mei Street	Berwick Street – Shek Kip Mei Street	NB	50	District Distributor	290	265	50%	60%
46	Shek Kip Mei Street	Shek Kip Mei Street - Berwick Street	SB	50	District Distributor	1025	640	20%	25%
47	Shek Kip Mei Street	Berwick Street – Nam Cheong Street	SB	50	District Distributor	1255	845	20%	25%
48	Shek Kip Mei Street	Nam Cheong Street - Cheung Sha Wan Road	SB	50	District Distributor	40	70	30%	35%

Notes:

(1) EB : Eastbound ; SB : Southbound ; WB : Westbound ; NB : Northbound

(2) Figure round to the nearest 5.

Appendix 6-2

Traffic Noise Impact Assessment Results

Table 1a. Base Case Scenario (Max AM & PM)

Floor Level	NAP mPD	NAP_01	NAP_02	NAP_03	NAP_04	NAP_05	NAP_06	NAP_07	NAP_08	NAP_09	NAP_10
11	**53.7**	53	53	57	65	58	57	68	66	62	71
Max		53	53	57	65	58	57	68	66	62	71
No. of Room with Exceedance		0	0	0	0	0	0	0	0	0	1
No. of Unit with Exceedance		0							1		

Note:

71	Predicted Noise Level Exceed Noise Criteria, 70dB(A)

Total no. of unit	**2**
no. of unit with exceedance	1
% of Compliance	50%
Max Noise Level	71

Table 1b. Mitigated Scenario (Max AM & PM)

Floor Level	NAP mPD	NAP_01	NAP_02	NAP_03	NAP_04	NAP_05	NAP_06	NAP_07	NAP_08	NAP_09	NAP_10
11	**53.7**	53	53	57	65	58	57	68	66	62	65
Max		53	53	57	65	58	57	68	66	62	65
No. of Room with Exceedance		0	0	0	0	0	0	0	0	0	0
No. of Unit with Exceedance		0							0		

Note:

Acoustic Window (Baffle Type)(PN1)(Ref.: ProPECC PN5/23)

Total no. of unit	**2**
no. of unit with exceedance	0
% of Compliance	100%
Max Noise Level	68

The presented predicted noise level after adopting baffle type acoustic window/balcony system (i.e. mitigated noise level) does not necessarily represent the noise level at 1m away from the baffle type acoustic window of the proposed development, but the equivalent noise level at 1m from the external façade after accounting the reduction in noise levels inside the flat offered by the baffle type acoustic window/ balcony system.

Appendix 6-3

Detail and Parameters Correction of Proposed Acoustic Window (Baffle Type)

Acoustic Window / Acoustic Sliding Door									
Opening Type	**Referenced Project**	**Room Size, m2**	**Room Type**	**Outer Opening Area, m2**	**Inner Opening Area, m2**	**Gap Width, mm**	**Overlapping Length, mm**	**Relative Noise Reduction**	**With Absorption?**
PN1	Practice Note on Application of Innovative Noise Mitigation Designs in Planning Private Residential Development against Road Traffic Noise Impact	8.0	Habitable Room	0.52	0.50	100 to 175	100	6.0	-

NSR ID	**Acoustic Window/ Acoustic Sliding door**	**Room Size, m2**	**Max. Required Reduction Noise Level, dB(A)**	**Referenced Case**	**Room Size of Referenced Case, m2**	**Outer Opening Area, m2**	**Inner Opening Area, m2**	**Relative Noise Reduction of Referenced Case, dB(A)**	**Noise Level with Room Size Adjustment, dB(A) [1]**	**Corrected Noise Reduction Level, dB(A)**	**Adopted Noise Reduction Level, dB(A) [2]**
NAP_10	Acoustic Window	10.087	0.3	PN1	8.0	0.5	100 to 175	6.0	0.0	6.0	6.0

Note:

[1] The corrected noise reduction level is determined by the following equation, for room size in the proposed case smaller than the reference room size:

$= 10 \times \log(Room\ Size\ of\ Proposed\ Room, m^2\ / Room\ Size\ of\ Referenced\ Case, m^2)$

[2] The noise reduction level adopted in the assessment is based on the max. required noise reduction level of each NSR, i.e. the adopted noise reduction level would not larger than the max. required noise reduction level.

Appendix 6-4

Reference of Acoustic Systems Design

Design parameters for Acoustic Systems

a) Acoustic Window (Baffle Type)

Acoustic System Reference	Option	Parameters of Acoustic Window & Habitable Room					Sound Attenuation (dB(A))
		Room Area (sqm)	OOA (m2)	G (mm)	O (mm)	IOA (m2)	
i.) ProPECC PN 5/23 (PN1)	-	8	Not larger than 0.522	100-175	Not less than 100	Not larger than 0.5046	6

Note:

G – Gap Width, mm

O – Overlapping width, mm

OOA – Outer Opening Area, m^2

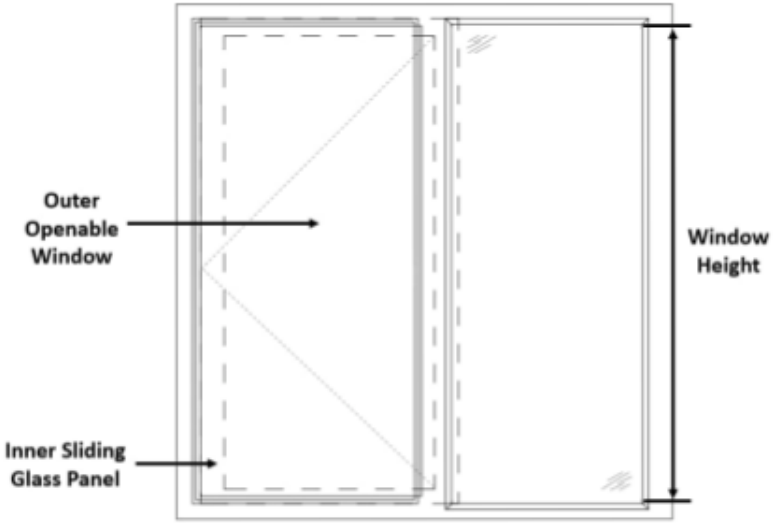
IOA – Outer Opening Area, m^2

[1] For cases where Room Area of the proposed room is smaller than the reference case, sound attenuation is determined by the following equation = 10 x log (Room Area of the proposed room m^2 / Room Area of reference case m^2)

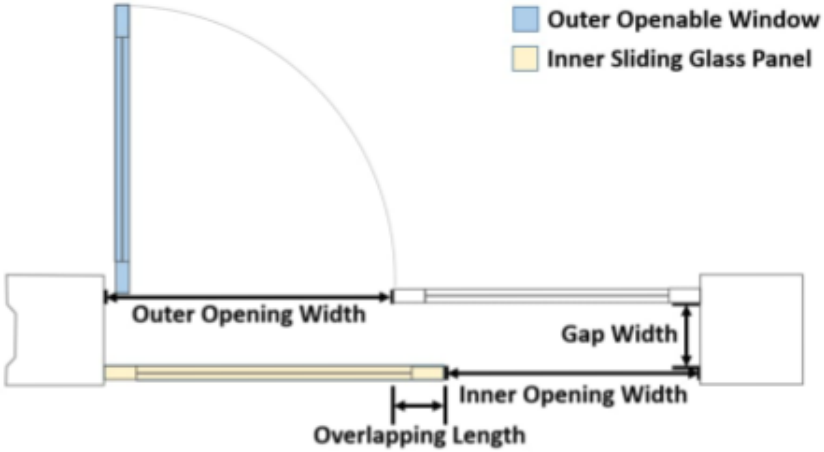
[2] Sound leakage shall be minimized in design (e.g. minimizing gap between floor/ceiling and the sliding panel, adding cover on two sides of sliding glass panel at the foot and top to block sound passage) and during the specimen assembly, installation and measurement.

ai.) Acoustic Window (Baffle Type) Ref: ProPECC PN 5/23 (PN1)

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



INTERNAL VIEW (NOT TO SCALE)



PLAN (NOT TO SCALE)

Possible Designs of "Acoustic Window (Baffle Type)" for 8m² and 18m² rooms					
Room Size (m^2)	Room Dimensions (mm^3)	Inner Window Opening (mm^2)	Outer Window Opening (mm^2)	Overlapping Length (mm)	Gap Width (mm)
8	3200 (W) x 2500 (D) x 3400 (H)	580 (W) x 870 (H)	600 (W) x 870 (H)	≥ 100	100 to 175
18	5300 (W) x 3390 (D) x 3400 (H)	750 (W) x 1500 (H)	750 (W) x 1500 (H)	≥ 100	100 to 175

Notes:

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

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

Appendix 6-5

Fixed Plant Noise Reference Catalogue

ECOFRIO v2

YLCA / YLHA 0040 to 0150

Technical features

T Three phases supply **P** Hydro Pack **H** Heat pump

Model			YLCA / YLHA						
			0040 T-TP	0050 T-TP	0060 T-TP	0080 T-TP	0100 T-TP	0120 T-TP	0150 T-TP
Performance	Cooling capacity c/o units (1)	kW	39.3	51.8	60.1	77	100.3	118.5	150.5
	Total Input Power (1) (3)	kW	13.69	18.3	20.03	27.11	34.47	40.44	54.14
	EER (1)		2.87	2.83	3	2.84	2.91	2.93	2.78
	ESEER (1)		3.15	3.18	3.3	3.15	3.74	3.83	3.66
	Cooling capacity h/p units (1)	kW	37.6	51.2	60.1	71.7	95.4	113.6	144.5
	Heating capacity h/p units (1)	kW	38.8	52.8	60	75.2	104.6	120	150.5
	Total Input Power cool/heat mode (1)	kW	13.48 / 12.81	17.65 / 18.21	20.03 / 20.2	26.46 / 26.86	36.14 / 37.76	43.69 / 40	51.06 / 53.94
	EER / COP (1)		2.79 / 3.03	2.93 / 2.9	3 / 2.97	2.71 / 2.8	2.64 / 2.77	2.6 / 3	2.83 / 2.79
	ESEER (1)		3.15	3.18	3.29	2.91	3.39	3.43	3.73
	Capacity steps	%	0 / 100		0-50-100			0-25-50-75-100	
	Sound power level STD / LN	dB(A)	78 / 73	81 / 76	87 / 77	83 / 79	82 / 78	82 / 78	84 / 80
Compressor	Type					Scroll			
	Quantity		1		2			4	
Air side heat exchanger	Fans quantity			2		3		4	
	Working ambient temp. cool. / heat. mode					-18°C ~ 46°C / -10°C ~ 20°C			
Water side heat exchanger	Type				Single Plate Heat Exchanger			Dual Plate Heat Exchanger	
	Unit water volume (2)	Litres	131	188	194	285	193	195	214
	Pump Type					Multistage horizontal pumps			
	Nominal water flow	l/h	6 820	8 960	10 400	13 350	17 600	20 470	25 970
	Available pressure (1) (2)	kPa	105	108	158	123	187	202	186
	Pressure drop (1) (3)	kPa	75	39	50	63	59	33	27
	Working range water leaving temperature cooling / heating (4)					-5°C ~ 15°C / 30°C ~ 50°C			
	Water connections (2)	inch	1 1/4"		2"			2 1/2"	
Dimensions & Weight	Height / Width / Depth	mm	1573/1500/822	1600 / 1011 / 2104		1600/1118/2944	2190 / 1101 / 3416		2263/1101/3770
	Weight without pack / pack c/o	kg	340 / 380	524 / 580	555 / 611	715 / 785	1 124 / 1 220	1 190 / 1 286	1 415 / 1 503
	Weight without pack / pack h/p	kg	337 / 397	537 / 593	568 / 624	735 / 805	1 154 / 1 250	1 220 / 1 316	1 445 / 1 703
Electrical features	Voltage / Phases / Frequency	V/ph/hz				400 / 3 / 50+N+E			
	Maximum Unit current	A	33	46.2	49.2	70.5	80	108	120

YLCA: Cooling only units models. YLHA: Air to water heat pump models.
(1) net values at Eurovent nominal conditions (2) version P with hydro kit with filter (3) version without hydro kit (4) below 6°C with glycol
Nominal conditions: Cooling capacities in kW given for 7°C water leaving temperature Δt 5°C and 35°C ambient temperature
Heating capacities in kW given for 45°C water leaving temperature and 7°C ambient temperature

Compatibility table / Codes

Model	0040 TP	0050 TP	0060 TP	0080 TP	0100 TP	0120 TP	0150 TP
YLCA Cooling only unit (Pack included)	S668554084	S668525182	S668526182	S668528182	S668521182	S668551156	S668551507
YLHA Heat pump unit (Pack included)	S668654084	S668625182	S668626182	S668628182	S668621182	S668651156	S668651506

Model	0040 T	0050 T	0060 T	0080 T	0100 T	0120 T	0150 T
YLCA Cooling only unit (without Pack)	S668554080	S668525180	S668526180	S668528180	S668521180	S668551154	S668551503
YLHA Heat pump unit (without Pack)	S668654080	S668625180	S668626180	S668628180	S668621180	S668651154	S668651504

Use this unit code when a factory fitted option is NOT required

Accessories (Supplied loose)

AVM mounting	S613029002	S613026080		S613028180	S613021580		
Mechanical flow switch	S611992021						
Water Filter *	S611300150	S611300170			S611300190		
Remote control	S613802011						
Remote terminal	S613802231				-		
Cable for remote connection of the terminal	-				S613802241		
B.M.S. Communication	S613802041				S613802051		

Model	0040 TP	0050 TP	0060 TP	0080 TP	0100 TP	0120 TP	0150 TP
YLCA Cooling only unit (Pack included)	S668000226	S668000247	S668000251	S668000255	S668000259	S668000107	S668000111
YLHA Heat pump unit (Pack included)	S668000228	S668000248	S668000252	S668000256	S668000260	S668000131	S668000135

Model	0040 T	0050 T	0060 T	0080 T	0100 T	0120 T	0150 T
YLCA Cooling only unit (without Pack)	S668000038	S668000245	S668000249	S668000253	S668000257	S668000105	S668000109
YLHA Heat pump unit (without Pack)	S668000039	S668000246	S668000250	S668000254	S668000258	S668000129	S668000133

Use this unit code when a factory fitted option is required

Options (Factory fitted)

Low Noise version	S613990550	S613990650		S613990850	S613991050	S613991285	S613991584
Softstart	S606744692	S606744693			S606744694		
Dual pumps **	-	S613990540	S613990640	S613990840	S613991040	S613991286	S613991585
Condenser protection grille	S613995090	S613995091		S613995092	S613995093		S613995094

** included with unit version "P" only for unit without pack. Filter size: 2" for YLCA 40-50-60-80 and 2 1/2" for YLHA 100-120-150.*
*** Dual pump option has to be ordered with units with hydrokit.*

Modular air cooled scroll chiller / heat pump

YCAE 065R/S to 0100R/S

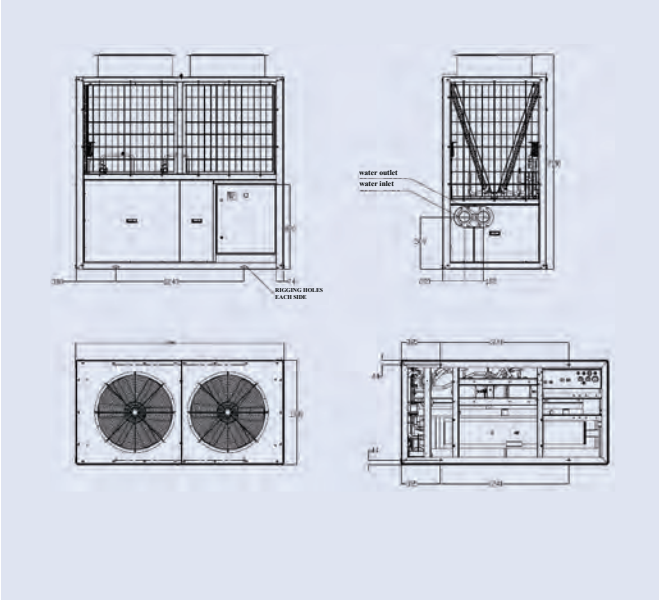
Technical features

Model			YCAE065SME53	YCAE065RME53	YCAE100SME53	YCAE100RME53
Cooling capacity		kW	64.1	64.1	99	99
Heating capacity		kW	-	70	-	103
EER / COP			3.05 / -	3.05 / 3.39	3.16 / -	3.16 / 3.2
ESEER			3.32	3.32	3.65	3.65
Refrigerant charge		kg	2 x 9	2 x 9	3 x 10.5	3 x 10.5
Sound power level		dB(A)	83	83	85	85
Capacity adjustment		%	0, 50, 100	0, 50, 100	0, 33, 66, 100	0, 33, 66, 100
Compressor	Type		Scroll	Scroll	Scroll	Scroll
	No.		2	2	3	3
Power input	Cooling	kW	21	21	31.3	31.3
	Heating	kW	-	20.8	-	33.9
Fan	Power input	kW	0.9 x 2	0.9 x 2	0.9 x 3	0.9 x 3
	Fan No.		2	2	3	3
	Air flow	m^3/h	13000 x 2	13000 x 2	13000 x 3	13000 x 3
Water-side heat exchanger	Water pressure drop	kPa	50	50	50	50
	Water pipe size	mm	114	114	89	89
	Pipe connection		Clamp	Clamp	Clamp	Clamp
	Water flow	m^3/h	11.1	11.1	17.2	17.2
Max. operating Current		A	49.3	49.3	74	74
Dimensions	Length	mm	2000	2000	2030	2030
	Width	mm	1000	1000	1930	1930
	Height	mm	2100	2100	2100	2100
Weight	Shipping weight	kg	800	840	1180	1240
	Operating weight	kg	880	920	1280	1350

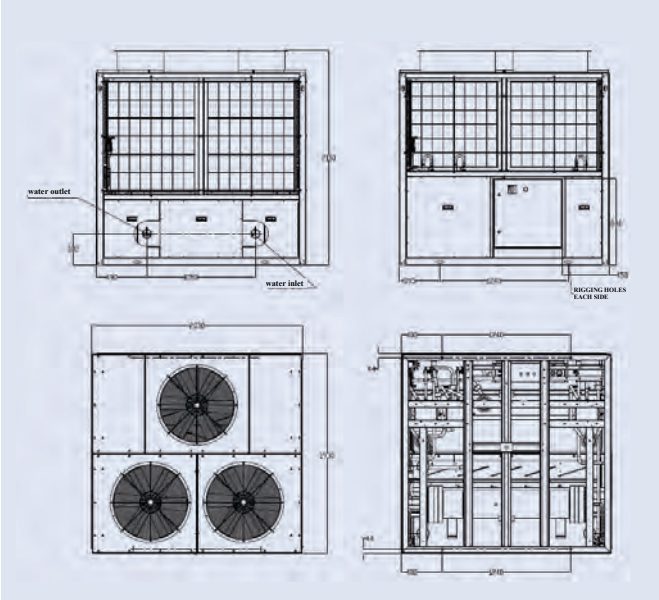
Nominal conditions: Cooling capacities in kW given for 7°C water leaving temperature Δt 5°C and 35°C ambient temperature
Heating capacities in kW given for 45°C water leaving temperature and 7°C ambient temperature

Dimensions and hydraulic connections

YCAE 065R/S



YCAE 100R/S



All dimensions in mm. Drawings not a scale.

Manufacturer reserves the rights to change specifications without prior notice.

Air-cooled scroll compressor chiller

YLAA 0180 to 0517

Nominal capacity

YLAA SE Standard	0180	0210	0241	0286	0320	0360	0400	0435	0485
Cooling capacity (kW)	190	205	218	272	310	349	388	423	473
EER	2.97	2.42	2.74	2.62	2.44	2.57	2.45	2.55	2.48
ESEER	3.97	3.43	3.6	3.84	3.63	3.84	3.71	3.75	3.74
ESEER with VSD	-	-	-	-	-	-	-	-	-
Sound power level dB(A)	89	89	86	90	94	94	95	96	96
Sound power level Low Noise Version dB(A)	82	83	84	87	87	87	87	89	89

YLAA HE High Efficiency	0195	0221	0261	0301	0350	0391	0442	0457	0517
Cooling capacity (kW)	198	212	248	295	344	380	426	455	519
EER	3.1	3.2	3.08	2.99	2.95	2.96	2.96	2.9	2.93
ESEER	4.25	4.15	4.08	3.98	3.92	4.12	4.1	3.98	4.16
ESEER with VSD	-	4.44	4.34	4.27	4.28	4.36	4.35	4.30	4.38
Sound power level dB(A)	89	91	90	93	94	95	95	96	96
Sound power level Low Noise Version dB(A)	82	84	87	86	87	88	88	89	89

At leaving chilled water temperature of 7°C, and ambient temperature of 35°C.

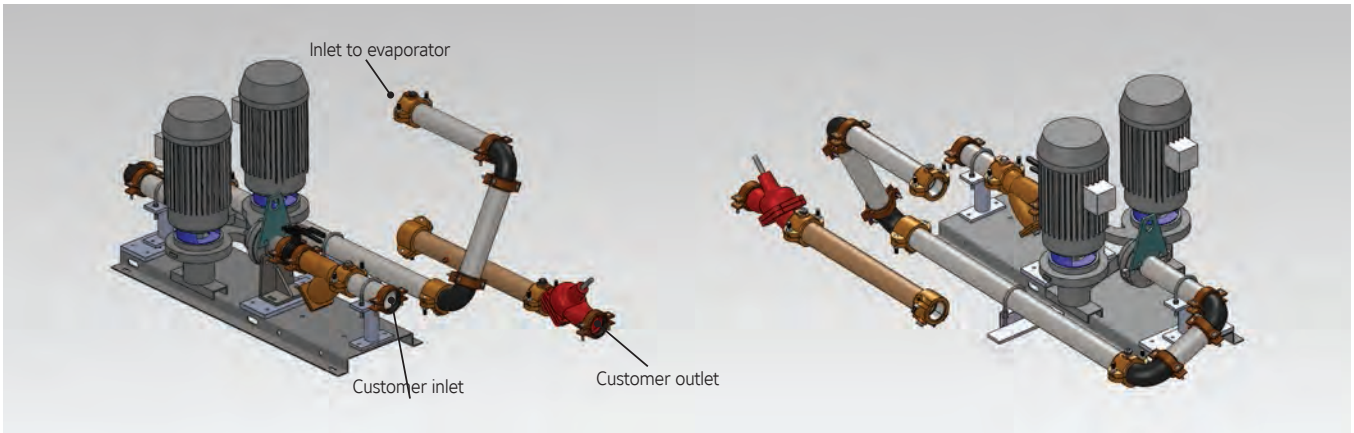
Technical data

YLAA SE Standard			0180	0210	0241	0286	0320	0360	0400	0435	0485
Dimensions	Length	mm	2911					3614			
	Width	mm	2242								
	Height	mm	2508								
Operating weight kg			1681	1725	1785	1853	1937	2814	2873	2642	2755

YLAA HE High Efficiency			0195	0221	0261	0301	0350	0391	0442	0457	0517
Dimensions	Length	mm	2911			3614			4769		
	Width	mm	2254								
	Height	mm	2507								
Operating weight kg			1706	1721	1851	2170	2339	2508	3343	3481	3615

YLAA Pump Kit

- Two option levels - basic and full featured - for maximum flexibility
- More impeller size options for better match to customer requirements
- New, smaller pump motors suitable for primary-secondary systems
- VSD option by SQ



GC-05, GC-06

SPECIFICATION FOR FT/LN(LOW NOISE TYPE)

SPECIFICATION FOR FT/LN(LOW NOISE TYPE)

ITEM	MODEL			FT/LN 8	FT/LN 10	FT/LN 15	FT/LN 20	FT/LN 25	FT/LN 30	FT/LN 40	FT/LN 50	FT/LN 60	FT/LN 80	FT/LN 100	FT/LN 125	FT/LN 150	FT/LN 175	FT/LN 200	FT/LN 225	FT/LN 250	FT/LN 300	FT/LN 350	FT/LN 400	FT/LN 500	FT/LN 600	FT/LN 700	FT/LN 800	FT/LN 1000
Capacity	27 ℃ WB	Circulating water flow rate	m^3/ hr	6.2	7.8	11.7	15.6	19.5	23.4	31.2	39.1	46.9	62.5	78.1	97.7	117.2	136.7	156.2	175.8	195.3	234.4	273.4	312.5	390.6	468.7	546.8	625.0	781.2
		Make-up water (Approx.)	m^3/ hr	0.1	0.1	0.2	0.2	0.3	0.3	0.4	0.6	0.7	0.9	1.1	1.4	1.7	2.0	2.2	2.5	2.8	3.4	3.9	4.5	5.6	6.7	7.8	8.9	11.2
	28 ℃ WB	Circulating water flow rate	m^3/ hr	5.6	7.1	10.6	14.4	17.8	21.5	28.7	36.3	42.5	58.8	70.6	88.2	107.5	125.0	142.5	160.0	176.2	212.5	250.0	287.5	337.5	431.2	512.4	575.0	718.7
		Make-up water (Approx.)	m^3/ hr	0.1	0.1	0.2	0.2	0.3	0.3	0.4	0.5	0.6	0.8	1.0	1.3	1.5	1.8	2.0	2.3	2.5	3.0	3.6	4.1	4.8	6.2	7.3	8.2	10.3
	Air flow rate (Approx.)		m^3/ min	70	85	140	160	230	280	330	420	450	700	830	950	1150	1200	1250	1600	1750	2000	2200	2450	2700	3500	3750	5000	5400
	Hot water temperature		ºC	37																								
	Cold water temperature		ºC	32																								
Overall Dimension	Diameter		mm	920	1160	1160	1490	1660	1660	1890	1890	2100	2100	2900	2900	2900	3310	3310	3960	3960	4360	4760	4760	5600	6600	6600	7600	7600
	Height （H）		mm	1755	1620	1870	1945	1885	2145	2220	2220	2340	2515	3060	3260	3260	3450	3600	3920	3920	3990	4195	4255	4590	5310	5510	5660	5860
	Height (w/o motor) (m)		mm	1530	1395	1645	1760	1720	1785	1860	1860	1980	2155	2590	2790	2790	2880	3030	3300	3300	3290	3495	3495	3830	4470	4670	4720	4940
Material	Air inlet mesh			PVC																								
	Basin			FRP																								
	Casing			FRP																								
	Eliminator			FRP																								
	Fan			ABS Plastic					Aluminium alloy															FRP				
	Filler			PVC																								
	Motor support			Steel (Hot-dip galvanized)																								
	Sprinkler head			ABS Plastic										Aluminium alloy														
	Sprinkler pipe			PVC pipe																								
	Stand pipe			PVC pipe																								
	Structure			Steel (Hot-dip galvanized)																								
	Splash mat			Nylon																								
Fan	TYPE			Axial-flow																								
	Diameter		mm	640		770		930			1200	1500		1800		2400				3000		3400		3700				
	Speed		rpm	750				600			500	440				375				314				257				
	Driven type			Direct driven								Belt driven												Gear driven				
Motor	TYPE			Totally enclosed fan cooled outdoor 3 phase induction motor																								
	Power source			380V / 3 / 50Hz																								
	Rated output		kw	0.2		0.37		1.1			1.5	3.7				5.5		7.5		11		15		22				
	No of pole		Pole	8				10			12	4																
Distribution System	TYPE			Automatic sprinkler system																								
	Inlet dia		mm	40	50		80				100	125		150						200			250			300	
	Outlet dia			15	20		40					65							100	75				100				
	No of outlet			4							6	4								6				8			10	
Piping	Inlet		mm	40	50		80				100	125		150						200			250			300	
	Outlet		mm	40	50		80				100	125		150						200			250			300	
	Drain		mm	25								50								80				100				
	Overflow		mm	25																80				100				
	Float valve		mm	15											25					32				50			80	
	Manual make-up		mm	15											25					32				50			80	
Weight	Dry weight		Kg	80	85	100	125	145	240	280	290	380	400	600	640	680	970	1000	1400	1450	1700	1920	2250	2650	4250	4350	5100	5300
	Operating weight		Kg	160	205	220	290	375	470	625	635	970	990	1700	1740	1780	2270	2300	2800	2850	3500	3920	4250	6350	9650	9750	12300	12500
Noise Level	Sound pressure level		dBA	40	41	42.5	43.5	44.5	46	47	48	48	49.5	52	52.5	53	54	54.5	55	55	56	57	58	60	62	62.5	65	66

SWL= 55+20*log(16)+8
= 87.08 dB(A)

GUARANTEE:

All components are guaranteed against defective material for a period of one (1) year.

When return to RYOWO with transportation prepaid , all parts found by factory inspection to be defective will be repaired replaced without charge , FOB HONG KONG.

No liability will be assumed for loss or damage resulting from misuse of products.

APPLICATION

For inquiry on RYOWO cooling towers , please contact local agents and specify the following conditions:

a). Circulating water flow
b). Inlet water temperature
c). outlet water temperature
d). ambient wet bulb temperature
e). power sources-voltage & frequency

4.2 - Physical data 30XA - Units with option 254 and 255***

30XA		252	302	352	402	452	502	602	702	752	802	852	902	1002	1102	1202	1302	1352	1402	1502	1702
Nominal cooling capacity*																					
Option 254	kW	271	295	322	387	438	493	600	659	708	766	809	870	967	1119	1218	1299	1399	1433	1484	1619
Option 255	kW	268	293	319	383	434	488	594	652	701	758	801	861	957	1108	1205	1286	1385	1419	1469	1603
Nominal power input*																					
Option 254‡	kW	88	99	104	124	145	160	198	212	236	258	270	303	327	370	413	453	513	479	497	539
Option 255‡	kW	90	101	106	127	148	163	202	217	241	263	277	310	335	378	422	464	527	489	509	552
Operating weight**	kg	4160	4190	4710	5190	5260	5830	6870	7030	7820	8140	8260	9010	9260	11470	11890	12250	12640	9180/ 4650	9340/ 4650	8270/ 8270
Refrigerant		R-134a																			
Circuit A	kg	60	64	70	85	85	102	102	100	129	112	130	129	140	102	112	112	112	140	140	130
Circuit B	kg	64	64	56	56	56	56	88	95	88	95	95	103	129	92	92	92	98	103	129	95
Circuit C	kg	-	-	-	-	-	-	-	-	-	-	-	-	-	135	135	135	122	135	135	130
Circuit D	kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	95
Compressors		06T semi-hermetic screw compressors, 50 r/s																			
Circuit A		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Circuit B		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Circuit C		-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1	1
Circuit D		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Minimum capacity	%	15	15	15	15	15	15	15	15	15	15	15	15	15	10	10	10	10	10	10	8
Control		PRO-DIALOG, electronic expansion valve (EXV)																			
Condensers		All aluminium micro-channel heat exchanger																			
Condenser fans		Axial Flying Bird 4 fans with rotating shroud																			
Quantity		6	6	7	8	8	9	11	12	13	13	14	15	16	19	20	20	20	24	24	28
Total air flow	l/s	20500	20500	20500	27333	27333	30750	37583	41000	41000	41000	47833	47833	54667	64917	68333	68333	68333	82000	82000	95667
Fan speed	r/s	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7
Evaporator		Flooded multi-pipe type																			
Water content	l	58	61	61	66	70	77	79	94	98	119	119	130	140	168	182	203	224	230	240	240
Maximum pressure****	kPa	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000

* Nominal conditions: evaporator entering/leaving water temperature = 12°C/7°C. Outdoor air temperature = 35°C, evaporator fouling factor = 0.000018 m^2 K/W
** Weights are guidelines only. Weight and diameters of connection modules 1 and 2 for sizes 1402 to 1702. The refrigerant charge is also given on the unit nameplate.
*** Option 254 = Units with copper/aluminium coils
Option 255 = Units with copper/aluminium coils without slots
**** Max. water-side operating pressure without hydronic module
‡ Data is not contractually binding and for information only. The values are rounded.

Notes:
Unit sizes 30XA 1402 to 1702 are supplied in two field-assembled modules.

Option 119 (high energy efficiency) can be used together with options 254 and 255. Contact your Carrier representative to obtain the performances.

4.3 - Sound levels

30XA		252	302	352	402	452	502	602	702	752	802	852	902	1002	1102	1202	1302	1352	1402	1502	1702
Standard unit																					
Sound power level*	dB(A)	89	89	89	92	93	93	94	93	95	95	94	96	95	96	96	96	97	97	97	97
Sound pressure level at 10 m**	dB(A)	57	57	57	60	61	61	62	61	63	63	62	63	63	63	63	63	64	64	64	64
Standard unit + option 257																					
Sound power level*	dB(A)	86	86	86	89	90	90	91	90	92	92	91	93	92	93	93	93	94	94	94	94
Sound pressure level at 10 m**	dB(A)	54	54	54	57	58	58	59	57	60	59	58	60	59	60	60	60	61	61	61	61
High energy efficiency version (option 119)																					
Sound power level*	dB(A)	94	94	94	95	95	95	96	96	98	98	98	99	98	99	100	99	100	101	100	101
Sound pressure level at 10 m**	dB(A)	62	62	62	62	62	62	63	64	65	66	65	66	65	66	67	66	67	68	67	67
Unit with options 119 + 257																					
Sound power level*	dB(A)	92	92	92	94	94	94	95	95	96	96	96	97	97	98	98	98	98	99	99	99
Sound pressure level at 10 m**	dB(A)	60	60	60	62	62	62	62	62	63	63	63	64	64	65	65	65	62	66	66	65

* 10^{-12} W - In accordance with ISO 9614-1 and certified by Eurovent
** Average sound pressure level, unit in a free field on a reflective surface

Appendix 6-6

Sample Barrier Calculation for the

Fixed Plant Noise Assessment

Barrier Effect

Source

	AP ID	AP Ident	AP CNL	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
				YHA-01	YHA-02	YHA-03	YHA-04	YHA-05	YHA-06	YHA-07	YHA-08	YHA-09	YHA-10	YHA-11	YHA-12	YHA-13	GC-01	GC-02	GC-03	GC-04	GC-05	GC-06	GC-07	GC-08	MSB-01	MSB-02	MSB-03	MSB-04	HFB-01	HFB-02	STF-01	STF-02	SKMCH-01	SKMCH-02	SKMCH-03	EH-01	EH-02	WP-01	WP-02
	1	NAP-01	50	0	0	0	0	0	0	0	0	0	0	0	0	0	10	10	10	10	10	10	10	10	10	10	10	10	10	10	0	0	10	10	10	10	10	10	10
	2	NAP-04	53	0	0	0	0	0	0	0	0	0	0	0	0	0	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	0	0	10	10
	3	NAP-10	53	0	0	0	0	0	0	0	0	0	0	0	0	0	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	0	0	10	10

Appendix 6-7

Sample Calculation for the Fixed Plant Noise Assessment

AP (R)	NAP-01	Ident	dB	YHA-01	YHA-02	YHA-03	YHA-04	YHA-05	YHA-06	YHA-07	YHA-08	YHA-09	YHA-10	YHA-11	YHA-12	YHA-13	GC-01	GC-02	GC-03	GC-04	GC-05	GC-06	GC-07	GC-08	MSB-01	MSB-02	MSB-03	MSB-04	HFB-01	HFB-02	STF-01	STF-02	SKMCH-01	SKMCH-02	SKMCH-03	EH-01	EH-02	WP-01	WP-02
x-coor	835083.69	CNL	dB	33.453218	33.434231	33.41521	33.381079	29.354256	29.311212	29.262036	32.670324	28.693508	28.7159	28.76025	28.771552	28.79057	30.58755	30.438983	30.354903	30.238541	22.191383	22.114125	29.912136	29.803931	33.473023	33.674907	33.465464	33.356572	29.800531	29.674179	32.4999778	44.0025499	28.775417	42.208517	42.219262	36.739522	36.534932	35.0524959	35.4382334
y-coor	821443.55	50.46564334																																					
Elevation	53.7																																						
		Source Point (Ln and Pt)																																						
		x-coor		834911.45	834914.07	834916.29	834918.52	834921.52	834924.77	834927.67	834908.9	834906.64	834904.1	834899.42	834896.81	834894.29	834790.04	834784.86	834781.93	834777.85	834772.54	834769.79	834765.96	834761.94	834871.84	834878.66	834871.64	834869.03	834833.11	834830.24	835226.899	835218.572	835136.49	835121.87	835117.57	834954.93	834951.65	835024.066	835026.091
		y-coor		821647.02	821649.97	821652.53	821655.65	821658.99	821663.07	821667.03	821677.33	821674.63	821671.71	821666.02	821663.33	821660.32	821438.5	821442.84	821445.33	821448.63	821439.72	821436.08	821445.59	821441.12	821448.22	821444.4	821439.68	821436.97	821306.15	821302.52	821323.701	821330.404	821510.49	821488.76	821491.95	821451.61	821448.02	821277.284	821284.721
		Elevation	mPD	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5	20.7	20.7	20.7	20.7	20.7	20.7	20.7	20.7	47	47	47	47	15	15	29	29	20.6	18	18	67.3	67.3	47	47
		SWL	dBA	87	87	87	87	83	83	83	87	83	83	83	83	83	95	95	95	95	87.1	87.1	95	95	95	95	95	94	94	83	94	83	94	94	94	94	95	95
		Impulse + intermittancy	dB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Façade	dB	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
		Tonality	dB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		S-R																																					
		Hor-Dist	m	266.58669	267.17411	267.76387	268.82534	269.66243	271.01116	272.56016	291.89819	291.11559	290.36172	288.87424	288.49639	287.86166	293.69609	298.82622	301.7682	305.88642	311.17327	313.98453	317.73378	321.75942	211.90044	207.02717	212.08512	214.76334	285.77704	290.04079	186.738937	176.051484	85.259859	59.181362	59.081548	129.0102	132.11879	176.629396	168.945676
		Vert Separation	m	22.2	22.2	22.2	22.2	22.2	22.2	22.2	22.2	22.2	22.2	22.2	22.2	22.2	33	33	33	33	33	33	33	33	6.7	6.7	6.7	6.7	38.7	38.7	24.7	24.7	33.1	35.7	35.7	13.6	13.6	6.7	6.7
		Slant Dist	m	267.50944	268.09484	268.68258	269.74043	270.5747	271.9189	273.46276	292.74117	291.96083	291.20915	289.72602	289.34928	288.71642	295.54423	300.64283	303.5672	307.66134	312.9182	315.71393	319.44289	323.44726	212.00634	207.13556	212.19093	214.86783	288.38552	292.61126	188.365391	177.775744	91.459573	69.115292	69.029844	129.72506	132.81692	176.756424	169.079477
		Dist. Attenuation	dB	56.546782	56.565769	56.58479	56.618921	56.645744	56.688788	56.737964	57.329676	57.306492	57.2841	57.23975	57.228448	57.20943	57.41245	57.561017	57.645097	57.761459	57.908617	57.985875	58.087864	58.196069	54.526977	54.325093	54.534536	54.643428	57.199469	57.325821	53.5000222	52.9974501	47.224583	44.791483	44.780738	50.260478	50.465068	52.9475041	52.5617666
		Barrier Effect																																					
		Barrier Reduction	dB	0	0	0	0	0	0	0	0	0	0	0	0	0	10	10	10	10	10	10	10	10	10	10	10	10	10	10	0	0	10	10	10	10	10	10	10

Remarks:

[1] CNL = SWL - DC + FC + BC + TC + IMC + INTC

CNL	Calculated Noise Level (dB(A))
SWL	Sound Power Level (dB(A))
DC	Distance Attenuation (dB(A))
FC	Façade Correction (dB(A))
BC	Barrier Correction (dB(A))
TC	Correction for Tonality (dB(A))
IMC	Correction for Impulsiveness (dB(A))
INTC	Correction for Intermittency (dB(A))

[2] Distance Attenuation for SWL = 20 log (distance) + 8

Appendix 6-8

Results for Fixed Plant Noise Impact Assessment

Scenario: Day, Evening, Night Time

ANL	65 dB(A) for Day and Evening and 55 dB(A) for Night																																							
AP ID	AP Ident	AP CNL	Source Individual CNL																																						
			YHA-01	YHA-02	YHA-03	YHA-04	YHA-05	YHA-06	YHA-07	YHA-08	YHA-09	YHA-10	YHA-11	YHA-12	YHA-13	GC-01	GC-02	GC-03	GC-04	GC-05	GC-06	GC-07	GC-08	MSB-01	MSB-02	MSB-03	MSB-04	HFB-01	HFB-02	STF-01	STF-02	SKMCH-01	SKMCH-02	SKMCH-03	EH-01	EH-02	WP-01	WP-02			
1	NAP-01	50	33	33	33	33	29	29	29	33	29	29	29	29	29	31	30	30	30	22	22	30	30	33	34	33	33	30	30	32	44	29	42	42	37	37	35	35			
2	NAP-04	53	34	34	34	34	30	30	30	33	29	29	29	29	29	31	31	31	31	23	22	30	30	34	34	34	34	30	30	22	33	29	42	42	48	47	35	35			
3	NAP-10	53	34	34	34	34	30	30	30	33	29	29	29	29	29	31	31	31	31	23	23	30	30	34	34	34	34	30	30	22	33	28	42	42	48	48	35	35			