ARUP

Paliburg Development Consultants Limited

Section 12A Application for Proposed Rezoning from “Commercial”, “Open Space” and an area shown as 'Road' to “Residential (Group A)13” and Amend the Notes of the Zone Applicable to the Site for Proposed Flat, Shop and Services, Eating Place and Social Welfare Facility (Child Care Centre) Uses at 16 Po Tai Street, Ma On Shan

Environmental Assessment Study

Reference: REP-01-004

Issue 05 | Nov 2026

This report takes into account the particular instructions and requirements of our client. It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

Job number 304537

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Executive Summary

This Environmental Assessment Study (EAS) was prepared in support of the Planning Application under Section 12A of the Town Planning Ordinance (TPO) for Proposed Composite Residential Re-development at 16 Po Tai Street, Ma On Shan. The total area of the Application Site (the Site) is about 5,090 m^2.

The Application Site is located to the east of Po Tai Street and to the west of Sai Sha Road. Road traffic noise assessment for existing NSRs has estimated that a total number of 113 flats will be exposed to noise levels in excess of the 70 dB(A) criterion under the base scenario (i.e. without mitigation). The maximum noise level is 71.6dB(A) and the overall noise compliance rate is 79.1%. Various forms of noise mitigation measures have therefore been investigated. In order to alleviate potential road traffic noise impact, fixed glazing, acoustic window (baffle type) and enhanced acoustic balcony (baffle type) are recommended to mitigate the affected residential units. With this mitigation measures in place, a 100% noise compliance rate could be achieved.

Tuen Ma Line (TML) is running on a viaduct along the Sai Sha Road to the east of the Application Site. Rail noise assessment indicates that the proposed residential development would comply with the relevant noise standards as stipulated in the HKPSG and hence adverse rail noise impact on planned noise sensitive receivers are not anticipated.

No major fixed noise sources are found within 300m from the proposed residential block. Potential fixed noise impact on the proposed residential development is not anticipated.

The current scheme has allowed for sufficient setback distances from the nearby roads to meet the minimum requirement as stipulated in HKPSG. No existing chimney is identified within 500m of the study area. Hence, no adverse air quality impact on the proposed development is anticipated.

A preliminary land contamination site appraisal through desktop research and site survey has been conducted. Results indicate that land contamination within the Application Site is not anticipated.

Waste management implications due to construction and operational phases are not anticipated provided good practices are in place.

Potential water pollution sources have been identified and mitigation measures have been recommended to mitigate any potential water quality impacts during the construction phase. With the implementation of good site practices and mitigation measures, adverse water quality impacts are not anticipated. Operational impacts associated with runoff and sewage from the development would be insignificant with proper management practices in place. The proposed development will be properly sewered and adverse water quality impact is not anticipated.

It is concluded that there are no adverse environmental impacts on the Application Site at 16 Po Tai Street, Ma On Shan for the Application under Section 12A of the TPO.

1. Introduction

1.1.1.1 This Environmental Assessment Study (EAS) was prepared in support of the Application under Section 12A of the Town Planning Ordinance (TPO) for Proposed Composite Residential Re-development at 16 Po Tai Street, Ma On Shan.

1.1.1.2 The Application Site is located to the east of Po Tai Street and to the west of Sai Sha Road, and has a total site area of about 5,090m^2. In accordance with the approved Ma On Shan Outline Zoning Plan (OZP) No. S/MOS/28 gazetted on 24 May 2024, the current land use zoning of the Application Site is "Commercial" ("C"), "Open Space" ("O") and an area shown as 'Road'.

1.1.1.3 This EAS is conducted to evaluate the potential environmental impacts on the proposed development with respect to the guidance for environmental considerations provided in Chapter 9 – Environment of the Hong Kong Planning Standards & Guidelines (HKPSG). The major potential environmental impacts on the Application Site include:

- traffic noise impact from the nearby road network;
- rail noise impact from nearby railway operations;
- fixed noise impact from nearby fixed noise sources; and
- air quality impact due to nearby road network and chimneys;

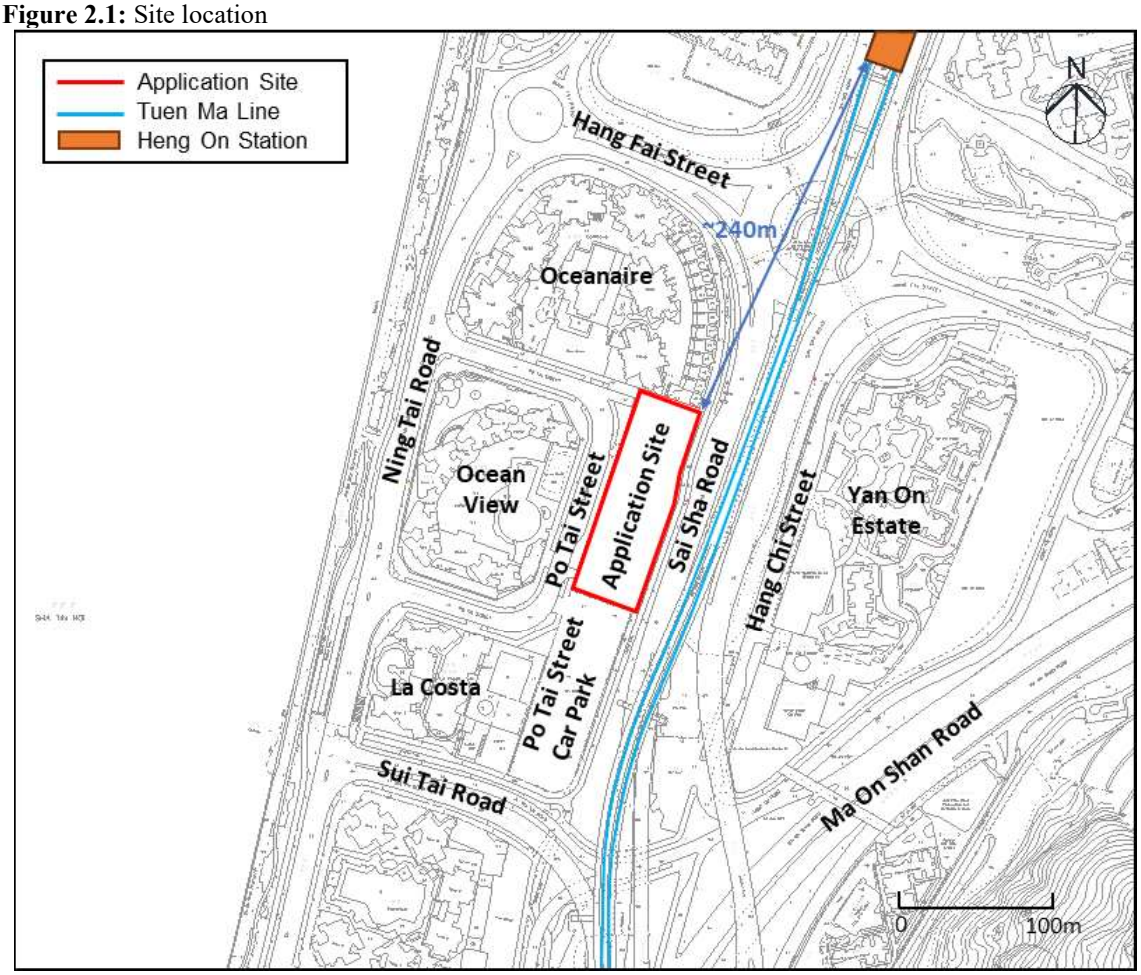
2. Site Location and Building Design

2.1 Site Location and Description

2.1.1.1 The Application Site is located in Ma On Shan and it is sandwiched by Po Tai Road to the west and Sai Sha Road to the east. It is situated in a urban setting predominated by high-rise residential neighbourhood including Oceanaire, Ocean View, La Costa and Yan On Estate. Immediate to the south of the Application Site is Po Tai Street Car Park. The Application Site is currently being occupied by We Go Mall.

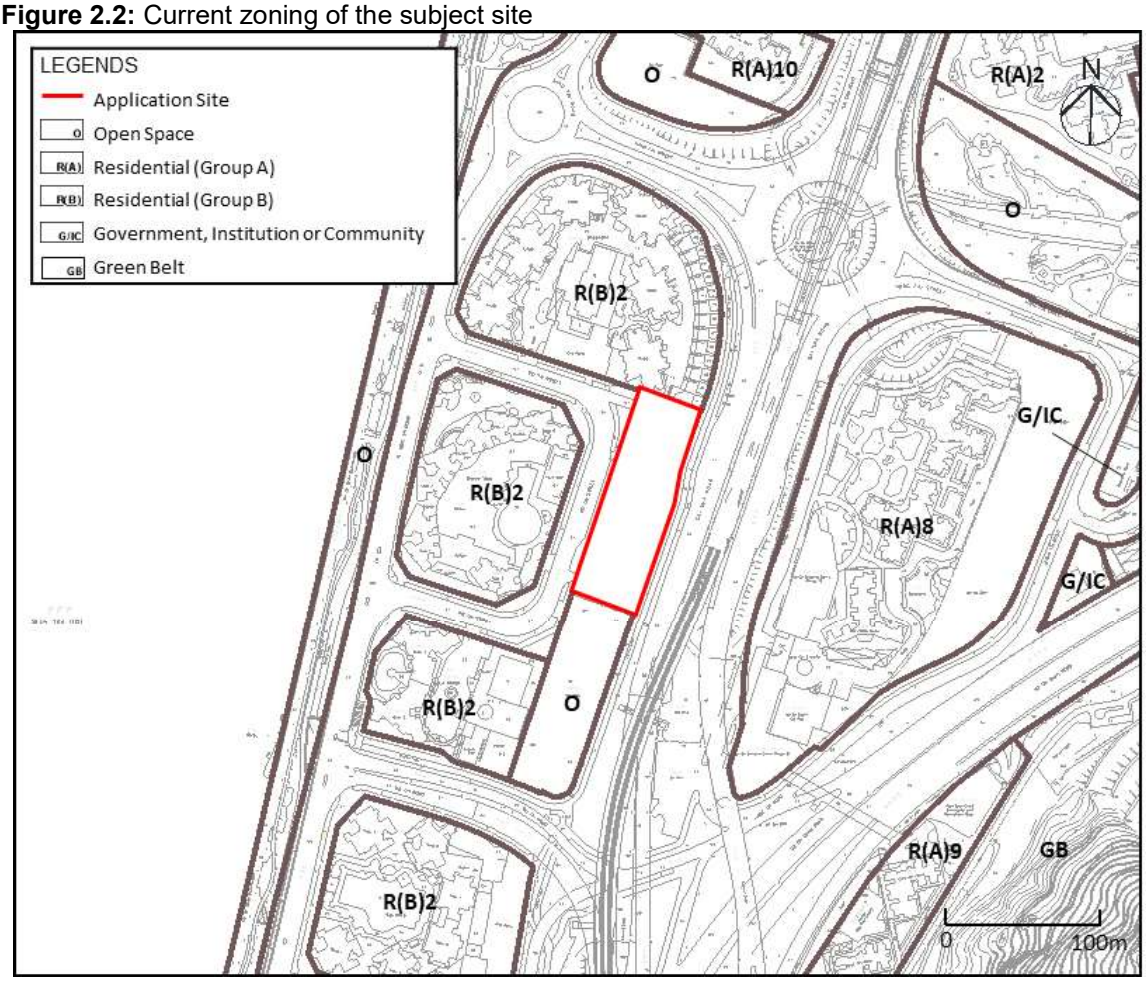
2.1.1.2 Tuen Ma Line (TML) is running on viaduct parallel with Sai Sha Road to the east of the Application Site. The MTR Hang On Station and Tai Shui Hang Station are located at approximately 240m to the northeast and 440m to the south of the Application Site respectively. The location of the Application Site is illustrated in **Figure 2.1**.

Figure 2.1: Site location



2.1.1.3 In accordance with the approved Ma On Shan Outline Zoning Plan (OZP) No. S/MOS/28 gazetted on 24 May 2024, the Application Site is currently zoned as "Commercial" ("C"), "Open Space" ("O") and an area shown as 'Road' (**Figure 2.2**). The areas in the vicinity are mainly zoned as "Residential (Group A)" ("R(A)"), "Residential (Group B)" ("R(B)"), "Open Space" ("O"), Government, Institution or Community ("G/IC") and Green Belt ("GB").

Figure 2.2: Current zoning of the subject site



2.2 Building and Site Design

2.2.1.1 The proposed development consists of two 21-storey residential blocks above a 5-storey podium with a total number of 540 residential flats. A social welfare facility of child care centre is planned on 2/F, while G/F, 1/F, 2/F and 5/F are planned for commercial and recreational uses[1]. The domestic floors are located from 6/F – 29/F[2]. A car park is planned in the basement and 3/F of the proposed development. The tentative population intake year of the whole development is Year 2035.

2.2.1.2 The latest indicative scheme, typical floor plans and schematic sections of the proposed development are illustrated in **Appendix 2.1**. The internal layout plans are yet to be available at this planning application stage.

2.2.1.3 The key development parameters for the Application Site are given in **Table 2.1**.

[1] 4/F is omitted.
[2] 13/F, 14/F and 24/F are omitted.

Table 2.1: Key domestic development parameters for the proposed development

Parameters	Block 1	Block 2
Total no. of residential storeys	21	21
No. of flats per residential storey	26 (6/F-12/F, 15/F-23/F, 25/F-26/F); 24 (27/F-29/F)	26 (6/F-12/F, 15/F-23/F, 25/F-26/F); 24 (27/F-29/F)
Floor to floor height (m)	3.15[1]	3.15[1]
First NSR level (mPD)	33.03[2]	33.03[2]
Main roof level (mPD)	97.98	97.98
Number of Flats per Block	270	270
Total number of flats	540	
Anticipated Total Population	1,458	
Tentative population intake year	2035	

Note:

[1] For modelling purpose, floor to floor height of 3.1m is adopted.

[2] For modelling purpose, first NSR levels of 33.0mPD is adopted.

2.3 EIAO Implication

2.3.1.1 The proposed Application Site is a residential development with site area less than 50ha, and hence it does not fall into any Schedule 3 of EIAO. Besides, all works of the proposed development will not encroach in an existing or gazetted proposed country park or special area, a conservation area, an existing or gazetted proposed marine park or marine reserve, a site of cultural heritage, and a site of special scientific interest. Therefore, the proposed works for the site do not fall into the category of Item Q.1 of Schedule 2 of EIAO and do not constitute a DP under the EIAO.

3. Site Inspection

3.1.1.1 Site visits were conducted in November 2024 and revisited in April 2026. Photographs taken on site and the neighbouring areas are given in **Photo 3.1** to **Photo 3.10** below.

3.1.1.2 The Application Site (**Photo 3.1**) is currently occupied by a commercial development – We Go Mall. It is bounded by Po Tai Street (**Photo 3.2**) to the west, Sai Sha Road (**Photo 3.3**) to the east, Oceanaire (**Photo 3.4**) to the north and Po Tai Street Car Park (**Photo 3.5**) to the south. Along Sai Sha Road, viaduct track of TML is observed (**Photo 3.6**). The Application Site is surrounded by high-rise residential developments (i.e. Oceanaire and Ocean View) (**Photo 3.4** and **Photo 3.7**) to the north and to the west respectively. Further to the east of the Application Site and on the opposite side of Sai Sha Road, Ma On Shan Road (**Photo 3.8**), high-rise residential developments such as Yan On Estate (**Photo 3.9**) and Kam Chun Court (**Photo 3.10**) are also observed.

3.1.1.3 Based on site observations, the noise climate in the vicinity of the Application Site was dominated by road traffic noise from Sai Sha Road and rail noise from TML. No other significant noise was perceived during the site visits.

Photo 3.1: Application Site



Photo 3.2: Po Tai Street

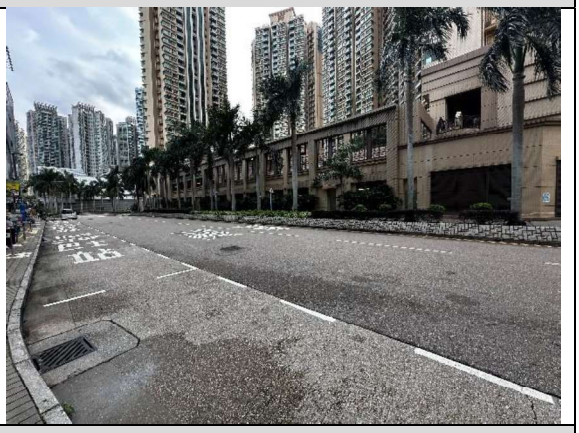


Photo 3.3: Sai Sha Road



Photo 3.4: Oceanaire



Photo 3.5: Po Tai Street Car Park	Photo 3.6: TML Viaduct Track
	
Photo 3.7: Ocean View	**Photo 3.8: Ma On Shan Road**
	
Photo 3.9: Yan On Estate	**Photo 3.10: Kam Chun Court**
	

4. Road Traffic Noise Impact Assessment

4.1 Concerned Road Sections and Noise Sensitive Receivers

4.1.1.1 As discussed in **Section 3**, the noise climate in the vicinity of the Application Site is currently dominated by road traffic noise from Sai Sha Road.

4.1.1.2 With reference to the HKPSG, Noise Sensitive Receivers (NSRs) shall include residential uses (all domestic premises including temporary housing accommodation), institutional uses (educational institutions including kindergarten, child care centres and all others where unaided voice communication is required), hotels, hostels, offices, places of public worship, courts of law, hospitals, clinics, convalescences, residential care homes for the elderly, amphitheatres, auditoria, libraries, performing arts centres and country parks. Based on the current development plan, the proposed residential block and the child care centre on 2/F within the Application Site are regarded as NSRs. Based on the current design of the non-domestic facilities, there is no planned openable window for ventilation for the child care centre on 2/F, therefore, it will not be included in the assessment.

4.2 Noise Criteria

4.2.1.1 In accordance with the HKPSG, the maximum permissible hourly road traffic noise levels at the external facades of different uses of NSRs for the proposed development are summarized in **Table 4.1**. These criteria apply to premises relying on opened windows as a primary means for ventilation.

Table 4.1: Summary of noise criteria for road traffic noise

Proposed/Developments Facilities	Noise Sensitive Room with Openable Windows for Ventilation [1]	Uses	Noise Standards for Road Traffic Noise, $L_{10(1\ hour)}$ dB(A)
Residential Block	Residential Units	Domestic	70

Note:

[1] The type of facilities and use of noise sensitive rooms are generally determined with respect to with reference to Table 4.1 of HKPSG, unless otherwise specified. All sensitive rooms which rely on opened windows for ventilation are identified.

4.3 Noise Assessment Points

4.3.1.1 Noise assessment points for the proposed residential block have been assigned to all openable windows of the NSRs for ventilation. The locations of the selected assessment points are illustrated in **Figures 4.1 – 4.2**.

Figure 4.1: Selected assessment points for residential block 1 (road traffic noise assessment)

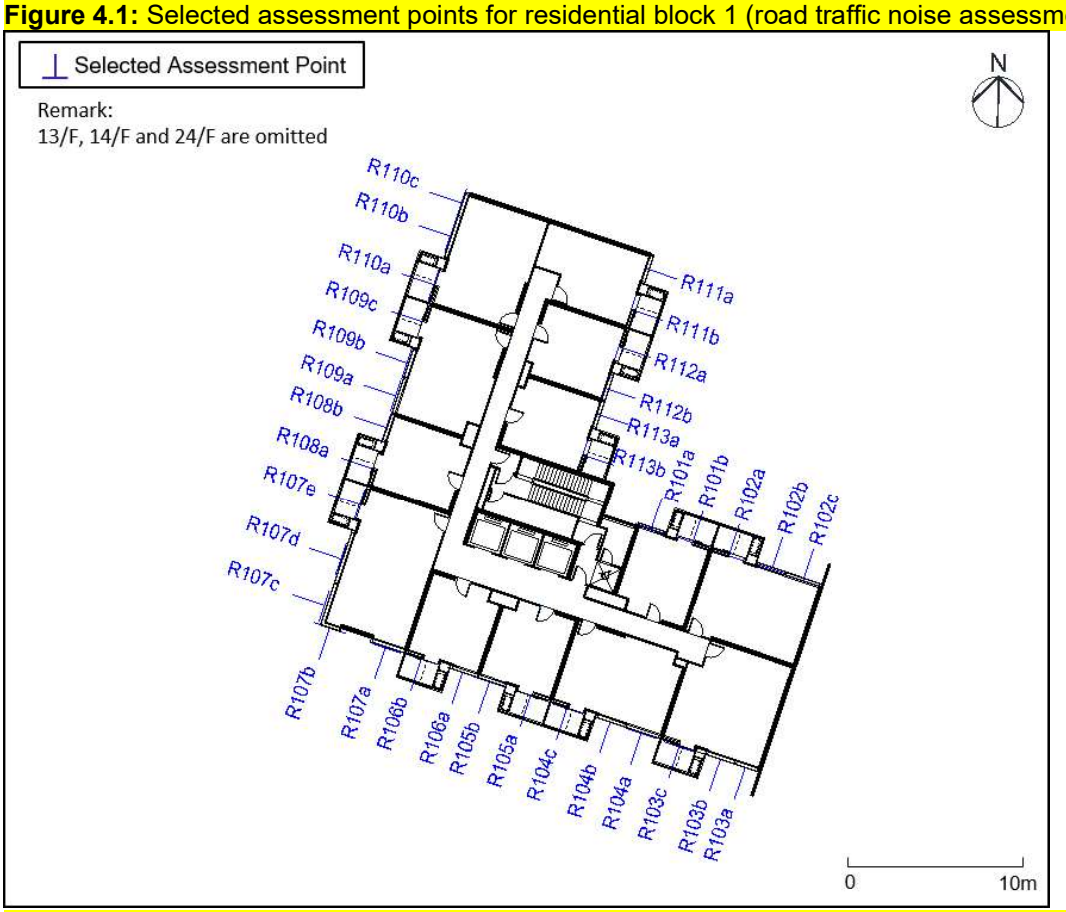
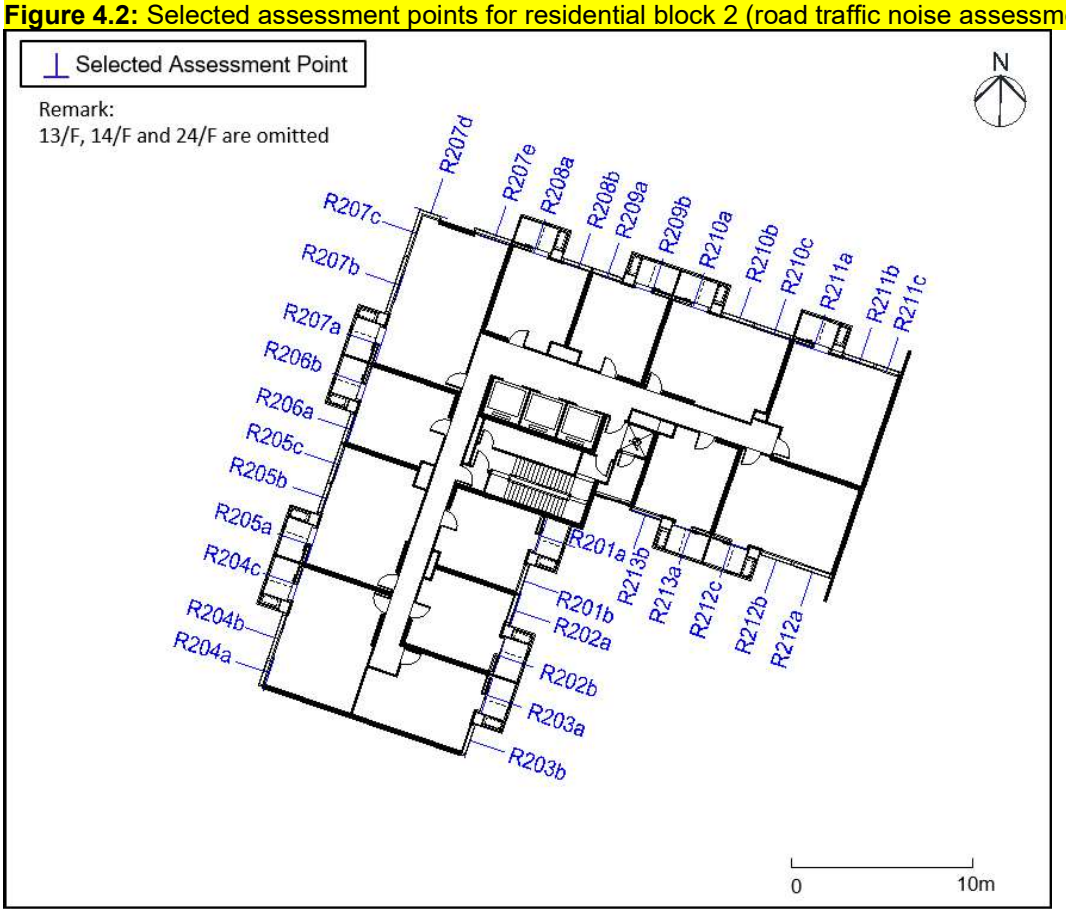


Figure 4.2: Selected assessment points for residential block 2 (road traffic noise assessment)



4.4 Assessment Methodology

4.4.1.1 Traffic noise levels at the facades of the selected assessment points have been predicted. The prediction is based on the maximum traffic projection within 15 years upon the population intake of the development and calculation method in accordance with the UK Department of the Transport "Calculation of Road Traffic Noise" (CRTN).

4.4.2 Existing Noise Mitigation Measures

4.4.2.1 As advised by Highways Department (HyD), low noise road surfacing (LNRS) is currently adopted on Ma On Shan Road which are within 300m of the subject site. The extent of the LNRS is illustrated in **Appendix 4.1**. Correspondence with HyD on the extent of LNRS is given in **Appendix 4.2**.

4.4.2.2 Based on desktop review, a number of roadside noise barriers, enclosures have been installed in the vicinity of the Application Site. The measures in vicinity of the Application Site are described below and illustrated in **Appendix 4.1**:

- Two cantilever noise barriers of about 100m and 190m in length respectively located at the southbound of Sai Sha Road;
- Two cantilever noise barriers of about 50m and 60m in length respectively along a section of Ma On Shan Road; and
- Vertical noise barrier of about 20m in length along a section of Ma On Shan Road.

4.4.2.3 In addition, cantilever barrier and LNRS have also been implemented according to the approved EIA report for Trunk Road T7 in Ma On Shan (EIA-137/BC) and described below and illustrated in **Appendix 4.1**:

- Cantilever noise barrier of about 240m in length along a section of Ma On Shan Road; and
- LNRS paved at all road sections of Trunk Road T7.

4.4.2.4 The existing at-source noise mitigation measures as described above have been incorporated into the base case scenario in the assessment.

4.5 Traffic Flow Data for Assessment

4.5.1.1 As advised by the Traffic Consultant, the maximum traffic flow within 15 years upon population intake of the residential development will occur in Year 2050. Traffic Impact Assessment (TIA) including the methodology on the traffic forecast for the EAS has been submitted to Transport Department (TD) for endorsement. The endorsement from TD is given in **Appendix 4.3**. The traffic consultant had checked and confirmed the validity of the traffic data, which is derived based on the traffic forecast methodology submitted to TD.

4.5.1.2 Traffic flow data for major roads surrounding the Application Site are presented in **Figure 4.3** and **Table 4.2** below. Details are given in **Appendix 4.3**.

Table 4.2: Predicted peak hourly traffic flow data on major roads

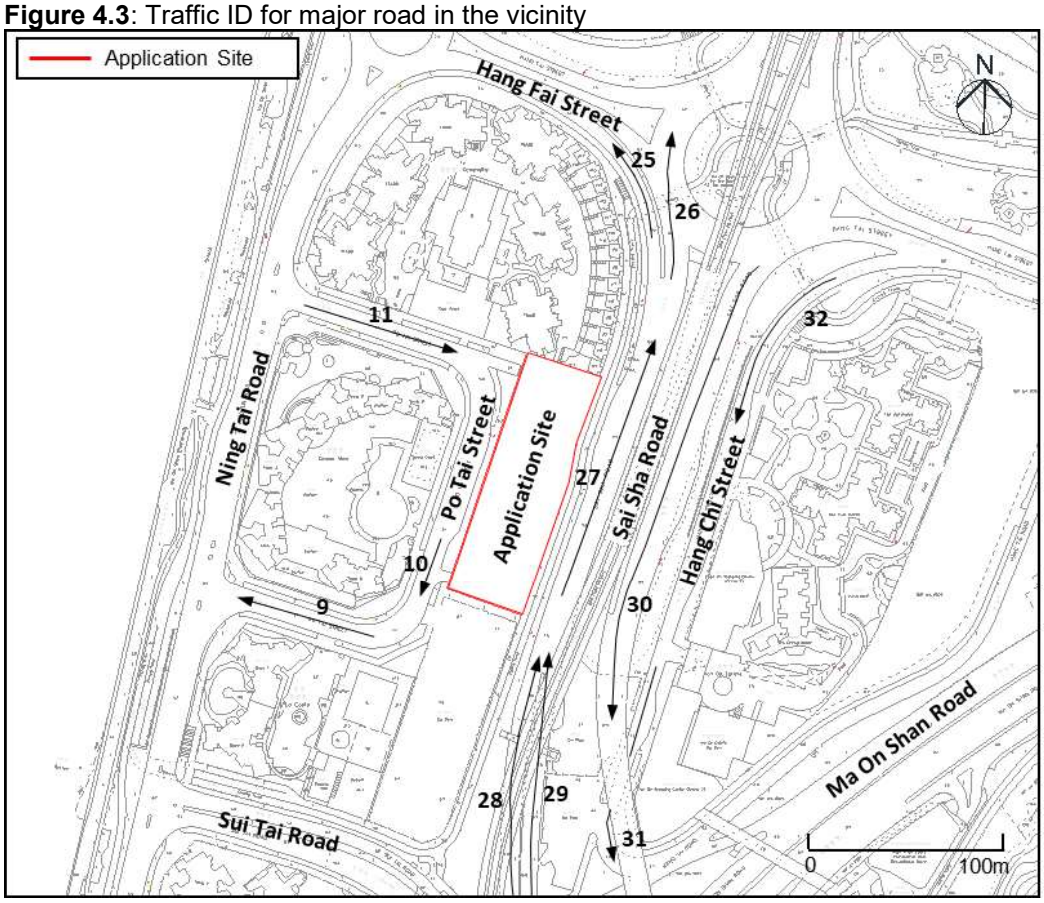
Road ID [1]	Road Description	Direction [2]	Speed Limit (km/hr)	Year 2050	
				Traffic Flow (veh/hr)	% of Heavy Vehicles
9	Po Tai Street	WB	50	300	24.6
10	Po Tai Street	SB	50	400	19.8
11	Po Tai Street	EB	50	450	18.4
25	Sai Sha Road Slip Road	WB	50	450	8.5
26	Sai Sha Road	NB	50	1300	17.2
27	Sai Sha Road	NB	50	1750	15.0
28	Sai Sha Road Slip Road	NB	50	1600	14.2
29	Sai Sha Road Slip Road	NB	50	200	20.9
30	Sai Sha Road	SB	70	1450	19.7
31	Hang Chi Street	SB	50	100	23.5
32	Hang Chi Street	SB	50	100	37.3

Note:

[1] Only the major roads are shown in the table above. Hence, the flow ID is not in sequential order.

[2] NB = North bound, SB= South bound, EB = East bound, WB = West bound.

Figure 4.3: Traffic ID for major road in the vicinity



4.6 Optimized Building Design

4.6.1.1 Optimized building design and orientation have already been incorporated into the current layout scheme for the base scenario, as described below:

4.6.2 Building Block Design, Layout and Orientation

4.6.2.1 Different block designs have been investigated. The current scheme is found to be the optimal option from the perspective of development efficiency, flat production, noise performance, scenery and angle of view, etc.

4.6.3 Podium

4.6.3.1 The residential block is situated on top of a podium of approximately 26m high for the current scheme, which can increase the separation between the residential units and the nearby roads to achieve larger noise reduction, in particular, for units on lower floors.

4.6.4 Building Setback

4.6.4.1 The Application Site is very narrow and has limited space available for building setback to reduce the noise impact effectively. Nonetheless, the building block has been deposited with optimised setback distance from Sai Sha Road as far as practicable to minimize the traffic noise impact.

4.7 Assessment Results

4.7.1.1 With the above optimised design, it is estimated that a total number of 113 flats will be exposed to the noise level in excess of the 70 dB(A) criterion and the overall compliance rate is 79.1%. Results of the road traffic noise assessments for the proposed residential development are summarised in **Table 4.3**. Details are presented in **Appendix 4.4**.

Table 4.3: Road noise assessment results (Base Case Scenario)

Scenario	Total No. of Flats	No. of Flats Exceeding the Noise Criteria	Max. Predicted Noise Levels, dB(A)	Compliance Rate
Base Case	540	113	71.6	79.1%

4.7.1.2 Results indicate that the predicted exceedances are located on the facades facing towards Sai Sha Road. The locations of exceedances are shown in **Figures 4.4 - 4.5** below.

Figure 4.4: Location of predicted exceedances in residential block 1

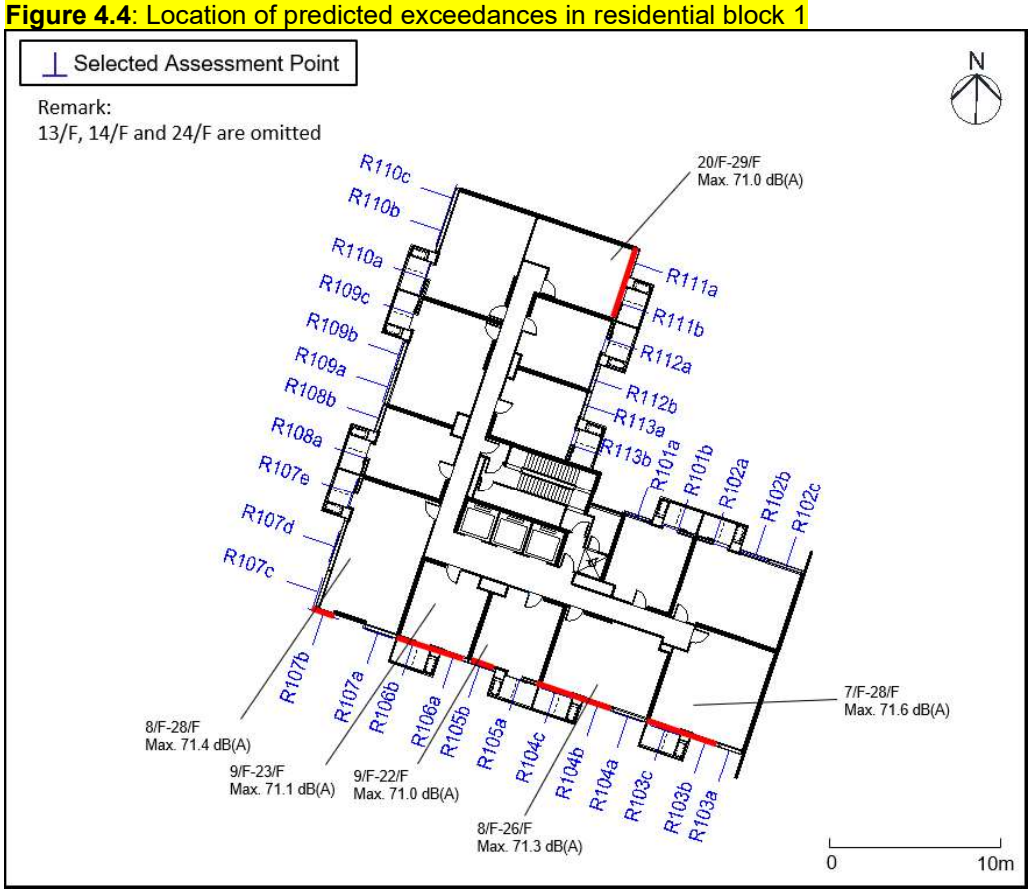
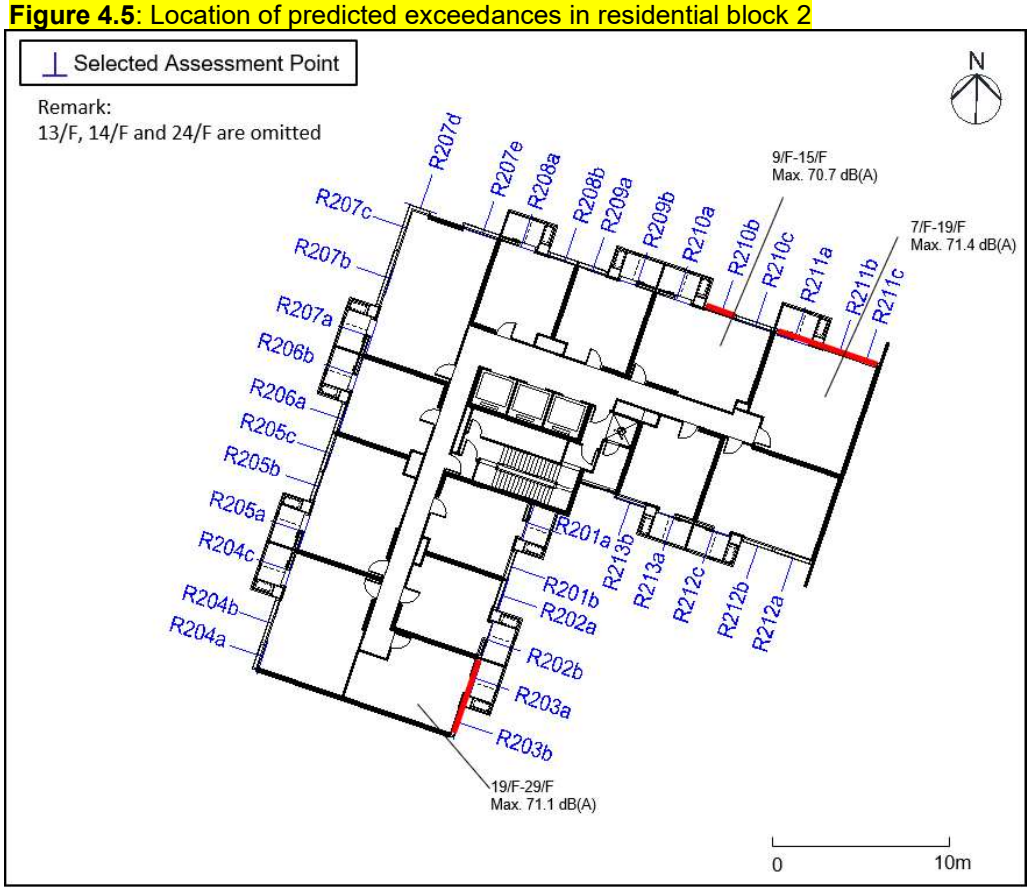


Figure 4.5: Location of predicted exceedances in residential block 2



4.8 Noise Mitigation Measures for Residential Block

4.8.1.1 Optimised building design has been adopted in the current scheme as described in the above sections. Other practicable noise mitigation measures have also been investigated and the findings are discussed as follows:

4.8.2 Acoustic Window Design (Baffle Design)

4.8.2.1 Based on the assessment results of base case scenario, acoustic window (baffle type) is proposed as mitigation measure. The acoustic window is designed with two layers of window including push open window at outer layer and sliding window at inner layer. The opening and gap between the two layers of window allows sufficient air flow to satisfy ventilation requirement; while at the same time, direct transmitted noise to the room is obstructed by inner slide window and hence noise reduction could be achieved. In order to achieve the intended noise reduction, the sliding window should be behind the opened side-hung window while the fixed glazing should be kept close. Special locking device (e.g. allen key) would be installed to the fixed glazing at the outer layer for keeping them in the above setting. The fixed glazing at the outer layer needs not to be opened for ventilation. The schematic and sectional drawing of the proposed acoustic window (baffle type) is extracted from EPD's Practice Note on Application of Innovative Noise Mitigation Designs in Planning Private Residential Developments against Road Traffic Noise Impact (PN 5/23) and shown in **Figure 4.6**. The locations of the proposed acoustic window (baffle type) are summarised in **Table 4.4** and indicated in **Figure 4.7** and **Figure 4.8**. On referencing to EPD's PN 5/23, noise attenuation by the acoustic window (baffle type) is taken as 6 dB(A) for this assessment considering the proposed acoustic window will be parallel to dominant line source (i.e. Sai Sha Road).

Figure 4.6: Schematic and sectional drawing of acoustic window

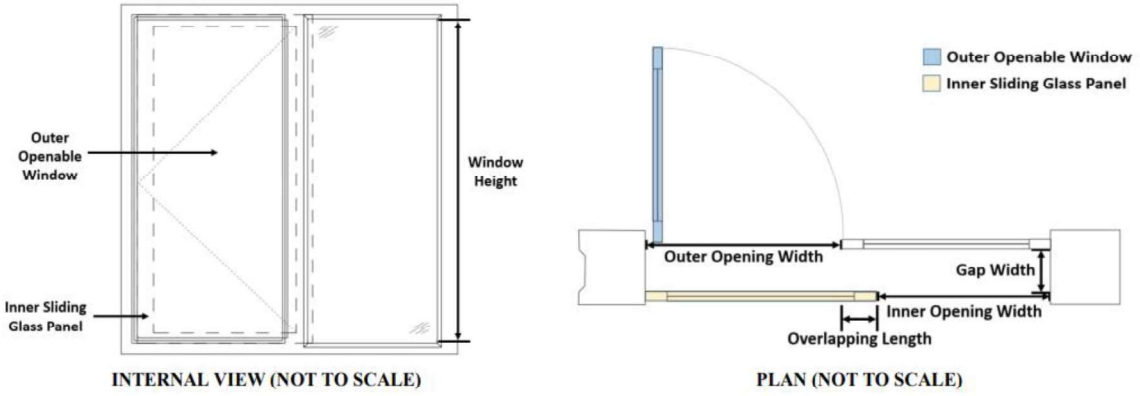


Table 4.4: Proposed locations of acoustic windows as mitigation measure for road traffic noise

Acoustic Window at NSR	Floor Requiring Acoustic Window
R103b	7/F – 21/F
R104b	8/F – 22/F
R105b	9/F – 22/F
R106a	9/F – 23/F
R111a	20/F – 29/F
R203b	19/F – 29/F
R210b	9/F – 15/F
R211b	7/F – 19/F
R211c	8/F – 12/F

Figure 4.7: Proposed locations of acoustic window for residential block 1

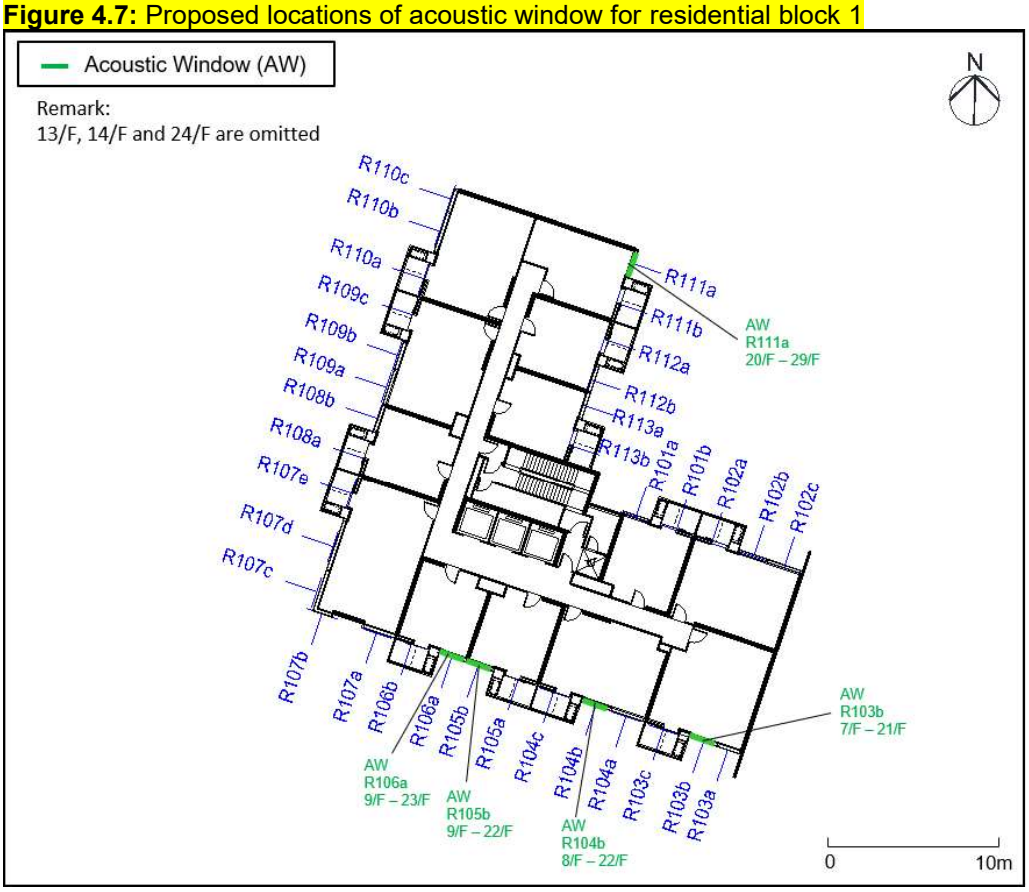
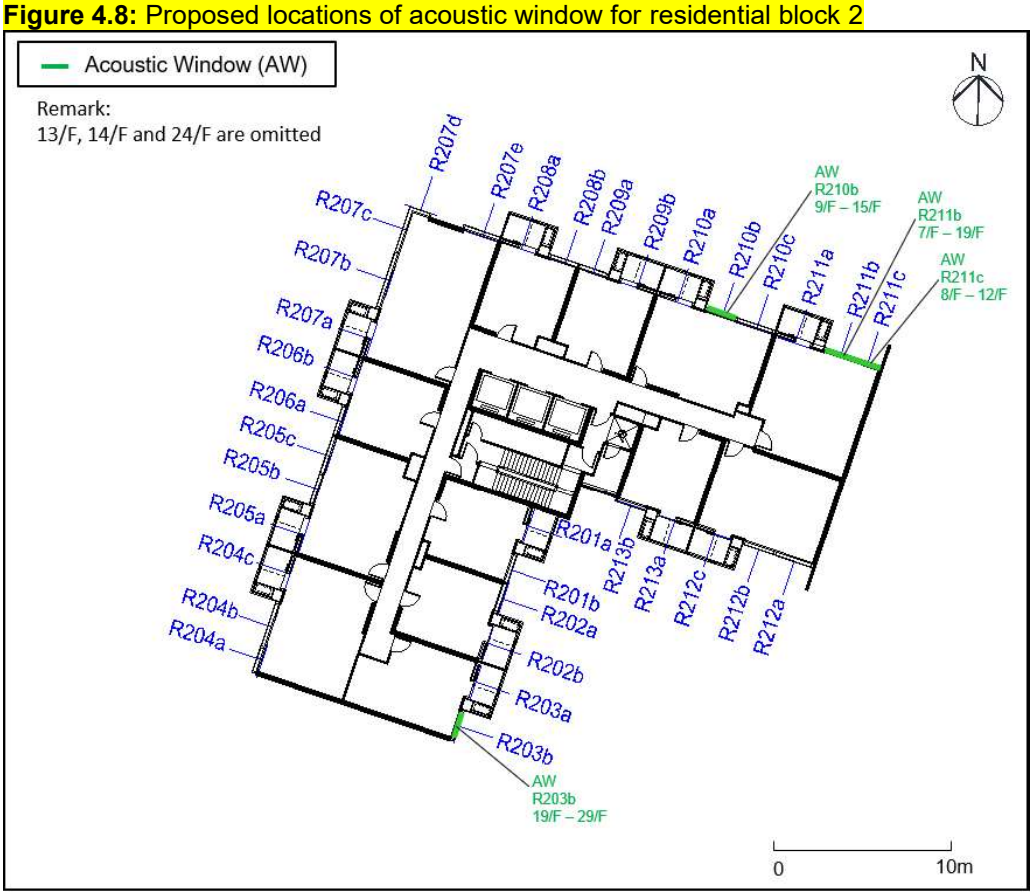


Figure 4.8: Proposed locations of acoustic window for residential block 2



4.8.2.2 According to the PN 5/23, while the noise attenuation of acoustic window (baffle type) would vary with room sizes and window opening size, the following ranges of variations would not affect the Relative Noise Reduction (RNR) of acoustic window (baffle type):

- Variations of room size within ±10%;
- Variations of floor-to-ceiling height within ±5%; and
- Variations of window opening size ±5%.

4.8.2.3 Should there be any variation on the room size, window opening size and configurations of acoustic window such as overlapping length or gap width, justifications with technical documents such as corrections, laboratory testing reports, in-situ measurement reports, etc. should be submitted to EPD for consideration. The principal and set-up of the laboratory and in-situ measurements should be agreed with EPD.

4.8.3 Enhanced Acoustic Balcony Design (Baffle Design)

4.8.3.1 In the base scenario, the noise screening effect from balcony was not considered. Based on the assessment results of base case scenario, enhanced acoustic balcony (baffle type) is also proposed as a mitigation measure for mitigating the traffic noise impact. Sound absorptive material will be applied on the ceiling and the inner side of the side wall. The enhanced balcony will be provided with an acoustic door. The acoustic door will have a similar design to that of an acoustic window, which has been commonly adopted as a mitigation measure for road traffic noise impact.

4.8.3.2 Acoustic door will consist of two layers of doors. The outer layer of door includes push open door/sliding door and fixed glazing window. The inner layer includes a sliding door. Absorptive material will be applied on the frame in between the two layers of doors. The opening and gap between the two layers of doors will allow sufficient air flow to satisfy ventilation requirement, whilst noise transmission to the room will be obstructed by the inner sliding door. The schematic and sectional drawing of the proposed enhanced acoustic balcony (baffle type) is extracted from EPD's PN 5/23 and shown in **Figure 4.9**. The locations of the proposed enhanced acoustic balconies are summarised in **Table 4.5** and indicated in **Figure 4.10** and **Figure 4.11**. On referencing to EPD's PN 5/23, noise attenuation by the Enhanced Acoustic Balcony (Baffle Type) is taken as 8 dB(A) for this assessment considering the proposed enhanced acoustic balcony will be parallel to dominant line source (i.e. Sai Sha Road).

Figure 4.9: Schematic and sectional drawing of enhanced acoustic balcony

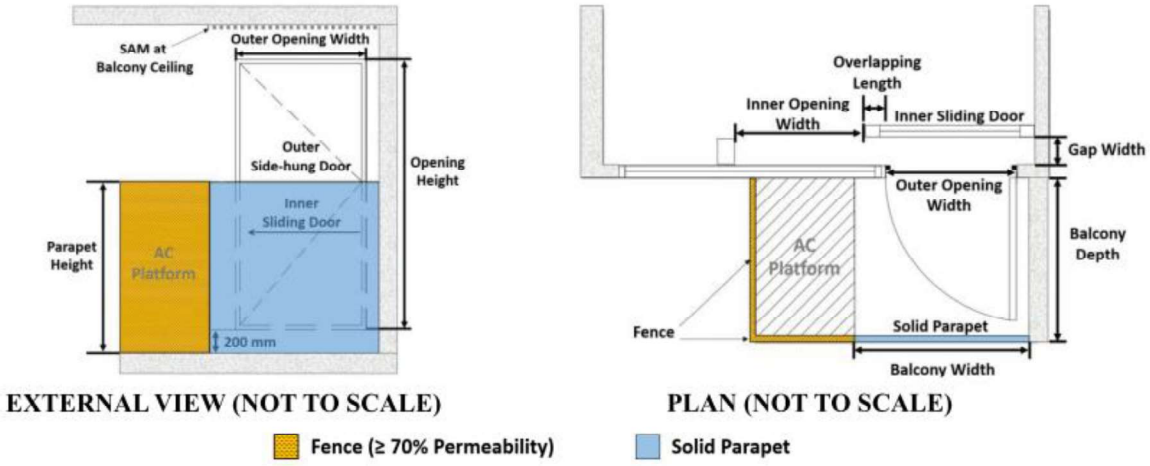


Table 4.5: Proposed locations of enhanced acoustic balcony as mitigation measure for road traffic noise

Enhanced Acoustic Balcony at NSR	Floors Requiring Enhanced Acoustic Balcony
R103c	7/F – 28/F
R104c	8/F – 26/F
R106b	9/F – 23/F
R111b	23/F – 29/F
R203a	21/F – 29/F
R211a	8/F – 18/F

Figure 4.10: Proposed locations of enhanced acoustic balcony for residential block

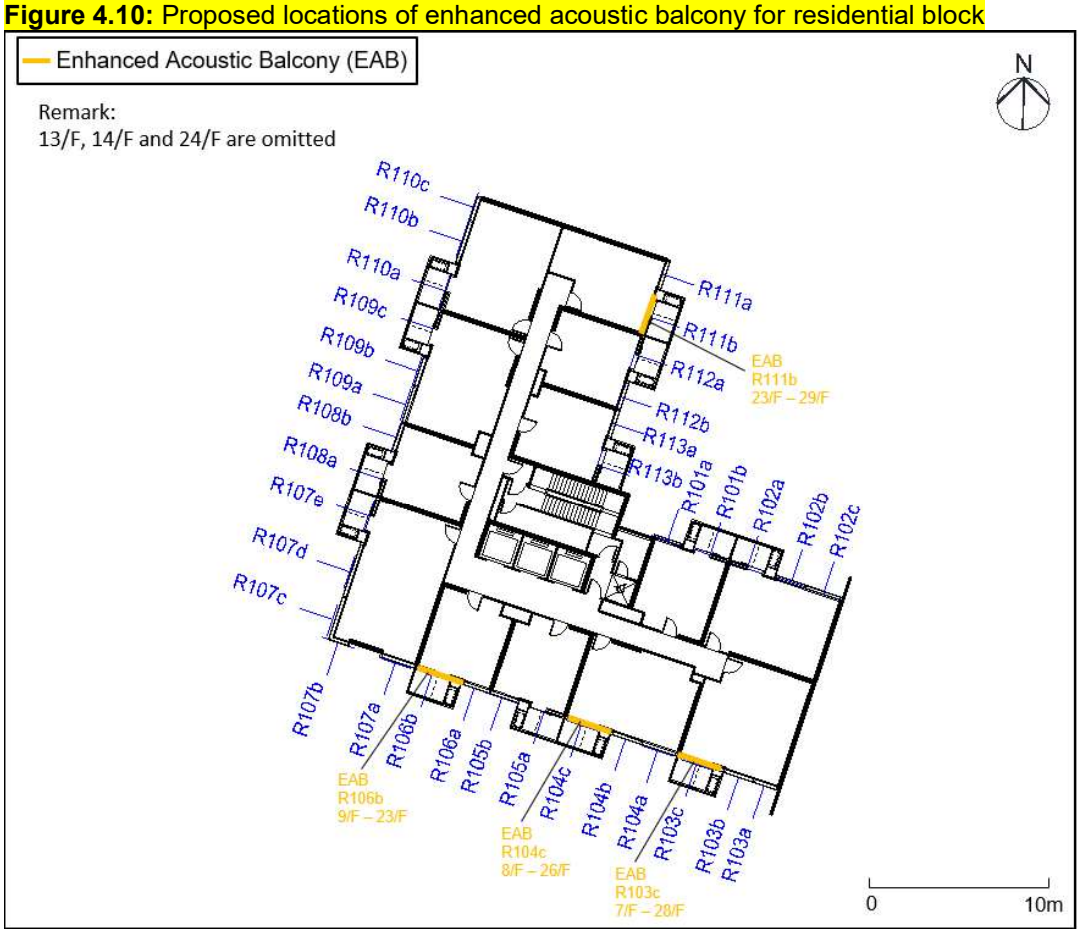
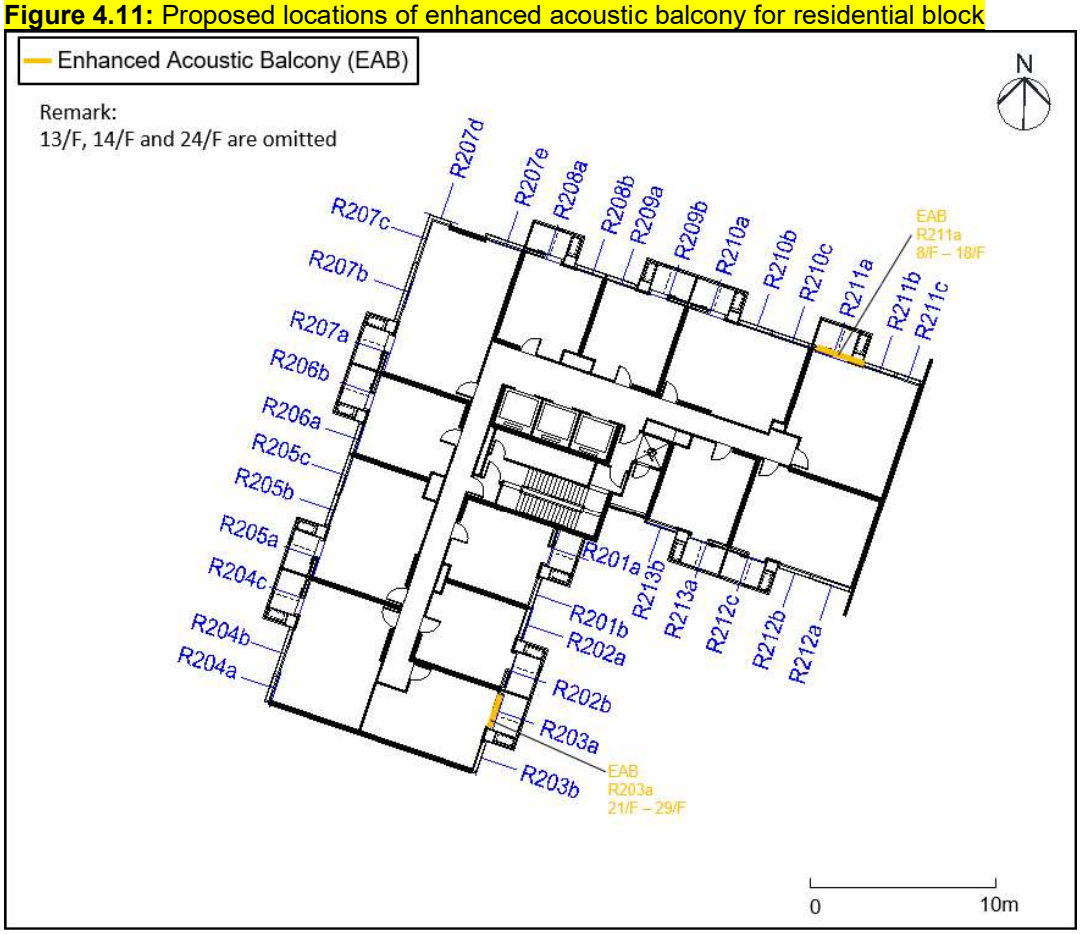


Figure 4.11: Proposed locations of enhanced acoustic balcony for residential block



4.8.3.3 Detailed design of the proposed enhanced acoustic balcony (baffle type) is not available at this stage yet and therefore, the design (i.e. opening size, overlapping length, gap width between panel, etc.) shall be referenced to EPD's PN 5/23 as far as practicable.

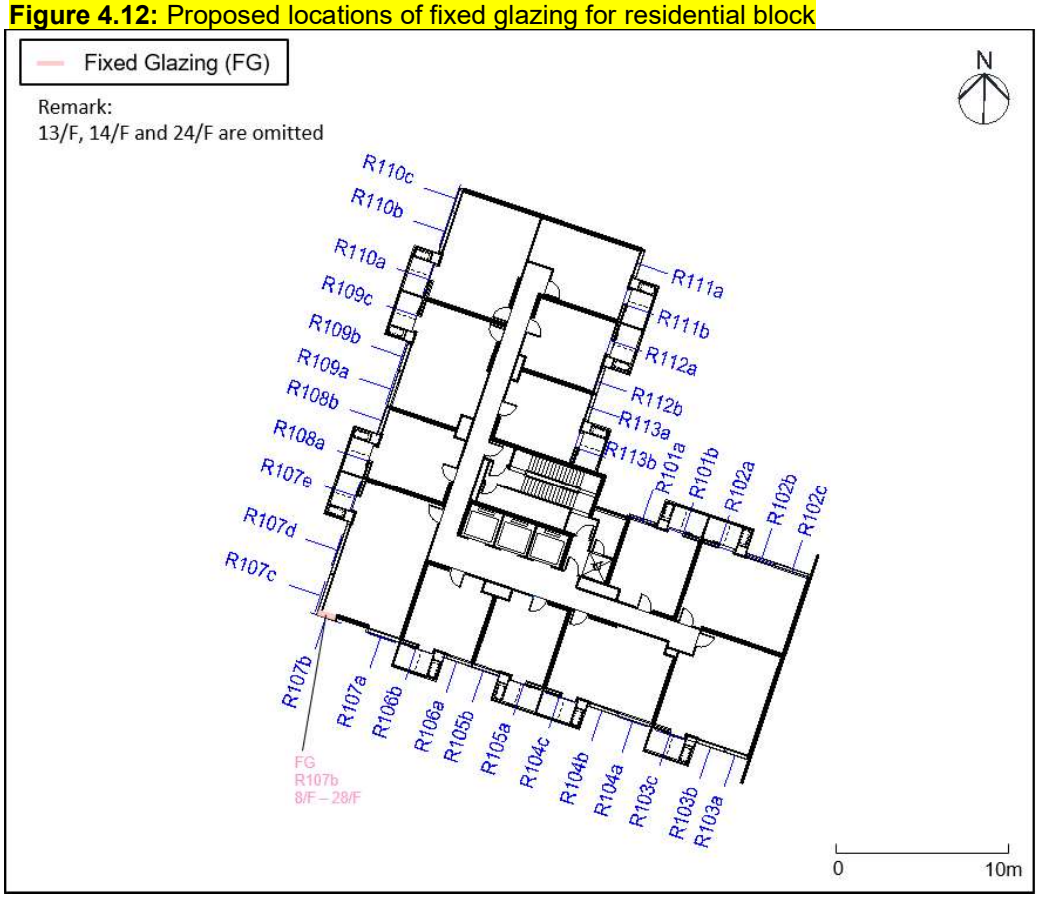
4.8.4 Conversion of Openable Window to Fixed Glazing at Side Window

4.8.4.1 It is proposed to convert the openable window to fixed glazing to mitigate the traffic noise impact. The proposed fixed glazing should be normally closed for noise reduction and need not to be opened for meeting the ventilation requirement. According to the HKPSG, 6mm window pane is considered sufficient for shielding off noise and appropriate for sound insulation purpose. Fixed glazing could only be open by Allen key for cleansing and maintenance purposes. The locations of the proposed fixed glazing are summarized in **Table 4.6** and illustrated in **Figure 4.12**.

Table 4.6: Proposed locations of fixed glazing as mitigation measure for road traffic noise

Fixed glazing at NSR	Floor Requiring Fixed glazing
R107b	8/F – 28/F

Figure 4.12: Proposed locations of fixed glazing for residential block



4.8.5 Assessment Results for Mitigated Scenario

4.8.5.1 With the provision of the fixed glazing, acoustic windows and enhanced acoustic balconies, all residential flats will comply with the criterion of 70 dB(A) and a compliance rate of 100% could be achieved. Therefore, adverse road traffic noise impact is not anticipated. Detailed results are attached in **Appendix 4.5**. A summary of combined mitigation measures recommended in the current scheme is also illustrated in **Figure 4.13** and **Figure 4.14**.

Figure 4.13: Location of proposed mitigation measures for road traffic noise for residential block

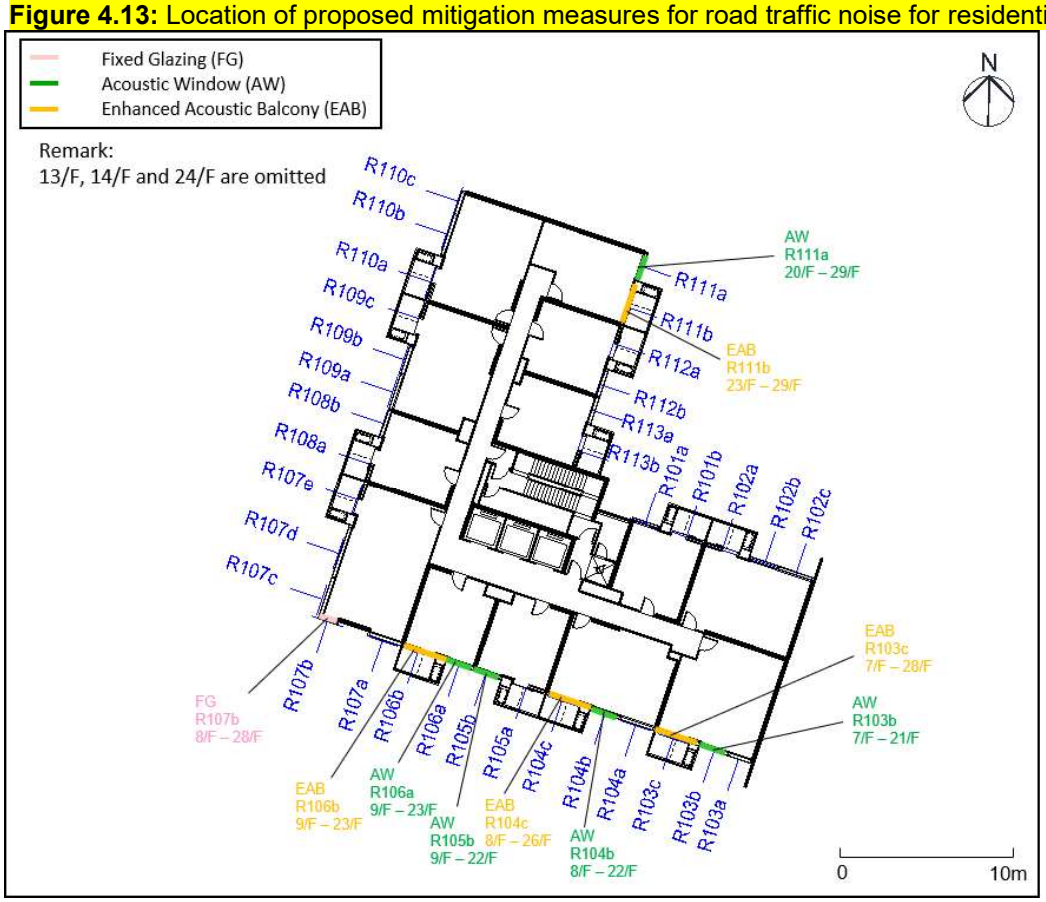
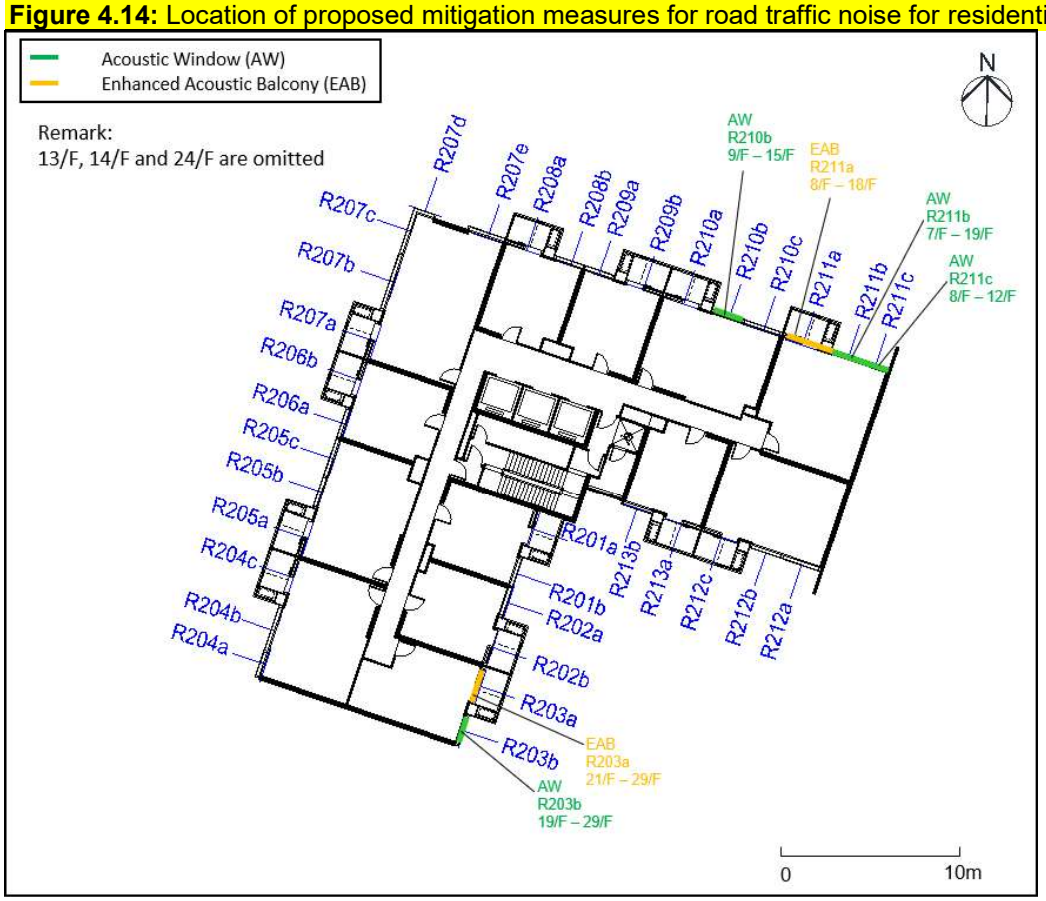


Figure 4.14: Location of proposed mitigation measures for road traffic noise for residential block

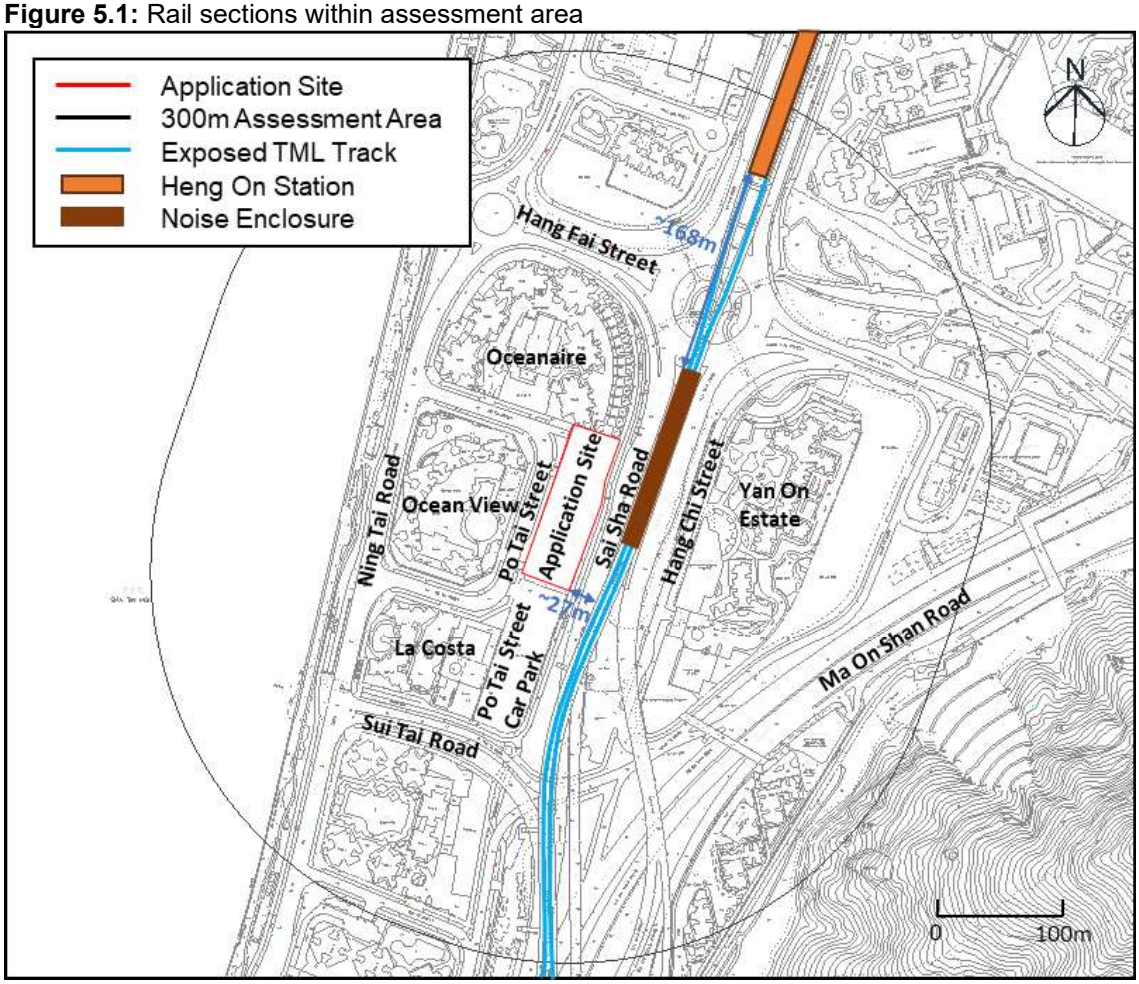


5. Rail Noise Assessment

5.1 Concerned Rail Sections

5.1.1.1 Tuen Ma Line (TML) is running on viaduct at approximately 27m from the Application Site along the Sai Sha Road (**Figure 5.1**), which complies with the minimum horizontal separation distance as recommended in the HKPSG. Heng On Station is located at approximately 168m from the Application Site. Part of the section of the viaduct track is fully enclosed by a noise enclosure as a noise mitigation measure to protect the nearby residential developments.

Figure 5.1: Rail sections within assessment area



5.2 Rail Noise Criteria

5.2.1.1 Noise planning standards for rail noise have been specified in Table 4.1 of the HKPSG Chapter 9, i.e. $L_{eq\ (24hour)}$ of 65 dB(A) and $L_{max\ (2300\text{-}0700\ hours)}$ of 85 dB(A). Besides, Acceptable Noise Levels (ANLs) are also stipulated in the Technical Memorandum for Assessment of Noise from Places other than Domestic Premises, Public Places or Construction Sites (IND-TM) issued under the Noise Control Ordinance as shown in **Table 5.1**. Rail noise impact is assessed according to the recommendation of the HKPSG, which include compliance with the relevant requirement of the NCO. These criteria apply to premises relying on opened windows as primary means for ventilation.

Table 5.1: Noise criteria for rail noise assessment

Area Sensitivity Rating	Time Period [1]	Acceptable Noise Levels, $L_{eq\ (30min)}$, dB(A) under IND-TM	Maximum A-weighted SPL, $L_{max\ (2300\text{-}0700hours)}$, dB(A) under HKPSG	24 hours Equivalent SPL, $L_{eq\ (24hour)}$, dB(A) under HKPSG
A	Daytime & Evening	60	85	65
	Night-time	50		
B	Daytime & Evening	65		
	Night-time	55		
C	Daytime & Evening	70		
	Night-time	60		

Note:

[1] Daytime: 0700 to 1900 hours, Evening: 1900 to 2300 hours, Night-time: 2300 to 0700 hours

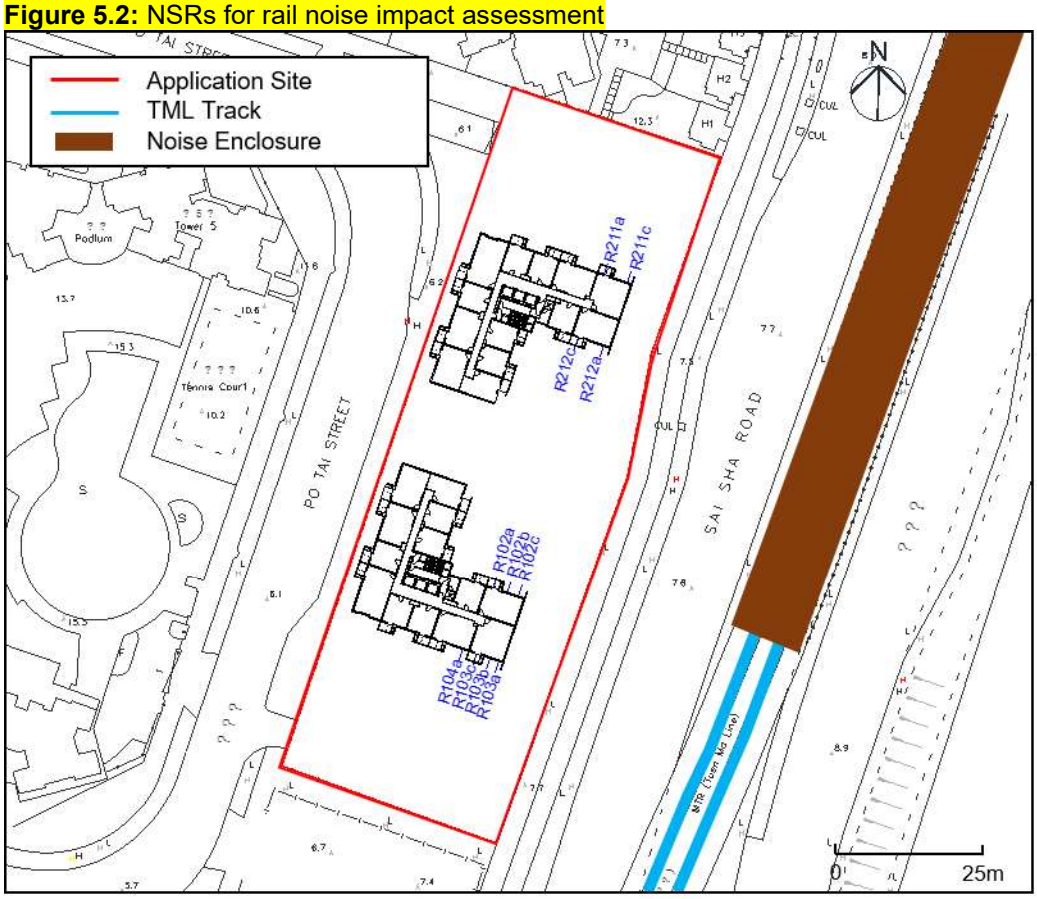
5.2.1.2 In consideration of the type of area within which the NSRs are located, the future context of the environs should also be taken into account. The Application Site is planned for high rise residential development. The site is surrounded by various high-rise residential developments to the north, to the west and to the east. The types of area (i) rural area, (ii) low density residential area consisting of low-rise or isolated high-rise developments; and (iii) urban area according to IND-TM cannot reflect the future environs of the subject site and are all not applicable. Thus, the whole site shall fall into type (iv) “Area other than those above" according to IND-TM.

5.2.1.3 Review of the Annual Traffic Census 2024 by Transport Department indicates that Ma On Shan Road had an Annual Average Daily Traffic (AADT) of 53,260, which is considered as an Influencing Factor (IF) under the IND-TM. The façades having line of sight to TML are also having a small view angle to Ma On Shan Road. These NSRs are at such a location that noise generated by the IF, whilst noticeable at the NSR, but is not dominant feature of the noise climate of the NSR. They are considered to be indirectly affected by the IF and hence an ASR of B is assigned. The Acceptable Noise Level (ANL) for ASR of “B” should be 65dB(A) for daytime & evening and 55dB(A) for night-time.

5.3 Representative Assessment Points

5.3.1.1 Representative NSRs of the proposed development have been selected for the assessment. Taking into account the development layout design, representative worst affected NSRs at the residential block with line of sight to the rail are selected for the assessment. The locations of the selected representative NSRs are illustrated in **Figure 5.2**. Furthermore, as discussed in **Section 4**, the proposed child care centre on 2/F will be operated with central air-conditioning system and will not rely on opened windows for ventilation. Hence, it will not be included in the assessment.

Figure 5.2: NSRs for rail noise impact assessment



5.4 Assessment Methodology

5.4.1.1 The assessment methodology generally follows the UK Department of the Transport "Calculation of Rail Noise" (CRN) and the assumptions adopted for the assessment are detailed in **Appendix 5.1**.

5.4.1.2 According to the Environmental Review Report (ERR) for FEP-05/039/2000F under the approved EIA report for East Rail Extension – Tai Wai to Ma On Shan (MOL) (AEIAR-028/1999) and as advised by the MTRC, the current peak train frequency for TML is 14 trains/30 mins/direction for daytime & evening time, and 8 trains/30 mins/direction for night-time. The 8-cars train is currently in operation for TML. The correspondence with MTRC is given in **Appendix 5.2**.

5.4.1.3 Based on the ERR, rail noise of MOL comprises of rolling noise, air-conditioning noise and viaduct re-radiated noise. Sound Exposure Level (SEL) of rolling noise of 8-cars train at 130 kph at 25m for viaduct section is 81.4 dB(A). The maximum rail noise level L_{max} of air-conditioning noise of 8-cars train at 130 kph at 25m at viaduct for running trains is 48.8 dB(A). The Sound Pressure Levels $L_{eq(30min)}$ of viaduct re-radiated noise of 8-cars train at 130 kph at 25m for typical viaduct with plain track is 40.6 dB(A). The noise source term for air-conditioning noise and viaduct re-radiated noise of MOL are converted to SEL and combined with SEL of rolling noise, and the combined SEL at 130 kph at 25m is adopted for the assessment.

5.4.1.4 Sound Pressure Levels ($L_{eq(30min)}$) at receivers are predicted based on the combined SEL, with the corrections for speed, rail deterioration, distance, angle of view, time, train frequency, air absorption, gap size and façade effect applied. The predicted L_{max} at the selected receivers are determined by converting the combined SEL to L_{max}, with distance attenuation, speed, rail deterioration, air absorption, gap size and façade effect taken into account.

5.5 Assessment Results

5.5.1.1 The predicted rail noise levels ($L_{eq\ (30min)}$) at the selected representative worst affected NSRs have been assessed and the results are summarised in **Table 5.2** for daytime & evening (from 0700 to 2300 hours) and **Table 5.3** for night-time (from 2300 to 0700 hours). Detailed calculations are given in **Appendix 5.3**. Results indicate that the predicted noise levels at the representative worst affected NSRs would comply both the daytime & evening and night-time noise criteria.

Table 5.2: Daytime & evening rail noise impact assessment results – residential block

Representative NSR ID	Proposed ASR	Predicted Noise Level, $L_{eq\ (30min)}$ dB(A) [1]	Daytime & Evening Noise Criterion, dB(A)	Comply [Y/N]
R102a	B	48	65	Y
R102b		46		Y
R102c		<40		Y
R103a		54		Y
R103b		57		Y
R103c		58		Y
R104a		55		Y
R211a		42		Y
R211c		41		Y
R212a		51		Y
R212c		52		Y

Note:

[1] Only the predicted noise levels for the worst floor are presented. Details shall be referred to **Appendix 5.3**.

Table 5.3: Night-time rail noise impact assessment results – residential block

Representative NSR ID	Proposed ASR	Predicted Noise Level, $L_{eq\ (30min)}$ dB(A) [1]	Night-time Noise Criterion, dB(A)	Comply [Y/N]
R102a	B	46	55	Y
R102b		44		Y
R102c		<40		Y
R103a		52		Y
R103b		55		Y
R103c		55		Y
R104a		52		Y
R211a		<40		Y
R211c		<40		Y
R212a		49		Y
R212c		49		Y

Note:

[1] Only the predicted noise levels for the worst floor are presented. Details shall be referred to **Appendix 5.3**.

5.5.1.2 According to MTRC's train schedule, the first and last TML train operating from the nearest Heng On Station are from 0543 to 0120 hours. The predicted $L_{eq\ (24hour)}$ is therefore calculated based on the assumptions of 16 hours (i.e. 0700 to 2300 hours) with daytime & evening $L_{eq\ (30min)}$, 4 hours (i.e. 0530 to 0700 and 2300 to 0130 hours) with night-time $L_{eq\ (30min)}$ and 4 non-service hours (i.e. 0130 to 0530 hours). The predicted $L_{eq\ (24hour)}$ at the representative worst affected NSRs are summarised in **Table 5.4** below and detailed calculations are given in **Appendix 5.4**. Results indicate that the predicted $L_{eq\ (24hour)}$ at the representative worst affected NSRs would comply with the noise criterion of 65dB(A).

Table 5.4: Predicted $L_{eq\ (24\ hour)}$ at the representative NSRs – residential block

Representative NSR ID	Predicted $L_{eq\ (24hour)}$, dB(A) [1][2]	$L_{eq\ (24hour)}$ Criterion, dB(A)	Comply [Y/N]
R102a	47	65	Y
R102b	45		Y
R102c	<40		Y
R103a	53		Y
R103b	56		Y
R103c	56		Y
R104a	54		Y
R211a	41		Y
R211c	40		Y
R212a	50		Y
R212c	50		Y

Notes:

[1] $L_{eq\ (24hour)} = 10 \log_{10} 1/24 [16 \times 10^{(\text{Daytime \& evening Leq(30mins)/10})} + 4 \times 10^{(\text{Night-time Leq(30mins)/10})}]$

[2] Only the predicted $L_{eq\ (24hour)}$ for the worst floors are presented. Details shall be referred to **Appendix 5.4**.

5.5.1.3 The predicted night-time maximum rail noise level $L_{max\ (2300\text{-}0700hours)}$ at the representative worst affected NSRs are summarised in **Table 5.5** and detailed calculation are given in **Appendix 5.5**. Results indicate that the predicted $L_{max\ (2300\text{-}0700hours)}$ at the representative worst affected NSRs would comply with the noise criterion of 85dB(A).

Table 5.5: Predicted $L_{max\ (2300\text{-}0700hours)}$ at the representative NSRs – residential block

Representative NSR ID	Predicted $L_{max\ (2300\text{-}0700hours)}$, dB(A) [1]	$L_{max\ (2300\text{-}0700hours)}$ Criterion, dB(A)	Comply [Y/N]
R102a	67	85	Y
R102b	67		Y
R102c	68		Y
R103a	67		Y
R103b	67		Y
R103c	67		Y
R104a	66		Y
R211a	66		Y
R211c	67		Y
R212a	67		Y
R212c	66		Y

Note:

[1] Only the predicted $L_{max\ (2300\text{-}0700hours)}$ for the worst floors are presented. Details shall be referred to **Appendix 5.5**.

5.5.1.4 It can be concluded that the predicted rail noise levels for the proposed development would comply with the rail noise criteria and hence no mitigation measure is required.

6. Review of Fixed Noise Impact

6.1 Identification of Fixed Noise Sources

6.1.1.1 Desktop study and site survey were conducted in November 2024 to identify any potential fixed noise sources within 300m from the proposed residential block. No existing major fixed noise sources were found within 300m of the subject site.

6.1.1.2 Based on desktop review, a planning application (No. A/MOS/129) under Section 16 of the Town Planning Ordinance was approved on a temporary basis on 25 October 2024 for the proposed temporary public vehicle park located to the south of the Application Site. The proposed temporary public vehicle park involves an Automated Parking System (APS) with mechanical parking spaces are planned at the car park. According to the Supporting Planning Statement, the duration of the APS operation (i.e. storing and retrieving vehicles) is short and the noise level is low against the high background noise. Hence, it is concluded that no noise nuisance from the APS to the nearby NSR will be anticipated.

6.2 Review of Potential Fixed Plant Noise Impact Arising from the Proposed Development

6.2.1.1 Detailed information and specifications of fixed plants are not available at the time of noise assessment. It is suggested that all fixed plants should be enclosed in the plant rooms, with the intakes/exhausts located at the facades facing away from the nearby existing NSRs, such as Oceanaire and planned NSRs inside the proposed development as far as practicable. If necessary, installation of silencers/acoustic louvres at the intakes/exhausts will be considered to further minimise the noise impact. The Contractor is required to carry out a noise commissioning test for the fixed plant sources before the operation of the Project to ensure that the operational noise levels are in compliance with the relevant noise criteria stipulated in HKPSG and NCO.

6.2.1.2 With appropriate noise mitigation measures, adverse noise impact from the planned fixed plant noise sources due to the operation of the proposed development is not anticipated.

7. Review of Construction Noise Impact

7.1 Legislation, Standards and Guidelines

7.1.1 General

7.1.1.1 The relevant legislation and associated guidance applicable to the present study for the assessment of noise impact include:

- Noise Control Ordinance (NCO) (Cap. 400);
- TM on Noise from Construction Work other than Percussive Piling (TM-GW);
- TM on Noise from Percussive Piling (TM-PP); and
- TM on Noise from Construction Work in Designated Areas (TM- DA).

7.1.2 Construction Noise Standards

7.1.2.1 There is no statutory noise limit for general construction works during daytime (i.e. 0700 to 1900 hours on any day not being a Sunday or general holiday) under the Noise Control Ordinance (NCO) and related Technical Memoranda (TMs) while the NCO provides statutory control of general construction works during restricted hours (i.e. 1900 to 0700 hours (of the next day) from Monday to Saturday and at any time on Sundays or general holidays). Nevertheless, ProPECC PN1/24 "Minimizing Noise from Construction Activities" stipulates criteria of 65 to 75dB(A) for daytime construction activities. **Table 7.1** below shows the criteria as stipulated in ProPECC PN1/24 "Minimizing Noise from Construction Activities".

Table 7.1: Noise standards for construction activities

Uses	Noise Standards[1], $L_{eq\ (30mins)}$
	0700-1900 hours on any day not being a Sunday or general Holiday
• All domestic premises, • Temporary housing accommodation, • Hostels • Convalescent homes, and • Homes for the aged	75
• Places of public worship, • Courts of law, and • Hospitals and medical clinics	70
• Educational institutions (including kindergartens and nurseries)	70 65 (During Examination)

Notes:

[1] The above standards apply to uses that rely on opened windows for ventilation.

[2] The standards shall be viewed as the maximum permissible noise levels assessed at 1m from the external façade.

7.2 Evaluation of Construction Phase Impact

7.2.1.1 Potential source of noise impact during construction phase would be construction noise generated from the use of Powered Mechanical Equipment (PME) for various construction activities. The key construction activities include site clearance, demolition, soil excavation for basement, piling works and superstructure works, which would involve the use of excavator, breaker, dump truck, etc.

7.2.1.2 The shortest horizontal separation distance between the site and the nearest NSR (i.e., Oceanaire) is less than 5m. The Contractor would be required to implement the mitigation measures mentioned in ProPECC PN 1/24 "Minimizing Noise from Construction Activities" as good practices. By adopting appropriate mitigation measures and good site practices, the construction noise impact can be minimised.

7.2.1.3 Based on review on EIA and other planning applications available in public domain, no concurrent project is identified in the vicinity of the site. Therefore, no cumulative construction noise impact is anticipated.

7.3 Recommended Mitigation Measures

7.3.1.1 In accordance with ProPECC PN 1/24 "Minimizing Noise from Construction Activities", the following mitigation measures should be given wherever practicable:

- Implementation of good site practices to limit noise emissions at source;
- Use of quiet plant and working methods (e.g. Quality Powered Mechanical Equipment (QPME), silent piling by press-in method);
- Installation of temporary noise barriers, panels or enclosures around the site boundary;
- Siting noisy equipment, such as emergency generators, water pumps, as far as possible from the NSR; and
- Scheduling of work to avoid simultaneous operations of noisy equipment.

7.3.1.2 The above recommended practices would need to be implemented in worksite as good practices whenever possible. Reference shall also be made to EPD's recommended pollution control clauses for construction contracts. With the implementation of the recommended mitigation measures, no insurmountable construction noise impact is therefore anticipated.

8. Review of Potential Air Quality Impact

8.1 Legislation, Standards and Guidelines

8.1.1 General

8.1.1.1 The relevant legislations, standards and guidelines applicable to the present study for the assessment of air quality impacts include:

- Air Pollution Control Ordinance (APCO) (Cap. 311);
- Air Pollution Control (Construction Dust) Regulation;
- Air Pollution Control (Non-road Machinery) (Emission) Regulation
- Air Pollution Control (Fuel Restriction) Regulations (i.e. using liquid fuel with a sulphur content of less than 0.001% by weight);
- Recommended Pollution Control Clauses for Construction Contracts; and
- Hong Kong Planning Standards and Guidelines (HKPSG)

8.1.2 Air Pollution Control Ordinance

8.1.2.1 The principal legislation for controlling air pollutants is the APCO (Cap. 311) and its subsidiary regulations, which defines statutory Air Quality Objectives (AQOs).

8.1.2.2 The APCO (Cap. 311) provides the power for controlling air pollutants from a variety of stationary and mobile sources and encompasses a number of AQOs. In addition to the APCO, the following overall policy objectives are laid down in Chapter 9 of the HKPSG as follows:

- Limit the contamination of the air in Hong Kong, through land use planning and through the enforcement of the APCO to safeguard the health and well-being of the community; and
- Ensure that the AQOs for 7 common air pollutants are met as soon as possible.

8.1.2.3 The prevailing AQOs, which took effect in Year 2025, are listed in **Table 8.1** below.

Table 8.1: Hong Kong air quality objectives

Pollutant	Limits on Concentration, µg/m³ [1] (The Number of Exceedance per calendar year allowed is shown in brackets)					
	Peak Season	10-min	1-hr	8-hr	24-hr [2]	Annual [2]
Sulphur Dioxide (SO_2)	-	500 (3)	-	-	40 (3)	-
Respirable Suspended Particulates (RSP, or PM_{10}) [3]	-	-	-	-	75 (9)	30 (N.A.)
Fine Suspended Particulates (FSP, or $PM_{2.5}$) [4]	-	-	-	-	37.5 (18)	15 (N.A.)

Pollutant	Limits on Concentration, µg/m³ [1] (The Number of Exceedance per calendar year allowed is shown in brackets)					
	Peak Season	10-min	1-hr	8-hr	24-hr [2]	Annual [2]
Carbon Monoxide (CO)	-	-	30,000 (0)	10,000 (0)	4,000 (0)	-
Nitrogen Dioxide (NO_2)	-	-	200 (18)	-	120 (9)	40 (N.A.)
Ozone (O_3)	100 (N.A.)	-	-	160 (9)	-	-
Lead (Pb)	-	-	-	-	-	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] Arithmetic mean.

[3] RSP means suspended particulates in air with a nominal aerodynamic diameter of 10 micrometres or smaller.

[4] FSP means suspended particulates in air with a nominal aerodynamic diameter of 2.5 micrometres or smaller.

8.1.2.4 The APCO (Cap. 311) also specifies that for premises that contain asbestos containing materials (ACM), the owner/occupier of the premises shall hire a registered a registered asbestos contractor to carry out the removal of the ACM. They shall give a written notice to the Environmental Protection Department (EPD) not less than 28 days prior to the commencement of the work.

8.1.3 Air Pollution Control (Construction Dust) Regulation

8.1.3.1 The Air Pollution Control (Construction Dust) Regulation specifies processes that require special dust control. The Contractors are required to inform the Environmental Protection Department (EPD) and adopt proper dust suppression measures while carrying out "Notifiable Works" (which requires prior notification by the regulation) and "Regulatory Works" to meet the requirements as defined under the regulation.

8.1.4 Air Pollution Control (Non-road mobile Machinery) (Emission) Regulation

8.1.4.1 Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation specifies that all Non-road Mobile Machinery (NRMMs), except those exempted, used in specified activities and locations including construction sites, container terminals and back up facilities, restricted areas of the airport, designated waste disposal facilities and specified processes are required to comply with the prescribed emission standards.

8.1.5 Hong Kong Planning Standards and Guidelines

8.1.5.1 Chapter 9 of HKPSG outlines the environmental requirements that need to be considered in land use planning. The recommended guidelines, standards and guidance cover the selection of suitable locations for the developments and sensitive uses, provision of environmental facilities, and design, layout, phasing and operational controls to minimise adverse environmental impacts. It also lists out environmental factors influencing land use planning and recommends buffer distances for land uses. The HKPSG also recommends minimum setback distance from different categories of air pollution sources. **Table 8.2** shows these minimum setback distances.

Table 8.2: Guidelines on buffer distance between air pollution sources and different land uses

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

Note:

[1] In situations where the height of chimneys is not known, use the set of guidelines marked with an asterisk for preliminary planning purpose and refine as and when more information is available.

[2] The buffer distance is the horizontal, shortest distance from the boundary of the industrial lot, the position of existing chimneys or the edge of road kerb, to the boundary of open space sites.

[3] The guidelines are generally applicable to major industrial areas but NOT individual large industrial establishments which are likely to be significant air pollution sources. EPD shall be consulted when planning open space sites close to such establishments.

[4] Amenity areas are permitted in any situation.

8.2 Description of the Environment

8.2.1 Existing Ambient Air Quality

8.2.1.1 Currently, there are 18 Air Quality Monitoring Stations (AQMS) in Hong Kong, including 15 General Monitoring Stations and 3 Roadside Monitoring Stations, operated by EPD to monitor the air quality in Hong Kong.

8.2.1.2 The nearest AQMS operated by EPD to the project is located at Sha Tin AQMS, which is approximate 5.8km away from the Project Site. The latest air quality monitoring data in the recent 5 years of various air pollutants monitored at Sha Tin AQMS is presented in **Table 8.3** and compared with the AQOs.

Table 8.3: Air Quality Monitoring Data (Sha Tin AQMS, 2021 - 2025)

Pollutant	Parameter	Concentrations (μg/m³)						AQOs (μg/m³)
		2021	2022	2023	2024	2025	5-year mean	
RSP	10th highest 24-hour	58	46	51	53	50	52 [69%]	75 (9)
	Annual	25	21	22	21	20	22 [73%]	30
FSP	19th highest 24-hour	31	30	26	31	28	29 [78%]	37.5 (18)
	Annual	14	13	13	13	12	13 [87%]	15
NO_2	19th highest 1-hour	159	112	133	122	131	131 [66%]	200 (18)
	10th highest 24-hour	74	55	62	53	66	62 [52%]	120 (9)
	Annual	32	26	27	26	29	28 [70%]	40
SO_2	4th highest 10-min	33	23	57	21	28	32 [6%]	500 (3)
	4th highest 24-hour	11	11	8	6	7	9 [22%]	40 (3)
O_3	10th highest 8-hour	157	**177**	159	**167**	**164**	**165 [103%]**	160 (9)
	Peak season	94	**103**	**101**	**109**	**104**	**102 [102%]**	100
CO	Maximum 1-hour	N/A	N/A	N/A	N/A	N/A	N/A	30,000
	Maximum 8- hour	N/A	N/A	N/A	N/A	N/A	N/A	10,000
	Maximum 24- hour	N/A	N/A	N/A	N/A	N/A	N/A	4,000

Notes:

[1] Number of exceedance allowed under the AQO is shown in ( ), % of the AQO is shown in [ ]. The 5-year mean is the average of the yearly values.

[2] Monitoring results exceeding the AQO are bolded.

8.2.1.3 It can be seen from **Table 8.3** that the monitoring records of 10th highest daily and annual RSP concentrations ranged from 46 μg/m³ to 58 μg/m³, and from 21 μg/m³ to 28 μg/m³ respectively in the past 5 years. These concentrations are well within the AQOs.

8.2.1.4 The 19th highest daily and annual FSP concentrations recorded were in the range of 26 μg/m³ to 31 μg/m³ and 12 μg/m³ to 14 μg/m³. These concentrations are well within the AQOs.

8.2.1.5 The 19th highest 1-hour NO_2 ranged from 112 μg/m³ to 159 μg/m³. The 10th highest 24-hour NO_2 ranged from 53 μg/m³ to 74 μg/m³. The annual NO_2 concentration ranged from 26 μg/m³ to 32 μg/m³. These concentrations are well within the AQOs.

8.2.1.6 The 4th highest 10-minute and 4th highest 24-hour SO_2 ranged from 21 μg/m³ to 57 μg/m³ and from 6 μg/m³ to 11 μg/m³ respectively in the past 5 years. These concentrations are well within the AQOs.

8.2.1.7 The 10th highest 8-hour averaged O_3 concentrations ranged from 157 µg/m^3 to 177 µg/m^3. The concentrations in Year 2022, 2024 and 2025 exceeded the AQO of 160 µg/m^3. The peak season O_3 concentrations ranged from 94 µg/m^3 to 109 µg/m^3. The concentrations in Year 2022 to 2025 exceeded the AQO of 100 µg/m^3. It should be noted that O_3 is not a pollutant directly emitted from pollution sources but formed by photochemical reactions between NOx and VOCs under sunlight. As it takes several hours for these photochemical reactions to take place, O_3 recorded in one place could be attributed to NOx and VOCs emissions from place afar. High ozone background is a regional air quality problem within the Pearl River Delta Region**.**

8.2.2 Future Ambient Air Quality

8.2.2.1 In order to predict the future ambient air quality taking into account the emission reduction plan for Pearl River Delta (PRD) region, PATH v3.0 (Pollutants in the Atmosphere and their Transport over Hong Kong), a regional air quality model, has been developed by EPD to simulate air quality over Hong Kong against the PRD as background. The proposed development would tentatively operate by Year 2035. The pollutant concentrations predicted by PATH v3.0 for Year for 2035 the concerned PATH grids are summarised in **Table 8.4**. The locations of the relevant PATH grids are also shown in **Figure 8.1**. The concentrations predicted by PATH v3.0 for Years 2035 for Level 1 (0-17m) provided in EPD's Smart Air Modelling Platform (SAMP) v2.1 are summarised in the below table. It is predicted all AQO parameters would be below the AQOs, except for O_3 which is a regional air pollutant not directly emitted from any pollution source as discussed in **Section 8.2.1.7**.

Table 8.4: Summary of Year 2035 background from PATH v3.0

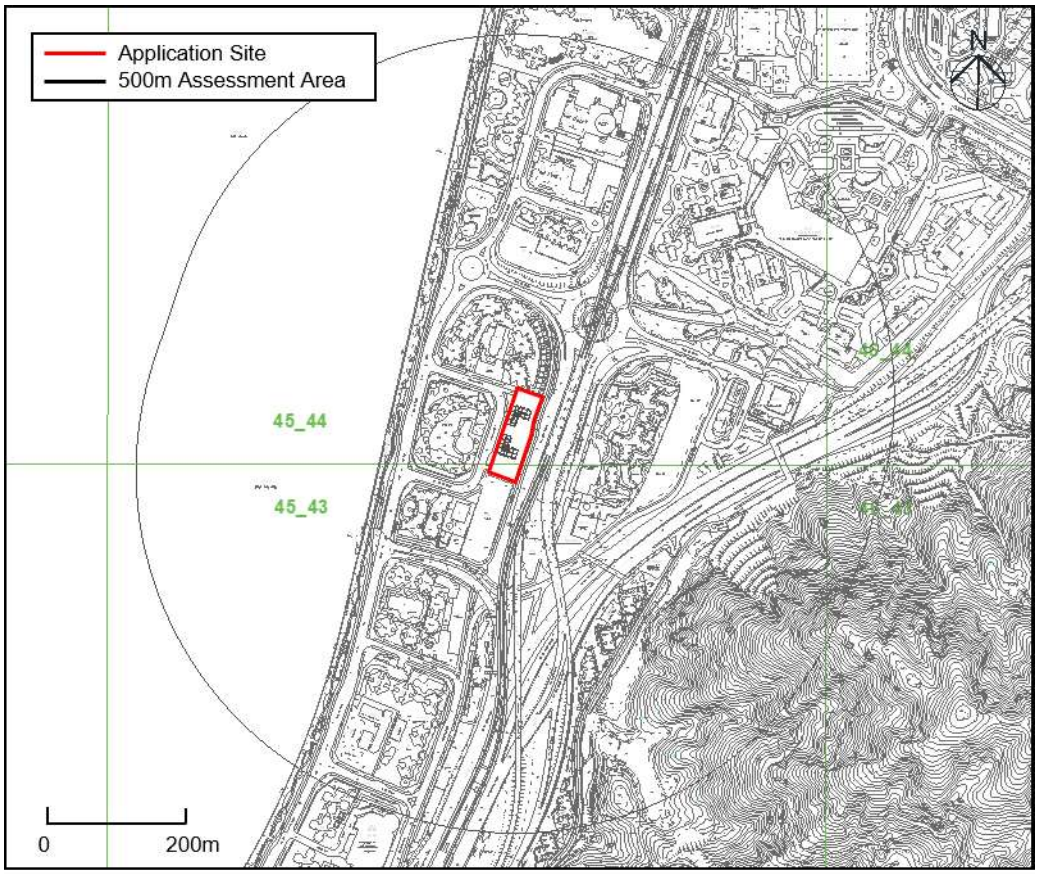
Pollutant	Parameter	Concentrations in various PATH grids (µg/m^3) [1]				AQOs[2] (µg/m^3)
		45_44	45_43	46_44	46_43	
RSP	10th highest 24-hour	49	48	49	49	75 (9)
	Annual	19	19	19	18	30
FSP	19th highest 24-hour	27	27	28	28	37.5 (18)
	Annual	11	11	11	11	15
NO_2	19th highest 1-hour	46	46	43	43	200 (18)
	10th highest 24-hour	21	21	20	19	120 (9)
	Annual	9	9	8	7	40
SO_2	4th highest 10-min	22	22	24	23	500 (3)
	4th highest 24-hour	7	7	7	7	40 (3)
O_3	10th highest 8-hour	**171**	**171**	**167**	**168**	160 (9)
	Peak Season	**122**	**122**	**121**	**122**	100
CO	Max. 1-hour	524	524	524	522	30,000
	Max. 8-hour	484	483	482	479	10,000
	Max. 24-hour	446	446	446	442	4,000

Note:

[1] Concentration in PATH grid exceeding the AQO are bolded and underlined.

[2] Values in ( ) indicate numbers of exceedances allowed per calendar year under the AQOs.

Figure 8.1: Location of relevant PATH grids



8.3 Identification of Representative Air Sensitive Receivers

8.3.1.1 In accordance with Annex 12 of the EIAO-TM, Air Sensitive Receivers (ASRs) include any domestic premises, hotel, hostel, hospital, clinic, nursery, temporary housing accommodation, school, educational institution, office, factory, shop, shopping centre, place of public worship, library, court of law, sports stadium or performing arts centre. Any other premises or places with which, in terms of duration or number of people affected, have a similar sensitivity to the air pollutant as the aforelisted premises and places would also be considered as a sensitive receiver.

8.3.1.2 Existing ASRs are identified by means of reviewing topographic maps, aerial photos, land status plans and supplemented by site inspections, whilst planned/ committed ASRs are reviewed by making reference to relevant Outline Zoning Plans (OZP), Outline Development Plans, Layout Plans and other published plans in the vicinity of the site.

8.3.1.3 Representative ASRs have been reviewed. Details of the identified ASRs are summarised in **Table 8.5**. and its corresponding location is illustrated in **Figure 8.2**.

Figure 8.2: Location of representative ASRs nearby

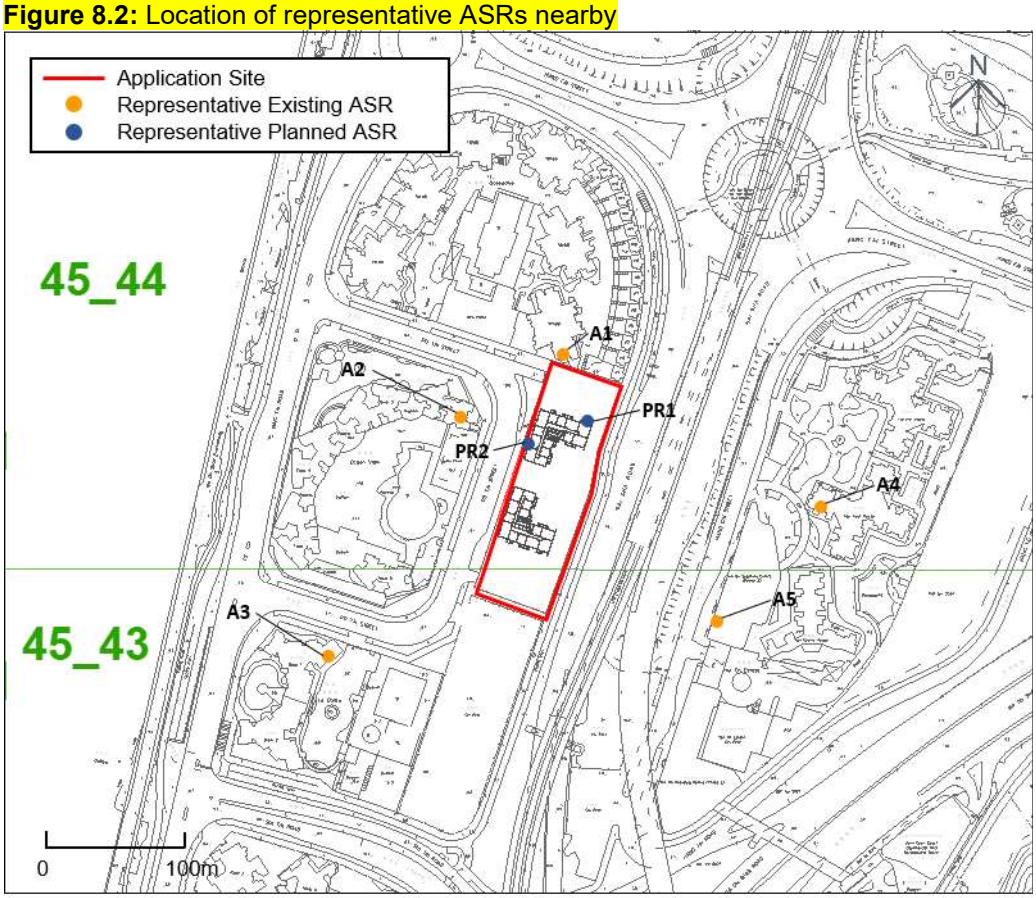


Table 8.5: Representative ASR within 500m study area

ASR ID	Location	Land Use	Approx. Distance from Site (m)	Assessment Height (mAG) [1]	ASR for Construction Phase	ASR for Operational Phase
Existing ASR						
A1	Oceanaire	Residential	< 5	1.5 - 75	✓	×
A2	Ocean View	Residential	30	1.5 - 95	✓	×
A3	La Costa	Residential	75	1.5 - 95	✓	×
A4	Yan On Estate	Residential	115	1.5 - 115	✓	×
A5	Yan On Shopping Centre	Commercial	85	1.5 - 20	✓	×
Planned ASR						
PR1	Proposed Residential Development	Residential	Within the Site	1.5 - 95	×	✓
PR2						

Note:

[1] Upper limit of the assessment height is rounded up to the nearest 5m.

8.4 Evaluation of Construction Phase Impact

8.4.1 Identification and Evaluation of Impact

8.4.1.1 The key sources of potential air quality impact during construction phase would be the dust emission generated from the construction activities associated with the Project, including site clearance, demolition, piling works, soil excavation for basement and superstructure, loading and unloading dusty material, and wind erosion of open sites. Based on the latest available information at the time of preparing this Report, the size of site formation and amount of excavated materials would be about 5,090m^2 and 63,500 m^3 respectively. The nearest ASR identified (i.e. Oceanaire) is located immediately adjacent to the Application Site. Nevertheless, given the proper implementation of recommended good site practices as stipulated in Air Pollution Control (Construction Dust) Regulation in place, any potential construction dust impact is expected to be minimized.

8.4.1.2 Fuel combustion from the use of Powered Mechanical Equipment (PME) during construction works could be a source of NO2, SO_2 and CO. Information regarding the number of machinery anticipated on site during construction stage is unavailable at the time of preparing this Report. Nevertheless, in order to improve air quality and protect public health, EPD has introduced the Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation, which came in effect on 1 June 2015, to regulate emissions from machines and non-road vehicles. Starting from 1 December 2015, only approved or exempted non-road mobile machinery are allowed to be used in construction sites. Hence, the emissions from PMEs are considered relatively small and will not cause insurmountable adverse air quality impact to nearby ASRs with the effect of the Regulation.

8.4.1.3 It is estimated that 2-3 dump truck per hour would be required during normal construction work. In view of the small number of dump trucks, additional vehicular emissions generated by the dump truck is considered insignificant.

8.4.1.4 Based on review on EIA and other planning applications available in public domain, no concurrent project is identified in the vicinity of the site. Therefore, no cumulative constructional air quality impact is anticipated.

8.4.2 Recommended Practices

8.4.2.1 The Contractor is recommended to follow the procedures and requirements given in the Air Pollution Control (Construction Dust) Regulation. It stipulates the construction dust control requirements for both Notifiable and Regulatory Works to be carried out by the Contractor. The following dust suppression measures should be incorporated by the Contractor to monitor and control the dust nuisance throughout the construction phase:

- Any excavated or stockpile of dusty material should be covered entirely by impervious sheeting or sprayed with water to maintain the entire surface wet and then removed or backfilled or reinstated where practicable within 24 hours of the excavation or unloading;
- Any dusty material remaining after a stockpile is removed should be wetted with water and cleared from the surface of roads;

- A stockpile of dusty material should not extend beyond the pedestrian barriers, fencing or traffic cones;
- The load of dusty materials on vehicles leaving a construction site should be covered entirely by impervious sheeting to ensure that the dusty materials do not leak from the vehicle;
- Where practicable, vehicles washing facilities including a high pressure water jet should be provided at every discernible or designated vehicle exit point. The area where vehicle washing takes place and the road section between the washing facilities and the exit point should be paved with concrete, bituminous materials or hardcores;
- When there are open excavation and reinstatement works, hoarding of not less than 2.4m high should be provided as far as practicable along the site boundary with provision for public crossing. Good site practice shall also be adopted by the Contractor to ensure the conditions of the hoardings are properly maintained throughout the construction period;
- The portion of any road leading only to construction site that is within 30m of a vehicle entrance or exit should be kept clear of dusty materials;
- Surfaces where any pneumatic or power-driven drilling, cutting, polishing or other mechanical breaking operation take place should be sprayed with water or a dust suppression chemical continuously;
- Any area that involves demolition activities should be sprayed with water or a dust suppression chemical immediately prior to, during and immediately after the activities so as to maintain the entire surface wet;
- For any wall of the building to be demolished that abuts or fronts upon a street, service lane or other open area accessible to the public, impervious dust screens or sheeting shall be used to enclose the whole wall to a height of at least 1 m higher than the highest level of the structure being demolished;
- Where a scaffolding is erected around the perimeter of a building under construction, effective dust screens, sheeting or netting should be provided to enclose the scaffolding from the ground level of the building, or a canopy should be provided from the first floor level up to the highest level of the scaffolding;
- Any skip hoist for material transport should be totally enclosed by impervious sheeting;
- Every stock of more than 20 bags of cement or dry pulverised fuel ash (PFA) should be covered entirely by impervious sheeting or placed in an area sheltered on the top and the three sides;
- Immediately before leaving a construction site, all vehicles shall be washed to remove any dusty materials from its body and wheels;
- Cement or dry PFA delivered in bulk should be stored in a closed silo fitted with an audible high level alarm which is interlocked with the material filling line and no overfilling is allowed; and
- Exposed earth should be properly treated by compaction, turfing, hydroseeding, vegetation planting or sealing with latex, vinyl, bitumen, shortcrete or other suitable

surface stabiliser within six months after the last construction activity on the construction site or part of the construction site where the exposed earth lies.

- Connecting construction plant and equipment to mains electricity supply should be considered and use of diesel generators and diesel-powered equipment should be avoided as far as possible.
- An EM&A program, e.g. weekly site audit, should be implemented to monitor the dust impacts arising from the construction activities associated with the Proposed Development.

8.4.2.2 Fuel combustion from the use of PME during construction works would be a source of air emission. Ultra-low sulphur diesel (ULSD) with a sulphur content of not more than 0.001% by weight and a viscosity of not more than 6 centistokes at 40^{o}C will be used to minimise SO_2 emissions in accordance with Air Pollution Control (Fuel Restriction) Regulations. Under the Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation, NRMMs, except those exempted, are required to comply with the prescribed emission standards. All regulated machines sold or leased for use in Hong Kong must be approved or exempted with a proper label in a prescribed format issued by EPD. Only approved or exempted NRMMs with a proper label are allowed to be used in specified activities and locations including construction sites.

8.4.2.3 To further control and reduce the emission from the use of NRMM from the Project, the following good site practices are recommended:

- Regulated machines shall be used and exempted NRMMs should be avoided where practicable;
- Use cleaner fuel such as ultra-low sulphur diesel in diesel-operated construction plant to reduce sulphur dioxide emission;
- Zero emission or clean fuels shall be considered as far as practicable for transportation activities;
- Use of electric PMEs where practicable;
- Connect construction plant and equipment to main electricity supply and avoid use of diesel generators and diesel-powered equipment as far as practicable;
- Switch off the engine of PMEs when idling;
- Implement regular and proper maintenance for plant and equipment; and
- Employ plant and equipment of adequate size and power output and avoid overloading of the plant.

8.4.2.4 Given that some ASRs (i.e. Oceanaire and Ocean View) are located close to the Application Site, the following measures shall be considered near those ASRs during construction phase to further minimize the dust impact:

- Adopt site hoarding at sufficient height close to those concerned ASRs;
- Locate the haul road away from those concerned ASRs;
- Avoid dusty works or placing stockpiles near to those concerned ASRs; and

- Minimization of unpaved, exposed earth by immediate covering/ permanent paving as soon as the works have been completed.

8.4.2.5 Furthermore, guidelines stipulated in EPD's Recommended Pollution Control Clauses for Construction Contracts should also be incorporated in the contract documents to abate dust impacts. The clauses include:

- 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) Regulations and Air Pollution Control (Smoke) Regulation;
- 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; and
- 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.

8.4.2.6 With the implementation of these good practice and measures, adverse construction dust impacts on the ASRs are not anticipated. Construction dust impacts are therefore not insurmountable.

8.5 Evaluation of Operational Phase Impact

8.5.1 Vehicular Emission

8.5.1.1 Hong Kong Planning Standards and Guidelines (HKPSG) provides environmental guidance for residential developments on air quality. The guidelines recommend the minimum buffer distance required for active and passive recreational uses.

8.5.1.2 The buffer distances between the sensitive uses of the current development scheme and the surrounding major roads are summarized in **Table 8.6** and illustrated in **Figure 8.3** and **Figure 8.4** below. For sensitive uses of the non-domestic facilities (including shops at G/F to 2/F and Child Care Centre at 2/F), fixed glazing and/or mechanical ventilation will be provided and the fresh air intake will be located away from the buffer zone.

Table 8.6: Separation distances between sensitive uses and nearby major roads

Name of Road	Type of Road[1]	HKPSG Recommended Setback Distance	Shortest Horizontal Setback Distance from the Nearest Air Sensitive Uses to Road Kerb
Sai Sha Road	DD	>10m	10.5m
Po Tai Street	LD[2]	>5m	5.1m

Note:

[1] In accordance with Annual Traffic Census (ATC) 2024: DD - District Distributor; LD – Local Distributor.

[2] In accordance with AADT 2024, Sai Sha Road is a DD road; while Po Tai Street is not classified. Po Tai Street is considered as LD based on its characteristics. The road type has been proposed in Technical Note on Traffic Forecast and confirmed by TD. Reply from TD is supplemented in **Appendix 4.3**.

Figure 8.3: Separation distances between air sensitive uses and nearby major roads (5/F)

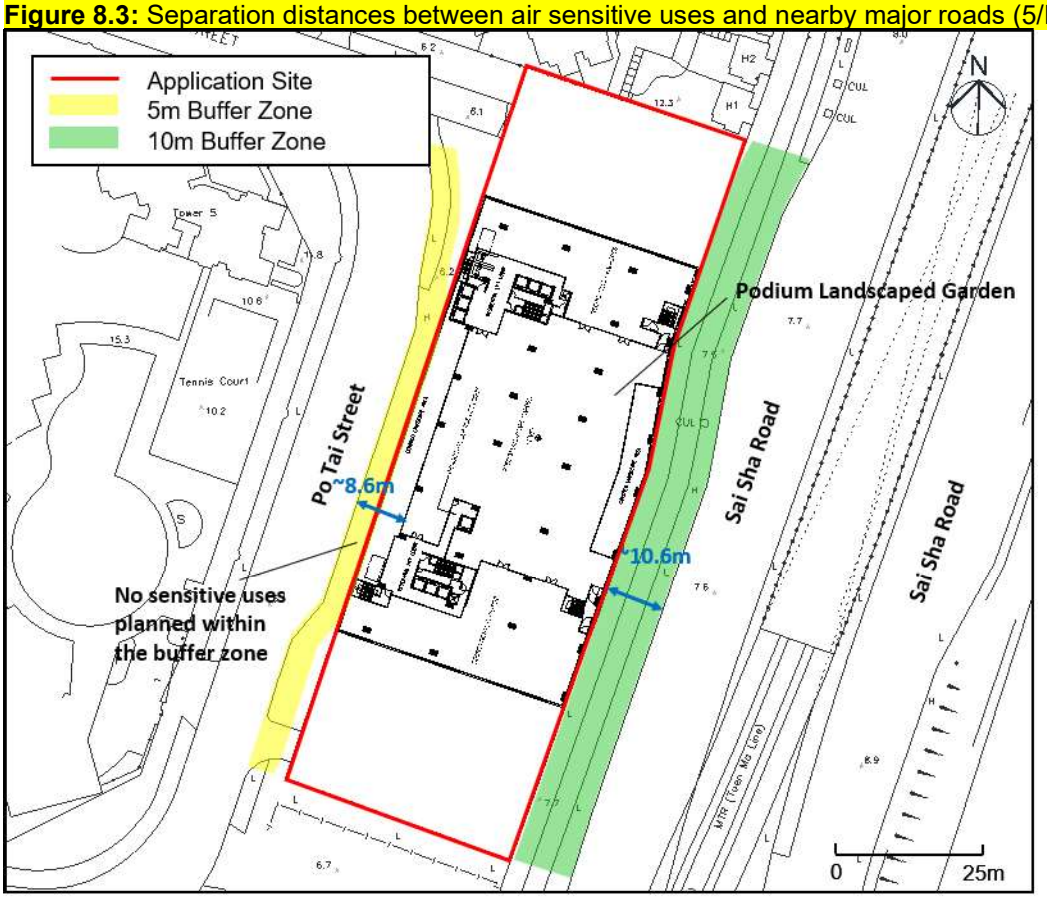
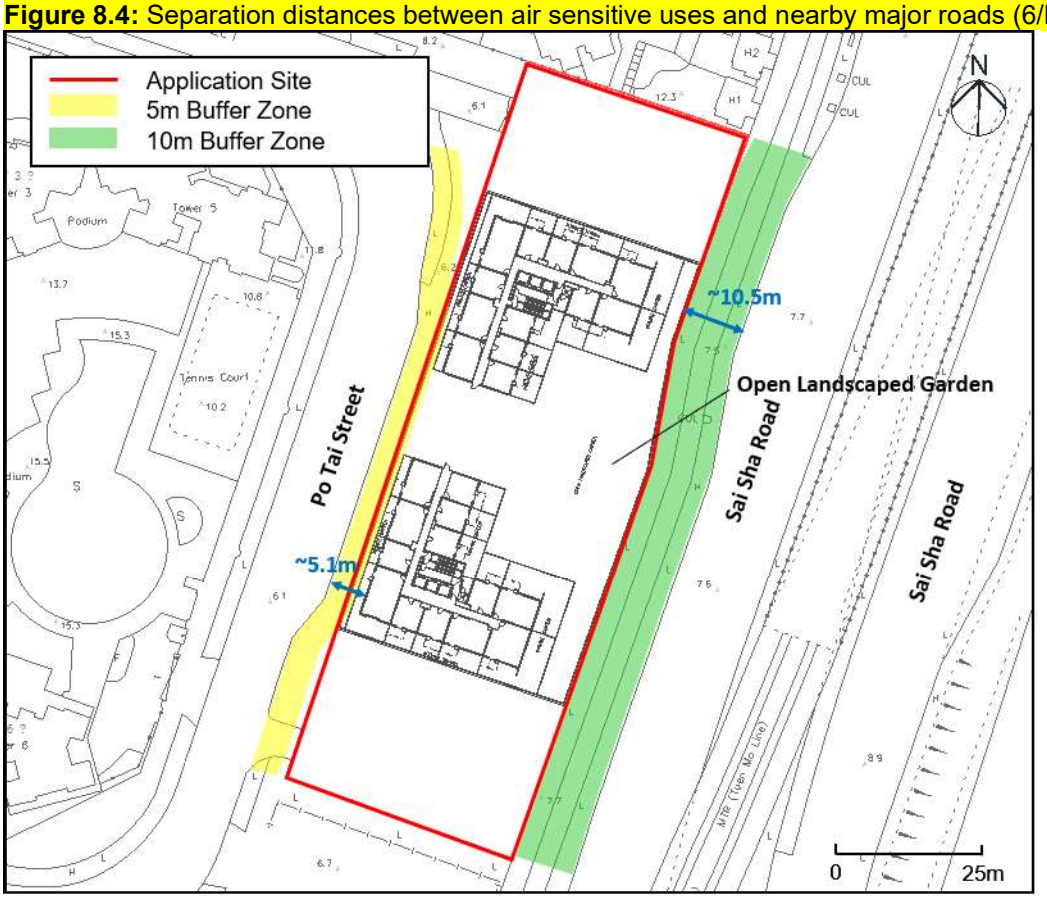


Figure 8.4: Separation distances between air sensitive uses and nearby major roads (6/F)



8.5.1.3 The current scheme can satisfy the setback distance requirements as stipulated in the HKPSG. No sensitive active and passive uses have been planned within the recommended buffer zone of 5m setback from road kerbs of Po Tai Street and 10m setback from road kerbs of Sai Sha Road respectively. Besides, no pedestrian area (i.e. seating place) have been planned within the recommended buffer zone. Adverse vehicular emission impact on the existing and proposed residential developments are therefore not anticipated.

8.5.1.4 A chimney survey was conducted on a walk-over basis within the 500m of the boundary of the Application site where site access was allowed and practicable on 27 August 2024 and revisited on 14 April 2026. No existing chimneys were found within 500m of the subject site. Besides, there will be no chimneys for the proposed development. Air quality impacts from chimney emissions are therefore not anticipated.

8.5.1.5 No major odour and marine emission sources are identified during the site survey, adverse impact from odour and marine emissions are not anticipated.

8.5.1.6 A carpark has been proposed at B1/F and 3/F. Detailed layout design is not yet available during the preparation of this EAS. If mechanical ventilation system is provided, it shall satisfy the requirements, including design, maintenance and operation of the ventilation systems, stipulated in the ProPECC PN 2/96 - Control of Air Pollution in Car Park. Any exhaust(s) of the proposed car park shall be located and directed away from nearby air sensitive uses as far as practicable. Therefore, adverse air quality impact arising from the proposed carpark is not anticipated.

9. Land Contamination Appraisal

9.1 Relevant Legislation, Standard and Guidelines

9.1.1.1. The relevant legislations, standards and guidelines applicable to the present study for the assessment of land contamination include:

- Guidance Note for Contaminated Land Assessment and Remediation, EPD, (Revised in April 2023);
- Practice Guide for Investigation and Remediation of Contaminated Land, EPD, 2011 (Revised in April 2023); and
- Guidance Manual for Use of Risked-based Remediation Goals for Contaminated Land Management, 2007 (Revised in April 2023).

9.2 Site Description

9.2.1.1 The site is situated at 16 Po Tai Street, Ma On Shan. The site is currently occupied by a 6-storey shopping mall (including 1-storey of basement car park). Surrounding the Application Site are Oceanaire to the north, Po Tai Street Car Park to the south, and bounded by Po Tai Street to the west and Sai Sha Road to the east. The location of the Application Site is indicated in **Figure 2.1**.

9.3 Review of Aerial Photographs and Historical Land Uses

9.3.1.1 Selected historical aerial photographs between 1964 to 2023 (i.e. 1964, 1973, 1984, 1995, 2004, 2009, 2014, 2019 and 2023) have been reviewed to identify any past land uses which may have the potential for causing land contamination. The historical aerial photographs are given in **Appendix 9.1**. The key findings are summarised in **Table 9.1** below.

Table 9.1: Description of historical land uses

Year	Description
1964	• The Application Site consisted of sea only.
1973	• No change in land use was observed as compared with Year 1964 within and in the vicinity of the Application site.
1984	• No change in land use was observed as compared with Year 1973 within the Application site. • The surrounding areas from the north-east to the south-east of the Application Site were reclaimed.
1995	• Further reclamation took place with the Application Site being reclaimed. • The reclaimed land to the east of the Application Site was converted to roads.
2004	• The Application Site was converted to a vacant land. • The reclaimed land to the west of the Application Site was converted into residential areas. A rail viaduct was also built along the north-east to south-east of the Application Site boundary.
2009	• The Application Site was converted to a car park. • The vacant land to the north and east of the Application Site were under construction.
2014	• The Application Site was converted back to a vacant land.

Year	Description
	• The vacant land to the north and east of the Application Site were developed into residential areas.
2019	• A commercial building was built on the Application Site. • No significant change in land use was observed as compared with Year 2014 in the vicinity of the Application Site.
2023	• No significant change in land use was observed as compared with Year 2019 within and in the vicinity of the Application Site.

9.4 Site Survey Findings

9.4.1.1 Site surveys were conducted in August 2024 and revisited in April 2026 to identify any existing land uses within the Application Site and the adjoining sites which may have potential for causing land contamination. Photo record of the site survey is given in **Appendix 9.2** and the site walkover checklist is given in **Appendix 9.3**. The site is primarily occupied by a shopping mall based on site observation. Potential land contamination activities were not identified. In general, all floors were entirely paved with tiles or concrete, and are in good condition with no observable cracks. Chemical waste such as used fluorescent lamps and batteries were found to be stored at the loading/ unloading area on the G/F of the building (**Photo 1** to **Photo 3**). Used paints were found to be stored at the chemical storage and mixing area room on 4/F (**Photo 4**). A fuel tank was also found at the fuel tank room on 4/F (**Photo 5)**. Nevertheless, no oil stains or chemical stains were observed on the ground of each floor. All chemicals and dangerous goods (DGs) are properly stored with containment or with no direct contact with the floors. No other chemicals or DGs were found on the remaining floors within the site, and no potential land contamination issue was observed during the site visits.

9.5 Relevant Information Request

9.5.1 Fire Services Department

9.5.1.1 Information request on any Dangerous Goods (DGs) license registered, and any record of DGs spillage/leakage incidents within the Application Site have been sent to FSD. FSD advised that one DGs license for diesel has been issued to the Application Site. As advised by the operator, diesel is stored in a fuel tank at the fuel tank room on 4/F and it is for the operation of backup generator during emergency use only. A total of one incident record of "Rubbish Fire" was also found outside the Application Site boundary. As the site is currently occupied by a shopping mall, waste generated are typically general refuse from commercial activities which would not contain chemicals or dangerous goods. Based on site observation, most of the site is entirely paved with tiles or concrete, and are in good condition with no observable cracks. Chemicals (i.e. paints) and DGs (i.e. diesel) were observed during site visits. Nevertheless, the chemicals/ DGs are properly stored with containment or with no direct contact with the floors and no stain was observed on the ground. Potential leakage brought by burning activities is not expected. Potential land contamination issue is therefore not anticipated. The correspondence with FSD is enclosed in **Appendix 9.4**.

9.5.2 Environmental Protection Department

9.5.2.1 Information request on any Chemical Waste Producer (CWP) registered, and any record of chemical spillage/leakage incidents within the Application Site were made to EPD. EPD advised that there is no record of spillage of chemicals within the Application Site for the past ten years. Chemical waste producer record was also reviewed at the EPD's Territory Control Office. The correspondence with EPD is attached in **Appendix 9.5**. It is noted that the property management company of We Go Mall currently located on the Application Site, is registered as the CWP. As advised by the property management company of We Go Mall, the major chemical waste types produced within the site are used paints, fluorescent lamps and batteries. As discussed in **Section 9.4** and shown in **Appendix 9.2**, the amounts of chemical waste are insignificant and properly stored. No chemical stains were found within the site. Therefore, potential spillage/leakage of chemicals is therefore not anticipated.

9.6 Identification of Potentially Contaminated Site

9.6.1.1 Review of desktop data and site visits have been conducted. In addition, as confirmed through site visits, potentially land contamination activities, such as car repairing and car scarping were not observed within the Application Site. Chemicals/DGs were found within the Application Site but they are properly stored with containment or with no direct contact with the floors. The floors are also entirely paved with tiles or concrete, and are in good condition with no observable cracks and stain observed. It is therefore concluded that land contamination is not anticipated in the Application Site. Further site investigation is not required.

10. Waste Management

10.1 Relevant Legislation, Standard and Guidelines

10.1.1.1 The relevant legislation, standards and guidelines applicable to the present study for the assessment of waste management implications include:

- Waste Disposal Ordinance (WDO) (Cap. 354) and subsidiary Regulations;
- Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap. 354N);
- Waste Disposal (Chemical Waste) (General) Regulation (Cap. 354C);
- Land (Miscellaneous Provisions) Ordinance (Cap. 28);
- Public Health and Municipal Services Ordinance (Cap. 132) - Public Cleansing and Prevention of Nuisances Regulation.
- Dumping at Sea Ordinance (Cap.466);
- Practice Note for Authorized Persons and Registered Structural Engineers on Management Framework for Disposal of Dredged/ Excavated Sediment (PNAP ADV-21); and
- Works Bureau Technical Circular (WBTC) No. 12/2000 Fill Management.

10.2 Evaluation of Constructional Phase Impact

10.2.1 Identification and Evaluation of Impact

10.2.1.1 During the construction phase, key construction activities which would potentially result in the generation of waste include minor site clearance including any temporary structure, piling works, soil excavation for basement and superstructure, etc. within the site area. These activities would result in the generation of wastes including both inert and non-inert construction and demolition (C&D) materials, Land-based sediments, chemical wastes and general refuse from on-site workforce.

10.2.1.2 However, in general, the handling and disposal of these materials and wastes will require proper management in order not to cause environmental impacts and nuisance. It is anticipated that there would not be any insurmountable impacts provided good site practices and other appropriate mitigation measures are implemented.

10.2.2 C&D Materials

10.2.2.1 Based on the preliminary design, about 3,800 m^2 of the existing We Go Mall basement floor will be retained and reused for the proposed development, reducing construction waste from basement excavation works. It is estimated that about 38,000 m^3 of inert soft C&D materials (e.g. excavated soil, demolition C&D materials) and 5,500 m^3 non-inert C&D materials will be generated during the construction phase of the site clearance and site formation works. All C&D materials arising from the construction will be sorted on–site to recover the inert C&D materials as well as the reusable and recyclable materials.

10.2.2.2 Any surplus C&D materials will become the property of the Contractor once they are removed from the site. The Contractor will be responsible for devising a system to work for on–site sorting of C&D materials and to promptly remove all sorted and processed material arising from the construction activities to optimise temporary stockpiling on–site. It is recommended that the system should include the identification of the source of generation, estimated quantity, arrangement for on–site sorting and/or collection, temporary storage areas, and frequency of collection by recycling contractors or frequency of removal off-site.

10.2.2.3 Disposal of C&D materials can be minimized through careful planning during the detailed design stage and with good site practice during construction. This includes the use of non–timber formwork and temporary works and on–site sorting of the C&D materials for reuse and recycling as far as practicable. For the inert C&D materials, it would be reused on–site as far as possible or else it would be delivered to public fill reception facilities which would be designated by the Public Fill Committee for beneficial reuse in other projects. The opportunity of reusing excavated C&D materials would be investigated in the Waste Management Plan, which will be derived in later detailed design stage. Meanwhile, non-inert C&D materials should be recycled whenever possible and be disposed of at public landfills (i.e. WENT landfill) as a last resort.

10.2.2.4 With the proper implementation of good construction site practice and recommended mitigation measures, the on-site handling, reuse, transportation and disposal of C&D materials would not cause adverse environmental impacts.

10.2.3 Land-based Sediment

10.2.3.1 Foundation/ piling works during building construction at the reclaimed area in the Application Site may result in the excavation of land-based sediment. In accordance with *Practice Note for Authorized Persons, Registered Structural Engineers and Registered Geotechnical Engineers – Management Framework for Disposal of Dredged/Excavated Sediment* (PNAP ADV-21) which sets out the procedure for seeking approval to dredge/ excavate sediment and the management framework for marine disposal of such sediment, a Sediment Sampling and Testing Plan (SSTP) shall be prepared at later detailed design stage and a separate Sediment Quality Report (SQR) shall be subsequently prepared to provide an evaluation/ categorization of the sediment quality conditions based on the chemical screening test results as well as determine disposal options.

10.2.3.2 Beneficial reuse of excavated sediment will be considered on site as far as practicable during the construction stage prior to disposal. If disposal at the designated marine disposal areas is required, the disposal options for the excavated sediment should follow the procedures in PNAP ADV-21. The findings obtained from the sediment sampling and testing work would be used in the application for marine dumping permit under the Dumping at Sea Ordinance (DASO). The transportation routing and frequency for marine disposal shall be agreed with EPD/CEDD during the construction phase prior to marine disposal.

10.2.4 Chemical Waste

10.2.4.1 Chemical wastes likely to be generated from the construction activities and associated facilities may include:

- scrap batteries or spent acid/alkali from their maintenance;
- used paint, engine oils, hydraulic fluids and waste fuel;
- spent mineral oils/cleansing fluids from mechanical machinery; and
- spent solvents/solutions, some of which may be halogenated, from equipment cleansing activities.

10.2.4.2 Chemical wastes may pose environmental, health and safety hazards if not stored and disposed of in an appropriate manner as outlined in the Waste Disposal (Chemical Waste) (General) Regulation and the Code of Practice on the Packaging, Labelling and Storage of Chemical Waste. These hazards may include:

- toxic effects to workers;
- adverse effects on air, water and land from spills; and
- fire hazards.

10.2.4.3 It is difficult to quantify the amount of chemical waste as it will be highly dependent on the contractor's on–site maintenance practice the number of plant and vehicles utilized. Nevertheless, it is anticipated that the quantity of chemical wastes would be small and in the order of few hundred litres per month. The estimated amount of chemical waste to be generated during construction phase is summarized in **Table 10.1.**

Table 10.1: Summary of chemical waste during construction phase

Waste type	Total amount generated
Scrap batteries	A few hundred kilograms per month
Spend hydraulic oil and waste fuel	A few hundred litres per month
Spent lubrication oil and cleaning fluids	
Spend solvent	

10.2.4.4 Suitable arrangements for the storage, handling, transport and disposal of chemical wastes shall be made in accordance with the Code of Practice on the Packaging, Labelling and Storage of Chemical Waste and Waste Disposal (Chemical Waste) (General) Regulation (Cap. 354C). Wherever possible opportunities should be taken to reuse and recycle materials. The chemical wastes shall be collected by a licensed chemical waste collector for subsequent disposal at the Chemical Waste Treatment Centre at Tsing Yi or other licensed facility. Given that the quantity of chemical wastes would be small and that the regulations as stipulated in the Code of Practice on the Packaging, Labelling and Storage of Chemical Waste and Cap. 354C would be strictly followed, adverse impacts brought by the generation of chemical waste is not anticipated.

10.2.5 General Refuse

10.2.5.1 The general refuse generated by the construction workforces mainly consists of food waste, aluminium cans and wastepaper. These general refuses will require off–site disposal. The number of workforce (clerical and workers) to be employed for the Project is not available at this stage, but is anticipated not to be over 500 staff. Based on the generation rate of 0.65kg/person/day, the total refuse generated per day would be less than 325kg/day. Therefore, it is estimated that 710 tonnes of general refuse would be generated during construction phase. The breakdown of estimated amount of general refuse to be generated during construction phase is summarised in **Table 10.2** below**.**

Table 10.2: Summary of general refuse during construction phase

Activities	Period	Daily Waste Generation (kg/day)	Total Amount Generated (tonne)
Construction phase	Approx. 6 years	< 325	< 710

10.2.5.2 Effective collection of site waste will be required to prevent waste materials being blown around by wind, flushed or leached into the marine environment, or creating an odour nuisance or pest and vermin problem. Waste storage areas shall be well maintained and cleaned regularly. In addition, disposal of waste at sites other than approved waste transfer or disposal facilities shall be prohibited. All collected waste shall be properly disposed of at public landfills (i.e. WENT Landfill)**.**

10.2.5.3 With the implementation of good waste management practices at the site, adverse environmental impacts are not expected to arise from the storage handling and transportation of general refuse generated from the site**.**

10.3 Recommended Practices for Construction Phase

10.3.1.1 Good site practice to avoid or reduce potential adverse environmental impacts associated with handling, collection and disposal of waste are proposed. These recommendations are based on the waste management hierarchy principles. The waste management options considered to be most preferable have the least environmental impacts and are more sustainable in the long term. The hierarchy is as follows (the priority follows descending order):

- avoidance and minimization,
- separation of inert C&D materials, reusable and recyclable materials from other wastes,
- reuse of materials,
- recovery and recycling, and
- treatment and disposal.

10.3.1.2 Prior to the commencement of the construction works, the contractors should incorporate these recommendations into a Waste Management Plan to provide an overall framework for waste management and reduction. Recommended good site practice, waste reduction measures as well as the waste transportation, storage and collection are as follows:

10.3.2 Good Site Practices

10.3.2.1 Adverse waste management implications are not expected, provided that good site practices are strictly implemented. The following good site practices are recommended throughout the construction phase of the Project:

10.3.2.2 Nomination of an approved personnel to be responsible for the implementation of good site practices, arrangements for collection and effective disposal to an appropriate facility of all wastes generated at the site:

- training of site personnel in proper waste management and chemical handling procedures;
- provision of sufficient waste disposal points and regular collection for disposal;
- separation of chemical wastes for special handling and appropriate treatment at the Chemical Waste Treatment Centre;
- regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors;
- implementation of a recording system for the amount of wastes generated/recycled and disposal sites. And
- Waste Management Plan (WMP) should be prepared and implemented by the Contractor in accordance with the Building Department's "Practice Note for Authorized Persons and Registered Structural Engineers (PN for AP & RSE) No. 243 (ADV – 19) – Construction and Demolition Waste". The WMP will be submitted to the Architect/Engineer for approval.

10.3.3 Waste Reduction Measures

10.3.3.1 The amount of waste generated can be significantly reduced through good management and control. Waste reduction is best achieved at the site planning and design phase, as well as by ensuring the implementation of good site practices when the works are in progress. Recommendations for achieving waste reduction include:

- on–site reuse of any material excavated as far as practicable;
- segregation and storage of different types of waste in different containers, skips or stockpiles to enhance reuse or recycling of material and their proper disposal;
- collection of aluminium cans and waste paper by individual collectors during construction should be encouraged. Separately labelled recycling bins should also be provided to segregate these wastes from other general refuse by the workforce;
- recycling of any unused chemicals and those with remaining functional capacity as far as possible;
- prevention of potential damage or contamination to the construction materials through proper storage and good site practices;
- planning and stocking of construction materials should be made carefully to minimise amount of waste generated and to avoid unnecessary generation of waste; and

- training on the importance of appropriate waste management procedures, including waste reduction, reuse and recycling should be provided to workers.

10.3.4 Storage, Collection and Transportation of Waste

10.3.4.1 Storage of waste on site may induce adverse environmental implications if not properly managed. The following recommendations should be implemented to minimise the impacts:

- waste such as soil should be handled and stored well to ensure secure containment;
- stockpiling area should be provided with covers and water spraying system to prevent materials from being washed away and to reduce wind–blown litter
- different locations should be designated to stockpile each material to enhance reuse.

10.3.4.2 With respect to the collection and transportation of waste from the construction works area to respective disposal sites, the following recommendations should be implemented to minimise the potential adverse environmental impacts:

- remove waste in timely manner;
- employ trucks with cover or enclosed containers for waste transportations;
- obtain relevant waste disposal permits from the appropriate authorities; and
- disposal of waste should be done at licensed waste disposal facilities.

10.3.4.3 In addition to the above measures, other specific mitigation measures on handling other specific waste generated from construction phase are recommended in the following subsections

10.3.5 C&D Materials

10.3.5.1 Wherever practicable, C&D materials should be segregated from other wastes to avoid contamination and ensure acceptability at public filling areas or reclamation sites. The following mitigation measures should be implemented in handling the waste:

- maintain temporary stockpiles and reuse excavated fill material for backfilling and reinstatement;
- carry out on–site sorting;
- make provisions in the contract documents to allow and promote the use of recycled aggregates where appropriate; and
- implement a trip–ticket system for each works contract to ensure that the disposal of C&D materials are properly documented and verified.

10.3.5.2 In addition, disposal of the C&D materials onto any sensitive location such as agricultural land, etc. should be avoided. Disposal of C&D materials or any other wastes at unauthorized locations and sites other than approved waste transfer or disposal facilities shall be prohibited.

10.3.5.3 Standard formwork or pre–fabrication should be used as far as practicable in order to minimise the arising of C&D materials. The use of more durable formwork or plastic facing for the construction works should be considered. Metal hoarding should be used to enhance the possibility of recycling. The purchasing of construction materials should be carefully planned in order to avoid over ordering and wastage.

10.3.5.4 The contractor should recycle as much of the C&D materials as possible on–site. Public fill and C&D waste should be segregated and stored in different containers or skips to enhance reuse or recycling of materials and their proper disposal. Where practicable, concrete and masonry can be crushed and used as fill. Steel reinforcement bar can be used by scrap steel mills. Different areas of the construction site should be considered for such segregation and storage.

10.3.5.5 According to the "Project Administrative Handbook Chapter 4, Section 4.1.3", for DPs, a Construction and Demolition Material Management Plan (C&DMMP) has to be submitted to the Public Fill Committee (PFC) for approval in case of C&D materials disposal exceeding 50,000m^3. For non–DPs, a C&DMMP has to be submitted to PFC for approval prior to commencement of the detailed design in case of generating surplus C&D materials in excess of 300,000 m^3 or requiring imported fill exceeding 300,000m^3. The C&DMMP should be vetted and endorsed by the departmental Vetting Committee before submitting to PFC for approval. Since the proposed development is a non-DP and will generate less than 300,000m^3 C&D materials, a C&DMMP is not required under PAH. Nonetheless, the Project Proponent shall consult the Public Fill Committee of CEDD for the advisory outlet of the C&D materials.

10.3.6 Land-based Sediments

10.3.6.1 Standard good site practices should be implemented during the construction phase to minimize any potential exposure. Possible mitigation measures to handle the land-based sediment are summarized as follows.

- All construction plant and equipment shall be designed and maintained to minimise the risk of silt, sediments, contaminants or other pollutants being released into the water column or deposited in the locations other than designated location.
- All dumping vessels shall be sized such that adequate draft is maintained between vessels and the sea bed at all states of the tide to ensure that undue turbidity is not generated by turbulence from vessel movement or propeller wash.
- Adequate freeboard shall be maintained on barges to ensure that decks are not washed by wave action.

10.3.6.2 The Contractors shall monitor all vessels transporting the excavated land-based sediment to ensure that no dumping outside the approved location takes place. The Contractor shall keep and produce logs and other records to demonstrate compliance and that journeys are consistent with designated locations and copies of such records shall be submitted to the Engineers.

- The Contractors shall comply with the conditions in the dumping permit issued under the Dumping at Sea Ordinance.
- All bottom dumping vessels (hopper barges) shall be fitted with tight fittings seals to their bottom openings to prevent leakage of material.

- The excavated land-based sediment shall be placed into the disposal pit by bottom dumping.
- Contaminated land-based sediment shall be transported by split barge of not less than 750m^3 capacity and capable of rapid opening and discharge at the disposal site.
- Discharge shall be undertaken rapidly and the hoppers shall be closed immediately. Sediment adhering to the sides of the hopper shall not be washed out of the hopper and the hopper shall remain closed until the barge returns to the disposal site.

10.3.7 Chemical Waste

10.3.7.1 For those processes that generate chemical wastes, the contractor shall identify any alternatives that generate reduced quantities or even no chemical wastes, or less dangerous types of chemical wastes.

10.3.7.2 If chemical wastes are produced at the construction site, the contractors should register with EPD as chemical waste producers. Chemical wastes should be handled in accordance with the Code of Practice on the Packaging, Handling and Storage of Chemical Wastes. Containers used for storage of chemical wastes should:

- be suitable for the substance they are holding, resistant to corrosion, maintained in a good condition, and securely closed;
- have a capacity of less than 450 L unless the specification has been approved by EPD; and
- display a label in English and Chinese in accordance with instructions prescribed in Schedule 2 of the Regulations.

10.3.7.3 The storage area for chemical wastes should:

- be clearly labelled and used solely for the storage of chemical wastes;
- be enclosed on at least 3 sides;
- has an impermeable floor and bunding, of capacity to accommodate 110% of the volume of the largest container or 20% by volume of the chemical wastes stored in the area, whichever is greatest;
- have adequate ventilation;
- be covered to prevent rainfall entering (water collected within the bund must be tested and disposed as chemical wastes, if necessary); and
- be arranged so that incompatible materials are adequately separated.

10.3.7.4 Disposal of chemical wastes should:

- be via a licensed chemical waste collector; and
- be to a facility licensed to receive chemical wastes, such as the CWTC which also offers a chemical waste collection service and can supply the necessary storage containers; or
- be to a re–user of the waste, upon approval granted by EPD.

10.3.8 General Refuse

10.3.8.1 General refuse generated on–site should be stored in enclosed bins or compaction units separated from construction and chemical wastes. Recycling bins should also be provided to encourage recycling. A reputable waste collector should be employed by the contractor to remove general refuse from the site on a daily basis separate from the construction and chemical wastes. Burning of refuse on construction sites or fly tipping is prohibited by law.

10.4 Evaluation of Operational Phase Impact

10.4.1 Identification and Evaluation of Impact

10.4.1.1 The operational phase of the proposed development would generate municipal solid waste. With reference to the latest data from "Monitoring of Solid Waste in Hong Kong 2024" by EPD, the MSW disposal rate was 1.40 kg/person/day in Year 2024, and the recovery rate for recycling was 34% of the MSW generation. By calculation, the MSW generation rate, disposal rate and recycled rate were 2.12 kg/person/day, 1.40 kg/person/day and 0.72 kg/person/day in 2024 respectively. The estimated MSW based on planned residential and employment populations respectively is summarized in **Table 10.3**.

Table 10.3: Estimated quantities of MSW from planned Residential and Employment Population during operation phase

Estimated MSW from Residential Population (tpd)[1]			
Residential Population	**Generated [2]**	**Required Disposal [2]**	**Recycled [2]**
1,458	3.1	2.0	1.0

Note:

[1] tpd: tonne per day

[2] MSW disposal rate was 1.40 kg/person/day according to "Monitoring of Solid Waste in Hong Kong 2024" by EPD https://www.wastereduction.gov.hk/sites/default/files/resources_centre/waste_statistics/msw2024_eng.pdf). By calculation, the MSW generation rate was 2.12 kg/person/day. MSW recovery rate for recycling was 34% of the MSW generation. By calculation, the MSW recycling rate was 0.72 kg/person/day.

10.4.1.2 A reputable waste collector should be employed to provide routine cleaning of the proposed development to minimize odour, pest and litter impacts associated with the generation of general refuse. Recycling bins should also be provided to encourage recycling.

10.4.1.3 With the implementation of the recommended mitigation measures for the handling, transportation and disposal of the identified waste, adverse residual waste management implications are not anticipated for the operational phase.

10.5 Recommended Practices for Operational Phase

10.5.1 Waste Collection and Disposal

10.5.1.1 An effective and efficient waste handling system is essential in order to minimize potential adverse environmental impacts during waste storage, collection and transport, such impacts may include odour if waste is not collected frequently; water quality if waste enters storm water drains; aesthetics and vermin problems if the waste storage area is not well maintained and cleaned regularly. The waste handling system may also facilitate materials recovery and recycling.

10.5.1.2 A refuse collection room would be installed at the ground floor for localized refuse collection and the waste would be transported to a refuse transfer station (RFS). To avoid potential odour nuisance during transport of waste, enclosed waste collection trucks should be used and the collection route and time should be properly planned. At least daily collection should be arranged by the waste collector.

10.5.2 Waste Recycling

10.5.2.1 In order to facilitate recycling, a 4-bin recycling system for paper, metals, plastics and glass should be adopted together with a general refuse bin. They should be placed in prominent places to promote waste separation at source. All recyclable materials should be collected by recyclers. Food waste recycling bins should be set up at a designated location to collect food waste during operational phase. The collected food waste should be delivered to the EPD's food waste recycling facilities for turning into energy or resources.

11. Water Quality Impact

11.1 Legislation and Standards

11.1.1 General

11.1.1.1 The relevant legislation, standards, and guidelines applicable to the present study for the assessment of water quality impacts include:

- Water Pollution Control Ordinance (WPCO) (Cap. 358);
- Technical Memorandum on Standards for Effluents Discharged into Drainage and Sewerage Systems, Inland and Coastal Waters (TM-DSS);
- Practice Note for Professional Persons on Construction Site Drainage (ProPECC) PN 2/24;
- Practice Note for Professional Persons on Drainage Plan Subject to Comment by the Environmental Protection Department (ProPECC) PN 1/23; and
- HKPSG.

11.1.2 Water Pollution Control Ordinance (Cap. 358)

11.1.2.1 WPCO (Cap. 358) provides the major statutory framework for the protection and control of water quality in Hong Kong. According to the Ordinance and its subsidiary legislation, the entire Hong Kong waters are divided into ten Water Control Zones (WCZs) and four supplementary WCZs. Each WCZ has a designated set of statutory Water Quality Objectives (WQOs) designed to protect the inland and/ or marine environment and its users. The Project is located within the Tolo Harbour & Channel WCZ with corresponding WQOs as summarised in **Table 11.1.**

Table 11.1: Water Quality Objectives for Tolo Harbour and Channel Water Control Zone

Parameters	Objectives	Sub-Zone
Aesthetic appearance	No noxious or offensive odour or offensive taint or colour in either waters or edible aquatic organisms in the subzone to be present in concentrations detectable by bioassay or organoleptic tests.	Marine Waters in Whole Zone
	No visible foam, oil, grease, scum, litter or other objectionable matter.	Marine Waters in Whole Zone
	Shall not cause waters of the subzone to contain substances that — (a) settle to form objectionable deposits; (b) float as debris, scum, oil or other matter to form nuisances; (c) produce objectionable colour, odour, taste or turbidity; (d) injure or are toxic or produce adverse physiological responses in humans, animals or plants; or (e) are conducive to undesirable aquatic life or a nuisance to aquatic life.	All Inland Watercourses
Bacteria	The level of Escherichia coli (*E. coli*) should not exceed 610/100 mL, calculated as the geometric mean of all samples collected in one calendar year.	Marine Waters in Secondary contact recreation subzone

Parameters	Objectives	Sub-Zone
		and Fish culture subzones
	The level of *E. coli* shall not exceed 1000 per 100 mL, calculated as a running median of the most recent 5 consecutive samples taken at intervals of between 7 and 21 days (or 14 and 42 days).	Inland Waters in Shing Mun (A, C, D, E, H, I) and Tai Po (B, C) subzones and other watercourses
	The level of *E. coli* should not exceed 0 per 100 mL, calculated as a running median of the most recent 5 consecutive samples taken at intervals of between 7 and 21 days (or 14 and 42 days).	Inland Waters in Shing Mun (B, F, G), Lam Tsuen (C, D) and Tai Po (A) subzones
Chlorophyll-a	The level of chlorophyll-a in waters of the subzone shall not exceed 20 milligrams per cubic metre, calculated as a running arithmetic mean of 5 daily measurements for any single location and depth.	Marine Waters in Harbour subzone
	The level of chlorophyll-a in waters of the subzone shall not exceed 10 milligrams per cubic metre, calculated as a running arithmetic mean of 5 daily measurements for any single location and depth.	Marine Waters in Buffer subzone
	The level of chlorophyll-a in waters of the subzone shall not exceed 6 milligrams per cubic metre, calculated as a running arithmetic mean of 5 daily measurements for any single location and depth.	Marine Waters in Channel subzone
Colour	Colour of waters of the subzone to not exceed 50 Hazen units at any time.	Inland Waters in Shing Mun (A, C, D, E, H, I) and Tai Po (B, C) subzones and other watercourses
	Colour of waters of the subzone to not exceed 30 Hazen units at any time.	Inland Waters in Shing Mun (B, F, G), Lam Tsuen (C, D) and Tai Po (A) subzones
Dissolved oxygen (DO)	The level of dissolved oxygen in waters of the subzone to shall not be less than 2 milligrams per litre within 2 metres of the bottom, or to be less than 4 milligrams per litre in the remainder of the water column.	Marine Waters in Harbour subzone
	The level of dissolved oxygen in waters of the subzone shall not be less than 3 milligrams per litre within 2 metres of the bottom, or to be less than 4 milligrams per litre in the remainder of the water column.	Marine Waters in Buffer subzone
	The level of dissolved oxygen in waters of the subzone shall not be less than 4 milligrams per litre at any point in the water column.	Marine Waters in Channel subzone
	The level of dissolved oxygen in waters of the subzone shall not be less than 4 milligrams per litre or 40% saturation (at 15 degrees Celsius) at any time.	All Inland Watercourses
Light penetration	No changes in turbidity, suspended material, colour or other parameters arising from waste discharges shall reduce light transmission by more than 20 per cent of the normal level in the subzone at any location or any time.	Marine Waters in Harbour subzone
	No changes in turbidity, suspended material, colour or other parameters arising from waste discharges shall reduce light transmission by more than 15 per cent of the normal level in the subzone at any location or any time.	Marine Waters in Buffer subzone
	No changes in turbidity, suspended material, colour or other parameters arising from waste discharges shall reduce light transmission by more than 10 per	Marine Waters in Channel subzone

Parameters	Objectives	Sub-Zone
	cent of the normal level in the subzone at any location or any time.	
pH	Shall not cause the normal pH range of any waters of the subzone to be extended by greater than ± 0.5 pH units at any time.	Marine Waters in Harbour subzone
	Shall not cause the normal pH range of any waters of the subzone to be extended by greater than ± 0.3 pH units at any time.	Marine Waters in Buffer subzone
	Shall not cause the normal pH range of any waters of the subzone to be extended by greater than ± 0.1 pH units at any time.	Marine Waters in Channel subzone
	Shall not cause the pH of waters of the subzone to exceed the range of 6.0 to 9.0 at any time.	Inland Waters in Shing Mun (D, E, I) subzones and other watercourses
	Shall not cause the pH of waters of the subzone to exceed the range of 6.5 to 8.5 at any time.	Inland Waters in Shing Mun (A, B, C, F, G, H), Lam Tsuen (C, D) and Tai Po (A, B, C) subzones
Salinity	Shall not cause the normal salinity range of any waters of the subzone to be extended by greater than ± 3 parts per thousand at any time.	All Marine Waters subzone
Settleable Material	Shall give rise to no bottom deposits or submerged objects which adversely influence bottom-living communities, alter the basic Harbour geometry or shipping channels, present any hazard to shipping or diving activities, or affect any other beneficial use of the waters of the subzone.	All Marine Waters subzone
Temperature	Shall not cause the natural daily temperature range in waters of the subzone to be extended by greater than ± 1.0 degree Celsius at any location or time. The rate of temperature change shall not exceed 0.5 degrees Celsius per hour at any location, unless due to natural phenomena.	All Marine Waters subzone
	Human activity should not cause the daily temperature range to change by more than 2.0°C	All Inland Watercourses
Suspended solids (SS)	Shall not cause the annual median of SS in waters of the subzone to exceed 25 milligrams per litre.	Inland Waters in Shing Mun (D, E, I) subzones and other watercourses
	Shall not cause the annual median of SS in waters of the subzone to exceed 20 milligrams per litre.	Inland Waters in Shing Mun (A, B, C, F, G, H), Lam Tsuen (C, D) and Tai Po (A, B, C) subzones
5-Day biochemical oxygen demand (BOD5)	Not to exceed 5 mg/L at any time.	Inland Waters in Shing Mun (A, C, D, E, H, I), Tai Po (B, C) subzones and other watercourses
	Not to exceed 3 mg/L at any time.	Inland Waters in Shing Mun (B, F, G), Lam Tsuen (C, D) and Tai Po (A) subzones
Chemical oxygen demand (COD)	Not to exceed 30 mg/L at any time.	Inland Waters in Shing Mun (A, C, D, E, H, I), Tai Po (B, C) subzones and other watercourses

Parameters	Objectives	Sub-Zone
	Not to exceed 15 mg/L at any time.	Inland Waters in Shing Mun (B, F, G), Lam Tsuen (C, D) and Tai Po (A) subzones
Ammoniacal Nitrogen	Shall not cause the ammoniacal nitrogen in waters of the subzone to exceed 0.5 milligrams per litre at any time.	All Inland Watercourses
Toxic substances	Shall not cause the toxicants in waters of the subzone to attain such a level as to produce significant toxic effects in humans, fish or any other aquatic organism, with due regard to biologically cumulative effects in food chains and to toxicant inter-actions with each other.	Whole Zone

11.1.3 Technical Memorandum on Standards for Effluents Discharged into Drainage and Sewerage Systems, Inland & Coastal Waters (TM-DSS)

11.1.3.1 TM-DSS specifies the limits to control the physical, chemical and microbial parameters for effluent discharges into foul sewers, stormwater drains, inland and coastal water. Any effluent discharge from the proposed construction and operation activities must comply with relevant requirements and standards stipulated in TM-DSS.

11.1.4 Practice Note for Professional Persons on Construction Site Drainage (ProPECC) PN 2/24

11.1.4.1 The Practice Note for Professional Persons (ProPECC Note PN2/24) on Construction Site Drainage provides guidelines for the handling and disposal of construction discharges. It is applicable to this study for the control of site runoff and wastewater generated during the construction phase of the Project. The types of discharges from construction sites outlined in the ProPECC Note PN 2/24 include:

- surface runoff;
- groundwater;
- boring and drilling water;
- wastewater from concrete batching and precast concrete casting;
- wheel washing water;
- bentonite slurries;
- water for testing and sterilization of water retaining structures and water pipes;
- wastewater from building construction and site facilities; and
- acid cleaning, etching and pickling wastewater.

11.1.5 Practice Note for Professional Persons on Drainage Plan Subject to Comment by the Environmental Protection Department (ProPECC) PN 1/23

11.1.5.1 The Practice Note for Professional Persons (ProPECC Note PN1/23) on Drainage Plans subject to Comment by the Environmental Protection Department provides non-statutory guidelines in preparing drainage plans for the operational phase of the Project. It suggests that drainage plans submitted to the Building Authority should be referred to the Environmental Protection Department (EPD) for comment whenever there is a concern for pollution control.

11.1.6 Hong Kong Planning Standards and Guidelines (HKPSG)

11.1.6.1 Chapter 9 of the HKPSG outlines environmental requirements that need to be considered in land use planning. The recommended guidelines, standards and guidance cover the selection of suitable locations for the developments and sensitive uses, provision of environmental facilities, and design, layout, phasing and operational controls to minimize the adverse environmental impacts. It also lists out environmental factors influencing land use planning and recommended buffer distances for land uses.

11.2 Description of the Environment

11.2.1.1 The baseline conditions of marine water were referred to the marine water quality monitoring data routinely collected by EPD. The closest marine water quality monitoring station would be Tolo Harbour & Channel WCZ (Station TM2), which is located around 800m away from the Project Site.

11.2.1.2 The details of the recent water quality monitoring data from the nearest monitoring station in that WCZ (Station TM2) in Year 2025 are presented in **Table 11.2**.

Table 11.2: Summary of EPD's Routine Marine Water Quality Data for Tolo Harbour & Channel Water Control Zone in Year 2025

Parameters		Tolo Harbour & Channel WCZ
		TM2
Temperature (°C)		24.7 (17.6 – 31.5)
Salinity		29.8 (24.5 – 32.7)
Dissolved Oxygen (mg/L)	Depth Averaged	7.4 (3.8 – 10.2)
	Bottom	7.4 (3.0 – 10.3)
Dissolved Oxygen (% Saturation)	Depth Averaged	105 (55 – 150)
	Bottom	104 (45 – 151)
pH		8.0 (7.4 – 8.3)
Secchi Disc Depth (m)		1.8 (1.0 – 2.8)
Turbidity (NTU)		1.5 (0.3 – 5.3)
Suspended Solids (mg/L)		4.0 (1.5 – 8.4)
5-day Biochemical Oxygen Demand (mg/L)		2.0 (0.2 – 4.0)
Ammonia Nitrogen (mg/L)		0.066 (0.019 – 0.235)
Unionised Ammonia (mg/L)		0.003

Parameters	Tolo Harbour & Channel WCZ
	TM2
	(<0.001 – 0.019)
Nitrite Nitrogen (mg/L)	0.006 (<0.002 – 0.022)
Nitrate Nitrogen (mg/L)	0.069 (0.004 – 0.345)
Total Inorganic Nitrogen (mg/L)	0.14 (0.03 – 0.52)
Total Kjeldahl Nitrogen (mg/L)	0.33 (0.21 – 0.62)
Total Nitrogen (mg/L)	0.40 (0.23 – 0.65)
Orthophosphate Phosphorus (mg/L)	0.011 (<0.002 – 0.053)
Total Phosphorus (mg/L)	0.08 (0.03 – 0.17)
Silica (as SiO_2) (mg/L)	1.17 (<0.05 – 4.85)
Chlorophyll-*a* (µg/L)	8.1 (1.3 – 19.5)
E. coli (count/100mL)	31 (1 – 2500)
Faecal Coliforms (count/100mL)	150 (8 – 12000)

Note:

[1] The table above is extracted from the Annual Report of Marine Water Quality in Hong Kong in 2025.

[2] Unless otherwise specified, data presented are depth-averaged (A) values calculated by taking the means of three depths: Surface (S), Mid-depth (M), Bottom (B).

[3] Data presented are annual arithmetic means of the depth-averaged results except for *E. coli* and faecal coliforms, which are annual geometric means.

[4] Data in brackets indicate the ranges.

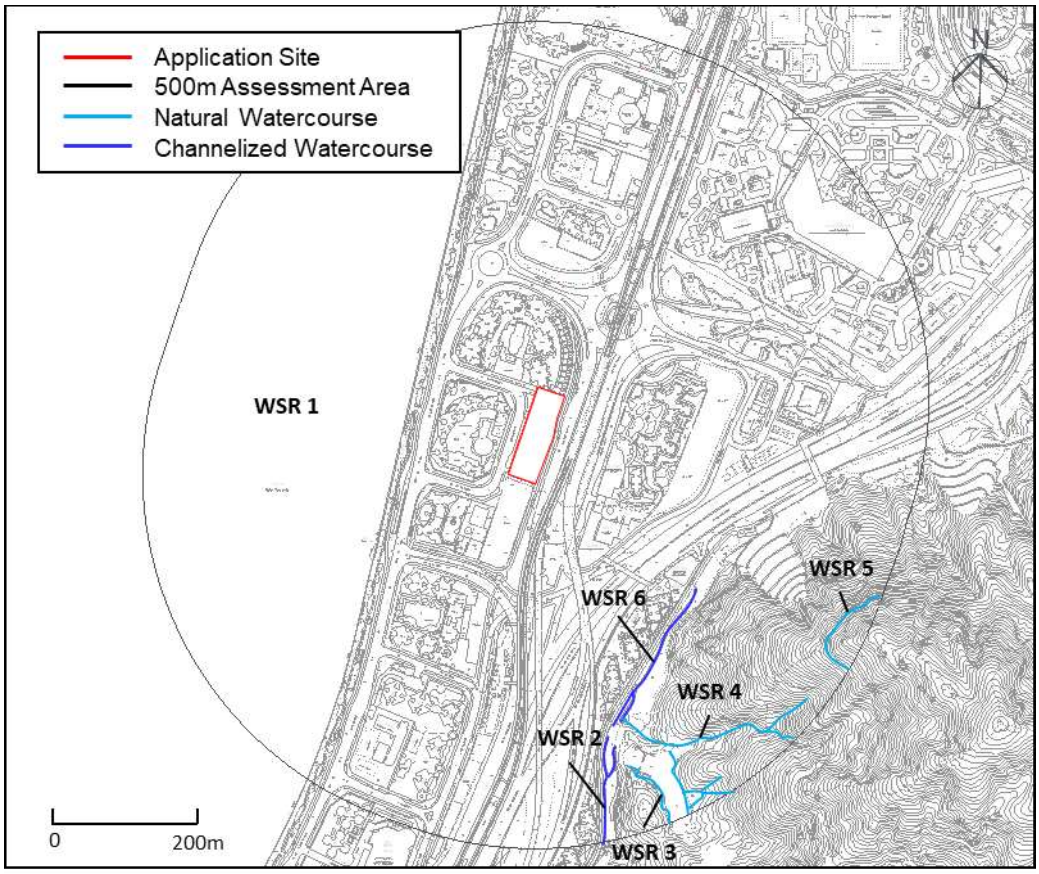
11.3 Water Sensitive Receivers

11.3.1.1 Water Sensitive Receivers (WSRs) within 500m from the Application Site are identified and presented in **Figure 11.1**. Major WSRs are listed in **Table 11.3**.

Table 11.3: Water sensitive receivers

ID	WSRs	Status	Distance from WSR
WSR 1	Sha Tin Hoi	Marine Waters	~ 150m
WSR 2	From Chun Tan House to the South of Chun Biu House	Channelized Watercourse	~ 360m
WSR 3	From Ma On Shan Country Park to the South of Chun Biu House	Natural Watercourse	~ 410m
WSR 4	From Ma On Shan Country Park to Kam Chun Court	Natural Watercourse	~ 340m
WSR 5	From Ma On Shan Country Park to Tai Shui Hang North Street Car Park	Natural Watercourse	~ 455m
WSR 6	From the South of Chun Biu House to Kam Chun Court Commercial and Recreational Block	Channelized Watercourse	~260m

Figure 11.1: Locations of water sensitive receivers



11.4 Evaluation of Construction Phase Impact

11.4.1 Construction Site Runoff

11.4.1.1 During rainstorm events, construction site runoff would come from all over the works site. The surface runoff might be polluted by:

- Runoff and erosion from site surfaces, earth working areas and stockpiles;
- Wash water from dust suppression sprays and wheel washing facilities; and
- Chemicals spillage such as fuel, oil, solvents and lubricants from maintenance of construction machinery and equipment.

11.4.1.2 Construction runoff may cause physical, biological and chemical effects. The physical effects include potential blockage of drainage channels and increase of suspended solid levels in the receiving water bodies. Runoff containing significant amounts of concrete and cement–derived material may cause primary chemical effects such as increasing turbidity and discoloration, elevation in pH, and accretion of solids. A number of secondary effects may also result in toxic effects to water biota due to elevated pH values, and reduced decay rates of faecal microorganisms and photosynthetic rate due to the decreased light penetration.

11.4.1.3 Construction site runoff could be carefully controlled and mitigated through the recommended mitigation measures outlined in **Section 11.5**. Construction site runoff impacts would therefore be reduced to satisfactory levels before discharges such that adverse water quality impact would not be anticipated.

11.4.2 Sewage from Workforce

11.4.2.1 Sludge and sewage effluents will arise from the sanitary facilities provided for the on–site construction workforce. The sewage is characterized by high levels of biochemical oxygen demand (BOD), ammonia, E. coli and oil / grease.

11.4.2.2 The sewage generated should be properly managed to minimize the adverse impact of odour and potential health risks to the workers by attracting pests and other disease vectors.

11.4.2.3 Adequate portable chemical toilets should be provided to ensure all sewage is properly collected. It is anticipated that no adverse environmental implications would arise if the chemical toilets are properly maintained and licensed collectors are employed for the collection and disposal of sewage on a regular basis.

11.4.3 Accidental Spillage of Chemical

11.4.3.1 Chemicals used during construction, such as fuel, oil, solvents, and lubricants from the maintenance of construction machinery and equipment, may cause pollution and trigger physicochemical effects in the nearby waterbodies if accidental spillage occurs. However, with the proper implementation of mitigation measures recommended in **Section 11.5** below, there would not be adverse water quality impacts.

11.5 Recommended Mitigation Measures for Construction Phase

11.5.1 Construction Site Runoff

11.5.1.1 In accordance with the Practice Note for Professional Persons on Construction Site Drainage, EPD, 2024 (ProPECC PN 2/24), the proposed construction phase mitigation measures include but not limited to the following.

- Surface run-off from construction sites should be discharged into storm water drains via adequately designed sand/silt removal facilities such as sand traps, silt traps, sedimentation tanks and sediment basins. Channels or earth bunds or sand bag barriers should be provided on site to properly direct surface run-off to such silt removal facilities. Perimeter channels at site boundaries should be provided where necessary to intercept surface run-off from outside the site so that it will not wash across the site. Catchpits and perimeter channels should be constructed in advance of site formation works and earthworks.
- Silt removal facilities, channels and manholes should be maintained and the deposited silt and grit should be removed regularly, at the onset of and after each rainstorm to ensure that these facilities are functioning properly at all times. Dikes or embankments for flood protection should be implemented around the boundaries of earthwork areas. Temporary ditches should be provided to facilitate the runoff discharge into storm drains, through a silt/sediment trap. The silt/ sediment traps should be incorporated in the permanent drainage channels to enhance deposition rates.
- Construction works should be programmed to minimize soil excavation works in rainy seasons (generally from April to September). If soil excavation works could not be avoided in these months or at any time of year when rainstorms are likely, for the purpose of preventing soil erosion, temporarily exposed slope surfaces should be

covered (e.g. by tarpaulin), and temporary access roads should be protected by crushed stone or gravel, as excavation proceeds. Intercepting channels should be provided (e.g. along the crest/edge of excavation) to prevent surface run-off from washing across exposed soil surfaces. Arrangements should always be in place to ensure that adequate surface protection measures can be safely carried out well before the arrival of a rainstorm.

- Earthworks final surfaces should be well compacted and the subsequent permanent works or surface protection works should be carried out immediately after the final surfaces are formed to prevent erosion caused by rainstorms. Appropriate drainage like intercepting channels should be provided where necessary.
- Measures should be taken to minimize the ingress of rainwater into trenches. If excavation of trenches in the rainy season is necessary, they should be dug and backfilled in short sections of length. Rainwater pumped out from trenches or foundation excavations should be discharged into storm water drains via silt removal facilities.
- Open stockpiles of construction materials (e.g. aggregates, sand and fill material) on sites should be covered with tarpaulin or similar impermeable fabric during rainstorms. Measures should be taken to prevent washing away construction materials, soil, silt or debris into any drainage system.
- Manholes (including newly constructed ones) should always be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris from getting into the drainage system, and to prevent surface run-off from getting into foul sewers. Discharge of surface run-off into foul sewers must always be prevented in order not to unduly overload the foul sewerage system.
- Precautions to be taken at any time of year when rainstorms are likely, actions to be taken when a rainstorm is imminent or forecast and actions to be taken during or after rainstorms.
- Groundwater pumped out of wells, etc. for lowering ground water level in basement or foundation construction, and groundwater seepage pumped out of tunnels or caverns under construction should be diverted to silt removal facilities for treatment before discharging into storm water drains.
- Water used in ground boring and drilling for site investigation or rock/soil anchoring should as far as practicable be recirculated after sedimentation. When there is a need for final disposal, the wastewater should be discharged into storm water drains via silt removal facilities.
- Wastewater generated from the washing down of mixer trucks and drum mixers and similar equipment should wherever practicable be recycled. The discharge of wastewater should be kept to a minimum.
- To prevent pollution from wastewater overflow, the pump sump of any water recycling system should be provided with a standby pump of adequate capacity and with automatic alternating devices.
- Under normal circumstances, surplus wastewater may be discharged into foul sewers after proper treatment (e.g. silt removal, pH adjustment to within the pH range of 6 to 10, etc.). Disposal of wastewater into storm water drains will require more elaborate treatment. Surface run-off should be segregated from the concrete batching plant and casting yard area as much as possible, and diverted to the storm water drainage system. Surface run-off contaminated by materials in a concrete batching

plant or casting yard should be adequately treated before disposal into storm water drains.

- All vehicles and plants should be cleaned before they leave a construction site to ensure no earth, mud, debris and the like is deposited by them on roads. A wheel washing bay should be provided at every site exit if practicable and wash-water should have sand and silt settled out or removed before discharging into storm water drains. The section of construction road between the wheel washing bay and the public road should be paved to reduce vehicle tracking of soil and to prevent site run-off from entering public road drains.
- Bentonite slurries used in diaphragm wall and bored-pile construction should be reconditioned and reused wherever practicable. If the disposal of a certain residual quantity cannot be avoided, used bentonite slurry (if mixed with only inert fill materials) should be dewatered, and disposed of at a (i) public fill reception facility / area; or (ii) marine dumping ground (as the last resort) subject to obtaining a marine dumping licence from the Environmental Protection Department (EPD) on a case-by-case basis.
- The water generated from the dewatering process should be treated to the respective effluent standards applicable to foul sewers, storm water drains or the receiving waters as set out in the "Technical Memorandum on Effluent Standards" (TM) issued under the Water Pollution Control Ordinance (WPCO) (Cap. 358) which is made available at the EPD's website (http://www.epd.gov.hk).
- Water used in water testing to check leakage of structures and pipes should be reused for other purposes as far as practicable. Surplus unpolluted water could be discharged into storm water drains.
- Sterilization is commonly accomplished by chlorination. Specific advice from the EPD should be sought during the design stage of the works with regard to the disposal of the sterilizing water. The sterilizing water should be reused wherever practicable.
- Before commencing any demolition works, all sewer and drainage connections should be sealed to prevent building debris, soil, sand etc. from entering public sewers/drains.
- Wastewater generated from building construction activities including concreting, plastering, internal decoration, cleaning of works and similar activities should not be discharged into the storm water drainage system. If the wastewater is to be discharged into foul sewers, it should undergo the removal of settleable solids in a silt removal facility, and pH adjustment as necessary.
- Acidic wastewater generated from acid cleaning, etching, pickling and similar activities should be neutralized to within the pH range of 6 to 10 before discharging into foul sewers. If there is no public foul sewer in the vicinity, the neutralized wastewater should be tankered off site for disposal into foul sewers or treated to a standard acceptable for discharge into to storm water drains and the receiving waters.
- Sewage from toilets, kitchens and similar facilities should be discharged into a foul sewer. If there is no foul sewer in the vicinity, chemical toilets, a septic tank and soakaway system (see Appendix B of ProPECC PN 2/24 for general reference) or for larger flows, a sewage treatment plant will have to be provided as appropriate.
- Wastewater collected from canteen kitchens, including that from basins, sinks and floor drains, should be discharged into foul sewers via grease traps capable of providing at least 20 minutes retention during peak flow. Details of a typical grease trap should be referred to Appendix C of ProPECC PN 2/24 for general reference.

The EPD has also published "Grease Traps for Restaurants and Food Processors" which provides guidance on the design, operation and maintenance of grease traps and it is made available at the EPD's website (http://www.epd.gov.hk).

- Drainage serving an open oil filling point should be connected to storm water drains via a petrol interceptor with peak storm bypass. Typical details of such a petrol interceptor prepared by the Highways Department, available at its website (http://www.hyd.gov.hk) for general reference.
- Vehicle and plant servicing areas, vehicle wash bays and lubrication bays should as far as possible be located within roofed areas. The drainage in these covered areas should be connected to the foul sewer via petrol interceptor(s). Oil leakage or spillage should be contained and cleaned up immediately. Waste oil should be collected and stored for recycling or disposal in accordance with the Waste Disposal Ordinance (Cap. 354).

11.5.1.2 By adopting the above construction site mitigation measures with best management practices in accordance with ProPECC PN 2/24, it is anticipated that the impacts of construction site runoff from the construction site will be reduced to satisfactory levels before discharges. The details of best management practices will be highly dependent to actual site condition and the Contractor shall apply for a discharge license under WPCO.

11.5.2 Sewage from Workforce

11.5.2.1 Portable chemical toilets and sewage holding tanks should be provided for handling the sewage generated by the construction workforce. A licensed contractor should be employed to provide appropriate and adequate portable toilets to cater employed populations and be responsible for appropriate disposal and maintenance.

11.5.2.2 Notices should be posted at conspicuous locations to remind the workers not to discharge any sewage or wastewater into the nearby environment during the construction phase. Regular environmental audit on the construction site should be conducted in order to provide an effective control of any malpractices and achieve continual improvement of environmental performance on site.

11.5.3 Accidental Spillage of Chemical

11.5.3.1 The mitigation measures for avoiding accidental spillage of Chemical are given below:

- Proper implementation of best practices of chemical storage practices (i.e., storage under covered area, provision of secondary containment, and material safety data sheets etc.);
- Potential chemical wastes should be disposed of in accordance with the guidelines stipulated in the Waste Disposal (Chemical Waste) (General) Regulation (Cap. 354C).
- Provision of spill kits to handle spillage; and
- Provide training on handling spillage events to the construction workforce.

11.6 Operational Phase Impact

11.6.1.1 The major sources of water quality impact during operational phase includes.

- Runoff from the Development; and
- Sewage from the Development.

11.6.2 Runoff from the Development

11.6.2.1 The proposed development will lead to an increase in area of impermeable surfaces and hence the peak surface runoff rates. Besides, vehicle dust, tyre scraps and oils might be washed away from the road surface to the nearby water courses by surface runoff or road surface cleaning. Subject to detailed design and requirement of relevant government departments, the capacities of road drainage system shall cater the runoff from 50 year-return-period rainstorm. Proper drainage systems with silt traps and oil interceptors should be installed and connected to the existing drainage system. The design of road gullies with silt traps should be incorporated in the detailed design stage.

11.6.2.2 The Professional Persons Environmental Consultative Committee Practice Note 1/23 Drainage Plans subject to Comment by the Environmental Protection Department – Building (Standards of Sanitory Fitments, Plumbing, Drainage Works and Latrines) Regulations (ProPECC PN 1/23), also provides guidelines and practices for handling, treatment and disposal of various effluent discharges to stormwater drains and foul sewers. The design of site drainage and disposal of site effluents generated within the proposed development area should follow the relevant guidelines and practices as given in the ProPECC PN 1/23.

11.6.3 Sewage from the Development

11.6.3.1 Sewage will be generated from the future population who use the facilities of the Development. According to the current design, the estimated Average Dry Weather Flow (ADWF) from the development is about 875 m^3/day. All sewage will be conveyed to the public sewerage system, which will be connected to the Sha Tin Sewage Treatment Works. The Development will be properly sewered and adverse water quality impact is not anticipated. A separate Sewerage Impact Assessment Report has been conducted to assess the impact of sewage generation as a result of the proposed development. Details of mitigation measures, if necessary, shall be referred to the Sewerage Impact Assessment (SIA) Report.

11.7 Recommended Mitigation Measures

11.7.1.1 The site is located at a highly urbanised, well-planned area. As evaluated in above **Section 11.6.2**, adverse water quality impact during operational phase is not anticipated. However, any potential impact can be further minimized with the implementation of mitigation measures recommended below.

11.7.2 Runoff from the Development

11.7.2.1 The Development will lead to an increase in area of impermeable surfaces and hence the peak surface runoff rates. Besides, vehicle dust, tyre scraps and oils might be washed away from the road surface to the nearby water environment by surface runoff or road surface cleaning. Proper drainage systems with silt traps and oil interceptors should be installed.

11.7.2.2 Runoff will be controlled by best management practice. Runoff will be intercepted by properly designed and managed silt traps at appropriate spacing so that common debris, refuse and fallen leaves etc. can be captured before allowing the runoff to drain into nearby water environment. The collected pollutants would be tankered away for off-site disposal at landfill sites. After the removal of the pollutants, the pollution levels from stormwater would be much reduced. Furthermore, the design of drainage plans would follow the recommendations in ProPECC PN 1/23 which provides useful non-statutory guidelines for pollution control on different types of discharge from the Development to minimize water quality impact.

11.7.3 Sewage from the Development

11.7.3.1 As mentioned in **Section 11.6.3** above, the Development will be properly sewered and adverse water quality impact is not anticipated.

12. Conclusion

12.1.1.1 An Environmental Assessment Study has been conducted to support the Planning Application under Section 12A of TPO for the Proposed Composite Residential Re-Development at 16 Po Tai Street, Ma On Shan.

12.1.1.2 With the implementation of fixed glazing, acoustic window and enhanced acoustic balcony, a road traffic noise compliance rate of 100% could be achieved for the proposed development. Adverse road traffic noise impact on the proposed development are not anticipated.

12.1.1.3 Tuen Ma Line (TML) is running on a viaduct along Sai Sha Road. Rail noise assessment indicates that the predicted noise levels for the proposed residential development would comply with the ANL and the HKPSG's criteria. Adverse rail noise impact on the proposed residential development is not anticipated.

12.1.1.4 No existing major fixed noise sources were identified within 300m of the subject site. Hence, potential fixed noise impact on the proposed residential development is not anticipated.

12.1.1.5 The current design scheme has allowed sufficient setback from the surrounding roads to meet the minimum requirement as stipulated in the HKPSG. Hence potential vehicular emission impact is not anticipated. Based on the chimney survey, no existing chimneys were found within 500m of the subject site.

12.1.1.6 A preliminary land contamination site appraisal through desktop review and site survey has been conducted to review any past and existing land uses within and adjoining the Application Site. It is found that there is no potential of land contamination within and adjoining the Application Site.

12.1.1.7 For waste management, implications due to construction and operational phases are not anticipated provided good practices are in place.

12.1.1.8 Potential water pollution sources have been identified and mitigation measures have been recommended to mitigate any potential water quality impacts during the construction phase. With the implementation of good site practices and mitigation measures, adverse water quality impacts are not anticipated. Operational impacts associated with runoff and sewage from the development would be insignificant with proper management practices in place. The proposed development will be properly sewered and adverse water quality impact is not anticipated.

12.1.1.9 It is concluded that there are no insurmountable environmental impacts at the Proposed Composite Residential Re-Development at, 16 Po Tai Street, Ma On Shan.

Appendix 2.1

Schematic Sections

SITE PARTICULARS

ADDRESS	= PO TAI STREET, MA ON SHAN, SHA TIN, N.T.
LOT NO.	= SHA TIN TOWN LOT NO. 482
AREA OF SITE	= 5,090 m²
CLASS OF SITE	= 'A'
HEIGHT OF BUILDING (mPD)	= 100mPD
SITE COVERAGE	
PERMITTED SITE COVERAGE FOR NON-DOMESTIC (OVER 15m)	= 60%
PERMITTED SITE COVERAGE FOR DOMESTIC	= 33.33%

PROPOSED RESIDENTIAL

PLOT RATIO	= 5
GROSS FLOOR AREA	= 25,450 m²
SITE COVERAGE	= 21.509%

NOS. OF UNIT

ONE BEDROOM	= 282
TWO BEDROOM	= 168
THREE BEDROOM + MAID	= 90
TOTAL	= 540

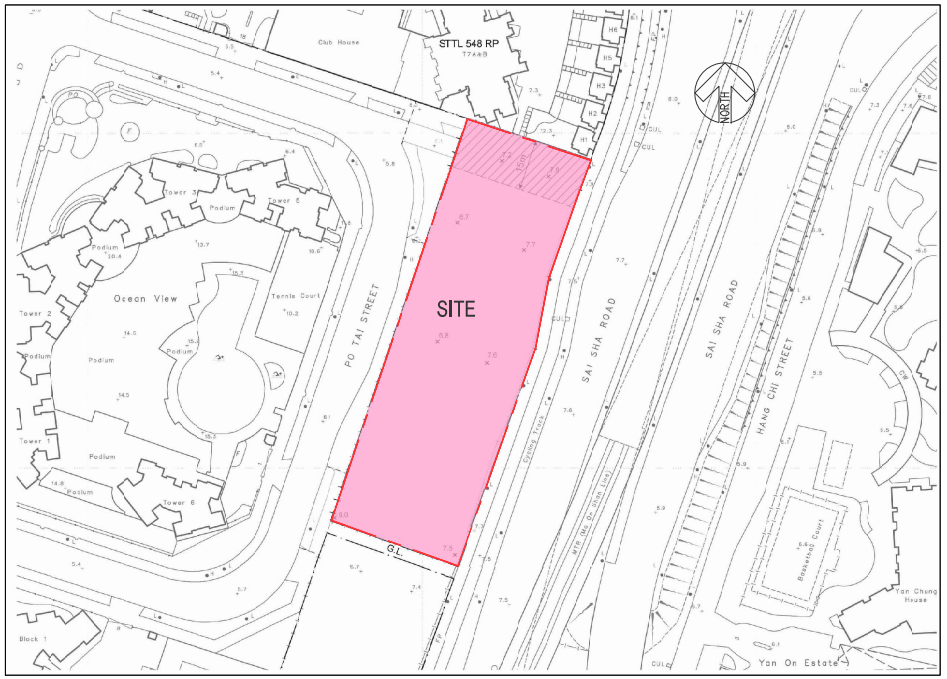
PROPOSED COMMERCIAL

PLOT RATIO	= 1.792
GROSS FLOOR AREA	= 9,121.280 m²

PROPOSED CHILD CARE CENTRE

PLOT RATIO	= 0.198
GROSS FLOOR AREA	= 1,007.820 m²

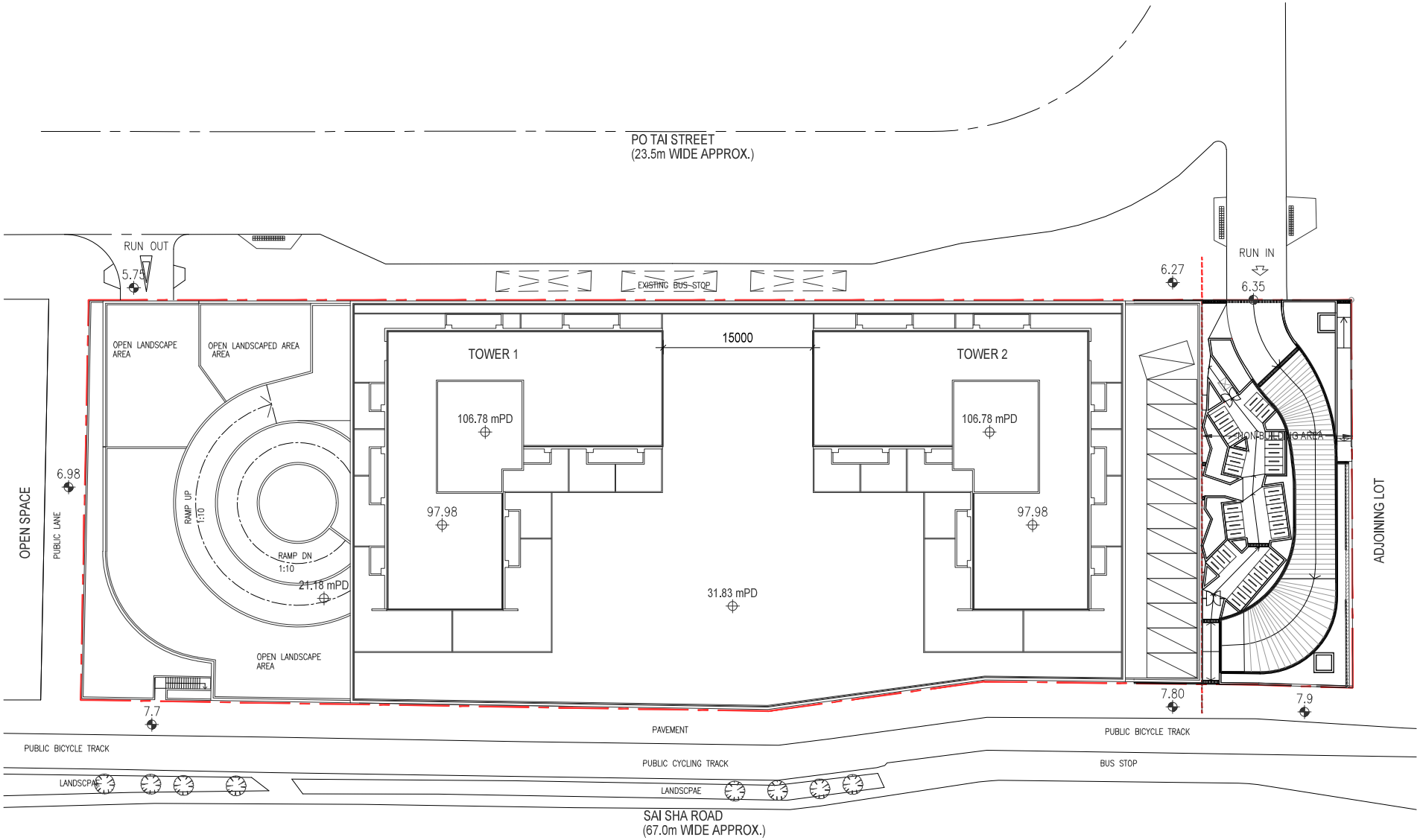
TOTAL PLOT RATIO	= 6.99
TOTAL GROSS FLOOR AREA	= 35,579.100 m²



BLOCK PLAN
1:1500

SECTION 12A APPLICATION FOR PROPOSED REZONING FROM "COMMERCIAL", "OPEN SPACE" AND AN AREA SHOWN AS 'ROAD' TO "RESIDENTIAL (GROUP A)13" AND AMEND THE NOTES OF THE ZONE APPLICABLE TO THE SITE FOR PROPOSED FLAT, SHOP AND SERVICES, EATING PLACE AND SOCIAL WELFARE FACILITY (CHILD CARE CENTRE) USES AT 16 PO TAI STREET, MA ON SHAN

04/11/2026

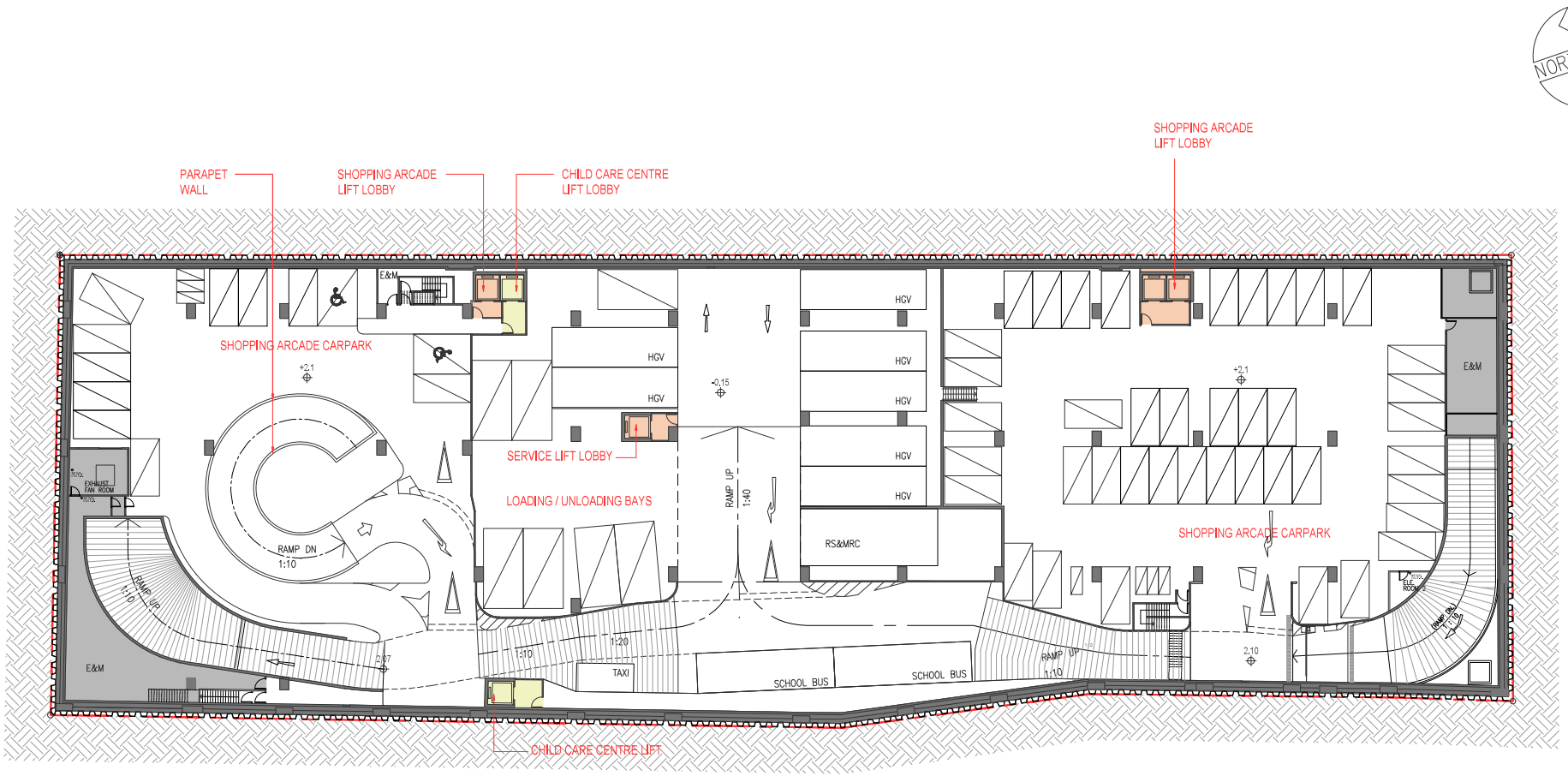


MASTER LAYOUT PLAN

1:400

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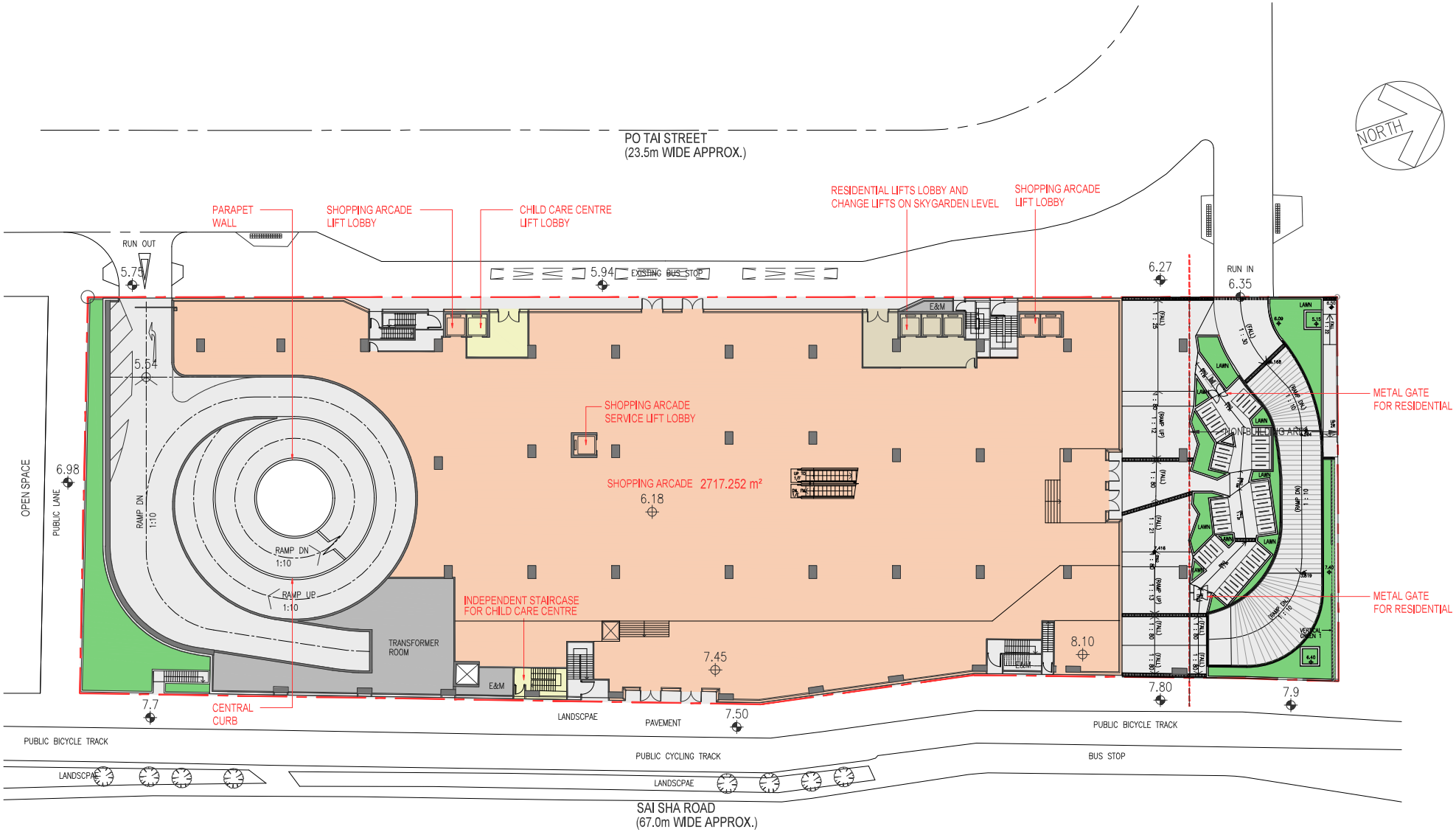


BASEMENT 1 FLOOR PLAN

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SECTION 12A APPLICATION FOR PROPOSED REZONING FROM "COMMERCIAL", "OPEN SPACE" AND AN AREA SHOWN AS 'ROAD' TO "RESIDENTIAL (GROUP A)13" AND AMEND THE NOTES OF THE ZONE APPLICABLE TO THE SITE FOR PROPOSED FLAT, SHOP AND SERVICES, EATING PLACE AND SOCIAL WELFARE FACILITY (CHILD CARE CENTRE) USES AT 16 PO TAI STREET, MA ON SHAN

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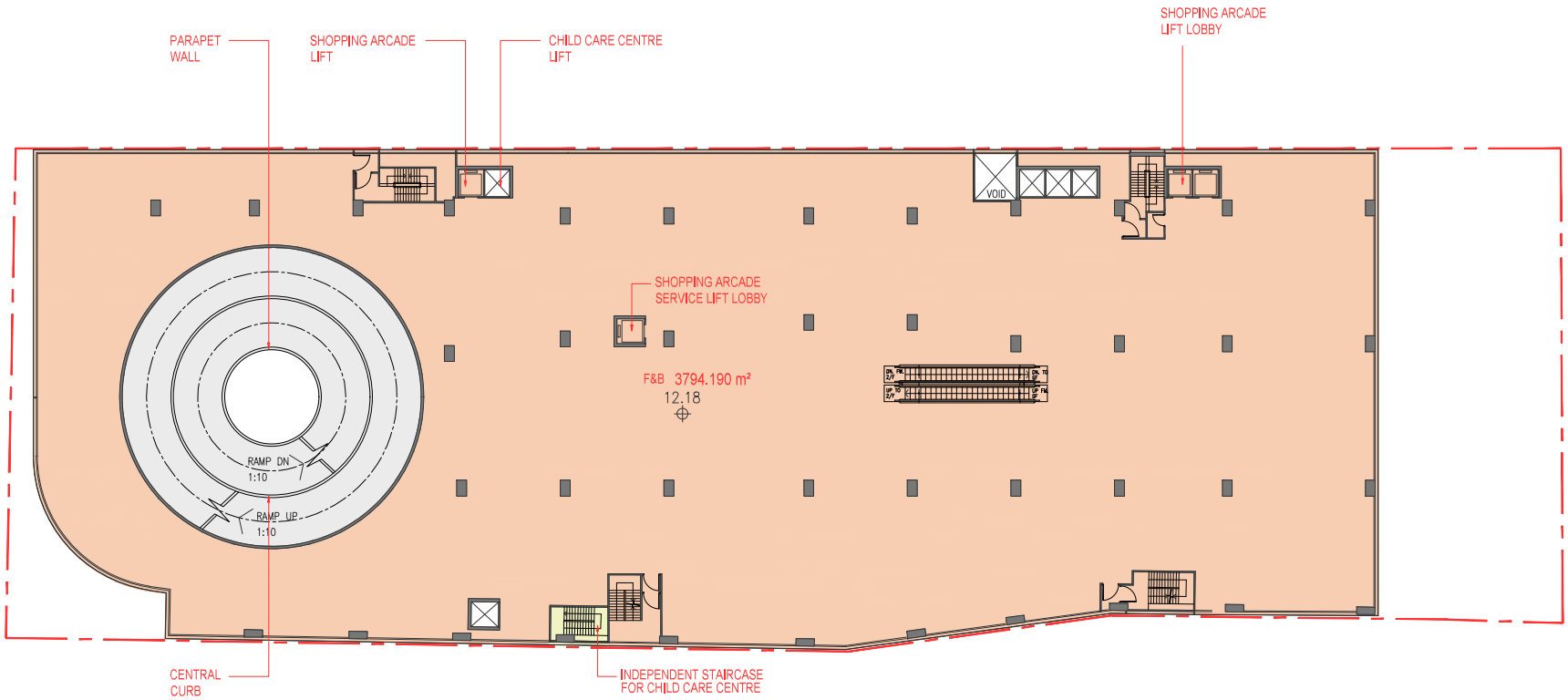


GROUND FLOOR PLAN

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SECTION 12A APPLICATION FOR PROPOSED REZONING FROM “COMMERCIAL”, “OPEN SPACE” AND AN AREA SHOWN AS 'ROAD' TO “RESIDENTIAL (GROUP A)13” AND AMEND THE NOTES OF THE ZONE APPLICABLE TO THE SITE FOR PROPOSED FLAT, SHOP AND SERVICES, EATING PLACE AND SOCIAL WELFARE FACILITY (CHILD CARE CENTRE) USES AT 16 PO TAI STREET, MA ON SHAN

04/11/2026



1ST FLOOR PLAN

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SECTION 12A APPLICATION FOR PROPOSED REZONING FROM “COMMERCIAL”, “OPEN SPACE” AND AN AREA SHOWN AS 'ROAD' TO “RESIDENTIAL (GROUP A)13” AND AMEND THE NOTES OF THE ZONE APPLICABLE TO THE SITE FOR PROPOSED FLAT, SHOP AND SERVICES, EATING PLACE AND SOCIAL WELFARE FACILITY (CHILD CARE CENTRE) USES AT 16 PO TAI STREET, MA ON SHAN

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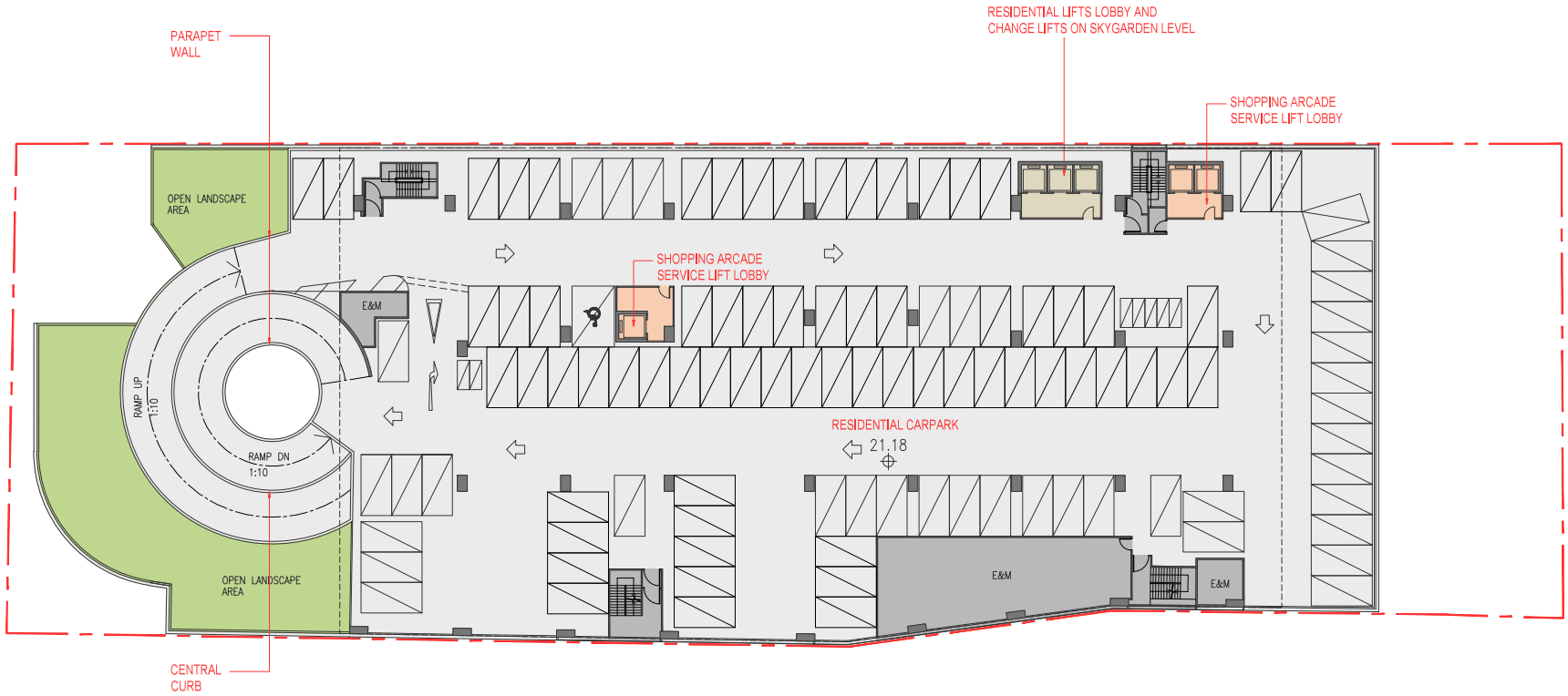


2ND FLOOR PLAN

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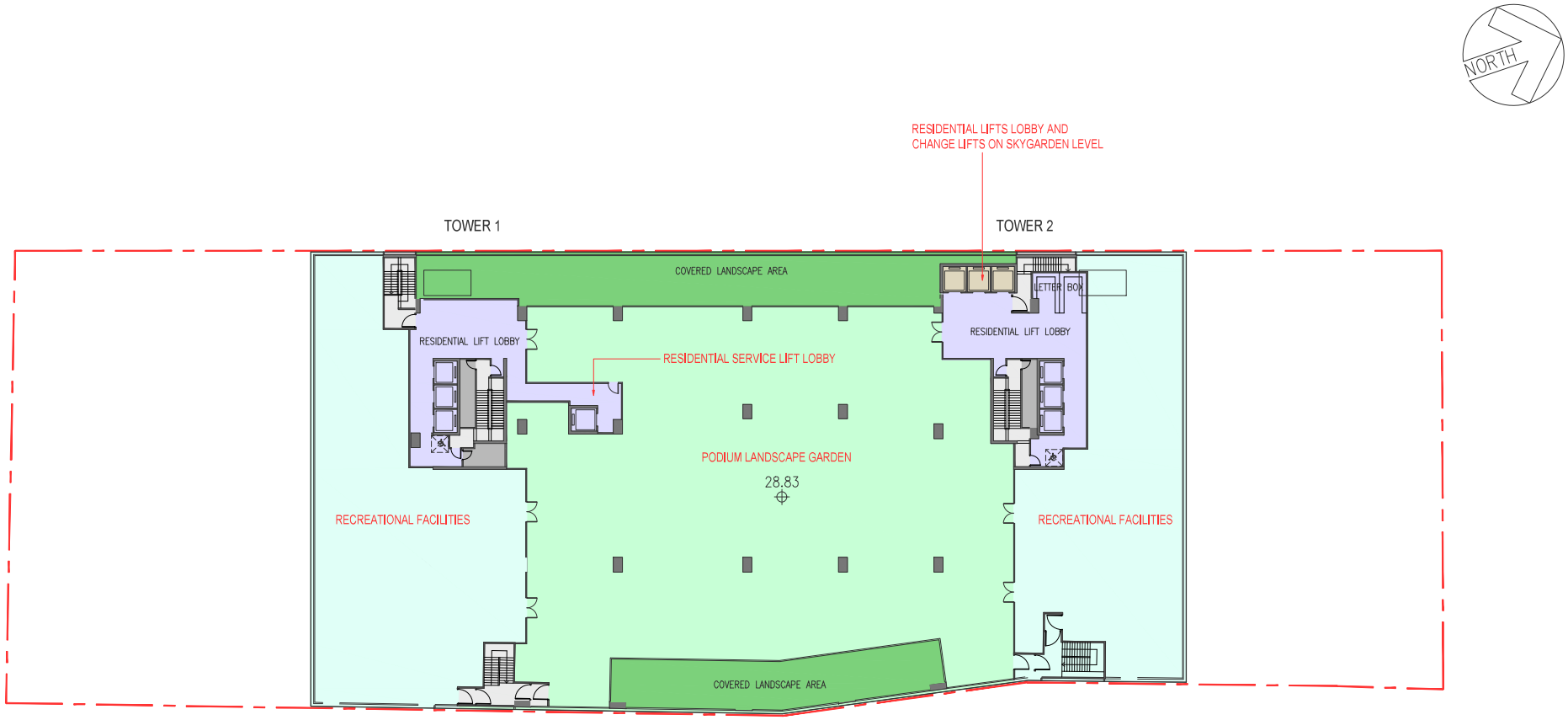


3RD FLOOR PLAN (RESIDENTIAL CARPARK)

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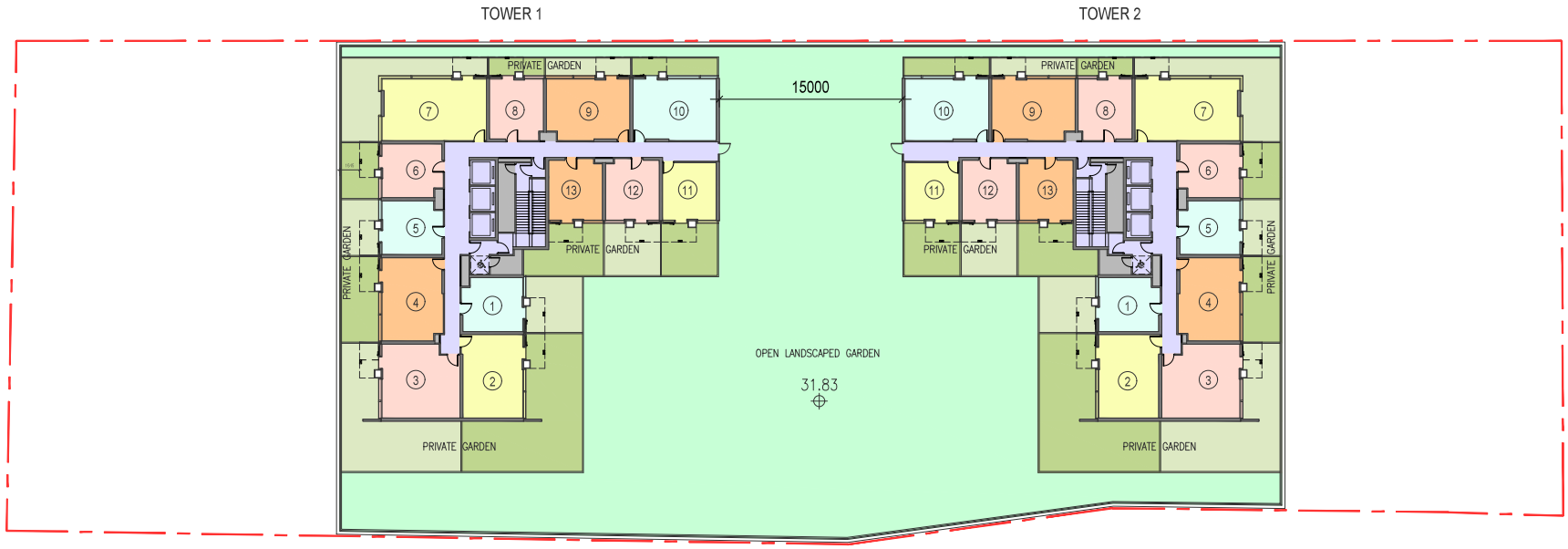


5TH FLOOR PLAN (RECREATIONAL FACILITIES AND COMMUNAL SKY GARDEN)

1:400

SECTION 12A APPLICATION FOR PROPOSED REZONING FROM “COMMERCIAL”, “OPEN SPACE” AND AN AREA SHOWN AS 'ROAD' TO “RESIDENTIAL (GROUP A)13” AND AMEND THE NOTES OF THE ZONE APPLICABLE TO THE SITE FOR PROPOSED FLAT, SHOP AND SERVICES, EATING PLACE AND SOCIAL WELFARE FACILITY (CHILD CARE CENTRE) USES AT 16 PO TAI STREET, MA ON SHAN

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6TH FLOOR PLAN (RESIDENTIAL)

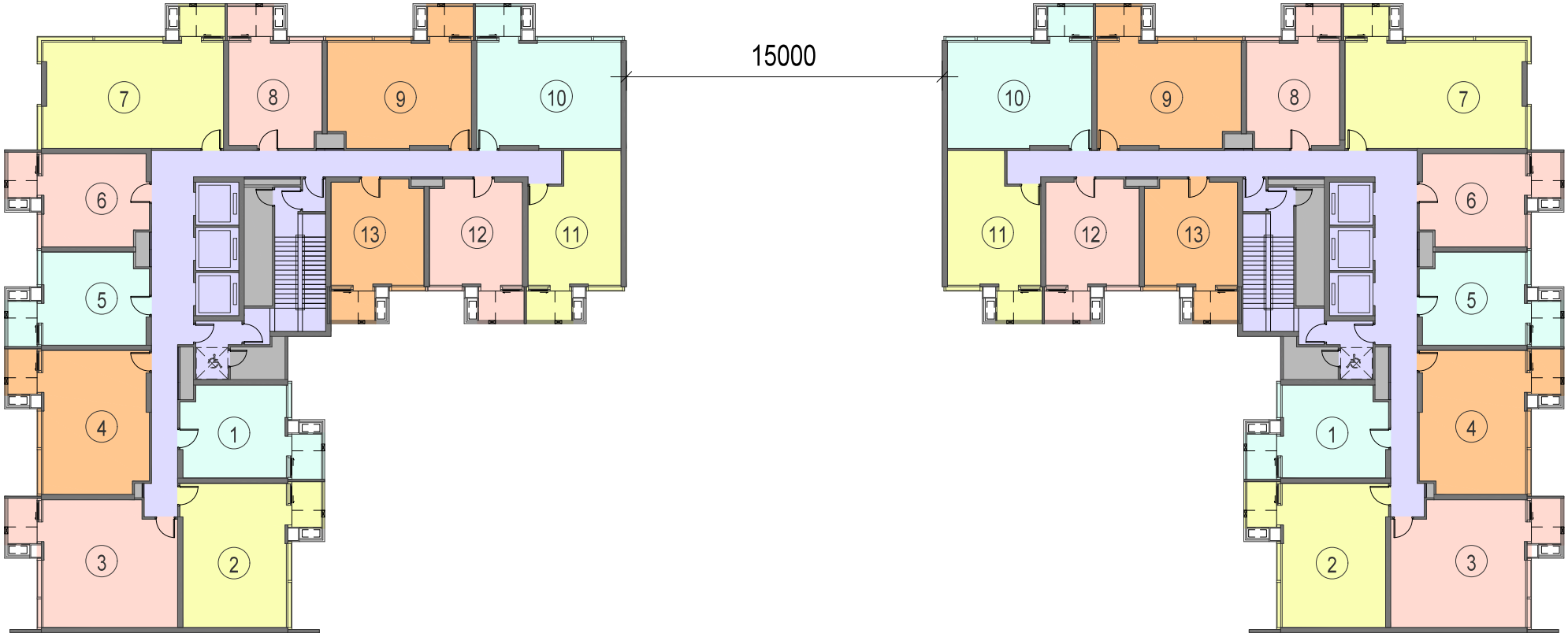
1:400

SECTION 12A APPLICATION FOR PROPOSED REZONING FROM "COMMERCIAL", "OPEN SPACE" AND AN AREA SHOWN AS 'ROAD' TO "RESIDENTIAL (GROUP A)13" AND AMEND THE NOTES OF THE ZONE APPLICABLE TO THE SITE FOR PROPOSED FLAT, SHOP AND SERVICES, EATING PLACE AND SOCIAL WELFARE FACILITY (CHILD CARE CENTRE) USES AT 16 PO TAI STREET, MA ON SHAN

04/11/2026

TOWER 1

TOWER 2



7TH ~ 26TH FLOOR PLAN (17 STOREYS OF RESIDENTIAL)

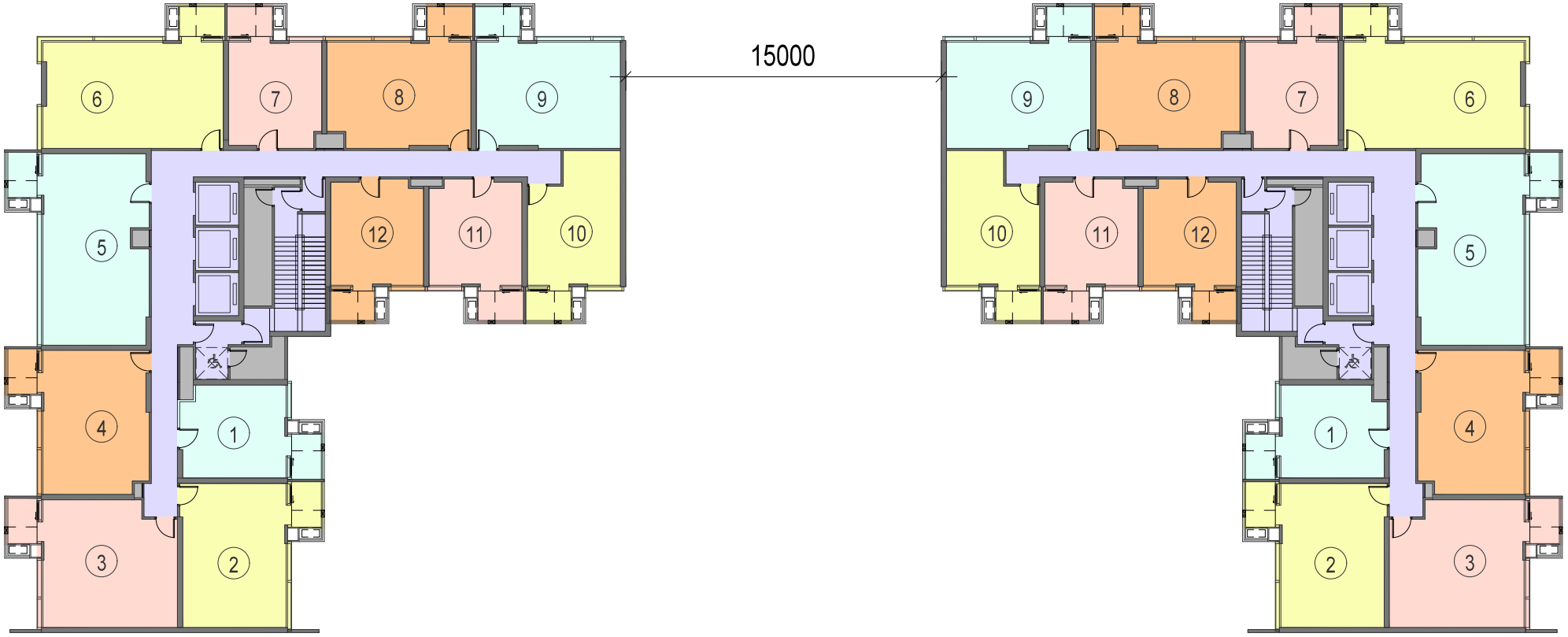
1:200

SECTION 12A APPLICATION FOR PROPOSED REZONING FROM “COMMERCIAL”, “OPEN SPACE” AND AN AREA SHOWN AS 'ROAD' TO “RESIDENTIAL (GROUP A)13” AND AMEND THE NOTES OF THE ZONE APPLICABLE TO THE SITE FOR PROPOSED FLAT, SHOP AND SERVICES, EATING PLACE AND SOCIAL WELFARE FACILITY (CHILD CARE CENTRE) USES AT 16 PO TAI STREET, MA ON SHAN

04/11/2026

TOWER 1

TOWER 2



27TH ~ 29TH FLOOR PLAN (3 STOREYS OF RESIDENTIAL)

1:200

SECTION 12A APPLICATION FOR PROPOSED REZONING FROM "COMMERCIAL", "OPEN SPACE" AND AN AREA SHOWN AS 'ROAD' TO "RESIDENTIAL (GROUP A)13" AND AMEND THE NOTES OF THE ZONE APPLICABLE TO THE SITE FOR PROPOSED FLAT, SHOP AND SERVICES, EATING PLACE AND SOCIAL WELFARE FACILITY (CHILD CARE CENTRE) USES AT 16 PO TAI STREET, MA ON SHAN

04/11/2026

SITE PARTICULARS

ADDRESS	= PO TAI STREET, MA ON SHAN, SHA TIN, N.T.
LOT NO.	= SHA TIN TOWN LOT NO. 482
AREA OF SITE	= 5,090 m²
CLASS OF SITE	= 'A'
HEIGHT OF BUILDING (mPD)	= 100mPD
SITE COVERAGE	
PERMITTED SITE COVERAGE FOR NON-DOMESTIC (OVER 15m)	= 60%
PERMITTED SITE COVERAGE FOR DOMESTIC	= 33.33%

PROPOSED RESIDENTIAL

PLOT RATIO	= 5
GROSS FLOOR AREA	= 25,450 m²
SITE COVERAGE	= 21.509%

NOS. OF UNIT

ONE BEDROOM	= 282
TWO BEDROOM	= 168
THREE BEDROOM + MAID	= 90
TOTAL	= 540

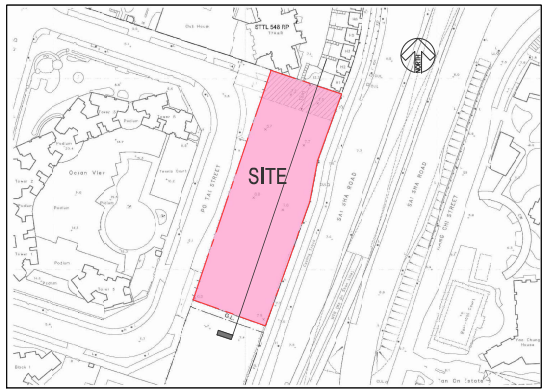
PROPOSED COMMERCIAL

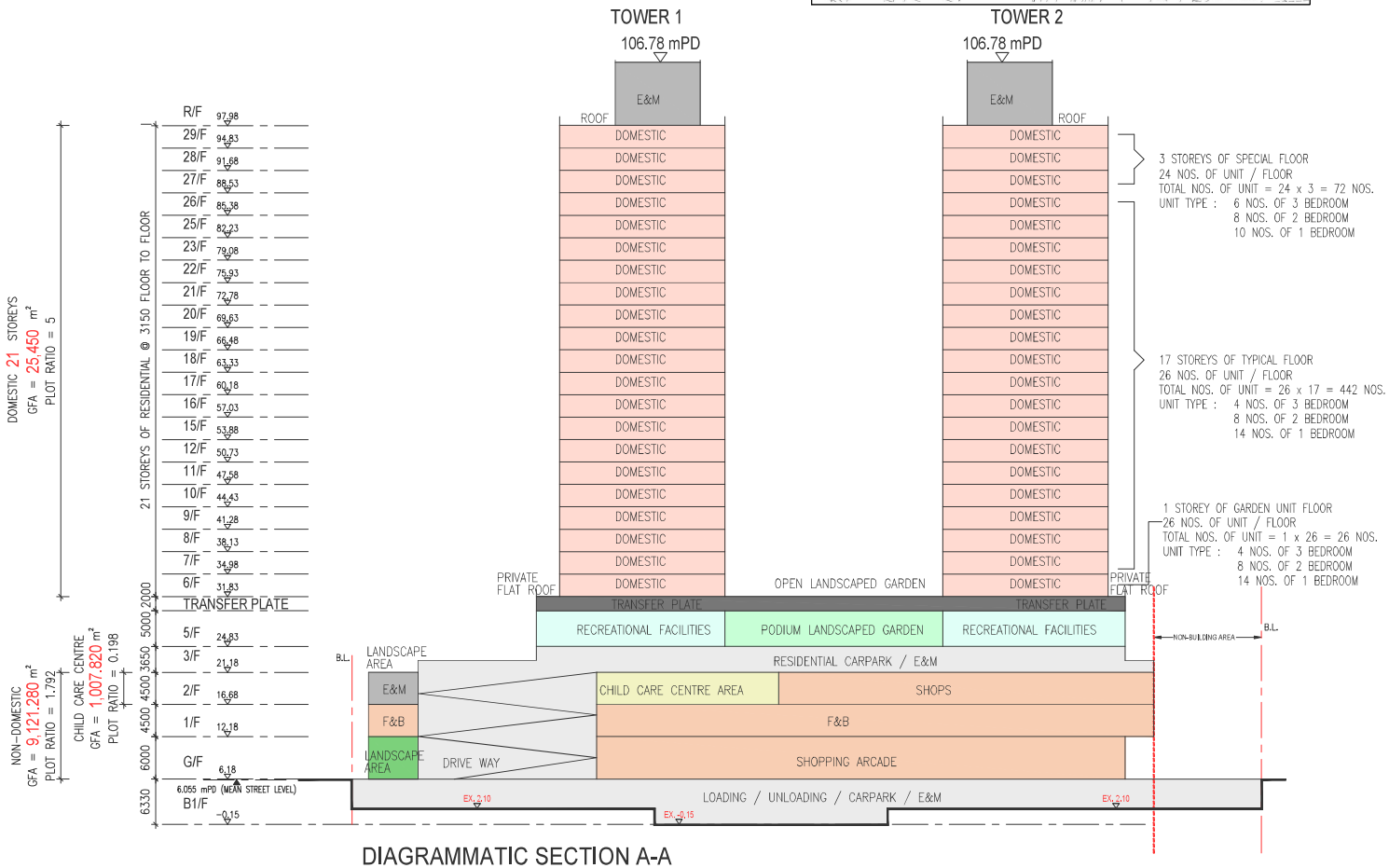
PLOT RATIO	= 1.792
GROSS FLOOR AREA	= 9,121.280 m²

PROPOSED CHILD CARE CENTRE

PLOT RATIO	= 0.198
GROSS FLOOR AREA	= 1,007.820 m²

TOTAL PLOT RATIO	= 6.99
TOTAL GROSS FLOOR AREA	= 35,579.100 m²





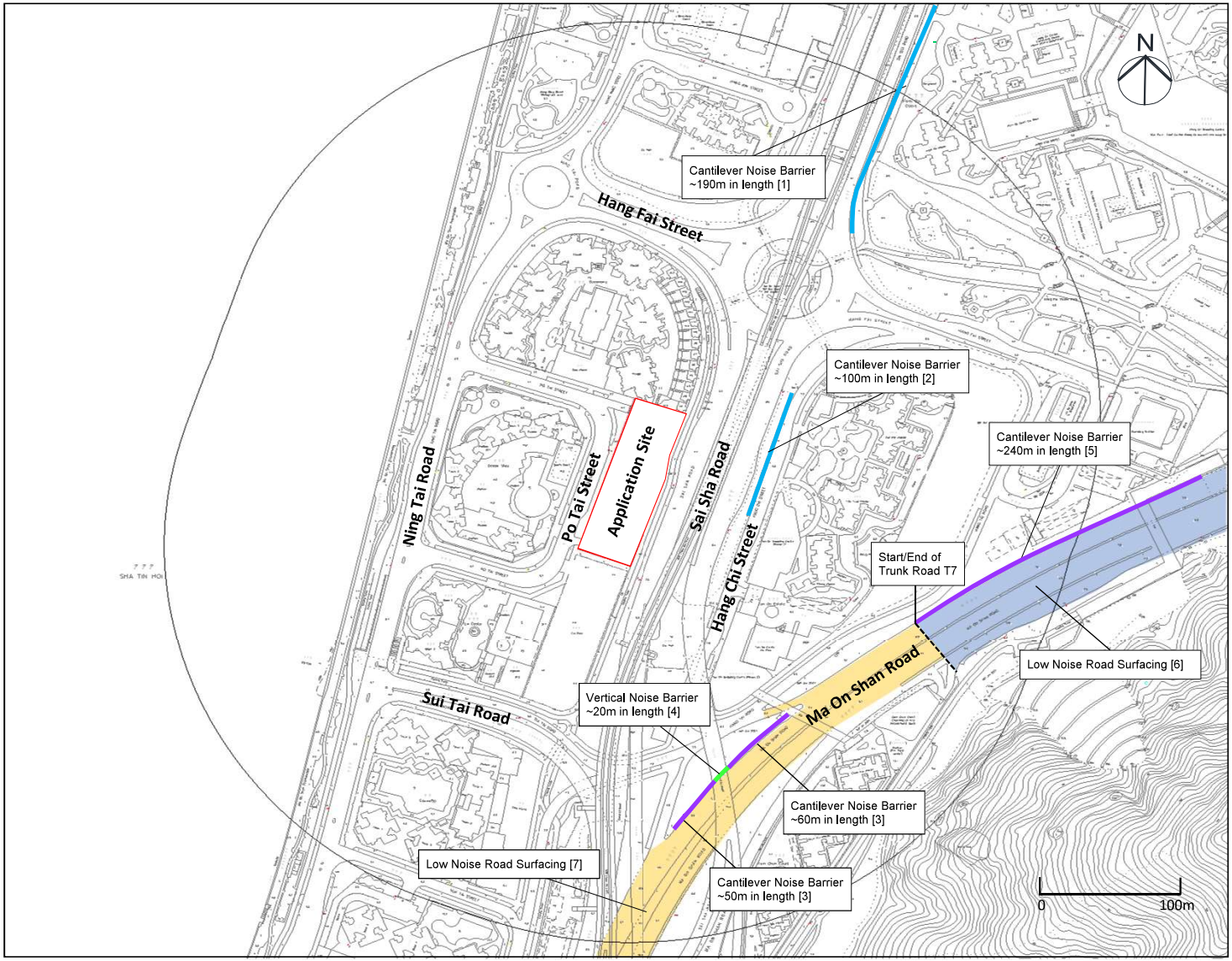
DIAGRAMMATIC SECTION A-A
1:700

SECTION 12A APPLICATION FOR PROPOSED REZONING FROM "COMMERCIAL", "OPEN SPACE" AND AN AREA SHOWN AS 'ROAD' TO "RESIDENTIAL (GROUP A)13" AND AMEND THE NOTES OF THE ZONE APPLICABLE TO THE SITE FOR PROPOSED FLAT, SHOP AND SERVICES, EATING PLACE AND SOCIAL WELFARE FACILITY (CHILD CARE CENTRE) USES AT 16 PO TAI STREET, MA ON SHAN

04/11/2026

Appendix 4.1

Existing Noise Mitigation Measures



Existing Noise Mitigation Measures in vicinity of the Application Site

- Application Site
- 300m Assessment Area
- Cantilever Noise Barrier along Sai Sha Road
- Cantilever Noise Barrier along Ma On Shan Road
- Vertical Noise Barrier along Ma On Shan Road
- Low Noise Road Surfacing Extent from Trunk Road T7 EIA
- Low Noise Road Surfacing Extent from HyD

Note:

[1] Only the general layout is available during inspection at HyD (See Drawing No. 63093/1002B). Based on site observation, the noise barrier is assumed to be 5.5m high with a cantilever arm of 2m long.

[2] Only the general layout is available during inspection at HyD (See Drawing No. 63093/1002B). Based on site observation, the noise barrier is assumed to be 5m high with a cantilever arm of 2m long.

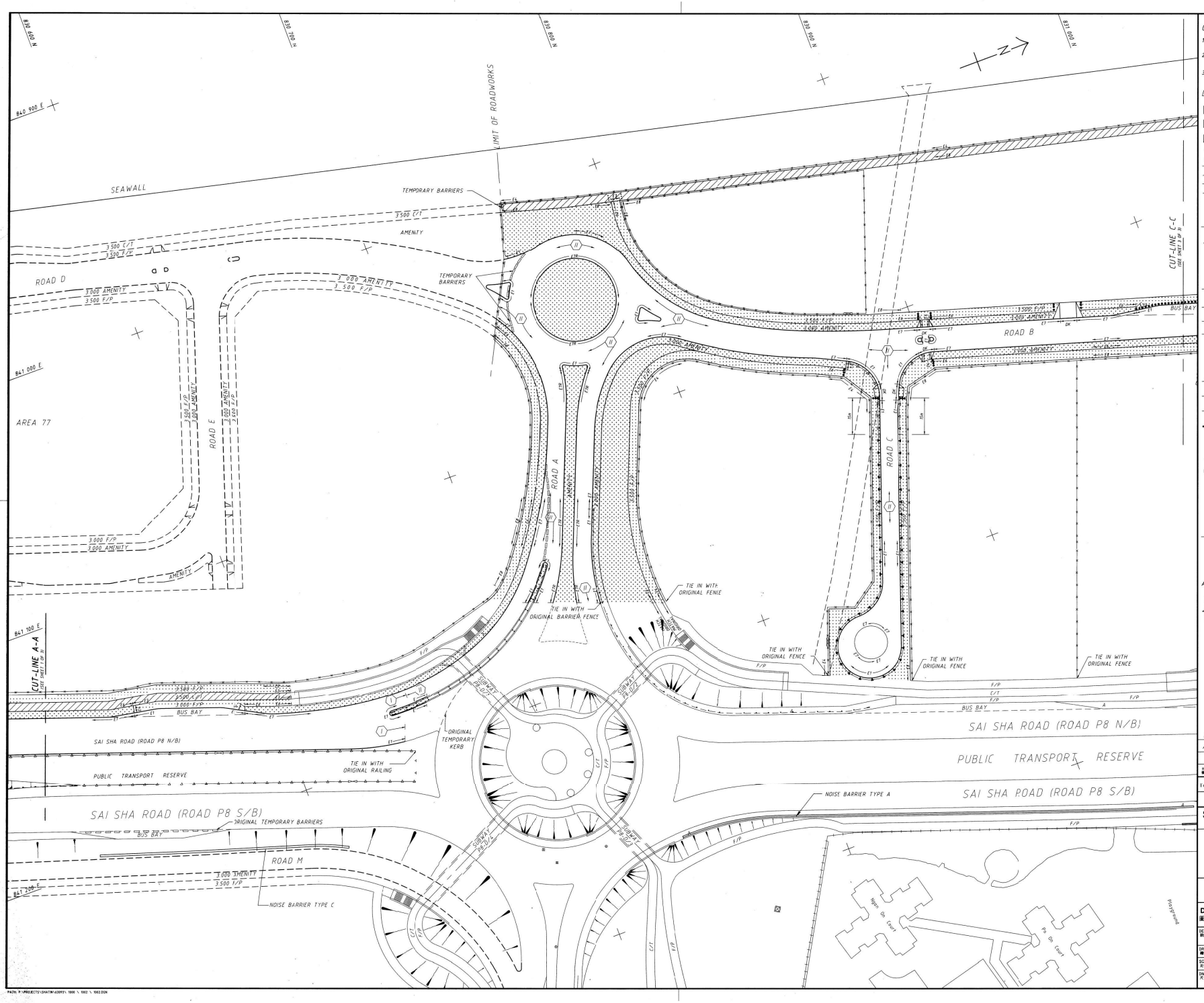
[3] As-built drawing of the barrier is not available during inspection at HyD. Based on site observation, the noise barrier is assumed to be 5m high with a cantilever arm of 3m long.

[4] As-built drawing of the barrier is not available during inspection at HyD. Based on site observation, the noise barrier is assumed to be 4.5m high.

[5] 5m cantilever noise barrier with a cantilever arm of 2m long. Reference to Trunk Road T7 EIA (EIA-137/BC) (See Figure 2 and 3).

[6] Reference to Trunk Road T7 EIA (EIA-137/BC).

[7] The extent of low noise road surfacing is advised by HyD (See Appendix 4.2).



GENERAL NOTES:

1. THIS DRAWING TO BE READ IN CONJUNCTION WITH DRG. NO. 63093/1001 & 1003.
2. ALL LEVELS ARE IN METRES AND REFER TO PRINCIPAL DATUM.
3. ALL CO-ORDINATES ARE IN ACCORDANCE WITH HK (1980) GAUSS CO-ORDINATE SYSTEM.

LEGEND:

- AMENITY AREA
- FOOTPATH / CONCRETE PAVIMENT
- CYCLETRACK
- ORIGINAL SLOPE
- CUT SLOPE (1 IN 2 UNLESS OTHERWISE SPECIFIED)
- FILL SLOPE (1 IN 2 UNLESS OTHERWISE SPECIFIED)
- +5.6 ORIGINAL SPOT LEVEL (APPROXIMATE)
- CHAINAGE ALONG SETTING OUT LINE
- TRAFFIC DIRECTION
- +5.6 NOMINAL LEVEL ABOVE P.D.
- TYPE AND EXTENT OF EDGING
- CHAIN LINK FENCE (FOR DETAILS SEE HyD. DRG. H6121 & H6122)
- ORIGINALCHAIN LINK FENCE
- EXPRESSWAY FENCING
- ORIGINAL EXPRESSWAY FENCNG TO BE RETAINED
- SERVICE GATE (FOR DETAILS SEE DRG. NO. 63093/6119)
- GATE FOR CHAIN LINK FENCE
- HOARDING (FOR DETAILS SEE AO DRG. AO 22 AND P.S. CL 1.63)
- TYPE 2 RAILING (FOR DETAILS SEE HyD DRG. H2130A & H2131A)
- 2m TUBULAR AMENITY RAILING WITH 2m SPACING (FOR DETAILS SEE HyD DRG. H2135)
- UNTENSIONED CORRUGATED BEAM BARRIER FENCE (WITH ANCHOR BLOCK) (FOR DETAILS SEE HyD DRG. H2117 – H2127) TRANSITION TO OTHER EDGING
- ORIGINAL BARRIER FENCE TO BE RETAINED
- TEMPORARY BARRIER (FOR DETAILS SEE HyD. DRG. H2104)
- CYCLETRACK FRANGIBLE BOLLARD
- FRANGIBLE / FIXED STEEL BOLLARD (ON FOOTPATH)
- EMERGENCY CRASH GATE
- TEMPORARY KERB
- TYPE OF CARRIAGEWAY
- DROP KERB (FOR DETAILS SIE HyD. DRG. H117)

ABUTMENT BRIDGE DECK

PIER

ROADWORKS BY OTHERS

REV. 修訂	DESCRIPTION 內容摘要	BY 繪圖	CHKD 核對	APPROVED 核准人	DATE 日期
B	AS BUILT DRAWING	JMS	JMS	AL	21-6-99
A	WORKING DRAWING	EH	TC	PKY	05-11-96
	FIRST ISSUE 首次發售	EH	SYC	PKY	19-7-96

Territory Development Department 拓展署

NT EAST DEVELOPMENT OFFICE 新界東拓展處

SHA TIN NEW TOWN, STAGE II

MA ON SHAN DEVELOPMENT – PHASE 2

CONTRACT J PART 2 – ROAD P8 (FINAL SECTION) ROADS AND DRAINS IN AREA 86 (PART) AND AREA 90 (PART)

GENERAL LAYOUT

SHEET 2 OF 3

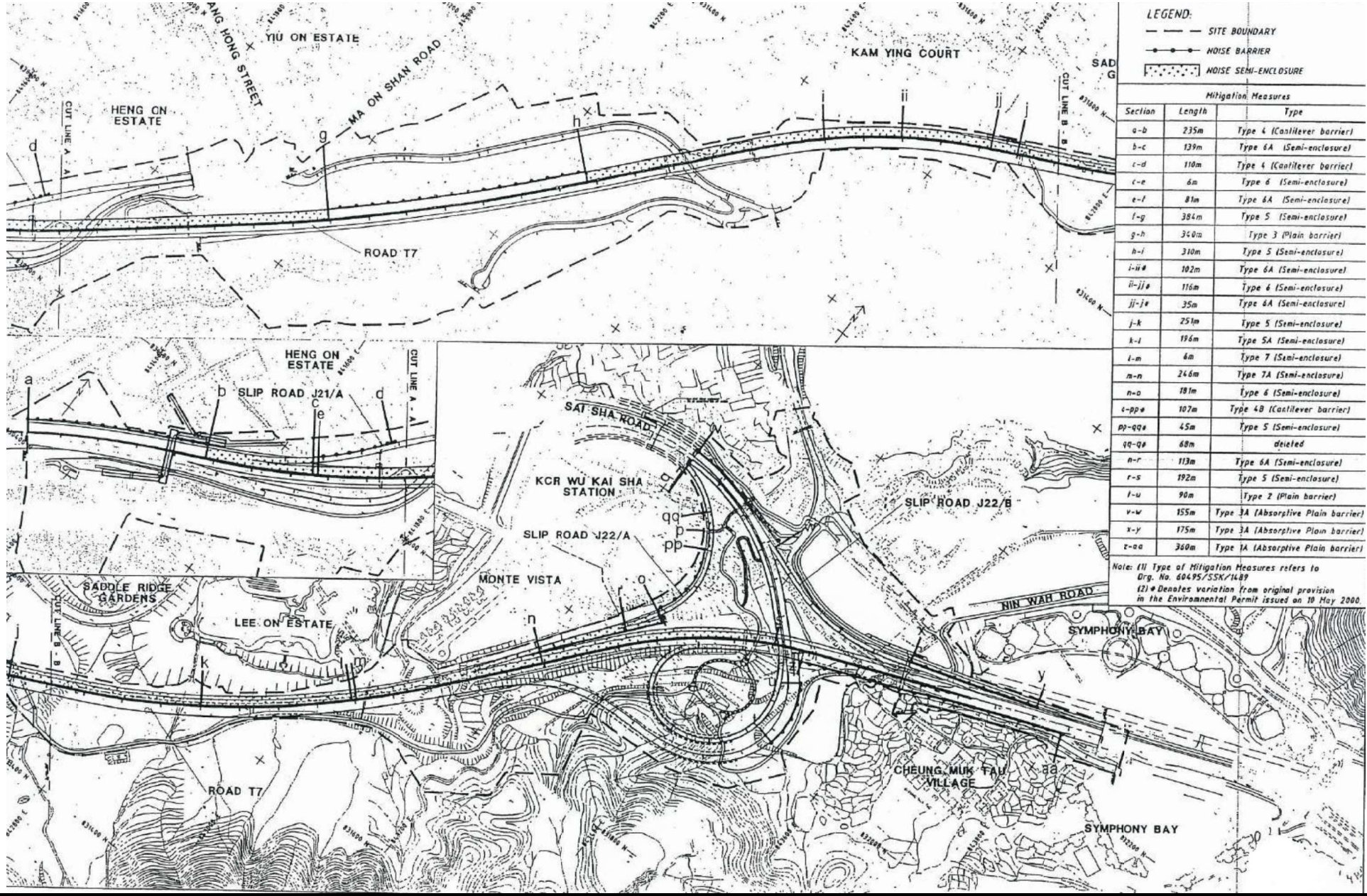
MAUNSELL CONSULTANTS ASIA LTD.
茂盛(亞洲)工程顧問有限公司

DRG.NO. 圖紙編號 63093/1002^B

DESIGNED BY 設計 ERIC HON	CONTRACT NO. 合約編號 ST 72/94	DATE OF ISSUE 發出日期
DRAWN BY 繪圖 HLQ	STATUS 種類 AS BUILT DRAWING	
SCALE 比例 1 : 500		
DIMENSIONS ARE IN 尺寸單位 METRES	© COPYRIGHT RESERVED 版權所有	

Maunsell

PATH: P:\PROJECTS\SHATIN\63093\ 1000 \ 1002 \ 1002.DGN



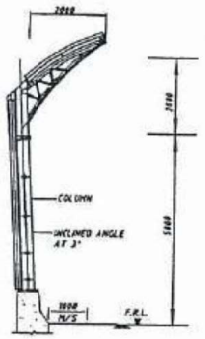
Mitigation Measures

Section	Length	Type
a-b	235m	Type 4 (Cantilever barrier)
b-c	139m	Type 6A (Semi-enclosure)
c-d	110m	Type 4 (Cantilever barrier)
c-e	6m	Type 6 (Semi-enclosure)
e-f	81m	Type 6A (Semi-enclosure)
f-g	384m	Type 5 (Semi-enclosure)
g-h	340m	Type 3 (Plain barrier)
h-i	310m	Type 5 (Semi-enclosure)
i-ii#	102m	Type 6A (Semi-enclosure)
ii-jj#	116m	Type 6 (Semi-enclosure)
jj-j#	35m	Type 6A (Semi-enclosure)
j-k	251m	Type 5 (Semi-enclosure)
k-l	196m	Type 5A (Semi-enclosure)
l-m	6m	Type 7 (Semi-enclosure)
m-n	246m	Type 7A (Semi-enclosure)
n-o	181m	Type 6 (Semi-enclosure)
o-pp#	107m	Type 4B (Cantilever barrier)
pp-qq#	45m	Type 5 (Semi-enclosure)
qq-q#	68m	deleted
n-r	113m	Type 6A (Semi-enclosure)
r-s	192m	Type 5 (Semi-enclosure)
t-u	90m	Type 2 (Plain barrier)
v-w	155m	Type 3A (Absorptive Plain barrier)
x-y	175m	Type 3A (Absorptive Plain barrier)
z-aa	360m	Type 1A (Absorptive Plain barrier)

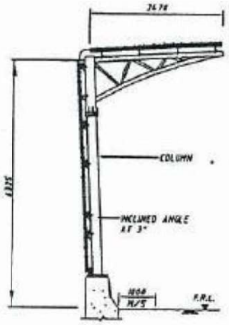
Note: (1) Type of Mitigation Measures refers to Drg. No. 60495/SSK/1489
(2) # Denotes variation from original provision in the Environmental Permit issued on 10 May 2000.

Project Title: Trunk Road T7 in Ma On Shan
Figure 2: Site Boundary, Road Alignment And Layout Arrangement of Noise Barriers and Enclosures

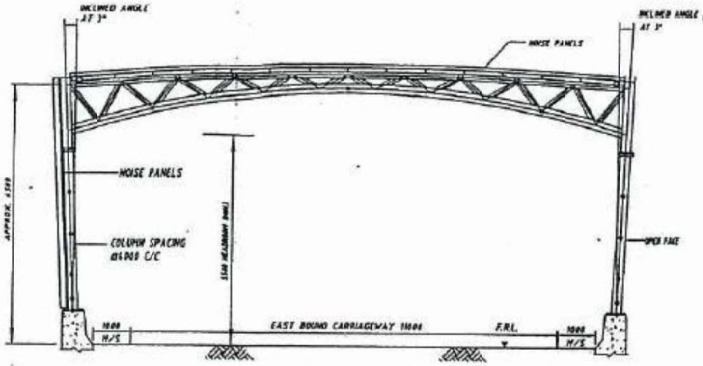
Environmental Permit No:
FEP-04/057/2000/A



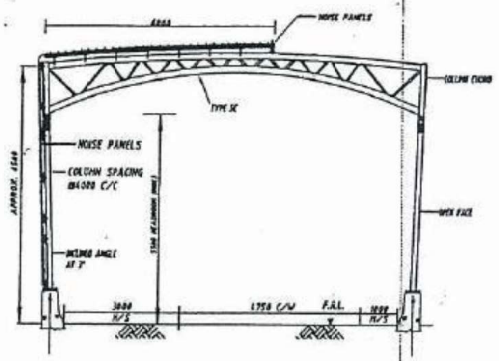
NOISE MITIGATION MEASURE TYPE 4
5m REFLECTIVE CANTILEVERED NOISE BARRIER
NOTE : TYPE 4A 5m HIGH ABSORPTIVE CANTILEVERED NOISE BARRIER



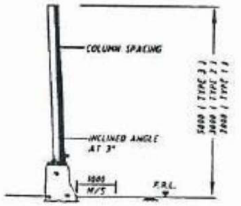
NOISE MITIGATION MEASURE TYPE 4B
6m HIGH REFLECTIVE CANTILEVERED NOISE BARRIER



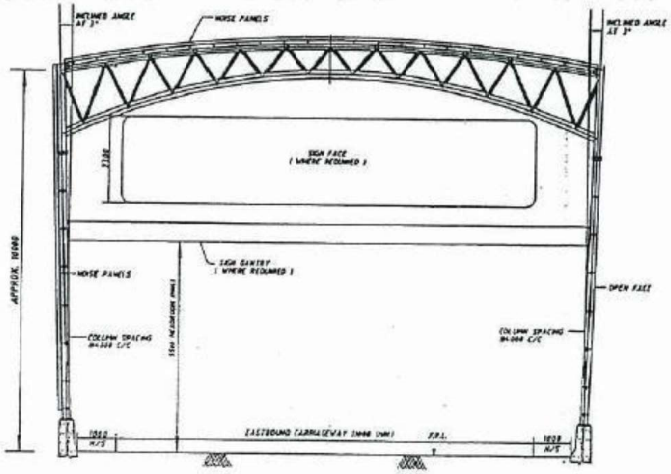
NOISE MITIGATION MEASURE TYPE 5
NOTE : TYPE 5A - TRANSITION BETWEEN TYPE 5 AND TYPE 1



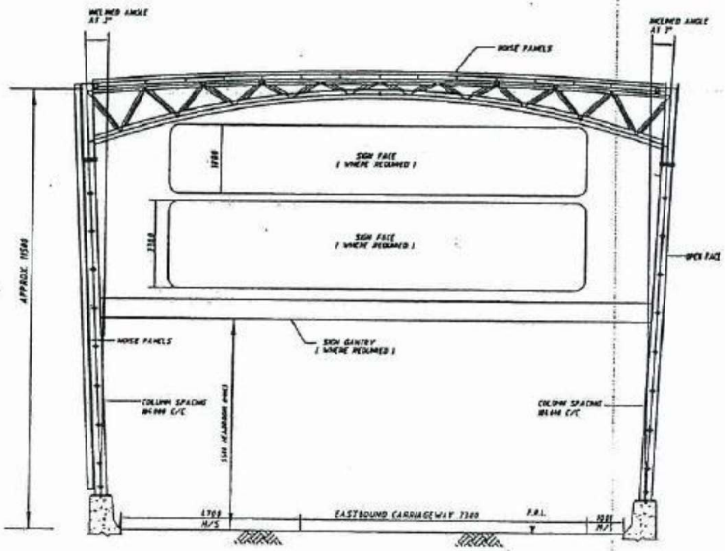
NOISE MITIGATION MEASURE TYPE 5C



NOISE MITIGATION MEASURE TYPE 1, 2 & 3
VERTICAL REFLECTIVE NOISE BARRIER
NOTE : TYPE 1A, 2A ARE 2m, 3m HIGH ABSORPTIVE NOISE BARRIER RESPECTIVELY



NOISE MITIGATION MEASURE TYPE 6
NOTE : TYPE 6A-TRANSITION BETWEEN TYPE 5 AND TYPE 6



NOISE MITIGATION MEASURE TYPE 7
NOTE : TYPE 7A-TRANSITION BETWEEN TYPE 6 AND TYPE 7

Project Title: Trunk Road T7 in Ma On Shan
Figure 3: Noise Mitigation Measures Cross Sections

Environmental Permit No:
FEP-04/057/2000/A

Appendix 4.2

Relevant Correspondence with HyD on LNRS

Anthonio Wun

From: dest1.nt@hyd.gov.hk
Sent: Tuesday, November 26, 2024 2:19 PM
To: Anthonio Wun
Cc: ctost1.nt@hyd.gov.hk; daiowst3.nt@hyd.gov.hk; HKG C1EnvFile; Johnny So; miowst1.nt@hyd.gov.hk; sto2.nt@hyd.gov.hk; mehsre2.nt@hyd.gov.hk
Subject: RE: FW: EAS for Proposed Commercial / Residential Re-Development at 16 Po Tai Street, Ma On Shan - Request for Information on Friction Course Materials and Noise Barriers

Dear Anthonio,

Please note that noise reducing highway surfacing PMFC is applied along MOS road. Thanks.

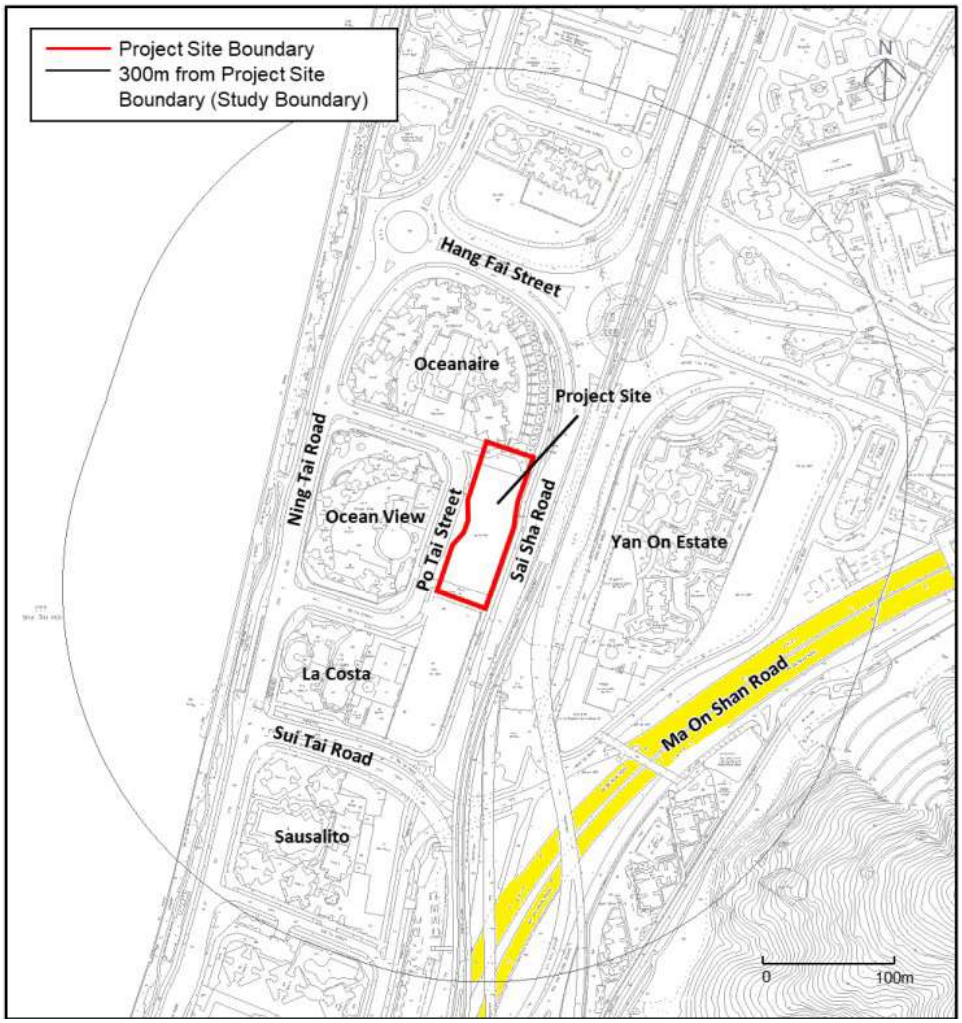
Regards,
Anson WAI
DE/ST(1) & DE/ST(2) (Ag.), HyD
Tel: 2762 4098

From: "Anthonio Wun" <Anthonio.Wun@arup.com>
To: "dest1.nt@hyd.gov.hk" <dest1.nt@hyd.gov.hk>
Cc: "ctost1.nt@hyd.gov.hk" <ctost1.nt@hyd.gov.hk>, "daiowst3.nt@hyd.gov.hk" <daiowst3.nt@hyd.gov.hk>, "HKG C1EnvFile" <HKG.C1EnvFile@arup.com>, "Johnny So" <johnny.so@arup.com>, "miowst1.nt@hyd.gov.hk" <miowst1.nt@hyd.gov.hk>, "sto2.nt@hyd.gov.hk" <sto2.nt@hyd.gov.hk>
Date: 26/11/2024 11:09
Subject: RE: FW: EAS for Proposed Commercial / Residential Re-Development at 16 Po Tai Street, Ma On Shan - Request for Information on Friction Course Materials and Noise Barriers

---

Dear Mr Wai,

Tried to call but in vain. We understand that Ma On Shan Road (see highlighted) is a high speed road, and we would like to confirm whether low noise road surfacing materials (e.g. PMSMA6/PMFC…) were used in Ma On Shan Road and the surrounding road network (e.g. Sai Sha Road/ Hang Tai Road…) connected to it. Thank you.



Best Regards,

Anthonio Wun
Assistant Consultant | Consulting

Arup
Level 5, Festival Walk, 80 Tat Chee Avenue, Kowloon Tong, Hong Kong
d +852 2908 4293 f +852 2268 3380
t: +852 2528 3031
arup.com

From: dest1.nt@hyd.gov.hk <dest1.nt@hyd.gov.hk>
Sent: Tuesday, November 26, 2024 10:18 AM
To: Anthonio Wun <Anthonio.Wun@arup.com>
Cc: ctost1.nt@hyd.gov.hk; daiowst3.nt@hyd.gov.hk; HKG C1EnvFile <HKG.C1EnvFile@arup.com>; Johnny So <johnny.so@arup.com>; miowst1.nt@hyd.gov.hk; sto2.nt@hyd.gov.hk
Subject: RE: FW: EAS for Proposed Commercial / Residential Re-Development at 16 Po Tai Street, Ma On Shan - Request for Information on Friction Course Materials and Noise Barriers

Dear Anthonio,
Wearing course / SMA applied for your information please.

Regards,
Anson WAI
DE/ST(1) & DE/ST(2) (Ag.), HyD
Tel: 2762 4098

From: "Anthonio Wun" <Anthonio.Wun@arup.com>
To: "dest1.nt@hyd.gov.hk" <dest1.nt@hyd.gov.hk>
Cc: "HKG C1EnvFile" <HKG.C1EnvFile@arup.com>, "Johnny So" <johnny.so@arup.com>, "sto2.nt@hyd.gov.hk" <sto2.nt@hyd.gov.hk>, "daiowst3.nt@hyd.gov.hk" <daiowst3.nt@hyd.gov.hk>, "ctost1.nt@hyd.gov.hk" <ctost1.nt@hyd.gov.hk>, "miowst1.nt@hyd.gov.hk" <miowst1.nt@hyd.gov.hk>
Date: 25/11/2024 17:38
Subject: RE: FW: EAS for Proposed Commercial / Residential Re-Development at 16 Po Tai Street, Ma On Shan - Request for Information on Friction Course Materials and Noise Barriers

---

Dear Mr Wai,

Thank you for your email. Kindly please advise the road network within the Study Boundary (see attached), which is within 300m from the project site. Thank you for your assistance.

Best Regards,

Anthonio Wun
Assistant Consultant | Consulting

Arup
Level 5, Festival Walk, 80 Tat Chee Avenue, Kowloon Tong, Hong Kong
d +852 2908 4293 f +852 2268 3380
t: +852 2528 3031
arup.com

From: dest1.nt@hyd.gov.hk <dest1.nt@hyd.gov.hk>
Sent: Monday, November 25, 2024 5:27 PM
To: Anthonio Wun <Anthonio.Wun@arup.com>
Cc: HKG C1EnvFile <HKG.C1EnvFile@arup.com>; Johnny So <johnny.so@arup.com>; sto2.nt@hyd.gov.hk; daiowst3.nt@hyd.gov.hk; ctost1.nt@hyd.gov.hk; miowst1.nt@hyd.gov.hk
Subject: RE: FW: EAS for Proposed Commercial / Residential Re-Development at 16 Po Tai Street, Ma On Shan - Request for Information on Friction Course Materials and Noise Barriers

Dear Anthonio,

Please note that wearing course / SMA is applied on Po Tai Street currently.

Regards,
Anson WAI

DE/ST(1) & DE/ST(2) (Ag.), HyD
Tel: 2762 4098

From: "Anthonio Wun" <Anthonio.Wun@arup.com>
To: "dest1.nt@hyd.gov.hk" <dest1.nt@hyd.gov.hk>, "sto2.nt@hyd.gov.hk" <sto2.nt@hyd.gov.hk>
Cc: "dest2.nt@hyd.gov.hk" <dest2.nt@hyd.gov.hk>, "HKG C1EnvFile" <HKG.C1EnvFile@arup.com>, "Johnny So" <johnny.so@arup.com>
Date: 21/11/2024 11:06
Subject: RE: FW: EAS for Proposed Commercial / Residential Re-Development at 16 Po Tai Street, Ma On Shan - Request for Information on Friction Course Materials and Noise Barriers

---

Dear Mr Wai,

In addition to the requested items in the previous email, we would like to have the maintenance record indicating the friction course material paved on the road network within the study boundary. Kindly please arrange and thank you for your assistance.

Best Regards,

Anthonio Wun
Assistant Consultant | Consulting

Arup
Level 5, Festival Walk, 80 Tat Chee Avenue, Kowloon Tong, Hong Kong
d +852 2908 4293 f +852 2268 3380
t: +852 2528 3031
arup.com

From: dest1.nt@hyd.gov.hk <dest1.nt@hyd.gov.hk>
Sent: Tuesday, September 17, 2024 11:50 AM
To: sto2.nt@hyd.gov.hk
Cc: dest2.nt@hyd.gov.hk; HKG C1EnvFile <HKG.C1EnvFile@arup.com>; Johnny So <johnny.so@arup.com>; Anthonio Wun <Anthonio.Wun@arup.com>
Subject: Re: FW: EAS for Proposed Commercial / Residential Re-Development at 16 Po Tai Street, Ma On Shan - Request for Information on Friction Course Materials and Noise Barriers

您不常收到來自 dest1.nt@hyd.gov.hk 的電子郵件。了解為什麼這點很重要的原因

Dear Tony,

Please assist. Thanks.

Regards,
Anson WAI
DE/ST(1) & DE/ST(2) (Ag.), HyD
Tel: 2762 4098

From: "Anthonio Wun" <Anthonio.Wun@arup.com>
To: "dest2.nt@hyd.gov.hk" <dest2.nt@hyd.gov.hk>
Cc: "Johnny So" <johnny.so@arup.com>, "HKG C1EnvFile" <HKG.C1EnvFile@arup.com>

Date: 17/09/2024 10:30
Subject: FW: EAS for Proposed Commercial / Residential Re-Development at 16 Po Tai Street, Ma On Shan - Request for Information on Friction Course Materials and Noise Barriers

---

Dear Mr Wai,

Environmental Assessment Study for the Proposed Commercial / Residential Re-Development at 16 Po Tai Street, Ma On Shan
Request for Information on Friction Course Materials and Noise Barriers

We are currently conducting an environmental assessment study for the Proposed Commercial / Residential Re-Development at 16 Po Tai Street, Ma On Shan. As part of the study, we need to carry out a road traffic noise impact assessment. We would be grateful if you could provide us the following information for our assessment.

1. **As-Built Drawings for Noise barrier**

0. As-built drawings for existing noise barriers for all road network within the study boundary (see Attachment).
1. As-built drawings for planned noise barriers, if any, for all road network within the study boundary (see Attachment).

2. **Friction Course Materials on Nearby Roads**

0. Existing extent of friction course materials on all road networks within the study boundary (see Attachment).
1. Planned extent of friction course materials, if any, on all road networks within the study boundary (see Attachment).

We would be grateful if you could provide your reply to us by 27 September 2024. We look forward to receiving your reply. If you require any further information, please do not hesitate to contact me at 2908-4293. Thank you for your help in advance.

Best Regards,

Anthonio Wun
Assistant Consultant | Consulting

Arup
Level 5, Festival Walk, 80 Tat Chee Avenue, Kowloon Tong, Hong Kong
d +852 2908 4293 f +852 2268 3380
t: +852 2528 3031
arup.com

From: ctost1.nt@hyd.gov.hk <ctost1.nt@hyd.gov.hk>
Sent: Tuesday, September 17, 2024 10:22 AM
To: Anthonio Wun <Anthonio.Wun@arup.com>
Cc: dest2.nt@hyd.gov.hk
Subject: Fw: EAS for Proposed Commercial / Residential Re-Development at 16 Po Tai Street, Ma On Shan - Request for Information on Friction Course Materials and Noise Barriers

Dear Sir / Madam,

Please forward your request to our district team engineer DE/ST(2) Mr Anson Wai (**dest2.nt@hyd.gov.hk**) for response your request. Thanks.

Regards,
CHAN Cho-keung
CTO/ST(1),
NT Region,
Highways Department
Tel: 2762 3983
----- Forwarded by Cho Keung CHAN/HYD/HKSARG on 15/09/2024 11:17 -----

From: "Anthonio Wun" <Anthonio.Wun@arup.com>
To: "ctost1.nt@hyd.gov.hk" <ctost1.nt@hyd.gov.hk>
Cc: "Johnny So" <johnny.so@arup.com>, "HKG C1EnvFile" <HKG.C1EnvFile@arup.com>
Date: 13/09/2024 14:50
Subject: EAS for Proposed Commercial / Residential Re-Development at 16 Po Tai Street, Ma On Shan - Request for Information on Friction Course Materials and Noise Barriers

---

Dear Mr Chan,

Environmental Assessment Study for the Proposed Commercial / Residential Re-Development at 16 Po Tai Street, Ma On Shan
Request for Information on Friction Course Materials and Noise Barriers

We are currently conducting an environmental assessment study for the Proposed Commercial / Residential Re-Development at 16 Po Tai Street, Ma On Shan. As part of the study, we need to carry out a road traffic noise impact assessment. We would be grateful if you could provide us the following information for our assessment.

1. **As-Built Drawings for Noise barrier**
0. As-built drawings for existing noise barriers for all road network within the study boundary (see Attachment).
1. As-built drawings for planned noise barriers, if any, for all road network within the study boundary (see Attachment).

2. **Friction Course Materials on Nearby Roads**
0. Existing extent of friction course materials on all road networks within the study boundary (see Attachment).
1. Planned extent of friction course materials, if any, on all road networks within the study boundary (see Attachment).

We would be grateful if you could provide your reply to us by 25 September 2024. We look forward to receiving your reply. If you require any further information, please do not hesitate to contact me at 2908-4293. Thank you for your help in advance.

Best Regards,

Anthonio Wun
Assistant Consultant | Consulting

Arup
Level 5, Festival Walk, 80 Tat Chee Avenue, Kowloon Tong, Hong Kong

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t: +852 2528 3031
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Electronic mail messages entering and leaving Arup business systems are scanned for viruses and acceptability of content.

Appendix 4.3

Traffic Forecast and TD Endorsement

By Fax and by Post
2528 6343

運輸署
Transport Department

本署檔案 Our Ref. : (00CY8) in 010-070-452-NR-STTL-482
來函檔號 Your Ref. : J7362/6
電 話 Tel. : 2399 2408
圖文傳真 Fax : 2381 3799
電 郵 Email : hokingwui@td.gov.hk

13 August 2025

CKM Asia Limited
21st Floor, Methodist House
36 Hennessy Road
WAN CHAI
HONG KONG
(Attn.: TANG Ho Chung)

Dear Sir/Madam,

Rezoning Application for Redevelopment of We Go Mall at 16 Po Tai Street, Ma On Shan

Traffic Forecast for Traffic Noise Impact Assessment

I refer to your letter under reference J7362/6 dated 8 July 2025.

Please note that Noise Impact Assessment is not under our purview. We are not in a position to provide comments on the traffic figures tailor-made for the environmental assessment study.

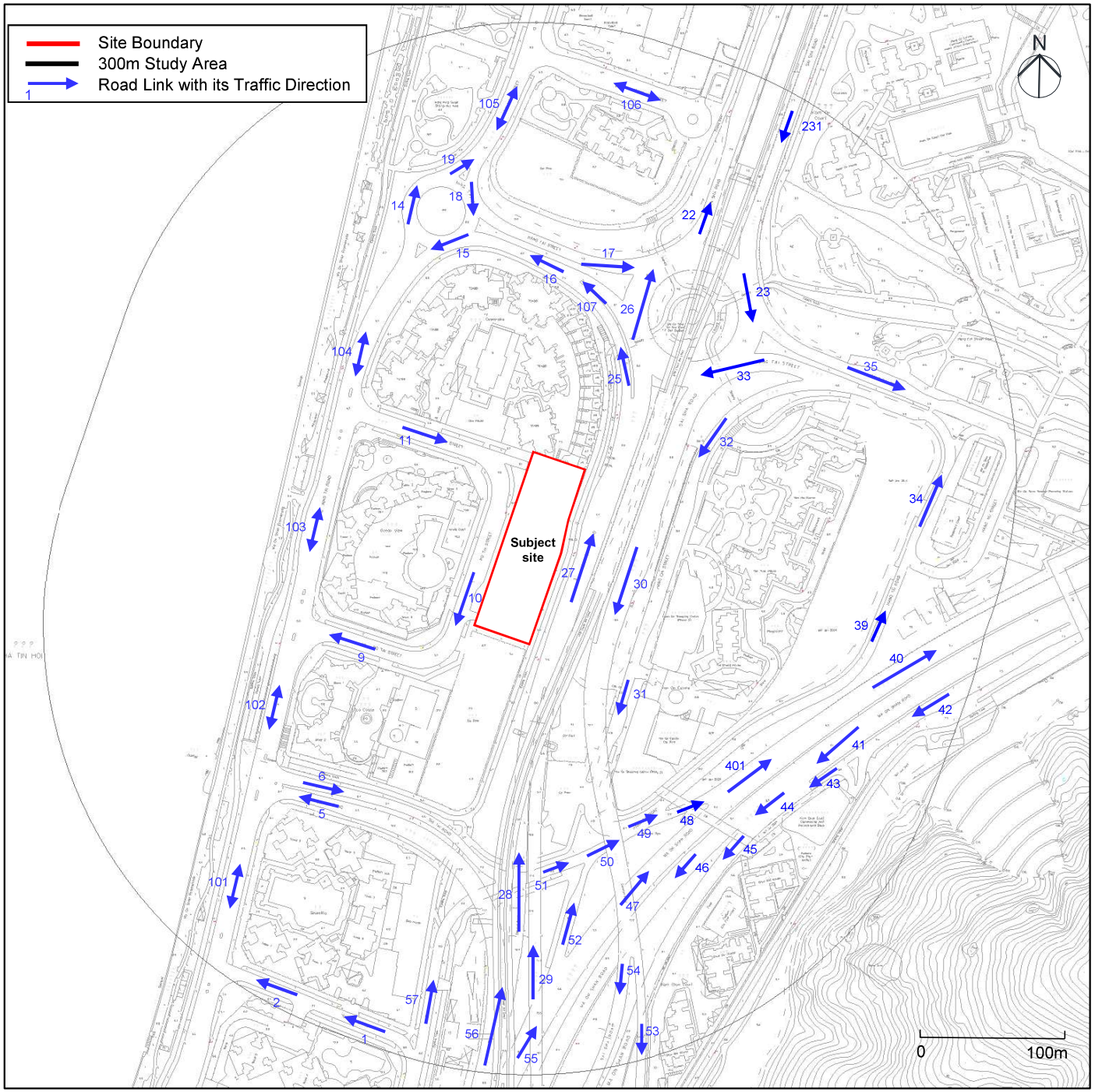
Notwithstanding the above, I have no further comment on the methodology of the traffic forecast provided that the traffic data of the technical note is tally with those for the relevant Traffic Impact Assessment (TIA) report of the captioned application.

Yours faithfully,

(Steve K W HO)
for Commissioner for Transport

Internal
E/MOS

新界分區辦事處
NT Regional Office
九龍聯運街三十號旺角政府合署七樓
7th Floor, Mong Kok Government Offices, 30 Luen Wan Street, Kowloon.
圖文傳真 Fax No.: 2381 3799 (新界區) (NTRO)
網址 Web Site: http://www.td.gov.hk


Site Boundary
300m Study Area
Road Link with its Traffic Direction
Subject site
N
0
100m

Year 2050 Traffic Flow (PM Peak)

Road ID	Street [1]	Speed Limit (km/hr)	Year 2050	
			Traffic Flow (veh/hr)	% of Heavy Vehicles
1	Yuk Tai Street (WB)	50	200	16.1
2	Yuk Tai Street (WB)	50	150	16.2
5	Sui Tai Road (WB)	50	200	18.9
6	Sui Tai Road (EB)	50	50	8.3
9	Po Tai Street (WB)	50	300	24.6
10	Po Tai Street (SB)	50	400	19.8
11	Po Tai Street (EB)	50	450	18.4
14	Ning Tai Road (SB)	50	450	18.6
15	Ning Tai Road (NB)	50	400	24.6
16	Hang Fai Street (WB)	50	650	16.2
17	Hang Fai Street (EB)	50	500	22.0
18	Hang Ming Street (SB)	50	250	25.0
19	Hang Ming Street (NB)	50	350	19.5
22	Sai Sha Road (NB)	70	1100	18.1
23	Sai Sha Road (SB)	50	950	24.1
25	Sai Sha Road Slip Road (WB)	50	450	8.5
26	Sai Sha Road (NB)	50	1300	17.2
27	Sai Sha Road (NB)	50	1750	15.0
28	Sai Sha Road Slip Road (NB)	50	1600	14.2
29	Sai Sha Road Slip Road (NB)	50	200	20.9
30	Sai Sha Road (SB)	70	1450	19.7
31	Hang Chi Street (SB)	50	100	23.5
32	Hang Chi Street (SB)	50	100	37.3
33	Hang Fai Street (WB)	50	500	23.2
34	Hang Tai Road (WB)	50	550	27.5
35	Hang Fai Street (WB)	50	400	25.5
39	Hang Tai Road (NB)	50	200	20.9
40	Ma On Shan Road (NB)	80	2950	25.6
41	Ma On Shan Road (SB)	80	2300	20.9
42	Ma On Shan Road Slip Road (SB)	50	200	40.4
43	Ma On Shan Road (SB)	50	200	40.7
44	Ma On Shan Road Slip Road (SB)	80	2500	22.5
45	Ma On Shan Road Slip Road (SB)	80	1000	30.1
46	Ma On Shan Road (SB)	80	1500	17.2
47	Ma On Shan Road (NB)	70	2850	24.0
48	Ma On Shan Road Slip Road (NB)	50	150	56.2
49	Hang Tai Road (NB)	50	350	38.0
50	Hang Tai Road (NB)	50	250	41.9
51	Hang Tai Road (NB)	50	200	17.1
52	Ma On Shan Road Slip Road (NB)	50	100	100.0
53	Sai Sha Road Slip Road (SB)	70	150	14.6

Road ID	Street [1]	Speed Limit (km/hr)	Year 2050	
			Traffic Flow (veh/hr)	% of Heavy Vehicles
54	Sai Sha Road Slip Road (SB)	80	1350	20.2
55	Ma On Shan Road (NB)	70	2900	25.9
56	Sai Sha Road (NB)	70	1750	14.8
57	Hang Tai Road (NB)	50	150	18.6
101	Ning Tai Road (3+4)	50	550	30.7
102	Ning Tai Road (7+8)	50	400	37.3
103	Ning Tai Road (12+13)	50	500	22.5
104	Ning Tai Road (14+15)	50	850	21.4
105	Hang Ming Street (18+19)	50	600	21.8
106	Hang Kin Street (20+21)	50	250	33.2
107	Sai Sha Road Slip Road (24+25)	50	650	17.0
231	Sai Sha Road (SB)	70	950	24.1
401	Ma On Shan Road (NB)	70	2950	25.6

Note:
[1] NB = North bound, SB= South bound, EB = East bound, WB = West bound.

CKM ASIA LIMITED 陳錦敏亞洲有限公司
Traffic and Transportation Planning Consultants 交通及運輸策劃顧問

Our Ref: J7362/4 6 January 2025

Transport Department
Urban Regional Office
Traffic Engineering (NTE) Division
9/F, Mong Kok Government Offices
30 Luen Wan Street
Mong Kok, Kowloon

Attn: Mr HO King Wui (Engr / Ma On Shan)

(BY POST)

Dear Mr Ho,

Rezoning Application for Redevelopment of We Go Mall at 16 Po Tai Street, Ma On Shan Road Type of Po Tai Street

CKM Asia Limited is the Traffic Consultant engaged by the Applicant of the captioned project. To facilitate the conduct of Environmental Assessment for the captioned project, we would like to confirm with your department the road type for Po Tai Street. The classification of Po Tai Street is not specified in the Annual Traffic Census (ATC).

According to the ATC report, Ning Tai Road is a District Distributor. In view that Po Tai Street is a local road linking the adjacent developments to Ning Tai Road, we are of the view that Po Tai Street is classified as a ***Local Distributor***.

We would greatly appreciate it if your department could confirm the road type of Po Tai Street as ***Local Distributor*** at your earliest convenience.

Should you have any queries, please do not hesitate to contact the undersigned. Thank you for your attention.

Yours sincerely

TANG Ho Chung
Principal Traffic Engineer

cc: Client

KIM\THC

21st Floor, Methodist House, 36 Hennessy Road, Wanchai, Hong Kong
香港灣仔軒尼詩道36號循道衛理大廈21樓
Tel 電話 : (852) 2520 5990 Fax 傳真 : (852) 2528 6343
Email 電郵 : mail@ckmasia.com.hk Website 網址 : http://www.ckmasia.com.hk

By Fax and by Post
2528 6343

運輸署
Transport Department

本署檔案 Our Ref. : (NSDQT) in TD NR157/161/STTL-482
來函檔號 Your Ref. : J7362/4
電 話 Tel. : 2399 2408
圖文傳真 Fax : 2381 3799
電 郵 Email : hokingwui@td.gov.hk

5 February 2025

CKM Asia Limited
21st Floor, Methodist House
36 Hennessy Road
WAN CHAI
HONG KONG
(Attn.: TANG Ho Chung)

Dear Sir/Madam,

Rezoning Application for Redevelopment of We Go Mall at 16 Po Tai Street, Ma On Shan
Road Type of Po Tai Street

I refer to your letter under reference J7362/4 dated 6 January 2025.

I have no objection on your view that the road type of Po Tai Street is Local Distributor.

Yours faithfully,

(Steve K W HO)
for Commissioner for Transport

Internal
E/MOS

Appendix 4.4

Predicted Traffic Noise Levels for Residential Block (Basecase Scenario)

Floor	R101a	R101b	R102a	R102b	R102c	R103a	R103b	R103c	R104a	R104b	R104c	R105a	R105b	R106a	R106b
29	68.5	67.7	69.1	69.1	68.8	68.3	70.1	70.4	68.9	70.1	70.3	68.6	70.1	70.2	70.1
28	68.5	67.8	69.2	69.3	68.9	68.3	70.1	**70.5**	69.0	70.2	70.4	68.7	70.1	70.3	70.2
27	68.6	67.9	69.4	69.4	69.0	68.4	70.2	**70.6**	69.1	70.2	70.4	68.7	70.2	70.3	70.2
26	68.7	68.1	69.4	69.5	69.2	68.5	70.2	**70.6**	69.1	70.3	**70.5**	68.8	70.2	70.4	70.3
25	68.8	68.1	69.6	69.6	69.3	68.6	70.3	**70.7**	69.2	70.3	**70.6**	68.9	70.3	70.4	70.4
23	68.8	68.2	69.7	69.8	69.4	68.6	70.3	**70.7**	69.3	70.4	**70.6**	69.0	70.4	**70.5**	**70.5**
22	68.9	68.3	69.8	69.8	69.5	68.7	70.4	**70.8**	69.4	**70.5**	**70.7**	69.1	**70.5**	**70.6**	**70.5**
21	68.8	68.3	69.8	70.0	69.7	68.8	**70.5**	**70.9**	69.4	**70.6**	**70.8**	69.2	**70.6**	**70.7**	**70.6**
20	68.7	68.4	69.9	70.1	69.8	68.9	**70.6**	**71.0**	69.5	**70.7**	**70.9**	69.2	**70.6**	**70.8**	**70.7**
19	68.4	68.3	69.9	70.2	69.9	69.0	**70.7**	**71.1**	69.6	**70.7**	**71.0**	69.4	**70.7**	**70.8**	**70.8**
18	68.3	68.1	69.9	70.2	70.0	69.0	**70.7**	**71.2**	69.7	**70.8**	**71.1**	69.4	**70.8**	**70.9**	**70.8**
17	68.0	67.9	69.7	70.2	70.0	69.1	**70.8**	**71.3**	69.8	**70.9**	**71.1**	69.5	**70.9**	**71.0**	**70.9**
16	67.8	67.6	69.3	70.1	70.1	69.2	**70.9**	**71.3**	69.8	**71.0**	**71.2**	69.6	**71.0**	**71.1**	**71.0**
15	67.7	67.4	69.0	69.7	70.0	69.3	**71.0**	**71.4**	69.9	**71.0**	**71.3**	69.7	**71.0**	**71.1**	**71.0**
12	67.6	67.2	68.7	69.3	69.6	69.4	**71.1**	**71.5**	70.0	**71.1**	**71.3**	69.7	**71.0**	**71.1**	**70.9**
11	67.5	67.1	68.5	68.9	69.1	69.5	**71.2**	**71.6**	70.1	**71.1**	**71.3**	69.7	**71.0**	**71.0**	**70.9**
10	67.0	66.8	68.4	68.7	68.6	69.7	**71.3**	**71.6**	70.1	**71.1**	**71.2**	69.6	**70.8**	**70.9**	**70.8**
9	64.2	65.5	67.6	68.3	68.2	69.8	**71.3**	**71.5**	70.1	**71.0**	**71.0**	69.5	**70.6**	**70.7**	**70.7**
8	60.6	61.5	64.3	66.4	67.3	69.9	**71.2**	**71.3**	70.0	**70.7**	**70.7**	69.3	70.4	70.4	70.4
7	57.0	57.5	59.4	61.0	62.0	69.7	**70.9**	**70.8**	69.7	70.4	70.3	69.1	70.0	70.0	69.9
6	53.6	53.7	55.3	56.2	56.7	67.2	67.8	68.0	67.6	68.0	68.1	67.6	67.9	67.8	67.8
Max	68.9	68.4	69.9	70.2	70.1	69.9	**71.3**	**71.6**	70.1	**71.1**	**71.3**	69.7	**71.0**	**71.1**	**71.0**
Min	53.6	53.7	55.3	56.2	56.7	67.2	67.8	68.0	67.6	68.0	68.1	67.6	67.9	67.8	67.8

Total Flats	540
Exceedance	113
Compliance Rate	79.1%

Noise sensitive receivers with exceedance (≥70.5 dB(A))

Floor	R107a	R107b	R107c	R107d	R107e	R108a	R108b	R109a	R109b	R109c	R110a	R110b	R110c	R111a	R111b
29	69.1	70.4	67.0	64.8	64.4	64.2	64.8	64.9	64.8	64.4	64.3	64.9	66.2	**70.9**	**70.6**
28	69.1	**70.5**	67.1	65.0	64.6	64.4	65.0	65.0	65.0	64.5	64.5	65.0	66.3	**71.0**	**70.6**
27	69.2	**70.6**	67.2	65.1	64.7	64.5	65.1	65.2	65.1	64.6	64.6	65.1	66.4	**71.0**	**70.7**
26	69.3	**70.7**	67.3	65.3	64.8	64.7	65.3	65.3	65.3	64.8	64.8	65.3	66.5	**71.0**	**70.7**
25	69.4	**70.7**	67.4	65.4	64.9	64.8	65.4	65.4	65.4	64.9	64.9	65.4	66.5	**71.0**	**70.7**
23	69.4	**70.8**	67.6	65.6	65.1	65.0	65.6	65.6	65.6	65.1	65.1	65.6	66.6	**70.9**	**70.6**
22	69.5	**70.9**	67.7	65.7	65.3	65.2	65.8	65.8	65.8	65.3	65.3	65.8	66.7	**70.8**	70.4
21	69.6	**71.0**	67.8	65.9	65.5	65.4	66.0	66.0	65.9	65.5	65.5	66.0	66.9	**70.6**	70.3
20	69.7	**71.1**	68.0	66.1	65.7	65.6	66.2	66.2	66.1	65.7	65.6	66.1	67.0	**70.5**	70.1
19	69.8	**71.2**	68.1	66.3	65.9	65.8	66.3	66.4	66.3	65.9	65.8	66.3	67.2	70.3	70.0
18	69.9	**71.2**	68.2	66.5	66.1	66.0	66.5	66.6	66.5	66.1	66.0	66.5	67.3	70.2	69.9
17	70.0	**71.3**	68.4	66.8	66.4	66.2	66.8	66.8	66.8	66.3	66.3	66.8	67.5	70.1	69.8
16	70.0	**71.3**	68.6	66.9	66.5	66.4	66.9	67.0	66.9	66.4	66.4	66.9	67.6	70.1	69.7
15	70.1	**71.4**	68.7	67.1	66.7	66.6	67.2	67.2	67.2	66.7	66.7	67.1	67.8	70.1	69.7
12	70.1	**71.4**	68.9	67.3	66.9	66.8	67.4	67.4	67.4	66.9	66.9	67.3	67.8	70.0	69.6
11	70.0	**71.4**	69.0	67.5	67.1	67.0	67.6	67.6	67.6	67.1	67.1	67.5	67.8	69.7	69.3
10	70.0	**71.3**	69.2	67.7	67.3	67.2	67.7	67.8	67.7	67.2	67.2	67.7	67.8	68.4	67.9
9	69.9	**71.1**	69.3	67.8	67.4	67.3	67.8	67.9	67.8	67.4	67.3	67.8	67.9	65.0	64.5
8	69.6	**70.7**	69.1	67.5	67.0	66.8	67.4	67.6	67.5	66.9	67.0	67.5	67.5	61.6	61.3
7	69.2	70.0	67.6	65.1	64.4	64.2	65.0	65.3	65.2	64.3	64.6	65.1	65.2	58.7	58.4
6	67.6	67.9	63.9	58.9	58.2	57.9	58.8	59.1	59.1	58.1	58.6	59.2	59.3	55.9	55.5
Max	70.1	**71.4**	69.3	67.8	67.4	67.3	67.8	67.9	67.8	67.4	67.3	67.8	67.9	**71.0**	**70.7**
Min	67.6	67.9	63.9	58.9	58.2	57.9	58.8	59.1	59.1	58.1	58.6	59.2	59.3	55.9	55.5

Noise sensitive receivers with exceedance (≥70.5 dB(A))

Floor	R112a	R112b	R113a	R113b	R201a	R201b	R202a	R202b	R203a	R203b	R204a	R204b	R204c	R205a	R205b
29	70.2	69.8	69.4	68.8	69.5	70.0	70.2	70.3	**70.8**	**71.0**	65.4	64.6	64.5	64.0	64.6
28	70.3	69.9	69.5	68.9	69.5	70.0	70.2	70.4	**70.8**	**71.0**	65.4	64.7	64.7	64.1	64.7
27	70.3	69.9	69.5	68.9	69.6	70.0	70.3	70.4	**70.9**	**71.1**	65.6	64.9	64.8	64.2	64.8
26	70.3	69.9	69.5	69.0	69.6	70.1	70.3	70.4	**70.9**	**71.1**	65.7	65.1	65.0	64.4	65.0
25	70.3	70.0	69.5	69.0	69.6	70.1	70.3	70.4	**70.9**	**71.1**	65.8	65.2	65.1	64.5	65.1
23	70.2	69.9	69.5	68.9	69.5	70.0	70.2	70.4	**70.8**	**71.0**	66.0	65.3	65.3	64.7	65.3
22	70.1	69.7	69.3	68.7	69.4	69.9	70.1	70.2	**70.7**	**70.9**	66.1	65.5	65.5	64.9	65.4
21	69.9	69.5	69.1	68.6	69.3	69.7	70.0	70.1	**70.6**	**70.8**	66.3	65.7	65.6	65.0	65.6
20	69.8	69.4	69.0	68.4	69.0	69.6	69.8	70.0	70.4	**70.7**	66.5	65.9	65.8	65.2	65.8
19	69.6	69.2	68.8	68.2	68.9	69.4	69.6	69.8	70.2	**70.5**	66.6	66.1	66.0	65.4	65.9
18	69.5	69.1	68.7	68.1	68.7	69.2	69.5	69.6	70.1	70.3	66.8	66.2	66.2	65.6	66.1
17	69.4	69.0	68.6	68.0	68.6	69.1	69.4	69.5	70.0	70.2	67.0	66.4	66.4	65.7	66.3
16	69.4	69.0	68.6	67.9	68.5	69.1	69.3	69.5	69.9	70.2	67.1	66.6	66.5	65.9	66.5
15	69.3	68.9	68.5	67.9	68.5	69.0	69.3	69.4	69.9	70.1	67.3	66.8	66.7	66.1	66.6
12	69.3	68.9	68.5	67.9	68.5	69.0	69.2	69.4	69.9	70.1	67.5	67.0	66.9	66.3	66.9
11	68.9	68.5	68.1	67.5	68.2	68.8	69.0	69.2	69.6	69.9	67.5	67.2	67.1	66.5	67.0
10	67.5	67.0	66.5	65.9	67.4	67.9	68.1	68.2	68.7	68.9	67.5	67.4	67.3	66.7	67.2
9	64.0	63.5	63.0	62.3	65.0	65.3	65.5	65.3	66.0	66.2	67.4	67.4	67.3	66.7	67.3
8	60.9	60.4	59.9	59.2	62.0	62.3	62.4	61.8	62.7	62.9	67.0	67.1	67.0	66.4	67.0
7	58.0	57.5	56.8	56.1	58.7	59.0	59.2	58.7	59.5	59.7	64.8	65.0	64.9	64.3	65.2
6	55.2	54.6	54.0	53.2	55.4	55.8	56.0	55.7	56.3	56.5	59.2	59.7	59.8	59.7	60.6
Max	70.3	70.0	69.5	69.0	69.6	70.1	70.3	70.4	**70.9**	**71.1**	67.5	67.4	67.3	66.7	67.3
Min	55.2	54.6	54.0	53.2	55.4	55.8	56.0	55.7	56.3	56.5	59.2	59.7	59.8	59.7	60.6

Noise sensitive receivers with exceedance ($\geq$70.5 dB(A))

Floor	R205c	R206a	R206b	R207a	R207b	R207c	R207d	R207e	R208a	R208b	R209a	R209b	R210a	R210b	R210c
29	64.6	64.5	64.2	63.3	64.1	65.9	69.2	67.2	68.7	68.9	68.9	67.8	69.1	69.0	68.1
28	64.7	64.6	64.3	63.4	64.2	65.9	69.3	67.3	68.8	69.0	68.9	67.9	69.1	69.1	68.2
27	64.9	64.8	64.4	63.5	64.3	66.0	69.3	67.4	68.9	69.1	69.0	68.0	69.2	69.3	68.3
26	65.1	64.9	64.6	63.7	64.5	66.0	69.4	67.5	69.0	69.2	69.1	68.1	69.3	69.3	68.4
25	65.2	65.0	64.7	63.8	64.6	66.1	69.5	67.5	69.1	69.3	69.2	68.2	69.4	69.5	68.5
23	65.3	65.2	64.9	64.0	64.8	66.3	69.6	67.6	69.2	69.4	69.3	68.3	69.6	69.6	68.6
22	65.5	65.4	65.1	64.1	64.9	66.4	69.7	67.7	69.3	69.5	69.4	68.4	69.7	69.7	68.7
21	65.7	65.6	65.2	64.3	65.1	66.5	69.8	67.8	69.4	69.6	69.5	68.5	69.8	69.8	68.8
20	65.8	65.7	65.4	64.5	65.3	66.6	69.9	67.9	69.4	69.7	69.6	68.6	69.9	69.9	68.9
19	66.0	65.9	65.6	64.7	65.4	66.7	70.0	67.9	69.5	69.8	69.7	68.7	70.0	70.0	69.0
18	66.2	66.1	65.8	64.8	65.6	66.8	70.0	68.0	69.6	69.9	69.8	68.8	70.1	70.1	69.1
17	66.4	66.2	66.0	65.0	65.8	66.8	70.0	68.0	69.7	70.0	69.9	68.8	70.1	70.2	69.3
16	66.5	66.4	66.2	65.2	66.0	66.9	70.1	68.0	69.7	70.0	70.0	68.9	70.2	70.3	69.4
15	66.7	66.6	66.3	65.4	66.2	67.0	70.0	67.9	69.6	70.0	70.0	69.0	70.3	**70.5**	69.5
12	66.9	66.8	66.6	65.7	66.4	67.1	70.0	67.7	69.6	70.0	70.0	69.0	70.4	**70.6**	69.6
11	67.1	67.0	66.8	65.8	66.6	67.1	69.9	67.5	69.4	69.9	70.0	68.9	70.4	**70.6**	69.7
10	67.3	67.1	67.0	66.0	66.8	67.2	69.8	67.2	69.2	69.7	69.8	68.8	70.4	**70.7**	69.7
9	67.3	67.2	67.0	66.1	66.9	67.3	69.6	67.0	69.0	69.5	69.6	68.6	70.3	**70.6**	69.7
8	67.0	66.9	66.7	65.9	66.6	67.1	69.2	66.7	68.8	69.2	69.2	68.4	70.0	70.4	69.6
7	65.2	65.1	64.9	64.2	64.9	65.7	68.2	66.4	68.1	68.5	68.6	68.1	69.1	69.6	69.2
6	60.8	60.8	60.7	60.1	60.5	61.6	64.5	63.9	64.7	64.9	64.9	64.9	65.3	65.7	65.6
Max	67.3	67.2	67.0	66.1	66.9	67.3	70.1	68.0	69.7	70.0	70.0	69.0	70.4	**70.7**	69.7
Min	60.8	60.8	60.7	60.1	60.5	61.6	64.5	63.9	64.7	64.9	64.9	64.9	65.3	65.7	65.6

Noise sensitive receivers with exceedance (≥70.5 dB(A))

Floor	R211a	R211b	R211c	R212a	R212b	R212c	R213a	R213b
29	69.4	69.5	68.8	69.2	69.5	69.5	68.1	69.1
28	69.5	69.6	68.9	69.2	69.6	69.6	68.2	69.1
27	69.6	69.7	69.0	69.3	69.7	69.7	68.3	69.2
26	69.7	69.8	69.1	69.4	69.7	69.8	68.3	69.2
25	69.8	69.9	69.2	69.5	69.8	69.9	68.4	69.3
23	69.9	70.1	69.3	69.6	69.9	70.0	68.4	69.3
22	70.1	70.2	69.4	69.7	70.0	70.0	68.4	69.3
21	70.2	70.3	69.5	69.8	70.1	70.1	68.4	69.2
20	70.3	70.4	69.7	69.9	70.2	70.1	68.4	69.1
19	70.4	**70.5**	69.8	70.0	70.3	70.2	68.3	68.9
18	**70.5**	**70.7**	69.9	70.1	70.4	70.2	68.0	68.7
17	**70.6**	**70.8**	70.0	70.1	70.4	70.0	67.8	68.5
16	**70.8**	**70.9**	70.2	70.2	70.3	69.8	67.6	68.3
15	**70.9**	**71.0**	70.3	70.2	70.1	69.4	67.4	68.2
12	**71.0**	**71.2**	**70.5**	70.0	69.8	69.1	67.3	68.1
11	**71.1**	**71.3**	**70.6**	69.6	69.4	68.9	67.2	68.0
10	**71.1**	**71.4**	**70.7**	69.0	69.0	68.8	67.1	67.7
9	**71.2**	**71.4**	**70.8**	68.6	68.7	68.4	66.5	66.4
8	**71.0**	**71.4**	**70.9**	68.2	67.9	66.5	64.0	63.4
7	70.0	**70.5**	70.4	64.9	63.4	62.0	60.2	59.8
6	65.9	66.5	66.6	58.6	58.0	57.3	55.8	55.9
Max	**71.2**	**71.4**	**70.9**	70.2	70.4	70.2	68.4	69.3
Min	65.9	66.5	66.6	58.6	58.0	57.3	55.8	55.9

Noise sensitive receivers with exceedance ($\geq$70.5 dB(A))

Floor	R101 Max	R102 Max	R103 Max	R104 Max	R105 Max	R106 Max	R107 Max	R108 Max	R109 Max	R110 Max	R111 Max	R112 Max	R113 Max	R201 Max	R202 Max
29	68.5	69.1	70.4	70.3	70.1	70.2	70.4	64.8	64.9	66.2	**70.9**	70.2	69.4	70.0	70.3
28	68.5	69.3	**70.5**	70.4	70.1	70.3	**70.5**	65.0	65.0	66.3	**71.0**	70.3	69.5	70.0	70.4
27	68.6	69.4	**70.6**	70.4	70.2	70.3	**70.6**	65.1	65.2	66.4	**71.0**	70.3	69.5	70.0	70.4
26	68.7	69.5	**70.6**	**70.5**	70.2	70.4	**70.7**	65.3	65.3	66.5	**71.0**	70.3	69.5	70.1	70.4
25	68.8	69.6	**70.7**	**70.6**	70.3	70.4	**70.7**	65.4	65.4	66.5	**71.0**	70.3	69.5	70.1	70.4
23	68.8	69.8	**70.7**	**70.6**	70.4	**70.5**	**70.8**	65.6	65.6	66.6	**70.9**	70.2	69.5	70.0	70.4
22	68.9	69.8	**70.8**	**70.7**	**70.5**	**70.6**	**70.9**	65.8	65.8	66.7	**70.8**	70.1	69.3	69.9	70.2
21	68.8	70.0	**70.9**	**70.8**	**70.6**	**70.7**	**71.0**	66.0	66.0	66.9	**70.6**	69.9	69.1	69.7	70.1
20	68.7	70.1	**71.0**	**70.9**	**70.6**	**70.8**	**71.1**	66.2	66.2	67.0	**70.5**	69.8	69.0	69.6	70.0
19	68.4	70.2	**71.1**	**71.0**	**70.7**	**70.8**	**71.2**	66.3	66.4	67.2	70.3	69.6	68.8	69.4	69.8
18	68.3	70.2	**71.2**	**71.1**	**70.8**	**70.9**	**71.2**	66.5	66.6	67.3	70.2	69.5	68.7	69.2	69.6
17	68.0	70.2	**71.3**	**71.1**	**70.9**	**71.0**	**71.3**	66.8	66.8	67.5	70.1	69.4	68.6	69.1	69.5
16	67.8	70.1	**71.3**	**71.2**	**71.0**	**71.1**	**71.3**	66.9	67.0	67.6	70.1	69.4	68.6	69.1	69.5
15	67.7	70.0	**71.4**	**71.3**	**71.0**	**71.1**	**71.4**	67.2	67.2	67.8	70.1	69.3	68.5	69.0	69.4
12	67.6	69.6	**71.5**	**71.3**	**71.0**	**71.1**	**71.4**	67.4	67.4	67.8	70.0	69.3	68.5	69.0	69.4
11	67.5	69.1	**71.6**	**71.3**	**71.0**	**71.0**	**71.4**	67.6	67.6	67.8	69.7	68.9	68.1	68.8	69.2
10	67.0	68.7	**71.6**	**71.2**	**70.8**	**70.9**	**71.3**	67.7	67.8	67.8	68.4	67.5	66.5	67.9	68.2
9	65.5	68.3	**71.5**	**71.0**	**70.6**	**70.7**	**71.1**	67.8	67.9	67.9	65.0	64.0	63.0	65.3	65.5
8	61.5	67.3	**71.3**	**70.7**	70.4	70.4	**70.7**	67.4	67.6	67.5	61.6	60.9	59.9	62.3	62.4
7	57.5	62.0	**70.9**	70.4	70.0	70.0	70.0	65.0	65.3	65.2	58.7	58.0	56.8	59.0	59.2
6	53.7	56.7	68.0	68.1	67.9	67.8	67.9	58.8	59.1	59.3	55.9	55.2	54.0	55.8	56.0
Max	68.9	70.2	**71.6**	**71.3**	**71.0**	**71.1**	**71.4**	67.8	67.9	67.9	**71.0**	70.3	69.5	70.1	70.4
Min	53.7	56.7	68.0	68.1	67.9	67.8	67.9	58.8	59.1	59.3	55.9	55.2	54.0	55.8	56.0

Total Flats	540
Exceedance	113
Compliance Rate	79.1%

Noise sensitive receivers with exceedance (≥70.5 dB(A))

Floor	R203 Max	R204 Max	R205 Max	R206 Max	R207 Max	R208 Max	R209 Max	R210 Max	R211 Max	R212 Max	R213 Max
29	**71.0**	65.4	64.6	64.5	69.2	68.9	68.9	69.1	69.5	69.5	69.1
28	**71.0**	65.4	64.7	64.6	69.3	69.0	68.9	69.1	69.6	69.6	69.1
27	**71.1**	65.6	64.9	64.8	69.3	69.1	69.0	69.3	69.7	69.7	69.2
26	**71.1**	65.7	65.1	64.9	69.4	69.2	69.1	69.3	69.8	69.8	69.2
25	**71.1**	65.8	65.2	65.0	69.5	69.3	69.2	69.5	69.9	69.9	69.3
23	**71.0**	66.0	65.3	65.2	69.6	69.4	69.3	69.6	70.1	70.0	69.3
22	**70.9**	66.1	65.5	65.4	69.7	69.5	69.4	69.7	70.2	70.0	69.3
21	**70.8**	66.3	65.7	65.6	69.8	69.6	69.5	69.8	70.3	70.1	69.2
20	**70.7**	66.5	65.8	65.7	69.9	69.7	69.6	69.9	70.4	70.2	69.1
19	**70.5**	66.6	66.0	65.9	70.0	69.8	69.7	70.0	**70.5**	70.3	68.9
18	70.3	66.8	66.2	66.1	70.0	69.9	69.8	70.1	**70.7**	70.4	68.7
17	70.2	67.0	66.4	66.2	70.0	70.0	69.9	70.2	**70.8**	70.4	68.5
16	70.2	67.1	66.5	66.4	70.1	70.0	70.0	70.3	**70.9**	70.3	68.3
15	70.1	67.3	66.7	66.6	70.0	70.0	70.0	**70.5**	**71.0**	70.2	68.2
12	70.1	67.5	66.9	66.8	70.0	70.0	70.0	**70.6**	**71.2**	70.0	68.1
11	69.9	67.5	67.1	67.0	69.9	69.9	70.0	**70.6**	**71.3**	69.6	68.0
10	68.9	67.5	67.3	67.1	69.8	69.7	69.8	**70.7**	**71.4**	69.0	67.7
9	66.2	67.4	67.3	67.2	69.6	69.5	69.6	**70.6**	**71.4**	68.7	66.5
8	62.9	67.1	67.0	66.9	69.2	69.2	69.2	70.4	**71.4**	68.2	64.0
7	59.7	65.0	65.2	65.1	68.2	68.5	68.6	69.6	**70.5**	64.9	60.2
6	56.5	59.8	60.8	60.8	64.5	64.9	64.9	65.7	66.6	58.6	55.9
Max	**71.1**	67.5	67.3	67.2	70.1	70.0	70.0	**70.7**	**71.4**	70.4	69.3
Min	56.5	59.8	60.8	60.8	64.5	64.9	64.9	65.7	66.6	58.6	55.9

Noise sensitive receivers with exceedance (≥70.5 dB(A))

Appendix 4.5

Predicted Traffic Noise Levels for Residential Block (Mitigated Scenario)

Floor	R101a	R101b	R102a	R102b	R102c	R103a	R103b	R103c	R104a	R104b	R104c	R105a	R105b	R106a	R106b
29	68.5	67.7	69.1	69.1	68.8	68.3	70.1	70.4	68.9	70.1	70.3	68.6	70.1	70.2	70.1
28	68.5	67.8	69.2	69.3	68.9	68.3	70.1	**62.5**	69.0	70.2	70.4	68.7	70.1	70.3	70.2
27	68.6	67.9	69.4	69.4	69.0	68.4	70.2	**62.6**	69.1	70.2	70.4	68.7	70.2	70.3	70.2
26	68.7	68.1	69.4	69.5	69.2	68.5	70.2	**62.6**	69.1	70.3	**62.5**	68.8	70.2	70.4	70.3
25	68.8	68.1	69.6	69.6	69.3	68.6	70.3	**62.7**	69.2	70.3	**62.6**	68.9	70.3	70.4	70.4
23	68.8	68.2	69.7	69.8	69.4	68.6	70.3	**62.7**	69.3	70.4	**62.6**	69.0	70.4	**64.5**	**62.5**
22	68.9	68.3	69.8	69.8	69.5	68.7	70.4	**62.8**	69.4	**64.5**	**62.7**	69.1	**64.5**	**64.6**	**62.5**
21	68.8	68.3	69.8	70.0	69.7	68.8	**64.5**	**62.9**	69.4	**64.6**	**62.8**	69.2	**64.6**	**64.7**	**62.6**
20	68.7	68.4	69.9	70.1	69.8	68.9	**64.6**	**63.0**	69.5	**64.7**	**62.9**	69.2	**64.6**	**64.8**	**62.7**
19	68.4	68.3	69.9	70.2	69.9	69.0	**64.7**	**63.1**	69.6	**64.7**	**63.0**	69.4	**64.7**	**64.8**	**62.8**
18	68.3	68.1	69.9	70.2	70.0	69.0	**64.7**	**63.2**	69.7	**64.8**	**63.1**	69.4	**64.8**	**64.9**	**62.8**
17	68.0	67.9	69.7	70.2	70.0	69.1	**64.8**	**63.3**	69.8	**64.9**	**63.1**	69.5	**64.9**	**65.0**	**62.9**
16	67.8	67.6	69.3	70.1	70.1	69.2	**64.9**	**63.3**	69.8	**65.0**	**63.2**	69.6	**65.0**	**65.1**	**63.0**
15	67.7	67.4	69.0	69.7	70.0	69.3	**65.0**	**63.4**	69.9	**65.0**	**63.3**	69.7	**65.0**	**65.1**	**63.0**
12	67.6	67.2	68.7	69.3	69.6	69.4	**65.1**	**63.5**	70.0	**65.1**	**63.3**	69.7	**65.0**	**65.1**	**62.9**
11	67.5	67.1	68.5	68.9	69.1	69.5	**65.2**	**63.6**	70.1	**65.1**	**63.3**	69.7	**65.0**	**65.0**	**62.9**
10	67.0	66.8	68.4	68.7	68.6	69.7	**65.3**	**63.6**	70.1	**65.1**	**63.2**	69.6	**64.8**	**64.9**	**62.8**
9	64.2	65.5	67.6	68.3	68.2	69.8	**65.3**	**63.5**	70.1	**65.0**	**63.0**	69.5	**64.6**	**64.7**	**62.7**
8	60.6	61.5	64.3	66.4	67.3	69.9	**65.2**	**63.3**	70.0	**64.7**	**62.7**	69.3	70.4	70.4	70.4
7	57.0	57.5	59.4	61.0	62.0	69.7	**64.9**	**62.8**	69.7	70.4	70.3	69.1	70.0	70.0	69.9
6	53.6	53.7	55.3	56.2	56.7	67.2	67.8	68.0	67.6	68.0	68.1	67.6	67.9	67.8	67.8
Max	68.9	68.4	69.9	70.2	70.1	69.9	70.4	70.4	70.1	70.4	70.4	69.7	70.4	70.4	70.4
Min	53.6	53.7	55.3	56.2	56.7	67.2	64.5	62.5	67.6	64.5	62.5	67.6	64.5	64.5	62.5

Total Flats	540
Exceedance	0
Compliance Rate	100%

Noise sensitive receivers with exceedance (≥70.5 dB(A))

Noise sensitive receivers applied with fixed glazing

Noise sensitive receivers applied with acoustic window (baffle type)

Noise sensitive receivers applied with enhanced acoustic balcony (baffle type)

Floor	R107a	R107b	R107c	R107d	R107e	R108a	R108b	R109a	R109b	R109c	R110a	R110b	R110c	R111a	R111b
29	69.1	70.4	67.0	64.8	64.4	64.2	64.8	64.9	64.8	64.4	64.3	64.9	66.2	**64.9**	**62.6**
28	69.1	-	67.1	65.0	64.6	64.4	65.0	65.0	65.0	64.5	64.5	65.0	66.3	**65.0**	**62.6**
27	69.2	-	67.2	65.1	64.7	64.5	65.1	65.2	65.1	64.6	64.6	65.1	66.4	**65.0**	**62.7**
26	69.3	-	67.3	65.3	64.8	64.7	65.3	65.3	65.3	64.8	64.8	65.3	66.5	**65.0**	**62.7**
25	69.4	-	67.4	65.4	64.9	64.8	65.4	65.4	65.4	64.9	64.9	65.4	66.5	**65.0**	**62.7**
23	69.4	-	67.6	65.6	65.1	65.0	65.6	65.6	65.6	65.1	65.1	65.6	66.6	**64.9**	**62.6**
22	69.5	-	67.7	65.7	65.3	65.2	65.8	65.8	65.8	65.3	65.3	65.8	66.7	**64.8**	70.4
21	69.6	-	67.8	65.9	65.5	65.4	66.0	66.0	65.9	65.5	65.5	66.0	66.9	**64.6**	70.3
20	69.7	-	68.0	66.1	65.7	65.6	66.2	66.2	66.1	65.7	65.6	66.1	67.0	**64.5**	70.1
19	69.8	-	68.1	66.3	65.9	65.8	66.3	66.4	66.3	65.9	65.8	66.3	67.2	70.3	70.0
18	69.9	-	68.2	66.5	66.1	66.0	66.5	66.6	66.5	66.1	66.0	66.5	67.3	70.2	69.9
17	70.0	-	68.4	66.8	66.4	66.2	66.8	66.8	66.8	66.3	66.3	66.8	67.5	70.1	69.8
16	70.0	-	68.6	66.9	66.5	66.4	66.9	67.0	66.9	66.4	66.4	66.9	67.6	70.1	69.7
15	70.1	-	68.7	67.1	66.7	66.6	67.2	67.2	67.2	66.7	66.7	67.1	67.8	70.1	69.7
12	70.1	-	68.9	67.3	66.9	66.8	67.4	67.4	67.4	66.9	66.9	67.3	67.8	70.0	69.6
11	70.0	-	69.0	67.5	67.1	67.0	67.6	67.6	67.6	67.1	67.1	67.5	67.8	69.7	69.3
10	70.0	-	69.2	67.7	67.3	67.2	67.7	67.8	67.7	67.2	67.2	67.7	67.8	68.4	67.9
9	69.9	-	69.3	67.8	67.4	67.3	67.8	67.9	67.8	67.4	67.3	67.8	67.9	65.0	64.5
8	69.6	-	69.1	67.5	67.0	66.8	67.4	67.6	67.5	66.9	67.0	67.5	67.5	61.6	61.3
7	69.2	70.0	67.6	65.1	64.4	64.2	65.0	65.3	65.2	64.3	64.6	65.1	65.2	58.7	58.4
6	67.6	67.9	63.9	58.9	58.2	57.9	58.8	59.1	59.1	58.1	58.6	59.2	59.3	55.9	55.5
Max	70.1	70.4	69.3	67.8	67.4	67.3	67.8	67.9	67.8	67.4	67.3	67.8	67.9	70.3	70.4
Min	67.6	67.9	63.9	58.9	58.2	57.9	58.8	59.1	59.1	58.1	58.6	59.2	59.3	55.9	55.5

Noise sensitive receivers with exceedance (≥70.5 dB(A))
Noise sensitive receivers applied with fixed glazing
Noise sensitive receivers applied with acoustic window (baffle type)
Noise sensitive receivers applied with enhanced acoustic balcony (baffle type)

Floor	R112a	R112b	R113a	R113b	R201a	R201b	R202a	R202b	R203a	R203b	R204a	R204b	R204c	R205a	R205b
29	70.2	69.8	69.4	68.8	69.5	70.0	70.2	70.3	**62.8**	**65.0**	65.4	64.6	64.5	64.0	64.6
28	70.3	69.9	69.5	68.9	69.5	70.0	70.2	70.4	**62.8**	**65.0**	65.4	64.7	64.7	64.1	64.7
27	70.3	69.9	69.5	68.9	69.6	70.0	70.3	70.4	**62.9**	**65.1**	65.6	64.9	64.8	64.2	64.8
26	70.3	69.9	69.5	69.0	69.6	70.1	70.3	70.4	**62.9**	**65.1**	65.7	65.1	65.0	64.4	65.0
25	70.3	70.0	69.5	69.0	69.6	70.1	70.3	70.4	**62.9**	**65.1**	65.8	65.2	65.1	64.5	65.1
23	70.2	69.9	69.5	68.9	69.5	70.0	70.2	70.4	**62.8**	**65.0**	66.0	65.3	65.3	64.7	65.3
22	70.1	69.7	69.3	68.7	69.4	69.9	70.1	70.2	**62.7**	**64.9**	66.1	65.5	65.5	64.9	65.4
21	69.9	69.5	69.1	68.6	69.3	69.7	70.0	70.1	**62.6**	**64.8**	66.3	65.7	65.6	65.0	65.6
20	69.8	69.4	69.0	68.4	69.0	69.6	69.8	70.0	70.4	**64.7**	66.5	65.9	65.8	65.2	65.8
19	69.6	69.2	68.8	68.2	68.9	69.4	69.6	69.8	70.2	**64.5**	66.6	66.1	66.0	65.4	65.9
18	69.5	69.1	68.7	68.1	68.7	69.2	69.5	69.6	70.1	70.3	66.8	66.2	66.2	65.6	66.1
17	69.4	69.0	68.6	68.0	68.6	69.1	69.4	69.5	70.0	70.2	67.0	66.4	66.4	65.7	66.3
16	69.4	69.0	68.6	67.9	68.5	69.1	69.3	69.5	69.9	70.2	67.1	66.6	66.5	65.9	66.5
15	69.3	68.9	68.5	67.9	68.5	69.0	69.3	69.4	69.9	70.1	67.3	66.8	66.7	66.1	66.6
12	69.3	68.9	68.5	67.9	68.5	69.0	69.2	69.4	69.9	70.1	67.5	67.0	66.9	66.3	66.9
11	68.9	68.5	68.1	67.5	68.2	68.8	69.0	69.2	69.6	69.9	67.5	67.2	67.1	66.5	67.0
10	67.5	67.0	66.5	65.9	67.4	67.9	68.1	68.2	68.7	68.9	67.5	67.4	67.3	66.7	67.2
9	64.0	63.5	63.0	62.3	65.0	65.3	65.5	65.3	66.0	66.2	67.4	67.4	67.3	66.7	67.3
8	60.9	60.4	59.9	59.2	62.0	62.3	62.4	61.8	62.7	62.9	67.0	67.1	67.0	66.4	67.0
7	58.0	57.5	56.8	56.1	58.7	59.0	59.2	58.7	59.5	59.7	64.8	65.0	64.9	64.3	65.2
6	55.2	54.6	54.0	53.2	55.4	55.8	56.0	55.7	56.3	56.5	59.2	59.7	59.8	59.7	60.6
Max	70.3	70.0	69.5	69.0	69.6	70.1	70.3	70.4	70.4	70.3	67.5	67.4	67.3	66.7	67.3
Min	55.2	54.6	54.0	53.2	55.4	55.8	56.0	55.7	56.3	56.5	59.2	59.7	59.8	59.7	60.6

Noise sensitive receivers with exceedance (≥70.5 dB(A))
Noise sensitive receivers applied with fixed glazing
Noise sensitive receivers applied with acoustic window (baffle type)
Noise sensitive receivers applied with enhanced acoustic balcony (baffle type)

Floor	R205c	R206a	R206b	R207a	R207b	R207c	R207d	R207e	R208a	R208b	R209a	R209b	R210a	R210b	R210c
29	64.6	64.5	64.2	63.3	64.1	65.9	69.2	67.2	68.7	68.9	68.9	67.8	69.1	69.0	68.1
28	64.7	64.6	64.3	63.4	64.2	65.9	69.3	67.3	68.8	69.0	68.9	67.9	69.1	69.1	68.2
27	64.9	64.8	64.4	63.5	64.3	66.0	69.3	67.4	68.9	69.1	69.0	68.0	69.2	69.3	68.3
26	65.1	64.9	64.6	63.7	64.5	66.0	69.4	67.5	69.0	69.2	69.1	68.1	69.3	69.3	68.4
25	65.2	65.0	64.7	63.8	64.6	66.1	69.5	67.5	69.1	69.3	69.2	68.2	69.4	69.5	68.5
23	65.3	65.2	64.9	64.0	64.8	66.3	69.6	67.6	69.2	69.4	69.3	68.3	69.6	69.6	68.6
22	65.5	65.4	65.1	64.1	64.9	66.4	69.7	67.7	69.3	69.5	69.4	68.4	69.7	69.7	68.7
21	65.7	65.6	65.2	64.3	65.1	66.5	69.8	67.8	69.4	69.6	69.5	68.5	69.8	69.8	68.8
20	65.8	65.7	65.4	64.5	65.3	66.6	69.9	67.9	69.4	69.7	69.6	68.6	69.9	69.9	68.9
19	66.0	65.9	65.6	64.7	65.4	66.7	70.0	67.9	69.5	69.8	69.7	68.7	70.0	70.0	69.0
18	66.2	66.1	65.8	64.8	65.6	66.8	70.0	68.0	69.6	69.9	69.8	68.8	70.1	70.1	69.1
17	66.4	66.2	66.0	65.0	65.8	66.8	70.0	68.0	69.7	70.0	69.9	68.8	70.1	70.2	69.3
16	66.5	66.4	66.2	65.2	66.0	66.9	70.1	68.0	69.7	70.0	70.0	68.9	70.2	70.3	69.4
15	66.7	66.6	66.3	65.4	66.2	67.0	70.0	67.9	69.6	70.0	70.0	69.0	70.3	**64.5**	69.5
12	66.9	66.8	66.6	65.7	66.4	67.1	70.0	67.7	69.6	70.0	70.0	69.0	70.4	**64.6**	69.6
11	67.1	67.0	66.8	65.8	66.6	67.1	69.9	67.5	69.4	69.9	70.0	68.9	70.4	**64.6**	69.7
10	67.3	67.1	67.0	66.0	66.8	67.2	69.8	67.2	69.2	69.7	69.8	68.8	70.4	**64.7**	69.7
9	67.3	67.2	67.0	66.1	66.9	67.3	69.6	67.0	69.0	69.5	69.6	68.6	70.3	**64.6**	69.7
8	67.0	66.9	66.7	65.9	66.6	67.1	69.2	66.7	68.8	69.2	69.2	68.4	70.0	70.4	69.6
7	65.2	65.1	64.9	64.2	64.9	65.7	68.2	66.4	68.1	68.5	68.6	68.1	69.1	69.6	69.2
6	60.8	60.8	60.7	60.1	60.5	61.6	64.5	63.9	64.7	64.9	64.9	64.9	65.3	65.7	65.6
Max	67.3	67.2	67.0	66.1	66.9	67.3	70.1	68.0	69.7	70.0	70.0	69.0	70.4	70.4	69.7
Min	60.8	60.8	60.7	60.1	60.5	61.6	64.5	63.9	64.7	64.9	64.9	64.9	65.3	64.5	65.6

Noise sensitive receivers with exceedance (≥70.5 dB(A))
Noise sensitive receivers applied with fixed glazing
Noise sensitive receivers applied with acoustic window (baffle type)
Noise sensitive receivers applied with enhanced acoustic balcony (baffle type)

Floor	R211a	R211b	R211c	R212a	R212b	R212c	R213a	R213b
29	69.4	69.5	68.8	69.2	69.5	69.5	68.1	69.1
28	69.5	69.6	68.9	69.2	69.6	69.6	68.2	69.1
27	69.6	69.7	69.0	69.3	69.7	69.7	68.3	69.2
26	69.7	69.8	69.1	69.4	69.7	69.8	68.3	69.2
25	69.8	69.9	69.2	69.5	69.8	69.9	68.4	69.3
23	69.9	70.1	69.3	69.6	69.9	70.0	68.4	69.3
22	70.1	70.2	69.4	69.7	70.0	70.0	68.4	69.3
21	70.2	70.3	69.5	69.8	70.1	70.1	68.4	69.2
20	70.3	70.4	69.7	69.9	70.2	70.1	68.4	69.1
19	70.4	**64.5**	69.8	70.0	70.3	70.2	68.3	68.9
18	**62.5**	**64.7**	69.9	70.1	70.4	70.2	68.0	68.7
17	**62.6**	**64.8**	70.0	70.1	70.4	70.0	67.8	68.5
16	**62.8**	**64.9**	70.2	70.2	70.3	69.8	67.6	68.3
15	**62.9**	**65.0**	70.3	70.2	70.1	69.4	67.4	68.2
12	**63.0**	**65.2**	**64.5**	70.0	69.8	69.1	67.3	68.1
11	**63.1**	**65.3**	**64.6**	69.6	69.4	68.9	67.2	68.0
10	**63.1**	**65.4**	**64.7**	69.0	69.0	68.8	67.1	67.7
9	**63.2**	**65.4**	**64.8**	68.6	68.7	68.4	66.5	66.4
8	**63.0**	**65.4**	**64.9**	68.2	67.9	66.5	64.0	63.4
7	70.0	**64.5**	70.4	64.9	63.4	62.0	60.2	59.8
6	65.9	66.5	66.6	58.6	58.0	57.3	55.8	55.9
Max	70.4	70.4	70.4	70.2	70.4	70.2	68.4	69.3
Min	62.5	64.5	64.5	58.6	58.0	57.3	55.8	55.9

Noise sensitive receivers with exceedance (≥70.5 dB(A))
Noise sensitive receivers applied with fixed glazing
Noise sensitive receivers applied with acoustic window (baffle type)
Noise sensitive receivers applied with enhanced acoustic balcony (baffle type)

Floor	R101 Max	R102 Max	R103 Max	R104 Max	R105 Max	R106 Max	R107 Max	R108 Max	R109 Max	R110 Max	R111 Max	R112 Max	R113 Max	R201 Max	R202 Max
29	68.5	69.1	70.4	70.3	70.1	70.2	70.4	64.8	64.9	66.2	64.9	70.2	69.4	70.0	70.3
28	68.5	69.3	70.1	70.4	70.1	70.3	69.1	65.0	65.0	66.3	65.0	70.3	69.5	70.0	70.4
27	68.6	69.4	70.2	70.4	70.2	70.3	69.2	65.1	65.2	66.4	65.0	70.3	69.5	70.0	70.4
26	68.7	69.5	70.2	70.3	70.2	70.4	69.3	65.3	65.3	66.5	65.0	70.3	69.5	70.1	70.4
25	68.8	69.6	70.3	70.3	70.3	70.4	69.4	65.4	65.4	66.5	65.0	70.3	69.5	70.1	70.4
23	68.8	69.8	70.3	70.4	70.4	64.5	69.4	65.6	65.6	66.6	64.9	70.2	69.5	70.0	70.4
22	68.9	69.8	70.4	69.4	69.1	64.6	69.5	65.8	65.8	66.7	70.4	70.1	69.3	69.9	70.2
21	68.8	70.0	68.8	69.4	69.2	64.7	69.6	66.0	66.0	66.9	70.3	69.9	69.1	69.7	70.1
20	68.7	70.1	68.9	69.5	69.2	64.8	69.7	66.2	66.2	67.0	70.1	69.8	69.0	69.6	70.0
19	68.4	70.2	69.0	69.6	69.4	64.8	69.8	66.3	66.4	67.2	70.3	69.6	68.8	69.4	69.8
18	68.3	70.2	69.0	69.7	69.4	64.9	69.9	66.5	66.6	67.3	70.2	69.5	68.7	69.2	69.6
17	68.0	70.2	69.1	69.8	69.5	65.0	70.0	66.8	66.8	67.5	70.1	69.4	68.6	69.1	69.5
16	67.8	70.1	69.2	69.8	69.6	65.1	70.0	66.9	67.0	67.6	70.1	69.4	68.6	69.1	69.5
15	67.7	70.0	69.3	69.9	69.7	65.1	70.1	67.2	67.2	67.8	70.1	69.3	68.5	69.0	69.4
12	67.6	69.6	69.4	70.0	69.7	65.1	70.1	67.4	67.4	67.8	70.0	69.3	68.5	69.0	69.4
11	67.5	69.1	69.5	70.1	69.7	65.0	70.0	67.6	67.6	67.8	69.7	68.9	68.1	68.8	69.2
10	67.0	68.7	69.7	70.1	69.6	64.9	70.0	67.7	67.8	67.8	68.4	67.5	66.5	67.9	68.2
9	65.5	68.3	69.8	70.1	69.5	64.7	69.9	67.8	67.9	67.9	65.0	64.0	63.0	65.3	65.5
8	61.5	67.3	69.9	70.0	70.4	70.4	69.6	67.4	67.6	67.5	61.6	60.9	59.9	62.3	62.4
7	57.5	62.0	69.7	70.4	70.0	70.0	70.0	65.0	65.3	65.2	58.7	58.0	56.8	59.0	59.2
6	53.7	56.7	68.0	68.1	67.9	67.8	67.9	58.8	59.1	59.3	55.9	55.2	54.0	55.8	56.0
Max	68.9	70.2	70.4	70.4	70.4	70.4	70.4	67.8	67.9	67.9	70.4	70.3	69.5	70.1	70.4
Min	53.7	56.7	68.0	68.1	67.9	64.5	67.9	58.8	59.1	59.3	55.9	55.2	54.0	55.8	56.0

Total Flats	540
Exceedance	0
Compliance Rate	100%

Floor	R203 Max	R204 Max	R205 Max	R206 Max	R207 Max	R208 Max	R209 Max	R210 Max	R211 Max	R212 Max	R213 Max
29	65.0	65.4	64.6	64.5	69.2	68.9	68.9	69.1	69.5	69.5	69.1
28	65.0	65.4	64.7	64.6	69.3	69.0	68.9	69.1	69.6	69.6	69.1
27	65.1	65.6	64.9	64.8	69.3	69.1	69.0	69.3	69.7	69.7	69.2
26	65.1	65.7	65.1	64.9	69.4	69.2	69.1	69.3	69.8	69.8	69.2
25	65.1	65.8	65.2	65.0	69.5	69.3	69.2	69.5	69.9	69.9	69.3
23	65.0	66.0	65.3	65.2	69.6	69.4	69.3	69.6	70.1	70.0	69.3
22	64.9	66.1	65.5	65.4	69.7	69.5	69.4	69.7	70.2	70.0	69.3
21	64.8	66.3	65.7	65.6	69.8	69.6	69.5	69.8	70.3	70.1	69.2
20	70.4	66.5	65.8	65.7	69.9	69.7	69.6	69.9	70.4	70.2	69.1
19	70.2	66.6	66.0	65.9	70.0	69.8	69.7	70.0	70.4	70.3	68.9
18	70.3	66.8	66.2	66.1	70.0	69.9	69.8	70.1	69.9	70.4	68.7
17	70.2	67.0	66.4	66.2	70.0	70.0	69.9	70.2	70.0	70.4	68.5
16	70.2	67.1	66.5	66.4	70.1	70.0	70.0	70.3	70.2	70.3	68.3
15	70.1	67.3	66.7	66.6	70.0	70.0	70.0	70.3	70.3	70.2	68.2
12	70.1	67.5	66.9	66.8	70.0	70.0	70.0	70.4	65.2	70.0	68.1
11	69.9	67.5	67.1	67.0	69.9	69.9	70.0	70.4	65.3	69.6	68.0
10	68.9	67.5	67.3	67.1	69.8	69.7	69.8	70.4	65.4	69.0	67.7
9	66.2	67.4	67.3	67.2	69.6	69.5	69.6	70.3	65.4	68.7	66.5
8	62.9	67.1	67.0	66.9	69.2	69.2	69.2	70.4	65.4	68.2	64.0
7	59.7	65.0	65.2	65.1	68.2	68.5	68.6	69.6	70.4	64.9	60.2
6	56.5	59.8	60.8	60.8	64.5	64.9	64.9	65.7	66.6	58.6	55.9
Max	70.4	67.5	67.3	67.2	70.1	70.0	70.0	70.4	70.4	70.4	69.3
Min	56.5	59.8	60.8	60.8	64.5	64.9	64.9	65.7	65.2	58.6	55.9

Appendix 5.1

Parameters and Assumptions for Rail Noise Calculation

Calculation of $L_{eq, 30min}$ at NSR from SEL

1. Conversion of Air-conditioning Noise in L_{max} to Sound Exposure Level (SEL)

Parameters	Assumptions	Remarks
Conversion from L_{max} to SEL [1]	$SEL = L_{max} + 10 \log (L / V) + 10.5 - 10 \log [4D / (4D^2 + 1)) + 2 \tan^{-1}(1 / 2D))]$	L is the train length (in m) V is the actual operating train speed (in kph) d is the perpendicular distance from track (in m) D = d / L

Note:
[1] Conversion from L_{max} to SEL based on Equation 15.21 of the "Transportation Noise Reference Book", 1987, edited by Paul Nelson.

2. Conversion of Viaduct Re-radiated Noise in $L_{eq(30min)}$ to SEL

Parameters	Assumptions	Remarks
Conversion from $L_{eq(30min)}$ to SEL	$SEL = L_{eq(30min)} - 10 \log (N_1) + 10 \log (1800)$	N_1 is the train frequency per direction in 30 minutes

3. Combine SEL of Air-conditioning Noise and Viaduct Re-radiated Noise with SEL of Rolling Noise.

4. Calculation of $L_{eq(30min)}$ from each track from the combined SEL

Parameters	Assumptions	Remarks
Speed [1]	$20 \log (V / V_{ref})$ dB(A)	V is the actual operating train speed V_{ref} is the reference train speed 130kph
Distance	Change of SEL with distance = $- 10 \log (d_1/25)$ dB(A)	d_1 is the distance between track and receiver
View Angle	$10 \log (\pi\theta/180-\cos2\alpha \sin\theta) - 5$ dB(A)	α is the acute angle between a line drawn through the receiver point, parallel to the track and the line bisecting the angle view θ θ is the view angle
Air absorption	$0.2 - 0.008d$ dB(A)	*d* is the distance (m)
Façade Reflection	2.5 dB(A)	-
Time correction to 30 minutes for $L_{eq (30min)}$	$10 \log (1 / 1800)$	-
Rail Deterioration	3 dB(A)	A 3dB(A) rail deterioration correction has been included for conservative assessment according to the approved EIA Report for MOL (AEIAR-028/1999).
Gap Size [2]	$10 \log (G / 250)$	G is the gap size
Train Frequency [3]	$10 \log (N_1)$	N_1 is the train frequency in 30 minutes Frequency (trains / direction / 30 minutes)

Note:
[1] According to the speed profile of Tai Shui Hang to Heng On Section of the ERR under FEP No. FEP-05/039/2000F of the approved EIA Report for MOL (AEIAR-028/1999), the speed is 60kph for trains to Tuen Mun and 70kph for trains to Wu Kai Sha.

[2] According to the ERR under FEP No. FEP-05/039/2000F of the approved EIA Report for MOL (AEIAR-028/1999), the gap size along the concerned rail section is 310mm.
[3] According to the ERR under FEP No. FEP-05/039/2000F of the approved EIA Report for MOL (AEIAR-028/1999) and as advised by the MTRC, the maximum train frequency for Tuen Ma Line is 28 trains per hour per direction (tphpd) for daytime/evening and 16 tphpd for night-time respectively.

Calculation of L_{max} at NSR from SEL

1. Conversion of the combined SEL to L_{max}

Parameters	Assumptions	Remarks
Conversion from SEL to L_{max} [1]	L_{max} = SEL – 10 log (L / V) – 10.5 + 10 log [4D / ($4D^2$ + 1)) + 2 $\tan^{-1}$(1 / 2D))]	L is the train length (in m) V is the actual operating train speed (in kph) d is the perpendicular distance from track (in m) D = d / L

Note:
[1] Conversion from SEL to L_{max} based on Equation 15.21 of the "Transportation Noise Reference Book", 1987, edited by Paul Nelson.

2. Calculation of L_{max} from each track

Parameters	Assumptions	Remarks
Distance	- 20 log (d_1/25) dB(A)	d_1 is the distance between track and receiver
Rail Deterioration	3 dB(A)	-
Façade	2.5 dB(A)	-
Gap Size	10 log (G / 250)	G is the gap size
Air absorption	0.2 – 0.008*d* dB(A)	*d* is the distance (m)

Project no: 304537-00
Project name: Proposed Commercial / Residential Re-Development at 16 Po Tai Street, Ma On Shan
Title: Sound Exposure Level (SEL) Calculation

1. Conversion of Air-conditioning Noise in L_{max} to SEL

L_{max} of Air-conditioning Noise at 130kph @25m, dB(A) [1]	Train Length (m) [1]	SEL at 130kph @25m, dB(A) [2]
48.8	200	56.2

Notes:
[1] With reference to the approved EIA report for East Rail Extension – Tai Wai to Ma On Shan (AEIAR-028/1999).
[2] Conversion from L_{max} to SEL based on Equation 15.21 of the "Transportation Noise Reference Book", 1987, edited by Paul Nelson:
$SEL = L_{max} + 10\log(L/V) + 10.5 - 10\log[4D/(4D^2+1)) + 2\tan^{-1}(1/2D))]$
where L is the train length (in m), V is the train speed (in kph), d is the perpendicular distance from track (in m), and D = d / L

2. Conversion of Viaduct Re-radiated Noise in $L_{eq,30min}$ to SEL

$L_{eq(30min)}$ of Viaduct Re-radiated Noise at 130kph @25m, dB(A) [1]	No. of Train Events in approved MOL EIA [1]	Correction, dB(A)	SEL at 130kph @25m, dB(A)
		Time	
40.6	10	32.6	63.2

Notes:
[1] With reference to the approved EIA report for East Rail Extension – Tai Wai to Ma On Shan (AEIAR-028/1999).

3. Combined SEL

Tracks	SEL for Air-conditioning Noise at 130kph @25m, dB(A)	SEL for Viaduct Re-radiated Noise at 130kph @25m, dB(A)	Rolling Noise at 130kph @25m, dB(A) [1]	Combined SEL at 130kph @25m, dB(A)	Actual Train Speed, kph	Correction, dB(A)	Combined SEL at Actual Speed @25m, dB(A)
						Speed	
Tuen Ma Line (To Wu Kai Sha)	56.2	63.2	81.4	81.5	70	-5.4	76.1
Tuen Ma Line (To Tuen Mun)	56.2	63.2	81.4	81.5	60	-6.7	74.8

Notes:
[1] With reference to the approved EIA report for East Rail Extension – Tai Wai to Ma On Shan (AEIAR-028/1999).

Appendix 5.2

Relevant Correspondence with MTRC

MTR Corporation Limited
香港鐵路有限公司
www.mtr.com.hk

Arup Hong Kong Limited
5/F, Festival Walk,
80 Tat Chee Avenue,
Kowloon Tong, Hong Kong

Our ref: T&ESD/E&IC/ES/EnvE/L1339

Date: 25 AUG 2026

Attention: Mr. Johnny SO

By Post and Fax
(Fax no.:2268 3380)

Dear Mr. So,

Re: Environmental Assessment Study for the Proposed Commercial / Residential Re-Development at 16 Po Tai Street, Ma On Shan

Request for Operation Details of Tuen Ma Line (Tai Shui Hang to Heng On Section)

We refer to your letter (ref.: 304537/L003/JS/aw) dated 11 March 2025 requesting information regarding Tuen Ma Line (TML), and our reply letter (ref.: O/RAP/TSH/1000-0064) dated 18 March 2025.

Please be advised that the future ultimate peak train frequency during the period from 23:00 to 07:00 hours has been updated to approximately 8 trains per 30 minutes per direction. Should your organization require updated information for any subsequent assessment, we would appreciate it if you could contact our office for the latest available information.

We would like to take this opportunity to caution that the proposed development can be sensitive to air-borne noise emitted from the nearby TML viaduct. Like many other property development projects in close proximity to the railway, it is crucial for the development proponent and its consultant to ensure that any proposed noise mitigation measures are fit-for-purpose and capable of satisfactorily addressing both train noise issues. Potential mitigation measures may include:

- Incorporating self-protecting building designs,
- Optimizing building disposition to reduce noise reflection,
- Conducting noise verification tests for acoustic windows or balconies, and
- Specifying appropriate sound insulation properties for fixed glazing.

These measures are indicative only and non-exhaustive, and the development proponent and its consultants remain responsible for identifying and implementing all necessary mitigation measures to ensure compliance with applicable noise requirements.

Please be reminded that any information that may come to your knowledge or come into your possession from MTR Corporation Limited shall only be used solely as reference for this captioned project. Further distribution and/or publication of the above information for purposes not connected with the captioned project are strictly prohibited without the prior consent of MTR Corporation Limited. Please also note that any such information is subject to change without prior notification.

MTR Corporation Limited
香港鐵路有限公司
www.mtr.com.hk

Our ref: T&ESD/E&IC/ES/EnvE/L1339
Date: 25 AUG 2026

Should you have any additional enquiries, please feel free to contact Ms. Priscilla Chan at 2993-2534 or the undersigned at 2993 4127.

Yours sincerely,

Catherine Leung
Lead Environmental Manager

c.c Dr. LAW Chi Wing (EPD) [Fax no.: 2802 4511]
Miss CHENG Hei Yiu (EPD) [Fax no.: 2591 0558]

MTR Headquarters Building, Telford Plaza, Kowloon Bay,
Kowloon, Hong Kong. GPO Box 9916, Hong Kong
Tel (852) 2993 2111 Fax (852) 2798 8822

香港九龍灣德福廣場港鐵總部大樓
香港郵政總局信箱9916號
電話 (852) 2993 2111 傳真 (852) 2798 8822

MTR Corporation Limited
香港鐵路有限公司
www.mtr.com.hk

Arup
Level 5 Festival Walk
80 Tat Chee Avenue
Kowloon Tong
Kowloon

Attention: Mr. Johnny So

Your ref.: 304537/L003/JS/aw

Our ref.: O/RAP/TSH/1000-0064

By Post

18 March 2025

Dear Mr. So,

Environmental Assessment Study for the Proposed Commercial / Residential Re-Development at 16 Po Tai Street, Ma On Shan

Request for Operation Details of Tuen Ma Line (Tai Shui Hang to Heng On Station)

We refer to your letter dated 11 March 2025, regarding the requested information mentioned in the subject.

Please be advised that the information stated in your letter has been confirmed by our Train Service Planning team, with the maximum number of headway and train schedule. Additionally, 6 trains / direction / 30mins will be provided for Kai Tak Sports Park events during the nigh-time operating period from 23:00 to 07:00.

For any operational details related to the Tuen Ma Line, please contact our Trian Service Planning team, Mr. Neo Lam at LCMLAM@mtr.com.hk directly and keep the undersigned be informed.

Sincerely,

Jack Yeung
for Chief Railway Protection & Land Survey Manager (Operations)
DH/WW/JY

MTR Headquarters Building, Telford Plaza, Kowloon Bay,
Kowloon, Hong Kong. GPO Box 9916, Hong Kong.
Tel (852) 2993 2111 Fax (852) 2798 8822

香港九龍灣德福廣場港鐵總部大樓
香港郵政總局信箱9916號
電話 (852) 2993 2111 傳真 (852) 2798 8822

MIX
Paper from responsible sources
FSC™ C123738

Our ref 304537/L003/JS/aw

ARUP

BY FAX AND BY POST

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johnny.so@arup.com
www.arup.com

MTR Corporation Limited
MTR Headquaters Building,
Telford Plaza, 33 Wai Yip Street,
Kowloon Bay,
Hong Kong

11 March 2025

Dear Sir/Madam,

Environmental Assessment Study for the Proposed Commercial / Residential Re-Development at 16 Po Tai Street, Ma On Shan

Request for Operation Details of Tuen Ma Line (Tai Shui Hang to Heng On Section)

We have been recently appointed by Paliburg Development Consultants Limited to conduct an Environmental Assessment Study (EAS) for the Proposed Commercial / Residential Re-Development at 16 Po Tai Street, Ma On Shan (see **Attachment A**). The proposed development is close to the existing Tuen Ma Line (for section between Tai Shui Hang and Heng On Station) (see **Attachment B**).

As part of the study, we are required to conduct rail noise assessment for the captioned project. We would be grateful if you could confirm the following information of this Tuen Ma Line Section for assessment:

1. **Maximum no. of headway**

Operating Periods	No. of Headway	No. of cars per train
Daytime and Evening (0700-2300)	14 trains / direction / 30mins	8
Night-time (2300-0700)	5 trains / direction / 30mins	8

Source:
Environmental Review Report for FEP-05/039/2000F under the approved EIA report for East Rail Extension – Tai Wai to Ma On Shan (AEIAR-028/1999).

2. **Train Schedule**

Service Hours – Heng On	
First Train	**Last Train**
05:43 a.m. (To Tuen Mun)	01:20 a.m. (To Wu Kai Sha)

Source:
https://www.mtr.com.hk/en/customer/services/service_hours_search.php?query_type=search&station=101

Ove Arup & Partners Hong Kong Ltd | Registered in England & Wales
Registered Number: 1359968 | Registered Address: 8 Fitzroy Street London W1T 4BJ

We would be grateful if you could provide the requested information at your earliest convenience and before 25 March 2025.

If you require any further information, please do not hesitate to contact the undersigned or our Mr. Anthonio Wun at 2908 4293.

Yours sincerely,



Johnny So
Senior Consultant

Encl.
Appointment Letter and Site Location Plan

Ove Arup & Partners Hong Kong Ltd | Registered in England & Wales
Registered Number: 1359968 | Registered Address: 8 Fitzroy Street London W1T 4BJ

百利保發展顧問有限公司
Paliburg Development Consultants Limited

DUPLICATE

Our Ref.: PDC/482/014/24

August 21, 2024

Arup Hong Kong Ltd.
Level 5 Festival Walk
80 Tat Chee Avenue
Kowloon Tong
Kowloon

Dear Sirs,

Letter of Appointment
Environmental Consultancy Services for Section 12A Application for
Proposed Composite Residential Re-development at
We Go Mall, 16 Po Tai Street, Ma On Shan, Sha Tin, New Territories
Sha Tin Town Lot No. 482

We act as the Development Consultant for and on behalf of our Principal, Real Charm Investment Limited ("the Employer") in respect of the captioned project.

Reference is made to the following; a copy each of which is attached for easy reference: -

(A) Our letter ref. PDC/482/005/24 dated April 29, 2024 regarding Invitation to Submission of Fee Proposal for the captioned services; and

(B) Your fee proposal ref. 2024_ENV016/L002/FC/js with our markup comments dated May 13, 2024.

We are pleased to confirm that your revised fee proposal for the captioned is acceptable subject to the following conditions: -

(1) Scope of Professional Services

You shall provide basic services to the Employer and such basic services shall mean all acts and duties which are normally performed and executed by punctilious Environmental Consultant according to their professional practice in relation to projects of similar nature. Without prejudice to the generality of the foregoing, your scope of services shall include all services as stated in our letter dated April 29, 2024, your revised fee proposal dated May 13, 2024 and the followings: -

i) To assist the preparation for Submission of Section 12A Applications under the Town Planning Ordinances and provide initial advice and comments on submission drawings and documents prepared by other consultants.

ii) To attend meetings with relevant government departments as requested by PDCL, including but not limited to assist and liaison in obtaining comments on the Pre-submission from relevant government departments.

iii) To assess and prepare all necessary data, information, assessment reports, drawings and documents for Section 12A Applications under the Town Planning Ordinances as below:-

(1) To prepare the Environmental Assessment ("EA") Report.
(2) To prepare the Sewage Impact Assessment ("SIA") Report.
(3) To prepare the Drainage Impact Assessment ("DIA") Report.
(4) To prepare the Noise Impact Assessment ("NIA") Report.

iv) To attend meetings with relevant government departments as requested by PDCL, including but not limited to assist and liaison in obtaining statutory approvals for EA, SIA, DIA and NIA.

.../P.2

To acknowledge receipt and to confirm your agreement to the contents of this letter, please sign and return the duplicate copy of the same within 5 days from the date hereof for record purpose.

With your confirmation, this letter shall constitute a binding Contract between you and the Employer.

Yours faithfully,
PALIBURG DEVELOPMENT CONSULTANTS LTD.

.....
DENNIS K.K. CHAN
Assistant General Manager

DC/SY/AC/STC/jl

Encl.: as stated

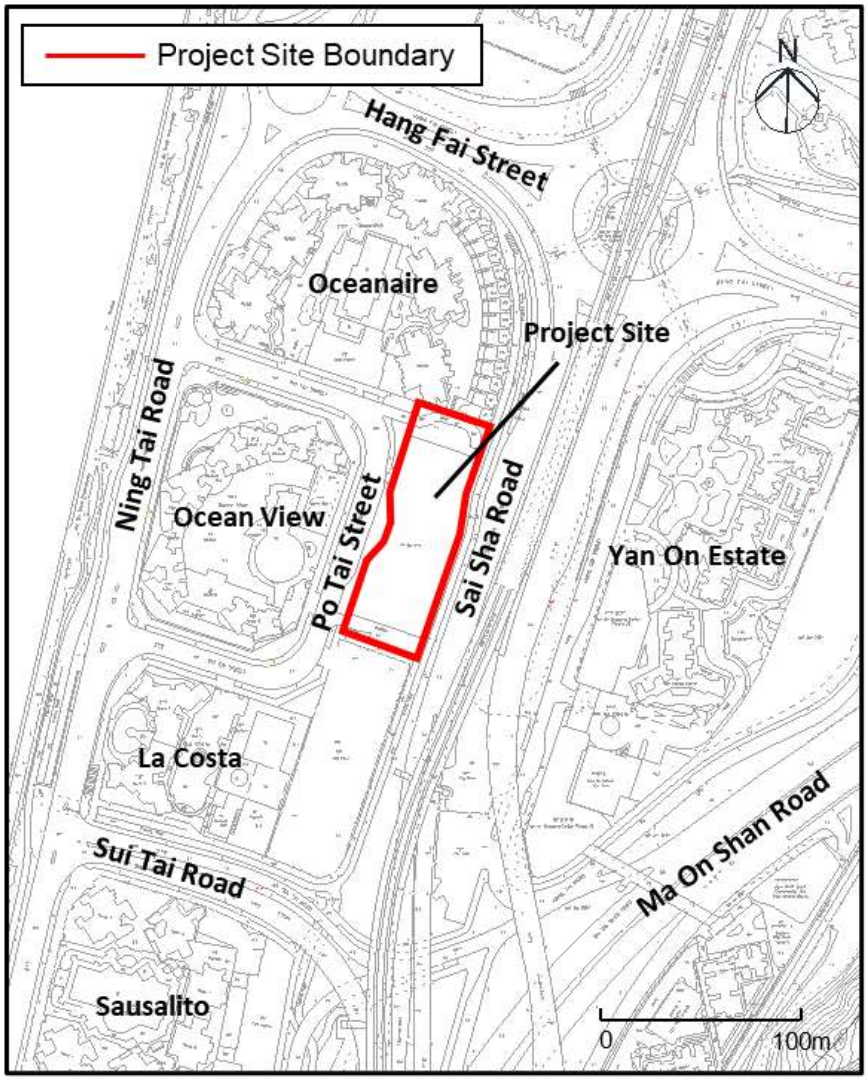
c.c. Real Charm Investment Limited

We confirm our agreement to the content of this letter

.....
For and on behalf of
Arup Hong Kong Ltd.

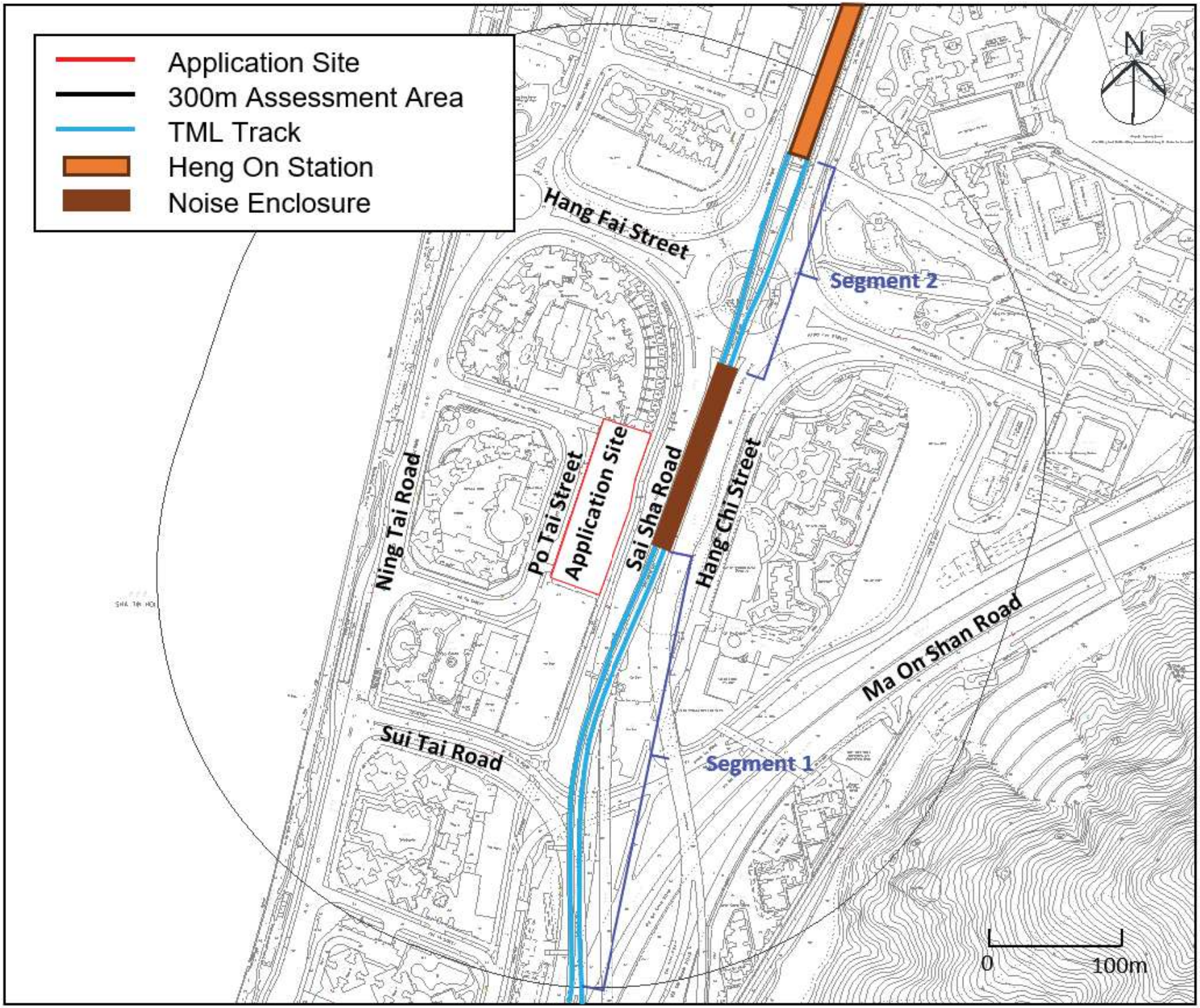
Date: 26 Aug 2024

Attachment B



Appendix 5.3

Detailed Calculations of $L_{eq(30min)}$ at Representative NSRs


Application Site
300m Assessment Area
TML Track
Heng On Station
Noise Enclosure
N
Hang Fai Street
Segment 2
Ning Tai Road
Po Tai Street
Application Site
Sai Sha Road
Hang Chi Street
Ma On Shan Road
Sui Tai Road
Segment 1
0
100m

Project no: 304537-00
Project name: Proposed Commercial / Residential Re-Development at 16 Po Tai Street, Ma On Shan
Title: Detailed Calculations of Leq(30min) at Representative NSRs
NSR: R102a
First NSR Level: 33.03mPD
No. of Storeys: 21 (6/F-29/F)
Uses: Residential

								NSR Details						Corrections, dB(A)										Daytime Result		Night-time Result	
Floor	Area Sensitivity Rating	Rail Headway	Segment	Daytime/Evening Operation Frequency (headway/30 min) [1]	Night-time Operation Frequency (headway/30 min) [1]	SEL, dB(A) @25m	Horizontal Distance from Source Line (m)	Height (mPD)	Nearest Distance from the Track (d')	View Angle (G), deg	Acute Angle (alpha), deg	Height of Railhead (mPD) [2]	Distance Correction [3]	View Angle Correction	Air Absorption	Facade Correction	Time Correction (30 min)	Rail Deterioration	Gap Size	Daytime/Evening Operation Frequency Correction (headway/30min)	Night-time Operation Frequency Correction (headway/30min)	Predicted Daytime/ Evening $L_{eq\ 30min}$, dB(A)	Predicted Overall Daytime/Evening Noise Level $L_{eq\ 30min}$ at Assessment Point, dB(A)	Predicted Night-time $L_{eq\ 30min}$, dB(A)	Predicted Overall Night-time Noise Level $L_{eq\ 30min}$ at Assessment Point, dB(A)
6	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	50.1	33.0	51.1	4.6	80.7	22.7	-3.1	-13.1	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	45.1	48	42.6	46
		Tuen Ma Line to Tuen Mun		14	8	74.8	45.4	33.0	46.6	5.5	80.5	22.7	-2.7	-12.3	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	44.9		42.5	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	47.8	33.0	48.9	6.0	11.3	22.7	-2.9	-25.9	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	48.0	33.0	49.1	8.0	12.5	22.7	-2.9	-23.7	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
7	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	50.1	36.2	51.9	4.6	80.7	22.7	-3.2	-13.1	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	45.0	48	42.6	46
		Tuen Ma Line to Tuen Mun		14	8	74.8	45.4	36.2	47.4	5.5	80.5	22.7	-2.8	-12.3	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	44.9		42.4	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	47.8	36.2	49.7	6.0	11.3	22.7	-3.0	-25.9	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	48.0	36.2	49.8	8.0	12.5	22.7	-3.0	-23.7	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
8	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	50.1	39.3	52.8	4.6	80.7	22.7	-3.2	-13.1	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	44.9	48	42.5	46
		Tuen Ma Line to Tuen Mun		14	8	74.8	45.4	39.3	48.3	5.5	80.5	22.7	-2.9	-12.3	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	44.8		42.3	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	47.8	39.3	50.6	6.0	11.3	22.7	-3.1	-25.9	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	48.0	39.3	50.8	8.0	12.5	22.7	-3.1	-23.7	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
9	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	50.1	42.5	53.9	4.6	80.7	22.7	-3.3	-13.1	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	44.8	48	42.4	46
		Tuen Ma Line to Tuen Mun		14	8	74.8	45.4	42.5	49.5	5.5	80.5	22.7	-3.0	-12.3	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	44.6		42.2	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	47.8	42.5	51.7	6.0	11.3	22.7	-3.2	-25.9	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	48.0	42.5	51.9	8.0	12.5	22.7	-3.2	-23.7	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
10	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	50.1	45.6	55.1	4.6	80.7	22.7	-3.4	-13.1	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	44.7	48	42.3	45
		Tuen Ma Line to Tuen Mun		14	8	74.8	45.4	45.6	50.8	5.5	80.5	22.7	-3.1	-12.3	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	44.5		42.1	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	47.8	45.6	53.0	6.0	11.3	22.7	-3.3	-25.9	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	48.0	45.6	53.2	8.0	12.5	22.7	-3.3	-23.7	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
11	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	50.1	48.8	56.5	4.6	80.7	22.7	-3.5	-13.1	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	44.6	48	42.2	45
		Tuen Ma Line to Tuen Mun		14	8	74.8	45.4	48.8	52.3	5.5	80.5	22.7	-3.2	-12.3	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	44.4		42.0	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	47.8	48.8	54.4	6.0	11.3	22.7	-3.4	-25.9	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	48.0	48.8	54.6	8.0	12.5	22.7	-3.4	-23.7	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
12	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	50.1	51.9	58.0	4.6	80.7	22.7	-3.7	-13.1	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	44.5	48	42.0	45
		Tuen Ma Line to Tuen Mun		14	8	74.8	45.4	51.9	54.0	5.5	80.5	22.7	-3.3	-12.3	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	44.2		41.8	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	47.8	51.9	56.0	6.0	11.3	22.7	-3.5	-25.9	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	48.0	51.9	56.2	8.0	12.5	22.7	-3.5	-23.7	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
15	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	50.1	55.1	59.6	4.6	80.7	22.7	-3.8	-13.1	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	44.3	47	41.9	45
		Tuen Ma Line to Tuen Mun		14	8	74.8	45.4	55.1	55.7	5.5	80.5	22.7	-3.5	-12.3	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	44.1		41.7	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	47.8	55.1	57.7	6.0	11.3	22.7	-3.6	-25.9	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	48.0	55.1	57.9	8.0	12.5	22.7	-3.6	-23.7	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
16	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	50.1	58.2	61.4	4.6	80.7	22.7	-3.9	-13.1	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	44.2	47	41.8	45
		Tuen Ma Line to Tuen Mun		14	8	74.8	45.4	58.2	57.6	5.5	80.5	22.7	-3.6	-12.3	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	43.9		41.5	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	47.8	58.2	59.5	6.0	11.3	22.7	-3.8	-25.9	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	48.0	58.2	59.7	8.0	12.5	22.7	-3.8	-23.7	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
17	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	50.1	61.4	63.3	4.6	80.7	22.7	-4.0	-13.1	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	44.0	47	41.6	45
		Tuen Ma Line to Tuen Mun		14	8	74.8	45.4	61.4	59.6	5.5	80.5	22.7	-3.8	-12.3	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	43.8		41.3	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	47.8	61.4	61.5	6.0	11.3	22.7	-3.9	-25.9	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	48.0	61.4	61.6	8.0	12.5	22.7	-3.9	-23.7	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
18	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	50.1	64.5	65.2	4.6	80.7	22.7	-4.2	-13.1	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	43.9	47	41.5	45
		Tuen Ma Line to Tuen Mun		14	8	74.8	45.4	64.5	61.7	5.5	80.5	22.7	-3.9	-12.3	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	43.6		41.2	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	47.8	64.5	63.5	6.0	11.3	22.7	-4.0	-25.9	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	48.0	64.5	63.6	8.0	12.5	22.7	-4.1	-23.7	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
19	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	50.1	67.7	67.3	4.6	80.7	22.7	-4.3	-13.1	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	43.7	47	41.3	44
		Tuen Ma Line to Tuen Mun		14	8	74.8	45.4	67.7	63.9	5.5	80.5	22.7	-4.1	-12.3	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	43.4		41.0	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	47.8	67.7	65.6	6.0	11.3	22.7	-4.2	-25.9	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	48.0	67.7	65.8	8.0	12.5	22.7	-4.2	-23.7	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
20	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	50.1	70.8	69.5	4.6	80.7	22.7	-4.4	-13.1	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	43.6	47	41.2	44
		Tuen Ma Line to Tuen Mun		14	8	74.8	45.4	70.8	66.1	5.5	80.5	22.7	-4.2	-12.3	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	43.3		40.8	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	47.8	70.8	67.8	6.0	11.3	22.7	-4.3	-25.9	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	48.0	70.8	68.0	8.0	12.5	22.7	-4.3	-23.7	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
21	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	50.1	74.0	71.7	4.6	80.7	22.7	-4.6	-13.1	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	43.4	47	41.0	44
		Tuen Ma Line to Tuen Mun		14	8	74.8	45.4	74.0	68.5	5.5	80.5	22.7	-4.4	-12.3	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	43.1		40.7	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	47.8	74.0	70.1	6.0	11.3	22.7	-4.5	-25.9	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	48.0	74.0	70.2	8.0	12.5	22.7	-4.5	-23.7	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
22	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	50.1	77.1	74.0	4.6	80.7	22.7	-4.7	-13.1	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	43.3	46	40.9	44
		Tuen Ma Line to Tuen Mun		14	8	74.8	45.4	77.1	70.9	5.5	80.5	22.7	-4.5	-12.3	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	42.9		40.5	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	47.8	77.1	72.4	6.0	11.3	22.7	-4.6	-25.9	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	48.0	77.1	72.5	8.0	12.5	22.7	-4.6	-23.7	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
23	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	50.1	80.3	76.3	4.6	80.7	22.7	-4.8	-13.1	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	43.1	46	40.7	44
		Tuen Ma Line to Tuen Mun		14	8	74.8	45.4	80.3	73.3	5.5	80.5	22.7	-4.7	-12.3	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	42.8		40.3	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	47.8	80.3	74.8	6.0	11.3	22.7	-4.8	-25.9	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	48.0	80.3	74.9	8.0	12.5	22.7	-4.8	-23.7	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	

Project no: 304537-00
Project name: Proposed Commercial / Residential Re-Development at 16 Po Tai Street, Ma On Shan
Title: Detailed Calculations of Leq(30min) at Representative NSRs
NSR: R102a
First NSR Level: 33.03mPD
No. of Storeys: 21 (6/F-29/F)
Uses: Residential

								NSR Details					Height of Railhead (mPD) [2]	Corrections, dB(A)									Daytime Result		Night-time Result	
Floor	Area Sensitivity Rating	Rail Headway	Segment	Daytime/Evening Operation Frequency (headway/30 min) [1]	Night-time Operation Frequency (headway/30 min) [1]	SEL, dB(A) @25m	Horizontal Distance from Source Line (m)	Height (mPD)	Nearest Distance from the Track (d')	View Angle (G), deg	Acute Angle (alpha), deg		Distance Correction [3]	View Angle Correction	Air Absorption	Facade Correction	Time Correction (30 min)	Rail Deterioration	Gap Size	Daytime/Evening Operation Frequency Correction (headway/30min)	Night-time Operation Frequency Correction (headway/30min)	Predicted Daytime/ Evening $L_{eq\ 30min}$, dB(A)	Predicted Overall Daytime/Evening Noise Level $L_{eq\ 30min}$ at Assessment Point, dB(A)	Predicted Night-time $L_{eq\ 30min}$, dB(A)	Predicted Overall Night-time Noise Level $L_{eq\ 30min}$ at Assessment Point, dB(A)
25	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	50.1	83.4	78.7	4.6	80.7	22.7	-5.0	-13.1	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	43.0	46	40.5	44
		Tuen Ma Line to Tuen Mun		14	8	74.8	45.4	83.4	75.8	5.5	80.5	22.7	-4.8	-12.3	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	42.6		40.2	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	47.8	83.4	77.3	6.0	11.3	22.7	-4.9	-25.9	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	48.0	83.4	77.4	8.0	12.5	22.7	-4.9	-23.7	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
26	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	50.1	86.6	81.2	4.6	80.7	22.7	-5.1	-13.1	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	42.8	46	40.4	43
		Tuen Ma Line to Tuen Mun		14	8	74.8	45.4	86.6	78.3	5.5	80.5	22.7	-5.0	-12.3	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	42.4		<40	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	47.8	86.6	79.8	6.0	11.3	22.7	-5.0	-25.9	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	48.0	86.6	79.9	8.0	12.5	22.7	-5.0	-23.7	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
27	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	50.1	89.7	83.7	4.6	80.7	22.7	-5.2	-13.1	-0.5	2.5	-32.6	3.0	0.9	11.5	9.0	42.7	46	40.2	43
		Tuen Ma Line to Tuen Mun		14	8	74.8	45.4	89.7	80.9	5.5	80.5	22.7	-5.1	-12.3	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	42.3		<40	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	47.8	89.7	82.3	6.0	11.3	22.7	-5.2	-25.9	-0.5	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	48.0	89.7	82.4	8.0	12.5	22.7	-5.2	-23.7	-0.5	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
28	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	50.1	92.9	86.2	4.6	80.7	22.7	-5.4	-13.1	-0.5	2.5	-32.6	3.0	0.9	11.5	9.0	42.5	46	40.1	43
		Tuen Ma Line to Tuen Mun		14	8	74.8	45.4	92.9	83.6	5.5	80.5	22.7	-5.2	-12.3	-0.5	2.5	-32.6	3.0	0.9	11.5	9.0	42.1		<40	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	47.8	92.9	84.9	6.0	11.3	22.7	-5.3	-25.9	-0.5	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	48.0	92.9	85.0	8.0	12.5	22.7	-5.3	-23.7	-0.5	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
29	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	50.1	96.0	88.8	4.6	80.7	22.7	-5.5	-13.1	-0.5	2.5	-32.6	3.0	0.9	11.5	9.0	42.4	45	<40	43
		Tuen Ma Line to Tuen Mun		14	8	74.8	45.4	96.0	86.2	5.5	80.5	22.7	-5.4	-12.3	-0.5	2.5	-32.6	3.0	0.9	11.5	9.0	41.9		<40	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	47.8	96.0	87.5	6.0	11.3	22.7	-5.4	-25.9	-0.5	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	48.0	96.0	87.6	8.0	12.5	22.7	-5.4	-23.7	-0.5	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
																						Max. Leq	48		46
																						Criterion	65		55
																						Comply	Y		Y

Notes:
[1] According to the ERR under FEP No. FEP-05/039/2000F of the approved EIA Report for MOL (AEIAR-028/1999) and as advised by the MTRC, the maximum train frequency for Tuen Ma Line is 28 trains per hour per direction (tphpd) for daytime/evening and 16 tphpd for night-time respectively.
[2] The highest railhead (i.e. 22.7mPD) is adopted for all rail segments for conservative assessment.
[3] Distance correction is calculated based on 25m reference distance.

Project no: 304537-00
Project name: Proposed Commercial / Residential Re-Development at 16 Po Tai Street, Ma On Shan
Title: Detailed Calculations of Leq(30min) at Representative NSRs
NSR: R102b
First NSR Level: 33.03mPD
No. of Storeys: 21 (6/F-29/F)
Uses: Residential

								NSR Details					Corrections, dB(A)									Daytime Result		Night-time Result	
Floor	Area Sensitivity Rating	Rail Headway	Segment	Daytime/Evening Operation Frequency (headway/30 min) [1]	Night-time Operation Frequency (headway/30 min) [1]	SEL, dB(A) @25m	Horizontal Distance from Source Line (m)	Height (mPD)	Nearest Distance from the Track (d')	View Angle (G), deg	Acute Angle (alpha), deg	Height of Railhead (mPD) [2]	Distance Correction [3]	View Angle Correction	Air Absorption	Facade Correction	Time Correction (30 min)	Rail Deterioration	Gap Size	Daytime/Evening Operation Frequency Correction (headway/30min)	Night-time Operation Frequency Correction (headway/30min)	Predicted Daytime/ Evening $L_{eq\ 30min}$, dB(A)	Predicted Overall Daytime/Evening Noise Level $L_{eq\ 30min}$ at Assessment Point, dB(A)	Predicted Night-time $L_{eq\ 30min}$, dB(A)	Predicted Overall Night-time Noise Level $L_{eq\ 30min}$ at Assessment Point, dB(A)
6	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	47.3	33.0	48.4	2.6	79.3	22.7	-2.9	-15.6	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	42.8	46	40.4	44
		Tuen Ma Line to Tuen Mun		14	8	74.8	42.7	33.0	43.9	3.5	79.1	22.7	-2.4	-14.3	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	43.2		40.8	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	45.1	33.0	46.3	5.5	10.7	22.7	-2.7	-26.7	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	45.4	33.0	46.6	8.0	11.6	22.7	-2.7	-24.3	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
7	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	47.3	36.2	49.2	2.6	79.3	22.7	-2.9	-15.6	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	42.7	46	40.3	44
		Tuen Ma Line to Tuen Mun		14	8	74.8	42.7	36.2	44.8	3.5	79.1	22.7	-2.5	-14.3	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	43.1		40.7	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	45.1	36.2	47.1	5.5	10.7	22.7	-2.7	-26.7	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	45.4	36.2	47.4	8.0	11.6	22.7	-2.8	-24.3	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
8	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	47.3	39.3	50.1	2.6	79.3	22.7	-3.0	-15.6	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	42.6	46	40.2	44
		Tuen Ma Line to Tuen Mun		14	8	74.8	42.7	39.3	45.8	3.5	79.1	22.7	-2.6	-14.3	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	43.0		40.6	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	45.1	39.3	48.1	5.5	10.7	22.7	-2.8	-26.7	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	45.4	39.3	48.3	8.0	11.6	22.7	-2.9	-24.3	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
9	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	47.3	42.5	51.3	2.6	79.3	22.7	-3.1	-15.6	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	42.5	46	40.1	44
		Tuen Ma Line to Tuen Mun		14	8	74.8	42.7	42.5	47.0	3.5	79.1	22.7	-2.7	-14.3	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	42.9		40.5	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	45.1	42.5	49.2	5.5	10.7	22.7	-2.9	-26.7	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	45.4	42.5	49.5	8.0	11.6	22.7	-3.0	-24.3	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
10	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	47.3	45.6	52.6	2.6	79.3	22.7	-3.2	-15.6	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	42.4	46	<40	44
		Tuen Ma Line to Tuen Mun		14	8	74.8	42.7	45.6	48.5	3.5	79.1	22.7	-2.9	-14.3	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	42.8		40.3	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	45.1	45.6	50.6	5.5	10.7	22.7	-3.1	-26.7	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	45.4	45.6	50.8	8.0	11.6	22.7	-3.1	-24.3	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
11	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	47.3	48.8	54.0	2.6	79.3	22.7	-3.3	-15.6	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	42.3	46	<40	43
		Tuen Ma Line to Tuen Mun		14	8	74.8	42.7	48.8	50.0	3.5	79.1	22.7	-3.0	-14.3	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	42.6		40.2	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	45.1	48.8	52.1	5.5	10.7	22.7	-3.2	-26.7	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	45.4	48.8	52.3	8.0	11.6	22.7	-3.2	-24.3	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
12	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	47.3	51.9	55.6	2.6	79.3	22.7	-3.5	-15.6	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	42.2	46	<40	43
		Tuen Ma Line to Tuen Mun		14	8	74.8	42.7	51.9	51.7	3.5	79.1	22.7	-3.2	-14.3	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	42.4		40.0	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	45.1	51.9	53.7	5.5	10.7	22.7	-3.3	-26.7	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	45.4	51.9	54.0	8.0	11.6	22.7	-3.3	-24.3	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
15	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	47.3	55.1	57.3	2.6	79.3	22.7	-3.6	-15.6	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	42.0	46	<40	43
		Tuen Ma Line to Tuen Mun		14	8	74.8	42.7	55.1	53.6	3.5	79.1	22.7	-3.3	-14.3	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	42.3		<40	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	45.1	55.1	55.5	5.5	10.7	22.7	-3.5	-26.7	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	45.4	55.1	55.7	8.0	11.6	22.7	-3.5	-24.3	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
16	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	47.3	58.2	59.1	2.6	79.3	22.7	-3.7	-15.6	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	41.9	45	<40	43
		Tuen Ma Line to Tuen Mun		14	8	74.8	42.7	58.2	55.5	3.5	79.1	22.7	-3.5	-14.3	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	42.1		<40	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	45.1	58.2	57.4	5.5	10.7	22.7	-3.6	-26.7	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	45.4	58.2	57.6	8.0	11.6	22.7	-3.6	-24.3	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
17	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	47.3	61.4	61.1	2.6	79.3	22.7	-3.9	-15.6	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	41.7	45	<40	43
		Tuen Ma Line to Tuen Mun		14	8	74.8	42.7	61.4	57.6	3.5	79.1	22.7	-3.6	-14.3	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	41.9		<40	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	45.1	61.4	59.4	5.5	10.7	22.7	-3.8	-26.7	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	45.4	61.4	59.6	8.0	11.6	22.7	-3.8	-24.3	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
18	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	47.3	64.5	63.1	2.6	79.3	22.7	-4.0	-15.6	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	41.5	45	<40	43
		Tuen Ma Line to Tuen Mun		14	8	74.8	42.7	64.5	59.8	3.5	79.1	22.7	-3.8	-14.3	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	41.8		<40	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	45.1	64.5	61.5	5.5	10.7	22.7	-3.9	-26.7	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	45.4	64.5	61.7	8.0	11.6	22.7	-3.9	-24.3	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
19	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	47.3	67.7	65.3	2.6	79.3	22.7	-4.2	-15.6	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	41.4	45	<40	42
		Tuen Ma Line to Tuen Mun		14	8	74.8	42.7	67.7	62.0	3.5	79.1	22.7	-3.9	-14.3	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	41.6		<40	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	45.1	67.7	63.7	5.5	10.7	22.7	-4.1	-26.7	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	45.4	67.7	63.9	8.0	11.6	22.7	-4.1	-24.3	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
20	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	47.3	70.8	67.5	2.6	79.3	22.7	-4.3	-15.6	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	41.2	45	<40	42
		Tuen Ma Line to Tuen Mun		14	8	74.8	42.7	70.8	64.3	3.5	79.1	22.7	-4.1	-14.3	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	41.4		<40	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	45.1	70.8	65.9	5.5	10.7	22.7	-4.2	-26.7	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	45.4	70.8	66.1	8.0	11.6	22.7	-4.2	-24.3	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
21	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	47.3	74.0	69.7	2.6	79.3	22.7	-4.5	-15.6	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	41.1	45	<40	42
		Tuen Ma Line to Tuen Mun		14	8	74.8	42.7	74.0	66.7	3.5	79.1	22.7	-4.3	-14.3	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	41.2		<40	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	45.1	74.0	68.3	5.5	10.7	22.7	-4.4	-26.7	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	45.4	74.0	68.5	8.0	11.6	22.7	-4.4	-24.3	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
22	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	47.3	77.1	72.1	2.6	79.3	22.7	-4.6	-15.6	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	40.9	44	<40	42
		Tuen Ma Line to Tuen Mun		14	8	74.8	42.7	77.1	69.2	3.5	79.1	22.7	-4.4	-14.3	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	41.0		<40	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	45.1	77.1	70.7	5.5	10.7	22.7	-4.5	-26.7	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	45.4	77.1	70.9	8.0	11.6	22.7	-4.5	-24.3	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
23	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	47.3	80.3	74.5	2.6	79.3	22.7	-4.7	-15.6	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	40.7	44	<40	42
		Tuen Ma Line to Tuen Mun		14	8	74.8	42.7	80.3	71.7	3.5	79.1	22.7	-4.6	-14.3	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	40.9		<40	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	45.1	80.3	73.1	5.5	10.7	22.7	-4.7	-26.7	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	45.4	80.3	73.3	8.0	11.6	22.7	-4.7	-24.3	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	

Project no: 304537-00
Project name: Proposed Commercial / Residential Re-Development at 16 Po Tai Street, Ma On Shan
Title: Detailed Calculations of Leq(30min) at Representative NSRs
NSR: R102b
First NSR Level: 33.03mPD
No. of Storeys: 21 (6/F-29/F)
Uses: Residential

								NSR Details					Height of Railhead (mPD) [2]	Corrections, dB(A)									Daytime Result		Night-time Result	
Floor	Area Sensitivity Rating	Rail Headway	Segment	Daytime/Evening Operation Frequency (headway/30 min) [1]	Night-time Operation Frequency (headway/30 min) [1]	SEL, dB(A) @25m	Horizontal Distance from Source Line (m)	Height (mPD)	Nearest Distance from the Track (d')	View Angle (G), deg	Acute Angle (alpha), deg		Distance Correction [3]	View Angle Correction	Air Absorption	Facade Correction	Time Correction (30 min)	Rail Deterioration	Gap Size	Daytime/Evening Operation Frequency Correction (headway/30min)	Night-time Operation Frequency Correction (headway/30min)	Predicted Daytime/ Evening $L_{eq\ 30min}$, dB(A)	Predicted Overall Daytime/Evening Noise Level $L_{eq\ 30min}$ at Assessment Point, dB(A)	Predicted Night-time $L_{eq\ 30min}$, dB(A)	Predicted Overall Night-time Noise Level $L_{eq\ 30min}$ at Assessment Point, dB(A)
25	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	47.3	83.4	77.0	2.6	79.3	22.7	-4.9	-15.6	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	40.6		<40		
		Tuen Ma Line to Tuen Mun		14	8	74.8	42.7	83.4	74.2	3.5	79.1	22.7	-4.7	-14.3	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	40.7	44	<40	42	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	45.1	83.4	75.6	5.5	10.7	22.7	-4.8	-26.7	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40		
		Tuen Ma Line to Tuen Mun		14	8	74.8	45.4	83.4	75.8	8.0	11.6	22.7	-4.8	-24.3	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40		
26	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	47.3	86.6	79.5	2.6	79.3	22.7	-5.0	-15.6	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	40.4		<40		
		Tuen Ma Line to Tuen Mun		14	8	74.8	42.7	86.6	76.8	3.5	79.1	22.7	-4.9	-14.3	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	40.5	44	<40	41	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	45.1	86.6	78.2	5.5	10.7	22.7	-5.0	-26.7	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40		
		Tuen Ma Line to Tuen Mun		14	8	74.8	45.4	86.6	78.3	8.0	11.6	22.7	-5.0	-24.3	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40		
27	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	47.3	89.7	82.0	2.6	79.3	22.7	-5.2	-15.6	-0.5	2.5	-32.6	3.0	0.9	11.5	9.0	40.3		<40		
		Tuen Ma Line to Tuen Mun		14	8	74.8	42.7	89.7	79.4	3.5	79.1	22.7	-5.0	-14.3	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	40.4	44	<40	41	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	45.1	89.7	80.8	5.5	10.7	22.7	-5.1	-26.7	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40		
		Tuen Ma Line to Tuen Mun		14	8	74.8	45.4	89.7	80.9	8.0	11.6	22.7	-5.1	-24.3	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40		
28	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	47.3	92.9	84.6	2.6	79.3	22.7	-5.3	-15.6	-0.5	2.5	-32.6	3.0	0.9	11.5	9.0	40.1		<40		
		Tuen Ma Line to Tuen Mun		14	8	74.8	42.7	92.9	82.1	3.5	79.1	22.7	-5.2	-14.3	-0.5	2.5	-32.6	3.0	0.9	11.5	9.0	40.2	44	<40	41	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	45.1	92.9	83.4	5.5	10.7	22.7	-5.2	-26.7	-0.5	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40		
		Tuen Ma Line to Tuen Mun		14	8	74.8	45.4	92.9	83.6	8.0	11.6	22.7	-5.2	-24.3	-0.5	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40		
29	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	47.3	96.0	87.2	2.6	79.3	22.7	-5.4	-15.6	-0.5	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40		
		Tuen Ma Line to Tuen Mun		14	8	74.8	42.7	96.0	84.8	3.5	79.1	22.7	-5.3	-14.3	-0.5	2.5	-32.6	3.0	0.9	11.5	9.0	40.0	43	<40	41	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	45.1	96.0	86.1	5.5	10.7	22.7	-5.4	-26.7	-0.5	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40		
		Tuen Ma Line to Tuen Mun		14	8	74.8	45.4	96.0	86.2	8.0	11.6	22.7	-5.4	-24.3	-0.5	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40		
																						Max. Leq	46		44	
																						Criterion	65		55	
																						Comply	Y		Y	

Notes:
[1] According to the ERR under FEP No. FEP-05/039/2000F of the approved EIA Report for MOL (AEIAR-028/1999) and as advised by the MTRC, the maximum train frequency for Tuen Ma Line is 28 trains per hour per direction (tphpd) for daytime/evening and 16 tphpd for night-time respectively.
[2] The highest railhead (i.e. 22.7mPD) is adopted for all rail segments for conservative assessment.
[3] Distance correction is calculated based on 25m reference distance.

Project no: 304537-00
Project name: Proposed Commercial / Residential Re-Development at 16 Po Tai Street, Ma On Shan
Title: Detailed Calculations of Leq(30min) at Representative NSRs
NSR: R102c
First NSR Level: 33.03mPD
No. of Storeys: 21 (6/F-29/F)
Uses: Residential

								NSR Details						Corrections, dB(A)									Daytime Result		Night-time Result	
Floor	Area Sensitivity Rating	Rail Headway	Segment	Daytime/Evening Operation Frequency (headway/30 min) [1]	Night-time Operation Frequency (headway/30 min) [1]	SEL, dB(A) @25m	Horizontal Distance from Source Line (m)	Height (mPD)	Nearest Distance from the Track (d')	View Angle (G), deg	Acute Angle (alpha), deg	Height of Railhead (mPD) [2]	Distance Correction [3]	View Angle Correction	Air Absorption	Facade Correction	Time Correction (30 min)	Rail Deterioration	Gap Size	Daytime/Evening Operation Frequency Correction (headway/30min)	Night-time Operation Frequency Correction (headway/30min)	Predicted Daytime/ Evening $L_{eq\ 30min}$, dB(A)	Predicted Overall Daytime/Evening Noise Level $L_{eq\ 30min}$ at Assessment Point, dB(A)	Predicted Night-time $L_{eq\ 30min}$, dB(A)	Predicted Overall Night-time Noise Level $L_{eq\ 30min}$ at Assessment Point, dB(A)
6	B	Tuen Ma Line to Wu Kai Sha	1	No Line of Sight.																		-	<40	-	<40
		Tuen Ma Line to Tuen Mun																				-		-	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	43.1	33.0	44.3	5.2	10.1	22.7	-2.5	-27.4	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	43.3	33.0	44.5	7.2	11.3	22.7	-2.5	-25.0	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
7	B	Tuen Ma Line to Wu Kai Sha	1	No Line of Sight.																		-	<40	-	<40
		Tuen Ma Line to Tuen Mun																				-		-	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	43.1	36.2	45.1	5.2	10.1	22.7	-2.6	-27.4	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	43.3	36.2	45.3	7.2	11.3	22.7	-2.6	-25.0	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
8	B	Tuen Ma Line to Wu Kai Sha	1	No Line of Sight.																		-	<40	-	<40
		Tuen Ma Line to Tuen Mun																				-		-	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	43.1	39.3	46.2	5.2	10.1	22.7	-2.7	-27.4	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	43.3	39.3	46.4	7.2	11.3	22.7	-2.7	-25.0	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
9	B	Tuen Ma Line to Wu Kai Sha	1	No Line of Sight.																		-	<40	-	<40
		Tuen Ma Line to Tuen Mun																				-		-	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	43.1	42.5	47.4	5.2	10.1	22.7	-2.8	-27.4	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	43.3	42.5	47.6	7.2	11.3	22.7	-2.8	-25.0	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
10	B	Tuen Ma Line to Wu Kai Sha	1	No Line of Sight.																		-	<40	-	<40
		Tuen Ma Line to Tuen Mun																				-		-	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	43.1	45.6	48.8	5.2	10.1	22.7	-2.9	-27.4	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	43.3	45.6	49.0	7.2	11.3	22.7	-2.9	-25.0	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
11	B	Tuen Ma Line to Wu Kai Sha	1	No Line of Sight.																		-	<40	-	<40
		Tuen Ma Line to Tuen Mun																				-		-	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	43.1	48.8	50.4	5.2	10.1	22.7	-3.0	-27.4	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	43.3	48.8	50.5	7.2	11.3	22.7	-3.1	-25.0	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
12	B	Tuen Ma Line to Wu Kai Sha	1	No Line of Sight.																		-	<40	-	<40
		Tuen Ma Line to Tuen Mun																				-		-	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	43.1	51.9	52.1	5.2	10.1	22.7	-3.2	-27.4	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	43.3	51.9	52.2	7.2	11.3	22.7	-3.2	-25.0	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
15	B	Tuen Ma Line to Wu Kai Sha	1	No Line of Sight.																		-	<40	-	<40
		Tuen Ma Line to Tuen Mun																				-		-	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	43.1	55.1	53.9	5.2	10.1	22.7	-3.3	-27.4	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	43.3	55.1	54.1	7.2	11.3	22.7	-3.3	-25.0	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
16	B	Tuen Ma Line to Wu Kai Sha	1	No Line of Sight.																		-	<40	-	<40
		Tuen Ma Line to Tuen Mun																				-		-	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	43.1	58.2	55.8	5.2	10.1	22.7	-3.5	-27.4	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	43.3	58.2	56.0	7.2	11.3	22.7	-3.5	-25.0	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
17	B	Tuen Ma Line to Wu Kai Sha	1	No Line of Sight.																		-	<40	-	<40
		Tuen Ma Line to Tuen Mun																				-		-	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	43.1	61.4	57.9	5.2	10.1	22.7	-3.6	-27.4	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	43.3	61.4	58.0	7.2	11.3	22.7	-3.7	-25.0	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
18	B	Tuen Ma Line to Wu Kai Sha	1	No Line of Sight.																		-	<40	-	<40
		Tuen Ma Line to Tuen Mun																				-		-	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	43.1	64.5	60.0	5.2	10.1	22.7	-3.8	-27.4	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	43.3	64.5	60.2	7.2	11.3	22.7	-3.8	-25.0	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
19	B	Tuen Ma Line to Wu Kai Sha	1	No Line of Sight.																		-	<40	-	<40
		Tuen Ma Line to Tuen Mun																				-		-	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	43.1	67.7	62.3	5.2	10.1	22.7	-4.0	-27.4	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	43.3	67.7	62.4	7.2	11.3	22.7	-4.0	-25.0	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
20	B	Tuen Ma Line to Wu Kai Sha	1	No Line of Sight.																		-	<40	-	<40
		Tuen Ma Line to Tuen Mun																				-		-	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	43.1	70.8	64.6	5.2	10.1	22.7	-4.1	-27.4	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	43.3	70.8	64.7	7.2	11.3	22.7	-4.1	-25.0	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
21	B	Tuen Ma Line to Wu Kai Sha	1	No Line of Sight.																		-	<40	-	<40
		Tuen Ma Line to Tuen Mun																				-		-	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	43.1	74.0	67.0	5.2	10.1	22.7	-4.3	-27.4	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	43.3	74.0	67.1	7.2	11.3	22.7	-4.3	-25.0	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
22	B	Tuen Ma Line to Wu Kai Sha	1	No Line of Sight.																		-	<40	-	<40
		Tuen Ma Line to Tuen Mun																				-		-	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	43.1	77.1	69.4	5.2	10.1	22.7	-4.4	-27.4	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	43.3	77.1	69.5	7.2	11.3	22.7	-4.4	-25.0	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
23	B	Tuen Ma Line to Wu Kai Sha	1	No Line of Sight.																		-	<40	-	<40
		Tuen Ma Line to Tuen Mun																				-		-	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	43.1	80.3	71.9	5.2	10.1	22.7	-4.6	-27.4	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	43.3	80.3	72.0	7.2	11.3	22.7	-4.6	-25.0	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	

Project no: 304537-00
Project name: Proposed Commercial / Residential Re-Development at 16 Po Tai Street, Ma On Shan
Title: Detailed Calculations of Leq(30min) at Representative NSRs
NSR: R102c
First NSR Level: 33.03mPD
No. of Storeys: 21 (6/F-29/F)
Uses: Residential

								NSR Details					Height of Railhead (mPD) [2]	Corrections, dB(A)									Daytime Result		Night-time Result	
Floor	Area Sensitivity Rating	Rail Headway	Segment	Daytime/Evening Operation Frequency (headway/30 min) [1]	Night-time Operation Frequency (headway/30 min) [1]	SEL, dB(A) @25m	Horizontal Distance from Source Line (m)	Height (mPD)	Nearest Distance from the Track (d')	View Angle (G), deg	Acute Angle (alpha), deg		Distance Correction [3]	View Angle Correction	Air Absorption	Facade Correction	Time Correction (30 min)	Rail Deterioration	Gap Size	Daytime/Evening Operation Frequency Correction (headway/30min)	Night-time Operation Frequency Correction (headway/30min)	Predicted Daytime/Evening $L_{eq\ 30min}$, dB(A)	Predicted Overall Daytime/Evening Noise Level $L_{eq\ 30min}$ at Assessment Point, dB(A)	Predicted Night-time $L_{eq\ 30min}$, dB(A)	Predicted Overall Night-time Noise Level $L_{eq\ 30min}$ at Assessment Point, dB(A)
25	B	Tuen Ma Line to Wu Kai Sha	1	No Line of Sight.																		-	<40	-	<40
		Tuen Ma Line to Tuen Mun																				-		-	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	43.1	83.4	74.4	5.2	10.1	22.7	-4.7	-27.4	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	43.3	83.4	74.6	7.2	11.3	22.7	-4.7	-25.0	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
26	B	Tuen Ma Line to Wu Kai Sha	1	No Line of Sight.																		-	<40	-	<40
		Tuen Ma Line to Tuen Mun																				-		-	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	43.1	86.6	77.0	5.2	10.1	22.7	-4.9	-27.4	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	43.3	86.6	77.1	7.2	11.3	22.7	-4.9	-25.0	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
27	B	Tuen Ma Line to Wu Kai Sha	1	No Line of Sight.																		-	<40	-	<40
		Tuen Ma Line to Tuen Mun																				-		-	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	43.1	89.7	79.7	5.2	10.1	22.7	-5.0	-27.4	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	43.3	89.7	79.8	7.2	11.3	22.7	-5.0	-25.0	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
28	B	Tuen Ma Line to Wu Kai Sha	1	No Line of Sight.																		-	<40	-	<40
		Tuen Ma Line to Tuen Mun																				-		-	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	43.1	92.9	82.3	5.2	10.1	22.7	-5.2	-27.4	-0.5	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	43.3	92.9	82.4	7.2	11.3	22.7	-5.2	-25.0	-0.5	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
29	B	Tuen Ma Line to Wu Kai Sha	1	No Line of Sight.																		-	<40	-	<40
		Tuen Ma Line to Tuen Mun																				-		-	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	43.1	96.0	85.0	5.2	10.1	22.7	-5.3	-27.4	-0.5	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	43.3	96.0	85.1	7.2	11.3	22.7	-5.3	-25.0	-0.5	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
																						Max. Leq	<40		<40
																						Criterion	65		55
																						Comply	Y		Y

Notes:
[1] According to the ERR under FEP No. FEP-05/039/2000F of the approved EIA Report for MOL (AEIAR-028/1999) and as advised by the MTRC, the maximum train frequency for Tuen Ma Line is 28 trains per hour per direction (tphpd) for daytime/evening and 16 tphpd for night-time respectively.
[2] The highest railhead (i.e. 22.7mPD) is adopted for all rail segments for conservative assessment.
[3] Distance correction is calculated based on 25m reference distance.

Project no: 304537-00
Project name: Proposed Commercial / Residential Re-Development at 16 Po Tai Street, Ma On Shan
Title: Detailed Calculations of Leq(30min) at Representative NSRs
NSR: R103a
First NSR Level: 33.03mPD
No. of Storeys: 21 (6/F-29/F)
Uses: Residential

								NSR Details						Corrections, dB(A)									Daytime Result		Night-time Result	
Floor	Area Sensitivity Rating	Rail Headway	Segment	Daytime/Evening Operation Frequency (headway/30 min) [1]	Night-time Operation Frequency (headway/30 min) [1]	SEL, dB(A) @25m	Horizontal Distance from Source Line (m)	Height (mPD)	Nearest Distance from the Track (d')	View Angle (G), deg	Acute Angle (alpha), deg	Height of Railhead (mPD) [2]	Distance Correction [3]	View Angle Correction	Air Absorption	Facade Correction	Time Correction (30 min)	Rail Deterioration	Gap Size	Daytime/Evening Operation Frequency Correction (headway/30min)	Night-time Operation Frequency Correction (headway/30min)	Predicted Daytime/ Evening $L_{eq\ 30min}$, dB(A)	Predicted Overall Daytime/Evening Noise Level $L_{eq\ 30min}$ at Assessment Point, dB(A)	Predicted Night-time $L_{eq\ 30min}$, dB(A)	Predicted Overall Night-time Noise Level $L_{eq\ 30min}$ at Assessment Point, dB(A)
6	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	43.9	33.0	45.1	43.0	39.5	22.7	-2.6	-7.1	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	51.6	54	49.2	52
		Tuen Ma Line to Tuen Mun		14	8	74.8	39.4	33.0	40.7	44.3	38.9	22.7	-2.1	-7.0	-0.1	2.5	-32.6	3.0	0.9	11.5	9.0	50.8		48.4	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
7	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	43.9	36.2	45.9	43.0	39.5	22.7	-2.6	-7.1	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	51.6	54	49.1	52
		Tuen Ma Line to Tuen Mun		14	8	74.8	39.4	36.2	41.6	44.3	38.9	22.7	-2.2	-7.0	-0.1	2.5	-32.6	3.0	0.9	11.5	9.0	50.7		48.3	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
8	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	43.9	39.3	46.9	43.0	39.5	22.7	-2.7	-7.1	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	51.5	54	49.0	52
		Tuen Ma Line to Tuen Mun		14	8	74.8	39.4	39.3	42.8	44.3	38.9	22.7	-2.3	-7.0	-0.1	2.5	-32.6	3.0	0.9	11.5	9.0	50.6		48.2	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
9	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	43.9	42.5	48.1	43.0	39.5	22.7	-2.8	-7.1	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	51.3	54	48.9	51
		Tuen Ma Line to Tuen Mun		14	8	74.8	39.4	42.5	44.1	44.3	38.9	22.7	-2.5	-7.0	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	50.4		48.0	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
10	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	43.9	45.6	49.5	43.0	39.5	22.7	-3.0	-7.1	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	51.2	54	48.8	51
		Tuen Ma Line to Tuen Mun		14	8	74.8	39.4	45.6	45.6	44.3	38.9	22.7	-2.6	-7.0	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	50.3		47.9	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
11	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	43.9	48.8	51.0	43.0	39.5	22.7	-3.1	-7.1	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	51.1	54	48.6	51
		Tuen Ma Line to Tuen Mun		14	8	74.8	39.4	48.8	47.2	44.3	38.9	22.7	-2.8	-7.0	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	50.1		47.7	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
12	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	43.9	51.9	52.7	43.0	39.5	22.7	-3.2	-7.1	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	50.9	53	48.5	51
		Tuen Ma Line to Tuen Mun		14	8	74.8	39.4	51.9	49.0	44.3	38.9	22.7	-2.9	-7.0	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	49.9		47.5	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
15	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	43.9	55.1	54.5	43.0	39.5	22.7	-3.4	-7.1	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	50.7	53	48.3	51
		Tuen Ma Line to Tuen Mun		14	8	74.8	39.4	55.1	51.0	44.3	38.9	22.7	-3.1	-7.0	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	49.8		47.3	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
16	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	43.9	58.2	56.5	43.0	39.5	22.7	-3.5	-7.1	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	50.6	53	48.1	51
		Tuen Ma Line to Tuen Mun		14	8	74.8	39.4	58.2	53.0	44.3	38.9	22.7	-3.3	-7.0	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	49.6		47.1	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
17	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	43.9	61.4	58.5	43.0	39.5	22.7	-3.7	-7.1	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	50.4	53	48.0	51
		Tuen Ma Line to Tuen Mun		14	8	74.8	39.4	61.4	55.2	44.3	38.9	22.7	-3.4	-7.0	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	49.4		46.9	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
18	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	43.9	64.5	60.6	43.0	39.5	22.7	-3.8	-7.1	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	50.2	53	47.8	50
		Tuen Ma Line to Tuen Mun		14	8	74.8	39.4	64.5	57.4	44.3	38.9	22.7	-3.6	-7.0	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	49.2		46.8	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
19	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	43.9	67.7	62.8	43.0	39.5	22.7	-4.0	-7.1	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	50.1	53	47.6	50
		Tuen Ma Line to Tuen Mun		14	8	74.8	39.4	67.7	59.8	44.3	38.9	22.7	-3.8	-7.0	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	49.0		46.6	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
20	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	43.9	70.8	65.1	43.0	39.5	22.7	-4.2	-7.1	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	49.9	52	47.5	50
		Tuen Ma Line to Tuen Mun		14	8	74.8	39.4	70.8	62.2	44.3	38.9	22.7	-4.0	-7.0	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	48.8		46.4	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
21	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	43.9	74.0	67.5	43.0	39.5	22.7	-4.3	-7.1	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	49.7	52	47.3	50
		Tuen Ma Line to Tuen Mun		14	8	74.8	39.4	74.0	64.6	44.3	38.9	22.7	-4.1	-7.0	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	48.6		46.2	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
22	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	43.9	77.1	69.9	43.0	39.5	22.7	-4.5	-7.1	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	49.5	52	47.1	50
		Tuen Ma Line to Tuen Mun		14	8	74.8	39.4	77.1	67.2	44.3	38.9	22.7	-4.3	-7.0	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	48.4		46.0	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
23	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	43.9	80.3	72.4	43.0	39.5	22.7	-4.6	-7.1	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	49.4	52	46.9	49
		Tuen Ma Line to Tuen Mun		14	8	74.8	39.4	80.3	69.7	44.3	38.9	22.7	-4.5	-7.0	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	48.2		45.8	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	

Project no: 304537-00
Project name: Proposed Commercial / Residential Re-Development at 16 Po Tai Street, Ma On Shan
Title: Detailed Calculations of Leq(30min) at Representative NSRs
NSR: R103a
First NSR Level: 33.03mPD
No. of Storeys: 21 (6/F-29/F)
Uses: Residential

								NSR Details					Height of Railhead (mPD) [2]	Corrections, dB(A)									Daytime Result		Night-time Result	
Floor	Area Sensitivity Rating	Rail Headway	Segment	Daytime/Evening Operation Frequency (headway/30 min) [1]	Night-time Operation Frequency (headway/30 min) [1]	SEL, dB(A) @25m	Horizontal Distance from Source Line (m)	Height (mPD)	Nearest Distance from the Track (d')	View Angle (G), deg	Acute Angle (alpha), deg		Distance Correction [3]	View Angle Correction	Air Absorption	Facade Correction	Time Correction (30 min)	Rail Deterioration	Gap Size	Daytime/Evening Operation Frequency Correction (headway/30min)	Night-time Operation Frequency Correction (headway/30min)	Predicted Daytime/ Evening $L_{eq\ 30min}$, dB(A)	Predicted Overall Daytime/Evening Noise Level $L_{eq\ 30min}$ at Assessment Point, dB(A)	Predicted Night-time $L_{eq\ 30min}$, dB(A)	Predicted Overall Night-time Noise Level $L_{eq\ 30min}$ at Assessment Point, dB(A)
25	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	43.9	83.4	74.9	43.0	39.5	22.7	-4.8	-7.1	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	49.2	52	46.8	49
		Tuen Ma Line to Tuen Mun		14	8	74.8	39.4	83.4	72.4	44.3	38.9	22.7	-4.6	-7.0	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	48.1		45.6	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
26	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	43.9	86.6	77.5	43.0	39.5	22.7	-4.9	-7.1	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	49.0	52	46.6	49
		Tuen Ma Line to Tuen Mun		14	8	74.8	39.4	86.6	75.0	44.3	38.9	22.7	-4.8	-7.0	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	47.9		45.5	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
27	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	43.9	89.7	80.1	43.0	39.5	22.7	-5.1	-7.1	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	48.9	51	46.4	49
		Tuen Ma Line to Tuen Mun		14	8	74.8	39.4	89.7	77.7	44.3	38.9	22.7	-4.9	-7.0	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	47.7		45.3	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
28	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	43.9	92.9	82.8	43.0	39.5	22.7	-5.2	-7.1	-0.5	2.5	-32.6	3.0	0.9	11.5	9.0	48.7	51	46.3	49
		Tuen Ma Line to Tuen Mun		14	8	74.8	39.4	92.9	80.5	44.3	38.9	22.7	-5.1	-7.0	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	47.5		45.1	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
29	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	43.9	96.0	85.4	43.0	39.5	22.7	-5.3	-7.1	-0.5	2.5	-32.6	3.0	0.9	11.5	9.0	48.5	51	46.1	49
		Tuen Ma Line to Tuen Mun		14	8	74.8	39.4	96.0	83.2	44.3	38.9	22.7	-5.2	-7.0	-0.5	2.5	-32.6	3.0	0.9	11.5	9.0	47.4		44.9	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
																						Max. Leq	54		52
																						Criterion	65		55
																						Comply	Y		Y

Notes:
[1] According to the ERR under FEP No. FEP-05/039/2000F of the approved EIA Report for MOL (AEIAR-028/1999) and as advised by the MTRC, the maximum train frequency for Tuen Ma Line is 28 trains per hour per direction (tphpd) for daytime/evening and 16 tphpd for night-time respectively.
[2] The highest railhead (i.e. 22.7mPD) is adopted for all rail segments for conservative assessment.
[3] Distance correction is calculated based on 25m reference distance.

Project no: 304537-00
Project name: Proposed Commercial / Residential Re-Development at 16 Po Tai Street, Ma On Shan
Title: Detailed Calculations of Leq(30min) at Representative NSRs
NSR: R103b
First NSR Level: 33.03mPD
No. of Storeys: 21 (6/F-29/F)
Uses: Residential

								NSR Details					Height of Railhead (mPD) [2]	Corrections, dB(A)									Daytime Result		Night-time Result	
Floor	Area Sensitivity Rating	Rail Headway	Segment	Daytime/Evening Operation Frequency (headway/30 min) [1]	Night-time Operation Frequency (headway/30 min) [1]	SEL, dB(A) @25m	Horizontal Distance from Source Line (m)	Height (mPD)	Nearest Distance from the Track (d')	View Angle (G), deg	Acute Angle (alpha), deg		Distance Correction [3]	View Angle Correction	Air Absorption	Facade Correction	Time Correction (30 min)	Rail Deterioration	Gap Size	Daytime/Evening Operation Frequency Correction (headway/30min)	Night-time Operation Frequency Correction (headway/30min)	Predicted Daytime/ Evening $L_{eq\ 30min}$, dB(A)	Predicted Overall Daytime/Evening Noise Level $L_{eq\ 30min}$ at Assessment Point, dB(A)	Predicted Night-time $L_{eq\ 30min}$, dB(A)	Predicted Overall Night-time Noise Level $L_{eq\ 30min}$ at Assessment Point, dB(A)
6	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	45.7	33.0	46.8	63.8	50.5	22.7	-2.7	-3.9	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	54.6	57	52.2	55
		Tuen Ma Line to Tuen Mun		14	8	74.8	41.0	33.0	42.3	65.1	49.8	22.7	-2.3	-3.9	-0.1	2.5	-32.6	3.0	0.9	11.5	9.0	53.8		51.3	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
7	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	45.7	36.2	47.6	63.8	50.5	22.7	-2.8	-3.9	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	54.6	57	52.1	55
		Tuen Ma Line to Tuen Mun		14	8	74.8	41.0	36.2	43.1	65.1	49.8	22.7	-2.4	-3.9	-0.1	2.5	-32.6	3.0	0.9	11.5	9.0	53.7		51.3	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
8	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	45.7	39.3	48.6	63.8	50.5	22.7	-2.9	-3.9	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	54.5	57	52.0	55
		Tuen Ma Line to Tuen Mun		14	8	74.8	41.0	39.3	44.2	65.1	49.8	22.7	-2.5	-3.9	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	53.6		51.1	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
9	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	45.7	42.5	49.8	63.8	50.5	22.7	-3.0	-3.9	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	54.3	57	51.9	54
		Tuen Ma Line to Tuen Mun		14	8	74.8	41.0	42.5	45.5	65.1	49.8	22.7	-2.6	-3.9	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	53.4		51.0	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
10	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	45.7	45.6	51.1	63.8	50.5	22.7	-3.1	-3.9	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	54.2	57	51.8	54
		Tuen Ma Line to Tuen Mun		14	8	74.8	41.0	45.6	47.0	65.1	49.8	22.7	-2.7	-3.9	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	53.3		50.9	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
11	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	45.7	48.8	52.6	63.8	50.5	22.7	-3.2	-3.9	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	54.1	57	51.6	54
		Tuen Ma Line to Tuen Mun		14	8	74.8	41.0	48.8	48.6	65.1	49.8	22.7	-2.9	-3.9	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	53.1		50.7	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
12	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	45.7	51.9	54.2	63.8	50.5	22.7	-3.4	-3.9	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	53.9	56	51.5	54
		Tuen Ma Line to Tuen Mun		14	8	74.8	41.0	51.9	50.3	65.1	49.8	22.7	-3.0	-3.9	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	53.0		50.5	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
15	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	45.7	55.1	56.0	63.8	50.5	22.7	-3.5	-3.9	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	53.8	56	51.4	54
		Tuen Ma Line to Tuen Mun		14	8	74.8	41.0	55.1	52.2	65.1	49.8	22.7	-3.2	-3.9	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	52.8		50.3	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
16	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	45.7	58.2	57.9	63.8	50.5	22.7	-3.6	-3.9	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	53.6	56	51.2	54
		Tuen Ma Line to Tuen Mun		14	8	74.8	41.0	58.2	54.2	65.1	49.8	22.7	-3.4	-3.9	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	52.6		50.2	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
17	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	45.7	61.4	59.9	63.8	50.5	22.7	-3.8	-3.9	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	53.5	56	51.0	54
		Tuen Ma Line to Tuen Mun		14	8	74.8	41.0	61.4	56.3	65.1	49.8	22.7	-3.5	-3.9	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	52.4		50.0	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
18	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	45.7	64.5	61.9	63.8	50.5	22.7	-3.9	-3.9	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	53.3	56	50.9	53
		Tuen Ma Line to Tuen Mun		14	8	74.8	41.0	64.5	58.6	65.1	49.8	22.7	-3.7	-3.9	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	52.2		49.8	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
19	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	45.7	67.7	64.1	63.8	50.5	22.7	-4.1	-3.9	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	53.1	56	50.7	53
		Tuen Ma Line to Tuen Mun		14	8	74.8	41.0	67.7	60.8	65.1	49.8	22.7	-3.9	-3.9	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	52.0		49.6	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
20	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	45.7	70.8	66.3	63.8	50.5	22.7	-4.2	-3.9	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	53.0	55	50.5	53
		Tuen Ma Line to Tuen Mun		14	8	74.8	41.0	70.8	63.2	65.1	49.8	22.7	-4.0	-3.9	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	51.9		49.4	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
21	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	45.7	74.0	68.7	63.8	50.5	22.7	-4.4	-3.9	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	52.8	55	50.4	53
		Tuen Ma Line to Tuen Mun		14	8	74.8	41.0	74.0	65.6	65.1	49.8	22.7	-4.2	-3.9	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	51.7		49.2	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
22	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	45.7	77.1	71.0	63.8	50.5	22.7	-4.5	-3.9	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	52.6	55	50.2	53
		Tuen Ma Line to Tuen Mun		14	8	74.8	41.0	77.1	68.1	65.1	49.8	22.7	-4.4	-3.9	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	51.5		49.1	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
23	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	45.7	80.3	73.5	63.8	50.5	22.7	-4.7	-3.9	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	52.5	55	50.0	53
		Tuen Ma Line to Tuen Mun		14	8	74.8	41.0	80.3	70.7	65.1	49.8	22.7	-4.5	-3.9	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	51.3		48.9	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	

Project no: 304537-00
Project name: Proposed Commercial / Residential Re-Development at 16 Po Tai Street, Ma On Shan
Title: Detailed Calculations of Leq(30min) at Representative NSRs
NSR: R103b
First NSR Level: 33.03mPD
No. of Storeys: 21 (6/F-29/F)
Uses: Residential

								NSR Details					Corrections, dB(A)									Daytime Result		Night-time Result	
Floor	Area Sensitivity Rating	Rail Headway	Segment	Daytime/Evening Operation Frequency (headway/30 min) [1]	Night-time Operation Frequency (headway/30 min) [1]	SEL, dB(A) @25m	Horizontal Distance from Source Line (m)	Height (mPD)	Nearest Distance from the Track (d')	View Angle (G), deg	Acute Angle (alpha), deg	Height of Railhead (mPD) [2]	Distance Correction [3]	View Angle Correction	Air Absorption	Facade Correction	Time Correction (30 min)	Rail Deterioration	Gap Size	Daytime/Evening Operation Frequency Correction (headway/30min)	Night-time Operation Frequency Correction (headway/30min)	Predicted Daytime/ Evening $L_{eq\ 30min}$, dB(A)	Predicted Overall Daytime/Evening Noise Level $L_{eq\ 30min}$ at Assessment Point, dB(A)	Predicted Night-time $L_{eq\ 30min}$, dB(A)	Predicted Overall Night-time Noise Level $L_{eq\ 30min}$ at Assessment Point, dB(A)
25	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	45.7	83.4	76.0	63.8	50.5	22.7	-4.8	-3.9	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	52.3	55	49.9	52
		Tuen Ma Line to Tuen Mun		14	8	74.8	41.0	83.4	73.2	65.1	49.8	22.7	-4.7	-3.9	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	51.1		48.7	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
26	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	45.7	86.6	78.5	63.8	50.5	22.7	-5.0	-3.9	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	52.1	55	49.7	52
		Tuen Ma Line to Tuen Mun		14	8	74.8	41.0	86.6	75.9	65.1	49.8	22.7	-4.8	-3.9	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	51.0		48.5	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
27	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	45.7	89.7	81.1	63.8	50.5	22.7	-5.1	-3.9	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	52.0	54	49.5	52
		Tuen Ma Line to Tuen Mun		14	8	74.8	41.0	89.7	78.5	65.1	49.8	22.7	-5.0	-3.9	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	50.8		48.4	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
28	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	45.7	92.9	83.7	63.8	50.5	22.7	-5.2	-3.9	-0.5	2.5	-32.6	3.0	0.9	11.5	9.0	51.8	54	49.4	52
		Tuen Ma Line to Tuen Mun		14	8	74.8	41.0	92.9	81.3	65.1	49.8	22.7	-5.1	-3.9	-0.5	2.5	-32.6	3.0	0.9	11.5	9.0	50.6		48.2	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
29	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	45.7	96.0	86.4	63.8	50.5	22.7	-5.4	-3.9	-0.5	2.5	-32.6	3.0	0.9	11.5	9.0	51.7	54	49.2	52
		Tuen Ma Line to Tuen Mun		14	8	74.8	41.0	96.0	84.0	65.1	49.8	22.7	-5.3	-3.9	-0.5	2.5	-32.6	3.0	0.9	11.5	9.0	50.5		48.0	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
																						Max. Leq	57		55
																						Criterion	65		55
																						Comply	Y		Y

Notes:
[1] According to the ERR under FEP No. FEP-05/039/2000F of the approved EIA Report for MOL (AEIAR-028/1999) and as advised by the MTRC, the maximum train frequency for Tuen Ma Line is 28 trains per hour per direction (tphpd) for daytime/evening and 16 tphpd for night-time respectively.
[2] The highest railhead (i.e. 22.7mPD) is adopted for all rail segments for conservative assessment.
[3] Distance correction is calculated based on 25m reference distance.

Project no: 304537-00
Project name: Proposed Commercial / Residential Re-Development at 16 Po Tai Street, Ma On Shan
Title: Detailed Calculations of Leq(30min) at Representative NSRs
NSR: R103c
First NSR Level: 33.03mPD
No. of Storeys: 21 (6/F-29/F)
Uses: Residential

								NSR Details					Corrections, dB(A)									Daytime Result		Night-time Result	
Floor	Area Sensitivity Rating	Rail Headway	Segment	Daytime/Evening Operation Frequency (headway/30 min) [1]	Night-time Operation Frequency (headway/30 min) [1]	SEL, dB(A) @25m	Horizontal Distance from Source Line (m)	Height (mPD)	Nearest Distance from the Track (d')	View Angle (G), deg	Acute Angle (alpha), deg	Height of Railhead (mPD) [2]	Distance Correction [3]	View Angle Correction	Air Absorption	Facade Correction	Time Correction (30 min)	Rail Deterioration	Gap Size	Daytime/Evening Operation Frequency Correction (headway/30min)	Night-time Operation Frequency Correction (headway/30min)	Predicted Daytime/ Evening $L_{eq\ 30min}$, dB(A)	Predicted Overall Daytime/Evening Noise Level $L_{eq\ 30min}$ at Assessment Point, dB(A)	Predicted Night-time $L_{eq\ 30min}$, dB(A)	Predicted Overall Night-time Noise Level $L_{eq\ 30min}$ at Assessment Point, dB(A)
6	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	48.2	33.0	49.3	69.2	53.9	22.7	-2.9	-3.3	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	55.0	58	52.6	55
		Tuen Ma Line to Tuen Mun		14	8	74.8	43.7	33.0	44.9	70.5	52.9	22.7	-2.5	-3.3	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	54.1		51.7	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
7	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	48.2	36.2	50.0	69.2	53.9	22.7	-3.0	-3.3	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	55.0	58	52.5	55
		Tuen Ma Line to Tuen Mun		14	8	74.8	43.7	36.2	45.7	70.5	52.9	22.7	-2.6	-3.3	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	54.0		51.6	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
8	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	48.2	39.3	51.0	69.2	53.9	22.7	-3.1	-3.3	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	54.9	57	52.5	55
		Tuen Ma Line to Tuen Mun		14	8	74.8	43.7	39.3	46.7	70.5	52.9	22.7	-2.7	-3.3	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	53.9		51.5	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
9	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	48.2	42.5	52.1	69.2	53.9	22.7	-3.2	-3.3	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	54.8	57	52.4	55
		Tuen Ma Line to Tuen Mun		14	8	74.8	43.7	42.5	48.0	70.5	52.9	22.7	-2.8	-3.3	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	53.8		51.4	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
10	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	48.2	45.6	53.4	69.2	53.9	22.7	-3.3	-3.3	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	54.7	57	52.2	55
		Tuen Ma Line to Tuen Mun		14	8	74.8	43.7	45.6	49.3	70.5	52.9	22.7	-3.0	-3.3	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	53.7		51.2	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
11	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	48.2	48.8	54.8	69.2	53.9	22.7	-3.4	-3.3	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	54.5	57	52.1	55
		Tuen Ma Line to Tuen Mun		14	8	74.8	43.7	48.8	50.9	70.5	52.9	22.7	-3.1	-3.3	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	53.5		51.1	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
12	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	48.2	51.9	56.4	69.2	53.9	22.7	-3.5	-3.3	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	54.4	57	52.0	55
		Tuen Ma Line to Tuen Mun		14	8	74.8	43.7	51.9	52.6	70.5	52.9	22.7	-3.2	-3.3	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	53.4		50.9	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
15	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	48.2	55.1	58.0	69.2	53.9	22.7	-3.7	-3.3	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	54.3	57	51.8	54
		Tuen Ma Line to Tuen Mun		14	8	74.8	43.7	55.1	54.4	70.5	52.9	22.7	-3.4	-3.3	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	53.2		50.8	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
16	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	48.2	58.2	59.9	69.2	53.9	22.7	-3.8	-3.3	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	54.1	57	51.7	54
		Tuen Ma Line to Tuen Mun		14	8	74.8	43.7	58.2	56.3	70.5	52.9	22.7	-3.5	-3.3	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	53.0		50.6	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
17	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	48.2	61.4	61.8	69.2	53.9	22.7	-3.9	-3.3	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	54.0	56	51.5	54
		Tuen Ma Line to Tuen Mun		14	8	74.8	43.7	61.4	58.3	70.5	52.9	22.7	-3.7	-3.3	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	52.9		50.4	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
18	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	48.2	64.5	63.8	69.2	53.9	22.7	-4.1	-3.3	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	53.8	56	51.4	54
		Tuen Ma Line to Tuen Mun		14	8	74.8	43.7	64.5	60.5	70.5	52.9	22.7	-3.8	-3.3	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	52.7		50.3	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
19	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	48.2	67.7	65.9	69.2	53.9	22.7	-4.2	-3.3	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	53.6	56	51.2	54
		Tuen Ma Line to Tuen Mun		14	8	74.8	43.7	67.7	62.7	70.5	52.9	22.7	-4.0	-3.3	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	52.5		50.1	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
20	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	48.2	70.8	68.1	69.2	53.9	22.7	-4.4	-3.3	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	53.5	56	51.1	54
		Tuen Ma Line to Tuen Mun		14	8	74.8	43.7	70.8	65.0	70.5	52.9	22.7	-4.1	-3.3	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	52.4		49.9	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
21	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	48.2	74.0	70.4	69.2	53.9	22.7	-4.5	-3.3	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	53.3	56	50.9	53
		Tuen Ma Line to Tuen Mun		14	8	74.8	43.7	74.0	67.4	70.5	52.9	22.7	-4.3	-3.3	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	52.2		49.8	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
22	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	48.2	77.1	72.7	69.2	53.9	22.7	-4.6	-3.3	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	53.2	56	50.7	53
		Tuen Ma Line to Tuen Mun		14	8	74.8	43.7	77.1	69.8	70.5	52.9	22.7	-4.5	-3.3	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	52.0		49.6	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
23	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	48.2	80.3	75.1	69.2	53.9	22.7	-4.8	-3.3	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	53.0	55	50.6	53
		Tuen Ma Line to Tuen Mun		14	8	74.8	43.7	80.3	72.3	70.5	52.9	22.7	-4.6	-3.3	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	51.8		49.4	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	

Project no: 304537-00
Project name: Proposed Commercial / Residential Re-Development at 16 Po Tai Street, Ma On Shan
Title: Detailed Calculations of Leq(30min) at Representative NSRs
NSR: R103c
First NSR Level: 33.03mPD
No. of Storeys: 21 (6/F-29/F)
Uses: Residential

								NSR Details					Corrections, dB(A)									Daytime Result		Night-time Result	
Floor	Area Sensitivity Rating	Rail Headway	Segment	Daytime/Evening Operation Frequency (headway/30 min) [1]	Night-time Operation Frequency (headway/30 min) [1]	SEL, dB(A) @25m	Horizontal Distance from Source Line (m)	Height (mPD)	Nearest Distance from the Track (d')	View Angle (G), deg	Acute Angle (alpha), deg	Height of Railhead (mPD) [2]	Distance Correction [3]	View Angle Correction	Air Absorption	Facade Correction	Time Correction (30 min)	Rail Deterioration	Gap Size	Daytime/Evening Operation Frequency Correction (headway/30min)	Night-time Operation Frequency Correction (headway/30min)	Predicted Daytime/ Evening $L_{eq\ 30min}$, dB(A)	Predicted Overall Daytime/Evening Noise Level $L_{eq\ 30min}$ at Assessment Point, dB(A)	Predicted Night-time $L_{eq\ 30min}$, dB(A)	Predicted Overall Night-time Noise Level $L_{eq\ 30min}$ at Assessment Point, dB(A)
25	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	48.2	83.4	77.5	69.2	53.9	22.7	-4.9	-3.3	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	52.9	55	50.4	53
		Tuen Ma Line to Tuen Mun		14	8	74.8	43.7	83.4	74.8	70.5	52.9	22.7	-4.8	-3.3	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	51.7		49.2	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
26	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	48.2	86.6	80.0	69.2	53.9	22.7	-5.1	-3.3	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	52.7	55	50.3	53
		Tuen Ma Line to Tuen Mun		14	8	74.8	43.7	86.6	77.4	70.5	52.9	22.7	-4.9	-3.3	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	51.5		49.1	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
27	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	48.2	89.7	82.5	69.2	53.9	22.7	-5.2	-3.3	-0.5	2.5	-32.6	3.0	0.9	11.5	9.0	52.5	55	50.1	53
		Tuen Ma Line to Tuen Mun		14	8	74.8	43.7	89.7	80.0	70.5	52.9	22.7	-5.1	-3.3	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	51.3		48.9	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
28	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	48.2	92.9	85.1	69.2	53.9	22.7	-5.3	-3.3	-0.5	2.5	-32.6	3.0	0.9	11.5	9.0	52.4	55	50.0	52
		Tuen Ma Line to Tuen Mun		14	8	74.8	43.7	92.9	82.6	70.5	52.9	22.7	-5.2	-3.3	-0.5	2.5	-32.6	3.0	0.9	11.5	9.0	51.2		48.7	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
29	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	48.2	96.0	87.7	69.2	53.9	22.7	-5.5	-3.3	-0.5	2.5	-32.6	3.0	0.9	11.5	9.0	52.2	55	49.8	52
		Tuen Ma Line to Tuen Mun		14	8	74.8	43.7	96.0	85.3	70.5	52.9	22.7	-5.3	-3.3	-0.5	2.5	-32.6	3.0	0.9	11.5	9.0	51.0		48.6	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
																						Max. Leq	58		55
																						Criterion	65		55
																						Comply	Y		Y

Notes:
[1] According to the ERR under FEP No. FEP-05/039/2000F of the approved EIA Report for MOL (AEIAR-028/1999) and as advised by the MTRC, the maximum train frequency for Tuen Ma Line is 28 trains per hour per direction (tphpd) for daytime/evening and 16 tphpd for night-time respectively.
[2] The highest railhead (i.e. 22.7mPD) is adopted for all rail segments for conservative assessment.
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Project no: 304537-00
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NSR: R104a
First NSR Level: 33.03mPD
No. of Storeys: 21 (6/F-29/F)
Uses: Residential

								NSR Details						Corrections, dB(A)									Daytime Result		Night-time Result	
Floor	Area Sensitivity Rating	Rail Headway	Segment	Daytime/Evening Operation Frequency (headway/30 min) [1]	Night-time Operation Frequency (headway/30 min) [1]	SEL, dB(A) @25m	Horizontal Distance from Source Line (m)	Height (mPD)	Nearest Distance from the Track (d')	View Angle (G), deg	Acute Angle (alpha), deg	Height of Railhead (mPD) [2]	Distance Correction [3]	View Angle Correction	Air Absorption	Facade Correction	Time Correction (30 min)	Rail Deterioration	Gap Size	Daytime/Evening Operation Frequency Correction (headway/30min)	Night-time Operation Frequency Correction (headway/30min)	Predicted Daytime/ Evening $L_{eq\ 30min}$, dB(A)	Predicted Overall Daytime/Evening Noise Level $L_{eq\ 30min}$ at Assessment Point, dB(A)	Predicted Night-time $L_{eq\ 30min}$, dB(A)	Predicted Overall Night-time Noise Level $L_{eq\ 30min}$ at Assessment Point, dB(A)
6	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	50.6	33.0	51.6	48.8	44.3	22.7	-3.2	-5.8	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	52.3	55	49.9	52
		Tuen Ma Line to Tuen Mun		14	8	74.8	46.0	33.0	47.1	50.1	42.8	22.7	-2.8	-5.9	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	51.3		48.8	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
7	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	50.6	36.2	52.4	48.8	44.3	22.7	-3.2	-5.8	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	52.2	55	49.8	52
		Tuen Ma Line to Tuen Mun		14	8	74.8	46.0	36.2	47.9	50.1	42.8	22.7	-2.8	-5.9	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	51.2		48.8	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
8	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	50.6	39.3	53.3	48.8	44.3	22.7	-3.3	-5.8	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	52.1	55	49.7	52
		Tuen Ma Line to Tuen Mun		14	8	74.8	46.0	39.3	48.9	50.1	42.8	22.7	-2.9	-5.9	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	51.1		48.7	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
9	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	50.6	42.5	54.3	48.8	44.3	22.7	-3.4	-5.8	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	52.0	55	49.6	52
		Tuen Ma Line to Tuen Mun		14	8	74.8	46.0	42.5	50.1	50.1	42.8	22.7	-3.0	-5.9	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	51.0		48.6	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
10	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	50.6	45.6	55.5	48.8	44.3	22.7	-3.5	-5.8	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	51.9	54	49.5	52
		Tuen Ma Line to Tuen Mun		14	8	74.8	46.0	45.6	51.4	50.1	42.8	22.7	-3.1	-5.9	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	50.9		48.4	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
11	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	50.6	48.8	56.9	48.8	44.3	22.7	-3.6	-5.8	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	51.8	54	49.4	52
		Tuen Ma Line to Tuen Mun		14	8	74.8	46.0	48.8	52.9	50.1	42.8	22.7	-3.3	-5.9	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	50.7		48.3	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
12	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	50.6	51.9	58.4	48.8	44.3	22.7	-3.7	-5.8	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	51.7	54	49.3	52
		Tuen Ma Line to Tuen Mun		14	8	74.8	46.0	51.9	54.5	50.1	42.8	22.7	-3.4	-5.9	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	50.6		48.2	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
15	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	50.6	55.1	60.1	48.8	44.3	22.7	-3.8	-5.8	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	51.6	54	49.1	52
		Tuen Ma Line to Tuen Mun		14	8	74.8	46.0	55.1	56.2	50.1	42.8	22.7	-3.5	-5.9	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	50.4		48.0	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
16	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	50.6	58.2	61.8	48.8	44.3	22.7	-3.9	-5.8	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	51.4	54	49.0	51
		Tuen Ma Line to Tuen Mun		14	8	74.8	46.0	58.2	58.1	50.1	42.8	22.7	-3.7	-5.9	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	50.3		47.9	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
17	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	50.6	61.4	63.7	48.8	44.3	22.7	-4.1	-5.8	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	51.3	54	48.9	51
		Tuen Ma Line to Tuen Mun		14	8	74.8	46.0	61.4	60.1	50.1	42.8	22.7	-3.8	-5.9	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	50.1		47.7	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
18	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	50.6	64.5	65.6	48.8	44.3	22.7	-4.2	-5.8	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	51.1	54	48.7	51
		Tuen Ma Line to Tuen Mun		14	8	74.8	46.0	64.5	62.2	50.1	42.8	22.7	-4.0	-5.9	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	50.0		47.5	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
19	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	50.6	67.7	67.7	48.8	44.3	22.7	-4.3	-5.8	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	51.0	53	48.6	51
		Tuen Ma Line to Tuen Mun		14	8	74.8	46.0	67.7	64.3	50.1	42.8	22.7	-4.1	-5.9	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	49.8		47.4	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
20	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	50.6	70.8	69.8	48.8	44.3	22.7	-4.5	-5.8	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	50.8	53	48.4	51
		Tuen Ma Line to Tuen Mun		14	8	74.8	46.0	70.8	66.6	50.1	42.8	22.7	-4.3	-5.9	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	49.6		47.2	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
21	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	50.6	74.0	72.0	48.8	44.3	22.7	-4.6	-5.8	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	50.7	53	48.2	51
		Tuen Ma Line to Tuen Mun		14	8	74.8	46.0	74.0	68.9	50.1	42.8	22.7	-4.4	-5.9	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	49.5		47.0	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
22	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	50.6	77.1	74.3	48.8	44.3	22.7	-4.7	-5.8	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	50.5	53	48.1	51
		Tuen Ma Line to Tuen Mun		14	8	74.8	46.0	77.1	71.2	50.1	42.8	22.7	-4.5	-5.9	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	49.3		46.9	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
23	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	50.6	80.3	76.6	48.8	44.3	22.7	-4.9	-5.8	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	50.4	53	47.9	50
		Tuen Ma Line to Tuen Mun		14	8	74.8	46.0	80.3	73.7	50.1	42.8	22.7	-4.7	-5.9	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	49.1		46.7	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	

Project no: 304537-00
Project name: Proposed Commercial / Residential Re-Development at 16 Po Tai Street, Ma On Shan
Title: Detailed Calculations of Leq(30min) at Representative NSRs
NSR: R104a
First NSR Level: 33.03mPD
No. of Storeys: 21 (6/F-29/F)
Uses: Residential

								NSR Details					Corrections, dB(A)									Daytime Result		Night-time Result	
Floor	Area Sensitivity Rating	Rail Headway	Segment	Daytime/Evening Operation Frequency (headway/30 min) [1]	Night-time Operation Frequency (headway/30 min) [1]	SEL, dB(A) @25m	Horizontal Distance from Source Line (m)	Height (mPD)	Nearest Distance from the Track (d')	View Angle (G), deg	Acute Angle (alpha), deg	Height of Railhead (mPD) [2]	Distance Correction [3]	View Angle Correction	Air Absorption	Facade Correction	Time Correction (30 min)	Rail Deterioration	Gap Size	Daytime/Evening Operation Frequency Correction (headway/30min)	Night-time Operation Frequency Correction (headway/30min)	Predicted Daytime/ Evening $L_{eq\ 30min}$, dB(A)	Predicted Overall Daytime/Evening Noise Level $L_{eq\ 30min}$ at Assessment Point, dB(A)	Predicted Night-time $L_{eq\ 30min}$, dB(A)	Predicted Overall Night-time Noise Level $L_{eq\ 30min}$ at Assessment Point, dB(A)
25	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	50.6	83.4	79.0	48.8	44.3	22.7	-5.0	-5.8	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	50.2	53	47.8	50
		Tuen Ma Line to Tuen Mun		14	8	74.8	46.0	83.4	76.2	50.1	42.8	22.7	-4.8	-5.9	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	49.0		46.5	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
26	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	50.6	86.6	81.5	48.8	44.3	22.7	-5.1	-5.8	-0.5	2.5	-32.6	3.0	0.9	11.5	9.0	50.1	52	47.6	50
		Tuen Ma Line to Tuen Mun		14	8	74.8	46.0	86.6	78.7	50.1	42.8	22.7	-5.0	-5.9	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	48.8		46.4	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
27	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	50.6	89.7	84.0	48.8	44.3	22.7	-5.3	-5.8	-0.5	2.5	-32.6	3.0	0.9	11.5	9.0	49.9	52	47.5	50
		Tuen Ma Line to Tuen Mun		14	8	74.8	46.0	89.7	81.3	50.1	42.8	22.7	-5.1	-5.9	-0.5	2.5	-32.6	3.0	0.9	11.5	9.0	48.6		46.2	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
28	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	50.6	92.9	86.5	48.8	44.3	22.7	-5.4	-5.8	-0.5	2.5	-32.6	3.0	0.9	11.5	9.0	49.8	52	47.3	50
		Tuen Ma Line to Tuen Mun		14	8	74.8	46.0	92.9	83.9	50.1	42.8	22.7	-5.3	-5.9	-0.5	2.5	-32.6	3.0	0.9	11.5	9.0	48.5		46.1	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
29	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	50.6	96.0	89.1	48.8	44.3	22.7	-5.5	-5.8	-0.5	2.5	-32.6	3.0	0.9	11.5	9.0	49.6	52	47.2	50
		Tuen Ma Line to Tuen Mun		14	8	74.8	46.0	96.0	86.5	50.1	42.8	22.7	-5.4	-5.9	-0.5	2.5	-32.6	3.0	0.9	11.5	9.0	48.3		45.9	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
																						Max. Leq	55		52
																						Criterion	65		55
																						Comply	Y		Y

Notes:
[1] According to the ERR under FEP No. FEP-05/039/2000F of the approved EIA Report for MOL (AEIAR-028/1999) and as advised by the MTRC, the maximum train frequency for Tuen Ma Line is 28 trains per hour per direction (tphpd) for daytime/evening and 16 tphpd for night-time respectively.
[2] The highest railhead (i.e. 22.7mPD) is adopted for all rail segments for conservative assessment.
[3] Distance correction is calculated based on 25m reference distance.

Project no: 304537-00
Project name: Proposed Commercial / Residential Re-Development at 16 Po Tai Street, Ma On Shan
Title: Detailed Calculations of Leq(30min) at Representative NSRs
NSR: R211a
First NSR Level: 33.03mPD
No. of Storeys: 21 (6/F-29/F)
Uses: Residential

								NSR Details						Corrections, dB(A)									Daytime Result		Night-time Result	
Floor	Area Sensitivity Rating	Rail Headway	Segment	Daytime/Evening Operation Frequency (headway/30 min) [1]	Night-time Operation Frequency (headway/30 min) [1]	SEL, dB(A) @25m	Horizontal Distance from Source Line (m)	Height (mPD)	Nearest Distance from the Track (d')	View Angle (G), deg	Acute Angle (alpha), deg	Height of Railhead (mPD) [2]	Distance Correction [3]	View Angle Correction	Air Absorption	Facade Correction	Time Correction (30 min)	Rail Deterioration	Gap Size	Daytime/Evening Operation Frequency Correction (headway/30min)	Night-time Operation Frequency Correction (headway/30min)	Predicted Daytime/ Evening $L_{eq\ 30min}$, dB(A)	Predicted Overall Daytime/Evening Noise Level $L_{eq\ 30min}$ at Assessment Point, dB(A)	Predicted Night-time $L_{eq\ 30min}$, dB(A)	Predicted Overall Night-time Noise Level $L_{eq\ 30min}$ at Assessment Point, dB(A)
6	B	Tuen Ma Line to Wu Kai Sha	1	No Line of Sight.																		-	42	-	<40
		Tuen Ma Line to Tuen Mun																				-		-	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	49.0	33.0	50.1	12.5	16.7	22.7	-3.0	-19.3	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	47.0	33.0	48.1	12.5	18.9	22.7	-2.8	-18.3	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
7	B	Tuen Ma Line to Wu Kai Sha	1	No Line of Sight.																		-	42	-	<40
		Tuen Ma Line to Tuen Mun																				-		-	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	49.0	36.2	50.8	12.5	16.7	22.7	-3.1	-19.3	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	47.0	36.2	48.9	12.5	18.9	22.7	-2.9	-18.3	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
8	B	Tuen Ma Line to Wu Kai Sha	1	No Line of Sight.																		-	42	-	<40
		Tuen Ma Line to Tuen Mun																				-		-	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	49.0	39.3	51.7	12.5	16.7	22.7	-3.2	-19.3	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	47.0	39.3	49.8	12.5	18.9	22.7	-3.0	-18.3	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
9	B	Tuen Ma Line to Wu Kai Sha	1	No Line of Sight.																		-	42	-	<40
		Tuen Ma Line to Tuen Mun																				-		-	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	49.0	42.5	52.8	12.5	16.7	22.7	-3.2	-19.3	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	47.0	42.5	51.0	12.5	18.9	22.7	-3.1	-18.3	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
10	B	Tuen Ma Line to Wu Kai Sha	1	No Line of Sight.																		-	41	-	<40
		Tuen Ma Line to Tuen Mun																				-		-	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	49.0	45.6	54.1	12.5	16.7	22.7	-3.4	-19.3	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	47.0	45.6	52.3	12.5	18.9	22.7	-3.2	-18.3	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
11	B	Tuen Ma Line to Wu Kai Sha	1	No Line of Sight.																		-	41	-	<40
		Tuen Ma Line to Tuen Mun																				-		-	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	49.0	48.8	55.5	12.5	16.7	22.7	-3.5	-19.3	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	47.0	48.8	53.7	12.5	18.9	22.7	-3.3	-18.3	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
12	B	Tuen Ma Line to Wu Kai Sha	1	No Line of Sight.																		-	41	-	<40
		Tuen Ma Line to Tuen Mun																				-		-	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	49.0	51.9	57.0	12.5	16.7	22.7	-3.6	-19.3	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	47.0	51.9	55.3	12.5	18.9	22.7	-3.5	-18.3	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
15	B	Tuen Ma Line to Wu Kai Sha	1	No Line of Sight.																		-	41	-	<40
		Tuen Ma Line to Tuen Mun																				-		-	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	49.0	55.1	58.7	12.5	16.7	22.7	-3.7	-19.3	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	47.0	55.1	57.1	12.5	18.9	22.7	-3.6	-18.3	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
16	B	Tuen Ma Line to Wu Kai Sha	1	No Line of Sight.																		-	41	-	<40
		Tuen Ma Line to Tuen Mun																				-		-	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	49.0	58.2	60.5	12.5	16.7	22.7	-3.8	-19.3	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	47.0	58.2	58.9	12.5	18.9	22.7	-3.7	-18.3	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
17	B	Tuen Ma Line to Wu Kai Sha	1	No Line of Sight.																		-	41	-	<40
		Tuen Ma Line to Tuen Mun																				-		-	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	49.0	61.4	62.4	12.5	16.7	22.7	-4.0	-19.3	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	47.0	61.4	60.9	12.5	18.9	22.7	-3.9	-18.3	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
18	B	Tuen Ma Line to Wu Kai Sha	1	No Line of Sight.																		-	41	-	<40
		Tuen Ma Line to Tuen Mun																				-		-	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	49.0	64.5	64.4	12.5	16.7	22.7	-4.1	-19.3	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	47.0	64.5	62.9	12.5	18.9	22.7	-4.0	-18.3	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
19	B	Tuen Ma Line to Wu Kai Sha	1	No Line of Sight.																		-	40	-	<40
		Tuen Ma Line to Tuen Mun																				-		-	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	49.0	67.7	66.5	12.5	16.7	22.7	-4.2	-19.3	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	47.0	67.7	65.0	12.5	18.9	22.7	-4.2	-18.3	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
20	B	Tuen Ma Line to Wu Kai Sha	1	No Line of Sight.																		-	40	-	<40
		Tuen Ma Line to Tuen Mun																				-		-	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	49.0	70.8	68.7	12.5	16.7	22.7	-4.4	-19.3	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	47.0	70.8	67.3	12.5	18.9	22.7	-4.3	-18.3	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
21	B	Tuen Ma Line to Wu Kai Sha	1	No Line of Sight.																		-	40	-	<40
		Tuen Ma Line to Tuen Mun																				-		-	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	49.0	74.0	70.9	12.5	16.7	22.7	-4.5	-19.3	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	47.0	74.0	69.5	12.5	18.9	22.7	-4.4	-18.3	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
22	B	Tuen Ma Line to Wu Kai Sha	1	No Line of Sight.																		-	<40	-	<40
		Tuen Ma Line to Tuen Mun																				-		-	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	49.0	77.1	73.2	12.5	16.7	22.7	-4.7	-19.3	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	47.0	77.1	71.9	12.5	18.9	22.7	-4.6	-18.3	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
23	B	Tuen Ma Line to Wu Kai Sha	1	No Line of Sight.																		-	<40	-	<40
		Tuen Ma Line to Tuen Mun																				-		-	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	49.0	80.3	75.6	12.5	16.7	22.7	-4.8	-19.3	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	47.0	80.3	74.3	12.5	18.9	22.7	-4.7	-18.3	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	

Project no: 304537-00
Project name: Proposed Commercial / Residential Re-Development at 16 Po Tai Street, Ma On Shan
Title: Detailed Calculations of Leq(30min) at Representative NSRs
NSR: R211a
First NSR Level: 33.03mPD
No. of Storeys: 21 (6/F-29/F)
Uses: Residential

								NSR Details					Corrections, dB(A)									Daytime Result		Night-time Result	
Floor	Area Sensitivity Rating	Rail Headway	Segment	Daytime/Evening Operation Frequency (headway/30 min) [1]	Night-time Operation Frequency (headway/30 min) [1]	SEL, dB(A) @25m	Horizontal Distance from Source Line (m)	Height (mPD)	Nearest Distance from the Track (d')	View Angle (G), deg	Acute Angle (alpha), deg	Height of Railhead (mPD) [2]	Distance Correction [3]	View Angle Correction	Air Absorption	Facade Correction	Time Correction (30 min)	Rail Deterioration	Gap Size	Daytime/Evening Operation Frequency Correction (headway/30min)	Night-time Operation Frequency Correction (headway/30min)	Predicted Daytime/ Evening $L_{eq\ 30min}$, dB(A)	Predicted Overall Daytime/Evening Noise Level $L_{eq\ 30min}$ at Assessment Point, dB(A)	Predicted Night-time $L_{eq\ 30min}$, dB(A)	Predicted Overall Night-time Noise Level $L_{eq\ 30min}$ at Assessment Point, dB(A)
25	B	Tuen Ma Line to Wu Kai Sha	1	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-	<40	-	<40
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	49.0	83.4	78.0	12.5	16.7	22.7	-4.9	-19.3	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	47.0	83.4	76.8	12.5	18.9	22.7	-4.9	-18.3	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
26	B	Tuen Ma Line to Wu Kai Sha	1	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-	<40	-	<40
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	49.0	86.6	80.5	12.5	16.7	22.7	-5.1	-19.3	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	47.0	86.6	79.3	12.5	18.9	22.7	-5.0	-18.3	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
27	B	Tuen Ma Line to Wu Kai Sha	1	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-	<40	-	<40
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	49.0	89.7	83.0	12.5	16.7	22.7	-5.2	-19.3	-0.5	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	47.0	89.7	81.8	12.5	18.9	22.7	-5.2	-18.3	-0.5	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
28	B	Tuen Ma Line to Wu Kai Sha	1	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-	<40	-	<40
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	49.0	92.9	85.6	12.5	16.7	22.7	-5.3	-19.3	-0.5	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	47.0	92.9	84.4	12.5	18.9	22.7	-5.3	-18.3	-0.5	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
29	B	Tuen Ma Line to Wu Kai Sha	1	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-	<40	-	<40
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	49.0	96.0	88.2	12.5	16.7	22.7	-5.5	-19.3	-0.5	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	47.0	96.0	87.1	12.5	18.9	22.7	-5.4	-18.3	-0.5	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
																						Max. Leq	42		<40
																						Criterion	65		55
																						Comply	Y		Y

Notes:
[1] According to the ERR under FEP No. FEP-05/039/2000F of the approved EIA Report for MOL (AEIAR-028/1999) and as advised by the MTRC, the maximum train frequency for Tuen Ma Line is 28 trains per hour per direction (tphpd) for daytime/evening and 16 tphpd for night-time respectively.
[2] The highest railhead (i.e. 22.7mPD) is adopted for all rail segments for conservative assessment.
[3] Distance correction is calculated based on 25m reference distance.

Project no: 304537-00
Project name: Proposed Commercial / Residential Re-Development at 16 Po Tai Street, Ma On Shan
Title: Detailed Calculations of Leq(30min) at Representative NSRs
NSR: R211c
First NSR Level: 33.03mPD
No. of Storeys: 21 (6/F-29/F)
Uses: Residential

								NSR Details						Corrections, dB(A)									Daytime Result		Night-time Result	
Floor	Area Sensitivity Rating	Rail Headway	Segment	Daytime/Evening Operation Frequency (headway/30 min) [1]	Night-time Operation Frequency (headway/30 min) [1]	SEL, dB(A) @25m	Horizontal Distance from Source Line (m)	Height (mPD)	Nearest Distance from the Track (d')	View Angle (G), deg	Acute Angle (alpha), deg	Height of Railhead (mPD) [2]	Distance Correction [3]	View Angle Correction	Air Absorption	Facade Correction	Time Correction (30 min)	Rail Deterioration	Gap Size	Daytime/Evening Operation Frequency Correction (headway/30min)	Night-time Operation Frequency Correction (headway/30min)	Predicted Daytime/ Evening $L_{eq\ 30min}$, dB(A)	Predicted Overall Daytime/Evening Noise Level $L_{eq\ 30min}$ at Assessment Point, dB(A)	Predicted Night-time $L_{eq\ 30min}$, dB(A)	Predicted Overall Night-time Noise Level $L_{eq\ 30min}$ at Assessment Point, dB(A)
6	B	Tuen Ma Line to Wu Kai Sha	1	No Line of Sight.																		-	41	-	<40
		Tuen Ma Line to Tuen Mun																				-		-	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	44.7	33.0	45.9	11.2	15.2	22.7	-2.6	-20.5	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	42.6	33.0	43.8	13.7	16.1	22.7	-2.4	-19.1	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
7	B	Tuen Ma Line to Wu Kai Sha	1	No Line of Sight.																		-	41	-	<40
		Tuen Ma Line to Tuen Mun																				-		-	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	44.7	36.2	46.7	11.2	15.2	22.7	-2.7	-20.5	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	42.6	36.2	44.7	13.7	16.1	22.7	-2.5	-19.1	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
8	B	Tuen Ma Line to Wu Kai Sha	1	No Line of Sight.																		-	41	-	<40
		Tuen Ma Line to Tuen Mun																				-		-	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	44.7	39.3	47.7	11.2	15.2	22.7	-2.8	-20.5	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	42.6	39.3	45.7	13.7	16.1	22.7	-2.6	-19.1	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
9	B	Tuen Ma Line to Wu Kai Sha	1	No Line of Sight.																		-	41	-	<40
		Tuen Ma Line to Tuen Mun																				-		-	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	44.7	42.5	48.9	11.2	15.2	22.7	-2.9	-20.5	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	42.6	42.5	47.0	13.7	16.1	22.7	-2.7	-19.1	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
10	B	Tuen Ma Line to Wu Kai Sha	1	No Line of Sight.																		-	41	-	<40
		Tuen Ma Line to Tuen Mun																				-		-	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	44.7	45.6	50.2	11.2	15.2	22.7	-3.0	-20.5	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	42.6	45.6	48.4	13.7	16.1	22.7	-2.9	-19.1	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
11	B	Tuen Ma Line to Wu Kai Sha	1	No Line of Sight.																		-	41	-	<40
		Tuen Ma Line to Tuen Mun																				-		-	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	44.7	48.8	51.7	11.2	15.2	22.7	-3.2	-20.5	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	42.6	48.8	49.9	13.7	16.1	22.7	-3.0	-19.1	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
12	B	Tuen Ma Line to Wu Kai Sha	1	No Line of Sight.																		-	41	-	<40
		Tuen Ma Line to Tuen Mun																				-		-	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	44.7	51.9	53.4	11.2	15.2	22.7	-3.3	-20.5	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	42.6	51.9	51.6	13.7	16.1	22.7	-3.2	-19.1	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
15	B	Tuen Ma Line to Wu Kai Sha	1	No Line of Sight.																		-	40	-	<40
		Tuen Ma Line to Tuen Mun																				-		-	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	44.7	55.1	55.2	11.2	15.2	22.7	-3.4	-20.5	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	42.6	55.1	53.5	13.7	16.1	22.7	-3.3	-19.1	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
16	B	Tuen Ma Line to Wu Kai Sha	1	No Line of Sight.																		-	40	-	<40
		Tuen Ma Line to Tuen Mun																				-		-	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	44.7	58.2	57.1	11.2	15.2	22.7	-3.6	-20.5	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	42.6	58.2	55.5	13.7	16.1	22.7	-3.5	-19.1	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
17	B	Tuen Ma Line to Wu Kai Sha	1	No Line of Sight.																		-	<40	-	<40
		Tuen Ma Line to Tuen Mun																				-		-	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	44.7	61.4	59.1	11.2	15.2	22.7	-3.7	-20.5	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	42.6	61.4	57.5	13.7	16.1	22.7	-3.6	-19.1	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
18	B	Tuen Ma Line to Wu Kai Sha	1	No Line of Sight.																		-	<40	-	<40
		Tuen Ma Line to Tuen Mun																				-		-	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	44.7	64.5	61.2	11.2	15.2	22.7	-3.9	-20.5	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	42.6	64.5	59.7	13.7	16.1	22.7	-3.8	-19.1	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
19	B	Tuen Ma Line to Wu Kai Sha	1	No Line of Sight.																		-	<40	-	<40
		Tuen Ma Line to Tuen Mun																				-		-	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	44.7	67.7	63.4	11.2	15.2	22.7	-4.0	-20.5	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	42.6	67.7	61.9	13.7	16.1	22.7	-3.9	-19.1	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
20	B	Tuen Ma Line to Wu Kai Sha	1	No Line of Sight.																		-	<40	-	<40
		Tuen Ma Line to Tuen Mun																				-		-	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	44.7	70.8	65.7	11.2	15.2	22.7	-4.2	-20.5	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	42.6	70.8	64.3	13.7	16.1	22.7	-4.1	-19.1	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
21	B	Tuen Ma Line to Wu Kai Sha	1	No Line of Sight.																		-	<40	-	<40
		Tuen Ma Line to Tuen Mun																				-		-	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	44.7	74.0	68.0	11.2	15.2	22.7	-4.3	-20.5	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	42.6	74.0	66.6	13.7	16.1	22.7	-4.3	-19.1	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
22	B	Tuen Ma Line to Wu Kai Sha	1	No Line of Sight.																		-	<40	-	<40
		Tuen Ma Line to Tuen Mun																				-		-	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	44.7	77.1	70.4	11.2	15.2	22.7	-4.5	-20.5	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	42.6	77.1	69.1	13.7	16.1	22.7	-4.4	-19.1	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
23	B	Tuen Ma Line to Wu Kai Sha	1	No Line of Sight.																		-	<40	-	<40
		Tuen Ma Line to Tuen Mun																				-		-	
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	44.7	80.3	72.9	11.2	15.2	22.7	-4.6	-20.5	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	42.6	80.3	71.6	13.7	16.1	22.7	-4.6	-19.1	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	

Project no: 304537-00
Project name: Proposed Commercial / Residential Re-Development at 16 Po Tai Street, Ma On Shan
Title: Detailed Calculations of Leq(30min) at Representative NSRs
NSR: R211c
First NSR Level: 33.03mPD
No. of Storeys: 21 (6/F-29/F)
Uses: Residential

								NSR Details					Corrections, dB(A)								Daytime Result		Night-time Result	
Floor	Area Sensitivity Rating	Rail Headway	Segment	Daytime/Evening Operation Frequency (headway/30 min) [1]	Night-time Operation Frequency (headway/30 min) [1]	SEL, dB(A) @25m	Horizontal Distance from Source Line (m)	Height (mPD)	Nearest Distance from the Track (d')	View Angle (G), deg	Acute Angle (alpha), deg	Height of Railhead (mPD) [2]	Distance Correction [3]	View Angle Correction	Air Absorption	Facade Correction	Time Correction (30 min)	Rail Deterioration	Gap Size	Daytime/Evening Operation Frequency Correction (headway/30min)	Night-time Operation Frequency Correction (headway/30min)	Predicted Daytime/ Evening $L_{eq\ 30min}$, dB(A)	Predicted Overall Daytime/Evening Noise Level $L_{eq\ 30min}$ at Assessment Point, dB(A)	Predicted Night-time $L_{eq\ 30min}$, dB(A)	Predicted Overall Night-time Noise Level $L_{eq\ 30min}$ at Assessment Point, dB(A)
25	B	Tuen Ma Line to Wu Kai Sha	1	No Line of Sight.																	-		-	
		Tuen Ma Line to Tuen Mun																			-	<40	-	<40
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	44.7	83.4	75.4	11.2	15.2	22.7	-4.8	-20.5	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	42.6	83.4	74.2	13.7	16.1	22.7	-4.7	-19.1	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
26	B	Tuen Ma Line to Wu Kai Sha	1	No Line of Sight.																	-		-	
		Tuen Ma Line to Tuen Mun																			-	<40	-	<40
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	44.7	86.6	77.9	11.2	15.2	22.7	-4.9	-20.5	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	42.6	86.6	76.8	13.7	16.1	22.7	-4.9	-19.1	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
27	B	Tuen Ma Line to Wu Kai Sha	1	No Line of Sight.																	-		-	
		Tuen Ma Line to Tuen Mun																			-	<40	-	<40
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	44.7	89.7	80.5	11.2	15.2	22.7	-5.1	-20.5	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	42.6	89.7	79.4	13.7	16.1	22.7	-5.0	-19.1	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
28	B	Tuen Ma Line to Wu Kai Sha	1	No Line of Sight.																	-		-	
		Tuen Ma Line to Tuen Mun																			-	<40	-	<40
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	44.7	92.9	83.2	11.2	15.2	22.7	-5.2	-20.5	-0.5	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	42.6	92.9	82.1	13.7	16.1	22.7	-5.2	-19.1	-0.5	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
29	B	Tuen Ma Line to Wu Kai Sha	1	No Line of Sight.																	-		-	
		Tuen Ma Line to Tuen Mun																			-	<40	-	<40
		Tuen Ma Line to Wu Kai Sha	2	14	8	76.1	44.7	96.0	85.9	11.2	15.2	22.7	-5.4	-20.5	-0.5	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
		Tuen Ma Line to Tuen Mun		14	8	74.8	42.6	96.0	84.8	13.7	16.1	22.7	-5.3	-19.1	-0.5	2.5	-32.6	3.0	0.9	11.5	9.0	<40		<40	
																						Max. Leq	41		<40
																						Criterion	65		55
																						Comply	Y		Y

Notes:
[1] According to the ERR under FEP No. FEP-05/039/2000F of the approved EIA Report for MOL (AEIAR-028/1999) and as advised by the MTRC, the maximum train frequency for Tuen Ma Line is 28 trains per hour per direction (tphpd) for daytime/evening and 16 tphpd for night-time respectively.
[2] The highest railhead (i.e. 22.7mPD) is adopted for all rail segments for conservative assessment.
[3] Distance correction is calculated based on 25m reference distance.

Project no: 304537-00
Project name: Proposed Commercial / Residential Re-Development at 16 Po Tai Street, Ma On Shan
Title: Detailed Calculations of Leq(30min) at Representative NSRs
NSR: R212a
First NSR Level: 33.03mPD
No. of Storeys: 21 (6/F-29/F)
Uses: Residential

								NSR Details					Corrections, dB(A)									Daytime Result		Night-time Result	
Floor	Area Sensitivity Rating	Rail Headway	Segment	Daytime/Evening Operation Frequency (headway/30 min) [1]	Night-time Operation Frequency (headway/30 min) [1]	SEL, dB(A) @25m	Horizontal Distance from Source Line (m)	Height (mPD)	Nearest Distance from the Track (d')	View Angle (G), deg	Acute Angle (alpha), deg	Height of Railhead (mPD) [2]	Distance Correction [3]	View Angle Correction	Air Absorption	Facade Correction	Time Correction (30 min)	Rail Deterioration	Gap Size	Daytime/Evening Operation Frequency Correction (headway/30min)	Night-time Operation Frequency Correction (headway/30min)	Predicted Daytime/ Evening $L_{eq\ 30min}$, dB(A)	Predicted Overall Daytime/Evening Noise Level $L_{eq\ 30min}$ at Assessment Point, dB(A)	Predicted Night-time $L_{eq\ 30min}$, dB(A)	Predicted Overall Night-time Noise Level $L_{eq\ 30min}$ at Assessment Point, dB(A)
6	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	48.4	33.0	49.5	33.9	32.1	22.7	-3.0	-9.6	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	48.7	51	46.3	49
		Tuen Ma Line to Tuen Mun		14	8	74.8	43.8	33.0	45.0	34.9	31.4	22.7	-2.6	-9.6	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	47.8		45.4	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
7	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	48.4	36.2	50.2	33.9	32.1	22.7	-3.0	-9.6	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	48.6	51	46.2	49
		Tuen Ma Line to Tuen Mun		14	8	74.8	43.8	36.2	45.8	34.9	31.4	22.7	-2.6	-9.6	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	47.7		45.3	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
8	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	48.4	39.3	51.2	33.9	32.1	22.7	-3.1	-9.6	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	48.5	51	46.1	49
		Tuen Ma Line to Tuen Mun		14	8	74.8	43.8	39.3	46.8	34.9	31.4	22.7	-2.7	-9.6	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	47.6		45.2	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
9	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	48.4	42.5	52.3	33.9	32.1	22.7	-3.2	-9.6	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	48.4	51	46.0	49
		Tuen Ma Line to Tuen Mun		14	8	74.8	43.8	42.5	48.0	34.9	31.4	22.7	-2.8	-9.6	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	47.5		45.1	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
10	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	48.4	45.6	53.5	33.9	32.1	22.7	-3.3	-9.6	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	48.3	51	45.9	48
		Tuen Ma Line to Tuen Mun		14	8	74.8	43.8	45.6	49.4	34.9	31.4	22.7	-3.0	-9.6	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	47.3		44.9	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
11	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	48.4	48.8	55.0	33.9	32.1	22.7	-3.4	-9.6	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	48.2	51	45.8	48
		Tuen Ma Line to Tuen Mun		14	8	74.8	43.8	48.8	51.0	34.9	31.4	22.7	-3.1	-9.6	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	47.2		44.8	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
12	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	48.4	51.9	56.5	33.9	32.1	22.7	-3.5	-9.6	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	48.1	51	45.6	48
		Tuen Ma Line to Tuen Mun		14	8	74.8	43.8	51.9	52.6	34.9	31.4	22.7	-3.2	-9.6	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	47.0		44.6	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
15	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	48.4	55.1	58.2	33.9	32.1	22.7	-3.7	-9.6	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	47.9	50	45.5	48
		Tuen Ma Line to Tuen Mun		14	8	74.8	43.8	55.1	54.5	34.9	31.4	22.7	-3.4	-9.6	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	46.9		44.5	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
16	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	48.4	58.2	60.0	33.9	32.1	22.7	-3.8	-9.6	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	47.8	50	45.3	48
		Tuen Ma Line to Tuen Mun		14	8	74.8	43.8	58.2	56.4	34.9	31.4	22.7	-3.5	-9.6	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	46.7		44.3	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
17	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	48.4	61.4	61.9	33.9	32.1	22.7	-3.9	-9.6	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	47.6	50	45.2	48
		Tuen Ma Line to Tuen Mun		14	8	74.8	43.8	61.4	58.4	34.9	31.4	22.7	-3.7	-9.6	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	46.6		44.1	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
18	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	48.4	64.5	64.0	33.9	32.1	22.7	-4.1	-9.6	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	47.5	50	45.0	48
		Tuen Ma Line to Tuen Mun		14	8	74.8	43.8	64.5	60.5	34.9	31.4	22.7	-3.8	-9.6	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	46.4		43.9	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
19	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	48.4	67.7	66.1	33.9	32.1	22.7	-4.2	-9.6	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	47.3	50	44.9	47
		Tuen Ma Line to Tuen Mun		14	8	74.8	43.8	67.7	62.8	34.9	31.4	22.7	-4.0	-9.6	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	46.2		43.8	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
20	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	48.4	70.8	68.2	33.9	32.1	22.7	-4.4	-9.6	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	47.2	50	44.7	47
		Tuen Ma Line to Tuen Mun		14	8	74.8	43.8	70.8	65.1	34.9	31.4	22.7	-4.2	-9.6	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	46.0		43.6	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
21	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	48.4	74.0	70.5	33.9	32.1	22.7	-4.5	-9.6	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	47.0	49	44.6	47
		Tuen Ma Line to Tuen Mun		14	8	74.8	43.8	74.0	67.4	34.9	31.4	22.7	-4.3	-9.6	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	45.9		43.4	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
22	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	48.4	77.1	72.8	33.9	32.1	22.7	-4.6	-9.6	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	46.8	49	44.4	47
		Tuen Ma Line to Tuen Mun		14	8	74.8	43.8	77.1	69.8	34.9	31.4	22.7	-4.5	-9.6	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	45.7		43.3	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
23	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	48.4	80.3	75.2	33.9	32.1	22.7	-4.8	-9.6	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	46.7	49	44.2	47
		Tuen Ma Line to Tuen Mun		14	8	74.8	43.8	80.3	72.3	34.9	31.4	22.7	-4.6	-9.6	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	45.5		43.1	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	

Project no: 304537-00
Project name: Proposed Commercial / Residential Re-Development at 16 Po Tai Street, Ma On Shan
Title: Detailed Calculations of Leq(30min) at Representative NSRs
NSR: R212a
First NSR Level: 33.03mPD
No. of Storeys: 21 (6/F-29/F)
Uses: Residential

								NSR Details					Height of Railhead (mPD) [2]	Corrections, dB(A)									Daytime Result		Night-time Result	
Floor	Area Sensitivity Rating	Rail Headway	Segment	Daytime/Evening Operation Frequency (headway/30 min) [1]	Night-time Operation Frequency (headway/30 min) [1]	SEL, dB(A) @25m	Horizontal Distance from Source Line (m)	Height (mPD)	Nearest Distance from the Track (d')	View Angle (G), deg	Acute Angle (alpha), deg		Distance Correction [3]	View Angle Correction	Air Absorption	Facade Correction	Time Correction (30 min)	Rail Deterioration	Gap Size	Daytime/Evening Operation Frequency Correction (headway/30min)	Night-time Operation Frequency Correction (headway/30min)	Predicted Daytime/ Evening $L_{eq\ 30min}$, dB(A)	Predicted Overall Daytime/Evening Noise Level $L_{eq\ 30min}$ at Assessment Point, dB(A)	Predicted Night-time $L_{eq\ 30min}$, dB(A)	Predicted Overall Night-time Noise Level $L_{eq\ 30min}$ at Assessment Point, dB(A)
25	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	48.4	83.4	77.6	33.9	32.1	22.7	-4.9	-9.6	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	46.5	49	44.1	47
		Tuen Ma Line to Tuen Mun		14	8	74.8	43.8	83.4	74.9	34.9	31.4	22.7	-4.8	-9.6	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	45.3		42.9	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
26	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	48.4	86.6	80.1	33.9	32.1	22.7	-5.1	-9.6	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	46.4	49	43.9	46
		Tuen Ma Line to Tuen Mun		14	8	74.8	43.8	86.6	77.4	34.9	31.4	22.7	-4.9	-9.6	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	45.2		42.7	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
27	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	48.4	89.7	82.7	33.9	32.1	22.7	-5.2	-9.6	-0.5	2.5	-32.6	3.0	0.9	11.5	9.0	46.2	49	43.8	46
		Tuen Ma Line to Tuen Mun		14	8	74.8	43.8	89.7	80.0	34.9	31.4	22.7	-5.1	-9.6	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	45.0		42.6	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
28	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	48.4	92.9	85.2	33.9	32.1	22.7	-5.3	-9.6	-0.5	2.5	-32.6	3.0	0.9	11.5	9.0	46.1	49	43.6	46
		Tuen Ma Line to Tuen Mun		14	8	74.8	43.8	92.9	82.7	34.9	31.4	22.7	-5.2	-9.6	-0.5	2.5	-32.6	3.0	0.9	11.5	9.0	44.8		42.4	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
29	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	48.4	96.0	87.8	33.9	32.1	22.7	-5.5	-9.6	-0.5	2.5	-32.6	3.0	0.9	11.5	9.0	45.9	48	43.5	46
		Tuen Ma Line to Tuen Mun		14	8	74.8	43.8	96.0	85.4	34.9	31.4	22.7	-5.3	-9.6	-0.5	2.5	-32.6	3.0	0.9	11.5	9.0	44.7		42.3	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
																						Max. Leq	51		49
																						Criterion	65		55
																						Comply	Y		Y

Notes:
[1] According to the ERR under FEP No. FEP-05/039/2000F of the approved EIA Report for MOL (AEIAR-028/1999) and as advised by the MTRC, the maximum train frequency for Tuen Ma Line is 28 trains per hour per direction (tphpd) for daytime/evening and 16 tphpd for night-time respectively.
[2] The highest railhead (i.e. 22.7mPD) is adopted for all rail segments for conservative assessment.
[3] Distance correction is calculated based on 25m reference distance.

Project no: 304537-00
Project name: Proposed Commercial / Residential Re-Development at 16 Po Tai Street, Ma On Shan
Title: Detailed Calculations of Leq(30min) at Representative NSRs
NSR: R212c
First NSR Level: 33.03mPD
No. of Storeys: 21 (6/F-29/F)
Uses: Residential

								NSR Details						Corrections, dB(A)									Daytime Result		Night-time Result	
Floor	Area Sensitivity Rating	Rail Headway	Segment	Daytime/Evening Operation Frequency (headway/30 min) [1]	Night-time Operation Frequency (headway/30 min) [1]	SEL, dB(A) @25m	Horizontal Distance from Source Line (m)	Height (mPD)	Nearest Distance from the Track (d')	View Angle (G), deg	Acute Angle (alpha), deg	Height of Railhead (mPD) [2]	Distance Correction [3]	View Angle Correction	Air Absorption	Facade Correction	Time Correction (30 min)	Rail Deterioration	Gap Size	Daytime/Evening Operation Frequency Correction (headway/30min)	Night-time Operation Frequency Correction (headway/30min)	Predicted Daytime/ Evening $L_{eq\ 30min}$, dB(A)	Predicted Overall Daytime/Evening Noise Level $L_{eq\ 30min}$ at Assessment Point, dB(A)	Predicted Night-time $L_{eq\ 30min}$, dB(A)	Predicted Overall Night-time Noise Level $L_{eq\ 30min}$ at Assessment Point, dB(A)
6	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	53.1	33.0	54.1	36.2	34.2	22.7	-3.4	-8.8	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	49.0	52	46.6	49
		Tuen Ma Line to Tuen Mun		14	8	74.8	48.5	33.0	49.6	37.2	33.1	22.7	-3.0	-8.9	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	48.0		45.6	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
7	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	53.1	36.2	54.8	36.2	34.2	22.7	-3.4	-8.8	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	49.0	51	46.5	49
		Tuen Ma Line to Tuen Mun		14	8	74.8	48.5	36.2	50.3	37.2	33.1	22.7	-3.0	-8.9	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	47.9		45.5	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
8	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	53.1	39.3	55.6	36.2	34.2	22.7	-3.5	-8.8	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	48.9	51	46.5	49
		Tuen Ma Line to Tuen Mun		14	8	74.8	48.5	39.3	51.3	37.2	33.1	22.7	-3.1	-8.9	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	47.9		45.4	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
9	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	53.1	42.5	56.7	36.2	34.2	22.7	-3.6	-8.8	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	48.8	51	46.4	49
		Tuen Ma Line to Tuen Mun		14	8	74.8	48.5	42.5	52.4	37.2	33.1	22.7	-3.2	-8.9	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	47.8		45.3	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
10	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	53.1	45.6	57.8	36.2	34.2	22.7	-3.6	-8.8	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	48.7	51	46.3	49
		Tuen Ma Line to Tuen Mun		14	8	74.8	48.5	45.6	53.6	37.2	33.1	22.7	-3.3	-8.9	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	47.6		45.2	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
11	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	53.1	48.8	59.1	36.2	34.2	22.7	-3.7	-8.8	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	48.6	51	46.2	49
		Tuen Ma Line to Tuen Mun		14	8	74.8	48.5	48.8	55.1	37.2	33.1	22.7	-3.4	-8.9	-0.2	2.5	-32.6	3.0	0.9	11.5	9.0	47.5		45.1	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
12	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	53.1	51.9	60.6	36.2	34.2	22.7	-3.8	-8.8	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	48.5	51	46.1	49
		Tuen Ma Line to Tuen Mun		14	8	74.8	48.5	51.9	56.6	37.2	33.1	22.7	-3.5	-8.9	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	47.4		44.9	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
15	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	53.1	55.1	62.2	36.2	34.2	22.7	-4.0	-8.8	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	48.4	51	45.9	48
		Tuen Ma Line to Tuen Mun		14	8	74.8	48.5	55.1	58.3	37.2	33.1	22.7	-3.7	-8.9	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	47.2		44.8	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
16	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	53.1	58.2	63.9	36.2	34.2	22.7	-4.1	-8.8	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	48.2	51	45.8	48
		Tuen Ma Line to Tuen Mun		14	8	74.8	48.5	58.2	60.1	37.2	33.1	22.7	-3.8	-8.9	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	47.1		44.7	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
17	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	53.1	61.4	65.7	36.2	34.2	22.7	-4.2	-8.8	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	48.1	51	45.7	48
		Tuen Ma Line to Tuen Mun		14	8	74.8	48.5	61.4	62.0	37.2	33.1	22.7	-3.9	-8.9	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	46.9		44.5	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
18	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	53.1	64.5	67.6	36.2	34.2	22.7	-4.3	-8.8	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	48.0	50	45.5	48
		Tuen Ma Line to Tuen Mun		14	8	74.8	48.5	64.5	64.0	37.2	33.1	22.7	-4.1	-8.9	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	46.8		44.4	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
19	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	53.1	67.7	69.6	36.2	34.2	22.7	-4.4	-8.8	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	47.8	50	45.4	48
		Tuen Ma Line to Tuen Mun		14	8	74.8	48.5	67.7	66.1	37.2	33.1	22.7	-4.2	-8.9	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	46.6		44.2	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
20	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	53.1	70.8	71.6	36.2	34.2	22.7	-4.6	-8.8	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	47.7	50	45.2	48
		Tuen Ma Line to Tuen Mun		14	8	74.8	48.5	70.8	68.3	37.2	33.1	22.7	-4.4	-8.9	-0.3	2.5	-32.6	3.0	0.9	11.5	9.0	46.5		44.0	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
21	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	53.1	74.0	73.8	36.2	34.2	22.7	-4.7	-8.8	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	47.5	50	45.1	48
		Tuen Ma Line to Tuen Mun		14	8	74.8	48.5	74.0	70.6	37.2	33.1	22.7	-4.5	-8.9	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	46.3		43.9	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
22	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	53.1	77.1	76.0	36.2	34.2	22.7	-4.8	-8.8	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	47.4	50	44.9	47
		Tuen Ma Line to Tuen Mun		14	8	74.8	48.5	77.1	72.9	37.2	33.1	22.7	-4.6	-8.9	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	46.2		43.7	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
23	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	53.1	80.3	78.3	36.2	34.2	22.7	-5.0	-8.8	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	47.2	50	44.8	47
		Tuen Ma Line to Tuen Mun		14	8	74.8	48.5	80.3	75.3	37.2	33.1	22.7	-4.8	-8.9	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	46.0		43.6	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	

Project no: 304537-00
Project name: Proposed Commercial / Residential Re-Development at 16 Po Tai Street, Ma On Shan
Title: Detailed Calculations of Leq(30min) at Representative NSRs
NSR: R212c
First NSR Level: 33.03mPD
No. of Storeys: 21 (6/F-29/F)
Uses: Residential

								NSR Details					Corrections, dB(A)									Daytime Result		Night-time Result	
Floor	Area Sensitivity Rating	Rail Headway	Segment	Daytime/Evening Operation Frequency (headway/30 min) [1]	Night-time Operation Frequency (headway/30 min) [1]	SEL, dB(A) @25m	Horizontal Distance from Source Line (m)	Height (mPD)	Nearest Distance from the Track (d')	View Angle (G), deg	Acute Angle (alpha), deg	Height of Railhead (mPD) [2]	Distance Correction [3]	View Angle Correction	Air Absorption	Facade Correction	Time Correction (30 min)	Rail Deterioration	Gap Size	Daytime/Evening Operation Frequency Correction (headway/30min)	Night-time Operation Frequency Correction (headway/30min)	Predicted Daytime/ Evening $L_{eq\ 30min}$, dB(A)	Predicted Overall Daytime/Evening Noise Level $L_{eq\ 30min}$ at Assessment Point, dB(A)	Predicted Night-time $L_{eq\ 30min}$, dB(A)	Predicted Overall Night-time Noise Level $L_{eq\ 30min}$ at Assessment Point, dB(A)
25	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	53.1	83.4	80.6	36.2	34.2	22.7	-5.1	-8.8	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	47.1	50	44.7	47
		Tuen Ma Line to Tuen Mun		14	8	74.8	48.5	83.4	77.7	37.2	33.1	22.7	-4.9	-8.9	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	45.8		43.4	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
26	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	53.1	86.6	83.0	36.2	34.2	22.7	-5.2	-8.8	-0.5	2.5	-32.6	3.0	0.9	11.5	9.0	46.9	49	44.5	47
		Tuen Ma Line to Tuen Mun		14	8	74.8	48.5	86.6	80.2	37.2	33.1	22.7	-5.1	-8.9	-0.4	2.5	-32.6	3.0	0.9	11.5	9.0	45.7		43.2	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
27	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	53.1	89.7	85.5	36.2	34.2	22.7	-5.3	-8.8	-0.5	2.5	-32.6	3.0	0.9	11.5	9.0	46.8	49	44.4	47
		Tuen Ma Line to Tuen Mun		14	8	74.8	48.5	89.7	82.7	37.2	33.1	22.7	-5.2	-8.9	-0.5	2.5	-32.6	3.0	0.9	11.5	9.0	45.5		43.1	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
28	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	53.1	92.9	88.0	36.2	34.2	22.7	-5.5	-8.8	-0.5	2.5	-32.6	3.0	0.9	11.5	9.0	46.6	49	44.2	47
		Tuen Ma Line to Tuen Mun		14	8	74.8	48.5	92.9	85.3	37.2	33.1	22.7	-5.3	-8.9	-0.5	2.5	-32.6	3.0	0.9	11.5	9.0	45.4		42.9	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
29	B	Tuen Ma Line to Wu Kai Sha	1	14	8	76.1	53.1	96.0	90.5	36.2	34.2	22.7	-5.6	-8.8	-0.5	2.5	-32.6	3.0	0.9	11.5	9.0	46.5	49	44.1	46
		Tuen Ma Line to Tuen Mun		14	8	74.8	48.5	96.0	87.9	37.2	33.1	22.7	-5.5	-8.9	-0.5	2.5	-32.6	3.0	0.9	11.5	9.0	45.2		42.8	
		Tuen Ma Line to Wu Kai Sha	2	No Line of Sight.																		-		-	
		Tuen Ma Line to Tuen Mun																				-		-	
																						Max. Leq	52		49
																						Criterion	65		55
																						Comply	Y		Y

Notes:
[1] According to the ERR under FEP No. FEP-05/039/2000F of the approved EIA Report for MOL (AEIAR-028/1999) and as advised by the MTRC, the maximum train frequency for Tuen Ma Line is 28 trains per hour per direction (tphpd) for daytime/evening and 16 tphpd for night-time respectively.
[2] The highest railhead (i.e. 22.7mPD) is adopted for all rail segments for conservative assessment.
[3] Distance correction is calculated based on 25m reference distance.

Appendix 5.4

Detailed Calculations of $L_{eq(24hr)}$ at Representative NSRs

Project no: 304537-00
Project name: Proposed Commercial / Residential Re-Development at 16 Po Tai Street, Ma On Shan
Title: Detailed Calculations of Leq(24hr) at Representative NSRs

NSRs	Daytime & evening Operating Hours [1]	Night-time Operating Hours [1]	Max. Daytime/Evening $L_{eq(30min)}$, dB(A) [2]	Max. Night-time $L_{eq(30min)}$, dB(A) [2]	$L_{eq(24hour)}$, dB(A) [3]	$L_{eq(24hour)}$ Criteria, dB(A) [4]	$L_{eq(24hour)}$ Compliance (Y/N)
R102a	16	4	48	46	47	65	Y
R102b	16	4	46	44	45	65	Y
R102c	16	4	<40	<40	<40	65	Y
R103a	16	4	54	52	53	65	Y
R103b	16	4	57	55	56	65	Y
R103c	16	4	58	55	56	65	Y
R104a	16	4	55	52	54	65	Y
R211a	16	4	42	<40	41	65	Y
R211c	16	4	41	<40	40	65	Y
R212a	16	4	51	49	50	65	Y
R212c	16	4	52	49	50	65	Y
				Max. Leq(24hour), dB(A)	**56**	**65**	**Y**

Notes:
[1] According to MTRC website, the first and last TML trains operating from the nearest Heng On Station are 5:43am and 01:20am, resulting in 16 daytime & evening operating hours and 4 night-time operating hours.
[2] The maximum daytime/evening and night-time Leq(30min) at each representative NSR are applied for this calculation.
[3] $L_{eq(24\ hour)}$ = 10 log 1/24 [Daytime/Evening operating hours x 10^(Leq 30min (daytime/evening)/10) + Night-time operating hours x 10^(Leq 30min (night-time)/10)]
[4] Criteria as stipulated in Hong Kong Planning Standards and Guidelines (HKPSG).

Appendix 5.5

Detailed Calculations of L_{max} at Representative NSRs

Project no: 304537-00
Project name: Proposed Commercial / Residential Re-Development at 16 Po Tai Street, Ma On Shan
Title: Detailed Calculations of L_{max} at Representative NSRs

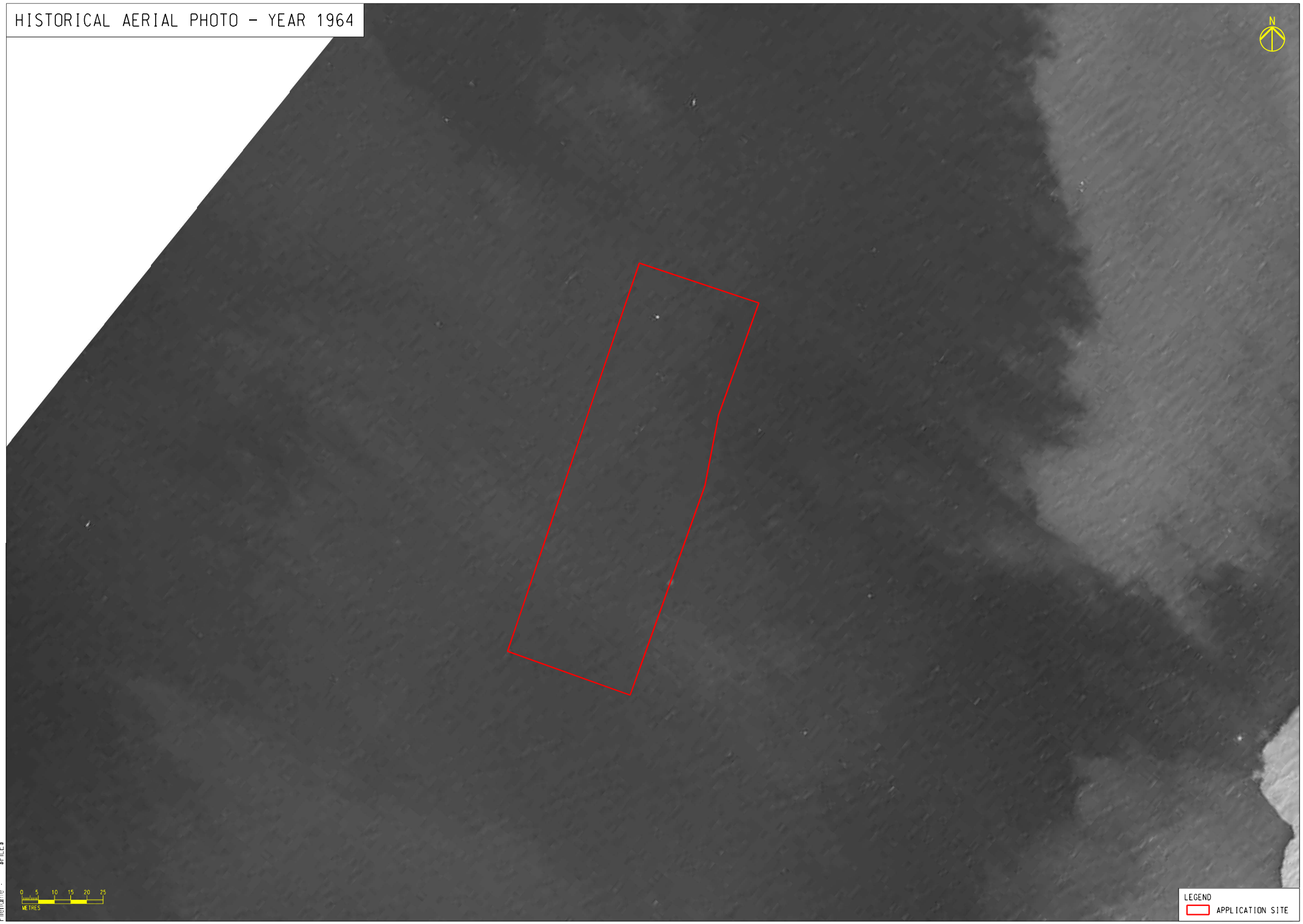
NSR	Track	SEL @d_{ref}, dB(A) [1]	L_{max} @d_{ref}, dB(A) [1, 2]	NSR	Correction, dB(A)					L_{max} @ Receiver, dB(A)
				Nearest Horizontal Distance to Track (d), m [3]	Distance [4]	Rail Deterioration	Façade	Gap Size	Air Absorption	
R102a	Tuen Ma Line (To Tuen Mun)	74.8	64	45	-5.2	3.0	2.5	0.9	-0.2	65
	Tuen Ma Line (To Wu Kai Sha)	76.1	66	48	-5.6	3.0	2.5	0.9	-0.2	67
R102b	Tuen Ma Line (To Tuen Mun)	74.8	64	43	-4.6	3.0	2.5	0.9	-0.1	66
	Tuen Ma Line (To Wu Kai Sha)	76.1	66	45	-5.1	3.0	2.5	0.9	-0.2	67
R102c	Tuen Ma Line (To Tuen Mun)	74.8	64	43	-4.8	3.0	2.5	0.9	-0.1	65
	Tuen Ma Line (To Wu Kai Sha)	76.1	66	43	-4.7	3.0	2.5	0.9	-0.1	68
R103a	Tuen Ma Line (To Tuen Mun)	74.8	64	39	-4.0	3.0	2.5	0.9	-0.1	66
	Tuen Ma Line (To Wu Kai Sha)	76.1	66	44	-4.9	3.0	2.5	0.9	-0.2	67
R103b	Tuen Ma Line (To Tuen Mun)	74.8	64	41	-4.3	3.0	2.5	0.9	-0.1	66
	Tuen Ma Line (To Wu Kai Sha)	76.1	66	46	-5.2	3.0	2.5	0.9	-0.2	67
R103c	Tuen Ma Line (To Tuen Mun)	74.8	64	44	-4.9	3.0	2.5	0.9	-0.1	65
	Tuen Ma Line (To Wu Kai Sha)	76.1	66	48	-5.7	3.0	2.5	0.9	-0.2	67
R104a	Tuen Ma Line (To Tuen Mun)	74.8	64	46	-5.3	3.0	2.5	0.9	-0.2	65
	Tuen Ma Line (To Wu Kai Sha)	76.1	66	51	-6.1	3.0	2.5	0.9	-0.2	66
R211a	Tuen Ma Line (To Tuen Mun)	74.8	64	47	-5.5	3.0	2.5	0.9	-0.2	65
	Tuen Ma Line (To Wu Kai Sha)	76.1	66	49	-5.8	3.0	2.5	0.9	-0.2	66
R211c	Tuen Ma Line (To Tuen Mun)	74.8	64	43	-4.6	3.0	2.5	0.9	-0.1	66
	Tuen Ma Line (To Wu Kai Sha)	76.1	66	45	-5.0	3.0	2.5	0.9	-0.2	67
R212a	Tuen Ma Line (To Tuen Mun)	74.8	64	44	-4.9	3.0	2.5	0.9	-0.2	65
	Tuen Ma Line (To Wu Kai Sha)	76.1	66	48	-5.7	3.0	2.5	0.9	-0.2	67
R212c	Tuen Ma Line (To Tuen Mun)	74.8	64	49	-5.8	3.0	2.5	0.9	-0.2	64
	Tuen Ma Line (To Wu Kai Sha)	76.1	66	53	-6.5	3.0	2.5	0.9	-0.2	66
								Max. L_{max}, dB(A)		68
								HKPSG L_{max} Criterion, dB(A)		85
								Compliance		Y

Notes:
[1] Reference distance from the track (@25m).
[2] Conversion from SEL to L_{max} based on Equation 15.21 of the "Transportation Noise Reference Book", 1987, edited by Paul Nelson:
L_{max} = SEL - 10log(L/V) - 10.5 + 10log[4D/(4D²+1) + 2tan⁻¹(1/(2D))]
where L is the train length (in m), V is the train speed (in kph), d is the perpendicular distance from track (in m), and D = d / L
[3] Nearest distance from the track to receiver
[4] A distance correction of -20 x log (d/d_{ref}) is applied.

Appendix 9.1

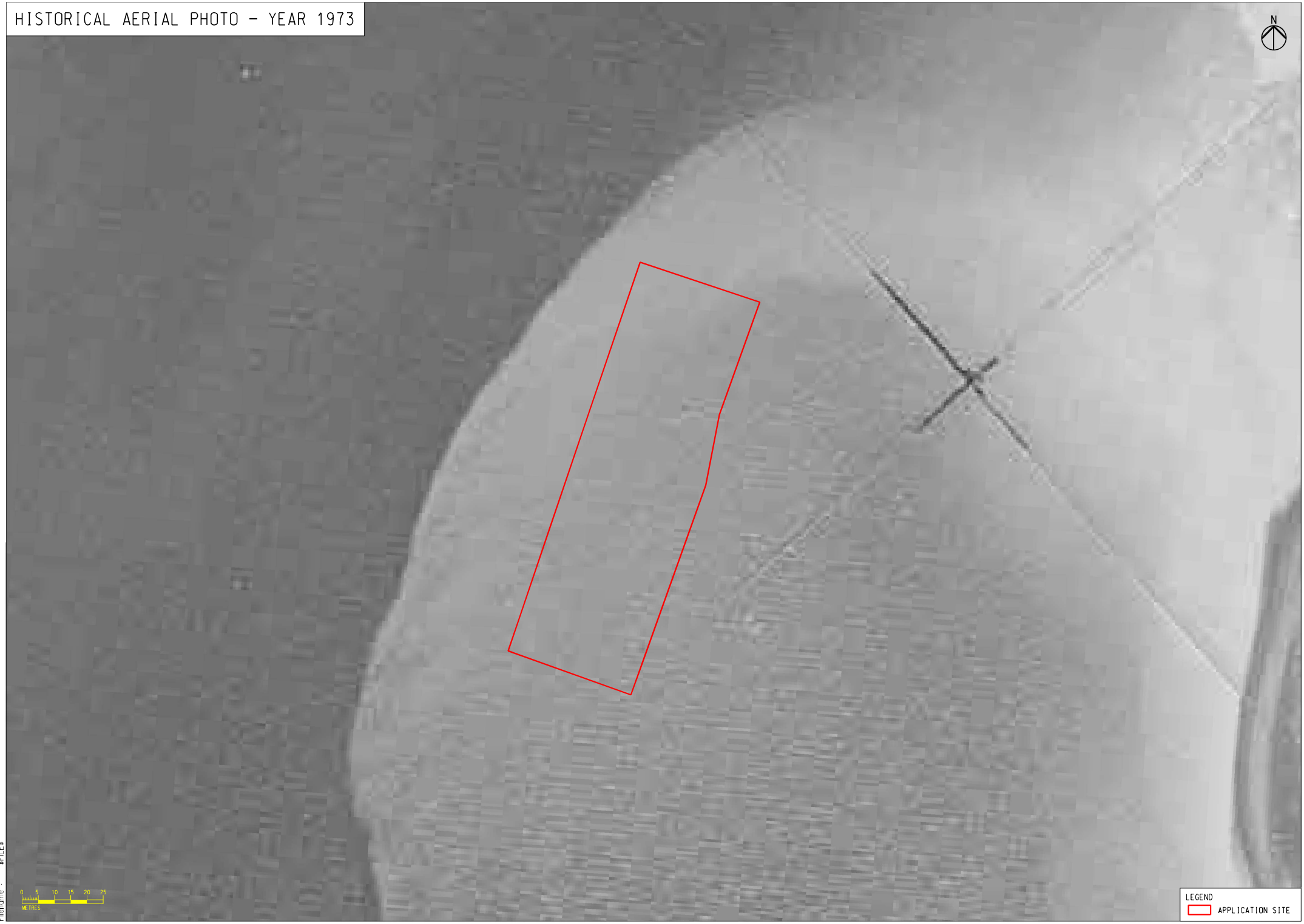
Historical Aerial Photos

HISTORICAL AERIAL PHOTO - YEAR 1964



Printed by : $DATE$
Filename : $FILE$

HISTORICAL AERIAL PHOTO - YEAR 1973



Printed by : $DATE$
Filename : $FILE$

HISTORICAL AERIAL PHOTO - YEAR 1984



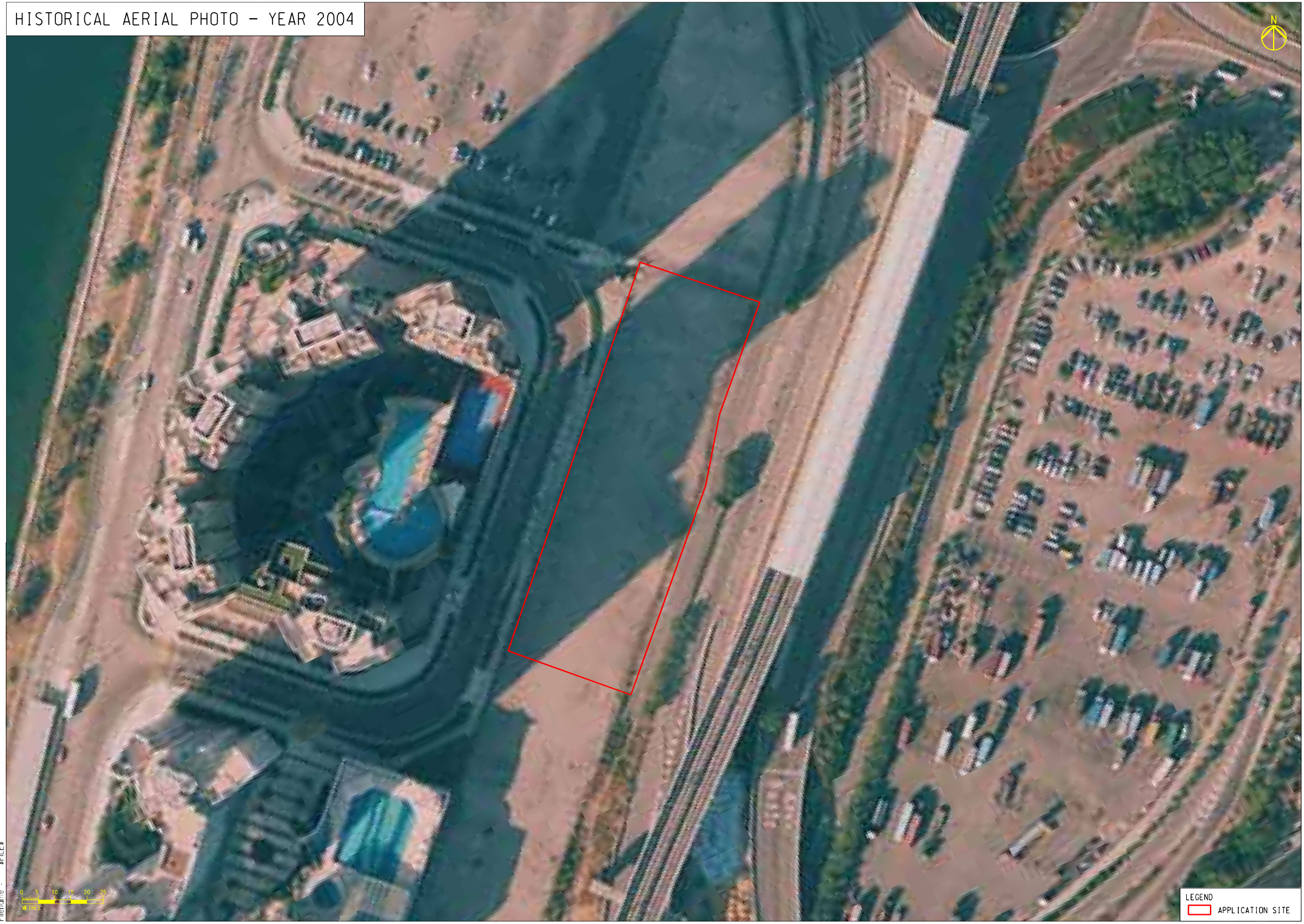
Printed by : $DATE$
Filename : $FILE$

HISTORICAL AERIAL PHOTO - YEAR 1995



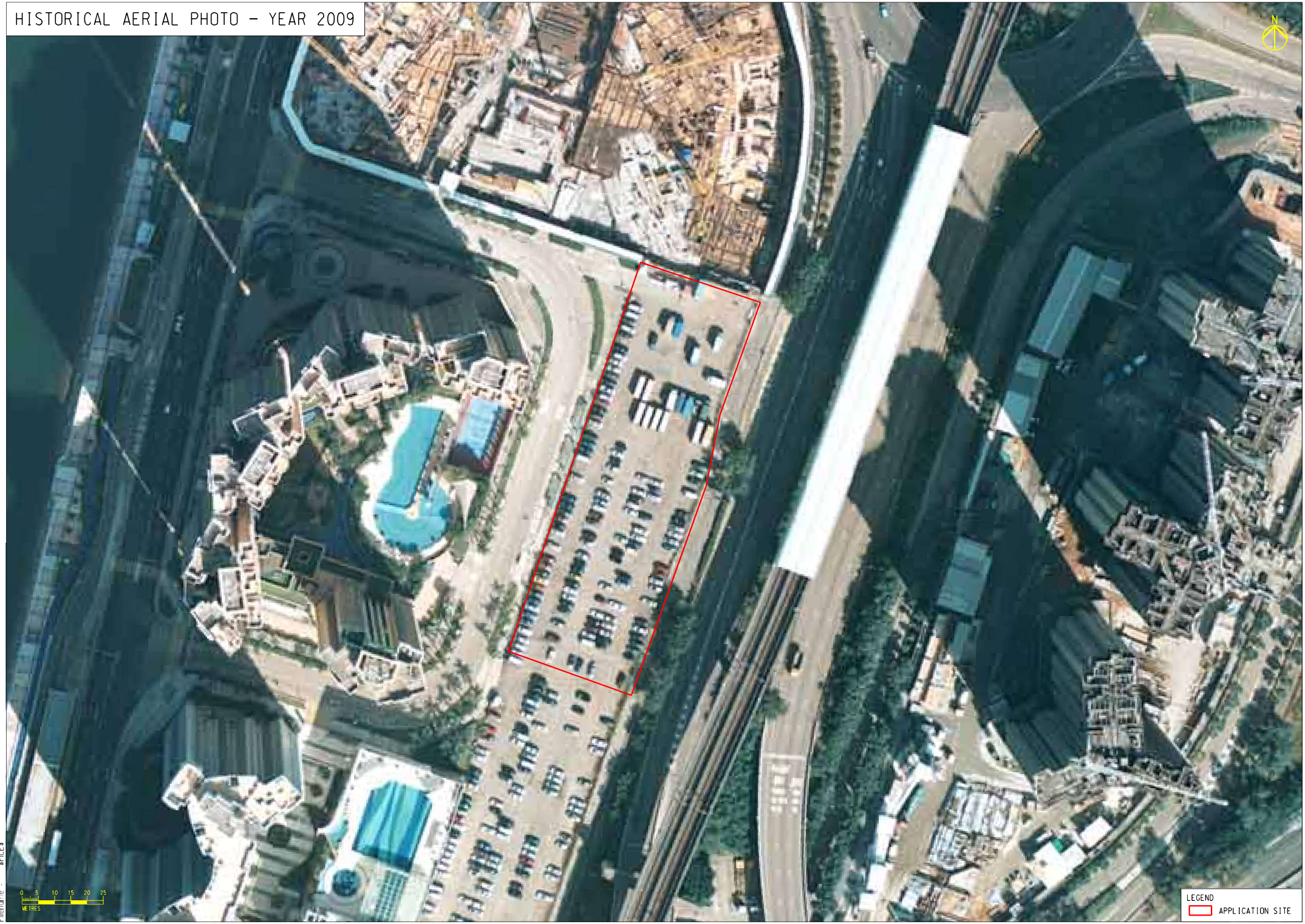
Printed by : $DATE$
Filename : $FILE$

HISTORICAL AERIAL PHOTO - YEAR 2004



Printed by : $DATE$
Filename : $FILE$

HISTORICAL AERIAL PHOTO - YEAR 2009



Printed by : $DATE$
Filename : $FILE$

HISTORICAL AERIAL PHOTO - YEAR 2014



Printed by : $DATE$
Filename : $FILE$

HISTORICAL AERIAL PHOTO - YEAR 2019



Printed by : $DATE$
Filename : $FILE$

HISTORICAL AERIAL PHOTO - YEAR 2023



Printed by : $DATE$
Filename : $FILE$

Appendix 9.2

Photo Record of Site Survey

Photo Records

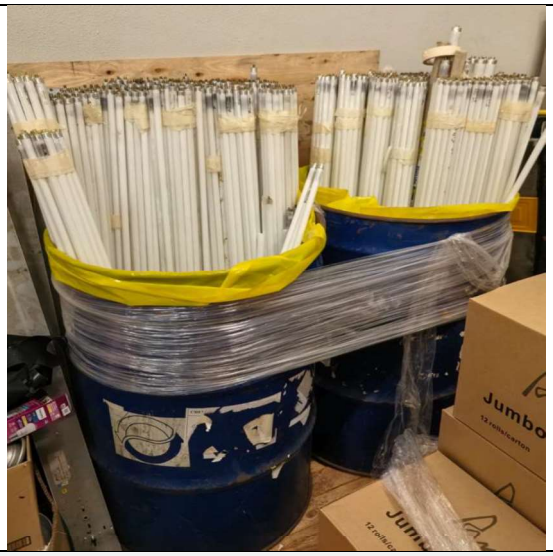
	
Photo 1 Loading/Unloading Area on G/F of We Go Mall	**Photo 2** Used fluorescent lamps stored at Loading/Unloading Area on G/F of We Go Mall
	
Photo 3 Used batteries stored at Loading/Unloading Area on G/F of We Go Mall	**Photo 4** Used paint stored at Chemical Storage and Mixing Area Room on 4/F of We Go Mall



Photo 5
Fuel tank at Fuel Tank Room on 4/F of We Go Mall

Appendix 9.3

Site Walkover Checklist

ARUP

Site Walkover Checklist

1) GENERAL SITE DETAILS	
Site Owner/ Client	We Go Mall
Property Address	16 Po Tai Street
Person Conducting the Questionnaire (name & position)	Anthonio Wun, Assistant Consultant
Authorised Owner/ Client Representative (if applicable) (name, position & telephone)	NA

2) ACTIVITIES	
Briefly describe activities carried out on site, including types of products/chemicals/materials handled. **Obtain a flow schematic if possible.**	Commercial activities
Number of employees:	N/A
- Full-time:	N/A
- Part-time:	N/A
- Temporary/Seasonal:	N/A
Maximum no. of people on site at any time:	N/A
Typical hours of operation:	07:00-23:00
Number of shifts:	N/A
Days per week:	7
Weeks per year:	52
Scheduled plant shut-down:	N/A
Detail the main sources of energy at the site:	
Gas (Yes/No)	No
Electricity (Yes/No)	Yes
Coal (Yes/No)	No
Oil (Yes/No)	No
Other (Yes/No)	No

Site Walkover Checklist

3) SITE DESCRIPTION	
This section is intended to gather information on site setting and environmental receptors on, adjacent or close to the site.	
What is the total site area (m^2):	5090
What area of the site is covered by buildings (%):	90%
Please list all current and previous owners/occupiers if possible.	We Go Mall
Is a site plan available? (Yes/No) If yes, please attach.	No
Are there any other parties on site as tenants or sub-tenants? (Yes/No) If yes, identify those parties.	Yes, restaurants/supermarkets etc.
Describe surrounding land use (residential, industrial, rural, etc.) and identify neighbouring facilities and types of industry.	
North:	Ocenaire
South:	Po Tai Street Car Park
East:	Sai Sha Road
West:	Po Tai Street
Describe the topography of the area (flat terrain, rolling hills, mountains, by a large body of water, vegetation, etc.).	Flat
State the size and location of the nearest residential communities.	Oceanaire
Are there any sensitive habitats nearby, such as nature reserves, parks, wetlands, or sites of special scientific interest?	No

Site Walkover Checklist

4) QUESTIONNAIRE WITH EXISTING/ PREVIOUS SITE OWNER OR OCCUPIER		
	Yes/No	**Notes**
1. What are the main activities/operations at the above address?	Yes	Commerical activities
2. How long have you been occupying the site?	Yes	6 years
3. Were you the first occupant on site? (If yes, what was the usage of the site prior to occupancy.)	No	-
4. Prior to your occupancy, who occupied the site?	N/A	-
5. What were the main activities/operations during their occupancy?	N/A	-
6. Have there been any major changes in operations carried out at the site in the last 10 years?	N/A	-
7. Have any polluting activities been carried out in the vicinity of the site in the past?	N/A	-
8. To the best of your knowledge, has the site ever been used as a petrol filling station/car service garage?	N/A	-
9. Are there any boreholes/wells or natural springs either on the site or in the surrounding area?	N/A	-
10. Do you have any registered hazardous installations as defined under relevant ordinances? (If yes, please provide details.)	No	-
11. Are any chemicals used in your daily operations? (If yes, please provide details.)	Yes	Batteries, Paints
- Where do you store these chemicals?	Yes	Locading Unloading Area (G/F), Chemical Waste and Mixing Area Room (4/F)
12. Material inventory lists, including quantities and locations available? (If yes, how often are these inventories updated?)	N/A	-
13. Has the facility produced a separate hazardous substance inventory?	N/A	-
14. Have there ever been any incidents or accidents (e.g. spills, fires, injuries, etc.) involving any of these materials? (If yes, please provide details.)	No	-
15. How are materials received (e.g. rail, truck, etc.) and stored on site (e.g. drums, tanks, carboys, bays, silos, cisterns, vaults and cylinders)?	Yes	Truck, store in containers

Site Walkover Checklist

4) QUESTIONNAIRE WITH EXISTING/ PREVIOUS SITE OWNER OR OCCUPIER (CONTINUED)		
	Yes/No	**Notes**
16. Do you have any underground storage tanks? (If yes, please provide details.)	N/A	-
- How many underground storage tanks do you have on site?	N/A	-
- What are the tanks constructed of?	N/A	-
- What are the contents of these tanks?	N/A	-
- Are the pipelines above or below ground?	N/A	-
- If the pipelines are below ground, has any leak and integrity testing been performed?	N/A	-
- Have there been any spills associated with these tanks?	N/A	-
17. Are there any disused underground storage tanks?	N/A	-
18. Do you have regular check for any spillage and monitoring of chemicals handled? (If yes, please provide details.)	N/A	-
19. How are the wastes disposed of?	Yes	handled by licensed waste collector
20. Have you ever received any notices of violation of environmental regulations or received public complains? (If yes, please provide details.)	No	-
21. Have any spills occurred on site? (If yes, please provide details)	No	-
- When did the spill occur?		-
- What were the substances spilled?		-
- What was the quantity of material spilled?		-
- Did you notify the relevant departments of the spill?		-
- What were the actions taken to clean up the spill?		-
- What were the areas affected?		-
22. Do you have any records of major renovation of your site or re-arrangement of underground utilities, pipe work/underground tanks? (If yes, please provide details.)	N/A	-
23. Have disused underground tanks been removed or otherwise secured (e.g. concrete, sand, etc.)?	N/A	-
24. Are there any known contaminations on site? (If yes, please provide details.)	No	-
25. Has the site ever been remediated? (If yes, please provide details.)	No	-

Site Walkover Checklist

5) SITE SURVEY INFORMATION	
1. Date of Survey:	08/27/2024

6) OBSERVATIONS		
	Yes/No	**Notes**
1. Are chemical storage areas provided with secondary containment (i.e. bund walls and floors)?	N/A	-
2. What are the conditions of the bund walls and floors?	N/A	-
3. Are any surface water drains located near to drum storage and unloading areas?	No	
4. Are any solid or liquid waste (other than wastewater) generated at the site? (If yes, please provide details.)	Yes	Commerical waste from shops
5. Is there a storage site for the wastes?	Yes	-
6. Is there an on-site landfill?	No	-
7. Were any stressed vegetation noted on site during the site reconnaissance? (If yes, please indicate location and approximate size.)	No	-
8. Were any stained surfaces noted on-site during the site reconnaissance? (If yes, please provide details.)	No	-
9. Are there any potential off-site sources of contamination?	No	-
10. Does the site have any equipment which might contain polychlorinated biphenyls (PCBs)?	No	-
11. Are there any sumps, effluent pits, interceptors or lagoons on site?	No	-
12. Any noticeable odours during site walkover?	No	-
13. Are any of the following chemicals used on site: fuels, lubricating oils, hydraulic fluids, cleaning solvents, used chemical solutions, acids, anti-corrosive paints, thinners, coal, ash, oily tanks and bilge sludge, metal wastes, wood preservatives, and polyurethane foam?	Yes	Used paints and batteries

Appendix 9.4

Relevant Correspondence with FSD

Our ref 304537/L002/JS/aw

ARUP

BY EMAIL AND BY POST

Level 5 Festival Walk
80 Tat Chee Avenue
Kowloon Tong
Kowloon
Hong Kong

t +852 2528 3031
d +852 2908 4381
f +852 2268 3380

johnny.so@arup.com
www.arup.com

Fire Services Department
Fire Services Headquarters Building
No.1 Hong Chong Road
Tsim Sha Tsui East
Kowloon

7 October 2024

Dear Sir/Madam,

Environmental Assessment Study for the Proposed Commercial / Residential Re-Development at 16 Po Tai Street, Ma On Shan

Request for Information of Dangerous Goods and Incident Records

We are currently conducting an environmental assessment study for the Proposed Commercial / Residential Re-Development at 16 Po Tai Street, Ma On Shan. As part of the study, we are required to review the historical and present land use around the area, and evaluate any potential land contamination issues within the Site Boundary as shown in **Attachment A**. We would like to request the following information for our land contamination assessment:

- The records of Dangerous Goods License issued within the Site Boundary;
- Any past and present information related to the use, storage, spillage/leakage of dangerous goods within the Site Boundary; and
- Past and present incident records within the Site Boundary.

We would be grateful if you could provide the requested information at your earliest convenience and before 18 October 2024.

If you require any further information, please do not hesitate to contact the undersigned or our Mr. Anthonio Wun at 2908 4293.

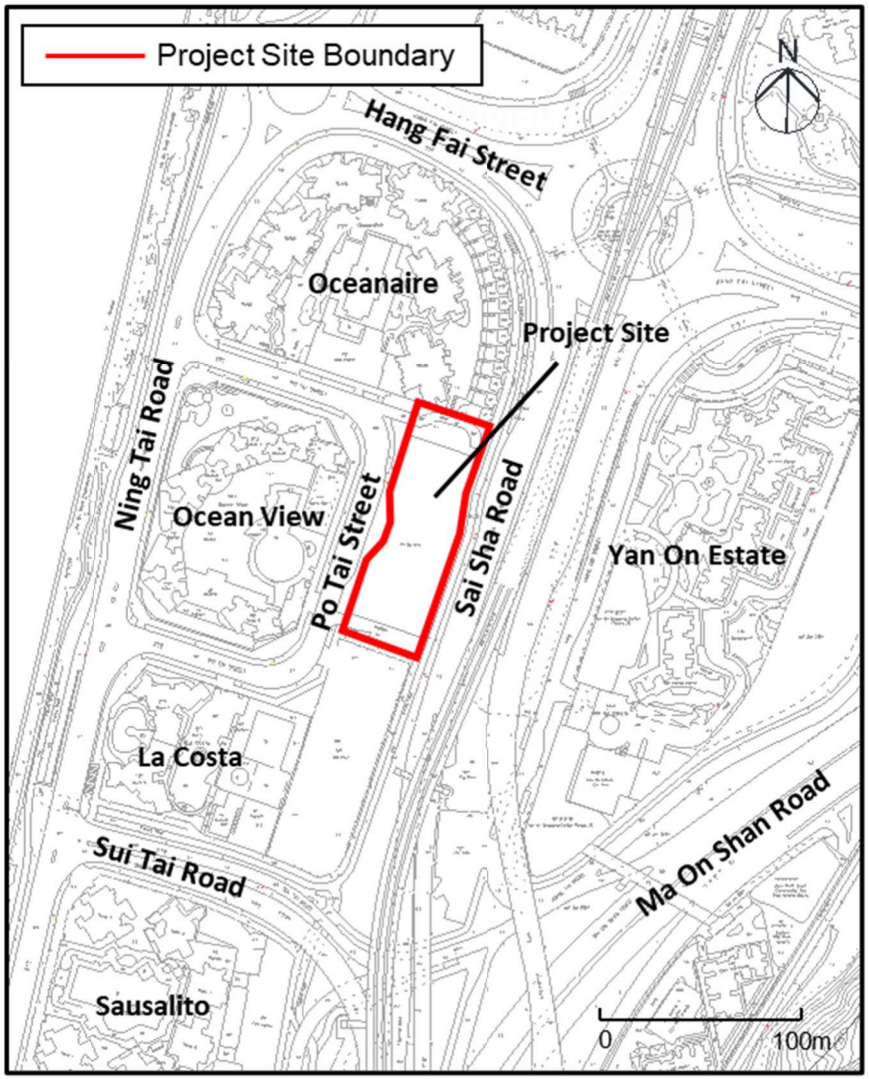
Yours sincerely,

Johnny So
Senior Consultant

Encl. Site Location Plan

Ove Arup & Partners Hong Kong Ltd | Registered in England & Wales
Registered Number: 1359968 | Registered Address: 8 Fitzroy Street London W1T 4BJ

Attachment A



消 防 處
香港九龍尖沙咀東部康莊道 1 號
消防處總部大廈

FIRE SERVICES DEPARTMENT
FIRE SERVICES HEADQUARTERS BUILDING,
No.1 Hong Chong Road,
Tsim Sha Tsui East, Kowloon,
Hong Kong.

本處檔號 **OUR REF.** : (138) in FSD GR 6-5/4 R Pt. 55
來函檔號 **YOUR REF.** :
電子郵件 **E-mail** : hkfsdenq@hkfsd.gov.hk
圖文傳真 **FAX NO.** : 2988 1196
電　　話 **TEL NO.** : 2733 7896

31 October 2024

ARUP
Level 5, Festival Walk,
80 Tat Chee Avenue,
Kowloon Tong, Kowloon
(Attn: Mr. Anthonio WUN, Assistant Consultant)

Dear Mr. WUN,

Environmental Assessment Study
for Proposed Commercial / Residential Re-development
at 16 Po Tai Street, Ma On Shan
Request for Information of Dangerous Goods & Incident Records

I refer to your cmail of 7.10.2024 regarding the captioned request and reply below in response to your questions:-

1. According to our record, from the year of 1990 to present moment, dangerous goods licenses have been issued by this department to the subject address, with details as shown in **Appendix A**.

2. A total of **1** incident record was found at the subject location. Please refer to **Appendix B** for details.

If you have further questions, please feel free to contact the undersigned.

Yours sincerely,

(AU Ting-hin)
for Director of Fire Services

Appendix A

Environmental Assessment Study for Proposed Commercial / Residential Re-development at 16 Po Tai Street, Ma On Shan
Request for Information of Dangerous Goods & Incident Records

Item	Type of dangerous goods	Quantity	Location of storage
1.	Diesel	1,300 litres	Proposed Commercial Development on Sha Tin Town Lot No. 482 at Po Tai Street, Ma On Shan

Appendix B

Environmental Assessment Study
for Proposed Commercial / Residential Re-development
at 16 Po Tai Street, Ma On Shan
Request for Information of Dangerous Goods & Incident Records

No.	Date	Type of Incident	Address
1.	8/10/2022	Rubbish Fire	Outside 16 Po Tai Street

Appendix 9.5

Relevant Correspondence with EPD

Our ref 304537/L001/JS/aw

ARUP

BY EMAIL AND BY POST

Level 5 Festival Walk
80 Tat Chee Avenue
Kowloon Tong
Kowloon
Hong Kong

t +852 2528 3031
d +852 2908 4381
f +852 2268 3380

johnny.so@arup.com
www.arup.com

Environmental Protection Department
Environmental Compliance Division
Regional Office (North)
10/F, Shatin Government Offices
No.1 Sheung Wo Che Road
Sha Tin, New Territories

7 October 2024

Dear Sir/Madam,

Environmental Assessment Study for the Proposed Commercial / Residential Re-Development at 16 Po Tai Street, Ma On Shan

Request for Information of Chemical Waste Producers Registration and Chemical Spillage Accident Records

We are currently conducting an environmental assessment study for the Proposed Commercial / Residential Re-Development at 16 Po Tai Street, Ma On Shan. As part of the study, we are required to review the historical and present land use around the area, and evaluate any potential land contamination issues within the Site Boundary as shown in **Attachment A**. We would like to request the following information for our land contamination assessment:

- The records of Chemical Waste Producers Registration of the area within the Site Boundary; and
- Past and present chemical spillage / leakage records of the area within the Site Boundary.

We would be grateful if you could provide the requested information at your earliest convenience and before 18 October 2024.

If you require any further information, please do not hesitate to contact the undersigned or our Mr. Anthonio Wun at 2908 4293.

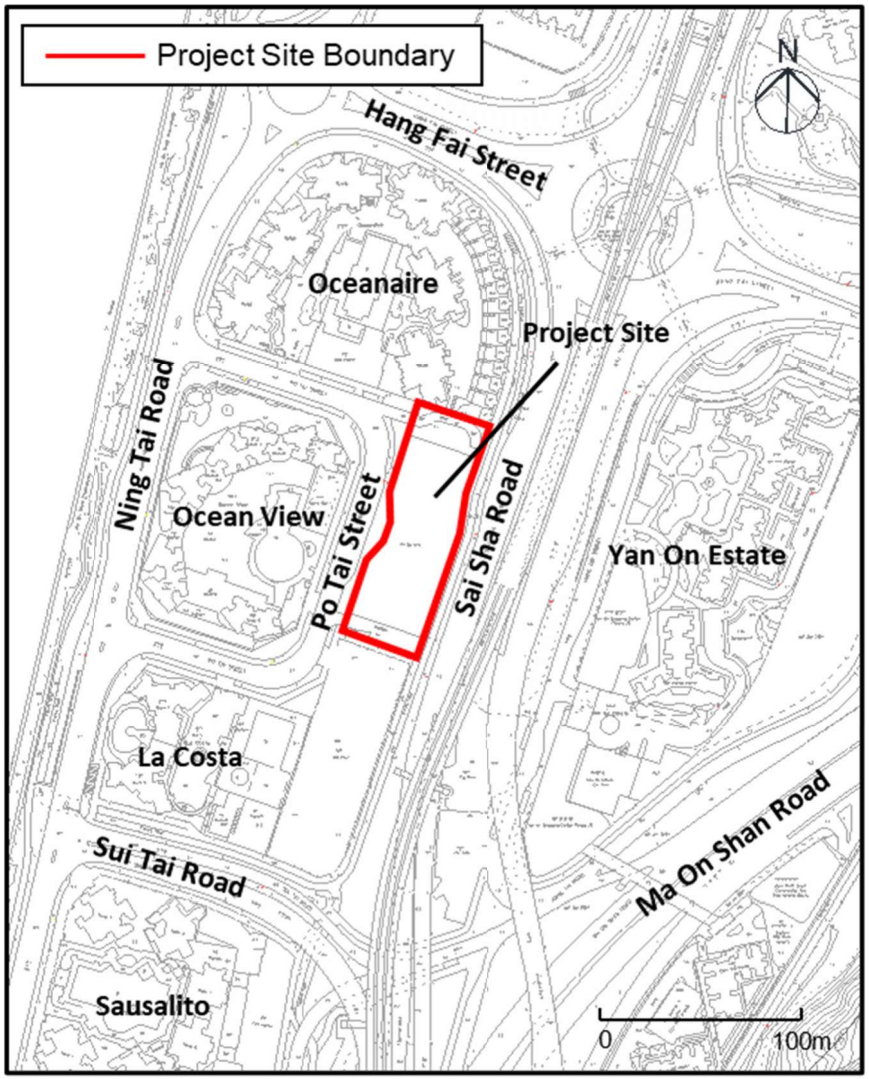
Yours faithfully,

Johnny So
Senior Consultant

Encl. Site Location Plan

Ove Arup & Partners Hong Kong Ltd | Registered in England & Wales
Registered Number: 1359968 | Registered Address: 8 Fitzroy Street London W1T 4BJ

Attachment A



Anthonio Wun

From: manlungleung@epd.gov.hk
Sent: Tuesday, October 15, 2024 9:23 AM
To: Anthonio Wun
Cc: Johnny So; kelmantang@epd.gov.hk; ctchu@epd.gov.hk
Subject: Fw: EAS for the Proposed Commercial / Residential Re-Development at 16 Po Tai Street, Ma On Shan - Request for Information of Chemical Waste Producers Registration and Chemical Spillage Accident Records

Dear Mr. Wun,

I refer to your email below enclosed with the site location for the captioned.

Regarding your enquiries in the above letter, this Regional Office has no record of spillage or leakage of chemicals within the Project site for the past 10 years. You may like to check with other relevant parties or departments for such information as appropriate.

As registered chemical waste producers at the location are concerned, a register of chemical waste producers is available for inspection in the Territorial Control Office of this department. If you would like to inspect, please contact Mr. Tim MAN at 2835 1017 for making appointment to view the records.

Should you have any query on the matter, please contact me at 2158 5841.

Best regards,
Mike M. L. LEUNG
E(RN)41
Tel: 2158-5841
Fax: 2685-1133

----- Forwarded by Man Lung Leung/EPD/HKSARG on 07/10/2024 09:50 -----

From: Anthonio Wun <Anthonio.Wun@arup.com>
To: "manlungleung@epd.gov.hk" <manlungleung@epd.gov.hk>
Cc: Johnny So <johnny.so@arup.com>
Date: 07/10/2024 09:37
Subject: EAS for the Proposed Commercial / Residential Re-Development at 16 Po Tai Street, Ma On Shan - Request for Information of Chemical Waste Producers Registration and Chemical Spillage Accident Records

---

Dear Mr Leung,

Environmental Assessment Study for the Proposed Commercial / Residential Re-Development at 16 Po Tai Street, Ma On Shan

Request for Information of Chemical Waste Producers Registration and Chemical Spillage Accident Records

We are currently conducting an environmental assessment study for the Proposed Commercial / Residential Re-Development at 16 Po Tai Street, Ma On Shan. As part of the study, we are required to review the historical and present land use around the area, and evaluate any potential land contamination issues within

the Site Boundary as shown in **Attachment A**. We would like to request the following information for our land contamination assessment:

- The records of Chemical Waste Producers Registration of the area within the Site Boundary; and
- Past and present chemical spillage / leakage records of the area within the Site Boundary.

We would be grateful if you could provide the requested information at your earliest convenience and before 18 October 2024.

If you require any further information, please do not hesitate to contact me at 2908 4293. Thank you.

Best Regards,

Anthonio Wun
Assistant Consultant | Consulting

Arup
Level 5, Festival Walk, 80 Tat Chee Avenue, Kowloon Tong, Hong Kong
d +852 2908 4293 f +852 2268 3380
t: +852 2528 3031
arup.com

Electronic mail messages entering and leaving Arup business systems are scanned for viruses and acceptability of content. [attachment "Attachment A - Site Location Plan.pdf" deleted by Man Lung Leung/EPD/HKSARG]