MTR Corporation Limited

HONG KONG SECTION OF GUANGZHOU – SHENZHEN – HONG KONG EXPRESS RAIL LINK

(No. EP-349/2009/A)

Environmental Monitoring and Audit Report No. 7

(September 2010)

Verified by: _____

Position: Independent Environmental Checker

Date: 14 October 2010

MTR Corporation Limited

HONG KONG SECTION OF GUANGZHOU - SHENZHEN - HONG KONG EXPRESS RAIL LINK

(No. EP-349/2009/A)

Environmental Monitoring and Audit Report No. 7

(September 2010)

Certified by: Glenn Frommer

Position: Environmental Team Leader

Date: 12 OCT 2010

EXECUTIVE SUMMARY

This is the 7th monthly Environmental Monitoring and Audit (EM&A) Report presenting the EM&A works undertaken during the period from 1 to 30 September 2010 for the Hong Kong Section of Guangzhou - Shenzhen - Hong Kong Express Rail Link (hereinafter referred to "the XRL" or "the Project") in accordance with the EM&A Manual and the requirement under EP-349/2009 and EP-349/2009/A (for 27/9 onwards).

Air Quality

Air quality monitoring was conducted for 24-hour Total Suspended Particulates (TSP) at 8 air quality monitoring locations in the vicinity of Works Area in Mai Po (Works Area A) Shing Mun (Works Area G), Shek Yam (Works Area H), Nam Cheong (Works Area P, Q and R) and West Kowloon (Works Area V1 and V2) in September 2010. One 24-hour TSP Action Level exceedance was recorded at Yaumati Catholic Primary School (Hoi Wang Road, AM 14) in this month. Actions stipulated under the Event and Action Plan (Table 9.4 of the EM&A Manual) were implemented. No exccedance was revealed by subsequent monitoring conducted.

Airborne Noise

Airborne noise was measured in terms of $L_{eq\ (30min)}$ dB(A) with L_{10} and L_{90} measurements as reference at 17 noise monitoring locations in the vicinity of Works Area in Mai Po (Works Area A), Shing Mun (Works Area G), Shek Yam (Works Area H), Nam Cheong (Works Area N, O, P, Q, R and S) and West Kowloon (Works Area V1 and V2) once every week. For the reporting month, exceedances of Limit Level were recorded at HKIVE Haking Wong Waterfront Annex (CN 23), Yaumati Catholic Primary School (Hoi Wang Road) (CN 29), Tower 3, The Waterfront (CN 32) and The Arch (CN 33). In addition, 1 exceedance of Action Level was triggered as noise complaint was received in the reporting month. Actions stipulated under the Event and Action Plan (Table 3.4 of the EM&A Manual) were implemented for all the exceedances. Noise source was identified and the contractor had implemented further mitigation measures accordingly to minimize the noise impact.

Monitoring of Avifaunal Species

Monthly ecological monitoring was conducted on 17 September 2010 during the construction of Mai Po Ventilation Building Works Area (MPV). The monitoring results indicated the fishponds within the survey area were utilized by a large number of waterbirds in September 2010 during the monitoring. No significant fluctuation in the number of species and abundance of avifauna was observed. Based on the

monitoring results, no adverse indirect impacts arising from the Project were observed.

Monitoring of Impact at Fishpond due to Noise

In accordance with the Monitoring and Emergency Response Plan, impact noise monitoring was conducted at fish pond on weekly basis for assessment of impact at fishponds due to noise. It was revealed from the monitoring results that all monitoring results were within the Limit Level. Based on the monitoring results, there was no adverse impact at fishpond due to noise.

Landscape and Visual

Regular inspections and audits conducted by certified Arborist found that the tree protection works being carried out by the civil works and transplanting contractors were in accordance with the requirements of EP and EIA.

Environmental Audits

In this reporting month, regular site inspections attended by representative from MTRCL and Contractors were carried out at 802 in Nam Cheong, 803 A, B, C, D and 811A, 811B in West Kowloon, 802, 805 and 820 in Nam Cheong, 822 in Shing Mun, Shek Yam, Tai Shu Ha Road West Magazine Site, So Kwun Wat Nursery and Magazine Site and Tsing Chau Tsai Barging Point and 825 in Mai Po and Siu Lam Barging Point. In addition to the regular site inspections, IEC environmental audits attended by IEC, MTRCL and Contractors were held on monthly basis. Issues observed during these audits are detailed in Section 6.

Environmental Complaints / Exceednace / Non-conformance / Summons and Prosecution

For September 2010, a total of 1 environmental complaint was referred from EPD. The environmental complaints received were related to construction noise from geotechnical investigation works at Kok Cheung Street & Tai Tsun Street of Tai Kok Tsui. Complaint investigations were conducted in accordance with the complaint handling procedure in the EM&A Manual. Details of complaints are contained in Section 7.

For the reporting month, noise exceedances of Limit Level were recorded at HKIVE Haking Wong Waterfront Annex (CN 23), Yaumati Catholic Primary School (Hoi Wang Road) (CN 29), Tower 3, The Waterfront (CN 32) and The Arch (CN 33). In

addition, 1 exceedance of Action Level was triggered as noise complaint was received in the reporting month. Actions stipulated under the Event and Action Plan (Table 3.4 of the EM&A Manual) were implemented. Noise source was identified and the contractor implemented further mitigation measures accordingly to minimize the noise impact.

For this month, one 24-hour TSP Action Level exceedance was recorded at Yaumati Catholic Primary School (Hoi Wang Road, AM 14) in this month. Actions stipulated under the Event and Action Plan (Table 9.4 of the EM&A Manual) were implemented. No exceedance was revealed by subsequent monitoring conducted.

No non-compliance event was recorded during the reporting period. No summons/prosecutions was received in this reporting period.

Works for Coming Month

Construction works were started in Works Area A, G, H, N, O, P, Q, R, S, V1, V2, AA, AC, AE and AG. In additional to these above works areas, construction would be commenced in following works areas in October 2010 according to the latest programme:

- Works Area J (Kwai Chung Ventilation Building Works Area)
- Works Areas M (Lai Chi Kok Works Area)

Please refer to Table 8-1 for the major works in the respective works areas. Impact monitoring would be commenced in October 2010 accordingly with reference to the EM&A Manual.

Further Environmental Key Issues

Air quality, airborne noise at NSRs and fishpond, ecological, landscape and visual monitoring shall continue in the following month. Considering the nature of construction activities, key environmental issues in the coming months include the followings:

- Disposal of C&D waste;

- Dust generation from site activities;
- Noise impact from operating equipment;
- Site water discharge;
- Chemical wastes;
- Ecological impact;
- Trees protection

Reporting Changes

In the reporting period, there was no reporting change of circumstances which may affect the compliance with the recommendations of the EIA Report. The original Environmental Permit No. EP-349/2009 has been amended with EP-349/2009/A issued on 27 September 2010.

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Appendix

1. INTRODUCTION

1.1 Project Background

Further to the Government's decision made in April 2008, MTR Corporation (MTR) commenced to plan and design the Hong Kong Section of Guangzhou - Shenzhen - Hong Kong Express Rail Link (hereinafter referred to "the XRL" or "the Project"), which is a committed cross boundary transport infrastructure project.

The XRL would provide high speed rail services between Hong Kong and Guangzhou, and a connection to the national high-speed passenger rail network serving major mainland cities outside of Guangdong province. The Hong Kong section of the XRL is about 26km from new terminus located in West Kowloon (i.e. West Kowloon Terminus (WKT)) to the boundary at Huang gang. Along the railway corridor, there would be a total of eight ventilation buildings/ emergency access point (EAP), stabling sidings and a maintenance facility at Shek Kong Stabling Sidings (SSS) and an Emergency Rescue Station (ERS) next to SSS serving the operation of the XRL.

1.2 Coverage

This is the 7th monthly Environmental Monitoring and Audit (EM&A) Report presenting the EM&A works undertaken during the period from 1 to 30 September 2010 for XRL in accordance with the EM&A Manual and the requirement under EP-349/2009 (for 1/9 to 26/9) and EP-349/2009/A (for 27/9 onwards).

2. PROJECT INFORMATION

2.1 Project Management Organisation and Management Structure

The project management organisation chart and contact of key personnel are shown in Appendix B.

2.2 Construction Activities

This report marked the 7th month of civil construction in Works Area A, G, H, N, O, P, Q , R, S, V1, V2, AA, AC, AE and AG for September 2010. It is anticipated that the civil construction be completed in year 2015. The updated construction activity is provided in Section 8. Major construction activities undertaken in the reporting month is summarized in the following table.

Contract	**Works Area**	**Major Construction Activities**
Nam Cheong		
802	Q	Erection of temporary walkway, sheet-pilling, pre-drilling work, bored pile removal, bored pile construction, H-pile extraction
805	N,O	Erection of covered walkway, construction of footing for temporary footbridge
805	S	Removal of footbridge
West Kowloon		
803A	V1	Diaphragm construction, pre-drilling, hoarding modification, bored pile, utilities diversion and road works
803B	V1	Bored piling works, socketed H-piling works, pre-drill and ground investigation work
803C	V1	Plant Set-up, Bored pile, Pre-bored H-pile, excavation, and utilities diversion.
803D	V1	Pre-bored H-pile, bored pile, diaphragm wall, barging facility, barging facility operation.

Contract	Works Area	Major Construction Activities
811A	V2	Construction of guide wall and pre-drilling for D-wall, bored piles and socket-H piles
811B	V2	Erection of hoarding, site clearance and site investigations
Nam Cheong		
820	P	Setting up of associating plants for D-wall construction, trial pits and site investigation work, grouting work, d-wall excavation and concreting, utility diversion, temporary traffic arrangement, planter demolition & road work, sheetpiling works, pipe piling
820	R	Utilities diversion
Shek Yam		
822	G	Re-provision of bus turning loop, construction of buttress wall, pre-drilling
Shing Mun		
822	H	Construction of retaining wall, construction of temporary steel deck, construction of adit portal
So Kwun Wat		
822	AC	Structural and E&M work of magazine site
Tai Shu Ha Road West Magazine Site		
822	AE	Site preparation
Tsing Chau Tsai Barging Point		
822	AG	Site preparation
Mai Po		
825	A	Construction of diaphragm wall

Contract	Works Area	Major Construction Activities
Siu Lam		
825	AA	Construction of ramp, jetty, access road

Table 2-1 Major construction activities in September 2010

3. ENVIRONMENTAL STATUS

3.1 Status of Implementation of mitigation measures

Environmental mitigation measures recommended in the EIA report were implemented and their implementation status are summarized in Appendix C.

3.2 Status of Submissions under EP

A summary of the submissions submitted under the EP for this Project during the reporting month is presented in Table 3-1 below:

EP-349/2009/A Clause No.	**Document Title**
1.13	Notification of the commencement date of construction of the Project for Contract 821
2.14	Tree Planting and Landscape Plan for Yuen Long District (Tai Shu Ha) Rev 1
2.21	Contamination Assessment Report for Lai Chi Kok Works Area (Rev B)
2.21	Supplementary Contamination Assessment Report for Nam Cheong Barging Point
2.21	Supplementary Contamination Assessment Report for Kwai Chung Ventilation Building Works Area
2.6	Management organization of the Civil Contractors for Contract 821
2.43	Monthly EM&A Report

Table 3-1 Summary of the status of submissions submitted under the EP

3.3 Status of Permit/License/Notifications

A summary of the status of permits, licences, and/or notifications on environmental protection for this Project during the reporting month is presented in Table 3-2 below.

The Environmental Permit (EP-349/2009 from 1/9 to 26/9 and EP-349/2009/A for 27/9 onwards) issued by EPD is being used for the XRL project.

Item	Item Description	Application Date	Permit Status
Contract 805 (Works Area S)			
1	Construction Noise Permit for removal of Footbridge KF119	2 Sep 2010	Approved on 14 Sep 2010 (Permit No.: GW-RE0433-10, valid until 27 Dec 2010)
Contract 811A (Works Area V2)			
1	Construction Noise Permit for Site Construction	30 Sept 2010	Under Assessment
Contract 811B (Works Area V2)			
1	Notification of construction work under APCO	1 Sep 10	Ref. No. 321096
2	Registration as Chemical Waste Producer	13 Sep 10	Under Assessment
3	WPCO license	13 Sep 10	Under Assessment
4	Bill account for disposal of construction waste	1 Sep 10	Ref. No. SC01113
Contract 822 (Works Area G, H, AC, AE and AG)			
1	Construction Noise Permit for Works Area H	14 Sep 2010	Approved on 30 Sep 2010 (License No.GW-RW0497-10)

Item	Item Description	Application Date	Permit Status
2	Discharge Water License under WPCO For Works Area F For Works Area G	 16 Jul 2010 31 Aug 2010	 Approved on 30 Sep 2010. (License No.WT00007438-2010,) Under Assessment for Work Area G.
Contract 825 (Works Area A)			
1	Construction Noise Permit	21 Sep 2010 29 Sep 2010	Acknowledged (Ref. No. 321760) Acknowledged (Ref. No. 321953)
2	WPCO license for Mai Po	25 Feb 2010	Approved on 30 Sep 2010 (License No. WT00007441-2010, valid until 31 Oct 2015)

Table 3-2 Summary of the status of permits, licences, and/or notifications

4. SUMMARY OF EM&A REQUIREMENT

4.1 Air Quality

4.1.1 Air Quality Parameters

In accordance to the EM&A Manual, 24-hour Total Suspended Particulates (TSP) levels were measured at the 8 air monitoring locations in accordance with the EM&A Manual. Monitoring was undertaken at each monitoring location once per every six days. Information such as date of monitoring, duration, weather condition, equipment used and monitoring results shall be recorded on the field data sheet developed for the Project. Monitoring results are summarized in Section 5.

4.1.2 Monitoring Methodology and Calibration

Monitoring was undertaken to establish for 24-hour Total Suspended Particulates (TSP) at 8 monitoring locations in the vicinity of the Works Area A, G, H, P, Q, R , V1 and V2. Monitoring of 24-hour TSP was carried out using a high volume sampler (HVS) according to Part 50 Chapter 1 Appendix B, Title 40 of the Code of Federal Regulations of the USEPA.

The sampling procedure follows to that described Part 50 Chapter 1 Appendix B, Title 40 of the Code of Federal Regulations of the USEPA. TSP is sampled by drawing air through a conditioned, pre-weighed filter paper inside the high volume sampler at a controlled rate. After 24-hour sampling the filter paper with retained particles shall be collected and returned to HOKLAS accredited laboratory (ALS Technichem (HK) Pty Ltd) for drying in a desiccators followed by accurate weighing. TSP levels are calculated from the ratio of the mass of particulate retained on the filter paper to the total volume of air sampled.

The flow rate of the high volume sampler with mass flow controller was calibrated using an orifice calibrator. Initial calibration (five points) was conducted upon installation and prior to commissioning. Calibration was carried out every six months. the detail of calibration is shown in Table 4-1 below. The samplers shall be properly maintained. Prior to dust monitoring commencing, appropriate checks shall be made to ensure that all equipment and necessary power supply are in good working condition.

Monitoring Station ID	Air Quality Monitoring Location	HVS Serial Number	Last Calibration Date
AM 1	Outside No. 142 Mai Po San Tsuen	467	16/7/2010
AM 9	Sau Shan House, Cheung Shan Estate	529	3/7/2010
AM 10	Yau Ma Hom Resite Village	509	3/7/2010
AM 13	St. Andrew Primary School	524	6/8/2010
AM 14	Yaumati Catholic Primary School	407	6/8/2010
AM 15	Between Sorrento and The Waterfront	515	9/6/2010
AM 16	Tower 3, The Waterfront	1282	9/6/2010
AM 17	The Victoria Towers	528	18/6/2010

Table 4-1 Calibration details of HVS

4.1.3 Monitoring Location

According to the EM&A Manual, air quality monitoring was carried out at the locations as shown in Table 4-1 above. The monitoring locations are illustrated in Appendix D.

4.1.4 Action and Limit Levels

With reference to the baseline monitoring results, the Action and Limit Levels for the 24-hour TSP monitoring derived are shown in Table 4-2. In the case of exceedance of Action and/or Limit levels for air quality occur, the Event and Action Plan as stipulated the EM&A Manual shall be implemented.

Monitoring Station ID	24-hour TSP Level in μg/m^3	
	Action Level	Limit Level
AM 1	217.3	260
AM 9	171.2	260
AM 10	174.8	260
AM 13	180.3	260
AM 14	158.2	260
AM 15	168.8	260
AM 16	155.9	260
AM 17	179.3	260

Table 4-2 Action and Limit Levels for Air Quality

4.2 Air-borne Noise

4.2.1 Noise Parameters

In accordance to the EM&A Manual, construction noise monitoring shall be conducted to obtain one set of 30-minute measurement at each monitoring station between 0700 and 1900 hours on normal weekdays at a frequency of once per week when construction activities are underway. The Leq, L10 and L90 were also recorded at the specified interval.

4.2.2 Monitoring Methodology and Calibration

As referred to the Technical Memorandum (TM) issued under the NCO, sound level meters in compliance with the International Electrotechnical Commission Publications 651: 1979 (Type 1) and 804: 1985 (Type 1) specifications shall be used for carrying out the noise monitoring. In this baseline monitoring, B&K 2250 sound level meters, which complies with the above-mentioned specifications, were used.

Immediately prior to and following each noise measurement the accuracy of the sound level meter should be checked using an acoustic calibrator generating a known sound pressure level at a known frequency. Measurements may be accepted as valid only if the difference between calibration levels obtained before and after the noise

measurement is less than 1.0 dB.

The sound level meters and calibrator are verified by the certified laboratory or manufacturer at a regular interval to ensure they perform to the same level of accuracy as stated in the manufacturer's specifications. Details of calibration is shown in Table 4-3 below:

Monitoring Station ID	**Noise Monitoring Location**	**Serial Number**	**Last Calibration Date**
Sound Level Meters			
CN 1	No. 142 Mai Po San Tsuen	2701830	19/2/2010
CN 2	Mai Po San Tsuen Village House	2701819	19/2/2010
CN 17	Tsuen Wan Lutheran School	2701824	19/2/2010
CN 18	Sau Shan House	2701831	19/2/2010
CN 19	Sun Fung Centre	2701821	19/2/2010
CN 23	HKIVE Haking Wong Waterfront Annex	2701818	22/2/2010
CN 24	St. Andrew Primary School	2701825	19/2/2010
CN 25	St. Mary's Church Mok Hing Yiu College	2709428	16/7/2010
CN 26	Ying Wah College	2701822	22/2/2010
CN 27	Cheong Shun House, Nam Cheong Estate	2709426	11/5/2010
CN 28	Tower 6, Harbour Green	2701817	19/2/2010
CN 29	Yaumati Catholic Primary School	2701815	22/2/2010

Monitoring Station ID	Noise Monitoring Location	Serial Number	Last Calibration Date
CN 30	Man Cheong Street Refuse Collection Point	2701816	19/2/2010
CN 31	Tower 6, Sorrento	2701826	19/2/2010
CN 32	Tower 3, The Waterfront	2701823	19/2/2010
CN 33	Star Tower, The Arch	2701827	19/2/2010
CN 34	The Victoria Towers	2701829	19/2/2010
Calibrator			
Serial Number		**Last Calibration Date**	
10186489		23/5/2010	

Table 4-3 Calibration details of noise monitoring equipments

4.2.3 Monitoring Location

According to the EM&A Manual, noise quality monitoring was carried out at the locations as shown in Table 4-3 above. The monitoring locations are illustrated in Appendix D.

4.2.4 Action and Limit Levels

The Action and Limit Levels for the construction noise are shown in Table 4-4 below. In the case of non-compliance of Action and/or Limit level, the Event and Action Plan stipulated in the EM&A Manual shall be implemented.

Time Period	Action	Limit
0700-1900 hours on normal weekdays	When one documented complaint is received	75 dB(A) for residential premises
		70 dB(A) for school and 65 dB(A) during examination period

Table 4-4 Action and Limit Levels for Airborne Construction Noise

4.3 Ground-borne Noise

No ground-borne noise monitoring was conducted in the reporting month since no operation of TBM was carried out.

4.4 Ecological Monitoring

4.4.1 Ecological Monitoring on Avifaunal Communities

Monitoring methodology

In accordance with the Ecological Monitoring Plan, avifaunal communities would be surveyed quantitatively by transect count or/and point count method covering the vicinity of the works area as shown in Table 4-7 below. Birds heard or seen within the survey area would be identified to species level and counted. The nature of construction works within works area conducting during each impact monitoring would also be recorded. Weather condition and other noticeable activities occurring within or in the vicinity of the survey areas would be recorded. The impact monitoring results would be compared to the baseline data collected before construction. Should any unpredicted indirect ecological impacts arising from the Project be detected, remedial measures would be implemented by the Contractor.

Monitoring location, frequency and duration

In accordance with the EM&A Manual and Ecological Monitoring Plan, ecological monitoring should be conducted at Works Area in MPV, TPP, SSS/ERS, TUW and PHV. With the construction works at MPV commenced in April 2010, ecological monitoring on monthly basis was commenced in April 2010. The location, frequency and duration of ecological monitoring at MPV are shown in Table 4-5 and Figure C8016/C/XRL/ACM/M51/001 in Appendix D.

Works Area	**Monitoring Location**	**Monitoring Frequency**	**Monitoring Duration**
Mai Po Ventilation Building Works Area (MPV)	• Fishponds in Wetland Conservation Area (WCA) within 500 m from the boundary of MPV works area	Monthly	During construction phase of MPV works area

Table 4-5 Requirement of Construction Impact Monitoring for Avifaunal Group

4.4.2 Monitoring of impact at fishpond due to noise/vibrations

In accordance with the Monitoring and Emergency Response Plan, during construction stage, air-borne noise monitoring should be carried out at the respective monitoring location at nearby fishpond (Appendix D) when there are project-related construction activities being undertaken within a radius of 300m from the monitoring location. One set of 30-minute measurement at a frequency of once a week when the above-mentioned construction activities are underway.

As operation of TBM underneath fishponds in Mai Po is not expected in the coming reporting months, no monitoring of ground-borne noise was carried out.

Monitoring of impact due to air-borne noise

Monitoring methodology

With reference to the Monitoring and Emergency Response Plan, the noise acceptance criteria of 75 dB(A) was adopted for the assessment of adverse impact to fisheries due to air-borne noise.

Monitoring location, frequency and duration

The nearest fish-pond located in the vicinity of the works area in Mai Po as shown in Appendix D was identified as a representative air-borne and ground-borne noise/vibration monitoring location.

During construction stage, routine air-borne noise monitoring would be carried out at the respective monitoring location when there are project-related construction activities being undertaken within a radius of 300m from the monitoring station. One set of 30-minute measurement at a frequency of once a week when the above-mentioned construction activities are underway.

Action and Limit Levels

The Action and Limit levels for air-borne noise are defined in the table below. Should non-compliance of the noise quality criteria occur, actions in accordance with the Table 4-6 as should be carried out.

Time Period	Action Level	Limit Level
All time period	When one documented complaint related to adverse impact to fisheries from fish-pond operator or any abnormal ecological monitoring results	75 dB(A) for air-borne noise

Table 4-6: Action and Limit Level for potential impact at fishpond due to air-borne noise

4.5 Landscape and Visual

Monitoring of the implementation of the tree protection measures during construction phase was conducted in accordance with the requirements of EP condition 2.15 (iv). The landscape and visual monitoring and auditing would be conducted once a month throughout the construction stage and covering the entire project site areas.

4.6 Cultural Heritage

4.6.1 Archaeology

No monitoring and reporting is required since construction at Shek Kong Stabling Sidings (SSS) and Lung Kwu Sheng Tan (LKST) have not started.

4.6.2 Built Heritage

No monitoring and reporting is required since construction at ex-Lai Chi Kok Hospital (LCKH) and SSS have not started.

4.7 Landfill Gas

No monitoring was carried out in this reporting month since there was no construction within the Ngau Tam Mei Landfill (NTML) consultation zone.

5. MONITORING RESULT

5.1 Air Quality

The monitoring schedule is shown in Appendix E. Graphical plots of the monitoring results in the reporting month are shown in Appendix F. Results of 24-hour TSP level are shown in Table 5-1 below.

Monitoring Date	**Monitoring Result (µg m-3)**	**Action Level (µg m-3)**	**Limit Level (µg m-3)**	**Exccedance?**
AM 1				
4 Sep 2010	64.3	217.3	260.0	N
10 Sep 2010	134.6	217.3	260.0	N
16 Sep 2010	88.5	217.3	260.0	N
22 Sep 2010	43.1	217.3	260.0	N
28 Sep 2010	101.2	217.3	260.0	N
AM 9				
4 Sep 2010	26.7	171.2	260.0	N
10 Sep 2010	47.7	171.2	260.0	N
16 Sep 2010	35.2	171.2	260.0	N
22 Sep 2010	22.9	171.2	260.0	N
28 Sep 2010	35.5	171.2	260.0	N
AM 10				
6 Sep 2010	36.4	174.9	260.0	N
10 Sep 2010	64.9	174.9	260.0	N
16 Sep 2010	39.3	174.9	260.0	N
22 Sep 2010	24.3	174.9	260.0	N
28 Sep 2010	33.4	174.9	260.0	N
AM 13				
2 Sep 2010	28.5	180.3	260.0	N
8 Sep 2010	154.8	180.3	260.0	N
14 Sep 2010	76.8	180.3	260.0	N
20 Sep 2010	75.9	180.3	260.0	N
25 Sep 2010	104.0	180.3	260.0	N
30 Sep 2010	89.0	180.3	260.0	N
AM 14				
2 Sep 2010	18.1	158.2	260.0	N

Monitoring Date	Monitoring Result (µg m-3)	Action Level (µg m-3)	Limit Level (µg m-3)	Exccedance?
8 Sep 2010	170.9	158.2	260.0	Y (Action Level Exceedance)
13 Sep 2010	20.5	158.2	260.0	N
14 Sep 2010	35.8	158.2	260.0	N
20 Sep 2010	31.8	158.2	260.0	N
25 Sep 2010	114.6	158.2	260.0	N
30 Sep 2010	34.7	158.2	260.0	N
AM 15				
2 Sep 2010	15.9	168.8	260.0	N
8 Sep 2010	129.6	168.8	260.0	N
14 Sep 2010	40.0	168.8	260.0	N
20 Sep 2010	19.7	168.8	260.0	N
25 Sep 2010	32.4	168.8	260.0	N
30 Sep 2010	37.6	168.8	260.0	N
AM 16				
2 Sep 2010	17.5	155.9	260.0	N
8 Sep 2010	130.8	155.9	260.0	N
14 Sep 2010	40.6	155.9	260.0	N
20 Sep 2010	28.5	155.9	260.0	N
25 Sep 2010	102.4	155.9	260.0	N
30 Sep 2010	19.2	155.9	260.0	N
AM 17				
2 Sep 2010	59.9	179.3	260.0	N
8 Sep 2010	121.7	179.3	260.0	N
14 Sep 2010	41.2	179.3	260.0	N
20 Sep 2010	20.6	179.3	260.0	N
25 Sep 2010	81.2	179.3	260.0	N
30 Sep 2010	41.0	179.3	260.0	N

Table 5-1 Air Quality Monitoring Results

One exceedance of 24-hr TSP Action Level was recorded in the reporting month at Yaumati Catholic Primary School (AM 14). Actions identified in the Event and Action Plan (Table 9.4 of the EM&A Manual) were undertaken. The ER, IEC and

Contractor were informed of the exceedances. Investigation results revealed that the similar construction activities was on-going at site and the contractor was asked to enhance the air mitigation measures. The subsequent measurement (refer to Table 5-1) revealed that the site condition was been improved.

5.2 Noise

The monitoring schedule is shown in Appendix E. Results of measured noise level, in terms of $L_{eq(30min)}$ is presented in Table 5-2 below. Graphical presentations are given in Appendix F.

Monitoring Date	Leq, dB(A)	Limit Level, dB(A)	Exceedance?
CN 1			
10/9/2010	66	75	N
15/9/2010	66	75	N
22/9/2010	64	75	N
27/9/2010	67	75	N
CN 2			
1/9/2010	68	75	N
6/9/2010	69	75	N
15/9/2010	69	75	N
22/9/2010	68	75	N
27/9/2010	68	75	N
CN 17			
10/9/2010	63	70	N
16/9/2010	60	70	N
20/9/2010	63	70	N
29/9/2010	65	70	N

Monitoring Date	Leq, dB(A)	Limit Level, dB(A)	Exceedance?
CN 18			
10/9/2010	72	75	N
15/9/2010	66	75	N
22/9/2010	60	75	N
27/9/2010	63	75	N
CN 19			
10/9/2010	67	75	N
15/9/2010	69	75	N
22/9/2010	67	75	N
27/9/2010	70	75	N
CN 23			
1/9/2010	70	70	N
10/9/2010	70	70	N
15/9/2010	71	70	Y
22/9/2010	66	70	N
27/9/2010	70	70	N
CN 24			
10/9/2010	68	70	N
15/9/2010	69	70	N
22/9/2010	67	70	N
27/9/2010	68	70	N
CN 25			

Monitoring Date	Leq, dB(A)	Limit Level, dB(A)	Exceedance?
10/9/2010	67	70	N
15/9/2010	70	70	N
22/9/2010	69	70	N
27/9/2010	70	70	N
CN 26			
1/9/2010	67	70	N
10/9/2010	70	70	N
15/9/2010	64	70	N
22/9/2010	64	70	N
27/9/2010	70	70	N
CN 27			
10/9/2010	65	75	N
15/9/2010	65	75	N
22/9/2010	65	75	N
28/9/2010	66	75	N
CN 28			
1/9/2010	74	75	N
10/9/2010	70	75	N
15/9/2010	70	75	N
22/9/2010	70	75	N
28/9/2010	71	75	N
CN 29			
10/9/2010	69	70	N

Monitoring Date	Leq, dB(A)	Limit Level, dB(A)	Exceedance?
15/9/2010	71	70	Y
22/9/2010	69	70	N
27/9/2010	68	70	N
CN 30			
10/9/2010	66	75	N
15/9/2010	64	75	N
22/9/2010	68	75	N
27/9/2010	66	75	N
CN 31			
10/9/2010	72	75	N
15/9/2010	73	75	N
22/9/2010	74	75	N
27/9/2010	73	75	N
CN 32			
10/9/2010	75	75	N
15/9/2010	75	75	N
22/9/2010	78	75	Y
27/9/2010	74	75	N
CN 33			
10/9/2010	75	75	N
15/9/2010	77	75	Y
22/9/2010	78	75	Y

Monitoring Date	Leq, dB(A)	Limit Level, dB(A)	Exceedance?
27/9/2010	79	75	Y
CN 34			
10/9/2010	74	75	N
15/9/2010	73	75	N
22/9/2010	73	75	N
27/9/2010	73	75	N

Note: The result was rounded to the nearest dB, with values of 0.5 or more being rounded upwards.

Table 5-2 Construction Noise Monitoring Results

Referring to the table above, one noise exceedance was recorded at HKIVE Haking Wong Waterfront Annex (CN 23) on 15 September 2010. Actions identified in the Event and Action Plan (Table 3.4 of the EM&A Manual) were undertaken. The ER, IEC and Contractor were informed of the exceedance. The investigation revealed that the major noise source was the construction site adjacent to the works area.

For the one exceedances at Yaumati Catholic Primary School (CN 29), actions identified in the Event and Action Plan (Table 3.4 of the EM&A Manual) were undertaken. The ER, IEC and Contractor were informed of the exceedances. Investigation results revealed that the noise source may possibly due to the works by 811A Contractor. Corresponding noise mitigation measures proposed by the 811A Contractor were reviewed by IEC and ET and implemented by the 811A Contractor to minimize the noise impact.

One noise exceedance at The Waterfront (CN 32) was recorded. Actions identified in the Event and Action Plan (Table 3.4 of the EM&A Manual) was undertaken. The ER, IEC and Contractors were informed of the exceedance. The investigation revealed that 803A, 803B, 803C and 803D construction works may be the noise source. Noise mitigation measures proposed by the Contractors were reviewed by IEC and ET and implemented by the Contractors to minimize the noise impact. All contractors in WKT works area were remind to enhance the noise mitigation measures to comply with the statutory requirement and minimize noise nuisance to the nearby NSRs.

For the noise exceedances at The Arch (CN 33), actions identified in the Event and Action Plan (Table 3.4 of the EM&A Manual) were undertaken. The ER, IEC and Contractors were informed of the exceedances. The investigation result revealed that noise source may possibly due to works by 803A, 803B, 803C and 803D Contractors. Additional noise mitigation measures proposed by the Contractor were reviewed by IEC and ET and implemented by the 803A, 803B, 803C and 803D Contractor to minimize the noise impact. All contractors in WKT works area were remind to enhance the noise mitigation measures to comply with the statutory requirement and minimize noise nuisance to the nearby NSRs.

5.3 Ecological Monitoring

5.3.1 Ecological Monitoring on Avifaunal Communities

Monthly avifauna monitoring at MPV work site was conducted on 17 September 2010. The weather conditions and other noticeable activities occurring within or in the vicinity of the survey area during the monitoring were summarized in Table 5-3. The MPV-1 survey site comprised about 20 fishponds with most of them being actively managed (Figure C8016/C/XRL/ENS/M51/001 in Appendix D refers). Commonly observed pond management activities during the monitoring include pond aeration, removal of bund weeds and fish feeding. Ongoing construction activities were also recorded at the works area of the project "Proposed Comprehensive Development at Wo Shang Wai, Yuen Long" (hereinafter to be referred to as "Wo Shang Wai Project") located near Point Count Location MPV-1/P9. The bird species and their abundance recorded during the avifauna monitoring for the reporting month are presented in Appendix H.

Date	**Weather Conditions**	**Noticeable Activities in the MPV-1 Survey Site**
17 September 2010	Sunny	-Pond aeration -Removal of bund weeds -Fish feeding -Draining of pond -Erection of site hoarding for Wo Shang Wai Project near Point Count Location MPV-1/P9

Table 5-3 Weather condition and noticeable activities observed in the MPV-1 survey site during monitoring in September 2010

A total of 290 individuals from 30 avifauna species were recorded from the Point Count Locations at MPV-1 in September 2010 (Table 5-4 refers). The total number of species recorded during the monitoring was 34. The population of the avifauna recorded mainly consisted of ardeids (e.g. egrets and herons) and other widespread resident species (e.g. Eurasian Tree Sparrow and Crested Myna). Other recorded waterbirds included Little Grebe, White-breasted Waterhen, Black-winged Stilt, Common Sandpiper, Common Kingfisher, White-throated Kingfisher and Collared Crow. Erection of site hoarding for Wo Shang Wai Project was observed near Point Count Location MPV-1/P9. The number of birds in the nearby ponds decreased from 13 individuals in August 2010 (including 1 individual of Great Egret and 3 individuals of Little Egret) to 4 individuals during the current monitoring (Spotted Dove and Eurasian Tree Sparrow). As the erection of site hoarding is temporary in nature and nearly completed, disturbance on the bird species is expected to be transient. Detailed records of avifauna at MPV-1 survey site are presented in Appendix H.

The monitoring results in September 2010 were compared against the wet season results of the baseline bird survey conducted from August to October 2009. The number of bird species recorded from the Point Count Locations of MPV-1 survey site in September 2010 was of similar magnitude as the baseline survey results (Table 5-4 refers). Meanwhile, the abundance of avifauna recorded from the Point Count Locations in the current monitoring was higher than that of the baseline survey results (Table 5-4 refers). This was attributed to the increase in the number of Common Sandpiper, Chinese Bulbul, Eurasian Tree Sparrow and Crested Myna in some ponds.

In addition, the total number of species recorded from MPV-1 in September 2010 was higher than those recorded in the baseline survey (Table 5-5 refers). The additional bird species recorded in the current month included for instance, Black-winged Stilt (common passage migrant of conservation interest), Lesser Coucal (common resident), Collared Crow (uncommon resident of conservation interest) and Azure-winged Magpie, which had not been recorded during the wet season baseline survey.

The number of species of conservation interest recorded from MPV-1 survey site in September 2010 was of similar magnitude as those recorded in the baseline survey (Table 5-5 refers). The monitoring results indicated the fishponds within the survey area were utilized by a large number of waterbirds in September 2010 during the

monitoring. No significant fluctuation in the number of species and abundance of avifauna was observed. Therefore, no adverse indirect impacts arising from the Project were identified.

Survey	MPV-1	
	No. of Species	Abundance
17 September 2010	30	290
August to October 2009 [1] (Source: monthly averaged number obtained in Baseline Bird Survey)	24	230

Table 5-4 Number of species and abundance of avifauna recorded in September 2010 during bird survey at the point count locations of the MPV-1 survey site

Note:

(1) Monthly average obtained from baseline bird survey.

Month	Total Number of Species Recorded [1,2]
17 September 2010	34 (7)
August to October 2009 [3] (Source: monthly averaged number obtained in Baseline Bird Survey)	24 (5)

Note:

(1) Total number of species recorded included the avifauna recorded from both point count locations and walk transect.

(2) The numbers in brackets denote the number of species of conservation interest.

(3) Monthly average obtained from baseline bird survey.

Table 5-5 Total number of avifauna species recorded during bird survey at the MPV-1 survey site

5.3.2 Monitoring of impact at fishpond due to noise

In accordance with the Monitoring and Emergency Response Plan, impact noise monitoring was conducted at fish pond on weekly basis for assessment of impact at fishponds due to noise. The results are displayed in the table below. It was revealed from the monitoring results that all monitoring results were within the Limit Level of

75 dB(A). Based on the monitoring results, there was no adverse impact at fishpond due to noise.

Monitoring Date	L_{eq}, dB(A)
7/9/2010	57
14/9/2010	51
25/9/2010	54
28/9/2010	54

Table 5-6 Noise monitoring results at fishpond in Mai Po

5.4 Waste Management

The quantities of waste disposed from this Project during the reporting month and the previous 2 months are summarized in the following table:

Reporting Month	Inert C&D [1]Materials (tonnes)	Non-inert C&D [2]Materials (tonnes)	Chemical Waste (Litre)
Contract 802			
July 2010	487.3	18.1	0
August 2010	245.2	7.7	0
September 2010	153.6	9.1	0
Contract 803A			
July 2010	18976.9	2.8	0
August 2010	8478.9	30.5	0
September 2010	15084.0	61.5	0
Contract 803B			
July 2010	5560.4	12.4	0
August 2010	7662.0	11.3	0
September 2010	7858.1	8.4	400
Contract 803C			
July 2010	12094.6	38.3	0
August 2010	13752.8	46.8	0
September 2010	7928.1	44.8	0
Contract 803D			
July 2010	17982.4	17.0	0

Reporting Month	Inert C&D [1]Materials (tonnes)	Non-inert C&D [2]Materials (tonnes)	Chemical Waste (Litre)
August 2010	22758.0	35.2	800
September 2010	28252.9	25.3	2000
Contract 805			
September 2010	21.0	3.3	0
Contract 811A			
July 2010	0	0	0
August 2010	2760	0	0
September 2010	5082	36	0
Contract 811B			
September 2010	0	0	0
Contract 820			
July 2010	33.4	26.8	0
August 2010	4053.7	8.2	0
September 2010	10306.3	30.4	0
Contract 822			
July 2010	4708.8	49.3	0
August 2010	1077.8	14.8	0
September 2010	1568.2	57.0	0
Contract 825			
July 2010	11715.1	12.8	0
August 2010	10591.1	21.5	0
September 2010	6753.3	25.0	0

Note:

1. Inert C&D materials include bricks, concrete, building debris, rubble and excavated soil.

2. Non-inert C&D materials include steel, paper / cardboard packaging waste, plastics and other wastes such as general refuse.

Table 5-7 Summary of construction waste generated

5.5. Landscape and Visual

5.5.1 Monitoring Requirement

A Certified Arborist was employed and has conducted inspection and audits and found that the tree protection works being carried out by the civil works and transplanting contractors were in accordance with EP/EIA.

Monitoring of the implementation of the tree protection measures during construction phase was conducted in accordance with the requirements of EP condition 2.15 (iv).

The landscape and visual monitoring and auditing will be conducted on regular basis throughout the construction stage and covering the entire project site areas.

5.5.2 Audit Result

Monthly monitoring and audit was undertaken in accordance with the requirement of EP condition 2.15 (iv)

General Observations on Tree Transplantation Works

Root ball preparation / wrapping for transplanted trees has been improved, Greater care in crown pruning was recommended to be exercised to ensure structure of tree.

Tree Protection Works at Contract 802

Climbing plants growing on the tree truck. Climbing plant was recommended to be removed.

Tree Protection Works at Contract 803A

Tree protection measures was recommended to be improved.

Tree Removal Work at Contract 805

Tree removal works within site is completed.

Tree Removal Works at Contract 811A

Tree removal works within site was completed.

Tree Protection Work at Contract 820

Tree protection measures was implemented.

Tree Removal Work 822

Tree protection measures was recommended to be improved.

Tree Protection Work 825

Removal of climber on retained trees was recommended. Tree transplanting works is to be carried out.

6. SITE INSPECTION

Regular site inspections attended by representatives from ET and Contractors were carried out at 802 in Nam Cheong, 803 A, B, C, D and 811A in West Kowloon, 820 in Nam Cheong, 822 in Shing Mun, Shek Yam and So Kwun Wat, Tsing Chau Tsai and Tai Shu Ha Road West, 825 in Mai Po and Siu Lam Barging Point and dates are shown in the following table. In addition to the regular site inspections attended by ET and Contractors, monthly IEC environmental audits attended by IEC, ET and Contractors were held on 1 September 2010 in 802; 15 September 2010 in 803A; 17 September 2010 in 803B; 16 September 2010 in 803C; 15 September 2010 in 803D; 1 September 2010 in 805; 28 September 2010 in 811A; 21 September 2010 in 811B; 24 September in 820; 20 September 2010 in 822; and 20 September 2010 in 825.

Contract	**Date of Site Inspections**
802	1/9, 10/9, 15/9, 22/9 and 29/9
803A	1/9, 8/9, 15/9, 22/9 and 29/9
803B	3/9, 14/9, 17/9 and 24/9
803C	2/9, 9/9, 16/9, 22/9 and 30/9
803D	1/9, 8/9, 15/9, 22/9 and 29/9
805	1/9, 10/9, 15/9, 22/9 and 29/9
811A	8/9, 21/9, and 28/9
811B	7/9, 14/9, 21/9 and 28/9
820	2/9, 9/9, 16/9, 24/9 and 30/9
822	6/9, 13/9, 20/9 and 27/9
825	6/9, 13/9, 20/9 and 27/9

Table 6-1: Date of site inspection

All observations have been recorded in the audit checklist and passed to the Contractor together with the appropriate recommended mitigation measures where necessary. The key observations from these site inspections and Contractor's follow-up action are summarized in Table 6-2 below. No non-compliance was observed.

Item	Description	Contractor's Follow-up Action(s) Undertaken
Contract 802		
1	Noise mitigation measure should be improved for the demolition breaking work.	The breaker was enclosed by soundproofing material.
2	Water treatment facility should be provided.	Water treatment facility was established.
3	Mud spillage from construction vehicle was found on the road.	All construction vehicles would be washed thoroughly before leaving the site entrance.
Contract 803A		
1	The Contractor was recommended to install noise insulation material for D-Wall construction rigs on both sides of plants.	Noise insulation sheet was provided to cover noisy parts of both side of D-Wall rigs.
2	Oil drum and chemical were observed to be placed on bare ground during plant maintenance.	Drip tray was provided for oil drum and chemical.
Contract 803B		
1	Oil drum was observed to be on bare ground.	Drip trays were provided for oil drums and chemicals.
2	Gaps were observed between noise barriers provided for air compressors on site.	The gaps were sealed with noise insulation sheets to provide adequate noise mitigation measures.
3	The Contractor was recommended that noise mitigations be erected for all RCD, air compressors and generators in operation near noise sensitive receivers.	Temporary noise barriers were erected for air compressors and generators near noise sensitive receivers. Noise absorptive sheets were provided for RCD.
Contract 803C		
1	Oil drums were observed on bare ground without drip trays.	Drip trays were provided for oil drums and chemicals.

Item	Description	Contractor's Follow-up Action(s) Undertaken
2	It was observed that some noise mitigation measures on site were applied at wrong direction.	The noise mitigation measures were reviewed and locations were rectified.
3	Oil stain was observed on the ground of a gas cylinder.	Oil and soil was cleaned up as chemical waste.
Contract 803D		
1	It was observed that the three sides of cement mixing shelter were not properly fixed.	The cement mixing shelter was properly installed by securely fixing the three sides of shelter.
2	C&D construction waste were not covered properly.	C&D construction waste was removed on timely basis and provided with tarpaulin sheets if not moved.
3	It was observed that the bund walls erected at discharge point was not high enough.	The height of bund wall was increased.
Contract 805		
1	Dusty stockpiles were observed on site without provision of any dust suppression measure.	Frequent water spraying was applied.
2	The storm drain was not protected to prevent construction runoff from flowing in.	The storm drain was protected with sandbag layer.
3	A chemical drum was found located on soil ground without any spillage container.	The chemical was stored inside chemical waste storage area.
Contract 811A		
1	Mixed waste observed and the Contractor was reminded to enhance the waste sorting process on site	Waste sorting carried out on site
2	Chemical drums were not properly stored on site	Provided drip trays for the chemical for all chemical containers.

Item	Description	Contractor's Follow-up Action(s) Undertaken
3	Haul road within the site was dry	Increased the watering frequency for the haul road
Contract 811B		
1.	Drip trays for some generators were too small	Provided adequate size of drip trays underneath the generators
2	Chemical drums were not properly storage on site	Provided drip trays for the chemical for all chemical containers.
Contract 820		
1	Haul road at Launching Shaft near Rising Main was dusty.	Increased the watering frequency for the haul road.
2	Oil drum was found on bare ground.	Drip trays were provided for oil drums.
3	Waste skip without proper label was observed.	Proper label for waste skip was provided.
Contract 822		
1	Water treatment facility was not properly established.	Water treatment facility was established on site.
2	No dust suppression measure was provided for the stockpile of excavated material.	The stockpile has been covered by tarpaulin.
3	Sand and mud were accumulated inside the drainage channel.	The sediment was removed. Drianage channel would be regularly checked to keep clear.
4	Contaminated sand used for absorbing chemical spillage was left on ground.	The contaminated sand has been placed into a bag and collected by the licensed waste collector.
Contract 825		
1	Opening in drip tray was found	Provide plug to the opening to avoid leakage
2	Water was found inside the drip tray	The accumulated water was cleared and treated as chemical waste

Item	Description	Contractor's Follow-up Action(s) Undertaken
3	Stockpile was not covered up properly	Stockpile was covered to avoid dust impact

Table 6-2 Summary of site inspections, recommendations and follow-up actions

7. NON-COMPLIANCE AND DEFICIENCY

7.1 Summary of Complaint

For this reporting month, a total of one environmental complaint was referred from EPD. There are a total of fourteen environmental complaints since commencement of the construction. The complaints and follow-up actions are summarized as below:

A complaint was referred from EPD in the reporting month regarding construction noise from geotechnical investigation works at Kok Cheung Street & Tai Tsun Street of Tai Kok Tsui on 21 September 2010. The Engineer's Representative and IEC were informed of the complaint. Investigation was carried out in accordance with the EM&A Manual and identified the source. Mitigation measures were implemented to minimize nuisance to the neighbourhood. The investigation results were reviewed by the IEC.

7.2 Summary of Exceedance

In the reporting month, one noise exceedance was recorded at HKIVE Haking Wong Waterfront Annex (CN 23) on 15 September 2010. Actions identified in the Event and Action Plan (Table 3.4 of the EM&A Manual) were undertaken. The ER, IEC and Contractor were informed of the exceedance. The investigation revealed that the major noise source was the construction site adjacent to the works area.

For the one exceedances at Yaumati Catholic Primary School (CN 29), actions identified in the Event and Action Plan (Table 3.4 of the EM&A Manual) were undertaken. The ER, IEC and Contractor were informed of the exceedances. Investigation results revealed that the noise source may possibly due to the works by 811A Contractor. Corresponding noise mitigation measures proposed by the 811A Contractor were reviewed by IEC and ET and implemented by the 811A Contractor to minimize the noise impact.

One noise exceedance at The Waterfront (CN 32) was recorded. Actions identified in the Event and Action Plan (Table 3.4 of the EM&A Manual) was undertaken. The ER, IEC and Contractors were informed of the exceedance. The investigation revealed that 803A, 803B, 803C and 803D construction works may be the noise source. Noise mitigation measures proposed by the Contractors were reviewed by

IEC and ET and implemented by the Contractors to minimize the noise impact. All contractors in WKT works area were remind to enhance the noise mitigation measures to comply with the statutory requirement and minimize noise nuisance to the nearby NSRs.

For the noise exceedances at The Arch (CN 33), actions identified in the Event and Action Plan (Table 3.4 of the EM&A Manual) were undertaken. The ER, IEC and Contractors were informed of the exceedances. The investigation result revealed that noise source may possibly due to works by 803A, 803B, 803C and 803D Contractors. Additional noise mitigation measures proposed by the Contractor were reviewed by IEC and ET and implemented by the 803A, 803B, 803C and 803D Contractor to minimize the noise impact. All contractors in WKT works area were remind to enhance the noise mitigation measures to comply with the statutory requirement and minimize noise nuisance to the nearby NSRs.

In addition, 1 exceedance of Action Level was triggered as noise complaint was received in the reporting month and actions identified in the Event and Action Plan were undertaken.. Please refer to Section 7.1 for the details.

In the reporting month, one exceedance of 24-hr TSP Action Level was recorded in the reporting month at Yaumati Catholic Primary School (AM 14). Actions identified in the Event and Action Plan (Table 9.4 of the EM&A Manual) were undertaken. The ER, IEC and Contractor were informed of the exceedances. Investigation results revealed that the similar construction activities was on-going at site and the contractor was asked to enhance the air mitigation measures. The subsequent measurement (refer to Table 5-1) revealed that the site condition was been improved.

7.3 Summary of Notification of Summons, Prosecutions and Corrective Actions

No notification of summons and prosecutions was received during the reporting month.

8. FUTURE KEY ISSUES

8.1 Construction Works in Coming Months

Works to be undertaken for the following months are summarized below.

Contract 802 (Works Area Q)
Sheet-pilling, pre-drilling work, bored pile construction, bored pile removal, utility diversion
Contract 803A (Works Area V1)
Diaphragm construction, pre-drilling, hoarding modification, bored pile, utilities diversion and road works
Contract 803B (Works Area V1)
Bored pile, socketed H-piling works and pre-drilling works.
Contract 803C (Works Area V1)
Plant Set-up, Bored pile, Pre-bored H-pile, excavation, and utilities diversion
Contract 803D (Works Area V1)
Pre-bored H-pile, bored pile, diaphragm wall, barging facility, barging facility operation.
Contract 805 (Works Area N & O)
Demolition of building
Contract 805 (Works Area S)
Demolition and removal of footbridge
Contract 811A (Works Area V2)
Construction of site offices, D-wall, bored piling and socket-H piling

Contract 811B (Works Area V2)
Construction of foundation for footbridge, bored piling works, installation of socketted H-piles, construction of guide walls, construction of diaphragm walls
Contract 820 (Works Area P)
Site office establishment, diaphragm wall construction including excavation and concreting work, grouting work, marine sediment sampling and testing, utility diversion, temporary traffic arrangement, road work, pipe piling; excavation work
Contract 820 (Works Area R)
Utilities diversion
Contract 820 (Works Area M)
Road diversion, utility diversion
Contract 822 (Works Area F)
Site clearance and preparation, hoarding construction, pre-drilling work
Contract 822 (Works Area G)
Re-provision of bus turning loop, construction of buttress wall and pre-drilling
Contract 822 (Works Area H)
Construction of retaining wall, construction of steel decking, construction of adit portal
Contract 822 (Works Area AC)
Major construction works completed.
Contract 822 (Works Area AE)
Site clearance and site formation
Contract 822 (Works Area AG)

Site preparation
Contract 825 (Works Area A)
Ground investigation works
Contract 825 (Works Area AA)
Construction of ramp, jetty, access road

Table 8-1 Summary of construction works in coming month

In addition to the above works areas, major construction activities would be commenced in Works Areas at Kwai Chung Ventilation Building Works Area (Works Areas J) and Lai Chi Kok Works area (Works Area M) in coming month. Impact monitoring would be conducted according to the construction programme.

8.2 Monitoring Schedule for Next Month

The tentative schedule of TSP, noise and ecological monitoring for the next reporting period is presented in Appendix E.

9. CONCLUSIONS

The Report presents the results of EM&A works and the impact monitoring for the construction works of the XRL project undertaken during the period of 1 September 2010 to 30 September 2010. The major construction activities in the reporting period included foundation works in the West Kowloon Works Areas, Nam Cheong, Shing Mun, Shek Yam, Mai Po Works Area and Barging Points.

Impact monitoring for air quality and noise were conducted in accordance with the EM&A Manual in the reporting period. Exceedances of Limit Level in noise monitoring were recorded at HKIVE Haking Wong Waterfront Annex (CN 23), Yaumati Catholic Primary School (Hoi Wang Road) (CN 29), Tower 3, The Waterfront (CN 32) and The Arch (CN 33) in September 2010. Noise sources were identified and the Contractors were requested to implement additional mitigation measures. In addition, 1 exceedance of Action Level was triggered as noise complaint was received in the reporting month and actions identified in the Event and Action Plan were undertaken. One exceedance of 24-hr TSP Action Level was recorded in the reporting month at Yaumati Catholic Primary School (AM 14). Actions identified in the Event and Action Plan were undertaken. Investigation was conducted and the contractor was asked to enhance the air mitigation measures. No environmental notification of summon and prosecution was received in the reporting period.

One environmental complaint was received in the reporting period regarding construction noise from geotechnical investigation works at Kok Cheung Street & Tai Tsun Street of Tai Kok Tsui. The complaints had been handled in accordance with the procedures stipulated in the EM&A Manual. Investigation was carried out in accordance with the EM&A Manual and identified the source. Mitigation measures were implemented to minimize nuisance to the neighbourhood. The investigation results were reviewed by the IEC.

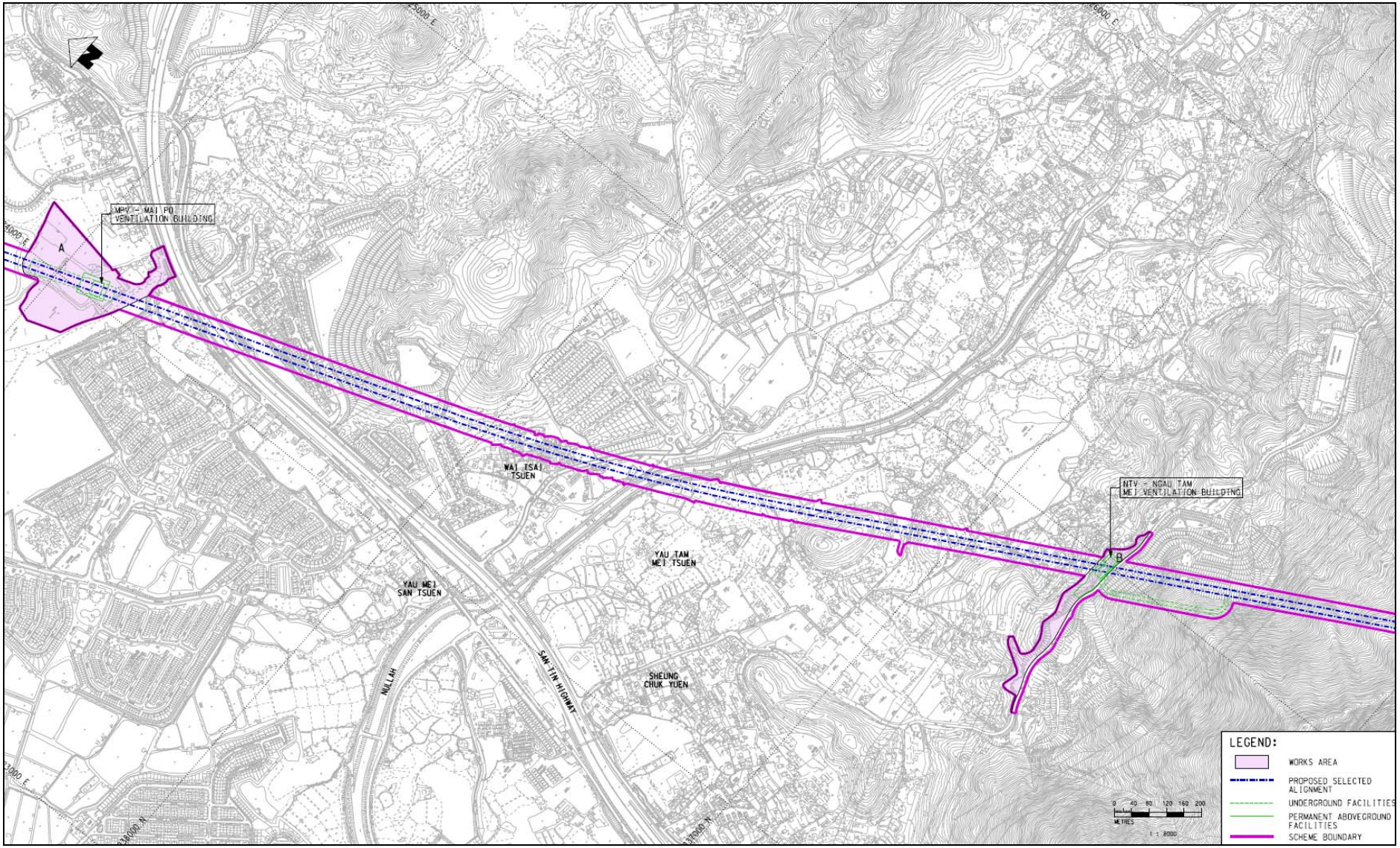
Site inspections were conducted regularly to monitor proper implementation of environmental pollution control and mitigation measures for the Project. No non-conformance to the environmental requirements was identified in the reporting period.

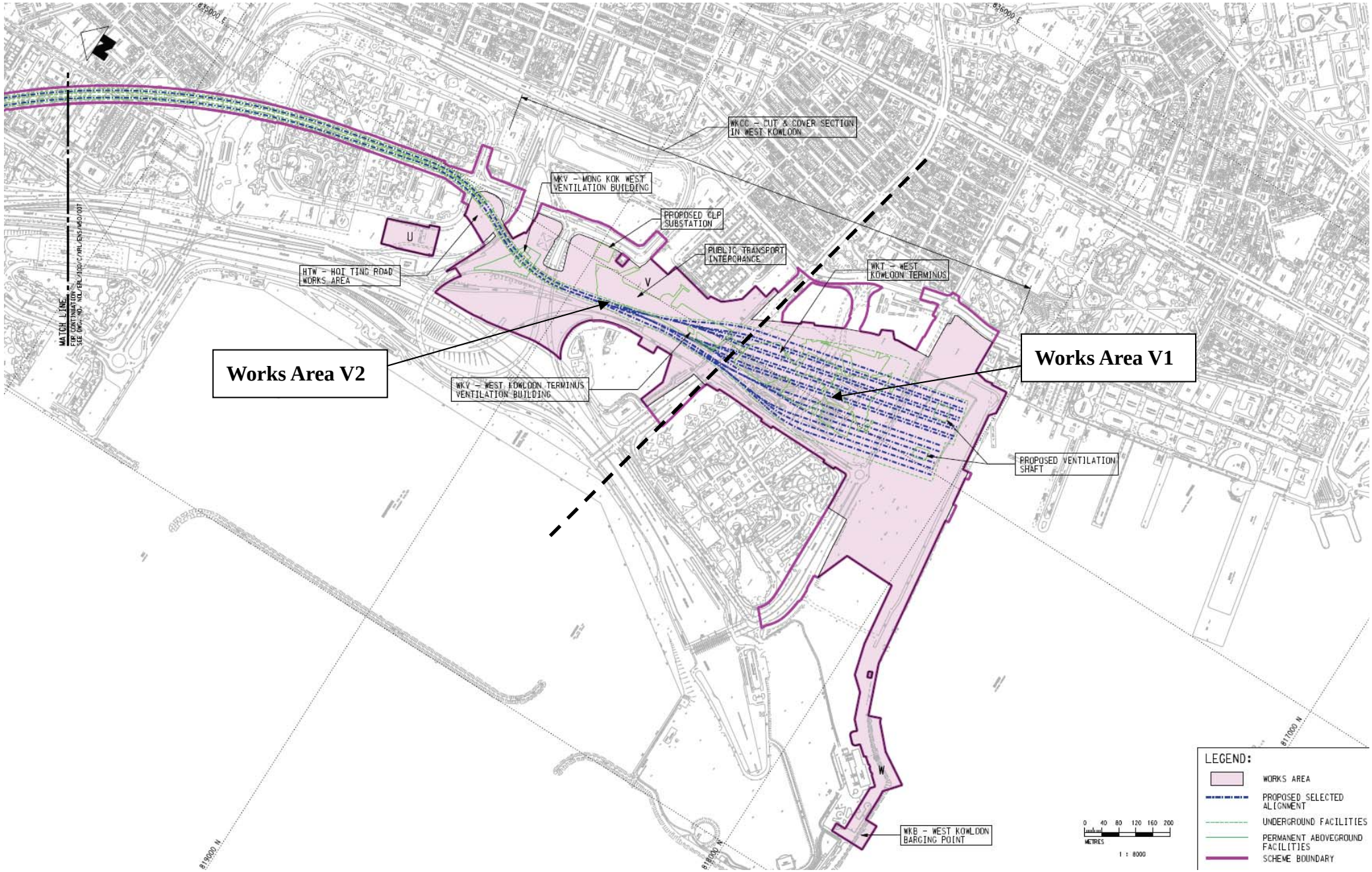
In the reporting period, there was no reporting change of circumstances which may

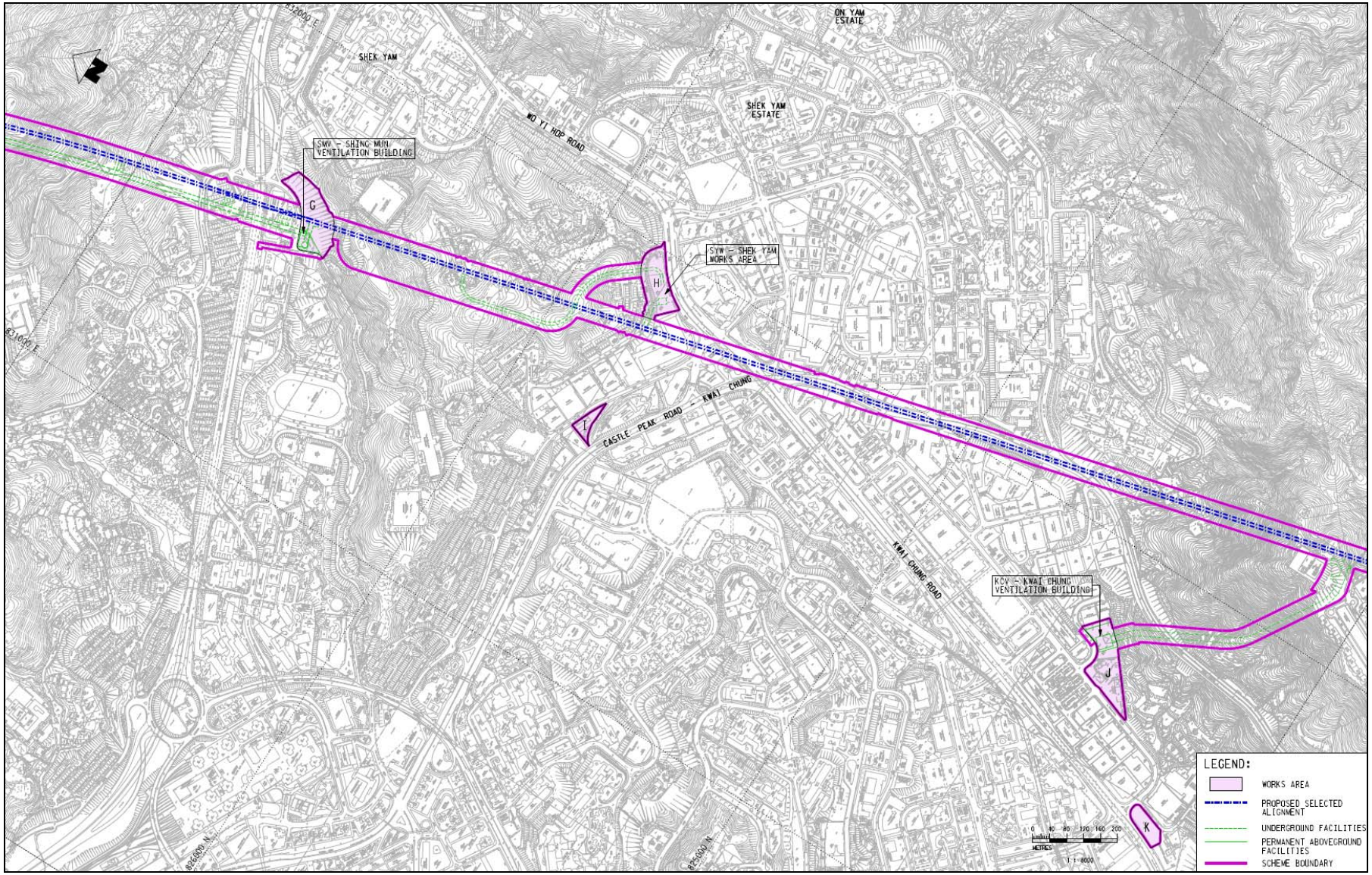
affect the compliance with the recommendations of the EIA Report. The original Environmental Permit No. EP-349/2009 has been amended with EP-349/2009/A issued on 27 September 2010. It is concluded from the environmental monitoring and audit works for the XRL Project that the construction works were undertaken in an appropriately environmentally sensitive manner in the reporting period. The environmental protection and pollution control measures provided by the contractors were generally acceptable apart from some minor irregularities which were rectified timely by the respective civil works contractors. The ET would continue the implementation of the environmental monitoring and audit programme in accordance to the EM&A Manual and to a level consistent with MTRCL's Corporate Sustainability Policy.

Appendix A

Works Area


MPV - MAI PO VENTILATION BUILDING
A
WAI TSAI TSUEN
YAU TAM MEI TSUEN
YAU MEI SAN TSUEN
SHEUNG CHUK YUEN
NULLAH
SAN TIN HIGHWAY
NTV - NGAU TAM MEI VENTILATION BUILDING
B
LEGEND:
WORKS AREA
PROPOSED SELECTED ALIGNMENT
UNDERGROUND FACILITIES
PERMANENT ABOVEGROUND FACILITIES
SCHEME BOUNDARY
0 40 80 120 160 200
METRES
1 : 8000


WKCC - CUT & COVER SECTION IN WEST KOWLOON
MKV - MONG KOK WEST VENTILATION BUILDING
PROPOSED CLP SUBSTATION
PUBLIC TRANSPORT INTERCHANGE
WKT - WEST KOWLOON TERMINUS
HTW - HOI TING ROAD WORKS AREA
MATCH LINE
FOR CONTINUATION SEE DWG. NO. HDL/RL/100/C/RL/EKS/450/001
Works Area V2
Works Area V1
WKV - WEST KOWLOON TERMINUS VENTILATION BUILDING
PROPOSED VENTILATION SHAFT
WKB - WEST KOWLOON BARGING POINT
U
V
W
818000 N
819000 N
811000 N
836000 E
838000 E
0 40 80 120 160 200
METRES
1 : 8000
LEGEND:
WORKS AREA
PROPOSED SELECTED ALIGNMENT
UNDERGROUND FACILITIES
PERMANENT ABOVEGROUND FACILITIES
SCHEME BOUNDARY


SHEK YAM
ON YAM ESTATE
SHEK YAM ESTATE
WO YI HOP ROAD
SMV - SHING MUN VENTILATION BUILDING
G
SYW - SHEK YAM WORKS AREA
H
CASTLE PEAK ROAD - KWAI CHUNG
I
KWAI CHUNG ROAD
KCV - KWAI CHUNG VENTILATION BUILDING
J
K
832000 E
831000 E
826000 N
825000 N
0 40 80 120 160 200
METRES
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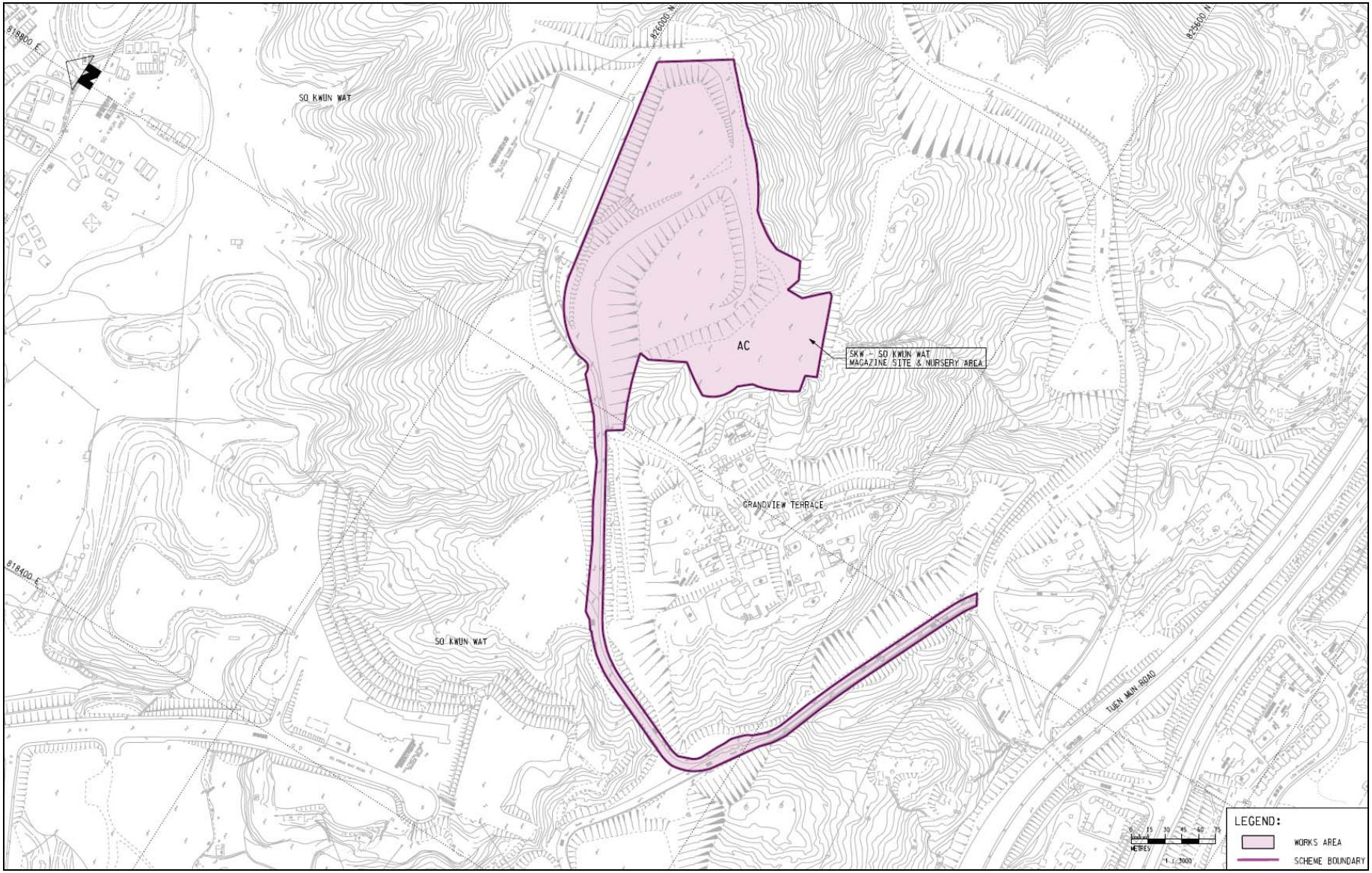
WORKS AREA
PROPOSED SELECTED ALIGNMENT
UNDERGROUND FACILITIES
PERMANENT ABOVEGROUND FACILITIES
SCHEME BOUNDARY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AC
SKW - SO KWUN WAT
MAGAZINE SITE & NURSERY AREA
GRANDVIEW TERRACE
TUEN MUN ROAD
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METRES
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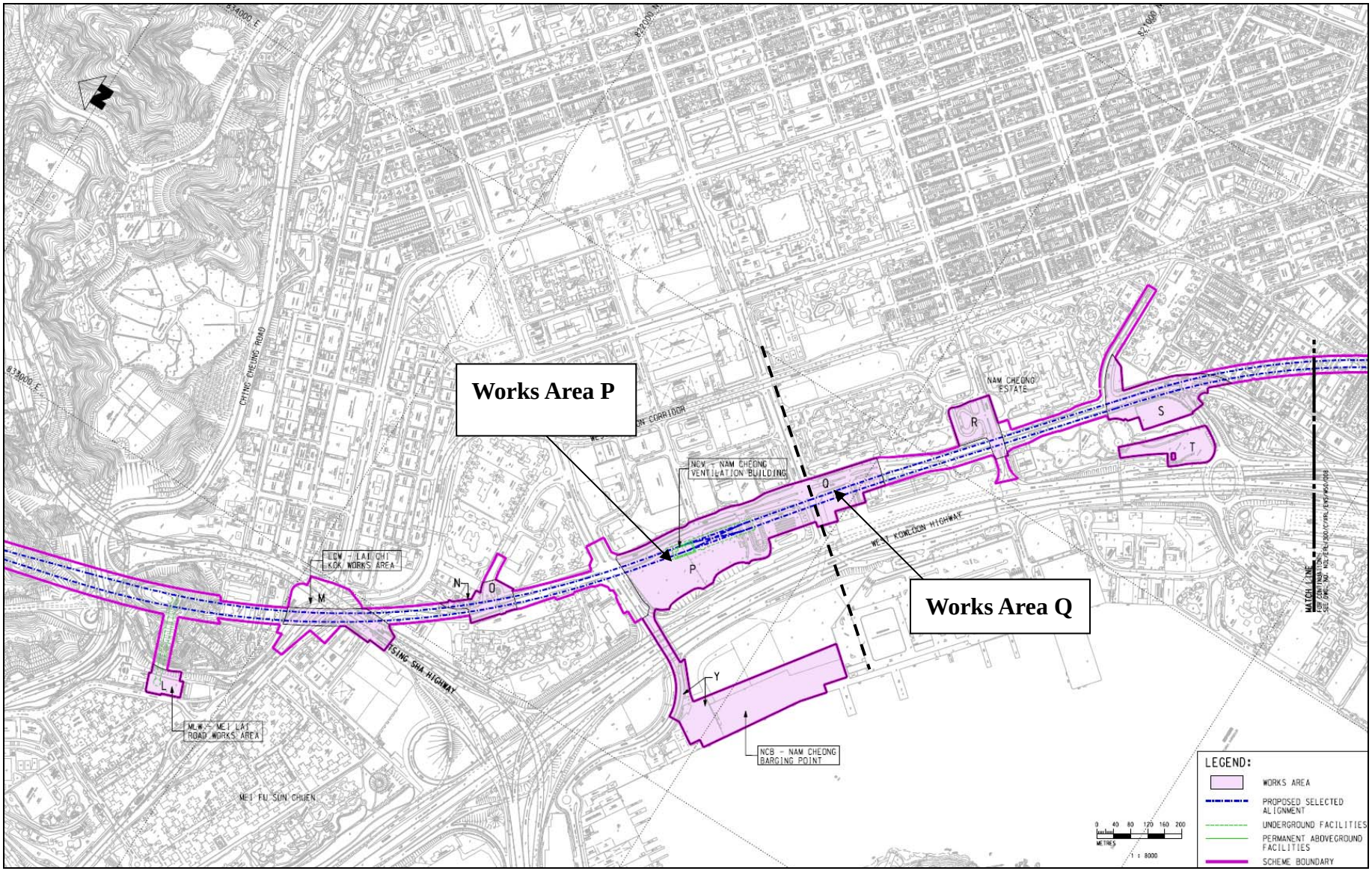
LEGEND:
WORKS AREA
SCHEME BOUNDARY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Works Area Q
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NAM CHEONG ESTATE
NCV - NAM CHEONG VENTILATION BUILDING
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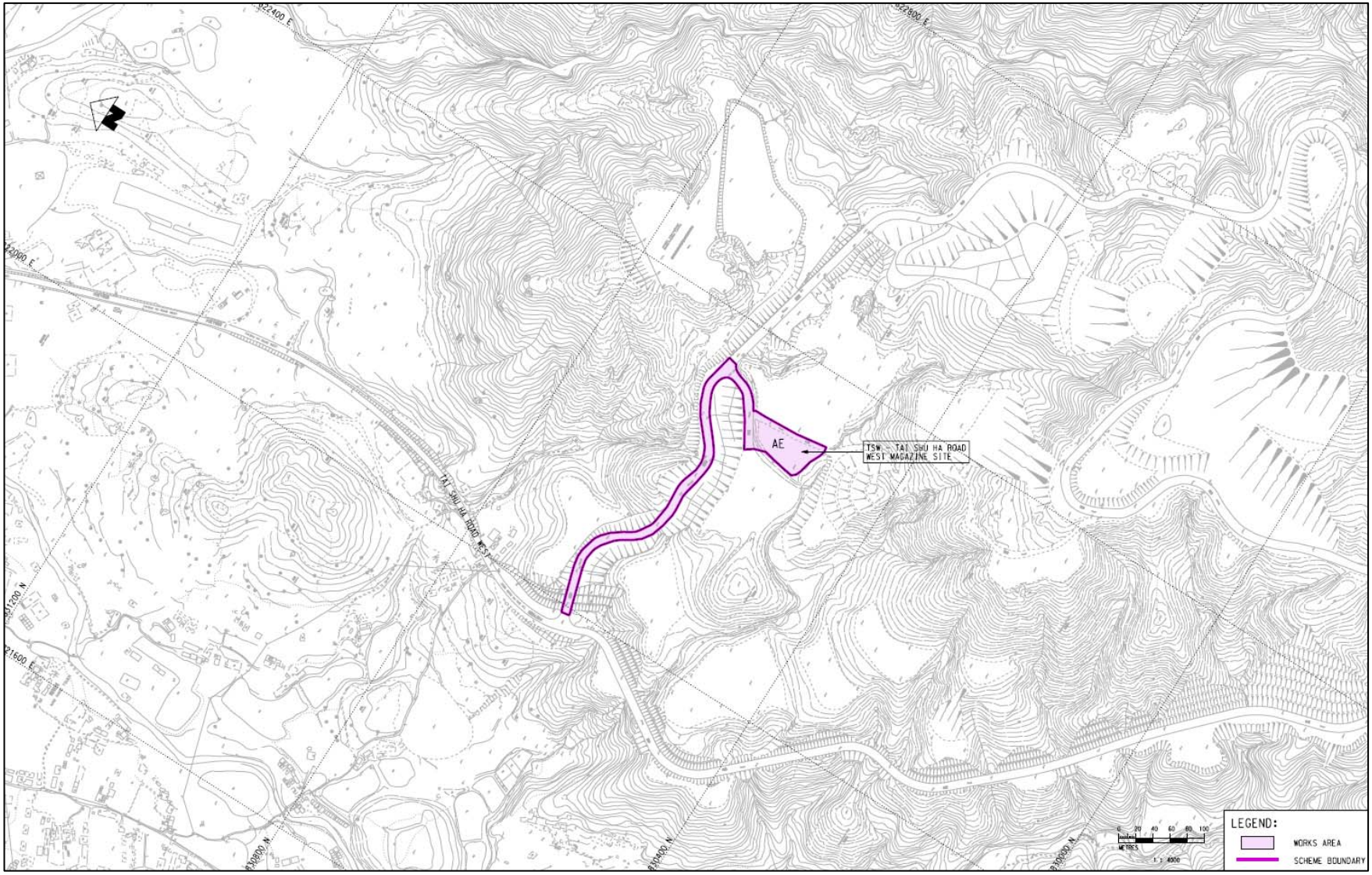
LCW - LAI CHI KOK WORKS AREA
TSING SHA HIGHWAY
MLW - MEI LAI ROAD WORKS AREA
MEI FU SUN CHUEN
NCB - NAM CHEONG BARGING POINT
MATCH LINE
LEGEND:
WORKS AREA
PROPOSED SELECTED ALIGNMENT
UNDERGROUND FACILITIES
PERMANENT ABOVEGROUND FACILITIES
SCHEME BOUNDARY
METRES
1 : 8000


AE
TSW - TAI SHU HA ROAD WEST MAGAZINE SITE
TAI SHU HA ROAD WEST
LEGEND:
WORKS AREA
SCHEME BOUNDARY
METRES
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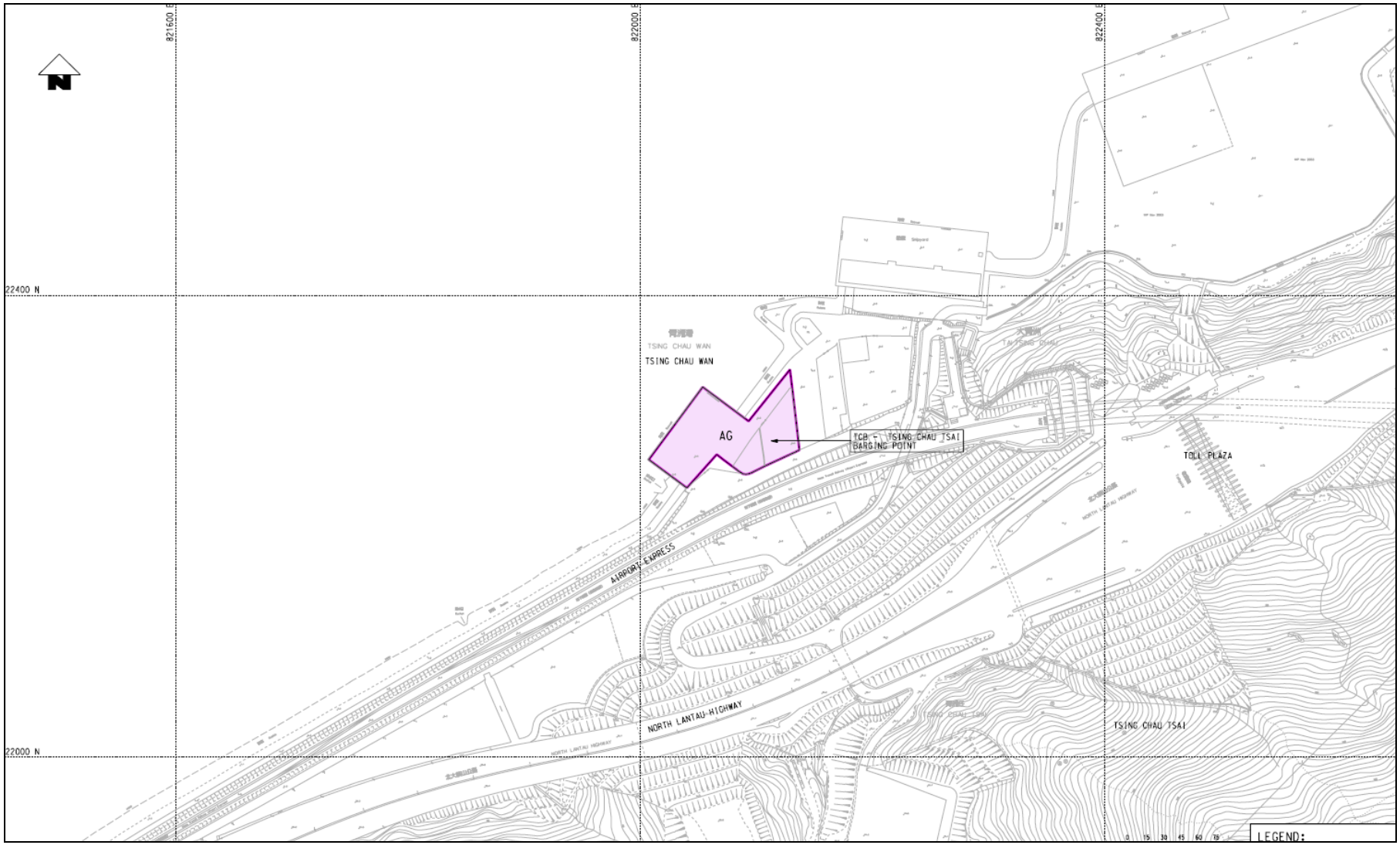
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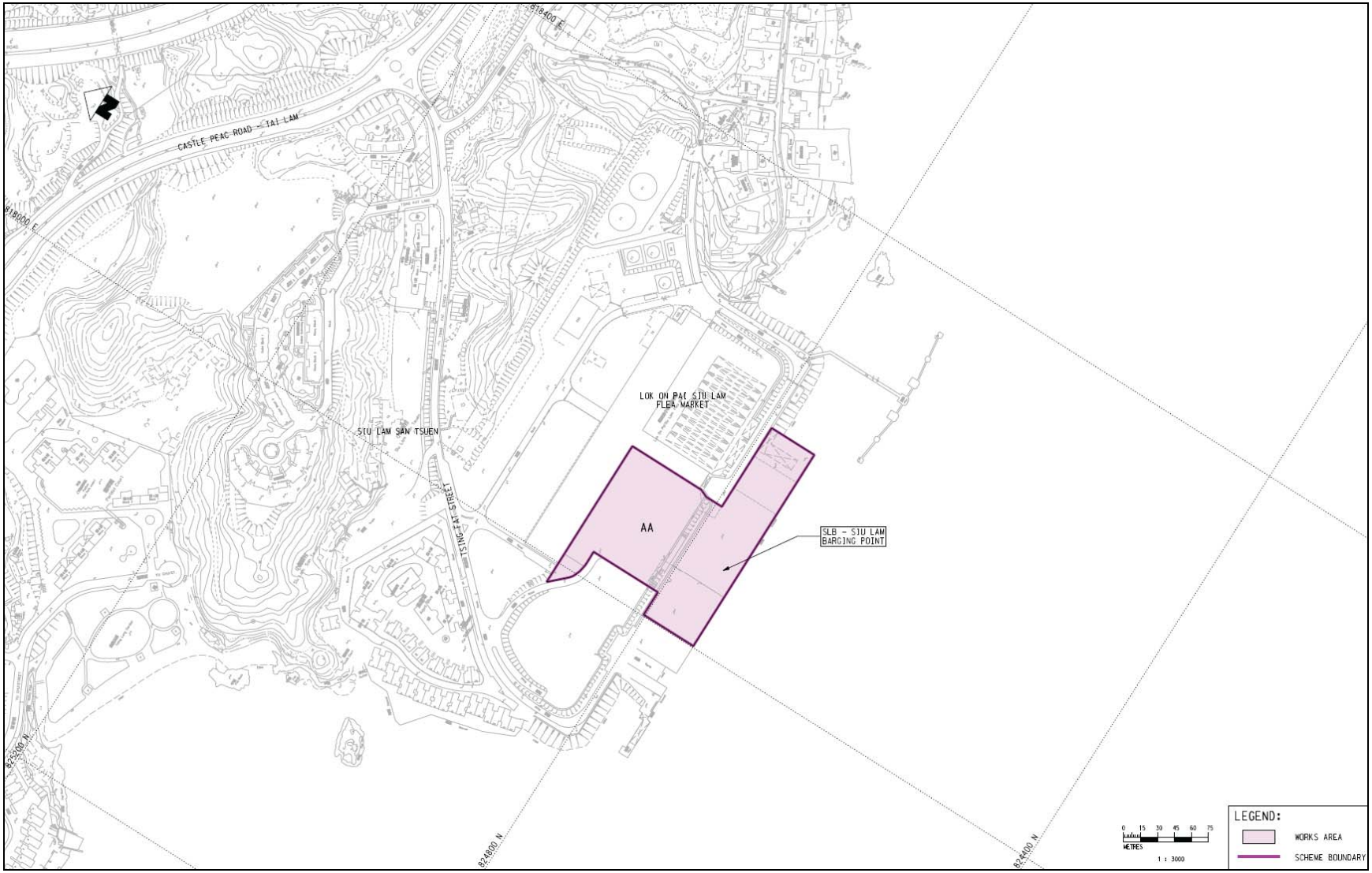
822000 E
822400 E
22400 N
22000 N
TSING CHAU WAN
TSING CHAU WAN
AG
TCB - TSING CHAU TSAI
BARGING POINT
TOLL PLAZA
AIRPORT EXPRESS
NORTH LANTAU HIGHWAY
TSING CHAU TSAI
0 15 30 45 60 75
LEGEND:


CASTLE PEAK ROAD - TAI LAM
SIU LAM SAN TSUEN
TSING AT STREET
LOK ON PAI SIU LAM FLEA MARKET
AA
SLB - SIU LAM BARGING POINT
819400 E
818000 E
824800 N
824400 N
0 15 30 45 60 75
METRES
1 : 3000
LEGEND:
WORKS AREA
SCHEME BOUNDARY

Appendix B

Project Management Organization and Contacts of Key Personnel

Engineer's Representative		
Title	Name	Telephone
Construction Manager (802, 805 &820)	Mr. David Salisbury	2208 3518
Construction Manager (803 A/B/C)	Mr. Samuel Lo	3575 5641
Construction Manager (803 D)	Mr. KS Lim	3575 5723
Construction Manager (811 A)	Mr. Albert Lam	3575 1357
Construction Manager (822)	Mr. Andy Fok	2208 3732
Construction Manager (825)	Mr. Ivan Chau	2208 3334
Independent Environmental Checker		
Divisional Manager	Dr. Anne Kerr	2828 5793
Environmental Team		
Environmental Team Leader	Mr. Glenn Frommer	2688 1552
Deputy Environmental Team Leader	Mr. Richard Kwan	2688 1179
Contractor		
Contract 802 Contractor		
Project Manager	Frankie Lam	6021 2602
Environmental Officer	Ms. Karen Lung	9849 7368
Contract 803A Contractor		
Project Manager	Dick YIU	9426 4657
Site IMS Manager	Nick LAU	9216 9245
Contract 803B Contractor		
Project Manager	Fung Lai Man	9252 4204
Project Manager	Peter Cheung	9278 5536
Contract 803C Contractor		
Project Manager	Mr. Roland Yuen	9465 2815

Deputy Project Manager	Mr. Desmond Chung	9015 6863
Contract 803D Contractor		
Project Manager	Dick YIU	9426 4657
Site IMS Manager	Nick LAU	9216 9245
Contract 805		
Project Manager	Hobby LAU	9828 0638
Environmental Engineer / Officer	Federick WONG	6330 0519
Contract 811A Contractor		
Project Manager	Bob Aylmer	2561 8072
Quality, Safety and Environmental Manager	Keith Gordon	3994 8345
Environmental Officer	Kevin Wong	2164 2832
Contract 820 Contractor		
Project Director	Alain Hervio	2215 6600/ 6112 9197
Senior QSE Manager	Y. T. So	2215 6631/ 9307 8728
Contract 822 Contractor		
Environmental & Quality Manager	Mr. Brian Pickering	6323 5753
Environmental Manager / Officer	Mr. David Hung	9765 6151
Environmental Coordinator	Ms. Jane Huang	6491 4620
Contract 825 Contractor		
Project Manager	Mr. Nakayama	2482 8101
QAE Manager	Mr. M.H.Isa	9884 0810

Appendix C

Implementation Status

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
Ecological Impact (Detailed design Phase / Pre-construction Phase)						
S3.398	- Prior to commencement of channel works, an ecological habitat management plan should be prepared to provide the detailed specifications for the habitats and ecological functions to be provided, and control of colonization of invasive plant species at the mitigation stream habitats and define the long-term management and ecological monitoring and audit requirements for these habitats.	To mitigate the avoidable loss of watercourse habitat	MTR	SSS	Detailed design phase / Prior to commencement of channel works	To be implemented as per construction programme
S3.388 - S3.397	- The constructed channel in the SSS site should include open channel with ecologically friendly stream feature to mitigate the direct impact due to the loss of a watercourse habitat in Shek Kong.	To mitigate the avoidable loss of watercourse habitat	MTR / DDC	SSS	Detailed design phase	To be implemented as per construction programme
S3.410	- The implementation details of the impact monitoring programme should be described in ecological monitoring plan for EPD approval before	To outline details of ecological impact monitoring	MTR	MPV, TPP, SSS / ERS, PHV and	Before commencement of construction	Implemented

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
	commencement of construction activities.			TUW	activities	
S3.327 & S3.412	- A monitoring and emergency response plan (to be prepared by the Contractor), in relation to potential impacts due to groundwater drawdown, will form part of the EM&A requirement in the EM&A Manual subject to approval by EPD and AFCD before commencement of the tunnelling and MPV construction in Mai Po area. The plan should include, but not be limited to, details of monitoring locations and programme, a mechanism to monitor the implication from the works to the groundwater system and fish pond, action levels and emergency responses such as immediate action, remedial action and investigation.	To detect potential impacts due to groundwater drawdown	Contractor	MPV	Before commencement of the tunnelling and MPV construction	AFCD's comment has been sought

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
S3.413	- A monitoring and emergency response plan, in relation to impacts due to noise/vibration, should form part of the EM&A requirement in the EM&A Manual subject to approval by EPD and AFCD before commencement of the tunnelling and MPV construction in Mai Po area.	To detect and monitor noise / vibration impacts	Contractor	MPV	Before commencement of bore tunnelling and MPV construction	Implemented
Ecological Impact (Construction Phase)						
S3.325 - S3.326	- Implementation of precautionary measures during tunnelling works.	To avoid potential hydrogeological impacts	Contractor	All works areas	Construction phase	To be implemented as per construction programme
S3.409 to S3.410	- Ecological impact monitoring focusing on habitats and species of conservation interest should be conducted during the construction phase at the MPV, TPP, SSS / ERS, PHV, and TUW sites where a number of avifauna of conservation interest (e.g.	To monitor potential indirect construction impacts to wildlife	MTR	MPV, TPP, SSS / ERS, PHV, and TUW	Construction phase	Implemented

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
	overwintering bird, Greater Painted-snipe) and areas of conservation interest (e.g. country parks, conservation areas, and wetlands) were recorded. - Avifaunal communities should be surveyed quantitatively along transects. Birds heard or seen along the transects should be identified to species and counted. The nature of construction works within works area conducting during each impact monitoring visit should also be recorded. The quantitative monitoring results should be compared to pre-construction condition. The impact monitoring results should be undertaken by qualified ecologist(s) with relevant working experience. - Should any unpredicted indirect ecological impacts arising from the proposed Project be detected, remedial measures should be developed and implemented by the Contractor.		MTR Contractor			

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
S3.327 & S3.412	- Implementation of the groundwater monitoring and emergency response plan.	To detect and minimize hydrological impacts	Contractor	MPV	Construction phase (During bore tunneling works and construction of Mai Po Ventilation Shaft)	Refer to Item for S3.327 & S3.412.
S3.413	- Implementation of monitoring and emergency response plan on noise and vibration.	To detect and minimize noise / vibration impacts	Contractor	MPV	Construction phase (During bore tunneling works and construction of Mai Po Ventilation Shaft)	Implemented
S3.364 -S3.369	- Use of quiet construction plant and temporary noise barriers.	To minimise impacts to surrounding habitats	MTR / Contractor	All works areas	Construction phase	Implemented

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
	- Access to the ventilation building sites should follow existing access roads, such as the maintenance access along the existing drainage channels. - Site hoarding of about 2.4 m high should be erected around the works area of access roads along drainage channels in the TPP and SSS / ERS sites. - Gate and fences should be installed along the construction accesses that are adjacent to public areas. - Gates and hoardings should be provided at the entrances/exits and along the boundary of the works areas respectively to prevent any trespassers from encroaching or will fully disturbing any wild animals and their habitats within the works areas. - A trip-ticket system should be adopted to monitor the disposal of construction and demolition materials. CCTV and warning signs should be provided at the					

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
	entrance of the proposed temporary and permanent vehicular access.					
3.370 -3.371 and 3.373	- Vegetation located within the works areas should be preserved as far as practicable. - To avoid soil compaction, heavy machinery should not be used in close proximity to vegetation. Soils that become compacted through the activities of the development should be loosened to an appropriate depth to allow seed germination. - All temporarily affected habitats should be reinstated after the completion of works. - Placement of equipment or stockpiles should be confined to designated works areas. Access routes should be confined on existing disturbed land, where practicable.	To minimize impacts to vegetation	MTR / Contractor	All works areas	Construction phase	Implemented
	- Detailed vegetation survey should be conducted in	To minimize impacts to	MTR /	TSW	Prior to	Vegetation

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
	TSW site prior to commencement of site clearance.	vegetation	Contractor		commencement of site clearance	Survey Report formulated and deposited to EPD
	- To mitigate the loss of the vegetation and habitats, planting of native species should be provided in the areas affected by the Project in TSW site, and other works area, where practicable.	To minimize impacts to vegetation	MTR / Contractor	TSW and all other works areas	Construction phase	To be implemented as per construction programme
S3.372	- The affected individuals of Incense Tree within the NTV works area should be transplanted to nearby suitable habitats prior to the commencement of site clearance at NTV works area as far as practicable. - A detailed vegetation survey covering the affected habitat at NTV works area should be conducted by a suitably qualified botanist / ecologist to identify and record the affected individuals in order to provide	To minimize impacts to vegetation	MTR / Contractor	NTV	Construction phase	To be implemented as per construction programme

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
	details for the transplantation scheme prior to the commencement of site clearance. Feasibility and suitability of transplanting the affected individuals would be studied and suitable receptor sites would be identified. The transplantation proposal for the affected individuals should be prepared as necessary and transplantation should be supervised by a suitably qualified ecologist / horticulturist.					
S3.374 - S3.377	- Site hoarding of 2.4 m high should be set up along the boundary of the works areas as far as practicable.	To minimize disturbance to wildlife	Contractor	All works areas	Construction phase	Implemented
	- The erection of hoarding (2.4 m) along KT5 in the area with high Greater Painted-snipe occurrence (e.g. the proposed access road next to KT5) should avoid their breeding season, prior to construction activities in the area.			KT5 (near TPP)	Prior to the construction of access road	To be implemented as per construction programme
	- The use of noisy construction equipment such as			KT5 (near TPP)	Construction phase	To be implemented

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
	hydraulic breakers should be avoided at the area with high painted-snipe occurrence (e.g. the proposed access road next to KT5) during their breeding season as far as practicable.					as per construction programme
	- Hoardings of 2.4 m height should be put in place before commencement of construction activities. Hoarding at the section along the northern boundary of the MPV works area should be installed first. The duration of hoarding erection should be kept as brief as practicable. - Upon the erection of site hoarding, all construction activities should be conducted within the fenced area.			MPV	Right after possession of site	Implemented
	- Major construction site lighting should point inward and downward. Unnecessary lighting should be turned off outside working hours of the construction sites.			All works area	Construction phase	Implemented

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
S3.378 - S3.380	- Excavation works carried out within waterbodies should be carried out in dry season where practicable. - Excavation works within the watercourse / drainage channel should be restricted when possible to an enclosed dry section of the watercourse / drainage channel, with containment measures such as bunds and barriers used within the watercourse / drainage channel. - Site runoff should be directed towards regularly cleaned and maintained silt traps and oil / grease separators. The silt and oil / grease separators should be appropriately designed for the local drainage and ground conditions. Tightly sealed closed grab excavators should be deployed where material to be handled is wet. - The flow of the watercourse and drainage channel located with the Project Area should be maintained	To minimise pollution to waterbodies	Contractor	All works areas	Construction phase	To be implemented as per construction programme

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
	throughout the construction phase.					
Terrestrial Ecological Impact (Post-construction / Operation Phase)						
S3.327 & S3.412	- Implementation of the groundwater monitoring and emergency response plan.	To detect and minimize hydrogeological impacts	Contractor	MPV	Post-construction phase	To be implemented as per construction programme
S3.381	- The affected agricultural land should be restored to a condition suitable for agricultural use before handing over to landowners / operators.	To minimize impacts to surrounding habitats	MTR / Contractor	All temporarily occupied agricultural land	Operation phase	To be implemented as per construction programme
S3.382 – S3.384	- Vegetation control in the constructed channels should be implemented to prevent the excessive growth of vegetation that would impede the drainage capacity of the channel. To minimise sedimentation, de-silting should be limited to the dry season	To minimise impacts to constructed channels	MTR	All constructed channels in SSS	Operation phase	To be implemented as per construction programme

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
	(November to March). The natural stream bed substrate should not be removed from the channel during de-silting works. - For maintenance de-silting, temporary barrier walls should be used to provide a dewatered zone for de-silting works. Waste material produced during de-silting should be disposed of in a timely and appropriate manner.					
S3.385 & S3.387	- Large areas of reflective material (including glass) should not be used on the outer surfaces of the buildings. - All the major lighting sources should point inward and downward to minimise glare disturbance to wildlife. The intensity of light should also be controlled to the lowest possible level.	To minimise impacts to wildlife	MTR / DDC	All ventilation buildings in northern section and SSS	Detailed design and Operation phases	To be implemented as per construction programme

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
S3.411	- Implementation of ecological habitat management plan. - Ecological monitoring of the mitigation stream habitats according to ecological habitat management plan.	To monitor the wildlife use of the mitigation stream habitat	MTR	Mitigation stream habitat in SSS / ERS	Operation phase	To be implemented as per construction programme
Marine Ecological Impact (Construction Phase)						
Appendix3.6 (S1.102)	- The use of high-speed vessels should also be avoided during the construction and operation of the proposed barging point.	To minimise the indirect impact to Chinese White Dolphin habitat	Contractor	LKB	Construction phase	To be implemented as per construction programme
Appendix3.6 (S1.103)	- No dumping of rubbish, oil or chemicals would be allowed.	To minimise the pollution to marine habitats	Contractor	LKB	Construction phase	To be implemented as per construction programme
Appendix3.6	- Deployment of silt curtains around the closed grab dredgers to minimize the suspended sediment impact	To minimise the impact to	Contractor	LKB	Construction	To be implemented

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
(S1.104)	due to dredging activities in dredging region. - To minimize impact on the gorgonians along the coastline near the dredging area, double silt curtains should be deployed around the works area.	subtidal habitats			phase	as per construction programme
Appendix3.6 (S1.106)	- The number of work vessels and small crafts should be minimized. Dredging should be carried out continuously without unnecessary break to prevent unpredictable or sudden noise outbursts at random intervals.	To minimise disturbance impact on Chinese White Dolphin	Contractor	LKB	Construction phase	To be implemented as per construction programme
Appendix3.7 (S1.83)	- Mitigation measures to control water quality impacts proposed under Section 11 should be adopted.	To minimise indirect impact to intertidal and subtidal flora and fauna	Contractor	WKT	Construction phase	To be implemented as per construction programme
Appendix3.6 (S1.105)	- Engines of vessels moored at the barging point would be turned off to minimize unnecessary underwater	To minimise disturbance impact on Chinese White Dolphin	Contractor	LKB	Construction phase	To be implemented as per

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
	noise.					construction programme
Pond Fisheries Impact (Pre-construction Phase)						
S4.51	- A monitoring and emergency response plan, in relation to potential impacts due to groundwater drawdown, will form part of the EM&A requirement in the EM&A Manual subject to approval by EPD and AFCD before commencement of the tunnelling and MPV construction in Mai Po area. The plan should include, but not be limited to, details of monitoring locations and programme, a mechanism to monitor the implication from the works to the groundwater system and fish ponds including their water levels, action levels and emergency responses such as immediate action, remedial action and investigation.	To detect and minimize potential hydrological impacts	Contractor	MPV	Pre-construction phase (Before commencement of the tunnelling and MPV construction)	To be implemented as per construction programme

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
S4.52	- A monitoring and emergency response plan, in relation to impacts due to noise/vibration, should form part of the EM&A requirement in the EM&A Manual subject to approval by EPD and AFCD before commencement of the tunnelling and MPV construction in Mai Po area.	To detect and monitor noise / vibration impacts	Contractor	MPV	Pre-construction phase (Before commencement of bore tunnelling and MPV construction)	Implemented
S4.45	- Consultation should be conducted with fish operators in Mai Po before tunnelling starts. The method of construction, potential impact and mitigation measures should be fully explained to the operators at the meeting.	Engagement of stakeholders	Contractor / MTR	MPV	Pre-construction phase (Before commencement of tunneling works)	To be implemented as per construction programme
Pond Fisheries Impact (Construction Phase)						
S4.51	- Implementation of the groundwater monitoring and emergency response plan.	To detect and minimize hydrogeological impacts	Contractor	MPV	Construction phase (During bore tunneling works and	To be implemented as per construction

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
					construction of Mai Po Ventilation Shaft)	programme
S4.52	- Implementation of the monitoring and emergency response plan on noise and vibration.	To detect and minimize noise / vibration impacts	Contractor	MPV	Construction phase (During bore tunneling works and construction of Mai Po Ventilation Shaft)	Implemented
S4.40	- Good site practices and proper dust and water quality control measures should be implemented. These include site confinement with fencing/hoarding erection at the perimeter of the works area, stockpile covering by impervious sheeting to avoid spread of construction dust, and proper handling, storage and	To minimize the indirect off-site impacts on the adjacent fishponds	Contractor	MPV	Construction phase	Implemented

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
	disposal of chemical waste to avoid contamination of the existing water system, etc.					
S4.44	Implementation of good site practices during the construction phase: ▪ Only well-maintained plant should be operated on-site and plant should be serviced regularly during the construction program; ▪ Silencers or mufflers on construction equipment should be utilized and properly maintained during the construction program; ▪ Machines and plant (such as trucks) that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum; ▪ Plant known to emit noise strongly in one direction	To minimize disturbance to fishponds by construction noise	Contractor	MPV	Construction phase	Implemented

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
	should, wherever possible, be orientated so that the noise is directed away from the nearby fishponds; ▪ Material stockpiles and other structures should be effectively utilized, wherever practicable, in screening noise from on-site construction activities; ▪ Use of movable barrier for certain powered mechanical equipment (PME); and ▪ Use of noise enclosure or acoustic shed to cover certain stationary PME.					
Pond Fisheries Impact (Post-construction Phase)						
S4.51	- Implementation of the groundwater monitoring and emergency response plan.	To detect and minimize hydrogeological impacts	Contractor	MPV	Post-Construction phase	To be implemented as per construction programme
Marine Fisheries Impact (Construction Phase)						
Appendix4.2	- Mitigation measures to control water quality impacts proposed under Section 11 should be adopted.	To minimize the indirect impact on fisheries	Contractor	LKB and WKT	Construction phase	To be implemented

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
(S1.38)		resources				as per construction programme
Airborne Noise Impact (Construction Phase)						
S5.120	The following good site practices should be implemented: ▪ Only well-maintained plant should be operated on-site and plants should be serviced regularly during the construction program; ▪ Silencers or mufflers on construction equipment should be utilized and should be properly maintained during the construction program; ▪ Mobile plant, if any, should be sited as far from noise sensitive receivers (NSRs) as possible; ▪ Machines and plant (such as trucks) that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum; ▪ Plant known to emit noise strongly in one direction	To reduce construction noise impact	MTR / Contractor	All works areas	Construction phase	Implemented

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
	should, wherever possible, be orientated so that the noise is directed away from the nearby NSRs; and ▪ Material stockpiles and other structures should be effectively utilized, wherever practicable, in screening noise from on-site construction activities.					
S5.121-S5.122 and Table 5.22	The following quiet PME should be used: ▪ Pneumatic breaker (SWL=110dB(A)) ▪ Tracked Excavator Fitted with Hydraulic Breaker (SWL=110dB(A)) ▪ Truck Mixer (SWL=100dB(A)) ▪ Tracked Crane (SWL=101dB(A)) ▪ Dump Truck (SWL=103dB(A)) ▪ Tracked Excavator/Loader (SWL=105dB(A)) ▪ Dozer (SWL=111dB(A)) ▪ Road Roller (SWL=101dB(A))	To reduce construction noise impact	MTR / Contractor	Works Areas A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, Y, Z, AA, AC, AE, AF, AG and AH	Construction phase	Implemented
S5.123 -	Movable noise barrier should be used for the following	To reduce construction	MTR /	Works Areas	Construction	Implemented

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
S5.124	PME where practicable: ▪ Mini backhoe ▪ Breaker, mini-robot mounted ▪ Vibratory poker ▪ Handheld breaker ▪ Excavator ▪ Grab ▪ Tracked Crane	noise impact	Contractor	A, C and D	phase	
S5.125	Noise enclosure/acoustic shed should be used for the following PME where practicable: ▪ Air compressor ▪ Concrete pump ▪ Grout pump ▪ Shotcrete pump	To reduce construction noise impact	MTR / Contractor	Works Areas A, B, C, D, E, F, G, H, I, J, K, L, M, O, P, Q, S, T, U, V and Z	Construction phase	Implemented
S5.125	Acoustic enclosure should be used for enclosing drilling jumbo as fully as possible.	To reduce construction noise impact	MTR / Contractor	Works Areas B, C, F, H and J	Construction phase	To be implemented as per construction

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
						programme
S5.127	Silencer should be used for the ventilation fans.	To reduce construction noise impact	MTR / Contractor	Works Areas A, B, C, D, E, F, H, J, L and P	Construction phase	To be implemented as per construction programme
S5.128	Noise insulating fabric should be applied where practicable to cover the following PME: ▪ Drill rig ▪ Grab and chisel ▪ Oscillator & casings ▪ Piling rig ▪ Piling, large diameter bored, reverse circulation drill ▪ Piling, vibrating hammer	To reduce construction noise impact	MTR / Contractor	Works Areas A, B, C, D, E, G, L, M, N, O, Q, R, S, V	Construction phase	Implemented
S5.130	Use of “Noise Insulating Cover” to cover the mucking out points.	To reduce construction noise impact	MTR / Contractor	Works Area L	Construction phase	To be implemented

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
						as per construction programme
S5.131	Use of temporary hoardings along the works boundary.	To reduce construction noise impact	MTR / Contractor	Works Areas B and D	Construction phase	To be implemented as per construction programme
S5.134-S5.136	Use of saw instead of mini-robot mounted breaker and oscillator pile for removal of superstructures	To reduce construction noise impact	MTR / Contractor	Works Areas N, O and S	Construction phase	To be implemented as per construction programme
S5.137	Scheduling of construction works outside school examination periods	To reduce construction noise impact	MTR / Contractor	Works Areas G, J, K, L, N, O, P, Q, Y, U, V and AH	Construction phase	To be implemented as per construction

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
						programme
S5.193	Airborne construction noise monitoring should be conducted in accordance with EM&A Manual to monitor the airborne noise impact.	To monitor airborne noise impact	MTR / Contractor	Proposed monitoring locations	Construction phase	Implemented
Airborne Noise Impact (Operation Phase)						
S5.113 and Table 5.21	The maximum permissible sound power levels (Max SWLs) for the fixed plant should be complied with during the selection of equipment and mitigation measures.	To comply with the noise criteria of Noise Control Ordinance	MTR / DDC	MPV, NTV, PHV, SMV, KCV, NCV, MKV, WKV and WKT	Detailed design and operation phases	To be implemented as per construction programme
S5.140	Noise barrier should be erected as follow: ▪ A 8m high barrier along the access road on eastern side of SSS; and ▪ 5.5m barrier along western boundary facing Leung Uk Tsuen squats.	To comply with the noise criteria of Noise Control Ordinance	MTR / DDC	SSS	Detailed design and operation phases	To be implemented as per construction programme

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
S5.140	Installation of 13m absorptive panels on both sides and full length of ERS.	To comply with the noise criteria of Noise Control Ordinance	MTR / DDC	ERS	Detailed design and operation phases	To be implemented as per construction programme
S5.196	Noise commissioning test is recommended to monitor the ground-borne noise level complying with NCO.	To monitor ground-borne noise impact	MTR / Contractor	Proposed monitoring locations	Operation phase	To be implemented as per construction programme
Ground-borne Noise Impact (Construction Phase)						
S6.82	Ground-borne construction noise monitoring should be conducted in accordance with EM&A Manual to monitor the ground-borne noise impact.	To monitor ground-borne noise impact	MTR / Contractor	Proposed monitoring locations	Construction phase	To be implemented as per construction programme
S6.85	Construction groundborne noise measurement results should be used to further update the ground-borne noise	To update the predicted ground-borne noise levels.	MTR / Contractor	TBM tunneling	Construction phase	To be implemented

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
	prediction where appropriate.			section		as per construction programme
S6.83	Conduct tests of the FDL of the train to update the ground-borne noise prediction and the recommended mitigation measures as necessary.	To confirm the predicted ground-borne noise levels	MTR	-	Prior to the final design of the trackform and the extent of each type of trackform, and after the proposed train in operation outside Hong Kong	To be implemented as per construction programme
S6.84	Conduct vibration borehole testing at two carefully selected locations along the proposed tunnel alignment to determine the LSR values under certain geological conditions. The ground-borne noise predictions and	To confirm the predicted ground-borne noise levels	MTR	Proposed two locations	Prior to the commencement of construction works	To be implemented as per construction

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
	the recommendation on mitigation measures should be updated as necessary.					programme
Ground-borne Noise Impact (Operation Phase)						
S6.87	Noise commissioning test is recommended to monitor the ground-borne noise level complying with NCO.	To monitor ground-borne noise impact	MTR / Contractor	Proposed monitoring locations	Operation phase	To be implemented as per construction programme
Landscape and Visual Impact (Construction Phase)						
Table 7.10	All existing trees should be carefully protected during construction as far as possible in accordance with ETWB TCW No. 29/2004 and 3/2006.	To minimize landscape and visual impacts during construction phase	Contractor	Works areas	Detailed design and construction phases	Implemented

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
	Trees should be retained on site as far as possible. Should removal of trees be unavoidable due to construction impacts, trees will be transplanted or felled depending on stated criteria in the Tree Removal Applications to be submitted separately in accordance with ETWBC 2/2004 and 3/2006. Wood resulting from tree removal should be recycled as mulch or soil conditioner which could be used within the Project or in other projects as much as possible.		Contractor			
	Control of night-time lighting glare.		Contractor			
	Erection of decorative screen hoarding to screen off undesirable views of the construction site having consideration of safety and security.		Contractor			
	Reuse of existing topsoil where possible for new planting areas within the project.		Contractor			
Landscape and Visual Impact (Operation Phase)						
Table	~~Compensatory tree planting should be incorporated into~~	To minimize landscape	MTR	Works areas	Detailed design	To be

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
7.11	the proposed Project where space is available	and visual impacts during operation phase			and operation phases	implemented as per construction programme
	Landscape and visual enhancement treatments		MTR			
	Compensatory habitat proposal for natural stream course at SSS		MTR			
	Reinstatement of works area in Nam Cheong Park to integrate with the existing park.		MTR			
	Tall buffer tree planting should be incorporated provide screening to ventilation buildings, engineering structures and associated facilities.		MTR			
	Roof greening to mitigate the visual impact of VB on the VSRs at high level.		MTR			
	Vertical greening would be incorporated where practicable to visually soften the façade of ventilation building and/or noise barrier		MTR			
	Incorporation of aesthetically pleasing streetscape design which would be responsive to adjacent landscape context.		MTR			

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
	Roadside amenity trees to enhance the landscape and visual quality of the existing and proposed road.		MTR			
	Reinstatement of disturbed areas to match adjacent area or to condition to suit future landuse.		MTR			
	Aesthetically pleasing design as regard to the form, material and finishes shall be incorporated to all buildings, engineering structures and associated infrastructure facilities so as to blend in the buildings and structures to the adjacent landscape and visual context.		MTR			
	Control of Operation Night-time Glare		MTR			
	Incorporation of aesthetically pleasing design to boundary fence so as to blend in the structure to the adjacent landscape and visual context.		MTR			
	The scale, location, disposition and design of the ventilation shafts at WKCD would be further reviewed and submitted to relevant parties (e.g. WKCDA and PlanD) for agreement.		MTR			

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
Cultural Heritage Impact						
S8.100 – S8.103	• Conduct further investigation (a minimum of 18 trial pits, 1m x 1.5m) to confirm any archaeological remains exist in the inaccessible areas (**NOL/ERL/300/C/XRL/ENS/M55/303- 304 & 306-307**). If archaeological data collected from these 18 test pits is insufficient to ascertain the archaeological potential of the inaccessible areas, additional test pits should be conducted • Conduct rescue excavation to preserve archaeological remains by detailed records if found (**NOL/ERL/300/C/XRL/ENS/M55/307**)	To confirm any archaeological remains exist in the inaccessible areas and to preserve archaeological remains if any	MTR	Proposed rescue excavation area in SSS and other archaeological deposit areas identified in the further archaeological investigation	Prior to construction phase	To be implemented as per Archaeological Action Plan formulated
S8.103	Conduct archaeological watching brief during construction works at TUW for identification of any historical finds during construction phase	To identify any historical finds in the works area	MTR	TUW	Construction phase	To be implemented as per Archaeological Action Plan

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
						formulated
S8.104	Conduct regular site audit during the construction of barging point to confirm that no excavation works is conducted at Lung Kwu Sheung Tan archaeological deposit area.	To avoid direct impact	MTR	LKST barging point and associated access road	Construction phase	To be implemented as per construction programme
S8.105	Restriction of works boundary of TPP to be extended to relics discovered area outside TPP.	To avoid direct impact	MTR	TPP	Construction phase	To be implemented as per construction programme
S8.107, S8.128	Avoid works areas at the sites of the identified built heritage structures as far as practicable. Identified earth shines within works boundary of SSS and TPP will be relocated by local villagers prior to commencement of construction works at SSS and TPP.	To avoid direct impact	MTR	Earth shines (NHL-04,TKP-02 and LET-07)	Prior to construction phase	To be implemented as per construction programme

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
S8.109, S8.125	Vibration monitoring at Lai Chi Kok Hospital: ▪ Prior to commencement of construction works, the location and installation of the monitoring stations should be discussed and agreed with AMO, Hong Kong Institution for Promotion of Chinese Culture (the "NPO", selected organization for the Revitalisation Scheme), the Commissioner for Heritage's Office and relevant parties before installation. ▪ Compliance monitoring of vibration limits should be conducted and reported as a requirement of EM&A programme.	To monitor vibration impacts on the identified vibration sensitive historical buildings	MTR	Ex-Lai Chi Kok Hospital	Before construction phase; Construction phase	To be implemented as per construction programme
S8.110, S8.126	▪ A further condition survey and appropriate consolidation works (e.g. installation of temporary propping or reinforced timber beam to maintain the stability of structure etc.), if required, will be carried out on Blocks P Q, W and the inaccessible area of LCKH prior to construction. It should be discussed	To minimize vibration impacts on the identified vibration sensitive historical buildings	MTR	Ex-Lai Chi Kok Hospital	Detailed design	To be implemented as per construction programme

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
	and agreed in advance with AMO, NPO, the Commissioner for Heritage's Office and relevant parties,					
S8.112, S8.127	▪ If consent is given by the property owner, a condition survey will be carried out at Cheung Yuen prior to the commencement of works in SSS. The survey should be discussed and agreed in advance with AMO and property owner prior to commencement of survey.	To minimize vibration impacts on the identified vibration sensitive historical buildings	MTR	Cheung Yuen	Prior to construction phase	To be implemented as per construction programme
S8.112, S8.127	▪ If consent is given by the property owner, vibration monitoring at LET-06 (Cheung Yuen) will be conducted when excavation works are being conducted within 50m radius from the house. The monitoring location should be discussed and agreed with AMO and property owner before installation.	To monitor vibration impacts on the identified vibration sensitive historical buildings	MTR	Cheung Yuen	Construction phase	To be implemented as per construction programme
S8.113,	▪ Control of vibration levels from the proposed	To minimize vibration	MTR	All works	Construction	To be

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
S8.124	blasting and excavation activities within a peak particle velocity (ppv) limit of 25mm/s to prevent potential vibration impact to all identified built heritage resources.	impacts on the identified vibration sensitive historical buildings		area where blasting and excavation activities are involved	phase	implemented as per construction programme
S8.114 - S8.115	▪ Use of sensibly designed screen hoardings for reducing the potential visual impact.	To minimize visual impacts	MTR	All identified heritage buildings in all works areas	Detailed design and construction phase	To be implemented as per construction programme
Land Contamination Impact						
S9.28 – S9.33	Remediation of Contaminated Soil ▪ After excavation, confirmation sampling and testing shall be conducted from the sidewalls and at base of the excavations to ensure complete excavation of contaminated soils. ▪ Bioremediation (biopiling) / ex-situ chemical oxidation are proposed to remediate the	To remediate contaminated soil	Contractor	Sites H and Q	Site remediation	To be implemented as per construction programme

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
	contaminated soil recorded in Sites H and Q. Remediation Report(s) (RR) for contaminated works area(s) should be prepared by the Land Contamination Specialist to detail the remediation process and demonstrate that contaminated soils are all removed, properly handled and disposal of. The remediated soil should be reused on site to minimise the waste disposal.					
S9.35(i)	For construction works of the alignment close to Ngau Tam Mei Landfill ▪ As a general precautionary measure, visual inspection of excavated materials should be conducted to screen soil for signs of contamination (e.g. discoloration, stains and odour). The inspection process should also be assisted by a photo ionization detector (PID) for volatile organics. If suspected materials are encountered during tunnel boring, sampling and testing for the parameters recommended in Table 6.1 of CAP should be undertaken to verify any contamination. The suspected soil bored out during excavation and tunnel boring should be temporary stockpiled and if laboratory analysis indicated exceedance of	Acting as a general precautionary measure to screen soil for signs of contamination during tunnel boring works under/close to Ngau Tam Mei Landfill	MTR/Contractor	Within the Landfill Boundary where signs of contamination is identified	During Tunnel Boring within Ngau Tam Mei Landfill Boundary Section	To be implemented as per construction programme

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
	relevant RBRG levels, remediation works, should be undertaken depending on the quantity and quality of contaminated soil identified.					
S9.35(ii)	For construction works at CLP transformer station at Lai Cheung Road and Petrol Filling Station at 82 Tai Kok Tsui Road ▪ As a general precautionary measure, visual inspection of excavated materials should be conducted to screen soil for signs of contamination (e.g. discoloration, stains and odour). The inspection process should also be assisted by a photo ionization detector (PID) for volatile organics. If suspected materials are encountered during tunnel boring, further sampling and testing should also be undertaken to verify any contamination. The soil bored out during excavation and tunnel boring should be temporary stockpiled and if laboratory analysis indicated exceedance of relevant RBRG levels, remediation works, should be undertaken depending on the quantity and quality of contaminated soil identified.	Acting as a general precautionary measure to screen soil for signs of contamination during tunnel boring/ excavation at CLP transformer station at Lai Cheung Road and Petrol Filling Station at 82 Tai Kok Tsui Road	MTR/Contractor	Area close to CLP transformer station at Lai Cheung Road and Petrol Filling Station at 82 Tai Kok Tsui Road where signs of contamination is identified	During Tunnel Boring/ excavation works near CLP transformer station at Lai Cheung Road and Petrol Filling Station at 82 Tai Kok Tsui Road	To be implemented as per construction programme

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
S9.35 (iii)	For sites with contamination identified (Site H and Site Q) the following environmental mitigation measures should be undertaken during the course of the site remediation: ▪ Excavation profiles must be properly designed and executed with attention to the relevant requirements for environment, health and safety; ▪ Excavation should be carried out during dry season as far as possible to minimise contaminated runoff from contaminated soils; ▪ Supply of suitable clean backfill material is needed after excavation; ▪ The chemical oxidant proposed (RegenOxTM) as a contaminant mass reduction technology. Comprises a solid oxidant complex (sodium percarbonate/catalytic formulation) and an activator complex (a composition of ferrous salt embedded in a micro-scale catalyst gel). These chemical will be securely stored, separately and way from sources of ignition or oxidizable items. Handling will & will be undertaken by persons specifically trained and wearing appropriate PPE.	To minimise the potentially adverse environmental impacts arising from the handling of potentially contaminated materials.	Contractor	Sites H and Q /during transportation	Site remediation and prior to construction phase	To be implemented as per construction programme

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
	▪ Vehicles containing any excavated materials should be suitably covered to limit potential dust emissions or contaminated wastewater run-off, and truck bodies and tailgates should be sealed to prevent any discharge during transport or during wet conditions; ▪ Speed control for the trucks carrying contaminated materials should be enforced; and ▪ Vehicle wheel and body washing facilities at the site's exist points should be established and used.					
S9.35(iv)	In order to minimise the potentially adverse effects on health and safety of construction workers during the course of site remediation, the Occupation Safety and Health Ordinance (OSHO) (Chapter 509) and its subsidiary Regulations should be followed by all site personnel working on the site at all times. In addition, the following basic health and safety measures should be implemented as far as possible: ▪ Set up a list of safety measures for site workers; ▪ Provide written information and training on safety	To minimise the potentially adverse effects on health and safety of construction workers during the course of site remediation	Contractor	Sites H and Q	Site remediation and prior to construction phase	

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
	for site workers; ▪ Keep a log-book and plan showing the contaminated zones and clean zones; ▪ Maintain a hygienic working environment; ▪ Avoid dust generation; ▪ Provide face and respiratory protection gear to site workers; ▪ Provide personal protective clothing (e.g. chemical resistant jackboot, liquid tight gloves) to site workers; and ▪ Provide first aid training and materials to site workers.					
9.35(v)	For Areas Feasible or Infeasible for On-Site Inspection and Site Investigation (i) Phase 2 supplementary SI works ▪ Upon site access is granted, site inspection should be carried out to ascertain any contaminative sources and hotspot of contamination within the site. ▪ The sampling and testing schedule as recommended	(i) To identify areas with land contamination concern, report laboratory results and propose remediation measures if necessary. (ii) To ensure remediation works have been undertaken to before	MTR/ Contractor	Areas Infeasible for On-Site Inspection and Site Investigation and WSW	After land resumption and prior to the construction works commencement at respective sites	Implemented

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
	in the approved CAP should then be updated based on respective site situation and the number of sampling locations may be significantly reduced. A revised CAP should then be submitted to EPD for endorsement. ▪ For supplementary CARs and RAP(s), upon completion of SI and laboratory testing, supplementary CARs should be submitted to EPD for endorsement. If contamination is identified, RAP(s) should also be submitted to EPD for endorsement. ▪ The revised CAPs and supplementary CARs and /or RAP(s) should be submitted in separate packages for different works area depending on the schedule of land resumption and the commencement of construction works for each works area. ▪ RR(s) should be submitted to demonstrate completion of remediation works before construction work starts at the site. (ii) WSW ▪ According to WSW EP Condition 3.14, the Project Proponent of the WSW development shall prepare	the commencement of any construction works of the Project that may disturb the ground of the south-western portion of the MPV.				

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
	and submit CAR/RAP to EPD within 2 months after commencement of construction of the WSW development and the recommendations in the endorsed CAR/RAP shall be fully implemented before the commencement of any construction works that may disturb the ground of the relevant sites. ▪ This project will ensure that the completion of remediation works before the construction works at contaminated areas start.					
Waste Management Implications (Construction Phase)						
S10.107	Recommendations for good site practices: ▪ Prepare a Waste Management Plan approved by the Engineer/Supervising Officer of the Project based on current practices on construction sites; ▪ Training of site personnel in, site cleanliness, proper waste management and chemical handling procedures; ▪ Provision of sufficient waste disposal points and regular collection of waste; ▪ Appropriate measures to minimize windblown litter and dust during transportation of waste by either	To implement good site practice for handling, sorting reuse and recycling of C&D materials	Contractor	All works areas	Construction phase	Implemented

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
	covering trucks or by transporting wastes in enclosed containers; ▪ Regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors; and ▪ Separation of chemical wastes for special handling and appropriate treatment.					
S10.108	Recommendations for waste reduction measures: ▪ Sorting of demolition debris and excavated materials from demolition works to recover reusable/ recyclable portions (i.e. soil, broken concrete, metal etc.); ▪ Segregation and storage of different types of waste in different containers, skips or stockpiles to enhance reuse or recycling of materials and their proper disposal; ▪ Encourage collection of aluminium cans by providing separate labelled bins to enable this waste to be segregated from other general refuse generated by the workforce; ▪ Proper storage and site practices to minimize the potential for damage or contamination of construction materials;	To implement on-site sorting facilitating reuse and recycling of materials as well as proper disposal of waste	Contractor	All works areas	Construction phase	Implemented

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
	▪ Plan and stock construction materials carefully to minimize amount of waste generated and avoid unnecessary generation of waste; and ▪ Training should be provided to workers about the concepts of site cleanliness and appropriate waste management procedures, including waste reduction, reuse and recycle.					
S10.109	The Contractor should prepare and implement a Waste Management Plan (WMP) as a part of the Environmental Management Plan (EMP) in accordance with ETWB TCW No. 19/2005 which describes the arrangements for avoidance, reuse, recovery, recycling, storage, collection, treatment and disposal of different categories of waste to be generated from the construction activities.	To keep trace of the generation, minimization, reuse and disposal of C&D materials in the Project	Contractor	All works areas	Construction phase	Implemented
S10.112	Storage of materials on site may induce adverse environmental impacts if not properly managed, recommendations to minimise the impacts include: ▪ Waste, such as soil, should be handled and stored well to ensure secure containment, thus minimising the potential of pollution; ▪ Maintain and clean storage areas routinely;	To minimise potential impacts of waste storage and enhance reusable volume	Contractor	All work areas	Construction phase	Implemented

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
	▪ Stockpiling area should be provided with covers and water spraying system to prevent materials from wind-blown or being washed away; and ▪ Different locations should be designated to stockpile each material to enhance reuse.					
S10.113	Waste hauliers must hold a valid permit for the collection of waste as stipulated in their permits. Removal of waste should be done in a timely manner.	To collect and remove waste generated	Contractor	All work areas	Construction phase	Implemented
S10.114-115	Implementation of trip-ticket system to monitor waste disposal and control fly-tipping. Set up warning signs at vehicular access points reminding drivers of designated disposal sites and penalties of an offence. Installation of close-circuited television at access points of vehicles to monitor and prevent illegal dumping.	To monitor disposal of waste and control fly-tipping	Contractor	All work areas	Construction phase	Implemented
S10.117	Recommendations for excavated materials within works areas: ▪ Several ramps should be used for transportation of different materials as far as practicable (at SSS/ERS site, both soft and hard materials could be generated	To mitigate and minimize the potential impacts from the storage and transportation of materials within works areas	Contractor	All works areas	Construction Phase	To be implemented as per construction programme

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
	with the provision of three ramps, each of them can be used for single material for primary separation). Each ramp should be used for transportation of a single material as far as practicable. ▪ If a conveyor system is used, materials should be transported separately on the belts, it is therefore proposed that more than one conveyor belt should be installed if possible. If more than one material is needed to be transported on a single belt, each material should be stockpiled separately once they are removed from the excavation face to the ground and the belt should operate at different times with different materials as far as practicable. ▪ Enclosure should also be provided for the conveyor belt, as far as practicable to minimize the of dust generation. ▪ Different locations should be designated for each material during stockpiling. Stockpiling may be needed when the conveyor system is under constraint or when the spoil could not be transported away from works area immediately after excavation. Cover should be provided to dusty stockpiles to avoid the materials from being					

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
	wind-blown or flushed away by water. It is expected that water spraying system should also be equipped to moisten the materials.					
S10.119	Wet spoil generated from TBM construction, construction of bored piles and D-wall should be properly handled before disposal to Taishan and Fill Banks respectively for reuse in other projects. Dry materials should be mixed with the wet spoil or by the use of lime to reduce water content where applicable.	To minimise impacts to disposal outlet from reception of wet spoil	Contractor	All works areas	Construction phase	To be implemented as per construction programme
S10.120	Wheelwash facilities should be provided before the trucks leave the works area.	To minimise dust impact	Contractor	All works areas	Construction phase	Implemented
S10.121	The Contractor should ensure the on-site separation from inert portion. The waste delivered to landfill should not contain any free water or have water content more than 70% by weight. The haulier must ensure suitable amount of waste would be loaded on different types of trucks used. A one-week notice should be given to EPD with information on Contractor's name and respective contact details.	To meet the requirement for disposal at landfill	Contractor and Waste haulier	All works areas	Construction phase	Implemented

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
S10.125	This will generally follow the PNAP 25 in handling of dredged/excavated sediment. The dredged / excavated sediments would be loaded onto barges and transported to existing designated disposal sites allocated by the MFC according to their levels of contamination, as presented below: ▪ For Type 1 sediment, the sediments will be excavated/dredged and transport to designated CEDD Facilities, typically at South Cheung Chau and/or Ninepin. ▪ For Type 2 sediment, the sediments will be dredged/excavated and transport to designated CEDD Facilities, typically at East Sha Chau for confined marine disposal. ▪ For Type 3 sediment, it would require special treatment/disposal before confined marine disposal at CEDD Facilities, typically at East Sha Chau. In order to have the least potential of loss of contaminants to the marine environment, containment of the sediments in geosynthetic containers is proposed when transporting the sediment. Field trials are recommended to be undertaken during	To dispose sediment in an authorized and least impacted way	Contractor	All works areas with sediments concern	Detailed Design and Construction phase	To be implemented as per construction programme

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
	the detailed design stage to establish the optimum handling method for this approach. The details of the disposal methodology could therefore be confirmed during the detailed design stage, prior to construction.					
S10.126	The basic requirements and procedures for dredged / excavated sediment disposal specified under PNAP 252 shall be followed.	To dispose sediment in an authorized and least impacted way	Contractor	All works areas with sediments concern	Construction phase	To be implemented as per construction programme
S10.127	The Project Proponent will agree in advance with MFC of CEDD on the site allocation by submitting a Construction & Demolition Material Management Plan. The final disposal sites and arrangement will be determined by the MFC and a dumping permit will be obtained from the DEP prior to the commencement of the dredging and excavation works.	To determine the best handling and disposal option of the sediments.	MTR/ Contractor	All works areas with sediments concern	Detailed Design and Construction phase	To be implemented as per construction programme
S10.128	The contractor for the dredging/ excavation works shall apply for the site allocations of marine sediment disposal based on the prior agreement with MFC/CEDD. The contractor shall apply for all necessary permits from relevant authorities for the disposal of dredged / excavated sediment.	To dispose the sediments in an authorized way.	Contractor	All works areas with sediments concern	Construction phase	To be implemented as per construction programme

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
S10.129	If temporary stockpiling of sediments is necessary, the sediment should be covered by tarpaulin and earth bunds or sand bag barriers should be provided on site to prevent leachate from entering the drains and surrounding water bodies. The stockpiling areas should be completely paved or covered by lining avoiding contaminating the soil or groundwater underneath.	To prevent the cross contamination of surrounding soils and water bodies	Contractor	All works areas with sediments concern	Construction phase	To be implemented as per construction programme
S10.130	The dredged / excavated sediment should be transported by covering trucks to designated barging points. The barge transporting the sediments to the designated disposal site should be equipped with tight fitting seals to prevent leakage. Besides, the barge should not be filled to a level that would cause overflow of materials or laden water during loading or transportation.	To prevent overflowing of sediments to the surrounding area and water bodies	Contractor	All works areas with sediments concern / trucks / barges	Construction phase	To be implemented as per construction programme
S10.131	Loading of the dredged / excavated sediment to the barge should be controlled to avoid splashing and overflowing of the sediment slurry to the surrounding water.	To prevent overflowing of sediments to the surrounding area and water bodies	Contractor	Barging points	Construction phase	To be implemented as per construction programme
S10.132	In order to minimise the potential odour emissions during the dredging / excavation operation and transportation of the sediment, the dredged / excavated sediment placed on barges should be properly covered	To minimise dust and odor impacts to surrounding environment	Contractor	All works areas with sediments concern /	Construction phase	To be implemented as per construction

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
	as far as practicable. Requirement of the *Air Pollution Ordinance (Construction Dust) Regulation*, where relevant, should be adhered to during the construction phase of the Project.			Barging points		programme
S10.134	Workers should wear protective gloves when carrying out the dredging / excavation works. Adequate washing and cleaning facilities should be provided on site.	To minimise the exposure to the contaminated sediments	Contractor	All works areas with sediments concern	Construction phase	Implemented
S10.135	For allocation of sediment disposal site and application of marine dumping permit, another proposal for sampling and chemical testing of the sediment will be prepared and submitted to the EPD for approval following the procedures in PNAP 252. The approved detailed sampling and chemical testing will be carried out prior to the commencement of the dredging/excavation activities to confirm the sediment disposal method. The contamination levels of the marine sediment to be dredged / excavated have to be analysed and recorded. After carrying out the sampling and testing, a Sediment Quality Report (SQR) will be prepared for EPD approval as required under the *Dumping at Sea Ordinance* to agree and confirm the quantities and extent of the contamination of the sediments prior to the dredging/ construction contract	To analyse the sediments quality and determine the best disposal option	Contractor	All works areas with sediments concern	Construction phase	To be implemented as per construction programme

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
	being tendered. The SQR will include the sampling details, the chemical testing results, quality control records, proposed classification and delineation of sediment according to the requirements of the Appendix A of PNAP 252.					
S10.136	If chemical wastes are produced at the construction site, the Contractor would be required to register with the EPD as a chemical waste producer and to follow the guidelines stated in the *Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes*. Containers used for storage of chemical waste should : ▪ Be compatible with the chemical wastes being stored, maintained in good condition and securely sealed; ▪ Have a capacity of less than 450 litres unless the specifications have been approved by EPD; and ▪ Display a label in English and Chinese in accordance with instructions prescribed in Schedule 2 of the *Waste Disposal (Chemical Waste) (General) Regulation*.	To properly store the chemical waste within works areas	Contractor	All works areas	Construction phase	Implemented
S10.137	The chemical storage areas should: ▪ Be clearly labelled to indicate corresponding chemical characteristics of the chemical waste and	To prepare appropriate storage areas for chemical waste at works areas	Contractor	All works areas	Construction phase	Implemented

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
	used for storage of chemical waste only; ▪ Be enclosed on at least 3 sides; ▪ Have an impermeable floor and bunding, of capacity to accommodate 110% of the volume of the largest container or 20% by volume of the chemical waste stored in that area, whichever is the greatest; ▪ Have adequate ventilation; ▪ Be covered to prevent rainfall from entering; and ▪ Be properly arranged so that incompatible materials are adequately separated.					
S10.138	Lubricants, waste oils and other chemical wastes would be generated during the maintenance of vehicles and mechanical equipments. Used lubricants should be collected and stored in individual containers which are fully labelled in English and Chinese and stored in a designated secure place.	To clearly label the chemical waste at works areas	Contractor	All works areas	Construction phase	Implemented
S10.139	A trip-ticket system should be operated in accordance with the *Waste Disposal (Chemical Waste) (General) Regulation* to monitor all movements of chemical waste. The Contractor should employ a licensed collector to transport and dispose of the chemical wastes, to either	To monitor the generation, reuse and disposal of chemical waste	Contractor	All works areas	Construction phase	Implemented

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
	the approved CWTC at Tsing Yi, or another licensed facility, in accordance with the *Waste Disposal (Chemical Waste) (General) Regulation*.					
S10.140	General refuse should be stored in enclosed bins or compaction units separate from C&D materials and chemical waste. A reputable waste collector should be employed by the contractor to remove general refuse from the site, separately from C&D materials and chemical wastes.	To properly store and separate from other C&D materials for subsequent collection and disposal	Contractor	All works areas	Construction phase	Implemented
S10.141	The recyclable component of general refuse, such as aluminium cans, paper and cleansed plastic containers should be separated from other waste. Provision and collection of recycling bins for different types of recyclable waste should be set up by the Contractor. The Contractor should also be responsible for arranging recycling companies to collect these materials.	To facilitate recycling of recyclable portions of refuse	Contractor	All works areas	Construction phase	Implemented
S10.142	The Contractor should carry out a training programme for workers in avoiding, reducing, reusing and recycling of materials generation. Posters and leaflets advising on the use of the bins should also be provided in the sites as reminders.	To raise workers' awareness on recycling issue	Contractor	All works areas	Construction phase	Implemented
Waste Management Implications (Operation Phase)						

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
S10.146-10.147	Chemical waste: ▪ The requirements stipulated in the *Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes* should be followed in handling of chemical waste as in construction phase. ▪ A trip-ticket system should be operated in accordance with the *Waste* Disposal *(Chemical Waste) (General) Regulation* to monitor all movements of chemical wastes which would be collected by a licensed collector to a licensed facility for final treatment and disposal. ▪ The recommendations proposed for the mitigation of impacts from chemical waste in construction phase should also be followed (refer to S10.104-S10.106).	To avoid environmental impacts in handling, storage and disposal of chemical waste	MTR	Ventilation buildings, SSS and WKT	Operation phase	To be implemented as per construction programme
S10.148-S10.149	General refuse: ▪ Provide recycling bins at designated areas for proper recycling of papers, aluminium cans and plastics bottles.	To separate general refuse from other waste types and proper disposal of the refuse	MTR	Ventilation buildings, SSS and WKT	Operation phase	To be implemented as per construction programme

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
	▪ Separation from other waste types and collected by licensed collectors at daily basis to minimize the potential impacts from odour and vermin.					
S10.150	Industrial waste: ▪ Separation of reusable components like steel before collection by licensed collector	To recycle useful materials from industrial waste and proper disposal	MTR	Ventilation buildings, SSS and WKT	Operation phase	To be implemented as per construction programme
Water Quality Impact (Construction Phase)						
S11.128 - S11.153	Construction site run-off and general construction activities: ▪ The mitigation measures as outlined in the ProPECC PN 1/94 Construction Site Drainage should be adopted where applicable.	To control water quality impact from construction site runoff and general construction activities	MTR / Contractor	All works areas	Construction phase	Implemented
S11.154	Groundwater seepages from uncontaminated area: ▪ In case seepage of uncontaminated groundwater occurs, groundwater should be pumped out from the works areas and discharged into the storm system via silt removal facilities. Uncontaminated groundwater from dewatering process should also	To control water quality impact from groundwater from uncontaminated area	MTR / Contractor	All works areas	Construction phase	To be implemented as per construction programme

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
	be discharged into the storm system via silt traps.					
S11.155	As the proposed WKT is near the Victoria Harbour, high ground water level regime due to both tidal effects and rainwater infiltration is anticipated. A cofferdam wall should be built to limit groundwater inflow to the excavation works areas in the WKT site.	To control water quality impact from groundwater from uncontaminated area	MTR / Contractor	WKT	Construction phase	To be implemented as per construction programme
S11.156	To monitor the tide and groundwater relationship, it is recommended to install groundwater level loggers at the nearest tidal areas (i.e. near Mai Po).	To monitor the groundwater level	MTR / Contractor	Mai Po	Construction phase	To be implemented as per construction programme
S11.157 - S11.158	Site Runoff or Groundwater from contaminated areas: ▪ No directly discharge of groundwater from contaminated areas should be adopted.	To control water quality impact from contaminated groundwater	MTR / Contractor	Excavation areas where contaminated	Construction phase	To be implemented as per

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
	▪ Prior to any excavation works within the potentially contaminated areas, the baseline groundwater quality in the areas should be reviewed based on the past relevant site investigation data and any additional groundwater quality measurements to be performed with reference to *Guidance Note for Contaminated Land Assessment and Remediation* and the review results should be submitted to EPD for examination. If the review results indicated that the groundwater to be generated from the excavation works would be contaminated, this contaminated groundwater should be either properly treated or properly recharged into the ground in compliance with the requirements of the TM-DSS. ▪ If wastewater treatment is to be deployed for treating the contaminated groundwater, the wastewater treatment unit shall deploy suitable treatment processes (e.g. oil interceptor / activated carbon) to reduce the pollution level to an acceptable standard and remove any prohibited substances (such as TPH) to an undetectable range. ▪ All treated effluent from the wastewater treatment plant shall meet the requirements as stated in			ground-water is found		construction programme

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
	TM-DSS and should be either discharged into the foul sewers or tankered away for proper disposal. ▪ If deployment of wastewater treatment is not feasible for handling the contaminated groundwater, groundwater recharging wells should be installed as appropriate for recharging the contaminated groundwater back into the ground. The recharging wells should be selected at places where the groundwater quality will not be affected by the recharge operation as indicated in section 2.3 of the TM-DSS. The baseline groundwater quality should be determined prior to the selection of the recharge wells, and submit a working plan to EPD for agreement. Pollution levels of groundwater to be recharged shall not be higher than pollutant levels of ambient groundwater at the recharge well. Groundwater monitoring wells should be installed near the recharge points to monitor the effectiveness of the recharge wells and to ensure that no likelihood of increase of groundwater level and transfer of pollutants beyond the site boundary. Prior to recharge, free products should be removed as necessary by installing the petrol interceptor. The Contractor should apply					

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
	for a discharge licence under the WPCO through the Regional Office of EPD for groundwater recharge operation or discharge of treated groundwater.					
S11.128 - S11.136, S11.160	Barging points: Mitigation measures for control water quality impact from surface run-off should be applied. The following good site practices should also be adopted: ▪ all vessels should be sized so that adequate clearance is maintained between vessels and the seabed in all tide conditions, to ensure that undue turbidity is not generated by turbulence from vessel movement or propeller wash ▪ all hopper barges should be fitted with tight fitting seals to their bottom openings to prevent leakage of material ▪ construction activities should not cause foam, oil, grease, scum, litter or other objectionable matter to be present on the water within the site ▪ loading of barges and hoppers should be controlled	To control water quality impact from barging point	MTR / Contractor	All barging Points	Construction phase	To be implemented as per construction programme

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
	to prevent splashing of material into the surrounding water. Barges or hoppers should not be filled to a level that will cause the overflow of materials or polluted water during loading or transportation					
S11.161	Effluent discharge: There is a need to apply to EPD for a discharge licence for discharge of effluent from the construction site under the WPCO. The discharge quality should meet the requirements specified in the discharge licence. Minimum distances of 100 m should be maintained between the discharge points of construction site effluent and the existing seawater intakes. If monitoring of the treated effluent quality from the works areas is required during the construction phase of the Project, the monitoring should be carried out in accordance with the WPCO license which is under the ambit of regional office (RO) of EPD.	To control water quality impact from effluent discharge from construction site	MTR / Contractor	All works areas	Construction phase	Implemented
S11.162	Accidental spillage of chemicals: Contractor should register as a chemical waste producer	To control water quality impact from accidental chemical spillage	MTR / Contractor	All works areas	Construction phase	Implemented

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
	if chemical wastes would be produced from the construction activities. The Waste Disposal Ordinance (Cap 354) and its subsidiary regulations in particular the Waste Disposal (Chemical Waste) (General) Regulation should be observed and complied with for control of chemical wastes**.**					
S11.163	Any service shop and maintenance facilities should be located on hard standings within a bunded area, and sumps and oil interceptors should be provided. Maintenance of vehicles and equipment involving activities with potential for leakage and spillage should only be undertaken within the areas appropriately equipped to control these discharges.	To control water quality impact from accidental chemical spillage	MTR / Contractor	All works areas	Construction phase	To be implemented as per construction programme
S11.164	Disposal of chemical wastes should be carried out in compliance with the Waste Disposal Ordinance. The Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes published under the Waste Disposal Ordinance details the requirements to deal with chemical wastes. General requirements are given as follows: ▪ Suitable containers should be used to hold the chemical wastes to avoid leakage or spillage during storage, handling and transport.	To control water quality impact from accidental chemical spillage	MTR / Contractor	All works areas	Construction phase	Implemented

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
	▪ Chemical waste containers should be suitably labelled, to notify and warn the personnel who are handling the wastes, to avoid accidents. ▪ Storage area should be selected at a safe location on site and adequate space should be allocated to the storage area.					
S11.165	Surface construction works at or in close proximity of watercourses or seafront: ▪ The proposed surface construction works should be carried out in dry season as far as practicable where the flow in the river channel or stream is low. ▪ The use of less or smaller construction plants may be specified to reduce the disturbance to the riverbed or pond deposits. ▪ Temporary sewerage system should be designed to prevent wastewater from entering the river, streams and sea. ▪ Temporary storage of materials (e.g. equipment, filling materials, chemicals and fuel) and temporary stockpile of construction materials should be located well away from any water courses during	To control water quality impact from construction works at or in close proximity of watercourses or seafront	MTR / Contractor	All works areas	Construction phase	To be implemented as per construction programme

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
	carrying out of the construction works. ▪ Stockpiling of construction materials and dusty materials should be covered and located away from any water courses. ▪ Construction debris and spoil should be covered up and/or disposed of as soon as possible to avoid being washed into the nearby water receivers. ▪ Construction activities, which generate large amount of wastewater, should be carried out in a distance away from the waterfront, where practicable. ▪ Mitigation measures to control site run-off from entering the nearby water environment should be implemented to minimize water quality impacts. Surface channels should be provided along the edge of the waterfront within the work sites to intercept the run-off. ▪ Construction effluent, site run-off and sewage should be properly collected and/or treated. ▪ Any works site inside the water courses should be temporarily isolated. The water flow should be temporarily diverted to downstream by using PVC					

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
	pipes, steel arrays in concrete case or similar, restricting the excavation works to be conducted within an enclosed dry section of the channel. This works arrangement would provide a dry zone for excavation works within the river channel and would prevent the conveyance of suspended sediment downstream. Dewatering at works section should be conducted prior to the commencement of works. Further limiting or reducing the works area inside the water courses should be considered during wet season or rainstorm event in order to reduce the area of exposed surface. ▪ Silt curtain should be installed around the construction activities at or near the watercourses to minimize the potential impacts due to accidental spillage of construction wastes and excavated materials. ▪ Proper shoring may need to be erected in order to prevent soil or mud from slipping into the watercourses. ▪ Supervisory staff should be assigned to station on site to closely supervise and monitor the works.					

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
S11.166	Surface construction works close to water gathering grounds: ▪ The conditions as specified in WSD guidelines on protection of Water Gathering Ground should be followed or observed where practicable	To control water quality impact from surface construction works close to Water Gathering Ground	MTR / Contractor	Works areas close to water gathering ground	Construction phase	To be implemented as per construction programme
S11.167	Dredging of marine sediments at LKST: ▪ Closed grab dredger should be used to minimize the loss of sediment during the raising of the loaded grabs through the water column. ▪ No more than one closed grab dredger should be operated at any one time. ▪ Double silt curtains should be deployed around the dredging operations as far as practicable. ▪ The descent speed of grabs should be controlled to minimize the seabed impact speed. ▪ Barges should be loaded carefully to avoid splashing of material. ▪ All barges used for the transport of dredged materials should be fitted with tight bottom seals in order to prevent leakage of material during loading	To minimize the loss of fine sediment to suspension during dredging of marine sediments at LKST	MTR / Contractor	Marine dredging at LKST	Construction phase	To be implemented as per construction programme

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
	and transport. ▪ All barges should be filled to a level which ensures that material does not spill over during loading and transport to the disposal site and that adequate freeboard is maintained to ensure that the decks are not washed by wave action.					
S11.83 and S11.165	Diversion of watercourse: ▪ The excavation works at the existing stream in Shek Kong/ Kam Tin Nullah should be carried out by approved methods by the Engineer to minimise erosion. Should excavation works be carried out at the designated section of water course, temporary river diversion should be conducted prior to the commencement of works to avoid water flowing into works area. The temporary diversion of water flow should be performed by appropriate means, such as completing the construction of the proposed channel section for carrying diverted flow prior to excavation works, or other similar methods, as approved by the Engineer to suit the works condition. This works arrangement would provide a dry zone for excavation works within the river channel and would prevent the conveyance of	To control water quality impact due to diversion of watercourse	MTR / Contractor	Watercourse to be diverted in Shek Kong	Construction phase	To be implemented as per construction programme

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
	suspended sediment downstream. Dewatering at works section should also be conducted prior to the commencement of works. ▪ Mitigation measures for minimizing the water quality impact for surface construction works at or close to the watercourses should also be applied.					
S. 11.169 - 11.173	Hydrogeological Impact: For the cut and cover tunnels and associated excavations for vent buildings and emergency access/escape points, the following measures should be in place in order to mitigate any drawdown effects to the groundwater table during the operation of the temporary dewatering works: ▪ Toe grouting should be applied beneath the toe level of the temporary/permanent cofferdam walls as necessary to lengthen the effective flow path of groundwater from outside and thus control the amount of water inflow to the excavation. ▪ Recharge wells should be installed as necessary outside the excavation areas. Water pumped from the excavation areas should be recharge back into the ground.	To control groundwater hydrogeological impact and groundwater drawdown	MTR/ Contractor	All works areas	Construction phase	To be implemented as per construction programme

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
	The bored tunnels should be constructed using a closed face tunnel boring machine to limit water inflow into the excavation face. The cutter head for the machine will be sealed during excavation and therefore the water inflow from the face will be very small. Precast undrained linings should be installed and back grouted behind the tunnel boring machine as it advances along the alignment to minimize the potential inflow of water behind the cutter head. The Contractor should initially adopt suitable water control strategies while undertaking the excavation works. The water control strategies are shown as follow: ▪ Probing Ahead: As normal practice, the Contractor will undertake rigorous probing of the ground ahead of tunnel excavation works to identify zones of significant water inflow. The probe drilling results will be evaluated to determine specific grouting requirements in line with the tunnel advance. In such zones of significant water inflow that could occur as a result of discrete, permeable					

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	features, the intent would be to reduce overall inflow by means of cut-off grouting executed ahead of the tunnel advance. ▪ Pre-grouting: Where water inflow quantities are excessive, pre-grouting will be required to reduce the water inflow into the tunnel. The pre-grouting will be achieved via a systematic and carefully specified protocol of grouting. ▪ In principle, the grout pre-treatment would be designed on the basis of probe hole drilling ahead of the tunnel face. In the event of excessive drawdown being observed within the ground water table as a result of the tunnelling works even after incorporation of the water control strategies, post-grouting will be applied as described below: ▪ Post-grouting: Groundwater drawdown will be most likely due to inflows of water into the tunnel that have not been sufficiently controlled by the pre-grouting measures. Where this occurs post					

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	grouting will be undertaken before the lining is cast. Whilst unlikely to be required in significant measure, such a contingency should be allowed for reduction in permeability of the tunnel surround (by grouting) to limit inflow to acceptable levels. A detailed groundwater monitoring programme should be developed in detailed design stage to monitor both the proposed works and the impact of those works on the adjacent area.					
Water Quality Impact (Operation Phase)						
S11.174	Tunnel run-off and drainage: ▪ Track drainage channels discharge should pass through oil/grit interceptors/chambers to remove oil, grease and sediment before being pumped to the foul sewer/holding tank for further disposal. ▪ The silt traps and oil interceptors should be cleaned and maintained regularly. ▪ Oily contents of the oil interceptors should be transferred to an appropriate disposal facility, or to be collected for reuse, if possible.	To control runoff from rail track	MTR / DDC	Tunnels and rail tracks	Operation phase	To be implemented as per construction programme

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
S11.175 – S11.176	Sewage effluents: ▪ Connection of domestic sewage generated from the Project should be diverted to the foul sewer wherever possible. If public sewer system is not available, sewage tanking away services or on-site sewage treatment facilities should be provided to prevent direct discharge of sewage to the nearby storm system and all the discharge should comply with the requirements stipulated in the TM-DSS. ▪ For handling, treatment and disposal of other operation stage effluent, the practices outlined in ProPECC PN 5/93 should be adopted where applicable.	To control water quality impact from sewage effluent discharge ventilation buildings, SSS and WKT	MTR / DDC	Ventilation buildings, SSS and WKT	Operation phase	To be implemented as per construction programme
S11.177-S11.181	Shek Kong Stabling Sidings (SSS): ▪ All the maintenance areas within the SSS should be housed or covered to prevent generation of contaminated rainwater runoff. All wastewater generated from the maintenance and cleaning activities should be collected and diverted to oil interceptor or other appropriate treatment facilities for proper treatment so that it satisfies the requirements stipulated in the TM-DSS.	To control water quality impacts from the operation of Shek Kong Stabling Sidings	MTR/DDC	SSS	Operation phase	To be implemented as per construction programme

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
	▪ In case there is no pubic sewer available for the SSS during the operation phase, all wastewater generated or collected in the SSS should be tankered away for proper disposal to prevent direct discharge of any wastewater to the nearby surface water system. ▪ Oil interceptors should be regularly inspected and cleaned to avoid wash-out of oil during storm conditions. A bypass would be provided to avoid overload of the interceptor's capacity. ▪ All waste oils and fuels should be collected and handled in compliance with the Waste Disposal Ordinance. Site drainage should be well maintained and good management practices should be observed to ensure that oils and chemicals are managed, stored and handled properly and do not enter the nearby water streams. Areas for chemical storage should be securely locked. The storage area should have an impermeable floor and bunding of capacity to accommodate 110% of the volume of the largest container or 20% by volume of the chemical waste stored in that area, whichever is the greatest, to minimize the impacts from any potential accidents. In case of the occurrence of					

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	accidental spillage of chemicals, it is required to take immediate actions to control the release of chemicals. ▪ Disposal of chemical wastes should be carried out in compliance with the Waste Disposal Ordinance. The Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes published under the Waste Disposal Ordinance details the requirements to deal with chemical wastes.					
S11.182	For any future maintenance desilting of the newly constructed or diverted watercourses, temporary barrier walls should be used to provide a dry zone for desilting work. Maintenance desilting should be carried out during periods of low flow in the dry season.	To control water quality impact due to maintenance desilting of the newly constructed or diverted watercourses	MTR	Diverted watercourses in Shek Kong	Operation phase	To be implemented as per construction programme
Air Quality (Construction Phase)						
S 12.78	For concrete batching plant, the requirements and mitigation measures stipulated in the *Guidance Note on the Best Practicable Means for Cement Works (Concrete Batching Plant) BPM 3/2(93)* should be followed and implemented.	To minimize dust impacts	MTR / Contractor	Concrete batching plant at works area V	Construction phase	To be implemented as per construction programme

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
Table 12.9 and Table 12.12	The design emission concentration of dust collector for different types of silos for concrete batching plant should be: ▪ Dust collector for each small Cement Silo ≤ 30 mg/m^3 ▪ Dust collector for each Large Capacity Cement Silo ≤ 50mg/m^3 ▪ Dust collector for each PFA Silo ≤ 30 mg/m^3 ▪ Dust collector for each Mixer ≤ 40 mg/m3 During operation of concrete batching plant: ▪ The aggregates should be unloaded from the tipper trucks to the receiving hopper equipped with enclosures on 3 sides and top cover, and water spraying system. ▪ The cement and PFA should be directly loaded into the silo via a flexible duct. Dust collectors should be installed at the cement/PFA silo based on the above design emission rates. ▪ The aggregates should be stored in fully enclosed overhead storage bins. The top of overhead	To minimize dust impacts	MTR / Contractor	Concrete batching plant at works area V	Construction phase	To be implemented as per construction programme

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
	storage bins should be covered with cladding. Water spraying system should be installed at the top of storage bins for watering the aggregates, and aggregate storage bins should be fully enclosed. ▪ The whole process of weighing and mixing of cementitious material should be performed in a fully enclosed environment. The mixers shall equip with the dust collectors based on the above design emission rates. ▪ The concrete should be directly loaded from the mixer into the transit mixer of a truck in "wet" form. ▪ Haul road within the site should be paved. Wheel washing pit should be installed at the gate of the concrete batching plant. Water spraying system should be installed along the haul road.					
Table 12.10	(1) Cut & Cover Areas and Stockpiles in the vicinity of adits/shafts: (a) Heavy construction activities at Cut & Cover Areas, Storage of materials at Stockpiles - Active areas for heavy construction activities, loading & unloading materials at	To minimize dust impacts	MTR / Contractor	All works areas	Construction phase	Implemented

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
	stockpiles ▪ The specified requirements for cut & cover areas and stockpiles at Shek Kong, Nam Cheong and West Kowloon works areas are as follows: (i) Shek Kong works area – active area minimized to 15% of total area, watering with complete coverage of active area ten times a day. (ii) Nam Cheong works area – active area minimized to 30% of total area, watering with complete coverage of active stockpile area four times a day. (iii) West Kowloon works area – active area minimized to 15% of total area, watering with complete coverage of active area eight times a day. ▪ For other sites, the active area would be minimized to 30% of the total area, water spraying system would be applied on the active area and watering with complete coverage of active area four times a day would be required. ▪ The remaining inactive area would be well covered					

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
	with impervious sheeting at all work sites. (b) Trucks - Transportation of materials ▪ Wheel wash facilities provided at the site exit. The vehicles should be washed before leaving the stockpiles. The spoils should also be well covered before leaving the site in order to minimise generation of dusty materials. ▪ The haul roads within the site should be paved and water spraying would be provided to keep the wet condition. ▪ For the Shek Kong works area, watering paved haul roads once per hour would be provided. (2) Temporary stockpiles within barging facilities: (a) Loading point - Loading of spoils from trucks onto stockpile ▪ Water spraying should be provided at the loading points to suppress the dust impact. (b) Storage of materials - Active area for loading & unloading materials					

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
	▪ Water spraying system should be applied on the active area and watering with complete coverage of active area four times a day is required.					
Table 12.11	Barging facilities: (1) Haul road within barging facilities - Transportation of spoils to the barging points ▪ All road surfaces within the barging facilities should be paved and water spraying should be provided to keep the wet condition. For paved haul roads at West Kowloon and Nam Cheong, watering haul road once per hour is required. (2) Unloading of materials - Unloading of spoil materials ▪ The unloading process should be undertaken within enclosed tipping hall. Water spraying and dust curtain should be provided at the discharge point for dust suppression. (3) Trucks - Vehicles leaving the barging facilities ▪ Vehicle wheel washing facilities should be provided at site exit.	To minimize dust impacts	MTR / Contractor	All barging points	Construction phase	To be implemented as per construction programme

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
	(4) Transportation of spoils to one of the Nam Cheong Barging Point ▪ Fully enclosed conveyor system should be adopted for transportation of spoils from shaft to the barging point.					
S 12.78	Dust suppression measures stipulated in the Air Pollution Control (Construction Dust) Regulation and good site practices: ▪ Use of regular watering, with complete coverage, to reduce dust emissions from exposed site surfaces and unpaved roads, particularly during dry weather. ▪ Use of frequent watering for particularly dusty construction areas and areas close to ASRs. ▪ Side enclosure and covering of any aggregate or dusty material storage piles to reduce emissions. Where this is not practicable owing to frequent usage, watering should be applied to aggregate fines. ▪ Open stockpiles should be avoided or covered. Where possible, prevent placing dusty material	To minimize dust impacts	MTR / Contractor	All works areas	Construction phase	Implemented

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
	storage piles near ASRs. ▪ Tarpaulin covering of all dusty vehicle loads transported to, from and between site locations. ▪ Establishment and use of vehicle wheel and body washing facilities at the exit points of the site. ▪ Provision of wind shield and dust extraction units or similar dust mitigation measures at the loading points, and use of water sprinklers at the loading area where dust generation is likely during the loading process of loose material, particularly in dry seasons/ periods. ▪ Imposition of speed controls for vehicles on unpaved site roads. 8 kilometers per hour is the recommended limit. ▪ Where possible, routing of vehicles and positioning of construction plant should be at the maximum possible distance from ASRs. ▪ 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 3 sides. ▪ Cement or dry PFA delivered in bulk should be					

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
	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. ▪ Loading, unloading, transfer, handling or storage of bulk cement or dry PFA should be carried out in a totally enclosed system or facility, and any vent or exhaust should be fitted with an effective fabric filter or equivalent air pollution control system.					
S12.94	Environmental monitoring and audit for dust emission should be conducted in accordance with EM&A Manual during the construction phase of the Project to check compliance with legislative requirements.	To monitor dust impact	MTR / Contactor	Proposed monitoring locations	Design and operation phases	Implemented
Air Quality (Operation Phase)						
S12.48	The vent shafts of the stations should be designed to be sited at more than 5m from any opening at the adjacent building	To alleviate the adverse air quality impact in the stations	MTR	WKT	Design and operation phases	To be implemented as per construction programme
S12.50	The design of the mechanical air ventilation for PTI	To alleviate the adverse	MTR	PTI at the	Design and	To be

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
	should follow EPD's ProPECC PN1/98 Control of Air Pollution in Semi-confined Public Transport Interchanges.	air quality impact in the PTI		ground floor of ventilation building complex at WKT	operation phases	implemented as per construction programme
Hazard to Life						
S13.96/ S13.99	Improved truck design to reduce the amount of combustibles in the cabin and fuel carried in the fuel tank should be minimised to reduce the duration of any fire. The truck should be brand new, diesel powered and equipped with fuel and battery isolation switches, front exhaust spark arrester, 1 x 9 kg water based and 1 x 9 kg dry chemical powder fire extinguishers. This should be combined with monthly vehicle inspection	To meet the ALARP requirement	MTRC/ Contractor	-	Construction phase	To be implemented as per construction programme
S13.96	The explosive truck accident frequency should be minimized by implementing a dedicated training programme for both the driver and his attendants, including regular briefing sessions, implementation of a	To meet the ALARP requirement	MTRC/ Contractor	-	Construction phase.	To be implemented as per construction

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
	defensive driving attitude. In addition, drivers should be selected based on good safety record, and medical checks.					programme
S13.96	The contractor should as far as practicable combine the explosive deliveries for a given work area.	To meet the ALARP requirement	MTRC/ Contractor	-	Construction phase	To be implemented as per construction programme
S13.96	The explosive truck fire involvement frequency should be minimized by implementing a better emergency response and training to make sure the adequate fire extinguishers are used and attempt is made to evacuate the area of the incident or securing the explosive load if possible. All explosive vehicles should also be equipped with bigger capacity AFFF-type extinguishers.	To meet the ALARP requirement	MTRC/ Contractor	-	Construction phase	To be implemented as per construction programme
S13.96	A minimum headway between two consecutive truck conveys of at least 10 min is recommended	To meet the ALARP requirement	MTRC/ Contractor	Along explosives transport	Construction phase.	To be implemented as per

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
				route.		construction programme
S13.96/ S13.105	Only the required quantity of explosives for a particular blast should be transported to avoid the return of unused explosives to the magazines. If disposal is required for small quantities, disposal should be made in a controlled and safe manner by a Registered Shotfirer.	To reduce the risk during explosives transport	MTRC/ Contractor	-	Construction phase	To be implemented as per construction programme
S13.97	Blasting activities including storage and transport of explosives should be supervised and audited by competent site staff to ensure strict compliance with the blasting permit conditions.	To ensure that the risks from the proposed explosives storage and transport would be acceptable	MTRC / Contractor	Works areas at which explosives would be stored and/or used.	Construction phase	To be implemented as per construction programme
S13.97	Emergency plan (ie magazine operational manual) shall be developed to address uncontrolled fire in magazine area and transport. The case of fire near an explosive carrying	To reduce the risk of fire	MTRC/ Contractor	Explosive Magazine and along	Construction phase	To be implemented as per

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
	truck in jammed traffic should also be covered. Drill of the emergency plan should be carried out at regular intervals.			explosives transport route.		construction programme
S13.97	Adverse weather working guideline should be developed to clearly define procedure for transport explosives during thunderstorm.	To ensure safe transport of explosives	MTRC/ Contractor	Along explosives transport route.	Construction phase	To be implemented as per construction programme
S13.98	Delivery vehicles shall not be permitted to remain within the secured fenced off magazine store area.	To reduce the risk of fire within the magazine	MTRC / Contractor	Explosive Magazine	Construction phase	To be implemented as per construction programme
S13.98	Good house-keeping within and outside of the magazine to ensure that combustible materials (including vegetation) are removed and not allowed to accumulate.	To reduce the risk of fire within the magazine	MTRC / Contractor	Explosive Magazine	Construction phase	To be implemented as per construction

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
						programme
S13.99/ S13.101	Use only experienced driver(s) with good safety record. Training should be provided to ensure it covers all major safety subjects.	To ensure safe transport of explosives	MTRC/ Contractor	-	Construction phase	To be implemented as per construction programme
S13.99	Develop procedure to ensure that parking space on the site is available for the explosive truck. Confirmation of parking space should be communicated to truck drivers before delivery.	To ensure that the risks from the proposed explosives storage and transport would be acceptable	MTRC/ Contractor	Explosive magazine	Construction phase	To be implemented as per construction programme
S13.99	Detonators shall not be transported in the same vehicle with other Class 1 explosives	To reduce the risk of explosion during the transport of cartridge emulsion	MTRC / Contractor	-	Construction phase	To be implemented as per construction programme
S13.99	During transport of the explosives within the tunnel, hot work should not be permitted in the vicinity of the	To ensure safe transport of	MTRC/	Along explosives	Construction	To be implemented

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
	explosives offloading or charging activities.	explosives	Contractor	transport route.	phase	as per construction programme
S13.99	Ensure that packaging of detonators remains intact until handed over at blasting site.	To reduce the risk of explosion during the transport of detonator	MTRC/ Contractor	-	Construction phase	To be implemented as per construction programme
S13.99	Horizontal fire screen on cargo deck and vertical fire screen mounted at least 150 mm behind the drivers cab and 100 mm from the steel cargo compartment, the vertical screen shall protrude 150 mm in excess of all three (3) sides of the steel cargo compartment.	To reduce the risk during explosives transport	MTRC/ Contractor	-	Construction phase	To be implemented as per construction programme
S13.104	Ensure that cartridge emulsion with high water content should be preferred. Also, the emulsion with perchlorate formulation should be avoided.	To ensure safe explosives to be used	MTRC/ Contractor	-	Construction phase	To be implemented as per construction programme

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
Landfill Gas Hazard – Design and Construction Phases						
S14.73 & S14.86	- All personnel who work on site and all visitors to the site should be made aware of the possibility of ignition of gas in the vicinity of excavations. Safety notices should be posted warning of the potential hazards.	Protect the workers from landfill gas hazards	Contractor	XRL tunnels within the NTML Consultation Zone, Barging Point and Nursery Site	Construction phase	To be implemented as per construction programme
S14.73	- Those staff who work in, or have responsibility for "at risk" areas, including all excavation workers, supervisors and engineers working within the Consultation Zone, should receive appropriate training on working in areas susceptible to landfill gas, fire and explosion hazards.	Protect the workers from landfill gas hazards	Contractor	XRL tunnels within the NTML Consultation Zone	Construction phase	To be implemented as per construction programme
S14.73	- During all works, safety procedures will be implemented to minimise the risks of fires and explosions and asphyxiation of workers (especially in	Protect the workers from landfill gas hazards	Contractor	XRL tunnels within the NTML	Construction phase	To be implemented as per

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
	confined space).			Consultation Zone		construction programme
S14.73	- Safety officers, specifically trained with regard to landfill gas related hazards and the appropriate actions to take in adverse circumstances will be present on all worksites throughout the works.	Protect the workers from landfill gas hazards	Contractor	XRL tunnels within the NTML Consultation Zone	Construction phase	To be implemented as per construction programme
S14.73, S14.86, S14.87	- Smoking and naked flames will be prohibited within confined spaces. 'No Smoking' and 'No Naked Flame' notices in Chinese and English will be posted prominently around the construction site. Safety notices should be posted warning of the potential hazards.	Protect the workers from landfill gas hazards	Contractor	XRL tunnels within the NTML Consultation Zone, Barging Point and Nursery Site	Construction phase	To be implemented as per construction programme
S14.73	- Welding, flame-cutting or other hot works may only be carried out in confined spaces when controlled by	Protect the workers from landfill gas hazards	Contractor	XRL tunnels within the	Construction phase	To be implemented

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
	a 'permit to work' procedure, properly authorised by the Safety Officer. The permit to work procedure will set down clearly the requirements for continuous monitoring of methane, carbon dioxide and oxygen throughout the period during which the hot works are in progress. The procedure will also require the presence of an appropriately qualified person who shall be responsible for reviewing the gas measurements as they are made, and who shall have executive responsibility for suspending the work in the event of unacceptable or hazardous conditions. Only those workers who are appropriately trained and fully aware of the potentially hazardous conditions which may arise will be permitted to carry out hot works in confined areas.			NTML Consultation Zone		as per construction programme
S14.73	- A mechanical ventilation system must be in use at all times during which personnel are engaged in works inside the tunnel or excavation and be evacuated in	Protect the workers from landfill gas hazards	Contractor	XRL tunnels within the NTML	Construction phase	To be implemented as per

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
	the event of power outages. Work must not be carried out in the absence of mechanical ventilation and supervision of adequately trained safety personnel. In exceptional case where work is carried out under non-ventilated condition, any electrical equipment used, such as motors and extension cords, should be intrinsically safe.			Consultation Zone		construction programme
S14.73	- Adequate fire extinguishing equipment, fire-resistant clothing and breathing apparatus sets should be made available on site.	Protect the workers from landfill gas hazards	Contractor	XRL tunnels within the NTML Consultation Zone	Construction phase	To be implemented as per construction programme
S14.86	- Raising the site office 500mm above ground.	Protect the workers from landfill gas hazards	Contractor	Barging Point	Construction phase	To be implemented as per construction programme

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
S14.86	- Utilities services connected to the site office and the annulus around these service entry points should be properly sealed.	Protect the workers from landfill gas hazards	Contractor	Barging Point	Construction phase	To be implemented as per construction programme
S14.74	- Construction works to be undertaken in confined space should follow the relevant Regulations under Chapter 59 Factories and Industrial Undertakings Ordinance and Chapter 509 Occupational Health and Safety Ordinance.	Protect the workers from landfill gas hazards	Contractor	XRL tunnels within the NTML Consultation Zone	Construction phase	To be implemented as per construction programme
S14.73	- Monitoring of methane, carbon dioxide and oxygen inside the XRL tunnels.	Protect the workers from landfill gas hazards	Contractor	XRL tunnels within the NTML Consultation Zone	Construction phase	To be implemented as per construction programme
S14.75	- A walkover survey to monitor flammable gas at all joints and cracks, if identified, upon completion of the tunnel work. Rectifications, such as sealing of	Confirm no landfill gas ingress into the XRL	Contractor	XRL tunnels within the NTML	Construction phase	To be implemented as per

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
	cracks and inspection of tunnel seals, shall be carried out for any signs of the presence of flammable gas. The survey should be conducted under non-ventilated condition and before starting the work of the day.	tunnels		Consultation Zone		construction programme
S14.76	- Weekly monitoring of methane, carbon dioxide and oxygen in the form of a walkover survey at 20m intervals for section of tunnels under NTML and 50m interval within the NTML Consultation Zone should be conducted after completion of the tunnel construction works and not less than 3 months before commencement of operation. The survey should be conducted under non-ventilated condition and before starting the work of the day.	Confirm no landfill gas ingress into the XRL tunnels	Contractor	XRL tunnels within the NTML Consultation Zone	Construction phase	To be implemented as per construction programme
S14.77	- A summary of the monitoring results should be submitted to EPD for record before the commencement of operational phase. The results should be reviewed and agreed with EPD before the commencement of operation to determine the	To review and agree the monitoring requirement during the operational phase	MTR/Contractor	-	Before operation	To be implemented as per construction

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
	monitoring requirements during the operational phase					programme
S14.78	- Appropriate sealant will be applied to joints to prevent the ingress of groundwater, which will also form a low permeability gas barrier. Good workmanship and adequate construction supervision will be required to ensure the actual works are implemented as per the design requirements. This will be implemented by MTRC's Material and Workmanship Specification.	Protect the XRL tunnels from landfill gas hazards	Design Engineer/ Contractor	XRL tunnels within the NTML Consultation Zone	Design and Construction phases	To be implemented as per construction programme
S14.79	- Adequate ventilation will be needed as part of the tunnel design to act as an active gas control when needed.	Protect the XRL tunnels from landfill gas hazards	Design Engineer	XRL tunnels within the NTML Consultation Zone	Design phase	To be implemented as per construction programme
S14.80	- Upon completion of the landfill gas protection measures, a report on the implemented landfill gas protection measures with relevant as-built drawings	Ensure landfill gas protection measures have been completed	Contractor	XRL tunnels within the NTML	Construction phase	To be implemented as per

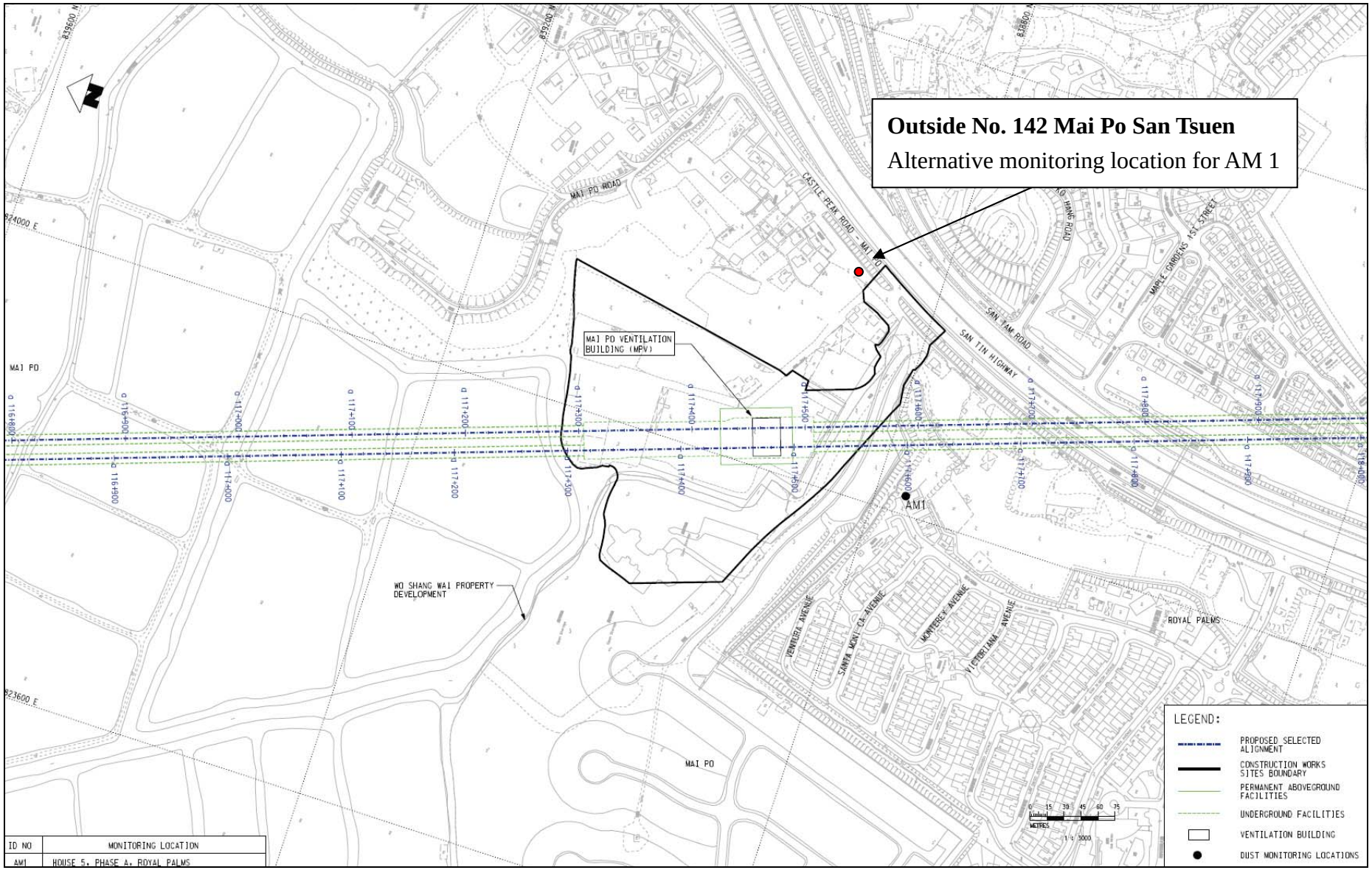
EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
	and other detailed information showing that the design measures mentioned in this assessment to protect the tunnels from landfill gas hazard have been properly incorporated should be submitted to EPD.			Consultation Zone		construction programme
Landfill Gas Hazard – Operation Phase						
S14.76	- Ventilation of the tunnels should be switched on for half an hour before the first train is expected (the requirement to implement this measure is subject to findings of the review of landfill gas monitoring data with EPD before the commencement of operation).	Protect the operation of the XRL from landfill gas hazards	MTR	XRL tunnels within the NTML Consultation Zone	Operation phase	To be implemented as per construction programme
S14.76	- All maintenance personnel and station staff working within the tunnels should be educated in the dangers of landfill gas and the signs and symptoms of asphyxia.	Protect the workers from landfill gas hazards	MTR	XRL tunnels within the NTML Consultation Zone	Operation phase	To be implemented as per construction programme
S14.76	- Smoking within the tunnels should be prohibited at all times.	Protect the operation of the XRL and workers	MTR	XRL tunnels within the	Operation phase	To be implemented

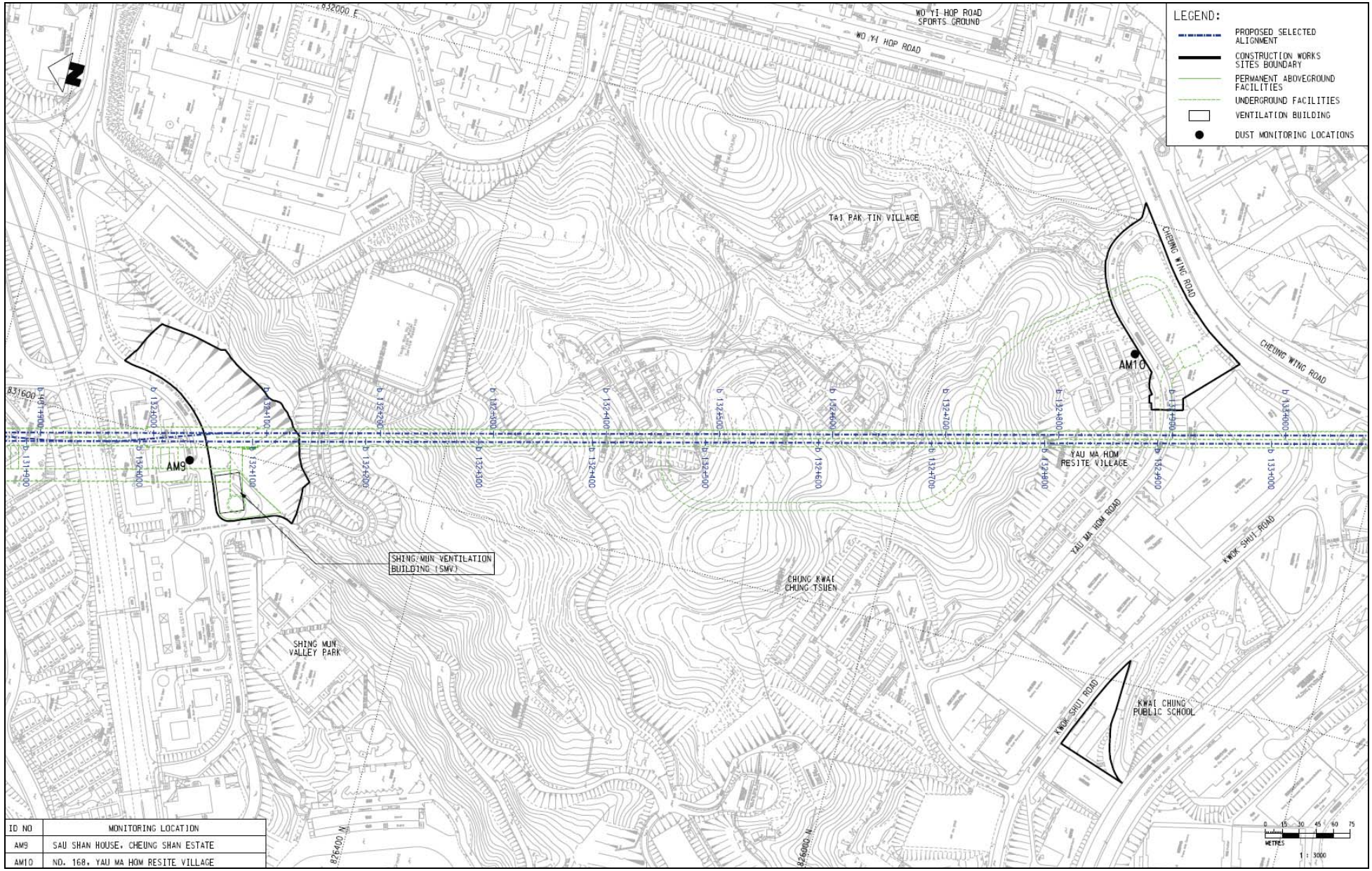
EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
		from landfill gas hazards		NTML Consultation Zone		as per construction programme
S14.76	- An assumed presence of landfill gas should be adopted at all times by maintenance workers and a strictly regulated "work permit procedure" involving training, ventilation, gas monitoring (as detailed in the Construction recommendations section), safety tracking and communication with maintenance staff, enforcement of the no smoking order.	Protect the workers from landfill gas hazards	MTR	XRL tunnels within the NTML Consultation Zone	Operation phase	To be implemented as per construction programme
S14.82 & S14.83	- The monitoring requirement during the operational phase should be discussed with EPD before the commencement of operation. Weekly monitoring of methane, carbon dioxide and oxygen in the form of a walkover survey at 20m intervals for section of tunnels under NTML and 50m interval within the NTML Consultation Zone is tentatively proposed. The survey should be conducted under non-ventilated	Confirm no landfill gas ingress into the XRL tunnels	MTR	XRL tunnels within the NTML Consultation Zone	Operation phase	To be implemented as per construction programme

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
	condition and before the first train operates and start-up of ventilation, if applicable. A summary of the monitoring results should be submitted to EPD for record at the end of the monitoring period.					
S14.84	- An annual walkover survey in the tunnels within the Consultation Zone of the NTML should be conducted to test for the presence of flammable gas at joints and cracks, if identified. Rectifications, such as sealing of cracks and inspection of tunnel seals, should be carried out for any signs of presence of flammable gas. The survey should be conducted under non-ventilated condition and before the first train operates and start-up of ventilation, if applicable.	Confirm no landfill gas ingress into the XRL tunnels	MTR	XRL tunnels within the NTML Consultation Zone	Operation phase	To be implemented as per construction programme

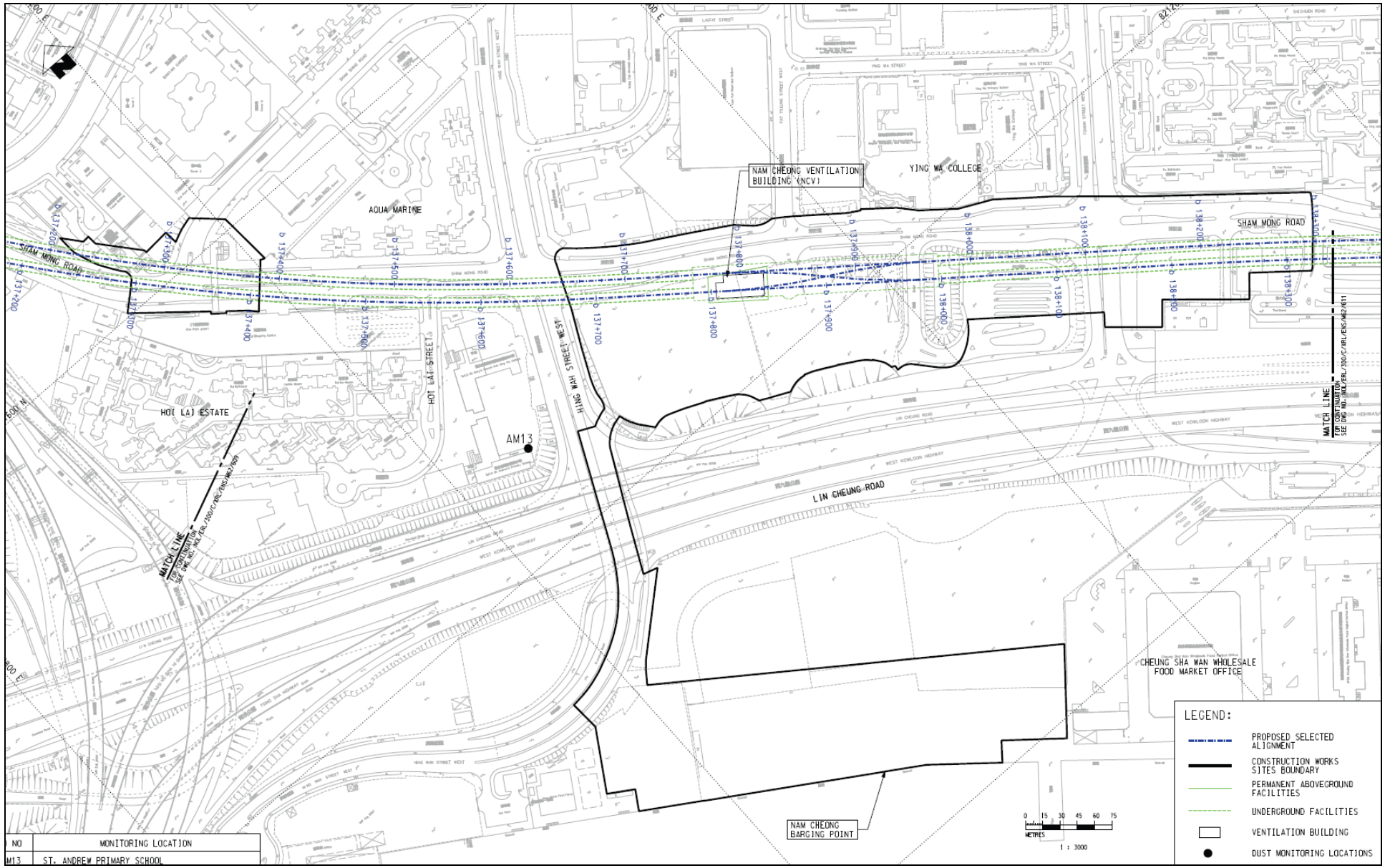
Appendix D

Monitoring Locations

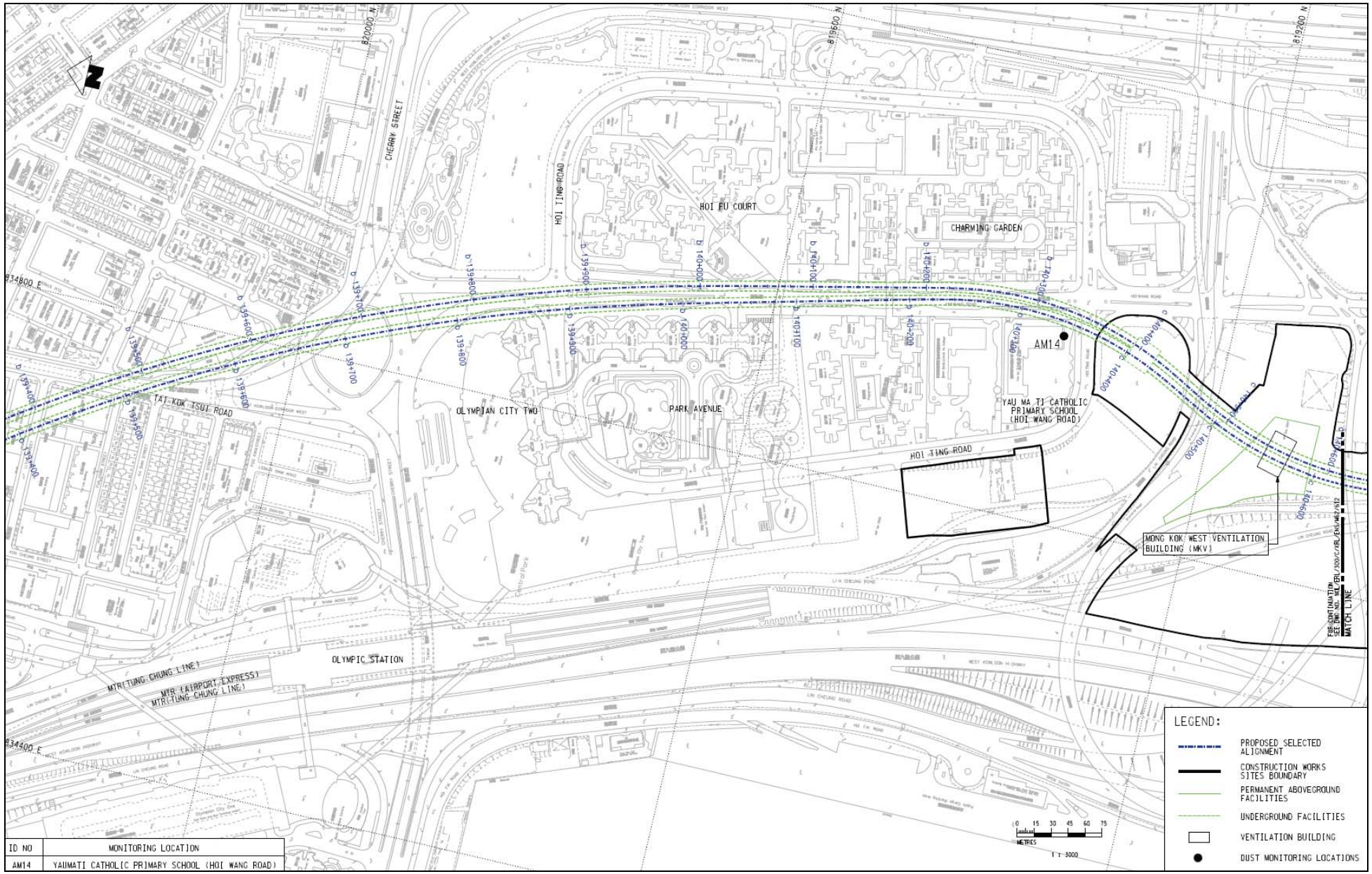

Outside No. 142 Mai Po San Tsuen
Alternative monitoring location for AM 1
MAI PO VENTILATION BUILDING (MPV)
MAI PO ROAD
CASTLE PEAK ROAD - MAI PO
SAN TIN HIGHWAY
SAN TAM ROAD
KO HANG ROAD
MARLE GARDENS 1ST STREET
WO SHANG WAI PROPERTY DEVELOPMENT
MAI PO
ROYAL PALMS
VENEZIA AVENUE
SANTA MONICA AVENUE
MONTEREY AVENUE
VICTORIANA AVENUE
AM1
LEGEND:
PROPOSED SELECTED ALIGNMENT
CONSTRUCTION WORKS SITES BOUNDARY
PERMANENT ABOVEGROUND FACILITIES
UNDERGROUND FACILITIES
VENTILATION BUILDING
DUST MONITORING LOCATIONS
METRES
1 : 1000
ID NO | MONITORING LOCATION
AM1 | HOUSE 5, PHASE A, ROYAL PALMS



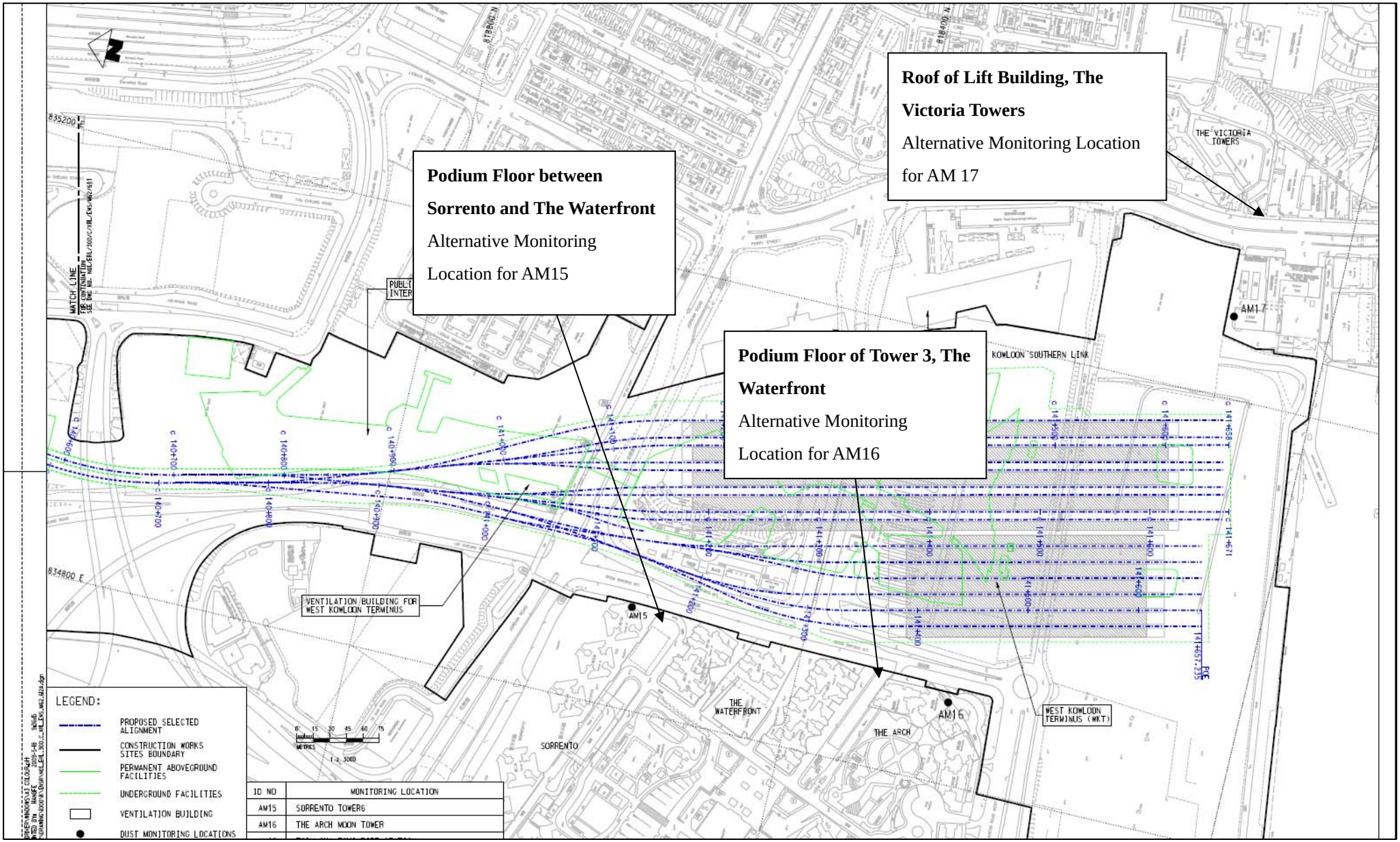
ID NO	MONITORING LOCATION
AM9	SAU SHAN HOUSE, CHEUNG SHAN ESTATE
AM10	NO. 168, YAU MA HOM RESITE VILLAGE



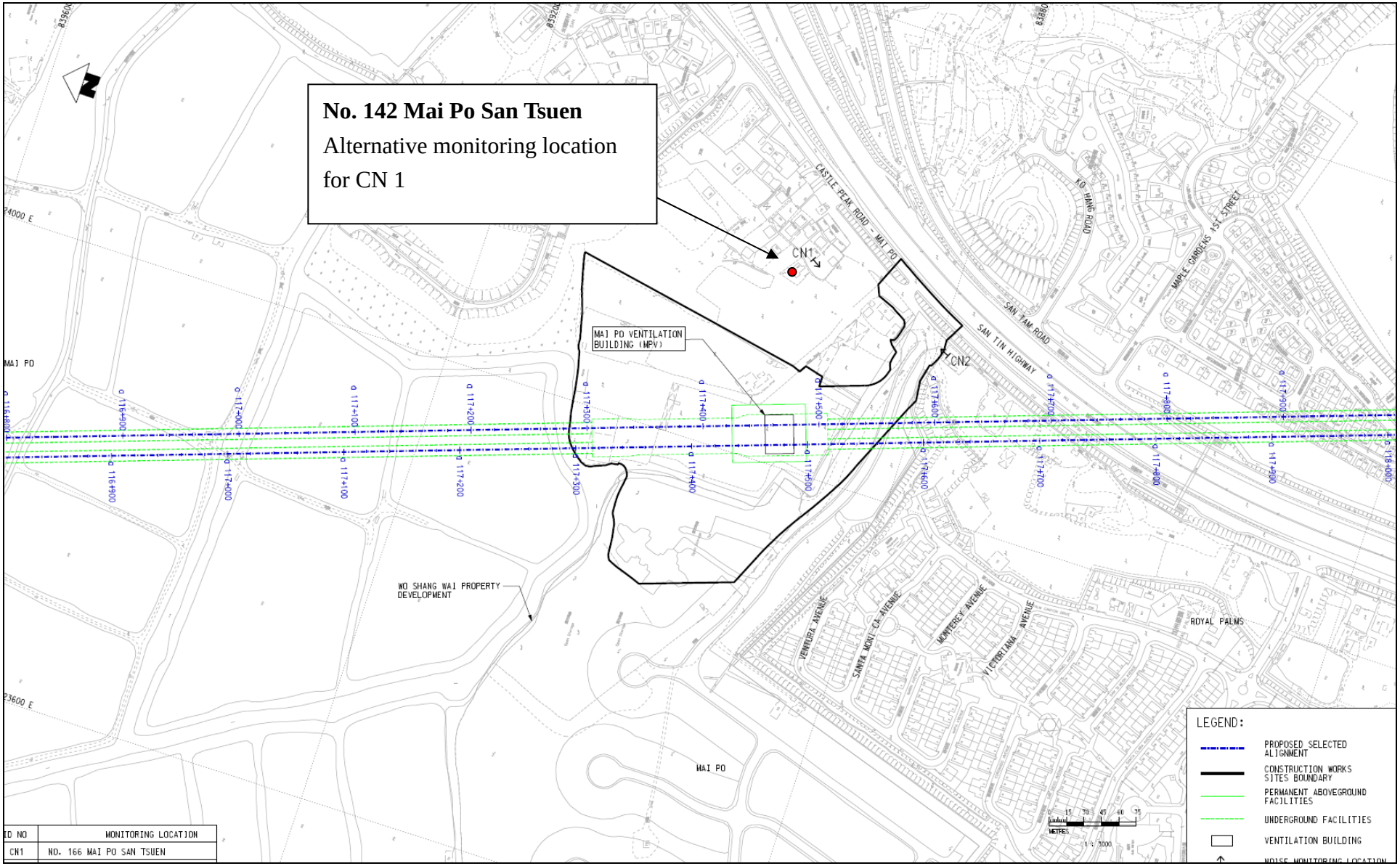
NO	MONITORING LOCATION
M13	ST. ANDREW PRIMARY SCHOOL

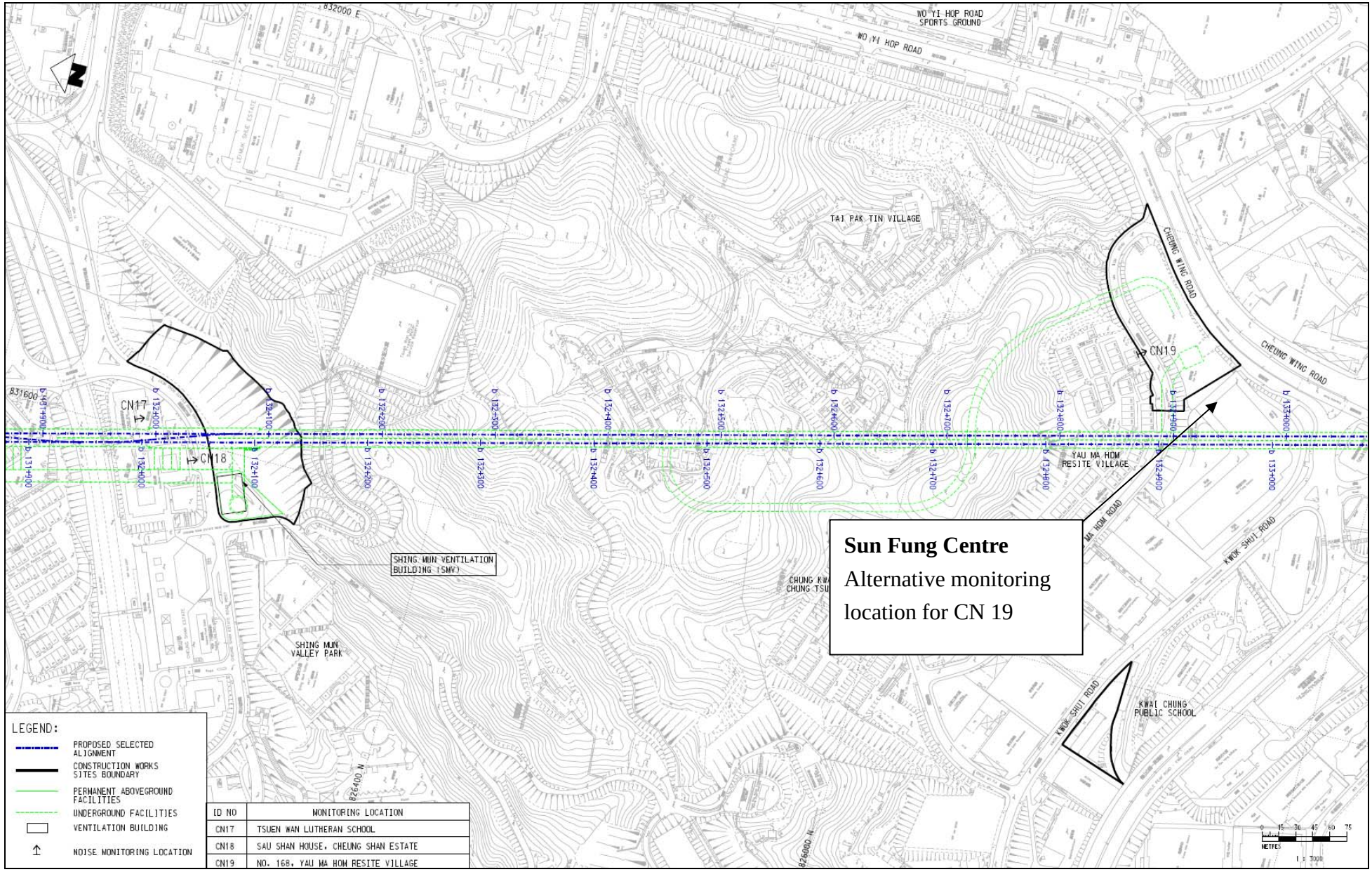


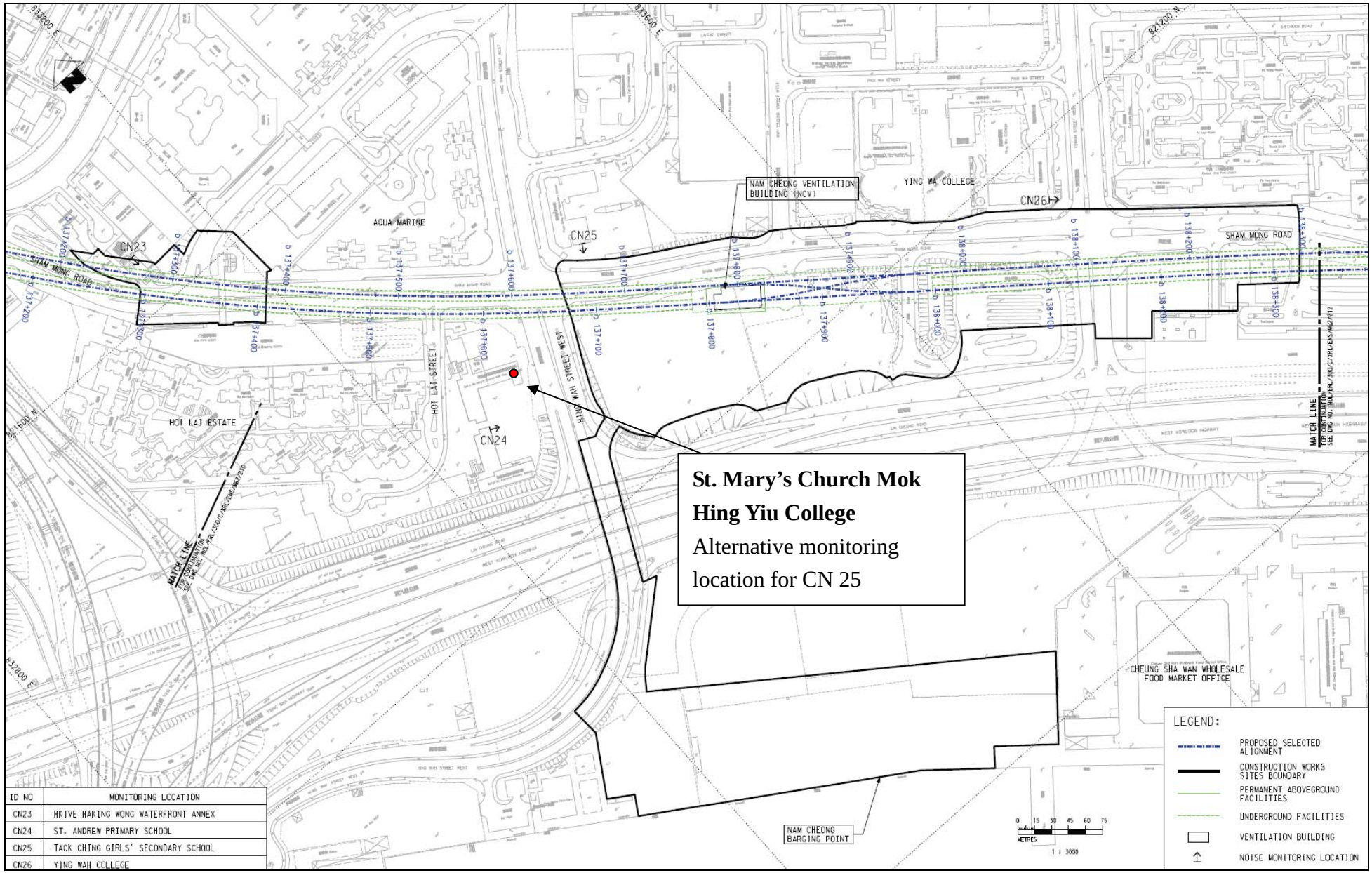
ID NO	MONITORING LOCATION
AM14	YAUMATI CATHOLIC PRIMARY SCHOOL (HOI WANG ROAD)



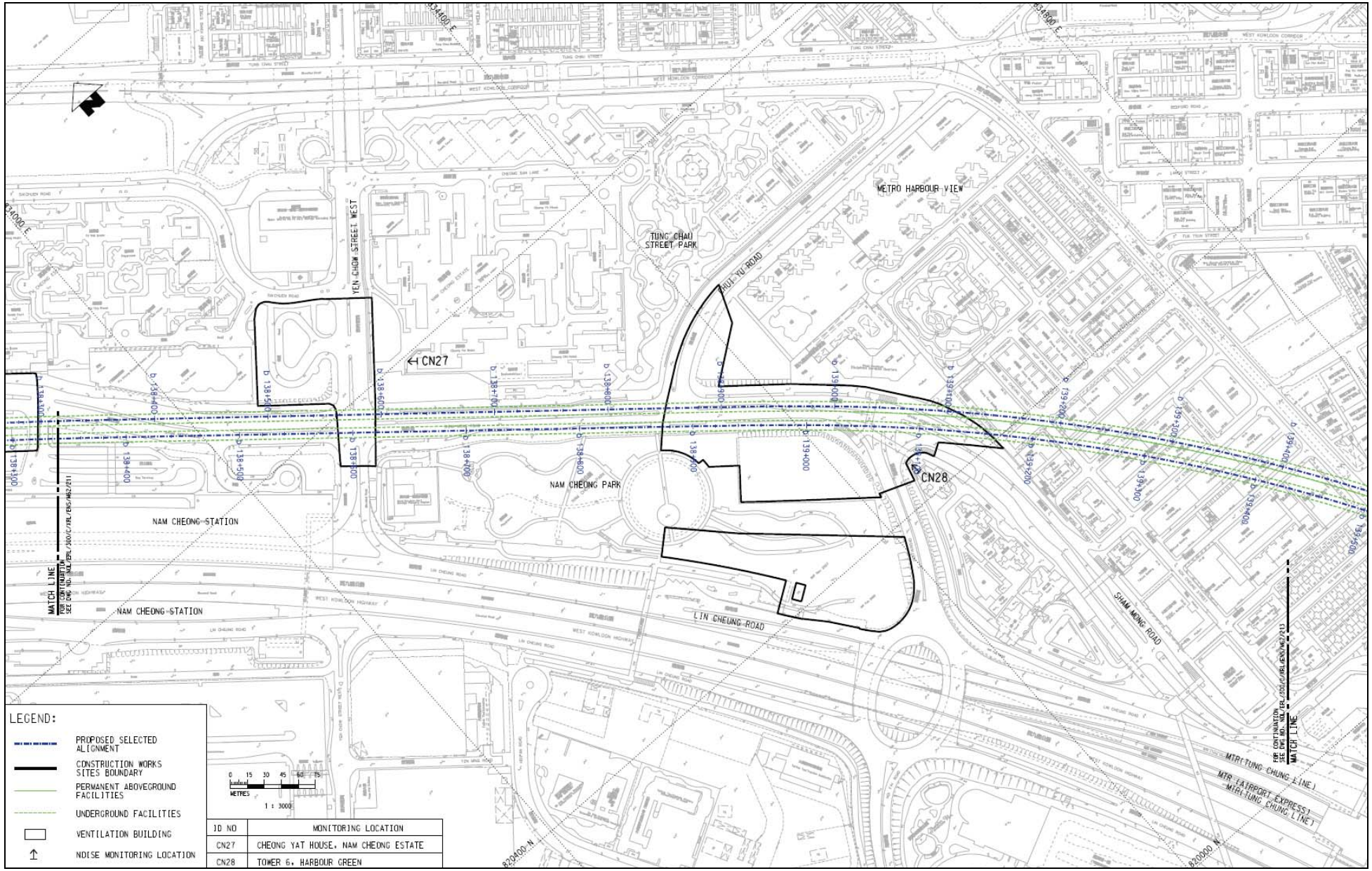
Dust monitoring locations

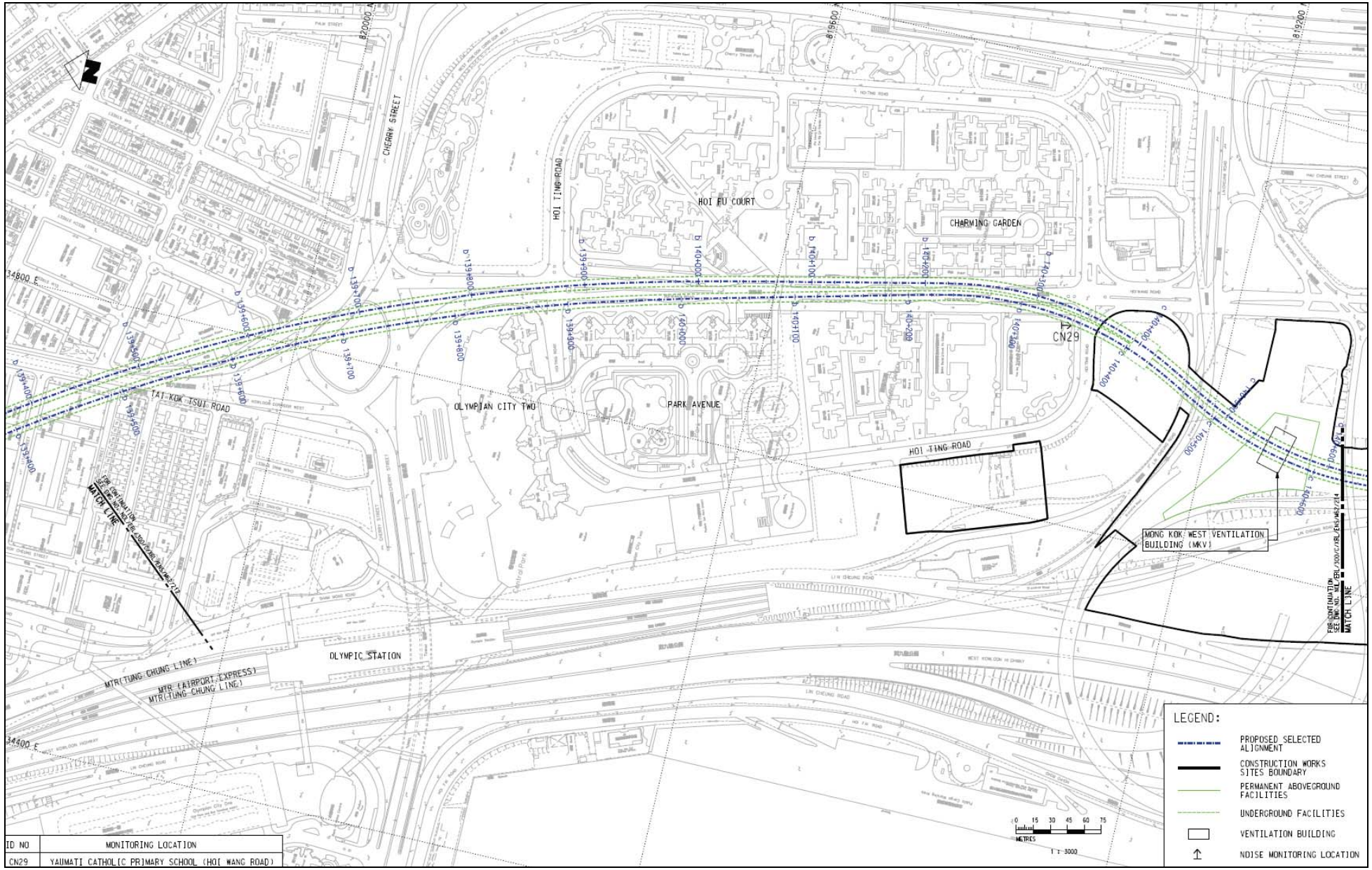

No. 142 Mai Po San Tsuen
Alternative monitoring location for CN 1
CN1
CN2
MAI PO VENTILATION BUILDING (MPV)
WO SHANG WAI PROPERTY DEVELOPMENT
CASTLE PEAK ROAD - MAI PO
SAN TIN HIGHWAY
SAN TAM ROAD
KO HANG ROAD
MAPLE GARDENS
1ST STREET
ROYAL PALMS
VENTURA AVENUE
SANTA MONICA AVENUE
MONTEREY AVENUE
VICTORIANA AVENUE
MAI PO
24000 E
23600 E
LEGEND:
PROPOSED SELECTED ALIGNMENT
CONSTRUCTION WORKS SITES BOUNDARY
PERMANENT ABOVEGROUND FACILITIES
UNDERGROUND FACILITIES
VENTILATION BUILDING
NOISE MONITORING LOCATION
METRES
1 : 3000
ID NO
MONITORING LOCATION
CN1
NO. 166 MAI PO SAN TSUEN


WO YI HOP ROAD SPORTS GROUND
WO YI HOP ROAD
TAI PAK TIN VILLAGE
CHEUNG WING ROAD
CN19
CN17
CN18
YAU MA HOM RESITE VILLAGE
SHING MUN VENTILATION BUILDING (SMV)
SHING MUN VALLEY PARK
KWOK SHUI ROAD
KWAI CHUNG PUBLIC SCHOOL
Sun Fung Centre
Alternative monitoring location for CN 19
LEGEND:
PROPOSED SELECTED ALIGNMENT
CONSTRUCTION WORKS SITES BOUNDARY
PERMANENT ABOVEGROUND FACILITIES
UNDERGROUND FACILITIES
VENTILATION BUILDING
NOISE MONITORING LOCATION
ID NO | MONITORING LOCATION
CN17 | TSUEN WAN LUTHERAN SCHOOL
CN18 | SAU SHAN HOUSE, CHEUNG SHAN ESTATE
CN19 | NO. 168, YAU MA HOM RESITE VILLAGE
METRES

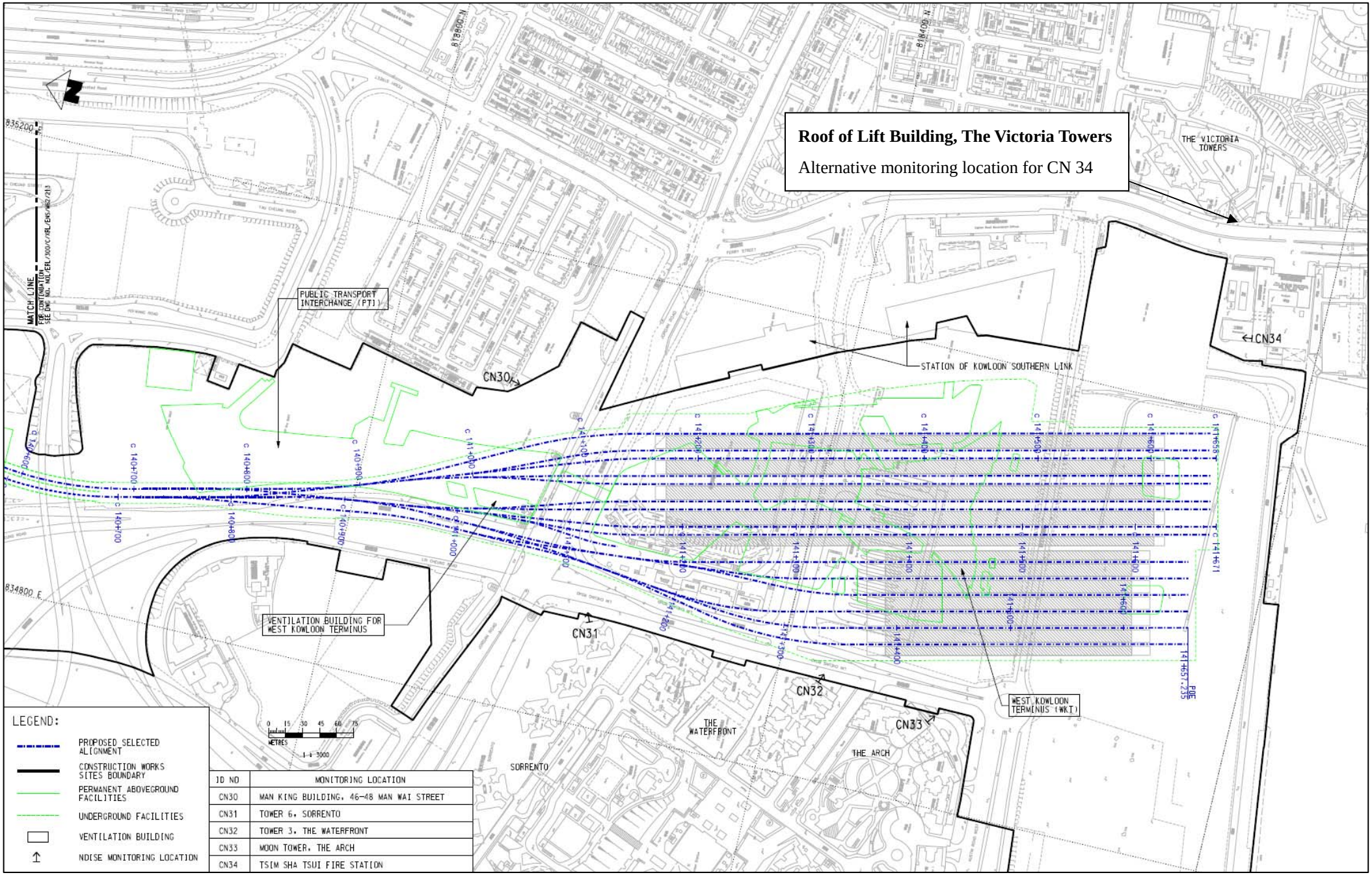


ID NO	MONITORING LOCATION
CN23	HKIVE HAKING WONG WATERFRONT ANNEX
CN24	ST. ANDREW PRIMARY SCHOOL
CN25	TACK CHING GIRLS' SECONDARY SCHOOL
CN26	YING WAH COLLEGE


CN27
CN28
YEN CHOW STREET WEST
TUNG CHAU STREET PARK
HUI YU ROAD
METRO HARBOUR VIEW
NAM CHEONG PARK
NAM CHEONG STATION
NAM CHEONG STATION
LIN CHEUNG ROAD
SHAM MONG ROAD
WEST KOWLOON HIGHWAY
WEST KOWLOON CORRIDOR
MTR(TUNG CHUNG LINE)
MTR (AIRPORT EXPRESS)
MTR(TUNG CHUNG LINE)
MATCH LINE
FOR CONTINUATION SEE DWG NO. NOL/EPL/300/C/RL/EBS/M02/211
MATCH LINE
FOR CONTINUATION SEE DWG NO. NOL/EPL/300/C/RL/EBS/M02/213
LEGEND:
PROPOSED SELECTED ALIGNMENT
CONSTRUCTION WORKS SITES BOUNDARY
PERMANENT ABOVEGROUND FACILITIES
UNDERGROUND FACILITIES
VENTILATION BUILDING
NOISE MONITORING LOCATION
0 15 30 45 60 75
METRES
1 : 3000
ID NO | MONITORING LOCATION
CN27 | CHEONG YAT HOUSE, NAM CHEONG ESTATE
CN28 | TOWER 6, HARBOUR GREEN
834400 E
834800 E
820400 N
820000 N

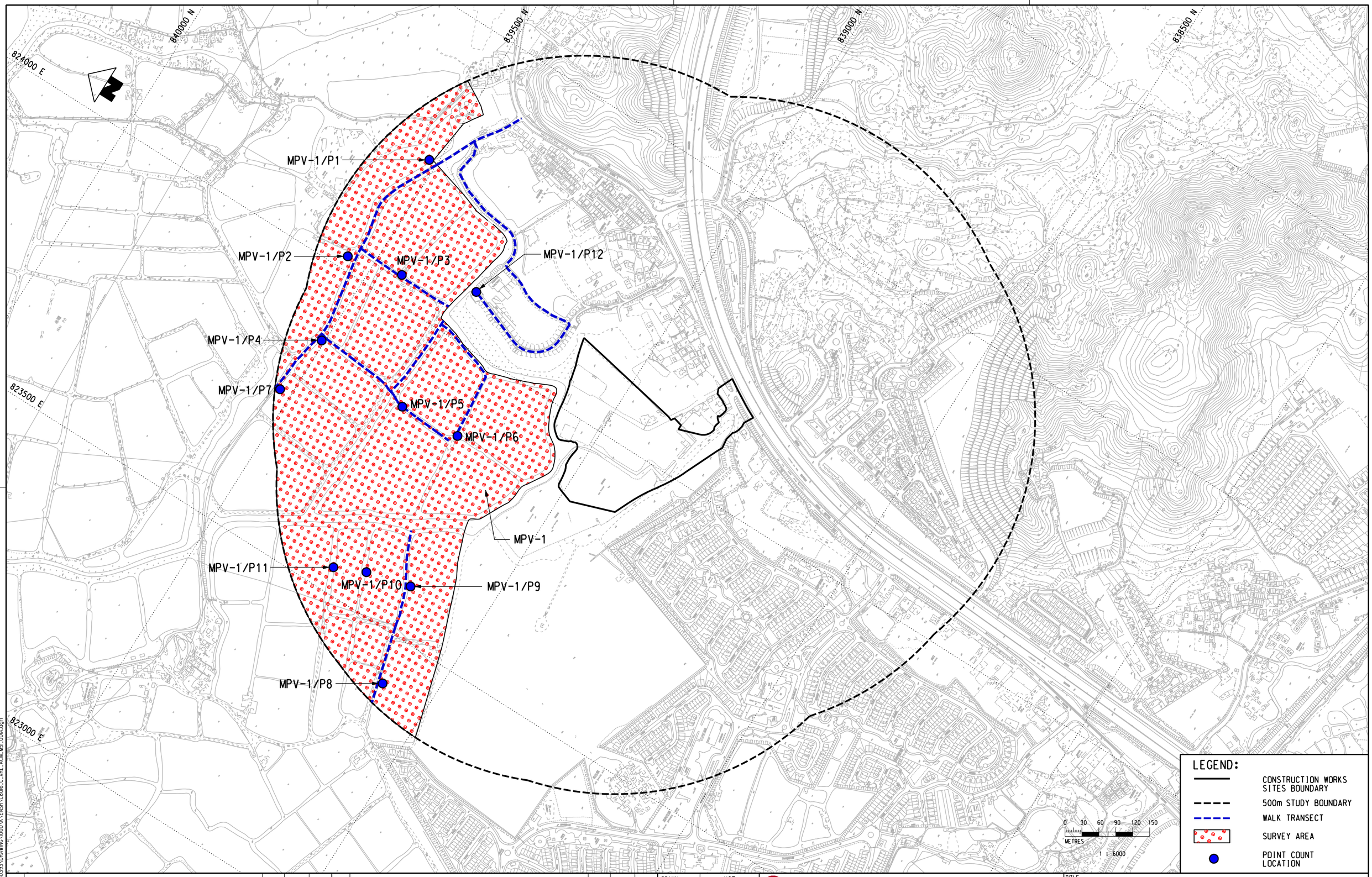


ID NO	MONITORING LOCATION
CN29	YAUMATI CATHOLIC PRIMARY SCHOOL (HOI WANG ROAD)



ID NO	MONITORING LOCATION
CN30	MAN KING BUILDING, 46-48 MAN WAI STREET
CN31	TOWER 6, SORRENTO
CN32	TOWER 3, THE WATERFRONT
CN33	MOON TOWER, THE ARCH
CN34	TSIM SHA TSUI FIRE STATION

Noise monitoring locations



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FILENAME: P:\projects\60150393\DRAWING\000\XTENSR\C8016_C_XRL_ACM_M51_001A.dgn

REV	DESCRIPTION	BY	DATE	APPROVED	REV	DESCRIPTION	BY	DATE	APPROVED

DRAWN	XCF
DESIGNED	TWF
CHECKED	KCC
APPROVED	PL
DATE	10/OCT/2008

MTR

EXPRESS RAIL LINK

ORIGINATOR

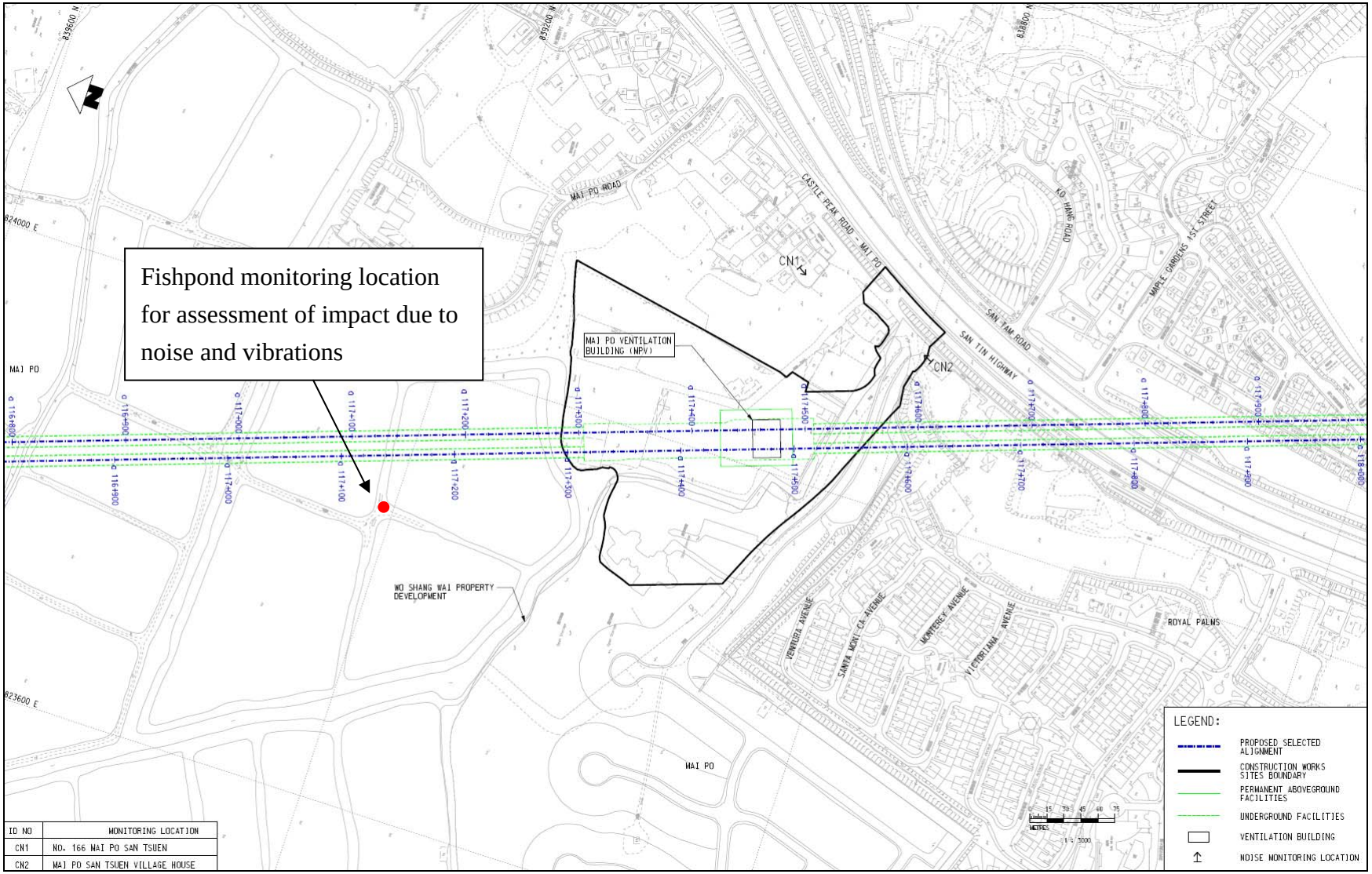
AECOM

CADD REF.
C8016_C_XRL_ACM_M51_001A.dgn

TITLE

C8016
ENVIRONMENTAL TERM CONSULTANCY FOR XRL
SURVEY AREA, POINT COUNT LOCATION AND WALK TRANSECT FOR MPV-1

SCALE	FIGURE NO.	REV.
1 : 6000 (A3)	C8016/C/XRL/ACM/M51/001	A



Fishpond monitoring location

Appendix E

Monitoring Schedule

Actual Construction Dust (24-hr TSP) Impact Monitoring Schedule - September 2010

Note 1: **TSP** denotes Total Suspended Particulate

Sep-2010						
Sunday	**Monday**	**Tuesday**	**Wednesday**	**Thursday**	**Friday**	**Saturday**
			1	2 AM13, AM14, AM15 AM16, AM17	3	4 AM1, AM9
5	6 AM10*	7	8 AM13, AM14, AM15 AM16, AM17	9	10 AM1, AM9, AM10	11
12	13 AM14**	14 AM13, AM14, AM15 AM16, AM17	15	16 AM1, AM9, AM10	17	18
19	20 AM13, AM14, AM15 AM16, AM17	21	22 AM1, AM9, AM10	23	24	25 AM13, AM14, AM15 AM16, AM17
26	27	28 AM1, AM9, AM10	29	30 AM13, AM14, AM15 AM16, AM17		

*24-hr TSP impact monitoring for AM10 was postposed from 4 September 2010 to 6 September 2010 due to power supply shortage

**Repeat 24-hr TSP impact monitoring for AM14 was conducted on 13 September 2010 due to exceedance of 24-hr TSP impact monitoring result on 8 September 2010

Tentative Construction Dust (24-hr TSP) Impact Monitoring Schedule - October 2010

Note 1: **TSP** denotes Total Suspended Particulate

Oct-2010						
Sunday	**Monday**	**Tuesday**	**Wednesday**	**Thursday**	**Friday**	**Saturday**
					1	2
3	4 AM1, AM9, AM10	5	6 AM13, AM14, AM15 AM16, AM17	7	8	9 AM1, AM9, AM10
10	11	12 AM11, AM13, AM14, AM15, AM16, AM17	13	14	15 AM1, AM9, AM10	16
17	18 AM11, AM13, AM14, AM15, AM16, AM17	19	20	21 AM1, AM9, AM10	22	23 AM11, AM13, AM14, AM15, AM16, AM17
24	25	26	27 AM1, AM9, AM10	28	29 AM11, AM13, AM14, AM15, AM16, AM17	30
31						

Monitoring Schedule in the Reporting Month (01 Sep 2010 - 30 Sep 2010)

	CN1	CN2	CN17	CN18	CN19	CN23	CN24	CN25	CN26	CN27	CN28	CN29	CN30	CN31	CN32	CN33	CN34
Date	No. 142 Mai Po San Tsuen	Mai Po San Tsuen Village Hse	Tsuen Wan Lutheran School	Sau Shan House	Sun Fung Centre	HKIVE	St Andrew	Tack Ching	Ying Wah College	Nam Cheong	Harbour Green	Yaumati Catholic Pri School	Man King Building	Tower 6, Sorrento	Tower 3, The Waterfront	Moon Tower, The Arch	Victoria Tower
01-Sep-10		√				√			√		√						
02-Sep-10																	
03-Sep-10																	
04-Sep-10																	
05-Sep-10																	
06-Sep-10		√															
07-Sep-10																	
08-Sep-10																	
09-Sep-10																	
10-Sep-10	√		√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
11-Sep-10																	
12-Sep-10																	
13-Sep-10																	
14-Sep-10																	
15-Sep-10	√	√		√	√	√	√	√	√	√	√	√	√	√	√	√	√
16-Sep-10			√														
17-Sep-10																	
18-Sep-10																	
19-Sep-10																	
20-Sep-10			√														
21-Sep-10																	
22-Sep-10	√	√		√	√	√	√	√	√	√	√	√	√	√	√	√	√
23-Sep-10																	
24-Sep-10																	
25-Sep-10																	
26-Sep-10																	
27-Sep-10	√	√		√	√		√	√		√	√	√	√	√	√	√	√
28-Sep-10						√			√								
29-Sep-10			√														
30-Sep-10																	

Monitoring Schedule in the Next Reporting Month (01 Oct 2010 - 31 Oct 2010)

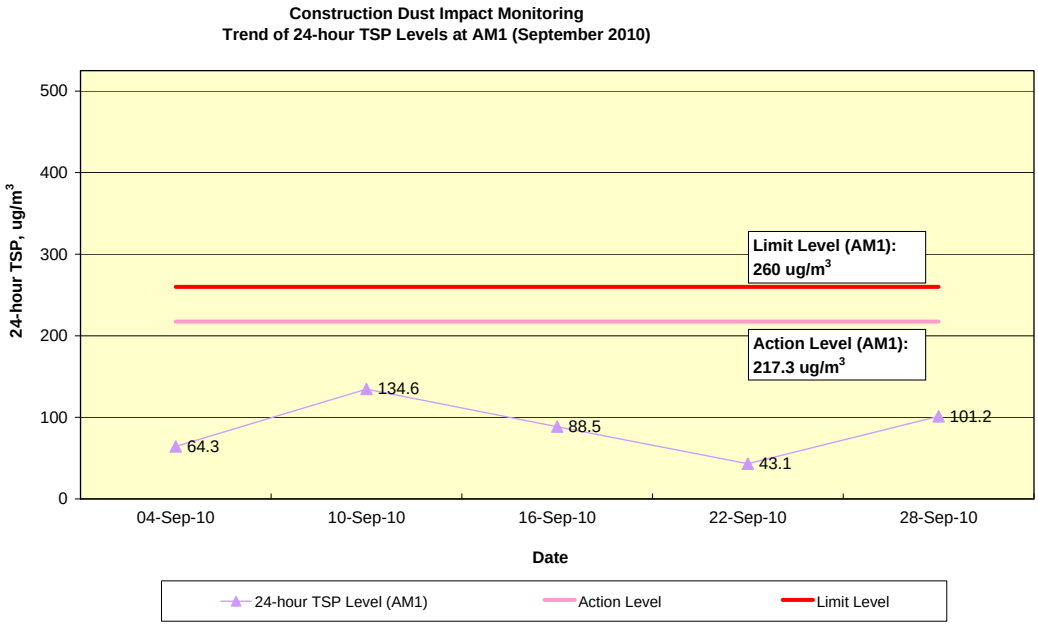
	CN1	CN2	CN17	CN18	CN19	CN22	CN23	CN24	CN25	CN26	CN27	CN28	CN29	CN30	CN31	CN32	CN33	CN34
Date	No. 142 Mai Po San Tsuen	Mai Po San Tsuen Village Hse	Tsuen Wan Lutheran School	Sau Shan House	Sun Fung Centre	Lai Chi Kok Reception Centre	HKIVE	St Andrew	Tack Ching	Ying Wah College	Nam Cheong	Harbour Green	Yaumati Catholic Pri School	Man King Building	Tower 6, Sorrento	Tower 3, The Waterfront	Moon Tower, The Arch	Victoria Tower
01-Oct-10																		
02-Oct-10																		
03-Oct-10																		
04-Oct-10	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
05-Oct-10																		
06-Oct-10																		
07-Oct-10																		
08-Oct-10																		
09-Oct-10																		
10-Oct-10																		
11-Oct-10	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
12-Oct-10																		
13-Oct-10																		
14-Oct-10																		
15-Oct-10																		
16-Oct-10																		
17-Oct-10																		
18-Oct-10	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
19-Oct-10																		
20-Oct-10																		
21-Oct-10																		
22-Oct-10																		
23-Oct-10																		
24-Oct-10																		
25-Oct-10	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
26-Oct-10																		
27-Oct-10																		
28-Oct-10																		
29-Oct-10																		
30-Oct-10																		
31-Oct-10																		

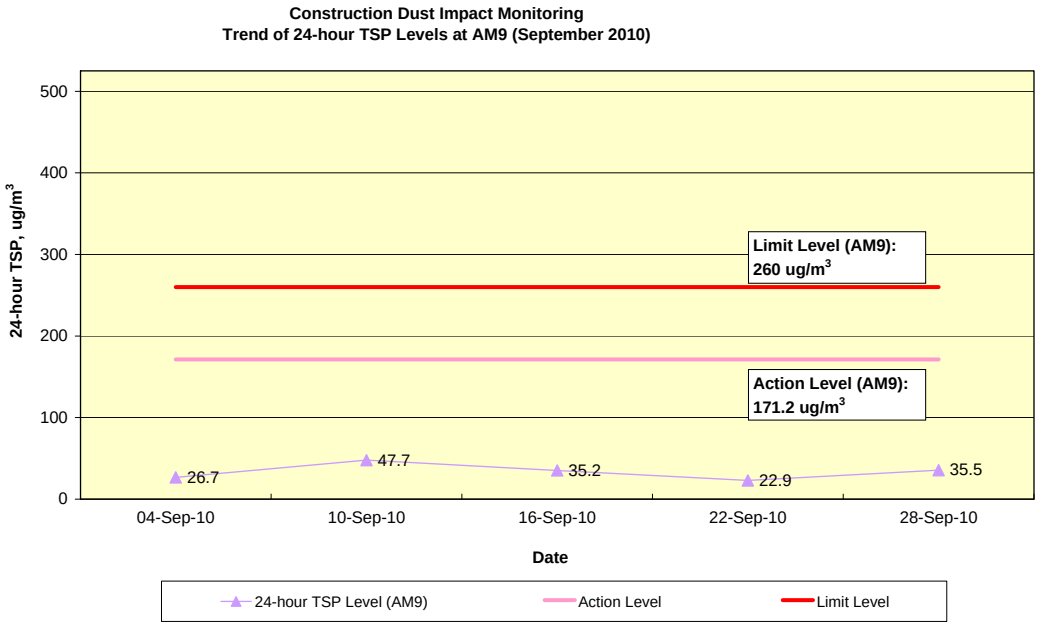
Appendix E Monitoring Schedule

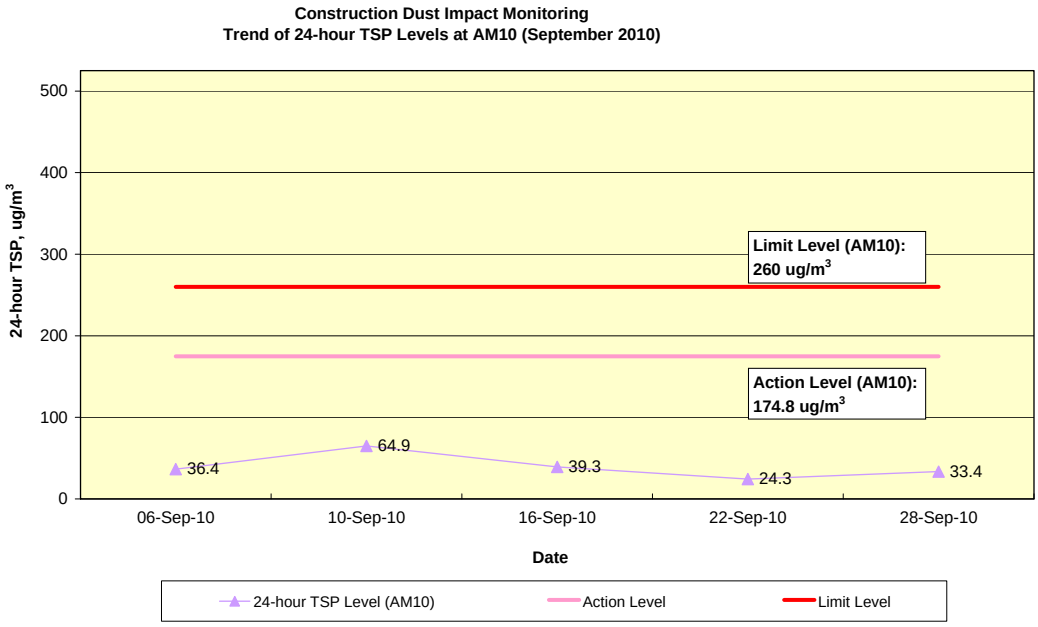
Works Area	Survey Site	Date of Survey in September 2010	Tentative Date of Survey in October 2010
MPV	MPV-1	17 September 2010	20 October 2010

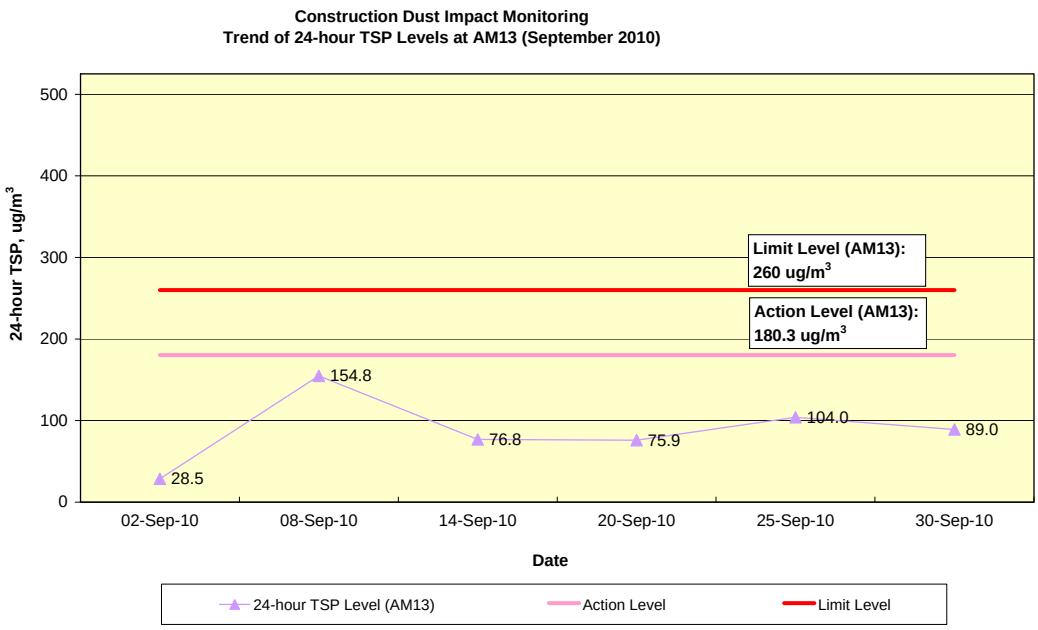
Appendix F

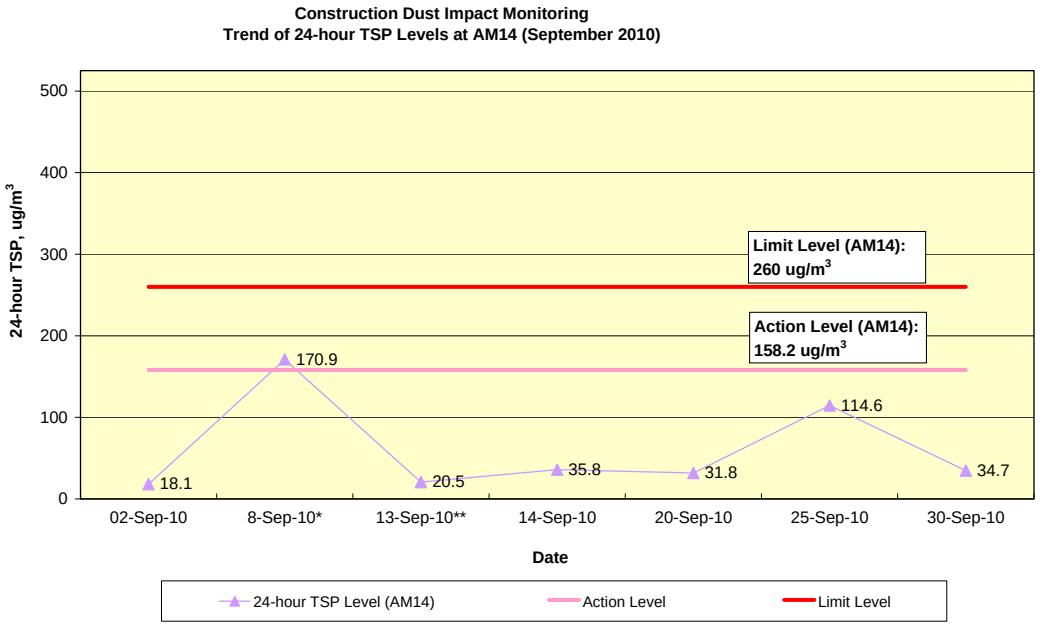
Graphical Plots of Monitoring Results

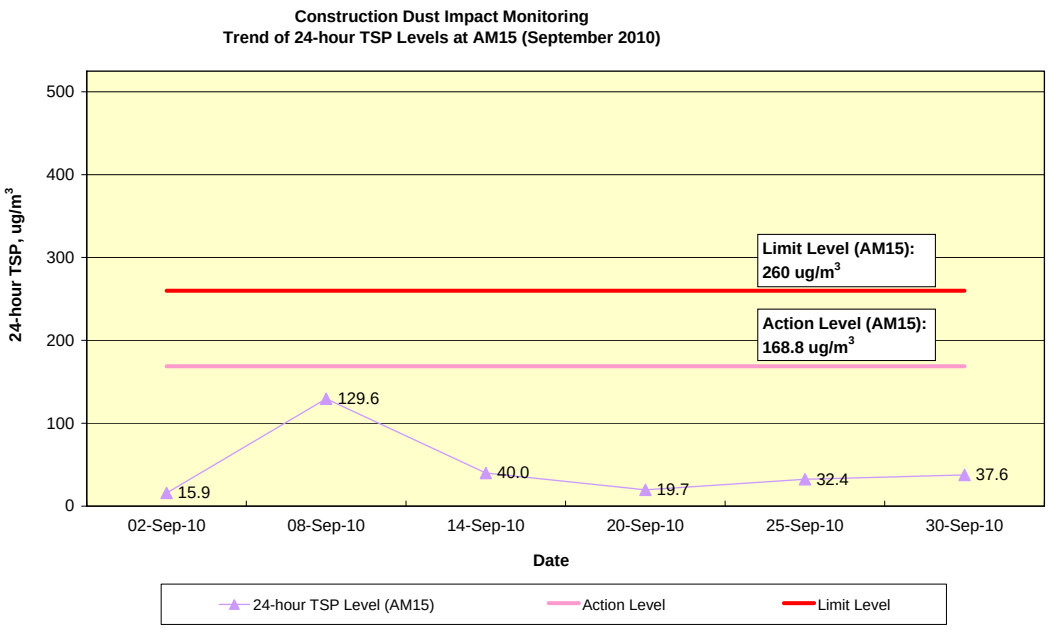

Construction Dust Impact Monitoring
Trend of 24-hour TSP Levels at AM1 (September 2010)
24-hour TSP, ug/m3
500
400
300
200
100
0
Limit Level (AM1):
260 ug/m3
Action Level (AM1):
217.3 ug/m3
64.3
134.6
88.5
43.1
101.2
04-Sep-10
10-Sep-10
16-Sep-10
22-Sep-10
28-Sep-10
Date
24-hour TSP Level (AM1)
Action Level
Limit Level

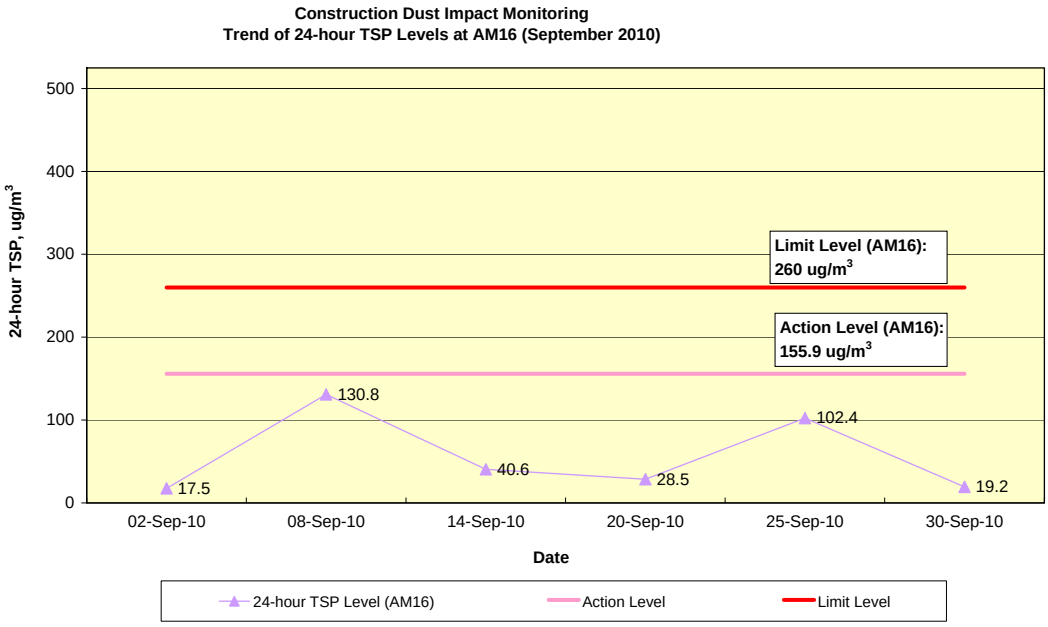

Construction Dust Impact Monitoring
Trend of 24-hour TSP Levels at AM9 (September 2010)
24-hour TSP, ug/m3
500
400
300
200
100
0
Limit Level (AM9):
260 ug/m3
Action Level (AM9):
171.2 ug/m3
26.7
47.7
35.2
22.9
35.5
04-Sep-10
10-Sep-10
16-Sep-10
22-Sep-10
28-Sep-10
Date
24-hour TSP Level (AM9)
Action Level
Limit Level

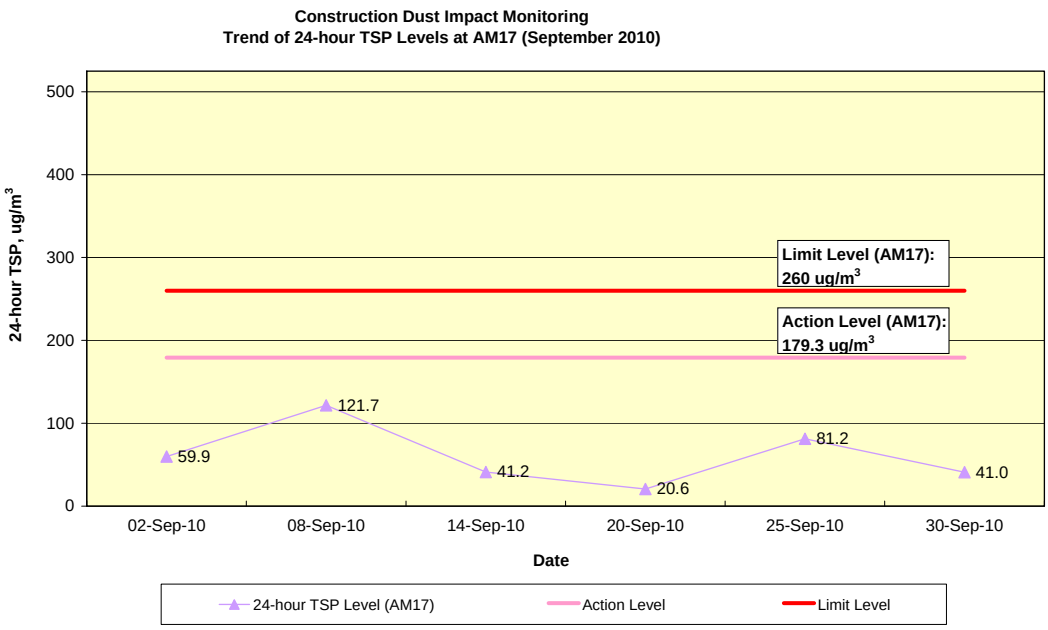

Construction Dust Impact Monitoring
Trend of 24-hour TSP Levels at AM10 (September 2010)
24-hour TSP, ug/m3
500
400
300
200
100
0
Limit Level (AM10):
260 ug/m3
Action Level (AM10):
174.8 ug/m3
36.4
64.9
39.3
24.3
33.4
06-Sep-10
10-Sep-10
16-Sep-10
22-Sep-10
28-Sep-10
Date
24-hour TSP Level (AM10)
Action Level
Limit Level

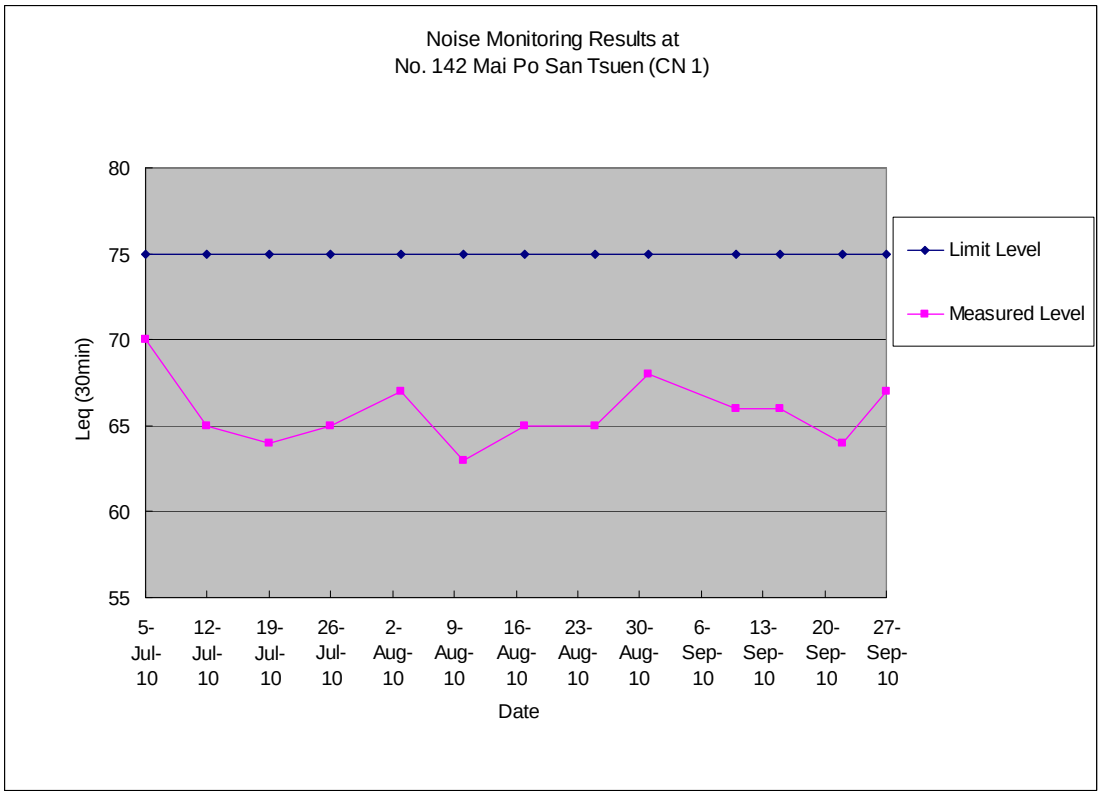

Construction Dust Impact Monitoring
Trend of 24-hour TSP Levels at AM13 (September 2010)
24-hour TSP, ug/m3
500
400
300
200
100
0
Limit Level (AM13):
260 ug/m3
Action Level (AM13):
180.3 ug/m3
28.5
154.8
76.8
75.9
104.0
89.0
02-Sep-10
08-Sep-10
14-Sep-10
20-Sep-10
25-Sep-10
30-Sep-10
Date
24-hour TSP Level (AM13)
Action Level
Limit Level

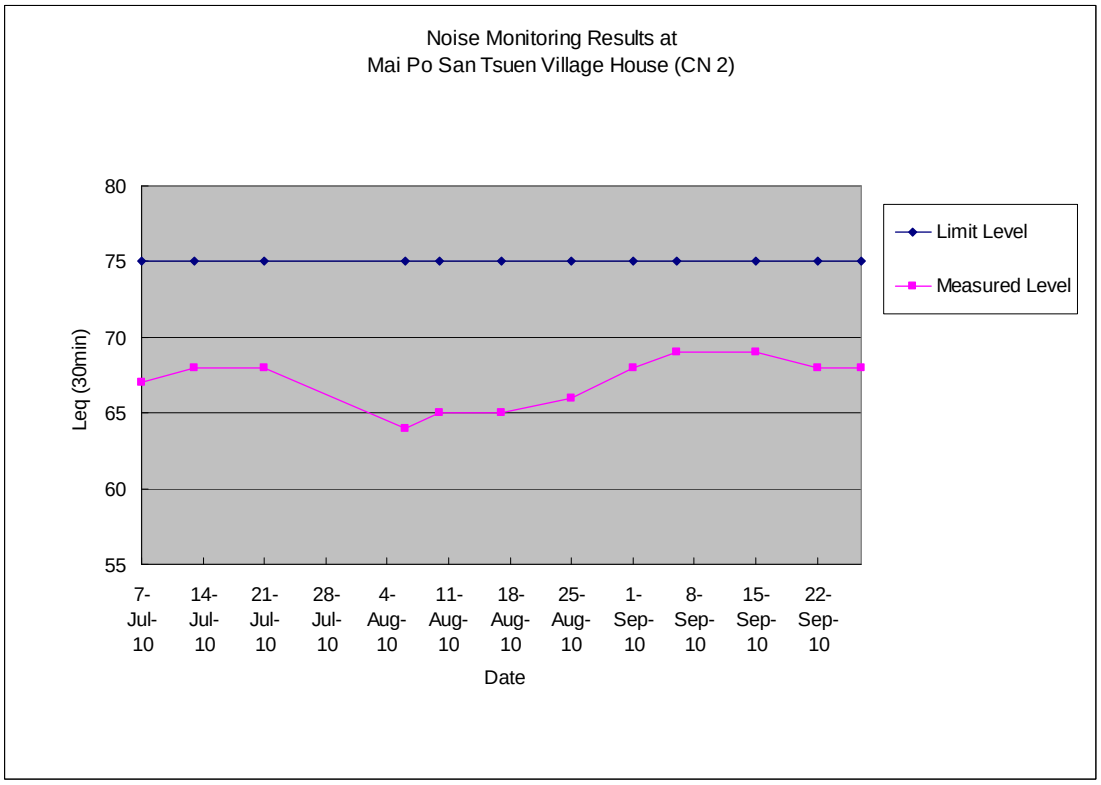

Construction Dust Impact Monitoring
Trend of 24-hour TSP Levels at AM14 (September 2010)
24-hour TSP, ug/m3
500
400
300
200
100
0
Limit Level (AM14):
260 ug/m3
Action Level (AM14):
158.2 ug/m3
170.9
114.6
18.1
20.5
35.8
31.8
34.7
02-Sep-10
8-Sep-10*
13-Sep-10**
14-Sep-10
20-Sep-10
25-Sep-10
30-Sep-10
Date
24-hour TSP Level (AM14)
Action Level
Limit Level

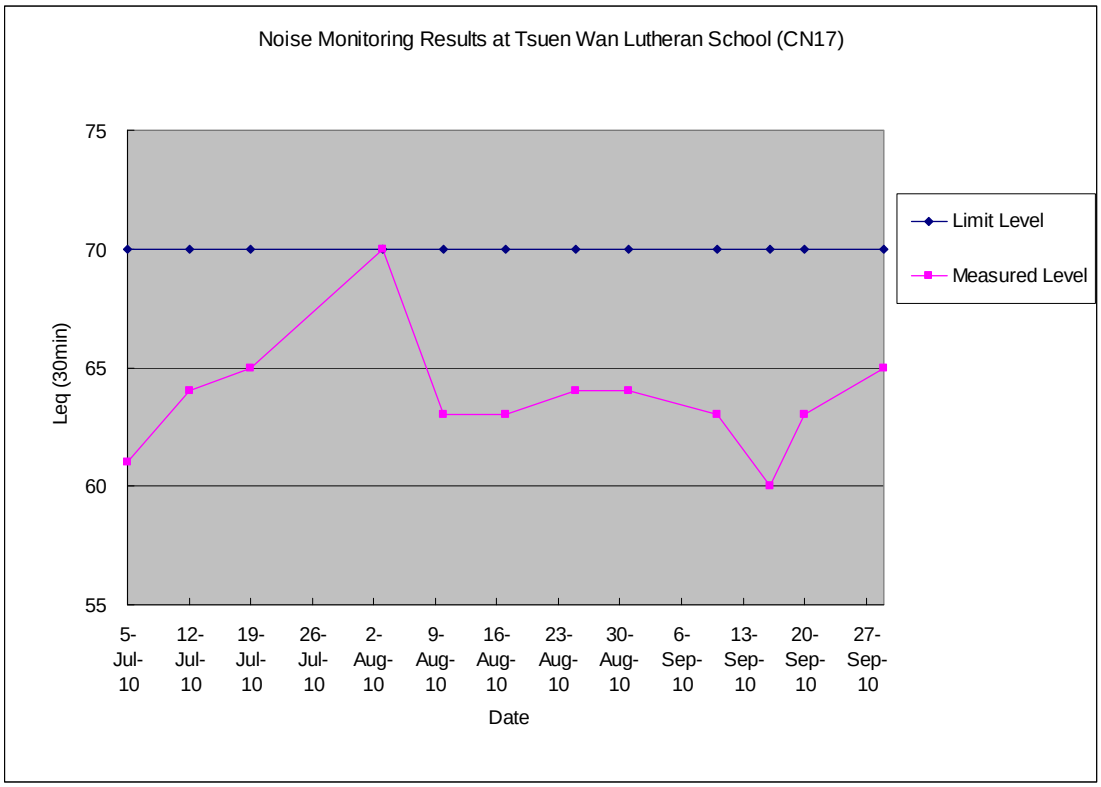

Construction Dust Impact Monitoring
Trend of 24-hour TSP Levels at AM15 (September 2010)
24-hour TSP, ug/m3
500
400
300
200
100
0
Limit Level (AM15):
260 ug/m3
Action Level (AM15):
168.8 ug/m3
129.6
15.9
40.0
19.7
32.4
37.6
02-Sep-10
08-Sep-10
14-Sep-10
20-Sep-10
25-Sep-10
30-Sep-10
Date
24-hour TSP Level (AM15)
Action Level
Limit Level

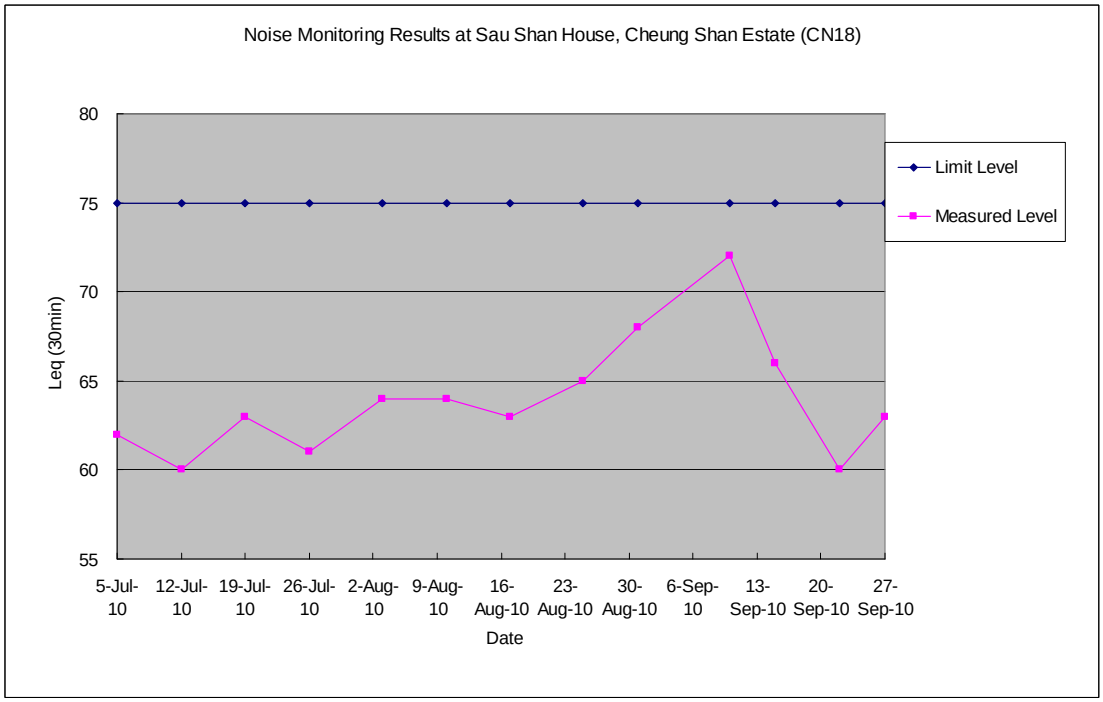

Construction Dust Impact Monitoring
Trend of 24-hour TSP Levels at AM16 (September 2010)
24-hour TSP, ug/m3
500
400
300
200
100
0
Limit Level (AM16):
260 ug/m3
Action Level (AM16):
155.9 ug/m3
17.5
130.8
40.6
28.5
102.4
19.2
02-Sep-10
08-Sep-10
14-Sep-10
20-Sep-10
25-Sep-10
30-Sep-10
Date
24-hour TSP Level (AM16)
Action Level
Limit Level

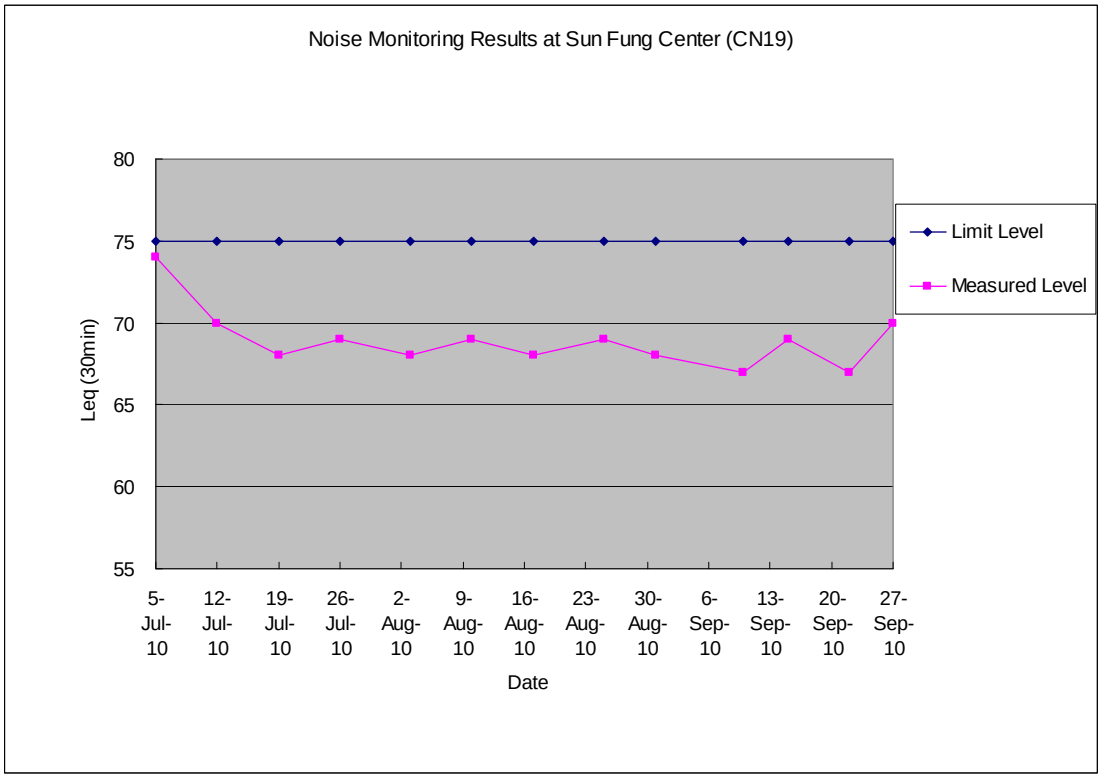

Construction Dust Impact Monitoring
Trend of 24-hour TSP Levels at AM17 (September 2010)
24-hour TSP, ug/m3
500
400
300
200
100
0
Limit Level (AM17):
260 ug/m3
Action Level (AM17):
179.3 ug/m3
59.9
121.7
41.2
20.6
81.2
41.0
02-Sep-10
08-Sep-10
14-Sep-10
20-Sep-10
25-Sep-10
30-Sep-10
Date
24-hour TSP Level (AM17)
Action Level
Limit Level

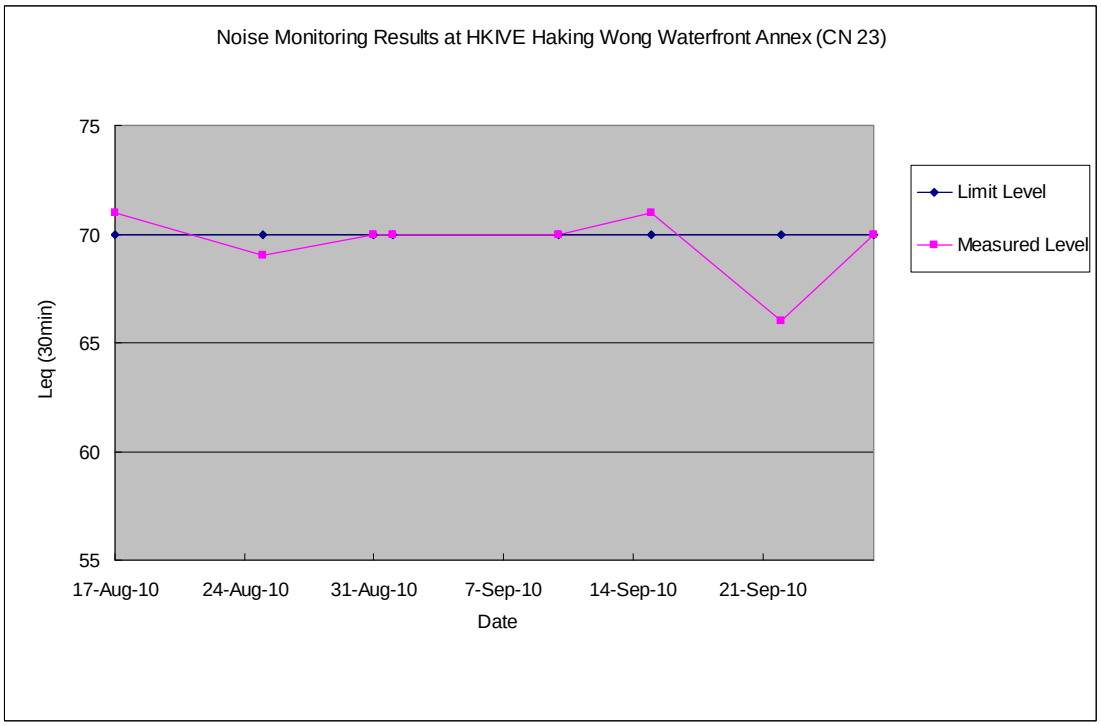

Noise Monitoring Results at
No. 142 Mai Po San Tsuen (CN 1)
80
75
70
65
60
55
Leq (30min)
5-Jul-10
12-Jul-10
19-Jul-10
26-Jul-10
2-Aug-10
9-Aug-10
16-Aug-10
23-Aug-10
30-Aug-10
6-Sep-10
13-Sep-10
20-Sep-10
27-Sep-10
Date
Limit Level
Measured Level

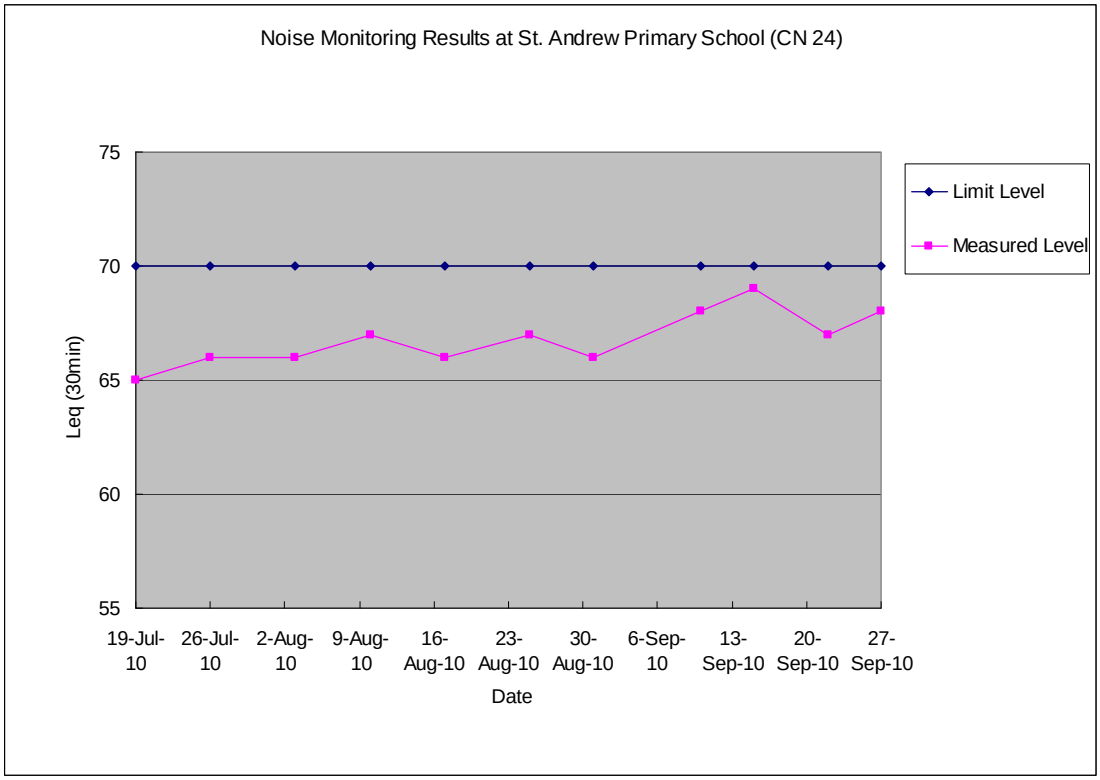

Noise Monitoring Results at
Mai Po San Tsuen Village House (CN 2)
80
75
70
65
60
55
Leq (30min)
7-Jul-10
14-Jul-10
21-Jul-10
28-Jul-10
4-Aug-10
11-Aug-10
18-Aug-10
25-Aug-10
1-Sep-10
8-Sep-10
15-Sep-10
22-Sep-10
Date
Limit Level
Measured Level

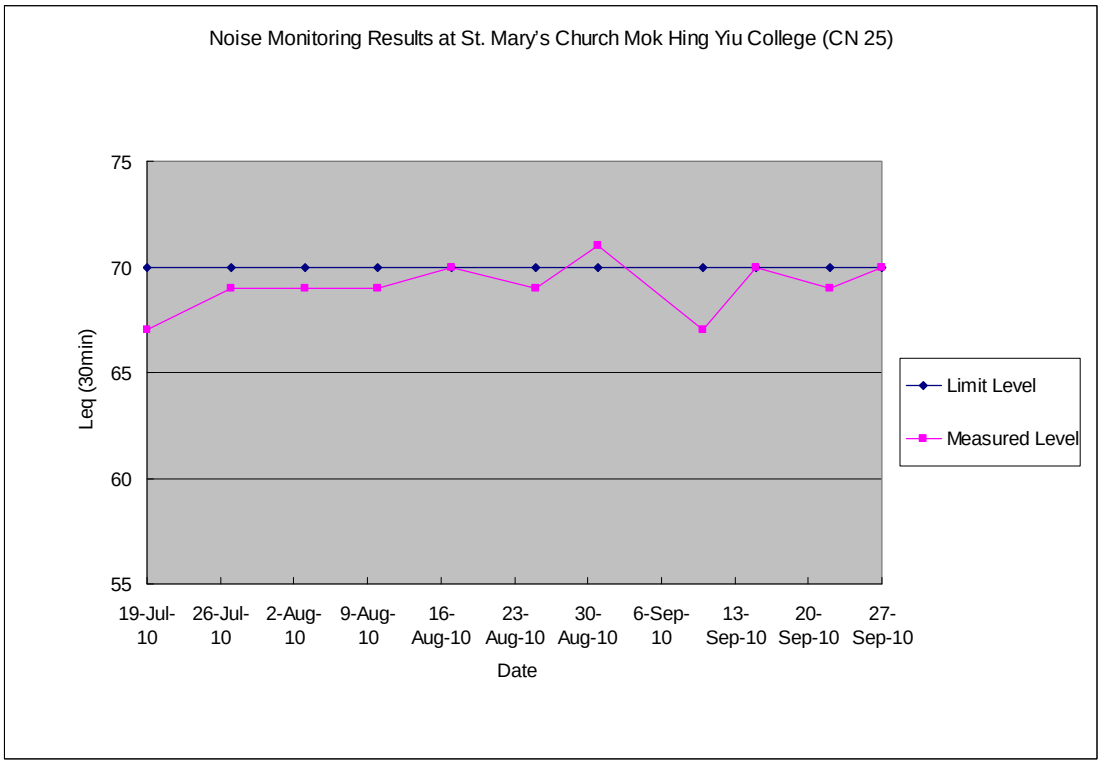

Noise Monitoring Results at Tsuen Wan Lutheran School (CN17)
75
70
65
60
55
Leq (30min)
5-Jul-10
12-Jul-10
19-Jul-10
26-Jul-10
2-Aug-10
9-Aug-10
16-Aug-10
23-Aug-10
30-Aug-10
6-Sep-10
13-Sep-10
20-Sep-10
27-Sep-10
Date
Limit Level
Measured Level

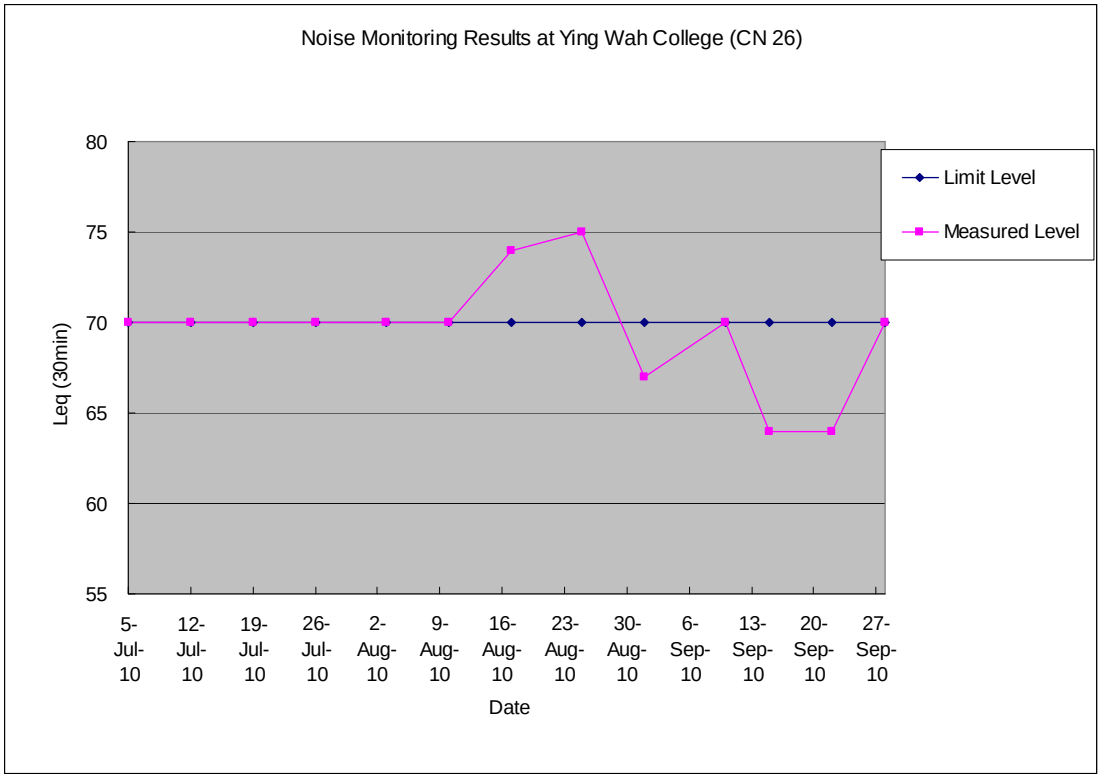

Noise Monitoring Results at Sau Shan House, Cheung Shan Estate (CN18)
80
75
70
65
60
55
Leq (30min)
5-Jul-10
12-Jul-10
19-Jul-10
26-Jul-10
2-Aug-10
9-Aug-10
16-Aug-10
23-Aug-10
30-Aug-10
6-Sep-10
13-Sep-10
20-Sep-10
27-Sep-10
Date
Limit Level
Measured Level

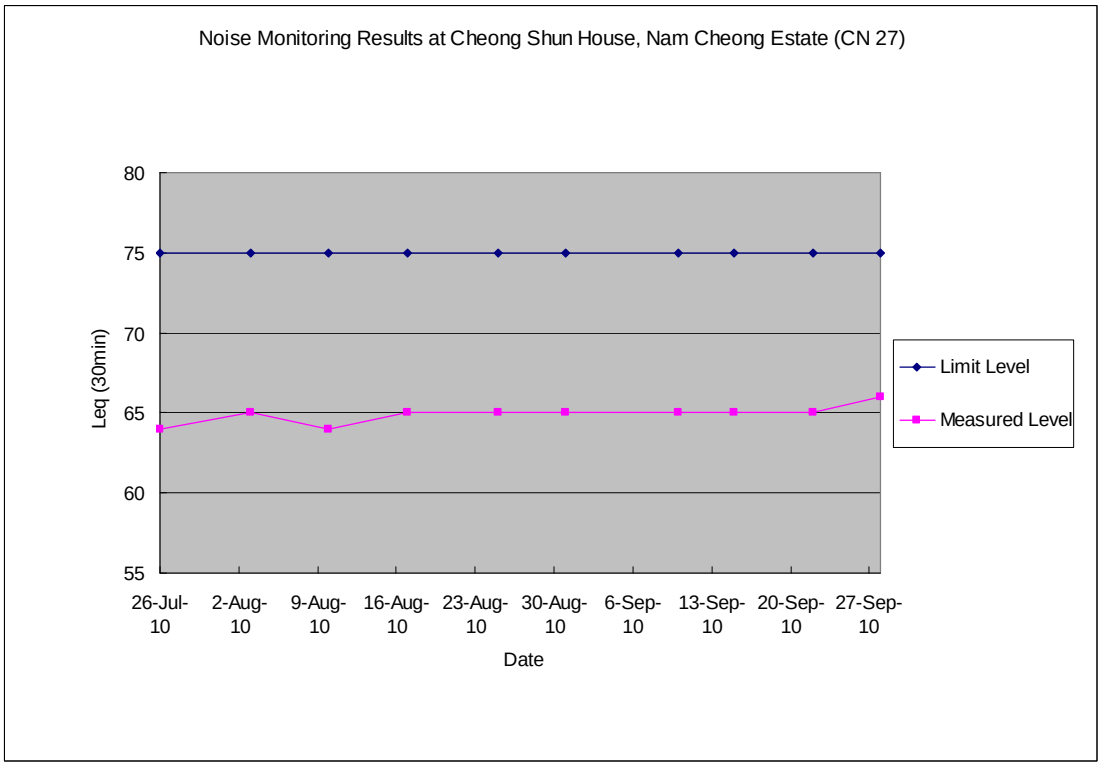

Noise Monitoring Results at Sun Fung Center (CN19)
80
75
70
65
60
55
Leq (30min)
5-Jul-10
12-Jul-10
19-Jul-10
26-Jul-10
2-Aug-10
9-Aug-10
16-Aug-10
23-Aug-10
30-Aug-10
6-Sep-10
13-Sep-10
20-Sep-10
27-Sep-10
Date
Limit Level
Measured Level

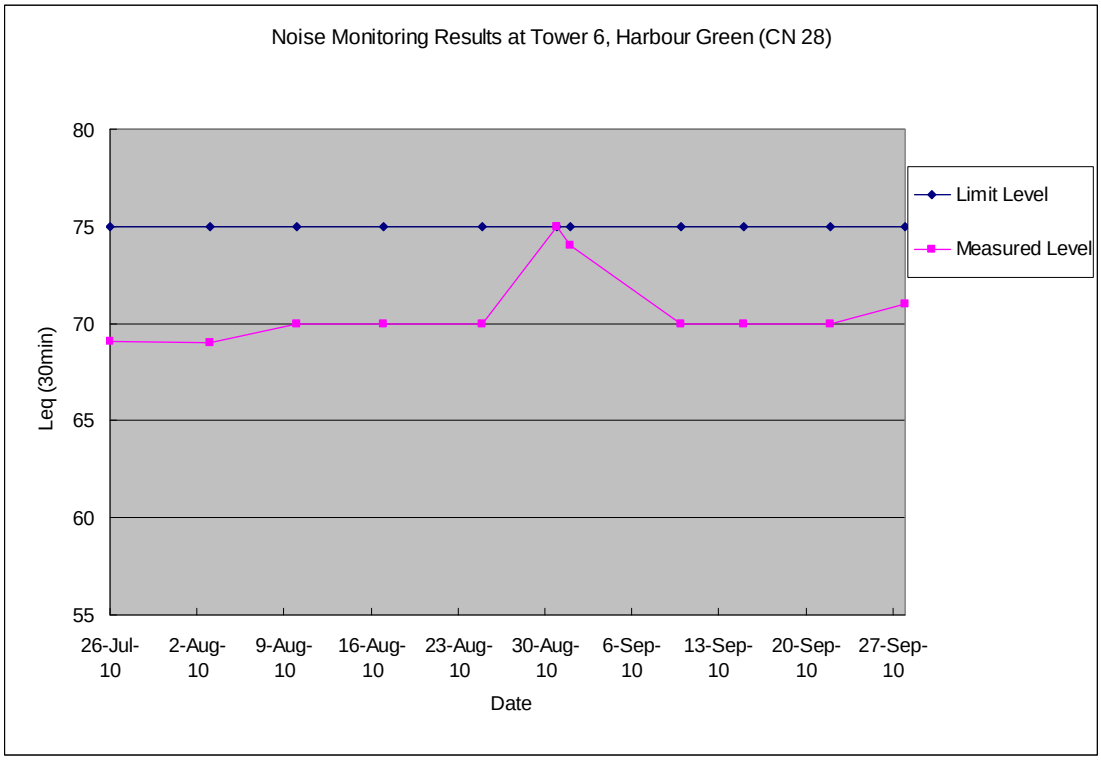

Noise Monitoring Results at HKIVE Haking Wong Waterfront Annex (CN 23)
75
70
65
60
55
Leq (30min)
17-Aug-10
24-Aug-10
31-Aug-10
7-Sep-10
14-Sep-10
21-Sep-10
Date
Limit Level
Measured Level

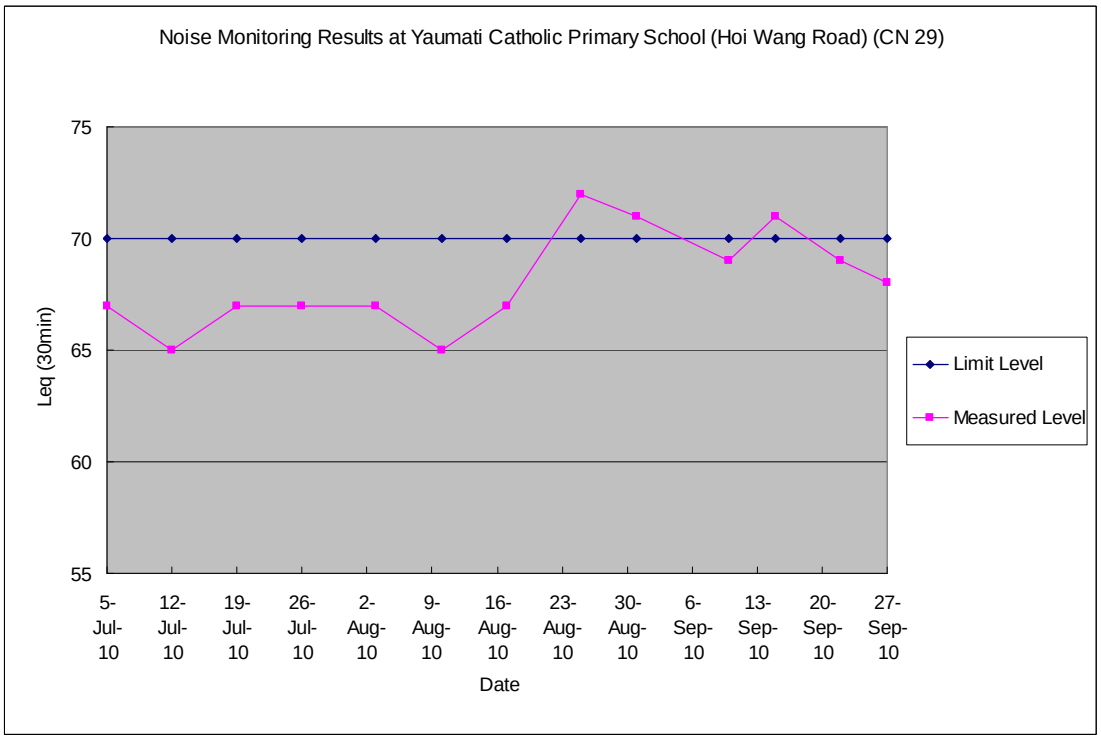

Noise Monitoring Results at St. Andrew Primary School (CN 24)
75
70
65
60
55
Leq (30min)
19-Jul-10
26-Jul-10
2-Aug-10
9-Aug-10
16-Aug-10
23-Aug-10
30-Aug-10
6-Sep-10
13-Sep-10
20-Sep-10
27-Sep-10
Date
Limit Level
Measured Level

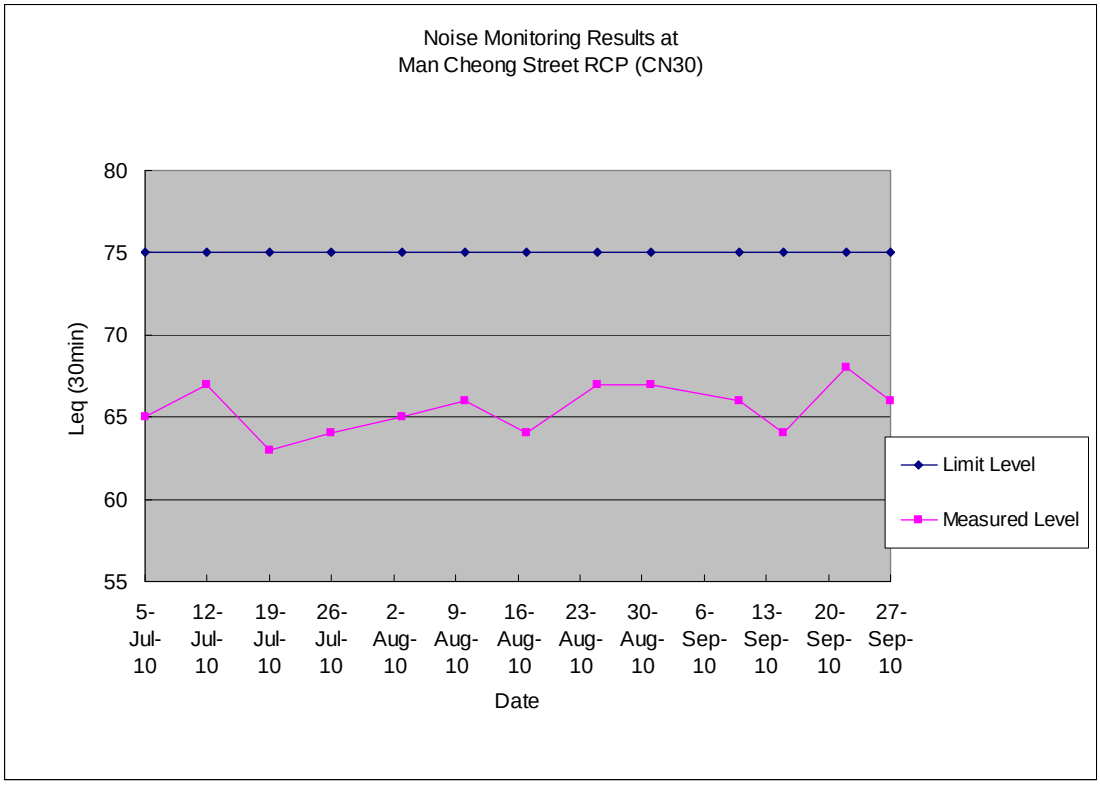

Noise Monitoring Results at St. Mary's Church Mok Hing Yiu College (CN 25)
75
70
65
60
55
Leq (30min)
19-Jul-10
26-Jul-10
2-Aug-10
9-Aug-10
16-Aug-10
23-Aug-10
30-Aug-10
6-Sep-10
13-Sep-10
20-Sep-10
27-Sep-10
Date
Limit Level
Measured Level

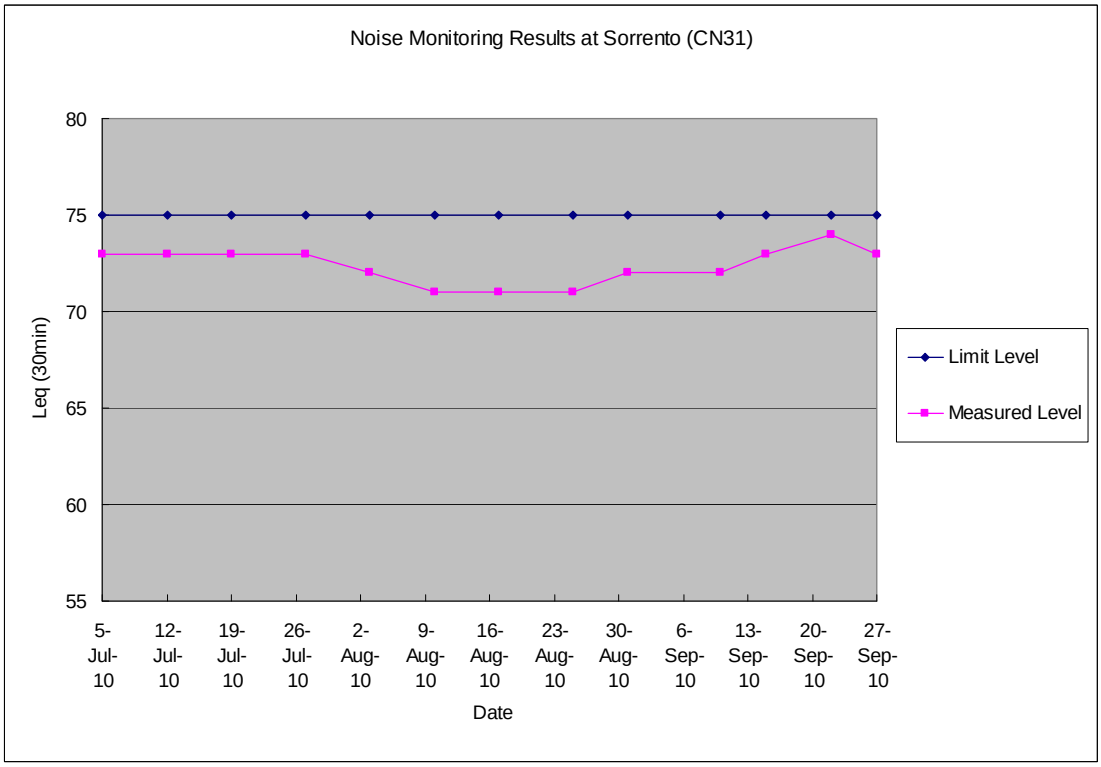

Noise Monitoring Results at Ying Wah College (CN 26)
80
75
70
65
60
55
Leq (30min)
5-Jul-10
12-Jul-10
19-Jul-10
26-Jul-10
2-Aug-10
9-Aug-10
16-Aug-10
23-Aug-10
30-Aug-10
6-Sep-10
13-Sep-10
20-Sep-10
27-Sep-10
Date
Limit Level
Measured Level

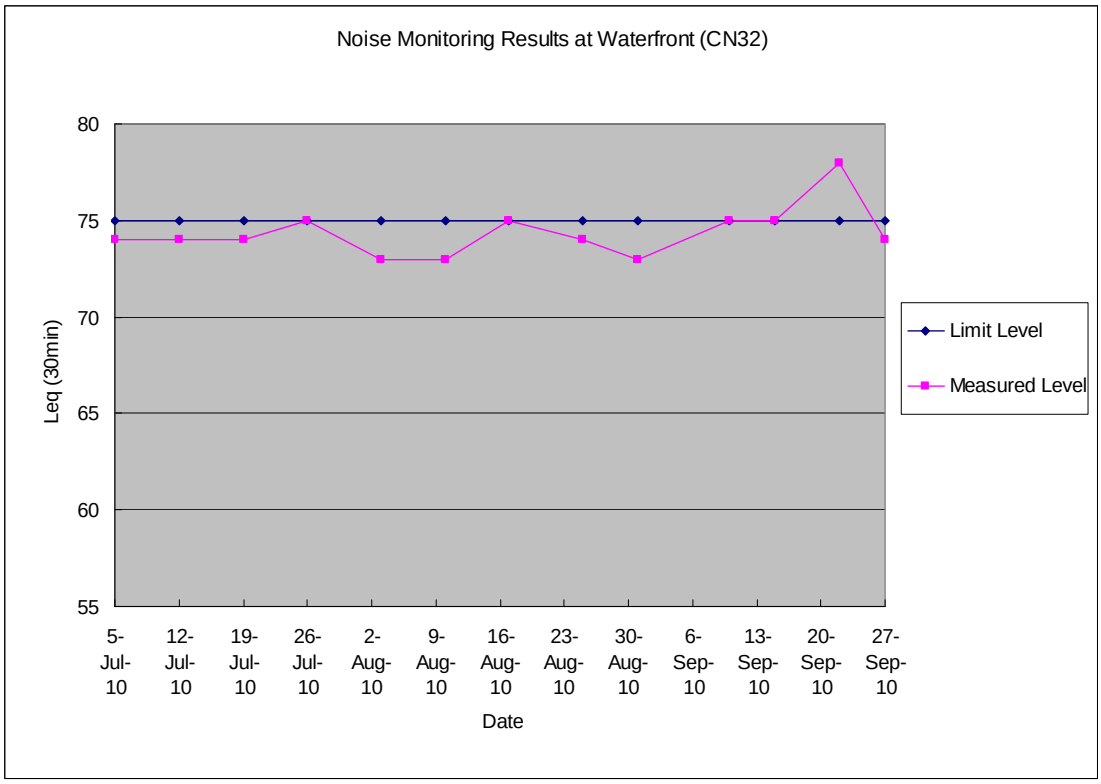

Noise Monitoring Results at Cheong Shun House, Nam Cheong Estate (CN 27)
80
75
70
65
60
55
Leq (30min)
26-Jul-10
2-Aug-10
9-Aug-10
16-Aug-10
23-Aug-10
30-Aug-10
6-Sep-10
13-Sep-10
20-Sep-10
27-Sep-10
Date
Limit Level
Measured Level

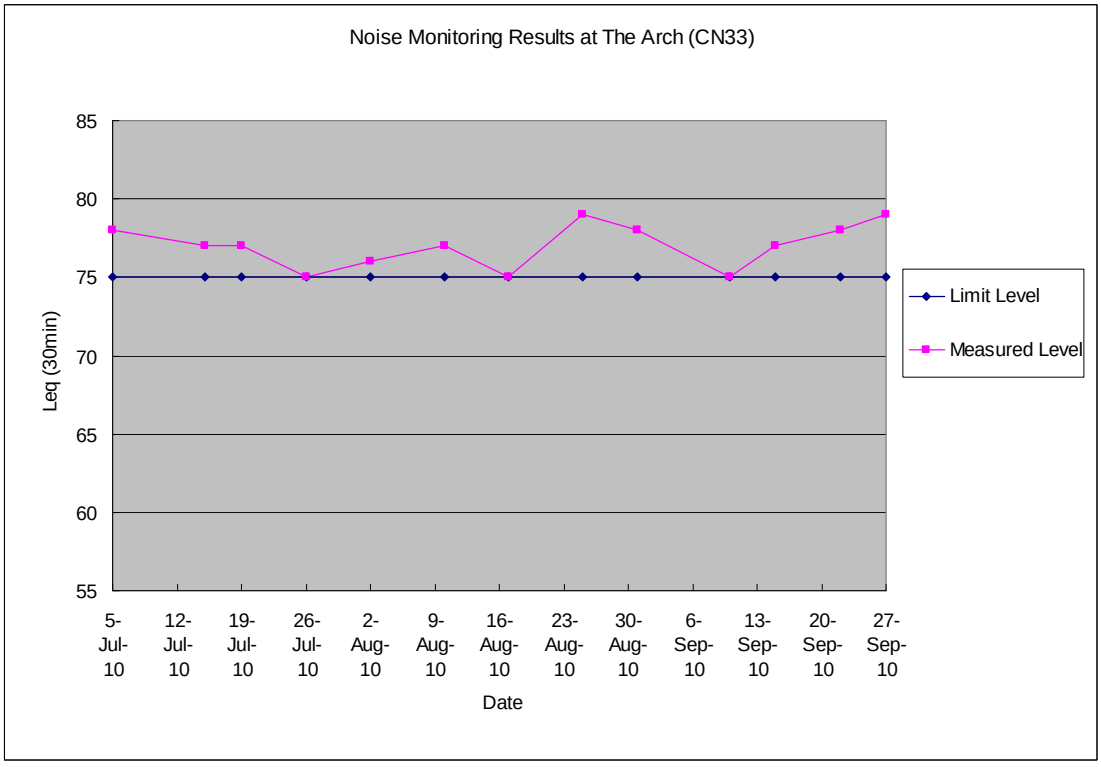

Noise Monitoring Results at Tower 6, Harbour Green (CN 28)
80
75
70
65
60
55
Leq (30min)
26-Jul-10
2-Aug-10
9-Aug-10
16-Aug-10
23-Aug-10
30-Aug-10
6-Sep-10
13-Sep-10
20-Sep-10
27-Sep-10
Date
Limit Level
Measured Level

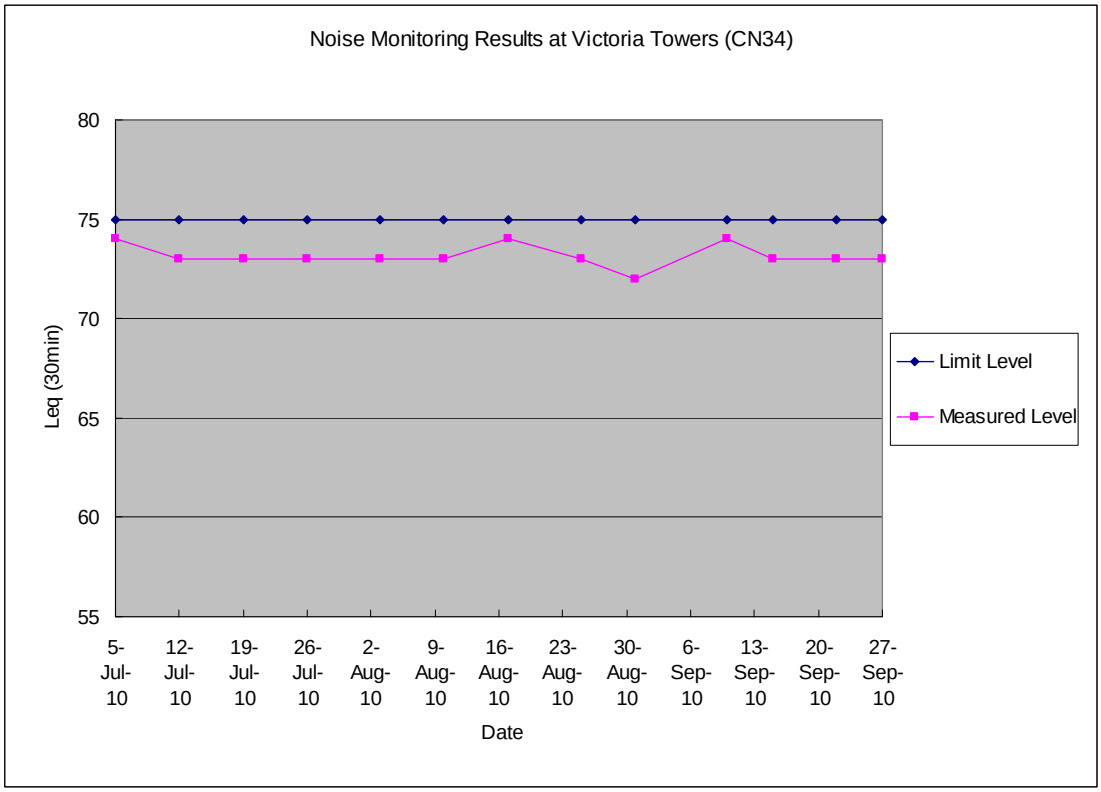

Noise Monitoring Results at Yaumati Catholic Primary School (Hoi Wang Road) (CN 29)
75
70
65
60
55
Leq (30min)
5-Jul-10
12-Jul-10
19-Jul-10
26-Jul-10
2-Aug-10
9-Aug-10
16-Aug-10
23-Aug-10
30-Aug-10
6-Sep-10
13-Sep-10
20-Sep-10
27-Sep-10
Date
Limit Level
Measured Level


Noise Monitoring Results at
Man Cheong Street RCP (CN30)
80
75
70
65
60
55
Leq (30min)
5-Jul-10
12-Jul-10
19-Jul-10
26-Jul-10
2-Aug-10
9-Aug-10
16-Aug-10
23-Aug-10
30-Aug-10
6-Sep-10
13-Sep-10
20-Sep-10
27-Sep-10
Date
Limit Level
Measured Level


Noise Monitoring Results at Sorrento (CN31)
80
75
70
65
60
55
Leq (30min)
5-Jul-10
12-Jul-10
19-Jul-10
26-Jul-10
2-Aug-10
9-Aug-10
16-Aug-10
23-Aug-10
30-Aug-10
6-Sep-10
13-Sep-10
20-Sep-10
27-Sep-10
Date
Limit Level
Measured Level


Noise Monitoring Results at Waterfront (CN32)
80
75
70
65
60
55
Leq (30min)
5-Jul-10
12-Jul-10
19-Jul-10
26-Jul-10
2-Aug-10
9-Aug-10
16-Aug-10
23-Aug-10
30-Aug-10
6-Sep-10
13-Sep-10
20-Sep-10
27-Sep-10
Date
Limit Level
Measured Level


Noise Monitoring Results at The Arch (CN33)
85
80
75
70
65
60
55
Leq (30min)
5-Jul-10
12-Jul-10
19-Jul-10
26-Jul-10
2-Aug-10
9-Aug-10
16-Aug-10
23-Aug-10
30-Aug-10
6-Sep-10
13-Sep-10
20-Sep-10
27-Sep-10
Date
Limit Level
Measured Level


Noise Monitoring Results at Victoria Towers (CN34)
80
75
70
65
60
55
Leq (30min)
5-Jul-10
12-Jul-10
19-Jul-10
26-Jul-10
2-Aug-10
9-Aug-10
16-Aug-10
23-Aug-10
30-Aug-10
6-Sep-10
13-Sep-10
20-Sep-10
27-Sep-10
Date
Limit Level
Measured Level

Appendix G

Bird Species and Abundance Recorded during Avifauna Survey

Appendix G Bird Species and Abundance Recorded during the Avifauna Monitoring in September 2010

Works Area: MPV
Survey Site: MPV-1
Survey Date: 17 September 2010

	Common Name (1)	Chinese Name	Principal Status (2)	Point Count Location												Sub-total	Walk Transect
				MPV-1/P1	MPV-1/P2	MPV-1/P3	MPV-1/P4	MPV-1/P5	MPV-1/P6	MPV-1/P7	MPV-1/P8	MPV-1/P9	MPV-1/P10	MPV-1/P11	MPV-1/P12		
1	**Little Grebe**	小䴙䴘	P			3			2						6	11	
2	**Grey Heron**	蒼鷺	W					1								1	
3	**Great Egret**	大白鷺	P			1		1	2	1				1		6	
4	**Little Egret**	小白鷺	P		1	3		10	5	1	2		10	3		35	√
5	Cattle Egret	牛背鷺	P							6						6	
6	**Chinese Pond Heron**	池鷺	P		3	13		4	7	1	1			1		30	√
7	Black-crowned Night Heron	夜鷺	P					1								1	√
8	White-breasted Waterhen	白胸苦惡鳥	R	1	1				1							3	
9	**Black-winged Stilt**	黑翅長腳鷸	W								1					1	
10	Common Sandpiper	磯鷸	M,W			1	2		4		1		3		1	12	√
11	Spotted Dove	珠頸斑鳩	R	3	2	1			1		4	2		1	2	16	√
12	Lesser Coucal	小鴉鵑	R													0	√
13	Common Kingfisher	普通翠鳥	AM,P	1		1	2				1					5	
14	White-throated Kingfisher	白胸翡翠	AM,P											1		1	
15	Barn Swallow	家燕	SpM,Su							5						5	√
16	Yellow Wagtail	黃鶺鴒	M,W			2			1							3	
17	White Wagtail	白鶺鴒	W,R					2			3		4			9	√
18	Red-whiskered Bulbul	紅耳鵯	R	1	1	1									2	5	√
19	Chinese Bulbul	白頭鵯	R			1					15					16	√
20	Long-tailed Shrike	棕背伯勞	R			1		1			1					3	
21	Oriental Magpie Robin	鵲鴝	R	1	1	2		1							1	6	
22	Yellow-bellied Prinia	黃腹山鷦鶯	R	1		2		1			1					5	√
23	Plain Prinia	純色山鷦鶯	R			2							1			3	√
24	Great Tit	大山雀	R													0	√
25	Japanese White-eye	暗綠繡眼鳥	R,?W													0	√
26	Scaly-breasted Munia	斑文鳥	R								7					7	
27	Eurasian Tree Sparrow	麻雀	R	10							36	2				48	√
28	Black-collared Starling	黑領椋鳥	R							1	2					3	√
29	Common Myna	家八哥	R	2					2							4	√
30	Crested Myna	八哥	R			13	5	10		7	3		2		1	41	√
31	Black Drongo	黑卷尾	M,Su												1	1	
32	Common Magpie	喜鵲	R			1		1								2	√
33	**Collared Crow**	白頸鴉	R							1						1	
34	Azure-winged Magpie	灰喜鵲	Category E*													0	√
	No. of Birds at Each Point:			**20**	**9**	**48**	**9**	**33**	**25**	**23**	**78**	**4**	**20**	**7**	**14**		
	No. of Birds Recorded from Point Count:			**290**													
	No. of Species Recorded from Point Count:			**30**													
	Total No. of Species:			**34**													
	Total No. of Species of Conservation Interest:			**7**													

Note:
(1) Species in bold represents Species of Conservation Interest.
(2) R=resident; W=winter visitor; Su=summer visitor; M=migrant; A=autumn; Sp=spring; P=present all year [Principal status was assessed with reference to Carey *et al*. (2001): The Avifauna of Hong Kong]
* Category E: Species for which all published Hong Kong records are considered likely to relate to birds that have escaped or have been released from captivity and do not possess a Principal Status.

Note:
1. Species in bold represents Species of Conservation Interest.
2. "at f" denotes the birds were recorded at flight.

All wild birds are Protected under Wild Animal Protection Ordinance (Cap. 170)
* Protected under Protection of Endangered Species of Animals and Plants Ordinance (Cap. 586)
\# Wetland-dependent species (including wetland-dependent species and waterbirds)
1. Fellowes et al. (2002); GC=Global concern; RC=Regional Concern; LC=Local Concern; PGC=Potential Global Concern; PRC=Potential Regional Concern.
2. List of Wild Animals Under State Protection (promulgated by State Forestry Administration and Ministry of Agriculture on 14 January, 1989). [國家重點保護野生動物名錄1989年1月14日林業局及農業部發佈施行]
Note (highlighted in yellow): Red-billed Starling is considered by *Fellowes et al*. (2002) to be of Global Concern. Since publication, however, the global population estimate has been revised and the species is not now considered globally threatened (BirdLife International 2007). A listing of Regional Concern (RC), based on the importance of the large roosts present near Deep Bay, is considered to be more appropriate.

Appendix H

Representative Photographs of the Avifauna Monitoring

Appendix H Representative Photographs taken during the Avifauna Monitoring in September 2010
MPV-1 (Fishponds at Mai Po)

Plate 1 Pond Aeration at Point Count Location MPV-1/P10

Plate 2 Removal of Grasses that Partially Covered the Pond at Point Count Location MPV-1/P1

Plate 3 Draining of Water from Nearby Pond at Point Count Location MPV-1/P10

Appendix H Representative Photographs taken during the Avifauna Monitoring in September 2010
MPV-1 (Fishponds at Mai Po)

Plate 4 Little Grebe at Point Count Location MPV-1/P1

Plate 5 Collared Crow at Point Count Location MPV-1/P7

Plate 6 Black-winged Stilt at Point Count Location MPV-1/P8

Appendix H Representative Photographs taken during the Avifauna Monitoring in September 2010
MPV-1 (Fishponds at Mai Po)

Plate 7 Active Nest of Little Grebe at Point Count Location MPV-1/P12

Appendix I

Certified Arborist Inspection Record

MTR Express Rail Link, Contract 801

Monthly Audit Inspection Record

September 2010

Audit of tree works, including tree protection, pruning work, transplanting work, maintenance works in the temporary holding nursery, and compensation tree planting

Date	Contract	Activity Description	Purpose
2 Oct 2010 4 Oct 2010	801 - Tree Transplanting (Nursery) CLP private plot in Tai Po Kau	Inspection of trees to be transplanted within the contract	Regular monthly audit of tree works
28 Sept 2010	802 - Nam Cheong Property Parcel 40.2, and Sham Mong Rd Footpath, Private Lot NKIL6436	Inspection of retained trees and trees to be transplanted within the contract	Regular monthly audit of tree works
28 Sept 2010	803A - WKT D-Wall (Site A) Parcels 44.3, 45.8 45.10, plus Footpaths and central dividers of Lin Cheung Road, Austin Road West, and Canton Road	Inspection of retained trees and trees to be transplanted within the contract	Regular monthly audit of tree works
28 Sept 2010	805 - Sham Mong Road Parcel 41.4,38.3, Sham Mong Road Footpath (near 38.3), and Footpath of Sham Mong Rd, Parcels 38.6/38.7 (footpath alongside CLP Building) NKIL 6363 (CLP Building)	Inspection of retained trees and trees to be transplanted within the contract	Regular monthly audit of tree works
30 Sept 2010	811A—WKT station North Ngo Cheung Road, Hoi Wang Road, Lin Cheung Road	Inspection of retained trees and trees to be transplanted within the contract	Regular monthly audit of tree works
9 Oct 2010	820 - Mei Lai Road to Hoi Ting Road Tunnels Parcel 37.2, 37.3, Kwai Chung Road (Footpath near 37.5) Sham Mong Road & Hing Wah Street West Footpath	Inspection of retained trees and trees to be transplanted within the contract	Regular monthly audit of tree works

	Parcel 39.1, 40.4, Sham Mong Road (Nam Cheong Park) Private Lot STT-KX2382, Private Lot STT-KX2416		
30 Sept 2010	821—Shek Yam to Mei Lai Road Tunnels Parcel NT-9 (slope) NT-10	Inspection of retained trees and trees to be transplanted within the contract	Regular monthly audit of tree works
4 Oct 2010	822 - Tse Uk Tsuen to Shek Yam Tunnels Parcels NT-6 (Pat Heung), NT-7, and NT-8, Site Office - San Kwai Street, Kwai Hing, Parcel NT-17 (6.6, 6.9) 822—Siu Lam FW Service Reservoir	Inspection of retained trees and trees to be transplanted within the contract	Regular monthly audit of tree works
24 Sept 2010	825 - Mai Po to Ngau Tam Mei Tunnels Parcels NT-1a (Mai Po), CP-12, and verges of Castle Peak Road - Mai Po	Inspection of retained trees and trees to be transplanted within the contract	Regular monthly audit of tree works

Signed by:
Matthew PRYOR (RLA, CA)