MTR Corporation Limited

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

(No. EP-349/2009/B)

Environmental Monitoring and Audit Report No. 11

(January 2011)

Verified by:	
Position:	Independent Environmental Checker
Date:	16 February 2011

MTR Corporation Limited

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

(No. EP-349/2009/B)

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(January 2011)

Certified by: Glenn Frommer

Position: Environmental Team Leader

Date: 14 FEB 2011

EXECUTIVE SUMMARY

This is the 11th monthly Environmental Monitoring and Audit (EM&A) Report presenting the EM&A works undertaken during the period from 1 to 31 January 2011 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/A and EP-349/2009/B (for 24 January 2011 onwards).

Air Quality

Air quality monitoring was conducted for 24-hour Total Suspended Particulates (TSP) at 13 air quality monitoring locations in the vicinity of Works Area in Mai Po (Works Area A) Ngau Tam Mei (Works Area B), Tai Kong Po (Works Area C), Pat Heung (Works Area F), Shing Mun (Works Area G), Shek Yam (Works Area H), Kwai Chung (Works Area J), Mei Foo (Works Area L), Nam Cheong (Works Area P, Q and R) and West Kowloon (Works Area V1 and V2) in January 2011.

Please refer to the section "Environmental Complaints/Exceedance/Non-compliance/ Summons and Prosecution" below for the exceedance in air quality in the reporting month.

Airborne Noise

Airborne noise was measured in terms of $L_{eq\ (30min)}$ dB(A) with L_{10} and L_{90} measurements as reference at 24 noise monitoring locations in the vicinity of Works Area in Mai Po (Works Area A), Ngau Tam Mei (Works Area B), Tai Kong Po (Works Area C), Pat Heung (Works Area F), Shing Mun (Works Area G), Kwai Chung, (Works Area J), Shek Yam (Works Area H), Mei Foo (Works Area L), Nam Cheong (Works Area M, N, O, P, Q, R and S) and West Kowloon (Works Area V1 and V2) once every week.

Please refer to the section "Environmental Complaints/Exceedance/Non-compliance/ Summons and Prosecution" below for the noise exceedance in the reporting month.

Monitoring of Avifaunal Species

Monthly ecological monitoring was conducted during the construction of Mai Po Ventilation Building Works Area (MPV), access road to Tai Kong Po Works Area (TPP-1/2/3) and Pat Heung Ventilation Building Works Area (PHV). The monitoring results indicated the fishponds within the survey area of MPV and drainage channel within the survey area of (TPP-1/2/3) were utilized by a large number of waterbirds in January 2011 during the monitoring. No significant fluctuation in the number of species and abundance of avifauna was observed for the survey at MPV, PHV and (TPP-1/2/3). 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 803 A, 803B, 803C, 803D, 811A and 811B in West Kowloon, 802, 805 and 820 in Nam Cheong, 821 in Kwai Chung, 822 in Pat Heung, Shing Mun, Shek Yam, Tai Shu Ha Road West Magazine Site, So Kwun Wat Nursery and Magazine Site and Tsing Chau Tsai Barging Point, 824 in Ngau Tam Mei and Tai Kong Po 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 / Exceedance / Non-compliance / Summons and Prosecution

For the reporting month, a total of 3 environmental complaints were referred from EPD. The environmental complaints received were related to odour from the construction sites at Sham Mong Road adjoining the Bus Terminus opposite to Ying Wa College; groundborne noise generated by tunnel excavation works at Shek Yum adit; muddy water discharge to storm drain at Mai Po Works Area. 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 air-borne noise Limit Level were recorded at HKIVE Haking Wong Waterfront Annex (CN 23), St. Mary's Church Mok Hing Yiu College (CN 25), Ying Wah College (CN 26), Yaumati Catholic Primary School (CN 29), The Waterfront (CN 32) and The Arch (CN 33).There was no noise exceedance of Action Level 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 had implemented further mitigation measures accordingly to minimize the noise impact.

Exceedances of 24-hour TSP Action Level were recorded at Mai Po San Tsuen (AM 1), Kong Tai Road Village House (AM 3) and Sau Shan House, Cheung Shan Estate (AM 9) in this month. In addition, one exceedance of 24-hour TSP Limit Level was recorded at Kong Tai Road Village House (AM 3). Actions stipulated under the Event and Action Plan (Table 9.4 of the EM&A Manual) were implemented. Investigation was carried out with dust source identified and the contractor implemented further mitigation measures accordingly to minimize the dust impact.

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 Areas A, B, C, F, G, H, J, L, M, N, O, P, Q, R, S, V1, V2, AA, AC, AE and AG. Construction in Shek Kong Stabling Sidings (Works Areas D and D1) would be commenced in the coming month according to the latest programme.

Please refer to Table 8-1 for the major works in the respective works areas. Impact monitoring would be commenced in February 2011 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/A has been amended with EP-349/2009/B on 24 January 2011.

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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 11th monthly Environmental Monitoring and Audit (EM&A) Report presenting the EM&A works undertaken during the period from 1 to 31 January 2011 for XRL in accordance with the EM&A Manual and the requirement under Environmental Permit No. EP-349/2009/A and EP-349/2009/B (for 24 January 2011 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 11th month of civil construction in Works Area A, B, C, F, G, H, J, L, M, N, O, P, Q, R, S, V1, V2, AA, AC, AE and AG for January 2011. 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	Sheet-pilling, pre-drilling work, bored pile removal, bored pile construction, H-pile extraction, pile cap demolition, excavation & lateral supports and utility diversion
805	N,O	Demolition of superstructure, erection of temporary footbridge, sheet piling work, demolition of pile cap.
805	S	Removal and demolition of footbridge
West Kowloon		
803A	V1	Diaphragm construction, pre-drilling, utilities diversion, road works and post drilling
803B	V1	Bored piling works, socketed H-piling works, pre-drill and ground investigation work
803C	V1	Plant Set-up, Pre-bored H-pile, excavation, and utilities

Contract	Works Area	Major Construction Activities
		diversion.
803D	V1	Pre-bored H-pile, bored pile, diaphragm wall, barging facility operation, hoarding modification, utilities diversion, road works and post drilling
811A	V2	Pre-drilling works for bored pile, diaphragm wall and socketted H-piles; construction of guide wall, diaphragm wall and socketted H-pile; traffic diversion at Lai Cheung Road; construction of traffic deck at Lai Cheung Road; external works to CLP Sub Station at Lai Cheung Road
811B	V2	Predrilling for diaphragm wall, bored piling and diaphragm wall, bored pile and,prebored H-piles installation, guide wall and diaphragm wall construction, temporary road construction, construction of temporary footbridge;
Nam Cheong		
811B	Y	Operation of Nam Cheong Barging Point
820	M	Utility diversion; Removal of pile by hydraulic rotator on-going
820	P	Grouting work on-going; D-wall excavation and concreting for Zone B; Pre-bored H-piling; Utilities diversion; Temporary traffic arrangement.
820	R	Preparation work for pile-removal; Temporary traffic arrangement and utilities diversion
820	S	Temporary traffic arrangement; Utilities diversion; Removal of pile just started
820	Y	Disposal ramp erection; Plant mobilization and site set-up
821	Y	Disposal ramp erection; Plant mobilization and site

Contract	**Works Area**	**Major Construction Activities**
		set-up
Kwai Chung		
821	J	Laying power cable and drainage work; establishment of workshop area, labour washing facility, stock piling area and new wastewater treatment system; breaking and drilling work near the portal of the tunnel; sampling work
Pat Heung		
822	F	Site formation, pre-drilling work
Shek Yam		
822	G	Pipe piling, buttress construction
Shing Mun		
822	H	Adit construction, temporary workshop construction
So Kwun Wat		
822	AC	Nil
Tai Shu Ha Road West Magazine Site		
822	AE	Construction of magazine
Tsing Chau Tsai Barging Point		
822	AG	Nil
Ngau Tam Mei		
824	B	Site preparation, sheet piling
Tai Kong Po		
824	C	Site preparation

Contract	**Works Area**	**Major Construction Activities**
Mai Po		
825	A	Shaft construction
Siu Lam Barging Point		
825	AA	Nil

Table 2-1 Major construction activities in January 2011

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/B Clause No.	**Document Title**
2.11	Contingency Plan for Groundwater Level for Contract 825 (Rev 1)
2.11	Contingency Plan for Groundwater Level for Contract 811B
2.14	Tree Planting and Landscape Plan (Part 7) (Revision 1 – Addendum) (Remaining Works Areas in Yuen Long District)
2.21	Supplementary Contamination Asessment Report and Remediation Action Plan for Kwai Chung Ventilation Building (Rev B)
2.21	Revised Contamination Assessment Plan for Shek Kong Works Area for Area F, G, U and V
2.21	Revised Contamination Assessment Plan for Mai Po Ventilation Building Works Area for Area C1 and D (Rev B)
2.42	Baseline Monitoring Report (Part 13) Rev 1
2.43	Monthly EM&A Report

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

3.3 Status of Permit/License/Notifications

A summary of the status of permits, licences and notifications on environmental protection made, applied or approved under this Project during the previous and reporting month is presented in Table 3-2 below. The Environmental Permit No. EP-349/2009/A and EP-349/2009/B (for 24 January 2011 onwards) issued by EPD was used for the XRL project.

Item	Item Description	Application Date	Permit Status
Contract 803A (Works Area V1)			
1	WPCO License	10 Jan 2011	Under Assessment
2	Construction Noise Permit (Watermain Works) - Renewal	10 Jan 2010	Approved on 19 Jan 2011 GW-RE0025-11 (Valid until 24 Jul 2011)
Contract 803B (Works Area V1)			
1	WPCO License for Area 13.37	31 Dec 2010	Under Assessment
2	Registration as Chemical Waste Producer for Area 13.37	Jan 2011	Under Assessment
3	Construction Noise Permit for Area 13.37	Jan 2011	Under Assessment
Contract 803D (Works Area V1)			
1	WPCO License	10 Jan 2011	Under Assessment
Contract 805 (Works Area N, O, S)			
1	WPCO license Sham Mong Road KF118	5 Nov 2010	Approved on 16 Dec 2010

Item	Item Description	Application Date	Permit Status
	Footbridge, KF119 Footbridge and CLP Spare Equipment Building		(PermitNo.:WT00008071-2010 valid until 31 Dec 2015)
2	Construction Noise Permit for removal of Footbridge KF118	23 Dec 2010	Approved on 6 Jan 2011 (PermitNo.:GW-RW0752-10 valid until 22 Feb 2011)
Contract 811A (Works Area V2)			
1	Construction Noise Permit (Works Area 13.46 &13.44)	4 Jan 2011	Approved on 28 Jan 2011 (Permit no. GW-RE0043-11 valid till 3 May 2011
2	Construction Noise Permit (for relocation of gantry)	20 Jan 2011	Under Assessment
Contract 811B (Works Area V2 & Y)			
1	Construction Noise Permit	12 Nov 2010	Licence no.: GW-RW0641-10 Valid from 3 Dec 10 to 24 Apr 11
2	Construction Noise Permit	9 Dec 2010	Licence no.: GW-RW0731-10 Valid from 25 Dec 10 to 20 Jun 11
3	Construction Noise Permit (for installation of	27 Jan 2011	Under Assessment (Ref. No. 326345)

Item	Item Description	Application Date	Permit Status
	temp. steel bridge at area 13.62)		
4	WPCO license 13.42B (site area)	4 Jan 2011	Under Assessment (Ref. No. 325410)
5	WPCO license 13.42A, 13.42C, 13.41AA, 13.41AB & 13.38 (site area)	4 Jan 2011	Licence no.: WT00008197-2011 Valid from 25 Jan 11 to 30 Nov 15
6	WPCO license 13.40 (site area)	29 Dec 2010	Licence no.: WT00008181-2011 Valid from 25 Jan 11 to 31 Jan 16
Contract 820 (Works Area M, P, R, S, Y, T, V)			
1	WPCO license for Works Area V (next to Contract 811A)	26 Jan 2011	Under Assessment
2	Construction Noise Permit (Pile removal work at WD1, Sham Mong Road J/O Yuet Lun street)	14 Jan 2011	Permit granted GW-RW0071-11. Valid until 30-Jul-11
3	Construction Noise Permit (Pile removal work at YC2 and NC1)	26 Jan 2011	Under Assessment
Contract 821 (Works Area J)			

Item	Item Description	Application Date	Permit Status
1	Construction Noise Permit (24hr Construction Work involving Rock Splitting and Excavation)	31 Dec 2010	Permit GW-RW0015-11 granted. Valid from 18 Jan 2011 to 13 July 2011.
Contract 822 (Works Area F, G, H, AC, AE and AG)			
1	Construction Noise Permit (construction from 7:00 to 23:00 and dewatering for full day) for Works Area H	12 Nov 2010	License No.GW-RW0596-10, Valid from 19:00, 12 Nov 2010 to 07:00, 31 Jan 2011 for Works Area H
2	Construction Noise Permit (construction from 7:00 to 23:00 and dewatering for full day) for Works Area H, revised for the hole opened on the decking for ventilation.	3 Dec 2010	License No. GW-RW0710-10 Valid from 19:00, 17 Dec 2010 to 07:00, 31 Jan 2011 for Works Area H
3	Construction Noise Permit (construction for full day) for Works Area H	24 Dec 2010	EPD acknowledged receipt on 24 Dec 2010
Contract 824 (Works Areas B and C)			
1	WPCO license for Works Area C	11 Nov 2010	Under assessment (Acknowledgement Receipt Ref No : 323527)
2	WPCO license for Works	8 Dec 2010	Under assessment

Item	Item Description	Application Date	Permit Status
	Area B and C		(Acknowledgement Receipt Ref No : 324516)
3	WPCO license for Works Area C	21 Dec 2010	Under assessment (Acknowledgement Receipt Ref No : 325061)
4	Registration as Chemical Waste Producer	11 Oct 2010	Under assessment
Contract 825 (Works Area A)			
1	Construction Noise Permit	24 Dec 2010	Permit granted on 4 Jan 2011 (Ref: GW-RN0454-10)
2	Construction Noise Permit	21 Jan 2011	Permit granted on 28 Jan 2011 (Ref: GW-RN0030-11)

Table 3-2 Summary of the status of permits, licences and notifications made, applied and approved under this Project during the previous and reporting month

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 13 air monitoring locations in accordance with the EM&A Manual. Monitoring was undertaken at each monitoring location once per every 6 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 13 monitoring locations in the vicinity of the Works Area A, B, C, F, G, H, J, L, P, Q, 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 2	Yau Tam Mei Village House	468	2/11/2010
AM 3	Kong Tai Road Village House	510	2/11/2010
AM 8	No. 306, Sheung Tsuen San Tsuen Village House	520	2/11/2010
AM 9	Sau Shan House, Cheung Shan Estate	529	29/12/2010
AM 10	Yau Ma Hom Resite Village	509	29/12/2010
AM 11	Chung Shun Knitting Centre	1707	7/10/2010
AM 12	Po Leung Kuk Tong Nai Kan College	520	6/12/2010
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	6/12/2010
AM 16	Tower 3, The Waterfront	1282	6/12/2010
AM 17	The Victoria Towers	528	6/12/2010

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. Impact monitoring for AM8 was suspended on 4 and 8 January 2011 due to the termination of power supply by original house owner and it was resumed on 14 January 2011.

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 2	179.4	260
AM 3	154.7	260
AM 8	158.1	260
AM 9	171.2	260
AM 10	174.8	260
AM 11	160.3	260
AM 12	162.5	260
AM 13	180.3	260
AM 14	158.2	260

Monitoring Station ID	24-hour TSP Level in μg/m^3	
	Action Level	Limit Level
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. Detail 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 3	Yau Tam Mei Village House	2718893	21/6/2010
CN 4	Yau Tam Mei Village House	2718887	21/6/2010
CN 5	Kong Tai Road Village House	2718895	21/6/2010
CN 6	Kong Tai Road Village House	2718879	21/6/2010
CN 15	No. 305B - Sheung Tsuen San Tsuen Village House	2718885	21/6/2010
CN 16	DD 114 LOT 1405 Sheung Tsuen	2718888	21/6/2010
CN 18	Sau Shan House	2701831	13/1/2011
CN 19	Sun Fung Centre	2701821	10/1/2011
CN 21	Po Leung Kuk Tong Nai Kan College	2701820	15/4/2010
CN 22	Block I, Lai Chi Kok Reception Centre	2709427	11/5/2010
CN 23	HKIVE Haking Wong Waterfront Annex	2701818	10/1/2011

Monitoring Station ID	Noise Monitoring Location	Serial Number	Last Calibration Date
CN 24	St. Andrew Primary School	2701825	17/1/2011
CN 25	St. Mary's Church Mok Hing Yiu College	2709428	16/7/2010
CN 26	Ying Wah College	2701822	13/1/2011
CN 27	Cheong Shun House, Nam Cheong Estate	2709426	11/5/2010
CN 28	Tower 6, Harbour Green	2701817	3/1/2011
CN 29	Yaumati Catholic Primary School	2701815	3/1/2011
CN 30	Man Cheong Street Refuse Collection Point	2701816	19/2/2010
CN 31	Tower 6, Sorrento	2701826	17/1/2011
CN 32	Tower 3, The Waterfront	2701823	19/2/2010
CN 33	Star Tower, The Arch	2701827	17/1/2011
CN 34	The Victoria Towers	2701829	6/1/2011
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 hoarding erection completed and construction works at MPV, TPP

and PHV commenced, ecological monitoring on monthly basis was commenced accordingly. The location, frequency and duration of ecological monitoring at MPV, TPP and PHV are shown in Table 4-5 and Figures C8016/C/XRL/ACM/M51/001, C8016/C/XRL/ACM/M51/003 and C8016/C/XRL/ACM/M51/006 in Appendix D.

Works Area	**Survey Site**	**Monitoring Location**	**Monitoring Frequency**	**Monitoring Duration**
Mai Po Ventilation Building Works Area (MPV)	MPV-1	• Fishponds in Wetland Conservation Area (WCA) within 500 m from the boundary of MPV works area	Monthly	During construction phase of MPV works area
Access road leading to TPP	TPP-1/2/3	• The whole alignment of drainage channel KT5 (TPP-1) • The section of drainage channel 95CD along the proposed alignment of access upgrading (TPP-2) • The whole alignment of abandoned meander of conservation interest 43CD-1 (TPP-3)	Monthly	During upgrading and operation of access road for construction phase activities

Works Area	Survey Site	Monitoring Location	Monitoring Frequency	Monitoring Duration
Pat Heung Ventilation Building Works Area (PHV)	PHV-1 (grouped with TUW-2 due to overlapping of survey area)	• Woodland in CA within 500m from the boundary of PHV works area	Monthly	During construction phase of PHV 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) and Gin Drinker Bays Landfill (GDBL) consultation zone.

5. MONITORING RESULT

5.1 Air Quality

The monitoring schedule is shown in Appendix E. Results of 24-hour TSP level and the graphical presentation of monitoring results are shown in Appendix F. Impact monitoring for AM8 was suspended on 4 and 8 January 2011 due to the termination of power supply by original house owner and it was resumed on 14 January 2011.

In the reporting month, there are exceedances of 24-hr TSP Action Level on 3, 25 and 29 January 2011 at AM 1; 8, 14 and 20 January 2011 at AM 3 and 25 January 2011 at AM 9 were recorded in the reporting month. Exceedance of 24-hr TSP Limit Level was recorded on 15 January 2011 at AM 3. Actions stipulated under the Event and Action Plan (Table 9.4 of the EM&A Manual) were implemented for all exceedances and monitoring frequency was increased.

For the exceedances at AM 1, investigation results revealed that the proper mitigation measures had been implemented at Mai Po Works Area and the exceedances might possibly be due to nearby trench work by other project. Nonetheless, the 825 Contractor was reminded to ensure that dust mitigation for construction site and access road be implemented to minimize dust impact. The investigation result was reviewed by IEC.

For the exceedances at AM 3, investigation results revealed that the exceedances might possibly due to site formation work at Tai Kong Po Works Area. The 824 Contractor provided additional dust mitigation measures, including covering of stockpile and improving watering frequency and coverage by automatic sprinklers. The situation would be continuously reviewed by IEC.

For the exceedances at AM 9, investigation results revealed that the exceedance might possibly due to works carried out at Shing Mun Works Area. The 822 Contractor is reminded to enhance the dust suppression measure. The situation would be continuously reviewed by IEC.

5.2 Noise

The monitoring schedule is shown in Appendix E. Results of measured noise level, in terms of $L_{eq(30min)}$ and graphical presentations are presented in Appendix F.

In the reporting month, noise exceedances of Limit Level were recorded at HKIVE Haking Wong Waterfront Annex (CN 23) on 19 January 2011; St Mary's Mok Hiu Hing College (CN 25) on 27 January 2011; Ying Wah College (CN 26) on 5 and 14 January 2011; Yaumati Catholic Primary School (CN29) on 5, 12 and 18 January 2011; The Waterfront (CN 32) on 5, 12 and 27 January 2011 and The Arch (CN 33) on 5 Jan 2011.

Regarding the noise exceedances at CN 23, 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. It was found from the investigation that the exceedance was not caused by project activities. The investigation results were reviewed by IEC.

One noise exceedance was recorded at St. Mary's Mok Hiu Hing College (CN 25) on 27 January 2011. 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. It was found that the construction works for pre-bored H-pile and rock drillings carried out in Nam Cheong Launching Shaft might have caused the noise exceedance. The Contractor was reminded to enhance the noise mitigation measures to comply with the statutory requirement and minimize noise nuisance to the nearby NSRs.

Two noise exceedances were recorded at Ying Wa College (CN 26) on 5 and 14 January 2011 respectively. 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. It was found that the construction works carried out in 802 might have caused the noise exceedance. The Contractor implemented further mitigation measures to minimize the noise impact.

Three exceedances were recorded at CN 29 at Yaumati Catholic Primary School and actions identified in the Event and Action Plan (Table 3.4 of the EM&A

Manual) were undertaken. The investigation was conducted accordingly and revealed that noise source may possibly due to works by 811A Contractor. Remedial proposals were received and additional noise mitigation measures proposed by the Contractor were implemented to minimize the noise impact. The contractor was reminded 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 Waterfront (CN 32) and The Arch (CN 33) in West Kowloon, actions identified in the Event and Action Plan (Table 3.4 of the EM&A Manual) were undertaken and monitoring frequency was increased. 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, there was no noise exceedance of Action Level in the reporting month.

5.3 Ecological Monitoring

5.3.1 Ecological Monitoring on Avifaunal Communities

Ecological monitoring at MPV

Monthly avifauna monitoring at MPV work site was conducted on 21 January 2011. 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 G.

Date	**Weather Conditions**	**Noticeable Activities in the MPV-1 Survey Site**
21 January 2011	Sunny	• Removal of bund weed • Agricultural activities at pond bund at Point Count Location MPV-1/P5

Table 5-3 Weather condition and noticeable activities observed in the MPV-1 survey site during monitoring in January 2011

A total of 676 individuals from 40 avifauna species were recorded from the Point Count Locations at MPV-1 in January 2011 (Table 5-4 refers). The total number of species recorded during the monitoring was 44. The population of the avifauna recorded mainly consisted of Great Cormorant, ardeids (e.g. egrets and herons), sandpipers (e.g. Green Sandpiper, Wood Sandpiper and Common Sandpiper), wagtails (e.g. Yellow Wagtail and White Wagtail), Red-billed Starling and other widespread resident species (e.g. Spotted Dove, Chinese Bulbul, Eurasian Tree Sparrow, Black-collared Starling and Crested Myna). Other recorded waterbirds and wetland-dependent species included Little Grebe, Eurasian Wigeon, Tufted Duck, Black Kite, White-breasted Waterhen, Common Moorhen, Little Ringed Plover, Common Snipe, Common Kingfisher, White-throated Kingfisher and Collared Crow. Detailed records of avifauna at MPV-1 survey site are presented in Appendix G.

The monitoring results in January 2011 were compared against the dry season results of the baseline bird survey conducted from November 2009 to January 2010. The number of bird species and abundance recorded from the Point Count Locations of MPV-1, and the total number of species and species of conservation interest recorded from MPV-1 survey site in January 2011 were of similar magnitude as the baseline survey results (Table 5-4 and Table 5-5 refer). Meanwhile, the number of birds recorded from the Point Count Locations during the current monitoring was higher than that from the baseline (Table 5-4 refers). This was due to the increased records of Great Cormorant, Little Egret, Chinese Bulbul, Eurasian Tree Sparrow,

Red-billed Starling and Black-collared Starling at some of the ponds. Of particular interest, 3 individuals of Eurasian Wigeon were recorded at a pond near Point Count Location MPV-1/P6 during the current monitoring, which had not been recorded during the baseline monitoring. Eurasian Wigeon is species of conservation interest. In addition, a flock of over 50 individuals of Great Cormorant was observed roosting on a tree near a pond at Point Count Location MPV-1/P2. Meanwhile, flocks of around 50 individuals of Red-billed Starling were observed at pond bunds at Point Count Location MPV-1/P3, MPV-1/P5 and MPV-1/P8, respectively.

The monitoring results indicated the fishponds within the survey area were utilized by a large number of waterbirds in January 2011 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**
21 January 2011	40	676
November 2009 to January 2010 [1] (Source: monthly averaged number obtained in Baseline Bird Survey)	38	306

Table 5-4 Number of species and abundance of avifauna recorded in January 2011 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]**
21 January 2011	44 (11)
November 2009 to January 2010 [3] (Source: monthly averaged number obtained in Baseline Bird Survey)	41 (11)

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

Ecological monitoring at Tai Kong Po (TPP-1)

The avifauna monitoring location for the proposed works area of the TPP access road was sub-divided into three survey sites namely TPP-1, TPP-2 and TPP-3. With the erection of site hoarding was completed and construction work at access road was started in the reporting month, monthly monitoring was carried out at TPP during reporting month.

The TPP-1 survey site is a drainage channel (KT5) with gabion / masonry banks at upper portion. The rest of the channel is trapezoidal with vegetated grasscrete banks on both sides of the channel. The downstream end of the channel joins up with a main drainage channel (95CD) (Figure C8016/C/XRL/ENS/M51/003 in Appendix D refers).

The weather condition and other noticeable activities occurring within or in the vicinity of the survey area during the monitoring are summarized in Table 5-6. The bird species and their abundance recorded during the avifauna monitoring for the reporting month are presented in Appendix G.

Date of Monitoring	**Weather Condition**	**Noticeable Activities Observed in the TPP-1 Survey Site**
14 January 2011	Sunny	• Upgrading of access road • Excavation works near Point Count Location TPP-1/P4 and TPP-1/P5 • Removal of vegetation at the gabions near Point Count Location TPP-1/P3

Table 5-6 Weather Condition and Noticeable Activities Observed in the TPP-1 Survey Site during the Monitoring in January 2011

A total of 271 individuals from 27 avifauna species were recorded from the Point Count Locations at TPP-1 in January 2011 (Table 5-7 refers). The total number of species recorded during the monitoring was 30. The population of the avifauna recorded mainly consisted of ardeids (egrets and herons), sandpipers (e.g. Green Sandpiper, Wood Sandpiper and Common Sandpiper), wagtails (e.g. Yellow Wagtail, Grey Wagtail and White Wagtail), and starlings (e.g. Red-billed Starling and Black-collared Starling). Other recorded waterbirds include White-breasted Waterhen, Little Ringed Plover and Common Snipe. It is typical in most lowland streams of Hong Kong (polluted and/or channelized at their lower courses) that lowland wetland bird species such as Chinese Pond Heron, White-breasted Waterhen, Common Kingfisher and Grey Wagtail could be found in low densities (Wong et al., 2009). Of particular interest, flocks of egrets and herons (e.g. Cattle Egret and Chinese Pond Heron), sandpipers (Green Sandpiper and Wood Sandpiper), winter visitor Red-billed Starling, and resident species (e.g. Black-collared Starling) were found on the channel bed near Point Count Location TPP-1/P2. Bird activity in channelized streams is largely restricted to exploiting food resources, typically fish or insects (Wong et al., 2009). In addition, Greater Painted-snipe was not recorded during the current monitoring, which had been recorded during the monitoring in November and December 2010. This might due to the removal of vegetation at the gabions near Point Count Location TPP-1/P1 and TPP-1/P3 (Appendix J refers), where Greater Painted-snipe were found during the monitoring in November and December 2010. Detailed records of avifauna at TPP-1 are presented in Appendix G.

The monitoring results in January 2011 were compared against the dry season results of the baseline bird survey conducted from November 2009 to January 2010. The number of bird species and abundance recorded from the Point Count Locations of TPP-1, and the total number of species and species of conservation interest recorded from TPP-1 survey site in November 2010 were of similar magnitude as the baseline survey results (Table 5-7 and Table 5-8 refer).

The monitoring results indicated the drainage channel within the survey area was utilized by a large number of waterbirds and water-dependent species in January

2011 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 Period	TPP-1 Survey Site	
	No. of Bird Species	Abundance of Bird Species
14 January 2011	27	271
November 2009 to January 2010 [1]	27	311

Note:

1. Monthly average obtained from baseline bird survey.

Table 5-7 Number of Bird Species and Abundance of Bird Species Recorded in January 2011 Avifauna Monitoring at the Point Count Locations of the TPP-1 Survey Site

Survey Period	Total Number of Bird Species Recorded [1,2]
14 January 2011	30 (5)
November 2009 to January 2010 [3]	27 (6)

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 5-8 Total Number of Bird Species Recorded in January 2011 Avifauna Monitoring at the TPP-1 Survey Site

Ecological monitoring at Tai Kong Po (TPP-2)

The weather condition and other noticeable activities occurring within or in the vicinity of the survey area during the monitoring are summarized in Table 5-9. The TPP-2 survey site covered a section of main drainage channel 95CD, which is a concrete trapezoidal channel with grasscrete banks. Plantation of native or landscape vegetation was observed along the embankment of the channel (Figure C8016/C/XRL/ENS/M51/002 in Appendix D refers). The bird species and their abundance recorded during the avifauna monitoring for the reporting month are

presented in Appendix G.

Date of Monitoring	Weather Condition	Noticeable Activities Observed in the TPP-2 Survey Site
14 January 2011	Sunny	• Piling works within the proposed access road near Point Count Location TPP-2/P1 • Removal of vegetation at the grasscrete banks along the channel near Point Count Location TPP-2/P1 and TPP-2/P2

Table 5-9 Weather Condition and Noticeable Activities Observed in the TPP-2 Survey Site during the Monitoring in January 2011

A total of 47 individuals from 12 avifauna species were recorded from the Point Count Locations at TPP-2 in January 2011 (Table 5-10 refers). The total number of species recorded during the monitoring was 19. The population of the avifauna recorded mainly consisted of Little Ringed Plover, sandpipers (e.g. Green Sandpiper, Wood Sandpiper and Common Sandpiper), wagtails (e.g. Yellow Wagtail and White Wagtail), and Oriental Magpie Robin. Other recorded wetland-dependent species included White-throated Kingfisher. It is typical in most lowland streams of Hong Kong (polluted and/or channelized at their lower courses) that lowland wetland bird species such as Chinese Pond Heron, White-breasted Waterhen, Common Kingfisher and Grey Wagtail could be found in low densities (Wong *et al*., 2009). A species of conservation interest Red-throated Pipit was also found at the grasscrete bank near Point Count Location TPP-2/P3, which had not been recorded during the baseline monitoring (Appendix J refers). Detailed records of avifauna at TPP-2 are presented in Appendix G.

The monitoring results in January 2011 were compared against the dry season results of the baseline bird survey conducted from November 2009 to January 2010. The number of bird species and abundance recorded from the Point Count Locations of TPP-2, and the total number of species and species of conservation interest recorded from TPP-2 survey site in January 2011 were of similar magnitude as the

baseline survey results (Table 5-10 and Table 5-11 refer).

The monitoring results indicated the main drainage channel within the survey area was utilized by typical lowland stream birds in January 2011 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 Period	TPP-2 Survey Site	
	No. of Bird Species	Abundance of Bird Species
14 January 2011	12	47
November 2009 to January 2010 (1)	13	60

Note:

(1) Monthly average obtained from baseline bird survey.

Table 5-10 Number of Bird Species and Abundance of Bird Species Recorded in January 2011. Avifauna Monitoring at the Point Count Locations of the TPP-2 Survey Site

Survey Period	Total Number of Bird Species Recorded [1,2]
14 January 2011	19 (2)
November 2009 to January 2010 [3]	17 (1)

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 5-11 Total Number of Bird Species Recorded in January 2011 Avifauna Monitoring at the TPP-2 Survey Site

Ecological monitoring at Tai Kong Po (TPP-3)

The weather condition and other noticeable activities occurring within or in the vicinity of the survey area during the monitoring are summarized in Table 5-12. The

TPP-3 survey site is an abandoned meander (43CD-1) of conservation interest with natural banks and substratum. The earthen banks of the meander were mostly dominated by grasses and weeds. The section near point count location TPP-3/P1 was found to be usually wet though the water was quite stagnant. Due to its close proximity to a village access road of Kam Hing Wai and Shui Mei Tsuen, this section of meander was subject to higher disturbance from villagers and traffic. Point count locations TPP-3/P2 and TPP-3/P3 were only seasonally wet (Figure C8016/C/XRL/ENS/M51/002 in Appendix D refers). The bird species and their abundance recorded during the avifauna monitoring for the reporting month are presented in Appendix G.

Date of Monitoring	**Weather Condition**	**Noticeable Activities Observed in the TPP-3 Survey Site**
14 January 2011	Sunny	• No major construction activities in vicinity

Table 5-12 Weather Condition and Noticeable Activities Observed in the TPP-3 Survey Site during the Monitoring in January 2011

A total of 35 individuals from 16 avifauna species were recorded from the Point Count Locations at TPP-3 in January 2011 (Table 5-13 refers). The total number of species recorded during the monitoring was 16. The population of the avifauna recorded consisted of widespread resident species (e.g. Spotted Dove, Red-whiskered Bulbul, Oriental Magpie Robin, Masked Laughingthrush and Japanese White-eye), wagtails (e.g. Grey Wagtail and White Wagtail), and winter visitors (e.g. Olive-backed Pipit, Yellow-browed Warbler and White-cheeked Starling). Other recorded waterbirds included Chinese Pond Heron and White-breasted Waterhen. Chinese Pond Heron and White-cheeked Starling are species of conservation interest. It is typical in most lowland streams of Hong Kong (polluted and/or channelized at their lower courses) that lowland wetland bird species such as Chinese Pond Heron, White-breasted Waterhen, Common Kingfisher and Grey Wagtail could be found in low densities (Wong *et al*., 2009). Detailed records of avifauna at TPP-3 are presented in Appendix I.

The monitoring results in January 2011 were compared against the dry season results of the baseline bird survey conducted from November 2009 to January 2010.

The number of bird species and abundance recorded from the Point Count Locations of TPP-3, and the total number of species and species of conservation interest recorded from TPP-3 survey site in January 2011 were of similar magnitude as the baseline survey results (Table 5-13 and Table 5-14 refer).

The monitoring results indicated the abandoned meander within the survey area was utilized by typical lowland stream birds in January 2011 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 Period	TPP-3 Survey Site	
	No. of Bird Species	Abundance of Bird Species
14 January 2011	16	35
November 2009 to January 2010 [1]	14	45

Note:

1. Monthly average obtained from baseline bird survey.

Table 5-13 Number of Bird Species and Abundance of Bird Species Recorded in January 2011 Avifauna Monitoring at the Point Count Locations of the TPP-3 Survey Site

Survey Period	Total Number of Bird Species Recorded [2,3]
14 January 2011	16 (2)
November 2009 to January 2010 [1]	14 (1)

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 5-14 Total Number of Bird Species Recorded in January 2011 Avifauna Monitoring at the TPP-3 Survey Site

Ecological monitoring at PHV

With the commencement of construction at PHV, monthly avifauna monitoring was conducted at PHV-1 survey site on 14 January 2011. The weather condition and other noticeable activities occurring within or in the vicinity of the survey area during the monitoring are summarized in Table 5-9. The PHV-1 survey site comprised the woodland in Conservation Area (CA) within 500 m from the boundary of the PHV works area (Figure C8016/C/XRL/ENS/M51/006 in Appendix F refers). The bird species and their abundance recorded during the avifauna monitoring for the reporting month are presented in Appendix G.

Date of Monitoring	**Weather Condition**	**Noticeable Activities Observed in the PHV-1 Survey Site**
14 January 2011	Sunny	• No construction activities located in the vicinity

Table 5-15 Weather Condition and Noticeable Activities Observed in the PHV-1 Survey Site during the Monitoring in January 2011

A total of 34 individuals from 9 avifauna species were recorded from the Point Count Locations at PHV-1 in January 2011 (Table 5-16 refers). The total number of species recorded during the monitoring was 21. The population of the avifauna recorded consisted of residents (e.g. Red-whiskered Bulbul, Chinese Bulbul, Oriental Magpie Robin, Masked Laughingthrush, Common Tailorbird, Great Tit, Fork-tailed Sunbird and Japanese White-eye) and winter visitor Grey-backed Thrush. It is typical that the forest bird community in Hong Kong is dominated by a few habitat-generalist species, including Chinese Bulbul, Red-whiskered Bulbul, Common Tailorbird and Japanese White-eye (Wong *et al*., 2009). Other recorded species from the walk transect included for instance, common residents (Crested Serpent Eagle, Chestnut Bulbul and Streak-breasted Scimitar Babbler), uncommon resident Rufous-capped Babbler, scarce spring passage migrant Black Bulbul, and common winter visitor Red-flanked Bluetail. Rufous-capped Babbler is a species of conservation interest. Detailed records of avifauna at PHV-1 are presented in Appendix G.

The monitoring results in January 2011 were compared against the dry season

results of the baseline bird survey conducted from November 2009 to January 2010. The number of bird species and abundance recorded from the Point Count Locations of PHV-1, and the total number of species and species of conservation interest recorded from PHV-1 survey site in January 2011 were of similar magnitude as the baseline survey results (Table 5-16 and Table 5-17 refer). Of particular interest, a species of conservation interest Rufous-capped Babbler was recorded, which had not been found during the baseline monitoring. In addition, Chestnut Bulbul, Black Bulbul, Red-flanked Bluetail, Grey-backed Thrush, Hainan Blue Flycatcher and Scarlet-backed Flowerpecker had not been recorded during the baseline monitoring neither.

The monitoring results indicated the woodland within the survey area was utilized by typical forest birds in January 2011 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 Period	**PHV-1 Survey Site**	
	No. of Bird Species	**Abundance of Bird Species**
14 January 2011	9	34
November 2009 to January 2010 [1]	8	19

Note:

(1) Monthly average obtained from baseline bird survey.

Table 5-16 Number of Bird Species and Abundance of Bird Species Recorded in January 2011 Avifauna Monitoring at the Point Count Locations of the PHV-1 Survey Site

Survey Period	Total Number of Bird Species Recorded [1,2]
14 January 2011	21 (1)
November 2009 to January 2010 [3]	16 (0)

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 5-17 Total Number of Bird Species Recorded in January 2011 Avifauna Monitoring at the PHV-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)
6/1/2011	59
13/1/2011	59
20/1/2011	55
27/1/2011	57

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			
November 2010	383.4	1.97	0
December 2010	92.6	3.6	0
January 2011	40.3	1.3	0
Contract 803A			
November 2010	9083.2	29.0	1000
December 2010	11044.3	38.0	0
January 2011	9025.0	23.1	1000
Contract 803B			
November 2010	9012.0	9.3	0
December 2010	10253.2	14.0	0
January 2011	10857.6	116.2	0
Contract 803C			
November 2010	4273.8	47.4	0
December 2010	1358.7	22.7	0
January 2011	0	4.8	0
Contract 803D			
November 2010	18331.1	4.4	1600
December 2010	17317.6	8.4	800
January 2011	13973.0	19.1	0
Contract 805			
November 2010	711.0	0	0
December 2010	0	4.8	0
January 2011	286.0	4.8	0
Contract 811A			
November 2010	12386.0	19.6	0
December 2010	10091.5	61.0	0
January 2011	16615.0	18.1	200
Contract 811B			
November 2010	3596.0	17.9	800
December 2010	10474.0	197.4	0
January 2011	9849.5	87.4	0
Contract 820			

Reporting Month	**Inert C&D [1]Materials (tonnes)**	**Non-inert C&D [2]Materials (tonnes)**	**Chemical Waste (Litre)**
November 2010	11641.3	36.8	0
December 2010	8794.7	19.7	0
January 2011	3237.3	22.7	0
Contract 821			
November 2010	418.0	6.4	0
December 2010	2667.6	5.8	0
January 2011	3717.1	6.1	0
Contract 822			
November 2010	1012.2	102.1	0
December 2010	8971.7	48.5	0
January 2011	18060.1	31.2	0
Contract 824			
November 2010	15000	350	0
December 2010	4450	4100	0
January 2011	6500	500	0
Contract 825			
November 2010	21607.0	173.8	0
December 2010	21279.1	248.4	0
January 2011	11709.7	13.7	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 and disposed

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)

Tree Transplanting Works at Contract 801

Root ball preparation / wrapping for transplanted trees was recommended to be improved. Pesticide treatment was applied to the palms tree in temporary holding nursery. Reconstruction of rootball was undertaken.

Tree Protection Work 802

Construction activities were observed to be close to tree canopy. Electric cable was observed to attach to the tree. Contractor was recommended to propose mitigation measures.

Tree Protection Work 803C

Trees to be retained have been identified and protected with fencing. No works envisaged within the area.

Tree Protection Work 805

Areas underneath retained trees were observed to be used as car parking space. Protective measure should be improved.

Tree Protection Work 811A

Protective fencing was recommended to be improved which was found to be close to the trees and needed to be reset at the edge of the tree protection zone.

Tree Protection Work 811B

Trees to be felled at Lin Cheung Road and Jordan Road were removed per schedule.

Tree Protection Work 820

Site hoarding and car park surfacing formed around retained trees. It was recommended that any further disturbance of the roots should be avoided.

Tree Protection Work 821

Contractor was recommended to remove the dead branches and spray insecticide.

Tree Protection Work 822

Trees on slope were removed by Contractor.

Tree Transplanting Work 824

Trees have been transplanted. Protective fencing around retained trees was observed insufficient and should be improve.

Tree Transplanting Work 825

Trees have been transplanted to area near new site office.

5.5.3 Contractor's Tree Survey Record

Based on the Contractor's Survey Record in Kwai Chung Ventilation Building Works area prepared by 821 Contractor on September 2010, which is attached in Appendix J, the following findings were observed:

- Tree no. T7198 (Macaranga Tanarius) which is planned to be retained in accordance to TLP-3 was found missing upon our taking over the site (Table 2 of Page 3 of the Contractor's Survey Record refers). It is not able to confirm how this has occurred as the TLP-3 tree survey was carried out in August 2008 and there has been other occupant of the site for some 2 years before we took over the site for XRL on 19 July 2010. It was already missing before the Contractor took over the site.

- There are 5 nos. of trees found deviated from the report to the TLP-3 in terms of the tree species (Table 3 of Page 4 of the Contractor's Survey Record refers).

- 3 additional trees (Carica papaya) were identified. (Table 4 of Page 4 of the Contractor's Survey Record refers). These 3 extra trees are retained on site.

6. SITE INSPECTION

Regular site inspections attended by representatives from ET and Contractors were carried out at 802/805 in Nam Cheong, 803 A, B, C, D and 811A/B in West Kowloon, 820/821 in Nam Cheong, 822 in Shing Mun, Shek Yam and So Kwun Wat, Tsing Chau Tsai and Tai Shu Ha Road West, 824 in Tai Kong Po and Ngau Tam Mei, 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 5 January 2011 in 802; 19 January 2011 in 803A; 14 January 2011 in 803B; 21 January 2011 in 803C; 19 January 2011 in 803D; 5 January 2011 in 805; 25 January 2011 in 811A; 28 January 2011 in 811B; 20 January 2011 in 820; 18 January 2011 in 821, 17 January 2011 in 822; 26 January in 824 and 24 January 2011 in 825.

Contract	**Date ofSite Inspections**
802	5/1, 14/1, 19/1 and 26/1
803A	5/1, 12/1, 19/1 and 26/1
803B	7/1, 14/1, 21/1 and 28/1
803C	6/1, 13/1, 21/1 and 28/1
803D	5/1, 12/1, 19/1 and 26/1
805	5/1, 14/1, 19/1 and 26/1
811A	4/1, 11/1, 18/1, and 25/1
811B	5/1, 11/1, and 28/1
820	6/1, 13/1, 20/1 and 27/1
821	4/1, 11/1, 18/1 and 25/1
822	3/11,10/1,17/1, 24/1 and 31/1
824	4/1, 11/1, 18/1 and 25/1

Contract	**Date ofSite Inspections**
825	3/1, 10/1, 17/1, 24/1 and 31/1

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	There was no preventive measure to contain the possible leakage for the chemical container.	The empty chemical container was disposal of and other chemical containers have been placed with a proper drip tray.
2	The sand and mud has been cumulated inside the surface channel.	Prompt cleaning is arranged to remove the cumulated sand and mud inside the surface channel.
Contract 803A		
1	It was observed that some oil drum and chemicals were placed on bare ground and minor drip of oil was observed from the oil drum near site of Lin Cheung Road across Elements.	Drip trays were provided for chemical storage and soil was cleaned up as chemical.
2	It was observed that no watering was provided during concrete breaking works near site at Lin Cheung Road.	Watering was provided during concrete breaking works.
3	It was observed that Diaphragm Wall Excavator in operation was not provided	Sound adsorptive materials were provided to cover the noisy part of plants.

Item	Description	Contractor's Follow-up Action(s) Undertaken
	with noise mitigation measures near site of Lin Cheung Road.	
4	It was observed that piles of C&D materials were not properly covered of site near Austin Station.	C&D materials were covered by canvas.
Contract 803B		
1	It was observed that diesel water pump of SI rig was not provided with noise mitigation measures near work site between Wui Cheung Road and Lin Cheung Road.	Noise barrier was provided as noise mitigation measures.
2	It was observed that the drip tray of one powerpack was full of mud and some oil was on top near site of Wui Cheung Road.	The soil and oil was cleaned up as chemical waste.
3	It was observed that noise mitigation measures were not provided for air compressor, powerpack and RCD in operation near site of Lin Cheung Road.	Noise barriers and sound absorptive sheets were provided.
Contract 803C		
1	It was observed that housekeeping of material storage near MTR PM Office has room for improvement.	The housekeeping was improved by removing unnecessary materials on site.
Contract 803D		
1	It was observed that chemical was placed on bareground without proper drip tray at site near Canton Road Fire Station.	The chemical was removed.

Item	Description	Contractor's Follow-up Action(s) Undertaken
2	It was observed that noise mitigation measures was not provided for air compressors near Austin Road West.	Noise mitigation measures such as noise barrier was provided.
3	It was observed that socket-H piling in operation was not provided with canvas cover to seal off muddy water and noise at seafront works area.	Canvas cover was provided.
4	It was observed that oil was leaking from an air compressor. Although drip tray was provided, minor leakage was observed to the muddy water near Austin Road West works area.	The drip tray was replaced and oil was cleaned up as chemical waste.
Contract 805		
1	Suspected chemical leakage was observed on the ground.	Leakage was cleaned up and removed as chemical waste. Toolbox talk was conducted on to remind workers on implementing preventive measures on possible chemical leakage during plant maintenance.
2	Mud tray was observed in the site entrance.	Mud was swept away at the site entrance . Site vehicles leaving the site have also been washed and regular cleaning will be conducted.
3	Muffler on hydraulic breaker was found worn-out.	Muffler on hydraulic breaker has been replaced.
4	Dust suppression measure was not implemented on the exposed ground.	Regular water spraying has been conducted on minimum four times per day.
Contract 811A		

Item	Description	Contractor's Follow-up Action(s) Undertaken
1	Noise mitigation measures were not properly implemented on site during concrete breaking at Lai Cheung Road	Noise absorbing material was provided for the breaker.
2	Haul road inside the site was dry and dusty	Watering frequency was increased
3	Drip trays underneath the generators were not properly maintained	The drip trays were fixed and cleaned up accordingly.
Contract 811B		
1	Stockpiling of excavated materials was found on site without proper covering	Provided impervious sheet for the stockpiling materials
2	Chemical was not properly stored and the chemical/chemical waste storage area were not properly locked	Chemical/chemical waste storage area were locked and chemical was placed inside the chemical storage area.
3.	Haul road inside the site was dry and dusty	Watering frequency was increased
Contract 820		
1	Stockpile of dusty material without covering was observed in Nam Cheong Launching Shaft and Barging Point.	Water spraying and tarpaulin sheet covering the stockpile were provided.
2	Fugitive dust was observed during vehicle movement at Nam Cheong Barging Point.	Water spraying was provided on the haul road.
3	Storage of oil drums without drip tray was observed in Nam Cheong Launching Shaft.	Drip tray was provided for the storage of oil drums.
Contract 821		

Item	Description	Contractor's Follow-up Action(s) Undertaken
1	Stockpile of dusty material without covering was observed in Nam Cheong Barging Point.	Water spraying and tarpaulin sheet covering the stockpile were provided.
2	Fugitive dust was observed during vehicle movement at Nam Cheong Barging Point.	Water spraying was provided on the haul road.
3	U-channel without covering was observed in the middle of the site of Kwai Chung Ventilation Building works area.	The u-channel was covered properly.
Contract 822		
1	Dust suppression measure was not implemented for carrying out loading / unloading activities of excavated material at Shek Yam.	A briefing of applying water spraying to the stockpile especially during material loading and unloading has been given to the foremen on the site.
2	The quality of water discharge was not satisfactory at Pat Heung.	The water treatment plant has been fixed and maintained to ensure the quality of discharge.
Contract 824		
1	Storm drain at Tai Kong Po was not properly protected.	Protection by sand bags were provided next to storm drain.
2	Watering at Tai Kong Po and Ngau Tam Mei should be improved	Watering frequency was improved
3	Stockpile at Tai Kong Po was not covered	The stockpile was covered with tarpaulin sheet
Contract 825		
1	Sludge in soakaway pit at Mai Po Works Area was not cleared	Sludge was cleared from the pit
2	Ground surface at Mai Po Works Area was dry and dusty	Watering frequency and coverage were improved

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 three environmental complaints were referred from EPD. There are a total of twenty seven environmental complaints since commencement of the construction. The complaints were handled in accordance to the EM&A Manual and relevant parties including the Engineer's Representative and IEC were informed of the complaints. The details of complaint are summarized as below:

A complaint was referred from EPD about muddy water discharge to storm drain from Mai Po Works Area on 7 January 2011. Upon investigation, there was no muddy water discharge to the storm drain. Nonetheless, the Contractor would take further mitigation measures by diverting back the water generated from access road cleansing to site for treatment. The investigation results were reviewed by the IEC.

A complaint was referred from EPD regarding groundborne noise generated by tunnel excavation works in restricted hours at the area of the Shek Yum adit (Contract 822) on 19 January 2011. Such works were rescheduled and suspended to be carried out in restricted hours. The investigation results were reviewed by the IEC.

A complaint was referred from EPD about odour from the construction sites at Sham Mong Road adjoining the Bus Terminus opposite to Ying Wa College on 31 January 2011. It might be due to the works associated with sewer diversion at the raising main work areas. Through the on site investigation, no odour was found and deodour systems have been in place on site. A formal response to EPD would be made and reported in next month.

7.2 Summary of Exceedance

In the reporting month, noise exceedances of Limit Level were recorded at HKIVE Haking Wong Waterfront Annex (CN 23) on 19 January 2011; St Mary's Mok Hiu Hing College (CN 25) on 27 January 2011; Ying Wah College (CN 26) on 5 and 14

January 2011; Yaumati Catholic Primary School (CN29) on 5, 12 and 18 January 2011; 5, 12 and 27 January 2011 on The Waterfront (CN 32) and 5 January 2011 on The Arch (CN 33).

Regarding the noise exceedances at CN 23, 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. It was found from the investigation that the exceedance was not caused by project activities. The investigation results were reviewed by IEC.

One noise exceedance was recorded at St. Mary's Mok Hiu Hing College (CN 25) on 27 January 2011. 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. It was found that the construction works for pre-bored H-pile and rock drillings carried out in Nam Cheong Launching Shaft might have caused the noise exceedance. The Contractor was reminded to enhance the noise mitigation measures to comply with the statutory requirement and minimize noise nuisance to the nearby NSRs.

Regarding the noise exceedances at Ying Wa College (CN 26), 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. It was found that the works carried out in 802 might have caused the noise exceedance. The Contractor implemented further mitigation measures to minimize the noise impact.

Three exceedances were recorded at CN 29 at Yaumati Catholic Primary School and actions identified in the Event and Action Plan (Table 3.4 of the EM&A Manual) were undertaken. The investigation was conducted accordingly and revealed that noise source may possibly due to works by 811A Contractor. Remedial proposals were received and additional noise mitigation measures proposed by the Contractor were implemented to minimize the noise impact. The contractor was reminded 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 Waterfron (CN 32) and The Arch (CN 33) in West Kowloon, 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 and 803D Contractors. Additional noise mitigation measures proposed by the Contractor were reviewed by IEC and ET and implemented by the 803A, 803B and 803D Contractor to minimize the noise impact. All contractors in WKT works area were reminded to enhance the noise mitigation measures to comply with the statutory requirement and minimize noise nuisance to the nearby NSRs.

There was no noise exceedances of Action Level in the reporting month.

In the reporting month, there are exceedances of 24-hr TSP Action Level on 3 and 25 January 2011 at AM 1; 8, 14 and 20 January 2011 at AM 3; 25 January at AM 9 recorded in the reporting month. Exceedance of 24-hr TSP Limit Level was recorded on 15 January 2011 at AM 3. Actions stipulated under the Event and Action Plan (Table 9.4 of the EM&A Manual) were implemented for all exceedances and monitoring frequency was increased.

For the exceedances at AM 1, investigation results revealed that the proper mitigation measures had been implemented at Mai Po Works Area and the exceedances might possibly be due to nearby trench work by other project. Nonetheless, the 825 Contractor was reminded to ensure that dust mitigation for construction site and access road be implemented to minimize dust impact. The investigation result was reviewed by IEC.

For the exceedances at AM 3, investigation results revealed that the exceedances might possibly due to site formation work at Tai Kong Po Works Area. The 824 Contractor provided additional dust mitigation measures, including complete covering of stockpile and improving watering frequency and coverage by automatic sprinklers. The situation would be continuously reviewed by IEC.

For the exceedances at AM 9, investigation results revealed that the exceedances might possibly due to works carried out at Shing Mun Works Area. The 822

Contractor is reminded to enchance the dust suppression measure. The situation would be continuously reviewed by IEC.

7.3 Summary of Notification of Summons, Prosecutions, Non-compliance and Corrective Actions

No notification of summons and prosecutions was received during the reporting month. No non-compliance event was recorded during the reporting period.

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, bored pile removal, utility diversion, H-pile extraction, pile cap demolition and excavation & lateral supports
Contract 803A (Works Area V1)
Diaphragm construction, pre-drilling, utilities diversion, road works and post drilling
Contract 803B (Works Area V1)
Bored pile, socketed H-piling works and interface coring.
Contract 803C (Works Area V1)
Plant Set-up, S.I. and Piling Testing Works
Contract 803D (Works Area V1)
Pre-bored H-pile, bored pile, diaphragm wall, barging facility operation, hoarding modification, utilities diversion ,road works and post drilling
Contract 805 (Works Area N & O)
Demolition of foundation of superstructure, removal of span of footbridge
Contract 805 (Works Area S)
Demolition of footbridge, sheet-piling work
Contract 811A (Works Area V2)
Pre-drilling works for bored pile, diaphragm wall and socketted H-piles; construction of diaphragm wall; construction of socketted H-pile; external

works to CLP Sub Station at Lin Cheung Road; construction of gantry at Lai Cheung Road
Contract 811B (Works Area V2 & Y)
Construction of foundation for footbridge, predrilling and construction of diaphragm wall, installation of bored piling, installation of pre-bored H-piles, construction of guide walls, installation of diaphragm walls, temporary road construction, construction of temporary footbridge, operation of Nam Cheong Barging Point
Contract 820 (Works Area M)
Pile removal work; Excavation Work; Utility diversion
Contract 820 (Works Area P)
Diaphragm wall construction including excavation and concreting work; Grouting work; Utility diversion; Bulk Excavation for Launching Shaft; Pile removal work; Bored piling work
Contract 820 (Works Area Q)
Temporary traffic arrangement
Contract 820 (Works Area R)
Utilities diversion
Contract 820 (Works Area S)
Utilities diversion; Excavation Work; Pile removal work
Contract 820 (Works Area Y)
Site setup
Contract 821 (Works Area J)
Laying power cable and water pipe, breaking & drilling work at the portal, Labour washing and workshop erection.

Contract 821 (Works Area Y)
Site setup and Barging Point operation
Contract 822 (Works Area F)
Site formation, construction of pipe pile wall, retaining wall construction
Contract 822 (Works Area G)
Construction of pipe pile wall,
Contract 822 (Works Area H)
Adit construction
Contract 822 (Works Area AC)
No major construction works
Contract 822 (Works Area AE)
No major construction works
Contract 822 (Works Area AG)
No major construction works
Contract 823A (Works Areas D and D1)
Site formation works
Contract 823B (Works Areas D)
Site formation works
Contract 824 (Works Area B)
Site formation
Contract 824 (Works Area C)
Site formation, bored piling works

Contract 824 (Works Area AF)
Hoarding erection
Contract 825 (Works Area A)
Shaft construction
Contract 825 (Works Area AA)
Nil

Table 8-1 Summary of construction works in coming month

According to the latest programme, construction activities would be commenced in Shek Kong Stabling Sidings (Works Area D and D1). 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.

No major construction works would be carried out at Kwai Chung Road Works Area (Works Area K in EM&A Manual refers) according to the latest construction programme. Nonetheless, as a measure to protect the residents and school in the area from noise impact, monitoring would be carried out at CN 20 in following months to monitor the construction noise level in the area.

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 January 2011 to 31 January 2011. The major construction activities in the reporting period included foundation works in the West Kowloon Works Areas, Nam Cheong, Kwai Chung, Shing Mun, Shek Yam, Pat Heung, Tai Kong Po, Ngau Tam Mei, 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), St Mary's Mok Hiu Hing College (CN 25), Ying Wah College (CN 26), Yaumati Catholic Primary School (CN29), The Waterfront (CN 32) and The Arch (CN 33) in Janaury 2011. There was no Action Level exceedance in noise monitoring in the reporting month. Exceedances of 24-hour TSP Action Level were recorded at Mai Po San Tsuen (AM 1), Kong Tai Road Village House (AM 3) and Cheung Shan Estate (AM 9) in this month. In addition, there was one exceedance of 24-hour TSP Limit Level at Kong Tai Road Village House (AM 3). Dust source was identified and the contractor improved mitigation measures accordingly to minimize the dust impact. No environmental notification of summon and prosecution was received in the reporting period.

Three environmental complaints were received in the reporting period regarding odour from the construction sites at Sham Mong Road adjoining the Bus Terminus opposite to Ying Wa College; groundborne noise generated by tunnel excavation works at Shek Yum adit; muddy water discharge to storm drain at Mai Po Works Area. The complaints had been handled in accordance with the procedures stipulated in the EM&A Manual. Investigations were carried out in accordance with the EM&A Manual.

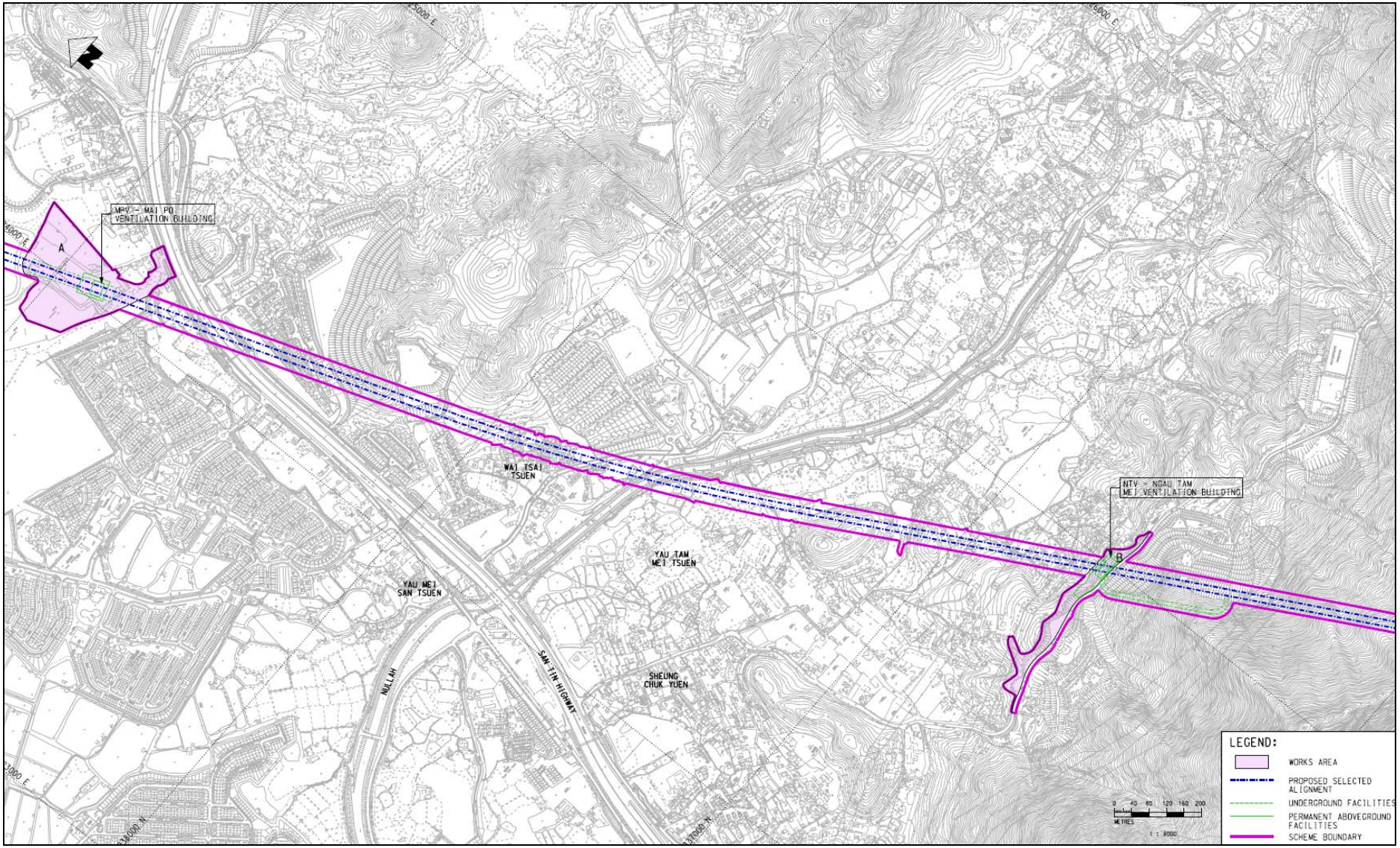
Site inspections were conducted regularly to monitor proper implementation of environmental pollution control and mitigation measures for the Project. No non-compliance to the environmental requirements was identified in the reporting

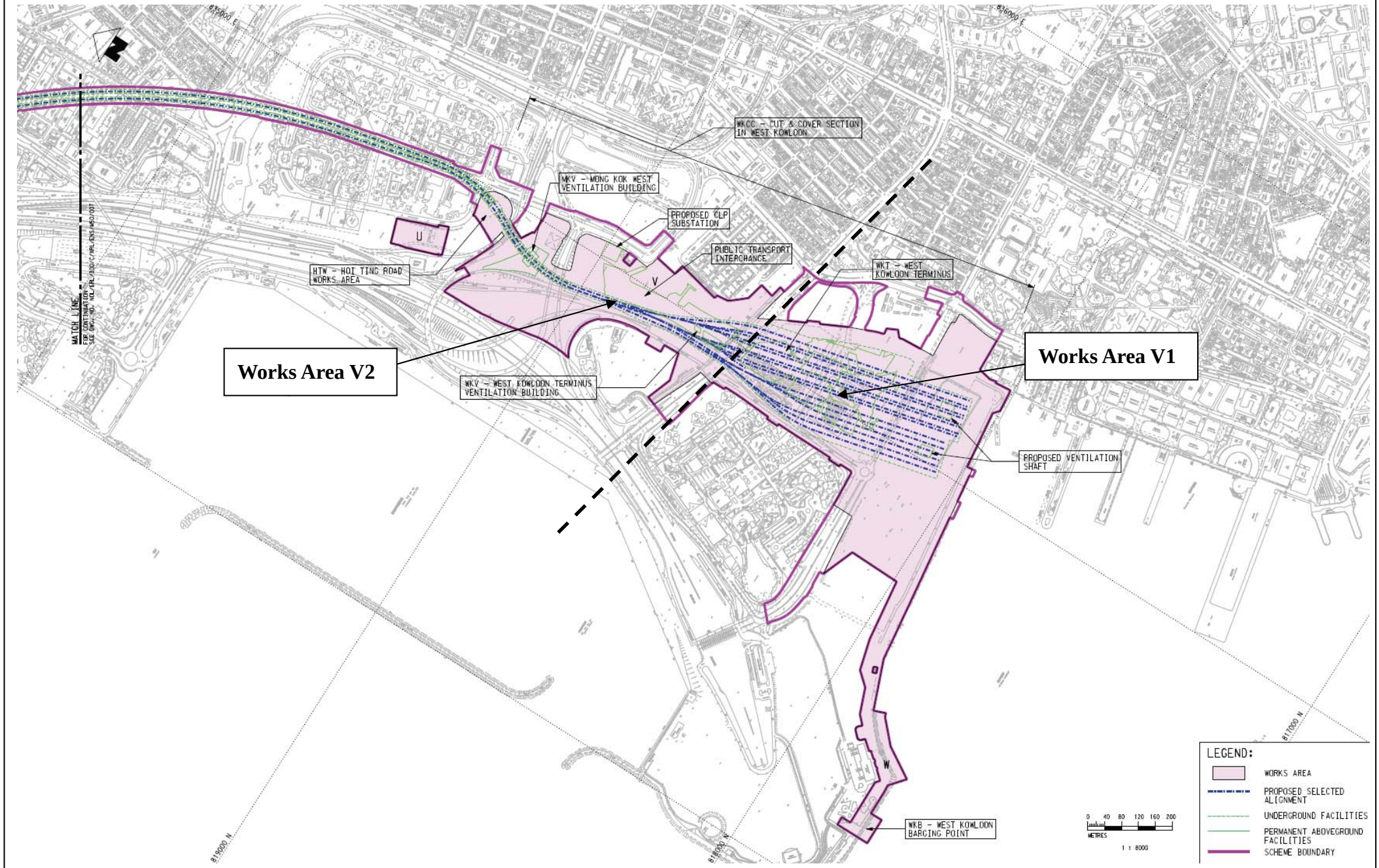
period.

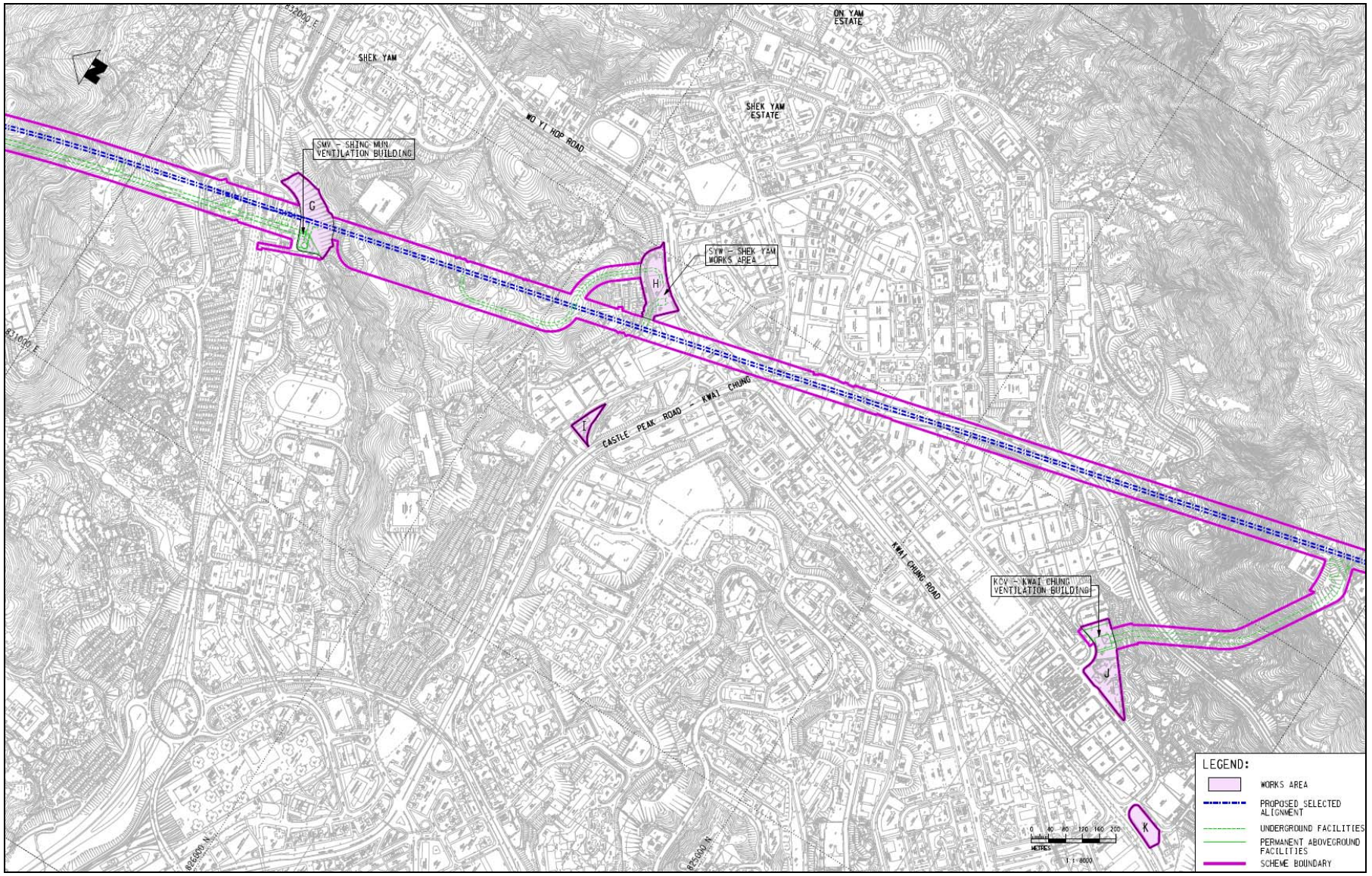
In the reporting period, there was no reporting change of circumstances which may affect the compliance with the recommendations of the EIA Report. It is concluded from the environmental monitoring and audit works for the XRL Project that the construction works were undertaken in an appropriately environmentally sensitive manner in the reporting period. The environmental protection and pollution control measures provided by the contractors were generally acceptable apart from some irregularities which were responded 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.

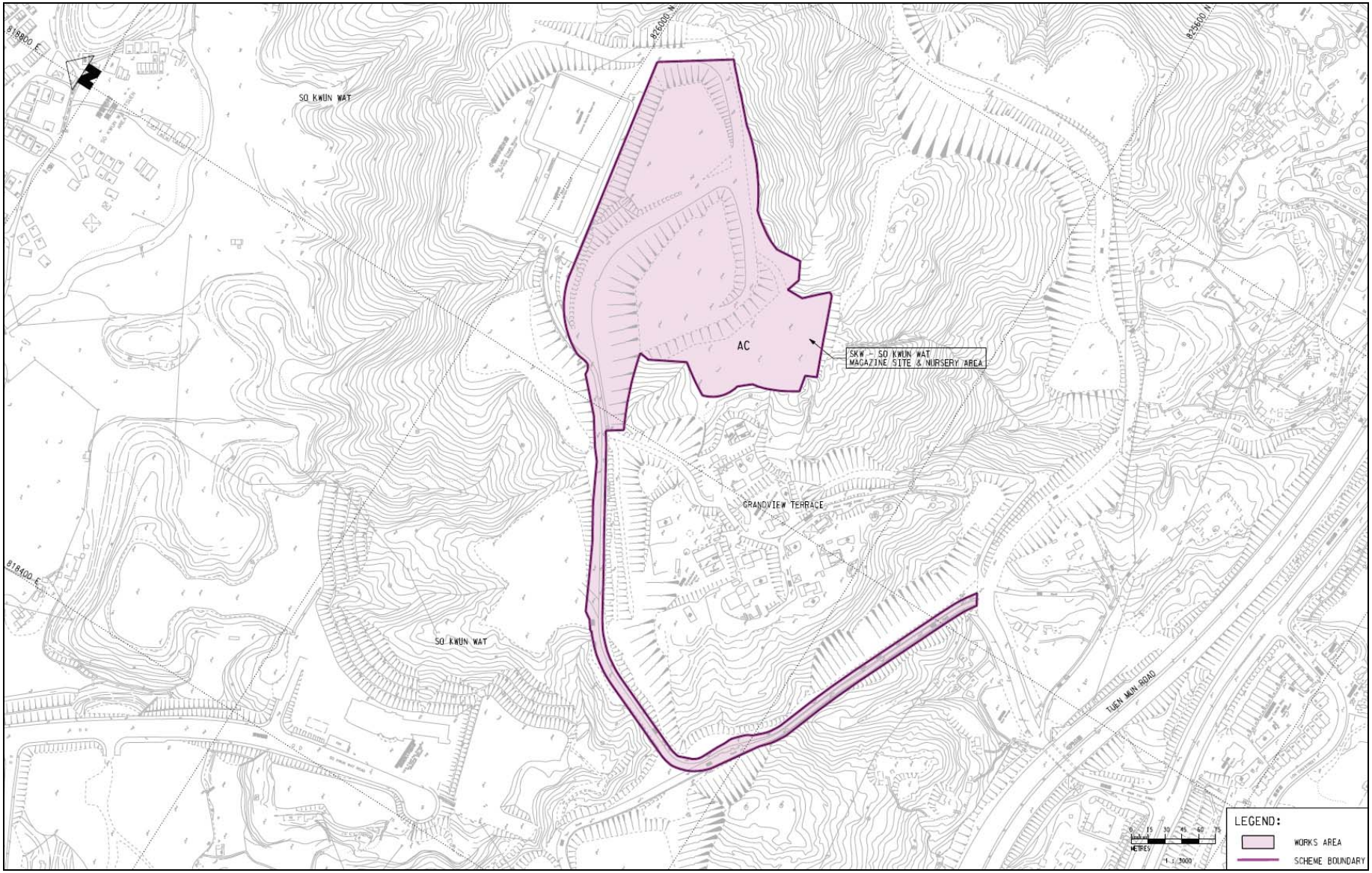
Appendix A

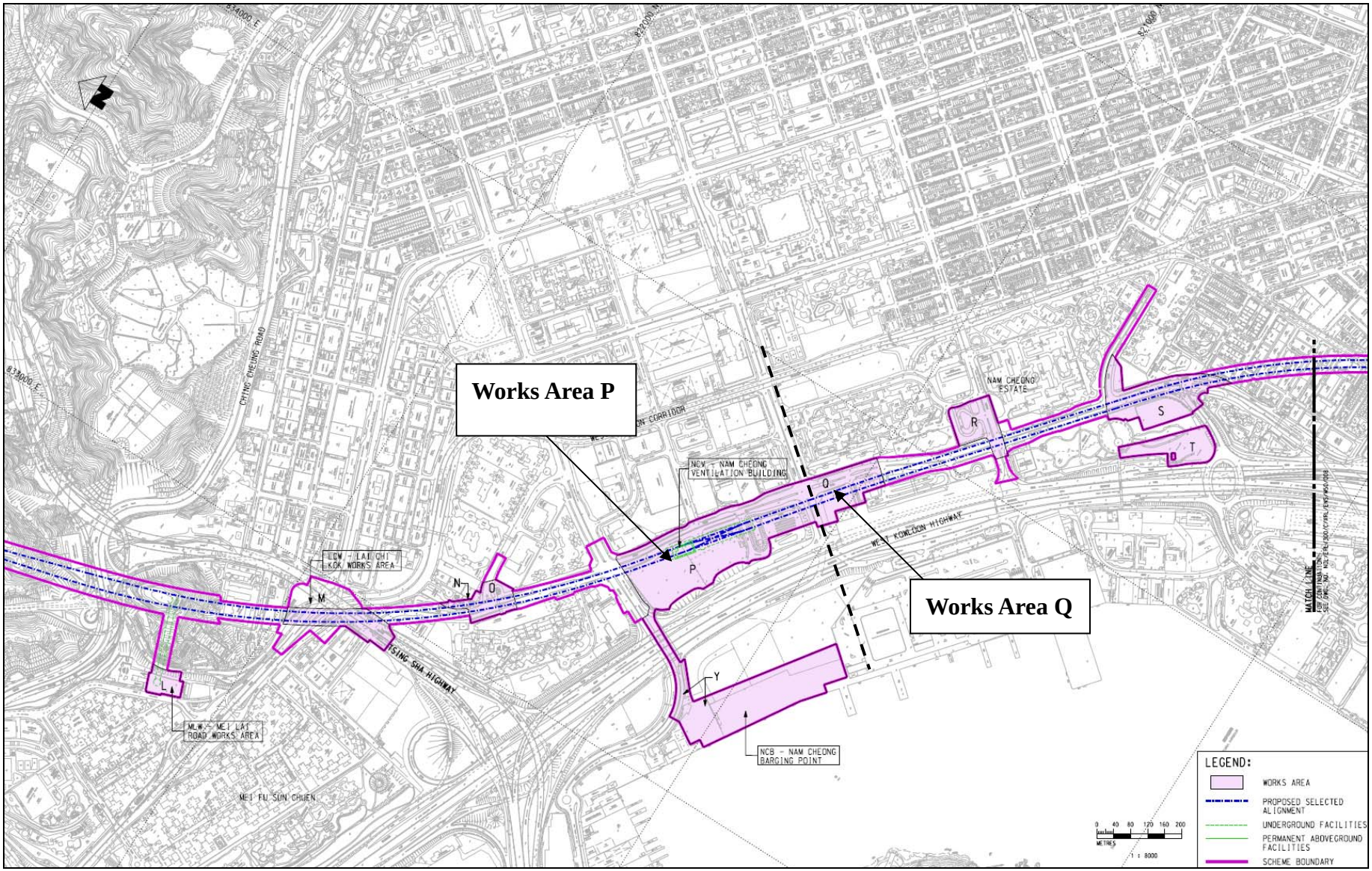
Works Area

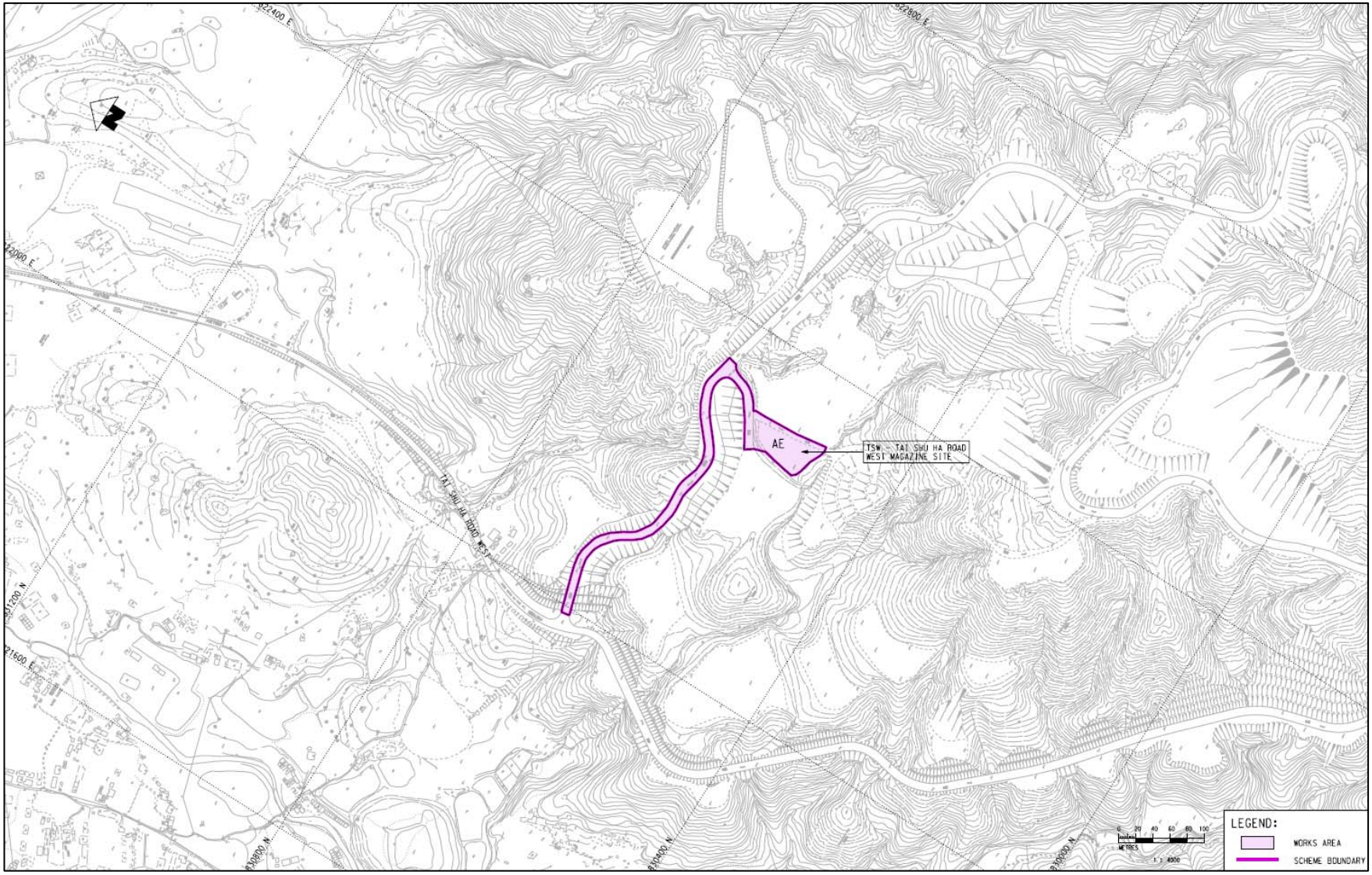

MPV - MAI PO VENTILATION BUILDING
A
NTV - NGAU TAM MEI VENTILATION BUILDING
B
WAI TSAI TSUEN
YAU TAM MEI TSUEN
YAU MEI SAN TSUEN
SHEUNG CHUK YUEN
NULLAH
SAN TIN HIGHWAY
LEGEND:
WORKS AREA
PROPOSED SELECTED ALIGNMENT
UNDERGROUND FACILITIES
PERMANENT ABOVEGROUND FACILITIES
SCHEME BOUNDARY
METRES
1 : 8000


WKCC - CUT & COVER SECTION IN WEST KOWLOON
WKV - 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. MEL/800/CIVIL/EKS/WSO/001
Works Area V2
Works Area V1
WKV - WEST KOWLOON TERMINUS VENTILATION BUILDING
PROPOSED VENTILATION SHAFT
WKB - WEST KOWLOON BARGING POINT
U
V
W
836000 E
818000 N
LEGEND:
WORKS AREA
PROPOSED SELECTED ALIGNMENT
UNDERGROUND FACILITIES
PERMANENT ABOVEGROUND FACILITIES
SCHEME BOUNDARY
0 40 80 120 160 200
METRES
1 : 8000

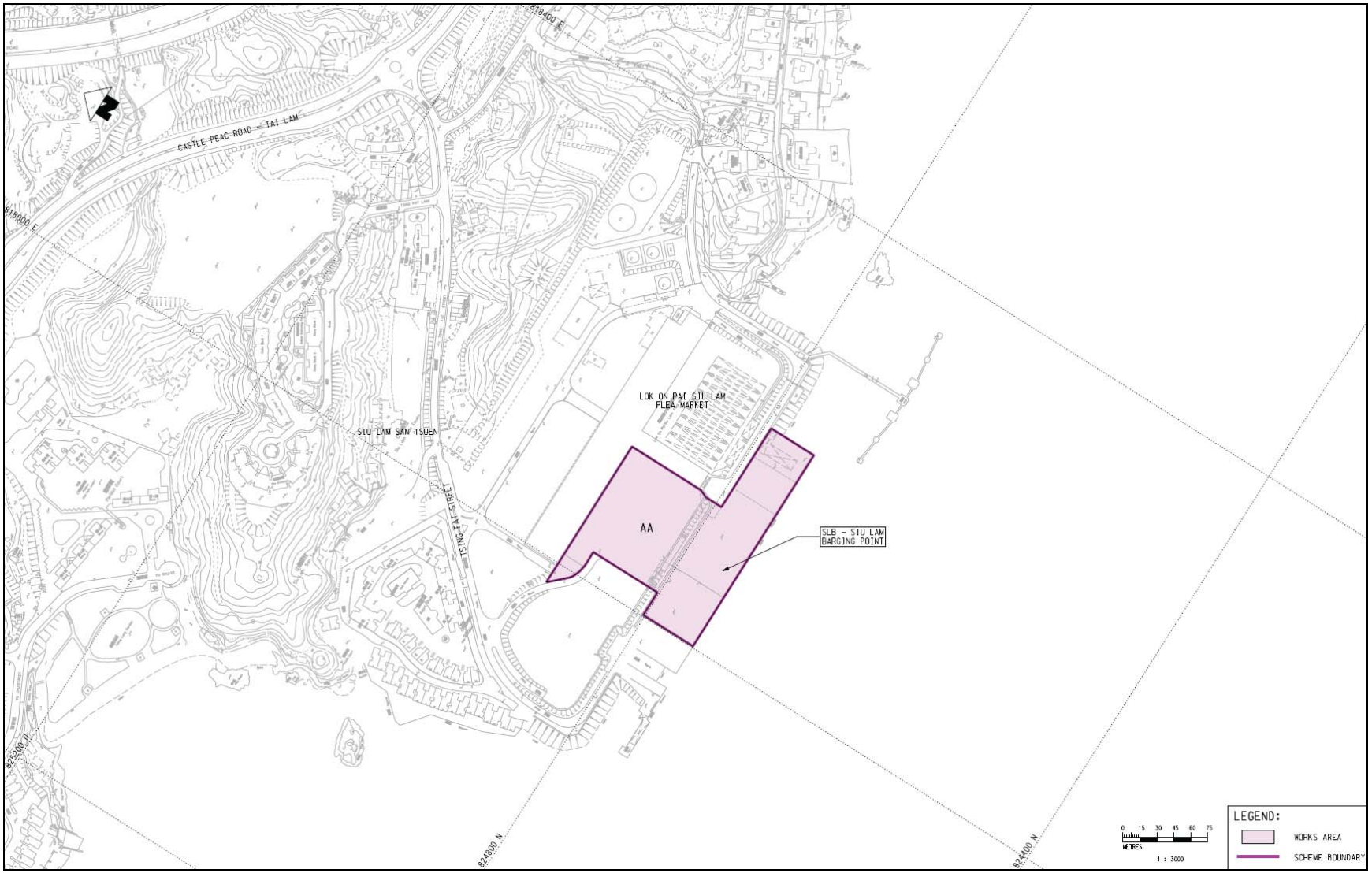

SHEK YAM
ON YAM ESTATE
SHEK YAM ESTATE
WO YI HOP ROAD
SMV - SHING MUN VENTILATION BUILDING
SYW - SHEK YAM WORKS AREA
CASTLE PEAK ROAD - KWAI CHUNG
KWAI CHUNG ROAD
KCV - KWAI CHUNG VENTILATION BUILDING
G
H
I
J
K
831000 E
832000 E
826000 N
825000 N
0 40 80 120 160 200
METRES
1 : 8000
LEGEND:
WORKS AREA
PROPOSED SELECTED ALIGNMENT
UNDERGROUND FACILITIES
PERMANENT ABOVEGROUND FACILITIES
SCHEME BOUNDARY

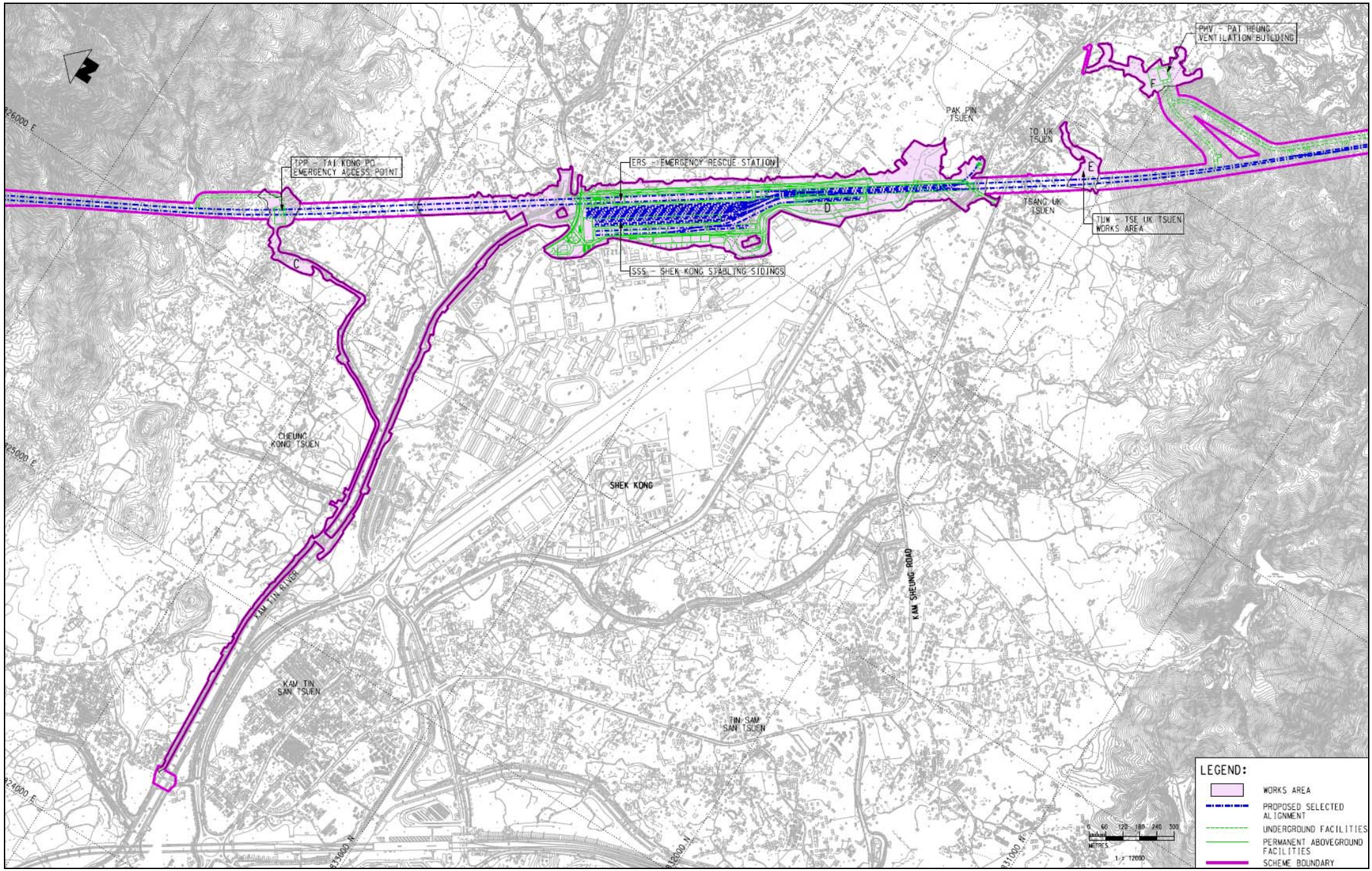

818800 E
818400 E
836600 N
836200 N
SO KWUN WAT
SO KWUN WAT
SO KWUN WAT
AC
SKW - SO KWUN WAT
MAGAZINE SITE & NURSERY AREA
GRANDVIEW TERRACE
TUEN MUN ROAD
0 15 30 45 60 75
METRES
1 : 3000
LEGEND:
WORKS AREA
SCHEME BOUNDARY


Works Area P
Works Area Q
CHING CHEUNG ROAD
NAM CHEONG ESTATE
NCV - NAM CHEONG VENTILATION BUILDING
WEST KOWLOON HIGHWAY
LCW - LAI CHI KOK WORKS AREA
TSING SHA HIGHWAY
MLW - MEI LAI ROAD WORKS AREA
NCB - NAM CHEONG BARGING POINT
MEI FU SUN CHUEN
MATCH LINE
LEGEND:
WORKS AREA
PROPOSED SELECTED ALIGNMENT
UNDERGROUND FACILITIES
PERMANENT ABOVEGROUND FACILITIES
SCHEME BOUNDARY


822400 E
822800 E
821200 E
821600 E
810800 N
810400 N
810000 N
AE
TSW - TAI SHU HA ROAD WEST MAGAZINE SITE
TAI SHU HA ROAD WEST
0 20 40 60 80 100
METRES
1 : 4000
LEGEND:
WORKS AREA
SCHEME BOUNDARY


821600 E
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:


818400 E
CASTLE PEAK ROAD - TAI LAM
818000 E
LOK ON PAI SIU LAM
FLEA MARKET
SIU LAM SAN TSUEN
TSING FAT STREET
AA
SLB - SIU LAM
BARGING POINT
825000 N
824800 N
824400 N
0 15 30 45 60 75
METRES
1 : 3000
LEGEND:
WORKS AREA
SCHEME BOUNDARY


PHV – PAT HEUNG VENTILATION BUILDING
PAK PIN TSUEN
TO UK TSUEN
TSANG UK TSUEN
TUW – TSE UK TSUEN WORKS AREA
TPP – TAI KONG PO EMERGENCY ACCESS POINT
ERS – EMERGENCY RESCUE STATION
SSS – SHEK KONG STABLING SIDINGS
CHEUNG KONG TSUEN
SHEK KONG
KAM TIN RIVER
KAM SHEUNG ROAD
KAU TIN SAN TSUEN
TIN SAM SAN TSUEN
C
D
E
F
826000 E
825000 E
824000 E
833000 N
832000 N
831000 N
0 60 120 180 240 300
METRES
1 : 12000
LEGEND:
WORKS AREA
PROPOSED SELECTED ALIGNMENT
UNDERGROUND FACILITIES
PERMANENT ABOVEGROUND FACILITIES
SCHEME BOUNDARY

Appendix B

Project Management Organization and Contacts of Key Personnel

Title	Name	Telephone
Engineer's Representative		
Construction Manager (802, 805, 820 & 821)	Mr. Bill Clowes	3605 0056
Construction Manager (803 A/B/C)	Mr. Samuel Lo	3575 5641
Construction Manager (803 D)	Mr. KS Lim	3575 5723
Construction Manager (811 A & B)	Mr. Albert Lam	3575 1357
Construction Manager (822, 823 A & 823B)	Mr. Andy Fok	2208 3732
Construction Manager (824 and 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

Title	Name	Telephone
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 811B Contractor		
Project Manager	Chris Williams	9669 2665
Construction Manager	Anthony Zervaas	6011 8178
Environmental Manager	Brian Kam	9456 9541
Environmental Officer	Sammie Chan	6407 3833
Contract 820 & 821 Contractor		
Project Director	Alain Hervio	2215 6600/ 6112 9197
Senior QSE Manager	Y. T. So	2215 6631/ 9307 8728
QSE Officer (Environmental)	Chris Siu-hong Chan	2728 1120
Contract 822 Contractor		
Environmental & Quality Manager	Mr. Brian Pickering	6323 5753

Title	Name	Telephone
Environmental Manager / Officer	Mr. David Hung	9765 6151
Environmental Coordinator	Ms. Jane Huang	6491 4620
Contract 823A & B Contractor		
Project Manager	Philip Davies	2411 7600
Environmental Officer	Wendy Ng	2411 7607
Contract 824 Contractor		
Works Manager	Ian Sweeney	9759 8192
Environmental Officer	Patrick Sin	6022 8646
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	Ecological Habitat Management Plan (EHMP) formulated and submitted to EPD
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	AFCD's comment has been sought during formulation of the EHMP

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
S3.410	- The implementation details of the impact monitoring programme should be described in ecological monitoring plan for EPD approval before commencement of construction activities.	To outline details of ecological impact monitoring	MTR	MPV, TPP, SSS / ERS, PHV and TUW	Before commencement of construction activities	Implemented
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 during formulation of 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
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	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
	number of avifauna of conservation interest (e.g. 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	Implemented
Appendix3.6 (S1.105)	- Engines of vessels moored at the barging point would be turned off to minimize unnecessary underwater noise.	To minimise disturbance impact on Chinese White Dolphin	Contractor	LKB	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
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)	AFCD's comment has been sought during formulation of Plan
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	To detect and monitor noise / vibration impacts	Contractor	MPV	Pre-construction phase (Before commencement	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
	Manual subject to approval by EPD and AFCD before commencement of the tunnelling and MPV construction in Mai Po area.				of bore tunnelling and MPV construction)	
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 construction of Mai Po Ventilation	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
					Shaft)	
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 disposal of chemical waste to avoid contamination of the existing water system, etc.	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
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 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	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
	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 (S1.38)	- Mitigation measures to control water quality impacts proposed under Section 11 should be adopted.	To minimize the indirect impact on fisheries resources	Contractor	LKB and WKT	Construction phase	To be implemented as per construction programme
Airborne Noise Impact (Construction Phase)						
S5.120	The following good site practices should be implemented:	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
	▪ 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 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-S	The following quiet PME should be used:	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
5.122 and Table 5.22	▪ 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))	noise impact	Contractor	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	phase	
S5.123 - S5.124	Movable noise barrier should be used for the following PME where practicable: ▪ Mini backhoe ▪ Breaker, mini-robot mounted ▪ Vibratory poker ▪ Handheld breaker ▪ Excavator	To reduce construction noise impact	MTR / Contractor	Works Areas A, C and D	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
	▪ Grab ▪ Tracked Crane					
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 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

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
S5.128	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 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

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
S5.134-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	Implemented
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

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
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
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

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
S5.196	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 prediction where appropriate.	To update the predicted ground-borne noise levels.	MTR / Contractor	TBM tunneling section	Construction phase	To be implemented as per construction programme
S6.83	Conduct tests of the FDL of the train to update the ground-borne noise prediction and the recommended	To confirm the predicted ground-borne noise levels	MTR	-	Prior to the final design of the	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
	mitigation measures as necessary.				trackform and the extent of each type of trackform, and after the proposed train in operation outside Hong Kong	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 the recommendation on mitigation measures should be updated as necessary.	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 programme

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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
	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		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
	the Project or in other projects as much as possible.					
	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 7.11	Compensatory tree planting should be incorporated into the proposed Project where space is available	To minimize landscape and visual impacts during operation phase	MTR	Works areas	Detailed design and operation phases	To be implemented as per construction programme
	Landscape and visual enhancement treatments		MTR			
	Compensatory habitat proposal for natural stream course at SSS		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
	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			
	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,		MTR			

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	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.					
	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	Implemented
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	Implemented
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	To monitor vibration impacts on the identified vibration sensitive	MTR	Ex-Lai Chi Kok Hospital	Before construction phase; Construction	To be implemented as per construction

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	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.	historical buildings			phase	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 and agreed in advance with AMO, NPO, the Commissioner for Heritage's Office and relevant parties,	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
S8.112,	▪ If consent is given by the property owner, a	To minimize vibration	MTR	Cheung Yuen	Prior to	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
S8.127	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.	impacts on the identified vibration sensitive historical buildings			construction phase	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, S8.124	▪ Control of vibration levels from the proposed 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.	To minimize vibration impacts on the identified vibration sensitive historical buildings	MTR	All works area where blasting and excavation activities are involved	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
S8.114 - 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 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	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
	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 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 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
S9.35(ii)	For construction works at CLP transformer station at Lai Cheung Road and Petrol Filling Station at 82 Tai Kok Tsui	Acting as a general precautionary measure to	MTR/Contractor	Area close to CLP	During Tunnel Boring/	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
	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.	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		transformer station at Lai Cheung Road and Petrol Filling Station at 82 Tai Kok Tsui Road where signs of contamination is identified	excavation works near CLP transformer station at Lai Cheung Road and Petrol Filling Station at 82 Tai Kok Tsui Road	as per construction programme
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	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
	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. ▪ 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					

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
	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 for site workers; ▪ Keep a log-book and plan showing the contaminated zones and clean zones; ▪ Maintain a hygienic working environment; ▪ Avoid dust generation;	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
	▪ 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 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	(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 the commencement of any construction works of the Project that may disturb the ground of the south-western portion	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
	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 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	of the MPV.				

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	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 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	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
	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; ▪ 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	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
	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; ▪ 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	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
	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 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	To mitigate and minimize the potential impacts from the storage and transportation of materials within works areas	Contractor	All works areas	Construction Phase	Implemented

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	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 wind-blown or flushed away by water. It is expected that water spraying system should also be equipped to moisten the materials.					

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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
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:	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
	▪ 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 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.					

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
S10.126	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
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	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

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
	avoiding contaminating the soil or groundwater underneath.					
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 as far as practicable. Requirement of the *Air Pollution Ordinance (Construction Dust) Regulation*, where	To minimise dust and odor impacts to surrounding environment	Contractor	All works areas with sediments concern / Barging points	Construction phase	To be implemented as per construction programme

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	relevant, should be adhered to during the construction phase of the Project.					
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 being tendered. The SQR will include the sampling details, the chemical testing results, quality control	To analyse the sediments quality and determine the best disposal option	Contractor	All works areas with sediments concern	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
	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 used for storage of chemical waste only;	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
	▪ 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 the approved CWTC at Tsing Yi, or another licensed	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
	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

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
Waste Management Implications (Operation Phase)						
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	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

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
	plastics bottles. ▪ Separation from other waste types and collected by licensed collectors at daily basis to minimize the potential impacts from odour and vermin.					programme
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

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
S11.154	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 be discharged into the storm system via silt traps.	To control water quality impact from groundwater from uncontaminated area	MTR / Contractor	All works areas	Construction phase	Implemented
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	Site Runoff or Groundwater from contaminated areas:	To control water quality	MTR /	Excavation	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
- S11.158	▪ No directly discharge of groundwater from contaminated areas should be adopted. ▪ 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	impact from contaminated groundwater	Contractor	areas where contaminated ground-water is found	phase	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
	substances (such as TPH) to an undetectable range. ▪ All treated effluent from the wastewater treatment plant shall meet the requirements as stated in 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					

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 site boundary. Prior to recharge, free products should be removed as necessary by installing the petrol interceptor. The Contractor should apply 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,	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
	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 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

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
S11.162	Accidental spillage of chemicals: Contractor should register as a chemical waste producer 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**.**	To control water quality impact from accidental chemical spillage	MTR / Contractor	All works areas	Construction phase	Implemented
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:	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
	▪ Suitable containers should be used to hold the chemical wastes to avoid leakage or spillage during storage, handling and transport. ▪ 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,	To control water quality impact from construction works at or in close proximity of watercourses or seafront	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
	filling materials, chemicals and fuel) and temporary stockpile of construction materials should be located well away from any water courses during 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.					

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
	▪ Any works site inside the water courses should be temporarily isolated. The water flow should be temporarily diverted to downstream by using PVC 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					

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
	watercourses. ▪ Supervisory staff should be assigned to station on site to closely supervise and monitor the works.					
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	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
	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 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	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
	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 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	To control groundwater hydrogeological impact and groundwater drawdown	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
	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. 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					

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
	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 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:					

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
	▪ 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 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.	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
	▪ 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.					
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	To control water quality impacts from the operation of Shek Kong Stabling	MTR/DDC	SSS	Operation 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
	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. ▪ 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	Sidings				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
	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 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)						

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
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
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	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
	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 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					

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 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 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	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
	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 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.					

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
	(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 ▪ 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.	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
	(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. (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.	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
	▪ 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 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					

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
	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 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

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
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 should follow EPD's ProPECC PN1/98 Control of Air Pollution in Semi-confined Public Transport Interchanges.	To alleviate the adverse air quality impact in the PTI	MTR	PTI at the ground floor of ventilation building complex at WKT	Design and operation phases	To be 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	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
	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					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 defensive driving attitude. In addition, drivers should be selected based on good safety record, and medical checks.	To meet the ALARP requirement	MTRC/ Contractor	-	Construction phase.	To be implemented as per construction 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	To meet the ALARP requirement	MTRC/ Contractor	-	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
	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.					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 route.	Construction phase.	To be implemented as per 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	To ensure that the risks from the proposed	MTRC / Contractor	Works areas at which	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
	site staff to ensure strict compliance with the blasting permit conditions.	explosives storage and transport would be acceptable		explosives would be stored and/or used.		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 truck in jammed traffic should also be covered. Drill of the emergency plan should be carried out at regular intervals.	To reduce the risk of fire	MTRC/ Contractor	Explosive Magazine and along explosives transport route.	Construction phase	To be implemented as per 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

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
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 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	MTRC/ Contractor	Explosive magazine	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
		acceptable				
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 explosives offloading or charging activities.	To ensure safe transport of explosives	MTRC/ Contractor	Along explosives transport route.	Construction phase	To be implemented 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	To reduce the risk during explosives transport	MTRC/ Contractor	-	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
	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.					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
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

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
S14.73	- 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 confined space).	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	- 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,	- Smoking and naked flames will be prohibited within	Protect the workers from	Contractor	XRL tunnels	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
S14.86, S14.87	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.	landfill gas hazards		within the NTML Consultation Zone, Barging Point and Nursery Site	phase	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 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	Protect the workers from landfill gas hazards	Contractor	XRL tunnels within the NTML Consultation Zone	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
	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.					
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 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.	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	- Adequate fire extinguishing equipment, fire-resistant clothing and breathing apparatus sets should be made	Protect the workers from	Contractor	XRL tunnels within the	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
	available on site.	landfill gas hazards		NTML Consultation Zone	phase	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
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

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
S14.73	- 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 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.	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
S14.76	- 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	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

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 operation. The survey should be conducted under non-ventilated condition and before starting the work of the day.					
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 monitoring requirements during the operational phase	To review and agree the monitoring requirement during the operational phase	MTR/Contractor	-	Before operation	To be implemented as per construction 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

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
S14.79	- 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 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.	Ensure landfill gas protection measures have been completed	Contractor	XRL tunnels within the NTML Consultation Zone	Construction phase	To be implemented as per 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	Protect the operation of the XRL from landfill gas hazards	MTR	XRL tunnels within the NTML Consultation	Operation phase	To be implemented as per construction

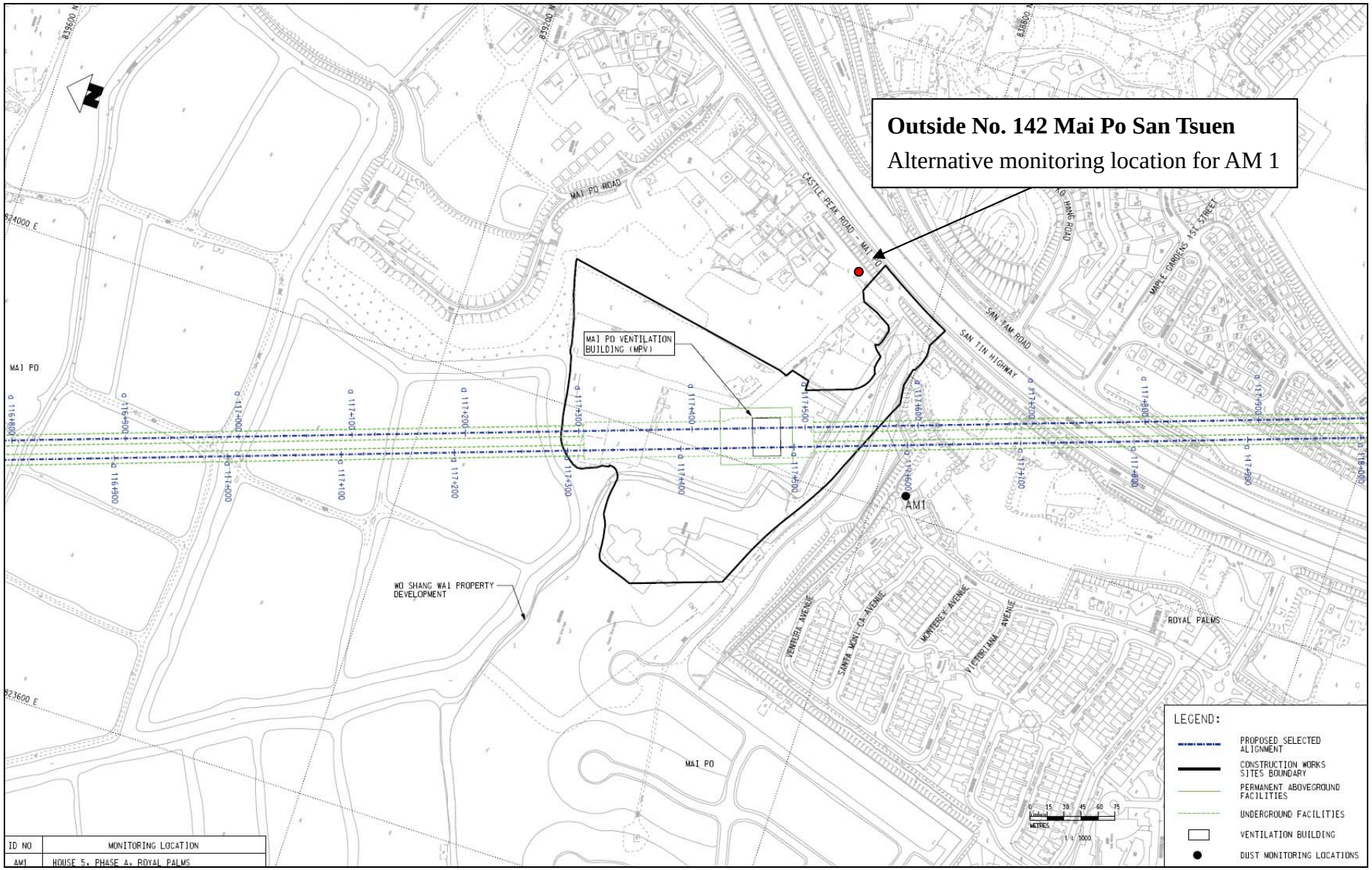
EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
	with EPD before the commencement of operation).			Zone		programme
S14.76	- All maintenance 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 from landfill gas hazards	MTR	XRL tunnels within the NTML Consultation Zone	Operation phase	To be implemented 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,	Protect the workers from landfill gas hazards	MTR	XRL tunnels within the NTML Consultation Zone	Operation phase	To be implemented as per construction programme

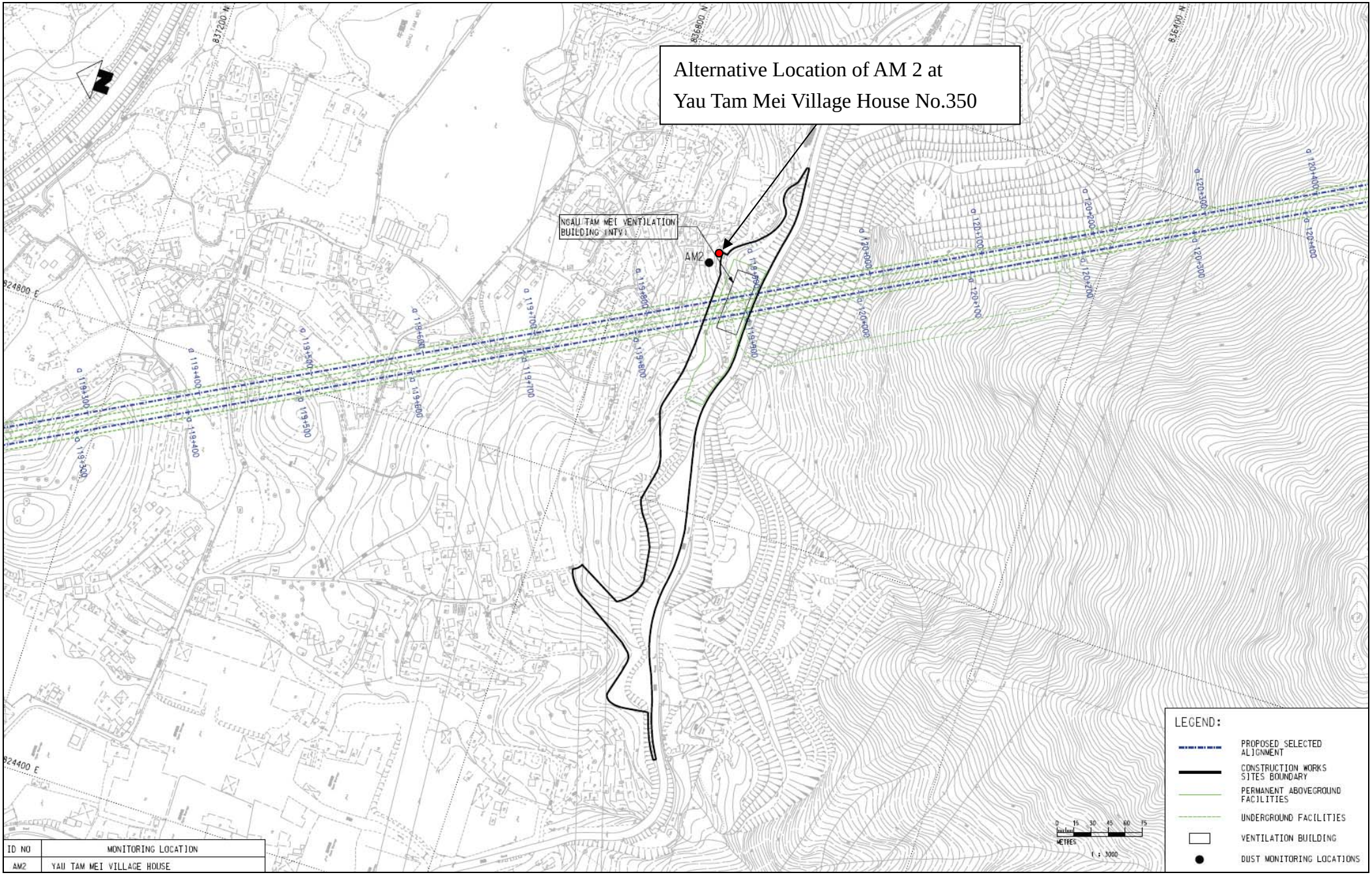
EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
	enforcement of the no smoking order.					
S14.82 & S14.83	- The monitoring requirement 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 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.	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
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	Confirm no landfill gas ingress into the XRL tunnels	MTR	XRL tunnels within the NTML Consultation	Operation phase	To be implemented as per construction

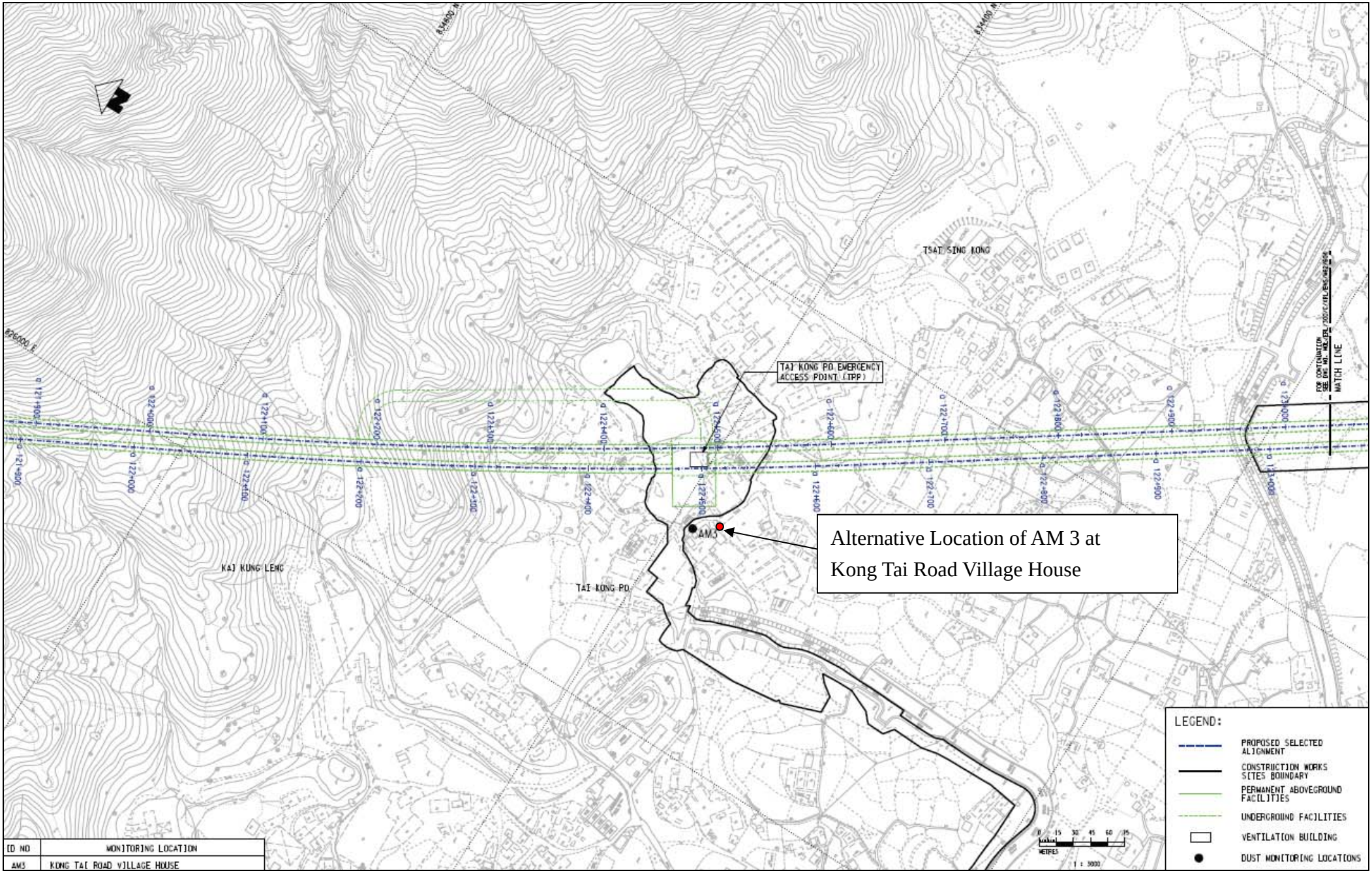
EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status
	carried out for any signs of presence of flammable gas. The survey should be conducted under non-ventilated condition and before the first train operates and start-up of ventilation, if applicable.			Zone		programme

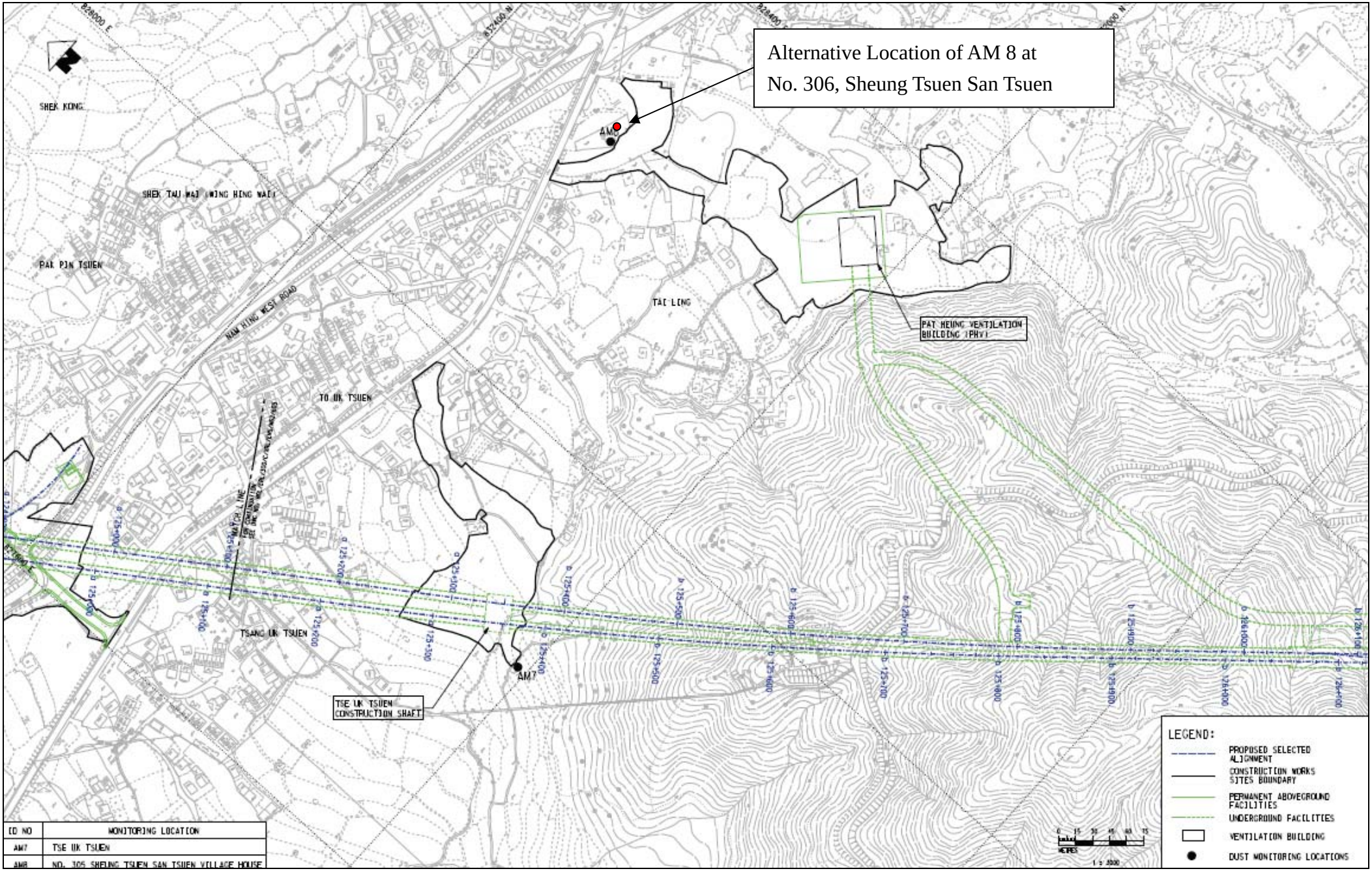
Appendix D

Monitoring Locations

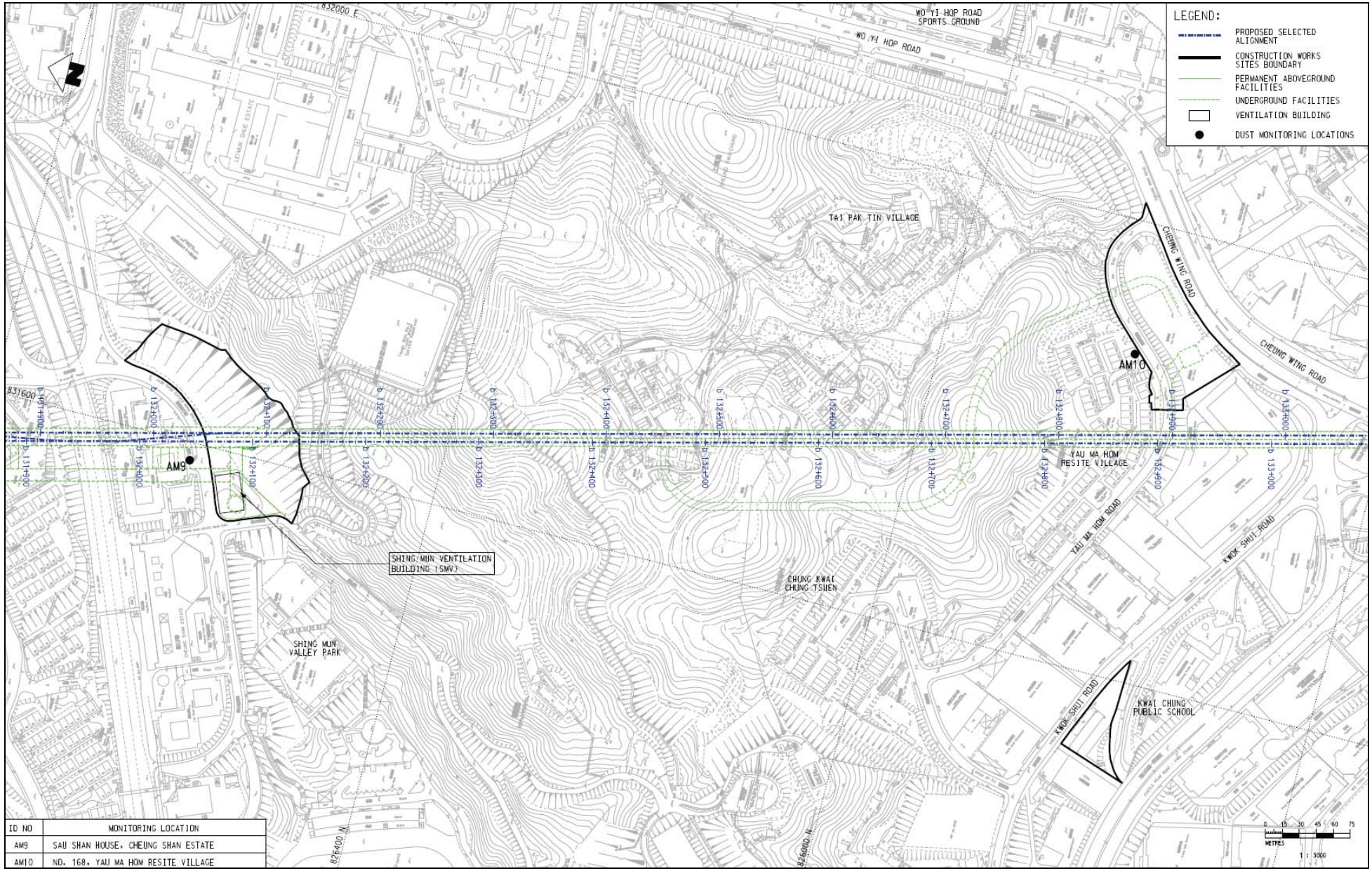

Outside No. 142 Mai Po San Tsuen
Alternative monitoring location for AM 1
MAI PO VENTILATION BUILDING (MPV)
WO SHANG WAI PROPERTY DEVELOPMENT
AM1
MAI PO
MAI PO ROAD
CASTLE PEAK ROAD - MAI PO
SAN TIN HIGHWAY
SAN TAM ROAD
ROYAL PALMS
VENTURA AVENUE
SANTA MONICA AVENUE
MONTEREY AVENUE
VICTORIANA AVENUE
MARIE CURIENS 1ST STREET
839600 N
824000 E
823600 E
ID NO
MONITORING LOCATION
AM1
HOUSE 5, PHASE 4, ROYAL PALMS
LEGEND:
PROPOSED SELECTED ALIGNMENT
CONSTRUCTION WORKS SITES BOUNDARY
PERMANENT ABOVEGROUND FACILITIES
UNDERGROUND FACILITIES
VENTILATION BUILDING
DUST MONITORING LOCATIONS
METRES
1 : 3000


Alternative Location of AM 2 at
Yau Tam Mei Village House No.350
NGAU TAM MEI VENTILATION BUILDING (NTV)
AM2
837200 N
836800 N
836400 N
824800 E
824400 E
LEGEND:
PROPOSED SELECTED ALIGNMENT
CONSTRUCTION WORKS SITES BOUNDARY
PERMANENT ABOVEGROUND FACILITIES
UNDERGROUND FACILITIES
VENTILATION BUILDING
DUST MONITORING LOCATIONS
METRES
1 : 3000
ID NO | MONITORING LOCATION
AM2 | YAU TAM MEI VILLAGE HOUSE

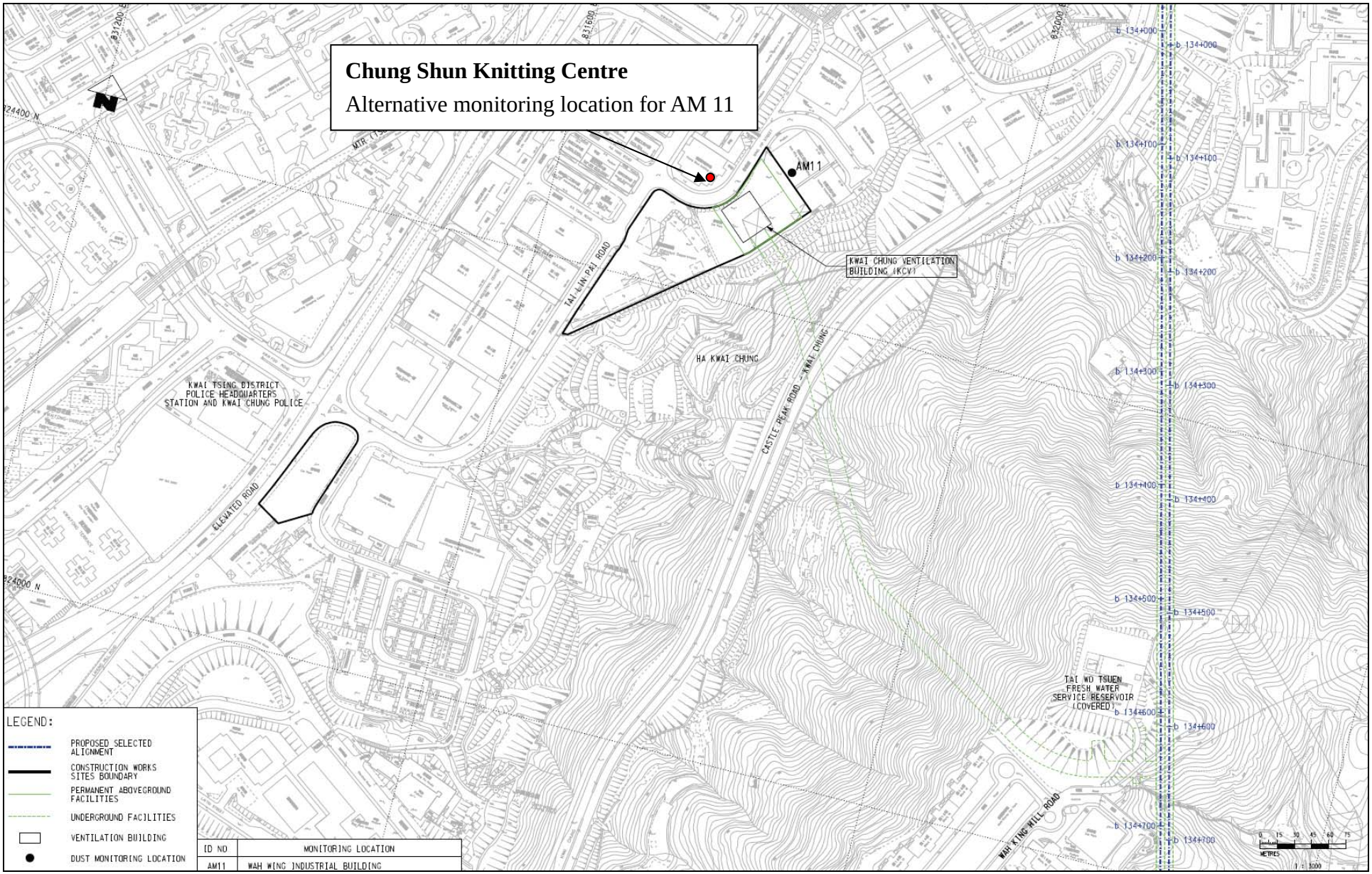

TSAT SING KONG
TAI KONG PO EMERGENCY ACCESS POINT (TPP)
AM3
Alternative Location of AM 3 at Kong Tai Road Village House
KAI KONG LENG
TAI KONG PO
MATCH LINE
LEGEND:
PROPOSED SELECTED ALIGNMENT
CONSTRUCTION WORKS SITES BOUNDARY
PERMANENT ABOVEGROUND FACILITIES
UNDERGROUND FACILITIES
VENTILATION BUILDING
DUST MONITORING LOCATIONS
ID NO
MONITORING LOCATION
AM3
KONG TAI ROAD VILLAGE HOUSE

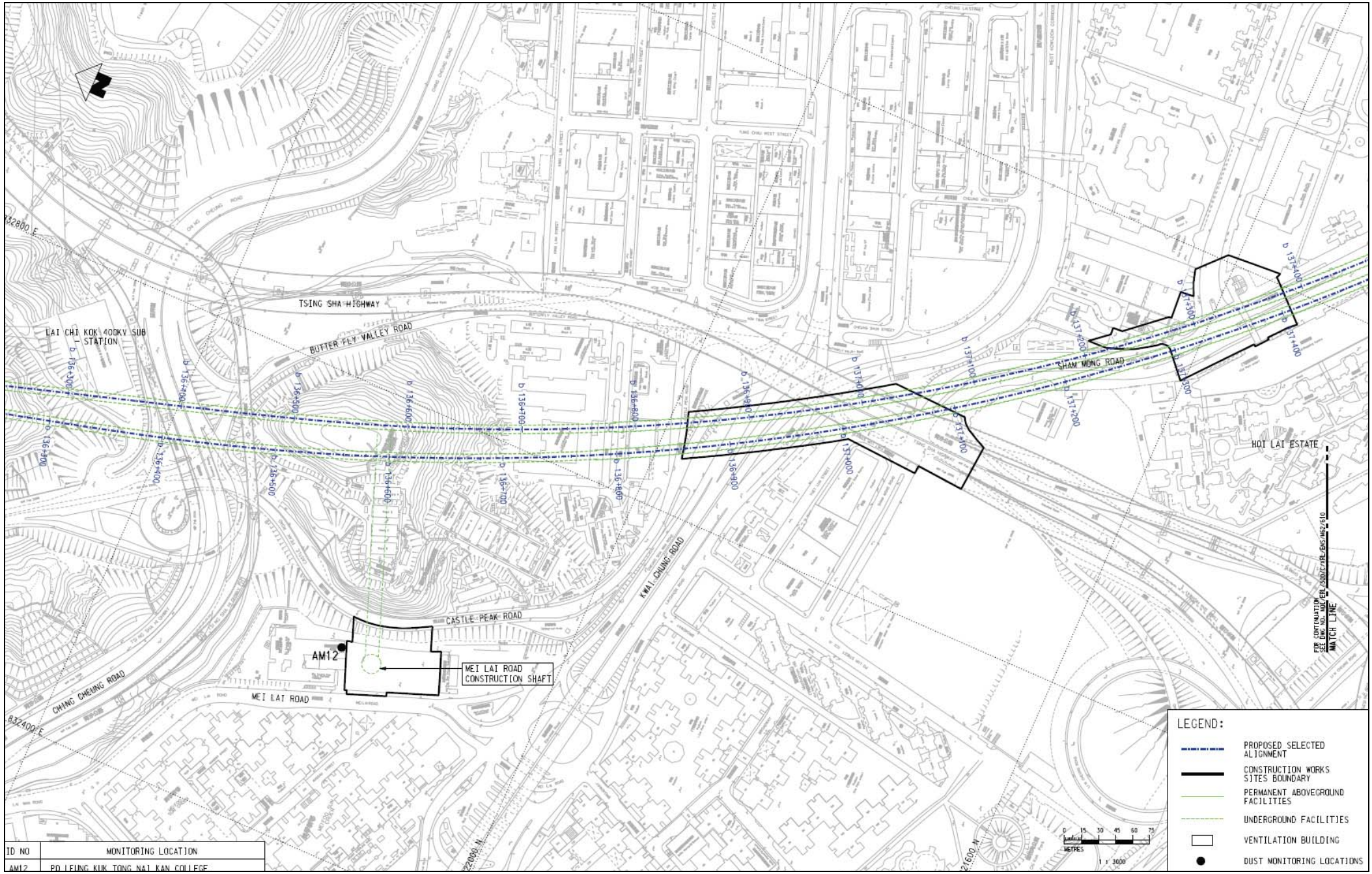


ID NO	MONITORING LOCATION
AM7	TSE UK TSUEN
AM8	NO. 305 SHEUNG TSUEN SAN TSUEN VILLAGE HOUSE

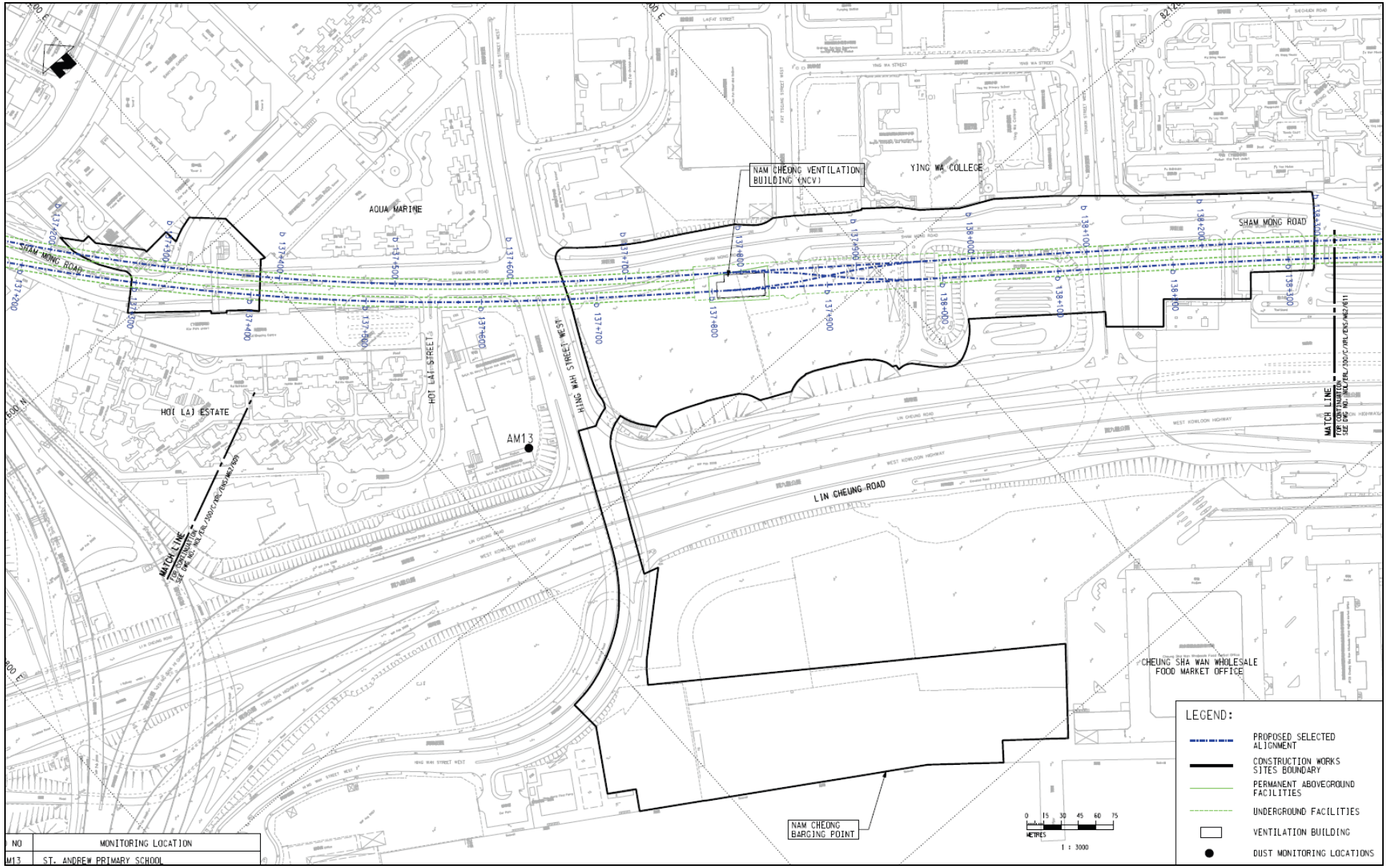


ID NO	MONITORING LOCATION
AM9	SAU SHAN HOUSE, CHEUNG SHAN ESTATE
AM10	NO. 168, YAU MA HOM RESITE VILLAGE

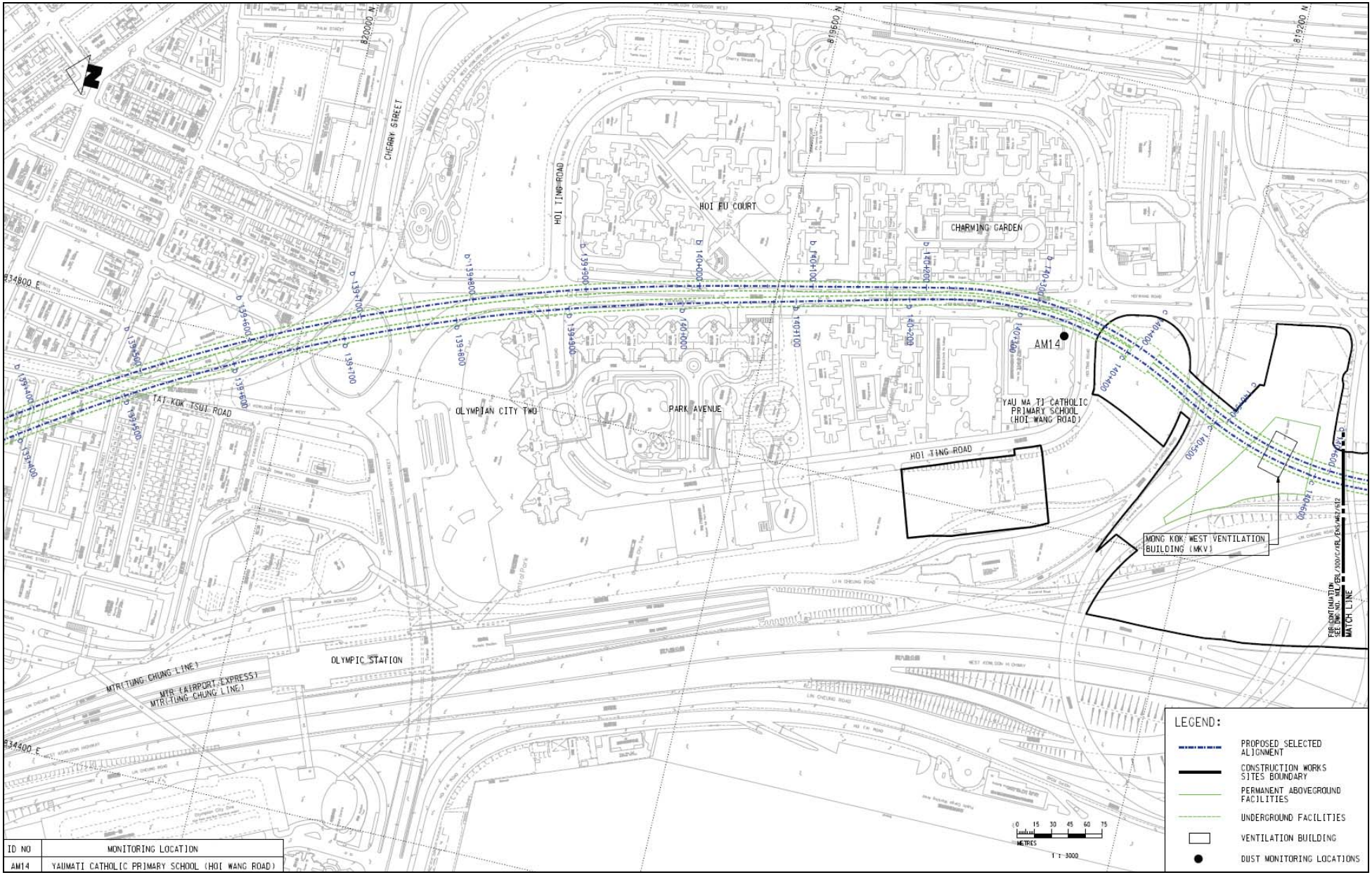

Chung Shun Knitting Centre
Alternative monitoring location for AM 11
AM11
KWAI CHUNG VENTILATION BUILDING (KCV)
TAI KLIN PAI ROAD
HA KWAI CHUNG
CASTLE PEAK ROAD - KWAI CHUNG
KWAI TSING DISTRICT POLICE HEADQUARTERS STATION AND KWAI CHUNG POLICE
ELEVATED ROAD
TAI WO TSUEN FRESH WATER SERVICE RESERVOIR (COVERED)
WAH KING HILL ROAD
LEGEND:
PROPOSED SELECTED ALIGNMENT
CONSTRUCTION WORKS SITES BOUNDARY
PERMANENT ABOVEGROUND FACILITIES
UNDERGROUND FACILITIES
VENTILATION BUILDING
DUST MONITORING LOCATION
ID NO
MONITORING LOCATION
AM11
WAH WING INDUSTRIAL BUILDING



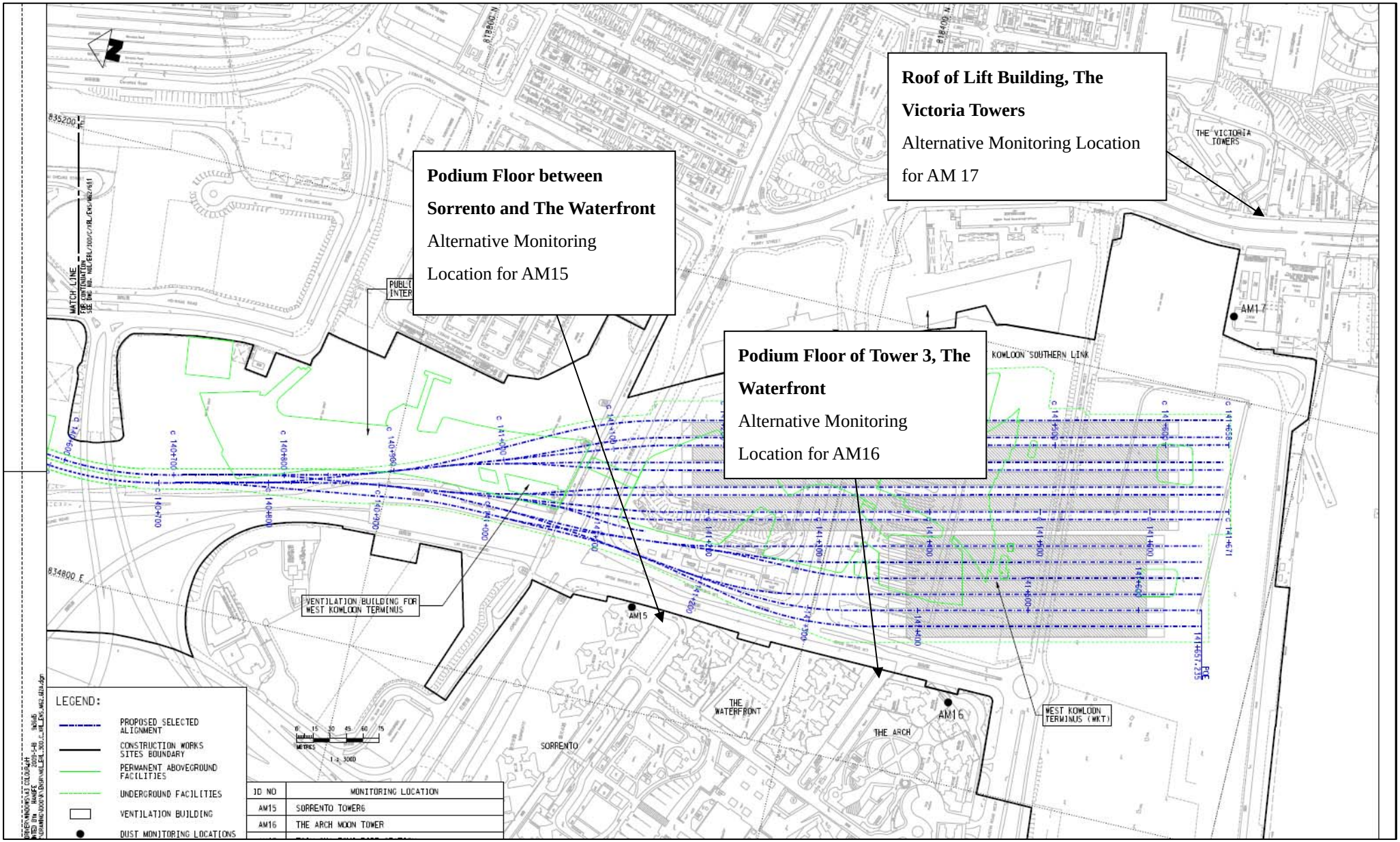
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AM12	PO LEUNG KUK TONG NAI KAN COLLEGE



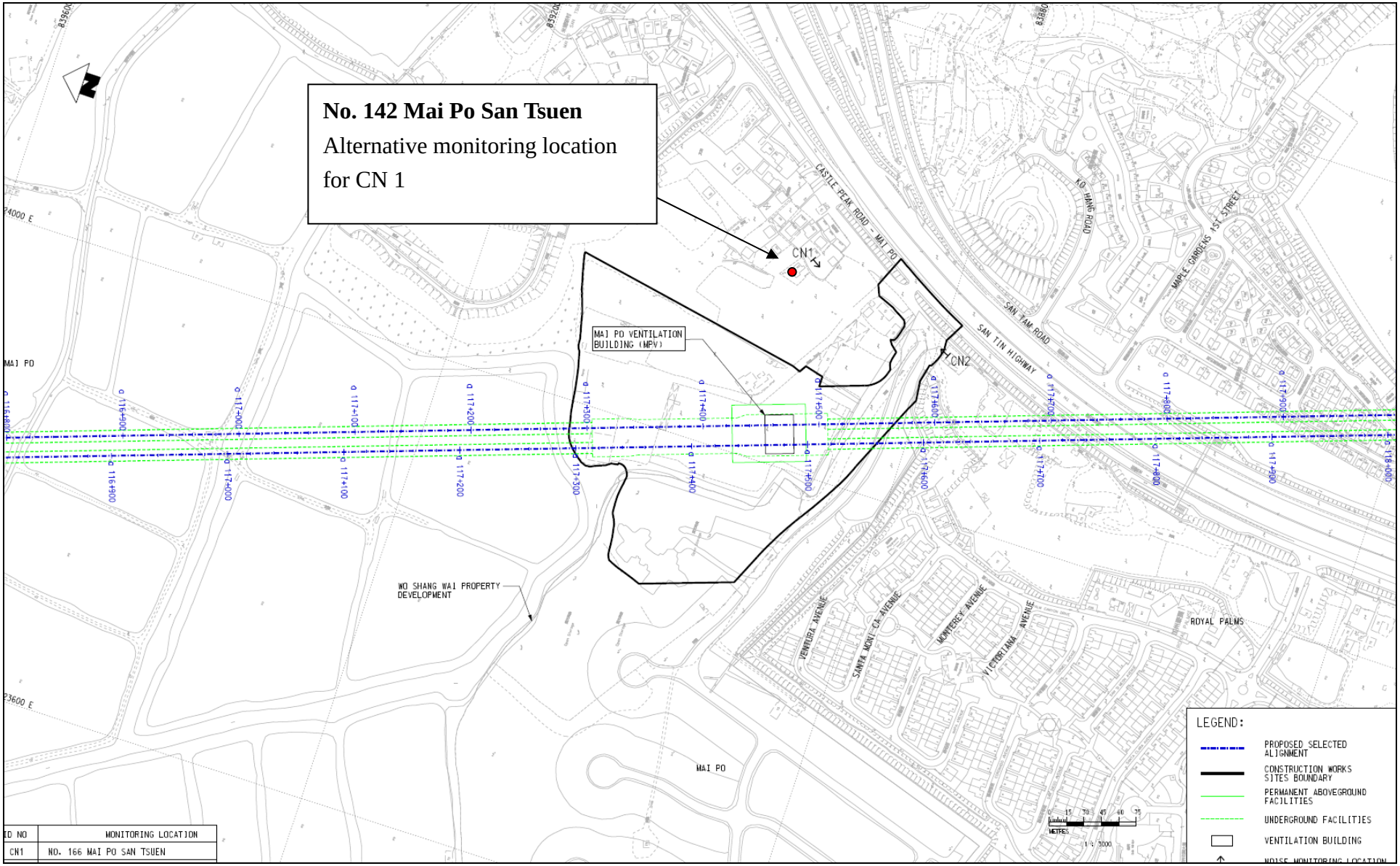
NO	MONITORING LOCATION
M13	ST. ANDREW PRIMARY SCHOOL

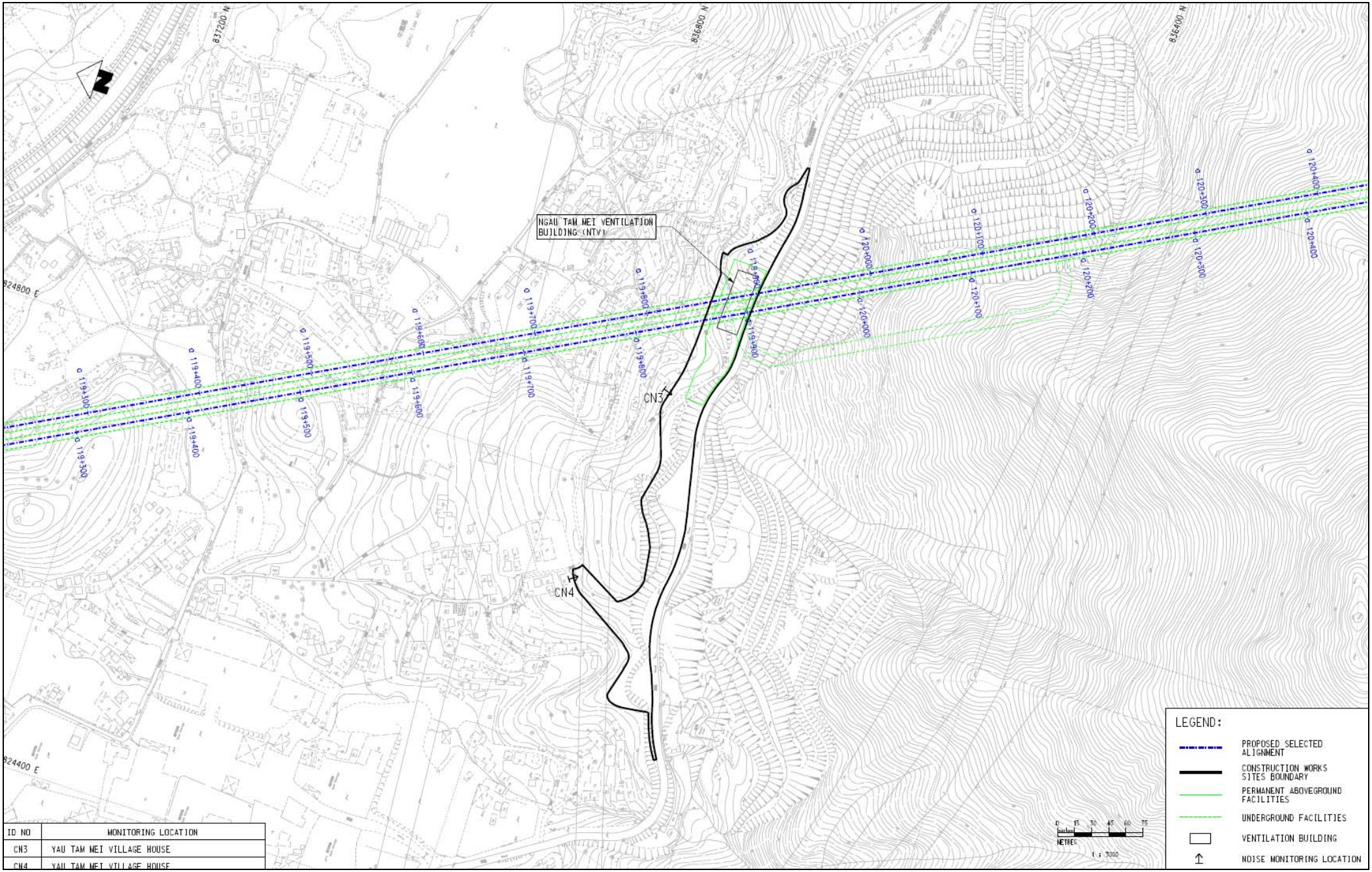


ID NO	MONITORING LOCATION
AM14	YAUMATI CATHOLIC PRIMARY SCHOOL (HOI WANG ROAD)

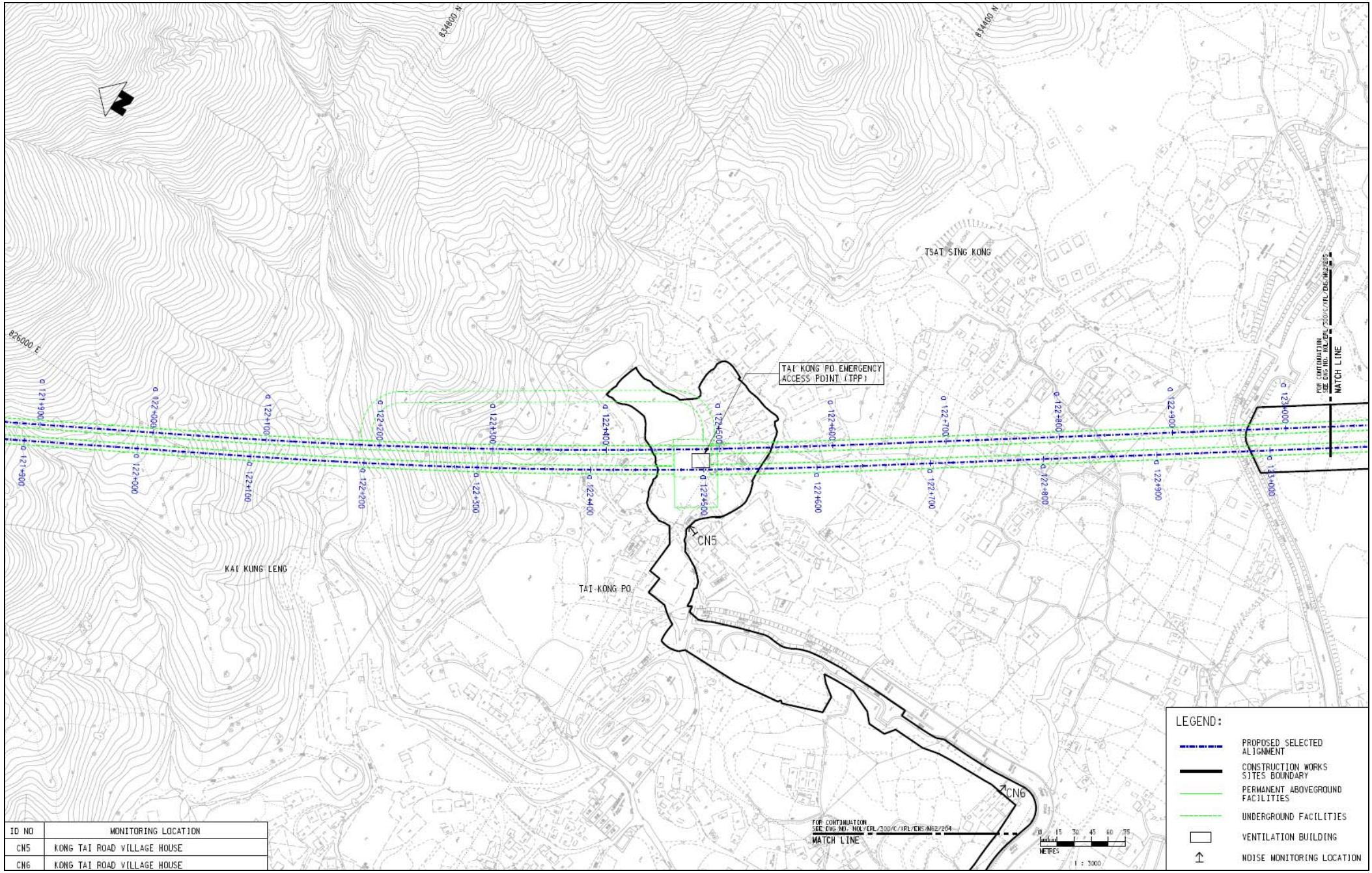


Dust monitoring locations

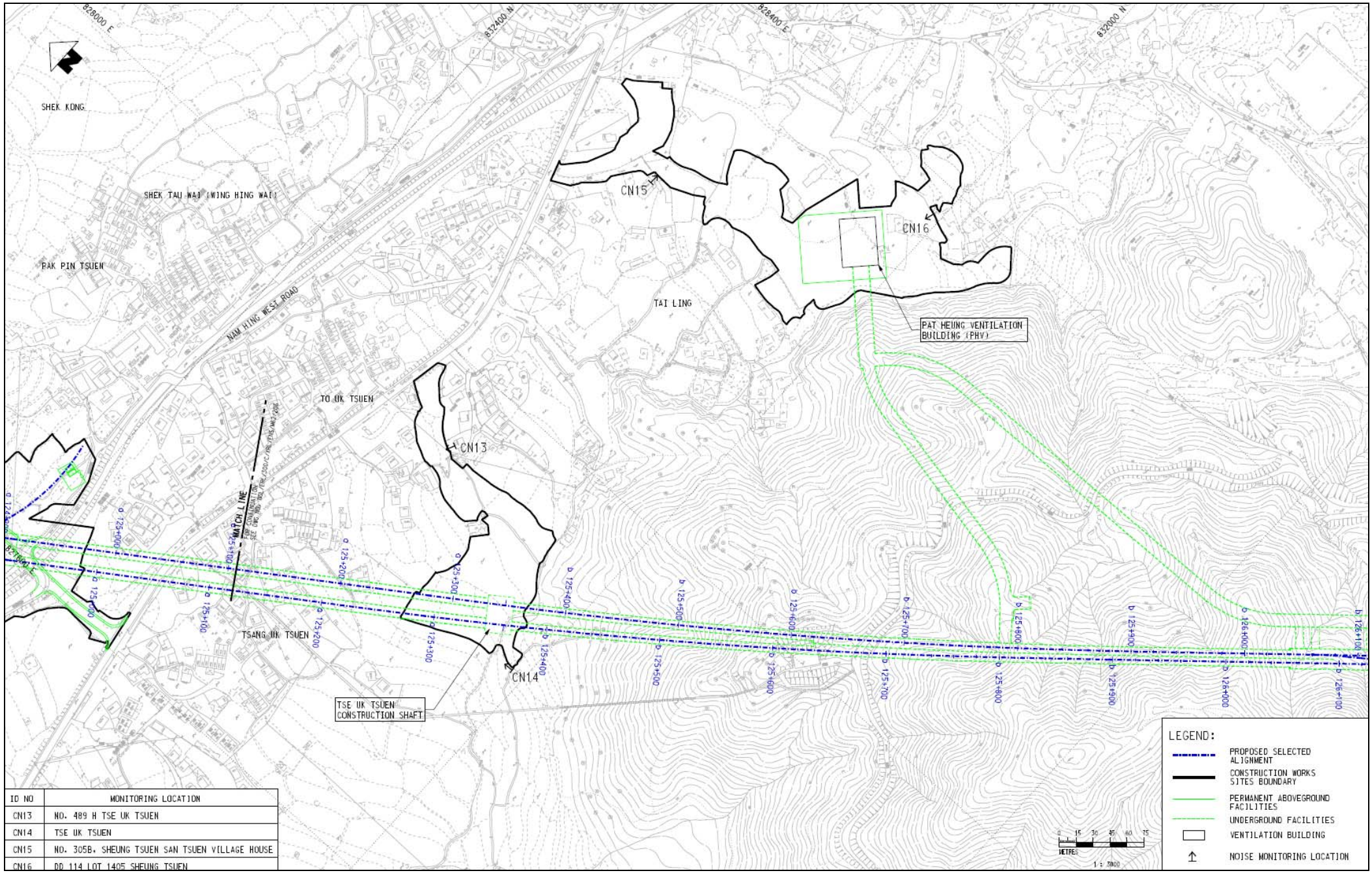

No. 142 Mai Po San Tsuen
Alternative monitoring location for CN 1
CN1
CN2
MAI PO VENTILATION BUILDING (MPV)
WO SHANG WAI PROPERTY DEVELOPMENT
MAI PO
CASTLE PEAK ROAD - MAI PO
KO HANG ROAD
MAPLE GARDENS
1ST STREET
SAN TAM ROAD
SAN TIN HIGHWAY
VENTURA AVENUE
SANTA MONICA AVENUE
MONTEREY AVENUE
VICTORIANA AVENUE
ROYAL PALMS
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



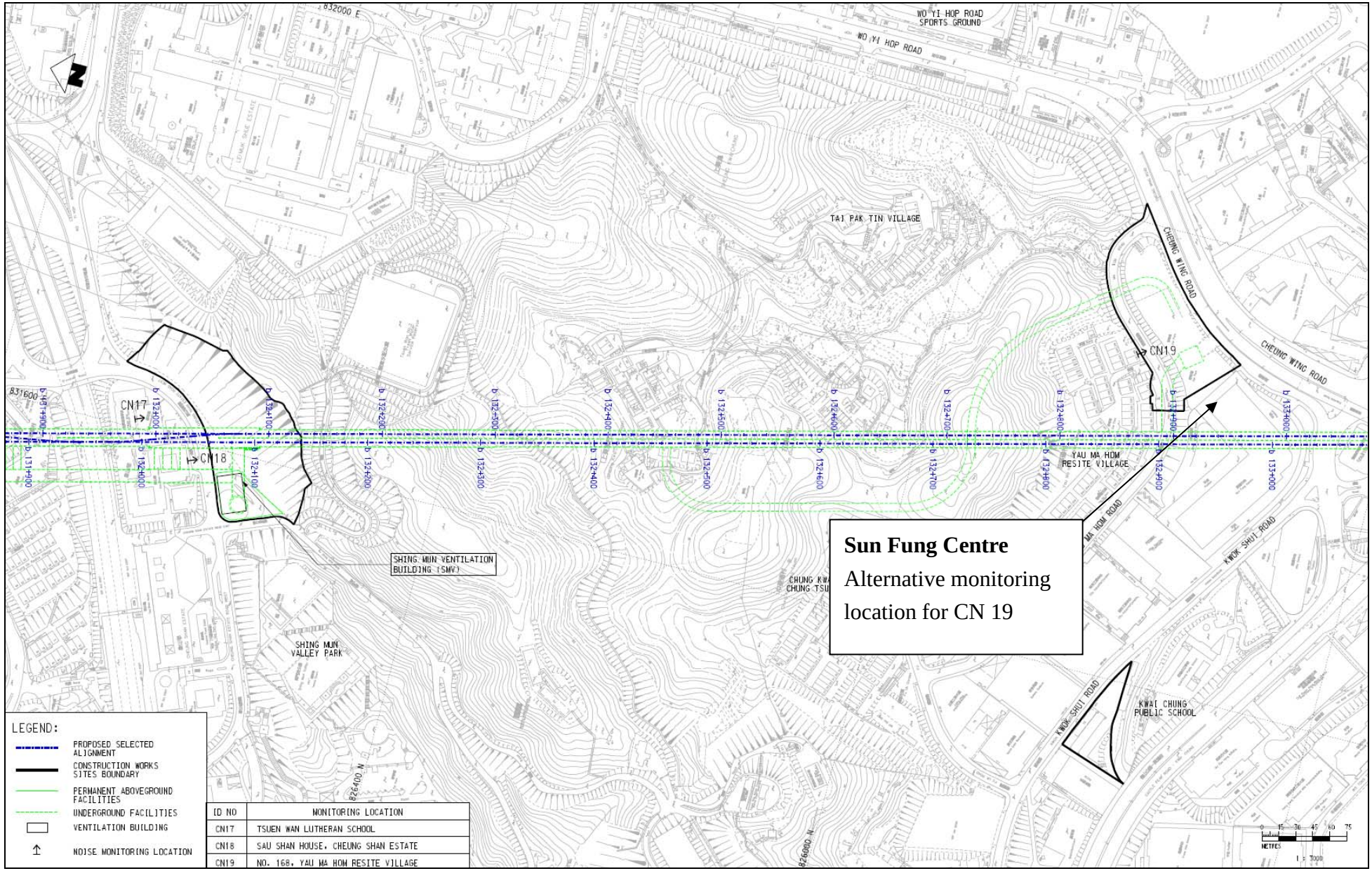
ID NO	MONITORING LOCATION
CN3	YAU TAM MEI VILLAGE HOUSE
CN4	YAU TAM MEI VILLAGE HOUSE

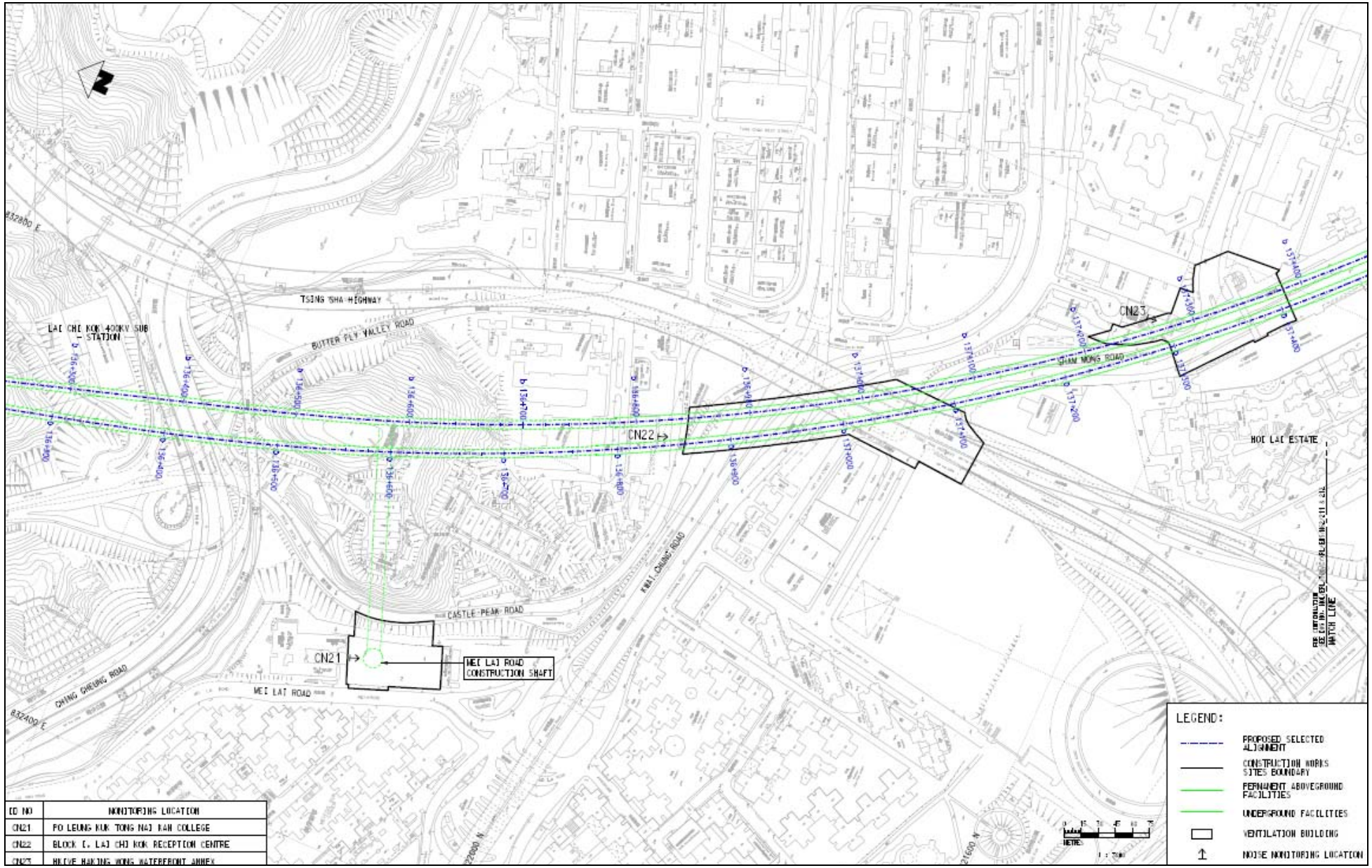


ID NO	MONITORING LOCATION
CN5	KONG TAI ROAD VILLAGE HOUSE
CN6	KONG TAI ROAD VILLAGE HOUSE

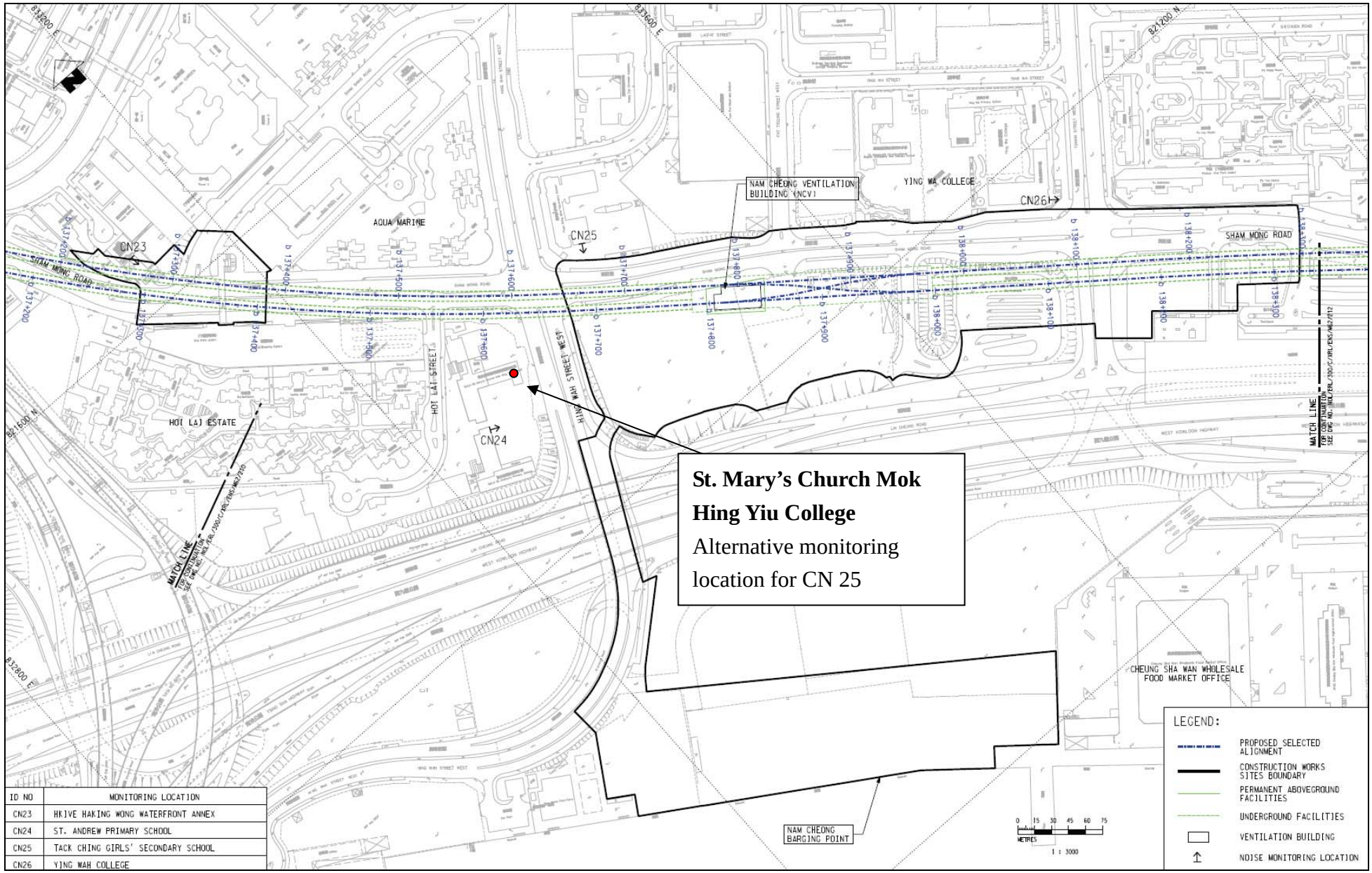


ID NO	MONITORING LOCATION
CN13	NO. 489 H TSE UK TSUEN
CN14	TSE UK TSUEN
CN15	NO. 305B, SHEUNG TSUEN SAN TSUEN VILLAGE HOUSE
CN16	DD 114 LOT 1405 SHEUNG TSUEN

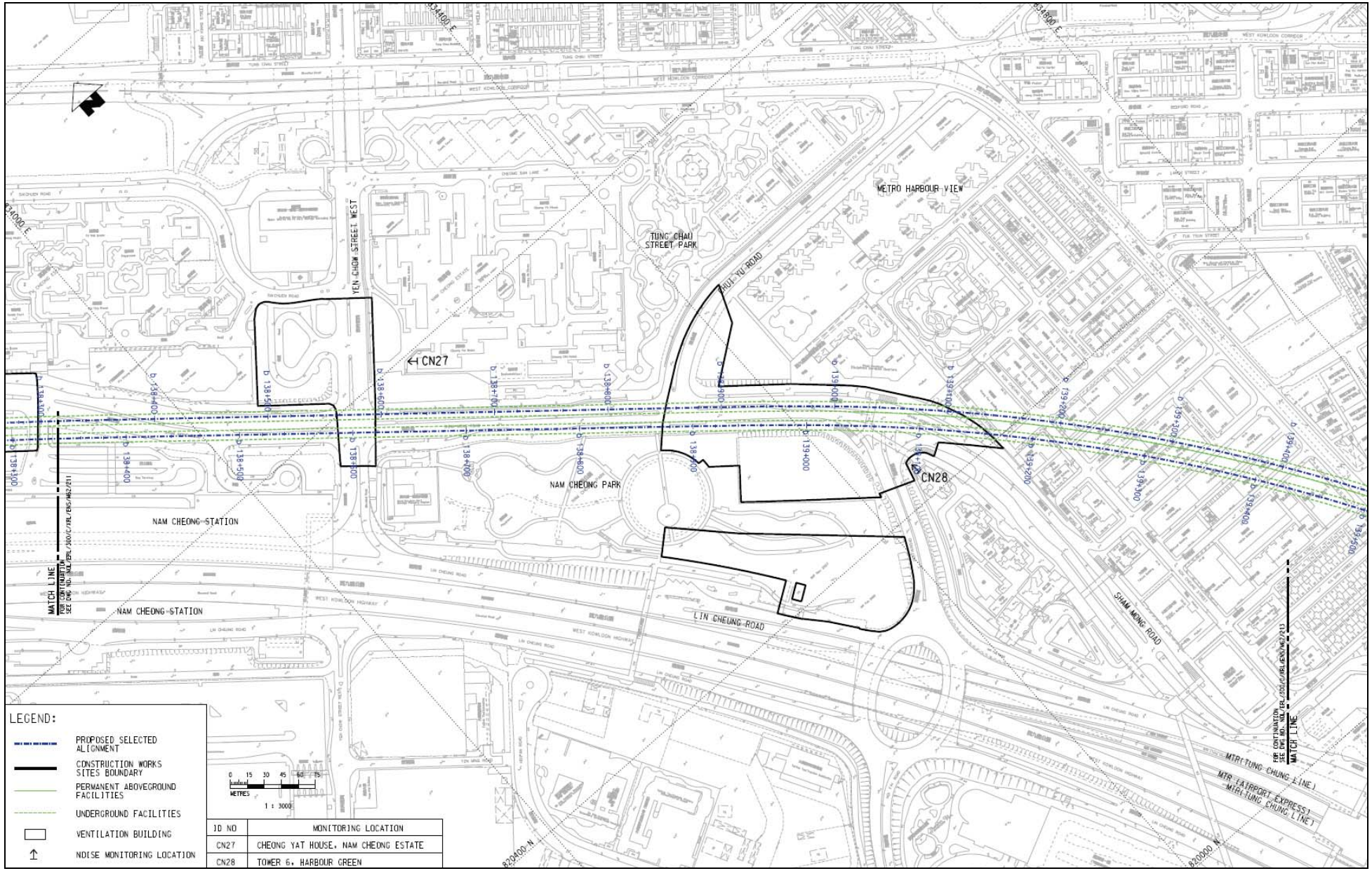

832000 E
WO YI HOP ROAD SPORTS GROUND
WO YI HOP ROAD
TAI PAK TIN VILLAGE
CHEUNG WING ROAD
CHEUNG WING ROAD
CN19
CN17
CN18
831600
SHING MUN VENTILATION BUILDING (SMV)
SHING MUN VALLEY PARK
YAU MA HOM RESITE VILLAGE
MA HOM ROAD
KWOK SHUI ROAD
KWOK SHUI ROAD
KWAI CHUNG PUBLIC SCHOOL
826400 N
826000 N
METRES
1 : 7000
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

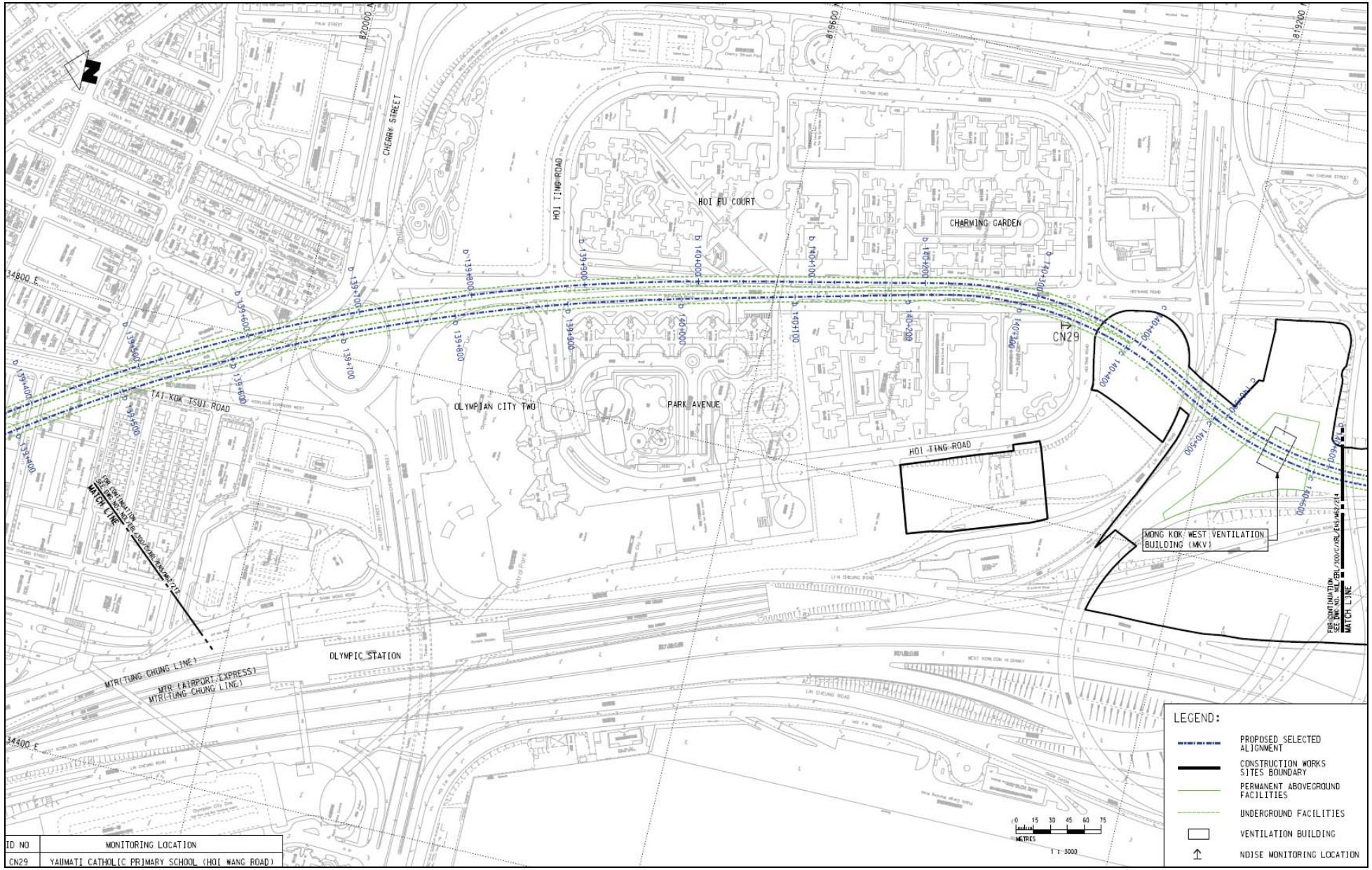


ID NO	MONITORING LOCATION
CN21	PO LEUNG KUK TONG NAI RAN COLLEGE
CN22	BLOCK C, LAI CHI KOK RECEPTION CENTRE
CN23	HOLYE HAKKING WONG WATERFRONT ANNEX

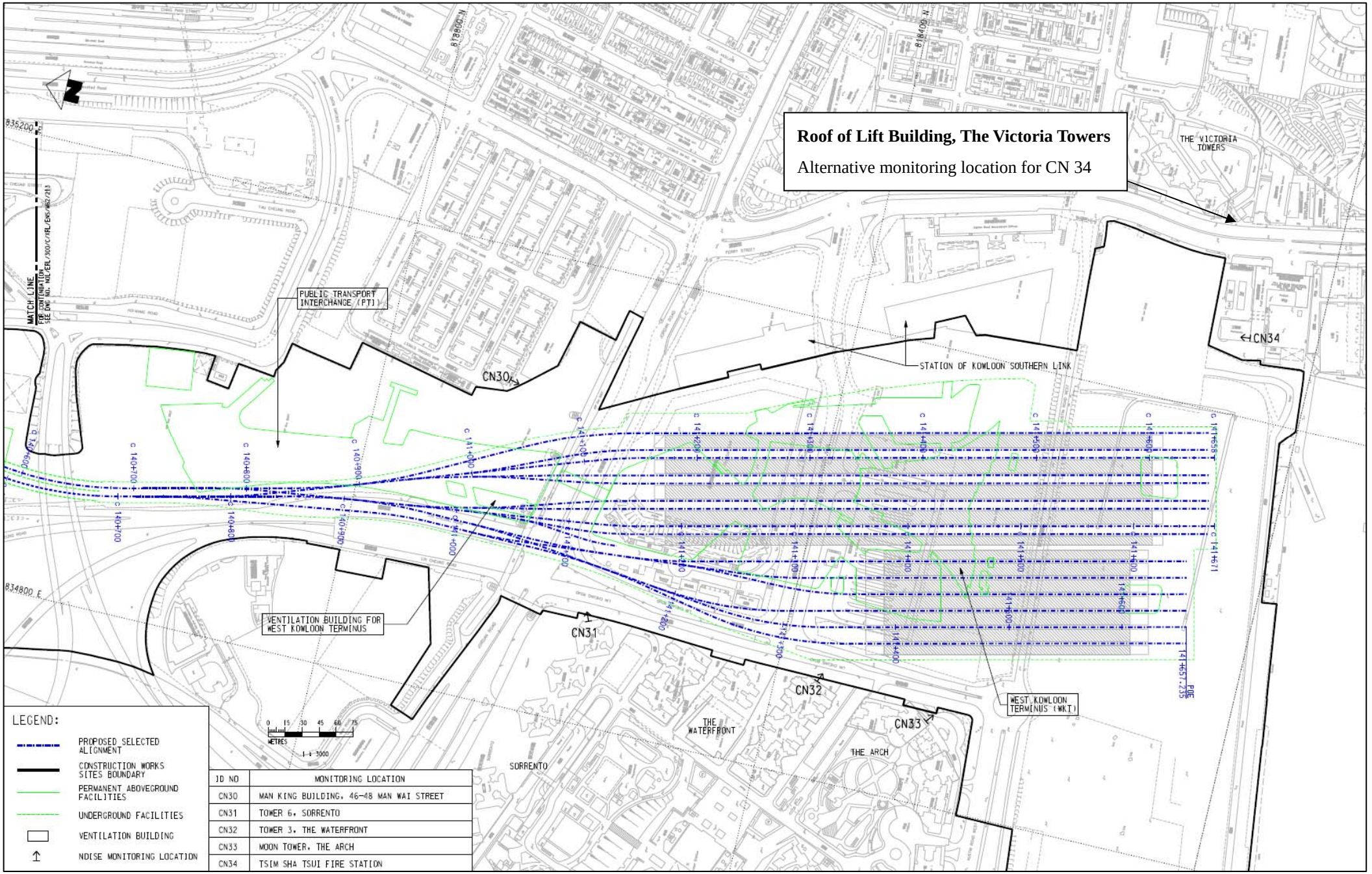


ID NO	MONITORING LOCATION
CN23	HKIVE HAKING WONG WATERFRONT ANNEX
CN24	ST. ANDREW PRIMARY SCHOOL
CN25	TACK CHING GIRLS' SECONDARY SCHOOL
CN26	YING WAH COLLEGE

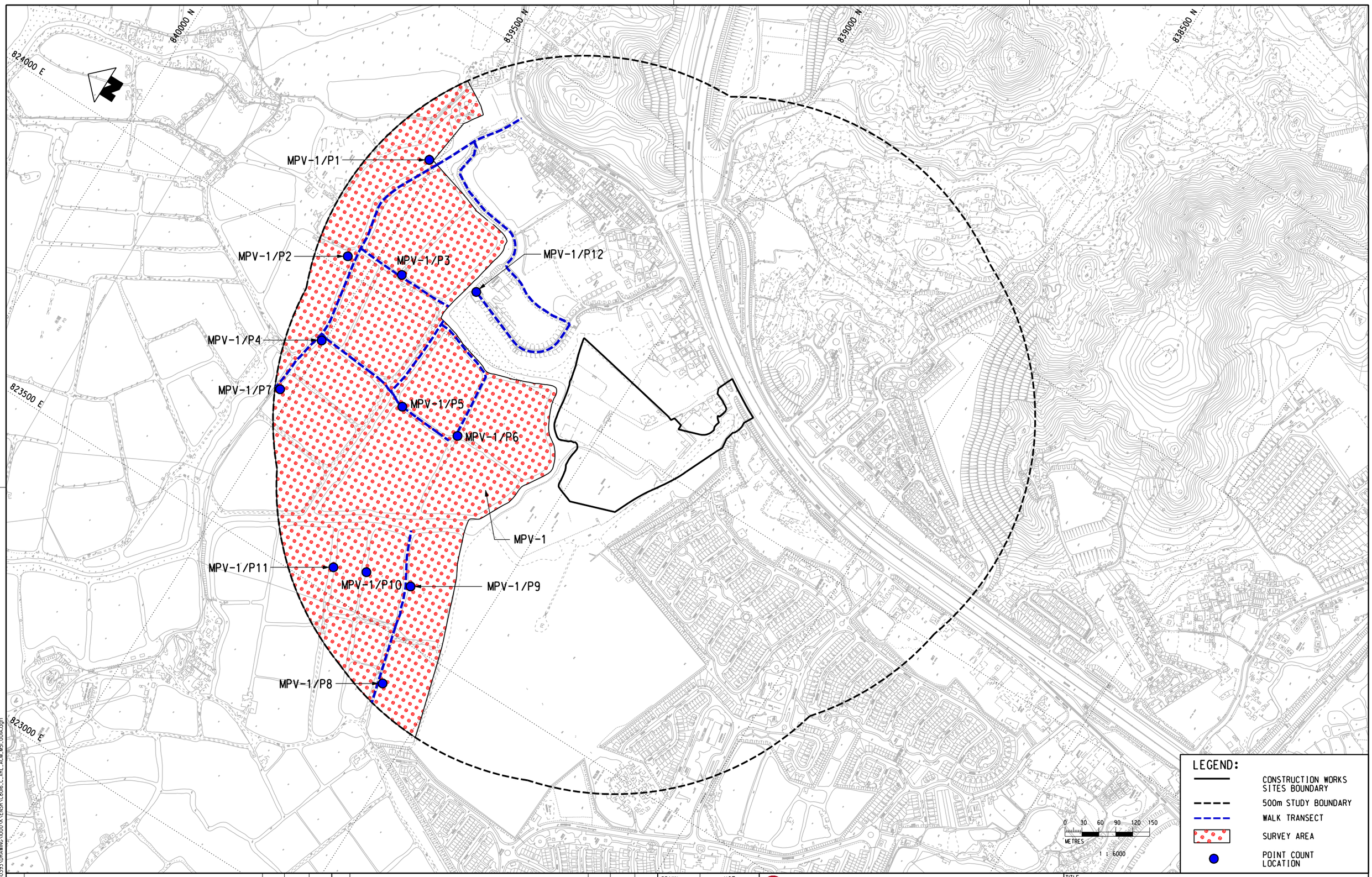

LEGEND:
PROPOSED SELECTED ALIGNMENT
CONSTRUCTION WORKS SITES BOUNDARY
PERMANENT ABOVEGROUND FACILITIES
UNDERGROUND FACILITIES
VENTILATION BUILDING
NOISE MONITORING LOCATION
0 15 30 45 60 75
METRES
1 : 3000
ID NO | MONITORING LOCATION
CN27 | CHEONG YAT HOUSE, NAM CHEONG ESTATE
CN28 | TOWER 6, HARBOUR GREEN
CN27
CN28
NAM CHEONG STATION
NAM CHEONG PARK
TUNG CHAU STREET PARK
METRO HARBOUR VIEW
YEN CHOW STREET WEST
CHUI YU ROAD
LIN CHEUNG ROAD
SHAM MONG ROAD
WEST KOWLOON HIGHWAY
MTR(TUNG CHUNG LINE)
MTR (AIRPORT EXPRESS)
MTR(TUNG CHUNG LINE)
MATCH LINE
FOR CONTINUATION SEE DWG NO. NKL/DPL/300/C/XRL/EBS/NK2/211
MATCH LINE
FOR CONTINUATION SEE DWG NO. NKL/DPL/300/C/XRL/EBS/NK2/213
834000 E
834500 E
820400 N
820000 N



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



Noise monitoring locations



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REV	DESCRIPTION	BY	DATE	APPROVED	REV	DESCRIPTION	BY	DATE	APPROVED

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

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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

835000 N

834000 N

825000 E

826000 E

827000 E

TPP-1/P1

TPP-1/P2

TPP-1/P3

TPP-1

KT5

TPP-1/P4

TPP-1/P5

95CD

SSS-1/P3

SSS-1/P2

SSS-1/P1

SSS-2b/P1

SSS-1/P4

SSS-1

SSS-2b/P3

95CD-5

SSS-2b/P2

SSS-2b

SSS-2a

95CD-4

SSS-2a/P2

SSS-2a/P1

0 40 80 120 160 200

METRES

1 : 8000

LEGEND:

- CONSTRUCTION WORKS SITES BOUNDARY
- 500m STUDY BOUNDARY
- WALK TRANSECT
- SURVEY AREA
- POINT COUNT LOCATION

REV	DESCRIPTION	BY	DATE	APPROVED	REV	DESCRIPTION	BY	DATE	APPROVED

DRAWN	ZRH
DESIGNED	--
CHECKED	--
APPROVED	--
DATE	02/DEC/2010

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EXPRESS RAIL LINK

ORIGINATOR

AECOM

CADD REF.

C8016_C_XRL_ENS_M51_003A.dgn

TITLE

C8016

ENVIRONMENTAL TERM CONSULTANCY FOR XRL

SURVEY AREA, POINT COUNT LOCATION AND WALK TRANSECT FOR TPP-1, SSS-1,SSS-2a AND SSS-2b

SCALE	FIGURE NO.	REV.
1 : 8000 (A3)	C8016/C/XRL/ENS/M51/003	A

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834500 N
834000 N
833500 N
824000 E
824500 E
825000 E
825500 E

43CD-1
TPP-3/P3
TPP-3/P1
TPP-3/P2
TPP-3
TPP-2/P4
95CD
TPP-2/P3
TPP-2
TPP-2/P2
TPP-2/P1

0 30 60 90 120 150
METRES
1 : 6000

LEGEND:
- CONSTRUCTION WORKS SITES BOUNDARY
- 500m STUDY BOUNDARY
- WALK TRANSECT
- SURVEY AREA
- POINT COUNT LOCATION

PLOT DRV
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DRAWN	YJP
DESIGNED	TWF
CHECKED	KCC
APPROVED	PL
DATE	14/SEP./2009

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MTR
EXPRESS RAIL LINK
ORIGINATOR
AECOM
CADD REF. FIGURE 2.dgn

TITLE
NOL / ERL-300
BASELINE BIRD SURVEY FOR EIA
PROPOSED SURVEY AREA, POINT COUNT LOCATION AND WALK TRANSECT FOR TPP-2 AND TPP-3

SCALE	FIGURE NO.	REV
1 : 6000 (A3)	FIGURE 2	-

828000 E

835000 N

829000 E

832000 N

827000 E

TUW-2 AND PHV-1/P2

TUW-2 AND PHV-1/P1

TUW-2 AND PHV-1

LEGEND:

- CONSTRUCTION WORKS SITES BOUNDARY
- 500m STUDY BOUNDARY
- WALK TRANSECT
- SURVEY AREA
- POINT COUNT LOCATION

0 40 80 120 160 200

METRES

1 : 8000

831000 N

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REV	DESCRIPTION	BY	DATE	APPROVED

REV	DESCRIPTION	BY	DATE	APPROVED

DRAWN	ZRH
DESIGNED	--
CHECKED	--
APPROVED	--
DATE	02/DEC/2010

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MTR

EXPRESS RAIL LINK

ORIGINATOR

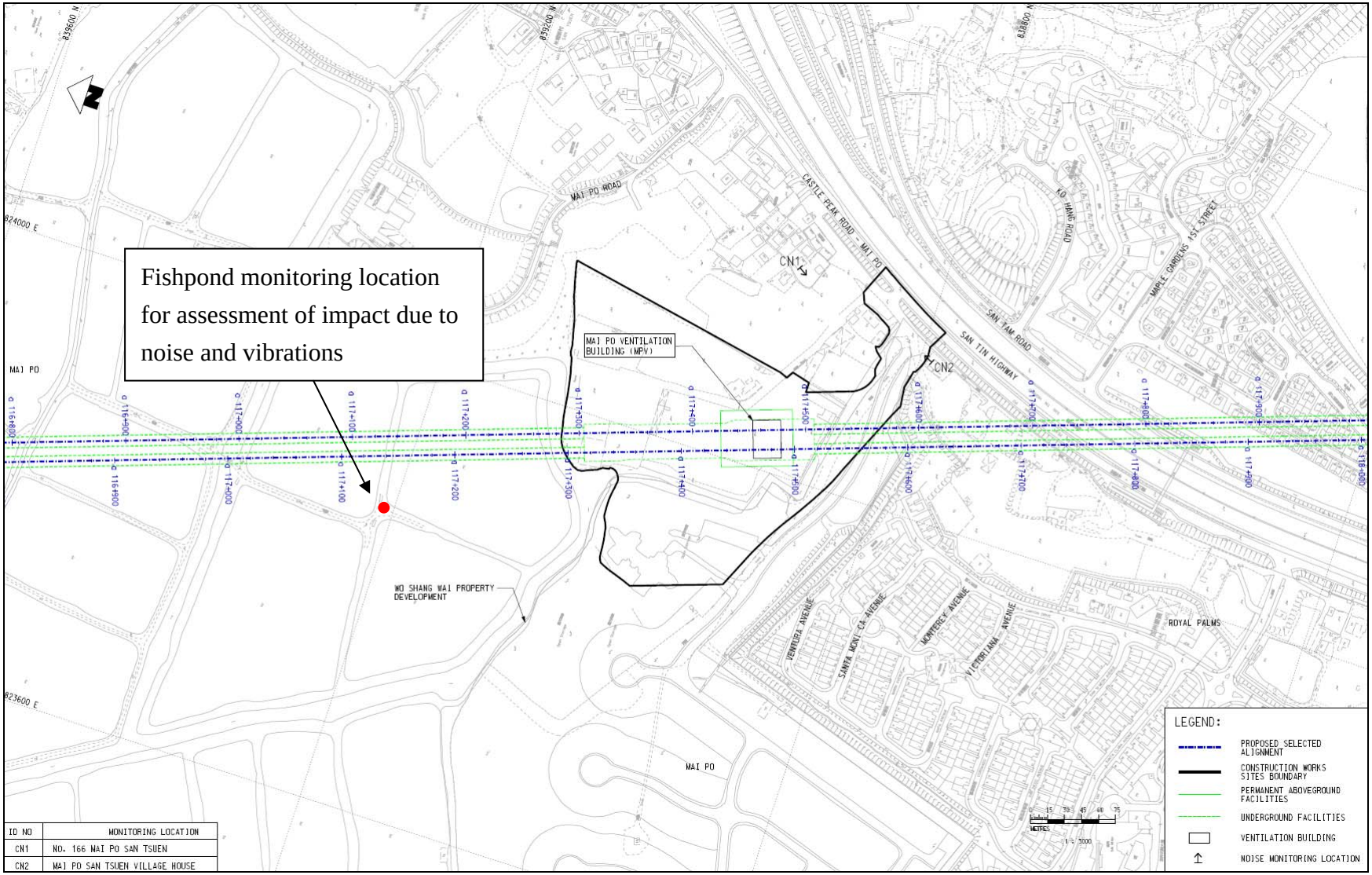
AECOM

CADD REF. C8016_C_XRL_ENS_M51_006A.dgn

TITLE

C8016
ENVIRONMENTAL TERM CONSULTANCY FOR XRL
SURVEY AREA, POINT COUNT LOCATION AND WALK TRANSECT FOR TUW-2 AND PHV-1

SCALE	FIGURE NO.	REV.
1 : 8000 (A3)	C8016/C/XRL/ENS/M51/006	A



Fishpond monitoring location

Appendix E

Monitoring Schedule

Actual Construction Dust (24-hr TSP) Impact Monitoring Schedule - January 2011

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

Jan-2011						
Sunday	**Monday**	**Tuesday**	**Wednesday**	**Thursday**	**Friday**	**Saturday**
						1
2	3 AM1, AM2, AM9, AM10	4 AM3	5 AM11, AM12, AM13, AM14, AM15, AM16, AM17	6	7 AM1, AM2, AM9, AM10	8 AM3
9	10	11 AM11, AM12, AM13, AM14, AM15, AM16, AM17	12	13 AM1, AM2 AM9, AM10	14 AM3, AM8	15 AM3*
16	17 AM11, AM12, AM13, AM14, AM15, AM16, AM17	18	19 AM1, AM2, AM9, AM10	20 AM3, AM8	21	22 AM11, AM12, AM13, AM14, AM15, AM16, AM17
23	24	25 AM1, AM2, AM9, AM10	26 AM3, AM8	27 AM11, AM12, AM13, AM14, AM15, AM16, AM17	28	29 AM1, AM2, AM9
30	31 AM10#					

Note: Impact monitoring for AM8 was suspended on 4 and 8 January 2011 due to the termination of power supply by original house owner and was resumed on 14 January 2011.

24-hr TSP impact monitoring for AM10 was postposed from 29 January 2011 to 31 January 2011 due to power supply shortage

* Limit level exceedance was recorded at AM3 on 15 Jan 2011 for repeat 24-hr TSP impact monitoring.

Tentative Construction Dust (24-hr TSP) Impact Monitoring Schedule - February 2011

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

Feb-2011						
Sunday	**Monday**	**Tuesday**	**Wednesday**	**Thursday**	**Friday**	**Saturday**
		1 AM1,AM2, AM9, AM10 AM3, AM8	2 AM11, AM12, AM13, AM14, AM15, AM16, AM17	3	4	5
6	7 AM1,AM2, AM9, AM10 AM3, AM8	8 AM11, AM12, AM13, AM14, AM15, AM16, AM17	9	10 AM1, AM2, AM4, AM9, AM10	11 AM3, AM5, AM6, AM7, AM8	12
13	14 AM11, AM12, AM13, AM14, AM15, AM16, AM17	15	16 AM1, AM2, AM4, AM9, AM10	17 AM3, AM5, AM6, AM7, AM8	18	19 AM11, AM12, AM13, AM14, AM15, AM16, AM17
20	21	22 AM1, AM2, AM4, AM9, AM10	23 AM3, AM5, AM6, AM7, AM8	24	25 AM11, AM12, AM13, AM14, AM15, AM16, AM17	26
27	28 AM1, AM2, AM4, AM9, AM10					

Monitoring Schedule in the Reporting Month (01 Jan 2011 - 31 Jan 2011)

	CN1	CN2	CN3	CN4	CN5	CN6	CN15	CN16	CN18	CN19	CN21	CN22	CN23	CN24	CN25	CN26	CN27
Date	No. 142 Mai Po San Tsuen	Mai Po San Tsuen Village Hse	Yau Tam Mei Village House	Yau Tam Mei Village House	Kong Tai Road Village House	Kong Tai Road Village House	No. 305B - Sheung Tsuen San Tsuen Village	DD 114 LOT 1405 Sheung Tsuen	Sau Shan House	Sun Fung Centre	Po Leung Kuk Tong Nai Kan College	Block I, Lai Chi Kok Reception Centre	HKIVE Haking Wong Waterfront Annex	St. Andrew Primary School	St. Mary's Church Mok Hing Yiu College	Ying Wah College	Cheong Shun House, Nam Cheong Estate
01-Jan-11																	
02-Jan-11																	
03-Jan-11	√							√	√	√							
04-Jan-11		√	√	√	√	√											
05-Jan-11													√			√	
06-Jan-11											√	√		√	√		√
07-Jan-11							√										
08-Jan-11																	
09-Jan-11																	
10-Jan-11	√							√	√	√							
11-Jan-11			√	√	√	√											
12-Jan-11		√					√					√					√
13-Jan-11											√				√		
14-Jan-11													√	√		√	
15-Jan-11																	
16-Jan-11																	
17-Jan-11	√							√	√	√							
18-Jan-11		√	√	√	√	√	√					√					√
19-Jan-11													√			√	
20-Jan-11											√						
21-Jan-11														√	√		
22-Jan-11																	
23-Jan-11																	
24-Jan-11	√							√	√	√		√		√			√
25-Jan-11		√		√	√	√											
26-Jan-11			√				√				√		√			√	
27-Jan-11															√		
28-Jan-11																	
29-Jan-11																	
30-Jan-11																	
31-Jan-11																	

Monitoring Schedule in the Reporting Month (01 Jan 2011 - 31 Jan 2011)

	CN28	CN29	CN30	CN31	CN32	CN33	CN34
Date	Tower 6, Harbour Green	Yaumati Catholic Primary School	Man Cheong Street Refuse Collection Point	Tower 6, Sorrento	Tower 3, The Waterfront	Star Tower, The Arch	The Victoria Towers
01-Jan-11							
02-Jan-11							
03-Jan-11							
04-Jan-11							
05-Jan-11		√	√	√	√	√	√
06-Jan-11	√						
07-Jan-11							
08-Jan-11							
09-Jan-11							
10-Jan-11							
11-Jan-11			√	√			
12-Jan-11	√	√			√	√	√
13-Jan-11							
14-Jan-11							
15-Jan-11							
16-Jan-11							
17-Jan-11			√				
18-Jan-11	√	√					
19-Jan-11							
20-Jan-11					√	√	√
21-Jan-11				√			
22-Jan-11							
23-Jan-11							
24-Jan-11							
25-Jan-11		√					
26-Jan-11							
27-Jan-11	√				√	√	√
28-Jan-11			√	√			
29-Jan-11							
30-Jan-11							
31-Jan-11							

Monitoring Schedule in the Next Reporting Month (01 Feb 2011 - 28 Feb 2011)

	CN1	CN2	CN3	CN4	CN5	CN6	CN7	CN8	CN9	CN10	CN11	CN12	CN13	CN14	CN15	CN16
Date	No. 142 Mai Po San Tsuen	Mai Po San Tsuen Village Hse	Yau Tam Mei Village House	Yau Tam Mei Village House	Kong Tai Road Village House	Kong Tai Road Village House	House 93, Seasons Villas	DD110 LOT 482, Wang Toi Shan	Leung Uk Tsuen Village House	Leung Uk Tsuen Squats	Leung Uk Tsuen Village House	630 Sheung Tsuen	No. 489H Tse Uk Tsuen	Tse Uk Tsuen	No. 305B - Sheung Tsuen San Tsuen Village	DD 114 LOT 1405 Sheung Tsuen
01-Feb-11	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
02-Feb-11																
03-Feb-11																
04-Feb-11																
05-Feb-11																
06-Feb-11																
07-Feb-11																
08-Feb-11	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
09-Feb-11																
10-Feb-11																
11-Feb-11																
12-Feb-11																
13-Feb-11																
14-Feb-11																
15-Feb-11	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
16-Feb-11																
17-Feb-11																
18-Feb-11																
19-Feb-11																
20-Feb-11																
21-Feb-11																
22-Feb-11	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
23-Feb-11																
24-Feb-11																
25-Feb-11																
26-Feb-11																
27-Feb-11																
28-Feb-11																

Monitoring Schedule in the Next Reporting Month (01 Feb 2011 - 28 Feb 2011)

	CN18	CN19	CN20	CN21	CN22	CN23	CN24	CN25	CN26	CN27	CN28	CN29	CN30	CN31	CN32	CN33	CN34
Date	Sau Shan House	Sun Fung Centre	VTC Kwai Chung	Po Leung Kuk Tong Nai Kan College	Block I, Lai Chi Kok Reception Centre	HKIVE Haking Wong Waterfront Annex	St. Andrew Primary School	St. Mary's Church Mok Hing Yiu College	Ying Wah College	Cheong Shun House, Nam Cheong Estate	Tower 6, Harbour Green	Yaumati Catholic Primary School	Man Cheong Street Refuse Collection Point	Tower 6, Sorrento	Tower 3, The Waterfront	Star Tower, The Arch	The Victoria Towers
01-Feb-11	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
02-Feb-11																	
03-Feb-11																	
04-Feb-11																	
05-Feb-11																	
06-Feb-11																	
07-Feb-11																	
08-Feb-11	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
09-Feb-11																	
10-Feb-11																	
11-Feb-11																	
12-Feb-11																	
13-Feb-11																	
14-Feb-11																	
15-Feb-11	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
16-Feb-11																	
17-Feb-11																	
18-Feb-11																	
19-Feb-11																	
20-Feb-11																	
21-Feb-11																	
22-Feb-11	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
23-Feb-11																	
24-Feb-11																	
25-Feb-11																	
26-Feb-11																	
27-Feb-11																	
28-Feb-11																	

Appendix E Ecological Monitoring Schedule

Works Area	Survey Site	Date of Survey in January 2011	Tentative Date of Survey in February 2011
MPV	MPV-1	21 January 2011	15 February 2011
Access road leading to TPP	TPP-1	14 January 2011	24 February 2011
Access road leading to TPP	TPP-2	14 January 2011	24 February 2011
Access road leading to TPP	TPP-3	14 January 2011	24 February 2011
Access road leading to SSS / ERS	SSS-1	-	24 February 2011
Access road leading to SSS / ERS	SSS-2b	-	24 February 2011
Access road leading to SSS / ERS	SSS-3	-	22 February 2011
TUW	TUW-1	-	22 February 2011
TUW	TUW-2 (grouped with PHV-1 due to overlapping of survey area	-	22 February 2011
PHV	PHV-1 (grouped with TUW-2 due to overlapping of survey area)	14 January 2011	22 February 2011

Appendix F

Graphical Plots of Monitoring Results

APPENDIX F: Air Quality Monitoring Results - 24-hour TSP Monitoring

- AM1

Date	24-hour TSP Monitoring Results ($\mu g/m^3$)	Action Level ($\mu g/m^3$)	Limit Level ($\mu g/m^3$)
03-Jan-11	**259.0**	217.3	260.0
07-Jan-11	176.5	217.3	260.0
13-Jan-11	173.5	217.3	260.0
19-Jan-11	133.3	217.3	260.0
25-Jan-11	**238.1**	217.3	260.0
29-Jan-11	**235.4**	217.3	260.0

- AM2

Date	24-hour TSP Monitoring Results ($\mu g/m^3$)	Action Level ($\mu g/m^3$)	Limit Level ($\mu g/m^3$)
03-Jan-11	94.7	179.4	260.0
07-Jan-11	93.9	179.4	260.0
13-Jan-11	51.6	179.4	260.0
19-Jan-11	95.3	179.4	260.0
25-Jan-11	68.1	179.4	260.0
29-Jan-11	84.9	179.4	260.0

- AM3

Date	24-hour TSP Monitoring Results ($\mu g/m^3$)	Action Level ($\mu g/m^3$)	Limit Level ($\mu g/m^3$)
04-Jan-11	131.9	154.7	260.0
08-Jan-11	**206.3**	154.7	260.0
14-Jan-11	**252.3**	154.7	260.0
15-Jan-11*	***275.3***	154.7	260.0
20-Jan-11	**213.5**	154.7	260.0
26-Jan-11	149.9	154.7	260.0

* Limit level exceedance was recorded on 15 Jan 2011 for repeat 24-hr TSP impact monitoring.

- AM8

Date	24-hour TSP Monitoring Results ($\mu g/m^3$)	Action Level ($\mu g/m^3$)	Limit Level ($\mu g/m^3$)
14-Jan-11	69.1	158.2	260.0
20-Jan-11	83.1	158.2	260.0
26-Jan-11	99.3	158.2	260.0

- AM9

Date	24-hour TSP Monitoring Results ($\mu g/m^3$)	Action Level ($\mu g/m^3$)	Limit Level ($\mu g/m^3$)
03-Jan-11	121.2	171.2	260.0
07-Jan-11	96.8	171.2	260.0
13-Jan-11	144.2	171.2	260.0
19-Jan-11	80.1	171.2	260.0
25-Jan-11	**202.4**	171.2	260.0
29-Jan-11	77.7	171.2	260.0

- AM10

Date	24-hour TSP Monitoring Results ($\mu g/m^3$)	Action Level ($\mu g/m^3$)	Limit Level ($\mu g/m^3$)
03-Jan-11	68.7	174.8	260.0
07-Jan-11	118.4	174.8	260.0
13-Jan-11	71.6	174.8	260.0
19-Jan-11	112.1	174.8	260.0
25-Jan-11	102.5	174.8	260.0
31-Jan-11	70.2	174.8	260.0

- AM11

Date	24-hour TSP Monitoring Results ($\mu g/m^3$)	Action Level ($\mu g/m^3$)	Limit Level ($\mu g/m^3$)
05-Jan-11	57.3	160.3	260.0
11-Jan-11	92.0	160.3	260.0
17-Jan-11	76.7	160.3	260.0
22-Jan-11	159.3	160.3	260.0
27-Jan-11	108.5	160.3	260.0

- AM12

Date	24-hour TSP Monitoring Results ($\mu g/m^3$)	Action Level ($\mu g/m^3$)	Limit Level ($\mu g/m^3$)
05-Jan-11	95.7	162.5	260.0
11-Jan-11	95.2	162.5	260.0
17-Jan-11	134.1	162.5	260.0
22-Jan-11	116.4	162.5	260.0
27-Jan-11	85.5	162.5	260.0

Remark:

- Impact monitoring for AM8 was suspended on 4 and 8 January 2011 due to the termination of power supply by original house owner and it was resumed on 14 January 2011.
- Bold value indicated an Action level exceedance
- Bold & Italic value indicated an Limit level exceedance

APPENDIX F: Air Quality Monitoring Results - 24-hour TSP Monitoring

- AM13

Date	24-hour TSP Monitoring Results ($\mu g/m^3$)	Action Level ($\mu g/m^3$)	Limit Level ($\mu g/m^3$)
05-Jan-11	123.4	180.3	260.0
11-Jan-11	109.1	180.3	260.0
17-Jan-11	165.8	180.3	260.0
22-Jan-11	145.4	180.3	260.0
27-Jan-11	95.4	180.3	260.0

- AM14

Date	24-hour TSP Monitoring Results ($\mu g/m^3$)	Action Level ($\mu g/m^3$)	Limit Level ($\mu g/m^3$)
05-Jan-11	120.7	158.2	260.0
11-Jan-11	132.6	158.2	260.0
17-Jan-11	138.9	158.2	260.0
22-Jan-11	136.0	158.2	260.0
27-Jan-11	90.6	158.2	260.0

- AM15

Date	24-hour TSP Monitoring Results ($\mu g/m^3$)	Action Level ($\mu g/m^3$)	Limit Level ($\mu g/m^3$)
05-Jan-11	133.0	168.8	260.0
11-Jan-11	162.4	168.8	260.0
17-Jan-11	164.2	168.8	260.0
22-Jan-11	159.1	168.8	260.0
27-Jan-11	113.1	168.8	260.0

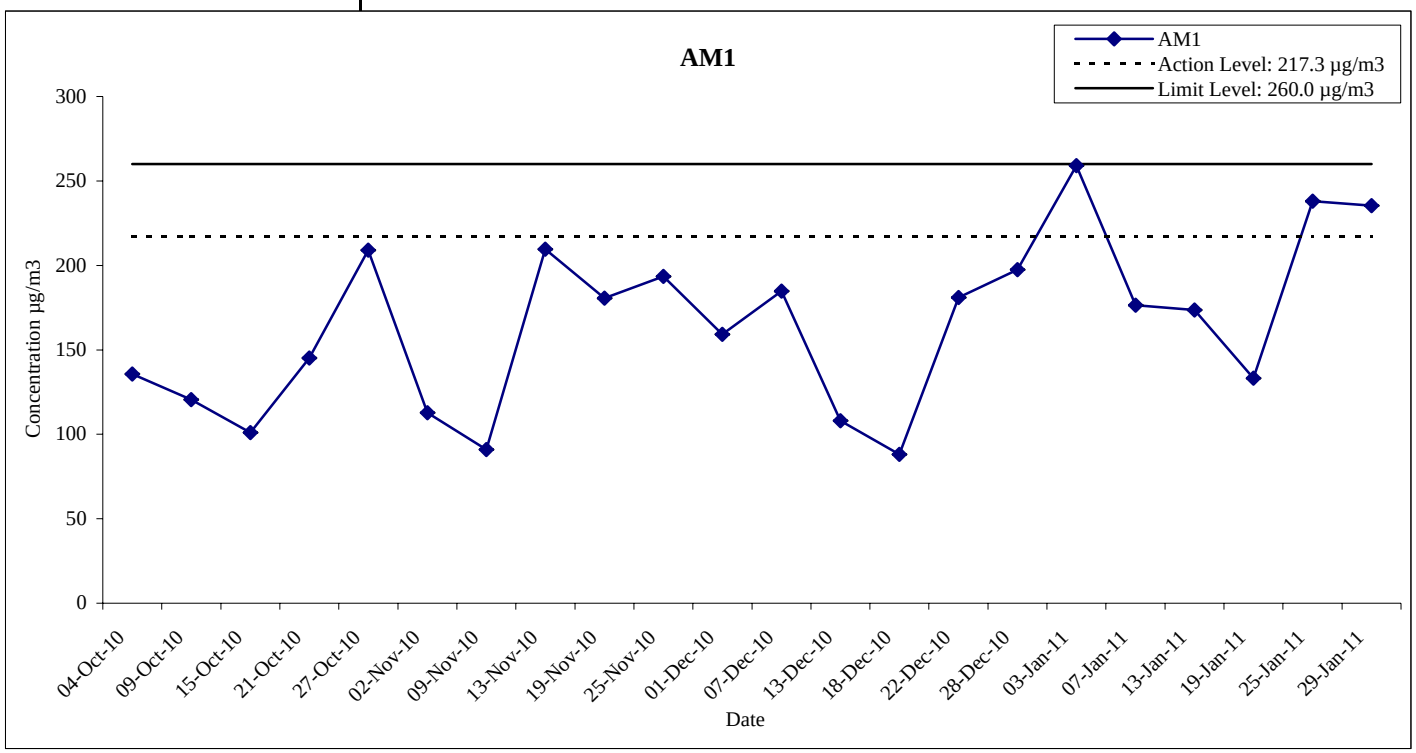
- AM16

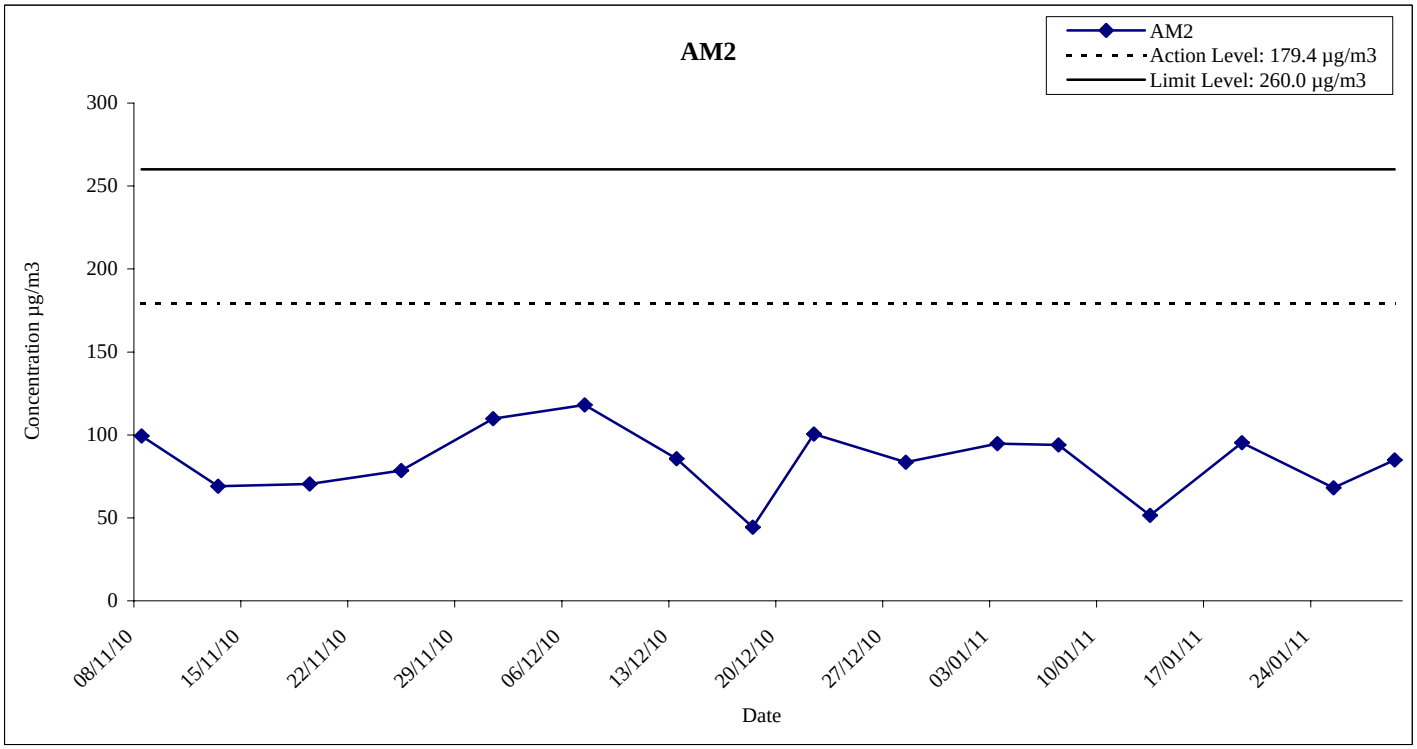
Date	24-hour TSP Monitoring Results ($\mu g/m^3$)	Action Level ($\mu g/m^3$)	Limit Level ($\mu g/m^3$)
05-Jan-11	123.1	155.9	260.0
11-Jan-11	145.1	155.9	260.0
17-Jan-11	84.5	155.9	260.0
22-Jan-11	154.9	155.9	260.0
27-Jan-11	66.9	155.9	260.0

- AM17

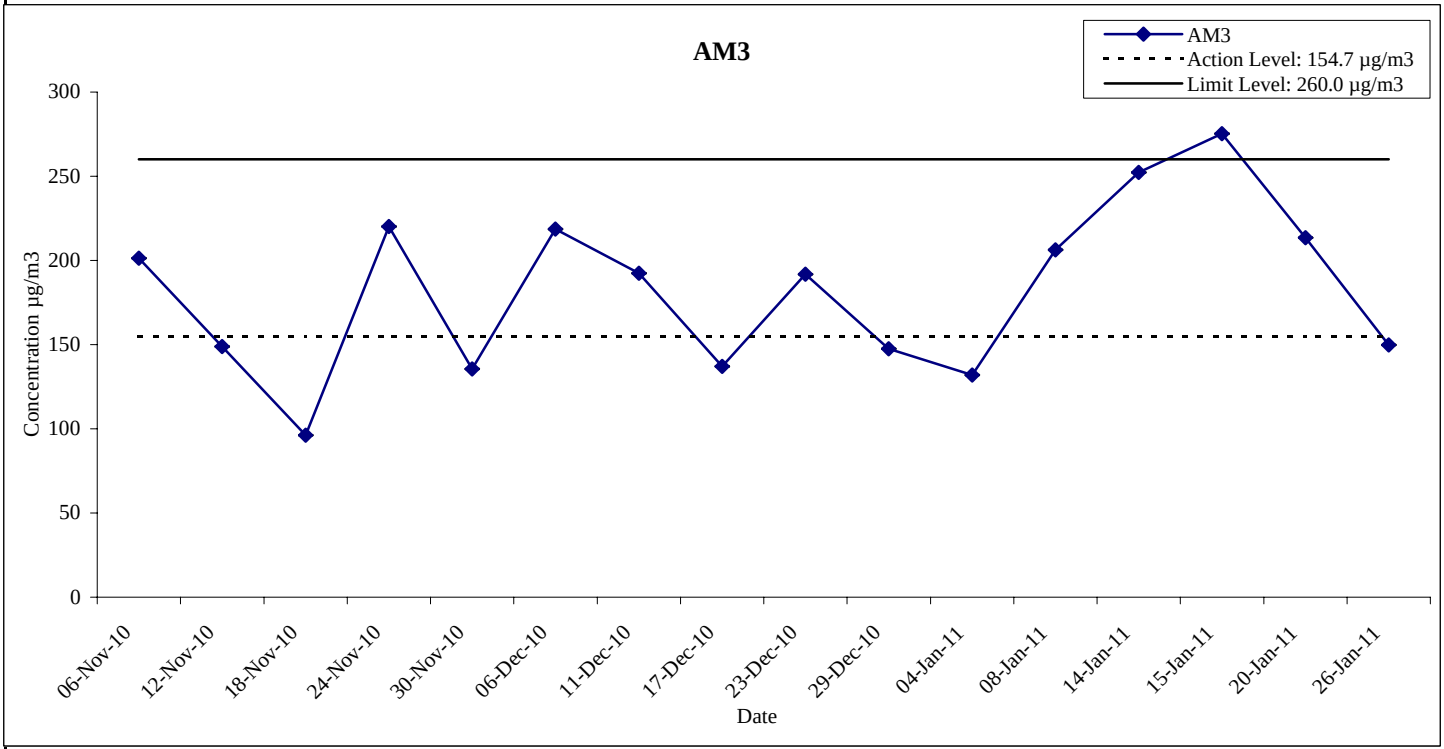
Date	24-hour TSP Monitoring Results ($\mu g/m^3$)	Action Level ($\mu g/m^3$)	Limit Level ($\mu g/m^3$)
05-Jan-11	137.3	179.3	260.0
11-Jan-11	140.0	179.3	260.0
17-Jan-11	177.5	179.3	260.0
22-Jan-11	149.5	179.3	260.0
27-Jan-11	104.6	179.3	260.0

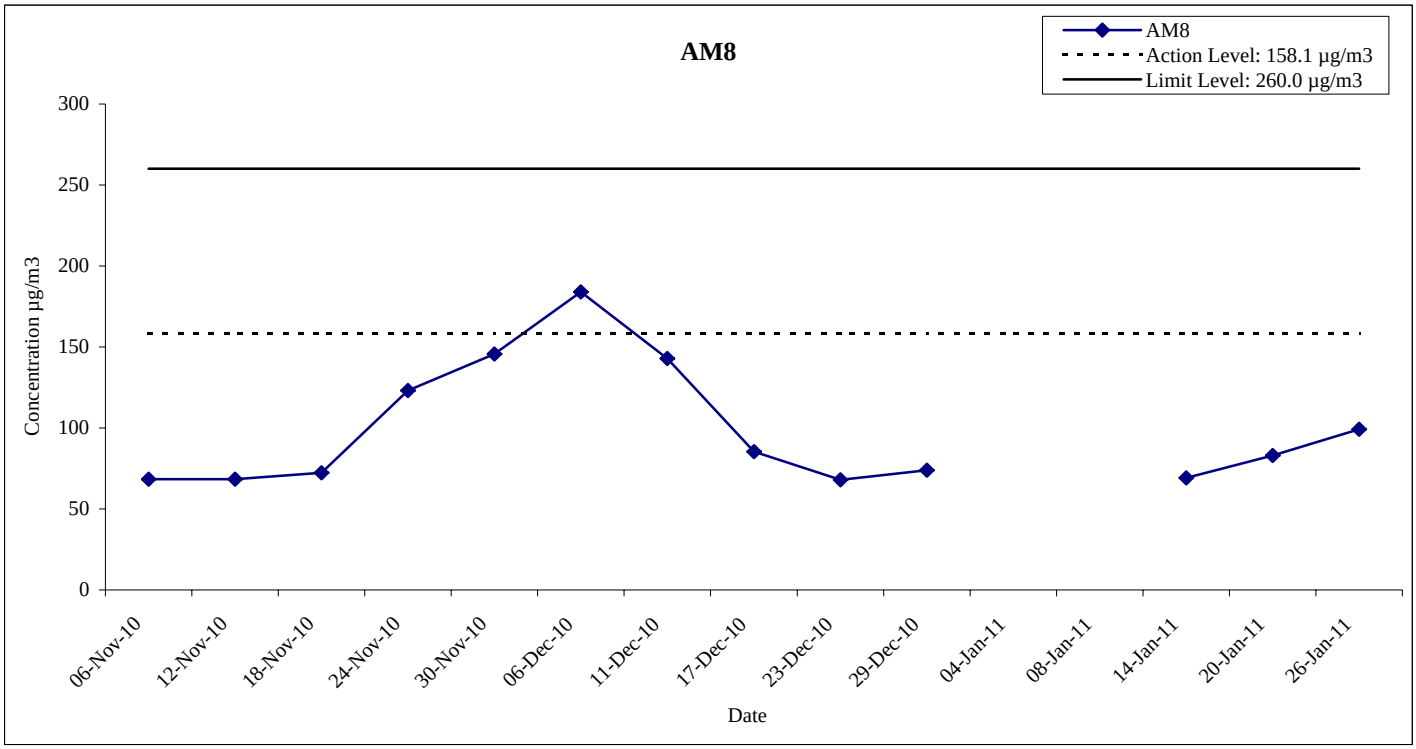
Remark: Bold value indicated an Action level exceedance
Bold & Italic value indicated an Limit level exceedance





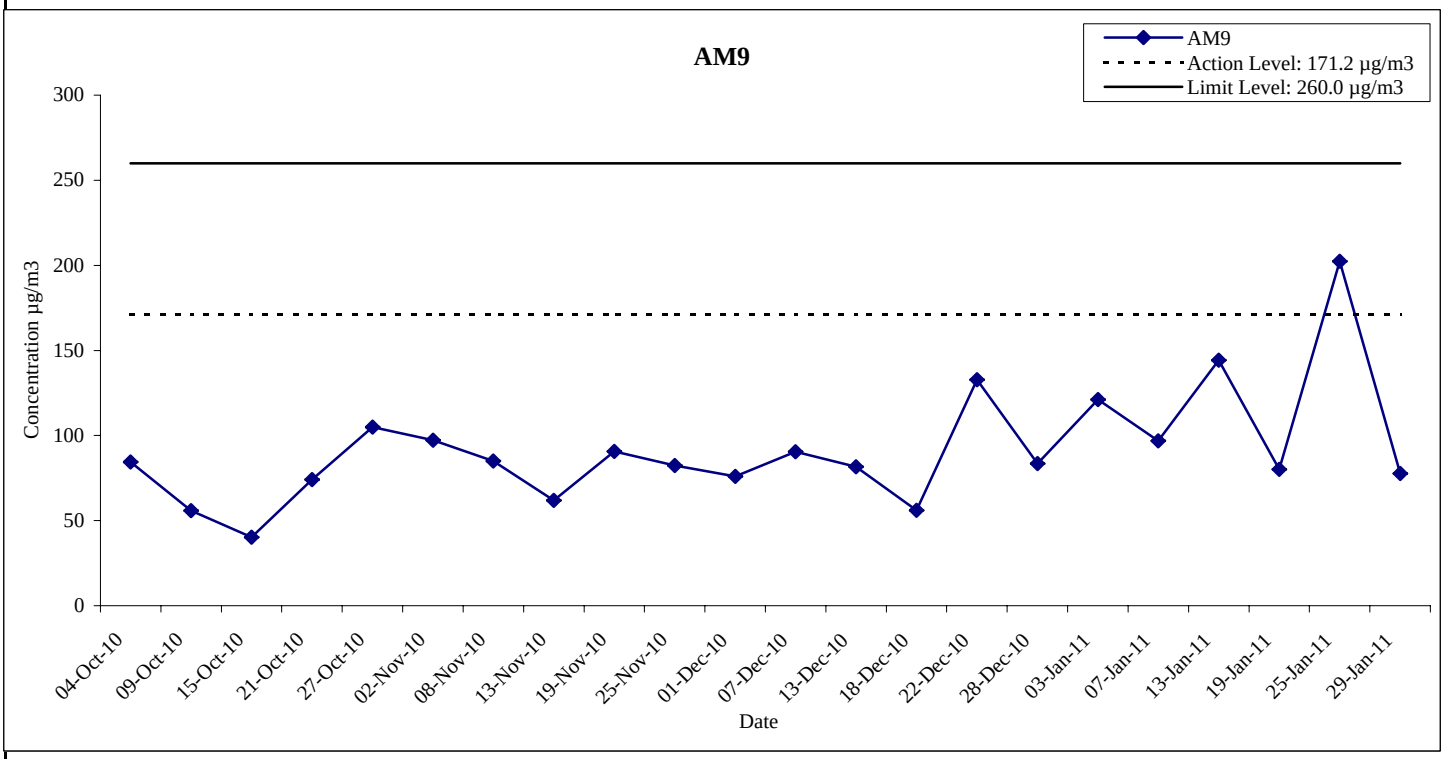
MTR	Hong Kong Section of Guangzhou-Shenzhen-Hong Kong Express Rail Link **Graphical Presentation of 24-hour TSP** **Monitoring Results for Location AM1 and AM2**	**Date**	**2011**
		APPENDIX	**F**

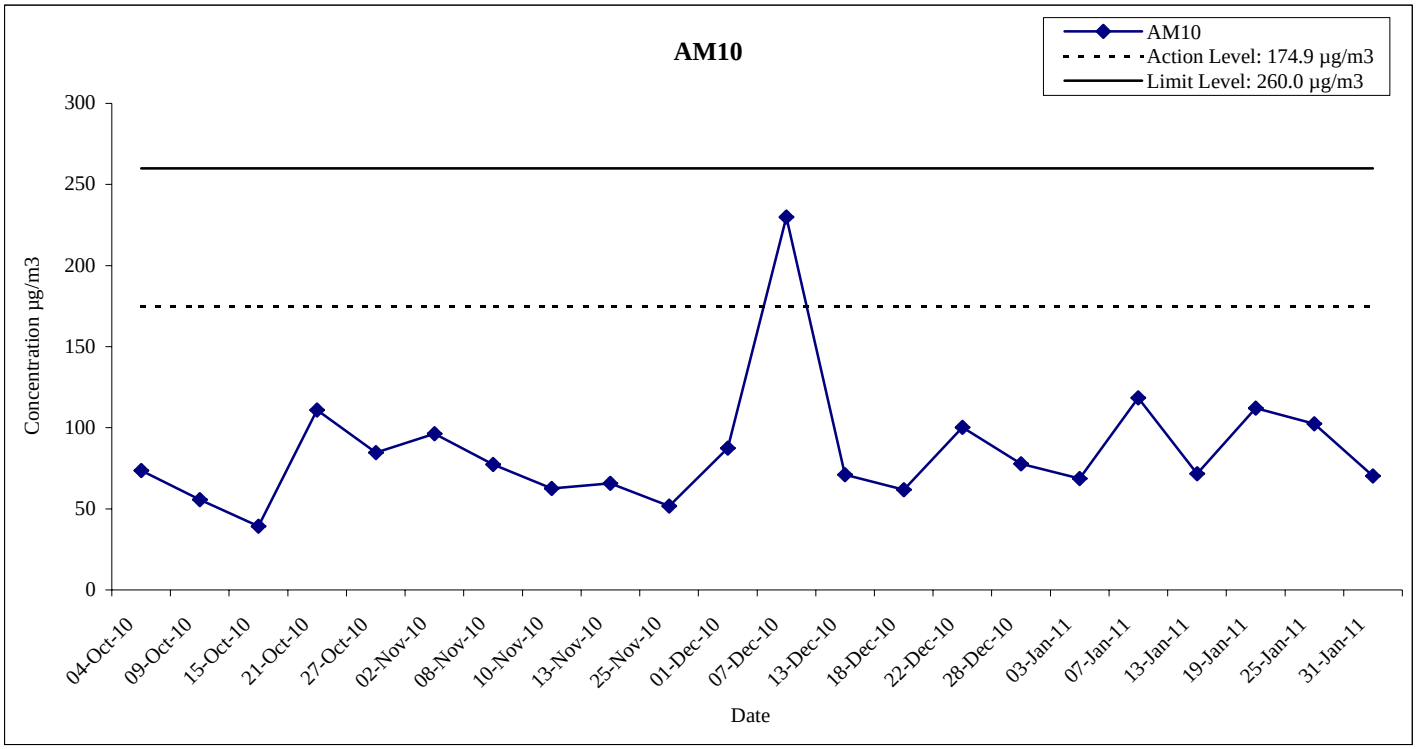




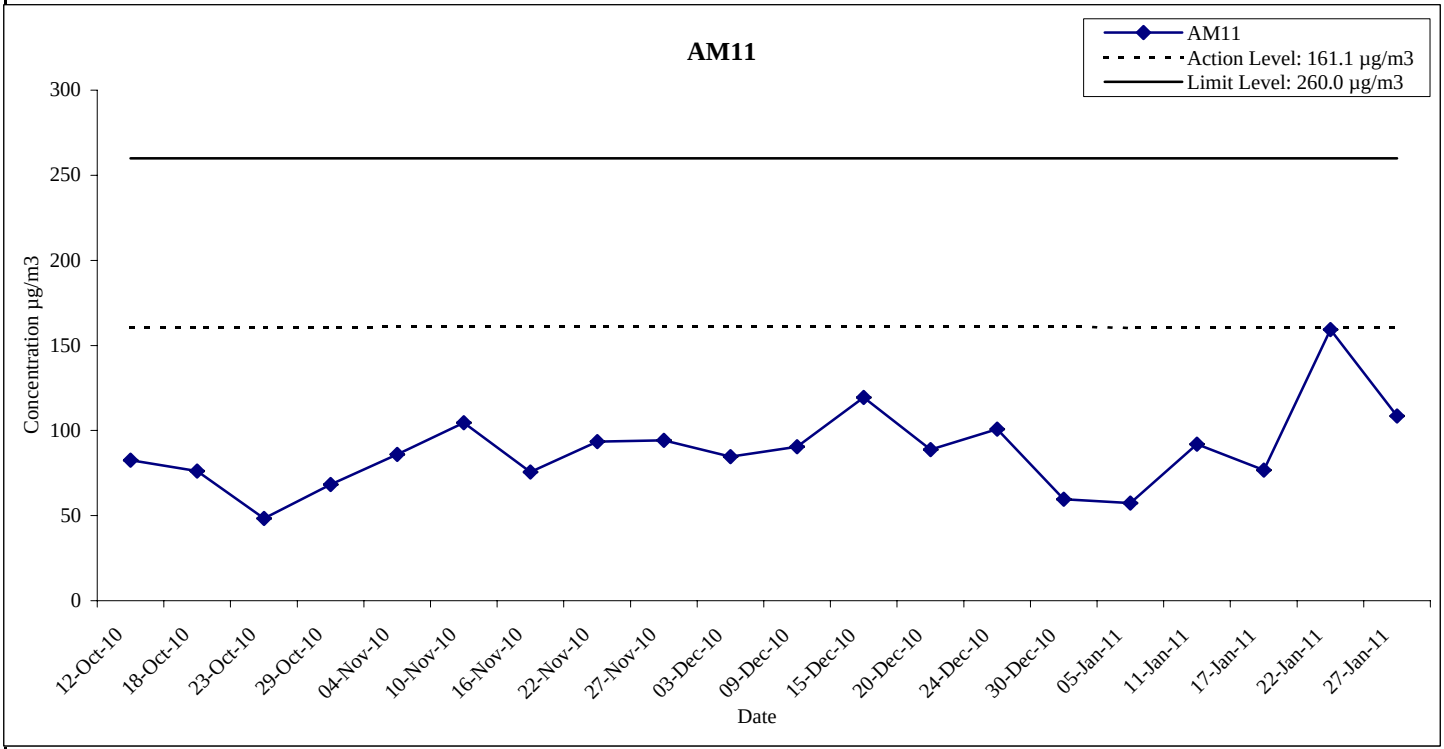
Remarks:
Impact monitoring for AM8 was suspended on 4 and 8 January 2011 due to the termination of power supply by original house owner and it was resumed on 14 January 2011.

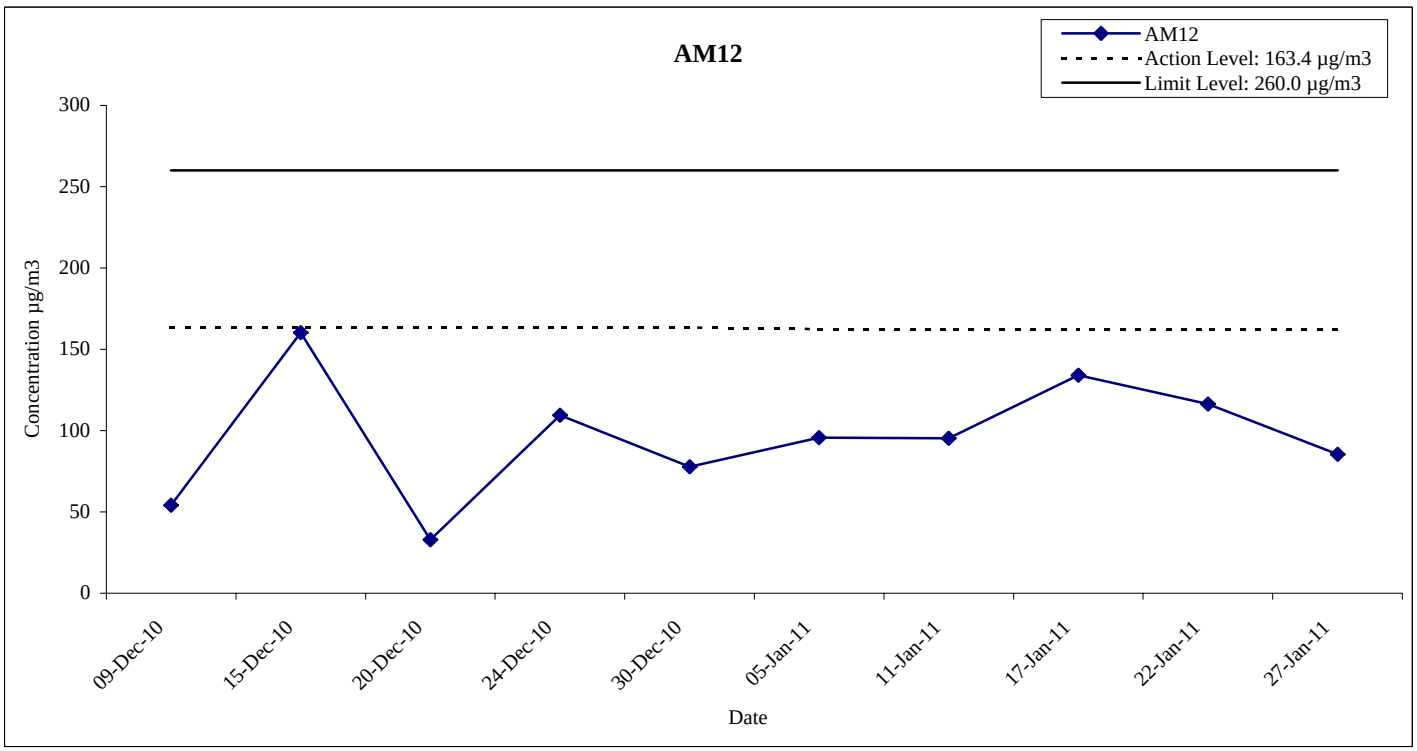
MTR	Hong Kong Section of Guangzhou-Shenzhen-Hong Kong Express Rail Link **Graphical Presentation of 24-hour TSP** **Monitoring Results for Location AM3 and AM8**	**Date**	**2011**
		APPENDIX	**F**



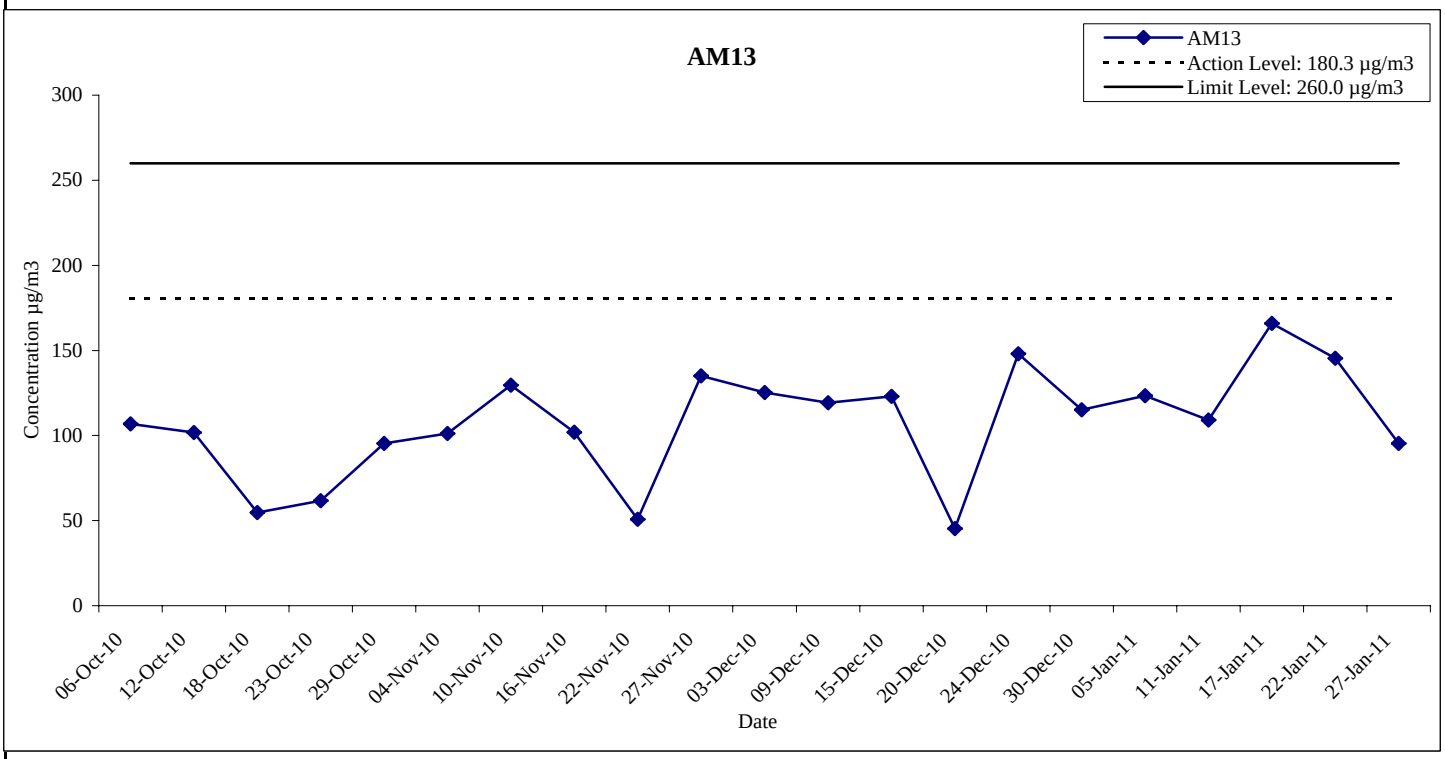


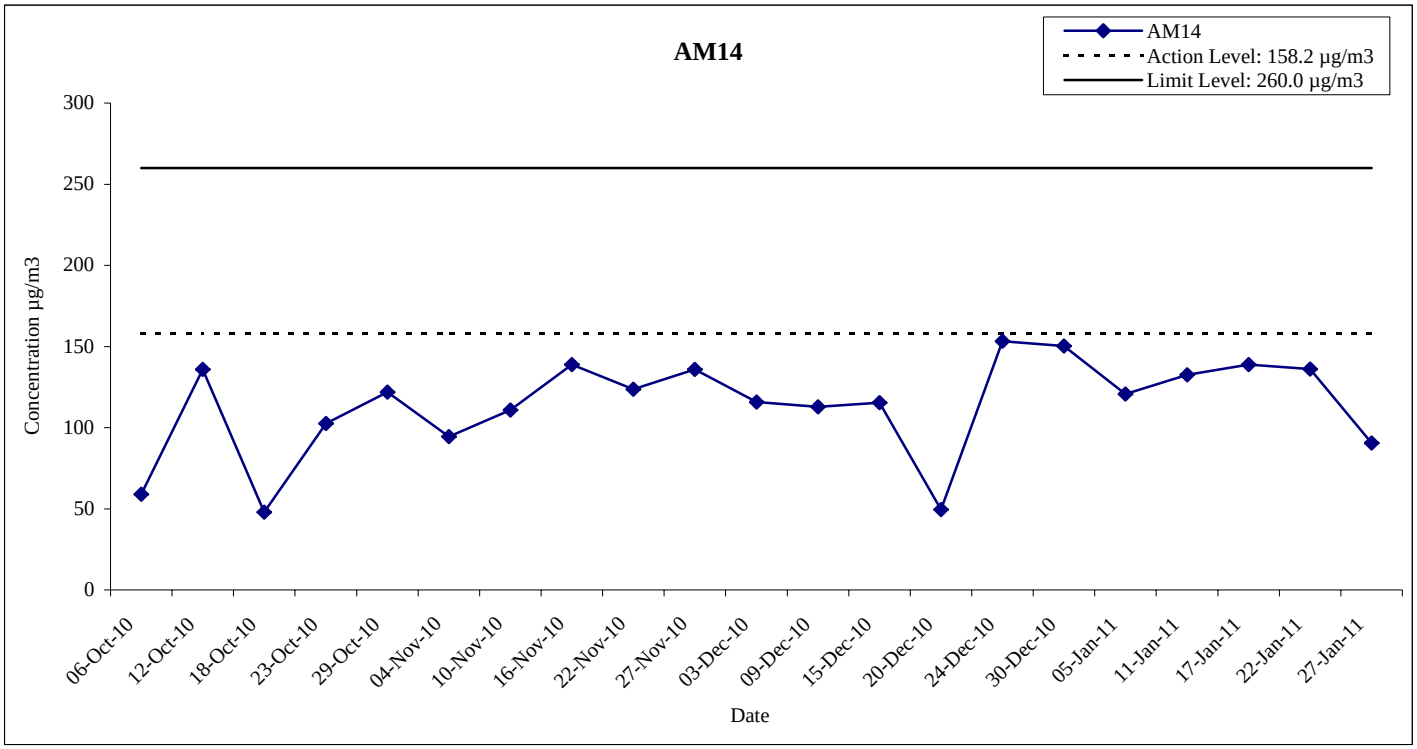
MTR	Hong Kong Section of Guangzhou-Shenzhen-Hong Kong Express Rail Link **Graphical Presentation of 24-hour TSP** **Monitoring Results for Location AM9 and AM10**	**Date**	**2011**
		APPENDIX	**F**



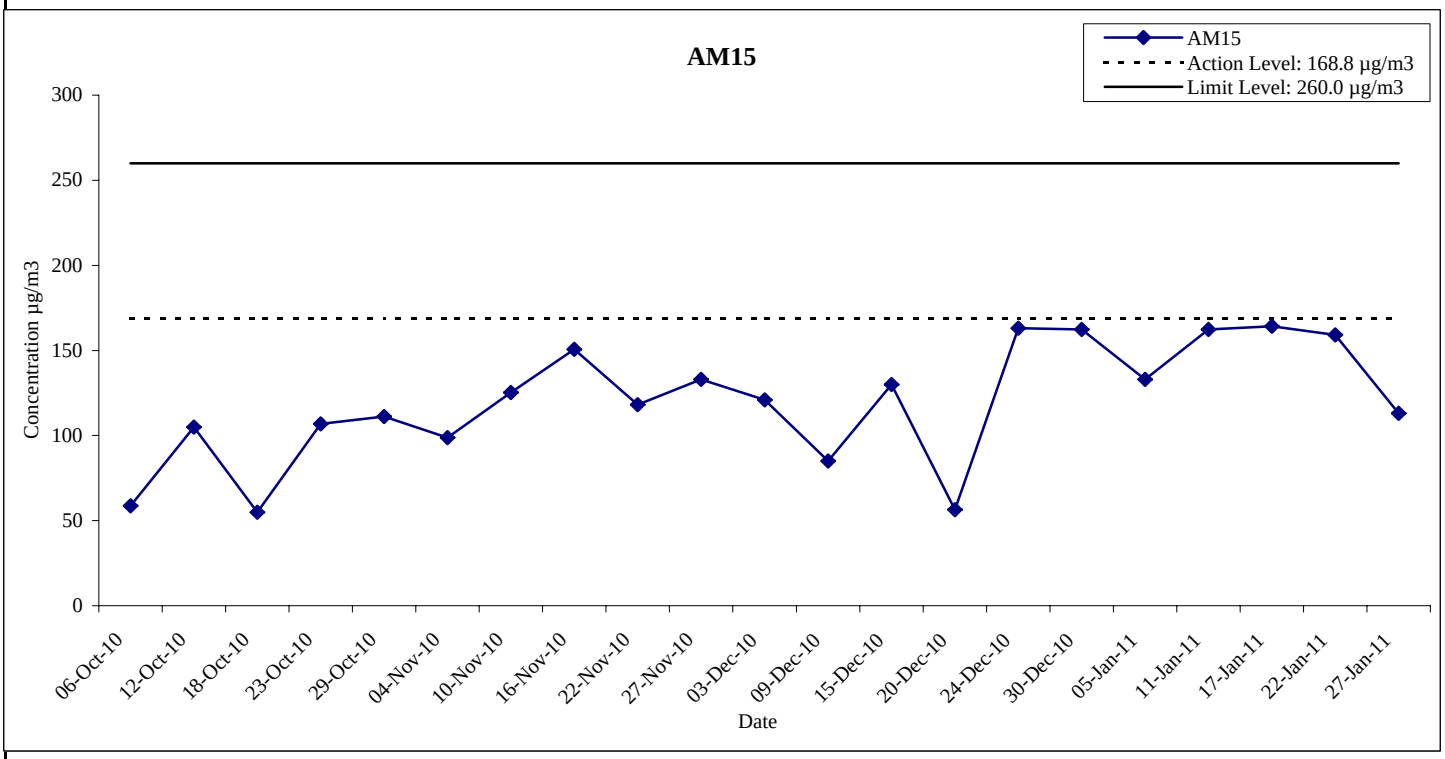


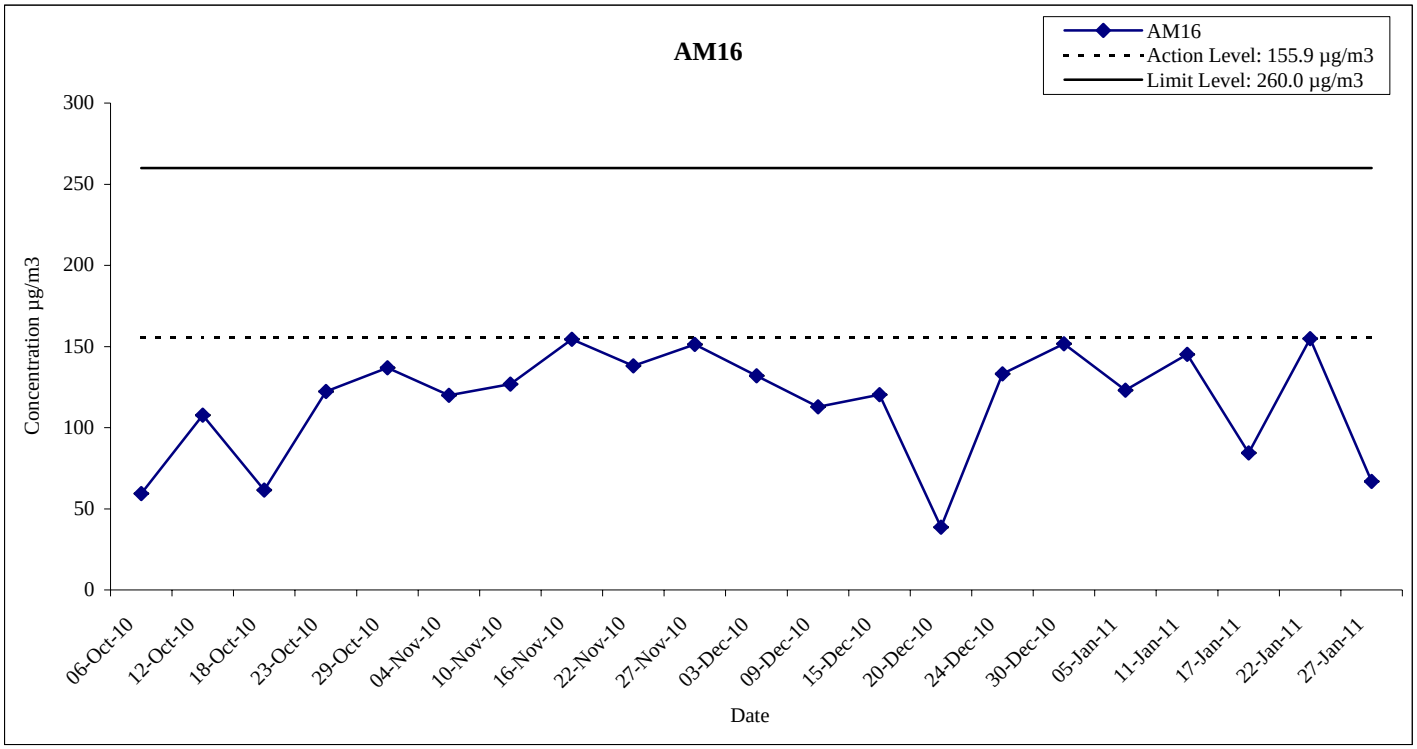
MTR	Hong Kong Section of Guangzhou-Shenzhen-Hong Kong Express Rail Link **Graphical Presentation of 24-hour TSP** **Monitoring Results for Location AM11 and AM12**	**Date**	**2011**
		APPENDIX	**F**



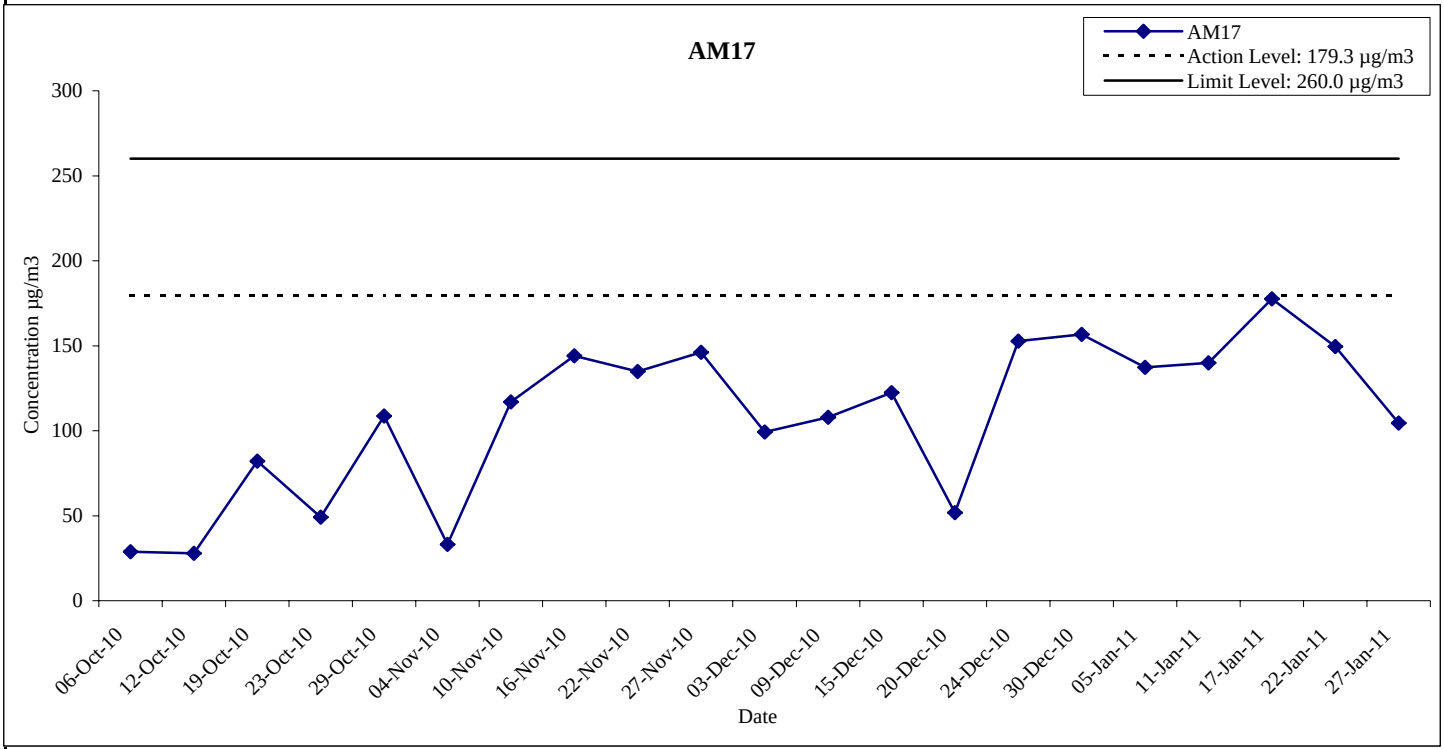


MTR	Hong Kong Section of Guangzhou-Shenzhen-Hong Kong Express Rail Link **Graphical Presentation of 24-hour TSP** **Monitoring Results for Location AM13 and AM14**	**Date**	**2011**
		APPENDIX	**F**





MTR	Hong Kong Section of Guangzhou-Shenzhen-Hong Kong Express Rail Link **Graphical Presentation of 24-hour TSP** **Monitoring Results for Location AM15 and AM16**	**Date**	**2011**
		APPENDIX	**F**



MTR	Hong Kong Section of Guangzhou-Shenzhen-Hong Kong Express Rail Link **Graphical Presentation of 24-hour TSP** **Monitoring Result for Location AM17**	**Date**	**2011**
		APPENDIX	**F**

APPENDIX F: Noise Monitoring Results

- CN1

Date	Noise Monitoring Results	Limit Level	Exceedance?
	Leq, dB(A)	Leq, dB(A)	
3-Jan-11	68	75	N
10-Jan-11	62	75	N
17-Jan-11	66	75	N
24-Jan-11	62	75	N

- CN2

Date	Noise Monitoring Results	Limit Level	Exceedance?
	Leq, dB(A)	Leq, dB(A)	
4-Jan-11	69	75	N
12-Jan-11	67	75	N
18-Jan-11	65	75	N
25-Jan-11	67	75	N

- CN3

Date	Noise Monitoring Results	Limit Level	Exceedance?
	Leq, dB(A)	Leq, dB(A)	
4-Jan-11	72	75	N
11-Jan-11	67	75	N
18-Jan-11	62	75	N
26-Jan-11	47	75	N

- CN4

Date	Noise Monitoring Results	Limit Level	Exceedance?
	Leq, dB(A)	Leq, dB(A)	
4-Jan-11	50	75	N
11-Jan-11	49	75	N
18-Jan-11	49	75	N
25-Jan-11	49	75	N

- CN5

Date	Noise Monitoring Results	Limit Level	Exceedance?
	Leq, dB(A)	Leq, dB(A)	
4-Jan-11	66	75	N
11-Jan-11	65	75	N
18-Jan-11	63	75	N
25-Jan-11	66	75	N

- CN6

Date	Noise Monitoring Results	Limit Level	Exceedance?
	Leq, dB(A)	Leq, dB(A)	
4-Jan-11	60	75	N
11-Jan-11	64	75	N
18-Jan-11	60	75	N
25-Jan-11	56	75	N

- CN15

Date	Noise Monitoring Results	Limit Level	Exceedance?
	Leq, dB(A)	Leq, dB(A)	
7-Jan-11	71	75	N
12-Jan-11	71	75	N
18-Jan-11	68	75	N
26-Jan-11	66	75	N

- CN16

Date	Noise Monitoring Results	Limit Level	Exceedance?
	Leq, dB(A)	Leq, dB(A)	
3-Jan-11	59	75	N
10-Jan-11	55	75	N
17-Jan-11	54	75	N
24-Jan-11	56	75	N

- CN18

Date	Noise Monitoring Results	Limit Level	Exceedance?
	Leq, dB(A)	Leq, dB(A)	
3-Jan-11	69	75	N
10-Jan-11	60	75	N
17-Jan-11	60	75	N
24-Jan-11	60	75	N

- CN19

Date	Noise Monitoring Results	Limit Level	Exceedance?
	Leq, dB(A)	Leq, dB(A)	
3-Jan-11	67	75	N
10-Jan-11	71	75	N
17-Jan-11	74	75	N
24-Jan-11	70	75	N

APPENDIX F: Noise Monitoring Results

- CN21

Date	Noise Monitoring Results	Limit Level	Exceedance?
	Leq, dB(A)	Leq, dB(A)	
6-Jan-11	67	70	N
13-Jan-11	70	70	N
20-Jan-11	69	70	N
26-Jan-11	69	70	N

- CN22

Date	Noise Monitoring Results	Limit Level	Exceedance?
	Leq, dB(A)	Leq, dB(A)	
6-Jan-11	73	75	N
12-Jan-11	73	75	N
18-Jan-11	72	75	N
24-Jan-11	72	75	N

- CN23

Date	Noise Monitoring Results	Limit Level	Exceedance?
	Leq, dB(A)	Leq, dB(A)	
5-Jan-11	68	70	N
14-Jan-11	69	70	N
19-Jan-11	72	70	Y
26-Jan-11	68	70	N

- CN24

Date	Noise Monitoring Results	Limit Level	Exceedance?
	Leq, dB(A)	Leq, dB(A)	
6-Jan-11	68	70	N
14-Jan-11	57	65	N
21-Jan-11	67	70	N
24-Jan-11	69	70	N

- CN25

Date	Noise Monitoring Results	Limit Level	Exceedance?
	Leq, dB(A)	Leq, dB(A)	
6-Jan-11	67	70	N
13-Jan-11	64	70	N
21-Jan-11	70	70	N
27-Jan-11	71	70	Y

- CN26

Date	Noise Monitoring Results	Limit Level	Exceedance?
	Leq, dB(A)	Leq, dB(A)	
5-Jan-11	71	70	Y
14-Jan-11	69	65	Y
19-Jan-11	65	70	N
26-Jan-11	70	70	N

- CN27

Date	Noise Monitoring Results	Limit Level	Exceedance?
	Leq, dB(A)	Leq, dB(A)	
6-Jan-11	65	75	N
12-Jan-11	66	75	N
18-Jan-11	66	75	N
24-Jan-11	65	75	N

- CN28

Date	Noise Monitoring Results	Limit Level	Exceedance?
	Leq, dB(A)	Leq, dB(A)	
6-Jan-11	72	75	N
12-Jan-11	71	75	N
18-Jan-11	70	75	N
27-Jan-11	70	75	N

- CN29

Date	Noise Monitoring Results	Limit Level	Exceedance?
	Leq, dB(A)	Leq, dB(A)	
5-Jan-11	71	70	Y
12-Jan-11	72	70	Y
18-Jan-11	72	70	Y
25-Jan-11	69	70	N

- CN30

Date	Noise Monitoring Results	Limit Level	Exceedance?
	Leq, dB(A)	Leq, dB(A)	
5-Jan-11	69	75	N
11-Jan-11	70	75	N
17-Jan-11	70	75	N
28-Jan-11	71	75	N

APPENDIX F: Noise Monitoring Results

- CN31

Date	Noise Monitoring Results	Limit Level	Exceedance?
	Leq, dB(A)	Leq, dB(A)	
5-Jan-11	75	75	N
11-Jan-11	74	75	N
21-Jan-11	73	75	N
28-Jan-11	72	75	N

- CN32

Date	Noise Monitoring Results	Limit Level	Exceedance?
	Leq, dB(A)	Leq, dB(A)	
5-Jan-11	80	75	Y
12-Jan-11	76	75	Y
20-Jan-11	73	75	N
27-Jan-11	78	75	Y

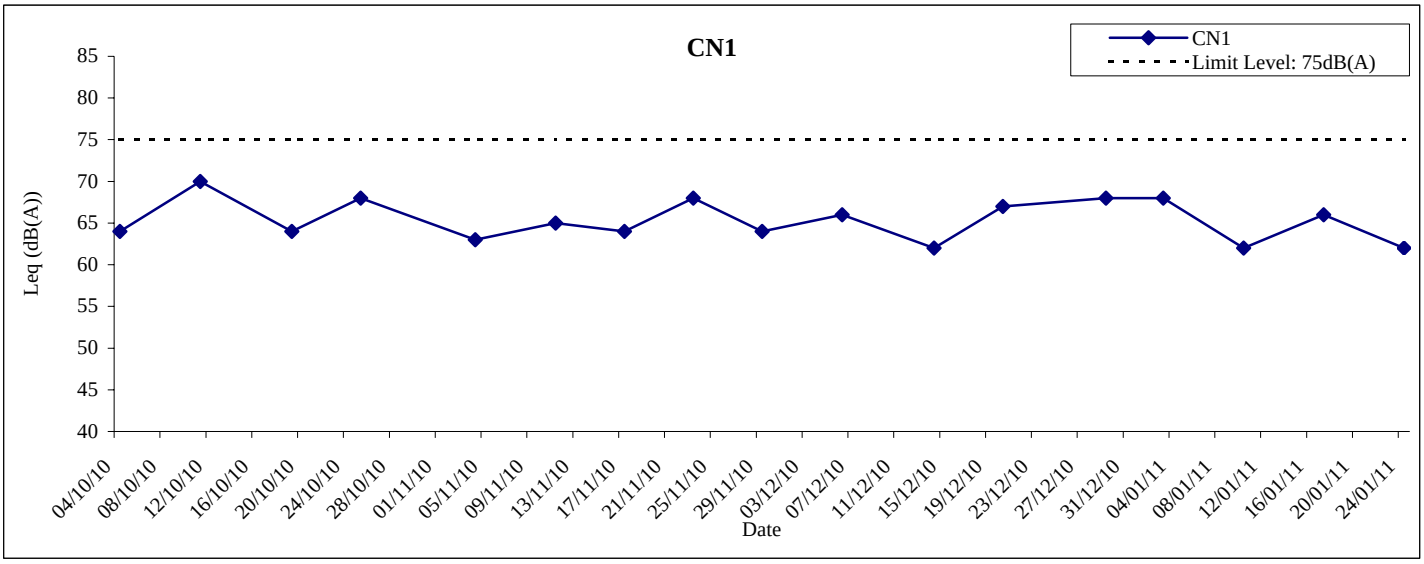
- CN33

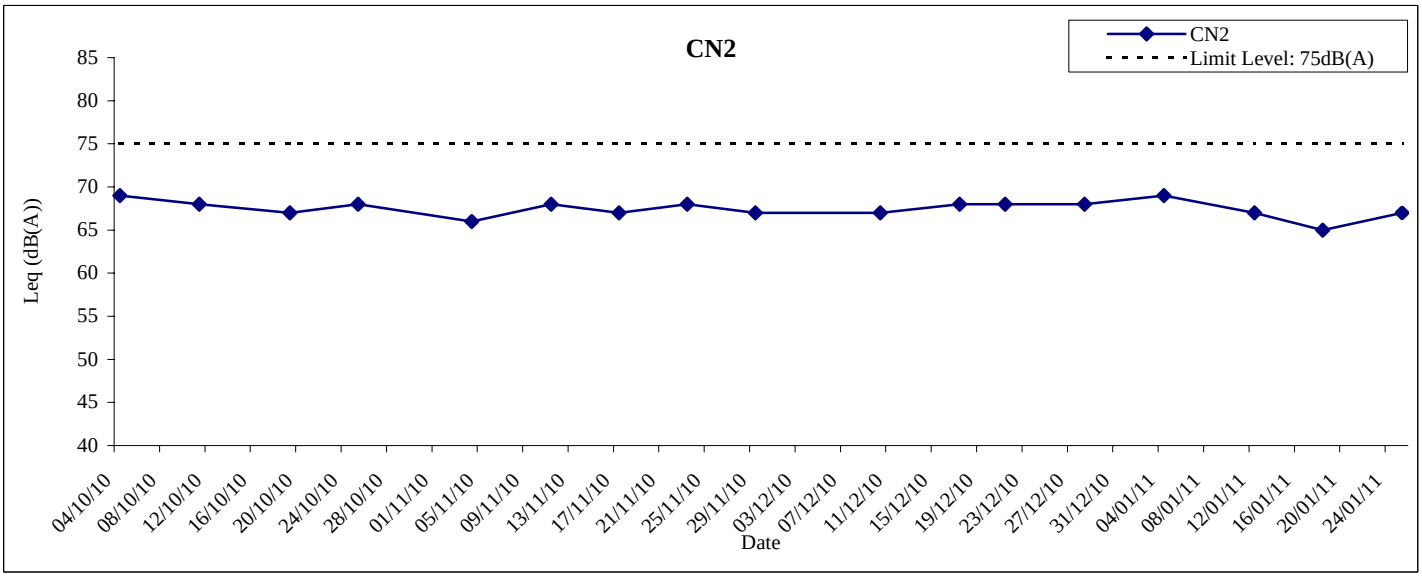
Date	Noise Monitoring Results	Limit Level	Exceedance?
	Leq, dB(A)	Leq, dB(A)	
5-Jan-11	78	75	Y
12-Jan-11	75	75	N
20-Jan-11	72	75	N
27-Jan-11	75	75	N

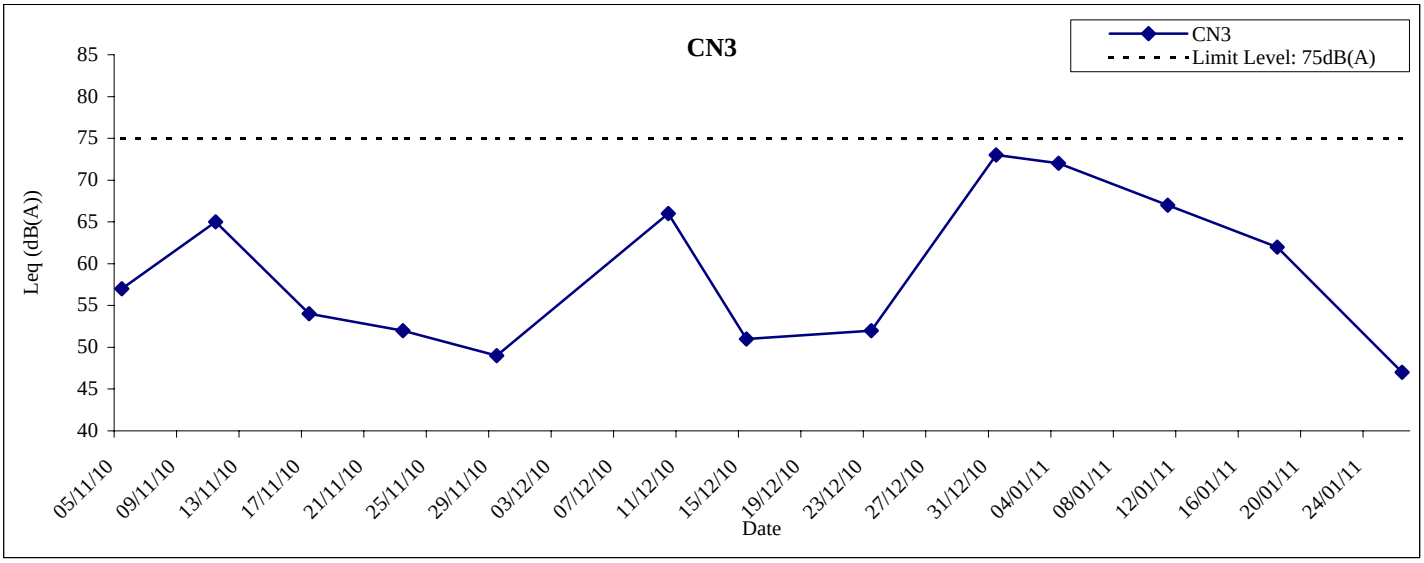
- CN34

Date	Noise Monitoring Results	Limit Level	Exceedance?
	Leq, dB(A)	Leq, dB(A)	
5-Jan-11	73	75	N
12-Jan-11	73	75	N
20-Jan-11	72	75	N
27-Jan-11	73	75	N

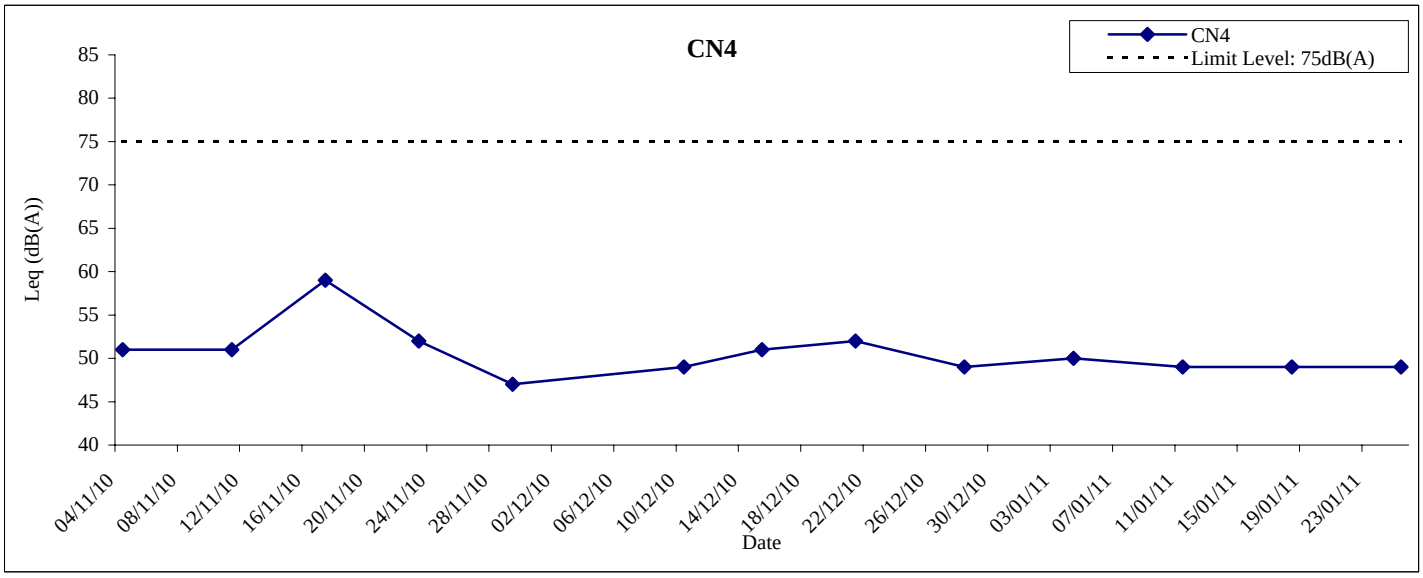
Note: Impact monitoring at Tsuen Wan Lutheran School (CN 17) had been temporarily suspended since December 2010 due to school closure. Monitoring at this location will be resumed subject to confirmation of school operation or other noise sensitive use at CN 17.

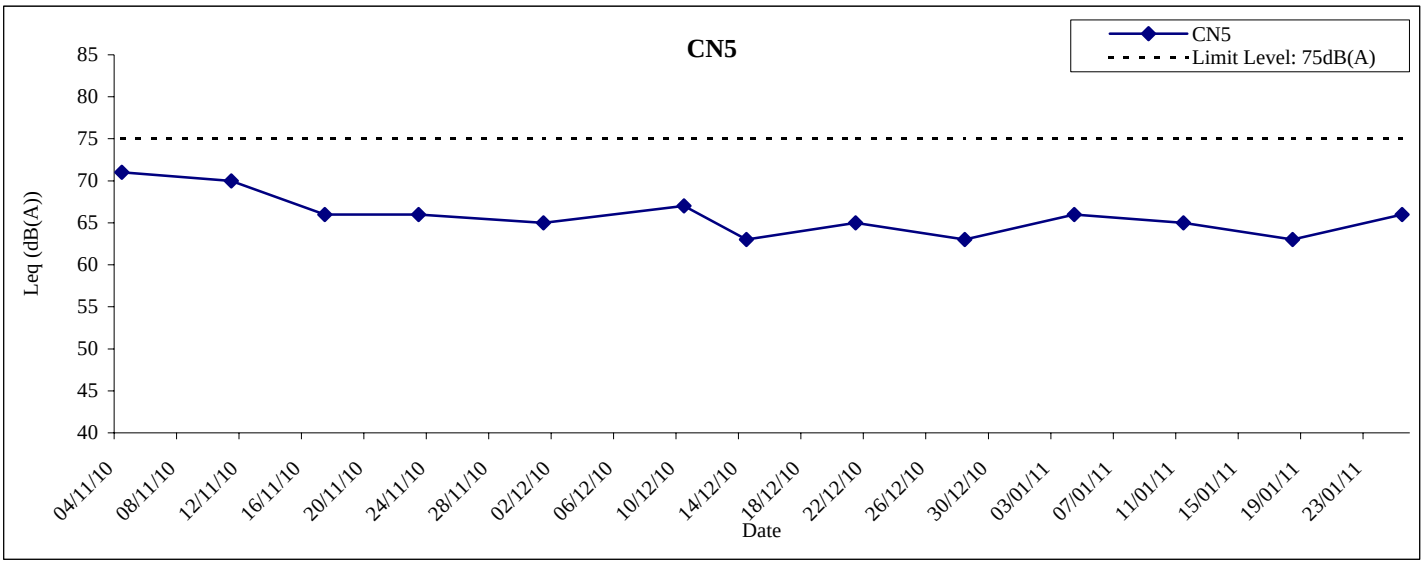


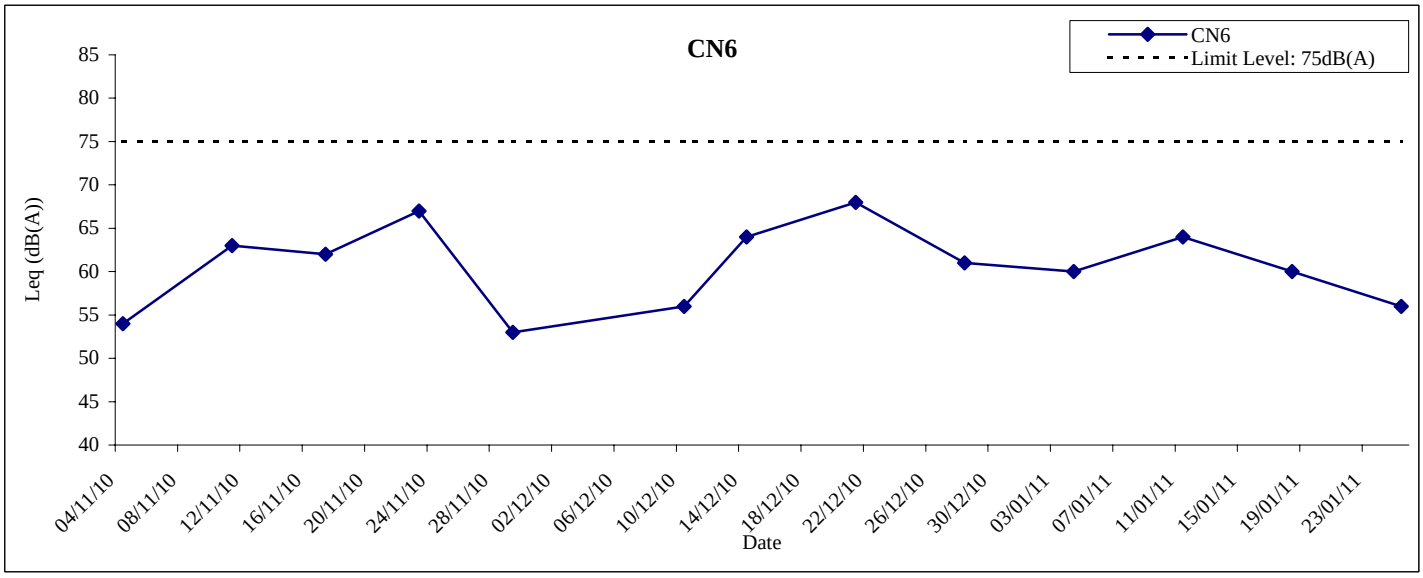




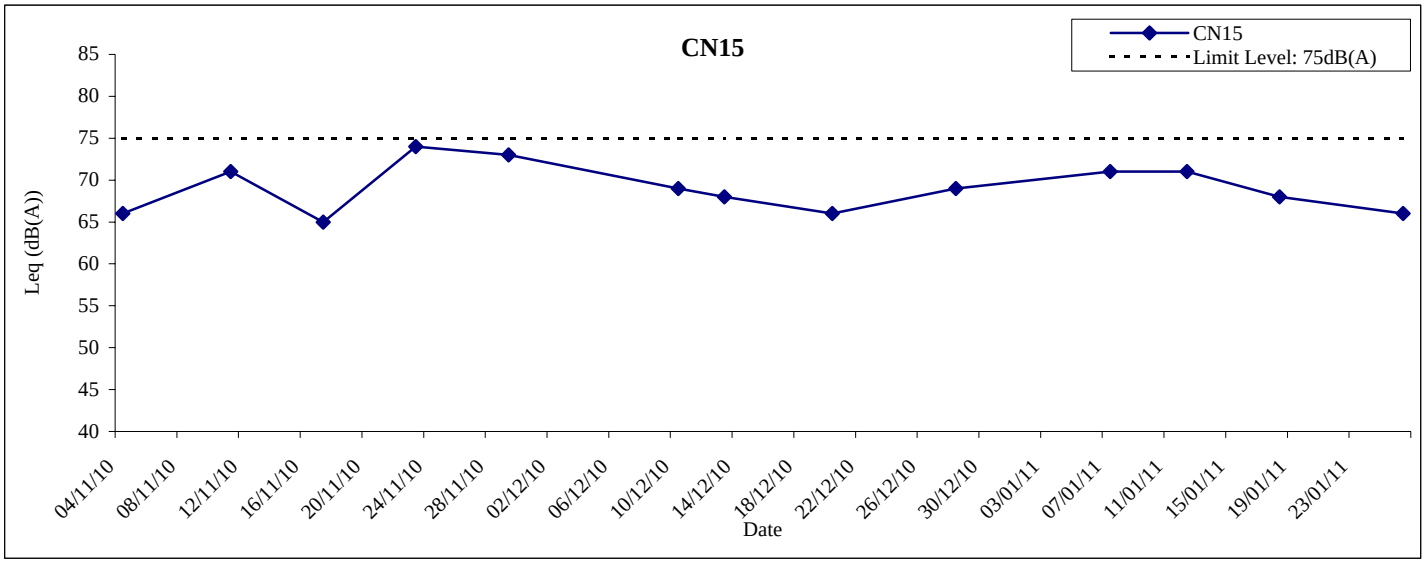
MTR	Hong Kong Section of Guangzhou-Shenzhen-Hong Kong Express Rail Link **Graphical Presentation of Noise** **Monitoring Results for Location CN1, CN2 and CN3**	**Date**	**2011**
		APPENDIX	**F**

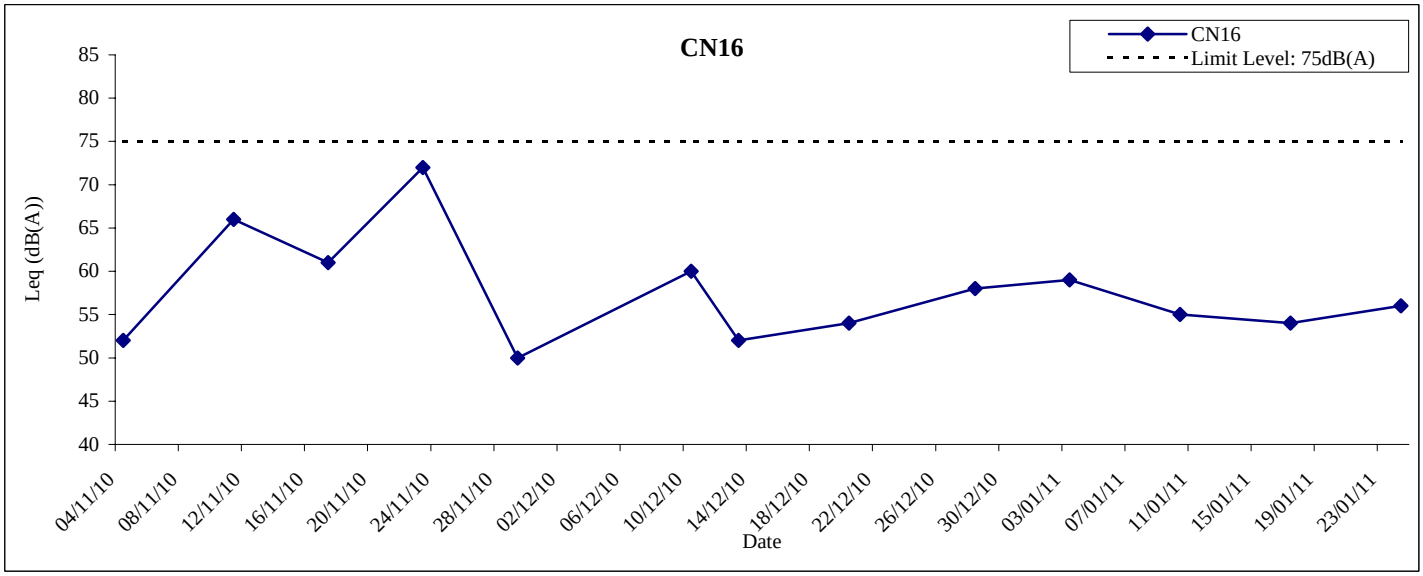


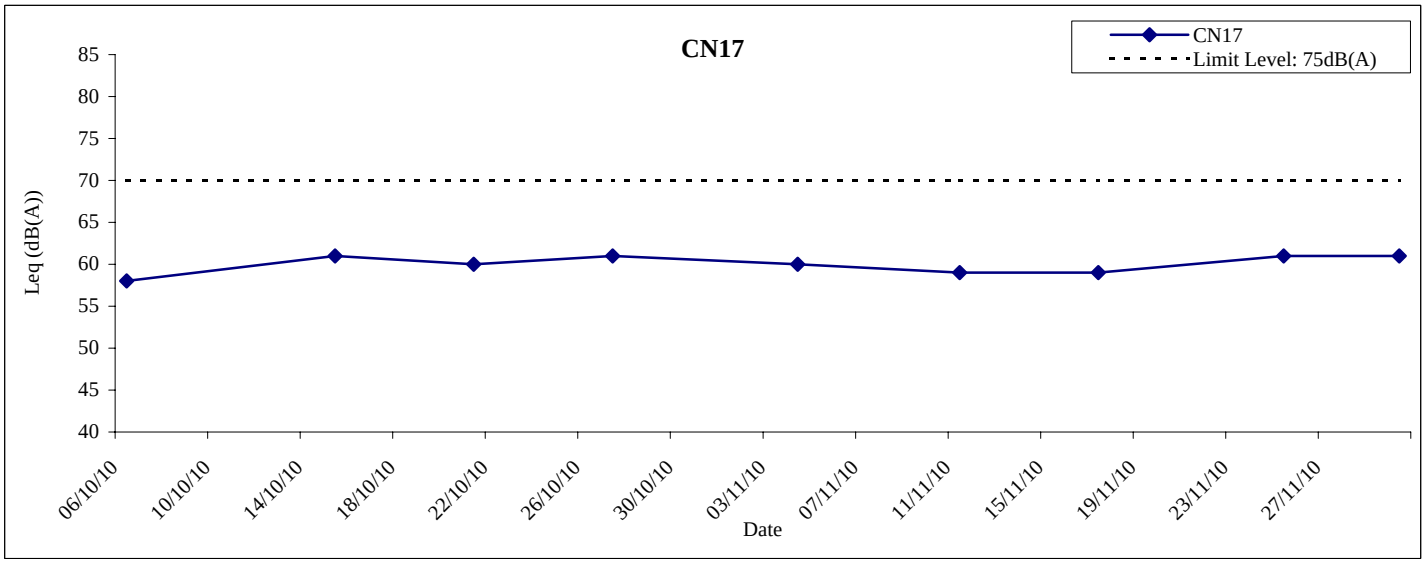




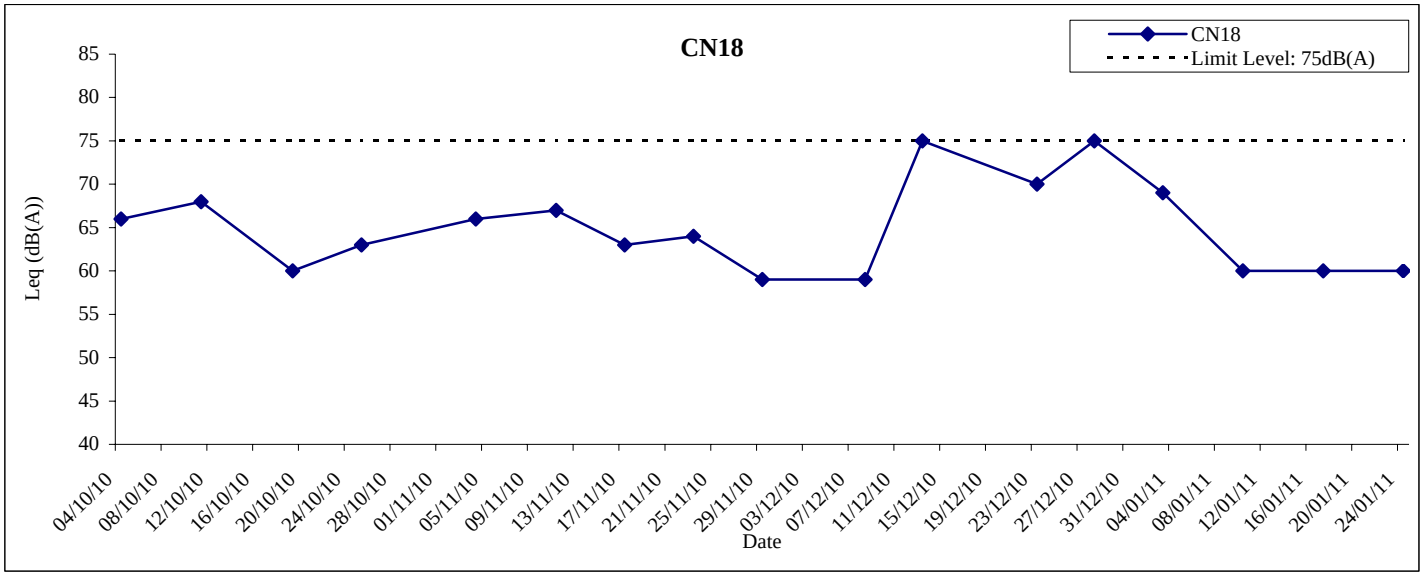
MTR	Hong Kong Section of Guangzhou-Shenzhen-Hong Kong Express Rail Link **Graphical Presentation of Noise** **Monitoring Results for Location CN4, CN5 and CN6**	**Date**	**2011**
		APPENDIX	**F**

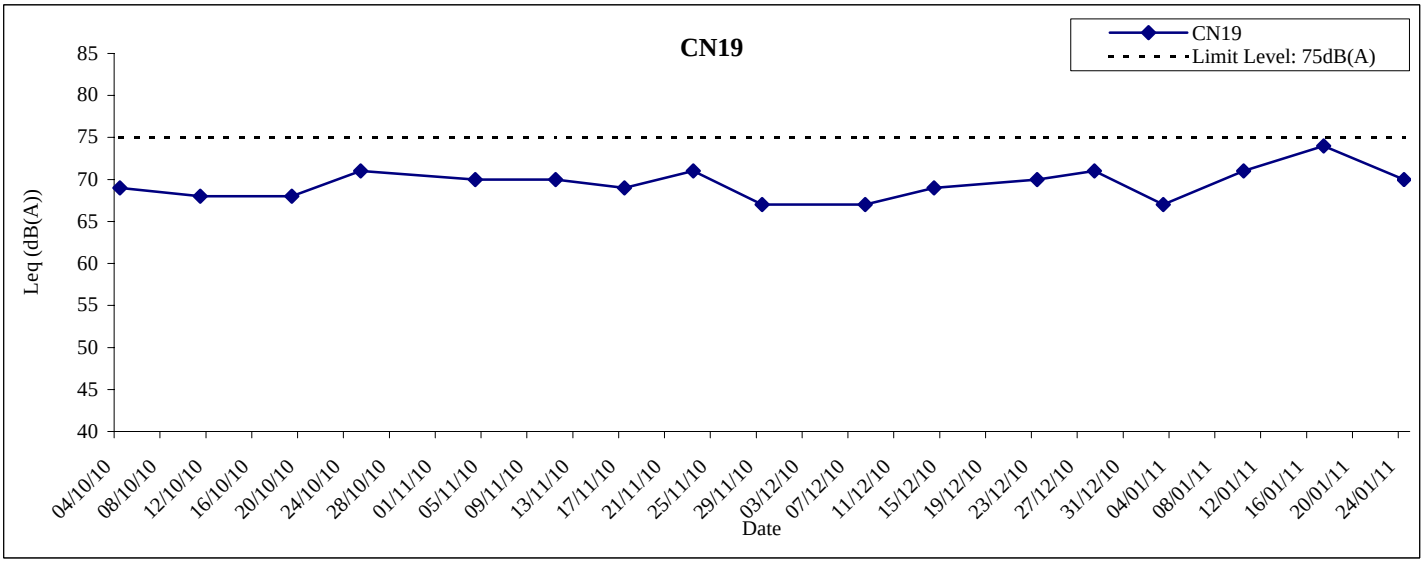


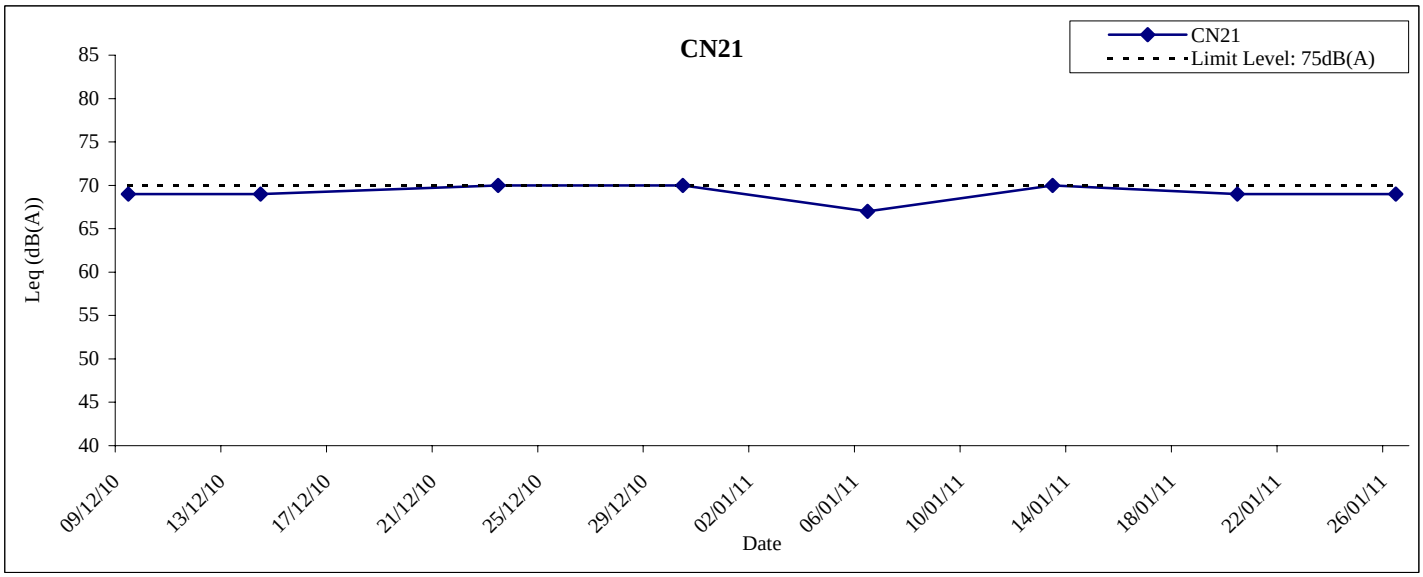




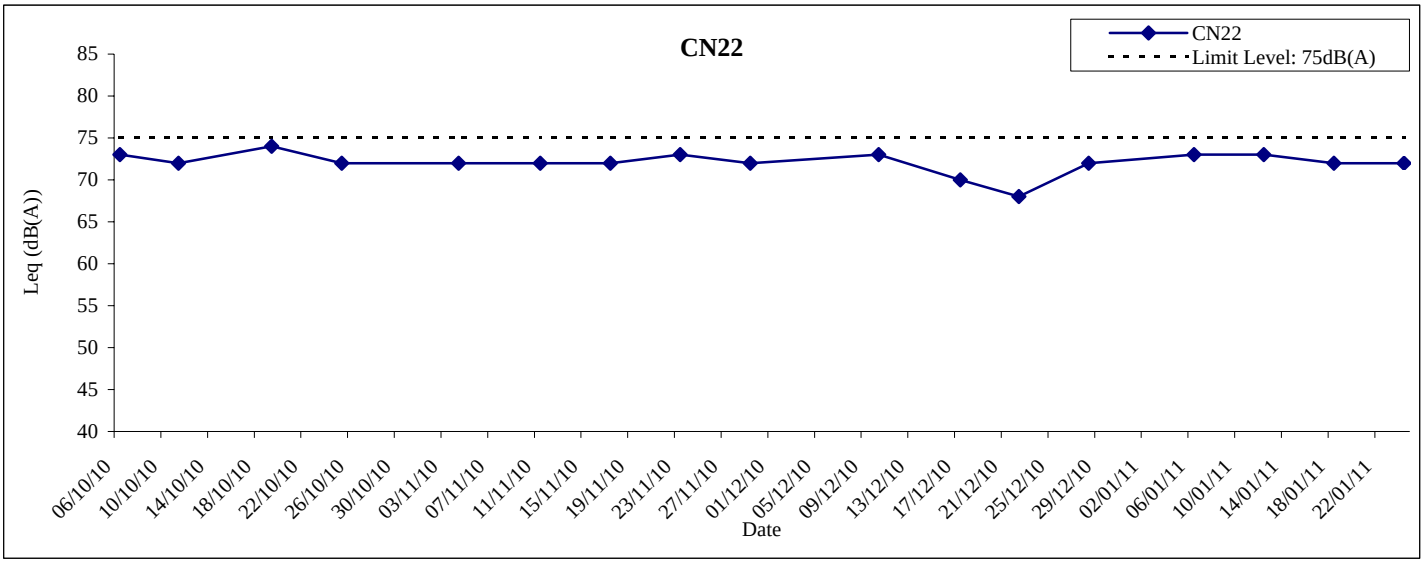
MTR	Hong Kong Section of Guangzhou-Shenzhen-Hong Kong Express Rail Link **Graphical Presentation of Noise** **Monitoring Results for Location CN15, CN16 and CN17**	**Date**	**2011**
		APPENDIX	**F**

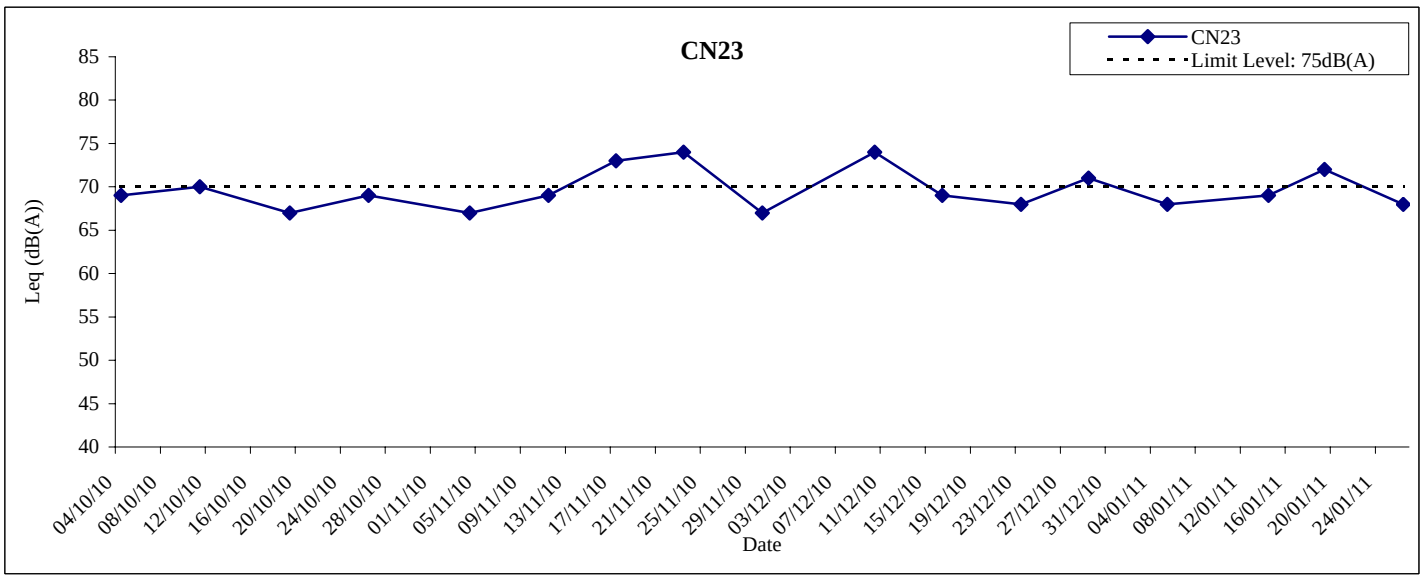


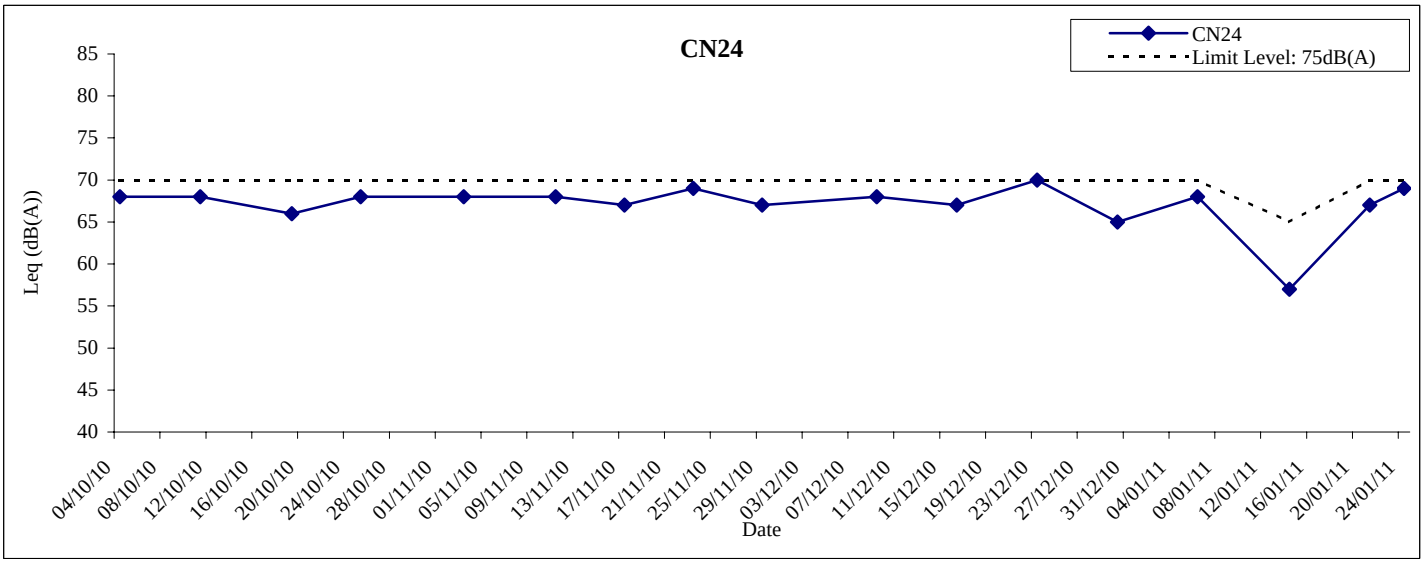




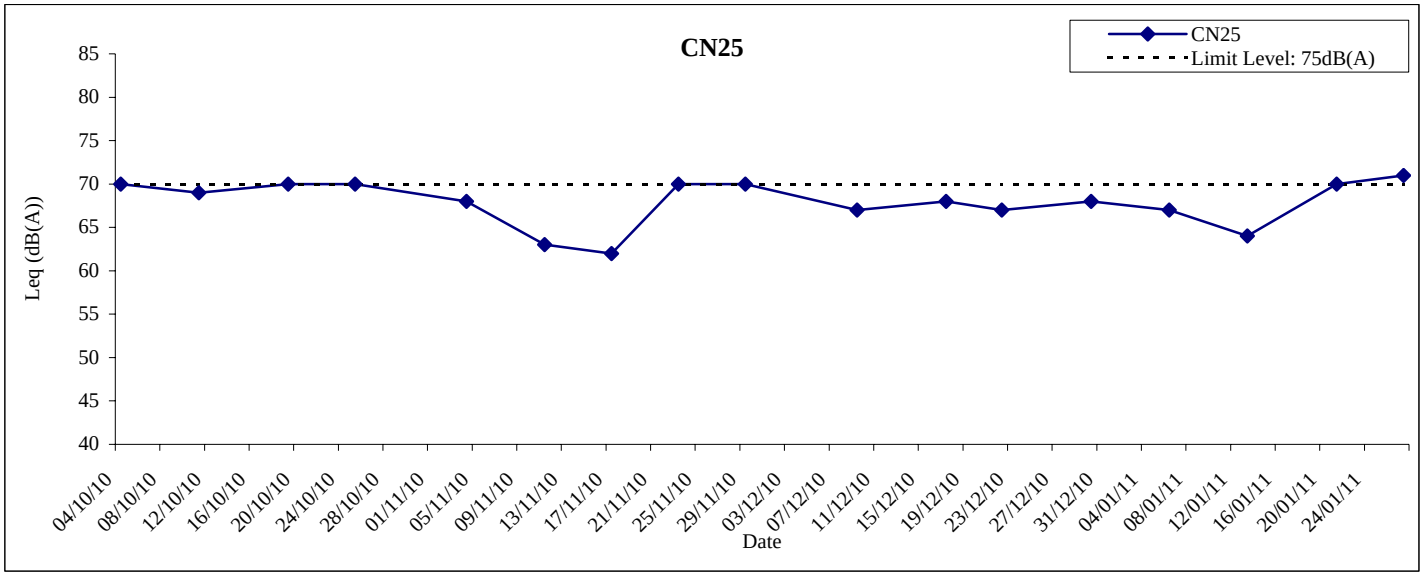
MTR	Hong Kong Section of Guangzhou-Shenzhen-Hong Kong Express Rail Link **Graphical Presentation of Noise** **Monitoring Results for Location CN18, CN19 and CN21**	**Date**	**2011**
		APPENDIX	**F**

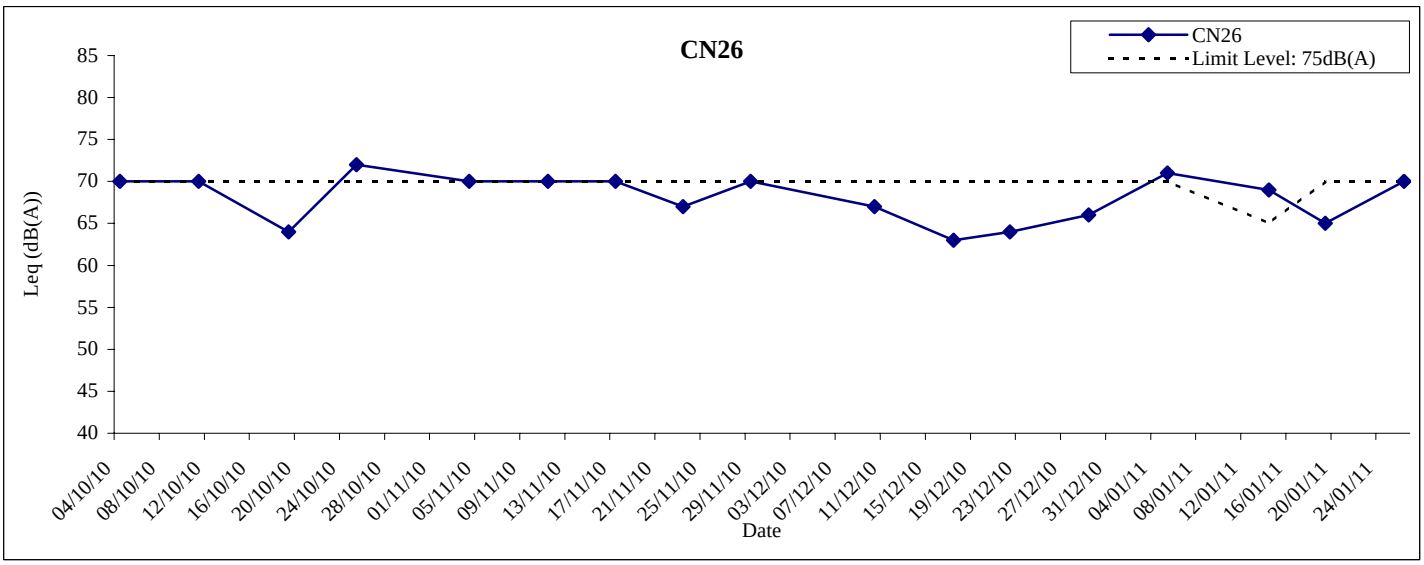


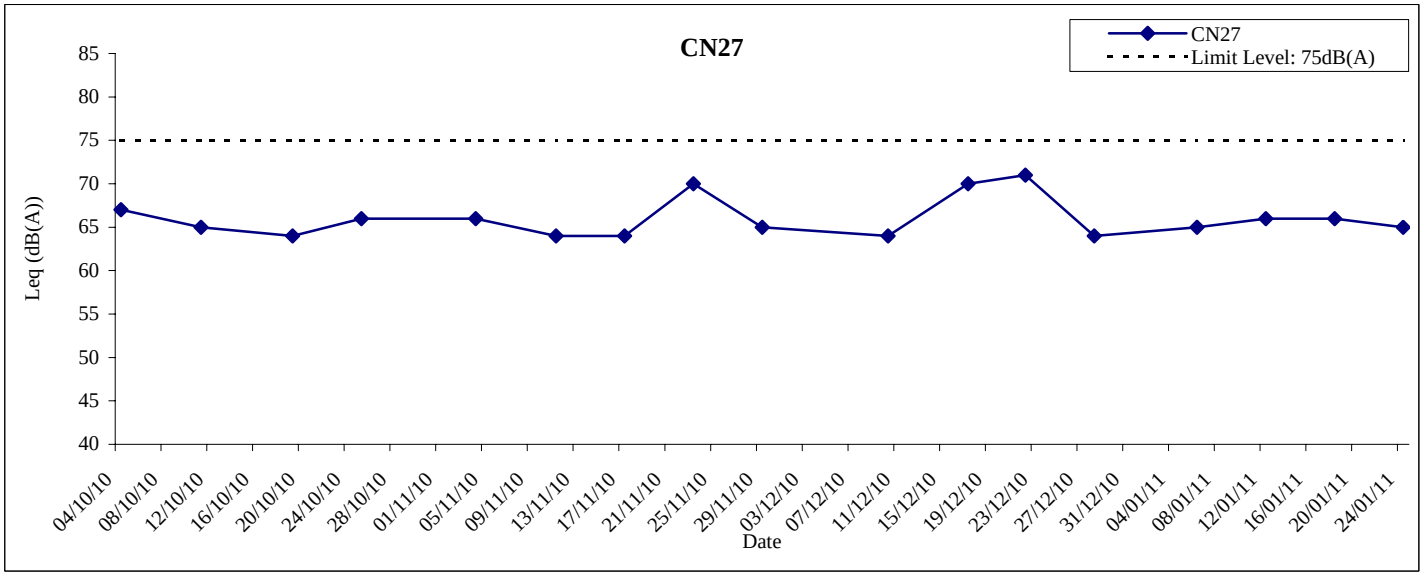




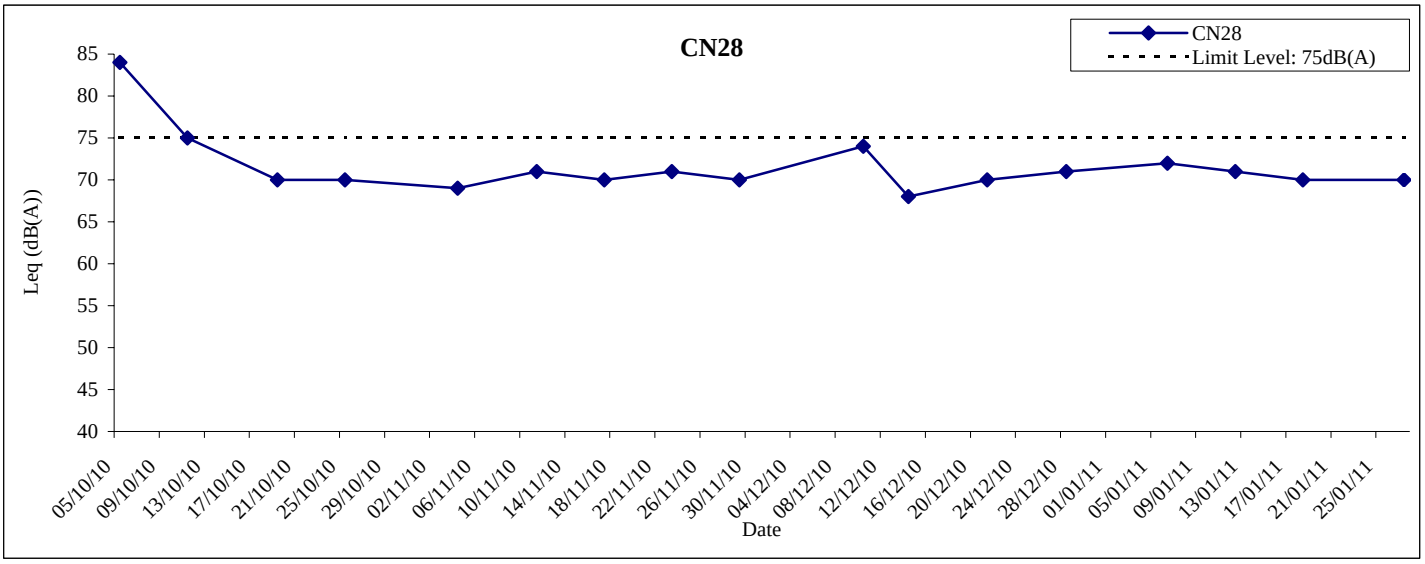
MTR	Hong Kong Section of Guangzhou-Shenzhen-Hong Kong Express Rail Link **Graphical Presentation of Noise** **Monitoring Results for Location CN22, CN23 and CN24**	**Date**	**2011**
		APPENDIX	**F**

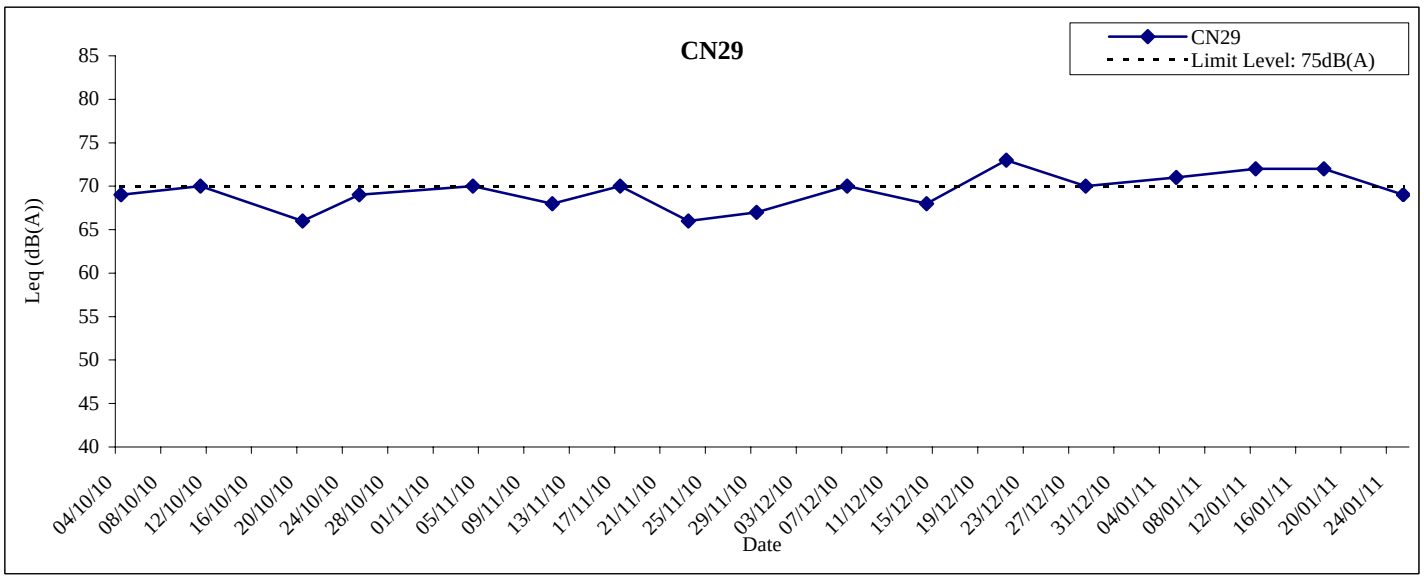


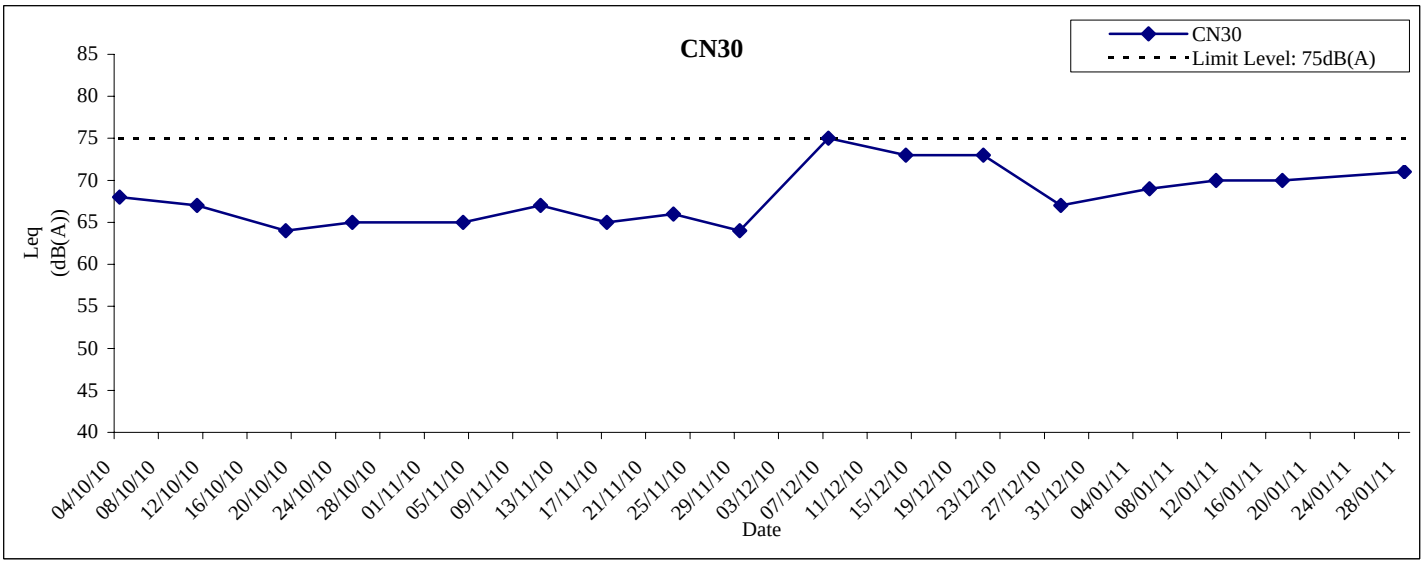




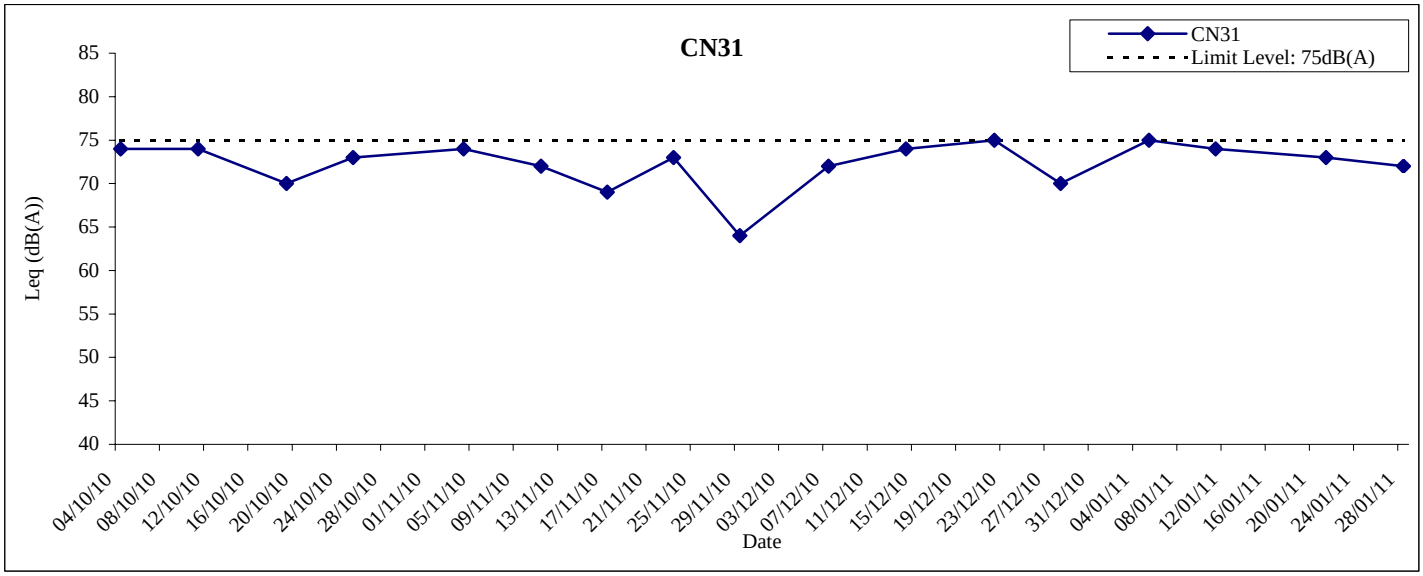
MTR	Hong Kong Section of Guangzhou-Shenzhen-Hong Kong Express Rail Link **Graphical Presentation of Noise** **Monitoring Results for Location CN25, CN26 and CN27**	**Date**	**2011**
		APPENDIX	**F**

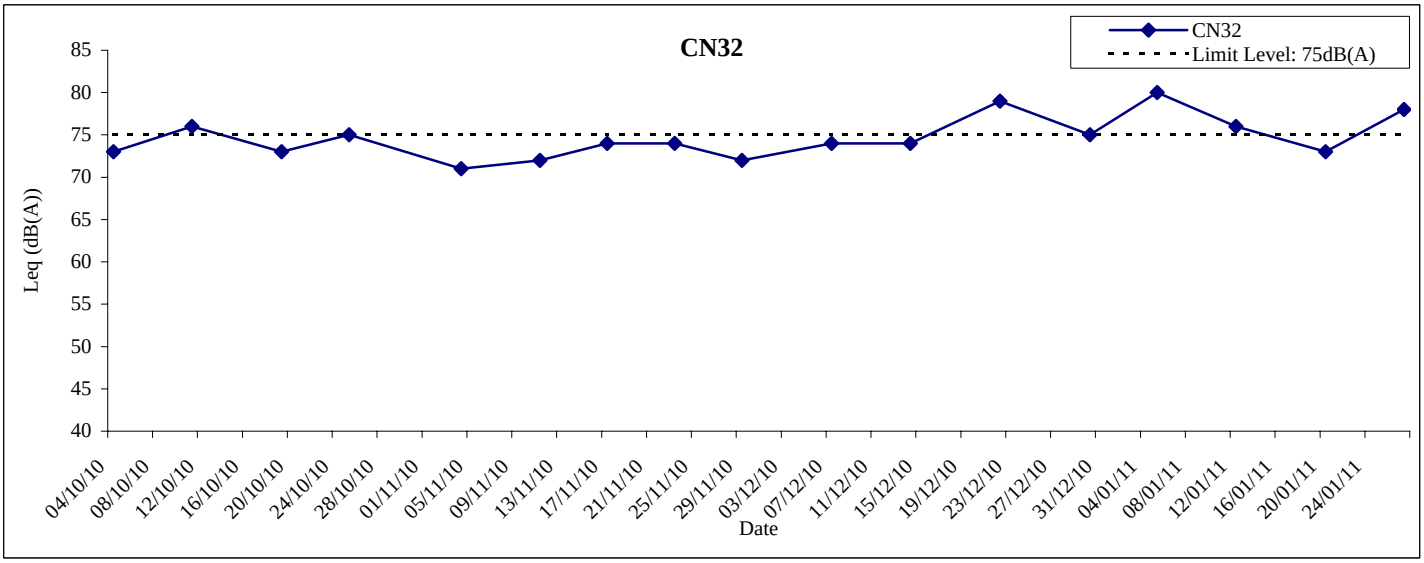


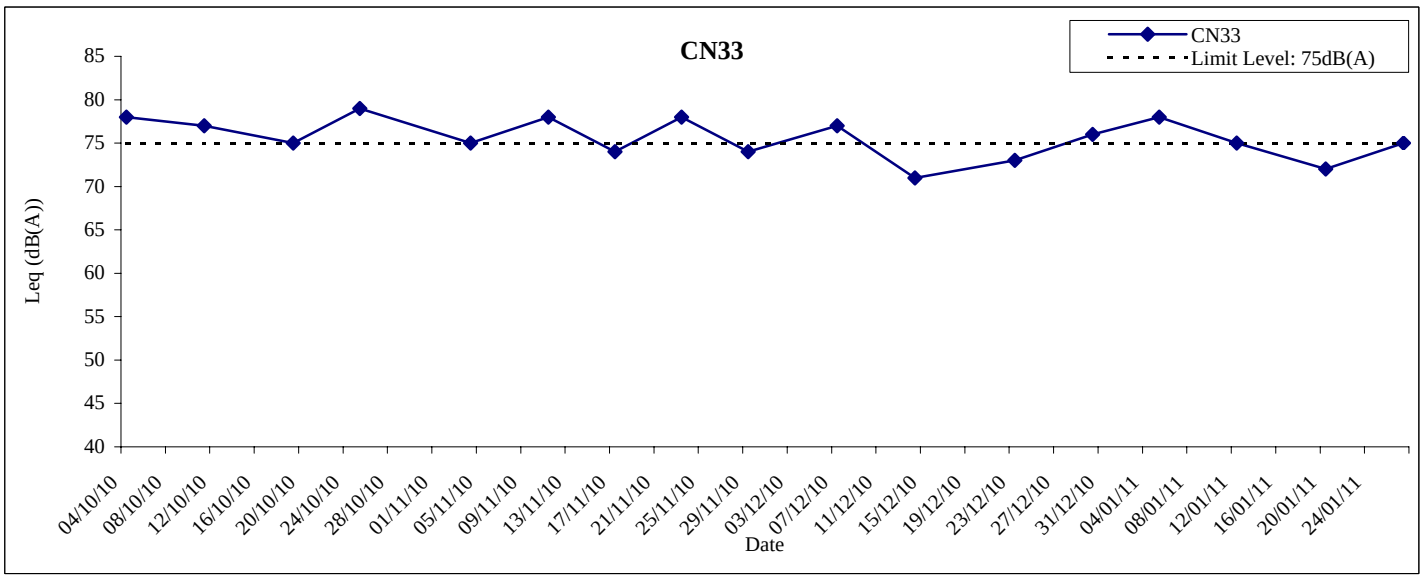




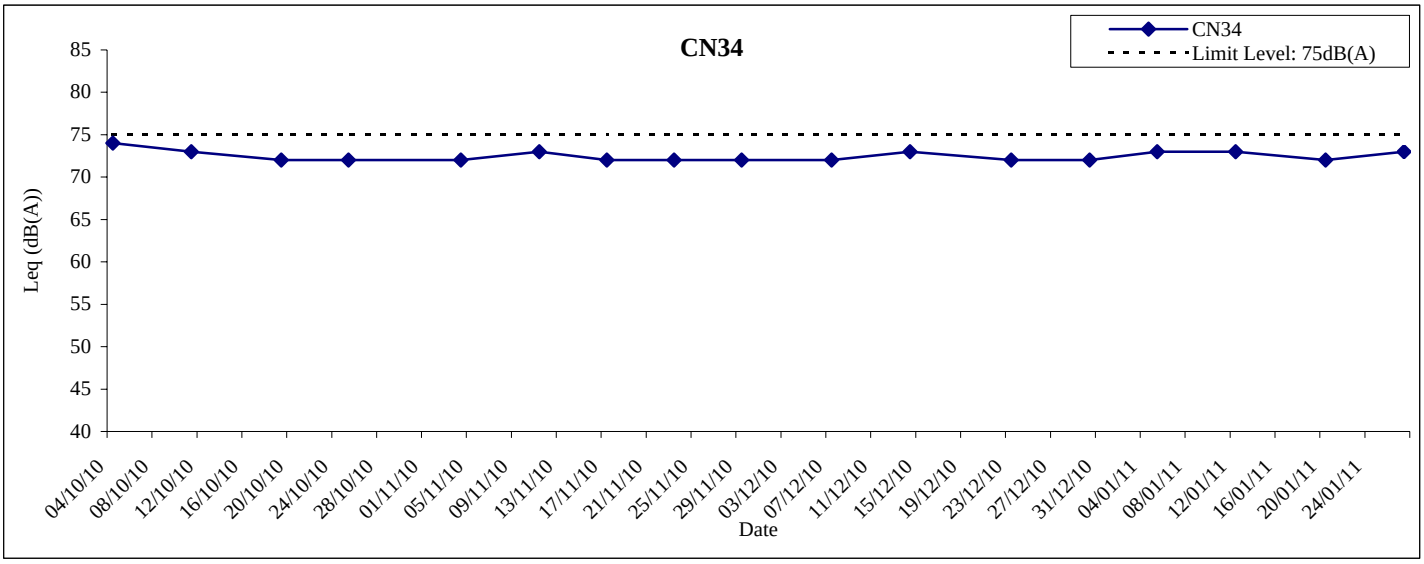
MTR	Hong Kong Section of Guangzhou-Shenzhen-Hong Kong Express Rail Link **Graphical Presentation of Noise** **Monitoring Results for Location CN28, CN29 and CN30**	**Date**	**2011**
		APPENDIX	**F**







MTR	Hong Kong Section of Guangzhou-Shenzhen-Hong Kong Express Rail Link **Graphical Presentation of Noise** **Monitoring Results for Location CN31, CN32 and CN33**	**Date**	**2011**
		APPENDIX	**F**



MTR	Hong Kong Section of Guangzhou-Shenzhen-Hong Kong Express Rail Link **Graphical Presentation of Noise** **Monitoring Results for Location CN34**	**Date**	**2011**
		APPENDIX	**F**

Appendix G

Bird Species and Abundance Recorded during Avifauna Survey

Appendix G Bird Species and Abundance Recorded during the Avifauna Monitoring in January 2011

Works Area: MPV
Survey Site: MPV-1
Survey Date: 21 January 2011

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		
Little Grebe	小鸊鹈	P	2	1	2			1							6	
Great Cormorant	鸕鷀	W		68	2				2						72	√
Grey Heron	蒼鷺	W					3								3	√
Little Egret	小白鷺	P		30	6		1				5	23	2		67	√
Chinese Pond Heron	池鷺	P		3						1		5			9	√
Eurasian Wigeon	赤頸鴨	W						3							3	
Tufted Duck	鳳頭潛鴨	W												4	4	
Black Kite	黑鳶(麻鷹)	W,R								1					1	√
White-breasted Waterhen	白胸苦惡鳥	R			1										1	√
Common Moorhen	黑水雞	R												1	1	
Little Ringed Plover	金眶鴴(黑領鴴)	W,R						1							1	√
Green Sandpiper	白腰草鷸	W					1	4	2			1			8	√
Wood Sandpiper	林鷸	M,W					4	2	1						7	√
Common Sandpiper	磯鷸	M,W					1	1		2		4	1		9	√
Common Snipe	扇尾沙錐	W							4						4	√
Spotted Dove	珠頸斑鳩	R	3	1			1	3		1		4	1	1	15	√
Common Kingfisher	普通翠鳥	AM,P				1						1			2	√
White-throated Kingfisher	白胸翡翠	AM,P	1	1											2	
Yellow Wagtail	黃鶺鴒	M,W			1		4	4	1	1	2				13	√
Grey Wagtail	灰鶺鴒	W					1								1	
White Wagtail	白鶺鴒	W,R			4		3	3	2	6	3	3	2		26	√
Olive-backed Pipit	樹鷚	W			1			2							3	√
Red-whiskered Bulbul	紅耳鵯	R												2	2	√
Chinese Bulbul	白頭鵯	R		6	5					52		6	4	7	80	√
Long-tailed Shrike	棕背伯勞	R								1					1	√
Oriental Magpie Robin	鵲鴝	R					1			1					2	√
Daurian Redstart	北紅尾鴝	W					1			1					2	√
Common Stonechat	黑喉石鴴	W,M			2		1			2	1			2	8	√
Masked Laughingthrush	黑臉噪鶥	R													0	√
Zitting Cisticola	棕扇尾鶯	W			1			1							2	
Yellow-bellied Prinia	黃腹山鶯鶯	R			1							1		1	3	√
Plain Prinia	純色山鶯鶯	R		1	1			2		1					5	√
Dusky Warbler	褐柳鶯	W								1					1	
Yellow-browed Warbler	黃眉柳鶯	R,W			1					2					3	√
Japanese White-eye	暗綠繡眼鳥	R,?W													0	√
Eurasian Tree Sparrow	麻雀	R								50					50	√
Red-billed Starling	絲光椋鳥	W	3	5	48		50			52			23		181	√
Black-collared Starling	黑領椋鳥	R						20	1	4		2	5		32	√
Common Myna	家八哥	R													0	√
Crested Myna	八哥	R	2									26	1		29	√
Common Magpie	喜鵲	R	1		1		2	1				2	1		8	√
Large-billed Crow	大嘴烏鴉	R			1			2							3	√
Collared Crow	白頸鴉	R			2		1	2	1						6	√
Azure-winged Magpie	灰喜鵲	Category E*													0	√
No. of Birds at Each Point:			**12**	**116**	**80**	**1**	**75**	**52**	**14**	**179**	**11**	**78**	**40**	**18**		
No. of Birds Recorded from Point Count:			**676**													
No. of Species Recorded from Point Count:			**40**													
Total No. of Species:			**44**													
Total No. of Species of Conservation Interest:			**11**													

Note:
(1) Species in bold represents Species of Conservation Interest.
(2) R=resident; W=winter visitor; M=migrant; A=autumn; 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.

Appendix G Bird Species and Abundance Recorded during the Avifauna Monitoring in January 2011

Works Area: Access road leading to TPP
Survey Site: TPP-1
Survey Date: 14 January 2011

Common Name [1]	Chinese Name	Principal Status [2]	Point Count Location					Sub-total	Walk Transect
			TPP-1/P1	TPP-1/P2	TPP-1/P3	TPP-1/P4	TPP-1/P5		
Little Egret	小白鷺	P	2					2	√
Cattle Egret	牛背鷺	P	4	6				10	
Chinese Pond Heron	池鷺	P	3	7	3	1		14	√
White-breasted Waterhen	白胸苦惡鳥	R	2	2				4	
Little Ringed Plover	金眶鴴(黑領鴴)	W,R				1	2	3	
Green Sandpiper	白腰草鷸	W	1	8	1		7	17	
Wood Sandpiper	林鷸	M,W		9				9	
Common Sandpiper	磯鷸	M,W		1				1	
Common Snipe	扇尾沙錐	W			7			7	
Spotted Dove	珠頸斑鳩	R	1	1			1	3	√
Yellow Wagtail	黃鶺鴒	M,W	1	1	2	1	1	6	
Grey Wagtail	灰鶺鴒	W	1		2		1	4	
White Wagtail	白鶺鴒	W,R	2	7	3	3	4	19	
Olive-backed Pipit	樹鷚	W		2	4			6	
Red-throated Pipit	紅喉鷚	M,W			1			1	
Red-whiskered Bulbul	紅耳鵯	R			1			1	√
Chinese Bulbul	白頭鵯	R						0	√
Long-tailed Shrike	棕背伯勞	R					1	1	
Oriental Magpie Robin	鵲鴝	R	1	3	1	2	1	8	√
Daurian Redstart	北紅尾鴝	W		1				1	
Common Stonechat	黑喉石鴴	W,M					1	1	
Masked Laughingthrush	黑臉噪鶥	R	2					2	√
Yellow-bellied Prinia	黃腹山鶯	R			2		1	3	
Plain Prinia	純色山鶯	R		1				1	
Common Tailorbird	長尾縫葉鶯	R						0	√
Dusky Warbler	褐柳鶯	W	2			1		3	
Japanese White-eye	暗綠繡眼鳥	R,?W						0	√
Red-billed Starling	絲光椋鳥	W	11	100		2		113	
Black-collared Starling	黑領椋鳥	R	3	17	2	2		24	√
Crested Myna	八哥	R	3	4				7	
		No. of Birds at Each Point:	**39**	**170**	**29**	**13**	**20**		
		No. of Birds Recorded from Point Count:	**271**						
		No. of Species Recorded from Point Count:	**27**						
		Total No. of Species:	**30**						
		Total No. of Species of Conservation Interest:	**5**						

Note:
(1) Species in bold represents Species of Conservation Interest.
(2) R=resident; W=winter visitor; M=migrant; P=present all year [Principal status was assessed with reference to Carey *et al*. (2001): The Avifauna of Hong Kong]

Works Area: Access road leading to TPP
Survey Site: TPP-2
Survey Date: 14 January 2011

Common Name [1]	Chinese Name	Principal Status [2]	Point Count Location				Sub-total	Walk Transect
			TPP-2/P1	TPP-2/P2	TPP-2/P3	TPP-2/P4		
Little Ringed Plover	金眶鴴(黑領鴴)	W,R			4	1	5	√
Green Sandpiper	白腰草鷸	W	2				2	√
Wood Sandpiper	林鷸	M,W				1	1	
Common Sandpiper	磯鷸	M,W			3	2	5	
Spotted Dove	珠頸斑鳩	R		1			1	
White-throated Kingfisher	白胸翡翠	AM,P		1			1	√
Yellow Wagtail	黃鶺鴒	M,W			1	1	2	√
White Wagtail	白鶺鴒	W,R	4	7	7	3	21	√
Red-throated Pipit	紅喉鷚	M,W			1		1	
Red-whiskered Bulbul	紅耳鵯	R					0	√
Chinese Bulbul	白頭鵯	R					0	√
Oriental Magpie Robin	鵲鴝	R		4	2		6	
Yellow-bellied Prinia	黃腹山鷦鶯	R	1				1	
Japanese White-eye	暗綠繡眼鳥	R,?W					0	√
Eurasian Tree Sparrow	麻雀	R					0	√
Black-collared Starling	黑領椋鳥	R			1		1	
Common Myna	家八哥	R					0	√
Crested Myna	八哥	R					0	√
Common Magpie	喜鵲	R					0	√
No. of Birds at Each Point:			**7**	**13**	**19**	**8**		
No. of Birds Recorded from Point Count:			**47**					
No. of Species Recorded from Point Count:			**12**					
Total No. of Species:			**19**					
Total No. of Species of Conservation Interest:			**2**					

Note:
(1) Species in bold represents Species of Conservation Interest.
(2) R=resident; W=winter visitor; M=migrant; P=present all year; A=autumn [Principal status was assessed with reference to Carey *et al*. (2001): The Avifauna of Hong Kong]

Works Area: Access road leading to TPP
Survey Site: TPP-3
Survey Date: 14 January 2011

Common Name [1]	Chinese Name	Principal Status [2]	Point Count Location			Sub-total
			TPP-3/P1	TPP-3/P2	TPP-3/P3	
Chinese Pond Heron	池鷺	P			1	1
White-breasted Waterhen	白胸苦惡鳥	R		1	1	2
Spotted Dove	珠頸斑鳩	R	1		2	3
Grey Wagtail	灰鶺鴒	W		1		1
White Wagtail	白鶺鴒	W,R	2			2
Olive-backed Pipit	樹鷚	W			1	1
Red-whiskered Bulbul	紅耳鵯	R	2	1	1	4
Oriental Magpie Robin	鵲鴝	R	3	1	1	5
Masked Laughingthrush	黑臉噪鶥	R			4	4
Common Tailorbird	長尾縫葉鶯	R			2	2
Dusky Warbler	褐柳鶯	W	2			2
Yellow-browed Warbler	黃眉柳鶯	W			1	1
Great Tit	大山雀	R			1	1
Fork-tailed Sunbird	叉尾太陽鳥	R		1	1	2
Japanese White-eye	暗綠繡眼鳥	R,?W		1	2	3
White-cheeked Starling	灰椋鳥	W	1			1
No. of Birds at Each Point:			**11**	**6**	**18**	
No. of Birds Recorded from Point Count:			**35**			
No. of Species Recorded from Point Count:			**16**			
Total No. of Species:			**16**			
Total No. of Species of Conservation Interest:			**2**			

Note:

(1) Species in bold represents Species of Conservation Interest.

(2) R=resident; W=winter visitor; P=present all year
[Principal status was assessed with reference to Carey *et al*. (2001): The Avifauna of Hong Kong]

Appendix G Bird Species and Abundance Recorded during the Avifauna Monitoring in January 2011

Works Area: PHV
Survey Site: PHV-1 (grouped with TUW-2 due to overlapping of survey area)
Survey Date: 14 January 2011

Common Name [1]	Chinese Name	Principal Status [2]	Point Count Location		Sub-total	Walk Transect
			TUW-2 and PHV-1/P1	TUW-2 and PHV-1/P2		
Crested Serpent Eagle	蛇鵰	R,M			0	√
Spotted Dove	珠頸斑鳩	R			0	√
Red-whiskered Bulbul	紅耳鵯	R	4	2	6	√
Chinese Bulbul	白頭鵯	R	5		5	√
Chestnut Bulbul	栗背短腳鵯	R,W			0	√
Black Bulbul	黑短腳鵯	W			0	√
Red-flanked Bluetail	紅脇藍尾鴝	W			0	√
Oriental Magpie Robin	鵲鴝	R	2	1	3	√
Grey-backed Thrush	灰背鶇	W	1		1	
Streak-breasted Scimitar Babbler	棕頸鉤嘴鸝	R			0	√
Rufous-capped Babbler	紅頭穗鸝	R			0	√
Masked Laughingthrush	黑臉噪鸝	R	6		6	√
Yellow-bellied Prinia	黃腹山鷦鶯	R			0	√
Common Tailorbird	長尾縫葉鶯	R	2		2	√
Yellow-browed Warbler	黃眉柳鶯	W			0	√
Asian Brown Flycatcher	北灰鶲	M,W			0	√
Hainan Blue Flycatcher	海南藍仙鶲	Su			0	√
Great Tit	大山雀	R	1		1	√
Scarlet-backed Flowerpecker	朱背啄花鳥	R			0	√
Fork-tailed Sunbird	叉尾太陽鳥	R	2	1	3	√
Japanese White-eye	暗綠繡眼鳥	R,?W	3	4	7	√
No. of Birds at Each Point:			**26**	**8**		
No. of Birds Recorded from Point Count:			**34**			
No. of Species Recorded from Point Count:			**9**			
Total No. of Species:			**21**			
Total No. of Species of Conservation Interest:			**1**			

Note:
(1) Species in bold represents Species of Conservation Interest.
(2) R=resident; W=winter visitor [Principal status was assessed with reference to Carey *et al*. (2001): The Avifauna of Hong Kong]

Appendix H

Representative Photographs of the Avifauna Monitoring

Appendix H Representative Photographs taken during the Avifauna Monitoring in January 2011
MPV-1 (Fishponds at Mai Po)



Plate 1 Point Count Location MPV-1/P6



Plate 2 Agricultural Activities at Pond Bund at Point Count Location MPV-1/P5



Plate 3 Yellow Wagtail at Point Count Location MPV-1/P5

Appendix H Representative Photographs taken during the Avifauna Monitoring in January 2011 TPP-1 (Drainage Channel KT5 at Tai Kong Po)



Plate 4 Excavation Works near Point Count Location TPP-1/P4 and TPP-1/P5



Plate 5 Removal of Vegetation at the Gabions near Point Count Location TPP-1/P3

Appendix H Representative Photographs taken during the Avifauna Monitoring in January 2011 TPP-2 (Main drainage channel 95CD along Chi Ho Road)



Plate 6 Removal of Vegetation at the Grassgrete Banks near Point Count Location TPP-2/P1 and TPP-2/P2



Plate 7 Red-throated Pipit at Point Count Location TPP-2/P3

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Plate 8 Point Count Location TPP-3/P1



Plate 9 Point Count Location TPP-3/P3



Plate 10 Common Tailorbird at Point Count Location TPP-3/P3

Appendix H Representative Photographs taken during the Avifauna Monitoring in January 2011 PHV-1 (Secondary Woodland at Pat Heung)



Plate 11 Point Count Location TUW-2 and PHV-1/P1



Plate 12 Red-flanked Bluetail along Walk Transect of TUW-2 and PHV-1 Survey Site



Plate 13 Grey-backed Thrush along Walk Transect of TUW-2 and PHV-1 Survey Site

Appendix I

Certified Arborist Inspection Record

MTR Express Rail Link, Contract 801

Monthly Audit Inspection Record

January 2011

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
31/01/2011 30/01/2011	801 – Siu Lang Shui (Nursery) So Kwun Wat Nursery CLP private plot in Tai Po Kau	Inspection of trees to be transplanted within the contract	Regular monthly audit of tree works
26/01/2011	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
27/01/2011	803C Parcels 45.1, 45.3, 45.6, 45.7	Inspection of retained trees and trees to be transplanted within the contract	Regular monthly audit of tree works
02/02/2011	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
27/01/2011	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
27/01/2011	811B - WKT Approach Tunnels – South Parcel 44.1, Lin Cheung Road, and Jordan Road Footpath & Central Divider	Inspection of retained trees and trees to be transplanted within the contract	Regular monthly audit of tree works
26/01/2011	820 - Mei Lai Road to Hoi Ting Road Tunnels Parcel 37.2, 37.3, Kwai Chung Road (Footpath near	Inspection of retained trees and trees to be	Regular monthly audit of tree works

	37.5) Sham Mong Road & Hing Wah Street West Footpath Parcel 39.1, 40.4, Sham Mong Road (Nam Cheong Park) Private Lot STT-KX2382, Private Lot STT-KX2416	transplanted within the contract	
26/01/2011	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
01/02/2011 (Pat Heung) 28/01/2011	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
01/02/2011	823A - Kam Tin Tunnels Parcels NT-5A, NT-5.1A, and NT-5.3A	Inspection of retained trees and trees to be transplanted within the contract	Regular monthly audit of tree works
01/02/2011	823B - SSS and ERS Parcels NT-5.1B, NT-5.2, and NT-5.3B	Inspection of retained trees and trees to be transplanted within the contract	Regular monthly audit of tree works
25/01/2011	824 Ngau Tam Mei to Tai Kong Po Tunnels NT-3, NT-5.1A, NT-4	Inspection of retained trees and trees to be transplanted within the contract	Regular monthly audit of tree works
25/01/2011	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)



Appendix J

Contract 821 Tree Survey Record

MTRC Express Rail Link (XRL)

Contract 821 Shek Yam to Mei Lai Road Tunnels

TREE SURVEY RECORD
(Rev.1)

Client: Dragages-Bouygues Joint Venture

Prepared by: Urbis Limited

Prepared by :	*Doris Cheung*	17th September 2010 Date
Checked by :	*Jan Poon*	17th September 2010 Date
Approved by :	*Alexander Duggie (Director)*	17th September 2010 Date

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1. INTRODUCTION

1.1 Dragages-Bouygues Joint Venture has been commissioned by Mass Transit Railway Corporation Limited (MTRCL) to construct the Express Rail Link (XRL), under Contract XRL Contract 821, which consists of new tunnels from Shek Yam to Mei Lai Road.

1.2 Urbis Limited is commissioned by Dragages-Bouygues Joint Venture to provide verification of the approved Tree Removal Application provided by MTRCL (LandsD Memo Ref. (7) in RD/XRL/GEN/39 pt. 2 dated 18 June 2010, (11) in RD/XRL/GEN/39 pt. 2 dated 30 July 2010, and (25) in L/M8 in DLO/TWKT/TW 2/155/2007 dated 26 May 2010) and conduct detailed check of previous tree survey within the XRL Contract 821 works boundary in accordance with clause AN1.3 of Particular Specification in Appendix AN. The survey results are recorded in this "Tree Survey Record" report.

2. CONTENT OF THIS REPORT

2.1 For ease of reference this report shall be titled: "Tree Survey Record" and shall contain the following items:

(a) Updated observation of trees (Section 4);

(b) Tree Assessment Schedule comprising: Botanical name, tree identity number, diameter at breast height, tree crown spread, tree height, form and health (Appendix A);

(c) Tree Survey Plan showing locations of all existing trees (Appendix B); and

(d) Photographic record of individual trees with date stamps and annotations, showing clearly the whole tree as far as possible (Appendix C).

3. TREE SURVEY

Tree Survey Methodology

3.1 The recent tree survey was carried out in July and August 2010. For the purpose of the Tree Survey, the guideline from Works Branch Technical Circular No. 03/06, i.e. a plant is considered a tree if its girth (circumference of the trunk) measures 300mm (95mm DBH) or more at a height of 1300mm above ground level, was followed.

3.2 The tree survey identifies the following attributes of trees:

(a) Botanical name;

(b) Height;

(c) Crown spread;

(d) Trunk diameter (measured 1.3 metre from the ground);

(e) An assessment of form;

(f) An assessment of health;

(g) Amenity value

(h) Survival rate after transplanting and

(i) Other remarks.

Tree Numbering and Cross-Reference System

3.3 For ease of cross-reference between drawings, schedule and photographs, and for ease of checking on site, the following tree numbering and cross reference system has been adopted in the Report:

- the tree numbering as indicated has been pre-determined by the Record as provided under the Contract and has not been altered in this report.
- the tree number starting from TA001 was assigned to the additional trees which have not been reported/identified under the Contract and their treatment has yet to be instructed by the Engineer;
- every tree has been photographed, the photographs have been numbered, and the tree numbers have been marked on the photographs;
- the Tree Assessment Schedule in **Appendix A** identifies the survey sheet number, tree number and photograph number for each tree;
- the trees in the Tree Assessment Schedule are listed first by survey sheet number and then by tree number - in this way all trees found on one survey sheet are located together in the Tree Assessment Schedule for ease of cross reference between the schedule and the drawings;
- each page of tree photographs in **Appendix II** has the relevant survey sheet number identified at the bottom right corner of the page, and the photographs are grouped by survey sheet for ease of cross reference and checking on site;
- the trees in the photographs are arranged first by trees for retention, second by trees for transplanting, third by trees for felling and then final by additional trees ;

4. TREE RECORD FINDINGS

4.1 A total of **34** trees were found in XRL C821 contract works boundary in the initial Tree Removal Application excluding **1** nos. of dead tree. There are **16** nos. of trees to be retained, **4** nos. of trees to be transplanted, and **14** nos. of trees to be felled in the Tree Removal Application.

4.2 The tree survey verifying the conditions of the trees were conducted in August 2010. After the survey, there was **1** nos. of trees which is found already felled with only a tree stump left on site. There are also **3** nos. of additional trees found on site to be larger than 95mm in diameter. These trees have not been reported / identified under the Contract.

4.3 Therefore, excluding the trees not found on site. There are **15** nos. of trees to be retained, **4** nos. of trees to be transplanted, and **14** nos. of trees to be felled after the tree survey. Adding **3** nos. of trees, there were totally **36** nos. of trees found within XRL 821 works boundary after verification of trees on site.

Table 1 - Summary of number of trees found in XRL Contract 821 Works Boundary

Description	Retain	Transplant	Fell	Additional trees	Total
In Approved Tree Removal Application	16	4	14	-	**34**
Number of tree not found on site	1	0	0	-	**1**
After tree survey	15	4	14	3	**36**

4.4 A total of **1** nos. of trees which have been recorded in TRA was either found missing or felled on site. The existing location of some missing trees was planted with a new tree which is less than 95mm in stem diameter as found on site. This tree is listed in table 2 below:

Table 2 – List of Trees have been recorded in TRA were either found missing or felled

Drawing No. C821/T/XRL/ URB/	Tree No.	Status of Tree in Tree Removal Application	Remarks
C04/202	T7198	Retain	Tree had been felled and only a tree stump left. As observed in photo taken in July 2010 provided by Dragages and site survey in August 2010. Supplementary information is provided in Appendix D.

4.5 Discrepancies on tree species for some trees were found in the tree removal application and actual site conditions. The tree species have been corrected in this tree survey report and provided in table below:

Table 3 – List of trees which tree species have been corrected in this Tree Survey Report

Drawing No. C821/T/ XRL/URB/	Tree No.	Tree Species	Status of Tree in Tree Removal Application	Remarks
C04/202	T6607	*Ficus virens var. sublanceolata*	Fell	Tree recorded as *Celtis sinensis* in Tree Removal Application
C04/202	T6608	*Celtis sinensis*	Fell	Tree recorded as *Macaranga tanarius* in Tree Removal Application
C04/202	T7145	*Tetradium glabrifolium*	Fell	Tree recorded as *Melia azedarach* in Tree Removal Application
C04/202	T7147	*Tetradium glabrifolium*	Fell	Tree recorded as *Melia azedarach* in Tree Removal Application
C04/202	T7183	*Sterculia lanceolata*	Retain	Tree recorded as *Litsea glutinosa* in Tree Removal Application

4.6 A total of 3 additional trees which have not been reported / identified under the Contract are listed in table below:

Table 4 – List of Additional Trees

Drawing No. C821/T/XTL/URB/	Tree No.	Tree Species
C04/202	TA001	*Carica papaya*
C04/202	TA002	*Carica papaya*
C04/202	TA003	*Carica papaya*

Appendix A

Tree Assessment Schedule

EXPRESS RAIL LINK (XRL)

CONTRACT 821 - Shek Yam to Mei Lai Road Tunnels

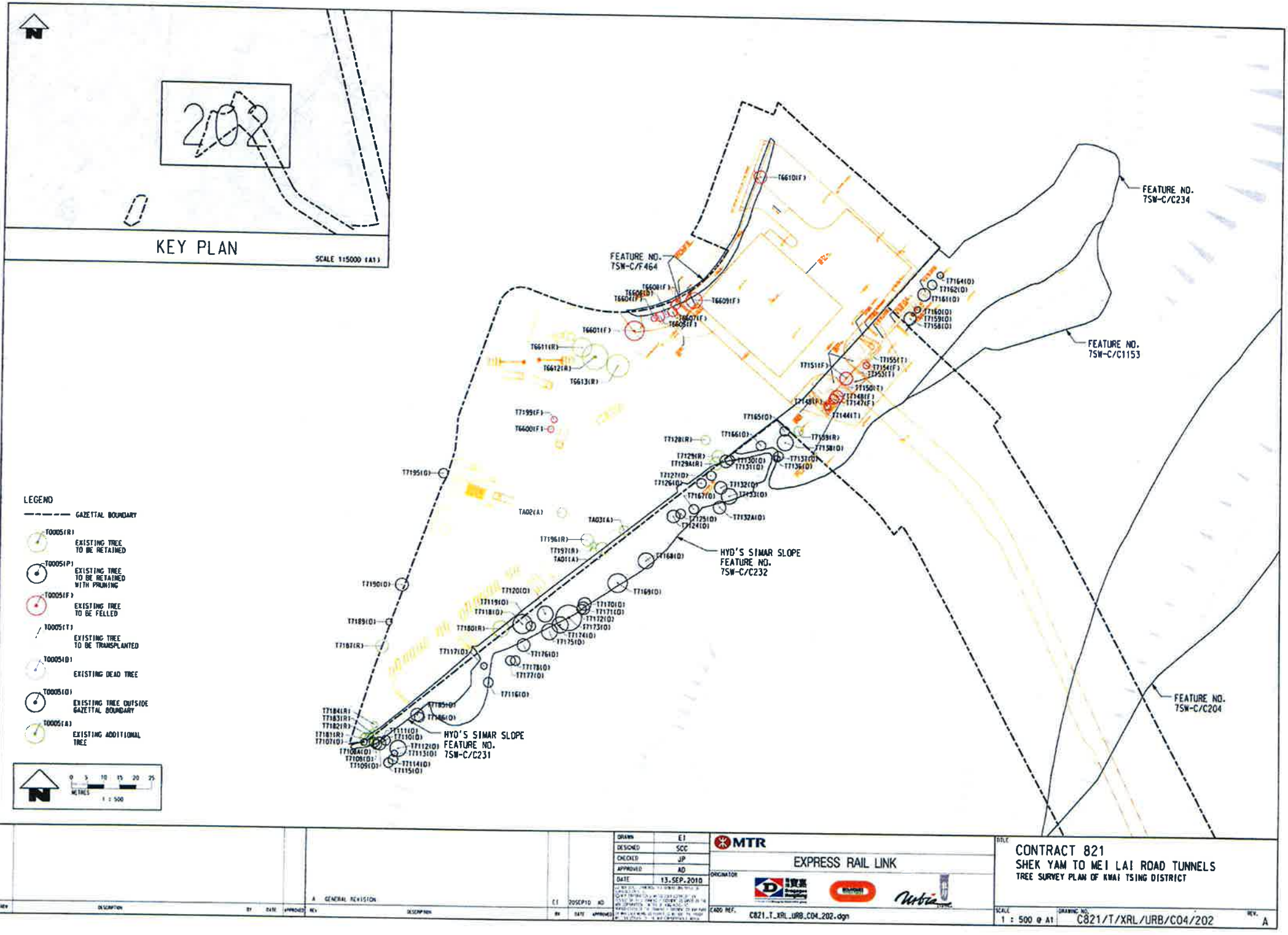
Existing Tree Assessment Schedule

Rev.1

SURVEY SHEET No. C821/TXRL/URB/	TREE No.	PHOTO No.	BOTANICAL NAME	CHINESE COMMON NAME	SIZE (m)			CONDITION OF TREE IN TREE REMOVAL APPLICATION (PREVIOUS TREE SURVEY)			Old & Valuable Tree or Important Tree (OVT/IT)	CONDITION OF TREE IN CURRENT TREE SURVEY REPORT			SURVIVAL RATE AFTER TRANSPLANTING (High/Med/Low)	STATUS OF TREE IN TREE REMOVAL APPLICATION (PREVIOUS TREE SURVEY)	REMARKS
					OVERALL HEIGHT	TRUNK DIAMETER	CROWN SPREAD	FORM (Good/Fair/Poor)	HEALTH (Good/Fair/Poor)	AMENITY VALUE (High/Med/Low)		FORM (Good/Fair/Poor)	HEALTH (Good/Fair/Poor)	AMENITY VALUE (High/Med/Low)			
C04/202	T6600	1,2	*Ficus hispida*	對葉榕	4	0.12	2	Fair	Fair	Low		Fair	Fair	Low	Low	Fell	Twin-trunk, wound found on trunk
C04/202	T6601	3,4	*Macaranga tanarius*	血桐	6	0.58	6	Fair	Fair	Med		Fair	Fair	Med	Low	Fell	Die-back branches
C04/202	T6604	5,6	*Bridelia tomentosa*	土蜜樹	3	0.10	2	Fair	Fair	Low		Fair	Fair	Med	Low	Fell	Multi-trunk, watersprouts observed
C04/202	T6605	7,8	*Macaranga tanarius*	血桐	6	0.15	3	Fair	Fair	Low		Fair	Fair	Low	Low	Fell	Leaning trunk
C04/202	T6606	9,10	Dead Tree	枯樹	4	0.15	2	-	-	-		-	-	-	-	Dead	-
C04/202	T6607	11,12	*Ficus virens var. sublanceolata*	黃葛樹	5	0.24	3	Fair	Fair	Med		Fair	Fair	Med	Low	Fell	Tree species amended. Tree recorded as Celtis sinensis in Tree Removal Application
C04/202	T6608	13,14	*Celtis sinensis*	朴樹	6	0.26	3	Fair	Fair	Med		Fair	Fair	Low	Low	Fell	Leaning trunk, cavity found on trunk. Tree species amended. Tree recorded as Macaranga tanarius in Tree Removal Application
C04/202	T6609	15,16	*Macaranga tanarius*	血桐	6	0.25	5	Fair	Fair	Med		Fair	Fair	Med	Low	Fell	-
C04/202	T6610	17,18	*Ligustrum sinense*	山指甲	5	0.38	4	Fair	Fair	Med		Fair	Fair	Med	Med	Fell	Multi-trunk
C04/202	T6611	19,20,21	*Celtis sinensis*	朴樹	10	0.59	6	Good	Good	High		Good	Fair	High	Low	Retain	Wound found on branch
C04/202	T6612	22,23,24,25,26	*Celtis sinensis*	朴樹	10	1.01	8	Good	Good	High	IT	Good	Fair	High	Low	Retain	This tree is "important" because it has trunk diameter in excess of 1m. Cross branches, die-back branches, wound on branches, pruned branches
C04/202	T6613	27,28,29,30,31	*Macaranga tanarius*	血桐	10	0.68	7	Fair	Fair	Med		Fair	Poor	Low	Low	Retain	Die-back branches, water sprout, cavity found on trunk
C04/202	T7128	32,33,34	*Trema tomentosa*	山黃麻	7	0.17	4	Good	Good	Med		Good	Good	Med	Med	Retain	-
C04/202	T7129	35,36,37	*Macaranga tanarius*	血桐	6	0.23	4	Fair	Fair	Med		Fair	Fair	Med	High	Retain	Unbalanced crown, cavity found on trunk
C04/202	T7129A	89,90,91,92,93	*Ficus hispida*	對葉榕	5	0.15	4	Fair	Fair	Med		Poor	Fair	Med	Low	Retain	On slope, watersprouts observed, broken wound found on trunk
C04/202	T7139	38,40	*Leucaena leucocephala*	銀合歡	6	0.14	3	Fair	Fair	Low		Fair	Fair	Low	High	Retain	Die-back branches
C04/202	T7144	41,42	*Ficus microcarpa*	細葉榕	3	0.16	2	Fair	Good	Med		Fair	Good	Med	High	Transplant	Climber growing on tree, grow in raised planter, die-back branches
C04/202	T7145	39,43	*Tetradium glabrifolium*	楝葉吳茱萸	4	0.13	2	Fair	Fair	Low		Fair	Fair	Low	High	Fell	Wilted Twigs observed. Tree species amended. Tree recorded as Melia azedarach in Tree Removal Application
C04/202	T7147	44,45	*Tetradium glabrifolium*	楝葉吳茱萸	4	0.11	3	Fair	Fair	Low		Fair	Fair	Low	High	Fell	Wilted Twigs observed. Tree species amended. Tree recorded as Melia azedarach in Tree Removal Application
C04/202	T7148	46,47	*Casuarina equisetifolia*	木麻黃	9	0.28	4	Good	Good	Med		Good	Good	Med	Low	Fell	Climber growing on tree, watersprout observed
C04/202	T7150	48,49	*Cleistocalyx operculatus*	水翁	5	0.13	3	Fair	Good	Med		Fair	Good	Med	High	Transplant	Die-back branches
C04/202	T7151	50,51	*Casuarina equisetifolia*	木麻黃	10	0.36	4	Fair	Good	Med		Fair	Good	Med	Low	Fell	-
C04/202	T7153	52,53	*Cleistocalyx operculatus*	水翁	3	0.12	2	Fair	Good	Med		Fair	Good	Med	High	Transplant	-
C04/202	T7154	54,55	*Cleistocalyx operculatus*	水翁	3	0.12	2	Fair	Fair	Med		Fair	Fair	Med	Med	Fell	Water sprouts observed
C04/202	T7155	56,57	*Ficus microcarpa*	細葉榕	2	0.11	2	Fair	Good	Med		Fair	Good	Med	High	Transplant	Die-back branches
C04/202	T7180	58,59,60,61	*Ficus virens var. sublanceolata*	黃葛樹	9	0.20	5	Fair	Fair	Med		Fair	Fair	Med	Low	Retain	HyD SIMAR Slope Feature No. 7SW-C/C232, pruned branches with decay wood, wounds with exposed dead wood, adnormal bark crack on trunk, roots severed with dead wood exposed
C04/202	T7181	62,63	*Ficus variegata var. chlorocarpa*	青果榕	10	0.30	4	Fair	Fair	Med		Fair	Fair	Med	Low	Retain	Die-back branches, HyD SIMAR Slope Feature No. 7SW-C/C231
C04/202	T7182	64,65	*Aquilaria sinensis*	土沉香	6	0.24	3	Fair	Fair	High	IT	Fair	Fair	High	Low	Retain	Die-back branches. Recorded in AFCD's book "Rare and Precious Plants of Hong Kong" (2003). HyD SIMAR Slope Feature No. 7SW-C/C231
C04/202	T7183	66,67	*Sterculia lanceolata*	假蘇鐵	6	0.21	3	Fair	Fair	Med		Fair	Fair	Med	Low	Retain	Die-back branches, HyD SIMAR Slope Feature No. 7SW-C/C231. Tree species amended. Tree recorded as Litsea glutinosa in Tree Removal Application
C04/202	T7184	68,69,70	*Artocarpus macrocarpus*	波羅蜜	6	0.11	2	Fair	Fair	Med		Fair	Fair	Med	Low	Retain	Cavity found on trunk, die-back branches
C04/202	T7187	71,72,73	*Macaranga tanarius*	血桐	6	0.18	4	Fair	Fair	Med		Fair	Fair	Med	High	Retain	Watersprouts, die-back branches, decay wound found
C04/202	T7196	74,75,76	*Macaranga tanarius*	血桐	6	0.24	4	Fair	Fair	Med		Fair	Fair	Med	Med	Retain	On slope, die-back branches, watersprouts observed, decaying
C04/202	T7197	77,78,79	*Macaranga tanarius*	血桐	6	0.16	2	Fair	Fair	Med		Fair	Fair	Med	Med	Retain	On slope, benidng trunk, unbalanced crown, watersprouts, die-back branches and wound observed,
C04/202	T7198	80	*Not found (Macaranga tanarius)*	-	6	0.20	3	Fair	Fair	Med		-	-	-	-	Retain	Tree had been felled and only a tree stump left. As observed in photo taken in July 2010 provided by Dragages and site survey in August 2010. Supplementary information is provided in Appendix D.
C04/202	T7199	81,82	*Ficus hispida*	對葉榕	3	0.10	2	Fair	Fair	Low		Fair	Fair	Low	Med	Fell	-
C04/202	TA001	83,84	*Carica papaya*	番木瓜	7	0.20	4	-	-	-		Fair	Good	Low	Low	-	Friut tree
C04/202	TA002	85,86	*Carica papaya*	番木瓜	5	0.16	3	-	-	-		Fair	Good	Low	Low	-	Friut tree
C04/202	TA003	87,88	*Carica papaya*	番木瓜	4.5	0.16	3	-	-	-		Fair	Good	Low	Low	-	Friut tree

Appendix B

Drawings


KEY PLAN
SCALE 1:5000 (A1)
202
FEATURE NO. 7SW-C/F464
FEATURE NO. 7SW-C/C234
FEATURE NO. 7SW-C/C1153
FEATURE NO. 7SW-C/C204
HYD'S SIMAR SLOPE FEATURE NO. 7SW-C/C232
HYD'S SIMAR SLOPE FEATURE NO. 7SW-C/C231
LEGEND
GAZETTAL BOUNDARY
T0005(R) EXISTING TREE TO BE RETAINED
T0005(P) EXISTING TREE TO BE RETAINED WITH PRUNING
T0005(F) EXISTING TREE TO BE FELLED
T0005(T) EXISTING TREE TO BE TRANSPLANTED
T0005(D) EXISTING DEAD TREE
T0005(O) EXISTING TREE OUTSIDE GAZETTAL BOUNDARY
T0005(A) EXISTING ADDITIONAL TREE
0 5 10 15 20 25
METRES
1 : 500
DRAWN EI
DESIGNED SCC
CHECKED JP
APPROVED AD
DATE 13.SEP.2010
A GENERAL REVISION EI 20SEP10 AD
MTR
EXPRESS RAIL LINK
ORIGINATOR
CAD REF. C821_T_XRL_URB_C04_202.dgn
TITLE
CONTRACT 821
SHEK YAM TO MEI LAI ROAD TUNNELS
TREE SURVEY PLAN OF KWAI TSING DISTRICT
SCALE 1 : 500 @ A1
DRAWING NO. C821/T/XRL/URB/C04/202
REV. A

Appendix C

Tree Survey Photographs

PHOTOGRAPH No. 1



PHOTOGRAPH No. 2



PHOTOGRAPH No. 3



PHOTOGRAPH No. 4



PHOTOGRAPH No. 5



PHOTOGRAPH No. 6



PHOTOGRAPH No. 7



PHOTOGRAPH No. 8



PHOTOGRAPH No. 9



MTRC EXPRESS RAIL LINK (XRL) CONTRACT 821 SHEK YAM TO MEI LAI ROAD TUNNELS
TREE SURVEY PHOTOGRAPHS

SURVEY SHEET NO: C821/T/XRL/URB/C04/202

PHOTOGRAPH No. 10



PHOTOGRAPH No. 11



PHOTOGRAPH No. 12



PHOTOGRAPH No. 13



PHOTOGRAPH No. 14



PHOTOGRAPH No. 15



PHOTOGRAPH No. 16



PHOTOGRAPH No. 17



PHOTOGRAPH No. 18



MTRC EXPRESS RAIL LINK (XRL) CONTRACT 821 SHEK YAM TO MEI LAI ROAD TUNNELS
TREE SURVEY PHOTOGRAPHS

SURVEY SHEET NO: C821/T/XRL/URB/C04/202

PHOTOGRAPH No. 19



PHOTOGRAPH No. 20



PHOTOGRAPH No. 21



PHOTOGRAPH No. 22



PHOTOGRAPH No. 23



PHOTOGRAPH No. 24



PHOTOGRAPH No. 25



PHOTOGRAPH No. 26



PHOTOGRAPH No. 27



MTRC EXPRESS RAIL LINK (XRL) CONTRACT 821 SHEK YAM TO MEI LAI ROAD TUNNELS
TREE SURVEY PHOTOGRAPHS

SURVEY SHEET NO: C821/T/XRL/URB/C04/202

PHOTOGRAPH No. 28



PHOTOGRAPH No. 29



PHOTOGRAPH No. 30



PHOTOGRAPH No. 31



PHOTOGRAPH No. 32



PHOTOGRAPH No. 33



PHOTOGRAPH No. 34



PHOTOGRAPH No. 35



PHOTOGRAPH No. 36



MTRC EXPRESS RAIL LINK (XRL) CONTRACT 821 SHEK YAM TO MEI LAI ROAD TUNNELS
TREE SURVEY PHOTOGRAPHS

SURVEY SHEET NO: C821/T/XRL/URB/C04/202

PHOTOGRAPH No. 37



PHOTOGRAPH No. 38



PHOTOGRAPH No. 39



PHOTOGRAPH No. 40



PHOTOGRAPH No. 41



PHOTOGRAPH No. 42



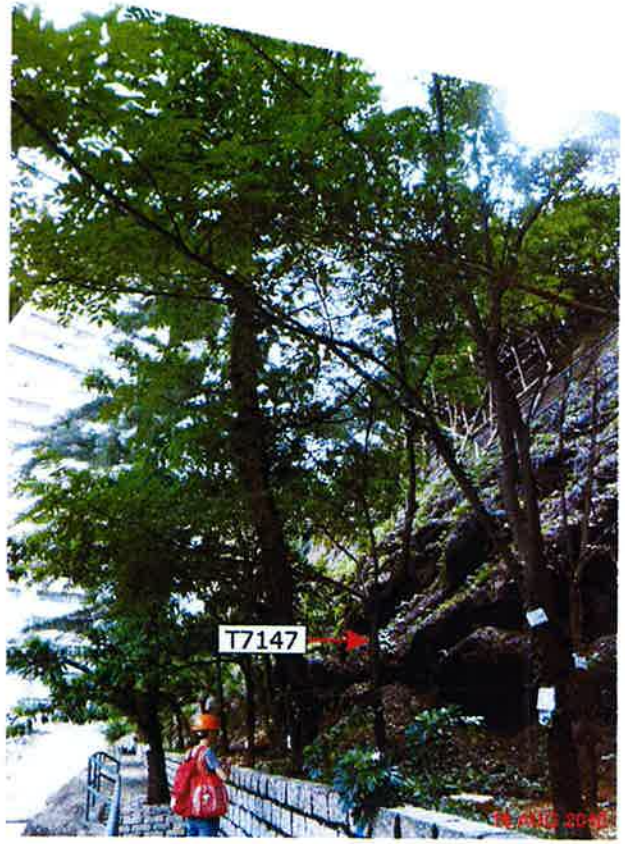
PHOTOGRAPH No. 43



MTRC EXPRESS RAIL LINK (XRL) CONTRACT 821 SHEK YAM TO MEI LAI ROAD TUNNELS
TREE SURVEY PHOTOGRAPHS

SURVEY SHEET NO: C821/T/XRL/URB/C04/202

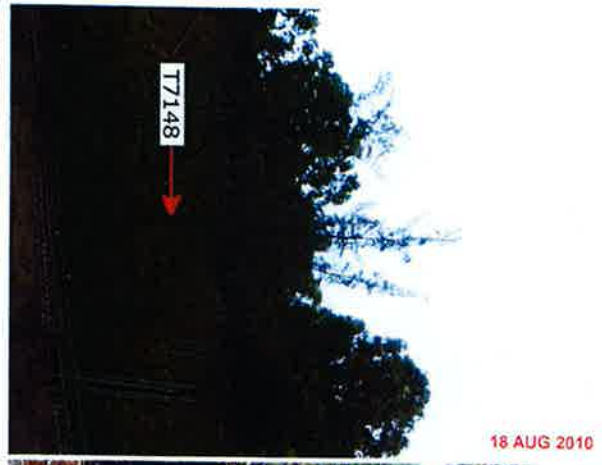
PHOTOGRAPH No. 44



PHOTOGRAPH No. 45



PHOTOGRAPH No. 46



PHOTOGRAPH No. 47



PHOTOGRAPH No. 48



PHOTOGRAPH No. 49



PHOTOGRAPH No. 50



PHOTOGRAPH No. 51



MTRC EXPRESS RAIL LINK (XRL) CONTRACT 821 SHEK YAM TO MEI LAI ROAD TUNNELS
TREE SURVEY PHOTOGRAPHS

SURVEY SHEET NO: C821/T/XRL/URB/C04/202

PHOTOGRAPH No. 52



PHOTOGRAPH No. 53



PHOTOGRAPH No. 54



PHOTOGRAPH No. 55



PHOTOGRAPH No. 56



PHOTOGRAPH No. 57



PHOTOGRAPH No. 58



PHOTOGRAPH No. 59



PHOTOGRAPH No. 60



MTRC EXPRESS RAIL LINK (XRL) CONTRACT 821 SHEK YAM TO MEI LAI ROAD TUNNELS
TREE SURVEY PHOTOGRAPHS

SURVEY SHEET NO: C821/T/XRL/URB/C04/202

PHOTOGRAPH No. 61



PHOTOGRAPH No. 62



PHOTOGRAPH No. 63



PHOTOGRAPH No. 64



PHOTOGRAPH No. 65



PHOTOGRAPH No. 66



PHOTOGRAPH No. 67



PHOTOGRAPH No. 68



PHOTOGRAPH No. 69



MTRC EXPRESS RAIL LINK (XRL) CONTRACT 821 SHEK YAM TO MEI LAI ROAD TUNNELS
TREE SURVEY PHOTOGRAPHS

SURVEY SHEET NO: C821/T/XRL/URB/C04/202

PHOTOGRAPH No. 70



PHOTOGRAPH No. 71



PHOTOGRAPH No. 72



PHOTOGRAPH No. 73



PHOTOGRAPH No. 74



PHOTOGRAPH No. 75



PHOTOGRAPH No. 76



PHOTOGRAPH No. 77



PHOTOGRAPH No. 78



MTRC EXPRESS RAIL LINK (XRL) CONTRACT 821 SHEK YAM TO MEI LAI ROAD TUNNELS
TREE SURVEY PHOTOGRAPHS

SURVEY SHEET NO: C821/T/XRL/URB/C04/202

PHOTOGRAPH No. 79



PHOTOGRAPH No. 80



PHOTOGRAPH No. 81



PHOTOGRAPH No. 82



PHOTOGRAPH No. 83



PHOTOGRAPH No. 84



PHOTOGRAPH No. 85



PHOTOGRAPH No. 86



PHOTOGRAPH No. 87



MTRC EXPRESS RAIL LINK (XRL) CONTRACT 821 SHEK YAM TO MEI LAI ROAD TUNNELS
TREE SURVEY PHOTOGRAPHS

SURVEY SHEET NO: C821/T/XRL/URB/C04/202

PHOTOGRAPH No. 90

PHOTOGRAPH No. 93

PHOTOGRAPH No.

PHOTOGRAPH No. 89

PHOTOGRAPH No. 92

PHOTOGRAPH No.

PHOTOGRAPH No. 88

PHOTOGRAPH No. 91

PHOTOGRAPH No.

Appendix D

Supplementary Information

Appendix D



T7198 taken on 26 AUG 2008



T7198 taken on 18 AUG 2010



T7198 taken on 19 JUL 2010 as provided by Dragages