Highways Department

Contract No. HY/2007/14 Widening of Tuen Mun Road at **Tsing Tin Interchange**

Final EM&A Review Report

Final

Certified by Environmental Team Leader Coleman Ng

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Verified by Independent Environmental Checker Dr. F. C. Tsang

Hyder Consulting Limited

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Executive Summary

This is the Final Environmental Monitoring and Audit (EM&A) Review Report for Construction Phase prepared by Ove Arup & Partners Hong Kong Limited (Arup), the designated Environmental Team (ET), for the Project "Widening of Tuen Mun Road at Tsing Tin Interchange".

The construction phase of the Project was commenced on 2 October 2008. Substantial completion of the construction work was certified by Highways Department on 9 January 2010. Termination of construction phase EM&A programme was submitted to EPD together with IEC's verification on 28 January 2010.

Environmental Monitoring Works

Environmental Monitoring Locations

Environmental monitoring and audit works for the Project was undertaken regularly as stipulated in the EM&A Manual. Two air monitoring locations (Kwong Choi Market (AM1(a)) and The Church of Christ in China Tam Lee Lai Fun Memorial Secondary School (AM3(a)) and one noise monitoring location (The Church of Christ in China Tam Lee Lai Fun Memorial Secondary School (TLLF(a)) were designated for the air and noise monitoring respectively.

Air Quality Monitoring

1-hour Total Suspended Particulates (TSP) and 24-hour TSP monitoring were conducted at both air monitoring locations (AM1(a) and AM3(a)) during the construction phase in accordance with the EM&A Manual. All 1-hour and 24-hour TSP measurement were below the Action/Limit Level. No exceedance of Action and Limit level was recorded.

Construction Noise Monitoring

Construction noise monitoring was conducted at monitoring location TLLF(a) during the construction stage in accordance with the EM&A Manual. A total of 30 Limit Level exceedances were recorded. On-site observations during the noise monitoring revealed that the noise source was mainly the traffic noise along Tuen Mun Road although it was also observed that the Contractor was undertaking the construction works. Together with the on-site observations and interpretation from the monitoring results, construction noise level was considered insignificant and below the noise limit level. It was therefore concluded that the noise exceedance was not related to the construction activities. No further actions were applicable.

Construction works were carried out in the restricted hours during the construction phase. The conditions stipulated in respective Construction Noise Permits (CNPs) of related construction works were followed by the Contractor. No non-compliance was recorded during the reporting period.

In accordance with the Section 3.9.1 of the EM&A Manual as mentioned in the Environmental Permit (EP) (EP No.: EP-302/2008/B) for the Project, operational traffic noise monitoring was conducted at the designated locations for the purpose of assessing the accuracy of traffic noise predictions by comparing the project noise impact predictions with the actual impact.

Two times of monitoring were conducted at 6-month intervals within the first year upon completion of the Project based on the approved Operational Traffic Noise Monitoring Plan. The Operation Traffic Noise Final Report which presented the first and second operational noise monitoring details and results together with IEC's verification was submitted to EPD on 10 February 2011.

Landscape and Visual

A total of sixteen landscape and visual monitoring audits were carried out during the construction phase. No non-compliance was recorded.

Waste Disposal

The total amount of inert C&D materials, chemical waste and general refuse of 8,935m³, and 220m³ were generated respectively during the construction phase and were disposed of at fill bank at Tuen Mun Area 38 and WENT landfill respectively. 4,120 kg chemical waste was disposed of at SENT Landfill and Dunwell Industrial Limited. The total amount of 42kg metals and 143kg paper/cardboard packaging were generated respectively and were collected by recycler.

Complaint Log

No complaint in relation to the environmental issues was recorded during the reporting period.

Notifications of Summons and Successful Prosecutions

No summonses or prosecution related to the environmental issues was recorded during the reporting period.

1 Introduction

Ove Arup & Partners Hong Kong Limited (Arup) was appointed by Highways Department (HyD) as the Environmental Team (ET) for Contract No. HY/2007/14 Widening of Tuen Mun Road at Tsing Tin Interchange (the "Project"). In accordance with the EM&A Manual of the Project, environmental monitoring including air quality, noise and landscape & visual issues were required during construction phase of the Project.

The construction phase of the Project was commenced on 2 October 2008 and completed on 9 January 2010. With the satisfactory of the conditions stipulated in the Clause 10.5.1 of the EM&A Manual under the Project, EPD had approved the termination the construction phase EM&A programme based on the recommendation proposed by ET Leader. The construction phase EM&A programme was terminated on 28 January 2010.

1.1 Project Background

The Project was undertaken at the northern part of Town Centre Section of Tuen Mun Road (TMR) near the Tuen Mun River Channel. The Project comprised the following works:

- (1) Widening of the 240 metre-long dual 2-lane section of TMR at Tsing Tin Interchange to a 11m wide dual 3-lane carriageway; and
- (2) Construction of associated slope works, geotechnical works, and works on the environmental mitigation, landscape, drainage, road lighting, water mains and traffic aids.

The location of the works area is indicated in Figure 1.1.

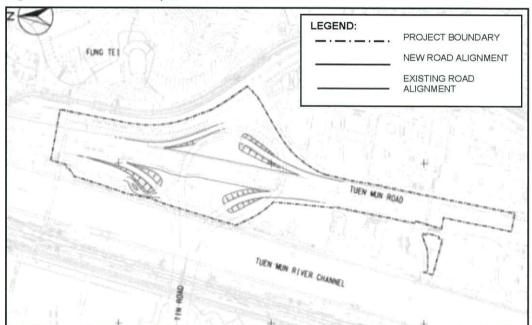


Figure 1.1 Site location plan

1.2 Project Organisation

The project organisation structure in relation to the environmental management is shown in **Figure 1.2**. Contacts of key environmental staff of the Project are shown in **Table 1.1**.

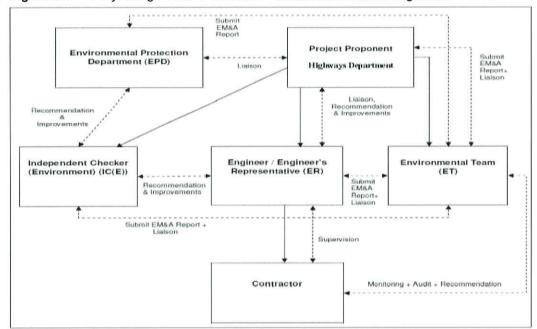


Figure 1.2 Project organisation structure – environnemental management

Table 1.1 Contacts of key environmental staff

Organization	Name	Telephone
Environmental Protection Department (EPD)		
EPO (Strategic Assessment)22	Thomas To	2835 1103
Engineer's Representative (ER)		
Highways Department: Senior Engineer	C.W. Ng	2762 4067
Independent Environmental Checker (IEC)		
Hyder Consulting Ltd: Independent Environmental Checker	Dr. F.C. Tsang	2911 2744
Environmental Team (ET)		
Ove Arup & Partners Hong Kong Ltd: Environmental Team Leader	Coleman Ng	2268 3097
Contractor		
China Harbour Engineering Company Limited		
Project Manager	Eric Wu	9786 8630
Safety and Environmental Officer	Brian Cheung	5168 7861

1.3 Project Area, Sensitive Receivers and Environmental Monitoring Locations

The location of the sensitive receivers and monitoring stations are shown in **Figures 1-2**, while **Table 1.2** shows the detail correspondences of monitoring stations.

Table 1.2 Summary of impact air quality and noise monitoring stations

Table 1.2	Summary of impact all quality	and noise monito	illig stations
ID	Premise	Address	Monitoring Location Detail
Air			
AM1(a)	Kwong Choi Market	2 Tsing Min Path	Roof-top of the market office at the market garden
AM3(a)	The Church of Christ in China Tam Lee Lai Fun Memorial Secondary School	10 San Wo Lane	Ground-floor garden at the corner of the school

ID	Premise	Address	Monitoring Location Detail
Noise			
TLLF(a)	The Church of Christ in China Tam Lee Lai Fun Memorial Secondary School	10 San Wo Lane	Car park of the school, facing to the construction area.

Figure 1-2 Location of the air quality and noise monitoring stations LEGEND: IMPACT DUST MONITORING STATION IMPACT NOISE MONITORING STATION AM1(a) TUEN MUN ROAD TLLF(a) AM3(a) TUEN MUN RIVER CHANNEL

Scope of Construction Works 2

2.1 **Construction Activities of the Reporting Period**

The major construction works were commenced on 2 October 2008 and completed on 9 January 2010.

The major components of this Project are listed below:

October to December 2008

- Site clearance;
- Re-compaction of fill slope;
- Provision of temporary footpath;
- Construction of mini-pile;
- Construction of noise barrier;
- Excavation for pile cap;
- Excavation & wailing for noise barrier footing & Underground Utilities (UU) slewing;
- Installation of sheet pile for noise barrier footing; and
- Pile testing.

January to March 2009

Site Clearance:

- Re-compaction of fill slope;
- Construction of noise barrier footing;
- Excavation for pile cap;
- Excavation & wailing for noise barrier footing & UU slewing;
- Installation of sheet pile for noise barrier footing;
- Installation for cap pile & UU slewing; and
- Road pavement and drainage for widen lane.

April to June 2009

- Site Clearance;
- Re-compaction of fill slope;
- Construction of noise barrier footing;
- Construction of sign gantry footing;
- Construction of pile cap;
- Existing UU lowering;
- Drainage & road re-construction; and
- Road pavement and drainage for widen lane.

July to September 2009

- Site Clearance;
- Construction of noise barrier;
- Fabrication of sign gantry;
- Existing UU lowering;
- Drainage & road re-construction; and
- Road pavement and drainage for widen lane.

October 2009 to January 2010

- Site clearance;
- Re-compaction of fill slope;
- Fabrication of sign gantry;
- Superstructure of noise barrier construction;
- Drainage & road re-construction; and
- Road pavement and drainage for widen lane.

3 Summary of EM&A Requirements

3.1 Monitoring Locations

In accordance with the EM&A Manual, three air quality monitoring locations (Lakeshore Building, Kwong Choi Market and The Church of Christ in Chan Tam Lee Lai Fun Memorial School) and two noise monitoring locations (Lakeshore Building and The Church of Christ in Chan Tam Lee Lai Fun Memorial School) were required for baseline and impact monitoring. However, owing to refusal of access to monitoring location at Lakeshore Building and no replacement was found, air quality and noise monitoring at this location were deleted.

Proposal for changing of environmental monitoring programme together with IEC's verification was submitted to EPD on 19 September 2008.

Therefore, two air quality and one noise monitoring stations were adopted for dust and noise monitoring respectively for the Project. Locations of air quality and noise monitoring stations are shown in **Figure 1.2** and summarized in **Table 1.2**.

3.2 Monitoring Parameters and Frequency

In accordance with the EM&A Manual, air quality monitoring was measured in terms of the TSP levels for both 24-hour and 1-hour periods. For noise monitoring, construction noise was measured in terms of the A-weighted equivalent continuous sound pressure level (L_{eq}). Furthermore, the monitoring of the implementation of the landscape and visual mitigation measures was also undertaken. The monitoring parameters, frequency, locations (**Figure 1.2**) and performance limits are summarised in **Table 3.1**.

Table 3.1 Monitoring parameters, frequency, locations and performance limits

Monitoring	Parameters	Frequency	Location	Action Level	Limit Level
Air	1-hr TSP (0700 – 1900 hours)	3 times every 6 days	AM1(a), AM3(a)	323μg/m³ for AM1(a); 305μg/m³ for AM3(a)	500 μg/m ³
	24-hr TSP (0000 – 2400 hours)	Once every 6 days		161μg/m³ for AM1(a); 168μg/m³ for AM3(a)	260 μ g/m ³
Noise	0700 - 1900 hours on normal weekdays - L _{eq(30min)}	Once per week	TLLF(a)	When one documented complaint is received	70 / 65 dB(A) ^(Note 1)
	0700 - 2300 hours on holiday; and 1900 - 2300 hours on all other days - L _{eq(5min)} (Note 2)	Once per week (Note 2)	Entire site area (Note 2)		70 (Note 2)
	2300 - 0700 hours of next day - L _{eq(5min)} (Note 2)				55 (Note 2)
Landscape	LR1 - landscape resources along roadside planting at Tsing Tin interchange; LR2 - landscape resources at Sai Hui Park	Once site audit per month	Entire site area	N/A	N/A

Notes:

- For normal day-time working hours, the noise criteria are 70 dB(A) and 65 dB(A) for normal teaching periods and examination period respectively.
- If works are to be carried out during restricted hours, the conditions stipulated in the Construction Noise Permit (CNP) issued by the Noise Control Authority have to be followed.

3.3 Environmental Quality Performance Limits (Action and Limit Levels)

The environmental quality performance limits, i.e. Action and Limit Levels (A/L Levels) were derived from the baseline monitoring results and reported in Baseline Monitoring Report ^[3]. All the monitoring results were checked against the A/L Levels. A/L Levels are summarised in **Table 3.1**.

3.4 Environmental Mitigation Measures

The environmental mitigation measures stipulated in the Project EIA Report [1] and the EM&A Manuel for the Contractor to follow. Major mitigation measures during the

construction phase in relation to the air quality, construction noise as well as landscape and visual are summarised in **Appendix A**.

3.5 Event and Action Plan

The Event Action Plans for air quality, construction noise as well as landscape and visual are appended in **Appendix B.**

4 Environmental Monitoring Results

4.1 Air Quality Monitoring Results and Observations

4.1.1 Weather Condition

No adverse weather conditions, in particular adverse wind speed & wind direction and fog & rain that may significantly affect or invalidate the collected monitoring data, were recorded during the monitoring dates.

4.1.2 1-hour and 24-hour TSP Monitoring Results

Monitoring of 1-hour TSP and 24-hour TSP were conducted at both monitoring stations AM1(a) and AM3(a) during the construction phase. Graphical presentation of 1-hour TSP and 24-hour TSP monitoring results are shown in **Appendix C**.

4.1.3 General Observations

It was observed from the graphs that the higher TSP levels were recorded between October 2008 to March 2009 as well as October 2009 to Jan 2010. Based on the field observations, no particular abnormal construction activities were observed. In addition, dust control measures including water spraying and covering the exposed soil were well implemented, it was therefore concluded that the elevations of TSP levels were not related to the Project.

4.1.4 Exceedance for Air Quality Monitoring

All measured 1-hour and 24-hours TSP were below the Action and Limit Level. No exceedance of Action and Limit level was recorded.

4.2 Noise Monitoring Results and Observations

4.2.1 Weather Condition

No adverse weather conditions, in particular adverse wind speed and rain that may significantly affect or invalidate the collected monitoring data, were recorded during the monitoring periods.

4.2.2 Noise Monitoring Results

4.2.2.1 Non-restricted Hours

Monitoring of the construction noise level was conducted at the monitoring location TLLF(a) during non-restricted hours. Graphical presentations of the monitoring results are shown in **Appendix D.**

4.2.2.2 Restricted Hours

The construction works and activities such as road marking and sign gantry installation etc were carried out during some restricted hours. Relevant Construction Noise Permits (CNPs) were granted by EPD before the works commencement, the Contractor strictly followed the conditions stipulated in the CNPs. There was no non-compliance recorded.

4.2.3 General Observations

Based on the field observations, no particular abnormal construction activities were observed. Traffic noise along Tuen Mun Road had been noticed.

4.2.4 Exceedance of Limit Levels for Construction Noise

A total thirty Limit Level exceedances was recorded during non-restricted hours and are summarized in **Table 4.1**. Based on the field observations, it was revealed that the exceedances were mainly caused by traffic noise along Tuen Mun Road. It was therefore concluded that the noise exceedances were not related to construction activities of the Project. No further action was applicable.

No non-compliance was recorded in restricted hours during the reporting period.

Table 4.1 Summary of exceedance of the construction noise monitoring during nonrestricted hours

Month	No. of Measurements	Range of Monitoring Results	Limit Level	No. of exceedances
WIOITH	No. of Measurements	Leq (30-min), dB(A)	dB(A)	No. of exceedances
Oct 08	5	67 – 75		4
Nov 08	4	68 – 74		3
Dec 08	5	66 – 74		3
Jan 09	4	67 - 71		3 (Note 2)
Feb 09	4	66 - 70		0
Mar 09	4	67 - 68	70/65 (Note 1)	0
Apr 09	5	68 - 74		1
May 09	4	69 - 73		2
Jun 09	4	71 – 73		4 (Note 2)
Jul 09	5	69 - 74		3
Aug 09	4	70 - 72		1
Sep 09	5	70 - 73		2
Oct 09	4	70		0
Nov 09	4	70 - 72		2
Dec 09	5	70		0
Jan 10	4	70		2 (Note 2)
Total No.	70	N/A	N/A	30

Notes:

4.2.5 Operational Traffic Noise Monitoring

In accordance with the Section 3.9.1 of the EM&A Manual of the Project, operational traffic noise monitoring is required to be conducted at the designated locations for the purpose of assessing the accuracy of traffic noise predictions by comparing the project noise impact predictions with the actual impact. Two times of monitoring were conducted at 6-month intervals within the first year upon completion of the Project based on the approved Operational Traffic Noise Monitoring Plan.

The first operational noise monitoring was conducted at TMHQ (19/F, Block F, Tsing Chung Koon Road Government Quarter), VB (25/F, Victory Building) and LB1 (20/F Lakeshore Building) on 12 July 2010 and MYS (4/F and 6/F, SKH Mung Yan Primary School) on 26 October 2010 respectively, whilst the second operational noise monitoring at the same

For normal day-time working hours, the noise criteria are 70 dB(A) and 65 dB(A) for normal teaching periods and examination periods respectively.

Due to the examination were conducted between 9 to 22 January, 8 to 19 June 2009 as well as 11 to 21 January 2010, the limit level was 65 dB(A) and 2 exceedances were recorded during each examination period.

locations was conducted on 6 January 2011. The traffic condition including traffic flow, percentage of heavy and light vehicles as well as traffic speeds were recorded during each monitoring event.

The overall measured noise levels at all monitoring locations were found lower than the projected noise levels which were calculated based on the traffic count results in the first and second operational noise monitoring.

The Operation Traffic Noise Final Report [4] which presented the first and second operational noise monitoring details and results together with IEC's verification was submitted to EPD on 10 February 2011.

4.3 Landscape and Visual Monitoring Results

4.3.1 Landscape and Visual Monitoring Audit Results

A total of sixteen monthly landscape and visual monitoring audits was conducted during the construction phase. The design, implementation and maintenance of landscape and mitigation measures as stipulated in the EM&A Manual were inspected. No non-compliance was recorded during the reporting period.

4.4 Waste Management

Disposal of waste material during construction phase complied with the corresponding waste disposal requirements. The total amounts of different types of waste generated by the activities of the Project in the reporting period are summarized in **Table 4.2**.

Table 4.2 Total amounts of waste generated during the reporting period

Waste Type	Total Amount	Disposal Locations
Inert C&D Waste	8,935 m³	Disposal of at fill blank at Tuen Mun Area 38
Metals	42 kg	D
Paper/cardboard packaging	143 kg	Recycle collector
Chemical Waste	4,120 kg (Note 1)	Disposal of at SENT landfill and Dunwell Industrial Limited (Note 1)
General Refuse	220 m³	Disposal of at WENT landfill

Notes:

5 Implementation Status of Environmental Mitigation Measures

The Contractor had implemented various environmental mitigation measures as stipulated in EIA Report and EM&A Manual. Major mitigation measures during the reporting period in relation to the air quality, construction noise as well as landscape & visual are summarised in **Appendix E**.

6 Summary of the Non-compliance, Complaint, Notification of Summons and Successful Prosecutions

6.1 Summary of Non-compliance

No non-compliance of the air quality, noise as well as landscape and visual was recorded.

 ^{2,300} and 1,820 kg was disposed at SENT Landfill between Jan and Aug 2009 and Dunwell Industrial Limited between Sep 2009 and Jan 2010 respectively.

6.2 Review of the Reasons for and the Implications of Exceedances

There was no non-compliance was recorded. Therefore, review of the non-compliance was not required.

6.3 Summary of Action Taken

There was no non-compliance was recorded. Therefore, no further action was required.

6.4 Compliant Record

No environmental complaint was recorded.

6.5 Notification of Summons and Successful Prosecution

No summon or prosecution related to environmental issues was recorded against the Project.

7 Comparison of EM&A Data with the EIA Predication

7.1 Comparison of the EM&A Data with the EIA Predication

There was no air quality predication in the EIA Report. Therefore, no comparison was conducted for air monitoring results (i.e. 1-hour and 24-hour TSP).

The noise monitoring data collected were generally in line with the predication of the EIA Report.

The total amounts of inert C&D waste disposal were less than the predication stipulated of the EIA Report.

7.2 Review of Monitoring Methodology and EM&A Programme

The environmental monitoring methodology and procedures were regularly reviewed by the ET. No modification to the existing monitoring methodologies was recommended.

Implementation of EM&A programme and effectiveness and efficiency of the mitigation measures were considered satisfactory.

8 Conclusions and Recommendations

The construction phase of the Project was commenced on 2 October 2008 and completed on 9 January 2010. The EM&A programme including air quality, noise, landscape & visual and environmental site inspection had been implemented.

No exceedance of Action and Limit Level for 1-hour and 24-hour TSP monitoring was recorded.

A total thirty Limit Level exceedances of noise monitoring during non-restricted hours was recorded. The noise exceedances were mainly caused by traffic noise along Tuen Mun Road. It was therefore concluded that the noise exceedances were not related to the Project. No further action was required.

No non-compliance of the landscape and visual monitoring was recorded.

No complaint, summons or prosecution related to environmental issues was recorded.

The environmental monitoring results indicated that the construction activities complied with the relevant environmental requirements. The mitigation measures stipulated in the EIA were effectively implemented by the Contractor. Environmental performance of the Contractor during the reporting period was generally satisfactory.

As a whole, EM&A programme had been well conducted and no particular recommendation was advised for improvement of the EM&A programme.

9 References

- [1] Maunsell Consultants Asia Ltd. December 2007. Quotation Ref No. Hy(S)Q/026/2006 Widening of Tuen Mun Road at Tsing Tin Interchange – Environmental Impact Assessment Report
- [2] Maunsell Consultants Asia Ltd. December 2007. Quotation Ref No. Hy(S)Q/026/2006 Widening of Tuen Mun Road at Tsing Tin Interchange – Environmental Monitoring & Audit Manual
- [3] Ove Arup & Partners Hong Kong Limited. September 2008. Contract No. HY/2007/14 Widening of Tuen Mun Road at Tsing Tin Interchange Baseline Monitoring Report (Revision 6)
- [4] Ove Arup & Partners Hong Kong Limited. February 2011. Contract No. HY/2007/14 Widening of Tuen Mun Road at Tsing Tin Interchange – Operational Traffic Noise Final Report (Final)

Appendix A

Environmental Mitigation Measures

Environmental Mitigation Measures

The environmental mitigation measures carried out were basically followed the requirements described in the EIA report. Major mitigation measures during the construction phase in relation to the air quality, construction noise as well as landscape and visual are summarised as follows:

Air Quality (Dust) related

- Skip hoist for material transport should be totally enclosed by impervious sheeting;
- Every vehicle should be washed to remove any dusty materials from its body and wheels before leaving a construction site;
- The area where vehicle washing takes place and the section of the road between the washing facilities and the exit point should be paved with concrete, bituminous materials or hardcores;
- Where a site boundary adjoins a road, streets or other accessible to the public, hording of not less than 2.4m high from ground level should be provided along the entire length except for a site entrance or exit;
- Every stack of more than 20 bags of cement should be covered entirely by impervious sheeting places in an area sheltered on the top and the 3 sides;
- All dusty materials should be sprayed with water prior to any loading, unloading or transfer operation so as to maintain the dusty materials wet;
- The height from which excavated materials are dropped should be controlled to a minimum practical height to limit fugitive dust generation from unloading;
- The load of dusty materials carried by vehicle leaving a construction site should be covered entirely by clean impervious sheeting to ensure dust materials do not leak from the vehicle; and
- Instigation of an environmental monitoring and auditing program to monitor the construction process in order to enforce controls and modify method of work if dusty conditions arise.

Construction Noise related

- Use of quiet powered mechanical equipment
- Road paving Adoption of quiet PMEs, movable noise barrier and scheduling of PMEs during normal teaching period, only one PME to be operated and the work area not less than 22m from NSR TLLF or cease operation of PMEs if work area less than 30m from NSR TLLF during examination period. The barrier material shall have a surface mass of not less than 14 kg/m² on skid footing with 25mm thick internal sound absorptive lining.
- Road marking Adoption of quiet PMEs and movable noise barrier during normal teaching period and examination period. The work area should be located not less than 18m from NSR TLLF during examination period. The barrier material shall have a surface mass of not less than 14 kg/m2 on skid footing with 25mm thick internal sound absorptive lining.
- Construction of noise barrier Adoption of quiet PMEs and movable noise barrier during examination period, piling operation for construction of noise barrier would also be ceased during examination period. The barrier

material shall have a surface mass of not less than 14 kg/m² on skid footing with 25mm thick internal sound absorptive lining.

· Good Site Practice:

- 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 should be properly maintained during the construction program.
- Mobile plant, if any, should be sited as far away from NSRs as possible.
- Machines and plant (such as trucks) that may be in intermittent use should be shut down between works 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.
- Material stockpiles and other structures should be effectively utilized, wherever practicable, in screening noise from on-site construction activities.
- Scheduling the noisy work to be conducted in non-school hours or long holiday such as summer vacation as possible.

Landscape and Visual related

- Topsoil, where identified, should be stripped and stored for re-use in the construction of the soft landscape works, where practical.
- Existing trees to be retained on site should be carefully protected during construction.
- Trees unavoidably affected by the works should be transplanted where practical.
- Compensatory tree planting should be provided to compensate for felled trees.
- Control of night-time lighting.
- Erection of decorative screen hoarding compatible with the surrounding setting.

Appendix E	
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Event Action Plans

The action required to be taken by different parties in case of occurrence of exceedance of A/L Levels are summarised in the Event and Action Plan in **Tables A to C**.

Table A Event and Action Plan for Air Quality

Γable A	Event and Action P	lan for Air Quality				
Event	Action					
	ET	IEC	ER	Contractor		
Action Level						
Exceedance for one sample	Identify source and investigate the causes of exceedance; Inform Contactor, IEC and ER; Repeat measurement to confirm finding.	Check monitoring data submitted by ET; Check Contractor's working method.	Notify Contractor.	Rectify any unacceptable practice; Amend working methods if appropriate.		
Exceedance for two or more consecutive samples	1. Identify source and investigate the causes of exceedance; 2. Inform Contractor, IEC and ER; 3. Increase monitoring frequency to daily; 4. Discuss with IEC and Contractor on remedial. actions required; 5. Assess the effectiveness of Contractor's remedial actions; 6. If exceedance continues, arrange meeting with IEC and ER; 7. If exceedance stops, cease additional monitoring.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss with ET and Contractor on possible remedial measures; 4. Advise the ER on the effectiveness of the proposed remedial measures;	Confirm receipt of notification of exceedance in writing; Notify Contractor; In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented; Supervise implementation of remedial measures; Conduct meeting with ET and IEC if exceedance continues.	Discuss with ET and IEC on proper remedial actions; Submit proposals for remedial actions to ER and IEC within three working days of notification; Implement the agreed proposals; Amend proposal if appropriate.		
Limit Level						
Exceedance for one sample	Identify source and investigate the causes of exceedance; Inform Contractor, IEC, ER, and EPD; Repeat measurement to confirm finding; Assess effectiveness of Contractor's remedial actions and keep EPD, IEC and ER informed of the results.	Check monitoring data submitted by ET; Check Contractor's working method; Discuss with ET and Contractor on possible remedial measures; Advise the ER on the effectiveness of the proposed remedial measures.	Confirm receipt of notification of exceedance in writing; Notify Contractor; In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented; Supervise implementation of remedial	Take immediate action to avoid further exceedance; Discuss with ET and IEC on proper remedial actions; Submit proposals for remedial actions to ER and IEC within three working days of notification; Implement the agreed proposals.		

Event	Action					
	ET THE	IEC	ER	Contractor		
Exceedance for	Notify IEC, ER,	Check monitoring	measures; 5. Conduct meeting with ET and IEC if exceedance continues. 1. Confirm receipt	Take immediate		
Exceedance for two or more consecutive samples	 Notify IEC, ER, Contractor and EPD; Repeat measurement to confirm findings; Carry out analysis of Contractor's working procedures to identify source and investigate the causes of exceedance; Increase monitoring frequency to daily; Arrange meeting with IEC, ER and Contractor to discuss the remedial actions to be taken; Assess effectiveness of Contractor's remedial actions and keep EPD, IEC and ER informed of the results; If exceedance stops, cease additional monitoring. 	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss amongst ER, ET, and Contractor on the potential remedial actions; 4. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly.	1. Confirm receipt of notification of exceedance in writing; 2. Notify Contractor; 3. In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented; 4. Supervise implementation of remedial measures; 5. If exceedance continues, consider stopping the Contractor to continue working on that portion of work which causes the exceedance until the exceedance is abated.	1. Take immediate action to avoid further exceedance; 2. Discuss with ET, ER and IEC on proper remedial actions; 3. Submit proposals for remedial actions to IEC within three working days of notification; 4. Implement the agreed proposals; 5. Submit further remedial actions in problem still not under control; 6. Stop the relevant portion of works as instructed by the ER until the exceedance is abated.		

Table B Event and Action Plan for Construction Noise

Event	Action			
	ET	IEC	ER	Contractor
Action Level being exceeded	Notify ER, IEC and Contractor; Carry out investigation; Report the results of investigation to the IEC, ER and Contractor; Discuss with the IEC and Contractor on remedial measures required; Increase	Review the investigation results submitted by the ET; Review the proposed remedial measures by the Contractor and advise the ER accordingly; Advise the ER on the effectiveness of the proposed remedial	Confirm receipt of notification of failure in writing; Notify Contractor; In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented; Supervise the implementation of remedial measures.	Submit noise mitigation proposals to ET and ER; Implement noise mitigation proposals.

Event	Action					
	ET	IEC	ER	Contractor		
	monitoring frequency to check mitigation effectiveness.	measures.				
Limit Level being exceeded	1. Inform IEC, ER, Contractor and EPD; 2. Repeat measurements to confirm findings; 3. Increase monitoring frequency; Identify source and investigate the cause of exceedance; 4. Carry out analysis of Contractor's working procedures; 5. Discuss with the IEC, Contractor and ER on remedial measures required; 6. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results; 7. If exceedance stops, cease additional monitoring.	1. Discuss amongst ER, ET, and Contractor on the potential remedial actions; 2. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly.	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented; 4. Supervise the implementation of remedial measures; 5. If exceedance continues, consider stopping the Contractor to continue working on that portion of work which causes the exceedance until the exceedance is abated.	1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to ET and ER within 3 working days of notification; 3. Implement the agreed proposals; 4. Submit further proposal if problem still not under control; 5. Stop the relevant portion of works as instructed by the ER until the exceedance is abated.		

Table C Event and Action plan for Landscape and Visual

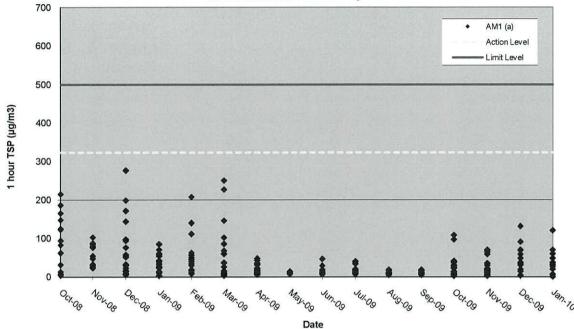
Event		Ac	ction	
	ET	IEC	ER	Contractor
Non- conformity on one occasion	Identify source Inform the IEC and the ER Discuss remedial actions with the IEC, the ER and the Contractor Monitor remedial action until rectification has been completed	Check report Check the Contractor's working method Discuss with the ER and the Contractor on possible remedial measures Advise the ER on effectiveness of proposed remedial	Notify the Contractor Ensure remedial measures are properly implemented	Amend working methods Rectify damage and undertake remedial measures or any necessary replacement

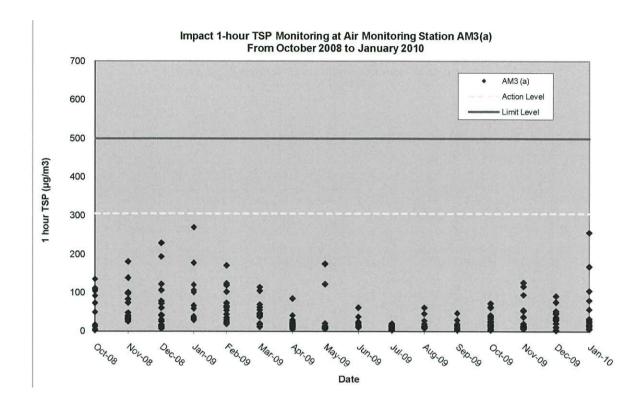
Event		Ac	ction	
Nog Est	ET	IEC measures	ER	Contractor
Repeated Non- conformity	1. Identify source 2. Inform the IEC and the ER 3. Increase monitoring (site audit) frequency 4. Discuss remedial actions with the IEC, the ER and the Contractor 5. Monitor remedial actions until rectification has been completed 6. If exceedance stops, cease additional monitoring (site audit)	1. Check report 2. Check the Contractor's working method 3. Discuss with the ER and the Contractor on possible remedial measures 4. Advise the ER on effectiveness of proposed remedial measures 5. Supervise implementation of remedial measures	Notify the Contractor Ensure remedial measures are properly implemented	Amend working methods Rectify damage and undertake remedial measures or any necessary replacement

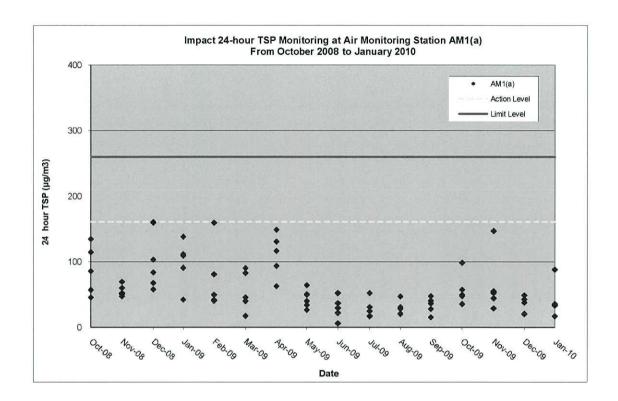
Appendix C

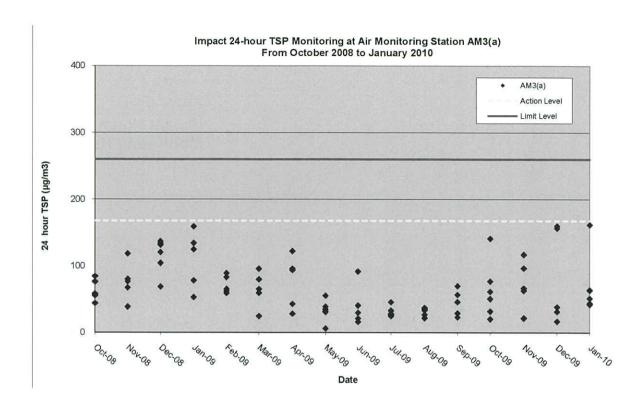
Impact Air Monitoring Results



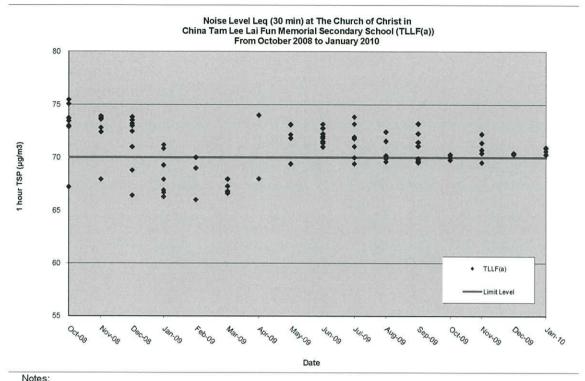








Appendix D
Impact Noise
Monitoring Results



(1) All noise results exceeding limit level were not project-related.

Appendix E

Environmental Mitigation Implementation Schedule

Summary of Environmental Mitigation Implementation Schedule

EIA Ref #	Mitigation Measures	Location / Timing	Status *
Air Quality Control			
53.8.1	Implementation of dust suppression measures stipulated in Air Pollution Control (Construction Dust) Regulation.	Work site / during construction	
	 skip hoist for material transport should be totally enclosed by impervious sheeting 		8
	 every vehicle should be washed to remove any dusty materials from its body and wheels before leaving a construction site 		> \
	 the area where vehicle washing takes place and the section of the road between the washing facilities and the exit point should be paved with concrete, bituminous materials or hardcores 		· XX
	 where a site boundary adjoins a road, streets or other accessible to the public, hording of not less than 2.4m high from ground level should be provided along the entire length except for a site entrance or exit 		` `
	 every stack of more than 20 bags of cement should be covered entirely by impervious sheeting places in an area sheltered on the top and the 3 sides 		>
	 all dusty materials should be sprayed with water prior to any loading, unloading or transfer operation so as to maintain the dusty materials wet 		>
	 the height from which excavated materials are dropped should be controlled to a minimum practical height to limit fugitive dust generation from unloading 		N/A
	 the load of dusty materials carried by vehicle leaving a construction site should be covered entirely by clean impervious sheeting to ensure dust materials do not leak from the vehicle 		N/A
	 instigation of an environmental monitoring and auditing program to monitor the construction process in order to enforce controls and modify method of work if dusty conditions arise 		N/A
Noise Control			
S4.8.1	Use of quiet powered mechanical equipment	Work Sites / During Construction	N/A
S4.8.5 – S4.8.6	Road paving - Adoption of quiet PMEs, movable noise barrier and scheduling of PMEs during normal teaching period, only one PME to be operated and the work area not less	Work Site for road paving, road marking and	N/A
	than 22m from NSR TLLF or cease operation of PMEs if work area less than 30m from		
	NSR TLLF during examination period. The barrier material shall have a surface mass of	barrier in the vicinity of	

Notes (*): ~ - Compliance; N/A - Not Applicable; N/O - Not Observed; Rdr - Reminder; Obs - Observation; N/C - Non Compliance

EIA Ref #	Mitigation Measures	Location / Timing	Status *
	not less than 14 kg/m² on skid footing with 25mm thick internal sound absorptive lining.	NSR TLFF (The Church of Christ in China Tam Lee Lai Fun Memorial Secondary School) / During Construction	
S4.8.5 & S4.8.7	Road marking - Adoption of quiet PMEs and movable noise barrier during normal teaching period and examination period. The work area should be located not less than 18m from NSR TLLF during examination period. The barrier material shall have a surface mass of not less than 14 kg/m² on skid footing with 25mm thick internal sound absorptive lining.	Work Site for road marking in the vicinity of NSR TLFF / During Construction	N/A
S4.8.5 & S4.8.8	Construction of noise barrier - Adoption of quiet PMEs and movable noise barrier during examination period, piling operation for construction of noise barrier would also be ceased during examination period. The barrier material shall have a surface mass of not less than 14 kg/m² on skid footing with 25mm thick internal sound absorptive lining.	Work Site for construction of noise barrier in the vicinity of NSR TLFF / During Construction	N/A
S4.9.2	 Good Site Practice: Only well-maintained plant should be operated on-site and plant should be serviced regularly during the construction program. 	Work Sites / During Construction	>
	 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 away from NSRs as possible. 		>
	 Machines and plant (such as trucks) that may be in intermittent use should be shut down between works 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. 		`
	 Material stockpiles and other structures should be effectively utilized, wherever practicable, in screening noise from on-site construction activities. 		N/A
	 Scheduling the noisy work to be conducted in non-school hours or long holiday such as summer vacation as possible. 		N/A

Notes (*): ✓ - Compliance; N/A - Not Applicable; N/O - Not Observed; Rdr - Reminder; Obs - Observation; N/C - Non Compliance

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EIA Ref #	Mitigation Measures	Location / Timing	Status *
Water Quality Control			
\$5.7.2	Measures for Tuen Mun River Channel	Work site / During the	3
	 Site runoff would be directed towards regularly cleaned and maintained sand traps, silt traps and where appropriate. 	construction period	>
	Oil/grease separators to minimise risk of sedimentation and pollution to the River Channel.		A/N
	 Debris and rubbish generated on-site would be collected, handled and disposed of properly. 		>
	The stockpile or temporary storage area and chemical waste storage area shall be located at least 30m away from Tuen Mun River Channel.		>
\$5.7.3	Construction Runoff and Drainage	Work site / During the	
	The site practices outlined in ProPECC PN 1/94 "Construction Site Drainage" shall be implemented including:	construction period	
	 Sand/silt removal facilities such as sand traps, silt traps or sediment basins shall be provided to remove sand/silt particles from runoff to meet the requirements of the Technical Memorandum standard under the Water Pollution Control Ordinance. The design of silt removal facilities should be based on the guidelines provided in ProPECC PN 1/94. All drainage facilities and erosion and sediment control 		>
	Water pumped out from foundation excavations should be discharged into silt removal facilities.		>
	• Careful programming of the works to minimise surface excavations during the rainy season. If excavation of soil cannot be avoided during the rainy season, or at any time of year when rainstorms are likely, exposed slope surfaces should be covered by a tarpaulin or other means. Other measures that need to be implemented before, during, and after rainstorms are summarized in ProPECC PN 1/94.		`
	 Exposed soil surface shall be protected by paving as soon as possible to reduce the potential of soil erosion. 		0/N
	Open stockpiles of construction materials on site shall be covered with tarpaulin or		>

EIA Ref #	Mitigation Measures	Location / Timing	Status *
	similar fabric during rainstorms.		
S5.7.4 – S5.7.5	Sewage from General Construction Activities Debris and rubbish generated on-site shall be collected, handled and disposed of properly to avoid entering the nearby nullah and stormwater drains. Stockpiles of cement and other construction material should be kept covered when not being used.	Work site / During the construction period	•
	Oils and fuels should only be used and stored in designated areas which have pollution prevention facilities. All fuel tanks and storage areas shall be provided with locks and be sited on sealed areas, within bunds of a capacity equal to 110% of the storage capacity of the largest tank. The bund should be drained of rainwater after a rain event.		>
S5.7.6	Sewage Effluent Temporary sanitary facilities, such as portable toilets, shall be employed on-site. A licensed contractor would be responsible for appropriate disposal and maintenance of these facilities.	Work site and adjacent water / During the design and construction period.	>
Waste Management			
\$6.6.1	Good Site Practices	Work site / During the	
	Recommendations for good site practices during the construction activities include:	construction period	
	 nomination of an approved person, such as a site manager, to be responsible for good site practices, arrangements for collection and effective disposal to an appropriate facility, of all wastes generated at the site; 		>
	 training of site personnel in proper waste management and chemical waste handling procedures; 		>
	 provision of sufficient waste disposal points and regular collection for disposal; 		`
	 appropriate measures to minimise windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers; 		> >
	 regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors; and 		>
	 recording system for the amount of wastes generated, recycled and disposed of (including the disposal sites). 		>

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EIA Ref #	Mitigation Measures	Location / Timing	Status *
S6.6.2	Waste Reduction Measures	Work site / During	
	Waste reduction is best achieved at the planning and design stage, as well as by ensuring the implementation of good site practices. Recommendations to achieve waste reduction include:	planning and design stage, and construction stage	
	 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; 		>
	 to encourage collection of aluminium cans, PET bottles and paper, separate labelled bins shall be provided to segregate these wastes from other general refuse generated by the work force; 		O/N
	any unused chemicals or those with remaining functional capacity shall be recycled;		O/N
	 use of reusable non-timber formwork to reduce the amount of C&D material. 		
	 prior to disposal of C&D waste, it is recommended that wood, steel and other metals shall be separated for re-use and / or recycling to minimise the quantity of waste to be disposed of to landfill; 		> >
	proper storage and site practices to minimise the potential for damage or contamination of construction materials; and		>
	plan and stock construction materials carefully to minimise amount of waste generated and avoid unnecessary generation of waste.		>
\$6.6.4	General Refuse	Work site / During the	
	General refuse should be stored in enclosed bins or compaction units separate from C&D material. A licensed waste collector should be employed by the contractor to remove general refuse from the site, separately from C&D material.	construction period	>
	A collection area should be provided where wastes can be stored and loaded prior to removal from site. An enclosed and covered area is recommended to reduce the occurrence of wind blow light material.		>
S6.6.5	Chemical Wastes	Work site / During the	
	After use, chemical wastes (for example, cleaning fluids, solvents, lubrication oil and fuel) should be handled according to the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes. Spent chemicals should be collected by a licensed collector for disposal at the CWTF or other licensed facility in accordance with the Waste	construction period	`

Notes (*): ^ - Compliance; N/A - Not Applicable; N/O - Not Observed; Rdr - Reminder; Obs - Observation; N/C - Non Compliance

EIA Ref #	Mitigation Measures	Location / Timing	Status *
	Disposal (Chemical Waste) (General) Regulation.		
S6.6.6 & 6.6.7	Construction and Demolition Material	Work site / During the	
	Excavated fill material shall be reused on-site as backfill material as far as possible. The material to be disposed at public fill reception facility shall be free from marine mud, household refuse, plastic, metals, industrial and chemical waste, animal and vegetable matter, and other material considered to be unsuitable by the Filling Supervisor.	construction period	>
Hazard to Life			
\$8.8.4	The number of workers on site during construction stage should be kept as the level as assessed in this report.	Works area/ During construction phase	N/O
	• Emergency evacuation procedures should be formulated and Highways Department (HyD) should ensure all workers on site should be familiar with these procedures as well as the route to escape in case of gas release incident occur. Relevant Departments, such as Water Supplies Department and Fire Services Department, should be consulted during the development of Emergency procedures. Diagram showing the escape routes to a safe place should be posted in the site notice boards and at the entrance/exit of		
	site. • The emergency procedures should specify means of providing a rapid and direct		O/N
			ģ
	• The construction site officer of HyD should establish a communication channel with the TMWTW operation personnel during construction stage. In case of any hazardous incidents in the treatment works, operation personnel of TMWTW should advise the site officer to evacuate the construction workers.		O Z
S8.8.5	Induction Training should be provided to any staff before working on site at the Tsing Tin Interchange work site.	Works area/During construction phase	O/N
58.8.6	Periodic drills should be coordinated and conducted to ensure all construction staffs are familiar with the evacuation procedures. Upon completion of the drills, a review on every step taken should be conducted to identify area of improvement.	Works area/ During construction phase	O/N
Ecology			
S9.7.2	Construction activities would be confined to developed areas of low ecological value, and	Works area / During construction phase	,

Notes (*): ✓ - Compliance; N/A - Not Applicable; N/O - Not Observed; Rdr - Reminder; Obs - Observation; N/C - Non Compliance

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EIA Ref #	Mitigation Measures	Location / Timing	Status *
	there would be no direct impact to other habitats within the Assessment Area.		
89.7.4	To mitigate the noise impacts to habitats and associated wildlife within and adjacent to the proposed works area, quite mechanical plants and well-maintained plants should be used wherever possible. Noise-emitting construction plant should be installed away from the egretry as far as practical. Schedule of construction programme should be carefully planned to avoid noise-generating construction activities with high disturbance impact during the breeding seasons of the ardeids (i.e. mid-March to August).	Works area / During construction phase	>
89.7.5	Noise barrier should also be implemented to mitigate the noise impact in operation phase. To minimize the bird collision impact, pprecautionary and bird-friendly approach to noise barrier design should be implemented:	Works area / during construction phase	
	 The transparent materials of the noise barriers would be non-glaring and not light- reflective. 		>
	 Noise barrier panels would be with either tinted materials, embedded opaque stripes or superimposed patterns of thin opaque stripes. 		`
	 Noise barrier would be made visible to birds, such as putting falcon stickers on the transparent panels. 		>
S9.7.7	Standard good site practice measures should be implemented throughout the construction phase. The measures should include:	Works area / during construction phase	
	 Placement of equipment in designated works areas selected on existing disturbed land. 		`
	 Construction activities should be restricted to the proposed works area that would be clearly demarcated. 		> '
	 The proposed works area should be reinstated immediately after completion of the works. 		>
	 Open burning on proposed works sites is illegal, and should be strictly enforced. 		>
	 Waste skips should be provided to collect general refuse and construction wastes. The wastes should be disposed of timely and properly off-site. 		`
	 Any soil contamination with fuel leaked from construction plants should be removed off-site. 		>

Notes (*): < - Compliance; N/A - Not Applicable; N/O - Not Observed; Rdr - Reminder; Obs - Observation; N/C - Non Compliance

S9.7.8 To minimize the construction dust impact to the vegetation within and in vicinity of the proposed works area, the following mitigation measures as listed below should be implemented. • Regular watering should be used during the construction stage. • Any aggregate or dusty material storage piles should be completely covered. • Minimum practical height for dropping of excavated material should be applied. • Minimuse the indirect impacts to the nearby Tuen Mun River Channel, the following measures should be implemented: • Any runoff and drainage water with high levels of suspended solids should be prevented from entering the nearby water-bodies. • Site runoff should be directed towards regularly cleaned and maintained silt traps and oil/grease separators to avoid and minimise the risk of sedimentation and pollution of the nearby stream courses and drainage culvert. • The silt and oil/grease separators should be appropriately designed for the local drainage and ground conditions. • Debris and rubbish generated on-site should be collected, handled and disposed of properly. • Debris and rubbish generated on-site should be calcited, handled and disposed of properly. • Compensatory planting of a ratio not less than 1:1 ratio in terms of quality and quantity should be provided to compensate for the loss of roadside trees due to the construction works. • CM1 Topsoil, where identified and practical, should be stripped and stored for re-use in the construction. • CM2 Existing trees to be retained on site should be transplanted where practical. • CM3 Trees unavoidably affected by the works should be transplanted refered.	EIA Ref #	Mitigation Measures	Location / Timing	Status *
 Regular watering should be used during the construction stage. Any aggregate or dusty material storage piles should be completely covered. Minimum practical height for dropping of excavated material should be applied. S9.7.9 To minimize the indirect impacts to the nearby Tuen Mun River Channel, the following measures should be implemented: Any runoff and drainage water with high levels of suspended solids should be prevented from entering the nearby water-bodies. Site runoff should be directed towards regularly cleaned and maintained silt traps and oil/grease separators to avoid and minimize the risk of sedimentation and pollution of the nearby stream courses and drainage culvert. The silt and oil/grease separators should be appropriately designed for the local drainage and ground conditions. Debris and rubbish generated on-site should be collected, handled and disposed of properly. S9.7.10 Compensatory planting of a ratio not less than 1:1 ratio in terms of quality and quantity should be provided to compensate for the loss of roadside trees due to the construction works. CMI Topsoil, where identified and practical, should be stripped and stored for re-use in the construction of the soft landscape works. CMI Topsoil, where identified and practical, should be transplanted where practical. CMI Topsoil, where planting should be provided to compensate for felled trees. 	89.7.8	To minimize the construction dust impact to the vegetation within and in vicinity of the proposed works area, the following mitigation measures as listed below should be implemented:	Works area / During construction phase	· c
 Any aggregate or dusty material storage piles should be completely covered. S9.7.9 Minimum practical height for dropping of excavated material should be applied. S9.7.9 To minimize the indirect impacts to the nearby Tuen Mun River Channel, the following measures should be implemented: Any runoff and drainage water with high levels of suspended solids should be prevented from entering the nearby water-bodies. Site runoff should be directed towards regularly deaned and maintained silt traps and oil/grease separators to avoid and minimise the risk of sedimentation and pollution of the nearby stream courses and drainage culvert. The silt and oil/grease separators should be appropriately designed for the local drainage and ground conditions. Debris and rubbish generated on-site should be collected, handled and disposed of properly. S9.7.10 Compensatory planting of a ratio not less than 1:1 ratio in terms of quality and quantity should be provided to compensate for the loss of roadside trees due to the construction works. CMM Topsoil, where identified and practical, should be stripped and stored for re-use in the construction. CMM Stristing trees to be retained on site should be carefully protected during construction. CMM Trees unavoidably affected by the works should be transplanted where practical. CMM Compensatory tree planting should be provided to compensate for felled trees. 		 Regular watering should be used during the construction stage. 		>
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Debris and rubbish generated on-site should be collected, handled and disposed of properly. S9.7.10 Compensatory planting of a ratio not less than 1:1 ratio in terms of quality and quantity should be provided to compensate for the loss of roadside trees due to the construction works. Cape and able 10.6 CM1 Topsoil, where identified and practical, should be stripped and stored for re-use in the construction of the soft landscape works. CM2 Existing trees to be retained on site should be carefully protected during construction. able 10.6 CM3 Trees unavoidably affected by the works should be transplanted where practical. able 10.6 CM4 Compensatory tree planting should be provided to compensate for felled trees.				0/N
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Notes (*): ~ - Compliance; N/A - Not Applicable; N/O - Not Observed; Rdr - Reminder; Obs - Observation; N/C - Non Compliance

Highways Department

Contract No. HY/2007/14 Widening of Tuen Mun Road at Tsing Tin Interchange Final EM&A Review Report

EIA Ref #	Mitigation Measures	Location / Timing	Status *
Table 10.6	CM5 Control of night-time lighting.	Work site / During	>
		Construction Phase	
Table 10.6	CM6 Erection of decorative screen hoarding compatible with the surrounding setting.	Work site / During	>
	-	Construction Phase	