

Contract No. GE/2013/35
Landslip Prevention and Mitigation Programme, 2012, Package A
Landslip Prevention and Mitigation Works

**Landslip Prevention and Mitigation Works at Feature Nos. 11SW-A/R94 and
11SW-A/FR218, Caine Lane, Mid-Levels**

Monthly EM&A Report for June 2017

AECOM Asia Co. Ltd.

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EXECUTIVE SUMMARY

The Project comprises two features Nos, 11SW-A/R94 and 11SW-A/FR218 located at the northwest of HKMMS, Caine Lane and south of the Hong Kong Museum of Medical Sciences (HKMMS) respectively.

AECOM is the Consultant Engineer appointed by the Geotechnical Engineering Office (GEO) of Civil Engineering and Development Department (CEDD) to undertake design and supervision for the Project.

The EM&A works was commenced on 5 April 2017.

This report documents the findings of EM&A works conducted in the period between 1 and 30 June 2017. The major activities in the reporting period were summarized as below:

Location	Site Activities
11SW-A/R94	<ul style="list-style-type: none"> - Temporary removal of the existing masonry stone facing - Drilling of soil nail holes by coring machine - Fixing and installation of soil nail bars - Grouting of soil nails holes
11SW-A/FR218	<ul style="list-style-type: none"> - Pit by pit excavation - Laying of blinding at the bottom of the excavated pits - Installation of dowel bars at the back of the existing masonry wall - Backfilling of the excavated pits by concrete - Backfilling of top soil

Complaint, Notification of Summons and Successful Prosecution

No environmental complaint, notification of summons and successful prosecution were received in the reporting month.

Reporting Changes

No change was received in reporting month.

Site Inspection by External Parties

No site inspection by external parties in reporting month.

Future Key Issues

Key issues to be considered in the coming month included:-

Location	Site Activities
11SW-A/R94	<ul style="list-style-type: none"> - Drilling of soil nail holes by coring machine - Fixing and installation of soil nail bars - Grouting of soil nails holes - Reinstate the masonry stone facing - Construction of soil nail heads
11SW-A/FR218	<ul style="list-style-type: none"> - Pit by pit excavation - Laying of blinding at the bottom of the excavated pits - Installation of dowel bars at the back of the existing masonry wall - Backfilling of the excavated pits by concrete - Backfilling of top soil - Construction of stairway

Potential environmental impacts arising from the above construction activities were mainly associated with construction dust, construction noise, water quality and waste management.

1 INTRODUCTION

1.1 Purpose of the Report

1.1.1 This was 3rd monthly EM&A Report to summaries audit findings between 1 and 30 June 2017.

1.2 Report Structure

1.2.1 This monthly EM&A Report is organized as follows:

Section 1: Introduction

Section 2: Project Information

Section 3: Implementation Status of Environmental Mitigation Measures

Section 4: Monitoring Results

Section 5: Environmental Site Inspection and Audit

Section 6: Environmental Non-conformance

Section 7: Government Authority Inspection

Section 8: Future Key Issues

Section 9: Conclusions and Recommendations

Section 10: Adjustment

2 PROJECT INFORMATION

2.1 Background

2.1.1 The Project comprises two feature Nos. 11SW-A/R94 and 11SW-AFR218 located at the south of the Hong Kong Museum of Medical Sciences (HKMMS) and the northwest of HKMMS, Caine Lane, Mid-levels respectively. The site is in the "Government, Institution or Community" (G/IC) zone on the Sai Ying Pun & Sheung Wan Outline Zoning Plan (OZP) No. S/H3/29. The location of the site was shown in Project Profile plan.

2.1.2 The Project Profile (PP) for the above features (Register No.: PP-541/2016) was submitted on 20 June 2016 under the Environmental Impact Assessment Ordinance (EIAO). Following the submitted PP, the Director of Environmental Protection (DEP)'s letter of permission to apply directly for environmental permit on 26 July 2016 (Ref.: DIR-250/2016). Environmental Permit (EP) (EP No. EP-520/2016) was granted on 8 August 2016, which was covered both feature Nos. 11SW-A/R94 and 11SW-AFR218.

2.2 Site Description

2.2.1 The main scope of works for the two features comprises the following as shown:

Feature no. 11SW-A/R94

- Temporary removal of the existing masonry stone facing
- Drilling of soil nail holes by coring machine
- Fixing and installation of soil nail bars
- Grouting of soil nails holes
- Construction of soil nail heads
- Reinstatement of the existing masonry stone facing

Feature no. 11SW-A/FR218

- Pit by pit excavation
- Laying of blinding at the bottom of the excavated pits
- Installation of dowel bars at the back of the existing masonry wall
- Backfilling of the excavated pits by concrete
- Backfilling of top soil
- Landscape works (planter wall, shrubs and hydroseeding)

2.3 Construction Programme and Activities

2.3.1 The major construction activities undertaken in the reporting month were summarized as below:

Location	Site Activities
11SW-A/R94	<ul style="list-style-type: none"> - Temporary removal of the existing masonry stone facing - Drilling of soil nail holes by coring machine - Fixing and installation of soil nail bars - Grouting of soil nails
11SW-A/FR218	<ul style="list-style-type: none"> - Pit by pit excavation - Laying of blinding at the bottom of the excavated pits - Installation of dowel bars at the back of the existing masonry wall - Backfilling of the excavated pits by concrete - Backfilling of top soil

2.3.2 The updated construction programme were summarized in **Appendix A**.

2.4 Project Personnel

2.4.1 The key personnel contact names and numbers for the Project were summarized in **Table 2.1**.

Table 2.1 Contact Information of Key Personnel

<u>Party</u>	<u>Position</u>	<u>Name</u>	<u>Telephone</u>
AECOM Asia Co. Ltd.	IEC	Gigi Lam	3922 9000
AECOM Asia Co. Ltd.	Resident Engineer	Tommy Poon	3689 2883
Contractor - Geotech Engineering Ltd.	Project Manager	Danise Tang	9183 2621
	Site Agent	Francis Bao	6680 7070

2.5 Status of Environmental Licenses, Notification and Permits

2.5.1 Relevant valid environmental licenses, permits and/or notifications on environmental protection for this Project in the reporting month were summarized in **Table 2.2**.

Table 2.2 Status of Environmental Licenses, Notifications and Permits

Permit / License No. / Notification/ Reference No.	Valid Period		Status	Remarks
	From	To		
<i>Environmental Permit</i>				
EP-520/2016	8-8-2016	-	Valid	-
<i>Billing Account for Construction Waste Disposal</i>				
701982721	30-4-2014	End of Project	Account Active	-

3 IMPLEMENTATION STATUS OF ENVIRONMENTAL MITIGATION MEASURES

- 3.1.1 The Contractor had implemented effective environmental mitigation measures to comply with the requirements as stated in the PP and the EP. The environmental mitigation measures during the reporting period was summarized in **Appendix B**. Status of required submissions under the EP during the reporting period was summarized in **Table 3.1**.

Table 3.1 Status of Required Submission under Environmental Permit

<u>EP Condition</u>	<u>Submission</u>	<u>Submission Due Date</u>
Condition 3.2	Monthly Monitoring Report	15 July 2017

4 MONITORING RESULTS

4.1 Waste Management

- 4.1.1 The C&D materials and general wastes had been collected, sorted and temporary stored in receptacles on site.
- 4.1.2 Some C&D material had been reused on site. In this reporting month, the progress of works for both features were affected by inclement weather. Neither C&D materials nor general refuse had been generated, no paper/cardboard packaging material, metal or plastic was collected by recycling contractor.
- 4.1.3 The monthly records of disposal were summarized in **Appendix C**.
- 4.1.4 The Contractor had implemented effective measures for sorting, collecting, reusing, recycling and trip ticket system for C&D materials and wastes. The Contractor had reminded to remove stockpiled wastes and clean the workplace frequently.
- 4.1.5 The revised total estimated quantities of C&D materials and wastes generated from both features was 310m³.

4.2 Noise Management

- 4.2.1 Noise mitigation measures had implemented in according to the PP.
- 4.2.2 Noise level had monitored weekly at the 6 designed Noise Sensitive Receiver. No non-compliance was noted.

4.3 Cultural Heritage Management

- 4.3.1 Ground settlement markers, tilting markers and vibration monitoring points had installed around the site.
- 4.3.2 Monitoring work had been carried out daily and no abnormal result was noted.

4.4 Wastewater Management

- 4.4.1 All wastewater generated from construction activities had properly collected and pumped to the storage tanks for reuse. Where necessary, the surplus water temporarily stored in the water tanks would be collected by a licensed discharge subcontractor.

5 ENVIRONMENTAL SITE INSPECTION AND AUDIT

- 5.1.1 Site inspections had been carried out weekly to closely monitor environmental pollution control and mitigation measures for the Project. The implementation schedule for mitigation measures were summarized in **Appendix B**.
- 5.1.2 In the reporting month, five joint site inspections with the IEC, Resident Supervision Staff, and the Contractor were held on 1, 8, 15, 23 and 29 June 2017. The IEC's site audit checklists were summarized in **Appendix D**. No non-compliance was found during the site inspections. Details of observations and recommendations were summarized in **Table 5.1**.

Table 5.1 Observations and Recommendations of Site Audit

<u>Parameters</u>	<u>Date</u>	<u>Observations and Recommendations</u>	<u>Follow-up</u>
Air Quality	Nil	Nil	Nil
Noise	Nil	Nil	Nil
Water Quality	23/06/2017	Existing manhole cover at the crest of feature No. 11SW-A/R94 was opened after rainstorm. The Contractor had reminded to cover the manhole property.	29/06/2017
Waste	23/06/2017	Some refuse and soil debris were found on site. Contractor had reminded to clean up the site regularly.	29/06/2017
Cultural Heritage	Nil	Nil	Nil
Permits/Licenses	Nil	Nil	Nil

6 ENVIRONMENTAL NON-CONFORMANCE

6.1 Summary of Environmental Non-Compliance

6.1.1 No environmental non-compliance was recorded in the reporting month.

6.2 Summary of Environmental Complaints

6.2.1 No environmental complaint was received in the reporting month.

6.3 Summary of Environmental Summon and Successful Prosecutions

6.3.1 Neither environmental prosecution nor notification of summons was received in the reporting month.

7 GOVERNMENT AUTHORITY INSPECTION

7.1.1 No government authority inspection was recorded in the reporting month.

8 FUTURE KEY ISSUES

8.1 Construction Programme for the Coming Month

8.1.1 Potential environmental impacts arising from the below construction activities were mainly associated with construction dust, construction noise, water quality and waste management.

Location	Site Activities
11SW-A/R94	<ul style="list-style-type: none">- Drilling of soil nail holes by coring machine- Fixing and installation of soil nail bars- Grouting of soil nails holes- Reinstate masonry stone facing- Construction of soil nail heads
11SW-A/FR218	<ul style="list-style-type: none">- Pit by pit excavation- Laying of blinding at the bottom of the excavated pits- Installation of dowel bars at the back of the existing masonry wall- Backfilling of the excavated pits by concrete- Backfilling of top soil- Construction of stairway

9 CONCLUSIONS AND RECOMMENDATIONS

9.1 Conclusions

- 9.1.1 Five environmental site inspections were carried out in June 2017. The minor deficiencies had been rectified by contractor swiftly.
- 9.1.2 According to the Contractor's information, no environmental complaint, notification of summons and successful prosecution was received in the reporting month.

9.2 Recommendations

- 9.2.1 According to the environmental site inspections performed in the reporting month, the following recommendations were provided:

Air Quality Impact

- No specific observation was identified in the reporting month.

Construction Noise Impact

- No specific observation was identified in the reporting month.

Water Quality Impact

- Existing manhole cover at the crest of feature No. 11SW-A/R94 was opened after rainstorm. The Contractor had reminded to cover the manhole property.

Waste Management

- Some refuse and soil debris were found on site. Contractor had reminded to clean up the site regularly.

Cultural Heritage

- No specific observation was identified in the reporting month.

Permits/licenses

- No specific observation was identified in the reporting month.

10 ADJUSTMENT

10.1.1 The revised noise assessment were summarized in **Appendix E**. Adjustment of the PME would be reviewed time to time to suit the actual progress of works.

Appendix A

Construction Programme

Landslip Preventive and Mitigation Works

Landslip Preventive and Mitigation Programme, 2012, Package A -
 Contract No. : GE/2013/35 Works Order No. : LPM201335/14/AR94

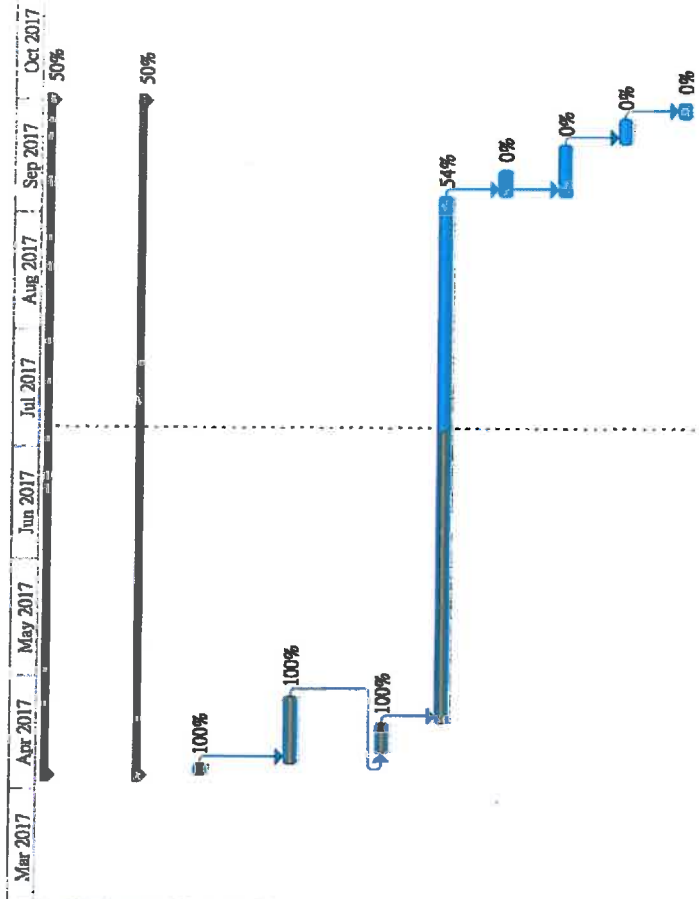
Contractor : Geotech Engineering Limited
 Programme Date : 06/07/2017 Revision No. : 12

Slope No. & Location : 11SW-A/R94 Hong Kong Museum of Medical Science, No.2 Caine Lane, Mid-Levels

Commencement Date : 05/04/2017 Anticipated Completion Date : 30/09/2017

UPDATED WORKS PROGRAMME

ID	Description	Quantity	Duration	Start	Finish
1	Feature No.11SW-A/R94 Hong Kong Museum of Medical Science		147 days	2017/4/5	2017/9/30
2	GEOTECHNICAL WORKS		147 days	2017/4/5	2017/9/30
3	Erection and modification of Base Scaffolding and Temporary Working Platform	1 item	3 days	2017/4/5	2017/4/7
4	Take up and store existing Masonry Stones (approx. 0.5m x 0.5m each no.)	70 nos.	12 days	2017/4/8	2017/4/25
5	Install Test Nails and carry out Pull Out Test	2 nos.	4 days	2017/4/11	2017/4/18
6	Soil Nailing Works	62 nos.	116 days	2017/4/19	2017/9/5
7	Installation of Raking Drains	4 nr.	6 days	2017/9/6	2017/9/12
8	Construction of Soil Nail Heads	62 nos.	12 days	2017/9/6	2017/9/19
9	Reinstatement of existing Masonry Stones	70 nos.	6 days	2017/9/20	2017/9/26
10	Dismantle Temporary Working Platform and Base Scaffolding	1 item	4 days	2017/9/27	2017/9/30



Remark:

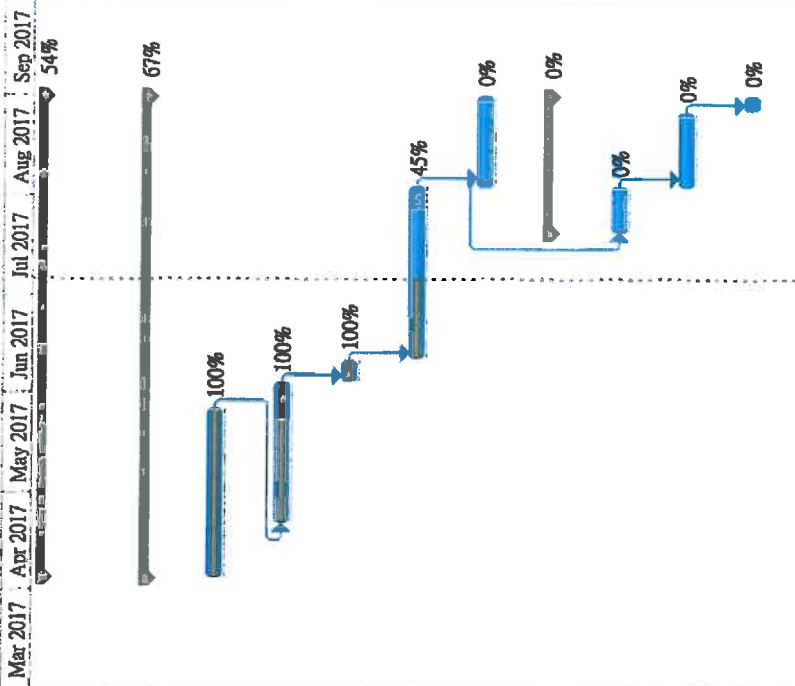
1. The above duration is based on working days.

Prepared By :

Landslip Preventive and Mitigation Programme, 2012, Package A Landslip Preventive and Mitigation Works
 Contractor : Geotech Engineering Limited
 Contract No. : GE/2013/35 Works Order Nos. : LPM201335/62/AFR218 Programme Date : 06/07/2017 Revision No. : 12
 Slope No. & Location : 11SW-A/FR218 Pathological Institute, Caine Lane, Mid-Levels Commencement Date : 05/04/2017 Anticipated Completion Date : 31/08/2017

UPDATED WORKS PROGRAMME

ID	Description	Quantity	Duration	Start	Finish
1	Feature No.11SW-A/FR218 Pathological Institute, Caine Lane, Mid-Levels		121 days	2017/4/5	2017/8/31
2	GEOTECHNICAL WORKS				
3	Pit Excavation and install shoring system	360 cu.m.	40 days	2017/4/5	2017/5/26
4	Backfilling with Mass Concrete	250 cu.m.	34 days	2017/4/22	2017/6/3
5	Construction Wall Stem of Wall Thickening	18m (L)	6 days	2017/6/5	2017/6/10
6	Construction for Mass Concrete Planter Wall	18m (L)	45 days	2017/6/12	2017/8/3
7	Filling of compacted fill	73.5 cu.m.	24 days	2017/8/4	2017/8/31
8	MISCELLANEOUS				
9	Construction of concrete staircase	8.0m	12 days	2017/7/21	2017/8/3
10	Masonry Works for Wing Wall and Planter Wall	80.0 sq.m.	20 days	2017/8/4	2017/8/26
11	Hydroseeding & Planting Works	120.0 sq.m. & 960 mrs	4 days	2017/8/28	2017/8/31



Remark:
 1. The above duration is based on working days.
 Prepared By :

Appendix B

Environmental Mitigation Implementation Schedule

Appendix B Environmental Mitigation Implementation Schedule

Potential Environmental Impacts	Proposed Mitigation Measures
Air Quality	
<ul style="list-style-type: none"> Fugitive dust emissions from construction activities including site formation, drilling, and wind erosion of the excavated areas 	<ul style="list-style-type: none"> Dust suppression measures as stipulated in the <i>Air Pollution Control (Construction Dust) Regulation (Cap. 311R) of Air Pollution Control Ordinance (APCO) (Cap. 311)</i> Good site practices
Noise	
<ul style="list-style-type: none"> Construction noise from the use of powered mechanical equipment (PME) for the construction activities 	<ul style="list-style-type: none"> Use of quieter PME Use of noise enclosure Use of movable noise barrier Use of noise insulating fabric for certain PME Good site practices
Water Quality	
<ul style="list-style-type: none"> Water pollution from uncontrolled surface runoff and erosion of exposed soil, earthworks and stockpiles during storm events Muddy water from construction activities such as dust suppression sprays, dewatering during excavation and washing of construction equipment 	<ul style="list-style-type: none"> Good site practices as per <i>Professional Persons Environmental Consultative Committee Practice (ProPECC) Note PN 1/94 "Construction Site Drainage"</i>
Waste Management	
<ul style="list-style-type: none"> Certain amount of C&D materials from construction works 	<ul style="list-style-type: none"> Good waste management plan, practices and waste reduction measures Disposal of C&D materials should be managed in accordance with the <i>Development Bureau Technical Circular (Works) DEVB TC(W)) No. 6/2010 "Trip Ticket System for Disposal of Construction & Demolition Materials"</i>. Proper storage, collection and transportation to designated destination of waste, including C&D materials, general refuse and chemical wastes On-site sorting of all C&D materials to inert or non-inert
Ecology	
<ul style="list-style-type: none"> No adverse ecological impact is expected. 	<ul style="list-style-type: none"> Not required
Cultural Heritage	
<ul style="list-style-type: none"> Indirect impact to the historic feature, such as extension of existing cracks on the structures within the Monument or the dislocation of the roof tiles on the Main Building and Annex Block, by ground-borne vibration from the use of PME 	<ul style="list-style-type: none"> Conduct condition survey at the existing components of the Monument prior to the commencement of the construction work Provide protective measures to the structure of HKMMS subject to results of condition survey Provide tarpaulin curtain to protect the Annex Block during the construction phase Conduct detailed photographic and cartographic recording of Feature No. 11SW-A/FR218 to the satisfaction of AMO before the affected masonry work is temporarily removed for the slope works Install ground settlement markers, tilting monitoring markers and vibration monitoring points during the active construction period and

	<p>obtain readings at a daily interval</p> <ul style="list-style-type: none">● Operate drilling process manually under full-time supervision of experienced works supervisor at Feature No. 11SW-A/R94● Reserve clearance distance between the proposed soil nails at Feature No. 11SW-A/R94 and the Annex Block (including the columns in front of the masonry wall)● Reinstate the masonry wall of the Feature No. 11SW-A/R94 after the upgrading works● Adopt Manual pit by pit excavation● Adopt non-excavation type of hoardings at Feature No. 11SW-A/FR218
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Appendix C

Record of Disposal

Records of Disposal of WASTE C & D Materials

Month June year 2017

Disivision: GEO / CEDD

Contract No.: GE/2013/35

Contract Title: Landslip Prevention and Mitigation Programme, 2012, Package A, Landslip Prevention and Mitigation Works.

(Inert)

Site Location: 1) 11SW-A/FR218 2) 11SW-A/R94

Contractor: Geotech Engineering Limited.

DDF No.1	Date of Disposal	Disposal Site ²	Vehicle Reg. No.	Time of Departure	Proportion of Truckload	Time of Disposal	Date of DDF & Receipt submitted by Contractor	Receipt No.	Late Return of DDF and / or Receipt	Vol. (m ³) / Wt. (t) (Where applicable)	Total Vol. (m ³) / Wt. (t) (Where applicable)
Nil											
Nil											
Nil											
Nil											
Nil											
Nil											
Nil											
Nil											
Nil											
Nil											
Nil											



Submitted by: Geotech Engineering Limited.

Signature:

Name/Post: Cyrus Li / Safety Officer

Date: 30 JUN 2017

Appendix D

IEC Site Audit Checklist

Project: Landslip Prevention and Mitigation Works at Feature Nos. 11SW-A/R94 and 11SW-A/FR218, HKMMS, Caine Lane, Mid-Levels
Inspection Date: 1 June 2017
Time: 3:45 pm
Inspection Area: Feature No. 11SW-A/R94
 Feature No. 11SW-A/R218
 HKMMS & its Annex Block

Inspected by
Client: CEDD
ER: AECOM
IEC: AECOM
ET: N/A
Contractor: Geotech Engineering Ltd.

PART A: GENERAL INFORMATION

Weather: Sunny Fine Cloudy Rainy
Temperature: ~ 28 °C
Humidity: High Moderate Low
Wind: Strong Breeze Light Calm

PART B: SITE AUDIT

Not Obs.	Yes	No	Follow up	N/A	Photo/Remarks
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Section 1: Water Quality

1.01	Obtained an effluent discharge license.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1.02	Provision of sedimentation tank.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.03	Channels, sandbags or bunds should be provided to direct surface run-off to sedimentation tanks.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.04	Open stockpiles of construction materials on site should be covered with tarpaulin or similar fabric as necessary during rainstorms.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.05	Good site practices should be adopted to remove rubbish and litter from construction site so as to prevent the rubbish and litter from spreading the site area. And, It is would be cleaned the construction sites on a regular basis.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.06	Manholes are adequately covered and temporarily sealed.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.07	Some procedures and equipment for rainstorm protection are provided.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.08	Measures to prevent leaked oil from entering the drainage system are provided.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1.09	Notices should be posted at conspicuous locations to remind the workers not to discharge any sewage or wastewater into the nearby environment.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Section 2: Air Quality

2.01	Use of regular watering/tarpaulin, with coverage to reduce dust emissions from exposed site surfaces, particularly during dry weather.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.02	Use of frequent watering for particularly dusty static construction area.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.03	Dusty materials transported on trucks with tarpaulin covering to and from the site.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.04	Hoarding are not less than 2.4m tall provided at areas with public access.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.05	Public road around the site entrance should be kept clean and free from dust.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.06	Where possible, routing of vehicles and positioning of construction plant should be at the maximum possible distance from ASRs.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.07	Mechanical covers of all dump trucks entering or leaving the site are in good services conditions.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.08	Dark smoke emission from plant/equipment should be avoided.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.09	De-bagging, batching and mixing processes are carried out in sheltered areas during the use of bagged cement.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

	Not Obs.	Yes	No	Follow up	N/A	Photo/Remarks
Section 3: Noise						
3.01	All plants are well maintained and in good operating condition.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.02	All the plants should be serviced regularly during the construction program.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.03	Use of noise enclosure for static PME.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.04	Use movable noise barrier only for feature no. 11SW-A/R94.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.05	Use of noise insulating fabric for certain PME (e.g. handheld electric saw and use in designated area with noise barrier).	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.06	Idle equipment should be turned off or throttled down.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.07	Where possible, quieter PME should be used.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Section 4: Waste/Chemical Management						
4.01	Training of site personnel in site cleanliness and proper waste management.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.02	Provision of sufficient waste disposal point and regular collection of waste.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.03	Regular cleaning and maintenance for drainage systems.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.04	Proper storage and site practices to minimize the potential for damage or contamination of construction materials.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.05	Training should be provided to workers about the concepts of site cleanliness and appropriate waste management procedures, including waste reduction, reuse and recycle.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.06	Waste should be handled and stores well to ensure secure containment, thus minimizing the potential of pollution.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.07	Storage area should be provided with covers and, if necessary, water spraying system to prevent materials for wind-blown or being washed away.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4.08	The construction waste generated on-site would be transported to the designated disposal facilities managed by EPD or CEDD.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.09	On-site sorting of all C&D materials to inert or non-inert.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.10	The panels have hold legible red English words and Chinese characters "CHEMMICAL WASTE" "化學廢物" note less than 60mm high on a white background.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Section 5: Landscape & Visual						
5.01	Temporary hoarding would be erected along the boundary of the works site to provide some screening effect to the surrounding sensitive receivers.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Section 6: Culture Heritage						
6.01	Provide tarpauln curtain or similar materials to protect the Annex Block (Feature No. 11SW-A/R94) during the construction phase.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.02	Install ground settlement makers, tilting monitor makers and vibration monitoring points during the active construction period and obtain readings at a daily interval.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.03	Operate drilling process manually under full-time supervision of experienced works supervisor at Feature No. 11SW-A/R94.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.04	Reserve clearance distance, 600mm, between the proposed soil nails at Feature No. 11SW-A/R94 and the Annex Block (including the columns in front of the masonry wall).	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.05	Adopt manual pit by pit excavation at Feature No. 11SW-A/FR218.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.06	Adopt non-excavation type of hoardings at Feature No. 11SW-A/FR218 between the slope and main building.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Not Obs.	Yes	No	Follow up	N/A	Photo/ Remarks
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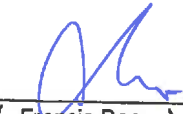
Section 7: Others

7.01 Are relevant Environmental Permits posted at all vehicle site entrances/exits or at a convenient location for public's information at all times?

Not Obs.
 Yes
 No
 Follow up
 N/A
 _____ Photo/ Remarks

Remarks

NIL

Client	ER	ENPO/IEC	ET	Contractor
()	 (Tommy Poon)	 (Ms. Gigi Lam)	()	 (Francis Bao)

Project: Landslip Prevention and Mitigation Works at Feature Nos. 11SW-A/R94 and 11SW-A/FR218, HKMMS, Caine Lane, Mid-Levels
Inspection Date: 8 June 2017
Time: 3:45 pm
Inspection Area: Feature No. 11SW-A/R94
 Feature No. 11SW-A/R218
 HKMMS & its Annex Block

Inspected by
Client: CEDD
ER: AECOM
IEC: AECOM
ET: N/A
Contractor: Geotech Engineering Ltd.

PART A: GENERAL INFORMATION

Weather: Sunny Fine Cloudy Rainy
Temperature: ~ 30 °C
Humidity: High Moderate Low
Wind: Strong Breeze Light Calm

PART B: SITE AUDIT

Not Obs.	Yes	No	Follow up	N/A	Photo/Remarks
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Section 1: Water Quality

1.01	Obtained an effluent discharge license.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1.02	Provision of sedimentation tank.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.03	Channels, sandbags or bunds should be provided to direct surface run-off to sedimentation tanks.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.04	Open stockpiles of construction materials on site should be covered with tarpaulin or similar fabric as necessary during rainstorms.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.05	Good site practices should be adopted to remove rubbish and litter from construction site so as to prevent the rubbish and litter from spreading the site area. And, it would be cleaned the construction sites on a regular basis.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.06	Manholes are adequately covered and temporarily sealed.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.07	Some procedures and equipment for rainstorm protection are provided.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.08	Measures to prevent leaked oil from entering the drainage system are provided.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1.09	Notices should be posted at conspicuous locations to remind the workers not to discharge any sewage or wastewater into the nearby environment.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Section 2: Air Quality

2.01	Use of regular watering/tarpaulin, with coverage to reduce dust emissions from exposed site surfaces, particularly during dry weather.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.02	Use of frequent watering for particularly dusty static construction area.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.03	Dusty materials transported on trucks with tarpaulin covering to and from the site.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.04	Hoarding are not less than 2.4m tall provided at areas with public access.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.05	Public road around the site entrance should be kept clean and free from dust.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.06	Where possible, routing of vehicles and positioning of construction plant should be at the maximum possible distance from ASRs.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.07	Mechanical covers of all dump trucks entering or leaving the site are in good services conditions.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.08	Dark smoke emission from plant/equipment should be avoided.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.09	De-bagging, batching and mixing processes are carried out in sheltered areas during the use of bagged cement.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

	Not Obs.	Yes	No	Follow up	N/A	Photo/Remarks
Section 3: Noise						
3.01		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.02		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.03		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The noise enclosure has been further modified.
3.04		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.05		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.06		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.07		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Section 4: Waste/Chemical Management						
4.01		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.02		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.03		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.04		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.05		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.06		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.07		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
4.08		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.09		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.10		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Section 5: Landscape & Visual						
5.01		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Section 6: Culture Heritage						
6.01		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.02		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.03		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.04		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.05		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.06		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Not Obs.	Yes	No	Follow up	N/A	Photo/Remarks
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Section 7: Others

7.01 Are relevant Environmental Permits posted at all vehicle site entrances/exits or at a convenient location for public's information at all times?

Remarks

NIL

~~Client~~

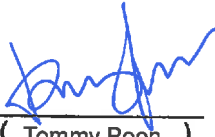
ER

ENPO/IEC

ET

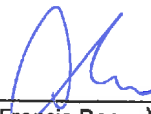
Contractor

()


(Tommy Poon)


(Ms. Gigi Lam)

()


(Francis Bao)

Project: Landslip Prevention and Mitigation Works at Feature Nos. 11SW-A/R94 and 11SW-A/FR218, HKMMS, Caine Lane, Mid-Levels
Inspection Date: 15 June 2017
Time: 3:45 pm
Inspection Area:
 Feature No. 11SW-A/R94
 Feature No. 11SW-A/R218
 HKMMS & its Annex Block

Inspected by
Client: CEDD
ER: AECOM
IEC: AECOM
ET: N/A
Contractor: Geotech Engineering Ltd.

PART A: GENERAL INFORMATION

Weather: Sunny Fine Cloudy Rainy
Temperature: ~ 28 °C
Humidity: High Moderate Low
Wind: Strong Breeze Light Calm

PART B: SITE AUDIT

Not Obs.	Yes	No	Follow up	N/A	Photo/Remarks
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Section 1: Water Quality

1.01	Obtained an effluent discharge license.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1.02	Provision of sedimentation tank.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.03	Channels, sandbags or bunds should be provided to direct surface run-off to sedimentation tanks.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.04	Open stockpiles of construction materials on site should be covered with tarpaulin or similar fabric as necessary during rainstorms.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.05	Good site practices should be adopted to remove rubbish and litter from construction site so as to prevent the rubbish and litter from spreading the site area. And, it would be cleaned the construction sites on a regular basis.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.06	Manholes are adequately covered and temporarily sealed.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.07	Some procedures and equipment for rainstorm protection are provided.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.08	Measures to prevent leaked oil from entering the drainage system are provided.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1.09	Notices should be posted at conspicuous locations to remind the workers not to discharge any sewage or wastewater into the nearby environment.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Section 2: Air Quality

2.01	Use of regular watering/tarpaulin, with coverage to reduce dust emissions from exposed site surfaces, particularly during dry weather.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.02	Use of frequent watering for particularly dusty static construction area.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.03	Dusty materials transported on trucks with tarpaulin covering to and from the site.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.04	Hoarding are not less than 2.4m tall provided at areas with public access.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.05	Public road around the site entrance should be kept clean and free from dust.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.06	Where possible, routing of vehicles and positioning of construction plant should be at the maximum possible distance from ASRs.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.07	Mechanical covers of all dump trucks entering or leaving the site are in good services conditions.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.08	Dark smoke emission from plant/equipment should be avoided.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.09	De-bagging, batching and mixing processes are carried out in sheltered areas during the use of bagged cement.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

IEC Site Audit Checklist

	Not Obs.	Yes	No	Follow up	N/A	Photo/Remarks
Section 3: Noise						
3.01 All plants are well maintained and in good operating condition.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.02 All the plants should be serviced regularly during the construction program.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.03 Use of noise enclosure for static PME.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.04 Use movable noise barrier only for feature no. 11SW-A/R94.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.05 Use of noise insulating fabric for certain PME (e.g. handheld electric saw and use in designated area with noise barrier).	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.06 Idle equipment should be turned off or throttled down.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.07 Where possible, quieter PME should be used.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Section 4: Waste/Chemical Management						
4.01 Training of site personnel in site cleanliness and proper waste management.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.02 Provision of sufficient waste disposal point and regular collection of waste.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.03 Regular cleaning and maintenance for drainage systems.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.04 Proper storage and site practices to minimize the potential for damage or contamination of construction materials.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.05 Training should be provided to workers about the concepts of site cleanliness and appropriate waste management procedures, including waste reduction, reuse and recycle.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.06 Waste should be handled and stores well to ensure secure containment, thus minimizing the potential of pollution.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.07 Storage area should be provided with covers and, if necessary, water spraying system to prevent materials for wind-blown or being washed away.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
4.08 The construction waste generated on-site would be transported to the designated disposal facilities managed by EPD or CEDD.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.09 On-site sorting of all C&D materials to inert or non-inert.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.10 The panels have hold legible red English words and Chinese characters "CHEMMICAL WASTE" "化學廢物" note less than 60mm high on a white background.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Section 5: Landscape & Visual						
5.01 Temporary hoarding would be erected along the boundary of the works site to provide some screening effect to the surrounding sensitive receivers.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Section 6: Culture Heritage						
6.01 Provide tarpaulin curtain or similar materials to protect the Annex Block (Feature No. 11SW-A/R94) during the construction phase.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.02 Install ground settlement makers, tilting monitor makers and vibration monitoring points during the active construction period and obtain readings at a daily interval.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.03 Operate drilling process manually under full-time supervision of experienced works supervisor at Feature No. 11SW-A/R94.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.04 Reserve clearance distance, 600mm, between the proposed soil nails at Feature No. 11SW-A/R94 and the Annex Block (including the columns in front of the masonry wall).	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.05 Adopt manual pit by pit excavation at Feature No. 11SW-A/FR218.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.06 Adopt non-excavation type of hoardings at Feature No. 11SW-A/FR218 between the slope and main building.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Not Obs.	Yes	No	Follow up	N/A	Photo/ Remarks
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Section 7: Others

7.01 Are relevant Environmental Permits posted at all vehicle site entrances/exits or at a convenient location for public's information at all times?

Remarks

NIL

~~Client~~

ER

ENPO/IEC

~~ET~~

Contractor

()



(Tommy Poon)



(Ms. Gigi Lam)

()



(Francis Bao)

Project: Landslip Prevention and Mitigation Works at Feature Nos. 11SW-A/R94 and 11SW-A/FR218, HKMMS, Caine Lane, Mid-Levels
Inspection Date: 23 June 2017
Time: 10:00 am
Inspection Area:
 Feature No. 11SW-A/R94
 Feature No. 11SW-A/R218
 HKMMS & its Annex Block

Inspected by:
Client: CEDD
ER: AECOM
IEC: AECOM
ET: N/A
Contractor: Geotech Engineering Ltd.

PART A: GENERAL INFORMATION

Weather: Sunny Fine Cloudy Rainy
Temperature: ~ 30 °C
Humidity: High Moderate Low
Wind: Strong Breeze Light Calm

PART B: SITE AUDIT

Not Obs.	Yes	No	Follow up	N/A	Photo/Remarks
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Section 1: Water Quality

1.01	Obtained an effluent discharge license.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1.02	Provision of sedimentation tank.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.03	Channels, sandbags or bunds should be provided to direct surface run-off to sedimentation tanks.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.04	Open stockpiles of construction materials on site should be covered with tarpaulin or similar fabric as necessary during rainstorms.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.05	Good site practices should be adopted to remove rubbish and litter from construction site so as to prevent the rubbish and litter from spreading the site area. And, it would be cleaned the construction sites on a regular basis.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Please refer to "1" at Page 3
1.06	Manholes are adequately covered and temporarily sealed.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Please refer to "2" at Page 3
1.07	Some procedures and equipment for rainstorm protection are provided.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.08	Measures to prevent leaked oil from entering the drainage system are provided.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1.09	Notices should be posted at conspicuous locations to remind the workers not to discharge any sewage or wastewater into the nearby environment.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Section 2: Air Quality

2.01	Use of regular watering/tarpaulin, with coverage to reduce dust emissions from exposed site surfaces, particularly during dry weather.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.02	Use of frequent watering for particularly dusty static construction area.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.03	Dusty materials transported on trucks with tarpaulin covering to and from the site.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.04	Hoarding are not less than 2.4m tall provided at areas with public access.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.05	Public road around the site entrance should be kept clean and free from dust.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.06	Where possible, routing of vehicles and positioning of construction plant should be at the maximum possible distance from ASRs.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.07	Mechanical covers of all dump trucks entering or leaving the site are in good services conditions.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.08	Dark smoke emission from plant/equipment should be avoided.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.09	De-bagging, batching and mixing processes are carried out in sheltered areas during the use of bagged cement.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

IEC Site Audit Checklist

	Not Obs.	Yes	No	Follow up	N/A	Photo/Remarks
Section 3: Noise						
3.01 All plants are well maintained and in good operating condition.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.02 All the plants should be serviced regularly during the construction program.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.03 Use of noise enclosure for static PME.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.04 Use movable noise barrier only for feature no. 11SW-A/R94.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.05 Use of noise insulating fabric for certain PME (e.g. handheld electric saw and use in designated area with noise barrier).	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.06 Idle equipment should be turned off or throttled down.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.07 Where possible, quieter PME should be used.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Section 4: Waste/Chemical Management						
4.01 Training of site personnel in site cleanliness and proper waste management.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.02 Provision of sufficient waste disposal point and regular collection of waste.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.03 Regular cleaning and maintenance for drainage systems.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.04 Proper storage and site practices to minimize the potential for damage or contamination of construction materials.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.05 Training should be provided to workers about the concepts of site cleanliness and appropriate waste management procedures, including waste reduction, reuse and recycle.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.06 Waste should be handled and stored well to ensure secure containment, thus minimizing the potential of pollution.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.07 Storage area should be provided with covers and, if necessary, water spraying system to prevent materials for wind-blown or being washed away.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
4.08 The construction waste generated on-site would be transported to the designated disposal facilities managed by EPD or CEDD.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.09 On-site sorting of all C&D materials to inert or non-inert.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.10 The panels have hold legible red English words and Chinese characters "CHEMICAL WASTE" "化學廢物" note less than 60mm high on a white background.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Section 5: Landscape & Visual						
5.01 Temporary hoarding would be erected along the boundary of the works site to provide some screening effect to the surrounding sensitive receivers.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Section 6: Culture Heritage						
6.01 Provide tarpaulin curtain or similar materials to protect the Annex Block (Feature No. 11SW-A/R94) during the construction phase.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.02 Install ground settlement makers, tilting monitor makers and vibration monitoring points during the active construction period and obtain readings at a daily interval.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.03 Operate drilling process manually under full-time supervision of experienced works supervisor at Feature No. 11SW-A/R94.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.04 Reserve clearance distance, 600mm, between the proposed soil nails at Feature No. 11SW-A/R94 and the Annex Block (including the columns in front of the masonry wall).	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.05 Adopt manual pit by pit excavation at Feature No. 11SW-A/FR218.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.06 Adopt non-excavation type of hoardings at Feature No. 11SW-A/FR218 between the slope and main building.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	




Not Obs.	Yes	No	Follow up	N/A	Photo/Remarks
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Section 7: Others

7.01 Are relevant Environmental Permits posted at all vehicle site entrances/exits or at a convenient location for public's information at all times? _____

Remarks

- "1" Some rubbish/litter including soil were observed within site boundary. Reminded Contractor to clean up regularly.
- "2" A manhole at the top of Slope 11SW-A/R94 has not been well covered after several days of heavy rain, reminded Contractor to well cover it.

Client	ER	ENPO/IEC	ET	Contractor
				
()	(Tommy Poon)	(Ms. Gigi Lam)	()	(Francis Bao)

IEC Site Audit Checklist

Project: Landslip Prevention and Mitigation Works at Feature Nos. 11SW-A/R94 and 11SW-A/FR218, HKMMS, Caine Lane, Mid-Levels
Inspection Date: 29 June 2017
Time: 15:45 pm
Inspection Area:
 Feature No. 11SW-A/R94
 Feature No. 11SW-A/R218
 HKMMS & its Annex Block

Inspected by:
Client: CEDD
ER: AECOM
IEC: AECOM
ET: N/A
Contractor: Geotech Engineering Ltd

PART A: GENERAL INFORMATION

Weather: Sunny Fine Cloudy Rainy
Temperature: ~ 30 °C
Humidity: High Moderate Low
Wind: Strong Breeze Light Calm

PART B: SITE AUDIT

Not Obs.	Yes	No	Follow up	N/A	Photo/ Remarks
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Section 1: Water Quality

1.01	Obtained an effluent discharge license.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1.02	Provision of sedimentation tank.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.03	Channels, sandbags or bunds should be provided to direct surface run-off to sedimentation tanks.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.04	Open stockpiles of construction materials on site should be covered with tarpaulin or similar fabric as necessary during rainstorms.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.05	Good site practices should be adopted to remove rubbish and litter from construction site so as to prevent the rubbish and litter from spreading the site area. And, it would be cleaned the construction sites on a regular basis.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Item "1"
1.06	Manholes are adequately covered and temporarily sealed.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Item "2"
1.07	Some procedures and equipment for rainstorm protection are provided.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.08	Measures to prevent leaked oil from entering the drainage system are provided.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1.09	Notices should be posted at conspicuous locations to remind the workers not to discharge any sewage or wastewater into the nearby environment.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Section 2: Air Quality

2.01	Use of regular watering/tarpaulin, with coverage to reduce dust emissions from exposed site surfaces, particularly during dry weather.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.02	Use of frequent watering for particularly dusty static construction area.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.03	Dusty materials transported on trucks with tarpaulin covering to and from the site.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.04	Hoarding are not less than 2.4m tall provided at areas with public access.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.05	Public road around the site entrance should be kept clean and free from dust.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.06	Where possible, routing of vehicles and positioning of construction plant should be at the maximum possible distance from ASRs.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.07	Mechanical covers of all dump trucks entering or leaving the site are in good services conditions.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.08	Dark smoke emission from plant/equipment should be avoided.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.09	De-bagging, batching and mixing processes are carried out in sheltered areas during the use of bagged cement.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

IEC Site Audit Checklist

	Not Obs.	Yes	No	Follow up	N/A	Photo/ Remarks	
Section 3: Noise							
3.01	All plants are well maintained and in good operating condition.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.02	All the plants should be serviced regularly during the construction program.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.03	Use of noise enclosure for static PME.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.04	Use movable noise barrier only for feature no. 11SW-A/R94.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.05	Use of noise insulating fabric for certain PME (e.g. handheld electric saw and use in designated area with noise barrier).	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.06	Idle equipment should be turned off or throttled down.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.07	Where possible, quieter PME should be used.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Section 4: Waste/Chemical Management							
4.01	Training of site personnel in site cleanliness and proper waste management.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.02	Provision of sufficient waste disposal point and regular collection of waste.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.03	Regular cleaning and maintenance for drainage systems.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.04	Proper storage and site practices to minimize the potential for damage or contamination of construction materials.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.05	Training should be provided to workers about the concepts of site cleanliness and appropriate waste management procedures, including waste reduction, reuse and recycle.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.06	Waste should be handled and stores well to ensure secure containment, thus minimizing the potential of pollution.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.07	Storage area should be provided with covers and, if necessary, water spraying system to prevent materials for wind-blown or being washed away.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
4.08	The construction waste generated on-site would be transported to the designated disposal facilities managed by EPD or CEDD.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.09	On-site sorting of all C&D materials to inert or non-inert.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.10	The panels have hold legible red English words and Chinese characters "CHEMMICAL WASTE" "化學廢物" note less than 60mm high on a white background.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Section 5: Landscape & Visual							
5.01	Temporary hoarding would be erected along the boundary of the works site to provide some screening effect to the surrounding sensitive receivers.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Section 6: Culture Heritage							
6.01	Provide tarpaulin curtain or similar materials to protect the Annex Block (Feature No. 11SW-A/R94) during the construction phase.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.02	Install ground settlement makers, tilting monitor makers and vibration monitoring points during the active construction period and obtain readings at a daily interval.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.03	Operate drilling process manually under full-time supervision of experienced works supervisor at Feature No. 11SW-A/R94.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.04	Reserve clearance distance, 600mm, between the proposed soil nails at Feature No. 11SW-A/R94 and the Annex Block (Including the columns in front of the masonry wall).	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.05	Adopt manual pit by pit excavation at Feature No. 11SW-A/FR218.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.06	Adopt non-excavation type of hoardings at Feature No. 11SW-A/FR218 between the slope and main building.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Not Obs.	Yes	No	Follow up	N/A	Photo/ Remarks
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Section 7: Others

7.01 Are relevant Environmental Permits posted at all vehicle site entrances/exits or at a convenient location for public's information at all times?

Not Obs.
 Yes
 No
 Follow up
 N/A

Remarks
NIL

Follow-up Observation(s)

Item "1" Rubbish/litter found scattered on ground were removed. (Closed)

Item "2" The manhole at the top of Slope 11SW-A/R94 was well covered. (Closed)

~~Client~~

ER

ENPO/IEC

~~ET~~

Contractor

(Tommy Poon)

(Ms. Gigi Lam)

_____ (.)

(Francis Bao)

Appendix E

Adjustment of PME

Proposed Construction Plant Inventory
 Unmitigated Scenario
 Feature No. 11SW-A/R94

1 Site clearance, UJ detection and Preparation

Powered Mechanical Equipment	Ref. ^[1]	No. of items	SWL/item, dB(A)	On-time %	On-time Correction, dB(A)	Barrier Correction, dB(A)	Total SWL, dB(A)
Dump truck with grab, 5.5 tone < gross vehicle weight ≤ 38 tonne	OCNP	1	105	60%	2	0	103
Total							103

2 Initial survey and erection of hoarding

Powered Mechanical Equipment	Ref. ^[1]	No. of items	SWL/item, dB(A)	On-time %	On-time Correction, dB(A)	Barrier Correction, dB(A)	Total SWL, dB(A)
Generator	CNP101	1	108	80	1	0	107
Crane lorry, 5.5 tonne < gross vehicle weight ≤ 38 tonne	OCNP	1	105	60	2	0	103
Welding set	EIA Ref. 1	1	78	80	1	0	77
Water Pump (electric)	CNP281	2	88	10	10	0	81
Total							108

3 Ground investigation works

Powered Mechanical Equipment	Ref. ^[1]	No. of items	SWL/item, dB(A)	On-time %	On-time Correction, dB(A)	Barrier Correction, dB(A)	Total SWL, dB(A)
Generator	CNP101	1	108	80	1	0	107
Dump truck with grab, 5.5 tone < gross vehicle weight ≤ 38 tonne	OCNP	1	105	60	2	0	103
Breaker, hand-held, mass > 10kg and < 20kg	CNP024	1	108	60	2	0	106
Water Pump (electric)	CNP281	2	88	10	10	0	81
Total							110

4 Take off existing masonry stone facing

Powered Mechanical Equipment	Ref. ^[1]	No. of items	SWL/item, dB(A)	On-time %	On-time Correction, dB(A)	Barrier Correction, dB(A)	Total SWL, dB(A)
Generator	CNP101	1	108	100	0	0	108
Breaker, hand-held, mass > 10kg and < 20kg	CNP024	1	108	60	2	0	106
Water Pump (electric)	CNP281	2	88	10	10	0	81
Total							110

5 Installation of soil nails and raking drains

Powered Mechanical Equipment	Ref. ^[1]	No. of items	SWL/item, dB(A)	On-time %	On-time Correction, dB(A)	Barrier Correction, dB(A)	Total SWL, dB(A) ^[2]	
							Group 1	Group 2
Generator	CNP101	1	108	100	0	0	108	-
Crane lorry, 5.5 tonne < gross vehicle weight ≤ 38 tonne	OCNP	1	105	80	1	0	104	-
Dump truck with grab, 5.5 tone < gross vehicle weight ≤ 38 tonne	OCNP	1	105	80	1	0	104	-
Drill rig, rotary type (diesel)	OCNP	1	110	100	0	0	110	-
Concrete lorry mixer	CNP044	1	109	80	1	0	-	108
Grout mixer	OCNP	1	90	100	0	0	90	-
Grout pump	OCNP	1	105	80	1	0	-	104
Water Pump (electric)	CNP281	2	88	10	10	0	81	81
Total							113	109
Maximum							113	

6 Construction of soil nail head

Powered Mechanical Equipment	Ref. ^[1]	No. of items	SWL/item, dB(A)	On-time %	On-time Correction, dB(A)	Barrier Correction, dB(A)	Total SWL, dB(A) ^[2]	
							Group 1	Group 2
Generator	CNP101	1	108	100	0	0	108	-
Crane lorry, 5.5 tonne < gross vehicle weight ≤ 38 tonne	OCNP	1	105	80	1	0	104	-
Dump truck with grab, 5.5 tone < gross vehicle weight ≤ 38 tonne	OCNP	1	105	80	1	0	104	-
Breaker, hand-held, mass > 10kg and < 20kg	CNP024	1	108	60	2	0	106	-
Concrete lorry mixer	CNP044	1	109	80	1	0	-	108
Grout mixer	OCNP	1	90	100	0	0	90	-
Grout pump	OCNP	1	105	80	1	0	-	104
Saw, circular, wood	CNP201	1	108	80	1	0	107	-
Water Pump (electric)	CNP281	2	88	10	10	0	81	81
							Total	113
							Maximum	113

7 Reinstatement of existing masonry stone facing

Powered Mechanical Equipment	Ref. ^[1]	No. of items	SWL/item, dB(A)	On-time %	On-time Correction, dB(A)	Barrier Correction, dB(A)	Total SWL, dB(A)	
							Group 1	Group 2
Generator	CNP101	1	108	100	0	0	108	-
Breaker, hand-held, mass > 10kg and < 20kg	CNP024	1	108	60	2	0	106	-
Water Pump (electric)	CNP281	2	88	10	10	0	81	81
							Total	110

8 Site clearance and dismantle of hoarding

Powered Mechanical Equipment	Ref. ^[1]	No. of items	SWL/item, dB(A)	On-time %	On-time Correction, dB(A)	Barrier Correction, dB(A)	Total SWL, dB(A)	
							Group 1	Group 2
Generator	CNP101	1	108	100	0	0	108	-
Crane lorry, 5.5 tonne < gross vehicle weight ≤ 38 tonne	OCNP	1	105	80	1	0	104	-
Dump truck with grab, 5.5 tone < gross vehicle weight ≤ 38 tonne	OCNP	1	105	80	1	0	104	-
Welding set	EIA Ref. 1	1	78	100	0	0	78	-
Water Pump (electric)	CNP281	2	88	10	10	0	81	81
							Total	111

Notes:

- [1] CNP – Table 3, Technical Memorandum on Noise from Construction Work Other than Percussive Piling (GW-TM)
 OCNP – Other PME documented by the Noise Control Authority
 (http://www.epd.gov.hk/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf)
 EIA Ref. 1 – Approved Sheung Shui to Lok Ma Chau Spur Line Environmental Impact Assessment Report (Register No.: AEIAR-052/2002)
- [2] PME in different groups will not be in use concurrently. The group with higher SWL has been adopted in the assessment for the worst case scenario.

Proposed Construction Plant Inventory
 Unmitigated Scenario
 Feature No. 11SW-A/FR218

1 Site clearance, UU detection and Preparation

Powered Mechanical Equipment	Ref. ^[1]	No. of items	SWL/item, dB(A)	On-time %	On-time Correction, dB(A)	Barrier Correction, dB(A)	Total SWL, dB(A)
Dump truck with grab, 5.5 tone < gross vehicle weight ≤ 38 tonne	OCNP	1	105	60	2	0	103
Total							103

2 Initial survey and erection of hoarding

Powered Mechanical Equipment	Ref. ^[1]	No. of items	SWL/item, dB(A)	On-time %	On-time Correction, dB(A)	Barrier Correction, dB(A)	Total SWL, dB(A)
Generator	CNP101	1	108	80	1	0	107
Crane lorry, 5.5 tonne < gross vehicle weight ≤ 38 tonne	OCNP	1	105	60	2	0	103
Welding set	EIA Ref. 1	1	78	80	1	0	77
Water Pump (electric)	CNP281	2	88	10	10	0	81
Total							108

3 Excavation works (Bay 1 & Bay 3)

3.1 PME will be in use in Bay 1 & Bay 3

Powered Mechanical Equipment	Ref. ^[1]	No. of items	SWL/item, dB(A)	On-time %	On-time Correction, dB(A)	Barrier Correction, dB(A)	Total SWL, dB(A)
Welding set	EIA Ref. 1	1	78	10	10	0	68
Breaker, hand-held, mass > 10kg and < 20kg	CNP024	1	108	10	10	0	98
Excavator	CNP081	1	112	20	7	0	105
Winch (electric)	CNP262	2	95	50	3	0	95
Water Pump (electric)	CNP281	2	88	10	10	0	81
Total							106

3.2 PME will operate at "area for bulky PME for works at Bay 1 to Bay 3" ^[3]

Powered Mechanical Equipment	Ref. ^[1]	No. of items	SWL/item, dB(A)	On-time %	On-time Correction, dB(A)	Barrier Correction, dB(A)	Total SWL, dB(A) ^[2]	
							Group 1	Group 2
Generator	CNP101	1	108	100	0	0	-	108
Crane lorry, 5.5 tonne < gross vehicle weight ≤ 38 tonne	OCNP	1	105	10	10	0	-	95
Saw, circular, wood	CNP201	1	108	10	10	0	-	98
Dump truck with grab, 5.5 tone < gross vehicle weight ≤ 38 tonne	OCNP	1	105	10	10	0	95	-
Water Pump (electric)	CNP281	2	88	10	10	0	81	81
Total							95	109
Maximum							109	

4 Installation of dowel bars and concrete works

Powered Mechanical Equipment	Ref. ^[1]	No. of items	SWL/item, dB(A)	On-time %	On-time Correction, dB(A)	Barrier Correction, dB(A)	Total SWL, dB(A) ^[2]	
							Group 1	Group 2
Generator	CNP101	1	108	80	1	0	107	-
Breaker, hand-held, mass > 10kg and < 20kg	CNP024	1	108	10	10	0	98	-
Concrete lorry mixer	CNP044	1	109	30	5	0	-	104
Saw, circular, wood	CNP201	1	108	10	10	0	98	-
Poker	CNP170	1	113	10	10	0	-	103
Concrete pump	CNP047	1	109	10	10	0	-	99
Water Pump (electric)	CNP281	2	88	10	10	0	81	81
Total							108	107
Maximum							108	

- 5 Pit by pit excavation works (Bay 2)
5.1 PME will be in use in Bay 2

Powered Mechanical Equipment	Ref. ^[1]	No. of items	SWL/item, dB(A)	On-time %	On-time Correction, dB(A)	Barrier Correction, dB(A)	Total SWL, dB(A)
Welding set	EIA Ref. 1	1	78	10	10	0	68
Breaker, hand-held, mass > 10kg and < 20kg	CNP024	1	108	10	10	0	98
Excavator	CNP081	1	112	20	7	0	105
Winch (electric)	CNP262	2	95	50	3	0	95
Water Pump (electric)	CNP281	2	88	10	10	0	81
Total							106

- 5.2 PME will operate at "area for bulky PME for works at Bay 1 to Bay 3" ^[3]

Powered Mechanical Equipment	Ref. ^[1]	No. of items	SWL/item, dB(A)	On-time %	On-time Correction, dB(A)	Barrier Correction, dB(A)	Total SWL, dB(A) ^[2]	
							Group 1	Group 2
Generator	CNP101	1	108	100	0	0	-	108
Saw, circular, wood	CNP201	1	108	60	2	0	-	106
Crane lorry, 5.5 tonne < gross vehicle weight ≤ 38 tonne	OCNP	1	105	50	3	0	-	102
Dump truck with grab, 5.5 tone < gross vehicle weight ≤ 38 tonne	OCNP	1	105	80	1	0	104	-
Water Pump (electric)	CNP281	2	88	10	10	0	81	81
Total							104	111
Maximum							111	

- 6 Installation of dowel bars and concrete works

Powered Mechanical Equipment	Ref. ^[1]	No. of items	SWL/item, dB(A)	On-time %	On-time Correction, dB(A)	Barrier Correction, dB(A)	Total SWL, dB(A) ^[2]	
							Group 1	Group 2
Generator	CNP101	1	108	80	1	0	107	-
Breaker, hand-held, mass > 10kg and < 20kg	CNP024	1	108	15	8	0	100	-
Concrete lorry mixer	CNP044	1	109	10	10	0	-	99
Saw, circular, wood	CNP201	1	108	50	3	0	105	-
Poker	CNP170	1	113	10	10	0	-	103
Concrete pump	CNP047	1	109	10	10	0	-	99
Water Pump (electric)	CNP281	2	88	10	10	0	81	81
Total							110	106
Maximum							110	

- 7 Back filling of top soil

Powered Mechanical Equipment	Ref. ^[1]	No. of items	SWL/item, dB(A)	On-time %	On-time Correction, dB(A)	Barrier Correction, dB(A)	Total SWL, dB(A)
Generator	CNP101	1	108	100	0	0	108
Water Pump (electric)	CNP281	2	88	10	10	0	81
Total							108

- 8 Construction of concrete staircase

Powered Mechanical Equipment	Ref. ^[1]	No. of items	SWL/item, dB(A)	On-time %	On-time Correction, dB(A)	Barrier Correction, dB(A)	Total SWL, dB(A) ^[2]	
							Group 1	Group 2
Generator	CNP101	1	108	100	0	0	-	108
Crane lorry, 5.5 tonne < gross vehicle weight ≤ 38 tonne	OCNP	1	105	80	1	0	-	104
Breaker, hand-held, mass > 10kg and < 20kg	CNP024	1	108	15	8	0	-	100
Concrete lorry mixer	CNP044	1	109	10	10	0	99	-
Saw, circular, wood	CNP201	1	108	80	1	0	107	-
Water Pump (electric)	CNP281	2	88	10	10	0	81	81
Total							108	110
Maximum							110	

9 Landscape works

Powered Mechanical Equipment	Ref. ^[1]	No. of items	SWL/item, dB(A)	On-time %	On-time Correction, dB(A)	Barrier Correction, dB(A)	Total SWL, dB(A)
Generator	CNP101	1	108	100	0	0	108
Crane lorry, 5.5 tonne < gross vehicle weight ≤ 38 tonne	OCNP	1	105	80	1	0	104
Water Pump (electric)	CNP281	2	88	10	10	0	81
						Total	109

10 Site clearance and dismantle of hoarding

Powered Mechanical Equipment	Ref. ^[1]	No. of items	SWL/item, dB(A)	On-time %	On-time Correction, dB(A)	Barrier Correction, dB(A)	Total SWL, dB(A)
Generator	CNP101	1	108	100	0	0	108
Crane lorry, 5.5 tonne < gross vehicle weight ≤ 38 tonne	OCNP	1	105	80	1	0	104
Dump truck with grab, 5.5 tone < gross vehicle weight ≤ 38 tonne	OCNP	1	105	80	1	0	104
Welding set	EIA Ref. 1	1	78	100	0	0	78
Water Pump (electric)	CNP281	2	88	10	10	0	81
						Total	111

Notes:

- [1] CNP - Table 3, Technical Memorandum on Noise from Construction Work Other than Percussive Piling (GW-TM)
 OCNP - Other PME documented by the Noise Control Authority
 (http://www.epd.gov.hk/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf)
 EIA Ref. 1 - Approved Sheung Shui to Lok Ma Chau Spur Line Environmental Impact Assessment Report (Register No.: AEIAR-052/2002)
- [2] PME in different groups will not be in use concurrently. The group with higher SWL has been adopted in the assessment for the worst case scenario.
- [3] Due to the gradient and limited area of Bay 1 to Bay 3, bulky PME such as generators and trucks will be placed and operate at the "area for bulky PME for works at Bay 1 to Bay 3" as shown in Figure 3.2.

Proposed Construction Plant Inventory
Mitigated Scenario
Feature No. 11SW-A/R94

1 Site clearance, UU detection and Preparation

Powered Mechanical Equipment	Ref. ^[1]	No. of items	SWL/item, dB(A)	On-time %	On-time Correction, dB(A)	Barrier Correction, dB(A)	Total SWL, dB(A)
Dump truck with grab, 5.5 tone < gross vehicle weight ≤ 38 tonne	OCNP	1	105	60%	2	5	98
Total							98

2 Initial survey and erection of hoarding

Powered Mechanical Equipment	Ref. ^[1]	No. of items	SWL/item, dB(A)	On-time %	On-time Correction, dB(A)	Barrier Correction, dB(A)	Total SWL, dB(A)
Generator	OPME EPD-02677	1	91	80	1	10	90
Crane lorry, 5.5 tonne < gross vehicle weight ≤ 38 tonne	OCNP	1	105	60	2	5	98
Welding set	EIA Ref. 1	1	78	80	1	0	77
Water Pump (electric)	CNP281	2	88	10	10	5	76
Total							98

3 Ground investigation works

Powered Mechanical Equipment	Ref. ^[1]	No. of items	SWL/item, dB(A)	On-time %	On-time Correction, dB(A)	Barrier Correction, dB(A)	Total SWL, dB(A)
Generator	OPME EPD-02677	1	91	80	1	10	90
Dump truck with grab, 5.5 tone < gross vehicle weight ≤ 38 tonne	OCNP	1	105	60	2	5	98
Breaker, hand-held, mass > 10kg and < 20kg	EIA Ref. 2	1	100	60	2	5	93
Water Pump (electric)	CNP281	2	88	10	10	5	76
Total							99

4 Take off existing masonry stone facing

Powered Mechanical Equipment	Ref. ^[1]	No. of items	SWL/item, dB(A)	On-time %	On-time Correction, dB(A)	Barrier Correction, dB(A)	Total SWL, dB(A)
Generator	OPME EPD-02677	1	91	100	0	10	81
Breaker, hand-held, mass > 10kg and < 20kg	EIA Ref. 2	1	100	60	2	5	93
Water Pump (electric)	CNP281	2	88	10	10	5	76
Total							93

5 Installation of soil nails and raking drains

Powered Mechanical Equipment	Ref. ^[1]	No. of items	SWL/item, dB(A)	On-time %	On-time Correction, dB(A)	Barrier Correction, dB(A)	Total SWL, dB(A) ^[2]	
							Group 1	Group 2
Generator	OPME EPD-02677	1	91	100	0	10	81	-
Crane lorry, 5.5 tonne < gross vehicle weight ≤ 38 tonne	OCNP	1	105	80	1	5	99	-
Dump truck with grab, 5.5 tone < gross vehicle weight ≤ 38 tonne	OCNP	1	105	80	1	5	99	-
Drill rig, rotary type (diesel)	OCNP	1	110	100	0	10	100	-
Concrete lorry mixer	CNP044	1	109	80	1	5	-	103
Grout mixer	OCNP	1	90	100	0	0	90	-
Grout pump	OCNP	1	105	80	1	5	-	99
Water Pump (electric)	CNP281	2	88	10	10	5	76	76
Total							104	104
Maximum							104	

6 Construction of soil nail head

Powered Mechanical Equipment	Ref. ^[1]	No. of items	SWL/item, dB(A)	On-time %	On-time Correction, dB(A)	Barrier Correction, dB(A)	Total SWL, dB(A) ^[2]	
							Group 1	Group 2
Generator	OPME EPD-02677	1	91	100	0	10	81	-
Crane lorry, 5.5 tonne < gross vehicle weight ≤ 38 tonne	OCNP	1	105	80	1	5	99	-
Dump truck with grab, 5.5 tone < gross vehicle weight ≤ 38 tonne	OCNP	1	105	80	1	5	99	-
Breaker, hand-held, mass > 10kg and < 20kg	EIA Ref. 2	1	100	60	2	5	93	-
Concrete lorry mixer	CNP044	1	109	80	1	5	-	103
Grout mixer	OCNP	1	90	100	0	0	90	-
Grout pump	OCNP	1	105	80	1	5	-	99
Saw, circular, wood	EIA Ref. 2	1	103	50	1	5	97	-
Water Pump (electric)	CNP281	2	88	10	10	5	76	76
Total							104	104
Maximum							104	

7 Reinstatement of existing masonry stone facing

Powered Mechanical Equipment	Ref. ^[1]	No. of items	SWL/item, dB(A)	On-time %	On-time Correction, dB(A)	Barrier Correction, dB(A)	Total SWL, dB(A)
Generator	OPME EPD-02677	1	91	100	0	10	81
Breaker, hand-held, mass > 10kg and < 20kg	EIA Ref. 2	1	100	60	2	5	93
Water Pump (electric)	CNP281	2	88	10	10	5	76
						Total	93

8 Site clearance and dismantle of hoarding

Powered Mechanical Equipment	Ref. ^[1]	No. of items	SWL/item, dB(A)	On-time %	On-time Correction, dB(A)	Barrier Correction, dB(A)	Total SWL, dB(A)
Generator	OPME EPD-02677	1	91	100	0	10	81
Crane lorry, 5.5 tonne < gross vehicle weight <= 38 tonne	OCNP	1	105	80	1	5	99
Dump truck with grab, 5.5 tonne < gross vehicle weight <= 38 tonne	OCNP	1	105	80	1	5	99
Welding set	EIA Ref. 1	1	78	100	0	0	78
Water Pump (electric)	CNP281	2	88	10	10	5	76
						Total	102

Notes:

- [1] CNP – Table 3, Technical Memorandum on Noise from Construction Work Other than Percussive Piling (GW-TM)
 OCNP – Other PME documented by the Noise Control Authority
 (http://www.epd.gov.hk/epd/english/application_for_licences/guidance/files/OtherSWL.pdf)
 EIA Ref. 1 – Approved Sheung Shui to Lok Ma Chau Spui Line Environmental Impact Assessment Report (Register No.: AEIAR-052/2002)
- [2] PME in different groups will not be in use concurrently. The group with higher SWL has been adopted in the assessment for the worst case scenario.

Proposed Construction Plant Inventory
 Mitigated Scenario
 Feature No. 11SW-14FR218

1 Site clearance, UU detection and Preparation

Powered Mechanical Equipment	Ref. ⁽¹⁾	No. of items	SWL/item, dB(A)	On-time %	On-time Correction, dB(A)	Barrier Correction, dB(A)	Total SWL, dB(A)
Dump truck with grab, 5.5 tonne < gross vehicle weight ≤ 38 tonne	OCNP	1	105	60	2	5	98
Total							98

2 Initial survey and erection of hoarding

Powered Mechanical Equipment	Ref. ⁽¹⁾	No. of items	SWL/item, dB(A)	On-time %	On-time Correction, dB(A)	Barrier Correction, dB(A)	Total SWL, dB(A)
Generator	OPME EPD-02677	1	91	80	1	10	80
Crane lorry, 5.5 tonne < gross vehicle weight ≤ 38 tonne	OCNP	1	105	60	2	5	98
Welding set	EIA Ref. 1	1	78	80	1	5	72
Water Pump (electric)	CNP281	2	88	10	10	5	76
Total							98

3 Excavation works (Bay 1 & Bay 3)

3.1 PME will be in use in Bay 1 & Bay 3

Powered Mechanical Equipment	Ref. ⁽¹⁾	No. of items	SWL/item, dB(A)	On-time %	On-time Correction, dB(A)	Barrier Correction, dB(A)	Total SWL, dB(A)
Welding set	EIA Ref. 1	1	78	10	10	5	63
Breaker, hand-held, mass > 10kg and < 20kg	EIA Ref. 2	1	100	10	10	5	85
Excavator	CNP081	1	112	20	7	5	100
Winch (electric)	CNP262	2	95	50	3	5	90
Water Pump (electric)	CNP281	2	88	10	10	5	76
Total							101

3.2 PME will operate at "area for bulky PME for works at Bay 1 to Bay 3"⁽¹⁾

Powered Mechanical Equipment	Ref. ⁽¹⁾	No. of items	SWL/item, dB(A)	On-time %	On-time Correction, dB(A)	Barrier Correction, dB(A)	Total SWL, dB(A) ⁽²⁾	
							Group 1	Group 2
Generator	OPME EPD-02677	1	91	100	0	10	-	81
Crane lorry, 5.5 tonne < gross vehicle weight ≤ 38 tonne	OCNP	1	105	10	10	5	-	90
Saw, circular, wood	EIA Ref. 2	1	103	10	10	5	-	88
Dump truck with grab, 5.5 tonne < gross vehicle weight ≤ 38 tonne	OCNP	1	105	10	10	5	90	-
Water Pump (electric)	CNP281	2	88	10	10	5	76	76
Total							90	93
Maximum							90	93

4 Installation of steel bars and concrete works

Powered Mechanical Equipment	Ref. ⁽¹⁾	No. of items	SWL/item, dB(A)	On-time %	On-time Correction, dB(A)	Barrier Correction, dB(A)	Total SWL, dB(A) ⁽²⁾	
							Group 1	Group 2
Generator	OPME EPD-02677	1	91	80	1	10	90	-
Breaker, hand-held, mass > 10kg and < 20kg	EIA Ref. 2	1	100	10	10	5	85	-
Concrete lorry mixer	CNP044	1	109	30	5	5	-	99
Saw, circular, wood	EIA Ref. 2	1	103	10	10	5	88	-
Picker	CNP170	1	112	10	10	5	-	98
Concrete pump	CNP017	1	109	10	10	5	-	94
Water Pump (electric)	CNP281	2	88	10	10	5	76	76
Total							90	102
Maximum							102	102

5 Pit by pit excavation works (Bay 2)

5.1 PME will be in use in Bay 2

Powered Mechanical Equipment	Ref. ⁽¹⁾	No. of items	SWL/item, dB(A)	On-time %	On-time Correction, dB(A)	Barrier Correction, dB(A)	Total SWL, dB(A)
Welding set	EIA Ref. 1	1	78	10	10	5	63
Breaker, hand-held, mass > 10kg and < 20kg	EIA Ref. 2	1	100	10	10	5	85
Excavator	CNP081	1	112	20	7	5	100
Winch (electric)	CNP262	2	95	50	3	5	90
Water Pump (electric)	CNP281	2	88	10	10	5	76
Total							101

5.2 PME will operate at "area for bulky PME for works at Bay 1 to Bay 3"⁽¹⁾

Powered Mechanical Equipment	Ref. ⁽¹⁾	No. of items	SWL/item, dB(A)	On-time %	On-time Correction, dB(A)	Barrier Correction, dB(A)	Total SWL, dB(A) ⁽²⁾	
							Group 1	Group 2
Generator	OPME EPD-02677	1	91	100	0	10	-	81
Saw, circular, wood	EIA Ref. 2	1	103	60	2	5	-	96
Crane lorry, 5.5 tonne < gross vehicle weight ≤ 38 tonne	OCNP	1	105	50	3	5	-	97
Dump truck with grab, 5.5 tonne < gross vehicle weight ≤ 38 tonne	OCNP	1	105	80	1	5	99	-
Water Pump (electric)	CNP281	2	88	10	10	5	76	76
Total							99	99
Maximum							99	99

6 Installation of steel beams and concrete works								
Powered Mechanical Equipment								
	Ref. [1]	No. of items	SWL/item, dB(A)	On-time %	On-time Correction, dB(A)	Barrier Correction, dB(A)	Total SWL, dB(A) [2]	
							Group 1	Group 2
Generator	OPME EPD-02677	1	91	80	1	10	90	-
Breaker, hand-held, mass > 10kg and < 20kg	EIA Ref. 2	1	109	15	8	5	97	-
Concrete lorry mixer	CNP044	1	109	10	10	5	-	94
Saw, circular, wood	EIA Ref. 2	1	103	50	3	5	95	-
Poker	CNP170	1	113	10	10	5	-	95
Concrete pump	CNP047	1	109	10	10	5	-	94
Water Pump (electric)	CNP281	2	88	10	10	5	76	76
							Total	96
							Maximum	101
7 Back filling of top soil								
Powered Mechanical Equipment								
	Ref. [1]	No. of items	SWL/item, dB(A)	On-time %	On-time Correction, dB(A)	Barrier Correction, dB(A)	Total SWL, dB(A)	
Generator	OPME EPD-02677	1	91	100	0	10	81	-
Water Pump (electric)	CNP281	2	88	10	10	5	76	-
							Total	82
8 Construction of concrete staircase								
Powered Mechanical Equipment								
	Ref. [1]	No. of items	SWL/item, dB(A)	On-time %	On-time Correction, dB(A)	Barrier Correction, dB(A)	Total SWL, dB(A) [2]	
							Group 1	Group 2
Generator	OPME EPD-02677	1	91	100	0	10	-	81
Crane lorry, 5.5 tonne < gross vehicle weight ≤ 38 tonne	OCNP	1	105	80	1	5	-	98
Breaker, hand-held, mass > 10kg and < 20kg	EIA Ref. 2	1	100	15	8	0	-	92
Concrete lorry mixer	CNP044	1	109	10	10	5	94	-
Saw, circular, wood	EIA Ref. 2	1	103	50	1	5	97	-
Water Pump (electric)	CNP281	2	88	10	10	5	76	76
							Total	99
							Maximum	100
9 Landscape works								
Powered Mechanical Equipment								
	Ref. [1]	No. of items	SWL/item, dB(A)	On-time %	On-time Correction, dB(A)	Barrier Correction, dB(A)	Total SWL, dB(A)	
Generator	OPME EPD-02677	1	91	100	0	10	81	-
Crane lorry, 5.5 tonne < gross vehicle weight ≤ 38 tonne	OCNP	1	105	80	1	5	98	-
Water Pump (electric)	CNP281	2	88	10	10	5	76	-
							Total	99
10 Site clearance and dismantle of hoarding								
Powered Mechanical Equipment								
	Ref. [1]	No. of items	SWL/item, dB(A)	On-time %	On-time Correction, dB(A)	Barrier Correction, dB(A)	Total SWL, dB(A)	
Generator	OPME EPD-02677	1	91	100	0	10	81	-
Crane lorry, 5.5 tonne < gross vehicle weight ≤ 38 tonne	OCNP	1	105	80	1	5	99	-
Dump truck with grab, 5.5 tonne < gross vehicle weight ≤ 38 tonne	OCNP	1	105	80	1	5	99	-
Welding set	EIA Ref. 1	1	78	100	0	0	78	-
Water Pump (electric)	CNP281	2	88	10	10	5	76	-
							Total	102

Notes:

- [1] CNP - Table 3, Technical Memorandum on Noise from Construction Works Other than Percussive Piling (GW-T&I)
 OCNP - Other PME documented by the Noise Control Authority
 (http://www.epa.gov.hk/epd/english/application_for_licences/guidance_files/OtherSWL.pdf)
 EIA Ref. 1 - Approved Shaung Shui to Lok Ma Chau Spur Line Environmental Impact Assessment Report (Register No.: AEIAR-052/2002)
- [2] PME in different groups will not be in use concurrently. The group with higher SWL has been adopted in the assessment for the worst case scenario.
- [3] Due to the gradient and limited area of Bay 1 to Bay 3, bulky PME such as generators and trucks will be placed and operate at the 'area for bulky PME for works at Bay 1 to Bay 3' as shown in Figure 3.2.

Distance of NSRs to the Notional Source Positions

NSR	Description	Land use	Feature No. 11SW-A/R94	Horizontal distance to notional source position, m				
				Overall	Bay 1	Bay 2	Bay 3	Area for bulky PME for works at Bay 1 to
N1	Silver Jubilee Mansion	Residential	58	19	22	22	24	17
N2	Cherry Crest	Residential	53	18	15	22	29	17
N3	No.1, U Lam Terrace	Residential	39	24	25	29	34	29
N4	The Bellevue place	Residential	34	54	57	59	63	60
N5	Briar-Caine Co-Op Building	Residential	23	66	72	70	69	75
N6	Island Christian Academy	Educational Institution	68	58	56	62	69	59

Construction Noise Impact
Unmitigated Scenario

NSR N1

Description Silver Jubilee Mansion

Act No.	Main Construction Elements	SWL	Distance, m	Distance Correction, dB(A)	SPL	Construction Period (Tentative)											
						2017											
						Apr 4	May 5	Jun 6	Jul 7	Aug 8	Sep 9	Oct 10	Nov 11	Dec 12			
Feature No. 11SW-A/R94																	
1	Site clearance, UU detection and preparation	103	58	43	63												
2	Initial survey and erection of hoarding	108	58	43	68												
3	Ground investigation works	110	58	43	70												
4	Take off existing masonry stone facing	110	58	43	70			70									
5	Installation of soil nails and raking drains	113	58	43	73				73	73							
6	Construction of soil nail head	113	58	43	73												
7	Reinstatement of existing masonry stone facing	110	58	43	70								70				
8	Site clearance and dismantle of hoarding	111	58	43	71										71		
Feature No. 11SW-A/FR218																	
1	Site clearance, UU detection and preparation	103	19	34	72												
2	Initial survey and erection of hoarding	108	19	33	78												
3.1	Excavation works (Bay 1)	106	22	35	74					74							
3.1	Excavation works (Bay 3)	106	24	36	73					73							
3.2	Excavation works (Bulky PME area)	109	17	33	79					79							
4	Installation of dowel bars and concrete works	108	19	34	77					77							
5.1	Pit by pit excavation works (Bay 2)	106	22	35	74					74							
5.2	Pit by pit excavation works (Bulky PME area)	111	17	33	81					81							
6	Installation of dowel bars and concrete works	110	19	34	79								79				
7	Back filling of top soil	108	19	34	77								77				
8	Construction of concrete staircase	110	19	34	79									79			
9	Landscape works	109	19	34	78									78			
10	Site clearance and dismantle of hoarding	111	19	34	80										80		

Total SPL, dB(A): 79 81 78 82 80 79 80 80 79 80 79 80 80
Exceedance: 4 6 3 7 5 4 5 4 5 4 5

Note:
Figures in red denote exceedance of the EIAO-TM construction noise criteria.

Construction Noise Impact
Unmitigated Scenario

NSR N2

Description Cherry Crest

Act No.	Main Construction Elements	SWL	Distance, m	Distance, Correction, dB(A)	SPL	Construction Period (Tentative)											
						2017											
						Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec			
Feature No. 11SW-A/R94																	
1	Site clearance, UU detection and preparation	103	53	43	63												
2	Initial survey and erection of hoarding	108	53	43	68												
3	Ground investigation works	110	53	43	70												
4	Take off existing masonry stone facing	110	53	43	70			70									
5	Installation of soil nails and raking drains	113	53	43	73				73	73	73						
6	Construction of soil nail head	113	53	43	73												
7	Reinstatement of existing masonry stone facing	110	53	43	70											70	
8	Site clearance and dismantle of hoarding	111	53	43	71												71
Feature No. 11SW-A/FR218																	
1	Site clearance, UU detection and preparation	103	18	33	73												
2	Initial survey and erection of hoarding	108	18	33	78												
3.1	Excavation works (Bay 1)	106	15	32	77												
3.1	Excavation works (Bay 3)	106	29	37	72												
3.2	Excavation works (Bulky PME area)	109	17	33	79												
4	Installation of dowel bars and concrete works	108	18	33	78			78									
5.1	Pit by pit excavation works (Bay 2)	106	22	35	74				74								
5.2	Pit by pit excavation works (Bulky PME area)	111	17	33	81												
6	Installation of dowel bars and concrete works	110	18	33	80												
7	Back filling of top soil	108	18	33	78												
8	Construction of concrete staircase	110	18	33	80												
9	Landscape works	109	18	33	79												79
10	Site clearance and dismantle of hoarding	111	18	33	81												81

Total SPL, dB(A): 80 82 79 82 81 79 81 81 80 81
Exceedance: 5 7 4 7 6 4 6 6 5 6

Note:
Figures in red denote exceedance of the EIAO-TM construction noise criteria.

Construction Noise Impact
Unmitigated Scenario

NSR N3

Description No.1, U Lam Terrace

Act No.	Main Construction Elements	SWL	Distance, m	Distance, Correction, dB(A)	SPL	Construction Period (Tentative)											
						2017											
						Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec			
						4	5	6	7	8	9	10	11	12			
Feature No. 11SW-A/R94																	
1	Site clearance, UU detection and preparation	103	39	43	63												
2	Initial survey and erection of hoarding	108	39	43	68												
3	Ground investigation works	110	39	43	70												
4	Take off existing masonry stone facing	110	39	43	70			70									
5	Installation of soil nails and raking drains	113	39	43	73				73	73							
6	Construction of soil nail head	113	39	43	73							73					
7	Reinstatement of existing masonry stone facing	110	39	43	70								70				
8	Site clearance and dismantle of hoarding	111	39	43	71										71		
Feature No. 11SW-A/FR218																	
1	Site clearance, UU detection and preparation	103	24	36	70												
2	Initial survey and erection of hoarding	108	24	36	75												
3.1	Excavation works (Bay 1)	106	25	36	73												
3.1	Excavation works (Bay 3)	106	34	39	70												
3.2	Excavation works (Bulky PME area)	109	29	37	75												
4	Installation of dowel bars and concrete works	108	24	36	75			75									
5.1	Pit by pit excavation works (Bay 2)	106	29	37	72				72								
5.2	Pit by pit excavation works (Bulky PME area)	111	29	37	77				77								
6	Installation of dowel bars and concrete works	110	24	36	77					77							
7	Back filling of top soil	108	24	36	75						75						
8	Construction of concrete staircase	110	24	36	77							77					
9	Landscape works	109	24	36	76								76				
10	Site clearance and dismantle of hoarding	111	24	36	78										78		

Total SPL, dB(A): 77 79 76 79 78 77 78 77 78 77 78 77 78 77 78 78
Exceedance: 2 4 1 4 3 2 3 2 3 2 3 2 3 2 3 3

Note:
Figures in red denote exceedance of the EIAO-TM construction noise criteria.

Construction Noise Impact
Unmitigated Scenario

NSR N4

Description The Bellevue Place

Act No.	Main Construction Elements	SWL	Distance, m	Distance, Correction, dB(A)	SPL	Construction Period (Tentative)											
						2017											
						Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec			
						4	5	6	7	8	9	10	11	12			
Feature No. 11SW-A/R94																	
1	Site clearance, UU detection and preparation	103	34	39	67												
2	Initial survey and erection of hoarding	108	34	39	72												
3	Ground investigation works	110	34	39	74												
4	Take off existing masonry stone facing	110	34	39	74			74									
5	Installation of soil nails and raking drains	113	34	39	77				77	77	77						
6	Construction of soil nail head	113	34	39	77							77					
7	Reinstatement of existing masonry stone facing	110	34	39	74								74				
8	Site clearance and dismantle of hoarding	111	34	39	75										75		
Feature No. 11SW-A/FR218																	
1	Site clearance, UU detection and preparation	103	54	43	63												
2	Initial survey and erection of hoarding	108	54	43	68												
3.1	Excavation works (Bay 1)	106	57	43	66												
3.1	Excavation works (Bay 3)	106	63	44	65												
3.2	Excavation works (Bulky PME area)	109	60	44	68												
4	Installation of dowel bars and concrete works	108	54	43	68			68									
5.1	Pit by pit excavation works (Bay 2)	106	59	43	66				66								
5.2	Pit by pit excavation works (Bulky PME area)	111	60	44	70				70								
6	Installation of dowel bars and concrete works	110	54	43	70					70							
7	Back filling of top soil	108	54	43	68						68						
8	Construction of concrete staircase	110	54	43	70							70					
9	Landscape works	109	54	43	69								69				
10	Site clearance and dismantle of hoarding	111	54	43	71										71		

Total SPL, dB(A): 71 78 75 78 78 78 78 78 78 78 75 78 78 78 75 76
Exceedance: - 3 0 0 3 3 3 3 3 3 3 0 0 1

Note:
Figures in red denote exceedance of the EIAO-TM construction noise criteria.

Construction Noise Impact
Unmitigated Scenario

NSR N5

Description Briar-Caine Co-Op Building

Act No.	Main Construction Elements	SWL	Distance, m	Distance Correction, dB(A)	SPL	Construction Period (Tentative)																		
						2017																		
						Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec										
Feature No. 11SW-A/R94													4	5	6	7	8	9	10	11	12			
1	Site clearance, UU detection and preparation	103	23	35	71																			
2	Initial survey and erection of hoarding	108	23	35	76																			
3	Ground investigation works	110	23	35	78																			
4	Take off existing masonry stone facing	110	23	35	78																			
5	Installation of soil nails and raking drains	113	23	35	81																			
6	Construction of soil nail head	113	23	35	81				81	81														
7	Reinstatement of existing masonry stone facing	110	23	35	78																			
8	Site clearance and dismantle of hoarding	111	23	35	79														79					
Feature No. 11SW-A/FR218																								
1	Site clearance, UU detection and preparation	103	66	44	62																			
2	Initial survey and erection of hoarding	108	66	44	67																			
3.1	Excavation works (Bay 1)	106	72	45	64																			
3.1	Excavation works (Bay 3)	106	69	45	64																			
3.2	Excavation works (Bulky PME area)	109	75	46	66																			
4	Installation of dowel bars and concrete works	108	66	44	67					67														
5.1	Pit by pit excavation works (Bay 2)	106	70	45	64					64														
5.2	Pit by pit excavation works (Bulky PME area)	111	75	46	68					68														
6	Installation of dowel bars and concrete works	110	66	44	69								69											
7	Back filling of top soil	108	66	44	67									67										
8	Construction of concrete staircase	110	66	44	69										69									
9	Landscape works	109	66	44	68														68					
10	Site clearance and dismantle of hoarding	111	66	44	70														70					

Total SPL, dB(A): 73 81 78 82 82 81 81 81 81 81 79 79
Exceedance: - 6 3 7 7 6 6 6 4 4

Note:
Figures in red denote exceedance of the EIAO-TM construction noise criteria.

Construction Noise Impact
Unmitigated Scenario

NSR N6

Description Island Christian Academy

Act No.	Main Construction Elements	SWL	Distance, m	Distance Correction, dB(A)	SPL	Construction Period (Tentative)																		
						2017																		
						Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec										
Feature No. 11SW-A/R94																								
1	Site clearance, UU detection and preparation	103	68	45	61																			
2	Initial survey and erection of hoarding	108	68	45	66																			
3	Ground investigation works	110	68	45	68																			
4	Take off existing masonry stone facing	110	68	45	68			68																
5	Installation of soil nails and raking drains	113	68	45	71				71	71														
6	Construction of soil nail head	113	68	45	71							71												
7	Reinstatement of existing masonry stone facing	110	68	45	68																68			
8	Site clearance and dismantling of hoarding	111	68	45	69																	69		
Feature No. 11SW-A/FR218																								
1	Site clearance, UU detection and preparation	103	58	43	63																			
2	Initial survey and erection of hoarding	108	58	43	68																			
3.1	Excavation works (Bay 1)	106	56	43	66																			
3.1	Excavation works (Bay 3)	106	69	45	64																			
3.2	Excavation works (Bulky PME area)	109	59	43	69																			
4	Installation of dowel bars and concrete works	108	58	43	68					68														
5.1	Pit by pit excavation works (Bay 2)	106	62	44	65							65												
5.2	Pit by pit excavation works (Bulky PME area)	111	59	43	71																			
6	Installation of dowel bars and concrete works	110	58	43	70									70										
7	Back filling of top soil	108	58	43	68										68									
8	Construction of concrete staircase	110	58	43	70											70								
9	Landscape works	109	58	43	69																	69		
10	Site clearance and dismantling of hoarding	111	58	43	71																	71		

Total SPL, dB(A): 70 74 71 75 74 73 74 74 72 73
Exceedance: - 4 1 5 4 3 4 4 2 2 3

Note:
Figures in red denote exceedance of the EIAO-TM construction noise criteria.

Construction Noise Impact

Mitigated Scenario

NSR N1

Description Silver Jubilee Mansion

Act No.	Main Construction Elements	SWL	Distance, m	Distance Correction, dB(A)	SPL	Construction Period (Tentative)											
						2017											
						Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec			
						4	5	6	7	8	9	10	11	12			
Feature No. 11SW-A/R94																	
1	Site clearance, UU detection and preparation	98	58	43	58		58										
2	Initial survey and erection of hoarding	98	58	43	58		58										
3	Ground investigation works	99	58	43	59		59										
4	Take off existing masonry stone facing	93	58	43	53			53									
5	Installation of soil nails and raking drains	104	58	43	64				64	64	64						
6	Construction of soil nail head	104	58	43	64							64					
7	Reinstatement of existing masonry stone facing	93	58	43	53								53				
8	Site clearance and dismantle of hoarding	102	58	43	62										62		
Feature No. 11SW-A/FR218																	
1	Site clearance, UU detection and preparation	98	19	34	67												
2	Initial survey and erection of hoarding	98	19	33	68												
3.1	Excavation works (Bay 1)	101	22	35	69												
3.1	Excavation works (Bay 3)	101	24	36	68												
3.2	Excavation works (Bulky PME area)	93	17	33	63												
4	Installation of dowel bars and concrete works	102	19	34	71					71							
5.1	Pit by pit excavation works (Bay 2)	101	22	35	69					69							
5.2	Pit by pit excavation works (Bulky PME area)	99	17	33	69					69							
6	Installation of dowel bars and concrete works	101	19	34	70						70						
7	Back filling of top soil	82	19	34	51						51						
8	Construction of concrete staircase	100	19	34	69							69					
9	Landscape works	99	19	34	68								68				
10	Site clearance and dismantle of hoarding	102	19	34	71										71		

Total SPL, dB(A): 71 72 71 71 73 71 65 70 68 68 72
 Exceedance: - - - - - - - - - -

Note: Figures in red denote exceedance of the EIAO-TM construction noise criteria.

Construction Noise Impact

Mitigated Scenario

NSR N2

Description Cherry Crest

Act No.	Main Construction Elements	SWL	Distance, m	Distance Correction, dB(A)	SPL	Construction Period (Tentative)																		
						2017																		
						Apr 4	May 5	Jun 6	Jul 7	Aug 8	Sep 9	Oct 10	Nov 11	Dec 12										
Feature No. 11SW-A/R94																								
1	Site clearance, UU detection and preparation	98	53	43	58																			
2	Initial survey and erection of hoarding	98	53	43	58	59																		
3	Ground investigation works	99	53	43	59																			
4	Take off existing masonry stone facing	93	53	43	53		53																	
5	Installation of soil nails and raking drains	104	53	43	64				64	64														
6	Construction of soil nail head	104	53	43	64																			
7	Reinstatement of existing masonry stone facing	93	53	43	53																	53		
8	Site clearance and dismantling of hoarding	102	53	43	62																		62	
Feature No. 11SW-A/FR218																								
1	Site clearance, UU detection and preparation	98	18	33	68																			
2	Initial survey and erection of hoarding	98	18	33	68																			
3.1	Excavation works (Bay 1)	101	15	32	72																			
3.1	Excavation works (Bay 3)	101	29	37	67																			
3.2	Excavation works (Bulky PME area)	93	17	33	63																			
4	Installation of dowel bars and concrete works	102	18	33	72					72														
5.1	Pit by pit excavation works (Bay 2)	101	22	35	69						69													
5.2	Pit by pit excavation works (Bulky PME area)	99	17	33	69						69													
6	Installation of dowel bars and concrete works	101	18	33	71							71												
7	Back filling of top soil	82	18	33	52								71											
8	Construction of concrete staircase	100	18	33	70																			
9	Landscape works	99	18	33	69																		69	
10	Site clearance and dismantling of hoarding	102	18	33	72																		72	

Total SPL, dB(A): 71 73 73 72 72 73 72 65 71 69 69 72

Exceedance: - - - - - - - - - - - - - - -

Note: Figures in red denote exceedance of the EIAO-IM construction noise criteria.

Construction Noise Impact
Mitigated Scenario

NSR N3

Description No.1, U Lam Terrace

Act No.	Main Construction Elements	SWL	Distance, m	Distance Correction, dB(A)	SPL	Construction Period (Tentative)											
						2017											
						Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec			
						4	5	6	7	8	9	10	11	12			
Feature No. 11 SW-A/R94																	
1	Site clearance, UU detection and preparation	98	39	43	58	58											
2	Initial survey and erection of hoarding	98	39	43	58	58											
3	Ground investigation works	99	39	43	59	59											
4	Take off existing masonry stone facing	93	39	43	53	53											
5	Installation of soil nails and raking drains	104	39	43	64	64			64	64							
6	Construction of soil nail head	104	39	43	64	64					64						
7	Reinstatement of existing masonry stone facing	93	39	43	53	53							53				
8	Site clearance and dismantle of hoarding	102	39	43	62	62								62			
Feature No. 11 SW-A/FR218																	
1	Site clearance, UU detection and preparation	98	24	36	65	65											
2	Initial survey and erection of hoarding	98	24	36	65	65											
3.1	Excavation works (Bay 1)	101	25	36	68	68											
3.1	Excavation works (Bay 3)	101	34	39	65	65											
3.2	Excavation works (Bulky PME area)	93	29	37	59	59											
4	Installation of dowel bars and concrete works	102	24	36	69	69											
5.1	Pit by pit excavation works (Bay 2)	101	29	37	67	67				67							
5.2	Pit by pit excavation works (Bulky PME area)	99	29	37	65	65				65							
6	Installation of dowel bars and concrete works	101	24	36	68	68					68						
7	Back filling of top soil	82	24	36	49	49						49					
8	Construction of concrete staircase	100	24	36	67	67						67					
9	Landscape works	99	24	36	66	66							66				
10	Site clearance and dismantle of hoarding	102	24	36	69	69								69			

Total SPL, dB(A): 68 70 70 69 69 69 69 69 69 69 69 69 69 69 69
Exceedance: - - - - - - - - - - - - - - - -

Note:
Figures in red denote exceedance of the EIAO-TM construction noise criteria.

Construction Noise Impact

Mitigated Scenario

NSR N5

Description Briar-Caine Co-Op Building

Act No.	Main Construction Elements	SWL	Distance, m	Distance Correction, dB(A)	SPL	Construction Period (Tentative)												
						2017												
						Apr 4	May 5	Jun 6	Jul 7	Aug 8	Sep 9	Oct 10	Nov 11	Dec 12				
Feature No. 11SW-A/R94																		
1	Site clearance, UU detection and preparation	98	23	35	66	66												
2	Initial survey and erection of hoarding	98	23	35	66	66												
3	Ground investigation works	99	23	35	67	67												
4	Take off existing masonry stone facing	93	23	35	61	61												
5	Installation of soil nails and raking drains	104	23	35	72	72												
6	Construction of soil nail head	104	25	35	72	72												
7	Reinstatement of existing masonry stone facing	93	23	35	61	61												
8	Site clearance and dismantle of hoarding	102	23	35	70	70												
Feature No. 11SW-A/FR218																		
1	Site clearance, UU detection and preparation	98	66	44	57	57												
2	Initial survey and erection of hoarding	98	66	44	57	57												
3.1	Excavation works (Bay 1)	101	72	45	59	59												
3.1	Excavation works (Bay 3)	101	69	45	59	59												
3.2	Excavation works (Bulky PME area)	93	75	46	50	50												
4	Installation of dowel bars and concrete works	102	66	44	61	61												
5.1	Pit by pit excavation works (Bay 2)	101	70	45	59	59												
5.2	Pit by pit excavation works (Bulky PME area)	99	75	46	56	56												
6	Installation of dowel bars and concrete works	101	66	44	60	60												
7	Back filling of top soil	82	66	44	41	41												
8	Construction of concrete staircase	100	66	44	59	59												
9	Landscape works	99	66	44	58	58												
10	Site clearance and dismantle of hoarding	102	66	44	61	61												

Total SPL, dB(A): 67 70 70 64 73 73 72 72 73 63 61
 Exceedance: - - - - - - - - - - - - - - - -

Note: Figures in red denote exceedance of the EIAO-IM construction noise criteria.

Construction Noise Impact
Mitigated Scenario

NSR N6

Description Island Christian Academy

Act No.	Main Construction Elements	SWL	Distance, m	Distance Correction, dB(A)	SPL	Construction Period (Tentative)																
						2017																
						Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec								
Feature No. 11SW-A/R94														4	5	6	7	8	9	10	11	12
1	Site clearance, UU detection and preparation	98	68	45	56																	
2	Initial survey and erection of hoarding	98	68	45	56																	
3	Ground investigation works	99	68	45	57																	
4	Take off existing masonry stone facing	93	68	45	51			51														
5	Installation of soil nails and raking drains	104	68	45	62				62	62												
6	Construction of soil nail head	104	68	45	62						62											
7	Reinstatement of existing masonry stone facing	93	68	45	51								51									
8	Site clearance and dismantle of hoarding	102	68	45	60									60								
Feature No. 11SW-A/FR218																						
1	Site clearance, UU detection and preparation	98	58	43	58																	
2	Initial survey and erection of hoarding	98	58	43	58																	
3.1	Excavation works (Bay 1)	101	56	43	61																	
3.1	Excavation works (Bay 3)	101	69	45	59																	
3.2	Excavation works (Bulky PME area)	93	59	43	53																	
4	Installation of dowel bars and concrete works	102	58	43	62			62														
5.1	Pit by pit excavation works (Bay 2)	101	62	44	60				60													
5.2	Pit by pit excavation works (Bulky PME area)	99	59	43	59				59													
6	Installation of dowel bars and concrete works	101	58	43	61					61												
7	Back filling of top soil	82	58	43	42						42											
8	Construction of concrete staircase	100	58	43	60							60										
9	Landscape works	99	58	43	59								59									
10	Site clearance and dismantle of hoarding	102	58	43	62									62								

Total SPL, dB(A): 62 65 65 65 65 63 64 64 60 60 64
Exceedance: - - - - -

Note:
Figures in red denote exceedance of the EIAO-TM construction noise criteria.

	Range, dB(A)	Limit	Range in Project Profile
N1	65 - 73	75	64-73
N2	65 - 73	75	65-73
N3	65 - 70	75	67-72
N4	61 - 69	75	62-70
N5	63 - 73	75	64-73
N6	60 - 65	70	60-66