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 April 2017

AECOM Asia Co. Ltd.

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EXECUTIVE SUMMARY

The Project comprises two slopes which respectively located at the south of the Hong Kong Museum of Medical Sciences (HKMMS) and the northwest of HKMMS, Caine Lane, Mid-levels.

The Consultants, which was engaged by the Geotechnical Engineering Office (GEO) of CEDD, would carry out the design and construction supervision of the Project. The Hong Kong Museum of Medical Science Society (HKMMS Society) would be responsible for routine maintenance of the completed works.

The EM&A programme commenced on 5 April 2017.

This report documents the findings of EM&A works conducted in the period between 5 and 30 April 2017. As informed by the Contractor, major activities in the reporting period were:

Location	Site Activities
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
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

Complaint, Notification of Summons and Successful Prosecution

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

Reporting Changes

There was no reporting change in the reporting month.

Future Key Issues

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

Location	Site Activities
11SW-A/R94	- Drilling of soil nail holes by coring machine - Fixing and installation of soil nail bars - Grouting of soil nails
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

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

1 INTRODUCTION

1.1 Purpose of the Report

1.1.1 This is the seventh monthly EM&A Report which summaries audit findings for the Project during the reporting period between 5 and 30 April 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: Future Key Issues
Section 8: Conclusions and Recommendations
Section 9: Adjustment

2 PROJECT INFORMATION

2.1 Background

2.1.1 The Project comprises Feature Nos. 11SW-A/R94 and 11SW-AFR218 which respectively located at the south of the Hong Kong Museum of Medical Sciences (HKMMS) and the northwest of HKMMS, Caine Lane, Mid-levels. They are located within a "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 Project is 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 covers 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
- 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 are summarised below:

Location	Site Activities
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 -
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

2.3.2 The construction programme is presented in **Appendix A**.

2.4 Project Personnel

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

Table 2.1 Contact Information of Key Personnel

Party	Position	Name	Telephone
AECOM Asia Co. Ltd.	IEC	Gigi Lam	3922 9000
AECOM Asia Co. Ltd.	Engineer Representative (ER)	Tommy Poon	5664 0767
Contractor - Geotech Engineering Ltd.	Project Manager	Danise Tang	9183 2621
	Site Agent	Francis Bao	6680 7070

2.5 Status of Environmental Licences, Notification and Permits

2.5.1 Relevant valid environmental licenses, permits and/or notifications on environmental protection for this Project in the reporting month are 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		
Environmental Permit				
EP-520/2016	8-8-2016	-	Valid	-
Billing Account for Construction Waste Disposal				
701982721	30-4-2014	End of Project	Account Active	-

3 IMPLEMENTATION STATUS OF ENVIRONMENTAL MITIGATION MEASURES

The Contractor has implemented environmental mitigation measures and requirements as stated in the PP and the EP. The implementation status of the environmental mitigation measures during the reporting period is summarized in **Appendix B.** Status of required submissions under the EP during the reporting period is summarised in **Table 3.1.**

Table 3.1 Status of Required Submission under Environmental Permit

EP Condition	Submission	Submission Date
Condition 3.2	Monthly Monitoring Report	12 May 2017

4 MONITORING RESULTS

4.1 Waste Management

4.1.1 C&D materials and wastes sorting were carried out on site. Receptacles were available for C&D wastes and general refuse collection.

4.1.2 As advised by the Contractor, 90.34 m^3 inert C&D material was generated in the reporting month. 0 m^3 of general refuse was generated in the reporting month. No paper/cardboard packaging material, metal or plastic was collected by recycling contractor in the reporting month. No inert C&D materials were reused on site.

4.1.3 The record of disposal is annexed in **Appendix C**.

4.1.4 The Contractor is advised to properly maintain on site C&D materials and wastes collection, sorting and recording system and maximize reuse / recycle of C&D materials and wastes. The Contractor is reminded to properly maintain the site tidiness and dispose of the wastes accumulated on site regularly and properly.

4.1.5 The total estimated quantities of C&D materials and wastes generated from both feature is revised as 310 m^3.

4.2 Noise Management

4.2.1 Noise mitigation measures, which mentioned in PP, have implemented.

4.2.2 Noise monitoring was conducted in every week at 6 Noise Sensitive Receiver which mentioned in PP. The results of the noise level have fully complied of the standard which mentioned in PP.

4.3 Cultural Heritage Management

4.3.1 Ground settlement markers, tilting monitoring markers and vibration monitoring points were installed around the construction site.

4.3.2 Reading of the ground settlement, tilting monitoring and vibration monitoring were obtained at a daily interval. And, the reading of the above monitoring have fully complied of the standard which mentioned in PP.

5 ENVIRONMENTAL SITE INSPECTION AND AUDIT

5.1.1
Site inspections were carried out on a weekly basis to monitor the implementation of proper environmental pollution control and mitigation measures for the Project. A summary of the mitigation measures implementation schedule is provided in **Appendix B**.

5.1.2
In the reporting month, 4 joint site inspections with the IEC, ER and the Contractor were carried out on 7, 12, 20 and 28 April 2017. The IEC site audit checklists are provided in **Appendix D**. No non-compliance was recorded during the site inspections. Details of observations recorded during the site inspections are presented in **Table 5.1**.

Table 5.1 Observations and Recommendations of Site Audit

Parameters	Date	Observations and Recommendations	Follow-up
Air Quality	Nil	Nil	Nil
Noise	20 Apr 2017	• Reminder: Noise enclosures should be modified properly.	28 Apr 2017
Water Quality	Nil	Nil	Nil
Waste	Nil	Nil	Nil
Cultural Heritage	28 Apr 2017	• Reminder: Conduct the measurements daily and send the record to the IEC	5 May 2017
Permits/ Licenses	Nil	Nil	Nil

5.1.3 All the follow-up actions requested by IEC during the site inspection were undertaken as reported by the Contractor and confirmed into the following weekly site inspection conducted during the reporting period.

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 recorded in the reporting month.

6.3 Summary of Environmental Summon and Successful Prosecutions

6.3.1 No environmental related prosecution or notification of summons was received in the reporting month.

7 FUTURE KEY ISSUES

7.2 Construction Programme for the Coming Month

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

Location	Site Activities
11SW-A/R94	- Drilling of soil nail holes by coring machine - Fixing and installation of soil nail bars - Grouting of soil nails
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

8 CONCLUSIONS AND RECOMMENDATIONS

8.1 Conclusions

8.1.1 4 nos. of environmental site inspections were carried out in April 2017. Recommendations on remedial actions were given to the Contractor for the deficiencies identified during the site audit.

8.1.2 Referring to the Contractor's information, no environmental complaint, notification of summons and successful prosecution was received in the reporting month.

8.2 Recommendations

8.2.1 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

- Modification of noise enclosure was recommended.

Water Quality Impact

- No specific observation was identified in the reporting month.

Waste Management

- No specific observation was identified in the reporting month.

Cultural Heritage

- All result/ record should be sent to IEC.

Permits/licenses

- No specific observation was identified in the reporting month.

9 ADJUSTMENT

9.1.1 A Letter of adjustment to the PME mentioned in the Project Profile was submitted to EPD (letter dated 13 Apr 2017). The "Adjustment" summary is attached in **Appendix D**. Any further adjustment to the PME list will be shown in the monthly report.

Appendix A

Construction Programme

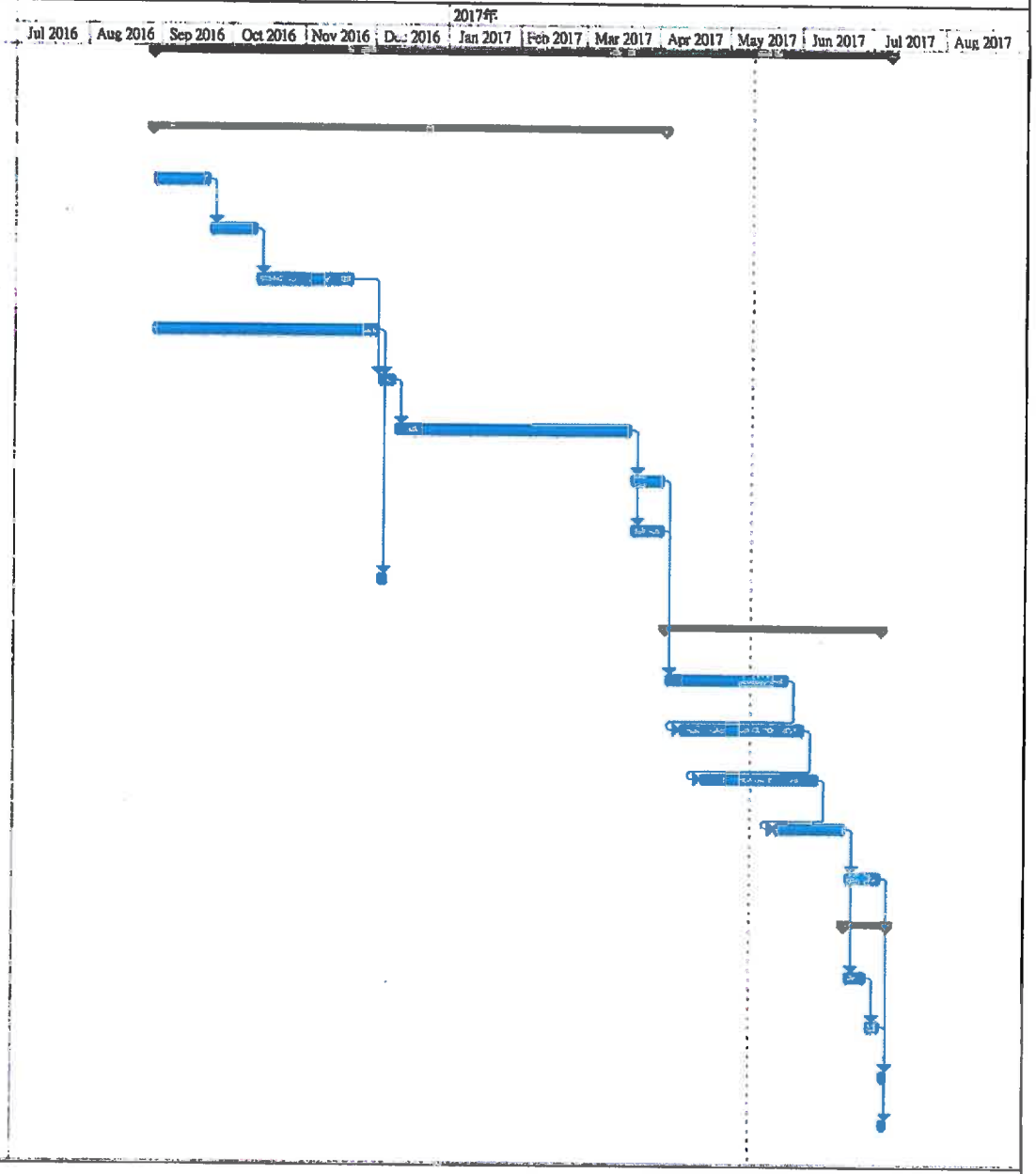
Landslip Preventive and Mitigation Programme, 2012, Package A -
Contract No. : GE/2013/35 Works Order Nos. : LPM201335/62/AFR218
Slope No. & Location : 11SW-A/FR218 Pathological Institute, Caine Lane, Mid-Levels

Landslip Preventive and Mitigation Works

Contractor : Geotech Engineering Limited
Programme Date : 17/04/2017 Revision No. : 10
Commencement Date : 29/08/2016 Completion Date : 13/01/2017 Anticipated Completion Date : 08/07/2017

UPDATED WORKS PROGRAMME

ID	Description	Quantity	Duration	Start	Finish
1	**Feature No.11SW-A/FR218 Pathological Institute, Caine Lane, Mid-Levels**		**253 days**	**2016/8/29**	**2017/7/8**
2	**PRELIMINARY**		**178 days**	**2016/8/29**	**2017/4/3**
3	Underground Utilities Detection & Topo Survey	1 item	20 days	2016/8/29	2016/9/21
4	Condition Survey	1 item	15 days	2016/9/22	2016/10/11
5	Awaiting for AMO's consent for commencement of works	1 item	35 days	2016/10/12	2016/11/21
6	Application of Temporary Traffic Arrangement (TTA) for Works Area & Loading Unloading Activities	1 item	80 days	2016/8/29	2016/12/2
7	Mobilization of Construction Plants and Materials	1 item	6 days	2016/12/3	2016/12/9
8	Protection Works	1 item	80 days	2016/12/10	2017/3/20
9	Erection of Hoarding and Project Signboard	70m & 1 no.	12 days	2017/3/21	2017/4/3
10	General Site Clearance and Clearance of Vegetation	160 sq.m.	12 days	2017/3/21	2017/4/3
11	Installation of Monitoring Points	10 nos.	3 days	2016/12/3	2016/12/6
12	**GEOTECHNICAL WORKS**		**72 days**	**2017/4/5**	**2017/7/5**
13	Pit Excavation and install shoring system	360 cu.m.	40 days	2017/4/5	2017/5/26
14	Install Dowel bars and Fixing steel reinforcement	42 nos. & 4 ton.	40 days	2017/4/11	2017/6/2
15	Backfilling with Mass Concrete	250 cu.m.	40 days	2017/4/20	2017/6/8
16	Construction for Planter Wall (1.55m(W) x 2.4m(D))	18m (L)	25 days	2017/5/22	2017/6/20
17	Filling of compacted fill	73.5 cu.m.	12 days	2017/6/21	2017/7/5
18	**MISCELLANEOUS**		**15 days**	**2017/6/21**	**2017/7/8**
19	Construction of concrete staircase	8.0m	8 days	2017/6/21	2017/6/29
20	Masonry Works for Wing Wall and Planter Wall	80.0 sq.m.	4 days	2017/6/30	2017/7/5
21	Hydroseeding & PlantingWorks	120.0 sq.m. & 960 nos	3 days	2017/7/6	2017/7/8
22	Reinstatement of Flood Light	1 item	3 days	2017/7/6	2017/7/8



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

Prepared By :

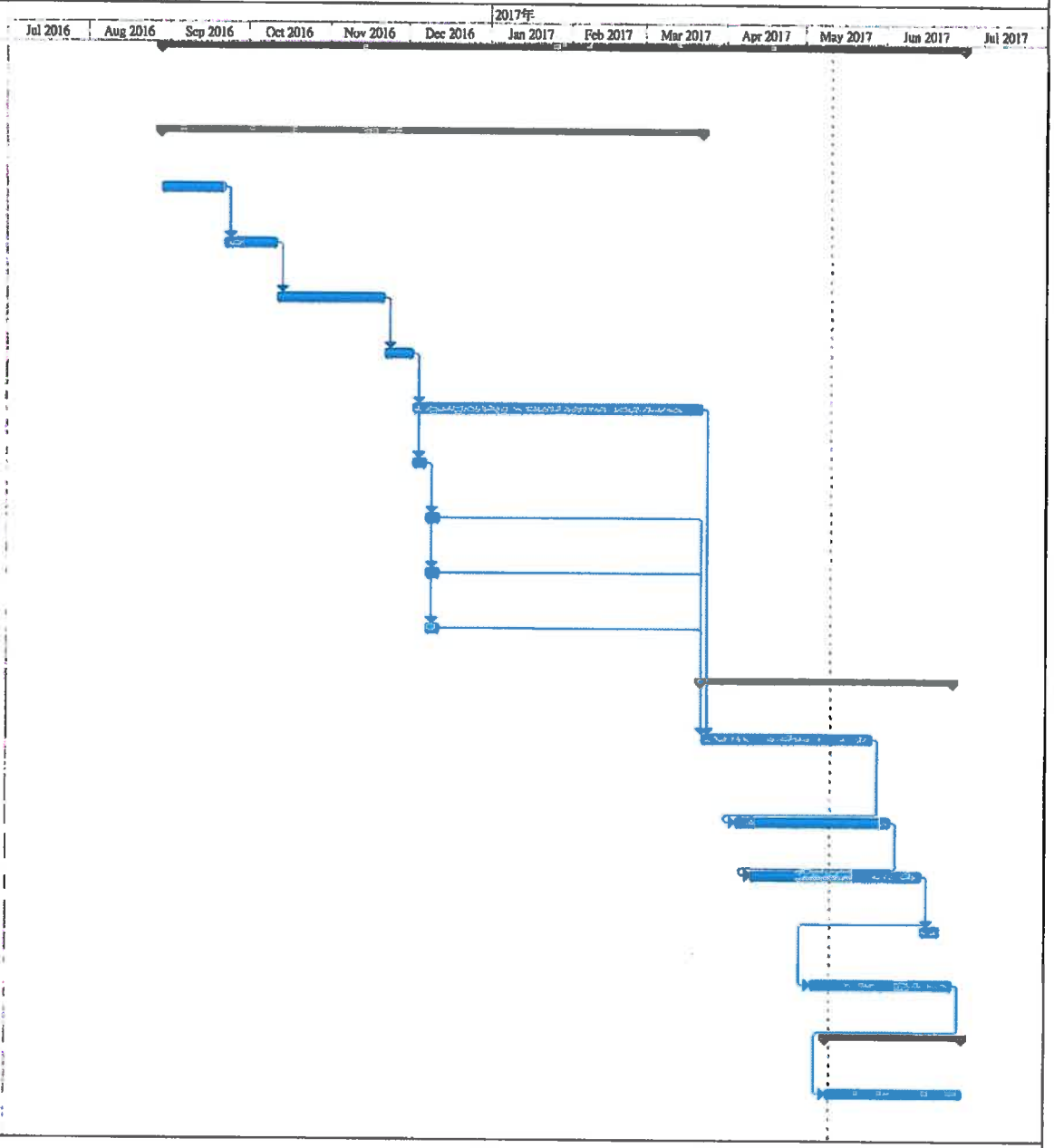
Landslip Preventive and Mitigation Programme, 2012, Package A -
Contract No. : GE/2013/35 Works Order No. : LPM201335/14/AR94
Slope No. & Location : 11SW-A/R94 Hong Kong Museum of Medical Science, No.2 Caine Lane, Mid-Levels

Landslip Preventive and Mitigation Works

Contractor : Geotech Engineering Limited
Programme Date : 17/04/2017 Revision No. : 10
Commencement Date : 29/08/2016 Completion Date : 13/01/2017 Anticipated Completion Date : 30/06/2017

UPDATED WORKS PROGRAMME

ID	Description	Quantity	Duration	Start	Finish
1	Feature No.11SW-A/R94 Hong Kong Museum of Medical Science, No.2 Caine Lane, Mid-Levels		247 days	2016/8/29	2017/6/30
2	PRELIMINARY		168 days	2016/8/29	2017/3/22
3	Underground Utilities Detection and Topo Survey	1 item	20 days	2016/8/29	2016/9/21
4	Condition Survey	1 item	15 days	2016/9/22	2016/10/11
5	Awaiting for AMO's consent for commencement of works	1 item	35 days	2016/10/12	2016/11/21
6	Application for Temporary Traffic Arrangement (TTA) for Caine Lane	1 item	10 days	2016/11/22	2016/12/2
7	Protection Works	1 item	88 days	2016/12/3	2017/3/22
8	Mobilization of Construction Plants and Materials	1 item	4 days	2016/12/3	2016/12/7
9	Erection of Hoarding and Project Signboard	100 m	4 days	2016/12/8	2016/12/12
10	General Site Clearance	60 sq.m.	4 days	2016/12/8	2016/12/12
11	Installation of Monitoring Points	3 nos	4 days	2016/12/8	2016/12/12
12	GEOTECHNICAL WORKS		75 days	2017/3/23	2017/6/26
13	Erection and modifcation of Base Scaffolding and Temporary Working Platform	1 item	50 days	2017/3/23	2017/5/26
14	Take up and store existing Masonry Stones	150 sq.m.	45 days	2017/4/5	2017/6/2
15	Soil Nailing Works	64 nos.	50 days	2017/4/11	2017/6/14
16	Installation of Raking Drains	4 nos.	6 days	2017/6/15	2017/6/21
17	Construction of Soil Nail Heads	62 nos.	45 days	2017/5/4	2017/6/26
18	MISCELLANEOUS		44 days	2017/5/10	2017/6/30
19	Reinstatement of Masonry Stones	150 sq.m.	44 days	2017/5/10	2017/6/30



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	
• Fugitive dust emissions from construction activities including site formation, drilling, and wind erosion of the excavated areas	• Dust suppression measures as stipulated in the *Air Pollution Control (Construction Dust) Regulation* (Cap. 311R) of *Air Pollution Control Ordinance* (APCO) (Cap. 311) • Good site practices
Noise	
• Construction noise from the use of powered mechanical equipment (PME) for the construction activities	• 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	
• 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	• Good site practices as per *Professional Persons Environmental Consultative Committee Practice (ProPECC) Note PN 1/94 "Construction Site Drainage"*
Waste Management	
• Certain amount of C&D materials from construction works	• Good waste management plan, practices and waste reduction measures • Disposal of C&D materials should be managed in accordance with the *Development Bureau Technical Circular (Works) DEVB TC(W)) No. 6/2010 "Trip Ticket System for Disposal of Construction & Demolition Materials".* • 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	
• No adverse ecological impact is expected.	• Not required
Cultural Heritage	
• 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	• 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

	obtain readings at a daily interval ● 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

Appendix C

Record of Disposal

Records of Disposal of INERT C & D Materials

Month April year 2017

Disvision: GEO / CEDD

Form 28A

Contract No.: GE/2013/35

(Inert)

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

Site Location: 1) 11SW-A/FR218

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)
16898748	25/4/2017	CW-PFBP	CZ9006	09:55	3/4	10:23	27/4/2017	170040307	Nil	8.12 t	8.12 t
16898749	25/4/2017	CW-PFBP	CZ9006	11:30	3/4	12:06	27/4/2017	170035532	Nil	8.56 t	16.68 t
16898750	25/4/2017	CW-PFBP	CZ9006	13:40	3/4	14:20	27/4/2017	170040519	Nil	8.32 t	25.00 t
16898751	26/4/2017	CW-PFBP	CZ9006	09:15	3/4	09:52	28/4/2017	170040776	Nil	8.34 t	33.34 t
16898753	26/4/2017	CW-PFBP	CZ9006	14:20	3/4	15:00	28/4/2017	170041043	Nil	8.24 t	41.58 t
17220142	27/4/2017	CW-PFBP	CZ9006	11:15	3/4	12:08	29/4/2017	170041318	Nil	8.27 t	49.85 t
16898764	27/4/2017	CW-PFBP	CZ9006	15:15	3/4	16:14	29/4/2017	170041475	Nil	8.10 t	57.95 t
16898765	28/4/2017	CW-PFBP	CZ9006	14:40	3/4	15:29	4/5/2017	170041822	Nil	8.22 t	66.17 t
17220135	29/4/2017	CW-PFBP	CZ9006	10:35	3/4	11:19	4/5/2017	170042092	Nil	7.90 t	74.07 t
17220136	29/4/2017	CW-PFBP	CZ9006	13:35	3/4	14:17	4/5/2017	170042212	Nil	8.02 t	82.09 t

Submitted by: Geotech Engineering Limited. Signature: _____ Name/Post: Cyrus Li / Safety Manager Date: 4/5/2017

Records of Disposal of INERT C & D Materials

Month April year 2017

Disvision: GEO / CEDD

Form 28A

Contract No.: GE/2013/35

(Inert)

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

Site Location: 1) 11SW-A/FR218

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)
17220137	29/4/2017	CW-PFBP	CZ9006	15:05	3/4	15:41	4/5/2017	170042274	Nil	8.25	90.34

Submitted by: Geotech Engineering Limited. Signature: _____ Name/Post: Cyrus Li / Safety Manager Date: 4/5/2017

Appendix D

IEC Site Audit Checklist

AECOM

Project:	Landslip Prevention and Mitigation Works at Feature Nos. 11SW-A/R94 and 11SW-A/FR218, HKMMS, Caine Lane, Mid-Levels	**Inspected by**	
Inspection Date:	7 April 2017	**Client:**	CEDD
Time:	3:00pm	**ER:**	*AECOM*
Inspection Area:	☒Feature No. 11SW-A/R94	**IEC:**	*AECOM*
	☒Feature No. 11SW-A/R218	**ET:**	*N/A*
	☒HKMMS & its Annex Block	**Contractor:**	*Geotech Engineering Ltd.*

PART A: GENERAL INFORMATION

Weather:	☐ Sunny	☑ Fine	☐ Cloudy	☐ Rainy	
Temperature:	~ 25 °C				
Humidity:	☑ High	☐ Moderate	☐ Low		
Wind:	☐ Strong	☑ Breeze	☐ Light	☐ Calm	

PART B: SITE AUDIT

		Not Obs.	Yes	No	Follow up	N/A	Photo/ Remarks
Section 1: Water Quality							
1.01	Obtained an effluent discharge license.	☐	☐	☐	☐	☒	
1.02	Provision of sedimentation tank.	☐	☒	☐	☐	☐	
1.03	Channels, sandbags or bunds should be provided to direct surface run-off to sedimentation tanks.	☐	☒	☐	☐	☐	
1.04	Open stockpiles of construction materials on site should be covered with tarpaulin or similar fabric as necessary during rainstorms.	☐	☒	☐	☐	☐	
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.	☐	☒	☐	☐	☐	
1.06	Manholes are adequately covered and temporarily sealed.	☐	☒	☐	☐	☐	
1.07	Some procedures and equipment for rainstorm protection are provided.	☒	☐	☐	☐	☐	
1.08	Measures to prevent leaked oil from entering the drainage system are provided.	☒	☐	☐	☐	☐	
1.09	Notices should be posted at conspicuous locations to remind the workers not to discharge any sewage or wastewater into the nearby environment.	☒	☐	☐	☐	☐	
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.	☐	☒	☐	☐	☐	
2.02	Use of frequent watering for particularly dusty static construction area.	☒	☐	☐	☐	☐	
2.03	Dusty materials transported on trucks with tarpaulin covering to and from the site.	☒	☐	☐	☐	☐	
2.04	Hoarding are not less than 2.4m tall provided at areas with public access.	☐	☒	☐	☐	☐	
2.05	Public road around the site entrance should be kept clean and free from dust.	☐	☒	☐	☐	☐	
2.06	Where possible, routing of vehicles and positioning of construction plant should be at the maximum possible distance from ASRs.	☐	☒	☐	☐	☐	
2.07	Mechanical covers of all dump trucks entering or leaving the site are in good services conditions.	☒	☐	☐	☐	☐	
2.08	Dark smoke emission from plant/equipment should be avoided.	☒	☐	☐	☐	☐	
2.09	De-bagging, batching and mixing processes are carried out in sheltered areas during the use of bagged cement.	☒	☐	☐	☐	☐	

		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.	☐	☒	☐	☐	☐	
3.02	All the plants should be serviced regularly during the construction program.	☐	☒	☐	☐	☐	
3.03	Use of noise enclosure for static PME.	☐	☐	☐	☒	☐	See Page 3
3.04	Use movable noise barrier only for feature no. 11SW-A/R94.	☒	☐	☐	☐	☐	
3.05	Use of noise insulating fabric for certain PME (e.g. handheld electric saw and use in designated area with noise barrier).	☒	☐	☐	☐	☐	
3.06	Idle equipment should be turned off or throttled down.	☐	☒	☐	☐	☐	
3.07	Where possible, quieter PME should be used.	☐	☐	☐	☐	☒	
Section 4: Waste/Chemical Management							
4.01	Training of site personnel in site cleanliness and proper waste management.	☐	☒	☐	☐	☐	
4.02	Provision of sufficient waste disposal point and regular collection of waste.	☐	☒	☐	☐	☐	
4.03	Regular cleaning and maintenance for drainage systems.	☐	☒	☐	☐	☐	
4.04	Proper storage and site practices to minimize the potential for damage or contamination of construction materials.	☐	☒	☐	☐	☐	
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.	☐	☒	☐	☐	☐	
4.06	Waste should be handled and stores well to ensure secure containment, thus minimizing the potential of pollution.	☐	☒	☐	☐	☐	
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.	☐	☐	☐	☐	☒	
4.08	The construction waste generated on-site would be transported to the designated disposal facilities managed by EPD or CEDD.	☐	☒	☐	☐	☐	
4.09	On-site sorting of all C&D materials to inert or non-inert.	☒	☐	☐	☐	☐	
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 while background.	☐	☐	☐	☐	☒	
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.	☐	☒	☐	☐	☐	
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.	☐	☒	☐	☐	☐	
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.	☐	☐	☐	☒	☐	See Page 3
6.03	Operate drilling process manually under full-time supervision of experienced works supervisor at Feature No. 11SW-A/R94.	☒	☐	☐	☐	☐	
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).	☐	☒	☐	☐	☐	
6.05	Adopt manual pit by pit excavation at Feature No. 11SW-A/FR218.	☒	☐	☐	☐	☐	
6.06	Adopt non-excavation type of hoardings at Feature No. 11SW-A/FR218 between the slope and main building.	☐	☒	☐	☐	☐	

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

- Construction activities were suspended during site auditing.
- For Item 3.03, the noise enclosures should be properly covered.
- For Item 6.02, the updated location plan of ground settlement markers, tilting monitoring markers and vibration monitoring points should be provided to IEC for reference, while obtained readings at a daily interval should also be provided as soon as possible.

~~Client~~	ER	[redacted]/IEC	~~ET~~	Contractor
( )	(Tommy Poon)	(Ms. Gigi Lam)	( )	(Bao Ho Yin)

AECOM

Project:	Landslip Prevention and Mitigation Works at Feature Nos. 11SW-A/R94 and 11SW-A/FR218, HKMMS, Caine Lane, Mid-Levels	**Inspected by**	
Inspection Date:	12 April 2017	**Client:**	CEDD
Time:	3:30 pm	**ER:**	*AECOM*
Inspection Area:	☒Feature No. 11SW-A/R94	**IEC:**	*AECOM*
	☒Feature No. 11SW-A/R218	**ET:**	*N/A*
	☒HKMMS & its Annex Block	**Contractor:**	*Geotech Engineering Ltd.*

PART A: GENERAL INFORMATION

Weather:	☐ Sunny	☐ Fine	☐ Cloudy	☑ Rainy
Temperature:	~ 24 °C			
Humidity:	☑ High	☐ Moderate	☐ Low	
Wind:	☐ Strong	☑ Breeze	☐ Light	☐ Calm

PART B: SITE AUDIT

		Not Obs.	Yes	No	Follow up	N/A	Photo/ Remarks
Section 1: Water Quality							
1.01	Obtained an effluent discharge license.	☐	☐	☐	☐	☒	
1.02	Provision of sedimentation tank.	☐	☒	☐	☐	☐	
1.03	Channels, sandbags or bunds should be provided to direct surface run-off to sedimentation tanks.	☐	☒	☐	☐	☐	
1.04	Open stockpiles of construction materials on site should be covered with tarpaulin or similar fabric as necessary during rainstorms.	☐	☒	☐	☐	☐	
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.	☐	☒	☐	☐	☐	
1.06	Manholes are adequately covered and temporarily sealed.	☐	☒	☐	☐	☐	
1.07	Some procedures and equipment for rainstorm protection are provided.	☐	☒	☐	☐	☐	
1.08	Measures to prevent leaked oil from entering the drainage system are provided.	☒	☐	☐	☐	☐	
1.09	Notices should be posted at conspicuous locations to remind the workers not to discharge any sewage or wastewater into the nearby environment.	☐	☒	☐	☐	☐	
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.	☐	☒	☐	☐	☐	
2.02	Use of frequent watering for particularly dusty static construction area.	☒	☐	☐	☐	☐	
2.03	Dusty materials transported on trucks with tarpaulin covering to and from the site.	☒	☐	☐	☐	☐	
2.04	Hoarding are not less than 2.4m tall provided at areas with public access.	☐	☒	☐	☐	☐	
2.05	Public road around the site entrance should be kept clean and free from dust.	☐	☒	☐	☐	☐	
2.06	Where possible, routing of vehicles and positioning of construction plant should be at the maximum possible distance from ASRs.	☐	☒	☐	☐	☐	
2.07	Mechanical covers of all dump trucks entering or leaving the site are in good services conditions.	☒	☐	☐	☐	☐	
2.08	Dark smoke emission from plant/equipment should be avoided.	☒	☐	☐	☐	☐	
2.09	De-bagging, batching and mixing processes are carried out in sheltered areas during the use of bagged cement.	☒	☐	☐	☐	☐	

		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.	☐	☒	☐	☐	☐	
3.02	All the plants should be serviced regularly during the construction program.	☐	☒	☐	☐	☐	
3.03	Use of noise enclosure for static PME.	☐	☐	☐	☒	☐	See Page 3
3.04	Use movable noise barrier only for feature no. 11SW-A/R94.	☒	☐	☐	☐	☐	
3.05	Use of noise insulating fabric for certain PME (e.g. handheld electric saw and use in designated area with noise barrier).	☒	☐	☐	☐	☐	
3.06	Idle equipment should be turned off or throttled down.	☐	☒	☐	☐	☐	
3.07	Where possible, quieter PME should be used.	☐	☐	☐	☐	☒	
Section 4: Waste/Chemical Management							
4.01	Training of site personnel in site cleanliness and proper waste management.	☐	☒	☐	☐	☐	
4.02	Provision of sufficient waste disposal point and regular collection of waste.	☐	☒	☐	☐	☐	
4.03	Regular cleaning and maintenance for drainage systems.	☐	☒	☐	☐	☐	
4.04	Proper storage and site practices to minimize the potential for damage or contamination of construction materials.	☐	☒	☐	☐	☐	
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.	☐	☒	☐	☐	☐	
4.06	Waste should be handled and stores well to ensure secure containment, thus minimizing the potential of pollution.	☐	☒	☐	☐	☐	
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.	☐	☐	☐	☐	☒	
4.08	The construction waste generated on-site would be transported to the designated disposal facilities managed by EPD or CEDD.	☐	☒	☐	☐	☐	
4.09	On-site sorting of all C&D materials to inert or non-inert.	☒	☐	☐	☐	☐	
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 while background.	☐	☐	☐	☐	☒	
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.	☐	☒	☐	☐	☐	
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.	☐	☒	☐	☐	☐	
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.	☐	☐	☐	☒	☐	See Page 3
6.03	Operate drilling process manually under full-time supervision of experienced works supervisor at Feature No. 11SW-A/R94.	☒	☐	☐	☐	☐	
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).	☐	☒	☐	☐	☐	
6.05	Adopt manual pit by pit excavation at Feature No. 11SW-A/FR218.	☒	☐	☐	☐	☐	
6.06	Adopt non-excavation type of hoardings at Feature No. 11SW-A/FR218 between the slope and main building.	☐	☒	☐	☐	☐	

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

- Construction activities were suspended due to heavy rain.
- For Item 3.03, the noise enclosures were not properly covered, it should be further modified.
- For Item 6.02, the updated location plan of ground settlement markers, tilting monitoring markers and vibration monitoring points were still outstanding. The measured/recorded result should be provided for IEC's review as soon as possible.

~~Client~~	ER	~~ENV~~/IEC	~~ET~~	Contractor
( )	(Tommy Poon)	(Ms. Sigi Lam)	( )	(Bao Ho Yin)

AECOM

Project:	Landslip Prevention and Mitigation Works at Feature Nos. 11SW-A/R94 and 11SW-A/FR218, HKMMS, Caine Lane, Mid-Levels	**Inspected by**	
Inspection Date:	20 April 2017	**Client:**	CEDD
Time:	3 pm	**ER:**	*AECOM*
Inspection Area:	☒Feature No. 11SW-A/R94	**IEC:**	*AECOM*
	☒Feature No. 11SW-A/R218	**ET:**	*N/A*
	☒HKMMS & its Annex Block	**Contractor:**	*Geotech Engineering Ltd.*

PART A: GENERAL INFORMATION

Weather:	☐ Sunny	☐ Fine	☑ Cloudy	☐ Rainy
Temperature:	~ 26 °C			
Humidity:	☑ High	☐ Moderate	☐ Low	
Wind:	☐ Strong	☑ Breeze	☐ Light	☐ Calm

PART B: SITE AUDIT

		Not Obs.	Yes	No	Follow up	N/A	Photo/ Remarks
Section 1: Water Quality							
1.01	Obtained an effluent discharge license.	☐	☐	☐	☐	☒	
1.02	Provision of sedimentation tank.	☐	☒	☐	☐	☐	
1.03	Channels, sandbags or bunds should be provided to direct surface run-off to sedimentation tanks.	☐	☒	☐	☐	☐	
1.04	Open stockpiles of construction materials on site should be covered with tarpaulin or similar fabric as necessary during rainstorms.	☐	☒	☐	☐	☐	
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.	☐	☒	☐	☐	☐	
1.06	Manholes are adequately covered and temporarily sealed.	☐	☒	☐	☐	☐	
1.07	Some procedures and equipment for rainstorm protection are provided.	☐	☒	☐	☐	☐	
1.08	Measures to prevent leaked oil from entering the drainage system are provided.	☒	☐	☐	☐	☐	
1.09	Notices should be posted at conspicuous locations to remind the workers not to discharge any sewage or wastewater into the nearby environment.	☐	☒	☐	☐	☐	
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.	☐	☒	☐	☐	☐	
2.02	Use of frequent watering for particularly dusty static construction area.	☒	☐	☐	☐	☐	
2.03	Dusty materials transported on trucks with tarpaulin covering to and from the site.	☒	☐	☐	☐	☐	
2.04	Hoarding are not less than 2.4m tall provided at areas with public access.	☐	☒	☐	☐	☐	
2.05	Public road around the site entrance should be kept clean and free from dust.	☐	☒	☐	☐	☐	
2.06	Where possible, routing of vehicles and positioning of construction plant should be at the maximum possible distance from ASRs.	☐	☒	☐	☐	☐	
2.07	Mechanical covers of all dump trucks entering or leaving the site are in good services conditions.	☒	☐	☐	☐	☐	
2.08	Dark smoke emission from plant/equipment should be avoided.	☒	☐	☐	☐	☐	
2.09	De-bagging, batching and mixing processes are carried out in sheltered areas during the use of bagged cement.	☒	☐	☐	☐	☐	

		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.	☐	☒	☐	☐	☐	
3.02	All the plants should be serviced regularly during the construction program.	☐	☒	☐	☐	☐	
3.03	Use of noise enclosure for static PME.	☐	☐	☐	☒	☐	See Page 3
3.04	Use movable noise barrier only for feature no. 11SW-A/R94.	☒	☐	☐	☐	☐	
3.05	Use of noise insulating fabric for certain PME (e.g. handheld electric saw and use in designated area with noise barrier).	☒	☐	☐	☐	☐	
3.06	Idle equipment should be turned off or throttled down.	☐	☒	☐	☐	☐	
3.07	Where possible, quieter PME should be used.	☐	☐	☐	☐	☒	
Section 4: Waste/Chemical Management							
4.01	Training of site personnel in site cleanliness and proper waste management.	☐	☒	☐	☐	☐	
4.02	Provision of sufficient waste disposal point and regular collection of waste.	☐	☒	☐	☐	☐	
4.03	Regular cleaning and maintenance for drainage systems.	☐	☒	☐	☐	☐	
4.04	Proper storage and site practices to minimize the potential for damage or contamination of construction materials.	☐	☒	☐	☐	☐	
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.	☐	☒	☐	☐	☐	
4.06	Waste should be handled and stores well to ensure secure containment, thus minimizing the potential of pollution.	☐	☒	☐	☐	☐	
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.	☐	☐	☐	☐	☒	
4.08	The construction waste generated on-site would be transported to the designated disposal facilities managed by EPD or CEDD.	☐	☒	☐	☐	☐	
4.09	On-site sorting of all C&D materials to inert or non-inert.	☒	☐	☐	☐	☐	
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 while background.	☐	☐	☐	☐	☒	
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.	☐	☒	☐	☐	☐	
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.	☐	☒	☐	☐	☐	
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.	☐	☐	☐	☒	☐	See Page 3
6.03	Operate drilling process manually under full-time supervision of experienced works supervisor at Feature No. 11SW-A/R94.	☒	☐	☐	☐	☐	
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).	☐	☒	☐	☐	☐	
6.05	Adopt manual pit by pit excavation at Feature No. 11SW-A/FR218.	☒	☐	☐	☐	☐	
6.06	Adopt non-excavation type of hoardings at Feature No. 11SW-A/FR218 between the slope and main building.	☐	☒	☐	☐	☐	

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

- Construction activities were suspended during site auditing.
- For Item 3.03, the noise enclosures should be further modified to provide better coverage.
- For Item 6.02, the updated location plan for the measurement/monitoring points as well as finding/measured result are still outstanding, please provide the result to IEC as soon as possible.

~~Client~~	ER	~~ENVR~~/IEC	~~ET~~	Contractor
( )	(Tommy Poon)	(Ms. Gigi Lam)	( )	(Cao Ho Yin)

AECOM

Project:	Landslip Prevention and Mitigation Works at Feature Nos. 11SW-A/R94 and 11SW-A/FR218, HKMMS, Caine Lane, Mid-Levels	**Inspected by**	
Inspection Date:	28 April 2017	**Client:**	CEDD
Time:	10 am	**ER:**	*AECOM*
Inspection Area:	☒Feature No. 11SW-A/R94	**IEC:**	*AECOM*
	☒Feature No. 11SW-A/R218	**ET:**	*N/A*
	☒HKMMS & its Annex Block	**Contractor:**	*Geotech Engineering Ltd.*

PART A: GENERAL INFORMATION

Weather:	☐ Sunny	☑ Fine	☐ Cloudy	☐ Rainy	
Temperature:	~ 22 °C				
Humidity:	☐ High	☑ Moderate	☐ Low		
Wind:	☐ Strong	☑ Breeze	☐ Light	☐ Calm	

PART B: SITE AUDIT

		Not Obs.	Yes	No	Follow up	N/A	Photo/ Remarks
Section 1: Water Quality							
1.01	Obtained an effluent discharge license.	☐	☐	☐	☐	☒	
1.02	Provision of sedimentation tank.	☐	☒	☐	☐	☐	
1.03	Channels, sandbags or bunds should be provided to direct surface run-off to sedimentation tanks.	☐	☒	☐	☐	☐	
1.04	Open stockpiles of construction materials on site should be covered with tarpaulin or similar fabric as necessary during rainstorms.	☐	☒	☐	☐	☐	
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.	☐	☒	☐	☐	☐	
1.06	Manholes are adequately covered and temporarily sealed.	☐	☒	☐	☐	☐	
1.07	Some procedures and equipment for rainstorm protection are provided.	☐	☒	☐	☐	☐	
1.08	Measures to prevent leaked oil from entering the drainage system are provided.	☒	☐	☐	☐	☐	
1.09	Notices should be posted at conspicuous locations to remind the workers not to discharge any sewage or wastewater into the nearby environment.	☐	☒	☐	☐	☐	
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.	☐	☒	☐	☐	☐	
2.02	Use of frequent watering for particularly dusty static construction area.	☒	☐	☐	☐	☐	
2.03	Dusty materials transported on trucks with tarpaulin covering to and from the site.	☒	☐	☐	☐	☐	
2.04	Hoarding are not less than 2.4m tall provided at areas with public access.	☐	☒	☐	☐	☐	
2.05	Public road around the site entrance should be kept clean and free from dust.	☐	☒	☐	☐	☐	
2.06	Where possible, routing of vehicles and positioning of construction plant should be at the maximum possible distance from ASRs.	☐	☒	☐	☐	☐	
2.07	Mechanical covers of all dump trucks entering or leaving the site are in good services conditions.	☒	☐	☐	☐	☐	
2.08	Dark smoke emission from plant/equipment should be avoided.	☒	☐	☐	☐	☐	
2.09	De-bagging, batching and mixing processes are carried out in sheltered areas during the use of bagged cement.	☐	☒	☐	☐	☐	

		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.	☐	☒	☐	☐	☐	
3.02	All the plants should be serviced regularly during the construction program.	☐	☒	☐	☐	☐	
3.03	Use of noise enclosure for static PME.	☐	☐	☐	☒	☐	See Page 3
3.04	Use movable noise barrier only for feature no. 11SW-A/R94.	☒	☐	☐	☐	☐	
3.05	Use of noise insulating fabric for certain PME (e.g. handheld electric saw and use in designated area with noise barrier).	☒	☐	☐	☐	☐	
3.06	Idle equipment should be turned off or throttled down.	☐	☒	☐	☐	☐	
3.07	Where possible, quieter PME should be used.	☐	☐	☐	☐	☒	
Section 4: Waste/Chemical Management							
4.01	Training of site personnel in site cleanliness and proper waste management.	☐	☒	☐	☐	☐	
4.02	Provision of sufficient waste disposal point and regular collection of waste.	☐	☒	☐	☐	☐	
4.03	Regular cleaning and maintenance for drainage systems.	☐	☒	☐	☐	☐	
4.04	Proper storage and site practices to minimize the potential for damage or contamination of construction materials.	☐	☒	☐	☐	☐	
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.	☐	☒	☐	☐	☐	
4.06	Waste should be handled and stores well to ensure secure containment, thus minimizing the potential of pollution.	☐	☒	☐	☐	☐	
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.	☐	☐	☐	☐	☒	
4.08	The construction waste generated on-site would be transported to the designated disposal facilities managed by EPD or CEDD.	☐	☒	☐	☐	☐	
4.09	On-site sorting of all C&D materials to inert or non-inert.	☒	☐	☐	☐	☐	
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 while background.	☐	☐	☐	☐	☒	
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.	☐	☒	☐	☐	☐	
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.	☐	☒	☐	☐	☐	
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.	☐	☒	☐	☐	☐	
6.03	Operate drilling process manually under full-time supervision of experienced works supervisor at Feature No. 11SW-A/R94.	☒	☐	☐	☐	☐	
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).	☐	☒	☐	☐	☐	
6.05	Adopt manual pit by pit excavation at Feature No. 11SW-A/FR218.	☒	☐	☐	☐	☐	
6.06	Adopt non-excavation type of hoardings at Feature No. 11SW-A/FR218 between the slope and main building.	☐	☒	☐	☐	☐	

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

- For Item 3.03, noise enclosure for plant equipment at feature no. 11SW-A/FR218 was modified. Similar modification of noise enclosure at feature no. 11SW-A/P94 should still require.

~~Client~~	ER	~~IC~~/IEC	~~ET~~	Contractor
( )	(Tommy Poon)	(Ms. Gigi Lam)	( )	(Bao Ho Yin)

Appendix E

Adjustment of PME

Proposed Construction Plant Inventory
Unmitigated 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	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	1	88	10	10	0	78
						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	80	1	0	107
Water Pump (electric)	CNP281	1	88	10	10	0	78
						Total	111

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	100	0	0	108
Water Pump (electric)	CNP281	1	88	10	10	0	78
						Total	111

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	-
Air compressor, air flow > 10m^3/min and ≤ 30m^3/min	CNP002	1	102	100	0	0	102	-
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	1	88	10	10	0	78	78
						Total	114	109
						Maximum	114	

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	-
Air compressor, air flow > $10m^3$/min and ≤ $30m^3$/min	CNP002	1	102	100	0	0	102	-
Breaker, hand-held, mass ≥ 10kg and < 20kg	CNP024	1	108	100	0	0	108	-
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	1	88	10	10	0	78	78
						Total	114	109
						Maximum	114	

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	CNP101	1	108	100	0	0	108
Breaker, hand-held, mass ≥ 10kg and < 20kg	CNP024	1	108	100	0	0	108
Water Pump (electric)	CNP281	1	88	10	10	0	78
						Total	111

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	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	1	88	10	10	0	78
						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
						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
Water Pump (electric)	CNP281	2	88	10	10	0	81
Winch (electric)	CNP262	2	95	50	3	0	95
						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	-
						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	20	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
						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
Water Pump (electric)	CNP281	2	88	10	10	0	81
Winch (electric)	CNP262	2	95	50	3	0	95
						Total	105

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	-
						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
						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
						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	-
						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
						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
						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	QPME 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	0	77
Water Pump (electric)	CNP281	1	88	10	10	5	73
						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	QPME EPD-02677	1	91	80	1	10	80
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	80	1	5	94
Water Pump (electric)	CNP281	1	88	10	10	5	73
						Total	100

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	QPME EPD-02677	1	91	100	0	10	81
Breaker, hand-held, mass > 10kg and < 20kg	EIA Ref. 2	1	100	100	0	5	95
Water Pump (electric)	CNP281	1	88	10	10	5	73
						Total	95

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	QPME 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	-
Air compressor, air flow > 10m³/min and ≤ 30m³/min	CNP002	1	102	100	0	10	92	-
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)	CNP231	1	88	10	10	5	73	73
						Total	105	104
						Maximum	105	

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	QPME 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	-
Air compressor, air flow > 10m³/min and ≤ 30m³/min	CNP002	1	102	100	0	10	92	-
Breaker, hand-held, mass > 10kg and < 20kg	EIA Ref. 2	1	100	100	0	5	95	-
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	80	1	5	97	
Water Pump (electric)	CNP251	1	88	10	10	5	73	73
						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	QPME EPD-02677	1	91	100	0	10	81
Breaker, hand-held, mass > 10kg and < 20kg	EIA Ref. 2	1	100	100	0	5	95
Water Pump (electric)	CNP251	1	88	10	10	5	73
						Total	95

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	QPME 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
Welding set	EIA Ref. 1	1	78	100	0	0	78
Water Pump (electric)	CNP251	1	88	10	10	5	73
						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/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
Mitigated 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	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	QPME 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	75	80	1	5	72
						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
Water Pump (electric)	CNP281	2	88	10	10	5	76
Winch (electric)	CNP262	2	95	50	3	5	90
						Total	101

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	QPME 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 tone < gross vehicle weight ≤ 38 tonne	OCNP	1	105	10	10	5	90	-
						Total	90	92
						Maximum	92	

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	QPME EPD-02677	1	91	80	1	10	80	-
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	-
Poker	CNP170	1	113	10	10	5	-	98
Concrete pump	CNP047	1	109	10	10	5	-	94
						Total	90	102
						Maximum	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
Water Pump (electric)	CNP281	2	88	10	10	5	76
Winch (electric)	CNP262	2	95	50	3	5	90
						Total	101

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	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 tone < gross vehicle weight ≤ 38 tonne	OCNP	1	105	80	1	5	99	-
						Total	99	99
						Maximum	99	

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	OPME EPD-02677	1	91	80	1	10	80	-
Breaker, hand-held, mass > 10kg and < 20kg	EIA Ref. 2	1	100	15	8	5	87	-
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	-	98
Concrete pump	CNP047	1	109	10	10	5	-	94
						Total	96	101
						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
						Total	81

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	-	99
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	80	1	5	97	-
						Total	99	100
						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	99
						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 tone < gross vehicle weight ≤ 38 tonne	OCNP	1	105	80	1	5	99
Welding set	EIA Ref. 1	1	78	100	0	0	78
						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/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**.

Distance of NSRs to the Notional Source Positions

NSR	Description	Land use	Horizontal distance to notional source position, m					
			Feature No. 11SW-A/R94	Feature No. 11SW-A/FR218				
				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	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	58	43	63	63								
2	Initial survey and erection of hoarding	108	58	43	68		68							
3	Ground investigation works	111	58	43	71		71							
4	Take off existing masonry stone facing	111	58	43	71			71						
5	Installation of soil nails and raking drains	114	58	43	74				74	74	74			
6	Construction of soil nail head	114	58	43	74							74		
7	Reinstatement of existing masonry stone facing	111	58	43	71								71	
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	72								
2	Initial survey and erection of hoarding	108	19	33	78	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	79	80
				Exceedance:		4	6	3	7	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
						4	5	6	7	8	9	10	11	12
Feature No. 11SW-A/R94														
1	Site clearance, UU detection and preparation	103	53	43	63	63								
2	Initial survey and erection of hoarding	108	53	43	68		68							
3	Ground investigation works	111	53	43	71		71							
4	Take off existing masonry stone facing	111	53	43	71			71						
5	Installation of soil nails and raking drains	114	53	43	74				74	74	74			
6	Construction of soil nail head	114	53	43	74							74		
7	Reinstatement of existing masonry stone facing	111	53	43	71								71	
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	73								
2	Initial survey and erection of hoarding	108	18	33	78	78								
3.1	Excavation works (Bay 1)	106	15	32	77		77							
3.1	Excavation works (Bay 3)	106	29	37	72		72							
3.2	Excavation works (Bulky PME area)	109	17	33	79		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				81					
6	Installation of dowel bars and concrete works	110	18	33	80					80				
7	Back filling of top soil	108	18	33	78						78			
8	Construction of concrete staircase	110	18	33	80							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	80	81
				Exceedance:		5	7	4	7	6	4	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	63								
2	Initial survey and erection of hoarding	108	39	43	68		68							
3	Ground investigation works	111	39	43	71		71							
4	Take off existing masonry stone facing	111	39	43	71			71						
5	Installation of soil nails and raking drains	114	39	43	74				74	74	74			
6	Construction of soil nail head	114	39	43	74							74		
7	Reinstatement of existing masonry stone facing	111	39	43	71								71	
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	70								
2	Initial survey and erection of hoarding	108	24	36	75	75								
3.1	Excavation works (Bay 1)	106	25	36	73		73							
3.1	Excavation works (Bay 3)	106	34	39	70		70							
3.2	Excavation works (Bulky PME area)	109	29	37	75		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	79	78	78
				Exceedance:		2	4	1	4	3	2	4	3	3

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
						4	5	6	7	8	9	10	11	12
Feature No. 11SW-A/R94														
1	Site clearance, UU detection and preparation	103	23	35	71	71								
2	Initial survey and erection of hoarding	108	23	35	76		76							
3	Ground investigation works	111	23	35	79		79							
4	Take off existing masonry stone facing	111	23	35	79			79						
5	Installation of soil nails and raking drains	114	23	35	82				82	82	82			
6	Construction of soil nail head	114	23	35	82							82		
7	Reinstatement of existing masonry stone facing	111	23	35	79								79	
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	62								
2	Initial survey and erection of hoarding	108	66	44	67	67								
3.1	Excavation works (Bay 1)	106	72	45	64		64							
3.1	Excavation works (Bay 3)	106	69	45	64		64							
3.2	Excavation works (Bulky PME area)	109	75	46	66		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	79	82	82	82	82	79	79
				Exceedance:		-	6	4	7	7	7	7	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
						4	5	6	7	8	9	10	11	12
Feature No. 11SW-A/R94														
1	Site clearance, UU detection and preparation	103	68	45	61	61								
2	Initial survey and erection of hoarding	108	68	45	66		66							
3	Ground investigation works	111	68	45	69		69							
4	Take off existing masonry stone facing	111	68	45	69			69						
5	Installation of soil nails and raking drains	114	68	45	72				72	72	72			
6	Construction of soil nail head	114	68	45	72							72		
7	Reinstatement of existing masonry stone facing	111	68	45	69								69	
8	Site clearance and dismantle of hoarding	111	68	45	69									69
Feature No. 11SW-A/FR218														
1	Site clearance, UU detection and preparation	103	58	43	63	63								
2	Initial survey and erection of hoarding	108	58	43	68	68								
3.1	Excavation works (Bay 1)	106	56	43	66		66							
3.1	Excavation works (Bay 3)	106	69	45	64		64							
3.2	Excavation works (Bulky PME area)	109	59	43	69		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				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 dismantle of hoarding	111	58	43	71									71
				Total SPL, dB(A):		70	74	72	75	74	73	74	72	73
				Exceedance:		-	4	2	5	4	3	4	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	100	58	43	60		60							
4	Take off existing masonry stone facing	95	58	43	55			55						
5	Installation of soil nails and raking drains	105	58	43	65				65	65	65			
6	Construction of soil nail head	104	58	43	64							64		
7	Reinstatement of existing masonry stone facing	95	58	43	55								55	
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	67								
2	Initial survey and erection of hoarding	98	19	33	68	68								
3.1	Excavation works (Bay 1)	101	22	35	69		69							
3.1	Excavation works (Bay 3)	101	24	36	68		68							
3.2	Excavation works (Bulky PME area)	92	17	33	62		62							
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	81	19	34	50						50			
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	73	71	65	70	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	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	53	43	58	58								
2	Initial survey and erection of hoarding	98	53	43	58		58							
3	Ground investigation works	100	53	43	60		60							
4	Take off existing masonry stone facing	95	53	43	55			55						
5	Installation of soil nails and raking drains	105	53	43	65				65	65	65			
6	Construction of soil nail head	104	53	43	64							64		
7	Reinstatement of existing masonry stone facing	95	53	43	55								55	
8	Site clearance and dismantle of hoarding	102	53	43	62									62
Feature No. 11SW-A/FR218														
1	Site clearance, UU detection and preparation	98	18	33	68	68								
2	Initial survey and erection of hoarding	98	18	33	68	68								
3.1	Excavation works (Bay 1)	101	15	32	72		72							
3.1	Excavation works (Bay 3)	101	29	37	67		67							
3.2	Excavation works (Bulky PME area)	92	17	33	62		62							
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	81	18	33	51						51			
8	Construction of concrete staircase	100	18	33	70							70		
9	Landscape works	99	18	33	69								69	
10	Site clearance and dismantle of hoarding	102	18	33	72									72
				Total SPL, dB(A):		71	73	72	73	72	65	71	69	72
				Exceedance:		-	-	-	-	-	-	-	-	-

Note:
Figures in red denote exceedance of the EIAO-TM 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. 11SW-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	100	39	43	60		60							
4	Take off existing masonry stone facing	95	39	43	55			55						
5	Installation of soil nails and raking drains	105	39	43	65				65	65	65			
6	Construction of soil nail head	104	39	43	64							64		
7	Reinstatement of existing masonry stone facing	95	39	43	55								55	
8	Site clearance and dismantle of hoarding	102	39	43	62									62
Feature No. 11SW-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)	92	29	37	58		58							
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					
5.2	Pit by pit excavation works (Bulky PME area)	99	29	37	65				65					
6	Installation of dowel bars and concrete works	101	24	36	68					68				
7	Back filling of top soil	81	24	36	48						48			
8	Construction of concrete staircase	100	24	36	67							67		
9	Landscape works	99	24	36	66								66	
10	Site clearance and dismantle of hoarding	102	24	36	69									69
				Total SPL, dB(A):		68	70	69	70	69	65	69	66	70
				Exceedance:		-	-	-	-	-	-	-	-	-

75

Min 65
Max 70

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

Construction Noise Impact
Mitigated 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	98	34	39	62	62								
2	Initial survey and erection of hoarding	98	34	39	62		62							
3	Ground investigation works	100	34	39	64		64							
4	Take off existing masonry stone facing	95	34	39	59			59						
5	Installation of soil nails and raking drains	105	34	39	69				69	69	69			
6	Construction of soil nail head	104	34	39	68							68		
7	Reinstatement of existing masonry stone facing	95	34	39	59								59	
8	Site clearance and dismantle of hoarding	102	34	39	66									66
Feature No. 11SW-A/FR218														
1	Site clearance, UU detection and preparation	98	54	43	58	58								
2	Initial survey and erection of hoarding	98	54	43	58	58								
3.1	Excavation works (Bay 1)	101	57	43	61		61							
3.1	Excavation works (Bay 3)	101	63	44	60		60							
3.2	Excavation works (Bulky PME area)	92	60	44	51		51							
4	Installation of dowel bars and concrete works	102	54	43	62			62						
5.1	Pit by pit excavation works (Bay 2)	101	59	43	61				61					
5.2	Pit by pit excavation works (Bulky PME area)	99	60	44	58				58					
6	Installation of dowel bars and concrete works	101	54	43	61					61				
7	Back filling of top soil	81	54	43	41						41			
8	Construction of concrete staircase	100	54	43	60							60		
9	Landscape works	99	54	43	59								59	
10	Site clearance and dismantle of hoarding	102	54	43	62									62
				Total SPL, dB(A):		65	68	64	70	69	69	69	62	68
				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	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	23	35	66	66								
2	Initial survey and erection of hoarding	98	23	35	66		66							
3	Ground investigation works	100	23	35	68		68							
4	Take off existing masonry stone facing	95	23	35	63			63						
5	Installation of soil nails and raking drains	105	23	35	73				73	73	73			
6	Construction of soil nail head	104	23	35	72							72		
7	Reinstatement of existing masonry stone facing	95	23	35	63								63	
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)	92	75	46	49		49							
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	81	66	44	40						40			
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	71	65	73	73	73	73	64	71
				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	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	23	35	66	66								
2	Initial survey and erection of hoarding	98	23	35	66		66							
3	Ground investigation works	100	23	35	68		68							
4	Take off existing masonry stone facing	95	23	35	63			63						
5	Installation of soil nails and raking drains	105	23	35	73				73	73	73			
6	Construction of soil nail head	104	23	35	72							72		
7	Reinstatement of existing masonry stone facing	95	23	35	63								63	
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)	92	75	46	49		49							
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	81	66	44	40						40			
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	71	65	73	73	73	73	64	71
				Exceedance:		-	-	-	-	-	-	-	-	-

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

Construction Noise Impact
Mmitigated 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
						4	5	6	7	8	9	10	11	12
Feature No. 11SW-A/R94														
1	Site clearance, UU detection and preparation	98	68	45	56	56								
2	Initial survey and erection of hoarding	98	68	45	56		56							
3	Ground investigation works	100	68	45	58		58							
4	Take off existing masonry stone facing	95	68	45	53			53						
5	Installation of soil nails and raking drains	105	68	45	63				63	63	63			
6	Construction of soil nail head	104	68	45	62							62		
7	Reinstatement of existing masonry stone facing	95	68	45	53								53	
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	58								
2	Initial survey and erection of hoarding	98	58	43	58	58								
3.1	Excavation works (Bay 1)	101	56	43	61		61							
3.1	Excavation works (Bay 3)	101	69	45	59		59							
3.2	Excavation works (Bulky PME area)	92	59	43	52		52							
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	81	58	43	41						41			
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	63	65	65	63	64	60	64
				Exceedance:		-	-	-	-	-	-	-	-	-

70

Min 60
Max 65

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	62 - 70	75	62-70
N5	64 - 73	75	64-73
N6	60 - 65	70	60-66